

Shock absorber removal equipment

MADE IN ITALY

Rev.092021

FG 750/1P



FG 750/2P



CE

SHOCK ABSORBER REMOVAL EQUIPMENT

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1. GENERAL WARNINGS



Before using the machine, carefully read the warnings and instructions contained in this manual.

Improper or unsafe use of this machine can be dangerous or cause death or serious bodily injury. This manual of warnings and instructions is an integral part of the product and must be kept by the user for any future consultation. It contains important informations on the safe use of the product.



Intended use.

This machine and its accessories must be used only for the purpose for which it is designed. This machine is a pneumatic equipment designed to mount or dismount the shock absorbers of cars. Any different use could cause damage to people, animals or things and is considered an improper and unreasonable act. The manufacturer cannot be held responsible for any damage caused by improper, erroneous and unreasonable use, such as: failure to comply with the instructions and warnings provided, use of non-original accessories, unauthorized modifications or interventions on the product, etc.

2. TECHNICAL FEATURES AND DESCRIPTION OF THE EQUIPMENT

The shock absorber removal equipment is a machine composed of a metal structure on which a pneumatic piston (or two depending on the model) acts fixedly connected to the structure and whose extension or compression through the action of compressed air, allows compression or the release of the shock absorber spring positioned in the special coupling brackets of the shock absorber remover. Therefore, the shock absorber removal equipment is a pneumatic machine designed to mount or dismount the shock absorbers of cars.

Below is the table containing the technical specifications.

MODEL:	FG 750/1P
NUMBER OF PISTONS:	1
NOMINAL WORKING PRESSURE:	minimum: 5 bar; maximum: 10 bar
COMPRESSION FORCE:	at 5 bar: 585 kgf at 6 bar: 702 kgf at 7 bar: 819 kgf at 8 bar: 936 kgf at 9 bar: 1053 kgf at 10 bar: 1170 kgf
PISTON STROKE:	300 mm
SIZES:	55 x 54 x h134 cm
NET WEIGHT:	79 kg








MODEL:	FG 750/2P
NUMBER OF PISTONS:	2
NOMINAL WORKING PRESSURE:	minimum: 5 bar; maximum: 10 bar
COMPRESSION FORCE:	at 5 bar: 1170 kgf at 6 bar: 1404 kgf at 7 bar: 1638 kgf at 8 bar: 1872 kgf at 9 bar: 2106 kgf at 10 bar: 2340 kgf
PISTON STROKE:	300 mm
SIZE:	55 x 54 x h134 cm
NET WEIGHT:	89 kg

NOISE EMISSIONS (EN ISO 11202): at 1 meter from user position the noise emitted by the machine is less than 70 dB (A).

3. IMPORTANT SAFETY INSTRUCTIONS

Be very careful when using the shock absorber removal equipment because the compression springs are a potential danger (the danger is determined by the compression force itself).

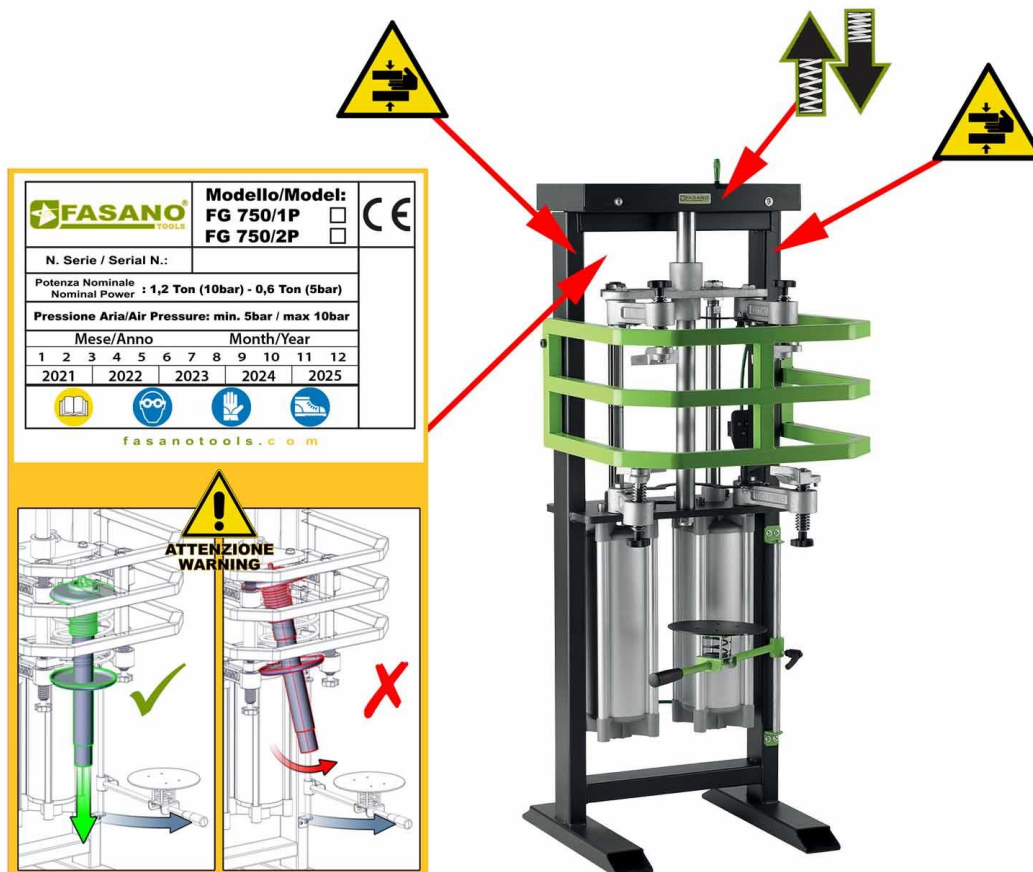
When using this machine, always follow the following safety instructions to reduce the risk of personal injury:

	<p>Always wear safety glasses with side protection when using the machine in accordance with current regulations.</p> <p>Pneumatic equipment can project materials, debris resulting in the risk of serious eye injury. The machine accessories can loosen, break, detach with force, projecting particles in the direction of the operator. Furthermore, the compressed air used to power the tool can be dangerous. The flow of air can cause serious injury to soft tissues (eyes, ears, etc.).</p>
	<p>Always use safety shoes when using the machine in accordance with current regulations.</p>
	<p>Always use protective gloves when using the machine in accordance with current regulations.</p>
	<p>Danger of crushing upper limbs.</p> <p>Never place the upper limbs on the movement plate of the shock absorber. During the disassembly or assembly operations, pay attention to the position of the hands, to avoid possible crushing.</p>
	<p>Never exceed the maximum nominal pressure for use of the shock absorber removal equipment, reported in the technical characteristics (Paragraph 2 of this manual) and on the machine itself.</p> <p>Exceeding the maximum operating pressure can cause an explosion resulting in serious injuries.</p>
	<ul style="list-style-type: none"> • Never use the shock absorber removal equipment near flammable substances (petrol, naphtha, solvent-based cleaners, etc.). • Always work in clean, well-ventilated and free from combustible materials. • Never use oxygen, carbon dioxide or other cylinder gases to power this device with compressed air. • Never use the shock absorber removal equipment in potentially explosive atmosphere. Sparks and fires can develop.
	<p>ATTENTION:</p> <ul style="list-style-type: none"> • Never leave powered shock absorber removal equipment unattended. Disconnect the air hose when the device is not in use. • Do not allow the shock absorber remover to be used by people who are not professionally qualified or who have not read these instructions. • Never tamper with or modify the shock absorber removal equipment as the effectiveness of the safety measures would be reduced or canceled, increasing the risks for the user. • Before disconnecting the compressed air supply hose from the shock absorber removal equipment, make sure that you have previously closed the compressed air supply tap coming from the power supply system. • Disconnect the air hose before servicing or mounting the accessories on the machine. • Never use the shock absorber removal equipment under the action of drugs, alcohol or when you are tired. • Do not wear loose clothing, or wear bracelets and chains. Keep your hair and clothes away from moving parts. Loose clothing, jewelry or long hair can get caught in moving parts.



- Never put the shock absorber removal equipment in contact with equipment under electrical voltage. Risk of electric shock.
- When using the shock absorber removal equipment, maintain a stable and balanced body position.
- Shock absorber removal equipment use is allowed to only one person at a time.
- Before usage of the shock absorber removal equipment, make sure there aren't other people nearby. The presence of other people may cause distraction and loss of control while using the shock absorber removal equipment.
- Always take care to keep the shock absorber removal equipment clean, free from oil and grease and in good condition.
- Never use accessories not specifically designed for this shock absorber removal equipment.
- Always make sure that the shock absorber is properly seated in the special coupling bracket before start to operate with the shock absorber removal equipment in order to avoid a dangerous sudden extraction.
- Before each use, always check that the shock absorber removal equipment has not been damaged, that there aren't air leaks or worn parts. In case of anomalies, do not use the shock absorber removal equipment and contact your dealer.
- Never overload the shock absorber removal equipment as it could break or be dangerously damaged.
- Never bend or squeeze hoses and never use solvents.
- Always keep hoses away from heat, oil and rotating parts. Immediately replace a damaged hose. A faulty supply line can cause uncontrolled machine movements.
- Do not remove the labels placed on the machine as they are integral parts of the product. If they deteriorate or are illegible, request them from the manufacturer and replace them immediately, placing them in their original location following the pictogram scheme below.

PICTOGRAM SCHEME AND WARNING LABELS:



4. HANDLING AND UNPACKING OF THE EQUIPMENT

Use a suitable means of transport to move the packaged shock absorber removal equipment in the place where you intend to place it.

