

# Keeping your fleet moving



Discover core strength. Visit [\[insert local url\]](#).



# The world is changing and growing – fast

**It's tough out there – and it's getting tougher. The world is changing at breakneck speed, throwing an ever-growing, intense set of external challenges and pressures your way...**

As people are living longer, the **global population is growing** – significantly in the East, and with particular expansion among the middle classes. This **increase in middle class consumption** will place increased pressure on the supply chain, with **more food and goods** to be transported by **more trucks**, covering **more kilometres** – delivering to more people that don't want to wait.

And as the population rises, so too will **urbanisation** and the **growth of megacities**, creating even more challenges for **last mile deliveries** – and as more and more trucks enter densely populated areas, it's likely that they'll be required to meet the same emissions standards as light trucks and vans.

Finally, globalisation – the big trend of the last 20 years – is slowing down as trade is starting to become more regionalised, increasing the demand for trucks, light trucks and vans.

## Right now...

There are more than **90 million** new trucks and vans on the road each year\*

## By 2030...

The global population will increase by **1.2 billion†**

**97% of this growth** will occur in developing countries†

**60% of the global population** will live in cities†

**94% of increased urbanisation** will occur in developing countries†

\* Source - Automotive World, 1996.

† Source - Roland Berger Trend Compendium 2030. Megatrend 1: Demographic Dynamics, Oct 2017.





# The business environment is getting tougher – fast

The relentless pace of global change means the operating environment is getting tougher, too. Demand is heavier, journeys are longer, timescales are shorter, competition is greater, customer expectations are higher, environmental regulations are tougher and vehicle technology is moving faster than it ever has before.

Increasing CO<sub>2</sub> emissions and labour regulations means businesses need to seek **more sustainable solutions** – at a time when **rising operating costs** paired with **lower cost entrants** from developing economies place more **pressure on profit and margins**.

## The pressure's on: The drive to net zero CO<sub>2</sub> emissions.

The move to net zero CO<sub>2</sub> emissions by 2050 means limits for CO<sub>2</sub>, NO<sub>x</sub> and PM are up to 98% lower. This, coupled with tighter labour regulations, means OEMs are forced to introduce major hardware design interventions – everywhere from the engines and pistons to the after-treatment systems – with greater investment placed in hybrid engine technologies, biofuels and gas fuels, and new, more demanding fluid specifications.

**2013** – Euro VI

**2020** – China VI

**2020** – Bharat VI



**Technological developments** designed to improve efficiency and productivity – such as connected vehicles allowing truck-to-HQ, truck-to-truck and driver-to-HQ communication – also bring with them **complexity** and the need for **hands-on, intelligent interpretation** of new data sets.

All at a time when we can expect more congestion and city traffic than ever. This means more **stop-start driving**, more engines running at **higher temperatures**, and **more stress for transmission systems and fluids** – all of which can lead to **rising maintenance costs** and **unscheduled downtime**.

**A perfect storm of tighter deadlines, harsher conditions, keener competition and tougher regulations means that now, more than ever, it takes core strength for fleets to minimise risk, maximise profit and uptime, go the distance and succeed.**

**We're here to help.**

## Right now...

Demand for last mile deliveries is growing **8% per annum.\***

## By 2030...

Road freight transport is expected to **increase by 40%\*\***

**41 million** electric commercial vehicles by 2040.†

\* Source - McKinsey, 'Parcel delivery: the future of the last mile', September 2016.

\*\* Source - European Commission Logistics and Multimodal Transport Forum 2015.

† Source - Automotive World May 2020.



# It takes core strength to succeed

Truck engines and transmission systems are under constant attack. Every trip, the battle to stay strong in the face of ever-increasing demands is a test of resilience – and it's a similar kind of resilient core strength that everyone working in the industry, from drivers to CEOs, needs to draw upon, to go the distance and deliver on time, every time.

PETRONAS Lubricants International is here to help you solve the problems you face today and tomorrow. Our newly formulated engine oils and transmission fluids are engineered to stay stronger for longer, delivering stronger profits through:

- Increased vehicle availability
- Reduced operating costs
- Improved driver experience.

Increased vehicle availability could generate **\$2-4,000 a day**<sup>†</sup>

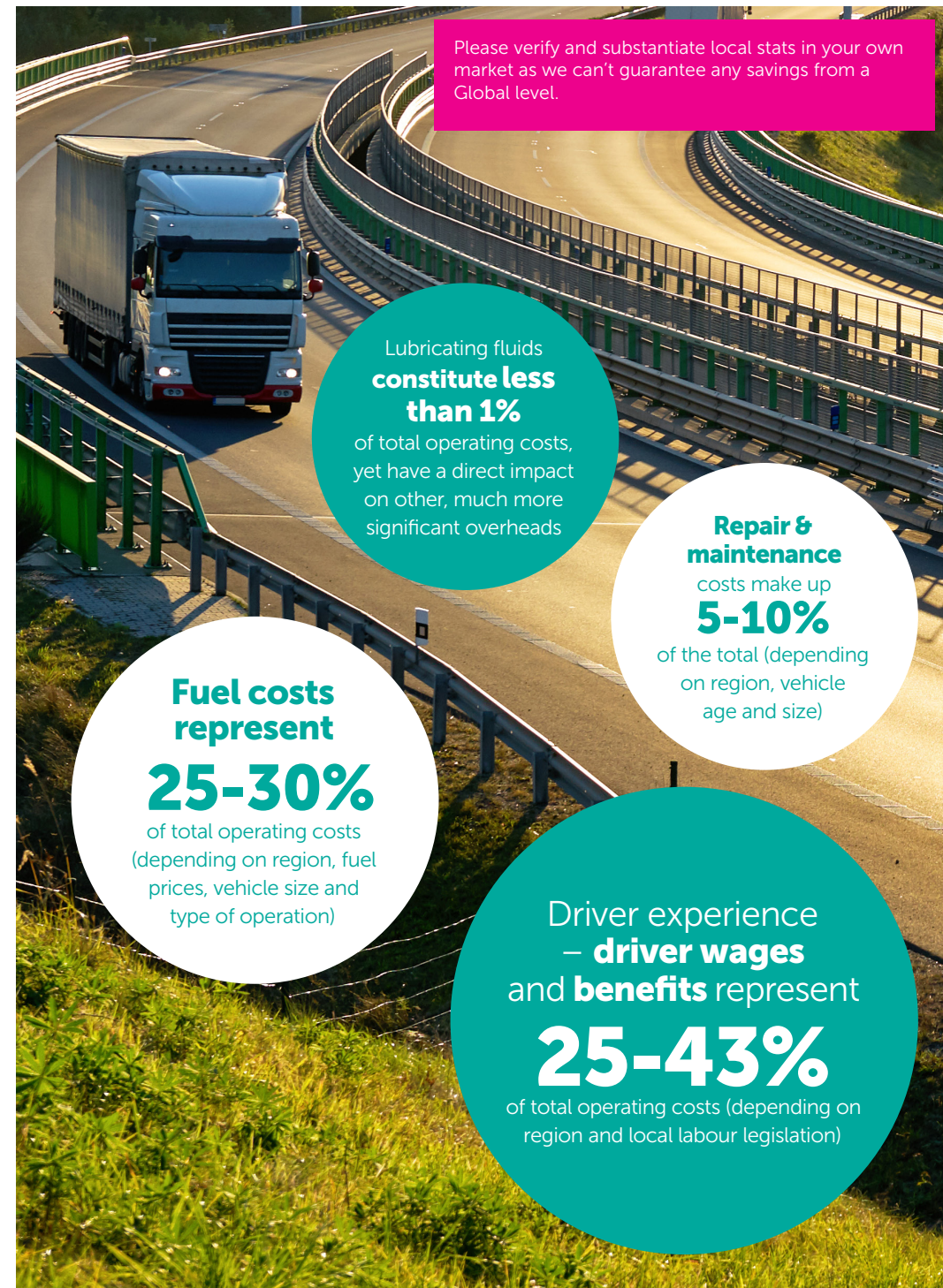
More KMs covered and goods delivered = **more happy customers**

