

C - SPECIFICATIONS

1993 Jeep Cherokee

1993 ENGINE PERFORMANCE

Chrysler Corp. - Service & Adjustment Specifications

Jeep; Cherokee, Grand Cherokee, Grand Wagoneer, Wrangler

INTRODUCTION

Use this article to quickly find specifications related to servicing and on-vehicle adjustments. This is a quick-reference article for when you are familiar with an adjustment procedure and only need a specification.

CAPACITIES

BATTERY SPECIFICATIONS

| Application | Group | Cold Crank Amps @ 0°F (-18°C) |
|---------------------|-------|-------------------------------|
| 2.5L | 58 | 390 |
| 4.0L | | |
| Cherokee | 58 | 475 |
| Grand Cherokee | 34 | 600 |
| 5.2L | 34 | 600 |

FLUID CAPACITIES

| Application | (1) Quantity |
|---------------------------------------|-------------------|
| Crankcase (2) | |
| 2.5L | 5.0 Qts. (4.7L) |
| 4.0L | 6.0 Qts. (5.7L) |
| 5.2L | 5.0 Qts. (4.7L) |
| Cooling System (Includes Heater) | |
| 2.5L | |
| Cherokee | 10.0 Qts. (9.5L) |
| Wrangler | 9.0 Qts. (8.5L) |
| 4.0L | |
| Cherokee | 12.0 Qts. (11.4L) |
| Grand Cherokee | 9.3 Qts. (8.8L) |
| Wrangler | 10.5 Qts. (9.9L) |
| 5.2L | |
| Grand Cherokee | 14.9 Qts. (14.1L) |
| Automatic Transmission (3) | |
| AW-4 (4) | 8.5 Qts. (8.0L) |
| 32RH (4) | 8 Qts. (7.6L) |
| 42RE (5) | 10.2 Qts. (9.6L) |
| Manual Transmission (API GL-5 75W-90) | |
| AX-5 (2WD 5-Speed) | 7.4 Pts. (3.5L) |
| AX-5 (4WD 5-Speed) | 7.0 Pts. (3.3L) |
| AX-15 (5-Speed) | 6.7 Pts. (3.2L) |
| Front/Rear Axles (API GL-5 75W-90) | |
| Cherokee (6) | 2.5 Pts. (1.2L) |
| Grand Cherokee (7) (8) | 3.0 Pts. (1.4L) |
| Wrangler (7) (8) | 2.5 Pts. (1.2L) |
| Wrangler (H/D Axle) (5) (6) | 3.0 Pts. (1.4L) |
| Transfer Case (Mercon or Dexron-II) | |
| Command-Trac 231 | |
| Except Wrangler | 2.2 Pts. (1.0L) |

| | |
|----------------------|-----------------|
| Wrangler | 3.3 Pts. (1.5L) |
| Model 249 | 3.0 Pts. (1.4L) |
| Selec-Trac 242 | 3.0 Pts. (1.4L) |

- (1) - Fluid capacities listed are approximate. Always fill to FULL mark.
- (2) - Includes oil filter.
- (3) - Drain and refill capacity only. Does not include torque converter.
- (4) - Mercon or Dexron-II fluid.
- (5) - Mopar ATF Plus fluid only.
- (6) - With trailer towing package (5000 lbs.), use 75W-140 synthetic gear oil.
- (7) - With trailer towing package use API GL-5 80W-140.
- (8) - With limited slip differential, add 2 ounces of friction modifier.

QUICK-SERVICE

SERVICE INTERVALS & SPECIFICATIONS

REPLACEMENT INTERVALS

| Component | Miles |
|---------------------|--------|
| Oil & Filter | 7,500 |
| Air Filter | 30,000 |
| Coolant | 45,000 |
| Fuel Filter | 30,000 |
| Oxygen Sensor | 75,000 |
| Spark Plugs | 30,000 |

BELT ADJUSTMENT (Tension In Lbs. (kg) Using Belt Tension Gauge)

| Application | Tension |
|---------------------|-----------------------|
| Serpentine Belt (1) | |
| New Belts | 180-200 (81.72-90.8) |
| Used Belts | 140-160 (63.56-72.64) |
| V-Belt | |
| New Belts | 120-160 (54.48-72.64) |
| Used Belts | 90-115 (40.86-52.21) |

- (1) - Grand Cherokee is equipped with automatic belt adjustment.

