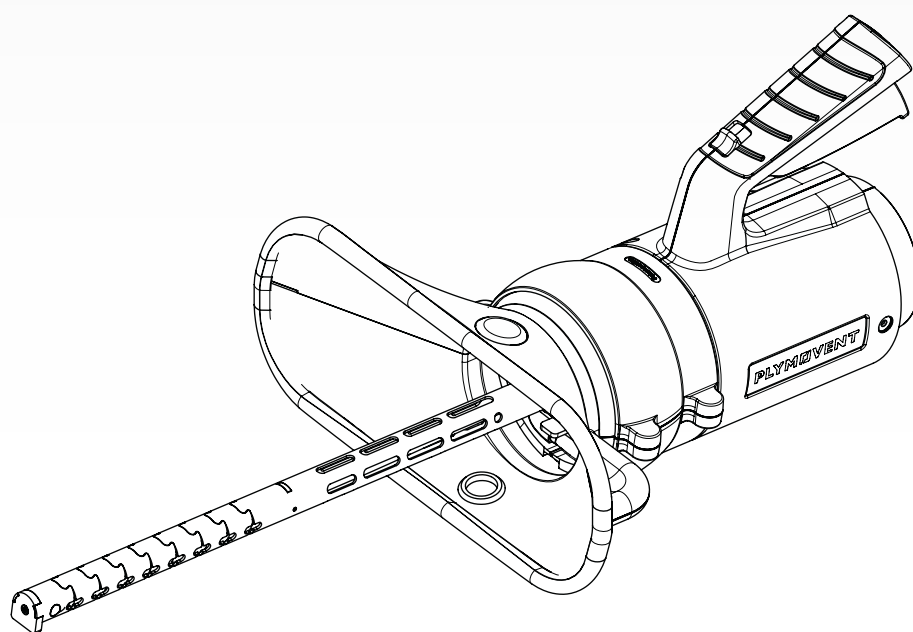


Universal nozzle

INTERNAL GRABBER



EN

Installation manual

EN – ORIGINAL INSTRUCTION

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To improve comprehension for people whose first language is not English, we have written parts of this manual in Simplified Technical English (STE). STE is a controlled language originally developed for aerospace industry maintenance manuals. It offers a carefully limited and standardized subset of English, along with specific writing rules.

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PREFACE

Using this manual

Pictograms and symbols

The following pictograms and symbols are used in this manual:

	TIP Suggestions and recommendations to simplify carrying out tasks and actions
	ATTENTION A remark with additional information for the user. A remark brings possible problems to the user's attention.
	CAUTION! Procedures, if not carried out with the necessary caution, could damage the product, the workshop or the environment.
	Personal protective equipment (PPE) Instruction to use respiratory protection when you do service, maintenance and repair jobs, as well as during functional testing. We recommend to use a half-face respirator according to DIN EN 141/143, protection class P3.
	Personal protective equipment (PPE) Instruction to use protective gloves when you do service, maintenance and repair jobs.

Text indicators

Listings indicated by "-" (hyphen) concern enumerations.
Listings indicated by "•" (bullet point) describe steps to perform.

Service and technical support

For information about specific adjustments, maintenance or repair jobs which are not dealt with in this manual, please contact the supplier of the product. He will always be willing to help you. Make sure you have the following specifications at hand:

- product name
- serial number

You can find these data on the identification plate.

Product indications

Unless specifically stated, the contents of this manual applies to the Internal Grabber.

1 INTRODUCTION

1.1 Identification of the product

The identification plate contains, among other things, the following data:

- product name
- serial number

1.2 General description

Universal exhaust extraction nozzle for almost all tailpipes including flush mounted tailpipes. The nozzle clamps tightly inside the tailpipes hence staying in position. The Internal Grabber is able to host a variety of hose diameters. It includes a soft edged, sliding and pivoting skirt with optimizing docking possibilities while maximizing exhaust extraction. The Internal Grabber comes standard with an automatic shut-off damper as well as a magnetic mounting tripod for easy out of way storage.

1.3 Technical specifications

■ Physical dimensions and properties

Material	PA-6 (nylon) with 15% glass filling
Colour	Iron grey with yellow support colours
Weight	3,1 kg (6.8 lbs)
Dimensions (without beak)	324 x 253 x 346 mm (12.8 x 10 x 13.6 in.)

■ Ambient conditions

Max. operating temperature:	150°C (300°F)
Max. relative humidity	80%
Outdoor use allowed	yes
Storage conditions	• -5°C - 30°C (23°F - 100°F) • relative humidity max. 80%

■ Options and accessories

Coupler kit | reducers | increasers | hose

■ Where used

All vehicles with a tailpipe of Ø 25 - 75 mm (1 - 3 in.)

