

# LIQUID DIET



# Mercedes-Benz has picked the right fluid

It's no surprise that Mercedes-Benz owners are very particular about their vehicles. They come to your shop because they trust that the quality of your work will meet their demanding standards. They know their cars or SUVs will be fixed right and properly maintained while they're in your care.

You can ensure that you continue to earn your customers' trust by using only the maintenance fluids recommended by Mercedes-Benz. From engine oil to differential lube to chassis grease, and everything in between, Mercedes-Benz has a recommended fluid.

Using anything but the recommended fluids could interfere with performance and vehicle reliability. A cheaper brand might put a few more dollars on your bottom line for the short term, but it is customer satisfaction that pays off the most in the long term. And customer satisfaction is best achieved by using the recommended fluids whenever you do any maintenance or repair work on a Mercedes-Benz.

The fluid recommendations are based on extensive testing by Mercedes-Benz. Often, this testing is done in cooperation with various fluid manufacturers and refiners. In others, they are Mercedes-Benz brand products that are only available through your authorized dealer.

## Gasoline

With today's soaring gasoline prices, if your customers complain about poor performance and poor mileage in 1986 or newer models, ask them if they have switched to a lower octane gasoline or ethanol to save money. If they have, tell them to go back to premium unleaded, even if it's the most expensive fuel available.

Mercedes-Benz is very clear that only premium unleaded is to be used for all gasoline engines since MY 1986, except for MY 1986 190E models with the 2.3L engine. "Gasohol", which is usually a blend of 90% gasoline and 10% ethanol, may be used. Ethanol concentrations greater than 10% are not permitted except for specially designated "Flexible Fuel Vehicles" that can burn blends up to 85% ethanol/15% gasoline.



*When you run an engine as sophisticated as the direct injection V6 in the CLS 350, you'd better burn only premium gasoline.*

Owners of MY 1975-85 Mercedes-Benz vehicles and MY 1986 190E with the 2.3L engine can use unleaded regular gasoline. For MY 1972-74, unleaded gasoline with at least an 87 octane rating should be used.

Before MY 1972, Mercedes-Benz vehicles, like most cars, were designed to use leaded gasoline, which, of course, hasn't been available for many years. These cars, like the younger MY 1986 and new models, need unleaded premium, with an octane rating of at least 91.

Using anything other than premium unleaded in any gasoline engine since MY 1986 is not only discouraged, Mercedes-Benz has a list of recommendations if a driver is forced to use anything else, including:

- Only partially fill the tank with any other gasoline. Drive only until premium unleaded is available. Top off the tank with premium unleaded as soon as possible.
- Do not drive at full throttle and avoid hard acceleration when using anything but unleaded premium.
- If the vehicle is lightly loaded, such as no more than two occupants with no luggage, engine speed should be kept below 2,000 rpm. If the vehicle is fully loaded or operating in a mountainous area, do not exceed 2/3 throttle position.
- The only fuel additives recommended are detergents and other additives blended with the gasoline during the refining process by the petroleum company. According to Mercedes-Benz, “DO NOT blend other fuel additives with the fuel. These additional additives only result in unnecessary cost and may be harmful to engine operation.”

The only exception to the “no additives” rule is Mercedes-Benz’s own additive, (Part Number A 000 989 25 45 10). Follow the specific directions when using this to remove internal carbon build up on valves because a high quality gasoline with detergent additives was not regularly used in the car.

## Engine Oil

Synthetic engine oil was covered in detail in the last issue of Star Tuned, so we will only touch on it briefly in this article. For vehicles with the Flexible Service System (FSS), only synthetic oil should be used in all V-6, V-8 and V-12 gasoline engines. Conventional mineral-based oils do not meet the performance requirements for an FSS engine's extended drain intervals.

Any of the synthetic oils listed below can be used in a MY 1998 or newer Mercedes-Benz vehicle with a gasoline engine:

- 76 Pure Synthetic Motor Oil 5W-40
- Agip Eurosport 5W-40
- Agip Synthetic PC 5W-40
- Castrol Syntec 5W-40
- Kendall GT-1 Full Synthetic Oil 5W-40
- Mobil 1 Tri-Synthetic Formula 0W-40
- Pennzoil Synthetic European Formula 5W-40
- Quaker State Full Synthetic European Formula 5W-40
- Shell Helix Ultra 5W-30
- Shell Helix Ultra 5W-40
- Valvoline SynPower MXL 0W-30



*Only the supercharger on the C230 Sport Coupe and Sport Sedan use a Mercedes-Benz lubricant, Part Number A 000 989 62 01.*

For Mercedes-Benz vehicles prior to MY 1998, petroleum-based oils may be used. Synthetics can also be used in the older vehicles if the engine is mechanically sound and there are no oil leaks. Any leak must be fixed before changing from petroleum-based oil to a synthetic because the more “slippery” synthetic will make the leak much worse.



