

Specifications :

model	HEADS		WEIGHT		LENGTH		HEIGHT		WORKING WIDTH		AIR CONS		WRK.PRESS.		AIR HOSE
	QTY	lb	kg	ins	mm	ins	mm	ins	mm	cfm	l/s	psi	bar	bsp	
MS3-VR	3	11	5.0	25	533	7	178	3	75	25	12	90	6	3/4"	

MS3-VR Vibration Reduced triple head scabblers are designed for medium duty work in de-scaling, laitence removal and concrete repair. The tools are made to the same high standards for reliable and durable performance as other tools in the range but are vibration reduced to allow the operator longer continuous use.

Pneumatic Tool Test Results : Model MS3-VR Hand Held Scabblers

Total Acceleration Level a+ K= Guaranteed Maximum 4.49 0.32 4.81m/sec/sec - 3-Axes Vector sum re:ISOEN28662/1/3/5			Sound Power Level (dB(A)) a+ K= Guaranteed Maximum 102 1 103 re:2000/14/EC		
Maximum Total Vibration level transmitted to trained operator under actual working conditions = 5.6 m/s/s					
Minimum Total Vibration level transmitted to trained operator under actual working conditions = 3.1 m/s/s					
Average Total Vibration level transmitted to trained operator under actual working conditions = 5.5 m/s/s					
EC DECLARATION OF CONFORMITY: Machinery Safety					
We Macdonald Air Tools Ltd., East Kilbride, Scotland declare under our sole responsibility that the product to which this declaration relates, conforms to the requirements of the Council Directive of 23rd July 1998 on the approximation of the laws of the Member States relating to the Machinery Directive 98/37/EC and any subsequent amendments. Other Applicable Directives:84/537/EEC, 79/113/EEC,2000/14/EC, 2002/44/EC Applicable Standards:ISOEN 28662/1/2/3/5, 792-4:2000,ENISO 3744:1995, ENISO 3746:1995, ENISO 12096					
Product Name: Vibration Reduced Hand Held Scabblers Model : MS3-VR Serial Number:					
Signature of Certifier: <i>E.J. Van der Stighelen</i> (EJ Van der Stighelen - Engineering Manager) Date & Place of issue: / / EAST KILBRIDE					



