

Update on Water Ingestion Problem on M1 Tank.

5/4 Sept 85

MAJ Strickland/mw/48208

AMCPM-GCM-LF

C, Sys Eng Div  
(AMCPM-GCM-S)

C, Fld/Tng Br  
(AMCPM-GCM-LF)

1. Reference is made to:

- a. 20 Jun 85 letter to MG Sunell, Subject: Water Ingestion Problem in the M1, copy at Encl 1.
- b. 30 Aug 85 Incident Summary: Water in Air Induction System, copy at Encl 2.

2. Per the references above, request you furnish this office the latest information available on solution/modification on water ingestion on the M1 Abrams Tank.

3. Has the modification ECP 3626-B (reference A attached) been approved for field use? If not, what is the planned fix for this problem of water in the air intake plenums, and how much water damage to the strainer elements would cause them to be replaced?

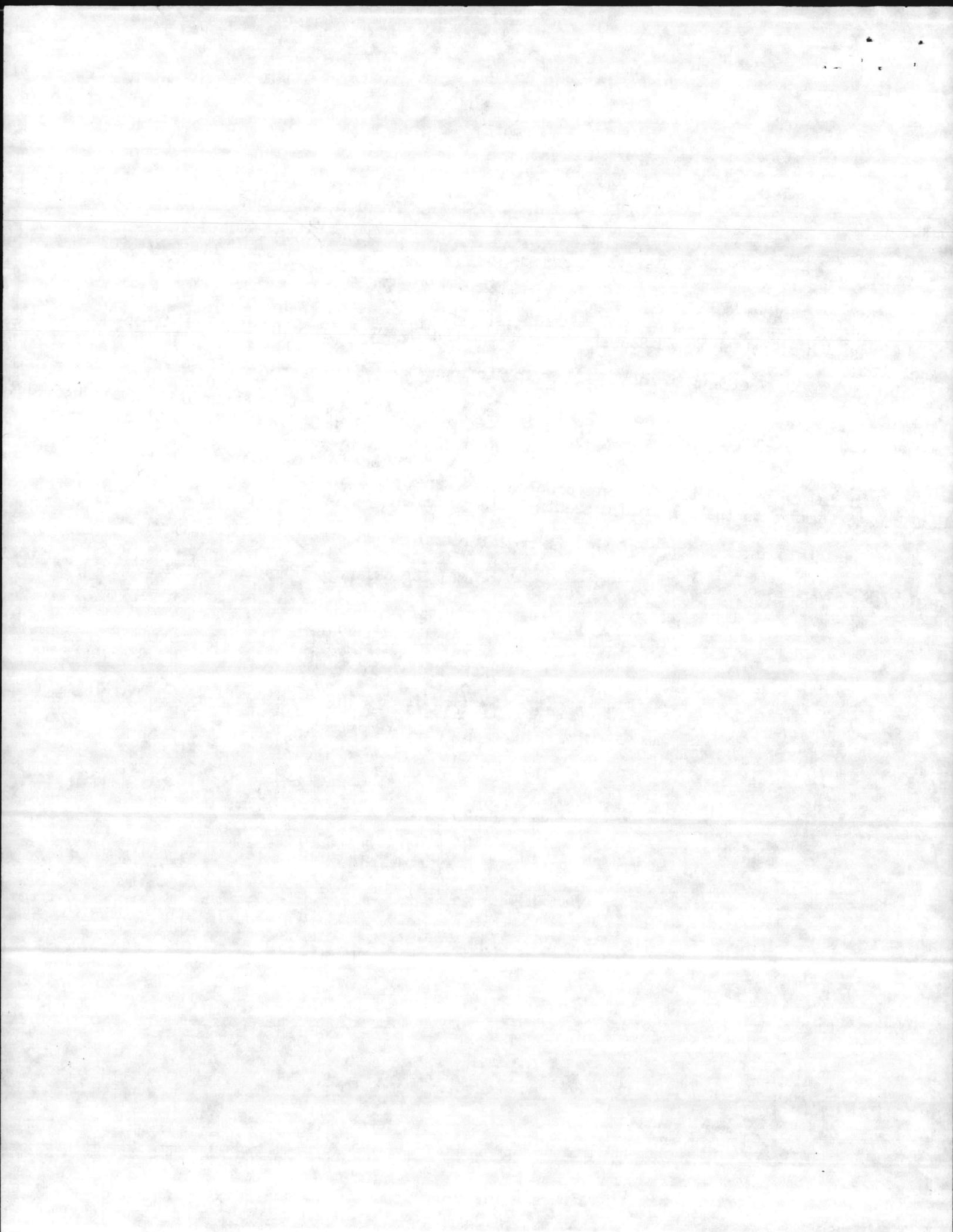
4. Request this information be furnished no later than seven work days from date of this DF.

5. POC's in this office are LTC Strom 4-5247 or MAJ Strickland 4-8208.

SIGNED

RAYMOND L. STROM  
LTC, AR  
C, Fld/Tng Br

Encls





DEPARTMENT OF THE ARMY  
UNITED STATES ARMY TANK-AUTOMOTIVE COMMAND  
WARREN, MICHIGAN 48090

REPLY TO  
ATTENTION OF

AMCPM-GCM-MFC

20 June 1985

SUBJECT: Water Ingestion in the M1

PM Tank Systems  
ATTN: AMCPM-GCM (MG Sunell)  
Warren, MI 48090

1. An increasing number of Ft Hood tanks are experiencing engine aborts on start during moderate to heavy rains (see Encl 1). The aborts are caused by water soaked vee packs and seems to be attributed to two causes: (Pecleaner & Air Inlet Grill)

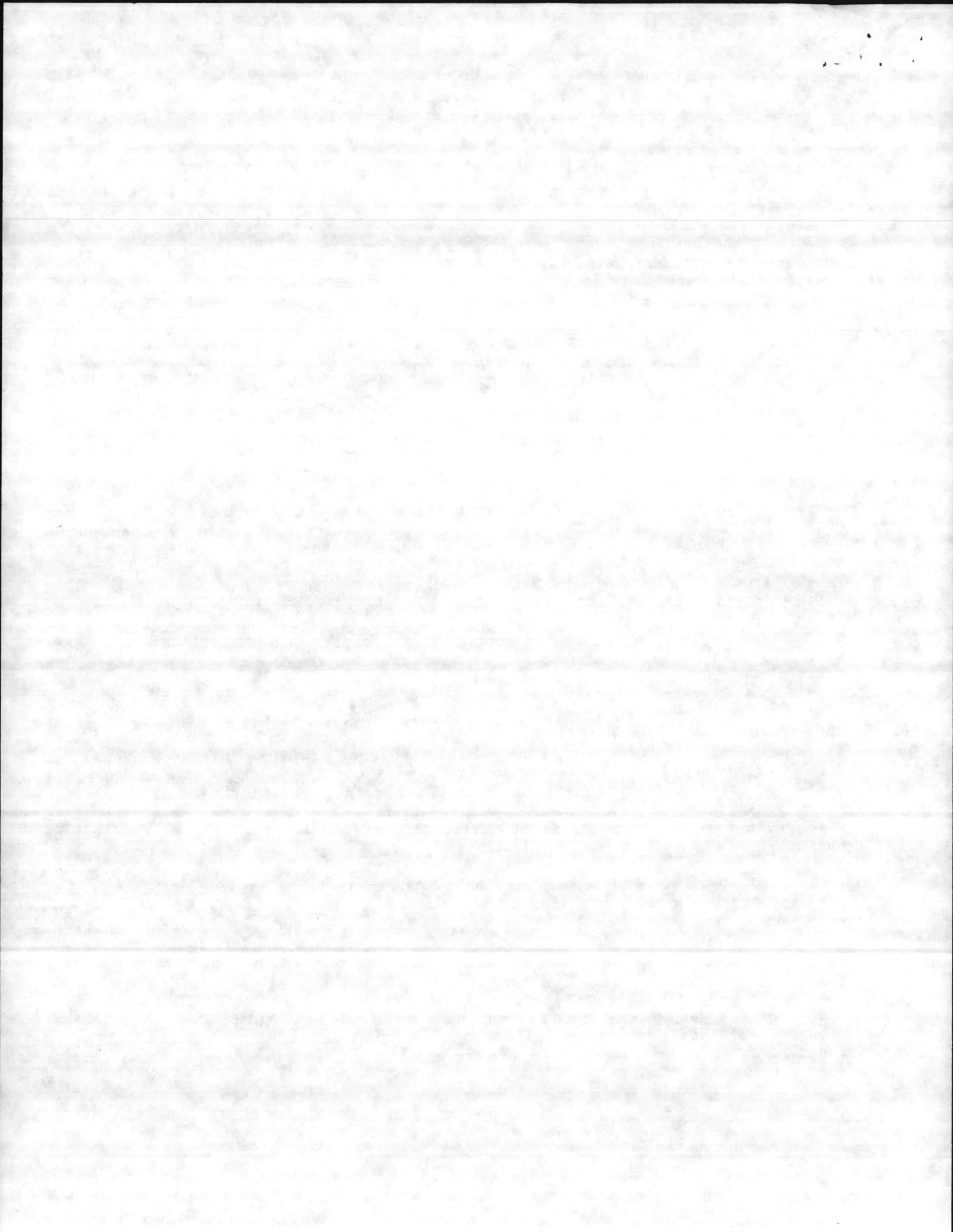
a. Precleaners: The newer style precleaner is manufactured by Pull Land and Marine and is called Centrisep Air Cleaner. The older style is still being used in manufacturing of the M1 and in the field and is manufactured by the Donaldson Corporation. When units order a new precleaner using NSN 2940-01-088-2429, they will get either the old or new style precleaner. The Centrisep, new style, is causing two problems for the M1 engine:

(1) Water. The first problem is water getting into the precleaner, then into the air filter vee packs. The possible reason for this is the newer precleaner is designed with a lower profile. Due to the lower profile, it creates more area for water to get into precleaner which in turn, will get the vee packs wet. It would appear that water could travel over the rain rail and the precleaner. When water soaks into the vee packs, it will restrict the air flow to the engine. This will cause a loss of power and eventually could decrease the life of the turbine engine.

(2) Debris. The second problem is debris is becoming lodged into the precleaner. Since the newer precleaner has no screen on the top side (the old Donaldson model did), debris can easily be drawn into the precleaner. The narrow thickness of the precleaner does not allow the scavenger pump to do its job. The debris will build up to the point where air flow can be restricted.

(3) The conclusion is that debris build-up was not a problem, nor, to a lesser degree was water ingestion on the older style, Donaldson Corporation, precleaner. Consideration should be taken to discontinue the use of the Pull Land and Marine Corporation precleaner and remove all from the inventory.

Encl 1



20 June 1985

SUBJECT: Water Ingestion in the M1

b. Air Inlet Grill. On 7 Jan 85, LTC Keller (Cdr 2/8) notified me that he had experienced significant engine abort problems while on a recent Field Training Exercise (FTX). The bn(-), with a total of twenty M1's, occupied a Tactical Assembly Area (TAA) and shut down their engines. During the night, it rained for about one and one-half hour (not a wind driven rain but the fall was moderate). As it began to rain, one company (-) (total of ten tanks) covered their air intake boxes with canvas to protect against water ingestion. After about one hour in the rain, the company was ordered to move from the TAA. Four of the ten tanks aborted on the initial start. In the other company, three of ten tanks also aborted on the initial start. Both company commanders directed the crews and maintenance personnel to inspect the vee packs. In all abort cases, the portion of the vee pack near the air intake were saturated with water. Furthermore, the air boxes had  $\frac{1}{4}$ " to  $\frac{1}{2}$ " water standing.

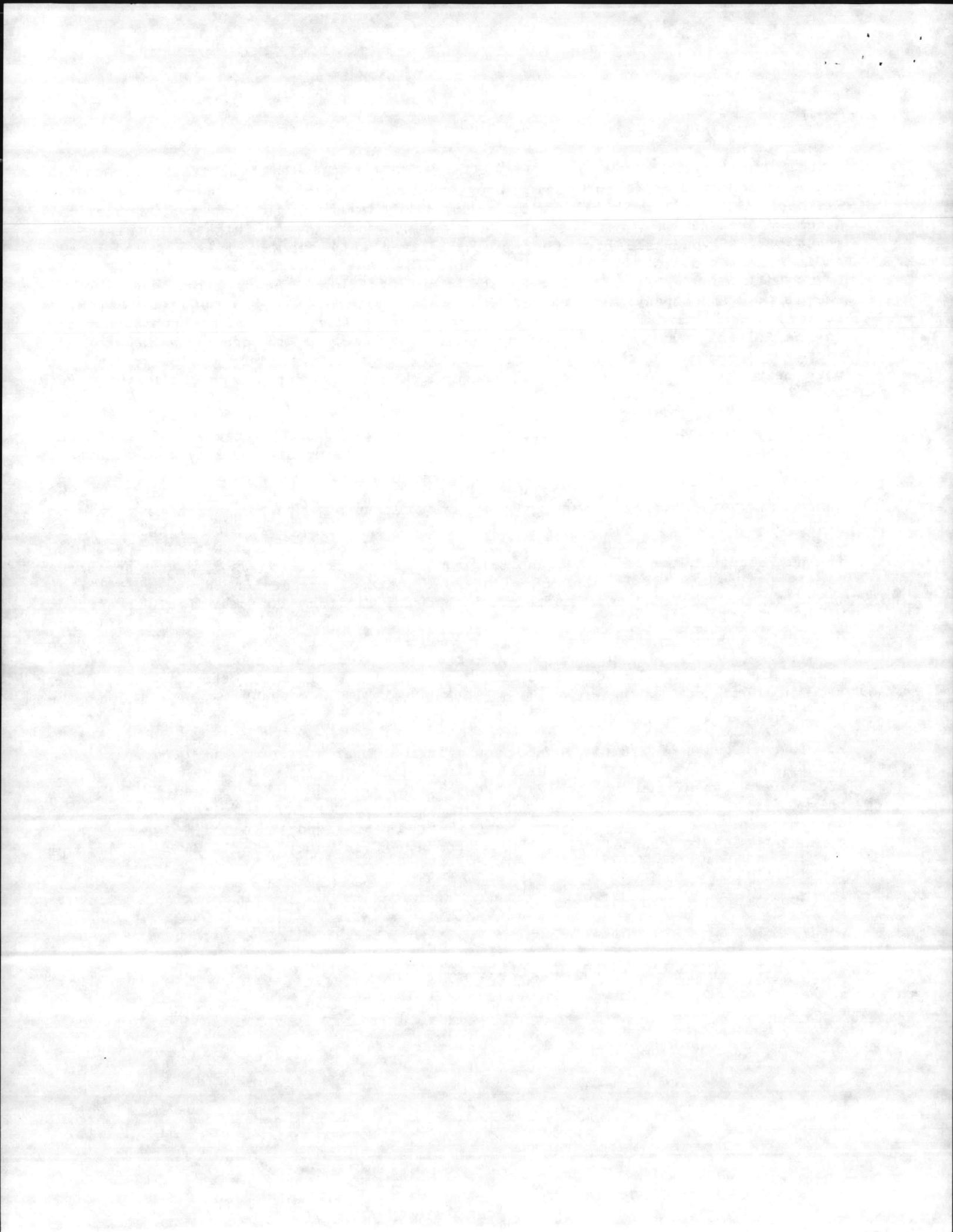
Both companies had sufficient quantities of new vee packs to replace those in the tanks that had aborted. Six out of seven started immediately and the remaining tank was evacuated. MAJ Henderson, Executive Officer of 1/7, reported similiar difficulties with water ingestion while out on the same FTX, but with different engine symptoms. In this case, the tanks were running when it began to rain, and were operated until the crew members detected a "popping" or "rattling" noise in the engine. I have enclosed five statements (Encl 2-6) from crew members [Of note is the fact that the unit did pass through House Creek (ford was not 48") see statement No. 5 by SFC Bledsoe but this does not contradict statement No 4 by SFC Batts (last page). SFC Batts is correct in that the Military Police did block off Cow House Creek but SFC Bledose did ford House Creek (different creeks).] I informed MAJ Henderson, 1/7, that water may have been ingested, by those tanks fording House Creek, due to improper plenum seal on the hull side. He responded by saying they would look at that. Be that as it may, it does not explain why the same unit (1/7) had water soaked vee packs and used the M113A1 exhaust and personnel heater to dry them.

2. In both cases of 2/8 and 1/7, I strongly feel that water was ingested, primarily, through the air inlet grill located above the air box and forward of the precleaner doors (item 34, Encl 1). Extensive checks by both 2/8 and 1/7 indicate this is the case. To further substantiate this, ECP L3626-B (Encl 7) has been designed for the M1A1 (I am not sure if it is approved or not). This ECP adds a "drip rail" to channel water away from the precleaner as it comes in through the air inlet grill.

### 3. Summary and Recommendations:

#### a. Summary

(1) An increasing number of Ft Hood tanks are experiencing engine aborts and engine damage due to water ingestion.



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SUBJECT: Water Ingestion in the M1

(2) The new style precleaner manufactured by Pull Land and Marine contributes to the problem of water ingestion and debris build-up.

