



Heater Kit

Liquid-Cooled Workman® MD/HD Utility Vehicle

Model No. 07349—Serial No. 312000001 and Up

Model No. 07349—Serial No. 313000001 and Up

Model No. 07349—Serial No. 314000001 and Up

Form No. 3371-776 Rev C

Installation Instructions

For the HDX, HDX-D, and HDX Auto

Preparing the Machine

1. Raise the bed and insert the safety bar.
2. Remove the battery cover and disconnect the positive battery cable.
3. Drain the engine coolant according to the instructions in your *Workman Operator's Manual*.
4. Remove the hood according to the instructions in your *Workman Operator's Manual*.
5. Remove the shield covering the hydraulic lines under the front center of the vehicle (Figure 1).

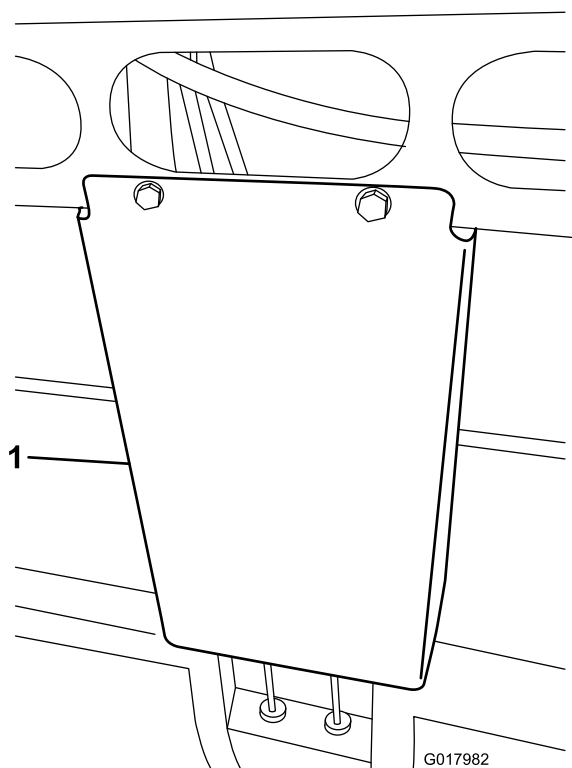


Figure 1

1. Hydraulic shield

Assembling the Heater

1. Loosely attach the elbow hose to the bottom fitting of the heater assembly with a hose clamp (Figure 2).

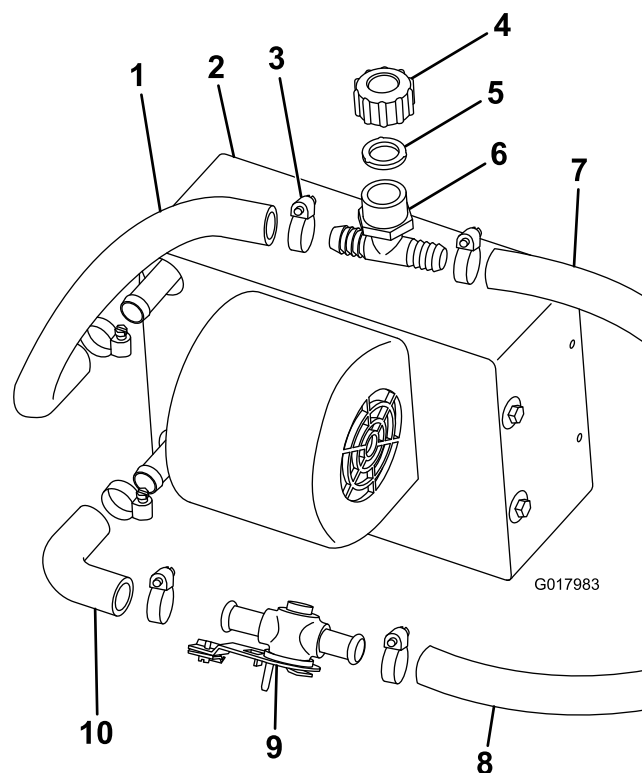


Figure 2

- | | |
|-----------------|-------------------|
| 1. 12 inch hose | 6. White fill tee |
| 2. Heater | 7. Short Hose |
| 3. Hose clamp | 8. Long hose |
| 4. Fill tee cap | 9. Heater valve |
| 5. Gasket | 10. Elbow hose |

2. Connect the heater valve to the elbow hose with a hose clamp (Figure 2).
3. Cut a 12 inch piece of 5/8 inch hose and attach it to the top fitting of the heater assembly with a hose clamp (Figure 2).
4. Connect the white fill tee, gasket, and cap to the upper heater hose with a hose clamp (Figure 2).



