

HEATER KIT



P/N 2882753

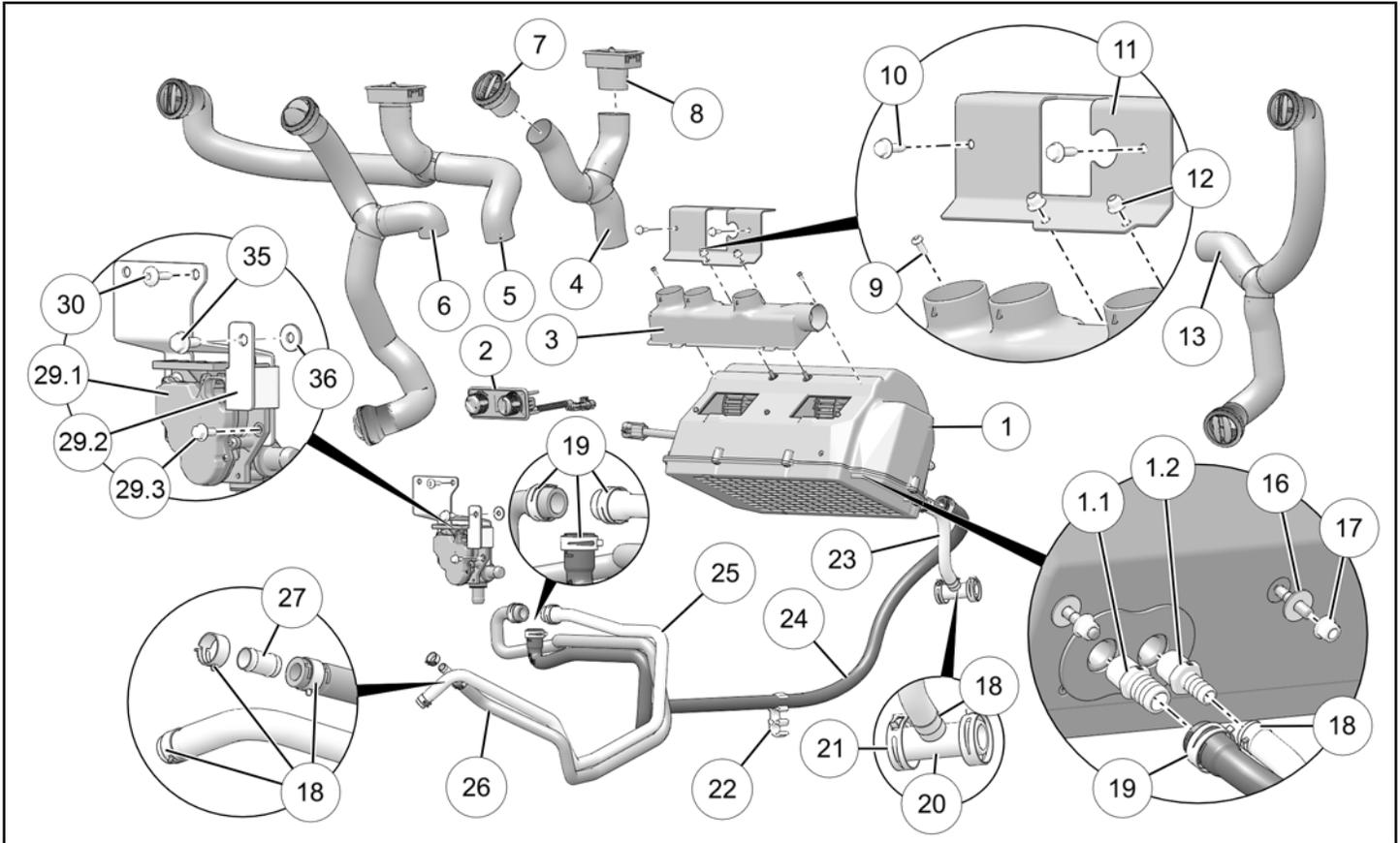
BEFORE YOU BEGIN

Read these instructions and check to be sure all parts and tools are accounted for. Please retain these installation instructions for future reference and parts ordering information.

APPLICATION

Verify accessory fitment at Polaris.com.

KIT CONTENTS



REF	QTY	PART DESCRIPTION	PART NUMBER
1	1	Core, Heater (includes items 1.1–1.2)	2636739
1.1	1	- Fitting - Male, 1/2 NPT X 3/4 HB	7052671
1.2	1	- Fitting - Male, 1/2 NPT X 1/2 HB	7052663
2	1	Switch Panel	2413993
3	1	Manifold, Heater	5453899
4	1	Duct Assembly, RH Inboard Dash and RH Defrost	2636687
5	1	Duct Assembly, LH Outboard Dash and LH Defrost	2636686
6	1	Duct Assembly, LH Inboard Dash and LH Footwell	2636684
7	6	Vent, Round	5452877

REF	QTY	PART DESCRIPTION	PART NUMBER
8	2	Vent, Rectangular (Defrost)	5453900
9	2	Screw, Torx® Pan Head, High/Low - #10 X 1/2	7519091
10	2	Screw, Hex Flange - M6 X 1.0 X 20	7518529
11	1	Bracket, Core Mounting	5263841-329
12	2	Nut, Hex Flange, Locking - M6 X 1.0	7547339
13	1	Duct Assembly, RH Outboard Dash and RH Footwell	2636685
14	-	(unused)	n/a
15	-	(unused)	n/a
16	2	Washer, Flat - 0.328 X 1.25 X 16GA	7555716
17	2	Nut, Hex Flange, Locking - M8 X 1.25	7547332
18	5	Clamp, Hose, Spring - 21 mm dia	7081026
19	4	Clamp, Hose, Springband - 27 mm dia X 12 mm wide	7080841
20	1	Fitting, Tee - 1.0 X 1.0 X 0.5	7052530
21	2	Clamp, Hose, Springband - 35 mm dia X 12 mm wide	7080844
22	1	Clip, Hose Routing	5453897
23	1	Hose, Heater Core Outlet to Engine Return - 1/2 ID X 8.5 inches	5416358
24	1	Hose, 3-Way Valve Outlet to Heater Core Inlet	5416478
25	1	Hose, 3-Way Valve Outlet to Engine Water Pump Inlet	5416480
26	1	Hose, Engine Oil Cooler Outlet to 3-Way Valve Inlet	5416479
27*	1	Fitting, Union	n/a
28	-	(unused)	n/a
29	1	Valve Assembly, 3-Way (includes items 29.1-29.3)	2413634
29.1	1	- Valve, 3-Way	2413634
29.2	1	- Bracket, 3-Way Valve Mount	5264960-329
29.3	4	- Screw, Hex Flange - M6 X 1.0 X 16	7518187
30	2	Screw, Torx® Truss Head - M6 X 1.0 X 25	7519650
31	-	(unused)	n/a
32	30	Cable Tie (not shown)	7080761
33	1	Harness, Heater (not shown)	2414076
34	1	Cover, Lower Storage Compartment (not shown)	5454155
35	1	Screw, Hex Flange - M8 X 1.25 X 20	7518555
36	1	Washer, Flat - 0.327 X 0.875 X 0.090	7556341
37	1	Template, Upper Dash Vent (not shown)	9940923

* Fitting included in universal Splice Kit PN 2205073 (packaged separately); splice kit includes additional parts not used for heater installation.

TOOLS REQUIRED

- Safety Goggles
- Drill
- Drill Bit: 1/4 inch (6 mm)
- Drain Pan
- Hole Saw: 1-1/4 inch (32 mm), 2-1/2 inch (64 mm)
- Pliers, Hose Pinch-Off (three required)
- Pliers, Slip Joint
- Pliers, Side Cutting
- Pliers, Push Pin Rivet
- Cutting Tool
- Screwdriver Set, Torx®
- Socket Set, Metric
- Socket Set, SAE

CONSUMABLES REQUIRED

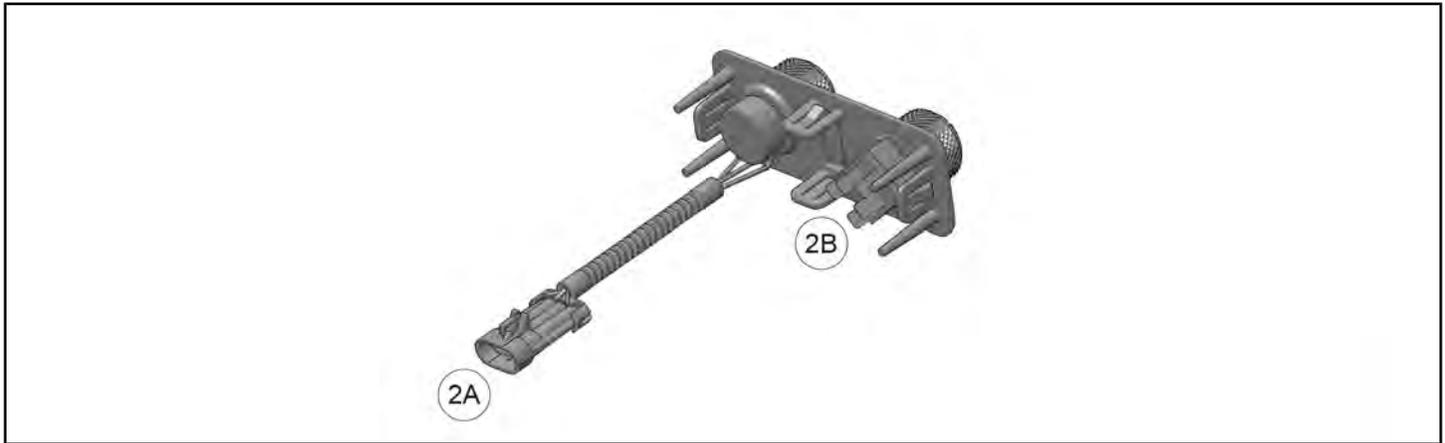
- Antifreeze, POLARIS 50/50 Premix, 2-4 quarts
- Gloves, Chemical Resistant

IMPORTANT

Your Heater Kit is exclusively designed for your vehicle. Please read the installation instructions thoroughly before beginning. Installation is easier if the vehicle is clean and free of debris. For your safety, and to ensure a satisfactory installation, perform all installation steps correctly in the sequence shown.

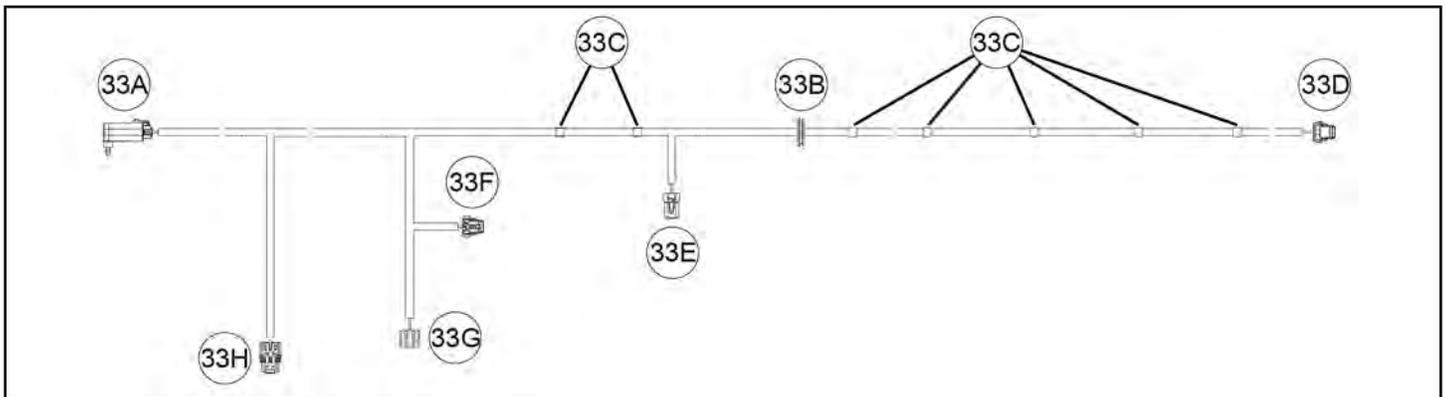
HARNESS DETAIL

SWITCH PANEL ②:



REF	PART DESCRIPTION	WIRE COLOR	PIN QTY/ GENDER	CONNECTS TO
2A	Connector, Temperature Control	-	3 male	Heater harness ③③, connector 33F
2B	Connector, Blower Control	-	5 male	Heater harness ③③, connector 33G

HEATER HARNESS ③③:

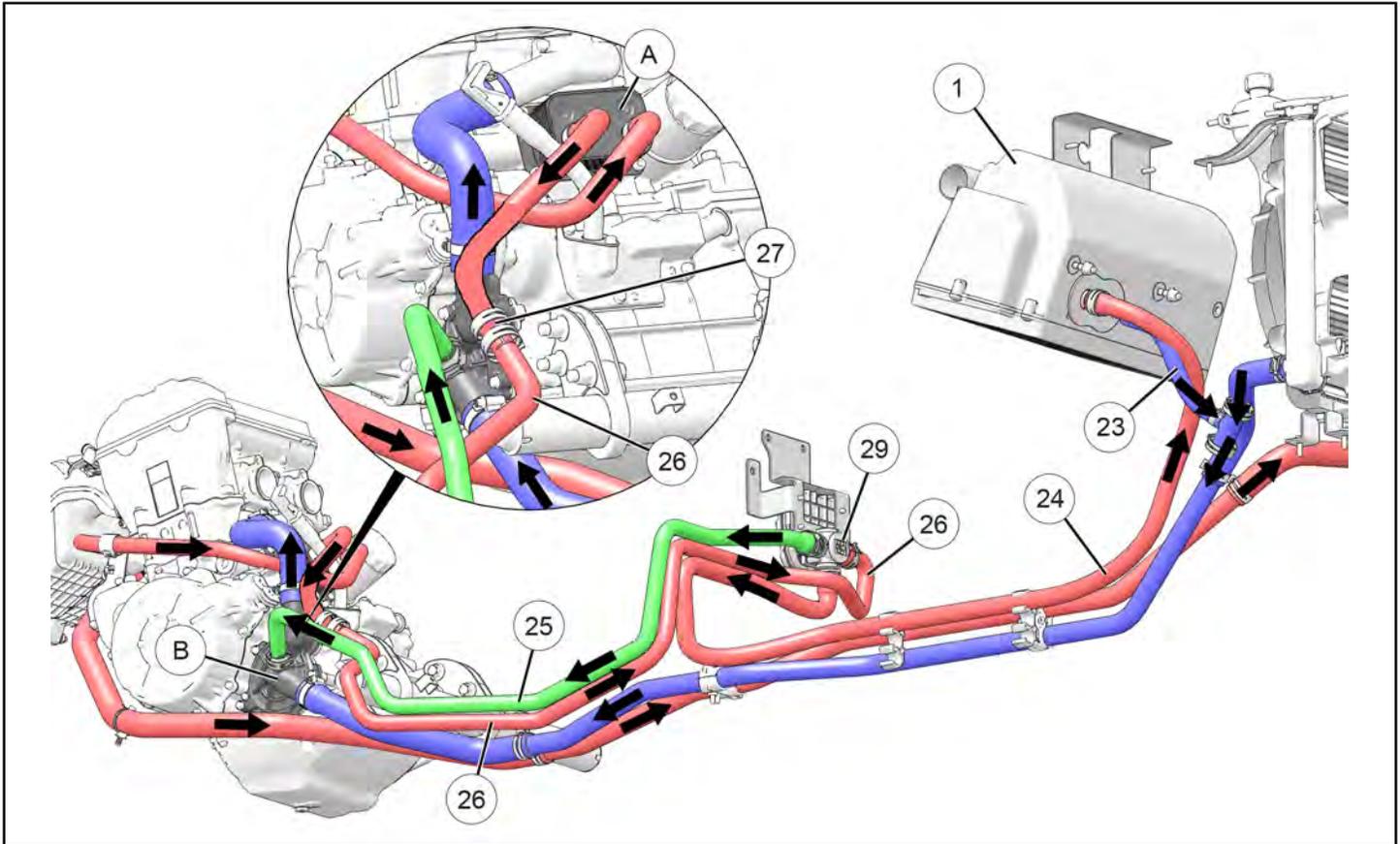


REF	PART DESCRIPTION	WIRE COLOR	PIN QTY/ GENDER	CONNECTS TO
33A	Relay/Fuse Block	-	-	Vehicle structure
33B	Grommet	-	-	Vehicle structure
33C	Electrical Tape, White (7 places)	-	-	Nothing; identifies locations where harness is secured using cable ties ③②
33D	Connector, 3-Way Valve	-	6 female	3-way valve assembly ②⑨
33E	Connector, Blower Motor	-	4 female	Heater core ①
33F	Connector, Temperature Control	-	3 female	Switch panel ②, connector 2A
33G	Connector, Blower Control	-	5 female	Switch panel ②, connector 2B
33H	Connector, Terminal Block	-	3 female	Vehicle terminal block

COOLANT FLOW DETAIL

Coolant flow through the installed heater core is shown.

- **Heater OFF:** Coolant flows from oil cooler (A) through union (27) and hose (26) into LH side of valve (29). Coolant passes straight through valve and out RH side, then flows through hose (25) back to water pump (B). No coolant flows through hose (24), hose (23), or core (1).
- **Heater ON:** Coolant flows from oil cooler (A) through union (27) and hose (26) into LH side of valve (29). Coolant is diverted out bottom of valve, then flows through hose (24) to core (1), through core and out hose (23), then back to water pump (B). No coolant flows through hose (25).



INSTALLATION INSTRUCTIONS

PREPARE VEHICLE FOR INSTALLATION

NOTICE

Polaris recommends two people assemble and install this kit.

WARNING

Ensure red positive (+) battery terminal is **COMPLETELY COVERED** by protective boot. Accidental tool contact across both battery terminals will result in high current electrical arc, and may result in battery explosion. Death or serious personal injury may occur.

1. Shift vehicle transmission into PARK. Turn ignition switch to OFF position and remove key.

2. Flip up passenger seat bottom (CREW: right rear passenger seat bottom) and remove underseat storage compartment. Disconnect black negative (-) cable from battery.

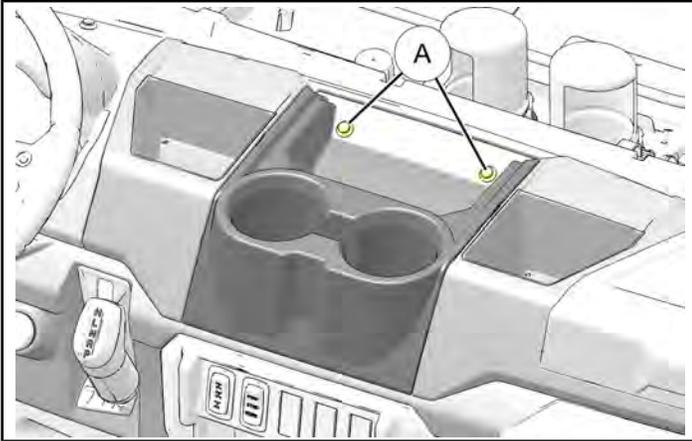
CREW: Also remove left rear passenger seat bottom and underseat storage compartment.

3. Raise vehicle bed.

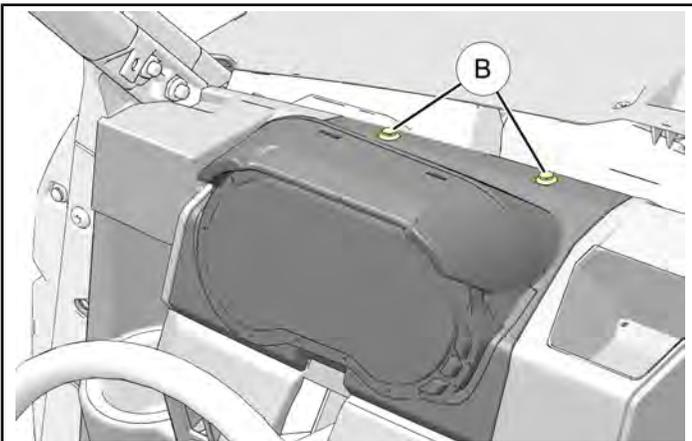
4. Remove hood.

5. If windshield is installed, remove or open (as applicable) to gain access to upper dash.

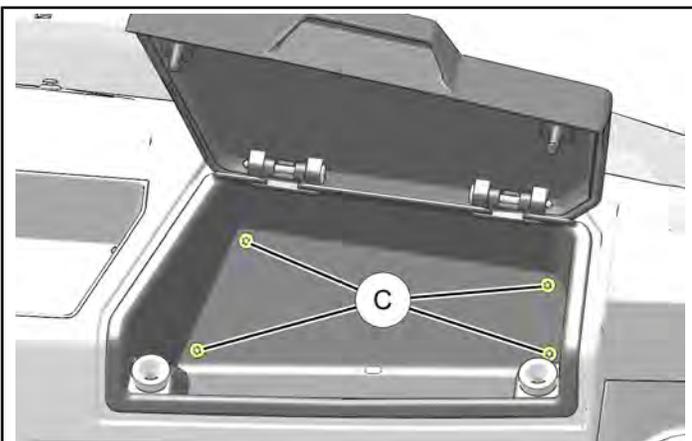
6. Remove upper dash cupholder by removing two push pin rivets (A), then slide cupholder rearward. Retain rivets.



7. Tilt steering wheel to full down position. Detach instrument cluster hood by removing two push pin rivets (B), then slide hood (and instrument cluster) rearward. Disconnect instrument cluster wiring harness. Retain rivets.

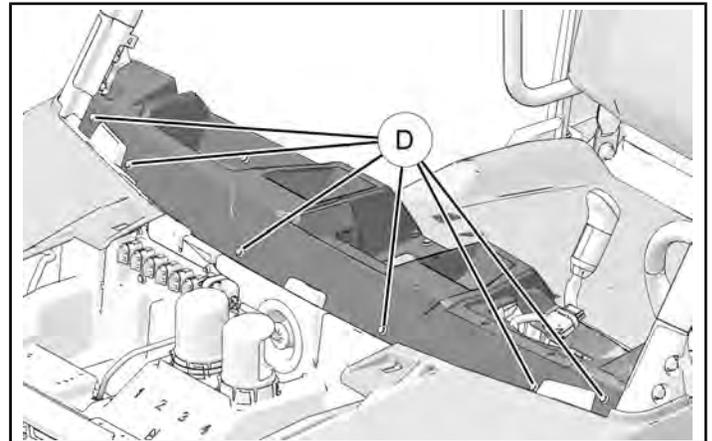


8. Open door to upper storage compartment. Remove four screws (C) from forward wall of compartment, then remove compartment/door assembly from dash. Retain screws.

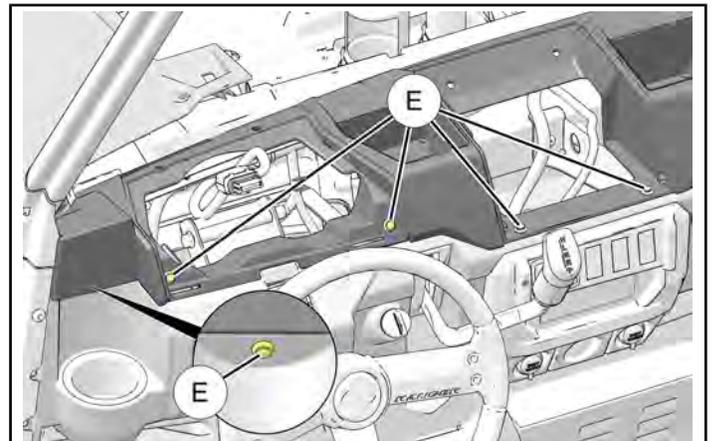


9. Remove upper dash.

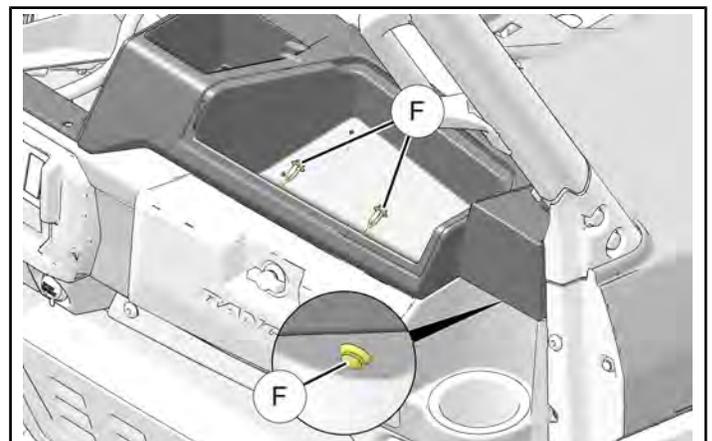
- a. Remove six push pin rivets (D) along forward edge of dash.



- b. Remove five push pin rivets (E) from left side of dash: two at center cupholder, two at instrument cluster, and one on underside of dash above cupholder.



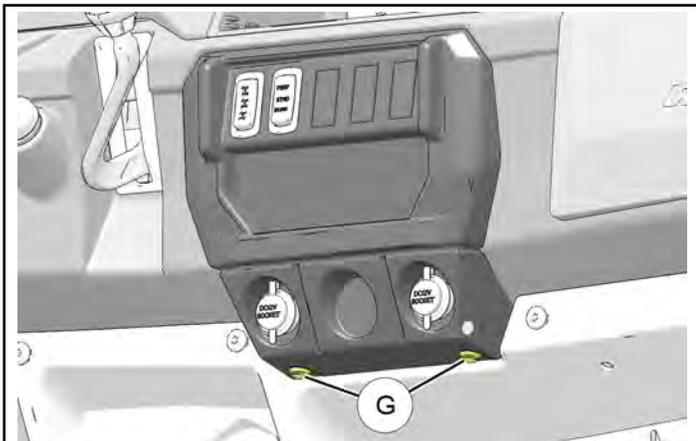
- c. Remove three push pin rivets (F) from right side of dash: two inside upper storage area and one on underside of dash above cupholder.



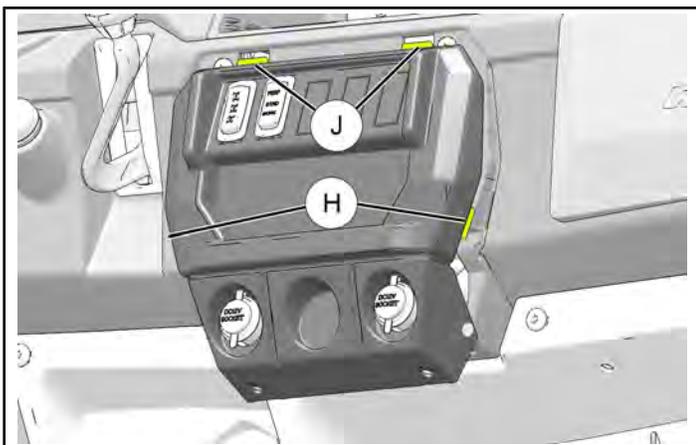
- d. Remove upper dash from vehicle.

10. Remove control panel.

- a. Remove two push pin rivets (G) from lower face of control panel. Retain rivets.

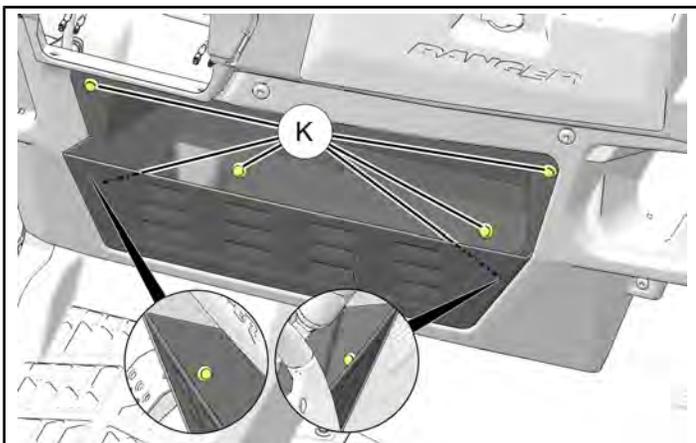


- b. Rotate bottom of control panel rearward, disengaging two side tabs (H), then drop two upper tabs (J) out of slots in main dash panel.