■ Scope of supply

Internal Grabber | Wall mount tripod with magnetic feet

■ Order information

Article no.	0000120423
Number/package	1

■ Shipping data

Gross weight	4 kg (8.8 lbs)
Packing dimensions	400 x 400 x 220 mm (16 x 16 x 9 in.)
Harmonized Tariff Code	84219990

2 PRODUCT DESCRIPTION

2.1 Product components

The product consists of the following main components and elements:

- A Handle
- B Skirt
- C Pull rod
- D Beak
- E Wall mount

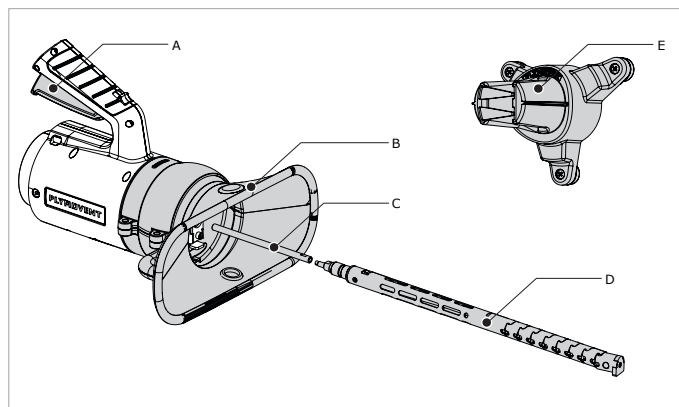


Fig. 2.1 Product components

3 SAFETY INSTRUCTIONS

General

The manufacturer does not accept any liability for damage to the product or personal injury caused by ignoring of the safety instructions in this manual, or by negligence during installation, use, maintenance, and repair of the product mentioned on the cover of this document and any corresponding accessories. Specific working conditions or used accessories may require additional safety instructions. Immediately contact your supplier if you detect a potential danger when using the product.

The user of the product is always fully responsible for observing the local safety instructions and regulations. Observe all applicable safety instructions and regulations.

User manual

- Everyone working on or with the product, must be familiar with the contents of this manual and must strictly observe the instructions therein. The management should instruct the personnel in accordance with the manual and observe all instructions and directions given.
- Do not change the order of the steps to perform.
- Keep the manual with the product.

Users

- The use of this product is exclusively reserved to authorised, trained and qualified users. Temporary personnel and personnel in training can only use the product under supervision and responsibility of skilled engineers.
- Stay alert and keep your attention to your work. Do not use the product when you are under the influence of drugs, alcohol or medicine.
- The product is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Children must be supervised not to play with the product.

Technical specifications

Do not change the specifications given in this manual.

Modifications

Modification of (parts of) the product is not allowed.

Installation

- The installation of this product is exclusively reserved to authorised, trained and qualified engineers.
- During installation, always use Personal Protective Equipment (PPE) to avoid injury. This also applies to persons who enter the work area during installation.
- Use sufficient climbing gear and safety guards when working on a higher level than 2 metres (local restrictions may apply).
- Do not install the product in front of entrances and exits which must be used for emergency services.
- Mind any gas and water pipes and electric cables.
- Make sure that the workspace is well illuminated.
- Stay alert and keep your attention to your work. Do not install the product when you are under the influence of drugs, alcohol or medicine.
- Air containing particles such as chromium, nickel, beryllium, cadmium, lead etc., should never be recycled. This air must always be brought outside the working area.

Use

- Inspect the product and check it for damage. Verify the functioning of the safety features.
- Check the working environment. Do not allow unauthorised persons to enter the working environment.
- Protect the product against water and humidity.

- Make sure the room is always sufficiently ventilated; this applies especially to confined spaces.
- Make sure that the workshop, in the vicinity of the product, contains sufficient approved fire extinguishers (suitable for fire classes ABC).

Service, maintenance and repairs

- Obey the maintenance intervals given in this manual. Overdue maintenance can lead to high costs for repair and revisions and can render the guarantee null and void.
- Always use Personal Protective Equipment (PPE) to avoid injury. This also applies for persons who enter the work area.
- Make sure the room is sufficiently ventilated.
- Use tools, materials, lubricants and service techniques which have been approved by the manufacturer. Never use worn tools and do not leave any tools in or on the product.
- Use sufficient climbing gear and safety guards when working on a higher level than 2 metres (local restrictions may apply).
- Clean the area afterwards.

4 INSTALLATION

4.1 Tools and requirements

You need the following tools and requirements to install the unit:

- PH2 screwdriver
- Wrench size 7 & 10 mm



4.2 Unpacking

The package contains:

- Grabber
- Beak
- Pull rod
- Wall mount



4.3 Mounting the pull rod

The pull rod is inserted in the Grabber during transport.

- Remove the pull rod from the Grabber by continuously operating the handle (ca. 25 times). Refer to fig. 4.1.

