
TECHNICAL BULLETIN

WARRANTY PROGRAM FOR HELICOPTER, ATTACK AH-64A

HEADQUARTERS, DEPARTMENT OF THE ARMY
13 SEPTEMBER 1988

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

WARRANTY PROGRAM
FOR
HELICOPTER, ATTACK
AH-64A

HEADQUARTERS, DEPARTMENT OF THE ARMY, WASHINGTON, DC
13 SEPTEMBER 1988

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

The reporting of errors, omissions, and recommendations for improving this publication is recommended. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded direct to: Commander U.S. Army Aviation Systems Command, ATTN: AMSAV-MMD, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you.

1. General.

a. This warranty technical bulletin (WTB) is for use by warranty control officers and users activities to provide guidance for management and application of the warranty program for the AH-64A Helicopter and applicable associated subsystems.

b. DA-PAM 738-751, Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A), is used to track hours of operation/flight.

c. The warranty on all secondary components is limited to a one time failure.

d. Check all warranty identification cards for positive item identification.

2. Explanation of Terms. The following explanation of terms peculiar to warranty and contract terminology are used within this WTB.

a. Government Acceptance Date (GAD). The date an item of equipment is accepted into Army inventory by the execution of the acceptance

block and signing of a DD Form 250 or approved acceptance document, by an authorized representative of the Government.

b. Fail/Failure. A malfunction or breakage of a warranted item (not due to ordinary usage or wear and tear) or damage to a warranted item which renders it unserviceable by reason of a condition which causes a warranted item to fail to meet any conformance\performance requirement.

c. Primary Component. Any selected field replaceable, depot repairable, serialized, major component which is warranted for the full period specified regardless of where or when installed.

d. Repair. To restore an item to serviceable condition without affecting its warranty (includes replacement, where replacement is necessary to achieve conformance or performance requirements).

e. Resultant Failure/Damage. Failure suffered directly by a warranted part(s) which is induced/caused primarily by failure of another warranted part(s)/item(s), both\all provided by and warranted by the manufacturer/contractor.

f. Secondary Component. Any field replaceable, depot repairable, serialized subcomponent of a primary component which is warranted only as a subassembly or part of a warranted aircraft or primary component in which it is originally installed.

g. Spare. A primary component purchased separately as a spare part and/or repair part not installed in an end item (aircraft).

h. WARCO. Warranty Control Office/Officer. Established at the intermediate general support level or equivalent and serves as the intermediary between the troops owning the equipment and USAAVSCOM.

i. Warranty. A promise or statement of fact from a seller to a purchaser on the nature, usefulness, or condition of the supplies or performance of services to be furnished. The main purpose of a warranty in a government contract is to outline the rights and obligations of the contractor and the government for defective items and\or services.

j. Warranty Claim. Action initiated by the equipment user for authorized warranty repair, replacement or reimbursement from the manufacturer/contractor.

k. Warranty Period. Time interval during which the warranty is in effect. Normally measured as the maximum number of years, months or flight operating hours.

3. Cover ages.

a. Helicopter, Attack

- (1) Model AH-64A
- (2) NSN 1529-01-106-9515
- (3) FSCM 02731
- (4) Serial Numbers 85-25351 thru 87-0507
- (5) Contracts DAAJ09-85-C-A002 and DAAJ09-87-C-A009
- (6) Coverages

(a) Warranty coverage begins at the GAD and lasts for 240 flight hours or 24 months, whichever occurs first, for any primary or secondary component originally installed, or the remainder of the aircraft warranty period for replacement components.

(b) Refer to Appendix A for the list of AH-64 Helicopter warranted components and subcomponents.

b. Target Acquisition Designator Sight/Pilots Night Vision Sensor (TADS/PNVS)

- (1) Model
 - (a) TADS AN/ASQ-170
 - (b) PNVS AN/AAQ-11
- (2) NSN
 - (a) TADS 1270-01-142-2855
 - (b) PNVS 5855-01-120-7831
- (3) FSCM 04939
- (4) Serial Numbers
 - (a) TADS 04001 and subsequent
 - (b) PNVS 00301 and subsequent
- (5) Contracts DAAJ09-85-C-A008 and DAAJ09-85-C-A011
- (6) Coverage

(a) The warranty provides for depot repair of the TADS for 300 operating hours and the PNVS for 200 operating hours or 24 months from the GAD for both TADS and PNVS, whichever occurs first. It applies when the unit fails to meet the operational requirements per the TMs and requires removal for depot repairs. The time meter built into each warranted component is to be used to determine the actual operating hours.

(b) Refer to Appendix B for the warranted primary and secondary TADS/PNVS components.

c. Engine, Gas Turbine

- (1) Model T700-GE-701
- (2) NSN 2840-01-114-2211
- (3) FSCM 99207
- (4) Serial Numbers GEE 374812 and subsequent
- (5) Contract DAAJ09-85-C-A481
- (6) Coverage

(a) The warranty provides for depot repair of the Engine, Hydromechanical Unit and Electric Control Unit for 240 flight hours (as evidence by DA Form 2410) or 24 months from GAD, whichever occurs first. It applies when the unit fails to meet the operational requirements per the TMs and requires removal for depot repair. The warranty does not apply if failure is due to obvious induced damage caused by maintenance error, operation beyond limits, or foreign object damage.

(b) Refer to Appendix C for the list of turbine engine warranted primary and secondary components.

4. CONTRACTOR RESPONSIBILITY.

a. The contractor, upon preliminary determination of warranty coverage, shall provide all materials, labor, facilities, tools, etc., needed to effect repair and commence to repair/replace such parts, IAW published service\repair procedures, as necessary to achieve specified "return-to-service" requirements.

b. The item(s) determined to be defective, due to defective material or workmanship, shall be repaired or replaced at the option of the contractor at no cost to the government.

c. The contractor's responsibility for coverage of Resultant Failure/Damage shall be limited to repair of the failed warranted "Primary and/or Secondary Components". The contractor shall not be liable for damage done through misuse or abuse by the government or for damage to or induced in other non-warranted parts.

5. GOVERNMENT RESPONSIBILITIES.

a. The contractor must be notified by AVSCOM in writing of any failure of any warranted component within ninety (90) days after discovery of a failure. In order to receive warranty coverage, the government must deliver the reported warranty item(s) to the authorized repair site within one hundred and eighty (180) days after the discovery of the failure.

b. AVUM or AVIM maintenance will be performed by government personnel IAW published maintenance procedures (TMs, TBs, etc.,). Such maintenance does not void any coverage under warranty and is at government expense, including parts and labor.

c. Alterations and/or modifications shall not be made unless expressly authorized or directed by the U.S. Army Aviation Systems Command (USAAVSCOM).

d. For all components covered under warranty, the government shall bear all transportation costs and liability for shipments to the designated repair facility.

6. NULLIFICATION. The provisions of the warranties, covered by this publication, shall not apply to any warranted item if failure has been caused by:

- a. Improper installation or maintenance.
- b. Operation contrary to the TMs (or other written instructions provided to and approved by the government) in such a way as to induce a failure.
- c. Repair or alteration by the government in such a way as to induce a failure.
- d. Misuse, neglect, or accident.
- e. Combat damage.
- f. Foreign object damage.
- g. Test program damage.

h. Failure caused by acts of God, the public enemy, subversion, riots, vandalism, sabotage, flood or similar causes, fire or explosion induced by or originating from sources external to the warranted item(s).

