



# TECHNICAL BULLETIN

DATE: 1 MAY 1972

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## RELOCATION OF ENGINE FUEL SUPPLY HOSE

### 1. PLANNING INFORMATION

#### A. MODELS AFFECTED:

369HE Helicopter Serial Nos. 0101E thru 0215E  
369HS Helicopter Serial Nos. 0001S thru 0368S  
369HM Helicopter Serial Nos. 0001 thru 0004;  
0005M thru 0213M; 0215M thru 0219M

#### B. PREFACE:

The information given in this Service Information Notice lists a procedure for modifying the engine fuel supply system, to eliminate possible interference between the fuel supply system bulkhead fitting (nipple) located in the engine firewall, and the left rear landing gear strut. The modification and relocation of fuel system components is recommended in order to prevent chafing to the fuel line in the event of a hard landing or a collapsed landing gear damper.

#### C. TIME OF COMPLIANCE:

At owners and operators discretion

#### D. WEIGHT AND BALANCE:

Weight and balance not affected

#### E. REFERENCE:

500 Series - Basic Handbook of Maintenance Instruction, Revised I December 1971

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## F. PARTS LIST:

| REPLACEMENT PARTS/SUPPLIES |             |      |                              |
|----------------------------|-------------|------|------------------------------|
| Nomenclature               | Part No.    | Qty. | Source                       |
| Fitting                    | 369H8103    | 1    | HTC -AD                      |
| Hose Assembly              | 369H8102    | 1    | HTC -AD                      |
| Tube, Drain                | 369H8010-85 | 1    | HTC -AD                      |
| Valve, Drain               | CAV-170H-4  | 1    | Saf-Air,<br>Ligonía, Mich.   |
| *Valve, Drain              | CAV-170     | 1    | Saf-Air,<br>Ligonía, Mich.   |
| Elbow                      | AN833-8     | 1    | Commercial                   |
| Reducer                    | AN919-11D   | 1    | Commercial                   |
| Nut                        | AN924-8     | 2    | Commercial                   |
| Packing                    | MS29512-08  | 2    | Commercial                   |
| Packing                    | MS29512-05  | 1    | Commercial                   |
| Washer                     | AN960-4L    | 2    | Commercial                   |
| Rivet                      | NAS1738MW4  | 1    | Commercial                   |
| Base                       | TC-814      | 1    | Thom. & Betts,<br>Eliz. N.J. |
| Ty-Rap                     | TY-25M      | 1    | Thom. & Betts,<br>Eliz. N.J. |

\* Optional - Replacement for 369A8111 fuel cell sump drain valve.

## G. MATERIALS:

| MATERIALS                           |                                     |
|-------------------------------------|-------------------------------------|
| Nomenclature                        | Source                              |
| Primer, zinc chromate               | W.P. Fuller Co.<br>L.A., California |
| Cardboard, corrugated or equivalent | Commercial                          |
| Tape, adhesive                      | Commercial                          |

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| TOOLS AND EQUIPMENT Nut |            |
|-------------------------|------------|
| Nomenclature            | Source     |
| Drill, portable         | Commercial |
| Drill bit – #30         | Commercial |
| Gun, rivet              | Commercial |

## 2. PROCEDURE

- a. Check that all electrical power is OFF.
- b. Disconnect battery and external power.
- c. Close fuel shutoff valve by pulling outward on fuel control knob.
- d. Open engine access doors.
- e. Tape corrugated cardboard or equivalent protective covers over left rear landing gear strut and brace to prevent tool nicks or scratches.
- f. Drain fuel from coupling and hose assembly, supply tube and engine fuel pump.
- g. Remove clamps on coupling and hose assembly and slide fire sleeve down away from engine pump; unscrew coupling halves (See Figure 1).
- h. Slide fire sleeve upward and disconnect hose and coupling assembly at structural ring tee fitting. Discard hose and coupling assembly.

**NOTE:** During modification of engine fuel supply lines, cover or cap open ends of any installed tubing or fitting, to prevent entry of dirt or contaminants.

- i. Loosen tube nut on 369A8010-631 supply tube at Station 137.50 structural ring and at Station 124 bulkhead.
- j. Spring structural ring slightly aft until flare on supply tube clears lip on tee fitting; remove and discard supply tube.

**NOTE:** Do not remove existing union from Station 124 bulkhead. A washer should be installed under the union jam nut. If not present, install AN960PD1216 washer; torque jam nut to 400 to 420 inch-pounds.

- k. Remove following components from Station 137.50 structural ring: 369A8142 tee, 369A8111 drain valve, AN924-8D nut, and AN960PD1216 washer.

**NOTE:** Remove any caps or covers at installation of new hoses and firings.

- l. Install 369H8103 firewall fitting to existing AN832-8 union on Station 124 bulkhead, using MS29512-08 packing and AN924-8 nut. Position new fitting as shown and tighten nut.
- m. Install AN833-8 elbow to firewall fitting, using MS29512-08 packing and AN924-8 nut. Position elbow as shown and tighten nut.
- n. Install AN919-11D reducer with MS29512-05 packing at engine fuel pump.

