



SHELL RETINAX[®] GREASES CMX AND MDX

Multipurpose lithium complex grease with moly for construction, mining and agricultural equipment

Product Description

Shell Retinax[®] Greases CMX and MDX (formerly SDX) are multipurpose lithium complex high dropping point, extreme pressure (EP) greases containing molybdenum disulfide (moly). They are primarily intended for construction, mining and agricultural equipment applications. Shell Retinax[®] Greases CMX 1 and 2, and Retinax[®] Grease MDX 2 (formerly Retinax Grease SDX 2) greases are recommended for use in applications requiring a Caterpillar Multipurpose Grease product.

Application

Construction, mining and agricultural applications for Shell Retinax[®] Greases CMX 1 and 2, and Retinax[®] Grease MDX 2 include virtually all points of grease lubrication found on dozers, scrapers, earthmovers, cranes, backhoes, shovels, rollers, tractors, combines, and cotton pickers. These lubrication points include all types of anti-friction bearing arrangements from plain sleeve-type to rolling element bearings, as well as bushings and other sliding surface or pivot points. The presence of moly provides added shock loading protection. Shell Retinax[®] Greases CMX 1 and 2, and MDX 2 are formulated to perform well in conditions of high loads and temperature extremes. Additionally, Shell Retinax Greases[®] CMX 1 and 2, and MDX 2 provide excellent resistance to rust and corrosion and are highly resistant to water washout.

Features

Shell Retinax[®] Greases CMX 1 and 2, and MDX 2 consist of a lithium complex soap thickened, multipurpose, extreme pressure (EP) grease compounded with a highly refined ISO 320 viscosity grade paraffinic base oil. Shell Retinax[®] Greases CMX 1 and 2 contain 3% moly by weight, and Shell Retinax[®] Grease MDX 2 contains 5% moly by weight. These greases are characterized by high dropping point (above 450°F) and are formulated with a special additive package to provide excellent rust protection and resistance to water washout. A special tackifier helps keep Shell Retinax[®] Greases CMX 1 and 2, and MDX 2 in place on high speed machinery and in wet conditions. Shell Retinax[®] Greases CMX 1 and 2, and MDX 2 have been engineered with good pumpability characteristics making them ideal for centralized lubrication systems. Shell Retinax[®] Grease CMX 1 is suitable for those applications where very cold weather and/or long feed lines are involved.

The presence of moly provides an extra measure of protection in shock loading situations which are very common in both construction and agricultural usage. During heavy shock loading the lubricant film between metal surfaces can be temporarily ruptured or squeezed out. By using a moly grease, a film remains to prevent metal-to-metal contact which could cause equipment damage. The presence of moly is also valuable in dirty environments or when proper relubrication intervals are not followed.

Benefits

- excellent heavy and shock load protection
- resistance to water washout
- wide range of applications
- high temperature capability
- good low temperature pumpability
- excellent rust and corrosion protection

Recommendations

- construction and mining equipment
- agricultural equipment
- for cold weather operations
- for especially severe applications requiring maximum heavy and shock load protection

Approvals

- meets requirements of Caterpillar's Multipurpose Molybdenum Grease specification.

Product Maintenance

Maintaining a clean work environment is critical when equipment greasing is performed. Grease fitting should be wiped clean prior to grease injection to prevent contaminants from entering the equipment. Bearing housings should be maintained one-third to one-half full of grease. Over-greasing should be avoided as excessive heat buildup can result. Periodic relubrication via grease gun or centralized system should be supplemented by complete cleaning and packing with fresh grease on an appropriate schedule.

Typical Properties of Shell Retinax[®] Greases CMX and MDX

	Test Method	CMX 1	CMX 2	MDX 2
Product Code		71116	71118	71147
NLGI Grade		1	2	2
Appearance		-----Gray, Tacky----- --		
Thickener Type	Lithium Complex	Lithium Complex	Lithium Complex	Lithium Complex
Moly%		3%	3%	5%
Base Oil Viscosity @ 40°C, cSt @ 100°C, cSt	D 445 D 445	320 29.3	320 29.3	320 29.3
Penetration, dmm Worked, 60X Worked, 10,000X, % Change	D 217	325 10	280 10	280 10
Dropping Point, °F	Mettler	450+	450+	450+
Rust Protection	D 1743	Pass	Pass	Pass
Copper Corrosion	D 4048	1b	1b	1b
Water Washout wt% loss at 175°F	D 1264	4	2	2
Timken, OK Load, lbs	D 2509	50	50	60
Four-Ball EP Load Wear Index, kgf Weld Point, kgf	D 2596	68 400	68 400	68 400
Four-Ball Wear, mm 1 hr, 75°C, 1200 rpm, 40 kgf	D 2266	0.4	0.4	0.4
Grease Mobility, g/minute -20°F 0°F 20°F	U.S. Steel Method	- - -	0.2 4.0 30	0.2 4.0 30
Guide To Usable Temperature Min, °F Continuous Service, Max, °F Short Exposure, Max, °F		-30 325 450	-20 325 450	-20 325 450

Handling & Safety Information

For information on the safe handling and use of these products, refer to their Material Safety Data Sheets at <http://www.shell-lubricants.com/msds/>. If you are a Shell Distributor, please call **1+800-468-6457** for all of your service needs. All other customers, please call **1+800-840-5737** for all of your service needs. Information is also available on the World Wide Web: <http://www.shell-lubricants.com/>.