CHAPTER

26

FIRE PROTECTION

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26-Rec. of Temp. Rev.	1	Feb 1/85
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* Asterisk indicates pages revised, added or deleted by thecurrent revision. The portion of the text affected by the current revision is indicated by a vertical line in the outer margin of the page.

Record of Temporary Revisions

Rev. No.	Date Inserted	Date Removed	Page Number	Rev. No.	Date Inserted	Date Removed	Page Number
26-1	Mar 27/78	Aug 21/78 Rev #9	26-20-00 Pg 2				

FIRE PROTECTION - DESCRIPTION AND OPERATION

1. DESCRIPTION

A. Aircraft fire protection consists of two systems, a detection and an extinguishing system.

B. Engine fire detection is accomplished by sensing elements in each engine area and is indicated by the fire warning lights on the glareshield and the master warning light.

C. Engine fire extinguishing is provided by two fire extinguishing bottles. The contents of both bottles may be discharged to either engine or one bottle to each engine.

D. A portable, hand-operated fire extinguisher, located either aft of the copilot's seat or aft of the right-hand service cabinet/partition, or in the left-hand service cabinet, is for use in the flight and passenger compartments.

NOTE: Location of cabin fire extinguisher will vary with aircraft floorplan.

DETECTION - DESCRIPTION AND OPERATION

1. DESCRIPTION

A. The engine nacelles are equipped with a fire detection warning system. The system consists of two control units, three sensing elements in each engine area and warning lights located in each tee-handle. The sensing elements in the engine area are connected in series to form a sensing element assembly.

B. A control unit, installed for each fire detection system, monitors sensing element resistance. If sensing element resistance drops below 350 ohms, the control unit energizes the FIRE PULL warning lights in the tee handle. A fire detect test switch is used to check system operation. With the test switch set to FIRE DET and depressing the push button, a resistance is connected in the circuit. This resistance, simulating an engine fire, lights the FIRE PULL warning lights and the master warning lights.

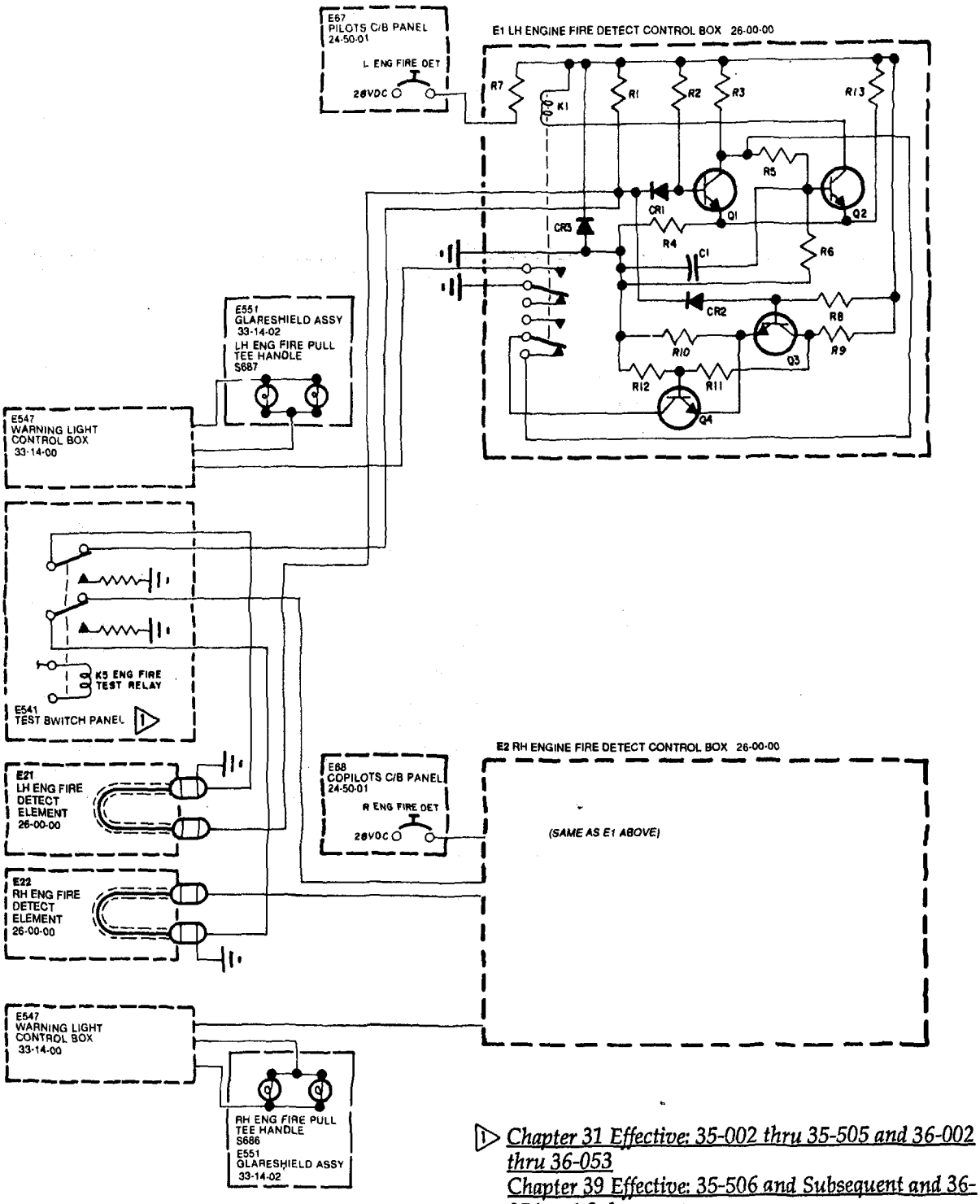
NOTE: The nomenclature of the Fire Switch Tee-Handle may read either FIRE PULL or ENG FIRE PULL.

C. Component Description

(1) Engine fire detection sensing element assemblies consist of three elements each. One element is secured around the tailcone with hinge-type clamps. One is secured to a support tube on the accessory gear box with hinge-type clamps. The third element is secured to the firewall with hinge-type clamps. The outer part of the element is inconel metal tubing which encloses a thermistor core (a ceramic material) containing internal wires. The ceramic material has a negative coefficient of resistance with respect to temperature. The electrical resistance decreases as temperature increases. During normal ambient temperature, the core resistance is relatively high and there is small current flow across the core. An increase in heat produces a decrease in resistance of the ceramic material, allowing increased current flow. The control unit energizes the FIRE PULL warning light when the temperature in the accessory gear box or firewall areas is approximately 410°F. The tailcone element temperature must reach approximately 890°F before the control unit energizes the FIRE PULL warning light due to normally higher temperatures in this area.

(2) The fire detection control units are installed in the aft tailcone section. The LH control unit is located on the LH electrical equipment tray and the RH control unit is located on the RH electrical equipment tray.

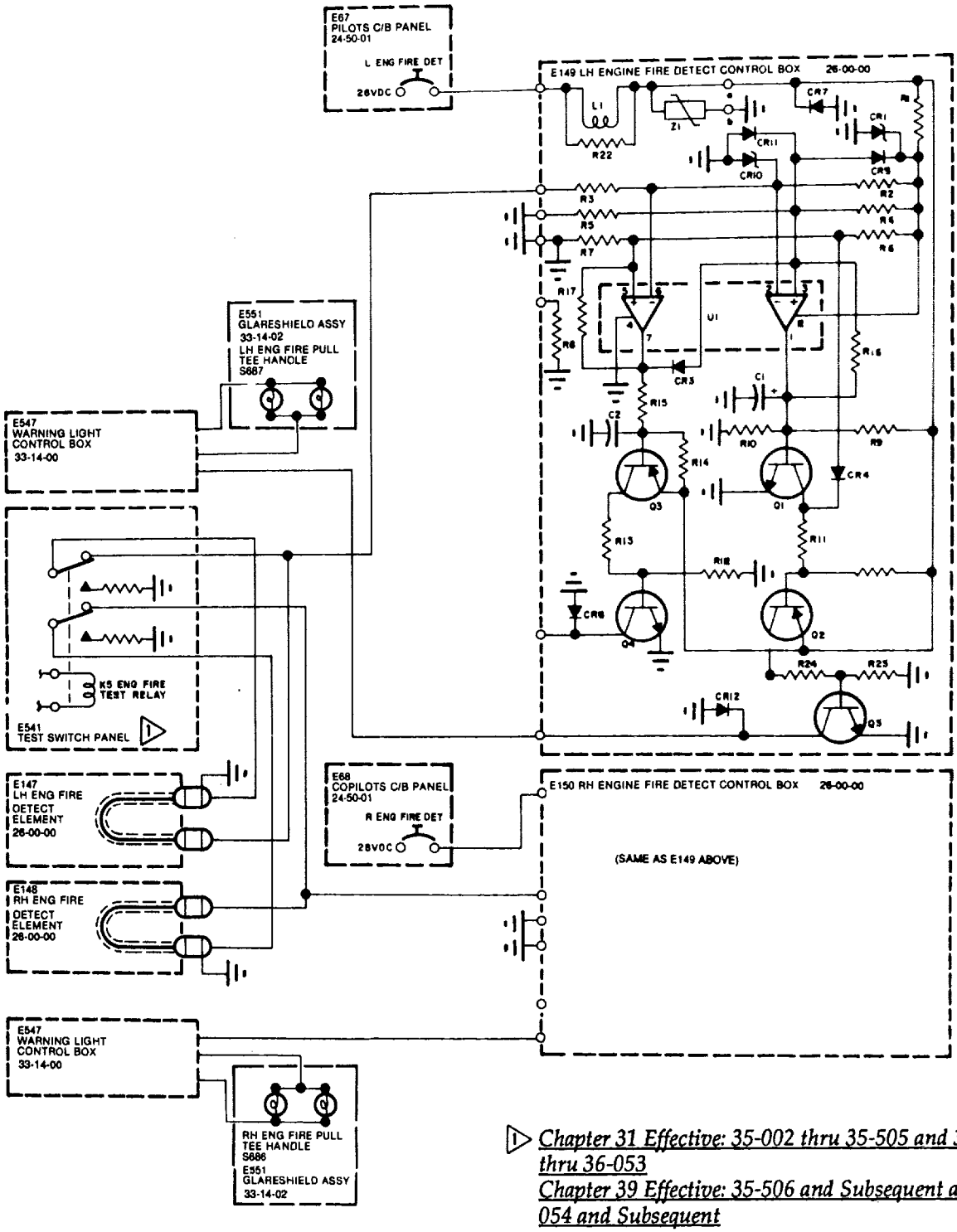
(3) The warning lights consist of two bulbs located in each Fire Switch Tee-Handle. Refer to 26-10-03 for replacement of the bulbs.



▷1 *Chapter 31 Effective: 35-002 thru 35-505 and 36-002 thru 36-053*
Chapter 39 Effective: 35-506 and Subsequent and 36-054 and Subsequent

20-31B

Fire Detection Electrical Control Schematic
Figure 1 (Sheet 1 of 2)



▷1 *Chapter 31 Effective: 35-002 thru 35-505 and 36-002 thru 36-053*
Chapter 39 Effective: 35-506 and Subsequent and 36-054 and Subsequent

20-30B

Fire Detection Electrical Control Schematic
Figure 1 (Sheet 2 of 2)

1. TROUBLE SHOOTING

A. Tools and Test Equipment

NOTE: Equivalent substitutes may be used in lieu of the following items.

NAME	PART NUMBER	MANUFACTURER	USE
Multimeter	Model 260	Simpson	Check circuits.
Hi-Pot Tester	Model M100DC	ROD-L Electronics, Inc., Menlo Park, CA	Check sensing elements.

