

PRO Jack

Workshop Manual



[WM]-PKM-PRO-JACK
04/07/2022

Table of contents

Chapt I :	Disassembly.....	4
1.	Remove the feet.....	4
2.	Depressurized the jack	4
3.	Remove the pin and the support pin.....	5
4.	Disassemble the handlebar	5
5.	Empty the oil.....	6
6.	Disassemble the body.....	7
Chapt II :	Assembly	11
1.	Seal	11
2.	Separator piston	16
3.	Body.....	16
4.	16	
5.	Rod and tube	18
6.	Pin	20
7.	Pressurize.....	20
8.	Feet.....	21
9.	Handlebar	21
10.	Purge.....	22
11.	Body Cap.....	24
Chapt III :	Services.....	25
Chapt IV :	Versioning.....	25
Chapt V :	Notes	26

Flash the QR code below or follow the link to find out every information available for this product.



www.pkm-consulting.com/support/PRO-JACK/

The QR code is also on the product with his serial number.



Chapt I : Disassembly

1. Remove the feet

Tighten the jack into the vise, you must use soft jaw to preserve the tube.

To remove the feet, use a 8mm hexagonal key and 19 mm wrench or adjustable plier.



2. Depressurized the jack

Unscrew the inflation screw into the rod with a Torx 20 screwdriver. Then, use a $\varnothing 0.7\text{mm}$ needle to deflate the jack.



3. Remove the pin and the support pin

Unscrew the low stop of the pin and remove support pin assembly.



4. Disassemble the handlebar

Unclip the circlip of the axle of the pump rod and retire the axle.

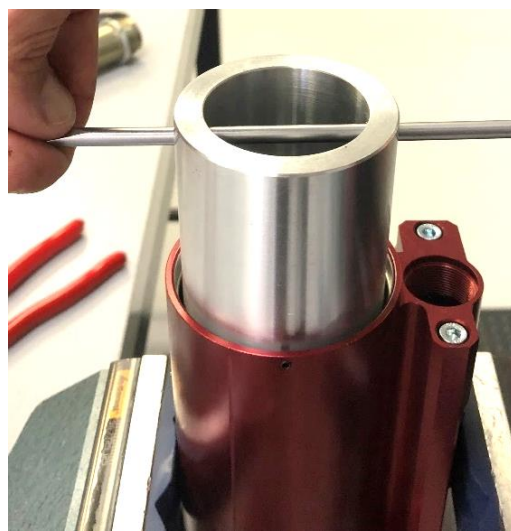
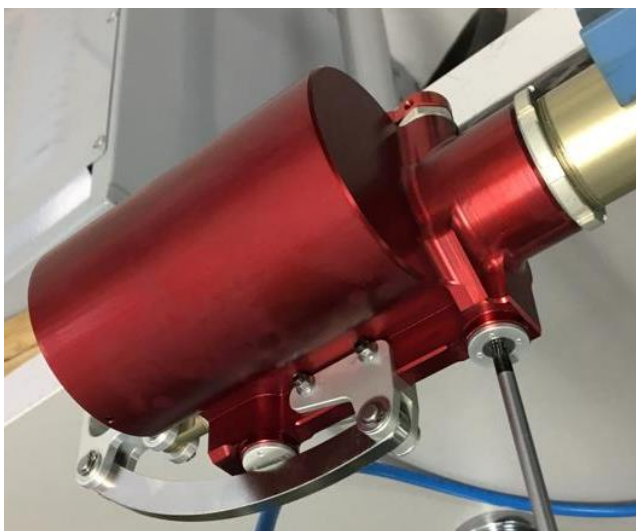


Repeat this step on the connecting rod.



5. Empty the oil

Unscrew the bleed screw and set the hole down to fill out the oil on a recovery tank. Pump the separator piston with his tool **OT-EXT-002-A** to fill out the oil.



6. Disassemble the body

Unscrew check valves caps with **OT-SER-192-B** on the body.



Unscrew the tap cap and the pump cap from the body. Disassemble the tap from the body.



Unscrew the screw on each side of the pump rod.



Disassemble the pump from the body. Unscrew the piston from the tube.



