

PARTS & SERVICE NEWS

REF NO.	AA02223
DATE	September 18, 2002

SUBJECT: NEW, IMPROVED HEATER/AIR CONDITIONER ASSEMBLIES

PURPOSE: Introduce to the field new heater/air conditioner assemblies, as well as new parts lists.

APPLICATION: Komatsu Electric Drive Dump Trucks:
 730E: AFE47-A thru AA, A30079 thru A30214;
 830E: AFE32-AY, AZ, BE, BF, BH, BK, BN, BP, BQ, BU, BV, BX, BY, BZ, CC, CG, CK, CM, CN, CT, CY, DD, A30544 thru A30682;
 930E: AFE 48-A thru V, A30019, A30026 thru A30298
 Komatsu Mechanical Drive Dump Trucks:
 530M: CF32628AFP49-A, A30001 thru A30038;
 HD1500-5: A30039 & Up

FAILURE CODE: 8710Z9

DESCRIPTION: 730E/830E/930E - Heater/Air Conditioner Assembly (PC1066)
 530M/HD1500-5 - Heater/Air Conditioner Assembly (EK3000)

Two new heater/air conditioner assemblies have been developed, one for 730E/830E/930E electric drive trucks and the other for 530M/HD1500-5 mechanical drive trucks. Both assemblies come equipped with improved water capture and sealing benefits. Other improvements include the removal of the recirculation switch, flapper door, and actuator. The system now operates with fixed air recirculation. In addition, the air conditioner is not able to operate unless the blower fan is switched "ON". This function prevents wear and tear on A/C components that may occur during unintentional operation of the system. Refer to Parts and Service New, AA02104, *REWIRING HVAC BLOWER CONTROL SWITCH*.

Trucks equipped with older style HVAC systems may install the new assemblies to gain the added benefits. All vehicles to be updated with the new HVAC assemblies must be equipped with the drain hole in the floor of the cab, as well as the connecting drain hose. If the drain hole and hose have not yet been installed, the procedure is outlined within the installation procedure starting on page 8 of this document.

Refer to pages 2 thru 7 for illustrations and parts breakdowns of each new HVAC assembly. PC1066, Figure 55554, is used on 730E, 830E, and 930E trucks, and EK3000, Figure 50405, is used on HD1500-5 trucks.

