

Series ARP

REPAIR KIT MANUAL



Introduction

1.1 Product Safety Instructions



Never disassemble a unit under pressure.



Isolate the actuator pneumatically, hydraulically, and electrically.



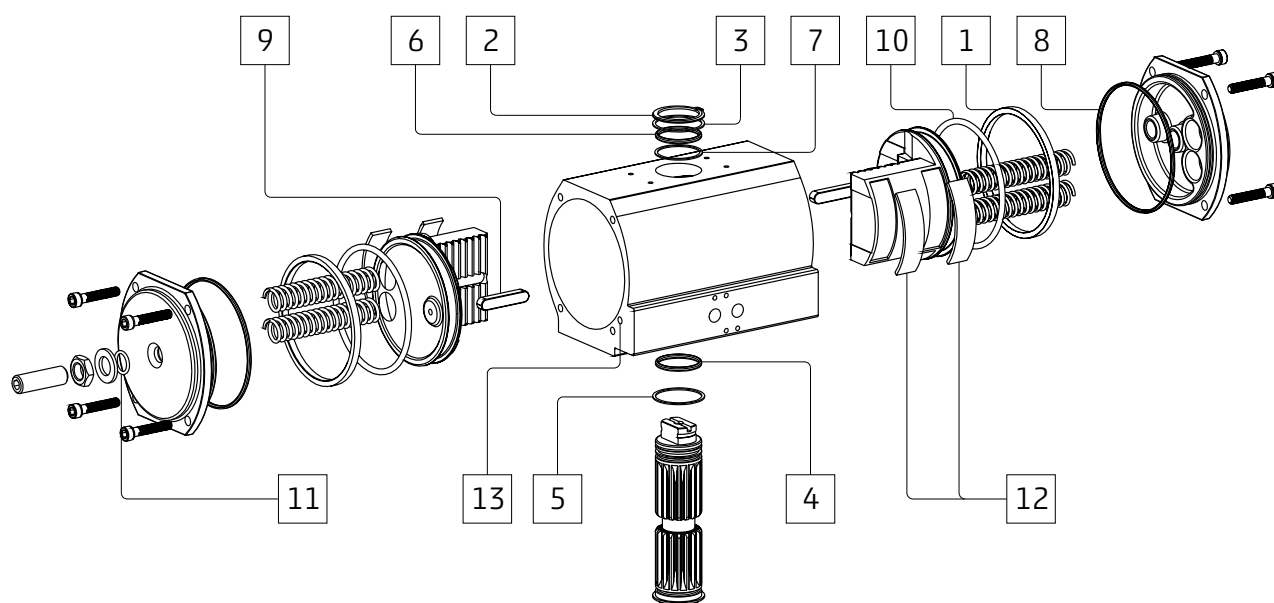
Always remove accessories and mounting tools before maintenance.

1.2 More information

- Actuator Lubricant: BERULUB FR16Spring Lubricant: VALVOLINE L-EP2
- The Repair Kits include all seals and bearings.
- Always wear the proper safety equipment required by local authorities and current legislative regulations. For proper maintenance of Camozzi actuators, follow the instructions in this manual. Before removing the actuator, ensure the correct procedure is followed to isolate the valve and piping system.

1.3 Kit Content

- The kit contains parts for all types of the same size. Therefore it may be some parts included in the kit that is not needed.
- Temperature range: -20°C to +140°C / -4°F to +284°F
- Material: Nitrile (NBR)
- Grease all the parts properly before assembling. Use the same type of lubricants we recommend.
- Warning: Do not dismount an Actuator without following our special instructions, DANGER.



Ref.no.	Description	Quantity
1	Backup Bearing Piston	2
2	Circlip Upper	1
3	Washer Upper	1
4	Driveshaft Lower O-ring	1
5	Driveshaft Lower Washer	1
6	Driveshaft Upper Bearing	1
7	Driveshaft Upper O-ring	1
8	Endcap O-ring	2
9	Piston Guidebar	2
10	Piston O-ring	2
11	Stop Adjustment O-ring	1
12	Wear Pads Piston	4
13	Ball Bearing	2

Some parts will not be needed, depending on the type of actuator that is going to be repaired.

