



# Shell Turbo Oil J 32

## Premium Industrial Turbine Oil

Shell Turbo Oil J has been specially formulated to satisfy the demanding requirements of the MHI (Mitsubishi Heavy Industry) non-geared steam & gas turbines.

This is based on a blend of specially chosen high quality hydrotreated base oils with selected additives to enhance their rust and oxidation properties.

### DESIGNED TO MEET CHALLENGES

#### Performance, Features & Benefits

- **Good thermal and oxidation stability**  
Resists the formation of sludge and other harmful products of oxidation, giving long oil life.
- **Excellent corrosion protection**  
High level of corrosion protection of all metal surfaces.
- **Excellent oil/water separation properties**  
Easy drainage of excess water from lubrication systems.
- **Good air release characteristics**  
Effective air release without excessive foaming.
- **Reliable performance in MHI turbines**  
Shell Turbo Oil J meets the requirements of MHI turbines and has been successfully tested in the MHI in-house dry TOST test.

#### Main Applications

- **Power generation MHI turbines**  
Shell Turbo Oil J may also be used for other industrial applications requiring high quality rust and oxidation (R & O) inhibited oils, which separate easily from water.

#### Specifications, Approvals & Recommendations

- Shell Turbo Oil J is approved by MHI against their specifications Turbine Oil Type 2 (additive) MS04-MA-CL001 (R-2) and MS04-MA-CL002 (R-2).

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

#### Typical Physical Characteristics

Properties			Method	Turbo J 32
Viscosity	@104°F	cSt	ASTM D445	32
Viscosity	@212°F	cSt	ASTM D445	5.3
Viscosity Index			ASTM D 2270	104
Color			ASTM D 1500	L 0.5
Pour Point		°F	ASTM D 97	-0.40
Flash Point (COC)		°F	ASTM D 92	431.6
Total Acid Number		mg KOH/g	ASTM D 974	0.05
Foaming Seq I		ml/ml	ASTM D 892	30/Nil
Foaming Seq II		ml/ml	ASTM D 892	20/Nil
Foaming Seq III		ml/ml	ASTM D 892	30/Nil
Water Separability	@129.2°F	minutes	ASTM D 1401	40-40-0(10)
Air Release, Minutes			ASTM D 3427	<4
Copper Corrosion (3 hrs)	@212°F		ASTM D 130	1b
Rust Control			ASTM D 665B	Pass
Oxidation Control Test - TOST Life		hours	ASTM D 943	>8000
Oxidation Control Test - Dry TOST			MHI Method	Pass

Properties		Method	Turbo J 32
Oxidation Control Test - RPVOT - minutes	minutes	ASTM D 2272	>950

These characteristics are typical of current production. While future production will conform to Shell's specification, variations in these characteristics may occur.

### Health, Safety & Environment

- Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.Shell.com/>

- **Protect the Environment**

Take used oil to an authorized collection point. Do not discharge into drains, soil or water.

### Additional Information

- **Advice**

Product recommendations for applications not covered here may be obtained from your Shell representative.