



DATED FROM _____ FILE No. 1235-6-AC/176
TO _____ VOLUME No. 1

CLOSED VOLUME

DO NOT PLACE ANY CORRESPONDENCE ON THIS FILE

FOR SUBSEQUENT CORRESPONDENCE SEE:

FILE No. _____ VOLUME No. 2

PLEASE KEEP ATTACHED TO TOP OF FILE

SECRET

TEMPORARY DOCKET

ARMY

[illegible]

INSTRUCTIONS

1. Temporary Dockets are to deal WITH ONE CASE ONLY.
2. T.D.'s NOT to be placed on main file UNLESS Central Registry informed.
3. T.D. No. together with main file number to be quoted on all correspondence originated.
4. T.D.'s not to be passed from one service to another..
5. Action should be taken as soon as possible in order that main file may be kept up to date. If action cannot be taken within 48 hrs. B.F. Docket.
6. T.D.'s to be passed, P.A.'d, B.F.'d, etc., in the same manner as main files.

SECRET

HQS 8900-33/47 (DCD)
HQS 8950-10-6

M E M O R A N D U M

28 Jun 62.

DEP

Proposed NEMR for AIFV and ATV Long Term

1. Reference your memorandum dated 7 May 62 forwarding the marginal proposed NEMR for comments.
2. We believe that the discussion of post-1970 Armoured Personnel Carriers is premature. In our ABC standardization work we have been directed to write a concept of operations for this time frame and also a supporting study on combat vehicles for the same period. Until both these studies have been prepared and given national and if possible, ABC approval, we do not believe it wise to present a national view to NATO on such an important subject as Armoured Personnel Carriers.
3. However, because you stated in your memorandum under reference that you may at any time be asked for official comment within 48 hours and you therefore wish to have our opinion on file, the following very tentative opinion is offered on the NATO NEMR.

GENERAL COMMENTS

4. We must be very careful in agreeing to a policy which calls for two vehicles of this general type if it is possible to meet most, if not all, of the requirements in one vehicle. When one compares the requirements listed for the Armoured Transport Vehicle (ATV) with the requirements listed for the Armoured Infantry Fighting Vehicle (AIFV) very few differences emerge. Essentially these differences appear to be that the AIFV will have a heavier vehicle weapon system and an automatic continuous position finding device, neither of which are called for in the ATV.
5. We agree with the SHAPE contention that an AIFV type vehicle will be essential for armoured formations and that all ground forces may not need the same highly complex equipment but we believe that we should bend our efforts towards developing a basic chassis, power plant and hull that can perform the suggested roles in both armoured and infantry formations with the minimum of modification.
6. The roles proposed in Part III para A 2 of the proposed NEMR appear influenced to some extent by German Army ideas on the use of armoured carriers, (vide Appendix I to Annex "F" to BR/1779/3/CD dated 25 Jan 62 which was a Joint Report on Anglo-German Combat Development Discussions) in that the German Army currently uses two types.

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SPECIFIC COMMENTS7. Part II, para B 1 -

The term "providing continuous mobile combat support for the tanks" is one requiring clear definition. If the AIFV is to operate with the tanks continually it would seem to indicate that the ballistic protection of the AIFV would have to be of the same order as the tank; if this is so what we are asking for is another tank, with more people in it, and with less effective firepower. This would appear to be a false concept as we would be risking the lives of 10 or 11 men in an AIFV to do a job less effectively than it could be done by three to five men in a tank.

8. Infantry are essential and must be in the armoured battle but we do not believe that their role is to supply "continuous mobile combat support" as we understand the term. However, should this requirement remain then this NEMR must be co-ordinated at every step of the way with the NEMR on the post-70 tank so that this capability will be achieved.

9. Part II, para D -

It is noted that the verb "must" is used in every para of this section except 4 which suggests that the vehicle "should" be amphibious. We believe the amphibious capability to be highly important and recommend the sentence be amended to read "It must be amphibious".

10. We believe that personnel carriers, in addition to being amphibious, must have the maximum possible built-in capability for speedy entrance and exit from rivers and streams, possibly by means of integral winches or scraping blades. Reference should be made to this requirement in this section.

11. Part II, para H 1 -

This para could be construed to mean that the design should be aimed primarily at these uses for the vehicle. We believe it is important to emphasize that the primary role of the AIFV is as an infantry carrier in the combat area; the design should meet that role and consideration for other uses should be secondary.

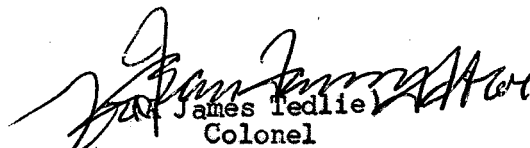
12. The Canadian position on the employment and armament of APCs for the TF 1966-70 is contained in Annex "H" to the Report of the 5th Meeting TSWG/CD, a copy of which is attached for information. This paper, as part of the MFR of the 5th Meeting TSWG/CD, received national approval from the US and Canadian Armies with a reservation by Canada to the effect that the paper could not interfere with the procurement of current equipment. The British Army withheld approval of this paper requesting reconsideration at the 6th Meeting TSWG/CD. Until the studies for the post-70 period mentioned in para 2 above are approved this paper gives as good an agreed Canadian opinion on this matter as we believe to be available.

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13. The above are tentative comments but we emphasize once more the reservation regarding stating a national position to NATO prematurely which we raised in para 2 above.

JGWH/2-6719/bjs


James Tedlie
Colonel
Director of Combat Development

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MEMORANDUM

HQS 1235-6-6-5 TD 2127 (D Armour)

20 Jun 62

DEP

Proposed NEMR

Infantry Fighting Vehicle and Armoured Transport Vehicle

1. Reference is made to the marginally noted document.
2. The following comments are offered:

a. AIFV - Post 1970

- (1) Firepower. An anti-APC capability is considered essential. It is suggested para II C 2 should be amended to reflect this requirement.
- (2) Protection. It is considered that the need for NBC protection has received cursory treatment. Since the main task of this vehicle will be to provide: 'continuous mobile combat support for tanks', it must have, at least, the same level of protection as the tanks with which it is to operate.
- (3) Sustained Combat Capability. Para II D 2 sets out a general sustained combat capability of 24 hours. It is considered that this is too specific and that it should be expressed in relation to the tank. A suggested amendment to this para is as follows:
 - (a) Delete - second sentence
 - (b) Insert - 'Generally it must be able to operate for at least the same period as the tank(s) for which it provides combat support'

b. ATV - Post 1970. No comment

3. It is considered the basic requirements of the post 1970 APC must, in some measure, be related to the tank in service in the same time frame. It is therefore suggested this Directorate be given a further opportunity for comment based on the results of the FMBT - 1970 meeting to be held in Jul.

h. A. C. Amy
(E A C Amy)

Colonel
Director of Armour

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DEPARTMENT OF NATIONAL DEFENCE

MINUTE SHEET

Referred	REMARKS
<p>1668 → DCD <i>May 15 Jun 62</i></p> <p>D Armour</p> <p>D 2nd</p> <p>② D Armour</p> <p>1. Regret delay in passing this TD but comments require much study.</p> <p>2. We have made extra copies now and have passed 1 copy including copy of this memo to D Inf.</p> <p>3. Please pass your comments on this TD back to DEP Major <i>for DCD 15 Jun 62</i></p>	<p>① The proposed NBMR has been forwarded for info only, however, we will in due course get it for official comment with probably a 48 hour time limit.</p> <p>2. It is therefore requested that you comment on this one now. When the official request for comment comes in we will ask for confirmation of your comments made at this time.</p> <p><i>Jeffery</i></p> <p><i>EP2a</i></p>

Address reply to:

The Chairman,
Chiefs of Staff,
OTTAWA.

FILE: CSC 2155-6 (SO/LOG)

DOCUMENT SECRET
CLASSIFICATION:

DATE: 2 May 62

JOINT STAFF MEMORANDUM

SUBJECT: PROPOSED NBMR FOR ARMoured INFANTRY FIGHTING VEHICLE
AND ARMoured TRANSPORT VEHICLE LONG TERM

DESCRIPTION: DOCUMENT 6800/20 DATED 18 APR 62

1. The attached document is referred to: I CGS - 2 ✓

CDRB - 1

2. It is requested that action be taken by: FOR INFORMATION PLEASE.

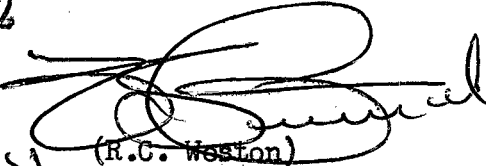
II DEP

3. Copies distributed by:

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MAY 3 1962

FSL/20465/dw

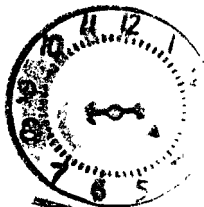

(R.C. Weston)

Air Commodore
for Chairman, Chiefs of Staff

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SUPREME HEADQUARTERS ALLIED POWERS EUROPE
PARIS, FRANCE

6800/20

18 April 1962

SUBJECT : Proposed NBMR for Armored Infantry Fighting Vehicle (A.I.F.V.)
and Armored Transport Vehicle (A.T.V.), Long Term

TO : Chairman
Standing Group
North Atlantic Treaty Organization
The Pentagon
Washington 25, D. C., U. S. A.

1. Attached hereto is a Proposed NBMR for an Armored Infantry
Fighting Vehicle (A.I.F.V.), and an Armored Transport Vehicle (A.T.V.).

2. The length of both proposed NBMR's made telegraphic transmission
unfeasible.

FOR THE SUPREME ALLIED COMMANDER EUROPE:

1 Enclosure:
Proposed NBMR, SHAPE, 6800/20,
Subject: Proposed NBMR for
Armored Infantry Fighting
Vehicle (A.I.F.V.) and Armored
Transport Vehicle (A.T.V.) Long Term

B. Mueller-Hillebrand
B. MUELLER-HILLEBRAND
Lt Gen, German Army
Deputy Chief of Staff
Plans and Policy

DISTRIBUTION:
(See Page 2)

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6800/20, subject: Proposed NBMR for Armored Infantry Fighting Vehicle
(A.I.F.V.) and Armored Transport Vehicle (A.T.V.)
Long Term.

<u>DISTRIBUTION</u>	<u>English</u>	<u>French</u>
<u>ACTION:</u>		
SGN	21	9
<u>INFORMATION: (All Information with Inclosures attached)</u>		
SGREP	7	2
AGARD	7	2
SEC/GEN NATO (Thru: SGREP)	7	2
NATO SCIENCE ADVISOR	5	2
MOD BELGIUM	3	4
MOD CANADA	7	-
MOD DENMARK	4	-
MOD FRANCE	1	10
MOD GERMANY	4	1
MOD GREECE	5	2
MOD ITALY	9	4
MAF LUXEMBOURG	2	1
MOD NETHERLANDS	6	-
MOD NORWAY	4	-
MOD PORTUGAL	1	2
MOD TURKEY	10	4
MOD UNITED KINGDOM	28	-
SECDEF UNITED STATES	23	-
NMR (SHAPE) BELGIUM	2	2
NMR (SHAPE) CANADA	4	-
NMR (SHAPE) DENMARK	2	-
NMR (SHAPE) FRANCE	2	4
NMR (SHAPE) GERMANY	1	-
NMR (SHAPE) GREECE	2	-
NMR (SHAPE) ITALY	2	2
NMR (SHAPE) LUXEMBOURG	-	1
NMR (SHAPE) NETHERLANDS	2	-
NMR (SHAPE) NORWAY	2	-
NMR (SHAPE) PORTUGAL	2	2
NMR (SHAPE) TURKEY	2	1
NMR (SHAPE) UNITED KINGDOM	3	-
NMR (SHAPE) UNITED STATES	5	-
SACLANT	5	5
CINCHAN	5	5
CINCNORTH	5	5
CINCENT	5	5
CINCSOUTH	5	5
CINCFMED	5	5
SHAPE:		
SACEUR	1	1
DSACEUR	1	-
AIRDEP	1	-
COFS	1	-
DCLA	1	1
DCO	1	-
OSCAD	2	1
DCPANDP	1	-
SECY	4	1
AIROPS	3	-
ADEF	3	1
INTEL	2	1
LOG	3	1
OANDT	2	-
PANDP	3	1
PROG	1	1
SIG	3	1
EXNMR	1	-
AG CEN REC	2	2
TOTAL	251	99

FRENCH TRANSLATION FOLLOWS.

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6800/20

PROPOSED NBMR FOR ARMORED INFANTRY FIGHTING VEHICLE (A.I.F.V.)

AND

ARMORED TRANSPORT VEHICLE (A.T.V.)

LONG TERM

I. INTRODUCTION

1. SHAPE has reviewed the problem of APC's Post 1970.
2. SHAPE considers that there is a requirement for two types of infantry carriers.
 - a. An Armored Infantry Fighting Vehicle capable of operating with tanks throughout the entire battlefield area.
 - b. An Armored Transport Vehicle having lower requirements and designed for multiple functions.

II. PROPOSED NBMR FOR AN ARMORED INFANTRY FIGHTING VEHICLE (A.I.F.V.)

A. GENERAL.

1. SHAPE considers that there is a need for an A.I.F.V. for Allied Command Europe Forces Post 1970 having the greatest possible superiority in every respect over present similar designs.
2. The tactical concept for such a design must be based on the operational concept Post 70 (see Letter, SHAPE, 6800/20, Subject: Study on an Operational Concept Post 1970, Including an Estimation of Major Long Term Scientific and Technical Trends with Regard to Tank Development, and Proposed Statement of an NBMR on Long Term Main Battle Tank (Post 1970), dated 8 February 1962), emphasizing the requirement to combine infantry combat support capability for tanks, since tanks will rarely fight independently.
3. This combat vehicle (Post 70) must be capable of operating effectively on the nuclear battlefield and in an environment of electronic, chemical, biological as well as conventional warfare.
4. A Post 70 A.I.F.V. should include the most advanced technological development.
5. It must be capable of operating under a wide-variety of weather, climate, and terrain conditions and within the complex military geographical conditions of ACE's areas.

B. TASK

1. The armored infantry fighting vehicle's main task is to operate with tanks throughout the entire battlefield area providing continuous mobile combat support for the tanks.
2. It must give the infantry the capability to fight mounted or to switch to dismounted action, and vice versa very rapidly. It must be able to operate in all phases of land combat in both nuclear and

Enclosure 1 to Letter SHAPE 6800/20, Subject: Proposed NBMR for Armored Infantry Fighting Vehicle (A.I.F.V.) and Armored Transport Vehicle (A.T.V.), dated 18 April 1962 (5 pages)

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non-nuclear warfare. It should provide rapid and continuous readiness of action which is one of its decisive characteristics.

C. CAPABILITIES

Carrying Capability and Firepower

1. The crew—normally an infantry section—must be able to fight while mounted on the vehicle with all their individual weapons against ground targets and against low performance, low-flying aircraft and helicopters. The capability of the crew for mounted fighting or changing to dismounted action and back must be of high degree.

2. The A.I.F.V. must be armed with a weapon capable of delivering intimate fire for the armored combat forces. It should also be capable of supporting dismounted infantry actions as well as having an anti-aircraft capability against low flying, low performance aircraft and helicopters.

This weapon must be capable of delivering a high volume of accurate fire against personnel, material, and weapons with limited armored protection which can be engaged at ranges greater than that of Soviet heavy machine guns (presently 14.5mm).

The weapon must be capable of switching the fire rapidly from one target to another under adverse terrain conditions and must be effective at night and under conditions of reduced visibility.

3. Observation and sighting devices to provide the capability of observing and firing first are required.

D. MOBILITY.

1. Insofar as mobility is concerned the A.I.F.V. must have, relative to its configuration, the similar capabilities to the tank. It must have a high cross-country mobility under all weather conditions including the capability of operating at night and under conditions of reduced visibility.

2. It must have significant sustained combat capability. Generally it must be able to operate for periods up to 24 hours (500 kilometers cross-country cruising range without refuelling and maintenance).

3. This A.I.F.V. must be readily maneuverable with quick acceleration, small turning radius and short stopping distances. The road speed should be higher than that of existing A.I.F.V.s. Every feasible method should be employed to reduce the noise created by operating A.I.F.V.s (desired).

4. It should be amphibious. Both a strategic and tactical air transport capability are necessary.

5. Automatic continuous position finding must be provided. It must be capable of unrestricted rail movement within the international gauge.

E. PROTECTION.

1. The future A.I.F.V. must not only be provided with conventional armored protection but must have the ability to gain additional protection by maneuverability, acceleration, and deceleration, readiness of fire, and the provision of highly effective viewing devices.

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2. Commensurate with the attainment of other required characteristics the size of the A.I.F.V. should be as small as practicable, with emphasis on a low silhouette.

3. Armored protection must be limited to essentials commensurate with the A.I.F.V.'s mission within the armored combat forces. The protection must be adequate to assure survival on the battlefield when operating with tanks. Special consideration must be given to mine protection.

4. NBC identification system must be built into the A.I.F.V. NBC protection should be built in to the greatest extent possible. The A.I.F.V. must be provided with a self-contained method of generating its own smoke screen quickly. A built-in fire extinguisher system is required.

5. A means of significantly reducing the vulnerability of the A.I.F.V. to enemy electronic detection is desirable.

6. The ability to detect infra-red illumination of the vehicle is essential. A means to detect radar is desirable.

F. COMMUNICATION.

A reliable means of communication between A.I.F.V. and tanks and other arms (dismounted infantry) of the armored combat team must be provided.

G. MAINTENANCE.

1. Significant improvement must be made toward a reduction in maintenance. Maintenance operations in the field must be simple, easy to perform and as far as possible, within the capability of the A.I.F.V. crew.

2. Significant improvement must be made in obtaining greater reliability and service life of components.

H. MISCELLANEOUS.

1. The basic construction of the vehicle should be designed to be used for an armored reconnaissance vehicle, transportation of infantry crew served weapons and other support weapons, and for supply transportation in the combat zone.

2. Maximum use should be made of standard parts interchangeable with other contemporary army material.

3. Great attention must be paid to all factors affecting the comfort and efficiency of the crew and reduction of stresses imposed upon them.

III. PROPOSED NBMR FOR AN ARMORED TRANSPORT VEHICLE (A.T.V.)

A. GENERAL

1. The type of vehicle outlined under Part II is essentially for the purpose to operate with armored formation. Not all ground forces need the same complex and highly technical equipment.

NATO SECRET

2. SHAPE proposes, therefore, an NBMR for an Armored Transport Vehicle (A.T.V.) with lower requirements. This vehicle would be employed by infantry units other than those cooperating with tanks. The A.T.V. should be capable of being used for other purposes such as weapon carriers, command vehicles, armored ambulances, armored signals, load carriers, etc., and to be used in those areas and with organizations where requirements are less than those of the armored infantry fighting vehicle.

3. This A.T.V. could be based partially on civilian production which would make mass production of it easier and cheaper.

B. TASK

To provide the infantry with armored protected transport to and on the battlefield area. Also to provide armor protected transport for multiple tasks such as weapon carriers, command vehicles, armored ambulances, armored signals, cargo carriers and for formations of those organizations where the requirements can be reduced.

C. CAPABILITIES

1. The A.T.V. must be capable of bringing troops--normally an infantry section--to and on the battlefield with adequate protection. The A.T.V. must possess a main weapon capable of all-around fire against ground targets, and anti-aircraft fire against low-flying, low-performance aircraft and helicopters.

2. It must permit passengers the ability to fire most of their individual weapons from inside the vehicle while essentially still being protected.

3. The A.T.V. must be air-transportable.

4. It should have a high degree of cross-country mobility including the capability of operating at night and under conditions of reduced visibility.

5. It must have a high speed on roads, and it must be amphibious.

6. The A.T.V. should have a cruising range of 500 kilometers cross-country without refueling and maintenance.

7. Adequate protection should be provided against overhead and ground bursts from light artillery, rifle and light machine guns. Special consideration must be given to mine protection. Protection against NBC agents should be provided to the extent feasible.

8. Ease of loading and unloading personnel and cargo must be afforded.

9. The basic article must be capable of easy conversion to perform multiple tasks prescribed in Para III, A above, by the addition of kits.

10. Multi-fuel engines are required.

11. The A.T.V. must be simple to operate, reliable and easy to maintain.

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12. Maximum use should be made of standard parts and interchangeable with other contemporary army equipments.

13. Mass-production of the basic carrier is essential.

14. The A.T.V. should be provided with a self-contained method of generating its own smoke screen quickly. A built-in fire extinguisher system is necessary.

15. The A.T.V. should be capable of being used as a tractor for towing loads.

M E M O R A N D U M

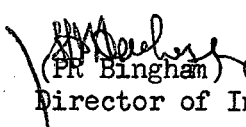
HQC 1235-6-6-5 TD 2197
(D Inf)

18 Jul 62

DEP

Proposed NBMR for Armoured Infantry Fighting Vehicle
and Armoured Transport Vehicle Long Term
Document 6800/20 dated 18 Apr 62

1. Reference DEP memorandum dated 7 May 62 requesting D Inf comments on this proposal.
2. Remarks are related to NBMR paragraphs:
 - a. Para I. 1. As a principle Infantry can not support the philosophy of two basic light armoured fighting vehicles under the concept suggested in this document. Infantry must be flexible and capable of adapting to any situation with the minimum delay. This would not be possible under the theory outlined in this paper. An armoured vehicle for strictly transport of stores based on a common APC chassis as now planned with the BOBCAT is a different proposition and is quite acceptable.
 - b. Para II. A. D Inf agrees with the need for an improved APC in this period along the lines stated.
 - c. Para II. D. 4. D Inf feels that the AIFV must be amphibious. The inference here is one of "may". The AIFV must also have a faster swimming speed and improved water entrance and exit competence, i.e. some device or means of scaling higher river or canal banks than is now possible.
 - d. Para II. H. 1. (1) The basic construction should also be designed to cater for use as a command post and cargo carrier.
(2) A multi-fuel engine should be considered.
 - e. Para III. D Inf disagrees with the concept outlined for Infantry for reasons stated above. However other Corps that do not require the same standard of flexibility, on vehicle fighting capabilities, close tank cooperation may accept such a vehicle as the one described.


(PR Bingham) Colonel
Director of Infantry



CONFIDENTIAL

IN REPLY PLEASE QUOTE
RCSI 7687 - APC BOBCAT
NO.

T40

Department of National Defence
Army

THE ROYAL CANADIAN SCHOOL OF INFANTRY
CAMP BORDEN Ont 11 Jul 1962


Army Headquarters
Department of National Defence
OTTAWA 4, Ontario

Attention: Director of Infantry

15 INF
JUL 13 1962
1235-6-6-5
Chgt OGP

Armoured Infantry Fighting Vehicles

1. Reference is made to HQ 1235-6-6-5 (D Inf) dated 28 Jun 62.
2. It is agreed that certain NATO countries may have a requirement for a second infantry carrier (Armoured Transport Vehicle) having lower requirements than the Armoured Infantry Fighting Vehicle used by infantry normally employed with tanks.
3. The policy for Canadian Infantry in the post-1970 period is not yet clearly defined, but whatever components exist as pure infantry or as part of Close Combat Groups (inf, armd and arty), it is considered that we should continue to support the policy of one armoured carrier capable of being employed as:
 - a. APC (Inf)
 - b. Armd Carrier (SEV Wpns)
 - c. Armd Command Post
 - d. Armoured Load Carrier
4. Certain other corps may well be able to accept an Armoured Transport Vehicle of the type mentioned in the NATO Basic Military Requirement paper. These vehicles may not need the same performance capabilities as the APC (Inf), or all the special equipment, such as Navaid and Infrared.


(RJ Wilkinson)
Lieutenant Colonel
Acting Commandant

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→ HQ 1235-6-6-5 (D Inf)
D Inf INF 70.1-1

ARMY HEADQUARTERS,
, Ont., 28 Jun 62.

Commandant,
The Royal Canadian School of Infantry,
Camp Borden, Ontario.

Armoured Infantry Fighting Vehicles - Long Term
NATO Basic Military Requirement (NBMR)

1. Attached is a copy of a proposed NBMR for future, post 1970, infantry and transport armoured vehicles.
2. It is requested that the proposed document be studied and any comments that you may have be forwarded to D Inf by not later than 16 Jul 62.
3. You are particularly requested to comment on the feasibility of having two types of armoured vehicles for operational purposes in the battalion. Reference Part III A and B.

(PR Bingham) Colonel
Director of Infantry

Att (1)

RJM/4-9025/fd

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JUL 1971

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PROPOSED NEMR FOR ARMORED INFANTRY FIGHTING VEHICLE (A.I.F.V.)

AND

ARMORED TRANSPORT VEHICLE (A.T.V.)

LONG TERM

I. INTRODUCTION

1. SHAPE has reviewed the problem of APC's Post 1970.

a. SHAPE considers that there is a requirement for two types of infantry carriers.

a. An Armored Infantry Fighting Vehicle capable of operating with tanks throughout the entire battlefield area.

b. An Armored Transport Vehicle having lower requirements and designed for multiple functions.

II. PROPOSED NEMR FOR AN ARMORED INFANTRY FIGHTING VEHICLE (A.I.F.V.)

A. GENERAL.

1. SHAPE considers that there is a need for an A.I.F.V. for Allied Command Europe Forces Post 1970 having the greatest possible superiority in every respect over present similar designs.

2. The tactical concept for such a design must be based on the operational concept Post 70 (see Letter, SHAPE, 6800/20, Subject: Study on an Operational Concept Post 1970, Including an Estimation of Major Long Term Scientific and Technical Trends with Regard to Tank Development, and Proposed Statement of an NEMR on Long Term Main Battle Tank (Post 1970), dated 8 February 1962), emphasizing the requirement to combined infantry combat support capability for tanks, since tanks will rarely fight independently.

3. This combat vehicle (Post 70) must be capable of operating effectively on the nuclear battlefield and in an environment of electronic, chemical, biological as well as conventional warfare.

4. A Post 70 A.I.F.V. should include the most advanced technological development.

5. It must be capable of operating under a wide-variety of weather, climate, and terrain conditions and within the complex military geographical conditions of ACE's areas.

B. TASK

1. The armored infantry fighting vehicle's main task is to operate with tanks throughout the entire battlefield area providing continuous mobile combat support for the tanks.

2. It must give the infantry the capability to fight mounted or to switch to dismounted action, and vice versa very rapidly. It must be able to operate in all phases of land combat in both nuclear and

Enclosure 1 to Letter SHAPE 6800/20, Subject: Proposed NEMR for Armored Infantry Fighting Vehicle (A.I.F.V.) and Armored Transport Vehicle (A.T.V.), dated 18 April 1962 (5 pages)

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non-nuclear warfare. It should provide rapid and continuous readiness of action which is one of its decisive characteristics.

G. CAPABILITIES

Carrying Capability and Firepower

1. The crew--normally an infantry section-- must be able to fight while mounted on the vehicle with all their individual weapons against ground targets and against low performance, low-flying aircraft and helicopters. The capability of the crew for mounted fighting or changing to dismounted action and back must be of high degree.

2. The A.I.F.V. must be armed with a weapon capable of delivering intimate fire for the armored combat forces. It should also be capable of supporting dismounted infantry actions as well as having an anti-aircraft capability against low flying, low performance aircraft and helicopters.

This weapon must be capable of delivering a high volume of accurate fire against personnel, material, and weapons with limited armored protection which can be engaged at ranges greater than that of Soviet heavy machine guns (presently 14.5mm).

The weapon must be capable of switching the fire rapidly from one target to another under adverse terrain conditions and must be effective at night and under conditions of reduced visibility.

3. Observation and sighting devices to provide the capability of observing and firing first are required.

D. MOBILITY

1. Insofar as mobility is concerned the A.I.F.V. must have, relative to its configuration, the similar capabilities to the tank. It must have a high cross-country mobility under all weather conditions including the capability of operating at night and under conditions of reduced visibility.

2. It must have significant sustained combat capability. Generally it must be able to operate for periods up to 24 hours (500 kilometers cross-country cruising range without refuelling and maintenance).

3. This A.I.F.V. must be readily maneuverable with quick acceleration, small turning radius and short stopping distances. The road speed should be higher than that of existing A.I.F.V.s. Every feasible method should be employed to reduce the noise created by operating A.I.F.V.s (desired).

4. It should be amphibious. Both a strategic and tactical air transport capability are necessary.

5. Automatic continuous position finding must be provided. It must be capable of unrestricted rail movement within the international gauge.

E. PROTECTION.

1. The future A.I.F.V. must not only be provided with conventional armored protection but must have the ability to gain additional protection by maneuverability, acceleration, and deceleration, readiness of fire, and the provision of highly effective viewing devices.

NATO SECRET

2. Commensurate with the attainment of other required characteristics the size of the A.I.F.V. should be as small as practicable, with emphasis on a low silhouette.

3. Armored protection must be limited to essentials commensurate with the A.I.F.V.'s mission within the armored combat forces. The protection must be adequate to assure survival on the battlefield when operating with tanks. Special consideration must be given to mine protection.

4. NBC identification system must be built into the A.I.F.V. NBC protection should be built in to the greatest extent possible. The A.I.F.V. must be provided with a self-contained method of generating its own smoke screen quickly. A built-in fire extinguisher system is required.

5. A means of significantly reducing the vulnerability of the A.I.F.V. to enemy electronic detection is desirable.

6. The ability to detect infra-red illumination of the vehicle is essential. A means to detect radar is desirable.

F. COMMUNICATION.

A reliable means of communication between A.I.F.V. and tanks and other arms (dismounted infantry) of the armored combat team must be provided.

G. MAINTENANCE.

1. Significant improvement must be made toward a reduction in maintenance. Maintenance operations in the field must be simple, easy to perform and as far as possible, within the capability of the A.I.F.V. crew.

2. Significant improvement must be made in obtaining greater reliability and service life of components.

H. MISCELLANEOUS.

1. The basic construction of the vehicle should be designed to be used for an armored reconnaissance vehicle, transportation of infantry crew served weapons and other support weapons, and for supply transportation in the combat zone.

2. Maximum use should be made of standard parts interchangeable with other contemporary army material.

3. Great attention must be paid to all factors affecting the comfort and efficiency of the crew and reduction of stresses imposed upon them.

III. PROPOSED NAME FOR AN ARMORED TRANSPORT VEHICLE (A.T.V.)

A. GENERAL

1. The type of vehicle outlined under Part II is essentially for the purpose to operate with armored formation. Not all ground forces need the same complex and highly technical equipment.

NATO SECRET

2. SHAPE proposes, therefore, an NHR for an Armored Transport Vehicle (A.T.V.) with lower requirements. This vehicle would be employed by infantry units other than those cooperating with tanks. The A.T.V. should be capable of being used for other purposes such as weapon carriers, command vehicles, armored ambulances, armored signals, load carriers, etc., and to be used in those areas and with organizations where requirements are less than those of the armored infantry fighting vehicle.

3. This A.T.V. could be based partially on civilian production which would make mass production of it easier and cheaper.

B. TASK

To provide the infantry with armored protected transport to and on the battlefield area. Also to provide armor protected transport for multiple tasks such as weapon carriers, command vehicles, armored ambulances, armored signals, cargo carriers and for formations of those organizations where the requirements can be reduced.

C. CAPABILITIES

1. The A.T.V. must be capable of bringing troops--normally an infantry section--to and on the battlefield with adequate protection. The A.T.V. must possess a main weapon capable of all-around fire against ground targets, and anti-aircraft fire against low-flying, low-performance aircraft and helicopters.

2. It must permit passengers the ability to fire most of their individual weapons from inside the vehicle while essentially still being protected.

3. The A.T.V. must be air-transportable.

4. It should have a high degree of cross-country mobility including the capability of operating at night and under conditions of reduced visibility.

5. It must have a high speed on roads, and it must be amphibious.

6. The A.T.V. should have a cruising range of 500 kilometers cross-country without refueling and maintenance.

7. Adequate protection should be provided against overhead and ground bursts from light artillery, rifle and light machine guns. Special consideration must be given to mine protection. Protection against NBC agents should be provided to the extent feasible.

8. Ease of loading and unloading personnel and cargo must be afforded.

9. The basic article must be capable of easy conversion to perform multiple tasks prescribed in Para III, A above, by the addition of kits.

10. Multi-fuel engines are required.

11. The A.T.V. must be simple to operate, reliable and easy to maintain.

NATO SECRET

12. Maximum use should be made of standard parts and interchangeable with other contemporary army equipments.

13. Mass-production of the basic carrier is essential.

14. The A.T.V. should be provided with a self-contained method of generating its own smoke screen quickly. A built-in fire extinguisher system is necessary.

15. The A.T.V. should be capable of being used as a tractor for towing loads.

NATO SECRET

6-6-5
6-6-13

FILE: S 2-5105-AC/174
S 2-5105-AC/176

DOCUMENT CONFIDENTIAL
CLASSIFICATION:

DATE: 3 July 1962

Address Reply to:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29. (1)

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/174 - Battle Tanks
AC/176 - Armoured Personnel Carrier

- (a) CANAC Numbered Letter N-802 dated 15 June 1962 to External
(b) NATO Document AC/41-D/30 dated 13 June 1962
(of interest to AC/174 and AC/176 Groups)

1. The attached document is referred to: CGS (2)

CDRB

2. It is requested that action be taken by: CGS - Papers to be made
available to Canadian
Representatives on
AC/176 Group, please

3. Copies distributed to:

(2)
EP2A
1. To non MS 7/14/62
2. Copies to D Armour and
DEE (2 copies)
3. Copy PA'd to 1235-6-6-13 file
(Main Battle Tank) for record purposes.
45/62

J. C. Outram
J.C. Outram
Secretary

Principal Supply Officers Committee
2-8403 "C" 2334

DEPARTMENT OF EXTERNAL AFFAIRS, CANADA. (DUPLICATE)
NUMBERED LETTER

TO: THE UNDER-SECRETARY OF STATE FOR
EXTERNAL AFFAIRS, OTTAWA, CANADA.

FROM: The Canadian Delegation to the
North Atlantic Council, Paris

Reference: Your telegram DL-1205 of Sept 27/61
Subject: AC/41 - Group of Experts on Materials
and Manufacturing Techniques for Weapons
(formerly the Group of Experts on Steel for
Weapons)

CONFIDENTIAL
Security:.....
No:..... N-802
Date:..... June 15, 1962
Enclosures:.....
Air or Surface Mail:..... AIR
Post File No:..... 9/22

Ottawa File No.	

References

Would you kindly draw to the attention of the Canadian representatives on this Group copies of document AC/41-D/30 of June 13, going forward to you under transmittal slip 3837. It contains a proposal by the Chairman of the Group for the setting up of two Sub-Groups to undertake certain studies of interest to the AC/174 Group on Battle Tanks and the AC/176 Group on Armoured Personnel Carriers. The Canadian representatives on this latter Group in particular may also wish to be informed of this initiative by the AC/41 Group.

Internal
Circulation

P. SOLLY-FLOOD
The Delegation.

Distribution
to Posts

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE N° 9
COPY

ORIGINAL: FRENCH
13th June, 1962

NATO CONFIDENTIAL
DOCUMENT
AC/41-D/30

GROUP OF EXPERTS ON MATERIALS AND MANUFACTURING TECHNIQUES FOR WEAPONS, ARMOUR AND GUN-BARREL WEAR

Memorandum by the Chairman

It is thought that the Experts are aware that various Groups, called "Ad Hoc Mixed Working Groups" because they comprise both technicians and military representatives, have been set up to study possibilities for the joint manufacture, on the basis of equipment already in existence, under development, or still in the early stages of research, of standard equipment for which there is a NATO military requirement.

On several occasions, two of these Groups, the Ad Hoc Mixed Working Group on Battle Tanks and the Ad Hoc Mixed Working Group on Armoured Personnel Carriers, have broached the question of armour and that of gun-barrel life, but, in order to pursue their work, they asked to be given further information on the progress achieved in these specialised fields.

Both problems are clearly within the province of our Group, which should take necessary steps to ensure that these Ad Hoc Working Groups receive the most recent information on these matters. As regards barrel-wear, although the Group included a survey of this question in AC/41-D/19, it goes back to 1959 and could with advantage be brought up to date so as to take account of the high performances which recent developments in guns and ammunition require. As regards armour, the Group has already made known its intention of tackling this problem.

I therefore propose that two Sub-Groups be set up, i.e:

AC/41-(SGI) - Armour (all types)
Blindages (tous types)

AC/41-(SGII) - Increase of gun-barrel life
Prolongement de la vie des tubes.

NATO CONFIDENTIAL

NATO CONFIDENTIAL
AC/41-D/30

-2-

However, to conduct these studies satisfactorily, specialists appointed to these Sub-Groups should be able to communicate and discuss the most recent results obtained in their respective countries. They should be in a position to give a general account of the latest advances with information on the trend of research so that, in the not-so-far distant future, the Main Group may present a report on likely post-1970 achievements able to provide the Ad Hoc Working Groups with the detailed technical characteristics they are called upon to formulate for the manufacture of the equipment envisaged.

I should like, as soon as possible, to have the views of the members of our Group on the points referred to above. If this proposal is approved, I will suggest at our next meeting presumably to be held in October, 1962, that, in view of the desirability of maintaining the restrictive character of these Sub-Groups, qualified representatives of France, the German Federal Republic, the United Kingdom and the United States should be assigned to these Sub-Groups, it being understood that any other country able to make a contribution to their work and wishing to participate in it would be invited to join them.

As contact with the Experts of these Ad Hoc Working Groups may prove desirable, I have listed names hereunder for information:

	<u>AC/176</u>	<u>AC/174</u>
	<u>Armoured Personnel Carriers</u>	<u>Main Battle Tanks</u>
<u>Belgium</u>	Major BASTOGNE	Major BASTOGNE
<u>Canada</u>	Lt. Colonel J.F. OWENS	
<u>France</u>	Colonel JOURNES	Colonel JOURNES
<u>German Federal Republic</u>	Colonel D. NÄHRING	Colonel D. NÄHRING
<u>Italy</u>		Lt. Colonel GALLENI
<u>Netherlands</u>	Major T.A. van ZANEN	Major E. GRUTZMACHER
<u>United Kingdom</u>	Major General K. G. COOPER	Major General K.C. COOPER
<u>United States</u>	Colonel R.H. WHITE	Colonel M.S. DAVISON

(Signed) C. A. LAMBERTS

OTAN/NATO,
Paris, XVIIe.

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-33-

NATO SECRET
ANNEX VIII to
AC/74-D/635

ARMoured PERSONNEL CARRIER
(AC/176)

1. An Ad Hoc Mixed Working Group on an Armoured Personnel Carrier (AC/176) was set up by the Armaments Committee on 24th June, 1960. The countries participating in this work are Belgium, Canada, France, Germany, the Netherlands, the United Kingdom and the United States, as well as the NATO military authorities and the International Staff.

2. The original object of this Group was to examine the possibilities of, and if subsequently so directed by the Armaments Committee, to implement a co-operative project for a NATO Armoured Personnel Carrier. The terms of reference were so phrased as to cover either a tracked or a wheeled vehicle already in design or under development.

3. No NATO Basic Military Requirement (NBMR) was in existence when the Group began its work. It became immediately apparent that at least five countries already had designs in late stages of development or in series production, and that there were considerable differences between the types and their planned operational use. It would not be possible therefore in the short-term for any one common type to be produced.

4. At its second meeting in February 1961, the Group therefore decided that there was nothing to be done in the short-term, and that it should concentrate its efforts immediately on a completely new type of equipment to be produced by 1970-72. The Armaments Committee, supporting this view, agreed that the Group should initiate a co-ordinated study for the development of a long-term equipment, and revised the terms of reference accordingly. The Standing Group were at the same time invited to formulate an NBMR for such an armoured personnel carrier, as NBMR-10, which was issued on 27th April, 1961 relates only to short-term equipment.

5. The next action to be taken by the AC/176 Group is dependent upon the position to be adopted by the NATO military authorities, who are still considering the question of a NBMR for the long-term.

6. Conclusion: It is difficult therefore, at this moment, to assess the prospects of the Group with any accuracy. It is clear that there is a long-term requirement for an armoured personnel carrier to be brought into service in the nineteen-seventies. Every effort should naturally be made to see that there should be a single standard NATO design and co-ordinated development and production of that design. To this end, it is important that nations reach early agreement on the operational concept for such a vehicle.

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NATO SECRET
ANNEX VIII to
AC/74-D/635

-34-

7. Action proposed: The Group will continue in existence and direct its work on the long-term project in the light of the awaited NBMR and any other recommendations to be produced by the NATO military authorities.

NATO SECRET

-34-

000034

FILE: S 2-5105-AC/176

DOCUMENT RESTRICTED
CLASSIFICATION:

DATE: 20 Feb 62

Address Reply to:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

- (a) CCOS Memo to DDP dated 13 Feb 62
- ✓(b) Tele DL 351 dated 15 Feb 62 from External to NATO Paris
- ✓(c) CANAC Tele 417 dated 16 Feb 62 to External

1. The attached document is referred to: → CGS - 2 of (a); 4 of (b),(c)
CDRB - 1 of (a); 2 of (b),(c)

2. It is requested that action be taken by: FOR INFORMATION, please

3. Copies distributed to:

②
EP 2A
1. To note the M. 21 Feb 62
2. 3 copies of (b) and (c) and 1 copy of (a)
to DSE
J. C. Outram

J. C. Outram
(J.C. Outram)
Secretary
Principal Supply Officers Committee
6-8403 "C" 2334

Our file ref. CSC 2155-6
(S0/186)....



DEPARTMENT OF NATIONAL DEFENCE

JOINT STAFF

RESTRICTED

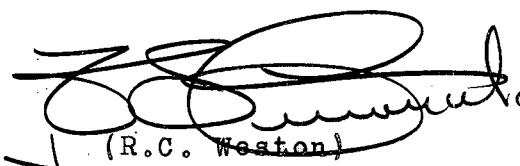
OTTAWA, 13 Feb 62.

ADDRESS REPLY TO
CHAIRMAN
CHIEFS OF STAFF,
OTTAWA

Deputy Minister,
Department of Defence Production,
No. 2 Temporary Building,
OTTAWA.

RDP - AC/176 - Armoured Personnel Carrier

1. Further to our letter of even file dated 11 Dec 61 and your tele DL 1676 dated 12 Dec 61 and NATO Paris tele 3667 dated 13 Dec 61.
2. It would be appreciated if you would ask the Delegation if a firm date has been established for the next meeting of the AC/176 group.


(R.C. Weston)
Air Commodore
for Chairman, Chiefs of Staff

FSL/20465/dw

cc: Secy PSOC - 4

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RESTRICTED

AC Paraphrase
not required.
No unclassified
reply or reference.

FM EXTERNAL OTT FEB15/62 RESTD

TO NATOPARIS DL351 PRIORITY

INFO CCOS DM/DND

REF YOURTEL 3367 DEC13

RDP-AC/176 - ARMOURED PERSONNEL CARRIER

WE OF COURSE ARE RELYING ON YOU TO INFORM US OF FIRM DATES FOR
SUBJECT MTG. HOWEVER, FOR PLANNING PURPOSES, COULD YOU OBTAIN EVEN
A TENTATIVE DATE FROM INTERNATIONAL STAFF.

513/16 FEB 62

RESTRICTED

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RESTRICTED

AC Paraphrase
not required.
No unclassified
reply or reference.

FM NATOPARIS FEB16/62 RESTD

TO EXTERNAL 417

INFO CCOS CJS(L)

TT DM/DND FM CCOS

DM/DDP OTT FM OT

REF YOURTEL DL351 FEB15

RDP-AC/176-ARMoured PERSONNEL CARRIER

ACCORDING TO THE INTERNATIONAL STAFF THE TIMING OF THE NEXT MTG
DEPENDS ENTIRELY ON THE PROVISION OF AN NBMR FOR THE LONG TERM.

THE INTERNATIONAL STAFF DO NOT RPT NOT THINK THAT THE NEXT MTG
CAN TAKE PLACE BEFORE JUL AT THE EARLIEST AND IT MAY EVEN BE LATER.

WE WILL INFORM YOU AS SOON AS WE HAVE SOMETHING MORE DEFINITE
TO REPORT.

550/16 FEB 62

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HQS 1235-6-6-5 (DEP 2a)

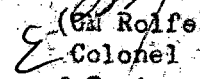
ARMY HEADQUARTERS
OTTAWA, Ont., 6 Dec 61

Secretary
Principal Supply Officers Committee

AREWCO on an Armoured Personnel Carrier AC/176

1. Reference is made to letter W-1425 forwarded under cover of your S 2-5105-AC/176 dated 9 Nov 61 which indicated the date of the next meeting which was postponed from Dec to late Jan 62.
2. Would you enquire whether or not a firm date has been set or, if not, what is the latest forecast.

FCJ/2-6509/gm


(Gen Rolfe)
Colonel
Director of Equipment Policy

FILE: S 2-5105-AC/176

DOCUMENT RESTRICTED
CLASSIFICATION:

DATE: 14 Dec 61

Address Reply to:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier
CANAC tele 3367 dated 13 Dec 61 to External

1. The attached document is referred to: *→* CGS (4)
CDRB (2)

FOR INFORMATION, please

2. It is requested that action be taken by: CGS - In reply to your memo
1235-6-6-5(DEP 2a) dated
6 Dec 61.

3. Copies distributed to:

EP 217
1. To note per
2. Two copies to OCS (Lt Col MacLean).
Noted M. MacLean
[Signature]
14 Dec 61

[Signature]
(J.C. Outram)
Secretary
Principal Supply Officers Committee
6-8403 "C" 2334

110

RESTRICTED

AC Paraphrase
not required.
No unclassified
reply or reference.

FM NATOPARIS DEC13/61 RESTD

TO EXTERNAL 3367 PRIORITY

INFO CCOS PRIORITY CJS(L)

TT DM/DND PRIORITY FM CCOS

DM/DDP OTT FM OTT

REF YOURTEL DL-1676 DEC12

RDP-AC/176-ARMoured PERSONNEL CARRIER

THE SECRETARY OF THE AC/176 GROUP HAS TOLD US THAT THE NEXT MEETING
WILL HAVE TO BE POSTPONED BEYOND LATE JAN TO MID FEB AT THE EARLIEST.
THE REASON FOR THIS FURTHER DELAY IS THE PREPARATION OF AN NBMR FOR
THE LONG TERM REQUIREMENT, WHICH THE STANDING GROUP HAVE PASSED TO
SHAPE FOR DRAFTING .IT IS CONSIDERED UNLIKELY THAT SHAPE CAN COMPLETE
THIS TASK IN TIME TO PERMIT THE MEETING OF THE GROUP BEFGRE MID FEB.
WE WILL ADVISE YOU IMMEDIATELY WHEN FIRM DALES FOR THE NEXT MEETING
ARE ESTABLISHED.

468/13 DEC 61

PRIORITY

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Document disclosed under

Document 000042 vert

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FILE: S 2-5105-AC/176

DOCUMENT RESTRICTED
CLASSIFICATION:

DATE: 13 Dec 61

Address Reply to:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

(a) CCOS Memo to DDP dated 11 Dec 61

(b) Tele DL 1676 dated 12 Dec 61 from External to NATO Paris

1. The attached document is referred to: → CGS - 2 of (a); 4 of (b)
CDRB - 1 of (a); 2 of (b)

2. It is requested that action be taken by: FOR INFORMATION, please

3. Copies distributed to:

(2)
EP 2A
1. To WSC MLI
2. One copy of (a) and two of (b)
sent to OEE
14 Dec 61

J. C. Outram
(J.C. Outram)
Secretary
Principal Supply Officers Committee
6-8403 "C" 2334

108

Our file ref. CSC 2155-6
(50/LOG).....



DEPARTMENT OF NATIONAL DEFENCE

JOINT STAFF

RESTRICTED

OTTAWA, 11 Dec 61.

