

Variable conditions
Constant evolution





Under variable conditions there is just one thing you can

Your equipment depends on reliable performance from its hydraulic systems, so your choice of hydraulic oil is crucial. Some hydraulic oils poorly withstand changes in temperature or variations in working conditions.

By using low-performing oils, you risk:

- Corrosion and sludge build-up
- Increased wear
- Cavitation (air pockets)
- Filter blocking and valve sticking
- Increased oil use

These problems can lead to:

- Equipment damage
- Premature failure and replacement of components
- Loss of operating precision
- Excessive noise
- Increased maintenance
- Expensive downtime



Shell Tellus – keeping you ahead

In many cases, hydraulic systems are required to operate under variable conditions, for instance in outdoor applications where temperatures can change with the season or throughout the day, or when mobile equipment is transported from one site to another. Designed to give reliable hydraulic performance in a wide range of temperatures, the new Shell Tellus variable temperature hydraulic oils include a new polymer technology that helps them outperform major competitors and protect your investment. Shell Tellus is the world's leading hydraulic brand, and has now become better than ever.



keep constant: the use of a hydraulic oil that evolves

Shell Tellus variable temperature hydraulic oils are designed to avoid problems related to low-performing lubricants, to reduce your maintenance costs and to help you to:

- **Reduce oil consumption and improve equipment protection** through outstanding shear and oxidation stability
- **Start up quickly** thanks to excellent low-temperature performance
- **Maintain precision of machinery** when either hot or cold or under high loads thanks to new polymer technology
- **Reduce wear and corrosion.** Strong hydrolytic stability and wear protection reduce the negative impact of unavoidable water condensation in your machinery after shutdown
- **Reduce your number of hydraulic oil grades** as the wide temperature range will allow you to use one oil in a wide range of environments



Anti-wear performance for longer equipment life

Without any doubt, one of the most critical parts of a hydraulic system is the pump. Whether they are gear pumps, vane pumps, axial piston pumps, or radial piston pumps, they are all exposed to severe wear by running at high revolutions over extended periods of time, handling high temperatures and pressures. In highly demanding industry tests such as the new Denison T6H, next-generation Shell Tellus T demonstrated excellent lubricating performance and resistance to wear in pumps.



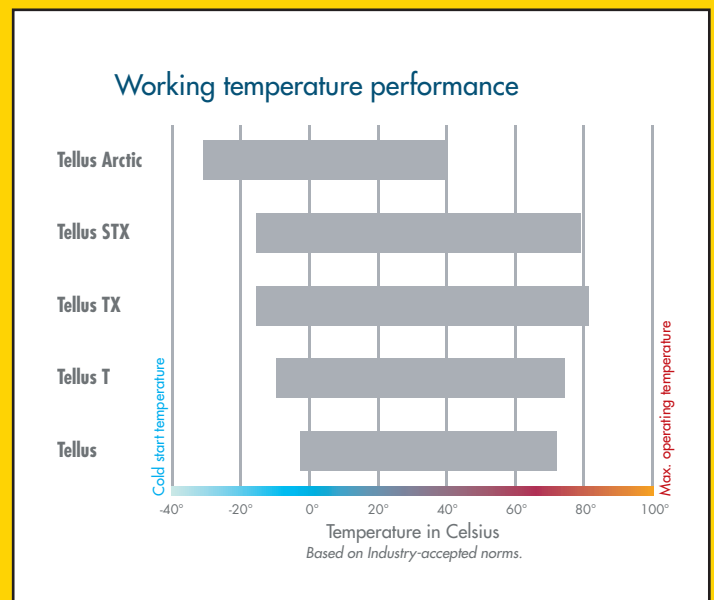


Effective from start to finish

Tellus variable temperature hydraulic oils have been developed to maintain their viscosity throughout a wide temperature range. Unlike ordinary hydraulic oils, they contain new polymer technology, unique to these kinds of lubricants. After a cold start-up, the heat-activated polymers will ensure that the hydraulic oil retains correct viscosity when the oil temperature increases.