MECHANICAL CHECKS

ENGINE COMPRESSION

Check engine compression with engine at normal operating temperature, all spark plugs removed and throttle wide open.

NOTE: Compression pressure and cylinder pressure variation for 2.5L and 4.0L engines are not available from manufacturer at time of publication.

COMPRESSION SPECIFICATIONS

| Application | Specification |
|---|----------------------------|
| 2.5L | |
| Cherokee | 9.2:1 |
| Wrangler | 9.1:1 |
| 4.0L | 8.8:1 |
| 5.2L | 9.1:1 |
| Normal Compression Pressure ... | 120-150 psi (827-1034 kPa) |
| Minimum Compression Pressure | 100 psi (689 kPa) |
| Maximum Variation Between Cylinders | 5 psi (172 kPa) |

VALVE CLEARANCE

NOTE: Vehicles are equipped with hydraulic lifters. No adjustments are required.

IGNITION SYSTEM

IGNITION COIL

IGNITION COIL RESISTANCE - Ohms @ 68°F (20°C)

| Application | Primary | Secondary |
|----------------------|----------|---------------|
| Diamond Coil | .97-1.18 | 11,300-15,300 |
| Toyodenso Coil | .95-1.20 | 11,300-13,300 |

HIGH TENSION WIRE RESISTANCE

HIGH TENSION WIRE RESISTANCE

| Application | Ohms |
|-----------------|-------------------|
| All Wires | 250-1000 per inch |