B. See figure 101 for trouble shooting procedure. (Refer to Wiring Manual, Chapter 26, for wiring diagrams.)

NOTE:
- Trouble shooting procedures apply to either right or left engine.
- Plugs and pins for Kidde fire detect systems are shown in parentheses if different.

PROBABLE CAUSE	ISOLATION PROCEDURE	REMEDY
1. Right or Left Fire Warning Annunciator Not Illuminated in Test Mode.		
a. Open fire detect circuit.	Verify resistance of 8 to 10 ohms between pins V and U of P630 for RH engine, and between pins T and X of P630 for LH engine. P630 is located at the Test Switch Panel.	Repair or replace defective circuit components as necessary to achieve correct resistance.
	Verify continuity between pin V, P630, and pin D, P820 (P28), for the RH control unit. Verify continuity between pin T, P630, and pin D, P819 (P27), for the LH control unit.	Repair or replace defective circuit components as necessary to restore continuity.
	Verify continuity between pin C, P820 (pin H, P28) and pin G P832 for RH side, and between pin C, P819 (pin H, P27) and pin G P833 for LH side.	Repair or replace defective circuit components as necessary to restore continuity.
b. Defective RH or LH control unit.	Verify resistances and continuity as described in step 1.a., above.	Replace RH or LH control unit.

Fire Detection System Trouble Shooting
Figure 101 (Sheet 1 of 2)

PROBABLE CAUSE	ISOLATION PROCEDURE	REMEDY
1. Right or Left Fire Warning Annunciator Not Illuminated in Test Mode (Continued).		
c. Loss of 28 vdc power to control unit.	Visually inspect R fire detect CB on copilot's circuit breaker panel or L fire detect CB on pilot's circuit breaker panel.	Ensure that circuit breakers are depressed.
	Visually inspect battery switch.	Ensure that switch is set on.
	Check for +28 vdc at pin A, P820 (P28), or at pin A, P819(P27).	Repair or replace defective circuit components as necessary to achieve correct voltage.
2. False Fire Warning Annunciation.		
a. Shorted fire detect circuit.	With test switch inactivated, verify 0 ohms between pins V and U of P630 (R engine), and between pins T and X of P630 (L engine). P630 is located at the test switch panel.	Repair or replace defective circuit components as necessary to achieve correct resistance.
b. Defective sensing element.	Verify resistance as described in step 1.a., above.	Replace defective sensing element(s). (Refer to 26-10-01.)
	Perform Inspection/Check of fire detect sensing elements. (Refer to 26-10-01.)	
c. Defective control unit.	Verify resistance as described in step 1.a., above.	Replace control unit. (Refer to 26-10-04.)

Fire Detection System Trouble Shooting
Figure 101 (Sheet 2 of 2)

DETECTION SENSING ELEMENTS - MAINTENANCE PRACTICES

1. REMOVAL/INSTALLATION

A. Remove Fire Detection Sensing Element (See figure 201.)

(1) Remove engine nacelle. (Refer to Chapter 71.)

CAUTION: USE EXTREME CARE DURING REMOVAL NOT TO TWIST, KINK, OR DENT SENSING ELEMENT.

(2) Disconnect sensing element at connectors.
(3) Using a screwdriver, turn screw on hinge-type clamps until clamp releases.
(4) Carefully remove sensing element.

B. Install Fire Detection Sensing Element (See figure 201.)

CAUTION:

- **TO AVOID THE POSSIBILITY OF FALSE FIRE WARNINGS, CAREFUL ATTENTION SHOULD BE PAID TO ELEMENT ROUTING THROUGH THE ATTACHING CLAMPS. THE ELEMENT SHOULD BE CENTERED IN THE GROMMET SO THAT IT IS NOT PINCHED OR SQUEEZED IN ANY MANNER. CAREFUL ATTENTION SHOULD BE PAID WHEN CLAMPING THE GROMMET SO THAT THE CLAMP PRESSES UNIFORMLY ON THE GROMMET.**
- **USE EXTREME CARE DURING REMOVAL NOT TO TWIST, KINK, OR DENT SENSING ELEMENT.**

(1) Position element with grommets attached, as it was prior to removal.
(2) Close hinge clamps on grommets and turn screw on hinge clamp until it snaps into locked position.
(3) Connect sensing element connectors.
(4) Install engine nacelle. (Refer to Chapter 71.)

2. INSPECTION/CHECK

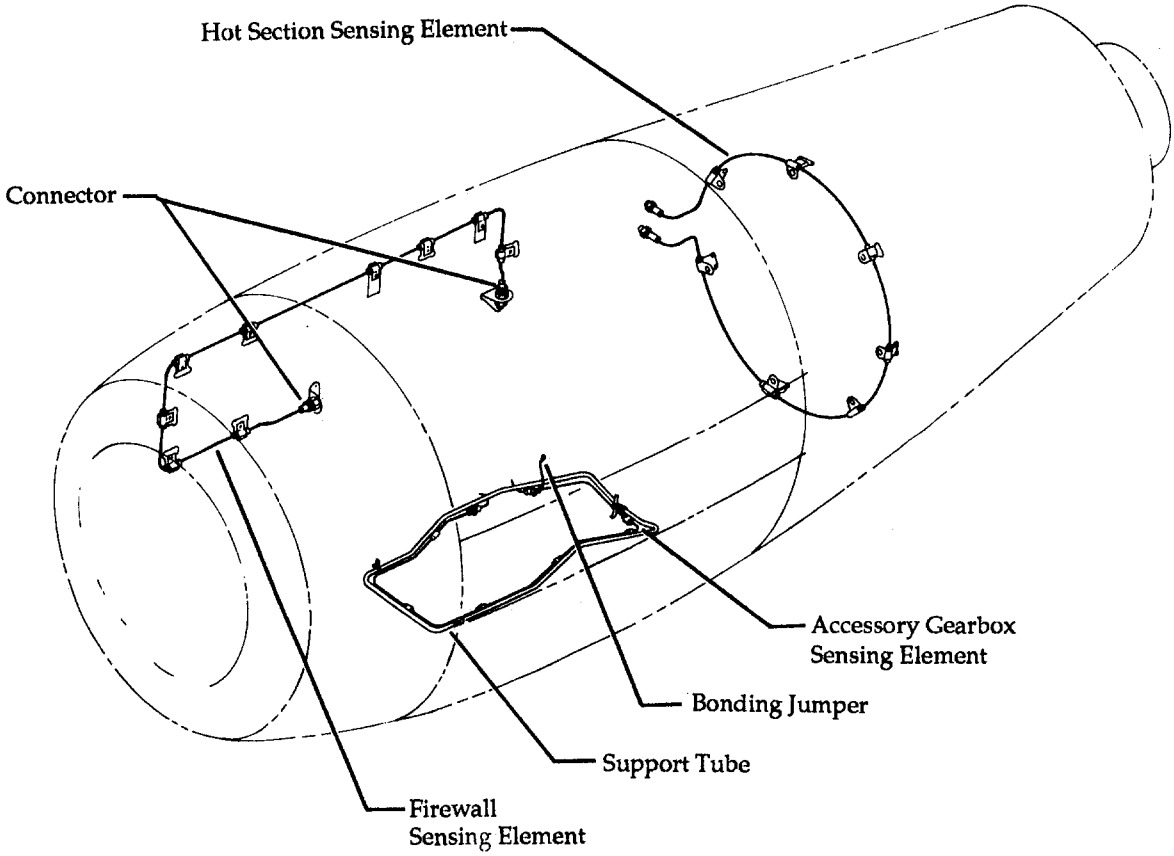
NOTE:

- The following procedures are provided as an aid in determining the condition of the fire detection sensing elements. These procedures may also be used on new elements prior installation.
- Resistance checks are to be performed on elements with the elements stabilized to ambient temperature. Therefore the engine must be cooled completely.

A. Tools and Equipment

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Hi-Pot Tester	Model M100DC	ROD-L Electronics, Inc. Menlo Park, CA 94025	Check Sensing Elements
Multimeter	Model 260	Simpson	Check Sensing Elements



Fire Detection Sensing Element Installation
Figure 201

B. Perform Inspection/Check of McGraw-Edison Fire Detect Sensing Elements
(1) Remove engine nacelle sections and pylon access covers as required to gain access to sensing elements. (Refer to Chapter 71.)
(2) Disconnect sensing elements to be tested at connectors.

NOTE: There is no need to remove the elements from the aircraft for testing.

(3) Inspect center pins and contacts at ends of sensing element to see that they are properly centered. Inspect for foreign material and/or contamination in recesses around pins and contacts.
(4) Connect ohmmeter from center pin on one end of element to center pin on other end of element. Center conductor resistance for firewall element shall not exceed 2.6 ohms. Center conductor resistance for tailcone element shall not exceed 3.6 ohms. Center conductor resistance for accessory gearbox element shall not exceed 1.95 ohms.
(5) Connect tester positive lead to element center pin and negative lead to element sheath.
(6) Refer to Table 1 for test voltage and minimum resistance. Apply test voltage and take instrument reading as soon as it stabilizes (not to exceed 20 seconds after first application of test voltage).

NOTE: Any sudden or momentary shifts in instrument reading are indicative of breakdown.

(7) Replace sensing elements which have a lower resistance than those indicated in Table 1.
(8) Replace sensing elements which have an indication of breakdown.
(9) Connect sensing elements to aircraft wiring.
(10) Install engine nacelle sections and pylon access covers. (Refer to Chapter 71.)

Element	Temperature	Test Voltage	Minimum Resistance
Hot Section Element (P/N 244-07235)	68 - 90 degrees F	325 vdc	20 megohms
Accessory Gearbox Element (P/N 244-03915)	68 degrees F	100 vdc	.0692 megohms
	72 degrees F	100 vdc	.0615 megohms
	76 degrees F	100 vdc	.0538 megohms
	80 degrees F	100 vdc	.0462 megohms
	84 degrees F	100 vdc	.0400 megohms
	88 degrees F	100 vdc	.0354 megohms
	92 degrees F	100 vdc	.0308 megohms
	96 degrees F	100 vdc	.0268 megohms
	100 degrees F	100 vdc	.0231 megohms
Firewall Element (P/N 244-05215)	68 degrees F	100 vdc	.0519 megohms
	72 degrees F	100 vdc	.0462 megohms
	76 degrees F	100 vdc	.0404 megohms
	80 degrees F	100 vdc	.0346 megohms
	84 degrees F	100 vdc	.0300 megohms
	88 degrees F	100 vdc	.0265 megohms
	92 degrees F	100 vdc	.0231 megohms
	96 degrees F	100 vdc	.0201 megohms
	100 degrees F	100 vdc	.0173 megohms

Sensor Resistance Values
Table 1

C. Perform Inspection/Check of Kidde Fire Detect Sensing Elements
(1) Remove engine nacelle sections and pylon access covers as required to gain access to sensing elements. (Refer to Chapter 71.)
(2) Disconnect sensing elements to be tested at connectors.

NOTE: There is no need to remove the elements from the aircraft for testing.

(3) Inspect center pins and contacts at ends of sensing element to see that they are properly centered. Inspect for foreign material and/or contamination in recesses around pins and contacts.
(4) Connect ohmmeter from center pin on one end of element to center pin on other end of element. Center conductor resistance for firewall element shall not exceed 4.60 ohms. Center conductor resistance for tailcone element shall not exceed 3.50 ohms.

