



Radiator Kit Serial Number 314000000 and After

Workman® HDX Utility Vehicle

Model No. 147-8199

Installation Instructions

Safety

Cooling System Safety

- Swallowing engine coolant can cause poisoning; keep out of reach from children and pets.
- Discharge of hot, pressurized coolant or touching a hot radiator and surrounding parts can cause severe burns.
 - Always allow the engine to cool at least 15 minutes before removing the radiator cap.
 - Use a rag when opening the radiator cap, and open the cap slowly to allow steam to escape.
- Do not operate the machine without the covers in place.
- Keep your fingers, hands and clothing clear of rotating fan and drive belt.
- Shut off the engine and remove the key before performing maintenance.



Installation

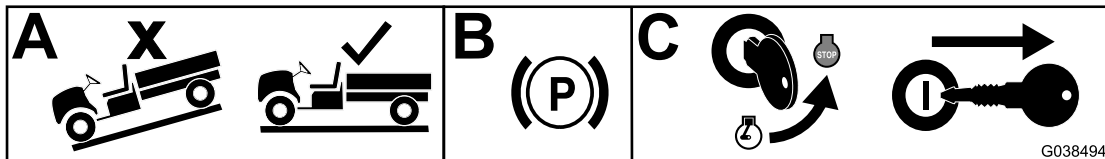
Loose Parts

Use the chart below to verify that all parts have been shipped.

Description	Qty.	Use
No parts required	–	Prepare the machine.
No parts required	–	Drain the engine coolant.
Spring latch	2	Install the radiator kit.
Hex-head bolt (5/16 x 5/8 inch)	4	
Upper mount plate	1	
Flange bushing	4	
Square nut	4	
Upper radiator mount	1	
Screw	5	
Radiator-mount assembly	1	
Jumper wire harness	1	
Lower mount plate	1	
Radiator assembly	1	
No parts required	–	Fill the cooling system.

Preparing the Machine

1. Park the machine on a level surface.
2. Engage the parking brake.
3. Shut off the engine and remove the key.



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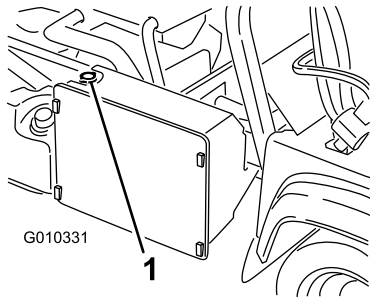
Draining the Engine Coolant

⚠ WARNING

If the engine has been running, the pressurized, hot coolant can escape and cause burns.

- Do not open or add coolant to the radiator; doing so introduces air into the system and results in engine damage. Add only engine coolant to the reservoir.
- Do not open the radiator cap when the engine is running.
- Use a rag when opening the radiator cap, and open the cap slowly to allow steam to escape.

1. Raise the bed and position the safety support on the extended lift cylinder to secure the bed.
2. Remove the radiator cap.

