

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

**QUICK REACTION TRIMBLE TRIMPACK
GLOBAL POSITIONING SYSTEM (GPS) SPECIAL
MISSION INSTALLATION, EH-60A/UH-60A/UH-60L
HELICOPTERS**

Headquarters, Department of the Army, Washington, D.C.
15 January 1999

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

- 1. Summary.** This Technical Bulletin adds provisions for temporary installation of a GPS Trimpack Receiver on the Copilot's instrument panel: and a remote Antenna mounted on the upper surface of the Aircraft.
- 2. Purpose.** This installation, when the GPS Trimpack is installed, will provide the Copilot and Pilot with information to manually update the Doppler Navigation System (DNS).
- 3. Priority Classification.** ROUTINE.
- 4. Applicable end Item(s) or system(s).**

NOMENCLATURE	NSN	CAGE	MODEL	S/N
Helicopter	1520-01-035-0266	78286	UH-60A	* *
Helicopter	1520-01-298-4532	78286	UH-60L	* *
Helicopter	1520-01-082-0686	78286	EH-60A	* *

* * The installation required an airworthiness release for each aircraft tail number. Prior approval of this installation is required from each unit's MACOM. Each unit requesting installation kits is required to provide their request for the kits by aircraft type, model, series, serial number and unit through their MACOM to PM Aviation Blackhawk, ATTN: AMSAM-DSA-UH-L, Redstone Arsenal, AL 35898-5000. PM Aviation Blackhawk will request an airworthiness release from ATCOM Directorate of Engineering and provide installation kits.

5. Assembly Components to be Installed.

NOMENCLATURE	NSN	CAGE	PART NO.	WEIGHT
Kit A	5895-01-361-3789	20309	90209225-502	15 lbs

*This TB supersedes TB 1-1520-237-20-147, dated 31 May 1996.

NOMENCLATURE	NSN	CAGE	PART NUMBER	WEIGHT
Kit B Antenna, GPS	5985-01-326-5583	65457	*12038-00 or *16248-40 or *22433-40	0.3 lbs
Receiver, Trimble Trimpack	5825-01-357-6171	65457	*16768-10 or *16768-20 or *20636-00 or *20636-10	4.2 lbs
Anvis Modification, Kit	5895-01-340-5502	80063	*A3154590-2	0.1 lbs

* DA has directed the distribution of the B kits for the post Desert Storm environment. The sets will be distributed according to the prioritization established and directed by HQDA with assistance from the U.S. Army Combined Arms Command. Questions concerning distribution should be addressed to Mr. Rusty Keller, PM-GPS, (SFAE-CM-GPS-DPM), Ft. Monmouth, NJ 07703-5000 (DSN 992-6061).

6. Parts to be Installed.

Contents of Kit A.				
Washer, Flat	5310-00-167-0765	88044	AN970-3	4
Jumper	*	20309	90209228-3	1
Cable, RF	*	20309	90209182-504	1
* * Cable, RF	*	20309	90209182-505	1
Cable, Power	*	20309	90209183-503	1
Circuit Breaker	5925-00-929-7716	96906	MS26574-1	1
Mount, GPS Antenna	*	20309	90209216-501	1
Mount, Trimpack	*	20309	90209384-501	1
Doubler	*	20309	90209220-501	1
Doubler Plate	*	20309	90209227-501	1
Doubler, Feed Thru Top	*	20309	90209228-6	1
Doubler, Feed Thru Bottom	*	20309	90209228-5	1
Blankoff Panel, Antenna	*	20309	90209175-501	1
Bracket			20-032-1	1
** Cable, RF	*	20309	90209182-510	1
Clamp	5340-00-291-5353	96906	MS21919WDG2	2
Clamp	5340-00-291-5322	96906	MS21919WDG3	2
Screw, Machine	5305-00-435-6840	96906	MS35206-332	4
Screw, Machine	5305-00-989-7435	96906	MS35207-264	5

* NSN to be assigned.

* * RF Cable 90209182-510 or 90209182-505 is included in the kit. If 90209182-510 is substituted for 90209182-505, substitute clamp MS21919WDG2 with clamp MS21919WDG3.

Contents of Kit A. (Cont.)				
NOMENCLATURE	NSN	CAGE	PART NUMBER	QUANTITY
Screw, Machine	5305-00-995-3442	96906	M535207-268	8
Clamp	5340-00-291-5323	96906	MS21919WDG4	1
Screw, Machine	5305-00-984-6222	96906	M535206-235	4
Screw, Machine	5305-00-903-2196	96906	MS24693-C34	2
Nut Plate Assembly		20309	90209385-501	1
Washer, Flat	5310-00-638-9857	88044	AN960C6L	10
Washer, Flat	5310-00-558-6207	88044	AN960C8L	4
Washer, Flat	5310-00-167-0812	88044	AN960C10L	22
Nut, Self Locking	5310-00-982-6813	96906	MS21044C06	6
Nut, Self Locking	5310-00-208-9255	96906	MS21044C3	6
Template, Antenna Mounting	*	20309	90209230-1	1
Template, Trimpack Mount	*	20309	90209386-1	1
Terminal Lug	5940-00-204-8966		MS25036-102	1
Terminal Lug	5940-00-143-4771	96906	MS25036-103	1
Rivets	5320-01-138-4239	81349	M78855/2-4-03	4
Decal	*		90209228-4	1
Tywraps	5975-00-984-6582		MS3367-1-0	100
Bolt	5306-00-722-0393	88044	AN3-4A	1
Bolt	5306-00-274-2119	88044	AN3-5A	4
Bolt	5306-00-150-9221	88044	AN3-3A	2
Tywraps	5975-00-727-5153	96906	MS3367-4-9	10

* NSN to be assigned.

Contents of Kit B				
NOMENCLATURE	NSN	CAGE	PART NUMBER	QUANTITY
Antenna, GPS	5985-01-326-5583	65457	*12038-00 or *16248-40 or *22433-40	1
Receiver, Trimble	5825-01-357-6170	65457	*16768-20 or *16768-10 or *20636-00 or *20636-10	1
Anvis Modification Kit	5895-01-340-5502	80063	*A3154590-2	1

*Obtain through supply channels.

NOTE

Using L1/L2 Antenna, P/N 22433-40, is preferred with the Trimble Centurion P/N 20636-00. The L1/L2 Antenna enhances anti-jam capability and makes position and velocity error better.

NOTE

Refer to the small light weight Global Positioning System Receiver (SLGR) support plan, airborne and ground application, for return or repair instructions for failed Trimble Trimpack equipment. Prior to fielding the Trimpack, instructions on logistics support will be provided to gaining unit commanders and/or Logistics Assistance Representatives in country.

7. Application.

a. Category of Maintenance: Aircraft downtime will be charged to AVUM Maintenance.

(1) AVIM for Kit A installation.

(2) AVUM for Kit A removal and Kit B Installation/Removal.

b. Time required for Kit A installation. Work force and Man Hour requirements of this Technical Bulletin are as follows:

WORK FORCE/SKILLS	MAN-HOURS
Aircraft Electrician	8
Sheet Metal Repairer	8
Total man-hours required for this application is: 16 hours.	

c. TB/MWO(s) to be applied prior to or concurrently with this Technical Bulletin: None.

8. Publications which require a change as a result of this Technical Bulletin: None.

NOTE

Operation and Maintenance Guide will be provided with the Trimpack Receiver.