1.4 Actuator Disassembly

- The cover screws of all Camozzi actuators are long enough to allow the release of the springs.
- It is recommended to use a hydraulic press for better assistance for simple disassembly

Unscrew two diagonal screws of the cover (on opposite sides) one turn at a time until they are completely released.



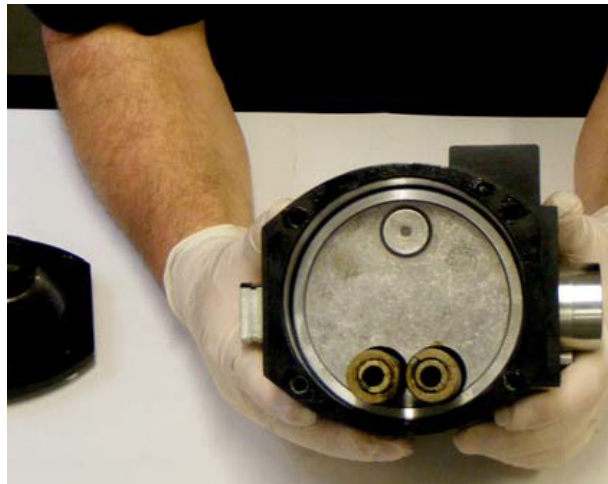
In actuators, springs are placed inside the piston, but only on one side of it.



Note how the screws allow the lid to remain horizontal by being unscrewed in uniform manner.



In the photograph you can see how the internal springs are inserted inside the external springs. This system presents itself on both sides.



1.4 Actuator Disassembly

Using the appropriate tool, rotate the top of the sprocket counterclockwise, this will push the pistons out of the cylinder.



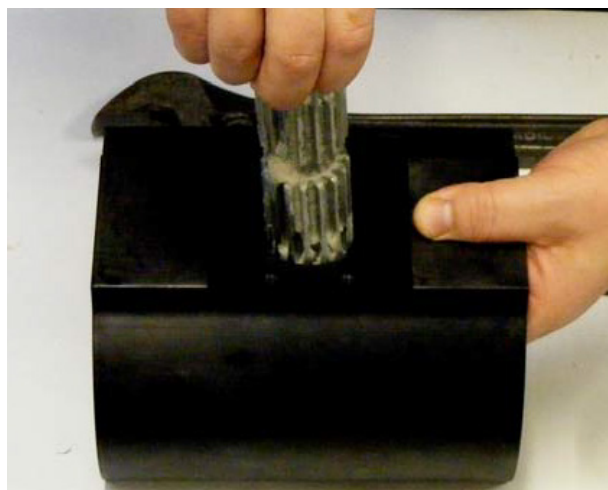
Using the appropriate tool, remove the snap ring from the top of the pinion, then remove the washer.



Note how the two pistons look, completely greased, with the two pads on the back, the O rings and the back up bearings on the circumference of the cylinder head.



Gently pull the pinion out of the bottom of the cylinder.



You have completely disassembled an actuator.

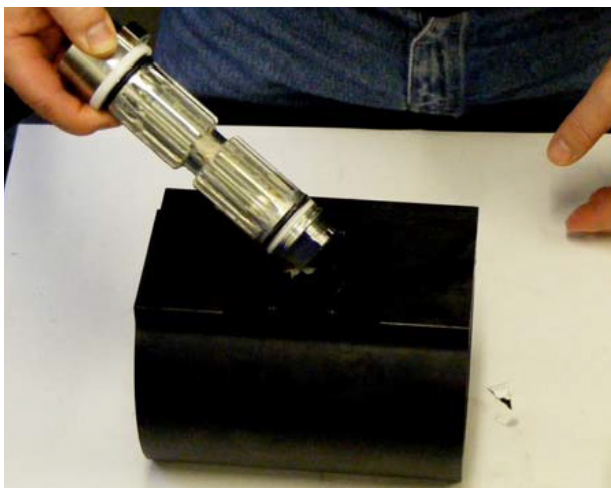
Carefully remove the plastic parts and gaskets, taking care not to damage them with sharp or pointed equipment, if replacement of the parts is possible.