Element	Temperature	Test Voltage	Minimum Resistance
Hot Section Element (P/N 896416)	68 degrees F	350-500 vdc	109 megohms
	72 degrees F	350-500 vdc	96 megohms
	76 degrees F	350-500 vdc	85 megohms
	80 degrees F	350-500 vdc	75 megohms
	84 degrees F	350-500 vdc	66 megohms
	88 degrees F	350-500 vdc	58 megohms
	92 degrees F	350-500 vdc	51 megohms
	96 degrees F	350-500 vdc	45 megohms
	100 degrees F	350-500 vdc	40 megohms
Accessory Gearbox Element (P/N 896414)	68 degrees F	10 vdc	.3587 megohms
	72 degrees F	10 vdc	.3201 megohms
	76 degrees F	10 vdc	.2857 megohms
	80 degrees F	10 vdc	.2550 megohms
	84 degrees F	10 vdc	.2276 megohms
	88 degrees F	10 vdc	.2031 megohms
	92 degrees F	10 vdc	.1813 megohms
	96 degrees F	10 vdc	.1618 megohms
	100 degrees F	10 vdc	.1444 megohms
Firewall Element (P/N896415)	68 degrees F	10 vdc	.2739 megohms
	72 degrees F	10 vdc	.2445 megohms
	76 degrees F	10 vdc	.2182 megohms
	80 degrees F	10 vdc	.1947 megohms
	84 degrees F	10 vdc	.1738 megohms
	88 degrees F	10 vdc	.1551 megohms
	92 degrees F	10 vdc	.1384 megohms
	96 degrees F	10 vdc	.1236 megohms
	100 degrees F	10 vdc	.1103 megohms

Sensor Resistance Values
Table 2

(5) Connect tester positive lead to element center pin and negative lead to element sheath.
(6) Refer to Table 1 for test voltage and minimum resistance. Apply test voltage and take instrument reading as soon as it stabilizes (not to exceed 20 seconds after first application of test voltage).

NOTE: Any sudden or momentary shifts in instrument reading are indicative of breakdown.

(7) Replace sensing elements which have a lower resistance than those indicated in Table 2.
(8) Replace sensing elements which have an indication of breakdown.
(9) Connect sensing elements to aircraft wiring.
(10) Install engine nacelle sections and pylon access covers. (Refer to Chapter 71.)

ARMED SWITCHES - MAINTENANCE PRACTICES

1. **REMOVAL/INSTALLATION**

   A. **Replace ARMED Switch Lamps** (See figure 201.)

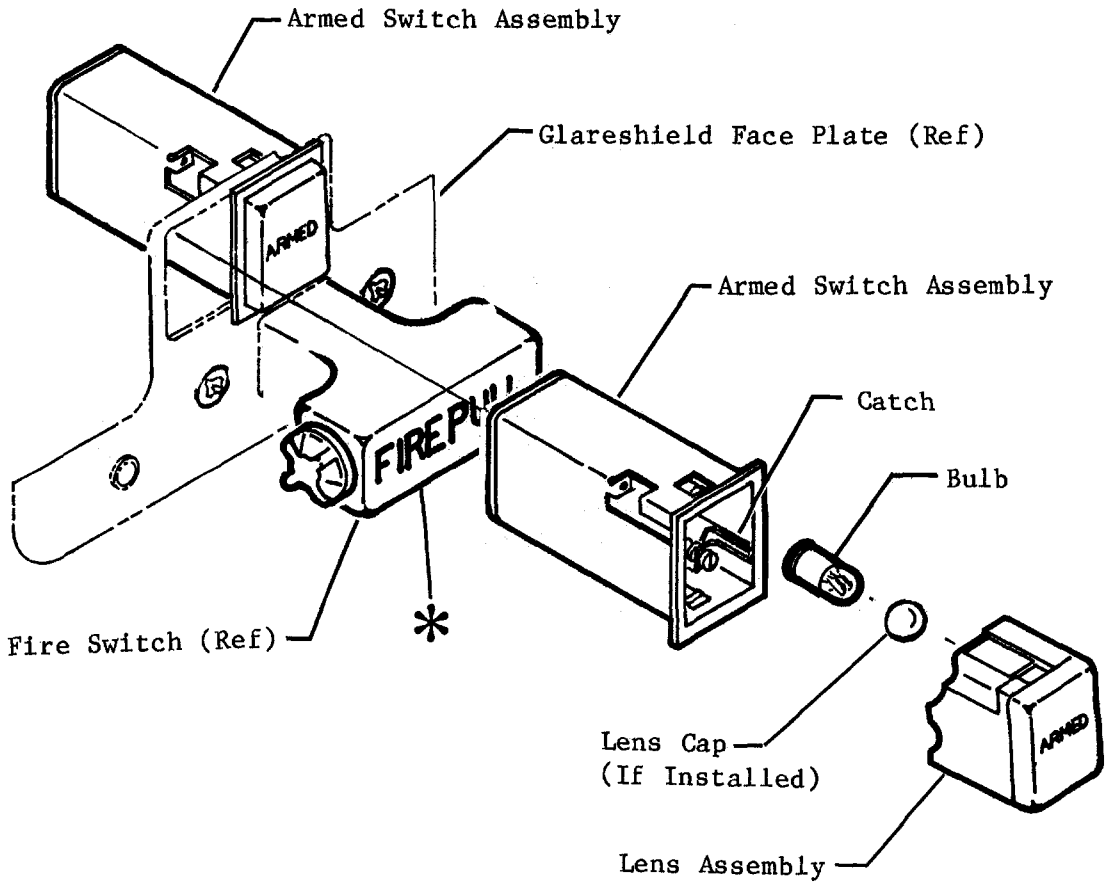
      (1) Pull FIRE EXT circuit breaker.
      (2) Grasp lens portion of the switch and pull straight out. Lens will pull out of switch assembly.
      (3) Extract old lamp(s) and remove lens cap(s) (if installed). Install lens cap on new lamp(s) and install.
      (4) Press lens back into switch assembly.
      (5) Pull FIRE PULL Switch. Both ARMED Switches shall illuminate.
      (6) Push FIRE PULL Switch in.
      (7) Reset FIRE EXT circuit breaker.

   B. **Remove ARMED Switch** (See figure 201.)

      (1) Pull FIRE EXT circuit breaker.
      (2) Grasp lens portion of the switch and pull straight out. Lens will pull of switch assembly.
      (3) Using a small screwdriver turn the screw, just inside of the switch bezel, counterclockwise until catch rotates inside of switch.
      (4) Pull switch straight out and disconnect electrical wiring. Tag wiring.

   C. **Install ARMED Switch** (See figure 201.)

      (1) Connect electrical wiring to switch.
      (2) Rotate catch inside of switch and push switch into glareshield.
      (3) Rotate screw clockwise so that catch rotates out of the switch. Tighten screw.
      (4) Press lens into switch assembly.
      (5) Pull FIRE PULL Switch. Both ARMED Switches shall illuminate.
      (6) Push FIRE PULL Switch in.
      (7) Reset FIRE EXT circuit breaker.



* The nomenclature of the Fire Switch Tee-Handle may read either FIRE PULL or ENG FIRE PULL.

Armed Switch Installation
Figure 201

FIRE PULL SWITCH - MAINTENANCE PRACTICES

1. REMOVAL/INSTALLATION

NOTE: Lamp replacement is accomplished by simply removing the caps on the end of the tee-handle and replacing the lamp(s).

A. Remove Fire Pull Switch (See figure 201.)

(1) Lower tailcone access door and disconnect aircraft batteries.
(2) Pull applicable FIRE EXT circuit breaker.

CAUTION: WHEN PERFORMING MAINTENANCE ON THE FIRE PULL SWITCH, USE EXTREME CARE NOT TO DEPRESS EITHER ARMED SWITCH.

(3) Pull Fire Pull Switch handle out far enough to gain access to set screw in handle.
(4) Remove setscrew and remove handle from switch shaft. Depress shaft to its original position.
(5) Remove countersunk screws located on each side of hole from which shaft protrudes.
(6) Remove three screws located at outboard-most portion of switch bracket.
(7) Remove two screws located at inboard-most portion of switch bracket.

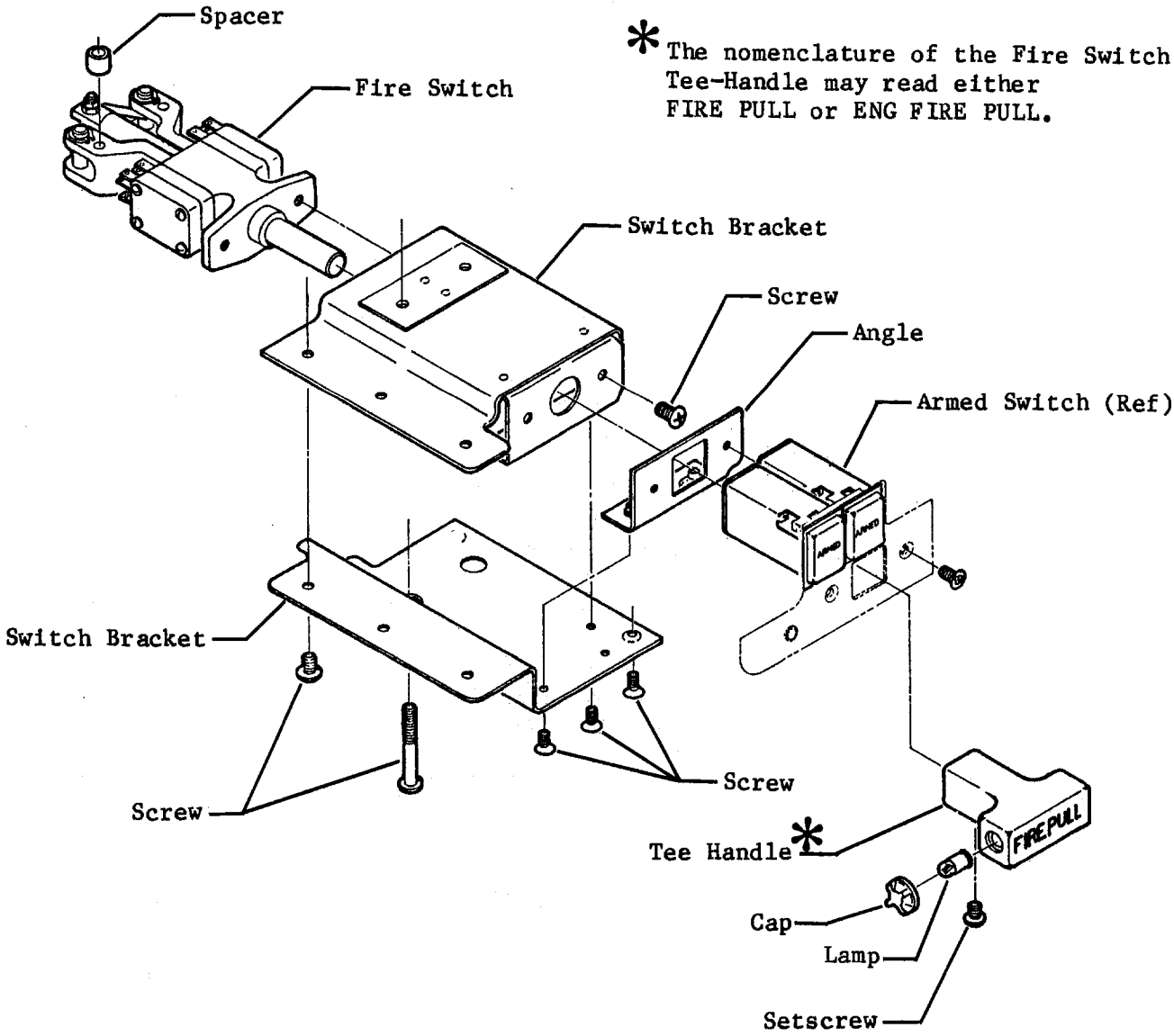
NOTE: Removal of the screws in step 8 will release two spacers. Be sure to catch these spacers when removing the switch bracket assembly.