ADDRESS REPLY TO
CHAIRMAN
CHIEFS OF STAFF,
OTTAWA

Deputy Minister,
Department of Defence Production,
No. 2 Temporary Building,
OTTAWA.

RDP - AC/176 - Armoured Personnel Carrier

1. Reference Nato Paris letter N-1425 dated 20 Oct 61.
2. It would be appreciated if you would ask the Delegation if a firm date has been established for the next meeting of the AC/176 group.
3. You will recall that the previously scheduled meeting for December 6-8, 1961 was postponed at least until the latter half of January 1962.

(R.C. Weston)
Air Commodore
for Chairman, Chiefs of Staff

FSL/2-0465/dw

cc: Secy PSOC - 4

(107)
000044

RESTRICTED

AC Paraphrase
not required.
No unclassified
reply or reference.

FM EXTERNAL OTT DEC12/61 RESTD

TO NATOPARIS DL1676 PRIORITY

INFO CCOS DM/DND

TT LDN(CJS)FM CCOS

REF YOURLET N1425 OCT20

RDP-AC/176-ARMoured PERSONNEL CARRIER

CAN YOU GIVE US A FIRM DATE FOR NEXT MEETING OF SUBJECT GROUP.

YOU WILL RECALL THAT MEETING SCHEDULED FOR DEC6-8, WAS POSTPONED
UNTIL AT LEAST LATTER HALF OF JAN, 1962.

431/13DEC61

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23

Address Reply:
The Chairman,
Chiefs of Staff,
Ottawa

File: GC 2413.3.5 (JPS/W)
Document Attach
Classification: SECRET
Date: 23 Nov 61

JOINT STAFF MEMORANDUM

Subject:

1961 Interim Annual Review - France

Description:

NATOPARIS 3149 dated 21 Nov 61

③

DEP

to see page 2. If the
French can do it, why
can't we?

1. The attached document is referred to:

CCOS
CAS
CGS
CNS

HHA PARKER
COLONEL
DMO & P

1 DEC 1961

D/CJS - file
CJS

④

2. It is requested that action be taken by:

for info

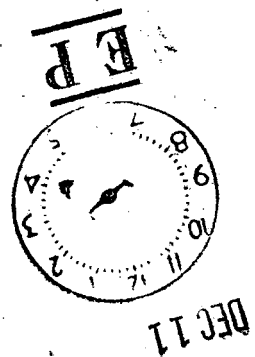
DMO & P
Ref Mem 3 - The French Govt
made a firm decision in
1950. a 5% to produce a vehicle
and have programmed of forward
it consistently
7 Dec 61.

RECEIVED
4/24 NOV 1961
DMO & P
Director
MO 2
MO 3

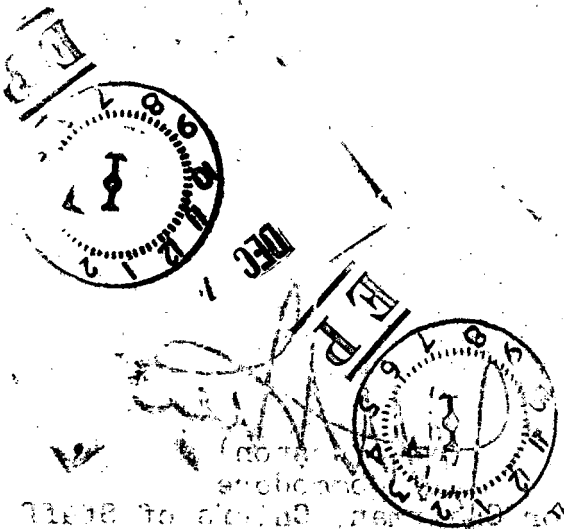
(Signature)
for Chairman, Chiefs of Staff

IAMc/2-2871/pm

61/000046



000047



SECRET

AC Paraphrase
not required. 55/93
No unclassified
reply or reference.

FM ●TOPARIS NOV21/61 SECRET

TO EXTERNAL 3149

INFO LDN WASHDC EMBPARIS CCOS CJS(W)

DM/DND FM CCOS

1961 INTERIM ANNUAL REVIEW-FRANCE

1.FRENCH EXAM TOOK PLACE ON NOV15.FRENCH PERMREF WAS SUPPORTED BY AN IMPRESSIVE ARRAY OF MILITARY OFFICERS AND CIVILIAN OFFICIALS INCLUDING NEW CHIEF OF STAFF OF THE ARMED FORCES GENERAL PUGET.

2.PN HIS OPENING STATEMENT FRENCH REP SAID THAT THERE WAS NO RPT NO CHANGE IN FRENCH DEFENCE POLICY.MILITARY EXPENDITURES REMAINED VERY HIGH AND WHILE A GOOD DEAL OF THIS MONEY WAS BEING USED TO KEEP ALGERIA QUOTE IN THE FREE WORLD UNQUOTE,EFFORTS WERE BEING MADE TO MODERNIZE THE FORCES AND TO PROVIDE A NUCLEAR CAPABILITY.THE COST OF BUILDING UP THE FORCE DE FRAPPE WOULD BE VERY HIGH MAKING IT EVEN MORE DIFFICULT TO IMPROVE THE CONVENTIONAL CAPABILITY OF FRENCH ARMY.FRENCH REP SAID THAT HE COULD NOW REPORT THAT DELIVERIES OF THE MIRAGE THREE HAD COMMENCED AND THAT THE FIRST ORDER WOULD BE COMPLETED BY END 1962.FURTHER ORDERS FOR THIS AIRCRAFT WOULD FOLLOW.AS A RESULT OF THE TENSION IN EUROPE FRENCH GOVT HAD RETURNED TWO DIVISIONS FROM ALGERIA AND HAD STATIONED THEM IN THE EASTERN PART OF FRANCE WHERE THEY WERE BEING RETRAINED AND REEQUIPPED.

3.TURNING TO THE SPECIFIC POINTS ON THE AGENDA FRENCH REP SAID THAT THE LACK OF NUCLEAR DELIVERY CAPABILITY FOR THE ARMY RESULTED FROM THE FACT THAT SAS SITES IN GERMANY HAD NOT RPT NOT BEEN COMPLETED.HOWEVER TWENTY HONEST JOHN LAUNCHERS WERE OPERATIONAL AND TWO MORE BATTERY S WERE IN TRAINING.FRENCH REP SAID THAT AN ARRANGEMENT WITH GERMAN ARMY WOULD PROVIDE FOR COMMON STORAGE OF WARHEADS.

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AC Paraphrase
not required.
No unclassified
reply or reference.

PAGE TWO 3149

4. GREGH ASKED ABOUT THE SHORTAGE OF MAJOR UNITS IN EUROPE. FRENCH REP REPLIED THAT THE SHORTAGE WAS CAUSED BY THE WAR IN ALGERIA WHERE FRENCH AUTHORITIES FELT THEY WERE MAKING A MAJOR CONTRIBUTION TO WESTERN DEFENCE. TWO DIVISIONS HAD BEEN RETURNED TO FRANCE HOWEVER AND MORE WOULD FOLLOW.

5. IN REPLY TO A QUESTION CONCERNING PERSONNEL FRENCH REP STATED THAT M-DAY DIVISIONS WERE NOW UP TO NEARLY 100 PERCENT. THIS HAD BEEN ACHIEVED BY EXTENDING CONSCRIPT SERVICE OF MEN IN UNITS IN GERMANY BY FROM 14 TO 18 MONTHS. EQUIPMENT FOR M-DAY UNITS WAS BEING IMPROVED IN THAT THEY WOULD HAVE AMONG OTHER THINGS 400 NEW APCs IN 1962 AND A FURTHER 400 IN 1963. IN ADDITION MOST OF THE COMMUNICATIONS EQUIPMENT WAS BEING REPLACED AND AS FAR AS THESE UNITS WERE CONCERNED MOST OF THE SHORTFALL IN EQUIPMENT WOULD BE ELIMINATED SHORTLY.

6. THE SG REP ASKED FOR INFO CONCERNING REPLACEMENT OF MEDIUM TANKS. THE FRENCH REP REPLIED THAT PILOT MODELS OF A NEW MEDIUM TANK WERE NOW BEING PRODUCED BUT THAT THE PRESENT TANK WAS IN GOOD SHAPE AND WOULD BE RETAINED FOR SOME TIME. NEW TYPE AMMUNITION WAS BEING PURCHASED FOR THIS EQUIPMENT. FRENCH WERE CARRYING ON JOINT STUDIES WITH GERMANY AND ITALY ON OTHER NEW TANKS AND THERE WOULD PROBABLY BE A COORDINATED PRODUCTION PROGRAMME.

7. CONCERNING THE NAVY FRENCH REP POINTED OUT THAT SHORTFALLS IN ESCORTS WERE DUE TO THE ASSIGNMENT OF A NUMBER OF THESE VESSELS TO NATIONAL COMMAND BUT THAT IN THE EVENT OF HOSTILITIES THESE SHIPS WOULD BE TURNED OVER TO SACLANT. THE SACLANT REP STATED THAT

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SECRET

AC Paraphrase
not required.
No unclassified
reply or reference.

PAGE THREE 3149

SACLANT WAS MOST GRATIFIED BY THE WAY IN WHICH FRENCH NAVY HAD FULFILLED ITS FORCE GOALS AND WITH THE QUALITY OF BOTH THE MEN AND SHIPS. FRENCH REP SAID THAT THE FRENCH NAVY WOULD OBTAIN MORE ASW HELICOPTERS IN 1962 AND THAT THEY WERE ATTEMPTING TO OBTAIN MORE ASW WEAPONS. MR GREGH ASKED FOR SOME INFO ON FRENCH NAVAL FORCES IN THE MEDITERRANEAN. HE POINTED OUT THAT THESE WERE NOW NATIONAL FORCES AND THAT NATO RECEIVED NO RPT NO INFO ABOUT THEM. FRENCH REP REPLIED BRIEFLY THAT FRENCH NAVAL FORCES IN THE MEDITERRANEAN WOULD BE QUOTE A UN UOTE CATEGORY WITHIN 48 HRS IN THE EVENT OF AN EMERGENCY.

8. TURNING TO THE AIR FORCE FRENCH REP REPORTED THAT THE FRENCH AUTHORITIES WERE TRYING TO IMPROVE THE SURVIVABILITY OF THEIR SQUADRONS BY THE USE OF DEPLOYMENT AIR FIELDS, SOME DISPERSAL, AND THEY WERE CONSIDERING THE POSSIBILITY OF HARDENING IN THE FUTURE. FRENCH HAD RECENTLY SIGNED AN AGREEMENT WITH USA FOR PROVISION OF ATOMIC WEAPONS FOR FRENCH AIRCRAFT STATIONED IN GERMANY. WARHEADS WOULD ALSO BE PROVIDED FOR THE TWO NIKE MISSILE UNITS IN GERMANY. SOME DELAY IN THE ACQUISITION OF WARHEADS WOULD PROBABLY RESULT FROM THE FACT THAT STORAGE DEPOTS WERE NOT RPT NOT READY YET.

9. FRENCH REP REPORTED THAT THE FOLLOWING MEASURES WERE TAKEN AS A RESULT OF SECEURS FLANS OF ACTION. ARXY-THE RECALL TO FRENCE OF TWO DIVISIONS WHICH WERE NOW BEING REEQUIPPED AND WERE EAR-MARKED FOR ASSIGNMENT TO SACEUR. FRENCH ARMY UNITS IN GERMANY WERE BEING BROUGHT UP TO 100 PERCENT AND THEIR EQUIPMENT WAS BEING MODERNIZED. ARRANGEMENTS WERE BEING MADE SO THAT RESERVISTS COULD BE CALLED UP QUICKLY. NAVY-QUOTE A UNQUOTE AND QUOTE B UNQUOTE CATEGORY SHIPS WERE BEING MADE OPERATIONAL IN EQUIPMENT AND PER-

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SECRET

AC Paraphrase
not required.
No unclassified
reply or reference.

PAGE FOUR 3149

SONNET MORE ASW EQUIPMENT WAS BEING OBTAINED AND INFRASTRUCTURE WORK WAS BEING ACCELERATED AIRFORCE-THE F-100 SQUADRONS WERE BEING REINFORCED WITH MORE AIRCRAFT. FORTY AIRCRAFT WERE BEING RETURNED FROM NORTH AFRICA TO EUROPE AND EARMARKED FOR SACEUR. ONE SQUADRON OF MIRAGE3-C AIRCRAFT EQUIPPED WITH AIR TO AIR MISSILES WAS BEING MADE OPERATIONAL IMMEDIATELY-MORE WOULD FOLLOW AS QUICKLY AS POSSIBLE.

10. THE FINANCIAL IMPLICATIONS OF THE PLAN OF ACTION CALLED FOR A SECOND EXTRA BUDGET FOR DEFENCE OF FORTY MILLION NF. IN ADDITION THREE HUNDRED AND FIFTY MILLION NF IN CREDITS WAS BEING MADE AVAILABLE FOR THE PURCHASE OF SUCH EQUIPMENT AS ARMoured VEHICLES TRANSPORT AIRCRAFT HELICOPTERS AND ASW EQUIPMENT.

11. DEALING WITH THE QUESTION ON FINANCE AND ECONOMY FRENCH REP POINTED OUT THAT THE DEFENCE BUDGET IN FRANCE AMOUNTING TO ABOUT FOUR BILLION DOLLARS THIS CURRENT YEAR WAS THE HIGHEST IN EUROPE. IT AMOUNTED TO 8 PERCENT OF THE GNP. DEFENCE TASKS TOOK UP ABOUT 6 PERCENT OF THE LABOUR FORCE. DURING THE CURRENT YEAR IT HAD BEEN NECESSARY TO ASK FOR TWO SUPPLEMENTARY BUDGETS-THE FIRST FOR THREE HUNDRED AND EIGHTY MILLION NF-THE SECOND FOR FORTY MILLION NF. HE SAID THAT THERE WOULD BE AN INCREASE IN THE DEFENCE BUDGET FOR 1962 BUT THAT THE DEFENCE DEPT MUST COMPETE FOR THE TAX DOLLAR WITH THE EXPENDITURES OF A WELFARE STATE AND THE NECESSARY HELP TO UNDER-DEVELOPED COUNTRIES. FRENCH REP STATED THAT CARE MUST BE TAKEN TO ALLOW INDUSTRY TO HAVE ENOUGH RESERVE MONEY FOR INVESTMENT SO AS TO ALLOW THE ECONOMY TO GROW. IT WAS EXPECTED THAT FRENCH ECONOMY WOULD GROW BY 5.5 PERCENT IN 1962. FRENCH GOVT WERE TRYING AS BEST THEY COULD TO KEEP PRICES DOWN.

12. THE EXAM WAS CLOSED WITH A SERIES OF COMPLIMENTARY STATEMENTS BY MR GRECH, GERMAN REP AND USA REP, ALL THANKING FRANCE FOR HER EFFORTS.

950/23 NOV 61

SECRET

000051

HQS 1235-6-6-5 (DEF 2a)

ARMY HEADQUARTERS
OTTAWA, Ont., 6 Dec 61

Secretary
Principal Supply Officers Committee.

ARMWG on an Armoured Personnel Carrier AC/176

1. Reference is made to letter M-1425 forwarded under cover of your S 2-5105-AC/176 dated 9 Nov 61 which indicated the date of the next meeting which was postponed from Dec to late Jan 62.
2. Would you enquire whether or not a firm date has been set or, if not, what is the latest forecast.

FGJ/2-6309/gm

(G. Rolfe)
Colonel
Director of Equipment Policy

PA → 1405 12 35-6-65
FILE: S 2-5105-AC/176

DOCUMENT SECRET
CLASSIFICATION:

DATE: 9 Nov 61

Address Reply to:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier
(a) CANAC Numbered Letter N-1425 dated 20 Oct 61 to External
(b) NATO Document AC/176-D/4 dated 31 Oct 61

1. The attached document is referred to: → CGS - 2 of (a); 4 of (b)
CDRB - 1 of (a); 2 of (b)

2. It is requested that action be taken by: FOR INFORMATION, please

3. Copies distributed to:

*A copy of N-1425
was sent to Capt Adams
on 6/11/61: LL*

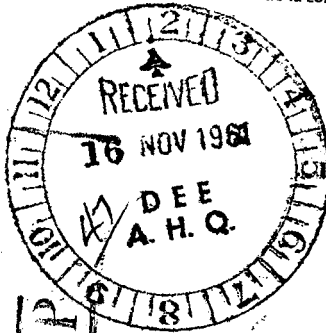
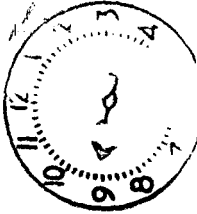
*Noted 21 Nov 61
E. G. [Signature]*

[Signature]
(J.C. Outram)
Secretary
Principal Supply Officers Committee
6-8403 "C" 2334

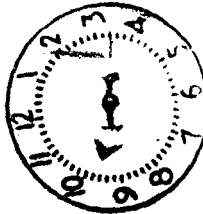
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NOV 23

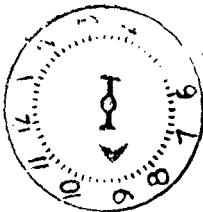


NOV 13



EP

NOV 23



EP

DEPARTMENT OF EXTERNAL AFFAIRS, CANADA.

(DUPLICATE)

NUMBERED LETTER

TO: THE UNDER-SECRETARY OF STATE FOR
EXTERNAL AFFAIRS, OTTAWA, CANADA.

FROM: The Canadian Delegation to the
North Atlantic Council, PARIS

Reference: Our letter N-1084 of August 3

Subject: RDP-AC/176 - ARMoured PERSONNEL
COURIER

Security: RESTRICTED

No: N-1425

Date: October 20, 1961

Enclosures:

Air or Surface Mail: air

Post File No: 9/35/5

Ottawa File No.

References

We have been told by the Secretary that the next meeting previously scheduled for December 6-8 will have to be postponed at least until the latter half of January 1962, because the Standing Group will not be in a position to furnish definitive views on a NBMR before then (see paragraph 2 of the cover note to AC/176-D/3). A revised date for the meeting will be circulated later and we shall keep you informed.

2. Lt. Col. W. Owens of CARDE and Major V. Kenyon of CALE represented Canada at the AC/176 meeting held last February.

Internal
Circulation

(Sgd.) P. Solly-Flood
The Delegation

Distribution
to Posts

CJS(L)

Document divulgué en vertu de la Loi sur l'accès à l'information

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE
COPY

N° 14

ORIGINAL: ENGLISH
31st October, 1961.

NATO SECRET
DOCUMENT
AC/176-D/4

AD HOC MIXED WORKING GROUP ON AN ARMoured
PERSONNEL CARRIER

NEXT MEETING OF THE GROUP

Note by the Secretary

With reference to paragraph 2 of Document AC/176-D/3, the NATO military authorities have now informed me that NBMR-10 does not cover the long term requirement.

An NBMR covering a long term armoured personnel carrier is under study but will not be available in time before the next meeting scheduled to take place 6th, 7th and 8th December, 1961. This meeting is therefore postponed until a future date which will be made known as soon as possible.

(Signed) A. de CALLATAY

OTAN/NATO
Paris, XVIIe.

NATO SECRET

CONSEIL DE L'ATLANTIQUE NORD
NORTH ATLANTIC COUNCIL

6-6-5

EXEMPLAIRE
COPY

N° 16

ORIGINAL: ENGLISH
31st October, 1961.

NATO SECRET
DOCUMENT
AC/176-D/4

AD HOC MIXED WORKING GROUP ON AN ARMoured
PERSONNEL CARRIER

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OTAN/NATO
Paris, XVIe.

NATO SECRET

99

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE
COPY

N° 17

ORIGINAL: ENGLISH
31st October, 1961.

NATO SECRET
DOCUMENT
AC/176-D/4

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

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(Signed) A. de CALLATAY

OTAN/NATO
Paris, XVIe.

NATO SECRET

98

000058

MAIN FILE No. 1235 - 6 - 3 - 5 T.D. No. 1296

DEPARTMENT OF NATIONAL DEFENCE

TEMPORARY DOCKET

[illegible]

INSTRUCTIONS

1. Temporary Dockets are to deal WITH ONE CASE ONLY.
2. T.D.'s NOT to be placed on main file UNLESS Central Registry informed by means of Form D.N.D. 710.
3. T.D. No. together with main file number to be quoted on all correspondence originated.
4. T.D.'s not to be passed from one service to another.
5. Action should be taken as soon as possible in order that main file may be kept up to date. If action cannot be taken within 48 working hrs., B.F. Docket.
6. T.D.'s to be requisitioned, passed, B.F.'d. etc., in the same manner as main files by means of Form D.N.D. 710.

DEPARTMENT OF EXTERNAL AFFAIRS, CANADA.

(DUPLICATE)

NUMBERED LETTER

TO: THE UNDER-SECRETARY OF STATE FOR
EXTERNAL AFFAIRS, OTTAWA, CANADA.

FROM: The Canadian Delegation to the
North Atlantic Council, PARIS

Reference: Our letter N-1084 of August 3

Subject: RDP-AC/176 - ARMoured PERSONNEL
COURIER

Security: RESTRICTED

No: N-1425

Date: October 20, 1961

Enclosures:

Air or Surface Mail: air

Post File No: 9/35/5

Ottawa File No.

References

We have been told by the Secretary that the next meeting previously scheduled for December 6-8 will have to be postponed at least until the latter half of January 1962, because the Standing Group will not be in a position to furnish definitive views on a NBMR before then (see paragraph 2 of the cover note to AC/176-D/3). A revised date for the meeting will be circulated later and we shall keep you informed.

2. Lt. Col. W. Owens of CARDE and Major V. Kenyon of CALE represented Canada at the AC/176 meeting held last February.

Internal
Circulation

Distribution
to Posts

CJS(L)

(Sgd.) P. Solly-Flood

The Delegation

*Lt Col McKee
with his 6 Nov 61*

*Mr Moore (3)
Have CPM sent to Lt Col McKee - DES
then PA to 1235-6-6-5
E. W. 61*

*④ Done PA
6 Nov 61*

73

DEC 1235-6-6-8

DEPARTMENT OF NATIONAL DEFENCE

MINUTE SHEET

REMARKS

Referred to

To be signed in full showing Appointment, Telephone Number & Date

2000
(For Lt-Col
McLean)

En: Attached find copy of
External numbered Letter No
N1425 dated 20 Oct 61.

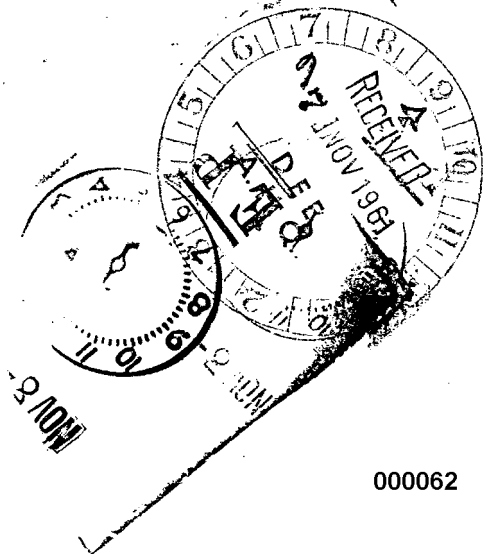
[Signature]

NEP RC

6-7094

6 Nov 61

97



000062

DEPARTMENT OF EXTERNAL AFFAIRS, CANADA.

(DUPLICATE)

NUMBERED LETTER

TO: THE UNDER-SECRETARY OF STATE FOR
EXTERNAL AFFAIRS, OTTAWA, CANADA.

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Reference:.....Our letter N-1084 of August 3

Subject:.....RDP-AC/176 - ARMOURED PERSONNEL
.....COURIER

Security:.....RESTRICTED

No:....N-1425

Date:....October 20, 1961

Enclosures:.....

Air or Surface Mail:....air

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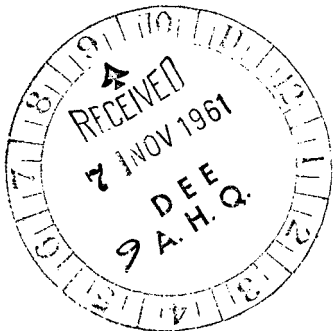
2. Lt. Col. W. Owens of CARDE and Major V. Kenyon of CALE represented Canada at the AC/176 meeting held last February.

Internal
Circulation

(Sgd.) P. Solly-Flood
The Delegation

Distribution
to Posts

CJS(L)



000064

IN REPLY PLEASE QUOTE

NO. HQ 1235-6-6-5 TD 1296
(DEP 2a)



Department of National Defence Army

ARMY HEADQUARTERS
OTTAWA, Ont. 2 Nov 1961

Secretary,
Principal Supply Officers Committee

Ad Hoc Mixed Working Group on an Armoured
Personnel Carrier - AC/176

1. Reference is made to NATO Document AC/176-D/3 dated 31 Jul 61 forwarded under cover of your 2-5105-AC/176 dated 10 Aug 61.
2. The next meeting of the Ad Hoc Mixed Working Group on Armoured Personnel Carriers will be held in Paris on 6, 7 and 8 Dec 61. The Agenda for this meeting has not been received, although it is understood that discussions will concern military characteristics and initial research and development approaches to the Armoured Personnel Carrier for the 1970 period on.
3. The first meeting of the Working Group was held 7-8 Sep 1960 and was attended by Lt Col WJ Owens (AEEE) and Mr P Solly-Flood (DDP) as Canadian representatives.
4. The second meeting 14-15 Feb 61 was attended by Lt Col WJ Owens and Maj VD Kenyon (CALE). The Group discussed the question of common requirements, operational characteristics and possible production sharing within NATO, and concluded that by 1965 all countries would have satisfied their requirements from currently planned production.
5. The Group recommended that it be invited to undertake a study and design of a carrier which would meet Long Term requirements and that its Terms of Reference be amended accordingly.
6. The Armaments Committee noted the Report of the Working Group and the proposed Terms of Reference and emphasized that they would apply only to the development and manufacture of an APC for a Long Term requirement. The statement of the NATO Basic Military Requirement for an APC (in EMR-10) was circulated.
7. The Army provided representation at the first and second meetings at the request of DDP. However, now that the Group has recommended a change of Terms of Reference and the next meetings will consider the Long Term requirement, the meetings will be of considerably more value to the Canadian Army.
8. If the Working Group succeeds in its task to produce a single design of an APC acceptable to all countries, capable of production in all countries from a single set of centrally maintained design records, the

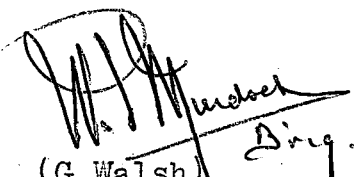
-2-

economies and development which would result are large. In view of Canada's need for such a vehicle it is considered that participation by Canada would be worthwhile and that the Canadian contributions to the design would ensure at least that Canada's ideas were presented and considered. Even if the Working Group is not completely successful, the information gained will be of use to the Army in its future vehicle development programme.

9. It is, therefore, recommended that the Canadian Army be represented at the third meeting of the Ad Hoc Mixed Working Group on an Armoured Personnel Carrier to be held in Paris on 6-8 Dec 61. As Lt Col Owens is no longer employed at AHQ, it is recommended that Lt Col AL MacLean of the Vehicle and Construction Section of the Directorate of Equipment Engineering (DEE) represent Canada at the meeting in Paris 6-8 Dec 61.

10. You are requested to seek CCOS approval. Travel forms in duplicate are attached.

ATT


(G Walsh) Dir.
Lieutenant General
Chief of the General Staff

94

TO: Chairman, Chiefs of Staff

SECURITY CLASSIFICATION: Document disclosed under the Access to Information Act
Document divulgué en vertu de la Loi sur l'accès à l'information

FILE NO: HQS 1235-6-6-5 (EE4)

DATE: 27 Sep 61

s.19(1)

Temporary Duty outside Canada on Chairman Chiefs of Staff Authority

1. The following information is submitted, in order that arrangements may be completed for the undermentioned personnel to proceed outside Canada on temporary duty, subject to Chairman Chiefs of Staff approval.

2. <u>Personnel:</u>								
<u>Number</u>	<u>Rank</u>	<u>Christian Names</u>	<u>Surname</u>	<u>Date and Place of Birth</u>	<u>Service/ Directorate</u>	<u>Phone Number</u>	<u>Security Clearance</u>	<u>(See Note 2)</u>
	Lt-Col	AROS LOUDON	MACLEAN		ARMY/DEE	6-6481	TOP SEC COSMIC	

28 Nov Arr Lr 29 pm
A Mc

3. Purpose of Visit: (state briefly including particulars of invitation, if applicable) To attend NATO Ad Hoc Mixed Working Group on an Armoured Personnel Carrier with prior discussion with Lt Col OWENS of MC of S in LONDON.

4. Location and duration: (give specific address) LONDON 3-5 Dec 61 PARIS 5-9 Dec 61

5. Accommodation: (give details ~~if arranged~~ hotel preferred) LONDON - PARIS - Hotel BLANCHE FONTAINE

6. Transportation: (give details and dates) (all transportation overseas will normally be by Service Aircraft) Service Aircraft to and from EUROPE

7. Security Classification of subject to be discussed: NATO SECRET

NOTE: 1. TD to USA: If application covers a visit of an unclassified nature to a USA Armed Forces establishment or classified nature to a USA Armed Forces establishment or civilian firm engaged on a USA Defence Department contract, a US clearance is required and the Pentagon requires a minimum of 30 days to arrange. Action in this regard will be taken by Joint Staff or CAS/PMOV, as applicable. Applications requiring a US clearance should reach Joint Staff six weeks prior to commencement date of TD.

2. Security clearance for attendance at NATO meeting will be in accordance with paragraph 4 of SD 1 Letter No 60/21.

[Signature]
SA Kellough Col
Signature

Director DEE
Appointment

6-7216
Phone Number

000067

TO: Chairman, Chiefs of Staff

FILE NO: HQS 1235-6-6-5 (EE4)

DATE: 27 Sep 61

Temporary Duty outside Canada on Chairman Chiefs of Staff Authority

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2. Personnel:	Rank	Christian Names	Surname	Date and Place of Birth	Service/ Directorate	Phone Number	Security Clearance	(See Note 2)
<u>Number</u>								
[REDACTED]	<u>It-Col</u>	<u>ABOS LOUDON</u>	<u>MACLEAN</u>	[REDACTED]	<u>ARMY/DEE</u>	<u>6-6181</u>	<u>TOP SEC COSMIC</u>	

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Shirley Mearns
McKellough Col Director DEE 6-7216
Signature Appointment Phone Number

DEPARTMENT OF NATIONAL DEFENCE

MINUTE SHEET

Referred to

REMARKS

To be signed in full showing Appointment, Telephone Number & Date

DEP - (Wozward) 6 Oct 61

Attached in three (3) copies
of CCOS pro forma plus
one (1) copy of Request for
NATO Security Certificate.
(re telcon this A.M.
Wozward's office 6-7094).

If ~~an~~ a 2nd copy of NATO
Security Certificate for DMI required
for your records, please call
2-5-178 Sgt Johnston and
will forward same.

Sgt Johnston.
DEE

TO: Chairman, Chiefs of Staff

Temporary Duty outside Canada on Chairman Chiefs of Staff Authority

1. The following information is submitted, in order that arrangements may be completed for the undermentioned personnel to proceed outside Canada on temporary duty, subject to Chairman Chiefs of Staff approval.

2. Personnel:

<u>Number</u>	<u>Rank</u>	<u>Christian Names</u>	<u>Surname</u>	<u>Date and Place of Birth</u>	<u>Service/ Directorate</u>	<u>Phone Number</u>	<u>Security Clearance</u>	<u>(See Note 2)</u>
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Lt Col

AROS LOUDON

MACLEAN

ARMY/DEE

66481

TOPSEC COSMIC

Lo 28 Nov

On 29 Nov in London

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Lt Col

AROS LONDON

MACLEAN

ARMY/DEE

66481

TOPSEC COSMIC

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6. Transportation: (give details and dates) (all transportation overseas will normally be by Service Aircraft) Service Aircraft to and from EUROPE

7. Security Classification of subject to be discussed: NATO SECRET

NOTE: 1. TD to USA: If application covers a visit of an unclassified nature to a USA Armed Forces establishment or classified nature to a USA Armed Forces establishment or civilian firm engaged on a USA Defence Department contract, a US clearance is required and the Pentagon requires a minimum of 30 days to arrange. Action in this regard will be taken by Joint Staff or CAS/PMov, as applicable. Applications requiring a US clearance should reach Joint Staff six weeks prior to commencement date of TD.

2. Security clearance for attendance at NATO meeting will be in accordance with paragraph 4 of SD 1 Letter No 60/21.

TO: Chairman, Chiefs of Staff

SECURITY CLASSIFICATION: Document disclosed under the Access to Information Act -
Document divulgué en vertu de la Loi sur l'accès à l'information
FILE NO: HQS 1235-6-6-5 (324)
DATE: 27 Sep 61

Temporary Duty outside Canada on Chairman Chiefs of Staff Authority

1. The following information is submitted, in order that arrangements may be completed for the undermentioned personnel to proceed outside Canada on temporary duty, subject to Chairman Chiefs of Staff approval.

2. Personnel:

<u>Number</u>	<u>Rank</u>	<u>Christian Names</u>	<u>Surname</u>	<u>Date and Place of Birth</u>	<u>Service/ Directorate</u>	<u>Phone Number</u>	<u>Security Clearance</u>	<u>(See Note 2)</u>
---------------	-------------	------------------------	----------------	--------------------------------	---------------------------------	-------------------------	-------------------------------	-------------------------

LA. Col

ARCS LONDON

MACLEAN

ARMY/DEE

66491

TOPSEC COSMIC

3. Purpose of Visit: (state briefly including particulars of invitation, if applicable) To attend NATO Ad Hoc Mixed Working Group on an Armoured

Personnel Carrier with prior discussion with Lt. Col O'NEIL of AF of S in LONDON.

4. Location and duration: (give specific address) LONDON 3-5 Dec 61 PARIS 5-9 Dec 61

5. Accommodation: (give details ~~arranged~~ of hotel preferred) LONDON - PARIS - Hotel BLANCHE FONTAINE

6. Transportation: (give details and dates) (all transportation overseas will normally be by Service Aircraft) Service Aircraft to and from EUROPE

7. Security Classification of subject to be discussed: NATO SECRET

NOTE: 1. TD to USA: If application covers a visit of an unclassified nature to a USA Armed Forces establishment or classified nature to a USA Armed Forces establishment or civilian firm engaged on a USA Defence Department contract, a US clearance is required and the Pentagon requires a minimum of 30 days to arrange. Action in this regard will be taken by Joint Staff or CAS/PMOY, as applicable. Applications requiring a US clearance should reach Joint Staff six weeks prior to commencement date of TD.

2. Security clearance for attendance at NATO meeting will be in accordance with paragraph 4 of SD 1 Letter No 60/21.

Folio 86 + 87

were duplicates of
Folio 94 + 95 &
have been removed

13 Dec 61 J. Johnson
EPIC

TO: Chairman, Chiefs

SECURITY CLASSIFICATION:
FILE NO: HQS 1235-6-6-5 (BRL)
DATE: 27 Sep 61

Temporary Duty outside Canada on Chairman Chiefs of Staff Authority

1. The following information is submitted, in order that arrangements may be completed for the undermentioned personnel to proceed outside Canada on temporary duty, subject to Chairman Chiefs of Staff approval.

2. Personnel:								
<u>Number</u>	<u>Rank</u>	<u>Christian Names</u>	<u>Surname</u>	<u>Date and Place of Birth</u>	<u>Service/ Directorate</u>	<u>Phone Number</u>	<u>Security Clearance</u>	<u>(See Note 2)</u>
	lt-Col	AROS LONDON	HACIBAH		AST/CEE	6-4421	TOP SEC CREST	

3. Purpose of Visit: (state briefly including particulars of invitation, if applicable) ~~To attend NATO Ad Hoc Mixed Working Group on an Approved~~
~~Personnel Carrier with prior discussion with Lt Col OWENS of MC of S in LONDON.~~

4. Location and duration: (give specific address) LONDON 3-5 Dec 61 PARIS 5-9 Dec 61

5. Accommodation: (give details ~~if arranged or~~ hotel preferred) LONDON - PARIS - Hotel BLANCHE FONTAINE

6. Transportation: (give details and dates) (all transportation overseas will normally be by Service Aircraft) ~~Service Aircraft to and from EUROPE~~

7. Security Classification of subject to be discussed: NATO SECRET

NOTE: 1. TD to USA: If application covers a visit of an unclassified nature to a USA Armed Forces establishment or classified nature to a USA Armed Forces establishment or civilian firm engaged on a USA Defence Department contract, a US clearance is required and the Pentagon requires a minimum of 30 days to arrange. Action in this regard will be taken by Joint Staff or CAS/PMov, as applicable. Applications requiring a US clearance should reach Joint Staff six weeks prior to commencement date of TD.

2. Security clearance for attendance at NATO meeting will be in accordance with paragraph 4 of SD 1 Letter No 60/21.

21
3

M E M O R A N D U M

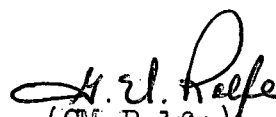
HQ 1235-6-6-5 TD 1296 (DEF 2a)

1 Nov 61

DCGS

Ad Hoc Mixed Working Group on an Armoured
Personnel Carrier - AC/176

1. At flyleaf is a memorandum to Secty, PSOC requesting CCOS approval for Lt Col AL MacLean (DEE) to attend the Third Meeting of the AHMWG on an Armoured Personnel Carrier to be held in Paris 6-8 Dec 61.
2. The VQMG has approved the attendance of Lt Col MacLean for the Q Branch (folio below).
3. Your signature on memo at flyleaf is recommended.


(GM Rolfe)

Colonel

Director of Equipment Policy

FGJ/6-6309/hms

84

MEMORANDUM

HQ 1235-6-6-5 (EE-1)
HQ 1964-34/336

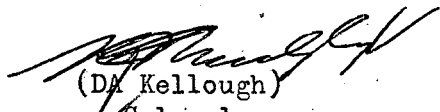
OTTAWA 27 Oct 61

DEP

Staff Travel Britain & France
Lt-Col AL Maclean

1. Reference telecon Capt's Adams - Mosley of 27 Oct 61.
2. Attached is DEE's travel request approved by Brigadier HW Love with Minute Sheet dated 26 Oct 61. Refers visit by Lt-Col AL Maclean to Britain and France.

GEJ/2-5178/mm


(DA Kellough)
Colonel
Director of Equipment Engineering

DEPARTMENT OF NATIONAL DEFENCE

MINUTE SHEET



Referred to

Office of the DQMG (D&D)

Lt Col
MacLean

DEE
(EE4)

REMARKS/MINUTE ()

26 Oct 1961

SUBJECT :

In Reply to : HQ 1235-6-6-5 (EE4)

You will note Brig Love has approved this.

He feels that this meeting may be premature as we have not decided on the operational concepts.

It is felt that the whole range of future vehicles must be worked out first. Advances in the state of the art may allow unconventional types to be used.

This should be our position and we try to get all the information.

2-2704

Rm 3080

"C" Bldg

(H W Love) Brig

[Signature]

000077

DIRECTORATE OF EQUIPMENT ENGINEERING

TRAVEL REQUEST

File HQ 1235-6-6-5 TD 1296 (EE-

Date Oct 61

TO:

1. Authority is requested for (No.) Lt-Col AL MacLEAN
(Rank) (Name)

To Visit LONDON AND PARIS From 3 DEC 61 To 9 DEC 61

This visit is being made for the following reasons:

To discuss APC (BOBCAT) with Lt-Col Owens of MC of S on 4 Dec and then
to attend NATO AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL
CARRIER in Paris on 6-7-8 Dec 61.
See attached letter and brief.

File Reference: HQS 1235-6-6-5 Date Oct 61 Recommended By: (Signature)
(Section Head)

(DA Kellough) (HW Love) (RW Moncel)
Colonel Brigadier Major-General
Director of Equipment Engineering Deputy Quartermaster-General Quartermaster-General
Equipment Engineering

To EEL (Travel Section)

If this visit is approved, may the following travel arrangements be made:

a. Method of Travel RCAF
(If POMC pls give Car Make and License Number)

b. LEAVING.....OTTAWA.....DATE.....28 Nov 61.....AT.....Hrs
ARRIVING.....LONDON.....Date.....29 Nov 61.....at.....Hrs Berth/PC.....Return/Single
LEAVING.....LONDON.....Date.....5 Dec 61.....at.....Hrs
ARRIVING.....PARIS.....Date.....5 Dec 61.....at.....Hrs Berth/PC.....Return/Single
LEAVING.....PARIS.....Date.....10 Dec 61.....at.....Hrs
ARRIVING.....OTTAWA.....Date.....11 Dec 61.....at.....Hrs Berth/PC.....Return/Single
LEAVING.....Date.....at.....Hrs
ARRIVING.....Date.....at.....Hrs Berth/PC.....Return/Single
LEAVING.....Date.....at.....Hrs
ARRIVING.....Date.....at.....Hrs Berth/PC.....Return/Single

c. ADVANCE REQUIRED \$100.00 d. ACCN REQUIRED LONDON & PARIS

(Signature of Officer Travelling)

(FOR TRAVEL SECTION USE)

ESTIMATED COST

ACTUAL COST

TPT \$150.00

CLAIM

TOTAL

HQ 1235-6-6-5 (EE-4)
TD 1296

OTTAWA, 26 Oct 61

Prepared by: Directorate of Equipment
Engineering

AD HOC MIXED WORKING GROUP ON
AN ARMoured PERSONNEL CARRIER
CANADIAN ARMY PARTICIPATION IN
THIRD MEETING

ATM

1. To review past and recommend future participation by the Army in the Ad Hoc Mixed Working Group on An Armoured Personnel Carrier.

BACKGROUND

2. The Working Group was established by the Armaments Committee at its meeting on 24 Jun 60 (Flag A).

3. The first meeting of the Working Group was held 7 and 8 Sep 60, and was attended by Lt-Col WJ Owens (AEEEE) and Mr P Solly-Flood (DDP) as Canadian representatives. The group discussed the questions of common requirement, operational characteristics and possible production sharing within NATO (Flag B). The conclusions drawn were that by 1965 all countries will have satisfied their requirements from currently planned production and therefore the Working Group had concluded the first phase of its original task. However, it recommended that a coordinated study for the development of a long-term equipment should be initiated and recommended changes in the terms of reference accordingly (Flag C).

4. The second meeting was held 14 and 15 Feb 61, Canada being represented by Lt-Col JF Owens (AEEEE) and Maj VD Kenyon (CALE). After lengthy discussion of the current situation the group recommended that it be invited to undertake the study and design of a carrier which would meet long term requirements and that its terms of reference be amended accordingly, and that the Standing Group should be invited to provide the Working Group with a general definition of the basic military requirement for an APC, the production of which should start in 1970-72 (Flag D).

5. The Armaments Committee noted the report of the Working Group and the proposed terms of reference, and emphasized that they apply only to the development and manufacture of an APC for a long term requirement (Flag E). The statement of a NATO basic military requirement for an APC (NBMR-10) was circulated (Flag F).

6. The next meeting of the Working Group will be held in Paris on 6, 7 and 8 Dec 61. The agenda for this meeting has not yet been received, although it is presumed that discussions will concern military characteristics and initial research and development approaches to the APC of 1970-72.

DG (EE)

Pls brief HOC
Maclean as
discussed

Director
VQMG

OCT 26 1961

8 0

.../2

- 2 -

COMMENTS

7. Canadian Representation

- a. Mr Solly-Flood of DDP represented Canada at the first meeting. Lt-Col Owens was only sent to render technical assistance and advice then required by the DDP representative (Flag G).
- b. The Army did not plan representation at the second meeting. However, as a result of a verbal request from DDP, the VOMG directed that Lt-Col Owens would attend (Flag H).
- c. DDP has requested verbally that the Army send a representative to the third meeting, to be held in Paris 6, 7 and 8 Dec 61.

8. Value of Canadian Participation

- a. The value to the Army of attendance at the first two meetings is considered only to be in obtaining information, primarily because the meetings were held too late to carry out the assigned task. However, the group recommended a change in the terms of reference and future meetings will consider the long term need.
- b. If the Working Group succeeds in its task of producing a single design of an APC acceptable to all countries, capable of production in all countries from a single set of centrally maintained design records, the economies in development which would result are large. In view of Canada's need for such a vehicle in the time frame being considered it is probable that participation by Canada would be worthwhile, and Canadian contributions to the design would ensure at least that Canada's ideas were presented and considered. Even if the Working Group is not completely successful, information gained will be of use to the Army in its future vehicle development programme.

RECOMMENDATION

9. I recommend that Lt-Col Maclean represent the Canadian Army and the Department of Defence Production at the third meeting of the Ad Hoc Mixed Working Group on an Armoured Personnel Carrier being held in Paris on 6, 7 and 8 Dec 61.

79

M E M O R A N D U M

HQ 1235-6-6-5 TD 1296 (EE-4)

OTTAWA, 25 Oct 61

DQMG(EE)

Ad Hoc Mixed Working Group On An Armoured
Personnel Carrier
Attendance by ZD2612 Lt-Col AL Maclean

1. Reference is made to earlier approval of this proposal, and subsequent reconsideration at next two folios down.
2. Minute (2) on next folio down requests further substantiation for attendance at this meeting. This is provided in the brief at flyleaf.
3. The brief has been prepared without receipt of the agenda because of the short time left before the meeting.
4. Authority for Lt-Col Maclean to attend the third meeting of the Working Group is requested. A second travel request is included.


(DA Keillough)
Colonel

Director of Equipment Engineering

ALM/6-6481/tp

78

DEPARTMENT OF NATIONAL DEFENCE

REGISTRY ACTION REQUEST

To CR:

Place on ⁿTD action as shown

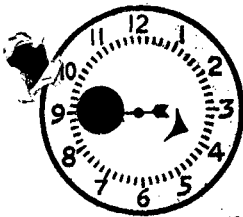
☐ Pass to DEF-4 and inform
this office of the complete reference

☒ Return ^{file}TD to this office.

Date 23 Oct 61 filed to [Signature]

Local: 6-8611 DEF 000082
(Directorate)

20 OCT '61 M



DQMG (EE)

MEMORANDUM

HQ 1235-6-6-5 (EE-4)

OTTAWA, 19 Oct 61

(2)

(1)

DQMG (EE)

Ad Hoc Mixed Working Group On
An Armoured Personnel Carrier
Attendance by ZD 2612 Lt-Col AL Maclean

1. The third meeting of the NATO Ad Hoc Mixed Working Group On An Armoured Personnel Carrier is to be held at NATO Headquarters in Paris on 6, 7 and 8 Dec 61.

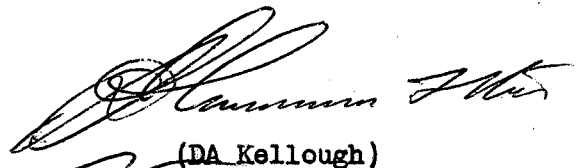
2. Lt-Col Owens, recently of ADE and now at the MC of S, represented Canada at the previous two meetings, at the request of the Department of Defence Production.

3. DDP have requested that Lt-Col Maclean represent Canada at the 3rd meeting.

4. It is recommended Lt-Col Maclean be authorized to attend this meeting.

Telecom
Layard-Maclean
Unless then

is a very
worthwhile agenda, and previous
meetings have produced results for
the Army, this trip will NOT
be supported despite the earlier
intention to attend at OOR.

