



# INSTRUCTION BULLETIN

No. 340741  
Machine: 800/810LP  
Published: 06-2004  
Rev. 00

**NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in the machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save the cost of ordering an entire kit.**

*NOTE: Numbers in parenthesis ( ) are reference numbers for parts listed in Bill of Materials.*

Installation instructions for **kit number 9000889**

## **SYNOPSIS / PROBLEM:**

This kit contains parts needed to install/replace the LPG injector, ECU controller, coolant orifice, and filter on 800/810 LPG model sweepers with serial numbers between 004937 and 005999 (with Zeems fuel systems). Please follow step-by-step instructions.

## **SPECIAL TOOLS / CONSIDERATIONS: NONE**

(Estimated time to complete: 2 hours)

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## **PREPARATION:**

1. Park the machine on a clean level surface.

**FOR SAFETY: Before leaving or servicing machine, stop on level surface, turn off machine, and remove key.**

2. Open and lock engine compartment doors.
3. Close the fuel tank service valve.
4. Run the engine until it stops from lack of fuel.

**FOR SAFETY: When servicing machine, allow engine to cool. Keep flames and sparks away from fuel system service area. Keep area well ventilated.**

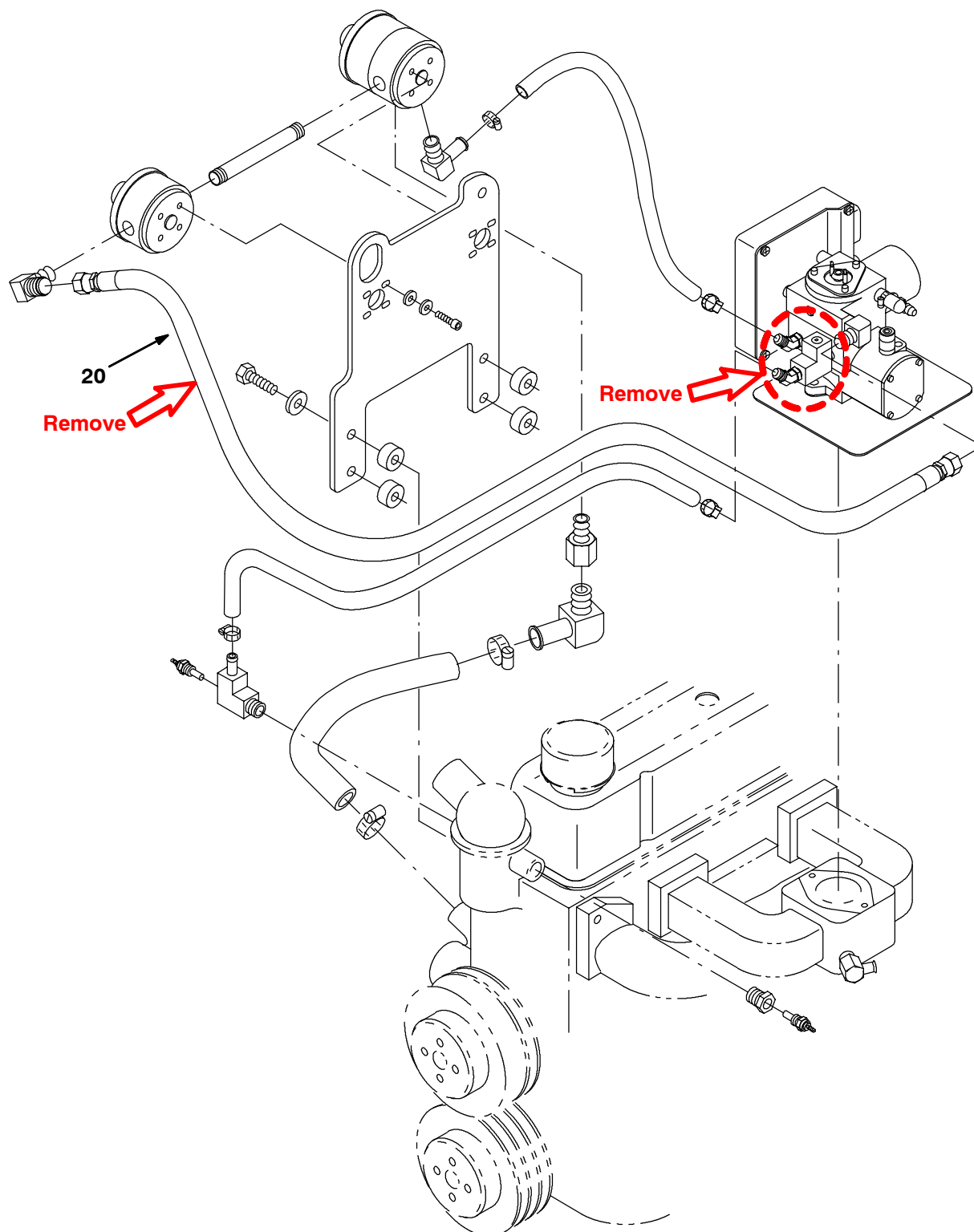
5. Disconnect the battery cables from the machine.