(8) Remove two screws located just inside of holes in bottom of switch bracket.
(9) Disconnect electrical wiring and remove switch bracket assembly.
(10) Remove screws securing angle to forward side of switch bracket.
(11) Remove screws securing switch to bracket and remove switch from bracket.

B. Install Fire Pull Switch (See figure 201.)

(1) Position switch on switch bracket and secure with screws.
(2) Position angle on bracket and secure with screws.
(3) Connect wiring to switch.
(4) Position spacers between top of switch mechanism and switch bracket. Align spacers with holes and insert screws through holes.
(5) Align screws (step 4) with holes in glareshield structure and start screws into glareshield.
(6) Start three screws at outboard portion of bracket into glareshield. Start two screws at inboard portion of switch bracket into glareshield.
(7) Install and tighten countersunk screws located on each side of hole from which switch shaft protrudes.

(8) Tighten screws installed in steps 5 and 6.
(9) Pull switch shaft out, position handle on shaft and secure with setscrew.
(10) Push Fire Pull Switch handle fully in.
(11) Connect aircraft batteries.
(12) With FIRE EXT circuit breaker pulled, pull FIRE PULL Switch. Both ARMED lights shall illuminate.
(13) Push FIRE PULL Switch in and reset FIRE EXT circuit breaker.
(14) Secure tailcone access door.



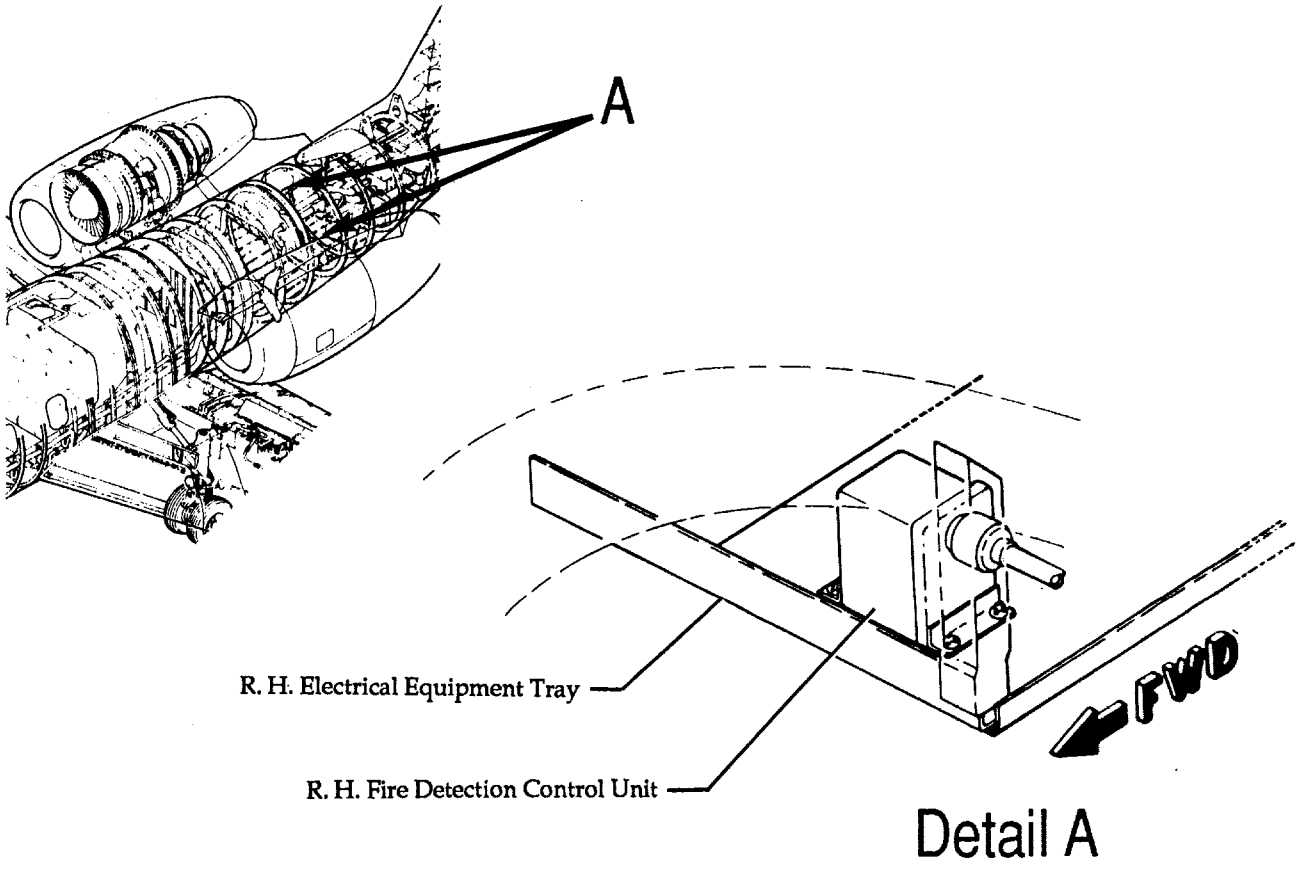
Fire Pull Switch Installation
Figure 201

1. REMOVAL/INSTALLATION

NOTE:
- The following removal and installation procedures are identical for both control units.
- The fire detection control units are installed in the aft tailcone section. The LH control unit is located on the LH electrical equipment tray and the RH control unit is located on the RH electrical equipment tray.

A. Remove Fire Detection Control Unit (See figure 201.)
   (1) Lower tailcone access door.
   (2) Disconnect aircraft batteries.
   (3) Disconnect electrical connector from applicable control unit.
   (4) Loosen and remove attaching parts and control unit from equipment tray.

B. Install Fire Detection Control Unit (See figure 201.)
   (1) Install control unit and secure with attaching parts.
   (2) Connect electrical connector to control unit.
   (3) Connect aircraft batteries.
   (4) Raise and secure tailcone access door.



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Fire Detection Control Unit Installation RH (Typical)
Figure 201

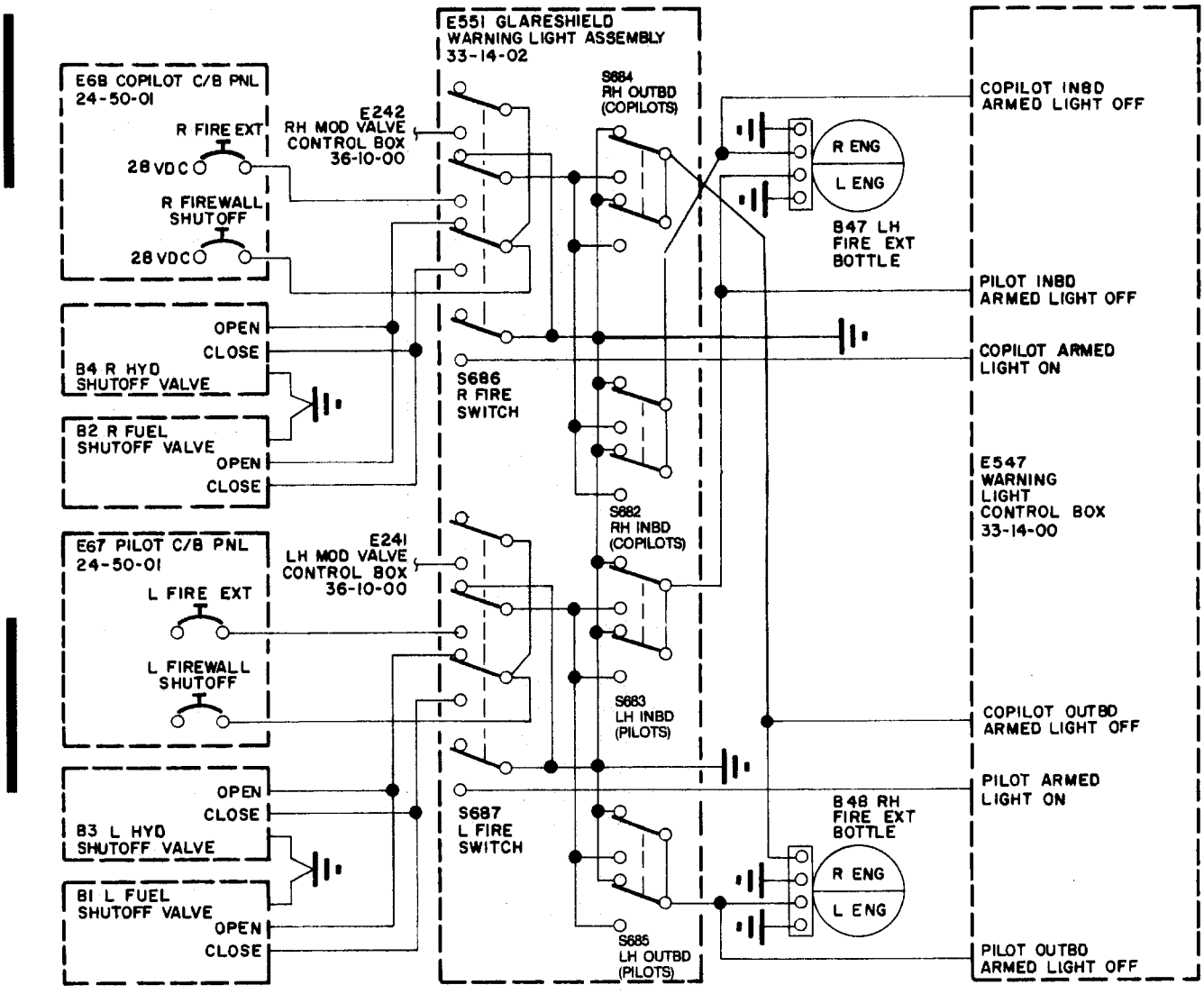
EXTINGUISHING - DESCRIPTION AND OPERATION

1. **DESCRIPTION**
   A. Aircraft fire extinguishing consists of a portable, hand-held fire extinguisher for cabin use and an engine fire extinguishing system.
   B. The engine fire extinguishing system, installed in the tailcone equipment section, provides fire extinguishing capabilities for each engine nacelle. The system consists of the following: two containers, a thermal discharge indicator, a manual discharge indicator, push-button type switches, pull-type fire switches, and two two-way check valves. Access to the fire extinguishing system is through the tailcone access door. A periodic check should be made to assure that container pressure is maintained at a normal operating range.
   C. Component Description
      (1) Two engine fire extinguisher containers are installed in the tailcone equipment section. The containers are charged with CF3Br (monobromotrifluromethane) extinguishing agent to a pressure of 600 psi. The CF3Br extinguishing agent is noncorrosive; therefore, no special cleaning of the engine or nacelle is required in the event the system has been used. The containers, plumbed to each engine nacelle, provide the aircraft with a two-shot system. The containers will fully discharge in 1 to 2 seconds. A pressure gage mounted on each container indicates the pressure charge of the container. The aircraft will have either a Walter Kidde or HTL Advanced Technology (formerly American Standard) containers.
      (2) There are two two-way check valves installed in the fire extinguisher system that prevent the extinguisher charge from entering the opposite container if one container is discharged. Arrows visible on the outside of the check valve assembly indicate the direction of flow through each of the three ports. The valve assembly has a flapper that blocks flow in the opposite direction. A spring holds the flapper in a centered position that permits the plumbing to vent when the system is not in operation. The Walter Kidde two-way check valve should be inspected at the time interval specified in Chapter 5. The two-way check valves manufactured by HTL Advanced Technology (American Std.) do not require inspection.

