



TRI Marine Grease™



The USS Dallas equipped with a Dry Deck Shelter (DDS) for SOF diving operations. TRI/Austin's new diver safe and seawater washout resistant grease will result in savings of material, application time and money.



Dry deck shelter hatch. Lubrication is needed on all internal gears and locking ring threads.

TRI Marine Grease™

- ✓ Resistant to washout
- ✓ Prevents Corrosion
- ✓ Non Off-Gassing
- ✓ Improved Durability
- ✓ Reduces Repair Costs
- ✓ Reduced Application Times

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Submarine hanger areas have actuated parts, doors, hatches, etc., that must be adequately lubricated to function correctly and extend service life. Texas Research Institute Austin (TRI) has developed an innovative grease approach utilizing fluorohydrocarbon base oil in conjunction with a thixotropic filler and various anti-corrosion additives. The optimized formulation has performed very well in both field and lab testing. It is resistant to water washout, prevents corrosion both actively and passively, and passed the NAVSEA P-9290 certification for off-gassing of volatile compounds. The new grease can be applied by hand, grease gun, or via grease lines. Reduced costs will be realized with the new grease through improved durability, reduced need for component repair, and minimal application time.

Material Specification and Qualification Testing

Standard Test Method	Test	Purpose of the Test	Test Results
ASTM-D-1403	Small Scale Cone Penetration	¼ Scale Penetration, Unworked and Worked	Unworked – 244 Worked – 254
ASTM-D-2595	Evaporation Loss @ 22 hours	Measurement of permanence	0.70%
ASTM-D-942	Pressure Vessel Oxidation @ 100 hours	Measure the net change in pressure resulting from consumption of oxygen by oxidation and gain in pressure due to formation of volatile oxidation by-products	2.0 psi drop
ASTM-D-2266	Four Ball Wear of Grease	Used to determine the relative wear preventing properties of greases under the test conditions	0.56 mm
ASTM-D-2596	Load Wear Index of Grease	Determination of the load-carrying properties of lubricating greases.	95.71
ASTM-D-1478	Low Temperature Torque	Determination of the starting and running torques at low temperatures (below -20°C (0°F)).	Starting Torque 9024 g-cm 1 Hr Running Torque 732 g-cm
FTM-5309	Copper Corrosion of Grease	Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test	Exposed 3B Immersed 4A
FTM-321	Oil Separation	Wire Cone Method	4.21%
FTM-5415	Resistance of Grease to Aqueous Solutions	1 week exposed to water and water/ethanol	0% disintegration
FTM-3005	Dirt Count of Greases	The number of foreign particles between 25 and 75 microns per milliliter of sample, and particles greater than 75 microns per milliliter of sample.	25 - 74 µ – 38/cc +75 µ – 0/cc