

Product	Key Benefits	Key Applications	Fluid Technology	Viscosity Grade	FZG Stages Passed	Pour Point °C	Performance Levels
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Industrial enclosed spur / helical / bevel / planetary gears / worm gears							
PETRONAS Gear Syn PAG	<ul style="list-style-type: none"> Excellent micropitting, extreme pressure and anti-wear protection Up to 5x longer oil life** High VI Excellent performance incl. energy saving 	Industrial Spur / Bevel / Helical / Planetary gears. Industrial Worm gears optional	Synthetic PAG	150, 220, 320, 460, 680	>12	-45 to -33	David Brown Type G lubricant; DIN 51517 Part III; Flender BA T 7300 A+B.
PETRONAS Gear Syn PAO	<ul style="list-style-type: none"> Excellent extreme pressure and anti-wear protection Up to 3x longer oil life** High VI Excellent performance incl. energy saving 	Industrial Spur / Bevel / Helical / Planetary gears	Synthetic PAO	150, 220, 320, 460, 680	>12	-48 to -39	AGMA 9005-E02 Cincinnati Machine P-74 David Brown S1.53.106 DIN 51517 Part III GE approval: GED50E35 Siemens MD Revision 15 T 7300 Table A-c U.S. Steel 224
PETRONAS Gear Syn	<ul style="list-style-type: none"> Excellent Micropitting resistance Excellent extreme pressure protection Up to 2x longer oil life** High VI Excellent resistance to sludging 	Wind turbine gear drives Mining – gear drives requiring additional protection such as conveyer belts, shaft winder gear drives, mills, crushers, separators and other processing units Steel and cement heavy duty industrial gear drives Power generation gear drives such as mills and heavily loaded gear drives	Synthetic	150, 220, 320, 460, 680	>12	-39 to -33	David Brown Type G lubricant DIN 51517 Part III SIEMENS MD (Revision 15) Table T 7300 A – HANSEN (HP1, HP2, HPP, P4 and M4ACC) Siemens MD Revision 15 T 7300 Table A-g
PETRONAS Gear FL	<ul style="list-style-type: none"> Excellent micropitting, extreme pressure and anti-wear protection Up to 1.6x longer oil life* Excellent performance 	Industrial Spur / Bevel / Helical / Planetary gears	Mineral	150, 220, 320, 460, 680	>12	-27 to -21	AGMA 9005-E02 David Brown S1.53.101 DIN 51517 Part III Fives Cincinnati Machine Gear GM LS 2 EP Gear Oil ISO 12925-1 CKC/CKD U.S. Steel 224 Siemens MD Revision 15 T 7300 Table A-a
PETRONAS Gear MEP	<ul style="list-style-type: none"> Excellent extreme pressure and anti-wear protection Up to 1.5x longer oil life* High performance 	Industrial Spur / Bevel / Helical / Planetary gears	Mineral	68, 100, 150, 220, 320, 460, 680, 1000	>12	-30 to -21	AGMA 9005-E02; David Brown S1.53.101; DIN 51517 Part III; Fives Cincinnati Machine Gear; GM LS 2 EP Gear Oil; ISO 12925-1 CKC/CKD; US Steel 224.

Industrial open gears							
PETRONAS Gear Syn OG	<ul style="list-style-type: none"> Lubricants light color prevents the need for gear cleaning prior to inspections, helping to reduce maintenance time and costs Excellent extreme pressure performance Excellent anti-wear protection Excellent oxidation stability 	Sugar mill bearings Highly loaded slow speed roller bearing applications Open gear applications where there are slush pans to accommodate open gear lubricants Gear drives subjected to extreme heavy loads, low speeds and shock loading Open gears which are operated under a wide range of different environmental conditions where water and solid contamination occurs	Synthetic	3200, 4000, 6800, 8000, 12000, 18000, 24000	>12	-21 to -9	



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PETRONAS
Fluid Technology
Solutions™

**TAKING YOU TO THE NEXT LEVEL
IN EFFECTIVENESS
INDUSTRIAL GEAR OILS**

PETRONAS
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YOUR PARTNER FOR PROGRESS

PETRONAS Lubricants International (PLI) is the global lubricant division of PETRONAS, one of the most successful petrochemical companies in the world.

Our mission is to deliver proven product technology and related services benefitting from our 100 years of experience. We believe in maximising your productivity with value-added products and services that are global, yet personal – our presence in 128 countries ensures our technical expertise reaches you wherever you are.

PLI's differentiator is product excellence, developed by world-class Technology Centres and brought to your market with local expertise. Our passion for performance improvement makes us an obvious choice for key OEMs and delivers success in Formula One Motorsport. Now, it has translated into a comprehensive industrial product range and tailor-made services for you.



