

# SPARK PLUG CLEANING KIT

## OPERATING MANUAL



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# 1 GENERAL INFORMATION

Read through this operating manual carefully before use and become familiar with the machine. Installation and start-up should not be carried out before reading and understanding this document. Keep this manual readily available so that you can reference it as needed.

## 1.1 What Is the Purpose of this Operating Manual?

This manual serves as an aid for the installation and operation of the product and supports the technical staff with all operating and maintenance tasks to be performed. Furthermore, this manual is aimed at preventing dangers to life and health of the user and third parties.

## 1.2 Who Is this Operating Manual Targeted to?

The operating manual provides a code of conduct for personnel tasked with the set-up, operation, maintenance, and repair of gas engines. A certain level of technical knowledge with respect to the operation of gas engines and basic knowledge of electronic ignition systems are necessary. Persons who are only authorized to operate the gas engine shall be trained by the operating company and shall be expressly instructed concerning potential hazards.

## 1.3 Which Symbols Are Used in the Operating Manual?

The following symbols are used in this manual and must be observed:



### Example

This symbol indicates examples, which point out necessary handling steps and techniques. In addition, you receive additional information from the examples, which will increase your knowledge.



### Notice

This symbol indicates important notices for the user. Follow these. In addition, this symbol is used for overviews that give you a summary of the necessary work steps.



### Warning

This symbol indicates warnings for possible risks of property damage or risks to health. Read these warning notices carefully and take the mentioned precautionary measures.

**Danger**

This symbol indicates warnings for danger to life, especially due to high voltage. Read these warning notices carefully and take the mentioned precautionary measures.

## 2 SAFETY INSTRUCTIONS

### 2.1 Safety Instructions for the Equipment

The following safety instructions must be observed to ensure safe operation.



#### Risk of Injury

Improper operation of the spark plug cleaning device can cause injury. Always follow the instructions below to avoid this hazard:

- Wear protective clothing, especially safety goggles, safety gloves, and breathing mask.
- The spark plug cleaning device must not be used in explosive atmospheres.
- Prevent access for children to compressed air tools.
- Never point the spark plug cleaning device at persons or animals.
- Connect compressed air supply via a quick connect coupling, only.
- The operating pressure must be adjusted via a pressure reducer.
- Do not use oxygen or flammable gases as an energy source.
- Use only original spare parts.
- Before performing maintenance or troubleshooting tasks, disconnect device from compressed air supply.
- Take precautions to prevent other persons from being disturbed or endangered (generation of dust).
- Ensure that the blasting grit is collected to be reused or discarded for environmentally compatible disposal.
- Do not use silica sand (toxic dust causing silicosis).
- Never open blasting grit container by force.
- Do not use flammable materials.



#### Danger of Destruction

The spark plug cleaning kit must not be used to clean pre-chamber spark plugs. The holes of the pre-chamber will be clogged during the cleaning process.

### 2.2 Proper Disposal

After the expiration of its service life, MOTORTECH equipment can be disposed of with other commercial waste, or it may be returned to MOTORTECH. We will ensure its environmentally friendly disposal.

## 3 INTENDED USE

### 3.1 Function Description

The kit consists of a spark plug cleaning device with various nozzles that serve to pick up spark plugs to be cleaned. The high pressure of the blasting grit removes oil residues and deposits in the electrode area of the spark plug. After cleaning, the electrode gap should be readjusted. Please refer to the respective manufacturer instructions.

The spark plug cleaning device does not produce dust, making it environmentally friendly. The blasting grit used is returned to the dust collector bag and can be reused.

### 3.2 Application Range

The spark plug cleaning kit is designed for cleaning spark plugs without pre-chamber within the scope of the regular maintenance cycle. MOTORTECH does not assume liability for any other uses of the spark plug cleaning device.

## 4 PRODUCT DESCRIPTION

### 4.1 Technical Data

The spark plug cleaning device has the following mechanical characteristics.

Characteristic	Value
Dimensions of the device	330 mm x 106 mm x 210 mm (13" x 4.2" x 8.3") (length x width x height)
Weight (without blasting grit)	0.82 kg (1.8 lbs)
Air consumption	390 l/min (13.8 cfm) at 6 bar (87 psi) operating pressure 420 l/min (14.9 cfm) at 8 bar (116 psi) operating pressure
Operating pressure	6 to 8 bar (87 to 116 psi)
Required air quality	purified, oil-free
Power output of the compressor	250 l/min (8.85 cfm) output or higher, which corresponds with a motor output of 2.5 kW
Recommended hose diameter (internal)	6 mm (0.24 ")
Blasting grit container volume	0.7 l (42.72 in <sup>3</sup> )
Blasting grit grain size	0.2 mm to 0.8 mm (0.008" to 0.031")

### Scope of Supply

The supply scope of the spark plug cleaning kit includes the following parts:

- Transport case
- Spark plug cleaning device
- Three cleaning nozzles for spark plugs with M14-, M18 and 7/8"-thread
- Blasting grit in separate container



## 4.2 Overview



Item No.	Description
1	Spark plug cleaning device
2	Attachment adapter
3	Dust collector bag
4	Three cleaning nozzles for spark plugs
5	Blasting grit container
6	Blasting grit

# 5 OPERATION

## 5.1 Start-Up

Before using the spark plug cleaning device, observe the safety instructions in chapter *Safety Instructions for the Equipment* on page 6.

