



Catalogue of lubricants for the mining and oil industry



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INTRODUCTION

When you choose Repsol Lubricants, **you are choosing much more.** As well as a high-quality product, you'll get the Repsol guarantee: an **integrated global energy company** which carries out exploration, production, refining, distribution and marketing activities in **more than 80 countries.** Repsol provides millions of people and companies all over the world with the most efficient, responsible and innovative energy solutions.

You'll also get **maximum innovation.** Repsol has a **Technology Centre** at the global forefront of R&D&i, where our technicians and researchers are continuously improving each product to ensure maximum efficiency and the highest level of technical and environmental quality.

In a sector such as the mining and oil industry, new technological advances are being introduced every day. Repsol is therefore working to develop a wide range of industrial lubricants and to this end is making every effort in terms of resources, research and technology.

At Repsol we have a wide range of industrial lubricants that comply with the **most stringent quality standards.** This is the only way we can ensure that your machinery and equipment is perfectly lubricated and protected, thereby enhancing its functions, improving its performance, contributing to energy savings and extending its useful life.

Repsol Lubricants are the best solution for your machinery and equipment.

In this catalogue we have selected the most popular products in the sector. However, Repsol has a wide range of other products at your disposal. For more information please see our catalogues at **repsol.com**



CHALLENGES FACED BY THE SECTOR

The challenges faced by mining equipment today are ever greater and take many different forms. This is partly due to the demands of production, which requires the full availability of equipment often used at full capacity. However, it is primarily the result of the **extreme environments** in which the equipment operates (high level of contamination with aggregates, the presence of water, the nature of the raw materials, etc.).

Under these extreme operating conditions, in addition to their usual functions lubricants must also provide **additional protection** in order to maintain or improve equipment reliability and availability, as well as facilitating maintenance management. With their extensive experience in these types of applications, Repsol Lubricants have shown that they can meet these challenges and provide a high performance level, thereby ensuring that equipment is fully available to customers.

The Repsol Lubricants range is designed to cope with extremely demanding operating conditions: **greater resistance to rust** (higher operating temperatures), **lower viscosity loss** (use of higher quality bases), **greater anti-wear capacity** (developed on a bespoke basis), etc. offering a high level of resistance in this operating environment.

In addition to the **state-of-the-art technology** used by Repsol to manufacture the lubricants, its extensive experience in the field and the data obtained from the analysis of thousands of samples also provide valuable information. This information is taken into account in the development and adaptation of its range of lubricating oils, and has made a significant contribution to the excellence of its products.



ENGINE OILS

In a sector where new technological advances are being introduced every day, Repsol carries out **constant research** in order to offer a wide range of lubricants which are adapted to the specific needs of each of our customers.

As well as complying with the **most stringent quality standards**, the exclusive formulation of our products provides perfect lubrication and maximum care for the engine, guaranteeing the maximum performance and duration of these systems.



REPSOL DIESEL TURBO UHPD MID SAPS 10W40

High-quality UHPD (Ultra High Performance Diesel) synthetic technology lubricating oil. Its name (mid SAPS) highlights its reduced ash content, which prevents the obstruction of systems that include particle filters, as well as protecting catalytic after-treatment systems and minimising polluting emissions. Its excellent composition makes it a long-life lubricant with extraordinarily long periods between oil changes. It is compatible with all kinds of fuels (diesel, LPG, CNG and biodiesel) and its characteristics make it the ideal oil for mixed fleets. It is valid for Euro 6 engines and older.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)	TBN
10W40	85	13,5	152	-30	225	12
QUALITY LEVEL	ACEA E6/E4/E7, MTU Type 3.1, MACK EO-N, API CI-4, JASO DH-2, VOLVO VDS-3/CNG, CAT ECF-1-a, MB 228.51/235.27, SCANIA LOW ASH, MAN 3477/3271-1, DAF EXTENDED DRAIN, VOITH Retarder Oil Class A, RENAULT VI RXD, RLD/RLD-2, RGD.					

REPSOL DIESEL TURBO UHPD URBAN 10W40

State-of-the-art synthetic lubricating oil particularly recommended for supercharged diesel engines of commercial vehicles with extraordinarily long periods between oil changes. Product specifically designed for low-emission Euro 5 diesel engines and some Euro 6 engines.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)	TBN
10W40	104	14,5	150	-30	225	13,5
QUALITY LEVEL	API CI-4, ACEA E4/E7, VOLVO VDS-3, MAN M3277/M3377, MB 228.5, RENAULT VI RLD-2/ RXD, MACK EO-N, MTU Type 3, DEUTZ DQC IV-10.					

REPSOL DIESEL TURBO THPD MID SAPS 15W40

High-quality synthetic technology lubricating oil. Its name underlines its suitability for turbocharged engines and its low ash content (mid SAPS), which prevents the obstruction of systems that include particle filters, as well as protecting catalytic after-treatment systems and minimising polluting emissions. It is compatible with diesel and biodiesel and without doubt plays a fundamental role in the lubrication of mixed fleet engines. It is valid for Euro 5 engines and older.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point [°C]	Flash point [°C]	TBN
15W40	108	14,5	135	-27	225	8,5
QUALITY LEVEL	API CJ-4/CI-4/CI-4 PLUS/SM, ACEA E7/E9, MB 228.31, VOLVO VDS-4, RENAULT RLD-3, MTU TYPE 2.1, CAT ECF-3 & ECF-2 & ECF-1-A, MACK EO-D PREMIUM PLUS, CUMMINS CES 20081, DETROIT DIESEL DDC 93K218, MAN 3575.					

REPSOL DIESEL TURBO THPD 10W40

THPD (Top High Performance Diesel) synthetic lubricating oil which optimises the performance of the most demanding latest-generation heavy-duty diesel engines. It has been developed for engines requiring lubricants that meet the ACEA E7 and API CI-4 quality standard, and its viscosity and composition means that the periods between oil changes can be significantly extended, always taking the manufacturer's recommendations into account. It is suitable for all weather conditions, particularly for cold starts, and is compatible with biodiesel and systems equipped with an EGR valve and SCR catalytic converters. It is valid for Euro 5 engines and older.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point [°C]	Flash point [°C]	TBN
10W40	90	14,6	150	-30	225	10
QUALITY LEVEL	API CF, ACEA E4/E7, MB 228.5, VOLVO VDS-3, RENAULT RLD-2, MTU Type 3, DAF Extended Drain, MACK EO-n, CUMMINS CES 20072, MAN 3575, SCANIA LDF-3.					

REPSOL DIESEL TURBO THPD 15W40

THPD (Top High Performance Diesel) lubricating oil which optimises the performance of the most demanding latest-generation heavy-duty diesel engines. It has been specifically designed for engines requiring lubricants which meet the ACEA E7 and API CI-4 quality standard, and its viscosity and composition means that the periods between oil changes can be extended, always according to the manufacturer's recommendations. Its modern formulation gives it magnificent anti-wear properties, protecting the turbocharger in particular. It is compatible with biodiesel and systems equipped with an EGR valve and SCR catalytic converters and is valid for Euro 5 engines and older.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)	TBN
15W40	108	14,5	141	-27	225	10,0
QUALITY LEVEL	API CI-4/CH-4/SL, ACEA E7/E5, MB 228.3, VOLVO VDS-3, RENAULT RLD-2, EO-N, CAT ECF-2 & ECF-1-a, DETROIT DIESEL DDC 93K215, CUMMINS CES 20076/20077/20078, DETROIT DIESEL DDC 93K218, MAN 3275-1.					

REPSOL SERIE 3 DD 40

Monograde lubricating oil produced from highly-refined bases. It includes especially selected additives which improve aspects such as its resistance to rust and anti-wear properties, as well as giving it a high level of detergent/dispersant power. Its composition makes it suitable for turbo-charged or naturally aspirated diesel engines working in severe conditions. This oil is particularly suitable for the lubrication of Detroit Diesel two-stroke engines. It can also be used in transmissions and torque converters.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)	TBN
40	138	14,9	95	-21	230	7,8
QUALITY LEVEL	API CF-2/CF/SJ, Special Detroit Diesel Series 149.					

