FCO CA11809: ThermoFlex Wide II Coolant Upgrade

Document number: 719-00838A Rev A

Product

- Kodak® ThermoFlex® Wide II

FCO priority

Upon customer request

Background

Some regions or customers may have health, safety, and environment (HSE) regulations that restrict the use of ethylene glycol at particular sites. Any ThermoFlex Wide customer that requests an upgrade to HSE-friendly propylene glycol should be upgraded.

Solution

Replace the fittings and hoses that are not compatible with the new coolant. Replace the coolant.

Time required

2 hours

Parts required

Part Number	Part Name	Quantity
512-00433A	Coolant upgrade kit SLV	1

Tools required

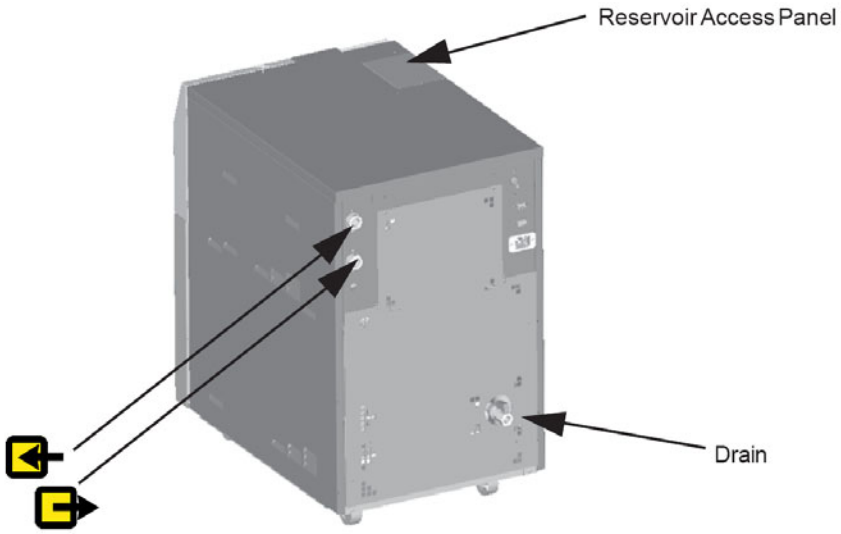
- Utility knife
- Hex key set
- Flat-head screwdriver
- Paper towel
- Combination wrench set or adjustable wrenches

Procedure

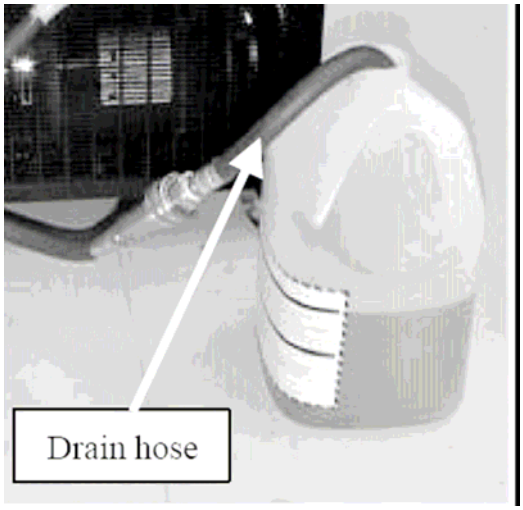
Draining the Coolant from the Cooling System

1. Move the carriage to approximately the center position at 1100 mm (43.31 in.).
2. Open the table.
3. Turn off the ThermoFlex Wide II device.