The shock absorber removal equipment is supplied in an horizontal position fixed on a pallet (Fig. 1) and packed in an appropriate carton box (Fig. 2).



Fig.1



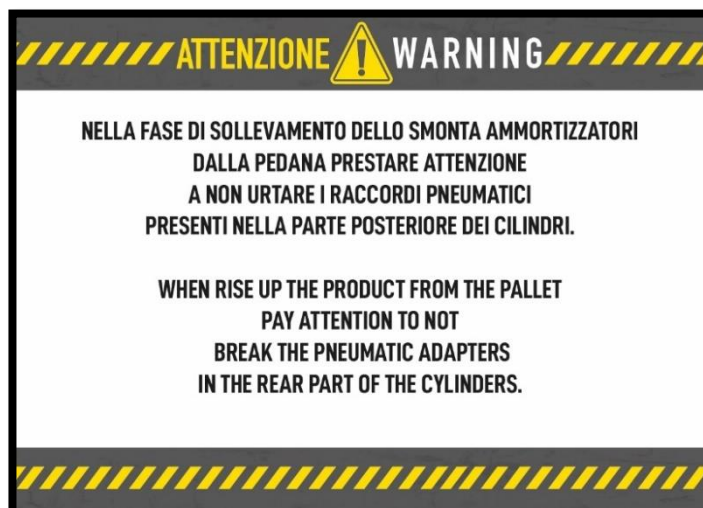
Fig.2

The control lever knob is supplied disassembled inside the envelope containing a copy of this warning, use and maintenance manual to avoid breaking it during transport.

To unpack the shock absorber removal equipment, cut the two fixing strips of the carton box.

Remove the carton box upwards.

The shock absorber removal equipment is fixed with nylon bands on a pallet. Cut the straps, remove the protective nylon on the feet and lift the shock absorber removal equipment following the warning placed on the packing bands.



5. PLACEMENT, INSTALLATION AND ASSEMBLY OF THE EQUIPMENT

PLACEMENT

Place the shock absorber removal equipment in the place that is considered most comfortable and in any case protected from humidity and dust, making sure that the environment has appropriate lighting that allows the machine to be used safely.

Make sure that the connection to the compressed air network is present in the place of installation.

INSTALLATION

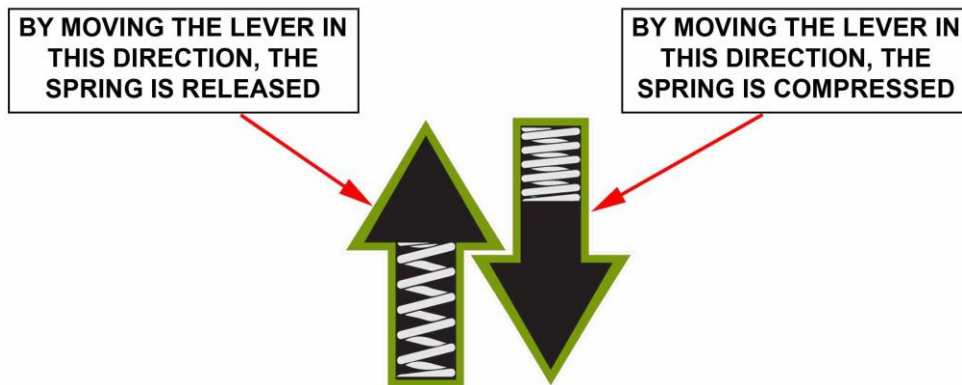
Secure the shock absorber removal equipment to the ground (on a flat surface) using the special fixing holes made on its two feet.



Use steel anchors for heavy anchors with dimensions not less than M10 and suitable for traction loads not less than 540 kgf and shear loads not less than 1320 kgf. Follow the conditions of use provided by the specific manufacturer of the anchors.

ASSEMBLY

The machine is supplied assembled in all its parts with the piston rod completely raised. Use control lever to lower the piston rod following the pictogram near:



NOTE: the lever knob is supplied disassembled so as not to risk breaking it during transport. Screw it onto the corresponding threaded pin before using the shock absorber removal equipment.

6. CONNECTIONS

This shock absorber removal equipment requires connection to the compressed air line for its use. The pressure released by the compressed air line must be between a minimum of 5 bar and a maximum of 10 bar. Never use pressures higher than 10 bar (risk of damage / injury) and if necessary reduce the pressure.

On the other hand, a pressure that is too low (less than 5 bar) could affect the functioning of the shock absorber removal equipment.

Supply the shock absorber removal equipment with clean, free of moisture compressed air. The presence of moisture in the supply compressed air reduces the life of the mechanical parts and can cause damage to the shock absorber removal equipment. It is recommended to integrate the compressed air line with a lubricating filter, adjusting it to two drops per minute.

