



DEXRON®-III MERCON® AUTOMATIC TRANSMISSION FLUID

pz6-01.00

A Superior Quality Multi-Functional Fluid For Automatic And Powershift Transmissions

PRODUCT DESCRIPTION

PENNZOIL® DEXRON®-III MERCON® is a new generation petroleum based fluid for automatic and powershift transmissions. It is fully qualified as both a DEXRON®-III and MERCON® lubricant surpassing General Motors specification 6297-M and Ford specification M2C185A. In addition, PENNZOIL® DEXRON®-III MERCON® is an approved Allison C-4 fluid and is qualified as a Caterpillar TO-2 lubricant.

To meet the lubrication demands of specialized equipment design, Pennzoil incorporated a "new generation" complex additive system in PENNZOIL® DEXRON®-III MERCON®. Specially selected friction modifiers allow friction retention for long life performance. Enhanced oxidation, thermal stability and corrosion resistance insure long mileage component protection. In addition, the anti-wear protection of PENNZOIL® DEXRON®-III MERCON® has been improved to exceed the most demanding requirements of hydraulic pump manufacturers.

APPLICATION

PENNZOIL® DEXRON®-III MERCON® is especially formulated to meet the viscosity and frictional requirements of a DexronDEXRON®-III fluid. It is a multi-functional fluid that meets or exceeds the following performance requirements or manufacturers' specifications:

- DEXRON®-III (GM 6297-M)
- Caterpillar TO-2
- MERCON® (Ford M2C185A)
- Sundstrand Hydrostatic Transmissions
- Allison Type C-4

PENNZOIL® DEXRON®-III MERCON® is suitable for use in applications requiring Ford M2C138CJ and Ford Type H fluids.

PENNZOIL® DEXRON®-III MERCON® is recommended for mobile equipment used by utility companies which require electrical insulating properties for hydraulic oils. PENNZOIL® DEXRON®-III MERCON® has a dielectric strength of 35kV.

PENNZOIL® DEXRON®-III MERCON® provides superior wear protection for all passenger cars and light trucks requiring the use of a Type A or Type A Suffix A, DEXRON®, DEXRON®-II, DEXRON®-IIE, DEXRON®-III or MERCON® Automatic Transmission Fluid -- General Motors, Ford (other than M2C33F or Type F fluids), Chrysler, American Motors, Nissan, Honda, VW, Subaru, Mitsubishi, Isuzu, Toyota, Fiat, Audi, Alfa Romeo, Renault, Porsche and Mercedes Benz.

PENNZOIL® DEXRON®-III MERCON® can be used in passenger cars, trucks and buses, off-highway construction/mining equipment, agricultural equipment, mobile hydraulic systems, industrial machinery, and power steering systems which require DEXRON®, DEXRON®-II, DEXRON®-IIE, OR DEXRON®-III fluids.

BENEFITS

- Excellent friction, oxidation and thermal stability
- Outstanding anti-wear performance
- Improved hydrolytic stability
- Better cold temperature flow properties than SAE 10W motor oil
- Protects components from harmful attack by corrosive acids
- Excellent compatibility with seal materials
- Outstanding hydraulic pump performance
- Year-round performance
- Multi-functional fluid - reduces inventory
- Assures long equipment life

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PENNZOIL® DEXRON®-III MERCON® AUTOMATIC TRANSMISSION FLUID

TEST	METHOD	TYPICAL RESULTS
Gravity, °API	ASTM D-287	32.5
Specific Gravity @ 60°F(15.6°C)	ASTM D-287	0.8780
Pounds per Gallon	-	7.25
Flash Point, °C(°F)	ASTM D-92	204(399)
Fire Point, °C(°F)	ASTM D-92	224(435)
Pour Point, °C(°F)	ASTM D-97	-57(-71)
Color	-	Red
Viscosity	-	-
@ 40°C, cSt	ASTM D-445	34.35
@ 100°C, cSt	ASTM D-445	7.23
@ 100°F, SUS	ASTM D-445 & D-2161	161.1
@ 210°F, SUS	ASTM D-445 & D-2161	49.9
Viscosity Index	ASTM D-2270	195
Brookfield Viscosity @ -40°C, cP	ASTM D-2983	17,200

Dielectric Strength, kV	ASTM D-877	35
Sundstrand Axial Piston Pump Test	Sundstrand Procedure	Excellent Pass
Rust Protection	ASTM D-665A	Pass (No Rust)
Hydrolytic Stability Test	ASTM D-2619	Excellent Pass
Foam Test	ASTM D-892-74	No Foam (0-0-0)
Copper Strip Corrosion (3 hrs @ 100°C)	ASTM D-130	1b
Material Number	-	-
Bulk	-	3310
12 x 946 ml	-	2017
19 L	-	3319
208 L	-	3316



PENNZOIL® GT PERFORMANCE® 20W-50 MOTOR OIL

pz6-02.00

PRODUCT DESCRIPTION

PENNZOIL® GT PERFORMANCE® 20W-50 MOTOR OIL with PureBase®se™ is a high performance lubricant formulated for passenger car and racing engines. It maintains thick oil films for added protection in hard working engines and hot climates.

