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Service Information Letter

Letter No. A-144 Rev. 1

65C30 Series Sealed Control Solenoid Valve & Clamp Replacement

TRANSMITTAL SHEET

This page transmits the supersedure of Service Information Letter A-144 Rev. New, by Service Information Letter A-144 Rev. 1, dated August 28, 2017.

- Revision SIL A-144 Rev. New, dated December 9/11
- Superseded by SIL A-144 Rev. 1, dated August 28/17

FAA acceptance has been obtained on technical data in this publication that affects type design.

Changes are shown by a change bar in the left or right margins coinciding with the change in the affected page.

This revision is issued to change the following:

- Divide Accomplishment Instruction into Part A (3.B Instruction) and Part B (3.C Instruction).
- Update sections (from original Rev. New) to repair minor errors.
- Update test instruction for Part A & B to refer to 93C35 manual & 02D01 supplement.
- Add new HET P/N for the Solenoid Valve Assembly due to version & vendor change.
- Add new HET P/N for the Clamp & Spacer to hold the new Solenoid Valve Assembly.
- Update instructions to install new Clamp & Spacer on the new Solenoid Valve Assembly.

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65C30 Series Sealed Control Solenoid Valve & Clamp Replacement

1. Planning Information

A. Effectivity

(1) All Hartzell Engine Technologies LLC (HET) Aircraft Heater P/N 65C30 Series Sealed Control Units are affected by this Service Information Letter if:

(a) P/N 10C67-1 Solenoid Valve Assembly is to be installed for any reason.

(b) P/N 81024 Solenoid Valve Assembly is to be installed for any reason.

WARNING: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS SERVICE INFORMATION LETTER. THE INFORMATION CONTAINED IN THIS PUBLICATION MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. FAILURE TO COMPLY WITH THIS SERVICE INFORMATION LETTER OR USE OF OBSOLETE INFORMATION MAY CREATE AN UNSAFE CONDITION THAT MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE. REFER TO THE HET WEBSITE FOR THE MOST RECENT REVISION LEVEL OF THE SERVICE INFORMATION LETTER.

B. Concurrent Requirements

(1) None.

C. Reason

(1) P/N 10C67 and 10C67-1 are no longer available but existing new or serviceable units may continue to be used with the original clamp arrangement. **This Service Information Letter does not require change of a properly operating solenoid valve.**

(2) Hartzell Engine Technologies has updated the Janitrol P/N 10C67 and 10C67-1 solenoid valve to P/N 81024 with the principle difference being the shape of the body and coil assembly.

(3) Provide instruction to permit installation of a P/N 10C67-1 or P/N 81024 solenoid valve into P/N 65C30 Series Sealed Control Units by discarding the existing clamp and installing matching clamp assembly which fits P/N 10C67-1 or P/N 81024 solenoid valve.

D. Description

(1) This Service Information Letter provides Instructions for Continued Airworthiness (ICA) and is considered a requirement by HET.

(2) This Service Information Letter is being issued to supply a method to modify the P/N 65C30 Series Sealed Control Unit to permit use of a P/N 10C67-1 or 81024 solenoid valve assembly should the original P/N 10C67 or 10C67-1 solenoid valve be replaced.

E. Compliance

(1) Compliance is required whenever a P/N 10C67 Solenoid Valve Assembly is replaced by a P/N 10C67-1 Solenoid Valve Assembly in 65C30 Series Sealed Control Units in accordance with Accomplishment Instruction Part A.

(2) Compliance is required whenever a P/N 10C67 or 10C67-1 solenoid valve is replaced by a P/N 81024 solenoid valve assembly in P/N 65C30 Series Sealed Control Units in accordance with Accomplishment Instruction Part B.

F. Approval

(1) FAA acceptance has been obtained on technical data in this publication that affects type design.

G. Manpower
(Accomplishment Instruction Part A or B)

(1) One half (0.5) manhour is required for the clamp replacement.

(a) This does not include time for removal and installation of the Sealed Control Unit from the aircraft/rotorcraft as this will vary with the model and type.

(2) Two (2.0) manhours are required for solenoid valve replacement and leak tests.

H. References

CAUTION: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL INSPECTIONS OR WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THE DOCUMENTS.

(1) HET P/N 93C35 Aircraft Heater Sealed Control Overhaul & Maintenance manual.

(2) HET P/N 02D01 Aircraft Heater Sealed Control Maintenance manual supplement.

(3) Aircraft/rotorcraft Service or Maintenance manual as may be applicable to your specific make and model.

I. Other Publications Affected

(1) None

J. Weight and Balance

(1) Not affected

2. Material Information*

Accomplishment Instruction PART A:

(1) One (1) each, Clamp Assembly P/N 95034.

(2) Clamp hardware: Two (2) each, Screw P/N MS35266-63, two (2) each, Washer P/N AN960-10L, and two (2) each, Nut P/N MS21044N3.

(3) One (1) each, Packing, Preformed P/N MS219513-274.

(4) Two (2) each, Gasket, Copper Special P/N AN900-7.

(5) Five (5) each, Gasket, P/N 83A83.

(6) Four (4) each, Nut, Self Locking, P/N MS21044N4.

(7) Four (4) each, Washer, Seal P/N 27C30.

(8) One (1) each, Valve, Solenoid P/N 10C67-1.

* Additional parts may be necessary based on whether the clamp replacement is being done to coincide with overhaul of the Sealed Control Unit or as a repair only.

Accomplishment Instruction PART B:

(1) One (1) each, Clamp (square with extension) P/N 81029. **

(2) Clamp hardware: one (1) each, Spacer P/N 81150, one (1) each, Screw, P/N MS35266-66, one (1) each, Screw, P/N MS35266-61, four (4) each, Washer P/N AN960-10L, and two (2) each, Nut P/N MS21044N3. **

(3) One (1) each, Packing, Preformed P/N MS219513-274.

(4) Two (2) each, Gasket, Copper Special P/N AN900-7.

(5) Five (5) each, Gasket, P/N 83A83.

