# MME Motorsport’s Product Care

# MME Motorsport – Quality, Performance and Care

At MME Motorsport, we take great pride in the quality and reputation of our products. We are delighted that you use them, as they are the result of our in-house development, analysis, manufacturing, and testing. To ensure optimal performance, it is essential to dedicate time to regular and careful maintenance. This will extend the lifespan of our products and guarantee their smooth and reliable operation.

# Intended use and safety information

FOR RACING PURPOSES and OFF-ROAD USE ONLY!

**All parts sold by MME Motorsport are not road legal and are designed for racing purposes only. By buying the parts, you agree to the following:**

Vehicle racing is an inherently dangerous sport with significant risk of personal injury or even death. When a user participates in vehicle racing and/or track events, he accepts the risk inherent therein. MME Motorsport, its employees, and affiliates makes no warranty that the use of its products or parts guarantees personal safety or freedom from physical injury or operates as a life-saving device.

MME Motorsport disclaims all liability for any special, direct, incidental or consequential damages, or any damages whatsoever, including, without limitation, the loss of life or limb, or damages due to bodily or personal injury, which may arise or result from the sale, installation, or use of any of its products and parts.

It is the user's responsibility to inspect and verify the dimensions, specifications, and performance of all products and parts as being appropriate for the use to which the user will put them prior to any actual installation and/or use of said products and parts.

MME Motorsport's products and parts are to be inspected by the user before each use for evidence of damage, defect or wear. Any deviation by the user from the manufacturer's specifications concerning use, maintenance, repair, alterations and modifications constitutes wilful negligence.

The installation of MME Motorsport's products or parts may adversely affect other vehicle components, safety equipment or manufactured goods (collectively "goods"). MME Motorsport assumes no responsibility for any damage to other goods, or bodily injury that may arise due to failure of other goods, due to installation and/or use, either proper or improper, of its products or parts.

# Maintenance schedule

Tools required for product maintenance:

- Allen wrench, size from 1.5 to 6 mm
- Small Phillips drive screw driver
- Spanners size from 8 mm to 19 mm
- Brake cleaner agent
- High temperature lithium grease
- Compressed air supply with an air nozzle
- Clean space and cleaning towels

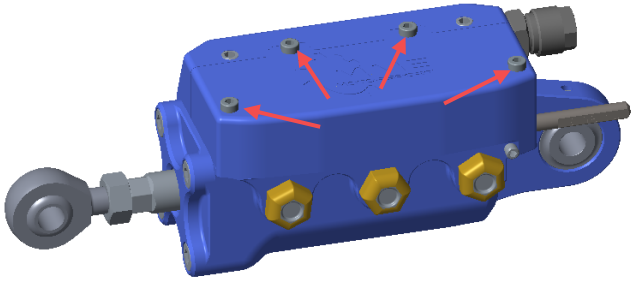
| ***Product*** | ***Regularly after each event*** | ***Once a year*** |
|---|---|---|
| ***GA-04-32x50***<br>***GA-05-40x50***<br>***GA-Q02*** | Check the actuator for leaks and any visual damage on piston rod | Take out the actuator<br>Inspect the piston rod for damage<br>Open, clean and lubricate the interior of the actuator.<br>Check the connection cable for damage |
| ***GA-02-32X50***<br>***GA-02-32X25***<br>***GA-02-40X25*** | Check the actuator for leaks and any visual damage on piston rod | Take out the actuator<br>Insect the piston rod for damage<br>Open, clean and lubricate the interior of the actuator |
| ***TBA-02-15x15***<br>***TBA-04-22x20*** | Check the actuator for leaks and any visual damage on piston rod | Take out the actuator<br>Insect the piston rod for damage<br>Clean and lubricate the piston rod |
| ***VBLK-04***<br>***TBB-03*** | Check the valve block for leaks and any visual damage | Take out the valve block<br>Open, clean and lubricate the interior of the valve block and valves<br>Check the connection cable for damage |
| ***ARBT-01-2L*** | Inspect the bottle for leaks and damage<br>Drain the water after each event, especially in humid condition | Drain the bottle<br>Check the connection cable for damage |
| ***APS-01*** | Check the air power source for leaks and any visual damage<br>Drain water through the drain valve after each race or event | Take out the air power source and clean it<br>Clean the compressor head<br>Open, clean and lubricate the interior of the valves<br>Check the connection cable for damage |

