**SINCE 1939** 





LUBRICANTS



#### **UNIQUE DICOVERY**

In 1939 the Norwegian Ole Bardahl made a unique discovery, which extended the boundaries of the lubricity of an oil substantially. He came to the conclusion that the molecular construction of motor oils could be modified with an additive, which would make it cling to moving parts of an engine. The so formed lubricating film prevents wear of the metal surfaces. Friction and wear are caused by irregularities of metal surfaces.



# Innovation since 1939

Bardahl lubricants are still being developed on the basis of polar active ingredients. The created lubrication film is able to endure higher temperatures and pressures with the result that an engine can operate more efficiently with less wear and maintenance.

Bardahl has since the 50s participated in many international racing events such as the Formula 1, Indy 500, Powerboat races, Paris-Dakar etc, using his own lubricants to be exact! This resulted in a huge amount of information about how Bardahl additives and oils behave in practice during extreme conditions. Bardahl used this information to further product development and advice to the customer.

Bardahl products are very suitable to operate in the toughest conditions where other products do not do this anymore.

"We are convinced that, if our products are used in racing where our products are extremely tested, they definitely are suitable for use in 'normal' traffic."



#### 4-BALL E.P. TEST

The Shell 4-ball pressure tester can measure exactly the behavior of lubricants under extremely high pressure. During the test, steel balls are loaded under various loads and speeds. They are checked for friction and wear. The test goes on until the lubricating film is broken and the bullets melt together. Because of the unique Bardahl formula the possible loads are very high. The photo shows the result of this test.

## **POWER PLUS ensures**

- + Maximum protection against wear
- + Optimal lubrication and longer life
- + Lower fuel consumption
- + Excellent lubrication at both high and low temperatures
- + Protection against oxidation and corrosion

#### THE ROLE OF OIL

The main functions of oils are:

- to ensure the sealing between pistons and cylinders,
- avoiding contact between moving parts,
- the removal of heat from the combustion process
- the disposal of sludge and wear particles.

You can see that oil has a very important job to fulfill. The use of correct motor oil and timely changes contribute to a longer life of the engine.

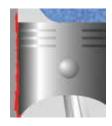
In recent years, the reduction of exhaust emissions from engines has become more important. Changing motor oil on time and using the correct oil, play a crucial role.

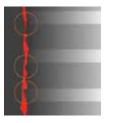
Engines with a diesel particulate filter require extra care. Using the right DPF motor oil will result in a minimum of pollution and limited flooding of the particulate filter. The pollution is not just harmful for the engine and diesel particulate filter but also for the turbo. Which motor oil you need depends on the brand and type of engine. Bardahl has an extended range of motor oils for each car.

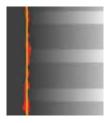


#### **TIMKEN TEST MACHINE**

This mobile tester shows the difference of wear on mechanical parts. Experience shows that Bardahl has increased the limit at which a lubricant still lubricates considerably.







1000 x enlarged: Metal surfaces have microscopic peaks and valleys

High pressures cause sparks, heating of metals and destruction of oil molecules. Bardahl lubricants contain a unique formula of molecules which keeps the temperature low and prevent metal - metal contact. This reduces friction, wear and prevents that engine temperature rises too strong.



Bardahl is present on five continents and products are sold in almost 100 countries. This success is due to the unique discovery by Ole Bardahl, but also through continuous research in laboratories and racing.

"We keep searching for improvements in existing products and development of new ones".



## CAR MOTOR OILS



#### FOR ENGINES WITHOUT DPF

XTC 10W40 synthetic

A high quality semi-synthetic motor oil for all passenger cars and light trucks with petrol, LPG and diesel engines, with or without turbo. Catalyst safe. Prevents black sludge

API SL/CF ACEA A3/B4 VW501.01 /505.00, MB 229.1, PSA B71 2294 Ref 50000 1, 5, 25, 60, 210 liter

#### XTC Turbo 15W40

This mineral motor oil fulfils all requirements of today's heaviest service classifications for all petrol-,LPG- and diesel engines, with or without turbo. Prevents black-sludge. Catalyst safe.

ACEA A3/B4 MB 229.1 Ref 50100 1, 5, 25, 60, 210 liter

XTC 15W50 synthetic

A high quality semi-synthetic motor oil for all gasoline, LPG and diesel passenger cars and light trucks with or without turbo. Catalyst safe. Suitable for large temperature fluctuations.

