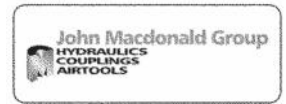




## **VR Breaker Maintenance Check sheet**

# VR Breaker Maintenance Check sheet



Checklist to assess whether maintenance work is required:

## EXCESSIVE WEAR TO HANDLE RETURN SPRINGS AND MOVING PARTS CHECK

1. With a breaker fitted with a chisel (or any suitable accessory) gripped in a vice or sitting on a chisel (accessory) embedded in the ground, but not connected to an air supply, push down both handles as far as they will go (FIG1) and release them (FIG2)

The handles should spring back upwards until they rest on the buffers (FIG3) which are bonded onto the underside of the tool top cap.

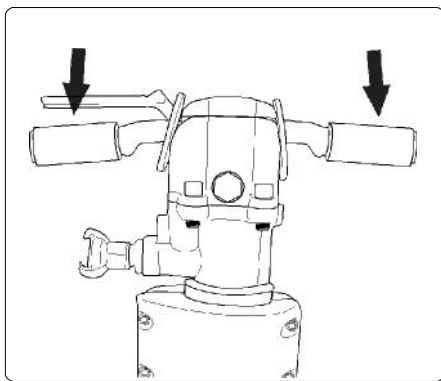


FIG1

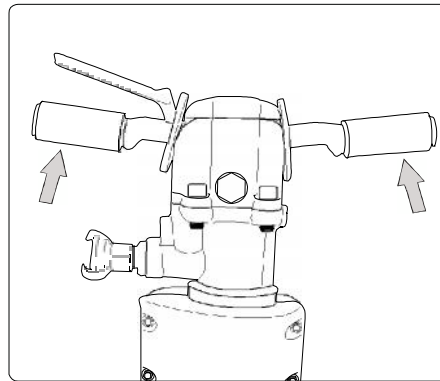


FIG2

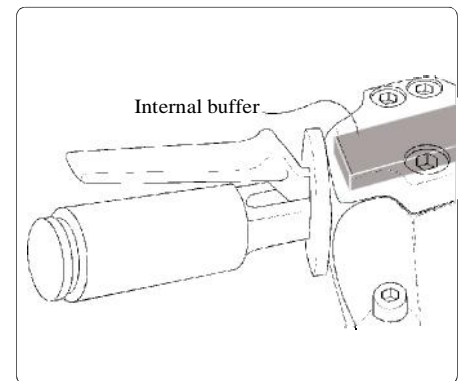


FIG3

2. Push the handles down slightly and pull them back up against the buffer to ensure that the buffer is still effective and that there is no metal-to-metal contact between the handles and the top cap (FIG4)

3. Push the handles backwards and forwards side to side (FIG5) if there is metal-to-metal contact between the handles at the outside edge of the backhead, then the handle spacer washers should be renewed.

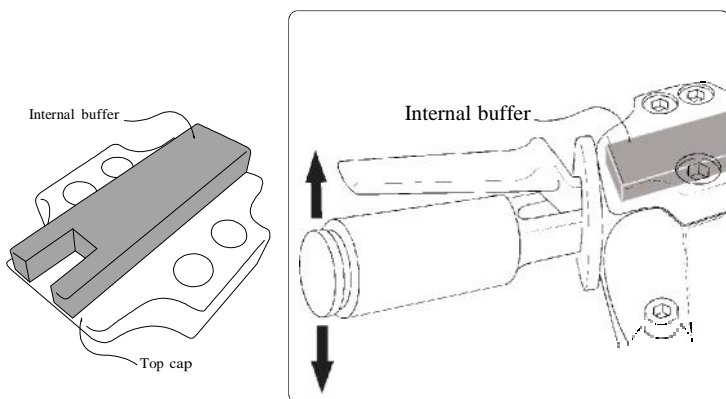


FIG4

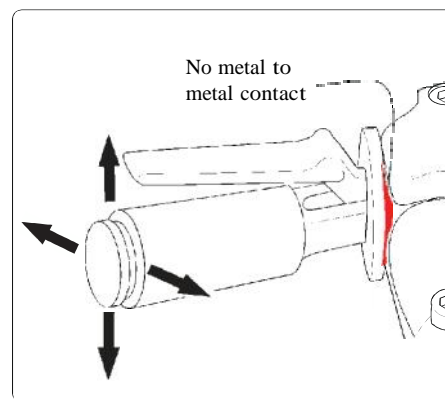
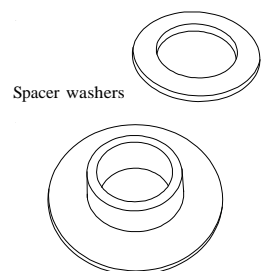