(3) The major contributor to water ingestion is water flowing into the precleaner through the air inlet grill located above the air box and forward of the precleaner doors.

(4) ECP L3626-B adds a "drip rail" which directs water from the precleaner.

(5) To my knowledge, no information has been passed to fielded units concerning ECP 3626-B and how it could assist M1 units.

b. Recommendations:

(1) Discontinue the use of the Pull land and Marine precleaner, remove all stocks and go back to the older style manufactured by Donaldson Corporation.

(2) Make ECP 3626-B effective ASAP and get it into the hands of fielded units (Ft Hood and Germany).

(3) Consider those M1's in USAREUR bn's POMCUS sets and determine how this ECP 3626-B can be applied before we field in places that have a lot more rain than Ft Hood.

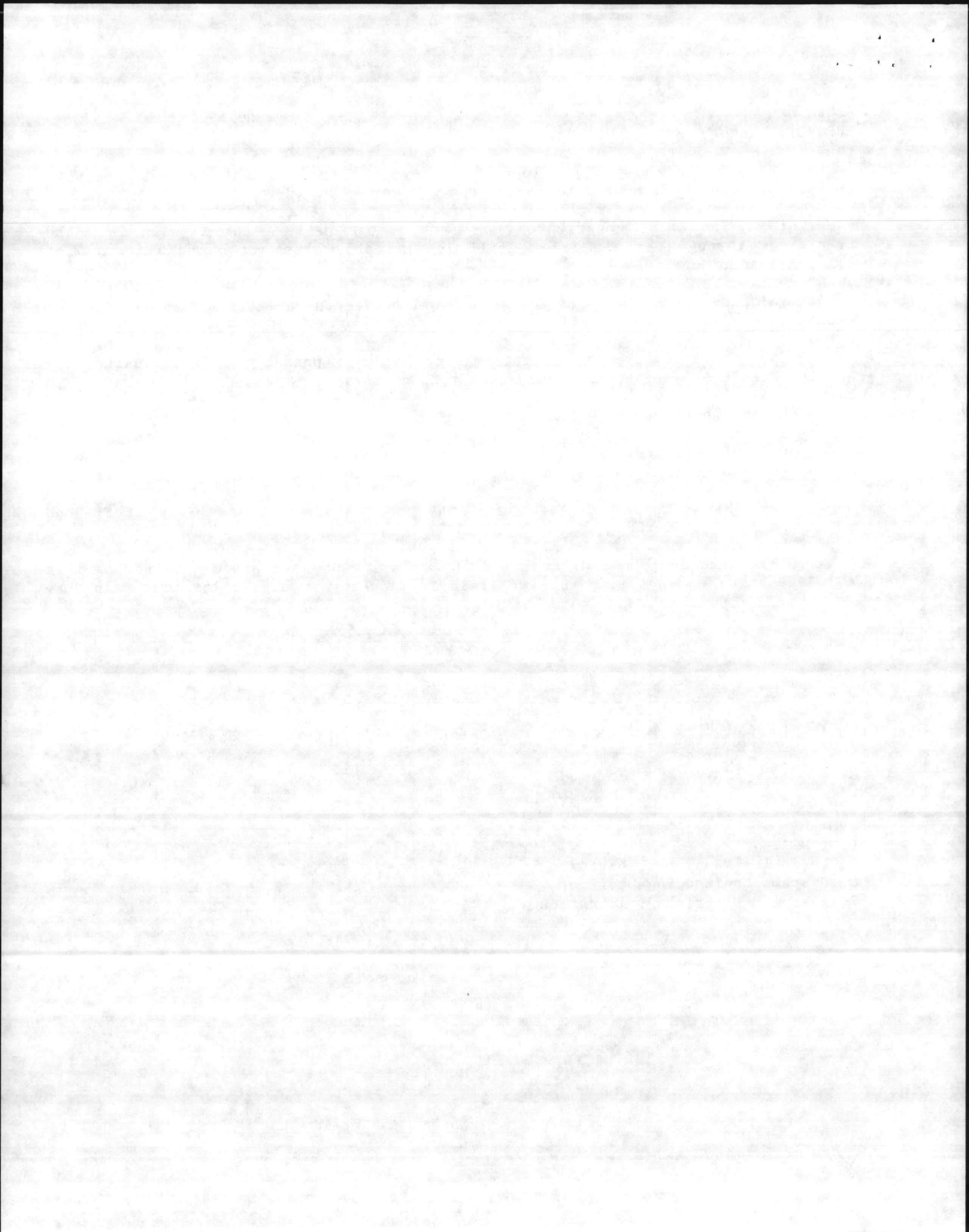
*Respectfully,*  
*Downing*

JOHN T. DOWNING  
LTC, AR

Chief, Materiel Fielding Team, CONUS

7 Encl  
as

CF:  
DPM, PM Tank Systems  
DPM, M1  
DPM, MIAI  
C, Logistics Management Division  
C, Systems Engineering Division  
C, European Materiel Fielding Team



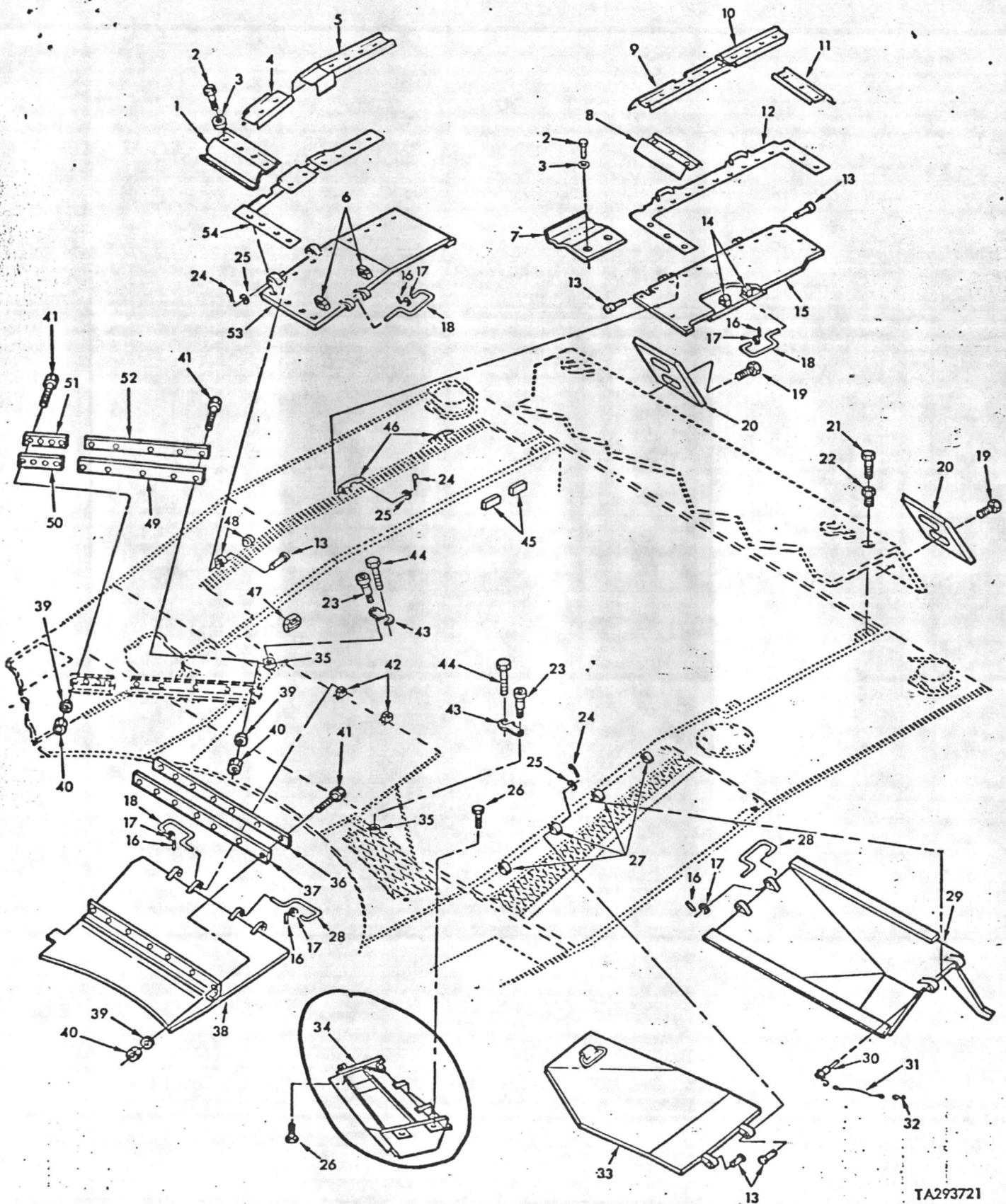
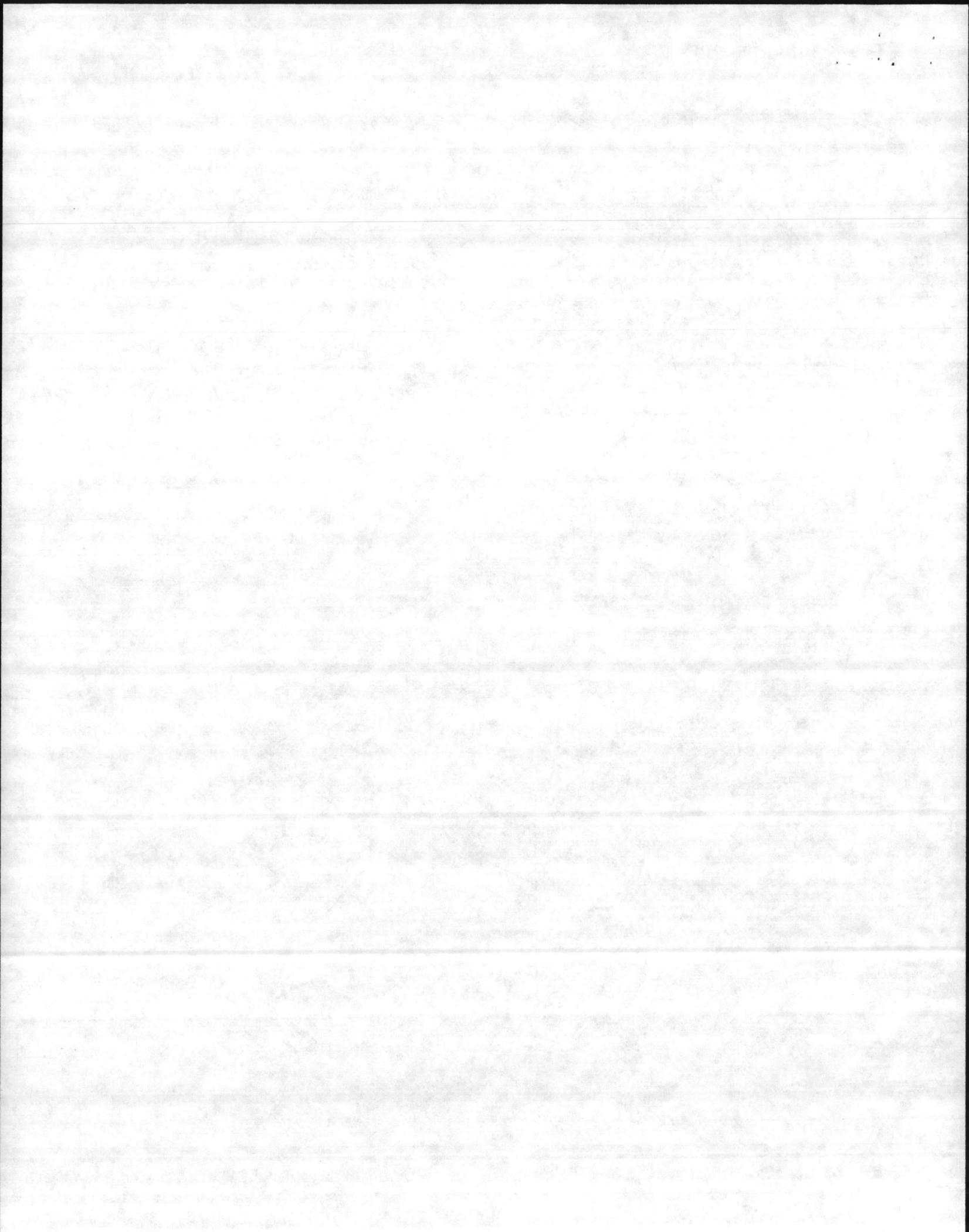


FIGURE 188. TOP DECK COVERS, AIR BOX, AND RELATED PARTS.

TA293721

Encl 1



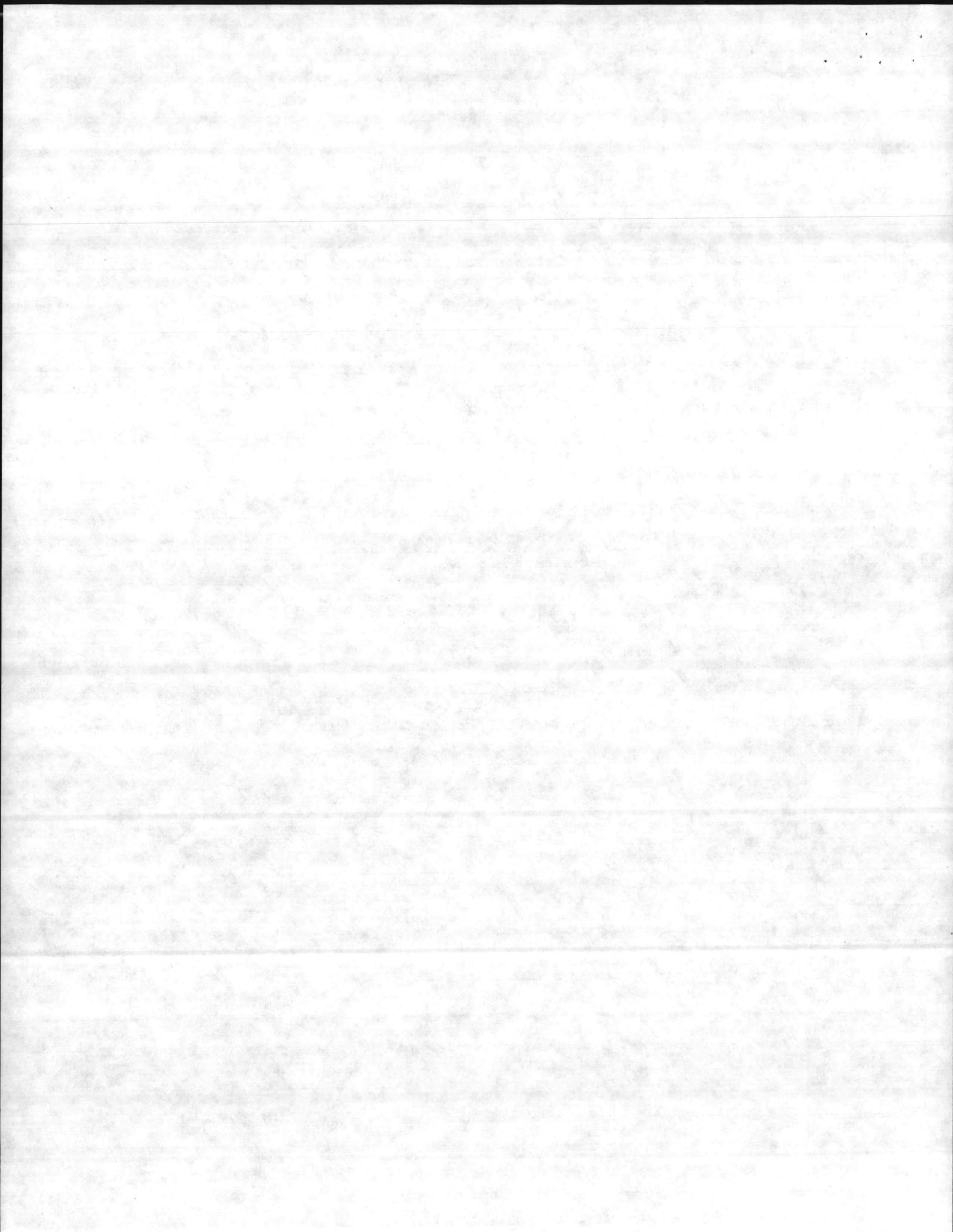
D24

ON 5 JUN 85 WHILE ON A MOVEMENT TO A AA IT WAS RAINING AND MY TANK WAS OPERATING NORMALLY FOR ABOUT THE FIRST 8 OR 9 K THEN I HEARD A POPPING SOUND COMING FROM ENGINE I HAD THE DRIVER PULL OVER TO THE SIDE OF THE ROAD AND TO SHUT-DOWN THE TANK BY THE BOOK. I THEN WAITED FOR THE MAINTANCE CREW TO ARRIVE WHEN THEY DID COME THE MOTOR SGT SFC BATT'S HAD THE DRIVER START THE TANK AND THEN BRING IT TO A HIGH IDLE EVERYTHING WAS RUNNING NORMAL. SFC BATT THEN HAD ME BRING THE TANK DOWN THE ROAD APP. 600 METERS TO ANOTHER DOWN TANK WHILE IN ROUTE THE ENGINE STARTING POPPING. AFTER WE ARRIVED AT THE SITE SFC BATT SAID TO LET THE TANK RUN TO PRY OUT THE VEE PACKS. IT WAS STILL RAINING AFTER IT STOPPED RAINING SFC <sup>WAGGONER</sup> ~~BA~~ BROUGHT A NEW SET OF PACK WE PUT THE IN AND DROVE THE TANK ON A TEST RUN IT WAS STILL POPPING. AFTER THAT SFC BATT'S TOLD ME TO TAKE THE TANK TO THE U.M.C.P.

