



## Mobil Dynagear Series

### Multi-Season, Multipurpose Lubricants for Open Gears

#### Product Description

The Mobil Dynagear Series of premium performance open gear lubricants is designed to provide outstanding protection of heavily loaded open gear sets exposed to a wide range of operating conditions. The Mobil Dynagear Series is based on lithium thickener technology, carefully chosen high performance additives and high viscosity semi-synthetic base fluids. These components synergistically provide a lubricant film that firmly adheres to lubricated surfaces. All members of the Mobil Dynagear Series are formulated solvent free and provide excellent dispensability without the use of chlorinated or hydrocarbon solvents.

The Mobil Dynagear Series' solvent free technology can help to significantly reduce run-off that can occur during lubricant application. Reduced run-off can help to establish a cohesive lubricating film quickly and enable optimization of the lubricant dispensing systems. A properly set-up dispensing system helps produce less waste while delivering the optimum lubricant film required to protect the gear set. The Mobil Dynagear Series can help reduce handling and waste disposal costs and the impact of fugitive emissions on the environment associated with the use of hydrocarbon solvents.

The Mobil Dynagear Series does not contain carbon black or asphalt. Additionally, the Mobil Dynagear Series does not form hardened tar like materials in the gear tooth root, does not flake off at low temperatures, can help keep spray injectors from plugging and has excellent low temperature pumpability. The Mobil Dynagear Series premium performance technology enables simpler and potentially less expensive clean-up of the gear teeth and guard, helping to reduce the amount of maintenance and inspection work necessary on critical open gear systems.

#### Features and Benefits

Mobil Dynagear 800 Extra, 600 SL, 2000, and 4000 are leading members of the Mobil Industrial Lubricants offered greases. The Mobil Dynagear Series of products have been specifically designed by ExxonMobil formulation technologists and are backed by our worldwide technical support staff.

The Mobil Dynagear Series was specifically formulated to meet the needs of heavily loaded gearsets commonly found in the mining industry that require exceptional EP /Anti-Wear performance and which would remain in place even in tough conditions of water spray, dust and dirt, and high and low temperatures. These greases offer the following features, advantages, and potential benefits:

Features	Advantages and Potential Benefits
Solvent free formulation	Higher lubricant flash points can help improve safety performance and reduce waste and associated disposal costs
Asphalt free formulation	Helps maintain system cleanliness, clean spray nozzles, prevents root build up and prevent flaking.
Carbon Black Free formulation	Carbon black is not used in the formulation and thereby does not contribute to potential health effects related to exposure to carbon black.
Excellent water resistance	"Stay in Place" performance and the ability to absorb moderate amounts of water with little change to the lubricant film
Excellent anti-rust, corrosion control	Long life for protected parts helps reduce maintenance associated with damaged surfaces
Very good low temperature pumpability and mobility for use in centralized systems	Provides excellent low temperature pumpability and start-up performance, a key feature for remote applications.

Features	Advantages and Potential Benefits
Powerful EP (extreme pressure) protection enhanced with solid lubricants	Helps protect mating surfaces against damaging wear in contact zones, helping to extend component life and reduce unplanned maintenance and repairs

## Applications

- The Mobil Dynagear Series of open gear lubricants are highly recommended for shovel dipper sticks and racks, swing gears (circle), propel system bushings, crowd gears, sheave bearings and undercarriage lubrication points.
- Mobil Dynagear 800 Extra and Mobil Dynagear 600 SL are recommended as all season multi-purpose greases and as low temperature open gear lubricants.
- Mobil Dynagear 2000 is specifically designed for use in applications operating at higher ambient temperatures and requiring greater film thickness.
- Select grades of the Mobil Dynagear series of products meet the requirements of P&H specification 464 and 520 for the lubrication of open gears.
- Mobil Dynagear 4000 is recommended by ExxonMobil for the lubrication of the hoist gear on Caterpillar Mining Electric Shovel Hoist Drum Gear sets and in applications where an extra heavy open gear lubricant is desired.
- Mobil Dynagear Series is recommended by ExxonMobil for use on Bucyrus non-electric shovel hoist drum gears
- The Mobil Dynagear Series is recommended by ExxonMobil for use in mining, grinding, mill applications and other industrial applications, where the grease is dispensed through central grease systems
- Mobil Dynagear 800 Extra is suitable for use as an all-season, multi-purpose grease for on-board systems on heavy duty equipment where NLGI 00 grade greases are recommended.

