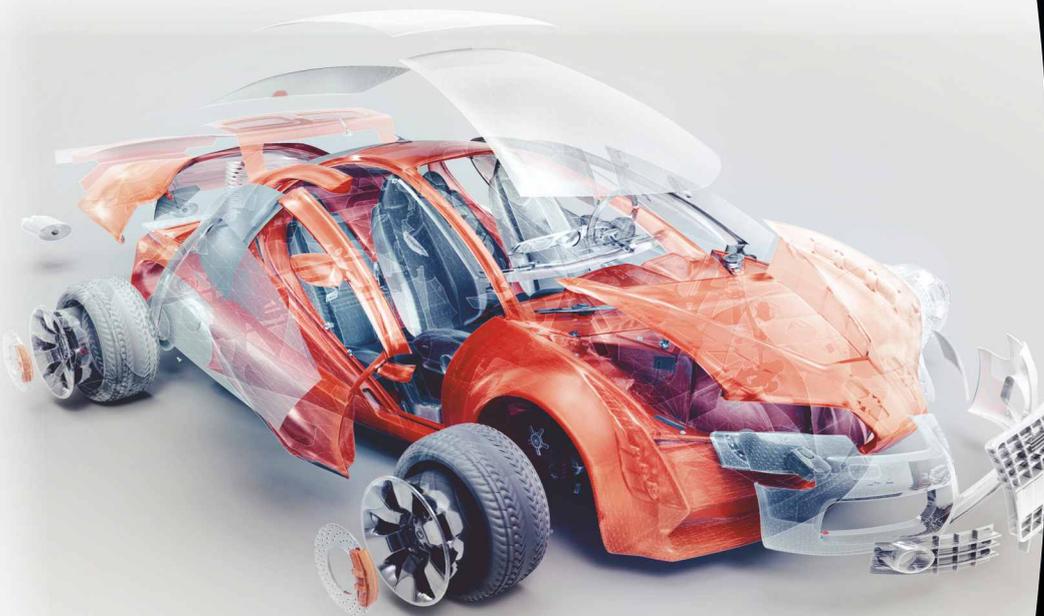




LUBCON[®] Special Lubricants for the Automotive Industry



**High Performance Lubricants
for more Safety and Reliability**

LUBCON[®] Special Lubricants

for Motor Vehicles

Alternator

Turmogrease N 503 B
Turmogrease Hitemp N 1002 plus mod.
Turmogrease Hitemp N 1002 plus ELC mod.
Turmogrease N 2

Clutch Release Bearing (magnetic clutch)

Turmogrease MP 1003
Turmogrease N 503 B
Thermoplex LME 552

Water Pump

Turmogrease MP 1003
Turmogrease PHS 1002

Tension Pulley

Turmogrease N 503 B
Turmogrease Hitemp N 1002 plus mod.
Turmogrease MP 1003
Turmogrease N 2
Thermoplex 2 HPL spezial
Turmogrease HLB
Sintono LS 16