9. Supply Parts and Disposition.

a. Expendable supplies required.

NOMENCLATURE	NSN	CAGE	PART NUMBER
Alodine	8030-01-018-2838	81349	MIL-C-5541
Primer	8010-00-082-2450	81349	MIL-P-23377
Sealant	8030-00-723-2746	81349	MIL-S-8802
Structural Adhesive	8040-00-152-0017	81349	MMM-A-132(1751B/A) or equiv.
Tape, Pressure	7510-00-283-0612	81349	PPP-T-42
Methyl Ethyl Keytone (MEK)	6810-00-281-2785	81349	TT-M-261

10. Special Tools, Jigs, and Fixtures required.

NOMENCLATURE	NSN	CAGE	PARTNUMBER	QUANTITY
Multimeter	6625-00-999-7465	80058	AN/USM-223	1

11. Kit A Installation Procedure.

- a. Preliminary Procedure. Inventory kit to assure completeness.

NOTE

- Refer to TM 1-1520-237-23 and TM 11-1520-237-23 for detailed removal and installation instructions not specified herein and to TM 1-1520-237-23P for detailed parts location.
- Refer to TM 55-1500-323-24 for detailed installation instructions concerning aircraft electrical and electronic wiring installation practices.
- Refer to TM I-I 500-204-23 (Series) for detailed installation instructions concerning aircraft sheetmetal modification/installation practices.

- b. Prepare the aircraft for safe ground maintenance (TM 1-1520-237-23).

- (1) Turn off all electrical and hydraulic power.
- (2) Disconnect battery from aircraft electrical system.

- c. Removal procedure.

- (1) Remove radio set control (P/N C-7392/ARN-89) from lower console (TM 11-1520-237-23).
- (2) Remove ESSS stores jettison control panel from lower console, if installed.
- (3) Remove copilots intercommunication system control panel from lower console.
- (4) Remove Caution/Advisory panel from instrument panel.
- (5) Remove main rotor pylon cover.
- (6) Open engine cowling (TM 1-1520-237-23).
- (7) Open APU compartment doors, 4T-28 & 3T-27 (TM 1-1520-237-23).
- (8) Remove Copilots Diffuser Duct (TM 1-1520-237-23).
- (9) Unfasten and lower overhead console.
- (10) Unfasten and lower copilot's overhead circuit breaker panel.
- (11) Open nose compartment door.

- d. Install Trimpack remote antenna mount (P/N 90209216-501) on cover assembly (P/N 70219-04802-054).

- (1) On Cover Assembly (P/N 70219-04802), remove three forward screws and 4 screws/rivets (Figure 1, Detail A).

- (2) Install template (P/N 90209230-1) on cover assembly (P/N 70219-04802) to locate holes for installation of antenna mount (Figure 1, Detail B).

- (3) Align template with 3 forward holes and decal arrow on template pointing forward, drill 11 pilot holes (Figure 1, detail B). Remove template.

- (4) Drill six pilot holes to 0.147, four pilot holes to 0.201 and one pilot hole to 1.12 diameter (Figure 1, detail C).
 - (5) Prepare holes with structural adhesive (MMM-A-132) in accordance with TM 1-1520-237-23-2 and Figure 1, Detail E-E, F-F and G-G.
 - (6) Install doubler (P/N 90209227-501) on underside of cover assembly and secure with two screws, washers, and nuts (Figure 1, Detail C and F-F).
 - (7) Install doubler (P/N 90209220-501) on upperside of cover assembly and secure with four screws (P/N MS35207-235), eight washers (P/N AN960C6L) and four nuts (P/N MS21044C06) (Figure 1, Details C and E-E).
 - (8) Position antenna mount (P/N 90209216-501) on cover assembly and temporarily install screws in forward and side flanges. Mark position of four holes in aft flange. Remove mount and drill four holes (Figure 1, Detail D).
 - (9) Install antenna mount on cover assembly and secure with screws and washers (Figure 1, Detail D).
- e. Install the GPS Trimpack mount (P/N 90209384-501) on left side of instrument panel (Figure 2).

NOTE

For use with the Centurion P/N 20636-00 and SLGR P(Y) P/N 20636-10, a 1.50 inch diameter hole must be punched in the right side of the Trimpack mount, centered 1.35 inches from the front and 1.75 inches from the bottom (Figure 2, Detail A).

- (1) Install template (P/N 90209386-1) on left hand side of instrument panel. Align template with bottom edge of opening for the Master Caution Panel and slide template left until it touches the clock. Drill four pilot holes to locate Trimpack mount (P/N 90209384-501). Remove template.
 - (2) Temporarily install the mount (P/N 90209384-501) on the instrument panel.
 - (3) Use the support leg of the mount as a template, drill three pilot holes to locate the mount onto the left side of the lower console. Remove the mount.
 - (4) Drill seven mounting holes to 0.204 (#6 drill size).
 - (5) Deburr holes and touch up work area using Alodine, (MIL-C-5541) and Primer (MIL-P-23377).
 - (6) Install the mount (P/N 90209384-501) on the instrument panel using four bolts (AN3-SA), washers (AN960C10L), washers (AN970-3) and nuts (MS21044C3). Secure support leg to lower console using three bolts (2 AN3-3A & 1AN3-4A), three washers (AN960C10L) and nutplate assembly (P/N 90209385-501). (Figure 2).
- f. Installation of aircraft wiring for GPS Trimpack.
- (1) Install circuit breaker (P/N MS26574-1) in blank space in overhead circuit breaker panel (Figure 3, Detail A).
 - (2) Install GPS Decal (P/N 90209228-4) on circuit breaker for identification,
 - (3) Connect jumper (P/N 90209228-3) from line side of "DPLR" circuit breaker to line side of GPS circuit breaker (Figure 3, Detail B-B).

(4) Starting with connector (U-182 B/U) of Trimpack power cable at Trimpack mount area on left hand side of copilot's lower console, route power cable long wire forward along existing wire bundles, behind

Main Instrument panel, up left side of windshield center post and aft to overhead circuit breaker panel (Figure 3). Install terminal lug (P/N MS25036-102) on power wire and connect to load side of GPS circuit breaker (Figure 3, Detail B-B.)

NOTE

- Allow approximately 12 inches of slack, at the mount area, for the mount to be able to swivel.
- Access to ground point may be obtained by removing KY 28 access cover in the nose of the aircraft.
- If cable P/N 90209182-510 is substituted for P/N 90209182-505 substitute clamp P/N MS21919WDG2 with P/N MS21919WDG3.

(5) Route power cable ground wire forward through copilot's lower console to local grounding point (Figure 3). Install terminal lug (P/N MS25036-103) on ground wire and connect to grounding point.

(6) Locate and mark position for coax bulkhead connector in cabin overhead structure (Figure 3, Detail D). Drill bulkhead connector hole 0.5 in structure.

(7) Using top doubler (P/N 90209228-6) as template, locate and drill four holes 0.098 for doubler rivet installation.

(8) Install top doubler (P/N 90209228-6) and bottom doubler (P/N 90209288-5). Apply sealant MIL-S-8802 under top doubler and secure doublers with four rivets (P/N M7885/2-4-03) (Figure 3, Detail F-F).

(9) Install bulkhead connector of 90209182-505 antenna cable in doubler hole of step (8) on upper exterior of cabin and secure on under side of lower doubler with lockwasher and nut.

