

Engineering Data

Lubrication

Proper lubrication and lubricant maintenance are the most important single maintenance factors for long, effective, trouble-free clutch operation.

All self-contained units are shipped from the factory prelubricated and ready to install. See data pages for details.

Oil lubrication is preferable in most applications. Grease lubrication may be used if: (1) conditions do not permit the type of main-

tenance required for oil lubricated clutches, (2) if the clutch is mounted on a vertical shaft, (3) if the clutch is a sprag design.

Grease lubricated clutches should not be operated at temperatures below +20°F (–7°C). If operation at temperatures below +20°F (–7°C) are required, consult Formsprag. In the following tables we have compiled a list of lubricants proven to be of value in the lubrication of overrunning clutches.

Recommended Lubricants

OVERRUNNING and BACKSTOPPING APPLICATIONS			
Temperature Range			
+20°F to +150°F (-7°C to +65°C) Maximum permissible ambient temperature	-10°F to +20°F (-23°C to -7°C) Ambient temperature	-40°F to +150°F (-40°C to +65°C) Maximum permissible ambient temperature	+20°F to +150°F (-7°C to +65°C) If below +20°F (-7°C) Consult Formsprag
OIL LUBRICANTS			GREASE LUBRICANTS
Chevron GST Oil 68 Mobil DTE Heavy Medium Any Automatic Transmission Fluid (ATF) Texaco Regal Oil R&O 68 Shell Turbo Oil 68 Amoco Industrial Oil 68 Exxon Teresstic Oil 68 Sunoco Sunvis 931 Mobil SHC-626 Mobil SHC-629	Mobil Gargoyle Arctic C Heavy Texaco Regal Oil R&O 46 Any Automatic Transmission Fluid (ATF) Amoco Oil Industrial 46 Sunoco Sunvis 921	Mobil Jet Oil 2 Shell Turbine Oil 555 Exxon Turbo Oil 2380 Exxon Turbo Oil 2389 Standard Esso Turbo Oil 2389 Military Oils MIL-L-7808 or MIL-L-23699 Shell Aeroshell Turbine Oil 500	Fiske Bros. Lubriplate Low- Temp Fiske Bros. Aero Lubriplate Shell Aeroshell No. 7 Shell Aeroshell No. 16 Beacon 325
INDEXING APPLICATIONS			
At 150 strokes per minutes or less	At 150 strokes per minutes or less	-10°F or below (-23°C)	Not Applicable Consult Formsprag
OIL LUBRICANTS			
Mobil DTE Light Oil Any Automatic Transmission Fluid (ATF) Texaco Regal Oil R&O 32 Shell Turbo Oil 32 Amoco Industrial Oil 32 Exxon Teresstic Oil 32	Sunoco Sunvis 916 Exxon Zerice 46 Any Automatic Transmission Fluid (ATF)	Consult Formsprag	

CAUTION: Do not use lubricants containing slippery additives or those having extreme pressure characteristics such as any EP type lubricants. Model RSCI clutch is the only design that can use lubricants containing extreme pressure (EP) additives. For additional lubrication and maintenance information, see the Installation and Maintenance instructions enclosed with each product shipped, or see Brochure P-1053, Lubrication & Maintenance of Sprag Clutches.

Bolt assemblies

In clutch designs torque is often transmitted through bolts. Experience has shown that it is a practical and reliable way since clutches transmit torque in only one direction.

For the metric clutch designs the Bolt Strength Standards (8.8, 10.9 and 12.9) and torque tightening values (Nm) are listed in the adjacent table.

Metric Bolt Strength Standard

Thread	8.8		10.9		12.9	
	Model	(Nm)	Model	(Nm)		(Nm)
M5	RSCI	(6)		(8)		(9)
M6		(10)		(14)		(16)
M8		(25)		(34)		(39)
M10		(48)	BAT	(68)	Screws supplied by Stieber	(77)
M12		(84)	GFR	(118)		(135)
M16		(206)	AL	(290)		(330)
M20		(402)		(550)		(640)
M24		(696)	RIZ	(950)		(1100)
M30		(1420)		(1900)		(2200)