Mercedes-Benz does not approve the use of any aftermarket engine oil additives. According to the company, these additives do not provide any benefit and may cause harm. The use of additives may cause oil sludging (thickening) and may damage the catalytic converter.

### Supercharger Oil

For lubricating the supercharger on the C230 Sport Coupe and Sport Sedan, use Mercedes-Benz Part Number A 000 989 62 01. For all other supercharger applications, including the E55 AMG, SL55 AMG, CL55 AMG, S55 AMG, G55 AMG, and CLS55 AMG, use Mobil Jet Oil II.

### Antifreeze

Mercedes-Benz recommends using only its own proprietary antifreeze, available as Part Number BQ 1 03 0002, which meets the M-B 325.0 specification. According to Mercedes-Benz:

“The use of aluminum components in Mercedes-Benz engines requires that anticorrosion/antifreeze specifically formulated to protect aluminum parts be used. Failure to use Mercedes-Benz 325.0 anticorrosion/antifreeze may result in significantly shortened service life. While there may be a number of products available which will provide the required protection, not all such products have been tested for Mercedes-Benz vehicles.”

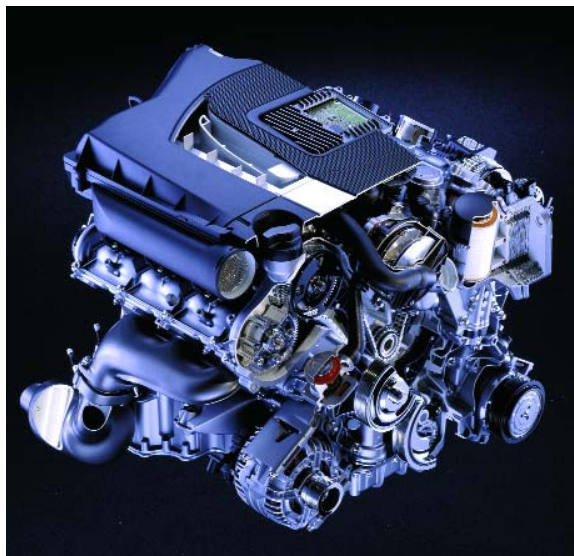
The replacement antifreeze can be mixed with the original coolant installed at the factory.

### ATF

For late model vehicles with the 7-speed transmission, use only Mercedes-Benz Part Number A 001 989 45 03 10 automatic transmission fluid. This fluid can also be used for vehicles with the 5-speed automatic transmission.

As an option, the 5-speed transmissions can also use Part Number A 001 989 21 03 10 automatic transmission fluid. However, this fluid cannot be used in the 7-speed automatics.

For automatics using Dexron III, there are a number of aftermarket brands that can be used:



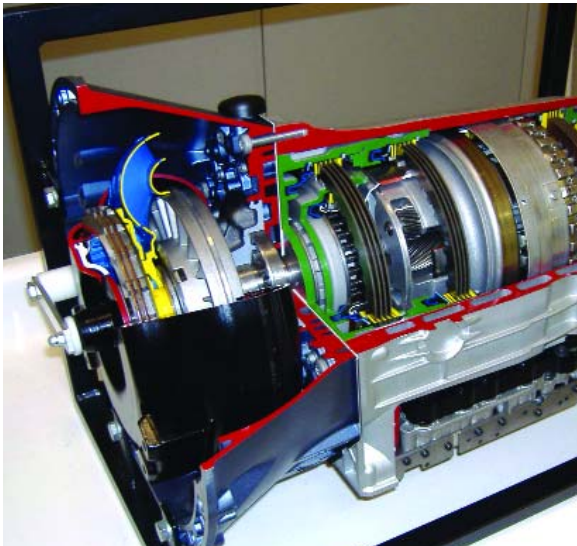
*Mercedes-Benz recommends using only its branded antifreeze because of the extensive use of aluminum components in its engines and extended drain intervals. Other brands have not been approved for use.*

- Castrol Dexron-III/Mercon ATF F-30341
- Castrol Transmax Mercedes-22257/22096
- Chevron ATF Dexron III F-30310/30159
- Citgo Multi-Purpose ATF D-21571
- Exxon Superflo ATF Dexron III F-30111
- Texaco ATF Mercon/Dexron-III F-30321
- Pennzoil ATF D-22412/F-30110
- Quaker State Dexron III/Mercon F30161
- Sunoco ATF Dexron-III/Mercon F-30176
- Unocal Multi-Purpose ATF D-22413/22431
- Valvoline ATF Type D
- For manual transmissions, use Mercedes-Benz fluid Part Number A 001 989 26 03 10.

