

**\*TM 1-1520-238-23P-2**

---

**TECHNICAL MANUAL**

**AVIATION UNIT AND INTERMEDIATE MAINTENANCE  
REPAIR PARTS AND SPECIAL TOOLS LIST**

**FOR**

**HELICOPTER, ATTACK,  
AH-64A APACHE  
(NSN 1520-01-106-9519)**

**DISTRIBUTION STATEMENT A:** Approved for public release; distribution is unlimited.

\*This manual together with TM 1-1520-238-23P-1, TM 1-1520-238-23P-3, TM 1-1520-238-23P-4, and TM 1-1520-238-23P-5, supersedes TM 55-1520-238-23P-1, TM 55-1520-238-23P-2, TM 55-1520-238-23P-3, TM 55-1520-238-23P-4 and TM 55-1520-238-23P-5, dated 24 October 1994, including all changes.

---

**HEADQUARTERS, DEPARTMENT OF THE ARMY  
28 May 1996**

Technical Manual  
No. 1-1520-238-23P

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, DC 28 May 1996

**TECHNICAL MANUAL**

**AVIATION UNIT AND INTERMEDIATE MAINTENANCE  
REPAIR PARTS AND SPECIAL TOOLS LIST  
FOR**

**HELICOPTER, ATTACK,  
AH-64A APACHE  
(NSN 1520-01-106-9519)**

**Current as of 31 December 2000**

**REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in the back of this manual directly to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5230. A reply will be furnished directly to you. You may also send in your comments electronically to our e-mail address: 2028@redstone.army.mil or by fax 205-842-6546/DSN 788-6546. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

**DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.**

**NOTE:**

This manual is printed in five volumes as follows:

- TM 1-1520-238-23P-1, consisting of Table of Contents, Section I and Section II (Functional Groups 00 thru 05).
  - TM 1-1520-238-23P-2, consisting of Table of Contents, Section I and Section II (Functional Groups 06 thru 09).
  - TM 1-1520-238-23P-3, consisting of Table of Contents, Section I and Section II (Functional Groups 10 thru 60) and Section III.
  - TM 1-1520-238-23P-4, consisting of Section I and Section IV (National Stock Number Index and Part Number Index).
  - TM 1-1520-238-23P-5, consisting of Section I and Section IV (Figure and Item Number Index).
- Sections I and IV are applicable to the -1, -2, -3, -4, and -5.

\*This manual together with TM 1-1520-238-23P-1, TM 1-1520-238-23P-3, TM 1-1520-238-23P-4, and TM 1-1520-238-23P-5, supersedes TM 55-1520-238-23P-1, TM 55-1520-238-23P-2, TM 55-1520-238-23P-3, TM 55-1520-238-23P-4 and TM 55-1520-238-23P-5, dated 24 October 1994, including all changes.

TABLE OF CONTENTS

	Page	Illus/ Figure
Section I. INTRODUCTION .....	1	
Section II. REPAIR PARTS LIST .....		
Group 00 AH-64A Helicopter (Exploded View) Functional Groups List .....	1-1	1
Group 02 Airframe		
Forward Fuselage Assembly .....	2-1	2
Skin, Stringer Installation (FS 35 to FS 115) .....	3-1	3
Forward Fuselage Assembly, Lower Access Doors .....	4-1	4
Keel Beam Installation, Forward Fuselage .....	5-1	5
Forward Fuselage Gun and Ammo Support .....	6-1	6
Structure and Support Installation (FS 35 to FS 57) .....	7-1	7
Forward Fuselage Assembly, Electronic Shelf and Doors .....	8-1	8
Shelf Assembly, Aircraft (FS 35 to FS 57) .....	9-1	9
Forward Fuselage Assembly, Canopy Door and Windshield .....	10-1	10
Forward Fuselage Assembly, TADS/PNVS Support .....	11-1	11
Forward Avionics Bay and Fan Support Installation .....	12-1	12
Structure Installation, FWD Avionics Bay LH (Part 1) .....	13-1	13
Structure Installation, FWD Avionics Bay LH (Part 2) .....	14-1	14
Structure Installation, FWD Avionics Bay RH (Part 3) .....	15-1	15
Structure Installation, FWD Avionics Bay RH (Part 4) .....	16-1	16
Structure Installation, FWD Avionics Bay (Frame Assembly) (Part 5) .....	17-1	17
Fairing, Fuselage, Nose Assembly .....	18-1	18
Forward Fuselage Structure (FS 35 to FS 80) (Copilot/Gunner) .....	19-1	19
Floor Installation Assembly, Copilot/Gunner Cockpit .....	20-1	20
Frame Installation (FS 35 and FS 46) .....	21-1	21
Frame Installation (FS 57 and FS 69) .....	22-1	22
Frame Installation Assembly (FS 80) .....	23-1	23
Frame Installation Assembly (FS 91) .....	24-1	24
Forward Fuselage (FS 105 to FS 115) .....	25-1	25
Frame Installation (FS 105) .....	26-1	26
Frame Installation Assembly (FS 115) .....	27-1	27
Beam and Pedal Support Installation (Pilot) .....	28-1	28
Floor Installation Assembly, Pilot (Center) (FS 98 to FS 125) .....	29-1	29
Floor Installation Assembly, Pilot (Left and Right Sides) (FS 98 to FS 125) .....	30-1	30
Shelf Installation Assembly, FWD Avionics Bay LH .....	31-1	31
Shelf, Duct Assembly LH FAB .....	32-1	32
Shelf Installation Assembly, FWD Avionics Bay RH .....	33-1	33
Shelf, Duct Assembly RH FAB .....	34-1	34
Gun Fairing Assembly (FS 103) .....	35-1	35

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Canopy Installation .....	36-1	36
Structure Installation, Rollover .....	37-1	37
Bow Beam Installation LH .....	38-1	38
Bow Beam Installation RH .....	39-1	39
Vent Installation Assembly .....	40-1	40
Panel Installation Assembly, Upper AFT .....	41-1	41
Canopy Installation Assembly LH .....	42-1	42
Door and Bumper Installation, Copilot/Gunner .....	43-1	43
Door and Bumper Installation, Pilot .....	44-1	44
Mechanical Installation, Door (Lever, Pulleys and Cable Assembly) Copilot/Gunner and Pilot .....	45-1	45
Mechanical Installation, Door (Locking Bars, Push Rods and Handles) Copilot/Gunner and Pilot .....	46-1	46
Door Assembly, Canopy, Copilot/Gunner (Upper) .....	47-1	47
Door Assembly, Canopy, Copilot/Gunner (Lower) .....	48-1	48
Door Assembly, Canopy, Pilot (Upper) .....	49-1	49
Door Assembly, Canopy, Pilot (Lower) .....	50-1	50
Canopy Transparencies Installation .....	51-1	51
Fitting Installation, Fuselage Fairing Support (Part 1) .....	52-1	52
Fitting Installation, Fuselage Fairing Support (Part 2) .....	53-1	53
Doubler Installation Assembly (FS 125) .....	54-1	54
Center Fuselage Access Doors and Panels .....	55-1	55
Center Fuselage Access Doors and Panels (Below WL 112) .....	56-1	56
Center Fuselage Handle and Footstep Installation .....	57-1	57
Bracket Assembly Installation, Rounds Counter Support .....	58-1	58
Closeout Installation and Cross Tube, Main Landing Gear .....	59-1	59
Bulkhead Installation Assembly (FS 125) .....	60-1	60
Frame and Intercostal Installation (FS 125 to FS 135) .....	61-1	61
Floor Installation, Pilot (Part 1) (FS 125 to FS 135) .....	62-1	62
Floor Installation, Pilot (Part 2) (FS 125 to FS 135) .....	63-1	63
Floor Installation, Pilot (FS 135 to FS 144) .....	64-1	64
Floor Installation, Pilot (FS 144 to FS 163) .....	65-1	65
Support Installation, Ammunition Chute (Part 1) .....	66-1	66
Support Installation, Ammunition Chute (Part 2) .....	66A-1	66A
Bulkhead Installation, Canted (Pilot) .....	67-1	67
Structure Installation Assembly, Upper Pilot Bulkhead (Left Side) (Part 1) ..	68-1	68
Structure Installation Assembly, Upper Pilot Bulkhead (Left Side) (Part 2) ..	69-1	69
Structure Installation Assembly, Upper Pilot Bulkhead (Right Side) .....	70-1	70
Structure Installation Assembly, Upper Pilot Bulkhead (Top) .....	71-1	71
Bulkhead Installation Assembly, Pilot .....	72-1	72

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Frame Installation, Fuselage Center (FS 144 and FS 154) .....	73-1	73
Support Installation (FS 125 to FS 163) .....	74-1	74
Pan, Fuel Cell Restraint (FS 135 to FS 163) .....	75-1	75
Frame and Intercostal Installation (FS 163 to FS 176) .....	76-1	76
Frame and Intercostal Installation (FS 182 to FS 199) .....	77-1	77
Frame Installation (FS 199 to FS 214) .....	78-1	78
Support Installation, Ammunition Magazine .....	79-1	79
Frame Installation (FS 230) .....	80-1	80
Frame and Intercostal Installation (FS 230 to FS 238) .....	81-1	81
Frame and Intercostal Installation (FS 247 to FS 269) .....	82-1	82
Longeron Installation .....	83-1	83
Skin and Stringer Installation (LH Side) .....	84-1	84
Skin and Stringer Installation (RH Side) .....	85-1	85
Dagger Installation, Fuselage Stringer Splice .....	86-1	86
Walkway Installation (FS 115 to FS 199) (Part 1) .....	87-1	87
Walkway Installation (LH Side) (FS 115 to FS 163) (Part 2) .....	88-1	88
Walkway Installation (RH Side) (FS 115 to FS 163) (Part 3) .....	89-1	89
Walkway Installation (LH Side) (FS 115 to FS 199) (Part 4) .....	90-1	90
Walkway Installation (RH Side) (FS 115 to FS 199) (Part 5) .....	91-1	91
Catwalk Installation, Upper Fuselage (FS 229 to FS 257) .....	92-1	92
Catwalk Installation, Upper Fuselage (FS 257 to FS 280) .....	93-1	93
Catwalk Installation, Upper Fuselage (FS 280 to FS 310) .....	94-1	94
Catwalk Installation, Upper Fuselage (FS 310 to FS 340) .....	95-1	95
Deck Installation Assembly (FS 158 to FS 188) .....	96-1	96
Deck Installation Assembly (FS 188 to FS 238) .....	97-1	97
Deck Installation Assembly (FS 238 to FS 258) .....	98-1	98
Deck Installation Assembly (FS 258 to FS 280) .....	99-1	99
Splice Installation (FS 436 to FS 476) (Part 1) .....	100-1	100
Splice Installation (FS 436 to FS 476) (Part 2) .....	101-1	101
Crew Station Sealing .....	102-1	102
Splice Plate Installation .....	103-1	103
AFT Fuselage Assembly LH .....	104-1	104
Electronic Compartment Installation LH .....	105-1	105
Stowage Compartment Installation LH .....	106-1	106
Frame Installation Assembly .....	107-1	107
Frame Installation Assembly .....	108-1	108
Skin and Stringer Installation Assembly LH .....	109-1	109
Skin and Stringer Installation Assembly RH .....	110-1	110
Support Installation Assembly, Nacelle Carry-Thru (FS 284) .....	111-1	111
Deck Installation Assembly (Brackets) (FS 280 to FS 300) .....	112-1	112
Deck Installation Assembly (Brackets) (FS 300 to FS 330) .....	113-1	113