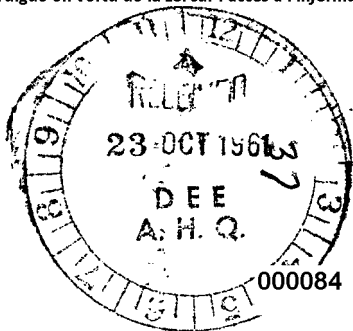

(DA Kellough)
Colonel
Director of Equipment Engineering

(EE, LAYARD) LT-COL
for DQMG (EE)

23 OCT 1961

77

000083



DIRECTORATE OF EQUIPMENT ENGINEERING

TRAVEL REQUEST

File DBE 1964-34/336

Date 4 Oct 61

TO:

1. Authority is requested for [REDACTED] Lt-Col AL MacLEAN
(No.) (Rank) (Name)

To Visit LONDON AND PARIS From 3 DEC 61 To 9 DEC 61

This visit is being made for the following reasons:

To discuss APC (BOBCAT) with Lt-Col Owens of MC of S M 4 Dec and then
to attend NATO AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL
CARRIER in Paris on 6-7-8 Dec 61.

See attached letter dated 27 Sep 61 (refers to verbal agreement).

File Reference: HQS 1235-6-6-5 Date 27 Sep 61 Recommended By: [REDACTED]
(Section Head)

[Signature]
(DA Keillough)

Colonel
Director of Equipment Engineering

(HW Love)
Brigadier

Deputy Quartermaster-General
Equipment Engineering

[Signature]
(RW Moncel)

Major-General
Quartermaster-General
50561

To EEL (Travel Section)

If this visit is approved, may the following travel arrangements be made:

a. Method of Travel RCAF
(If POMC pls give Car Make and License Number)

b. LEAVING... OTTAWA... DATE... 28 Nov 61... AT... Hrs
ARRIVING... LONDON... Date... 29 Nov 61... at... Hrs Berth/PC... Return/Single
LEAVING... LONDON... Date... 5 Dec 61... at... Hrs
ARRIVING... PARIS... Date... 5 Dec 61... at... Hrs Berth/PC... Return/Single
LEAVING... PARIS... Date... 10 Dec 61... at... Hrs
ARRIVING... OTTAWA... Date... 11 Dec 61... at... Hrs Berth/PC... Return/Single

s.19(1) LEAVING... Date... at... Hrs
ARRIVING... Date... at... Hrs Berth/PC... Return/Single
LEAVING... Date... at... Hrs
ARRIVING... Date... at... Hrs Berth/PC... Return/Single

c. ADVANCE REQUIRED \$100.00 d. ACCN REQUIRED LONDON & PARIS

(Signature of Officer Travelling)

(FOR TRAVEL SECTION USE)

	ESTIMATED COST	ACTUAL COST
TPT	\$150.00	
CLAIM		
TOTAL		

76

M E M O R A N D U M

DEE 1961-1 (EE-1)


OTTAWA, 4 Oct 61

DOMG (E&E)

Staff Travel Funds
DEE & AEE

Lt-Col AL MacLean
Visit Paris, France and London, England, 3 - 9 Dec 61.

1. The attached Travel Request is recommended for your approval.
2. Certified funds are available in Obj: 057
to cover the estimated cost of \$ 150.00 for this
temporary duty.


(DA Kellough)
Colonel
Director of Equipment Engineering

000086

M E M O R A N D U M

DEE 1235-6-6-5 (EE-4)

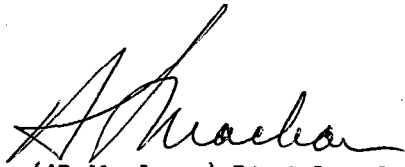
OTTAWA, 27 Sep 61

DEE

Ad Hoc Mixed Working Group On
An Armoured Personnel Carrier
Attendance by ZD 2612 Lt-Col AL Maclean

1. The third meeting of the NATO Ad Hoc Mixed Working Group On An Armoured Personnel Carrier is to be held at NATO Headquarters in Paris on 6, 7 and 8 Dec 61.
2. Lt-Col Owens, recently of ADE and now at the MC of S, represented Canada at the previous two meetings, at the request of the Department of Defence Production.
3. At the request of DDP, the DQMG(EE) has verbally agreed that Lt-Col Maclean should represent Canada at the third meeting.
4. Authority for Lt-Col Maclean to attend the meeting is requested.

ALM/6-6481


(AL Maclean) Lt-Colonel
EE-4

74

FILE: 2-5105-AC/176

DOCUMENT

CLASSIFICATION:

SECRET

DATE: 10 Aug 61

Address Reply to:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP AC/176 Armoured Personnel Carrier
NATO Letter N 1084 dated 3/8/61
NATO Document AC/176-D/3 dated 31/7/61

1. The attached document is referred to: *(1)*
✓ CGS (3)
CDRB (2)

2. It is requested that action be taken by: For information.

3. Copies distributed to:

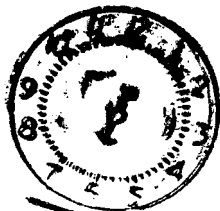
(3)
2 Copies passed to DDD { *14/4/61*
for info
14 Aug 61. *Jefferson*
EP2a

W. C. Outram
(J.C. Outram)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

(72)

AUG 11



EP

000089

DEPARTMENT OF EXTERNAL AFFAIRS, CANADA.

NUMBERED LETTER

TO: THE UNDER-SECRETARY OF STATE FOR
EXTERNAL AFFAIRS, OTTAWA, CANADA.

FROM: The Canadian Delegation to the North
Atlantic Council and the OEEC, Paris.

Reference: Your telegram DL-619 of April 20.....

Subject: BDP - AC/176 - Armoured Personnel.....

.....Carrier.....

Security: CONFIDENTIAL.....

No: N-1084.....

Date: August 3, 1961.....

Enclosures:

Air or Surface Mail: AIR.....

Post File No: 9/35/5.....

Ottawa File No.

50115-K-40

14

References

D-1

Would you please make available to
Lt. Colonel W. Owens in the Department of National
Defence a copy of document AC/176-D/3 of July 31,
going forward to you under transmittal slip 4695,
concerning "Decisions Taken by the Armaments Commit-
tee on the Chairman's Report". A copy of NBMR-10
is attached at annex to the document. It is also
noted that the next meeting of the AC/176 Group is
scheduled for December 6 - 8, 1961.

Internal
Circulation

Report to
C2005(2)
10/1/61
10/1/61

file
2/5

[Signature]
The Delegation.

71

Distribution
to Posts

CJS (London)

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE
COPY

N° 13

ORIGINAL: FRENCH/ENGLISH
31st July, 1961

NATO SECRET
DOCUMENT
AC/176-D/3

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

DECISION TAKEN BY THE ARMAMENTS COMMITTEE ON THE CHAIRMAN'S REPORT

Memorandum by the Secretary

The Armaments Committee discussed⁽¹⁾ the Chairman's report (AC/176-D/2) and took note of it, subject to amended terms of reference. These new terms of reference are circulated in Annex I; it should be emphasized that they apply only to the development and manufacture of an armoured personnel carrier for a long term requirement.

2. The NATO basic military requirement for an armoured carrier (NBMR-10, SGM-225-61, dated 27th April, 1961) is circulated as Annex II.

It is not quite clear whether this NBMR covers the long term requirement. Since the work of the Group has been now specifically directed to the long term period, the NATO military authorities are hereby asked to advise the Group as to what extent NBMR-10 is applicable to the development of a carrier for the long term period when equipments now being produced will be ready for replacement by those of more advanced design.

3. Arrangements have been made to hold the next meeting on the 6th, 7th and 8th December, 1961. The Agenda will be circulated through the usual channel.

(Signed) A. de CALLATAY

OTAN/NATO,
Paris, XVIe.

(1) See: AC/74-R/97, dated 29th May, 1961, Item VII
AC/74-R/98, dated 8th June, 1961, Item III
AC/74-R/99, dated 11th July, 1961, Item II

NATO SECRET

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-3-

NATO SECRET
ANNEX I to
AC/176-D/3

NEW TERMS OF REFERENCE FOR THE AD HOC MIXED WORKING GROUP
ON AN ARMoured PERSONNEL CARRIER

Phase I

- (a) to define the operational characteristics which would meet a stated NATO basic military requirement;
- (b) to draw up precise technical specifications;
- (c) to obtain from interested countries their overall requirements in both quantities and timing;
- (d) to investigate the possibilities of joint development and manufacture of a NATO equipment and to produce an outline plan for acceptance by interested countries and by the Armaments Committee;
- (e) to draw up a report for the Armaments Committee based on the actions taken under (a) to (d) above.

Phase II

If subsequently so directed by the Armaments Committee:

- (a) to request the interested countries to initiate co-ordinated design studies;
- (b) to appraise the design studies submitted and make a selection, taking into account operational, technical, financial and economic advantages;
- (c) "to work out a programme for developing and manufacturing such equipment within NATO."
- (d) to draw up further report for the Armaments Committee based on the action taken under (a) to (c) above.

-3-

NATO SECRET

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-5-

NATO SECRET
ANNEX II to
AC/176-D/3

NORTH ATLANTIC MILITARY COMMITTEE
COMITE MILITAIRE DE L'ATLANTIC NORD

Standing Group

Groupe Permanent

SGM-225-61

Pages 1:

MEMORANDUM FOR THE SECRETARY GENERAL,
NORTH ATLANTIC TREATY ORGANIZATION

Attention: Assistant Secretary General for Production
and Logistics

Subject: NATO BASIC MILITARY REQUIREMENT FOR AN ARMoured
CARRIER

Reference: C-M(59)82, 31st August, 1959

1. Pursuant to the responsibility assigned by reference, The Standing Group, after consultation with the Military Committee, hereby establishes a NATO Basic Military Requirement for an Armoured Carrier, with the statement thereof at Enclosure 1. Appended to the statement of the NATO Basic Military Requirement is a German comment which the Standing Group has been unable to incorporate in the statement.

2. This NATO Basic Military Requirement is identified as follows:

Title: Armoured Carrier

Number: NBMR-10

FOR THE STANDING GROUP:

WmGP/bmm

Wm. G. PRICE III
Colonel, USAF
Assistant Secretary

1 ENCLOSURE:
Statement of NBMR-10
W/1 appendix

DISTRIBUTION: A B1,2,4,5,7,9 D E1(1 ea)5,6 F(2 ea) G1 H1,5 J1 L
SGM-225-61

-5-

NATO SECRET

NATO SECRET
ANNEX II to
AC/176-D/3

-6-

ENCLOSURE 1

Pages 1 - 2 Incl.

STATEMENT OF A NATO BASIC MILITARY REQUIREMENT
FOR AN
ARMoured CARRIER (NBMR-10)

1. TASK

(a) Primary - To provide the infantry with armour-protected transport throughout the entire battlefield area, with some combat capability.

(b) Secondary - to provide armour-protected transport for multiple function such as mortar carrier, cargo carrier, ambulance and command vehicle.

1. CAPABILITY

a. The carrier must be armoured and air-transportable. It should possess an automatic weapon capable of all-round fire against ground targets and anti-aircraft fire for self-defence against low flying, low performance fixed wing aircraft and helicopters. The carrier should also possess a night and all-weather capability. The vehicle should be able to lay immediate smoke, and should be designed to enable a portion of the occupants to use their individual weapons from inside the vehicle. It must be able to carry a basic infantry unit, i.e., about twelve fully equipped infantrymen.

b. The carrier must be capable of operating with tanks and of participating in airborne operations and must possess a high degree of cross-country mobility to include mountainous terrain. It must be capable of crossing inland waterways preferably by inherent capability and should be capable of operating on swampy ground and in deep snow. A range of about 500 km on roads is required.

c. Adequate protection is required against;

- (1) light artillery fragments, rifle, heavy machine gun and armour piercing small arms fire, with particular emphasis on frontal protection;
- (2) anti-personnel mines and, to the extent feasible, anti-tank mines;
- (3) nuclear, biological and chemical attacks, as far as possible.

NATO SECRET

-6-

-7-

NATO SECRET
ANNEX II to
AC/176-D/3

d. The basic carrier must be adaptable to perform the multiple functions described in paragraph 1, above, through the application of kits which are sufficiently simple to be fitted by the vehicle crews. Reliable systems are required for communications within the vehicle, within the unit and with other arms. It is desirable that the carrier be equipped with a multi-fuel engine.

3. MISCELLANEOUS

There exists a need among the NATO armies for a carrier possessing the above capabilities. No estimate of quantities is available at this time. It is desired that a carrier meeting this requirement be made available within the shortest period possible.

1 APPENDIX German Comment

-7-

NATO SECRET

000095

NATO SECRET
ANNEX II to
AG/176-D/3

-8-

APPENDIX "A"

Pages 1

NATIONAL COMMENT NOT INCORPORATED

in the

NATO BASIC MILITARY REQUIREMENT FOR AN ARMoured CARRIER

GERMANY

"1. The NBMR, in its present form, cannot be agreed to since, in the German view, the difference characteristics for

- a combat vehicle and
- a carrier

have not been taken into consideration.

2. It is suggested to incorporate the requirements for an armoured carrier in the NBMR, on the basis of the FINABEL Agreement 1.A."

Appendix "A"

NATO SECRET

EXTRACT from:

SUMMARY RECORD AC/74-R/99

Dated 11 July 1961

NATO CONFIDENTIAL

II. PROJECT ON AN ARMoured PERSONNEL CARRIER (PRO/III/4)

References: AC/74-R/97, Item VII
AC/74-D/536

Document: AC/74-D/555

3. The CHAIRMAN said that the Committee would recall that that consideration was given at the last meeting to Document AC/74-D/555 which set out the revised terms of reference for the Ad Hoc Mixed Working Group on an Armoured Personnel Carrier. The Committee had not been able to come to a decision as certain delegations had not had the document sufficiently long to obtain instructions. However, a modification to the revised terms of reference had been proposed by the United Kingdom Representative and this had subsequently been incorporated by means of a corrigendum. He continued by saying that the Committee had not yet taken note of the report of the Ad Hoc Mixed Working Group and the comments in the cover note of the Document AC/74-D/536. He enquired whether any member wished to make any further comments on that document or on the new terms of reference as set out in AC/74-D/555 and corrigendum.

4. The FRENCH REPRESENTATIVE said that France was opposed to a re-examination of the short term requirements for an armoured personnel carrier. He did not wish the modified terms of reference given in Annex to AC/74-D/555 to be interpreted as indicating that the Group should reconsider short term requirements.

5. Referring to the cover note of AC/74-D/536, General FISCHER (Co-ordinator for Production and Logistics) said that the wording of paragraph 4 clearly indicated that the International Staff had simply suggested that the Committee and not the Group might wish to discuss the short-term problem when the military requirements for the period 1962-1966 had been finalised.

6. The FRENCH REPRESENTATIVE replied that on the understanding that no decision had been taken to re-examine short term requirements in the Group, he could agree to the revised terms of reference.

7. The COMMITTEE:

- (1) took note of the report in AC/74-D/536 and the comments in the cover note of that document, together with the comments made in discussion;
- (2) agreed that the Group should continue its work under the new terms of reference as set out in Annex to AC/74-D/555 as amended.

FILE: S 2-5105-AC/176

DOCUMENT CONFIDENTIAL
CLASSIFICATION:

DATE: 13 June 61

Address Reply to:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

M E M O R A N D U M

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

Corrigendum to NATO Document AC/176-D/555 dated 29 May 61

1. The attached document is referred to:

SCGS (4)

CDRB (2)

2. It is requested that action be taken by: FOR INFORMATION, please

3. Copies distributed to:

(2)
2 copies to sec. 14/6/61
~~Sec'y~~
14 June 61 JH

Robertson
R. C. Outram)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

68

Document divulgué en vertu de la Loi sur l'accès à l'information

CONSEIL DE L'ATLANTIQUE NORD
NORTH ATLANTIC COUNCIL

EXEMPLAIRE

COPY

N° 22

ORIGINAL : ENGLISH/FRENCH
29th May, 1961

NATO CONFIDENTIAL
CORRIGENDUM to
DOCUMENT
AC/74-D/555

ARMAMENTS COMMITTEE

CORRIGENDUM

to

AC/74-D/555
(dated 19th May, 1961)

1235-6-6-3
20/1 20/6/61

PROPOSED NEW TERMS OF REFERENCE FOR THE AD HOC MIXED WORKING
GROUP ON AN ARMoured PERSONNEL CARRIER (AC/176)

Page 3, Annex, Phase II

Delete (c) and replace to read:

"to work out a programme for developing and
manufacturing such equipment within NATO."

ORIGINAL : ANGLAIS/FRANCAIS
29 mai 1961

NATO CONFIDENTIEL
RECTIFICATIF au
DOCUMENT
AC/74-D/555

COMITE D'ARMEMENTS

RECTIFICATIF

au

AC/74-D/555
(en date du 19 mai 1961)

PROJET DE NOUVEAU MANDAT POUR LE GROUPE DE TRAVAIL MIXTE AD HOC
SUR UN VEHICULE BLINDE DE TRANSPORT DE PERSONNEL (AC/176)

Page 3, Annexe, Phase II

Supprimer (c) et remplacer par:

"établir un programme de mise au point et de
fabrication d'un tel matériel dans le cadre de
l'OTAN ;"

OTAN/NATO,
Paris, XVIe.

NATO CONFIDENTIEL

67

000099

FILE: S 2-5105-AC/176

DOCUMENT CONFIDENTIAL
CLASSIFICATION:

DATE: 31 May 61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

NATO Document AC/74-D/555 dated 19 May 61 (on AC/176 Group)

①
1. The attached document is referred to:

→ CGS (4)

CDRB (2)

2. It is requested that action be taken by:

FOR INFORMATION, please

3. Copies distributed to:

②
2 copies to DLR. ✓
2 on file
2 for J. P. Hardy
E.P.

J. C. Outram
J.C. Outram)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

1230668
Vol. 20168

EXTRACT FROM
THE CANADIAN DELEGATION TO THE
NORTH ATLANTIC COUNCIL, PARIS
N-807 - June 6, 1961

3. The new terms of reference for the Ad Hoc Mixed Working Group on an Armoured Personnel Carrier (AC/176) were finally approved by the Committee as a whole as laid down in the Annex to AC/74-D/555 and its Corrigendum. No objections to the Canadian proposal originally introduced into the Committee on April 24 were raised by the French representative. As a separate matter, the latter did, however, state that France would be reluctant to see the Ad Hoc Mixed Working Group attempt to devote any further attention to the short term. It should now concentrate on long term requirements.

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE N° 14
COPY

ORIGINAL: ENGLISH
19th May, 1961.

NATO CONFIDENTIAL
DOCUMENT
AC/74-D/555

ARMAMENTS COMMITTEE

CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION : ARMOURED PERSONNEL CARRIER (PRO/111/4)

PROPOSED NEW TERMS OF REFERENCE FOR THE AD HOC MIXED WORKING GROUP ON AN ARMOURED PERSONNEL CARRIER (AC/176)

Note by the Secretary

At its meeting held on 24th April, 1961⁽¹⁾ a report by the Chairman of the Ad Hoc Mixed Working Group on an Armoured Personnel Carrier was considered, together with a cover note submitted by the Chairman of the Committee.

2. During the discussion on new terms of reference for this Group, the Canadian Representative proposed an amendment which would instruct the Group to investigate the possibilities of joint development and manufacture of a NATO equipment and produce an outline plan acceptable to interested countries and to the Armaments Committee.

3. The Committee agreed to reconsider at its next meeting the report of the Group and the cover note by the Chairman (document AC/74-D/536) together with the amendment proposed by the Canadian Representative.

4. Attached at Annex are the new terms of reference, including the Canadian amendment, which is Phase I(d).

(Signed) H. WEST-BURNHAM

OTAN/NATO
Paris, XVIe

(1) AC/74-R/97 Item VII

NATO CONFIDENTIAL

-3-

NATO CONFIDENTIAL
ANNEX to
AC/74-D/555

PROPOSED NEW TERMS OF REFERENCE FOR THE AD HOC MIXED WORKING GROUP
ON AN ARMoured PERSONNEL CARRIER (AC/176)

Phase I

- (a) to define the operational characteristics which would meet a stated NATO basic military requirement;
- (b) to draw up precise technical specifications;
- (c) to obtain from interested countries their overall requirements in both quantities and timing;
- (d) to investigate the possibilities of joint development and manufacture of a NATO equipment and to produce an outline plan for acceptance by interested countries and by the Armaments Committee;
- (e) to draw up a report for the Armaments Committee based on the actions taken under (a) to (d) above.

Phase II

If subsequently so directed by the Armaments Committee:

- (a) to request the interested countries to initiate co-ordinated design studies;
- (b) to appraise the design studies submitted and make a selection, taking into account operational, technical, financial and economic advantages;
- (c) *to work out a programme for developing & manufacturing such equipment*
to examine the possibilities of developing and manufacturing such equipment within NATO *with NATO*
- (d) to draw up a further report for the Armaments Committee based on the action taken under (a) to (c) above.

NATO CONFIDENTIAL

000103

1235-6-6-5

C
O
P
Y

Address reply to:

The Chairman,
Chiefs of Staff,
Ottawa.

FILE: CSC 2155-6 (SO/LOG)

DOCUMENT

CLASSIFICATION: NATO SECRET

DATE: 11 May 61.

JOINT STAFF MEMORANDUM

SUBJECT: (a) NATO BASIC MILITARY REQUIREMENT FOR COUNTER FIRE LOCATORS

(b) NATO BASIC MILITARY REQUIREMENT FOR AN ARMoured CARRIER

DESCRIPTION: (a) DOCUMENT SGM-99-61(Revised) DATED 3 MAY 61

(b) DOCUMENT SGM/225-61 DATED 27 APR 61

(2) DEP

1. The attached document is referred to:

CGS

CDRB

DM/DND

DM/DDP

SEC'Y PSOC

K.A. TOMS

Lt Col

MA to CGS

May 12 1961

2. It is requested that action be taken by: FOR INFORMATION PLEASE.

(a) OUR MEMO OF 6 MAR 61 refers.

3. Copies distributed by:

Sgd:

for (R. C. WESTON)

Air Commodore

for Chairman, Chiefs of Staff.

FSL/2-0465/meb

(3)
2 Copies of attached papers
to HENK
23 May 61
EP 2a

NATO - SECRET

COPY NO. 42/ 1

NORTH ATLANTIC MILITARY COMMITTEE

COMITE MILITAIRE DE L'ATLANTIQUE NORD

Standing Group

Groupe Permanent

SGM-225-61

27 April 1961

Pages 1

MEMORANDUM FOR THE SECRETARY GENERAL, NORTH ATLANTIC
TREATY ORGANIZATION

ATTENTION: ASSISTANT SECRETARY GENERAL FOR PRODUCTION
AND LOGISTICS

SUBJECT: NATO Basic Military Requirement for an
Armoured Carrier

Reference: C-M(59)82, 31 August 1959

1. Pursuant to the responsibility assigned by reference,
The Standing Group, after consultation with the Military Committee,
hereby establishes a NATO Basic Military Requirement for an Armoured
Carrier, with the statement thereof at Enclosure 1. Appended to the
statement of the NATO Basic Military Requirement is a German comment
which the Standing Group has been unable to incorporate in the statement.

2. This NATO Basic Military Requirement is identified as
follows:

Title: Armoured Carrier

Number: NBMR-10

FOR THE STANDING GROUP:

WmGP/bmm

Wm. G. PRICE III
Colonel, USAF
Assistant Secretary

1 ENCLOSURE:
Statement of NBMR-10
w/1 appendix

DISTRIBUTION: A B1,2,4,5,7,9 D E1 (1 ea) 5,6 F(2ea) G1 H1,5 J1 L

NATO - SECRET
SGM-225-61

- 1 -

103
000105

SECRET - NATO

APPENDIX "A"

Pages 1

NATIONAL COMMENT NOT INCORPORATED

in the

NATO BASIC MILITARY REQUIREMENT FOR AN ARMoured CARRIER

GERMANY

- 1 "1. The NBMR, in its present form, cannot be agreed to since.
- 2 in the German view, the different characteristics for
- 3 - a combat vehicle and
- 4 - a carrier
- 5 have not been taken into consideration.
- 6 2. It is suggested to incorporate the requirements for an
- 7 armoured carrier in the NBMR, on the basis of the FINABEL Agree-
- 8 ment 1.A."

SECRET - NATO
SGM-225-61

- 1 -

Appendix "A"

000106

SECRET - NATO

ENCLOSURE 1

Pages 1 - 2 Incl.

STATEMENT OF A NATO BASIC MILITARY REQUIREMENT

FOR AN

ARMoured CARRIER (NBMR-10)

1. TASK

1 a. Primary - To provide the infantry with armour-protected
2 transport throughout the entire battlefield area, with some
3 combat capability.

4 b. Secondary - To provide armour-protected transport for
5 multiple function such as mortar carrier, cargo carrier,
6 ambulance and command vehicle.

2. CAPABILITY

8 a. The carrier must be armoured and air-transportable. It
9 should possess an automatic weapon capable of all-round fire
10 against ground targets and anti-aircraft fire for self-defense
11 against low flying, low performance fixed wing aircraft and
12 helicopters. The carrier should also possess a night and all-
13 weather capability. The vehicle should be able to lay immediate
14 smoke, and should be designed to enable a portion of the occupants
15 to use their individual weapons from inside the vehicle. It
16 must be able to carry a basic infantry unit, i.e., about twelve
17 fully equipped infantrymen.

18 b. The carrier must be capable of operating with tanks and
19 of participating in airborne operations and must possess a high
20 degree of cross-country mobility to include mountainous terrain.
21 It must be capable of crossing inland waterways preferably by
22 inherent capability and should be capable of operating on swampy
23 ground and in deep snow. A range of about 500 km on roads is
24 required.

1 APPENDIX:
German Comment

SECRET - NATO
SGM-225-61

- 1 -

Enclosure 1

000107

SECRET - NATO

1 c. Adequate protection is required against:

2 (1) light artillery fragments, rifle, heavy machine
3 gun and armour piercing small arms fire, with particular
4 emphasis on frontal protection;

5 (2) anti-personnel mines and, to the extent feasible,
6 anti-tank mines;

7 (3) nuclear, biological and chemical attacks, as far
8 as possible.

9 d. The basic carrier must be adaptable to perform the
10 multiple functions described in paragraph 1, above, through the
11 application of kits which are sufficiently simple to be fitted
12 by the vehicle crews. Reliable systems are required for commun-
13 ications within the vehicle, within the unit and with other arms.
14 It is desirable that the carrier be equipped with a multi-fuel
15 engine.

16 3. MISCELLANEOUS

17 There exists a need among the NATO armies for a carrier
18 possessing the above capabilities. No estimate of quantities
19 is available at this time. It is desired that a carrier meeting
20 this requirement be made available within the shortest period
21 possible.

SECRET - NATO

- 2 -

Enclosure 1

SGM-225-61

000108

① EP 2

to note Lolio 61

26 Apr 61

Jff.
EP2

②

EP 2(A)

Noted

WR

APR 27 1961

000109

1235-6-6

FILE: S 2-5105-AC/176

DOCUMENT CONFIDENTIAL
CLASSIFICATION:

DATE: 25 Apr 61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

M E M O R A N D U M

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

Tele DL619 dated 20 Apr 61 from External to NATO Paris

1. The attached document is referred to:

→ CGS (4)

CDRB (2)

2. It is requested that action be taken by:

FOR INFORMATION, please

3. Copies distributed to:

(2)
EP 2 to note
3. Copypassed to RDP
26 April 61
J. J. L. P. 20
Noted J. J. L. P. 20

Robertson
W.C. Outram)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

(62)

CONFIDENTIAL

AC Paraphrase
not required.
No unclassified
reply or reference.

FM EXTERNAL OTT APR20/61 CONF

TO NATOPARIS DL619 PRIORITY

INFO CCOS DM/DND

TT CJS(1)FM PARIS

REF YOURTELS 904 ARP13 AND 928 APR14 ITEM VII

RDP-AC/176-ARMoured PERSONNEL CARRIER

FOLLOWING FROM DDP QUOTE DND AND DDP CONCUR IN REPORT IN AC/74-D/536
AS SUBMITTED BY CHAIRMAN OF AD HOC MIXED WORKING GROUP EXCEPT FOR
PROPOSED TERMS OF REF FOR LONG TERM. CONSIDER TERMS OF REF PROPOSED
BY GARRET ACCEPTABLE SUBJECT TO REVISION TO REQUIRE WORKING GROUP
TO INVESTIGATE IN PHASE I POSSIBILITIES OF JOINT DEVELOPMENT AND
MANUFACTURE OF A NATO EQUIPMENT AND TO PRODUCE AN OUTLINE PLAN
ACCEPTABLE TO INTERESTED COUNTRIES AND ARMAMENTS CTTEE. CONSIDER
THIS STEP ESSENTIAL TO ENSURE FOLLOWING (1) THAT ADMIN AND FINANCIAL
IMPLICATIONS ARE EXAMINED AT AN EARLY STAGE (2) THAT DIVERGENT VIEWS
ON METHOD OF CONDUCTING PROGRAM ARE STUDIED AND RECONCILED (3) THAT
REQUIREMENT FOR ADDITIONAL NATO CONTROL MACHINERY CAN BE CONSIDERED.
2. AGREE WITH YOU THAT ARMAMENTS CTTEE CAN CONTRIBUTE LITTLE TO SHORT
TERM PROBLEM EXCEPT TO RECOMMEND THAT UNCOMMITTED COUNTRIES PROCURE
ONE SPECIFIC CARRIER OF FIVE AVAILABLE. DOUBT WHETHER AGREEMENT COULD
BE REACHED ON SUCH RECOMMENDATION. CONSIDER UNCOMMITTED COUNTRIES
SHOULD PURCHASE FROM AVAILABLE PRODUCTION SOURCE. THEY SHOULD BE
KEPT FULLY AWARE OF AVAILABILITY OF BOBCAT WITH POSSIBILITY OF
SOME SHARE IN PRODUCTION IF WARRANTED UNQUOTE.

1407/21 APR 61

CONFIDENTIAL

000111

SECRET

HQS 1235-6-6-5
TD 1047(DGCS)

Ottawa, 21 Apr 61

Chairman
Chiefs of Staff

NATO Basic Military Requirement for
Armoured Carrier

1. Reference is made to message JSW 150 to the CCOS dated 6 Apr 61 and JSW 165 dated 18 Apr 61 forwarded under cover of your CSC 2155-6 (SO/LOG) dated 10 Apr 61 and 19 Apr 61 respectively.
2. We were not prepared to accept the re-draft of this NBMR as quoted in paragraph 2 of message JSW 150. However, we will accept the NBMR as revised in accordance with the comments outlined in paragraph 3 of message JSW 150. It is understood from message JSW 165 dated 18 Apr 61 that these revisions have been made.

ORIGINAL
D G C S

(SF Clark)
Lieutenant-General
Chief of the General Staff

SECRET

000112

SECRET

MEMORANDUM

HQS 1235-6-6-5 TD 1047 (DEP 2a)

21 Apr 61

DCGS

NATO Basic Military Requirement for Armoured Carrier

1. The memo at flyleaf confirms our comment made on this file 28 Feb 61 (Flag "A") which was forwarded to Chairman, CJS(W) under cover of CSC 2155-6 (SO/LOG) dated 1 Mar 61.
2. Colonel MacDonald CJS(W) called CCOS, confirmed the telecon by wire JSW 150, 6 Apr 61 (Flag "B") and requested to talk with someone on the comments which we had submitted on the NBMR for an Armoured Carrier.
3. Briefly, the Standing Group reviewed the National comments on the NBMR for the Armoured Carrier and produced a revised draft paper which is set out in ^{CJS(W)}~~CJS~~ 150 dated 6 Apr. This re-draft disregarded some of our comments which we believed were quite pertinent and Colonel MacDonald made suggestions in para 3 of ~~CJS~~ 150 and discussed them by phone with Lt-Col Reed, 6 Apr 61.
4. ^{JSW}~~CJS~~ 165, dated 18 Apr 61 (Flag "C") indicates that the Standing Group has agreed to the revisions suggested by Col MacDonald.
5. Signature of the memo at flyleaf is recommended.

FGJ/6-6309/gm

H. V. Rolfe
(GM Rolfe)
Colonel

Director of Equipment Policy

SECRET

19
5
000113

(3)

EP2 (Uy fahson)

- a. For action, you apparently have spoke
w/C Sen so know what is required.
- b. He previously had a paper (a few days ago) for
reply to ft staff. This seems to be part of it.
- c. I don't know whether our reply to previous
paper has gone to ft. staff.
- d. When you have sorted - phone me.

ROLF
COUNSEL
J.P.

000114

(58) APR 20 1974

36
19

Address Reply to:

The Chairman,
Chiefs of Staff,
Ottawa.

FILE: CSC 2155-6 (SO/LOG)

DOCUMENT
CLASSIFICATION: CONFIDENTIAL

DATE: 19 APR 61.

①

JOINT STAFF MEMORANDUM

SUBJECT: NBMR FOR ARMoured CARRIER

②
DEP
APR 19 1961

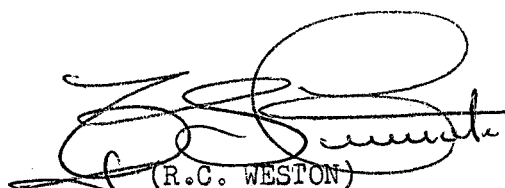
DESCRIPTION: TELE FROM CJS(W) TO CCOS JSW165 18 APR 61.

1. The attached document is referred to: CGS - 1 ✓

2. It is requested that action be taken by: FOR COMMENTS PLEASE. RE TELECON
MAJOR JOHNSON - W/C LEMON.

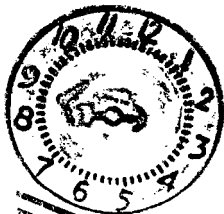
3. Copies distributed by:

FSL/2-0465/dh


(R.C. WESTON)
Air Commodore
for Chairman, Chiefs of Staff.

⑤

APR 20



EP

000116

CONFIDENTIAL

AC Paraphrase
not required.
No unclassified
reply or reference.

RR 181610Z

CONFIDENTIAL

FM CJS(W)

TO CCOS

BT

JSW165 18 APR

SUBJECT CLN NBMR FOR ARMoured CARRIER

FURTHER OUR TEL JSW150 OF 6 APR AND TELECON LT COL REED- COL MACDONALD
PD PLANNERS AGREED TO REVISIONS IN THEIR DRAFT PAPER IN
ACCORDANCE WITH THE COMMENTS OUTLINED IN REFERENCED SIGNAL AND AS
DISCUSSED BY REED AND MACDONALD

BT

CPN-JSW165-18-NBMR-TEL-150-6-LT-COL-REED-COL-MACDONALD

18/1613Z

1145/18 APR 61

CONFIDENTIAL

GOVERNMENT
OF
CANADA

ACTION REQUEST

CGSB 6-GP-12
P.P. & S. Cat. 3433

TO

LOCATION

FOR:

FILE NO.

☐ ACTION

☐ APPROVAL

☐ COMMENTS

☐ DRAFT REPLY

☐ INFORMATION

☐ INVESTIGATION

☐ MORE DETAILS

☐ NOTE & FILE

☐ NOTE & FORWARD

☐ NOTE & RETURN

☐ REPLY, PLEASE

☐ SEE ME, PLEASE

☐ SIGNATURE

☐ TRANSLATION

☐ YOUR REQUEST

PREPARE MEMO TO:

REPLY FOR SIGNATURES OF:

REMARKS:

FROM

PHONE

LOCATION

D000118

405 1235-6-5 (DE/Veh 1)

SECRET

ARMY DEVELOPMENT ESTABLISHMENT

In Reply to: DDD 1235-6-5

Dated : 19 Apr 61

OTTAWA, Ontario

20 Apr 61

Army Headquarters,
Department of National Defence,
OTTAWA, Ontario.

Attention: DDD

NATO Armaments Committee

Cooperation in Research, Development and Production

1. Reference is made to:

- a. AC/74-D/536
- b. CANAC Tel 880 dated 11 Apr 61 to External
- c. CANC Tel 904 dated 13 Apr to External
- d. Telecon Owens-Dolan of 20 Apr 61.

2. Attached at Annex 1 is a draft telegram containing comments by Lt. Col. W.J. Owens on the documents mentioned in para 1.

A copy of this draft telegram has been made available to Mr. Loveridge of the Department of Defence Production for such action as he deems advisable.

3. Such action as he deems advisable.

SECRET

WJO/6-7478/sn

(R L FRANKLIN)

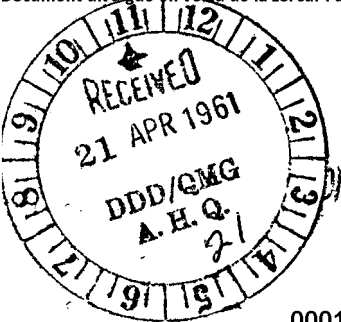
Colonel

Chief Superintendent
Army Development Establishment

000119

*DEP
Mr. W.J. Johnson
1. Reference your
mem 2 to 52-5105-AC/176
Dated 18 Apr 61
2. Please note
ADE comments
and draft were.
3. Sorry the deadline
has been passed.*

*Approved by
for DDD
28 Apr 61*



000120

SECRET

ANNEX 1 to: ADE 1235-6-5
(DE/VEH 1)
DATED: 20 APR 61

REF YOUR TEL 880 AND 904 AND AC/74-D/536

1. CONCUR IN REPORT AS SUBMITTED BY CHAIRMAN OF WORKING GROUP
EXCEPT FOR PROPOSED TERMS OF REFERENCE FOR LONG TERM STOP
CONSIDER TERMS OF REFERENCE PROPOSED BY GARRET ACCEPTABLE
SUBJECT TO REVISION TO REQUIRE WORKING GROUP TO INVESTIGATE
IN PHASE I THE POSSIBILITIES OF JOINT DEVELOPMENT AND MANUFACTURE
OF A NATO EQUIPMENT AND TO PRODUCE AN OUTLINE PLAN ACCEPTABLE
TO THE INTERESTED COUNTRIES AND THE ARMAMENTS COMMITTEE STOP
CONSIDER THIS STEP ESSENTIAL TO ENSURE FOLLOWING STOP
FIRST THAT ADMINISTRATIVE AND FINANCIAL IMPLICATIONS ARE
EXAMINED AT AN EARLY STAGE STOP
SECOND THAT DIVERGENT VIEWS ON THE METHOD OF CONDUCTING
THE PROGRAM ARE STUDIED AND RECONCILED STOP
THIRD THAT THE REQUIREMENT FOR ADDITIONAL NATO CONTROL
MACHINERY CAN BE CONSIDERED STOP
AGREE WITH YOU THAT ARMAMENTS COMMITTEE CAN CONTRIBUTE LITTLE
TO SHORT TERM PROBLEM EXCEPT TO RECOMMEND THAT UNCOMMITTED
COUNTRIES PROCURE ONE SPECIFIC CARRIER OF THE FIVE AVAILABLE STOP
DOUBT WHETHER AGREEMENT COULD BE REACHED ON SUCH RECOMMENDATION
STOP CONSIDER UNCOMMITTED COUNTRIES SHOULD PURCHASE FROM AVAILABLE
PRODUCTION SOURCE STOP THEY SHOULD BE KEPT FULLY AWARE OF
AVAILABILITY OF BOBCAT WITH POSSIBILITY OF SOME SHARE IN PRODUCTION
IF WARRANTED STOP

SECRET

000121

FILE: S 2-5105-AC/176

DOCUMENT S E C R E T
CLASSIFICATION:

DATE: 18 Apr 61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

M E M O R A N D U M

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

- (a) CANAC Tele 880 dated 11 Apr 61 to External
- (b) CANAC Tele 904 dated 13 Apr 61 to External

1. The attached document is referred to: CGS (4)
CDRB (2)

2. It is requested that action be taken by: CGS -
FOR COMMENTS by 20 April 61, please
(NATO Document AC/74-D/536 will be
forwarded immediately upon receipt)

3. Copies distributed to:

(2)
DDD
2 copies ✓
your comments pls.
18 April
J. C. Outram
EP 20
R. Chaitana
J.C. Outram
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

FM NA PARIS APR13/61 SECRET

TO EXTERNAL 904

INFO CCOS CJS(L)

DM/DND FM CCOS

DM/DDP OTT FM OTT

REF OUR TEL 880 MAR29

RDP-AC/176-ARMoured PERSONNEL CARRIER

IN OUR REFTEL WE SHOULD HAVE DRAWN ATTENTION SPECIFICALLY TO THE COVER NOTE TO AC/74-D/536 PREPARED BY THE ASST SEC GEN FOR PRODUCTION AND LOGISTICS. YOUR GUIDANCE ON IT IS REQUIRED FOR APR24 MEETING OF THE ARMAMENTS CTTEE.

2. IN THE DEL WE AGREE THAT THE CHANGES IN THE NEW TERMS OF REF, AS PROPOSED BY MR GARRETT, ARE AN IMPROVEMENT OVER THOSE SUGGESTED BY THE GROUP. WE ARE NOT RPT NOT, HOWEVER, SURE THAT ANYTHING VERY USEFUL CAN BE ACHIEVED BY THE ARMAMENTS CTTEE SO FAR AS NATO COOPERATION IS CONCERNED TO RESOLVE THE SHORT TERM PROBLEM. IT SEEMS TO US TO BE A QUESTION OF THE UNCOMMITTED COUNTRIES DECIDING ON THE TYPE OF VEHICLE WHICH THEY WANT (ABC CONCEPT OR THAT OF MOST CONTINENTAL EUROPEAN COUNTRIES) AND THEN PLACING ORDERS ON AN AVAILABLE PRODUCTION SOURCE. AT LEAST WE COULD SUGGEST THAT IT WOULD BE UNDESIRABLE FOR COUNTRIES STILL UNCOMMITTED TO ESTABLISH ANY NEW SOURCES TO MEET THE SHORT TERM NEED. IN THIS DISCUSSION WE SHOULD LIKE TO BE ABLE TO PROMOTE, IF POSSIBLE, THE QUOTE BOBCAT UNQUOTE AND YOUR SUGGESTIONS WOULD BE WELCOME.

3. PLEASE ENSURE THAT DDP HAS OBTAINED A COPY OF OUR REFTEL.

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SECRET

AC Paraphrase
not required.
No unclassified
reply or reference.

FM NATOPARIS APR11/61 SECRET
TO EXTERNAL GCO
INFO CCOS CJS(L)

DM/DND FM CCOS

REF OURLET N484 MAR29

RDP-AC/176-ARMoured PERSONNEL CARRIER

FURTHER TO OUR REFLET THE SUBJECT GROUPS REPORT IN AC/176-D/2
HAD NOW BEEN ISSUED AS DOCU AC/74-D/536 APR10 AND COPIES WILL GO
FORWARD TO YOU UNDER TS1624 IN THURS BAG. THE REPORT WILL BE TAKEN UP
FOR APPROVAL BY THE ARMAMENTS CTTEE ON APR24. PLEASE CONSULT LT
COLONEL WJ OWENS, DND, AND LET US KNOW BEFORE THAT DATE WHETHER IT
IS ACCEPTABLE.

728/12 APR 61

SECRET

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE
COPY N°

19

ORIGINAL: ENGLISH
10th April, 1961

NATO SECRET
DOCUMENT
AC/74-D/536

ARMAMENTS COMMITTEE

CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION: ARMOURED PERSONNEL CARRIER (PRO/III/4)

REPORT BY THE AD HOC MIXED WORKING GROUP ON AN ARMOURED PERSONNEL CARRIER (AC/176)

Note by the Chairman

Attached at Annex is a copy of a report to the Armaments Committee, prepared by the Chairman of the Ad Hoc Mixed Working Group on an Armoured Personnel Carrier, which is circulated to the Committee for consideration at its next meeting. There are two particular aspects of this report to which I would like to draw the attention of the Committee.

2. The first concerns the requirements for Armoured Personnel Carriers for the period up to 1965. In part II of the attached report, entitled "Results of work achieved by the Ad Hoc Mixed Working Group", statements are made concerning the requirements of the nations participating in this Group and in Phase II(a)(iii) it is concluded that "The requirements of the uncommitted nations (Belgium and the Netherlands) have been indicated as being so small that these requirements can be satisfied readily by any one of the major producers". In (b) it is stated that "The uncommitted countries would inform the International Staff of the subsequent decision taken regarding the choice of vehicles and plans for production and procurement".

3. This is excellent as far as it goes but there are several other European non-producing countries whose requirements have not been mentioned because they do not participate in the Group. These are Denmark, Greece, Italy, Norway, Portugal and Turkey. According to SHAPE estimates, their total requirements for the period 1962/1966 are likely to be of the order of 7,000 carriers. If the probable requirements of Belgium and the Netherlands, as estimated by SHAPE for the same period, are added, the total might well be not far short of 10,000 carriers.

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AC/74-D/536

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4. Figures of this order of magnitude and considerations of the logistic advantages of having only one, or at the most two, types of carrier in the forces of these non-producing countries might well lead the Committee to wish to discuss the short-term problem. This can perhaps most conveniently be done when the military requirements for the period 1962/1966 have been finalised.

5. The second aspect to which attention is drawn concerns the proposed terms of reference for the Group when working on the long-term problem. It is believed that there is some advantage in making these more complete. The following sub-paragraphs are therefore suggested for consideration in replacement of (a), (b) and (c) of those proposed in the report.

Phase I

- (a) to define the operational characteristics which would meet a stated NATO basic military requirement;
- (b) to draw up precise technical specifications;
- (c) to obtain from interested countries their overall requirements in both quantities and timing and plans for procurement;
- (d) to draw up a report for the Armaments Committee based on the actions taken under (a) to (c) above.

Phase II

If subsequently so directed by the Armaments Committee:

- (a) to request the interested countries to initiate co-ordinated design studies;
 - (b) to appraise the design studies submitted and make a selection, taking into account operational, technical, financial and economic advantages;
 - (c) to examine the possibilities of developing and manufacturing such equipment within NATO;
 - (d) to draw up a further report for the Armaments Committee based on the action taken under (a) to (c) above.
6. In conclusion, the Committee is invited:
- (i) to take note of the report and the comments made above;
 - (ii) to consider whether any further action should be taken by the Ad Hoc Mixed Working Group on the short-term problem;

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AC/74-D/536

- (iii) to agree that the Group should initiate a co-ordinated study for the development of a long-term equipment and that their terms of reference should be revised accordingly;
- (iv) to invite the Standing Group to formulate a NATO basic military requirement for an armoured personnel carrier for production in 1970/1972.

(Signed) JOHNSON GARRETT

OTAN/NATO,
Paris, XVIe.

NATO SECRET

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NATO SECRET
ANNEX to
AC/74-D/536

AD HOC MIXED WORKING GROUP ON AN ARMoured
PERSONNEL CARRIER

CHAIRMAN'S REPORT TO THE ARMAMENTS COMMITTEE

I. INTRODUCTION

The Armaments Committee at its meeting on 24th June, 1960 (AC/74-R/89, Item I) decided to set up an Ad Hoc Mixed Working Group with the following terms of reference:

The Ad Hoc Mixed Working Group shall examine the possibilities of and, if subsequently so directed by the Armaments Committee, implement a co-operative project for a NATO armoured personnel carrier, following the procedure set out below:

Phase I

- (a) to determine if there exists a common requirement among several countries for an armoured personnel carrier;
- (b) to obtain the main operational characteristics of the equipment proposed;
- (c) to ascertain if this equipment is of interest to countries for the equipment of their own forces.

Phase II

- (a) if several countries declare an interest in this equipment, to ask the NATO military authorities if it meets a NATO basic military requirement;
- (b) to examine the possibilities of manufacturing or procuring such equipment within NATO;
- (c) to draw up a report for the Armaments Committee.

The Ad Hoc Mixed Working Group met twice, on the 7th and 8th September, 1960 and on the 14th and 15th February, 1961. At the last meeting, they agreed that the Chairman should forward the following report to the Armaments Committee, in accordance with Phase II(c) of their terms of reference.