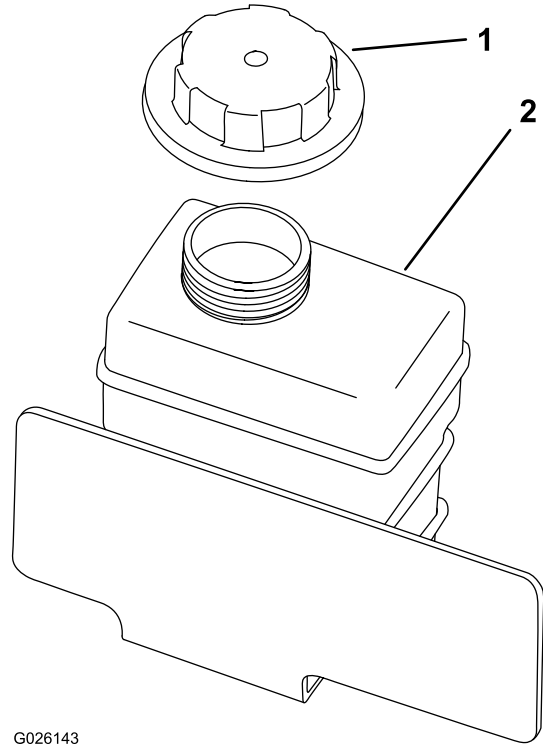


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1. Radiator cap

3. Remove the reserve-tank cap.



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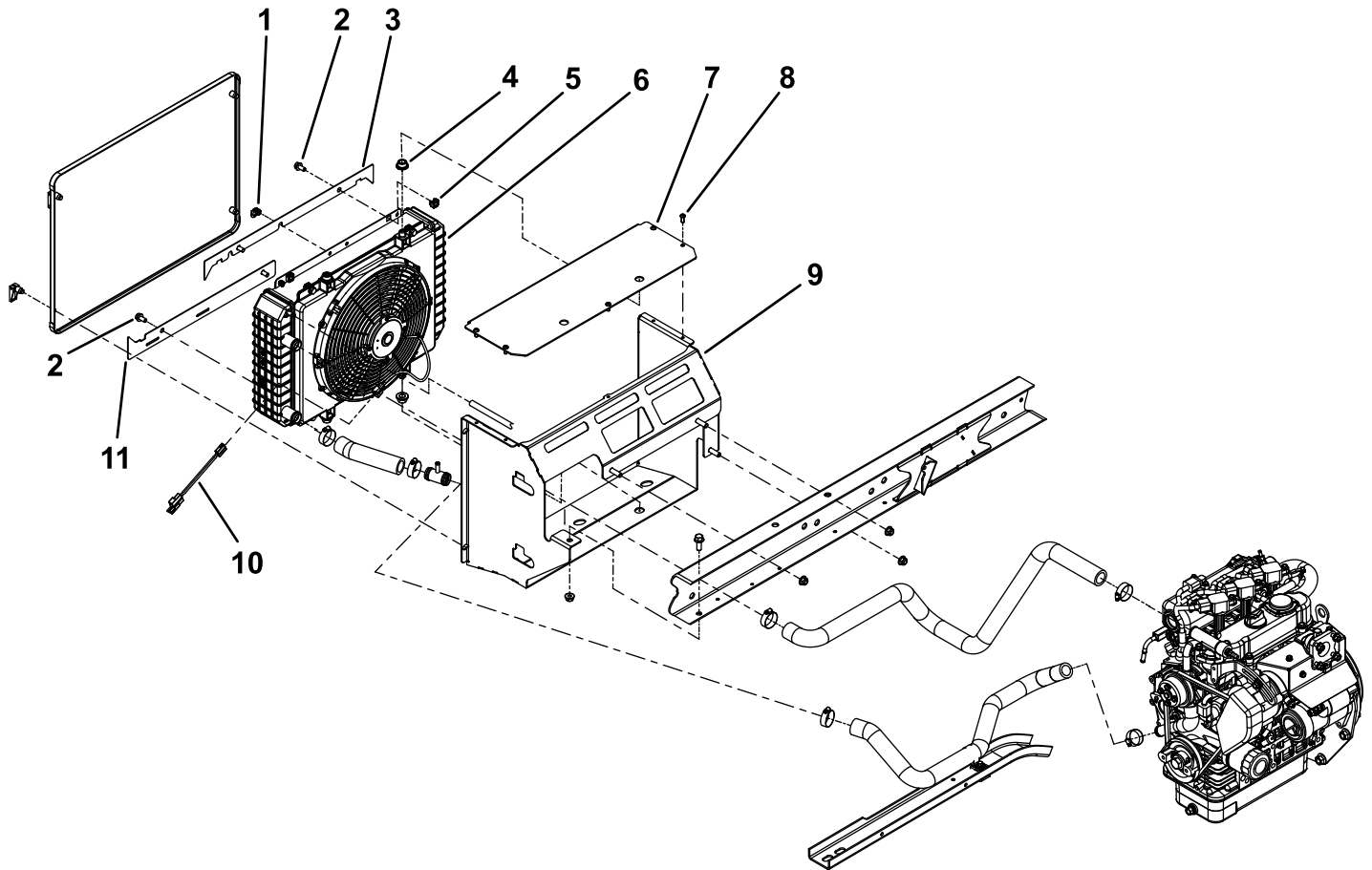
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1. Reserve-tank cap
2. Reserve tank

4. Disconnect the lower radiator hose and allow the coolant to flow into a drain pan.

Installing the Radiator Kit

1. Remove the existing radiator and associated hardware.
2. Remove the existing radiator-mount assembly and associated hardware.
3. Install the new radiator-mount assembly.
4. Install the radiator and the cooling fan and harness.
5. Install the upper radiator mount and associated hardware.
6. Install the lower mount plate and associated hardware.
7. Install the upper mount plate and associated hardware.
8. Cut the existing hose from the radiator to the reserve tank to 66 cm (26 inches) and route the hose as shown below.



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|------------------------------------|----------------------|-------------------------------|--------------------------|
| 1. Latch spring | 4. Flange bushing | 7. Upper radiator mount | 10. Jumper wire harness |
| 2. Hex-head bolt (5/16 x 5/8 inch) | 5. Square nut | 8. Screw | 11. Lower mounting plate |
| 3. Upper mounting plate | 6. Radiator assembly | 9. Radiator mounting assembly | |

Filling the Cooling System

Cooling System Specifications:

- **Cooling system capacity:** 3.7 L (4 US qt)
- **Coolant type:** a 50/50 solution of water and permanent ethylene-glycol antifreeze

Note: Your vacuum-fill tool may look different than the one shown below. Toro does not sell the vacuum-fill tool but you can purchase one from a tool vendor.