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Specification & Parts List

MS3-VR
Vibration Reduced Hand Held Scabblers



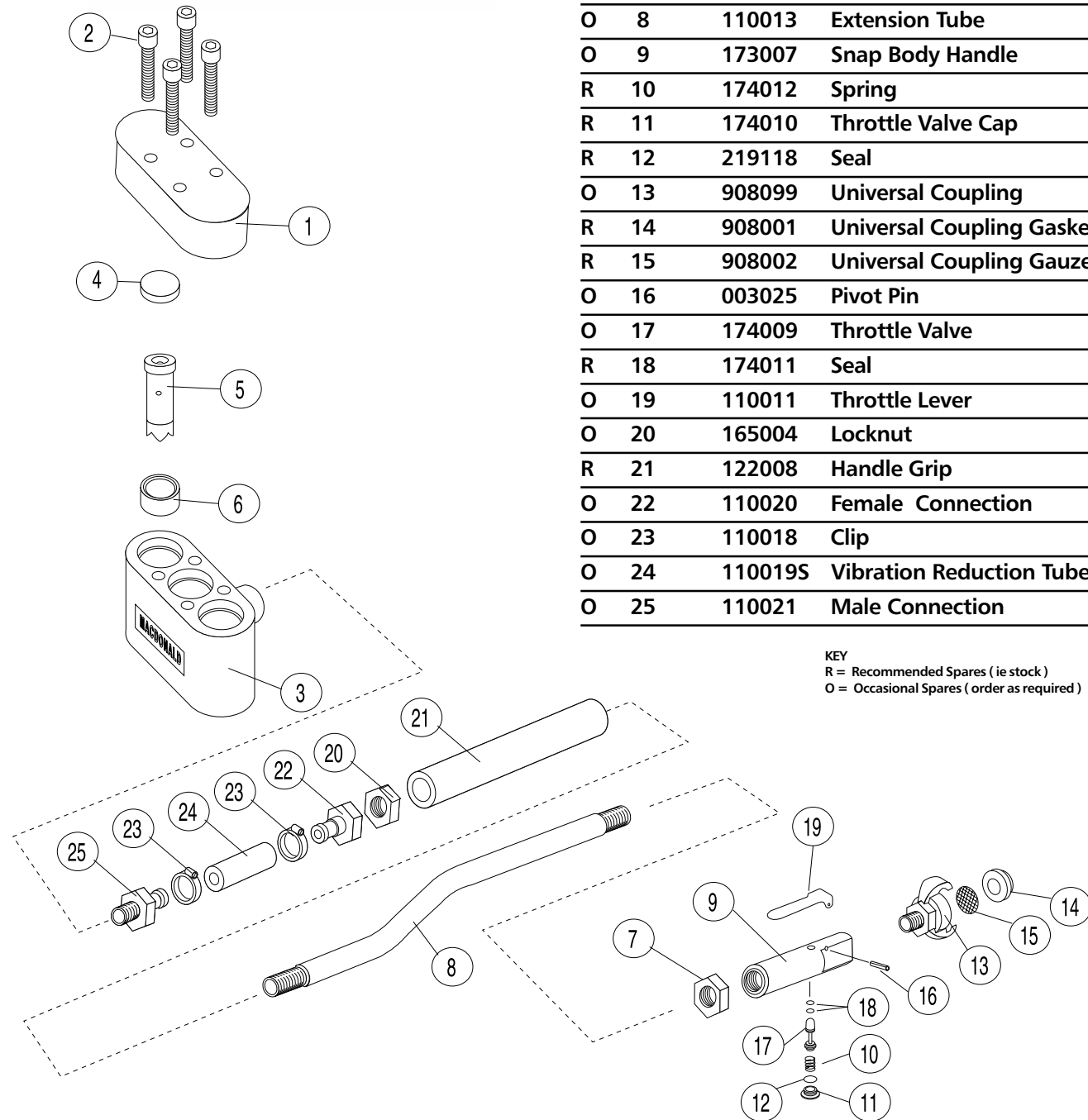
Macdonald

GENUINE SPARE PARTS

MS3-VR Vibration Reduced Scabbler

ILL. No.	Part No.	Description	Qty
O	1	173013 Steel Top Plate	1
R	2	173014 Capscrew	4
O	3	173001 Body	1
R	4	173003 Top Cap	3
R	5	112013 Piston	3
R	6	173002 Liner	3
O	7	110012 Locknut	1
O	8	110013 Extension Tube	1
O	9	173007 Snap Body Handle	1
R	10	174012 Spring	1
R	11	174010 Throttle Valve Cap	1
R	12	219118 Seal	1
O	13	908099 Universal Coupling	1
R	14	908001 Universal Coupling Gasket	1
R	15	908002 Universal Coupling Gauze	1
O	16	003025 Pivot Pin	1
O	17	174009 Throttle Valve	1
R	18	174011 Seal	2
O	19	110011 Throttle Lever	1
O	20	165004 Locknut	1
R	21	122008 Handle Grip	1
O	22	110020 Female Connection	1
O	23	110018 Clip	2
O	24	110019S Vibration Reduction Tube	1
O	25	110021 Male Connection	1

KEY
 R = Recommended Spares (ie stock)
 O = Occasional Spares (order as required)



MAINTENANCE AND REPAIR

Attention to a few fundamental points will prolong the life of the tool, keep it in service and ensure maximum working efficiency. Ensure that the operator reads and understands what he is required to do to comply with these points prior to using the tool. Ensure also that he carries out his part of the instructions.

1. Ensure the machine is disconnected from air supply before doing any work on it.
2. Ensure the machine is held firmly in a vice or fixture for dismantling.
3. Correct tools for dismantling and assembling must be used.
4. When using a solvent or cleaner, follow the manufacturer's instructions.
5. Before clearing the machine for use, ensure that all the connections and joints are tight, looseness causes air losses, vibration and general inefficiency.
6. If the application you are working on generates dust, wear a face mask or wet the surface with water to prevent the dust rising.

Lubrication

All pneumatic tools require regular and adequate lubrication to prevent excessive wear and ensure efficient operation. Particular attention should be paid to lubrication during the initial running in period of a new tool.

The tool works at top speed and full power right from the start, so lack of lubrication during this period, before the tool is loosened, can lead to excessive wear on all working parts.

