



## Crankcase Oil

<b>Models</b>	Case	<b>6100</b>
	Twin-Pack	<b>6105</b>
	Bottle	<b>6107</b>
	Drum	<b>6109</b>

### GENERAL USE

Establishing a regular crankcase oil change schedule is one of the most important steps in preventative maintenance and assuring long pump life. Change initial fill after 50 hours running period. Change oil every 3 months or at 500 hour intervals. Longer oil change intervals may be possible depending on application and environmental conditions.

**Check for oil in the crankcase before starting your pump.** Running your pump without oil will VOID the warranty. Periodically inspect crankcase to assure the oil level is at the red dot or mid point on the bubble gauge. Remove the oil cap on the top of the crankcase and inspect for water or other contaminants in the oil. Change immediately if discolored or contaminated.

Refer to individual data sheet or service manuals for prescribed amount of oil for each pump crankcase and fill crankcase to designated level (usually to marking on oil gauge).

Pumps using wicks should be periodically lubricated through the access holes on the top front of the crankcase. See Tech Bulletin 024 on lubrication of the Lo-Pressure seals. Larger pumps often use oilers. Oilers should be filled at start-up and opened for a minimum of thirty minutes prior to start-up. Adjust drip rate after start-up according to operating cycle of pump. (Approximately 2-3 drops per hole per week for typical installation.)

The type of lubricant will be determined by the application, the compatibility with other system components and concern for contamination of the pumped liquid. See Tech Bulletin 024.

#### ⚠ CAUTIONS AND WARNINGS

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. CAT PUMPS does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Data sheet. CAUTIONS and WARNINGS can also be viewed online at [www.catpumps.com/cautions-warnings](http://www.catpumps.com/cautions-warnings) or can be requested directly from CAT PUMPS.

#### WARRANTY

View the Limited Warranty on-line at [www.catpumps.com/warranty](http://www.catpumps.com/warranty).

### FEATURES

- Custom blend CAT PUMPS oil.
- Premium-grade, petroleum-based, ISO 68 hydraulic oil.
- Most advanced additive package to protect against wear, oxidation, rust and corrosion.

### SPECIFICATIONS

	6100	6105	6107	6109
<b>Grade</b>				
<b>Custom Hydraulic</b>	ISO 68	ISO 68	ISO 68	ISO 68
<b>Capacity</b> .....	Case (12 - 21 oz.)	5 Gal. (2 - 2.5 Gal.)	Bottle (21 oz.)	Drum (30 Gal.)
<b>Weight</b> .....	17 lbs.	41 lbs.	21 oz.	243 lbs.
<b>Dimensions</b> .....	10 x 10 x 6.75" 15 x 15 x 9.5" 6 x 3 x 2" 18 x 29"			

### TYPICAL INSPECTION TESTS

Grade ASTM.....	315
Grade AGMA.....	2
API Specific Gravity, @60°F .....	29.5
Specific Gravity @60°F.....	0.88
Color ASTM.....	< 7.0
Flash Point COC °F .....	300°
Fire Point COC °F.....	424°
Pour Point °F Typical.....	-33°
<b>Kinematic Viscosity</b>	
104°F, cst.....	70.0
212°F, cst.....	10.2
Viscosity Index .....	135
Aniline Point °F .....	190°
Foam Test ASTM.....	Pass
Total Acid Number, mg*KOH/g .....	0.9
Total Base Number, mg*KOH/g .....	0.6
Carbon Residue, Rams, Wt. % .....	.026
Rust Test, ASTM D 665, A&B.....	Pass
Copper Corrosion, 3 Hrs.@212°F.....	1a

*"Customer confidence is our greatest asset"*

# MATERIAL SAFETY DATA SHEET

CONFORMS WITH OSHA FORM OMB NO. 1218-0072

**CRANKCASE OIL ISO 68  
SPECIAL FORMULA PREMIUM GRADE**

Date Prepared 12-01-2009

**I. COMPANY IDENTIFICATION - CHEMICAL INFORMATION**

CAT PUMPS  
1681 94th Lane NE  
Minneapolis, Minnesota, 55449

Emergency Telephone Number 800-424-9300  
Telephone Number for information 763-780-5440

Chemical Name &amp; synonyms: Petroleum-based, hydraulic oil with advanced additive package to protect against wear, oxidation, rust and corrosion.

Chemical Family: Petroleum hydrocarbon plus additives.

