

SERVICE MANUAL BULLETIN

This Service Manual Bulletin is prepared by the Publications Department of New Flyer Industries Canada ULC. Refer to details below.

SMB-177

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APPLICABILITY					
VEHICLE LENGTH	<input type="checkbox"/> 30ft.	<input type="checkbox"/> 35ft.	<input type="checkbox"/> 40ft.	<input type="checkbox"/> 60ft.	<input checked="" type="checkbox"/> ALL
VEHICLE TYPE	<input checked="" type="checkbox"/> Xcelsior®	<input type="checkbox"/> MiDi®	<input type="checkbox"/> Invero®		<input type="checkbox"/> ALL
	<input type="checkbox"/> Low Floor	<input type="checkbox"/> High Floor			
FUEL TYPE	<input checked="" type="checkbox"/> Diesel	<input checked="" type="checkbox"/> Diesel/Electric	<input checked="" type="checkbox"/> CNG	<input type="checkbox"/> LNG	<input type="checkbox"/> ALL
	<input type="checkbox"/> Fuel Cell	<input type="checkbox"/> Trolley/Electric	<input type="checkbox"/> Battery/Electric		
SUBJECT	HVAC Coolant Hose Inspection				
SECTION TITLE	PM - PREVENTIVE MAINTENANCE				
DETAILS	<p>This bulletin provides new inspection and replacement requirements for the coolant hoses located above the SDS enclosure installed on your New Flyer vehicle.</p> <p>This bulletin applies to all Xcelsior® models fitted with a front rooftop HVAC unit manufactured by Thermo King or MCC.</p> <p>Make this Service Bulletin available to service personnel to inform them of changed information.</p>				

1. Quarterly Preventive Maintenance

1.1. HVAC Coolant Hose Inspection

Inspect the overhead HVAC coolant hoses on a quarterly basis as follows:

1. Open the SDS enclosure and locate the two coolant hoses above the SDS upper shelf. See “Fig. 1: HVAC Coolant Hoses” on page 2.

2. Open the center aisle HVAC access door and locate the opposite ends of the two coolant hoses. See “Fig. 2: Coolant Hoses Access” on page 2.

3. Inspect hoses for any evidence of leakage or weeping at the end fittings. Replace both hoses if leakage or weeping is evident. Refer to 2.1. “HVAC Coolant Hose Replacement” on page 3 in this bulletin for replacement procedure.