7. INSPECTION

Before use of the shock absorber removal equipment make the following inspections:

- always check that the compressed air line is perfectly efficient and that the compressed air emitted is between 5 bar and 10 bar;

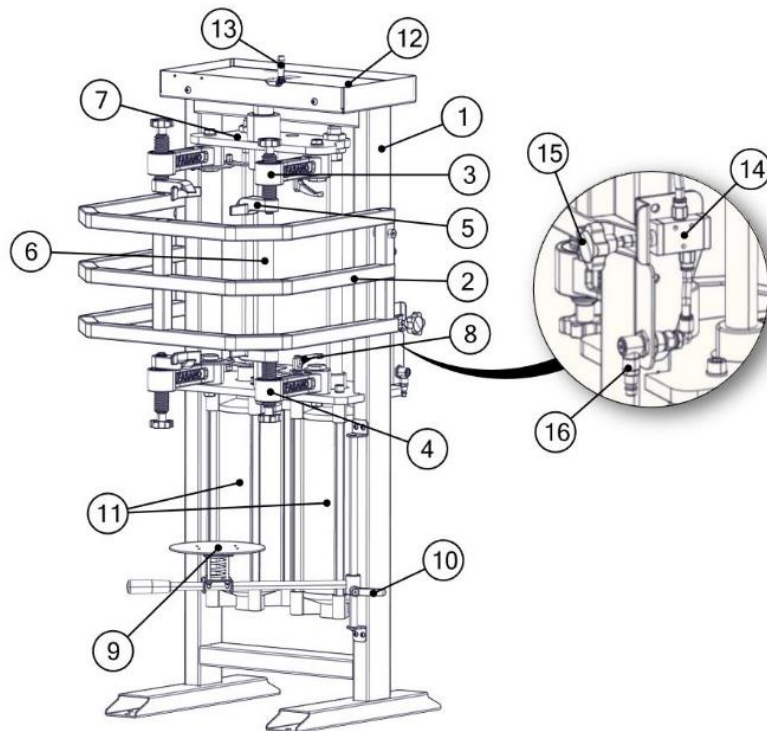
- always check that there aren't air leaks (from the fittings and pneumatic elements). In case of anomalous leaks, do not proceed with the start-up of the shock absorber disassembly and contact your dealer.

Periodically check the integrity and absence of rust on the components of the shock absorber removal equipment (adjustment arms, guide shaft, pipes, etc.) and check the integrity and efficiency of the screws used for fixing the shock absorber removal equipment to the ground.

8. OPERATION OF THE SHOCK ABSORBER REMOVAL EQUIPMENT

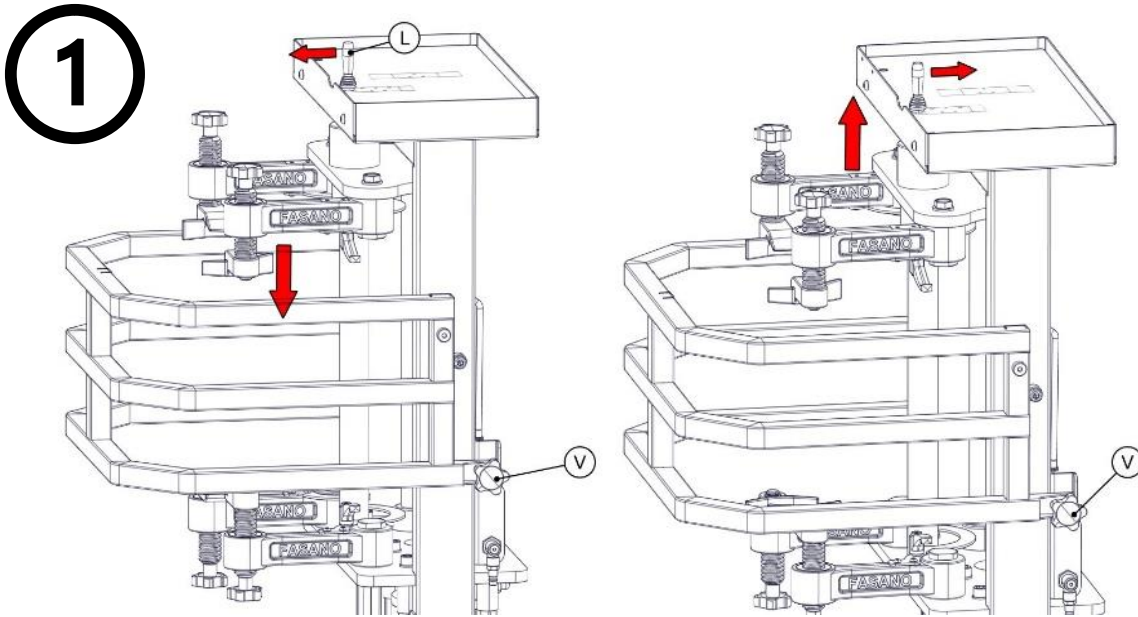
Once positioned, correctly fixed to the floor, connected to the compressed air line and carried out the appropriate checks, it is possible to start to use the shock absorber removal equipment.

