

DSS 100hp-5x12

DSS 100hp Performance Injectors Instruction Manual

Model: 100hp-5x12

INTRODUCTION

Thank you for choosing DSS 100hp Performance Injectors. These injectors are engineered to enhance the performance of your 1991.5-1993 factory intercooled Cummins 12 valve engine. Designed with a 5-hole, 5x12 nozzle configuration and a correct 145-degree spray pattern, they ensure efficient fuel delivery and improved engine response. Please read this manual thoroughly before installation and operation to ensure proper use and longevity of your product.

SAFETY INFORMATION

Automotive work, especially involving fuel systems, can be hazardous. Always prioritize safety. It is highly recommended that installation be performed by a qualified professional mechanic.

- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the engine is cool before beginning any work.
- Disconnect the vehicle's battery to prevent accidental starting or electrical shorts.
- Relieve fuel system pressure before disconnecting any fuel lines. Refer to your vehicle's service manual for specific procedures.
- Fuel is highly flammable. Work in a well-ventilated area away from open flames or ignition sources. Have a fire extinguisher readily available.
- Dispose of old fuel and parts according to local environmental regulations.

PACKAGE CONTENTS

Please verify that all components are present and undamaged before proceeding with installation.

- DSS 100hp Performance Injectors (Quantity: 6, for 6-cylinder engines)
- Associated O-rings and Seals (if applicable)

SETUP AND INSTALLATION

This section provides a general overview of the installation process. Always consult your vehicle's specific service manual for detailed, model-specific instructions, torque specifications, and safety warnings.

Tools and Materials (Typical)

- Socket set and wrenches
- Torque wrench
- Fuel line wrenches
- Gasket scraper or cleaning tools
- Clean rags
- New gaskets and seals (if not included with injectors)
- Diesel-rated anti-seize compound (for injector threads)

Installation Steps (General)

1. **Preparation:** Park the vehicle on a level surface, engage the parking brake, and block the wheels. Allow the engine to cool completely. Disconnect both negative battery terminals.
2. **Access:** Remove any components obstructing access to the fuel injectors, such as intake piping, valve covers, or fuel lines.
3. **Relieve Fuel Pressure:** Follow your vehicle's service manual to safely relieve fuel system pressure.
4. **Disconnect Fuel Lines:** Carefully disconnect the high-pressure fuel lines from the old injectors. Use appropriate fuel line wrenches to prevent rounding fittings. Cap or plug open lines to prevent contamination.
5. **Remove Old Injectors:** Loosen and remove the injector hold-down nuts or clamps. Carefully extract the old injectors. Note their orientation if necessary.
6. **Clean Injector Bores:** Thoroughly clean the injector bores in the cylinder head to remove any carbon buildup or debris. Ensure the sealing surfaces are clean and smooth.
7. **Install New Injectors:** Apply a thin layer of diesel-rated anti-seize compound to the injector body threads (if applicable, consult service manual). Install new O-rings and seals onto the DSS 100hp Performance Injectors. Carefully insert the new injectors into their respective bores, ensuring they seat properly.
8. **Secure Injectors:** Install the injector hold-down clamps or nuts. **Torque to the manufacturer's specifications using a torque wrench. Overtightening can damage injectors or cylinder head.**
9. **Reconnect Fuel Lines:** Reconnect the high-pressure fuel lines to the new injectors. Ensure all connections are tight but do not overtighten.
10. **Reassemble:** Reinstall any removed components (valve covers, intake piping, etc.).
11. **Reconnect Battery:** Reconnect the negative battery terminals.
12. **Bleed Fuel System:** Follow your vehicle's service manual for the correct procedure to bleed air from the fuel system. This typically involves cycling the ignition key or using a hand primer pump until fuel flows freely from loosened injector lines (then retightening).
13. **Initial Start-up:** Start the engine and check for any fuel leaks. Allow the engine to idle and observe for smooth operation.



Image: A single DSS 100hp Performance Injector, showcasing its design and construction. This image illustrates the typical appearance of the product.

OPERATING CONSIDERATIONS

After installation, observe your engine's performance. A slight change in engine sound or exhaust characteristics may be noted due to the performance-oriented design of these injectors. Monitor for any unusual noises, smoke, or performance issues. Ensure your fuel system is free of air after bleeding for optimal operation.

MAINTENANCE

Proper maintenance of your vehicle's fuel system is crucial for the longevity and performance of your DSS injectors.

- **Fuel Filter:** Regularly replace your fuel filter according to your vehicle manufacturer's recommendations. A clean fuel filter prevents contaminants from reaching and damaging the injectors.
- **Fuel Quality:** Use high-quality diesel fuel. Avoid contaminated or low-grade fuel, which can lead to injector clogging or damage.
- **Engine Maintenance:** Adhere to all recommended engine maintenance schedules, including oil changes and air filter replacement, to ensure overall engine health.

TROUBLESHOOTING

If you experience issues after installing your DSS 100hp Performance Injectors, consider the following common troubleshooting steps:

Symptom	Possible Cause	Solution
Rough idle or misfire	Air in fuel system, loose injector lines, faulty injector, incorrect installation.	Bleed fuel system thoroughly. Check all fuel line connections for tightness. Re-verify injector installation. If issues persist, consult a professional.

Symptom	Possible Cause	Solution
Fuel leaks	Loose fuel line connections, damaged O-rings/seals, improperly seated injectors.	Inspect all fuel line connections and injector seals. Tighten connections to specification. Replace any damaged O-rings or seals. Ensure injectors are seated correctly.
Excessive smoke (black/white)	Improper fuel delivery, air in fuel system, engine timing issues (unrelated to injectors directly but can be exacerbated).	Ensure fuel system is properly bled. Verify engine timing is correct (consult service manual). If smoke persists, professional diagnosis is recommended.
Loss of power	Air in fuel system, restricted fuel filter, other engine issues.	Check and replace fuel filter if necessary. Bleed fuel system. Ensure no other engine components are malfunctioning.

For persistent or complex issues, it is always best to seek assistance from a certified diesel mechanic.

SPECIFICATIONS

Feature	Detail
Model Number	100hp-5x12
Compatibility	1991.5-1993 Factory Intercooled Cummins 12 Valve Engines
Nozzle Configuration	5 Hole, 5x12
Spray Pattern	145 degrees
Material	Stainless Steel
Inlet Connection Size	0.13 Inches
Inlet Connection Type	Threaded
Outlet Connection Size	0.13 Inches
Outlet Connection Type	Threaded
Number of Ports	5
Thread Type	UNC
Thread Size	0.125 inches
Valve Type	Solenoid
Manufacturer	Dieselspeedshop.com

WARRANTY INFORMATION

DSS products are manufactured to high standards. This product comes with a limited warranty against defects in materials and workmanship under normal use. The warranty period and terms may vary. Please retain your proof of purchase. For specific warranty details and claims, please contact Dieselspeedshop.com directly.

SUPPORT

For technical assistance, installation questions, or any other inquiries regarding your DSS 100hp Performance Injectors,

please contact the manufacturer:

Manufacturer: [Dieselspeedshop.com](https://dieselspeedshop.com)

Please visit their official website for contact information and further resources.