Electric Actuators

Turmogrease N 502
Thermoplex 2 TML

Bowden Cables

Turmogrease SKL 18 VTF

Level Control Compressor

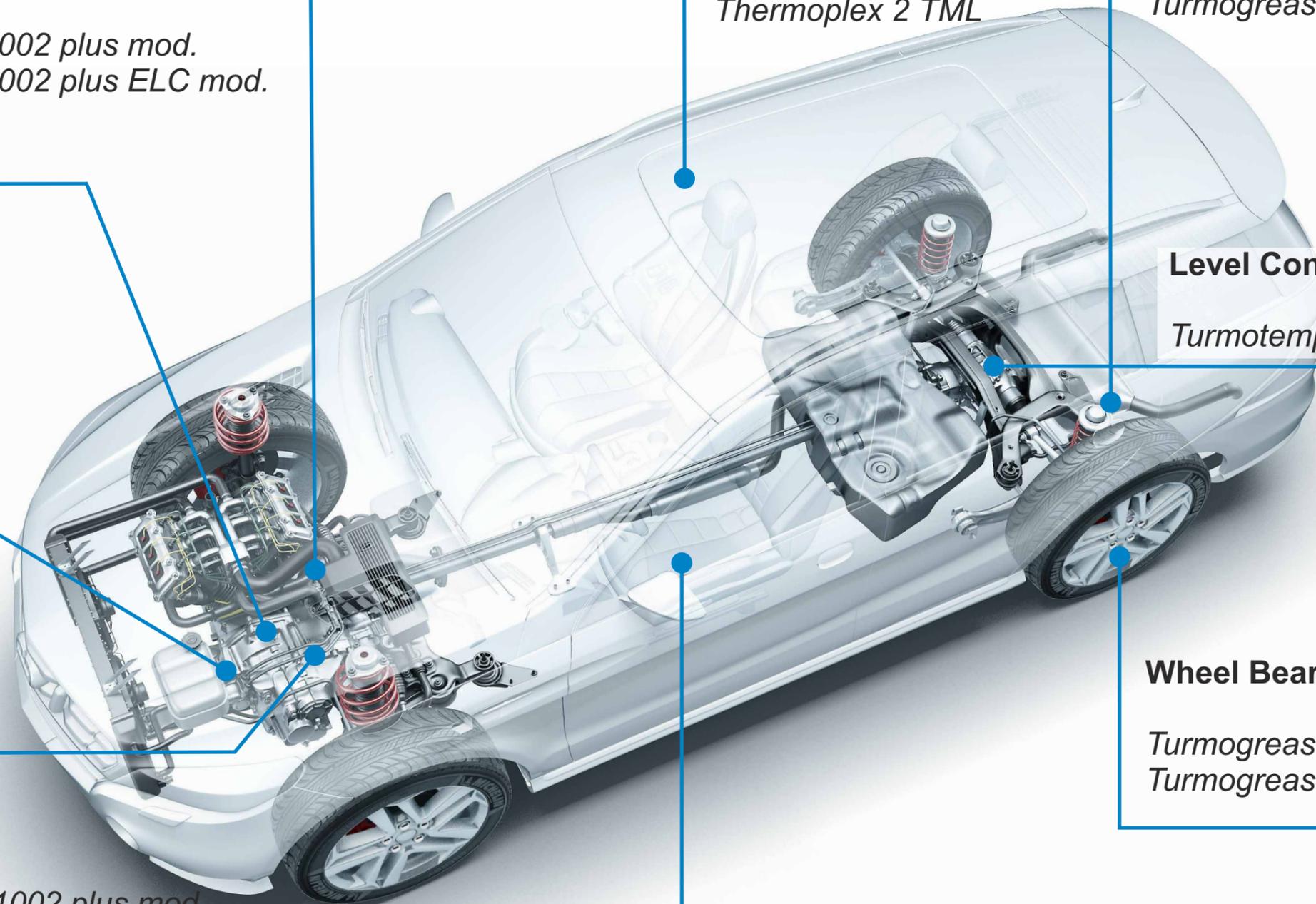
Turmotemp II 400 KL

Wheel Bearings

Turmogrease Li 802 EP
Turmogrease HDC 2

Door Lock Seat Adjustments

Turmogrease SKL 18



Lubricants for Motor Vehicles

This overview provides only a small selection of LUBCON products suitable for applications in the automotive industry. Please contact us for individual application consulting.

