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› FEL-PRO SS 70283-1 Valve Stem Seal Set Instruction Manual

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Model: SS 70283-1 | Brand: Fel-Pro

1. PRODUCT OVERVIEW

The Fel-Pro SS 70283-1 Valve Stem Seal Set is designed to provide effective sealing for engine valve stems. These seals prevent oil from entering the combustion chamber and exhaust system, which helps maintain engine performance and reduce oil consumption. Each seal is engineered with application-specific materials to ensure optimal fit and durability for your vehicle.

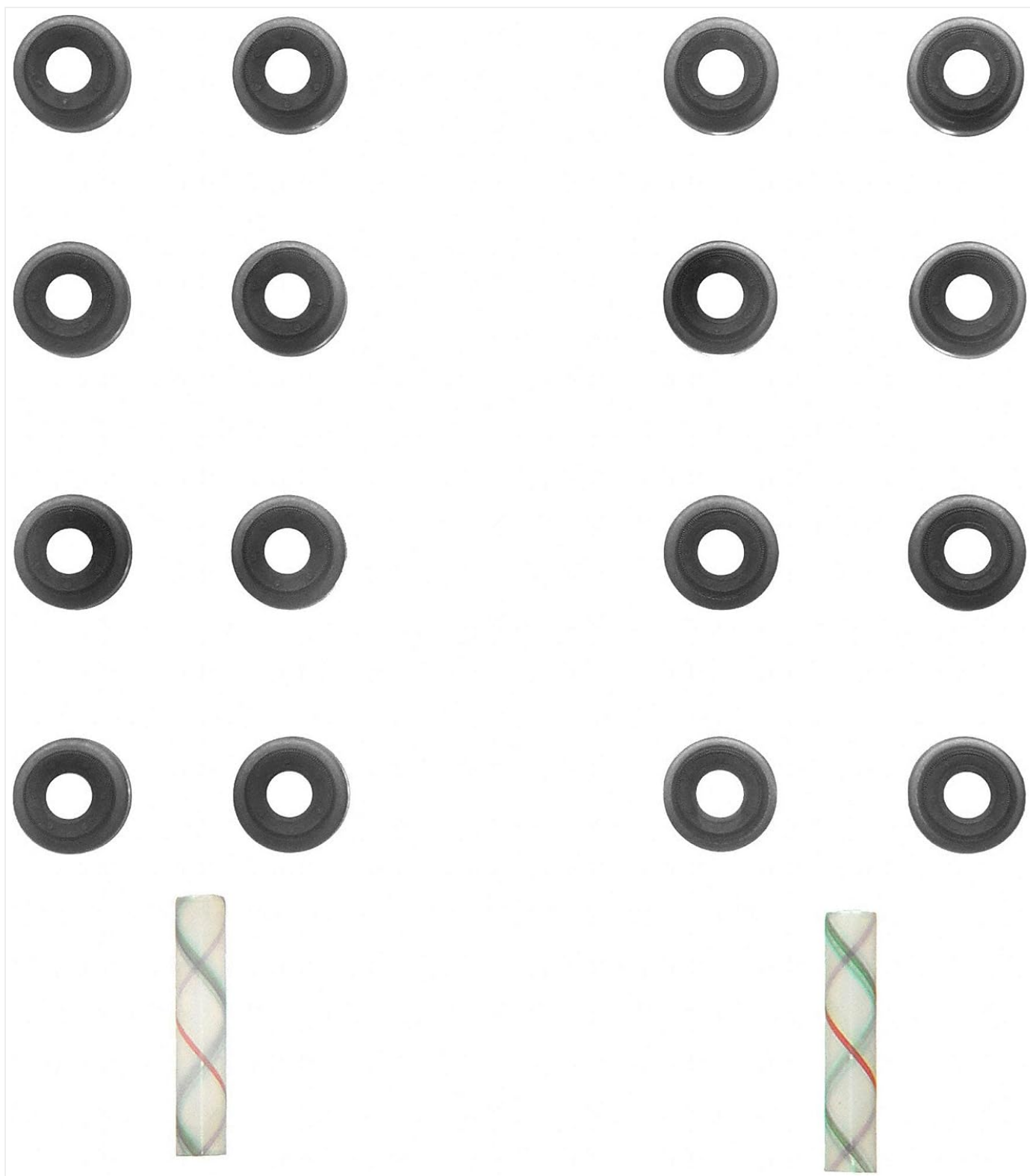


Figure 1: The Fel-Pro SS 70283-1 Valve Stem Seal Set, including multiple seals and an installation aid.