Could cut annual fuel bills by **\$500 - \$1,500 per truck**<sup>†</sup>

**Operating costs:**  
a small change can make a big difference...

\* Depending on type of freight and local freight rates.  
Source: ACEA and US [www.truckinginfo.com](http://www.truckinginfo.com)

† Indicative figures based on assumptions depending on the specific business variants such as annual km covered, fuel prices, driving style and fuel consumption.





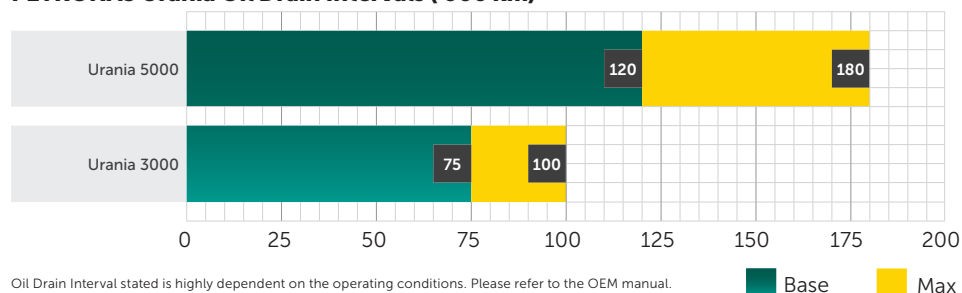
# Oil Drain Intervals

**Oil Drain Intervals (ODI) are set by OEMs and are designed to protect the engine following a defined period of usage and exposure to a wide variety of conditions.**

Today, many OEMs are striving towards an extended ODI. It is a major selling point because longer intervals can provide truck owners and operators with cost and time savings thanks to reduced downtime and less business disruption – with vehicles staying out on the road for longer.

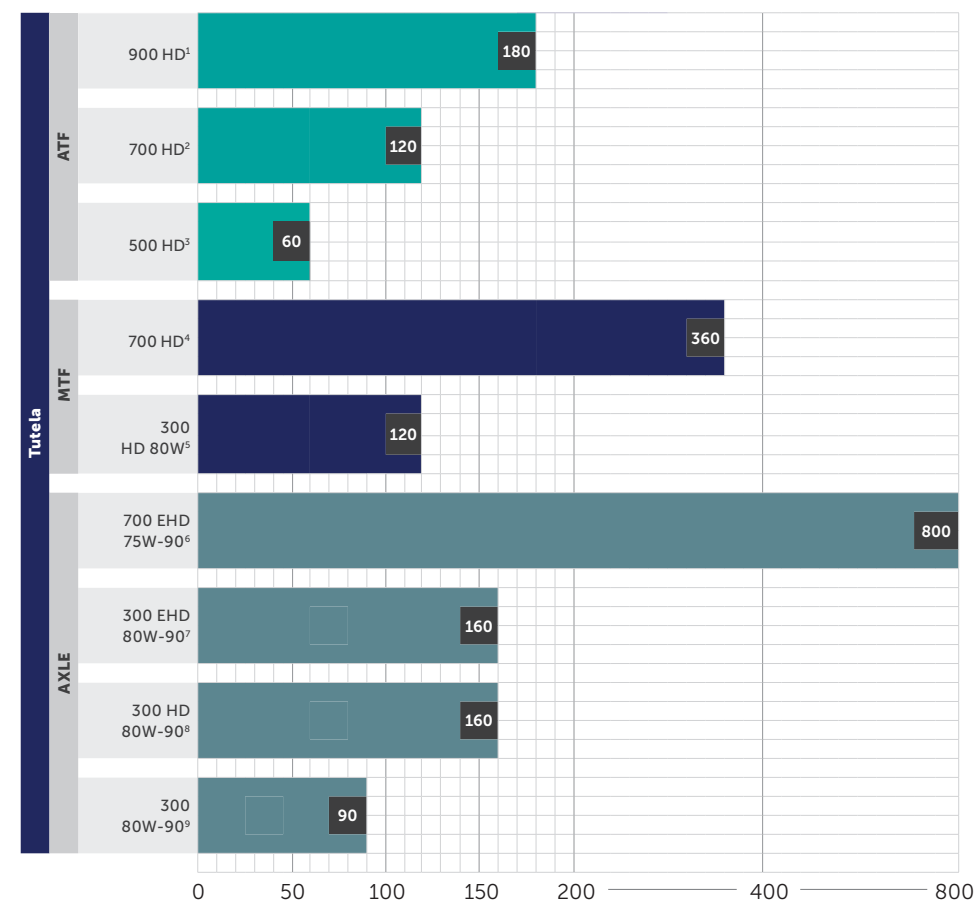
However, it's important to remember that oil drain intervals are set for a reason, so extending them must be done safely. It means that the engine's lubrication must provide the strength to stay stronger for longer, while providing truck owners and operators with the confidence to keep going.

**PETRONAS Urania Oil Drain Intervals ('000 km)**



**PETRONAS Tutela Extended Oil Drain Intervals ('000 km)**

Based on OEM approvals and specifications



<sup>1</sup>Based on MAN 339 Type Z12 and ZF TE-ML 20C and Extended Drain Intervals based on MAN 339 Type V2 and Voith H55.6336.xx specifications.\*

<sup>2</sup>Based on MAN 339 Type V2 and Voith H55.6336.xx specifications.\*

<sup>3</sup>Based on MAN 339 Type V1, VOITH H55.6335.xx.

