



Installation Instructions

DGK15F\FU Block Heater



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Kit Contents:

- (1) 120v-Block Heater



Tools & Materials Required:

- Punch
- Hammer
- 10 mm socket - 3/8 drive
- 17 mm socket - 3/8 drive
- 3/8 impact driver with 3" extension
- 10 mm combination ratchet wrench
- 13 mm combination ratchet wrench
- Needle Nose Pliers
- Clear silicone sealant
- 50/50 Mix Green Coolant
- Funnel
- Absorbent pads
- Electrical tape

- Black Cable Ties



INSTALLATION INSTRUCTIONS

- Step 1: Verify Kit Contents
- Step 2: Disconnect NEGATIVE battery cable: Using a 13 mm ratchet wrench, remove bolt and washer securing cables to the negative side of the battery. Position cables out of the way, then reinstall bolt and washer to battery terminal. (Figure 1)



Figure 1

- Step 3: Using a 10 mm socket and impact driver, remove all eight (14) bolts (four (4) on right and left sides of Top Enclosure, three (3) on the Rear Enclosure Frame, two (2) bolts in Control Cabinet above controls. and one (1) beneath the water inlet cover. (Figure 2)



Figure 2

- Step 4: Using the 17 mm socket and impact driver, remove two (2) bolt located on the top of the enclosure near each of the tie-down locations. (Figure 3)



Figure 3

- Step 5: Open the right side door, then using a 13mm ratchet wrench, remove two (2) bolts securing the air cleaner housing to the underside of the Top Enclosure. (Figure 4)



Figure 4

- Step 6: Remove "E clips" securing the hinge pins on the right side door. Remove hinge pins and carefully remove the door. Store right side door in a safe secure manner.
- Step 7: Open left door, then remove two (2) bolts securing left panel using a 10mm socket & driver.
- Step 9: Open fuel lid, remove fuel cap, strainer and fuel tank bushing (seal). (Figure 5) Set aside in a safe secure manner.



Figure 5

- Step 10: Carefully lift control panel end of Top Enclosure and support\prop up the end. (Figure 6)



Figure 6

- Step 11: Pinch clamp securing spill containment hose to underside of Top Enclosure using needle nose pliers - sliding clamp away. Carefully remove hose. (Figure 7)



Figure 7

- Step 12: Remove Top Enclosure and place on a sturdy flat work surface.

- Step 13: Remove "Blue" wire from the fuel tank sending unit. Using a #2 Phillips, remove the "Green" ground wire from the fuel tank sending unit. (Figure 8)

- Step 14: Pinch clamps securing fuel tank vent hoses to fuel tank; slide clamps along length of vent hoses approximately 1-1/2 inches, then remove fuel tank vent hoses from fuel tank. (Figure 8)

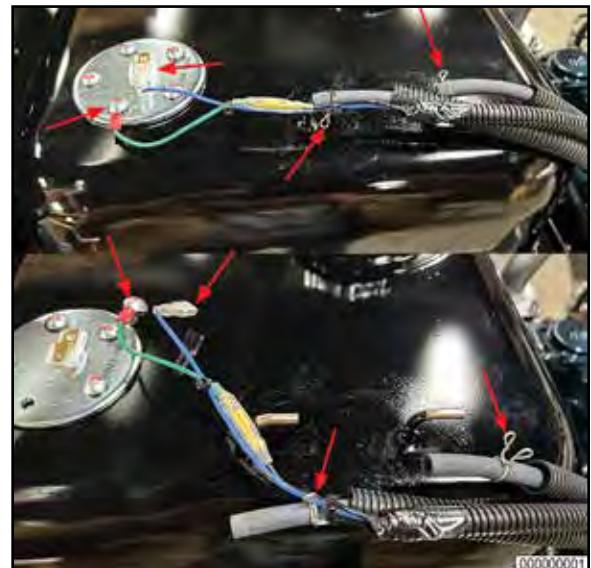


Figure 8

- Step 15: Place an absorbent pad below the fuel tank hoses; using a pair pliers, pinch hose clamp securing fuel supply hose (larger hose) to fuel tank and slide clamp down away from tank. Remove hose from tank. Repeat procedure for return fuel hose clamp and hose. (Figure 9)



Figure 9

- **Step 16:** Using a 10 mm socket and driver, remove four (4) bolts securing fuel tank to fuel tank spill containment. (Figure 10) Remove fuel tank and store in a safe secure manner.