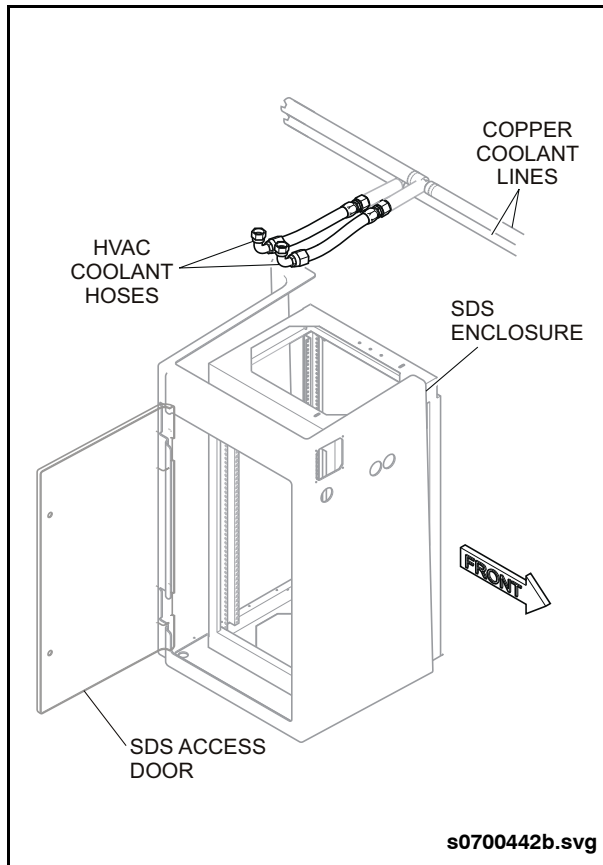


Fig. 1: HVAC Coolant Hoses

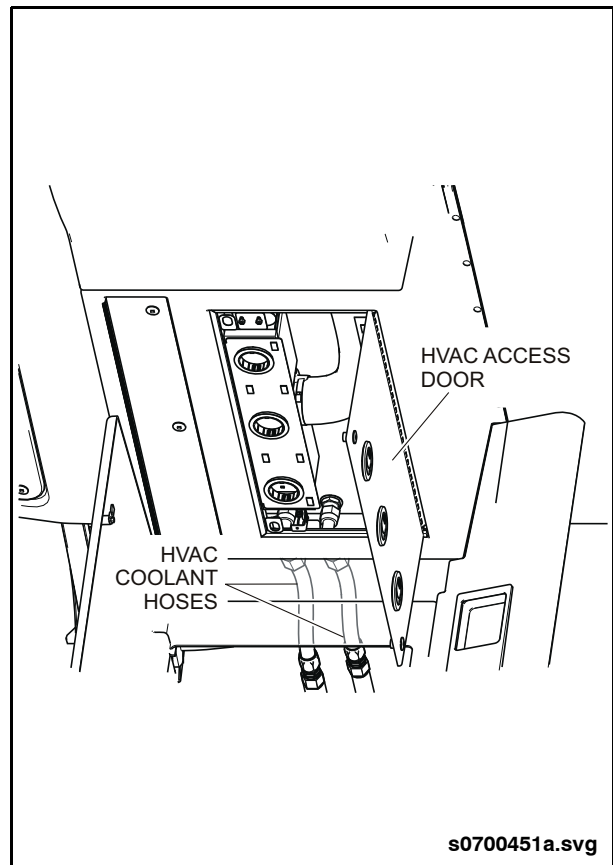


Fig. 2: Coolant Hoses Access

2. Four Year Preventive Maintenance

Open the SDS access door and confirm whether a spill tank assembly is installed above the SDS enclosure.

- ☐ Refer to 2.1. “HVAC Coolant Hose Replacement” on page 3 of this bulletin if a spill tank assembly is not installed.
- ☐ Refer to 2.2. “HVAC Coolant Hose Replacement with Spill Tank Assembly” on page 4 of this bulletin if a spill tank assembly is installed.

2.1. HVAC Coolant Hose Replacement



Allow heating system to cool and relieve system pressure. Keep away from hot coolant and surfaces to avoid injury.

Replace the HVAC coolant hoses, located above the SDS enclosure, every four years.

1. Set the Battery Disconnect switch to the OFF position.
2. Close the coolant supply and return valves, located under the driver’s platform and at the booster pump location in the engine compartment.
3. Drain the coolant from the rooftop HVAC unit by disconnecting the coolant hoses under the driver’s platform and drain into a suitable container.



DO NOT allow coolant to drip onto electronic equipment in the SDS enclosure when removing the HVAC coolant hoses. Use plastic sheets or similar means to protect any electronic equipment located beneath the HVAC coolant hoses.

4. Open the SDS enclosure and locate the two coolant hoses above the SDS upper shelf. See “Fig. 1: HVAC Coolant Hoses” on page 2.
5. Loosen the coolant hoses at the connection to the copper lines and drain into a suitable container. Disconnect the hoses from copper line once coolant has completely drained.
6. Open the center aisle HVAC access door and locate the opposite ends of the two coolant hoses.
7. Use a backup wrench and loosen each coolant hose fitting from the HVAC unit and allow any coolant to drain into a suitable container.
8. Disconnect and remove both hoses from the SDS enclosure. Discard hoses.
9. Install new hoses, ensuring threads on mating fittings are dry. Torque hoses, using a backup wrench, to 108 to 113 ft-lb. (146 to 153 Nm).
10. Reinstall the coolant hoses under the driver’s platform. Torque hose clamps to 80 in-lb. and torque again to 80 in-lb. after 30 minutes.

NOTE:

If using power torque driver, ensure tool RPM does not exceed 75 RPM.

11. Open the coolant supply and return shutoff valves located below the driver’s platform and at the booster pump location in the engine compartment.
12. Set the Battery Disconnect switch to the ON position.
13. Fill and deaerate the cooling/heating system. Refer to Section 6 & 10 of your New Flyer Service Manual for fill and deaeration procedure.
14. Check for leaks and repair as required.

2.2. HVAC Coolant Hose Replacement with Spill Tank Assembly



Allow heating system to cool and relieve system pressure. Keep away from hot coolant and surfaces to avoid injury.

Replace the HVAC coolant hoses, located above the SDS enclosure, every four years.

1. Set the Battery Disconnect switch to the OFF position.
2. Close the coolant supply and return valves, located under the driver's platform and at the booster pump location in the engine compartment.
3. Drain the coolant from the rooftop HVAC unit by disconnecting the coolant hoses under the driver's platform and drain into a suitable container.



DO NOT allow coolant to drip onto electronic equipment in the SDS enclosure when removing the HVAC coolant hoses. Use plastic sheets or similar means to protect any electronic equipment located beneath the HVAC coolant hoses.

4. Locate the drain hose and shutoff valve at the lower front section of the SDS enclosure. See "Fig. 3: HVAC Coolant Hoses" on page 5.
5. Open the shutoff valve at the end of the hose and drain any coolant from the primary collection tank. Close the shutoff valve once all coolant has been drained.
6. Open the SDS enclosure and locate the two coolant hoses above the SDS upper shelf.
7. Loosen the hose clamps and disconnect the two coolant hoses connected to the 90° fittings on the spill tank assembly.
8. Remove the fasteners that attach the spill tank assembly to the SDS rack structure and remove the spill tank assembly.
9. Locate the two coolant hoses that pass through the funnel and skirt assembly.
10. Loosen the coolant hoses at the connection to the copper lines and drain into a suitable container. Disconnect the hoses from copper line once coolant has completely drained.
11. Open the center aisle HVAC access door and locate the opposite ends of the two coolant hoses.
12. Use a backup wrench and loosen each coolant hose fitting from the HVAC unit and allow any coolant to drain into a suitable container.
13. Disconnect and pull both hoses out through the rubber skirt on the funnel assembly. Discard hoses.