<sup>4</sup>Based on ZF TE-ML 01L, 02L specifications.\*

<sup>5</sup>Based on MAN 341 Type E2 and Eaton specifications.\*

<sup>6</sup>Up to 800,000km based on Arvin Meritor O76N specifications.\*

<sup>7</sup>Based on MAN 342 Type M2 and SAE J2360 specifications.\*

<sup>8</sup>Based on MAN 342 Type M2 and SAE J2360 specifications.\*

<sup>9</sup>Based on MAN 342 Type M1 specification.\*



# PETRONAS Urania with StrongTech™ technology





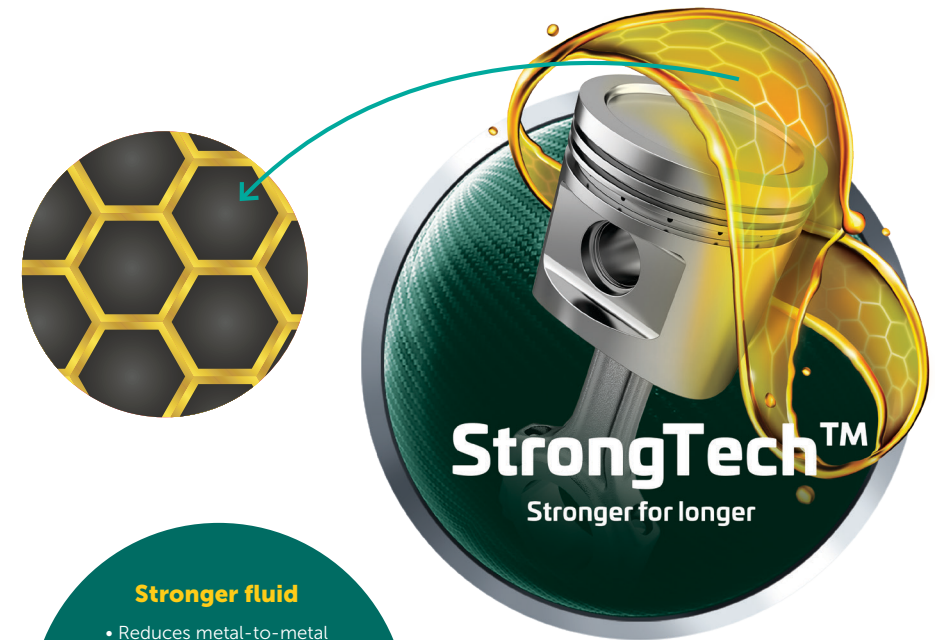
# PETRONAS Urania with StrongTech™ technology

## Engineered to stay stronger for longer

**To withstand the hostile environment deep inside the engine over long distances and in stop/start operating conditions, an oil needs to be incredibly resilient.**

It needs the durability to maintain its optimal viscosity in the face of high temperatures and harmful deposits. It needs core strength.

PETRONAS Urania with StrongTech™ technology is engineered to stay stronger for longer, forming a uniquely strong fluid film to extend drain intervals and engine life, maximise performance and profitability, and give you the core strength to keep moving.



### Stronger fluid

- Reduces metal-to-metal contact even at extreme temperatures.
- Controls harmful soot and deposits thanks to stronger cleaning properties.
- Resists oxidation and viscosity loss caused by high temperatures or high shear.

### Stronger engine

- Delivers more power and torque.
- Offers longer engine life.
- Reacts faster to prevent issues.
- Extends DPF life.

### Stronger vehicle

- Runs for longer even in harsh external conditions and under the stresses of different driving styles.
- Delivers reduced emissions thanks to improved fuel efficiency.
- Enables lower operating costs.

# PETRONAS Urania Portfolio

## Performance Laddering

						
500		1000		5000		
800		3000		Low Emission		
Mineral Monograde <b>API CF</b>		<b>StrongTech™</b> Improved Core Strength Strong Oil Film for Strong Engine		<b>StrongTech™</b> Ultimate Core Strength Extended Drain Interval Improved Fuel Economy (for 5W-30 variants)		
Mineral Multigrade <b>API CF-4</b>		<b>StrongTech™</b> Excellent Core Strength Extended Oil Life		<b>StrongTech™</b> Ultimate Core Strength Extended Drain Interval Ultimate Fuel Economy		
Mineral <b>API CH-4/CI-4</b> Euro II Main OEM SFU		Mineral/Part-Syn <b>API CI-4/CI4 Plus</b> ACEA E7 <b>Euro III/IV/V</b> OEM Approvals (i.e. <b>MB 228.3</b> ) <b>Std SAPS</b>		Part-Syn/Full-Syn <b>ACEA E4</b> <b>Euro III/IV/V</b> OEM Approvals (i.e. <b>MB 228.5</b> ) <b>Std SAPS</b>		
Mineral/Part-Syn <b>API CK-4/ACEA E9</b> Euro VI China VI/Bharat VI OEM Approvals (i.e. <b>MB 228.31</b> ) <b>Mid/Low SAPS</b>		Part-Syn/Full-Syn <b>API CK-4/ACEA E6</b> Euro VI China VI/Bharat VI OEM Approvals (i.e. <b>MB 228.51/.61</b> ) <b>Mid/Low SAPS</b>		Fully synthetic new <b>MAN &amp; Scania</b> <b>Euro VI-d engines</b> OEM Approvals by <b>MAN M3977 &amp; Scania LDF-5</b>		
Value		Standard		Premium		
				Prestige		

All packs shown are for illustration purposes only.



# **PETRONAS Tutela**

## **Protect your truck's Hidden Heroes**





# PETRONAS Tutela: Protect your truck's Hidden Heroes

A truck's engine is only part of its overall performance story. There are a number of other extremely hardworking systems that are just as critical to a vehicle's efficient, continued performance – systems that demand a technically advanced fluid system, but which are often undervalued and overlooked.

## **PETRONAS Tutela: enhanced protection for ancilliary systems**

The PETRONAS Tutela range of fluids represents our commitment to researching and developing fluids that are specifically engineered to protect all of a vehicle's systems, and are designed to work in conjunction with PETRONAS Urania to keep your business moving.







## PETRONAS Tutela

Transmission  
fluids



# The Transmission System: Guardian of the vehicle's power

## Meet our first Hidden Hero

Complex and operating under continual pressure at high temperatures, a vehicle's Transmission System is the very definition of a Hidden Hero. And all that stands between the full power of a vehicle driving metal against metal is a thin layer of protective molecules. You can trust PETRONAS Tutela to withstand pressure, enhance performance and efficiency, and extend the life of moving parts – today and tomorrow.

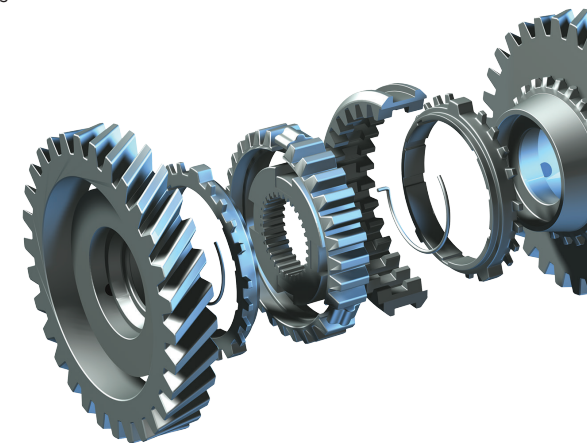
- **Improved fuel efficiency** – PETRONAS Tutela transmission fluids combine lower viscosity with strengthened fluid film resistance, to reduce friction and improve fuel efficiency without compromising on protection.
- **Defends against mechanical stress, to help avoid unexpected downtime and extend the working life** – our transmission fluids have anti-wear and anti-pitting properties to help extend the life of the Transmission System, and outstanding shock load resistance to protect the axle.

