



**SCARAB**  
FAYAT GROUP



# **MERLIN AND MAGNUM ROAD SWEEPERS**

**ILLUSTRATED PARTS CATALOGUE**





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## ILLUSTRATED PARTS CATALOGUE

### MERLIN AND MAGNUM ROAD SWEEPERS

Manual Z039752

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Scarab Sweepers Limited  
Pattenden Lane - Marden - Kent TN12 9QD, UK  
T: +44 (0)1622 831 006 - F: +44 (0)1622 832 417  
E: [scarab@scarab-sales.com](mailto:scarab@scarab-sales.com) - W: [scarab-sweepers.com](http://scarab-sweepers.com)  
Registered in England No. 18923459 - VAT No. GB 374 5002 68  
Registered Office: Pattenden Lane, Marden, Tonbridge, Kent TN12 9QD, UK

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MERLIN and MAGNUM

Important Notice To Users


This manual is published by the Technical Publications Department of Scarab Sweepers Limited and every effort is made to ensure that the information it contains is correct at the time of publication. Due to a policy of continuous development, however, the Company reserves the right to alter the specification and to supply when so altered without reference to illustrations and descriptions in this manual.

Parts depicted or mentioned in this manual may or may not be fitted to your particular road sweeper due to various options that may or may not have been selected and does not therefore infer that the part should be fitted to your particular road sweeper or is missing. If in doubt then please contact the Scarab Parts Department for clarification.

This manual may show pneumatic cylinders with bellows fitted. Bellows are no longer required and are now not fitted.

This manual does not attempt to cover every variation in assemblies such as exhaust gantries or sub-frames made necessary by differing customer requirements and also as a result of changes introduced by the chassis manufacturers.


It is imperative that the correct model is FULLY identified when procuring replacement parts for your Scarab Sweeper. To avoid unnecessary confusion and delays caused by incorrectly ordered parts, please refer to the Vehicle Serial Number (CE) Plate and take note of the vehicle's number.



The Serial Number Plate is located on the left hand side of the subframe, on the rear face of the suction spigot mounting and inboard of the suction nozzle lifting ram.

The example shown here is for guidance only.



	<b>Scarab Road Surface Cleaner</b> www.scarab-sweepers.com	<b>Scarab Sweepers Limited</b> Pattenden Lane, Marden, Tonbridge, Kent. TN12 9QD, England.
Type		
Serial Number		
Year of Manufacture		

This information should accompany every parts order to try and ensure that the correct parts are supplied.



## How To Use This Illustrated Parts Catalogue

### Introduction

This Illustrated Parts Catalogue has been organised to facilitate ease of use when identifying and procuring replacement parts for the Scarab Sweeper.

The information content has been arranged in a logical manner by creating a number of separate sections, each dealing with a specific aspect or sub-system of the machine, complete with its own table of contents. Where relevant, cross-references from one section to another have been included to enable the user to quickly navigate to the information that gives the required level of detail.

### Using The Parts Lists

The breakdown structure within each parts list reflects the inter-relationship of the various components in an assembly. The order of information (L to R) is: Item/Part No./Quantity/Description.

The first item on a parts list, is the description of the main assembly in question, is shown in bold, thus:

#### Description of Main Assembly

The succeeding parts generally fall into two categories, namely attaching parts i.e. bolts, screws, nuts, washers etc. or breakdown parts i.e. assemblies/sub assemblies and/or piece parts.

The parts are listed with each successive level being indented from its own parent level as follows:

Item	Part Number	Quantity	Description
			<b>Description of Main Assembly</b>
1	064321	1	Sub-Assembly 1 of Main Assembly
	012356	2	. Setscrew, M6 x 30mm
2	045678	1	. Sub-Sub-Assembly 1 of Sub-Assembly 1
3	032145	1	. . Piece part 1 of Sub-Sub-Assembly 1
	012356	2	. . . Setscrew, M6 x 30mm
NI	032187	1	. . Piece part 2 of Sub-Sub-Assembly 1
4	045678	1	. Sub-Sub-Assembly 2 of Sub-Assembly 1
5	032142	1	. . Piece part 1 of Sub-Sub-Assembly 2
	090909	AR	. . . Hose. rubber, 1 bore
6	064321	1	Sub-Assembly 2 of Main Assembly

As the parts list develops it can be seen how the individual items comprising the Main Assembly are related and how this relationship is shown by indenting.

### Item Numbers

Item numbers are used to cross-refer items from the parts lists to their associated illustrations and vice-versa, except for, attaching parts.

If the illustration of an item is superfluous, then the item number will be listed as not illustrated:- **NI**.

### Part Numbers

Not every item will have a part number associated with it because it might be an assembly that is broken down into its components elsewhere or there might be different versions of that item described elsewhere.

### Quantities

When a parts quantity has been marked with **AR** then this means **as required**, for example hose lengths may differ slightly due to the route taken, or you may have one or more of a given part then the quantity will be **as required** due to the quantity of said part that is fitted to a particular sweeper configuration.

### PDF Version

The PDF version of this manual has been created to open like you would the real manual with two pages per view, so do not click the one page per view button otherwise it makes it harder to read. It will include bookmarks to each chapter and links to other sections from components that are also referenced elsewhere to make navigation throughout the manual easier.

**Warranty Statement**

1. Scarab Sweepers Limited (hereinafter referred to as the Company) warrants that (subject to the other provisions of the published Terms and Conditions of Sale - available upon request) upon delivery and for a period of 12 months from the date of actual delivery, or 2,000 running hours from the date of actual delivery whichever is sooner, the Goods correspond with their specification at the time of delivery, and will be free from defects in materials and workmanship.
  2. The Company does not warrant the condition or quality of any used Goods supplied to the Customer, or other truck manufacturers' chassis cab content or to any other component not manufactured by the Company and any such warranty claims must be submitted to the manufacturer of that component, or their locally appointed agent.
  3. The Company shall not be liable for a breach of any of the warranties in condition 1 unless the Customer gives written notice of the defect to the Company, and (if the defect is as a result of damage in transit) to the carrier, within 7 days of the time when the Customer discovers or ought to have discovered the defect.
  4. The Company shall not be liable for a breach of any of the warranties in condition 1 if the Customer makes any further use of such Goods after giving such notice, the defect arises because the Customer failed to follow the Company's oral or written instructions as to the storage, installation, commissioning, use or maintenance of the Goods or (if there are none) good trade practice, or the Customer alters or repairs such Goods without the written consent of the Company, or uses non genuine parts to effect a repair.
  5. The following consumable items listed are excluded from the Company warranty:
    - all fuel oils,
    - antifreeze,
    - all brush link pivots and bushes,
    - wander hoses, suction nozzles,
    - body inlet ducts, wearing plates,
    - high pressure water pump piston seals and valves,
    - door seals,
    - inlet seals,
    - batteries,
    - tyres,
    - all brushes,
    - lift cables,
    - rubber skirts,
    - suction nozzle wheels,
    - flap trunking,
    - deflectors,
    - screens flaps or blanking plates,
    - water pump diaphragm valves and water jets,
    - all filter strainers and elements,
    - windows,
    - glass mirrors,
    - light bulbs,
    - fuses,
    - brake lining pads,
    - auxiliary drive belts and any other part normally regarded as consumable.
  6. Any parts replaced under the terms of this warranty will be covered by the unexpired portion of this warranty.
  7. Subject to conditions 3 and 4, if any of the Goods do not conform with any of the warranties in condition 1 the Company shall at its option repair or replace such Goods (or the defective part) or refund the price of such Goods at the pro rata Contract rate provided that, if the Company so requests, the Customer shall, at the Customer's expense, remove the defective Goods or part of such Goods and return the Goods or the part of such Goods which is defective to the Company. Parts replaced under warranty will be delivered by the Company FOB port of exportation.
  8. If the Company complies with the terms contained in this statement it shall have no further liability for a breach of any of the warranties in condition 1 in respect of such Goods.
  9. No representative or agent of Scarab Sweepers Limited has the authority to add or to vary these Warranty Conditions except with the Company's official confirmation in writing from Scarab Sweepers Limited, head office in Marden Kent, England.
- For further information, please refer to the Company's Terms & Conditions of Sale. In the event of conflict between this Warranty Statement and the Company's Terms & Conditions of Sale the latter will prevail.

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## CAB AND INSTRUMENTS

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<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cab Items - Controls - CANbus 3</b>			
1		1	Main control panel, complete (two speed brushes) . . . . . Page H1
2	037055	1	. Fixing plate, enclosure, main control panel
	000346	2	. . Screw, socket button head, M5 x 16mm
	000155	2	. . Nut, M5, Nyloc
3	037073*	1	. Ball joint, control panel mounting
NI	036912	1	. Loom, main control panel . . . . . Page H3
NI	036914	1	. . Loom, power, main control panel . . . . . Page H3
4	042348	1	Display screen CANbus v3.0 (programmed) . . . . . Page H1
5	030188*	1	. Ball joint, display screen
NI	036916	1	. Loom, display screen, CANbus 3 . . . . . Page H3
6	037074	1	Hopper controller, complete . . . . . Page H1
NI	037047	1	. Loom, hopper controller . . . . . Page H3
7	037300	1	. Storage pocket, hopper controller
8		1	Auxiliary controller, (Hydrostatic) . . . . . Page H1
9		1	Auxiliary controller, (UniDrive) . . . . . Page H1
10	037064	1	. Clamp, fixing plate
NI	036913	1	. Loom, auxiliary controller . . . . . Page H3
NI	036915	1	. . Loom, power, auxiliary controller . . . . . Page H3
11	**	1	. Bracket, mounting, auxiliary controller
NI	036907	1	Loom, clutch switch . . . . . Page H3
NI	026332	1	Loom, tachometer . . . . .
NI	036666	1	Loom, main controller, NODE 3 . . . . . Page H3

**Notes:-**

- \* Screen and control mountings are dependant on chassis/cab layouts, please contact Scarab Parts Department.
- \*\* This Item is chassis specific, please contact the Scarab Parts Department quoting Model, Chassis Type and Machine Serial Number.



**MAIN CONTROLS - CANbus 3**

Item	Part Number	Quantity	Description
<b>Cab Items - Controls - CANbus 3.1</b>			
1		1	Main control panel, complete (variable brush speed) . . . . . Page H1
2	037055	1	. Fixing plate, enclosure, main control panel
	000346	2	. . Screw, socket button head, M5 x 16mm
	000155	2	. . Nut, M5, Nyloc
3	037073*	1	. Ball joint, control panel mounting
NI	036912	1	. Loom, main control panel . . . . . Page H3
NI	036914	1	. . Loom, power, main control panel . . . . . Page H3
4	042360	1	Display screen CANbus v3.1 (programmed) . . . . .
5	030188*	1	. Ball joint, display screen
NI	040349	1	. Loom, display screen, CANbus 3.1 . . . . . Page H3
6	037074	1	Hopper controller, complete . . . . . Page H1
NI	037047	1	. Loom, hopper controller . . . . . Page H3
7	037300	1	. Storage pocket, hopper controller
8		1	Auxiliary controller, (Hydrostatic) (new fan symbol) . . . . . Page H1
9		1	Auxiliary controller, (UniDrive) (new fan symbol) . . . . . Page H1
10	037064	1	. Clamp, fixing plate
NI	036913	1	. Loom, auxiliary controller . . . . . Page H3
NI	036915	1	. . Loom, power, auxiliary controller . . . . . Page H3
11	**	1	. Bracket, mounting, auxiliary controller
NI	036907	1	Loom, clutch switch . . . . . Page H3
NI	026332	1	Loom, tachometer . . . . .
NI	036666	1	Loom, main controller, NODE 3 . . . . . Page H3
NI	040353	1	Loom, power supply, rear camera . . . . . Page C31,H1,H3
NI	040355	1	Loom, rear camera . . . . . Page C31,H1,H3
12	041534	1	Camera splitter . . . . . Page H5

**Notes:-**

- \* Screen and control mountings are dependant on chassis/cab layouts, please contact Scarab Parts Department.
- \*\* This Item is chassis specific, please contact the Scarab Parts Department quoting Model, Chassis Type and Machine Serial Number.



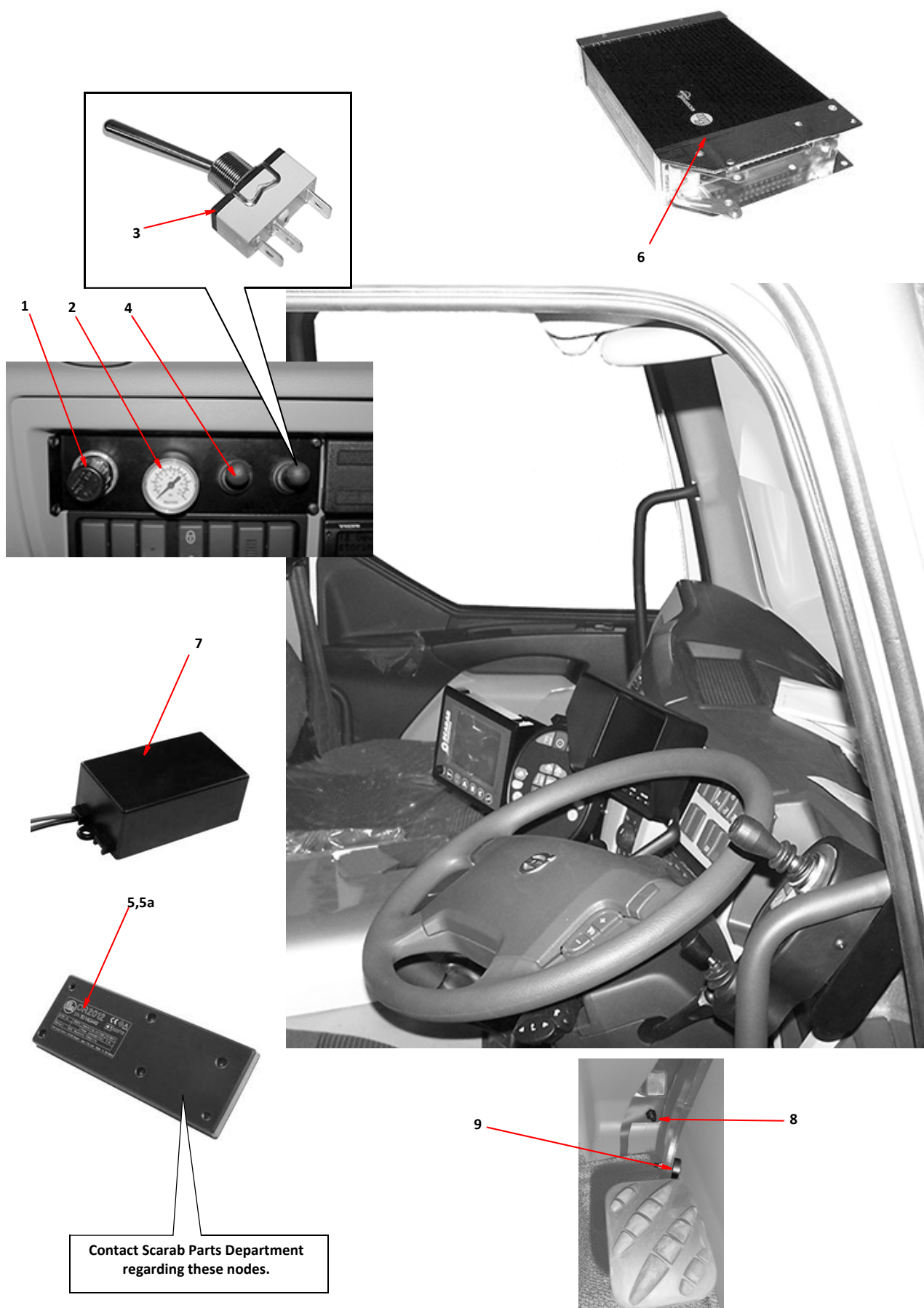


**MAIN CONTROLS - CANbus 3.1**

Item	Part Number	Quantity	Description
<b>Additional Cab Items</b>			
1	023242	1	Regulator, pressure
NI	023203	2	. Elbow, push-fit, 6mm - $\frac{1}{4}$ " BSP
NI	023203	1	. Elbow, push-fit, 6mm - $\frac{1}{8}$ " BSP
2	023246	1	Gauge, pressure, 0 - 10 bar
NI	024643	1	. Connector, straight, push fit, 6mm - $\frac{1}{8}$ " BSP
	011094	1	. Washer, M10
3	037249	AR	Switch body, toggle, ON/OFF . . . . . Page H5
NI	037248	AR	Switch body, toggle, ON/OFF/ON . . . . . Page H5
NI	037009	1	. Loom up/down pressure
NI	*	1	. Plate, dash mounting (side brush)
4	037247	AR	. . Rubber boot, toggle switch
5	036799**	3	Node, cabinet module (CR2012) . . . . . Page H1
5a	038985**	3	Node, E9G212, cabinet module (CR2012) . . . . . Page H1
6	036798	1	Controller, CR0505 . . . . . Page H1
NI	037048	1	Sounder . . . . . Page H5
7	039060	2	LED current source . . . . . Page H1
8	022224	1	Clutch sensor . . . . . Page H5
9	022225	1	Clutch sensor, magnet . . . . . Page H5

**Notes:-**

- \* This Item is chassis specific, please contact the Scarab Parts department quoting Model, Chassis Type and Machine Serial Number.
- \*\* Contact Scarab Parts Department regarding these nodes.



**ADDITIONAL CAB ITEMS**

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## TRANSMISSION

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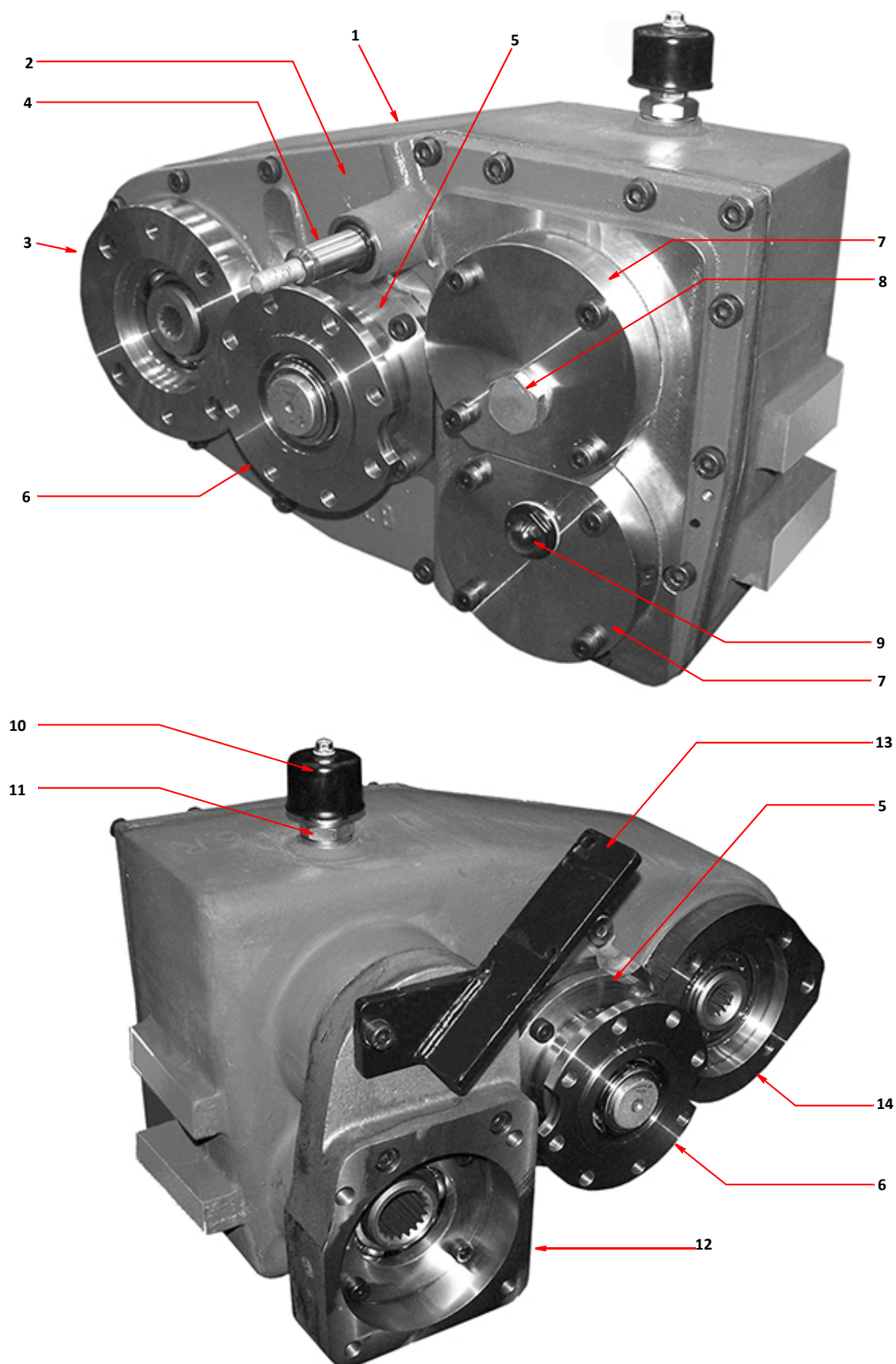
# B1

## MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Scarab Hydrostatic Gearbox Assembly *</b>			
1	014439	1	Casing, gearbox
2	014438	1	. Cover, gearbox
	011408	11	. . Screw, socket cap head, M10 x 30mm
		6	. . Screw, socket cap head, M10 x 35mm
NI	014505	1	. . Gasket, gearbox cover
3	014484	1	. . Boss, fan pump
	011028	4	. . . Screw, socket cap head, M10 x 25mm
4	024140	1	. . Shaft, selector
5	014482	1	. . Housing, input shaft oil seal
	011028	4	. . . Screw, socket cap head, M10 x 25mm
6	014433	1	. . Flange, input/output
7	014480	2	. . Bearing cap, motor/pinion gear shaft
	000070	8	. . . Screw, socket cap head, M10 x 50mm
NI	014503	2	. . Gasket, bearing cap
8	011244	1	. . . Plug, $\frac{3}{4}$ " BSP
9	014491	1	. . . Sight glass, gearbox oil level
10	020688	1	. . Filter/air breather
NI	011152	1	. . . Seal, Dowty, $\frac{1}{4}$ " BSP
11	021524	1	. . . Adaptor, $\frac{3}{4}$ x $\frac{1}{4}$ " BSP, M/F
NI	011155	1	. . . . Seal, Dowty, $\frac{3}{4}$ " BSP
12	020341	1	. Motor plate ( <b>R type gearboxes</b> )
	000070	6	. . Screw, socket cap head, M10 x 50mm
NI	014503	1	. . Gasket, motor plate
13	020501	1	. . Support bracket, gear change, pneumatic cylinder
14	014485	1	. Boss, gearbox pump
	011028	4	. . Screw, socket cap head, M10 x 25mm

### Notes:-

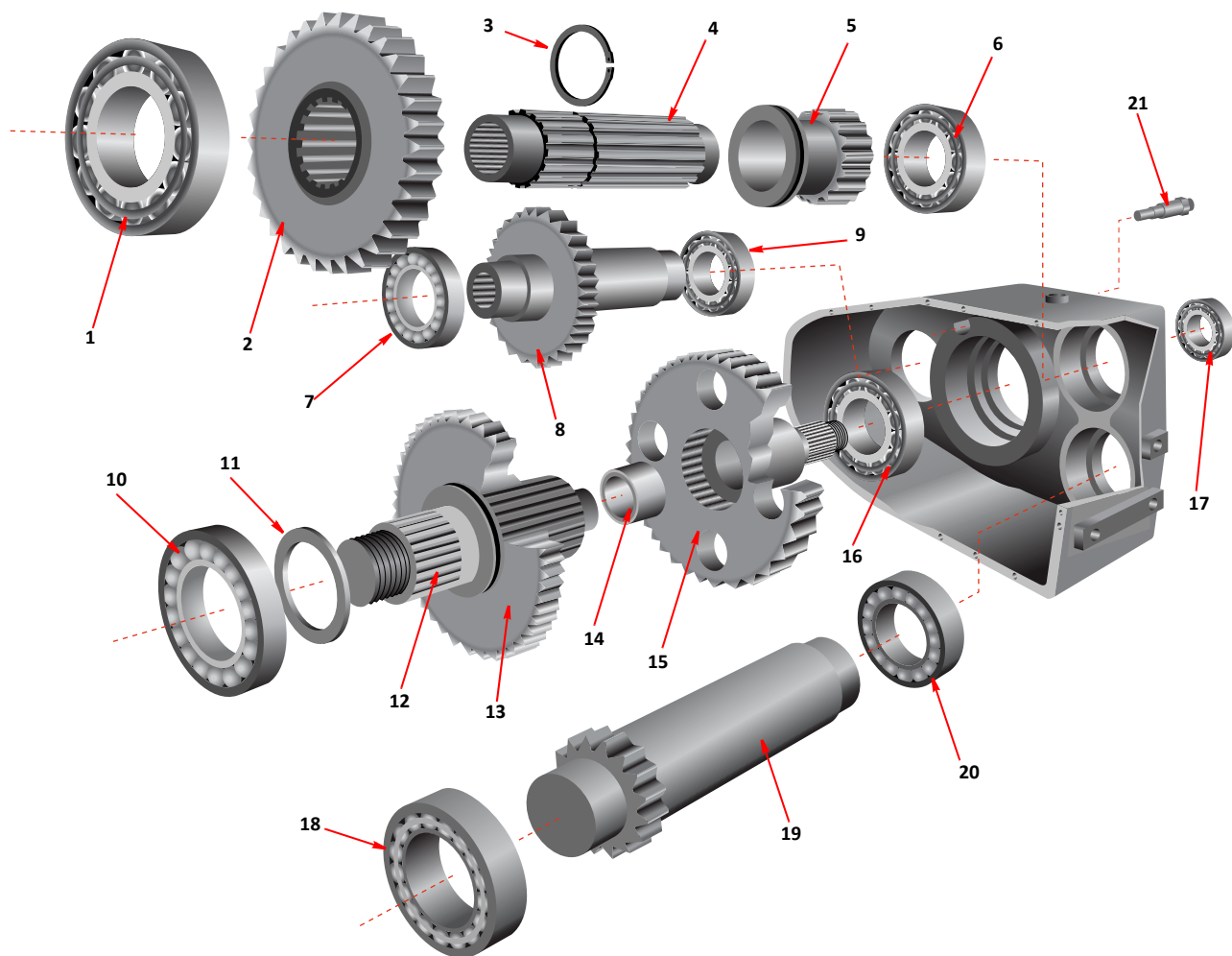
- \* Service Exchange Units are available. When ordering a complete service exchange gearbox, please contact Scarab Parts Department quoting, your machine serial number and model.  
For an exploded illustration of internal parts, refer to Page B3.  
For more detail and an exploded illustration of external parts, refer to Page B5.



