



# Aerospace Satellites



Lubricants designed specifically for satellite components that must survive the severe conditions of the space environment, where long life is critical for the success of the mission.

## SOLAR ARRAY DRIVE

This system is responsible for positioning the solar panels in order to harvest sun light that can be turned into energy. MAC lubricants fortified with both anti-oxidants and anti-wear additives will help ensure long life of components.

**Harmonic Gear Drive** - Rheolube® 2004 & Synthetic Oil 2001-3PB

**Slip Ring in Power Transfer Assemblies** - Rheolube® 2001

## SCAN MIRROR ASSEMBLY

This system moves in a horizontal motion to scan targeted areas for imaging. Lubricating the bearings within the assembly will reduce vibration, and allow the system to move in a quick, smooth motion.

**Bearings** - Synthetic Oil 2001-3PBNP

## REACTION WHEELS

By providing attitude control, reaction wheels are the control gyros for satellites. A medium viscosity MAC grease will operate through high-torque adjustments and can withstand extreme temperatures.

**Barrier Film** - NyeBar® Type-P

**Bearings** - Rheolube® 2000

## SPIN MECHANISM ASSEMBLY

This instrument supports and spins the satellite throughout the mission. The bearings within the assembly are in constant rotation and require a MAC grease fortified for friction reduction.

**Angular Contact Bearings** - Rheolube® 2000 & Synthetic Oil 2001

## CAMERA OPTICS

To ensure contaminants from other lubricants do not creep onto the camera lens, NyeBar® can be applied to multiple mechanisms on the camera mast. NyeBar® creates a barrier film, holding the lubricating oil in place. Ultrafiltered MAC lubricants have low outgassing rates and superior anti-wear performance, making them ideal for components within or near a satellite camera. Lubricants with a lower particle generation count will ensure that optical components are not compromised.

**Bearings** - Rheolube® 2000-LO & Rheolube® 2004-LO

**Camera Mast** - NyeBar® Type-P