After removing the gaskets and plastics, use kerosene or an equivalent to clean the components before reassembling. This step is to ensure that any contaminants have been removed so that the actuator continues to function properly after reassembly.

1.4 Actuator Assembly

- Make sure all internal parts are clean and free from foreign elements.
- Make sure the piston and pinion rack are not excessively worn. If necessary replace the pistons, pinion and guide rods.
- Check that the piston accessory parts do not show excessive wear. If so, replace all the parts. All components are included in the Camozzi Distribution Kit.
- In the Simple Effect actuator, check that the springs are not damaged. If so, replace them. The springs must all be replaced by requesting a "Spring Kit". Do not mix the new springs with the old ones.
- Check that the inside of the cylinder is not damaged or scratched. If so, replace the cylinder.
- Before assembling, lubricate the seals and plastic parts with the actuator lubricant mentioned above. Use the same lubricant also for the seats where the seals and plastic parts are to be positioned. For Single Effect actuators, lubricate the springs before inserting them.

Place the bearings and gaskets on the top and lower pinion (grease). Grease well the pinion.



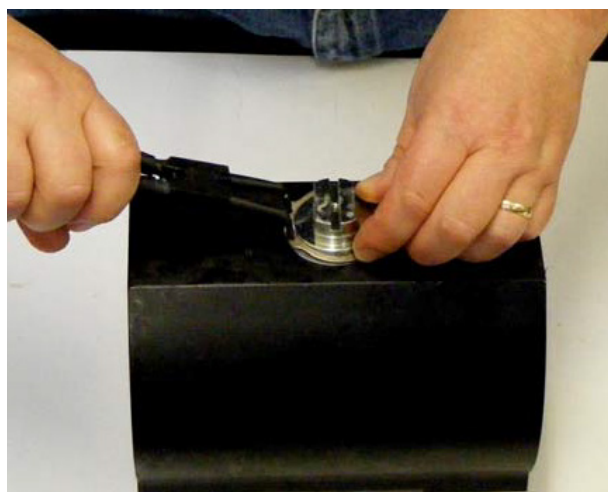
Place the "washer" on top of the pinion.



Insert the pinion from the hole on the bottom side of the cylinder, being careful not to "pinch" the "O" rings, and then push the pinion in by pressing on the underside.

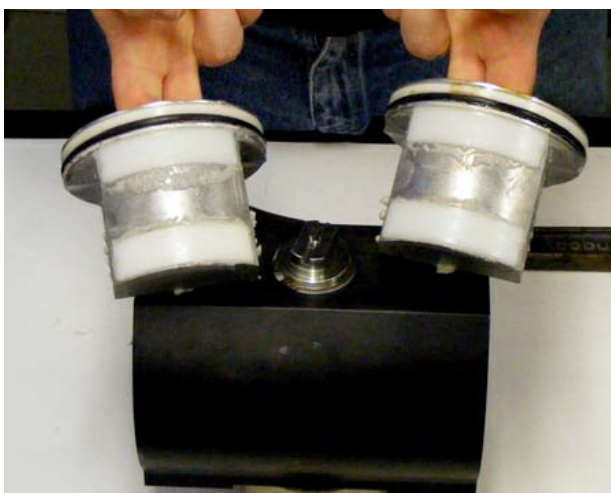


Using the appropriate tool, position the snap ring around the top of the sprocket.