FIG5



Spacer washers

If the above tests are all positive then the handle return springs should be lubricated using WD40 spray or similar light oil and the breaker put back into service. If any of the above tests are negative, the top cap should be removed and the handle return springs and/or the top cap and/or the handle spacer washers should be replaced as required and the breaker should be re-assembled.

Tests 1), 2) and 3) should then be repeated successfully before the breaker is put back into service.

# VR Breaker Maintenance Check sheet

Checklist to assess whether maintenance work is required:

## VARIOUS MAINTENANCE CHECKS

4. Check for bolts loosening (FIG1) and re-torque if necessary (FIG2&3)

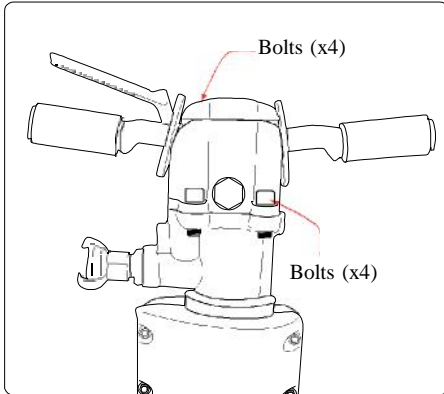


FIG1

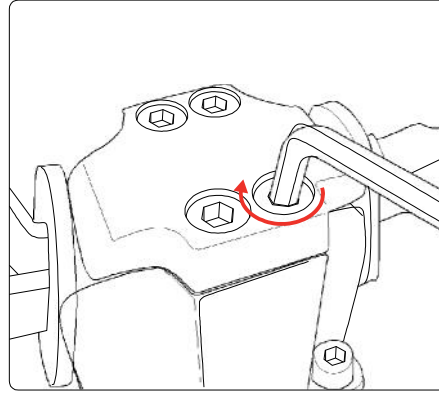


FIG2

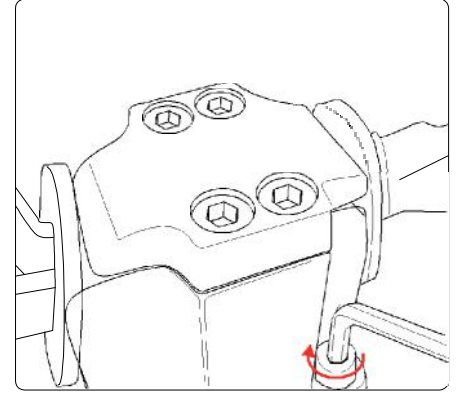


FIG3

If loosening has occurred, the correct procedure for re torquing is;

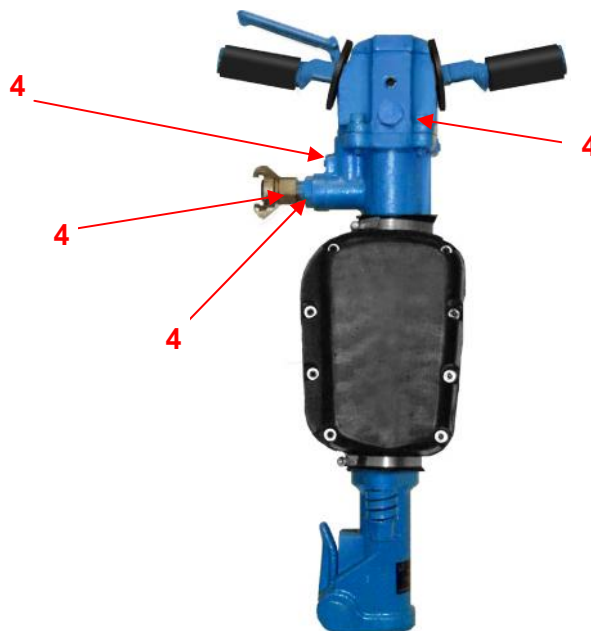
- Completely remove cap screws/bolts
- Clean all threads with suitable wire brush and use a solvent cleaner
- Reapply correct high strength retaining compound (see below)
- Torque to recommendations

## VR Breakers

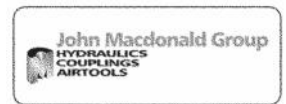
Retaining compound is used on the 4 backhead bolts, and also on the air inlet nipple where it screws on to the cylinder.