1. Select the required cleaning nozzle and insert it in the attachment adapter.



2. Unscrew the blasting grit container by rotating it clockwise.



3. Fill container with blasting grit.
4. Refit the blasting grit container to the attachment adapter by screwing it on counter-clockwise.
5. Connect the spark plug cleaning device to a compressor or compressed air source with adequate power output using a flexible compressed air hose (internal dia. 6 mm (0.24"), length max. 10 m (33') with quick connect coupling, see *Technical Data* on page 8).



- ▶ The spark plug cleaning device will then be ready to use and must be used with the required level of care.



#### **Risk of Injury**

If the spark plug cleaning device is ready to use, and the trigger is actuated, the blasting grit will be ejected with high pressure from the cleaning nozzle. Make sure that the trigger cannot be actuated unintentionally.

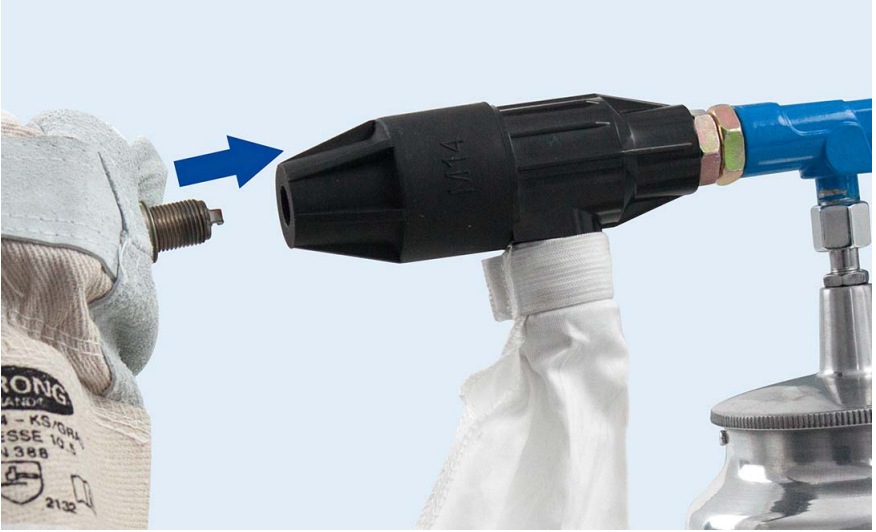
## **5.2 Spark Plug Cleaning Process**

Before using the spark plug cleaning device, observe the safety instructions in chapter *Safety Instructions for the Equipment* on page 6.

According to the thread sizes of spark plugs, the cleaning nozzles are labeled with M14, M18 and 7/8".

## 5 OPERATION

1. Select the cleaning nozzle suitable for the thread size of the spark plug you want to clean.
2. Attach the cleaning nozzle as described in section *Start-Up* on page 10.
3. Screw the threaded spark plug end into the cleaning nozzle.



4. Hold the spark plug tightly during the entire cleaning process.

**Risk of Injury**

The high pressure applied during cleaning can push the spark plug out of the nozzle. The spark plug and blasting grit are then ejected at high speed and can cause injury. Therefore, hold the spark plug tightly during the entire cleaning process.

5. Actuate the trigger in spurts to perform the cleaning.



- ▶ The blasting grit is suctioned in and ejected to blast the spark plug surface. The nozzle prevents the blasting grit from escaping. The blasting grit is collected in the dust collection bag.
6. Check the result after a few cleaning blasts. All solid deposits and oil residue should have been lifted off the surface.

## 5 OPERATION

7. Remove the loose residues with compressed air.



8. Repeat the cleaning process starting with step 3 as needed until the spark plug is free from residues.
9. When you reuse the cleaned spark plug, adjust the electrode gap.



### **Empty dust collector bag regularly**

The dust collector bag must be emptied regularly. Open the hook and loop fastener. The blasting grit can be reused several times. New blasting grit can be purchased from MOTORTECH (see product guide under [www.motortech.de](http://www.motortech.de)).

## 6 MAINTENANCE

### 6.1 Customer Service Information

You can reach our customer service during business hours at the following phone and fax number, or by e-mail:

Phone: +49 5141 93 99 0  
Fax: +49 5141 93 99 99  
Email: [service@motortech.de](mailto:service@motortech.de)

### 6.2 Spare Parts and Accessories

For spare parts and accessories, please refer to our current Product Guide, which is available for you to download on the Internet at [www.motortech.de](http://www.motortech.de).

### 6.3 Returning Equipment for Repair / Inspection

Enclose the following information when returning the equipment for repair and inspection:

- Name of company
- Name and location at which the equipment is installed
- Name and phone number of a contact person
- Engine type
- Part and serial numbers of the device
- Description of the defect/error
- Instructions concerning the desired type of repair/inspection

Providing this information will ensure the speedy and smooth processing of your repair order.

Send the equipment to one of the two addresses below or to the nearest MOTORTECH representative:

#### MOTORTECH GmbH

Hogrevestrasse 21-23  
29223 Celle

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Tel. +49 51 41 - 93 99 0  
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[info@motortechamericas.com](mailto:info@motortechamericas.com)

## 6 MAINTENANCE

### 6.4 Instructions for Packaging the Equipment

For return shipment, equipment should be packaged as follows:

- Use packaging material that does not damage the equipment surfaces.
- Wrap the equipment with sturdy materials and stabilize it inside the packaging.
- Use sturdy adhesive film to seal the packaging.



## Original MOTORTECH Accessories for Stationary Gas Engines

As a supplier, MOTORTECH develops, produces and distributes accessories as well as spare and wearing parts for nearly all kinds of stationary gas engines worldwide: ignition control and monitoring, industrial spark plugs and high tension leads, wiring systems and gas regulation – from detonation to speed control and complete gas engine management. On-site support and special training courses complete our service.



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