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Deck Installation Assembly (Brackets) (FS 330 to FS 370) .....	114-1	114
Deck Installation Assembly (Stringers) .....	115-1	115
AFT Fuselage Assembly RH .....	116-1	116
AFT Fuselage Door Assembly RH .....	117-1	117
Support Installation Assembly Electronic Compartment (Part 1) .....	118-1	118
Support Installation Assembly Electronic Compartment (Part 2) .....	119-1	119
Support Installation Assembly Electronic Compartment (Part 3) .....	120-1	120
AFT Fuselage Frame Installation RH (FS 290 to FS 310) .....	121-1	121
AFT Fuselage Frame Installation RH (FS 310 to FS 370) .....	122-1	122
Drain Pan Installation, Tail Boom Fluid .....	123-1	123
Tailboom Assembly (Part 1) .....	124-1	124
Tailboom Assembly (Part 2) .....	125-1	125
Empennage Installation .....	126-1	126
Spar Box Assembly, Vertical Stabilizer .....	127-1	127
Bracket Assembly, Upper Closing Rib, Vertical Stabilizer .....	128-1	128
Stabilizer, Vertical Tip and Antenna Trailing Edge Assembly .....	129-1	129
Spar Assembly, Forward Vertical Stabilizer .....	130-1	130
Stabilizer, Vertical Lower Leading Edge Fairing Installation .....	131-1	131
Stabilizer, Vertical Center Leading Edge Fairing Installation .....	132-1	132
Stabilizer, Vertical Upper Leading Edge Fairing Installation .....	133-1	133
Stabilator Assembly (Outer) .....	134-1	134
Stabilator Assembly (Spars) .....	135-1	135
Stabilator Assembly (Ribs) .....	136-1	136
Wing Installation .....	137-1	137
Wing Assembly, Aircraft Rib Installation .....	138-1	138
Wing Assembly, Aircraft Skin and Stringer Panel Installation .....	139-1	139
Wing Assembly, Aircraft Spar Installation .....	140-1	140
Wing Assembly, Aircraft Trailing Edge Installation .....	141-1	141
Fairing Installation, Nose Gearbox .....	142-1	142
Fairing Installation, Fuselage .....	143-1	143
Fairing Assembly, Doghouse .....	144-1	144
Fairing Installation Assembly, Main Rotor Shaft .....	145-1	145
Fairing Installation Assembly, Main Rotor Shaft .....	145A-1	145A
Cover Assembly, Sensor AN/AVR2A .....	145B-1	145B
Fairing Installation Assembly, Main Rotor Shaft (Center Section) .....	146-1	146
Frame Installation Assembly, Upper Fuselage Fairing (FS 219 to FS 231) .....	147-1	147
Support Installation Assembly, Door Hinges and Upper Fuselage Fairings ..	148-1	148
Door Installation Assembly, Upper Fuselage Fairing LH (FS 230 to FS 270) .....	149-1	149

**TABLE OF CONTENTS – Continued**

	Page	Illus/ Figure
Door Installation Assembly, Upper Fuselage Fairing RH (FS 230 to FS 270) .....	150-1	150
Fairing Installation Assembly (LH Side) (FS 270 to FS 313) .....	151-1	151
Fairing Installation RH (FS 270 to FS 313) .....	152-1	152
Door Installation Assembly, Upper Fuselage Fairing (FS 270 to FS 313) ....	153-1	153
Fairing Installation Assembly, Hydraulic Access RH (FS 313 to FS 340) ....	154-1	154
Door Installation Assembly LH (FS 313 to FS 340) .....	155-1	155
Fairing Installation (FS 340 to FS 370) .....	156-1	156
Fairing Installation Assembly, Tail Rotor Shaft (FS 370 to FS 450) .....	157-1	157
Fairing Installation Assembly, Tail Rotor Shaft (FS 450 to FS 503) .....	158-1	158
Fairing Installation Assembly, Tailboom Closeout .....	159-1	159
Fairing, Antenna Installation, ADF Sensor .....	160-1	160
Fairing Installation Assembly, Doppler (FS 330) .....	161-1	161
Fairing Installation Assembly, Louver (FS 221 to FS 247) .....	162-1	162
Fairing Installation Assembly, FAB Extension .....	163-1	163
Fairing Installation Assembly, FAB Extension .....	163A-1	163A
Fairing Installation, Ammunition Feed System LH .....	164-1	164
Fairing, Fuselage LH (FS 163 to FS 189) .....	165-1	165
Fairing Assembly, Fuselage LH (FS 115 to FS 163) .....	166-1	166
Fairing Installation, Ammunition Feed System RH .....	167-1	167
Fairing, Ammunition Feed RH (FS 163 to FS 189) .....	168-1	168
Fairing, Ammunition Feed RH (FS 115 to FS 163) .....	169-1	169
Panel Installation, Transmission Access .....	170-1	170
Support Installation, Transmission Access Panel .....	171-1	171
Longeron Installation, Upper Fuselage Fairing .....	172-1	172
Engine Nacelle Installation .....	173-1	173
Door, Access, Work Platform .....	174-1	174
Nacelle Assembly, LH Doors (Part 1) .....	175-1	175
Nacelle Assembly, RH Doors (Part 1) .....	176-1	176
Nacelle Assembly (Part 2) .....	177-1	177
Nacelle Assembly (Part 3) .....	178-1	178
Nacelle Assembly (Part 4) .....	179-1	179
Door Installation, Engine Access and Ventilation .....	180-1	180
Firewall Assembly LH (Part 1) .....	181-1	181
Firewall Assembly LH (Part 2) .....	182-1	182
Firewall Assembly LH (Part 3) .....	183-1	183
Firewall Assembly RH (Part 1) .....	184-1	184
Firewall Assembly RH (Part 2) .....	185-1	185
Firewall Assembly RH (Part 3) .....	186-1	186
Skin and Louver Installation, Nacelle .....	187-1	187
Frame Installation, Canted Nacelle .....	188-1	188

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Air Inlet Assembly .....	189-1	189
Support Installation, Rotor .....	190-1	190
Glareshield Installation, Forward LH (Curtain and Extension) .....	191-1	191
Glareshield Assembly, Forward Fixed LH .....	192-1	192
Glareshield Installation, Forward RH (Curtain and Extension) .....	193-1	193
Glareshield Assembly, Forward Fixed RH .....	194-1	194
Glareshield Installation, AFT LH (Curtain and Extension) .....	195-1	195
Glareshield Installation, AFT RH (Curtain and Extension) .....	196-1	196
Glareshield Assembly, AFT Fixed .....	197-1	197
Glareshield Installation, AFT Vertical .....	198-1	198
Instrument Panel Installation, Copilot/Gunner .....	199-1	199
Console Installation, Copilot/Gunner (LH Side) .....	200-1	200
Console Installation, Copilot/Gunner (RH Side) .....	201-1	201
Instrument Panel Installation, Pilot (Part 1) .....	202-1	202
Instrument Panel Installation, Pilot (Part 2) .....	203-1	203
Console Installation, Pilot (LH Side) .....	204-1	204
Panel Assembly, AFT Cockpit Stow Box .....	205-1	205
Console Installation, Pilot (RH Side) .....	206-1	206
Armored Crew Seat Installation .....	207-1	207
Seat, Aircraft, Armored .....	208-1	208
Seat, Aircraft, Armored (Restraint) .....	209-1	209
Seat, Armored/Cushion (Wing Panels, Cushions and Bucket) (Norton) .....	210-1	210
Seat, Armored/Cushion (Wing Panels, Cushions and Bucket) (Ceradyne) ..	211-1	211
Bucket Assembly .....	212-1	212
Frame Assembly (Handle, Track and Attenuator) .....	213-1	213
Frame Assembly (Crossmembers) .....	214-1	214
Frame Assembly (Fittings) .....	215-1	215
Non-Transparent Barrier Assembly .....	216-1	216
Transparent Barrier Installation .....	217-1	217
Armor Side and Floor Panels (FS 46 to FS 69) .....	218-1	218
Armor Side Panels (FS 115 to FS 145) .....	219-1	219
Scuff Plate Installation, Pilot and Copilot/Gunner .....	220-1	220
Compartment, Map Stowage (Copilot/Gunner) and Holster Installation, IHADSS Display Unit .....	221-1	221
Fairing Installation, Sensor Surveying Unit Mount (Copilot/Gunner)	222-1	222
Boresight Mount Installation, AFT Cockpit .....	223-1	223
Thermal Insulation Installation, Cockpit .....	224-1	224
Pouch Installation, Mask (Cockpit) .....	225-1	225
Foot Guard, Seat Installation (Pilot and Copilot/Gunner) and Mirror Installation (Copilot/Gunner) .....	226-1	226
Plate Installation, Mount Sensor Surveying Unit .....	227-1	227



TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Wire Strike Protection Installation, Lower .....	228-1	228
Wire Strike Protection Installation, Upper .....	229-1	229
Wire Strike Protection Installation, TADS/PNVS .....	230-1	230
Cutter Cable, Aircraft, PNVS .....	231-1	231
Mount, Sensor, Foward (Left Side) AH-64A/AVR-2A .....	231A-1	231A
Mount, Sensor, Foward (Right Side) AH-64A/AVR-2A .....	231B-1	231B
Mount, Sensor, AFT (Left Side) AH-64A/AVR-2A .....	231C-1	231C
Mount, Sensor, AFT (Right Side) AH-64A/AVR-2A .....	231D-1	231D
Connector, Stowage Installation AH-64A/AVR-2A .....	231E-1	231E
Vent Installation AH-64A/AVR-2A .....	231F-1	231F
Doubler Installation, AGES Connector AH-64A/AVR-2A .....	231G-1	231G
Grommet Installation, Wire Feed Thru AH-64A/AVR-2A .....	231H-1	231H
Clamping Stations Installation, Tailboom AH-64A/AVR-2A .....	231I-1	231I
Shelf Installation, AFT Avionics Bay, LH AH-64A/AVR-2A .....	231J-1	231J
 Group 03		
Landing Gear		
Landing Gear Installation (Main and Tail) .....	232-1	232
Main Landing Gear Installation .....	233-1	233
Wire Strike Protection Installation, Main Landing Gear .....	234-1	234
Wheel, Landing Gear (Parker-Hannifin) .....	235-1	235
Wheel, Landing Gear (Goodyear) .....	236-1	236
Landing Gear Assembly .....	237-1	237
Tail, Landing Gear Assembly .....	238-1	238
Wire Strike Protection Installation, Tail Landing Gear .....	239-1	239
Wheel Assembly, Tail Landing Gear (Parker-Hannifin) .....	240-1	240
Wheel Assembly, Tail Landing Gear (Goodyear) .....	241-1	241
Landing Gear, Fixed Tail Landing Gear Subassembly (Fork and Arm) .....	242-1	242
Shock Strut Assembly, Fixed Tail Landing Gear .....	243-1	243
Landing Gear, Fixed Tail Landing Gear Subassembly (Gear Lock and Actuator) .....	244-1	244
Brake System Installation (Master Cylinders) .....	245-1	245
Brake System Installation (Forward Tubing) (Part 1) .....	246-1	246
Brake System Installation (Forward Tubing) (Part 2) .....	247-1	247
Brake System Installation (Upper Tubing) LH .....	248-1	248
Brake System Installation (Upper Tubing) RH .....	249-1	249
Brake System Installation (Parking Brake Cable and Valves) .....	250-1	250
Valve, Rotary, Direct .....	251-1	251
Brake System Installation (AFT Lower Tubing) (Left Side) .....	252-1	252
Brake System Installation (AFT Lower Tubing) (Right Side) .....	253-1	253
Brake, Single Disk (Goodyear) .....	254-1	254
Brake, Single Disk (Parker-Hannifin) .....	255-1	255

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Group 04		
Power Plants		
Panel Assembly, Emergency Power Check .....	256-1	256
Engine Subsystems Installation		
(Inlet Particle Separator and Primary Nozzle) .....	257-1	257
Engine Starter Installation .....	258-1	258
Bleed Air and Anti-Icing System Installation .....	259-1	259
Engine Nacelle Subsystem Installation (Rods and Supports) .....	260-1	260
Engine Nacelle Subsystem Installation (Cowl and Actuator Tubing) .....	261-1	261
Engine Nacelle Subsystem Installation (Radiation Shields) .....	262-1	262
Engine Quick Change Drain System .....	263-1	263
Engine Quick Change Mount Assembly .....	264-1	264
Engine Firewall Louver Installation .....	265-1	265
Louver Assembly, Engine Cooling .....	266-1	266
Nozzle Installation, Secondary Infrared Suppressor .....	267-1	267
Nozzle Assembly, Secondary IRS (Outboard and Center) .....	268-1	268
Nozzle Assembly, Secondary IRS (Inboard) .....	269-1	269
Control Unit, Turbine Engine Speed .....	270-1	270
Engine Control Subsystem Installation (FS 71 to FS 103) .....	271-1	271
Engine Control Subsystem Installation (FS 103 to FS 140) .....	272-1	272
Quadrant Assembly, Pilot Power (Panel and Levers) .....	273-1	273
Quadrant Assembly, Pilot Power (Mechanism and Seals) .....	274-1	274
Quadrant Assembly, Pilot Power (Part 1) .....	275-1	275
Quadrant Assembly, Pilot Power (Part 2) .....	276-1	276
Quadrant Assembly, Pilot Power (Part 3) .....	277-1	277
Lever, Remote Control .....	278-1	278
Quadrant, Control Copilot/Gunner .....	279-1	279
Engine Control Subsystem Installation (FS 140 to FS 219) .....	280-1	280
Engine Control Subsystem Installation (FS 175 to FS 219) .....	281-1	281
Engine Controls Installation (LH Nacelle) .....	282-1	282
Engine Buildup Assembly LH .....	283-1	283
Engine Controls Installation (RH Nacelle) .....	284-1	284
Engine Buildup Assembly RH .....	285-1	285
Wiring Installation, No. 1 Engine (Part 1) .....	286-1	286
Wiring Installation, No. 1 Engine (Part 2) .....	287-1	287
Wiring Installation, No. 2 Engine (Part 1) .....	288-1	288
Wiring Installation, No. 2 Engine (Part 2) .....	289-1	289
Group 05		
Rotors		
Main Rotor Head and Blade Installation .....	290-1	290
Head, Rotary Wing (Dampers) .....	291-1	291
Head, Rotary Wing (Housing and Links) .....	292-1	292

TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Head, Rotary Wing (Strap) .....	293-1	293
Head, Rotary Wing (Hub) .....	294-1	294
Blade, Rotary Wing .....	295-1	295
Tail Rotor Installation (Head Blades) .....	296-1	296
Blade, Rotary Rudder, Tail Rotor .....	297-1	297
Group 06 Drive Train		
Drive System Shaft and Coupling Installation (FS 220 to FS 249) .....	298-1	298
Drive System Shaft and Coupling Installation (FS 253 to FS 551) .....	299-1	299
Drive System Shaft and Coupling Installation (Dampers and Anti-Flail) .....	300-1	300
Main Transmission and Lube System Installation (Drive Shaft and Mast) .....	301-1	301
Main Transmission and Lube System Installation (Hoses and Heat Exchanger) (LH Side) .....	302-1	302
Main Transmission and Lube System Installation (Hoses and Heat Exchanger) (RH Side) .....	303-1	303
Mast Assembly, Air Data Sensor .....	304-1	304
Transmission, Main (Part 1) .....	305-1	305
Transmission, Main (Part 2) .....	306-1	306
Transmission, Main (Part 3) .....	307-1	307
Transmission, Main (Part 4) .....	308-1	308
Transmission, Main (Part 5) .....	309-1	309
Rotor, Disc Brake (Parker-Hannifin) .....	310-1	310
Rotor, Disc Brake (Goodyear) .....	311-1	311
Main Transmission Seal Drain Tube Installation .....	312-1	312
Engine Nose Gearbox Installation .....	313-1	313
Gearbox, Engine Nose .....	314-1	314
Bowl Assembly, Lube Pump .....	315-1	315
Intermediate Gearbox Installation .....	316-1	316
Brace Installation, Tail Rotor Gearbox .....	317-1	317
Tail Rotor Gearbox Installation .....	318-1	318
Group 07 Hydraulic/Pneumatic Systems		
Hydraulic System Installation (FS 165 to FS 199) (LH Side) .....	319-1	319
Manifold, Hydraulic (Part 1) .....	320-1	320
Manifold, Hydraulic (Part 2) .....	321-1	321
Manifold Assembly, Reservoir .....	322-1	322
Hydraulic System Installation (FS 165 to FS 230) (RH Side) .....	323-1	323
Utility Pump and Tube Assembly .....	324-1	324
Main Rotor Servocylinder, Grounding Cable and Mounting Hardware .....	325-1	325
Servocylinder Assembly, Main Rotor, Collective and Lateral (Valves and Filters) .....	326-1	326
Servocylinder Assembly, Main Rotor, Longitudinal (Valves and Filters) .....	327-1	327

**TABLE OF CONTENTS – Continued**

	Page	Illus/ Figure
Control Pressure Tube Assembly (FS 165 to FS 230) .....	328-1	328
Control Return Tube Assembly (FS 165 to FS 230) .....	329-1	329
Hydraulic System Installation (FS 199 to FS 230) (LH Side) .....	330-1	330
Hydraulic System Installation below WL 145, Forward of FS 230 (LH Side) .	331-1	331
Hydraulic System Installation (FS 230 to FS 370) (LH Side) .....	332-1	332
Hydraulic System Installation (FS 230 to FS 255) (RH Side) .....	333-1	333
Hydraulic System Installation (FS 255 to FS 290) (RH Side) .....	334-1	334
Accumulator, Hydraulic .....	335-1	335
Tube Assembly, Metal .....	336-1	336
Hydraulic System Installation (FS 290 to FS 310) (RH Side) .....	337-1	337
Hydraulic System Installation (FS 310 to FS 340) (RH Side) .....	338-1	338
Manifold, Hydraulic (Part 1) .....	339-1	339
Manifold, Hydraulic (Part 2) .....	340-1	340
Manifold, Hydraulic (Part 3) .....	341-1	341
Manifold Assembly, Utility .....	342-1	342
Primary Ground Service Panel Assembly .....	343-1	343
Pump, Hydraulic RAM .....	344-1	344
Utility Ground Service Panel Assembly .....	345-1	345
Primary Pressure Tube Assembly .....	346-1	346
Return Tube Assembly .....	347-1	347
Hydraulic System Installation, AFT Tailboom (LH Side) .....	348-1	348
Hydraulic System Installation, AFT Tailboom (RH Side) .....	349-1	349
Utility Pressure and Return Tube Assembly .....	350-1	350
Utility Auxiliary Pressure and Return Tube Assembly (Part 1) .....	351-1	351
Utility Auxiliary Pressure and Return Tube Assembly (Part 2) .....	352-1	352
Accumulator, Hydraulic Utility System .....	353-1	353
Hydraulic System Installation (Wing) .....	354-1	354
Hydraulic System Installation (Vertical Stabilizer) .....	355-1	355
Servocylinder, Tail Rotor (Valves and Filters) .....	356-1	356
Hydraulic Line and Tailboom Armor Installation .....	357-1	357
Pressurized Air System Installation (FS 176 to FS 250) (Lower) .....	358-1	358
Pressurized Air System Installation (FS 250 to FS 330) (Lower) .....	359-1	359
Pressurized Air System Installation (FS 176 to FS 330) (Hydraulic Manifolds Precharge) .....	360-1	360
Pressurized Air System Installation (FS 223) (Part 1) .....	361-1	361
Pressurized Air System Installation (FS 223) (Part 2) .....	362-1	362
Pressurized Air System Installation (FS 220 to FS 250) (Part 3) .....	363-1	363
Rotor, Compressor, Gas .....	364-1	364
Particle Separator Assembly .....	365-1	365
Pressurized Air System Installation (FS 174 to FS 250) (Upper) .....	366-1	366

TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Pressurized Air System Installation (FS 247) .....	367-1	367
Pressurized Air System Installation (FS 250 to FS 280) (Part 4) .....	368-1	368
Pressurized Air System, Nacelle .....	369-1	369
Group 08 Instrument System		
Pilot and Copilot/Gunner Instrument Panel (Engine Instruments) .....	370-1	370
Access, Indicator, Engine Torque .....	371-1	371
Access, Indicator, Engine Rotor RPM .....	372-1	372
Access, Indicator, Turbine Gas Temperature .....	373-1	373
Access, Indicator, Gas Generator, RPM .....	374-1	374
Access, Indicator, Engine Oil Pressure .....	375-1	375
Access, Digital Display Panel, Selectable Parameter, Copilot/Gunner .....	376-1	376
Access, Indicator, Engine Fuel Quantity .....	377-1	377
Dim and Test Unit .....	378-1	378
Control Box, Electronic, Windshield Anti-Ice .....	379-1	379
Signal Conditioner, Power Supply Dimmer, Engine Out Warning Alarm, Signal Data Converter .....	380-1	380
Tray Assembly, Instrument .....	381-1	381
Access, Signal Data Converter .....	382-1	382
Chassis, Electrical .....	383-1	383
Electronic Component Assembly .....	384-1	384
Plate, Rear Assembly .....	385-1	385
Pilot and Copilot/Gunner Instrument Panel (Flight Instruments) .....	386-1	386
Pitot Static System Installation (FS 115 to FS 230) LH .....	387-1	387
Pitot Static System Installation, Pilot RH .....	388-1	388
Pitot Static System Installation, Copilot/Gunner RH .....	389-1	389
Pitot Static System Installation (FS 125 to FS 295) RH .....	390-1	390
Pitot Static System Installation (Wing) .....	391-1	391
Pilot and Copilot/Gunner Instrument Panel (Miscellaneous Instruments) ....	392-1	392
Group 09 Electrical System		
Wiring Installation, Main Rotor (De-Ice and Air Data Sensor) and Wiring Harness, W109 .....	393-1	393
Distribution Box Installation, Electrical Power .....	394-1	394
Box Assembly, Distribution, Electrical Power (Upper) .....	395-1	395
Box Assembly, Distribution, Electrical Power (Lower) .....	396-1	396
Box Assembly, Distribution, Electrical Power (Structure) .....	397-1	397
Box Assembly, Distribution, Electrical Power (Wire Harness) .....	398-1	398
Control, Generator .....	399-1	399
Wiring Harness, W668 (Part 1) .....	400-1	400
Wiring Harness, W668 (Part 2) .....	401-1	401
Wiring Harness, W668 (Part 3) .....	402-1	402

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Wiring Harness, W668 (Part 4) .....	403-1	403
Panel Installation, Circuit Breaker (Pilot) .....	404-1	404
Circuit Breaker Installation .....	404A-1	404A
Box Assembly, Circuit Breaker (Pilot) .....	405-1	405
Wiring Harness, W605 (Part 1) .....	406-1	406
Wiring Harness, W605 (Part 2) .....	407-1	407
Relay Box Installation, Engine 1 and 2 Start .....	408-1	408
Relay Box Assembly, Engine 1 and 2 Start (A330) .....	409-1	409
Wiring Harness, W652 .....	410-1	410
Transducer, Stabilator Airspeed .....	411-1	411
Switch, Squat .....	412-1	412
Generators and Electrical Component Installation (WL 145) .....	413-1	413
Panel Assembly, Electrical Power (Pilot) .....	414-1	414
Electrical Component Installation (AFT Avionics Bay) .....	415-1	415
Connector, External Power Receptacle (J14) .....	416-1	416
Switch, External Power Access Door and Open Canopy Indicator .....	417-1	417
Battery and Battery Charger .....	418-1	418
Panel Assembly, Circuit Breaker No. 2 (Copilot/Gunner) .....	419-1	419
Panel Assembly, Circuit Breaker No. 1 (Copilot/Gunner) .....	420-1	420
Wiring Harness, W621 .....	421-1	421
Panel Assembly, Interior/Exterior Lights (Pilot) .....	422-1	422
Dimming Multi-Channel Controller Assembly (Data Products) .....	423-1	423
Chassis Assembly, Dimming Controller (Data Products) .....	424-1	424
Utility and Glareshield Light Assembly (Copilot/Gunner) .....	425-1	425
Utility and Glareshield Light Assembly (Pilot) .....	426-1	426
Panel Assembly, Interior Lights (Copilot/Gunner) .....	427-1	427
Light Assembly, Utility Alligator Clamp Maintenance and Cable Assembly, Maintenance Light .....	428-1	428
Exterior Light Installation, Wing .....	429-1	429
Light Subassembly, Anti-Collision .....	430-1	430
Exterior Light Installation, AFT Fuselage .....	431-1	431
Electrical Component Installation, RH Forward Avionics Bay .....	432-1	432
Wiring Installation, Nose (FS 35 to FS 57) LH .....	433-1	433
Wiring Installation, Nose (FS 35 to FS 57) RH .....	434-1	434
Wiring Harness, W255 (Part 1) .....	435-1	435
Wiring Harness, W255 (Part 2) .....	436-1	436
Wiring Harness, W255 (Part 3) .....	437-1	437
Wiring Harness, W261 (Part 1) .....	438-1	438
Wiring Harness, W261 (Part 2) .....	439-1	439
Wiring Harness .....	440-1	440
Wiring Installation, Copilot/Gunner Console LH .....	441-1	441

TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Wiring Harness, W195, W197 and W219 .....	442-1	442
Wiring Harness, W145 .....	443-1	443
Wiring Installation, Copilot/Gunner Console (FS 57 to FS 98) RH .....	444-1	444
Wiring Harness, W210 .....	445-1	445
Wiring Harness, W262 .....	446-1	446
Wiring Harness, W266 (Part 1) .....	447-1	447
Wiring Harness, W266 (Part 2) .....	448-1	448
Wiring Harness, W266 (Part 3) .....	449-1	449
Wiring Installation, below Copilot/Gunner Floor (FS 35 to FS 91) .....	450-1	450
Wiring Installation, Pilot Instrument Panel (Part 1) .....	451-1	451
Wiring Installation, Pilot Instrument Panel (Part 2) .....	452-1	452
Wiring Harness, W645 .....	453-1	453
Wiring Harness, W647 .....	454-1	454
Matrix Assembly, Pilot Instrument Panel (A326) .....	455-1	455
Wiring Harness, W646 .....	456-1	456
Support, Distributor .....	457-1	457
Wiring Installation, Pilot Console LH (Part 1) .....	458-1	458
Wiring Installation, Pilot Console LH (Part 2) .....	459-1	459
Wiring Installation, Pilot Console LH (Part 3) .....	460-1	460
Wiring Harness, W117 (Part 1) .....	461-1	461
Wiring Harness, W117 (Part 2) .....	462-1	462
Wiring Harness, W117 (Part 3) .....	463-1	463
Wiring Harness, W119 (Part 1) .....	464-1	464
Wiring Harness, W119 (Part 2) .....	465-1	465
Wiring Harness, W119 (Part 3) .....	466-1	466
Wiring Harness, W119 (Part 4) .....	467-1	467
Wiring Harness, W220 .....	468-1	468
Wiring Installation, Pilot Console RH (Part 1) .....	469-1	469
Wiring Installation, Pilot Console RH (Part 2) .....	470-1	470
Wiring Harness, W187 and W188 .....	471-1	471
Wiring Harness, W190 .....	472-1	472
Wiring Harness, W207 and W212 .....	473-1	473
Wiring Harness, W224 .....	474-1	474
Wiring Harness, W116 (Part 1) .....	475-1	475
Wiring Harness, W116 (Part 2) .....	476-1	476
Wiring Harness, W116 (Part 3) .....	477-1	477
Wiring Harness, W118 (Part 1) .....	478-1	478
Wiring Harness, W118 (Part 2) .....	479-1	479
Wiring Harness, W118 (Part 3) .....	480-1	480
Wiring Harness, W118 (Part 4) .....	481-1	481
Wiring Harness, W201 .....	482-1	482

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Wiring Installation, below Pilots Floor (FS 91 to FS 163) (Part 1) .....	483-1	483
Wiring Installation, below Pilots Floor (FS 91 to FS 163) (Part 2) .....	484-1	484
Wiring Installation, below Pilots Floor (FS 91 to FS 163) (Part 3) .....	485-1	485
Wiring Installation, Forward Fuel Tank .....	486-1	486
Wiring Installation, Forward Avionics Bay LH .....	487-1	487
Wiring Installation, Forward Avionics Bay RH (Part 1) .....	488-1	488
Wiring Installation, Forward Avionics Bay RH (Part 2) .....	488A-1	488A
Wiring Installation, Main Transmission .....	489-1	489
Wiring Harness, Oil Pressure Transducer W159 and W167 .....	490-1	490
Wiring Installation, Ammo Bay (Part 1) .....	491-1	491
Wiring Installation, Ammo Bay (Part 2) .....	492-1	492
Wiring Harness, W268 .....	493-1	493
Wiring Installation, Wings (Part 1) .....	494-1	494
Wiring Installation, Wings (Part 2) .....	495-1	495
Wiring Harness, W155 .....	496-1	496
Wiring Harness, W157 .....	497-1	497
Wiring Harness, W156 .....	498-1	498
Wiring Harness, W158 .....	499-1	499
Wiring Installation, Pylon .....	500-1	500
Wiring Harness, W601 .....	501-1	501
Wiring Installation, AFT Deck LH (Part 1) .....	502-1	502
Wiring Installation, AFT Deck LH (Part 2) .....	503-1	503
Wiring Installation, AFT Deck LH (Part 3) .....	504-1	504
Wiring Installation, AFT Deck LH (Part 4) .....	505-1	505
Wiring Installation, AFT Deck LH (Part 5) .....	506-1	506
Wiring Installation, AFT Deck LH (Part 6) .....	507-1	507
Wiring Installation, AFT Deck LH (Part 7) .....	508-1	508
Wiring Harness, W211 (Part 1) .....	509-1	509
Wiring Harness, W211 (Part 2) .....	510-1	510
Wiring Harness, W211 (Part 3) .....	511-1	511
Relay Box Installation, Stabilator .....	512-1	512
Wiring Harness, W191 .....	513-1	513
Wiring Installation, AFT Deck RH (Part 1) .....	514-1	514
Wiring Installation, AFT Deck RH (Part 2) .....	515-1	515
Wiring Installation, AFT Deck RH (Part 3) .....	516-1	516
Wiring Harness, W102 (Part 1) .....	517-1	517
Wiring Harness, W102 (Part 2) .....	518-1	518
Wiring Harness, AM/FM Tail Antenna, W209 .....	519-1	519
Wiring Harness, W216, W218, W232 .....	520-1	520
Wiring Harness, W264 .....	521-1	521
Wiring Installation, AFT Fuel Tank .....	522-1	522



TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Wiring Installation, AFT Avionics Bay (FS 280 to FS 290) (Part 1) .....	523-1	523
Wiring Installation, AFT Avionics Bay (FS 280 to FS 290) (Part 2) .....	524-1	524
Wiring Installation, AFT Avionics Bay (FS 280 to FS 290) (Part 3) .....	525-1	525
Wiring Installation, AFT Avionics Bay (FS 290 to FS 310) (Part 4) .....	526-1	526
Filter, Radio Frequency .....	527-1	527
Wiring Harness, W108 (Part 1) .....	528-1	528
Wiring Harness, W108 (Part 2) .....	529-1	529
Distributor Box Assembly, AFT Avionics Bay .....	530-1	530
Wiring Installation, Tailboom (Part 1) .....	531-1	531
Wiring Installation, Tailboom (Part 2) .....	532-1	532
Wiring Installation, Tailboom (Part 3) .....	533-1	533
Wiring Installation, Tailboom (Part 4) .....	534-1	534
Wiring Installation, Tailboom (Part 5) .....	535-1	535
Wiring Harness, W170 .....	536-1	536
Wiring Harness, ADF Loop Antenna W182, W183 and W184 .....	537-1	537
Wiring Harness, W189 .....	538-1	538
Wiring Harness, W202 and W203 .....	539-1	539
Wiring Harness, W143 .....	540-1	540
Wiring Harness, W213 .....	541-1	541
Wiring Installation, Vertical Stabilator .....	542-1	542
Wiring Harness, W171 .....	543-1	543
Wiring Harness, W115 .....	544-1	544
Wiring Harness, W154 .....	545-1	545
Wiring Installation, Tail Rotor (De-Ice) .....	546-1	546
Caution and Warning Components .....	547-1	547
Panel, Fault-Function, Pilot (A106) (Housing) .....	548-1	548
Panel, Fault-Function, Pilot (A106) (Indicator Lights) .....	549-1	549
Panel, Fault-Function, Copilot/Gunner (A157) (Housing) .....	550-1	550
Panel, Fault-Function, Copilot/Gunner (A157) (Indicator Lights) .....	551-1	551
Panel, Fault-Function, Pilot (DS28) Copilot/Gunner (DS31) .....	552-1	552
Accelerometers .....	553-1	553
Alarm Unit, Control .....	554-1	554
Wiring Harness W226 KYK-13 Interface .....	554A-1	554A
Wiring Harness, EGI Attenuator W234 .....	554B-1	554B
Wiring Harness, Antenna Attenuator W227 .....	554C-1	554C
Cable Routing (Part 1) AH-64A/AVR-2A .....	554D-1	554D
Cable Routing (Part 2) AH-64A/AVR-2A .....	554E-1	554E
Cable Routing (Part 3) AH-64A/AVR-2A .....	554F-1	554F
Cable Routing (Part 4) AH-64A/AVR-2A .....	554G-1	554G
Wiring Harness, APR-39 Tie W670 AH-64A/AVR-2A .....	554H-1	554H
Wiring Harness, Left Sensor W671 AH-64A/AVR-2A .....	554I-1	554I

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Wiring Harness, Right Sensor W672 AH-64A/AVR-2A .....	554J-1	554J
Wiring Harness, AVR-2 Power W673 AH-64A/AVR-2A .....	554K-1	554K
Wiring Harness, Blkg/AGES W674 AH-64A/AVR-2A .....	554L-1	554L
Group 10 Fuel System		
Fuel Cell Installation (Forward) .....	555-1	555
Tank, Fuel, Aircraft (Amfuel) .....	556-1	556
Tank, Fuel, Aircraft (Goodyear) .....	557-1	557
Fuel Cell Installation (AFT) .....	558-1	558
Tank, Fuel, Aircraft (Amfuel) .....	559-1	559
Tank, Fuel, Aircraft (Goodyear) .....	560-1	560
Panel Assembly, Fuel (Pilot) .....	561-1	561
Panel Assembly, Fuel (Copilot/Gunner) .....	562-1	562
Refueling and Transfer Fuel System (Panel Assembly) .....	563-1	563
Refueling and Transfer Fuel System (FS 135 to FS 168) .....	564-1	564
Refueling and Transfer Fuel System (FS 176 to FS 230) .....	565-1	565
Refueling and Transfer Fuel System (Air Valve and Fuel Pump) .....	566-1	566
Refueling and Transfer Fuel System (FS 230 to FS 280) .....	567-1	567
Manifold, Fuel Service .....	568-1	568
Valve, Fuel-Defuel .....	569-1	569
Fuel Vent System (Forward Cell) .....	570-1	570
Fuel Vent System (AFT Cell) .....	571-1	571
Engine Fuel Supply Installation (FS 172 to FS 222) .....	572-1	572
Engine Fuel Supply Installation (FS 222 to FS 225) .....	573-1	573
Engine Fuel Supply Installation (FS 230) RH .....	574-1	574
Engine Fuel Supply Installation (FS 230 to FS 280) .....	575-1	575
Fuel Subsystem Installation (Forward Fuel Cell) .....	576-1	576
Fuel Subsystem Installation (AFT Fuel Cell) .....	577-1	577
Rigid Foam Armor, Fuel Cell (FWD and AFT) .....	578-1	578
Panel Assembly, N2 Inerting .....	579-1	579
Nitrogen Inerting Unit System Installation (Part 1) .....	580-1	580
Nitrogen Inerting Unit System Installation (Part 2) .....	581-1	581
Nitrogen Inerting Unit System Installation (Part 3) .....	582-1	582
Kit, Auxiliary Wing Tanks (2 Tanks) (Part 1) .....	583-1	583
Kit, Auxiliary Wing Tanks (2 Tanks) (Part 2) .....	584-1	584
Kit, Auxiliary Wing Tanks (4 Tanks) (Part 1) .....	585-1	585
Kit, Auxiliary Wing Tanks (4 Tanks) (Part 2) .....	586-1	586
Group 11 Flight Control System		
Rotor Controls, Upper Main (Pitch Links and Scissors) .....	587-1	587
Rotor Controls, Upper Main (Torque and Lateral Links) .....	588-1	588
Rotor Controls, Upper Main (Forward Longitudinals) .....	589-1	589

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Rotor Controls, Upper Main (AFT Longitudinals) .....	590-1	590
Rotor Controls, Upper Main (Collective and Laterals) .....	591-1	591
Stick Installation, Collective (Pilot and Copilot/Gunner) .....	592-1	592
Control Stick, Aircraft (Pilot and Copilot/Gunner) .....	593-1	593
Grip Assembly, Control, Collective Stick (Pilot and Copilot/Gunner) .....	594-1	594
Switch Assembly .....	595-1	595
Stick Installation, Pilot Collective (Support) .....	596-1	596
Support Assembly, Collective Stick (Pilot) .....	597-1	597
Stick Installation, Copilot/Gunner Collective (Support) .....	598-1	598
Support Assembly, Collective Stick (Copilot/Gunner) .....	599-1	599
Protective Cover Installation, Collective Stick .....	600-1	600
Stick Installation, Pilot Cyclic .....	601-1	601
Control Stick, Aircraft .....	602-1	602
Housing Assembly, Cyclic Stick (Pilot) .....	603-1	603
Stick Installation, Copilot/Gunner Cyclic .....	604-1	604
Control Stick, Aircraft (Part 1) .....	605-1	605
Control Stick, Aircraft (Part 2) .....	606-1	606
Housing Assembly, Cyclic, Copilot/Gunner (Part 1) .....	607-1	607
Housing Assembly, Cyclic, Copilot/Gunner (Part 2) .....	608-1	608
Linkage Installation, Copilot/Gunner to Pilot Control (Directional) (Part 1) ...	609-1	609
SPAD Assembly, Directional (Copilot/Gunner) .....	610-1	610
Linkage Installation, Copilot/Gunner to Pilot Control (Directional) (Part 2) ...	611-1	611
Linkage Installation, Copilot/Gunner to Pilot Control (Directional) (Part 3) ...	612-1	612
Linkage Installation, Copilot/Gunner to Pilot Control (Collective) .....	613-1	613
Linkage Installation, Copilot/Gunner to Pilot Control (Longitudinal) (Part 1) ..	614-1	614
Linkage Installation, Copilot/Gunner to Pilot Control (Longitudinal) (Part 2) ..	615-1	615
Linkage Installation, Copilot/Gunner to Pilot Control (Lateral) (Part 1) .....	616-1	616
Linkage Installation, Copilot/Gunner to Pilot Control (Lateral) (Part 2) .....	617-1	617
Linkage Installation, Copilot/Gunner to Pilot Control (Lateral) (Part 3) .....	618-1	618
Linkage Installation, Control (FS 115 to FS 176) (Directional) (Part 1) .....	619-1	619
Linkage Installation, Control (FS 115 to FS 176) (Directional) (Part 2) .....	620-1	620
Linkage Installation, Control (FS 115 to FS 176) (Directional) (Part 3) .....	621-1	621
SPAD Assembly, Control, Pilot (Directional) .....	622-1	622
Bellcrank Assembly .....	623-1	623
Linkage Installation, Control (FS 115 to FS 176) (Collective) (Part 1) .....	624-1	624
Linkage Installation, Control (FS 115 to FS 176) (Collective) (Part 2) .....	625-1	625
Linkage Installation, Control (FS 115 to FS 176) (Longitudinal) (Part 1) .....	626-1	626