Below is a description of the components of the shock absorber removal equipment to refer during the Disassembly and Reassembly phases.



1. Main frame
2. Safety frame
3. Adjustable upper arm
4. Adjustable lower arm
5. Hooking bracket
6. Guide shaft
7. Movement plate
8. Arm locking knob
9. Adjustable support plate
10. Plate adjustment locking knob
11. Pneumatic actuator cylinder
12. Pneumatic system case
13. Control lever
14. Pneumatic safety switch (movement is activated only when the safety knob (15) is screwed into the safety frame locking position)
15. Safety frame locking knob
16. Quick coupling for compressed air supply

DISASSEMBLY OF THE SHOCK ABSORBER:



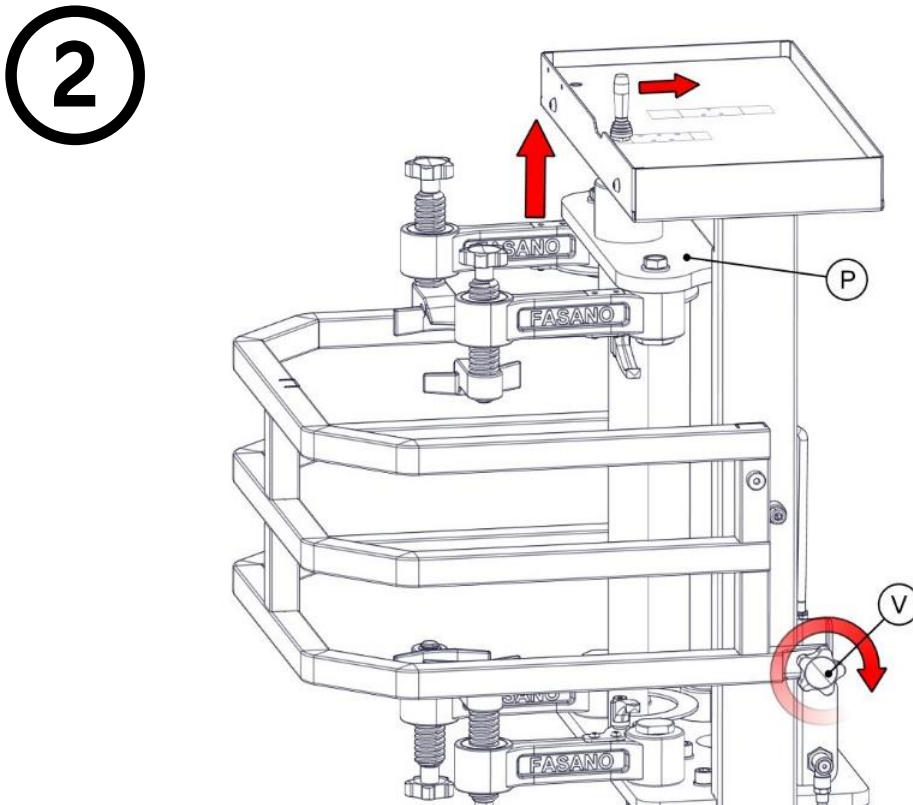
To move the movement plate act on the maintained action control lever "L" (Control lever):

- by moving the lever "L" towards the front of the machine, the movement plate moves downwards;
- by moving the lever "L" towards the rear of the machine, the movement plate moves upwards.



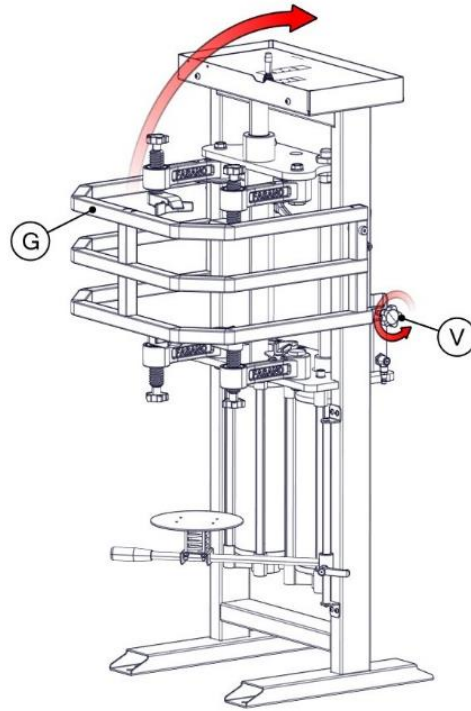
ATTENTION:

THE MOVEMENT PLATE ONLY MOVES WHEN THE SAFETY HANDWHEEL "V" IS SCREWED IN AND THE SAFETY FRAME IS ENGAGED.