(10) Starting at the Trimpack mount area at copilot's side of lower console, route the antenna cable (P/N 90209182-504) forward along with existing wire bundles in back of instrument panel, up left side of windshield center post and along overhead structure with existing wire bundles to connector installed in step 9. Connect antenna cable connector to bulkhead connector and secure power cable and 90209182-504 antenna cable to existing wire bundles with tywraps. Clamp (MS21919WDG4) the power cable and the antenna cable to the aft bolt of the mount support leg.

(11) Route 90209182-505 antenna cable aft through structure around main rotor hub and to GPS antenna mount (Figure 3).

(12) Secure cable to existing wire bundles by routing under existing primary cable clamps (if necessary, replace existing clamp with the next larger clamp size) and by tying with MIL-T-43435 lacing tape. Plastic tywraps should not be used to secure the cable where it routes in the vicinity of primary flight controls. Install additional clamps (Figure 3, Details G-G and H-H).

CAUTION

DO NOT route antenna cable over fluid lines.

(13) Connect connector on 90209182-505 antenna cable to connector on antenna blankoff panel. Secure blankoff panel to antenna mount with four screws (P/N MS35206-248) and four washers (P/N AN960C8L).

g. Final procedures.

- (1) Perform a continuity check on the antenna cables for the Trimpack remote antenna.
- (2) Install radio set control (P/N C-7392/ARN-89) in lower console (TM 11-1520-237-23).
- (3) Install stores jettison control panel in lower console, if removed.
- (4) Install copilot's intercommunications system (ICS) control panel in lower console.
- (5) Install Caution/Advisory panel in instrument panel.
- (6) Raise and secure copilot overhead circuit breaker panel.
- (7) Raise and secure overhead console.
- (8) Install copilot diffuser duct (TM 1-1520-237-23).
- (9) Close APU compartment doors, 4T-28 & 3T-27 (TM 1-1520-237-23).
- (10) Close engine cowling and secure latches (TM 1-1520-237-23).
- (11) Reinstall main rotor pylon cover, close and secure latches.
- (12) Connect the aircraft battery.
- (13) Turn power on to the GPS circuit breaker.
- (14) Verify P/N B of the GPS five P/N audio connector is common with airframe ground (Figure 4) and that P/N D has 28 VDC on it.
- (15) (Optional) Install the Trimpack unit (See note in paragraph 1) and remote antenna in the aircraft. Move the aircraft to outside ramp with good GPS satellite visibility. Power up the aircraft. Turn the Trimpack on and check to see that it acquires the GPS satellites which are visible at the time of the test.

12. Kit B Installation Procedure.

- a. Remove GPS antenna blankoff panel, if installed, from the GPS antenna mount on upper surface of aircraft.
- b. Connect GPS antenna cable to connector of GPS antenna (Figure 5).
- c. Install GPS antenna on its mount and secure with four screws (P/N MS35206-332) and four washers (P/N AN960C8L) (Figure 5).

NOTE

Only Trimble Trimpack GPS Receiver, P/Ns 16768-10, 16768-20, 20636-00 and 20636-10 are allowable for this installation. These receivers have software for compensation due to effects of rotor modulation and have green lighting. All other Trimble Trimpack receivers cannot be used. The P/N is located on a nameplate located between the receiver and the battery pack. The battery pack must be moved in order to see the nameplate. An ANVIS (Aviator's Night Vision Imaging System) filter modification kit, NSN 5895-01-340-5502, has been developed and when used with GPS Receivers 16768-10, 16768-20, and 20636-10 will provide an ANVIS acceptable display. Installation instructions for this anvis filter modification are contained in document, ILS 91-ANV0002, dated March 1991, provided with the ANVIS kit. GPS Receiver P/N 20636-00 display is ANVIS acceptable without the addition of the filter modification kit.

- d. Remove caps from GPS Trimpack receiver power connector and external antenna cable connector. Tape caps to side of receiver with pressure sensitive tape PPP-T-42 to prevent chafing.
- e. Install receiver in its mount on instrument panel and secure with clamp assemblies (Figure 5). Connect power cable and antenna cable.
- f. Move the aircraft to outside ramp with good satellite visibility. Power up aircraft. Turn the Trimpack on and check to see that it acquires the GPS satellites which are visible at the time of the test. For Receiver P/N 20636-00 and 20636-10 only, check if the GPS key is valid. If not, key the receiver and turn the A-S safety off.

NOTE

If the Trimpack receiver is removed from the aircraft and operated on its internal batteries, the external power connector cap must be reinstalled.

13. Kit B Removal Procedure.

- a. Remove GPS antenna from its mount and disconnect GPS antenna cable.
- b. Connect GPS antenna cable to antenna blankoff panel and install blankoff panel on GPS antenna mount. Secure panel to mount using screws and washers.
- c. Remove Trim pack receiver from its mount and disconnect antenna cable and power cable. Install caps on Trimpack connectors.

14. Kit A Removal Procedures.

- a. Prepare the aircraft for safe ground maintenance (TM 1-1520-237-23).
 - (1) Turn off all electrical and hydraulic power.
 - (2) Disconnect battery from aircraft electrical system.
- b. Remove radio set control (P/N C-7392/ARN-89) from lower console (TM 11-1520-237-23).
- c. Remove copilot's intercommunications system (ICS) control panel from lower console.
- d. Remove main rotor pylon cover.
- e. Open engine cowling (TM 1-1520-237-23).
- f. Open APU compartment doors, 4T-28 & 3T-27, (TM 1-1520-237-23).
- g. Remove copilot diffuser duct (TM 1-1520-237-23).
- h. Unfasten and lower overhead console.
- i. Unfasten and lower copilot overhead circuit breaker panel.
- j. Remove Trimpack remote antenna mount from cover assembly aft of APU access doors.
 - (1) If installed, remove antenna blankoff panel and disconnect antenna cable from the blankoff panel.
 - (2) Remove antenna mount by removing screws.
 - (3) Remove doublers and fill/repair holes in cover assembly in accordance with TM 1-1520-237-23.
- k. Remove GPS Trimpack mount from left hand side of instrument panel.
 - (1) Remove mount by removing hardware from the lower console and instrument panel.

- (2) Place hardware back in screw holes in instrument panel.
- I. Remove GPS Trimpack aircraft wiring.
 - (1) Remove jumper from line side of "DPLR" circuit breaker to line side of GPS circuit breaker (Figure 3, Detail B).
 - (2) Disconnect terminal lug on power wire from load side of GPS circuit breaker.
 - (3) Remove GPS circuit breaker from overhead circuit breaker panel (Figure 3, Detail A),
 - (4) Remove GPS decal from circuit breaker panel,
 - (5) Disconnect terminal lug on ground wire from grounding point.
 - (6) Remove tywraps securing power cable to existing wire bundles and remove power cable.
 - (7) Remove tywraps securing antenna cable to existing wire bundles.
 - (8) Remove clamps from antenna cable (P/N 90209182-505).
 - (9) Disconnect antenna cable (P/N 90209182-504) from bulkhead connector and remove cable.
 - (10) Remove bulkhead connector of antenna cable (P/N 90209182-505) from cabin overhead structure and remove antenna cable.
 - (11) Remove connector adapter from cabin overhead structure.
 - (12) Patch/repair hole in top doubler and bottom doubler in accordance with TM 1-1520-237-23.
 - (13) Remove connector adapter and bracket at FS 449.
- m. Install radio set control (P/N C-7392/AN/ARN-89) in lower console (TM 11-1520-237-23).
- n. Install copilot's intercommunications system (ICS) control panel in lower console
- o. Raise and secure copilot overhead circuit breaker panel.
- p. Raise and secure overhead console.
- q. Install copilot diffuser duct (TM 1-1520-237-23).
- r. Close APU compartment doors, 4T-28 & 3T-27, (TM 1-1520-237-23).
- s. Close engine cowling and secure latches (TM 1-1520-237-23).
- t. Install main rotor pylon cover/close and secure latches.