Installing the Heater and Heater Control

1. Attach the heater bracket to the heater using the screws supplied with the heater (Figure 3).

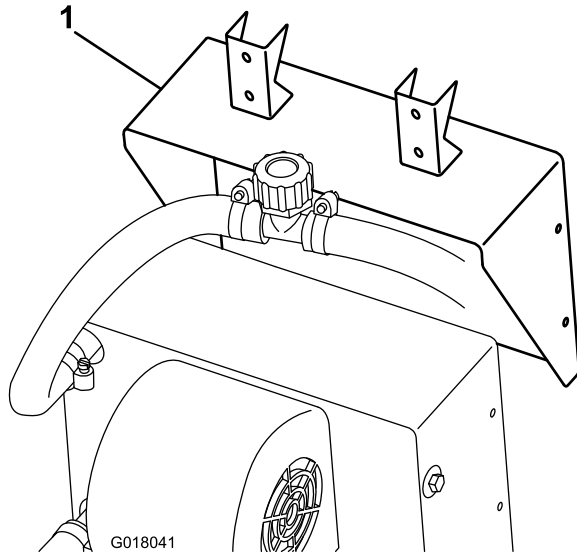


Figure 3

1. Heater bracket

2. Attach the heater and bracket assembly onto the front frame tube using the square U-bolts and flange nuts provided (Figure 4).

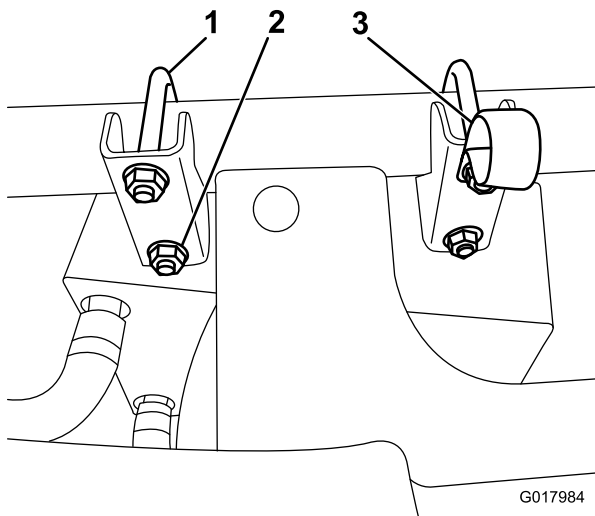


Figure 4

1. U-bolt
2. Flange nut
3. R-clamp

3. Attach the r-clamp under the top nut closest to the center of the vehicle (Figure 4).
4. Attach the heater control to the heater control mount using 4 sheet metal screws (Figure 5).

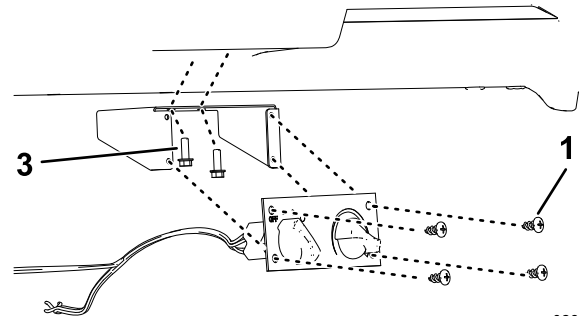
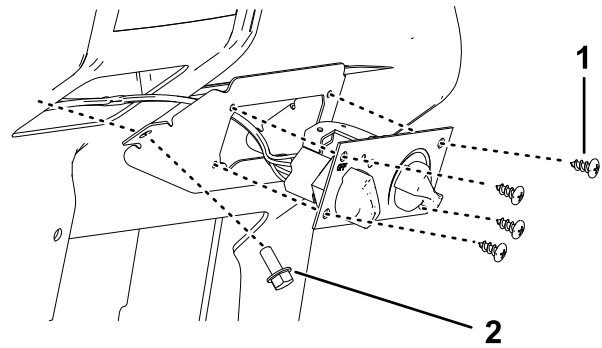


Figure 5

1. Screw (1/2 inch)
2. Bolt (5/16 inch)
3. Bolt (1/4 inch)

5. Connect the heater control cable and black wire harness connector to the heater control and the white wire harness connector to the heater (Figure 5).
6. Align the bracket with the cutout in the dash, mark the area where the holes need to be drilled, and drill the holes.
7. Secure using 4 Bolts (5/16 inch) in the front of the heater control mount and either 2 bolts (5/16 inch for the HD models) on the side of the mount or 2 bolts (1/4 inch for the MD models) on the inside top of the mount, depending on which model you have (Figure 5).
8. Route and connect the heater control cable to the heater valve (Figure 6).