7. CLAIM PROCEDURES.

a. Identification of Warranted Items.

(1) Warranted AH-64 airframe components are identified by the aircraft serial number. A DA Form 2408-15, AMSAV-Q overprint 2 Warranty Identification Card (WIC) (Fig 1) accompanies each aircraft and is retained in the Aircraft Historical Record Logbook for installed components. Replacement components are warranted only for the duration of the aircraft warranty period. Lateral transfer of serialized components will void the warranty coverage for that component and should be avoided.

(2) Warranted TADS\PNVS components are identified per an affixed decal, (Fig 2), stating the item is warranted until the expiration date. Also, a DA Form 2408-15 (WIC) accompanies each primary component or is contained in the historical records logbook if installed in the aircraft. TADS/PNVS component warranty coverage is independent of the AH-64 airframe coverage. Lateral transfer (cannibalization) of a warranted TADS\PNVS primary component is acceptable provided the DA Form 2408-15 WIC accompanies the primary component. However, secondary TADS/PNVS components listed on the DA Form 2408-15 (WIC) are warranted only as a subassembly of the primary component in which they were originally installed and lateral transfer (cannabilization) of secondary components should be avoided.

(3) Warranted engines are identified per an affixed decal stating the item is warranted until the expiration date. Also, a FA Form 2408-15 WIC accompanies the component or is contained in the historical records logbook if installed in the aircraft. The engine warranty coverage is independent of the AH-64 airframe coverage. Lateral transfer (cannibalization) of warranted engine primary components (Engine, HMU, ECU), is acceptable provided the DA Form 2408-15 WIC accompanies the primary component. However, secondary engine components listed in the DA Form 2408-15 WIC are warranted only as a subassembly of the primary component in which they are originally installed and lateral transfer (cannibalization) of secondary components should be avoided.

1. MODEL AN/ASQ-17D	2. NOMENCLATURE DESIGNATION TARGET ACQUISITION SYSTEM ASSEMBLY	3. SERIAL NUMBER 04013	4. MFG CODE 04939	5. PAGE NO)	6. NO OF PAGES
7. PART NUMBER 13076000	8. NSN 1270-01-142-2855	9. WARRANTY PERIOD			
		EXPIRATION DATE (M/Y) 8/88	COMPONENT HOURS 320		
10. SECONDARY COMPONENTS (Mounted with next higher assembly shown in blocks 8-9)					
NOMENCLATURE	PART NUMBER	SERIAL NO	NOMENCLATURE	PART NUMBER	SERIAL NO
OPTICAL RLY COLUMN ASSY	13074259	10029			
BORESIGHT ASSY	13075454-019	00222			
TURRET ASSY	13076290	04026			
CIRCUIT CARD ASSY	13076378	100667			
CIRCUIT CARD ASSY	13076378	100655			
CIRCUIT CARD ASSY	13076378	100678			

DA FORM 148-11, 1 JAN 64 ANSAV-8 Obsolete 2, 3 Mar 88 WARRANTY IDENTIFICATION CARD - HISTORICAL RECORD FOR AIRCRAFT
 REPLACES ORSAV-9 OVERPRINT 2, 3 MAR 68, WHICH IS OBSOLETE (78) 100-1100

Figure 1. Sample of a Completed Warranty Identification Card

WARRANTY

NSN

PI IN

MFR SN

TM

DATE LIMIT

Figure 2. Warranty Decal

U. S. GPO 1986-161-818 EDITION OF MAY 81 IS OBSOLETE WARRANTY EXHIBIT DA Form 736-750 and 738-761 EXCHANGE TAG	1 SUPPORT AGENCY (DODAAC) AVIM ACTIVITY		2 DATE Julian Date	
	3 ORGANIZATION (DODAAC) YOUR UNIT NUMBER		4 <input checked="" type="checkbox"/> WARRANTY <input type="checkbox"/> EIR EXHIBIT <input type="checkbox"/> EXCHANGE	
	5 NSN 1615-01-219-8667		6 NOUN NOMENCLATURE MAIN TRANSMISSION	
	7 PD 02		8 PD AUTHENTICATION CPT. Chas. B. Scott	
	9 END ITEM IDENTIFICATION HELICOPTER		10 MODEL AH-64A	
			11 SERIAL NO 85-25351	
	12 DEFICIENCY OR SYMTCM EXCESSIVE METAL CONT.			
	13 DATE ACCEPTED Julian Date		14 SIGNATURE John Doe	
	15 NMCS YES		16	
	17 JON 5-278		18 INITIALS JMH	
19 DATE REPAIRED Julian Date		20 INITIALS ABC		

COPY 1
DA FORM 2402
DEC 85

Figure 3. Sample of a Completed DA Form 2402

MAINTENANCE REQUEST						PAGE NO.	NO. OF PAGES	REQUIREMENT CONTROL SYMBOL	
For use of this form, see TM 38-750; the proponent agency is DCSLOG.								CSGLD-1047(R11)	
SECTION I - EQUIPMENT DATA									
CONTROL NUMBER 076167		WORK ORDER NUMBER		WESOC		ORQ PD		PD AUTHENTICATION	
<input type="checkbox"/> WORK REQUEST <input checked="" type="checkbox"/> MWO WARRANTY CLAIM		1a. ORGANIZATION YOUR UNIT		b. LOCATION YOUR LOCATION		c. UNIT IDENT CODE YOUR UIC			
2. SERIAL NO. 85-25351		3. NOUN NOMENCLATURE HELICOPTER		4. LINE NO.		5. MODEL AH-64A		6. NATIONAL STOCK NUMBER 1520-01-106-9515	
7. MAINTENANCE ACTIVITY AVIM Activity		8. LEVEL O/F	9. UTILIZATION CODE O	10. MCSR ITEM	11. HOURS 79	12. MILES	13. ROUNDS	14. STARTS	
15. FAILURE DETECTED DURING (Select one - use / or X)				16. FIRST INDICATION OF TROUBLE (Select one - use / or X)					
<input type="checkbox"/> A Scheduled Maintenance		<input type="checkbox"/> C Test		<input type="checkbox"/> E Storage		<input checked="" type="checkbox"/> G Flight		<input type="checkbox"/> I Inoperative	
<input type="checkbox"/> B Handling		<input type="checkbox"/> D Normal Op		<input type="checkbox"/> F Inspection		<input type="checkbox"/> H Other		<input type="checkbox"/> J Overheating	
								<input type="checkbox"/> K Out of Adjustment	
								<input checked="" type="checkbox"/> L Low Performance	
								<input type="checkbox"/> M Other	
18. DESCRIBE DEFICIENCIES OR SYMPTOMS ON THE BASIS OF COMPLETE CHECKOUT AND DIAGNOSTIC PROCEDURE IN EQUIPMENT TM (Do not prescribe repairs)									
WARRANTY CLAIM ACTION									
Hydraulic Press. Dropped to "O" Press IN FLIGHT. Pump CASE LEAKING AT HEAD GASKET									
19a. REMARKS									
(Point of Contact and Autonon Number)									
SECTION II - WORK ACCOMPLISHED									
17a. REPAIR ORGANIZATION/ACTIVITY				c. UNIT IDENT CODE		18. TYPE ORGANIZATION/ACTIVITY AC-COMPLISHING WORK (Select one - use / or X)		19. AMS ACCOUNT CODE	
b. LOCATION						<input type="checkbox"/> 1 TOE <input type="checkbox"/> 2 TO			
						<input type="checkbox"/> 3 CONTRACTOR			
20a. ACT CODE	FAILURE CODE b	c. COMPONENT/PART NOUN, SVC, OR MWO NO.			MANHOURS (Hrs & tenths) f	NATIONAL STOCK NUMBER h	PART SOURCE CODE i	QTY j	PARTS COST k
		d. CS CODE	e. REF DESIGNATOR	f. MFR CODE					
	381	COMPONENT SERIAL #	COMPONENT NOUN	02731		COMPONENT NSN		1	
			l. TOTAL MANHOURS		m. TOTAL MANHOURS COST		n. TOTAL PARTS COST		
21. DELAY (Select one) <input type="checkbox"/> 1 Parts <input type="checkbox"/> 2 Manpower <input type="checkbox"/> 3 Facilities <input type="checkbox"/> 4 Funds <input type="checkbox"/> 5 Tools									
23. SUBMITTED BY NAME			24. RECEIVED BY		25. WORK STARTED BY		26. INSPECTED BY		
JULIAN DATE			JULIAN DATE		JULIAN DATE		JULIAN DATE		
Julian Date									
27. ACCEPTED BY						22. DATA TRANSCRIBED			
						<input type="checkbox"/> A To User <input type="checkbox"/> C Salvaged			
						<input type="checkbox"/> B To Stock <input type="checkbox"/> D Evacuated			
						<input type="checkbox"/> E Cannibalization			