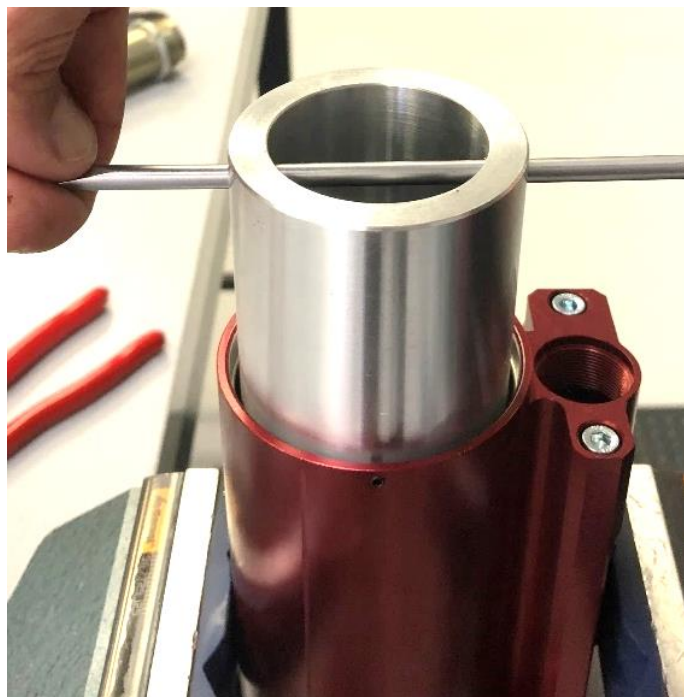
Unscrew the lock nut to free the tube and then unscrew the tube from the body.



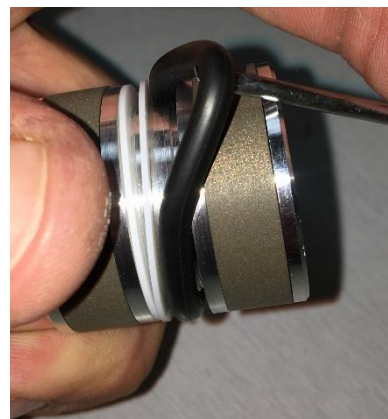
Take of the rod from the tube by the body side.



Remove the circlip and take of the separator piston from the body. Screw **OT-EXT-002-A** into the separator piston to get it out.



Remove all the seal and ring to change them.



Clean all the parts in a washing machine.

Chapt II : **Assembly**

For the assembly all seals bore must be **greased**.

Follow the parts list to use the right tool, with the right torque and Loctite for all parts.

To purge your jack correctly you must use an automatic bleeding machine.

You must use **PK-OIL-001-A** to fill up the jack.

1. Seal

To begin the assembly, you must set all the seal and back-up ring on the different parts, do not forget to grease the seal :

a) The pump cap

Put X-ring **JS0066** and the back-up ring **JS0084** against the ring (PK-BAG-057-A) that you do not need to remove. Then insert the second **JS0066**.



Put the O-ring **J01800200F** outside the Cap.



b) Pump Piston :

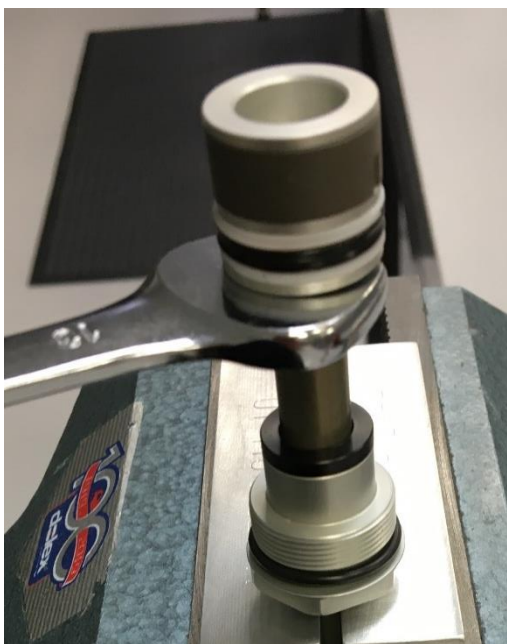
Insert the X-ring **JS0079** with backup ring **JS0068** on each side. Replace the piston band **PK-BAN-034-A**



c) Pump rod

Insert the washer **JA-RON-003-A** on the rod.





- Press the **rod assembly** into the previously cap.
- Lock the rod assembly into **OT-MOR-029-A**
- Screw the piston **JA-PIS-005-A** on the rod with **Loctite 243** at **8N.m**.

d) The tap

On the cap **JA-BOU-018-A** insert **J01400200N** and (N) O-ring.
Screw the rod **JA-TIG-009-B** through the cap with O-ring **J00550160F** inside it.



