



# Ball Valve Dismantling.



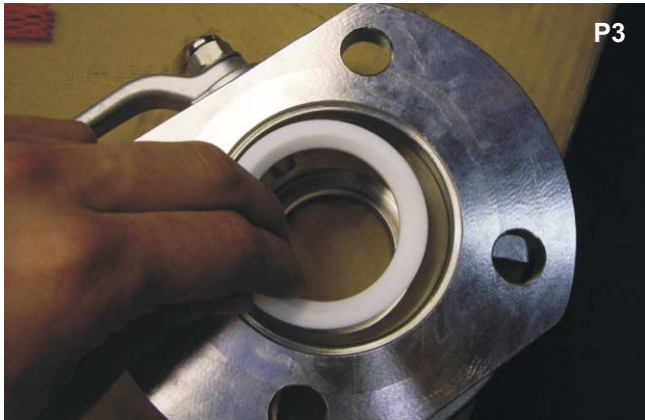
**2" FULL BORE  
BLACKO BALL VALVE**



Remove the front ball seal from the valve body.



Using the ball valve handle, rotate the ball until the slot is inline with the axis of the valve. This will allow the ball to be carefully removed from the valve body.



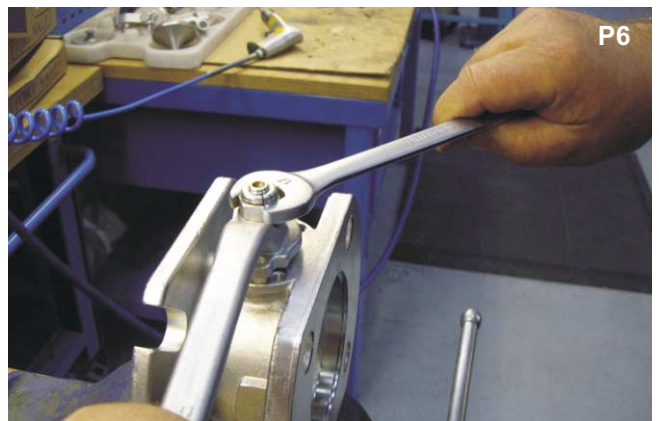
Remove the bottom ball seal from the valve body.



Using a 10mm A/F wrench, remove the handle stop pin.



Completely remove the handle stop pin.



Holding the handle and using a 17mm A/F wrench remove the M10 self locking nut which holds the handle in place.



Remove the Lock nut.



Remove the M10 plain washer.



Remove the valve handle.



Noting the orientation of the Belleville washers remove from spindle.



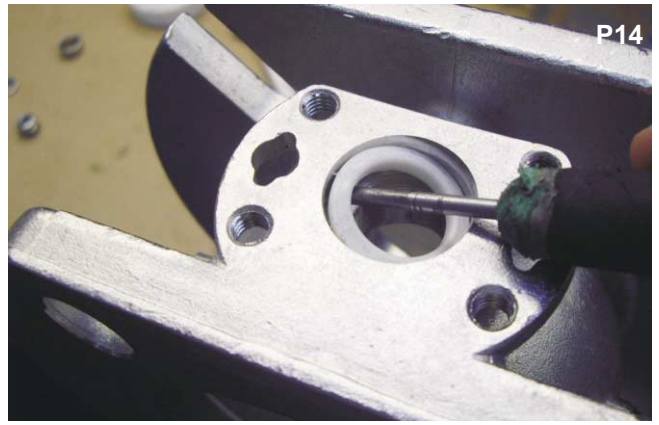
Remove the stuffing collar.