API SL/CF MB 229.1 ACEA A3/B4 Ref 50400 1, 5, 25, 60, 210 liter

#### XTC Turbo 20W50

This mineral motor oil meets the toughest requirements for gasoline, LPG and diesel engines with or without turbo. Prevents the formation of black sludge and is safe for catalytic converters.

API SL/SF ACEA A3/B4 MB 229.1 Ref 50500 1, 5, 25, 60, 210 liter

XTC FS 5W30 synthetic
A special synthetic motor oil for extended drain intervals, in accordance with the Ford specifications. Due to the low viscosity the operating temperature will be reached sooner, resulting in added fuel saving. Maximum protection in under all circumstances.

API SL/CF ACEA A1/B1, A5/B5 Renault RN0700, Ford M2C913-C/D Ref 50800 1, 5, 25, 60, 210 liter

#### XTC RS 5W40 syntronic

A full synthetic motor oil for use in all cars with petrol, LPG and diesel engines, with or without turbo. The advanced technology provides maximum protection in all circumstances. Prevents the formation of black sludge and is safe for catalytic converters. Allows extended drain intervals.

API SN/CF ACEA A3/B4 VW 502.00/505.00, MB226.5/ 229.3, BMW LL-01, PSA B71 2296, Renault RN0710/ 0700, GM LL-B-025, Porsche A40 Ref 51100 1, 5, 25, 60, 210 liter

#### XTC VA 0W30 syntronic

A fully synthetic engine oil for long extended drain intervals. Due to the low viscosity the operating temperature will be reached sooner, resulting in fuel saving. Maximum protection under all circumstances.

API SI/CF ACEA A1/B1, A5/B5 VW 503.00/506.00/506.01 Ref 51200 1, 5, 25, 60, 210 liter

#### XTC 0W40 syntronic

A fully synthetic engine oil for long extended drain intervals. Maximum performance for long time and fuel saving. Because of the low viscosity the operating temperature will sooner be reached what results in fuel saving. Maximum protection in under all circumstances.

API SN/CF ACEA A3/B4 BMW LongLife, MB229.3, VW 502.00/503.01/ 505.00, Porsche GL Ref 51000 Ref 51000 1, 5, 25, 60, 210 liter

#### XTC LS 5W30 C4 syntronic

A 100% synthetic motor oil specially developed for the treatment systems of Renault engines.

Renault RN072, MB 229.51 Ref 54100 1, 5, 25, 60, 210 liter

### FOR ENGINES WITH DPF

## XTC LA 5W30 syntronic

A special full synthetic motor oil for gasoline and diesel engines requiring extended oil drain intervals (up to 30.000km). This oil is suitable for many Euro IV diesel engines with Diesel Particulate Filters (DPF).

API SN/CF ACEA A3/B4/C2/C3 VW 502.00/505.00/505.01, MB229.51, BMW LongLife-04, GM Dexos 2 Ref 50300 1, 5, 25, 60, 210 liter

## XTC 50501 5W40 syntronic

A long-life full synthetic motor oil for cars and light trucks. Suitable for petrol-, LPGand diesel engines with or without Diesel Particulate Filters (DPF filter). This motor oil provides your engine with excellent lubrication and provides maximum protection under all climatic circumstances.

ACFA A3/B4/C3 VW505.00/505.01/502.00, Ford M2 C917-A, MB 226.5/229.31, BMW LongLife-04, Porsche A40, Renault RN0700/RN0710, GM Dexos 2 Ref 51700 1, 5, 25, 60, 210 liter

#### XTC LSP 5W30 LONGLIFE III syntronic

A full synthetic motor oil for Volkswagen, Audi, BMW and Mercedes-Benz engines. Also universally applicable as longlife motor oil with a low SAPS\* content for engines with catalysts and Diesel Particulate Filters (DPF).

API SL/CF ACEA A3/B4/C2/C3 VW 504.00/507.00 LongLife III/508.00 expected end 2015, MB 229.51, BMW LongLife-04, Porsche C30 Ref 51300 1, 5, 25, 60, 210 liter

#### XTC FE 5W30 C2 syntronic

A full synthetic motor oil with a low viscosity. This lubricant is suitable for petrol and diesel engines in passenger cars, equipped with EGR or Eolys system. The low SAPS\* level guarantees optimal function of the Diesel Particle Filter.