Retaining compound is used on the 3 pressure plugs on the cylinder.

Retaining compound is used on the connection between the air



# VR Breaker Maintenance Check sheet



5. Check handle grips and replace if required. (FIG1 needs replacement)(FIG2 suitable)

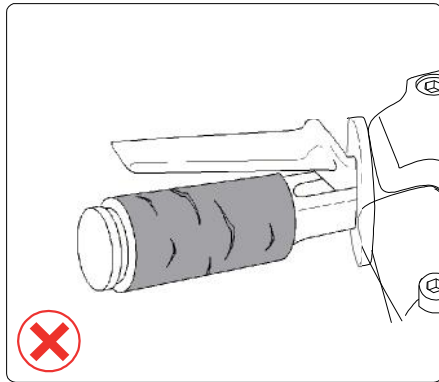


FIG1

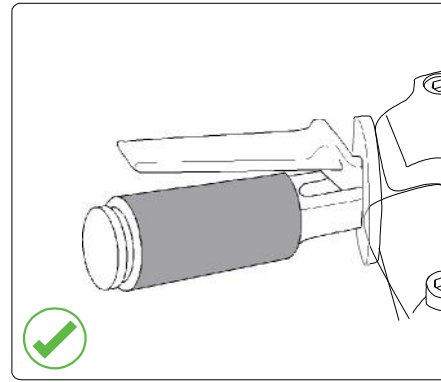


FIG2

6. Check for air leaks and repair with new seal kit if required.

7. Check silencer and replace if necessary.

8. Check built in line lubricator (FIG1&2 remove cap) and fill if required (FIG3 replace cap)

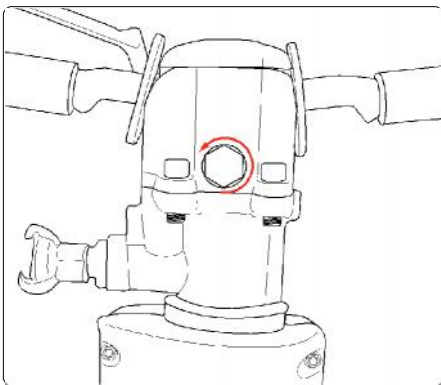


FIG1

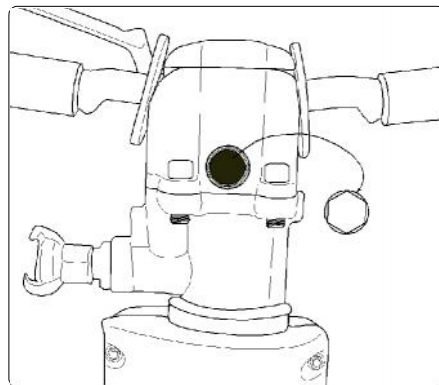


FIG2

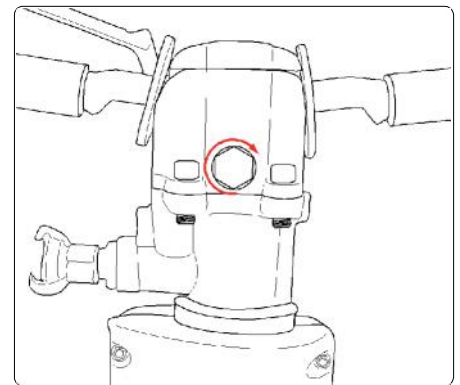


FIG3

Checklist to assess whether maintenance work is required:

## VARIOUS MAINTENANCE CHECKS

9. Check side rod bolts and springs (FIG1) if over the specified dimension of 53mm then tighten accordingly (FIG2) remeasure (FIG3)