# GA-04/GA-05 Gear actuator

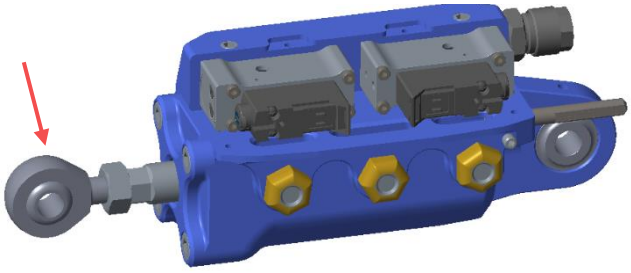
To perform the maintenance on the actuators they must be removed from the car.

Make sure to seal the air pipe to prevent any debris from entering the system. Debris is most common reason valves start leaking. If they do start, they need to be cleaned.

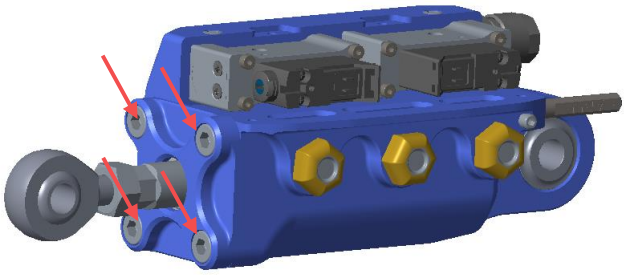
- Unscrew bolts from the valve cover to access to the valves. Clean the valves according to the valves maintenance manuals. Valve spool is pushed from the valve body thought the side hole.



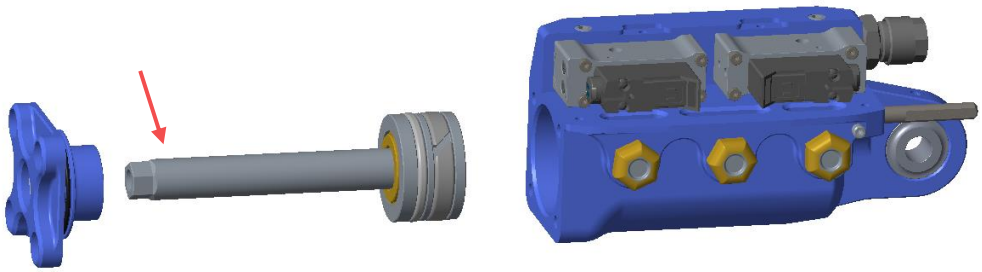
- Remove front rod end from the piston rod. Mark the position of the rod end for correct settings during the reinstallation.



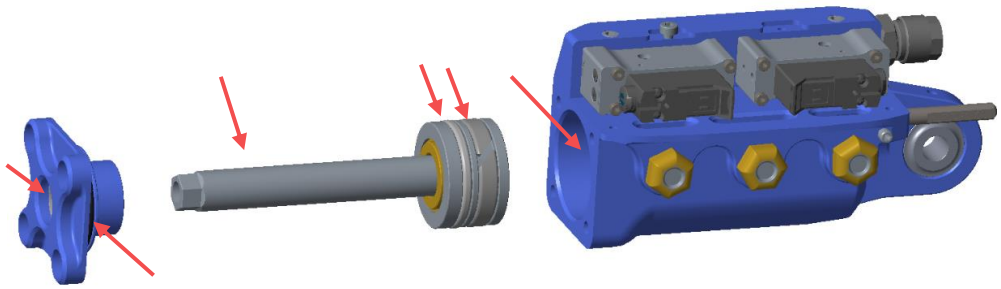
- Unscrew the bolt from the front actuator cover and pull out the cover using the piston rod for assistance



- Remove the piston rod from the front cover. First inspect the piston rod for any damage. If the damage is on the part of the piston rod that remains outside the actuator's travel range, first grind away those damages. Afterward, carefully remove the cover from the piston rod. This approach helps prevent damage to the seals and guide bush on the front actuator cover.



- Clean the piston, piston rod and actuator body together with the valve. You can use brake cleaner or gasoline (do not use nitroglycerin). Apply the cleaner with a brush or nozzles, ensuring all debris inside are removed. Then clean all parts with compressed air.
- Inspect all seals for any signs of damage.
- Replace all damaged seals, O-rings and guide bushings if needed.
- Lubricate the actuator hole, piston and piston rod using **high-temperature lithium grease** from the kit. Lubricate valves according to the valve maintenance manuals.