15. Weight and Balance Data. Weight and balance for this Technical Bulletin is shown on form 365A.

COMPONENT	WEIGHT (LBS.)	ARM (INCHES)	MOMENT/1000 (IN. LBS.)
Kit A			
Receiver Mount/Adapter	1.5	216.0	0.3
Wiring	1.5	309.0	0.5
Antenna Mount w/Doublers	1.0	454.0	0.5
Kit B			
Antenna	0.3	454.0	0.1
Receiver	4.2	216.0	0.9

16. Recording and Reporting Requirements.

a. Record and Reports. Record accomplishment of this Technical Bulletin in accordance with the procedure prescribed in DA PAM 738-751. The following forms are applicable:

- (1) DA Form 5504 (Maintenance Request) (Standard Army Maintenance System).
- (2) DA Form 2407 (Maintenance Request) (For Non SAMS Activity).
- (3) DA Form 2408-5 Equipment Modification Record.
- (4) DA Form 2408-13 Aircraft Maintenance Record.
- (5) DA Form 2408-15 Historical Record for Aircraft.

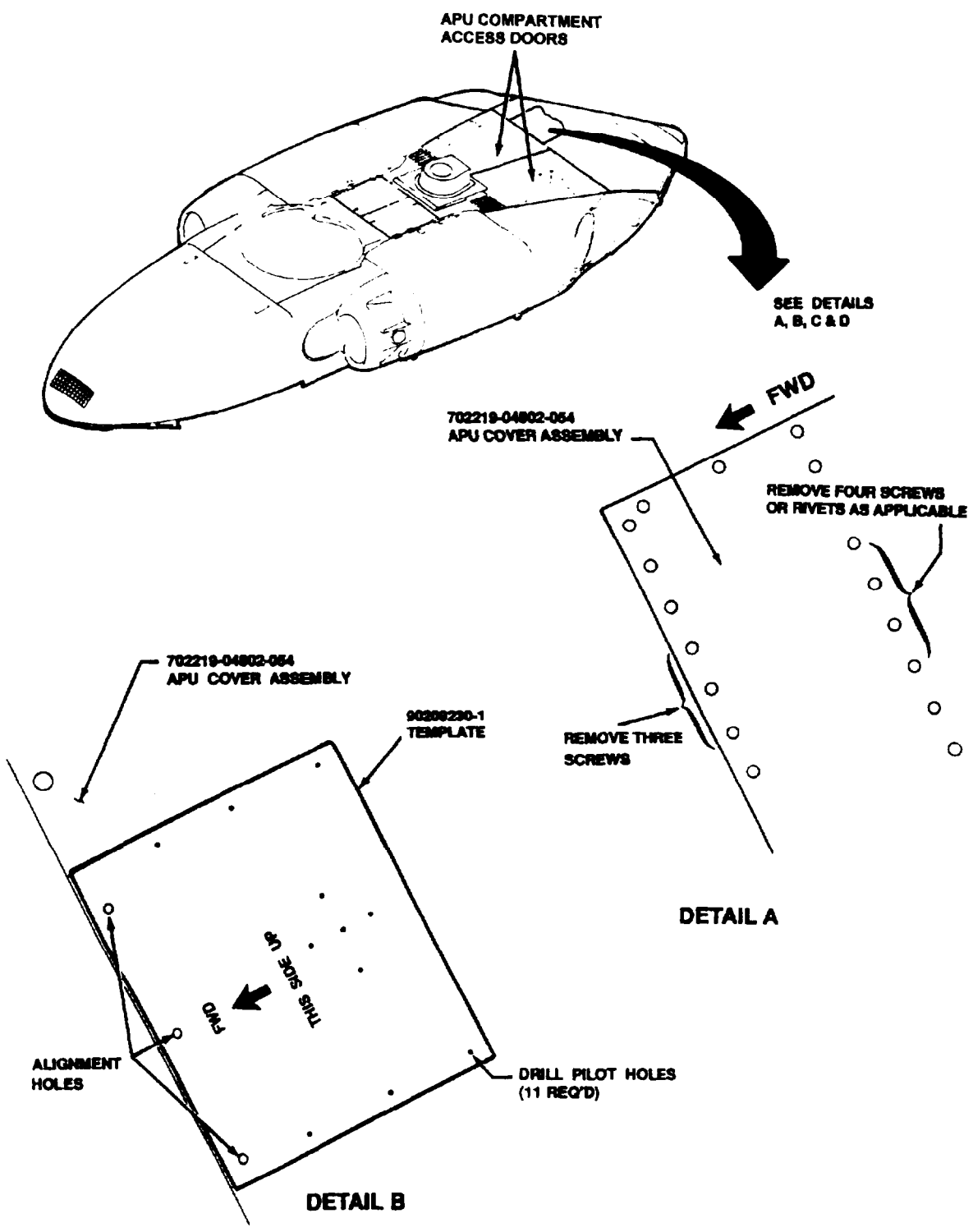
17. Points of Contact for this Technical Bulletin.

a. Technical point of contact for this TB is Mr. Jay Merkel, AMSAM-AR-EI-CU, DSN 645-0750 or (256) 955-0750, datafax 645-6590 or (256) 955-6590. The e-mail address is AMSAM-AR-EICU@redstone.army.mil. Alternate POC is Mr. Larry Moosman, (Camber Corp.) DSN 897-4914.

b. Logistical point of contact for this TB is Mr. Joe Hoover, AMSAM-DSA-UH-L, DSN 645-7898 or (256) 955-7898, datafax is DSN 645-6590 or (256) 955-6590. E-mail is hoover-jl@redstone.army.mil.

c. Forms and Records point of contact for this TB is Ms. Ann Waldeck, AMSAM-MMC-RE-FF. DSN 746-5564 or (256) 876-5564, datafax is 746-4904 or (256) 876-4904. E-mail is waldeck-ab@redstone.army.mil.

18. Reporting of Errors and Recommending Improvements. You can help improve this TB. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-LS-LP, Redstone Arsenal, AI 35898-5000. A reply will be furnished directly to you. You may also submit your recommended changes by E-mail directly to ls-lp@redstone.army.mil. or by fax (256) 842-6546/DSN 788-6546. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual.