**SCARAB HYDROSTATIC GEARBOX ASSEMBLY**

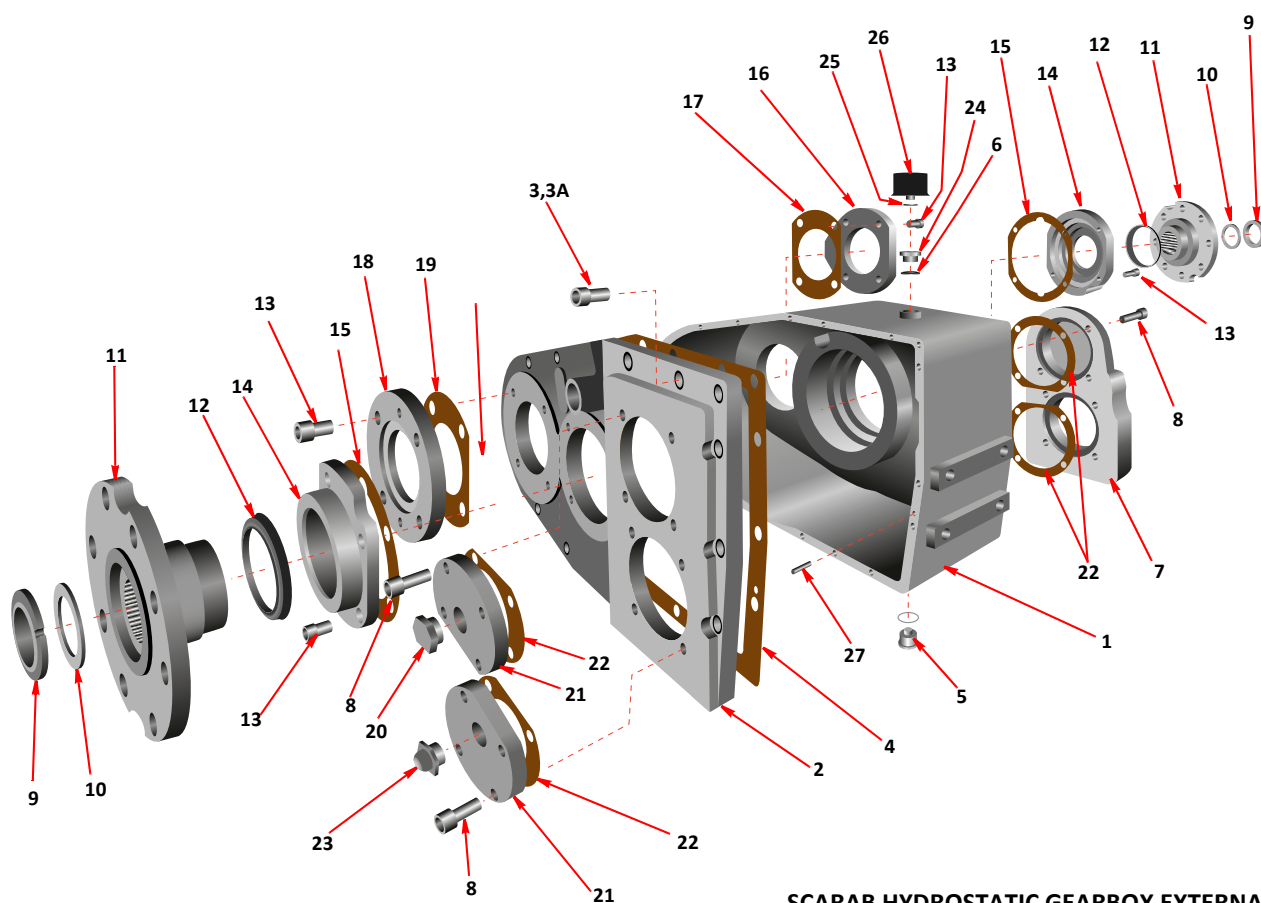
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Scarab Hydrostatic Gearbox Internal Parts</b>			
1	014579	1	Roller bearing, NJ309-E-TVP2
2	014425	1	Gearwheel 40T
2	014426	1	Gearwheel 42T
3	014495	1	Circlip 52mm
4	014431	1	Splined shaft
5	014423	1	Gearwheel 19T
6	014579	1	Roller bearing, NJ309-E-TVP2
7	013773	1	Ball bearing, 6211
8	020343	1	Gearwheel 36T
8	014427	1	Gearwheel 38T
8	020034	1	Gearwheel 43T
9	014581	1	Roller bearing, NJ211EC
10	013771	1	Ball bearing, 6310NR
11	014421	1	Washer 51x65x3
12	014432	1	Splined shaft
13	020035	1	Gearwheel, 41T
13	014428	1	Gearwheel, 46T
13	020342	1	Gearwheel, 48T
14	014494	1	Needle bearing, K30x40x30
15	014422	1	Gearwheel, 62T
16	014493	1	Roller bearing, NJ314-E-TVP2
18	014581	1	Roller bearing, NJ211EC
19	020528	1	Gearwheel, 19T
19	020529	1	Gearwheel, 21T
20	013773	1	Ball bearing, 6211
21	036808	1	Tacho sender





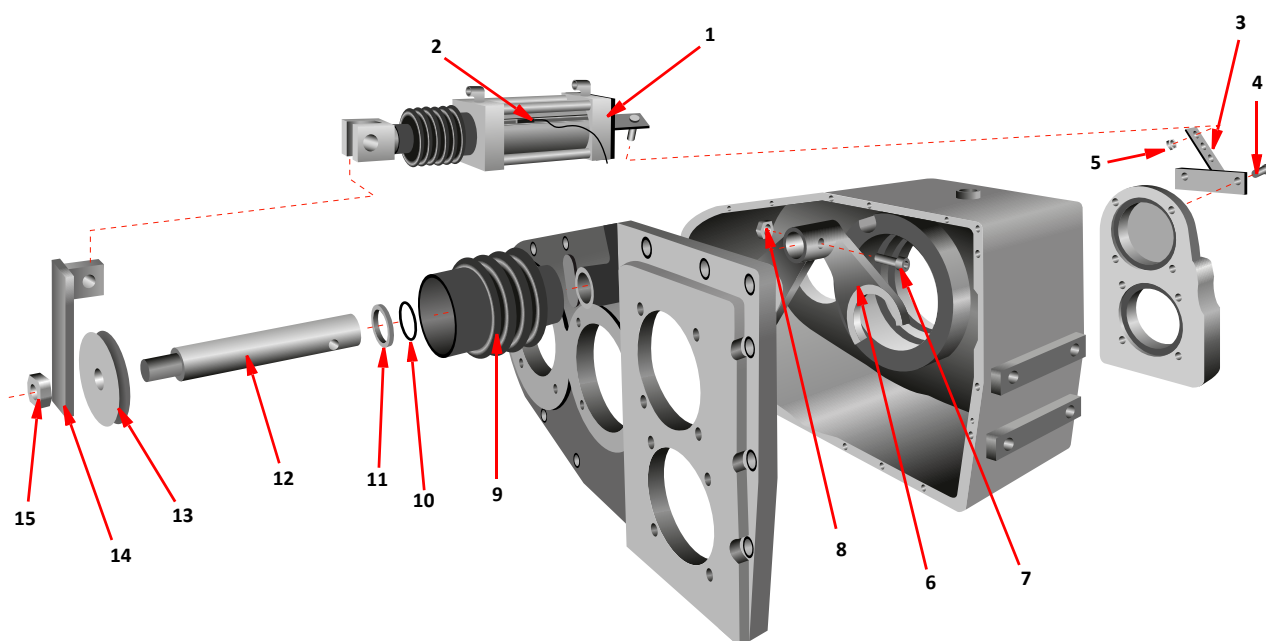
**SCARAB HYDROSTATIC GEARBOX INTERNAL PARTS**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Scarab Hydrostatic Gearbox External Parts</b>			
1	014439	1	Gearbox casing
2	014438	1	Gearbox cover
3	011408	11	Socket cap head, M10 x 30mm
3A	011029	6	Socket cap head, M10 x 35mm
4	014505	1	Gasket
5	021316	1	Plug, magnetic, $\frac{3}{4}$ " BSP
6	011155	1	Seal, dowty, $\frac{3}{4}$ " BSP
7	020341	1	Motor plate
8	000070	16	Socket cap head, M10 x 50mm
NI	014503	1	Gasket
9	014498	2	Lock ring M40 x 1.5mm
10	014499	2	Washer
11	014433	1	Flange
12	022081	2	Seal, V-ring, VS50-75
13	011028	11	Socket cap head, M10 x 25mm
14	014482	1	Housing
15	014502	2	Gasket
16	022392	1	Drive pump plate
17	014504	1	Gasket
18	014484	1	Fan pump plate
19	014504	1	Gasket
20	011244	1	Plug, $\frac{3}{4}$ " BSP
21	014480	2	Bearing cap
22	014503	4	Gasket
23	014491	1	Sight glass, gearbox oil level
24	021524	1	Adaptor, M/F, $\frac{3}{4}$ " BSP x $\frac{1}{4}$ " BSP
25	021524	1	Seal, dowty, $\frac{1}{4}$ " BSP
26	020688	1	Filler cap
27	014490	2	Dowel



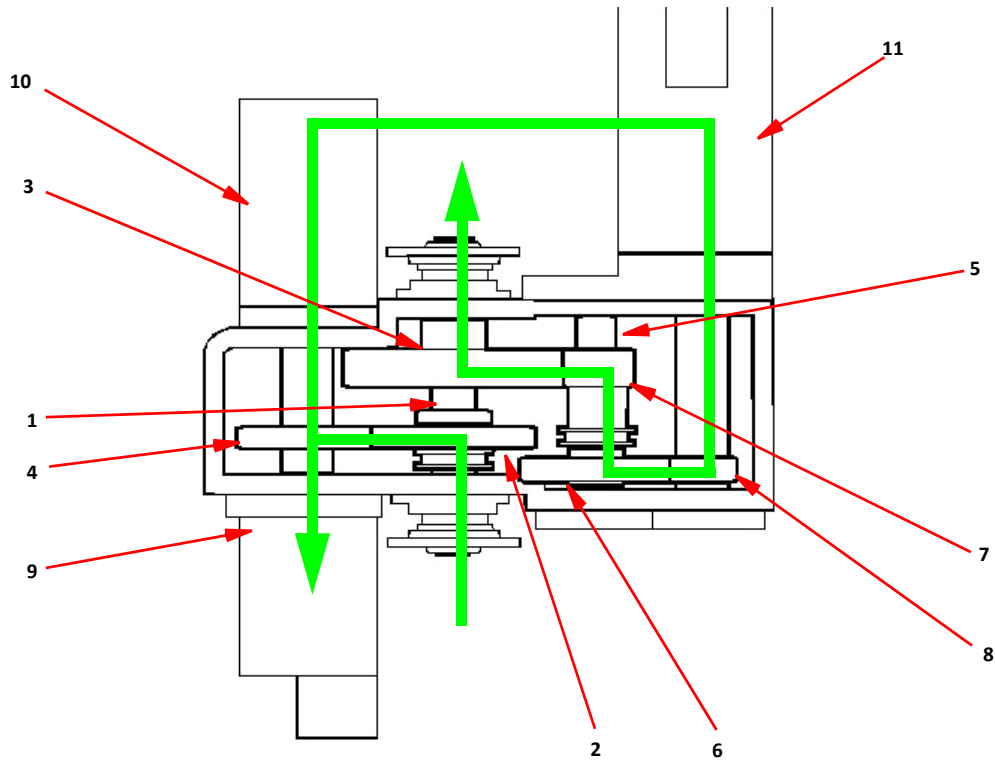
**SCARAB HYDROSTATIC GEARBOX EXTERNAL PARTS**

Item	Part Number	Quantity	Description
Scarab Hydrostatic Gearbox Changer Arrangement			
1	020287	1	Gear change pneumatic cylinder . . . . . Page G9
2	036800	2	Magnetic sensor . . . . . Page H5
3	020501	1	Support, pneumatic cylinder
4	000101	1	Socket cap head, M10 x 55mm
5	011075	1	Nut, M10, Nyloc
6	014486	1	Selector fork
7	000108	1	Socket cap head, M8 x 45mm
8	011073	1	Nut, M8, Nyloc
9	014473	1	Bellows
10	013774	1	O-ring, 22mm x 3.5mm
11	013775	1	Rubber seal
12	024140	1	Shaft
13	021089	1	Collar
14	020292	1	Arm
15	011076	1	Nut, M12



**SCARAB HYDROSTATIC GEARBOX CHANGER ARRANGEMENT**

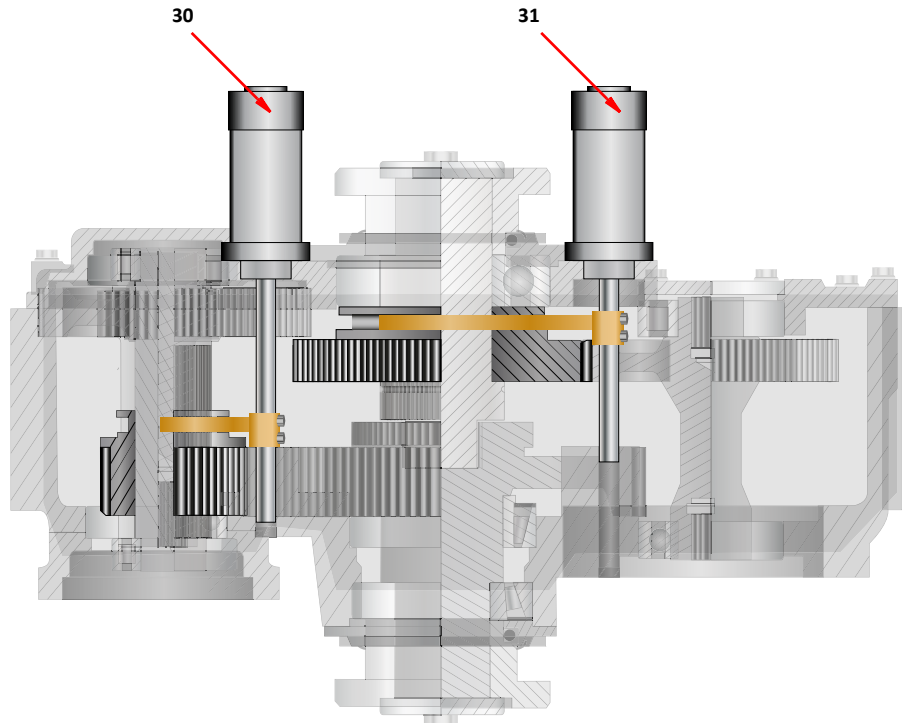
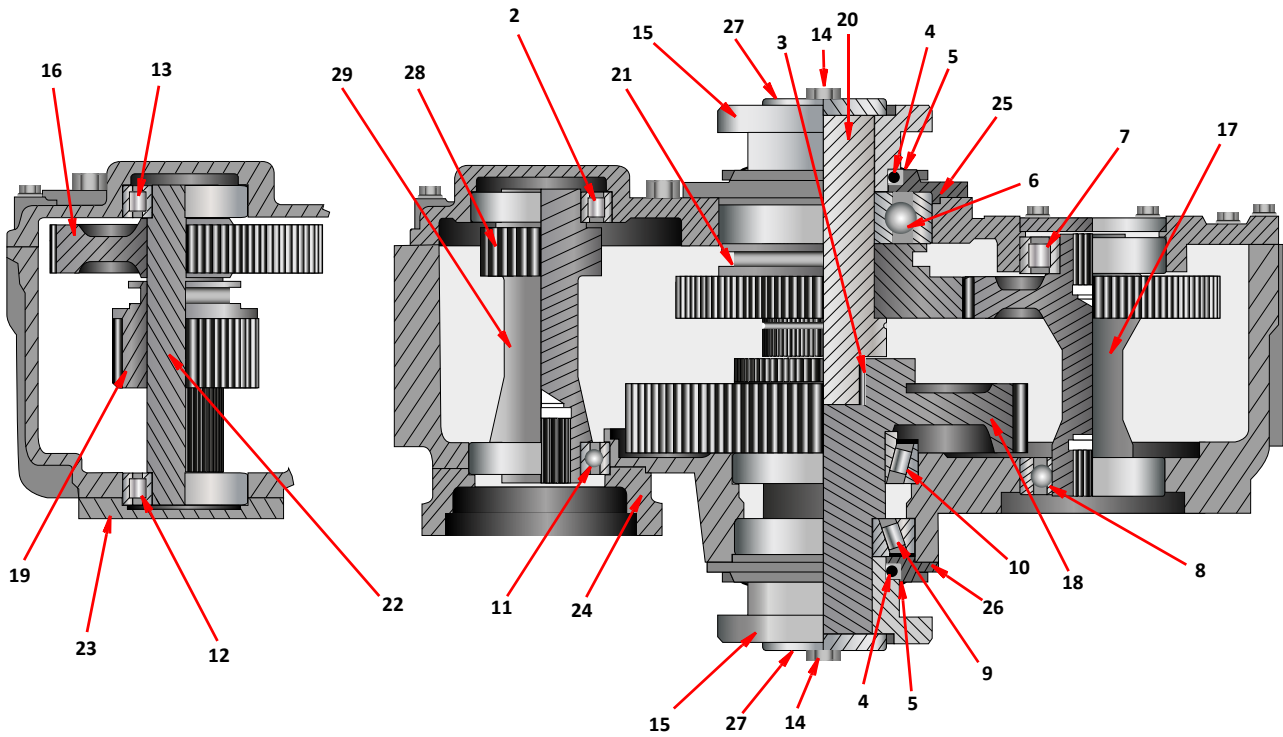
Item	Part Number	Quantity	Description
<b>Gearbox Build, Pump, Motor &amp; Ratio Configurations</b>			
1	014432	1	Shaft, gearbox input
2	020035	1	Gear, input, 41 tooth (used on gearboxes, 6R, 9R)
2	014428	1	Gear, input, 46 tooth (used on gearboxes, 7R, 10R)
2	020342	1	Gear, input, 48 tooth (used on gearboxes, 8R, 11R)
3	014422	1	Gear, output, 62 tooth
4	020343	1	Gear, 36 tooth (used on gearboxes, 8R, 11R)
4	014427	1	Gear, 38 tooth (used on gearboxes, 7R, 10R)
4	020034	1	Gear, 43 tooth (used on gearboxes, 6R, 9R)
5	014431	1	Shaft, splined
6	014425	1	Gear, 40 tooth (used on gearboxes, 2F, 6R, 7R, 8R)
6	014426	1	Gear, 42 tooth (used on gearboxes, 9R, 10R, 11R)
7	014423	1	Gear, pinion, 19 tooth (used on all gearboxes)
8	020528	1	Gear, motor shaft, 19 tooth (used on gearboxes 9R, 10R, 11R)
8	020529	1	Gear, motor shaft, 21 tooth (used on gearboxes 6R, 7R, 8R)
9	023620	1	Pump, hydraulic, fan . . . . .Page F35
9	024770	1	Pump, hydraulic, fan (French option) . . . . .Page F35
NI	013301	2	. Gasket
10	037015	1	Pump, hydraulic, drive . . . . .Page F33
NI	013196	2	. Gasket
11	040705	1	Motor Assembly, hydraulic, drive motor . . . . .Page F33
NI	021414	2	. Gasket



**GEARBOX PUMP, MOTOR & RATIO BUILD CONFIGURATIONS**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Gearbox HP Types</b>			
1	034563	1	Gearbox, HP, 1:1 Ratio Type 1
1	034435	1	Gearbox, HP, 0.75:1 Ratio Type 2
1	034515	1	Gearbox, HP, 0.75:1 Ratio Type 6
2	014581	1	Roller bearing
3	039290	1	Needle roller bearing
4	039291	1	Oil seal
5	039292	1	Dirt seal
6	039293	1	Ball bearing
7	014579	1	Roller bearing
8	039294	1	Ball bearing
9	039295	1	Taper roller bearing
10	039296	1	Taper roller bearing
11	013773	1	Ball bearing
12	014579	1	Roller bearing
13	014579	1	Roller bearing
14	039319	1	Tab washer
15	040211	2	Flange-companion KV150
16	040327	1	Motor wheel, 45T (for 034563 Type 1 gearbox)
16	040327	1	Motor wheel, 45T (for 034435 Type 2 gearbox)
16	040343	1	Motor wheel, 43T (for 034515 Type 6 gearbox)
17	040328	1	Motor shaft, 42T (for 034563 Type 1 gearbox)
17	040341	1	Motor shaft, 48T (for 034435 Type 2 gearbox)
17	040341	1	Motor shaft, 48T (for 034515 Type 6 gearbox)
18	040329	1	Gear-output
19	040330	1	Pinion-selector
20	040331	1	Shaft-input
21	040332	1	Input selector gear, 51T (for 034563 Type 1 gearbox)
21	040342	1	Input selector gear, 45T (for 034435 Type 2 gearbox)
21	040342	1	Input selector gear, 45T (for 034515 Type 6 gearbox)
22	040333	1	Shaft-transfer
23	040334	1	End cap
24	040335	1	Motor adaptor
25	040336	1	Seal housing
26	040337	1	Seal housing
27	040338	2	Washer
28	040339	1	Pump gear, 18T (for 034563 Type 1 gearbox)
28	040339	1	Pump gear, 18T (for 034435 Type 2 gearbox)
28	040344	1	Pump gear, 22T (for 034515 Type 6 gearbox)
29	040340	1	Pump shaft
30	035374	1	Cylinder, pneumatic, gear change . . . . . Page G9
31	035373	1	Cylinder, pneumatic, gear change . . . . . Page G9
NI	036800	2	Magnetic sensor . . . . . Page H5



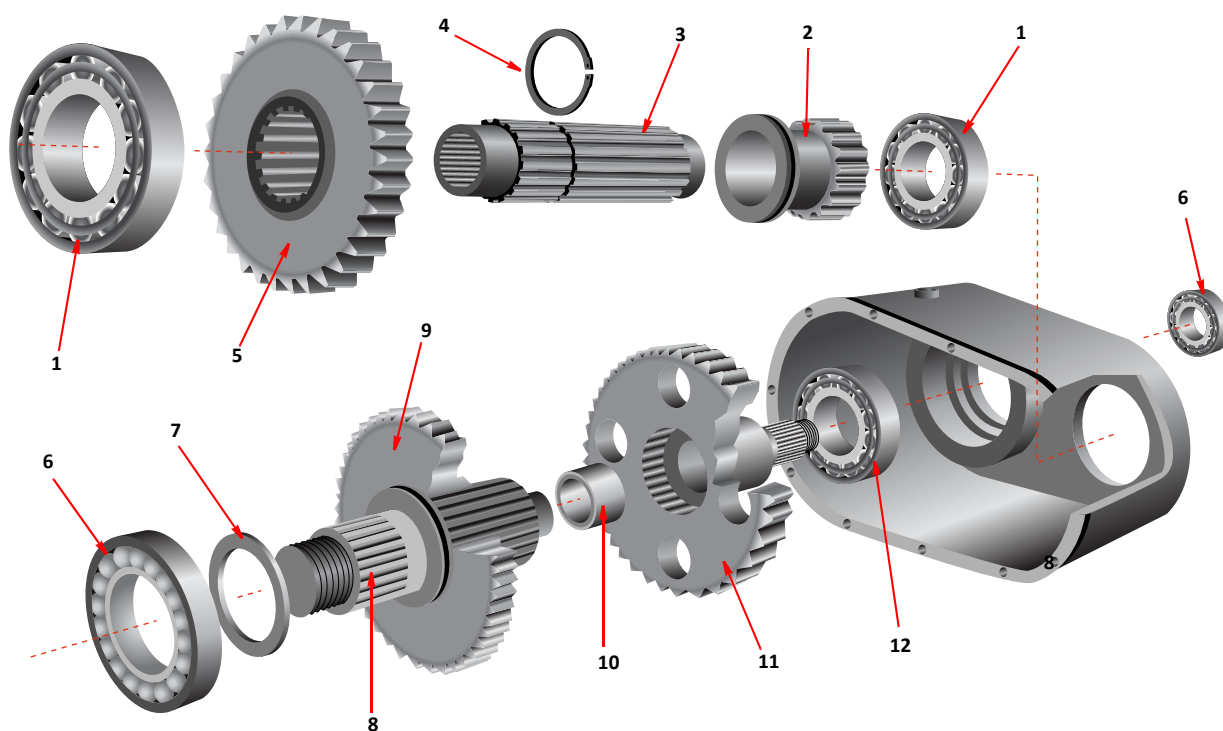


**GEARBOX HP TYPE RATIO BUILD CONFIGURATIONS**

# B13

## MERLIN and MAGNUM

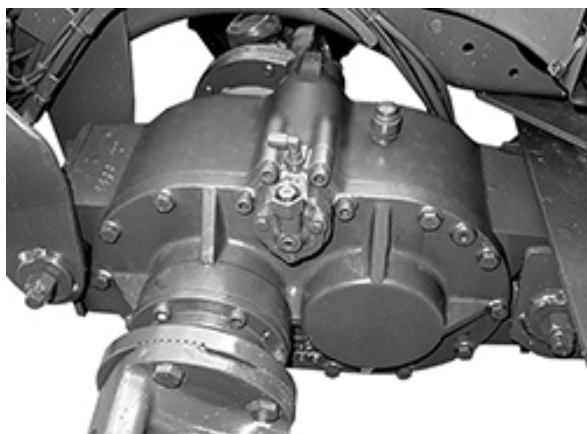
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Scarab Reduction Box Internal Parts</b>			
1	014579	2	Roller bearing, NJ309-E-TVP2
2	014423	1	Pinion gear, 19-tooth
3	014431	1	Splined shaft
4	014495	1	Circlip, external, 52mm
5	014425	1	Gear, 40-tooth, ( <b>Ratio 4.75:1</b> )
5	024852	1	Gear, 48-tooth, ( <b>Ratio 3.18:1</b> )
6	013771	2	Ball bearing, 6310NR
7	014421	1	Washer, 51mm ID x 65mm OD x 3mm thick
8	014432	1	Splined shaft
9	023592	1	Gear, 41-tooth, ( <b>Ratio 4.75:1</b> )
9	024851	1	Gear, 33-tooth, ( <b>Ratio 3.18:1</b> )
10	014494	1	Needle bearing, K30 x 40 x 30
11	014422	1	. Gear, 62-tooth
12	014493	1	Bearing, roller, NJ314-E-TVP2