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o. Install 369H8102 hose assembly with fire sleeve to reducer and to elbow installed at firewall fitting. Check that hose elbow at reducer is positioned as shown before tightening hose assembly; torque nuts to 150 to 250 inch-pounds both ends. Slide fire sleeve over hose ends at elbows and secure with clamps.

p. Using #30 drill bit, drill hole equally spaced between existing rivets in station 124.00 bulkhead as shown; coat hole with zinc chromate primer. Use extreme care not to drill through fuel cell or support structure.

q. Install TC-814 base, using NAS138MW4 rivet and AN960-4L washer.

r. Install CAV-170H-4 drain valve to 369H8103 firewall fitting.

s. Install 369A8010-85 drain tube to drain valve and secure with lock-wire; tie tube to base with Ty-rap and route tube down through grommet in fuselage floor. Allow sufficient slack in tube to give unrestrained release movement of drain valve. Trim drain valve at grommet as shown.

**NOTE:** For early configuration helicopters, replacement of spring-loaded plunger-type fuel cell sump drain valve (P/N 369A8111) with new needle and seat type drain valve (P/N CAV - 170) is recommended. The fuel sump drain valve is located in the start pump mounting pad. Refer to Section 12 of Basic HMI for valve removal and installation.

t. Remove protective cover from landing gear strut.

u. Open fuel shutoff valve by pushing inward on fuel control knob.

v. Connect battery; energize electric fuel pump and inspect fuel supply system for evidence of leakage, paying particular attention to relocated fuel hose assembly. Check drain valve for operation and leakage.

w. Close engine compartment doors.

x. Perform an operational check of the engine; reinspect engine area for evidence of fuel leakage.

y. Record modification of engine fuel supply hose in helicopter Log Book.

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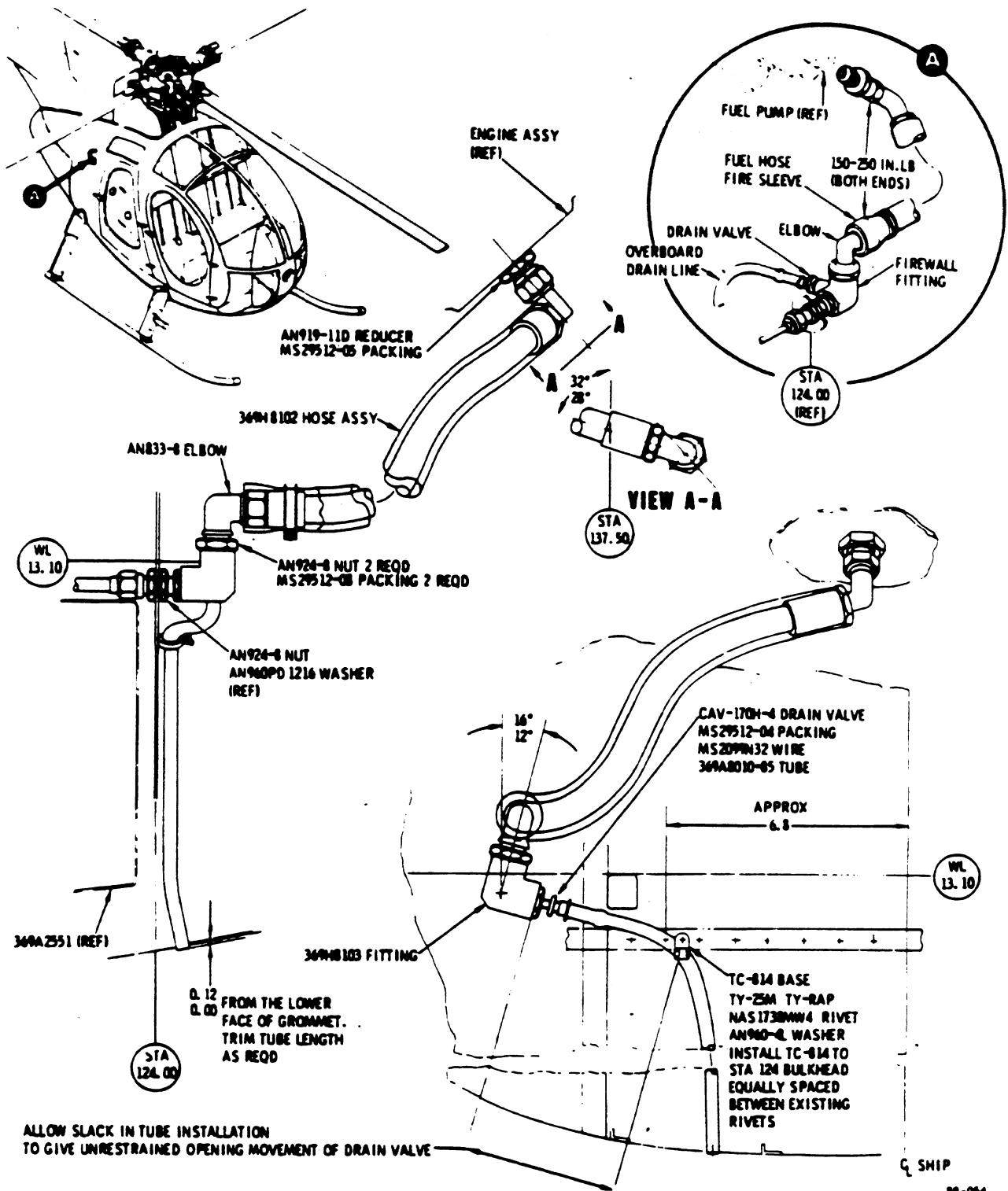


Figure 1. Relocation - Engine Fuel Supply Hose, Fuel Pump to Firewall