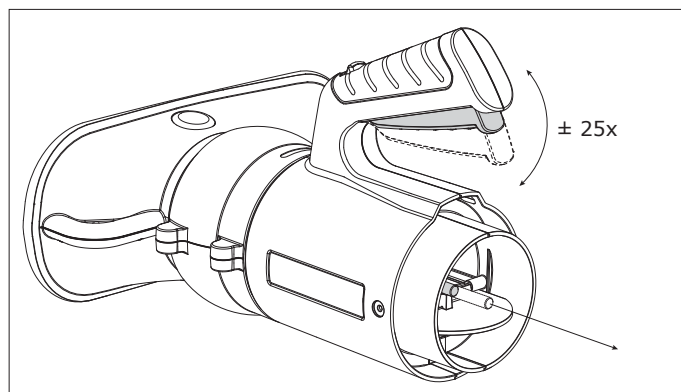


Fig. 4.1 Removing the pull rod

- Screw the pull rod onto the beak. Hold wrench 10 and rotate/tighten the pull rod with wrench 7. Refer to fig. 4.2.

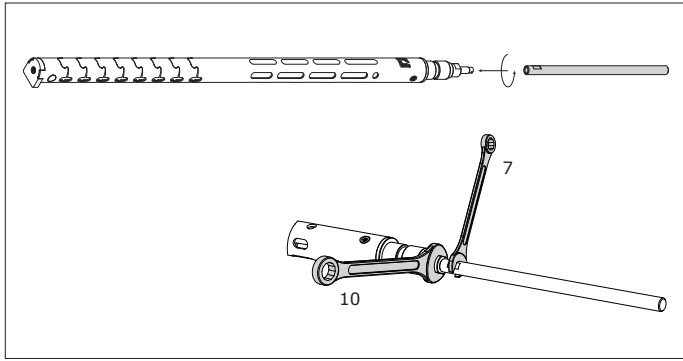


Fig. 4.2 Mounting the pull rod



Do not operate the handle when inserting the pull rod.

- Hold the Grabber and insert the beak with pull rod. Press tightly until the beak has clicked firmly in place. Press the button on the mechanism to ease the operation. Refer to fig. 4.3 below.

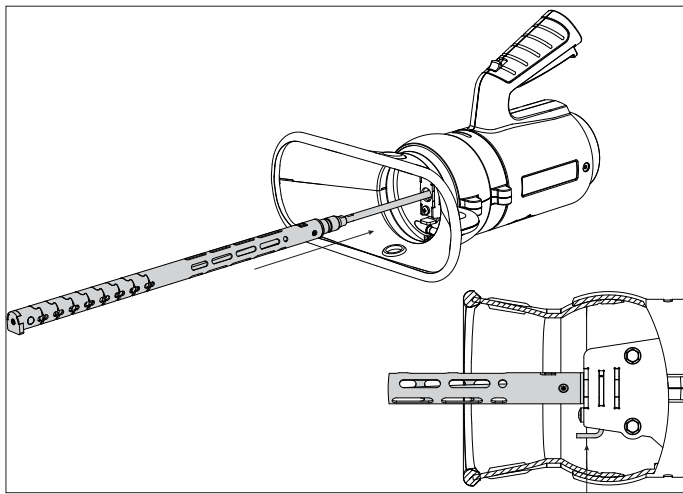


Fig. 4.3 Inserting the beak with pull rod

4.4 Mount the extraction hose on the Grabber

100 mm (4 in.) hose

- Mount the hose as far as possible on the hose adapter on the Grabber.
- If necessary, remove 15 mm (0.6 in.) of spiral.
- Fasten the hose with a hose clamp. Use the designated holes in the Grabber to fasten the clamp. Refer to fig. 4.4.

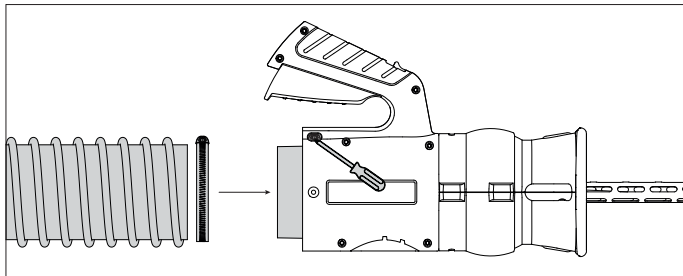


Fig. 4.4 Mounting a 100 mm hose.

75, 125 or 150 mm (3, 5 or 6 in.) hose

For a 75, 125 or 150 mm (3, 5 or 6 in.) hose a reducer or increaser is required to connect the hose to the Grabber.

- If necessary, remove 15 mm (0.6 in.) of spiral.
- Connect the reducer/increaser to the Grabber and fasten with the supplied screws (2x). Refer to fig. 4.8.

- Mount the extraction hose to the reducer/increaser and fasten with a hose clamp. Refer to fig. 4.5.

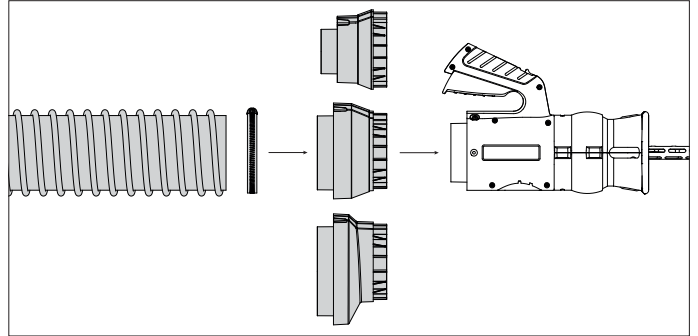


Fig. 4.5 Mounting a hose using a reducer/increaser

4.5 Wall mount

The Grabber can be stored using the delivered wall mount. The wall mount is suited with three magnets.