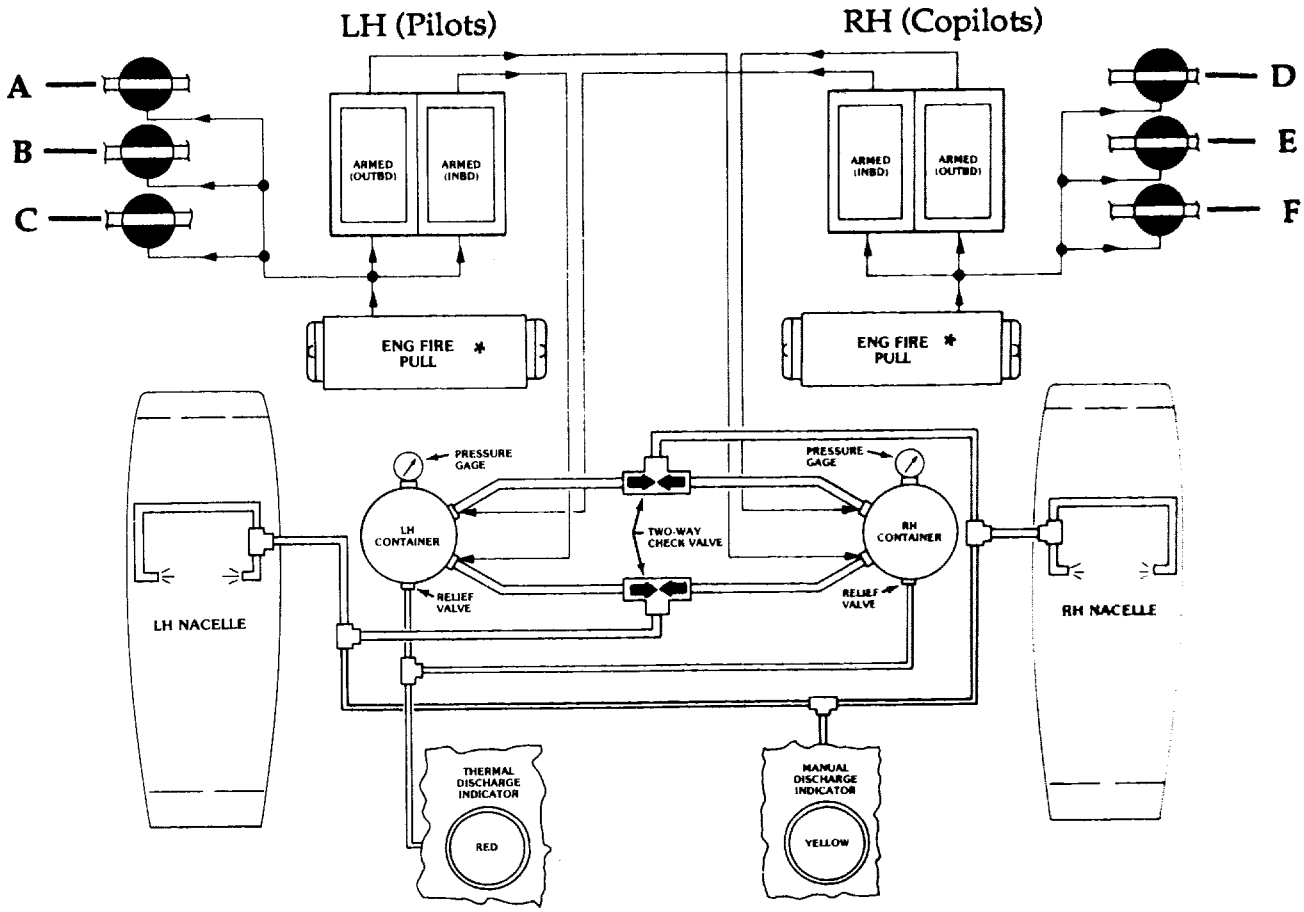
2. **OPERATION** (See figure 1.)
   A. Pulling the left FIRE PULL Tee-Handle Switch closes the left engine main fuel shutoff valve, the left hydraulic shutoff valve, and the left bleed air shutoff and pressure regulator valve, and lights the two ARMED switches just above the FIRE PULL Switch. Depressing the LH (Pilots) inboard ARMED Switch (switch light will extinguish), applies 28 vdc to the applicable cartridge on the LH fire extinguisher bottle. On Walter Kidde fire extinguishers, the exploding cartridge ruptures the container seal and releases the charge of extinguishing agent to the left nacelle. On HTL Advanced Technology fire extinguishers, the exploding squib assembly breaks a housing which mechanically holds a piston-type seal. The seal is blown out by bottle pressure, releasing extinguishing agent to the left nacelle. A two-way check valve installed in the plumbing between the containers prevents the charge from entering the second container. If a second charge of extinguishing agent is required, the LH (Pilots) outboard ARMED Switch is depressed thereby exploding the applicable squib assembly in the right container and releasing the extinguishing agent charge to the left nacelle.

      NOTE: This procedure describes operation of the fire extinguishing system for the left nacelle controlled by the pilots inboard and outboard ARMED Switches. Operation of the system for the right nacelle controlled by the copilots inboard and outboard ARMED Switches is typical.

   B. The thermal discharge valve, one located in each bottle, is designed to relieve bottle pressure when bottle temperature reaches 102.8°C (217°F).



Engine Fire Extinguishing Electrical Control Schematic
Figure 1

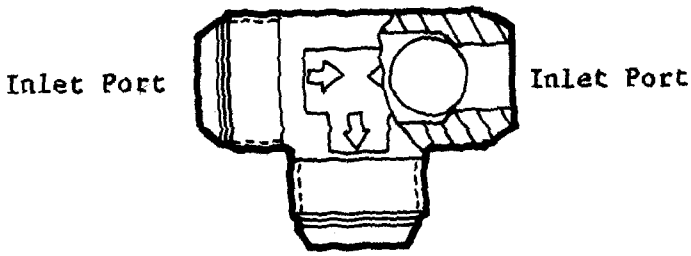


CAUTION: SYSTEM SCHEMATICS ARE PROVIDED FOR OPERATIONAL PURPOSES ONLY. THEY ARE NOT TO BE USED TO INSTALL OR CONNECT SYSTEM COMPONENTS.

A	LH Engine Bleed Air Shutoff and Pressure Regulator Valve	D	RH Engine Bleed Air Shutoff and Pressure Regulator Valve
B	LH Fuel Shutoff Valve	E	RH Fuel Shutoff Valve
C	LH Hydraulic Shutoff Valve	F	RH Hydraulic Shutoff Valve

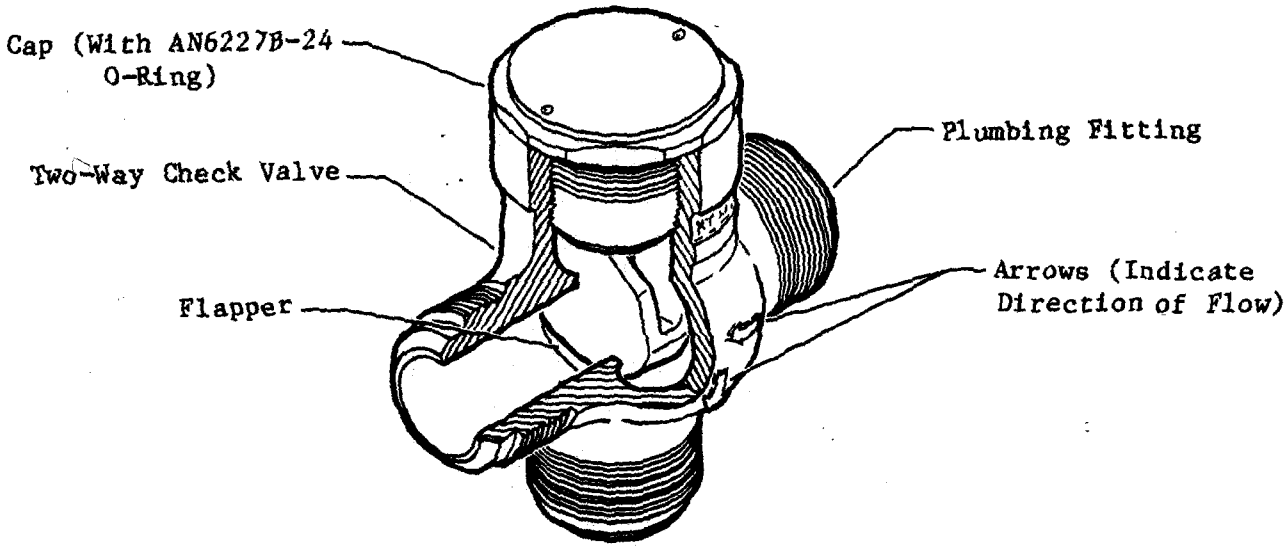
* The nomenclature of the Fire Switch Tee-Handle may read either FIRE PULL or ENGINE FIRE PULL.

Engine Fire Extinguishing System Schematic
Figure 2



TYPICAL

35-100 and Subsequent and 36-029 and Subsequent



TYPICAL

35-002 thru 35-099 and 36-002 thru 36-028

Two-Way Check Valve
Figure 3

1. ADJUSTMENT/TEST

NOTE: Perform Functional Test of Engine Fire Extinguishing System in accordance with current inspection interval as specified in Chapter 5.

A. Tools and Test Equipment

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Multimeter	Model 260	Simpson	Check Circuits
Digital Scale*	17345T33	McMaster - Carr Chicago, IL 60680	Weigh Fire Extinguisher Containers

* Substitute scales must be accurate to within ±0.01 pounds.

B. Functional Test of Engine Fire Extinguishing System
(1) Remove electrical power from aircraft.
(2) Open tailcone access door.

CAUTION: CARE SHALL BE TAKEN TO PREVENT DAMAGING WIRING AND OTHER AIRCRAFT EQUIPMENT WHEN GAINING ACCESS TO FIRE EXTINGUISHER CONTAINER CARTRIDGES.

(3) Gain access to fire extinguisher container cartridges.
(4) Disconnect and identify wires attached to insulated terminal of each cartridge.

WARNING:
- **BEFORE FUNCTIONAL TEST IS PERFORMED, INSTALL A JUMPER WIRE BETWEEN INSULATED TERMINAL AND GROUND STUD OF CARTRIDGE.**
- **DO NOT CONNECT A MULTIMETER, A BATTERY OPERATED CONTINUITY LIGHT, OR SIMILAR DEVICE ACROSS INSULATED TERMINAL OR GROUND STUD AND AIRCRAFT GROUND. USE OF SUCH DEVICES WHICH PASS MORE THAN 30 MA OF CURRENT MAY DETONATE CARTRIDGE AND CAUSE SERIOUS INJURY OR DAMAGE.**

NOTE: On *Aircraft 35-662 and Subsequent, 36-064 and Subsequent, and aircraft modified per Service Bulletin 35/36-26-2, "Verification and Identification of Engine Fire Extinguisher Bottle Wiring"* electrical wire identifications are shown in parenthesis().