DA FORM 2407
MAY 81

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FILE COPY 9

Figure 4. Sample of a Completed Airframe DA Form 2407 Warranty Claim

MAINTENANCE REQUEST					PAGE NO.	NO. OF PAGES	REQUIREMENT CONTROL SYMBOL		
For use of this form, see TM 38-750; the proponent agency is DCSLOG.							CSOLD-1047(R1)		
SECTION I - EQUIPMENT DATA									
CONTROL NUMBER 076167		WORK ORDER NUMBER		WESDC	ORG PD	PD AUTHENTICATION			
<input type="checkbox"/> WORK REQUEST <input type="checkbox"/> MWO <input checked="" type="checkbox"/> WARRANTY CLAIM	1a. ORGANIZATION YOUR UNIT			3. LOCATION YOUR LOCATION		e. UNIT IDENT CODE YOUR UIC			
2. SERIAL NO. 04009	3. NOUN NOMENCLATURE TADS		A. LINE NO.	5. MODEL AN/ASQ-170		6. NATIONAL STOCK NUMBER 1270-01-142-2855			
7. MAINTENANCE ACTIVITY Avim Activity		4. LEVEL %/F	8. UTILIZATION CODE 0	9. MCSR ITEM	4. SRC	9. PACING ITEM 120	10. HOURS		
14. FAILURE DETECTED DURING (Select one - use / or X) <input type="checkbox"/> A Scheduled Maintenance <input type="checkbox"/> C Test <input type="checkbox"/> E Storage <input checked="" type="checkbox"/> G Flight <input type="checkbox"/> I Inoperative <input type="checkbox"/> M Not in Use <input type="checkbox"/> O Out of Adjustment <input type="checkbox"/> B Handling <input type="checkbox"/> D Normal Op <input type="checkbox"/> F Inspection <input type="checkbox"/> H Other <input checked="" type="checkbox"/> J Low Performance <input type="checkbox"/> K Other				15. FIRST INDICATION OF TROUBLE (Select one - use / or X) <input type="checkbox"/> 258 Overheating <input type="checkbox"/> 790 Out of Adjustment <input checked="" type="checkbox"/> 287 Low Performance <input type="checkbox"/> Other					
16. DESCRIBE DEFICIENCIES OR SYMPTOMS ON THE BASIS OF COMPLETE CHECKOUT AND DIAGNOSTIC PROCEDURE IN EQUIPMENT TM (Do not prescribe repairs) WARRANTY CLAIM ACTION TURRET ASSY CAUSES TADS TO MALFUNCTION INTERMITTENTLY.									
16a. REMARKS (POINT OF CONTACT AND AUTOVON NUMBER)									
SECTION II - WORK ACCOMPLISHED									
17a. REPAIR ORGANIZATION/ACTIVITY			e. UNIT IDENT CODE		18. TYPE ORGANIZATION/ACTIVITY AC. COMPLETING WORK (Select one - use / or X) <input type="checkbox"/> 1 TOE <input type="checkbox"/> 2 TO <input checked="" type="checkbox"/> 3 CONTRACTOR		19. AMS ACCOUNT CODE		
6. LOCATION									
20a. ACT CODE	FAILURE CODE	c. COMPONENT/PART NOUN, SVC, OR MWO NO.		MANHOURS (Hrs & tenths)	NATIONAL STOCK NUMBER	PART SOURCE CODE	QTY	PARTS COST	
	360	d. CB CODE	e. REF DESIGNATOR	f. MFR CODE					
		Secondary Component	TURRET ASSY	04939	Secondary Component NSN		1		
				l. TOTAL MANHOURS	m. TOTAL MANHOURS COST	n. TOTAL PARTS COST			
21. DELAY (Select one) <input type="checkbox"/> 1 Parts <input type="checkbox"/> 2 Manpower <input type="checkbox"/> 3 Facilities <input type="checkbox"/> 4 Funds <input type="checkbox"/> 5 Tools				22. <input type="checkbox"/> DATA TRANSCRIBED					
23. SUBMITTED BY NAME		24. RECEIVED BY		25. WORK STARTED BY		26. INSPECTED BY		27. ACCEPTED BY	
JULIAN DATE JULIAN Date		JULIAN DATE		JULIAN DATE		JULIAN DATE		JULIAN DATE	
				28. DISPOSITION (Select one) <input type="checkbox"/> A To User <input type="checkbox"/> C Salvaged <input type="checkbox"/> B To Stock <input type="checkbox"/> D Eviscerated <input type="checkbox"/> E Cannibalization					