HYDRAULIC OILS

Repsol **hydraulic oils** are formulated with carefully selected and refined bases. As a result, they provide all parts of your machinery and equipment with the robustness and reliability they require, even in extreme operating conditions.

Their excellent **anti-wear** characteristics, together with their **anti-rust and anti-ageing properties, corrosion protection** and **outstanding water separation**, put them at the forefront of lubricating oil technology today.

Repsol also has a wide range of hydraulic oils so that you can choose the best one for your industry, including everything from conventional oils with zinc-based additives to the latest “ashless” oils and specific applications which require a fire-resistant fluid.

And all this with Repsol's **commitment to sustainability and the environment** through the use of biodegradable fluids.



REPSOL TELEX HVLP

Hydraulic oil for use in hydraulic circuits subjected to different changes of temperature, weather or very low operating temperatures. It is also very suitable for hydraulic systems used in marine applications.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point (°C)	Flash point (°C)	FZG Min. scuffing load stage	Time for neutralisation no. 2 (h)
15	4,0	145	-45	195	11	>2500
22	4,9	150	-39	205	11	>2500
32	6,3	150	-30	218	12	>2500
46	8,1	150	-30	230	12	>2500
68	10,9	150	-30	240	12	>2500
QUALITY LEVEL	ISO 6743/4 HV, DIN 51524 HVLP: MAG IAS P-68, P-69, P-80, EATON 35VQ25, AFNOR NF E 48603 HV, AFNOR NF E 48690/48691.					

REPSOL TELEX E

Hydraulic oil for use in hydraulic circuits and public works machinery equipped with any kind of pump. In general, it is for any mechanism requiring oil with high anti-wear properties.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point (°C)	Flash point (°C)	FZG Min. scuffing load stage	Time for neutralisation no. 2 (h)
5	1,6	-	-30	110	-	>1000
10	2,7	108	-27	146	-	>1000
15	3,5	113	-27	195	12	>2500
22	4,4	107	-27	202	12	>2500
32	5,4	104	-24	218	12	>2500
46	6,7	98	-24	230	12	>2500
68	8,6	98	-24	240	12	>2500
100	11,2	97	-21	250	12	>2500
QUALITY LEVEL	ISO 6743/4 HM, DIN 51524 HLP: MAG IAS P-68, P-69, P-80 PARKER DENISON HF-0, H-1, HF-1, EATON 35VQ25, AFNOR NF E 48603 HL, HM AFNOR NF E 48690/48691.					

REPSOL HYDROFLUX EP

General purpose hydraulic oil with high resistance to rust and ageing, anti-wear protection, good anti-foaming properties and excellent water separation.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point (°C)	Flash point (°C)	FZG Min. scuffing load stage	Time for neutralisation no. 2 [h]
22	4,3	103	-24	202	10	>1500
32	5,3	98	-24	218	10	>1500
46	6,7	98	-24	230	10	>1500
68	8,8	98	-24	240	10	>1500
100	11,1	97	-21	250	10	>1500
150	14,6	96	-21	252	10	>1500
QUALITY LEVEL	ISO 6743/4 HM, DIN 51524 HLP. AFNOR NF E 48603 HL, HM AFNOR NF E 48690/48691.					

REPSOL LIBRA HIDRAÚLICO HLP

Hydraulic oil formulated with a mixture of mineral bases and high-quality regenerated bases, suitable for use in circuits with severe anti-wear requirements. This range of products illustrates our commitment to sustainable development, as it completes the ecological chain in the production, use, collection and recycling of lubricants.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point (°C)	Flash point (°C)	FZG Min. scuffing load stage	Time for neutralisation no. 2 [h]
32	5,4	95	-21	200	11	>1500
46	6,9	95	-21	210	11	>1500
68	8,6	95	-21	220	11	>1500
QUALITY LEVEL	ISO 6743/4 HM, DIN 51524 HLP.					

REPSOL ARIES

Multifunctional lubricating oil for applications such as highly-revved mechanisms, at its lower viscosities, hydraulic or steam turbines in grades between ISO32 and ISO100, and for the lubrication of diverse mechanisms in the crankcase or by circulation at its higher viscosities.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point (°C)	Flash point (°C)	Time for neutralisation no. 2 (h)
7	2,1	95	-27	128	-
15	3,2	95	-18	170	>2000
22	4,5	95	-15	202	>2000
32	5,3	95	-15	218	>2000
46	6,7	95	-15	230	>2000
68	8,5	95	-10	240	>2000
100	11,0	95	-10	250	>2000
-	12,7	95	-10	260	>2000
150	14,6	95	-10	270	>2000
220	30,5	95	-10	270	>2000
QUALITY LEVEL	ISO 6743/4 HL, DIN 51524 HL.				

ASHLESS OILS

REPSOL HIDRÓLEO

Hydraulic oil for use in circuits operating in severe conditions with stringent filterability requirements (servo valves, robotics, etc.), as well as in systems in which there are extreme changes in temperature.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point (°C)	Flash point (°C)	FZG Min. scuffing load stage	Time for neutralisation no. 2 (h)
32	6,3	150	-33	218	10	>2000
46	8,1	150	-33	230	10	>2000
68	10,9	150	-30	240	10	>2000
100	14,5	150	-27	250	10	>2000
QUALITY LEVEL	ISO 6743/4 HV, DIN 51524 HVLP. AFNOR NF E 48603 HV MAG IAS P-68, P-69, P-80.					

REPSOL HIDRAÚLICO SC

Hydraulic oil for use in hydraulic circuits with very fine tolerance servo valves where excellent filterability is required.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point (°C)	Flash point (°C)	FZG Min. scuffing load stage	Time for neutralisation no. 2 (h)
32	5,4	102	-20	218	10	>2000
46	6,7	98	-20	230	10	>2000
68	8,6	99	-20	240	10	>2000
QUALITY LEVEL	ISO 6743/4 HM, DIN 51524 HLP, PARKER DENISON HF-0, HF-1, HF-1, MAG IAS P-68, P-69, P-80, AFNOR NF E 48603 HM.					

BIODEGRADABLE OILS

REPSOL BIO TELEX

A synthetic biodegradable hydraulic fluid designed to replace conventional oils where there is a need or interest in using a biodegradable fluid. The product is Ecolabel certified.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point (°C)	Flash point (°C)	FZG escalón mín.
46	9,5	187	-45	320	12
68	12,4	182	-39	318	12
QUALITY LEVEL	ISO 6743/4 HEES, DIN 51524 HVLP (exc. ageing resistance). Biodegradable according to OECD 301-B, ECOLABEL certified.				



REPSOL TELEX HFC

A fire-resistant hydraulic fluid (HFC) based on a mixture of water and glycol. For use in hydraulic systems which, due to their characteristics or their location, are at risk of catching fire, and where the fluid does not exceed a temperature of 60°C.

ISO GRADE	Rust A	Cu corrosion	Pour point [°C]	4-ball wear scar (mm)	pH at 20°C	% water
46	Pass	1b	-48	0,95	9,54	40%
QUALITY LEVEL	ISO 6743/4 HFC, ISO 12922 HFC. 7TH LUXEMBOURG REPORT.					

REPSOL TELEX VULCANO

A fire-resistant hydraulic fluid (HFDU) based on synthetic esters, designed for use in hydraulic systems which, due to their characteristics or their location, are at risk of catching fire, and where the fluid does not exceed a temperature of 90°C.

ISO GRADE	Viscosity at 100°C [cSt]	Viscosity index	Pour point [°C]	Flash point [°C]
68	12,6	185	-18	310
QUALITY LEVEL	ISO 6743/4 HFDU, ISO 12922 HFDU. 7TH LUXEMBOURG REPORT.			

TRANSMISSION OILS

Our lubricants meet the **most stringent quality standards**, and the exclusive formulation of our lubricants provides perfect lubrication and maximum care in demanding lubrication systems such as transmissions subjected to high loads.



REPSOL TRANSMISION FD-1 60

Oil which is particularly recommended for axles and final drives of CATERPILLAR machinery which require the use of oil without friction modifiers and meet the CAT FD-1 specification (FDAO: Final Drive Axle Oil). This oil significantly improves the performance and the useful life of machinery in comparison with those that comply with the CAT TO-4 standard.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
60	290	24,3	98	-18	265
QUALITY LEVEL	CATERPILLAR FD-1.				