2-372

Encl 2

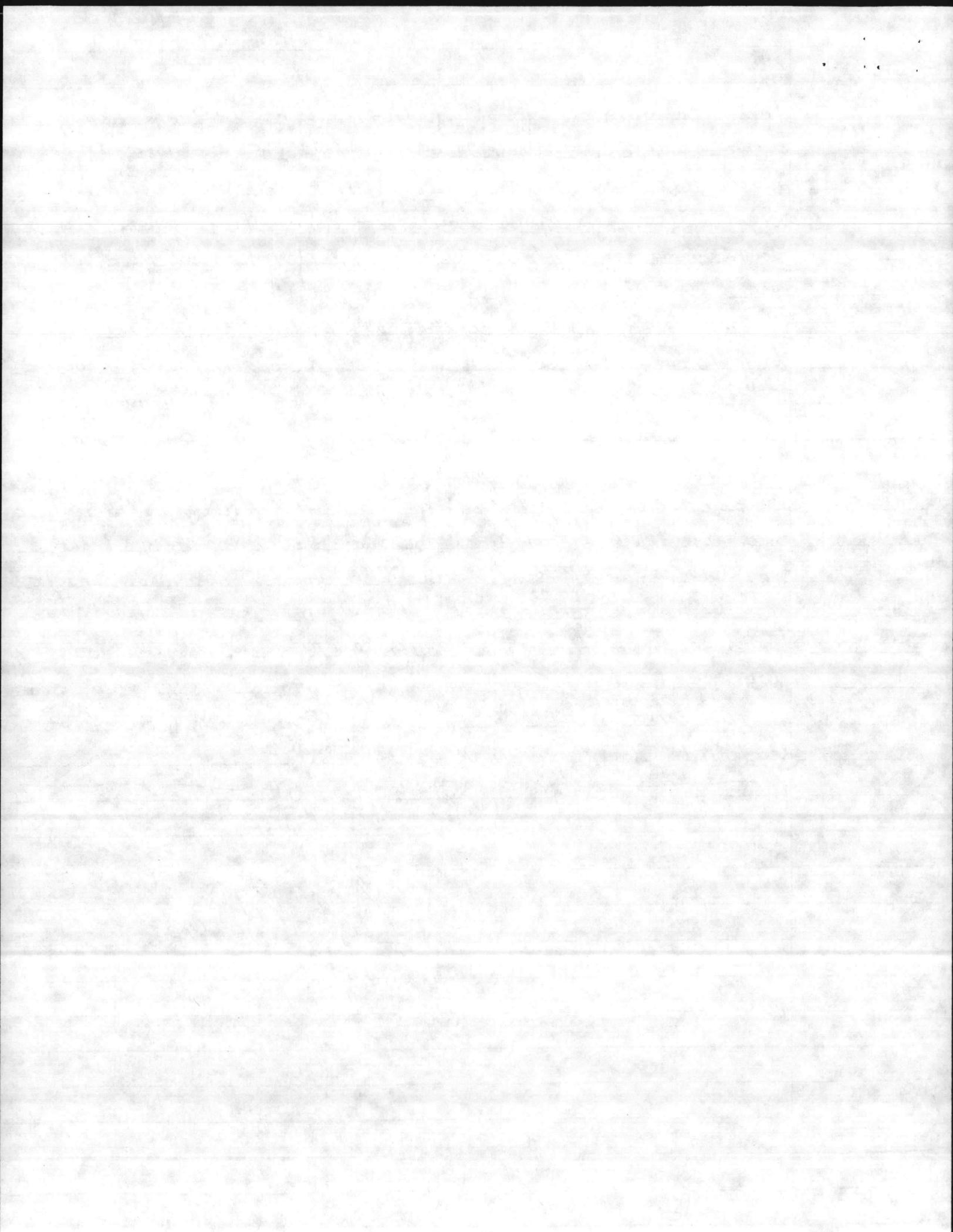
MICHAEL J. SALSBURY



The circumstances surrounding D-12 follows: D-12 WAS having engine trouble for about 2 weeks prior to 5 June 1985. The faculty fuel control light kept coming on & the engine would lose power. I (SSG Peery) would troubleshoot using the manual. We would reset and the engine power would return and the faculty fuel control light would go off. We reported our engine troubles to D. Co maintenance they checked out the tank and decided to change the fuel filters. On 5 June 1985 we were scheduled to move out of the A.A. to do a mission. We S.P.'ed about 0430 enroute to a location to conduct Class I. On that morning it was raining hard. We were roadmarching everything was running fine, about halfway there I heard a noise sounding like a Hoffman going off. Also the engine loss all power. The driver also informed me that the gas overtemp light came on. I told the driver (PFC Lince) to stop the tank while I got out the manual to troubleshoot. Also the noise sounding like a Hoffman turned out to be the engine backfiring. After we completed our troubleshooting procedures the gas overtemp light was still on, so we shut the engine and waited for maintenance. Maintenance <sup>looked</sup> at our tank and decided to tow my tank to U.M.C.P.

————— End of Statement —————

Roger V. Peery Jr.  
10 June 1985



13 June 85

## STATEMENT D-34

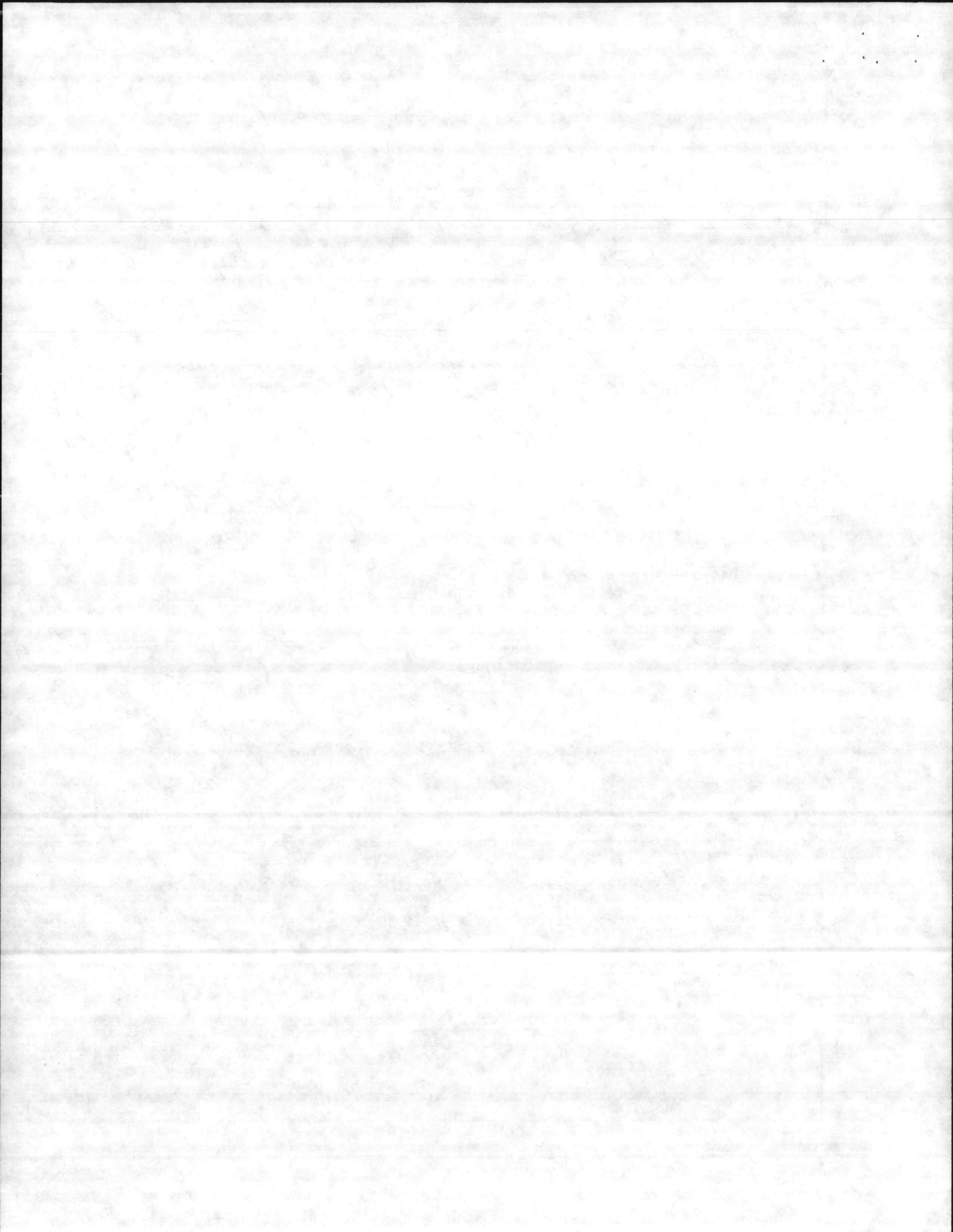
On 6 June 85, during a company roadmarch D-34 M-1 tank started losing engine power. It was dropped from the march column and driven to the UNCP on its own power. There the D-Team maintenance conducted a series of tests but found no faults on the problem.

On 7 June 85 after having changed the primary fuel filter, changed V-paks and re-cleaned the transmission oil coolers, the tank was road tested. It ran good.

Later on 7 June 85 after having conducted an attack and the company was reorganizing the driver was cooling down the engine (idling). A rattling noise was heard coming from the transmission cooler fans immediately the engine was shut down. The engine had already had more than 5 minutes to cool down.

Later that evening, D-Team maintenance attempted to start the engine, it did not start.

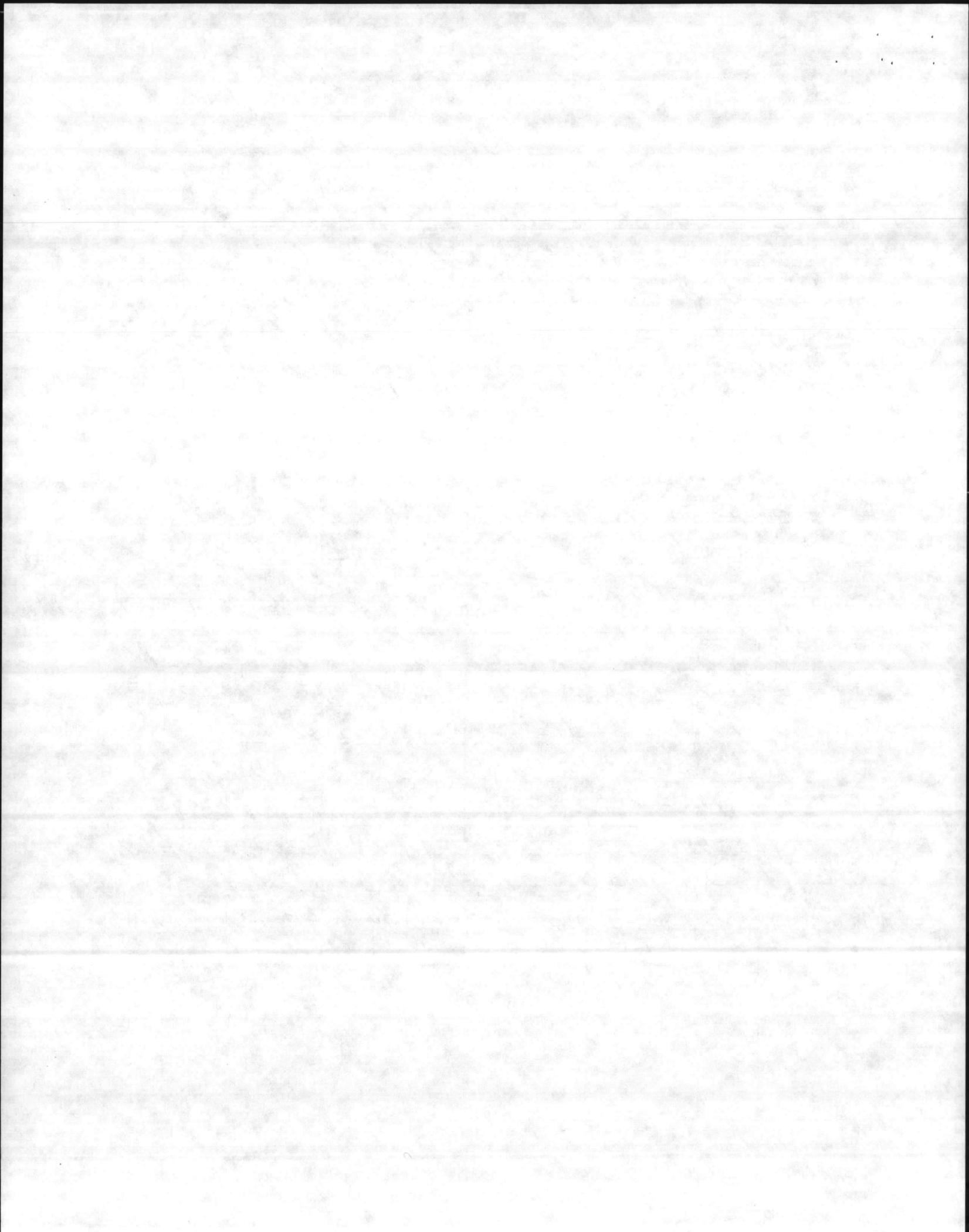
JUAN RODRIGUEZ SFC  
456-74-3467  
D CO 75 CAB



# Statement

11 June 85

ON or About 0400 6 June 85 AS  
we left the Assembly Area, just South  
of Old Copper's Cove Rd, it started  
to RAIN. At times it Rained hard  
AND before all of our ~~the~~ tanks reached  
West Range Rd. we lost two tanks  
due to the RAIN. When I Arrived  
at the location of the down tanks  
the operators had All ready shut  
them down. The First vehicle I  
came to was D-24 AND because it  
was still raining we could not pull  
the U-packs. I asked what happened  
and the operator/crew stated that the  
engine had made a popping noise and  
lost power. I then had the tank started  
AND it sounded good, then I had  
the oper. take it up to MAX-RPM,  
it also sounded good AND no popping.  
The next down tank was D-12 AND  
it was down about 500 meters from  
D-24 so I instructed the crew on  
D-24 to move to D-12 location AS



it wasn't popping. When myself and my maint. team and D-24 arrived at D-12 location the crew on D-24 stated the engine started popping again when it was put under strain. So I instructed them to shut down and wait until the rain stopped so we could dry out the V-packs. D-12 had been shut down before I got there and when asked they stated that they had the same problem, popping and loss of power. I instructed the crew on D-12 to do the same as D-24.

