Cardone 3L-1103

Cardone Service Plus 3L-1103 Rack and Pinion Hydraulic Transfer Tubing Assembly User Manual

Model: 3L-1103 | Brand: Cardone

Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your Cardone Service Plus 3L-1103 New Rack and Pinion Hydraulic Transfer Tubing Assembly. This assembly is designed to meet or exceed OEM performance for form, fit, and function, ensuring your vehicle's power steering system operates smoothly.
Please read this manual thoroughly before beginning any work to ensure safe and correct procedures are followed.

Product Overview

The Cardone Service Plus 3L-1103 is a complete hydraulic transfer tubing assembly for rack and pinion steering systems. It includes all necessary components for a seamless replacement.

Key Features:

- All new tubing and connectors for long-lasting performance.
- New seals provided where applicable for a secure fit.
- Includes all components required for installation.
- Guaranteed fit and function.
- Meets or exceeds Original Equipment Manufacturer (OEM) performance standards.

What's in the Box:

- Large Tubing
- Tubing Nuts
- O-ring
- Instruction Sheet (this manual)

Safety Information

Always prioritize safety when working on vehicle systems. Failure to follow safety precautions can result in serious injury or damage to the vehicle.

- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure the vehicle is securely supported on jack stands before working underneath it.
- Disconnect the vehicle's battery before beginning any electrical work.
- Be aware of hot surfaces and pressurized fluids.
- Refer to your vehicle's service manual for specific procedures and torque specifications.
- Dispose of old fluids and parts responsibly according to local regulations.

Setup and Installation

Installation of the Cardone Service Plus 3L-1103 Rack and Pinion Hydraulic Transfer Tubing Assembly requires mechanical knowledge and appropriate tools. If you are unsure about any step, it is recommended to seek professional assistance.

Tools and Materials Required:

- Socket/Wrench Set
- Line Wrenches (flare nut wrenches)
- Drain Pan
- New Power Steering Fluid (compatible with your vehicle)
- Shop Rags
- Vehicle Jack and Jack Stands
- Torque Wrench

Installation Steps:

1. **Prepare the Vehicle:** Park the vehicle on a level surface, engage the parking brake, and disconnect the negative battery terminal. Raise the front of the vehicle and secure it with jack stands.
2. **Drain Power Steering Fluid:** Place a drain pan under the power steering system. Disconnect the return line from the power steering reservoir and allow the fluid to drain.
3. **Locate and Remove Old Assembly:** Identify the existing rack and pinion hydraulic transfer tubing assembly. Carefully disconnect the tubing from the rack and pinion unit and any other connection points. Be prepared for residual fluid to leak.
4. **Inspect Connections:** Before installing the new assembly, inspect the mating surfaces on the rack and pinion unit and other connection points for cleanliness and damage.
5. **Install New Assembly:** Carefully route the new Cardone Service Plus 3L-1103 tubing assembly into position. Connect the tubing to the rack and pinion unit and any other connection points, ensuring the new O-ring is properly seated. Hand-tighten all fittings initially.
6. **Tighten Connections:** Using appropriate line wrenches, tighten all fittings to the vehicle manufacturer's specified torque. *Do not overtighten.*
7. **Refill Power Steering Fluid:** Reconnect the return line to the reservoir. Fill the power steering reservoir with new, compatible power steering fluid to the recommended level.
8. **Bleed the System:** With the front wheels off the ground, start the engine and slowly turn the steering wheel from lock to lock several times. This will help bleed air from the system. Monitor the fluid level in the reservoir and add fluid as needed. Continue until no more air bubbles are visible in the reservoir and the steering feels smooth.
9. **Final Checks:** Lower the vehicle. Check for any leaks around the newly installed tubing. Reconnect the battery. Test the steering system for proper operation.



Image: The complete Cardone Service Plus 3L-1103 Rack and Pinion Hydraulic Transfer Tubing Assembly, showing its bent metal tubing and connection points.



Image: A close-up view of one end of the Cardone 3L-1103 tubing assembly, highlighting the threaded fitting and bend in the tubing.



Image: A close-up view of the opposite end of the Cardone 3L-1103 tubing assembly, showing the hexagonal nut and connection point.

Operating Considerations

Once installed, the hydraulic transfer tubing assembly operates as an integral part of your vehicle's power steering system. No specific user operation is required beyond normal vehicle use.
After installation, pay attention to the following:

- **Steering Feel:** The steering should feel smooth and consistent. Any unusual stiffness, looseness, or noise should be investigated.
- **Fluid Level:** Regularly check the power steering fluid level in the reservoir, especially during the first few days after installation.
- **Leaks:** Periodically inspect the area around the new tubing assembly for any signs of fluid leaks.

Maintenance

The Cardone Service Plus 3L-1103 Hydraulic Transfer Tubing Assembly is designed for long-term durability and typically requires no specific maintenance beyond general power steering system care.

General Power Steering System Maintenance:

- **Fluid Checks:** Check power steering fluid level regularly (e.g., during oil changes) and top up with the correct fluid type if necessary.

- **Fluid Replacement:** Consult your vehicle's service manual for recommended power steering fluid replacement intervals.
- **Hose and Line Inspection:** Periodically inspect all power steering hoses and lines for cracks, leaks, or signs of wear.
- **Pump Noise:** Listen for unusual noises from the power steering pump, which could indicate low fluid or a failing component.

Troubleshooting

If you experience issues after installing the Cardone Service Plus 3L-1103 assembly, refer to the following common troubleshooting steps:

Symptom	Possible Cause	Solution
Fluid Leak at Connections	Loose fittings, damaged O-ring, incorrect installation.	Check torque on fittings. Ensure O-ring is properly seated and not pinched. If damaged, replace O-ring.
Noisy Power Steering (Whining/Groaning)	Low fluid level, air in the system.	Check and top up fluid level. Re-bleed the power steering system by turning the steering wheel lock-to-lock.
Stiff Steering	Low fluid level, air in the system, faulty power steering pump (unrelated to tubing assembly).	Check and top up fluid level. Bleed the system. If problem persists, inspect power steering pump.

If troubleshooting steps do not resolve the issue, consult a certified automotive technician.

Specifications

Attribute	Value
Brand	Cardone
Model Number	3L-1103
Material	Metal
Color	Black
Item Weight	1 Pounds
Product Dimensions	7 x 6.13 x 5.25 inches
Specific Uses	Vehicle Power Steering Systems
UPC	884548182974

Warranty Information

Cardone Service Plus products are backed by a commitment to quality. For specific warranty terms and conditions applicable to the 3L-1103 Rack and Pinion Hydraulic Transfer Tubing Assembly, please refer to the official Cardone website or contact their customer support directly. Warranty coverage typically addresses defects in materials and workmanship under normal use.

Customer Support

For technical assistance, installation questions, or warranty claims, please contact Cardone customer support:

- **Website:** Visit the official Cardone website for FAQs, product information, and contact forms.www.cardone.com

- **Phone:** Refer to the Cardone website for customer service phone numbers.
- **Store Page:** You can also visit the Cardone store on Amazon for more information:Cardone Amazon Store

When contacting support, please have your product model number (3L-1103) and purchase information ready.

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