

[Manuals.plus](#) /

› [CARMOCAR](#) /

› CARMOCAR EGV882 EGR Valve Instruction Manual for Nissan Frontier and Xterra 2.4L Engines

CARMOCAR EGV882

CARMOCAR EGV882 EGR Valve Instruction Manual

For Nissan Frontier 1998-2004 & Xterra 2000-2004 (2.4L 4-Cylinder Engines)

1. INTRODUCTION

This manual provides essential information for the installation, operation, maintenance, and troubleshooting of the CARMOCAR EGV882 Exhaust Gas Recirculation (EGR) Valve. Please read this manual thoroughly before installation and use to ensure proper function and safety.

The EGR valve is a critical component in your vehicle's emission control system, designed to recirculate a portion of exhaust gases back into the engine's combustion chambers. This process helps to lower combustion temperatures, thereby reducing the formation of nitrogen oxides (NOx) emissions.



Figure 1: CARMOCAR EGV882 EGR Valve and included gasket.

2. PRODUCT FEATURES

- **Part Numbers:** EGV882, 147103S500, 147103S501.
- **Enhanced Engine Efficiency:** Improves engine efficiency and reduces engine load.
- **Emission Reduction:** Effectively reduces nitrogen oxide emissions.
- **Extended Engine Life:** Contributes to extending the service life of engine components.
- **High Durability:** Constructed with a high-strength silicon diaphragm and quality rebar material for long-lasting performance and high-temperature resistance.
- **Improved Performance:** Designed to facilitate easier vehicle starting, improve throttle response time, and promote smoother engine operation.

PRODUCT STRUCTURE



Strong Housing



Protect internal components

Leak-proof washer



Prevent gas leakage

OE electrical connector



Correct installation

Figure 2: Product structure highlighting key components like the strong housing, OE electrical connector, and leak-proof washer.

3. COMPATIBILITY

The CARMOCAR EGV882 EGR Valve is designed as a direct replacement for the following vehicle models with 2.4L 4-cylinder engines:

- **Nissan Frontier:** 1998, 1999, 2000, 2001, 2002, 2003, 2004
- **Nissan Xterra:** 2000, 2001, 2002, 2003, 2004

Important: Please verify that the part numbers (EGV882, 147103S500, 147103S501) match your vehicle's requirements before purchase and installation.



EGR VALVE EGV882

Replacement for Nissan Frontier 1998-2004

Replacement for Nissan Xterra 2000-2004 2.4L 4 Cyl Engine

Figure 3: Visual representation of the EGV882 EGR Valve and its compatible vehicle models.

4. PACKAGE CONTENTS

Upon opening the package, you should find the following items:

- 1 x CARMOCAR EGV882 EGR Valve Assembly
- 1 x Gasket



PACKAGE INCLUDE

1 x EGR Valve

1 x Gasket

Figure 4: Contents of the CARMOCAR EGV882 package.

5. SPECIFICATIONS

Attribute	Detail
Part Numbers	EGV882, 147103S500, 147103S501, WS-E644
Material	Metal, Plastic
Item Dimensions (L x W x H)	3.5 x 3.9 x 4.7 inches
Item Weight	1.3 pounds
Exterior Finish	Metal
Inlet Connection Type	Threaded
Outlet Connection Type	NPT
Number of Ports	2

Attribute	Detail
Color	Black

6. SETUP AND INSTALLATION

Installation of an EGR valve typically involves working with engine components and exhaust systems. It is recommended that installation be performed by a qualified mechanic or an individual with appropriate automotive repair experience.

General Steps (Consult a service manual for your specific vehicle model):

- Safety First:** Ensure the engine is cool and the vehicle's battery is disconnected before beginning any work.
- Locate the Old EGR Valve:** Refer to your vehicle's service manual for the exact location of the EGR valve.
- Disconnect Electrical and Vacuum Lines:** Carefully disconnect any electrical connectors and vacuum hoses attached to the old EGR valve.
- Remove Mounting Bolts:** Unbolt the old EGR valve from the engine. Be prepared for potential resistance if bolts are corroded.
- Clean Mounting Surface:** Thoroughly clean the mounting surface on the engine block to ensure a proper seal with the new gasket. Remove any old gasket material or carbon buildup.
- Install New Gasket:** Place the new gasket provided with the CARMOCAR EGV882 valve onto the clean mounting surface.
- Mount New EGR Valve:** Position the new CARMOCAR EGV882 EGR valve and secure it with the mounting bolts. Tighten bolts to the manufacturer's specified torque.
- Reconnect Lines:** Reconnect all electrical connectors and vacuum hoses to the new EGR valve.
- Reconnect Battery:** Reconnect the vehicle's battery.
- Test:** Start the engine and check for proper operation and any exhaust leaks. Clear any stored diagnostic trouble codes (DTCs) if necessary.

Disclaimer: These are general guidelines. Always refer to your vehicle's specific service manual for detailed, model-specific installation instructions and safety precautions.

7. OPERATING PRINCIPLES

The EGR valve operates by diverting a small amount of exhaust gas back into the intake manifold. This inert gas displaces some of the oxygen in the combustion chamber, which in turn lowers the peak combustion temperature. Lower combustion temperatures are crucial for preventing the formation of harmful nitrogen oxides (NOx), a major component of smog.

The valve's operation is typically controlled by the engine's Powertrain Control Module (PCM) based on various engine parameters such as engine load, speed, and temperature. The CARMOCAR EGV882 is designed to integrate seamlessly with your vehicle's existing engine management system to maintain optimal performance and emissions control.

