The FINAL CHARGE Global Extended Life Coolant (“Final Charge coolant”) Fleet Conversion Program is a simple and cost-effective way to convert a properly maintained cooling system with less than 300,000 original miles of on-road use (3 years or 6,000 hours of off-highway use) currently using a conventional or fully formulated coolant, to Final Charge coolant’s patented formula. The Final Charge Fleet Conversion Program:

- Eliminates the need to perform a complete cooling system flush and fill
- Reduces vehicle and driver downtime
- Significantly reduces the quantity and cost of new coolant required at conversion

Completely flushing the cooling system and filling with Final Charge 50/50 prediluted coolant is the preferred conversion method, as this can remove most of the phosphate, silicate and other total dissolved solids that build up over time in a cooling system using a conventional or fully formulated coolant. However, a properly maintained cooling system can be converted to Final Charge coolant without a complete flush and fill using FINAL CHARGE Converter (“Final Charge Converter”).

Results of the following steps 1 through 4 will determine if the vehicle is a candidate for conversion using Final Charge Converter, or if a cooling system flush and fill with Final Charge 50/50 prediluted coolant is required. A summary of steps 1 through 4 is outlined in the FINAL CHARGE Global Extended Life Coolant Fleet Conversion Program Procedures Flow chart.

**FINAL CHARGE FLEET CONVERSION PROGRAM**

**Step 1: Test The Cooling System**

Whether you convert your vehicle using Final Charge Converter, or if you perform a complete cooling system flush and fill using Final Charge 50/50 prediluted coolant, the following maintenance must be performed prior to conversion.

- **Coolant Filter**: Check the cooling system to see if a cooling system filter is installed. If a cooling system filter is installed, the filter can be replaced with a non-chemically charged filter. (Final Charge coolant eliminates the need for Supplemental Coolant Additives (SCAs) used with conventional and fully formulated coolants.)

- **Check all cooling system hoses and clamps to ensure they are in good condition and well secured.**

- **Perform a pressure check of the cooling system and radiator cap. If the truck’s cooling system is defective or leaking in any way, DO NOT ADD Final Charge Converter. Any defects or leaks should be repaired first, then a complete cooling system flush and fill using Final Charge 50/50 prediluted coolant should be performed.**

**Step 2: Vehicle Mileage**

- **Vehicle has LESS THAN 300,000 original miles of on-road use (3 years of 6,000 hours of off-highway use) – PASS. Proceed to step 3.**

- **Vehicle has MORE THAN 300,000 original miles of on-road use (3 years of 6,000 hours of off-highway use) – FAIL. Drain the coolant and refill with Final Charge 50/50 prediluted coolant. DO NOT ADD Final Charge Converter.**

**Step 3: Visually Inspect The Coolant**

Draw a coolant sample from the cooling system. Visually inspect the coolant for contamination with sediment or oil. The coolant should appear clean (not cloudy) and, depending on brand, transparent green, purple or yellow in color. If the coolant is brown in color, appears to be loaded with sediment (or rust), or contaminated with oil, the cooling system should be flushed and then filled with Final Charge 50/50 prediluted coolant. DO NOT ADD Final Charge Converter. If the coolant passes the visual inspection, proceed to step 4.
Step 4: Test Coolant

Test the current coolant to determine its condition and suitability for conversion. Using a traditional 3-way heavy-duty coolant test strip, test the coolant to determine nitrite concentration, pH level and freeze point. A refractometer can also be used to test the coolant’s freeze point. Follow the test strip instructions provided. If the coolant fails any test, DO NOT ADD Final Charge Converter. Drain the old coolant and refill with Final Charge 50/50 prediluted coolant. Take the following actions based on the test strip results.

A. Nitrite Test:

• Nitrite level is between 800 ppm and 3,000 ppm – PASS. Proceed to step 4, part B (pH test).

• Nitrite level is less than 800 ppm – FAIL. Vehicle may experience wet sleeve cylinder liner pitting when using a conventional coolant with low nitrite levels (below 800 ppm). Drain the coolant and refill with Final Charge 50/50 prediluted coolant. DO NOT ADD Final Charge Converter.

