Benefit
Mobil SHC™ Gear 220 has helped Ocean Prawns experience problem-free operation and outstanding productivity for 17 years. The oil's superb wear protection and resistance to degradation has helped extend the trawler's main propulsion gear oil drain interval to 120,000 hours, lengthen gearbox life, reduce oil consumption and decrease the number of filter changes, resulting in environmental improvements and low maintenance costs.

Situation
Ocean Prawns is a modern shrimp trawler operating in the Arctic Ocean, off the coasts of eastern Canada and Greenland. When the vessel's 750-tonne freezer hold is full, course is set for stores on Newfoundland, Iceland and Greenland to unload the catch. Despite operating in temperatures as low as -30°C (-22°F) in winter and as high as 30°C (86°F) in summer, the trawler’s engine and gearbox must always perform reliably. Since 1996 (approximately 120,000 hours), Ocean Prawns has been using Mobil SHC Gear 220 in the main propulsion gear. During this time, the vessel’s main engine was changed from a Wärtsilä 8L32 to a Wärtsilä 18V32, increasing the load on the Rolls-Royce Ulstein 2400 gearbox by 100 percent.

Solution
Mobil SHC Gear 220 is a scientifically engineered fully synthetic lubricant designed to provide outstanding wear protection for gears and bearings operating under extreme load conditions. It offers performance advantages that conventional mineral oils cannot match. The product’s high viscosity index enables a wider operating temperature range and excellent low temperature start-up. Mobil SHC Gear 220 shows no tendency to plug fine filters, and is compatible with ferrous and non-ferrous metals, even at elevated temperatures.

Impact
Mobil SHC Gear 220 and ExxonMobil’s Signum™ Oil Analysis programme enabled Ocean Prawns A/S to extend the trawler's main propulsion gear oil drain interval to 120,000 hours, despite operating conditions that included extreme temperatures and a new engine that significantly increased stress on the gearbox. The classification society approved Ocean Prawn’s use of the new engine with the stipulation that only Mobil SHC Gear 220 could be used in the gearbox.