API SN/CF ACEA A1/B1/A5/B5/C2 Renault RN 0700, PSA B71 2290, Fiat 9.55535-S1 Ref 54000 1, 5, 25, 60, 210 liter

#### XTC FL 5W30 C1 syntronic

The special low SAPS formulation in the oil ensures that the lifespan of the DPF will be extended while this oil ensures for maximum fuel efficiency and low CO2 emissions.
Bardahl XTC FL 5W30 C1 motor oil resists oxidation, keeps soot particles floating and reduces piston deposits.

ACEA A1/B1/C1 JASO DL1, Ford WSS M2C934-B Ref 54900 1, 5, 25, 60, 210 1, 5, 25, 60, 210 liter

#### FOR HYBRIDE ENGINES

#### XTC FE 5W20 syntronic

A high quality motor oil developed for engines with Ford WSS-M2C-925-B specification. This oil has a very extensive additive package that ensures perfect, maximum lubrication and significantly improved fuel consumption (—) 3%). This engine oil is used when ILSAC GF-4 oils are prescribed.

API SL/CF ACEA A1/B1 Ford M2C-925-B 1, 5, 25, 60, 210 liter Ref 54300

#### FOR HIGH PERFORMANCE CARS

XTC INDY Racing 10W60 syntronic A premium full synthetic motor oil specially developed for use in extreme conditions and / or heavy loaded engine as those of Mercedes AMG, BMW M, Ferrari, Maserati, Aston Martin, etc. Protects engines which long are heavily loaded: high speed, high power, variable loads, heat, cold, etc.

API SL/CF Ref 50200 1, 5, 25, 60, 210 liter

**XTC INDY Racing 5W50 syntronic**A premium full synthetic motor oil specially developed for use in extreme conditions and / or heavy loaded engine as those of Mercedes AMG, BMW M, Ferrari, Maserati, Aston Martin, etc. Protects engines which long are heavily loaded: high speed, high power, variable loads, heat, cold, etc.

API SL/CF Ref 50200 1, 5, 25, 60, 210 liter

## **GEARBOX OILS**

### **FOR MANUAL TRANSMISSIONS**

#### XTG Gear Oil 75W90 GL5 syntronic

A full synthetic oil for manual gearboxes. This gearbox oil is universally applicable and can be used in all cars. This oil can also be used as a problem solver for gearboxes which do not operate correctly.

API GL3 /GL4 /GL5 MT-1 MIL-L- 2105A/B/C/D/E, MIL-PRF-2105E, MAN 3343S, ZF TE-ML 02B/05B/07A/12B/16F/17B/19C, SCANIA STO 1:0, 97312, VW501.50, MB235.8 Ref 51900 1, 5, 25, 60, 210 liter

#### XTG Gear Oil 75W90 synthetic

A semi-synthetic gear oil formulated to meet the highest requirements of modern gearboxes and transmissions.

API GL5 MIL-L-2105D Ref 52000

1, 5, 25, 60, 210 liter

## XTG Gear Oil 75W90 synthetic Limited Slip

A semi-synthetic gear oil formulated to meet the highest requirements of modern Limited Slip gearboxes and transmissions.

API GL5 Limited Slip MIL-L-2105C/D Ref 52500 1, 5, 25, 60, 210 liter

#### XTG Gear Oil 75W80 PSA

A high pressure gearbox oil especially developed for Citroën and Peugeot to meet the highest requirements: high torque at low RPM combined with hard acceleration and braking. Contains strong anti-wear, anti-foam and anti-corrosion properties.

API GL5

FIAT 9.55550-MX3/MZ1, Ford ESD-M2C186-A/ Ford WSD-M2C200-D, GM 1940182/1940768, Honda MTF 94, MB 235.10, NISSAN MT-XZ, PSA 9730 A8/B71 2330, Volvo 97308/ 97309/ 97310

Ref 52200 1, 5, 25, 60, 210 liter

# XTG Gear Oil 75W140 syntronic Limited Slip

A fully synthetic oil formulated to meet the highest requirements of modern gearboxes and transmissions. Also for Limited Slip.