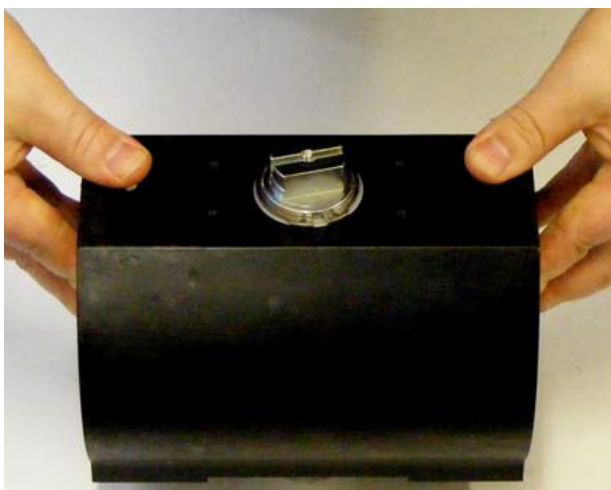


1.4 Actuator Assembly

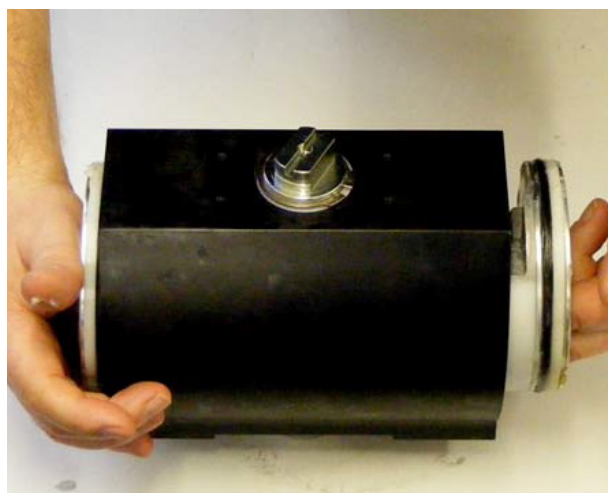
Insert the skates into the appropriate slots on the back of the pistons. Place the "O" rings into the seats on the circumference of the pistons, followed by the back up bearings, making sure the "O" rings are on the bottom of the headquarters.



Once the pinion rack has matched up with that of the two pistons, push the latter into the actuator as far as possible.



Position the actuator so that it faces you the face with the Air Ports, and the pinion cam both on the top right. Rotate the pinion 45 degrees in counterclockwise. Insert the right piston keeping the pads in front of you, while keeping the left piston rack.



Rotate the pinion clockwise. The DD on the pinion should be at 90 degrees to the cylinder (plus a little extra), in the closed position.



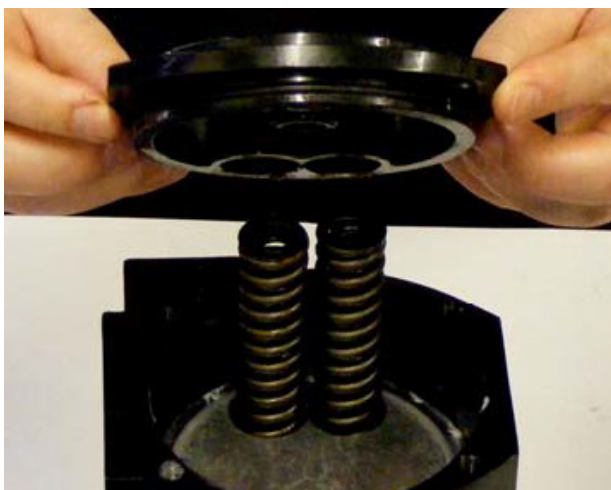
Attention!

Larger actuators require more than one person to service.