- Place the wall mount on a flat surface that is compatible with the magnets. Make sure that two magnets are facing up (Plymovent logo on top).
- Insert the Grabber on the wall mount. Refer to fig. 4.6.

It is also possible to install the wall mount directly on the wall.

- Remove the magnets using a PH2 screwdriver.
- Place the wall mount on a flat surface that is able to bear the weight of the Grabber. Mount to the wall with two sides facing up (Plymovent logo on top).
- Mount the Grabber.



The Grabber can be inserted on the wall mount with the beak facing up or down. Refer to fig. 4.7.

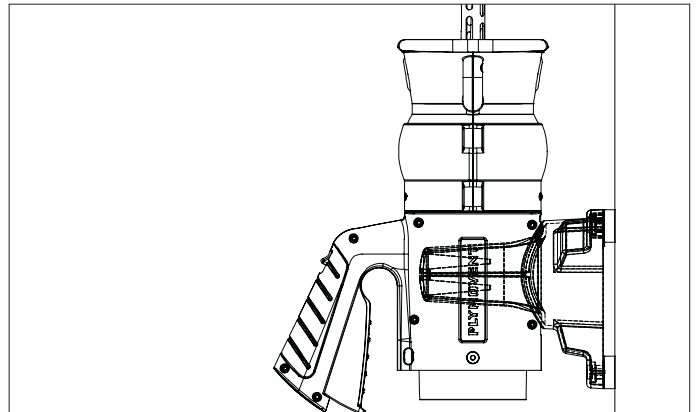


Fig. 4.6 Inserting the Grabber on the wall mount

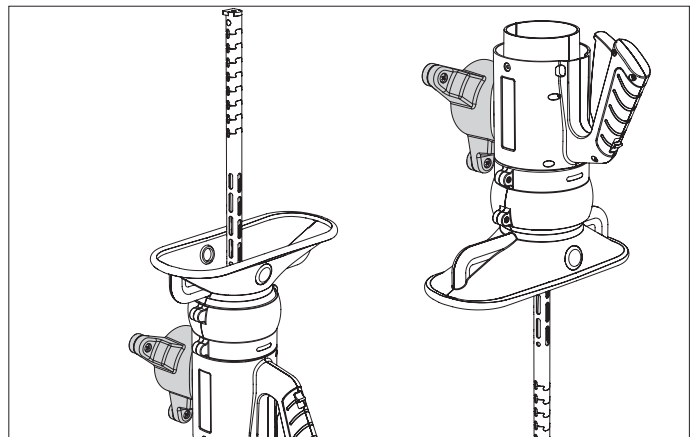


Fig. 4.7 The Grabber can be mounted facing up or down

4.6 Coupler kit

In case of two exhaust pipes on the vehicle a coupler kit is available. The coupler kit eliminates the need the use of a Y piece. A secondary Grabber is needed to use the coupler kit.

For the installation of the coupler kit, perform the following steps:

- Mount the reducer to the back side of the secondary Grabber. Fasten the reducer with the supplied screws in the designated holes in the Grabber. Refer to fig. 4.8.

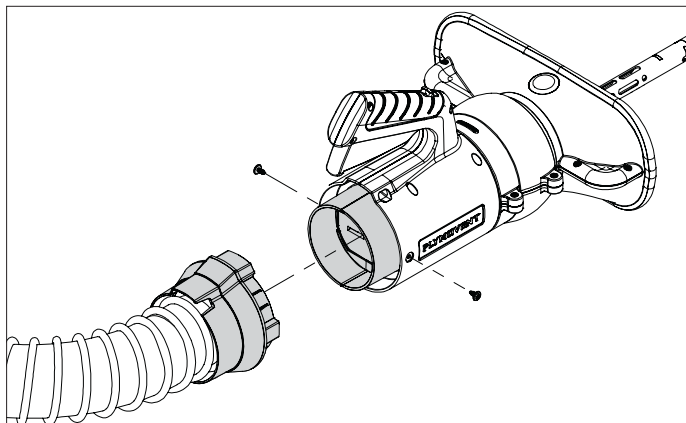


Fig. 4.8 Mounting the reducer to the Grabber



The coupler can only be connected to the Grabber in one specific orientation. Follow the guide notches on the valves.

- Connect the coupler to the other Grabber by inserting it into the butterfly valves on the bottom of the Grabber. Refer to fig. 4.9.