**WARNING: Always disconnect the battery cables from the machine before working on electrical components.**

**Electronic Fuel Ignition and Vaporizer Group, LPG (004937-005999)-FOR REFERENCE ONLY**

1. Remove the indicated parts from the engine. Refer to the diagram below for parts to be removed.



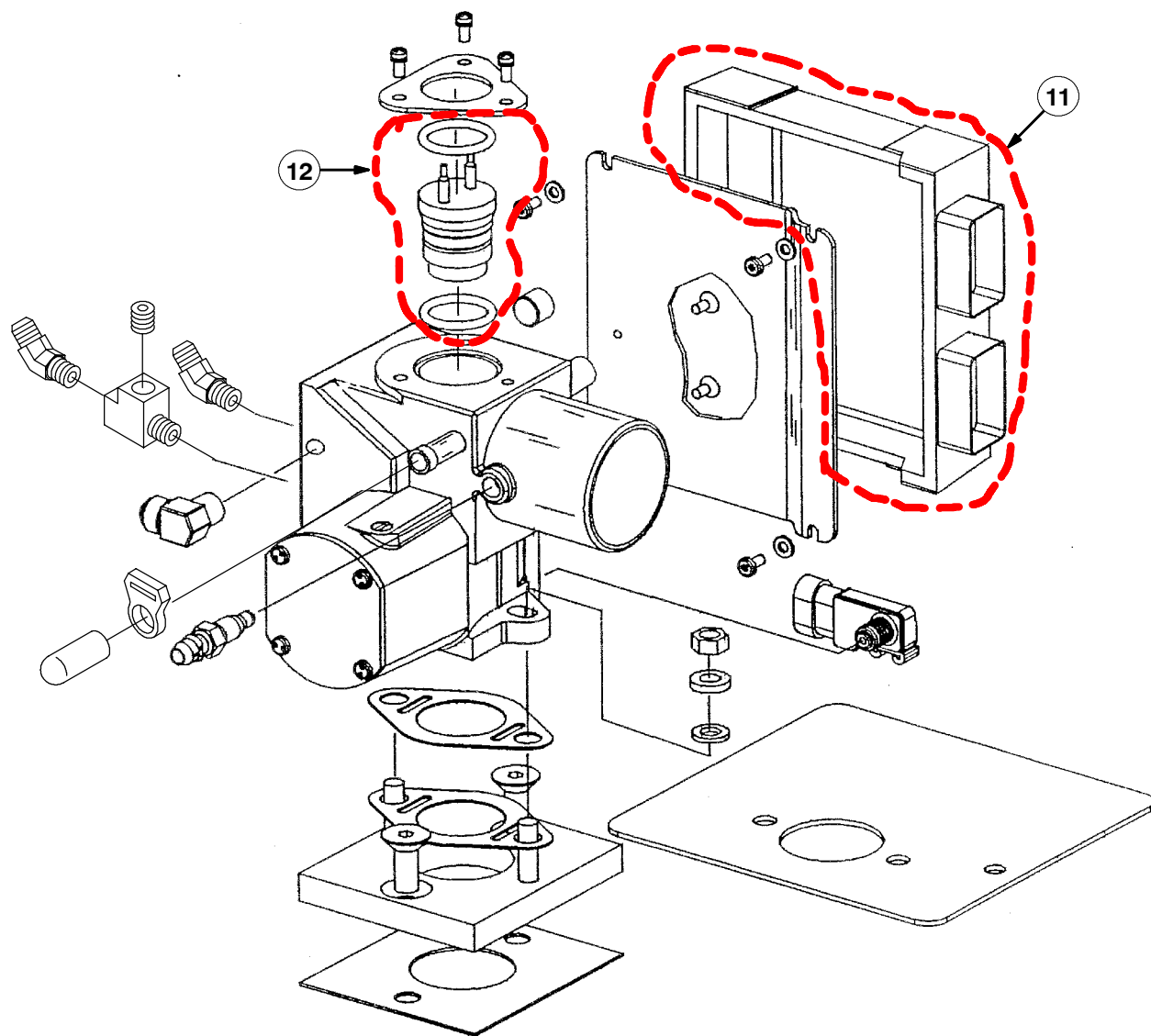
**FOR REFERENCE ONLY**

**Electronic Fuel Ignition and Vaporizer Group, LPG (004937-005999)-FOR REFERENCE ONLY**

<b>Ref.</b>	<b>Tennant Part No.</b>	<b>Machine Serial Number</b>	<b>Description</b>	<b>Qty.</b>
1	371894	(004937-005999 )	Housing Assy, Throttle, Lpg, [With Ecu]	1
1	371895	(004937-005999 )	Housing Assy, Throttle, Lpg, [Without Ecu]	1
2	371538	(004937-005999 )	Clamp	4
3	769808	(004937-005999 )	Hose, Heater, 0.38id x 18.0 L	1
4	392570	(004937-005999 )	Plate	1
5	371749	(004937-005999 )	Vaporizer	1
6	371754	(004937-005999 )	Fitting	1
7	371755	(004937-005999 )	Pipe	1
8	371750	(004937-005999 )	Regulator	1
9	371758	(004937-005999 )	Fitting	1
10	371768	(004937-005999 )	Fitting	1
11	371757	(004937-005999 )	Fitting	1
12	393972	(004937-005999 )	Hose, Conv	1
13	11399	(004937-005999 )	Clamp, Hose, Wormdrive, 0.81-1.50d	2
14	371759	(004937-005999 )	Screw	8
15	393991	(004937-005999 )	Sensor, Water Temp	1
16	36165	(004937-005999 )	Send-unit, Water, Temperature, .38npt	1
17	47167	(004937-005999 )	Fitting, Brs, Str, Pm08/Pf06	1
18	371767	(004937-005999 )	Spacer	4
19	371766	(004937-005999 )	Fitting, Elbow	1
20	07597	(004937-005999 )	Hose, Hi Press, Lp	1
21	769806	(004937-005999 )	Hose, Heater, 0.38id x 21.0 L	1

**FOR REFERENCE ONLY**

**NOTE: Refer to ECU Wiring Procedure for steps required to rewire the modified controller (ECU). Rewiring must be completed according to the ECU Wiring instructions. The redesigned injector will not function if rewiring is not completed according to the provided instructions. Remove the old parts and install the new (11) and (12) as shown in the diagram below.**