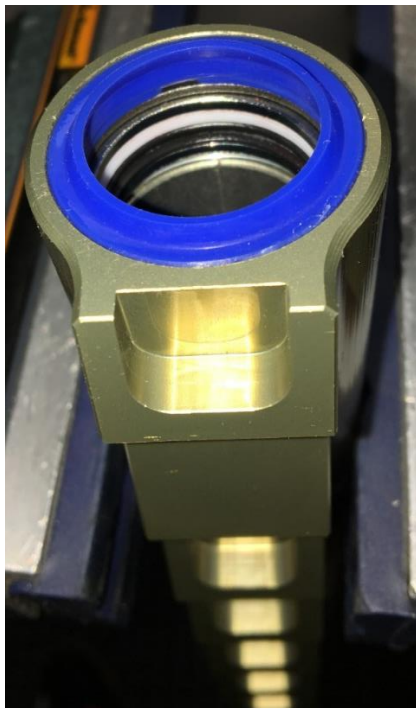
e) The separator piston

Insert the O-ring **J05400500N** around the separator piston.



f) Tube

Insert, in this exact order **JA-RON-001-A**, **JS0069**, **JS0074**, **JA-RON-004-A** into the tube and grease them. Then clip the circlip **PK-JNC-061-A** and finally insert the wiper seal **JS0076**.



g) Rod piston

Install piston band **PK-BAN-035-A**, back-up ring **JS0071** and O-ring **J02400400N** onto the piston **JA-PIS-001-D**.



2. Separator piston

- Grease the piston **JA-PIS-004-C** with his seal and set it into the body greased too.
- Do not forget the circlips **PK-JNC-095-A** before purge.



Screw the two **CHC050N005E109** screw with their copper seal **JC0002** with **Loctite 577** at **8N.m**.



Set the pump rod into the body after greasing it. Screw the cap **JA-BOU-016-A** into the body at **20N.m** with **OT-CLE-003-B**.



Set the tap assembly into the body. Screw the cap **JA-BOU-018-A** tap into the body with **Loctite 243** at **20N.m TOOOI**. Screw the rod **JA-TIG-009-B** at the maximum to close the tap. Set the scroll wheel onto this axle at **45°**. Screw **HC040N006E109A** with **Loctite 243**.

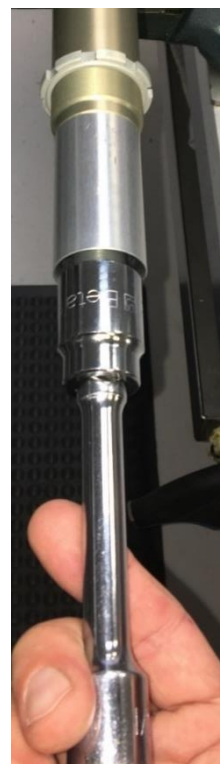


Screw all the cap **JA-BOU-001-D** and **JA-BOU-008-A** with **OT-SER-192-B** at **20N.m**.



5. Rod and tube

Insert the rod into the tube through the body side with **OT-CON-015-A**. Push with **OT-SER-019-A**.



Screw the tube into the body until the end of the thread with **Loctite 243**. Unscrew the tube to align the pin with the bleeding screw.



Lock the locknut **JA-ECR-001-B** to the body with **Loctite 243** at **35N.m** with **OT-SER-193-A**.



6. Pin

Insert the pin subset on the tube and screw the low stop screw **CHC040N006E109** with **Loctite 243** at **6N.m**.



7. Pressurize

Pressurize the jack through the bottom of the rod with a needle at **20bar** and tight up the screw **BHC040N006E1409** with his O-ring **J00450150N**.



8. Feet

Screw the feet **JA-PIE-005-A** to the rod with screw **JA-VIS-005-A** and his the washer **RA100AD** with **Loctite 243** at 20N.m.



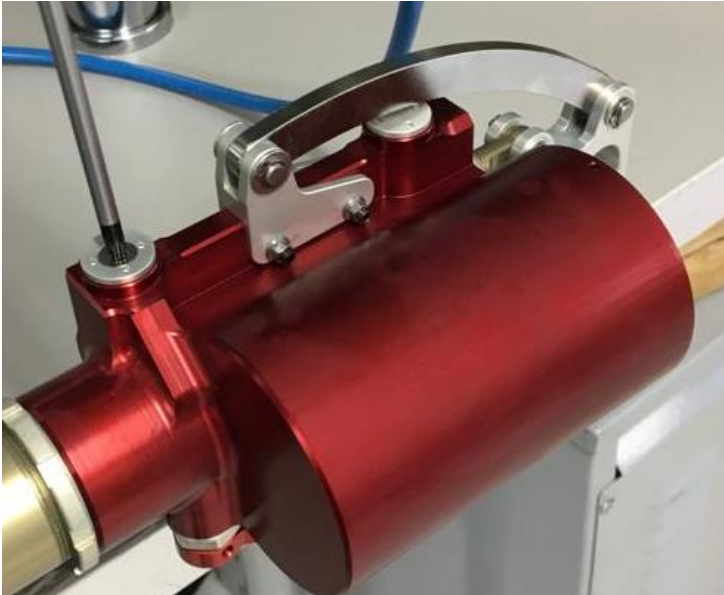
9. Handlebar

Set the handlebar with axles **JA-AXE-001-B** and circlips **PK-JNC-103-A**.