Secondly, the polymers have a tremendous shear strength – making them up to twice as stable as major competitors* – ensuring that correct viscosity is maintained even under high loads.

* as shown in the Shear Stability Test. See page 6.



Suitable for stationary and mobile equipment

The new Shell Tellus variable temperature oil range has been developed to keep a wide range of equipment operating in variable temperature conditions, including:

- Lifts and cranes
- High-precision presses
- Off-road hydraulics
- Diggers, earth movers and snow ploughs
- Refuse collection vehicles
- Open-cast mine machinery
- Bobcats
- Marine applications





Next generation Shell Tellus T complies with the latest specifications and the most rigorous tests of relevant original equipment manufacturers. For detailed information, please refer to the product data sheet.

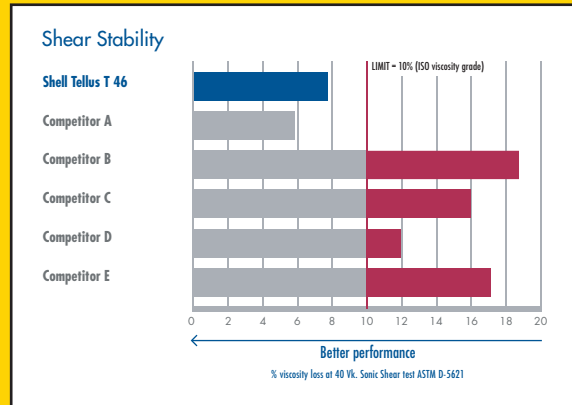
Shell Tellus variable temperature range

Type	Viscosity index	Characteristics
Shell Tellus Oils T next generation	140	<ul style="list-style-type: none"> • “Multigrade” hydraulic fluid • Next generation Shell Tellus Oil Additive Technology ZnDTP-based package • Excellent shear stability
Shell Tellus Oils TX	160	<ul style="list-style-type: none"> • “Multigrade” hydraulic fluid • ZnDTP-based package with enhanced EP performance • Class-leading shear stability
Shell Tellus Oils STX new	160	<ul style="list-style-type: none"> • “Multigrade” hydraulic fluid • New Unique Shell Patented Additive Technology Ashless-based package • Very good shear stability • STX is metal-free
Shell Tellus Arctic	300	<ul style="list-style-type: none"> • “Multigrade” hydraulic fluid • New Unique Shell Patented Additive Technology Ashless-based package • Class-leading performance in low-temperature climates

Shell Tellus T is the overall best-performing product and the only product meeting all test requirements (when compared to relevant competitors with a similar viscosity index):

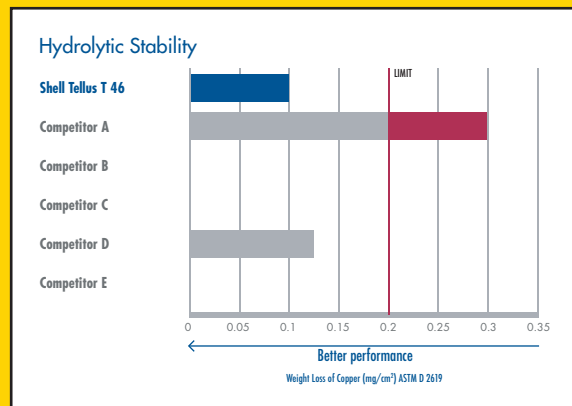
Shear Stability - For maintained equipment protection

It is relatively simple to improve the viscosity index (resistance to viscosity change when exposed to variations in temperature), of any given hydraulic oil. Formulating a high viscosity index hydraulic oil that resists shearing, and thus loss of viscosity, at moderate to high temperatures is however difficult. By carefully selecting the type and amount of polymers, it is possible to ensure the product maintains its performance after intensive use. Next generation Tellus T provides superb lubrication to the most sensitive parts of the pump in all conditions, avoiding the detrimental consequences of lubrication film interruption.



