MLDW™ Catalytic Lube Dewaxing

ExxonMobil's MLDW™ catalytic lubes dewaxing process can help operators dramatically reduce base stock production cost.

Deployed at the Adelaide refinery in 1979, and in reliable service in many lube plants ever since, MLDW can operate where other catalysts would fail. MLDW turns even high nitrogen and sulfur solvent-extracted raffinates, or propane deasphalted oils, into conventional or ultra-low-pour point base stocks (-40 °C and below). Whether for a revamp or a grassroots application, choose MLDW and see significant savings over solvent dewaxing, including lower utility costs since the need for solvent refrigeration, recovery and recycling is eliminated.

Advantages:
- Very long cycle length
- Better cold-cranking product properties
- Lower capital investment — about half that of solvent dewaxing
- Dramatically lower utility costs
- Boosted yields in heavy stocks
- Vastly lower production costs
- Safer operations — no volatile, toxic organic solvents
- Highly flexible process

A history of success with a proven process
A state-of-the-art, dual-reactor system uses proprietary technology to assure optimal feed distribution. This process utilizes equipment similar to that of middle distillate desulfurization units, and it has been retrofitted into these units. The shape-selective dewaxing catalyst does all the work to crack high pour point paraffins into naphtha and gas. This highly flexible process operates at hydrogen pressures ranging from 400 to 3,000 psig (27 to 200+ bar). In downstream recovery, the lube base oil is separated from hydrogen-rich recycled gas and by-products, primarily naphtha and propane.

One stop shopping
As a major crude refiner, global base oil marketer, strategic researcher and licensor of every aspect of lube technology, ExxonMobil is positioned to add value to its customers’ operations. ExxonMobil can help you monetize your assets and develop a plan for the future.

ExxonMobil is the leading provider of advanced lubes manufacturing technologies for the 21st century that meet and exceed customer expectations for quality and profitability.

Our advanced hydroprocessing technologies provide today's base stock manufacturers with maximum value through exceptional process performance for yield, run length and durability and outstanding product qualities.