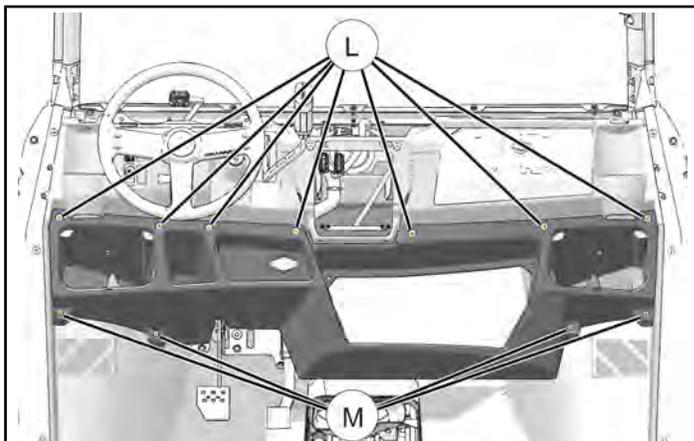
- c. Label and disconnect electrical harnesses from switches, sockets, or other devices in control panel.

11. Remove lower storage compartment by removing six push pin rivets (K). Retain rivets. Storage compartment will not be reinstalled.



12. Disconnect accessories from lower dash panel (such as speakers, winch remote socket, etc.).

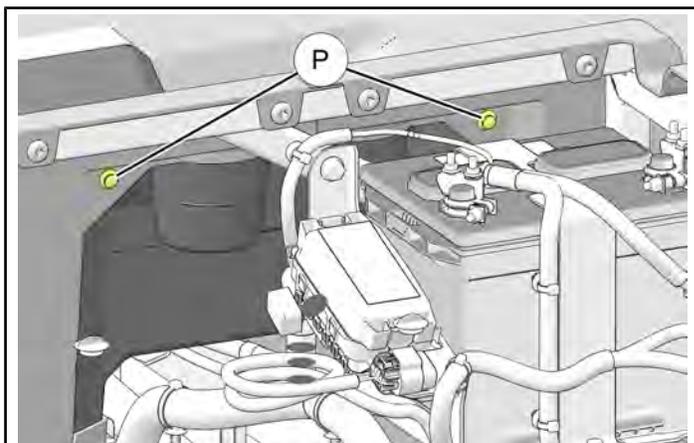
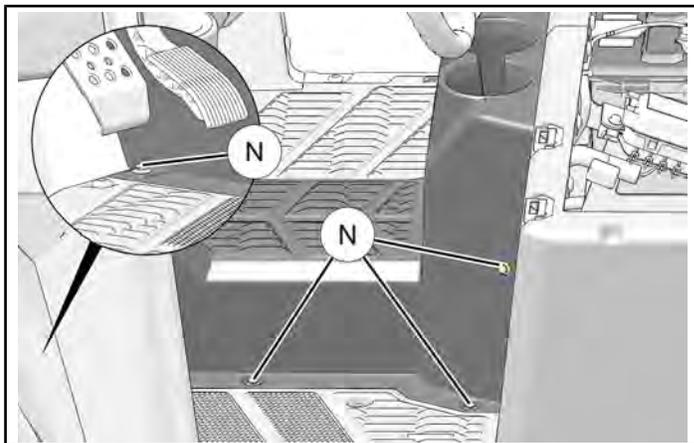
Remove lower dash by removing seven screws (L) and four (high-low thread) screws (M).



13. Remove four push pin rivets (N) from each side of center floor console, and two push pin rivets (P) (if installed) from interior of underseat storage compartment.

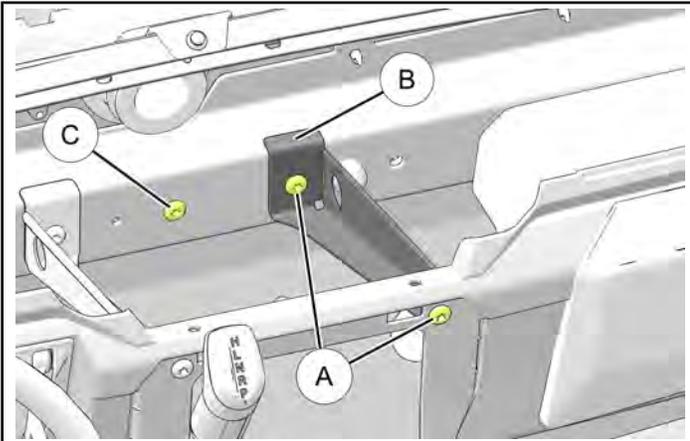
Lift back of console, disengage tab from front, then remove console from vehicle. Retain rivets.

CREW: Also remove rear center floor console. Push pin rivet locations similar to front center floor console.

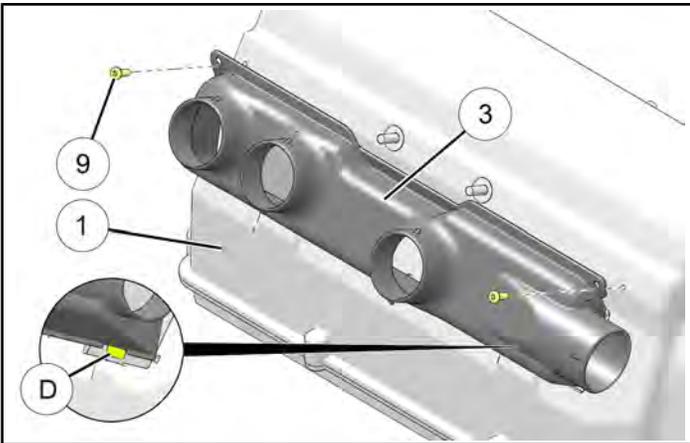


INSTALL HEATER CORE

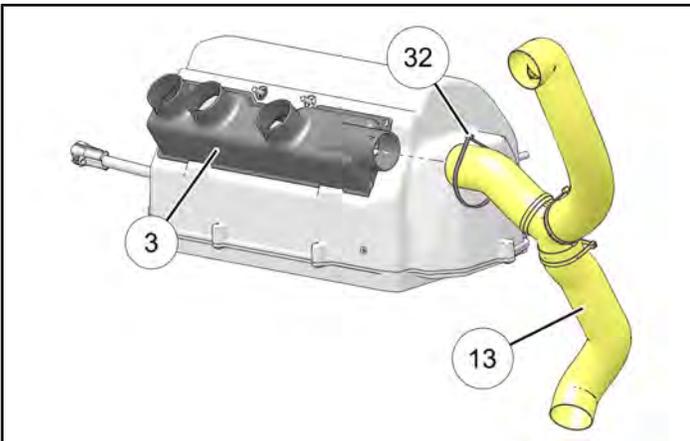
1. Remove two screws (A), then remove dash support bracket (B). Also remove screw (C). Retain any two screws; the remaining screw will not be reused.



2. Insert two tabs (D) on lower edge of manifold (3) into slots on front side of core (1), then secure top edge of manifold to core using two screws (9). Tighten screws.



3. Install RH duct assembly (13) to outlet on RH end of manifold (3) until duct contacts stop on manifold. Secure to manifold using cable tie (32).

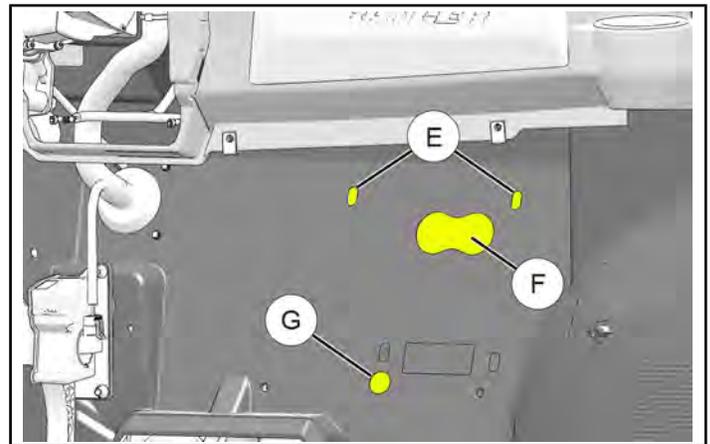


4. Cut out three marked openings in firewall:
 - Two vertical slots (E) for heater core mounting stud
 - One figure-eight shaped opening (F) for heater core hose fittings
 - One circular opening (G) for grommet 33B on heater harness (33); use 1-1/4 inch (32 mm) hole saw centered on marked outline; drilled opening will be LARGER than marked outline

Debur openings.

IMPORTANT

Control cutting depth to prevent damage to underlying structure or components.

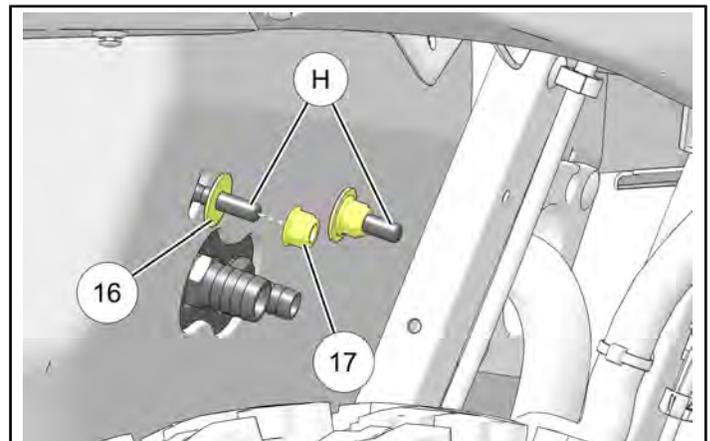


5. Lift heater core assembly (1) into position beneath dash, inserting two front studs (H) through vertical slots (E) in firewall. Loosely install core to firewall using two each washers (16) and nuts (17).

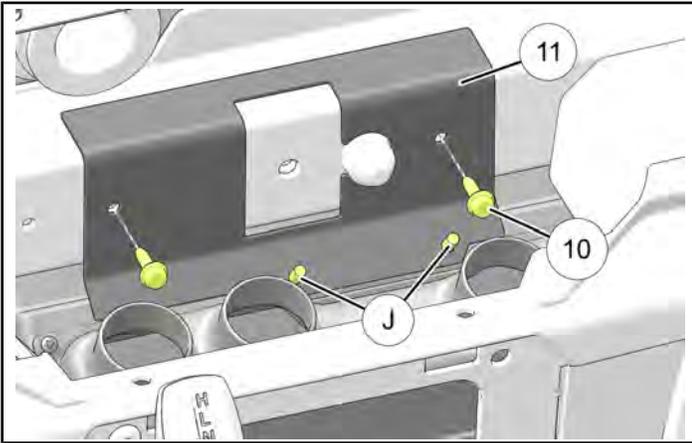
Route upper portion of RH duct assembly (13) upward towards cupholder to facilitate installation in a later step.

NOTICE

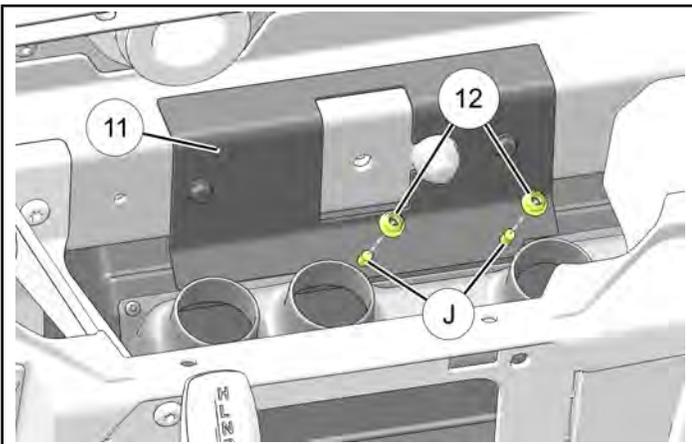
Heater core hose fittings not shown; fittings may be pre-installed.



6. Install core mounting bracket ⑪ over heater core upper studs ①, then install bracket to firewall structure using two screws ⑩. Tighten screws.



7. Secure heater core upper studs ① to core mounting bracket ⑪ using two nuts ⑫. Tighten nuts.



8. Tighten two firewall nuts ⑰ installed in Step 5 of this section.

NOTICE

Do not reinstall dash support bracket ⑥ at this time.

INSTALL HARNESS

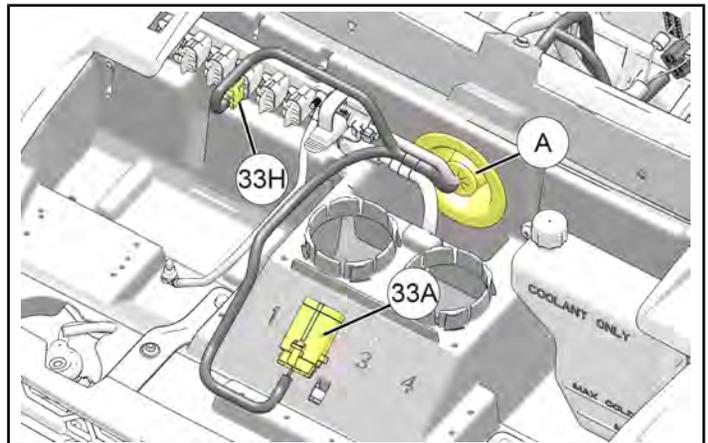
NOTICE

See previous section, **HARNESS DETAIL**, for connector identification.

1. Route all connectors on heater harness ③③, EXCEPT relay/fuse block connector 33A and terminal block connector 33H, rearward through firewall grommet ① into upper dash compartment.

NOTICE

Grommet may be temporarily removed to facilitate harness passage.



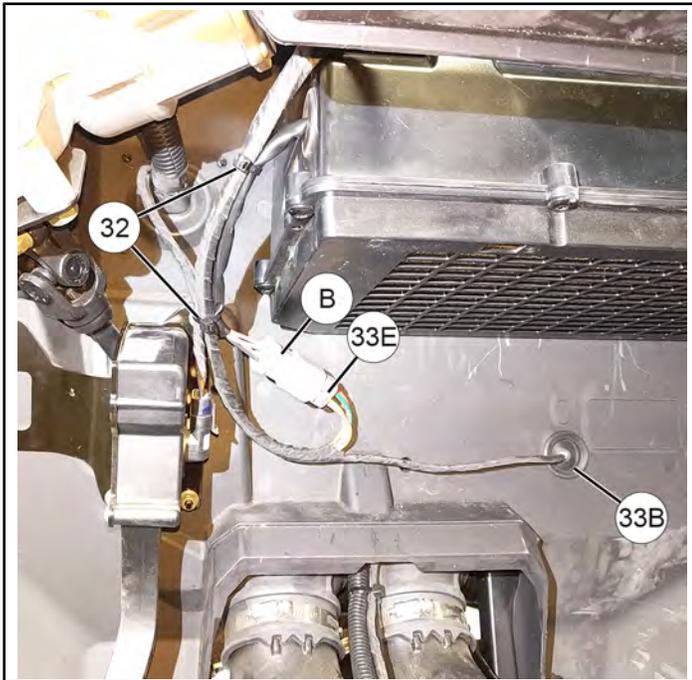
2. Drill out one accessory plug (1/4 inch / 6 mm) on under-hood liner, forward of air intake ducts, then install relay/fuse block 33A using attached fir tree clip.