Application	Product	Operating Temperature Range	Consistency Class NLGI	Water Resistance (DIN 51807 T1)	Drop Point (DIN 2176 in °C)	Base Oil/ Thickener	Features & Benefits
Bodywork and Interiors							
Windshield wiper drives, wire rope hoists, door lock, sliding roof, seat belt, pedals	Turmogrease SKL 18	-30 °C up to +150 °C	1	0-90	>200	SHC/ li-soap	Versatile special lubricant with very good media resistance for lifetime lubrication. Good corrosion protection, easy running-in at low temperatures, compatible with plastics, good damping properties. VW part no. 052778 A0
	Turmogrease SKL 18 VTF	-50 °C up to +130 °C	2	0-90	>190	SHC/ li-soap	Energy-efficient grease for lifetime lubrication with a high work resistance. It prevents excessive self-heating due to a low-viscous base oil. This grease has a low starting resistance and low frictional torque, plus it is compatible with most sealing components and elastomers. VW part no. 052778-B
Seating systems	Grizzlygrease DF 7503	-40 °C up to +160 °C	3	0-90	>220	SHC/ polyurea	Synthetic special grease to reduce noise at door opening systems, seat rails, seat/backrest adjustment, shift linkage and steering gears.
	Turmogrease N 7501 K	-40 °C up to +160 °C	1	0-90	>245	SHC/ polyurea	Special grease for plastic lubrication. Even under various influences the grease prevents a change of plastic characteristics, such as strength of material, dissolving, swelling, abrasion and potential stress cracking.
Bearings in electric actuators	Turmogrease N 502	-40 °C up to + 180 °C	2	1-80	>250	SHC, ester/ polyurea	Noise-tested special grease for various applications, e.g. rolling and ball bearings in automotive engineering (wheel bearings, water pumps, shift linkage, hinges etc.). Resistant to aqueous alkaline and acid cleaning agents, to hot and cold water as well as steam.
	Thermoplex 2 TML	-30 °C up to +160 °C	2	1-90	>180	Ester/li-soap	Noise-tested special grease for high speeds, high loads and high temperatures, also for lifetime lubrication. This grease is suitable for critical bearings that are subject to high loads whether running at high or low speed.
Door hinge	Turmopast NBI 2 weiss	-30 °C up to +150 °C	1	1-90	> 220	Mineral oil/ calcium-complex soap	Light-coloured lubricating and assembly paste with white solid lubricants against frictional and fretting corrosion. Resistant to water, alkaline and chemicals, prevents fretting and tribocorrosion.
Chassis							
Wheel bearing	Turmogrease Li 802 EP	-40 °C up to +140 °C	2	1-90	>190	SHC,mineral oil/ li-soap	Multipurpose long-term lubricant for high loads. It provides very good corrosion protection, excellent non-ferrous metal and ageing protection and a high lubricating film stability.
	Turmogrease HDC 2	-30 °C up to +150 °C	2	1-80	>250	Mineral oil/ ca-complex soap	Special grease with an extraordinary resistance to water and media, high load carrying capacity, high metal affinity as well as good friction and wear characteristics.
Bowden cables	Turmogrease SKL 18 VTF	-50 °C up to +130 °C	2	0-90	>190	SHC/ li-soap	Excellent wear and corrosion protection to ensure a smooth running of the cables.
Handbrake (lever)	Grizzlygrease No. 2	-50 °C up to +130 °C	3	0-90	>250	Mineral oil/li-Ca- special soap	Special grease with high thermal resistance, excellent pressure absorption capacity and adhesion properties.
	Grizzlygrease DF 7503	-40 °C up to +160 °C	3	0-90	>220	SHC/ polyurea	Damping grease with excellent corrosion protection. This grease is neutral to plastic and suitable for lifetime lubrication.