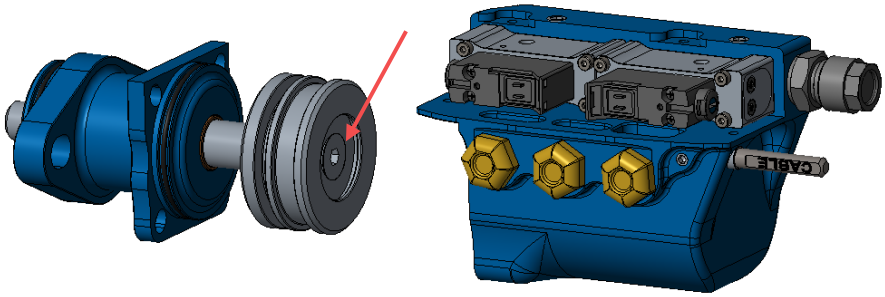


- Reassemble back the actuator in the reverse order. Perform a final inspection to ensure all parts are properly assembled and functioning correctly
- We offer an actuator maintenance kit that includes O-rings, seals, guides, pack of grease for lubrication and two valve maintenance kits. GA-04-SK

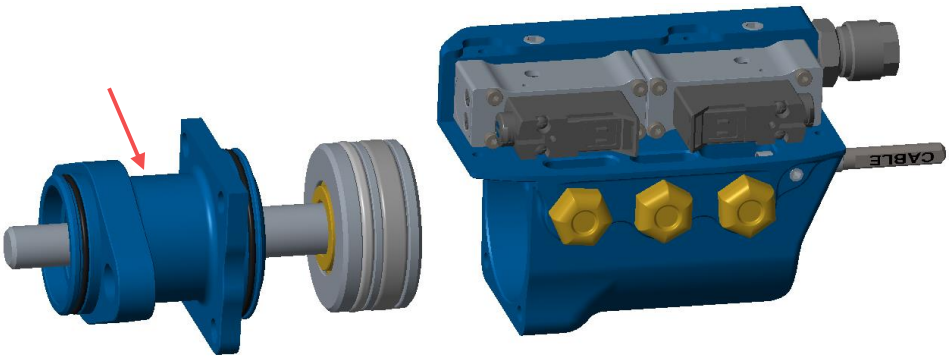
# GA-Q02 Gear actuator

The only difference between the GA-Q02 maintenance and the GA-04-32x50 is that you need to remove the piston from the piston rod to disassemble the front actuator cover and access the piston rod.

- Remove all seals from the piston and apply heat to loosen the M6 bolt that secures the piston to the rod.



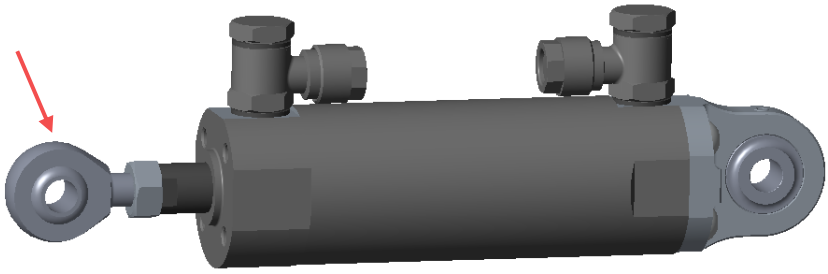

- Maintenance can also be performed without removing the front actuator cover from the piston rod. The rod seal and bushing are reused.



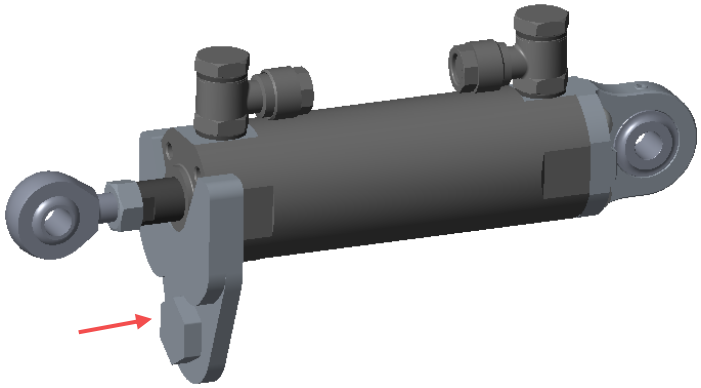

- We offer an actuator maintenance kit that includes O-rings, seals, guides, pack of grease for lubrication and two valve maintenance kits. GA-Q02-SK