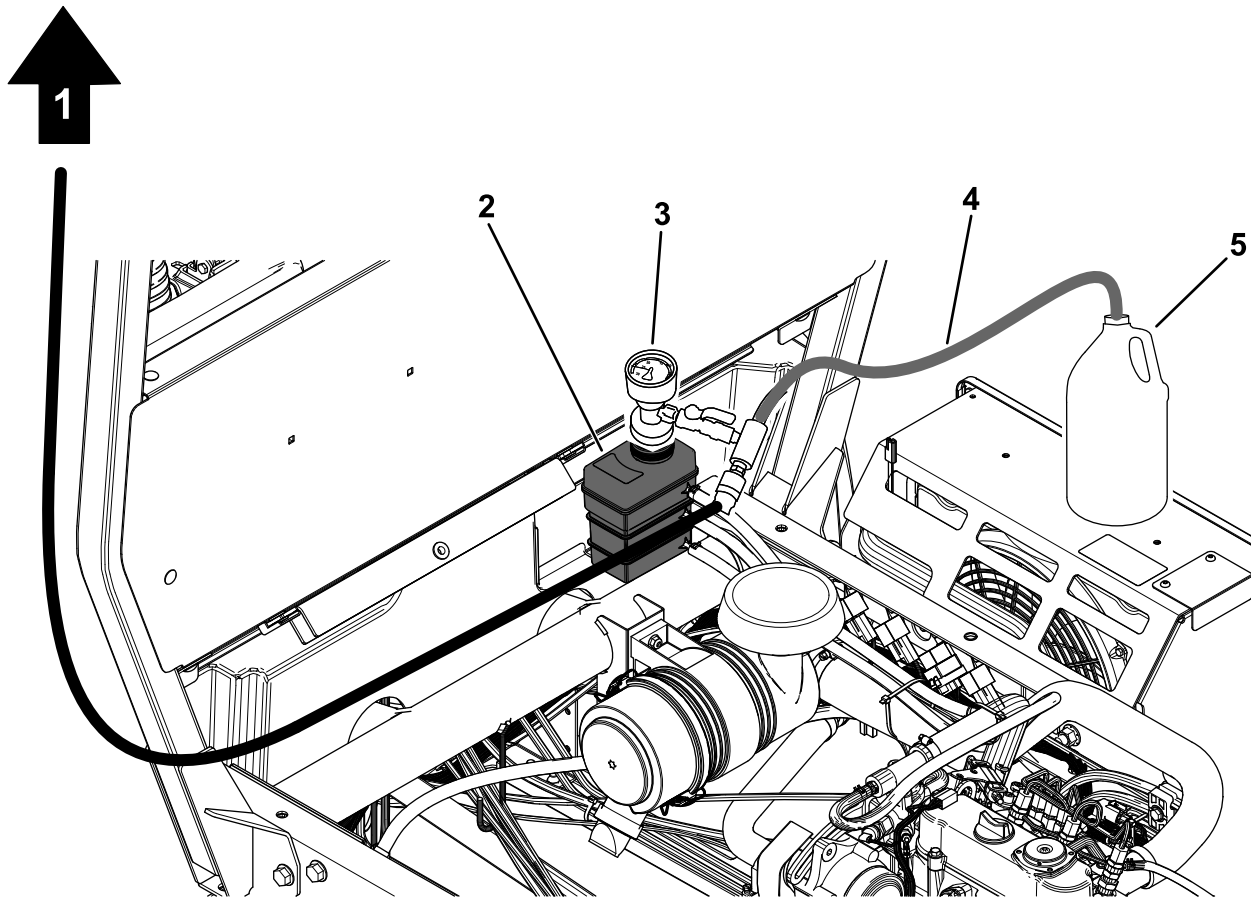


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1. With the cooling system empty, install the vacuum-fill tool onto the coolant-reserve tank.
2. Put the cooling system into a vacuum at -12 PSIG.
3. Place the vacuum-fill tool suction hose into the premixed coolant.
4. Fill the cooling system completely with the coolant and top off the coolant-reserve tank to the appropriate level.

Cooling system capacity: 3.7 L (4 US qt)

5. Install the reserve-tank cap.
6. Start and run the engine to the normal operating temperature and verify that the cooling system is filled and purged of any air in the system.



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1. Hose to shop air
2. Reserve tank
3. Vacuum-fill tool
4. Hose to the premixed coolant
5. Premixed coolant jug

Notes:



Count on it.