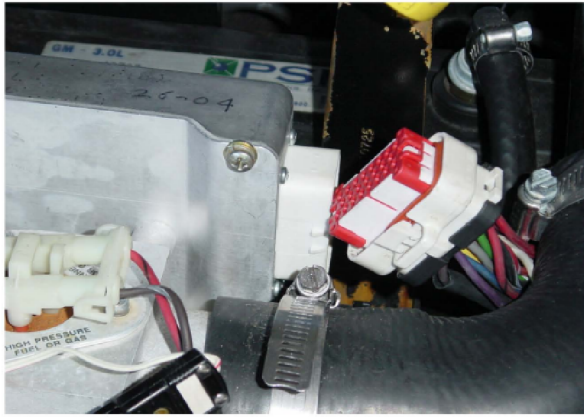


FIG. 1

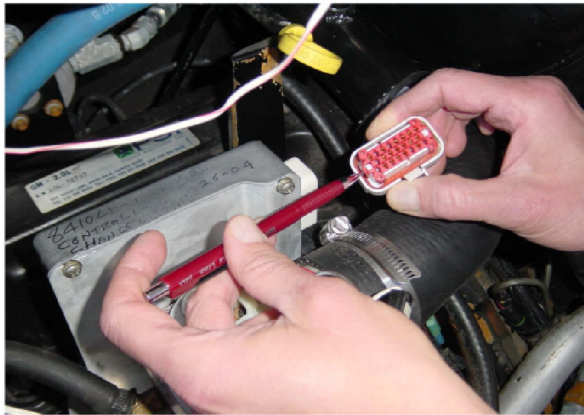


FIG. 2

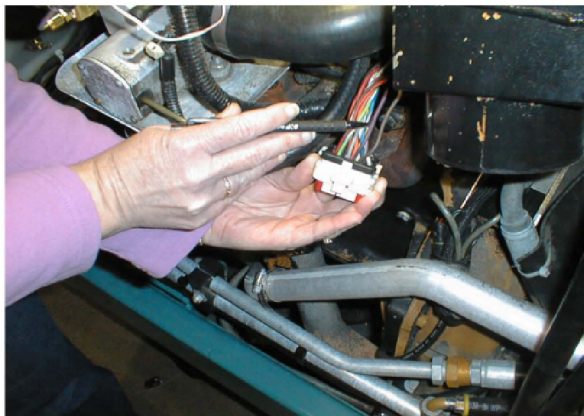


FIG. 3

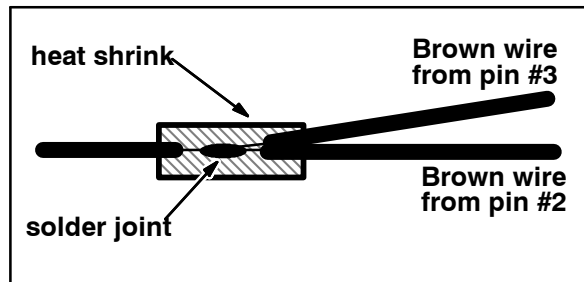


FIG. 4

*NOTE: The ECU reprograms itself when the engine is first started after rewiring. Allow approximately 1-2 minutes for the engine to settle down. The machine is then ready for use.*

## ECU Wiring Procedure:

*NOTE: Refer to schematic on the following page for additional wiring information.*

1. Disconnect the white connector from the ECU. Refer to Fig. 1.
2. Release, but do not remove, the red locking cover from the white connector to dislodge the connection. Refer to Fig. 2.
3. Cut the brown wire in **pin #3** approximately 2" above the connector.
4. Strip a small portion of insulation from the loose end of the brown wire still in **pin #3**.
5. Measure and mark a point 1 1/2" from the connector end of the brown wire in **pin #2**. Refer to Fig. 3.
6. Strip 3/4" of insulation from the marked area of the brown wire in **pin #2**.
7. Pull and twist the brown wire in **pin #2** from the connector.
8. Slide heat shrink onto the brown wire from **pin #2**.
9. Solder the loose end of the brown wire in **pin #3** to the brown wire in **pin #2**. Solder wires as shown in Fig. 4 so heat shrink can be positioned over the solder joint for the best possible seal.
10. Heat shrink the heat shrink over the solder joint and the exposed portions of both brown wires. Refer to Fig. 4.
11. Push the brown wire removed from the connector back into **pin #2**. Ensure brown wire is locked into place.
12. Ensure other wires are secure in the connector.
13. Lock the red locking cover back into place.
14. Reinstall (snap back) red cover back into place.
15. Ensure the red seal is properly positioned inside the white connector.
16. Tape the unused brown wire from the harness against the harness. This wire is not used.
17. Plug the white connector into the ECU. The connector should easily plug into the ECU. Do not force the connector into the ECU. Refer to Fig. 1.