(6) Four (4) each, Nut, Self Locking, P/N MS21044N4.

(7) Four (4) each, Seal Washer, P/N 27C30.

(8) One (1) each, Solenoid Valve Assembly, P/N 81024. **

* Additional parts may be necessary based on whether the clamp replacement is being done to coincide with overhaul of the Sealed Control Unit or as a repair only.

** Optional: One (1) each, Kit, HET P/N 81028 (contains one fuel solenoid valve P/N 81024, one clamp P/N 81029, one spacer P/N 81150, one screw, P/N MS35266-66, one screw, P/N MS35266-61, four washers P/N AN960-10L, & two nuts P/N MS21044N3.)

3. Accomplishment Instructions

NOTE: The Accomplishment Instructions are divided in to two parts, each Part is complete. Use Part A for change from 10C67 to 10C67-1 solenoid valve. Use Part B for change from 10C67 or 10C67-1 solenoid valve to the P/N 81024 solenoid valve. Refer to the Part A or Part B as applicable for your solenoid valve change.

WARNING: THIS PROCEDURE MUST BE PERFORMED BY COMPETENT AND QUALIFIED PERSONNEL WHO ARE FAMILIAR WITH AIRFRAME MAINTENANCE THAT IS SPECIFIC TO THE AIRCRAFT HEATING SYSTEM. FAILURE TO DO SO MAY RESULT IN ECONOMIC LOSS, EQUIPMENT DAMAGE, AND/OR PHYSICAL INJURY.

CAUTION: DO NOT USE OBSOLETE OR OUTDATED INFORMATION. PERFORM ALL WORK IN ACCORDANCE WITH THE MOST RECENT REVISION OF THIS SERVICE INFORMATION LETTER AND THE HET PUBLICATIONS REFERENCED. INSTALLATION ACTIVITY MUST BE DONE IN ACCORDANCE WITH THE MOST RECENT REVISION OF THE APPLICABLE AIRCRAFT/ROTORCRAFT MAINTENANCE MANUAL. INFORMATION CONTAINED IN THESE MANUALS OR THIS SERVICE INFORMATION LETTER MAY BE SIGNIFICANTLY CHANGED FROM EARLIER REVISIONS. FAILURE TO COMPLY WITH THIS SERVICE INFORMATION LETTER OR THE USE OF OBSOLETE INFORMATION MAY CREATE AN UNSAFE CONDITION THAT MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND / OR SUBSTANTIAL PROPERTY DAMAGE. REFER TO THE APPLICABLE AIRCRAFT MAINTENANCE MANUAL INDEX FOR THE MOST RECENT REVISION LEVEL OF THEIR PUBLICATIONS. REFER TO THE HET WEBSITE FOR THE CURRENT REVISION LEVELS OF HET PUBLICATIONS.

A. Gaining access and removing the Sealed Control Unit:

NOTE 1: This Service Information Letter does not require change of a properly operating fuel solenoid valve installed in a 65C30 Series Sealed Control Unit.

NOTE 2: This procedure must be performed by competent and qualified personnel who are familiar with aircraft/rotorcraft heating systems. Do not depend on this Service Information Letter for gaining access to the heater Sealed Control Unit. This instruction requires that you use the applicable aircraft/rotorcraft manufacturer's maintenance manuals or service instructions.

(1) Remove the necessary panels to gain access to the heater Sealed Control Unit. The location of the heater Sealed Control Unit may vary widely based on the type and model aircraft/ rotorcraft.

(a) If space does not permit or the unit is being overhauled, the heater Sealed Control Unit must be removed from aircraft/rotorcraft and the clamp change and solenoid valve replacement performed on the bench during repair or at overhaul.

(b) If space permits, the solenoid valve replacement and clamp change may be done on the aircraft/rotorcraft by removing the base assembly only.

(2) If Removing Sealed Control Unit from the Aircraft/rotorcraft:

(a) Disconnect electrical power including any ground power being applied to the aircraft/ rotorcraft. Turn off the fuel source to the Sealed Control Unit.

(b) Disconnect the electrical connector from the Sealed Control Unit.

(c) Provide a suitable container or shop rags to catch fuel residue from the Sealed Control Unit fuel lines.

(d) Crack open the fuel outlet line and catch fuel, if no fuel comes out, disconnect the line completely and cap.

(e) Crack open the inlet line and catch fuel, only a small amount of fuel should come out. If fuel continues to flow, check to be sure the aircraft fuel has been shut off. Once fuel has stopped, disconnect the line completely and cap.

(f) Disconnect the drain line at the bottom of the Sealed Control Unit. No fuel should be present. If fuel is found leaking into the unit, determine the cause and repair or overhaul.

(g) Disconnect four fasteners and remove hardware that attach the Sealed Control Unit to the aircraft/rotorcraft structure. Remove the complete Sealed Control Unit.

(3) If Procedure is Performed on the Aircraft/rotorcraft:

(a) Disconnect electrical power including any ground power being applied to the aircraft/ rotorcraft. Turn off the fuel source to the Sealed Control Unit.

(b) Disconnect the electrical connector from the Sealed Control Unit.

(c) Provide a suitable container or shop rags to catch fuel residue from the Sealed Control Unit fuel lines.

(d) Crack open the fuel outlet line and catch fuel, if no fuel comes out, disconnect the line completely and cap.

(e) Crack open the inlet line and catch fuel, only a small amount of fuel should come out. If fuel continues to flow, check to be sure the aircraft fuel has been shut off. Once fuel has stopped, disconnect the line completely and cap. Proceed to 3.B.

(f) It is not necessary to disconnect the drain line at the bottom of the Sealed Control cover, however watch for leaking fuel when the base is removed. No fuel should be present. If fuel is found leaking into the unit, determine the cause and repair or overhaul.

(g) This prepares Sealed Control Unit for removal of the base assembly. The base contains and secures all the components including the fuel solenoid valve.