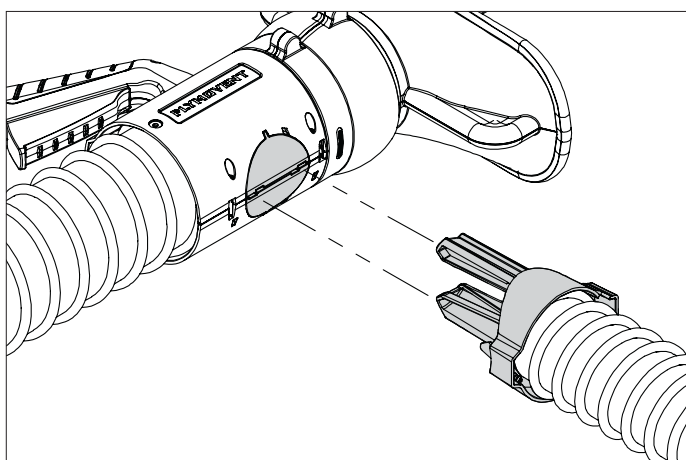


Fig. 4.9 Connecting the coupler to the other Grabber

The connection is successful when the bayonet mount clicks into place inside the body of the Grabber. This connection results in a virtual 50/50 air flow split between the two Grabbers. Refer to fig. 4.10 below.

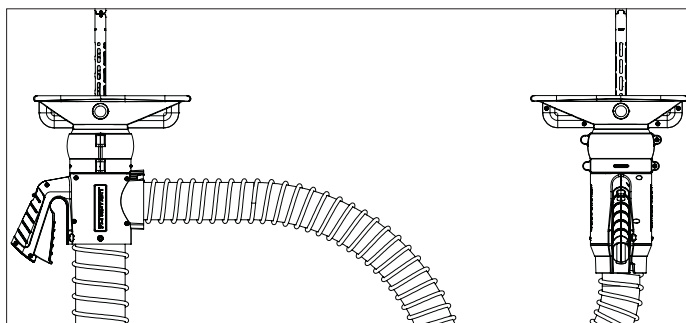


Fig. 4.10 Two Grabbers connected

Removing the coupler

- To remove the coupler, press the release button and gently slide out the coupler from the Grabber. Refer to fig. 4.11.

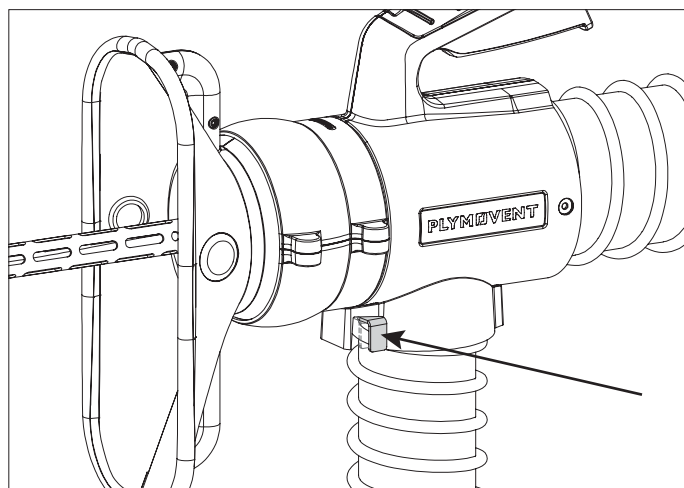


Fig. 4.11 Removing the coupler from the Grabber

Wall mount

The coupler kit comes with a wall mount to store the coupler.

Mount the coupler wall mount to the wall by using the magnets or fasten it to the wall using screws. Make sure the Plymovent logo is facing up.

Mount the wall mount for the secondary Grabber next to the coupler wall mount by using the magnets or fasten it to the wall using screws.

Store the coupler and the secondary Grabber as shown in fig. 4.12 below.

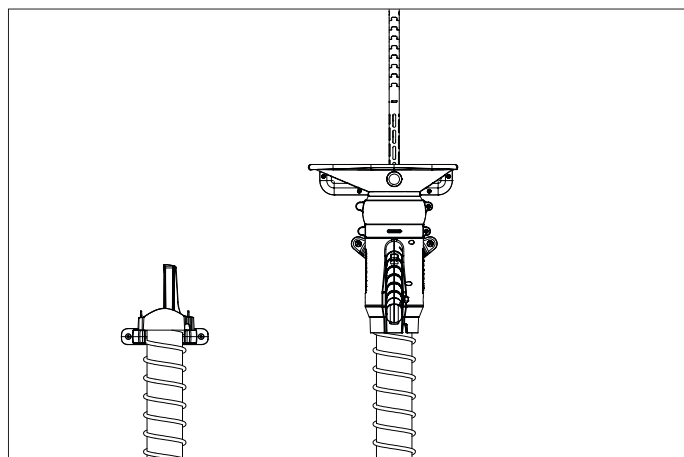


Fig. 4.12 Storing the coupler and the secondary Grabber

5 USE

Once the Grabber is set up, it is ready to connect to the vehicle.



Before using the Grabber, check if the release function works properly. Refer to paragraph 'releasing the beak' and fig. 5.7.

- Insert the beak as far as possible into the exhaust pipe.
- Squeeze handle firmly and repeatedly until there is sufficient friction between the beak and the exhaust pipe. You can squeeze the handle as tight as you like to optimize the grip of the Internal Grabber in the tailpipe. Refer to fig. 5.1, 5.2 and 5.3.