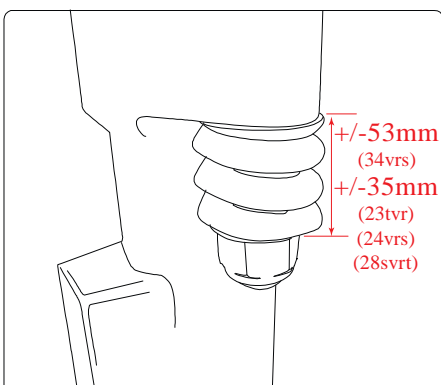


FIG1

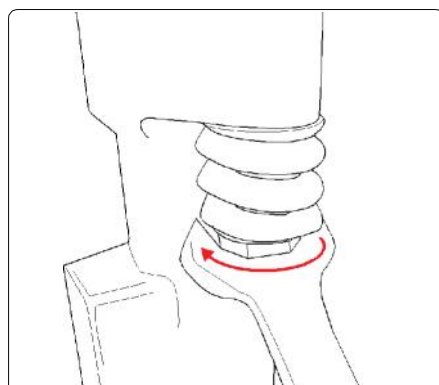


FIG2

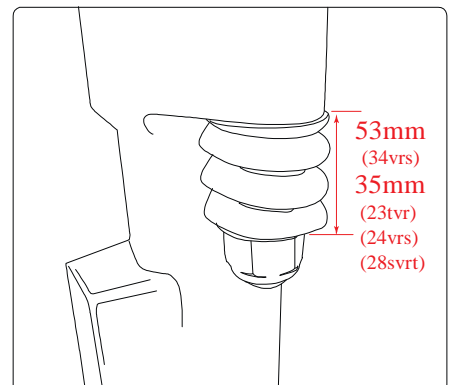


FIG3

# VR Breaker Maintenance Check sheet

10. Check coupling inlet gauze is present and free from contamination (FIG1 gauze present but needs cleaning) (FIG2 suitable)

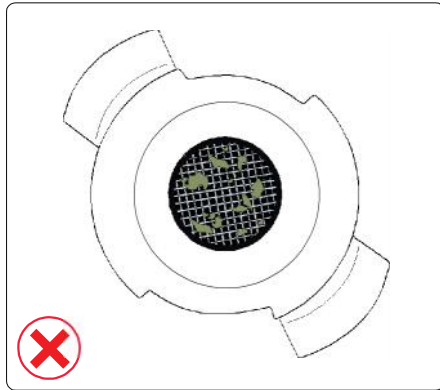


FIG1

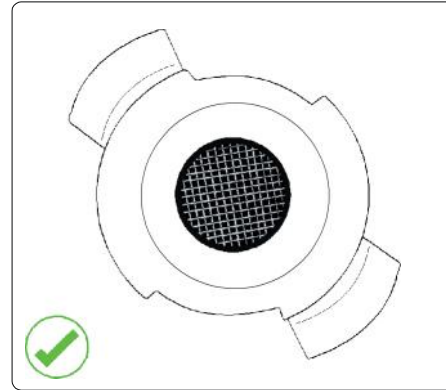


FIG2

When checks 1-10 have been carried out, connect tool to air and run. If tool splutters Or underperforms carry out step 11. If tool runs but won't stop when throttle is released carry out step 12