- **Increased oil drain intervals for commercial vehicles** – PETRONAS Tutela's increased thermal stability and durability allow it to resist thermal and mechanical stress for longer, extending the service intervals and reducing downtime and maintenance costs.
- **Performance even at low temperatures** – PETRONAS Tutela protects the transmission system and provides a smooth gear shift experience from the moment the engine starts up, even in cold and icy conditions.
- **Ready to tackle the increased electrification of the driveline** – PETRONAS Tutela's premium products offer lower electrical conductivity, high heat capacity, high thermal conductivity and low evaporation loss, making them fully compatible with electrical systems.
- **Ready to take on new speeds** – as vehicles continue to increase the number of gears available to drivers, the number of moving components also increases, which means more heat is generated. The lower viscosity and optimised friction characteristics of our newly launched premium products are

able to effectively dissipate this heat while compensating for energy losses – we're ready for the speed requirements of tomorrow, today.

- **Multi-purpose fluids for increasingly automated transmissions** – in many transmission systems, the lubricant doubles up as the hydraulic fluid in the actuator and clutch – PETRONAS Tutela transmission fluid's optimised chemistry and viscosity rises to the challenge of multiple applications.
- **Enhanced noise and vibration control qualities** – our transmission fluids have superior anti-foaming properties and oil film resistance, along with optimised friction characteristics, for a more pleasant driver experience, with easier, smoother shift and less noise and shudder.

- **Smoother, more comfortable gear shifts** – with wider Synchroniser compatibility (manual and dual clutch transmission fluids), anti-shudder properties (automatic, dual clutch and continuously variable transmission fluids with torque converter) and torque transfer capacity (continuously variable transmission fluids).







## PETRONAS Tutela

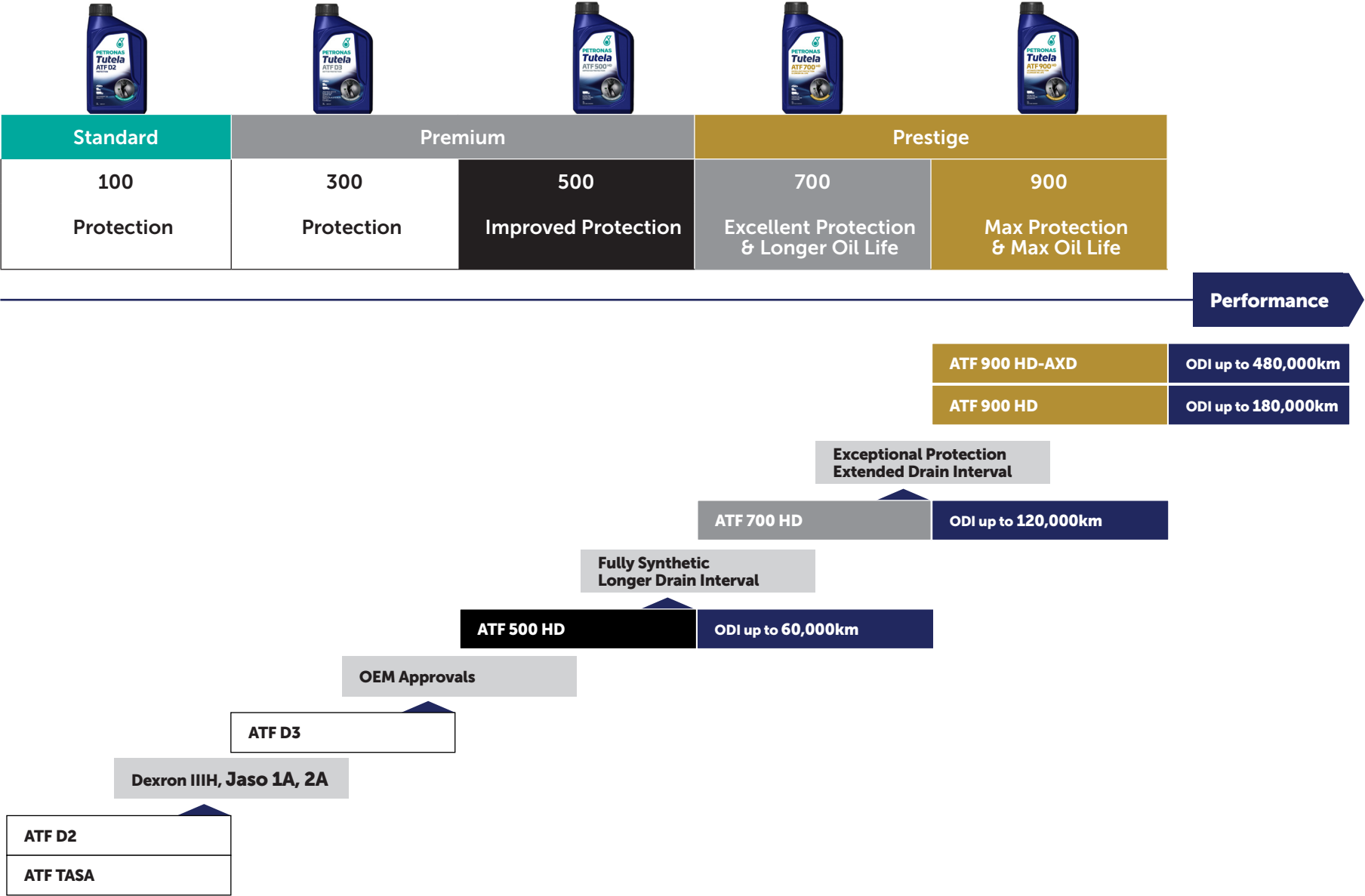
### Automatic transmission fluids

Automatic transmissions generate even more intense heat than manual ones, so lubricant fluids often degenerate more quickly. Low levels of fluid or fluid with deposits within the transmission system can cause slipping and shifting issues – and overheating can lead to malfunction and a decrease in the overall life of parts.

PETRONAS Tutela Automatic transmission fluids provide enhanced thermal and oxidation resistance to retain a stable viscosity at a wide range of temperatures. This helps optimise transmission efficiency for a range of vehicle types – leading to improved fuel economy. It also extends the fluid's life by preventing the formation of deposits, delivering a smooth, shudder-free drive, and lengthened Oil Drain Intervals for reduced servicing requirements.