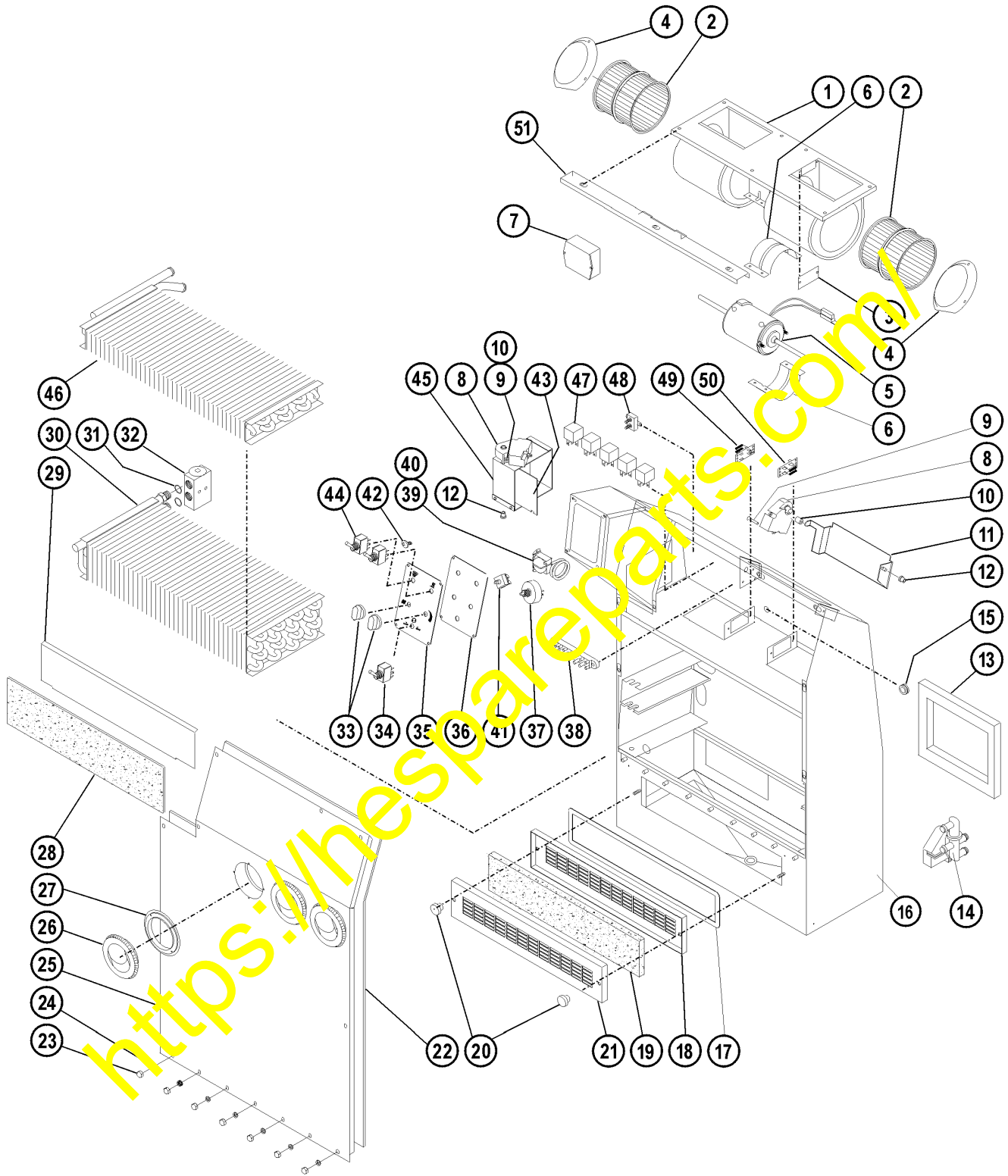


FIG. 55554
HEATER / AC ASSEMBLY

FIGURE 55554

HEATER/AIR CONDITIONER ASSEMBLY

PC1066

REF. NO.	PART NO.	QTY.	DESCRIPTION
0	VE8652	1	BLOWER ASSEMBLY
1	VE8658	1	HOUSING, BLOWER (1)
2	VE7951	2	WHEEL, BLOWER
3	VE8660	1	PLATE, COVER (1)
4	VE8657	2	VENTURI (1)
5	VE7950	1	MOTOR - 24V
6	VE8659	2	MOUNT, MOTOR (1)
7	BF5260	1	CONVERTER
8	BF5257	2	ACTUATOR, MOTOR
9	BF5266	6	SCREW - M4 X 20
10	BF5265	6	SPACER, NYLON
11	BF5254	1	DOOR, FLAPPER (DEFROST)
12	BF5267	2	BUSHING, SNAP - 3/16"
13	BF5643	1	FOAM, OPEN CELL (1)
14	BF4816	1	VALVE, HEATER
15	BF4170	1	GROMMET
16	XA2219	1	CASING
17	XA2227	1	GASKET - 1/16 X 1/2"
18	BF5252	1	HOLDER, INTERNAL FILTER
19	BF5467	1	FILTER, AIR
20	BF5268	2	KNOB
21	XA2242	1	HOLDER, EXTERNAL FILTER
22	XA2221	1	INSULATION, FOAM
23	XA2226	7	NUT, CAP
24	XA2222	7	WASHER, FLAT - M5
25	XA2220	1	COVER
26	BF2721	2	LOUVER
27	PB8320	2	ADAPTER, LOUVER
28	XA2231	1	FOAM
29	XA2224	1	PLATE, COIL
30	VE8650	1	COIL, EVAPORATOR
31	BF2733	2	O-RING - # 8
32	BF2712	1	VALVE, BLOCK
33	BF4218	2	KNOB
34	BF2713	1	SWITCH, TOGGLE (3 POSITION)
35	XA2239	1	OVERLAY
36	XA2228	1	PLATE, CONTROL
37	BF4168	1	POTENTIOMETER
38	BF2722	1	BLOCK, JUNCTION
39	BF5256	1	THERMOSTAT
40	BF2734	1	HOSE, PVC - 1/4" OD
41	BF2723	1	SWITCH, BLOWER
42	BF2738	4	SCREW, PAN - M6 X 1
43	BF5645	1	DOOR, FLAPPER (DISCHARGE)
44	BF2728	2	SWITCH, TOGGLE (2 POSITION)
45	BF5642	1	BRACKET, FLAPPER DOOR
46	SM2516	1	COIL, HEATER
47	XA2064	5	RELAY -12V