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Drive							
Clutch release bearing	Turmogrease MP 1003	-40 °C up to +160 °C	3	0-90	>250	SHC, mineral oil/ polyurea	Silicone-free, noise-tested special greases for various applications, e.g. rolling and ball bearings in automotive engineering (wheel bearings, water pumps, shift linkage, hinges etc.). Resistant to aqueous alkaline and acid cleaning agents, to hot and cold water as well as steam.
	Turmogrease N 503 B	-40 °C up to +180 °C	3	1-80	>250	SHC, ester/ polyurea	
	Thermoplex LME 552	-40 °C up to +200 °C	2	0-90	>230	PFPE, ester/ li-special soap	
Water pump bearing	Turmogrease MP 1003	-40 °C up to +160 °C	3	0-90	>250	SHC, mineral oil/ polyurea	Silicone-free special greases, e.g. for water pump bearings. These greases are resistant to aqueous alkaline and acid cleaning agents, to hot and cold water as well as steam.
	Turmogrease PHS 1002	-40 °C up to +160 °C	2	1-80	>250	SHC, mineral oil/ polyurea	
Tension pulley	Turmogrease Hitemp N 1002 plus mod.	-40 °C up to +180 °C	2	1-80	>250	Mixture of synthetic oils/ polyurea	Fully synthetic high temperature grease, which is suitable for various critical applications in the automotive industry. It provides very good high temperature stability, excellent corrosion protection, high pressure absorption capacity and is mostly neutral towards plastic.
	Turmogrease N 503 B	-40 °C up to +180 °C	3	1-80	>250	SHC, ester/ polyurea	Special greases for various applications, e.g. rolling and ball bearings in automotive engineering (wheel bearings, water pumps, shift linkage, hinges etc.). Resistant to aqueous alkaline and acid cleaning agents, to hot and cold water as well as steam.
	Turmogrease MP 1003	-40 °C up to +160 °C	3	0-90	>250	SHC, mineral oil/ polyurea	
	Turmogrease N 2	-40 °C up to +160 °C	2	0-90	>250	SHC, ester/ polyurea	
	Thermoplex 2 HPL spezial	-40 °C up to +160 °C	2	1-80	>200	Ester/li-soap	Fully synthetic special grease for tension pulley bearings. This grease has a high load carrying capacity, high thermal resistance, low frictional torque and starting resistance, excellent smooth running properties and it provides very good wear and corrosion protection.
	Turmogrease HLB	-40 °C up to +180 °C	2	1-80	>220	Ester/li-special soap	Fully synthetic special grease for high speeds and high loads. It provides low heating of high speed bearings, low starting resistance for ball bearings and is suitable for lifetime lubrication.
	Sintono LS 16	-40 °C up to +200 °C	2	1-90	>250	Ester, PFPE/ li-special soap	Special grease for the long-term and lifetime lubrication of e.g. for electric motor bearings. This grease has an excellent load carrying capacity.

Special Lubricants in Motorsport

Formula 1 means maximum performance in all areas, especially in the gearbox! You need a special grease that can constantly maintain its protective and lubricating properties under these extremely demanding conditions - even at temperatures over 200 °C, which are already generated by the gearbox itself.

The super fast gear-change processes place an enormous burden on the bearing within a very short time. So the grease needs a high load carrying capacity to enable the protective lubricant film to remain stable and reliable in more than 5.000 gear changes per race!

Get in contact with LUBCON lubrication experts to find the appropriate lubricant for your application!

LUBCON Special Lubricants

LUBCON special lubricants help you to safely reach your maintenance goals!

- ✓ efficient
- ✓ reliable
- ✓ individual consulting for your application

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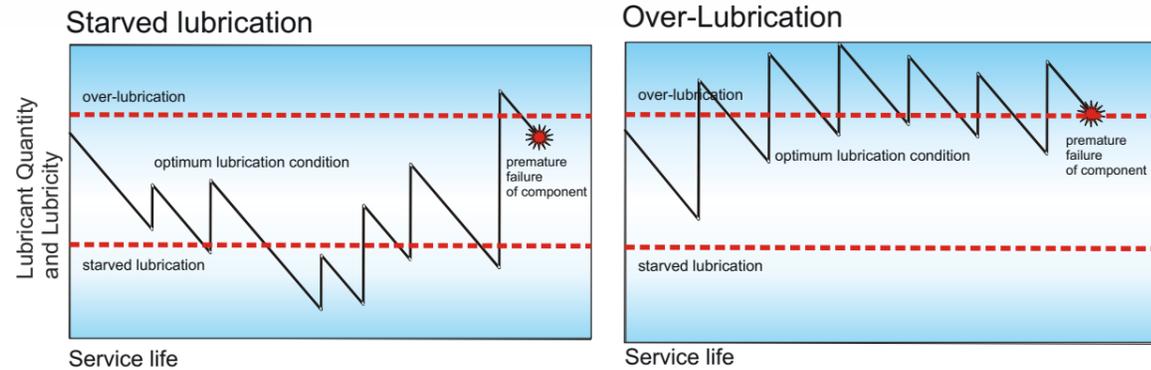
Lubricants for the Production Area

This overview provides only a small selection of LUBCON products suitable for applications in the automotive industry. Please contact us for individual application consulting.