REPSOL TRANSMISION TO-4 50

Lubricating oil especially formulated to meet the requirements of the CATERPILLAR, ALLISON and KOMATSU specifications, applicable in servo transmissions, clutches and brakes, as well as in final drives, crown wheels and differentials (according to SAE grade).



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
50	200	17,4	95	-18	240
QUALITY LEVEL	CATERPILLAR TO-4, ALLISON C-4 (SAE 10W y 30), KOMATSU KES 07.868.1.				

REPSOL TRANSMISION TO-4 30

Lubricating oil for public works machinery, especially formulated to meet the requirements of the CATERPILLAR, ALLISON and KOMATSU specifications, applicable in servo transmissions, clutches and brakes, as well as in final drives, hydraulic systems, crown wheels and differentials (according to SAE grade).



SAE GRADE	Viscosity at 40°C (cSt)	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)	TBN
30	105	11,4	98	-21	235	11
QUALITY LEVEL	CAT TO-4 (10W), ALLISON C-4 (10W), KOMATSU KES 07.868.1 (10W), CAT TO-4 (30), ALLISON C-4 (30), KOMATSU KES 07.868.1 (30), CAT TO-4 (50), KOMATSU KES 07.868.1 (50).					

REPSOL TRANSMISION TO-4 10W

Lubricating oil for public works machinery, especially formulated to meet the requirements of the CATERPILLAR, ALLISON and KOMATSU specifications, applicable in servo transmissions, clutches and brakes, as well as in final drives, hydraulic systems, crown wheels and differentials (according to SAE grade).



SAE GRADE	Viscosity at 40°C (cSt)	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)	TBN
10W	32	5,5	108	-27	195	11
QUALITY LEVEL	CAT TO-4 (10W), ALLISON C-4 (10W), KOMATSU KES 07.868.1 (10W), CAT TO-4 (30), ALLISON C-4 (30), KOMATSU KES 07.868.1 (30), CAT TO-4 (50), KOMATSU KES 07.868.1 (50).					

REPSOL DIESEL SERIE 3 10W

High-quality monograde mineral lubricant produced with highly-refined bases, to which especially selected additives are added to improve aspects such as its resistance to rust, anti-wear and detergent/dispersant power, thereby ensuring that it has a long service life. It can be used as a hydraulic fluid in public works machinery, as well as in transmissions for which the manufacturer recommends this grade of viscosity.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
10W	39	6,6	110	-27	200
QUALITY LEVEL	API CF/SF, CATERPILLAR TO-2, ALLISON C-3.				

REPSOL ORION UTTO

Universal tractor transmission oil (UTTO) which is also appropriate for public works machinery. Its carefully-designed formulation makes it suitable for use in gearboxes, differential conical gears, power take-offs, hydraulic systems, wet brakes (sintered or compound) and clutches.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
10W30	65	10,8	140	-33	180
QUALITY LEVEL	FORD M2C 134D/CNH MAT 3525, ALLISON C-4, JOHN DEERE J-20C, VOLVO WB 101, API GL-4/SAE 80W, PARKER DENISON UTTO/THF, CATERPILLAR TO-2, MASSEY FERGUSON, M-1145/M-1143.				

REPSOL CARTAGO LD 80W90

Long-life oil for differentials and some manual gearboxes that require GL-5 quality. It is especially recommended for differentials of commercial and public works vehicles operating in severe conditions which require a high-performance lubricant. It complies with current manufacturers' regulations that require oils to have a drain interval which enables the period between oil changes to be doubled or tripled in comparison with conventional mineral oils.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
80W90	135	14,25	102	-30	204
QUALITY LEVEL	API GL-5/MT-1, RENAULT Axle, MB 235.20, DAF API GL-5, MAN 342 M3, SAE J 2360, VOLVO 97310, SCANIA STO 1:0 for gearboxes, ZF TE-ML 05A/07A/08/12E/16B/17B/19B/21A, MACK GO-J, IVECO Axle, ARVIN MERITOR 076-D.				

REPSOL CARTAGO LD 85W140

Long-life oil for differentials and some manual gearboxes that require GL-5 quality. It is especially recommended for differentials of commercial and public works vehicles operating in severe conditions which require a high-performance lubricant. It complies with current manufacturers' regulations that require oils to have a drain interval which enables the period between oil changes to be doubled or tripled in comparison with conventional mineral oils.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
85W140	320	24,55	98	-12	218
QUALITY LEVEL	API GL-5/MT-1, DAF API GL-5, VOLVO 97310, SCANIA STO 1:0 for gearboxes, MACK GO-J, SCANIA STO 1:0 for differentials, IVECO Axle, ZF TE-ML 05A/07A/08/12E/16D/21A, ARVIN MERITOR 076-A.				

REPSOL CARTAGO MULTIGRADO EP 80W90

Extreme pressure multi-grade lubricating oil, used in vehicle differentials or transmission units and in manual gearboxes where API GL-5 oil is required. Its high load capacity makes it particularly suitable for hypoid differentials.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
80W90	140	15,4	108	-27	175
QUALITY LEVEL	API GL-5 (80W90), MB 235.0 (80W90), MAN 342 M1 (80W90), VW 727 (80W90), RENAULT Axles (80W90), DAF API GL-5 (80W90), MIL-L-2105 D (80W90), ZF TE-ML 05A/07A/ 08/16B/16C/17B/19B/ 21A (80W90), API GL-5 (85W14, VOLVO 97310 (85W140), DAF API GL-5 (85W140), MIL-L-2105 D (85W140), ZF TE-ML 05A/07A/ 08/16C/16D/21A (85W140), VOITH TURBO 132.00374400 (formerly 3.325-339) (80W90).				

REPSOL CARTAGO MULTIGRADO EP 85W140

Extreme pressure multi-grade lubricating oil, used in vehicle differentials or transmission units and in manual gearboxes where API GL-5 oil is required. Its high load capacity makes it particularly suitable for hypoid differentials.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
85W140	400	28,3	98	-18	175
QUALITY LEVEL	API GL-5 (80W90), MB 235.0 (80W90), MAN 342 M1 (80W90), VW 727 (80W90), RENAULT Axles (80W90), DAF API GL-5 (80W90), MIL-L-2105 D (80W90), ZF TE-ML 05A/07A/ 08/16B/16C/17B/19B/ 21A (80W90), API GL-5 (85W14, VOLVO 97310 (85W140), DAF API GL-5 (85W140), MIL-L-2105 D (85W140), ZF TE-ML 05A/07A/ 08/16C/16D/21A (85W140), VOITH TURBO 132.00374400 (formerly 3.325-339) (80W90).				

REPSOL CARTAGO AUTOBLOCANTE 80W90

Extreme pressure multi-grade lubricating oil, recommended for use in self-locking differentials and drive axles of public works or all-terrain four-wheel drive vehicles where fluids with LSD (limited-slip differential) characteristics are required. It can also be used in non-locking differentials where API GL-5 quality is required.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
80W90	150	16,3	113	-30	180
QUALITY LEVEL	API GL-5, ZF TE-ML 05C/07A/08/12C/21C.				

REPSOL MATIC III ATF

Lubricating oil formulated with synthetic components and especially designed for automatic transmissions which require long periods between oil changes, and power steering units in vehicles where a fluid that complies with the GM Dexron III or Dexron II specification is required. It can be used in light-duty vehicles, public works machinery and commercial vehicles.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)
-	34	7,5	180	-50	226
QUALITY LEVEL	DEXRON III H, MB 236.9, MAN 339 V-2/339 Z-2, VOITH H55.6336, ZF TE-ML 03D/04D/14B/16L/17C, ALLISON C-4, TES 295, TES 389, FORD MERCON V.				

REPSOL MATIC ATF

Dexron II D mineral lubricating oil for automatic transmissions in cars, commercial vehicles, buses and power steering units. It is especially recommended for large fleets of vehicles when a single general purpose ATF fluid is required.



SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point [°C]	Flash point [°C]
-	43	7,8	160	-40	180
QUALITY LEVEL	DEXRON II D, MB 236.9, MAN 339 V-1/339-Z1, VOITH H55.6335, FORD MERCON, ALLISON C-4, ZF TE-ML 03D/04D/11A/14A/17C.				



GEAR OILS

Repsol has designed a full range of lubricating oils to overcome the technical challenges of the wide variety of **industrial gearbox applications**.

Repsol Super Tauro mineral oil, with its excellent **anti-rust, anti-corrosion, demulsifying and anti-foaming properties**, together with its high load capacity, provides superior results in industrial gears subjected to severe operating conditions.

Repsol Synthetic Lubricants, which make it possible to extend the periods between oil changes, leading to savings on maintenance costs, are recommended for systems whose operating conditions reach extreme temperatures.

The range is completed by an oil especially designed for systems that experience a phenomenon known as **“micropitting”**, which appears in gears that are subjected to high cyclic loads and frequent stops and starts.



REPSOL SUPER TAURO PAG

High-performance synthetic lubricant for systems where very high resistance to rust and load capacity are required. Exceeds Flender requirements.

ISO GRADE	Viscosity at 100°C [cSt]	Viscosity index	Pour point [°C]	Flash point [°C]	FZG Min. scuffing load stage
150	25,3	202	-39	260	12
220	32,5	193	-33	294	12
320	43,9	196	-36	296	12
460	67,6	225	-36	286	12
680	122,0	272	-30	287	12
1000	165,0	284	-27	296	12
QUALITY LEVEL	ISO 6743/6 CKT, DIN 51517 CLP, AGMA, AIST 224, FLENDER.				

REPSOL SUPER TAURO SINTÉTICO

A synthetic PAO and ester-based lubricant for gears operating in extremely severe conditions and high temperatures. Its excellent resistance to rust means that the periods between oil changes can be extended. Exceeds Flender requirements.

ISO GRADE	Viscosity at 100°C [cSt]	Viscosity index	Pour point [°C]	Flash point [°C]	FZG Min. scuffing load stage
100	14,5	150	-54	205	12
150	21,0	153	-51	205	12
220	26,7	156	-42	205	12
320	35,5	158	-42	240	12
460	46	160	-39	240	12
QUALITY LEVEL	ISO 6743/6 CKT, DIN 51517 CLP, AGMA, AIST 224, FLENDER.				

REPSOL SUPER TAURO FND

A lubricant for all types of industrial gears which is suitable for all cases where high levels of resistance to rust and load capacity are required. Exceeds Flender requirements.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point [°C]	Flash point [°C]	FZG Min. scuffing load stage
220	18,7	95	-9	270	12
320	24,0	95	-9	270	12
QUALITY LEVEL	ISO 6743/6 CKD, DIN 51517 CLP, AGMA, FLENDER.				

REPSOL SUPER TAURO

A lubricant for industrial gears with high load requirements.

ISO GRADE	Viscosity at 100°C (cSt)	Viscosity index	Pour point [°C]	Flash point [°C]	FZG Min. scuffing load stage
68	8,8	98	-12	240	12
100	11,3	99	-10	250	12
150	14,6	96	-10	270	12
220	19,0	95	-10	270	12
320	24,0	95	-10	270	12
460	29,7	95	-10	270	12
680	40,0	95	-9	270	12
1000	50,0	100	-6	270	12
QUALITY LEVEL	ISO 6743/6 CKD, DIN 51517 CLP, AGMA, AIST 224.				

COMPRESSOR OILS

At Repsol we know that the reliability and efficiency of **air compression, process gas, refrigerant gas** and **vacuum pump** systems is crucial to the smooth running of your facilities. Selecting the right lubrication is therefore an essential part of maintenance systems.

With this in mind, we have designed a range of high-quality lubricants. Repsol lubricating oils are formulated with highly-refined bases and the latest additive technologies. They therefore meet all the requirements of the different types of compressors on the market.

The Repsol range of lubricants includes highly-refined paraffinic oils for normal working conditions, as well as other long-life synthetic oils for compressors operating in more severe conditions.



REPSOL SINTÉTICO THOR

An ester-based synthetic lubricant recommended for the lubrication of reciprocating and rotary compressors operating in severe working conditions which require maximum oil service life.

ISO GRADE	Viscosity at 100°C [cSt]	Viscosity index	Pour point [°C]	Flash point [°C]	Auto-ignition temperature [°C]	4-ball weld load [kg]
100	10,2	85	-33	274	425	130
QUALITY LEVEL	ISO 6743/3 DAB/DAJ/DGE/DVE, DIN 51506 VDL.					

REPSOL MERAK VDL

Oil recommended for lubricating cylinders and mechanisms in rotary and reciprocating compressors, whether they are air or inert gas compressors, with high discharge temperatures.

ISO GRADE	Viscosity at 100°C [cSt]	Viscosity index	Pour point [°C]	Oxidation with Fe ₂ O ₃	
				Conradson carbon [%]	Evaporation losses [%]
32	5,3	100	-12	0,9	9,1
46	6,7	98	-12	1,2	5,0
68	8,5	97	-12	2,7	4,5
100	11	96	-12	3,0	3,0
QUALITY LEVEL	ISO 6743/3 DAA/DAG DIN 51506 VDL.				

REPSOL ARIES TURBO GAS CC

Oil produced with hydrogenated bases, designed for the lubrication of latest-generation combined cycle turbines (steam or gas turbines and turbochargers), and also for ammonia compressors.

ISO GRADE	Viscosity at 100°C [cSt]	Viscosity index	Pour point [°C]	Flash point [°C]	Time for neutralisation no. 2 [h]
32	5,3	120	-15	220	>10.000
46	6,7	120	-15	230	>10.000
QUALITY LEVEL	ISO 6743/3 DAB/DAH, DIN 51506 VCL.				

REPSOL TURBO ARIES

Lubricating oil for steam turbines which require high resistance to rust and corrosion and a very long service life.

ISO GRADE	Viscosity at 100°C [cSt]	Viscosity index	Pour point [°C]	Flash point [°C]	Time for neutralisation no. 2 [h]
32	5,3	95	-15	218	>3000
46	6,7	95	-15	230	>3000
68	8,5	95	-12	240	>2500
QUALITY LEVEL	ISO 6743/3 DAA/DAG, DIN 51506 VCL.				

REPSOL TURBO ARIES EP

Lubricating oil for turbines which meet the MIL 17331H specification.

Viscosidad a 40°C [cSt]	Viscosity at 100°C [cSt]	Viscosity index	Pour point [°C]	Flash point [°C]	Time for neutralisation no. 2 [h]
80	9,5	95	-10	240	>1000

GAS ENGINE OILS

REPSOL LONG LIFE GAS 4005

A very long-life lubricating oil which includes hydrogenated bases and the latest generation of additives, enabling the period between oil changes to be extended in comparison with traditional gas cogeneration-based mineral oils. Suitable for modern stationary gas motors that use natural gas as fuel and require the use of oil with a maximum ash content of 0.5%. Its well-balanced formulation enables it to withstand the rust and nitration present in these types of engines, which operate in severe conditions, much better than conventional lubricants. In applications where the gas used as fuel is biogas or any another type of gas, the useful life of the lubricant will depend on the level of contaminants in the gas.

SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)	TBN
40	118	13,2	107	-12	225	5,1
QUALITY LEVEL	JENBACHER 1000-1109 (officially approved), MWM DEUTZ (officially approved), ROLLS ROYCE BERGEN BV-G/ CR-G/ K-G1/ K-G2/K-G3 (officially approved), MAN Diesel & Turbo medium-speed engines (officially approved), CUMMINS (officially approved), MAN 3271-2, WAUKESHA, CATERPILLAR, WÄRTSILÄ.					

REPSOL SUPER MOTOR GAS 4005

A very long-life mineral lubricating oil which is particularly suitable for meeting the lubrication requirements of modern stationary gas motors that use natural gas as fuel. It contains a maximum ash content of 0.5%, minimising the formation of deposits and guaranteeing maximum performance and operation time. It enables the periods between oil changes to be extended, thereby minimising maintenance costs.