## GA-02 Gear actuator

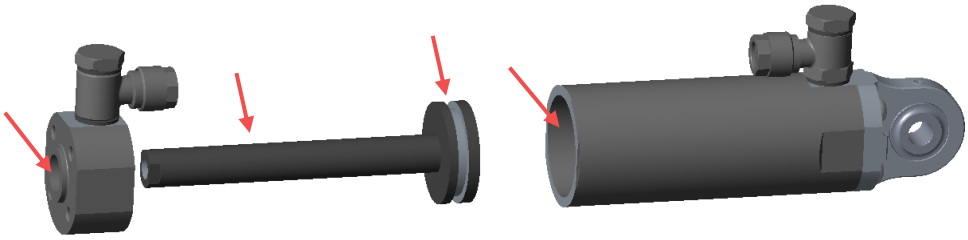
- Remove front rod end from the piston rod. Mark the position of the rod end to ensure correct settings during reinstallation.



- Unscrew the front actuator cover using keys delivered in the actuator kit.



- Remove the piston rod from the front cover.
- Clean the piston with piston rod and actuator body. You can use brake cleaner or gasoline (do not use nitroglycerin). Apply the cleaner with a brush or nozzles, ensuring all debris inside are removed. Then clean all parts with compressed air.
- Inspect all seals for any signs of damage.
- Lubricate the actuator hole, piston and piston rod using high-temperature lithium grease from the kit

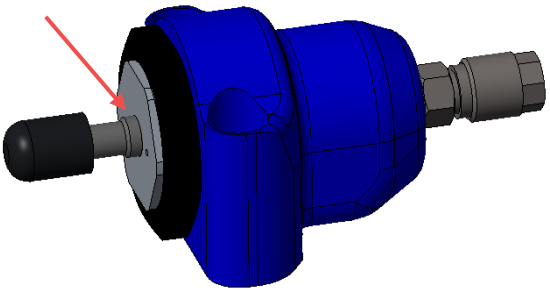


- Reassemble back the actuator in the reverse order. Perform a final inspection to ensure all parts are properly assembled and functioning correctly
- We offer grease kit for maintaining the standard actuators.

## TBA-02 actuator

To perform the maintenance on the actuator it must be removed from the car.

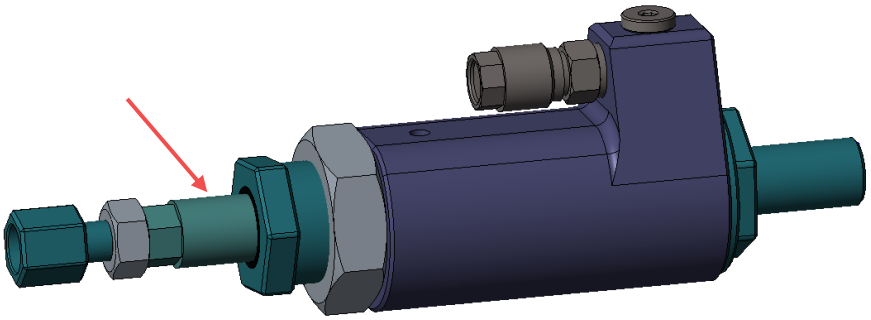
- Clean the piston rod with the compressed air and lubricate it with the high temperature grease.



## TBA-04 actuator

To perform the maintenance on the actuator it must be removed from the car.

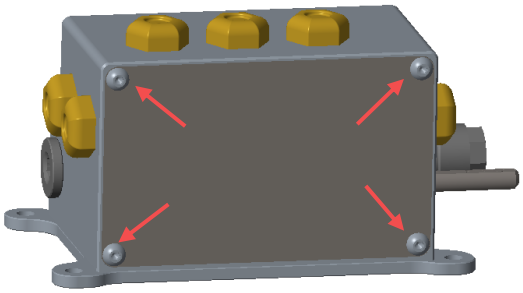
- Clean the piston rod with the compressed air and lubricate it with the high temperature grease.



