



Customer benefits

- **Resists degradation**
Good oxidation stability provided by the multi-component inhibitor system resists oil breakdown during exposure to high temperature conditions.
- **Potential maintenance and downtime savings**
The highly refined base stocks and multi-component oxidation inhibitor system resist the formation of harmful sludge and varnish deposits. The rust inhibitor protects components against corrosion.
- **Smooth operation**
Good water separability of the highly refined base stocks and inhibitor system ensure rapid settling of harmful water accumulated from steam condensate. The non-silicone foam inhibitor allows rapid release of entrained air while minimizing foam formation, enabling reliable operation of sensitive hydraulic control devices.
- **Potential inventory savings**
Rust and oxidation inhibited formulation has multipurpose capability in a wide range of industrial applications for which this type of product is recommended, helping to simplify oil inventories and reduce the possibility of using the wrong lubricant.

Applications

Regal R&O is suitable for use in the following applications provided a rust and oxidation (R&O) inhibited oil is acceptable.

- Steam and hydraulic turbines operating under all service conditions
- Industrial gas turbines operating under moderate service conditions where the oil is not exposed to excessively high temperatures, or gear sets requiring enhanced load carrying performance
- Centrifugal, rotary and reciprocating compressors, turbo-blowers and centrifugal pumps (not recommended for use in breathing air compressors)

Product features:

Inhibited turbine oil formulated from highly refined base stocks and rust, oxidation and foam inhibitors.



- Bath and circulating systems supplying rolling element bearings of all types, lightly loaded gear sets, vacuum pumps (including rotary vacuum pumps used in the dairy farming industry), machine tools (including computer controlled units), conveyors, electric motors, and low to moderate pressure hydraulic pumps where anti-wear properties are not required

Performance standards

Regal R&O is suitable for use where the following industry and OEM specifications are requested:

- British Standard BS 489:1999
- DIN 51515 Part 1 (2001)
- ISO 8068; L-TSA and TGA (ISO 32, 46, 68)
- Siemens TLV 9013 04 (ISO 32, 46 for turbo sets without gearboxes)
- Alstom HTGD 90117
- David Brown Table M - OM, 1M, 2M (ISO 32 to 68, respectively)
- ANSI/AGMA 9005-E02: AGMA Lubricant No. 1, 2 (ISO 46, 68, respectively)
- Cincinnati Machine P-38, P-55, P-54 (ISO 32, 46, 68, respectively)
- Meets requirements of major turbine builders including GE and Solar

Service considerations

Turbine oils must be capable of lubricating and cooling the bearings while protecting the system against rust, corrosion and harmful deposits. Since turbine equipment is normally used in key applications, the reliability of the rotating machinery and its lubricant is critical.

Regal R&O oils have demonstrated superior service in many types of industrial steam, gas and hydraulic turbines. Turbine equipment is expected to have a long, reliable service life because of its high cost and type of service such as electrical power generation.

Periodic monitoring of the oil in service is recommended to assure satisfactory performance of the turbine. The principal reasons for monitoring are two-fold: firstly, to determine the condition of the used oil and secondly, to disclose environmental or operational problems within the equipment. The oil should be visually inspected by the operator at frequent intervals for contaminants and/or appearance changes. Refer to ASTM D4378 for guidance on sampling and testing frequency. Samples should be taken from the discharge side of the oil pump while the system is circulating.



continued

During service, effective purification of the lubricating oil is recommended for the removal of contaminants such as water and solids.

Care should be taken to insure against cross-contamination with other oils, as this could reduce the performance characteristics of Regal R&O.

Product specifications

REGAL R&O KEY PROPERTIES	RESULTS			
ISO Grade	32	46	68	100
Product Code	520065	520066	520067	520068
Kinematic Viscosity,				
mm ² /s @ 40°C	32	46	68	100
mm ² /s @ 100°C	5.5	6.8	8.6	11.1
Viscosity Index	109	108	105	103
Air Release @ 50°C, mins	2.1	2.0	3.0	-
Flash Point, COC, °C	220	230	238	248
Pour Point, °C	-15	-15	-15	-12
Oxidation Stability,				
ASTM D943, hrs to 2.0 Acid No.	10000+	10000+	10000+	-
IP 280 (TOP), m %	0.11	0.08	-	-

This bulletin was prepared in good faith from the best information available at the time of issue. While the values and characteristics are considered representative, some variation, not affecting performance, can be expected. It is the responsibility of the user to ensure that the products are used in the applications for which they are intended.

Produced by Chevron Lubricants; Africa, Middle East and Pakistan.

Environment, Health and Safety Information is available on this product in the Material Safety Data Sheet (MSDS) and Customer Safety Guide. Customers are encouraged to review this information, follow precautions and comply with laws and regulations concerning product use and disposal. To obtain a MSDS for this product, visit www.caltexoils.com.

For more information, go to www.chevronlubricants.com