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Four Seasons 78391

Four Seasons 78391 A/C Compressor User Manual

Model: 78391 | Brand: Four Seasons

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Four Seasons 78391 A/C Compressor. This component is designed to be a direct replacement for specific vehicle applications, ensuring optimal performance of your vehicle's air conditioning system. For best results and to ensure safety, it is highly recommended that installation be performed by a certified automotive technician.

Important Safety Information

- Always wear appropriate personal protective equipment, including safety glasses and gloves, when working on automotive air conditioning systems.
- Automotive A/C systems contain pressurized refrigerant. Improper handling can lead to severe injury or environmental damage. Ensure the system is properly discharged by a qualified professional before attempting any removal or installation.
- When removing plugs or lines from the compressor, be aware that residual pressure or refrigerant oil may spray out. Always direct openings away from your face and body.
- Refer to your vehicle's service manual for specific procedures and torque specifications.
- Do not attempt to repair a damaged compressor. Replace it with a new, compatible unit.

2. PACKAGE CONTENTS

Verify that all components are present and undamaged upon opening the package:

- Four Seasons 78391 A/C Compressor with Clutch
- O-Rings (may be included for installation)

3. PRODUCT FEATURES

The Four Seasons 78391 A/C Compressor is engineered for reliable performance and durability:

- New Nippondenso 10S15L Compressor with Clutch
- Designed for direct fit and easy installation in compatible vehicles.
- Manufactured to meet or exceed OEM specifications.



Figure 3.1: Front view of the Four Seasons 78391 A/C Compressor, showing the main body and clutch assembly.



Figure 3.2: Rear view of the Four Seasons 78391 A/C Compressor, highlighting connection points and mounting brackets.

4. INSTALLATION GUIDE

Proper installation is critical for the longevity and performance of your new A/C compressor. It is strongly recommended that this procedure be performed by a qualified automotive service technician.

Pre-Installation Checks

- **System Flush:** Thoroughly flush the entire A/C system to remove old oil, debris, and contaminants. Failure to do so can lead to premature compressor failure and void the warranty.
- **Orifice Tube/Expansion Valve:** Replace the orifice tube or expansion valve. These components can harbor debris and restrict refrigerant flow.
- **Accumulator/Receiver Drier:** Always replace the accumulator or receiver drier. This component absorbs moisture and filters debris, and its capacity is limited.
- **Refrigerant Oil:** Ensure the correct type and amount of refrigerant oil (PAG or POE, as specified by the vehicle manufacturer or compressor instructions) is used. Distribute the oil properly throughout the system.
- **Leak Check:** Inspect all hoses, lines, and connections for signs of wear or damage. Replace as necessary.

Installation Steps (General)

1. Safely discharge the existing refrigerant from the A/C system using proper recovery equipment.
2. Disconnect the vehicle's battery.

3. Carefully remove the old A/C compressor, noting the routing of belts and connections.
4. Install the new Four Seasons 78391 A/C Compressor, ensuring all mounting bolts are torqued to the vehicle manufacturer's specifications. Use new O-rings (if supplied) and lubricate them with appropriate refrigerant oil before installation.
5. Reconnect all refrigerant lines and electrical connections.
6. Evacuate the A/C system using a vacuum pump to remove all air and moisture. Maintain vacuum for at least 30 minutes.
7. Recharge the A/C system with the correct type and amount of refrigerant (e.g., R-134a) as specified by the vehicle manufacturer.
8. Start the engine and test the A/C system for proper operation and cooling. Check for any leaks using a leak detector.
9. Reconnect the battery.

5. OPERATION

Once installed and properly charged, the A/C compressor functions as the heart of your vehicle's air conditioning system, circulating refrigerant to provide cooling. To ensure optimal performance and longevity:

- Operate your A/C system periodically, even during colder months, for at least 10-15 minutes. This helps to circulate refrigerant oil, lubricate seals, and prevent component degradation.
- Avoid running the A/C system with low refrigerant levels, as this can cause the compressor to overheat and fail.

6. MAINTENANCE

Regular maintenance helps extend the life of your A/C system and compressor:

- **Refrigerant Level Check:** Have your A/C system's refrigerant level checked annually by a professional. Low levels can indicate a leak and lead to compressor damage.
- **Belt Inspection:** Regularly inspect the serpentine belt that drives the compressor for cracks, fraying, or excessive wear. Replace if necessary.
- **Condenser Cleaning:** Keep the condenser (located in front of the radiator) free of leaves, dirt, and debris to ensure proper heat dissipation.
- **Cabin Air Filter:** Replace your cabin air filter regularly to maintain good airflow and prevent strain on the blower motor.

7. TROUBLESHOOTING

This section provides general guidance for common A/C system issues. For complex problems, consult a certified automotive technician.

Symptom	Possible Cause	Solution
A/C blows warm air	Low refrigerant, faulty compressor clutch, electrical issue, clogged expansion valve/orifice tube.	Check refrigerant level and for leaks. Inspect clutch engagement. Consult technician for electrical diagnosis or component replacement.
Compressor is noisy	Low refrigerant oil, internal compressor failure, worn clutch bearing, loose mounting.	Check oil level. If internal failure, replace compressor. Inspect clutch and mounting.
Compressor not engaging	Low refrigerant pressure, faulty pressure switch, electrical issue, seized compressor.	Check refrigerant level. Test pressure switch. Diagnose electrical circuit. If seized, replace compressor.
Burning smell from A/C	Slipping serpentine belt, seized compressor.	Inspect and replace belt if worn. If compressor is seized, it requires replacement.

8. TECHNICAL SPECIFICATIONS

Attribute	Specification
Manufacturer	Four Seasons
Model	A/C Compressor
Part Number	78391
Item Weight	13.2 pounds (5.99 kg)
Product Dimensions	7.31 x 6.69 x 10.38 inches (18.57 x 17.00 x 26.37 cm)
Package Weight	15.6 pounds (7.08 kg)
Package Dimensions	20.32 H x 28.702 L x 18.288 W (centimeters)
Exterior Finish	Painted

9. WARRANTY AND SUPPORT

Four Seasons products are manufactured to high standards and typically come with a manufacturer's warranty against defects in materials and workmanship. The specific terms and duration of the warranty may vary. Please retain your proof of purchase for warranty claims.

For detailed warranty information, technical support, or assistance with product-related inquiries, please contact Four Seasons customer service directly or visit their official website. Contact information can usually be found on the product packaging or the manufacturer's website.



Figure 9.1: Four Seasons brand logo.

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