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ANNEX to
AC/74-D/536

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II. RESULTS OF WORK ACHIEVED BY THE AD HOC MIXED WORKING GROUP

Following the terms of reference, the Ad Hoc Mixed Working Group:

Phase I (of terms of reference)

- (a) determined that all countries have recognised the need for some type or types of armoured personnel carriers;
- (b) obtained the main operational and technical characteristics of all existing or underdeveloped armoured personnel carriers (see Annex I to AC/176-R/1).
- (c) from the equipments proposed, was unable to recommend one particular carrier for NATO common use and concluded that NATO forces, in the period between 1960-1965, will be equipped with not less than 4 new types of carriers and possibly 5 as evidenced below.

United States: are now manufacturing armoured personnel carriers at a rate of 200 vehicles a month and are planning to meet their national requirements with the M.113.

France: is presently producing a transport combat vehicle V.T.T.12 CH, at a rate of 50 a month and plans to meet its national requirements with this vehicle.

Germany: intends to meet its national requirements for transport combat vehicle through national production at a rate of 150 a month, delivery starting 1963. Depending upon current studies, the present German requirement for a vehicle solely for transport would be met by procurement in the United States of M.113 type vehicles.

United Kingdom: indicated that they intend to continue development and manufacture of their own armoured personnel carrier FV-432. The bulk production would start in 1963.

Canada: indicated that they intend to produce 500 vehicles of the "Bobcat" family, including 350 armoured personnel carriers in order to meet their national requirements.

Belgium: indicated a requirement for a transport combat vehicle. However, their authorities have not yet selected a vehicle. Belgium would like to meet its requirement by 1965.

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NATO SECRET-
ANNEX to ---
AC/74-D/536

Netherlands: indicated a need of 170 transport combat tracked vehicles and 250 wheeled transport vehicles through 1963. After 1963, depending upon financial possibilities, 85 additional transport combat tracked vehicles and 400 transport wheeled vehicles would be purchased.

Phase II (of terms of reference)

- (a) Contrary to what was expected at the first meeting, positions and policies of the various countries could not be firmly established and, in view of the facts indicated below, the Ad Hoc Mixed Working Group does not consider it advisable to ask the NATO military authorities to decide whether any one of the mentioned equipments meets a basic NATO military requirement.
- (i) NATO countries which are producers of armoured personnel carriers are firmly committed to manufacture a family of vehicles to meet their national requirements.
 - (ii) Between the users, there is a difference in the tactical concept for the use of armoured personnel carriers which could not be resolved by the Ad Hoc Mixed Working Group.
 - (iii) The requirements of the uncommitted nations (Belgium and Netherlands) have been indicated as being so small that these requirements can be satisfied readily by any one of the major producers.
- (b) The countries actually engaged in the production or in the development of armoured personnel carriers have stated that they were willing to offer their vehicles for multilateral correlated production within NATO, if warranted, or to sell these vehicles to NATO member countries (Belgium has requested to participate in the manufacture of the equipment to be selected and ordered). It was agreed that uncommitted countries would inform the International Staff of the subsequent decision taken regarding the choice of vehicles and plans for production and procurement.

III. CONCLUSIONS AND PROPOSALS (long term planning)

It now appears that by 1965, all countries will have satisfied their requirements from the presently planned production. By 1970, the equipments now being produced and taken into service by NATO countries will be ready for replacement utilising more advanced designs.

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ANNEX to
AC/74-D/536

-8-

The Ad Hoc Mixed Working Group considers that in order to make available a commonly produced new design equipment to be in production in 1970-1972, experimental prototypes should be ready by 1968. This implies an immediate start of research and development studies.

The draft basic military requirement now being considered by the Standing Group could provide for designers, if approved, some minimum guidance related to 1970-1972 time frame.

The Ad Hoc Mixed Working Group therefore, taking note of the national requirements for an armoured personnel carrier to be in production by 1970-1972 and of the NATO probable requirement for such a vehicle:

- (a) recommend that they should initiate a co-ordinated study for the development of a long-term equipment and that their terms of reference should be revised accordingly (Proposed terms of reference attached).
- (b) request that the Standing Group be urged to furnish the Group in broad terms with a basic military requirement for an armoured personnel carrier for production in 1970-1972.
- (c) consider that they have concluded the task given to them by the Armaments Committee and propose no further action until a decision has been taken with regard to extending their terms of reference.

(Signed) F. D. LEJEUNE
Acting Chairman

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APPENDIX to
ANNEX to
AC/74-D/536

PROPOSED TERMS OF REFERENCE FOR THE AD HOC MIXED
WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

The Ad Hoc Mixed Working Group on a long-term armoured personnel carrier should examine the possibilities of implementing a co-operative project for a NATO armoured personnel carrier (long-term). This Group shall act in accordance with the document C-M(59)82 as follows:

- (a) to define the operational characteristics corresponding to NATO basic military requirements;
- (b) to initiate co-ordinated design studies, amongst the interested countries;
- (c) to examine the results of these studies and report to the Armaments Committee.

NATO SECRET

FP 2(A)

1. I presume there is ~~some~~ one
of which we had advance
copy the other day
2. I spoke later to
MacDonald & said to
stand firm on his A + B
+ D but to desist C.
He was going to negotiate
on the basis we could achieve
3. In meantime, prepare formal
reply, reiterating our views
on A, B + D

W 000133

EP2 (HT Con Reed)

- a. Actin pse.
- b. No date is given for reply - perhaps you covered in your telegram referred to at para 2.
- c. In any event, send reply soonest.

(S) (P) (F) (E)
MAGNEL
DEF

APR 11 1961

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56
10

Address Reply to:

The Chairman,
Chiefs of Staff,
Ottawa.

FILE: CSC 2155-6 (SO/LOG)

DOCUMENT SECRET
CLASSIFICATION:

DATE: 10 Apr 61.

①

JOINT STAFF MEMORANDUM

SUBJECT:

NATO BASIC MILITARY REQUIREMENT FOR ARMoured CARRIER

DESCRIPTION:

MESSAGE JSW 150 TO CCOS DATED 6 APR 61

②
DEP
K. J. TOMS
Lt-Col
W/C CGS
APR 10 1961


1. The attached document is referred to: CGS

③

2. It is requested that action be taken by: For CGS Comments. Re Telecon
Col MacDonald CJS(W)/Col Reid(AHQ)/
W/C Lemon (Joint Staff)

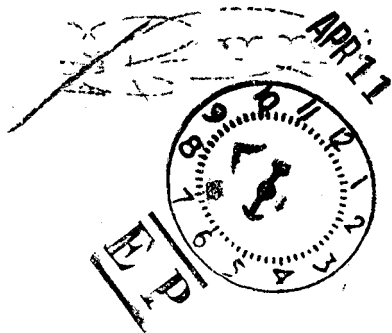
3. Copies distributed by:

FSL/2-0465/meb


(R. C. WESTON)
Air Commodore

for Chairman, Chiefs of Staff.

④
H9



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AC Paraphrase
not required.
No unclassified
reply or reference.

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RR 061530Z

FM CJS(W)

TO CCOS

BT

JSU150 6 APR

SUBJECT NATO BASIC MILITARY REQUIREMENT FOR ARMoured CARRIER

PARA 1 RELET CSC 2155-6 (SO LOG) OF 1 MAR 61. THE SGN PLANNERS HAVE NOW REVIEWED NATIONAL COMMENTS ON THE NBMR FOR THE ARMoured CARRIER AND PRODUCED A REVISED DRAFT PAPER WHICH IS SET OUT IN PARA 2 BELOW. UNDERLINED PORTIONS INDICATE CHANGES FROM MCM-19-61 DATED 6 FEB 61.

PARA 2 QUOTE STATEMENT OF A NATO BASIC MILITARY REQUIREMENT FOR ARMoured CARRIER (NBMR) . SGN PARA 1 UNDERLINE TASK END UNDERLINE

(A) PRIMARY - TO PROVIDE THE INFANTRY WITH ARMOUR-PROTECTED TRANSPORT THROUGHOUT THE ENTIRE BATTLEFIELD AREA, UNDERLINE WITH SOME INTEGRAL COMBAT CAPABILITY END UNDERLINE.

(B) SECONDARY-TO PROVIDE ARMOUR-PROTECTED TRANSPORT FOR MULTIPLE FUNCTIONS SUCH AS MORTAR CARRIER, CARGO CARRIER, AMBULANCE, COMMAND VEHICLES, ETC.

SGN PARA 2 UNDERLINE CAPABILITY END UNDERLINE

(A) THE CARRIER MUST BE ARMoured AND AIR-TRANSPORTABLE. IT MUST POSSESS AN AUTOMATIC WEAPON CAPABLE OF ALL-ROUND FIRE AGAINST GROUND TARGETS AND ANTI-AIRCRAFT FIRE FOR SELF-DEFENSE AGAINST LOW FLYING, LOW PERFORMANCE FIXED WING AIRCRAFT AND HELICOPTERS. THE CARRIER MUST POSSESS A NIGHT AND ALL-WEATHER CAPABILITY. THE VEHICLE SHOULD BE DESIGNED TO ENABLE A PORTION OF THE OCCUPANTS TO USE THEIR

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AC Paraphrase
not required.
No unclassified
reply or reference.

PAGE TWO SECRET JSW150

INDIVIDUAL WEAPONS FROM INSIDE THE VEHICLE. UNDERLINE IT SHOULD BE POSSIBLE TO LAY IMMEDIATE SMOKE FROM THE CARRIER END UNDERLINE. IT MUST BE CAPABLE OF CARRYING A BASIC INFANTRY UNIT, I.E. ABOUT TWELVE FULLY EQUIPPED INFANTRYMEN.

(B) THE CARRIER MUST BE CAPABLE OF OPERATING WITH TANKS, AND OF PARTICIPATING IN AIRBORNE OPERATIONS AND MUST POSSESS A HIGH DEGREE OF CROSS-COUNTRY MOBILITY UNDERLINE TO INCLUDE MOUNTAINOUS TERRAIN END UNDERLINE. IT UNDERLINE SHOULD END UNDERLINE BE CAPABLE OF CROSSING INLAND WATERWAYS UNDERLINE AND OF OPERATING ON SWAMPY GROUND AND IN DEEP SNOW END UNDERLINE, PREFERABLY BY INHERENT CAPABILITY. A RANGE OF ABOUT 500 KM ON ROADS IS REQUIRED. ADEQUATE PROTECTION FROM LIGHT ARTILLERY FRAGMENTS, RIFLE, HEAVY MACHINE GUN UNDERLINE AND ARMOUR PIERCING SMALL ARMS END UNDERLINE FIRE, ANTI-PERSONNEL MINES UNDERLINE AND, TO THE EXTENT FEASIBLE, ANTI-TANK MINES END UNDERLINE SHOULD BE PROVIDED, WITH PARTICULAR EMPHASIS BEING PLACED ON FRONTAL PROTECTION (WORD QUOTE AND UNQUOTE DELETED). PROTECTION (PHRASE QUOTE TO THE EXTENT FEASIBLE UNQUOTE DELETED) AGAINST NUCLEAR, BIOLOGICAL AND CHEMICAL (WORD QUOTE MUNITIONS UNQUOTE DELETED) UNDERLINE ATTACKS SHOULD ALSO BE PROVIDED, AS FAR AS POSSIBLE END UNDERLINE. THIS BASIC CARRIER MUST BE ADAPTABLE TO PERFORM THE MULTIPLE FUNCTIONS DESCRIBED IN PARAGRAPH 1 ABOVE THROUGH THE APPLICATION OF KITS UNDERLINE WHICH ARE SUFFICIENTLY SIMPLE TO BE FITTED BY THE VEHICLE CREWS END UNDERLINE. IT IS DESIRABLE THAT THE CARRIER BE EQUIPPED WITH A MULTI-FUEL ENGINE. UNDERLINE RELIABLE SYSTEMS ARE

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AC Paraphrase
not required.
No unclassified
reply or reference.

PAGE THREE SECRET JSW150

REQUIRED FOR COMMUNICATIONS WITHIN THE VEHICLE, WITHIN THE UNIT
AND WITH OTHER ARMS END UNDERLINE.

SGN PARA 3 UNDERLINE MISCELLANEOUS END UNDERLINE

THERE EXISTS A NEED AMONG THE NATO ARMIES FOR A CARRIER POSSESSING
THE ABOVE CAPABILITIES. NO ESTIMATE OF QUANTITIES IS AVAILABLE AT
THIS TIME. IT IS DESIRED THAT A CARRIER MEETING THIS REQUIREMENT
BE MADE AVAILABLE WITHIN THE SHORTEST PERIOD POSSIBLE. UNQUOTE.

PARA 3 THE SGN PLANNERS HAVE NOT AGREED TO INCLUDE THE CANADIAN
COMMENTS PRIMARILY BECAUSE THEY CONSIDER THEM TO BE OF A GENERAL
NATURE WHICH, WHILE IMPORTANT, NEED NOT BE INCLUDED IN THE
OUT LINE SPECIFICATIONS CONTAINED IN THE NDMR. ON READING SGN PRO-
POSALS IT SEEMS DOUBTFUL THAT THEIR REVISION IS ACCEPTABLE TO CANADA
FOR THE FOLLOWING REASONS:

(A) REFERENCE SGN PARA 2 (A) OF THE NEW DRAFT DOCUMENT, SECOND SENTENCE
STATES QUOTE IT MUST POSSESS AN AUTOMATIC WEAPON CAPABLE OF ALL-
ROUND FIRE UNQUOTE. IF THE CANADIAN POINT IS TO BE SUSTAINED
SHOULD THIS QUOTE MUST UNQUOTE NOT BE CHANGED TO QUOTE SHOULD
UNQUOTE?

(B) REFERENCE SGN PARA 2 (B) , SECOND SENTENCE, THE REVISED DOCUMENT
STATES QUOTE WHICH SHOULD BE CAPABLE OF CROSSING INLAND WATERWAYS
UNQUOTE. IT WOULD SEEM THAT THE WATER CROSSING CAPABILITY IS ESS-
ENTIAL AND THEREFORE THE WORD QUOTE MUST UNQUOTE SHOULD BE RE-
INSTATED.

(C) REFERENCE SGN PARA 2 (A) , THIRD SENTENCE. REFERS TO THE CAP-

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AC Paraphrase
not required.
No unclassified
reply or reference.

PAGE FOUR SECRET JSW150

ABILITY OF OCCUPANTS TO USE INDIVIDUAL WEAPONS FROM INSIDE THE VEHICLE WITHOUT REFERENCE TO THE CANADIAN VIEW THAT THIS CHARACTERISTIC SHOULD NOT RPT NOT PREJUDICE THE AMPHIBIOUS CAPABILITY.

(D) REFERENCE SGN PARA 2(B), THIRD SENTENCE. THIS PRESCRIBES A DEGREE OF PROTECTION FROM FRAGMENTS AND SMALL ARMS FIRE WHICH APPEARS TO IGNORE THE CANADIAN VIEW THAT THIS IS IMPOSSIBLE TO ACHIEVE CONSISTENT WITH AMPHIBIOUS AND AIR TRANSPORTABLE CHARACTERISTICS.

PARA 4 PLEASE ADVISE WHETHER YOU ARE PREPARED TO ACCEPT THE REDRAFT IN VIEW OF THE COMMENTS ABOVE

BT

~~CFN JSW150 6 1 6562155-6 1 61 2 NCM-19-61 6 61 2 1 2 500 NM~~

~~1 3 3 2 (A) 2 (B) 2 (A) 2 (B) 4~~

06/1849Z

353/06 APR 61

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AC Paraphrase
not required.
No unclassified
reply or reference.

PAGE TWO SECRET JJW150

INDIVIDUAL WEAPONS FROM INSIDE THE VEHICLE. ~~IT SHOULD BE~~
~~POSSIBLE TO LAY IMMEDIATE SMOKE FROM THE CARRIER~~
IT MUST BE CAPABLE OF CARRYING A BASIC INFANTRY UNIT, I.E. ABOUT
TWELVE FULLY EQUIPPED INFANTRYMEN.

(B) THE CARRIER MUST BE CAPABLE OF OPERATING WITH TANKS, AND OF
PARTICIPATING IN AIRBORNE OPERATIONS AND MUST POSSESS A HIGH DEGREE OF
CROSS-COUNTRY MOBILITY ~~TO INCLUDE MOUNTAINOUS TERRAIN~~
~~IT SHOULD~~ BE CAPABLE OF CROSSING
INLAND WATERWAYS ~~AND OF OPERATING ON SWAMPY GROUND AND IN~~
DEEP SNOW ~~PREFERABLY BY INHERENT CAPABILITY. A RANGE~~
OF ABOUT 500 KM ON ROADS IS REQUIRED. ADEQUATE PROTECTION FROM LIGHT
ARTILLERY FRAGMENTS, RIFLE, HEAVY MACHINE GUN ~~AND~~
ARMOUR PIERCING SMALL ARMS ~~FIRE, ANTI-PERSONNEL MINES~~
~~AND, TO THE EXTENT FEASIBLE, ANTI-TANK MINES~~
SHOULD BE PROVIDED, WITH PARTICULAR EMPHASIS BEING PLACED ON FRONTAL
PROTECTION ~~PROTECTION~~ AGAINST NUCLEAR, BIOLOGICAL
AND CHEMICAL ~~ATTACKS SHOULD ALSO BE PROVIDED, AS FAR AS POSSIBLE~~
THIS BASIC CARRIER MUST BE ADAPTABLE TO PERFORM THE MULTIPLE FUNCTIONS
DESCRIBED IN PARAGRAPH 1 ABOVE THROUGH THE APPLICATION OF KITS
~~WHICH ARE SUFFICIENTLY SIMPLE TO BE FITTED BY THE VEN-~~
ICLE CREWS ~~IT IS DESIRABLE THAT THE CARRIER BE~~
EQUIPPED WITH A MULTI-FUEL ENGINE. ~~RELIABLE SYSTEMS ARE~~

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SECRET

AC Paraphrase
not required.
No unclassified
reply or reference.

PAGE THREE SECRET JSU150

REQUIRED FOR COMMUNICATIONS WITHIN THE VEHICLE, WITHIN THE UNIT
AND WITH OTHER ARMS ~~THE UNDERLINE~~

SGN PARA 3 ~~UNDERLINE~~ MISCELLANEOUS ~~END UNDERLINE~~

THERE EXISTS A NEED AMONG THE NATO ARMIES FOR A CARRIER POSSESSING
THE ABOVE CAPABILITIES. NO ESTIMATE OF QUANTITIES IS AVAILABLE AT
THIS TIME. IT IS DESIRED THAT A CARRIER MEETING THIS REQUIREMENT
BE MADE AVAILABLE WITHIN THE SHORTEST PERIOD POSSIBLE. UNQUOTE.

PARA 3 THE SGN PLANNERS HAVE NOT AGREED TO INCLUDE THE CANADIAN
COMMENTS PRIMARILY BECAUSE THEY CONSIDER THEM TO BE OF A GENERAL
NATURE WHICH, WHILE IMPORTANT, NEED NOT BE INCLUDED IN THE

OUT LINE SPECIFICATIONS CONTAINED IN THE NBMR. ON READING SGN PRO-
POSALS IT SEEMS DOUBTFUL THAT THEIR REVISION IS ACCEPTABLE TO CANADA
FOR THE FOLLOWING REASONS:

✓ (A) REFERENCE SGN PARA 2 (A) OF THE NEW DRAFT DOCUMENT, SECOND SENTENCE
STATES QUOTE IT MUST POSSESS AN AUTOMATIC WEAPON CAPABLE OF ALL-
ROUND FIRE UNQUOTE. IF THE CANADIAN POINT IS TO BE SUSTAINED ✓
SHOULD THIS QUOTE MUST UNQUOTE NOT BE CHANGED TO QUOTE SHOULD
UNQUOTE?

(B) REFERENCE SGN PARA 2 (B) , SECOND SENTENCE, THE REVISED DOCUMENT
STATES QUOTE WHICH SHOULD BE CAPABLE OF CROSSING INLAND WATERWAYS ✓
UNQUOTE. IT WOULD SEEM THAT THE WATER CROSSING CAPABILITY IS ESS-
ENTIAL AND THEREFORE THE WORD QUOTE MUST UNQUOTE SHOULD BE RE-
INSTATED.

(C) REFERENCE SGN PARA 2 (A) , THIRD SENTENCE. REFERS TO THE CAP-

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AC Paraphrase
not required.
No unclassified
reply or reference.

PAGE FOUR SECRET JSW150

ABILITY OF OCCUPANTS TO USE INDIVIDUAL WEAPONS FROM INSIDE THE VEHICLE WITHOUT REFERENCE TO THE CANADIAN VIEW THAT THIS CHARACTERISTIC SHOULD NOT RPT NOT PREJUDICE THE AMPHIBIOUS CAPABILITY. X

(D) REFERENCE SCN PARA 2(B), THIRD SENTENCE. THIS PRESCRIBES A DEGREE OF PROTECTION FROM FRAGMENTS AND SMALL ARMS FIRE WHICH APPEARS TO IGNORE THE CANADIAN VIEW THAT THIS IS IMPOSSIBLE TO ACHIEVE CONSISTENT WITH AMPHIBIOUS AND AIR TRANSPORTABLE CHARACTERISTICS. /

PARA 4 PLEASE ADVISE WHETHER YOU ARE PREPARED TO ACCEPT THE REDRAFT IN VIEW OF THE COMMENTS ABOVE

BT

~~CFN JSW150 6 1 CS62155-6 1 61 2 NON-12-61 6 61 2 1 2 500 NM~~

~~1 3 3 2 (A) 2 (B) 2 (A) 2 (B) 4~~

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353/06 APR 61

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000144

FILE: S 2-5105-AC/176

DOCUMENT S E C R E T
CLASSIFICATION:

DATE: 11 Apr 61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

M E M O R A N D U M

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

- (a) CANAC Numbered Letter N-484 dated 29 Mar to External
- (b) NATO Document AC/176-D/2 dated 27 Mar 61

1. The attached document is referred to: ^① CGS (4)
CDRB (2)

2. It is requested that action be taken by: CGS - Please indicate whether you wish to comment.
CDRB - For information, please

3. Copies distributed to:

②
DDD
- pls indicate if
you wish to comment
- retain these copies
12 Apr 61 J. Pharo
EP2a

J. Pharo
(J. Pharo)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

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DEPARTMENT OF EXTERNAL AFFAIRS, CANADA.

NUMBERED LETTER

TO: THE UNDER-SECRETARY OF STATE FOR
EXTERNAL AFFAIRS, OTTAWA, CANADA.

FROM: ...The Canadian Delegation to the.....
...North Atlantic Council, Paris.....

Reference: Your telegram DL-265 of February 15.

Subject: ...RDP... AC/176... Armoured Personnel....
.....Carrier.....

Security: ...RESTRICTED.....

No:N-..... 484.....

Date:March 29, 1961.....

Enclosures:
.....

Air or Surface Mail:AIR.....

Post File No:9/35/5.....

Ottawa File No.

50115-A-40

33

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References

The Chairman's report to the Armaments
Committee is contained in AC/176-D/2 of March 27,
going forward to you under transmittal slip 1432
of March 29. It should be drawn to the attention
of Lt. Colonel W.J. Owens who represented Canada
at the February 14 - 15 meeting and, if he has any
observations which he wishes us to make in the
Armaments Committee, we should be notified.

D-1

Internal
Circulation

The Delegation.

Distribution
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ORIGINAL: ENGLISH
27th March, 1961

NATO SECRET
DOCUMENT
AC/176-D/2

AD HOC MIXED WORKING GROUP ON AN ARMOURED PERSONNEL CARRIER

CHAIRMAN'S REPORT TO THE ARMAMENTS COMMITTEE

Note by the Secretary

The members of the Ad Hoc Mixed Working Group will find herewith attached the Chairman's report to the Armaments Committee as approved during the last meeting which took place on 14th and 15th February, 1961.

2. This document has been forwarded to the Secretary of the Armaments Committee for circulation, and approval of the Committee.

(Signed) A. DE CALLATAY

OTAN/NATO,
Paris, XVIe.

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ANNEX to

AC/176-D/2

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

CHAIRMAN'S REPORT TO THE ARMAMENTS COMMITTEE

I. INTRODUCTION

The Armaments Committee at its meeting on 24th June, 1960 (AC/74-R/89, Item I) decided to set up an Ad Hoc Mixed Working Group with the following terms of reference:

The Ad Hoc Mixed Working Group shall examine the possibilities of and, if subsequently so directed by the Armaments Committee, implement a co-operative project for a NATO armoured personnel carrier, following the procedure set out below:

PHASE I

- (a) to determine if there exists a common requirement among several countries for an armoured personnel carrier;
- (b) to obtain the main operational characteristics of the equipment proposed;
- (c) to ascertain if this equipment is of interest to countries for the equipment of their own forces.

PHASE II

- (a) if several countries declare an interest in this equipment to ask the NATO military authorities if it meets a NATO basic military requirement;
- (b) to examine the possibilities of manufacturing or procuring such equipment within NATO;
- (c) to draw up a report for the Armaments Committee.

The Ad Hoc Mixed Working Group met twice, on the 7th and 8th September, 1960 and on the 14th and 15th February, 1961. At the last meeting, they agreed that the chairman should forward the following report to the Armaments Committee, in accordance with Phase II(c) of their terms of reference.

II. RESULTS OF WORK ACHIEVED BY THE AD HOC MIXED WORKING GROUP

Following the terms of reference, the Ad Hoc Mixed Working Group:

PHASE I (of terms of reference)

- (a) determined that all countries have recognised the need for some type or types of armoured personnel carriers;

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- (b) obtained the main operational and technical characteristics of all existing or under development armoured personnel carriers (see Annex I to AC/176-R/1).
- (c) from the equipments proposed, was unable to recommend one particular carrier for NATO common use and concluded that NATO forces, in the period between 1960-1965, will be equipped with not less than 4 new types of carriers and possibly 5 as evidenced below.

United States : are now manufacturing armoured personnel carriers at a rate of 200 vehicles a month and are planning to meet their national requirements with the M.113.

France : is presently producing a transport combat vehicle V.T.T.12 CH, at a rate of 50 a month and plans to meet its national requirements with this vehicle.

Germany : intends to meet its national requirements for transport combat vehicle through national production at a rate of 150 a month, delivery starting 1963. Depending upon current studies, the present German requirement for a vehicle solely for transport would be met by procurement in the United States of M. 113 type vehicles.

United Kingdom : indicated that they intend to continue development and manufacture of their own armoured personnel carrier FV-432. The bulk production would start in 1963.

Canada : indicated that they intend to produce 500 vehicles of the "Bobcat" family, including 350 armoured personnel carriers in order to meet their national requirements.

Belgium : indicated a requirement for a transport combat vehicle. However, their authorities have not yet selected a vehicle. Belgium would like to meet its requirement by 1965.

Netherlands : indicated a need of 170 transport combat tracked vehicles and 250 wheeled transport vehicles through 1963. After 1963 depending upon financial possibilities, 85 additional transport combat tracked vehicles and 400 transport wheeled vehicles would be purchased.

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PHASE II (of terms of reference)

(a) Contrary to what was expected at the first meeting, positions and policies of the various countries could not be firmly established and, in view of the facts indicated below, the Ad Hoc Mixed Working Group does not consider it advisable to ask the NATO military authorities to decide whether any one of the mentioned equipments meets a basic NATO military requirement.

(i) NATO countries which are producers of armoured personnel carriers are firmly committed to manufacture a family of vehicles to meet their national requirements;

(ii) between the users, there is a difference in the tactical concept for the use of armoured personnel carriers which could not be resolved by the Ad Hoc Mixed Working Group;

(iii) the requirements of the uncommitted nations (Belgium and Netherlands) have been indicated as being so small that these requirements can be satisfied readily by any one of the major producers.

(b) The countries actually engaged in the production or in the development of armoured personnel carriers have stated that they were willing to offer their vehicles for multilateral (correlated production within NATO, if warranted, or to sell these vehicles to NATO member countries (Belgium has requested to participate in the manufacture of the equipment to be selected and ordered). It was agreed that uncommitted countries would inform the International Staff of the subsequent decision taken regarding the choice of vehicles and plans for production and procurement.

III. CONCLUSIONS AND PROPOSALS (long-term planning)

It now appears that by 1965, all countries will have satisfied their requirements from the presently planned production. By 1970, the equipments now being produced and taken into service by NATO countries will be ready for replacement utilising more advanced designs.

The Ad Hoc Mixed Working Group considers that in order to make available a commonly produced new design equipment to be in production in 1970-1972, experimental prototypes should be ready by 1968. This implies an immediate start of research and development studies.

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The draft basic military requirement now being considered by the Standing Group could provide for designers, if approved, some minimum guidance related to 1970-1972 time frame.

The Ad Hoc Mixed Working Group therefore, taking note of the national requirements for an armoured personnel carrier to be in production by 1970-1972 and of the NATO probable requirement for such a vehicle:

- (a) recommend that they should initiate a co-ordinated study for the development of a long-term equipment and that their terms of reference should be revised accordingly (proposed terms of reference attached).
- (b) request that the Standing Group be urged to furnish the Group in broad terms with a basic military requirement for an armoured personnel carrier for production in 1970-1972.
- (c) consider that they have concluded the task given to them by the Armaments Committee and propose no further action until a decision has been taken with regard to extending their terms of reference.

(Signed) F.D. LEJEUNE
Acting Chairman

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PROPOSED TERMS OF REFERENCE

FOR THE AD HOC MIXED WORKING GROUP ON AN
ARMoured PERSONNEL CARRIER

The Ad Hoc Mixed Working Group on a long-term armoured personnel carrier should examine the possibilities of implementing a co-operative project for a NATO armoured personnel carrier (long-term). This Group shall act in accordance with the document C-M(59)82 as follows:

- (a) to define the operational characteristics corresponding to NATO basic military requirements;
- (b) to initiate co-ordinated design studies, amongst the interested countries;
- (c) to examine the results of these studies and report to the Armaments Committee.

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CONFIDENTIAL

MEMORANDUM

HQ 1235-6-6-5 (DD-4)

OTTAWA, 10 Apr 61.

DEP

Liaison Report
Armoured Personnel Carriers

1. Attached is Liaison Report by Lt-Col WJ Owens, ADE, who attended the Ad Hoc Mixed Working Group Committee Meeting at NATO Headquarters, Paris, France, on 14, 15 and 16 Feb 61.

2. The brochures on the German equipment have been passed to DDD Tech Library and are now listed as follows:

DDD TL No 74548 - Henschel - Armoured Pers Carriers
Armoured Freight Carriers
Armoured Anti-Tank Carriers

DDD TL No 74549 - Ruhrstahl - Armoured Pers Carrier.

BK/6-8611/tp
Encl.

cc: DDP

B Kasperowski Capt
(EC Mayhew)
Colonel

Director of Design and Development

When separated from attachments handle this document as
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C O N F I D E N T I A L

ADE 1235-6-5 (DE/Veh 1)

LIAISON REPORT OF LT. COL. W.J. OWENS

AT

NATO HEADQUARTERS, PARIS

TO ATTEND

THE AD HOC MIXED WORKING GROUP

ON

ARMoured PERSONNEL CARRIERS

14-15-16 FEBRUARY 1961

1. PURPOSE

The Working Group met for its second meeting to further examine the requirement for Armoured Personnel Carriers in various countries, and to further explore the extent to which standardization or co-operation in production could be achieved in accordance with its terms of reference (attached as ANNEXURE 1).

2. PERSONNEL

A list of the delegates is attached as ANNEXURE 2.

3. AGENDA

A copy of the Agenda is attached as ANNEXURE 3.

4. PROCEEDINGS

a. Item 1 - Approval of Summary Record of the Last Meeting.

(1) The Summary Record of the Last Meeting was adopted with the following corrections proposed by the Canadian Delegate:-

(a) para 13 lines 13 and 14
"trials will be completed by mid 1961"

(b) para 14, penultimate line
read "1500 miles" not "1500 km"

b. Item 2 - Study of Basic and Technical Characteristics.
This item was discussed in detail after Item 5.

c. Item 3 - Examination of Results of Trials Carried Out in Netherlands on AMX Vehicles.

(1) The Netherlands delegate stated that trial results were still under study and were not available for presentation; he further stated that at the time of the original under-taking to table the results was made, he was not authorized to enter into such an undertaking. The Netherlands would consult with the French authorities to ascertain if the results could be released and would inform the Secretary accordingly.

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d. Item 4 - Comments on US Presentation of M113 Carrier.

- (1) The Chairman explained that this demonstration had taken place in Germany and called for comments. (Note: Canada was not represented at this demonstration).
- (2) German delegate stated that they were impressed and had tested the vehicle for approximately one month. They considered it was the best available at this time. However, they wished to purchase the vehicle with a diesel engine of US origin fitted.
- (3) The US stated that they had no transmission in production which was suitable for a diesel engine and suggested that the Germans fit their own diesel engines and thereby economize on the purchase.
- (4) The French stated that they were impressed with the performance of the vehicle and by the ease of maintenance afforded, however they felt that the .50 cal MG was difficult to handle and sight and that the gunner would be vulnerable during operation of the weapon. They also felt that more observation was required for the passengers and that the amphibious demonstration was incomplete. They wished to see more of the vehicle's ability to enter and leave water and to operate in currents up to 2 metres per second.
- (5) In discussion it became apparent that for future requirements a more precise definition of entry and exit to water obstacles was desirable.

e. Item 5 - National Policies for Implementing Requirements.

- (1) US stated that they would meet all its requirements by production of M113 in the US at the rate of 200 vehicles per month. This could be increased to 400 vehicles per month by working two shifts.
- (2) UK stated that they would meet their requirements by production of FV432 manufactured in the UK with bulk production starting in 1963.
- (3) France stated that they would meet its requirements for an APC with the VTT12CH (AMX). Bulk production has started and two establishments are producing 25 vehicles per month each. This could be increased to 50 vehicles per month and a third establishment for producing at the same rate was available. A large order from a foreign country had been received. (From subsequent discussions it is suspected that this may be a mutual aid arrangement with Italy).
- (4) Canada stated that a submission had been made to the Defence Committee of the Cabinet for production of 500 vehicles of the Bobcat family. A decision on this matter was considered imminent. (See Note Annex 4).
- (5) Belgium stated that they had not yet selected a vehicle to replace the M75 but will inform the Secretary when a choice is made. It was desired to participate in the production of whatever vehicle was selected and this may affect the choice of vehicle. Further they were interested in a family of vehicles including APC's, weapon carriers, command vehicles, cargo carriers and perhaps an SP howitzer.

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- (6) Netherlands stated that by 1963 they would require 170 tracked APC's to equip two mechanized battalions. A further 85 tracked APC's would be required after 1963 to equip a further mechanized battalion. In addition it had been decided to equip a total of five infantry battalions with wheeled personnel carriers in the same period. No decision had been taken as to which APC would be chosen but the Netherlands was a party to FINABEL AGREEMENT 1-A-5 and this would seem to indicate vehicles would be of the 'combat' type rather than the 'transport' type. They also desired a family of vehicles to fill a variety of roles.
- (7) Germany stated that they had decided to adopt two types of vehicles, a lightly armoured one for the transport role and a heavier one for the combat role, with the SP howitzer or field gun being accommodated on the heavier vehicle. They were considering the purchase of M113 from the US to fill the transport role but strongly desired a diesel engine. No firm decision on the purchase had been taken to date. Prototypes of the combat vehicle had been undergoing tests and it was anticipated that 'series' production would commence in 1963 and a rate of 150 vehicles per month would be achieved with a total production of 2000 vehicles, including five different types.

f. Item 2 - Study of Basic and Technical Characteristics.

- (1) The Chairman pointed out that little progress had been made towards completing the tasks set out in the terms of reference; specifically there appeared to be a requirement for two distinct types of carriers, one providing transport only and the other providing transport and protection adequate to allow the carried personnel to fight from their vehicles. In addition it appeared that there was little possibility of obtaining any substantial measure of agreement on common characteristics at this time. It was decided that the characteristics of the five equipments as detailed in ANNEX I to the Summary Record of the first meeting of the Group be forwarded to the Armaments Committee in fulfillment of Phase 1(a) and 1(b) of the terms of reference.

g. Item 6 - Possibility of Joint Production or Procurement.

- (1) The US stated that they were prepared to enter into a multi-lateral agreement for production of M113 if the number of vehicles to be produced warranted.
- (2) France stated that they were prepared to participate in a joint production scheme if their vehicle met other country requirements.
- (3) The UK delegate stated that while not specifically briefed on this point, he was of the opinion that the UK would participate in joint production of FV432 with other countries.
- (4) The Netherlands stated that they would like to discuss joint production when they decided which vehicle to purchase.
- (5) Germany said that they were prepared to buy M113 from the US if it was decided to procure this vehicle. Joint production of the German Combat vehicle would be considered.

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- (6) Canada stated that it was prepared to undertake joint procurement or production of Bobcat with one or more countries.
- (7) Belgium stated it was most interested in manufacturing such parts of any vehicle adopted as lay within the manufacturing facilities available.

h. Item 7 - Setting-up of a Technical Group to Co-ordinate Future Studies for a long Term Personnel Carrier.

- (1) All delegates indicated their countries were interested in participating in such a group.
- (2) France outlined a plan, proposing that:-
 - (a) the date of delivery of a prototype should be decided;
 - (b) the operational and technical characteristics of the vehicle should be defined;
 - (c) agreement should be reached on the technical studies to be conducted and the best technicians available in the participating countries should be set to work to produce the best possible design.
- (3) After considerable discussion it was concluded that:-
 - (a) to ensure a significant technical advance over vehicles in service or entering into service at present, an experimental prototype should become available in or about 1968, with production 1970-72.
 - (b) to accomplish this design studies should commence at once;
 - (c) production in 70-72 would make new vehicles available as vehicles procured on present plans begin to leave service;
 - (d) that a joint approach of users and technicians to the task of producing basic military requirements was desirable.

j. German Film Presentation

- (1) The German Delegation presented a moving picture of an early prototype of their APC and Combat Infantry vehicle showing its performance and employment.
- (2) The vehicle is fully described in the two brochures accompanying this report. Three prototypes from different manufacturers are being procured - these are:-
 - (a) Ruhrstahl delivered in 1960;
 - (b) MOWAG to start test in about one month;
 - (c) Henschel.
- (3) All vehicles feature similar characteristics, notably;:
 - (a) 30mm at 30° frontal armour with 15mm side armour;
 - (b) Low silhouette-overall height about 6'6";

- (c) 20mm HS 820 cannon in turret with 360° traverse and +70° to -10° elevation providing some capability against slow moving aircraft.
 - (d) a weight of 15 m tons
 - (e) a variety of arrangements to provide for several applications e.g. SP a/1-k gun, weapons carrier etc.
Selection of one of the three as a production Vehicle would depend upon the results of tests.
- (4) The film showed that the vehicle has a very impressive cross country performance. The application shown was that of a combat infantry vehicle in which a crew of eight was carried who engaged the enemy by machine carbine, machine gun, hand grenade etc., while the vehicle was in motion. The crew dismounted only to apply finishing touches to any enemy who was assumed to have been almost destroyed by the fire.
 - (5) This application appeared an extreme case of the "combat" class of vehicle to all delegates. The German delegation stated that it met the requirements of the German general staff for a vehicle to work in intimate contact with tanks and the film depicted the fashion in which it would be employed.
 - (6) It was revealed in discussion that the vehicle would be capable of submerged (schnorkel) operation in water of up to 4 metres in depth after about 30 minutes preparation. This would allow the Rhine to be crossed without difficulty.
- k. Item 8 - Report to the Armements COMMITTEE

A report to the Armements Committee was drafted. A copy of the text is at Annexure 4.
 - l. Item 9 - Other Business

Nil
 - m. Item 10 - Date and Place of Next Meeting

To be decided later.

5. DISCUSSION

- a. The working group did not accomplish the tasks set in its terms of reference primarily because it came into existence five years too late. Five of the countries taking part are committed to development or production programs on vehicles of their own design and have no intention of changing. The group performed valuable work, however, in collecting the characteristics of equipment in use or about to come into service and if its recommendation for co-operation on the next generation of vehicles is adopted may succeed in achieving a substantial degree of standardization in this field in the period starting 1970.

- b. In informal discussions a demonstration of the UK and German vehicles was proposed to take place in the late Summer or early Fall. Both countries undertook to consider this. The possibility of a demonstration of BOBCAT was mentioned and the writer undertook to consult with superior authority to determine if, when and where such a demonstration might be held. M
- c. There is little interest in procuring BOBCAT on the part of any of the countries taking part in the discussions and it is the writer's view that this attitude is unlikely to be changed by demonstrations of one or more of our prototype vehicles. |
- d. The method of work of the group in conducting the development of a common personnel carrier was discussed informally with the Secretary, US and Belgian representatives after the meeting. It must be assumed that before any work can be undertaken a NATO Basic Military requirement must be provided which will be adequate to guide the group and allow designers in various interested countries to formulate concepts. The NATO standing group should be assisted by the mixed group in the preparation of this document.
- e. If the present differences in tactical philosophy persist into the 1970-75 period it is probable that two vehicles will be required, one a lightly armoured amphibious and the other a more heavily armoured vehicle which would probably require assistance in water crossings. |
- f. There are likely to be at least two methods of work proposed for the development of the long term NATO personnel carrier. These are:-
- (1) following the approval of the NATO Basic Military Requirements, the working group would formulate the outline technical characteristics which would be placed before designers in each of the participating countries who would produce design concepts one of which would be selected for development by the country by which it was submitted, or
 - (2) following formation of the outline technical characteristics, a mixed international design team would be set up to produce an agreed design concept which would be developed by a parent country using development resources in a variety of other countries to handle facets of the development for which they are peculiarly suited.
- g. The task of producing a single design acceptable to all countries, capable of production in all countries from a single set of centrally maintained design records is a formidable one. The economies in development, money and effort which would result from such a program are very large - it is probable that the five countries in active development on APC's at present will spend a total of about \$50 million on development of their equipments before these enter the production stage.

C O N F I D E N T I A L

Annexure I to ADE 1235-6-5

dated:

Terms of reference (Extract from Annex I to AC/176-N/I)

2. The Armaments Committee at its meeting of 24th June, 1960(2) decided to set up an ad hoc Mixed Working Group with the following terms of reference.

3. The ad hoc Mixed Working Group shall examine the possibilities of and, if subsequently so directed by the Armaments Committee, implement a co-operative project for a NATO armoured personnel carrier, following the procedure set out below:

Phase I

- (a) to determine if there exists a common requirement among several countries for an armoured personnel carrier;
- (b) to obtain the main operational characteristics of the equipment proposed;
- (c) to ascertain if this equipment is of interest to countries for the equipment of their own forces.

Phase II

- (a) if several countries declare an interest in this equipment, to ask the NATO military authorities if it meets a NATO basic military requirement;
- (b) to examine the possibilities of manufacturing or procuring such equipment within NATO;
- (c) to draw up a report for the Armaments Committee.

C O N F I D E N T I A L

Annexure 2 to ADE 1235-6-5

dated: "

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER
(AC/176)

MEMBERS OF THE GROUP

Chairman : Major General F.D. LEJEUNE (International Staff)

BELGIUM

<u>Lt. Col. FLOQUET</u>	Etat Major General Direction Generale des Troupes blindées
Lt. Col. M. MINETTE	Administration Generale du Budget Bruxelles
Major I.F.M. JEANMART	Centre d'Etudes et Experiences Brasschaat

CANADA

<u>Lt. Col. W.J. OWENS</u>	Army Development Est. Ottawa
Major V.D. KENYON	Canadian Joint Staff, London

FRANCE

<u>Colonel JOURNES</u>	Section Technique de l'Armee 1, Place St Thomas d'Aquin, Paris, 7e
Lt. Col. VERNY	Etat Major de l'Armee 231, Bld St Germain, Paris, 6e
Ing. Pal ROBINEAU	D.E.F.A. Caserne Sully, St Cloud, S & O
Ing en Chef BODIN	" " " "

GERMANY

<u>Col. D. NAHRING</u>	Bundesministerium fur Verteidigung Fu.H.115, Bonn
Col. von SCHULTZENDORFF	Truppenamt, Koln
Lt. Col. HELLWIG	Bundesministerium fur Verteidigung T.III.2, Bonn

NETHERLANDS

Major T.A. van ZANTEN	Inspectie Technische Dienst Burchlaan 31, The Hague
-----------------------	--

UNITED KINGDOM

<u>Major General K.C. COOPER</u>	War Office, Interdependence, London
Lt. Col. R.R. TIMMS	War Office, FVA Branch, London

UNITED STATES

Col. R.H. WHITE, Jr

Director of R. & E, OTAC
Detroit Arsenal, Centerline, Mich.

Mr. A.W. JAREMA

"

Lt. Col. A.N. WHITLEY

Office Deputy Chief Staff for
Military Operations
Washington, D.C. (Pentagon)

Major R.E. HAYES

Chief of Research & Development
Washington, D.C. (Pentagon)

SHAPE

Lt. Colonel de VRIES

SHAPE

STANDING GROUP REPRESENTATIVE

Lt. Col. CABOLET

NATO, Room A/492

Lt. Col. LINDHARDT

" "

INTERNATIONAL STAFF

Cdt A. de CALLATAY

Secretary

Annexure 3 to ADE 1235-6-5

dated:

CONSEIL DE L'ATLANTIQUE NORD
NORTH ATLANTIC COUNCIL

Exemplaire
Copy No.

ORIGINAL: ENGLISH
11th January 1961

NATO UNCLASSIFIED
AGENDA
AC/176-A/2

AD HOC MIXED WORKING GROUP ON AN ARMoured
PERSONNEL CARRIER

Second meeting which will take place at the
Permanent Headquarters, Place du Marechal de
Lattre de Tassigny, Paris, XVIe, on 14th.
15th and 16th February 1961, at 10 a.m.

AGENDA

- I. APPROVAL OF SUMMARY RECORD OF THE LAST MEETING
Document: AC/176-R/1
- II. STUDY OF BASIC AND TECHNICAL CHARACTERISTICS
Documents: Tables I and II of Annex I to
Summary record AC/176-R/1
- III. EXAMINATION OF THE RESULTS OF THE TRIALS CARRIED OUT
IN THE NETHERLANDS ON AMX VEHICLES
- IV. COMMENTS ON UNITED STATES PRESENTATION OF THE M113
ARMoured PERSONNEL CARRIER
- V. NATIONAL POLICIES FOR IMPLEMENTING THE REQUIREMENTS
- VI. POSSIBILITY OF JOINT PRODUCTION OR PROCUREMENT OF AN
ARMoured PERSONNEL CARRIER MEETING NATIONAL AND NATO
BASIC MILITARY REQUIREMENTS IF ANY
- VII. SETTING UP OF A TECHNICAL GROUP TO COORDINATE FUTURE
STUDIES FOR A LONG TERM ARMoured PERSONNEL CARRIER
- VIII. REPORT TO THE ARMAMENTS COMMITTEE
- IX. OTHER BUSINESS
- X. DATE AND PLACE OF NEXT MEETING

OTAN/NATO
Paris, XVIe.

(Signed) A. de CALLATAY

NATO UNCLASSIFIED

C O N F I D E N T I A L

Annexure 4 to ADE 1235-6-5

dated:

DRAFT REPORT TO THE ARMAMENTS COMMITTEE

I. SHORT TERM PLANNING

TERMS OF REFERENCE (See AC/176-N/1 Annex 1)

PHASE I

- (a) The Ad Hoc Mixed Working Group has determined that all countries have recognized the need for some type or types of Armoured Personnel Carriers.
- (b) The Group obtained the main operational and technical characteristics of all existing or under development APC's (see Annex I to AC/176-R/1).
- (c) From the equipments proposed, the Group was unable to recommend one single carrier for NATO common use.

