## **TECHNICAL DATA SHEET**

## CALIBER™ 460 M EXTREME PRESSURE GREASE with MoS<sub>2</sub>

Whitmore's Caliber<sup>™</sup> 460 M is a robust extreme pressure (EP) lithium complex grease containing molybdenum disulfide. It is designed primarily for earthmoving equipment and other heavy-duty rolling stock applications.

Whitmore has combined high oil viscosity with a synergistic blend of three solid lubricants to form a grease that can withstand high load and prevent scuffing or pitting of contact surfaces. Caliber™ 460 M can be used with confidence no matter how rough the terrain.

The lithium complex thickener assures outstanding stability and water resistance.

Increased re-lubrication frequency will be necessary at sustained temperatures above  $185^{\circ}F$  ( $85^{\circ}C$ ).

Caliber<sup>™</sup> 460 M is certified by Bucyrus International (Caterpillar) for use on heavy duty ball, roller and plain bearings.

Not listed below: Caliber<sup>™</sup> 460 is also available in NLGI grade 0 with ISO 150 base oil, with a usable temperature range of -15°F (-26°C) to 50°F (10°C). The product name is Caliber<sup>™</sup> 460 EP 0-150

## **BENEFITS:**

- WATER-RESISTANT excellent resistance to washing out of bearings.
- EXTREME PRESSURE protects against shock loads and scuffing of metal surfaces. Reduces parts replacement and downtime.
- SEALS OUT DIRT AND CONTAMINANTS forms a protective barrier to reduce wear and extend lubricant life.
- VERSATILE FORMULATION ideal for a wide range of equipment, including process machinery and industrial applications.

## **APPLICATIONS:**

Whitmore's Caliber<sup>™</sup>460 M is designed to lubricate the components of earthmoving equipment and rolling stock. It is recommended for wheel bearings, slewing bearings, vehicle chassis points and U-joints, as well as pivot points and bucket pins on earthmoving equipment. Caliber<sup>™</sup> 460 M will provide extended service intervals and reduced wear to draglines, shovels, excavators, trucks, conveyors, and other rolling stock, as well as in-plant applications.

Caliber<sup>™</sup> 460 M EP 2 has been approved for use in central lubrication systems and for manual lubrication of Komatsu's PC3000, PC4000, PC5500, and PC8000 series excavators.

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ASIM#		TYPICAL CHARACTERISTICS				
	Grade	EP 0-460	EP 1-220	EP 1	EP 1.5	EP 2
D-217	Cone Penetration (Worked)	355-385	310-340	310-340	290-310	265-295
D-2265	Dropping Point, °F (°C)	450 (232)	475 (246)	475 (246)	>500 (260)	>500 (260)
D-445	Kinematic Viscosity (Base Oil + Polymer)					
	cSt @ 40°C	460	220	480	480	480
	cSt @ 100°C	33.1	21.0	35.4	35.4	35.4
Gardner	Density, lb/gal @ 60°F (15.5°C)	7.57	7.56	7.56	7.57	7.57
Method	Specific Gravity, g/cc @ 60°F (15.5°C)	0.9076	0.9060	0.9060	0.9076	0.9076
D-2509	Timken OK Load, lbs, minimum	65	65	65	65	65
D-2596	Four Ball EP					
	Weld Point, kg (minimum)	620	620	620	620	800
	Load Wear Index (minimum)	65	65	65	65	65
D-2266	Four Ball Wear, Scar Width, mm	0.57	0.57	0.57	0.57	0.57
D-4049	Water Spray-Off, % Loss	NA	NA	NA	12	10
D-1264	Water Washout, % Loss @ 100°F (38°C)	NA	<5	<5	<4	<2
D-1743	Rust Test	Pass	Pass	Pass	Pass	Pass
D-4048	Copper Strip Corrosion for Greases					
(Modified)	212°F (100°C) @ 3 hrs	1B	1B	1B	1B	1B
	US Steel Mobility Test					
	g/sec @ 0°F (-18°C)	0.10	0.15	0.15	-	0.05
	Usable Temperature Range, °F (°C)	-5 (-20) to	-5 (-20) to	10 (-12) to	19 (-7) to	23 (-5) to
		50 (10)	80 (27)	90 (32)	200 (95)	340 (170)

The above are average values. Minor variations which do not affect product performance are to be expected in normal manufacturing.

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