IMPORTANT

Control drill depth to prevent damage to underlying structure or components.

3. Open power cap on vehicle terminal block at any open location, then plug in connector 33H.
4. Route connectors 33F and 33G rearwards towards control panel opening for later connection to switch panel ②.

- Route connector 33E downward, then join to connector ⑧ exiting LH side of heater core ①.



- Route 3-way valve connector 33D forward through firewall hole ⑥ drilled in previous section, **INSTALL HEATER CORE**, Step 4c, then install grommet 33B in hole.

Secure with two cable ties ⑩ at locations shown to prevent contact with hot components, sharp edges, or moving parts.

NOTICE

Slide grommet down harness as required. Any excess harness length will be secured at 3-way valve assembly ⑨.

- Route connector 33D forward to chassis support structure, downwards towards center floor tunnel, then rearward into tunnel.

Secure with cable tie ⑩ at location shown to prevent contact with hot components, sharp edges, or moving parts.

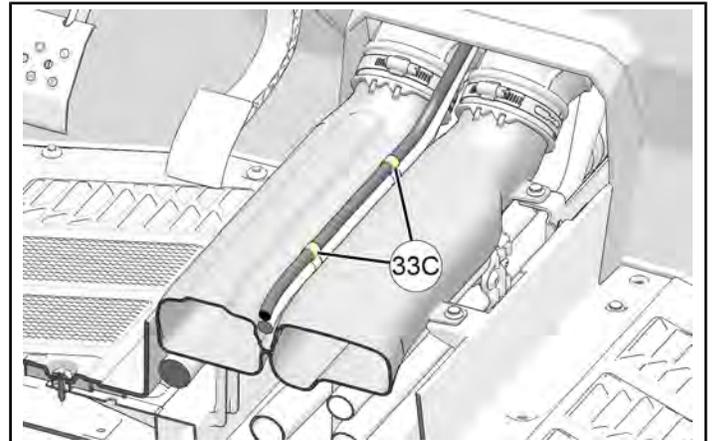


- Continue routing connector 33D rearward through tunnel along battery cables.

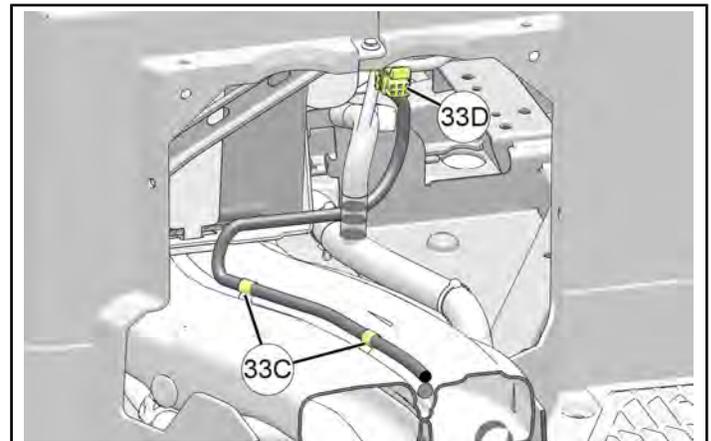
Secure harness to battery cable(s) using four cable ties ⑩ at (or near) white tape locations 33C to prevent contact with hot components, sharp edges, or moving parts.

NOTICE

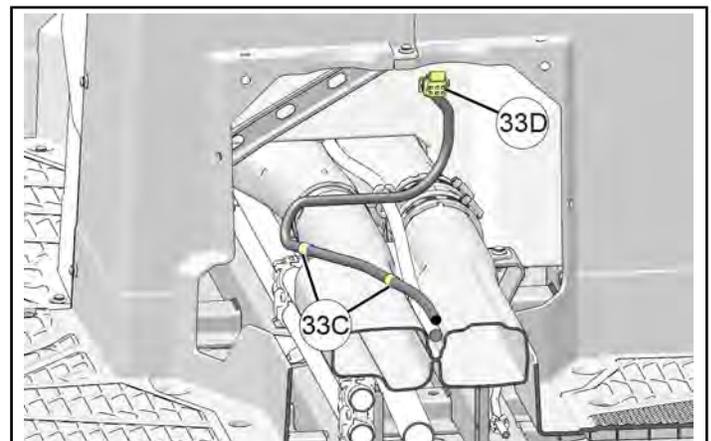
Connector 33D will be joined to 3-way valve assembly ⑨ in a later section.



Non-crew vehicle:



Crew vehicle:



PREPARE DASH — UPPER DASH WITHOUT SCRIBE LINES

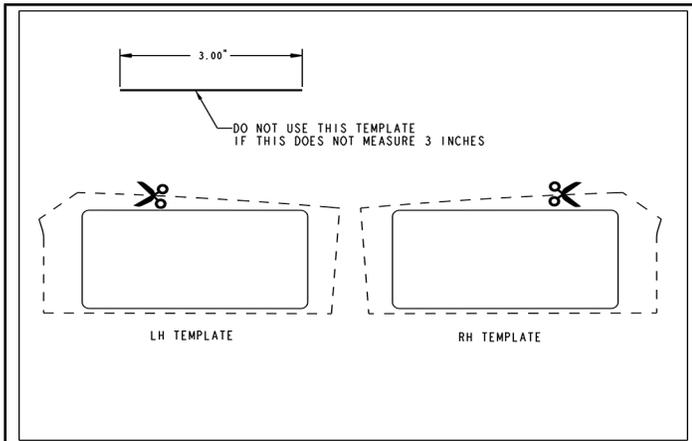
1. Locate REFERENCE DIMENSION on template page.

Verify REFERENCE DIMENSION is exact and template was properly printed to scale.

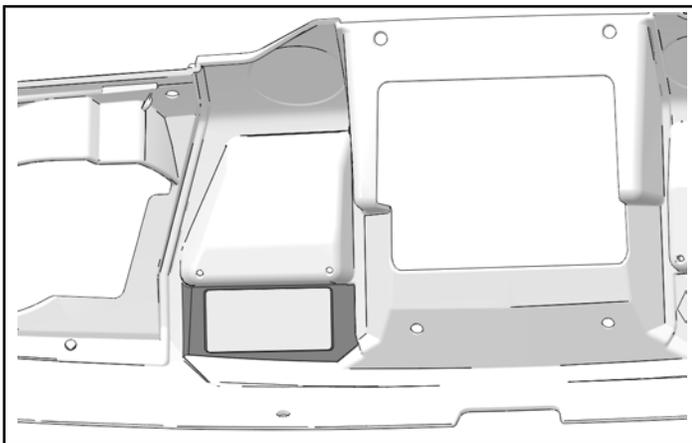
IMPORTANT

If REFERENCE DIMENSION is not exact, reprint template pages from electronic file. Adjust print setting to **Actual Size** to obtain 1:1 scale. Electronic file available from your **Authorized Polaris® Dealer**.

2. Cut out template along outer border.



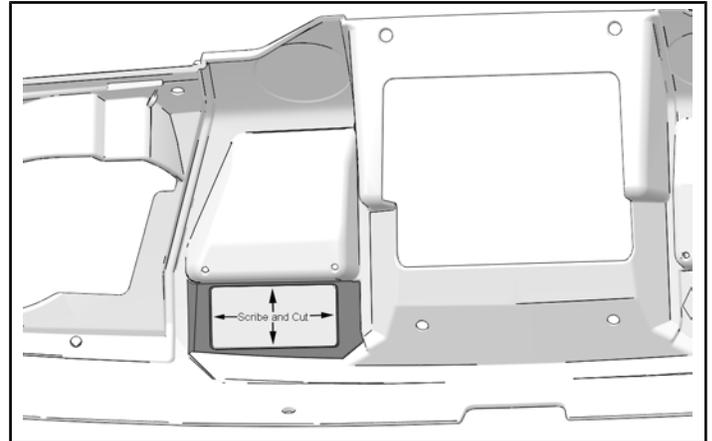
3. Tape each template to the underside of the upper dash, as shown.



4. Scribe upper dash along template lines.

TIP

It is best to use the template to create a scribe line into the dash before cutting the dash. The paper template may tear when cutting through dash and template at the same time.



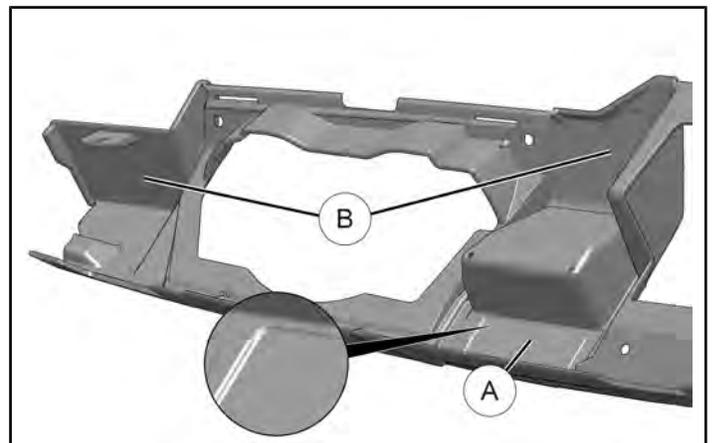
5. Cut upper dash vent openings along scribed template lines.

PREPARE DASH — UPPER DASH WITH SCRIBE LINES

1. Upper Dash Panel: Cut one rectangular defrost opening **A** along INSIDE EDGE of scribe lines. Repeat for opposite side of panel. Deburr openings.

NOTICE

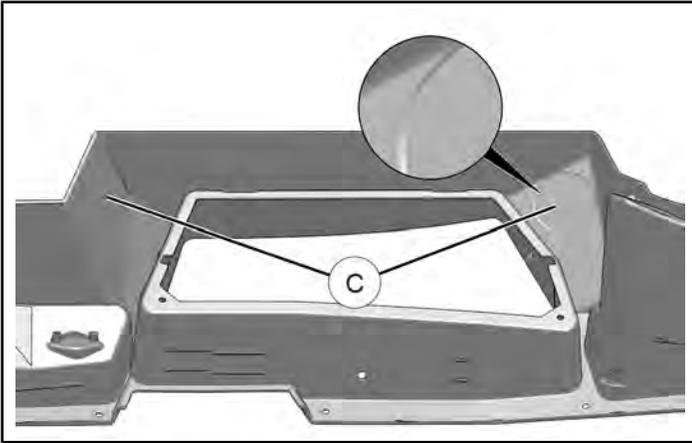
Left side shown; right side similar.



CAUTION

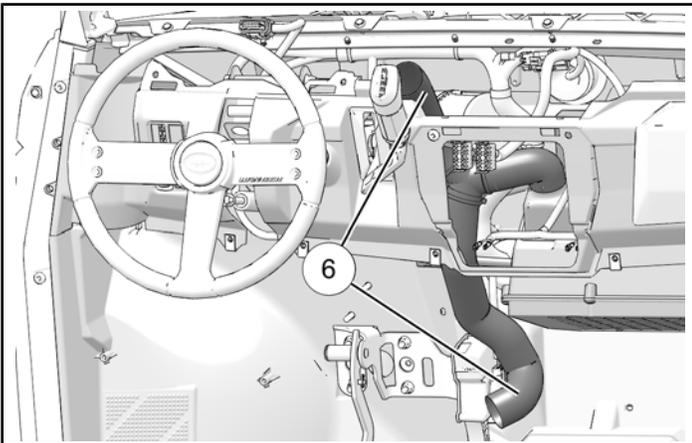
All six round vent openings **MUST** be cut using 2-1/2 inch (64 mm) hole saw. Do **NOT** cut on recessed markings. Cutting on recessed markings will result in excessively large opening and inability to install vent.

2. Upper Dash Panel: Cut four round vent openings **B** using 2-1/2 inch (64 mm) hole saw, centered on existing markings. Do **NOT** cut on recessed markings. Repeat for opposite side of panel.
3. Lower Dash Panel: Cut two round vent openings **C** using 2-1/2 inch (64 mm) hole saw, centered on existing markings. Do **NOT** cut on recessed markings.

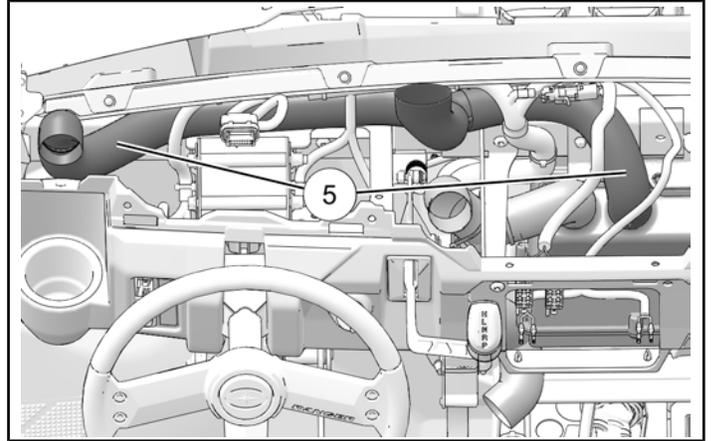


DUCT ASSEMBLY INSTALLATION

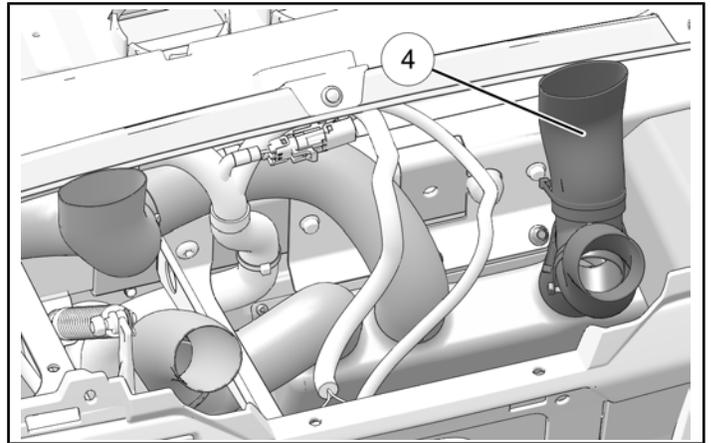
1. Install duct assembly **6** to **FIRST** outlet on manifold **3** until duct contacts stop on manifold. Secure duct to manifold using cable tie **32**.