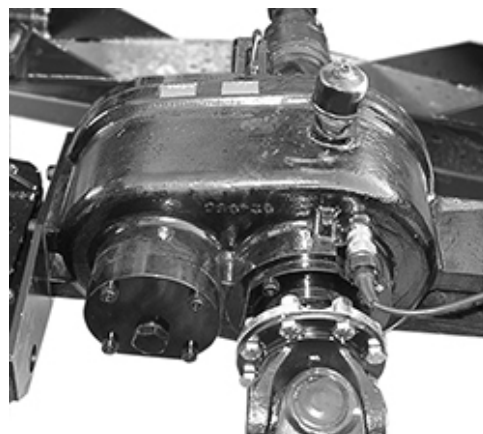
**SCARAB REDUCTION BOX INTERNAL PARTS**

Item	Part Number	Quantity	Description
<b>Scarab Reduction Box External Parts</b>			
	024867	1	Gearbox, 3.18:1 ratio, Complete
	024868	1	Gearbox, 4.75:1 ratio, Complete
1	024855	1	Casing, gearbox
NI	024857	1	Gasket
3	024856	1	Cover, gearbox
4	011155	1	Seal, dowty, $\frac{3}{4}$ " BSP
5	021524	1	Adaptor, $\frac{3}{4}$ " x $\frac{1}{4}$ " BSP, M/F
6	011152	1	Seal, dowty, $\frac{1}{4}$ " BSP
7	020688	1	Filter/breather
8	014502	2	Gasket
9	014482	2	Housing
10	011028	8	Socket cap head, M10 x 25mm
11	014433	2	Flange
12	014499	2	Washer 60 x 41 x 3
13	014498	2	Lock ring, M40 x 1.5
14	041969	2	Rubber seal
15	014491	1	Sight glass, oil level
16	000070	8	Socket cap head, M10 x 50mm
17	014480	2	Bearing cap
18	014503	2	Gasket
19	011408	12	Socket cap head, M10 x 30mm
20	014490	2	Dowel pin
21	011244	1	Plug, $\frac{3}{4}$ " BSP
22	011155	1	Seal, dowty, $\frac{3}{4}$ " BSP
23	021316	1	Plug, magnetic, $\frac{3}{4}$ " BSP

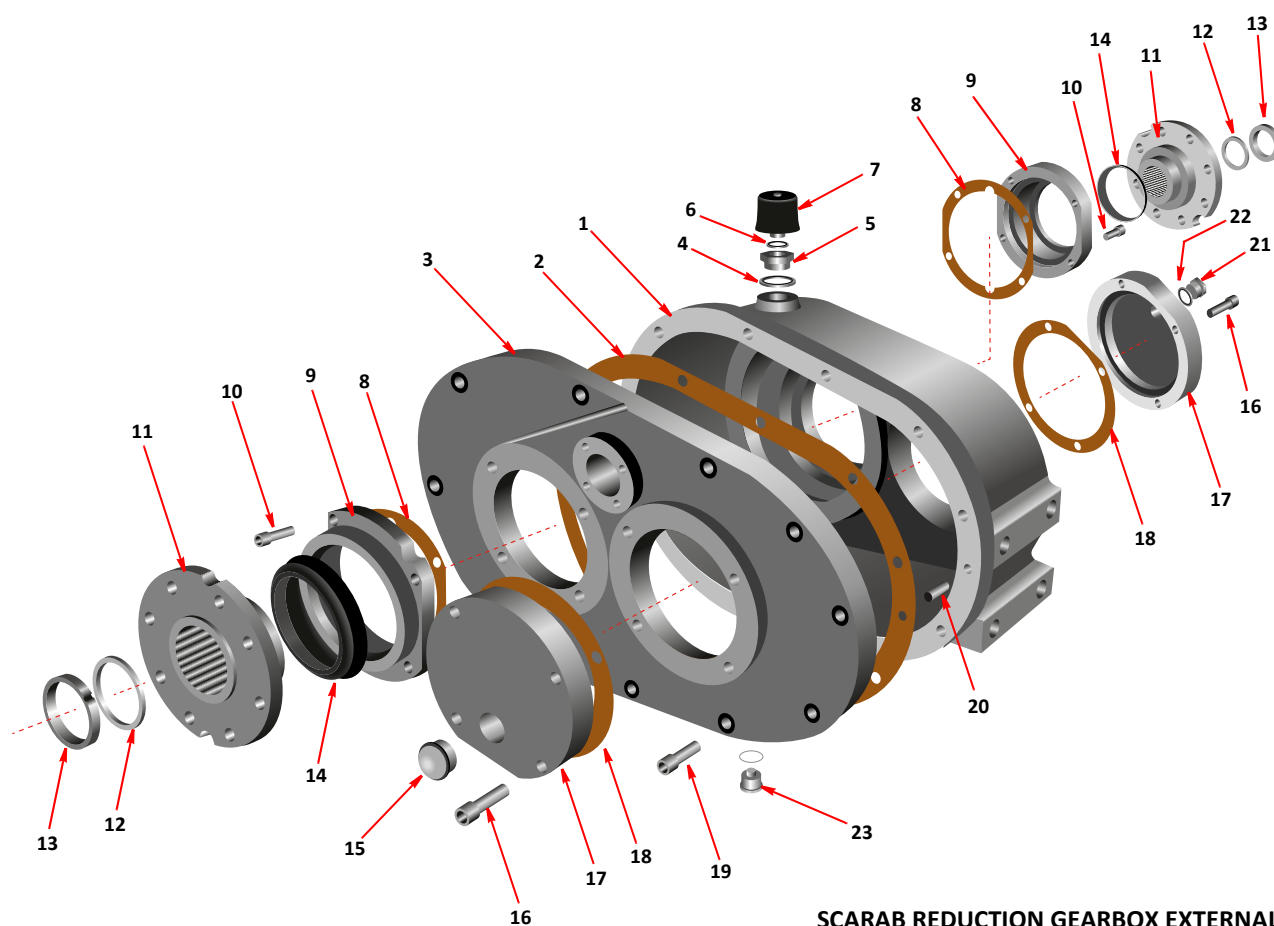
**i** Some vehicles are equipped with the Knowles reduction gearbox instead of the Scarab unit. If parts are required, please contact our parts department quoting your model/chassis type and the machine serial number.



KNOWLES REDUCTION BOX



SCARAB REDUCTION BOX

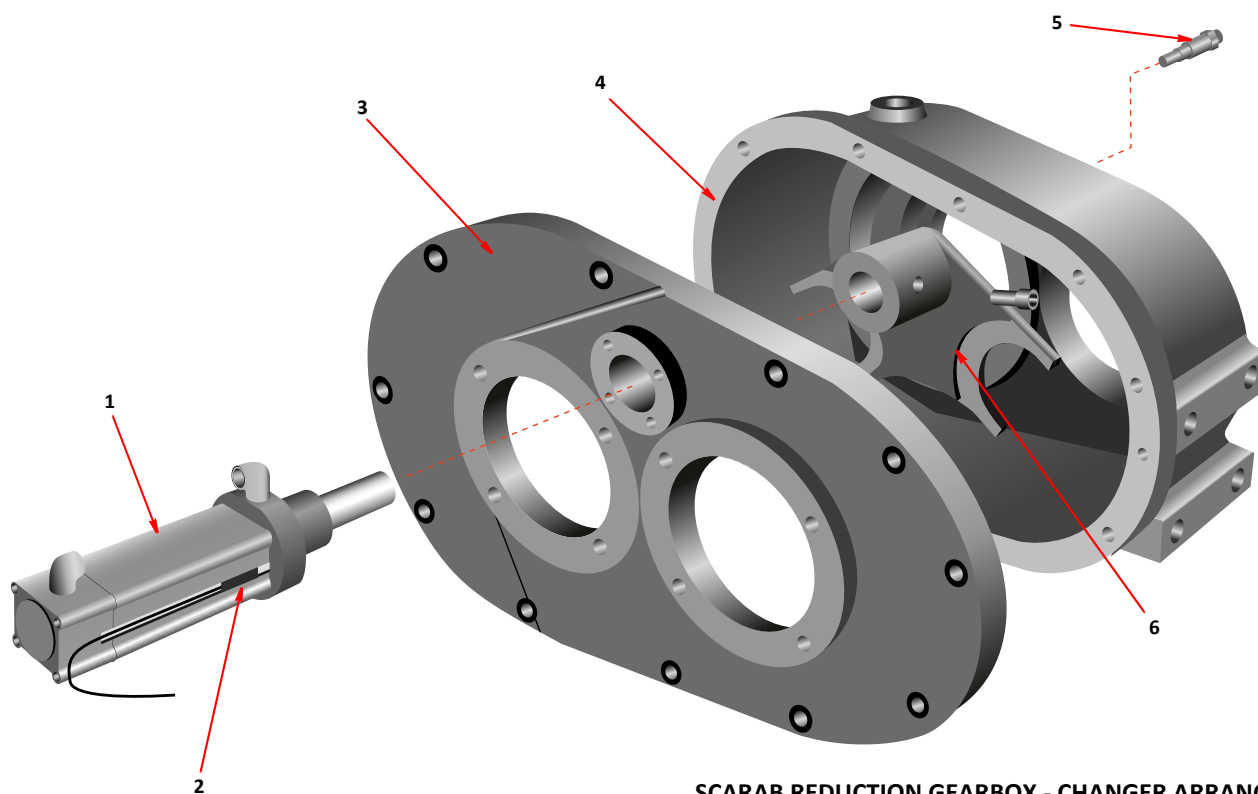


**SCARAB REDUCTION GEARBOX EXTERNAL PARTS**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Scarab Reduction Box - Changer Parts</b>			
1	026087	1	Pneumatic cylinder . . . . . Page G9
2	036800	2	Magnetic sensor . . . . . Page H5
3	024856	1	Cover
4	024855	1	Case
5	025922	1	Tacho sender . . . . . Page H5
6	024874	1	Selector fork
	000037	1	Socket cap head, M6 x 40mm

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Non Scarab Reduction Box PTO Seals</b>			
NI	030571	1	PTO Seal (Ref. on Oil Seal 01055) Common to DAF/IVECO
NI	030572	1	PTO Seal (Ref. on Oil Seal 01018) Common to DAF/IVECO
NI	030573	1	PTO Seal (Ref. on Oil Seal 01016) Common to RENAULT
NI	030574	1	PTO Seal (Ref. on Oil Seal 01059) Common to SCANIA

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Non Scarab Reduction Box Seals</b>			
NI	030575	1	Seal, Reduction box 24T (Ref. on Oil Seal 01002)
NI	030576	1	Seal, Reduction box 33T (Ref. on Oil Seal 01060)



**SCARAB REDUCTION GEARBOX - CHANGER ARRANGEMENT**

### Scarab Gearbox/Prop Shaft Installations

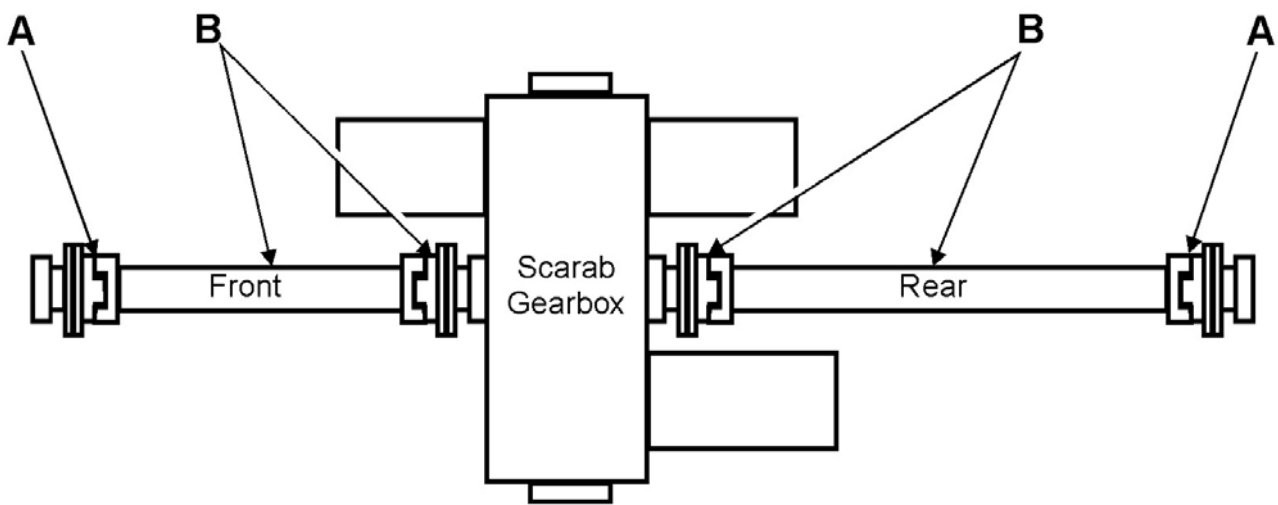
Scarab truck-mounted sweepers with either the hydrostatic gearbox or the unidrive reduction gearbox installed in the truck's drive train, do not utilise the original prop shaft. This is removed and is replaced by two shorter units, one forward of the Scarab gearbox and one to the rear.

This modification affects the procurement of replacement parts as follows:

- ☐ The outer universal joints i.e. those adjacent to the differential housing and to the truck gearbox should be obtained direct from the truck manufacturer in question.
- ☐ The inner universal joints i.e. those on the input and output sides of the Scarab transfer gearbox on the front and rear prop shafts can be obtained from Scarab Sweepers Limited.

It is not feasible to list in this document all prop shaft variations for all truck chassis configurations due to the need to accommodate chassis alterations introduced periodically by the manufacturers. This also applies to other installation items such as the brackets that mount the gearbox to the chassis.

To ensure, therefore, that the correct items are procured when needed, please consult the Scarab Parts Department, giving your chassis type, serial number and the Scarab Sweeper serial number.



- Input & Output U/J's Scarab part 014935

#### Legend:

- A - Procure from chassis manufacturer
- B - Procure from Scarab

### Gearbox Mounting Arrangements

The mounting arrangements for all hydrostatic and reduction gearboxes on Scarab truck mounted sweepers are model/chassis specific. To procure replacement components, please contact the Scarab Parts department stating your model/chassis type and the machine serial number.



## SUBFRAME, HOPPER & RELATED EQUIPMENT SECTION C

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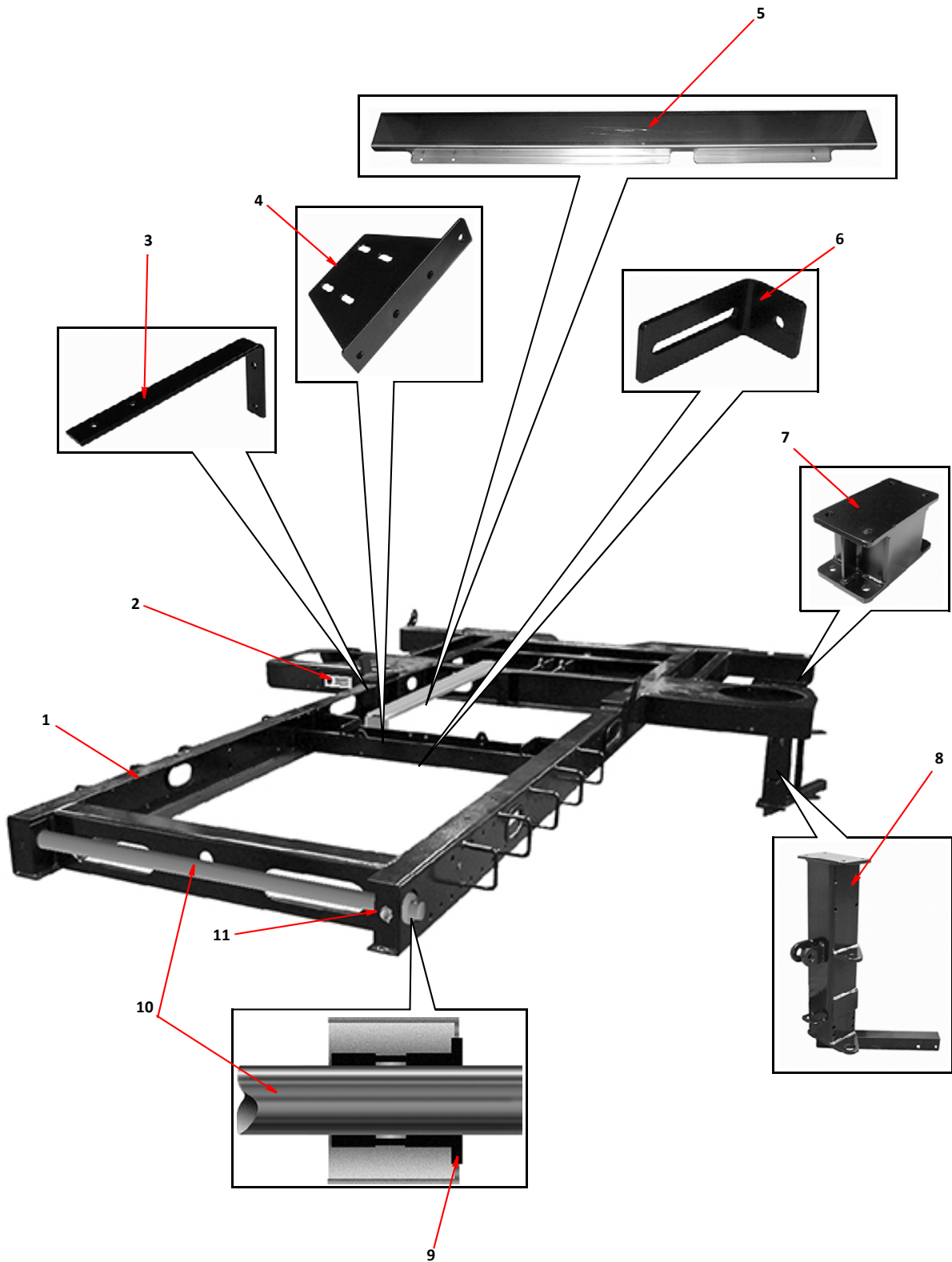
# C1

## MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Subframe Standard Parts</b>			
1	024978	1	Subframe ( <b>Merlin</b> )
NI	024246	1	Subframe ( <b>Magnum</b> )
NI	032224	1	Subframe ( <b>Merlin XP</b> )
2	021716	1	. Serial number & CE mark plate
3	032979	1	. Support, pipe, front ( <b>Merlin XP</b> )
NI	026239	1	. Support, pipe, front
	011087	2	. . Setscrew, M6 x 25mm
	011090	2	. . Washer, M6
	011071	2	. . Nut, M6 ,Nyloc
4	028010	1	. Support, pipe cover
	011067	2	. . Setscrew, M6 x 20mm
	011099	2	. . Washer, repair, $\varnothing 1 \frac{1}{4}$ ID
	011071	2	. . Nut, M6, Nyloc
5	028127	1	. Pipe cover ( <b>Merlin</b> )
NI	028009	1	. Pipe cover ( <b>Magnum</b> )
NI	040681	1	. Pipe cover ( <b>Magnum with ratchet hopper prop</b> )
6	030487	1	. Support, pipe, rear
	011067	1	. . Setscrew, M6 x 20mm
	011071	1	. . Washer, M6
	011071	1	. . Nut, M6, Nyloc
7	031381	AR	. Stub, subframe leg, 100mm long* ( <b>Merlin</b> )
NI	031355	AR	. Stub, subframe leg, 120mm long* ( <b>Merlin</b> )
NI	030316	AR	. Stub, subframe leg, 180mm long* ( <b>Merlin</b> )
NI	031693	AR	. Stub, subframe leg, 220mm long* ( <b>Merlin</b> )
Ni	031415	AR	. Stub, subframe leg, 95mm long*
NI	031416	AR	. Stub, subframe leg, 165mm long*
	011052	4	. . Setscrew, M12 x 30mm ( <b>Per stub</b> )
	011077	4	. . Nut, M12 ,Nyloc, ( <b>Per stub</b> )
8	027133	1	. Subframe leg, RH, (A)* ( <b>Merlin</b> )
NI	027132	1	. Subframe leg, LH, (B)* ( <b>Merlin</b> )
NI	027134	1	. Subframe leg, LH, (C)* ( <b>Merlin</b> )
NI	027134	1	. Subframe leg, RH, (D)* ( <b>Merlin</b> )
	000047	4	. . Bolt, M12 x 140mm ( <b>Per leg</b> )
	011077	4	. . Nut, M12, Nyloc ( <b>Per leg</b> )
NI	024247	1	. Subframe leg, LH, (J)* ( <b>Magnum</b> )
NI	024248	1	. Subframe leg, RH, (K)* ( <b>Magnum</b> )
NI	027753	1	. Subframe leg, LH, Hi-lift, (P)* ( <b>Magnum</b> )
NI	027754	1	. Subframe leg, RH, Hi-lift, (Q)* ( <b>Magnum</b> )
NI	030152	1	. Subframe leg, LH, (R)* ( <b>Magnum</b> )
NI	030153	1	. Subframe leg, RH, (S)* ( <b>Magnum</b> )
NI	030924	1	. Subframe leg, LH, (T)* ( <b>Magnum</b> )
NI	030925	1	. Subframe leg, RH, (U)* ( <b>Magnum</b> )
NI	030154	1	. Subframe leg, LH* ( <b>Magnum</b> ) (8000/8500 only)
NI	030155	1	. Subframe leg, RH* ( <b>Magnum</b> ) (8000/8500 only)
	011052	4	. . Setscrew, M12 x 30mm ( <b>Magnum</b> )
	011077	4	. . Nut, M12, Nyloc ( <b>Magnum</b> )
9	020336	2	. Bush, hopper hinge pin
10	013065	1	. . Hopper hinge pin
	000049	2	. . . Screw, socket cap head, M8 x 40mm
	011073	2	. . . Nut, M8, Nyloc
11	010901	2	. Grease point, $\frac{1}{8}$ BSP x 90°

### Notes:-

- \* The type of the subframe/stub and leg are dependent on many factors. Please contact the Scarab Parts Department quoting your machine serial number before ordering any parts.

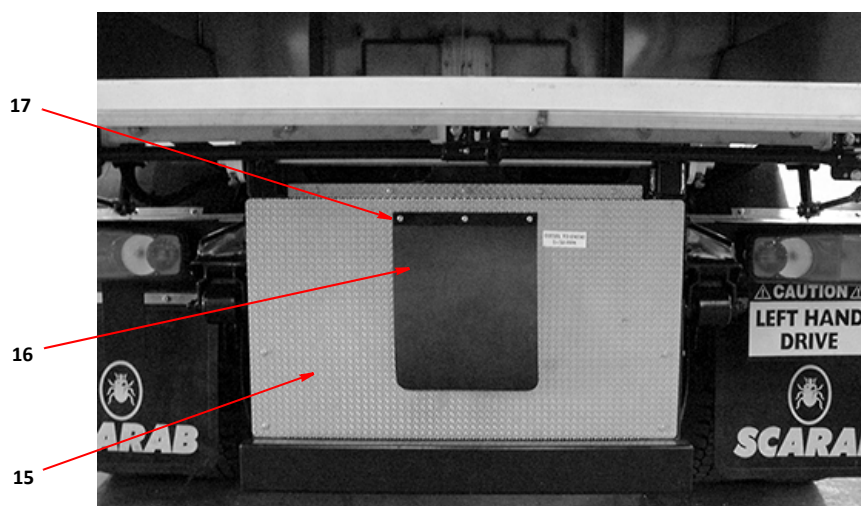
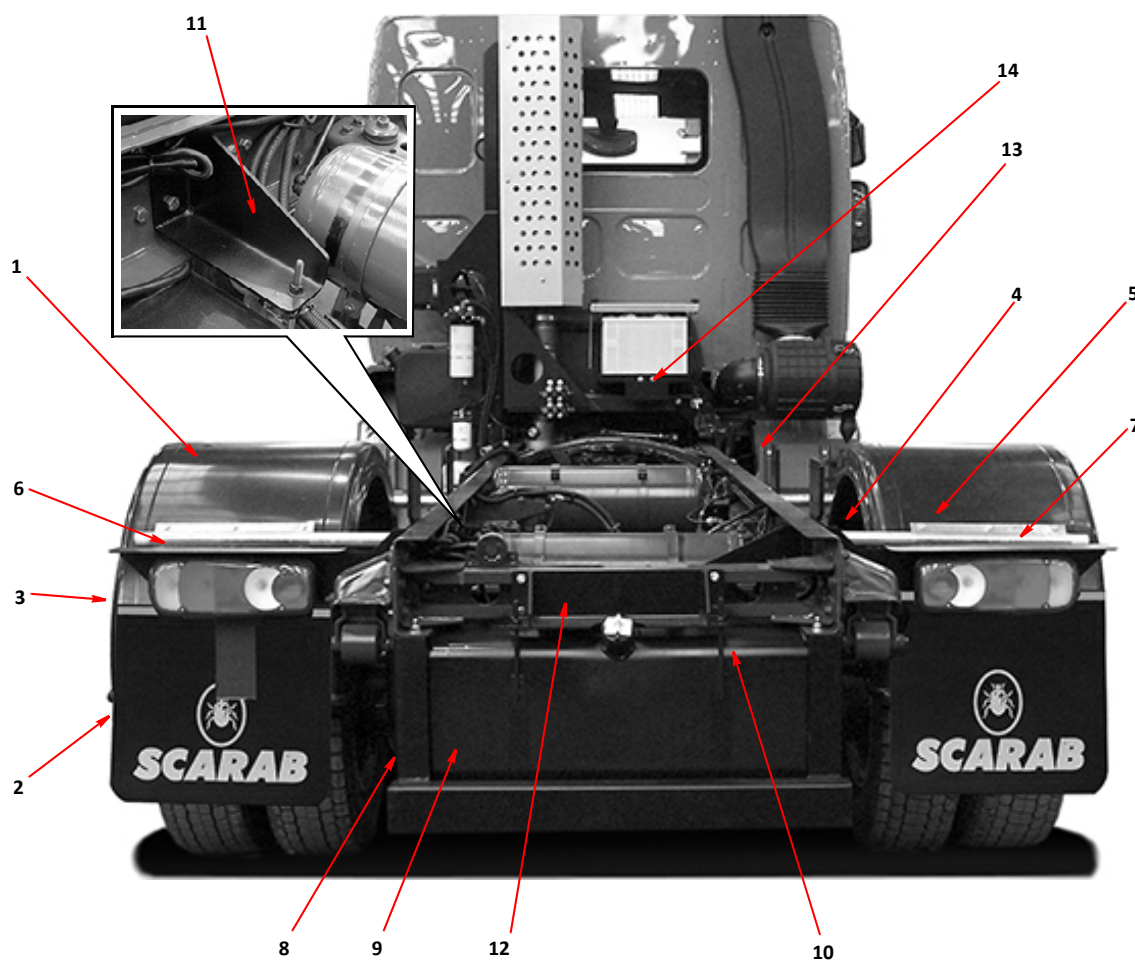