(5) Connect a jumper wire between insulated terminal and ground stud of cartridge.
(6) Insulate each of four wires previously disconnected to prevent contact with aircraft structure.
(7) Restore electrical power to aircraft.
(8) Pull LH ENG FIRE PULL T-handle. Both inboard/outboard ARMED Annunciator/ Switches shall illuminate.

(9) Preset multimeter to indicate +vdc and connect in series with aircraft ground and disconnected wire W24B20 (B48 RH AFT).

CAUTION: **WHEN ANY OF THE ARMED ANNUNCIATOR/SWITCHES ARE DEPRESSED WITH T-HANDLE (ENG FIRE PULL) PULLED, ARMED ANNUNCIATOR/ SWITCH(ES) SHALL EXTINGUISH AND +28 VDC WILL BE PRESENT AT CARTRIDGE. THE VOLTAGE SHALL REMAIN UNTIL ARMED ANNUNCIATOR/SWITCH(ES) HAVE BEEN RELEASED. TO RESET THE ARMED ANNUNCIATOR CIRCUIT, IN THE WARNING LIGHT CONTROL BOX, ELECTRICAL POWER MUST BE REMOVED FROM AIRCRAFT MOMENTARILY. WHEN POWER IS RESTORED TO AIRCRAFT, ARMED ANNUNCIATOR/ SWITCH(ES) SHALL BE ILLUMINATED INDICATING A PROPER RESET.**

(10) Depress LH outboard ARMED Annunciator/Switch. Annunciator/Switch shall extinguish and multimeter shall indicate +28 vdc.

(11) Remove multimeter lead from wire W24B20 (B48 RH AFT) and insulate wire from aircraft ground. Reconnect multimeter lead to disconnected electrical wire W27B20 (B47 LH AFT).

CAUTION: **WHEN ANY OF THE ARMED ANNUNCIATOR/SWITCHES ARE DEPRESSED WITH T-HANDLE (ENG FIRE PULL) PULLED, ARMED ANNUNCIATOR/ SWITCH(ES) SHALL EXTINGUISH AND +28 VDC WILL BE PRESENT AT CARTRIDGE. THE VOLTAGE SHALL REMAIN UNTIL ARMED ANNUNCIATOR/SWITCH(ES) HAVE BEEN RELEASED. TO RESET THE ARMED ANNUNCIATOR CIRCUIT, IN THE WARNING LIGHT CONTROL BOX, ELECTRICAL POWER MUST BE REMOVED FROM AIRCRAFT MOMENTARILY. WHEN POWER IS RESTORED TO AIRCRAFT, ARMED ANNUNCIATOR/ SWITCH(ES) SHALL BE ILLUMINATED INDICATING A PROPER RESET.**

(12) Depress LH inboard ARMED Annunciator/Switch. Annunciator/Switch shall extinguish and multimeter shall indicate +28 vdc.

(13) Remove multimeter lead from wire W27B20 (B47 LH AFT) and insulate wire from aircraft ground. Reconnect multimeter lead to disconnected electrical wire W25B20 (B47 LH FWD).

(14) Pull RH ENG FIRE PULL T-handle out. Both inboard/outboard ARMED Annunciator/ Switches shall illuminate.

CAUTION: **WHEN ANY OF THE ARMED ANNUNCIATOR/SWITCHES ARE DEPRESSED WITH T-HANDLE (ENG FIRE PULL) PULLED, ARMED ANNUNCIATOR/ SWITCH(ES) SHALL EXTINGUISH AND +28 VDC WILL BE PRESENT AT CARTRIDGE. THE VOLTAGE SHALL REMAIN UNTIL ARMED ANNUNCIATOR/SWITCH(ES) HAVE BEEN RELEASED. TO RESET THE ARMED ANNUNCIATOR CIRCUIT, IN THE WARNING LIGHT CONTROL BOX, ELECTRICAL POWER MUST BE REMOVED FROM AIRCRAFT MOMENTARILY. WHEN POWER IS RESTORED TO AIRCRAFT, ARMED ANNUNCIATOR/ SWITCH(ES) SHALL BE ILLUMINATED INDICATING A PROPER RESET.**

(15) Depress RH inboard ARMED Annunciator/Switch. Annunciator/Switch shall extinguish and multimeter shall indicate +28 vdc.

(16) Remove multimeter lead from wire W25B20 (B47 LH FWD) and insulate wire from aircraft ground. Reconnect multimeter lead to disconnected electrical wire W22B20 (B48 RH FWD).

CAUTION: **WHEN ANY OF THE ARMED ANNUNCIATOR/SWITCHES ARE DEPRESSED WITH T-HANDLE (ENG FIRE PULL) PULLED, ARMED ANNUNCIATOR/ SWITCH(ES) SHALL EXTINGUISH AND +28 VDC WILL BE PRESENT AT CARTRIDGE. THE VOLTAGE SHALL REMAIN UNTIL ARMED ANNUNCIATOR/SWITCH(ES) HAVE BEEN RELEASED. TO RESET THE ARMED ANNUNCIATOR CIRCUIT, IN THE WARNING LIGHT CONTROL BOX, ELECTRICAL POWER MUST BE REMOVED FROM AIRCRAFT MOMENTARILY. WHEN POWER IS RESTORED TO AIRCRAFT, ARMED ANNUNCIATOR/ SWITCH(ES) SHALL BE ILLUMINATED INDICATING A PROPER RESET.**

(17) Depress RH outboard ARMED Annunciator/Switch. Annunciator/Switch shall extinguish and multimeter shall indicate +28 vdc.
(18) Remove multimeter lead from wire W22B20 (B48 RH FWD) and insulate wire from aircraft ground.
(19) Reset ARMED Annunciator/Switch circuits by momentarily setting Battery Switches off (approximately 10 to 15 seconds), then then on. All ARMED Annunciator/Switches shall illuminate indicating a proper reset.
(20) Push LH/RH ENG FIRE PULL T-handles in. Both LH/RH inboard/outboard ARMED Annunciator/Switches shall extinguish.
(21) Remove electrical power from aircraft.
(22) Remove jumper wire from insulated terminal and ground stud of cartridge.
(23) Identify and connect electrical wire to insulated terminals on respective cartridges.
(24) Restore electrical power to aircraft.
(25) Restore aircraft to normal.

2. INSPECTION/CHECK

NOTE:
- Check each engine fire extinguisher container pressure gage for proper pressure at current inspection interval as specified in Chapter 5.
- Perform a weight check of each engine fire extinguisher container at current inspection interval specified in Chapter 5.

CAUTION: **THE FIRE EXTINGUISHER CONTAINER HAS A LIQUID PHASE AND A GASEOUS PHASE. A HIGH PROPORTION OF NITROGEN COULD BE LOST (PRESSURE LOSS) WITH NO LIQUID AGENT LOSS, AND THE CONTAINER WOULD STILL BE FUNCTIONAL. HOWEVER, A LEAK FROM THE LIQUID PHASE (AGENT LOSS) COULD OCCUR BEFORE A NOTICEABLE LOSS OF PRESSURE, MAKING THE CONTAINER NON-FUNCTIONAL.**

A. A periodic check shall be made to assure that container pressure is maintained at a normal operating range. A pressure gage mounted on each container indicates the psi charge of the container. See figure 201 for normal operating range.
B. A periodic weight check shall be made to assure that container extinguishing agent contents is maintained at the specified quantity. Refer to 26-20-01 for fire extinguisher container removal and installation procedure.

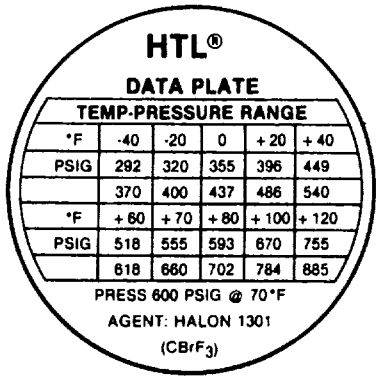
(1) Walter Kidde containers are to be weighed with valve assemblies installed. The weight shall be within ±0.05 lbs. of either: (1) the weight engraved on the Date Charged/Weight placard; or (2) the weight recorded in the Airframe Log Book for the previous year.

(2) HTL Advanced Technology containers are to be weighed with discharge outlets and cartridges installed. The weight shall be within ±0.04 lbs. of either: (1) the weight engraved on the Date Charged/Weight placard; or (2) the weight recorded in the Airframe Log Book for the previous year.

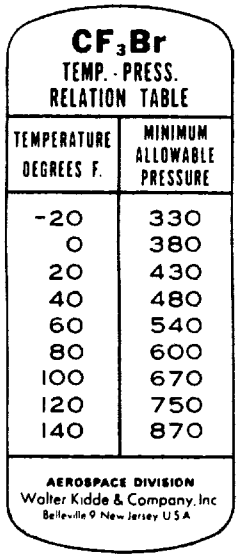
NOTE: If the allowable leakage is all halon, a maximum weight loss of 0.04 pounds would occur in one (1) year. If the cumulative weight loss of the container exceeds 0.15 pounds at any time, the container shall be replaced or overhauled prior to installation in the aircraft.

(3) If the above weight limits are not met, the fire extinguisher container must be replaced or overhauled prior to reinstallation in the aircraft.

(4) If the fire extinguisher container weighs within limits, record the date, container serial number, and weight in the Airframe Log Book prior to container reinstallation in the aircraft.



AIRCRAFT EQUIPPED WITH HTL ADVANCED TECHNOLOGY ENGINE FIRE EXTINGUISHER CONTAINERS



AIRCRAFT EQUIPPED WITH WALTER KIDDE ENGINE FIRE EXTINGUISHER CONTAINERS

Fire Extinguishing Container Normal Operating Range
Figure 201

EXTINGUISHER CONTAINER - MAINTENANCE PRACTICES

1. Removal/Installation

NOTE: Removal and installation procedures are identical for both left and right containers.

A. Remove Container - Walter Kidde (See Figure 201.)

CAUTION: CARE SHALL BE TAKEN TO PREVENT DAMAGING WIRING AND OTHER AIRCRAFT EQUIPMENT WHILE GAINING ACCESS TO ENGINE FIRE EXTINGUISHER CONTAINERS.

(1) Set Battery Switches off.
(2) Lower tailcone access door.
(3) Disconnect battery quick-disconnects.

WARNING:

- **BEFORE REMOVING A FULLY CHARGED CONTAINER, REMOVE EXPLOSIVE CARTRIDGES (SQUIBS) FROM CONTAINER.**
- **CONNECT A GROUND WIRE FROM ELECTRICAL CONNECTORS TO THE GROUNDING LUGS ON THE VALVE ASSEMBLIES.**
- **USE EXTREME CARE TO AVOID STRIKING THE CONTAINER SEAL OR ALLOWING THE CARTRIDGES TO CONTACT AN ELECTRICAL POWER SOURCE.**

(4) Disconnect and identify wires connected to the container valve assemblies.
(5) Connect a jumper wire between the electrical terminal and ground lug of each valve assembly.

WARNING: MANUAL DISCHARGE OUTLET SHALL BE CAPPED AS SOON AS EACH TUBE IS DISCONNECTED FROM OUTLET TO PREVENT PERSONAL INJURY SHOULD ENGINE FIRE EXTINGUISHER INADVERTENTLY DISCHARGE.

(6) Disconnect plumbing from valve assemblies.
(7) Loosen valve assembly nuts with a strap wrench and remove valve assemblies from container.
(8) Disconnect plumbing from the safety valve fitting.
(9) Remove attaching parts and container from aircraft.
(10) Install protective covers on container outlets and safety valve fitting and store container at a temperature below 100°F (38°C), preferably 70°F (21°C).