The damper at the rear opens automatically when the handle is pushed.

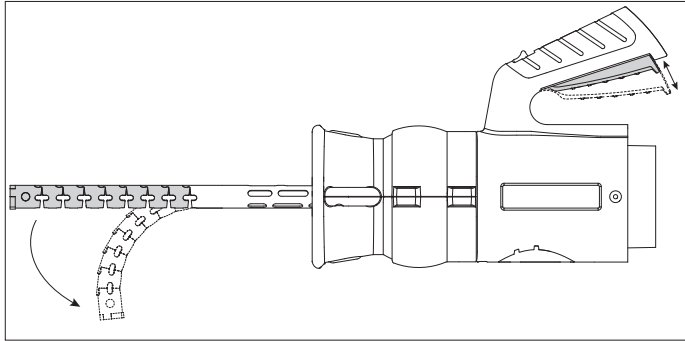


Fig. 5.1 Operating the handle to connect the Grabber

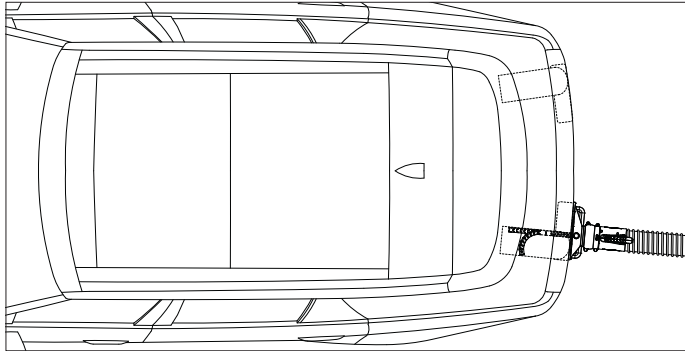


Fig. 5.2 Connection to the vehicle

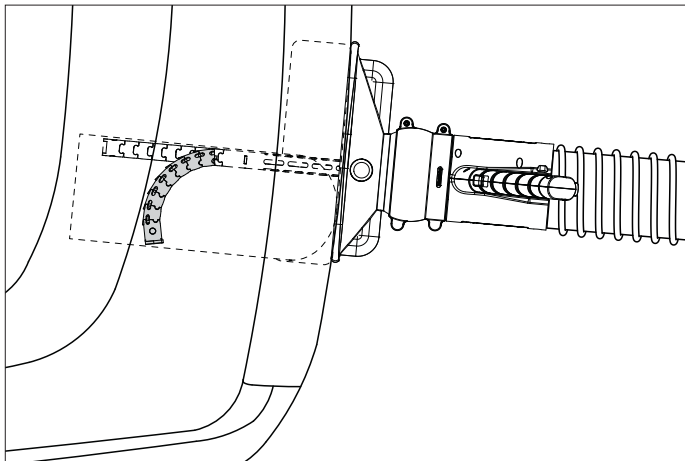


Fig. 5.3 Close up of the connection to the vehicle



Make sure to release the handle to the starting position between operations for the best result.

Adjusting the skirt

The skirt can swivel up, down and sideways and translate up and down in order to create maximum coverage. Refer to fig. 5.4.

- Position the skirt as close as possible to the exhaust pipe.
- If necessary rotate the skirt so that most of the exhaust pipe is covered by the skirt. Refer to fig. 5.5 and 5.6.