The countries positions were established as follows :

United States : are now manufacturing armoured personnel carriers at a rate of 200 vehicles a month and are planning to meet their national requirements with the M.113.

France : is presently producing the V.V.T.-AMX at a rate of 50 a month and plans to meet its national requirements with this vehicle.

Germany : intends to meet its national requirements for transport combat vehicles through national production at a production rate of 150 a month, delivery starting in 1963. Depending upon current studies, the present German requirement for a merely transport vehicle would be met by procurement in the United States of M.113 type vehicles.

United Kingdom: indicated that they intend to continue development and manufacture of their own armoured personnel carrier FV-432. The bulk production would start in 1963.

Canada : indicated that a request had been submitted to the Cabinet to produce 500 vehicles of the "Bobcat Family", including 350 armoured personnel carriers in order to meet their national requirements. A decision had not yet been taken by the Canadian Cabinet.

(1)

Belgium : indicated a requirement for a transport combat vehicle. However, their authorities have not yet selected a vehicle. Belgium would like to meet its requirements by 1965.

Netherlands : indicated a need of 170 transport combat vehicles and 250 wheeled transport vehicles through 1963. Depending upon financial possibilities, 85 additional transport combat tracked vehicles and 400 transport wheeled vehicles would be purchased.

From the above, it is concluded that NATO forces in the period between 1960-1965 will be equipped with not less than 3 new types of carriers and possibly 5.

- (1) The Canadian Representative is now able to state that the Canadian Cabinet has approved the proposal of the production of 500 vehicles of the "Bobcat Family". The report to the Armaments Committee will be amended accordingly.

C O N F I D E N T I A L

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C O N F I D E N T I A L

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PHASE II

- (a) Contrarily to what was expected at the last meeting of the various countries, positions and policies could not be firmly established and, in view of the facts indicated below, the Ad Hoc Mixed Working Group does not consider advisable to ask the NATO military authorities to decide if any one of the mentioned equipments meets a basic NATO military requirement.
 - (i) The users of armoured personnel carriers are firmly committed to manufacture a production of vehicles to meet their national requirements.
 - (ii) There is a difference between the users in the tactical concept for the use of armoured personnel carriers that could not be resolved by the Ad Hoc Mixed Group.
 - (iii) The requirements of the uncommitted nations (Belgium and Netherlands) have been indicated as being so small that these requirements can be satisfied readily by any one of the major producers.
- (b) The countries actually engaged in the production or in the development of armoured personnel carriers have stated that they were willing to offer their vehicles for multi-lateral correlated production within NATO, if warranted, or to sell these vehicles to NATO member countries.

II. LONG TERM PLANNING

It now appears that by 1965, all countries will have satisfied their requirements from the presently planned production. By 1970 the equipments now being produced and placed in service by NATO countries will be ready for replacement utilizing more advanced designs.

The draft basic military requirement now being considered by the Standing Group provides, if approved, some minimum guidance for designers.

The Ad Hoc Group considers that in order to make available a commonly produced new design equipment to be in production in 1970-72 experimental prototypes should be ready by 1968. This implies an immediate start of research and development studies.

The Ad Hoc Group therefore, taking note of the national requirements for an armoured personnel carrier to be in production by 1972 and of the NATO probable requirement for such a vehicle :

- (1) recommends that they should initiate a coördinate study and development of a long term equipment and that the terms of reference should be revised accordingly.
- (2) requests that the Standing Group be urged to furnish the Group with a broad basic military requirement for an armoured personnel carrier for production in 1970-72.

C O N F I D E N T I A L

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FILE: S 2-5105-AC/176

DOCUMENT SECRET
CLASSIFICATION:

DATE: 5 Apr 61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier
NATO Document AC/176-R/2 dated 16 Mar 61 (Minutes)

1. The attached document is referred to: *①* → SGS (4)
CDRB (2)
2. It is requested that action be taken by: FOR INFORMATION, please

3. Copies distributed to:

②
3 copies to RDP
6 Apr 61
G- *SM*
272a

Rechartrand
J.C. Outram
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

④
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CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE
COPY

N° 16

ORIGINAL: FRENCH
16th March, 1961

NATO SECRET
SUMMARY RECORD
AC/176-R/2

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

Summary record of a meeting held at the Permanent
Headquarters, Paris, XVIe, on Tuesday, 14th and
Wednesday, 15th February, 1961

PRESENT

Chairman: General F.D. Lejeune (Production, Logistics and
Infrastructure Division)

BELGIUM

Lt. Col. Floquet
Lt. Col. Minette
Major I.F.M. Jeanmart

CANADA

Lt. Col. J.F. Owens
Major V.D. Kenyon

FRANCE

Colonel Journès
Lt. Col. Verny
Ing. Mil. Pal Robineau
Ing.-en-Chef Bodin

GERMANY

Col. D. Nähring
Col. von Schultendorff
Lt. Col. Hellwig

NETHERLANDS

Major T.A. van Zanten

UNITED KINGDOM

Maj. Gen. K.C. Cooper
Lt. Col. R.C. Timms

UNITED STATES

Col. R.H. White, Jr
Mr. A.W. Jarema
Lt. Col. A.N. Whitley
Major R.E. Hayes

NATO MILITARY AUTHORITIES

STANDING GROUP

Lt. Col. Cabolet
Lt. Col. Lindhardt

SHAPE

Lt. Col. de Vries

INTERNATIONAL STAFF

Cdt. de Callatay (Secretary)

NOTE: Names underlined are those of the speaker of each country
or agency. The names of the representatives and the
posts occupied by them are set out at Annex.

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II.	Study of basic and technical characteristics	3 - 8
III.	Examination of the results of the trials carried out in the Netherlands on AMX vehicles	9 - 10
IV.	Comments on United States Presentation of the M 113 armoured personnel carrier	11 - 18
V.	Exchange of views following the presentation of the Canadian and German films on the BOBCAT and RUHRSTAHL vehicles	19 - 27
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1. In the absence of General CLAVIER, Head of Equipment and Ammunition Section, who had taken the Chair at the first meeting, General IEJEUNE, of the same Section, with the agreement of the Working Group, took the chair.

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I. APPROVAL OF THE SUMMARY RECORD OF THE LAST MEETING

Document: AC/176-R/1

2. The GROUP approved the Summary Record of the first meeting subject to the following amendments:

Paragraph 13, lines 13 and 14:

For: "It was expected that all trials would be completed by the end of 1961", read: "It was expected that all trials would be completed towards the middle of 1961".

Paragraph 14, penultimate line:

For: "Approximately 1,500 kms", read: "Approximately 1,500 miles".

Paragraph 44, lines 3, 4, 5, 6 and 7:

For: "The following documents: the summary record of the present meeting, a report on the trials carried out in the Netherlands (see statement on page 22) and the tables, duly filled in, of basic specifications and operation and technical characteristics", read: "the summary record of the present meeting, the tables, duly filled in, of basic specifications and operational and technical characteristics and possibly a report on the trials carried out in the Netherlands (see statement on paragraph 35)".

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II. STUDY OF BASIC AND TECHNICAL CHARACTERISTICS

Document: Tables I and II of Annex I to Summary Record AC/176-R/1.

3. The UNITED STATES REPRESENTATIVE said that the Group had already at its first meeting, completed the study of basic and technical characteristics; the results of this study were set out at Annex I to AC/176-R/1. In his opinion, it should ask the Standing Group whether any of the equipments listed at Annex I met a basic NATO military requirement. By so doing it would be following the example of the Group of Experts on the

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Defence against Very Low Flying Aircraft which, after studying a large number of equipments, had finally asked the Standing Group whether RED EYE met the NATO basic military requirements.

4. The CHAIRMAN remarked that the position as regards armoured personnel carriers had not developed along the lines foreseen by those who had given the Ad Hoc Mixed Working Group its terms of reference. The position of the Group was different from that of the Group of Experts on Defence against Very Low Flying Aircraft since no equipment so far had been selected by more than one country. In the circumstances, he suggested that the Group should examine the results obtained within the framework of its terms of reference in order to ascertain whether it had done all that it was possible to do.

5. During the ensuing exchange of views, it soon became apparent that while the Group could establish that there was a requirement in all countries for an armoured personnel carrier of one type or another, the Group could not establish a common requirement for short term purposes. This was because the different producer countries were already too far advanced in their national production plans to amend these with a view to adopting a single common equipment. Furthermore, the users had divergent tactical concepts which the Group could not reconcile.

6. Certain countries considered that a very clear distinction should be made between an armoured vehicle solely for transport purposes and an armoured transport vehicle enabling personnel to fight from the vehicle. Germany in particular regarded the two types of carriers as necessary, one for transport only and another capable of conveying infantry into battle and of permitting these troops to fight without leaving the vehicle whilst providing them with the necessary support weapon; these vehicles however were not considered as light tanks.

7. The CHAIRMAN, therefore, thought that all the Group could do for the time being was to give the Standing Group a factual account of the position.

8. The WORKING GROUP:

supported this view and agreed to take it into account when drafting its report to the Armaments Committee.

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III. EXAMINATION OF THE RESULTS OF THE TRIALS CARRIED OUT IN THE
NETHERLANDS ON AMX VEHICLES

9. The NETHERLANDS REPRESENTATIVE said that the results of the trials carried out in the Netherlands on AMX vehicles were not yet available. As soon as these studies were concluded the Netherlands authorities would inform the Secretariat after consulting with the French authorities. He was therefore unable to make an immediate report on the outcome of these trials.

10. The WORKING GROUP:

noted this statement.

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IV. COMMENTS ON UNITED STATES PRESENTATION OF THE M 113 ARMoured
PERSONNEL CARRIER

11. The SECRETARY, who had attended the presentation in Germany of the M 113 personnel carrier, thanked the United States Delegation on behalf of the Group and of the International Secretariat for the welcome the visitors had received and for the perfect organization and technical excellence of the presentation.

12. The FRENCH REPRESENTATIVE associated himself with this statement and informed the Group of the impressions he had formed during the presentation:

- the vehicle had been driven over fairly even ground, so it had not been possible to make a full assessment of its manoeuvrability. The "slalom" demonstration in a corridor had, however, been most promising;
- the engine and transmission gear were easily accessible and the driving position very well designed;
- the vehicle could carry twelve men but to judge of its spaciousness it would have to be loaded with all its equipment as well as with personnel fully equipped for combat;
- the close range defence weapon was not very easy to handle because the commander's seat was in the way.
- taking aim was not very convenient, as the gun-layer had to climb half out of the vehicle and was therefore no longer protected. The same applied to the two men seated behind the carrier-commander;

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- the fixed periscopes were wide, received the light well, and rendered observation easy, but there were large blind spots round the vehicle. Being apparently unable to observe the surrounding ground, the personnel on board would lose its bearings;
- the noise level was acceptable, both inside and outside the vehicle;
- loading and unloading from an aircraft was very easy, and making the vehicle fast inside the aircraft very quick;
- take-off and landing were spectacular on account of the ease and speed with which they were accomplished and the short run required on departure and arrival. The Cl30 aircraft was perfectly adapted to its task; he wondered whether it could carry two vehicles;
- the sight presentation schedule had not enabled the amphibious capabilities of the vehicle to be fully demonstrated. He was sorry not to have seen it operating in the water with all its gear, entering and leaving from different points and advancing upstream against currents of as much as 2 m. per second.

13. The GERMAN REPRESENTATIVE said that the M 113 had been tested for a whole month by the German Army and that the results had been most satisfactory. It had proved to be an excellent transport vehicle, in fact the best at present available for transport purposes proper. He would like to have additional information from the United States Representative on:

- (a) the maximum carrying capacity of the vehicle both on land and in the water;
- (b) the possibility of fitting it with a diesel engine.

14. The UNITED STATES REPRESENTATIVE, after thanking the Group for the high praise it had given the organizers of the presentation, replied as follows to the questions which had been put to him:

- the Cl30 aircraft could only carry one vehicle;
- the M 113 had a carrying capacity of 7,000 lbs., both on land and in the water;

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- trials had been made with a diesel engine but no decision had yet been taken. The use of a diesel engine would mean fitting different transmission gear and would raise the cost of the vehicle. The decision would consequently depend in part on the number of diesel-powered vehicles to be built.

15. The BELGIAN REPRESENTATIVE wished to know the steepest gradient the vehicle would negotiate on leaving or entering the water, and the UNITED KINGDOM REPRESENTATIVE asked, in particular, whether it would be able to tackle a bank with a step, i.e. a bank part of which was entirely vertical. This was the most unfavourable situation that could arise.

16. The FRENCH REPRESENTATIVE said that a vertical declivity, even if no more than 20 cm. high, had so far proved an insuperable obstacle to any amphibious vehicle. He would be very interested to hear the answer to the question put by the Belgian Representative. The most important point was whether or not the vehicle could cross rivers under enemy fire, i.e. whether the river-banks must be prepared in advance. The point at issue was determination of the capabilities of the M 113.

17. The UNITED STATES REPRESENTATIVE was unable to reply to this question, since he lacked the necessary information.

18. The WORKING GROUP:

- (1) noted the above statements;
- (2) noted that the M 113 met Germany's requirements for a personnel carrier but not for a combat vehicle.

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V. EXCHANGE OF VIEWS FOLLOWING THE PRESENTATION OF THE CANADIAN AND GERMAN FILMS ON THE BOBCAT AND RUHRSTAHL VEHICLES

19. The CHAIRMAN thanked the Canadian and German Delegations for the excellent films they had just shown the Group and invited its members to put questions to the Canadian and German Representatives.

BOBCAT (Canada)

20. Replying to a question by the French Representative, the CANADIAN REPRESENTATIVE said that, for entering and leaving the water, trials had so far only been carried out with slopes of not more than 20%. A complete range of trials was scheduled with a view to ascertaining the maximum acceptable gradient.

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His authorities believed that the crossing of rivers would in any case have to be preceded by at least a cursory survey of the river-banks.

21. The FRENCH REPRESENTATIVE said he attached as much importance to ability to enter and leave the water as he did to buoyancy, which seemed excellent.

22. The CHAIRMAN said that clearly it was desirable to avoid a preliminary see of the banks. At the moment, such a reconnaissance was unavoidable: whether it could or could not be accepted for the long term vehicle should be embodied in the operational characteristics.

RUHRSTAHL (Germany)

23. The GERMAN REPRESENTATIVE said that there were three German prototypes: the RUHRSTAHL, which had been shown in the film seen by the Group, the HENSCHELL, of which a description had been distributed and the MOWAG, a scale model of which was before the Group. The final selection would be made after the trials of the three prototypes, due to be completed this year.

24. Replying to questions by the United Kingdom and United States Representatives, he said that the German vehicle differed from those of the United Kingdom, United States and Canada in that it had been designed as a real combat vehicle. Its turret was fitted with a powerful weapon (20 mm. Hispano-Suiza 820) with all-round traversing and an elevation ranging from -10° to $+70^{\circ}$. It could carry 1,200 rounds of 20 mm. ammunition and 4,000 rounds of NATO 7.62 mm. ammunition. The personnel carried could fire over the hull of the vehicle in every direction. Its effective rolled steel armour (in front 30 mm. thick and at an angle of 30° to the horizontal; at the sides 15 to 20 mm. thick) rendered the vehicle proof against shell splinters, small arms fire and 20 mm. projectiles fired from any range. Although it complied with the terms of the FINABEL Agreement and could carry 12 men, the German vehicle, when used for combat purposes, carried only 8 men. The German military authorities believed that the conditions of a future nuclear war would demand combat groups as small as this. The vehicle, however, did not testify to any change in the concept of action as a combination of tanks and armoured infantry. It was as essential for the support of tanks, since tanks were too vulnerable at close range and because of their limited visibility were helpless without infantry support. In all three German prototypes, in addition to the three fixed periscopes of the driver and the fully-swivelling telescopes of the gunner and vehicle commander, the personnel had four tipping periscopes which could be turned in all directions.

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25. The German vehicle was not buoyant, owing to its outline and heavy armour, but could ford a stream 1.40 m. deep and fitted with a snorkel to a depth of 4 m. It could thus cross all European rivers, the Rhine for example, after not more than 30 minutes preparation.

26. Replying to a question by the Chairman, the UNITED KINGDOM, GERMAN and CANADIAN REPRESENTATIVES said that they would be happy to organise a field presentation of their prototypes at a date to be specified.

27. The WORKING GROUP:

- (1) noted the information supplied by the Canadian and German Representatives;
- (2) noted with satisfaction that demonstrations of the Canadian, German and United Kingdom vehicles would be organised for its benefit at a later date.

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VI. NATIONAL POLICIES FOR IMPLEMENTING THE REQUIREMENTS

28. The CHAIRMAN recalled that the Group had noted a requirement for an armoured personnel carrier in every member country and requested representatives to add to the statements they had made at the last meeting any additional information which might have come to hand since then.

29. The FRENCH REPRESENTATIVE confirmed in the following terms what he had said at the first meeting of the Group:

30. France had definitely chosen the VTT 12-CH, an armoured personnel carrier for twelve men plus the driver.

31. The French requirements for various versions of a tracked armoured vehicle, e.g. freighters, command vehicles, mortar-carriers, dozer vehicles, ambulances, etc., would be met by using the VTT 12-CH as the basic unit of the family. This has tremendous and unquestionable advantages as regards the training of personnel, maintenance, repairs and production. Some of these versions were already in being and quantity production would begin very shortly.

32. The VTT 12-CH was already in service in certain units of the French Army, and the factories were working on large orders for the Army. The same applied to the so-called armoured command vehicle version, the first of which would shortly be coming off the assembly line. Apart from French requirements, a large order from a foreign army was also in course of delivery in the armoured personnel carrier and the command vehicle versions.

33. This item was now being produced by "l'Atelier de Construction de Roanne" (military) and "Les Forges et Chantiers de la Méditerranée" (civil). The present output of each of these factories was twenty-five vehicles per month. Subject to certain alterations to their installations, both factories could increase production if necessary to fifty vehicles per month at a few months' notice. Furthermore, a factory dependent on the "Société des Forges et Ateliers du Creusot", at Châlon-sur-Saône, could also be assigned the manufacture of this vehicle which it would be able to produce at the same rate as the other two.

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34. The CANADIAN REPRESENTATIVE said that a request for authorisation to produce 500 vehicles of the BOBCAT family had been laid before the Cabinet. This figure included 350 armoured personnel carriers for national requirements⁽¹⁾.

35. The BELGIAN REPRESENTATIVE said that his country had a requirement for armoured personnel carriers which must also, at the request of the General Staff, be combat vehicles, comply roughly with the specifications of FINABEL agreement 1.A.5., and belong to a family which included freighters, mortar carriers, missile launchers and command vehicles. The Belgium authorities had not yet been able to take a final decision as trials were still in progress, principally with the United States M 113. The Secretariat would be informed as soon as a vehicle had been selected. Belgium wished to participate in the production of whatever vehicle was chosen.

36. The NETHERLANDS REPRESENTATIVE said that, as stated at the first meeting of the Group, his authorities intended to equip two armoured infantry battalions with 170 combat vehicles-tracked personnel carriers by 1963. If funds were available a third battalion would be equipped, after 1961, with 85 tracked vehicles, bringing the total to 255. Furthermore the Netherlands Army hoped to buy 250 wheeled DAF YP 408 vehicles by 1963 (see Annex 1 to AC/175-R/1) and was considering the purchase of a further 150 after that date. The decision regarding the proportion of tracked to wheeled vehicles had in part been governed by the wide difference in price between the two types. However, changes might occur in this respect and tracked vehicles might become less expensive than wheeled ones. In that case, the Netherlands plans might be amended and the wheeled vehicles replaced by tracked versions. As in Belgium, the final choice of model had not yet been made. To meet General Staff requirements it would have to comply with the specifications of the FINABEL Agreement 1.A.5. and form part of a complete family of vehicles. The Secretariat would be immediately informed of the vehicle selected.

37. The GERMAN REPRESENTATIVE said that his authorities had decided that two different types of vehicle were required, one for combat duties and the other for carrier duties. The combat vehicle would be produced nationally. The prototypes were already in existence and the Group had seen one of them in the film (see Item V of the present summary record). Quantity production would begin in 1963 at the rate of 150 a month which could be increased to 250 if necessary. It was planned to have five separate versions of this combat vehicle and to produce 2,000 in all.

(1) The Canadian Representative announced after the meeting that the Canadian Cabinet had now approved the production of these 500 BOBCAT vehicles.

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38. As regards the carrier vehicle proper, the German Authorities would, on completion of the present series of trials, probably select the carrier version of the US M 113. The final decision would depend to a great extent on whether it could be fitted with a diesel engine. For the sake of rapid deliveries, the German authorities would prefer the vehicle to have a US rather than a German diesel engine. For all combat vehicles, the German authorities insisted on a multifuel diesel engine.

39. At the request of the Chairman, the Group specified that by a family of vehicles it meant different versions of the same vehicle, common items being: the track assembly, the engine, the transmission gear, the driving position and the essential parts of the hull.

40. The UNITED KINGDOM REPRESENTATIVE said that his country was continuing to develop its own VLFV-432, and that industrial production would begin in 1963.

41. The UNITED STATES REPRESENTATIVE said that the United States was at present producing the M 113 at the rate of 200 per month, which was sufficient for its national requirements.

42. The CHAIRMAN, in conclusion, said that since the Group had only recently been set up, it could do no more than note the position as regards short-term requirements. The situation, which had hardly changed since the first meeting of the Group, could be summed up as follows:

43. Canada, France, the United States and the United Kingdom would be meeting their requirements with their own production. Germany's production would also cover its own requirements for a combat vehicle.

44. Belgium and the Netherlands were not yet able to say whether they would choose the M 113 or the French VTT 12-CH, the only two vehicles at present in quantity production. Each country had so far been following a different tack, with the exception of Germany, which had shown interest in the carrier version of the M 113. The Group, unable to alter the situation, could only report it to the Armaments Committee (see Report to the Armaments Committee, I (short-term plans)).

45. The WORKING GROUP:

noted the above statements.

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VII. PROPOSED STATEMENT OF A NATO BASIC MILITARY REQUIREMENT FOR AN ARMoured PERSONNEL CARRIER

46. The STANDING GROUP REPRESENTATIVE drew the attention of the Group, for its information, to document MCM-19-61 of 6th February, 1961, which proposed, for the approval of the Military Committee, a draft definition of a NATO basic military requirement for an armoured personnel carrier.

47. The WORKING GROUP:

- (1) noted that the draft had been drawn up in very general terms;
- (2) noted the above document.

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VIII. POSSIBILITY OF JOINT PRODUCTION OR PROCUREMENT OF AN ARMoured PERSONNEL CARRIER MEETING NATIONAL AND NATO BASIC MILITARY REQUIREMENTS IF ANY

48. The CHAIRMAN said that, in the absence of a choice of common equipment and of a definition of a NATO basic military requirement, the Item could only be discussed in very broad outline.

49. The UNITED STATES REPRESENTATIVE said that his country was prepared to participate in the multilateral production of M 113 within the framework of NATO. It would also be ready to sell this vehicle to potential buyers.

50. The FRENCH REPRESENTATIVE said that, on account of French production capabilities, his country would be prepared to sell the VTT 12-CH or to participate in multilateral production within the framework of NATO.

51. The CANADIAN REPRESENTATIVE adopted the same position as the United States and France.

52. The UNITED KINGDOM REPRESENTATIVE recalled that his country had not yet reached the stage of industrial production. He thought it was safe to say, however, that the United Kingdom would be prepared, when the time came, either to sell its carrier or to participate in multilateral production within the framework of NATO.

53. The BELGIAN and NETHERLANDS REPRESENTATIVES declared their willingness to take part in a working group for promoting the production and joint procurement of an armoured personnel

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carrier which would meet their national requirements. The BELGIAN REPRESENTATIVE added that whatever vehicle was chosen, his country would be able to manufacture certain components, by arrangement with the selling country.

54. The GERMAN REPRESENTATIVE said that his country was willing to co-operate within the framework of NATO, both as a producer and as a buyer.

55. The WORKING GROUP:

noted the position of the various countries with respect to the production or joint procurement of armoured personnel carriers.

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IX. SETTING UP OF A TECHNICAL GROUP TO CO-ORDINATE FUTURE STUDIES FOR LONG-TERM ARMoured PERSONNEL CARRIERS

56. The Group was unanimously in favour of setting up a technical group to co-ordinate future studies and to guide the Standing Group in its definition of the NATO basic military requirement, with a view to ensuring that it neither fell short nor went beyond what was technologically possible.

57. The FRENCH REPRESENTATIVE thought that the programme of long-term studies should be roughly as follows:

58. In the first place, dates should be set for the completion of prototypes. The Group itself, or an expanded group whose composition was still a matter for discussion, should then define the operational characteristics. This preliminary stage should be followed by the drafting of an agreement which would become the basis for the technical studies. A study group composed of experts familiar with technical developments would then be set up. The carrier produced as a result of these joint efforts would be owned in common by the NATO countries. He did not wish to minimise the difficulties involved in such an undertaking, but thought the great advantages of possessing such a common logistic facility would certainly be worth all the efforts required to overcome them.

59. The GERMAN REPRESENTATIVE was in favour of beginning the studies immediately, so that the first experimental prototype could be ready in the course of 1965.

60. The CANADIAN and UNITED STATES REPRESENTATIVES thought this deadline reflected undue optimism. Any decision on the phasing of the various production stages should take into

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account the army modernisation programmes of the various countries.

61. The CHAIRMAN supported this view. In his opinion, the carriers now in production would not start to require replacement until 1968-1970.

62. The FRENCH REPRESENTATIVE considered that the first experimental prototype could be produced in 1966. Industrial prototypes could be completed in 1968, and the decision to put them into production taken the same year. Industrial production could therefore start in 1970. Such a timetable called for an immediate commencement of the preliminary studies.

63. The UNITED STATES REPRESENTATIVE wondered whether the starting point should not be the NATO basic military requirement. He acknowledged that the Standing Group would require technical advice before deciding exactly what was practicable and what was not, but feared that studies made before the NATO military requirement had been defined might prove, to some extent, to be pointless.

64. The CHAIRMAN reminded the Group that an accurate detailed definition of the NATO basic military requirement would certainly not be ready for a long time. Studies might, therefore, start without delay on the basis of the NATO military requirement which was being submitted to the Military Committee for approval and which, when approved, could provide general guidance. The dates considered to be desirable and reasonable by the Working Group would have to be notified to the Standing Group with a request that it define the basic NATO military requirement as soon as possible and in any case in time for the industrial production of a standard armoured personnel carrier to be begun around 1970-1972. The engineering studies carried out meanwhile would be of considerable assistance to the Standing Group in defining the basic NATO military requirement. The Group should, therefore, request the Armaments Committee to review its terms of reference in the light of the new tasks it considered it should undertake for the successful production of future standard armoured personnel carriers.

95. The UNITED STATES REPRESENTATIVE considered that in that case the Group had completed the task assigned to it in its terms of reference. It must, therefore, before reconvening, wait for its revised terms of reference from the Armaments Committee.

66. The CHAIRMAN supported this view. However, when a decision had been reached by countries which, like Belgium and the Netherlands, had not yet determined their short-term requirements, a Working Group consisting, for example, of a single representative from each country would have to meet, unless bilateral agreements could suffice.

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67. The WORKING GROUP:

- (1) regarded as terminated the task it had been assigned in its present terms of reference;
- (2) recommended that it be invited to undertake the study and design of a carrier which would meet long term requirements and that its terms of reference be revised accordingly;
- (3) agreed that the Standing Group should be invited to provide the Group with a general definition of the basic military requirement for an armoured personnel carrier the production of which should start in 1970-1972;
- (4) invited those countries which had not already determined their short-term requirements to keep the Secretariat informed of their bilateral negotiations with producer countries.

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X. REPORT TO THE ARMAMENTS COMMITTEE

68. The WORKING GROUP:

adopted the text of its report to the Armaments Committee, to be circulated in the AC/176 series.

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XI. DATE AND PLACE OF THE NEXT MEETING.

69. The WORKING GROUP:

agreed not to fix the date of the next meeting until the Armaments Committee had approved its report and revised its terms of reference.

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ANNEX to
AC/176-R/2

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

MEMBERS OF THE GROUP

Chairman: Major General F.D. LEJEUNE (International Staff)

BELGIUM

Lt. Col. FLOQUET, Etat Major Général
Direction Générale des Troupes
in blindées
Lt. Col. M. MINETTE, Administration Générale du Budget
Bruxelles
Major I.F.M. JEANMART, Centre d'Etudes Militaires
Etablissement d'Experimentation
Brasschaat

CANADA

Lt. Col. W.J. OWENS, Army Development Est. Ottawa
Major V.D. KENYON, Canadian Joint Staff, London

FRANCE

Colonel JOURNES, Section Technique de l'Armée
1 Place St. Thomas D'Aquin, Paris, 7e.
Lt. Col. VERNY, Etat Major de l'Armée
231, Bld. St. Germain, Paris, 6e.
Ing. Pal ROBINEAU, D.E.F.A. Caserne Sully, St. Cloud,
S & O.
Ing. en Chef BODIN, D.E.F.A. Caserne Sully, St. Cloud,
S & O.

GERMANY

Col. D. NAHRING, Bundesministerium für Verteidigung,
Fü.H.115, Bonn
Col. von SCHULTZENDORFF, Truppenamt, Köln
Lt. Col. HELLWIG, Bundesministerium für Verteidigung
T.III.2, Bonn

NETHERLANDS

Major T.A. van ZANTEN, Inspectie Technische Dienst,
Burchlaan 31, The Hague

-17-

NATO SECRET

NATO SECRET
ANNEX to
AC/176-R/2

-18-

UNITED KINGDOM

Major General K.C. COOPER

War Office, Interdependence,
London

Lt. Col. R.C. TIMMS... War Office, FVA Branch, London

UNITED STATES

Col. R.H. WHITE, Jr.

Director of R. & E. OTAC
Detroit Arsenal, Centerline, Lich.

Mr. A.W. JAREMA

Detroit Arsenal, Centerline, Lich.

Lt. Col. A.N. WHITLEY

Office Deputy Chief Staff for
Military Operations

Major R.E. HAYES

Washington, D.C. (Pentagon)

Chief of Research & Development

Washington, D.C. (Pentagon)

STANDING GROUP

Lt. Col. CABOLET

NATO, Room A/492

Lt. Col. LINDHARDT

NATO, Room A/492

SHAPE

Lt. Col. de VRIES

SHAPE

INTERNATIONAL STAFF

Cdt. A. de CALLATAY

Secretary

NATO SECRET



①

Our file ref. CSC.2155-6....
(SO/LOG)

DEPARTMENT OF NATIONAL DEFENCE

JOINT STAFF

SECRET

EP 2(A)
MAR-3 1961

③ EP2

OTTAWA, 1 Mar 61.

ADDRESS REPLY TO
CHAIRMAN
CHIEFS OF STAFF,
OTTAWA

*For placing a file per
and appropriate circulation*

COLLEEN
COLONEL
DEP

Chairman,
Canadian Joint Staff Washington,
2450 Massachusetts Avenue,
WASHINGTON 8, D.C., U.S.A.

MAR 02 1961

②
JEP

MAR 22 1961

NATO Basic Military Requirement for
Armoured Carrier

1. Reference MCM-19-61 dated 6 Feb 61.

DEP 14 Feb 61

2. The Canadian Army feels that in general this NEMR calls for a vehicle with very extensive capabilities. It is not considered that all of these requirements can be met in a light armoured vehicle, particularly as it concerns the protection to be provided and the weapon requirements versus the factors of air-transportability and inherent swimming capability. Comments on particular portions of the NEMR are as follows:

- (a) All round traverse of the automatic weapon is highly desirable, but a balance must be struck between weight, complexity, silhouette, etc. All round close in fire will require a high silhouette.
- (b) It is not agreed that every APC should have an automatic weapon capable of effective AA fire. However, sufficient weapons should be found within each force with this capability. If the state of the art progresses to the extent where one weapon of reasonable size could possess the capability of engaging effectively both air and ground targets then, of course, it would be desirable. In other words, an AA capability is desirable only if it does not interfere with or compromise the weapon's primary anti-ground target role.
- (c) On-vehicle fighting capability is desirable but must not prejudice the requirement for an amphibious capability.
- (d) Protection from heavy machine gun fire may well demand a weight inconsistent with amphibious requirements and air-transportability.

[Signature]
(R.C. Weston)
Air Commodore
for Chairman, Chiefs of Staff.

cc: Canadian National Military Representative, SHAPE.

DM/DDP,

CGS

CDRB and Secy, PSOC.

4000186

MAR-2



E.P.

000187

S E C R E T
M E M O R A N D U M

HQS 1235-6-6-5 TD 1047
(DEP 2a)

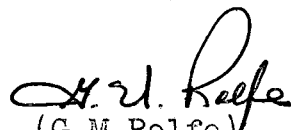
28 Feb 61

DCGS

NATO Basic Military Requirement (NBMR)
for an Armoured Carrier

1. The memo at flyleaf provides comments on a proposed statement of an NBMR for an Armoured Carrier.
2. The Canadian BOBCAT does not meet this NBMR as now written and we doubt that it can be met, completely. However, as an NBMR is by definition a very general statement, it would not be appropriate to make very detailed comments. The memo at flyleaf therefore only comments on those portions which we believe will be most difficult if not impossible to meet satisfactorily.
3. Your signature is recommended.

FGJ/6-6309/db


(G M Rolfe)
Colonel
Director of Equipment Policy

S E C R E T

SECRET

HQS 1235-6-6-5 TD 1047 (DEF 2a)

ARMY HEADQUARTERS

OTTAWA Ont. 28 Feb 61

Chairman,
Chiefs of Staff

NATO Basic Military Requirement
for an Armoured Carrier

1. Reference is made to MCH-19-61 dated 6 Feb 61 forwarded under cover of CSC 2155-6 (SO/LOG) dated 13 Feb 61 requesting comments on the marginally noted NBMR.

2. In general this NBMR calls for a vehicle with very extensive capabilities. We do not believe that all these requirements can be met in a light armoured vehicle, particularly as it concerns the protection to be provided and the weapon requirements, versus the factors of air-transportability and inherent swimming capability. Comments on particular portions of the NBMR are as follows:

- a. All round traverse of the automatic weapon is highly desirable, but a balance must be struck between weight, complexity, silhouette, etc. All round close in fire will require a high silhouette.
- b. It is not agreed that every APC should have an automatic weapon capable of effective AA fire. However, sufficient weapons should be found within each force with this capability. If the state of the art progresses to the extent where one weapon of reasonable size could possess the capability of engaging effectively both air and ground targets then, of course, it would be desirable. In other words, an AA capability is desirable only if it does not interfere with or compromise the weapon's primary anti-ground target role.
- c. On-vehicle fighting capability is desirable but must not prejudice the requirement for an amphibious capability.
- d. Protection from heavy machine gun fire may well demand a weight inconsistent with amphibious requirements and air-transportability.

ORIGINAL SIGNED BY

D C G S

(S F Clark)

Lieutenant General
Chief of the General Staff

RGJ/6-6309/nio

SECRET

000190

NATO SECRET

M E M O R A N D U M

HQS 1235-6-6-5 TD 1047 (ST2A)

24 Feb 61

DEP

NATO Basic Military Requirement for Armoured Carriers

1. DST offers the following comments on the cargo carrier version of the armour-protected transport mentioned at lines 4/5:

The armour protection of the cargo carrier should be further clarified. Is this armour protection to be provided to both the crew and the cargo in the same degree? If this is the requirement, serious limitations result in the loading facilities of the vehicle. It is suggested that the crew of the cargo carrier requires the same degree of armour protection as is afforded to the crew of the APC, but that a lesser degree of armour protection can be accepted for the cargo compartment.

2. An open top cargo carrier facilitates loading. The same armour protection as found in the APC can be afforded to the remaining planes of such a cargo carrier without imposing restrictions on the vehicle's performance. Greater flexibility is obtained with such a cargo carrier than is possible with a standard APC used to carry cargo.

JB/23907/hp

for (G F Stevenson)
Colonel
DST

NATO SECRET

NATO SECRET

HQS 1235-6-6-5 TD 1047 (DCD)

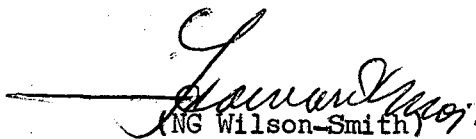
M E M O R A N D U M

24 Feb 61.

DEP (through DST)

NATO Basic Military Requirement for Armoured Carriers

1. Herewith DCD comments on this NEMR.
2. Line 9/10 - The capabilities required of this automatic weapon must be stated. We suggest it must be capable of defeating targets such as the BTR 50 p or other USSR APCs and perhaps desirably the PT 76 tank. An anti-aircraft capability is desirable only if it does not interfere with or compromise the weapons primary anti-ground target role. All round traverse is highly desirable however a balance must be struck between weight, complexity, silhouette etc.
3. Line 13 - An on-carrier fighting capability is essential. Provision should be made to achieve the maximum capability in this direction without prejudice to meeting the requirements for an amphibious capability.
4. Line 22 - Adequate armour protection must be clarified. All round protection against 14.2 MMG may prejudice the amphibious capability. A balance must be established between armour and amphibious requirements.


(NG Wilson-Smith)
Colonel

Director of Combat Development

TFH/6-6719/bjs

Copy to: D Inf

NATO SECRET

M E M O R A N D U M

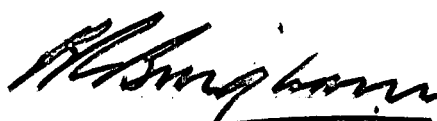
HQS 1235-6-6-5 (D Inf)

20 Feb 61

DEP (thru DCD, DST)

NATO Basic Military Requirement For Armoured Carriers

1. D Inf has studied the proposed NATO basic military requirement for an armoured carrier and submits the following comments:
 - a. Line 9 - Agree that automatic weapon should possess capability of traversing all round, especially for going through built up areas where high angle fire is required, however, because of inherent capability of vehicle to easily turn around this consideration should not override, for example, the requirement for a low silhouette. The amount of depression for 6400 mils will not be uniform due to various projections such as the cargo box. There should be maximum depression for at least 3200 mils to allow the gunner to engage close-in targets to the front.
 - b. Line 10 -, It is not agreed that every APC should have an automatic weapon capable of effective AA fire, however, sufficient weapons should be found within each force with this AA capability. If the state of the art progresses to the extent where one weapon of reasonable size would possess the capability of engaging effectively both air and ground targets then of course it would be desirable.
 - c. Line 13 - The requirement for occupants to use individual weapons is not agreed. If recoilless weapons of the MAW or LAW type were to be used an outlet would also be required for back blast. This does not seem practical. The integral GPMG will give adequate small arms fire support, especially since APCs will normally be travelling in small groups and could mutually assist one another by fire. Therefore, it is considered that firing apertures are not mandatory but if they could be fitted without undue cost or loss of protection to personnel inside they might be useful on occasion.
 - d. Line 22 - The APC should be considered a means of moving a force from place to place on the battlefield and of giving protection against light small arms fire, shell fragments and anti personnel mines. To make the APC safe from heavy machine guns, which it is understood according to NATO interpretation may be a weapon up to approximately 20mm in size, would entail providing unacceptable armour protection. The result of this would probably make most APCs too heavy for airborne operations and would greatly reduce the required degree of cross country mobility. In some cases the APC probably would not swim. It is believed that heavy machine guns must be more clearly defined in order to consider this point further.


(PR Bingham) Colonel
Director of Infantry

DEPARTMENT OF NATIONAL DEFENCE

MINUTE SHEET HQS 1235-6-6-5 TD 1047
(DEP 2a)

Referred

REMARKS


To be signed in full showing Appointment, Telephone Number & Date

D Inf ✓
DCD
DST

A NATO Basic Military Requirement (NBMR) is by definition, "a statement in general terms of the kind and type of equipment required, the date on which the equipment should be in service, and, insofar as practicable, the quantities needed."

Your comments are requested on the proposed NBMR for an Armoured Carrier by 22 Feb 61. Please pass quickly.

Feb 61


(W.K. Reed)
Lt-Col
DEP

5/14

FILE: CSC 2155-6 (SO/LOG)

DOCUMENT NATO SECRET
CLASSIFICATION:

DATE: 13 Feb 61.

①

Address Reply to:

The Chairman,
Chiefs of Staff,
Ottawa.

JOINT STAFF MEMORANDUM

SUBJECT: NATO BASIC MILITARY REQUIREMENT FOR
ARMoured CARRIER

③ EP2 (Lt. Col Reed)

Dear reply by 27 Feb 61, psc.
prepared for CGS signature.

(G.M. POLFE)
CDR/OPS
FEB 14 1961

FEB 14 1961

DESCRIPTION: DOCUMENT MCM-19-61 DATED 6 FEB 61

②
DEP
Comments pbs.
K.A. TOME
Lt. Col
FEB 14 1961

1. The attached document is referred to:

	Copy No.
CCOS	118
CAS	119
✓ CGS	120
CHS	121
CDRB	122
DM/DDP	123
SEC'Y PSOC	124

2. It is requested that action be taken by:

For CGS and CDRB comments by
1 Mar 61

3. Copies distributed by:



(R.C. Weston)
Air Commodore
for Chairman, Chiefs of Staff.

FSL/2-0465/meb

FEB 14



000196

NATO—SECRET

SECRET - NATO

COPY NO. 120

NORTH ATLANTIC MILITARY COMMITTEE
COMITE MILITAIRE DE L'ATLANTIQUE NORD

MCM-19-61

6 February 1961

Pages 1

MEMORANDUM FOR THE MEMBERS OF THE MILITARY COMMITTEE
IN PERMANENT SESSION

SUBJECT: NATO Basic Military Requirement
for Armoured Carrier

References: a. C-M(59)82
b. MC 82/2 (2nd Rev)(Final Decision)

1. SACEUR, CINCHAN and SACLANT consider that a NATO Basic Military Requirement (NBMR) should be established for an armoured carrier.

2. The Standing Group has evaluated the views of SACEUR and concurs in the need for establishing an NBMR in this field. Accordingly, a proposed statement of an NBMR is submitted at Enclosure 1.

3. The Standing Group, in considering the next step in the procedures outlined in references a and b, is mindful of paragraph 6b of reference a and paragraph 5c of reference b, concerning consultation with the Military Committee and the opportunity thus afforded to national staffs of interested nations to make known their views through their Representatives in the Military Committee. Accordingly, you are invited to submit your views on the proposed statement of the NBMR contained in Enclosure 1, to reach the Standing Group by 8 March 1961.

AS Grant
N. S. GRANT
Captain, Royal Navy
Deputy Secretary

1 ENCLOSURE
Proposed Statement
of an NBMR

DISTRIBUTION: A B C D E5,6/F G1-3 L

SECRET - NATO
MCM-19-61

Original damaged

NATO—SECRET

SECRET - NATO

ENCLOSURE 1

(Pages 1-2, incl.)

PROPOSED STATEMENT OF A NATO BASIC
MILITARY REQUIREMENT FOR
ARMOURED CARRIER (NBMR _____)

1 1. TASK

2 a. Primary - To provide the infantry with armour-
3 protected transport throughout the entire battlefield area.

4 b. Secondary - To provide armour-protected transport
5 for multiple functions such as mortar carrier, cargo carrier,
6 ambulance, command vehicles, etc.

7 2. CAPABILITY

8 a. The carrier must be armoured and air-transportable.

9 It must possess an automatic weapon capable of all-round fire
10 against ground targets and anti-aircraft fire for self-defense
11 against low flying, low performance fixed wing aircraft and
12 helicopters. The carrier must possess a night and all-weather
13 capability. The vehicle should be designed to enable a
14 portion of the occupants to use their individual weapons from
15 inside the vehicle. It must be capable of carrying a basic
16 infantry unit, i.e. about twelve fully equipped infantrymen.

17 b. The carrier must be capable of operating with tanks,
18 and of participating in airborne operations and must possess
19 a high degree of cross-country mobility. It must be capable
20 of crossing inland waterways, preferably by inherent 310 miles
21 capability. A range of about 500 km on roads is required.

22 Adequate protection from light artillery fragments, rifle and
23 heavy machine gun fire, and anti-personnel mines should be
24 provided, with particular emphasis being placed on frontal
25 protection and protection to the extent feasible against

SECRET - NATO
MCM-19-61

- 1 -

Enclosure 1

SECRET - NATO

1 nuclear, biological and chemical munitions. This basic
2 carrier must be adaptable to perform the multiple functions
3 described in paragraph 1 above through the application of
4 kits. It is desirable that the carrier be equipped with a
5 multi-fuel engine.

6 3. MISCELLANEOUS

7 There exists a need among the NATO armies for a carrier
8 possessing the above capabilities. No estimate of quantities
9 is available at this time. It is desired that a carrier
10 meeting this requirement be made available within the shortest
11 period possible.

110 letter enclosed M.H.

000200

FILE: S 2-5105-AC/176

DOCUMENT UNCLASSIFIED
CLASSIFICATION:

DATE: 22 Feb 61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

M E M O R A N D U M

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

Tele DL265 from External dated 15 Feb 61 to NATO Paris

①
1. The attached document is referred to:

→ CGS (3)
CDRB (2)

2. It is requested that action be taken by: FOR INFORMATION, please

3. Copies distributed to:

②
Noted & Pa.
2 copies on Bokoal BHR
23/2/61 JF

R. Chartrand
J.C. Outram)
Secretary
Principal Supply Officers Committee
6-8403 "C" 2334

UNCLASSIFIED

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

AH0020TT003

FM EXTERNAL OTT FEB15/61 UNCLAS

TO NATOPARIS DL265 OFIMMED

OPERATIONAL IMMEDIATE

INFO DM/DND CCOS

TT CJS (L) FM PARIS

REF OURTEL DL221 FEB6

RDP-AC/176-ARMoured PERSONNEL CARRIER

FOLLOWING IS AN EXTRACT FROM HANSARD OF AN ANNOUNCEMENT IN HOUSE OF COMMONS ON FEB14 BY THE HON. DS HARKNESS, MINISTER OF NATIONAL DEFENCE, CONCERNING THE BOBCAT VEHICLE.

2. QUOTE MR SPEAKER, HON. MEMBERS WILL RECALL THAT A LIGHT ARMoured TRACKED CARRIER, KNOWN AS THE BOBCAT, HAS BEEN UNDER DEVELOPMENT FOR CDN ARMY FOR SOME TIME.

3. THE BOBCAT VEHICLE IS DESIGNED IN THREE BASIC FORMS; AS AN ARMoured PERSONNEL CARRIER, A CARGO CARRIER AND A SELF-PROPELLED MOUNT FOR THE 105 MILLIMETRE HOWITZER, ALL BUILT ON A COMMON CHASSIS. THESE THREE BASIC TYPES ARE FURTHER ADAPTABLE TO MEET MANY NEEDS OF THE ARMY SUCH AS WEAPONS CARRIERS, COMMUNICATIONS VEHICLES, AMBULANCES AND FOR OTHER OPERATIONAL AND SUPPLY PURPOSES.

4. IN THE PAST, MOBILITY WAS PROVIDED BY FOOT, WHEELS AND TRACKS. THE VARIOUS COMPONENTS OF THE ARMY MOVED SEPARATELY BUT FOUGHT TOGETHER NOW, BECAUSE OF THE REQUIREMENT TO FIGHT IN WIDELY DISPERSED SMALL BATTLE TEAMS, THNS IN NO RPT

UNCLASSIFIED

000202

UNCLASSIFIED

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

PAGE TWO DL265

NO LONGER ACCEPTABLE OR PRACTICAL AND BATTLE TEAMS MUST MOVE, FIGHT AND LIVE TOGETHER. THEREFORE THE BASIC PHILOSOPHY BEHIND DEVELOPMENT OF A FAMILY OF VEHICLES WITH SIMILAR CHARACTERISTICS IS TO PROVIDE ALL PARTS OF THE TEAM WITH AN EQUAL CAPABILITY OF MOVEMENT.