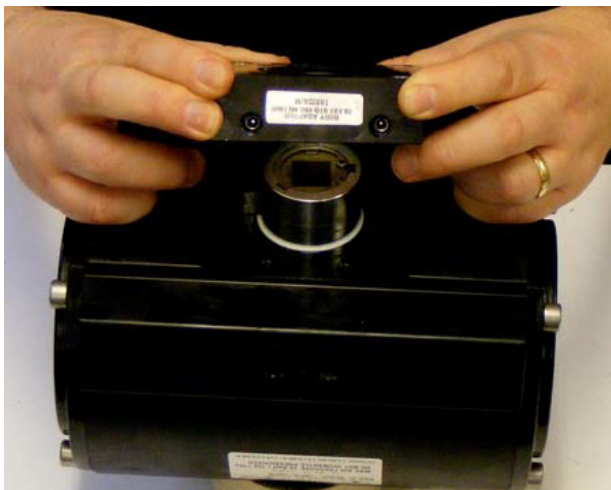
Make sure you follow your company and government safety regulations rooms when working with heavy objects

1.4 Actuator Assembly

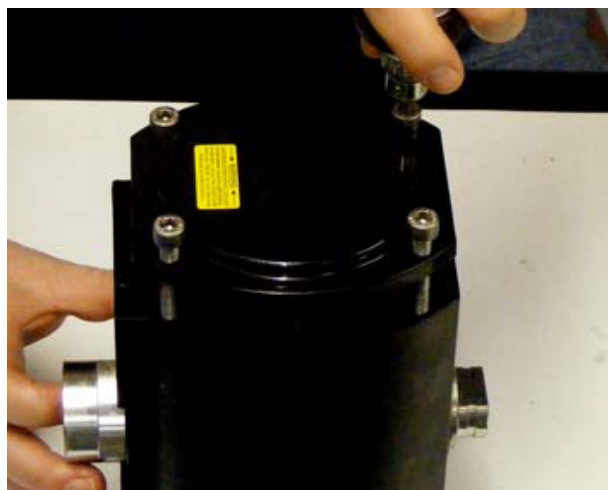
For Single Acting actuators, insert the springs in each piston if required (make sure the springs are well greased).
Place the cover over the springs making sure they fit into the two seats.



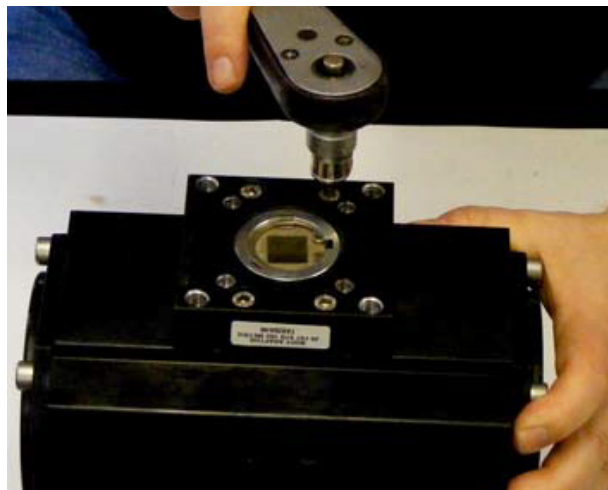
Insert the bearing into the adapter base and position it on the pinion, making sure that the holes for the adjustment screws up to the same side as the doors of the air.



Place the cover screws and screw two of them in placed diagonally. Make sure that the gasket ("O" ring) is not damaged during the procedure.



Using the appropriate tool, fix the base to the cylinder via the 4 screws.



1.4 Actuator Assembly

Using the appropriate tool, secure the insert with a snap ring inside the pinion.



Insert the adapter insert into the pinion cavity. There are three keyways allowing the insert to be positioned inline, at 45 degrees or at 90 degrees.



Attention!

If you have any questions regarding the maintenance of our products, please contact your local Camozzi representative. Always follow your company's safety procedures and national safety regulations.



Automation

A Camozzi Group Company

camozzi.com

Contacts

Camozzi Automation S.p.A.

Società Unipersonale

REGISTERED OFFICE

Via R. Rubattino, 81

20134 Milano

Italy

OPERATIONAL HEADQUARTERS

Via Eritrea, 20/1

25126 Brescia

Italy

Tel. +39 030 37921

marketing@camozzi.com

Customer Service

Tel. +39 030 3792790

service@camozzi.com

Export Department

Tel. +39 030 3792253

sales@camozzi.com