# PETRONAS Tutela Range

## Automatic Transmission Fluids





# PETRONAS Tutela

## Manual transmission fluids

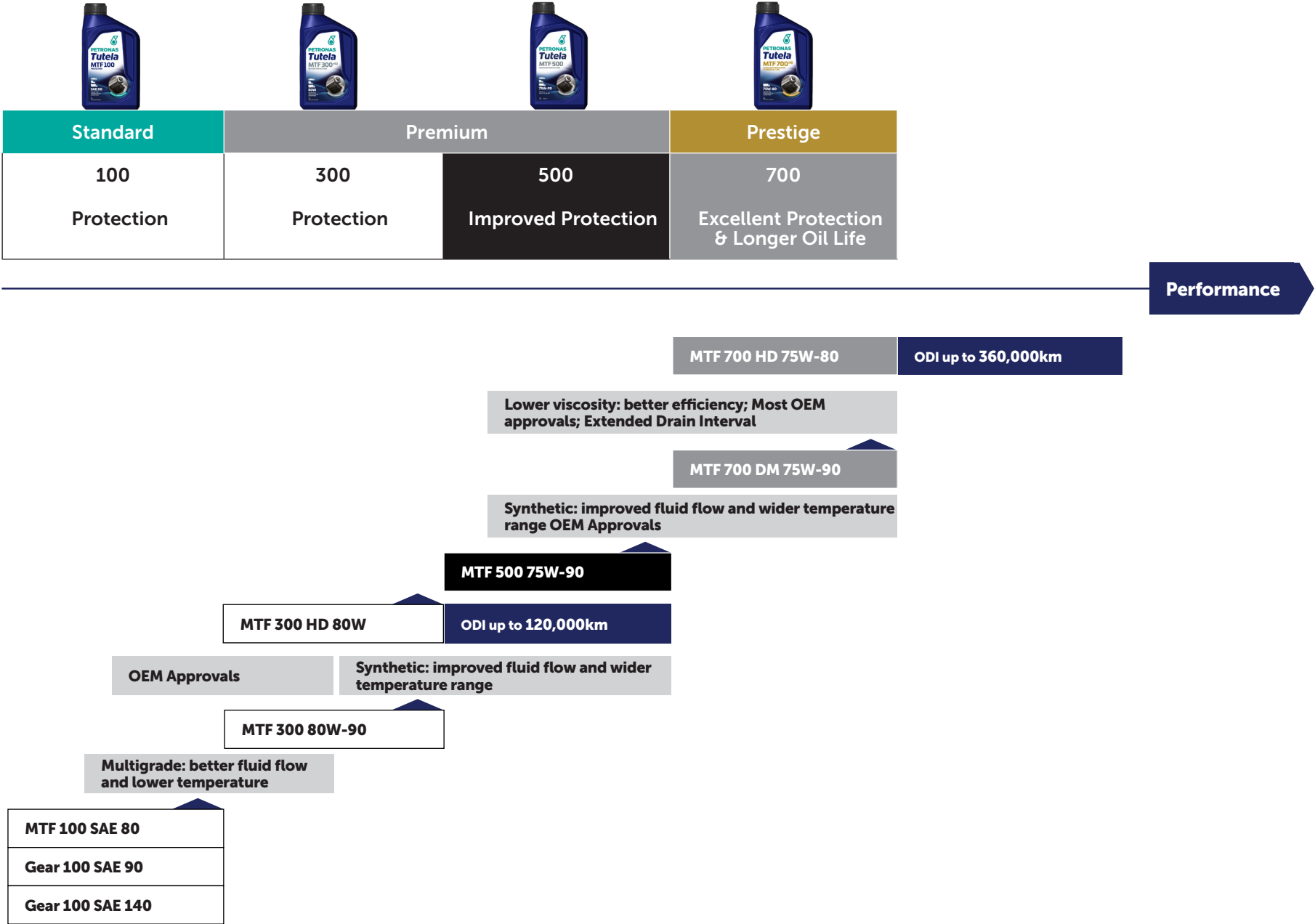


Manual transmission fluids have quite a job to prevent overheating – but they also have additional challenges caused by the amount of metal-to-metal contact in manual transmissions. Sub-standard oils struggle to combat the wearing of components, and can run out quickly – putting components at risk and reducing overall transmission life.

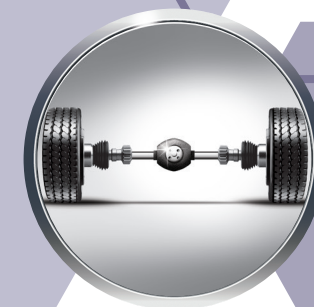
PETRONAS Tutela Manual transmission fluids extend component life through their enhanced shear stability for constant film strength and anti-wear protection. Not only this, their enhanced thermal and oxidation resistance properties help retain a stable viscosity, optimising transmission efficiency and even contributing towards fuel economy. Our highly engineered MTF products offer extended Oil Drain Intervals to reduce servicing requirements, and protect the transmission system even in the toughest conditions for a smooth drive and easy gear shift.

