

THERMAL-LUBE

MARINE THRUSTER GEAR LEAK-SEAL COMPOUND

XL0887

February 2026

DESCRIPTION:

XL0887 is a heavy-duty oil-based compound formulated with PTFE (polytetrafluorethylene) and selected performance additives to effectively reduce the quantity of water ingress due to damaged thruster gears. When **XL0887** is added into to the circulating oil system it will impregnate and treat the gear surfaces that are in contact with oil and water .

HOW DOES WATER GET INTO THE THRUSTER GEARS?

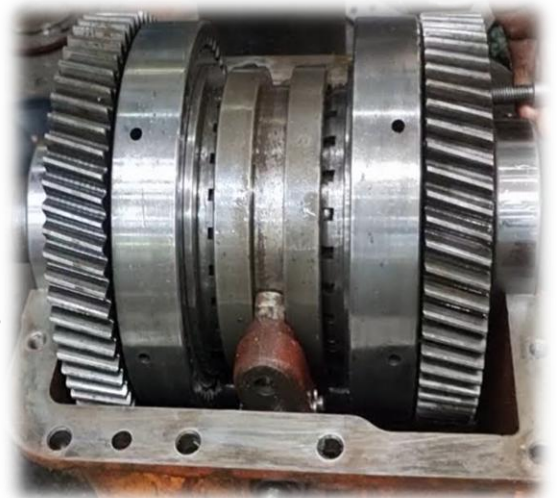


- Through the propeller shaft seal which can leak due to ageing, improper assembly, or damage.
- Dynamic water pressure from the propeller blades can overcome static pressure from the header tank causing water to ingress through the seal.
- Vibration can cause misalignment or curvature of the propeller shaft
- Fishing gear, debris, or objects can get caught on the propeller shaft, destroying the gear seals.

WHAT HAPPENS AFTER WATER GETS INTO THE THRUSTER GEARS?

When water gets into marine thruster gears, it can lead to several issues, including:

- Damage to the thruster motor which can cause corrosion and damage to the motor, leading to operational failure.
- Electrical issues: Water can disrupt the electrical components of the thruster, affecting its performance.
- Increased wear and tear: Water can introduce contaminants that can wear out the thruster components over time.
- Malfunctioning: If the thruster is not designed to be watertight, water can cause the thruster to malfunction, requiring repairs or replacement.



To prevent water ingress and ultimately damage, it is crucial to ensure that marine thruster gears are designed with watertight seals and to regularly inspect and maintain them.

If water does get into a thruster gear box, immediate action should be taken to remove it and prevent further damage. **XL0887** leak-seal compound is formulated to do just that!



255 Ave Labrosse, Pointe-Claire, Québec, Canada H9R 1A3

T: +1.514.694.5823; www.thermal-lube.com

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ATTRIBUTES:

XL0887 has outstanding EP (extreme pressure) properties and contains anti-rust and anti-corrosion additives which will help prevent wear, galling, or seizing caused by start up which –in effect- will reduce costly down-time.

XL0887 impregnates and treats rotating gears with its PTFE compound forming a layer of protection, thereby reducing friction, and wear. **XL0887** is also formulated with a unique seal-swelling agent that will allow the seal to sit tighter in place. The combination of these additives form a synergistic dressing that will reduce water ingress.

PRODUCTS:

- **XL0887** synthetic oil-based thruster gear leak-seal compound.
- **XL9887** biodegradable synthetic ester-based thruster gear leak seal compound.

APPLICATION:

XL0887 is formulated with PTFE particles with a mean-size of 5 microns. This should not interfere with most lubricating systems as long as the filter is greater than 10 microns.

- If necessary, remove or bypass any oil filters from the lubrication system that are less than 10 micron to ensure the PTFE particles do not get trapped in these filters.
- Increase the air pressure in the header tank or lift the tank high enough to reverse the pressure on the thruster seals (stopping any water ingress) and to allow the oil to flow outwards.
- Drain any residual water including that which may be ‘separated’ by a coalescing filter. This filter may also need to be removed.
- Empty 5-10% of the oil system into a storage container (empty drum or pail) if header tanks is full to capacity
- Blend **XL0887** or **XL9887** to an overall dilution of:
 - 6% for leaks less than 0.5L per hour
 - 9% for leaks greater than 0.5L per hour
- **NOTE:** Pre-dilution into a separate container may be necessary depending on accessibility of containers and mixing equipment
- Maintain a positive pressure on the seal to reduce water ingress and allow the dressing to circulate homogeneously within the oil system.
- Start reducing the pressure slowly while observing if there is any new water ingress.
- If so, increase the pressure to stop the ingress and add additional product (in increments of ~0.5%). Repeat as above until the ingress is eliminated or reduced to an acceptable level.