Key Features:

- **Application-Specific Design:** Valve stem seals are designed for specific applications, utilizing either deflector (umbrella) seals, O-ring style, or positive seals to match vehicle requirements.
- **Quality Materials:** Each valve stem seal is manufactured using materials selected for the specific vehicle application, ensuring reliable performance.
- **Engineered for Performance:** Parts undergo rigorous research, development, and testing by Fel-Pro engineers to meet high standards.
- **Installation Aid:** An installation tool is included to assist in protecting the inner lip of the seal during the installation

process, minimizing potential damage.

- **Broad Coverage:** Available for a wide range of domestic and foreign vehicles.



QUALITY MATERIALS

Each valve stem seal features materials based on the specific application for your vehicle repair

Figure 2: Different designs of Fel-Pro valve stem seals, illustrating the variety of application-specific materials and types.

2. INSTALLATION AND SETUP

Proper installation of valve stem seals is crucial for their effective operation and engine longevity. It is recommended that installation be performed by a qualified technician or individuals with appropriate automotive repair experience. Always refer to your vehicle's specific service manual for detailed instructions and torque specifications.

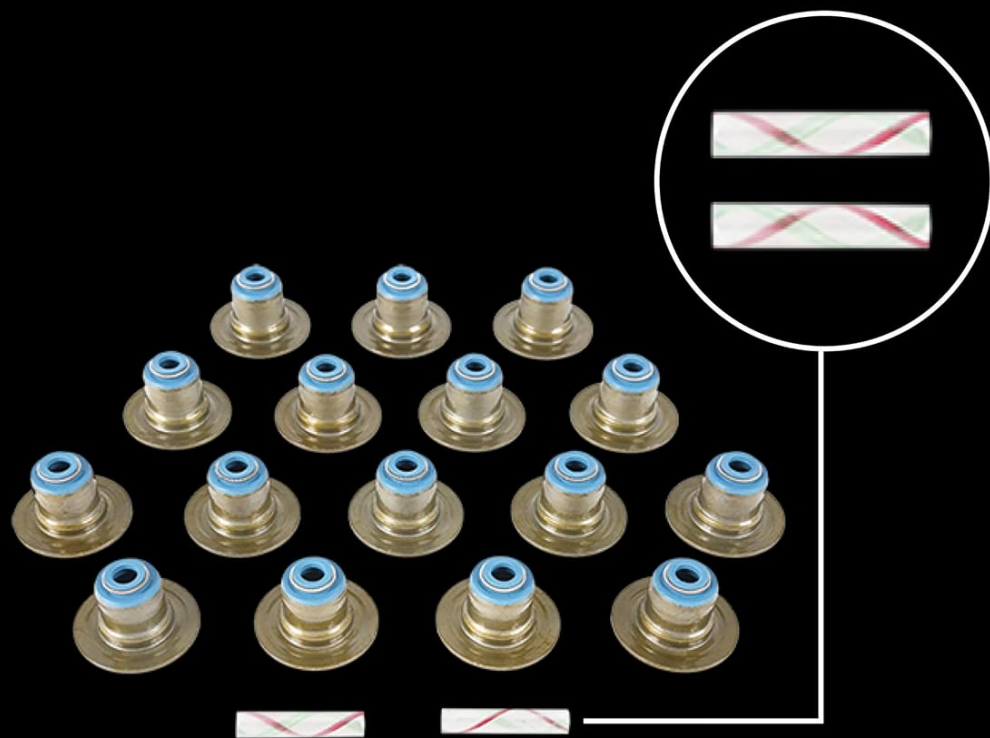
General Installation Steps:

1. **Preparation:** Ensure the engine is cool and disconnect the battery. Remove necessary components to access the valve stems (e.g., valve cover, rocker arms, valve springs).
2. **Remove Old Seals:** Carefully remove the old valve stem seals. Avoid damaging the valve stem or valve guide.

