AUTOOL HTS558

AUTOOL HTS558 Automotive Engine Intake Pipe Valve Carbon Cleaning Machine User Manual

Model: HTS558

1. Introduction

The AUTOOL HTS558 is an automotive engine intake pipe valve carbon cleaning machine designed to effectively remove carbon deposits from engine intake manifolds, intake valves, and exhaust valves. This system utilizes walnut sand blasting technology, a natural and non-corrosive method, to restore engine performance by addressing issues such as unstable idling, insufficient fuel combustion, and reduced air-fuel ratio caused by carbon buildup.

Figure 1: AUTOOL HTS558 Walnut Sand De-carbon Cleaner.

2. Safety Information

Always observe the following safety precautions when operating the AUTOOL HTS558 machine:

- Wear appropriate personal protective equipment (PPE), including safety goggles, gloves, and a dust mask, to prevent injury from walnut media or carbon particles.
- Ensure the engine is completely off and cooled down before beginning any cleaning procedures.
- Always disconnect the vehicle's battery before working on electrical components.
- Operate the machine in a well-ventilated area to avoid inhaling dust.
- Ensure all connections (hoses, air source) are secure before operation to prevent leaks or disconnections under pressure.
- Do not use chemical cleaning agents with this machine, as it is designed for walnut media and chemicals can cause corrosion.
- Keep children and unauthorized personnel away from the work area.

Figure 2: Safety goggles are included and should always be worn during operation.

3. Package Contents

Verify that all components are present in the package:

- AUTOOL HTS558 Main Unit
- Sand Suction Hose
- Sandblasting Gun
- Filter Cartridge
- Goggles
- 5 x Model Adapters (various sizes)
- Certificate
- Filter Screen
- 2 x Barrels (long, short)
- 2 x Sand Suction Hose Bends
- User Manual (this document)

Figure 3: Overview of the AUTOOL HTS558 machine and its included accessories.

4. Product Overview

The AUTOOL HTS558 is an integrated unit designed for efficient carbon cleaning. Key components include:

- **Handle:** For easy transport of the unit.
- **Power Cable:** Connects the unit to a 110V power source.
- **Power Switch:** Activates and deactivates the machine.
- **Lock:** Secures the top unit to the stainless steel drum.
- **Stainless Steel Drum:** Houses the walnut media and collects carbon deposits.
- **Sand Suction Port:** Where the sand suction hose connects.
- **Sandblasting Gun:** Delivers walnut media into the engine's intake system.
- **Sandblasting Tube:** Connects the sandblasting gun to the main unit.
- **Pulley:** For mobility of the unit.

Figure 4: Labeled diagram of the AUTOOL HTS558 main unit components.

5. Setup

Follow these steps to prepare the AUTOOL HTS558 for operation:

1. **Install Sand Suction Hose:** Connect the sand suction hose to the sand suction port on the main unit. Ensure a tight and secure connection.
2. **Install Sandblasting Gun:** Assemble the sandblasting gun by attaching the metal tube to the gun handle. Connect the sandblasting gun to the sandblasting tube.
3. **Prepare Walnut Media:** Open the main unit by releasing the locks and lifting the top. Ensure the filter cartridge is properly seated. Pour the recommended walnut media (0.4-0.8mm diameter, 2-4KG) into the stainless steel drum.
4. **Secure Unit:** Replace the top unit and secure it with the locks.
5. **Connect External Air Source:** Connect an external air compressor (output pressure > 0.7MPa / 7bar / 102PSI) to the air inlet on the machine.

6. **Select Adapter:** Choose the appropriate model adapter from the provided set that fits the vehicle's intake pipe. Attach it to the end of the sand suction hose.

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Video 1: Demonstrates the setup process for the AUTOOL HTS558, including hose and gun installation, adding walnut media, and connecting the air source.

Figure 5: The AUTOOL HTS558 with its various fittings and accessories.

6. Operating Instructions

Perform the following steps to clean engine carbon deposits:

1. **Engine Preparation:** Ensure the engine is turned off. Rotate the crankshaft to close the intake valve of the cylinder you intend to clean first. This prevents walnut media from entering the combustion chamber.
2. **Inspect Carbon Deposits:** Before cleaning, visually inspect the intake valve and pipe for carbon buildup. This helps assess the severity and track progress.