B. Install Container - Walter Kidde (See Figure 201.)

WARNING: DO NOT INSTALL CONTAINER CARTRIDGE INTO VALVE ASSEMBLY UNTIL VALVE IS ASSEMBLED ON CONTAINER AND CONTAINER IS INSTALLED IN AIRCRAFT.

CAUTION: THE ENGINE FIRE PULL TEE-HANDLES MUST BE PUSHED IN PRIOR TO FIRE EXTINGUISHER CONTAINER INSTALLATION. FAILURE TO DO SO WILL CAUSE THE CONTAINER TO DISCHARGE IF THE ARMED SWITCH IS DEPRESSED AFTER POWER IS RESTORED TO THE AIRCRAFT.

NOTE:
- If discharge of the container has occurred, replace the discharge indicator disc (red or yellow as applicable).
- Prior to installing container in aircraft, perform weight check. (Refer to Inspection/Check, 26-20-00.)

(1) Reset the ARMED Annunciator/Switches as follows:
  (a) Pull both right and left FIRE EXT circuit breakers.
  (b) Connect battery quick-disconnects.
  (c) Set Battery switches on. Pull RH/LH ENG FIRE PULL tee-handles. All ARMED Annunciator/Switches shall illuminate.
  (d) Set Battery Switches to off. Wait for relay to disengage (approximately 2 minutes.)
  (e) Push RH/LH ENG FIRE PULL tee-handles in. All ARMED Annunciator/Switches will extinguish.
  (f) Disconnect battery quick-disconnects.
(2) Purge the plumbing with dry compressed air or nitrogen to remove any foreign matter.
(3) Ensure all electrical power is removed from the aircraft.

WARNING:
- **NEW ENGINE FIRE EXTINGUISHER CONTAINERS, VALVE ASSEMBLIES AND CONTAINER CARTRIDGES ARE SHIPPED SEPARATELY TO PREVENT THE POSSIBILITY OF ACCIDENTAL CONTAINER DISCHARGE.**
- **IF A NEW COMPONENT IS TO BE INSTALLED, DO NOT INSTALL CONTAINER CARTRIDGE INTO VALVE ASSEMBLY UNTIL VALVE IS ASSEMBLED ON CONTAINER AND CONTAINER IS INSTALLED IN AIRCRAFT.**

(4) Position engine fire extinguisher container on mounting bracket and secure with mounting bolts.

WARNING: **CAPS SHALL BE REMOVED AND TUBING INSTALLED ONE MANUAL DISCHARGE OUTLET AT A TIME TO PREVENT PERSONAL INJURY SHOULD ENGINE FIRE EXTINGUISHER INADVERTENTLY DISCHARGE.**

(5) Remove protective covers from container outlets and safety valve fitting.
(6) Connect plumbing to safety valve fitting.
(7) Position O-rings on container outlets.
(8) Ensure valve assemblies are free of foreign matter and install on container (jumper wire connected between electrical terminal and ground lug).

NOTE: If manual discharge of the container has occurred, replace manual discharge indicator disc. (Refer to 26-20-02, Removal/Installation.)

(9) Connect plumbing to valve assemblies.
(10) Torque valve assembly nuts to 75 foot-pounds (101.7 Nm) using a strap wrench.
(11) Ensure both ENG FIRE PULL tee-handle switches are pushed in.
(12) Remove jumper wire and connect aircraft electrical wiring to each valve assembly.
(13) Connect battery quick-disconnects.
(14) Secure tailcone access door.
(15) Restore aircraft to normal.

C. Remove Container - HTL Advanced Technology (See Figure 201.)

CAUTION: CARE SHALL BE TAKEN TO PREVENT DAMAGING WIRING AND OTHER AIRCRAFT EQUIPMENT WHILE GAINING ACCESS TO ENGINE FIRE EXTINGUISHER CONTAINERS.

(1) Set Battery Switches off.
(2) Lower tailcone access door.
(3) Disconnect battery quick-disconnects.

WARNING: BEFORE REMOVING A FULLY CHARGED CONTAINER, REMOVE EXPLOSIVE CARTRIDGES (SQUIBS) FROM CONTAINER. USE EXTREME CARE TO PREVENT THE CARTRIDGES FROM CONTACTING AN ELECTRICAL POWER SOURCE.

(4) Disconnect and identify wires connected to the cartridges.
(5) Connect a jumper wire from the electrical terminal to the ground stud of each cartridge.
(6) Remove safety wire and cartridges from housing assemblies. (Refer to 26-20-02, Removal/Installation.)

WARNING: DO NOT ALLOW THE 1-1/4 INCH HEX HEAD OF THE HOUSING ASSEMBLY TO TURN. CONTAINER WILL DISCHARGE AND CAUSE INJURY TO PERSONNEL.

(7) Using a 1-1/4 inch wrench, hold the hex head of the housing assembly and loosen the cartridge. Use care not to turn the housing assembly.

WARNING: MANUAL DISCHARGE OUTLET SHALL BE CAPPED AS SOON AS EACH TUBE IS DISCONNECTED FROM OUTLET TO PREVENT PERSONAL INJURY SHOULD ENGINE FIRE EXTINGUISHER INADVERTENTLY DISCHARGE.

(8) Disconnect plumbing from container outlets.
(9) Disconnect plumbing from the safety valve fitting.
(10) Remove attaching parts and container from aircraft.
(11) Install protective covers on container outlets and safety valve fitting and store container at a temperature below 100°F (38°C), preferably 70°F (21°C).

D. Install Container - HTL Advanced Technology (See Figure 201.)

WARNING: DO NOT INSTALL CONTAINER CARTRIDGE INTO VALVE ASSEMBLY UNTIL VALVE IS ASSEMBLED ON CONTAINER AND CONTAINER IS INSTALLED IN AIRCRAFT.

CAUTION: THE ENGINE FIRE PULL TEE-HANDLES MUST BE PUSHED IN PRIOR TO FIRE EXTINGUISHER CONTAINER INSTALLATION. FAILURE TO DO SO WILL CAUSE THE CONTAINER TO DISCHARGE IF THE ARMED SWITCH IS DEPRESSED AFTER POWER IS RESTORED TO THE AIRCRAFT.

NOTE:
- If discharge of the container has occurred, replace the discharge indicator disc (red or yellow as applicable).
- Prior to installing container in aircraft, perform weight check. (Refer to Inspection/Check, 26-20-00.)

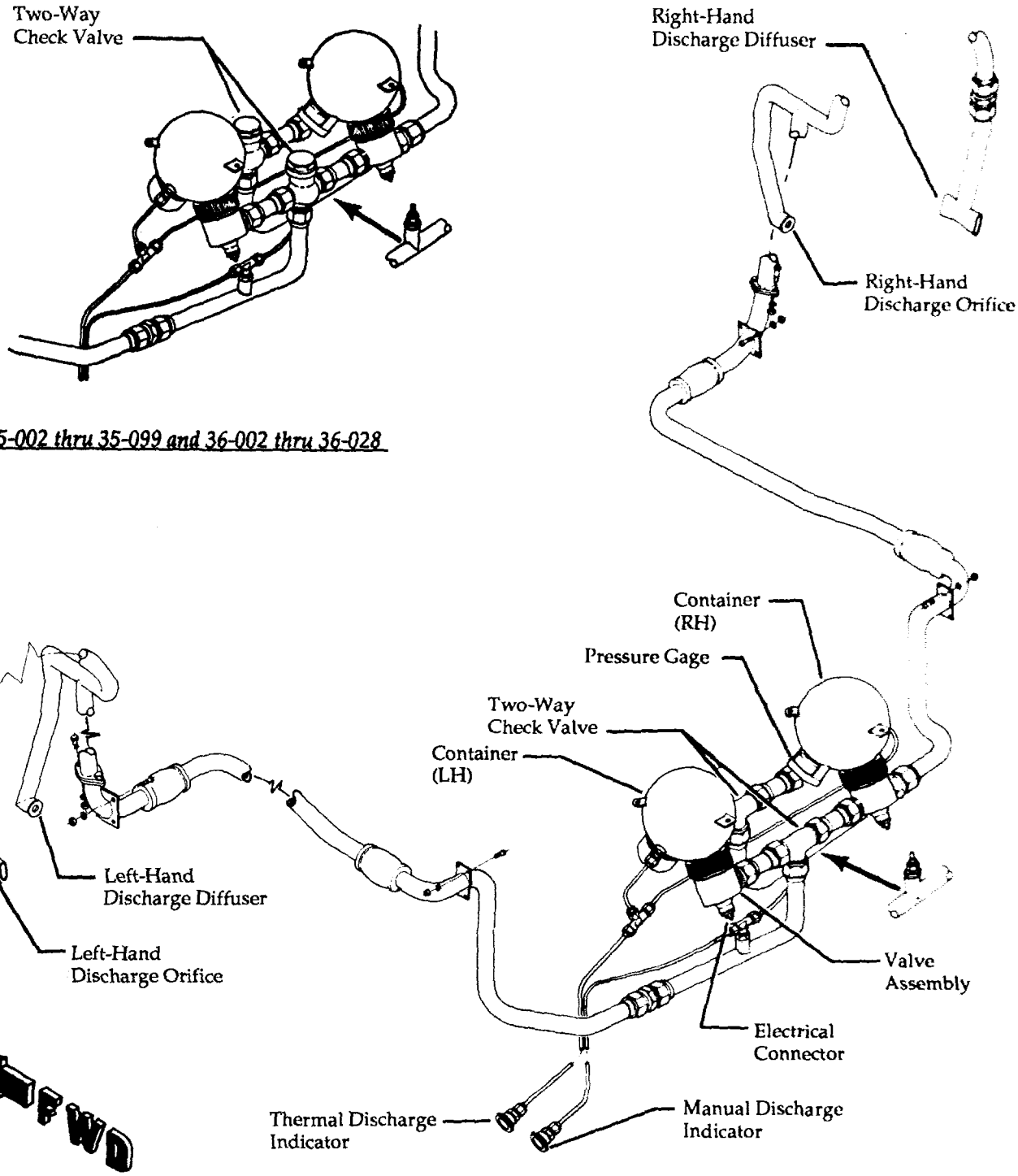
(1) Reset the ARMED Annunciator/Switches as follows:
  (a) Pull both right and left FIRE EXT circuit breakers.
  (b) Connect battery quick-disconnects.
  (c) Set Battery switches on. Pull RH/LH ENG FIRE PULL tee-handles. All ARMED Annunciator/Switches shall illuminate.
  (d) Set Battery Switches to off. Wait for relay to disengage (approximately 2 minutes.)
  (e) Push RH/LH ENG FIRE PULL tee-handles in. All ARMED Annunciator/Switches will extinguish.
  (f) Disconnect battery quick-disconnects.
(2) Purge the plumbing with dry compressed air or nitrogen to remove any foreign matter.
(3) Ensure all electrical power is removed from the aircraft.

WARNING: CAPS SHALL BE REMOVED AND TUBING INSTALLED ONE MANUAL DISCHARGE OUTLET AT A TIME TO PREVENT PERSONAL INJURY SHOULD ENGINE FIRE EXTINGUISHER INADVERTENTLY DISCHARGE.

(4) Remove protective covers from the container outlets and safety valve fitting. Ensure outlets are free of foreign matter.
(5) Install container in aircraft, align outlets with plumbing and secure with attaching parts.
(6) Connect plumbing to the safety valve fitting.
(7) Connect plumbing to the container outlets.

WARNING: DO NOT ALLOW THE 1-1/4 INCH HEX HEAD OF THE HOUSING ASSEMBLY TO TURN. CONTAINER WILL DISCHARGE AND CAUSE INJURY TO PERSONNEL.