**TABLE OF CONTENTS – Continued**

	Page	Illus/ Figure
Linkage Installation, Control (FS 115 to FS 176) (Longitudinal) (Part 2) . . . . .	627-1	627
SPAD Assembly, Control Pilot (Longitudinal) . . . . .	628-1	628
Linkage Installation, Control (FS 115 to FS 176) (Lateral) (Part 1) . . . . .	629-1	629
Linkage Installation, Control (FS 115 to FS 176) (Lateral) (Part 2) . . . . .	630-1	630
Linkage Installation, Control (FS 115 to FS 176) (Lateral) (Part 3) . . . . .	631-1	631
Feel Spring Cartridge and Magnetic Brake Installation (Directional) . . . . .	632-1	632
Feel Spring Cartridge and Magnetic Brake Installation (Longitudinal) . . . . .	633-1	633
Mechanism Assembly, Trim Feel Spring Cartridge (Longitudinal) . . . . .	634-1	634
Feel Spring Cartridge and Magnetic Brake Installation (Lateral) . . . . .	635-1	635
Brake Assembly, Magnetic . . . . .	636-1	636
Panel Assembly, Automatic Stabilization Equipment . . . . .	637-1	637
Computer, Dase . . . . .	638-1	638
Actuator Assembly, Stabilator . . . . .	639-1	639
Controller, Stabilator . . . . .	640-1	640
Chassis, Electrical . . . . .	641-1	641
Transducer, Stabilator Position . . . . .	642-1	642
Pedal Installation, Pilot Station (Part 1) . . . . .	643-1	643
Pedal Installation, Pilot Station (Part 2) . . . . .	644-1	644
Pedal Installation, Pilot Station (Part 3) . . . . .	645-1	645
Crank Assembly, Pedal Adjusting (Pilot) . . . . .	646-1	646
Pedal Installation, Copilot/Gunner Station (Part 1) . . . . .	647-1	647
Pedal Installation, Copilot/Gunner Station (Part 2) . . . . .	648-1	648
Pedal Installation, Copilot/Gunner Station (Part 3) . . . . .	649-1	649
Cover Installation, Protective (Pilot and Copilot/Gunner) . . . . .	650-1	650
Linkage Installation, Tail Rotor Mid Fuselage (FS 164 to FS 216) . . . . .	651-1	651
Linkage Installation, Tail Rotor AFT Fuselage (FS 275 to FS 477) . . . . .	652-1	652
Linkage and Actuator Installation, Tail Rotor Controls (Part 1) . . . . .	653-1	653
Linkage and Actuator Installation, Tail Rotor Controls (Part 2) . . . . .	654-1	654
Linkage and Actuator Installation, Tail Rotor Controls (Part 3) . . . . .	655-1	655
Pitch Control Installation, Tail Rotor (Part 1) . . . . .	656-1	656
Pitch Control Installation, Tail Rotor (Part 2) . . . . .	657-1	657
Swashplate, Controller . . . . .	658-1	658
 Group 12 Utility Systems		
Panel Assembly, Power Distribution, Pilot . . . . .	659-1	659
Panel Assembly, Copilot/Gunner . . . . .	660-1	660
Sensing Head Installation, Ice Detector; Controller, De-Icing; Relay Box Assembly, Engine Anti-Ice . . . . .	661-1	661
Relay Assembly, Engine Anti-Ice . . . . .	662-1	662
Signal Processor Unit Assembly, Ice Detector . . . . .	663-1	663
Windshield Wiper Installation . . . . .	664-1	664
Panel Assembly, Cockpit . . . . .	665-1	665

TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Fire Extinguishing System Installation (Cockpit Panels) .....	666-1	666
Fire Extinguishing System Installation (Miscellaneous) .....	667-1	667
Fire Extinguishing System Installation (Tubing) .....	668-1	668
Fire Extinguishing System Installation (Detectors and Amplifiers) .....	669-1	669
Fire Extinguisher, Aircraft .....	670-1	670
Wiring Installation, LH Nacelle Fire Sensors .....	671-1	671
Wiring Installation, RH Nacelle Fire Sensors .....	672-1	672
Fire/Overheat Detector and Frame Installation, Engine Firewall Louver .....	673-1	673
Group 13 Environmental Control System		
Panel Assembly, Power Distribution, Pilot .....	674-1	674
Environmental Control Unit Installation .....	675-1	675
Regulator, Air Pressure .....	676-1	676
Cooling System Installation .....	677-1	677
Fan Installation .....	678-1	678
Thermal Switch Assembly LH and RH .....	679-1	679
Environmental Control Defogging System LH .....	680-1	680
Environmental Control Defogging System RH .....	681-1	681
Fuselage Environmental Control System (FS 154 to FS 180) .....	682-1	682
Fuselage Environmental Control System (FS 180 to FS 296) .....	683-1	683
Crew Environmental Control System (FS 57 to FS 125) LH .....	684-1	684
Crew Environmental Control System (FS 125 to FS 155) LH .....	685-1	685
Crew Environmental Control System RH .....	686-1	686
Group 15 Auxiliary Power Plant		
Auxiliary Power Unit Installation .....	687-1	687
Engine, Gas Turbine (Front) .....	688-1	688
Engine, Gas Turbine (Rear) .....	689-1	689
Engine, Gas Turbine (Wiring Harness) .....	690-1	690
Auxiliary Power Unit Mount and Drain Installation .....	691-1	691
Auxiliary Power System (Exhaust and Enclosure) .....	692-1	692
Enclosure Installation, APU (Upper and Lower Cover) .....	693-1	693
Enclosure Installation, APU (Front and Top Cover) .....	694-1	694
Group 16 Mission Equipment		
Switch, Toggle, Pylon Ground Maintenance .....	695-1	695
External Stores Subsystem .....	696-1	696
Pylon, Aircraft (Frame and Actuator) .....	697-1	697
Frame Assembly, Pylon .....	698-1	698
Rack, Bomb Ejector, Aircraft (Part 1) .....	699-1	699
Rack, Bomb Ejector, Aircraft (Part 2) .....	700-1	700
Ejector Assembly, Rack Pylon .....	701-1	701

## TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Hardware Installation, Target Acquisition Designation Sight and Pilot Night Vision Sensor Assemblies .....	702-1	702
Countermeasure Installation (Part 1) .....	703-1	703
Countermeasure Installation (Part 2) .....	704-1	704
Countermeasure Installation (Part 3) .....	705-1	705
Countermeasure Installation (Part 4) .....	706-1	706
Cooling System Installation, Radar Jammer .....	707-1	707
Kit, Winterization System Installation .....	708-1	708
Covers, Antenna Blade .....	709-1	709
Wire Strike Protection Installation, Gun Deflector .....	710-1	710
Group 17    Emergency Equipment		
Canopy Severance Device Installation .....	711-1	711
Portable Fire Extinguisher Installation .....	712-1	712
First Aid Kit Installation (FWD and AFT Cockpits) .....	713-1	713
Group 60    Bulk Materials List		
Bulk Materials .....	Bulk-1	Bulk
Section III.    SPECIAL TOOLS LIST		
Group 80    Special Tools		
Ground Support Kit (AVUM) (Part 1) .....	714-1	714
Ground Support Kit (AVUM) (Part 2) .....	715-1	715
Ground Support Kit (AVUM) (Part 3) .....	716-1	716
Airframe Special Equipment (AVIM) .....	717-1	717
Tool Kit, Special (AVUM) (Part 1) .....	718-1	718
Tool Kit, Special (AVUM) (Part 2) .....	719-1	719
Tool Kit (AVIM) (Part 1) .....	720-1	720
Tool Kit (AVIM) (Part 2) .....	721-1	721
Crane, Aircraft Mounted Maintenance (Part 1) .....	722-1	722
Crane, Aircraft Mounted Maintenance (Part 2) .....	723-1	723
Crane, Aircraft Mounted Maintenance (Part 3) .....	724-1	724
Crane, Aircraft Mounted Maintenance (Part 4) .....	725-1	725
Yoke Assembly, Elevation .....	726-1	726
Rigging Kit, Aircraft (Part 1) .....	727-1	727
Rigging Kit, Aircraft (Part 2) .....	728-1	728
Rigging Kit, Aircraft (Part 3) .....	729-1	729
Kit, Sling Set (Part 1) .....	730-1	730
Kit, Sling Set (Part 2) .....	731-1	731
Kit, Sling Set (Part 3) .....	732-1	732
Kit, Sling Set (Part 4) .....	733-1	733
Kit, Sling Set (Part 5) .....	734-1	734

TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Kit, Sling Set (Part 6) .....	735-1	735
Transmission Kit, Removal and Installation .....	736-1	736
Platform, Main Transmission Removal and Installation .....	737-1	737
Kit, Lube Drain Hose .....	738-1	738
Test Equipment, Helicopter (Part 1) .....	739-1	739
Test Equipment, Helicopter (Part 2) .....	740-1	740
Tab Bending Tool and Gage .....	741-1	741
Box Assembly, Switch, Rotor Track and Balance Kit .....	742-1	742
Phase Tool Assembly .....	743-1	743
Kit, Ground Lock PGS .....	744-1	744
Cord Assembly, Electrical .....	745-1	745
Maintenance Platform, APU .....	746-1	746
Kit, Hydraulic Hoses .....	747-1	747
Kit, Fuel Cell Removal and Installation .....	748-1	748
Plate Assembly, Fuel Cell Access .....	749-1	749
Box Assembly, Fuel Cell Removal and Installation .....	750-1	750
Adapter Kit, Airframe Component Handling (Part 1) .....	751-1	751
Adapter Kit, Airframe Component Handling (Part 2) .....	752-1	752
Adapter Kit, Airframe Component Handling (Part 3) .....	753-1	753
Adapter Assembly, Main Rotor Blade Handling .....	754-1	754
Tool Kit, Aircraft Main Rotor Head .....	755-1	755
Adapter Assembly, Engine Handling .....	756-1	756
Tool Kit, Aircraft Maintenance (AVIM) .....	757-1	757
Fixture, Tail Rotor Head Assembly and Repair (AVIM) .....	758-1	758
Brake, Input Pinion Gear .....	759-1	759
Socket, Rotor Brake .....	760-1	760
Socket, Locknut Set .....	761-1	761
Cover, Ice Sensor Assembly .....	762-1	762
Tool, Output Shaft Seal Installation .....	763-1	763
Tool, Input Shaft Seal Installation .....	764-1	764
Kit, Spreader Bar/Positioning .....	765-1	765
Teeter Stop Bonding Fixture .....	766-1	766
Adapter Assembly, Calibration .....	767-1	767
Adapter, Calibration, Rotor Blade De-Ice System .....	768-1	768
Figure Deleted .....		769
Packer Assembly, Main Rotor Bearing .....	770-1	770
Rod/Link Adjustment Tool Assembly, Right .....	771-1	771
Fixture, Shock Strut Restraining .....	772-1	772
Spring Compressor, Fork Assembly .....	773-1	773
Test Set, Pylon Ejector .....	774-1	774
Socket, Wrench, Main Transmission .....	775-1	775

TABLE OF CONTENTS – Continued

	Page	Illus/ Figure
Fixture, Protective, Main Rotor Mast .....	776-1	776
Plug, Seal Kit .....	777-1	777
Wrench, Socket, Anti Flail Bearing .....	778-1	778
Compressor, Rotor Brake, Set .....	779-1	779
Set, Jackscrew .....	780-1	780
Tool Kit, Aircraft Lower Bearing Seal Installation/Removal .....	780A-1	780A
Tool Kit, Tail Rotor Fork Resilient Mount Installation/Removal .....	780B-1	780B
Tool Kit, Aircraft .....	780C-1	780C
Kit, Generator Removal .....	780D-1	780D
Group 82 Flyaway Items		
Tie Down Kit, Aircraft (Part 1) .....	781-1	781
Tie Down Kit, Aircraft (Part 2) .....	782-1	782
Tie Down Kit, Aircraft (Part 3) .....	783-1	783
Section IV. CROSS-REFERENCE INDEXES		
National Stock Number Index .....	I-1	
Part Number Index .....	I-141	
Figure and Item Number Index .....	I-527	



# AVIATION UNIT AND INTERMEDIATE MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

## SECTION I. INTRODUCTION

### 1. Scope.

This RPSTL lists and authorizes spares and repair parts; special tools; special Test, Measurement, and Diagnostic Equipment (TMDE); and other special support equipment required for performance of aviation unit and aviation intermediate maintenance of the AH-64A Advanced Attack Helicopter. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the Source, Maintenance and Recoverability (SMR) codes.

