



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.



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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-1298A | 28.6 |
| Density, lbs/gal (g/L) | Calculated | 7.375 (884) |
| 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-5949 | -33 (-27.4) |
| Flash Point, °F (°C) | ASTM D-92 | 425 (218) |
| HTHS, mPa•s | ASTM D-5481 | 5.7 |
| CCS, cP | ASTM D-5293 | 6,750 @ (-15°C) |
| MRV, cP | ASTM D-4598 | 40,000 @ (-20°C) |
| TBN, Typical | ASTM D-974 | 9.1 |
| KF Moisture, ppm | ASTM D-6304 | 400 (max) |
| Sulfated Ash, Typical | ASTM D-874 | 1.2 |
| Product Code | | 7157 |