

# DF2000



# Operating Instructions

## Connection Procedure

1. Allow vehicle engine to cool down to prevent hot coolant from spraying out under pressure. Hot coolant can cause personal injury.
2. Connect power leads to vehicle battery (Red on Positive and Black on Negative).
3. **Make sure that the valves on the three long hoses are closed** (Drain, Fill and Recovery Drain).
4. Connect air supply to DF2000.
5. Remove radiator cap and overflow reservoir cap for conventional cooling systems, **or** remove pressure cap on radiator surge tank where applicable.
6. Push "POWER" switch to the "ON" position.
7. Push "SUCTION TUBE" switch to the "START" position and use the suction tube to draw coolant from the radiator until the coolant level is below the upper radiator hose/radiator inlet connection. Draw coolant from the overflow reservoir until empty, **or** use the suction tube to draw coolant from the surge tank until the surge tank is empty.
  - ✓ The suction tube may become clogged after drawing old coolant. To restore operation, disassemble, clean and reassemble the filter assembly on the suction tube hose. **DO NOT OPERATE THE SUCTION TUBE WITHOUT THE FILTER ELEMENT IN PLACE.** This could result in damage to the unit.
8. Push "SUCTION TUBE" switch to the "STOP" position.
9. Use the supplied hose clamp pliers to pinch off the overflow hose between the radiator cap neck and the overflow reservoir on conventional cooling systems, **or** use two hose clamp pliers to pinch off the two hoses connected to the surge tank.
  - ✓ Some GM trucks have a heater hose connected to the upper portion of the radiator. Use one of the supplied hose clamps to pinch off this hose as well as the overflow hose.
10. **Replace radiator cap** where applicable.
11. Disconnect upper radiator hose from radiator inlet and attach proper size female adaptor to radiator inlet and male adaptor to hose.
12. Connect the drain and fill hoses to the adaptors via the quick connectors and open the valves on the hoses.
13. Make sure the supply tank has an adequate supply of coolant/water mix. Also make sure the recovery tank is empty enough to complete the drain and fill process.
  - ✓ A level switch is used to turn off the drain and fill process if the recovery tank becomes full.
14. You are now ready to automatically drain and fill the cooling system.

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## Drain and Fill Procedure

1. Push the "START DRAIN AND FILL CYCLE" switch.
2. The machine will automatically:
  - A - Drain the coolant from the vehicle cooling system,
  - B - Evacuate the cooling system to remove all the air,
  - C - Fill the coolant system with new coolant,
  - D - Pressurize the coolant system to check for leaks,
  - E - Automatically shut off when cycle is complete and no leaks are found, and
  - F - Equalize coolant system pressure to zero to facilitate easy and safe disconnect.
3. The Drain and Fill process is now complete.

## Disconnect Procedure

1. **Close the valves on the drain and fill hoses.**
2. Slowly remove the radiator cap and remove the hose clamp pliers from the overflow hose, **or** remove the hose clamp pliers from the two hoses connected to the surge tank.
3. Push "SUCTION TUBE" switch to the "START" position and use the suction tube to draw coolant from the radiator until the coolant level is below the upper radiator hose/inlet connection, **or** use the suction tube to draw coolant from the surge tank if water entered the tank after disconnecting the hose clamp pliers.
4. Push "SUCTION TUBE" switch to the "STOP" position.
5. Disconnect the drain and fill hoses from the adaptors and remove the adaptors from the radiator inlet and radiator hose. Reconnect the radiator hose to the inlet connection.
6. Top off the radiator and fill the overflow reservoir to the proper levels with coolant, **or** fill surge tank with coolant to the proper level.
7. **Replace radiator cap and overflow reservoir cap, or replace surge tank cap.**

## Recovery Tank Drain Procedure

1. **Close the valves on the drain and fill hoses.**
2. Position the recovery waste tank drain hose into the proper waste container.
3. Push "EMPTY RECOVERY TANK" switch to the "START" position and open the valve on the recovery tank drain hose.
4. Close the valve on the recovery tank drain hose and push "EMPTY RECOVERY TANK" switch to the "STOP" position when the tank is empty.

## Top Off Procedure

(Adding Coolant to Reservoir and Radiator/Surge Tank)

1. Close the valves on the drain and fill hoses.
2. Push "SUCTION TUBE" switch to "START" position.
3. Place the fill hose (female coupler) in position to top off reservoir, radiator or surge tank and open fill hose valve.
4. Close valve when complete and turn off suction tube and power switch.