



PENTOSIN TECHNICAL FLUID GUIDE

ANTIFREEZE

BRAKE FLUID

HYDRAULIC
FLUID

MOTOR OIL

TRANSMISSION
FLUID



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INTRODUCING PENTOSIN'S TECHNICAL AUTOMOTIVE FLUIDS



ANTIFREEZE

Nitrite, amine, and phosphate-free modern engine coolants. Specifically adapted for use in alloy engines and formulated for year-round use.

- Prevents lime formation
- Does not foam
- Protects against corrosion and cavitation
- Manufactured to the exact specs of DIN, ASTM, DBL

Note: PENTOFROST ++ can be used where G001200 is specified.

APPLICATIONS



PENTOFROST ++ (with silicates)

Size: 1.5 liters (1.59 quarts);
5 liters (1.32 US gallons)

Color: Violet/Purple

- Audi (all models 2006 on); Spec. TL 774 G
- Porsche (all models 2006-2009)
- Volkswagen (all models 2006 on); Spec TL 774 G



PENTOFROST NF (with silicates) (Formerly LONGTIME ANTIFREEZE G11)

Size: 1.5 liters (1.59 quarts)

Color: Blue/Green

- Audi (up to 06/1996)
- BMW (all years)
- Dodge Sprinter (all years)
- Jaguar (up to 1997)
- Mercedes-Benz (all years)
- MINI (all years)
- Porsche 924, 928, 944, & 968 (all years)
- Range Rover V8 & Diesel (1990-2005)
- Saab (up to 2000)
- Volkswagen (up to 06/1996)
- Volvo (all years)



PENTOFROST SF (without silicates) (Formerly LIFETIME ANTIFREEZE G12)

Size: 1.5 liters (1.59 quarts)

Color: Violet/Purple

- Audi (after 06/1996 up to 2005); Spec. TL 744 F
- Jaguar (1997 on)
- Land Rover Freelander, Discovery, Defender (1998 on)
- Porsche Boxster, 911, Cayman & Cayenne (1996 on)
- Saab (2001 on)
- Volkswagen (after 06/1996 up to 2005); Spec. TL 744 F



BRAKE FLUID

Exceeds DOT standards, delivering a more versatile brake fluid. Used by leading automotive manufacturers as first-fill, as well as refill. Especially suited for use in vehicles with ABS.

- High safety margin against vapor lock
- Long-term resistance to absorbing and retaining water
- Superior corrosion resistance
- Low viscosity fluid provides excellent flow performance at low temperatures
- SUPER DOT4 exceeds FMVSS 116 DOT 4, SAE J1704, and ISO 4925 Class 4 specification standards
- DOT4LV exceeds FMVSS 116 DOT 4, SAE J1703, and ISO 4925 Class 6 specification standards

NOTE: Low viscosity brake fluid can be used in vehicles that do not require a low viscosity fluid; however, standard DOT 3 or 4 brake fluid should not be used for top off in vehicles that require a low viscosity brake fluid. This action will reduce the low temperature properties and decrease the safety performance of the fluid.

APPLICATIONS



SUPER DOT4

Size: 0.25 liter (0.26 quart);
0.5 liter (0.53 quart);
1 liter (1.06 quarts);
5 liters (1.32 US gallons)

Color: Light Yellow

Boiling Point $\geq 265^{\circ}\text{C}$ ($\geq 509^{\circ}\text{F}$)

Wet Boiling Point $\geq 165^{\circ}\text{C}$ ($\geq 329^{\circ}\text{F}$)

- Audi (up to 2005)
- BMW (up to 2003)
- Jaguar (all years)
- Land Rover (all years)
- Mercedes-Benz (all years)
- Porsche (all years)
- Volvo (all years)
- Volkswagen (up to 2005)



BF-DOT4LV

Low Viscosity Brake Fluid

Size: 1 liter (1.06 quarts);
5 liter (1.32 US gallons)

Color: Yellow

Boiling Point $\geq 265^{\circ}\text{C}$ ($\geq 509^{\circ}\text{F}$)

Wet Boiling Point $\geq 170^{\circ}\text{C}$ ($\geq 338^{\circ}\text{F}$)

- Audi (2006 on); Spec. TL 766 Z
- BMW (2004 on); Spec. QV 34 001
- MINI (all years)
- Saab (all years)
- Volkswagen (2006 on);
Spec. TL 766 Z



HYDRAULIC FLUID

All-purpose high performance hydraulic fluids formulated for central hydraulic systems such as power steering, rear axle steering, level control, hydro-pneumatic suspension, and shock absorbers.