M8018225

Figure 1. GPS Antenna Mount Installation (Sheet 1 of 3)

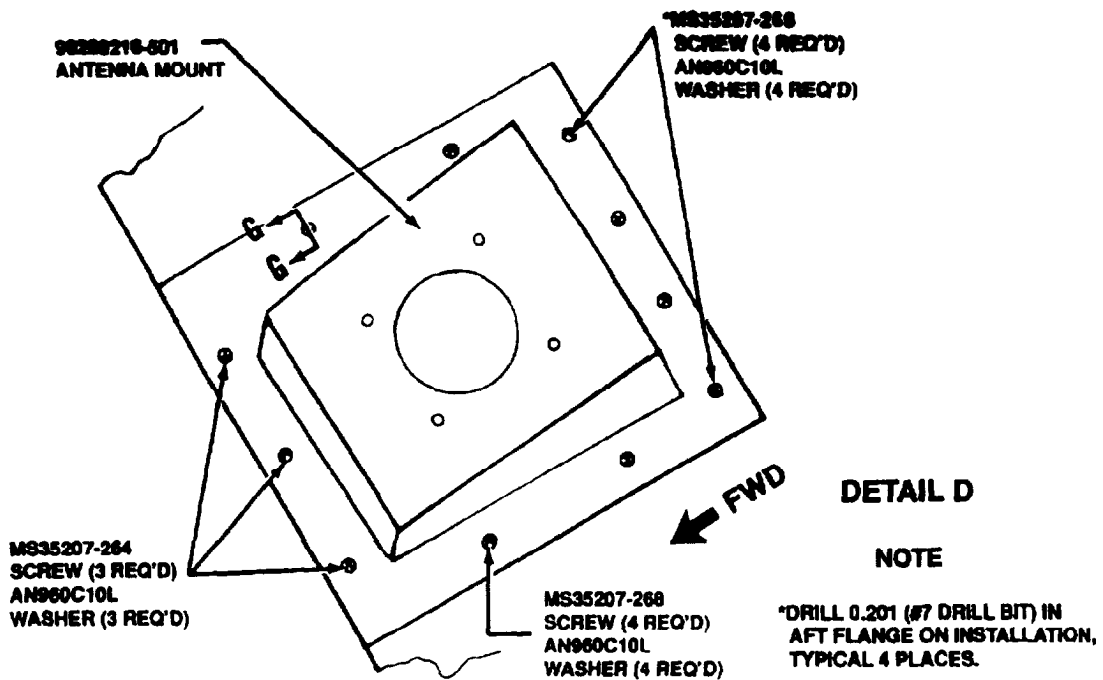
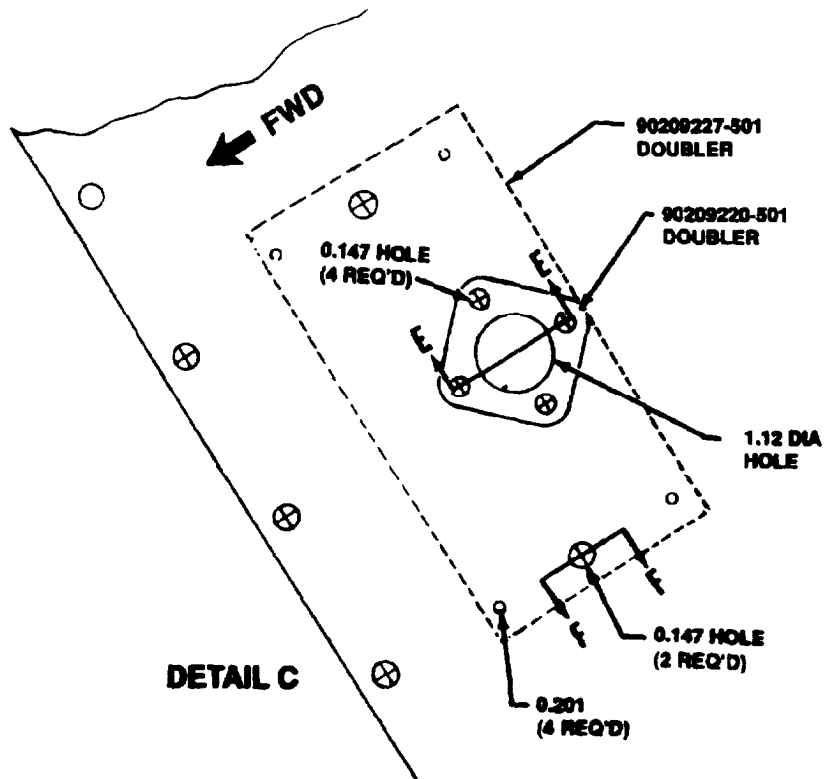
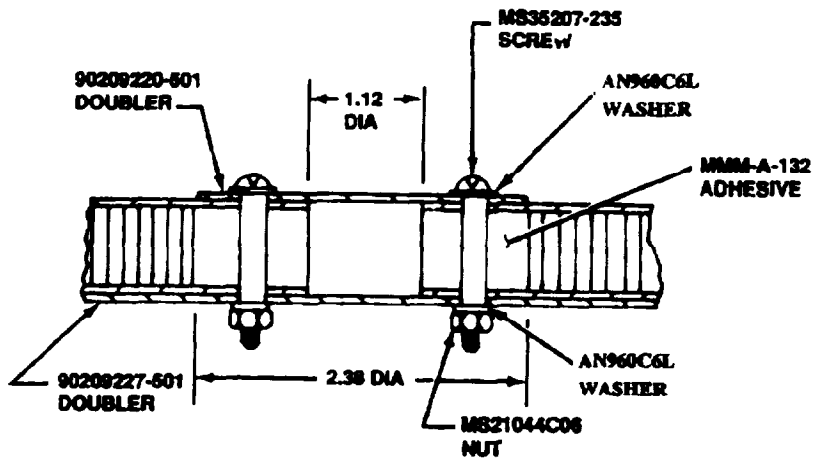
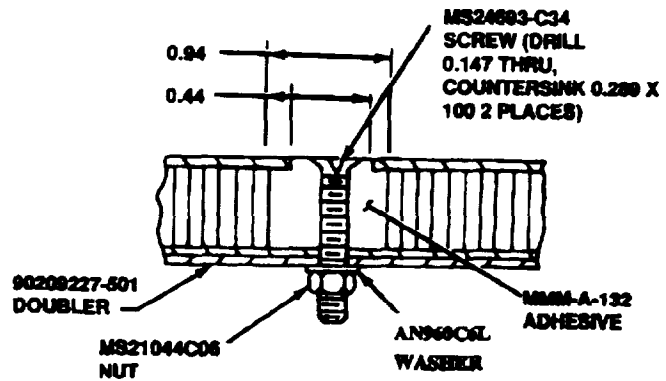


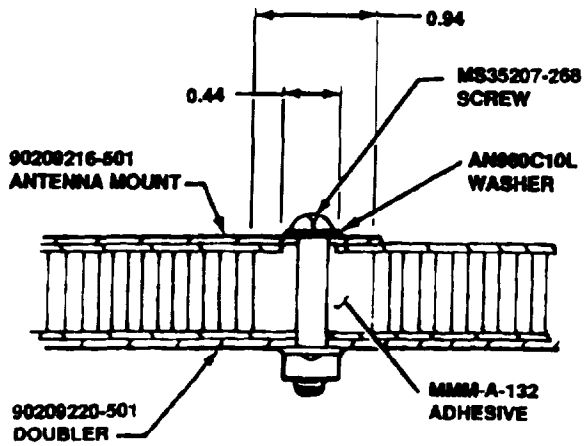
Figure 1. GPS Antenna Mount Installation (Sheet 2 of 3)



**DETAIL E - E
(TYPICAL 4 HOLES)**



**DETAIL F - F
(TYPICAL 2 PLACES)**



**DETAIL G - G
(TYPICAL 4 PLACES)**

MS018227

Figure 1. GPS Antenna Mount Installation (Sheet 3 of 3)

