



Product	Key Benefits	Key Applications	Fluid Technology	Viscosity Grade	FZG Stages Passed	TOST (Hours)	Performance Levels
Steam, gas, combined cycle turbines with / without associated gear drives							
PETRONAS Jenteram Syn	<ul style="list-style-type: none"> Very good varnish control High anti-wear protection Up to 4x longer oil life* Excellent performance 	Steam, gas, combined cycle turbines with / without associated gear drives	Synthetic, Ashless	32 to 68	9	14 000	Alstom HTGD 90117; ASTM D-4304 Type I, II and III; British Standard BS 489; DIN 51515 Part I and II; DIN 51524 Part I; Fives Cincinnati P-38; General Electric GEK-32568GH; ISO 8068 L-TGE and L-TSE; ISO 8068 L-TSA and L-TGA; ISO 11158 HH and HL; Siemens AG TLV 9013 04; Siemens AG TLV 9013 05.
PETRONAS Jenteram G	<ul style="list-style-type: none"> Very good varnish control High anti-wear protection Up to 3x longer oil life* High performance 	Steam, gas, combined cycle turbines with / without associated gear drives	Mineral, Ashless	32 to 68	9	10 500	Alstom HTGD 90117; ASTM D-4304 Type I, II and III; British Standard BS 489; DIN 51515 Part I and II; DIN 51524 Part I; Fives Cincinnati P-38; GB 11120-2011 L-TSA and L-TGA; General Electric GEK-32568GH; ISO 8068 L-TSA and L-TGA; ISO 8068 L-TSE and L-TGE; ISO 11158 HH and HL; Siemens AG TLV 9013 04; Siemens AG TLV 9013 05. Solar ES 9224 Class II
PETRONAS Jenteram	<ul style="list-style-type: none"> Very good anti-wear protection Up to 1.5x longer oil life* Very good performance 	Steam, gas, combined cycle turbines with / without associated gear drives	Mineral	32 to 100	8	5 250	AGMA; Alstom HTGD 90117; DIN 51515 Part I and II; General Electric; R60 oil Siemens; Solar; US Military.
Steam, gas, combined cycle turbines without associated gear drives							
PETRONAS Jenteram U	<ul style="list-style-type: none"> Excellent varnish control Very good anti-wear protection Up to 3x longer oil life* High performance 	Steam, gas, combined cycle turbines without associated gear drives	Mineral, Ashless	32 to 68	Not applicable	10 500	Alstom HTGD 90117; ASTM D-4304 Type I; British Standard BS 489; DIN 51515 Part I and II; DIN 51524 Part I; GB 11120-2011 L-TSA and L-TGA; General Electric GEK-32568J; ISO 8068 L-TSA and L-TGA; ISO 11158 HH and HL; Siemens AG TLV 9013 04; Siemens AG TLV 9013 05.



**PROVEN EXPERTS,
ALWAYS READY TO HELP!**

At the heart of our services, our experts strive to give you the peace-of-mind you're looking for.

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

For more information, please contact:

PETRONAS
Fluid Technology
Solutions™

**TAKING YOU TO THE NEXT LEVEL
IN RELIABILITY
TURBINE OILS**

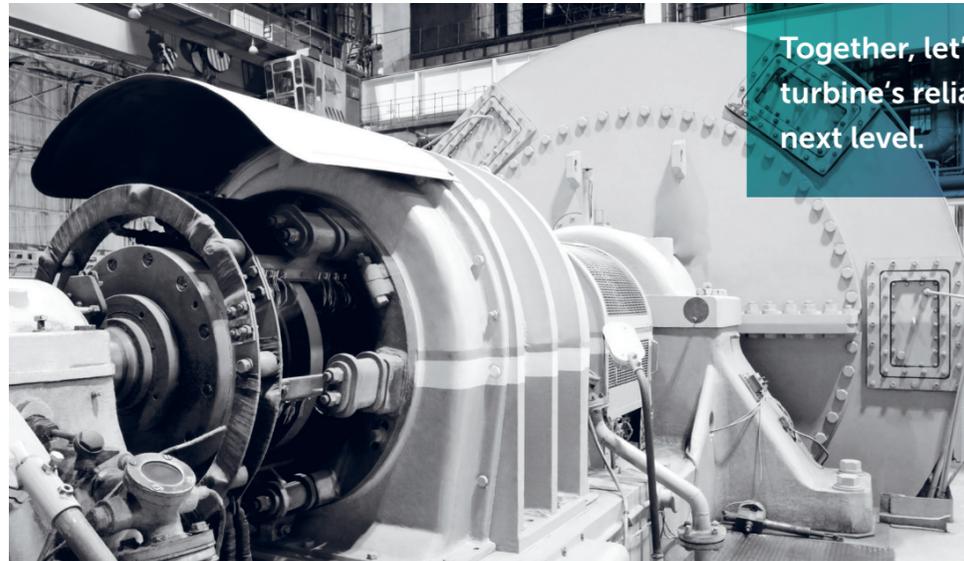
PETRONAS
Fluid Technology
Solutions™

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 turbine's reliability to the next level.

YOUR CHALLENGES, OUR EXPERTISE

The ever increasing demand for power has become a global challenge to both power providers and turbine manufacturers. Modern steam and gas turbines are being pushed to the limits in terms of expected performance and reliability.

Lengthy periods of time in service, extreme operating conditions such as high temperatures, elevated operating pressures and potential water contamination demand more from turbine oils. This is even more acute when a turbine is frequently powered up and shut down in response to peak load requirements. When potential breakdowns may run into hundreds of

thousands of dollars on a daily basis, there is no room for low quality lubricants.

At PLI, we understand that maximising uptime and reliability of your power generation plant 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 gas and steam turbine 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

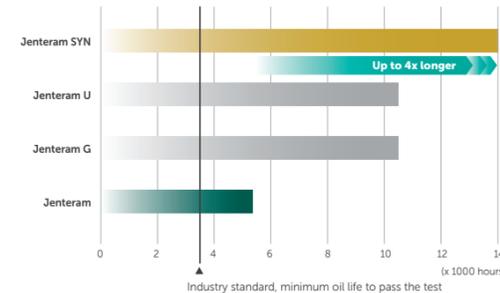
YOUR KEY TO MAXIMISING PERFORMANCE

Focusing our expertise, we've developed a comprehensive portfolio of turbine oils that serves every type of gas and steam turbine application. Choose the right product for your application need and take the reliability of your turbine to the next level.

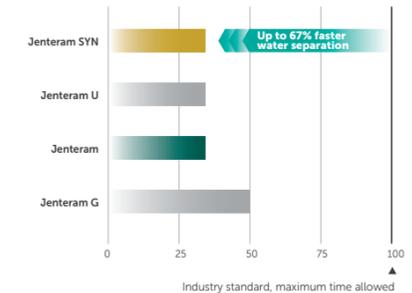
	Steam, gas, combined cycle turbines with / without associated gear drives	Steam, gas, combined cycle turbines without associated gear drives
SUPREME	<p>PETRONAS Jenteram SYN</p> <ul style="list-style-type: none"> Very good varnish control High anti-wear protection Up to 4x longer oil life* Excellent performance 	
PREMIUM	<p>PETRONAS Jenteram G</p> <ul style="list-style-type: none"> Very good varnish control High anti-wear protection Up to 3x longer oil life* High performance 	<p>PETRONAS Jenteram U</p> <ul style="list-style-type: none"> Excellent varnish control Very good anti-wear protection Up to 3x longer oil life* High performance
STANDARD	<p>PETRONAS Jenteram</p> <ul style="list-style-type: none"> Very good anti-wear protection Up to 1.5x longer oil life* Very good performance 	
BASIC	First price turbine oils	

*vs. minimum requirements of DIN 51515 Part II for industrial turbine oils based on TOST results (ASTM D943)

Oxidation Stability Test Results
(test method TOST ASTM D943)



Water Separability Test Results
(test method ASTM D1401)



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.