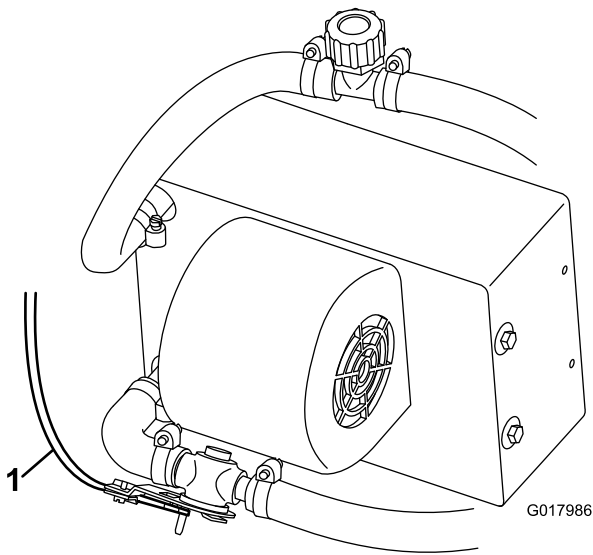


Figure 6

1. Heater control cable

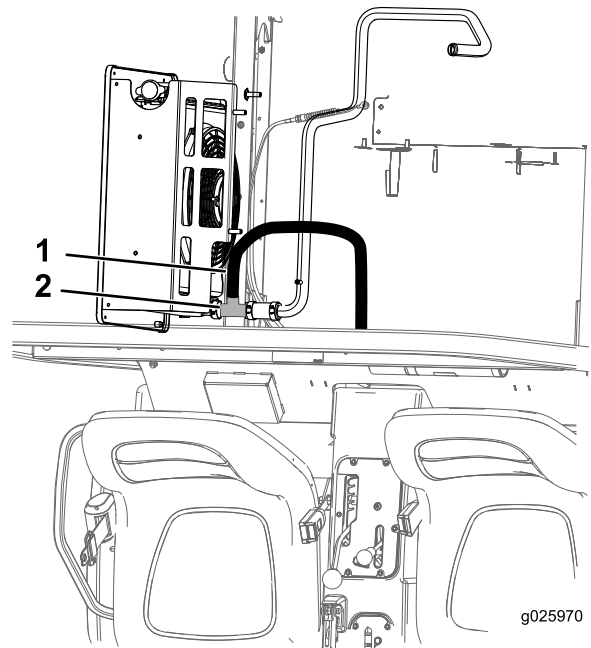


Figure 8

1. Short hose
2. Tee fitting

Installing the Hoses for the HDX Auto

1. Remove the temperature switch from the thermostat housing and install a tee fitting (Figure 7).

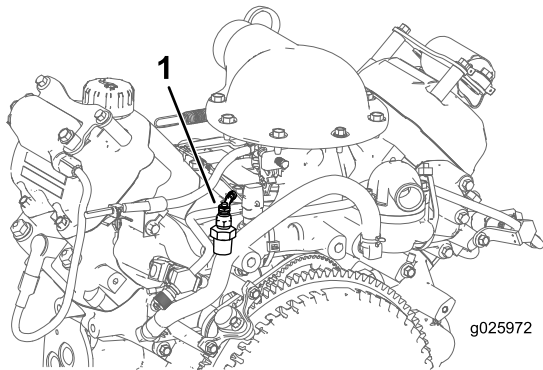


Figure 7

1. Temperature switch

2. Install the temperature switch and the 3/8 inch hose and 5/8 inch adapter fitting with worm clamps.
3. Cut the lower radiator hose and connect the tee fitting to each newly cut end of the lower radiator hose with the 2 wide hose clamps (Figure 8).

