

TUNE-UP

240D
300 Series

ENGINE IDENTIFICATION

First six digits of engine identification number, located on a tag at the rear, left side of engine crankcase, identify engines as follows:

Model	Code
240D	616.912
300D, CD & TD	617.912
300SD (Turbocharged)	617.950

COMPRESSION PRESSURE

Check compression pressure with engine at normal operating temperature and throttle valve fully open. Crank engine through at least 8 revolutions.

Application	Pressure psi (kg/cm ²)
Normal	319-348 (22.5-24.5)
Minimum	218 (15.0)
Maximum Variation Between Cylinders	44 (3.0)

VALVE CLEARANCE

Valves must be adjusted at ignition TDC and in firing order of individual cylinders. With engine cold, measure clearance between rocker arm and base circle of cam. Adjust valves to following specifications:

Valve Clearance Specifications

Application	Intake	Exhaust
Cold004" (.10 mm)	① .012" (.30 mm)
Warm006" (.15 mm)	② .014" (.35 mm)

① - 300 SD models: .014" (.35 mm).
② - 300 SD models: .016" (.40 mm)

VALVE ARRANGEMENT

4-Cylinder

E-I-I-E-E-I-I-E (front-to-rear)

5-Cylinder

E-I-I-E-E-I-I-E-E-I (front-to-rear)

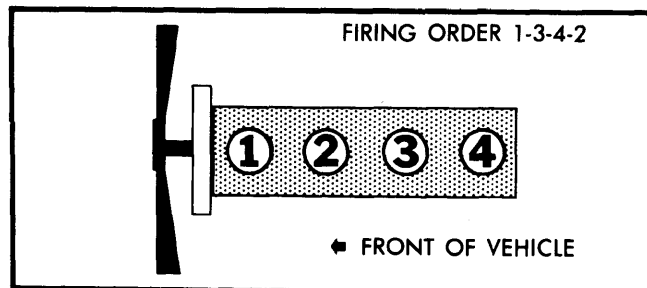


Fig. 1 240D Firing Order Illustration

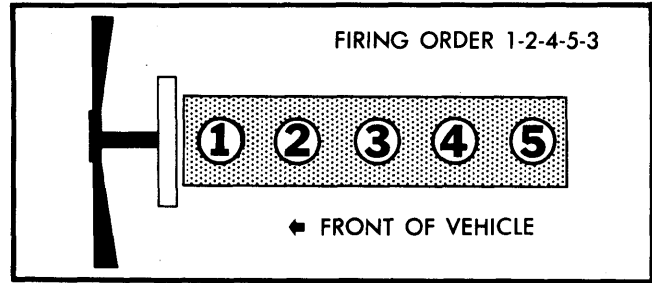


Fig. 2 300 Series Firing Order Illustration

GLOW PLUGS

Type	Bosch 0 100 221 107
Torque	15-22 ft. lbs. (2-3 mkg)

IDLE SPEED ADJUSTMENT

1) Start engine and run until normal operating temperature is reached, at least 176° F (80° C) oil temperature. If equipped, turn idle adjusting knob on dashboard clockwise to stop.

2) Disconnect throttle linkage push rod at angle lever. Check idle speed. If necessary, loosen lock nut and adjust with idle adjusting screw.

3) Reconnect push rod and adjust so clearance between lever cam and switch-over valve actuator(s) is 0.20" (0.5 mm). Be sure speed control cable has a small amount of slack. Place transmission selector in "D", turn on air conditioning, and turn wheels to full lock. Engine must run smoothly. If not, raise idle slightly.

CAUTION - If engine speed is adjusted too high, it will be above governor control range and could increase to maximum RPM when engine is not loaded.

Idle Speed Specifications

Application	Idle RPM
300SD	650-850
All Others	700-800

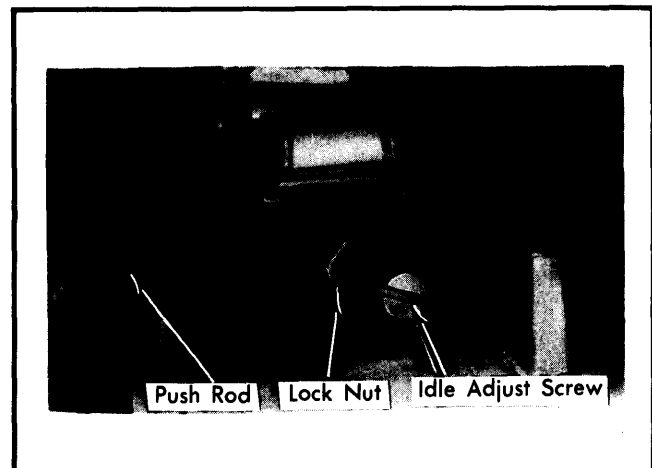


Fig. 3 Diesel Idle Adjustment Locations

1980 Mercedes-Benz 4 & 5 Tune-Up 1-57

GENERAL SERVICING

FUEL SYSTEMS

FUEL INJECTION

All Models use Bosch Diesel Fuel Injection.

Other Data & Specifications — See *Tune-Up and Bosch Diesel Fuel Injection* in **FUEL SYSTEMS** Section.

ELECTRICAL

BATTERY

Application	Amp. Hr. Rating
All Models	88

STARTER

All models are equipped with Bosch Starters.

Starter Specifications

Application	Volts	Amps	Test RPM
All Models	11.5	65-95	6500

ALTERNATOR

Application	Rated Amp. Output
All Models	55

ALTERNATOR REGULATOR

Bosch — Non-Adjustable; integral with alternator.

CAPACITIES

Application	Quantity
Crankcase (Includes Filter)	
300SD	7.9 qts.
All Others	7.0 qts.
Cooling System (Includes Heater)	
240D	10.6 qts.
300SD	12.7 qts.
All Others	11.6 qts.
Man. Trans. (SAE 10W-20)	3.4 pts.
Auto. Trans. (Dexron)	
300SD	5.6 qts.
All Others	5.0 qts.
Rear Axle (SAE 90)	2.1 pts.
Fuel Tank	
240D	17.2 gals.
300TD	18.5 gals.
300D, 300CD	21.1 gals.
300SD	21.6 gals.

FILTERS

Filter	Service Interval (Miles)
Oil Filter	Replace every 5000
Air Filter	Replace every 30,000
Fuel Filter	Replace every 30,000

BELT ADJUSTMENT

Application	① Deflection
Power Steering Belt40" (10 mm)
All Other Belts20" (5 mm)

① — Deflection is with a pressure of 13 lbs. (6 kg) applied midway on longest belt run.