BMW MSP/A, MIL-L-2105 D 1, 5, 25, 60, 210 liter Ref 59100

#### XTG Gear Oil 80W90 GL5

Premium quality gear oil formulated to exceed the requirements of automotive, motor cycle, truck, tractor and off road heavy duty equipment.

API GL5

MIL-L-2105C/D, ZF:TE ML 05A/07A/12E/16B/C /17B/19B, MAN 342 M-1/342M-2 1, 5, 25, 60, 210 liter Ref 52100

#### XTG Gear Oil 80W90 GL4

Premium quality gear oil formulated to exceed the requirements of automotive, motorcycle, truck, tractor and off road heavy duty equipment.

API GL4

Ref 52400 1, 5, 25, 60, 210 liter

#### XTG Gear Oil 85W140

A premium quality gear oil formulated to exceed the requirements of automotive, motor cycle, truck, tractor and off road heavy duty equipment.

MIL-L-2105C/D, ZF:TE ML 05A/07A/12E/16B/ C/D 17B/19B 1, 5, 25, 60, 210 liter

#### FOR FUEL SAVING **TRANSMISSIONS**

#### XTG Gear Oil FE 75W syntronic

A fully synthetic lubricant based on high quality base oils with low viscosity for use in manual transmissions of passenger cars for maximum fuel efficiency. The product offers optimized cold-start properties.

VW G052 171A1A2/ VW G052 178A2/ VW G052 512A2/ VW G52 726A2/ VW G055 726A2/VWG60 726A2/VW G70 726A, BMW 2300 7533 818, PSA standard 9730A8, Toyota 08885/81001/81081, Volvo1161839/ 1161838 Ref 59400 5, 25, 60, 210 liter

#### **FOR AUTOMATIC TRANSMISSIONS**

A fully synthetic gear oil based on high quality base oils, specially designed for automatic transmissions of ZF 6, 8 or 9 speed. The balanced composition guarantees a smooth operation and smooth shifting.

BMW 83222152426, CHRYSLER 68157995AA, FIAT 9.55550-AV5, JAGUAR 02JDE26444, LAND ROVER LR023288, VW G 060 162 Ref 59700 5, 25, 60, 210 liter

#### ATF VI

A fully synthetic transmission fluid based on high quality base oils, specially developed for 6 speed ZF automatic transmissions. For trouble-free operation and smooth shifting.

AML 4G4319A509/AA/S, BENTLEY PY112995PA, BMW 83220142516/M-1375.4, HYUNDAI 040000C90SG, JAGUAR Fluid 8432, LAND ROVER TYK500050, MASERATI 231603, VW G 055 005, ZF TE-ML 11 Ref 59600 5, 25, 60, 210 liter

#### ATF D-IV Universal

A high quality universal automatic transmission fluid for all driving conditions: traffic congestion, urban traffic etc. This product can be used if an ATF II, III or IV is

Dexron IV (incl.DII, DIII or Mercon), Toyota T/ T-111/T-IV, MB 236.3/236.5/236.7/236.9/ 236.10/236.11, Chrysler ATF +3 en +4, Nissan D/J/K, Mitsubishi Diamond SP-II/SP-III, GM DEXRON III H/III G /II D, ZF TE-ML 03D/04D/ 14A/B/16L/17C, Allison C-4,Voigt G607, VAG G 052 025-A2/G 052 162-A1, Ford Mercon/ Mercon V Ref 52600 1, 5, 25, 60, 210 liter

#### ATF DIII Dexron®III/ Mercon®

A high-performance automatic transmission fluid designed for use in the new generation of automatic transmissions where Dexron III or Mercon type is prescribed.

GM 6417M III G. Ford Mercon, Volvo 1273,40 (97340)/1273,41 (97341), Allison C4, Volth 556335 3x- ZFTE ML 03D/04D/09/11B/14A/ 17C, MAN 339V1/Z1 1, 5, 25, 60, 210 liter Ref 52700

#### ATF IID Dexron® II

A high quality automatic transmission fluid developed for use in a large number of automatic transmissions where a Dexron II-D is prescribed.