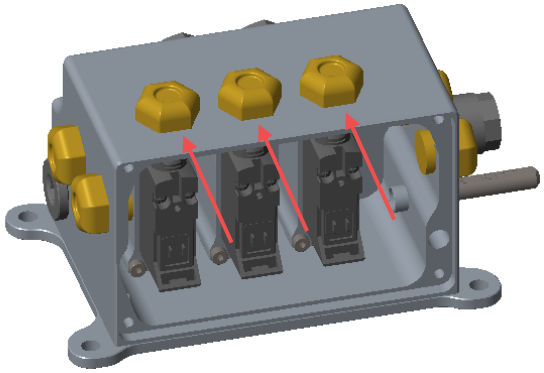
# VBLK-04 Valve block

To perform the maintenance on the valve block it must be removed from the car.

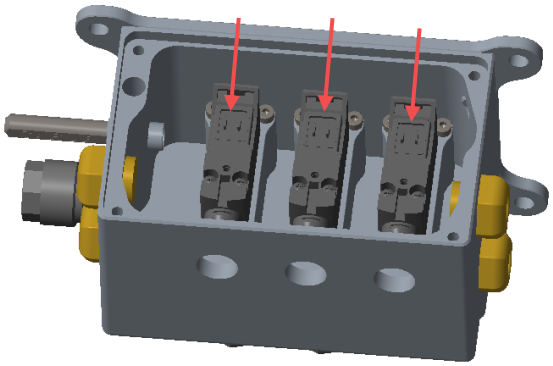
- Unscrew bolts from the valve block cover and remove cover from the block. You can remove side silencer to push a cover from the valve block from the inside.



- Remove the marked silencers from the valve block.



- Unscrew the valves from the valve block and carefully remove them. Be careful not to damage the connection cable. The connection cable doesn't need to be removed.
- Perform valve maintenance according to the valve maintenance manuals.

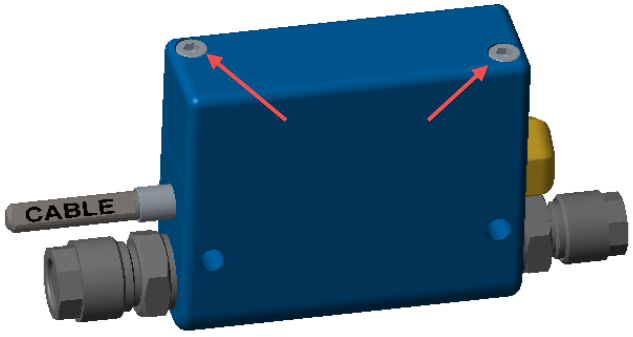


- Clean the valve block (without the valves) using brake cleaner and compressed air. Ensure that no debris remains inside the block or in the supply, up, down, and blip ports.
- Reassemble back the valve block in the reverse order. Perform a final inspection to ensure all parts are properly assembled and functioning correctly

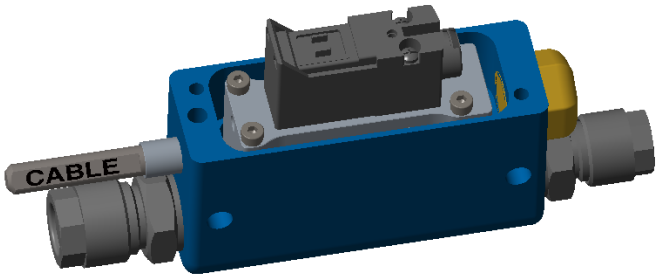
- We offer a valve block maintenance kit, which includes three valve maintenance kits and pack of grease. **VBLK-04-SK**

## TBB-03 Valve block

- Unscrew bolts from the valve block cover and remove cover from the block.




- Unscrew the valve from the valve block and carefully take him out. Be careful not to damage the connections cable. The connection cable doesn't need to be removed.

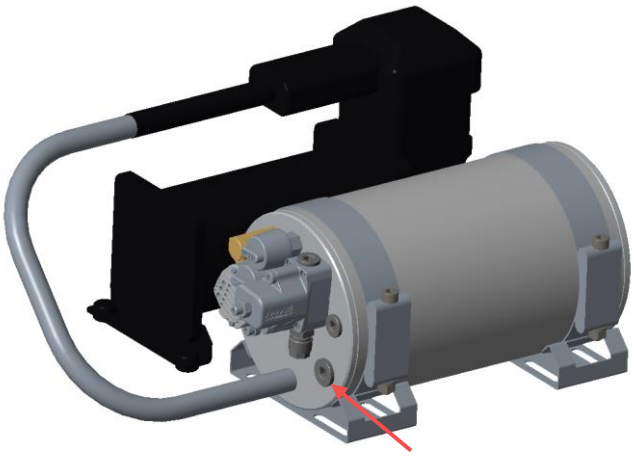



- Perform valve maintenance according to the valve maintenance manuals.
- Clean the valve block without valves with brake cleaner and compressed air. Ensure that no debris remains inside the block or in the supply and output ports."
- Reassemble back the valve block in the reverse order. Perform a final inspection to ensure all parts are properly assembled and functioning correctly
- We offer a valve maintenance kits for use in TBB-03 maintenance.