**SUBFRAME - STANDARD PARTS**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Subframe - Additional Standard Scarab Parts - Fitted to Chassis</b>			
1	*	1	Mudguard ( <b>Per side</b> )
2	024992	1	. Mud flap ( <b>Per side</b> )
NI	030140	1	. Mud flap, wide ( <b>Per side</b> )
3	024993	1	. . Clamp, mud flap ( <b>Per flap</b> )
NI	030187	1	. . Clamp, mud flap, wide ( <b>Per flap</b> )
	011011	5	. . . Setscrew, M8 x 25mm ( <b>Per clamp</b> )
	011073	5	. . . Nut, M8, Nyloc ( <b>Per clamp</b> )
4	013403	2	. Bracket, mudguard, straight ( <b>Per mudguard</b> )
NI	020836	2	. Bracket, mudguard, cranked ( <b>Per mudguard</b> )
	011032	3	. . Setscrew, M10 x 30mm ( <b>Per bracket</b> )
	011075	3	. . Nut, M10, Nyloc ( <b>Per bracket</b> )
5	013403	2	. . Stay, mudguard ( <b>Per mudguard</b> )
NI	020836	2	. . Stay backing plate ( <b>Per mudguard</b> )
	011010	6	. . . Setscrew, M8 x 20mm ( <b>Per stay</b> )
	011073	6	. . . Nut, M8, Nyloc ( <b>Per stay</b> )
6	*	1	. Bracket, rear lights LH
7	*	1	. Bracket, rear lights RH
	011083	2	. . Setscrew, M12 x 1.25 pitch x 35mm
	011086	2	. . Nut, M12 x 1.25 pitch ( <b>Per bracket</b> )
NI	036910	1	Loom, rear lights . . . . . Page H3
8	*	1	Bracket, rear under-run
9	*	1	Fuel tank
10	*	2	. Strap, fuel tank
	011075	4	. . Nut, M10, Nyloc
11	*	1	. Bracket, front, fuel tank, LH
NI	*	1	. Bracket, front, fuel tank, RH
12	*	1	. Bracket, rear, fuel tank
13	*	AR	Bracket, connecting, chassis/subframe
14	*	1	Support frame, Battery
15	*	1	Rear cover, fuel tank
16	026709	1	Cover, Rubber, fuel filler, narrow
17	014741	1	. Clamp plate, fuel filler cover, narrow
	011087	3	. . Setscrew, M6 x 25mm
	011071	3	. . Nut, M6, Nyloc
NI	032484	1	Cover, Rubber, fuel filler, wide
NI	032483	1	. Clamp plate, fuel filler cover, wide
	011087	3	. . Setscrew, M6 x 25mm
	011071	3	. . Nut, M6, Nyloc
NI	*	1	. Fuel tank sender
NI	*	1	. . Gasket, fuel tank sender
NI	*	1	. Fuel filler cap

**Notes:-**

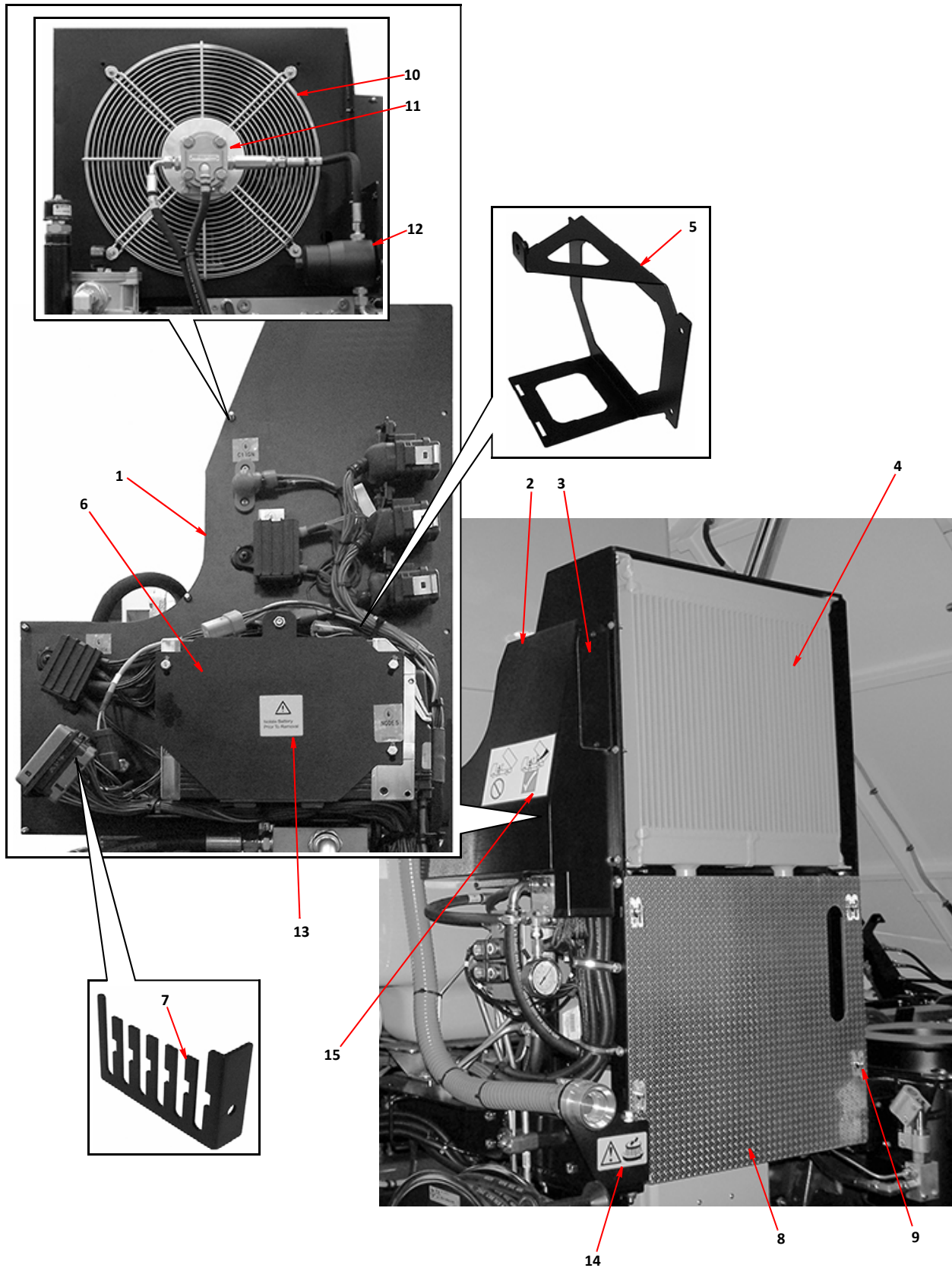
\* These items are chassis specific. When ordering, contact Scarab Parts Department, quoting machine serial number and chassis type.



**i** The photographs shown above are of a DAF chassis, other chassis configurations may differ.

**ADDITIONAL STANDARD SCARAB PARTS FITTED TO CHASSIS**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Oil Cooler and Hydraulics Gantry</b>			
1	037086	1	Oil cooler frame . . . . . Page F1
	011407	2	. . Bolt, M10 x 120mm
	011031	2	. . Setscrew, M10 x 25mm
	011075	4	. . Nut, M10, Nyloc
NI	024838	1	. . Oil cooler leg
	011407	2	. . Bolt, M10 x 120mm
	011031	1	. . Setscrew, M10 x 25mm
	011075	3	. . Nut, M10, Nyloc
2	037096	1	. . Node cover
	000402	7	. . Screw, Pozidrive, M5 x 20mm
	000155	7	. . Nut, M5, Nyloc
3	037097	1	. . Fuse cover
4	031732	1	. . Oil cooler . . . . . Page F3
5	037203	1	. . Bracket, node carrier
	000155	3	. . Nut, M5, Nyloc
6	037204	1	. . Cover, node carrier
	000097	4	. . Setscrew, M5 x 12mm
	011067	1	. . Setscrew, M6 x 20mm
	011071	1	. . Nut, M6, Nyloc
7	037198	1	. . Bracket, splice saver
	011010	1	. . Setscrew, M8 x 20mm
8	025383	1	. . Cover, hydraulic tank & valves
9	012253	4	. . Antiluce, Small
10	020883	1	. . Bracket, fan mounting
	000020	4	. . Setscrew, M6 x 30mm
	011071	4	. . Nut, M6, Nyloc
	011099	4	. . Washer, repair, M6
	023504	4	. . Anti-vibration ring
	023505	4	. . Anti-vibration bush
11	028752	1	. . Motor, hydraulic, cooler fan . . . . . Page F3
NI		1	. . Fan, oil cooler
12	025103	1	. . Filter, hydraulic, high pressure . . . . . Page F31
NI	036797	2	. . Controller CR0020 . . . . . Page H3
13	036170	1	. . Disconnect battery, caution label . . . . . Page I1
14	022383	1	. . Brush rotating, warning label . . . . . Page I1
15	022384	1	. . Hopper prop deployment, warning label . . . . . Page I1



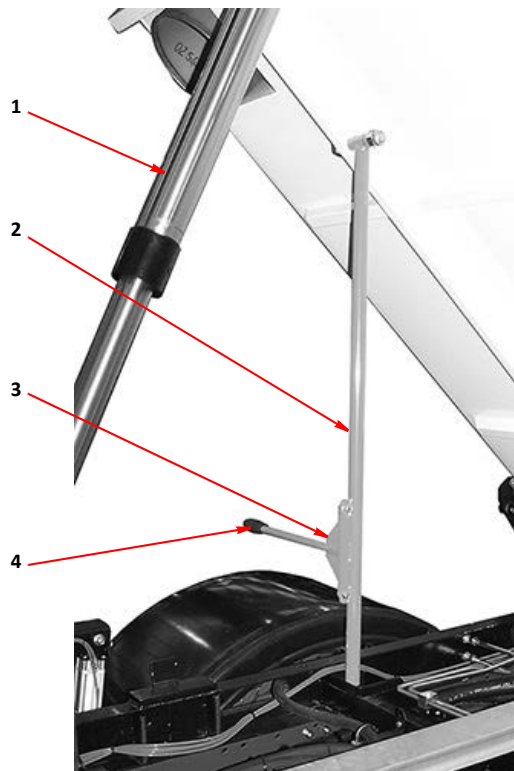
**OIL COOLER AND HYDRAULICS GANTRY**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Manual Hopper Safety Prop</b>			
1	024249	1	Hopper lift ram, dual stage . . . . .Page F41
NI	039677	1	Hopper Prop, ( <b>Merlin</b> )
2	039676	1	Hopper Prop, ( <b>Magnum</b> )
	011083	1	. Bolt, 1 " UNF x 6
	011062	1	. . Nut, 1 " UNF, Nyloc
3	039675	1	. Hopper prop handle
	011032	2	. . Setscrew, M10 x 30mm
	011075	2	. . . Nut, M10, Nyloc
4	039680	1	. . Hopper prop handle grip

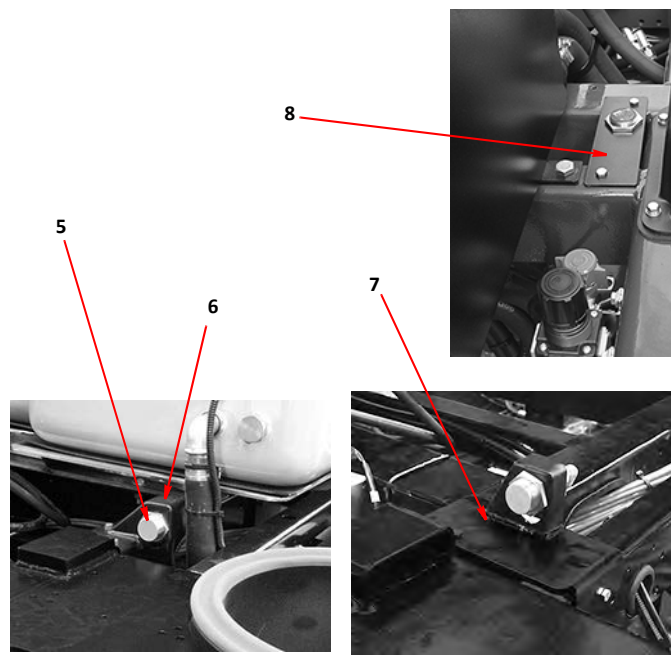
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Hopper Raised Sensor</b>			
5	032627	1	. Sensor, 'HOPPER-RAISED' . . . . . Page H5
6	039659	1	. . Bracket, hopper raised sensor ( <b>Merlin/Merlin XP</b> )
7	039673	1	. . Bracket, hopper raised sensor ( <b>Magnum/Magnum+</b> )
8	032908	1	. . Bracket, hopper raised sensor (vertical) ( <b>Merlin</b> )
NI	032909	1	. . Bracket, hopper raised sensor (vertical) ( <b>Magnum</b> )
	011067	2	. . . Setscrew, M6 x 20mm
	011091	2	. . . . Washer, spring, M6
	011071	2	. . . . Nut, M6, Nyloc

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Ratchet Hopper Prop</b>			
1	039901	1	Hopper Prop
2	040134	2	. Prop hinge pin
3	013053	2	. . Linch pin
4	039889	2	Lifting plate
	011094	4	. Washer, M10 special
	011075	2	. . Nut, M10, Nyloc
5	040456	2	Cylinder, pneumatic, 32 x 50 spring return . . . . . Page G15
	011407	2	. Bolt, M10 x 120mm
	011094	2	. . Washer, M10
	011075	2	. . . Nut, M10, Nyloc

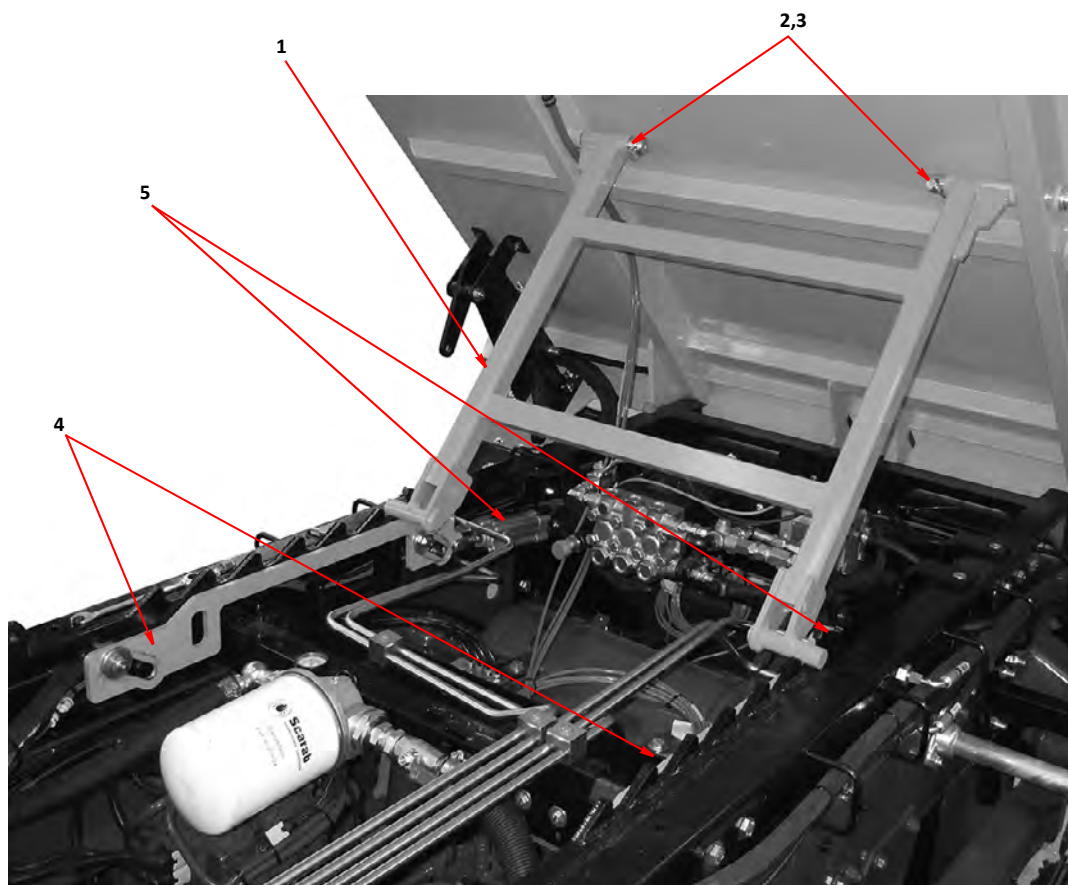




**MANUAL HOPPER PROP**



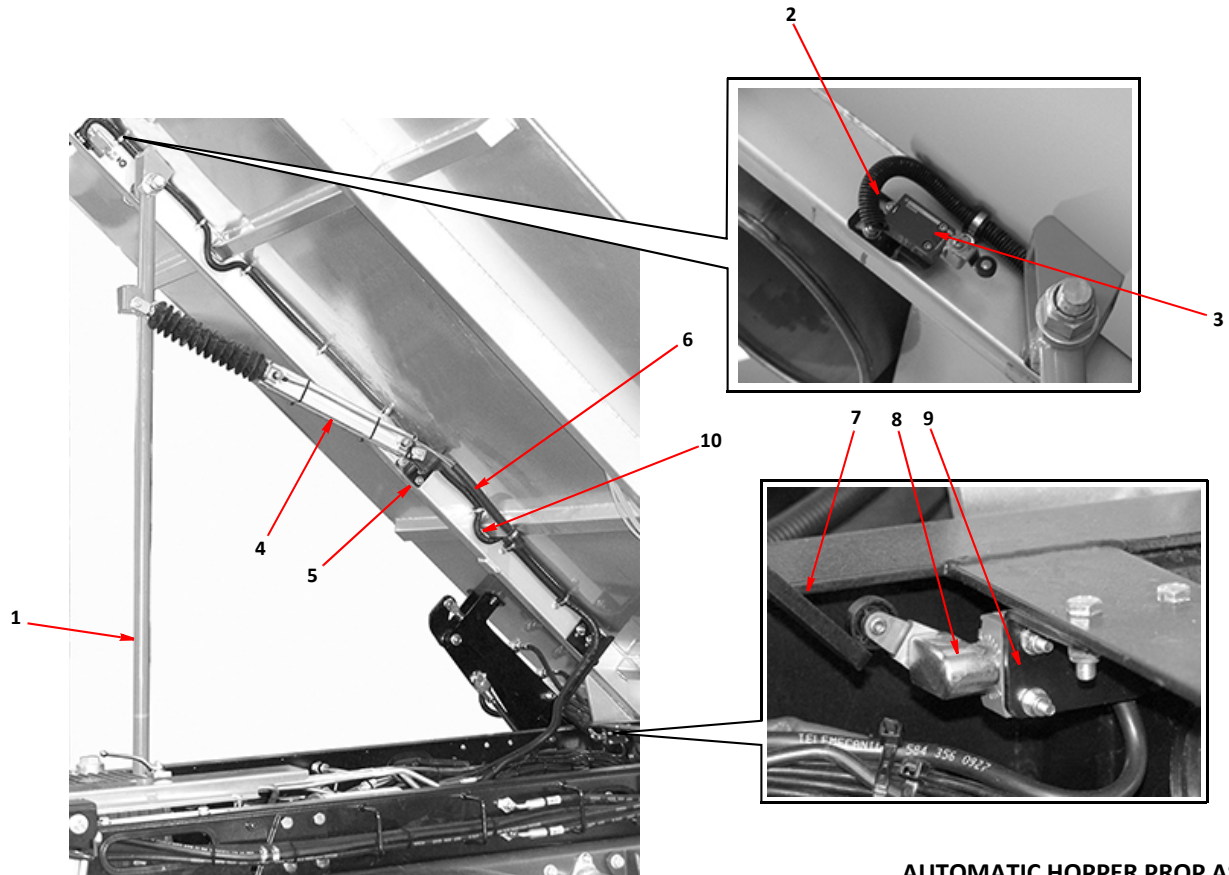
**HOPPER RAISED SENSOR**



**RATCHET HOPPER PROP**

**ItemPart NumberQuantityDescription****Automatic Hopper Safety Prop Assembly - (Option)**

1	030380	1	Hopper Prop ( <b>MERLIN</b> )	
1	030099	1	Hopper Prop ( <b>MAGNUM</b> )	
	000316	1	. Bolt, 1" UNF x 7	
	011062	1	. Nut, 1" UNF, Nyloc	
2	030379	1	. Mounting bracket, proximity switch ( <b>MERLIN</b> )	
NI	030226	1	. Mounting, bracket, proximity switch ( <b>MAGNUM</b> )	
	000191	2	. . Screw, socket cap head, M4 x 25mm	
	000134	2	. . Nut, M4, Nyloc	
3	030158	1	. . Switch, proximity, upper	
4	030156	1	. Cylinder, pneumatic, 40 x 250 . . . . .	Page G11
5	030377	1	. . Ram mounting bracket, catch pocket ( <b>MERLIN</b> )	
NI	030101	1	. . Ram mounting bracket, catch pocket ( <b>MAGNUM</b> )	
	011415	2	. . . Bolt, M8 x 80mm	
	011073	2	. . . Nut, M8, Nyloc	
6	024650	AR	. . Air pipe	
7	030378	1	. Proximity actuator bracket ( <b>MERLIN</b> )	
NI	030174	1	. Proximity actuator bracket ( <b>MAGNUM</b> )	
	000221	2	. . Bolt, M6 x 80mm	
	011071	2	. . Nut, M6, Nyloc	
8	030158	1	. Switch, proximity, lower . . . . .	Page H5
9	030159	1	. . Mounting bracket, proximity switch	
	011067	2	. . . Setscrew, M6 x 20mm	
	011071	2	. . . Nut, M6, Nyloc	
	000191	2	. . . Screw, socket cap head, M4 x 25mm	
	000134	2	. . . Nut, M4, Nyloc	
10	036920	1	. Loom, hopper, auto prop . . . . .	Page H3

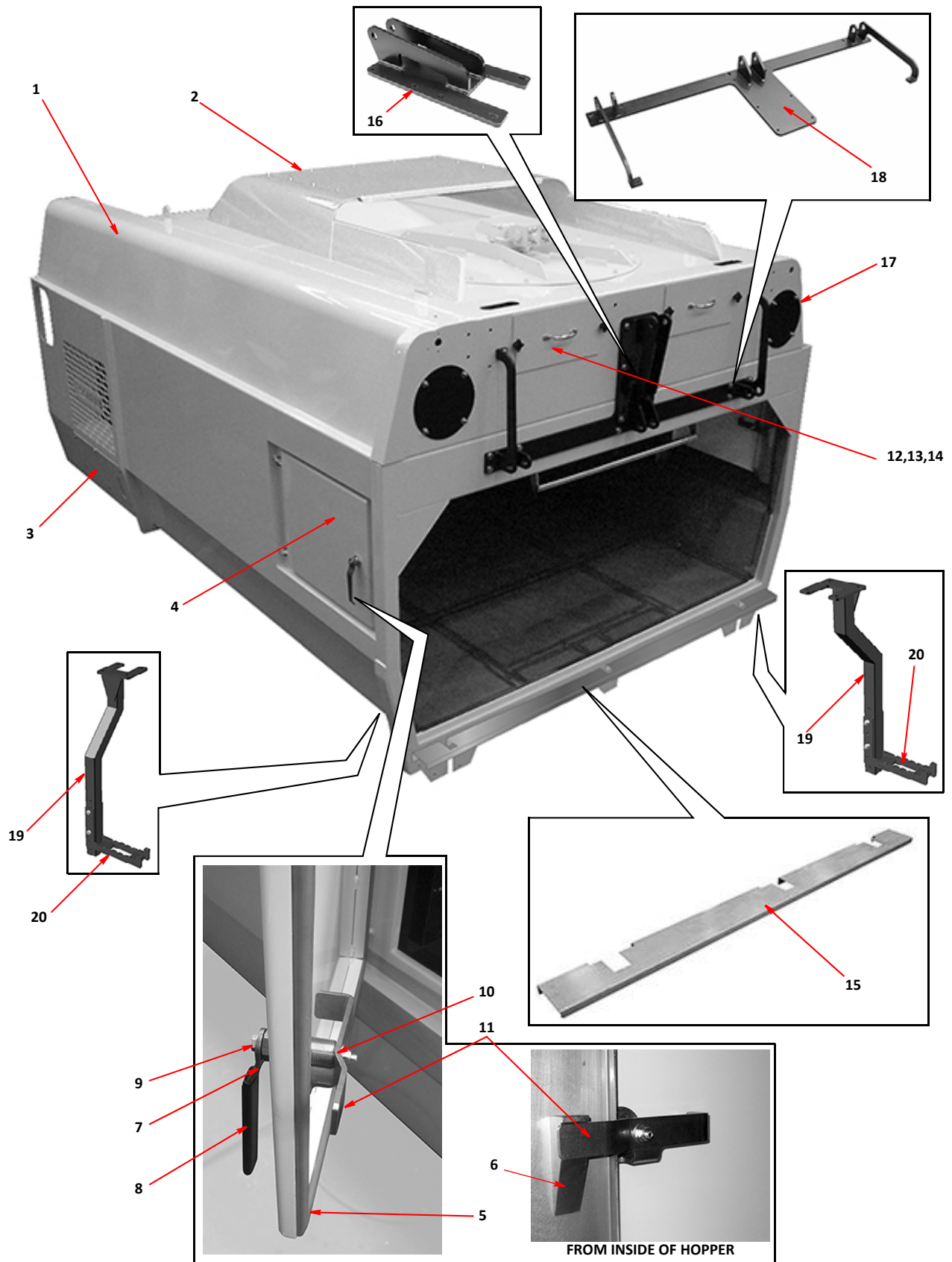


**AUTOMATIC HOPPER PROP ASSEMBLY**

Item	Part Number	Quantity	Description
<b>Hopper External Fittings</b>			
1		1	Hopper
2	035797	1	. Cover, hopper
	000254	13	. . Washer, M6, stainless steel
	000250	13	. . . Setscrew, M6 x 16, stainless steel
3	027755	1	. Access cover, valve block
	013645	AR	. . Seal strip
	011087	6	. . Setscrew, M6 x 25mm
	011091	6	. . Washer, spring, M6
4	028054	2	. Door, side-loading hatch
	000273	4	. . Setscrew, M12 x 25mm, stainless steel
	000277	4	. . Washer, M12, stainless steel
	000275	4	. . Nut, M12, Nyloc, stainless steel
5	013599	1	. . Seal, side door
6	027932	1	. Striker
	000252	4	. . Setscrew, M6 x 20mm, stainless steel
7	027933	2	. . Handle
8	040032	2	. . . Door handle sleeve
	011019	2	. . . Bolt, M8 x 90mm, stainless steel
	000263	2	. . . Nut, M8, Nyloc, stainless steel
9	027934	2	. . Spindle, door catch
10	027935	2	. . Bearing, door catch
12	040033	2	. . Door Catch RH
NI	040034	2	. . Door Catch RH
	027937	2	. . Back nut, $\frac{3}{4}$ " BSP
12	030728	2	. Cover plate, fan housing
	010546	AR	. . Seal strip
13	000248	4	. . Plastic Knob
14	010502	2	. . Handle
15	030210	1	. Chute, discharge. <b>(Merlin)</b>
NI	028937	1	. Chute, discharge, <b>(Magnum/8000/8500)</b>
	000256	8	. . Setscrew, M8 x 20mm, stainless steel
	000263	8	. . Nut, M8 Nyloc, stainless steel
	000270	16	. . Washer, M8, stainless steel
16	024346	1	. Mounting, adjustable, rear door ram . . . . . Page C25
NI	025660	1	. Mounting, adjustable, rear door ram, <b>(8000/8500)</b> . . . . . Page C25
	011032	10	. . Setscrew, M10 x 30mm
	011033	2	. . Setscrew, M10 x 35mm
	011074	12	. . Washer, M10
	011075	6	. . Nut, M10, Nyloc
17	025486	2	. Cover, wander boom aperture (1 only if rear boom fitted)
	011073	4	. . Nut, M8, Nyloc
	011092	4	. . Washer, M8
18	024345	1	. Plate, hinge, rear door . . . . . Page C25
NI	025661	1	. Plate, hinge, rear door, <b>(8000/8500)</b> . . . . . Page C25
	011034	6	. . Setscrew, M10 x 40mm
	011075	6	. . Nut, M10, Nyloc
	011074	6	. . Washer, M10
	011014	2	. . Setscrew, M8 x 40mm
	011073	2	. . Nut, M8, Nyloc
	011092	4	. . Washer, M8
19	*	1	. Rear step mount <b>(Per Step)</b>
20	*	1	. . Rear step <b>(Per Step)</b>
	000139	2	. . . Bolt, M12 x 90mm <b>(Per Step)</b>
	011077	2	. . . Nut, M12, Nyloc <b>(Per Step)</b>

**Notes:-**

\* Please contact Scarab Parts Department regarding these items.



