



## WINTER MAINTENANCE TIPS

Your equipment can be at risk when the temperatures drop below 50 degrees. It's critical that your machine's engine valve adjustment, ether start system, and cooling system be maintained at proper operating specifications. Let Carter Machinery inspect your equipment to prevent unnecessary downtime, short component life, or failures.

### START SYSTEM

With today's high performance engines, ether aid systems are critical to assist in starting machines. At startup, in cold conditions, diesel engines require a controlled amount of ether to reduce rough combustion and high cylinder pressures. The lack of this assistance can result in broken piston rings, piston scuffing, and broken pistons (especially in machines that have the older, mechanically controlled engines). It is critical that the ether starting system be operable and properly maintained.

### LUBRICANTS

Your machine Lubrication and Maintenance Guide provides recommendations for the proper weight of oils to use in cold weather. Oils that are too heavy for cold weather can result in oil pump starvation and cavitation which results in pump and bearing failures. In addition to using the proper weights of oil, it is very important to allow time for the machine to "warm up" before putting it into production. This will allow time for the bearings to become fully lubricated and the system to adjust to load conditions.

### COOLANT SYSTEM

Proper freeze protection is a must. In addition, acceptable water and coolant conditioner levels must be in order to prevent internal damage to steel and aluminum parts. Make sure you keep the radiator clean, belts and hoses in good condition, use water that meets the recommended specification, use proper antifreeze mix, add coolant conditioner on schedule, and take a coolant sample at each engine oil change interval. To assist in additional protection, joint coolant and supply water testing programs are available, as well as coolant test kits, which can be purchased through your local parts department.

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If you own or operate one of the models listed below, it's important to inspect and maintain your equipment before failures happen!

**Cat® 6020, 6015, 777, 785, 789, 990, 992, 993, 994, D10, and D11**

We're currently offering a **\$900 Winter Weather Inspection package**, see below for details!

# \$900 WINTER WEATHER INSPECTION\*

#### PACKAGE INCLUDES

- Ether System Check
- Coolant Check
- Coolant Sample
- Battery Load Test
- Fuel Sample
- Oil Sample

\*The \$900 Inspection Package includes parts and labor but excludes travel time and mileage.

Contact your Product Support Representative today to schedule your inspection!

**Carter**



**LET'S GET TO WORK.**