PurePureBase®Base ™ , Pennzoil's innovative technology base oil, is virtually free of the contaminants normally found in conventional base oils. As a result, Pennzoil's renowned additive system, Z-7® is more effective than ever in providing the additional protection required by modern engines. Pennzoil is engineered to exceed the demands of today's high-performance engines that operate under severe conditions such as urban stop-and-go driving. Specifically, PENNZOIL® GT Performance® 20W-50 Motor Oil provides added protection by maintaining thick oil films between critical engine parts.

APPLICATION

PENNZOIL® GT PERFORMANCE® 20W-50 MOTOR OIL is ideal for all gasoline powered engines where a 20W-50 motor oil is recommended. The high film strength provides exceptional protection for high-horsepower, hard working applications such as racing engines, modified street engines, and large V-8's. Because of its high temperature formula, PENNZOIL® GT Performance® is particularly suited for use in hot climates and hot running engines.

PENNZOIL® GT PERFORMANCE® 20W-50 MOTOR OIL surpasses the performance requirements of API SJSJL Service Classification. It exceeds ACEA viscosity protection requirements to provide excellent protection for European engines.

PENNZOIL® GT PERFORMANCE® 20W-50 MOTOR OIL is also recommended for older engines for which the owner's manual recommends API service classifications SJ, SH, SG, SF, SE or any combination thereof. Viscosity recommendations vary according to temperature and engine manufacturer. Always consult your owner's manual for the correct viscosity choice.

BENEFITS

- Reduces internal engine heat, friction, and wear
- Builds thick oil films to separate metal parts
- Specially designed to protect high horsepower engines
- Retards harmful deposit formation on vital engine parts

- Specially formulated for stop and go driving conditions
- Protects against rust and corrosion
- Exceeds the highest U.S. standards for automotive engine wear protection
- Exceeds European ACEA requirements for viscosity protection
- Protects engines under severe driving conditions
- Protects emission control devices against varnish build-up
- Eliminates the need for extra oil additives
- Controls high-temperature deposits in the ring belt and combustion chamber
- Exceeds Chrysler High Performance Engine Oil Standard MS 8809 and MS 6395
- Exceeds Ford standard M2C153E
- Exceeds General Motors standard GM 6094M
- Exceeds API SJSL Service Classification

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PENNZOIL® GT PERFORMANCE® 20W-50 MOTOR OIL

TEST	METHOD	TYPICAL RESULTS
SAE Viscosity Grade	SAE J300	20W-50
API Service	SAE J183	SJSL
Gravity, °API	ASTM D-287	28.3
Specific Gravity @ 15.6°C(60°F)	ASTM D-287	0.88
Pounds per Gallon	-	7.34
Flash Point, °C(°F)	ASTM D-92	232(450)
Pour Point, °C(°F)	ASTM D-97	-24(-11)
Color	ASTM D-1500	5.0
Viscosity	-	-
@ 40°C, cSt	ASTM D-445	189.0

@ 100°C, cSt	ASTM D-445	17.5
@ 100°F, SUS	ASTM D-445 & D-2161	872.7
@ 210°F, SUS	ASTM D-445 & D-2161	99.4
Viscosity Index	ASTM D-2270	130
Low Temperature Viscosity	-	-
Vis (cP) at Temperature (°C), Max.	ASTM D-5293	<4300 @-10
Borderline Pumping Temp., (°C), Max.	ASTM D-3829	<-15
High Temperature/High Shear Vis., cP	ASTM D-4683	5.1
Foam Test	ASTM D-892	nil/0
Volatility % evaporation @ 700°F	ASTM D-2887	<15
Copper Corrosion Rating	ASTM D-130	1a
Shear Stability, % Viscosity Loss, DIN Method	ASTM D-3945	<4.0
Material Number	-	3560
Bulk	-	3560
12 x 946 ml	-	4044
3 x 3.8 L	-	4045
208 L Bulk	-	35663560



PRODUCTS ▷

HIGH MILEAGE VEHICLE™

pz6-03.00

PRODUCT DESCRIPTION

PENNZOIL® HIGH MILEAGE VEHICLE™ motor oil is formulated to meet the needs of high mileage vehicles. Vehicles that have accumulated over 75,000 miles 120,000 kms. may see an increase in oil consumption or increase in leaks.

PENNZOIL® HIGH MILEAGE VEHICLE™ motor oil is a low volatility oil that helps decrease oil consumption. PENNZOIL® HIGH MILEAGE VEHICLE™ motor oil is blended to the higher end of the viscosity range, as well as and incorporates a special seal-conditioning agent that helps reduce leaks.

APPLICATION

PENNZOIL® HIGH MILEAGE VEHICLE™ motor oil is recommended for all gasoline engines used in passenger cars and light trucks. PENNZOIL® HIGH MILEAGE VEHICLE™ motor oil exceeds the current API Service SL and may be used in old or new vehicles. PENNZOIL® HIGH MILEAGE VEHICLE™ motor oil is available in an SAE 10W-30 and SAE 10W-40 viscosity grade.s.

