



TECHNICAL BULLETIN

DATE: 08 SEPTEMBER 1978
PAGE 1 OF 10

INSTALLATION OF ANTI-ICE FUEL FILTER, PN 369H90022

1. PLANNING INFORMATION

A. Models Affected:

500D Model 369D Helicopter Serial No. 0003D and subs equipped with PN 369H6416 Instrument Panel

B. Time of Compliance:

At owners and operators discretion -

Installation of the PN 369H90022 anti-ice fuel filter deletes the requirement for use of fuel containing anti-ice additives.

C. Preface:

The information given in this Service Information Notice provides instructions for incorporating an anti-ice fuel filter between the helicopter fuel system and the engine fuel system. The filter is designed to strip the fuel of ice particles prior to entering the engine fuel system. Electrical and mechanical equipment sense the build up of ice in the filter unit, and automatically illuminate a cockpit caution and activate the helicopter start pump. When the filter becomes fully clogged, a bypass valve contained in the filter unit opens and the fuel bypasses the anti-ice fuel filter element.

D. Reference:

500D Model 369D Basic HMI - Volume I, Issued 15 September 1976

E. Weight and Balance

Add/Subtract	Weight (lbs.)	Arm (inches)	Moment (inch-pounds)
Add	7.5	112.4	840

F. Parts List

When ordering, specify PN 369H90022 Anti-Ice Fuel Filter Installation which consists of the following:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Doubler	369H9022-1	1	HH
Tube	369H9022-2	1	HH
Filter Assembly	369H8021	1	HH
Fitting	369H8023	1	HH
Hose Assembly	369H8024-5	1	HH

DATE: 08 SEPTEMBER 1978
PAGE 2 OF 10

TECHNICAL BULLETIN

REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Hose Assembly	369H8025	1	HH
Bracket	369H8032	1	HH
Placard	369H8100	1	HH
Drain Valve	CAV-170H-4	1	Commercial
Tie Wrap	TY-25M	1	Commercial
Tee	6151-0250	1	Commercial
Clamp	AN737TW38	2	Commercial
Bolt	AN775-4	1	Commercial
Gasket	AN901-4A	2	Commercial
Reducer	AN919-19	2	Commercial
Washer	AN960PD416L	3	Commercial
Washer	AN960PDL10	2	Commercial
Washer	AN960-10	4	Commercial
Rivet	MS20615-3M	30	Commercial
Rivet	MS20615-4M	10	Commercial
Lockwire	MS20995C3M	AR	Commercial
Nut	MS21042-3	5	Commercial
Clamp	MS21919H2	5	Commercial
Packing	MS29512-04	1	Commercial
Packing	MS29512-012	2	Commercial
Screw	NAS603-7	5	Commercial
Bolt	NAS1304-5H	3	Commercial
Spacer	NAS43DD4-19	3	Commercial
Anti-Ice Fuel Filter Electrical Installation			
Harness Assembly	369H90161-3	1	HH
Panel	369H4735"A"	1	HH
Cover	369H4739	1	HH
Rivnut	S10K80	3	BF Goodrich
Washer	AN960PD10L	3	Commercial
Spacer	NAS43DD3-10	3	Commercial



TECHNICAL BULLETIN

DATE: 08 SEPTEMBER 1978
PAGE 3 OF 10

REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Screw	NAS603-8	3	Commercial
Screw	SFSW8CP-L01 BK	5	Commercial
Sleeve	MS21266-2	AR	Commercial
Rotorcraft Flight Manual Supplement	CSP-D-II	1	HH

G. Tools, Equipment and Materials

TOOLS AND EQUIPMENT	
Nomenclature	Source
Rivet tool, C800 Heading Tool or equivalent	BF Goodrich
Rivet gun	
Cutting shears	
Drill motor, portable	
Drill bit - No. G	
Drill bit - No. 2	
Drill bit - No. 30	

MATERIALS

Name	Specification	Part No.	Source
Anti-seize compound	MIL-T-5544B	Thread Lube or equivalent	Parker -Hannifin Cleveland, OH
Sealant	MIL-S-8660B	732RTV or equivalent	Dow Corning
Primer, zinc chromate	MIL-P-8585		Commercial
Paint, heat resistant - epoxy white	FED-STD-595	No. 17875	Commercial
Primer - epoxy yellow, polyimide			Commercial