• Nitrite level is greater than 3,000 ppm – FAIL. Radiator damage may occur in vehicles using a conventional coolant with high nitrite levels (above 3,000 ppm). Drain the coolant and refill with Final Charge 50/50 prediluted coolant. DO NOT ADD Final Charge Converter.

B. pH Test:

• pH level is between 8 and 11 – PASS. Proceed to step 4, part C (freeze point test).

• pH level is less than 8 – FAIL. Conventional coolants with a low pH level (less than 8) may be corrosive to cooling system metals, primarily cast iron, steel, copper and brass. Drain the coolant and refill with Final Charge 50/50 prediluted coolant. DO NOT ADD Final Charge Converter.

• pH level is greater than 11 – FAIL. Conventional coolants with a high pH level (greater than 11) may be corrosive to cooling system metals, primarily aluminum and solder. Drain the coolant and refill with Final Charge 50/50 prediluted coolant. DO NOT ADD Final Charge Converter.

C. Freeze Point Test:

If freeze point adjustment is needed, based on the following guidelines, use the Coolant Conversion Table 1 (attached) to adjust the freeze point at the time of conversion.

• Freeze point is between +5° F and -75° F - PASS. Adjust the freeze point, if needed, to -34° F using FINAL CHARGE Concentrate Coolant at the time of conversion. Proceed to Step 5.

• Freeze point is greater than +5° F or less than -75° F – FAIL. Drain the coolant and refill with Final Charge 50/50 prediluted coolant. DO NOT ADD Final Charge Converter.

Step 5: Add Final Charge Converter

Using Coolant Conversion Table 1 (attached) add the required amount of Final Charge Converter and, if coolant freeze point adjustment is needed, add Final Charge concentrate coolant to the cooling system. Be sure to include the remote mount auxiliary tank capacity when determining total cooling system capacity. Add Final Charge Converter and, if needed, Final Charge concentrate coolant to the radiator or surge tank (do not add to the overflow tank). USE CAUTION when opening a hot cooling system. You will need to drain some of the current coolant in the system to allow room to add Final Charge Converter and, if needed, Final Charge concentrate coolant.
Identify each unit that was converted to Final Charge coolant, by adding Final Charge Converter or by draining and refilling the system with Final Charge 50/50 prediluted coolant, with a Final Charge coolant radiator sticker. The sticker should be applied to a clean, dry surface on the radiator by the fill cap or the surge tank, or both.

Maintaining The Cooling System After Converting To Final Charge coolant.

To maintain the protection provided by Final Charge coolant, the proper level of Final Charge coolant’s patented inhibitor system must be present in the cooling system. This can be achieved by:

- Using ONLY Final Charge concentrate or Final Charge 50/50 prediluted coolant to top-off the cooling system
- If Final Charge coolant is not available, topping off the cooling system with water
- Maintaining between a 45% to 60% coolant and 55% to 40% water mix in the cooling system
- Do Not Add SCAs to the cooling system or use chemically charged filters
- Adding Final Charge Extender after an additional 300,000 miles of on-road use (3 years of 6,000 hours of off-highway use) after conversion

Proper maintenance is the key to maintaining your cooling system.

Proper maintenance includes using only Final Charge coolant when topping off and adding Final Charge Extender after 300,000 miles or 6,000 service hours from the time of conversion.

- Vehicles with a properly maintained cooling system and less than 300,000 original miles that are converted to Final Charge coolant using Final Charge Converter should realize an additional 600,000 miles of on-road use (6 years or 12,000 service hours of off-highway use) by adding Final Charge Extender after approximately 300,000 miles of on-road use (3 years or 6,000 service hours of off-highway use) following the conversion to Final Charge coolant.

- Vehicles with a properly maintained cooling system that are converted to Final Charge coolant by draining and refilling the cooling system with Final Charge 50/50 prediluted coolant should realize as much as an additional 600,000 miles of on-road use (6 years or 12,000 service hours of off-highway use) up to a maximum of 900,000 total vehicle service miles (18,000 total service hours) by adding Final Charge Extender after approximately 300,000 miles of on-road use (3 years or 6,000 service hours of off-highway use) following the conversion to Final Charge coolant.