FIGURE 55554**HEATER/AIR CONDITIONER ASSEMBLY****PC1066**

REF. NO.	PART NO.	QTY.	DESCRIPTION
48	BF2731	1	BREAKER, CIRCUIT
49	BF2725	1	RESISTOR - 12V
50	BF2726	1	RESISITOR - 24V
51	BF4166	1	RETAINER, BLOWER
NS			NOTE: NS = NOT SHOWN
NS	XA2230	1	HARNESS, WIRING
NS			NOTE: (1) NOT SERVICED SEPARATELY

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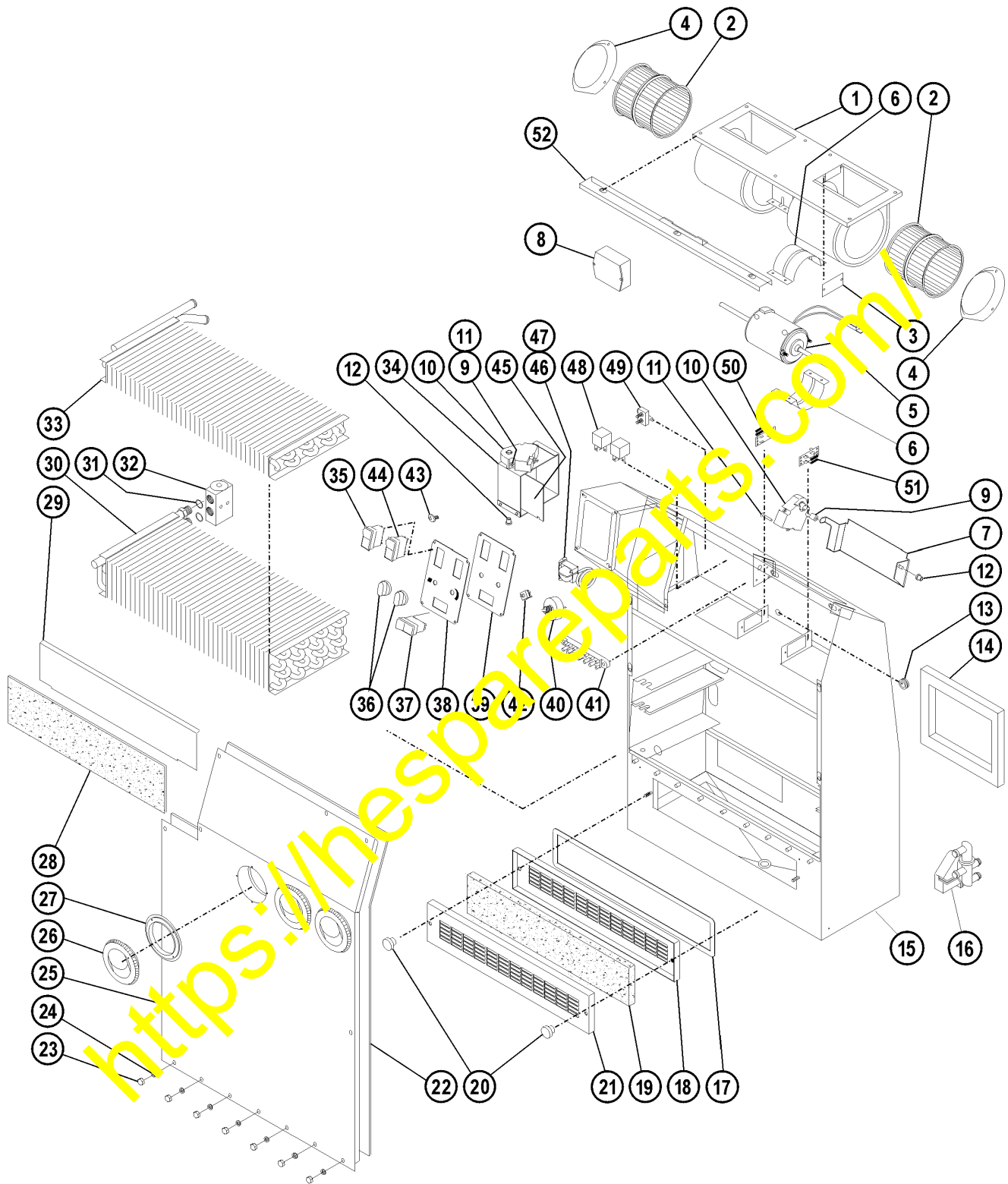