14. Install new hoses, ensuring threads on mating fittings are dry. Torque hoses, using a backup wrench, to 108 to 113 ft-lb. (146 to 153 Nm).
15. Replace the spill tank assembly, using original fasteners.
16. Reinstall coolant hoses on the 90° fittings on the spill tank assembly. Torque hose clamps to 80 in-lb. wait 30 minutes, then torque again to 80 in-lb.

NOTE:

If using power torque driver, ensure tool RPM does not exceed 75 RPM.

17. Reinstall the coolant hoses under the driver's platform. Torque hose clamps to 80 in-lb. and torque again to 80 in-lb. after 30 minutes.

NOTE:

If using power torque driver, ensure tool RPM does not exceed 75 RPM.

18. Open the coolant supply and return shutoff valves located below the driver's platform and at the booster pump location in the engine compartment.
19. Set the Battery Disconnect switch to the ON position.
20. Fill and deaerate the cooling/heating system. Refer to Section 6 & 10 of your New Flyer Service Manual for fill and deaeration procedure.
21. Check for leaks and repair as required.

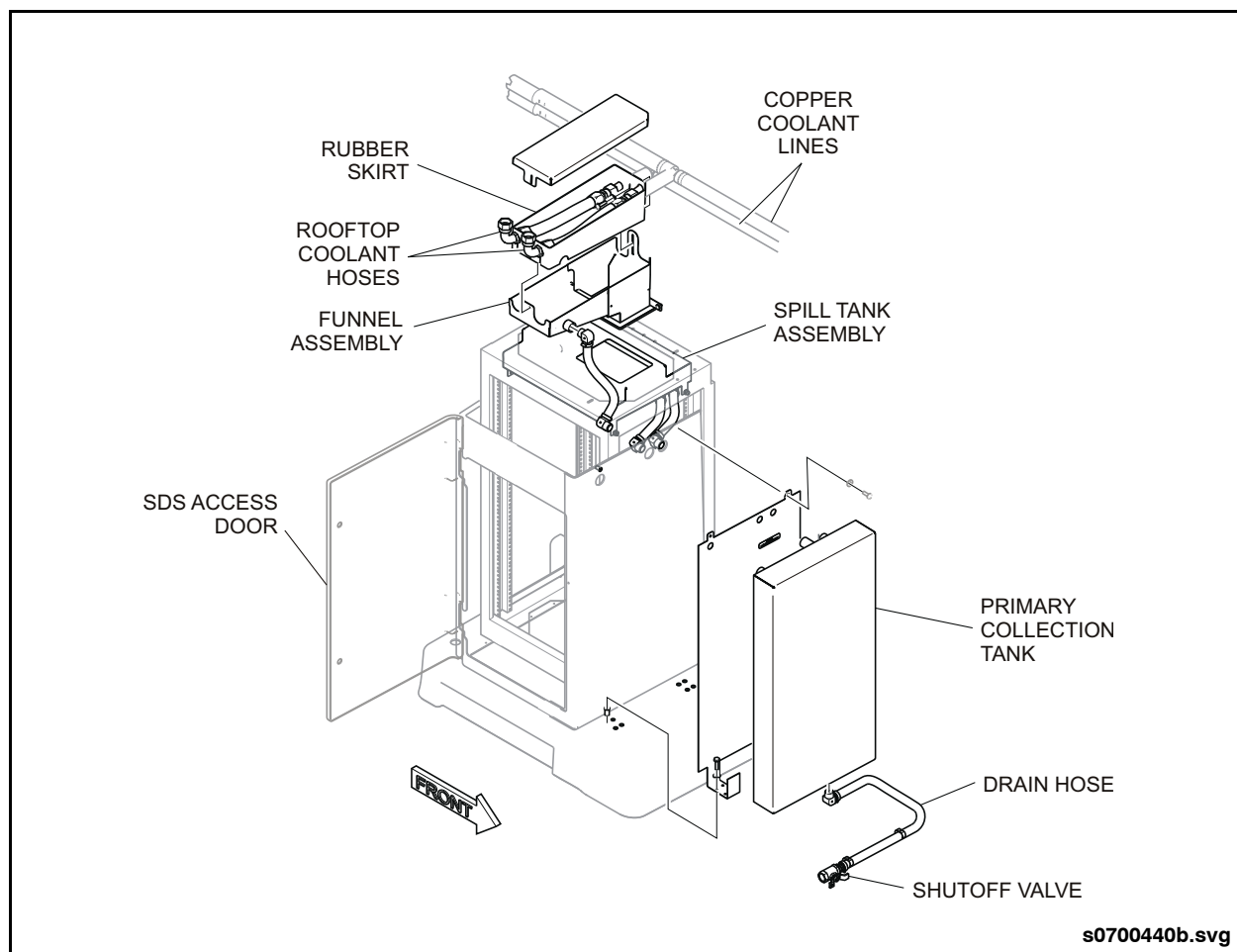


Fig. 3: HVAC Coolant Hoses