**i** Many variations of hopper exist therefore it is advisable to contact Scarab Parts Department, quoting the machines serial number when ordering associated replacement parts.

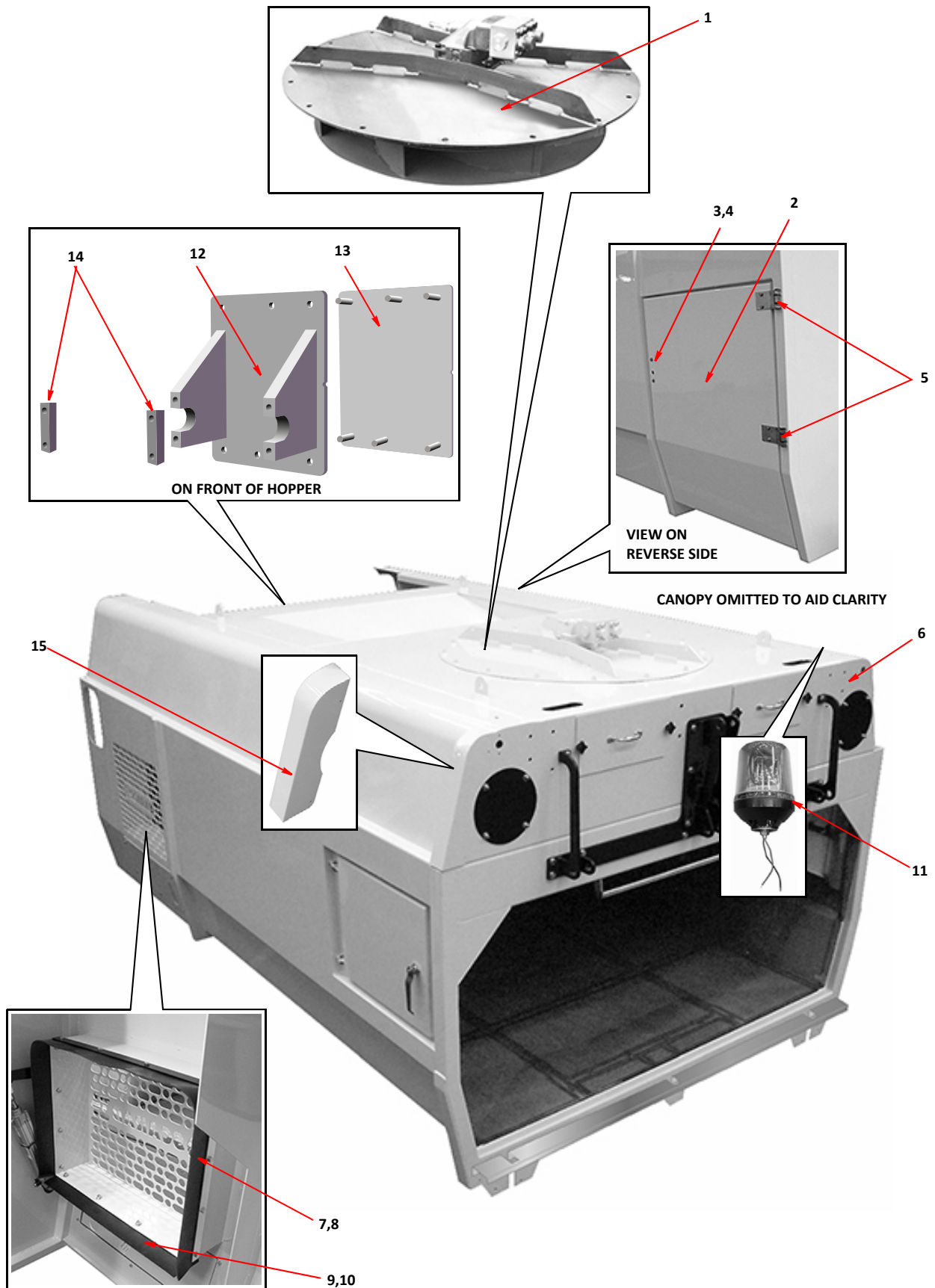
**HOPPER EXTERNAL FITTINGS**

Item	Part Number	Quantity	Description
<b>Hopper External Fittings - Continued</b>			
1		1	Suction fan assembly . . . . . Page C29
	011075	16	. Nut, M10, Nyloc
	011074	16	. Washer, M10
2	025828	1	Locker door ( <b>Merlin</b> )
NI	032228	1	Locker door ( <b>Merlin XP</b> )
3	013072	1	. Door lock
4	013073	1	. Spacer
	000284	2	. . Setscrew, M6 x 55mm
	011071	2	. . Nut, M6, Nyloc
5	011654	2	. Hinge
	000284	4	. . Setscrew, M6 x 55mm
	011071	4	. . Nut, M6, Nyloc
	011090	4	. . Washer, M6
NI	013069	1	. Key, locker door
6	030773	2	Rear marker light . . . . . Page H5
	000028	4	. Screw, slotted round head, 2BA x $\frac{1}{2}$ "
	011078	4	. Nut, 2BA, Nyloc
7	024937	1	Seal, cooler, long
8	022604	2	Clamp, long
	011010	8	. Setscrew, M8 x 20mm
	011073	8	. Nut, M8, Nyloc
	011092	8	. Washer, M8
9	022603	1	Seal, cooler, short
10	024983	2	Clamp, short
	011010	8	. Setscrew, M8 x 20mm
	011073	8	. Nut, M8, Nyloc
	011092	8	. Washer, M8
11	014064	1	Beacon, standard fit . . . . . Page H5
NI	036911	1	Loom, hopper components . . . . . Page H3
12	010719*	1	Pivot plate, hopper lift ram
NI	025581*	A/R	. Spacer 4mm
13	040382*	1	. Clamp plate (inside of hopper)
	011075*	6	. . Nut, M10, Nyloc
	000270*	6	. . Washer M10
14	034395*	2	. . Ram pivot bar
	011034*	4	. . . Bolt, M10 x 40mm
	011095*	4	. . . Washer, spring, rectangular, M10
15	024784	1	. Capping, LH. ( <b>Merlin</b> ) ( <b>Rivet</b> )
NI	040024	1	. Capping, LH. ( <b>Merlin</b> ) ( <b>Screw</b> )
NI	025767	1	. Capping, LH. ( <b>Magnum/8000/8500</b> ) ( <b>Rivet</b> )
NI	040014	1	. Capping, LH. ( <b>Magnum/8000/8500</b> ) ( <b>Screw</b> )
NI	024789	1	. Capping, RH. ( <b>Merlin</b> ) ( <b>Rivet</b> )
NI	040025	1	. Capping, RH. ( <b>Merlin</b> ) ( <b>Screw</b> )
NI	025766	1	. Capping, RH. ( <b>Magnum/8000/8500</b> ) ( <b>Rivet</b> )
NI	040013	1	. Capping, RH. ( <b>Magnum/8000/8500</b> ) ( <b>Screw</b> )

**Notes:-**

\* All these parts are required to retro fit the single piece pivot plate in place of the older 2 piece design.



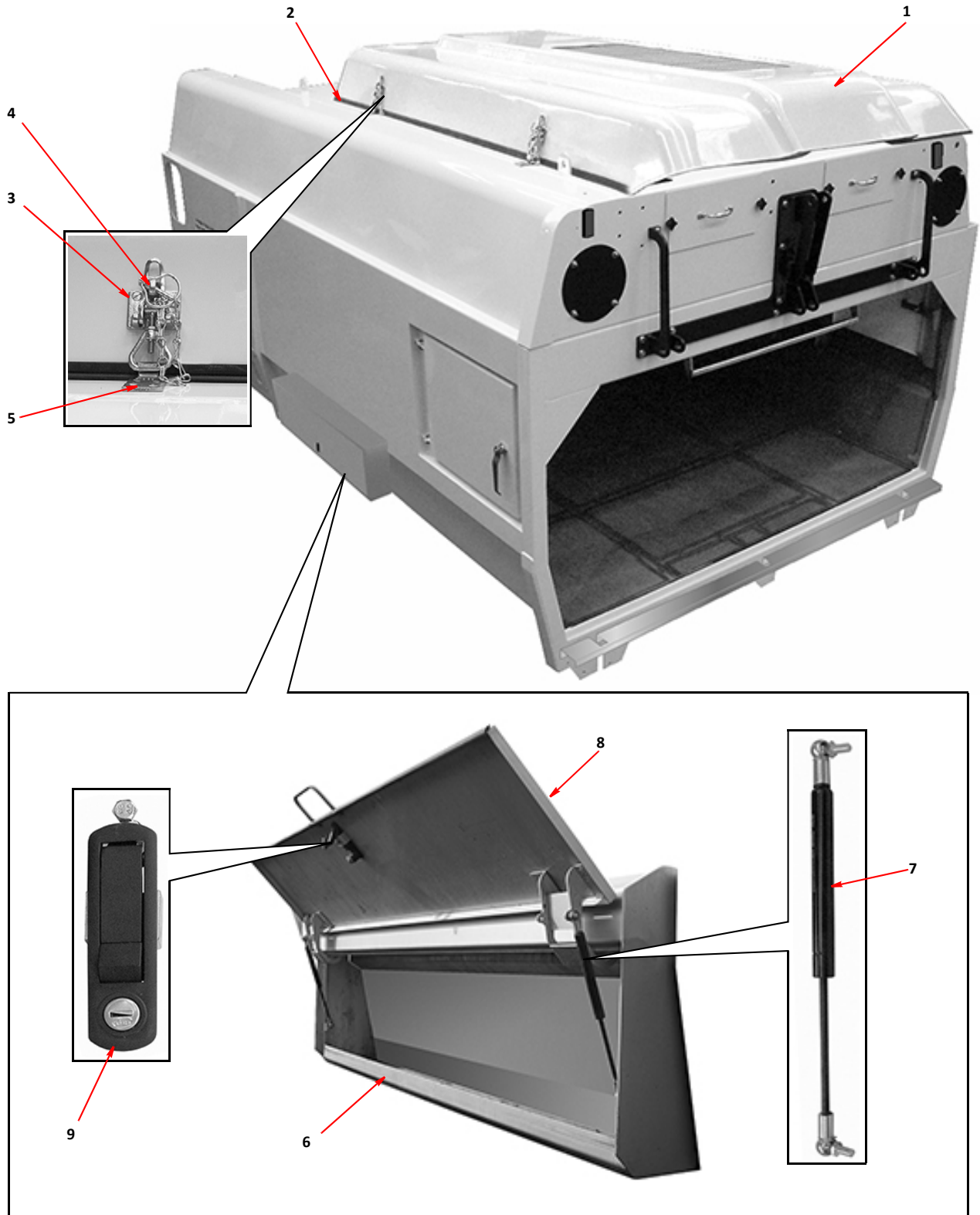


**i** Many variations of hopper exist therefore it is advisable to contact Scarab Parts Department, quoting the machines serial number when ordering associated replacement parts.

**HOPPER EXTERNAL FITTINGS**

Item	Part Number	Quantity	Description	
Hopper External Fittings - Continued				
1	024704	1	Hopper cover, GRP (Merlin)	
2	013952	AR	. Seal strip	
	000005	15	. . Screw, slotted countersunk, 2BA x $\frac{3}{4}$ "	
	011078	15	. . Nut, 2BA, Nyloc	
3	022656	5	. Toggle clip fastener	
4	013507	5	. Linch pin, complete with chain	
5	022657	5	. Hook plate, toggle clip	
6	031487	1	Ancillary tool locker body	
	000344	4	. Screw, button socket head, M10 x 25mm stainless steel	} Option
	000269	4	. Nut, M10, Nyloc, stainless steel	
	000270	4	. Washer, M10, stainless steel	
7	033114	2	. Gas Strut	
8	031489	1	. Locker door	
	011019		. . Setscrew, M8 x 90mm	
	011073		. . Nut, M8, Nyloc	
9	033115	1	. Locking latch	





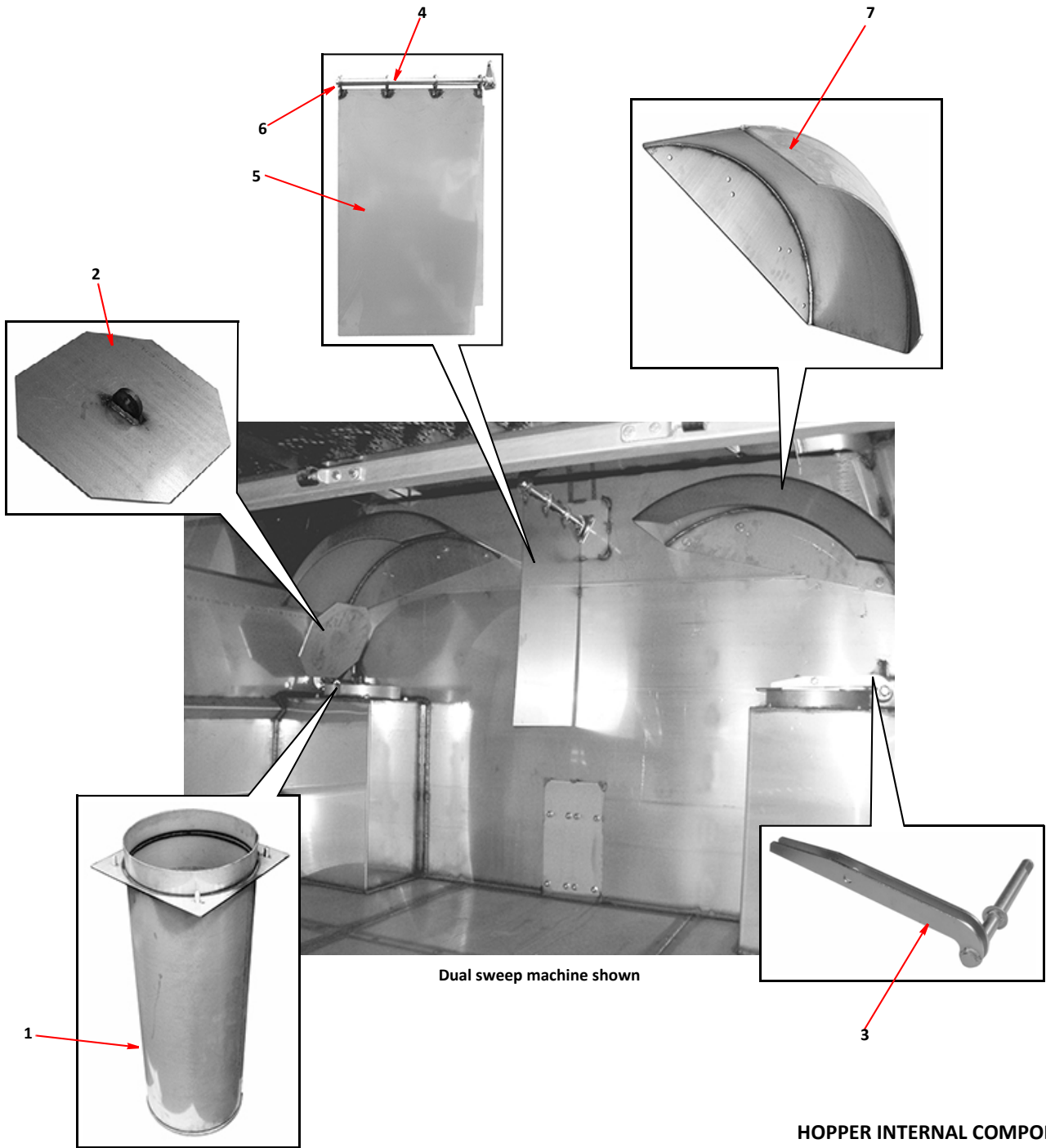
**i** Many variations of hopper exist therefore it is advisable to contact Scarab Parts Department, quoting the machines serial number when ordering associated replacement parts.

**HOPPER EXTERNAL FITTINGS**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>	
<b>Hopper Internal Components</b>				
1	025435*	1	Suction tube 750mm ( <b>Merlin</b> )	
1	025401*	1	Suction tube 850mm ( <b>Magnum</b> )	
1	025665*	1	Suction tube 925mm ( <b>Magnum/8000/8500</b> )	
1	024735*	1	Suction tube 600mm ( <b>Magnum/8000</b> )	
	005021	AR	. Sealing strip	
	000269	4	. Nut, M10 Nyloc, stainless steel	
	000270	4	. Washer, M10, stainless steel	
2	021514*	1	Cover lid, blanking . . . . .	Page C21
3	021518	1	. Flap arm, RH . . . . .	Page C21
NI	021517	1	. Flap arm, LH . . . . .	Page C21
4	030536	1	Mounting bar	
	011032	3	. Setscrew, M10 x 30mm	
	011075	3	. Nut, M10, Nyloc	
	011094	3	. Washer, M10	
5	030535*	1	. Deflector plate	
6	030537	1	. Locking ring	
	011031	1	. . Setscrew, M10 x 25mm	
	011095	1	. . Washer, spring, M10	
7	022644*	1	Deflector, universal	
	011055	2	. Bolt, M12 x 65mm	
	011051	4	. Setscrew, M12 x 25mm	

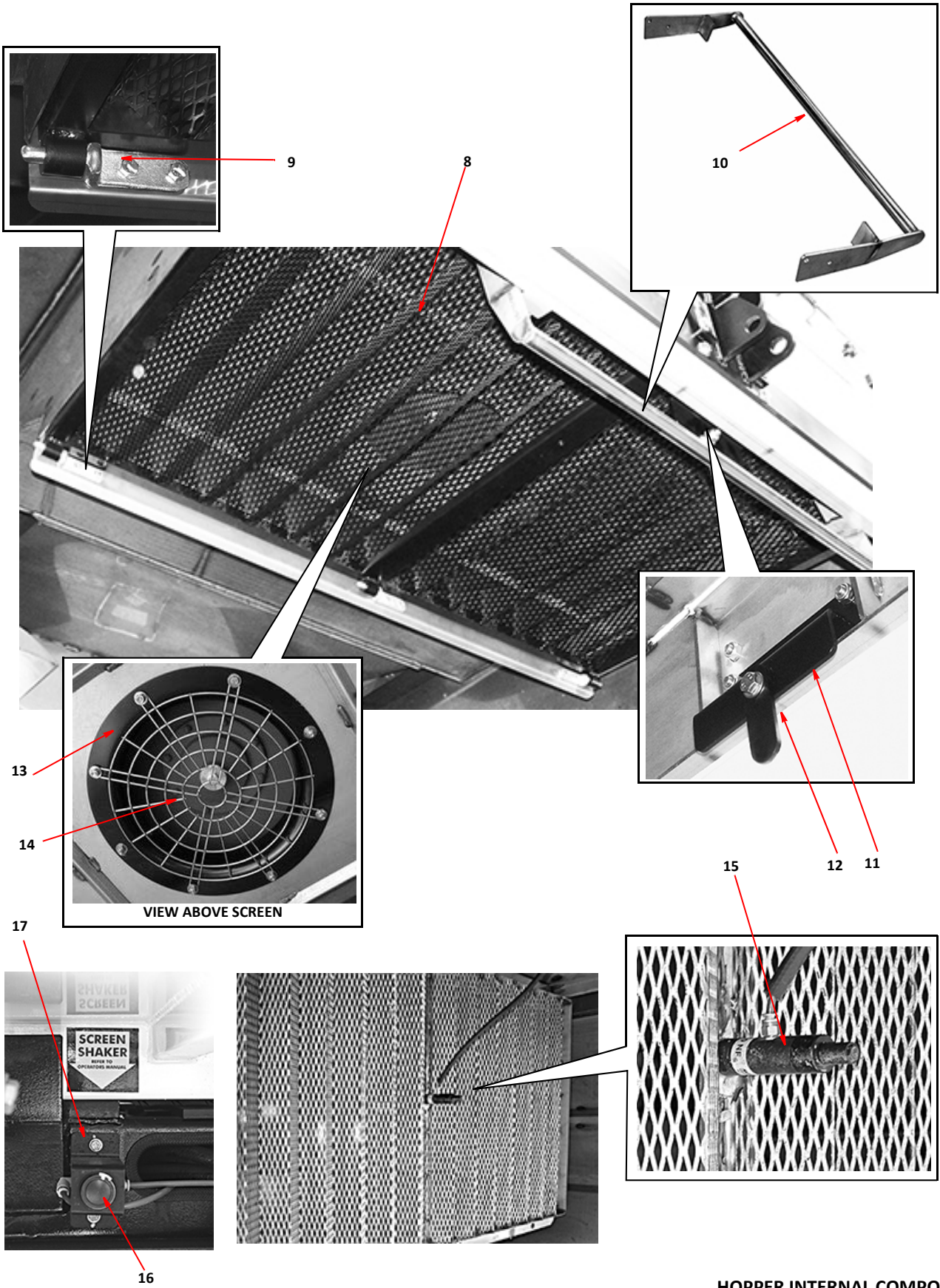
**Notes:-**

- \* Can be supplied with PU compound, before ordering replacement parts, please contact Scarab Parts Department quoting your machine serial number.



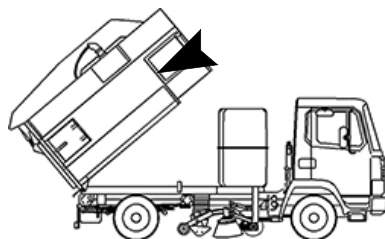
Item	Part Number	Quantity	Description
Hopper Internal Components - Continued			
8	024668	1	Screen, filter
9	025245	3	. Hinge, points
	000257	6	. . Setscrew, M8 x 25mm, stainless steel
	000263	6	. . Nut, M8, Nyloc
10	028265	1	. Screen handle catch
	000257	4	. . Setscrew, M8 x 25mm, stainless steel
	000263	4	. . Nut, M8, Nyloc, stainless steel
	011092	4	. . Washer, M8
11	028052	1	. Bracket, safety link
12	028053	1	. . Safety link
	000280	1	. . . Setscrew, M10 x 25mm, stainless steel
	011075	1	. . . Nut, M10, Nyloc, stainless steel
	000270	2	. . . Washer, M10, stainless steel
13	024790	1	Cone, inlet, suction fan
14	039674	1	. Fan guard
NI	034091	1	. Repair ring (requires welding)
	000263	8	. Nut, M8, Nyloc, stainless steel
15	033618	1	Vibrator, screen shaker
16	033620	1	Control button, screen shaker
17	033620	1	. Bracket, control button mounting
	011087	2	. . Setscrew, M6 x 25mm
	011071	2	. . Nut, M6, Nyloc

} Option



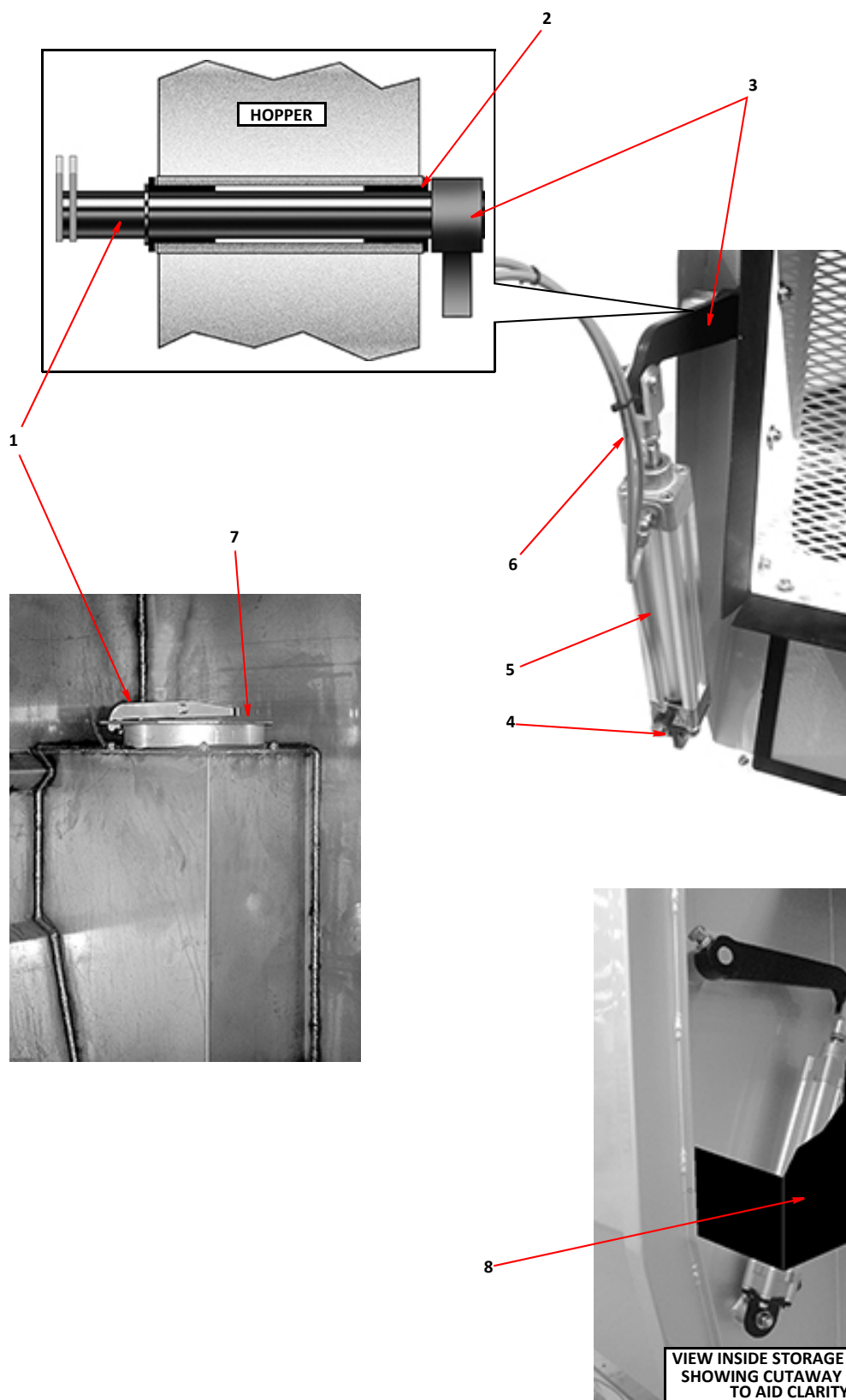
Item	Part Number	Quantity	Description
<b>Auto Blanking Arrangement *</b>			
1	021517	1	Flap arm, LH . . . . . Page C17
NI	021518	1	Flap arm, RH . . . . . Page C17
2	013488	2	. Bush
3	024772	1	. Flap lever
	000363	1	. . Setscrew, M12 x 1.25 pitch x 25mm, stainless steel
	000279	1	. . Nut, M12 x 1.25 pitch, stainless steel
5	021467	1	Cylinder, pneumatic, 40 x 200 . . . . . Page G13
	011075	1	. Nut, M10, Nyloc
6	024650	AR	. Tubing, air, flexible nylon, 6mm Superflex
7	021514**	1	Flap lid, blanking . . . . . Page C17
8	025486	1	Cover plate ( <b>Merlin</b> )
NI	032343	1	Cover plate ( <b>XP</b> )
NI	021547	1	Cover plate ( <b>Magnum</b> )

AUTO-BLANKING RAMS

**Notes:-**

- \* Items listed are identical for both left and right hand blanking assemblies, except for where identified specifically for one side.
- \*\* Can be supplied with PU compound, before ordering replacement parts, please contact Scarab Parts Department quoting your machine serial number.