# PETRONAS Tutela Range

## Manual Transmission Fluids







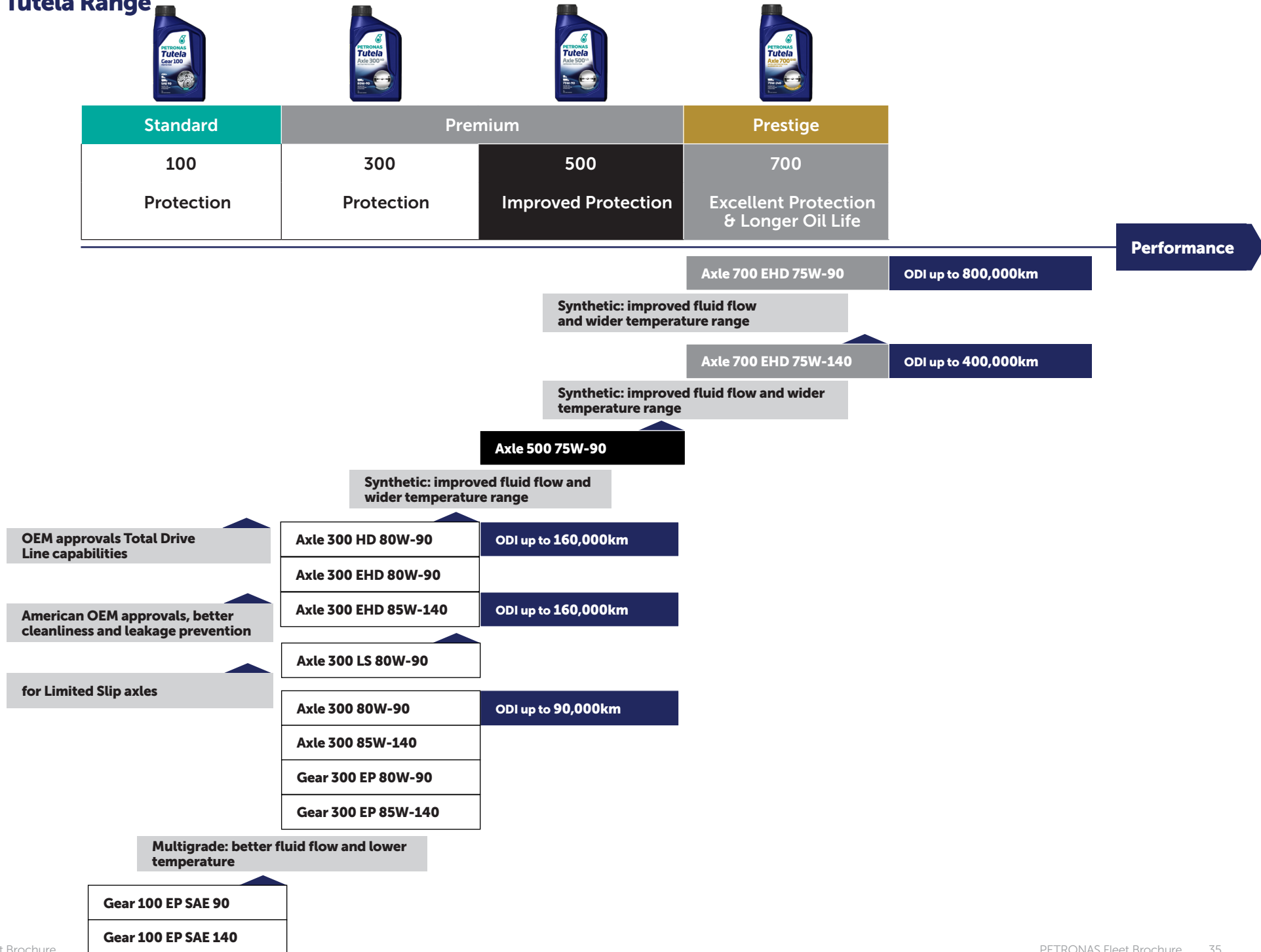
## PETRONAS Tutela Axle and Gear fluids

Axle fluids have to look after vehicles used in high shock load situations. Failure to protect axle systems can result in axle damage and costly repairs.

PETRONAS Tutela Axle and Gear fluids offer outstanding shock load resistance to protect the axle, particularly in low-speed, high-load scenarios such as those experienced in distribution and construction. Their optimised load-carrying performance and component protection qualities are suitable for axles, differentials and final drives, and they are recommended where recognised industry standards are required.

# PETRONAS Tutela Range

## Axle Fluids







## PETRONAS Tutela Brake fluids



Always fully  
drain and refill  
your brake fluid  
to remove water  
or contaminants  
- topping up is  
less effective.



## The Braking System: Critical safety guardian

### Meet our Second Hidden Hero

The PETRONAS Tutela range of brake fluids has been designed with all the most critical safety features in mind – **protecting vehicles, drivers, passengers and pedestrians in all conditions.**

- **Preventing brake-lock caused by water absorption**

Most brake fluids tend to absorb moisture from the surrounding air, increasing their water content. At high temperatures, the water boils and forms vapour pockets. Braking energy will then be wasted on compressing the vapour pockets instead of activating the brake pads – and this will lengthen braking action time or even prevent any braking at all. If the braking action is delayed by just 1/10th of a second, the braking distance of a vehicle travelling at 100 km/h (62 mph) increases by 2.8 metres – which could be

the difference between stopping safely and crashing. The chemical properties of PETRONAS Tutela Brake Fluid's premium products have extremely high boiling points, helping them mitigate vapour lock failure and prevent accidents.

- **Low viscosity and excellent stability at icy temperatures ensure better performance**

Brake fluids with high viscosity (thickness) at low temperatures build up the braking response more slowly, delaying activation time. Braking Systems can also become locked as a result of precipitations at extremely low temperatures between -40°C and -50°C. PETRONAS Tutela Brake Fluids are tested on their viscosity properties over a wide temperature range of -50°C to 120°C<sup>3</sup>, and all pass or even exceed

the requirements of international standards FMVSS 116, SAE J 1703, SAE J 1704 and the ISO 4925. In additional tests, a Braking System was made to brake from 130-0 km/h on a highway 10 times repeatedly. PETRONAS Tutela Brake Fluid's premium products remained stable and effective regardless of temperature, maximising safety.

- **Outstanding protection for maximum safety**

PETRONAS Tutela Brake Fluids contain highly effective additives which reliably protect essential metals in the Braking System from oxidation and corrosion, provide excellent lubrication to prevent friction and abrasion, and deliver optimum thermal stability. Compatible with a wide range of elastomers to protect against the loss of fluids, our brake fluids ensure that Braking Systems are protected from damage – guaranteeing lasting performance and safety.

- **For maximum safety, ask your mechanic to check your brake fluid every year** – and it's important that you use the brake fluid type recommended by your car's manufacturer. Replacing your brake fluid costs a fraction of the price to replace than other parts of the Braking System, and it's definitely worth the peace of mind.

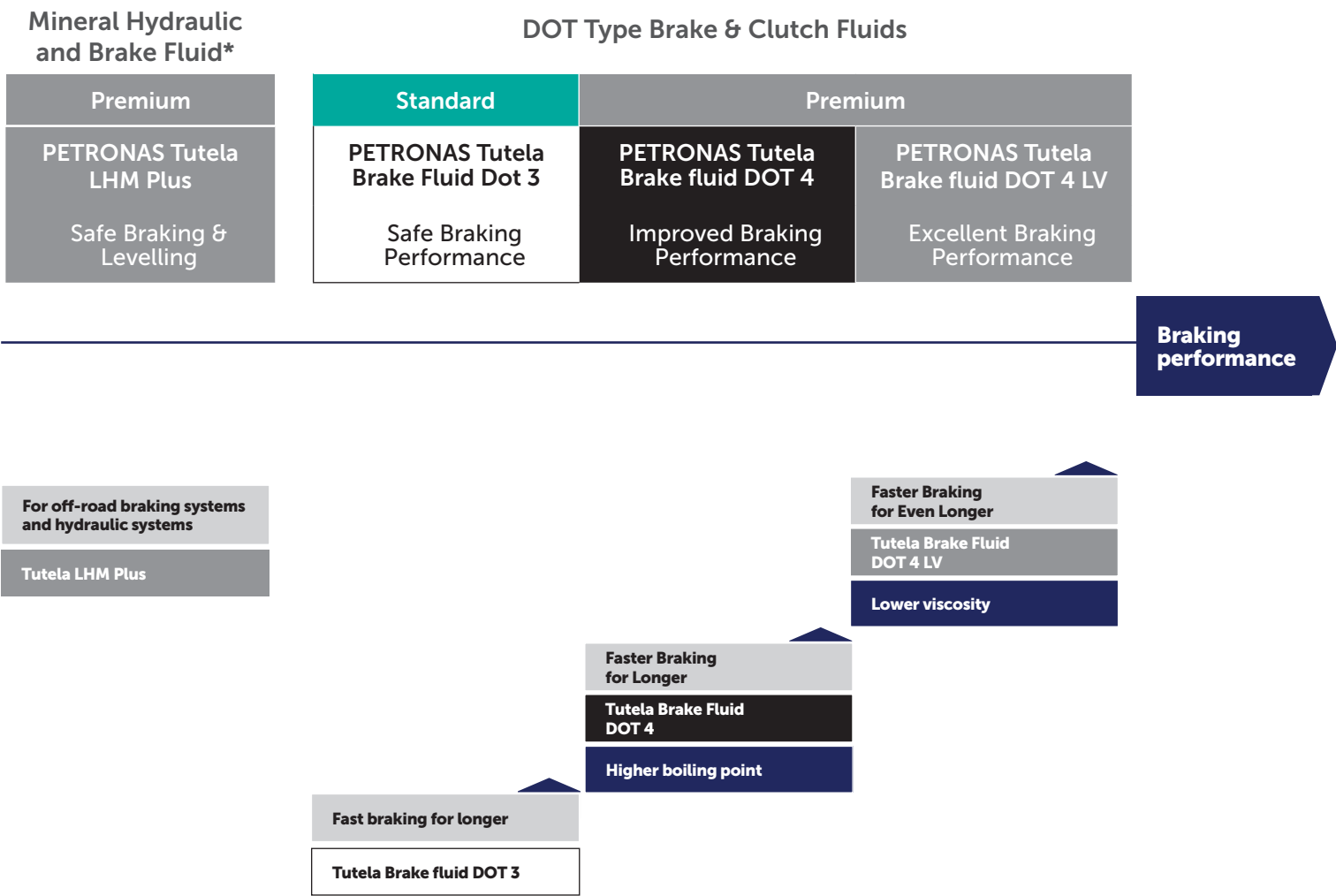
**Important: fully drain and refill your brake fluid – never simply top it up.** Your brake fluid does not remove water or contaminants from the Braking System, rendering the system less effective. Completely draining and refilling brake fluids ensures the Braking System gets totally new brake fluids while removing water or contaminant, so it's highly recommended.