**Wiring Diagram for J7 Main Harness**

**Legend:**

- RED
- ORA/GRN
- WHT/GRN
- RED/BLU
- YEL/BLK

**Pin J1-3 Wiring Legend:**

Pin	Color	Notes
J1-1	RED	
J1-2	ORA/GRN	
J1-3	WHT/GRN	
J1-4	RED/BLU	
J1-5	YEL/BLK	

**Pin J1-3 Wiring Legend (Gas Models Only):**

Pin	Color	Notes
J1-1	RED	
J1-2	ORA/GRN	
J1-3	WHT/GRN	
J1-4	RED/BLU	
J1-5	YEL/BLK	

**Pin J1-3 Wiring Legend (LP Models Only):**

Pin	Color	Notes
J1-1	RED	
J1-2	ORA/GRN	
J1-3	WHT/GRN	
J1-4	RED/BLU	
J1-5	YEL/BLK	

**Wiring Details:**

- Starter Solenoid:** Positive battery cable to starter solenoid contacts, then to starter motor assembly and starter solenoid coil.
- Starter Relay:** Connected to starter solenoid contacts and starter motor assembly.
- Coil Relay:** Connected to starter solenoid coil and coil.
- Sensors:** O2 sensor, MAP sensor, distributor, air temp sensor, h2o temp sensor, gov actuator, fuel pump, and oil pressure switch.
- Grounding:** Various ground connections throughout the harness.





## Assembly Instructions

*NOTE: Assemble all parts as shown in Fig. 6 through Fig. 9. Refer to the parts list on the last page for descriptions of numbered parts.*