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NMP COPY 2

Figure 5. Sample of a Completed TADS/PNVS DA Form 2407 Warranty Claim

MAINTENANCE REQUEST					PAGE NO.	NO. OF PAGES	REQUIREMENT CONTROL SYMBOL		
For use of this form, see TM 38-750, the proponent agency is DCSLOG.							CSGLD-1047(R1)		
SECTION I - EQUIPMENT DATA									
CONTROL NUMBER 076167		WORK ORDER NUMBER		WESDC	ORG PD	PD AUTHENTICATION			
<input type="checkbox"/> WORK REQUEST <input type="checkbox"/> MWO <input checked="" type="checkbox"/> WARRANTY CLAIM		1a. ORGANIZATION YOUR UNIT			b. LOCATION YOUR LOCATION		c. UNIT IDENT CODE YOUR UIC		
2. SERIAL NO. COMPONENT S/N		3. NOUN NOMENCLATURE ENGINE/HMU/ECU		a. LINE NO.	b. MODEL AH-64A		c. NATIONAL STOCK NUMBER COMPONENT NSN		
7. MAINTENANCE ACTIVITY ANIM ACTIVITY		d. LEVEL O/F	e. UTILIZATION CODE O	9. MCSR ITEM	4. ERC	5. PACING ITEM	10. HOURS Component Hours		
14. FAILURE DETECTED DURING (Select one - use / or X)				15. FIRST INDICATION OF TROUBLE (Select one - use / or X)					
<input type="checkbox"/> A Scheduled Maintenance <input type="checkbox"/> B Handling <input type="checkbox"/> C Test <input type="checkbox"/> D Normal Op <input type="checkbox"/> E Storage <input type="checkbox"/> F Inspection <input checked="" type="checkbox"/> G Flight				<input type="checkbox"/> 008 Inoperative <input type="checkbox"/> 008 Noisy <input type="checkbox"/> 258 Overheating <input type="checkbox"/> 387 Low Performance <input checked="" type="checkbox"/> 790 Out of Adjustment <input type="checkbox"/> Other					
16. DESCRIBE DEFICIENCIES OR SYMPTOMS ON THE BASIS OF COMPLETE CHECKOUT AND DIAGNOSTIC PROCEDURE IN EQUIPMENT TM (Do not prescribe repairs) WARRANTY CLAIM ACTION:									
(BRIEF DESCRIPTION OF DISCREPANCY FOR AIRCRAFT ENGINE AND WHY COMPONENT WAS REMOVED)									
16a. REMARKS (POINT OF CONTACT AND AUTOVON NUMBER)									
SECTION II - WORK ACCOMPLISHED									
17a. REPAIR ORGANIZATION/ACTIVITY			c. UNIT IDENT CODE		18. TYPE ORGANIZATION/ACTIVITY AC. COMPLETING WORK (Select one - use / or X)		19. AMS ACCOUNT CODE		
b. LOCATION					<input type="checkbox"/> 1 TOE <input type="checkbox"/> 2 TO <input type="checkbox"/> 3 CONTRACTOR				
20a. ACT CODE	FAILURE CODE	c. COMPONENT/PART NOUN, SVC, OR MWO NO.			MANHOURS	NATIONAL STOCK NUMBER	PART SOURCE CODE	QTY	PARTS COST
		d. CB CODE	e. REF DESIGNATOR	f. MFR CODE	(Hrs & tenths)				
	Secondary Component	Secondary Serial #	Secondary Noun	99207		Secondary NSN		1	
					l. TOTAL MANHOURS	m. TOTAL MANHOURS COST	n. TOTAL PARTS COST		
21. DELAY (Select one)					22. DATA TRANSCRIBED				
<input type="checkbox"/> 1 Parts <input type="checkbox"/> 2 Manpower <input type="checkbox"/> 3 Facilities <input type="checkbox"/> 4 Funds <input type="checkbox"/> 5 Tools									
23. SUBMITTED BY NAME		24. RECEIVED BY		26. WORK STARTED BY		28. INSPECTED BY		27. ACCEPTED BY	
JULIAN DATE Julian Date		JULIAN DATE		JULIAN DATE		JULIAN DATE		JULIAN DATE	
					28. DISPOSITION (Select one)				
					<input type="checkbox"/> A To User <input type="checkbox"/> B To Stock <input type="checkbox"/> C Salvaged <input type="checkbox"/> D Evacuated <input type="checkbox"/> E Cannibalization				

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CONTROL COPY 3

Figure 6. Sample of a Completed Engine DA Form 2407 Warranty Claim

(4) If there is doubt concerning warranty coverage, questions, or if other assistance concerning the warranty program is required, please contact your local Logistical Assistance Representative (LAR). Special inquiries can be made in writing to: U.S. Army Aviation Systems Command, ATTN: AMSAV-QR, 4300 Goodfellow Boulevard, St. Louis, Missouri 63120-1798, or by calling AUTOVON 693-1771 (Commercial 314 263-1771).

b. Reporting Procedures. When a failure of a warranted item that requires depot maintenance occurs, the reporting unit/maintenance activity will verify that the failed component is a warranted item (ref. para 7a). The maintenance level which determines unserviceability of a warranted item will initiate the warranty claim action.

(1) Tag all warranty claim exhibits with a DA Form 2402 exchange tag, (Fig 3), to allow for ease of warranty item identification. The tag will be overprinted in Red Letters, "Warranty Exhibit".

(2) The maintenance activity initiating the warranty claim will:

(a) Prepare DA Form 2407 (Figs 4, 5 and 6), IAW DA PAM 738-751.

(b) Copy 1 - not used, remove and destroy.

(c) copy 2 - forward to:

Commander
U s . Army Aviation Systems Command
ATTN: AMSAV-QR
4300 Goodfellow Boulevard
St. Louis, MO 63120-1798

(d) Copy 3 and 4 - retain for local use or until receipt of shipping/disposition instructions from (NICP).

(e) copy 5 - ship with the component.

(3) Warranty Identification Card (WIC) (Fig 1) DA Form 2408-15 AMSAV Overprint 2.

(a) The AH-64A WIC will remain in the aircraft logbook. As airframe components are removed, the component entry will be lined out on the WIC.

(b) TADS/PNVS and Engine Primary Components WICS will be removed from the aircraft logbook and shipped with that primary component for warranty repair. When secondary components are removed and returned for warranty claims, the secondary component entry will be lined out on the WIC and the WIC will be firmly attached to the repaired primary component for return to supply stores. The WIC must remain with the primary component as it will be placed in the aircraft logbook upon reinstallation in an aircraft.

(4) A category II (SF 368) Quality Deficiency Report (QDR) shall not be utilized for item(s) covered under warranty. When the warranty period has expired, and the conditions specified in DA PAM 738-751, para 2-13 are applicable, a SF 368 (QDR) will be submitted.

(5) When a defective item meets the criteria for a category I report, as prescribed in DA PAM 738-751, a deficiency report will be submitted IAW para 2-14. A category I report for a warranted item should be followed up with the submission of the DA Form 2407 (warranty claim).

(6) When the warranty period on any aircraft or primary component has expired, the DA Form 2408-15, AMSAV-Q Overprint 2 (WICs) will be removed from the logbook and forward to:

Commander
U.S. Army Aviation Systems Command
ATTN: AMSAV-QR
4300 Goodfellow Boulevard
St. Louis, Missouri 63120-1798

8. Storage/Shipment Handling

a. Warranty claim exhibits will be cleaned, preserved, tagged and packaged to prevent damage during handling, storage and shipment.

b. Disposition of warranted component to be shipped for depot level repair will be in accordance with the Automatic Return Item List as defined by the Army Master Data File.

c. The DA Form 2408-15, AVSCOM Overprint 2 WIC must accompany all TADS/PNVS and T 700-GE-701 Engine Primary Components for the duration of their respective warranty coverage period.

APPENDIX A
 AH-64A
 WARRRANTED COMPONENTS

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Shaft Driven Comp. (SHADRICOM)	7-211710013-7	606545-4-1	1660-01-243-1067
Main Transmission Assy (MAINXMSNA)	7-311310001-37		1615-01-252-6376
Engine, NGB, Left (ENGNGBLFT)	7-311320001-3		1615-01-155-6578
Engine, NGB, Right (ENGNGBRGT)	7-311320001-4		1615-01-155-6582
Gearbox, Intermediate (GBINTERMED)	7-311330001-3		1615-01-232-0038
Gearbox, Tailrotor (GBTAILROT)	7-311340001-5		1615-01-254-7793
Head Assy, Main Rotor (MRHEADASY)	7-311411003-607		1615-01-245-3148
Blade Assy, S/T M/R (MRBLADEAY)	7-311412000		1615-01-147-4873
Swashplate, Main Rotor (MRSWHPLAT)	7-311511101-7		1615-01-224-4867
Servocylinder, Lat. (LATSERVOC)	7-311820011	289300-1003XY	1650-01-243-1727
Servocylinder, Col. (COLSERVOC)	7-311820011	289300-1003XY	1650-01-243-1727
Servocylinder, Long. (LONSERVOC)	7-311820012	308900-1003XY	1650-01-242-1497
Servocylinder, Dir (DIRSERVOC)	7-311820014	289400-1001XY	1650-01-159-4480

*Including part number shown and subsequent part numbers of like components.

