

*McDonnell Douglas*  
*Helicopter Company*  
**SERVICE INFORMATION NOTICE**

NOTICE NO. HN-70  
DATE 5 August 1974  
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**SUBJECT:** INSTALLATION - FUEL SHUTOFF VALVE CONTROL,  
PN 369A8136-503 OR 369A8136-701

**MODIFICATION - FUEL SHUTOFF VALVE ASSEMBLY, PN 369A8104-3**

**MODELS AFFECTED:** Model 369HS Helicopter Serial No. 0001S thru 0563S  
Model 369HE Helicopter Serial No. 0101E and subq  
Model 369HM Helicopter Serial No. 0001 thru 0004;  
0005M thru 0248M

**TIME OF COMPLIANCE:** At owners discretion on initial installation of Fuel Shutoff Valve Control Installation, PN 369A8136-503 (for 369HE, 369HS); or PN 369A8136-701 (for 369HM)

**PREFACE:** A new fuel shutoff valve control cable installation is now being provided as spares replacement, when required, for the existing valve control installations on the above affected helicopters.

The new 369A8136-503 valve control installation replaces existing 369A8136-501 installations for 369HE and 369HS helicopters; the 369A8136-701 valve control installation replaces existing 369A8136 installation for 369HM helicopters.

It is noted that the existing 369A8104-3 fuel shutoff valve assembly is NOT compatible with the new 369A8136-503 or -701 valve control installations. At initial installation of the new -503 or -701 valve controls, either a new 369A8104-5 fuel shutoff valve assembly must be installed, or the existing 369A8104-3 valve assembly modified to the new -5 valve configuration.

Product Support Department

*McDonnell Douglas*  
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The information given in this Service Information Notice lists (1) instructions for initial installation of applicable new fuel shutoff valve controls on the helicopter, and (2) a procedure for optional field modification of the existing 369A8104-3 fuel shutoff valve assembly to the new -5 configuration.

The 369A8104-3 fuel shutoff valve assembly may still be procured as a spares replacement, but can be utilized only with existing 369A8136 or 369A8136-501 fuel shutoff valve control installations.

#### Reference

500 Series - Basic HMI, Issued 1 October 1972; Revision #3, 1 January 1974

#### PARTS LIST

<u>Nomenclature</u>	<u>Part No.</u>	<u>Replaces</u>	<u>Qty</u>	<u>Mfr</u>
Installation, Fuel Shutoff Valve Control	369A8136-503 (369HE, 369HS only)	369A8136-501	1	Hughes
	369A8136-701 (369HM only)	369A8136	1	Hughes
* Assembly, Fuel Shutoff Valve	369A8104-5	369A8104-3	1	Hughes
** Seal	600-015-3-4	600-015-3-4	1	Hughes
Pin, Cotter	AN381	AN381	AR	Hughes

\* Not required, if existing 369A8104-3 valve assembly modified to -5 configuration.

\*\* Required only if new 369A8104-5 valve assembly installed.

#### TOOLS AND EQUIPMENT

Drill, portable  
Drill bit - 0.468 in. dia  
Drill bit - 0.190/0.194 in. dia  
Drill bit - 0.094 in. dia  
Countersink - 0.375/0.387 in. dia x 100°

**STEP I - INITIAL INSTALLATION OF FUEL SHUTOFF VALVE CONTROL,  
PN 369A8136-503 OR 369A8136-701**

- a. Remove left fuel cell access cover and pilot compartment floor access door.
- b. Remove existing fuel shutoff valve control installation from helicopter, per Basic HMI. Remove cable support bracket from left fuel cell cover; remove electrical connector from bracket.
- c. Remove fuel shutoff valve assembly and install new 369A8104-5 valve assembly with new seal, per Basic HMI; or modify existing 369A8104-3 valve assembly (in place) to new -5 configuration, per Step II below.
- d. (369HE, 369HS only) Drill and countersink two holes in 369A2408 canopy panel assembly at location shown in Figure 1; install new -3 bracket to panel assembly with attach hardware as shown.
- e. (369HE, 369HS only) Drill two rivet holes and install nutplate on fuselage web at Station 50.50 as shown.
- f. (369HM only) Drill two rivet holes and install nutplate on fuselage web at Station 65.04 as shown.
- g. Drill 0.468 inch diameter hole in fuselage web at Station 78.50 as shown; install MS35490-6 grommet.
- h. Place control wire end of fuel shutoff control assembly through mounting hole in instrument panel and place lockwasher and nut over end of control wire.
- i. Thread fuel shutoff control assembly through mounting hole in panel, through grommets back to fuel shutoff valve. Secure with straps at locations shown.
- j. Tighten nut to secure forward end of control.
- k. Install -5 clamp on left fuel cell cover as shown and secure control cable.
- l. Install -7 clamp on left fuel cell cover as shown and secure J-251 connector.
- m. Install valve arm swivel and washer. Insert control wire through hole in swivel and draw taught. Install and tighten nut. Install cotter pin.
- n. As required, adjust angle of clamps to provide smooth, free action of control cable. Force required to actuate shutoff valve from control knob is 12 lb maximum.

o. Adjust control assembly as follows:

1. Push in cable control knob to set fuel shutoff valve in OPEN position.

NOTE

If wire end of control cable is disconnected or loose in swivel, avoid pulling control knob more than 2 inches from OPEN position, to prevent ball bearing in control knob from moving out of place.

2. Watch fuel shutoff valve lever to check that lever has moved counterclockwise to OPEN position with lever arm pointing toward C/L of helicopter.
3. Remove cotter pin and loosen nut on valve lever. Press lever arm counterclockwise against stop. Position control knob to provide a 0.090-0.150 inch gap between bottom of control knob and surface of fixed housing. Tighten nut on swivel to secure.
4. Pull cable control knob to set fuel shutoff valve in CLOSED position.
5. Check that fuel shutoff valve lever is in CLOSED position against stop with lever arm pointing away from C/L of helicopter.

NOTE

Full throw of valve lever is 90 degrees, stop to stop. If both stops are not contacted, check valve for angular installation of 90 degrees to fuel tank cover.

6. Push in control cable knob to open fuel shutoff valve. Recheck for proper gap under control knob when control lever is against the OPEN stop.
- p. Perform operational check of helicopter engine fuel system.
- q. Reinstall access doors and covers.

STEP II - MODIFICATION OF FUEL SHUTOFF VALVE ASSEMBLY,  
PN 369A8104-3 to 369A8104-5 CONFIGURATION

- a. Check that existing 369A8104-3 fuel shutoff control valve is in CLOSED position, with valve lever arm pointing towards C/L of helicopter.

NOTE

Use care when removing valve lever arm and cam, to prevent loss of two detent balls seated in detent cavities in valve boss.

b. Remove cotter pin securing valve lever arm and cam to valve stem; remove valve lever arm.

NOTE

Note existing position of cam on valve stem to facilitate repositioning. (See Figure 1.)

c. Remove cam and detent balls; reposition cam on valve stem 90 degrees clockwise from original position, with holes in cam and valve stem aligned, as shown.

d. Insert detent balls in holes in top of cam; check that ball bearings are seated properly in detent cavities in valve boss.

e. Install valve lever on cam and valve stem; check that lever arm bends downward and points away from C/L of helicopter, and that hole in lever arm aligns with holes in cam and stem.

f. Secure valve lever arm and cam to valve stem with cotter pin.

g. Check operation of fuel shutoff valve assembly; full throw of valve lever arm is 90 degrees, stop to stop.