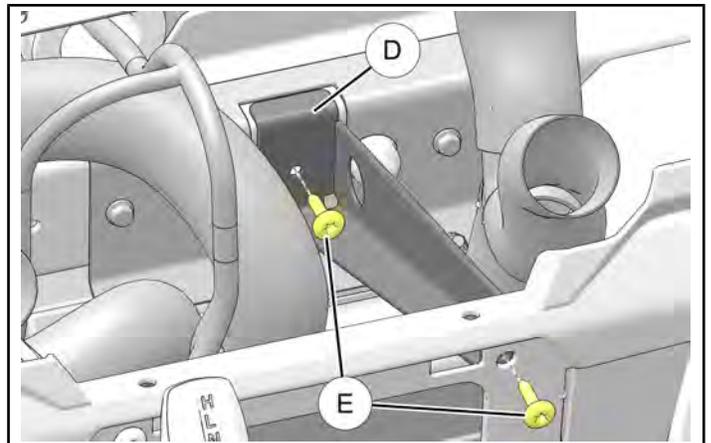
2. Install duct assembly **5** to **SECOND** outlet on manifold **3** (counting from LH to RH side) until duct contacts stop on manifold. Secure duct to manifold using cable tie **32**.



3. Install duct assembly **4** to **THIRD** outlet on manifold **3** until duct contacts stop on manifold. Secure duct to manifold using cable tie **32**.

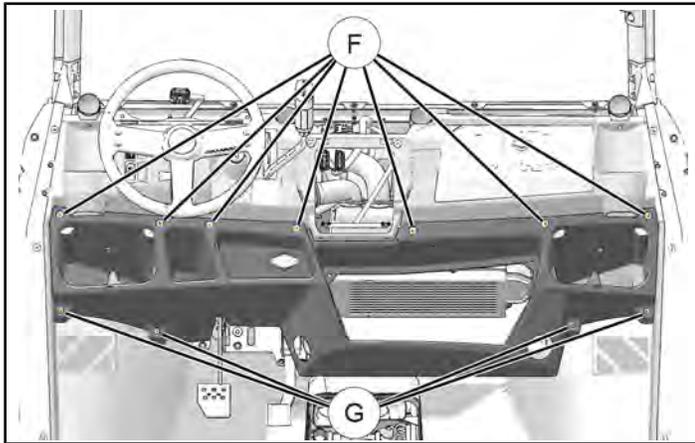


4. Reinstall dash support bracket **D** removed in previous section, **INSTALL HEATER CORE**, Step 1, using two retained screws **E**. Tighten screws.

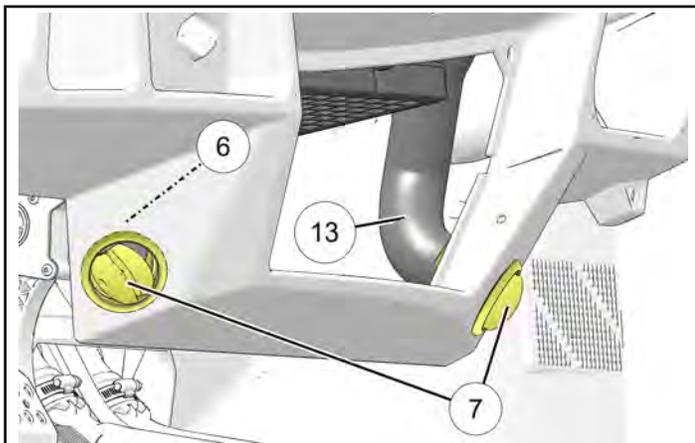


5. Install lower dash and footwell vents.
 - a. Disassemble two round vents ⑦ by unscrewing vent outlet from vent body.
 - b. Attach vent body to lower branch of RH duct ⑬ using cable tie ⑳. Repeat for LH duct ⑥.
 - c. Reconnect any accessories to lower dash panel (such as speakers, winch remote socket, etc.) removed in previous section **PREPARE VEHICLE FOR INSTALLATION**, Step 12.

Reinstall lower dash using seven retained screws ① and four (high-low thread) screws ②.



- d. Position vent body (with attached duct) at dash opening, then thread vent outlet back onto vent body. Repeat for opposite side.



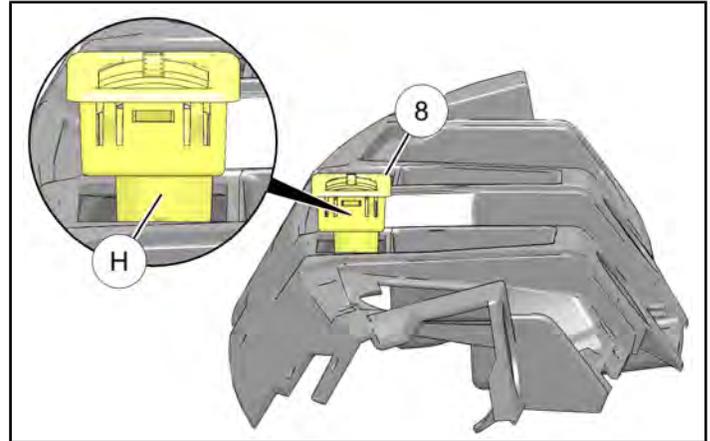
6. Install upper dash and vents.
 - a. Disassemble four round vents ⑦ by unscrewing vent outlet from vent body.
 - b. Attach all four vent bodies to occupant-facing branches of ducts ④, ⑤, ⑥, and ⑬ using cable ties ⑳.

- c. Observe that lower (oval) inlet ④ of rectangular vents ⑧ is offset relative to upper (rectangular) outlet.

When vent is installed in next step, ensure oval inlet is oriented REARWARD (towards occupants) as shown.

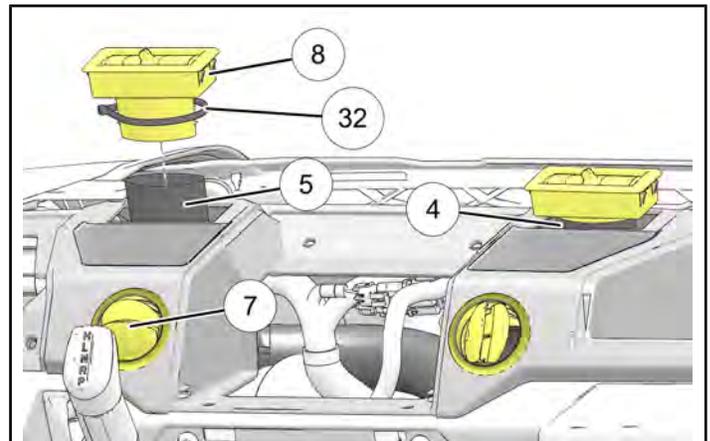
TIP

Do not install vent to upper dash at this time. Follow instructions in next step.



- d. Holding upper dash in position, push LH defroster duct ⑤ up through dash. Install rectangular vent ⑧, secure vent to duct using cable tie ①, THEN snap vent into dash opening.

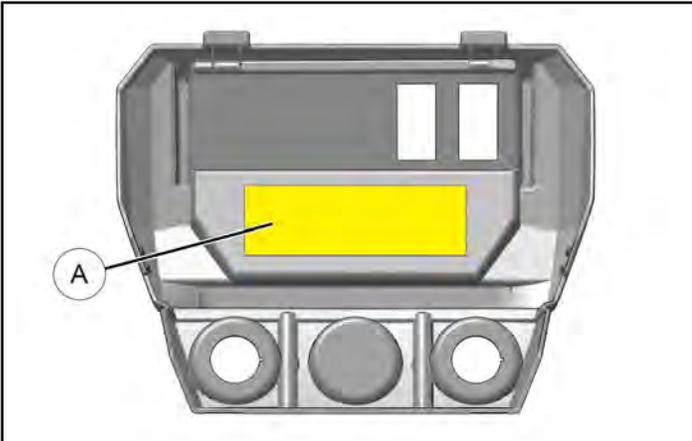
Repeat for RH side using RH defroster duct ④.



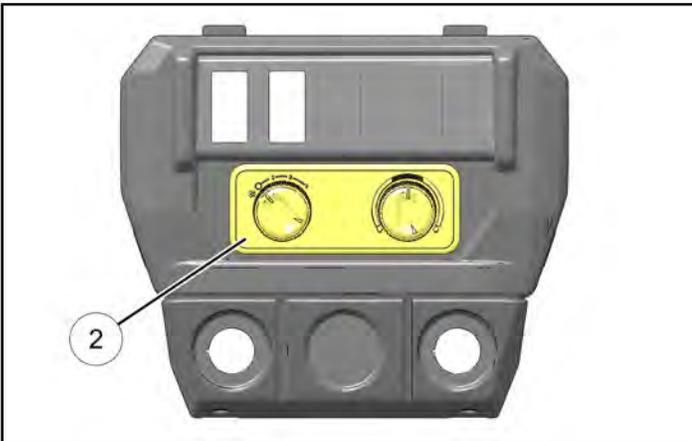
- e. Insert each of the four round vent bodies (with attached duct) into its corresponding dash opening, then thread vent outlet back onto vent body.
7. Reinstall upper dash. See previous section **PREPARE VEHICLE FOR INSTALLATION**, Step 9.

INSTALL CONTROL PANEL

1. Carefully cut out marked rectangular area **A** from control panel (visible on inside of panel). Debur opening.



2. Orient switch panel **2** so blower control is on LH side and temperature control is on RH side, then install into opening until tabs lock in place.



3. Join temperature control connector 2A on switch panel **2** to connector 33F on heater harness **33**.
4. Join blower control connector 2B on switch panel **2** to connector 33G on heater harness **33**.
5. Reconnect electrical harnesses disconnected in previous section **PREPARE VEHICLE FOR INSTALLATION**, Step 10, then reinstall control panel using two retained rivets **6**.

INSTALL COOLING SYSTEM COMPONENTS

⚠ WARNING

Ensure red positive (+) battery terminal is COMPLETELY COVERED by protective boot. Accidental tool contact across both battery terminals will result in high current electrical arc, and may result in battery explosion. Death or serious personal injury may occur.

⚠ WARNING

Always wear safety goggles and proper shop clothing when performing this procedure. Failure to do so may result in severe injury or death.

⚠ WARNING

Follow all chemical manufacturer instructions and safety precautions. Failure to follow all manufacturer instructions and precautions may result in severe injury or death.

⚠ WARNING

Ensure engine is COOL before performing the following steps. Hot cooling system will be pressurized, and opening system may result in uncontrolled release of hot coolant, resulting in severe burns or other injuries.

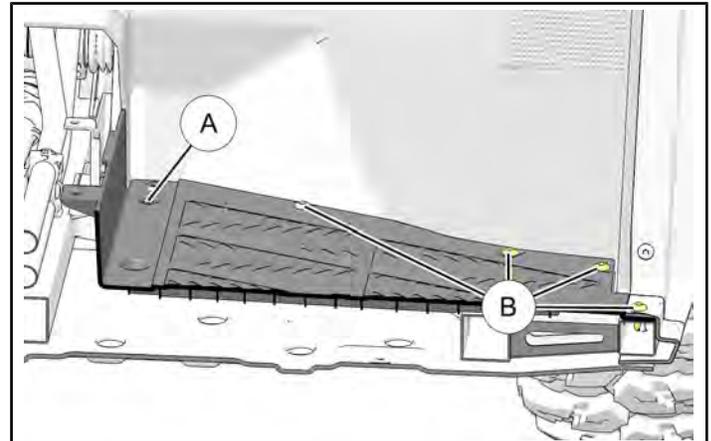
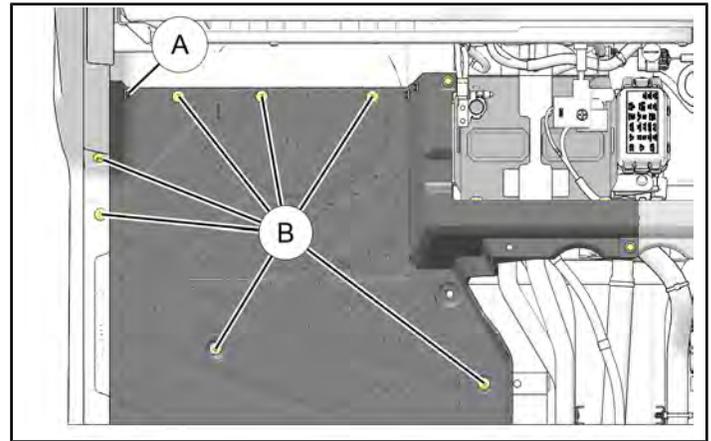
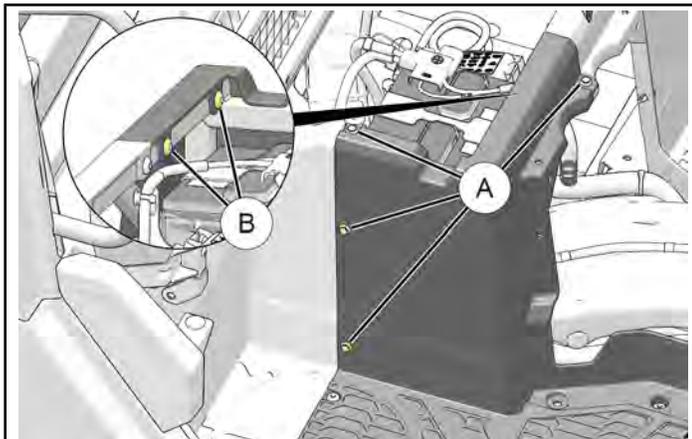
NOTICE

See previous section, **COOLANT FLOW DETAIL**, for additional information.