DATE: 08 SEPTEMBER 1978
PAGE 4 OF 10

TECHNICAL BULLETIN

2. ACCOMPLISHMENT INSTRUCTIONS

A. Helicopter Safety Procedures

WARNING Prior to performing modification of fuel system, perform the following to avoid possibility of fuel vapor ignition or fire:

- (1). Turn OFF all electrical power
- (2). Electrically ground helicopter (Section 2, Basic HMI)
- (3). Disconnect battery and external power (Section 17)

B. Access

NOTE: Perform the following to gain access to work areas:

- (1). Open engine access doors (Section 2)
- (2). Remove aft compartment seats; remove upper LH aft bulkhead panel and lower aft bulkhead panel (Section 2).
- (3). Remove pilot compartment LH floor access door (Section 2)
- (4). Remove instrument panel hood and instrument panel LH side fairing (Section 17)

C. Part I - Installation of Anti-Ice Fuel Filter

- (1). Close fuel shut off valve; drain fuel from supply line drain valve. (Section 2, Basic HMI.)
- (2). Disconnect and remove existing fuel supply hose from engine driven fuel pump and from elbow on Station 124.0 firewall fitting. (Section 12, Basic HMI.)

NOTE: Remove insulation from aft side of Station 124.0 firewall at area shown (View C). Clean firewall area with MEK or equivalent. Removal of L-shape section of insulation is required to install 369H90022-1 doubler.

- (3). Using existing rivet pattern on Station 124.0 firewall, drill 0.1295-inch diameter holes and install 369A90022-1 doubler on FORWARD side of firewall as shown. Install rivets with zinc chromate primer. (View A-A and A, Figure 1.)
- (4). Using 369H8032 bracket as template, mark and drill 0.1285-inch diameter rivet holes and install bracket on AFT side of firewall as shown. Use existing rivet pattern as applicable. Install rivets with zinc chromate primer.
- (5). Touch up firewall area where insulation was removed with primer and heat resistant paint.
- (6). Remove 369A8050-11 clip securing engine gearcase cooling duct to fuselage structure; drill 0.260-inch diameter hole and relocate clip on structure per dimension shown.
- (7). Install 369H8021 filter assembly on bracket with three bolts and washers as shown; lockwire bolts.
- (8). Connect new 369H8024-5 hose with firesleeve to filter and to engine driven fuel pump as shown.
- (9). Connect new 369H8025 hose with firesleeve to filter and to existing 369H8103 fitting and elbow on firewall; reposition fitting and elbow as shown. As required, install clamp on hose and secure clamp to stiffener, to prevent chaffing of hose on structure.

TECHNICAL BULLETIN

DATE: 08 SEPTEMBER 1978

PAGE 5 OF 10

- (10). Install new CAV-170H-4 valve with packing to filter, using anti-seize compound. Install new 369H90022-3 drain tube to valve with lockwire.
- (11). Splice new 6151-0250 tee into existing drain tube arrangement as shown; allow slack to permit unrestrained movement of drain tube. For helicopter with 369H92255 drain kit installed, reposition existing tee as shown.
- (12). Connect other end of 369H90022-3 drain tube to tee with lockwire.
- (13). Route 369H90161-3 wiring harness from filter down and aft, then forward through 369H2500 conduit left side. Install clamps four places at existing tooling holes in structure as shown; secure wiring harness with clamps. Route wiring forward through conduit to pilot compartment.

D. Part II - Electrical Installation

- (1). Using 369H4735 panel as template, mark and drill three 0.219-inch diameter holes in LH side of instrument console as shown in Figure 2; install rivets.

NOTE: Use existing nutplate and/or hole as reference point.

- (2). Install 369H4735 panel on LH side of instrument console, using three screws, washers and spacers as shown.
- (3). Route filter wiring harness from conduit to instrument console; tie in with existing wiring harness.
- (4). Connect electrical wiring per wiring diagram and wire table.
- (5). Reconnect battery and perform ground operational check of anti-ice fuel filter installation. (Refer to Section II of RFM Supplement No. CSP-D-II.)
- (6). Record helicopter serial number on 369H8100 placard; install placard on overhead duct in pilot compartment at location shown.
- (7). Install 369H4739 cover on 369H4735 panel, using five screws.
- (8). Make cutout in instrument console LH fairing as shown; reinstall fairing.
- (9). Make cutout in instrument console hood as shown; reinstall hood.
- (10). Reseal both ends of 369H2500 conduit with 732RTV sealant.
- (11). Reinstall removed components and access doors and panels.
- (12). Insert Rotorcraft Flight Manual Supplement in Section IX of flight manual.
- (13). Record installation of 369H90022 anti-ice fuel filter installation in Components Record of helicopter Log Book.