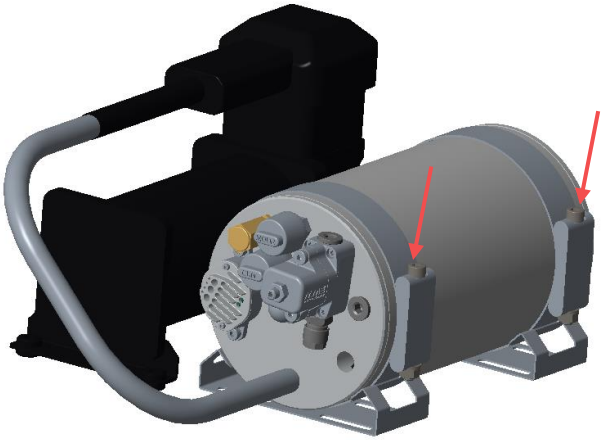
## ARBT-01-2L

We recommend draining the water from the reservoir at least once a year or more frequently if the system operates in a humid environment.

- Disconnect the compressor from the battery. Note that the compressor and bottle pneumatic line do not need to be disconnected.
- Remove the plug from the air bottle. Ensure all air is released before fully removing the plug. To release the air, unscrew the plug just halfway and allow the air to escape completely.



- Unscrew the bolts from the bottle clamp

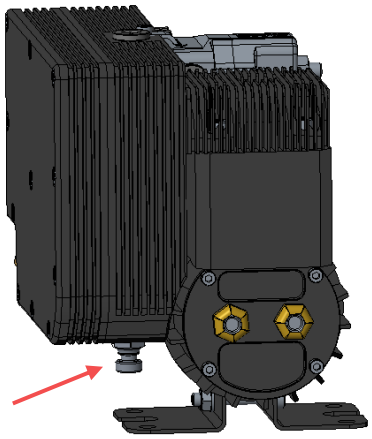


- Carefully remove the bottle from the clamps and drain the water from the bottle through the hole.
- Reassemble back the bottle in the reverse order. Perform a final inspection to ensure all parts are properly assembled and functioning correctly

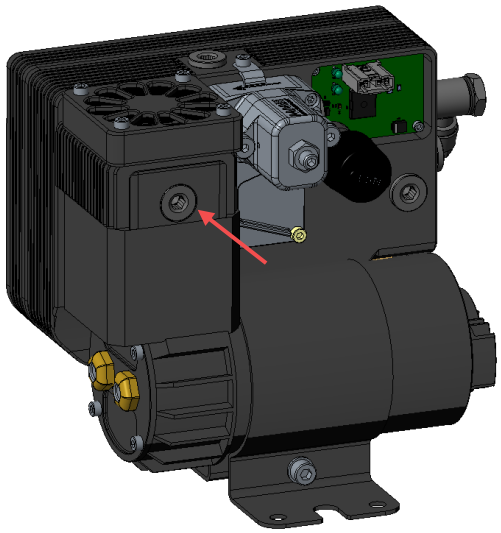
## APS-01

We recommend draining the water from the unit after each event or race. The unit is drained through the drain plug located at the bottom of the bottle.

- Drain the water from the bottle and ensure all the air is fully released.



- Unscrew the plug from compressor head and clean the interior with the compressed air. Then reassemble back the plug.

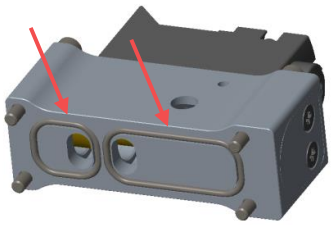


- Remove the fan (if installed) and clean the compressor head with brake cleaner and compressed air.
- Remove the valve block from the unit and perform valve maintenance according to the valve maintenance manuals.
- Perform a final inspection to ensure all parts are properly assembled and functioning correctly.