1. Remove RH floor liner by removing six push pin rivets (A) and 13 screws (B). Set liner aside.

NOTICE

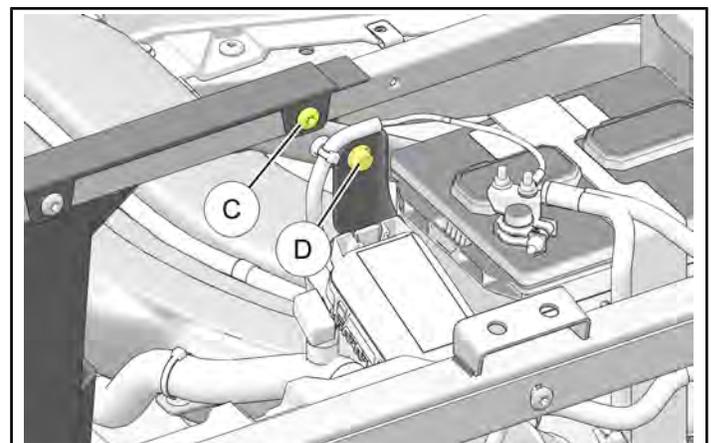
Non-crew shown; Crew front RH floor liner similar.



2. Install 3-way valve assembly.

RANGER XP® 1000 – MY21 and Older

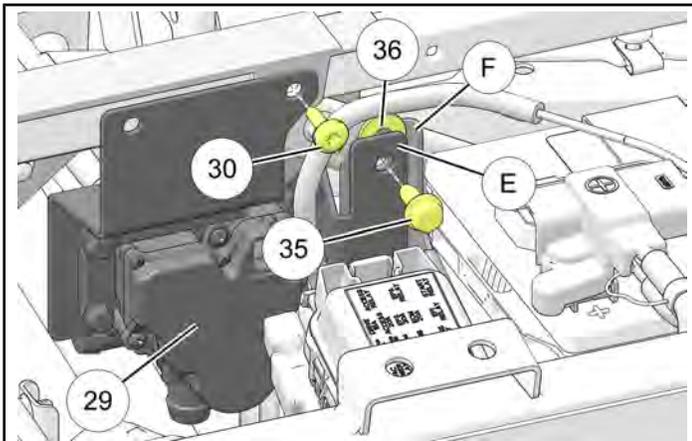
- a. Remove screws (C) and (D) from driver seat support structure. Screws will not be reused.



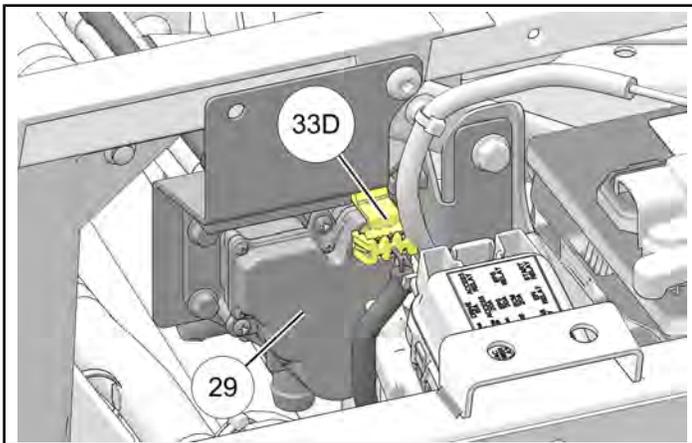
- b. Install valve mount bracket (E) (part of 3-way valve assembly (29)) to seat support structure and REAR side of battery tray bracket (F) using screw (30), screw (35), and washer (36). Tighten screws.

NOTICE

Installation of washer is optional and used as spacer between valve mount bracket and battery tray bracket as shown.

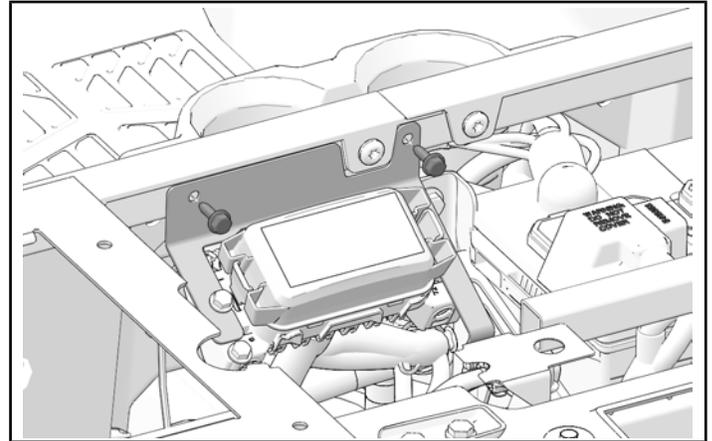


- c. Join 3-way valve connector 33D on heater harness (33) to 3-way valve assembly (29).
Secure any excess harness length at valve with cable ties (32) to prevent contact with hot components, sharp edges, or moving parts.

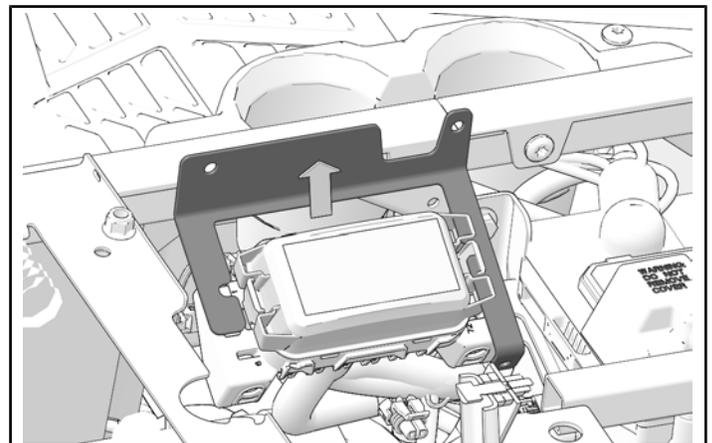


RANGER XP® 1000 – MY22 and Newer

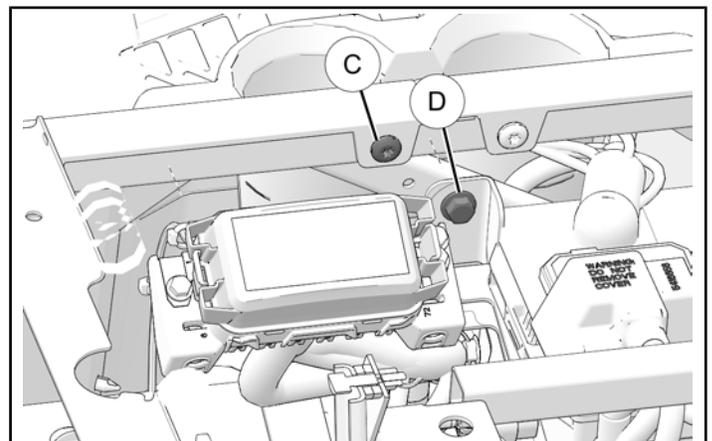
- a. Remove and keep two fuse box bracket screws.



- b. Remove and keep fuse box bracket.



- c. Remove and discard screws (C) and (D) from driver seat support structure. Screws will not be reused.



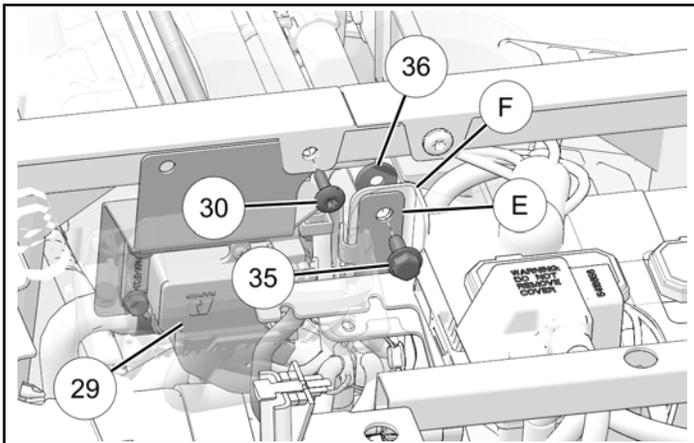
- d. Install valve mount bracket (E) (part of 3-way valve assembly (29)) to seat support structure and REAR side of battery tray bracket (F) using screw (30), screw (35), and washer (36). Tighten screws.

NOTICE

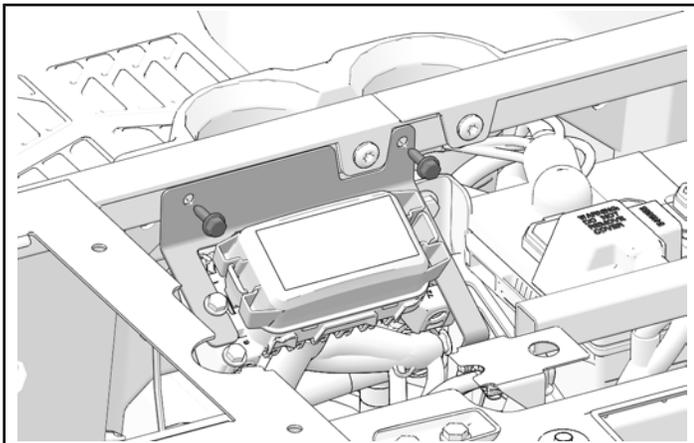
Installation of washer is optional and used as spacer between valve mount bracket and battery tray bracket as shown.

NOTICE

Fuse box and seat bracket hidden for clarity.



- e. Install fuse bracket with two retained screws. Tighten screws until fully seated.

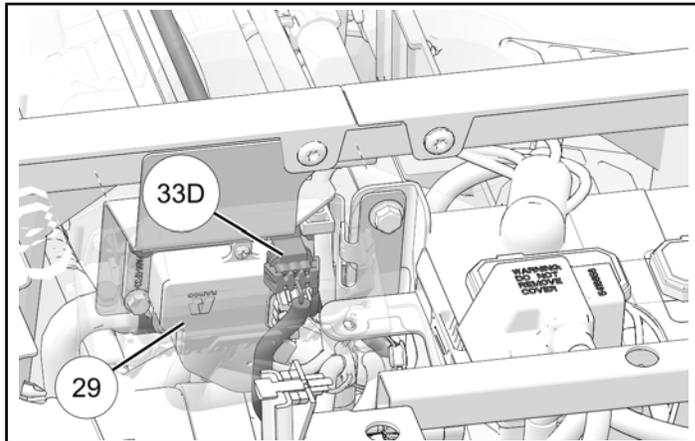


- f. Join 3-way valve connector 33D on heater harness (33) to 3-way valve assembly (29).

NOTICE

Fuse box and bracket hidden for clarity.

Secure any excess harness length at valve with cable ties (32) to prevent contact with hot components, sharp edges, or moving parts.

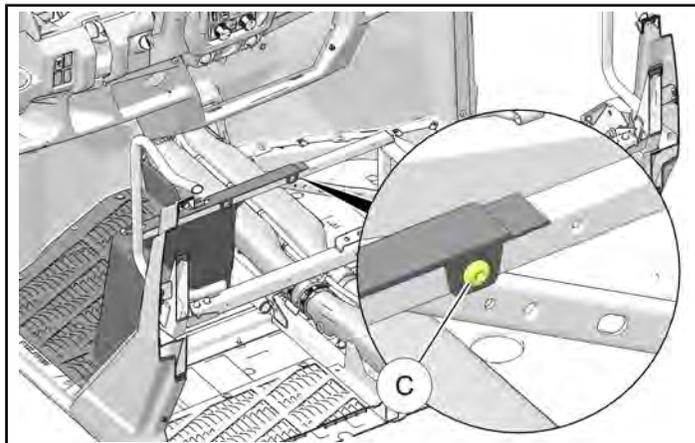


RANGER CREW® XP 1000

NOTICE

Fuse box hidden for clarity.

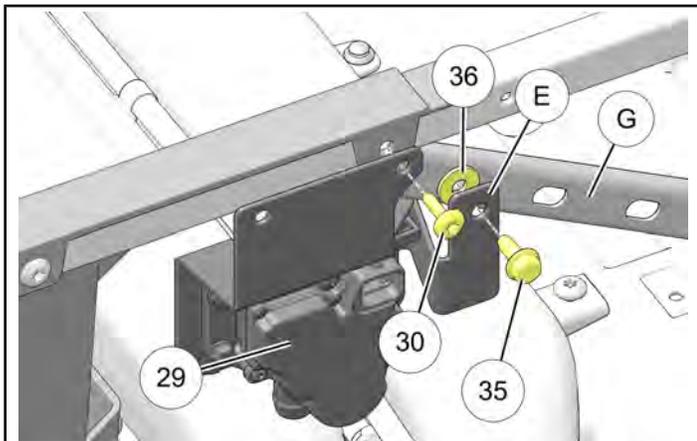
- a. Remove screw (C) from driver seat support structure. Screw will not be reused.



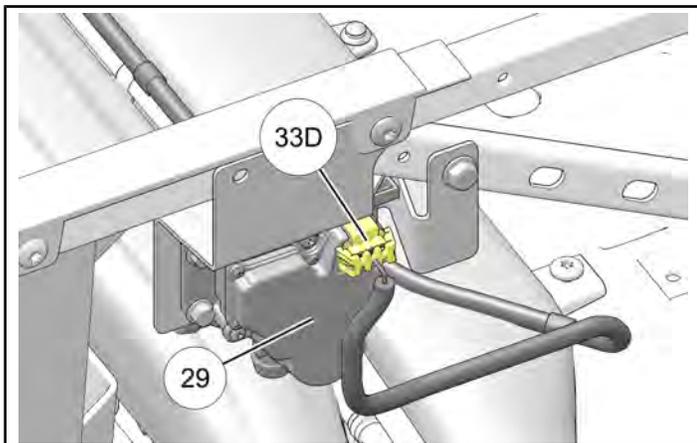
- b. Install valve mount bracket (E) (part of 3-way valve assembly (29)) to seat support structure using screw (30), screw (35), and washer (36). Tighten screws.