BENEFITS

- Helps Rreduces oil consumption
- Special seal-conditioning additive helps Rreduces leaks
- Low volatility
- Helps improve engine performance
- Exceeds API Service SL

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

TEST	METHOD	TYPICAL RESULTS	
-	-	-	-
Viscosity Grade	-	10W-30	5W3010W-40
Gravity, °API	ASTM D-287	30.6	30.6
Specific Gravity @ 60°F(15.6°C)	ASTM D-287	.86	.87
Viscosity	-	-	-
@ 40°C, cSt	ASTM D-445	83.3	109.4
@ 100°C, cSt	ASTM D-445	12.00	15.50
Pour Point, °C(°F)	ASTM D-97	-30(-22)	-30(-22)
Viscosity Index	ASTM D-2270	137	149
Low Temperature Viscosity	-	-	-
cP at Temperature (°C), Max	ASTM D-2602	<7000 @ -25	<7000 @ -25
High Temperature/High Shear Vis, cP	ASTM D-4683	3.40	3.93
NOACK Volatility, % off	-	<=13	<=13
Material Number	-	-	-
6/1 quart6 x 946 ml		1620500544	5041795160555
60 litre keg	-	-	161450



PRODUCTS ▷

MULTIGRADE MOTOR OIL

pz6-04.00

PRODUCT DESCRIPTION

PENNZOIL[®] MULTIGRADE MOTOR OIL with PureBase[®] delivers better engine protection than is required by new engine designs and operating conditions. PENNZOIL[®] MULTIGRADE MOTOR OIL with PureBase[®] base oil provides extraordinary engine protection under all driving conditions and is specially formulated to provide extra protection against the harmful effects of stop-and-go driving. In all grades, PENNZOIL[®] MULTIGRADE MOTOR OIL exceeds performance standards required by the industry.

PureBase[®], Pennzoil's innovative technology base oil, allows Pennzoil's renowned additive system, Z-7[®] to be more effective than ever in providing the additional protection required by modern engines. Pennzoil[®] is engineered to exceed the demands of today's high-performance engines that operate under severe conditions such as urban stop-and-go driving. Specifically, PENNZOIL[®] MULTIGRADE MOTOR OIL provides extra protection against harmful deposits and wear caused by both high and low temperature engine operation.

APPLICATION

PENNZOIL[®] MULTIGRADE MOTOR OIL is recommended for passenger cars, light-duty trucks, vans and sport utility vehicles that are fueled with gasoline (including turbocharged). PENNZOIL[®] MULTIGRADE MOTOR OIL SAE 5W-20, SAE 5W-30 and SAE 10W-30 exceed the demanding requirements of International Lubricant Standardization and Approval Committee (ILSAC) GF-3. ILSAC GF-3 comprises the latest standard for passenger car, van, light truck and sport utility vehicles (SUV's) engine oils. It surpasses the performance requirements of API SL Service Classification. PENNZOIL[®] MULTIGRADE MOTOR OIL is also recommended for older engines for which the owner's manual recommends API SJ, SH, SG, SF, SE Service Classifications or any combination thereof.

PENNZOIL[®] MULTIGRADE MOTOR OIL protects today's smaller six-cylinder and four-cylinder engines, even those that are turbocharged, as well as older, larger engines.

PENNZOIL[®] MULTIGRADE MOTOR OIL is available in three viscosity grades: SAE 5W-30, SAE 10W-30, and SAE 10W-40. Viscosity recommendations vary according to temperature and engine manufacturer. For most new cars (ca 1993 and later), API Certified oils displaying the "starburst" (ILSAC GF-2 or ILSAC GF-3) symbol are recommended. SAE 5W-20, SAE 5W-30 and SAE 10W-30 surpass ILSAC GF-3 requirements. PENNZOIL[®] MULTIGRADE MOTOR OIL SAE 5W-20 also meets Ford's WSS-M2C153-H specification for SAE 5W-20. Always consult your owner's manual for the correct viscosity choice.

BENEFITS

- Specially formulated for stop and go driving
- Extra protection for hot running engines
- Extra protection for cold running engines in stop-and-go serviceLow friction formula helps improve gas mileage for long engine life (SAE 5W-20, 5W-30, and 10W-30)

- Helps protect against rust and corrosion
- Exceeds the highest U.S. standards for automotive engine wear protection
- Protects engines under severe driving conditions
- Protects against startup wear
- Maximum protection against thermal breakdown helps prevent stuck rings
- Protects against varnish build-up
- Eliminates the need for extra oil additives
- Exceeds API SL Service Classification
- Meets or exceeds ILSAC GF-3
- Requirements (SAE 5W-20, 5W-30 and 10W-30)
- Exceeds manufacturers' U.S. warranty requirements
- Meets Ford WSS-M2C153-H specification (SAE 5W-20)

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PENNZOIL[®] MULTIGRADE MOTOR OIL