4. Cover the 5/8 inch hoses with split corrugated tubing.
5. Connect the long hose to the heater valve with a hose clamp, and route it under the unit, over the axel, and to the straight fitting (Figure 9).

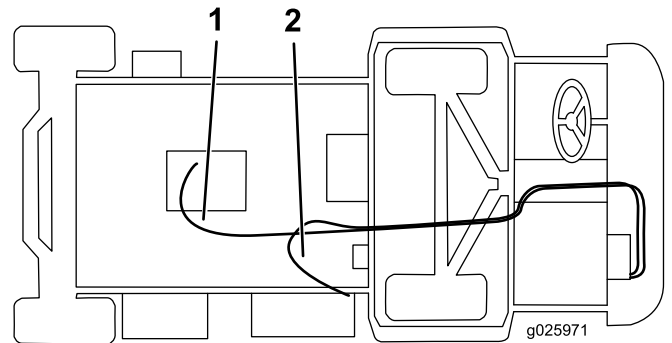


Figure 9

1. Long hose
2. Short hose
6. Connect the shorter hose to the white fill tee with a hose clamp, route it through the r-clamp on the heater bracket, and connect it to the tee fitting in the lower radiator hose with a hose clamp (Figure 9).

Installing the Hoses for the HDX and HDX-D

1. Remove the plug or temperature switch depending on the type of engine in the machine (Figure 10).
 - For gas engines: Remove the plug in the thermostat housing and install the 5/8 inch straight fitting with a worm clamp (Figure 10).

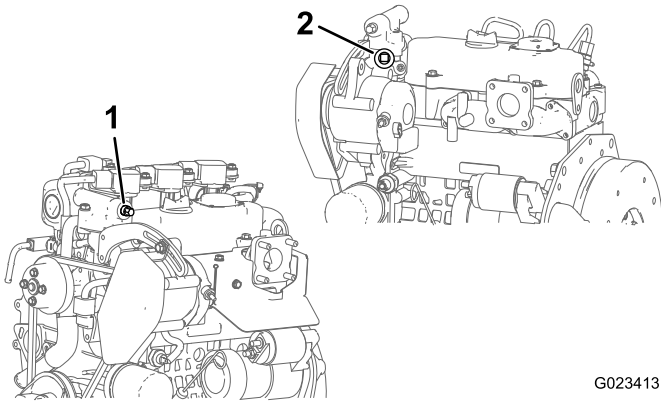


Figure 10

1. Gas engine – Plug
2. Diesel engine – Temperature switch

- For diesel engines: Remove the temperature switch from the thermostat housing and install a tee fitting (Figure 10).
 - Install the temperature switch and the 3/8 inch hose and 5/8 inch adapter fitting with worm clamps.
2. Cut the lower radiator hose about 3 1/2 inches from the centerline of the hose at the 90 degree bend (Figure 11).

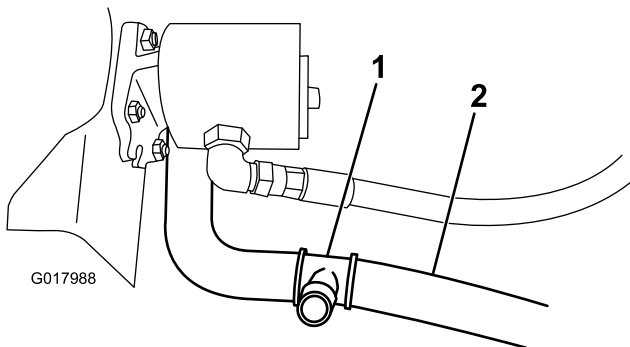


Figure 11

1. Tee fitting
2. Lower radiator hose

3. Connect the tee fitting to each newly cut end of the lower radiator hose with the 2 wide hose clamps (Figure 11).
4. Cover the 5/8 inch hoses with split corrugated tubing.
5. Connect the long hose to the heater valve with a hose clamp, and route it under the unit, over the axel, and to the straight fitting (Figure 12). Cut excess hose to fit.