DATE: 08 SEPTEMBER 1978
PAGE 6 OF 10

TECHNICAL BULLETIN

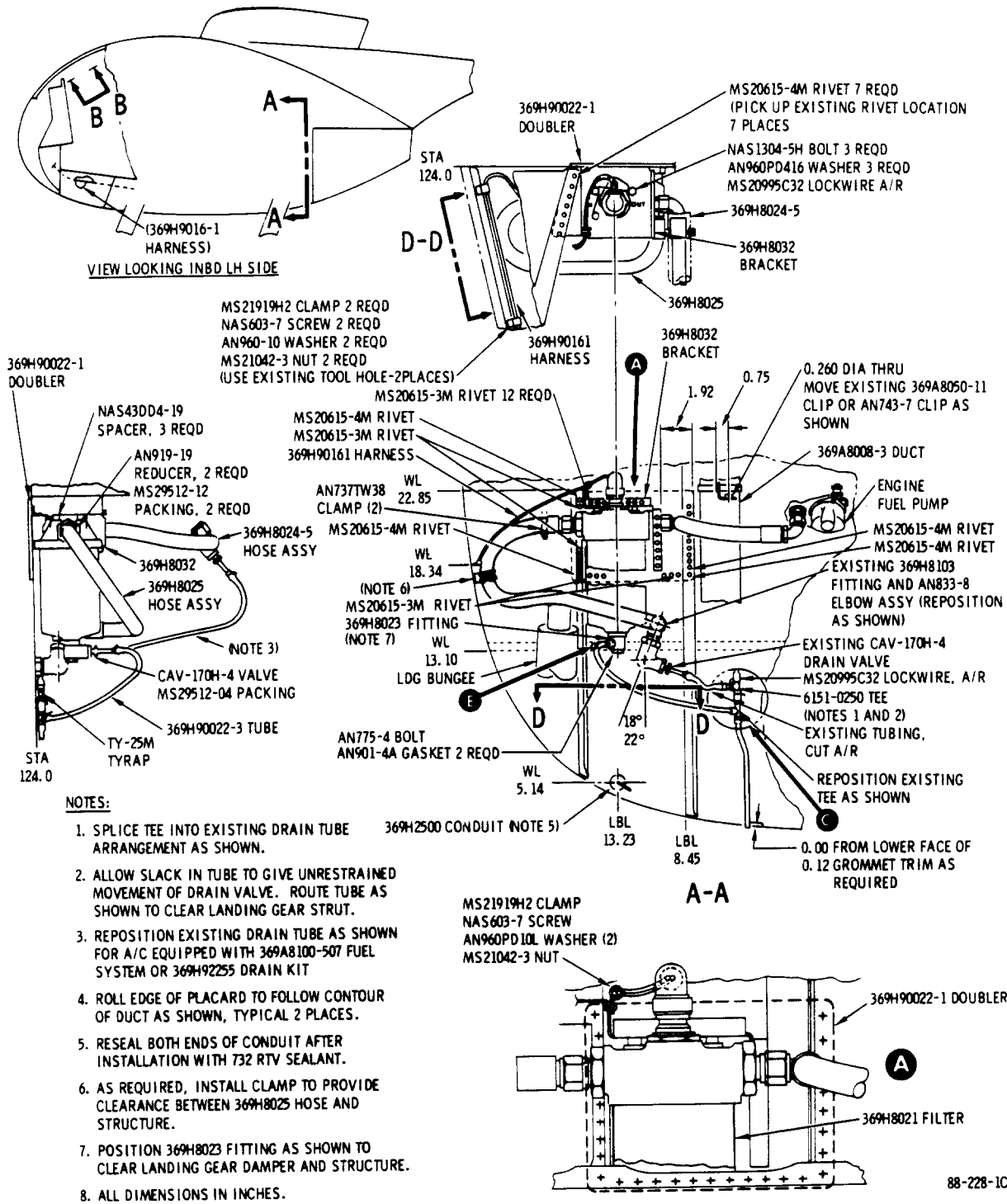


Figure 1. Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 1 of 2)

