DIESEL ENGINE OIL

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere TORQ-GARD SUPREME PLUS-50™ engine oil is recommended. This oil is specially formulated to provide superior protection against high temperature thickening and wear as well as exceptional cold weather starting performance; these properties allow an extended drain interval and may result in longer engine life.

If John Deere TORQ-GARD SUPREME PLUS-50 engine oil and a John Deere oil filter are used, the oil and filter change interval may be extended by 50 hours.

John Deere TORQ-GARD SUPREME® engine oil is also recommended. Other oils may be used if they meet one or more of the following:

- API Service Classification CE or CD
- Military Specification MIL-L-2104E or MIL-L-2104D or MIL-L-2104C

SAE 5W20, SAE 5W30, and arctic oil viscosity grades meeting API Service Classification CC may be used, but oil and filter must be changed at one-half the normal interval.

Oils meeting Military Specification MIL-L-46167B may be used as arctic oils.
Gear Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere GL-5 Gear Lubricant is recommended.

Other oils may be used if they meet one or more of the following:

- API Service Classification GL-5
- Military Specification MIL-L-2105D
- Military Specification MIL-L-2105C
- Military Specification MIL-L-2105B

Oils meeting Military Specification MIL-L-10324A may be used as arctic oils.

Extrem Pressure or Multipurpose Grease

Use grease based on the expected air temperature range during the service interval.

John Deere Moly High Temperature EP Grease and John Deere High Temperature EP Grease are recommended.

Other greases that may be used are:

- SAE Multipurpose EP Grease with 3 to 5 percent molybdenum disulfide.
- SAE Multipurpose EP Grease.
- Greases meeting Military Specification MIL-G-10924C may be used as arctic grease.
ALTERNATIVE LUBRICANTS

Additional information on cold weather operation is available from your John Deere dealer.

Conditions in certain geographical areas may require special lubricants and lubrication practices which do not appear in this operator's manual. If you have any questions, consult your John Deere dealer to obtain the latest information and recommendations.

HYDRAULIC TRANSMISSION OIL

JOHN DEERE LOW VISCOSITY HY-GARD® transmission and hydraulic oil is recommended.

Oils that meet JOHN DEERE standards, or other oils meeting JOHN DEERE Standard JDMJ20B may be used.

See your John Deere dealer for information.

FUEL SPECIFICATIONS

Use ONLY clean, high-quality fuel.

Use Grade No. 2-D fuel at temperatures above 40° F (4° C).

Use Grade No. 1-D fuel at temperatures below 40° F (4° C).

Use Grade No. 1-D fuel for all air temperatures at altitudes above 5000 ft (1500 m).

IMPORTANT: Use fuel with less than 1.0 per cent sulfur.
- If possible, use fuel with less than 0.5 per cent sulfur.
- If fuel sulfur is more than 0.5 per cent, change engine oil and filter every 100 hours.

For maximum filter life, sediment and water should not be more than 0.10 per cent.

The cetane number should be 40 minimum.

If you operate your machine where air temperatures are normally low or where altitudes are high, you may need fuel with a higher cetane number.

Cloud Point—For cold weather operation:
- Cloud point should be 10° F 912° C) below lowest normal air temperature.
Fuels and Lubricants

FUEL STORAGE

NOTE: Diesel fuels stored for a long time may form gum and plug filters.

Do not depend on fuel filters to remove water.

If possible, install a water separator at storage tank outlet. (See your John Deere dealer for this part.)

Keep fuel in a clean container in a protected area.

IMPORTANT: Keep all dirt, scale, water or other foreign material out of fuel.

Water and sediment MUST BE removed before fuel gets to engine.

Store fuel drum on its side with plug up.

Do not use de-icers to remove water from fuel.

DO NOT USE GALVANIZED CONTAINERS

IMPORTANT: Diesel fuel stored in galvanized containers reacts with zinc coating on container to form zinc flakes.

• If fuel contains water, a zinc gel will also form. The gel and flakes will quickly plug fuel filters and damage fuel injectors and fuel pumps.

DO NOT USE brass-coated containers: Brass is an alloy of copper and zinc.

Store fuel in:

• Plastic containers.
• Aluminum containers.
• Specially coated steel containers made for diesel fuel.

DO NOT USE a galvanized container to store diesel fuel.
FILLING FUEL TANK

CAUTION: Handle fuel carefully.
- Do not smoke while you fill fuel tank or service fuel system.
- Fill fuel tank only to bottom of filler neck.

IMPORTANT: DO NOT permit dirt or trash to get into fuel system.

Fill fuel tank at end of each day’s operation or when fuel gauge shows 1/4 or less fuel in tank.

Fill fuel tank only to bottom of filler neck.

FUEL TANK CAPACITY

870 and 970 ........................................ 32 L (8.5 U.S. gal)
1070 .................................................. 40 L (10.6 U.S. gal)

LUBRICANT STORAGE

Your machine can operate at top efficiency only if clean lubricants are used.

Use clean containers to handle all lubricants.

Store them in area protected from dust, moisture, and other contamination.

Store drums on their sides.