Old World Industries does not warrant against nor assume liability for any engine or cooling system failures which are the result of any preexisting condition of the engine and/or the cooling system, including but not limited to failure to maintain the engine and cooling system according to OEM guidelines prior to use of Final Charge Converter, Final Charge Coolant; or failure to maintain the cooling system as directed after conversion.
### FINAL CHARGE® GLOBAL EXTENDED LIFE COOLANT

**COOLANT CONVERSION TABLE**

*Use to convert a vehicle currently using a conventional or fully formulated coolant*

#### FINAL CHARGE GLOBAL EXTENDED LIFE COOLANT FLEET CONVERSION TABLE

<table>
<thead>
<tr>
<th>Freeze Point</th>
<th>+15°F</th>
<th>+10°F</th>
<th>+5°F</th>
<th>-10°F</th>
<th>-15°F</th>
<th>-20°F</th>
<th>-25°F</th>
<th>-30°F</th>
<th>-35°F</th>
<th>-40°F</th>
<th>-50°F</th>
<th>-60°F</th>
<th>-70°F</th>
<th>-80°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Coolant</td>
<td>20%</td>
<td>25%</td>
<td>30%</td>
<td>35%</td>
<td>40%</td>
<td>45%</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>65%</td>
<td>70%</td>
<td>75%</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>System Capacity (Gallons)</td>
<td>Drain The Coolant And Refill With Final Charge 50/50 Prediluted Coolant</td>
<td>Drain The Cooling System To Allow Room To ADD Required Quantity Of Final Charge Concentrate Coolant/Final Charge Converter (gallons)</td>
<td>Drain The Coolant And Refill With Final Charge 50/50 Prediluted Coolant</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Less than 4</td>
<td>1.00 / .25</td>
<td>.75 / .25</td>
<td>.50 / .25</td>
<td>.25 / .25</td>
<td>0 / .25</td>
<td>0 / .25</td>
<td>0 / .25</td>
<td>0 / .25</td>
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<td>0 / .25</td>
<td>0 / .25</td>
<td>0 / .25</td>
<td>0 / .25</td>
</tr>
<tr>
<td>4 to 8</td>
<td>2.00 / .50</td>
<td>1.50 / .50</td>
<td>1.00 / .50</td>
<td>.50 / .50</td>
<td>0 / .50</td>
<td>0 / .50</td>
<td>0 / .50</td>
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<td>0 / .50</td>
<td>0 / .50</td>
<td>0 / .50</td>
<td>0 / .50</td>
</tr>
<tr>
<td>9 to 12</td>
<td>3.00 / .75</td>
<td>2.25 / .75</td>
<td>1.50 / .75</td>
<td>1.00 / .75</td>
<td>.75 / .75</td>
<td>0 / .75</td>
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<td>0 / .75</td>
</tr>
<tr>
<td>13 to 16</td>
<td>4.00 / 1.00</td>
<td>3.00 / 1.00</td>
<td>2.00 / 1.00</td>
<td>1.00 / 1.00</td>
<td>0 / 1.00</td>
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</tr>
<tr>
<td>17 to 20</td>
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<td>3.75 / 1.25</td>
<td>2.50 / 1.25</td>
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<td>0 / 1.25</td>
</tr>
<tr>
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<td>4.50 / 1.50</td>
<td>3.00 / 1.50</td>
<td>2.00 / 1.50</td>
<td>1.50 / 1.50</td>
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<td>0 / 1.50</td>
<td>0 / 1.50</td>
</tr>
<tr>
<td>25 to 28</td>
<td>7.00 / 1.75</td>
<td>5.25 / 1.75</td>
<td>3.50 / 1.75</td>
<td>2.00 / 1.75</td>
<td>1.75 / 1.75</td>
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<td>0 / 1.75</td>
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</tr>
<tr>
<td>29 to 32</td>
<td>8.00 / 2.00</td>
<td>6.00 / 2.00</td>
<td>4.00 / 2.00</td>
<td>2.00 / 2.00</td>
<td>2.00 / 2.00</td>
<td>0 / 2.00</td>
<td>0 / 2.00</td>
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<td>0 / 2.00</td>
</tr>
</tbody>
</table>

• For example, if you have a 16-gallon cooling system with a freeze point of -12°F, you will need to drain 3 gallons from the cooling system and then add 2 gallons of Final Charge Concentrate Coolant to adjust the freeze point and also add 1 gallon of Final Charge Converter to the cooling system.