B. Instructions PART A:

NOTE: If overhauling the 65C30 Sealed Control Unit, HET Janitrol Overhaul Manual 93C35 and 02D01 supplement must be used for all procedures including disassembly, assembly, and testing. If a repair to replace the Solenoid Valve Assembly is being done, use only the instructions in this Service Information Letter to effect the repair. Refer to Fig. A-1.

(1) To repair or overhaul Sealed Control Unit, it is necessary to remove the base assembly (78) from the jacket and cover assembly (9).

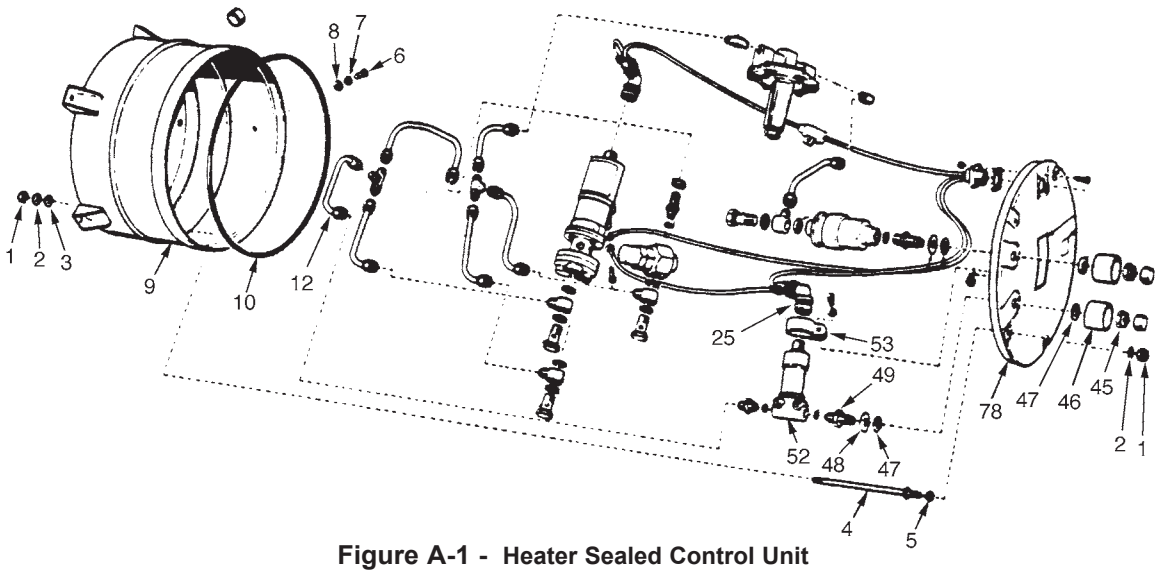


Figure A-1 - Heater Sealed Control Unit

NOTE: Whether on the aircraft/rotorcraft or on the bench, the base removal is the same. It should be noted that the base is heavy as it contains a fuel pump, fuel filter, pressure relief valve, fuel regulator and the fuel solenoid valve assembly. If the base (or entire unit) is being removed from the aircraft/rotorcraft, care must be taken not to drop it.

(2) Remove the screw (6) from the outer side of the jacket (9) and the four nuts (1) and washers (2) from the base and rock slightly to remove. If the unit is old, the preformed packing (10) may stick. Use a soft mallet and tap around the jacket circumference while hand pulling on the base. Do not pry using metallic tools as damage may occur to the base or jacket. Remove preformed packing (10) and discard.

(3) Locate the Solenoid Valve clamped to the base as shown in Figure A-2.

(4) Cut the safety wire and disconnect the electrical connector (25) from the mating connector on the Solenoid Valve (52).

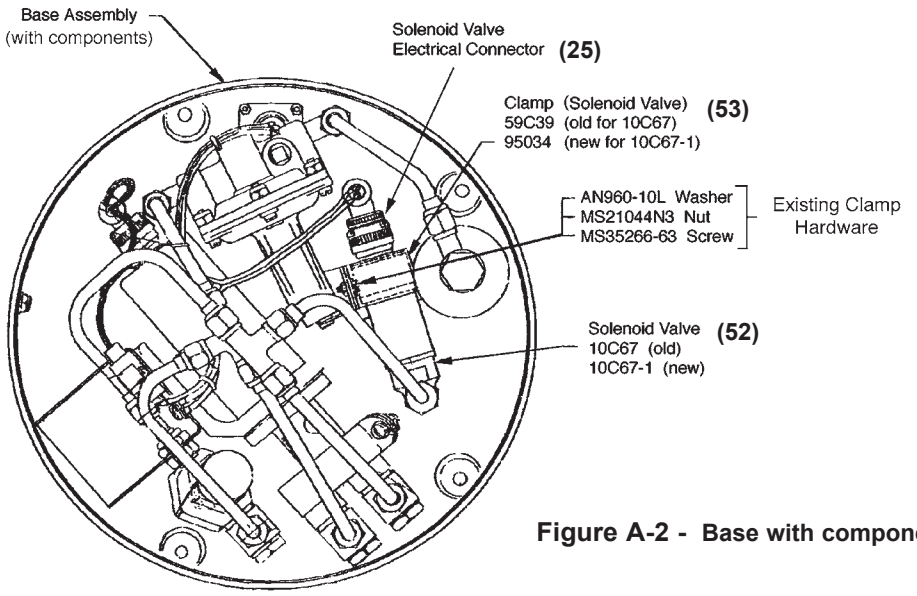


Figure A-2 - Base with components

(5) Disconnect the B-nuts and remove the fuel tube (12).

(6) Hold the union (49) using an open-end wrench and remove the nut (45), shroud (46), and gasket (47) on the face of the base assembly. Discard the gasket.

(7) Using an appropriate tool, remove the nut, washer, and screw releasing the old 59C39 clamp (53) and discard the clamp and hardware.

(8) Note the position of the Solenoid Valve Assembly (52) for later reassembly. Slide the union (49) which is attached to the Solenoid Valve out of the base assembly. Remove and discard the gasket (47) from the union assembly. Retain flat washer (48) for later re-installation. Properly discard the old Solenoid Valve Assembly.