5. THE MAIN FEATURES OF THESE VEHICLES PERMIT BATTLE GROUPS TO MOVE CROSS-COUNTRY AT 25 MPH, CROSS WATER OBSTACLES WITHOUT DELAY AND BE PROTECTED FROM SUCH BATTLE HAZARDS AS SMALL ARMS FIRE AND SHELL FRAGMENTS. IN ADDITION, A MEASURE OF PROTECTION IS PROVIDED FROM EFFECTS OF NUCLEAR WEAPONS.

6. DEVELOPMENT HAVING BEEN SUCCESSFULLY COMPLETED, IT HAS NOW BEEN DECIDED TO GO INTO PRODUCTION OF THIS VEHICLE. AN INITIAL ORDER FOR THE CDN CAR COMPANY. THE COST OF THE PILOT MODELS, PLUS PRODUCTION TOOLING IS ESTIMATED TO BE DOLLARS THREE AND ONE HALF MILLION. IT IS EXPECTED THAT THE PILOT MODELS AND PRODUCTION TOOLING WILL BE COMPLETED IN ABOUT TWO YEARS. AT THAT TIME OPEN TENDERS WILL BE CALLED FOR THE PRODUCTION OF A FURTHER 480 VEHICLES UNQUOTE.

7. PLEASE ENSURE THAT THIS ANNOUNCEMENT IS DRAWN TO THE ATTENTION OF COLONEL OWENS NOW ATTENDING THE SUBJECT MEETING UNQUOTE

160102Z

799/16 FEB 61

UNCLASSIFIED

000203

FILE: S 2-5105-AC/176

DOCUMENT CONFIDENTIAL
CLASSIFICATION:

DATE: 8 Feb 61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

Tele DL221 dated 6 Feb 61 from External to NATO Paris

1. The attached document is referred to: → CGS (3)
CDRB (2)

2. It is requested that action be taken by: FOR INFORMATION, please

3. Copies distributed to:

(2)
note & PA.
27

J. G. Outram
(J. G. Outram)
Secretary
Principal Supply Officers Committee
6-8403 "C" 2334

CONFIDENTIAL

AC Paraphrase
not required.
No unclassified
reply or reference.

FM EXTERNAL OTT FEB6/61 CONF

TO NATOPARIS DL221

INFO CCOS DM/DND

CJS(L)FM LDN

REF OURTEL DL203 FEB2

RDP-AC/176 ARMoured PERSONNEL CARRIER

COL OWENS WILL BE SHOWING A FIFTEEN INUTE 16MM STANDARD SILENT
FILM OF THE QUOTE BOBCAT UNQUOTE AT THE MEETING OF THE SUBJECT
GROUP ON FEB14-16. WE SUGGEST THAT IT BE SHOWN UNDER AGENDA ITEM
QUOTE OTHER BUSINESS UNQUOTE. PLEASE INFORM INTERNATIONAL
STAFF SO THAT APPROPRIATE ARRANGEMENTS MAY BE MADE.

329/07 FEB 61

CONFIDENTIAL

27
-000205

FILE: S 2-5105-AC/176

DOCUMENT CONFIDENTIAL
CLASSIFICATION:

DATE: 7 Feb 61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

- (a) Tele DL203 from External to NATO Paris dated 2 Feb 61
- (b) CCOS memo to DDP dated 30 Jan 61

1. The attached document is referred to: → CGS 3 of (a)
2 of (b)
CDRB 1 of each

2. It is requested that action be taken by: FOR INFORMATION, please

3. Copies distributed to:

(2)
noted & PA.
1 copy to 200 10
JH

L. Chartrand
J.C. Outram)
Secretary
Principal Supply Officers Committee
6-8403 "C" 2334

CONFIDENTIAL

AC Paraphrase
not required.
No unclassified
reply or reference.

FM EXTERNAL OTT FEB2/61 CONF

TO NATOPARIS DL203 ✓

INFO CCOS DM/DND CJS LDN

REF YOURLET N35 JAN12

RDP-AC/176 ARMoured PERSONNEL CARRIER

LT COL WJ OWENS OF ARMY DEVELOPMENT ESTABLISHMENT AHQ WILL BE THE CDN
REP AT THE MEETING OF THE SUBJECT GROUP IN PARIS FEB14-16.

2. LT COL OWENS IS CLEARED TOP SECRET AND INDOCTRINATED COSMIC. ACCOMODATION IN PARIS IS BEING ARRANGED BY DND.

155/3 FEB 61

Referred to.....	<i>Sec PSOC</i>
FEB 3 1961	
File No	<i>AC/126</i>
Chgd. to.....	

CONFIDENTIAL

Our file ref. **CSC 2155-6(SQ/ADM)**



DEPARTMENT OF NATIONAL DEFENCE

JOINT STAFF


OTTAWA, 30 Jan 61.

ADDRESS REPLY TO
CHAIRMAN
CHIEFS OF STAFF,
OTTAWA

Deputy Minister,
Department of Defence Production.
No. 2 Temporary Building,
Wellington Street,
Ottawa.

RDP - AC 176 - Armoured Personnel Carrier

1. With reference to AC/176 - A/2 of 11 Jan 61, Lt. Col. W.J. Owens Army Development Establishment, AHQ, will represent this Department at the meeting of the subject group in Paris 14-16 Feb 61.
2. Lt. Col. Owens is cleared Top Secret and indoctrinated COSMIC. Accommodation in Paris is being arranged by DND.
3. Please advise the Delegation accordingly.


(R.C. Weston)
Air Commodore
for Chairman, Chiefs of Staff.

GCW/2-3729/meb

PSOC - 4



DEPARTMENT OF NATIONAL DEFENCE

JOINT STAFF

OTTAWA, 30 Jan 61.

ADDRESS REPLY TO
CHAIRMAN
CHIEFS OF STAFF,
OTTAWA

Secretary, PSOC
CAS/P MOV

(1)

Referred to.....	<i>Sec PSOC</i>
JAN 31 1961	
File No.....	<i>AC/176</i>
Chgd. to.....	

RDP Meeting - Armoured Personnel Carrier

1. With reference to PSOC S2-5105-AC/176 of 25 Jan 61, the Chairman, Chiefs of Staff has approved the attendance of Lt. Col. W.J. Owens, AHQ/ADE at the subject meeting in Paris 14-16 Feb 61.
2. For P Mov; we are advised by the Army that Lt. Col. Owens will be meeting RMC of S in the UK on 8-10 Feb 61 prior to the Paris Meeting. Service Flight reservations are requested to Europe on 6 Feb and return to Canada 17 Feb accordingly. Travel proforma is attached.

[Signature]
(R.C. Weston)

Air Commodore
for Chairman, Chiefs of Staff.

DEP (2a) (Attn: Major Johnston)
For you pl
see PSOC
1/4/61

(3)
7 Feb 61
6 Feb 61

T.D. No. 1027

I.D. NO. _____
 L DEFENCE
 DOCKET
 155

TEMPORARY DOCKET

T.D. No. 1

[illegible]

25-782

INSTRUCTIONS

1. Temporary Dockets are to deal WITH ONE CASE ONLY.
2. T.D.'s NOT to be placed on main file UNLESS Central Registry informed by means of Form D.N.D. 710.
3. T.D. No. together with main file number to be quoted on all correspondence originated.
4. T.D.'s not to be passed from one service to another.
5. Action should be taken as soon as possible in order that main file may be kept up to date. If action cannot be taken within 48 working hrs., B.F. Docket.
6. T.D.'s to be requisitioned, passed, B.F.'d. etc., in the same manner as main files by means of Form D.N.D. 710.

MAIN FILE NUMBER:

M E M O R A N D U M

HQS 1235-6-6-5 (DEP 2a)

TD 1027

27 Jul 61

①

DDD

NATO RDP Armoured Personnel Carrier AC/176

1. Reference is made to your HQS 1235-6-6-5 (DD-1) dated 23 Jan 61 re attendance of Lt Col WJ Owens of ADE, on the AHMWG scheduled for 14-16 Feb 61.
2. Reference is also made to Lt Col Owens's report prepared following the last meeting 7-8 Sep 60, and particularly his comments re briefing.
3. As DDP has requested Lt Col Owens to attend it is our considered opinion that DDP should provide the complete briefing in line with their objective in planning attendance. In view of the current situation the GS branch cannot provide any more information than was done in Sep 60.
4. It is therefore requested that you ensure that DDP briefs Lt Col Owens completely to avoid unnecessary embarrassment to both Lt Col Owens and the Canadian Army.

*Copy to
John Owens
see Mr Enkin
of DDP.
HWH.*

W.R. Rolfe
W.R. Rolfe
Colonel

Director of Equipment Policy

FGJ/6-6309/hms

Pls to clarify:

cc: DQMG(D&D)

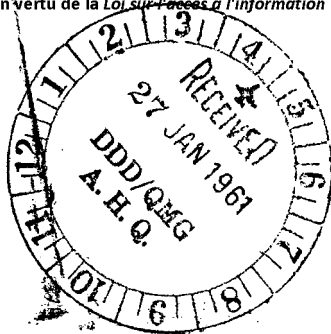
1. Items - national policy for implementing requirements

3 2000211

JAN 31



EP



000212

HQS 1235-6-6-5
(DEP 2a)

ARMY HEADQUARTERS
OTTAWA, Ont. 23 Jan 1961

Secretary,
Principal Supply Officers Committee

NATO RDP Armoured Personnel Carrier AC/176

1. Reference is made to our letter on this file dated 13 Jan 61.
2. As a result of a verbal request from DDP it is now proposed to send Lt/Col WJ Owens to the second meeting of the Ad Hoc Mixed Working Group on an Armoured Personnel Carrier to be held 14-16 Feb 61 in Paris.
3. Lt/Col Owens also attended the first meeting of this group, 7-8 Sep 60 at the request of DDP.
4. The appropriate travel proforma is attached. It is requested that CCOS approval of this trip be sought.

Original signed

CCGS

(SF Clark)

Lieutenant General
Chief of the General Staff

LES/6-6309/ab

M E M O R A N D U M

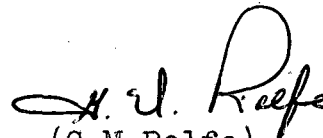
HQS 1235-6-6-5 (DEP 2a)

23 Jan 61

DCGS

NATO RDP Armoured Personnel Carrier AC/176

1. The memo at flyleaf requests Secretary PSOC to seek CCOS approval for Lt/Col Owens to attend the subject meeting in Paris 14-16 Feb 61.
2. On notification of the second meeting of the Ad Hoc Mixed Working Group on the Armoured Personnel Carrier, we advised Secty PSOC that the Canadian Army did not plan representation. However, DDP contacted the VQMG and requested that Lt/Col Owens again be made available to assist DDP at the meeting as was done at the first meeting 7-8 Sep 60. The VQMG agreed (see memo folio below).
3. The memo at flyleaf is recommended for signature.



(G M Rolfe)

Colonel

Director of Equipment Policy

FGJ/6-6309/db

M E M O R A N D U M

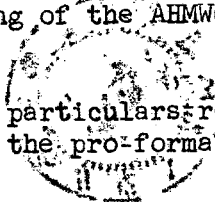
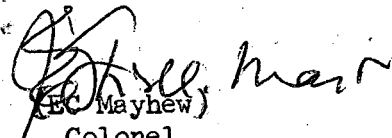
HQS 1235-6-6-5 (DD-1)

OTTAWA, 23 Jan 61

DEP

NATO RDP Armoured Personnel Carrier AC/176

1. Reference HQS 1235-6-6-5 (DEP 2a) dated 13 Jan 61 and telecon (Johnson - Shell) of 20 Jan 61 regarding the marginally-noted subject.
2. As a result of a verbal request from DDP, the VQMG has directed that Lt-Col W.J. Owens of ADE will attend the forthcoming meeting of the AHMWG scheduled for 14 - 16 Feb 61.
3. Necessary particulars regarding Lt-Col Owen's visit are detailed on the pro-forma attached.



JEC Mayhew
Colonel

Director of Design and Development

JES/2-0908/md

cc: DQMG(D&D)

JAN 23



EP

000216

Document disclosed under the *Access to Information Act* -
Document divulgué en vertu de la *Loi sur l'accès à l'information*

No letter enclosed M. G.

000217

TO: Chairman, Chiefs of Staff

s.19(1)

SECURITY CLASSIFICATION:

FILE NO:

DATE:

ANNEX A to

SD 1 Letter No 60/21

Dated 30 Mar 60

Amdt No 1

Dated 12 Jul 60

Temporary Duty outside Canada on Chairman Chiefs of Staff Authority

1. The following information is submitted, in order that arrangements may be completed for the undermentioned personnel to proceed outside Canada on temporary duty, subject to Chairman Chiefs of Staff approval.

2. Personnel:

Number

Rank

Christian Names

Surname

Date and Place of Birth

Service/
Directorate

Phone
Number

Security Clearance

(See
Note 2)

Lt-Col

Walter John

OWENS

- QMG/ADE - 6-7249 TOP SECRET(COSMIC)

3. Purpose of Visits: (state briefly including particulars of invitation, if applicable) To attend NATO Meeting of AD HOC Mixed Working Group on Armoured Personnel Carriers.

4. Location and duration: (give specific address) PARIS, France.

5. Accommodation: (give details if arranged or hotel preferred) Hotel Blanche Fontaine

6. Transportation: (give details and dates) (all transportation overseas will normally be by Service Aircraft) Pls arrange via RCAF
Aircraft leaving Ottawa 9 Feb 61, returning from Marville to Ottawa, 17 Feb 61.

7. Security Classification of subject to be discussed: NATO - SECRET

NOTE: 1. TD to USA: If application covers a visit of an unclassified nature to a USA Armed Forces establishment or classified nature to a USA Armed Forces establishment or civilian firm engaged on a USA Defense Department contract, a US clearance is required and the Pentagon requires a minimum of 30 days to arrange. Action in this regard will be taken by Joint Staff or CAS/FMove, as applicable. Applications requiring a US clearance should reach Joint Staff six weeks prior to commencement date of TD.

2. Security clearance for attendance at NATO Meeting will be in accordance with paragraph ~~4~~ of SD 1 Letter No 60/21.

raph 4 of SD 11

or a-1-

20988

000218

T.D. No.

MAIN FILE NUMBER

ARMY

T.D. No.

MAIN FILE NUMBER

- MAIN FILE NUMBER**

C 29



OUR FILE REF. DRBS 222-AC/176
(D Plans)

DEPARTMENT OF NATIONAL DEFENCE
DEFENCE RESEARCH BOARD

Ottawa, Ontario,
18 January, 1961.

The Deputy Minister,
Department of National Defence,
Ottawa, Ontario.

Referred to	PSOC
JAN 18 1961	
File No	1235-6-6-5
Chgd. to.	SEP

Attention: Secretary, PSOC

AC/176 - Armoured Personnel Carrier

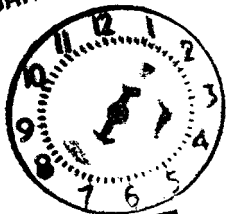
It is DRB's opinion that departmental interest in this working group is largely that of the Army's. DRB has little to contribute to the subject at this time.


for Chairman

CPM m
18/5025 - ac/176
b.

000220

JAN 20



EP

000221

FILE: S 2-5105-AC/176

DOCUMENT

CLASSIFICATION: Unclassified

DATE: 18-1-61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP- AC/176 Armoured Personnel Carrier
AC/176 - A/2 dated 11-1-61

①
1. The attached document is referred to: ✓ CGS (3)
CDRB (2)

2. It is requested that action be taken by: For Information

3. Copies distributed to:

⑤
2 copies to each.
19 Jan 61 J. C. Outram

J. C. Outram
(J.C. Outram)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE

COPY

N°

ORIGINAL: ENGLISH
11th January 1961

NATO UNCLASSIFIED
AGENDA
AC/176-A/2

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

Second meeting which will take place at the
Permanent Headquarters, Place du Maréchal de
Lattre de Tassigny, Paris, XVIe, on 14th,
15th and 16th February 1961, at 10 a.m.

AGENDA

- I. APPROVAL OF SUMMARY RECORD OF THE LAST MEETING
Document: AC/176-R/1
- II. STUDY OF BASIC AND TECHNICAL CHARACTERISTICS
Documents: Tables I and II of Annex I to
summary record AC/176-R/1
- III. EXAMINATION OF THE RESULTS OF THE TRIALS CARRIED OUT
IN THE NETHERLANDS ON AMX VEHICLES
- IV. COMMENTS ON UNITED STATES PRESENTATION OF THE M113
ARMoured PERSONNEL CARRIER
- V. NATIONAL POLICIES FOR IMPLEMENTING THE REQUIREMENTS
- VI. POSSIBILITY OF JOINT PRODUCTION OR PROCUREMENT OF AN
ARMoured PERSONNEL CARRIER MEETING NATIONAL AND NATO
BASIC MILITARY REQUIREMENTS IF ANY
- VII. SETTING UP OF A TECHNICAL GROUP TO COORDINATE FUTURE
STUDIES FOR A LONG TERM ARMoured PERSONNEL CARRIER
- VIII. REPORT TO THE ARMAMENTS COMMITTEE
- IX. OTHER BUSINESS
- X. DATE AND PLACE OF NEXT MEETING

(Signed) A. de CALLATAY

OTAN/NATO
Paris, XVIe.

NATO UNCLASSIFIED

2-1
000223

13 Jan 61

HQS 1235-6-6-5 (DEP 2a)

ARMY HEADQUARTERS
OTTAWA, Ont., /3 Jan 61

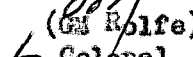
Secretary,
Principal Supply Officers Committee

NATO RDP Armoured Personnel Carrier AC/176

1. Reference AC/176-D/1 dated 28 Dec 60 and Letter N21 dated 5 Jan 61 forwarded on S 2-5105-AC/176 dated 12 Jan 61.

2. The Canadian Army does not plan representation at the next meeting of the AHMWG scheduled for 14-16 Feb 61. It is pointed out that representation on this group is primarily the responsibility of DDP. The Army only provided an officer at the previous meeting to render technical assistance and advice then required by the DDP representative.

FGJ/6-6309/gm


(GM Rolfe)
Colonel
Director of Equipment Policy

cc: DDD

24

1230-6-6-5

FILE: S 2-5105-AC/176

DOCUMENT

CLASSIFICATION: Secret

DATE: 12-1-61

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP- AC/176 Armoured Personnel Carrier

- (a) AC/176-D/1 dated 28 Dec. 60
- (B) Delegation Letter N 21 dated 5/1/61

①
1. The attached document is referred to: / CGS (3)

CDRB (2)

2. It is requested that action be taken by:

(a) Para 2

CGS Any action please?

(b) For reply re representation

3. Copies distributed to:

②
Copies to all along
with reply.
This was discussed -
agreed by all
12 Jan 61.

J. C. Outram
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE

COPY

N°

14

ORIGINAL : FRENCH
28th December, 1960

NATO SECRET
DOCUMENT
AC/176-D/1

AD HOC MIXED WORKING GROUP ON AN ARMoured
PERSONNEL CARRIER

DATE OF THE NEXT MEETING

Note by the Secretary

The Ad Hoc Mixed Working Group will hold its next meeting on 14th, 15th and 16th February 1961.

2. However, in order to ensure that the meeting will produce the desired results, the various member countries are asked to communicate to the Secretary, as early as possible, their national policy with respect to the satisfaction of requirements and the decisions taken with respect to the equipment chosen from among the items presented (see Summary Record AC/176-R/1, paragraph 44).

3. Furthermore, it is essential that the Ad Hoc Mixed Working Group should be in possession of the definition of basic requirements established by the Standing Group (see Summary Record 176-R/1, paragraph 48).

4. Pursuant to paragraph 44, the Netherlands is asked to send the Secretary, as a matter of urgency, the report on the trials held in the Netherlands in November 1960, to enable the International Staff to distribute it in good time.

(Signed) A. de CALLATAY

OTAN/NATO
Paris, XVIe.

NATO SECRET

22

000226

DEPARTMENT OF EXTERNAL AFFAIRS, CANADA.

DESPATCH

TO THE SECRETARY OF STATE FOR
EXTERNAL AFFAIRS, OTTAWA, CANADA:

FROM: The Canadian Delegation to the

North Atlantic Council, Paris

Reference: Your telegram DL-501 of August 29

Subject: RDP - AC/176 - Armoured Personnel

Carrier

Security:

No:

Date: January 5, 1951

Enclosures:

Air or Surface Mail: AIR

Post File No: 5/35/5

Ottawa File No.

References

Document AC/176-D/1 of December 28,
going forward to you under transmittal slip
No. 38 of January 5, proposes that the next meeting
of the subject Group be held from 14 - 16 February
inclusive and it outlines action to be taken prior
to the meeting. Lt. Colonel W.J. Owens of the
Department of National Defence represented Canada
at the first meeting in September and AC/176-D/1
should presumably be made available to him.

2. Please let us know in due course what you
envisage regarding Canadian representation at the
February 14 - 16 meeting.

Internal
Circulation

P BULLY-FLOOD
The Delegation.

Distribution
to Posts
CJS (London)

6-6-5

FILE: S 2 - 5105 -AC/176

DOCUMENT

CLASSIFICATION: CONFIDENTIAL

DATE: 28-12-60

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 Armoured Personnel Carrier

Tele from External to Nato Paris DL 1420
dated 23 Dec. 60

1. The attached document is referred to: CGS (3)
C/DRB

*2 copies to RDP
29 Dec 60
JY*

2. It is requested that action be taken by: For Information

3. Copies distributed to:

J.C. Outram
(J.C. Outram)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

(20)
000228

BY SECURE MEANS

CONFIDENTIAL

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

ROUTINE

FM EXTERNAL OTT DEC23/60 CONFID

TO NATOPARIS DL1420

INFO CCOS DM DND

TT CJS(L) FM PARIS

REF YOURTEL 3342 DEC16

RDP-AC/176-ARMoured PERSONNEL CARRIER-USA INVITATION TO
DEMONSTRATION IN GERMANY

IT IS NOT INTENDED TO SEND A REP TO THE DEMONSTRATION AS THE ARMY
HAS A VEHICLE IN OTT ON LOAN.

1590/23 DEC 60

CONFIDENTIAL

19
000229

HQS 1235-6-6-5 (DEP 2a)

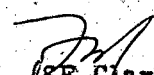
ARMY HEADQUARTERS
OTTAWA, Ont., 21 Dec 60

Secretary,
Principal Supply Officers Committee

NATO Armaments Committee
US M113 Armoured Personnel Carrier

1. Reference is made to your S2-5105-AC/176 dated 16 Dec 1960 forwarding NATO-Paris message 3342 dated 16 Dec re a demonstration of the US Carrier in Germany 13 Jan 60.
2. It is not intended that the Canadian Army should be represented at this demonstration as we have one of these vehicles on standardization loan and we have seen the vehicle on numerous occasions.

YGC/6-6309/GP


(SF Clark)
Lieutenant General
Chief of the General Staff

FILE: S2-5105-AC/176

DOCUMENT CONFIDENTIAL
CLASSIFICATION:

DATE: 16 Dec 1960

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

M E M O R A N D U M

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier
CANAC Tele 3342 dated 16 Dec 60 to External

1. The attached document is referred to: → CGS (3)

CDRB

2 copies to be kept

2. It is requested that action be taken by: CGS - For advice by
22 Dec re
representation at
demonstration.

3. Copies distributed to:

Not Council
(J.C. Outram)
Secretary

Principal Supply Officers Committee
6-8403

"C" 2334

BY SURE MEANS

CONFIDENTIAL

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

ROUTINE

FM NATOPARIS DEC16/60 CONFD

TO EXTERNAL 3342

INFO CCOS CJS(L)

DM/DND FM CCOS

RDP-AC/176-ARMoured PERSONNEL CARRIER-USA INVITATION TO DEMONSTRATION IN GERMANY

WE ARE SETTING OUT BELOW THE TEXT OF A LET WHICH WE HAVE RECEIVED FROM USA DEL ON THE ABOVE SUBJECT. PLEASE LET US HAVE YOUR COMMENTS AND, AS APPROPRIATE, THE PARTICULARS REQUESTED IN THE LAST PARA, BEFORE DEC30.

TEXT BEGINS: IN CONNECTION WITH THE WORK OF THE NATO AD HOC GROUP ON AN ARMoured PERSONNEL CARRIER, USA ARMY WOULD LIKE TO INVITE REPS OF THE INTERNATIONAL STAFF, NATO MILITARY AUTHORITIES AND NATIONS PARTICIPATING IN THIS AD HOC GROUP TO ATTEND A DEMONSTRATION OF THE M113 ARMoured PERSONNEL CARRIER AT KITZINGEN, GERMANY (NEAR WURZBURG) ON JAN13/61.

THE DEMONSTRATION WILL BE CLASSIFIED CONFD AND WILL INCLUDE THE AID TRANSPORTABILITY, AMPHIBIOUS, SPEED AND CROSS-COUNTRY MOBILITY FEATURES OF THIS CARRIER, AS WELL AS A STATIC DISPLAY AND A BRIEF REVIEW OF ITS CHARACTERISTICS. IT WILL COMMENCE AT 1000 HOURS AND IS EXPECTED TO BE CONCLUDED AT APPROX 1500. A LUNCHEON WILL BE PROVIDED AT A NEARBY OFFICERS CLUB.

FOR THE CONVENIENCE OF REPS WHO WISH TO AVAIL THEMSELVES OF THE OPPORTUNITY, AIR TRANSPORT WILL BE PROVIDED FROM PARIS TO

CONFIDENTIAL

000232

BY SURE MEANS

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Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

PAGE TWO 3342 CONFIDENTIAL

KITZINGEN AND RETURN. IT IS EXPECTED THE PLANE WILL DEPART PARIS AT 0800 ON THE 13TH AND ARRIVE BACK IN PARIS ABOUT 1700 THE SAME DAY. FURTHER DETAILS CONCERNING THE SCHEDULE AND EXACT PLACE OF DEPARTURE WILL BE PROVIDED LATER.

THOSE REPS DESIRING TO MAKE THEIR OWN TRAVEL ARRANGEMENTS SHOULD REPORT TO USA ARMY AIRFIELD AT KITZINGEN NO RPT NO LATER THAN 1000 HOURS ON THE 13TH.

PLEASE ADVISE ME BY DEC30 IF YOUR COUNTRY DESIRES TO SEND REPS TO THIS DEMONSTRATION, AND IF SO, THEIR NAMES, SECURITY CLEARANCES AND OFFICIAL POSITIONS, AND HOW MANY SPACES YOU WILL REQUIRE ON THE AIRPLANE.

1147/16 DEC 60

CONFIDENTIAL

000233

FILE: S2-5105-AC/176

DOCUMENT RESTRICTED
CLASSIFICATION:

DATE: 5 Dec 60

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

M E M O R A N D U M

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP - AC/176 - Armoured Personnel Carrier

(a) CANAC Tele dated 14 Nov 60 to External (2971)

(b) Tele from External to NATO Paris dated 15 Nov 60
(DL1239)

1. The attached document is referred to: *CGS* (3) - 1 copy only rec'd - 2 copies coming
CDRB 6/12/60
Rec'd 2 additional
copy 7/12/60 &
to 10/10/60.
12 Dec
2. It is requested that action be taken by: FOR INFORMATION, please
3. Copies distributed to:

J.C. Outram
J.C. Outram
Secretary
Principal Supply Officers Committee
6-8403 "C" 2334

22881

BY. SECURE MEANS

RESTRICTED

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

ROUTINE

FM EXTERNAL OTT NOV15/60 RESTD

TO NATO DL1239 OPIMMED

INFO CJS(L)CCOS DM/DND

REF YOURTEL 2971 NOV14

RDP-AC/176-ARMoured PERSONNEL CARRIER-INVITIATION TO AMX-APC TRIALS IN
THE NETHERLANDS

CJS(L)IS BEING INFORMED BY CCOS DIRECT THAT THE NOTICE OF TRIALS WAS
RECEIVED TOO LATE TO ARRANGE REPRESENTATION FROM OTTAWA OR LDN. HOWEVER,
WE WOULD APPRECIATE RECEIVING ANY INFO WHICH IS AVAILABLE AS A RESULT
OF THE TRIALS.

859/BM/16 NOV 60

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(14)
000235

BY SECURE MEANS

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Signal Centre
Chairman,
Chiefs of Staff
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Phone 9-2-4835

FM NATOPARIS NOV14/60 RESTD

TO EXTERNAL 2971 PRIORITY

INFO CCOS CJS(L) PRIORITY

TT DM/DND PRIORITY FM CCOS

REF YOURTEL DL901 AUG29

PRIORITY

RDP-AC/176-ARMoured PERSONNEL CARRIER-INVITATION TO AMX-APC TRIALS
IN THE NETHERLANDS

WE HAVE JUST NOW RECEIVED NOTICE OF AN INVITATION TO AMX-APC TRIALS
WHICH THE ROYAL NETHERLANDS ARMY HAS EXTENDED TO ALL MEMBER COUN-
TRIES. REF IS MADE TO PARA35 OF SUMMARY RECORD AC/176-R/1.

2. ALTHOUGH THE PROGRAMME FOR THE TRIALS DOES NOT RPT NOT PROVIDE
A PERIOD DURING WHICH ONLY THE APC WILL BE TESTED, NOV16 AND 17/60,
ARE CONSIDERED THE MOST SUITABLE DAYS FOR INTERESTED COUNTRIES
TO SEND REPRESENTATION.

3. THE PROGRAMME FOR NOV16 WILL TAKE PLACE AT SEESTERBERG AND THE
FOLLOWING TESTS ARE SCHEDULED FOR THAT DAY: LIGHT TANK PREPARATIONS
FOR FIRING TEST; APPRECIATION OF COMFORT OF ALL VEHICLES; ACCELERATION
TESTS.

4. THE PROGRAMME FOR NOV17 WILL TAKE PLACE AT PETTEN AND SEESTERBERG
AND THE FOLLOWING ARE SCHEDULED: LIGHT TANK DURABILITY TESTS; FIRING
OF 100 ROUNDS; SP AND APC PERFORMANCE TESTS; VERTICAL OBSTACLE CLIMB-
ING ABILITY; FORDING DEPTH.

5. COUNTRIES INTERESTED IN SENDING REPRESENTATION ARE ASKED TO CON-
TACT DIRECT THE OFFICE OF THE QUARTERMASTER GENERAL (VEHICLES BRANCH)

RESTRICTED

000236

BY SECURE MEANS

RESTRICTED

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

PAGE TWO 2971

31 VAN DEN BURCHLAN 31, THE HAGUE. FULL PARTICULARS SHOULD BE GIVEN REGARDING NAMES OF REPS, IDENTIFICATION, THE DAYS OF ATTENDANCE AND, AS NECESSARY, TRANSPORTATION AND HOTEL ACCOMMODATION NEEDS.

6. PLEASE DRAW THE FOREGOING TO THE ATTENTION OF LT COL WJ OWENS, DND WHO ATTENDED THE LAST MEETING OF THE AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER. LATE RECEIPT OF THE NETHERLANDS INVITATION MAY RULE OUT THE ATTENDANCE OF A REP FROM OTT BUT, IF THERE IS CDN INTEREST, CJS(L) MAY BE IN A POSITION TO SEND REPRESENTATION.

747/MC/14 NOV 60

RESTRICTED

000237

RESTRICTED

NATO RESTRICTED

HQS 1235-6-6-6 (DEP 2a)

Subject: Armoured Personnel Carrier

References: (a) AC/74-D458
AC/176

BACKGROUND

1. When subjects for consideration in the Armaments Committee RDP program were put forward the Canadian Army did not submit the BOBCAT, nor intend to be represented on the Armoured Personnel Carrier Group. The Army's reason for not participating was that nothing had been gained by an earlier meeting of a group of experts on Armoured personnel carriers. The situation has not changed significantly since then so participation was not considered necessary.

2. DDP did however submit the BOBCAT for consideration and asked the Army to attend, to give technical support. This the Army did.

CANADIAN ARMY VIEWS

The US has an armoured personnel carrier in production. Canada is preparing for production of the BOBCAT and the UK is developing a series of vehicles. Each country would like to produce and sell their own vehicle. A considerable change of policy or compromise is necessary before any concrete benefits can be gained.

RESTRICTED

HQS 1235-6-6-5(EP 2a)

ARMY HEADQUARTERS
OTTAWA, Ont. 15 Nov 60

Secretary,
Principal Supply Officers Committee

RDP AC/176 Armoured Personnel Carrier
AUX-APC Trials in the Netherlands

1. Reference is made to NATO Paris message 2971 dated 14 Nov 60 and telcom Miss Carroll - Maj Johnson.
2. Army Headquarters will not be represented. Attendance by CJS(L) is at the discretion of the Commander CJS(L).

RM
2 (Col Rolfe)
Colonel
Director of Equipment Policy

DOS/6-6309/HMO

OFFICE OF THE DEPUTY MINISTER OF NATIONAL DEFENCE
OTTAWA

Major F. G. Johnson
DEP 2A

Herewith the address
copy about which I
spoke to you. May I have
Army comments as
early as possible, please.

M. D. Connell
for
Secy. PSC

14/11/60

11
000240

BY SECURE MEANS

RESTRICTED

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

Referred to *Sup Soc*
NOV 14 1960
File No. *AC/176*
Chgd. to: _____

PRIORITY

FM NATOPARIS NOV14/60 RESTD

TO EXTERNAL 2971 PRIORITY

INFO CCOS CJS(L) PRIORITY

TT DM/DND PRIORITY FM CCOS

REF YOURTEL DL901 AUG29

RDP-AC/176-ARMoured PERSONNEL CARRIER-INVITATION TO AMX-APC TRIALS
IN THE NETHERLANDS

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WHICH THE ROYAL NETHERLANDS ARMY HAS EXTENDED TO ALL MEMBER COUN-
TRIES. REF IS MADE TO PARA35 OF SUMMARY RECORD AC/176-R/1.

2. ALTHOUGH THE PROGRAMME FOR THE TRIALS DOES NOT RPT NOT PROVIDE
A PERIOD DURING WHICH ONLY THE APC WILL BE TESTED, NOV16 AND 17/60,
ARE CONSIDERED THE MOST SUITABLE DAYS FOR INTERESTED COUNTRIES
TO SEND REPRESENTATION.

3. THE PROGRAMME FOR NOV16 WILL TAKE PLACE AT SEESTERBERG AND THE
FOLLOWING TESTS ARE SCHEDULED FOR THAT DAY: LIGHT TANK PREPARATIONS
FOR FIRING TEST; APPRECIATION OF COMFORT OF ALL VEHICLES; ACCELERATION
TESTS.

4. THE PROGRAMME FOR NOV17 WILL TAKE PLACE AT PETTEN AND SEESTERBERG
AND THE FOLLOWING ARE SCHEDULED: LIGHT TANK DURABILITY TESTS; FIRING
OF 100 ROUNDS; SP AND APC PERFORMANCE TESTS; VERTICAL OBSTACLE CLIMB-
ING ABILITY; FORDING DEPTH.

5. COUNTRIES INTERESTED IN SENDING REPRESENTATION ARE ASKED TO CON-
TACT DIRECT THE OFFICE OF THE QUARTERMASTER GENERAL (VEHICLES BRANCH)

(2) discussed with
DQMS (P.D.) in early
who agreed to reply
about 14 Nov 60
Df

RESTRICTED

9
000241

BY SECURE MEANS

RESTRICTED

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

PAGE TWO 2971

31 VAN DEN BURCHLAN 31, THE HAGUE. FULL PARTICULARS SHOULD BE GIVEN REGARDING NAMES OF REPS, IDENTIFICATION, THE DAYS OF ATTENDANCE AND, AS NECESSARY, TRANSPORTATION AND HOTEL ACCOMMODATION NEEDS.

6. PLEASE DRAW THE FOREGOING TO THE ATTENTION OF LT COL WJ OWENS, DND WHO ATTENDED THE LAST MEETING OF THE AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER. LATE RECEIPT OF THE NETHERLANDS INVITATION MAY RULE OUT THE ATTENDANCE OF A REP FROM OTT BUT, IF THERE IS CDN INTEREST, CJS(L) MAY BE IN A POSITION TO SEND REPRESENTATION.

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FILE: S2-5105 - AC/176

DOCUMENT

CLASSIFICATION: *SECRET*

DATE: 26 Oct 60

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

6-6-5'

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: RDP AC/176
AC/176 - R/1 dated 15 Oct 60

*2 Copies to
ad hl. (one
for Lt/Col Dunning
1 more. M.*

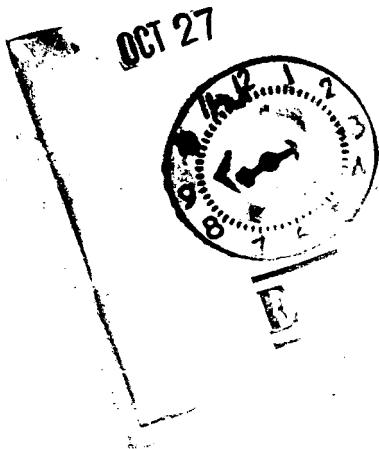
1. The attached document is referred to: CGS(3) ✓
C/DRB

2. It is requested that action be taken by: For information

3. Copies distributed to:

M. C. Outram
(J.C. Outram)
Secretary
Principal Supply Officers Committee
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N° 13

ORIGINAL: FRENCH
15th October, 1960

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SUMMARY RECORD
AC/176-R/1

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

Summary Record of a meeting held at the Permanent
Headquarters, Paris, XVIe., on Wednesday, 7th and
Thursday, 8th September, 1960

PRESENT

Chairman: Ing. Général R. Clavier (Head of Equipment and
Ammunition Section,
Production and Logistics
Division)

BELGIUM

Lt.Col. Floquet
Lt.Col. Minette
Maj. Jeanmart

NETHERLANDS

Maj. W.F.G. Stein
Maj. Ing. T.A. van Zanten
Mr. F.M.J. de Graauw

CANADA

Lt.Col. W.J. Owens
Mr. P. Solly-flood

UNITED KINGDOM

Brig. D.C. Mullen
Lt.Col. R.C. Timms
Mr. T.L.H. Butterfield

FRANCE

Col. Journès
Ing.Mil. Pal Robineau
Lt.Col. Verny
Lt.Col. Cauchie
Ing.-en-Chef Bodin
Col. de Chabot

UNITED STATES

Col. R.H. White, Jr.
Mr. A. Jarena
Col. T.W. Davis

NATO MILITARY AUTHORITIES STANDING GROUP

Lt.Col. Cabolet

GERMANY

Col. D. Nährung
Col. von Schultzendorff
Maj. Kettman

SHAPE

Col. Neckenauer

INTERNATIONAL STAFF

Secretary: Cdt. A. de Callatay

NOTE: Names underlined are those of the speaker of each
country or agency. The names and posts occupied by the
representatives are set out in Annex III.

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I. INTRODUCTORY STATEMENT

1. Ingénieur Général CLAVIER (Head of Engineering and Ammunition Section) welcomed the members of the Working Group. He reminded the Group that the general framework of its activities was defined in paragraph 6(c) of the Annex to C-M(59)82 and that its terms of reference were given in Annex I to AC/176-N/1. The main purpose of the Agenda of the present meeting was to facilitate collection of the data required to enable Phase I of the terms of reference to be completed and Phase II to be reached.

2. He pointed out that the choice of a chairman was not included in the Agenda. This was due to the fact that when the Armaments Committee had set up the Ad Hoc Working Groups, the great majority of its members had expressed the opinion that the chair should be occupied by a member of the International Staff. Naturally, if the Group preferred to appoint one of its own members to guide its work, the chair would immediately and most willingly be handed over to him.

3. The WORKING GROUP:

invited Général Clavier to accept the chairmanship.

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II. REQUIREMENTS OF THE VARIOUS COUNTRIES TAKING PART IN THE GROUP AND DETERMINATION OF COMMON REQUIREMENTS

4. The UNITED STATES REPRESENTATIVE made a statement on the United States requirements which had led to the development of the M113 armoured personnel carrier. He illustrated his statement with projections of photographs and of two colour films showing the service performance and production lines of this vehicle and others of the same family. A copy of his statement was distributed to the Group. The characteristics of the vehicle are set out at Annex I. Replying to questions by the French and United Kingdom Representatives, he gave the following explanations:

- troops carried in the M113 could only fight from the vehicle after opening the hatch in the roof intended for that purpose;
- the driver's periscope moved vertically and his seat could be adjusted to suit his height;
- the switch-over from daylight to the infra-red devices was automatic and involved no difficulty for the driver;

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- when the vehicle entered the water, the only action required was to start the pump by means of a lever. The wave-suppressor was brought into position by means of another lever on the outside of the vehicle but within easy reach of the driver who merely had to pass his arm through a hatch;
- the flap-door which served as a ramp was provided so as to facilitate and speed up loading and unloading of the vehicle. A door opening from left to right in the left-hand side of the exit panel enabled the vehicle to be opened even when the flap-door could not be let down.

5. The CHAIRMAN thanked the United States Representative for his explanations and invited the French Representative to state the position in his country.

6. Colonel JOURNES said that the requirements to be met by the armoured personnel carrier, as formulated by the French command authorities, were the following:

- to restore to the carrier-borne personnel of armoured units and to Armoured Division infantry, the mobility required to follow tanks and the necessary protection against conventional and nuclear fire;
- to equip mechanised infantry with a transport and combat vehicle suitable for the rapidly alternating concentrations and dispersals which were a feature of atom-age fighting, and to provide the degree of protection referred to above.

7. Ingénieur-en-Chef BODIN then described to the Group the characteristics of the VTT-12-CH, now fully developed and in bulk-production in his country (see Annex I). He remarked that this vehicle was a member of the AMX-13 tank family and had the same petrol engine (250 HP), water cooling-system, gear box, (5 gears and reverse), steering system (controlled differential), suspension, tracks, road speed and range. The only difference was in the arrangement of the plating. The same production lines could therefore turn out the AMX-13 as well as the VTT-12-CH carrier without any major modification. He emphasised that the VTT-12-CH had been designed as a combat vehicle and not merely as a personnel carrier. This had been achieved by making small apertures in the armour permitting all the personnel carried to fight from inside the vehicle with a field of vision of at least 120°, while the driver, the carrier commander and the sub-commander had a field of vision of 150°, 360° and 250° respectively. He felt sure that the possibility thus afforded all on board of looking outside was of great psychological value and counter-acted demoralisation and bewilderment on emerging from the vehicle on to the battle field.

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8. He gave the following details of the other uses to which the VTT-12-CH could be put:

Freighters - conversion achieved by removing the seats. The pay-load was then three tons.

Heavy mortar-carrier - a 120 mm. mortar could be mounted on the VTT-12-CH. Its angle of traverse was 30° on either side and its firing elevation ranged from 45° to 75°. Its crew, in addition to the driver would, in this instance consist of three gunners and sixty 120 mm. rounds could be carried. The mortar was a standard infantry piece which could be dismantled and reassembled for use as a ground weapon. Shock absorption was satisfactory and oscillation did not exceed 4 to 5 centimetres.

Remote-control missile carrier - converted into a missile carrier, the vehicle could take ten SS11 anti-tank missiles protected by the armour. These missiles were produced by Nord-Aviation. They could be fired two at a time or singly, in any direction. Their maximum range was 3,500 m., and their perforating capacity 500 mm. Other missiles could be adapted for use on this vehicle, for example, the ANTAP which was lighter and had a smaller range.

Command and dozer vehicles - Lastly, the VTT-12-CH could be fitted out as a command tank with table, chairs and radio equipment for liaison with higher or lower echelons and, for use by the Engineers, could also be equipped with a dozer shovel and various other attachments.

9. The freighter, heavy mortar carrier and command vehicles were now in production. The guided-missile carrier and dozer versions were undergoing trials.

10. Replying to questions by the Netherlands and United States Representatives, the FRENCH REPRESENTATIVE gave the following additional information:

- monthly output capacity of the 3 existing production lines was 150 vehicles, which could, if necessary, be of 3 different types;
- the turrets, which were very light, were operated by hand;
- because of the high degree of protection they afforded, the cost of the vehicle was rather high, i.e. about \$50,000, to which must be added the cost of weapons and radio equipment. This was a maximum which could no doubt be reduced if production rose.

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11. The UNITED KINGDOM REPRESENTATIVE then described the United Kingdom FV-432 armoured personnel carrier, which had been designed to meet the following requirements formulated by the General Staff: a vehicle capable of bringing troops, under adequate protection, to the battle field; easy to camouflage; transportable by air; able to operate continuously for eighteen hours on the battle field. The General Staff had never meant this vehicle to serve for combat purposes as well and it had not been designed to permit all the personnel carried to fight while still on board. Fighting was, however, possible from the circular hatch in the roof. The FV-432 belonged to the family of United Kingdom light tracked vehicle which comprised three main types: armoured personnel carriers, self-propelled artillery vehicles and freighters. The FV-432 could be adapted for other uses, however, such as: command, observation, anti-tank and target spotting vehicles as well as armoured ambulances. Every FV-432 had the fittings needed for its conversion to any of these uses and this was why the United Kingdom vehicle was somewhat bigger than that of the other countries. It could be hermetically sealed, pressurised and air-conditioned in accordance with the requirements of the theatre in which it operated. A paper giving the characteristics of this vehicle was distributed to the members of the Group.

12. They learnt that the first prototype would be ready in January, 1961 and that bulk production would start in April 1963. (The specifications for the FV-432 are set out in Annex I).

13. The CANADIAN REPRESENTATIVE then explained the general concepts underlying the design and engineering of the BOBCAT. The main purpose of this vehicle was to permit without difficulty of the wide dispersal of troops in small combat groups. A high degree of mobility was essential not only to enable nuclear attacks to be followed up, but also to provide protection against nuclear attacks by the enemy. It was not normally intended for use as a fighting vehicle. On no account must suitability for combat be sought at the expense of other qualities such as efficient protection, mobility, lightness, etc. Two prototypes were now ready and two more were about to be tested. They had been tried out very fully, though not as yet in the Arctic. It was expected that all trials would be completed by the end of 1961. Except on one or two points, the BOBCAT complied with the specifications of STANAG 2802 but not with those of FINABEL Agreement I.A.5 (see Annex I). Every member of the Group was given a copy of the specifications for this vehicle by the Canadian Representative who reminded them that more detailed information had already been sent to the delegations.

14. Replying to questions by the Belgian Representative, who asked why a vehicle intended exclusively as a personnel carrier was tracked and not wheeled, and what type of track

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was fitted, he said that a wheeled vehicle was not sufficiently mobile unless it had very large wheels, in which case the required mobility would only be obtained at the expense of the vehicle installations. The track comprised two main elements, one of which was flexible, the other rigid. The flexible element consisted of interlocking rubber blocks reinforced with a chain. If the rubber alone was damaged, the vehicle could still carry on for some time. If the whole block broke up, the track would have to be replaced. This type of track, which had been used for the first time on the BOBCAT, had an endurance of approximately 1,500 km. This fairly rapid rate of wear was offset by its other qualities.

15. Replying to a question put by the French Representative, he said that the duration of the cross-country trials had not exceeded four consecutive hours. On their completion, no symptoms of travel sickness or discomfort of any kind had been noted among the passengers, and although shut in and unable to look outside, their combat-effectiveness had not suffered at all.

16. Replying to a further question by the French Representative, he said that propulsion in the water was effected by means of the tracks. The average speed in calm waters was 3 to 3.75 m.p.h.