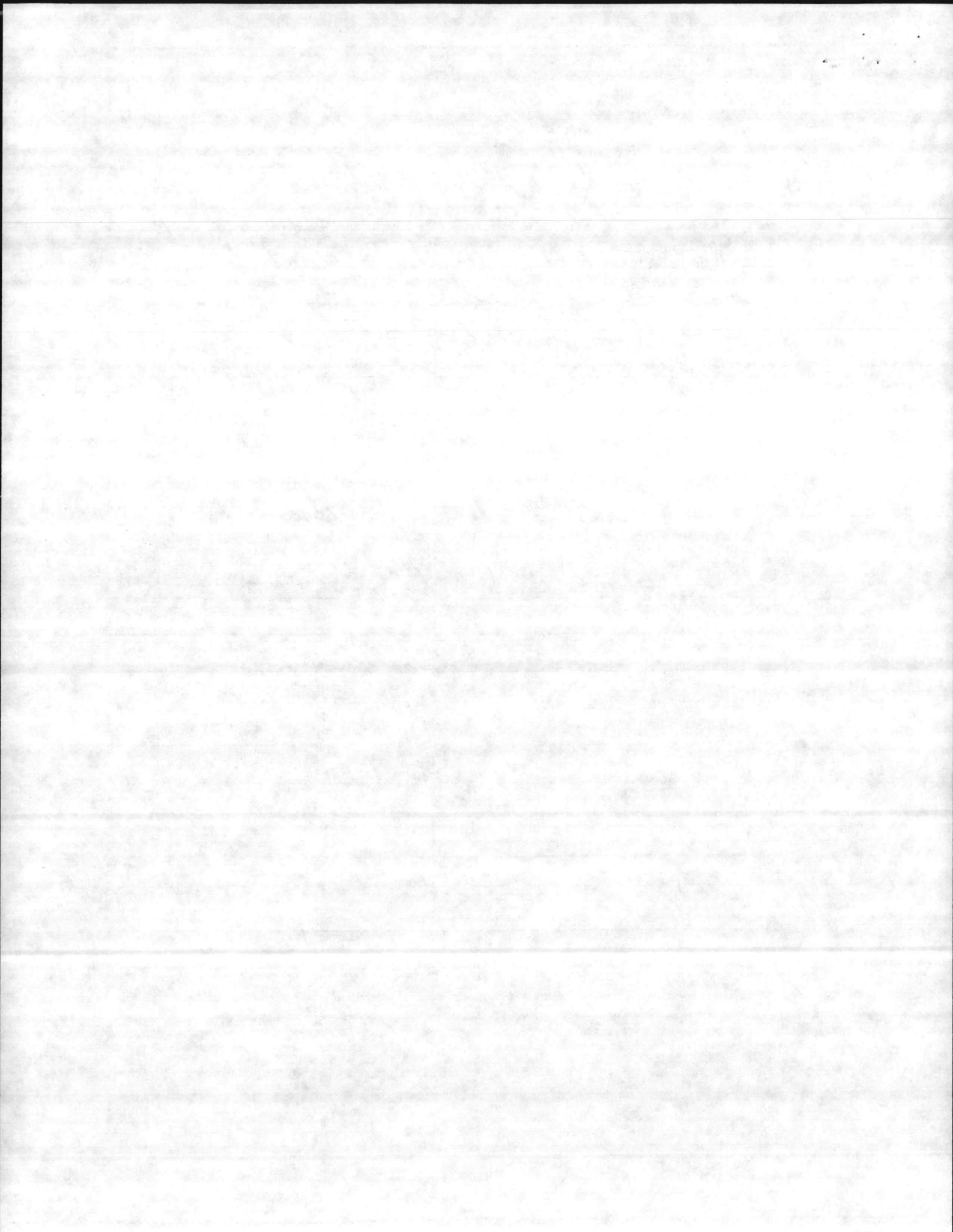
I then proceeded to the third down tank, which was north of the cow house. By the time I got there it had stopped raining and D-14 had been shut down so we started to dry V-packs. We used the exhaust on my M115A1 and personnel heater. We dried V-packs for more than an hour, and then installed them and started the engine. It sounded good, went to MAX RPM



And still no popping! We then started back to D-12 & D-24 location when D-14 aborted and would not start again. That was when we hooked up the M88A1. All three tanks had the same problem and neither of them went through a low water crossing because the MP's had them blocked and was directing the tanks on to the road. I feel that if it hadn't rained our tanks would not be down now. I also feel that it was <sup>not</sup> due to negligence on the crews part. <sub>WEB</sub>

— END of Statement —

William E. Batts  
William E. Batts  
SFC E-7  
D-Team Chief



# DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL

SUBJECT

TO

FROM

DATE

CMT 1

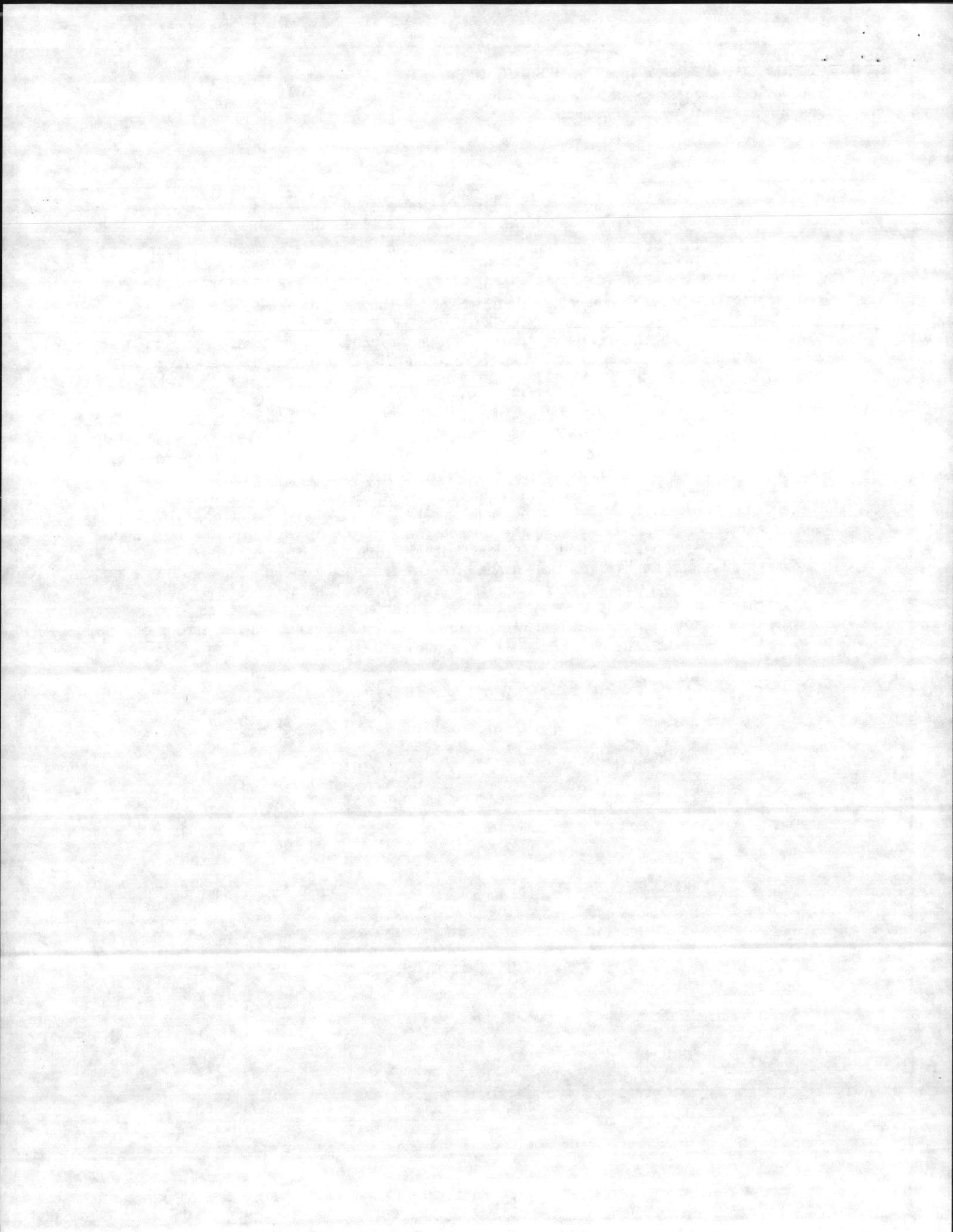
At on or about 0430 hours on the 5th of June was our S.P. for the Bn. mission. Prior to moving out there was a very hard rain and a slight rain while moving out. My platoon was the counter attacking force which was approximately 500 meters behind the Bn. When my tank D-14 arrived to the ford crossing at House Creek it was very deep and muddy. After going through the creek we had no signs of problems or loss of power. After arriving at our Class I location we cooled the tank down so the driver and crew could eat breakfast. The only problems at that time was my D-12 tank had loss of power and then my D-13 tank could not move when in gear. After a cool down time, we were able to position the tank after checking oil levels. After breakfast we moved out with 2 tanks in the platoon. We had moved out no signs of loss of power and crossed another stream of water, then when we tried to climb a hill there was a low popping noise. We stopped the tank and put it in tactical idle and had no problem of R.P.M.S. and asked the driver if he had any lights on, and he said no. Then I told him to hit the test light button and all lights worked. We continued on the mission at a reduced power with no problem, until we came up to Cow House Creek Bridge while trying to cross it started popping again, so on the other side of the bridge I reported a down vehicle and then jumped on my wingman tank to continue the mission. After ending the mission while on the return route I passed my down tank broken down again after the maintenance looked at it.

END OF STATEMENT

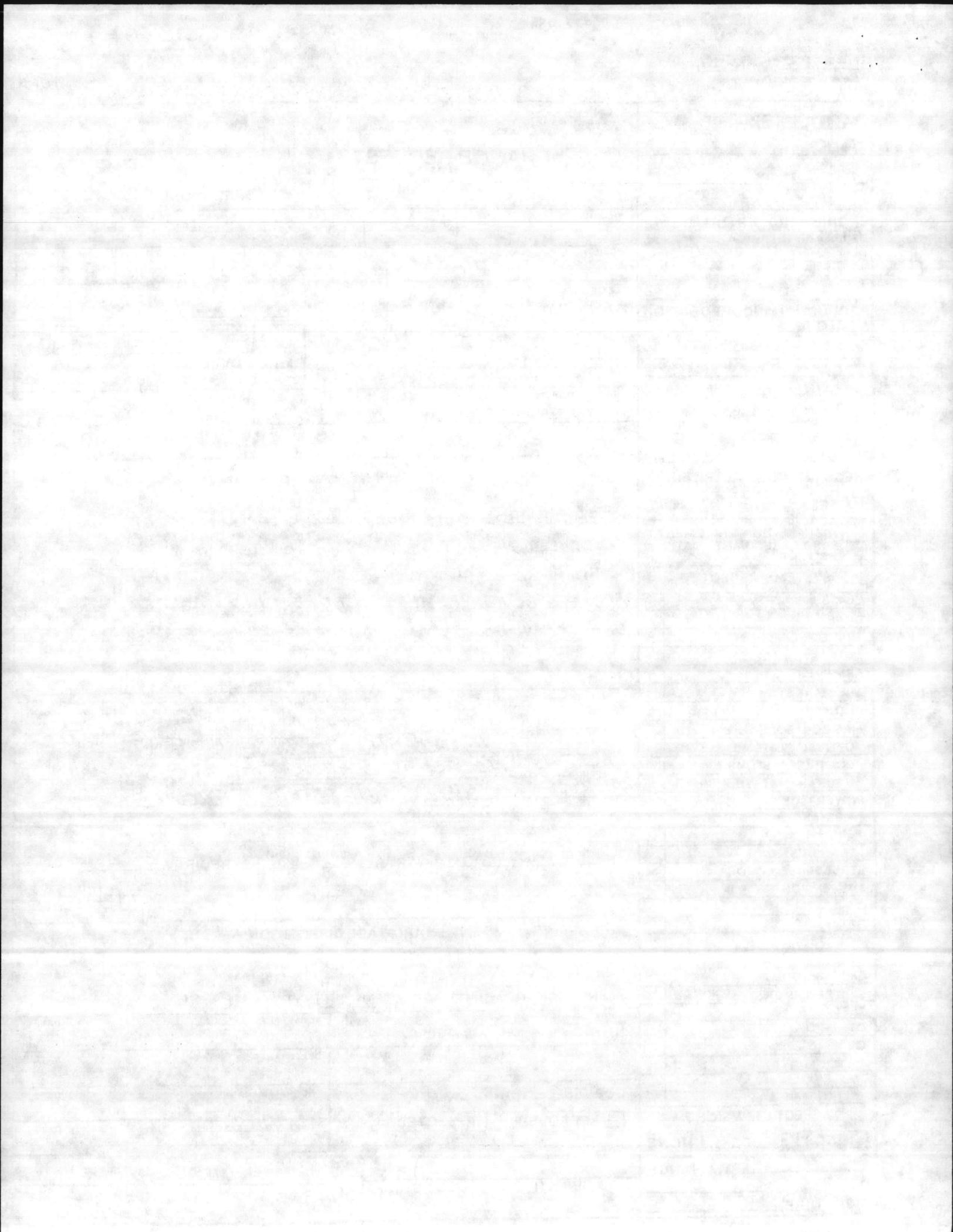
*George A. Bledsoe*

SFC. BLEDSOE, GEORGE W.  
1st Platoon Sgt.

Encl 6



MODEL (S): MIEI MI IPMI		CHANGE REQUEST				NUMBER L3626B		
ENGINEERING CONTRACT NUMBER:						SHEET 1 OF 14		
PRODUCTION INCORPORATION AT BLOCK		PRIORITY U	CATEGORY D	CLASS I	DATE 12 OCT 84	COMMAND: ARRADCOM <input type="checkbox"/> TACOM <input checked="" type="checkbox"/> GDLS <input type="checkbox"/> OTHERS _____		
RECOMMENDED EFFECTIVITY BY SERIAL NUMBER		ACTION <input type="checkbox"/> ECP <input type="checkbox"/> ERR <input type="checkbox"/> RFD <input type="checkbox"/> RFW <input type="checkbox"/> MFR MOD <input checked="" type="checkbox"/> FIELD MOD				DOD-STD-480 REQ'D <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
RECOMMENDED RETROFIT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TITLE OF CHANGE AIR BOX DRIP RAIL AND BAFFLE KIT FOR WATER ELIMINATION				REV.	DEPT. MGR.	DATE
<input type="checkbox"/> JUSTIFICATION STATEMENT FOR YES RECOMMENDATION ATTACHED						REV.	DEPT. MGR.	DATE
SYSTEMS AFFECTED						REV.	DEPT. MGR.	DATE
CLASS & DIVISION		CONFIGURATION ITEM/INSTALLATION AFFECTED AIR INDUCTION SYSTEM				NUMBER 12273705		
CHASSIS		LOWEST PART/ASSY AFFECTED SEE CONTINUATION SHEET				NUMBER		
TURRET		DESCRIPTION OF CHANGE (Describe hardware modification recommended to correct a problem or to capitalize on an improvement opportunity. Rough sketches or diagrams may be attached to amplify this description)						
AMMO STOWAGE		REMOVE SIDE AND REAR SEALS FROM PRECLEANER. INSTALL NEW SIDE AND REAR SEALS. ATTACH DRIP RAILS AN BAFFLES TO AIR SCOOP ABOVE FRONT OF PRECLEANER. INSTALL DRIP RAIL ON PRECLEANER ACCESS DOOR						
ARMAMENT		NEED FOR CHANGE (Explain (1) how and when need was recognized, e.g., test results field reports, engineering review meeting; (2) impact of not making change, e.g., safety hazard, mission failure high maintenance costs, schedule slippage; and (3) how change will improve system, e.g., increased reliability, reduced weight, decreased cost, substantially improved performance)						
AUXILIARY SYS		THE PRESENT AIR BOX SEAL ARRANGEMENT ALLOWS WATER TO ENTER THE AIR BOX DURING RAINSTORMS AND VEHICLE WASHING						
ELECTRICAL		SOURCE OF CHANGE:						
FIRE CONTROL		WD JYZD1077		WIR _____		RFD/RFW _____		
OPTICAL SIGHTING		OTHER <input type="checkbox"/> COPIES ATTACHED						
CONTROL SYSTEMS		ENGINEERING COMMENTS/HARDWARE DISPOSITION:						
MECHANICAL/HYD		INTERCHANGABILITY AFFECTED <input type="checkbox"/> YES <input type="checkbox"/> NO						
POWERPACK		ORIGINATOR WM. FORSYTHE		DATE 12 OCT 84		REVIEWING ENGR _____ DATE _____		
AIR HANDLING/COOLING		DEPT. MANAGER _____		DATE _____		DEPT. MANAGER _____ DATE _____		
ENGINE		CCB DISPOSITION <input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED				PROGRAM MANAGER _____ DATE _____		
TRANSMISSION		AFFECT ON WEIGHT <input type="checkbox"/> INCR <input type="checkbox"/> DECR <input type="checkbox"/> NONE				ADVANCED RELEASED _____ DATE _____		
STRUCTURES/ARMOR		EST. CHANGE				CCB DIRECTIVE _____		
SUSPENSION		DATE _____				CCB CHAIRMAN _____		
QA		SIGNATURE _____				DATE _____		
GFE								
INTERFACE								
QAIE								
SPECIAL TOOLS								
SYSTEMS ENGR								
TEST SETS								
OTHERS:								
OE								
MAT'L ENG								



MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

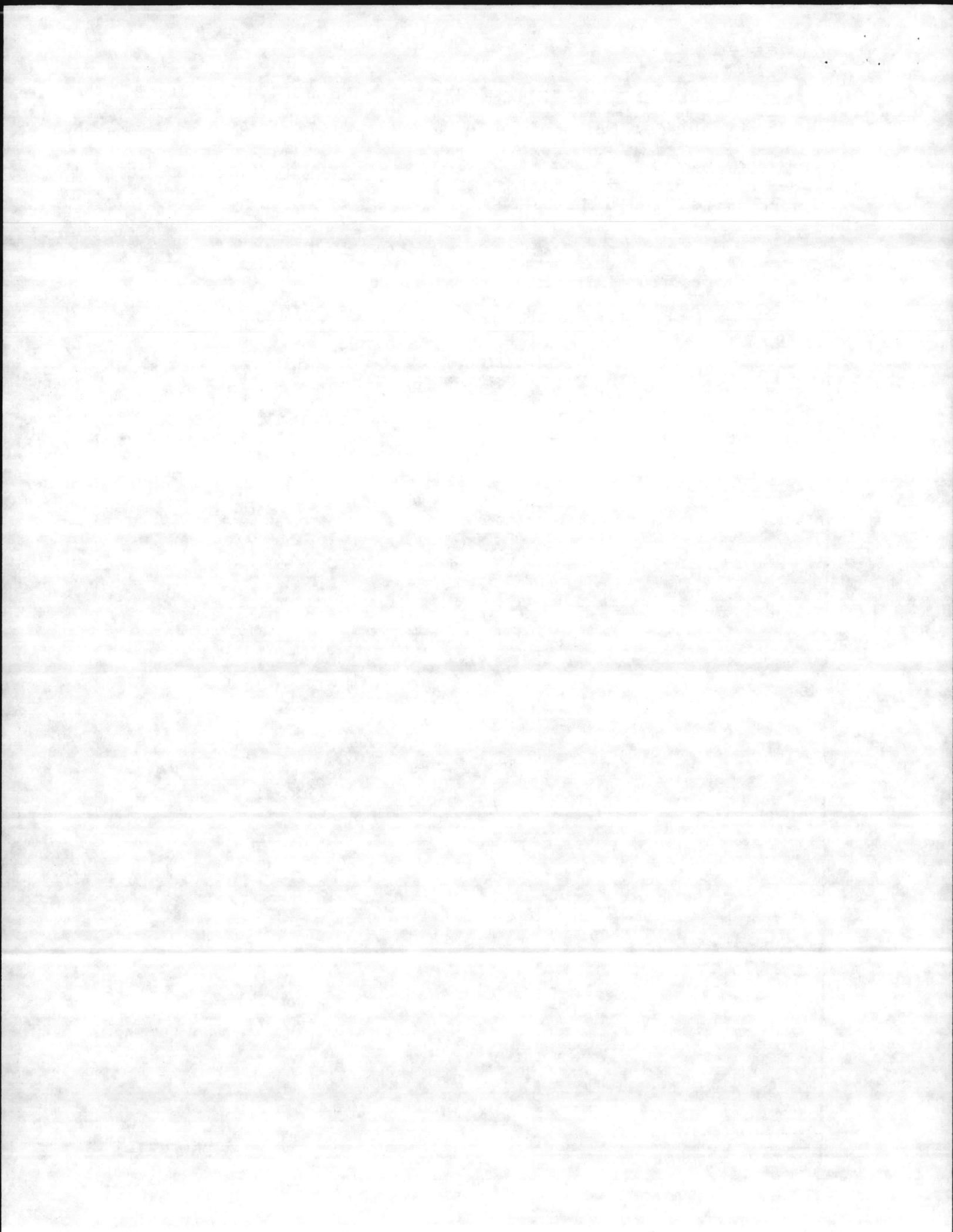
Title of Kit: AIR BOX Drip Rail AND Baffle KIT FOR WATER ELIMINATION	Date 12 OCT 84	RFC Number -B
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Modification Details: (Special Skills)

LOWEST PART / ASSEMBLY AFFECTED

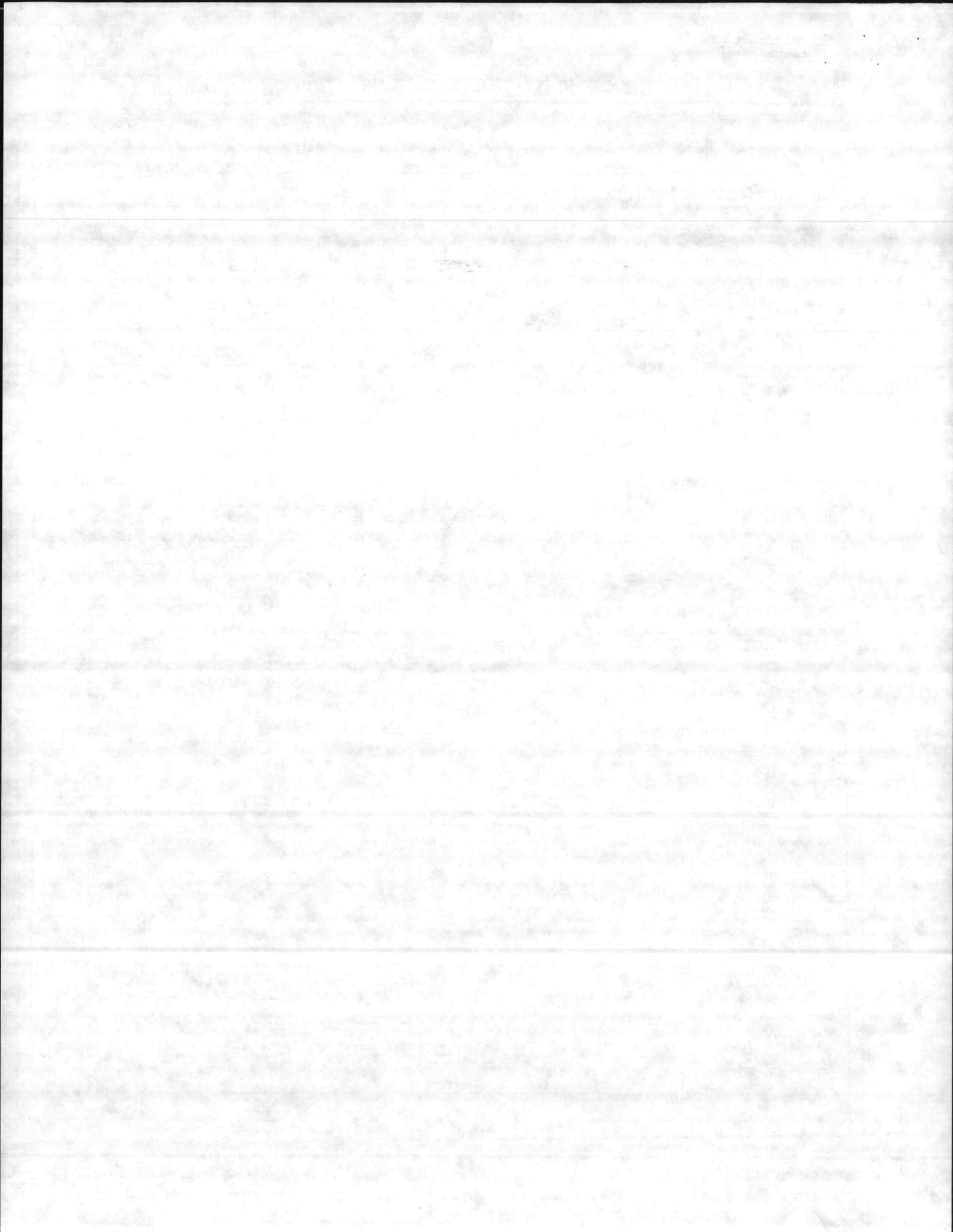
- PRECLEANER P/N 12287821
- AIR SCOOP P/N 12324204
- PRECLEANER ACCESS DOOR P/N 12322172

EFFECT ON WEIGHT <input type="checkbox"/> INCREASE <input type="checkbox"/> DECREASE <input type="checkbox"/> NONE	CCB DIRECTIVE <input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED	PROGRAM MANAGER DATE REVISION RELEASED DATE
EST. CHANGE DATE 84-106-0054-1 SIGNATURE	CCB DIRECTIVE	CCB CHAIRMAN Sheet <u>2</u> of



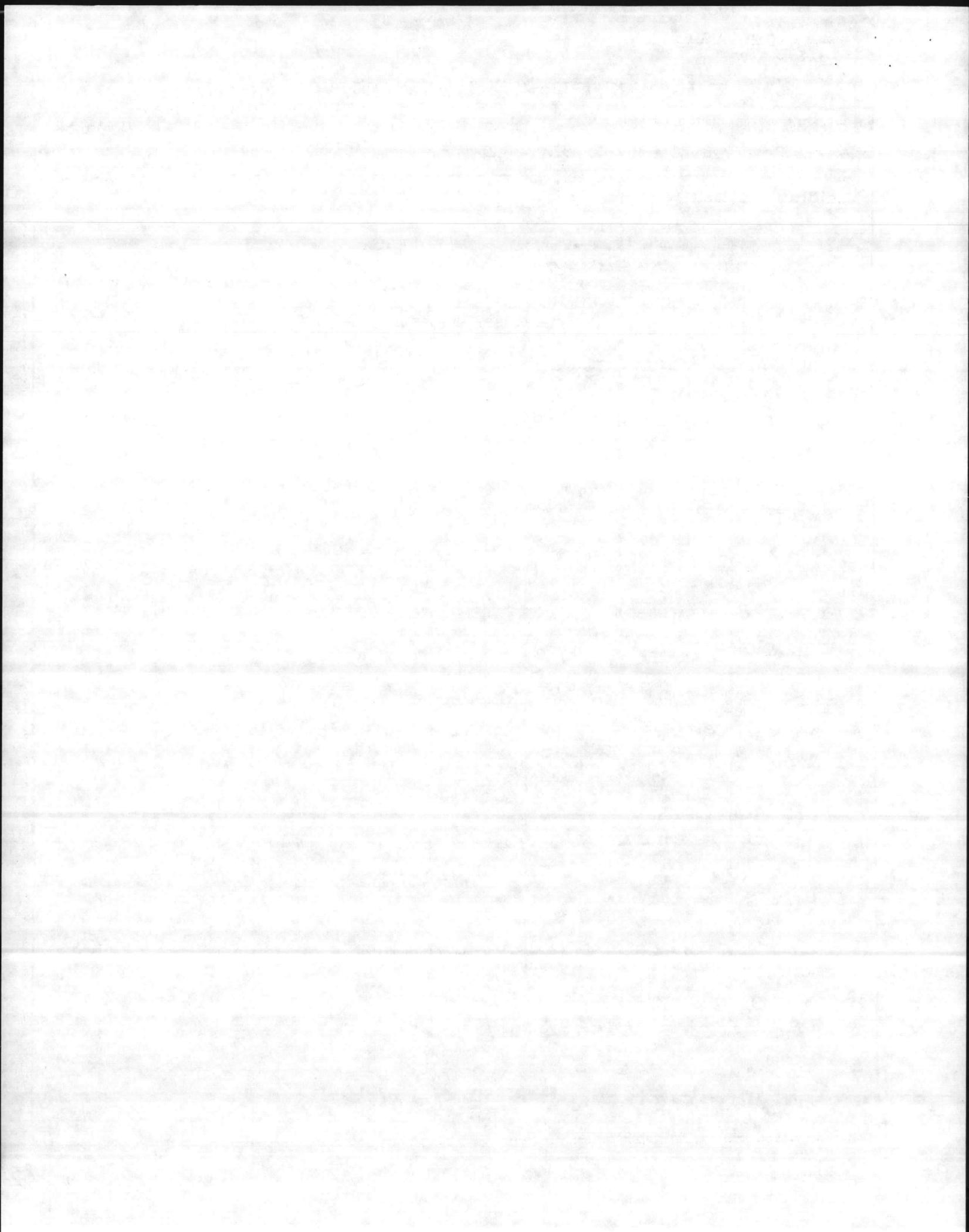
MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit: AIR BOX DRIP RAIS	Date 12 OCT 84	RFC Number -B
<p>Modification Details: (Special Skills)</p> <ol style="list-style-type: none"><li>10. REPLACE RIGHT SIDE SEAL WITH NEW SEAL PIN 1234423.</li><li>11. REMOVE SEAL PIN 12287783 AND RETAINER PIN 12287787 FROM PRECLEANER PIN 12287845 SEE FIG 5</li><li>12. REPLACE BACK PRECLEANER SEAL WITH NEW BRACKET PIN 1234424, NEW SEAL PIN 12344184 AND NEW RETAINER PIN 12344177 PER FIG 6</li><li>13. REASSEMBLE VEHICLE PER ATTACHMENT "B"</li><li>14. COMPLETE ECAR AND RETURN</li></ol> <p>* INSPECTION NOTE: INSPECTION TO CHECK WELDS AND COMPLETION OF MOD INSTRUCTION</p>		



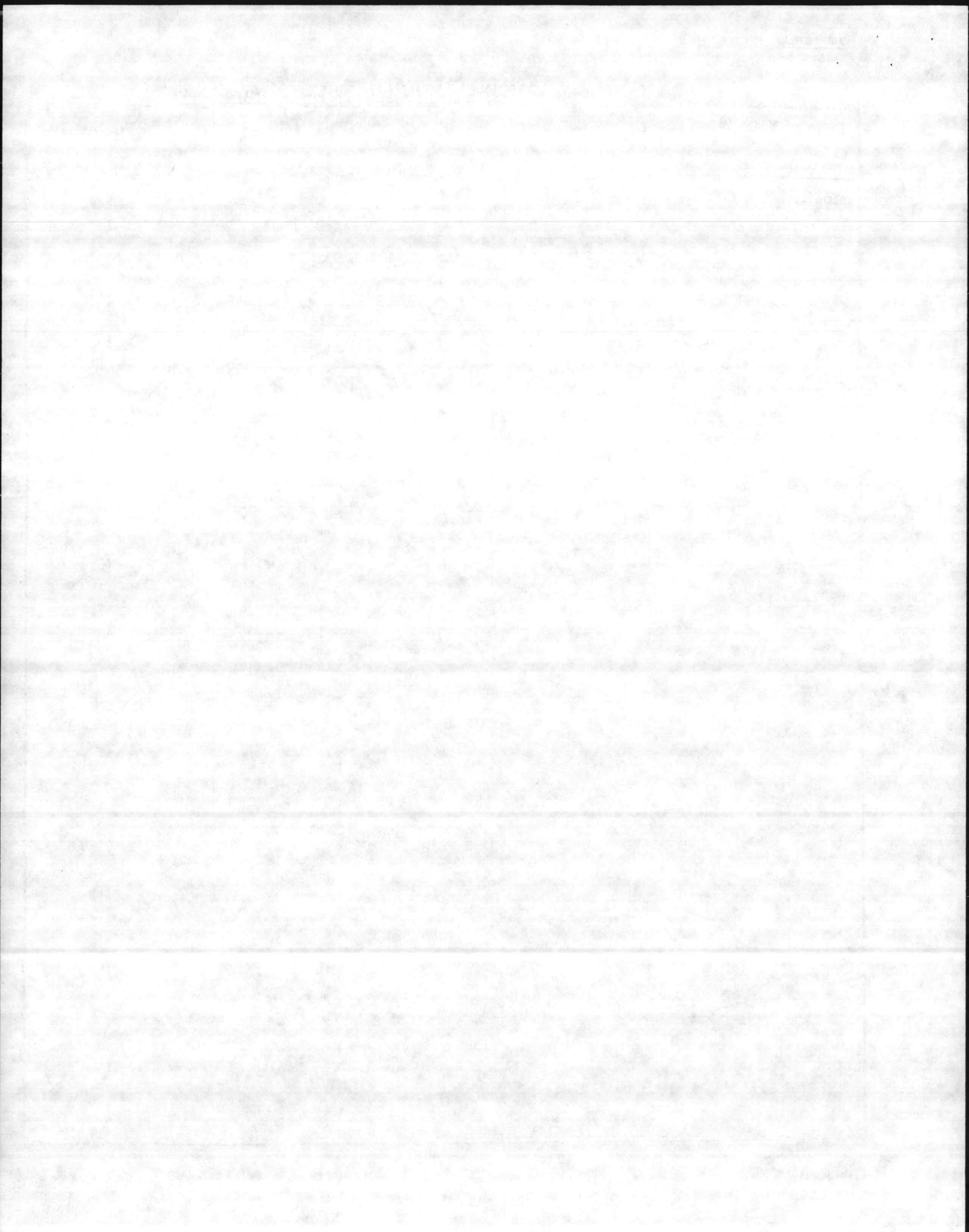
MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit: AIR BOX DRIP RAILS AND BAFFLE KITS	Date 12 OCT 84	RFC Number -B
<p>Modification Details: (Special Skills)</p> <p>VEHICLE CONDITION</p> <ul style="list-style-type: none"><li>TANK PARKED ON LEVEL GROUND</li><li>PARKING BRAKE ENGAGED</li><li>VEHICLE MASTER POWER SWITCH SET TO OFF</li><li>TRANSMISSION SHIFT CONTROL SET TO NEUTRAL</li></ul> <ol style="list-style-type: none"><li>DISASSEMBLE VEHICLE PER ATTACHMENT "A"</li><li>WELD LOWER BAFFLE PIN 12344187 TO PLATE 12287743 (MI, IPMI) 12311393 (MIEI) PER FIG. 1</li><li>WELD LOWER BAFFLE PIN 12344179 TO PLATE 12287743 (MI, IPMI) 12311393 (MIEI) PER FIG. 1</li><li>WELD UPPER BAFFLE PIN 12344186 TO PLATE 12288485 PER FIG. 1</li><li>WELD GUTTER PIN 12344191 TO HULL STRUCTURE PIN 12274800 (MI, IPMI) AND 12322324 (MIEI) PER FIG. 2</li><li>WELD GUTTER PIN 12344188 TO HULL STRUCTURE PIN 12274800 (MI, IPMI) 12322324 (MIEI) PER FIG. 2</li><li>CUT ANGLE INTO CATCH PIN 12288550 PER FIG. 3</li><li>WELD GUTTER PIN 12344176 TO COVER PIN 12322172 PER FIG. 4</li><li>REMOVE SEAL PIN 12287774 FROM PRECLEANER PIN 12287845 RIGHT SIDE.</li></ol>		