SAE GRADE	Viscosity at 40°C	Viscosity at 100°C	Viscosity index	Pour point (°C)	Flash point (°C)	TBN
40	125	13,6	102	-21	225	6,4
QUALITY LEVEL	JENBACHER 1000-1109 (officially approved), MWM DEUTZ (officially approved), ROLLS ROYCE BERGEN K-G1/K-G2/K-G3, CATERPILLAR WÄRTSILÄ, WAUKESHA, GUASCOR.					

PNEUMATIC TOOL OILS

REPSOL ASTRA

A fluid for the lubrication of drills, hammers and pneumatic tools in severe working conditions, as well as pneumatic mechanisms which require a fluid with the capacity to capture water drops, ensuring that they do not come into contact with metal surfaces [demulsifying test values of 0-0-80 at 30 minutes].

ISO GRADE	Viscosity at 100°C	Viscosity index	Pour point [°C]	Flash point [°C]	4-ball wear scar diameter at 40kg (mm)	4-ball wear scar diameter at 40kg (mm)
46	6,8	100	-21	200	0,42	0-0-80
100	11,3	97	-15	220	0,36	0-0-80
150	14,7	97	-15	225	0,36	0-0-80

ANTIFREEZES

REPSOL MAXIMUM QUALITY ORGANIC COOLANT ANTIFREEZE

Ethylene glycol-based engine coolant formulated with fully organic inhibitors, ensuring that it provides excellent protection against corrosion in all metals, particularly aluminium and other light alloys present in engine cooling circuits. Although it can be used in all types of cooling circuits (aluminium, copper, cast iron) it is particularly recommended for high-pressure aluminium engines where protection at high temperatures is very important.

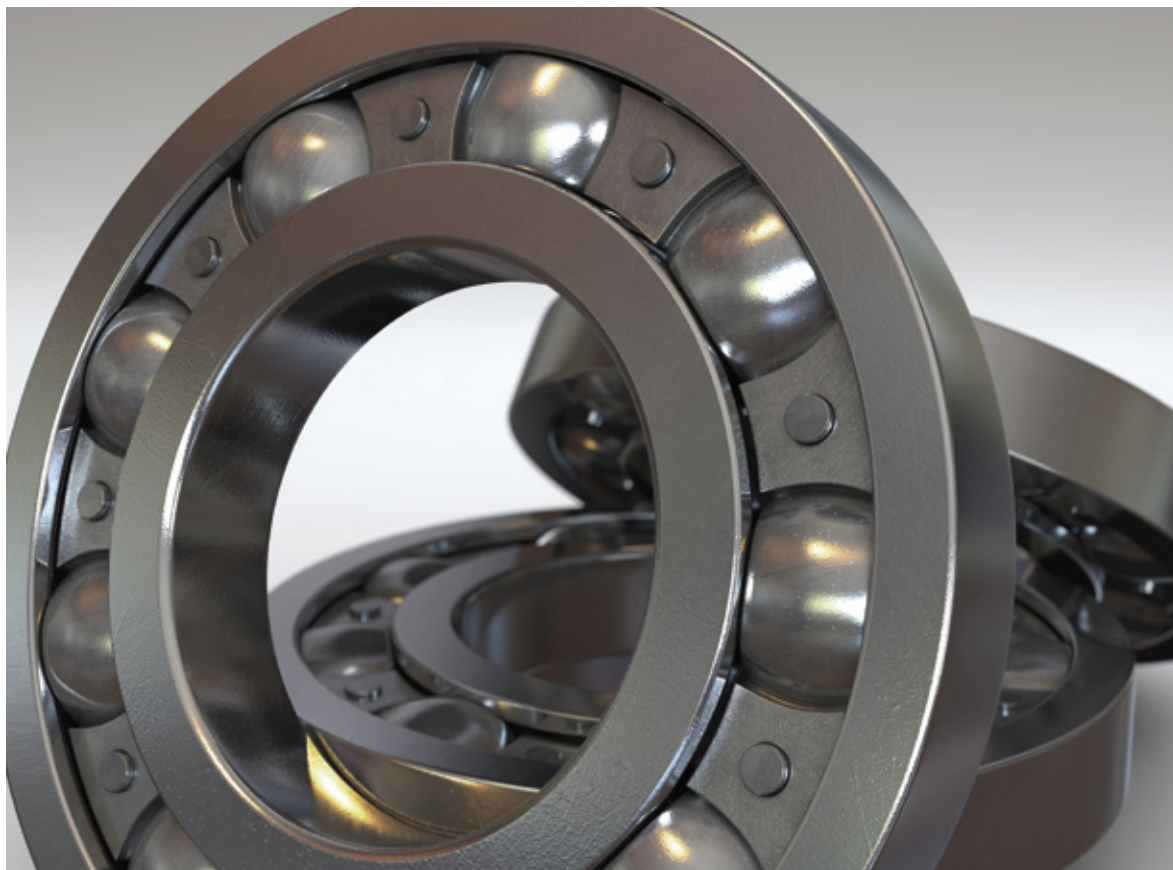


COLOUR	% MEG.	Density	Pour point [°C]	Dilution
MAGENTA	50%	1,068	-40	50%
QUALITY LEVEL	LINE 26-361-88, ASTM D3306/D4985, BS 6580:1992, SAE J1034/J814/YJ1941, MB Approval 325.3, Ford WSS-M97844-O, General Motors GM 6277M, Volkswagen VW 774 F, MAN 324 Type SNF, Deutz DQC CB-14, Caterpillar A4.05.09.01 DAF 74002, Renault Trucks 41-01-001/- 5 Type O, Jenbacher.			

GREASES

In order to guarantee excellent performance from your machinery, Repsol offers high-performance **lubricating greases**. This full range covers the needs of the most diverse industrial sectors.

It is possible to select everything from multi-purpose greases, which meet the lubrication requirements of the majority of facilities, to special products designed to work in conditions which are highly demanding due to the loads, temperatures or environmental contamination. Compliant with the **most stringent quality standards**, the exclusive formulation of our greases provides excellent performance in all types of machinery, extending its useful life and providing **extra reliability**. This makes the Repsol range of greases the best investment for your company.



Extreme-pressure greases

REPSOL LÍTICA EP

Grease for all types of bearings that withstand loads and vibrations (steel, rolling, mining, public works machinery), couplings, chains, guideways, shear bearings, rolling mills (chocks, bearings, brackets, etc.).

PRODUCT	BASE	THICKENER	NLGI	DROPPING POINT	WORKING TEMPERATURE	QUALITY LEVEL
GREASE LÍTICA EP 0	Mineral base (150 cSt)	Lithium	0	185 °C	-20 °C 120 °C	DIN 51502 GP OG - 20
GREASE LÍTICA EP 1	Mineral base (150 cSt)	Lithium	1	190 °C	-20 °C 120 °C	DIN 51825 KP1K - 20
GREASE LÍTICA EP 2	Mineral base (150 cSt)	Lithium	2	195 °C	-20 °C 120 °C	DIN 51825 KP2K - 20
GREASE LÍTICA EP 3	Mineral base (150 cSt)	Lithium	3	200 °C	-20 °C 120 °C	DIN 51825 KP3K - 20

REPSOL MOLIBGRAS EP 2

Lubrication of mechanisms exposed to very severe conditions involving sliding, very high loads and long greasing periods (plain bearings, hydraulic hammer bearings, fifth wheels, rolling mills, etc.).

PRODUCT	BASE	THICKENER	NLGI	DROPPING POINT	WORKING TEMPERATURE	QUALITY LEVEL
GREASE MOLIBGRASEP 2	Mineral base (150 cSt)	Lithium	2	185 °C	-20 °C 120 °C	DIN 51825 KPF 2K-20

Greases for special applications

REPSOL OGL

Lubrication of heavily-loaded large gear drives in the cement, steel, mining and chemical industries.