<sup>3</sup>Simulated service performance test run at 120°C. Fluidity and Appearance at low temperature test run at -40°C and -50°C.



# Global PETRONAS Tutela Brake & Clutch Fluids Range

All product groups



\*Not for use where a DOT fluid is recommended.



# PETRONAS Tutela Coolants



# Cooling System: Protector of key engine components

## Meet our Third Hidden Hero

A vehicle's Cooling System is critical for controlling temperatures and preserving engine safety. Damage could lead to all sorts of problems. That's why the Cooling System is our Third Hidden Hero.



### Maintains thermal balance to protect vehicles from overheating

The consequences of overheating can be extremely expensive, difficult to fix and, in some cases, fatal to the life of an engine. So, by simply preserving the balance of temperature, the Cooling System protects the engine and its components.



### Transferring heat to keep engines operating safely

In an engine, only a third of energy produced is used to propel the vehicle forwards. The rest creates unwanted heat. The engine coolant performs a critical heat transfer role to avoid the formation of solids and gases and ensure that the engine operates safely.



### Ensuring passenger safety through effective operation in all conditions

A properly operating Cooling System protects parts and engine operation across all conditions and temperature ranges. Once the desired operating temperature is reached, the thermostat adjusts the flow of coolant to the radiator, preventing significant risks to safety.



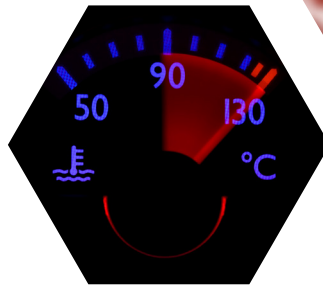
### Helping engines start in extremely cold conditions

The fluid also plays a protective role, preventing the freezing of the engine at low temperatures.

## High quality formulations for a wide range of applications

PETRONAS Tutela Coolants are formulated with high quality additive technologies, covering a variety of applications and specifications for passenger cars, light and heavy-duty vehicles and off-highway machineries. Each technology is tailored to a specific vehicle or engine application and cooling system requirement – broadly speaking, systems produced before the 90s require a conventional IAT coolant, while more modern systems accept long life OAT and HOAT coolants.

It helps to know how each of these additives work so you can understand their role in our products. Always refer to your owner's manual to select the proper technology.



### Conventional coolant

#### Inorganic Acid Tech (IAT)

- Traditionally most conventional coolants are IAT-based, where protection against corrosion starts immediately, forming a protective film over the surface of the metal.
- IAT-based coolants are normally drained every two years, depending on the vehicle's user manual, where it is suitable for applications such as older vehicles including off-road machinery and equipment.

**Protecting parts from freezing and reducing the warm-up phase for more efficient engines.**

### Long life coolants

#### Organic Acid Tech (OAT)

- OAT-based coolants offer long life protection due to the nature of the additive technology, making them more suitable for vehicles manufactured since the 1990s and later.
- These coolants are normally drained every five years, depending on the vehicle's specific requirements.

#### CAT ELC

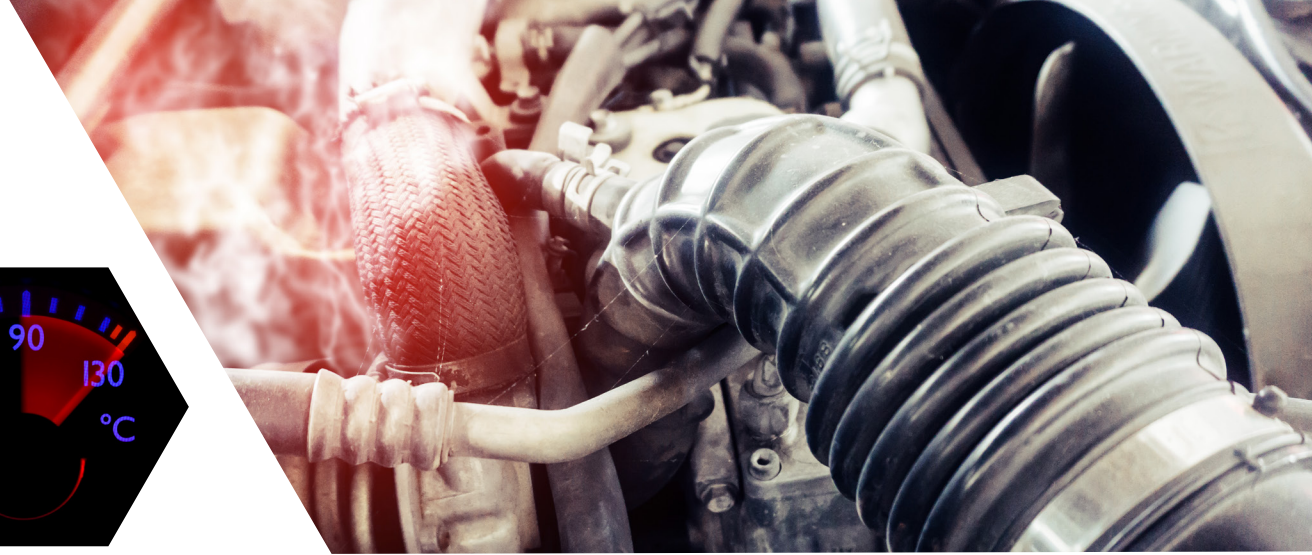
- These are formulations originally designed for Caterpillar machinery but is also suitable for use in similar vehicle types.
- ELC stands for 'Extended Life Coolants' reflecting the product's ability to keep working over an extended drain interval - offering protection for hard working, heavy duty industrial applications.

#### Hybrid Organic Acids Tech (HOAT)

- HOAT is a 1st generation hybrid technology coolant, merging the long life benefit of organic acid inhibitors and rapid protection of inorganic chemistry. Suitable for vehicles manufactured since the 1990s.
- HOAT-based coolants are normally drained every five years, depending on the vehicle's requirements.