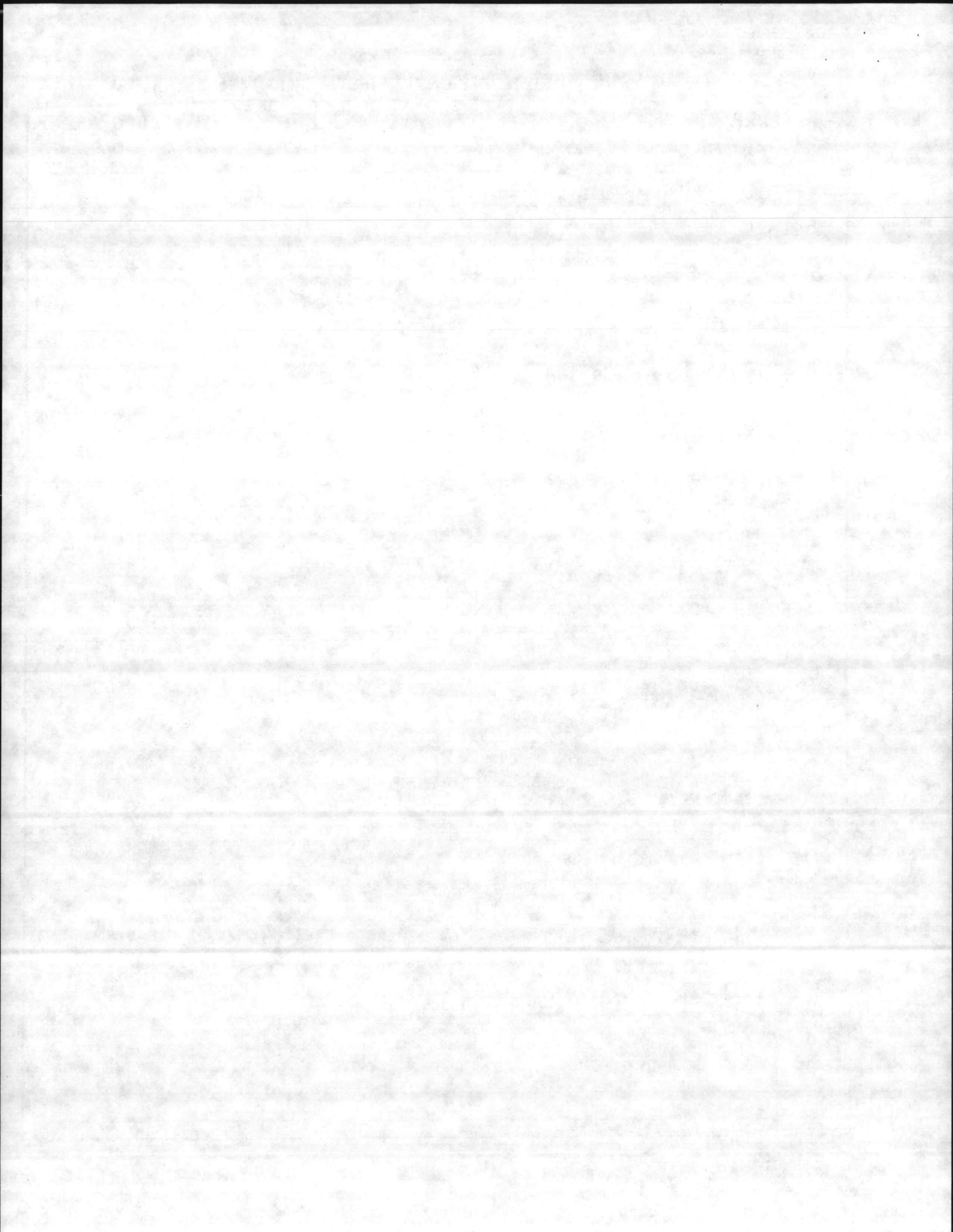
MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit: AIR BOX DRIP RAIL AND WATER BAFFLE KIT FOR WATER ELIMINATION.	Date	RFC Number -B
Modification Details: (Special Skills)  <p style="text-align: center;"><u>ATTACHMENT A</u> DISASSEMBLY OF VEHICLE</p>		



MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit: AIR BOX DRIP RAIL AND BRAFFLE KIT	Date 112 OCT 84	RFC Number -B
<p>Modification Details: (Special Skills)</p> <p>PRELIMINARY PROCEDURES:</p> <ol style="list-style-type: none"><li>1. TRANSVERSE TURRET UNTIL MAIN GUN IS OVER LEFT SIDE OF TANK. LINE UP PRECLEANER ARROWS IN TURRET AND LOCK TURRET</li><li>2. OPEN BOTH PRECLEANER DOORS</li><li>3. OPEN TOP DECK LEFT GRILLE DOORS</li></ol>		



MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit: AIR BOX DRIP RAIL AND WATER BAFFLE KIT FOR WATER ELIMINATION	Date 12 OCT 84	RFC Number -B
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Modification Details: (Special Skills)

TOP VIEW

P/N 12288485 PLATE

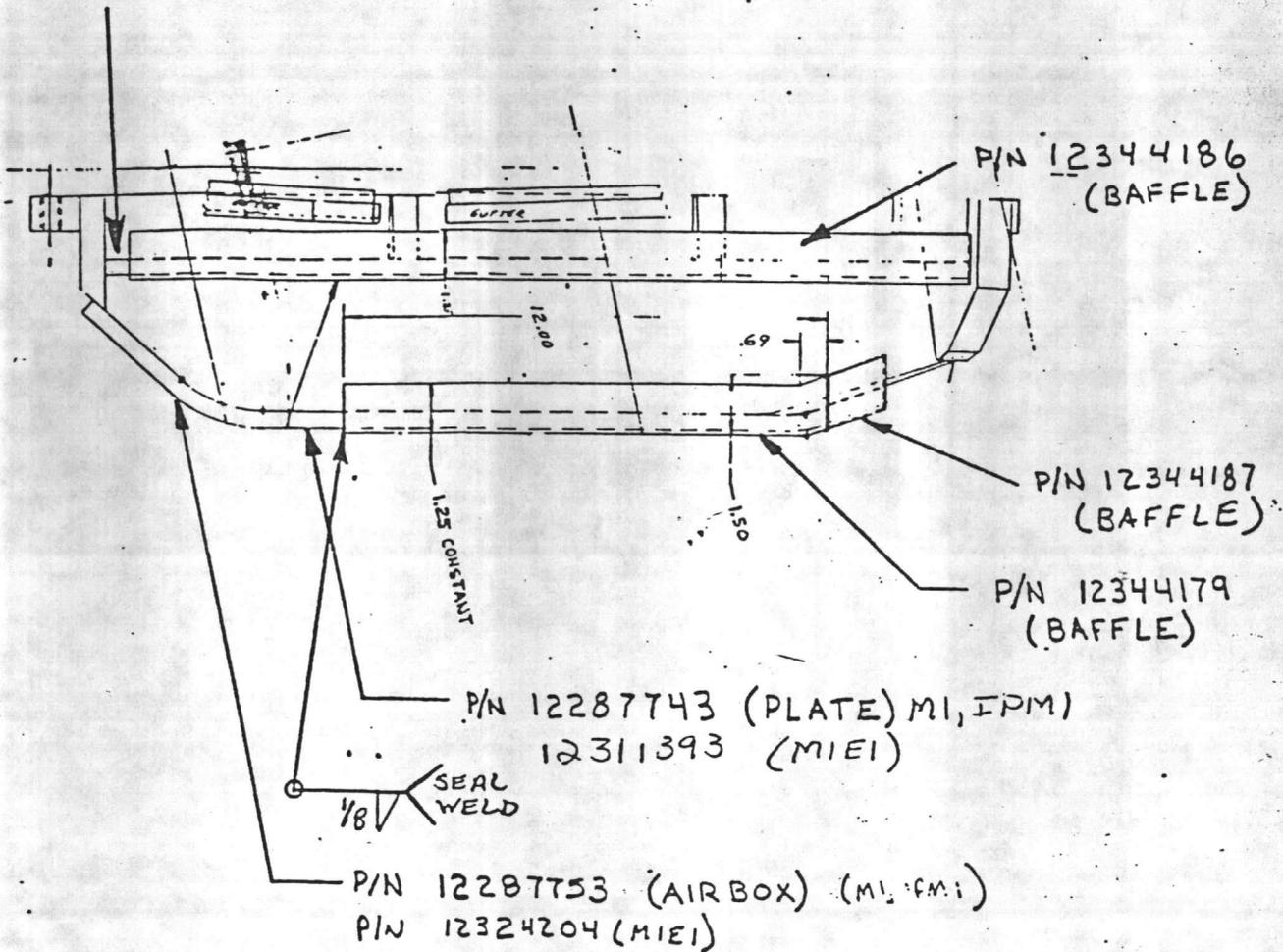
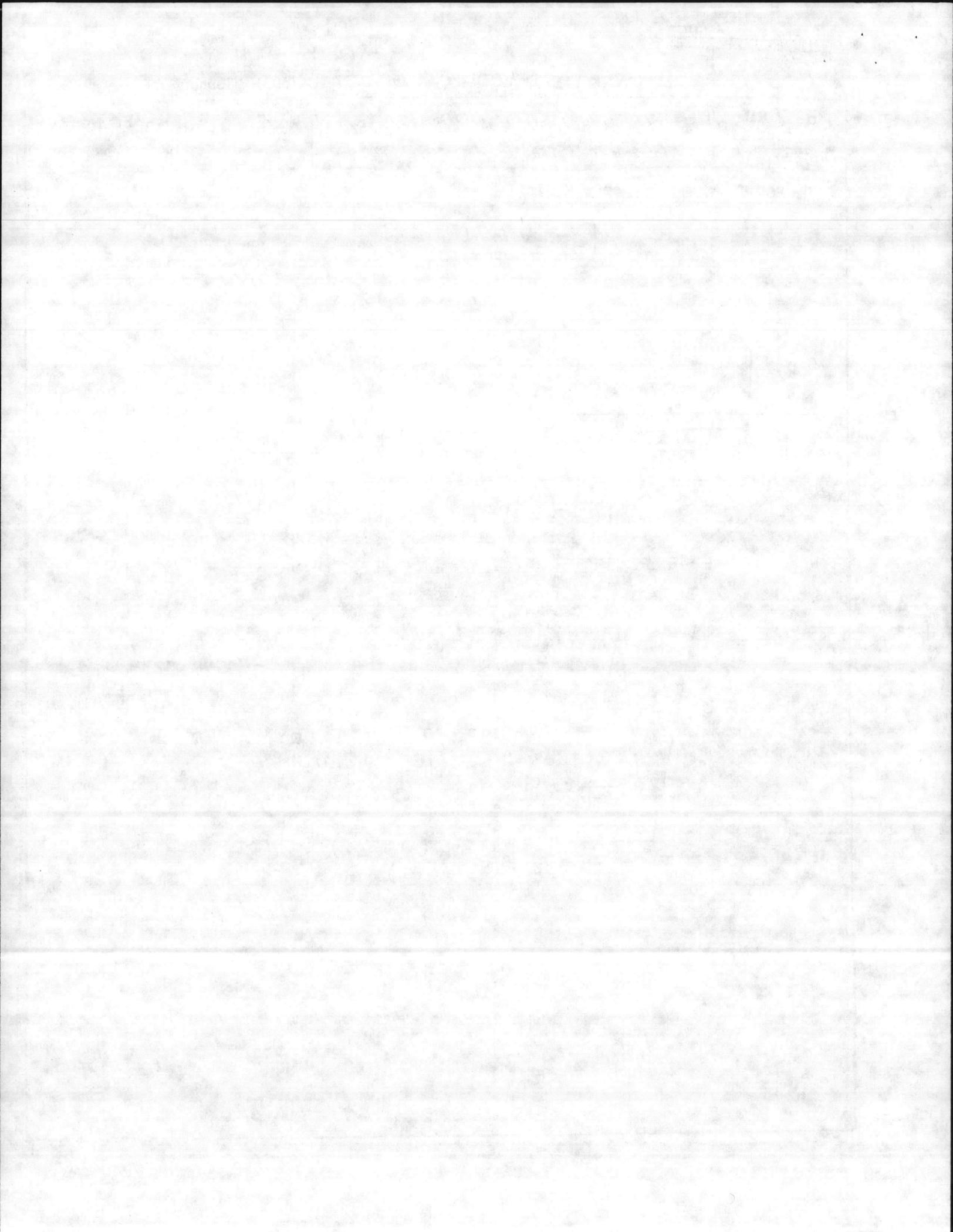