DEXRON II /ZF TE ML03D/04D/09/11A/14A/ 17C, Ford M2C 13BCJ Mercon, MB 236.7, Allison C-4, CAT TO-2, MAN 339V1/Z1, GM 6137M Dexron II 1, 5, 25, 60, 210 liter Ref 52800



#### ATF Special MB134

A full synthetic gear oil for meant for all automatic transmissions of Mercedes Benz with 7 gears and NAG-V sport transmissions. Because of its multipurpose character it is also highly recommended in other application as mentioned below.

MB 236.14/ 236.12/ 236.14/ 236.41/ 236.5, VW TL 52162/BMW ETL 7045E, BMW ETL 8072/ LT 71141, Nissan Matic S, Porsche ATF 3403 M115, Hyundai SP 1, 5, 25, 60, 210 liter Ref 59000

#### FOR DOUBLE CLUTCH/ **CVT TRANSMISSIONS**

A 100% synthetic transmission fluid specifically developed for the double-clutch gearboxes of modern cars. This gearbox oil ensures very smooth shifting gear changes under all conditions and contributes to a longer life of the gearbox.

VW TL 52182 (G 052 182), Ford M2C 936-A Ref 59200 1, 5, 25, 60, 210 liter Ref 59200

### **CVT Fluid syntronic**

This high-quality gear oil is specially developed for CVT transmissions and ensures smooth and easy switch in combination with a significant fuel savings. Bardahl CVT Fluid Syntronic possesses excellent shear resistance, protects against wear and eliminates the risk of oxidation or foams.

AUDI TL 52180, DODGE NS-2/CVTF+4, FORD AUDI IL 52180, DUDGE N5-2/CVTF+4, FURD CVT30/CVT23/MERCON C, GM SATURN DEX-CVT, HONDA HCF-2/HMMF, HYUNDAI SP-CVT1/SP-III, JEEP NS-2/CVTF+4, KIA SP-CVT 1/SP-III, MB 236.20, MINI EZL799A, MITSUBISHI CVTF-J1/SP-III, NISSAN NS-2/NS-1, PUNCH EZL799A, SUBARU Lineartronic CVTF, SUZUKI TC/NS-2/CVT Green 1, TOYOTA TC, VW G 052 180/VW G 052 516 Ref 59500 1, 5, 25, 60, 210 liter

#### **FOR ENGINES WITHOUT DPF**

#### 10W40 Dieselube synthetic (UHPD)

A synthetic diesel engine oil for very long drain intervals. Formulated with the latest advanced technology aditives for maximum performance over extended periods. Specially develloped for Euro III and IV engines. (not

API SL/CI-4 ACEA A3/ B4/E5/E7 Allison C4, Cummins CES/20076/20077/ 20078, Detroit Diesel CUMMINS CES 20076/77, Volvo VDS2 /VSD3, Renault RXD, MTU type 3, CAT ECF 1A 93 K215, Deutz DQC-Wild type 3, CAT ECT 1435 N213, Bedta 50C-III-10, Global DHD-1, Jaso DH-1, MACK EO-N/-EO-M-, MAN M3275-1, MB 229.1/228.3, MTU Type2, Renault RLD/RLD-2, Volvo VDF 3 Ref 51400 5, 25, 60, 210 liter

### 15W40 Dieselube (SHPD)

A motor oil specially recommended for engines which an oil-SHPD (Super High Performance Diesel) is prescribed. Suitable for extra heavy duty turbo-diesel engines with extended drain intervals. (Not for DPF)

API CI-4/SL, ACEA A3/B4 E3/E5/E7 Allison C4, CAT ECF-1A/ECF-2, Cummins CES Allison C4, CAI ECF-1A/ECF-2, Cummins CES 20076/20077/200078 MAN 3275/ 271, MB 228.3, VOLVO VDS/VDS2/VDS3, Mack EO-M (plus), Renault RV1/RLD-2, Cummins 20.076/77/78, Caterpillar ECF-1, Global DHD-1 20078, Detroit Diesel 93K215, Deutz DQC-III-10, Jaso DH-1, Mack EO-N, EO-M+, MAN M3275-1, MB 229.1/228.3, MTU Type2, Renault RLD/RLD2, Volvo VDS 3 Ref 51500 5, 25, 60, 210 liter

#### FOR ENGINES WITH DPF

# 10W40 Dieselube synthetic (Long Drain)

A fuel-efficient engine oil using very high quality base oils and the latest additives. This oil is suitable for use in engines with particulate filter, combined with low sulfur diesel. Suitable for use in diesel engines EURO 1, 2, 4, 5 or 6.