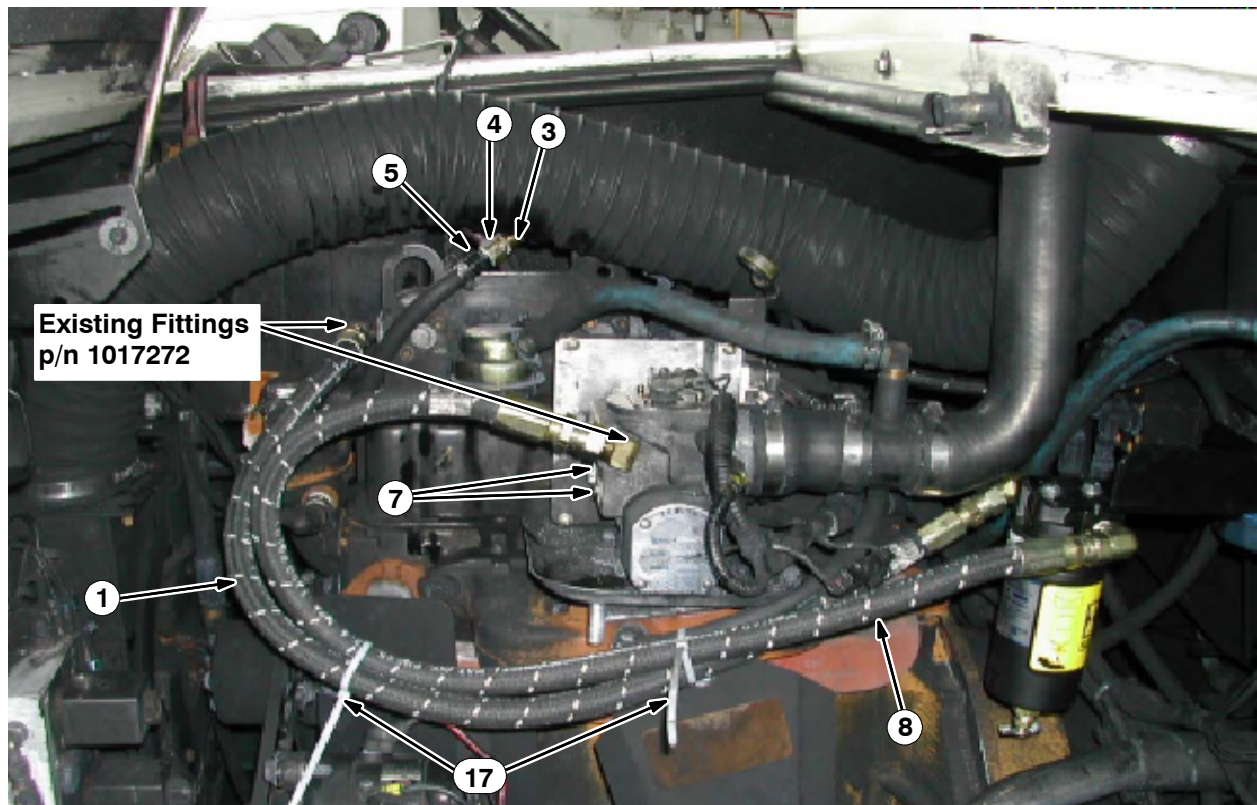


FIG. 6

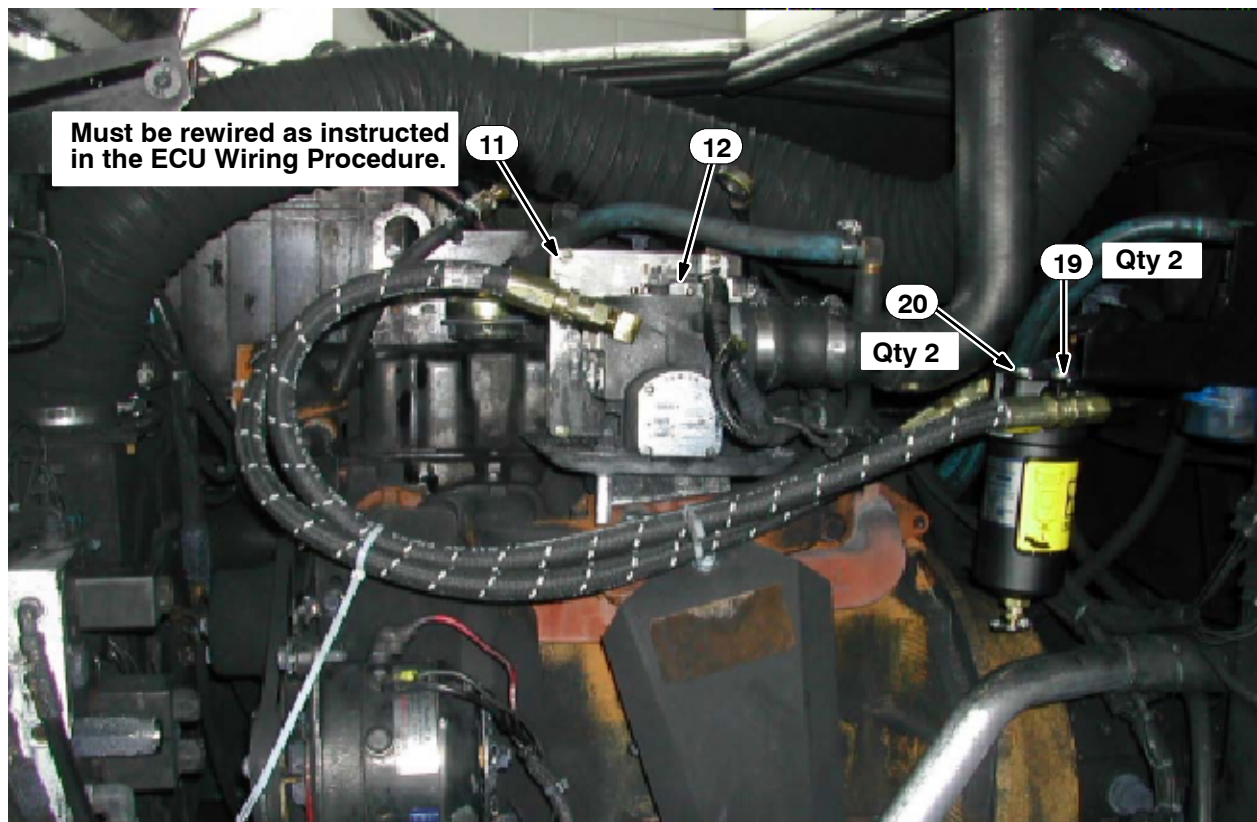


FIG. 7



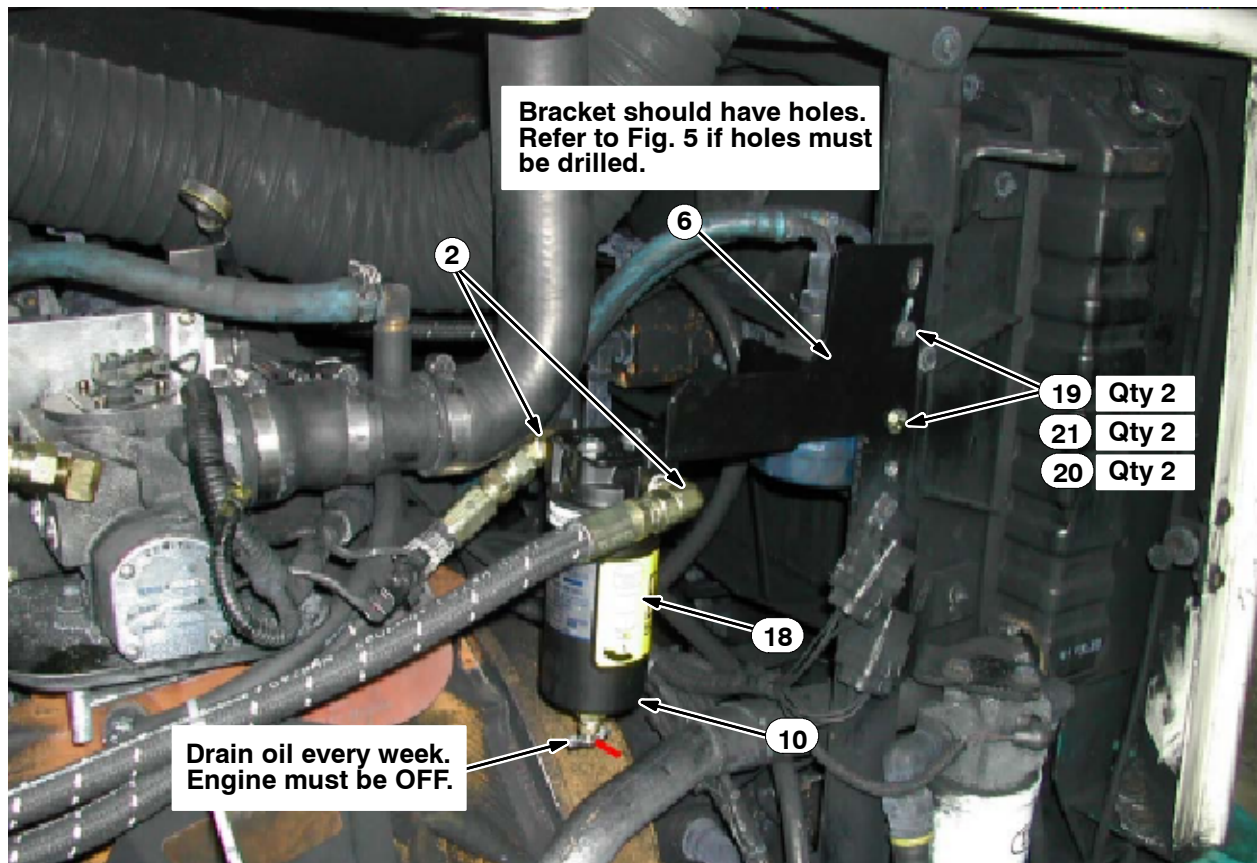


FIG. 8

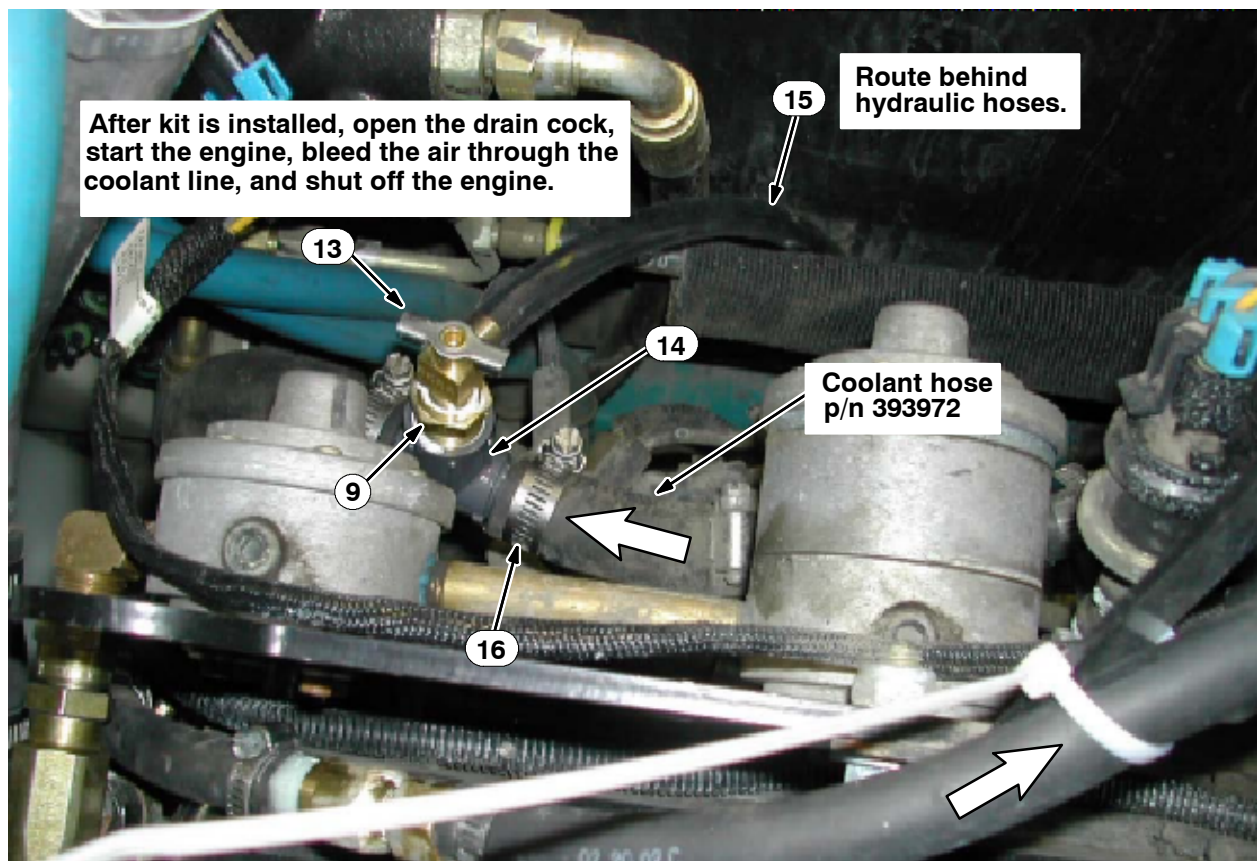


FIG. 9

**Parts List-(9000889)-Refer to Fig. 6 through Fig. 9 to identify parts**

<b>Ref.</b>	<b>Tennant Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	