



SYNTHETIC MOTOR OIL



NATURAL GAS

MOTOR OIL DESIGNED FOR COMPLETE PROTECTION



MOTOR OIL IS A MIXTURE

Base Oil





- Makes up most of engine oil
- Determines fundamental properties of engine oil

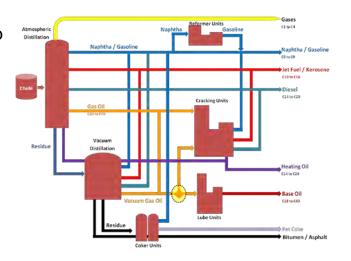
Additives



- Improve base oil properties
- Protect the base oil
 - Protect engine parts

A REVOLUTION IN MOTOR OIL

- Base oil 75-90% of motor oil
- High-quality base stocks key in top oils
- Group II/III base oils derived from crude
- Pennzoil focus on motor oil technology
- With imagination and technology, we started with something different: natural gas





SERIOUS INNOVATION

- 40 years in the making
- World's largest gas-to-liquids Plant
 - Pipeline Steel weight of 18 Eiffel Towers
 - GTL synthesis reactor tubes Doha to Tokyo
 - ~13,000 km of cables Doha to Houston
 - Employed 52,000 people
 - External estimates ~\$18-24B to build
 - 140,000 barrels/day petroleum liquids
- 3500+ patents
- Major step for cleaner energy

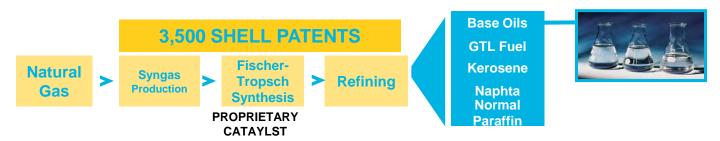






WHAT IS PUREPLUS™ TECHNOLOGY?

- Shell revolutionary gas-to-liquid (GTL) process that converts pure natural gas into the first-of-its-kind synthetic base oil used in the Pennzoil Platinum line of products
- Complex process using modified Fischer–Tropsch reaction to convert natural gas into liquid hydrocarbons
- Resulting PurePlus base oils are crystal clear and 99.5% pure
- These base oils have ~none of impurities found in crude oils





TRADITIONAL CRUDE OIL

VS.

PUREPLUS GAS TO LIQUID



IMAGINE TAKING A CUP OF WATER FROM A MUDDY RIVER AND RUNNING IT THROUGH A SMALL FILTER — EVEN AFTER YOU RUN THE WATER THROUGH THE FILTER, THERE WILL STILL BE SOME IMPURITIES LEFT IN THE WATER.



IMAGINE IF YOU COLLECTED A CUP OF WATER BY CONDENSING STEAM, OR WATER VAPOR. THE WATER TAKEN FROM THE GASEOUS STEAM WILL BE MUCH PURER THAN THE WATER TAKEN FROM THE MUDDY RIVER.



PurePlus[™] Technology is a revolutionary process that converts pure natural gas into the first-of-its-kind synthetic base oil used in Pennzoil Platinum® products, motor oils designed for **COMPLETE PROTECTION**





CLEANER PISTONS

BETTER FUEL ECONOMY

PROTECTS HORSEPOWER WEAR PROTECTION EXTREME TEMPERATURE PERFORMANCE







LET'S START THE SYNTHETIC REVOLUTION!



ENGINES HAVE CHANGES, WHY NOT THE TECHNOLOGY IN YOUR MOTOR OIL



Direct Injection, Turbo Charged, Hybrid Engines, Ethanol Fuels