API CI-4 ACEA E6/E7 Cummins CES20076/20077, Deutz DQC-III-10 LA, Jaso DH-2, Mack MAN M3275/M3277/ M3277 low ash, MB 229.5/228.51, MTU type 3, CAT ECF 1a, MACK EO-M, Cummins CES 2,0076/77, Volvo VDS2, Renault RXD EO-N, MAN 3477/ 3271-1, MB 226.9/228.51, MTU Type 3.1, Renault RLD-2/RGD/RXD, Volvo Ref 54400 5, 25, 60, 210 liter

#### 15W40 Dieselube SPECIAL (SHPD)

A new generation of diesel oil, which special base oils have been added, including a range of high performance additives. Contains a new and powerful anti-wear additive system resulting in greatly reduced wear of piston rings and cylinders. Suitable for DPF.

API CJ-4/CI-4+/SM ACEA E7/E9 CAT E7 F-2/ECF-3, Cummins CES 20081, Detroit Diesel 93K218, Deutz, MACK EO-O PP-07, Cummins CES 20081, MB 228.31, CATERPILLAR ECF-2/ECF-3, MAN M 3275, DDC 93K218, VOLVO VDS-4, GLOBAL DHD-1, MTU Type 2, JASO DH-1,2, Renault trucks
RDL-3 Deutz DQC-III-10 LA, Jaso DH-2, MACK
EO-0 Premium+, MAN M3575, MB 228.31,
MTU Type 2.1, Renault RLD-2, Volvo VDS 4
Ref 54500 5, 25, 60, 210 liter

#### Coolant -38°C

Retains its excellent features for at least two years when used in a closed system. Meets the requirements of most car manufacturers.

Ref 83000

1, 5, 25, 60, 210 liter

#### Cooling Fluid -38°C G12

Provides a maintenance free protection against frost and corrosion throughout the life of the engine.

Ref 83300 (red) Ref 83400 (blanc) 1, 5, 25, 60, 210 liter 1, 5, 25, 60, 210 liter

## Antifreeze Longlife G12

A nitrite / amine-free refrigerant that the in cooling systems used ferro and non-ferrous metals (aluminum) protects against corrosion, overheating and freezing

Ref 83200

1, 5, 25, 60, 210 liter

Air Brake Antifreeze
Developed to be added to air brake systems of trucks and earthmoving equipment etc. to prevent freezing of brakes, caused by moisture. Protects against -80°C.

Ref 84100

1, 5, 25, 60, 210 liter

## **VARIOUS OILS**

#### LHM Fluid

Mineral based fluid for Citroën hydraulic systems, power steering and braking systems.

Ref 52900

1, 5, 25, 60, 210 liter

#### LDS Fluid

A synthetic orange colored liquid for the hydraulic system of Citroën cars with "Hydractive 3" feature.

Ref 59900

1, 5, 25, 60, 210 liter

**Power Steering Fluid**A special hydraulic fluid with a high viscosity index. To be used in power steering units, shock-absorbers etc, of passenger cars, trucks and 4x4

DIN51524T2-ISO, 7308-VW TL 52146, Peugeot B712718, Volvo STD 1273,36, ZF TE-ML09(B), Ford M2C204-A, GM 1940766, Chrysler MS 5931, MB 345.0 Ref 53100 1, 5, 25, 60, 210 liter

#### Running in motorolie 20

Running motor oils are designed for remanufactured engines and contains additives that prevent oxidation, wear and corrosion. This oil has been developed to let the piston rings and cylinders run in quickly and effectively.

MIL-L-4615C, MB226.0, Ford M2C0153C, GM 6085-M 1, 5, 25, 60, 210 liter Ref 50600



#### **Brake Fluid DOT 3**

A synthetic fluid for hydraulic brake systems. The specific composition provides a high chemical stability, excellent resistance to deposits and is highly resistant to oxidation. Suitable for all hydraulic brake systems. where the manufacturer requires a DOT3 brake fluid, which meets the specifications mentioned below.