### 2. General.

In addition to Section I, Introduction, this Repair Parts and Special Tools List is divided into the following sections:

a. **Section II. Repair Parts List.** A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in item name sequence.

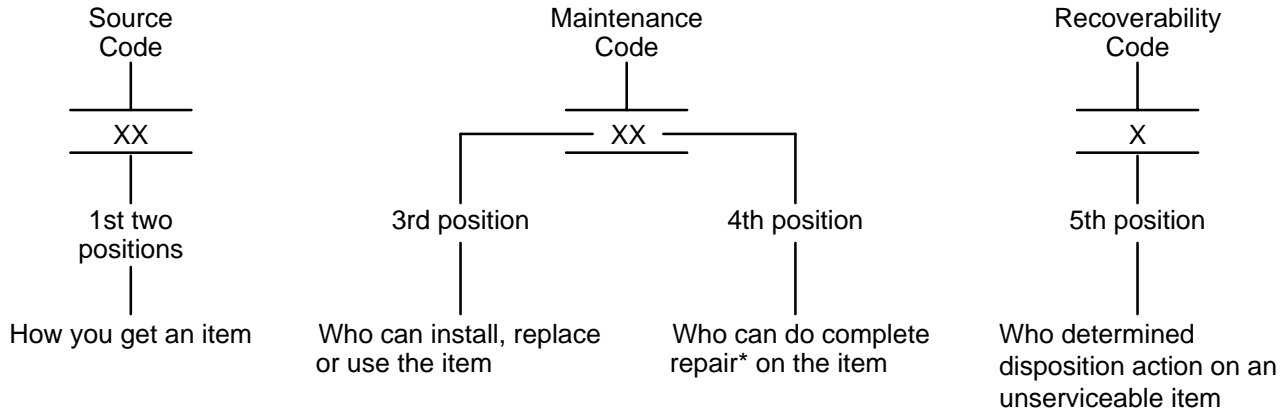
b. **Section II. Special Tools List.** A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE (UOC) column) for the purpose of maintenance.

c. **Section IV. Cross-reference Indexes.** A list, in National Item Identification Number (NIIN) sequence, of all National Stock Numbers (NSN) appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. The figure and item number index lists figure and item numbers in alphanumeric sequence and cross-references NSN, FSCM/CAGE and part numbers.

**3. Explanation of Columns (Sections II and III).**

a. **ITEM NO (Column (1)).** Indicates the number used to identify items called out in the illustration.

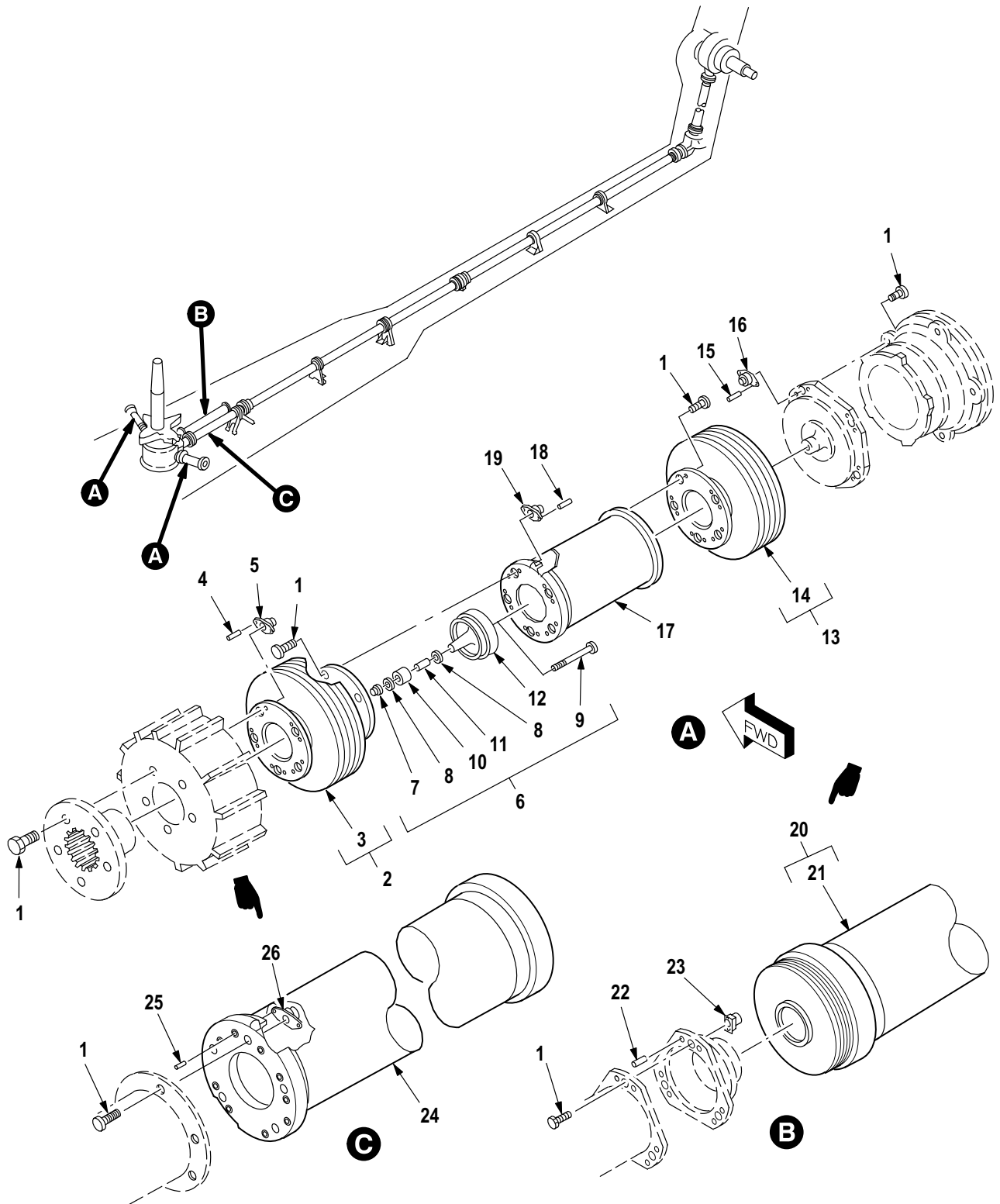
b. **SMR CODE (Column (2)).** The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:



\*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) **Source Code.** The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

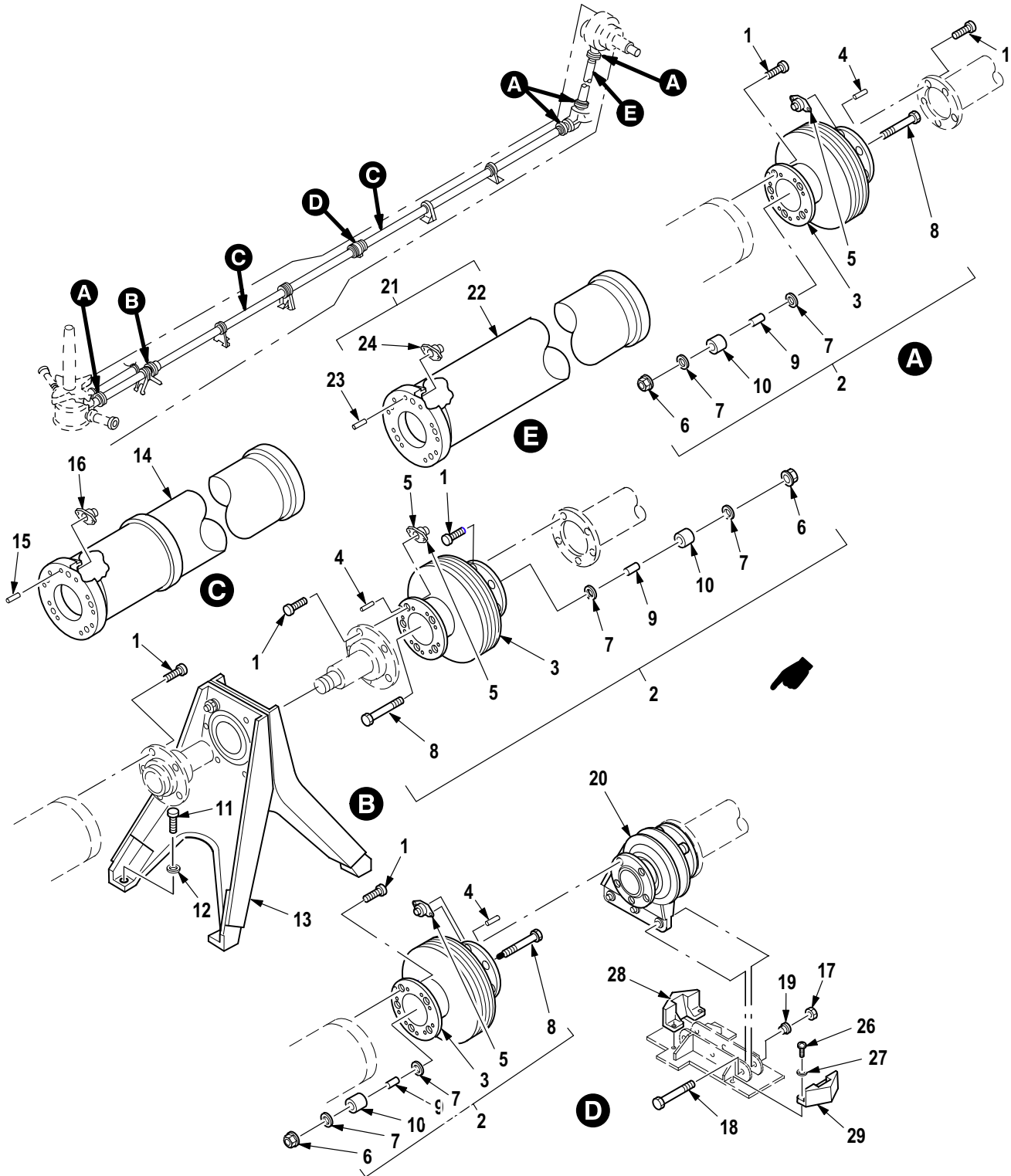
Code	Explanation
PA PB PC** PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3rd position of the SMR code.  **NOTE: Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3rd position of the SMR code. The complete kit must be requisitioned and applied.
MO- (Made at org/ AVUM Level) MF- (Made at DS/ AVIM Level) MH- (Made at GS Level) ML- (Made at Specialized Repair Activity (SRA)) MD- (Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. Fabricated items may also be made utilizing Appendix D of the TM 1-1520-238-23 Series. If the item is authorized to you by the 3rd position code of the SMR code, but the source code indicates it is made at a higher Level, order the item from the higher Level of maintenance.