FIG. 50405
HEATER / AC ASSEMBLY

FIGURE 50405

HEATER/AIR CONDITIONER ASSEMBLY

EK3000

REF. NO.	PART NO.	QTY.	DESCRIPTION
0	VE8652	1	BLOWER ASSEMBLY
1	VE8658	1	HOUSING, BLOWER (1)
2	VE7951	2	WHEEL, BLOWER
3	VE8660	1	PLATE, COVER (1)
4	VE8657	2	VENTURI (1)
5	VE7950	1	MOTOR - 24V
6	VE8659	2	MOUNT, MOTOR (1)
7	BF5254	1	DOOR, FLAPPER (DEFROST)
8	BF5260	1	CONVERTER
9	BF5265	6	SPACER, NYLON
10	BF5257	2	ACTUATOR, MOTOR
11	BF5266	6	SCREW - M4 X 20
12	BF5267	2	BUSHING, SNAP - 3/16"
13	BF4170	1	GROMMET
14	BF5643	1	FOAM, OPEN CELL (1)
15	XA2219	1	CASING
16	BF4816	1	VALVE, HEATER
17	XA2227	1	GASKET - 1/16 X 1/2"
18	BF5252	1	HOLDER, INTERNAL FILTER
19	BF5467	1	FILTER, AIR
20	BF5268	2	KNOB
21	XA2242	1	HOLDER, EXTERNAL FILTER
22	XA2221	1	INSULATION, FOAM
23	XA2226	7	NUT, CAP
24	XA2222	7	WASHER, FLAT - M5
25	XA2220	1	COVER
26	BF2721	2	LOUVER
27	PB8320	2	ADAPTER, LOUVER
28	XA2231	1	FOAM
29	XA2224	1	PLATE, COIL
30	VE8650	1	COIL, EVAPORATOR
31	BF2733	2	O-RING - # 8
32	BF2712	1	VALVE, BLOCK
33	BM2116	1	COIL, HEATER
34	BF5642	1	BRACKET, FLAPPER DOOR
35	BF5251	1	SWITCH, ROCKER (DEFROST)
36	BF4218	2	KNOB
37	BF5264	1	SWITCH, ROCKER (A/C)
38	XA2225	1	OVERLAY
39	XA2223	1	PLATE, CONTROL
40	BF4168	1	POTENTIOMETER
41	BF2722	1	BLOCK, JUNCTION
42	BF2723	1	SWITCH, BLOWER
43	BF2738	4	SCREW, PAN - M6 X 1
44	BF5263	1	SWITCH, ROCKER (VENTILATION)
45	BF5645	1	DOOR, FLAPPER (DISCHARGE)
46	BF2734	1	HOSE, PVC - 1/4"
47	BF5256	1	THERMOSTAT

FIGURE 50405**HEATER/AIR CONDITIONER ASSEMBLY****EK3000**

REF. NO.	PART NO.	QTY.	DESCRIPTION
48	XA2064	2	RELAY - 12V
49	BF2731	1	BREAKER, CIRCUIT
50	BF2725	1	RESISTOR - 12V
51	BF2726	1	RESISTOR - 24V
52	BF4166	1	RETAINER, BLOWER
NS			NOTE: NS = NOT SHOWN
NS	XA2230	1	HARNES, WIRING
NS			NOTE: (1) NOT SERVICED SEPARATELY