1017477	Hose, Lpg, MED08, JF08STR/JF08STR, 37.5"	1
2	1017272	Fitting, Hyd, E90, JM08/PM04	2
3	150516	Fitting, Brs, Str, PM04/BM06	1
4	1017239	Fitting, Brs, Str, PM04/PF04 Reducer	1
5	1017598	Fitting, Plstc, Str, BM06/M.69-16	1
6	1017080	Bracket, Filter, Lpg [6600]	1
7	02247	Fitting, Pipe, Plug, PM04 Hex Soc	2
8	1017476	Hose, Lpg, ME08, JF08STR/JF08STR, 35.0"	1
9	311828	Fitting, Brs, Str, PM08/PF04	1
10	1017500	Filter, Fuel, Lpg Coalescent	1
11	9000823	Kit, Replmt, Controller F/371892	1
12	1017270	Injector, Fuel, Lpg [3.0L GM] 8410/800	1
13	51305	Fitting, Draincock, .25NPT 90	1
14	64740	Fitting, Plstc, Tee, BM12/PF08/BM12	1
15	392258	Hose, PVC, Clr, 0.38ID 0.56OD 13.00L	1
16	11399	Clamp, Hose, Wormdrive, 0.81-1.50D	8
17	130041	Tie, Cable, Nyl, 11.5L .19W	6
18	1017662	Label, Instr, Filter Drain	1
19	19317	Screw, Hex, .25-20 X 0.75, 5	4
20	29570	Washer, Flat, 0.28B 1.00D .06, Stl	4
21	19312	Nut, Hex, Std, .25-20	2
22	41755	Tube, Heatshrink, .25ID 01.5L (Not Shown)	1

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