3. **Position Nozzle:** Insert the sand suction hose with the appropriate adapter into the intake pipe, ensuring a snug fit to minimize media escape.
4. **Start Cleaning:** Turn on the AUTOOL HTS558 machine. While holding the sand suction hose firmly in place, activate the sandblasting gun to begin spraying walnut media. The machine will simultaneously spray media and vacuum the spent media and carbon deposits.
5. **Monitor Progress:** Clean each intake pipe for approximately 1-3 minutes, depending on the carbon accumulation. Use a borescope or visual inspection to confirm thorough cleaning.
6. **Repeat for All Cylinders:** For multi-cylinder engines, repeat the process for each intake pipe, ensuring the corresponding intake valve is closed before cleaning.
7. **Final Inspection:** After cleaning all cylinders, perform a final inspection to ensure all carbon deposits have been removed and no walnut media remains in the intake system.

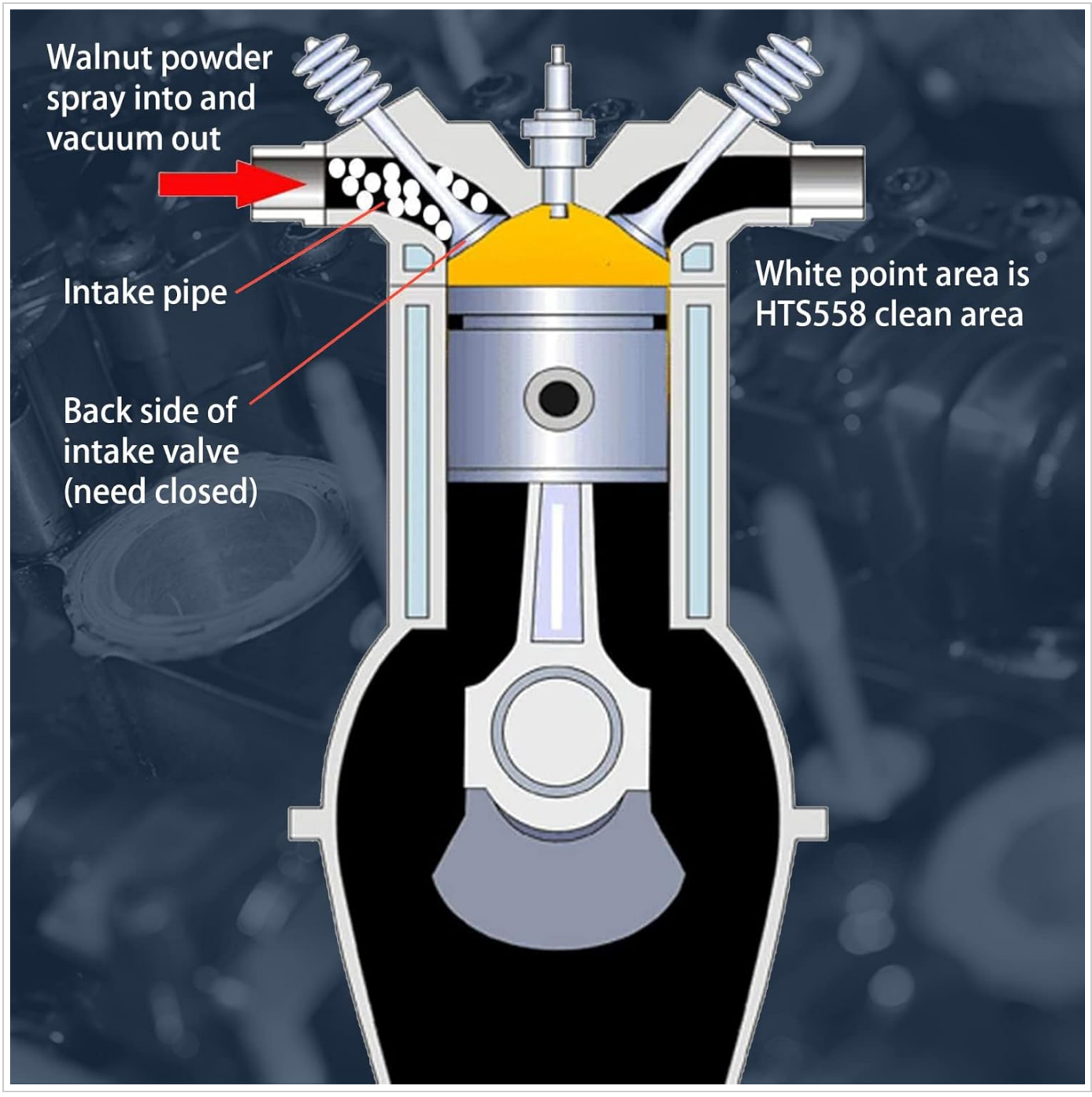

Figure 6: Illustration of walnut powder spray and vacuum action within the engine intake pipe.

Figure 7: Visual comparison of engine valves before and after carbon deposit removal using the HTS558.

Figure 8: The integrated design allows for simultaneous walnut sand grit spraying and recovery.