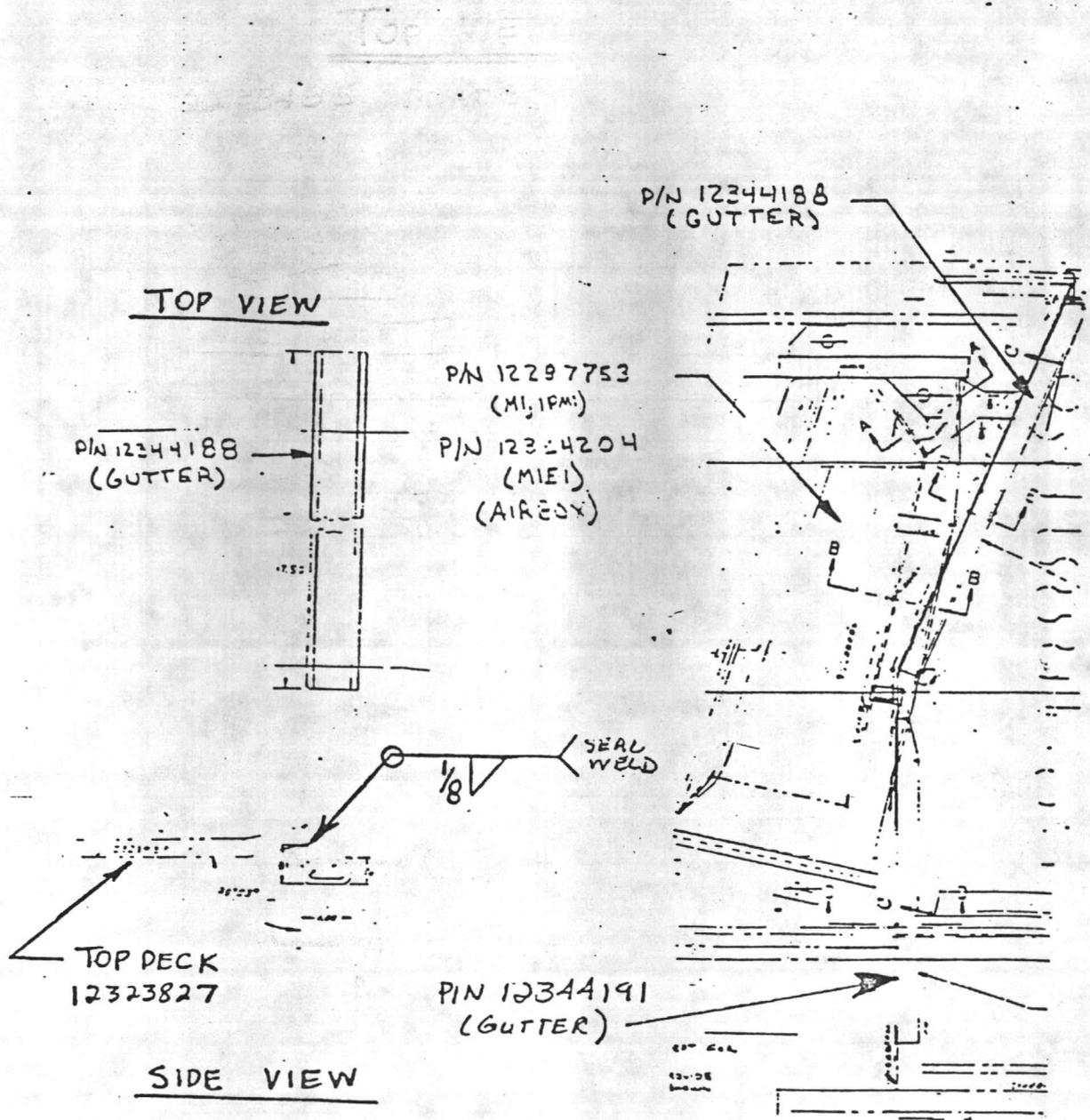
FIGURE 1

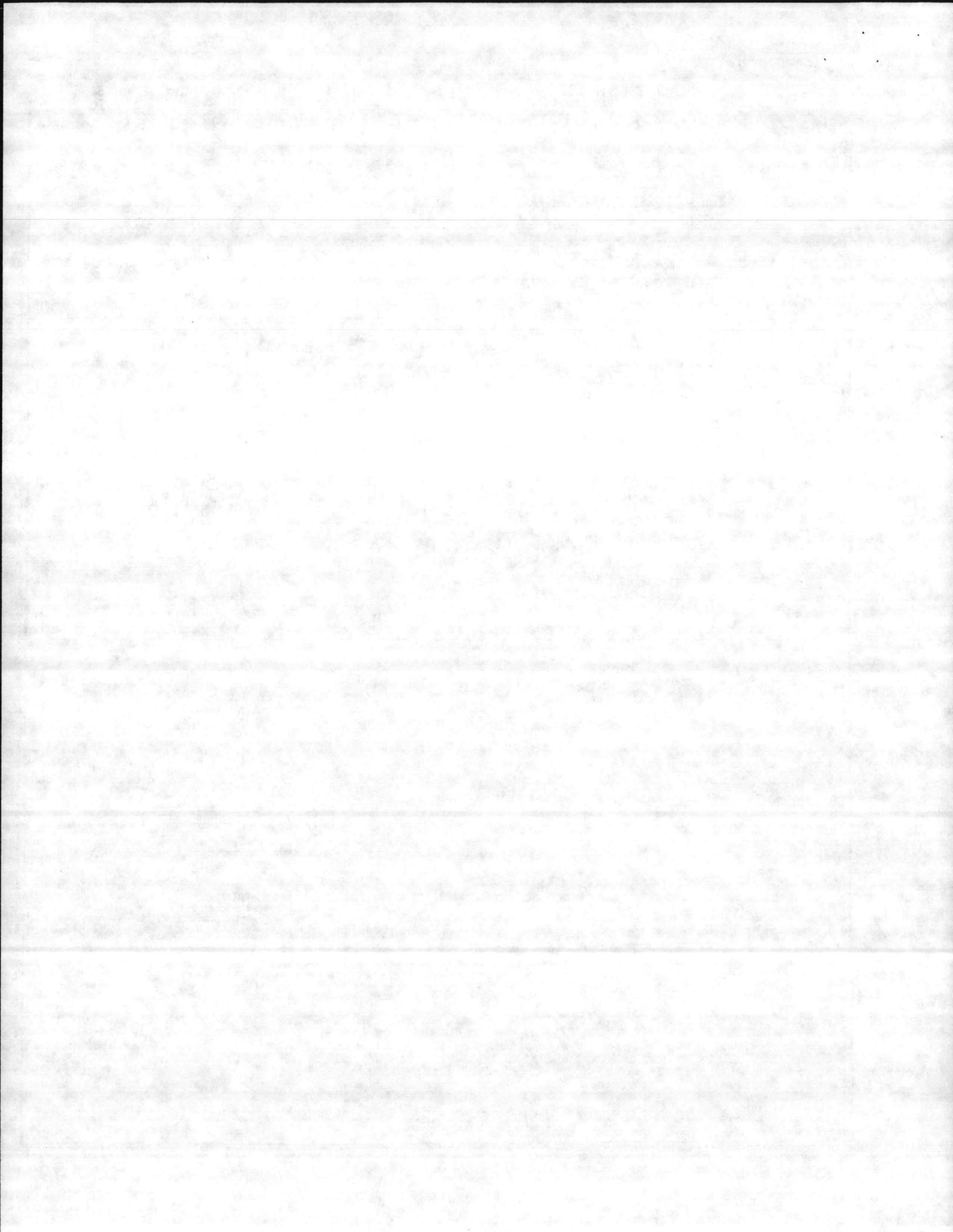


MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit: AIR BOX DRIP RAIL AND WATER BAFFLE KIT FOR WATER ELIMINATION.	Date 12 OCT 84	RFC Number -B
--	-------------------	------------------

Modification Details: (Special Skills)





MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit: AIR BOX DRIP RAIL AND BAFFLE KIT FOR WATER ELIMINATION	Date 10 OCT 84	RFC Number -B
---	-------------------	------------------

Modification Details: (Special Skills)

CATCH P/N 122 88550  
(MI, MIEI, EPMI)

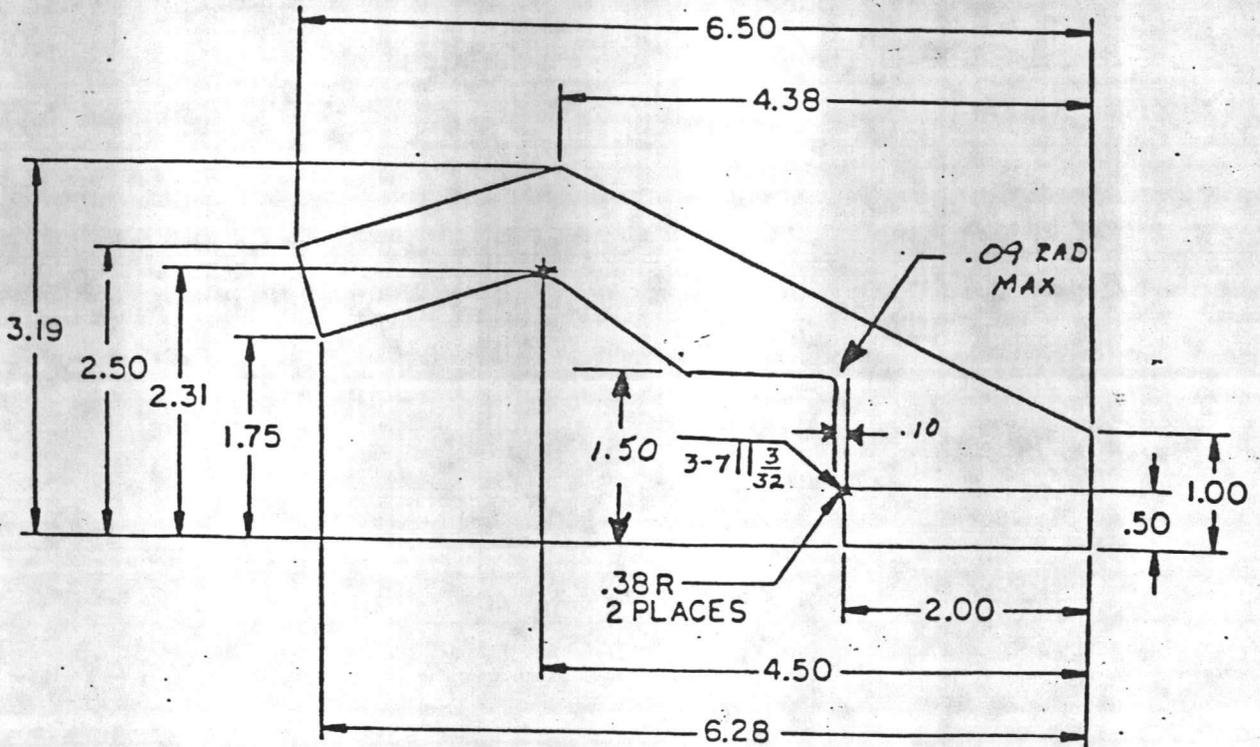
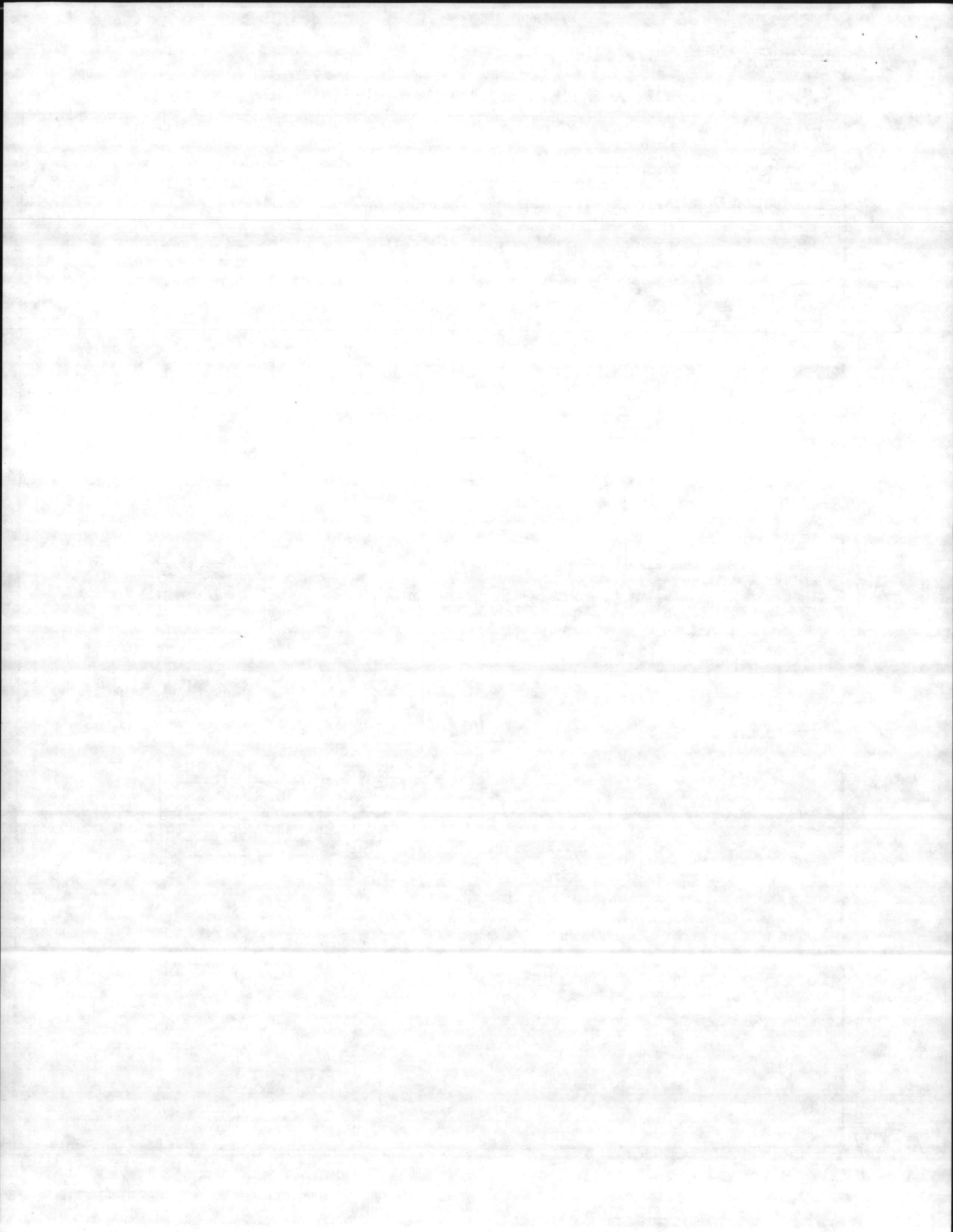


FIG. 3



MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit: AIR BOX DRIP RAIL AND WATER Baffle Kit FOR WATER ELIMINATION	Date: 12 OCT 84	RFC Number: -B
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Modification Details: (Special Skills)

SIDE VIEW

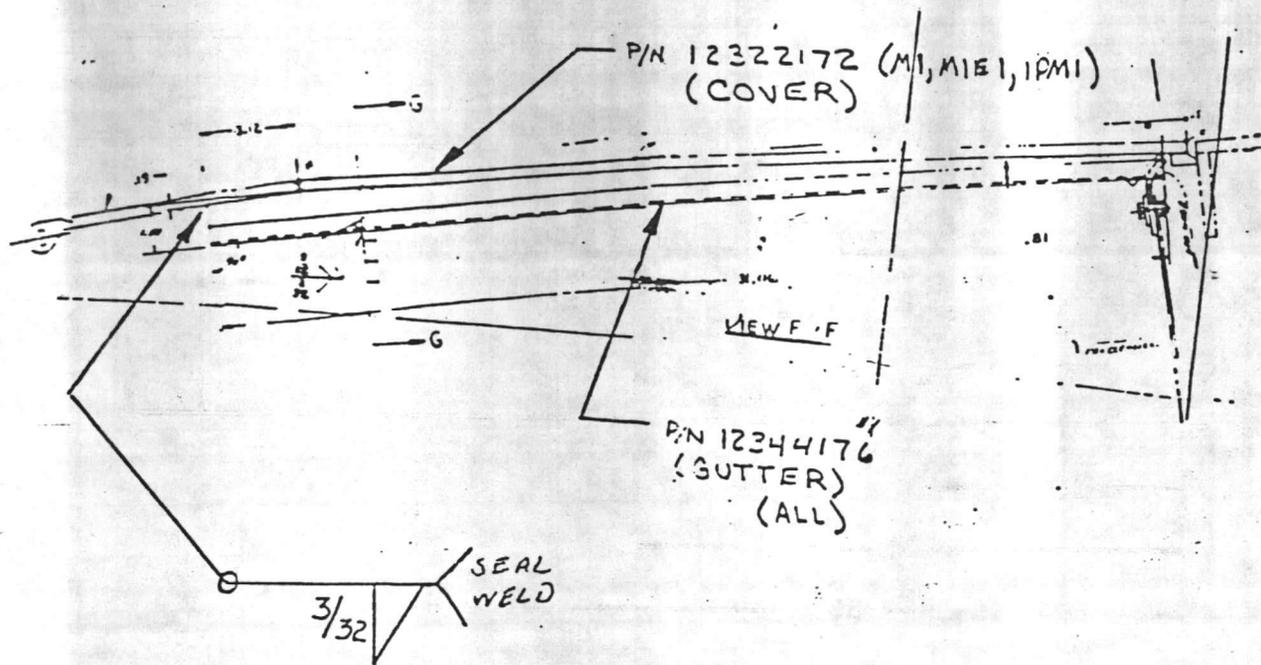
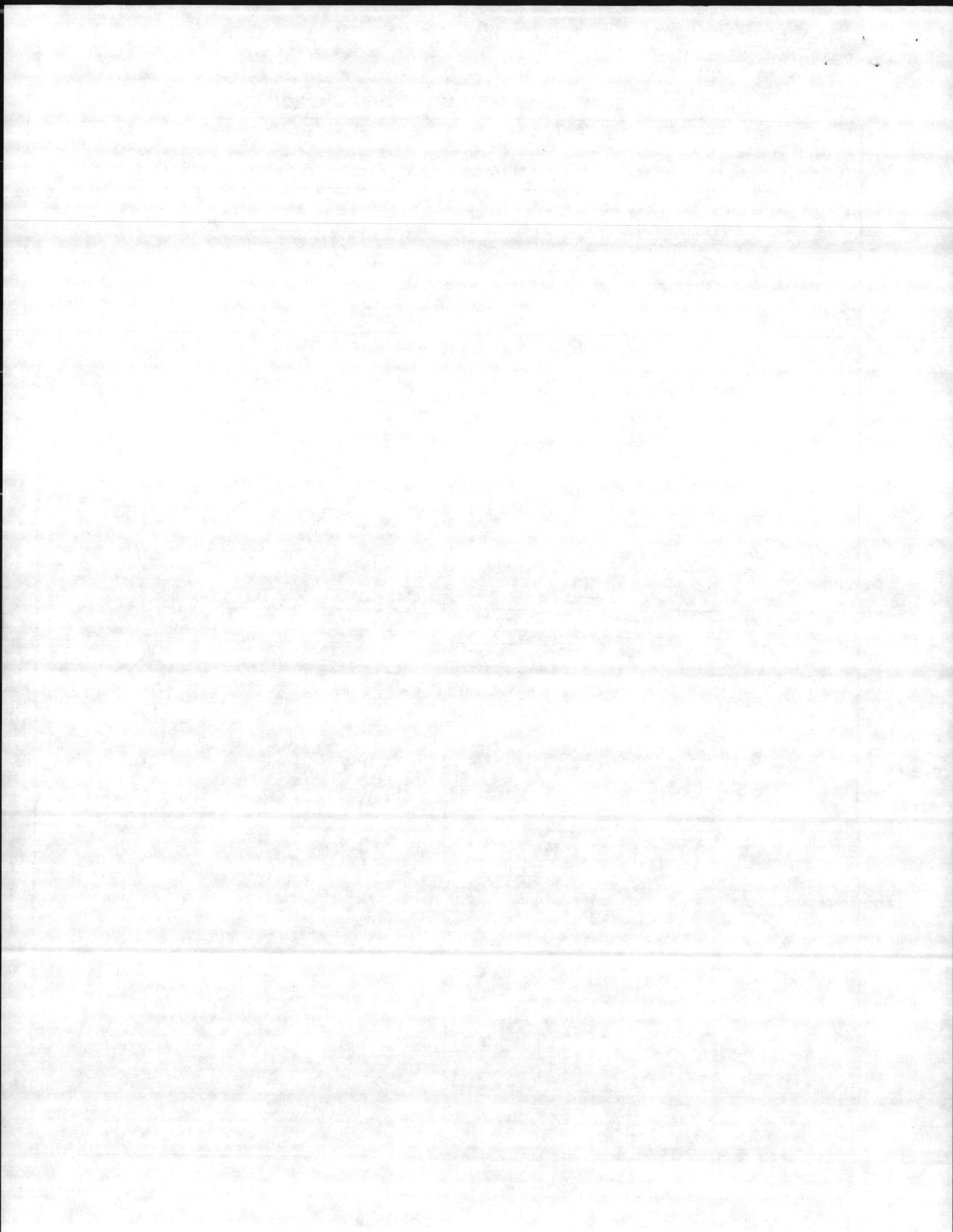


FIG 4



MODEL

CHANGE REQUEST CONTINUATION SHEET

M1, M1E1, 1PM1

SHEET 11 OF 14

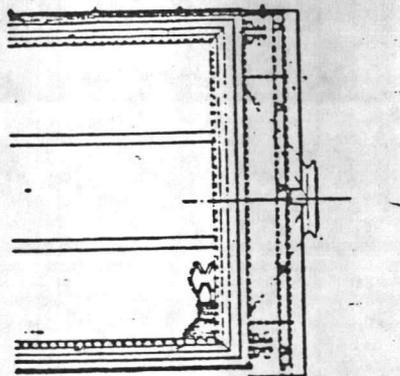
TITLE OF CHANGE

CHANGE NO. \_\_\_\_\_

AIR EXH. DR. P. PILES AND BAFFLES

DATE 12 OCT 84

WAS:



1-27761

1-27761-27767

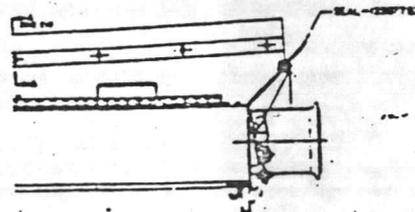
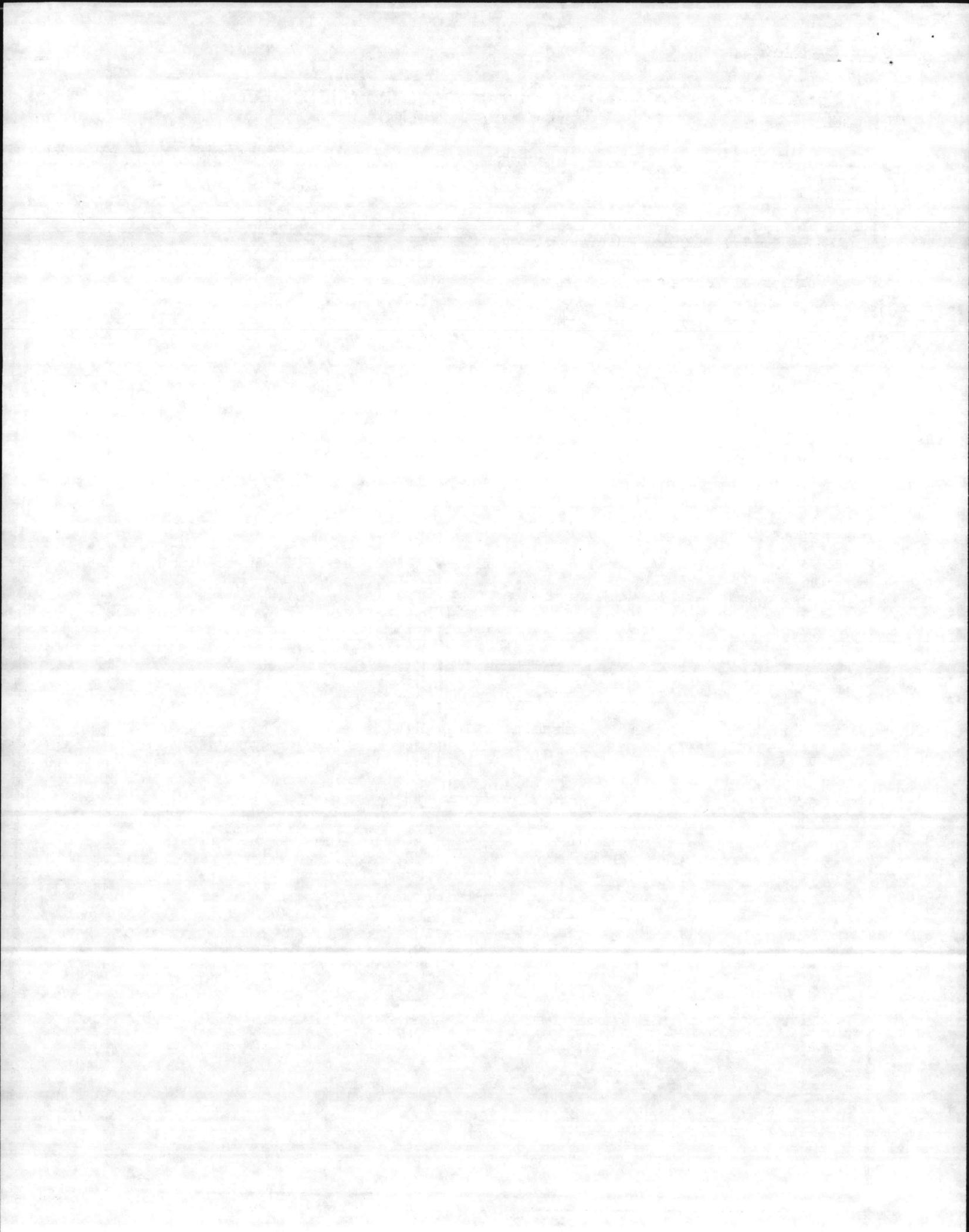


FIG 5



CHANGE REQUEST CONTINUATION SHEET

MODEL

MI, MIEI, IPMI

SHEET 12 OF 14

TITLE OF CHANGE

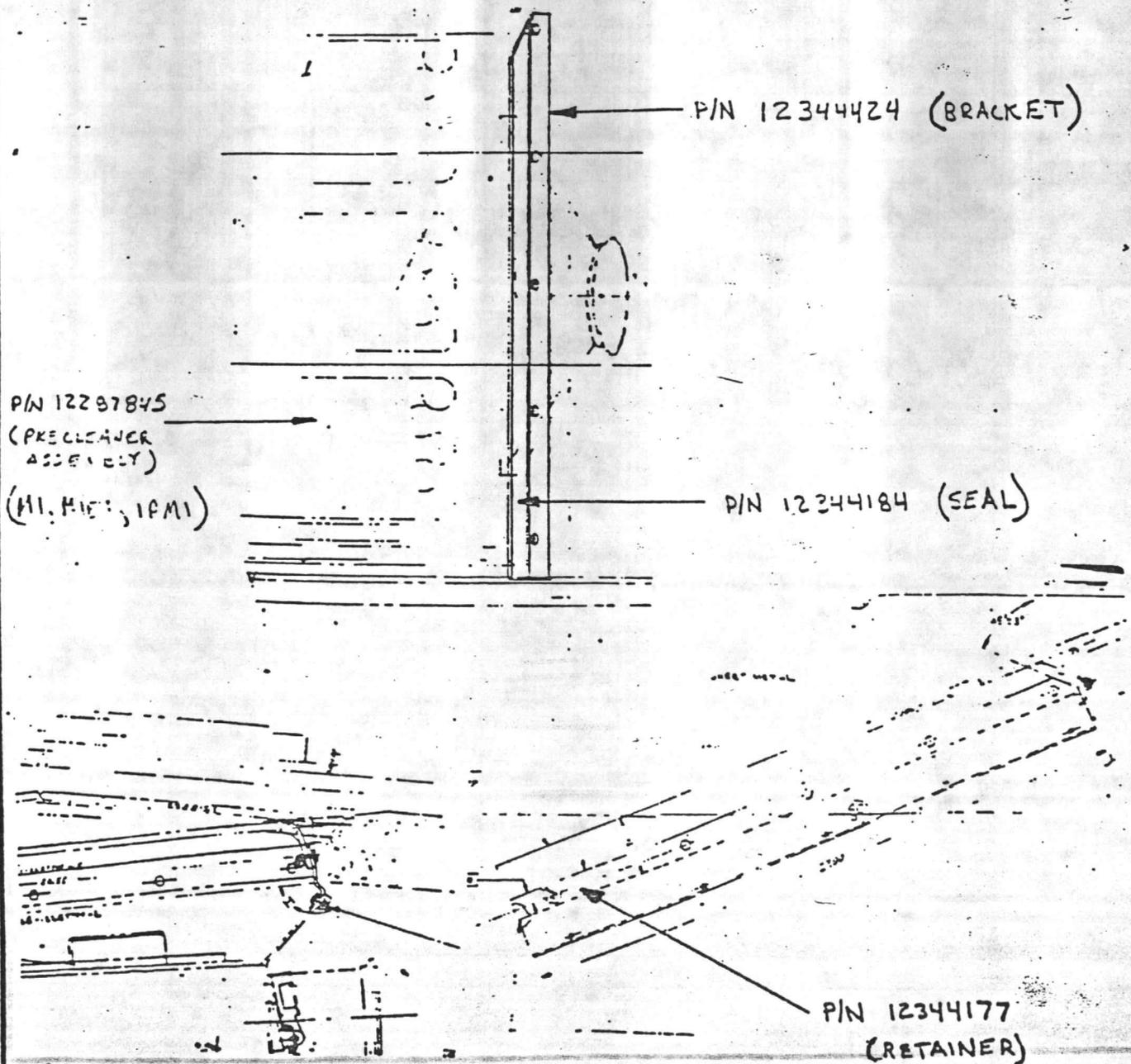
CHANGE NO. \_\_\_\_\_

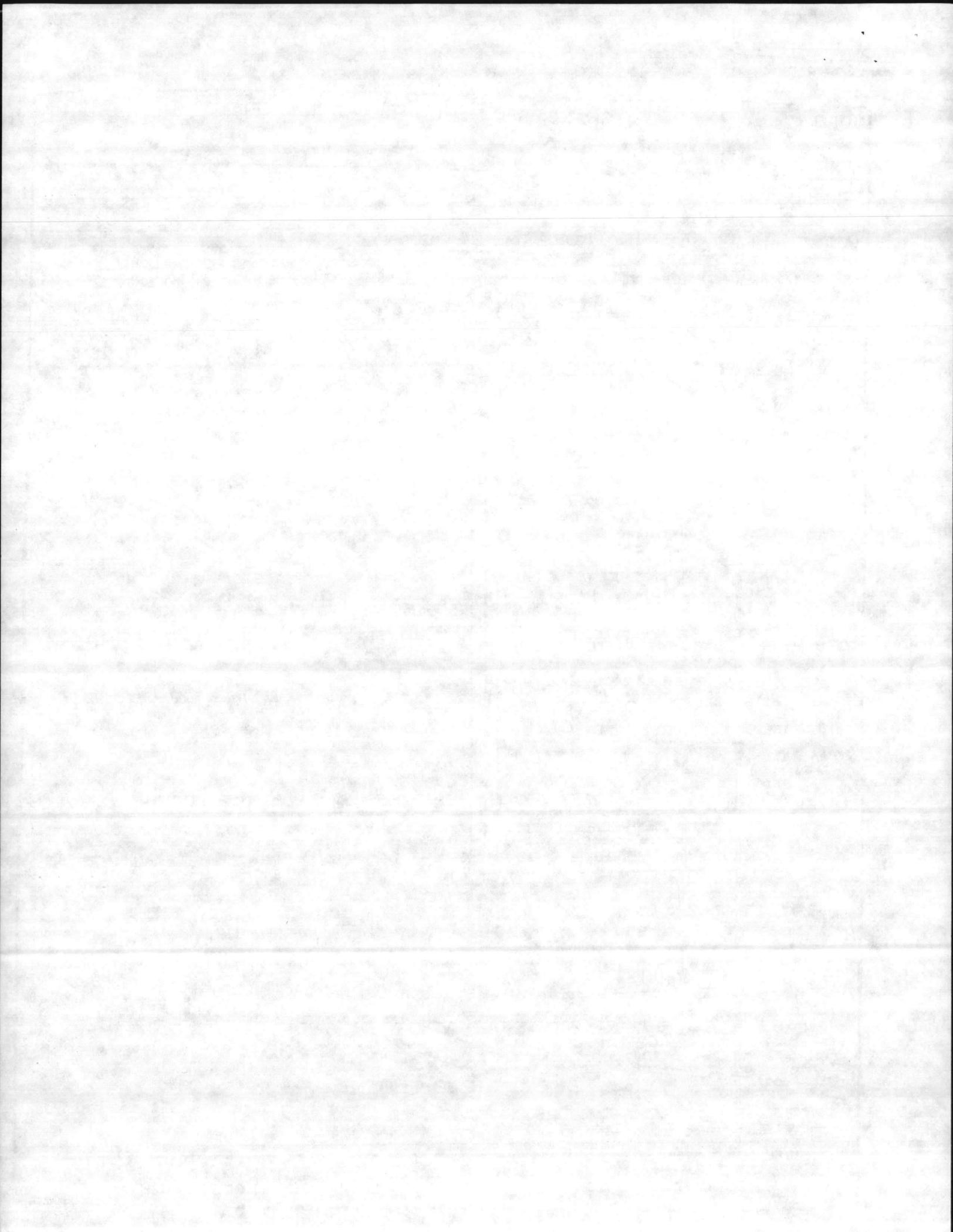
AIR BOX DRIP RAILS AND BAFFLES

DATE 12 OCT 84

REPLACE OLD SEAL P/N 12297782 (ALL) AND RETAINER P/N 12297787 (ALL) ON PRECLEANER ASSEMBLY 12287845 (ALL) WITH NEW BRACKET P/N 12344424, NEW SEAL P/N 12344184 AND NEW RETAINER P/N 12344177.

FIG. 6





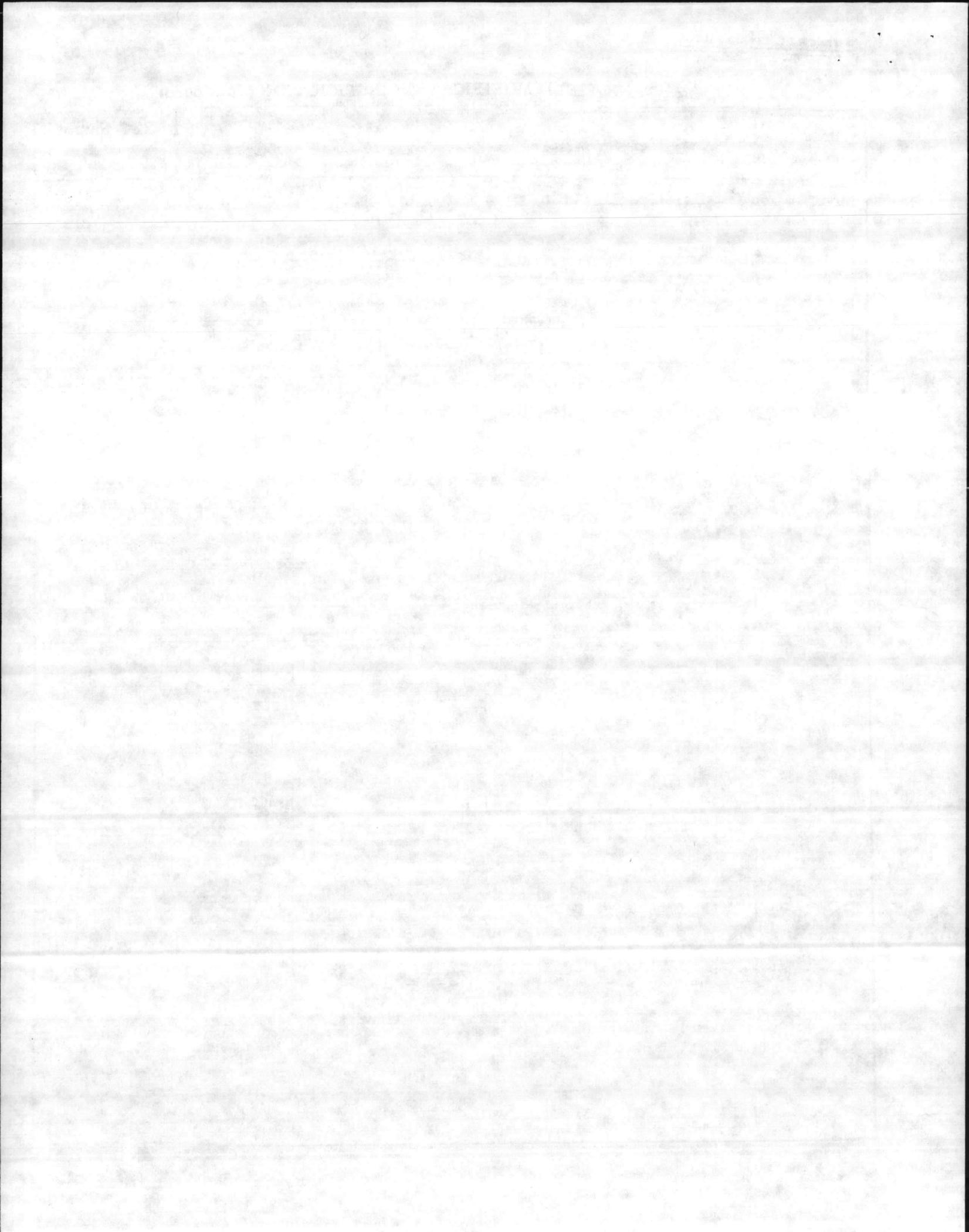
MI TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit: AIR BOX DRIP RAIRS AND GUTTERS	Date 12 OCT 84	RFC Number -B
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Modification Details: (Special Skills)

ATTACHMENT B

REASSEMBLY OF VEHICLE



## M1 TANK FIELD MODIFICATION INSTRUCTION (Continued)

Title of Kit:	Date	RFC Number
AIC BOX DRIP RAILS AND GUTTERS	12 OCT 84	-B
Modification Details: (Special Skills)		
<ol style="list-style-type: none"><li>1. CLOSE TOP DECK LEFT GRILLE DOORS</li><li>2. CLOSE BOTH PRECLEAWER DOORS</li><li>3. TRANSVERSE TURRET UNTIL MAIN GUN IS OVER FRONT OF VEHICLE. LOCK TURRET</li></ol>		