SPARK PLUGS

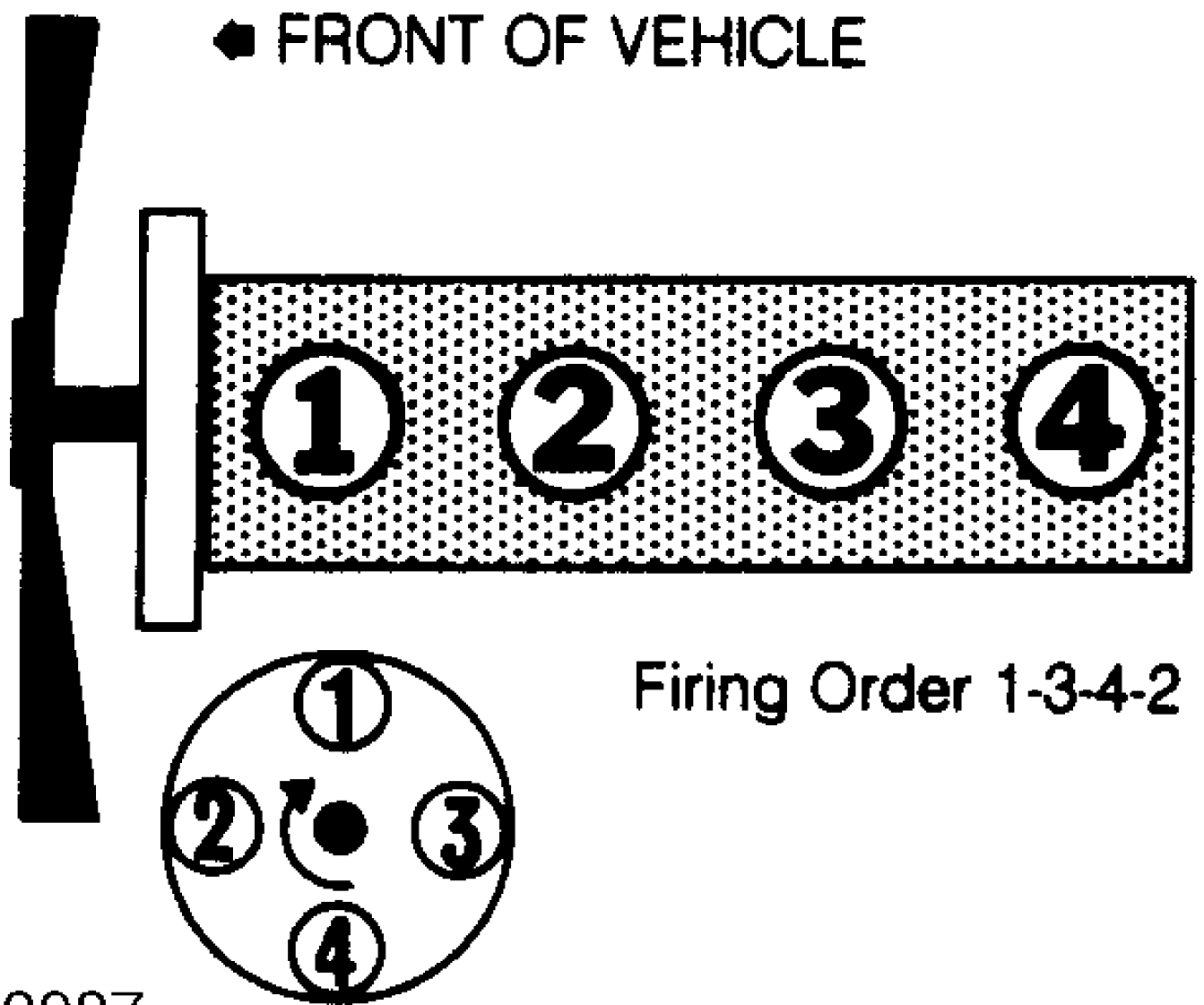
SPARK PLUG TYPE

| Application | Specification |
|-------------------|--------------------|
| 2.5L & 4.0L | Champion RC-12 LYC |
| 5.2L | Champion RC-12YC |

SPARK PLUG SPECIFICATIONS

| Application | Gap: In. (mm) | Torque: Ft. Lbs. (N.m) |
|----------------------|---------------|------------------------|
| 2.5L, 4.0L & 5.2L .. | .035 (.89) | 27 (37) |

FIRING ORDER & TIMING MARKS



9087

Fig. 1: Firing Order & Timing Marks (2.5L)