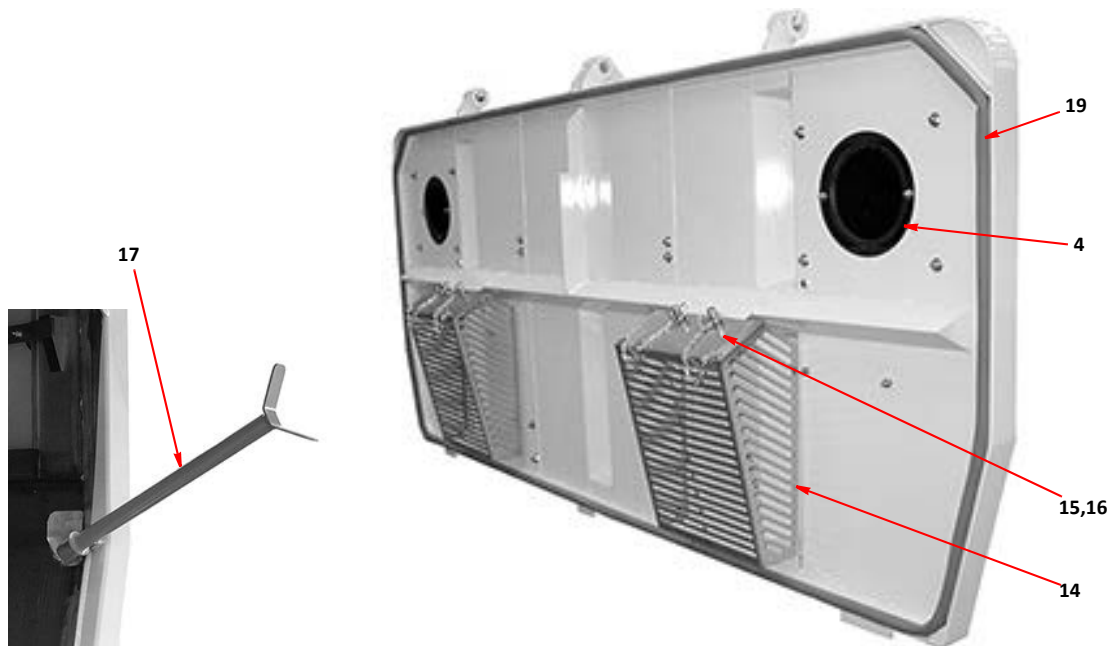
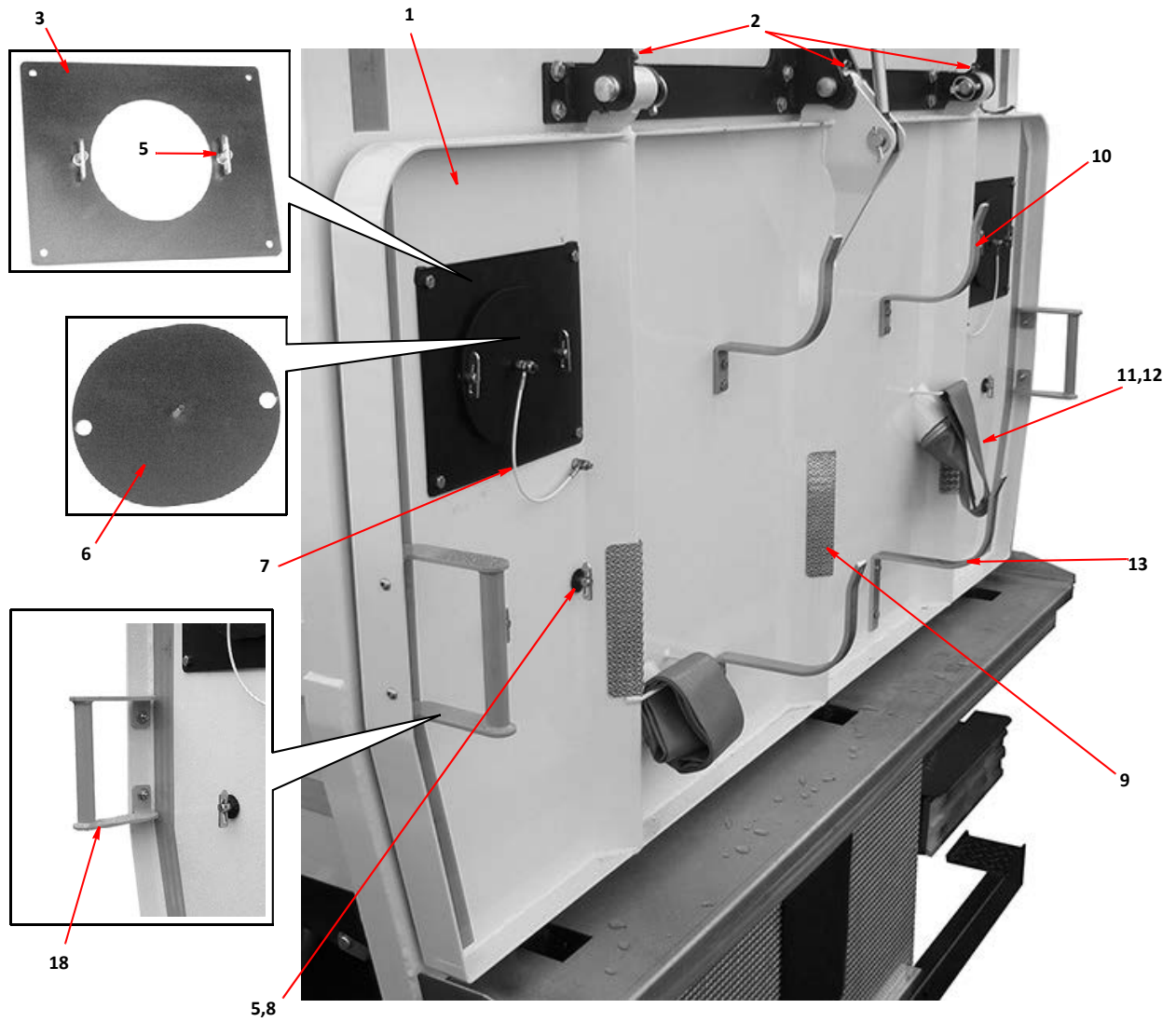
### AUTO BLANKING - ARRANGEMENT

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Rear Door Components</b>			
1	023012*	1	Rear door ( <b>Merlin</b> )
NI	027902*	1	Rear door ( <b>Magnum</b> )
NI	032223*	1	Rear door ( <b>XP</b> )
2	010902	3	. Grease point, $\frac{1}{8}$ " BSP x 90°
3	023009	2	. Plate, wander hose, mounting
4	025222	AR	. . Sealing strip, Titanfast DX78
	000257	8	. . Setscrew, M8 x 25mm, stainless steel
	000263	8	. . Nut, M8, Nyloc, stainless steel
5	012253	8	. Antiluce, small
6	012486	2	. Plate, blanking cap
7	020711	2	. . Leash cable
	000258	2	. . . Setscrew, M8 x 30mm, stainless steel
	000262	4	. . . Nut, M8, stainless steel
	000263	4	. . . Nut, M8, Nyloc, stainless steel
8	021979	4	. . . Washer, rubber
9	031919	3	. Protector
10	010245	2	. Hook, wander hose, upper mounting
	000257	4	. . Setscrew, M8 x 25mm, stainless steel
	000263	4	. . Nut, M8, Nyloc, stainless steel
11	010998	AR	. Hose, lay flat
12	012931	2	. . Clamp, worm drive, 70-90mm
13	022747	2	. Hook, wander hose, lower mounting
	000257	4	. . Setscrew, M8 x 25mm, stainless steel
	000263	4	. . Nut, M8, Nyloc, stainless steel
14	022292	2	. Strainer (option)
15	013506	4	. . . Pin
16	013507	4	. . . Linch pin and chain
17	039683	1	. Safety prop, hopper rear door, usually stowed in locker
18	039593	2	. Grab handle, hopper door
	000281	4	. . Setscrew, hex socket pan head, M8 x 25mm, stainless steel
	000264	4	. . . Washer, M8, stainless steel
	000263	4	. . . Nut, M8, Nyloc, stainless steel
19	030481	6.0 m	. Seal, rear door, circular section, (cut to length)

**Notes:-**

- \* Rear doors listed are for standard hoppers. Many variations of hopper and rear door exist and therefore it is advisable to contact Scarab Parts Department, quoting machine serial number when ordering.





**REAR DOOR COMPONENTS**

# C25

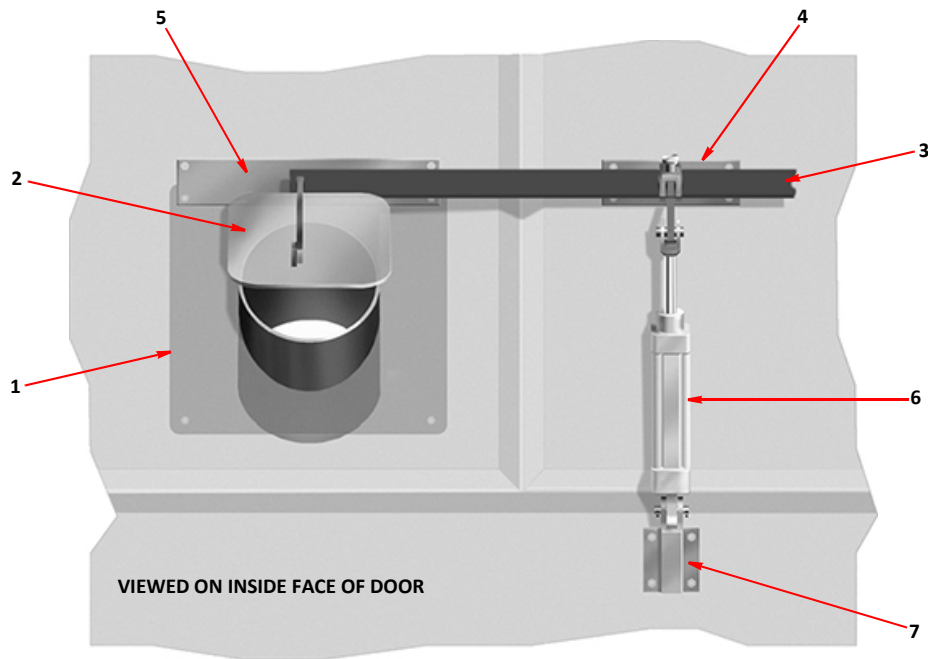
# MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Rear Door Auto Blanking Assembly* - (Option)</b>			
1	027674	2	Hose Spigot Plate
2	027675	2	. Flap Plate
3	027802	1	. Pivot Bar
4	027737	1	. . Adjuster bracket
5	027738	2	. . Pivot bracket
6	020602	1	Cylinder, pneumatic, 40 x 125 . . . . . Page G11
7	027679	1	. Ram bracket

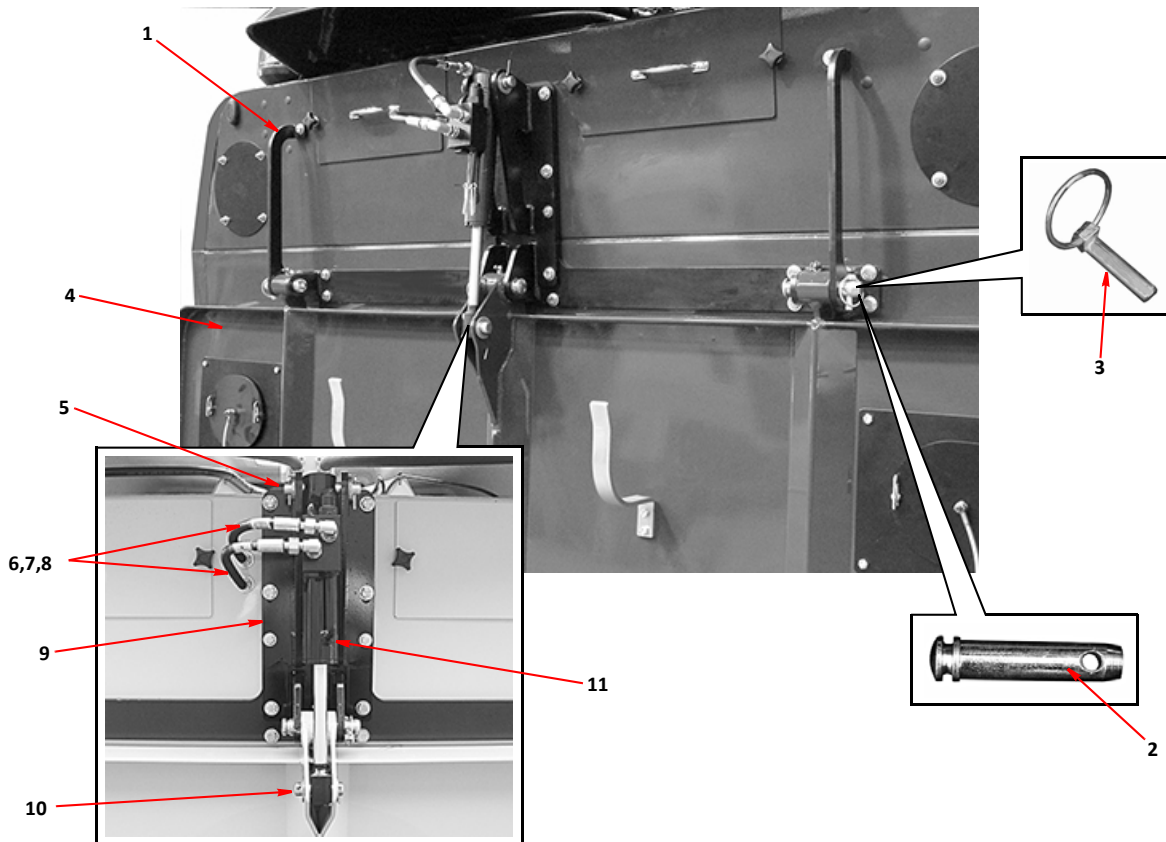
Item	Part Number	Quantity	Description
<b>Rear Door Hinge &amp; Ram Arrangement</b>			
1		1	Hinge plate . . . . . Page C11
2	013051	3	Hinge pin
3	013053	3	. Linch pin
4		1	Rear door assembly . . . . . Page C23
5	022558	1	Pin, upper
	011102	4	. Washer, M20
	011122	2	. Split pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ "
6	011317	2	Hose, rubber, $\frac{1}{4}$ " BSP x 295mm, straight ends
7	011269	2	Adaptor, bulkhead, M/M, $\frac{1}{4}$ " BSP
8	011171	2	Elbow, swivel, $\frac{1}{4}$ " BSP, M/F
9		1	Mounting plate, ram . . . . . Page C11
10	011102	1	. Pin, lower
	011102	4	. Washer, M20
	011122	2	. Split pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ "
11	022511	1	Ram assembly . . . . . .Page F41

## Notes:-

- \* The rear door auto-blanking option is only fitted when the vehicle is equipped with a rear mounted suction nozzle assembly.

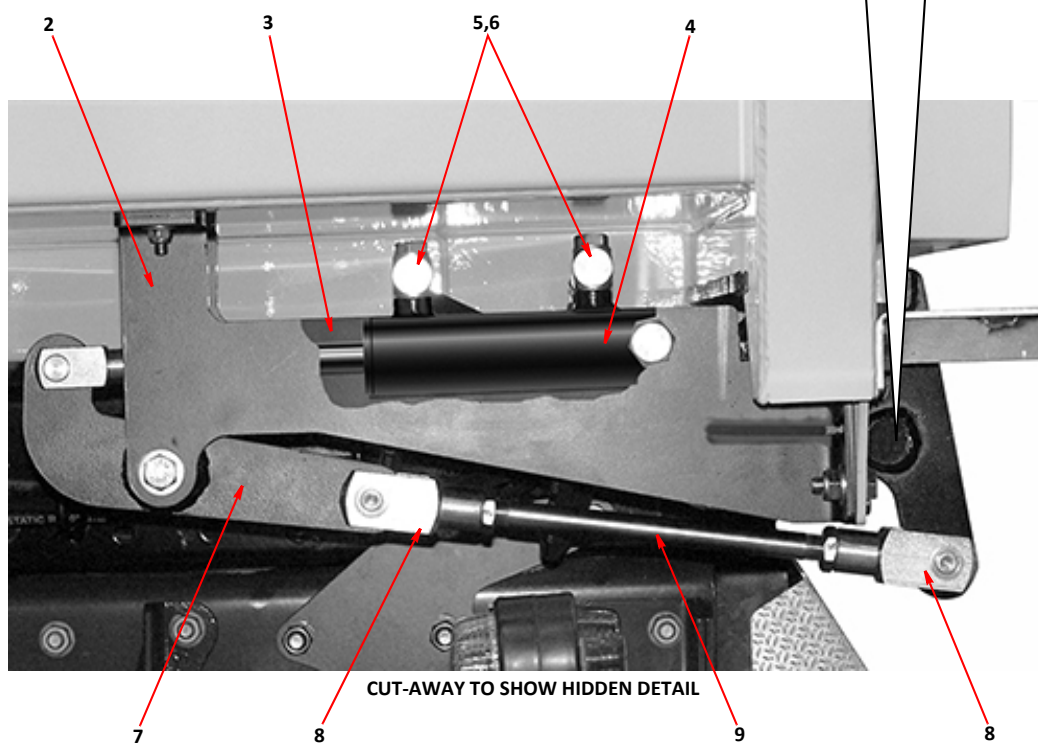
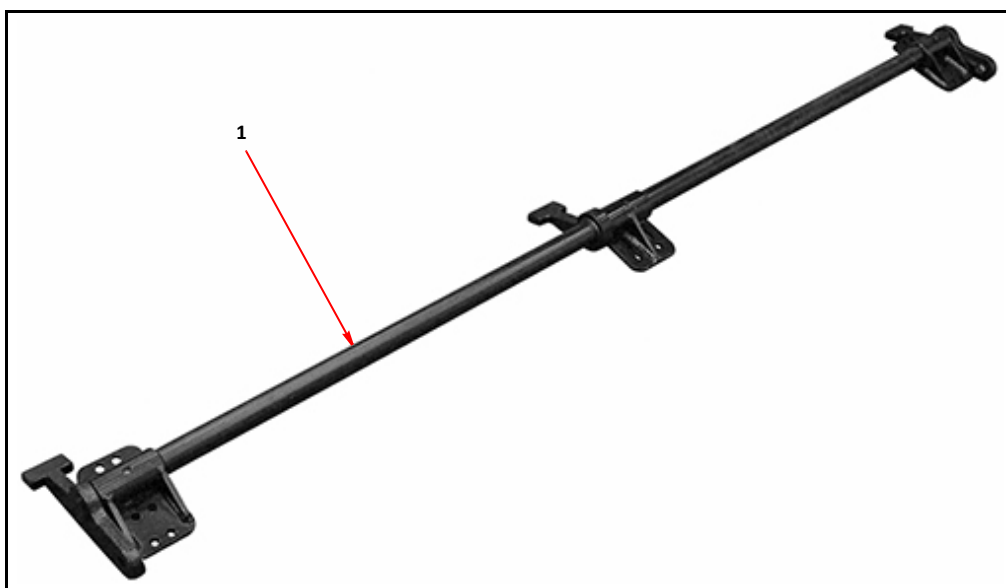


**REAR DOOR AUTO BLANKING ASSEMBLY**



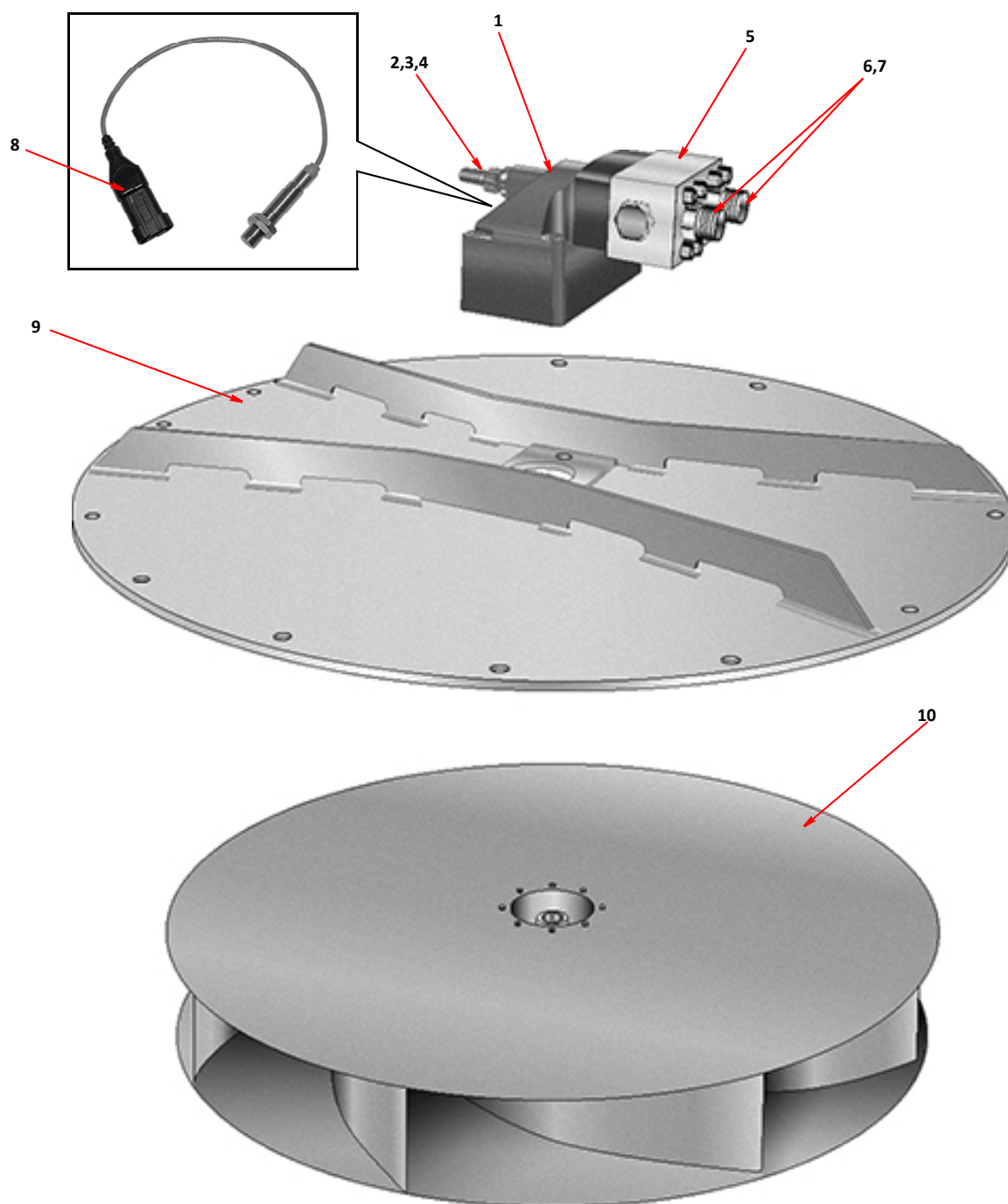
**REAR DOOR HINGE & RAM ARRANGEMENT**

Item	Part Number	Quantity	Description
<b>Rear Door Locking Arrangement</b>			
1	030985	1	Locking bar assembly ( <b>Merlin/Merlin XP</b> )
NI	027908	1	Locking bar assembly ( <b>Magnum</b> )
NI	028089	1	Locking bar assembly ( <b>8000/8500</b> )
	011032	8	. Setscrew, M10 x 30mm
	011074	16	. Washer, M10
	011075	8	. Nut, M10, Nyloc
2	030984	1	Side plate, outer, rear door clamp, RH ( <b>Merlin</b> )
3	030982	1	Side plate, inner, rear door clamp, RH ( <b>Merlin</b> )
NI	030983	1	Side plate, outer, rear door clamp, LH ( <b>Merlin</b> )
NI	030981	1	Side plate, inner, rear door clamp, LH ( <b>Merlin</b> )
NI	028278	1	Side plate, outer, rear door clamp, RH ( <b>Magnum/8000/8500</b> )
NI	028278	1	Side plate, inner, rear door clamp, RH ( <b>Magnum/8000/8500</b> )
NI	028277	1	Side plate, outer, rear door clamp, LH ( <b>Magnum/8000/8500</b> )
NI	027903	1	Side plate, inner, rear door clamp, LH ( <b>Magnum/8000/8500</b> )
	000329	4	. Screw, socket button head, M8 x 20mm, stainless steel
	000270	4	. Washer, M8, stainless steel
	000263	4	. Nut, M8, Nyloc, stainless steel
	011031	4	. Setscrew, M10 x 25mm
	011074	8	. Washer, M10
	011075	4	. Nut, M10, Nyloc
4	022350	2	. Ram, hydraulic . . . . .Page F41
	011133	2	. . Bolt, M16 x 100mm
	011060	2	. . Nut, M16, Nyloc
5	002017	4	. . Adaptor, banjo, elbow, M/M, $\frac{1}{4}$ " BSP
6	011152	8	. . Seal, Dowty, $\frac{1}{4}$ " BSP
7	024999	2	. Lever, ram operating
NI	013488	4	. . Bush
NI	022451	2	. . Spacer
	000139	2	. . . Bolt, M12 x 90mm
	011077	2	. . . Nut, M12, Nyloc
8	020299	4	. . Clevis, M16
NI	022673	4	. . Pin, clevis fixing
NI	022674	4	. . Clip, clevis pin
9	022347	2	. . Connecting rod
	000138	4	. . . Nut, M16 x 1.5 pitch