TEST	METHOD	TYPICAL RESULTS			-
-	-	-	-	-	-
SAE Viscosity Grade	SAE J300	5W-20	5W-30	10W-30	10W-40
API Service	SAE J183	SL	SL	SL	SL
ILSAC	-	GF-3	GF-3	GF-3	-
Gravity, °API	ASTM D-287	35.0	30.4	31.0	30.0
Specific Gravity @ 15.6°C(60°F)	ASTM D-287	.852	.87	.87	.88
Pounds per Gallon	-	7.10	7.27	7.25	7.30
Flash Point, °C(°F)	ASTM D-92	229(445)	216(420)	221(430)	213(415)
Pour Point, °C(°F)	ASTM D-97	-45(-49)	-42(-44)	-36(-33)	-36(-33)
Color	ASTM D-1500	4.0	5.0	5.0	5.0
Viscosity	-	-	-	-	-
@ 40°C, cSt	ASTM D-445	48.0	60.0	67.0	88.0
@ 100°C, cSt	ASTM D-445	8.6	10.5	10.5	13.5
@ 100°F, SUS	ASTM D-445 & D-2161	223	290	330	430
@ 210°F, SUS	ASTM D-445 & D-2161	54	63	63	75

Viscosity Index	ASTM D-2270	158	160	140	153
Low Temperature Viscosity	-	-	-	-	-
Vis (cP) at Temperature (°C), Max.	ASTM D-5293	<6600 @ -30	<6600 @ -30	<7000 @ -25	<7000 @ -25
Borderline Pumping Temp. (°C), Max.	ASTM D-3829	<-35	<-35	<-30	<-30
High Temperature/High Shear Vis., cP	ASTM D-4683	2.65	3.1	3.2	3.7
Foaming	ASTM D-892	Nil	nil	nil	nil
-	-	-	-	-	-
Noack Volatility	-	<15	<15	<15	<15
Corrosion Rating	ASTM D-130	1A	1A	1A	1A
Material Number	-	-	-	-	-
Bulk	-	-	3600	3610	3650
12 x 946 ml	-	-	2010	2011	2012
3 x 3.8 L	-	-	3496	3497	2972
208L	-	-	3606	3616	3656
4 x 3.78 L	-	-	5041969	5041970	5041971



PRODUCTS ▷

MULTI-VEHICLE AUTOMATIC TRANSMISSION FLUID

A High-Quality Multi-Vehicle Fluid For Automatic And Powershift Transmissions

pz6-05.00

PRODUCT DESCRIPTION

PENNZOIL® MULTI-VEHICLE ATF is a special blend of high quality synthetic and mineral base stocks with an advanced additive system for automatic and powershift transmissions. It is fully qualified as a DEXRON® -III, MERCON® , MERCON® V and Allison C-4 fluid. In addition, PENNZOIL® MULTI-VEHICLE ATF is recommended suitable recommended for Chrysler automatic specifications MS-7176 and MS-9602 transmissions and can function as a Caterpillar TO-2 lubricant.

PENNZOIL® MULTI-VEHICLE ATF is formulated to provide unsurpassed protection that meets or exceeds the highest quality standards in the industry. The specially balanced additive system protects against shudder, eliminates the need to stock ATF supplements and ensures a high-performance smooth driving experience. Carefully balanced friction modifiers allow friction retention for long life performance and maintain the smooth lock-ups required by a wide variety of vehicles. Enhanced oxidation, thermal stability and corrosion resistance helps maintain year-round protection of the transmission components. In addition, excellent anti-wear characteristics of PENNZOIL® MULTI-VEHICLE ATF exceed the most demanding requirements of hydraulic pump manufacturers.

APPLICATION

PENNZOIL® MULTI-VEHICLE ATF is specially formulated to meet the stringent viscosity and frictional requirements of DEXRON® -III, MERCON® and MERCON® V fluids. It provides excellent wear protection for all passenger cars and light trucks requiring the use of a Type A or Type A Suffix A, DEXRON® , DEXRON® -II, DEXRON® -IIE, DEXRON® -III, MERCON® or MERCON® V automatic transmission fluid.

This product has also been tested extensively for Chrysler MS-7176 and MS-9602 applications.

PENNZOIL® MULTI-VEHICLE ATF is recommended for use in many Chrysler, Honda/Acura, Toyota, Nissan, VW/Audi, BMW, Mitsubishi, Mercedes-Benz, Saturn, and Jeep vehicles. It is suitable for use in most automatic transmission vehicles including those made by General Motors, Ford (**except those requiring M2C33F or Type F fluids**) , American Motors, Nissan, Subaru, Isuzu, Fiat, Audi, Alfa Romeo, Renault, and Porsche. It is also recommended for automatic transmissions made by Voith, ZF (commercial) and Daimler Chrysler Europe.

PENNZOIL® MULTI-VEHICLE ATF can be used in passenger cars, trucks and buses, off-highway construction/mining equipment, agricultural equipment, mobile hydraulic systems, industrial machinery, and power steering systems which require DEXRON® , DEXRON® -II, DEXRON® -IIE, DEXRON® -III, MERCON® or MERCON® V fluids. It should not be used in Chrysler power steering systems.