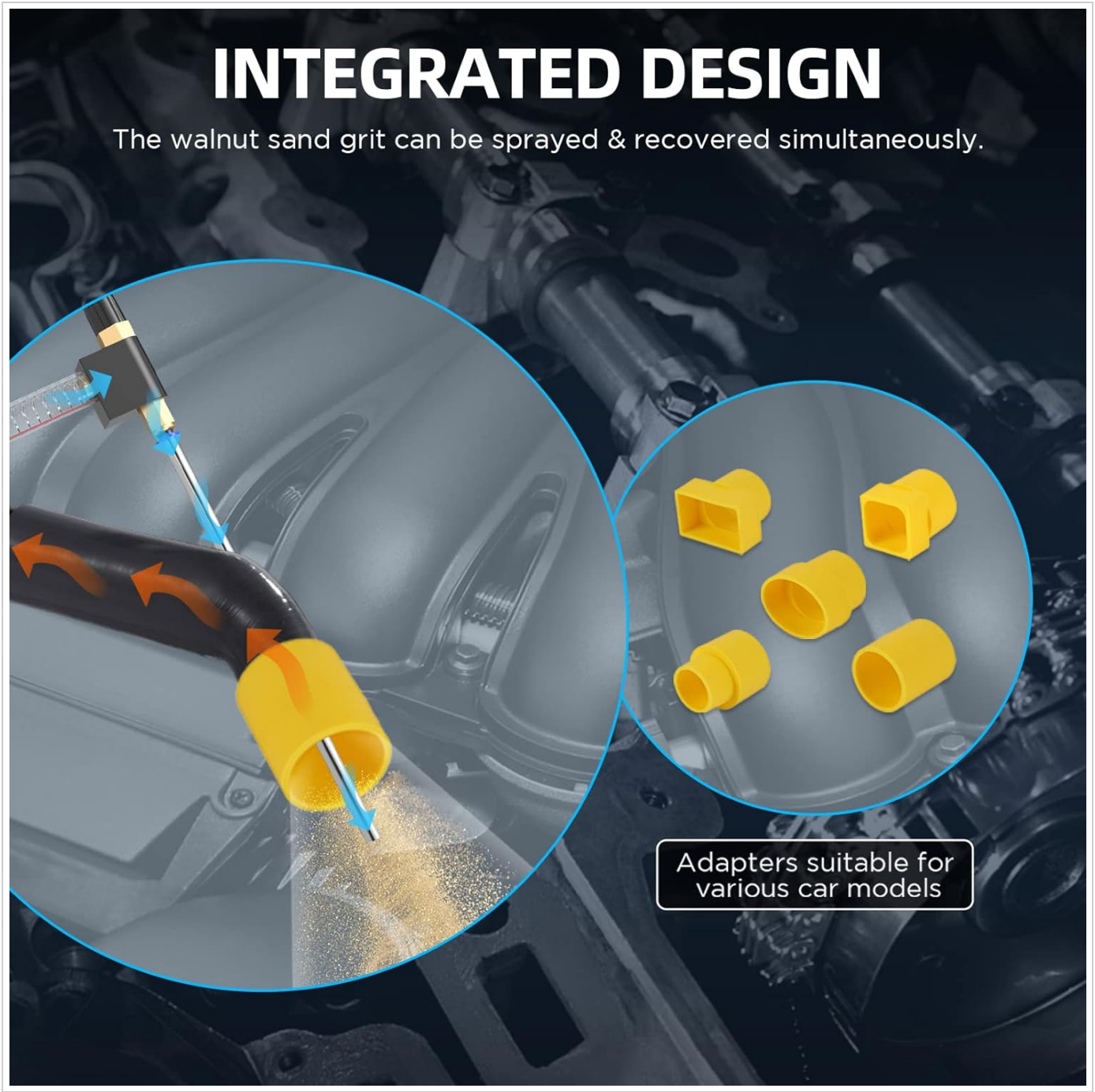

Figure 9: The machine requires an external air source for powerful and efficient carbon deposit removal.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your AUTOOL HTS558:

- **Filter Cleaning:** The machine features a built-in dust filter that separates recovered walnut sand grit from carbon deposits for recycling. Regularly check and clean the filter to maintain efficient suction and prevent clogging.
- **Walnut Media Management:** After each use, inspect the recovered walnut media. If it appears heavily contaminated with carbon, replace it with fresh media. The machine is designed to recycle clean walnut media.
- **Hose and Nozzle Inspection:** Periodically inspect all hoses, nozzles, and adapters for wear, cracks, or blockages. Replace any damaged components immediately.
- **Storage:** Store the machine in a clean, dry place away from direct sunlight and extreme temperatures.

Figure 10: The built-in dust filter separates walnut sand from carbon deposits for recycling.

8. Troubleshooting

If you encounter issues with your AUTOOL HTS558, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No suction or weak suction	Clogged filter, full collection drum, loose hose connection, insufficient air pressure.	Clean or replace filter, empty collection drum, check all hose connections, ensure air compressor meets pressure requirements.
No walnut media spray	Empty walnut media reservoir, clogged sandblasting gun, insufficient air pressure.	Refill walnut media, clear any blockages in the gun, verify air compressor pressure.

Problem	Possible Cause	Solution