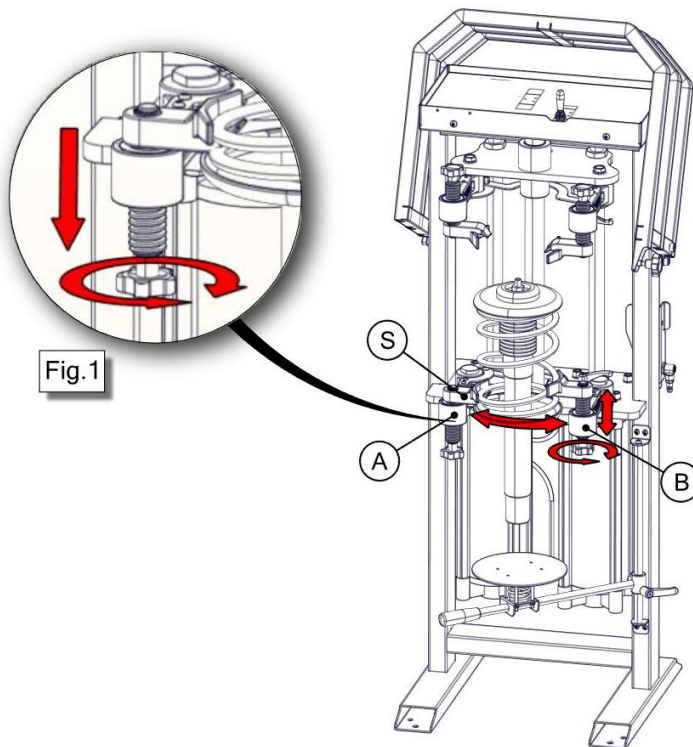
Before inserting the shock absorber to be disassembled bring the movement plate "P" up to the end of the stroke, making sure that the safety handwheel is screwed to enable the movement.

3



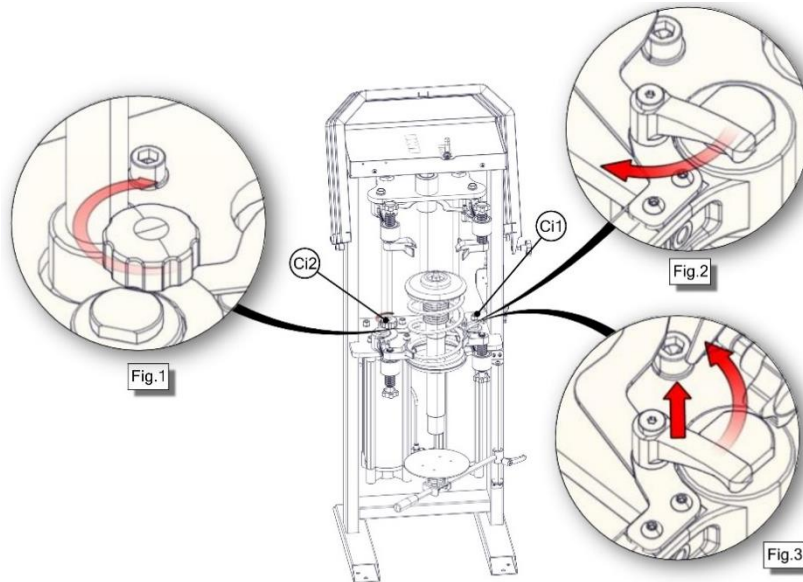
Unscrew the safety handwheel "V" until the safety frame "G" is released.
Fully raise the front of the safety frame G.

4



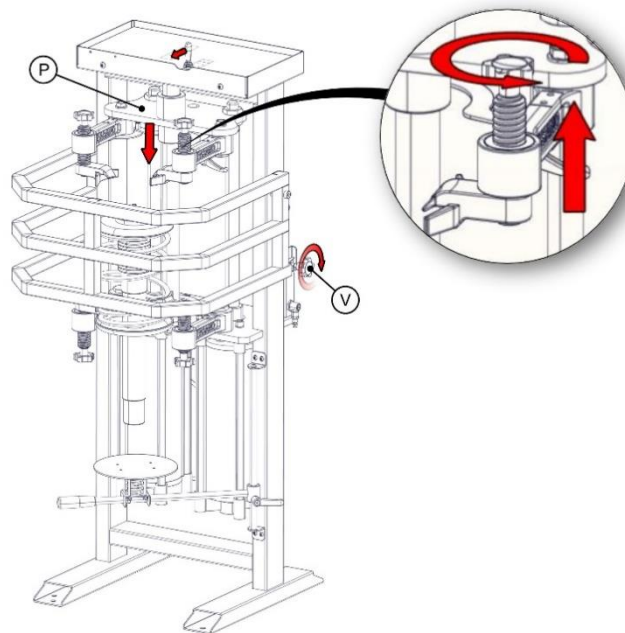
Before positioning the shock absorber to be disassembled, bring the hooking brackets "S" of the lower arms "A, B" in the lower position up to the end of the screw by acting on the adjustment handwheels of the arms (Fig.1)
Position the shock absorber by placing the shape of the shock absorber spring on the hooking bracket "S" of the arm from the lowest helicoid side. If necessary, rotate the spring so that the bracket is at the lowest point of the spring.
Close the brackets (the movement of the arms is interconnected for self-centering), and adjust the height of the hooking bracket of the opposite arm, using the adjustment handwheel, until the shock absorber is positioned vertically.

