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Dodge Ram 1500, Ram 2500, Ram 3500

2003 Dodge DR Ram Truck 1500 2500 3500 Service Manual

Comprehensive Service and Repair Instructions for Your Vehicle

INTRODUCTION AND OVERVIEW

This service manual, published by Detroit Iron and authored by Dodge Division, provides detailed instructions for the maintenance, service, and repair of 2003 Dodge DR Ram 1500, 2500, and 3500 series trucks. It is an essential resource for professional mechanics, automotive technicians, and vehicle owners undertaking their own repairs.

The manual covers all major mechanical components, including the engine, transmission, suspension, brakes, fuel system, exhaust, steering, electrical systems, and driveline. With 2908 pages of information, it includes detailed diagrams, photographs, and specifications to guide users through complex procedures.



Image: Front cover of the 2003 Dodge DR Ram Truck Service Manual, Volume 1a. It displays the title, model years, and "DaimlerChrysler Corporation" at the bottom.

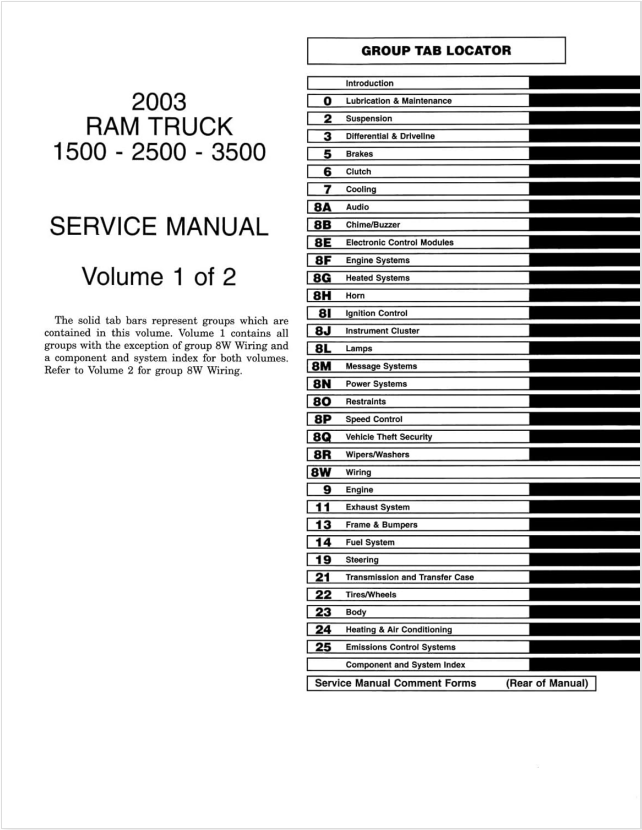
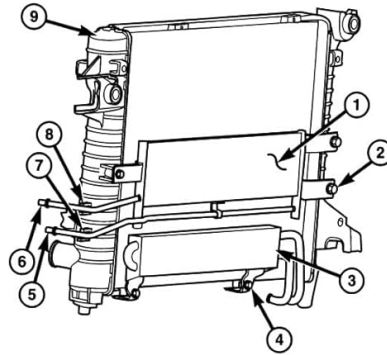


Image: Front cover of the 2003 Dodge DR Ram Truck Service Manual, Volume 1b. Similar to Volume 1a, indicating it is part of a multi-volume set.

MANUAL ORGANIZATION AND NAVIGATION

This service manual is structured to facilitate easy access to specific repair and maintenance information. It is divided into multiple sections, each dedicated to a particular system or component of the vehicle. Users can navigate through the manual using the provided group tab locator, which lists major sections such as Lubrication & Maintenance, Suspension, Brakes, Engine, Transmission, and Electrical.

Each section contains detailed procedures, specifications, and diagnostic information relevant to its topic. It is recommended to familiarize yourself with the manual's layout before beginning any service work.

TRANS COOLER (Continued)**Fig. 2 Cooling Module - 3.7L/4.7L/5.7L**

- 1 - TRANS OIL COOLER
- 2 - TRANS OIL COOLER MOUNTING BOLT (3)
- 3 - POWER STEERING OIL COOLER
- 4 - POWER STEERING OIL COOLER MOUNTING BOLT
- 5 - TRANS OIL COOLER OUTLET
- 6 - TRANS OIL COOLER INLET
- 7 - COOLER LINE CLIP
- 8 - COOLER LINE CLIP
- 9 - RADIATOR

- (5) Remove the bolts attaching the transmission cooler to the radiator.
- (6) Remove oil cooler from the vehicle. Take care not to damage the radiator core or transmission cooler tubes.