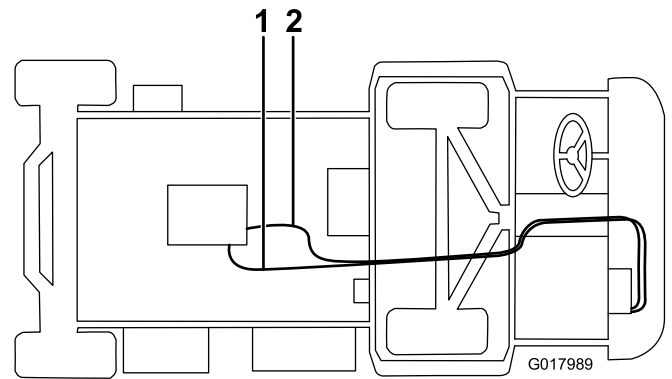


Figure 12

1. Long hose
2. Short hose

6. Connect the shorter hose to the white fill tee with a hose clamp, route it through the r-clamp on the heater bracket, and connect it to the tee fitting in the lower radiator hose with a hose clamp (Figure 12). Cut excess hose to fit.

Connecting the Wiring

1. Connect the pink wire from the heater wire harness to an open lead on the fuse block. If there is not an open fuse slot, install a new fuse block. Install the fuse in the open slot corresponding to the power lead used.
2. Connect the black wire from the heater wire harness to the ground block.

Finishing and Checking the Installation

1. Tie all the hoses and wires away from sharp edges and moving parts.
2. Install the previously removed hydraulic shield over the hoses. Install the battery cable and battery cover.
3. Remove the radiator cap and fill the radiator with coolant according to the instructions in you *Workman Operator's Manual*. Install the cap.
4. Remove the cap on the white tee near the heater assembly and fill with coolant. Install the cap. Install the hood.
5. Remove the radiator cap.
6. Start the engine and open the bleed screw on the thermostat cover until a steady stream of coolant comes out.
7. Close the bleed screw, then turn the engine off.
8. Top off the radiator and install the cap.
9. After running the engine up to full temperature and letting it cool down, check the coolant level again and refill if needed.

For the MDX-D

Preparing the Machine

1. Raise the bed and engage the prop rod.
2. Remove the battery cover and the positive battery cable.
3. Drain the coolant according to the instructions in your *Workman Operator's Manual*.
4. Open the hood.

Assembling the Heater

1. Attach the elbow hose to the bottom fitting of the heater assembly with a hose clamp (Figure 13).

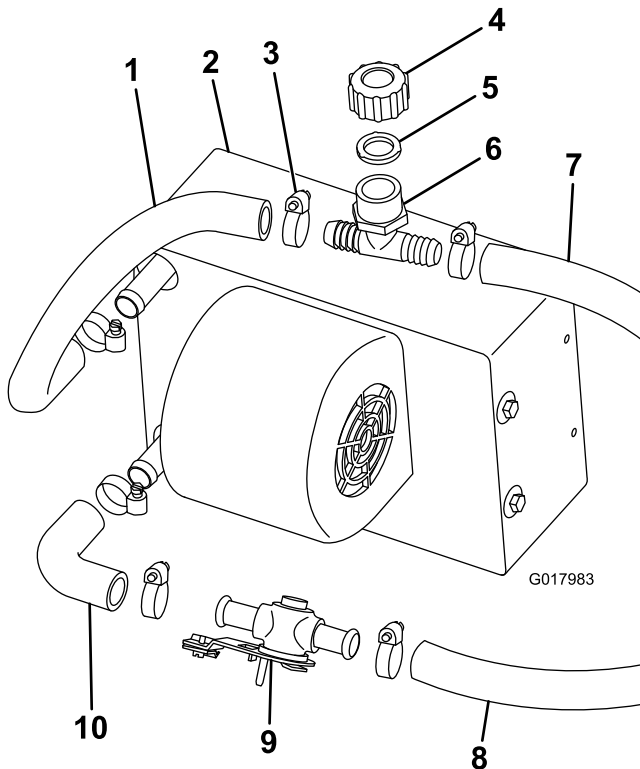


Figure 13

- | | |
|-----------------|-------------------|
| 1. 14 inch hose | 6. White fill tee |
| 2. Heater | 7. Short Hose |
| 3. Hose clamp | 8. Long hose |
| 4. Fill tee cap | 9. Heater valve |
| 5. Gasket | 10. Elbow hose |

2. Connect the heater valve to the elbow hose with a hose clamp (Figure 13).
3. Cut a 14 inch piece of 5/8 inch hose and attach it to the top fitting of the heater assembly with a hose clamp (Figure 13).
4. Connect the white fill tee, gasket, and cap to the upper heater hose with a hose clamp (Figure 13).