5



Block the movement of the arms using the lower locking knob "Ci1" and "Ci2" handwheel (Fig.1, Fig.2) keeping the arms closed on the shock absorber spring.
To tighten the movement of the arms with the knob "Ci1" turn the handle clockwise (Fig.2); to loosen it, turn anticlockwise.
If there are impediments to complete tightening, the knob is made in such a way that by lifting the lever it is possible to go back counterclockwise without loosening the tightening (Fig. 3).

6

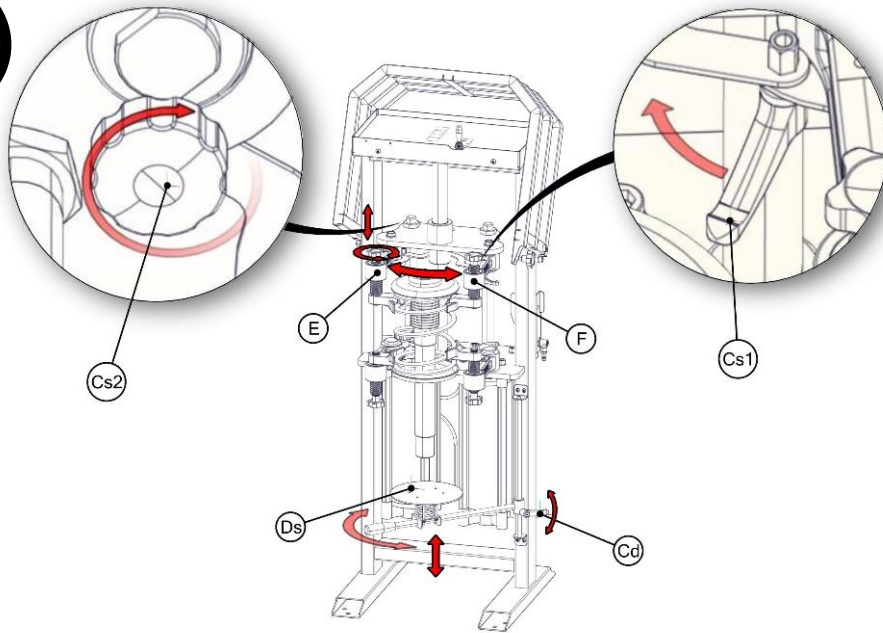


Close the safety frame and screw the safety handwheel "V".
Bring the upper arms hooking brackets up to the end of the screw stroke by turning the adjustment handwheels.
Position the arms in such a way that during the descent of the plate the parts of the arm do not collide with the shock absorber.
Lower the movement plate "P" up to the insertion height of the hooking bracket on the first available space of the spring to be compressed.



ATTENTION:
DURING THE MOVEMENT OF THE MOVEMENT PLATE, NEVER PUT YOUR HANDS OR ANYTHING ELSE INSIDE THE SAFETY FRAME. CRUSHING HAZARD.

7

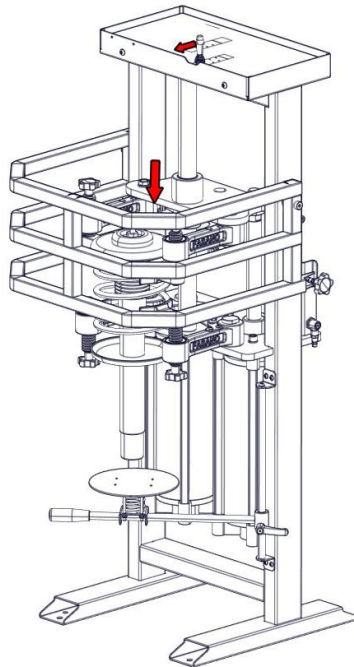


Open the safety frame by unscrewing the safety handwheel.

Adjust the height of the adjustment bracket of the opposite arm on the gap just below the coil spring. Close the brackets on the diameter of the suspension spring and further adjust the brackets until the shock absorber spring is locked.

Lock the arms using the upper locking knob "Cs1" and the opposite handwheel "Cs2". Adjust the shock absorber support "Ds" by bringing the support disc under the suspension body using the adjustment knob "Cd".

8



Close the safety frame and screw on the safety handwheel.