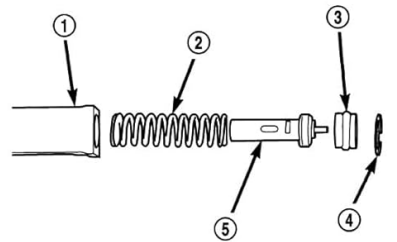
DISASSEMBLY - 5.9L ONLY

NOTE: The transmission oil cooler uses an internal thermostat to control transmission oil flow through the cooler. This thermostat is serviceable.

- (1) Remove the transmission oil cooler (Refer to 7 - COOLING/TRANSMISSION/TRANS COOLER - REMOVAL).
- (2) Remove the snap ring retaining the thermostat end plug (Fig. 3).
- (3) Remove the end plug, thermostat and spring from transmission oil cooler (Fig. 3).

ASSEMBLY - 5.9L ONLY

- (1) Thoroughly clean the thermostat bore on the transmission oil cooler.
- (2) Install the new spring, thermostat, end plug and snap ring.

**Fig. 3 Transmission Oil Cooler Thermostat Removal/Installation**

- 1 - THERMOSTAT HOUSING
- 2 - SPRING
- 3 - END PLUG
- 4 - SNAP RING
- 5 - THERMOSTAT

- (3) Install the transmission oil cooler (Refer to 7 - COOLING/TRANSMISSION/TRANS COOLER - INSTALLATION).

INSTALLATION

- (1) Position the transmission cooler tubes to the front of the radiator.
- (2) Snap the transmission cooler tubes into the clips on the side of the radiator tank.
- (3) Install the transmission cooler attaching bolts. Tighten the bolts to 16 N·m (140 in. lbs.).
- (4) inspect the quick connect fittings for debris and install the quick connect fitting on the cooler tube until an audible "click" is heard. Pull apart the connection to verify proper installation and install the secondary latches.
- (5) Connect the battery negative cable.
- (6) Start the engine and check all fittings for leaks.
- (7) Check the fluid level in the automatic transmission. Refer to the appropriate transmission section (Refer to 21 - TRANSMISSION/TRANSAXLE/AUTOMATIC - 45RFE/545RFE/FLUID - STANDARD PROCEDURE) or (Refer to 21 - TRANSMISSION/TRANSAXLE/AUTOMATIC - 46RE/FLUID - STANDARD PROCEDURE).

TRANS COOLER - 5.9L DIESEL**DESCRIPTION**

All diesel models equipped with an automatic transmission are equipped with both a main water-to-oil cooler and a separate air-to-oil cooler. Both cool-

Image: A page from the service manual titled "GROUP TAB LOCATOR". It shows a list of numbered and lettered sections, such as "0 Lubrication & Maintenance", "5 Brakes", "8E Engine Systems", and "23 Body", indicating the manual's organizational structure.

PERFORMING SERVICE AND REPAIR PROCEDURES

When performing any service or repair, always refer to the specific section of this manual that pertains to the component or system you are working on. Follow all instructions carefully and in the sequence provided. Pay close attention to safety warnings, torque specifications, and special tool requirements.

The manual includes step-by-step procedures, often accompanied by exploded views and illustrations, to ensure accuracy. For example, procedures for transmission cooler removal and installation are detailed with diagrams showing component breakdown and assembly steps.

INTAKE/EXHAUST VALVES & SEATS (Continued)

REFACING VALVES AND VALVE SEATS

The intake and exhaust valves have a 43-1/4° to 43-3/4° face angle and a 44-1/4° to 44-3/4° seat angle (Fig. 12).

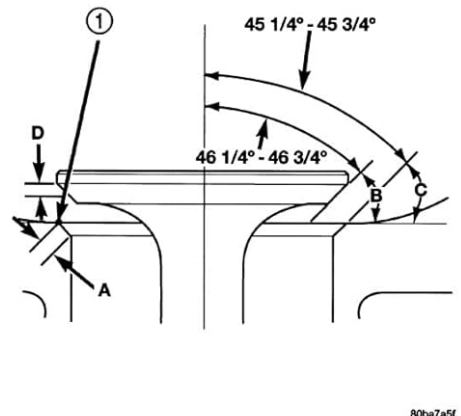


Fig. 12 Valve Face and Seat Angles
1 - CONTACT POINT
A,B,C and D

VALVE FACE AND VALVE SEAT ANGLE CHART

ITEM	DESCRIPTION	SPECIFICATION
A	SEAT WIDTH INTAKE	1.016 - 1.524 mm (0.040 - 0.060 in.)
	EXHAUST	1.524 - 2.032 mm (0.060 - 0.080 in.)
B	FACE ANGLE (INT. AND EXT.)	43 1/4° - 43 3/4°
C	SEAT ANGLE (INT. AND EXT.)	44 1/4° - 44 3/4°
D	CONTACT SURFACE	—

VALVES

Inspect the remaining margin after the valves are refaced (Fig. 13). Valves with less than 1.190 mm (0.047 in.) margin should be discarded.