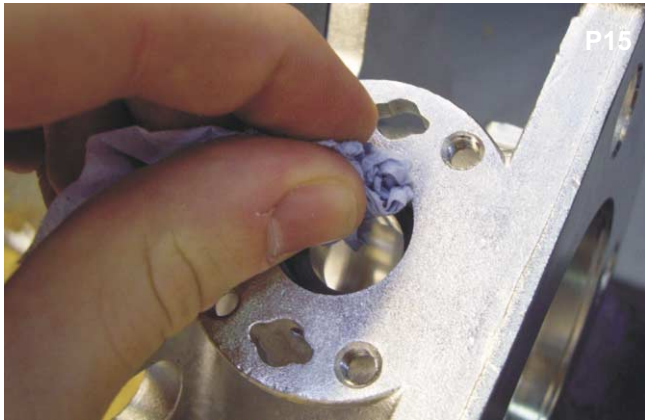
If needed carefully tap the spindle to free from bore.



Carefully remove the valve spindle.



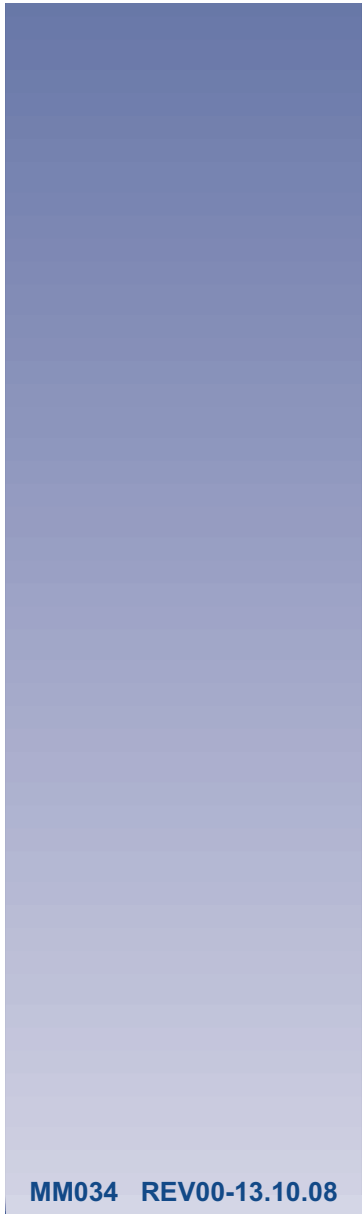
Using a slot head screw driver carefully remove the top ptfе o-ring ensuring no marks are left on the spindle bore.



Wipe clean the valve inspecting for any marks or dirt on sealing faces.



# **Ball Valve Re-assembly.**



**2" FULL BORE  
BLACKO BALL VALVE**



Examine the spindle housing for damage both in the top and bottom bore.



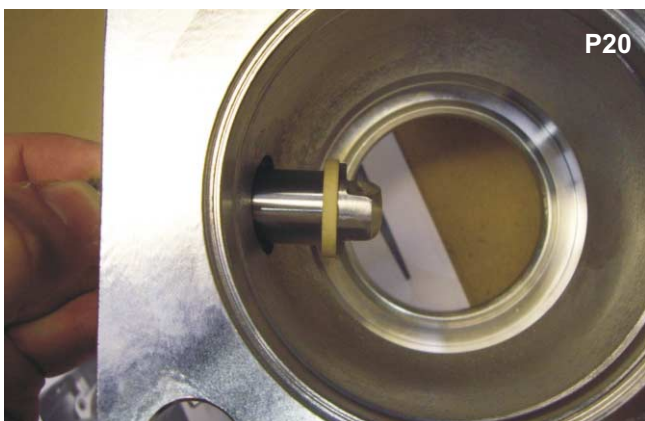
Examine the valve spindle for damage along the diameter where the seal will be located.



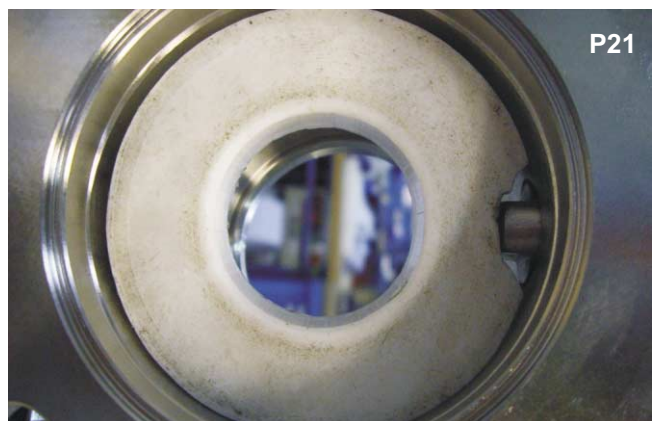
Check the ball for excessive wear, scratching or damage around the sealing areas at both ends of the ball.