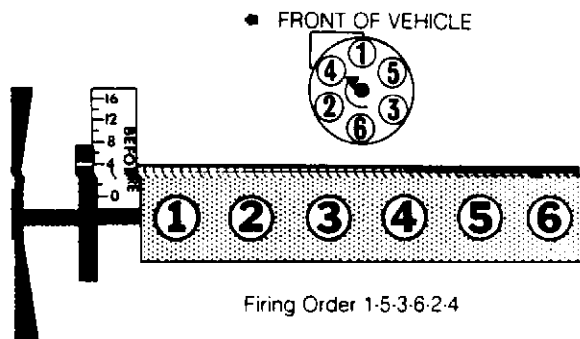
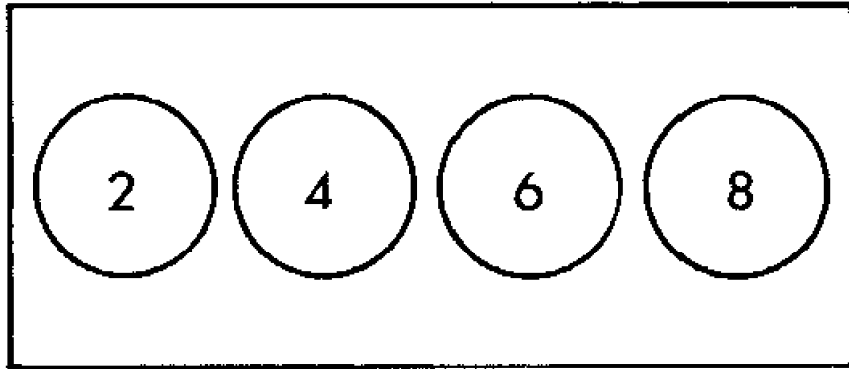
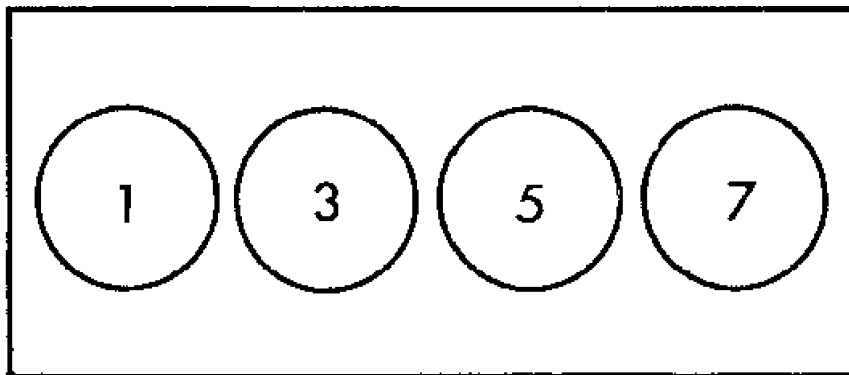
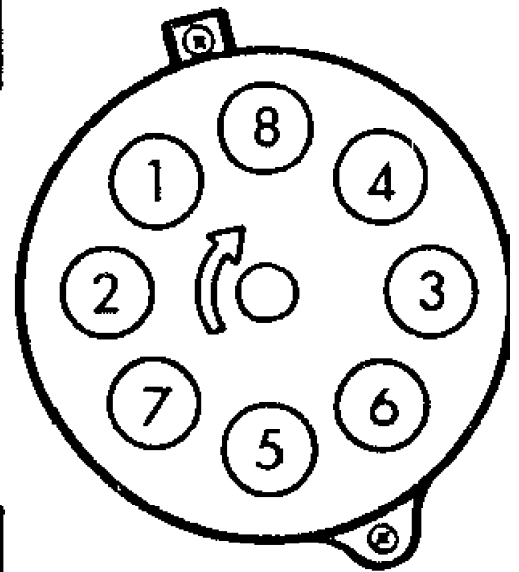


Fig. 2: Firing Order & Timing Marks (4.0L)

← FRONT OF ENGINE



FIRING ORDER 1-8-4-3-6-5-7-2



95E35778

Fig. 3: Firing Order & Distributor Rotation (5.2L)
Courtesy of Chrysler Corp.

IGNITION TIMING

Vehicles are equipped with Powertrain Control Module (PCM) computerized ignition. PCM controls ignition timing. No adjustment is possible.

DISTRIBUTOR SPECIFICATIONS

Vehicles are equipped with Powertrain Control Module computerized ignition. Distributor's only function is to distribute high voltage to appropriate spark plug. No adjustments are required.

FUEL SYSTEM

FUEL PUMP

NOTE: Fuel pump performance refers to fuel pressure and volume availability, not regulated fuel pressure.

FUEL PUMP PERFORMANCE

| Application | psi (kg/cm ²) | Minimum Volume In 30 sec. |
|-------------------|---------------------------|---------------------------|
| 2.5L, 4.0L & 5.2L | 39 (2.70) | 1 Pt. (.47L) |

REGULATED FUEL PRESSURE

| Application | psi (kg/cm ²) At Idle |
|----------------|-----------------------------------|
| With Vacuum | 31 (2.18) |
| Without Vacuum | 39 (2.70) |

INJECTOR RESISTANCE

INJECTOR RESISTANCE - Ohms @ 68°F (20°C)

| Application | Specification |
|-------------------|---------------|
| 2.5L, 4.0L & 5.2L | 12.8-15.2 |

IDLE SPEED & MIXTURE

NOTE: Idle mixture is controlled by the Powertrain Control Module (PCM). Adjustment is not required or possible.

THROTTLE POSITION SENSOR (TPS)

2.5L, 4.0L & 5.2L

Output voltage (center terminal of TPS) should be .20 volts at closed throttle and less than 4.8 volts at WOT. TPS is not adjustable.