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INSTALLATION PROCEDURE

1. Verify the heater and A/C is working properly before removal from the cab.
2. Shut off the heater supply and return valves on the engine.
3. Recover the refrigerant from the A/C system.
4. Remove the existing drain pipe nipple from the underside of the cab, if equipped.
5. Remove the front access panel from the front of the cab.
6. Using the access cover opening, remove all heater hose connections, A/C hoses, and the expansion valve block from the heater-A/C assembly.
7. Remove the three bolts securing the heater-A/C unit to the firewall.
8. From inside the cab, remove the floor mat or roll back to allow the three bolts holding the heater-A/C unit to the cab floor to be removed.
9. Disconnect all wiring and remove the heater-A/C unit from the cab.
10. If the truck is already equipped with a condensation drain, proceed to step 11. If it is necessary to install the drain, locate the drain hole location by referencing Figure 1. The cab floor requires holes in both the top and bottom plates. Use care when locating and drilling holes as errors or misalignment will cause significant difficulty in installing the drain pipe nipple.

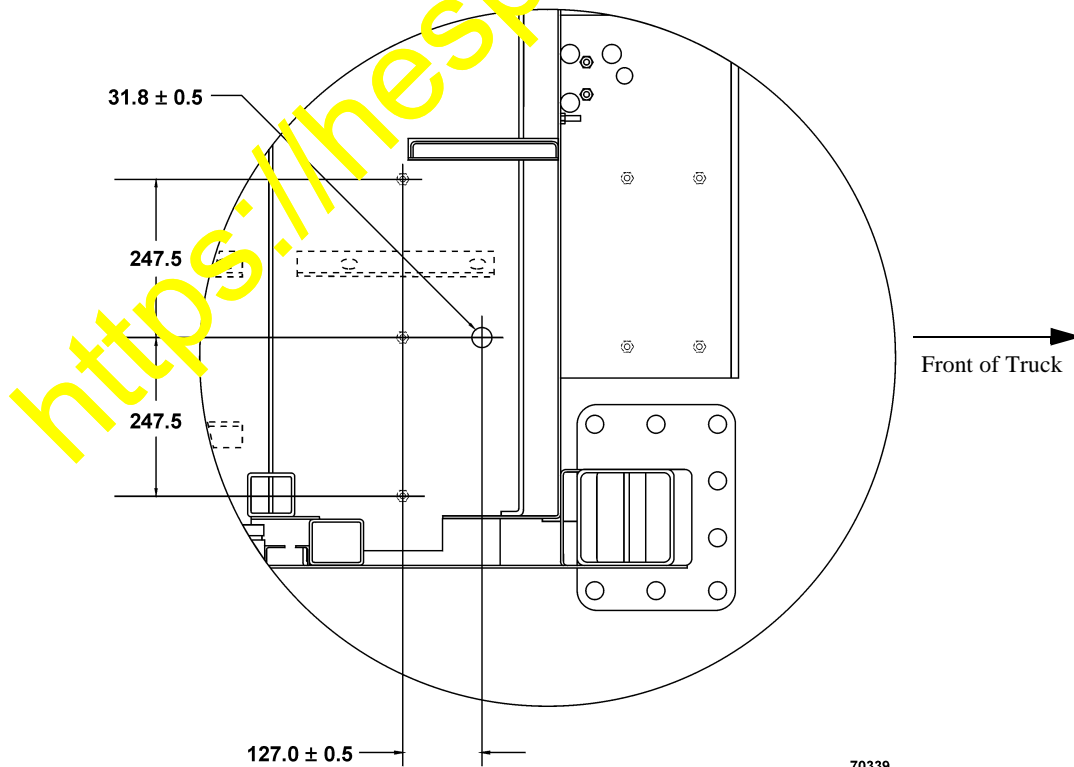


FIGURE 1. DRAIN HOLE LOCATION

11. Install the new heater-A/C assembly into the truck.

NOTE: The three previously used floor screws are no longer necessary for the new HVAC assemblies.

12. After the assembly is secured in position, verify the drain hole is lined up for the drain pipe to be installed.
13. Clean the threads on the long nipple, apply thread sealer, and install the nipple into the HVAC drain pan.