Figure 10

- **Step 17:** Using side cutters, cut three (3) cable ties securing wire harness to left side of fuel tank spill containment bracket. (Figure 11) Discard cable ties.



Figure 11

- **Step 18:** Using a 10 mm socket and driver, remove eight (8) bolts securing fuel tank spill containment to Enclosure Frame Mounting Brackets and Front Enclosure. (Figure 12)
- **Step 19:** Remove fuel tank spill containment and store in a safe secure manner.

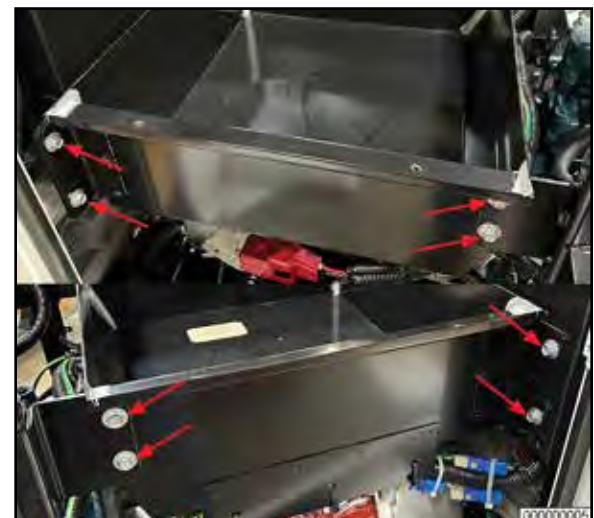


Figure 12

- Step 20: Prepare rear of engine cylinder head; carefully lift wire harness up for better access to freeze plug. (Figure 13)
- Step 21: Place an absorbent pad over the alternator to absorb spilled coolant.



Figure 13

- Step 22: Prepare Block Heater for installation; apply a light coating of clear silicon RTV to the mating surface. (Figure 14).



Figure 14

- Step 23: Using a punch and hammer, strike the left side of the freeze plug, forcing the freeze plug to pivot in place. Note: Some coolant will escape during the process - this is normal. Once the freeze plug has loosened (pivoted), use needle nose pliers to remove the freeze plug (Figure 15)

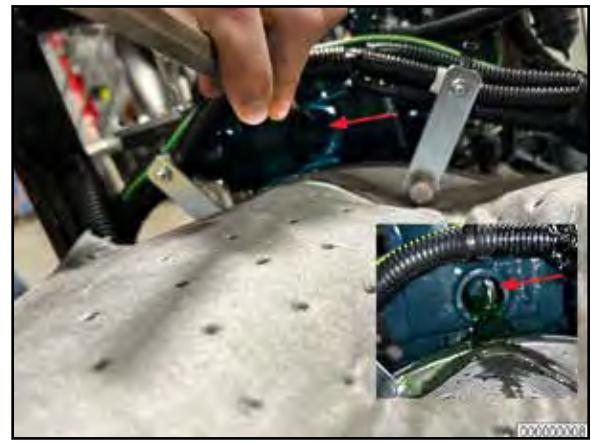


Figure 15

- **Step 24: Insert block heater into cylinder head freeze plug hole; using supplied tool and a hammer, tap on blocker heater till it is fully seated into the cylinder head. (Figure 16)**



Figure 16

- **Step 25: Attach block heater power cord to block heater and secure power cord in place with threaded retainer ring. Finger tighten retainer ring. (Figure 17)**
- **Step 25: Remove and discard absorbent pad.**



Figure 17

- **Step 26: Route power cord along existing wire harness down behind the battery towards the Shore Power connectors. (Figure 18).**
- **Step 27: Remove all excess cable tie materials (tails).**
- **Step 28: Remove and discard absorbent pad covering alternator.**



Figure 18

- **Step 29:** Position the fuel tank spill containment roughly where it was originally located. Carefully route the drain hose down through the corrugated tube, that directs the hose below to the spill containment guard. (Figure 19)



Figure 19

- **Step 30:** Position fuel tank spill containment back to it's original location and secure in place with eight (8) previously removed bolts using a 10 mm socket and impact driver. (Figure 20)