To help you select the correct grade of Mobil Dynagear for your equipment and operation, please contact your Sales Representative, or the ExxonMobil Technical Help Desk at 800 268 3183.

## Specifications and Approvals

Mobil Dynagear Series meets or exceeds the requirements of:	Mobil Dynagear 800 Extra (formerly Dynagear Extra)	Mobil Dynagear 600 SL (formerly Dynagear SL)	Mobil Dynagear 2000 (formerly Dynagear Heavy)	Mobil Dynagear 4000
Bucyrus International SD4713	X		X	X
P&H Specification 464 and 520	X	X	X	

## Typical Properties

	DYNAGEAR 800 EXTRA	DYNAGEAR 600 SL	DYNAGEAR 2000	DYNAGEAR 4000
Operating Temperature, °C, Multi-purpose grease	-40 to +40	-37 to +50	-	-
Operating Temperature, °C, OGL, except hoist gear*	-40 to +10	-37 to +10	-20 to +45	-10 to 55
Operating Temperature, °C, Hoist Drum Gear*	-	-	-	-10 to 35
Min. Dispensing Temp., °C	-45	-40	-20	-10
Worked Penetration mm/10 @ 25°C	400	335	380	390
Dropping Pt., °C	175	198	193	177
Flash Point, Base Fluids	158	204	243	268
Rust Protection	Pass	Pass	Pass	Pass

	DYNAGEAR 800 EXTRA	DYNAGEAR 600 SL	DYNAGEAR 2000	DYNAGEAR 4000
Copper Strip Corrosion, 24 hours @100°C	1	1	1	1
Oil Phase Viscosity				
cSt @ 40°C	680	620	2000	4000
cSt @ 100 °C	60	60	120	-
Molybdenum Disulfide, Wt. %,	>2.0	>2.0	>2.0	>2.0
Timken OK Load, kg	25	25	25	25
4 Ball EP, kgf				
Weld	800	800	800	800
LWI	145	145	145	145
4 Ball Wear Scar Diameter, mm	0.55	0.6	0.5	0.42
Timken Retention (30 lbs./30 min.)	Pass	Pass	Pass	Pass
Lincoln Ventmeter				
psi @ -40°C	200			
psi @ -35°C	-	183	-	-
psi @ -30°C	-	0	-	-
psi @ -20°C	-	-	117	-
psi @ -6°C	-	-	-	300
Apparent Viscosity, 20 sec.-1		@-30° 10,000	@0°C 2000	@0°C 2500
shear, P	@-40°C 10,000	@-40°C 38,000	@-15°C 9000	@-10°C 9200

*The values shown above are representative of current production. Some are controlled by manufacturing and performance specifications while*

## Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contact office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

All trademarks used herein are trademarks or registered trademarks of Exxon Mobil Corporation or one of its subsidiaries unless indicated otherwise.

4-2013

Exxon Mobil Corporation  
3225 Gallows Road  
Fairfax, VA 22037

1-800-ASK MOBIL (275-6624)

Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit [www.exxonmobil.com](http://www.exxonmobil.com) ExxonMobil is comprised of numerous affiliates and subsidiaries, many with names that include Esso, Mobil, or ExxonMobil. Nothing in this document is intended to override or supersede the corporate separateness of local entities. Responsibility for local action and accountability remains with the local ExxonMobil-affiliate entities.

Copyright © 2001-2013 Exxon Mobil Corporation. All rights reserved.