(a) If performing an overhaul, continue with the remaining steps of disassembly in the 93C35 Overhaul Manual. When beginning the assembly for overhaul, perform steps 3.B(9) through 3.B(16) before continuing the normal overhaul reassembly and test.

(b) If performing a repair only, install the new clamp assembly and new solenoid valve assembly per the steps below.

(9) Slide the new Clamp P/N 95034 over the new Solenoid Valve Assembly with the clamp extension hole pointing towards the electrical connector. Insert new Screw P/N MS35266-63 through the clamp security hole. Place the Washer P/N AN960-10L and the Nut P/N MS21044N3 on the screw snug but do not tighten. (Refer to Figures A-3 & A-4.)

(10) Using the position noted in step 3.B (8), install the flat washer (48) and new gasket P/N AN900-7 (47) on the union. Insert the union, with the arrow pointing towards the base, in the fuel outlet port. Install the new gasket AN900-7 (47), shroud (46), and nut (45) snug but do not tighten. (Refer to Figures A-1, A-3, & A-4.)

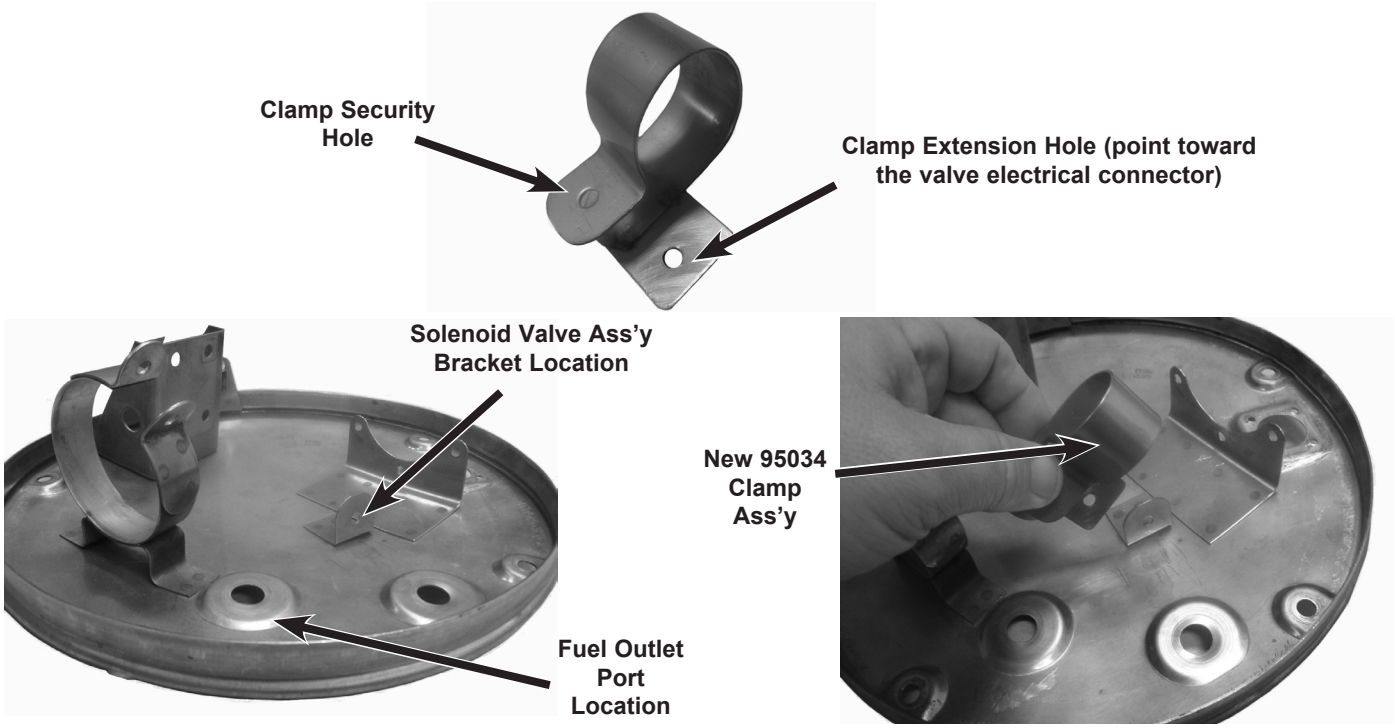


Figure A-3 - New Clamp & Location, P/N 95034 (for P/N 10C67-1)

(11) Position the new Clamp Assembly so that the hole in the Solenoid Valve Assembly bracket and the clamp extension hole aligns and insert the new Screw P/N MS35266-63 through the hole. Place the Washer P/N AN960-10L and the Nut P/N MS21044N3 on the screw snug but do not tighten. (Refer to Figures A-3 & A-4.)

(12) Position the Solenoid Valve so that the fuel tube removed in step 3.B(5) will fit without difficulty. Refer to Figures A-1 and A-2 as needed.

(13) Reconnect the fuel tube (12) but do not force. If B nuts will not finger tighten first, then reposition the Solenoid Valve Assembly for proper alignment and tighten. Use standard torque for B nut fittings.

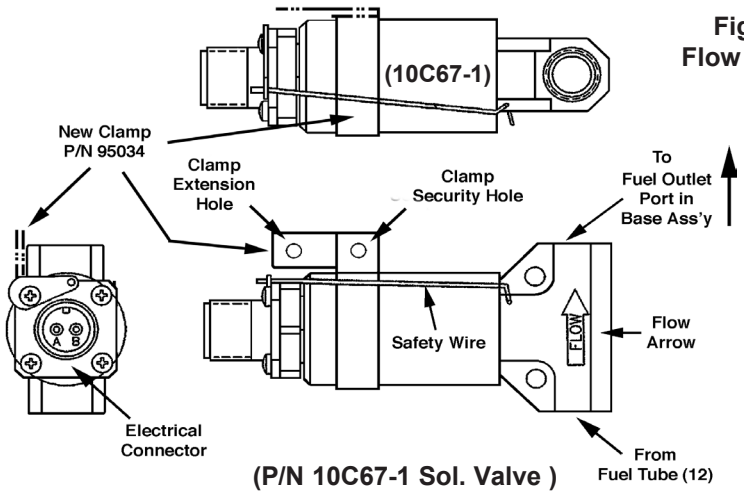


Figure A-4 - Solenoid Valve Flow Arrow & Clamp Orientation

(14) Tighten the nut against the shroud and gasket from step 3.B(10) making sure to hold the union in place using an open end wrench. Use standard torque.