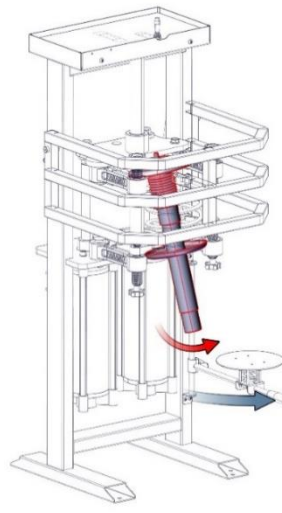
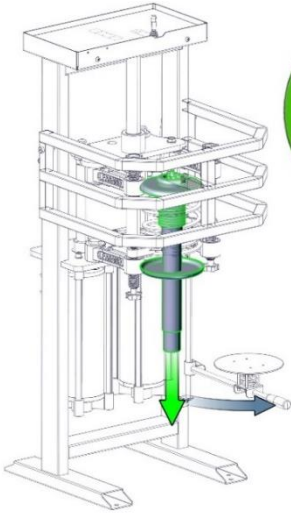
Proceed with the compression of the suspension spring until the suspension body is completely free from the compression of the spring.



ATTENTION:

- **NEVER EXCEED WITH THE COMPRESSION OF THE SHOCK SPRING**
- **DO NOT ALLOW THE LOWER AND UPPER ARMS COLLIDING BETWEEN THEM.**

9



Disassemble the suspension body by keeping the safety frame closed and acting on the disassembly nut from the top of the safety frame.



ATTENTION

DO NOT INSERT YOUR HANDS BETWEEN THE SLOTS OF THE SAFETY FRAME.

When the suspension body is free, move the shock absorber support and remove the shock absorber body vertically.



ATTENTION

DO NOT REMOVE THE SHOCK ABSORBER BODY BY BENDING IT OR PIVOTING ON THE COMPRESSED SPRING. THE SHOCK ABSORBER COULD DANGEROUSLY RELEASE.

REASSEMBLY OF THE SHOCK ABSORBER

To reassemble the new suspension body, carry out all the operations in reverse order to disassembly. Insert the new shock absorber in the same position as the old one. Operate the control lever until it adheres to the stop cap. Lock the cap to the shock absorber stem by tightening the relative nut appropriately to reassemble the shock absorber.

Act on the control lever to completely release the spring and remove the shock absorber from the shock absorber removal equipment.

9. TROUBLESHOOTING (CAUSES AND REMEDIES)



ATTENTION

Before carrying out any operation on the shock absorber removal equipment, disconnect the air supply hose. In this way the machine will be isolated from its primary energy source.

Below is a list of the most common faults:

- **The shock absorber removal equipment does not work.**
Make sure it is connected to the compressed air line. To work, the shock absorber removal equipment needs to be connected to compressed air using the quick coupling supplied.
- **The piston rod moves back.** This failure occurs when there is air leakage from the pneumatic cylinder. Contact your dealer for technical assistance.

10. STORAGE OF THE EQUIPMENT FOR A LONG PERIOD

When this shock absorber removal equipment is not used for a long period, take care to disconnect the connection hose to the compressed air line and insert oil for pneumatic cylinders inside the connection fitting.

11. DISPOSAL INFORMATION

When this equipment is no longer usable nor repairable, dispose of it according to local regulations in order to protect the environment.

12. ORDINARY AND EXTRA-ORDINARY MAINTENANCE



ATTENTION

Before carrying out any operation on the tool, disconnect the air supply hose. This operation is equivalent to isolating the machine from the primary energy source.

Periodically check that there aren't dust deposits, etc. If necessary, remove with a soft and dry cloth. Never use oil, detergents, alcohol, etc. If extraordinary maintenance is required: contact your dealer to request technical assistance.

13. EC DECLARATION OF CONFORMITY

The manufacturer / person authorized to make the technical file

FASANGAS Srl

Viale Grecia lotto 18 n.3
73100 Zona Industriale Lecce - ITALY

DECLARES

that the product: PNEUMATIC SHOCK ABSORBER REMOVAL EQUIPMENT

IS IN COMPLIANCE WITH

THE PROVISIONS OF THE FOLLOWING EUROPEAN DIRECTIVES

2006/42/EC MACHINERY DIRECTIVE

Harmonized standards used for compliance with the Essential Safety Requirements of the Directives

2006/42/EC EN ISO 12100:2010
 EN ISO4414 :2010

(Stamp and Signature of the legal representative or designated person.)

Declaration date

14. WARRANTY

This product is guaranteed free from manufacturing and material defects, for normal service use, for a period of one year from the date of purchase of the tool. If, in this period, defects attributable to the manufacturer are found on the product, the company Fasangas S.r.l. will act, at its own discretion, by repairing the tool or replacing it with another one of equal value and characteristics at no cost to the buyer. The warranty does not cover consumables and / or components subject to particular wear and tear caused by inappropriate or incorrect use of the tool or otherwise not in accordance with the details in this manual. The warranty right lapses if the product has been tampered with by personnel not authorized by Fasangas S.r.l. Products without warranty rights will be repaired at the customer's sole expense.