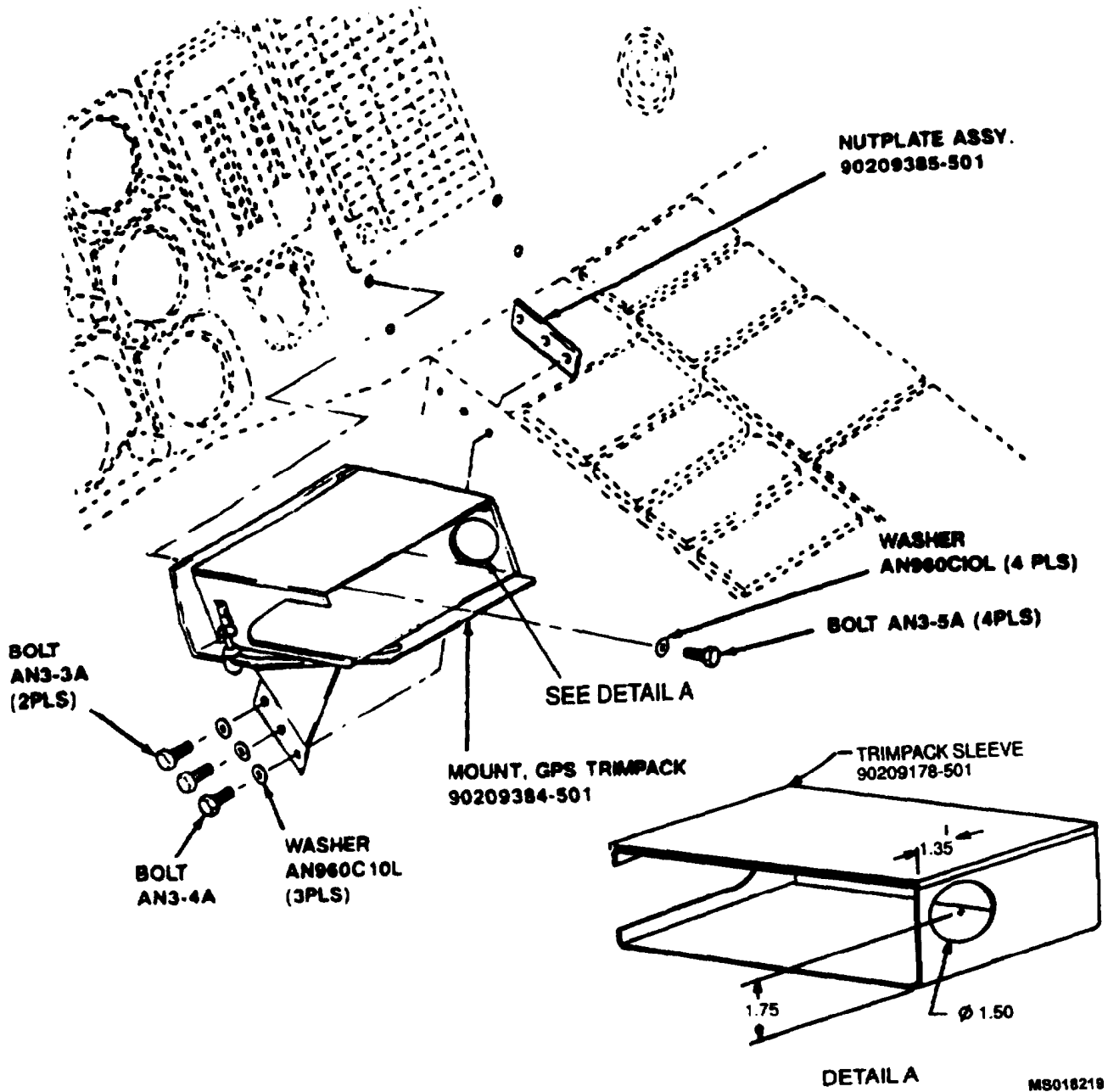
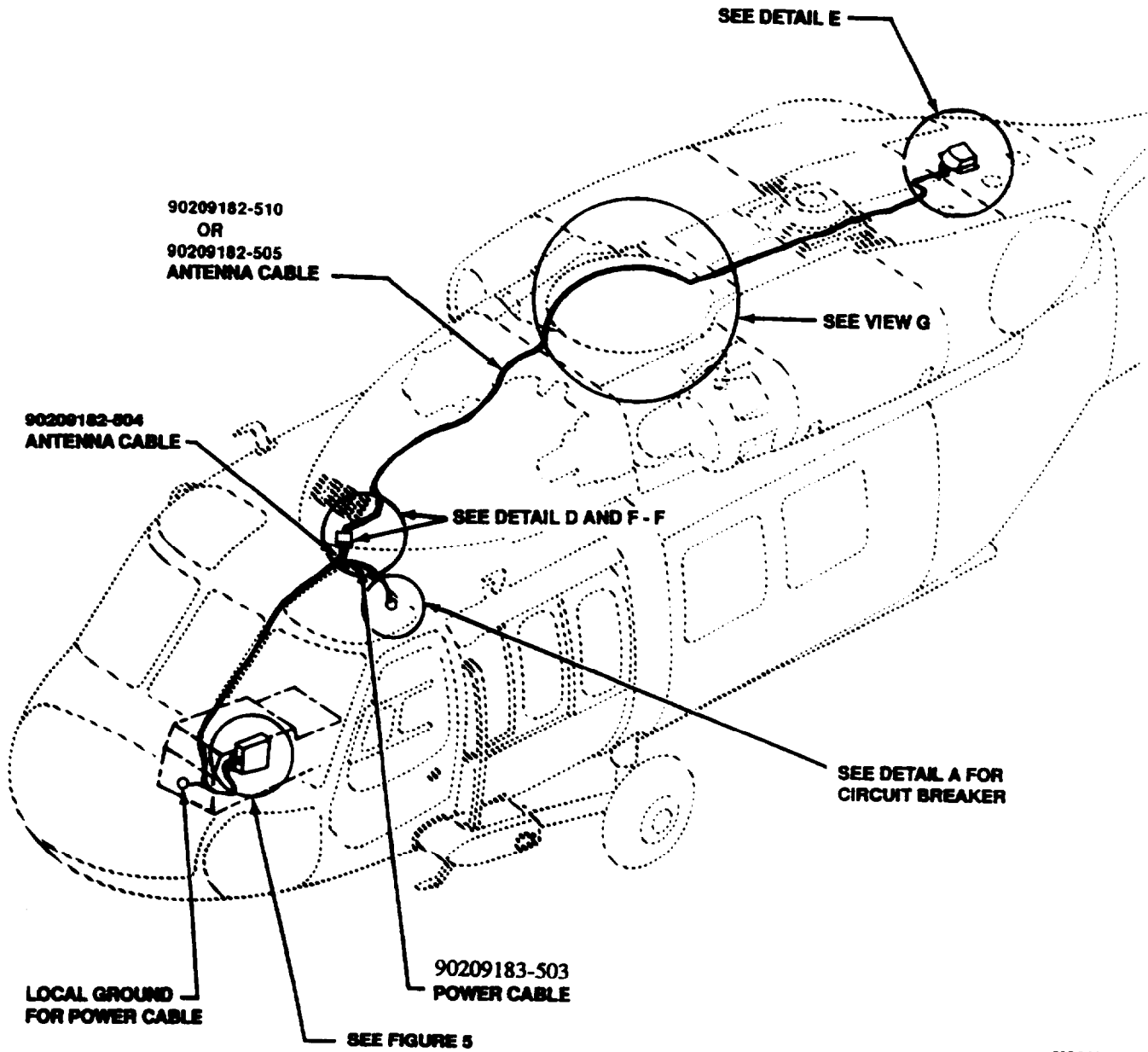


Figure 2. GPS Trimpack Mount Installation.