4. Disconnect the hose labeled “out” (connected to the return port labeled) from the chiller.



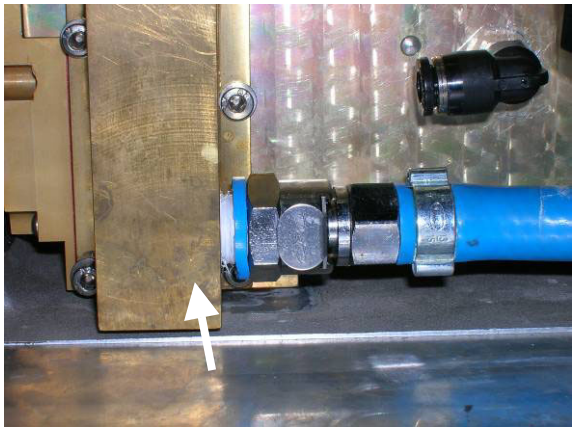
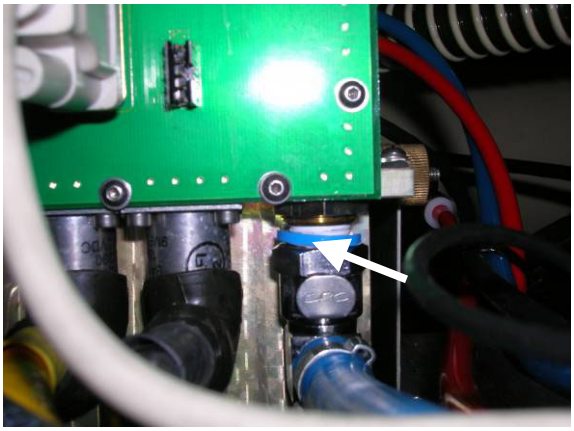
5. Connect the drain hose (attached to the hose assembly with a cable tie) to the disconnected hose.
6. Place the open end of the drain hose in an empty 4-liter container.



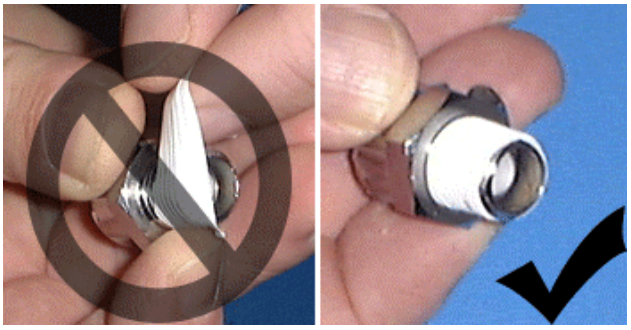
7. Turn on the ThermoFlex Wide II device to start the chiller pump. If the chiller pump does not start, press the chiller Start button.
8. Turn off the device when the fluid stops flowing.
9. Pour 1/3 of a jug of the new coolant (090-00326A) into the chiller reservoir and repeat steps 7 and 8.
10. Disconnect the remaining coolant hose from the chiller.
11. Turn off the circuit breaker on the back of the chiller.

Checking for Upgraded Head Coolant Couplings

1. Blue rings on the inlet and outlet fittings on the head indicate that the head couplings are compatible with the new coolant. If the blue rings are present, go to the next section—*Upgrading the External Hoses and Chiller Couplers.*

2. If the blue rings are not present, replace the head couplings.
3. Open kit 512-00325A and remove the two new coolant connectors (336-00301).
4. Cover the threaded portion of the new connectors with the Teflon® tape (56-3396) in the kit:
   a. Wind the tape clockwise around the threads (in the same direction as the threads).
   b. Make sure that there are at least two layers of tape and that you carefully align the tape with the end of the connector.



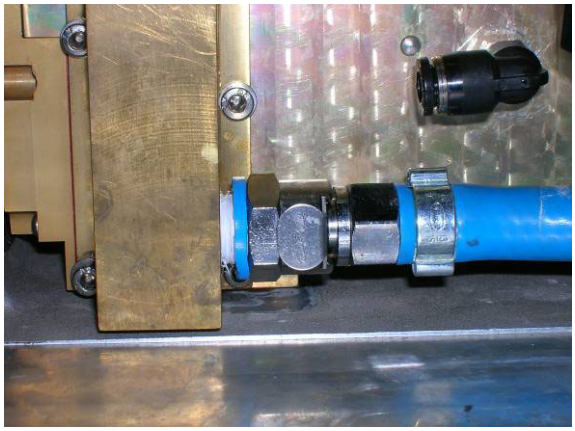
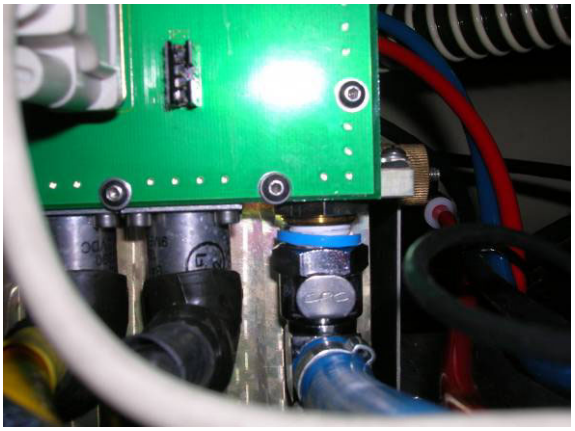
5. Mount a blue washer (304-00234) on the end of each new connector.