Installing the Heater and Heater Control

1. Drill a 5/16 inch hole in the glove box 8 1/2 inches from the left and 1 1/2 inches from the bottom (Figure 14).

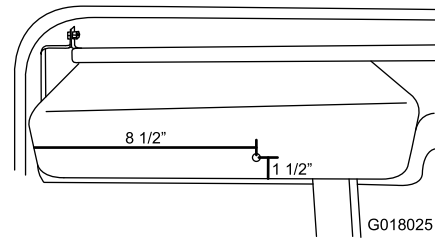


Figure 14

2. Attach the heater bracket to the heater using the screws supplied with the heater (Figure 15).

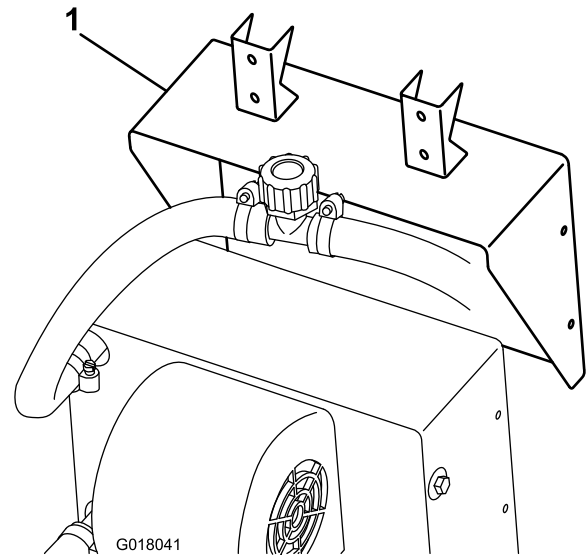


Figure 15

1. Heater bracket

3. Attach the heater and bracket assembly onto the front frame tube, snug against the u-frame, using the square u-bolts and flange nuts provided (Figure 16).

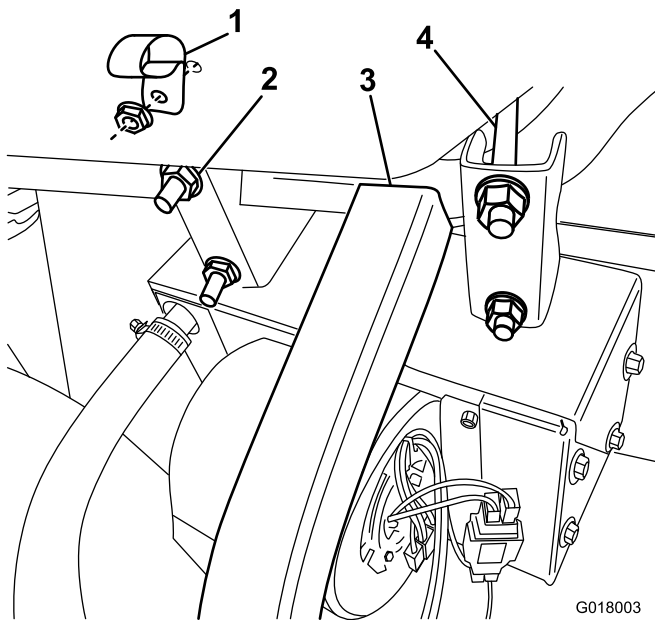


Figure 16

- | | |
|---------------|------------|
| 1. R-clamp | 3. U-frame |
| 2. Flange nut | 4. U-bolt |

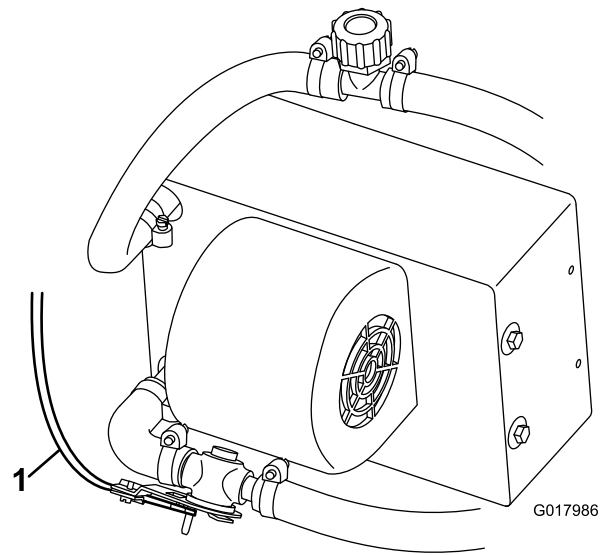


Figure 18

1. Heater control cable

4. Attach the r-clamp to the glove box with a flange-head screw and nut (Figure 16).
5. Attach the heater control mount to the dash under the cup holders with 2 flange head screws and nuts (Figure 17).