17. The NETHERLANDS REPRESENTATIVE, after outlining the views held by the Netherlands General Staff, described the wheeled armoured personnel-carrier to be bulk produced in the Netherlands at the end of this year or early in 1961. (His statement is reproduced at Annex II and the specifications of the vehicle at Annex I, to the present summary record).

18. Replying to various questions, the NETHERLANDS REPRESENTATIVE gave the following details:

No special means had been provided for increased speed on roads normally open to traffic; the type of pressure was not variable, there had been no attempt to make this vehicle suitable for crossing navigable water-ways and its turning circle was 9 m.

19. In reply to a question by the Standing Group Representative, he confirmed that his country intended at a later date to give the Standing Group its views on tracked and wheeled armoured personnel carriers, as set out in paragraphs 5(a) and (b) of Annex II.

20. The CHAIRMAN thanked the speakers for their very clear and interesting statements and summed up the position as follows:

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21. So far, five countries had studied the problem of the armoured personnel carrier. Two of them, France and the United States, had advanced beyond the development stage and had started bulk production. In the three other countries, i.e. Canada, the Netherlands and the United Kingdom, the prototype stage had been reached and manufacturing programmes were already being planned.

22. Two different concepts had emerged: under the first, the armoured personnel carrier was regarded purely as a transport vehicle; under the second, it was also regarded as a combat vehicle which must permit passengers to use their personal weapons while still enjoying the protection afforded by the vehicle.

23. The STANDING GROUP REPRESENTATIVE said that the NATO military authorities were as yet unable to state whether they would or would not define a basic NATO military requirement.

24. The CHAIRMAN recalled that national requirements had already been formulated by five countries and that comparison between them could lead to the definition of common requirements as called for under Item III of the Agenda, besides contributing to, or at least assisting, the examination of Items IV and V. He accordingly proposed that a sub-group comprising a representative from each delegation should be set up for the purpose of preparing the first column of two lists. The first list would enumerate the basic national characteristics required of armoured personnel carriers and the second the various operational and technical characteristics of vehicles in the design or production stage. Countries would then only have to fill in the resultant tables which, attached (Annex I) to the present summary record would highlight similarities and divergencies.

25. He added that in view of the status of studies and development in the different countries, it would be unrealistic to believe that the Ad Hoc Working Group could agree on a single type of armoured personnel carrier. It could, however, endeavour to identify a number of assemblies particularly subject to wear and which would therefore have to be replaced during the life of the vehicle. The Group might, without being over-ambitious, attempt to achieve, not identity, but interchangeability of some of certain assemblies, e.g. engines transmission gear, gear-boxes, track components, etc. He invited the Group to think about this problem.

26. The WORKING GROUP:

- (1) noted the statement by the Chairman;
- (2) noted the statements by the United States, French, Canadian, United Kingdom and Netherlands Representatives;

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- (3) instructed a sub-group to prepare the two lists proposed by the Chairman, one to show the basic national characteristics required of armoured personnel carriers and the other, the operational and technical characteristics of vehicles in the production or design stage;
- (4) invited member countries to complete the resultant tables which would be attached to the present summary record (Annex I).

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III. NATIONAL POLICY FOR MEETING THE REQUIREMENTS

27. The CHAIRMAN invited the members of the Group to explain, for purposes of information only, how their respective countries proposed to procure the armoured personnel carriers which they needed. If the Group was to fulfil its terms of reference, it would be an advantage to know whether a given country intended to manufacture the vehicles itself or to procure them from abroad, and whether it had already selected a model or had yet to do so.

28. The BELGIAN REPRESENTATIVE said that his country required armoured personnel vehicles which it regarded as combat vehicles rather than mere carriers. Belgium did not intend to produce these vehicles itself and had consequently explored the world market without, however, having reached a decision. Whatever decision it might take, Belgium was strongly in favour of joint production.

29. The CHAIRMAN recalled that the status of research and production was such that even highly desirable changes in design did not seem feasible. Nevertheless, joint production of a particular model must not be ruled out.

30. The BELGIAN REPRESENTATIVE said that if a country selected a vehicle which was already in production, it would be unrealistic, in present circumstances, to hope for even partial interchangeability. Only if a number of countries agreed to adopt a given type of vehicle could some degree of interchangeability be achieved by concentrating on one model and focusing their attention on common requirements. Belgium, having as yet taken no decision, could not announce its choice, but hoped to be able to do so very soon. The Secretary of the Group would be notified in writing.

31. The CANADIAN REPRESENTATIVE said that his country needed a light vehicle for use mainly as a personnel carrier.

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The BOBCAT met this particular requirement. Final decisions had not yet all been taken regarding arrangements for the production of this vehicle. Certain components such as the armour plates, gear boxes etc., would have to be imported. Canada was, moreover, prepared to apply a joint production plan for the BOBCAT. This plan still called for a great deal of study, however, and he would be unable to give further details before the next meeting. He would inform the Secretary of any developments in the position.

32. The FRENCH REPRESENTATIVE said that his country had decided ten years ago to produce an armoured car which could be used both as a personnel carrier and as a combat vehicle. The main emphasis had been laid on maximum protection for a given weight. This vehicle had now materialised, had been adopted by the Army and was in full-scale production. An amphibious version was under consideration. France's industrial potential would enable it to meet the requirements of other countries which decided to adopt this vehicle. Co-ordinated production was difficult after the start of construction, but when the time came for further research, France would willingly consider the possibility of a close association between the designers of the different countries. Should there be any change in the French position, it would be reported to the Secretary.

33. The CHAIRMAN regarded co-ordinated production of certain primary assemblies to be perfectly feasible at a later stage, and likely to give good results. Vehicles were in constant progress and later models superseded earlier ones. For example, the engine of the United States vehicle would probably be replaced by a multi-fuel engine and France would undoubtedly be prepared to consider adopting the same engine. Such developments could turn to the advantage of co-ordinated production provided that constant attention was paid to this point.

34. The GERMAN REPRESENTATIVE said that the Federal Republic intended to equip its Army with two types of armoured car, i.e. personnel carrier and a combat vehicle. The combat vehicle was in the design stage and Germany proposed to cover its requirements from national production. The personnel carrier was also being studied but no decision had yet been taken as to whether it was to be procured abroad or produced at home. The Secretary would be kept informed of all developments in this sphere. In any case, he would be grateful for the specifications of vehicles produced by other countries in order to find out whether any of their components or assemblies could be made interchangeable. Replying to a question by the Chairman, he said that only a tracked vehicle such as the M 113 was under consideration, the possibility of a wheeled vehicle having been ruled out.

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35. The NETHERLANDS REPRESENTATIVE recalled the statement he had made under Item II of the Agenda (see Annex II) and added that no decision had yet been taken regarding the type of tracked vehicle to be adopted by his country. Trials with the French vehicle would be held in mid-September. By agreement with Belgium, that country would send observers to these trials. In reply to a question by the Chairman, he said that he would discuss with his authorities the possibility of inviting observers from other countries, as well to attend these trials, at the request of their governments. The Secretary would be informed of the Netherlands Government's decision.

36. The UNITED KINGDOM REPRESENTATIVE said that his country was designing a vehicle whose development would be in line with that of the other vehicles in the same family. Industry in the United Kingdom was anxious to meet NATO requirements to the fullest possible extent but the purchase of certain equipment abroad had not been ruled out. As regards interchangeability of the assemblies exposed to the greatest amount of wear, he felt that the first step should be to prepare detailed drawings and to have access to the drawings of other countries. Like the other delegations, the United Kingdom Delegation would keep the Secretary informed of any changes in the situation in his country.

37. The UNITED STATES REPRESENTATIVE recalled that the M 113 was in full production in his country and that this vehicle, like its United Kingdom counterpart, was one of a family, a factor which imposed certain limitations on interchangeability. The M 113 was available and could be procured by any country wishing to do so. The United States was, moreover, prepared to consider a co-ordinated NATO production programme which would raise no particular problems, since most of the patent rights were held by the United States Government.

38. Referring to standardisation, he emphasised the need for caution in a field in which it was often best to leave well alone, for the rigidity of standardisation was a hindrance to progress. It must not be forgotten that all vehicles became obsolete after about five years.

39. The CHAIRMAN replied that he had not spoken of standardisation but of interchangeability which was not subject to the same drawbacks.

40. The UNITED STATES REPRESENTATIVE pointed out that, under its terms of reference, the Group, before examining the possibility of interchangeability, must establish the equipment their countries intended to use for their forces and in the case of several countries showing interest in a specific item, ask the military authorities whether this item met a

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basic NATO military requirement. When the adoption of one or two existing models had proved impossible, it would be time enough to study the co-ordinated production.

41. The CHAIRMAN confirmed that the Working Group's task was restricted to investigating the possibility of joint production of one or two armoured personnel carriers, but repeated that it would be idle in his opinion to hope to be able to concentrate on one or two models when five or six were actually in production since the abandonment of long and costly national studies might be the cause of serious difficulties. He therefore felt that the Group would be well advised to recommend, in its final report to the Armaments Committee, the setting-up of a technical working group instructed to co-ordinate future studies from the outset before national studies took divergent, irreconcilable paths from which there could be no turning back. This technical group would also be instructed, as an interim measure, to co-ordinate the study of basic assemblies particularly exposed to wear, with a view to rendering them interchangeable.

42. The BELGIAN REPRESENTATIVE, supported by the Canadian, French, German, Netherlands and United Kingdom Representatives, backed the United States Representative's short-term proposal and the Chairman's plan for long-term requirements, i.e. that countries should first indicate their preference for one of the two models at present available, after which the Group would propose to the Armaments Committee the setting-up of a technical study group to undertake the work described by the Chairman.

43. The WORKING GROUP:

- (1) noted the above statements on the different national policies;
- (2) adopted the views expressed by the Belgian Representative.

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IV. PREPARATION OF THE AGENDA FOR THE SECOND MEETING

44. The CHAIRMAN said that the Group had now practically completed Phase I of its terms of reference. For Phase II, it would have before it, at the second meeting, the following documents: the summary record of the present meeting, a report on the trials carried out in the Netherlands (see statement on page 22) and the tables, duly filled in, of basic specifications and operational and technical characteristics. It was probable that the definition of the basic NATO military requirements as established by the Standing Group would also have been received by that date.

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The first item of the agenda for the next meeting would be the same as Item III of the present meeting: "National Policies for Meeting Requirements". It was to be hoped that information provided under this head would enable Item (a) of Phase II of the terms of reference to be successfully tackled. The second item would entail assessment of the possibilities of producing or procuring within NATO the equipment selected, the third being preparation of the report to the Armaments Group in which would be included his proposal to set up a group to be responsible for co-ordinating future studies and for promoting, as an interim measure, the interchangeability of assemblies exposed to wear and requiring replacement.

45. He invited members of the Group who wished other items to be included in the Agenda to forward their suggestions to the Secretariat in good time.

46. The WORKING GROUP:

accepted the Chairman's proposals.

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V. DATE OF THE NEXT MEETING

47. The UNITED STATES REPRESENTATIVE having asked that the next meeting be held as soon as member countries had notified their choice, the BELGIAN REPRESENTATIVE expressed the hope that it would take place before the end of the year.

48. The CHAIRMAN said that he would examine the physical possibility of holding a meeting before the end of the year, but pointed out that the NATO administrative services, under pressure during the closing months of the year, would probably be unable to fit it in before 15th January, 1961. Moreover, it would be helpful if the Group had received the definition of the basic requirements from the Standing Group before re-assembling and this would take a little time.

49. Referring to what he had said the previous day and in reply to a question by the Chairman, the STANDING GROUP REPRESENTATIVE announced that the Major Command concerned had recently forwarded to the Standing Group some of the data on the basis of which it would probably be able to determine whether there was a basic NATO military requirement and if so, to define it. Although the time required for this work could hardly be reduced, he was prepared to ask Washington to forward the views of the military authorities with all possible speed.

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50. The WORKING GROUP:

agreed that its next meeting should take place as early in 1961 as was possible and noted that it would be desirable for the required information from member countries and from the Standing Group to be available at that time.

OTAN/NATO,
Paris, XVIe.

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ANNEX I to
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LIST OF BASIC CHARACTERISTICS FOR APC

TABLE I

BASIC CHARACTERISTICS	BELGIUM	CANADA	FRANCE	FEDERAL REPUBLIC OF GERMANY	NETHERLANDS	UNITED KINGDOM	UNITED STATES
Destination of equipment: Plain transport Transport and combat	Transport and combat for infantry assault operations, particularly when used in combination with a tank	Primary requirement - Armoured transportation	Transport and combat, enabling personnel to use their weapons from the shelter of the moving or stationary vehicle	Combat vehicle	a) Transport infantry in and outside combat zone not in close contact with the enemy. b) If required, conduct combat from the vehicle by fire in all directions from the weapons on the vehicle and organic to the squad. c) Ease of entry and egress.	Transport is primary requirement. Vehicle mounted machine gun is required to protection and covering fire.	To provide a light weight armoured personnel carrier for armoured and infantry units, capable of amphibious and Phase I air drop operation, superior cross-country mobility and adaptation to multiple function through the application of kits and/or modifications of its superstructure.
Number of passengers and crew with determination of their tasks	10/12 men including:- 1 driver 1 vehicle commander } crew + 10 soldiers in battle order	10 fully equipped infantry + driver and co-driver/gunner	1 vehicle commander and 1 driver + a team of 11 men with their weapons and equipment	1 driver and 11 men or 1 driver and 9 men - with sufficient room to conduct combat from vehicle.	1 driver and 9 men (complete infantry rifle squad) or 1 driver and 8 men (complete infantry support squad)	10 infantry soldiers in battle order + driver and vehicle commander	1 driver - assigned to vehicle 1 commander - commands vehicle, driver and passengers 11 soldiers (passengers)
Terrains and obstacles to be negotiated	Capable of operating at gross weight over unimproved road; and trails, open and rolling or hilly country, loose sand, snow and water in tropical and temperate zones - good cross-country performances. Fording depth 0.70 m. Floating capability desirable, if necessary by means of necessary devices	At gross weight over unimproved roads and trails, open and rolling country, loose sand, snow and water. Vertical obstacle - 2 ft. min. Gradients - 60% Trenches - max. possible Capable of floating and crossing inland waterways under its own power	Capable of operating at gross weight over unimproved roads and trails, rolling country, sand and snow, in tropical and temperate zones. Ability to cross fords 0.70 m. deep without preparation	Vertical obstacles 0.65 m. Trench (crossing) 2.20 m. Gradient 60% Fording depth 1.50 m.	Capable of operating in combination with tanks in all but extreme conditions. Obstacles: ground clearance 0.50 m. ditch spanning ability 1.20 m. vertical obstacles 0.50 m. fording depth 1.20 m. gradients 50%	a) Road and cross-country capability b) Ability to cross inland water obstacles (i) by fording (ii) by flotation without special preparation (speed 4 m/h.)	a) Cross rivers and inland waters of unlimited depth without preparation b) Gradeability: Forward slope: 60% Side slope: 30% c) Trench crossing: 66 inches d) Vertical obstacle ability: 24 inches
Air transportability	Air portability desirable - no parachuting	Essential that carrier be air portable into territory occupied by friendly troops through the use of hastily prepared, or repaired airstrips capable of being made operable within 24 hours of the beginning of airborne operations	Weight under 15 tons - no parachuting.	Phase II air portability - not air droppable.	Not required.	Phase II air portability - no parachuting.	Must be air transportable in Phase I airborne operations and air droppable from C-130 US aircraft (20,000 lb. drop weight).
Level of passive protection; against conventional weapons	It is essential that the front should withstand 20 mm. ammo. at 500 m. This degree of protection is desirable for the other surfaces and the minimum protection afforded by these must be against .30 at 100m. All surfaces must withstand 155 mm. shell fragments at 15 m. All-round protection against anti-personnel mines. The general design of the vehicle must be suitable, especially as regards shape and mobility	a) Compatible with weight limitations: top, sides, front and rear must withstand 105 mm. HE shell fragments at 90 ft., and front, sides and rear .30 CAL AP at 100 yards. Bottom must protect against mines. b) Protection against thermal effects of nuclear weapons must be provided.	All-round protection against 7.5 mm. armour-piercing bullet at all distances and 105 mm. shell fragments at 10 m. Front; protection from 20 mm. armour-piercing bullet at 500 m. Floor; protection from anti-personnel mines.	Front; protection against 20 mm. calibre at all distances Sides } protection against 155 mm. shell-burst Roof } at a distance of 20 m. Rear } Protection against 4.62 km. calibre at all distances.	All-round protection small calibre AP ammo. at a distance of 150 m. Must be possible to drive across contaminated areas for at least half an hour.	<u>Conventional weapons</u> a) Front-Immunity from equivalent of Russian 12.7 mm. SAAP at 200 yards. b) Sides and Rear-Immunity from Russian 7.62 mm. SAAP at 100 yards. Immunity from field gun and mortar splinters from ground bursts 30 feet from vehicle. c) Top-A roof is required to give immunity from V T fused shells and bombs as in paragraph (b) above. d) Mines-Protection is required against mines which will just fail to overturn the vehicle and also against anti-personnel shrapnel mines.	Compatible with maximum weight limitations. Protect against overhead bursts, flash burn and small arms in that order. Within area of armour protection, overhead cover has highest priority followed by side and floor protection in that order.
ABC Protection	Must afford collective protection against ABC agents for a short period. External decontamination kit desirable. The general design of the vehicle must reduce its vulnerability to flame-throwers, Molotov cocktails, napalm etc.		Protection against flash and shock effects of atomic bursts. The vehicle must be gas and fall-out tight.	Protection against fall-out, blast, thermal and flash effects of a nuclear burst. It must be possible to continue firing the gun mounted on the vehicle		Maximum practicable protection against ABC agents is required.	None is specified as inherent or integral to the vehicle, however provisions must be made to accept protective collector kits.

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BASIC CHARACTERISTICS	BELGIUM	CANADA	FRANCE	FEDERAL REPUBLIC OF GERMANY	NETHERLANDS	UNITED KINGDOM	UNITED STATES
Vehicle armament	It must be possible to mount a 20 mm. (minimum .50) all-round firing gun. AA fire capacity with gunner under cover. 1,000 rounds desirable, including 80 immediately available. It is desirable that the infantry personnel carried should be able to use their individual weapons while the vehicle is moving for immediate close defence purposes.	Vehicle shall be capable of mounting a forward firing machine gun operated by co-driver.	Highest possible calibre all-round firing machine-gun. Elevation range 10° to 45° minimum. Capable of operating very close to vehicle and also for AA firing. The gunner must be under cover in all circumstances.	20 mm. vehicle mounted gun for ground combat and AA defence. 7.62 mm. machine-gun.	Ring mount to fit an air-cooled .50 MG.	Vehicle mounted machine gun (new British general purpose MG) for use by commander to give 360° coverage.	A universal mount must be provided for the calibre 50 dual purpose machine-gun to permit the commander to engage surprise targets.
Observation possibility during day and night.	Day: All-round vision must be provided for the crew. Night: Provision for fitting I.R. devices to facilitate driving and possibly vision.	Protected vision shall be provided for driver and co-driver. Field of vision shall be 180°. Provision shall be made for operation of vehicle at night using visible or invisible light.	All personnel must be able to keep the terrain under observation. Provision must be made for operation of vehicle at night.	All-round vision must be provided for the whole crew. Infrared fire control vision device.	Day: a) driver and commander hatches b) crew hatches on top, side and rear pistolports c) driver's fixed and rotating periscope commander's fixed periscope Night - infrared driver scope.	Daylight operation - Protected vision device for driver giving 120° field of view - all-round vision for commander. Wind screen is required for driver when not closed down. Night operation - provision for fitting I.R. vision devices so that the vehicle can be driven at night either opened up or closed down.	Commander and driver's compartments shall be fully closed and protected, readily convertible to an open or semi-open status in order to provide optimum vision. Wide angle, full 180° field, protected vision shall be provided for the driver and vehicle commander. Provision will be made for operation at night by visible and invisible light.
Entry and egress possibility.	The general design of the vehicle must permit of rapid entry and egress for the crew and passengers in battle order.	Height for loading shall be kept as low as possible. Loading and unloading shall be as easy as possible.	All the personnel must be able to mount and dismount very rapidly and simultaneously if possible. Doors and hatches must be very easy to manipulate.	a) Rear door b) Overboard	Crew hatches on top and two rear doors.	a) A rear exit is required to permit rapid entry and exit for personnel and their weapons. b) An escape hatch is required in the roof for use when floating. c) Hatches are required for the vehicle commander and the driver	Suitable doors and exits for crew compartment independent of driver's access, shall be provided. Doors shall be wide enough for fully equipped passengers to mount and dismount rapidly. Accessibility for loading cargo is required. Doors and exits shall be proof against leakage when vehicle is crossing inland waterways. Provision shall be made for rapid escape of crew and passengers from disabled, upturned and sinking vehicles.
Level of comfort for passengers.	Must ensure that the combat readiness of the passengers is not adversely affected by long journeys (8 hours).	Frequent stops, low gear work and adverse climatic conditions shall be borne in mind in the design. Internal temperature must be tolerable by troops wearing normal operational clothing.	Great importance is attached to comfort (type and lay-out of passenger seats, space allowed per head, ventilation).	Must enable personnel to spend 8 hours at a time in the closed vehicle, under ABC combat conditions.	Complete combat readiness after sustained cross-country any duration transport.	Level of comfort to ensure all personnel are in a fit condition to fight after a considerable cross-country any time journey.	A degree of crew comfort will be provided which will ensure that the efficiency of the crew and passengers will not be adversely affected during the prescribed battlefield day.
Wireless facilities.	Provision shall be made for mounting a minimum of two radio sets, interphone required.	Provision shall be made for mounting one 5 mile and one 20 mile radio.	It must be possible to mount 2 radio sets to provide the command communications as well as the internal communications of the unit.	Radio communications a) Vehicle mounted radio set b) Communication with the Unit Commander	Capable to fit the organic wireless sets.	All vehicles must be provided with a wiring harness capable of taking all combinations of wireless sets used by the AFO and the vehicle roles to which it can be converted.	1) One or a combination of standard sets appropriate to the using arm will be required. Radios shall be located for maximum accessibility in operation. 2) Voice communication between vehicle commander and driver is essential. 3) Provision shall be made for rapid connection of an external telephone link or remote control for radio to the outside of the vehicle.
					Note: for basic characteristics for a tracked-AFO; as laid down in FINAL Agreement 1.A.5.	Durability and reliability.	Capable of operating 2,000 miles across country with only organizational maintenance.

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LIST OF TECHNICAL CHARACTERISTICS FOR A.P.C.
TABLE II

TECHNICAL CHARACTERISTICS	CANADA	FRANCE	FEDERAL REPUBLIC OF GERMANY	NETHERLANDS	UNITED KINGDOM	UNITED STATES
EQUIPMENT	"BOBCAT"	AMX	"STANDARD" armoured transport vehicle	WHEELED APC TYPE : DAF TP 408	APC F.V. 432	US M. 113
WEIGHT	Unladen - 17,500 lb. Gross - 21,000 lb.	14 tons (gross)	15 tons	11 Tons (11,000 kg.) including 10 men in battle order and their organic weapons.	Combat weight : 30,000 lbs. Air-portable weight : 24,000 lbs.	Combat weight : 22,500 lbs. (including 5 men and gear) Air-drop weight : 18,600 lbs. (includes 20% of fuel, no personnel) Design Gross weight: 24,000 lbs. (Optimum limit for cargo and other uses)
WIDTH	102"	2.51 m. overall	2.90 m.	2.40 m. (94½")	8 feet 6 inches	Max. overall : 104.75 inches Reducible to : 100.00 inches
HEIGHT	74"	2.33 m. overall (including antenna guards) 1.92 m. to roof	a) excluding turret 1.65 m. b) including turret 1.90 m.	1.80 m. (71")	Height to roof 6 feet 2 inches overall height reducible to 6 feet 4 inches by removal of MG	Max. : 98.25 inches (to top of machine gun) Min. : 79.50 inches (to top of antenna guards)
LENGTH	191"	5.54 m.	5.37 m.	6.10 m. (240")	16 feet 9 inches	Max. : 191.50 inches (overall, including towing hook) Min. : 190.00 inches (less towing hook)
MINIMUM GROUND CLEARANCE	13"	0.48 m.	0.40 m.	0.50 m. (19½")	18 inches	Min. and Max. : 16.00 inches
PERFORMANCES	The vehicle will operate at its gross weight effectively over all types of ground. A high degree of mobility is provided by the special spaced link type track over bog, sand and snow up to 40" in depth.	Capable of operating with ease at gross weight over unimproved roads and trails, open and rolling or hilly country, sand and snow, both in temperate and tropical zones.	Capable of operating at gross weight over unimproved roads and trails, open and rolling or hilly country, loose sand, snow and water, in tropical and temperate zones.	Capable of operating in combination with tanks in all but extreme conditions.	Maximum road speed 32.3 mph. Vertical obstacles 2 feet Maximum gradient 35° (70%)	Capable of operations with all types of tanks, at any speed, under any conditions.
GROUND PRESSURE	5 psi	670 gr. per sq.cm.	0.65 kg. per sq.cm.		10.7 psi	At combat weight : 7.3 lbs./sq.inch At air drop weight : 5.8 lbs./sq.inch At design gross weight : 7.6 lbs./sq.inch
POWER WEIGHT RATIO	19.5 HP/Ton	17.8 HP per ton.	20 HP per ton measured at driving wheel.	15 hp/ton	17.4 with K.60 multi-fuel engine 16.4 with B.81 engine	18.7 HP per ton (2,000 lbs.) at combat weight.
RADIUS OF ACTION	24 hours battlefield day bases on 40% cross-country, 40% idling and 20% road, road range 250-300 miles.	340 km. on roads. From 8 to 15 hours cross-country depending on the nature of the ground and the speed adopted.	500 km.	500 km. (3,105 miles)	24 hours battlefield day	200 miles on good surfaces.
MAXIMUM SPEED	35 mph.	60 km. per hour on roads	70 km. per hour.	80 km/h (49,680 mph)	32.3 mph.	40 miles per hour - level ground 15 miles per hour - on 10% grade
AVERAGE SPEED	Not determined	45 km. per hour on roads	50 km. per hour.	60 km/h (37,260 mph)	25 mph.	Most economical speed - 15 to 25 mph.
MINIMUM SPEED	2½ mph.	3.5 km. per hour	4 km. per hour	4 km/h (2,484 mph)	Speed in 1st gear = 6.1 mph. (maximum)	Maximum sustained speed - 2½ mph.

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TECHNICAL CHARACTERISTICS	CANADA	FRANCE	FEDERAL REPUBLIC OF GERMANY	NETHERLANDS	UNITED KINGDOM	UNITED STATES
OBSTACLES OR CAPACITY TO OVERCOME OBSTACLES	Ascend and descend - 60% slopes Side slopes - 40% Vertical obstacles - 36% slopes Trench - 82% slopes Water - swims at 3.5 - 4 mph.	Vertical obstacle : 65 cm. Slope : 60% Trench crossing : 1.80 m. wide Turning radius capable of being reduced to 4.38 m.	Vertical : 0.65 m. Trench : 2.20 m.	Vertical : 0.50 m. (19 1/2") Ditch spanning : 1.20 m. (47") Gradients : 50%	Vertical : 2 feet Trench crossing ability not less than 4 feet.	Trench crossing ability : 66 inches Vertical obstacle ability : 24 inches Water : floats and swims at 3 1/2 miles per hour Maximum gradeability: Forward slope : 60% (6 ft. rise in 10 ft. run) Side slope : 30%
PROTECTION a) General	Vehicle has low broken silhouette and high cross-country speed, making difficult target to locate and hit.	High mobility and speed. Total front surface: 3.80 sq.m. Total side surface : 7.30 sq.m.	Fording depth : 1.50 m. Swims in depth of 4.00 m.	By mobility and design of silhouette.	Armour (steel) Front upper : 12.5 mm. at 42° Front lower : 16 mm. at 35° Sides upper : 16 mm. at 0° Sides lower : 12.5 mm. at 0° Rear : 16 mm. at 0° Roof : 9 mm. Floor : 6 mm.	High mobility and design of small size silhouette.
b) ABC	Protection against thermal and fall-out effects of nuclear explosions. Collective protectors installed for crew.	Overall armour plating affording complete protection against thermal and flash effects of atomic bursts. Entirely fall-out proof.	Protection against fall-out, blast, heat and flash effects under all conditions. Protection under certain conditions against radiation.	Possible to drive across contaminated areas for at least half an hour.	Vehicle has built-in sealing for pressurisation by filtered ventilation system.	Provisions made for installation of a United States standard collective protector kit.
c) Conventional Weapons	Front, sides, rear and roof protection against 105 mm. HE shell at 90 ft. Front .30 cal. AP at 100 yds. Sides and rear .30 cal. AP at 300 yds. Belly proof against track detonated mines up to 9 lb. weight.	Thickness of armour plates (of specially treated steel) Front equivalent to 40 mm. Sides : 20 mm. Rear : 15 mm. Roof : 15 mm. Front floor : 20 mm. Rear : 15 mm. These armour plates afford protection: - All-round, against all 7.5 mm. armour-piercing bullets at all distances and 105 mm. shell splinters from bursts at 10m. - Front, against 20 mm. ammo. fired at over 500 m. range. - Against anti-personnel mine bursts.	In all cases, it is possible to continue firing the guns mounted on the vehicle. a) Front: protection against 20 mm. calibre at all distances. b) Sides upper: protection against 20 mm. calibre at distances of over 500 m., against 155 mm. calibre at 10 m. c) Sides lower: protection against 7.62 mm. calibre at all distances against 155 mm. calibre at 20 m. d) Roof, floor and rear: see (c)	All-round against small-calibre AP ammo at 150 m. (16 1/2 yds.)	Frontal arc Immune to Russian 12.7 mm. small arms AP at 200 yards range. Sides and rear a) Immune from Russian 7.62 mm. small arms AP at 100 yards range. b) Immune to 25 Pdr shell splinters from ground burst 30 feet from vehicle or air-bursts 50 feet from vehicle. Roof Immune from 25 Pdr VI fused splinters from burst 50 feet. Mines Protection against 9 lb. mines and anti-personnel shrapnel mines.	1. Defeats 105 mm. at 50 feet, all-round 2. Defeats .30 cal. AP at Front : 0 yards, upper slope Sides : 25 yards, lower slope Rear : 0 yards Rear : 100 yards 3. Defeats 50 cal. AP at 175 yards, frontally 4. Defeats personnel mines anywhere under belly 5. Computations indicate vehicle will defeat any mine not capable of overturning vehicle Test data not available. 6. No data available on 20 mm.
d) Against enemy detection	Noise level reduced to minimum by use of rubber track and dual muffler system. Possibility of infra red detection minimised by use of internal exhaust system.	Small size silhouette. Fittings for camouflage nets.	See STANAG, with the exception of paragraph 2.	Fittings for camouflage nets.	Exhausts screened from I.R. detection. Camouflage nets and fittings provided in storage. Cleats for attachment of foliage and natural camouflage.	Sound reduced to a minimum through muffling air intake and exhaust, use of rubber track pads, rubber treaded road wheels, rubber track bushing and inner track liner.
FLOATATION	Will float without flotation aids. Track propelled at 3.5 - 4.0 mph. Two electric bilge pumps fitted.	Will cross fords less than 0.65 m. deep without preparation.	Fording depth: 1.50 m. Swims in depth of 4.00 m.	Fording depth: without special provision : 1.20 m. (47") with special provision : 1.80 m. (71")	Vehicle will float without preparation. Additional free board is provided by built-in, collapsible flotation screen. Propulsion is by tracks. Speed in water 4 to 4 1/2 mph.	1. Floats and swims in water of unlimited depth, at 3 1/2 miles per hour. 2. No preparation required prior to entering water. 3. Free board, combat loaded, 14 inches. Considered adequate for inland waters, not for surf operations. 4. Bilge pump : Two with 108 gal./min. each capacity.

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TECHNICAL CHARACTERISTICS	CANADA	FRANCE	FEDERAL REPUBLIC OF GERMANY	NETHERLANDS	UNITED KINGDOM	UNITED STATES
RADIO	Mountings for one 5 mile radio at co-driver's station and one 20 mile radio in passenger compartment	SCR 508 or SCR 528 or ANGRCS radio sets. - Interphone.	a) Vehicle mounted radio set b) Communication with the Unit Commander	Possibility to fit the organic wireless sets.	Wiring harness capable of taking any necessary combination of radio sets. In APC roles, these are: Section vehicle - C42 Platoon vehicle - C42/B47 Company vehicle - C42/C42/B47 Battalion vehicle - C42/C42/C13	1. Mounts AN/GRC-5, AN FRC-6 through 10 AN/VRC-1, through 3; AN/GRC-19 AN/VRC-12 2. Interphone: AN/VIC-1 (2 outlets) 3. Four teleposts provided for internal-external telephone connections.
ELECTRIC SYSTEM	24 volts 100 amp AC/DC generator	24 volts	24 volts	24 volts	A.C. generation rectified to 24 volts D.C. Battery capacity 250 ampere/hours	24 volt D.C. system consisting of: AC alternator, 150 ampere Rectifier Regulator Two 12 volt batteries in series Automatic reset circuit breakers
RADIO INTERFERENCE	Suppressed to standard laid down in Technical Specification OS 192	Complete suppression	Interference suppression	Fully suppressed	Vehicle fully suppressed	Complete suppression in accordance with United States Army Standards.
NIGHT OPERATION	Provision in driver's cupola for infra red periscope	Provision made for operation using visible lights. Infrared device provided to facilitate driving.	a) Infrared night driving device. b) Infrared firing and observation vision device.	Infra red driver scope	Infra red vision periscope for driver to replace daylight periscope common user infra red binoculars for commander.	Normal; Standard automotive head and tail lights - Stop light. Blackout; Blackout driving lights Blackout marker lights Blackout tail and stop light Infrared; Two infra red headlights One infra red drivers periscope (360° traverse)
FUEL	Gasoline	NATO gasoline	Diesel oil, multi-fuel capability	Diesel oil	On early production vehicle fuel will be gasoline. In later production, engine will have multi-fuel capability from heavy diesel fuels to high grade petroleum fuels and including kerosene.	Gasoline, 80 gallon capacity. Electric fuel pump.
TEMPERATURE LIMITS	- 40°F to 120°F	During the testing of the French tank from which the personnel carrier has been derived, satisfactory operational performances were obtained both in the Scandinavian countries and in Israel.	+ 65°C to - 43°C	- 15°F to 122°F	Normal limits	1. Operates from 115°F to -25°F without requiring special kits. 2. Operates from 115°F to -65°F with use of winterisation kit (presently available and tested) 3. Storage; Safe for storage in ambient air temperature from 160°F to -80°F.
MAINTENANCE	Normal techniques to ensure interchangeability of components. Types of lubricants reduced to minimum. Targets 10,000 miles between major overhauls.	Easy to maintain; like the 13-ton AMX light tank.	Simple	NATO standard	Vehicle easy to maintain. Life between major overhauls has not yet been determined.	Operates 2,000 miles cross-country with only organizational maintenance; 4,000 miles cross-country without need for replacement of a major component, or the necessity of a major overhaul. Tracks have a minimum life of 3,000 miles, and normally give over 4,000 under test.
TOWING	Fitment for standard towing hook provided.	2 front hooks 2 rear hooks Towing fitment at rear.	Long-distance towing capability: 3 tons Capable of towing a vehicle of the same type over a short distance.	Under study	Towing rotatable hook provided.	1. Four lugs provided, one on each corner of hull. 2. One swivel type pintle hook mounted at rear, centre, of vehicle at 26" above ground.

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TECHNICAL CHARACTERISTICS	CANADA	FRANCE	FEDERAL REPUBLIC OF GERMANY	NETHERLANDS	UNITED KINGDOM	UNITED STATES
MISCELLANEOUS		Vehicle can be equipped with: - a wave-diverter - gangway-lowering gear	200 HP sustained performance power take-off		Full power take-off available on every installation for special roles.	1. Vehicle is designed specifically to facilitate air transport in Phase I, airborne operations. 2. Is capable of being parachute dropped from C-130 aircraft. 3. Equipped with fully automatic proven torque converter transmission permitting full power shift for improved mobility.
CARRYING CAPACITY	3,000 lbs.	12 men, seated, and their complete combat equipments (including 1 vehicle commander)	Useful load : 4 - 5 tons.	1,300 kg., without jeopardising prescribed cross-country ability	4,500 lbs. (approximately)	1. 13 fully equipped soldiers, including 1 driver, 1 commander, 11 passengers. 2. 231 cubic feet or 3,860 pounds of cargo + 1 driver. 3. Rear ramp opening of 54 x 49 1/2 inches gives access to a clear floor space of 54 inches wide by 101 1/2 inches long, with a roof height of 49 1/2 inches. 4. Cargo hatch opening in roof: 47 1/2" x 30 1/2".
CREW AND PASSENGERS	Crew: Driver and co-driver/gunner Passengers: 10 fully equipped infantry	1 driver	1 driver and 11 men or 1 driver and 8 men with sufficient room to conduct combat from vehicle	1 driver 9 men in battle order with organic weapons 1 driver 11 men without equipment	Driver Commander 10 Infantry men	Equally carries 13 fully equipped men, seated. Includes one driver, one commander and 11 soldiers, passengers.
ARMAMENT	7.62 machine gun in rotating armoured cupola with periscope sight at co-driver/gunner's station.	All-round firing turret with 7.5 machine gun (elevation range -10° to +45°) and 3,000 rounds. Gunner fully protected or all-round firing cupola with 12.7 machine gun (elevation range -10° to +70°) and 600 rounds.	20 mm. vehicle mounted gun and 7.62 mm. machine gun in all-round firing turret with 75° angle of elevation.	Ring mount to fit a .50 MG (360°)	Pintle mounted machine gun (7.62 mm. general purpose machine gun) 1,500 rounds ammunition.	1. One MG .50 cal. HB (flexible) 360° traverse on ring mount, 55° elevating all-round 21° depression, maximum. 2. 7.62 mm., M14 with 360 rds. ammo. (weapons of driver and commander). 3. 16 grenades, hand. 4. 5 mines, M18, AF Storage provided for 2,000 rounds 50 cal. ammo.
CAMOUFLAGE	Camouflage net carried. Silhouette kept as small as possible. Two multi-barrelled smoke dischargers fitted.	Under study	Anti-infrared paint Camouflage net Smoke screen dischargers.	Two sets of smoke grenade launchers	Camouflage net in storage Staples for natural camouflage Smoke dischargers Infra red anti-detection Paint if required	Smoke generator units can be mounted in vehicle if desired. Is not furnished as standard installed equipment.
PASSENGER COMFORT	a) Suspension designed to provide smoothest possible ride. b) Forced air circulation in passenger compartment. c) Engine bulkhead insulated against heat and noise.	Comfortable seats for all personnel. Provision for ventilation and air-conditioning.	Must enable personnel to spend 8 hours at a time inside the vehicle under ABC combat conditions, while firing the vehicle-mounted guns to full capacity.	Complete combat readiness after sustained cross-country transport.	Comfortable seating Adequate space Sound insulation of engine noises Forced draught ventilation with heating or cooling as required.	1. Padded seats with safety belts and hand straps for crew and passengers. 2. Personnel heater kit available when required. 3. Ventilation of crew compartment provided by engine cooling fan. 4. Crew compartment can be closed air and water tight. 5. Vehicle accepts standard United States collective protector kit for CBR protection.

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TECHNICAL CHARACTERISTICS	CANADA	FRANCE	FEDERAL REPUBLIC OF GERMANY	NETHERLANDS	UNITED KINGDOM	UNITED STATES
OBSERVATION POSSIBILITIES	Driver : 4 vision blocks providing overlapping field of view Co-driver/gunner : 5 vision blocks in rotating cupola Passengers : 4 vision blocks	Driver : 140° angle of vision with 3 passengers Vehicle Commander : all-round vision Deputy Vehicle Commander : 250° vision All the other passengers have a minimum angle of vision of 120° through side or rear ports.	All-round vision for all personnel carried.	Day : a) driver and commander hatches b) crew hatches on top, side and rear pistol ports c) driver - fixed and rotating periscope Night : Infrared driverscope	Driver : Head out position for driving when opened-up 3 periscopes giving 120° angle of vision (central wide angle periscope is replaced by infrared periscope) Commander : Rotating cupola with 3 periscopes having total included angle of 120°, thus providing facility for all-round vision.	Driver : Night : Infra red periscope 360° horizontal, 260° vertical Daylight : Approx. 200° (four periscopes) when hatch closed. 360° with hatch open and seat raised. Commander : Daylight : 360° (5 periscopes) 360° (hatch open)
EXITS	Roof Hatch 4' x 4' Rear door 3'3" x 3'5"	2 wide rear doors affording protection to dismounting personnel 4 wide panels in the roof can be opened to facilitate rapid exit of personnel	Rear door, and flaps to provide overboard exit.	Crew hatches on top and two rear doors	Rear door Commander and driver hatches in roof Large circular mortar hatch in roof	Rear ramp : 54 x 43 1/2 inches (opens instantaneously) Rear door : Large hinged door (located in ramp) Top : Drivers hatch Commanders hatch Cargo hatch, 47 1/2 x 36 1/2 inches
OTHER ROLES IN WHICH THE EQUIPMENT CAN BE USED	a) Tactical weapons carrier for: (i) medium mortar (ii) medium machine gun (iii) battalion anti-tank weapons b) Tactical command and signals vehicle c) Counter mortar radar vehicle d) Casualty evacuation vehicle	The following versions exist: - 1 type of cargo vehicle - 1 type of 120 mm. mortar carrier - several (4) types of command vehicles - 1 type of teleguided-missile launching vehicle - 1 type fitted with a wave diverter - 1 type fitted with gangway-lowering gear.	Command and radio vehicle. 81 mm. mortar carrier 120 mm. mortar carrier Ambulance Logistic support vehicle SS 11 missile carrier vehicle Anti-tank vehicle with 90 mm. gun Conventional AA artillery carrier	Load carrier Command vehicle Weapons carrier Armoured ambulance	Every APC has the necessary built-in fitment to enable it to be readily converted in the field to any of the following roles: a) Engineer section vehicle b) Armoured command vehicles c) Observation post vehicle for artillery d) Armoured ambulances e) Infantry support weapon vehicle including mortar vehicle, anti-tank vehicle (120 mm. R-O-L combat) f) Battlefield surveillance vehicle g) Target equipment locating vehicle	The uses of the M-113 are limited only by the imagination of the user. The components of the vehicle form the basis for a number of other vehicles, such as mortar carriers, missile carriers, cargo tractors, command post and fire direction vehicles, radar equipment carriers, anti-aircraft artillery weapons, etc.
STATUS OF DEVELOPMENT AND/OR PRODUCTION	Vehicle is in final stage of development. A revised prototype is scheduled for delivery in September, 1960. The most important aspects of the engineering tests of this vehicle will be completed by December, 1960. A government decision on procurement will be taken when the development is complete. Production drawings will be available in December, 1960. NOTE: The Canadian APC is one vehicle of a family which includes also a 105 mm. self-propelled howitzer and a 2 1/2 ton load carrier. All vehicles use the same chassis.	In quantity production to meet French and foreign requirements	a) Prototype tests Tests on 2 prototype vehicles started in spring of 1960. b) Prototypes in production Delivery of 12 prototypes scheduled for end of 1960. c) Capacity Quantity production: up to 100 vehicles per month.	APC production ready : end 1960 beginning 1961 Other roles in early stage of development	Prototype in the course of manufacture. Development trials commence January 1961. United Kingdom plans to produce the first production vehicles by mid-1961. RELATED VEHICLES The following additional vehicles are based on the same automotive components as the APC. a) 105 mm. artillery self-propelled mounting (FV 433) b) 3 1/2-ton armoured load carrier (FV 431) c) 5-ton un-armoured load carrier (FV 421)	M-113 is currently entering its second year of production, with a current rate of approximately 125 vehicles per month. Present production capacity is rated at 125 per month on a single shift, eight hour day, five day week. At three shift operation, five day week, the rate will be 300 vehicles per month. Procurement documentation is complete and of excellent quality. It has been used successfully in a competitive procurement in the United States.

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NAVO SECRET

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NATO SECRET
ANNEX II to
AC/176-R/1

STATEMENT MADE BY THE NETHERLANDS REPRESENTATIVES
SUB ITEM OF AGENDA No. III

made during the meeting of the Ad Hoc Mixed Working Group on an Armoured Personnel Carrier, held at Paris on 7th and 8th September, 1960.

1. One of the characteristics of the recommended organization, viz. the so-called LANDCENT division is that the Infantry should be fully equipped with Armoured Personnel Carriers.

In view of the circumstances of modern combat methods the necessity of such vehicles is generally accepted.

2. Considering the latest technical developments we can choose between two types of Armoured Personnel Carrier, viz. tracked vehicles and wheeled vehicles.

In this respect it is noted that the existing tracked vehicle has a greater cross-country travelling ability than the wheeled vehicle.

3. The tracked vehicles, however, have the following disadvantages:

- high cost of procurement
- intensive maintenance
- high fuel consumption

4. For economic and logistic reasons it will be clear therefore, that also in view of the total defence effort required - it is investigated whether all Infantry units should necessarily be equipped with tracked APC's and whether allocation of some wheeled APC's could be accepted from a tactical point of view.

5. The LANDCENT division organically consists of Armoured Brigades and Infantry Brigades

- (a) In the Armoured Brigade the main stress is laid on tank combat, hence on the attack and the counter-attack. The Infantry attached to these brigades should always be able to co-operate closely with the tanks and they may never reduce the speed of the tanks.

Considering the present development of Armoured Personnel Carriers, the tracked vehicle is the only suitable vehicle for the infantry of the Armoured Brigade.

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NATO SECRET

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ANNEX II to
AC/176-R/1

- (b) In the Infantry Brigade, however, the main stress is laid on infantry combat, which is still for the greater part conducted on foot. In this case it is not directly necessary to have the disposal of a vehicle which can follow the tanks at all times.

In the first place the infantry requires an armoured vehicle that gives them - during their movements - the greatest possible protection against conventional as well as against atomic weapons, and especially against fall-out.

For the actual combat these vehicles are not required, although they sometimes come in very handy. It is therefore desirable if it should be possible to fight from the vehicle.

As for the Infantry Brigade it is acceptable for tactical reasons and desirable for economic and logistic reasons to equip the infantry units partly with wheeled and partly with tracked APC's.

The number of tracked APC's to be allocated depends on the terrain in which the unit is to operate and on the cross-country travelling ability of the wheeled APC.

6. The Netherlands therefore suggests to submit the following joint requirements to the Standing Group:

- (a) Tracked Armoured Personnel Carriers for the Armoured Brigades.
- (b) Partly wheeled and partly tracked APC's for the Infantry Brigades.

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NATO SECRET

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NATO UNCLASSIFIED
ANNEX III to
AC/176-R/1

AD HOC MIXED GROUP ON AN ARMoured PERSONNEL CARRIER
AC/176

MEMBERS OF THE GROUP OF EXPERTS

Chairman: General CLAVIER International Staff

BELGIUM

Lt.Col. FLOQUET

Etat Major Général
Direction Générale des Troupes
blindées

Lt.Col. M. MINETTE

Dept. of National Defence
Directeur Planning Production

Major JEANMART

Centres d'Etudes Militaires
Et. d'Expérimentation BRASSCHAAT

CANADA

Lt.Col. W.J. OWENS
Mr. P. SOLLY-FLOOD

Dept. of National Defence
Canadian Permanent Delegation

FRANCE

Colonel JOURNES

Chef de Groupe
1, Place St. Thomas d'Aquin
PARIS, 7e.

Ing.Mil. Pal ROBINEAU

D.E.F.A. Caserne Sully, St.Cloud
(S & O)

Lt.Col. VERNY

EMA/ARMET
231, Bld. Saint-Germain, PARIS 7e.