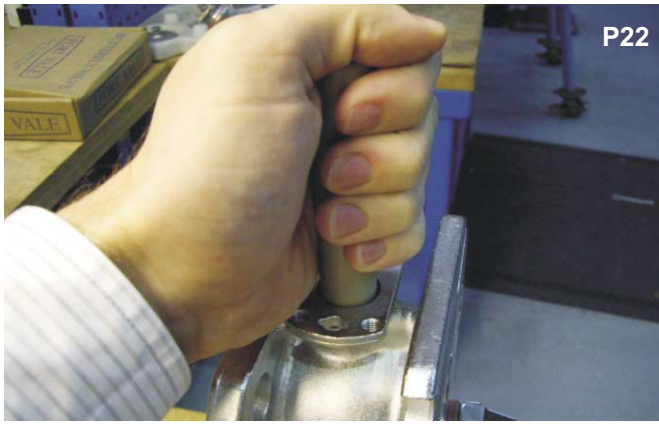
Slide the bottom bearing over the valve spindle with the recess over the head of the spindle.



Insert the spindle into the housing from the inside of the valve body.

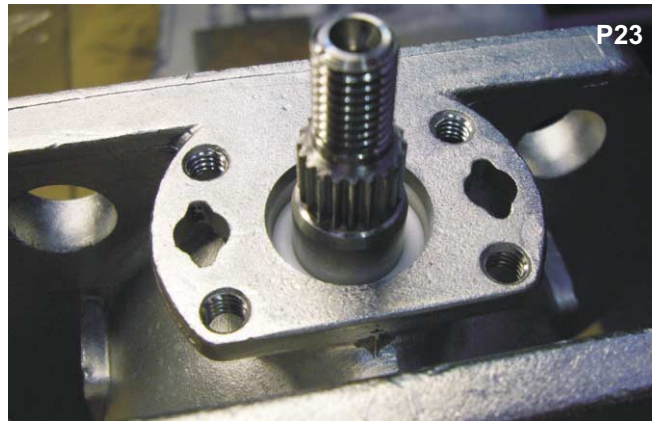


A tool like the one shown above (which is simply a 2.75" diameter piece of PTFE bar with a cut out for the spindle to locate on) must now be used to stop the spindle falling out.



P22

Using a non metallic seal pusher, push the PTFE o ring until it is fully located.



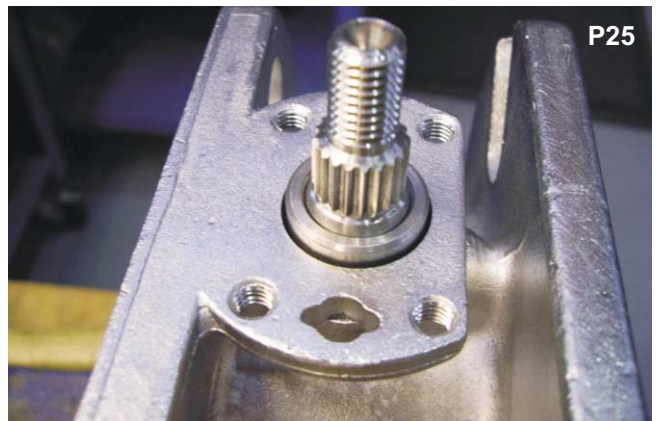
P23

The o ring should now not be able to move any further down the spindle bore.



P24

Ensure the correct orientation when inserting the stuffing collar. The bevelled edge must locate on the PTFE o ring.