BENEFITS

- Multi-vehicle ATF without the use of ATF supplements – inventory optimization
- Thoroughly field tested in a number of vehicles

- Excellent friction performance to enhance shift feel quality with no shudder
- Superior oxidation and thermal stability.
- Outstanding anti-wear performance for optimum protection of gears
- Better cold temperature flow properties than conventional ATF
- Protects components from harmful attack by corrosive acids
- Excellent compatibility with seal materials to prevent transmission leaks
- Year-round performance to assure long equipment life

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES
PENNZOIL® MULTI-VEHICLE ATF

TEST	METHOD	TYPICAL RESULTS
-	-	-
Density @ 15° C, g/mL	ASTM D-4052	0.857
Pounds per Gallon	-	7.15
Flash Point, ° C	ASTM D-92	190
Fire Point, ° C	ASTM D-92	210
Pour Point, ° C	ASTM D-97	-45
Color	-	Red
Viscosity	-	-
@ 40° C, cSt	ASTM D-445	35
@ 100° C, cSt	ASTM D-445	7.4
Viscosity Index	ASTM D-2270	185
Brookfield Viscosity @ -40° C, cP	ASTM D-2983	8,600
Material Number	-	-
12 x 946 ml	-	162251
60 L keg	-	160029
208 L drum	-	160030
Bulk	-	161599



SYNTHETIC BLEND MOTOR OIL

pz6-06.00

PRODUCT DESCRIPTION

PENNZOIL[®] SYNTHETIC BLEND MOTOR OIL is formulated to provide extra protection against the stress in heavy load situations. Heavy load situations, such as vacation road trips, towing or hauling heavy loads, or hazards of short trip driving involving frequent engine starts/carpooling, puts additional strain on the engine. These hazards can include harmful sludge build-up in engines, which can restrict oil flow to critical engine parts. PENNZOIL[®] SYNTHETIC BLEND motor oil's unique formula also provides extra protection against high temperature engine deposits and accelerated engine wear associated with short trip, stop and go driving, heavy load conditions.

PENNZOIL[®] SYNTHETIC BLEND MOTOR OIL exceeds the warranty requirements for gasoline engines when SAE 5W-30 and or 10W-30 are recommended, and exceed warranty requirements for diesels engines when SAE 15W-40 is recommended. It provides excellent lubrication characteristics under conditions outside the range of conventional motor oils. It provides extra protection under service conditions that generate extremely high engine oil temperatures, and helps ensure rapid delivery of protective lubricant to critical engine parts.

APPLICATION

PENNZOIL[®] SYNTHETIC BLEND MOTOR OIL SAE 5W-30 and SAE 10W-30 can be used in virtually all services for all gasoline engines, domestic and foreign, including passenger cars, light-duty trucks, vans and sport utility vehicles (including turbocharged). PENNZOIL[®] SYNTHETIC BLEND MOTOR OIL SAE 15W-40 is a universal oil providing excellent quality in both diesel and gasoline engines. PENNZOIL[®] SYNTHETIC BLEND is recommended for use in any type of severe service application such as prolonged use in hot or cold climates, services that generates very high engine oil operating conditions, such as like heavy load conditions, and severe stop and go driving.

PENNZOIL[®] SYNTHETIC BLEND MOTOR OIL SAE 5W-30 and SAE 10W-30 surpasses the demanding requirements of International Lubricant Standardization and Approval Committee (ILSAC) GF-32 and the American Petroleum Institute (API) SLJ Service Classification. ILSAC GF-32 comprises the latest standard for passenger car, van, light truck and sport utility vehicles (SUV's) engine oils. PENNZOIL[®] SYNTHETIC BLEND MOTOR OIL also meets European and Japanese engine performance requirements relevant to severe service applications.

PENNZOIL[®] SYNTHETIC BLEND MOTOR OIL SAE 15W-40 surpasses the demanding requirements of API CH-4, CG-4, CF-4, CF and API SJ. API Service Category CH-4 describes oils for use in high speed, four-stroke diesel engines designed to meet 1998 exhaust emissions as well as for previous model years. API CH-4 oils are specifically compounded for use with diesel fuels ranging in sulfur content up to 0.5% weight.

BENEFITS

- Protects against harmful engine deposits and wear caused by severe service (high and low temperature severe service)
- Exceeds the highest U.S. standards for automotive engine wear protection
- Provides extra protection against the formation of sludge during low temperature short trip driving
- Protects against rust and corrosion caused by severe, low temperature stop and go driving
- Exceeds manufacturers' U.S. warranty requirements
- Provides extra protection against thermal breakdown of the oil and resultant deposits

- Eliminates the need for oil additives or enhancers
- Exceeds API SLJ (SAE 5W-30 and SAE 10W-30), SH and SJ
- Exceeds the requirements of ILSAC GF-3 (SAE 5W-30 and SAE 10W-30)
- Exceeds the requirements of API CH-4 (SAE 15W-40)2

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PENNZOIL[®] SYNTHETIC BLEND MOTOR OIL