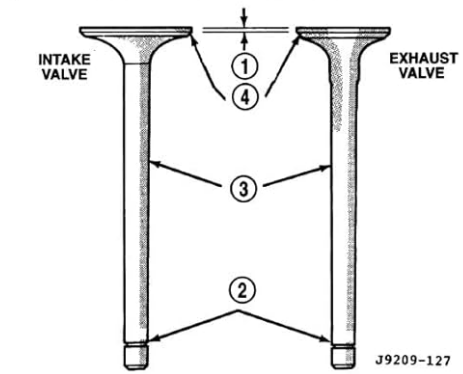


Fig. 13 Intake and Exhaust Valves
1 - MARGIN
2 - VALVE SPRING RETAINER LOCK GROOVE
3 - STEM
4 - FACE

VALVE SEATS

CAUTION: DO NOT un-shroud valves during valve seat refacing (Fig. 14).

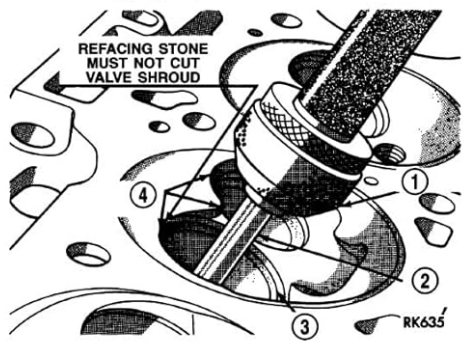


Fig. 14 Refacing Valve Seats
1 - STONE
2 - PILOT
3 - VALVE SEAT
4 - SHROUD

(1) When refacing valve seats, it is important that the correct size valve guide pilot be used for reseat-

Image: An example page from the service manual detailing "TRANS COOLER (Continued)" procedures. It includes diagrams for "Fig. 2 Cooling Module" and "Fig. 3 Transmission Oil Cooler Thermostat Removal/Installation", along with numbered steps for installation and disassembly.

MAINTENANCE GUIDELINES

Regular maintenance is crucial for the longevity and optimal performance of your 2003 Dodge Ram truck. This manual provides comprehensive schedules and procedures for routine maintenance tasks, including fluid checks and changes, filter replacements, and inspections of various vehicle systems. Refer to the "Lubrication & Maintenance" section for detailed service intervals and instructions.

Adhering to the recommended maintenance schedule outlined in this manual will help prevent potential issues and ensure your vehicle operates reliably.

TROUBLESHOOTING COMMON ISSUES

When encountering operational issues with your vehicle, this service manual serves as a primary resource for diagnosis and

troubleshooting. It includes diagnostic charts, testing procedures, and symptom-based guides to help identify the root cause of problems. Consult the relevant system-specific sections for detailed troubleshooting steps.

For electrical issues, refer to the dedicated electrical system diagrams and diagnostic procedures to trace circuits and test components effectively.

SPECIFICATIONS

This manual itself is a substantial resource with the following specifications:

- **Publisher:** Detroit Iron
- **Publication Date:** January 17, 2025
- **Edition:** First Edition
- **Print Length:** 2908 pages
- **ISBN-10:** 1791422306
- **ISBN-13:** 978-1791422301
- **Item Weight:** 15 pounds
- **Dimensions:** 11 x 8.5 x 5.53 inches

Vehicle-specific technical specifications, including torque values, fluid capacities, and component dimensions, are provided within the respective sections of the manual for each system and component.

WARRANTY INFORMATION

This 2003 Dodge DR Ram Truck Service Manual is an informational guide for vehicle service and repair. It does not include or provide any warranty information for the vehicle itself or for any parts or services performed using its instructions. For vehicle warranty details, please consult your original vehicle documentation or an authorized Dodge dealership.

SUPPORT AND CONTACT

For inquiries regarding the content, availability, or any issues related to this specific service manual, please contact the publisher:

Detroit Iron

(Contact information not provided in product data. Please refer to the manual's publisher details for direct contact.)

For vehicle-specific support or authorized service, please contact a certified Dodge service center.