Preserve Your Investment....

If your engine is out of operation and use is not expected short term, precautions should be taken to protect your engine from damage and ensure proper operation when you return to full production.

If an engine is not in use, oil can run off the cylinder walls, piston rings, main bearings, connecting rod bearings, crankshaft, gears, and other parts that normally receive lubrication.

This lack of lubricant allows corrosion to begin to appear on the metal, especially in areas of high humidity.

Preserve your investment by following the engine storage and preservation procedures recommended by Caterpillar. Your Cat® dealer has all the supplies and reference material you will need to preserve your investment.

### Parts Needed to Preserve Your Engine

<table>
<thead>
<tr>
<th>Part</th>
<th>Part Numbers and Available Quantities</th>
</tr>
</thead>
</table>
| Volatile Corrosion Inhibitors (VCI) Oil | 4C-6792 – 0.946 L (1.0 qt)  
                                        | 4C-6794 – 18.950 L (5.0 gal)  
                                        | 185-4770 – 18.9 L (5.0 gal) EAME* only                                                  |
| Cat® Extended Life Coolant (ELC)   | Contact your local Cat dealer for part numbers and available container sizes.                         |
| Cat Antifreeze                    | 8C-3684 – 3.78 L (1 gal)  
                                        | 8C-3686 – 208 L (55 gal)                                                        |
| Cooling System Conditioner       | 3P-2044 – 0.946 L (1 qt)  
                                        | 5P-2907 – 208 L (55 gal)  
                                        | 6V-3542 – 0.237 L (0.25 qt)  
                                        | 8T-1589 – 0.473 L (0.5 qt)                                                      |

*EAME – Europe, Africa, Middle East

Part numbers and package quantities may vary by region. For a complete listing of parts needed, please contact your local Cat dealer.

### Equipment Needed to Preserve Your Engine

<table>
<thead>
<tr>
<th>Part</th>
<th>Part Numbers and Available Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprayer</td>
<td>331-3626</td>
</tr>
<tr>
<td>Rust Preventive</td>
<td>Cat 450 Rust Preventive Oil</td>
</tr>
<tr>
<td>Oils &amp; Lubricants</td>
<td>Refer to the Operations &amp; Maintenance Manual for your engine</td>
</tr>
</tbody>
</table>
| Multipurpose Grease               | 5P-0960  
                                        | 129-1952 EAME* only                                                                                  |
| Filters                           | Refer to the Parts Book for your engine                                                               |
| Coolant Conditioner Test Kit      | 4C-9301                                                                                               |
| Coolant and Battery Tester        | 245-5829                                                                                              |
| Volatile Corrosion Inhibitors (VCI) Oil | 4C-6792 – 0.946 L (1.0 qt)  
                                        | 4C-6794 – 18.950 L (5.0 gal)  
                                        | 185-4770 – 18.9 L (5.0 gal) EAME* only                                                  |
| Calibration Fluid                 | 6V-6067 – 208.1 L (54.9 gal)  
                                        | 6V-6068 – 18.9 L (5.0 gal)  
                                        | 185-4665 – 18.9 L (5.0 gal) EAME* only                                                  |

*EAME – Europe, Africa, Middle East
Storage Procedures – Up to One Year for All Diesel and Natural Gas Engines

1. Clean the engine of any dirt, rust, grease, and oil. Inspect the exterior. Paint areas that contain paint damage with good quality paint.

2. Remove any dirt from the air cleaner(s). Check all seals, gaskets, and the filter element for damage.

3. Apply lubricant to all points shown in the Operation & Maintenance Manual, “Lubrication & Maintenance Table” for your equipment.

4. Drain and replace the crankcase oil and change the oil filter(s). For the proper procedure, refer to the Operation & Maintenance Manual for your equipment.

5. If equipped with an air starter, fill the reservoir with a mixture of 50 percent VCI oil and 50 percent engine oil.

6. Add VCI oil to the crankcase at the rate of three to four percent by volume.
   **Note:** If the engine crankcase is full, drain enough engine oil so the mixture can be added.

7. Remove the air filter element(s). Turn the engine at cranking speed with the throttle control in FUEL OFF position. Use a sprayer to add a mixture of 50 percent VCI oil and 50 percent engine oil into the air inlet or turbocharger inlet.
   **Note:** VCI oil mixture can also be added to the inlet by removing the plug for checking turbocharger boost pressure. The minimum application rate is 5.5 mL per L (3 oz per 1000 cu in) of engine displacement.

8. Use a sprayer to apply a 50 percent VCI oil and 50 percent engine oil mixture into the exhaust openings. The minimum application rate is 5.5 mL per L (3 oz per 1000 cu in) of engine displacement. Seal the exhaust pipe, including any drain holes in the muffler.

9. Remove the fuel from the secondary fuel filter housing or empty and reinstall the spin-on fuel filter element to remove any dirt and water. Drain the fuel injection pump (sleeve metering only).

   **Note:** VCI oil mixture can be added to the inlet by removing the plug for checking turbocharger boost pressure. The minimum application rate is 5.5 mL per L (3 oz per 1000 cu in) of engine displacement.

10. Apply a small amount of oil to the threads on the fuel tank filler neck and install the cap. Seal all openings to the tank to prevent evaporation of the fuel and preservative.

11. Spray a thin amount of VCI oil mixture (50 percent VCI oil and 50 percent engine oil) on the flywheel, ring gear teeth, and starter pinion. Install the covers to keep in the VCI vapors.

12. Apply a heavy amount of multipurpose grease (MPGM) to all outside parts that move, such as rod threads, ball joints, linkage, etc.
   **Note:** Install all covers and ensure that tape has been installed over all openings, air inlet, exhaust openings, flywheel housing, crankcase breather(s), dipstick tubes, etc.

13. Under most conditions it is best to remove the batteries and use them in another application. As an alternative, place them in storage where they can be periodically checked and electrically charged again when needed.

14. Loosen all belts (fan, alternator, etc.).

15. Place a waterproof cover over the engine. Ensure the engine cover is secure, but loose enough to allow air to circulate around the engine to prevent damage from condensation.

16. Attach a tag to the engine with a notation of the date that the unit was preserved.

17. Remove the waterproof cover every two or three months and check the engine for corrosion. If the engine has signs of corrosion at the check period, repeat the protection procedure.

For complete storage procedures, contact your local Cat dealer.