SAE | 1703 + FMVSS 116 Boiling point min. 230°C / Wet boiling point min. 140°C. Ref 53400 1, 5, 25, 60, 210 liter

#### **Brake Fluid DOT 4**

Synthetic brake fluid with a high boiling point is suitable for all hydraulic discanddrumbraking systems in cars, trucks, buses and other vehicles.

SAEJ 1703 + FMVSS 116 Boiling point min. 265°C / Wet boiling point min. 165°C. Ref 53500 250ml, 500ml, 1, 5, 25, 60, 210 liter

## **BRAKE FLUIDS**

#### Brake Fluid DOT 5.1 100% synthetic

Full synthetic brake fluid with a high boiling point is suitable for all hydraulic disc- and drumbraking systems in cars, trucks, buses and other vehicles.

SAE J - 1703 + FMVSS 116 Boiling point /min. 275°C / Wet boiling point min. 185°C. Ref 53600 250ml, 500ml, 1, 5, 25, 60, 210 liter

**Brake Fluid DOT 4 LV** A special brake fluid DOT4 LV (Low Viscosity) with extremely low viscosity at cold temperatures. Due to the low viscosity an ideal brake fluid for all modern vehicles fitted with ABS and ESP. The noticeable shorter response time during braking, especially at low temperatures, increases the safety. Miscible with all other branded DOT4 and DOT 5.1 brake fluids.

SAE J 1704 + FMVSS 116 Class 6 /VW-Norm 501 14 Boiling point min. 265°C / ISO 4925 Wet boiling point min. 165℃. Ref 53700 1, 5, 25, 60, 210 liter

**Brake Fluid DOT 5 Silicone**Silicone Brake Fluid DOT 5 is a high quality brake fluid on silicone base with a wide working temperature range between -40°C to 260°C. IMPORTANT REMARK: Silicone brake fluid may only used in clean, dry and new brake systems. DIRECTIONS OF USE: Never mix silicone Brake Fluid DOT 5 with other types of brake fluid.

Ref 53200 250ml, 1, 5, 25, 60, 210 liter

#### **ACEA CARS**

				Low SAPS 1)	Mid SAPS 1)	Mid SAPS 1)	Low SAPS 1)
A1/B1	A3/B3	A3/B4	A5/B5	C1	C2	C3	C4
		✓ A3/B3	✓ A1/B1	✓ A5/B5	✓ A5/B5	✓A3/B4	✓ A3/B4
FE≥2,5%	FE -	FE -	FE ≥ 2,5 %	FE ≥ 3,0 %	FE ≥ 2,5 %	FE ≥ 1,0 %	FE ≥ 1,0 %
HTHS 2,9-3,5 <sup>2)</sup>	HTHS ≥ 3,5	HTHS ≥ 3,5	HTHS 2,9 - 3,5	HTHS ≥ 2,9	HTHS ≥ 2,9	HTHS ≥ 3,5	HTHS ≥ 3,5
SA≤ 1,3%	SA 0,9-1,5%	SA 1,0-1,6%	SA ≤ 1,6 %	SA ≤ 0,5 %	SA ≤ 0,8 %	SA ≤ 0,8 %	SA ≤ 0,5 %
P -	Р -	P -	Р -	P ≤ 0,05 %	P ≤ 0,09 %	P ≤ 0,07-0,09 %	P ≤ 0,09 %
S -	S -	S -	S -	S ≤ 0,2 %	S ≤ 0,3 %	S ≤ 0,3 %	S ≤ 0,2 %
BMW LL-14 FE+	MB 229.1	BMB LL-01/	BMW LL-01 FE	Ford-934-B	BMW LL-12 FE	BMW LL-04	Renault
Ford 948-B	Dexos2	MB 229.3/.5	Ford 913-D	Mazda DPF	Honda DPF	MB 229.31/52/52	RN 0720
		dexos2/ Porsche	Renault RN 0700	Mitsubishi DPF	Mitsubishi DPF	Ford 917-A	
		PSA B71 2296/2300	VW 50300/50600	PSA B71 2312	PSA B71 2290	PSA B71 2297	
		Renault RN 0700			Toyota DPF	VW 505 01/	
		/ 0710				504 00/507 00	
		VW 502 00/505 00					

