



Product Bulletin

PENN-GRADE 1® V² 4-STROKE HIGH-PERFORMANCE SAE 20W-50 MOTORCYCLE OIL

DESCRIPTION

BRAD PENN® *PENN-GRADE 1® V² 4-Stroke High Performance SAE 20W-50 Motorcycle Oil* is formulated with mineral based Pennsylvania Grade base oils and superior additive chemistry specifically designed with twin V domestic and imported motorcycle engine technology/lubrication needs in mind. It provides increased levels of 'zinc' (zinc dialkyldithiophosphate) for exceptional anti-wear/anti-scuffing protection. Detergents, dispersants and anti-oxidants offer protection from thermal and/or oxidative oil breakdown that can lead to varnish and deposit formation. Anti-foam agents reduce oil foaming and air entrainment under high-output, high revving conditions.

BRAD PENN® *PENN-GRADE 1® V² 4-Stroke High Performance SAE 20W-50 Motorcycle Oil* meets JASO MA frictional performance requirements for wet clutches and is suitable for use in applications calling for one lubricant for the engine, transmission/wet clutch and primary chain systems (if applicable).

PERFORMANCE ADVANTAGES

- Pennsylvania grade base oils provide exceptional film strength.
- Excellent High Temperature protection for air and water cooled 4-cycle engines. Resists thermal and/or oxidative breakdown.
- Superior high temperature/high shear viscosity.
- Increased levels of 'zinc' (zinc dialkyldithiophosphate) offer outstanding anti-wear/anti-scuffing protection.
- Meets JASO MA frictional performance requirements for use in wet clutches.

APPLICATION

BRAD PENN® *PENN-GRADE 1® V² 4-Stroke High Performance SAE 20W-50 Motorcycle Oil* is a good multi-viscosity choice for use in V twin engines such as those commonly found in Harley-Davidson® motorcycles where an SAE 20W-50, API Service SJ, CF or CH-4 quality motor oil is specified.

Also suitable for use in S&S®, RevTech® and other V twin engines as well as Triumph®, Ducati®, BMW®, Victory® and other 4-stroke domestic and imported motorcycles where an SAE 20W-50 viscosity, API SJ, SH, SG, CH-4 or CF quality oil is specified. Always consult your owner's manual for proper oil viscosity and quality selection.



AMERICAN REFINING GROUP, INC.

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BRAD PENN[®]
PENN-GRADE 1[®]V² 4-Stroke High Performance
SAE 20W-50 Motorcycle Oil
Typical Properties

Properties	Test Method	20W-50
API Service	SAE J183	CH-4, CF SJ, SH, SG
API Gravity, 60°F	ASTM D-1298	28.7
Density, lbs/gal (g/L)	Calculated	7.355 (881)
Viscosity, cSt @ 40°C	ASTM D-445	167
Viscosity, cSt @ 100°C	ASTM D-445	19.35
Viscosity, SUS @ 100°F	ASTM D-2161	866
Viscosity, SUS @ 210°F	ASTM D-2161	98.1
Viscosity Index	ASTM D-2270	130
Color	ASTM D-1500	Green
Pour Point, °C (°F)	ASTM D-97	-33 (-27.4)
Flash Point, °F (°C)	ASTM D-92	425 (218)
HTHS, mPa	ASTM D-5481	5.7
CCS, cP	ASTM D-5293	6,750 @ (-15°C)
MRV, cP	ASTM D-4684	40,000 @ (-20°C)
TBN, Typical	ASTM D-2896	9.1
Sulfated Ash, Typical	ASTM D-874	1.2
Product Code		7157