Application	Product	Operating Temperature Range	Base Oil/ Thickener	Features & Benefits	Suitable Lubrication System (examples only)
Welding Robots					
Piston rod	Turmofluid ED 13	-45 °C up to +150 °C	SHC	Synthetic lubricating oil with a good spreading effect, excellent water-displacing properties, high metal affinity and excellent corrosion protection.	MicroMax 120
Joint bearing, cylinder piston	Turmopast MA 1	-40 °C up to +170 °C	SHC/ al-complex soap	Lubricating and assembly paste with high pressure resistance and very good wear and corrosion protection, it prevents fretting corrosion and tribocorrosion.	
Screw drive	Thermoplex ALN 1001	-40 °C up to +140 °C	SHC/polyurea-al-special soap	Synthetic special grease with good metal affinity and high oxidation and thermal stability, high load carrying capacity and long grease operating life.	MicroMax 120
Conveying Systems					
Skid conveying system	Grizzlygrease No. 1	-30 °C up to +150 °C	Mineral oil/ li-ca-special soap	Lubricating grease, e.g. for open spur gears, with very good adhesion properties and pressure absorption capabilities as well as excellent wear and corrosion protection.	MicroMax 120 with LubGear System
Cathodic coating	Turmogrease N 2	-40 °C up to +160 °C	SHC, ester/polyurea	Special grease that is resistant to aqueous alkaline and acid cleaning agents, to hot and cold water as well as steam.	
Scissors Lift					
Ball screw	Thermoplex ALN 1001	-40 °C up to +140 °C	SHC/polyurea-al-special soap	Synthetic special grease with good metal affinity and high oxidation and thermal stability, high load carrying capacity and long grease operating life.	MicroMax 120
Cam discs	Turmopast NBI 2 weiss	-30 °C up to +150 °C	Mineral oil/ ca-complex soap	Lubricating and assembly paste against frictional and fretting corrosion. This paste is resistant to water, alkaline and chemicals.	
Conveyor Rolls					
Support and track rollers (high temperatures)	Turmotemp II/400 KL	-30 °C up to +260 °C	PFPE/PTFE	Silicone-free grease with high resistance to chemicals and low evaporation losses, does not cause a swelling of plastomers and elastomers.	
Support and track rollers (drive units)	Tumogrease L 802 EP plus	-35 °C up to +140 °C	SHC, mineral oil/ li-special soap	High performance grease with optimum corrosion protection as well as excellent non-ferrous metal protection and ageing protection and a high lubricating film stability.	DuoMax 160
Electrical Drive Units					
Long-term lubrication of ball bearings	Turmogrease PU 703	-40 °C up to +180 °C	Ester/polyurea	Ball bearing grease for high and low temperatures which remains stable under media influence.	MicroMax 120/ DuoMax 160/ EasyMatic
	Turmogrease NBI 300 BP	-40 °C up to +200 °C	PFPE, ester/ polyurea	Fully synthetic lubricating grease with excellent corrosion and wear protection and very high pressure absorption capacity.	
Gantry Robots					
Steering rack drives	Grizzlygrease No. 1	-30 °C up to +150 °C	Mineral oil/ li-ca-special soap	Lubricating grease, e.g. for open spur gears, with very good adhesion properties and pressure absorption capabilities as well as excellent wear and corrosion protection.	
Linear guides	Thermoplex ALN 1001	-40 °C up to +140 °C	SHC/polyurea-al-special soap	Synthetic special grease with good metal affinity and high oxidation and thermal stability, high load carrying capacity and long grease operating life.	MicroMax 120 / QuattroMax 30-4
Conveyor Chains					
Chain oils	Turmofluid ED 13	-45 °C up to +150 °C	SHC	Synthetic lubricating oil with a good spreading effect, excellent water-displacing properties, high metal affinity and excellent corrosion protection.	Central lubrication unit TLB 2000 with VRDS control unit
	Turmofluid 300 OM	-5 °C up to +240 °C	Synthetic	Fully synthetic lubricant with a wear-reducing and noise damping effect. It has excellent adhesive and creeping properties.	
	Turmofluid UEL 60/120 (mod)	-20 °C up to +250 °C	SHC, Ester	Chain oils which can be fully varnished and are, therefore, especially recommended for chain lubrication in paint shops.	
	Turmopoloil 20 HD	-30 °C up to +220 °C	Polyglycol	Silicone-free chain oil that can be fully varnished and is suitable for conveyor chains in paint drying ovens.	