(15) Tighten both nuts securing the clamp from steps 3.B(9) & 3.B(11). Use standard torque.

(16) Reconnect the electrical connector and apply safety wire properly to secure.

(17) When assembly of solenoid valve and clamp is complete, a fuel leakage test must be performed using the 93C35 manual with P/N 02D01 supplement.

(a) This may be found in manual P/N 93C35, Section III, 3-4 Fuel Leakage Test.

(18) When performing the fuel leakage test, Stoddard solvent (or equivalent solvent) may be used in the fuel source instead of aviation fuel.

WARNING: IF USING AVIATION FUELS IN THE FUEL LEAKAGE TEST, BE SURE THAT THE TEST IS DONE IN A WELL VENTILATED AREA AWAY FROM ANY IGNITION SOURCES. THESE INCLUDE BUT ARE NOT LIMITED TO WELDING, GRINDING, OR ANY OTHER SPARK GENERATING PROCEDURE OR DEVICE. FAILURE TO OBSERVE THIS CAUTION MAY RESULT IN UNCONTAINED FIRE WITH POSSIBLE PHYSICAL INJURY OR DEATH, EQUIPMENT DAMAGE, AND ECONOMIC LOSS.

(19) If wet or leaking fuel is found, correct the condition and re-apply the fuel leakage test. If leakage continues or is found in areas other than the solenoid valve being replaced, the unit should be completely overhauled.

NOTE: Whether on the aircraft/rotorcraft or on the bench, the base installation is the same. It should be noted that the base is heavy as it contains a fuel pump, fuel filter, pressure relief valve, fuel regulator and the fuel solenoid valve assembly. If the base (or entire unit) is being installed in the aircraft/rotorcraft, care must be taken not to drop it.

(20) Remove fuel leakage test apparatus and reassemble the base into the jacket and cover assembly. Place new preformed packing (10) on the lip of the jacket (9). It is permissible to lube the packing with Dow Corning DC-4 at installation to help retain the packing while installing the base.

(21) In the jacket and cover assembly (9), locate the four support tubes (4) and remove and discard the seal washers (5) and install new P/N 27C30 seal washers.

(22) Place the base assembly (78) in the jacket and cover assembly (9) noting the location of the hole in the upper side of the jacket and in the edge of the base assembly. Make sure to align the four support tubes with the applicable holes in the base.

(23) With proper location made between the jacket and base assembly, install the screw (6), washer (7), and new gasket, P/N 83A83 into side of the base loosely to align the base.

(24) At the four support tube locations, install the flat washers (2) and new Self Locking Nut (1) P/N MS21044N4 to secure the base to the jacket and cover assembly. Tighten one screw (6) and four nuts (1) using standard torque.

(25) Prior to re-connecting aircraft/rotorcraft fuel lines and electrical connector, an air leakage test must be performed using the 93C35 manual with P/N 02D01 supplement.

(a) This may be found in manual P/N 93C35, Section III, 3-6 Pressure Test.

(26) Connection of the air leakage test lines and components may be done with the Sealed Control Assembly installed.

(27) If sealed control does not pass the air leakage test, the cause of air leakage must be found and corrected and the air leakage test repeated.

(28) Once the air leakage test has passed, remove the test apparatus and remove the caps from the fuel inlet and outlet fittings and attach the drain line.

(29) Using the most recent aircraft/rotorcraft maintenance manual or service instructions, install the fuel inlet and fuel outlet lines and torque to values found in the manual.

(a) If being returned from overhaul, mount the Sealed Control Assembly with hardware retained or as obtained from the applicable aircraft/rotorcraft manufacturer and torque to the values found in the manual.)

(30) Connect the aircraft/rotorcraft electrical connector for the Sealed Control Assembly and safety wire as required.

C. Instructions PART B:

NOTE: If overhauling, repairing, or testing a P/N 65C30 Series Sealed Control Unit, HET Overhaul Manual P/N 93C35 with P/N 02D01 supplement must be used for all procedures including disassembly, assembly, and testing.

(1) To repair or overhaul Sealed Control Unit, it is necessary to remove the base assembly (78) from the jacket and cover assembly (9). Refer to Figure B-1.

NOTE: Whether on the aircraft/rotorcraft or on the bench, the base removal is the same. It should be noted that the base is heavy as it contains a fuel pump, fuel filter, pressure relief valve, fuel regulator and the fuel solenoid valve assembly. If the base (or entire unit) is being removed from the aircraft/rotorcraft, care must be taken not to drop it.