NOTE: Refer to TM 55-1520-238-23P to obtain NSNs for subsequent series dash numbers (later configurations) for the above list of part numbers.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Fire Control Computer (FIRCONCMP)	7-319200001	8676000-515	1270-01-187-5449
Module Assy, Memory (MEMMODASY)		8676060-513	1270-01-218-6994
Power Supply Assy (PWRSPASY)		8676110-503	1270-01-185-8453
Module Assy, CPU (CPUMODASY)		8676020-507	1270-01-207-8954
Module Assy, Digital (DIGMODASY)		8676030-501	1270-01-190-2364
Computer Assy (COMPTRASY)		8676070-501	1270-01-189-6498
Aux Power Unit** (AUXPWRUNT)	7-211651002-5	3800102-2	2835-01-172-6200
Clutch ASSY (CLUTCHASY)		3886000-5	2835-01-164-5786
Starter, Hyd. (HYSTARTER)		4100196-2	2990-01-179-7252
Controller, Temp. (TEMPERCON)	7-211652001	2101790-6-1	6685-01-243-2683
Control Assy, Fuel (FULCONASY)		3882660-2	2910-01-166-1962
Case, Combustion Engine (COMBUSCAS)		3846026-6	2835-01-163-9629
Pump Assy, Oil Engine (OILPMPASY)		3880225-2	4320-01-178-0157

*Including part number shown and subsequent part numbers of like components.

**Applicable to aircraft serial numbers 85-25351 thru 85-25488 only.

NOTE: Refer to TM 55-1520-238-23P to obtain NSNs for subsequent series dash numbers (later configurations) for the above list of part numbers.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Hellfire Electronics (HELFIRESLK)	7-317141001	622-5646-001	1270-01-187-5778
Power Supply (PWRSUPAS 3)		642-9048-002	1270-01-186-9566
Circuit Card Assy (CKTCRDA55)		651-0025-001	1270-01-186-5738
Circuit Card Assy (CKTCRDA56)		651-0026-001	1270-01-186-5739
Circuit Card Assy (CKTCRDA57)		651-0027-001	1270-01-186-5740
Circuit Card Assy (CKTCRDA57)		651-0028-002	**
Circuit Card Assy (CKTCRDA58)		638-8278-002	1270-01-186-5737
Circuit Card Assy (CKTCRDA59)		646-3952-002	1270-01-186-5742
Circuit Card Assy (CXTCRDASA)		646-3937-004	1270-01-186-5731
Circuit Card Assy (CXTCRDASB)		646-3917-002	1270-01-186-3561
Circuit Card Assy (CKTCRDASC)		638-8040-002	1270-01-186-5732
Circuit Card Assy (CKTCRDASD)		642-9187-002	1270-01-186-0599

*Including part number shown and subsequent part numbers of like components.

**Denotes NSN not available.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Symbolic Generator (SYMBGENER)	7-319800002-3	4034028-954	5820-01-172-2886
Circuit Card Assy (CKTCRDASE)		4034054-901	5820-01-188-8888
Component Card Assy (COMCRDASF)		4034068-901	5820-01-189-7996
Circuit Card Assy (CKTCRDASG)		4034070-901	5820-01-188-8892
CCA, Video Input (VIDINPCCA)		4034052-953	**
Circuit Card Assy (CKTCRDASH)		4034056-901	5820-01-188-8889
Circuit Card Assy (CKTCRDASI)		4034060-952	**
Component Card Assy (COMCRDASJ)		4034062-901	5820-01-188-8891
Circuit Card Assy (CKTCRDASK)		4034072-901	5820-01-189-7997
Circuit Card Assy (CKTCRDASL)		4034060-951	**
Rack Elec Equip (RCKELKEQP)		4034030-953	**
Power Supply (PWRSUPPLY)		4034078-902	5820-01-188-8842

*Including part number shown and subsequent part numbers of like components.

**Denotes NSN not available.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
IHADSS DEU (IHADSSDEU)	7-319430041	10078763-101	1270-01-183-0518
Video Processor CCA (VIDPROCCA)		10078768-101	1270-01-182-1051
BITE Electronic CCA (BITELKCCA)		10078770-101	1270-01-182-1053
Pass Transistor A CCA (PASTRACCA)		10078776-101	1270-01-181-9117
Pass Transistor B CCA (PASTRBCCA)		10078778-101	1270-01-181-9118
Positive Regulator CCA (POSREGCCA)		10078780-101	1270-01-182-3917
Negative Regulator CCA (NEGREGCCA)		10078782-101	1270-01-182-3916
60V Power Supply CAA (60VPWSUCC)		10078852-101	1270-01-182-9566
Test Pattern Gen. CCA (TSTPGNCCA)		10078132-101	1270-01-182-1052
Deflection CCA (DEFLTNCCA)		10078774-101	1270-01-182-9567
Sw (SWEEP-CCA)		10078772-101	1270-01-182-3918

*Including part number shown and subsequent part numbers of like components.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
IHADSS SEU (IHADSSSEU)	7-319430031	10080253-102	1270-01-183-8519
Decode & Interrupt CCA (DECINTCCA)		10078784-101	1270-01-181-9119
Power Inter CPU CCA (PWINCPCCA)		10078786-102	1270-01-181-9120
Process Memory CCA (PRSMEMCCA)		10078788-101	1270-01-101-9121
Remote Terminal Inf. CCA (RMTERICCA)		10078790-102	1270-01-181-9122
Rec Cntl\Pulse SFP CCA (RMC/PSCCA)		10078798-102	1270-01-181-9125
Visor Retract CCA (VISRETCCA)		10078800-102	1270-01-182-9569
Pass Transistor A CCA (PXSTRACCA)		10078804-101	1270-01-182-9581
Pass Transistor B CCA (PXSTRBCCA)		10078806-101	1270-01-182-9580
Rec. Dr. & Power Sweep CCA (RTDRPWSCC)		10078808-102	1270-01-182-9582
A to D converter CCA (ADCONVCCA)		10078810-101	1270-01-182-9583
SEU Regulator CCA (SEUREGCCA)		10078846-101	1270-01-182-9584
SSU Motor & Cal CCA (SSUMBCCA)		10078844-101	1270-01-182-9585
Interim Energy Storage CCA (INENSTCCA)		10088298-101	1270-01-182-9570
Helmet Sig Processor CCA (HMTSPRCCA)		10078792-101	1270-01-181-9123
Oscillator Cnt Down CCA (OSCNONCCA)		10078794-101	5950-01-181-9124
Power Transformer Assy (PWTFMRCCA)		10079509-101	1270-01-182-9564
Filter CCA (FILTERCCI)		10088306-101	1270-01-183-9575
Motor Drivers CCA (MOTDVRCCA)		10078802-101	1270-01-182-9579