#### Silicate Organic Acids Tech (Si-OAT)

- Si-OAT is a new generation hybrid technology coolant providing both instant corrosion protection and long-life benefits.
- Si-OAT provides optimised electrical conductivity and resistivity compared to traditional coolant technologies, making it suitable for the latest generation and hybrid vehicles.
- Si-OAT coolants are normally drained every five or six years, depending on the vehicle's requirements.





# Global PETRONAS Coolants Range

All product groups



	Premium	Prestige			
	Inorganic Acid Technology (IAT)	Caterpillar ELC	Organic Acid Technology (OAT)	Hybrid Organic Acids Technology (HOAT)	Silicate Organic Acids Technology (Si-OAT)
	Long life Coolant technology	Long Life technology: stronger corrosion protection and deposit prevention			
		PETRONAS Tutela Coolant LL-ELC	PETRONAS Tutela Coolant LL	PETRONAS Tutela Coolant LL-G	PETRONAS Tutela Coolant LL-Si
		ASTM D3306 ASTM D4985 SAE J1034 JIS K 2234 CAT ELC/EC-1 Cummins John Deere JDM H 24 Detroit Diesel MTU MTL 5048	ASTM D3306 ASTM D6210 SAE J1034 CNHi MAT 3724/3624 DAF MAN 324 Type SNF MB 325.3 MTU MTL 5048 PSA B71 5110 VW/Audi Group TL 774-D/F	ASTM D3306 ASTM D4985 ASTM D6210 SAE J1034 JIS K2234 BMW N 600 69.0 Deutz MAN 324-NF MB 325.0 MTU MTL 50408 VW/Audi Group TL 774-C	ASTM D3306 ASTM D4985 ASTM D6210 SAE J1034 JIS K2234 Cummins CES 14603 Deutz MAN 324 Type Si-OAT MB 325.5/6 MTU MTL 5048 VW/Audi Group TL 774-G
Conventional Coolant technology	PETRONAS Tutela Coolant				
	ASTM D3306 ASTM D6210 SAE J1034 CNHi MAT 3620 John Deere JDM H 24 MB 235.0 MTU MTL 5048				

Specifications above are at Performance Level.

# Global PETRONAS Coolants Range

All product groups

Europe Only



Premium		Prestige				
Long life Coolant technology	Inorganic Acid Technology (IAT)	Caterpillar ELC	Organic Acid Technology (OAT)	Hybrid Organic Acids Technology (HOAT)	Phosphate Organic Acids Technology (P-OAT)	Silicate Organic Acids Technology (Si-OAT)
	Long Life technology: stronger corrosion protection and deposit prevention					
		PETRONAS Tutela Coolant LL-ELC	PETRONAS Tutela Coolant LL	PETRONAS Tutela Coolant LL-G	PETRONAS Tutela Coolant LL-H	PETRONAS Tutela Coolant LL-Si
					PETRONAS Tutela Coolant LL-T	
					PETRONAS Tutela Coolant LL-K	
		ASTM D3306 ASTM D4985 SAE J1034 JIS K 2234 CAT ELC/EC-1 Cummins John Deere JDM H 24 Detroit Diesel MTU MTL 5048	ASTM D3306 ASTM D6210 SAE J1034 CNHi MAT 3724/3624 DAF MAN 324 Type SNF MB 325.3 MTU MTL 5048 PSA B71 5110 VW/Audi Group TL 774-D/F	ASTM D3306 ASTM D4985 ASTM D6210 SAE J1034 JIS K2234 BMW N 600 69.0 Deutz MAN 324-NF MB 325.0 MTU MTL 50408 VW/Audi Group TL 774-C	ASTM D3306 JIS K2234 Honda Hyundai Kia Lexus Mitsubishi Nissan Subaru Suzuki Toyota	ASTM D3306 ASTM D4985 ASTM D6210 SAE J1034 JIS K2234 Cummins CES 14603 Deutz MAN 324 Type Si-OAT MB 325.5/6 MTU MTL 5048 VW/Audi Group TL 774-G
Conventional Coolant technology	PETRONAS Tutela Coolant					
	ASTM D3306 ASTM D6210 SAE J1034 CNHi MAT 3620 John Deere JDM H 24 MB 235.0 MTU MTL 5048					

Specifications above are at Performance Level.



# Expert Solutions

## Your progress. Our priority.

By partnering with you to solve the problems you face today and tomorrow, we can help you move ahead and develop your business. Our insight-driven services help you improve reliability, reduce your operating costs and free up your potential – all because we share your goals and priorities. Expert Solutions from PETRONAS is your secret weapon in your mission to do more, use less and grow faster. It's how our passion for progress can help take you to an exciting and more sustainable future.

## Equipment

Downtime is the enemy of progress. With predictive maintenance and support for your equipment and fluids, we can identify problems before they take hold – so you can plan ahead and focus on success.

- Diagnostics - Oil condition monitoring
- Fluid recommender



## Operations

With so much happening in your business, it's easy to lose sight of what matters. Our Expert Solutions use tools, services and support to help you achieve greater progress more quickly – and improve efficiency while reducing operational costs.

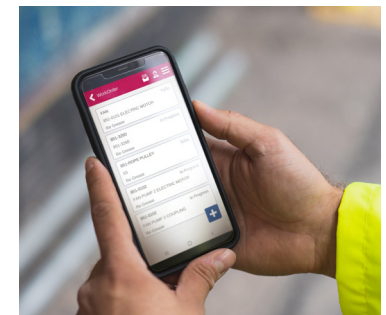
- Fleet survey
- Fluid-i



## People

With the right knowledge in your team, you can progress further, faster. That's why we work with your people to build their skills and help them work more effectively day in, day out.

- Technical training programme





# PETRONAS is ready for the world of tomorrow, today

**PETRONAS Lubricants International (PLI) is part of the PETRONAS Group. With 10 blending plants, over 30 sales offices and products distributed in more than 90 countries worldwide, PLI's global network of over 240 scientists, technical professionals and engineers anticipate future mobility challenges and opportunities, then research and develop advanced fluid technology solutions to meet tomorrow's challenges, today.**

We strive to deliver maximum value to our consumers, customers and the markets in which they operate – while minimising our environmental impact and pioneering high-performance fluids that are manufactured in increasingly low CO<sub>2</sub> environments and are dedicated to reducing emissions.

We are quietly confident, ambitious, self-assured, thoughtful and enterprising – yet always responsible and dependable.

**We are always moving forward.  
We are PETRONAS.**





# Find out more about how we can keep your fleet moving.

## Contacts

Jane Doe

[jane.doe@pli-petronas.com](mailto:jane.doe@pli-petronas.com)

123 lorem ipsum,  
Location country,  
Address street building,  
Postcode

DL: +98 7654 3210

Details  
TBC

**PETRONAS LUBRICANTS INTERNATIONAL SDN BHD** (485509-D)

Level 26, Integra Tower, The Intermark, 348 Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia.

[www.pli-petronas.com](http://www.pli-petronas.com)