TEST	METHOD		TYPICAL RESULTS	
-	-		-	
Viscosity Grade.	-	5W-30	10W-30	15W-40
API Service	-	SLJ	SLJ	CH-4, CG-4, CF-4, CF/SJ
ILSAC	-	GF-32	GF-32	-
Gravity, °API	ASTM D-287	32.4	31.4	29.3
Specific Gravity @ 60°F(15.6°C)	ASTM D-287	.86	.87	.88
Viscosity	-	-	-	-
@ 40°C, cSt	ASTM D-445	62.50.0	70.267.0	125.1
@ 100°C, cSt	ASTM D-445	10.5	10.5	16.0
Pour Point, °C(°F)	ASTM D-97	-3645(-3349)	-3345(-2749)	-27(-17)
Viscosity Index	ASTM D-2270	1585	1366	135
Low Temperature Viscosity	-	-	-	-
cP at Temperature (°C), Max	ASTM D-2602	<663300 @ -3025	<70003300 @ -250	<7000 @ -20
High Temperature/High Shear Vis, cP	ASTM D-4683	3.0	3.1	4.1
NOACK Volatility, % off	-	<=157	<=157	<17
Material Number	-	-	-	-
6 x 946 mL 1212/1 quart	-	56072	560734	162150

- Eliminates the need for oil additives or enhancers
- Exceeds API SL Service Classification
- Exceeds the requirements of ILSAC GF-3 (x-SAE 5W-50)
- Exceeds the requirements of GM 4718M (x-SAE 5W-50)
- PENNZOIL[®] SYNTHETIC MOTOR OIL WITH PENNZANE[®] SAE 5W-50 meets all engine protection requirements of ILSAC GF-3 and GM 4718M

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PENNZOIL[®] SYNTHETIC MOTOR OIL WITH PENNZANE[®]

TEST	METHOD	TYPICAL RESULTS		
-	-	-	-	-
Viscosity Grade.	-	5W-30	10W-30	5W-50
API Service	-	SJ	SJ	SJ
ILSAC	-	GF-2	GF-2	-
Gravity, °API	ASTM D-287	34.1	34	33.5
Specific Gravity @ 60°F(15.6°C)	ASTM D-287	0.85	0.86	.86
Viscosity	-	-	-	-
@ 40°C, cSt	ASTM D-445	57.4	63	118
@ 100°C, cSt	ASTM D-445	9.87	10.15	18.5
Pour Point, °C(°F)	ASTM D-97	-54	-52	-50
Viscosity Index	ASTM D-2270	159	150	176
Low Temperature Viscosity	ASTM D-2602	-	-	-
cP at Temperature (°C), Max	-	2200 @ -25	2230 @ -20	3300 @ -25
High Temperature/High Shear Vis, cP	ASTM D-4683	3.05	3.15	4.45
NOACK Volatility, % off	-	6.9	4.4	8.1
Material Number	-	-	-	-
6 x 946 ml	-	56557	56558	57238
208 L	-	56570	56569	56982



QUAKER STATE

HIGHER MILEAGE ENGINE OILS

qs7-01.00

DESCRIPTION

QUAKER STATE HIGHER MILEAGE ENGINE OILS are formulated to meet the needs of higher mileage engines. Most modern engine oils are formulated to meet new car warranty requirements. However, as an engine ages and accumulates over 120,000 km 75,000 miles, problems such as oil consumption, oil leakage, or lower cylinder compression may arise. These problems may lead to spark plug fouling, excessive intake valve deposits, or loss of power. The demands of the engine oil have then changed.

QUAKER STATE HIGHER MILEAGE ENGINE OILS have been developed to help address those problems. QUAKER STATE HIGHER MILEAGE ENGINE OILS are a synthetic blend engine oils that have a lower volatility than most conventional engine oils. This helps reduce oil consumption at high operating temperatures. Additionally, a special seal-conditioning additive was incorporated to help recondition seals and reduce leaking. QUAKER STATE HIGHER MILEAGE ENGINE OILS, also meets the engine protection requirements of API SJ, SH, or SG service levels.

FEATURES

QUAKER STATE HIGHER MILEAGE ENGINE OILS:

- Low volatility
- Special seal-conditioning additive
- Meets North American performance requirements for U.S., European and Japanese cars and light trucks with gasoline and gasoline turbo-charged engines where API SJ, SH or SG oils are specified

BENEFITS

- Reduces oil consumption
- Decreases leaks
- Helps recondition seals
- Increase cylinder compression

**TYPICAL PHYSICAL AND CHEMICAL PROPERTIES
QUAKER STATE HIGHER MILEAGE ENGINE OILS**

TEST	TYPICAL RESULTS	
-	-	-
SAE Grade	5W-30	10W-30
Gravity, °API	32.70	31.0
Flash, °C(°F)	210(410)	218(425)
Pour, °C(°F)	-42(-43)	-30(-22)
Viscosity	-	-
@ 40°C, cSt	68.91	79.33
@ 100°C, cSt	12.20	12.20
@ 100°F, SUS	349	406
@ 210°F, SUS	68.2	68.3
Viscosity Index	176	150
CCS Viscosity @ Temp. °C(°F), cPs Max.	<6600 @-30(-22)	<3500 @-20(-4)
Low Temperature Pumping Viscosity	-	-
@ -30°C(-22°F), cP (max.)	--	<60,000
Noack Volatility(%)	<15	<15
Material NumberMaterial Number	5041796	-
6 x 946 ml	5041361	63063
208 L	-	62431



PEAK PERFORMANCE CONVENTIONAL MOTOR OILS

qs7-02.00

DESCRIPTION

Quaker State[®] Peak Performance motor oils are formulated to help maintain engine life. Even under severe driving conditions, our advanced formula offers protection against stop-and-go and high temperature driving, cold and engine wear. Today's vehicles and their busy drivers need today's Quaker State[®] Peak Performance motor oils.