CAUTION

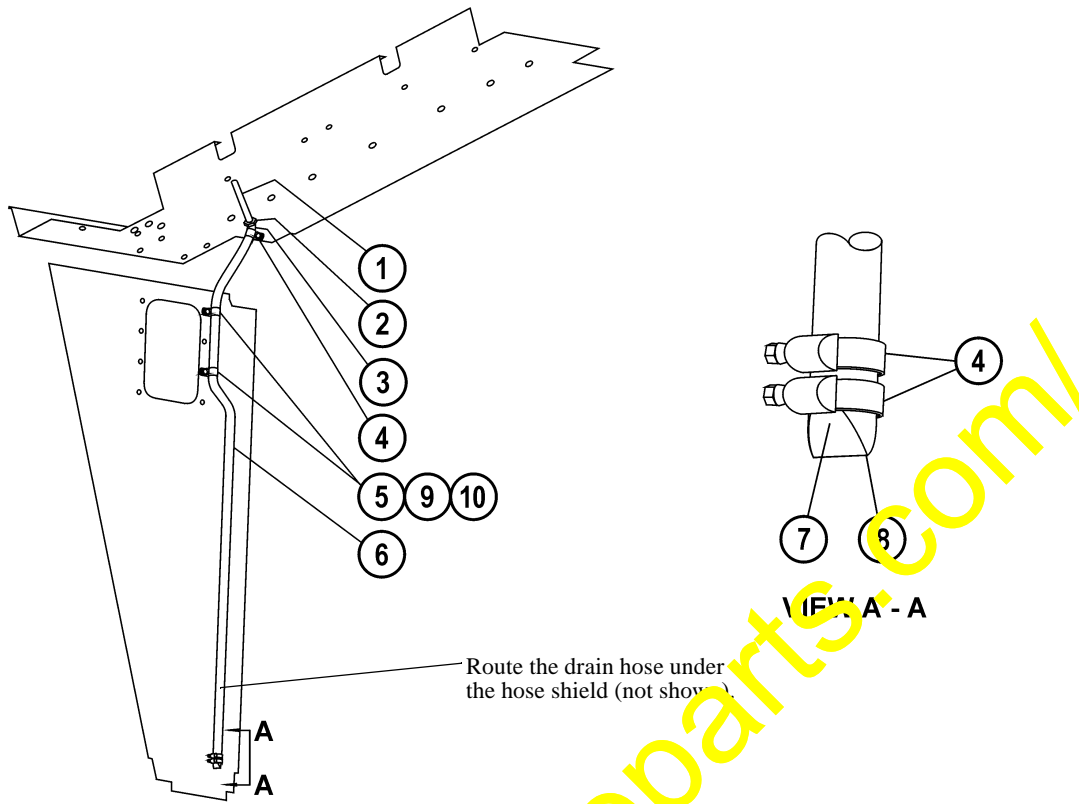
When installing the drain pipe nipple thru the floor plates, hand tighten the nipple onto the drain port of the heater-A/C assembly. Over-tightening of the pipe nipple may result in damage to the drip pan.

14. Attach the drain hose and associated parts. Route the drain hose to the appropriate location. Refer to Figure 2 for 530M/HD1500-5 trucks, and Figures 3 & 4 for 730E/830E/930E trucks. The bottom of the drain hose must be positioned so that mud is not able to accumulate on the valve opening.
15. Install heater hoses.
16. Install A/C lines.

CAUTION

The receiver-drier must be replaced each time the A/C system has been opened. Ensure that oil has been added to the system to account for lost oil in replaced components. One ounce of oil must be added for replacement of the evaporator, and two ounces must be added for the replacement of the receiver-drier.

17. Refill the cooling system after opening the heater valves. Ensure any trapped air is allowed to vent.
18. Recharge the A/C system.
19. Verify the heater and A/C systems operate properly.