- Ideal for cold weather climates
- Operating temperature range from -40°F (-40°C) to +275°F (+135°C)
- Works perfectly under extreme temperature changes
- Used by more than 25 global vehicle manufacturers as OE first-fill
- Meets DIN 51 524T3 and ISO 7308 specification standards

Important Notice: If vehicle specifications state CHF 7.1, CHF 11S and CHF 202 can be substituted in place of, but not mixed with, CHF 7.1. CHF 11S and CHF 202 are fully compatible and mixable. Pentosin CHF fluids should not be mixed with ATF fluids.

APPLICATIONS



CHF 7-1 (mineral oil based)

Size: 1 liter (1.06 quarts)

Color: Green

- Audi/Volkswagen (1984-1989)
- BMW (1987-09/1991)
- Volvo (1995-1998)



CHF 11S (synthetic oil based)

Size: 1 liter (1.06 quarts)

Color: Dark Green

- Audi (1990-2005); Spec. TL 52 146.00
- BMW (1990 on; check owners manual)
- Chrysler Crossfire
- Dodge Sprinter (all years)
- Jaguar (1990 on)
- Land Rover (all years)
- Mercedes-Benz (staggered models starting 1990 - check vehicle owners manual)
- MINI (all years)
- Nissan (1994 on)
- Porsche (1990-2005)
- Rolls Royce
- Saab (1990-2005)
- Volkswagen (1990-2005); Spec. TL 52 146.00
- Volvo (03/1998-2002)



CHF 202 (synthetic oil based)

Size: 1 liter (1.06 quarts)

Color: Dark Green

- Audi (2006 on); Spec. TL 52 146.01
- Porsche Cayenne (2006 on)
- Saab (2006 on)
- Volkswagen (2006 on); Spec. TL 52 146.01
- Volvo (2002 on)



APPLICATIONS

MOTOR OIL

Pentosin synthetic high performance motor oils offer optimum performance, efficiency, and fuel economy even under the most severe driving conditions.

- An all-season motor oil offering great protection against harsh start-up conditions and extreme temperature changes
- Formulated for long service life intervals
- Reduces motor oil sludge and fuel deposits
- Contains special friction modifiers which help the engine run smoothly and improves fuel economy



PENTO HIGH PERFORMANCE 5W-30

Size: 1 liter (1.06 quarts); 5 liters (1.32 US gallon)

Color: Amber

Service Class: API SL/CL, ACEA A3/B4

- Audi/Volkswagen with 502.00 & 505.00 engine oil specs
- BMW with LL-01 engine oil specs
- Jaguar (most 1993 on; exceptions Vanden Plas, XJ12, XJ6, XJR, XJS)
- Mercedes-Benz with MB 229.3 & 229.5 engine oil specs
- MINI with LL-01 engine oil specs
- Land Rover (all models where 5W-30 is required)
- Saab with GM-LL-B-025 engine oil specs



PENTO SUPER PERFORMANCE III 5W-30

Size: 1 liter (1.06 quarts); 5 liters (1.32 US gallon)

Color: Amber

Service Class: Exceeds API SM, ACEA A3/B4

- Audi/Volkswagen with 504.00 & 507.00 engine oil specs
- BMW with LL-04 engine oil specs
- Jaguar (most 1993 on; exceptions Vanden Plas, XJ12, XJ6, XJR, XJS)
- Mercedes-Benz with MB 229.3, 229.5, & 229.51 engine oil specs
- MINI with LL-04 engine oil specs
- Land Rover (all models where 5W-30 is required)
- Saab (all models where 5W-30 is required)



