WARNING: NEVER FILL SYSTEM WITH ONLY WATER!

Water Heat Kit Installation Procedure INTEGRA 30S

1. Verify that all pieces on Heat Kit check list are in the box.
2. Turn off engine and allow to cool. Drain cooling system of all fluid.
3. Remove drain pan and fan blade from evaporator casing.
4. Loosen two bolts which hold the evaporator coil to the deflector plate.
5. Remove two small bolts which fasten the injector to the deflector plate (if injector is present).
6. Slide in the water coil bracket (ITEM 2) between the evaporator coil and deflector positioning the slot on the lower evaporator bolt. See illustration.
7. Align the water coil bracket holes with the injector holes and fasten with two bolts (ITEMS 22,23,24).
8. Cut out template drawing (ITEM 17) from sheet 3 and position it on the outside of the evaporator casing and drill four holes as described on the template.
9. Place water coil (ITEM 1) on top of water coil bracket and secure it with supplied bolts (ITEMS 13,14) using the two holes in the casing first. Fasten the water coil to the bracket using supplied bolts.
10. Cut a 2 1/2" length of water hose (ITEMS 18,19) and trim off excess neoprene.
11. Insert the two (2) brass barbed fittings (ITEM 4) into the water solenoid valve (ITEM 3) and tighten with two wrenches.
12. Push the water valve assembly onto the short water hose. Verify the coolant flow direction. Tighten hose connection using two stainless steel hose clamps supplied (ITEM 7).
13. Fasten the water valve assembly to the casing with the two 10-24 UNC screws provided (ITEMS 10,11,12).
14. Remove the two knock outs from deflector plate. Install two diaphragm grommets Ø45mm in the resulting holes.
15. Pierce the grommets with a sharp object such as screwdriver or awl. Force the water hose through the grommet closest to the front of the truck and connect it to the water valve assembly using a stainless steel hose clamp.
16. Fasten water hose to the casing with hose clamps (ITEMS 8,9) from sharp edges and engine exhaust system.
17. Drill a small hole in the truck box to pass the water solenoid valve wiring (ITEM 16) from the evaporator section to the condenser section. (OMIT THIS STEP IF INSTALLING AN ELECTRIC HEATING KIT).
18. Complete electrical connections (ITEM 21), see electrical diagram on sheet 4.
19. Using nylon cable ties (ITEM 18), gather and secure all loose wiring.
20. Attach loose heater hose to truck chassis with cushioned hose clips (ITEM 8). Keep heater hose away from sharp edges and engine exhaust system.
21. Drill a small hole in the truck box to pass the water solenoid valve wiring (ITEM 16) from the evaporator to the condenser section. (OMIT THIS STEP IF INSTALLING AN ELECTRIC HEATING KIT).
22. Complete electrical connections (ITEM 21), see electrical diagram on sheet 4.
23. Using nylon cable ties (ITEM 18), gather and secure all loose wiring.
24. Attach loose heater hose to truck chassis with cushioned hose clips (ITEM 8). Keep heater hose away from sharp edges and engine exhaust system.
25. Drill a small hole in the truck box to pass the water solenoid valve wiring (ITEM 16) from the evaporator to the condenser section. (OMIT THIS STEP IF INSTALLING AN ELECTRIC HEATING KIT).
27. Using nylon cable ties (ITEM 18), gather and secure all loose wiring.
28. Attach loose heater hose to truck chassis with cushioned hose clips (ITEM 8). Keep heater hose away from sharp edges and engine exhaust system.
29. Drill a small hole in the truck box to pass the water solenoid valve wiring (ITEM 16) from the evaporator to the condenser section. (OMIT THIS STEP IF INSTALLING AN ELECTRIC HEATING KIT).
30. Complete electrical connections (ITEM 21), see electrical diagram on sheet 4.
31. Using nylon cable ties (ITEM 18), gather and secure all loose wiring.
32. Attach loose heater hose to truck chassis with cushioned hose clips (ITEM 8). Keep heater hose away from sharp edges and engine exhaust system.
33. Drill a small hole in the truck box to pass the water solenoid valve wiring (ITEM 16) from the evaporator to the condenser section. (OMIT THIS STEP IF INSTALLING AN ELECTRIC HEATING KIT).
34. Complete electrical connections (ITEM 21), see electrical diagram on sheet 4.
1. Disconnect the unit from all power sources.
2. Remove drain pan and fan blade from evaporator section.
3. If a water heat kit is previously installed on this unit, disconnect wires leading to water solenoid valve and water pump (optional), remove all wires connecting the water heat relay to the condenser electric box. These components come with the new electric heat assembly.
4. Using protective gloves, secure the heater element (ITEM 1) to the inside of the evaporator coil using the fixation hooks (ITEM 2) as shown. Long nose pliers are recommended for an easy installation.
5. Mount the electric box (ITEM 3) on the front wall close to the evaporator.
6. Pass the heater element wires through the middle grommet of the deflector plate inside the evaporator.
7. Remove condenser cab, then pass the heating wiring harness through the truck wall.
8. Remove electrical box cover from the condenser section.
9. Finish all electrical connections using diagrams on sheet 4
   a) Remove wire MCa1 from terminal A1 on stby motor contactor.
   b) Connect wire 41 to wire MCa1.
   c) Connect wire 42 to terminal A1 on stby motor contactor.
   d) Connect wire L1 to motor contactor input terminal 1.
   e) Connect wire L2 to motor contactor input terminal 3.
   f) Connect green & yellow ground wire to the condenser frame next to electrical box behind standby compressor.
   g) Connect wires 64 & 65 to heater element.
   h) Connect wire 3 to PC12-3 on PCB.
   i) Connect wire 10 to PC12-6 on PCB.
   j) Connect wire 15 to standby terminal on PCB.
   k) Connect wire 4 to battery terminal on PCB.
   l) Connect wires 2& GND to water solenoid.
   m) Connect wires P & GND to water pump (optional).
10. Close electric box, gather and secure all loose wiring with cable ties (ITEM 4).
11. Return condenser cab to the frame.
12. Return fan blade and drain pan to the evaporator.
13. Connect power sources and test unit in heating mode.
14. Patch any holes created during installation with an exterior sealant (not included).
2x Ø9 [ 3/8 ]
WATER COIL MOUNTING HOLES

2x Ø6 [ 1/4 ]
WATER VALVE MOUNTING HOLES

89 [ 3 1/2 ]

212 [ 8 5/8 ]

309 [ 12 3/8 ]

347 [ 13 5/8 ]

327 [ 12 7/8 ]
NOTE:
BEFORE INSTALLING AN ELECTRIC HEATING SYSTEM REMOVE
THE EXISTING WATER HEAT WIRING FIRST IF ALREADY PRESENT.

WATER & ELECTRIC HEAT