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FIGURE 2. 530M DRAIN INSTALLATION

TABLE 1. 530M DRAIN INSTALLATION PARTS LIST			
Figure Callout	Part Number	Description	Quantity
1	TR1993	Nipple, Long	1
2	SL644	Grommet	1
3	15016	Elbow	1
4	CD8419	Clamp	3
5	TR9441	Clamp, Vinyl	2
6	EJ1190	Hose, Heater	1
7	F4820	Nipple, Long	1
8	PC0865	Valve, Vac	1
9	MM0036	Capscrew	2
10	0164331032	Washer	2

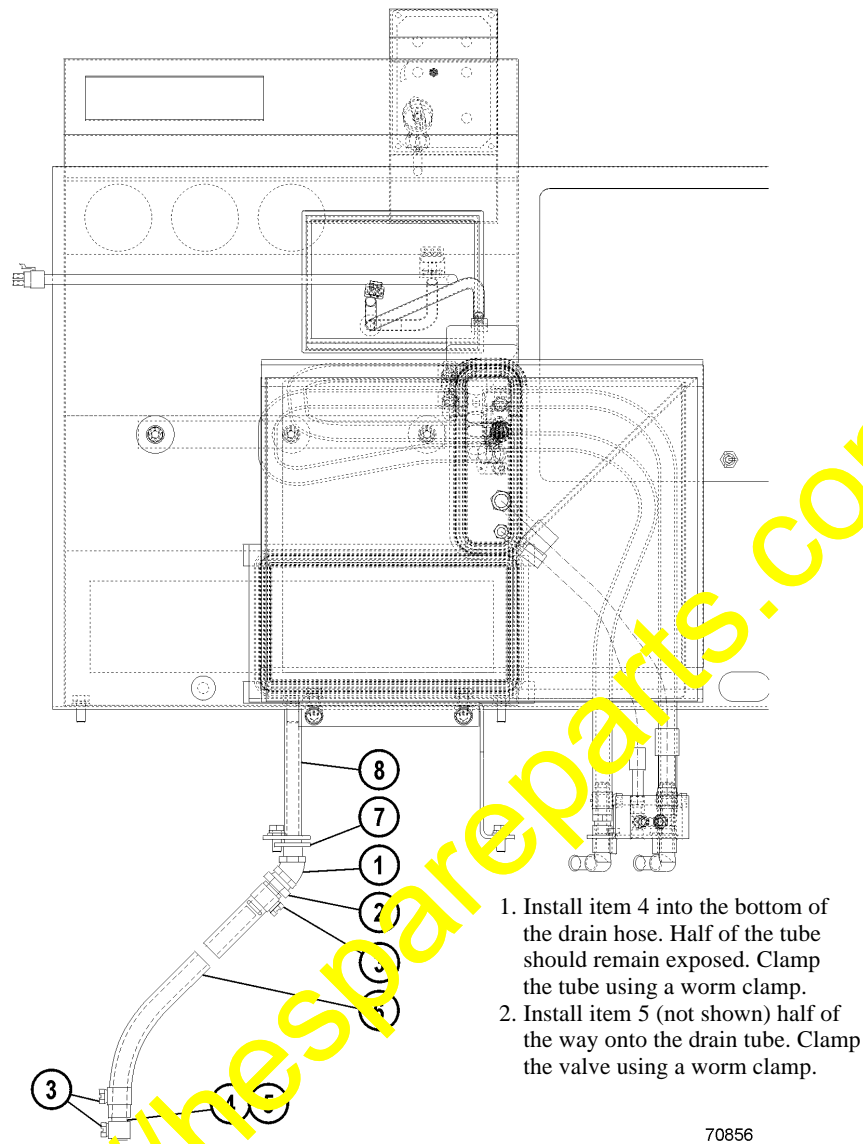


FIGURE 3. 730E/830E/930E DRAIN HOSE INSTALLATION

TABLE 1. 730E/830E/930E DRAIN INSTALLATION PARTS LIST

Figure Callout	Part Number	Description	Quantity
Figure 3	R05011	Fitting, Pipe	1
2, Figure 3	KC3835	Fitting, Pipe	1
3, Figure 3	HC0908	Clamp, Worm Drive	3
4, Figure 3	SM6023	Tube, Drain	1
5, Figure 3	SM6022	Valve, Kazoo	1
6, Figure 3	HK0425	Hose	1
7, Figure 3	SL6447	Grommet	1
8, Figure 3	TG1993	Nipple, Long	1
9, Figure 4	VN9908	Clamp, Vinyl	10