Together, let's take your gear drive's effectiveness to the next level.

YOUR CHALLENGES, OUR EXPERTISE

Today is the age of smaller, faster, and stronger. OEMs are offering increasingly compact and higher output geared drives. These have to perform at increased speeds, under higher loads as well as being constructed from new materials in order to significantly improve output and performance. Additionally the competitive market forces equipment owners to pursue more reliable and durable solutions to maintain profitability of their business.

These improvements in gearbox design along with end-user expectations demand more robust innovations in gear oils. Reduced oil reservoir capacities and higher power output generate much greater oil stress, causing low-quality lubricants to fail

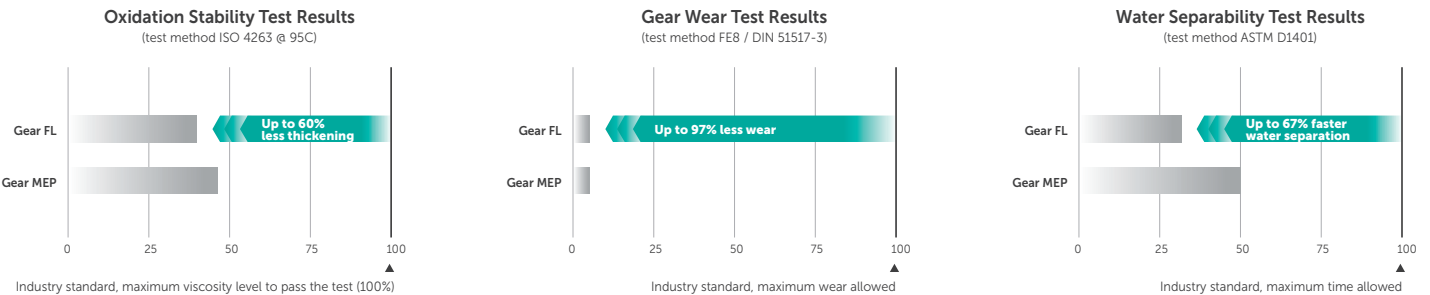
prematurely thus compromising system performance. This potentially leads to increased maintenance costs and, in extreme situations, can have a dramatic impact on the continuity of a production process.

At PLI, we understand that maximising uptime is your key challenge. That's why we have developed **Fluid Technology Solutions™**, an intelligent approach to your fluid requirements that maximises your business performance through tailor-made product offerings and expert services. Our superior solutions for industrial gearbox lubrication meet the most severe industry and OEM specifications in order to deliver you products you can rely on.

Increasing performance and protection
Improving uptime and lowering maintenance costs

	Industrial enclosed spur / helical / bevel / planetary gears / worm gears	Industrial open gears
SUPREME	PETRONAS Gear Syn PAG <ul style="list-style-type: none">Excellent micropitting, extreme pressure and anti-wear protectionUp to 5x longer oil life**High VIExcellent performance incl. energy saving	PETRONAS Gear Syn OG <ul style="list-style-type: none">Lubricants light color prevents the need for gear cleaning prior to inspections, helping to reduce maintenance time and costsExcellent extreme pressure performanceExcellent anti-wear protectionExcellent oxidation stability
PREMIUM	PETRONAS Gear Syn PAO <ul style="list-style-type: none">Excellent extreme pressure and anti-wear protectionUp to 3x longer oil life**High VIExcellent performance incl. energy saving	
	PETRONAS Gear Syn <ul style="list-style-type: none">Excellent Micropitting resistanceExcellent extreme pressure protectionUp to 2x longer oil life*High VIExcellent resistance to sludging	
	PETRONAS Gear FL <ul style="list-style-type: none">Excellent micropitting, extreme pressure and anti-wear protectionUp to 1.6x longer oil life*Excellent performance	
	PETRONAS Gear MEP <ul style="list-style-type: none">Excellent extreme pressure and anti-wear protectionUp to 1.5x longer oil life*High performance	
BASIC	First price gear oils	

* vs. minimum requirements of industrial gear oils to pass the viscosity increase test (ISO 4263-4 @95°C)
** vs. conventional mineral gear oils



FTS SERVICE PROGRAM – TAILOR-MADE FOR YOU

At PETRONAS, we believe success is made by close partnerships. It is that very belief that drives us to work together with you in overcoming the challenges you face – from demands of higher productivity to operating under intense, severe conditions.

That's why we present to you our **Fluid Technology Solutions™** Service Program – a tailor-made range of services designed to maximise your business performance. From specialised on-site analysis to emergency support for operational recovery, we are committed to assisting you in every possible situation.

Partner with us and take your business to the next level.