**REAR DOOR LOCKING ARRANGEMENT**

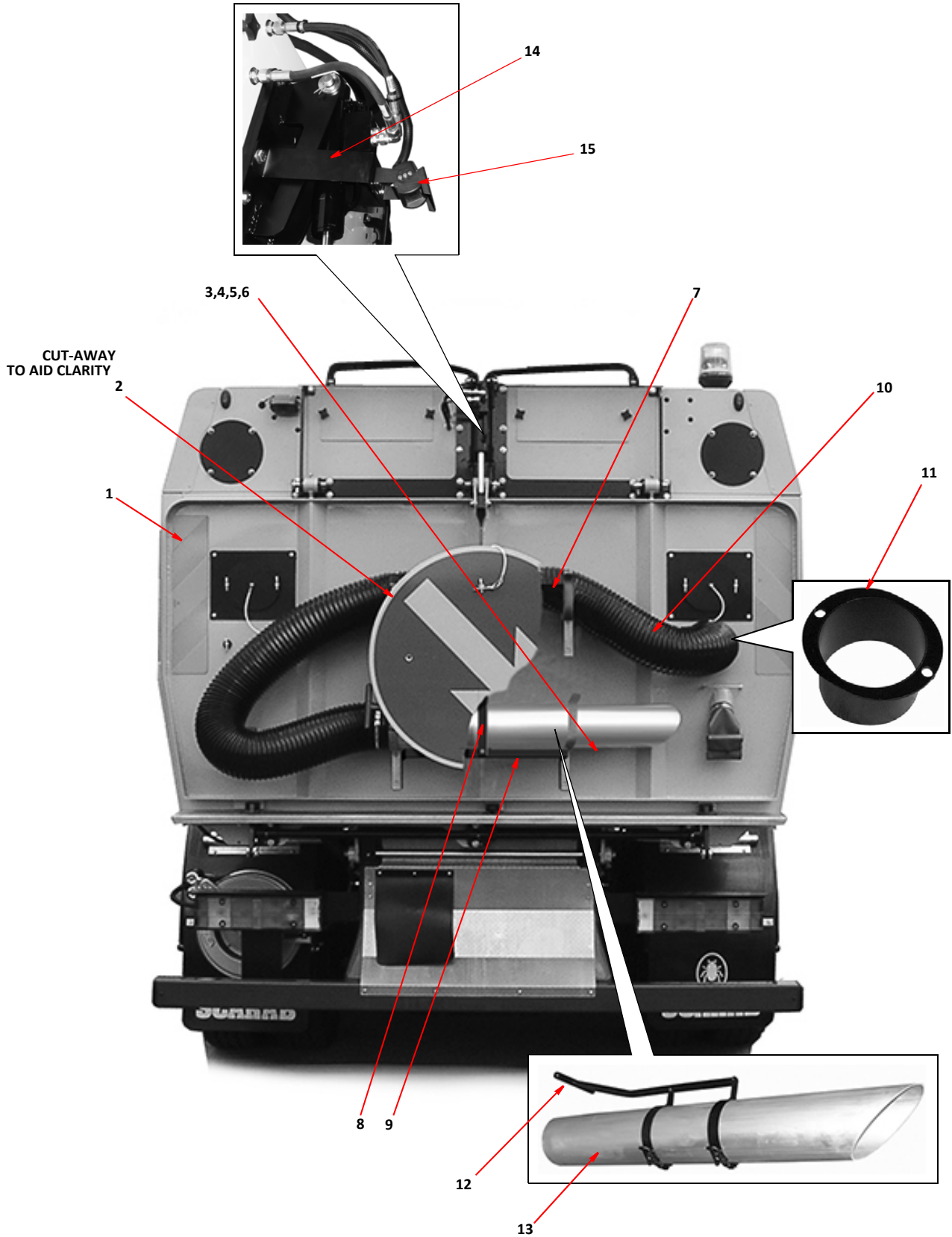
Item	Part Number	Quantity	Description
<b>Suction Fan Arrangement</b>			
1	024641	1	Motor, hydraulic, VOAC F12-030-MF-CH-K . . . . .Page F35
2	011248	1	. Adaptor, M/M, M18 x $\frac{3}{8}$ " BSP
3	011247	1	. Seal, Dowty, M18
4	010921	1	. Hose tail, $\frac{3}{8}$ " BSP female x $\frac{3}{8}$ " hose
NI	027237	1	. Seal kit, for 024641 VOAC Fan Motor
5	035967	1	. Valve block
	000048	8	. . Screw, socket cap head, M10 x 80mm
	011095	8	. , Washer, spring, M10
6	011151	2	. . Adaptor, M/M, $\frac{3}{4}$ " BSP
7	011155	2	. . Seal, Dowty, $\frac{3}{4}$ " BSP
8	025184	1	. Speed sensor (green lead) . . . . . Page H5
9	024679	1	Fan Plate
	011424	16	. Washer, M10
	011075	16	. Nut, M10, Nyloc
10	025241	1	Impellor
NI	030651	1	Impellor (stainless steel)
NI	041456	1	Impellor, high speed (stainless steel)
	011052	1	. Setscrew, M12 x 30mm
	024791	1	. Cap Washer, VOAC Motor



**SUCTION FAN ARRANGEMENT**

C31			MERLIN and MAGNUM
Item	Part Number	Quantity	Description
Additional Hopper/Rear Door Components			
1	022389	2	. Marker plates
2	026694	1	. Directional arrow, ø750mm
3	012253	2	. . Antiluce, small
	012969	2	. . . Washer, rubber, ø40 x 12 bore x 6mm thick
4	020711	1	. . Leash cable
5	021944	1	. . . R-clip
6	023599	1	. . . Key pull
7	031976	1	. . . Upper support bar, directional arrow
8	031978	1	. . . Centre support bar, directional arrow
	000003	2	. . . . Screw, socket countersunk, M8 x 20mm
	011073	2	. . . . Nut, M8, Nyloc
	011092	2	. . . . Washer, M8
9	031977	1	. . . Lower support bar, directional arrow
10	010119	1	. Wander hose, ø160mm x 3 metre
11	012488	1	. . Coupling
NI	010519	2	. . . Clamp, worm drive, size 135-165mm
12	010587	1	. . Tube
13	010321	1	. . Handle
14	036437	1	Bracket, rear camera
15	040354	1	. Rear camera . . . . . Page H5
NI	040353	1	Loom, power supply, rear camera . . . . . Page A3,H1,H3
NI	040355	1	Loom, rear camera . . . . . Page A3,H1,H3





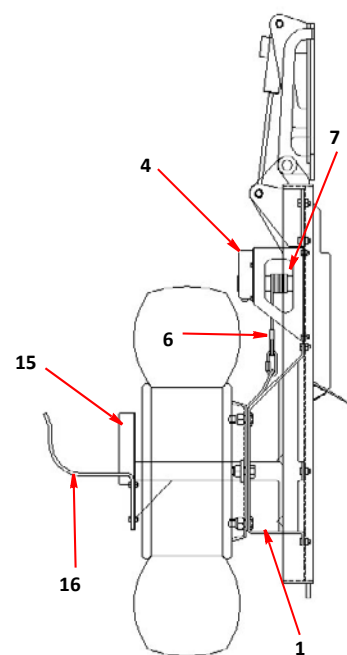
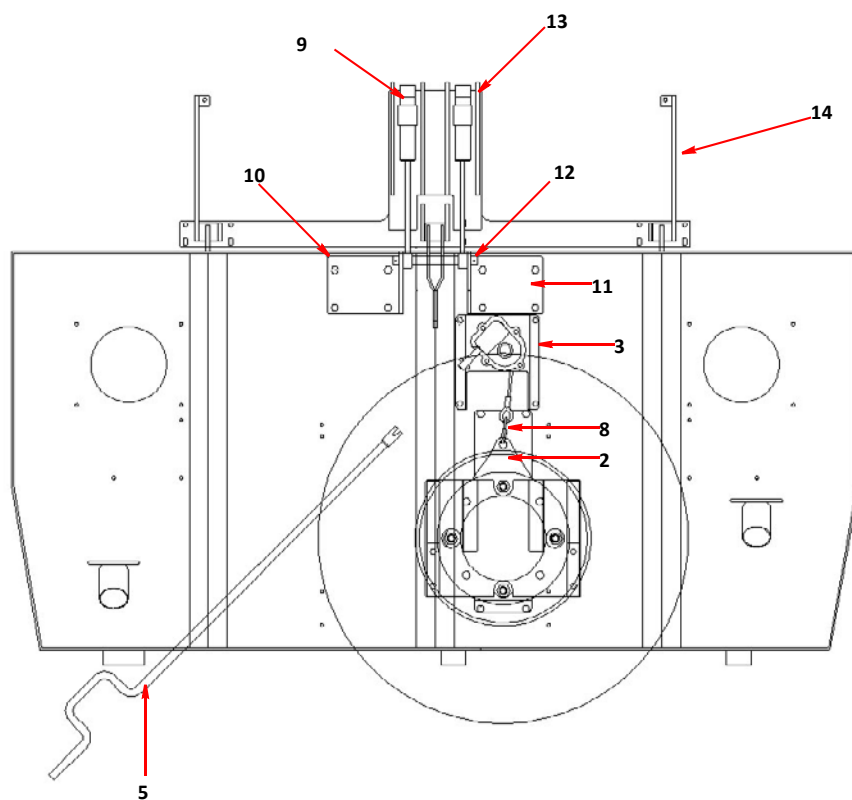
**ADDITIONAL HOPPER/REAR DOOR PARTS**

# C33

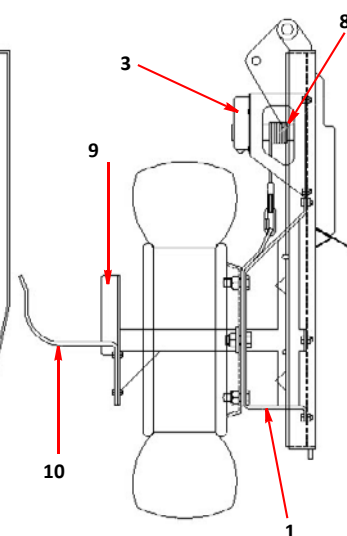
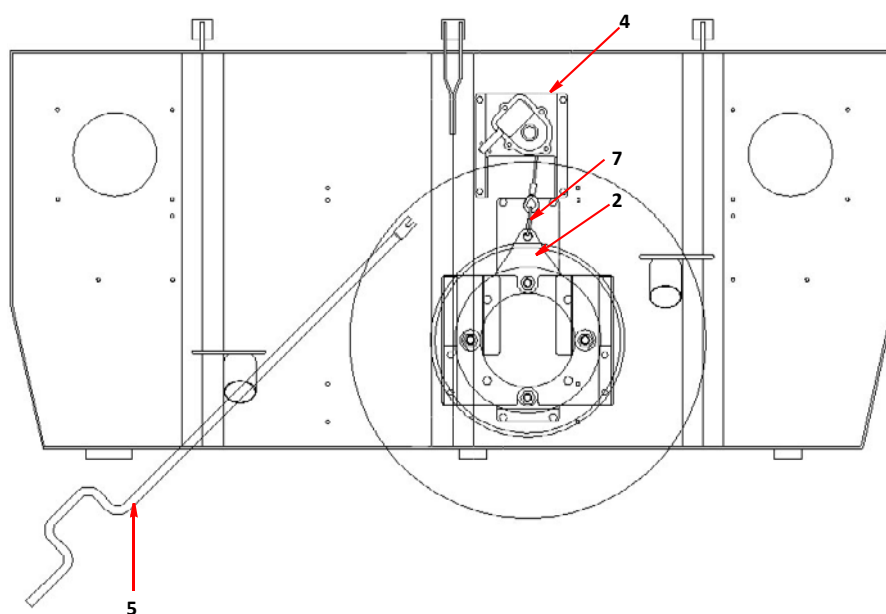
## MERLIN and MAGNUM

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Rear Door - Spare Wheel Carrier - Magnum - (Option)</b>			
1	026777	1	Bracket, spare wheel
	011082	4	. Nut, M20, Nyloc
2	026778	1	Lift plate
3	026779	1	Bracket, Winch
4	028406	1	Winch, modified
5	028407	1	. Winch handle
6	028645	1	. Cable, winch
7	014107	2	. . Cable grip 6mm
8	010606	1	. . Carabiner
9	022511	1	Ram
10	028523	1	. Ram pivot LH
11	028524	1	. Ram pivot RH
12	028525	1	. . Ram pin
13	025661	1	. Ram mount, adjustable
14	025660	1	Hinge plate, adjustable
15	028684	1	Rear boom carrier
16	022747	2	Hose hook large

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Rear Door - Spare Wheel Carrier - Merlin - (Option)</b>			
1	026777	1	Bracket, spare wheel
	011082	4	. Nut, M20, Nyloc
2	026778	1	Lift plate
3	028406	1	Winch, modified
4	026779	1	. Bracket, winch
5	028407	1	. Winch handle
6	028645	1	. Winch cable
7	014107	2	. . Cable grip 6mm
8	010606	1	. . Carabiner
9	028684	1	Rear boom carrier
10	022747	2	Hose hook large



**SPARE WHEEL CARRIER - MAGNUM**



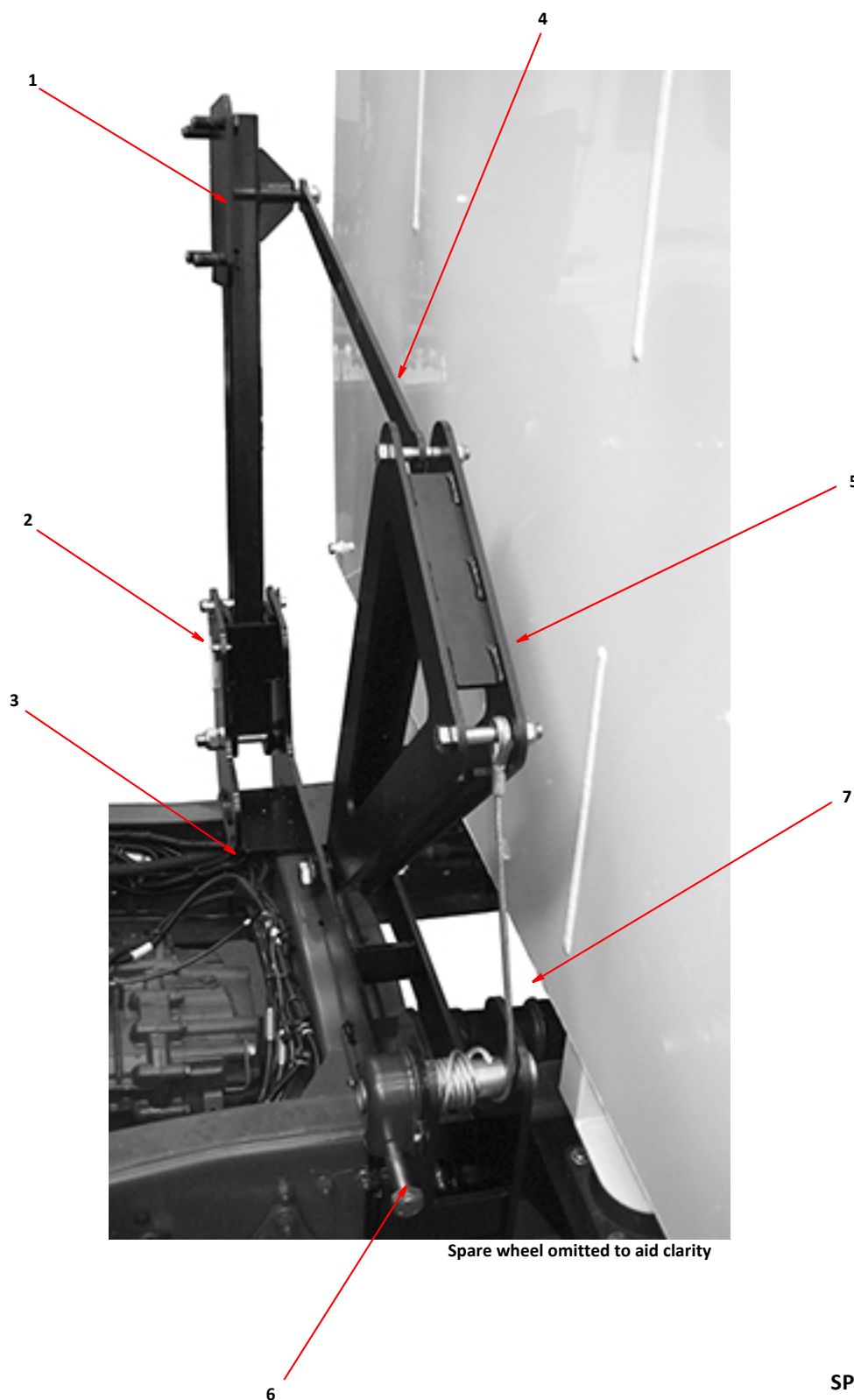
**SPARE WHEEL CARRIER - MERLIN**

# MERLIN and MAGNUM

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Chassis Mounted - Spare Wheel Carrier - (Option)</b>			
1	*	1	Main arm & wheel mounting
	011086	1	. Nut, M16, Nyloc
	000241	2	. Bolt, M24 x 130mm
	000008	2	. Nut, M24, Nyloc
	032587	1	. Lock pin
NI	020711	1	. . Leash cable
NI	023599	1	. . Pull ring
NI	021944	1	. . D-clip
3	*	1	. Mounting bracket
	011052	6	. . Setscrew, M12 x 30mm
	011086	6	. . Nut, M12, Nyloc
4	*	1	. Link arm
	000043	2	. . Bolt, M16 x 90mm
	011060	2	. . Nut, M16, Nyloc
5	032586	1	. 'V' Bracket
6	028406	1	. Winch
7	028645	1	Winch cable

## Notes:-

\* Before ordering these items please contact the Scarab Parts Department quoting machine serial number and model.





# **SWEEPING AND SUCTION EQUIPMENT**

## **SECTION D**

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# D1

## MERLIN and MAGNUM

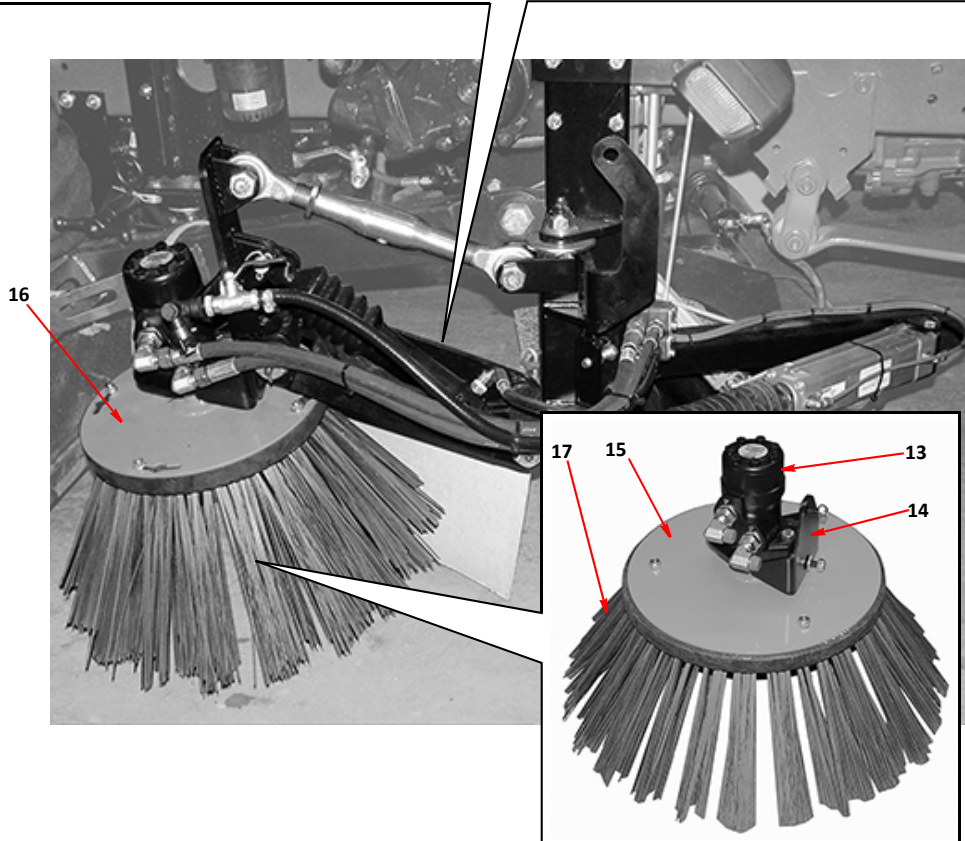
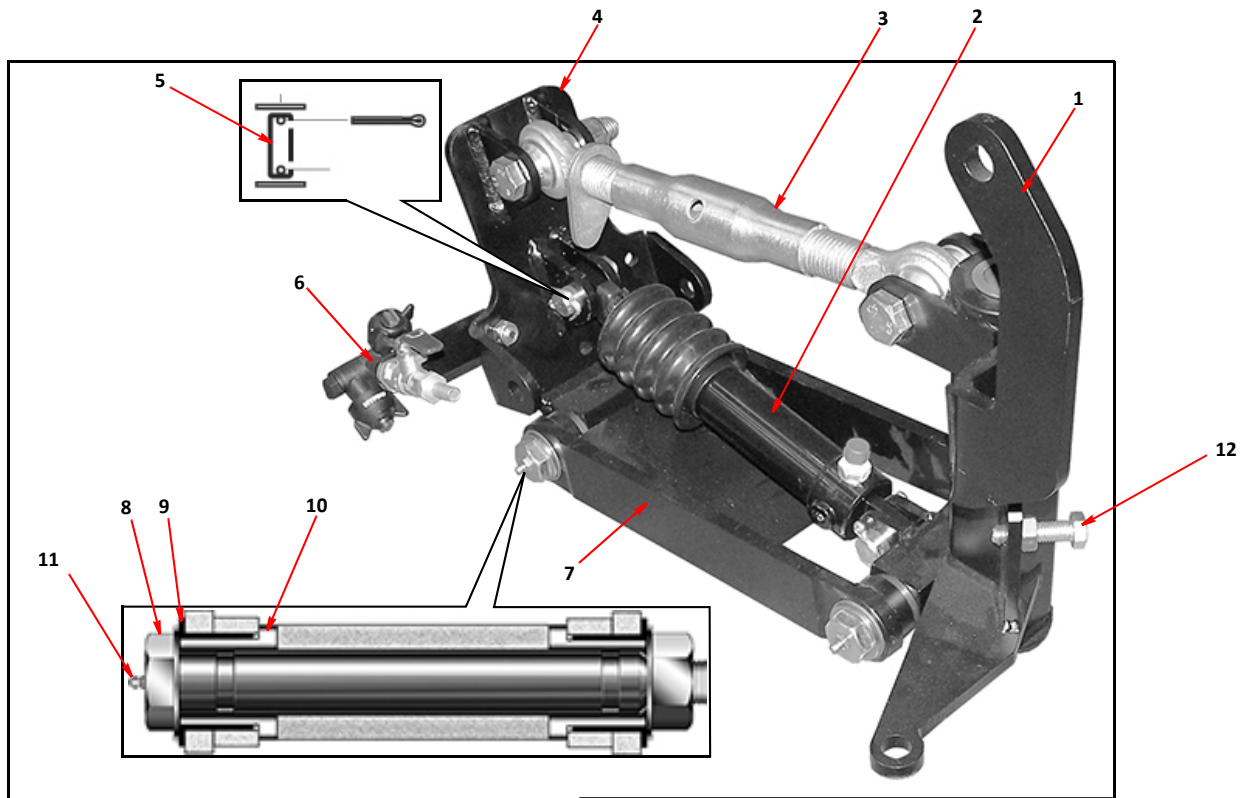
Item	Part Number	Quantity	Description
<b>Side Brush Arrangement</b>			
1	023124	1	Kingpost, RH
NI	023120	1	Kingpost, LH
2	024539	1	. Ram, hydraulic (raise/lower) . . . . .Page F41
3	013011	1	. Link, top (turnbuckle)
	011140	2	. . Bolt, M18 x 90mm
	011138	2	. . Washer, M18
	011139	2	. . Nut, M18, Nyloc
4	023121	1	. Plate, Swivel
5	010067	2	. . Pin, Ram Pivot, ø20mm x 50mm
	011103	2	. . . Washer, M20
	011122	2	. . . Pin, split, $\frac{3}{16}$ " x $1\frac{1}{2}$ "
6		1	. Brush spray nozzle assembly . . . . . Page E17
7	014801	1	. Link, lower
8	014796*	2	. . Bolt, pivot, M16 (special with grease point)
	014798*	2	. . Washer, 24 x 40 x 3
	014797*	2	. . Washer, 17 x 40 x 3
	011060*	2	. . Nut, M16, Nyloc
9	013012*	2	. . . Bush, plastic
10	014799*	4	. . Sleeve, spacer
11	010903	2	. . Grease point, straight, $\frac{1}{8}$ " BSP
12	011055	1	. . Bolt, M12 x 60mm ( <b>Merlin/XP</b> )
12	000110	1	. . Bolt, M12 x 80mm ( <b>Magnum</b> )
	011076	1	. . Nut, M12
13	010749	1	. . Motor, brush drive, hydraulic . . . . .Page F39
14		1	. . Plate, motor swivel
	011075	2	. . . Nut, M10, Nyloc
15	014067	1	. . Hub, side brush, 3 holes
16	011688	1	. . Hub, side brush, 4 holes
NI	040058**	1	. . . . . Spacer, brush hub
	040197	1	. . . . . Washer, safety, Schnorr
	011012	1	. . . . . Screw, M8 x 30mm
17		1	. . . Brush . . . . . Page D19

### Notes:-

\* These Items comprise the lower link bush kit 024611.