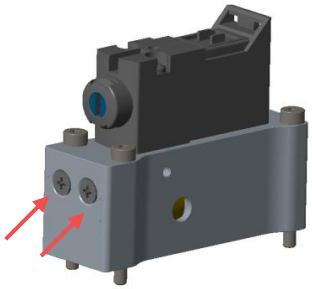
# Valve maintenance

Pneumatic valves can be cleaned of debris and lubricated according to the maintenance plan to ensure smooth operation. Before cleaning, you must first access them on the actuator and valve block. Refer to the detailed instructions below on how to access and maintain the valves.

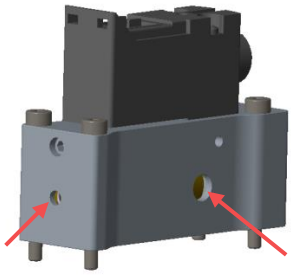
- When removing the valves from the valve block or actuator, take out the O-rings from the grooves and inspect them for damage.



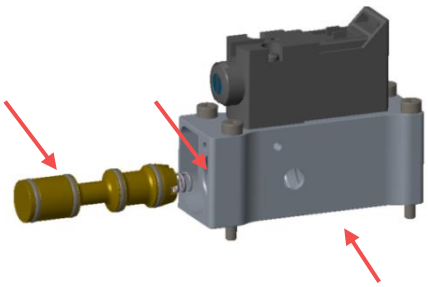
- Unscrew the two cross-recessed countersunk flat-head screws at the end of the valve.



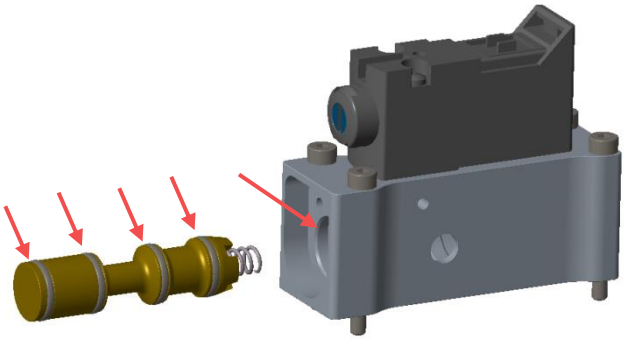
- Using a ϕ2 pin, push from the back of the valve to remove the valve cover and spool. Valve spool can be pushed through the side exhaust holes. Be careful not to lose the spring inside the valve spool.



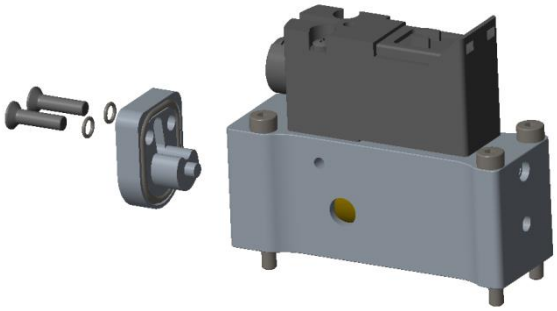
- Clean the valve spool and housing using brake cleaner or gasoline (do not use nitro-glycerine). Apply the cleaner with a brush or nozzle, ensuring all debris are removed. Please ensure that the seals on the valve spool are not removed during the maintenance process. Then clean all parts with compressed air.



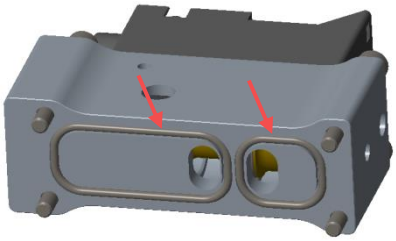
- Inspect all seals for any signs of damage.
- Lubricate the valve hole and spool using **high-temperature lithium grease** from the kit.



- Reinsert the valve spool with the spring back into the valve housing.
- Reattach the valve cover, ensuring the O-ring (medium-sized) is properly in place on the cover. Replace the green O-rings on the screws before reassembly.



- If you have removed the valves from the actuator or valve block, ensure that the O-rings (both large and small) are reinstalled on the mounting surface.



- Reattach the valve to the valve block or actuator, ensuring the correct valve orientation.
- We offer a valve cleaning kit, which includes O-rings, screws, and a pack of grease for lubrication. **VLV-01-SK**