TECHNICAL BULLETIN

DATE: 08 SEPTEMBER 1978
PAGE 7 OF 10

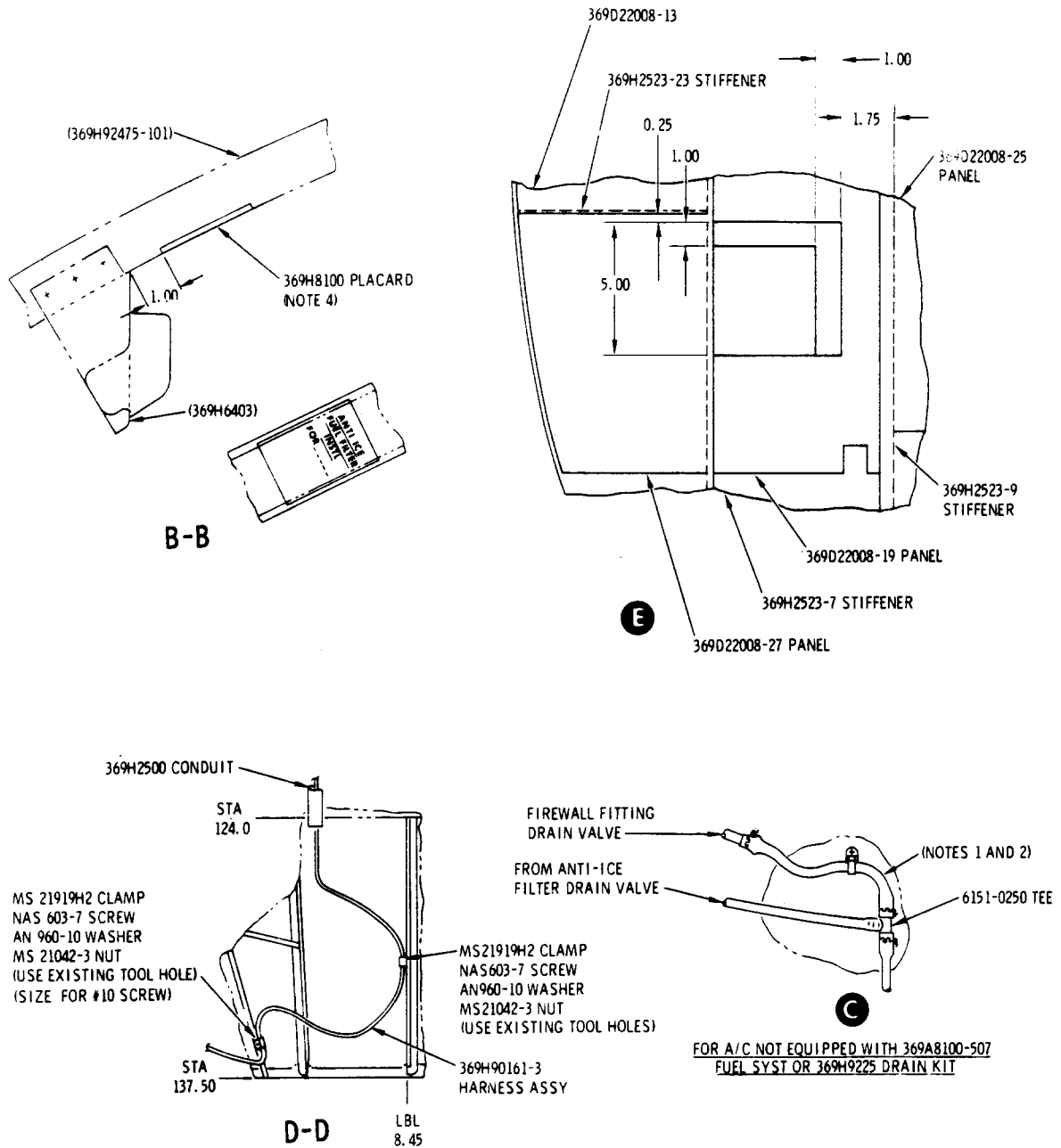
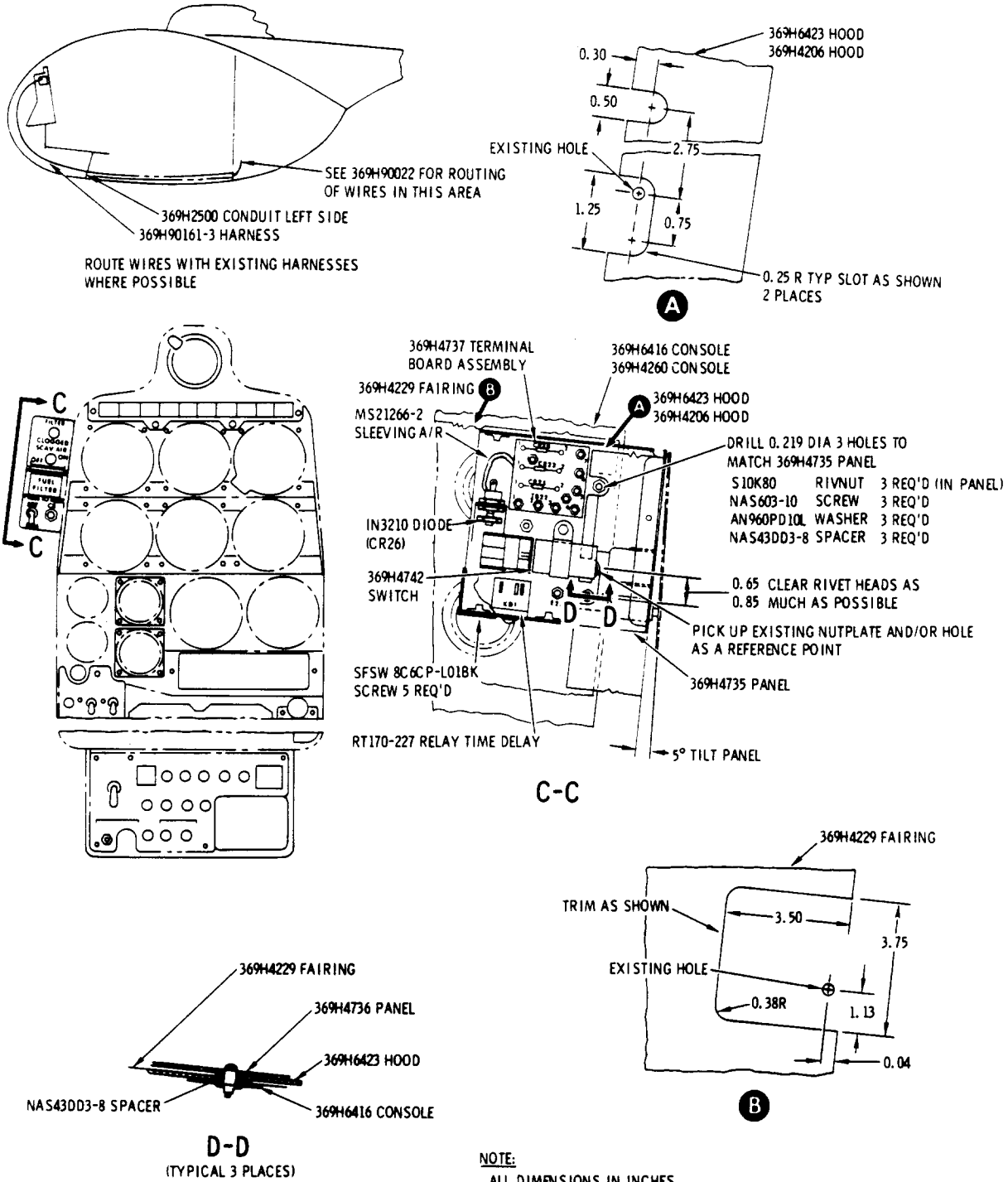