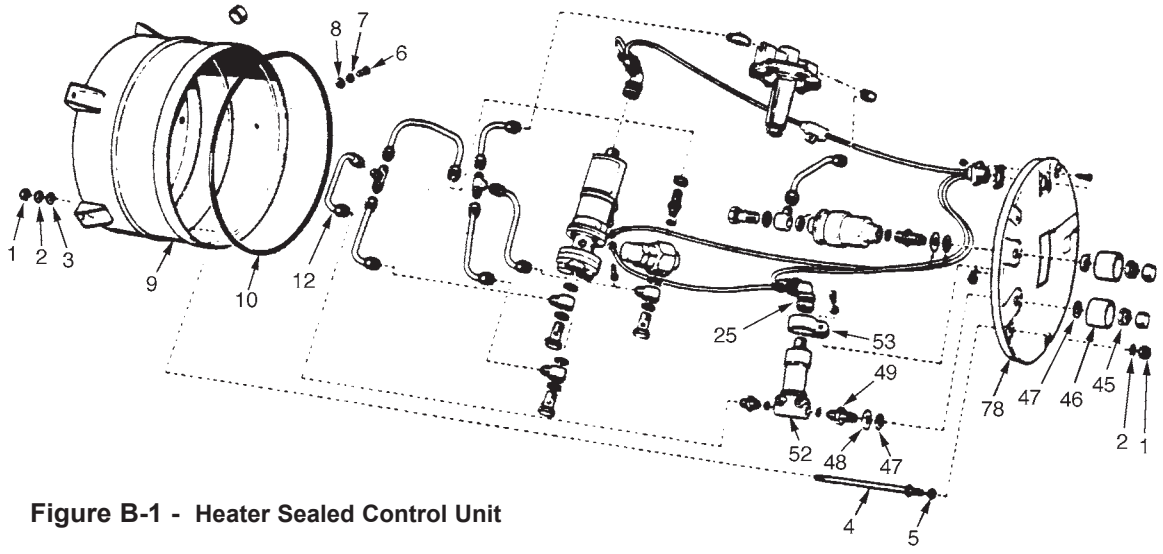


Figure B-1 - Heater Sealed Control Unit

(2) Remove the screw (6) from the outer side of the jacket (9) and the four nuts (1) and washers (2) from the base and rock slightly to remove. If the unit is old, the preformed packing (10) may stick. Use a soft mallet and tap around the jacket circumference while hand pulling on the base. Do not pry using metallic tools as damage may occur to the base or jacket. Remove preformed packing (10) and discard.

(3) Locate the solenoid valve clamped to the base as shown in Figure B-2.

(4) Cut the safety wire and disconnect the electrical connector (25) from the mating connector on the solenoid valve (52).

(5) Disconnect the B-nuts and remove the fuel tube (12).

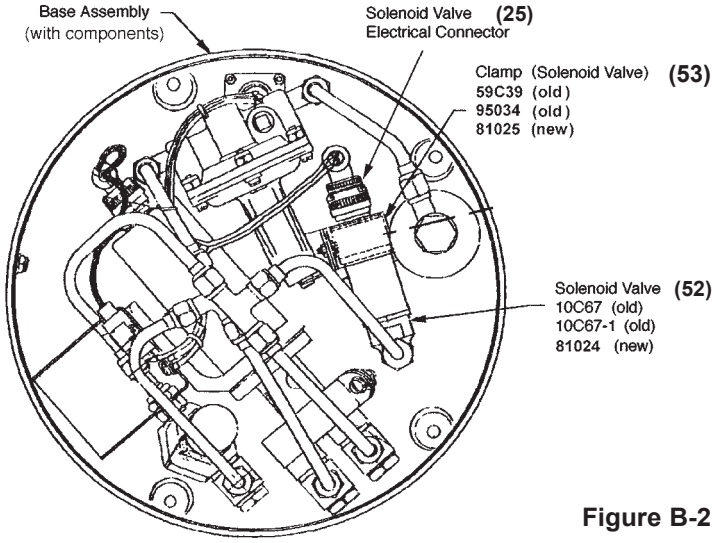


Figure B-2 - Base with components

(6) Hold the union (49) using an open-end wrench and remove the nut (45), shroud (46), and gasket (47) on the face of the base assembly. Discard the gasket.

(7) Using an appropriate tool, remove the nut, washer, and screw releasing the old 59C39 or 95034 clamp (53) and discard the clamp and hardware.

(8) Note the position of the solenoid valve assembly (52) for later reassembly. Slide the union (49) which is attached to the solenoid valve out of the base assembly. Remove and discard the gasket (47) from the union assembly. Retain flat washer (48) and union (49) for later reinstallation. Properly discard the old solenoid valve.

(a) If performing an overhaul, continue with the remaining steps of disassembly in the P/N 93C35 Overhaul Manual. When beginning the assembly for overhaul, perform steps 3.B(9) through 3.B(16) before continuing the normal overhaul reassembly and test.

(b) If performing a repair only, install the new clamp and new solenoid valve assembly per the steps below.

(9) Slide new clamp P/N 81029 over the new solenoid valve with the clamp extension hole pointing towards the valve electrical connector. Do not install screws at this time. (Refer to Figure B-6.)

(10) Using the position noted in step 3.B (8), install the flat washer (48) and new gasket P/N AN900-7 (47) on the union. Insert the union, with the arrow pointing towards the base, in the fuel outlet port. Install the new gasket AN900-7 (47), shroud (46), and nut (45) snug but do not tighten. (Refer to Figures B-1, B-3, B-4, & B-5.)

(11) There are two different configurations of the sealed control bases in service. The primary difference is the location of the solenoid valve bracket spot welded onto the base (wide or narrow bracket gap). Depending upon configuration, the clamp will need to be moved to fit. Use instruction 11(a) or 11(b) as suitable.

(a) Attachment through clamp security hole. Refer to Figure B-4 (wide gap).

(1) Position the new clamp so that the base solenoid valve bracket hole and the new clamp **security** hole aligns. (Refer to Figure B-4.)

(2) Confirm that the new clamp P/N 81029 remains on the square portion of the solenoid valve with the holes aligned when valve is positioned with fuel port fittings and line connections in alignment. If not, continue to instruction 11(b). Refer to Figure B-7a & B-7b.

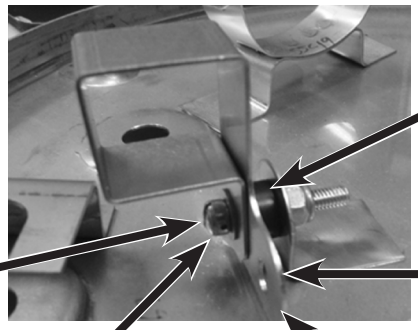
(3) Place a new washer P/N AN960-10L on a new screw P/N MS35266-66 and insert the screw through the clamp **security** hole.

(4) Install spacer P/N 81150 on the screw P/N MS35266-66 and insert the screw through the base plate bracket hole.

(5) Place a new Washer P/N AN960-10L and a new Nut P/N MS21044N3 on the screw snug but do not tighten at this time.