*Including part number shown and subsequent part numbers of like components.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Display Adj panel (DISADJPNL)	7-319430002	10080363-101	**
CCA, Bit & Intl (B & INTLCCA)		10069976-101	1270-01-181-9114
CCA, Cathode Amp (CATREGCCA)		10069979-101	1270-01-181-9113
CCA, Video Amp (VIDAMPCCA)		10069982-101	1270-01-181-9115
CCA, Remote Adj Rly (REMADJCCA)		10069985-101	1270-01-181-9116
Sensor Survey Unit (SENSVYUNI)	7-319420001	10078752-101	**
CCA, Pulse Sensor (PULSENCCA)		10078753-101	1240-01-158-8257
CCA, Programer Assy (PROGMRCCA)		10105846-101	1240-01-158-8258
Cent Display, ARCS (CONDISARC)	7-317310000-3		1005-01-220-8571
CCA, Memory (MEMORYCCA)		2807850-1	1290-01-220-8652
CCA, Mix Interface (MIXIFRCCA)		2807856-1	1290-01-182-7655
CCA, Fuzer (Analog) (FUZANLCCA)		2807862-2	1290-01-220-8653
CCA, Power Supply (PWRSUPCCA)		2807829-1	1290-01-182-7494
CCA, CPU Interface (CDUINFCCA)		2807853-1	1290-01-182-7654
CCA, Module Assy (MODULEASY)		2807839-1	1290-01-182-7480
CCA, I/O No. 1 (I/ONRICCA)		2807843-1	1290-01-220-8651
CCA, I/O No. 2 (I/ONR2CCA)		2807846-1	1290-01-220-8572

*Including part number shown and subsequent part numbers of like components.

** Denotes NSN not available.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Type I Dig Multiplexer (TYPIDIGMX)	7-311F00001	4032297-955	7025-01-211-0130
CCA, SSIU-A (SSIU-ACCA)		4032282-951	1270-01-169-8927
CCA, SSIU-J (SSIU-JCCA)		8000899-951	1270-01-168-7355
CCA, I/O Cntl (I/OCNTCCA)		4032290-951	1270-01-223-5731
Power Supply (PWRSUPASY)		4032995-951	1270-01-169-7104
CCA, Power Supply (PWRSUPCCA)		4033002-951	* *
Type II Dig. Multiplexer (TYP2DIGMX)	7-311F00003	4032998-954	7025-01-214-0988
Chassis, Electrical (ELECKCHASS)		4032296-952	1270-01-218-1730
Power Supply (POWERSPLY)		4033453-951	1270-01-155-6740
CCA, Power Supply (PWRSPPCA)		4033452-951	* *

*Including part number shown and subsequent part numbers of like components.

**Denotes NSN not available.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Type III Dig. Multiplexer (TYP3DIGMX)	7-311F00002	4032299-956	7025-01-210-7768
CCA, SSIU-J (SSIU-JCCA)		8000899-951	1270-01-168-7355
CCA, I/O Cntrl (I/OCNTCCB)		4032290-960	1270-01-223-5731
Power Supply (POWRSUPAY)		4032995-951	1270-01-169-7104
CCA, Power Supply (POWSPCCCA)		4033002-951	* *
CCA, Memory A-2 (12KMEMCCA)		8501830-903	1270-01-219-2912
CCA, Memory A-15 (4KMEMOCCA)		8501830-904	1270-01-222-6919
Chassis Electrical, Equip (CHALDEEQP)		4033180-952	1290-01-218-7068
CCA, Micro Control (MICCOMCCA)		4032312-952	1290-01-218-7103
CCA, SSIU-A (SSIU-SCCB)		4032282-951	1270-01-169-8927
Dase Computer (DASECOMTR)	7-211D00005	4040859-955	* *
CCA, Processor #2 (PROSSRCCA)		4032306-951	1290-01-170-4344
CCA, Microcntl (MECROMCCA)		4032312-951	1290-01-170-8743
CCA, PRCBRFI/OFBF (PRCSOFCCA)		4041102-951	6615-01-172-5285
CCA, I/O CTL (I/OCTLCCA)		4041105-951	6615-01-172-5284
Power Supply (PRWSPLLLY)		4032995-951	1270-01-169-7104
CCA, Power Supply (PWESPLLLY)		4033002-951	* *
CCA, Memory A-15 (MEM12KORY)		8501830-901	1270-01-219-2912

*Including part number shown and subsequent part numbers of like components.

**Denotes NSN not available.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Control Box, Turret (BOXCONTUR)	7-317222004-19		1290-01-206-0907
CCA, Servo Interface (SVOINFCCA)		520050-02-01	1005-01-203-3410
CCA, Logic (LOGICCAA)		520051-02-01	1005-01-205-4022
CCA, Logic & Bit (LOGBITCCA)		520052-02-01	1005-01-208-5800
CCA, Train/Elev Contr (TRELCOCCO)		520053-02-01	1005-01-203-3411
CCA, Power Supply Assy (CCASUPPWR)		520055-02-01	1005-01-208-5801
Indicator, Attitude (INDICATTI)	7-211C10008		6610-01-163-7061
Indicator, Radio Magnet (INDRADMAG)	7-214200027		5826-01-183-5499
Indicator, Remote Attitude (INDREMATT)	7-214200028		6610-01-158-2988
Panel Assy, Data Entry K/BO (PNASDEKYB)	7-219510034-601		1270-01-085-3373
CCA, Logic (CCALOGASY)	7-219510036		1270-01-186-5733

*Including part number shown and subsequent part numbers of like components.

NOTE: Refer to TM 55-1520-238-23P to obtain NSNs for subsequent series dash numbers (later configurations) for the above list of part numbers.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Panel Assy, Fire Control (PNLASYFCS)	7-319510011-3		**
Bridge Assy (BRIDGEASY)	7-3195100315-3		**
CCA, Receiver (RCVR-CCA)	7-319510019-601		1270-01-185-3999
Mother Board (MTRBRDASY)	7-319510023		1270-01-185-8457
Bridge Assy, Logic (LOGBRGASY)	7-319510052		**
MRTU Signal Resistor (CBMRTUSIG)	7-319510054		**
Omnidir, Airspeed Sens (OMNIAIRSR)	7-319720006	02585-3	1270-01-211-5639
Gun Control Box Assy (GNCNBXASY)	7-217222500-603		1005-01-211-4165
Chassis, Wired (CHWIREDGN)	7-317222506-601		**
CCA, Firing Logic (WBASYFIRL)	7-217222515-601		1005-01-211-6032
CCA, Drive/Brk (WBADRVBRK)	7-217222525-601		1005-01-211-6033
CCA, Gun Interface (WBAGUNINF)	7-217222555-601		1005-01-211-6034
CCA, Firing Pulse (WBAFIRPUL)	7-317222545		1005-01-211-6018
Rounds, Counter (RNDCTRASY)	7-217231706-601		1005-01-211-3656

*Including part number shown and subsequent part numbers of like components.