PRODUCT	BASE	THICKENER	NLGI	DROPPING POINT	WORKING TEMPERATURE	QUALITY LEVEL
GREASE OGL	Semi-synthetic base (1.500 cSt)	Complex aluminium	00	160 °C	-10 °C 120 °C	DIN 51502 OGPF 00K-10

MINING INDUSTRY, OPENCAST MINING



1

HYDRAULIC DRILLS:

RP TELEX E 32/46/68
RP TRANSMISIÓN T0-4 10W/30/50
RP MOLIBGRAS EP 2

2

PNEUMATIC DRILLS:

AIR LINE: RP ASTRA 100/150

3

PORTABLE SCREW COMPRESSOR:

RP MERAK VDL 32/46/68/100

4

LOADING AND TRANSPORTATION VEHICLES: DUMPERS, PAY LOADERS, BACKHOE LOADERS

• DIESEL ENGINE:

RP DIESEL TURBO UHPD MID SAPS 10W40
 RP DIESEL TURBO UHPD URBAN 10W40
 RP DIESEL TURBO THPD MID SAPS 15W40
 RP DIESEL TURBO THPD 10W40
 RP DIESEL TURBO THPD 15W40
 RP DIESEL SERIE 3 DD 40

• HYDRAULIC TRANSMISSION AND TORQUE CONVERTER:

RP TRANSMISIÓN TO-4 10W/30
 RP DIESEL SERIE 3 10W
 RP ORION UTTO
 RP MATIC III ATF
 RP MATIC ATF

• HYDRAULIC SYSTEM:

RP TRANSMISIÓN TO-4 10W
 RP DIESEL SERIE 3 10W
 RP TELEX E 32/46
 RP BIO TELEX 46/68

• FINAL DRIVES, REDUCTION GEARS AND DIFFERENTIALS:

RP TRANSMISIÓN FD-1 60
 RP TRANSMISIÓN TO-4 50
 RP CARTAGO LD 80W90
 RP CARTAGO LD 85W140
 RP CARTAGO MULTIGRADO EP 80W90
 RP CARTAGO MULTIGRADO EP 85W140
 RP CARTAGO AUTOBLOCANTE 80W90

• COOLING SYSTEM:

RP MAXIMUM QUALITY ORGANIC COOLANT ANTIFREEZE

• GREASE POINTS:

RP MOLIBGRAS EP 2
 RP GRASA LÍTICA EP



5

LOADERS / CRANES

• DIESEL ENGINE:

RP DIESEL TURBO UHPD MID SAPS 10W40
 RP DIESEL TURBO UHPD URBAN 10W40
 RP DIESEL TURBO THPD MID SAPS 15W40
 RP DIESEL TURBO THPD 10W40
 RP DIESEL TURBO THPD 15W40
 RP DIESEL SERIE 3 DD 40

• TURNTABLE PINIONS:

RP OGL 0

• HYDRAULIC SYSTEM:

RP TRANSMISIÓN TO 4 SAE 10W
 RP TELEX E 32/46
 RP BIO TELEX 46/68

• FINAL DRIVES/REDUCTION GEARS:

RP TRANSMISIÓN TO-4 50

• TRACTION ENGINES:

RP SUPERTAURO SINTÉTICO 320/220

• COOLING:

RP ANTICONGELANTE REFRIGERANTE MQ 50%

• GREASE POINTS:

RP MOLIBGRAS EP 2
 RP GRASA LÍTICA EP

DRILLS AND EQUIPMENT

1

JUMBO DRILLS

• DIESEL ENGINE - Deutz, Caterpillar, MWM, Detroit Diesel:

RP DIESEL TURBO UHPD MID SAPS 10W40
RP DIESEL TURBO UHPD URBAN 10W40
RP DIESEL TURBO THPD MID SAPS 15W40
RP DIESEL TURBO THPD 10W40
RP DIESEL TURBO THPD 15W40
RP DIESEL SERIE 3 DD 40

• HYDROSTATIC TRANSMISSION - Clark:

RP TRANSMISIÓN TO 4

• HYDROSTATIC TRANSMISSION: - Sundstrand:

RP ORION UTTO
RP TELEX HVLP 32/46/68
RP TELEX E 32/46/68

• DIFFERENTIAL – FRONT AND REAR:

RP CARTAGO MULTIGRADO EP 85W140
RP CARTAGO LD 85W140

• WET BRAKES - Rockwell

RP ORION UTTO

• MAIN HYDRAULIC SYSTEM AND STEERING:

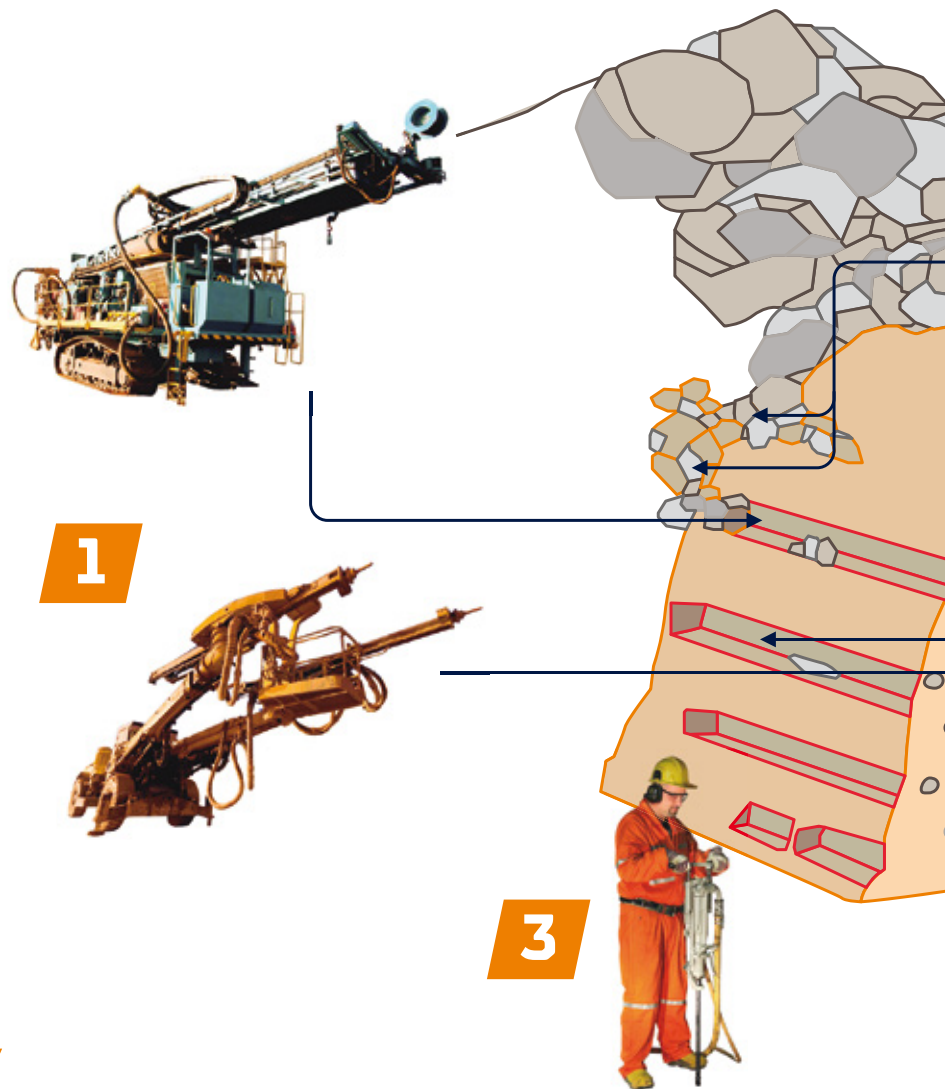
RP ORION UTTO
RP TELEX HVLP 32/46/68
RP TELEX E 32/46/68
RP BIOTELEX 46/68

• FRONT AND REAR WHEEL HUBS, REAR DIFFERENTIAL:

RP MOLIBGRAS EP 2

• UNIVERSAL JOINTS, MISCELLANEOUS ITEMS AND OTHER POINTS:

RP MOLIBGRAS EP 2



3

MANUAL DRILLS:

Air line

RP ASTRA 100/150

2

LOW-PROFILE VEHICLES: DUMPS, SCOOPS

- **DIESEL ENGINE - Deutz, Caterpillar, MWM, Detroit Diesel:**

RP DIESEL TURBO UHPD MID SAPS 10W40
 RP DIESEL TURBO UHPD URBAN 10W40
 RP DIESEL TURBO THPD MID SAPS 15W40
 RP DIESEL TURBO THPD 10W40
 RP DIESEL TURBO THPD 15W40
 RP DIESEL SERIE 3 DD 40

- **TORQUE CONVERTER AND TRANSMISSIONS - Borg & Beck/Clark:**

RP ORION UTTO
 HYDROSTATIC TRANSMISSION - Sundstrand:
 RP ORION UTTO

- **CHAIN BOX:**

RP TRANSMISIÓN TO 4

- **DIFFERENTIAL – FRONT AND REAR - John Deere, Ford:**

RP ORION UTTO

- **DIFFERENTIAL – FRONT AND REAR - Clark, Rockwell, Rock Torque**

RP CARTAGO MULTIGRADO EP 85W140
 RP CARTAGO LD 85W140

- **WET BRAKES - Rockwell:**

RP ORION UTTO

- **PLANETARY WHEEL HUBS - Clark, Rockwell, Rock Torque:**

RP CARTAGO MULTIGRADO EP 85W140

- **MAIN HYDRAULIC SYSTEM AND STEERING BOOSTER – ALL HYDRAULIC PUMPS:**

RP ORION UTTO

- **FRONT AND REAR WHEEL HUBS, REAR DIFFERENTIAL:**

RP MOLIBGRAS EP 2

- **BEARINGS (John Deere only) LUBRICATION OF CHAIN AND MAIN HYDRAULIC RESERVOIR:**

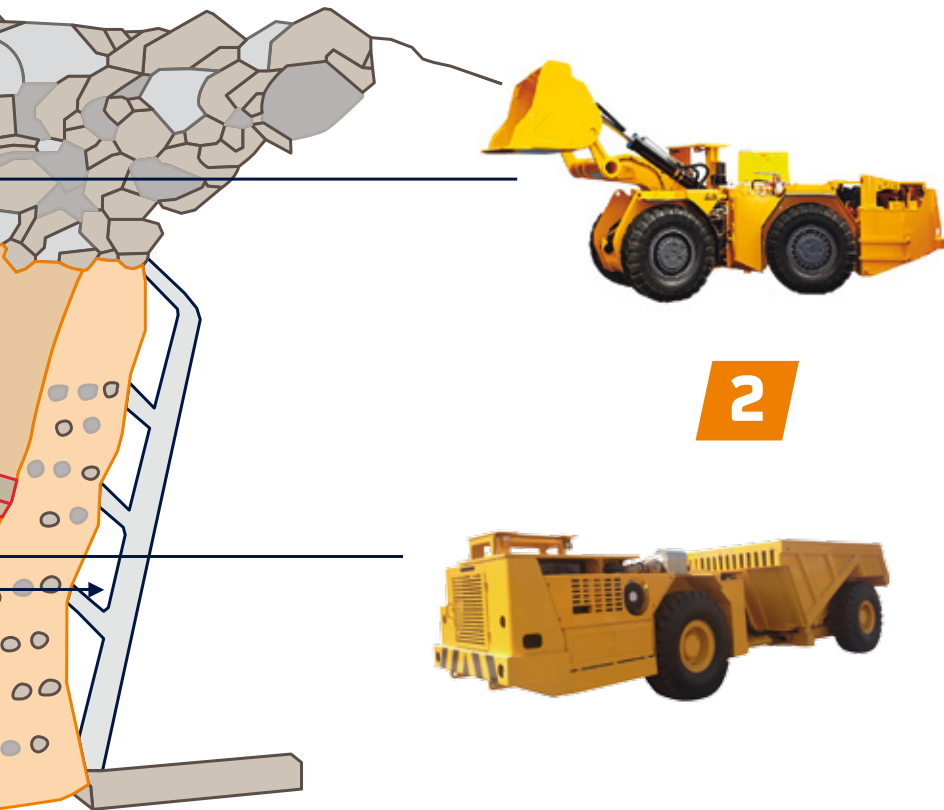
RP ORION UTTO

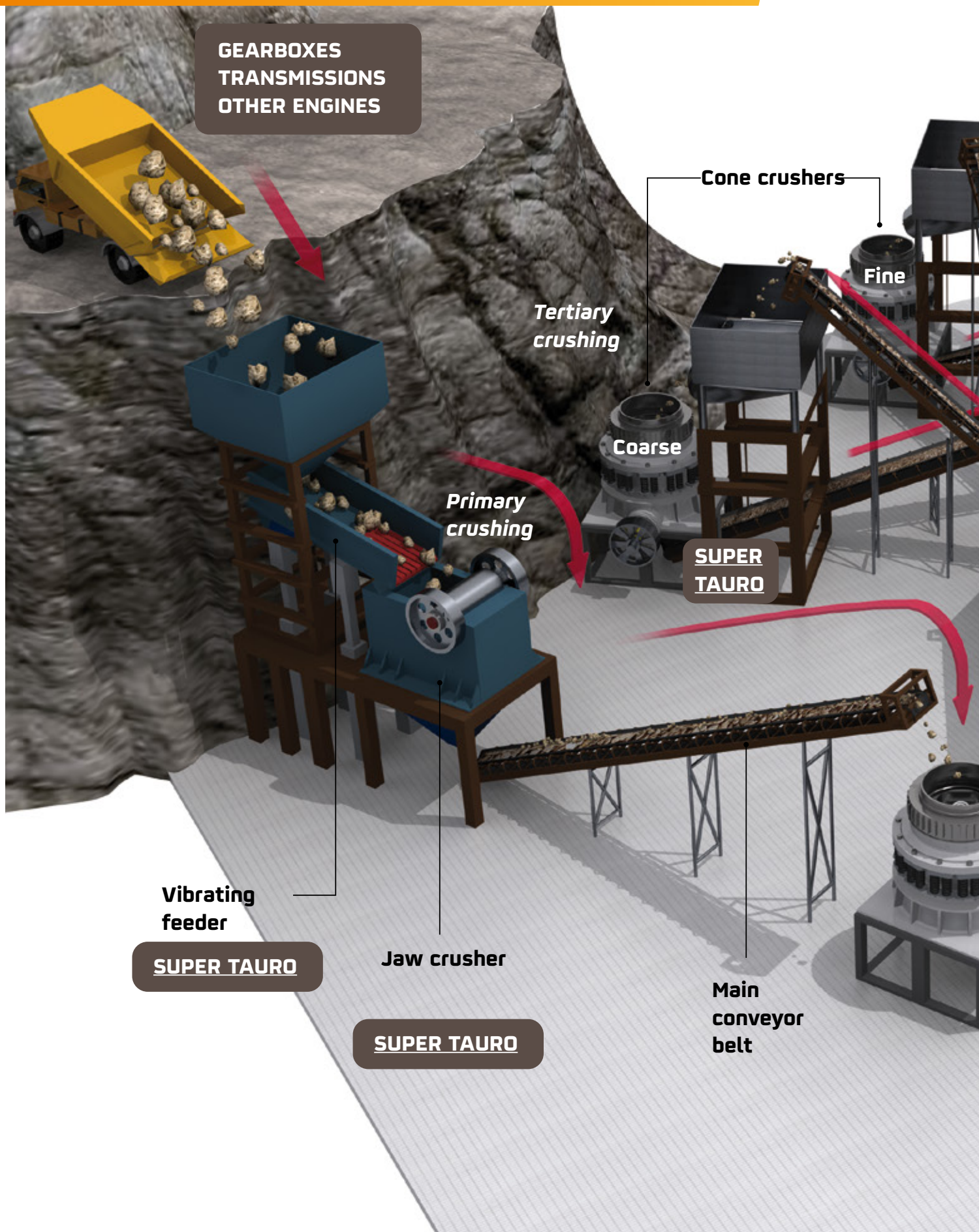
- **UNIVERSAL JOINTS, MISCELLANEOUS ITEMS AND OTHER POINTS:**

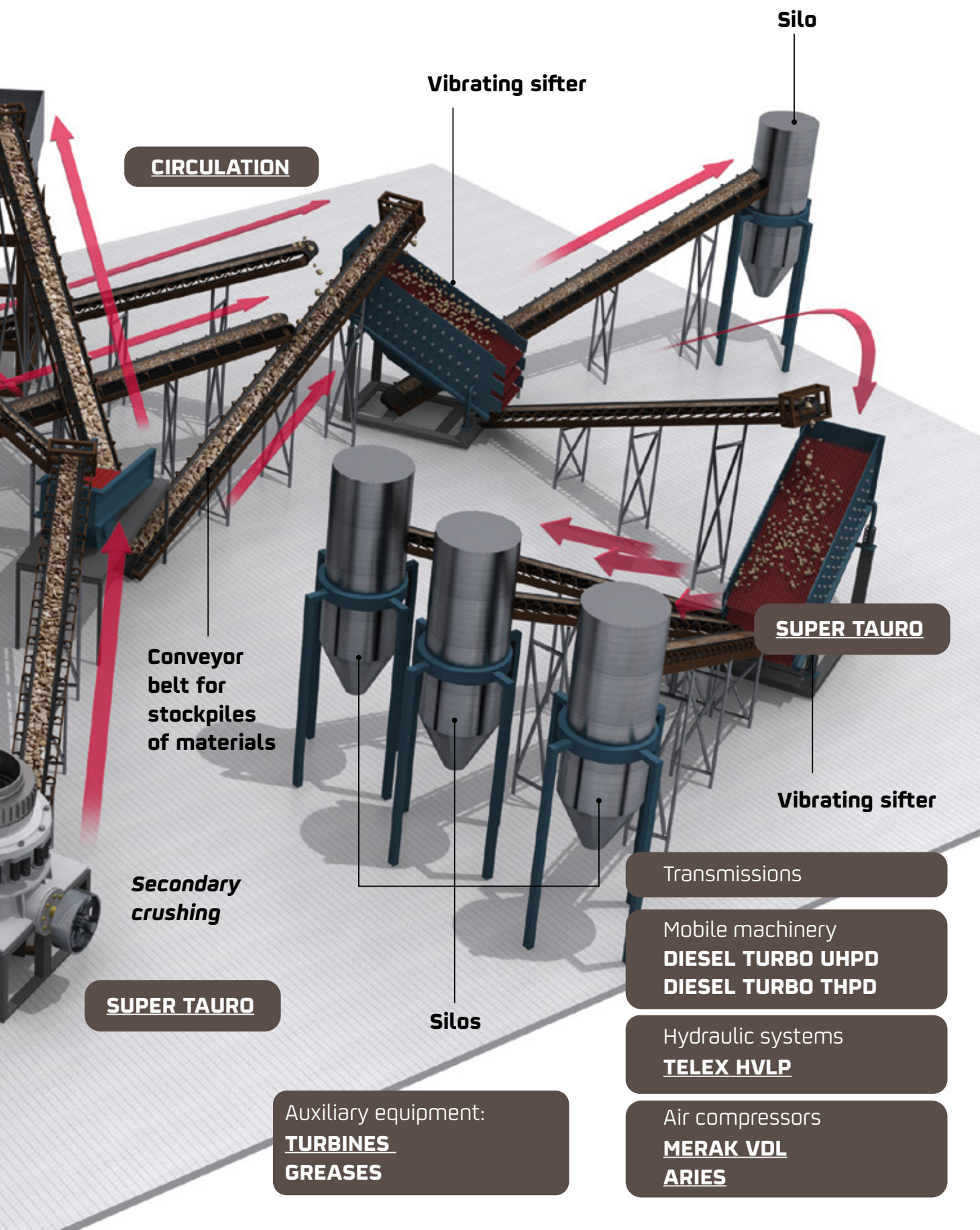
RP MOLIBGRAS EP 2

- **AIR-ACTUATED HYDRAULIC BRAKES:**

RP ORION UTTO







TECHNICAL ASSISTANCE SERVICES

ANALYSIS OF OIL IN SERVICE

At Repsol we know how important it is to ensure that your machinery and systems work in the best possible conditions. It is therefore essential to ensure that they are adequately lubricated.

