Premium Heavy Industry Lubricants

premium lubricants
Dex

PROVEN LOWEST DOWNTIMES

Advanced test method

Dex Premium Lubricants embody an entirely different approach to improving the effectiveness of industrial lubricants. Instead of relying on additives, Dex uses a proven nanotechnological enrichment process to fundamentally change the way the lubricant itself behaves.

Practice performance test

The result, as confirmed by several industrial test laboratories, is a lubricant which substantially outperforms standard products. However, since laboratory tests seldom match real-life situations, Dex Premium Lubricants has developed an additional and unique 'practice performance test' environment.

Test environment

The test environment consists of two electric motors that are connected to a gearbox. One is a driving motor that is running at 1,500 rpm and the other is a breaking motor running at 3,000 rpm. The breaking force is generated by a frequency controller. The return power is fed over a DC-bus back into the driving motor. Breaking force over various runs has a tolerance of less than 1%.

How do we test?

The gearbox is filled with 1 litre of lubricant. During the testing process, the breaking force is measured at set intervals. Starting from 0% the breaking force is increased by increments of 5% up to a maximum of 60%. This is the maximum capacity of the driving motor. This means the driving motor will have a loss of efficiency. Therefore 60% is in fact a 100% load.

Nano-enrichment process

Any commercially available lubricant can be upgraded to the performance levels described in this document by a proprietary nanotech process developed by Dex Premium Lubricants. Spectral analysis of the original oil and the same oil after application of this process show no differences at all. The only difference is the improved performance of the Dex lubricants that cannot be achieved by the standard oils which have not been enriched by the nanotech process.

Standard lubricant: spectral analyze AR1703539

Report-nr.	Date Sample	ISO 4406/1999 >4>6>14	SAE AS 4059	Visc 40°C ASTM D445 cSt	TAN ASTM D664 mgKOH/g	Water ASTM D6304 METHOD C ppm
AR1703539		--	--	85.90	2.49	120

Additive Elements (ppm)						Wear Metals (ppm)							
Report nr.	Na	B	Zn	P	Ca	Mg	Si	Fe	Cr	Mo	Al	Cu	Pb	Sn
AR1703539	2	125	788	751	1341	781	6	1	0	46	1	0	0	0

Dex Lubricant upgraded in the base: spectral analyze AR1703538

Report-nr.	Date Sample	ISO 4406/1999 >4>6>14	SAE AS 4059	Visc 40°C ASTM D445 cSt	TAN ASTM D664 mgKOH/g	Water ASTM D6304 METHOD C ppm
AR1703538		--	--	85.20	2.55	100

Additive Elements (ppm)						Wear Metals (ppm)							
Report nr.	Na	B	Zn	P	Ca	Mg	Si	Fe	Cr	Mo	Al	Cu	Pb	Sn
AR1703538	1	130	782	807	1331	820	9	1	0	46	1	0	0	0

Performance tests show major differences

	REFERENCE Dex 10W-40			Compared oil Losses. TNB run 26 april 2017					
REMP	IN	PLoss	% Loss	Pin	PLoss	Delta Loss	Total Loss	Performance	% Less Loss
0	1436,760	283,818	19,7540	1455,272	309,023	25,205	43,717	3,043	15,403
5	1458,184	306,115	20,99289	1503,375	356,835	50,720	95,911	6,577	31,332
10	1522,443	286,923	18,84622	1558,984	328,456	41,533	78,074	5,128	27,211
15	1591,060	284,590	17,88682	1607,571	305,721	21,131	37,642	2,366	13,227
20	1648,728	254,808	15,45482	1695,274	305,226	50,418	96,964	5,881	38,054
25	1777,404	264,302	14,87011	1818,432	307,622	43,320	84,348	4,746	31,913
30	1945,460	309,567	15,91228	1992,675	359,673	50,106	97,321	5,002	31,438
35	2117,584	327,664	15,47348	2138,547	352,243	24,579	45,542	2,151	13,899
40	2333,469	383,161	16,42023	2377,374	433,475	50,314	94,219	4,038	24,590
45	2515,487	411,736	16,36804	2544,924	469,884	58,148	87,585	3,482	21,272
50	2747,780	490,733	17,85925	2792,475	542,304	51,571	96,266	3,503	19,617
55	3002,428	591,499	19,70069	3008,025	602,000	10,501	16,098	0,536	2,722
60	3246,093	682,415	21,02266	3284,384	721,359	38,944	77,235	2,379	11,318
						Average performance better %		**3,756**	
						Average Less Loss %			**21,692**

Test results: Cuts zero load losses by more than 20%, lowers the thermal load and shows lower oil temperatures

Operational benefits

• Less downtime
• Less fuel consumption
• Less lubricant consumption
• Temperature reduction
• Noise reduction
• No$_x$ reduction