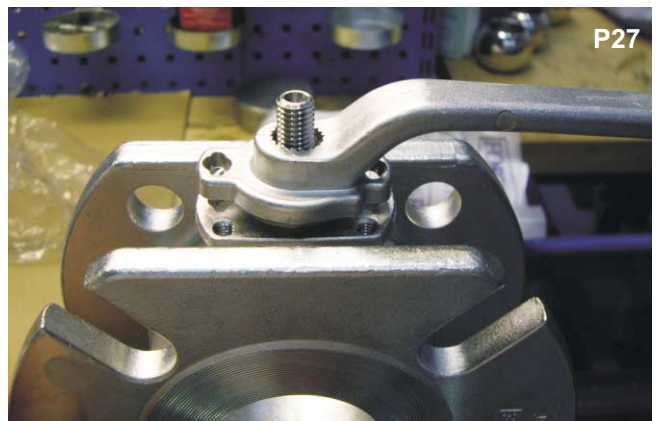
P25

Insert the stuffing collar into the spindle bore.



P26

Place the belleville washers as shown onto the spindle. Note the washers are to be assembled back to back and not the same way. The first washer placed on the spindle must be dished side down.



P27

Replace the handle, ensuring the orientation of the spindle and handle. With the handle in the closed position the flats of the spindle should be in line with the body axis.



Apply rocol to the spindle thread.



Replace the M10 plain washer.



Replace the M10 self locking nut.



Using a 17mm A/F wrench tighten the lock nut.



Replace the handle stop pin and tighten using a 10mm A/F wrench.



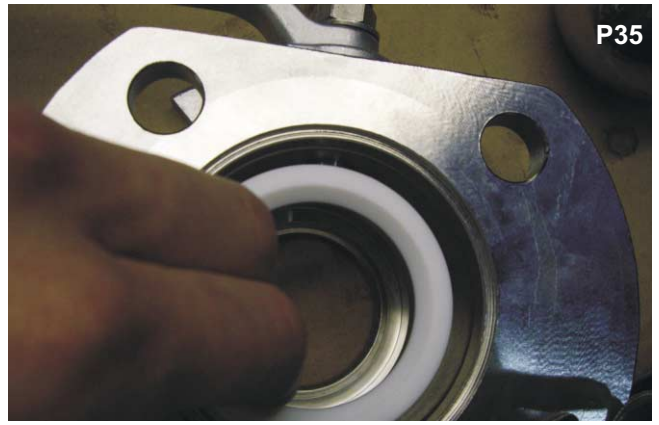
Ensure the valve body is clean and free from any damage.





P34

Ensure the PTFE back seal is in the correct orientation.



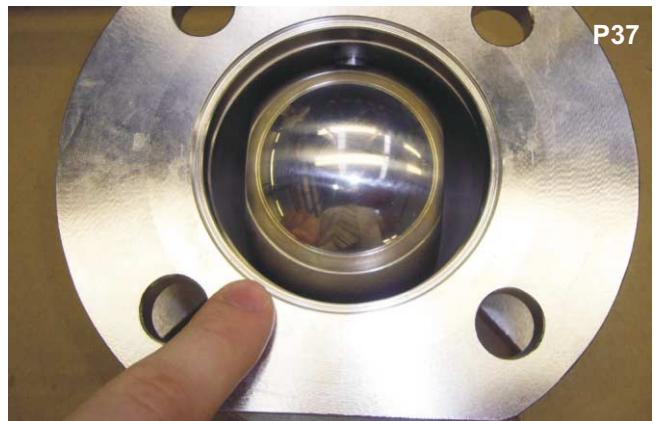
P35

Fit the PTFE seal into the recess as shown.



P36

Roll the ball into the ball valve body ensuring that the flats on the ball spindle are inline with the ball valve axis.



P37

Ensure that the front seal groove is clean and free from any dirt.



P38

Insert the front seal and ensure that the seal is seated correctly in the recess.