The **ADOC programme** is an exclusive service we offer our customers which is based on more than 20 years' experience in the analysis of lubricants. Through the periodic analysis of a sample of oil in service in our laboratory, the ADOC programme tells you the condition and performance of your machinery and systems, whilst predicting any mechanical failures before they occur.



Advantages of the ADOC programme:

- Improves the performance and productivity of your equipment.
- Reduces maintenance costs and unscheduled stoppages.
- Extends the useful life of lubricants and mechanical components, thereby minimising the associated replacement costs and the capital tied up in replacement parts.
- Enables maintenance and control activities to be scheduled.
- Leads to a significant improvement in the optimum working conditions of lubricants and components.

Other services:

● **Technical assistance**

Our team of technical specialists is available to offer you advice in your factory and provide specialised training in lubricants.

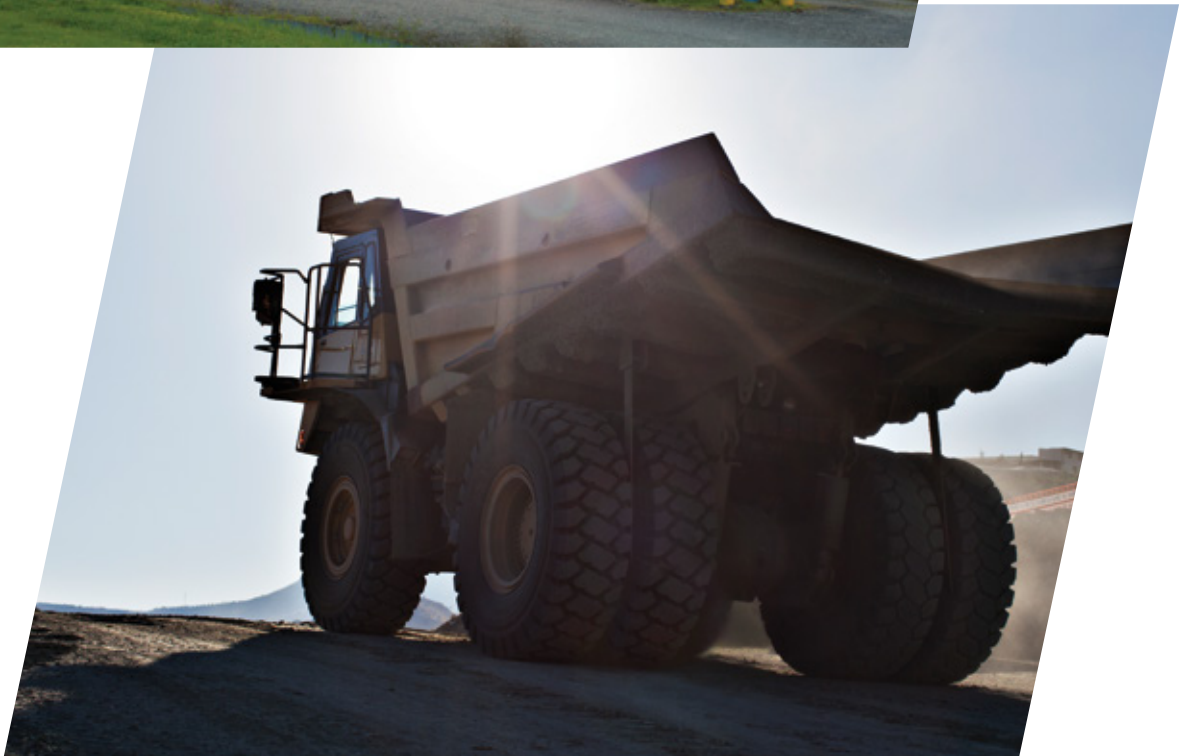
● **On-site assistance services**

We offer an expert recommendation on the best lubrication practices, improvement of lubrication performance, selection of samples and resolution of machinery-related problems to help extend the useful life and efficiency of your machinery.

● **On-site lubrication services**

We take care of everything necessary to ensure that the lubricants are not a cause for concern for customers, offering lubricant application services, warehouse management, sample taking, collection of used oil, etc.

● **Development of bespoke lubricants for the resolution of specific problems**



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