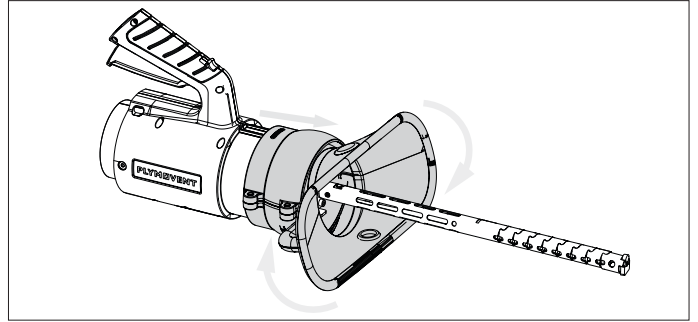


Fig. 5.4 Flexibility of the skirt to gain maximum coverage

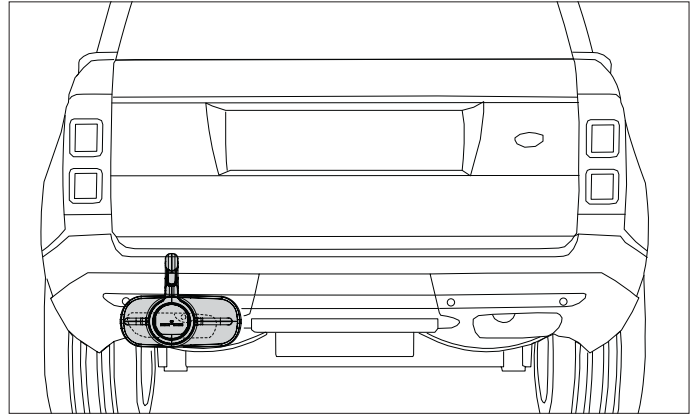


Fig. 5.5 Using the skirt to cover the exhaust pipe

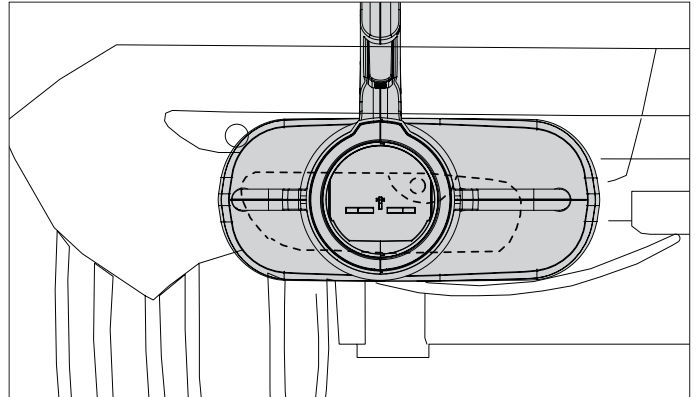


Fig. 5.6 Close up of skirt on the exhaust pipe

Releasing the beak

Refer to fig. 5.7.

- To release the Grabber, squeeze the handle (1) slightly before operating the release button (2). Lastly release the handle (3). The rear valve will close automatically.
- Withdraw the beak from the exhaust pipe carefully.

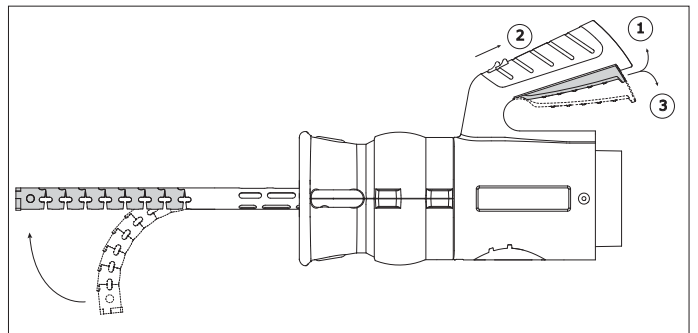


Fig. 5.7 Soft release of the beak

Use of measurement tools

It is possible to use measurement tools (gas and/or particle probes) while using the Internal Grabber.

- Make a cut out in the grommet. Refer to fig. 5.6.
- Insert measuring device.
- Connect Grabber to vehicle.

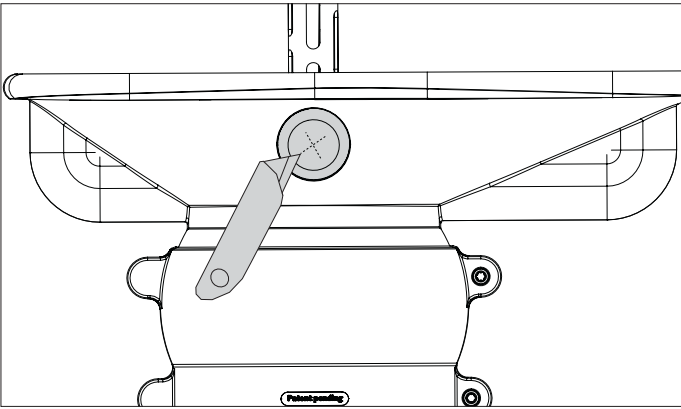


Fig. 5.8 Preparing the grommet for the use of gas and/or particle probes

6 MAINTENANCE

6.1 Periodic maintenance

The product has been designed to function without problems for a long time with a minimum of maintenance. In order to guarantee this, some simple, regular maintenance and cleaning activities are required which are described in this chapter. If you observe the necessary caution and carry out the maintenance at regular intervals, any problems occurring will be detected and corrected before they lead to a total breakdown.



The maintenance activities in the table below can be carried out by the user.

Component	Action	Frequency: every X months	
		X=6	X=12
Grabber	Cleaning		X
Beak	Checking for damage	X	
Handle	Check if the tension in the handle is still sufficient to hold the beak	X*	

* Before every use

6.2 Adjust the handle setting

If the connection between the Grabber and the tailpipe is weak it is possible that there is some free play in the handle. Slightly squeeze the handle until you can feel friction.

To adjust the handle setting, perform the following steps:

- Turn the adjustment bolt on the front side of the mechanism using a PH2 screwdriver.
Clockwise: increase free play
Counterclockwise: decrease free play.