3. **Inspect Components:** Inspect valve stems and guides for wear or damage. Replace any worn components as necessary.
4. **Lubricate New Seals:** Lightly lubricate the inner diameter of the new Fel-Pro valve stem seals with clean engine oil.
5. **Install New Seals:**
 - Place the provided installation aid (if applicable) over the valve stem tip to protect the seal's inner lip.
 - Carefully slide the new seal over the valve stem and onto the valve guide.
 - Use a specialized valve stem seal installation tool or a suitable socket to gently press the seal into place until it is fully seated. Do not use excessive force.
6. **Reassembly:** Reinstall valve springs, rocker arms, and valve cover according to your vehicle's service manual. Ensure all fasteners are torqued to specifications.
7. **Final Checks:** Reconnect the battery. Start the engine and check for proper operation and any signs of leaks.



Figure 3: A detailed view of a valve stem seal properly seated on an engine valve guide, demonstrating correct installation.



INSTALLATION AID

Installation tool included to protect inner lip of seal from damage (where applicable)

Figure 4: A collection of Fel-Pro valve stem seals alongside the protective sleeves designed to aid in installation.

3. OPERATING PRINCIPLES

Valve stem seals are critical components in an internal combustion engine, primarily responsible for controlling the amount of oil that lubricates the valve stems and guides. They prevent excessive oil from entering the combustion chamber during the intake stroke and from escaping into the exhaust system during the exhaust stroke.

By regulating oil flow, these seals help to:

- Reduce oil consumption.
- Prevent carbon buildup on valves and in the combustion chamber.
- Maintain proper engine emissions by preventing oil from burning.
- Ensure consistent engine performance.



Figure 5: Cross-sectional diagram illustrating the location and function of a valve stem seal within the engine's cylinder head.

4. MAINTENANCE

Valve stem seals are designed for long-term durability, but their lifespan can be affected by engine operating conditions, oil quality, and mileage. Regular engine maintenance, including timely oil changes with the manufacturer-recommended oil, can help prolong the life of these seals.

There is no routine maintenance procedure specifically for valve stem seals themselves. Their condition is typically assessed during other engine repairs or if symptoms of failure become apparent.

5. TROUBLESHOOTING

Symptoms of worn or failed valve stem seals often include:

- **Excessive Oil Consumption:** The engine uses more oil than usual between oil changes.
- **Blue Smoke from Exhaust:** Particularly noticeable during engine startup after sitting for a period, or during deceleration (engine braking) followed by acceleration. This indicates oil burning in the combustion chamber.
- **Spark Plug Fouling:** Oil deposits on spark plugs can lead to misfires and reduced engine performance.

If you experience these symptoms, it is advisable to have your vehicle inspected by a qualified mechanic to diagnose the issue. Replacing valve stem seals typically requires specialized tools and expertise.

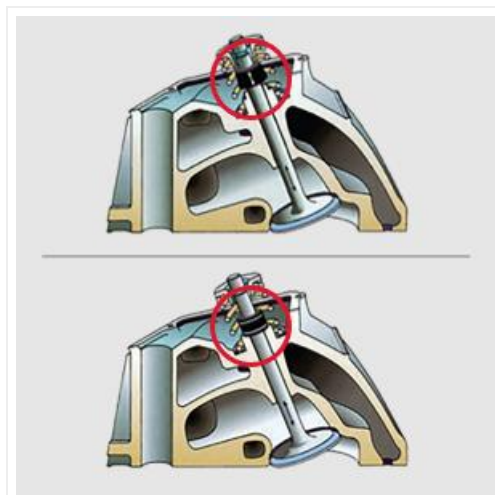


Figure 6: Blue smoke from the exhaust is a common indicator of oil burning, often due to worn valve stem seals.

6. SPECIFICATIONS

Attribute	Detail
Brand	Fel-Pro
Model Number	SS 70283-1
Material	Deflector
Color	Multicolor
Shape	Round
Item Weight	0.01 ounces
Product Dimensions	5 x 5 x 1 inches
Unit Count	1.0 Count (Set)
UPC	084113741746

7. WARRANTY AND SUPPORT

Fel-Pro products are manufactured to high-quality standards. For specific warranty information, please refer to the official Fel-Pro website or contact their customer support directly. Keep your purchase receipt as proof of purchase. For technical assistance or inquiries regarding the Fel-Pro SS 70283-1 Valve Stem Seal Set, please visit the [Fel-Pro Store on Amazon](#) or consult the official Fel-Pro corporate website.

This manual provides general information and guidelines. Always consult a qualified professional for specific vehicle repair procedures.

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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.

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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