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Figure 3. GPS Power Cable and Antenna Cable Installation (Sheet 1 of 3).

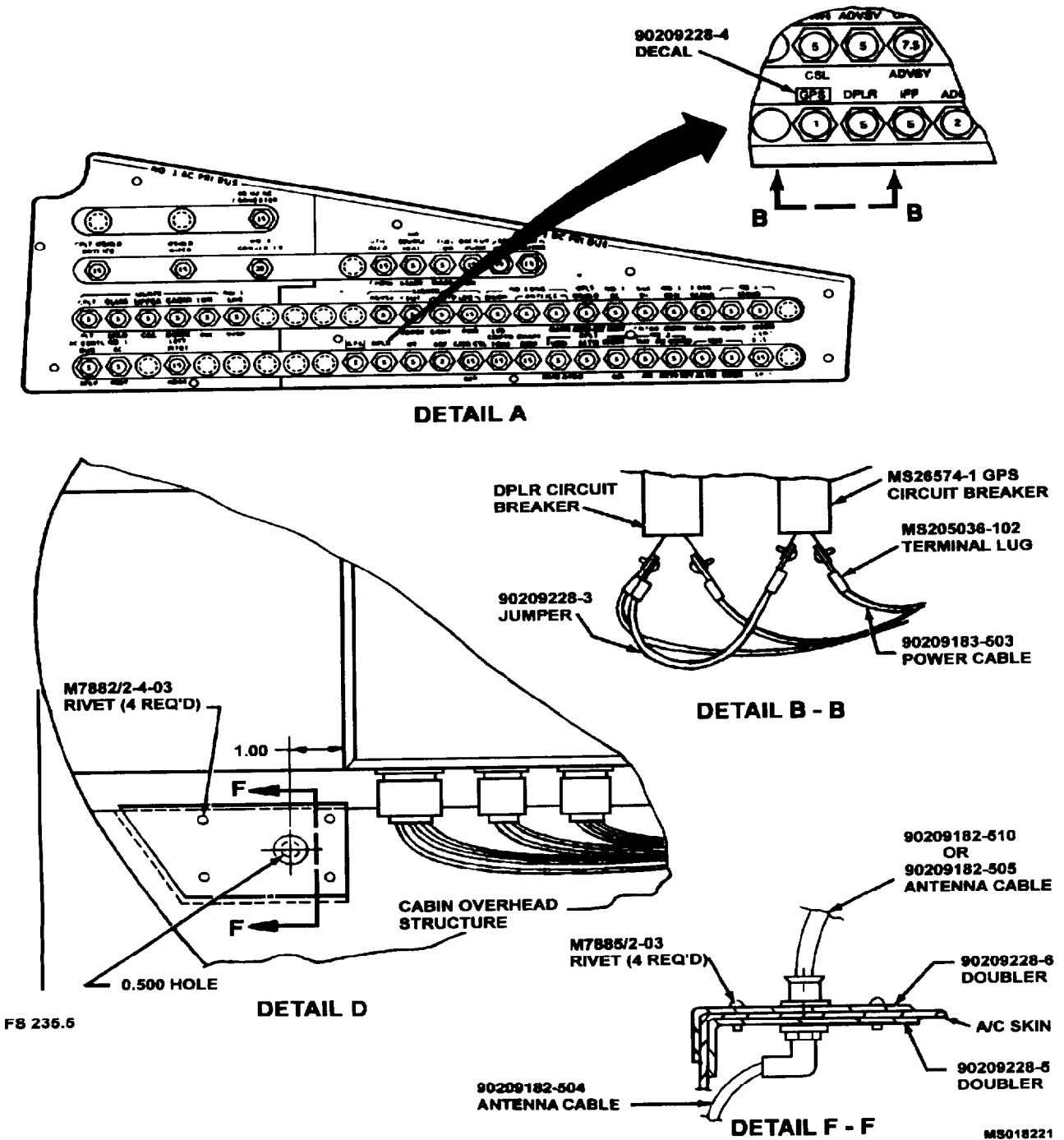


Figure 3. GPS Power Cable and Antenna Cable Installation (Sheet 2 of 3).