11. Check 3 part valve assembly and replace if necessary (fig1, 2&3)

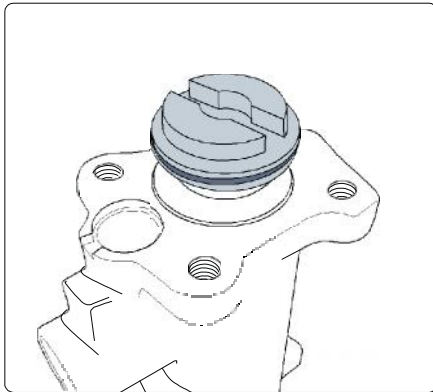


FIG1

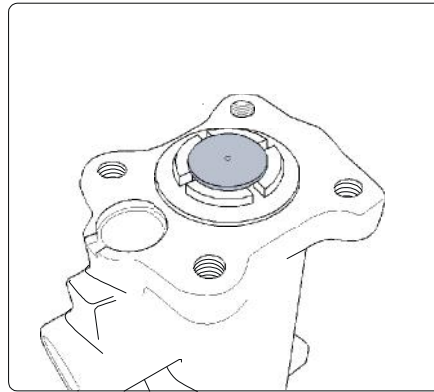


FIG2

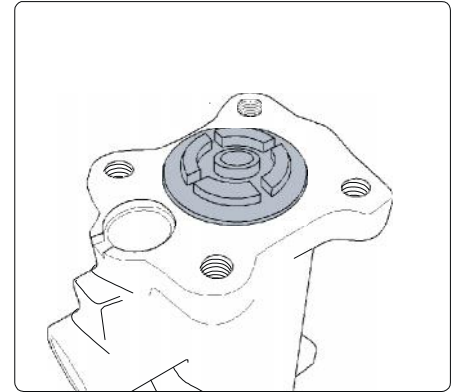


FIG3

12. Remove throttle valve stem (FIG1), clean/remove dirt (FIG2) insert back into tool (FIG3)

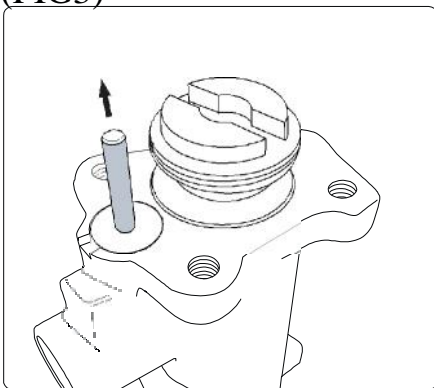


FIG1

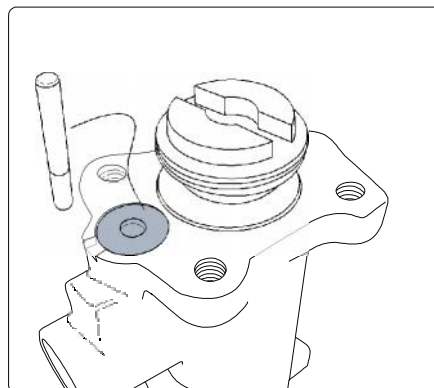


FIG2

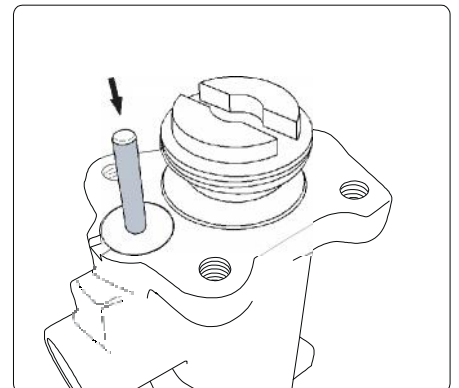
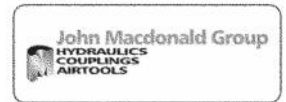


FIG3

# VR Breaker Maintenance Check sheet



Recommendations;

Macdonald Air Products are all assembled using thread locking compounds to ensure a level of adhesion that will not weaken under the working conditions of the tool. The locking compounds used in production and recommended for use during maintenance and repairs are detailed below.

**4.**

Loctite 638 - Retaining		
Strength Required	High	Recommended for all coarse metal threads. Suitable for fast applications at low temperatures e.g. outdoor plant maintenance
Handling Strength	8 min.	
Diametrical Clearance	Up to 0.25mm	
Temperature Resistance	150 C	

The data shown above is taken from Loctite literature. More information can be found on [www.loctite.co.uk](http://www.loctite.co.uk).

Recommended Torque settings for Genuine Macdonald (Umbrako) Cap Screws/Bolts

Tool	Fastener	Torque
DR4/CH4 VRS	M8 CAPSCREW	39 Nm
VIB DAMPED BREAKERS	1/2" UNC CAPSCREWS	156 Nm
VIB DAMPED BREAKERS	5/8" UNC CAPSCREW	209 Nm
DM11/12 VRS	M8 CAPSCREW	39 Nm
DM11/12 VRS	5/8" UNF CAPSCREWS	227 Nm
MSG	5/16" BSW BUTTON HEAD	31 Nm
STANDARD BREAKERS	5/8" UNC HEX BOLT	200 Nm
STANDARD SCABBLERS	1/2" UNC HEX BOLT	109 Nm
VR SCABBLERS	M10 CAPSCREWS	77 Nm
VR SCABBLERS	M12 CAPSCREWS	135 Nm
1615 ROCKDRILL		125 Nm
2315 ROCKDRILL		150 Nm

Macdonald Air Products recommends the use of genuine spare parts, these parts will have been Selected to ensure your product is maintained to the highest quality.

For further information;

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Phone; 01355 221215