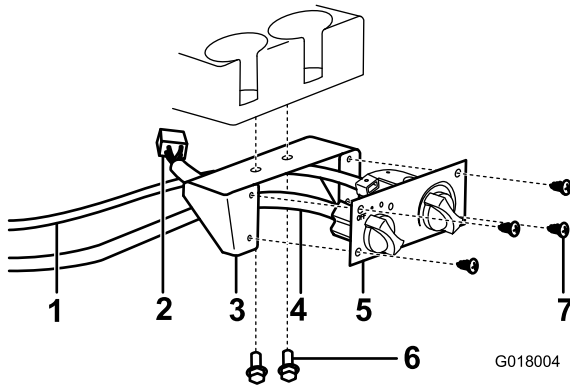


Figure 17

- | | |
|---------------------------------|----------------------|
| 1. Heater control cable | 5. Heater control |
| 2. White wire harness connector | 6. Flange head screw |
| 3. Heater control mount | 7. Sheet metal screw |
| 4. Black wire harness connector | |

6. Connect the heater control cable and black wire harness connector to the heater control and the white wire harness connector to the heater (Figure 17).
7. Attach the heater control to the heater control mount using 4 sheet metal screws (Figure 17).
8. Route and connect the heater control cable to the heater valve (Figure 18).

Installing the Hoses

1. Mark and drill 2 holes in the seatbase using a 1 inch hole saw (Figure 19). Make sure to drill through both layers of plastic.

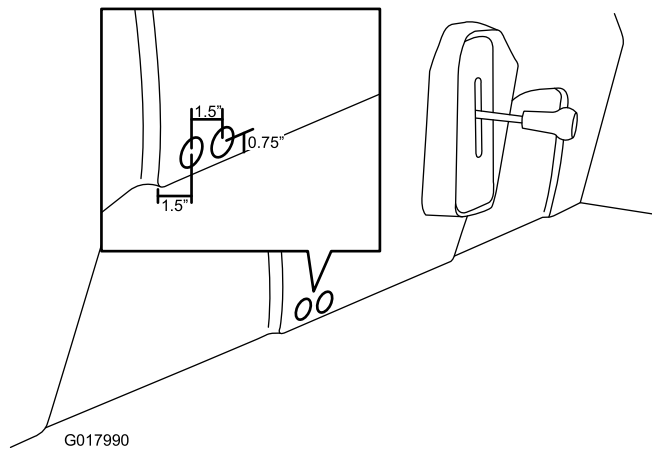


Figure 19

2. Put down a drip pan. Remove the plug under and to the front of the thermostat housing, apply pipe sealant to the threads on the 5/8 inch straight fitting, and install it on the unit (Figure 20).