6. Using the ¾-in. socket (690-00600B) in the kit and a ratchet or adjustable wrench, unscrew both coolant connectors from the thermal head.
   Be careful not to damage the hotlink (BNC) connector when removing the coolant connectors.

   Note: For the socket to fit properly, you must press the release button on the top of the connector.

7. Carefully clean any remaining sealant from the threaded connector holes.
   Make sure that there is no debris on the threading inside the thermal head.
8. Thread the new connectors into the thermal head until they are finger-tight.
9. Using the ¾-in. socket (690-00600B) in the kit, tighten the connectors at least one more full turn or until the connector is 4 mm from the thermal head. If necessary, keep turning until the fittings are oriented as shown.

Upgrading the External Hoses and Chiller Couplers

1. Disconnect the drain hose from the coolant return hose and discard it. Note how the drain hose is secured so that you can attach the new one in the same manner.
2. Use cable ties to secure the new drain hose (50-1628B) to the hose assembly.
3. Remove the quick-connect couplers from the ends of the disconnected hoses.
4. Clean any old sealant from the tapered threads on the hoses, apply Teflon tape to the threads, and attach the new couplers (336-0401 and 336-0402) from the kit.

   Note: Make sure to replace the respective couplers with the same type as the old ones.

5. Remove the quick-connect couplers from the chiller.
6. Clean any old sealant from the threads of the 90° elbows, apply Teflon tape to the threads of both elbows, and install the new couplers (336-0401 and 336-0402) from the kit.

   Note: Make sure to replace the respective couplers with the same type as the old ones.

7. Reconnect the coolant hoses to the chiller.

Replacing the Internal Hoses

1. Remove the center back panel of the ThermoFlex Wide II device.
2. Disconnect the coolant hoses from the thermal imaging head.
3. Note the type of coupling on each hose and then cut the couplings from the hoses. Use the end of the ferrule to make a straight cut, and remove as short a length as possible.



4. Slide two hose clamps over the ends of each hose so that the clamp joins are pointing in opposite directions.
5. Push a blue ring onto the barbed end of each coupling.
6. Push the new couplings into the hoses such that the hose is tight to the ring, *and* the ring is tight against the body of the coupling.

   Note: Make sure to replace the couplers with the same type as the old ones.

7. Position the hose clamps next to each other, and against the body of the coupling as shown. Orient the hose clamps so that the screwdriver slots face the same direction.



8. Gradually tighten the hose clamps. Alternate between the two clamps on each hose until all clamps are tight.
9. Connect the new couplings to the head.

Refilling the Cooling System with the New Coolant

1. Remove the cover plate from the top of the chiller and remove the reservoir cap.
2. Fill the reservoir with the premixed coolant (090-00326A) to the bottom of the filler neck. See the **COOLANT INFORMATION** on the container for handling precautions.
3. Check to make sure that the **Low Fluid Level** light on the front panel goes out.
4. Turn on the circuit breaker on the back of the chiller.
5. Turn on the ThermoFlex Wide II device. This will also turn on the chiller. If the chiller does not turn on, press the chiller power button.
6. As the cooling system hoses fill with coolant, the level in the reservoir will go down. Add coolant slowly until the level remains stable.
7. Make sure that the chiller is circulating coolant as it should.
8. Check for leaks, especially around the newly installed fittings.
9. Close the reservoir cap and replace the top plate.
10. Clean the top of the reservoir access panel with a clean cloth or wipe and 50/50 isopropyl alcohol/water.
11. Apply the label from the kit on the clean panel top.

FCO 100 Label #	15
Material disposition	Dispose of the old (pink) coolant and fittings, in compliance with local regulations. If a hazardous material depot is not available to receive the used coolant, send it back to Vancouver for proper disposal.
Technical contact	John Funk
Date submitted	14 March 2007
Last updated	08 May 2007