M09-638H

Figure 298. Group 06 Drive System Shaft and Coupling Installation (FS 220 to FS 249)  
7-31130005

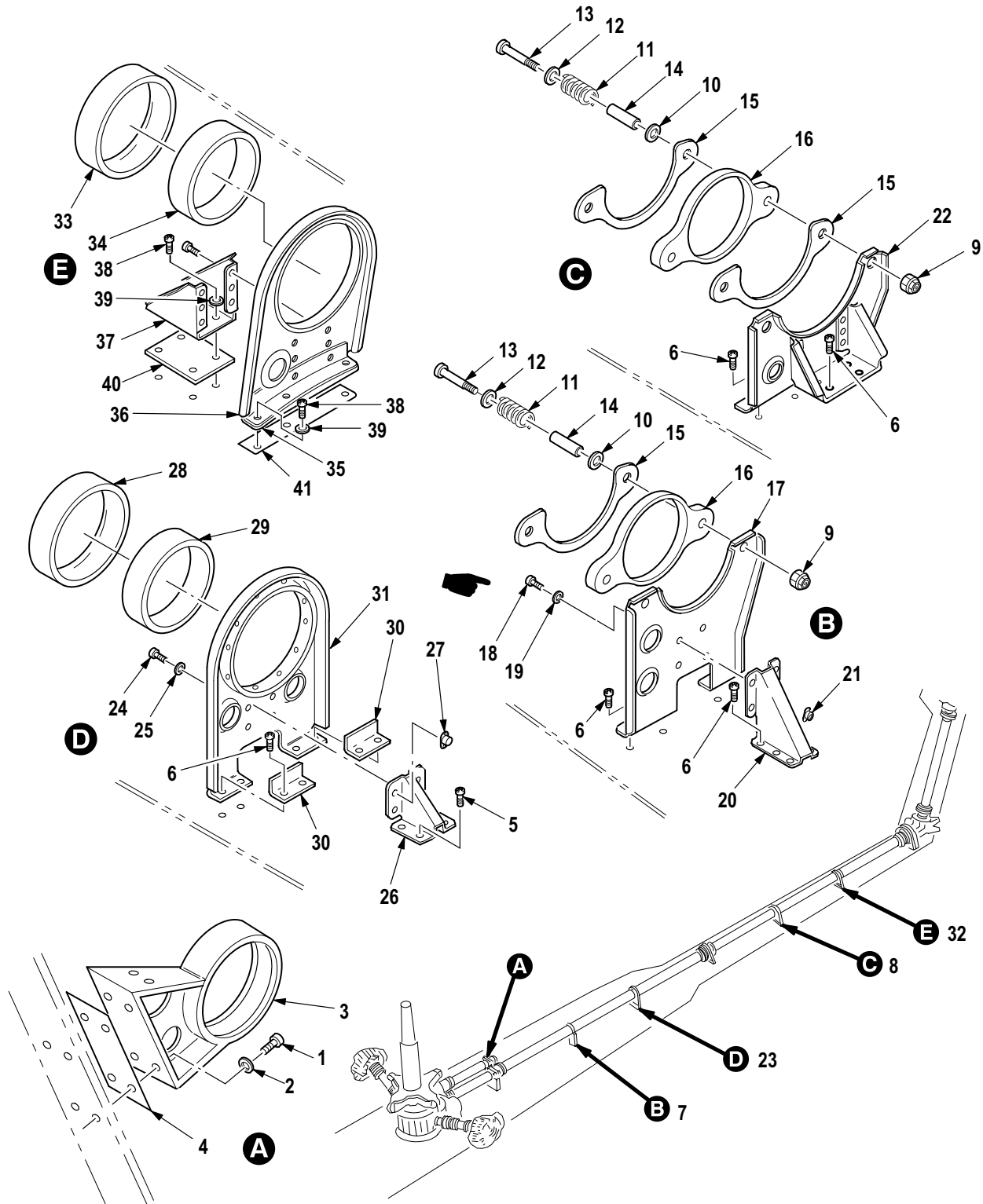
(1) ITEM NO.	(2) SMR CODE	(3) CAGE	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				Group 06 Drive Train Fig. 298 Drive System Shaft and Coupling Installation (FS 220 to FS 249) 7-311300005	
1	PAOZZ	02731	7-113500019	• Bolt, Shear .....	48
2	PAODD	02731	7-211350001	• Coupling, Engine Nos .....	2
3	XDOFF	99551	2494486	•• Coupling, Nosebox G .....	1
4	PAFZZ	99551	645615-2	••• Rivet, Blind .....	10
5	PAFZZ	99551	2494095	••• Nut, Self-Locking, Pl .....	5
6	AOOOO	99551	2494489	•• Nut Assy, Flail Brg .....	1
7	PAOZZ	80205	NAS1291C3M	••• Nut, Self-Locking, Ex .....	1
8	PAOZZ	99551	645074-33FU	••• Washer, Flat .....	2
9	PAOZZ	80205	NAS6303U25H	••• Bolt, Shear .....	1
10	PAOZZ	99551	2494490	••• Bearing, Sleeve .....	1
11	PAOZZ	99551	2494524	••• Bearing, Sleeve .....	1
12	PAOZZ	99551	2491942	••• Nut, Flail Bearing .....	1
13	PAODD	02731	7-211350003	• Coupling Assembly, T .....	2
14	XDOFF	99551	2494488	•• Coupling, Transmissi .....	1
15	PAFZZ	99551	645615-2	••• Rivet, Blind .....	10
16	PAFZZ	99551	2494095	••• Nut, Self-Locking, Pl .....	5
17	PAODD	02731	7-211350002	• Shaft, Input, Engine .....	2
18	PAFZZ	99551	2881003-4	•• Rivet, Solid .....	20
19	PAFZZ	99551	2493653	•• Nut, Self-Locking, Pl .....	10
20	PAODD	02731	7-211350009	• Shaft, Drive, Flexibl .....	1
21	PAFDD	99551	2494001	•• Shaft, Drive, Flexibl .....	1
22	PAFZZ	99551	2881003-4	••• Rivet, Solid .....	12
23	PAFZZ	99551	2491988	••• Nut, Self-Locking, Pl .....	6
24	PAODD	02731	7-211350005-3	• Driveshaft .....	1
25	PAFZZ	99551	2881003-4	•• Rivet, Solid .....	20
26	PAFZZ	99551	2493653	•• Nut, Self-Locking, Pl .....	10
END OF FIGURE					



M09-637H

Figure 299. Group 06 Drive System Shaft and Coupling Installation (FS 253 to FS 551)  
7-31130005

(1) ITEM NO.	(2) SMR CODE	(3) CAGE	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				Group 06 Drive Train Fig. 299 Drive System Shaft and Coupling Installation (FS 253 to FS 551) 7-311300005	
1	PAOZZ	02731	7-113500019	• Bolt, Shear .....	70
2	PAODD	02731	7-211350004-3	• Coupling, Tailrotor .....	6
3	XDOFF	99551	2494094	•• Coupling, Tail Rotor .....	1
4	PAFZZ	99551	645615-2	••• Rivet, Blind .....	10
5	PAFZZ	99551	2494095	••• Nut, Self-Locking, Pl .....	5
6	PAOZZ	80205	NAS1291C5M	•• Nut, Self-Locking, Ex .....	1
7	PAOZZ	99551	2494526	•• Washer, Flat .....	2
8	PAOZZ	80205	NAS6305U23	•• Bolt, Shear .....	1
9	PAOZZ	99551	2494525	•• Bearing, Sleeve .....	1
10	PAOZZ	99551	2494476	•• Bearing, Sleeve .....	1
11	PAOZZ	96906	MS21134-04010	• Bolt, Shear .....	4
12	PAOZZ	96906	MS20002C4	• Washer, Recessed .....	4
13	PAODD	02731	7-311350008-5	• Bearing Unit, Ball .....	1
14	PAODD	02731	7-211350006-5	• Shaft Assy, Tail Rot .....	2
15	PAFZZ	99551	645615-2	•• Rivet, Blind .....	20
16	PAFZZ	99551	2493653	•• Nut, Self-Locking, Pl .....	10
17	PAOZZ	96906	MS21083C4	• Nut, Self-Locking, He .....	3
18	PAOZZ	80205	NAS6204-17H	• Bolt, Shear .....	3
19	PAOZZ	80205	NAS77-4-025	• Bushing, Sleeve .....	3
20	PAODD	02731	7-211350007-5	• Bearing Unit, Ball .....	1
21	PAODD	02731	7-211350027-3	• Shaft, Shouldered .....	1
22	XDFFF	99551	2495633	•• Shaft, Complete, T/R .....	1
23	PAFZZ	99551	2881003-4	••• Rivet, Solid .....	20
24	PAFZZ	99551	2493653	••• Nut, Self-Locking, Pl .....	10
25	XCOOO	02731	7-311930020	• Armor Instl-T/R Drv (Not Illustrated-Installation Drawing) .	1
26	PAOZZ	80205	NAS1403-6	• Screw, Machine .....	4
27	PAOZZ	88044	AN960C10L	• Washer, Flat .....	4
28	PAOZZ	02731	7-311930021-5	• Deflector, Inboard T .....	1
29	PAOZZ	02731	7-311930022-3	• Deflector, Outboard .....	1
END OF FIGURE					



M09-063L

Figure 300. Group 06 Drive System Shaft and Coupling Installation (Dampers and Anti Flail)  
7-31130005