NOTICE

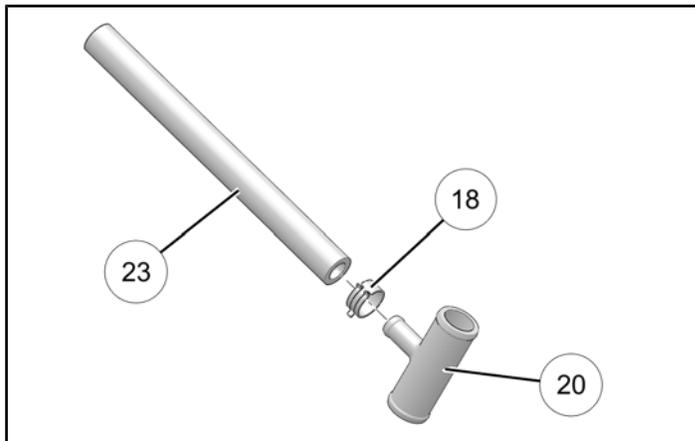
Installation of washer is optional and used as spacer between valve mount bracket and seat support bracket (G).



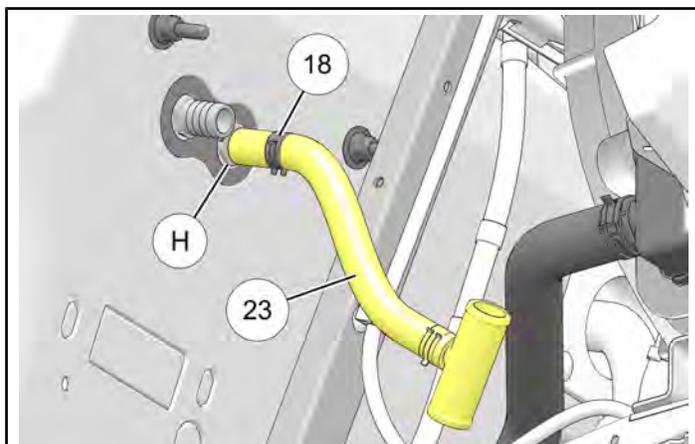
- c. Join 3-way valve connector 33D on heater harness (33) to 3-way valve assembly (29).
Secure any excess harness length at valve with cable ties (32) to prevent contact with hot components, sharp edges, or moving parts.



3. Install COLD RETURN heater hose to heater core outlet.
a. Assemble tee fitting (20) to one end of short hose (23) using clamp (18).

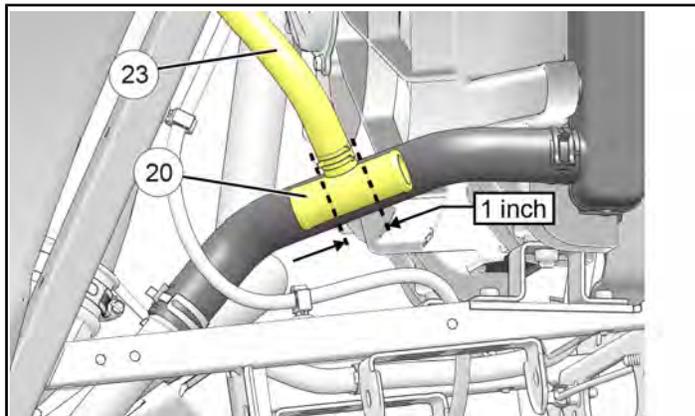


- b. Slip second clamp (18) over opposite end of hose (23), then install hose to 1/2 inch hose fitting (H). Do not clamp hose to fitting at this time to allow hose assembly to rotate into proper position.



- c. Hold tee fitting (20) against existing cold hose, rotating new hose (23) on fitting (H) as required to relieve twist.

Mark two cut lines on cold hose, approximately 1 inch (25 mm) apart, as shown.



- d. Using two pinch-off pliers, clamp existing cold hose approximately 3 inches from each mark to prevent excess coolant loss.
- e. Place drain pan beneath work area, then cut existing cold hose at two marks. Discard 1 inch hose segment between marks.
- f. Install tee fitting ⑳ between cut ends of cold hose using two clamps ㉑. Ensure clamp orientation will not chafe against vehicle components.

NOTICE

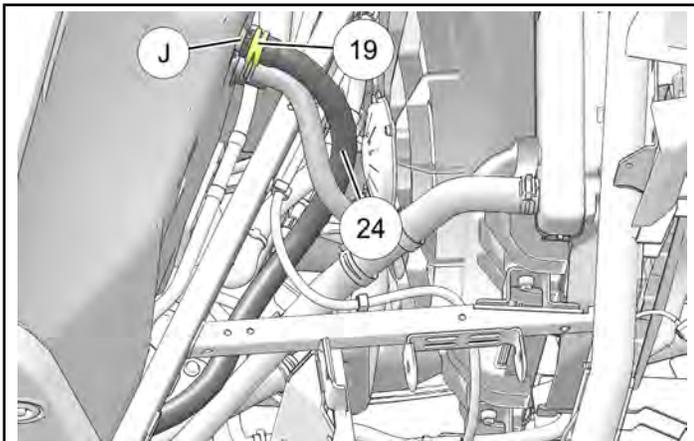
Final hose routing shown in Step 8 below.

- g. Move clamp ⑱ into final position on fitting ④.
 - h. Temporarily install 3rd hose pinch-off pliers on hose ㉓ between hose fitting ④ and tee fitting ⑳ to prevent core from filling with coolant.
 - i. Remove two pinch-off pliers from each side of tee fitting ⑳.
4. Install HOT SUPPLY heater hose between heater core inlet and 3-way valve.

NOTICE

Final hose routing shown in Step 8 below.

- a. Install forward end (larger bend radius) of hose ㉔ to 3/4 inch hose fitting ① using clamp ⑲. Ensure clamp orientation will not chafe against vehicle components.



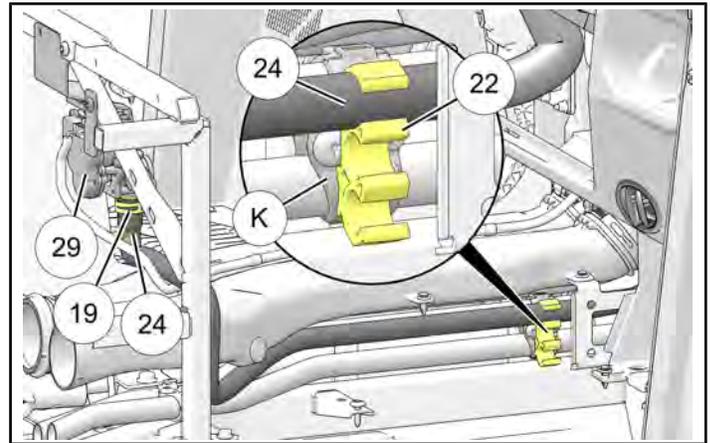
- b. Route opposite end (smaller bend radius) of hose ㉔ downward and rearward into center console following existing coolant lines.

Ensure the following:

- Hose cannot chafe against vehicle components or contact moving parts, taking into consideration suspension travel and steering operation
- Hose is not kinked at any point along its length

NOTICE

View looking inboard from RH side of vehicle. Non-crew vehicle shown; crew vehicle similar.



- c. Attach routing clip ㉒ to hose ㉔ using its UPPER (largest) opening, then install routing clip and hose to existing coolant line bracket ㉓ at front end of center console.

NOTICE

Clip is able to accommodate three different sized hoses. Only one hose is used in this application.

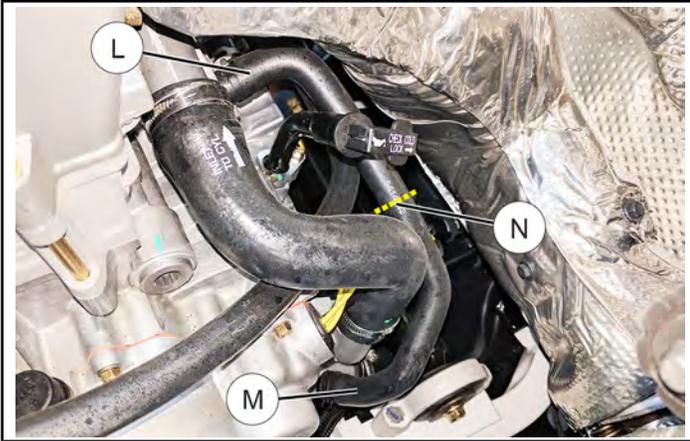
- d. Route hose up along seat structure and over intake duct to 3-way valve assembly ㉓. Secure to **BOTTOM** of 3-way valve assembly using clamp ⑲.
5. Install COLD RETURN heater hose between 3-way valve and engine

NOTICE

Final hose routing shown in Step 8 below.

- a. Place drain pan beneath engine water pump (forward RH corner of engine).

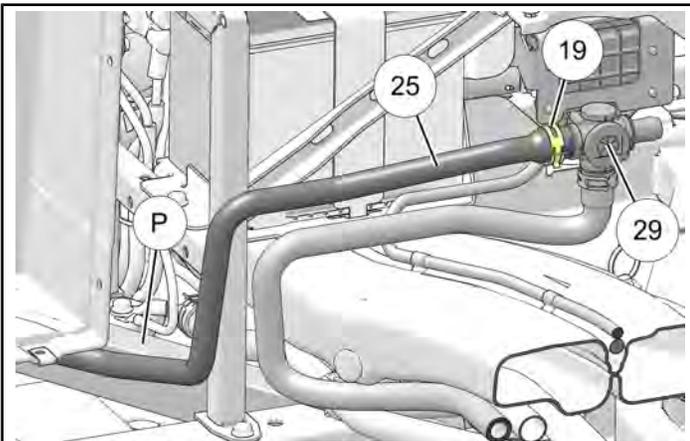
- b. Locate existing 1/2 inch diameter coolant hose connecting oil cooler outlet (L) to water pump inlet (M).



- c. Use two hose pinch-off pliers to clamp existing hose approximately 3 inches from each side of cut location (N) as shown, then cut hose. Do not remove either hose segment at this time.
- d. Secure hose (25) to **RIGHT (PASSENGER) SIDE** of 3-way valve (29) using clamp (19).

NOTICE

View looking rearward.
Non-crew vehicle shown; crew vehicle similar.



- e. Route opposite end of hose (25) across top of air intake duct, down seat structure, then rearward along **OUTSIDE** of vehicle frame (P) to water pump inlet (M).

Verify the following:

- Hose cannot rub against vehicle components or contact moving parts
- Hose cannot make contact with hot engine or exhaust components
- Hose is not kinked at any point along its length

- f. Trim hose (25) to proper length for connection to water pump inlet (M).

TIP

In next step coolant will flow from water pump inlet fitting when clamped coolant hose is removed. To minimize coolant loss ensure heater hose and hose clamp are ready for installation.

- g. Remove existing hose segment (along with one pinch-off pliers) from water pump inlet (M), then immediately secure trimmed hose (25) to water pump inlet using new clamp (18). Discard hose segment and old clamp.



6. Install **HOT SUPPLY** heater hose between 3-way valve and engine

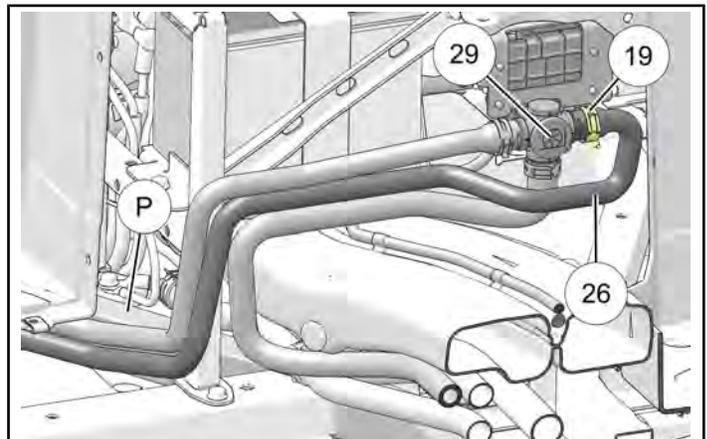
NOTICE

Final hose routing shown in Step 8 below.

- a. Secure hose (26) to **LEFT (DRIVER) SIDE** of 3-way valve (29) using clamp (19).

NOTICE

View looking rearward.
Non-crew vehicle shown; crew vehicle similar.

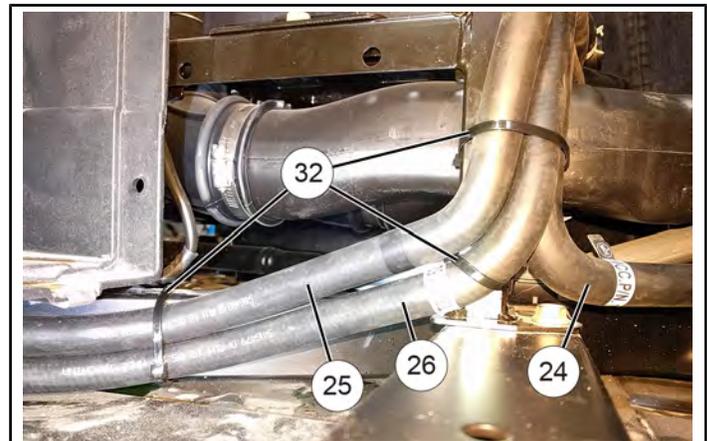
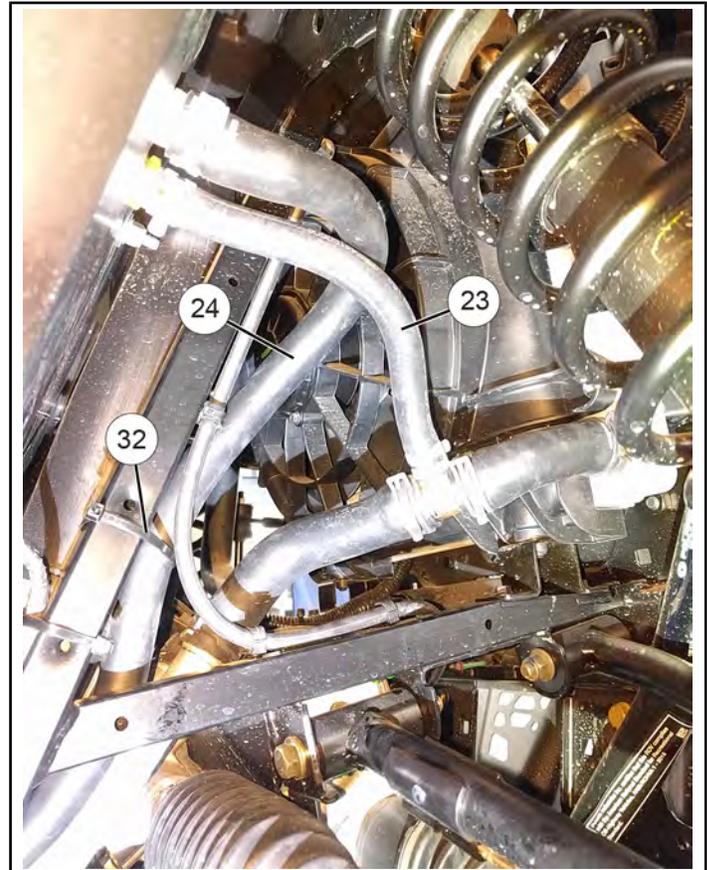


- b. Route opposite end of hose ②⑥ across top of air intake duct, down seat structure, then rearward along OUTSIDE of vehicle frame ① towards oil cooler outlet ①.

