MATERIAL SAFETY DATA SHEET

Dakota XHD 30; 0004
MSDS PREPARATION DATE: 1/3/14

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Information

Product Name: **Dakota XHD 30**
Product Description: Petroleum Oil; Lube Oil; Petroleum Hydrocarbon; Lubricant
Intended Use: Engine Oil
Product Code: 0004

Company Identification

Supplier: Diesel Dogs Companies
2091 Energy Park Drive
St. Paul, MN, 55108

Supplier General Contact Number: 1-800-437-1802
Emergency Number: Chemtrec 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

NFPA RATINGS:	Health	1	Flammability	1	Reactivity	0

EMERGENCY OVERVIEW

Appearance

Amber Fluid, Petroleum Odor

Health Hazards CAUTION!

May be harmful if swallowed.
May irritate eyes and skin.

POTENTIAL HEALTH EFFECTS

INHALATION

This product is not likely to present an inhalation hazard at normal temperatures and pressures. However, when aerosolizing, misting, or heating of this product, high concentrations of generated vapor or mist may irritate the respiratory tract (nose, throat, and lungs).

EYE CONTACT

May cause irritation

SKIN CONTACT

May cause irritation. Not likely to be absorbed through the skin in harmful amounts.

INGESTION

May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

MEDICAL CONDITIONS AGGRAVETED BY EXPOSURE

Individuals with pre-existing respiratory tract (nose, throat, and lungs) eye and/or skin disorders may have increased susceptibility to the effects of exposure.

SECTION 2: HAZARDS IDENTIFICATION (Continued)

CHRONIC

Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

POTENTIAL ENVIRONMENTAL EFFECTS

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Wt. Percent	Component	Synonym	CAS #
0 - 65	Highly refined petroleum lubricating oil	Lubricating oil base stock	Various*
0.5 – 1.5	Zinc Alkyl Dithiophosphate	Not Available	68649-42-3
0.1 – 0.5	Calcium long chain alkaryl sulfonate	Not Available	156105-31-6
0.1 – 0.5	Calcium borate	Not Available	12007-56-6

Component Related Regulatory Information

*Highly refined petroleum lubricating oil contains one or more CAS numbers listed as follows:
64741-88-4, 64742-52-5, 64742-54-7, 64742-55-8, 64742-58-1, 64742-57-0, 64742-01-4, 64742-62-7, 72623-83-7.
This product may be regulated, have exposure limits or other information identified as the following: Oil mist, mineral (8012-95-1).

SECTION 4: FIRST AID MEASURES

INHALATION

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

EYE CONTACT

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

SKIN CONTACT

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. If product is injected under pressure into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, a physician should immediately evaluate the individual as a medical emergency.

INGESTION

Do NOT induce vomiting. Immediately get medical attention. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything to an unconscious person by the mouth.

NOTE TO PHYSICIANS

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident.

SECTION 5: FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY

Sparks or flame. Products may burn, but does not ignite readily.

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Carbon dioxide, regular foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.

FIRE FIGHTING

Fire Fighting Instructions: Keep storage containers cool with water spray. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Hazardous Combustion Products: Decomposition and combustion materials may be toxic. Burning may produce sulfur oxides, aldehydes, ketones, carbon monoxide and unidentified organic compounds.

FIRE AND EXPLOSION HAZARDS

Heated containers may rupture. “Empty” containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact or static discharge.

FLAMMABILITY PROPERTIES

Flash Point (Method Used): 329°F (165°C) (minimum) (Cleveland Open Cup)
Flammable Limits In Air: Lower: Not Available Upper: Not Available
Autoignition Temperature: Not Available

HAZARD RATING
0= LEAST
1= SLIGHT FIRE
2= MODERATE
3= HIGH
4= EXTREME

NFPA 704 HAZARD IDENTIFICATION	
HEALTH HAZARD (BLUE)	1
HAZARD (RED)	1
REACTIVITY (YELLOW)	0
SPECIFIC HAZARD (WHITE)	

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **Section 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean spark-proof tool into a sealable container for disposal. Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

SECTION 7: HANDLING AND STORAGE

HANDLING

Keep away from sparks or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. This product has a low vapor pressure and is not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing and shoes.

SECTION 7: HANDLING AND STORAGE (Continued)

SHIPPING AND STORAGE

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain residue and can be dangerous.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES

Component Exposure Limits

Highly Refined Petroleum Lubricating Oil

ACGIH:	5mg/m^3 TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
	10 mg/m^3 STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)
OSHA Final:	5 mg/m^3 TWA (related to Oil mist, mineral)
OSHA Vacated:	5 mg/m^3 TWA (related to Oil mist, mineral)
NIOSH:	5 mg/m^3 TWA (related to Oil mist, mineral)
	10 mg/m^3 STEL (related to Oil mist, mineral)

Mineral Oil

ACGIH:	5mg/m^3 TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
	10 mg/m^3 STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)
OSHA Final:	5 mg/m^3 TWA (related to Oil mist, mineral)

ENGINEERING CONTROLS

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

PERSONAL PROTECTION

Respiratory Protection: No respiratory protection is normally required. Use NIOSH-certified P- or R-series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

Eye Protection: Where eye contact is likely, wear safety glasses; contact lens use is not recommended.

Skin Protection: Where skin contact is likely, wear neoprene, nitrile or equivalent protective gloves; use of natural rubber or equivalent gloves is not recommended. When product is heated and skin contact is likely, wear heat-insulating gloves, boots, and other protective clothing.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant face shield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

Personal Hygiene: Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard leather articles, such as shoes, saturated with these products.