8. MAINTENANCE

EGR valves are generally designed to be maintenance-free. However, carbon buildup can occur over time, potentially leading to reduced efficiency or malfunction. While direct user maintenance is not typically required,

regular vehicle maintenance and timely replacement of components like the EGR valve when symptoms arise are important.

- **Regular Inspections:** During routine vehicle servicing, a mechanic may inspect the EGR system for signs of carbon buildup or leaks.
- **Fuel Quality:** Using high-quality fuel can help minimize carbon deposits throughout the engine and exhaust system, including the EGR valve.
- **Timely Replacement:** If your vehicle exhibits symptoms of a failing EGR valve (see Troubleshooting section), prompt replacement is recommended to maintain engine performance and emissions compliance.

9. TROUBLESHOOTING

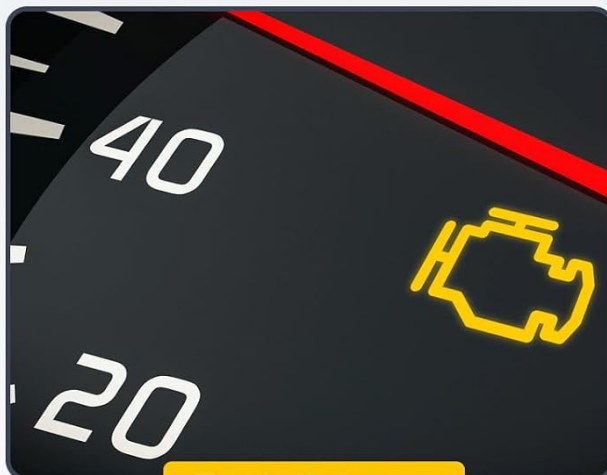
A malfunctioning EGR valve can lead to various engine performance issues and increased emissions. If you experience any of the following symptoms, your EGR valve may require inspection or replacement:

- **Higher Fuel Consumption:** An improperly functioning EGR valve can disrupt the air-fuel mixture, leading to decreased fuel efficiency.
- **Check Engine Light (Fault Light On):** The vehicle's onboard diagnostic (OBD-II) system will typically illuminate the Check Engine Light and store a diagnostic trouble code (DTC) if the EGR system is not operating correctly.
- **Black Smoke Appears:** Excessive black smoke from the exhaust can indicate incomplete combustion, which may be related to an EGR valve issue.
- **Engine Overheating:** While less common, a stuck-closed EGR valve can lead to higher combustion temperatures and potentially contribute to engine overheating.
- **Rough Idling or Stalling:** A stuck-open EGR valve can cause too much exhaust gas to enter the intake at idle, leading to a rough idle or stalling.
- **Reduced Engine Power:** Incorrect EGR flow can negatively impact engine power and acceleration.

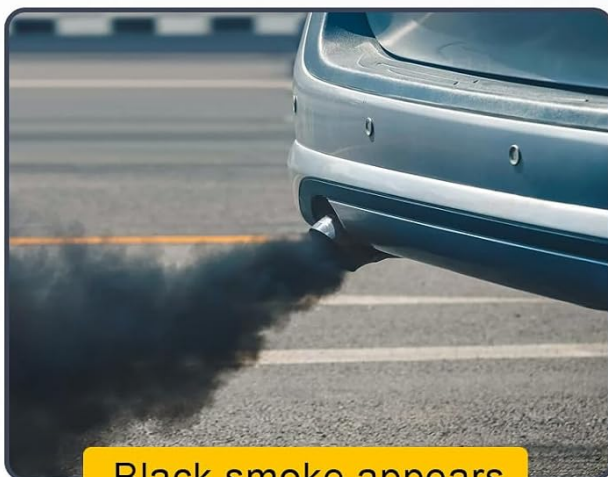
FAULT CAUSE



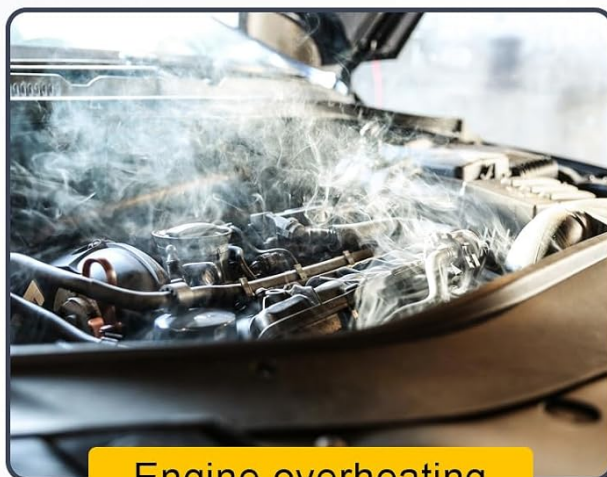
Higher fuel consumption



Fault light on



Black smoke appears



Engine overheating

Figure 5: Common fault causes and symptoms associated with a malfunctioning EGR valve.

If you encounter these issues, it is advisable to have your vehicle inspected by a professional mechanic to diagnose the root cause.

10. WARRANTY AND SUPPORT

CARMOCAR stands behind the quality of its products. The CARMOCAR EGV882 EGR Valve comes with **1-year customer service period**.

If you experience any problems during use or have questions regarding the product, please do not hesitate to contact CARMOCAR customer service. We are committed to responding to inquiries within 24 hours.

For support, please refer to the contact information provided with your purchase or visit the official CARMOCAR website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question