Verify the following:

- Hose cannot rub against vehicle components or contact moving parts
- Hose cannot make contact with hot engine or exhaust components
- Hose is not kinked at any point along its length
- c. Trim hose ②⑥ to proper length for connection to existing oil cooler outlet hose (NOT directly to oil cooler).

- 8. Secure all hoses using cable ties ③② to prevent contact with hot components, sharp edges, or moving parts.



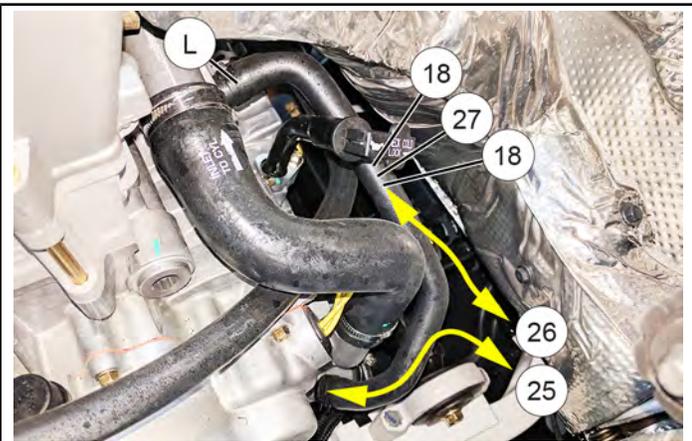
IMPORTANT

Short formed segment of existing oil cooler outlet hose must remain attached to oil cooler outlet ① to prevent contact with exhaust components.

- d. Join trimmed hose ②⑥ to existing oil cooler outlet hose using union fitting ②⑦ and two clamps ①⑧. Do NOT attach heater hose ②⑥ directly to oil cooler.

NOTICE

Union fitting included in splice kit along with additional parts not used for heater installation.



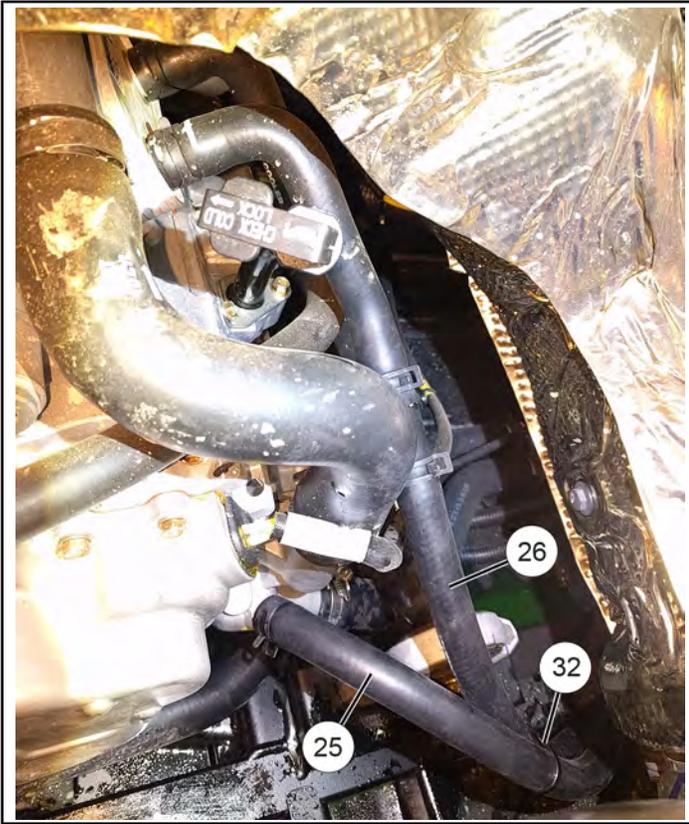
- 7. Remove hose pinch-off pliers near oil cooler outlet ① and pinch-off pliers on hose ②③ between hose fitting ① and tee fitting ②① (see Step 3).

IMPORTANT

No pinch-off pliers should remain installed.

NOTICE

Hoses ②⑤ and ②⑥ are tied to each other in the following illustration.



9. Properly dispose of any drained coolant per local and/or state regulations.

PREPARE VEHICLE TO BLEED COOLING SYSTEM

Reinstall upper storage compartment, instrument cluster/hood, and upper dash cupholder. See previous section **PREPARE VEHICLE FOR INSTALLATION**, Steps 6–8.

BLEED COOLING SYSTEM

Two bleed procedures are provided: one with the front end of the vehicle **LIFTED**, and another with the vehicle **LEVEL**. Where bleed steps differ, both procedures are called out.

TIP

Performing the **LIFTED** procedure is faster, easier, and generally results in a more complete system bleed.

NOTICE

It is suggested two people perform the **LEVEL** procedure: one to fill radiator, and one to monitor bleed screw.

⚠ WARNING

Always wear safety goggles and proper shop clothing when performing this procedure. Failure to do so may result in severe injury or death.

⚠ WARNING

Follow all chemical manufacturer instructions and safety precautions. Failure to follow all manufacturer instructions and precautions may result in severe injury or death.

1. Reconnect black negative (-) cable to battery, then reinstall under-seat storage compartment(s).

- If performing **LEVEL** procedure, proceed to Step 3.

If performing **LIFTED** procedure, properly lift and safely support front of vehicle 12–18 inches above rear of vehicle.

⚠ WARNING

DO NOT USE JACK TO STABILIZE OR SUPPORT VEHICLE. **Chocks** must be used to stabilize vehicle prior to lifting. **Blocks or jack stands** must be used to support vehicle after lifting.

Failure to properly chock and block vehicle may allow vehicle to fall, resulting in severe injury or death.

NEVER place any part of your body under lifted vehicle without properly chocking and blocking vehicle.

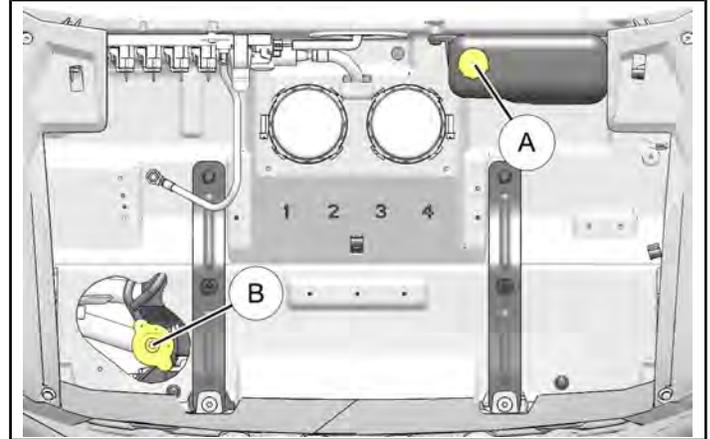
Observe the following:

- Vehicle must be on **FIRM, LEVEL, and DRY SURFACE** to permit safe jacking.
 - Ensure vehicle transmission is in “**PARK**” and ignition switch is in “**OFF**” position.
 - Securely chock **FRONT AND REAR** sides of **BOTH** rear tires to prevent vehicle from moving.
 - SUPPORT VEHICLE WITH BLOCKS OR JACK STANDS** designed for that purpose and which have adequate weight capacity.
 - FOLLOW ALL INSTRUCTIONS** included with jack, blocks, jack stands, and any other equipment used.
- Allow engine to cool to room temperature.
 - Place drain pan in position:
 - LEVEL** procedure: Beneath engine
 - LIFTED** procedure: Beneath radiator

⚠ WARNING

Do NOT remove radiator pressure cap when system is hot. Hot cooling system will be pressurized, and opening system will result in uncontrolled release of hot coolant, resulting in severe burns or other injuries.

- Remove recovery bottle cap **(A)** and radiator pressure cap **(B)**. Fill recovery bottle to **MAX COLD** line and radiator to filler neck with **Polaris Antifreeze 50/50 Pre-Mix**. Leave both caps off at this time.



- Open heater core valve.
 - Turn ignition key to “**ON**” position. Do NOT start engine.
 - Turn heater temperature control to full **HOT**. Wait 10 seconds.
 - Turn ignition switch to “**OFF**” position and remove key.

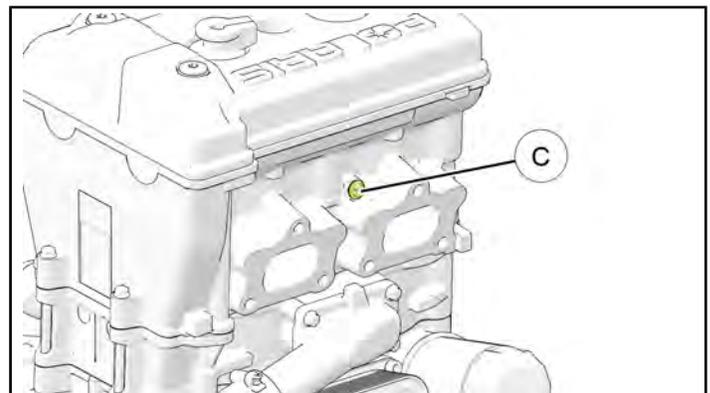
NOTICE

Heater fan speed position is irrelevant.

- Bleed engine block.
 - Raise vehicle bed.
 - Use 5/16 inch socket to loosen bleed screw **(C)** at front of engine until escaping air can be heard (approximately 2 full turns). Do NOT remove bleed screw.

NOTICE

Exhaust system shown partially transparent for clarity.



- c. Add **Polaris Antifreeze 50/50 Pre-Mix** to radiator as coolant fills heater system. Stop filling when a steady stream of coolant drains from bleed screw ③.
- d. Close bleed screw ③ and torque to specification.

TORQUE
7 ft. lbs. (10 Nm) ± 10%

- e. Fill recovery bottle to MAX COLD line and reinstall cap ①.
 - f. **LEVEL** procedure: Fill radiator to filler neck and reinstall pressure cap ②.
8. Start engine, leaving heater temperature control at full hot and turning heater fan to high speed.

⚠ WARNING

LEVEL procedure: Do NOT remove radiator pressure cap when system is hot. Hot cooling system will be pressurized, and opening system will result in uncontrolled release of hot coolant, resulting in severe burns or other injuries.

IMPORTANT

LIFTED procedure: Radiator pressure cap remains OFF throughout entire bleed procedure.

9. Allow engine to idle until radiator fan has cycled 2 times, **OR** until 215° F (102° C) temperature limit is reached.

While engine is warming up perform the following steps:

- a. Monitor engine/coolant temperature at all times. If temperature exceeds 215° F (102° C), then IMMEDIATELY shut off engine, allow engine to cool to room temperature, and re-bleed system.
- b. Monitor coolant level as follows:
 - **LEVEL** procedure: Monitor coolant level in recovery bottle. Add coolant as required.

NOTICE

If leaks are present cooling system may not draw coolant from recovery tank.

- **LIFTED** procedure: Monitor coolant level in radiator (cap remains OFF). Add coolant as required.

NOTICE

Coolant may periodically “burp” out of radiator filler neck as air exits system.

- c. Inspect system for leaks. Repair leaks as required, allowing engine to cool to room temperature before opening system.

10. Test heater operation. If inadequate heat is present allow engine to cool to room temperature, then re-bleed system using other bleed procedure (**LIFTED** or **LEVEL**, as applicable).

11. Allow engine to cool to room temperature.

⚠ WARNING

Do NOT remove radiator pressure cap when system is hot. Hot cooling system will be pressurized, and opening system will result in uncontrolled release of hot coolant, resulting in severe burns or other injuries.

12. Remove recovery bottle cap ① and radiator pressure cap ② (if installed), then fill recovery bottle to MAX COLD line and radiator to filler neck. Reinstall caps.

IMPORTANT

Periodically check coolant level during first few hours of operation.

13. Lower vehicle bed.

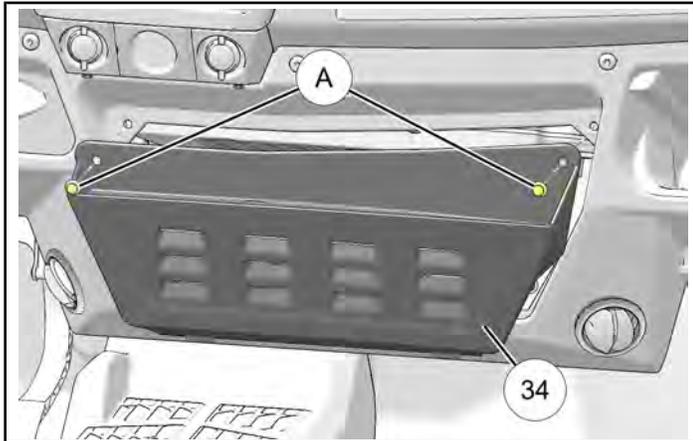
14. **LIFTED** procedure: Remove support equipment and lower vehicle. Follow all manufacturers instructions for equipment use.

15. Properly dispose of any drained coolant per local and/or state regulations.

RESTORE VEHICLE TO OPERATIONAL CONDITION

1. Reinstall right side floor liner. See previous section **INSTALL COOLING SYSTEM COMPONENTS**, Step 1.
2. Reinstall center floor console. See previous section **PREPARE VEHICLE FOR INSTALLATION**, Step 13.

3. Install lower storage compartment cover ③④ by inserting two lower tabs into dash panel, then secure using two retained push pin rivets ①.



4. Reinstall or close windshield (if applicable).
5. Reinstall hood, and lower vehicle bed.

FEEDBACK FORM

A feedback form has been created for the installer to provide any comments, questions or concerns about the installation instructions. The form is viewable on mobile devices by scanning the QR code or by clicking [HERE](#) if viewing on a PC.