FEATURES

QUAKER STATE[®] PEAK PERFORMANCE CONVENTIONAL MOTOR OILS exceed:

- API SL, SJ requirements. These are the latest API performance categories for gasoline engine oils used in passenger cars and light-duty trucks including turbo and non-turbo engines.
- North American warranty requirements for worldwide car manufacturers, including European, Japanese and U.S. where API SL or SJ oils are specified.
- ILSAC GF-3 Performance Standards (SAE 5W-20, 5W-30 & SAE 10W-30) meeting all physical, chemical and performance requirements of API SL, SJ and Energy Conserving.

BENEFITS

These formulas provide excellent:

- Resistance to thermal breakdown (oil thinning)
- Protection against deposits (sludge/varnish)
- Helps control oxidation (oil thickening)
- Excellent volatility control (oil consumption)
- Protection in changing climates (heat and cold)
- Advanced friction protection
- A clean-running and long-lasting engine

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

QUAKER STATE[®] PEAK PERFORMANCE CONVENTIONAL MOTOR OILS

TEST	TYPICAL RESULTS				-
	-	-	-	-	
SAE Grade	5W-20	5W-30	10W-40	10W-30	20W-50
Gravity, °API	35.0	32.7	29.5	30.1	27.7
Flash, °C(°F)	229(445)	207(405)	221(430)	210(410)	227(441)
Fire, °C(°F)	-	221(430)	232(450)	227(441)	235(455)
Pour, °C(°F)	-33(-27)	-33(-27)	-30(-22)	-30(-22)	-21(-6)
Viscosity	-	-	-	-	-
@ 40 °C, cSt	45.5	64.1	99.9	69.1	167.6
@ 100 °C, cSt	8.1	10.7	14.4	10.5	18.1
@ 100 °F, SUS	232	326	512	354	874
@ 210 °F, SUS	53	62.6	77	61.9	92.7
Viscosity Index	151	159	148	139	120
CCS Viscosity @ Temp. °C(°F)	<6600 @ -30(-22)	<6600 @ -30(-22)	<7000 @ -25(-13)	<7000 @ -25(-13)	<9500 @ -15(5)
cP Max.	-	-	-	-	-
Low Temperature Pumping,	@<-35°C(-31°F)	@ -35 °C(-31 °F)	@ - 30 °C(-22 °F)	@ -30 °C.(-22 °F)	@ - 20 °C(-4 °F)
Viscosity cP Max.	60,000	60,000	60,000	60,000	60,000
Material Number	-	-	-	-	-
Bulk	59752	36219	36319	1219	36419



FULL SYNTHETIC MOTOR OIL

qs7-03.00

For Advanced Engines

DESCRIPTION

QUAKER STATE[®] FULL SYNTHETIC MOTOR OIL is a fully synthetic oil with special protective additives for ultimate engine protection. Advanced engines like those found in luxury cars or super high performance cars require more than what a conventional oil can provide. QUAKER STATE[®] FULL SYNTHETIC MOTOR OIL is formulated to meet these needs.

FEATURES

QUAKER STATE[®] FULL SYNTHETIC MOTOR OIL exceeds:

- North American warranty requirements for U.S., European and Japanese cars and light trucks with gasoline and gasoline turbo-charged engines where API SL, SJ or CF oils are specified
- European ACEA A3-98/B3-98 engine test protection standards (5W-30 & 10W-30)
- European ACEA A3-98/B3-98 (5W-50)
- ILSAC GF-3 and Energy Conserving performance standards and meets Volvo service fill requirements (5W-30 & 10W-30)
- Meets Corvette GM 4718M-Corvette (5W-30 & 10W-30)
- Passes Japanese valve train wear tests

BENEFITS

Compared to conventional oils, the results are:

- Faster lubrication at extreme low temperatures
- Ultimate protection at extreme high temperatures
- Lower oil consumption under high speed conditions
- Superior protection against harmful deposits and acids