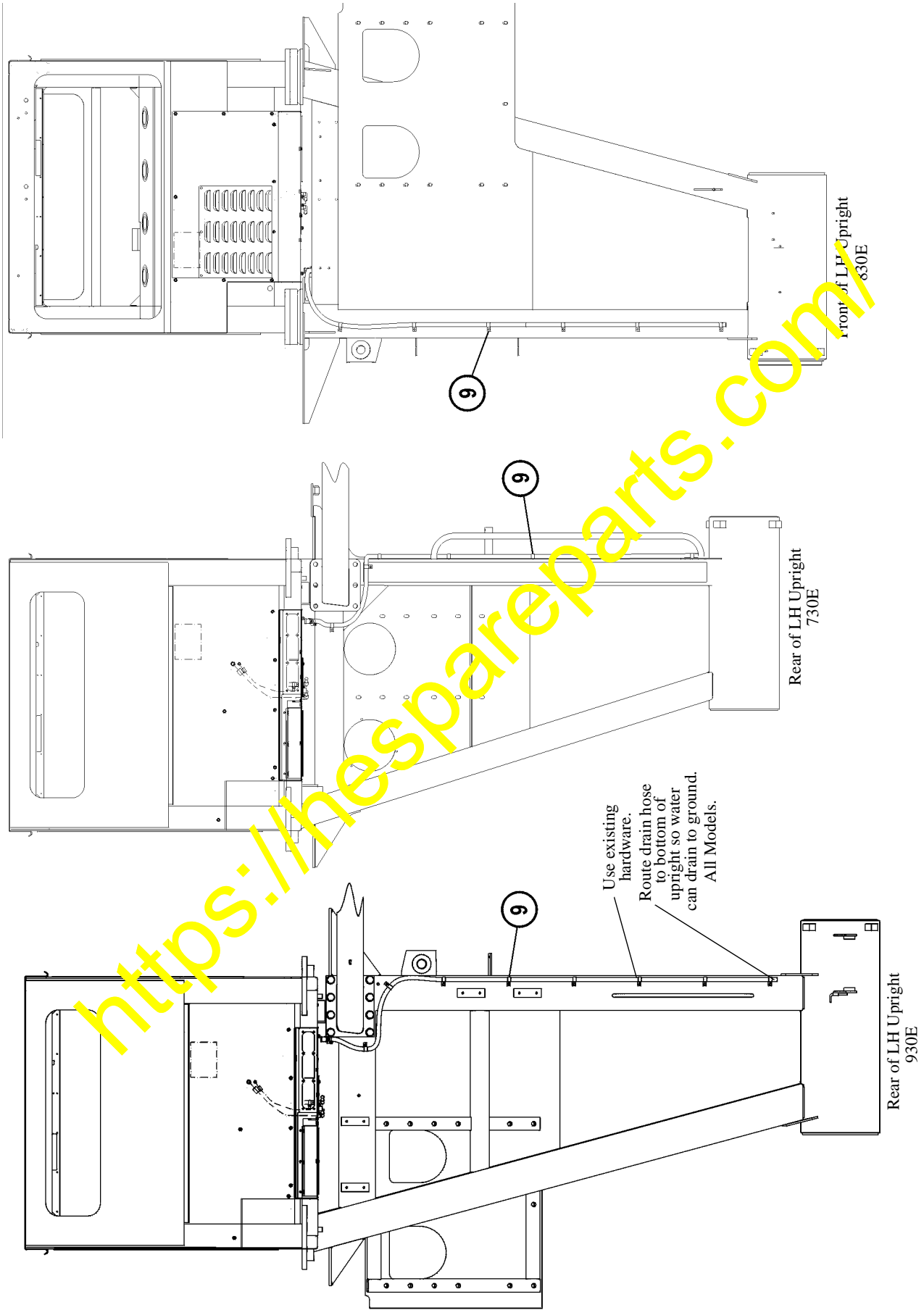


FIGURE 4. 730E/830E/930E DRAIN HOSE ROUTING