Freight Class: 65

**II. HAZARDOUS INGREDIENTS - IDENTITY INFORMATION****INGREDIENTS**

Specially refined mineral oils

Proprietary additives

Zinc dithiophosphate

CAS#	%	OSHA	OSHA	ACGIH	SKIN
Mixture	>90	5 mg/m <sup>3</sup> (PEL)*	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup> (TLV)	NO
Mixture	—	—	—	—	NO
68649-42-3	<0.5	—	—	—	NO

\* Applicable to oil mist, not defined for base oils

**III. PHYSICAL DATA**

- a. Boiling point (°F): >500°F (>260°C)
- b. Vapor pressure (mm Hg): Not determined.
- c. Vapor density (Air = 1): >1
- d. Solubility in water (%): Negligible
- e. Specific gravity (H<sub>2</sub>O = 1): 0.88@60°F (15.6°C)
- f. Percent volatile by volume: Negligible
- g. Evaporation rate: (n-Butyl Acetate=1) >1
- h. Appearance and odor: Greenish fluid, mild petroleum odor
- i. Melting point: Liquid

**IV. FIRE AND EXPLOSION HAZARD DATA**

- a. Flash point: >300°F
- b. Ignition temperature (°F): 730 estimated
- c. Flammable limitation: LEL 0.9% UEL: 7%
- d. Extinguishing media: Water Spray, Foam, CO<sub>2</sub>, Dry Chemicals
- e. Special fire fighting procedures: Use water spray to keep fire-exposed containers cool. If leak or spill has not ignited, use water spray to disperse the vapors. Utilize air-supplied breathing equipment in confined or enclosed areas.
- f. Unusual fire and explosion hazards: Empty containers can be dangerous; do not cut, weld, solder, drill or grind—explosion can result.
- g. HMIS Rating: Health - 1, Fire - 1, Reactivity - 0, Special Hazard - B

**V. REACTIVITY DATA**

- a. Stability: Stable
- b. Incompatible materials: Strong oxidizing materials and acids.
- c. Hazardous Decomposition Products: May form oxides of carbon, sulfur, phosphorus and nitrogen if combusted.
- d. Hazardous Polymerization: Will not occur.
- e. Conditions to avoid: High temperature and product contamination.

**VI. HEALTH HAZARD DATA**

- a. Route(s) of Entry: Inhalation Not a problem at room temperature/avoid mist  
Skin Avoid prolonged skin contact.  
Ingestion Possible
- b. Health Hazards (Acute and Chronic): Prolonged or repeated skin contact may cause irritation. Eye contact can cause discomfort. Ingestion can cause gastrointestinal distress.
- c. Carcinogenicity: NTP No  
IARC Monographs No  
OSHA Regulated No
- d. Medical Conditions: Generally Aggravated by Exposure: Product has a low order of toxicity. In normal use should not be harmful.

**Emergency and First Aid Procedures:**

- a. Eyes: Flush with clean, clear water until irritation subsides. If irritation persists, see a physician.
- b. Skin: Remove contaminated clothing, wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention.
- c. Inhalation: If overcome by inhalation of hot vapors, remove to fresh air. Seek immediate medical attention if necessary.
- e. Ingestion: Do not induce vomiting, contact a physician.

**VII. PRECAUTIONS FOR SAFE HANDLING AND USE**

- a. Steps to be taken in case material is released or spilled: Contain spill with use of sorbent media. Keep spill from entering sewers or waterways.
- b. Waste disposal methods: Disposal must be in accordance with local, state and federal regulations.
- c. Precautions to be taken in handling and storing: Keep containers closed when not in use. Store in cool, dry area away from sources of ignition.
- d. Other precautions: Do not pressurize, weld, cut, solder, or drill empty drums. Fumes can be explosive.

**VIII. CONTROL MEASURES**

- a. Respiratory Protection (Specify Type): Normally not needed.
- b. Ventilation: Local exhaust: Not Necessary  
Mechanical (General): Recommended  
Special: No Other: No
- c. Protective Gloves: Oil resistant.
- d. Eye Protection: Chemical goggles, splash shield.
- e. Other Protective Clothing or Equipment: Oil resistant apron if desired.
- f. Work/Hygienic Practices: Launder contaminated clothing before re-use. Cleanse skin thoroughly after contact. Properly dispose of contaminated leather articles and other materials which cannot be decontaminated.

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