Figure 1. Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 2 of 2)

DATE: 08 SEPTEMBER 1978
 PAGE 8 OF 10

TECHNICAL BULLETIN



88-229-1B

Figure 2. Electrical Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 1 of 3)

TECHNICAL BULLETIN

DATE: 08 SEPTEMBER 1978
PAGE 9 OF 10

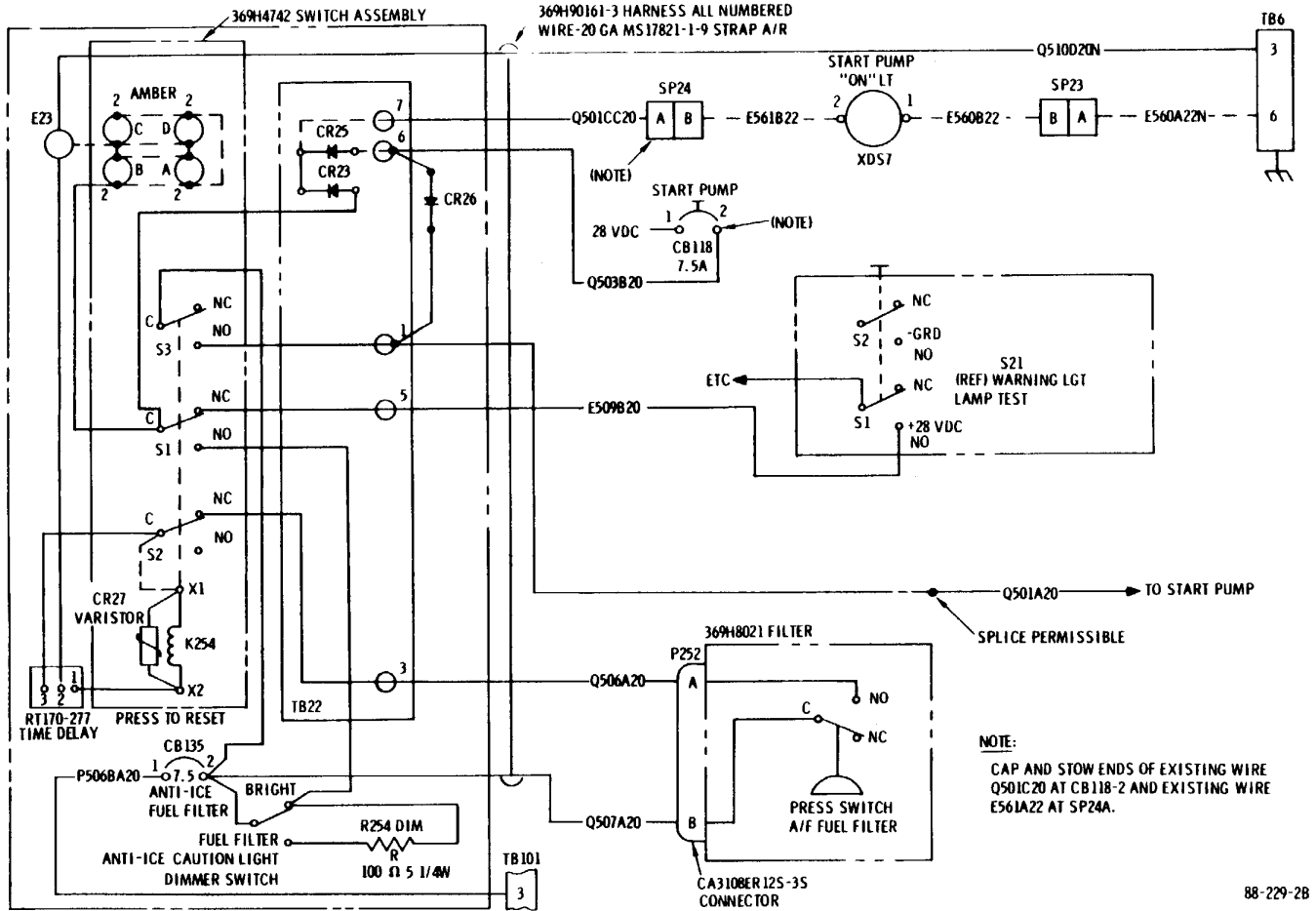
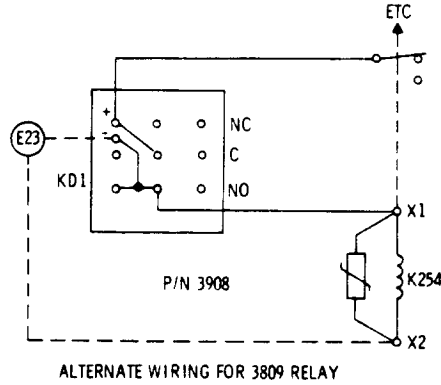


Figure 2. Electrical Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 2 of 3)

DATE: 08 SEPTEMBER 1978
 PAGE 10 OF 10

TECHNICAL BULLETIN



WIRE TABLE				
WIRE NO.	FROM	TERMINATION	TO	TERMINATION
Q507A20	CB 135-2	MS25036-149	P252-B	CRIMP
Q506A20	TB22-3	MS25036-101	P252-A	CRIMP
E509B20	TB22-5	MS25036-101	S21-S1 (NO)	SOLDER
Q510D20N	E23	MS25036-101	TB6-3	MS25036-101
Q501A20	TB22-1	MS25036-101	TO START PUMP	
Q501CC20	TB22-7	MS25036-101	SP24A	32445 (AMP)
Q503B20	TB22-6	MS25036-101	CB 118-2	MS25036-149
P506BA20	CB 135-1	MS25036-149	TB 101-3	MS25036-101

88-229-3A

Figure 2. Electrical Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 3 of 3)