**Denotes NSN not available.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Heading Attitude Ref Sys (HEADATTRS)	7-314200034	869415-5	6604-01-161-3919
CCA, Nav (NAVPROCCA)		869340-9	**
CCA, Dig (DIGTORCCA)		858830-5	**
CCA, Sen (SENELECCA)		869335-8	**
CCA, Tur (TINOUTCCA)		869440-5	**
CCA, Dig (DIGI/OCCA)		857245-4	**
CCA, Ana (ANAI/OCCA)		869450-2	**
CCA, Pow (PWRSUPCCA)		869455-4	**
CCA, Input Pwr Cnt (INPOCOCCA)		869470-1	**
Sen, Sub (SENASYSUB)		856935-8	**
AC Generator (AGGENERAT)	7-211B11025-3	28B391-2B	6115-01-160-8039
Controller, Stabilator (STABICTRL)	7-211D10001-11	776160-2	6615-01-161-2803
CCA, Gain Control (GAMCMTCCA)		775432-2	6105-01-184-1852
CCA, Fault Detect (FALDCTCCA)		775434-2	6105-01-168-4502
CCA, Power Supply (CCAPOESPY)		775436-2	6105-01-185-3217
CCA, Power Driver (PWRDVRCCA)		775438-2	6105-01-085-3218
Controller, Pylon Actuator (PYLCONACT)	7-317400220	88001330-102	1560-01-165-6778
Flex Circuit (FLEXCTRCT)		88001333-102	**
Air Data Processor (AIRDATPRO)	7-319720008	02584-7	1430-01-211-0025
Component Assy (COMASYCOM)		05066	**

*Including part number shown and subsequent part numbers of like components.

**Denotes NSN not available.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Shock Strut, Main Landing Gear (SHKMAINLG)	7-311210100	1168100-505	1620-01-147-4775
Environmental Control Unit (ENCUENCUE)	7-311A22105	2203010-1-1	1660-01-159-7141
Heat Exchanger (HEATEXCHR)		194186-2-1	**
Condenser Rehear (CONREHEAT)		194187-2-1	1660-01-163-4709
Control, Temp Sensor (CONTEMSEN)		625614-2-1	6685-01-182-5130
Valve, Modulation (VALVEMODU)		397884-1-2	2915-01-163-9478
Turbine Cooling (TURBINCOL)		2204390-1	1660-01-179-0969
Valve, Louver Control (VALLINDIR)	7-116310003-3		4810-01-157-2527
Valve, Fuel (VALVEFUEL)	7-116310018		4810-01-159-8469
Valve, Fuel Tank Shut Off (VALFUSHOF)	7-116310060		4810-01-160-1292
Valve, Relief Pressure (VALRELPRE)	7-116310061		4820-01-160-8097
Valve, Regulation Fuel (VALREGFUL)	7-211710004		4820-01-158-4486
Valve, Defog (VALVDEFOG)	7-211710060-3		1650-01-158-4470
Valve, Solenoid (VALSOLENO)	7-116310001		4810-01-161-1198

*Including part number shown and subsequent part numbers of like components.

**Denotes NSN not available.

NOTE: Refer to TM 55-1520-238-23P to obtain NSNs for subsequent series dash numbers (later configurations) for the above list of part numbers.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Throttle Valve, SCD (THRVALSDC)	7-211710062-5		4810-01-163-4544
Starter, Air Turbine (STAAIRTUR)	7-116320000-3	3505300-4-1	2995-01-159-8510
Valve, Shut Off (VALSHUTOF)	7-116320001-3	898916-10-1	4810-01-185-3210
Shaft, Drive Tail Rotor (TRSHFDRIV)	7-211350005		1615-01-154-7075
Shaft Assy, Tail Rotor (TRSHFTASY)	7-211350006-3		1615-01-154-7084
Hangar Assy, Aft Bearing (AFTBHANAY)	7-211350007		1615-01-161-3962
Shaft, Apu Drive (APUDRVSHF)	7-211350009		2835-01-154-7122
Blade Assy, Tail Rotor (TRBLDASSY)	7-311422050		1615-01-154-7139
Tail Rotor Swashplate (TRSWASHPL)	7-311527038-603		1615-01-224-6950
Valve, Shut Off (SOFFVALVE)	7-211642002-3		**
Valve, Solenoid (SLNDVALVE)	7-211642003-7		**
Valve, Solenoid (SOLNVALVE)	7-211642003-9		**

*Including part number shown and subsequent part numbers of like components.

**Denotes NSN not available.

NOTE: Refer to TM 55-1520-238-23P to obtain NSNs for subsequent series dash numbers (later configurations) for the above list of part numbers.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Valve, Shutoff Fuel (SOFUELVAL)	7-211642004	AV24B1293	2915-01-165-1025
Valve, Fuel Transfer (FUELXFRVA)	7-211642092		168-91-159-7988
Manifold, Fuel Service (FUELSEMF)	7-311642001	707600-3	1560-01-065-6851
Valve Shut Off, APU (APUSOVALV)	7-211642059		2990-01-159-0859
Pump APU Boost (APUBSTPMP)	7-211642062-7		2910-01-160-1265
Valve, Solenoid (SLNODVALV)	7-311642045		4810-01-163-4645
Valve, Anti Ice (ANTICEVAL)	7-211670301-3		1650-01-159-4425
Pump, Axial Piston (AXPSTPUMP)	7-311810022-3		4320-01-158-0893
Manifold Assy, Primary (PRTMANASY)		266500-1007	1650-01-226-7709
Manifold, Utility (UTILMANIF)		266600-1007	1650-01-228-5401
Pump, Hydraulic RAM (HYRAMPUMP)		266700-1001	4320-01-159-4469
Heat Exchanger, AIRC (ARHEATEXC)	7-211810018		1650-01-160-5612

*Including part number shown and subsequent part numbers of like components.

APPENDIX A, AH-64 WARRANTED COMPONENTS, CONT'D

<u>NOUN</u>	<u>PART NUMBER*</u>	<u>VENDOR PART NUMBER</u>	<u>NSN</u>
Fan, Vaneaxial (VANIXLFAN)	7-211A23103-3		4140-01-168-0158
Magazine, Ammo Storage (AMSTORMAG)	7-317236501-3		1005-01-207-5683
Strut Assy, Rotor Support (STRASSY11)	7-311160055-1		1615-01-164-3791
Strut Assy, Rotor Support (STRASSY22)	7-311160055-2		1615-01-164-3790
Strut Assy, Rotor Support (STRASSY33)	7-311160060-1		1615-01-164-3789
Strut Assy, Rotor Support (STRASSY44)	7-31160060-2		1615-01-164-3788
Strut Assy, Rotor Support (STRASSY55)	7-31160070-1		1615-01-165-1028
Strut Assy, Rotor Support (STRASSY66)	7-311160070-2		1615-01-165-1029
Strut Assy, Rotor Support (STRASSY77)	7-311160085-1		1615-01-163-9508
Strut Assy, Rotor Support (STRASSY88)	7-311160085-2		1615-01-163-9507
Base Assy, Mast (MASTBAASY)	7-311160030		1615-01-155-6581
Pump, Lube, Main Transmission (MXMSNPPMA)	7-311310101	12855	4320-01-163-7679
Heat Exchanger, Air (AIRHETEXC)	7-211310111-3		1660-01-159-4482
Actuator, Electro-ME (ELECEACTR)	7-311D10018		**

*Including part number shown and subsequent part numbers of like components.

**Denotes NSN not available.

APPENDIX B
 TARGET ACQUISITION DESIGNATION SYSTEM\PILOT NIGHT
 VISION SENSOR (TADS/PNVS) WARRENTED
 PRIMARY AND SECONDARY COMPONENTS

PRIMARY COMPONENTS
 SECONDARY COMPONENTS

<u>Item</u>	<u>Part Number*</u>
TADS	
Turret Assy	13076290
Boresight	13075454-019
Circuit Card Assy, Rate Gyro	13076378
Optical Relay Column Assy	13074259
Electronic Control Amplifier (Torquer Amp)	
Elevation and Yaw/Azimuth CCA	13076096-019
TADS Night Sensor Assy (NSA)	
Focus Control TADS CCA	13074124
ACM CCA	13076389-029
FOV CCA	13074123
Focus Adjust Pot CCA	13074556
Visual Multiplexer Assy	13075911
Power Supply Assy	13076193
Power Regulator CCA	13074308
Day Sensor Subassembly	
ALC Servo CCA	13075761-029
Optical Adjust CCA	13075762
Television Sensor Assy (TV Sensor)	
Power Supply Assy	13076193
Laser Transceiver Unit (LTU)	
Pulse Forming Network Assy	13079339
Receiver	13079300

*Including part number shown and subsequent part numbers of like components.