PENTO HIGH PERFORMANCE II 5W-40

Size: 1 liter (1.06 quarts); 5 liters (1.32 US gallon)

Color: Amber

Service Class: Exceeds API SM/CF, ACEA A3/B3/B4/C3

- Audi/Volkswagen with 502.00, 505.00, & 505.01 engine oil specs
- BMW with LL-04 & 5W-40 engine oil specs
- Jaguar (all models where 5W-40 is required)
- Mercedes-Benz with MB 229.51 & 5W-40 engine oil specs
- MINI with LL-04 & 5W-40 engine oil specs
- Porsche (all models 1973 on except Cayenne V6) Porsche approved
- Land Rover (all models where 5W-40 is required)
- Volvo (all models where 5W-40 is required)

Note: Always consult the vehicle owner's manual to identify motor oil specification requirements.



TRANSMISSION FLUID

Synthetic oil-based all-purpose high performance fluid for use in today's automatic and manual transmissions.

- Formulated anti-wear chemistry and friction modifiers guarantee stable friction performance in modern transmissions
- Automatic Transmission Fluid (ATF1)
 - Formulated from synthetic base oils and additive components
 - Surpasses all DEXRON III quality level requirements providing superior ATF fluid performance
 - Meets ZF TE 11B specification standards
- Double Clutch Transmission Fluid (FFL2, FFL3, FFL4)
 - Fully synthetic fluid with constant stable friction characteristics under the most severe driving conditions
 - Exclusively developed for application in the new Audi/Volkswagen, BMW, & Porsche double clutch transmission
- Manual Transmission Fluid (MTF2)
 - Formulated from premium synthetic gear oil with the latest EP-additives and shear stable VI improvers
 - 75W-80/API GL-4

Important Notice: When changing, replacing, or topping off fluids, always check the vehicle owner's manual and/or reservoir tank for indication of what type of fluid was original fill.



AUTOMATIC TRANSMISSION FLUID — PENTOSIN ATF1

Size: 1 liter (1.06 quarts); 5 liters (1.32 US gallons); 20 liters (5.28 gallons)
Color: Amber

- All ZF 3HP, 4HP, 5HP & 6HP transmissions (green & black label)
 - Aston Martin
 - Audi ; Spec. TL 521 62
 - BMW
 - Bentley
 - Jaguar (JLM20238)
 - Land Rover
 - Porsche (99991754700 or 00004320509)
 - Rolls Royce
 - Saab
 - Volkswagen; Spec. TL 521 62
 - Volvo
- Dodge Sprinter (all years)
- Mercedes-Benz (suitable replacement for NAG 1 & NAG 2)



DOUBLE CLUTCH TRANSMISSION FLUID — PENTOSIN FFL2

Size: 1 liter (1.06 quarts); 20 liters (5.28 gallons)
Color: Amber

- Audi/Volkswagen DSG transmissions (TT Quattro/ New Beetle 2004 on; Jetta 2005 on; A3/A3 Quattro/ GTI 2006 on; EOS 2007 on; TT 2008 on; R32 2008); Spec. TL 521 82



DOUBLE CLUTCH TRANSMISSION FLUID — PENTOSIN FFL3

Size: 1 liter (1.06 quarts); 20 liters (5.28 gallons)
Color: Amber

- Porsche DPK transmission (911, 911 Carrera, Carrera S, Carrera 4/4S; Boxster/S; Cayman/S; 2009 on) Porsche approved



DOUBLE CLUTCH TRANSMISSION FLUID — PENTOSIN FFL4

Size: 1 liter (1.06 quarts); 20 liters (5.28 gallons)
Color: Amber

- BMW DCT Transmission (M3 2008 on) BMW approved



MANUAL TRANSMISSION FLUID — PENTOSIN MTF2

Size: 1 liter (1.06 quarts)
Color: Amber

- BMW with ZF & Getrag manual transmissions (1997 on)