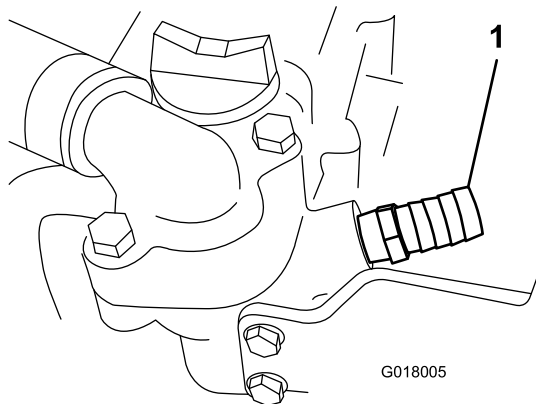


Figure 20

1. 5/8 inch straight fitting

3. Cut the lower radiator hose about 2 1/8 inches from the end of the hose going into the radiator (Figure 21).

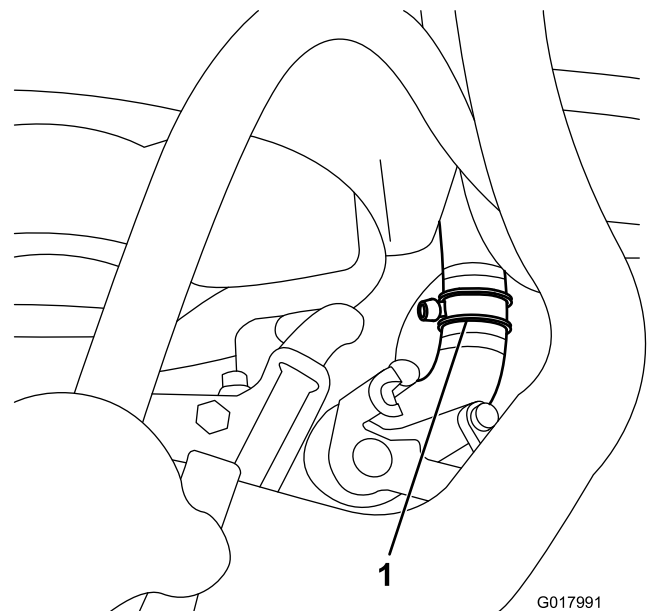


Figure 21

1. Tee fitting in lower radiator hose

4. Connect the tee fitting to each newly cut end of the lower radiator hose with the 2 wide hose clamps (Figure 21).
5. Connect the long hose to the heater valve with a hose clamp, and route it through the hole in the seatbase, the hole in the bed frame, and to the straight fitting with a hose clamp (Figure 22). Cut excess hose to fit.

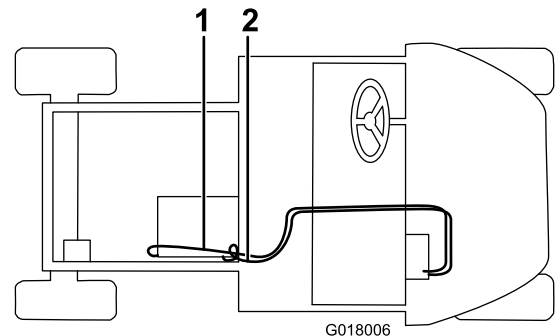


Figure 22

1. Short hose
2. Long hose

6. Connect the shorter hose to the white fill tee with a hose clamp, route it through the r-clamp on the glove box, through the hole in the seatbase, and connect it to the tee fitting in the lower radiator hose with a hose clamp (Figure 22). Cut excess hose to fit.

Connecting the Wiring

1. Connect the pink wire from the heater wire harness to an open lead on the fuse block. If there is not an open fuse slot, install a new fuse block. Install the fuse in the open slot corresponding to the power lead used.

2. Connect the black wire from the heater wire harness to the ground block.

Finishing and Checking the Installation

1. Cover the exposed 5/8 inch hoses with split corrugated tubing.
2. Tie all the hoses and wires away from sharp edges and moving parts.
3. Place the hose channel over the hoses on the floorboard and line up the forward edge with the front edge of the floorboard. Mark and drill holes in the floorboard and install the self-tapping screws (Figure 23).

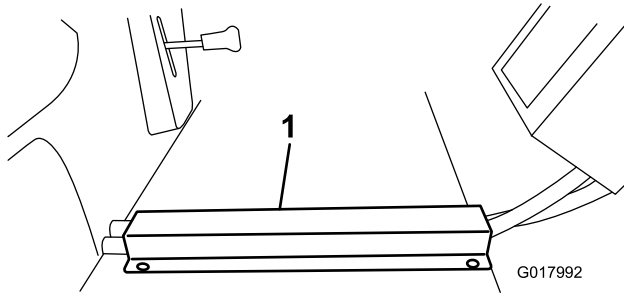


Figure 23

1. Hose channel

-
4. Install the previously removed battery cable and battery cover.
 5. Remove the coolant fill cap on top of the radiator hose and fill the radiator according to the instructions in your Workman *Operator's Manual*. Install the cap.

Important: When filling the coolant system, do not leave the pressurized recovery tank open when filling at another point in the system. This can result in overfilling the tank. It is important to have an air gap at the top of the tank. Do not have more than one system cap off at a time.

6. Remove the cap on the white tee near the heater assembly and fill with coolant. Install the cap.
7. Remove the cap from the pressurized recovery tank and fill it up to the bottom of the down-tube.
8. After running the engine up to full temperature and letting it cool down, check the coolant level again at the pressurized recovery tank and refill it up to the bottom of the down-tube if needed.