(6) Discard additional new hardware for this step only.

Figure B-3 - New Clamp & Hardware P/N 81029 (for P/N 81024 valve) (Assemble as shown.)



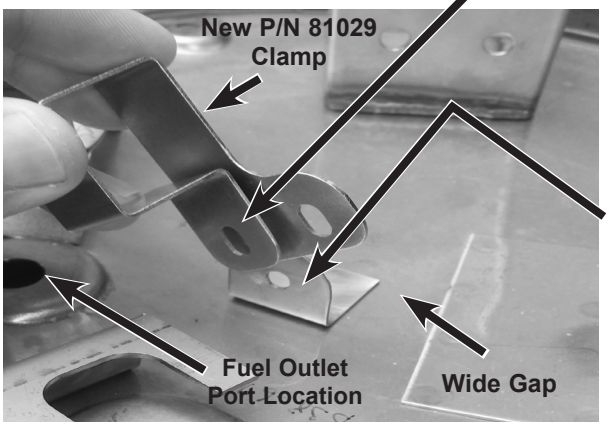


Fig. B-4 Installing New Clamp on base with wide bracket gap (components removed for clarity)

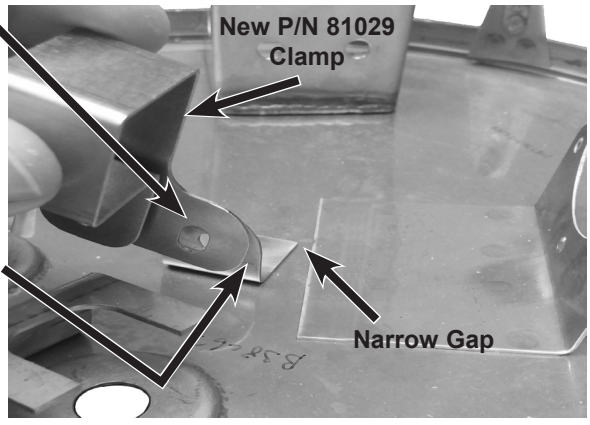


Fig. B-5 Installing New Clamp on base with narrow bracket gap (components removed for clarity)

(b) Attachment through clamp extension hole. Refer to Figure B-5 (narrow gap).

(1) Place a new washer P/N AN960-10L on a new screw P/N MS35266-61 and insert the screw through the clamp **security** hole. (Refer to Figure B-3.)

(2) Place a new washer P/N AN960-10L and a new Nut P/N MS21044N3 on the screw snug but do not tighten.

(3) Position the new clamp so that the base solenoid valve bracket hole and the new clamp **extension** hole align. (Refer to Figure B-3 & B-5.)

(4) Confirm that the new clamp P/N 81029 remains on the square portion of the solenoid valve with the holes aligned when valve is positioned with fuel port fittings and line connections in alignment. Refer to Figure B-7a & B-7b.

(5) Place a new washer P/N AN960-10L on a new screw P/N MS35266-66 and insert the screw through the clamp **extension** hole.

(6) Place a new spacer P/N 81150 on the screw P/N MS35266-66 and insert the screw through the base bracket hole.

(7) Place a new Washer P/N AN960-10L and a new Nut P/N MS21044N3 on the screw snug but do not tighten at this time. (Refer to Figures B-3 & B-5.)

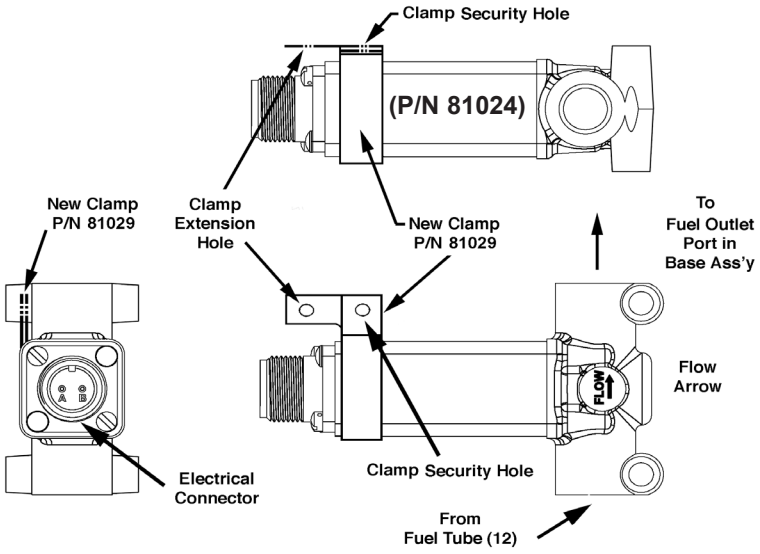


Figure B-6 - Solenoid Valve Flow Arrow & Clamp Orientation

(12) Position the solenoid valve so that the fuel tube removed in step 3.B(5) will fit without difficulty. Refer to Figure B-1 as needed.

(13) Reconnect the fuel tube (12) but do not force. If the B nuts will not finger tighten, then reposition the solenoid valve assembly for proper alignment and tighten. (It is permissible to bend the tube slightly to eliminate stress.) Use standard torque for B nut fittings.

(14) Tighten the nut against the shroud and gasket from step 3.B(10) making sure to hold the union in place using an open end wrench. Use standard torque.

(15) Tighten the nut(s) securing the clamp from steps 3.B(11)a & 3.B(11)b as applicable. Use standard torque.