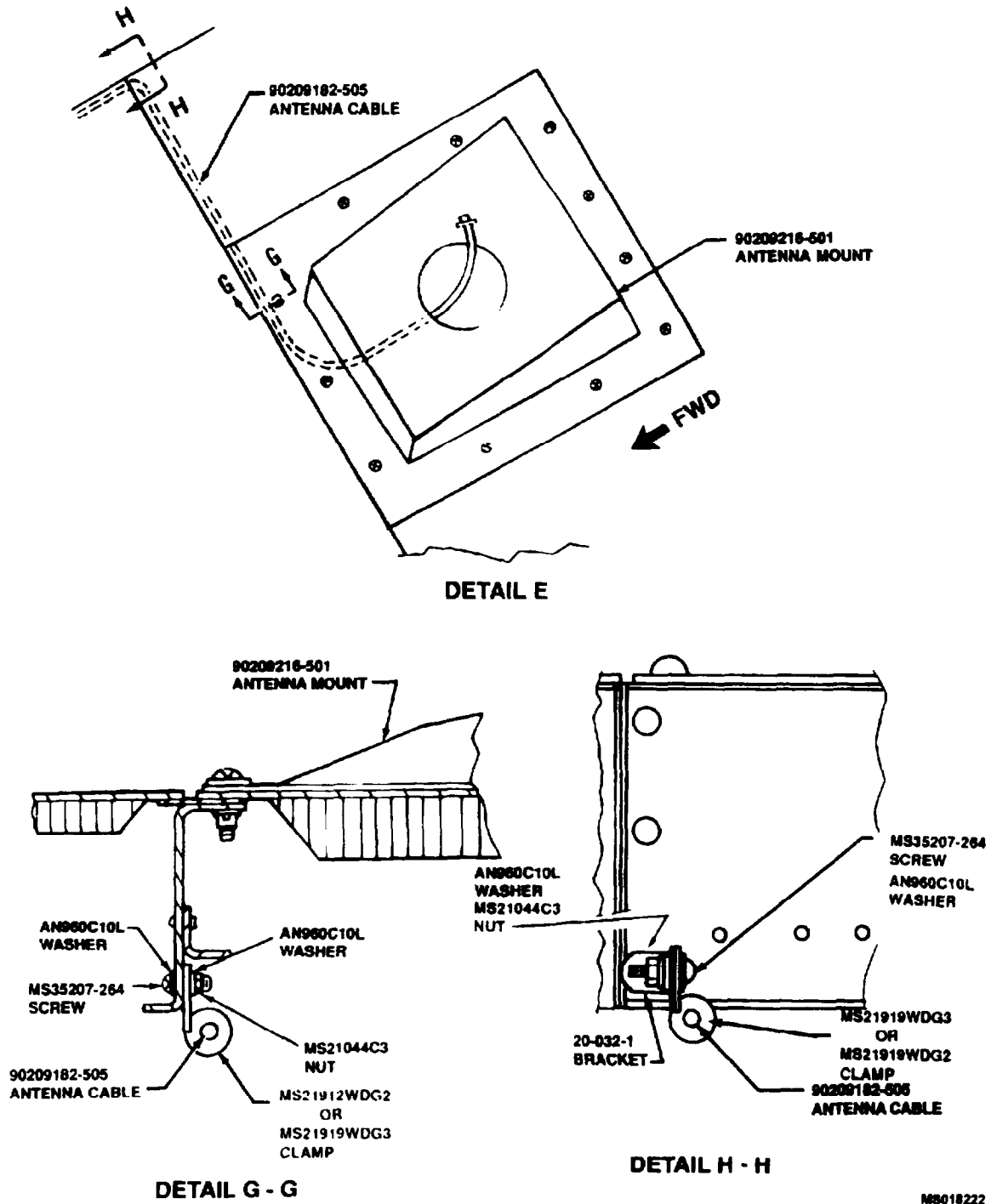
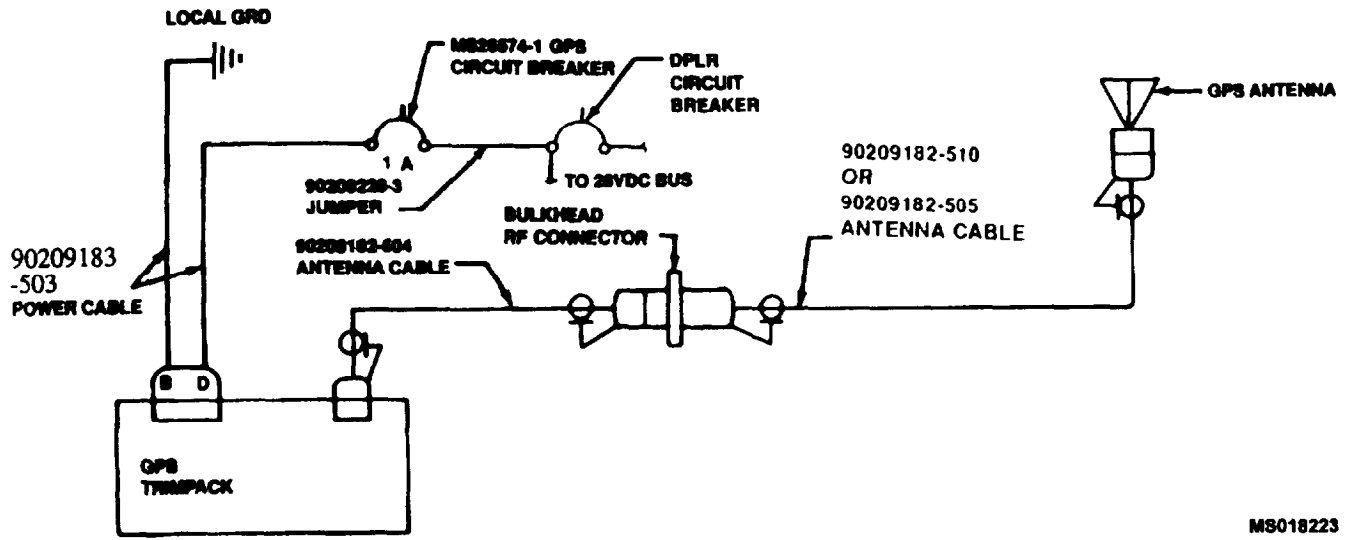


Figure 3. GPS Power Cable and Antenna Cable Installation (Sheet 3 of 3).



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Figure 4. GPS Wiring Diagram.

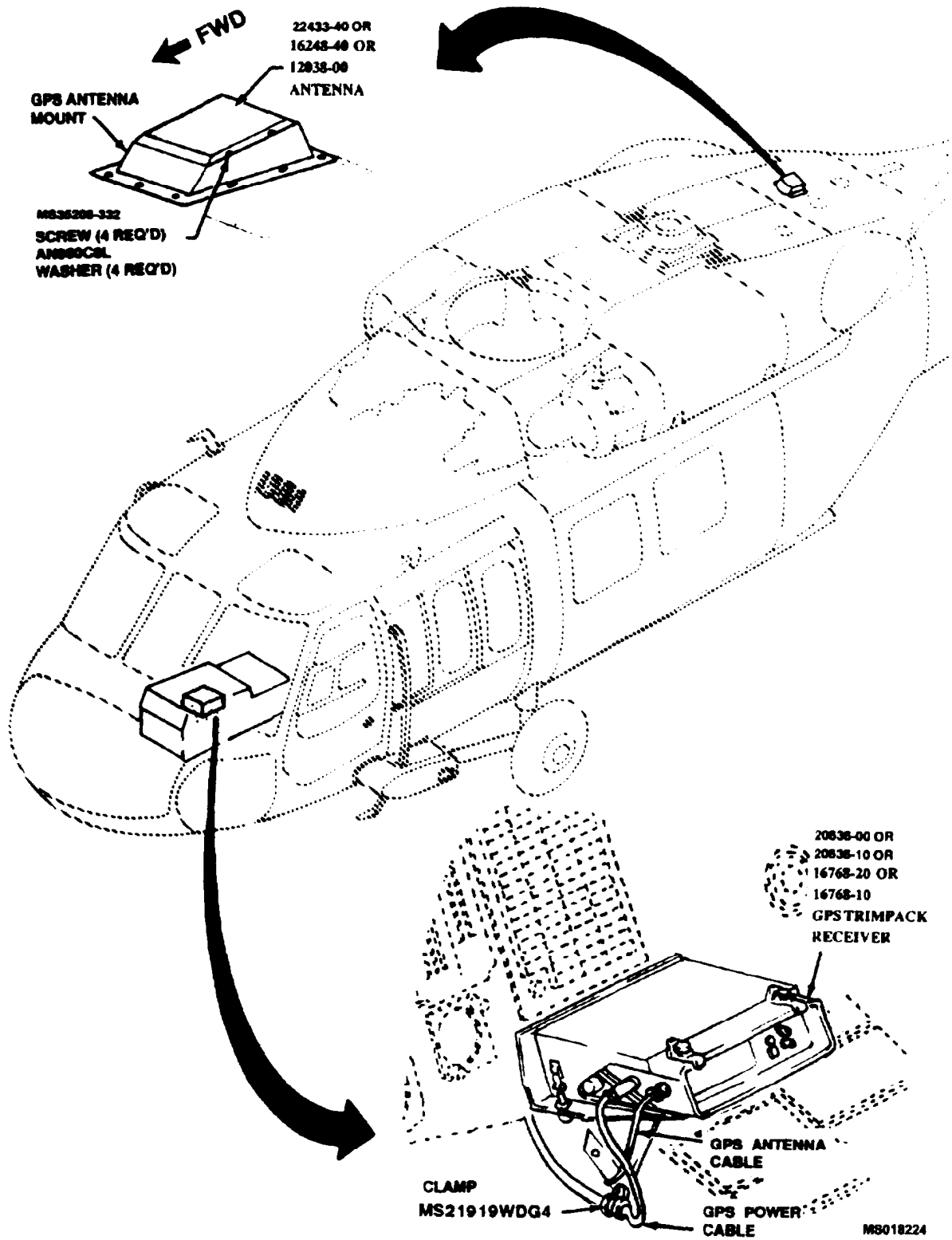
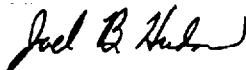


Figure 5. GPS Trim pack Receiver and Antenna Installation.

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
05436

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Subject: DA Form 2028

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5. **St:** MO
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7. **Date Sent:** 19-OCT-93
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9. **Pub Title:** TM
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