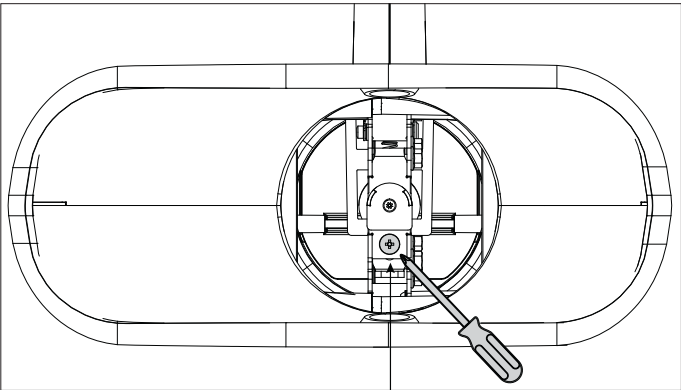


Fig. 6.1 Adjusting the handle setting

6.3 Removing the beak

In case the beak or the pull rod needs repairing or replacing, follow the instructions below to remove the beak. Refer to fig. 6.2.

- Operate the release button on the Grabber (A) and the release button on the mechanism (B) simultaneously.
- Withdraw the beak while still operating the release buttons.
- Let go of the release buttons.

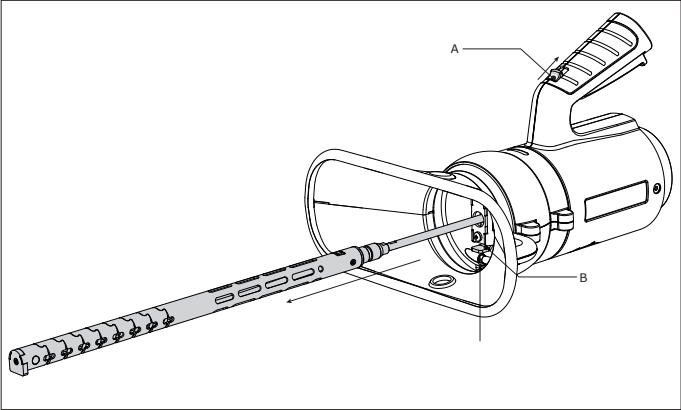


Fig. 6.2 Removing the beak from the Grabber

7 TROUBLESHOOTING

If the Grabber does not function (correctly), consult the checklist below to see if you can remedy the error yourself. Should this not be possible, contact your supplier.



WARNING
Obey the safety regulations that are written in chapter 3 when you carry out the activities below.

Problem	Possible cause	Solution
There is no air flow	Ventilator is not turned on	Turn on ventilator
	Beak is not operated enough, 4 - 5 pump actions required to open the valve	Operate the beak by squeezing the handle in order to open the rear valve
	Hose is not fitted correctly	Adjust the hose correctly

Problem	Possible cause	Solution
The Grabber is not fixed securely in the exhaust pipe	Handle setting is not set correctly	Adjust handle setting correctly, refer to paragraph 6.2
	The pull rod is damaged	Replace pull rod
	Gripper plate is damaged	Replace Gripper plate
	The handle has not been pushed firmly enough.	Firmly press the handle to secure a tight connection between the Grabber and the exhaust pipe
The air flow through the Grabber is low	Rear valve is not completely open	Position the pull rod correctly in the beak
	Beak is not positioned correctly	Adjust the position of the beak correctly

DECLARATIONS

CE & UKCA declaration of conformity for machinery

We, Plymovent, Koraalstraat 9, 1812 RK Alkmaar, the Netherlands, herewith declare, on our own responsibility, that the product(s):

- Exhaust Nozzle

which this declaration refers to, is/are in accordance with the conditions of the following Directive:

- CE 2006/42/EU Machine Directive
- UKCA Supply of Machinery (Safety) Regulations 2008

and is/are in conformity with the following harmonized standard(s) and/or other such normative documents + amendments, if any:

EN 12100:2010

Alkmaar, the Netherlands, August 2nd, 2022



Kees Janssen
Product Manager EE

8 SPARE PARTS

Position	Article number	Description
1 and 3	0000120442	Beak complete
2	0000120446	Tension cable
3	0000120447	Pull rod
4	0000120445	Gripper plate
5	0000120421	Wall mount
6	0000119980	Grommet

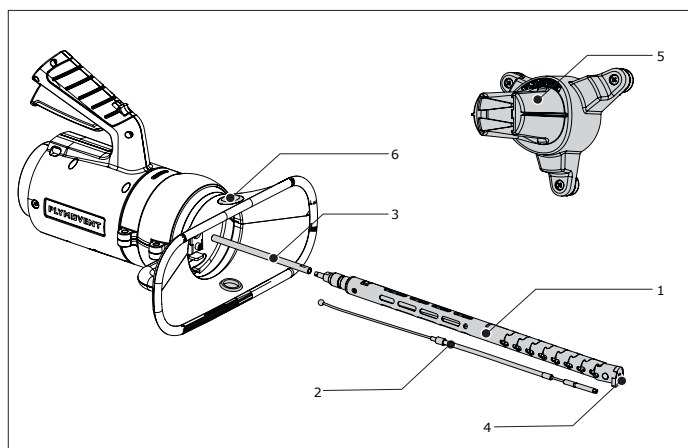


Fig. 8.1 Spare parts

9 DISPOSAL

After life of the product, dispose it of in accordance with federal, state or local regulations.

NOTES