### Transfer Case

The 4Matic Transfer Case on the C-Class, E-Class, and S-Class takes Mercedes-Benz Part Number A 001 989 23 03 11 fluid.

The transfer case on the G-Class uses Mercedes-Benz Part Number A 001 989 28 03 10 fluid, while the transfer case on the M-Class takes Part Number A 001 989 45 03 10 fluid.



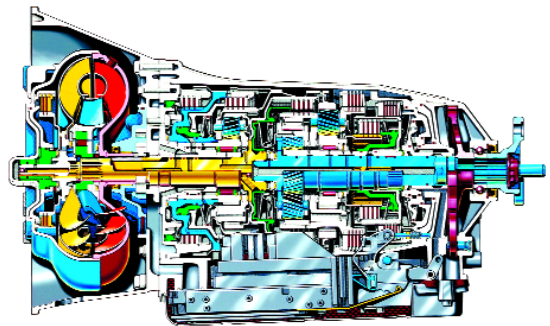
*The sophisticated 7-speed automatic transmission requires a special fluid, Part Number A 001 989 45 03 10.*

## Differentials

The general differential oil is Mercedes-Benz Hypoid Gear Oil, Part Number A 011 989 17 03 10. The exceptions to using the general differential oil are:



*Use Part Number A 001 989 23 03 11 for the transfer case fluid in the 4-Matic system.*



*The 5-speed automatic can use either the same fluid as the 7-speed or Part Number A 001 989 21 03 10. Don't use Part Number A 001 989 21 03 10 in the 7-speed!*

- G-Class front and rear differentials use Mercedes-Benz Part Number A 001 989 28 03 10.
- The front and rear axle differential on the G55 AMG and for the rear differential on the SL65 AMG use Castrol SAF-XJ (75W-140).

## Chassis Lubes

Shell Retinax C is the recommended chassis grease for all lube points except the front wheel hubs. For a multi-purpose grease, you can choose from several aftermarket brands:

- 3752 Almgard Vari-Purpose Lubricant
- Castrol LM Grease
- Exxon Multi-Purpose Grease
- Renolit MP
- Unocal MP Automotive Grease

The recommended "Long Term" grease for release bearings and release arm splines is Mercedes-Benz Part Number A 000 989 63 51 11. This grease should also be used to lube the propeller shaft universal joint on the G-Class model.

"High Temperature Antifriction Grease," Mercedes-Benz Part Number A 001 989 23 51 10 should be used for lubricating front wheel bearings. This grease is also used to lube the joint housing on the G-Class.



*All Mercedes-Benz brake systems use DOT 4 fluid sold in one- and five-liter containers.*

## Brake Fluid

Mercedes-Benz DOT 4 brake fluid is available in one liter (Part Number A 000 989 08 07 01) and five liter (Part Number A 000 989 08 07 11) containers. This is the only brake fluid recommended by Mercedes-Benz for all applications. This fluid is also used in the differential lock mechanisms of the G-Class model.

And to keep things quiet, use Mercedes-Benz Part Number A 001 989 94 51 Brake Pad Paste.

## P/S

Mercedes-Benz recommends using its branded power steering fluid, Part Number BQ 1320001 for all but the M-Class and G-Class models. The M-Class and G-Class power steering units use either Mercedes-Benz Part Number BQ 1460001 fluid, or any of the approved Dexron III transmissions fluids.

## Air Conditioning

Use Mercedes-Benz Part Number BQ 1 13 0001 Compressor Oil on all R-134a A/C systems.

## Body Lubricants

Several different lubricants are recommended for specialized applications on the vehicle body. "Lubrication Paste," Part Number A 001 989 46 51 should be used on the sliding blocks of tilt/sliding roofs and for cleaning and lubricating the panorama roof on the C-Class and E-Class models. The outer guide rail of the panorama roof should be lubed with Mercedes-Benz Special Lubricant, Part Number A 001 989 50 51.

Keep the convertible tops moving smoothly with Mercedes-Benz Part Number A 000 989 91 03 10 hydraulic oil.

Most door locks and striker eyes should be lubricated with Castrol CLS Grease. The only exception is the G-Class door locks. These can be lubed with:

- Exxon-Mobile Chassis Grease LBZ or TCL 435
- Mercedes-Benz Liquid Grease Part Number A 001 989 08 51 10

On the S-Class, SL-Class, and CL-Class, use Mercedes-Benz Part Number BQ 1320001 for the Active Body Control Fluid.