Other Protective Equipment: Where spills and splashes are likely, facilities storing or using these

products should be equipped with emergency eyewash and shower, both equipped with clean water, in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

Physical State	Amber Liquid
Odor	Petroleum odor
Odor Threshold	N/A

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Molecular Weight	Not applicable
Specific Gravity	0.89 (Estimated) (water=1) (approximately)
Vapor Density	>1 (Air = 1)
Vapor Pressure	less than 0.1 mm Hg at 68°F (20°C)
Relative Density	0.89 g/cm^3 at 60°F (15.5°C)
Initial Boiling Point	High
Boiling Range	Not available
Freezing/Melting Point	Not available
pH	Not applicable
Evaporation Rate	Not available
Solubilty In Water	Insoluble
Flash Point	329°F (165°C) (minimum) (Cleveland Open Cup)
Flammability	Not available
Flammable Limits In Air	**LOWER-** Not available **UPPER-** Not available
Autoignition Temperature	Not available

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures. Avoid sparks, or flame.

INCOMPATIBILITY: Avoid oxidizing agents.

REACTIVITY: Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures.
Also see **Section 5: Hazardous Combustion Products.**

SECTION 11: TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE: Skin, Eyes, Ingestion, and Inhalation.

ACUTE EFFECTS

May be harmful if swallowed. May irritate eyes and skin. May cause throat irritation, nausea, vomiting and diarrhea. Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

REPEATED DOSE EFFECTS

Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

SENSITIZATION

Based on best current information, there is no known human sensitization associated with this product.

MUTAGENICITY: Experimental evidence suggests that this product does not cause mutagenesis.

CARCINOGENICITY

Based on best current information, there is no known carcinogenicity as regulated by OSHA; as categorized by ACGIH A1 or A2 substances; as categorized by IARC Group 1 Group 2A, or Group 2B agents as either known carcinogens or substances for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.

REPRODUCTIVE TOXICITY: Based on best current information, there is no known reproductive toxicity associated with this product.

TERATOGENICITY: Based on best current information, there is no known teratogenicity associated with this product.

NEUROTOXICITY: High vapor / aerosol concentrations (attainable only at elevated temperatures) may cause central nervous system effects such as dizziness, drowsiness or headaches.

TOXICITY DATA:

Component Analysis – LD50/LC50

Zinc Dialkyl Dithiophosphate (68649-42-3)
Dermal LD50 Rat >2000 mg/kg
Oral LD50 Rat >2000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY

Material expected to be harmful to aquatic organisms. May cause long term adverse effects in the aquatic environment.

PERSISTENCE/DEGRADABILITY: Not readily biodegradable.

BIOACCUMULATIVE POTENTIAL: No information available for the product.

MOBILITY IN ENVIRONMENTAL MEDIA

Base oil component(s) – Low solubility and floats; expected to migrate from water to the land.

OTHER ADVERSE EFFECTS: Not available.

OCTANOL/WATER PARTITION COEFFICIENT: Not available.

VOLATILE ORGANIC COMPOUNDS: Negligible

AQUATIC RELEASE: Advise authorities if product has entered or may enter watercourses or sewer drains.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL RECOMMENDATIONS

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste.

USEPA WASTE CODES:

This product, if discarded, is not expected to be a characteristic or listed hazardous waste. If recycled in the USA, it must be managed in accordance with 40 CFR Part 279. Processing, use, or contamination by user may change the waste code(s) applicable to the disposal of these products.

SECTION 14: TRANSPORT INFORMATION

LAND (DOT): Not regulated as a hazardous material for Land Transport.

LAND (TDG): Not regulated as a dangerous good for Land Transport.

EMERGENCY RESPONSE GUIDE NUMBER: Not applicable
Reference *North American Emergency Response Guidebook.*

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

SARA SECTIONS 302, 304

Based on the ingredients listed in **SECTION 2**, this product does not contain any “extremely hazardous substances” listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA SECTIONS 311 AND 312 REPORTING

This product poses the following health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate (Acute) Health Hazard:	Yes
Delayed (Chronic) Health Hazard:	No
Physical Fire:	No
Physical Sudden Release of Pressure:	No
Physical Reactive:	No

SARA SECTION 313

This product contains the follow chemical(s) subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

Zinc dialkyl dithiophospate

CERCLA

Based on the ingredients listed in **SECTION 2**, this product does not contain any “hazardous substances” listed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

SECTION 15: REGULATORY INFORMATION (Continued)

THE FOLLOWING INGREDIENTS ARE CITED AS FOLLOWS:

Chemical Name	CAS Number	Regulatory List Citation(s)
Zinc Dialkyl Dithiophosphate	68649-42-3	MI 293 NJ RTK

TSCA

All components listed in **SECTION 2** are listed on, or are exempted from the requirements.

SECTION 16: OTHER INFORMATION

Disclaimer:

The information and recommendations contained within this document are believed by Diesel Dogs to be accurate and reliable as of the date prepared. The information and recommendations are offered for the user's consideration and analysis and in no way guarantee the chemical specifications for the specified product. It is solely the responsibility of the user to determine safe conditions for use of this product and to assume liability for any loss, damage or expense arising out of the product's improper use. The user should consider the information in this document in the context of how the selected product will be handled and used in conjunction with other products. It is the user's responsibility to determine that the product is suitable for the intended use.

Appropriate warnings and safe-handling procedures should be provided to all handlers and users. Diesel Dogs assumes no responsibility for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices within this document.