ACEA TRUCK & BUS						
				Low SAPS 1)	ACEA E4	ACEA E6
			ACEA E7 (E3,E5)	ACEA E9		
		ACEA (E2)	API CG-4CJ-4	API CJ-4	extended intervals	
	ACEA (E1)	API CF-4:::CH-4				
API CD	API CE/CF/CF-4					
	MB 227.1	MB 228.1/ MAN 271	MB 228.3/ MAN 3275	MB 228.31	MB 228.5/MAN 3277	MB 228.51/ MAN 3477
		VOLVO VDS	Renault Truck RD2/	Renault Truck RLD3	MAN 3277 CRT)	MTU Type 3.1
		Deutz DQC I-02	RLD2	VOLVO VDS-4	Renault Truck RXD	Deutz DQC IV-10-LA)
		MTU Type 1	VOLVO VDS-2/3	Deutz DQC II-10-LA	DAF HP1/2/	
			DAF HP3/ MTU Type 2	Deutz DQC III-LA)	MTU Type3	
			Deutz DQC II-10		Deutz DQC IV-10	

ACEA are basic, OEM additional special tests

- ▼HTHS = viscosity (mPa.s) at 150°C & high shear rate ▼ SA = Sulphate ash
- ▼ P = Phosphor ▼ S = Sulphur ▼ 1) Low-/Mid-SAPS-Oil ▼ SA, P & S = limited
- ▼ for Diesel-Particle-Filter (DPF), 2) HTHS xW-20 ▼ ≥ 2,6

Emission values for new vehicles with diesel engines							
	Valid	со	НС	NOx	HC+NOx	PM	
	from	(g/km)	(g/km)	(g/km)	(g/km)		
Euro I	01/92	3,16	-	-	1,13	0,14	
Euro II	01/96	1,00	0,15	0,55	0,70	0,08	
Euro III	01/00	0,64	0,06	0,50	0,56	0,05	
Euro IV	01/05	0,50	0,05	0,25	0,30	-	
Euro V	09/09	0,50	0,05	0,18	0,23	0,005	
Euro VI	08/14	0,50	0,09	0,08	0,17	0,005	

Certified: ISO 9001

#### **ENVIRONMENT**

The probability of oil spills on floors such as garages and workshops is real. Bardahl has two products to clean quickly and effectively oil spills. Bardahl produces granules; these have a high absorption capacity and are recyclable. In addition, Bardahl has oil absorbent cloths that can absorb up to 1.4 liters per cloth.

### **WORKSHOP EQUIPMENT**

For the workshop Bardahl supplies various equipement, such as cardan oil pumps, drum pumps, oil kits (funnel, dry cloth, glove, tissue), automatic gearbox dispenser, brake fluid pressure bleed system, sealant gun, coating spray, Handcleaner dispenser etc.

## **ADDITIONS**

**ACEA** is an European standardisation and stands for: Association des Constructeurs Européens d'Automobiles or Association of European Motorcar Manufacturers. The quality name of the ACEA exists of a letter, with a number. ACEA makes distinction between petrol engines (indicated with letter A), light diesel engines (indicated with letter B), diesel engines with a particle filter (indicated with letter C) and heavy diesel engines (indicated with letter E). With a number, behind the letter, the quality level is indicated. Thereby applies: the higher the number, the higher quality. For example: a motor oil can have the specification A3, B4, C3.

API stand for: American Petroleum
Institute. This is an American institute,
who indicates the quality of oil. This
American Institute categorize motorand transmission oils. Gasoline engine
oil categories (for cars, vans, and light
trucks with gasoline engines): Motor oils,
designed for gasoline engine service, fall
under API's "S" (Service) categories. F.i. SL,
SM, SN etc.

Diesel motor oil categories (for heavy-duty trucks and vehicles with diesel engines): Motor oils, designed for diesel-engine service, fall under API's "C" (Commercial) categories. F.i. CH-4, CI-4 etc.

**LOW SAPS** (SAPS:Sulphated Ash, Phosphorus & Sulphur)





# FOR A WORLD WITHOUT FRICTION SINCE 1939

BARDAHL - OCD NEDERLAND BV

Maxwellstraat 41, 3316 GP Dordrecht

The Netherlands

tel 0031-78 651 23 22 - info@bardahl.nl - www.bardahl.nl