



## Lubrication and maintenance

Freewheels are of lubricated in most of the applications, especially for indexing and high speed overrunning . When freewheels are used inside a transmission, splash lubrication is recommended .When freewheels are installed outside the transmission, totally enclosed freewheel with oil seals should be used.

In indexing applications low viscosity oil of 12 mm<sup>2</sup>/sec should be achieve optimum indexing characteristics .

If in some special cases grease lubrication is required, the recommended brands should be used. Please note that grease inhibits spring loading of the locking elements and reduces indexing accuracy as compared to oil lubrication. To overcome this effect most of the freewheels types can by supplied with stronger springs on request.

Freewheels are frictionally-engaged coupling .In order to obtain maximum service life of both lubrication and freewheel, oils of type CL confirming to DIN 51 517,Part 2 or CLP confirming to DIN 51 517,Part 3 should be employed. Under no circumstances should oils containing additives such as molybdenum disulphide, graphite etc, be used in the following table, we have compiled a list of lubrications proven to be of value in the lubrication of freewheels .Only if these or truly equivalent lubrications are used we can assume warranty for our products.

	Oil lubrication			Grease lubrication
	-20°C...+20°C	-20°C...+50°C	-50°C...+80°C	
Opetation Temperature	-20°C...+20°C	-20°C...+50°C	-50°C...+80°C	
Viscosity at 40°C	10 mm <sup>2</sup> /sec	22 mm <sup>2</sup> /sec	46 mm <sup>2</sup> /sec	
AGIP	AGIP SIC 10 AGIP OSO 10	AGIP SIC 22 , AGIP OSO 22	AGIP SIC 46 AGIP OSO 46	AGIP GR MU 2
ARAL	ARAL VITAM GF 10 ARAL VITAM DE 10	ARAL VITAM GF22 ARAL VITAM DE 22	ARAL VITAM GF46 ARAL VITAM DE 46	Aralub FK 2
BP	BP Energal HLP-D 10 BP Energal HLP 10	BP Energal HL 22, BP Energal HLP-D 22 BP Energal HLP 22	BP Energal HL46, BP Energal HLP-D 46, BP Energal HLP 46	BP Energrease LS 2, BP Olex PR 9142
CALYPSOL	Calypsal Bason OIL SR 10,MSR 10	Calypsal Bason OIL SR 22,MSR 22	Calypsal Bason OIL SR 22,MSR 46	Calypsol H 442 Calypsol Aluplex 2 EP
CASTROL	CASTROL HYSPIIN VG 10 CASTROL HYSPIIN AWS 10	CASTROL HYSPIIN VG 22 CASTROL HYSPIIN AWS 22	CASTROL HYSPIIN VG 46 CASTROL HYSPIIN AWS 46	CASTROL BNS CASTROL LZN
CHEVRON	Chevron EP Hydraulic Oil 10	Chevron EP Hydraulic Oil 22	Chevron EP Hydraulic Oil 46	Chevron Dura-Lith Grease 2, Chevron Polyurea EP Grease 2
ESSO	NUTO H 10	NUTO H 22	NUTO H 46	BEACON 2
FINA	FINA CTRKAN 10, FINA HYDRAN 10,	FINA CTRKAN 22, FINA HYDRAN 22	FINA CTRKAN 46, FINA HYDRAN 46	FINA MARSON AX 2
FUCHS	RENOLIN MR 3, RENOLIN B 3	RENOLIN DTA 5, RENOLIN MR 5, RENOLIN B 5	RENOLIN DTA 15, RENOLIN MR 15, RENOLIN B 15	RENOLIN FWA 160, RENOLEX EP 2
KLUBER	CRUCOLAN 10, LAMORA 10	CRUCOLAN 22, LAMORA 22	CRUCOLAN 46, LAMORA 46	ISOFLEX LDS 18 SPECIALL A
MOBIL	Mobil Velocito Oil No.6, Mobil D.T.E 21	Mobil Velocito Oil No.10, Mobil D.T.E 22	Mobil D.T.E. Oil Medium, Mobil D.T.E.25	Mobilux 2
OPTIMOL	ULTRA 2035 VG 10	ULTRA 2035 VG 22	ULTRA 2035 VG 46 HYDO 5045 EVG 46	LONGTIME PD 2, OLIT 2
REINER	REINER B 3	REINER B 5	REINER B 1 5	URETHYM LT 60
SHELL	Tellus Oel C 10, Tellus Oel 10	Tellus Oel C 22, Tellus Oel 22	Tellus Oel C 46,, Tellus Oel 46	Alvania Fott R 2, Retinax A
TEXACO	Rando Oil 10,  Rando Oil HD A -10	Rando Oil HD A -22	Rando Oil 46, Rando Oil HD B-46	Mulbitak 20, Texando FO 20, Mulbitak
TOTAL	TOTAL Azoila 10	TOTAL Azoila 22	TOTAL Azoila 46	TOTAL Multis
VALVOLINE	VALVOLINE R-60	VALVOLINE R-100 VALVOLINE ETC-20	VALVOLINE WA-4 VALVOLINE ETC-30	VALVOLINE LB-2

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