Lt.Col. CAUCHIE

Délégation Française OTAN

Ing.-en-Chef BODIN

DEFA
Atelier de Construction d'Issy-
les-Moulineaux, SATORY, par
Versailles

Colonel de CHABOT

Délégation Française OTAN

GERMANY

Colonel D. NAHRING

Bundesministerium für
Verteidigung
Fü H 115, Bonn-Hardtöhe

Colonel von SCHULTZENDORFF

"

Major KETTMANN

-24-

NATO UNCLASSIFIED

-25-

NATO UNCLASSIFIED
ANNEX III to
AC/176-R/1

NETHERLANDS

Major W.F.C. STEIN

Hoofdkwartier Generale Staf
Julianakaserne, Den Haag

Major Iz. T.A. van ZANTEN

Inspectie Technische Dienst

Mr. F.M.J. de GRAAUW

Netherlands Delegation to NATO

UNITED KINGDOM

Brigadier D.C. MULLEN

General Staff War Office

Lt.Col. R.C. TIMMS

War Office

Mr. T.L.H. BUTTERFIELD

Fighting Vehicle Research &
Development Establishment

UNITED STATES

Colonel Rex H. WHITE, Jr.

Director of R. & E. OTAC
Detroit Arsenal, Centerline, Mich.

Mr. A. JAREMA

Col. T.W. DAVIS

U.S. Delegation to NATO

STANDING GROUP REPRESENTATIVE

Lt.Col. CABOLET

NATO, Room A/492

SHAPE

Colonel NECKENAUER

SHAPE-PARIS

INTERNATIONAL STAFF

Cdt. A. de CALLATAY (Secretary)

NATO UNCLASSIFIED

000269

FILE: 2-5105-AC/176

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.


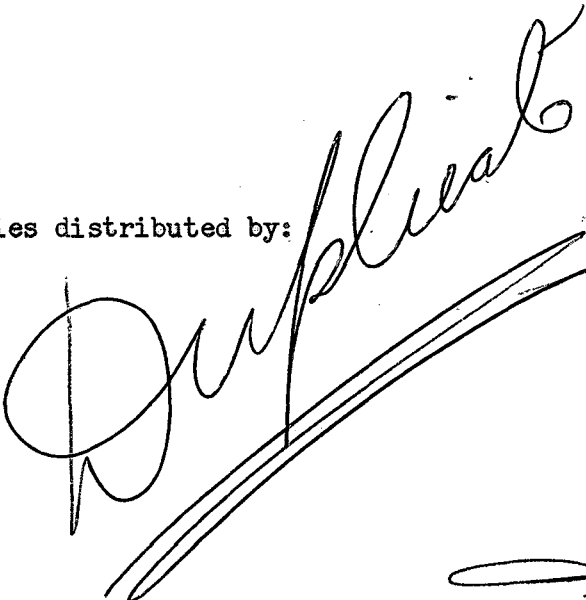
DOCUMENT
CLASSIFICATION:
CONFIDENTIAL

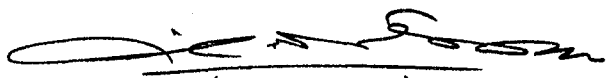
DATE: 7/Sep/60

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION
AD HOC MIXED WORKING GROUP ON ARMoured PERSONNEL CARRIER

DESCRIPTION: DDP Telegram AZ391 dated 31/Aug/60 to NATO PARIS

1. The attached document is referred to: CGS 
C/DRB
2. It is requested that action be taken by: For information
3. Copies distributed by: 



(J.C. Outram)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

BY SECURE MEANS

CONFIDENTIAL

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

FM DDP OTT AUG31/60 CONF

TO NATOPARIS AZ391

INFO DM DND CCOS

ROUTINE

(FOR SOLLY-FLOOD FM FA MILLIGAN)

REF OURTEL DL901 AUG29

NATO ARMAMENTS CTTEE RESEARCH DEVELOPMENT AND PRODUCTION OF MIL-
ITARY EQUIPT AD HOC MIXED WORKING GROUP ON ARMoured PERSONNEL
CARRIER MEETING SEP7-8.

AS YOU KNOW LT COL OWENS OF THE ARMY DEVELOPMENT ESTAB WILL BE THE
DND REP AT THE REFERENCED MEETING. COL OWENS HAS DISCUSSED VARIOUS
ASPECTS OF THE BOBCAT PROGRAMME WITH MR ERSKINE AND MYSELF. HE WILL
REPORT TO YOU AS SOON AS HE ARRIVES IN PARIS. IT IS SUGGESTED THAT
IF POSSIBLE YOU TAKE THE LEAD AT THIS MEETING, WITH COL OWENS PRO-
VIDING TECH ADVICE.

2. IN REVIEWING THE GROUP AGENDA, WE NOTE TWO POINTS WHICH MAY PRE-
SENT SOME PROBLEMS FROM OUR POINT OF VIEW:

ITEMS-QUOTE REQUIREMENTS OF VARIOUS COUNTRIS TAKING PART IN THE
GROUP AND DTERMINATION OF COMMON REQUIREMENTS UNQUOTE.

ITEMS-QUOTE NATIONAL POLICY FOR MEETING REQUIREMENTS UNQUOTE.

3. IF THESE TIEMS INVOLVE CONSIDERATION OF QUANTITATIVE REQUIREMENTS
THEN OUR POSITION IS THAT WHILE IT IS PRESENT INTENTION TO PRODUCE
THE BOBCAT IT IS, AFTER ALL, IN THE FINAL DEVELOPMENT STAGES AND THE
STAGES AND THE RESULTS OF THE EVALUATION TRIALS WILL PROBABLY NOT
RPT NOT BE KNOWN UNTIL ABOUT MID-DEC. COL OWENS WILL BE ABLE TO DIS-
CUSS THIS ASPECT IN MORE DETAIL WITH YOU.

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BY SECURE MEANS

CONFIDENTIAL

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

PAGE TWO AZ391 CONFD

4. AS WE NOTED IN OUR TEL AZ335 OF 11 MAY QUOTE IT IS UNDERSTOOD THAT, ALTHOUGH THE NATO COUNTRIES WANT AN ARMoured VEHICLE TO TRANSPORT INFANTRY ON THE BTTLFIELD THEY HAVE NOT RPT NOT YET BEEN ABLE TO ARRIVE AT COMMON DETAILED MILITARY CHARACTERISTICS FOR SUCH A VEHICLE. THE CDN CONCEPT IS BEING PUT FORTH FOR CONSIDERATION AS AT LEAST ONE OF THE NATO COUNTRIES HAS SHOWN INTEREST IN THE QUOTE BOBCAT UNQUOTE PROGRAMME. UNQUOTE.

0014/AG 01 SEP 60

CONFIDENTIAL

000272

FILE: CSC 2155-2 (SO/LOG)

DOCUMENT CONFIDENTIAL
CLASSIFICATION:

DATE: 1 Sep 60

Address Reply:

The Chairman,
Chiefs of Staff,
Ottawa.

①

JOINT STAFF MEMORANDUM

SUBJECT: ARMAMENTS COMMITTEE

DESCRIPTION: Tel AZ 391 from DDP Ottawa to Paris
dated 31 Aug 60

②

DEP

✓ K. A. TOMS
Lt-Col
MA b CGS

SEP - 1 1960

1. The attached document is referred to: ✓ CGS 1 copy
SEC'Y PSOC 4 copies

③ EP 2

appropriate action

(S. M. OLFE)
COLONEL
DEP


2. It is requested that action be taken by: INFORMATION

SEP 01 1960

No action reqd

3. Copies distributed by:

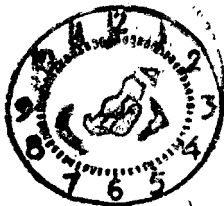
GCW/2-3729/meb


(R.C. Weston)
Air Commodore
for Chairman, Chiefs of Staff.

②

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SEP 1



EP

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BY SECURE MEANS

CONFIDENTIAL

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

FM DDP OTT AUG31/60 CONF ←

TO NATOPARIS AZ391

INFO DM DND CCOS

(FOR SOLLY-FLOOD FM FA MILLIGAN)

REF OURTEL DL901 AUG29

NATO ARMAMENTS CTTEE RESEARCH DEVELOPMENT AND PRODUCTION OF MIL-
ITARY EQUIPT AD HOC MIXED WORKING GROUP ON ARMoured PERSONNEL

CARRIER MEETING SEP7-8.

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STAGES AND THE RESULTS OF THE EVALUATION TRIALS WILL PROBABLY NOT
RPT NOT BE KNOWN UNTIL ABOUT MID-DEC. COL OWENS WILL BE ABLE TO DIS-
CUSS THIS ASPECT IN MORE DETAIL WITH YOU.

ROUTINE

*This is
not
strong
enough.*

CONFIDENTIAL

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BY SECURE MEANS

CONFIDENTIAL

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

PAGE TWO AZ391 CONF

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0014/AG 01 SEP 60

CONFIDENTIAL

000276

DEPARTMENT OF NATIONAL DEFENCE

TEMPORARY DOCKET

ARMY

[illegible]

INSTRUCTIONS

1. Temporary Dockets are to deal WITH ONE CASE ONLY.
2. T.D.'s NOT to be placed on main file UNLESS Central Registry informed by means of Form D.N.D. 710.
3. T.D. No. together with main file number to be quoted on all correspondence originated.
4. T.D.'s not to be passed from one service to another.
5. Action should be taken as soon as possible in order that main file may be kept up to date. If action cannot be taken within 48 working hrs., B.F. Docket.
6. T.D.'s to be requisitioned, passed, B.F.'d. etc., in the same manner as main files by means of Form D.N.D. 710.

M E M O R A N D U M

HQS 1235-6-6 Vol 4
(DEP 2a)

①

25 Aug 60

DCGS

Cooperation in Research, Development and Production
Ad Hoc Working Group on an Armoured Personnel Carrier

1. The memo at flyleaf is a request for Lt-Col W J Owens of ADE to attend the marginally noted meeting to be held in Paris 7 - 8 Sep 60.
2. DQMG(D&D) was reluctant to send a representative to this meeting. However, discussions between DDP, VQMG and DQMG(D&D) culminated in a decision that the Army should support DDP at this meeting.
3. It is recommended that the memo to the CCOS be forwarded for signature.

FGJ/6-6309/db

H. R. Rolfe
(G. M. Rolfe)

Colonel

Director of Equipment Policy

cc: DDD

② DCGS

a. Go into, please.

b. A view of extreme urgency to attempt savings RCAF to have signed.

Seen

W. MURDOCH
Director
DCGS

25 AUG 1960

(G. M. Rolfe)
COLONEL
DEP

AUG 25 1960

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10 25



P

000279

HQS 1235-6-6 Vol 4- (DEP 2a)

ARMY HEADQUARTERS

OTTAWA, Ont., 25 Aug 60

Secretary
Principal Supply Officers Committee

NATO Cooperation in Research, Development & Production
Ad Hoc Group on an Armoured Personnel Carrier

1. Reference is made to HQS 2-5105-AC/176 dated 16, 18 and 24 Aug, requesting information regarding Canadian representation at the meeting 7 and 8 Sep 60 of the Ad Hoc Group on an Armoured Personnel Carrier.
2. CSC 2155-2 (SO/LOG) dated 16 Jun 60 and addressed to The Under Secretary of State for External Affairs para 4 stated that the Army would give further consideration to providing representation in support of the Bobcat on a meeting to meeting basis, when further information is available on the Agenda, the duration of the meeting and details of representation being provided by other participants. It is understood that DDP is not sending a representative from Canada but is being represented by their delegate in Paris.
3. On a strong recommendation from DDP which submitted the "BOBCAT" for consideration, it is now recommended that Lt-Col W.J. Owens of ADE attend the Ad Hoc Working Group on an Armoured Personnel Carrier in Paris 7 and 8 Sep 60.
4. Approval for Lt-Col W.J. Owens to attend this meeting is requested.

FGJ/5-0309/5A

H. V. Reepe COLONEL
for (SF Clark)
Lieutenant General
Chief of the General Staff

cc: DDD

FILE: HQS 2-5105-AC/176

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

DOCUMENT

CLASSIFICATION:

UNCLASSIFIED

DATE: 18 Aug 60

MEMORANDUM

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: Ad Hoc Mixed Working Group on an Armoured Personnel
Carrier

NATO Document AC/176-A/1 dated 8 Aug 60

① 1. The attached document is referred to:

✓ CGS

C/DRB

⑤
DEP
to note

18 Aug 60
EP 2 a

2. It is requested that action be taken by: FOR INFORMATION, please

③ EP 2 A

Noted thanks.

(G.M. B. FEE)
COLONEL
DEP

3. Copies distributed by:

AUG 18 1960

J. C. Outram
J.C. Outram)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

⑥

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Document disclosed under the Access to Information Act -
Document divulgué en vertu de la Loi sur l'accès à l'information

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE

COPY

N°

ORIGINAL: FRENCH
8th August, 1960

NATO UNCLASSIFIED
AGENDA
AC/176-A/1

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

First Meeting which will take place at the
Permanent Headquarters, Place du Maréchal
de Lattre de Tassigny, Paris, XVIe.,
on 7th and 8th September, 1960, at 10 a.m.

AGENDA

- I. INTRODUCTORY STATEMENT
 - II. METHOD OF WORK
 - III. REQUIREMENTS OF THE VARIOUS COUNTRIES TAKING PART IN
THE GROUP AND DETERMINATION OF COMMON REQUIREMENTS
 - IV. CHARACTERISTICS OF THE VARIOUS NATIONAL EQUIPMENTS
IN PRODUCTION OR IN DEVELOPMENT
 - V. COMPARISON OF THE CHARACTERISTICS OF THESE EQUIPMENTS
AND OF THE COMMON REQUIREMENTS, TAKING INTO ACCOUNT
FINABEL AGREEMENT No. 1.A.5 AND, IF APPLICABLE,
DRAFT STANAG No. 2802
- Reference: AC/176-N/1
- VI. NATIONAL POLICY FOR MEETING THE REQUIREMENTS
 - VII. PREPARATION OF THE AGENDA FOR THE 2nd MEETING
 - VIII. OTHER BUSINESS
 - IX. DATE AND PLACE OF NEXT MEETING

(Signed) A. de CALLATAY¹¹

OTAN/NATO,
Paris, XVIe.

NATO UNCLASSIFIED

FILE: HQS 2-5105-AC/176

DOCUMENT

CLASSIFICATION:

S E C R E T

DATE: 16 Aug 60

Address Reply:

The Secretary,
Principal Supply Officers Committee,
DM Sec't, C29.

①

M E M O R A N D U M

SUBJECT: NATO ARMAMENTS COMMITTEE -
CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

DESCRIPTION: Ad Hoc Mixed Working Group on an Armoured Personnel Carrier

(a) Letter N-1124 dated 8 Aug 60

(b) NATO Document AC/176-N/1 dated 4 Aug 60

1. The attached document is referred to:

CGS
C/DRB

2. It is requested that action be taken by:

CGS for comments
on representation

3. Copies distributed by:

② EP2A

*Returned thanks
for appropriate action. See
above.*

CGS
C/DRB
DEF

AUG 17 1960

(J.C. Outram)
Secretary

Principal Supply Officers Committee
6-8403 "C" 2334

DEPARTMENT OF EXTERNAL AFFAIRS, CANADA.

NUMBERED LETTER

THE UNDER-SECRETARY OF STATE FOR
EXTERNAL AFFAIRS, OTTAWA, CANADA.

FROM: The Delegation of Canada to the North
Atlantic Council, Paris, France.

Reference:

Subject: Armaments Committee - Ad Hoc Mixed Working
Group on an Armoured Personnel Carrier

Security: ~~SECRET~~

No: 1124

Date: August 8, 1960

Enclosures:

Air or Surface Mail: Air

Post File No: 9-35-5

Ottawa File No.	
50115-11-40	
21	50

4-46

References

D-1

0

We draw to your attention Notice AC/176-11/1 of August 4, forwarded to you under Transmittal Slip 3473 of August 8, regarding the establishments of the above mentioned Group and its terms of reference. The first meeting is scheduled to take place on September 7 and 8 and we should, in due course, appreciate receiving from you particulars of Canadian representation planned.

The Delegation

Internal
Circulation

D

Distribution
to Posts

Document divulgué en vertu de la Loi sur l'accès à l'information

CONSEIL DE L'ATLANTIQUE NORD
NORTH ATLANTIC COUNCIL

EXEMPLAIRE

COPY

N°

13

ORIGINAL: FRENCH
4th August, 1960

NATO SECRET
NOTICE
AC/176-N/1

AD HOC MIXED WORKING GROUP ON AN ARMoured PERSONNEL CARRIER

ESTABLISHMENT OF THE GROUP AND TERMS OF REFERENCE

Note by the Secretary

In accordance with the conclusion reached by the Defence Ministers at their meeting held on 31st March and 1st April, 1960 (C-M(60)33, II(1)) concerning the selection and implementation of co-operative projects, the Armaments Committee at its meeting on 24th June, 1960 decided to set up an ad hoc Mixed Working Group on an Armoured Personnel Carrier.

2. The terms of reference agreed by the Committee for this Group are set out in paragraph 3 of document AC/74-D/458, a copy of which is attached at Annex I.

3. The countries which have so far signified their intention of participating in this Group are as follows:

Belgium
Canada
France
Germany

Netherlands
United Kingdom
United States

4. The members of the Group will find attached for information:

- (a) Annexes A and B of the new preliminary draft STANAG 2802, dated 27th April, 1959, giving respectively the military characteristics common to the family of special tracked armoured vehicles and the military characteristics of the armoured personnel carrier (see Annex II).

NATO SECRET

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NATO SECRET
AC/176-N/1

-2-

This new preliminary draft prepared by the Panel of Experts on Special Tracked Armoured Vehicles has been examined by the Army Board of the Military Agency for Standardisation which considered that it should be sent to nations and to the Supreme Headquarters of Allied Forces in Europe for information only.

- (b) FINABEL Agreement 1.A.5. ratified by all Finabel countries (see Annex III).

Furthermore, countries have received directly from the Canadian Delegation information regarding the armoured personnel carrier "BOBCAT".

Besides, France, Germany, Netherlands and the United Kingdom have stated that they had equipments either in production or nearly so, or in final stage of development. Considering the time available, it is desirable that countries wishing to submit information concerning this equipment send them without delay directly to the interested countries, with a copy to the International Secretariat.

5. The reserved date for the first meeting of the Group is that of 7th and 8th September, 1960. The agenda will be distributed under reference AC/176-A/1.

(Signed) A. de CALLATAY

OTAN/NATO,
Paris, XVIe.

NATO SECRET

-3-

NATO SECRET
ANNEX I to
AC/176-N/1

Previously circulated
as AC/74-D/4587
(PRO/III/4)

ARMAMENTS COMMITTEE

CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

PROJECT FOR ARMOURED PERSONNEL CARRIER:
TERMS OF REFERENCE FOR AN AD HOC MIXED WORKING GROUP

The countries showing an interest in this type of equipment(1) are as follows:

Belgium	no precise proposal	
Canada	BOBCAT	in final stage of development
France	Combat vehicle for infantry personnel transport	in production
Federal Republic of Germany	SPZ (new)	in final stage of development
Netherlands	DAF-YP 408	in production or nearly so
United Kingdom	FV 432	in final stage of development
United States	no precise proposal	

Terms of Reference

2. The Armaments Committee at its meeting of 24th June, 1960(2) decided to set up an ad hoc Mixed Working Group with the following terms of reference.

3. The ad hoc Mixed Working Group shall examine the possibilities of and, if subsequently so directed by the Armaments Committee, implement a co-operative project for a NATO armoured personnel carrier, following the procedure set out below:

Phase I

- (a) to determine if there exists a common requirement among several countries for an armoured personnel carrier;

-
- (1) Project III/4 in the tables in AC/74-D/432(1st revise)
(2) AC/74-R/89, Item I.

-3-

NATO SECRET

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NATO SECRET
ANNEX I to
AC/176-N/1

-4-

- (b) to obtain the main operational characteristics of the equipment proposed;
- (c) to ascertain if this equipment is of interest to countries for the equipment of their own forces.

Phase II

- (a) if several countries declare an interest in this equipment, to ask the NATO military authorities if it meets a NATO basic military requirement;
- (b) to examine the possibilities of manufacturing or procuring such equipment within NATO;
- (c) to draw up a report for the Armaments Committee.

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ANNEX II to
AC/176-N/1

ANNEX 'A' to
STANAG No.2802
(Preliminary Draft)

MILITARY CHARACTERISTICS COMMON TO THE FAMILY
OF SPECIAL TRACKED ARMoured VEHICLES

TACTICAL REQUIREMENT

1. The requirements of both nuclear and non-nuclear war indicate a need for a family of special tracked armoured vehicles to provide a good cross-country mobility for combat forces, along with protection from major battlefield hazards. This family will provide primarily for an armoured personnel carrier for the use of infantry in all phases of combat, and a tactical weapons carrier for the weapons which give the infantry close support. This family, with minor modifications, will also provide for a load carrier, command vehicle, armoured ambulance, etc. It is desirable that this family also include a self-propelled mount for field artillery.

2. This family of vehicles should be met by a single vehicle type, but if this is not feasible, maximum interchangeability of components should be provided for.

PHYSICAL CHARACTERISTICS

3. Weight

It is desirable that the vehicle be kept within the limits of Phase II airborne operations but in any case must not exceed 16.1 tons (15 metric tons) fully laden.

4. Dimensions

The size, and in particular the overall height, should be kept to a minimum with the provision of a maximum usable space within the particular version of the vehicle. Height requirements for load lift is to be kept to a minimum, and loading and unloading shall be as easy as possible.

- (a) Width: It is desirable that the width of the vehicle meet the requirement of Phase II of Airborne Operations, and in any case must not exceed 9.5 feet (2.9 metres).
- (b) Height: As low as possible but the overall height must not exceed the limits for Phase II of airborne operations.
- (c) Length: As short as possible.

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ANNEX II to
AC/176-N/1

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- (d) Minimum ground clearance: 16 inches (0.4 m.)
- (e) Arrangement of components: It is essential that the high mortality components used throughout the family shall be identical. It is desirable that they shall be used in a constant relationship or disposition to each other so that the introduction of mechanical components peculiar to one member of the family is avoided.

PERFORMANCE

5. The vehicle shall be capable of operating with tanks.

6. Mobility

- (a) The ground pressure should be under $8\frac{1}{2}$ pounds (600 grs.) per square inch (centimetre) (with the tracks sinking to a depth of 1 inch (2.5 cm.)).
- (b) Power/weight ratio not less than 20 HP per long ton (20 cv per metric ton).

7. Radius of Action

Built-in fuel capacity is required for a minimum of 200 miles (321 kilometres) over roads, and desirably 250 miles (412 kilometres) or a minimum of 10 hours engine running and desirably 18 hours.

8. Sustained Speed

- (a) Maximum Speed: should be capable of 30 mph (48 kmh), and 43 mph (69 kmh) desirable.
- (b) Minimum Speed: Not greater than $2\frac{1}{2}$ mph (4 kmh).

9. Obstacles

The vehicle shall be capable of overcoming the following obstacles:

- (a) Vertical obstacles of 2 feet minimum (0.6 m.).
- (b) Gradients of 60%.
- (c) Trenches of maximum width possible compatible with other physical characteristics.

PROTECTION

10. Protection will be afforded especially by mobility and the design of the silhouette.

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ANNEX II to
AC/176-N/1

11. Maximum protection should be provided for both crew and passengers against the thermal and flash effects of nuclear explosions. It is very desirable that the vehicles should be constructed so as to prevent the ingress of radio-active dust, without hindering the operation of the various moving panels.

12. Individual armour protection is covered in the Annexes dealing with each particular type of vehicle.

13. It is necessary to minimise detection of the vehicle by sight, sound or infra-red devices during operations with particular attention to:

- (a) Engine quietness;
- (b) Eliminating visible glowing and torching of mufflers;
- (c) Electric magnetic radiation;
- (d) Incorporating suitable cleats on all versions for attachment of camouflage nets.

FLOTATION

14. It is desirable that the vehicle in all its versions shall be capable of floating and crossing inland waterways under its own power, (STANAG No. 2805(A)). As a minimum requirement it should be possible to fit special flotation devices or the vehicle should be waterproofed to enable it to run under water.

FITTINGS

15. It is desirable that this vehicle be fitted with a power take-off for a winch or auxiliary equipment.

16. Consideration will be given to the possibility of fitting the vehicle for special tasks with the following equipment:

- (a) A dozer blade;
- (b) Bridge-laying equipment;
- (c) Mineclearing equipment.

CREW COMFORT

17. The vehicle must be so designed to give the driver the maximum ease of control. Frequent stops, low gear work and adverse climatic conditions must be borne in mind when designing the controls, the driving seat, the location of the instruments and positioning of levers.

18. The internal temperature of the crew compartment must be such that it can be tolerated by personnel wearing normal operational clothing, or while wearing a mask and protective clothing.

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ANNEX II to
AC/176-N/1

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RADIO EQUIPMENT

19. It must be possible to install a minimum of two radio sets (two antenna apertures and sufficient power for all radio sets).

NIGHT OPERATION

20. Provision shall be made for the operation of the vehicle at night by use of visible and invisible light.

ELECTRICAL SYSTEM

21. The vehicle will operate on a 24 volt D.C. system.

RADIO INTERFERENCE SUPPRESSION

22. The vehicle will be suppressed.

TOWING

23. A rotatable towing hook on the rear and a fixed hook on the front are required. Recovery lugs should also be fitted on the front and rear. Sizes of the hooks will be in accordance with STANAGs Nos. 2603 and 4019. The armoured carrier chassis must be capable of towing or being towed by another armoured carrier chassis.

TEMPERATURE LIMITATIONS

24. This will be the subject of a separate STANAG.

DURABILITY AND EASE OF MAINTENANCE

25. Maximum durability, ease of maintenance and simplicity of repair will be provided.

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NATO SECRET
ANNEX II to
AC/176-N/1

ANNEX "B" to
STANAG No. 2802
(Preliminary Draft)

MILITARY CHARACTERISTICS OF THE ARMOURED PERSONNEL CARRIER

GENERAL

1. These military characteristics are applicable to the armoured personnel carrier in addition to those which are common to the family of special tracked armoured vehicles.

CARRYING CAPACITY

2. The vehicle must be able to carry a driver, 11 men and desirably 12, or 9 men with sufficient room to fight.

ARMOUR

3. Maximum protection is desirable but is not consistent with the requirements of certain countries for airportability. It is acceptable, therefore, for the armoured personnel carrier requirement to be met by different vehicles with varying degrees of armour as long as the other characteristics of this STANAG are met. The following gives the minimum armour protection required and the ideal protection. The armour specifications selected between these two limits is a matter of national preference.

(a) Minimum Characteristics

That the armour is sufficient to withstand 105 mm. HE shell fragments at 90 feet (top, front, sides, rear), .30 calibre armoured piercing at 100 yards (front, sides, rear), and a maximum protection against any mine up to the size which will overturn the vehicle.

(b) Maximum Characteristics

- (1) It is essential that the front be immune to 20 mm. ammunition fired at a range of 547 yards (500 metres); the same protection is desirable on the sides and rear.
- (2) Protection of all surfaces including the roof, against fragments from 155 mm. ammunition exploding at 11 yards (10 metres).

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ANNEX II to
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- (3) Belly capable of withstanding the effect of a 16½ lb. mine (7½ kg.) detonating under the track.

ARMAMENT

4. The vehicle must carry:

- (a) One automatic weapon belonging to the vehicle itself and capable of all-round fire against ground targets (it is desirable that it be possible to use it as an anti-aircraft weapon for self-defence). The selection of the weapon to be used is a matter of national preference.
- (b) It is desirable that there be one or more smoke dischargers capable of laying quickly a smoke screen at short range.

PASSENGER COMFORT AND TEMPERATURE

5. In order to prevent undue fatigue and loss of efficiency on the part of the occupants, and bearing in mind tactical factors, consideration must be given to temperature, ventilation and seating comfort.

OBSERVATION

6. The vehicle must be designed so as to:

- (a) give the occupants maximum all-round observation when closed down;
- (b) enable the occupants to use their weapons from inside the vehicle when on the halt or on the move.

EXITS

7. Hatches should, if possible, be provided for the vehicle commander and driver.

8. A large exit must be provided at the rear of the vehicle for use by the occupants.

9. Emergency exits will be provided in the roof or sides, or both, to facilitate the evacuation from the vehicle in all cases. These exits should be as large as possible.

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ANNEX III to
AC/176-N/1

FINABEL CO-ORDINATING COMMITTEE

FINABEL AGREEMENT 1.A.5

SUBJECT

AGREEMENT

ON THE MILITARY CHARACTERISTICS OF THE
10-12 MAN FULL TRACKED ARMoured PERSONNEL CARRIER

Date of promulgation: 14th October, 1957

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ANNEX III to
AC/176-N/1

FINABEL AGREEMENT 1.A.5.

TERMS OF AGREEMENT

OBJECT

The purpose of this agreement is to lay down the military characteristics of the 10-12 man full tracked armoured personnel carrier.

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NATO SECRET
ANNEX III to
AC/176-N/1

DETAILS OF FINABEL AGREEMENT 1.A.5

MILITARY CHARACTERISTICS OF THE 10-12 MAN
FULL TRACKED ARMoured PERSONNEL CARRIER

I. TACTICAL REQUIREMENT

The full tracked armoured personnel carrier is required primarily to carry infantry in the assault and, particularly, when infantry are operating with tanks.

II. OTHER USES

This vehicle can also be employed as:

- a load carrier;
- a command vehicle;
- a vehicle allotted to an Air Control Team.

It is necessary that the main components of this vehicle be interchangeable with those of the light tank.

III. PHYSICAL CHARACTERISTICS

- (a) Weight: Minimum possible within a maximum limit of 15 metric tons when fully laden.
- (b) Maximum width: 2.9 metres
- (c) Height: As low as possible, the overall height must not exceed 2 metres. It is desirable that the roof should not exceed 1.8 metres.
- (d) Length: As short as possible.
- (e) Minimum ground clearance: 0.4 metres.

IV. ARMAMENT

The vehicle must carry:

- one automatic gun (20 mm. as a rule) belonging to the vehicle itself and capable of all round fire against ground targets (it should also be possible to use it as an anti-aircraft gun for self-defence).

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ANNEX III to
AC/176-N/1

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- one smoke discharger capable of laying quickly a smoke screen at short range.
- a stock of 1,000 rounds is desirable.

V. MOBILITY

- The ground pressure should be under 600 grs. per square centimetre (with the tracks sinking to a depth of 2.5 cm.).
- Power/weight ratio not less than 20 cv per metric ton.
- Radius of action: 400 Kms. over roads, i.e. 10 to 12 hour run.
- Maximum speed: 70 Kms./hour over road, average speed 40 Kms./hour and it should be possible to maintain a minimum speed of 4 Kms./hour.
- This vehicle should have the same ditch spanning ability as the tanks it accompanies.

VI. PROTECTION

- To be afforded especially by mobility and the design of the silhouette.
- It is essential that the front be immune to 20 mm. ammunition fired at a range of 500 metres; the same protection is desirable on the sides and rear.
- Protection of all surfaces including the roof, against fragments from 155 mm. ammunition exploding at 10 metres.
- Belly capable of withstanding the effect of a 7½ Kg. mine(1) detonating under the track.
- It is very desirable that the vehicle should be constructed so as to prevent the ingress of radio-active dust, without hindering the operation of the various moving panels.

(1) A 7½ Kg. mine can contain as much as 7 Kg. of explosive. This explosive charge is usually TNT, but it may eventually be another type of explosive with a brisance exceeding that of TNT by up to 30%.

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ANNEX III to
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VII. TRANSPORT CAPACITY

(a) As a personnel carrier

Crew : 1 driver
Passengers: 11 (or, better still 12) men carried
or 9 men with sufficient room to fight.

(b) Load carrier

Crew : 2 men
Pay load: 3 to 4 metric tons.

(c) Towing ability

This vehicle must be capable of being used as a cargo tractor. The trailer weighing from 2 to 3 metric tons.

VIII. OBSERVATION

The armour must be designed so as to:

- give the occupants maximum all round observation.
- enable the occupants to use their weapons - from inside the vehicle when on the halt or on the move.
- This characteristic must be compatible with that prescribed at paragraph VI above.

IX. EXITS

- Hatches should, if possible, be provided for the vehicle commander and driver.
- A large exit must be provided at the rear of the vehicle for use by the occupants.
- Emergency exits will be provided in the roof and sides to facilitate the evacuation from the vehicle in all cases.

X. RADIO EQUIPMENT

It must be possible to install two radio sets (two antenna apertures and sufficient power).

XI. MISCELLANEOUS

- (1) It should be possible to operate the vehicle whilst wearing a mask and protective clothing.

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ANNEX III to
AC/176-N/1

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- (2) General organization of the vehicle to be immune to flame throwers, Molotov Cocktails, napalm etc. should be provided.
- (3) Consideration should be given to the fitting of infra-red equipment (driving, observation, and short range-firing).
- (4) Use of NATO fuel. It is desirable that the engine should be capable of using other fuels as well (particularly gasoil).
- (5) Preferably the engine should be air-cooled, but consideration should be given to making the vehicle as silent as possible.
- (6) Ease of maintenance and repair should be considered (NATO standards).
- (7) It should be possible to fit special flotation devices or the vehicle should be waterproofed to enable it to run underwater.
- (8) The vehicle should be studied with a view to enabling it to be used on ice and snow.
- (9) Fittings

It is desirable that this vehicle be fitted with a power take-off for a winch or auxiliary equipment.

The possibility of fitting

- a Dozer blade
- bridge-laying equipment
- mine clearing equipment

should be studied for special tasks.

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Document divulgué en vertu de la Loi sur l'accès à l'information Act -
Document disclosed under the Access to Information Act

CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE
COPY

N°

16

ORIGINAL: ENGLISH
5th July, 1960

NATO SECRET
DOCUMENT
AC/74-D/458

(PRO/III/4)

ARMAMENTS COMMITTEE

CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

PROJECT FOR ARMoured PERSONNEL CARRIER: TERMS OF REFERENCE FOR AN AD HOC MIXED WORKING GROUP

The countries showing an interest in this type of equipment(1) are as follows:

Belgium	no precise proposal	
Canada	BOBCAT	in final stage of development
France	Combat vehicle for infantry personnel transport	in production
Federal Republic of Germany	SPZ (new)	in final stage of development
Netherlands	DAF-YP 408	in production or nearly so
United Kingdom	FV 432	in final stage of development
United States	no precise proposal	

Terms of Reference

2. The Armaments Committee at its meeting of 24th June, 1960(2) decided to set up an Ad Hoc Mixed Working Group with the following terms of reference.

3. The Ad Hoc Mixed Working Group shall examine the possibilities of and, if subsequently so directed by the Armaments Committee, implement a co-operative project for a NATO armoured personnel carrier, following the procedure set out below:

-
- (1) Project III/4 in the tables in AC/74-D/432(1st revise)
(2) AC/74-R/89, Item I.

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AC/74-D/458

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Phase I

- (a) to determine if there exists a common requirement among several countries for an armoured personnel carrier;
- (b) to obtain the main operational characteristics of the equipment proposed;
- (c) to ascertain if this equipment is of interest to countries for the equipment of their own forces.

Phase II

- (a) if several countries declare an interest in this equipment, to ask the NATO military authorities if it meets a NATO basic military requirement;
- (b) to examine the possibilities of manufacturing or procuring such equipment within NATO;
- (c) to draw up a report for the Armaments Committee.

OTAN/NATO,
Paris, XVIe.

NATO SECRET

BY SECURE EANS

CONFIDENTIAL

Signal Centre
Chairman,
Chiefs of Staff
Room 4802A Bldg
Phone 9-2-4835

ROUTINE

FM MILLIGAN DDP OTT JUN2/60 CONF

TO NATOPARIS(SOLLY FLOOD) AZ337

INFO EXTERNAL(DL1) DM/DND CCOS CJS(L)

REF YOURTEL 1231 MAY6

DEFENCE MINISTERS MEETING-COOPERATION IN RESEARCH, DEVELOPMENT
AND PRODUCTION-DANISH ENQUIRY

WE ASSUME FURTHER PARTICULARS REQUESTED BY DANISH DEL ON CDN
EQUIPMENTS ARMoured PERSONNEL CARRIER AND VEHICLE NAVIGATIONAL AID
ARE SATISFIED BY BOBCAT BROCHURES SENT YOU IN REPLY TO YOURTEL
1262 AND MATERIAL FORWARDED WITH MILLIGANS LET MAY19 AND 26. IF
NOT RPT NOT PLEASE ADVISE.

207/FH/ 03 JUN 60

CONFIDENTIAL

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MEMORANDUM

SECRET

HQS 1235-6-2
(DMO&P 3)

2 Jun 60

In reply to: CSC 2155-2(SO/LOG)
Dated: 1 Jun 60

Chairman,
Chiefs of Staff

Cooperation in Research, Development and Production
NATO Armaments Committee

1. I have no comment to make, on the proposals of the International Staff for an ad hoc group on the project for an armoured personnel carrier, except to agree to the terms of reference as set out in NATO PARIS message 1489 dated 31 May 60.
2. The Canadian Army would have difficulty in providing expert representation at this time. Considerable technical information has already been provided on the BOBCAT and further information could be provided by wire. Therefore it is recommended that DDP personnel already in Paris provide representation on the proposed ad hoc group.

Original Signed by
V.C.G.S.

(SF Clark)
Lieutenant-General
Chief of the General Staff



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MEMORANDUM

SECRET

HQS 1235-6-2
(DMO&P 3)

2 Jun 60

DGPO

Cooperation in Research, Development and Production
NATO Armaments Committee

1. The subject paper at Flag "A" was forwarded by the Joint Staff for comments by 2 Jun 60. It was passed to DEP for the preparation of comments in consultation with DQMG(D&D). DEP's comments are at Flag "B".
2. The memorandum to the CCOS at flyleaf is based on DEP's comments and is recommended for signature.

②
VCHS
Signature
recom mended.
R. M. BISHOP
BRIGADIER
DGPO
JUN 2 1960

(AJB Bailey)
Colonel
DMO&P

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M E M O R A N D U M

HQS 1235-6-2 (DEP 2b)

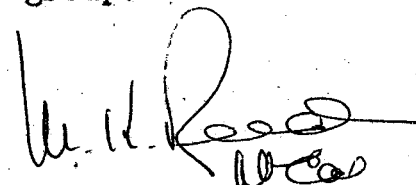
2 Jun 60

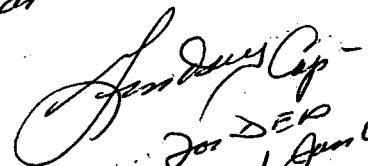
DMO&P

Cooperation in Research, Development and Production
NATO Armaments Committee

1. Reference Joint Staff Memorandum CSC 2155-2 (SO/LOG) dated 1 Jun 60 requesting comments on NATO-PARIS message 1489 dated 31 May 60.
2. The Canadian Army has no comment to make on the proposals of the International Staff for an ad hoc group on the project for an armoured personnel carrier, except to agree to the terms of reference as set out in message 1489.
3. May it be pointed out that the Canadian Army would have difficulty in providing expert representation at this time. Considerable technical information has already been provided on the Bobcat and further information could be readily provided by wire, therefore it is recommended that DDP personnel already in Paris provide representation on the proposed ad hoc group.

VEL/6-6043/db


(G M Rolfe)
Colonel
Director of Equipment Policy

Note:
Reply cleared with
DPMG (D&D) Para 3
added at their request.

for DEP
1 Jun 60

000306

BY SECURE MEANS

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Chiefs of Staff
Phone 9-2-4835
Room 4802A Bldg

PRIORITY

FM NATOPARIS MAY31/60 SECRET

TO EXTERNAL 1489 PRIORITY

INFO CCOS PRIORITY CJS(L)

DDP OTT PRIORITY FM OTT

TT DND PRIORITY FM CCOS

REF OURTEL 1472 MAY30

ARMAMENTS COMMITTEE-COOPERAAT

ION IN RESEARCH, DEVELOPMENT AND PRODUCTION OF MILITARY EQUIPMENT-PROJECT FOR AN ARMoured PERSONNEL CARRIER
WE SET OUT BELOW THE PROPOSALS OF THE INTERNATIONAL STAFF FOR AN AD HOC GROUP ON THE ABOVE SUBJECT. IF YOU HAVE COMMENTS, WE SHOULD RECEIVE THEM PRIOR TO THE JUN3 MEETING OF THE ARMAMENTS COMMITTEE.

2. THE TEXT OF THE INTERNATIONAL STAFF NOTE IS AS FOLLOWS:

~~TEXT BEGINS:~~ IN ACCORDANCE WITH THE PROPOSALS SET OUT IN DOCUMENT AC/74-D/432, COUNTRIES SHOWING AN INTEREST IN THIS TYPE OF EQUIPMENT ARE AS FOLLOWS:

CDA BOBCAT-IN FINIAL STAGE OF DEVELOPMENT

BELGIUM, NETHERLANDS NO PRECISE PROPOSAL

TERMS OF REF

2. AN AD HOC GROUP SHOULD BE ESTABLISHED TO EXAMINE THE POSSIBILITIES OF IMPLEMENTING A CO-OPERATIVE PROJECT FOR A NATO ARMoured PERSONNEL CARRIER. FOR THIS PURPOSE, THE AD HOC GROUP SHOULD:

PHASE I

(A) DETERMINE IF THERE EXISTS A COMMON REQUIREMENT AMONG SEVERAL

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BY SECURE MEANS

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PAGE TWO 1489

COUNTRIES FOR AN ARMoured PERSONNEL CARRIER;

(B) IF SO, OBTAIN THE MAIN OPERATIONAL CHARACTERISTICS OF THE EQUIPMENT PROPOSED;

(C) ASCERTAIN IF THIS EQUIPMENT IS OF INTEREST TO CO^{UH}ETRIES FOR THE EQUIPMENT OF THEIR OWN FORCES.

PHASE II

(A) IF SEVERAL COUNTRIES DECLARE AN INTEREST IN THIS EQUIPMENT, ASK THE NATO MILITARY AUTHORITIES IF IT MEETS A NATO BASIC MILITARY REQUIREMENT;

(B) EXAMINE THE POSSIBILITIES OF MANUFACTURING OR PROCURING SUCH EQUIPMENT WITHIN NATO;

(C) DRAW UP A REPORT FOR THE ARMAMENTS COMMITTEE. TEXT ENDS.

2124/RW/31 MAY 60

SECRET

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CONSEIL DE L'ATLANTIQUE NORD NORTH ATLANTIC COUNCIL

EXEMPLAIRE

COPY

N° 17

ORIGINAL: ENGLISH/FRENCH
30th May, 1960

NATO SECRET
WORKING PAPER
PRO/III/4-WP/1

ARMAMENTS COMMITTEE

CO-OPERATION IN RESEARCH, DEVELOPMENT AND PRODUCTION

PROJECT FOR AN ARMoured PERSONNEL CARRIER: SUGGESTED TERMS OF REFERENCE FOR AN AD HOC GROUP

Note by the International Staff

In accordance with the proposals set out in document AC/74-D/432, countries showing an interest in this type of equipment are as follows:

Canada		<u>BOBCAT</u> - in final stage of development
Belgium	}	No precise proposal
Netherlands		

Terms of Reference

2. An Ad Hoc Group should be established to examine the possibilities of implementing a co-operative project for a NATO armoured personnel carrier. For this purpose, the Ad Hoc Group should:

Phase I

- (a) determine if there exists a common requirement among several countries for an armoured personnel carrier;
- (b) if so, obtain the main operational characteristics of the equipment proposed;
- (c) ascertain if this equipment is of interest to countries for the equipment of their own forces.

NATO SECRET

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PRO/III/4-WP/1

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Phase II

- (a) if several countries declare an interest in this equipment, ask the NATO military authorities if it meets a NATO basic military requirement;
- (b) examine the possibilities of manufacturing or procuring such equipment within NATO;
- (c) draw up a report for the Armaments Committee.

OTAN/NATO,
Paris, XVIe.

NATO SECRET

000310

15/25

11

Att: y:

FILE: CSC 2155-2 (50/100)

DOCUMENT

CLASSIFICATION: SECRET

DATE: 24 MAY 60

JOINT STAFF MEMORANDUM

Subject: LIST OF PROJECTS FOR COOPERATION IN RESEARCH PRODUCTION AND DEVELOPMENT

- Description: (a) DEPT OF EXTERNAL AFFAIRS NUMBERED LETTER N-732 DATED 16 MAY 60
WITH ENCLOSURES 1 - 4 INCL
- (b) TELEGRAM FROM NATO PARIS TO EXTERNAL AFFAIRS NO 1399 DATED 19 MAY 60

1. The attached document is referred to: Ref (a) CCOS - 1 - FOR INFORMATION
CAS - Paras 19, 20 and 21
CAS - Paras 7, 10 and 21
CCS - Paras 7, 12, 14 and 15
CDRB - General comments

- Ref (b) CCS - Paras 3.

NOTE: AC/71/D/432 - will be circulated immediately it is received

2. It is requested that action be taken by: For comments as above by the 31 May 60 please

FSL/2-0465/mjm

13/25

RECEIVED
25 MAY 1960
DMO & P
Director
MO 1
MO 2
MO 3

(2) DMO. P
Presumably we will be asked for our official views on consultation with above referred to parties.

MAY 25 1960

3. Copies distributed by:

(3)
JEP

Please prepare necessary comments in consultation with DQMB (Drs)

28 May 60. J. J. J. J.

(R. C. Weston)
Air Commodore,
for Chairman, Chiefs of Staff.

(1)

BY SECUR MEANS

SECRET

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Chiefs of Staff
Phone 9-2-4835
Room 4802A Bldg

Ref (b)

FM NATOPARIS MAY19/60 SECRET

TO EXTERNAL 1399

ROUTINE

INFO CCOS OTT CJS(LDN)

TT DND FM CCOS

DDP OTT FM OTT

REF OUR LET N732 MAY16

ARMAMENTS COMMITTEE-COOPERATION IN RESEARCH, DEVELOPMENT AND
PRODUCTION.

THE FIRST CONSOLIDATED LIST OF PROJECTS PREPARED BY THE
INTERNATIONAL STAFF HAS NOW BEEN ISSUED IN AC/74/D/432 OF MAY17,
GOING FORWARD TO YOU UNDER TS1803 MAY19. PLEASE ENSURE THAT COPIES
ARE MADE AVAILABLE URGENTLY TO DND AND DDP.

2. AN INDICATION OF THE ACTION TO BE TAKEN AT THE ARMAMENTS
~~COMMITTEES~~ MEETING, NOW SCHEDULED FOR JUN3, IS CONTAINED IN THE
COVER NOTE TO AC/74/D/432. WE SHALL REQUIRE YOUR INSTRUCTIONS FOR
THE MEETING, DUE ACCOUNT BEING TAKEN OF THE COMMENTS MADE IN OUR
REF LET.

3. IN OUR REF LET WE OVER-LOOKED MAKING ANY COMMENT ON ARMoured
PERSONNEL CARRIERS, BUT YOU WILL SEE FROM ITEM 4 OF TABLE III IN
THE ANNEX TO AC/74/D/432 THAT THIS IS A CLASS 1 PROJECT AND THAT
THE CDN INITIATIVE OF THE QUOTE BOBCAT UNQUOTE HAS BEEN INCLUDED.
IT MAY THEREFORE BE ANTICIPATED THAT AN AD HOC MIXED GROUP WILL
BE SET UP IN THE NEAR FUTURE TO DEAL WITH THIS CATEGORY AND CDA
SHOULD HAVE EXPERT REPRESENTATION ON IT.

1285/GHT/20 MAY 60

SECRET

000312

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