(8) Lubricate new O-rings and threads on cartridges with Molycote DC-55M lubricant (Dow Corning Corp.) and install cartridges (jumper wire connected between electrical terminal and ground stud) in housing assemblies.
(9) Torque cartridges to 100 inch-pounds (11.3 Nm). Hold housing assembly with a suitable wrench to prevent it from turning. Safetywire cartridges.
(10) Ensure both ENG FIRE PULL tee-handle switches are pushed in.
(11) Remove jumper wire and connect aircraft electrical wiring to each cartridge.
(12) Connect battery quick-disconnects.
(13) Secure tailcone access door.
(14) Restore aircraft to normal.



Fire Extinguisher System Components Installation
Figure 201

EXTINGUISHER CONTAINER CARTRIDGE - MAINTENANCE PRACTICES

1. Removal/Installation

NOTE:
- Fire Extinguisher cartridges (squib assemblies) must be replaced at the regularly scheduled interval specified in Chapter 5.
- Removal and installation are identical for both outlets on both containers.
- Removal and installation of HTL Advanced Technology and Walter Kidde cartridges (squib assemblies) is different; therefore, two procedures have been provided.

A. Remove Container Cartridge - Walter Kidde (See figure 201.)
(1) Tools and Equipment

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Shunt Cap	244361	Walter Kidde Aerospace Inc. Wilson, NC. 27893	Isolate actuation stud on container cartridge.

(2) Remove all aircraft electrical power.
(3) Lower tailcone access door.
(4) Disconnect battery quick-disconnects.

CAUTION: CARE SHOULD BE TAKEN TO PREVENT DAMAGING WIRES AND OTHER EQUIPMENT WHILE GAINING ACCESS TO ENGINE FIRE EXTINGUISHER CONTAINER CARTRIDGES.

(5) Disconnect and identify electrical wires from actuation stud and grounding lug.

WARNING: AFTER DISCONNECTING ELECTRICAL WIRING FROM CONTAINER CARTRIDGE, INSTALL SHUNT CAP ON INSULATED TERMINAL OF CONTAINER CARTRIDGE. THIS WILL PREVENT ACCIDENTAL DISCHARGING OF CARTRIDGE.

(6) Install shunt cap on actuation stud of container cartridge.
(7) Disconnect and identify tubing from manual discharge outlet, cap outlet, and plug tubing.

WARNING: WHEN REMOVING CONTAINER CARTRIDGE FROM AIRCRAFT, MAKE SURE CONTAINER CARTRIDGE DOES NOT COME IN CONTACT WITH ANY ELECTRICAL SOURCE. CONTAINER CARTRIDGE WILL DISCHARGE AND CAUSE INJURY TO PERSONNEL.

(8) Loosen and remove entire swivel nut and container cartridge assembly from aircraft.
(9) Dispose of old cartridge in accordance with local regulations governing disposition of Class "C" explosives.

B. Install Container Cartridge - Walter Kidde (See figure 201.)

WARNING:
- THE CONTAINER CARTRIDGE IS TO BE INSTALLED IN THE ENGINE FIRE EXTINGUISHER CONTAINER ONLY AFTER THE ENGINE FIRE EXTINGUISHER CONTAINER HAS BEEN INSTALLED IN THE AIRCRAFT.
- DURING INSTALLATION OR HANDLING OF THE CONTAINER CARTRIDGE, ENSURE SHUNT CAP IS INSTALLED ON ACTUATION STUD OF THE CONTAINER CARTRIDGE. THIS WILL PREVENT ACCIDENTAL DISCHARGING OF CARTRIDGE.

(1) Position swivel nut and container cartridge on engine fire extinguisher container and tighten swivel nut to 60 foot-pounds.
(2) Identify, remove cap from manual discharge outlet and plug from tubing, and connect tubing to manual discharge outlet.
(3) Remove shunt cap from actuation stud of container cartridge.
(4) Identify and connect aircraft electrical wiring to actuation stud and grounding lug. (Refer to Chapter 26, Wiring Manual.)
(5) Connect battery quick-disconnects.
(6) Secure tailcone access door.
(7) Restore aircraft to normal.

C. Remove Squib Assembly - HTL Advanced Technology (formerly American Standard) (See figure 201.)
(1) Remove all aircraft electrical power.
(2) Lower tailcone access door.
(3) Disconnect battery quick-disconnects.

WARNING: AFTER DISCONNECTING ELECTRICAL WIRING FROM SQUIB ASSEMBLY, CONNECT A GROUND WIRE FROM THE ELECTRICAL TERMINAL ON THE SQUIB ASSEMBLY TO THE GROUNDING LUG ON THE SQUIB ASSEMBLY.

CAUTION: EXERCISE CARE TO PREVENT DAMAGE TO WIRING AND OTHER EQUIPMENT WHILE GAINING ACCESS TO ENGINE FIRE EXTINGUISHER CONTAINER CARTRIDGES.

(4) Disconnect electrical wiring from squib assembly and connect a ground wire from the electrical terminal on the squib assembly to the grounding lug on the squib assembly.

WARNING:
- WHEN REMOVING CONTAINER CARTRIDGE FROM AIRCRAFT MAKE SURE CONTAINER CARTRIDGE DOES NOT COME IN CONTACT WITH ANY ELECTRICAL SOURCE.
- DO NOT ALLOW THE 1-1/4 INCH HEX HEAD OF THE HOUSING ASSEMBLY TO TURN. THE CONTAINER WILL DISCHARGE AND CAUSE INJURY TO PERSONNEL.

(5) Using a 1-1/4" wrench, hold the hex head of the housing assembly and loosen the squib assembly using care not to turn the housing assembly.
(6) Unscrew the squib assembly from the housing assembly and remove the gasket.
(7) Dispose of old squib assembly by firing into a fixture specifically designed for that purpose or dispose of cartridge in accordance with local regulations governing disposition of Class "C" explosives.

D. Install Squib Assembly - HTL Advanced Technology (formerly American Standard)

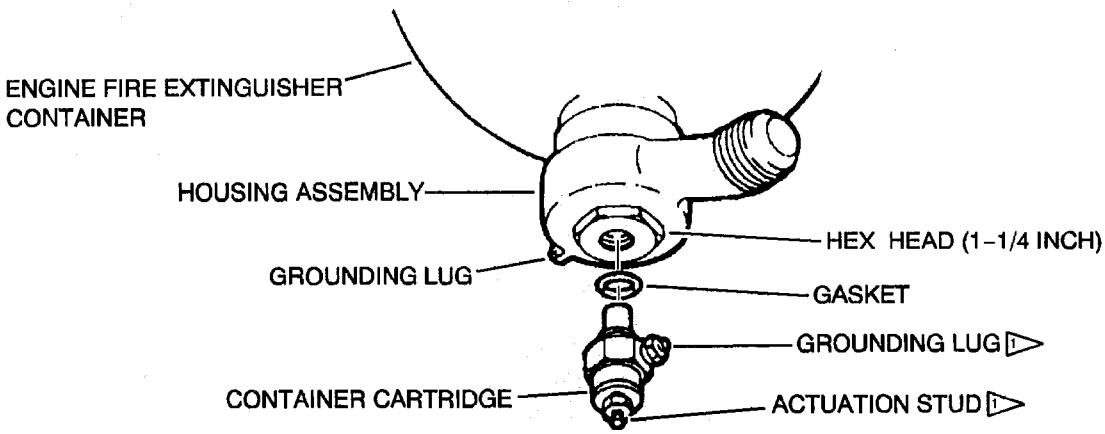
WARNING: THE CONTAINER CARTRIDGE IS TO BE INSTALLED IN THE ENGINE FIRE EXTINGUISHER CONTAINER ONLY AFTER THE ENGINE FIRE EXTINGUISHER CONTAINER HAS BEEN INSTALLED IN THE AIRCRAFT.

DURING INSTALLATION OR HANDLING OF THE CONTAINER CARTRIDGE, ENSURE A JUMPER WIRE IS INSTALLED BETWEEN THE INSULATED TERMINAL AND THE GROUNDING LUG OF THE SQUIB ASSEMBLY.

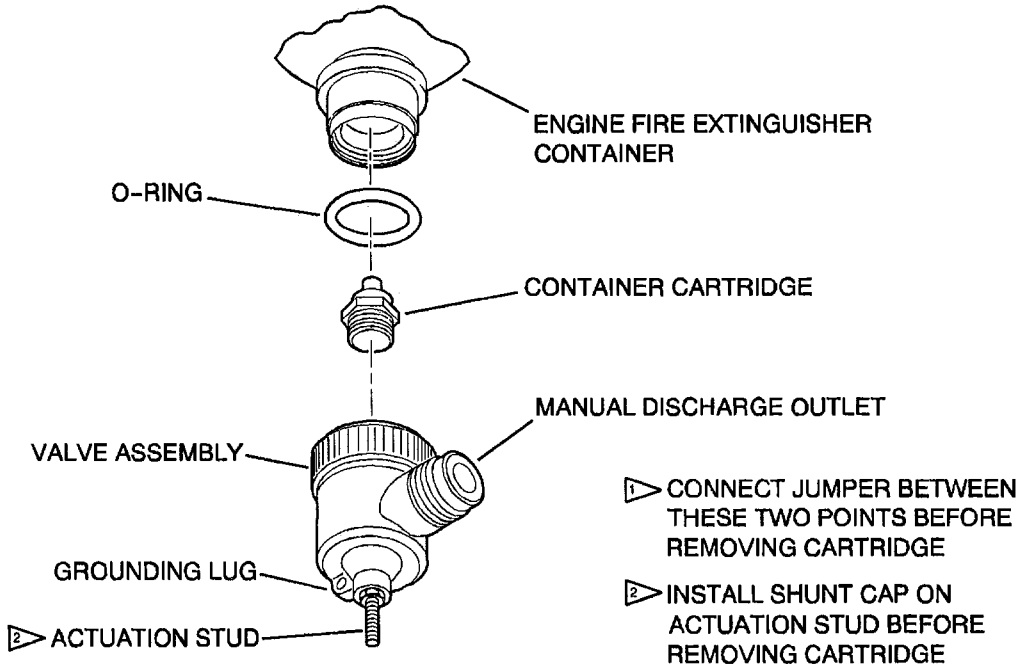
(1) Remove protective cap from new squib assembly.

WARNING: DO NOT ALLOW THE 1-1/4 INCH HEX HEAD OF THE HOUSING ASSEMBLY TO TURN. THE CONTAINER WILL DISCHARGE AND CAUSE INJURY TO PERSONNEL.

(2) Apply Molycote DC-55M lubricant (Dow Corning Corp.) or equivalent to squib assembly threads. Install squib assembly using new gasket. Be sure to hold steady the 1-1/4" hex on the housing assembly to avoid over torquing of the housing assembly.
(3) Torque the squib assembly to 100 inch-pounds (11.3 Nm) while holding the 1-1/4" hex.
(4) Safety wire squib assembly hex to outlet casting.
(5) Remove jumper wire previously installed between grounding lug and insulated terminal.
(6) Identify and connect aircraft electrical wires to insulated terminal and grounding stud. (Refer to Chapter 26, Wiring Manual.)
(7) Connect battery quick-disconnects.
(8) Secure tailcone access door.
(9) Restore aircraft to normal.
(10) Restore electrical power to aircraft.



HTL ADVANCED TECHNOLOGY CARTRIDGE (AMERICAN STANDARD)



WALTER KIDDE CARTRIDGE

Fire Extinguisher Container Cartridge Installation
Figure 201