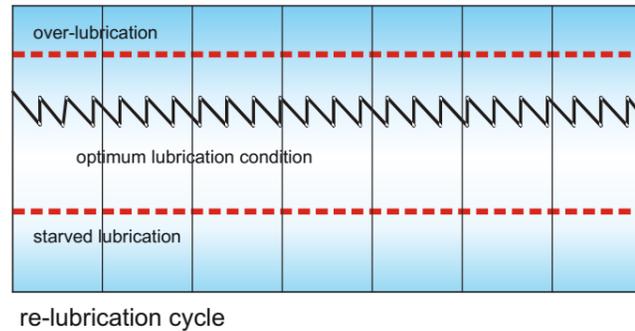
Smart Lubrication Technology

Whether used at processing machines, robots or transport chains - lubricants are applied at all production steps within the automotive production. While some components such as bearings are often lubricated for life, others have to be re-lubricated on a regular basis. However, manual lubrication is not always an appropriate solution. On the one hand, not all lubrication points are easy to access, on the other hand manual lubrication often leads to inadequate lubrication or over-lubrication. Both are frequent reasons for a premature failure of machine components.



Continuous and sufficient lubrication with an appropriate lubricant is essential for a long service life and the reliability of machine components. Automatic lubrication units supply the optimum lubrication quantity at the right time to the lubrication point. Thus, maintenance and servicing costs are effectively reduced and an accidental mixing up of incompatible products is avoided.

LUBCON Lubrication Systems



Special Lubricants and Lubrication Technology from One Source!

- ✓ increase safety and reliability
- ✓ reduce maintenance costs

Central Lubrication Unit TLB 2000 and VRDS



Lubrication system for transport and conveyor chains

- ✓ reduce maintenance costs and effort
- ✓ less wear
- ✓ extended machine availability and service life
- ✓ automatic lubrication within safety zones
- ✓ predefined point of impact
- ✓ lubrication with minimum quantities

Electro-mechanical Lubrication Units

Economical

- ✓ easy installation and activation
- ✓ automatic lubricant supply 24/7
- ✓ optimum metering of the lubricant
- ✓ battery-powered, no external power needed

Robust and reliable

- ✓ closed metal housing
- ✓ completely sealed unit
- ✓ performs in extreme environmental conditions (dust, water, heat)

Lubrication over long periods

- ✓ individually adjustable operating time
- ✓ lubrication device for minimum quantities



Electro-mechanical Central Lubrication Unit



EasyMatic

- ✓ improves safety
- ✓ prevents contamination due to precise and continuous automatic lubrication
- ✓ reduces grease consumption and maintenance intervals
- ✓ increases reliability
- ✓ reduces costs



At a glance:
Lubricants for the Automotive Industry

Bowden Cables
Turmogrease SKL 18 VTF

Electric Actuators
Turmogrease N 502
Thermoplex 2 TML

Wheel Bearing
Turmogrease Li 802 EP

Tension Pulley
Turmogrease N 503 B
Turmogrease Hitemp N 1002 plus mod.
Turmogrease MP 1003
Turmogrease N 2
Thermoplex HPL spezial
Turmogrease HLB

Water Pump Bearing
Turmogrease MP 1003
Turmogrease PHS 1002

Clutch Release Bearing
Turmogrease N 503 B
Turmogrease MP 1003
Thermoplex LME 552

**LUBCON special lubricants
applied in motorsport:**



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Lubricants • Lubrication Technology

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