APPENDIX B, TADS/PNVS WARRANTED COMPONENTS, CONT'D

<u>Item</u>	<u>Part Number*</u>
Indirect View Display Electrical Assy (IVD)	
Motor Drive CCA	13075607-019
Brightness CCA	13076240-019
Relay Drive CCA	13075675-019
BITE CCA	13074324
Contrast CCA	13074323
Motherboard CCA	13075815
Video Preamplifier	13078270
BIT Pattern Generator	13078710
Vertical Sync/15 Volt Regulator	13078070
High Voltage Power Supply	13078090
Low Voltage Power Supply	13078110
Focus Drive Reg CCA	13078130
Relay Drive Assy	13078280
Laser Tracker/Receiver Assy	13077510
TADS Electronic Unit (TEU)	
LST Decoder CCA	SM-D-703790
CPU CCA	13074388-019
Discrete Serial I/O CCA	13076348-029
Digital Tracker Processor CCA	13074391
Digital Tracker CPU CCA	13076289-019
Analog I/O CCA	13076324-019
Video Processor CCA	13074393
Timing Generator BITE CCA	13076214-019
Memory CCA	13076686
Interface I/O Laser, CCA	13075821
R/D Converter and Channel	13084713
Electronic Unit Subassembly	13075050-049
5 Volt Power Supply Assy	13074397
TADS Power Supply (TPS)	
Regulator CCA	13074415
Gyro Excitation CCA	13074341
BITE/Control CCA	13076028-019
Power Supply Motherboard	13074244

*Including part number shown and subsequent part numbers of like components.

APPENDIX B, TADS/PNVS WARRANTED COMPONENTS, CONT'D

<u>Item</u>	<u>Part Number*</u>
Laser Electronic Unit (LEU)	
Range Counter CCA	13079704
Receive/Range Counter FD/LS CCA	13079707
Code Generator CCA	13079713-019
Power Supply FD/LS CCA	13079716-019
Low Voltage Power Supply CCA	13079710
High Voltage Power Supply Assy	13079420
Alphanumeric Display Assy (AND)	
Display Driver CCA	13074358
Character Gen CCA	13074367-019
Interface Electronics CCA	13076313
Alphanumeric Display CCA	13074361
A.N.D. Motherboard	13076009
PNVS	
Azimuth Drive Gimbal Assy	13080423
PNVS Turret Assy	
Visual Relay/Multiplexer Assy	13080390
Power Supply Assy	13076193
Elevation Mirror and AFOCAL Lens	13080295
ACM CCA	13076389-029
Focusing Assy	13080050
Focus Control CCA	13080010
Power Regulator CCA	13074308
PNVS Control Amplifier (Torquer Amp)	
PNVS Torque AMP CCA	13080397
PNVS Electronic Unit Assy (PEU)	
Regulator CCA	13080303
Interface CCA	13080411
BITE/Control CCA	13080446
Video Processor CCA	13080416
Electronic Chassis Assy	13080237

*Including part number shown and subsequent part numbers of like components.

APPENDIX C
T700-GE-701 ENGINE
WARRANTED PRIMARY AND SECONDARY COMPONENTS

Primary Components

<u>Item</u>	<u>Part Number</u>	<u>NSN</u>
T700-GE-701 Engine	6044T06G01	2840-01-114-2211
Hydromechanical Unit (HMU)	4046T52G14	2915-01-222-7781
Electrical Control Unit	4082T99G01	2925-01-222-7764

Secondary Components

<u>Item</u>	<u>Part Number</u>	<u>NSN</u>
Cold Section Module	6044T07G01	2840-01-121-0751
Power Turbine Module	6044T08G01	2840-01-121-0752
Accessory Gearbox	6039T19G03	2840-01-101-9853
Gas Generator Turbine Rotor	6053T40G01	2840-01-137-5812
Gas Generator Turbine Stator	6053T36G02	2840-01-137-5820
Stage 1 Nozzle	5043T24G07	2840-01-120-7727
Combustion Liner	6043T71G03	2840-01-143-9806
Output Shaft Assembly	6039T56G04	2840-01-083-6844
Power Take-off Drive Assembly	5044T27G01	2840-01-082-8046
History Recorder	4046T26G03	2995-01-120-8714
Anti-Ice Bleed Valve	4046T28G05	2995-01-134-7264
Particle Separator Blower	6034T62P13	2995-01-128-6846
Overspeed Drain Valve	3046T17G01	2915-01-150-2933
Lube and Scavenge Pump	5034T11P04	2840-01-126-4129
Fuel Boost Pump	3033T33G02	2915-01-120-8717
Lube Oil Cooler	4046T25G01	2935-01-084-2430
Particle Separator Swirl Frame	6039T00G02	2840-01-087-9159

NOTE: Refer to TM 55-2840-238-23P to obtain NSNs for subsequent series dash numbers (later configurations) for the above list of part numbers.

By Order of the Secretary of the Army:

Official:

CARL E. VUONO
General, United States Army
Chief of Staff

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

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Maintenance requirements for AH-64A Helicopter, Attack (APACHE).



THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT. FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

PFC JOHN DOE
COA, 3d ENGINEER BN
FT. BELMONTWOOD, MD 63108

DATE SENT

PUBLICATION NUMBER

TB 55-1520-238-23-1

PUBLICATION DATE

13 SEP 1988

PUBLICATION TITLE WARRANTY PROGRAM FOR HELICOPTER, ATTACK AH-64A

BE EXACT. PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
6	2-1 a		
B1		4-3	
125	line 20		

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

In line 6 of paragraph 2-1a the manual states the engine has 6 Cylinders. The engine on my set only has 4 Cylinders. Change the manual to show 4 Cylinders.

Callout 16 on figure 4-3 is pointing at a bolt. In key to figure 4-3, item 16 is called a shim - Please correct one or the other.

I ordered a gasket, item 19 on figure B-16 by NSN 2910-00-762-3001. I got a gasket but it doesn't fit. Supply says I got what I ordered, so the NSN is wrong. Please give me a good NSN

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

JOHN DOE, PFC (268) 317-7111

SIGN HERE

JOHN DOE

DA FORM 2028-2
1 JUL 79

PREVIOUS EDITIONS ARE OBSOLETE.

DRST5-M Overprint 1, 1 Nov 80

PS--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

TEAR ALONG PERFORATED LINE

FILL IN YOUR
UNIT'S ADDRESS

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U S ARMY AVIATION SYSTEMS COMMAND
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ST. LOUIS, MO 63120-1798

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TEAR ALONG PERFORATED LINE

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigram = .035 ounce
 1 dekagram = 10 grams = .35 ounce
 1 hectogram = 10 dekagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	To	Multiply by	To change	To	Multiply by
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F Fahrenheit
temperature

5/9 (after
subtracting 32)

Celsius
temperature

°C