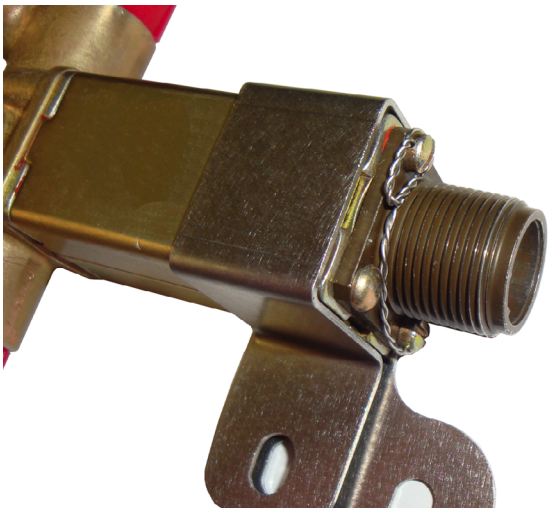


Figure B-7a - Correct Clamp Alignment

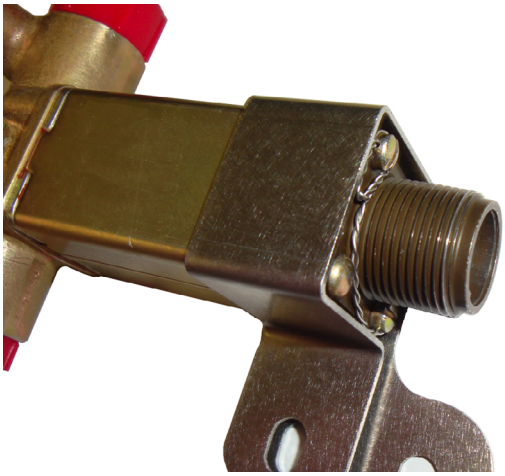


Figure B-7b - Incorrect Clamp Alignment

(16) When assembly of solenoid valve and clamp is complete, a fuel leakage test must be performed using the 93C35 manual with P/N 02D01 supplement.

(a) This may be found in manual P/N 93C35, Section III, 3-4 Fuel Leakage Test.

(17) When performing the fuel leakage test, Stoddard solvent (or equivalent solvent) may be used in the fuel source instead of aviation fuel.

WARNING: IF USING AVIATION FUELS IN THE FUEL LEAKAGE TEST, BE SURE THAT THE TEST IS DONE IN A WELL VENTILATED AREA AWAY FROM ANY IGNITION SOURCES. THESE INCLUDE BUT ARE NOT LIMITED TO WELDING, GRINDING, OR ANY OTHER SPARK GENERATING PROCEDURE OR DEVICE. FAILURE TO OBSERVE THIS CAUTION MAY RESULT IN UNCONTAINED FIRE WITH POSSIBLE PHYSICAL INJURY OR DEATH, EQUIPMENT DAMAGE, AND ECONOMIC LOSS.

(18) If wet or leaking fuel is found, correct the condition and re-apply the fuel leakage test. If leakage continues or is found in areas other than the solenoid valve being replaced, the unit should be completely overhauled.

NOTE: Whether on the aircraft/rotorcraft or on the bench, the base installation is the same. It should be noted that the base is heavy as it contains a fuel pump, fuel filter, pressure relief valve, fuel regulator and the fuel solenoid valve assembly. If the base (or entire unit) is being installed in the aircraft/rotorcraft, care must be taken not to drop it.

(19) Remove fuel leakage test apparatus and reassemble the base into the jacket and cover assembly. Place new preformed packing (10) on the lip of the jacket (9). It is permissible to lube the packing with Dow Corning DC-4 at installation to help retain the packing while installing the base.

(20) In the jacket and cover assembly (9), locate the four support tubes (4) and remove and discard the seal washers (5) and install new P/N 27C30 seal washers.

(21) Place the base assembly (78) in the jacket and cover assembly (9) noting the location of the hole in the upper side of the jacket and in the edge of the base assembly. Make sure to align the four support tubes with the applicable holes in the base.

(22) With proper location made between the jacket and base assembly, install the screw (6), washer (7), and new Gasket, P/N 83A83 into side of the base loosely to align the base.

(23) At the four support tube locations, install the flat washers (2) and new self locking nut (1) P/N MS21044N4 to secure the base to the jacket and cover assembly. Tighten one screw (6) and four nuts (1) using standard torque.

(24) Prior to re-connecting aircraft/rotorcraft fuel lines and electrical connector, an air leakage test must be performed using the 93C35 manual with P/N 02D01 supplement.

(a) This may be found in manual P/N 93C35, Section III, 3-6 Pressure Test.

(25) Connection of the air leakage test lines and components may be done with the Sealed Control Assembly installed.

(26) If sealed control does not pass the air leakage test, the cause of air leakage must be found and corrected and the air leakage test repeated.

(27) Once the air leakage test has passed, remove the test apparatus and remove the caps from the fuel inlet and outlet fittings and attach the drain line.

(28) Using the most recent aircraft/rotorcraft maintenance manual or service instructions, install the fuel inlet and fuel outlet lines and torque to values found in the manual.

(a) If being returned from overhaul, mount the Sealed Control Assembly with hardware retained or as obtained from the applicable aircraft/rotorcraft manufacturer and torque to the values found in the manual.)

(29) Connect the aircraft/rotorcraft electrical connector for the Sealed Control Assembly and safety wire as required.

C. Return to Service

(1) Before attempting a start of the installed heater, pressurize the heater fuel system lines and check lines and fittings to ensure no leaks exist. Be sure all air intake scoops, air ducts, and exhaust tubes are clean and free of debris. Utilize the applicable and most recent aircraft/rotorcraft service instructions or maintenance manual as required.

(2) Place the aircraft/rotorcraft outside or in a well ventilated area and perform a normal heater start, run, and shutdown. Utilize the most recent aircraft/rotorcraft AFM or POH to determine the procedure for proper operation.

(3) Using the applicable aircraft manufacturer's maintenance manuals of the latest revision, install any portion of the aircraft that was removed to gain access.

(4) Make a logbook entry to indicate installation of a new Solenoid Valve Assembly (P/N 10C67-1 or P/N 81024) and the completion of the P/N 65C30 Series Sealed Control Unit solenoid valve clamp replacement in accordance with this Service Information Letter

4. Contact Information

A. Contact HET Product Support for all communications regarding the technical content of this Service Information Letter.

(1) Phone +1.334.386.5400 (Option 2)

(2) Fax +1.334.386.5450

(3) E-mail at techsupport@HartzellEngineTech.com

(4) Address

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Montgomery, AL 36108
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