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

QUAKER STATE[®] FULL SYNTHETIC MOTOR OIL

TEST	TYPICAL RESULTS		
-	-	-	-
SAE Grade	5W-30	10W-30	5W-50
Gravity, °API	34.2	33.7	33.7
Flash, °C(°F)	227(440)	227(440)	224(435)
Fire, °C(°F)	250(482)	250(482)	250(482)
Pour, °C(°F)	-45(-49)	-40(-40)	-37(-35)
Viscosity	-	-	-
@ 40°C, cSt	56.8	61.9	1104.8
@ 100°C, cSt	10.50	10.50	18.2
@ 100°F, SUS	288	315	531
@ 210°F, SUS	61.9	61.9	92.8
Viscosity Index	177	160	193
CCS Viscosity @ Temp. °C(°F), cps Max.	6600 @ -30(-22)	7000 @ -25(-13)	6600 @ -30(-22)
Low Temperature Pumping Viscosity	-	-	-
@ -35°C(-31°F), cP (max.)	60,000	-	60,000
@ -30°C(-22°F), cP (max.)	-	60,000	-
MSDS @ -30°C(-22°F), cP (max.)	14953-	1507260,000	14953-
Material Number	-	-	-
6 x 946 ml 55 Gallon Drum	2910711652	1121029105	1202029103
208 L 6/1 Quart Case	1165212071	1121011255	1202014124



SYNTHETIC MOTOR OIL WITH PENNZANE®

pz6-07.00

PRODUCT DESCRIPTION

PENNZOIL® SYNTHETIC MOTOR OIL WITH PENNZANE® is an advanced technology, synthetic motor oil. It is a carefully balanced additive/base oil system that gives maximum engine protection under severe driving conditions. Pennzane®, the most technically advanced of all these components, was originally developed by Pennzoil for use in the space program and is used by NASA. Pennzane® was designed to be stable under some of the most extreme conditions that exist, the extreme temperatures of outer space.

PENNZOIL® SYNTHETIC MOTOR OIL WITH PENNZANE® provides excellent lubrication characteristics under conditions outside the range of conventional motor oils. It provides extra protection under service conditions that generate extremely high engine oil temperatures, and it flows better than conventional motor oils at extremely low temperatures.

APPLICATION

PENNZOIL® SYNTHETIC MOTOR OIL WITH PENNZANE® can be used in virtually all services for all gasoline engines, domestic and foreign. It is recommended for use in any type of severe service. Prolonged use in hot or cold climates, services that generates very high engine oil operating conditions, and severe stop and go driving conditions are those in which PENNZOIL® SYNTHETIC MOTOR OIL WITH PENNZANE® is recommended.

PENNZOIL® SYNTHETIC MOTOR OIL WITH PENNZANE® is available in three viscosity grades, SAE 5W-30, SAE 10W-30 and SAE 5W-50. Both the SAE 5W-30 and SAE 10W-30 surpass the performance requirements of API SJ, ILSAC GF-3, GM 4718M and API CF. PENNZOIL® SYNTHETIC MOTOR OIL WITH PENNZANE® SAE 5W-50 meets all of the engine protection requirements of these specifications. Since it is formulated to give a thicker film at high temperatures, SAE 5W-50 does not meet passenger car requirements for fuel economy. It is formulated to provide an extra thick oil film, not fuel economy.

BENEFITS

- Protects against harmful engine deposits and wear caused by severe service (high and low temperature severe service)
- Outperforms conventional motor oils in providing protection for hot running engines in severe service
- Flows better than conventional motor oils at extremely low temperatures
- Protects against rust and corrosion caused by severe, low temperature stop and go driving
- Provides extra protection against accelerated oil consumption normally associated with high temperature conditions
- Provides extra protection against thermal breakdown of the oil and resultant deposits

- Eliminates the need for oil additives or enhancers
- Exceeds API SL Service Classification
- Exceeds the requirements of ILSAC GF-3 (x-SAE 5W-50)
- Exceeds the requirements of GM 4718M (x-SAE 5W-50)
- PENNZOIL[®] SYNTHETIC MOTOR OIL WITH PENNZANE[®] SAE 5W-50 meets all engine protection requirements of ILSAC GF-3 and GM 4718M

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PENNZOIL[®] SYNTHETIC MOTOR OIL WITH PENNZANE[®]

TEST	METHOD	TYPICAL RESULTS		
-	-	-	-	-
Viscosity Grade.	-	5W-30	10W-30	5W-50
API Service	-	SJ	SJ	SJ
ILSAC	-	GF-2	GF-2	-
Gravity, °API	ASTM D-287	34.1	34	33.5
Specific Gravity @ 60°F(15.6°C)	ASTM D-287	0.85	0.86	.86
Viscosity	-	-	-	-
@ 40°C, cSt	ASTM D-445	57.4	63	118
@ 100°C, cSt	ASTM D-445	9.87	10.15	18.5
Pour Point, °C(°F)	ASTM D-97	-54	-52	-50
Viscosity Index	ASTM D-2270	159	150	176
Low Temperature Viscosity	ASTM D-2602	-	-	-
cP at Temperature (°C), Max	-	2200 @ -25	2230 @ -20	3300 @ -25
High Temperature/High Shear Vis, cP	ASTM D-4683	3.05	3.15	4.45
NOACK Volatility, % off	-	6.9	4.4	8.1
Material Number	-	-	-	-
6 x 946 ml	-	56557	56558	57238
208 L	-	56570	56569	56982