Figure 20

- **Step 31:** Reattach wire harness to lower bracket of spill containment using three (3) cable ties. (Figure 21)



Figure 21

- Step 32: Reinstall fuel tank and secure in place with four (4) previously removed bolts using a 10 mm socket and impact driver. (Figure 22)



Figure 22

- Step 33: Reattach fuel tank vent hoses to fuel tank and secure in place with pinch clamps (Figure 23)

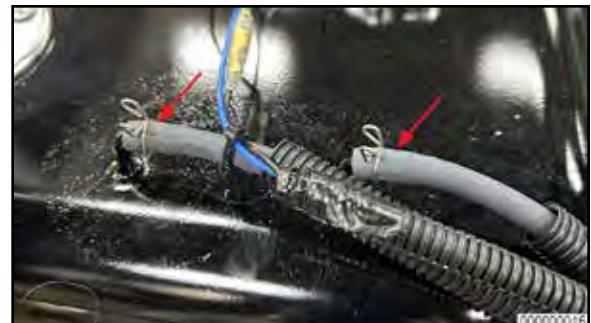


Figure 23

- Step 34: Reattach fuel level sending unit wire (Blue) and ground wire (Green) with #2 Phillips screwdriver. (Figure 24)



Figure 24

- Step 35: Reattach Fuel Supply and Return Hoses to Fuel Tank, securing each with hose clamps (Figure 25).



Figure 25

- **Step 36: Reposition Air Inlet Hose along side Fuel Tank as shown. (Figure 26)**



Figure 26

- **Step 37: Remove radiator cap and top off radiator with a 50/50 mix of coolant to replace coolant lost during block heater installation. Fill radiator till coolant level is just above the tubes (Figure 27), then reinstall radiator cap.**



Figure 26

- **Step 38: Connect the power cord (from block heater) to one of the receptacles of the shore power whip, making sure the prongs are fully inserted. Secure the connection by wrapping both ends with electrical tape to prevent accidental disconnection. Then wrap the unused receptical with electrical tape to prevent dust, dirt or moisture intrusion. (Figure 27)**



Figure 27

- Step 39: Secure power cord and other receptical together with a cable tie. Secure both to the frame bed with a cable tie as shown (Figure 28)



Figure 28

- Step 40: Reinstall Top Enclosure: Two persons (2) should carefully place the top enclosure back into place, propping up the control end as previously done in step 10. (Figure 29)



Figure 29

- Step 41: Reinstall the spill containment hose to the underside of the Top Enclosure, securing in place using needle nose pliers and hose clamp. (Figure 30)

- Step 42: Remove the wood block propping up the control end of the Top Enclosure.

Note: Minor adjustment to the placement may be necessary to align the assembly holes.



Figure 30

- Step 43 Using a 17 mm socket and impact driver, reinstall two (2) bolt located on the top of the Top Enclosure near each of the tie-down locations. (Figure 31)



Figure 31

- **Step 44:** Using a 10 mm socket and impact driver, reinstall all eight (14) bolts (four (4) on right and left sides of Top Enclosure, three (3) on the Rear Enclosure Frame, two (2) bolts in Control Cabinet above controls. and one (1) beneath the water inlet cover. (Figure 32).



Figure 32

- **Step 45:** Using a 13 mm ratchet wrench, reinstall two (2) bolts securing the air cleaner housing to the underside of the Top Enclosure. (Figure 33)



Figure 33

- **Step 46:** Open fuel lid, reinstall fuel tank bushing (seal), strainer and cap. (Figure 34)



Figure 34

- Step 47: Reinstall two (2) bolts securing left panel using a 10 mm socket & driver.
- Step 48: Reinstall right side door and to secure by reinserting hinge pins (outside going in). Then secure hinge pins in place with previously removed "E-clips".
- Step 49: Reconnect NEGATIVE battery cable: Remove the bolt from the negative battery terminal. Reposition the negative battery cable and any associated wires to the negative battery terminal and secure in place using the removed bolt and a 13 mm ratchet wrench. **DO NOT OVERTIGHTEN - Snug bolt.** (Figure 35)

The Block Heater Installation is now complete



Figure 35