Machine does not power on	Power cable not connected, power switch off, circuit breaker tripped.	Check power cable connection, ensure switch is on, reset circuit breaker.
Walnut media escaping from intake pipe	Improperly sealed adapter, incorrect adapter size, intake valve not fully closed.	Ensure adapter is tightly sealed, use correct adapter for vehicle, confirm intake valve is closed for the cylinder being cleaned.

9. Specifications

Technical specifications for the AUTOOL HTS558:

- **Applications:** All vehicle types
- **Rated Voltage:** 110V/220V
- **Rated Frequency:** 50/60HZ
- **Capacity:** 13L
- **Rated Power:** 1200W
- **Vacuum Suction:** 0.02MPa
- **Air Flow:** <300L/Min
- **Package Dimensions:** 400x400x540mm
- **Weight:** 10KG
- **Recommended Air Pump Pressure:** > 0.7MPa (7bar/102PSI)
- **Recommended Walnut Powder Diameter:** 0.4-0.8mm
- **Recommended Walnut Powder Amount:** 2-4KG (4-9LB)
- **Cleaning Time per Intake Pipe:** 1-3 minutes
- **Environment Temperature:** -10°C - +40°C
- **Relative Moisture:** < 85%

Figure 11: Detailed specifications for the AUTOOL HTS558 machine.

10. Warranty and Support

AUTOOL provides comprehensive support for the HTS558 machine:

- **3-Year Free Replacement:** If any parts of the AUTOOL HTS558 automotive engine intake pipe valve clean machine are lost, you can contact customer service for a free replacement within three years of purchase.
- **Technical Support:** Timely and effective technical support is available to solve quality problems within 24 hours. Please refer to the contact information provided with your product for support.