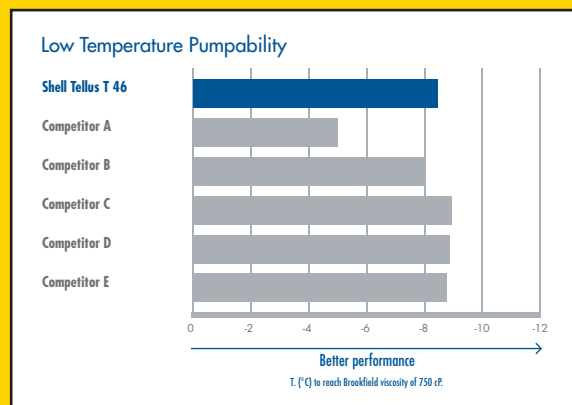
Hydrolytic Stability - For longer fluid life and protection against corrosion

Protection of the inner parts of a hydraulic system is relatively easy if it is completely clean and free from water. Unfortunately, real-life tests show that most of the time the oil inside a hydraulic system contains small but still damaging amounts of water. Free water not only causes corrosion in the delicate metal surfaces of servo valves, but also degrades the oil itself through increased acidity levels. Next generation Tellus T shows excellent hydrolytic, thermal and oxidative stability, thanks to the same successfully proven additive package of the next generation Tellus oils for stationary applications.



Low temperature pumpability - For fast start-up and improved energy efficiency

Pour Point has often been used in the industry to denote the ability of a hydraulic oil to flow at low temperature. However pumpability or T.°C at which the oil reaches a maximum dynamic viscosity of 750 cPoise is a much more representative test as it exposes the oil to mechanical conditions similar to the ones it will have inside your equipment. Next generation Tellus T is formulated without compromising performance at low temperature, ensuring accurate operation from the beginning, low friction and quick start-up time, resulting in a more efficient use of energy.



All data shown in the graphics are typical fresh oil sample values.



A partner you can rely on

With the introduction of the improved Tellus variable temperature hydraulic range with new polymer technology, Shell continues to produce innovative industrial fluids for the benefit of customers all over the world. Together with Tellus, Shell offers a full complementary portfolio of other Factory Plant Maintenance and Transport lubricants.

Our global presence and expertise also ensure that an extensive range of support services is available to you everywhere you work.

Outstanding performance in variable temperatures

By using the new Tellus range, you can continue operating day and night, in any season. These dedicated hydraulic oils will help you to:

- lower your maintenance costs
- extend oil drain intervals
- better protect your equipment
- increase productivity

Full FPM range

Shell also manufactures a full range of factory plant maintenance products designed to give you improved protection, longer service life and reduced wear.

Gear oils	Shell Omala and Tivela	An extensive range of high-performance gear oils for a wide range of applications
Compressor oils	Shell Corena	High-quality compressor oils
Refrigerator compressor oils	Shell Clavus	High-quality refrigerator compressor oils
Bearing & circulating oils	Shell Morlina	Premium-quality bearing & circulating oils available in a wide range of viscosities for a large number of industrial applications
Fire-resistant hydraulic fluids	Shell IruS	A full range of very high-performance fluids for high fire risk areas
Industrial greases	Shell Albida and Alvania	High-performance industrial greases
Environmentally considerate lubricants and greases	Shell Naturelle	A full range of environmentally considerate high-quality products
Lubricants and greases for food & beverage production	Shell Cassida	High-performance products for the food industry
Engine oils	Shell Rimula	Heavy-duty diesel engine oils
Transport gear and axle oils	Shell Spirax	Full portfolio of heavy-duty transport gear and axle oils

Local product portfolio might vary slightly. Please consult your Shell representative for more information.