Where an oil reservoir is incorporated in the tool it should be filled daily.

Before starting work each day, pour a small quantity of the correct grade of oil into the air inlet and blow out the hose to ensure no dirt or moisture is lying in the hose. Couple the hose to the tool and give the tool a short burst. Care must be taken not to over-oil the tool to avoid excess oil blowing from the tool and damaging the working surface.

Only clean oil of the correct grade, as stated, should be used for lubrication. A heavy or dirty oil is useless as it will only serve to "gum up" the tool.

Recommended Oil :

The following oils are recommended for use with Macdonald Tools and these or their equivalents should be used in normal conditions. For abnormal conditions e.g. extreme heat, consult the oil company.

SHELL	Clavus 25
BP	Energol LPT 80
ESSO	Zerice 46
MOBIL	Almo 525

Air Supply

Always ensure that an adequate supply of compressed air at a pressure of 6 bar (90 p.s.i.g.) minimum is available to the tool. Reduced air pressure will affect the performance of the tool adversely.

Use the shortest length of hose possible between the compressor and the tool to avoid undue pressure drop through the hose.

General

The tools require adequate flows of compressed air at around 6 bar pressure for efficient operation. Always blow out the hose carefully before coupling to the tool in case dirt or foreign matter is carried into the tool in the air stream. If the tool sticks completely, the most likely cause is dirt or improper or insufficient lubrication. If this happens the tool should be dismantled by a competent engineer, the parts should be thoroughly cleaned in a suitable solvent, lightly oiled and re-assembled. Keep the tool tight, do not allow any fasteners or connections to become loose because this can lead to air losses, vibration, excessive wear and inefficiency. Always use sharp moils and chisels or spades because dull cutting edges cause the tool to absorb the blow instead of cutting through the workpiece. This results in operator fatigue, chisel breakages and poor productivity.

SAFETY AND OPERATING INSTRUCTIONS (General)

1. Never exceed the maximum air pressure recommended for the machine, usually this is 6 bar (90 p.s.i.g.) for hand held machines.
2. Do not use damaged, frayed or deteriorated hoses and fittings. Always store hoses properly after use away from heat sources or sunlight. A hose failure can cause injury.
3. When blowing out a hose or air line, ensure the open end is held securely, a free end will whip and can cause injury. Open the supply air cock carefully and ensure that any particles are ejected safely. A blocked air hose can become a compressed air gun.
4. Close the air cock at the compressor or the supply line and release the line pressure before disconnecting the hose. The air cock should be within easy reach of the work area.
5. Personal protection such as safety glasses, gloves and safety footwear should be worn by the operator and other personnel where work operation or regulations require their use. Ear defenders should be worn.
6. Depending on the material being worked on, precautions may be required against the generated dust.

Use of the Machine and Operating Instructions.

- 1) Hold the machine only by the Throttle Handle and Rubber Hand Grip provided. Do not grip the machine by the top of the cylinder block, as this will increase vibration exposure.
- 2) The Pistons of MS3-VR will stop if the machine is overloaded.
- 3) The Vibration Reduction Tube (24) is designed to carry the correct load required by the MS3-VR without bending.
- 4) If the machine is overloaded the Vibration Reduction Tube may bend, therefore don't overload the machine during operation.
- 5) Apply only enough load to the machine to keep the cutting tips of the pistons in contact with the worksurface without bending the Vibration Reduction Tube.
- 6) The Weighted Acceleration Level quoted on the back of this part's list is an average of 3 sets of readings from 3 different Operators, measured on the front hand grip of the machine, whilst cutting concrete.
- 7) In certain applications the Acceleration levels generated may be higher than those quoted on this leaflet.
- 8) If the application you are working on generates dust wear a face mask, or wet the worksurface with water to prevent dust rising.

Warning

NEVER ATTEMPT TO CHANGE A CHISEL, MOIL, ASPHALT CUTTER OR OTHER ACCESSORY ON A PNEUMATIC TOOL UNLESS THE TOOL HAS BEEN COMPLETELY DISCONNECTED FROM THE AIR SUPPLY.

THE CYLINDER OF THIS TOOL IS HARDENED AND SHOULD NOT BE WELDED UNDER ANY CIRCUMSTANCES. WELDING CAN CAUSE LOCAL SOFTENING.