10. Purge

Remove the bleed screw and screw an M5 fitting with triangular groove sealing. Unlock the tap from a ½ turn.



The name of the program must be “shock with separating piston”.



a) 1st Cycle

Inspiration mode : Do not do anything, let the machine works.

Pressure mode : Open the tap, action the handlebar 3 times **slowly** on the way on and the way out. Close the tap and do some round trip **slowly**. When the rod is fully out, open **slowly** the tap and let the rod went back to the end.

b) 2nd Cycle

Use the same cycle as the first one. At the end, open the tap, fold the handlebar and put the jack in "car position".

It means:

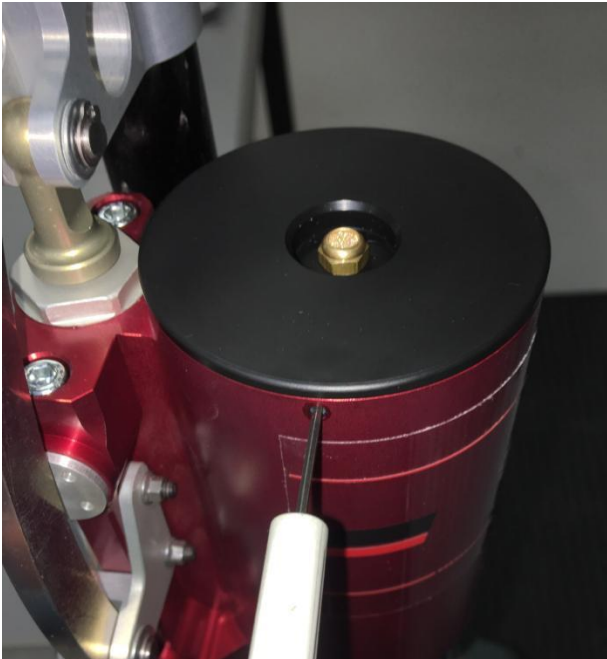
- Rod retracted
- Jack handle stowed

Adjust the reach of the separator piston. It must be 13mm from the top of the piston through the top of the body.

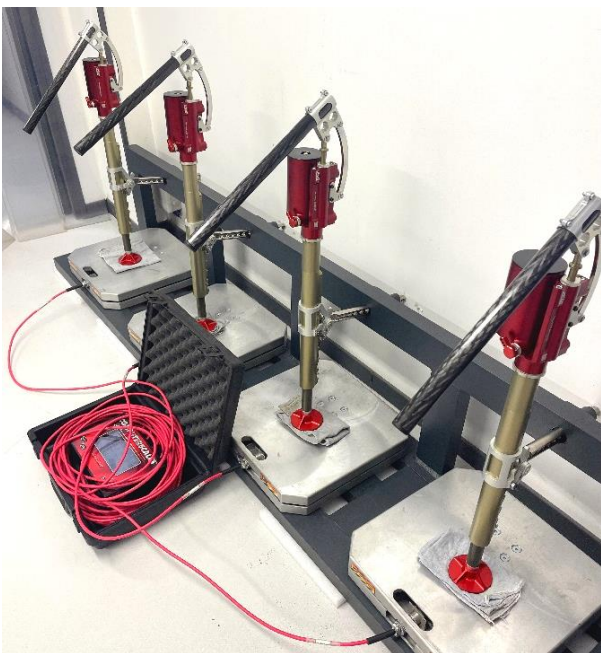


11. Body Cap

You can finally lock the body cap **JA-BOU-015-B** with **HC030N003E109B**.



The jack is ready to be tried. Lock the jack between a scale and a fixed metal beam. Pump the jack until 700kg appears in the scale. Let the jack for 1hour and check, if the weight is the same, the jack is ready to be packed on a race car.



Chapt III : **Services**

To keep your jack working well, you must do recommended services by PKM Consulting every 6 month for a normal use or 3 months for intensive use.

PKM Consulting
428, Avenue de Copenhague
83870 Signes, France
0033494903487 or contact@pkm-consulting.com

Chapt IV : **Versioning**

REV	NAME	DATE	CHANGES
A	RICORD	01/07/2022	Creation

Chapt V : Notes

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....