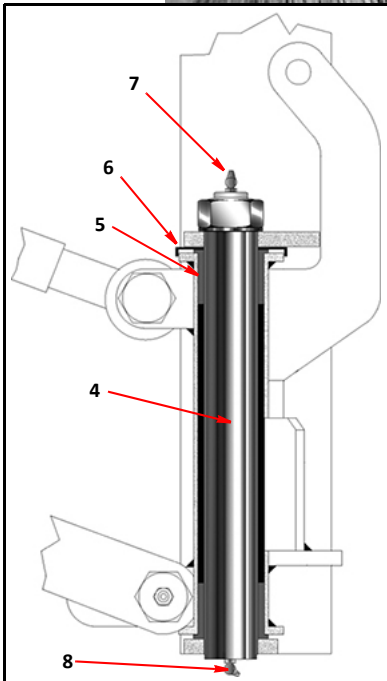
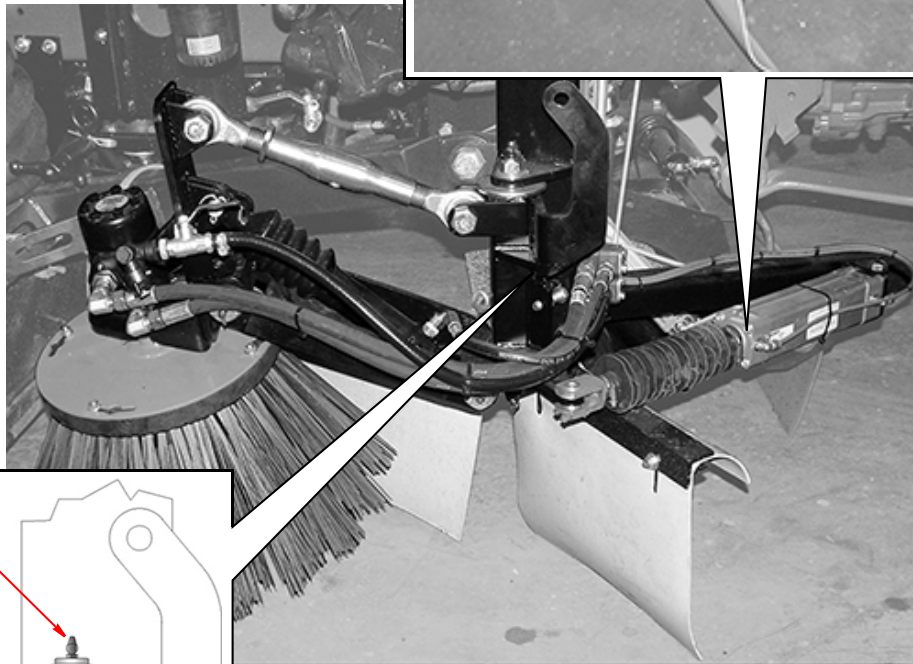
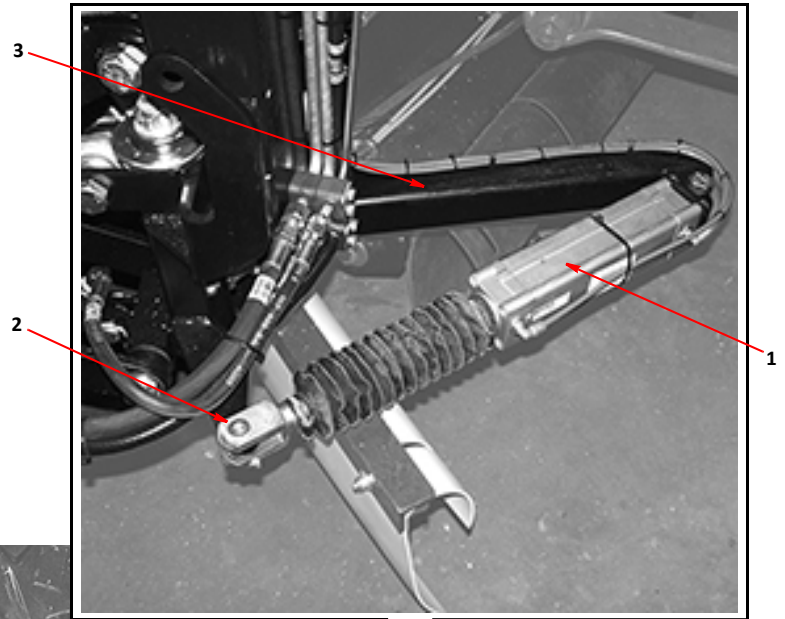
\*\* This part is required if the drive motor is manufactured by Eaton, please contact Scarab Parts Department.



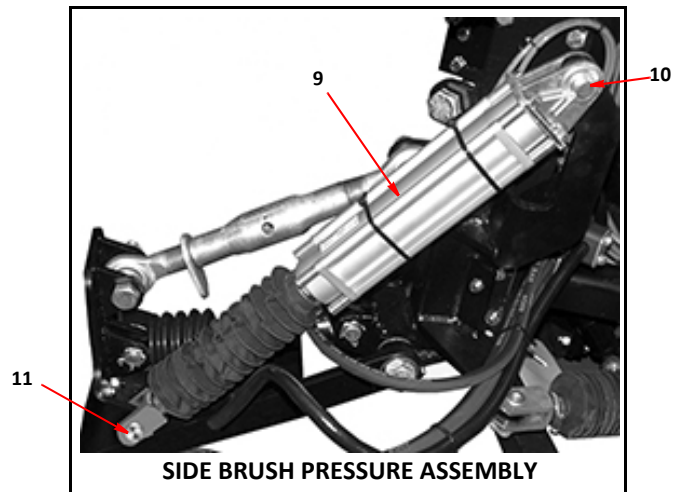


**SIDE-BRUSH ARRANGEMENT (HYDRAULIC LIFT)**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Side Brush Swing Out &amp; Brush Pressure Arrangement</b>			
1	020298	1	Cylinder, pneumatic, swing-out . . . . . Page G11
	011260	1	. Bolt, M14 x 70mm
	011127	1	. Nut, M14, Nyloc
2	022673	1	. Pin, clevis
	022674	1	. Pin, clevis, retainer
3	021520	1	Bracket, swing-out cylinder, RH ( <b>Merlin</b> )
NI	021519	1	Bracket, swing-out cylinder, LH ( <b>Merlin</b> )
NI	021722	1	Bracket, swing-out cylinder, RH ( <b>Magnum</b> )
NI	021721	1	Bracket, swing-out cylinder, LH ( <b>Magnum</b> )
	011407	2	. Bolt, M10 x 120mm
	011077	2	. Nut, M10, Nyloc
4	013007	1	Kingpin
	011102	1	. Washer, M20
	011082	1	. Nut, M20, Nyloc
5	013012	2	. Bush, plastic
6	013013	1	. Cap
7	010903	3	. Grease point, straight, $\frac{1}{8}$ " BSP
NI	020241	3	. Grease, straight connector (auto-lube only)
	020243	3	. Cone (auto-lube only)
	020242	3	. Nut (auto-lube only)
8	010901	1	. Grease point, 45°, $\frac{1}{8}$ " BSP
NI	020240	1	. Grease, elbow connector (auto-lube only)
	020243	3	. Cone (auto-lube only)
	020242	3	. Nut (auto-lube only)
9	020298	1	Cylinder, pneumatic, brush pressure (option) . . . . . Page G11
10	023123	1	. Pin, cylinder retaining
	011135	2	. Washer, M16
	011122	2	. Pin, split $\phi \frac{3}{16}$ x $1\frac{1}{2}$ "
11	022673	1	. Pin, clevis



**SIDE BRUSH SWING-OUT ARRANGEMENT**



**SIDE BRUSH PRESSURE ASSEMBLY**

**i** Please note that pneumatic cylinders are no longer fitted with bellows.

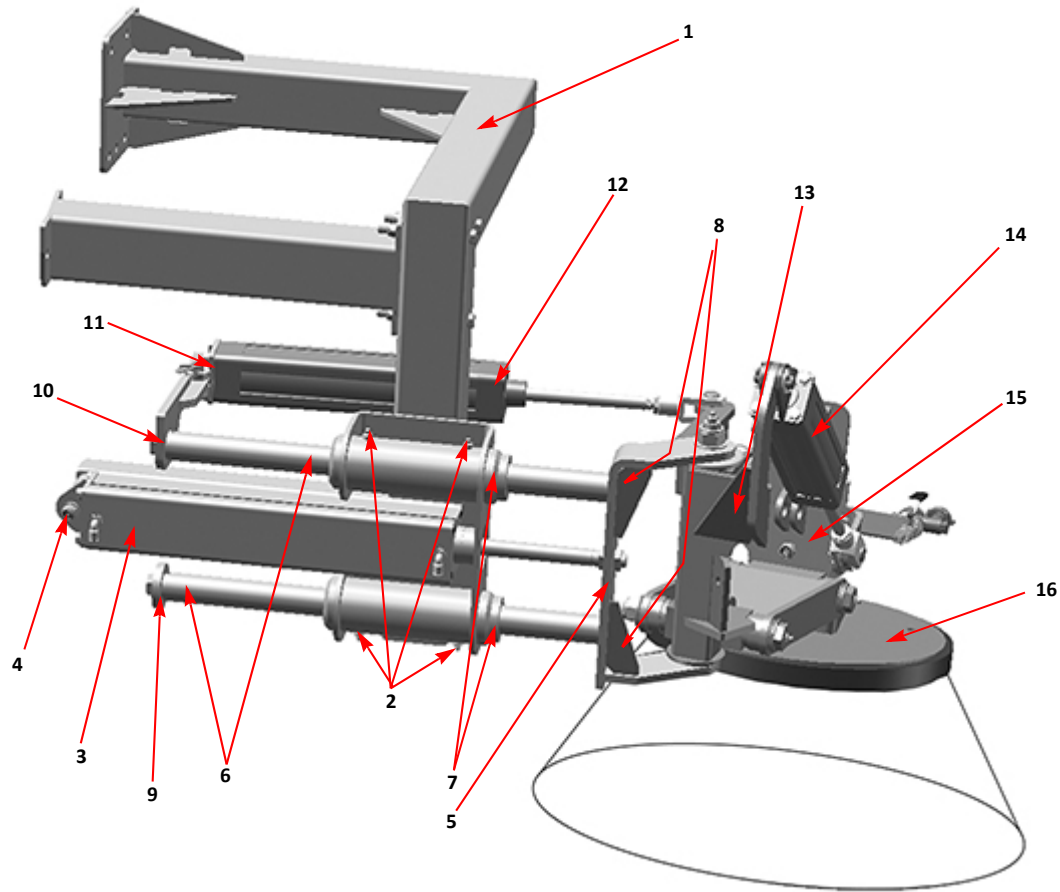
# D5

# MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Auxiliary Side Brush - (Option)</b>			
1	*	1	Main support frame
2	010903	4	. Grease point, straight, $\frac{1}{8}$ " BSP
3		1	. Pneumatic cylinder, brush (extend/retract) . . . . . Page G13
4	030859	1	. Bracket, extend/retract ram, pivot
5	030858	1	. Bracket, kingpost support
6	030856	2	. Thrust bar
7	039838	2	. . Spacer
8	030862	2	. . Washer, special, small
	000079	2	. . . Bolt, M16 x 55mm
9	030861	1	. . Washer, special, large
	000079	1	. . . Bolt, M16 x 55mm
10	030863	1	. . Push Link
	000079	1	. . . Bolt, M16 x 55mm
11	030859	1	. . Bracket, extend/retract ram, pivot
12		1	. . . Pneumatic cylinder, brush (swing in/out) . . . . . Page G15
13	030857**	1	. . Kingpost pivot
14		1	. Pneumatic cylinder, brush (raise/lower) . . . . . Page G7
15	**	1	Brush arrangement . . . . . Page D1
16		1	Brush assembly . . . . . Page D1

## Notes:-

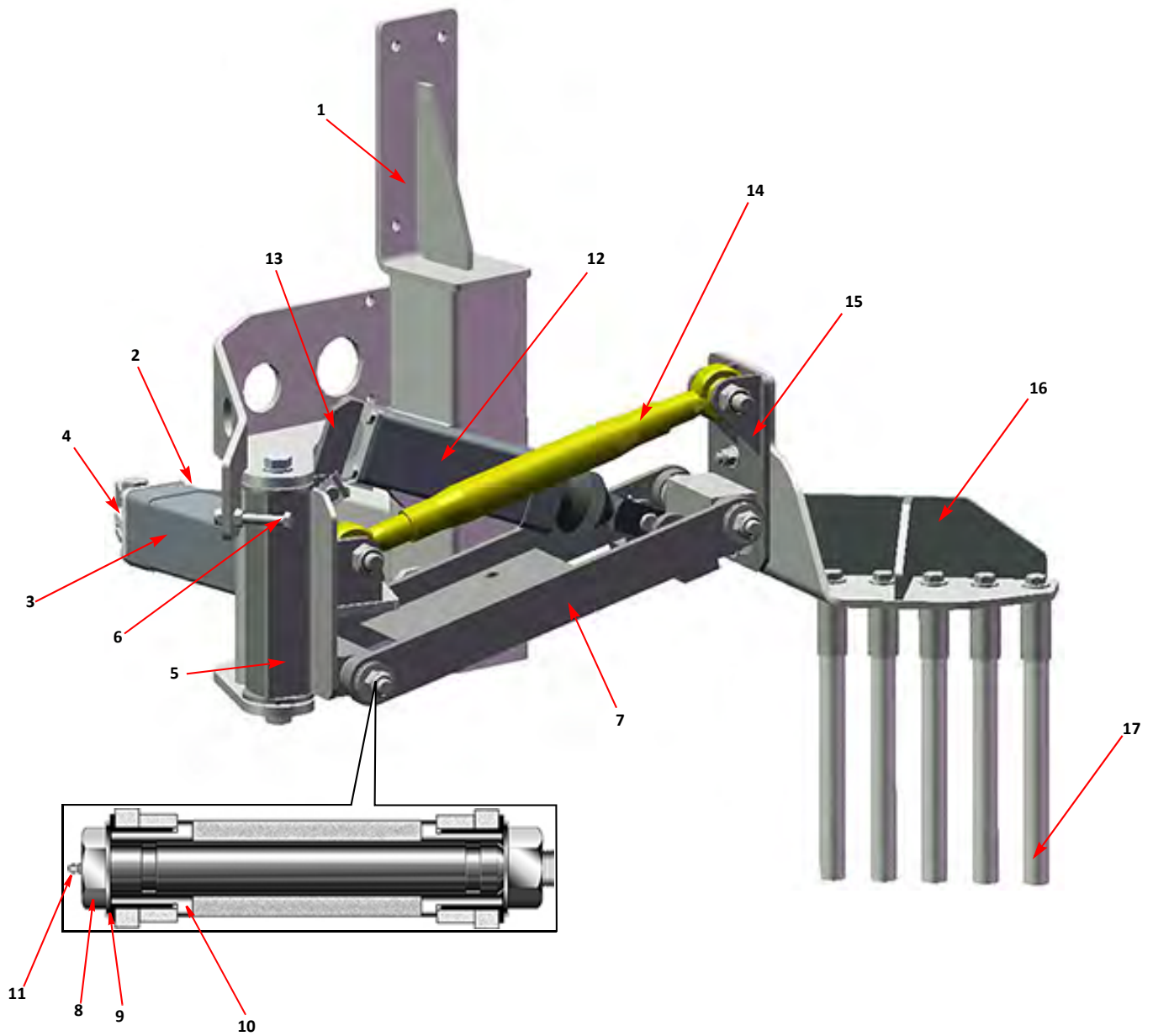
- \* Item is chassis specific and/or subject to optional configurations. Before ordering replacement parts, please contact the Scarab Parts Department, quoting your model type and serial number.
- \*\* Components used for the brush arrangement are similar as described on Page D1 except for the modified kingpost and the use of a pneumatic lift ram instead of the hydraulic lift ram.



**i** Left hand sweep version illustrated.  
Design of main support frame is just an example, please contact Scarab Parts Department.

**A TYPICAL AUXILIARY SIDE BRUSH ARRANGEMENT**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Auxiliary Side Brush Scraper - (Option)</b>			
1	042277	1	Main support frame LH
NI		1	Main support frame RH
2	034026	1	. Arm swing in/out pneumatic cylinder
	011032	2	. . HT setscrew, M10 x 30
	011075	2	. . Nut, M10, Nyloc
3	021026	1	. Pneumatic cylinder, swing in/out, 63 x 100
NI	021510	1	. . Bellows 50 x 160
NI	020299	1	. . Clevis
NI	022673	1	. . Clevis pin
NI	022674	1	. . Retaining clip
4	021032	1	. . Pivot bracket, swing in/out cylinder
	011010	4	. . . HT setscrew, M8 x 20
	011260	1	. . . HT setscrew, M16 x 70
	011060	1	. . . Nut, M16, Nyloc
5	020763	1	. Swivel post LH
NI	010903	2	. . Grease point, straight, $\frac{1}{8}$ " BSP
NI	020765	1	. . King pin
NI	013012	2	. . Bush swivel post
	011135	2	. . Washer M16
	011141	2	. . Bolt M16 x 35mm
NI	010903	1	. . Grease point, $\frac{1}{8}$ " BSP, straight
6	011043	1	. . Stop bolt M10 x 70
	011075	1	. . . Nut, M10, Nyloc
		1	. . . Nut, M10
7	020764	1	. Brush link
8	014796	2	. . Pivot bolt, M16, special
	014798	2	. . Washer 40 x 24 x 3
9	013012	2	. . Bush, plastic
10	014799	4	. . Sleeve, spacer
	014797	2	. . Washer 40 x 17 x 3
	011060	2	. . Nut, M16, Nyloc
11	010903	2	. . Grease point, straight, $\frac{1}{8}$ " BSP
12	021026	1	. . Pneumatic cylinder, raise/lower, 63 x 100
NI	021510	1	. . . Bellows 50 x 160
NI	020299	2	. . . Clevis
NI	022673	2	. . . Clevis pin
NI	022674	2	. . . Retaining clip
13	021031	1	. . . Pivot bracket, raise/lower cylinder
	011010	4	. . . HT setscrew, M8 x 20
NI	022673	2	. . . Clevis pin
NI	022674	2	. . . Retaining clip
14	020685	1	. . Top link
	011140	2	. . . Setscrew, M18 x 90
	000140	2	. . . Nut, M18, Nyloc
15	020769	1	. . Swivel plate
16	042287	1	. . Scraper element holder
	011033	2	. . . HT setscrew, M10 x 35
	011094	4	. . . Washer, M10
	011075	2	. . . Nut, M10, Nyloc
17	020499	5	. . . Scraper element, wire
	011050	5	. . . . Setscrew, M12 x 20
	011096	5	. . . . Washer, M12



Left hand sweep version illustrated.

**AUXILIARY SIDE BRUSH SCRAPER ARRANGEMENT**

# D9

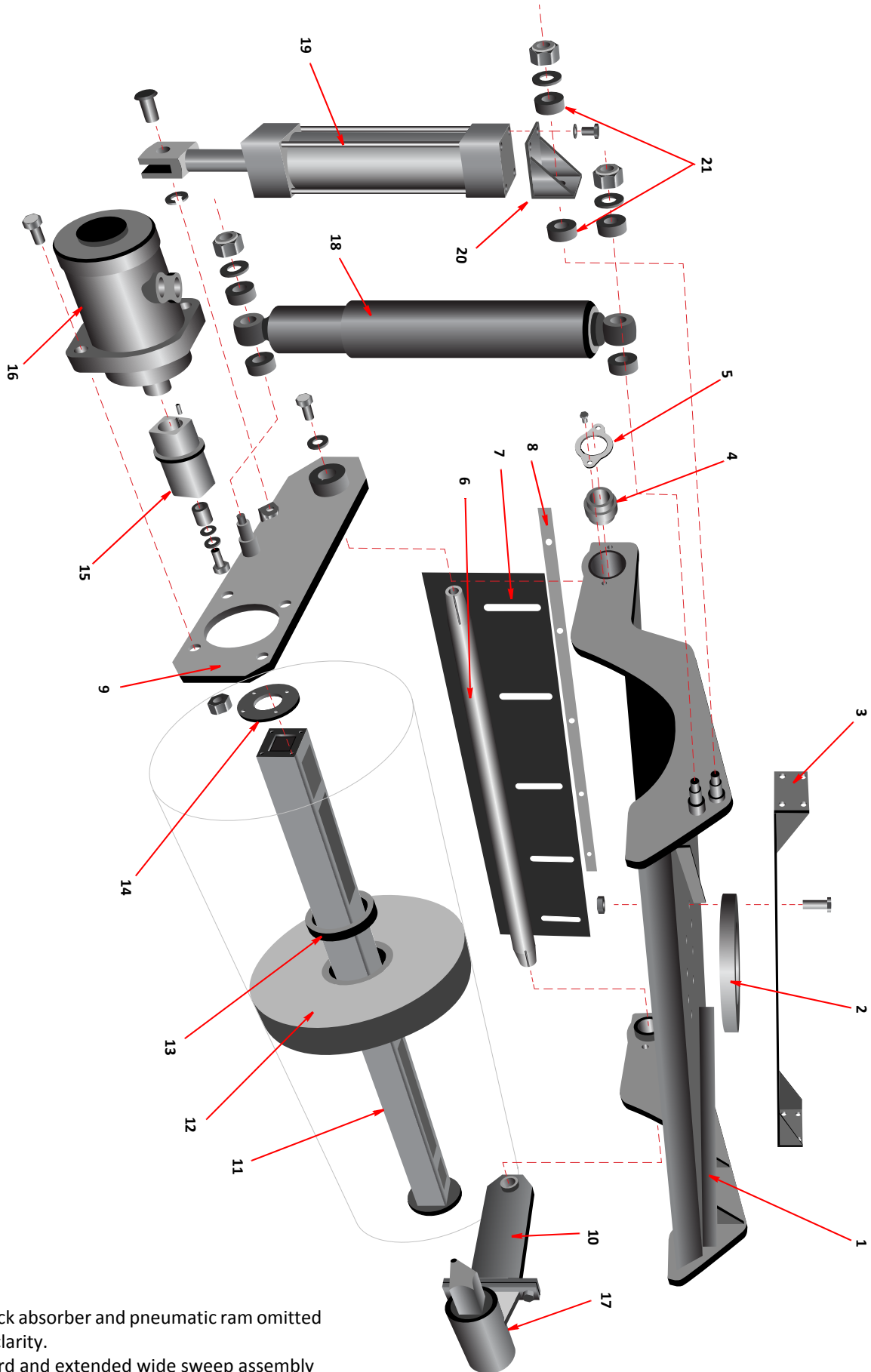
# MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Wide Sweep Assembly</b>			
1	036216	1	Cover, wide sweep, standard
NI	037173	1	Cover, wide sweep, extended + 200mm
2	020919	1	. Ring, adaptor
	011031	8	. . Setscrew, M10 x 25mm
	011095	8	. . Washer, spring, M10
3	024155	1	. . Support, wide sweep
	011031	8	. . . Setscrew, M10 x 25mm
	011095	8	. . . Washer, spring 10mm
4	036789	2	. Spherical bearing, wide sweep pivot
5	037172	2	. . Bearing retaining plate
	011010	4	. . . Setscrew, M8 x 20mm
	011073	4	. . . Nut, M8, Nyloc
	010903	2	. Grease point, straight, $\frac{1}{8}$ " BSP
NI	040301	2	. . Extension, grease point, $\frac{1}{8}$ " BSP
6	023080	1	. . Shaft, tapered, wide sweep pivot
6	025632	1	. . Shaft, tapered, wide sweep pivot extended +200mm
	013439	2	. . . Washer, special, 50mm OD x 16.5mm ID x 5mm
	011141	2	. . . Setscrew, M16 x 35mm
NI	013292	2	. . . Key
7		1	. Skirt, wide sweep . . . . . Page D19
8		1	. . Clamp, skirt wide sweep . . . . . Page D19
	011073	5	. . . Nut, M8, Nyloc
9	023077	1	. . Plate, motor, LH
10	023078	1	. . Plate, bearing housing, RH
11	013646	1	. . Brush Core, wide sweep
11	025642	1	. . Brush Core, wide sweep, extended +200mm
12			. Brush element . . . . . Page D19
13	023472		. . Spacer . . . . . Page D19
14	013649	1	. . Plate, end
	011417	4	. . . Screw, socket countersunk, $\frac{3}{8}$ " UNC x 1"
15	024535	1	. . . Shaft, drive
	011012	1	. . . . Setscrew, M8 x 30mm
	011093	1	. . . . Spring washer, 8mm
	038106	1	. . . . Spacer
	024538	1	. . . . Washer, cone, special
	011515	1	. . . . Key
NI	040058*	1	. . . . . Spacer
16	010566	1	. . Motor, hydraulic . . . . . Page F39
	011053	2	. . . Setscrew, M12 x 35mm
	011077	2	. . . Nut, M12, Nyloc
17		1	. . Bearing assembly, wide sweep . . . . . Page D11
	011053	2	. . . Setscrew, M12 x 35mm
	011077	2	. . . Nut, M12, Nyloc
18	014063	2	. Shock absorber
	011075	2	. . Nut, M10, Nyloc
	011096	2	. . Washer, M12
19	020602	2	. Cylinder, pneumatic . . . . . Page G11
	011067	4	. . Setscrew, M6 x 20mm
	011093	4	. . Spring washer, M6
201	020731	1	. . Bracket, pneumatic cylinder
	011075	1	. . . Nut, M10, Nyloc
	011094	1	. . . Washer, M10
21	011000	2	. . . Spacer, rubber, $\frac{5}{8}$ " bore x 15mm
NI	011000	1	. . . Spacer, rubber, $\frac{5}{8}$ " bore x 20mm (RH side)

## Notes:-

\* This part is required if the drive motor is manufactured by Eaton, please contact Scarab Parts Department.





**WIDE SWEEP ASSEMBLY**



RH shock absorber and pneumatic ram omitted to aid clarity.  
Standard and extended wide sweep assembly shown. Others similar.

# D11

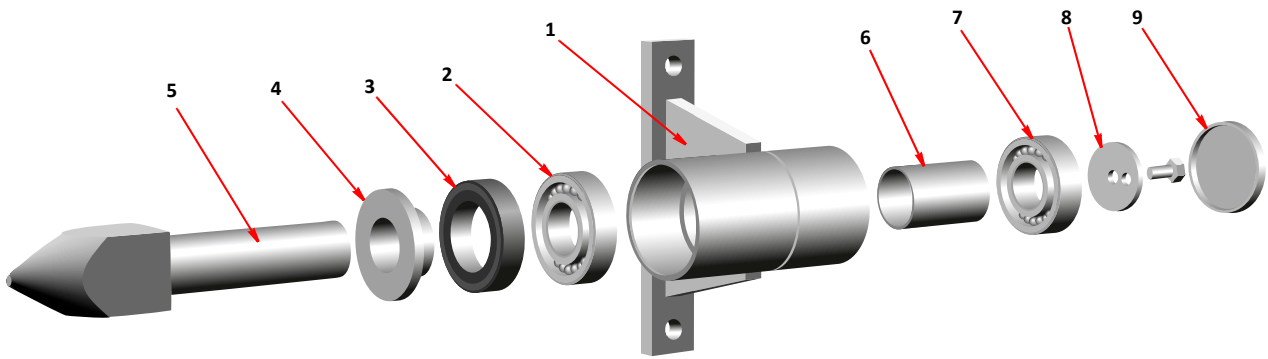
# MERLIN and MAGNUM

Item	Part Number	Quantity	Description
			<b>Bearing Assembly Wide Sweep</b>
	024224	1	Bearing assembly complete . . . . . Page D9
1	024219	1	. Housing, bearing assembly
2	010578	1	. . Bearing, ball race
3	024220	1	. . . Oil seal
4	024221	1	. . Spacer
5	024223	1	. Shaft
6	024531	1	. . Spacer
7	010578	1	. . Bearing, ball 6206
8	010004	1	. . . Washer, special 45mm OD x 9mm ID x 4mm thick
	011010	1	. . . Setscrew, M8 x 20mm
9	024222	1	. Cap, bearing

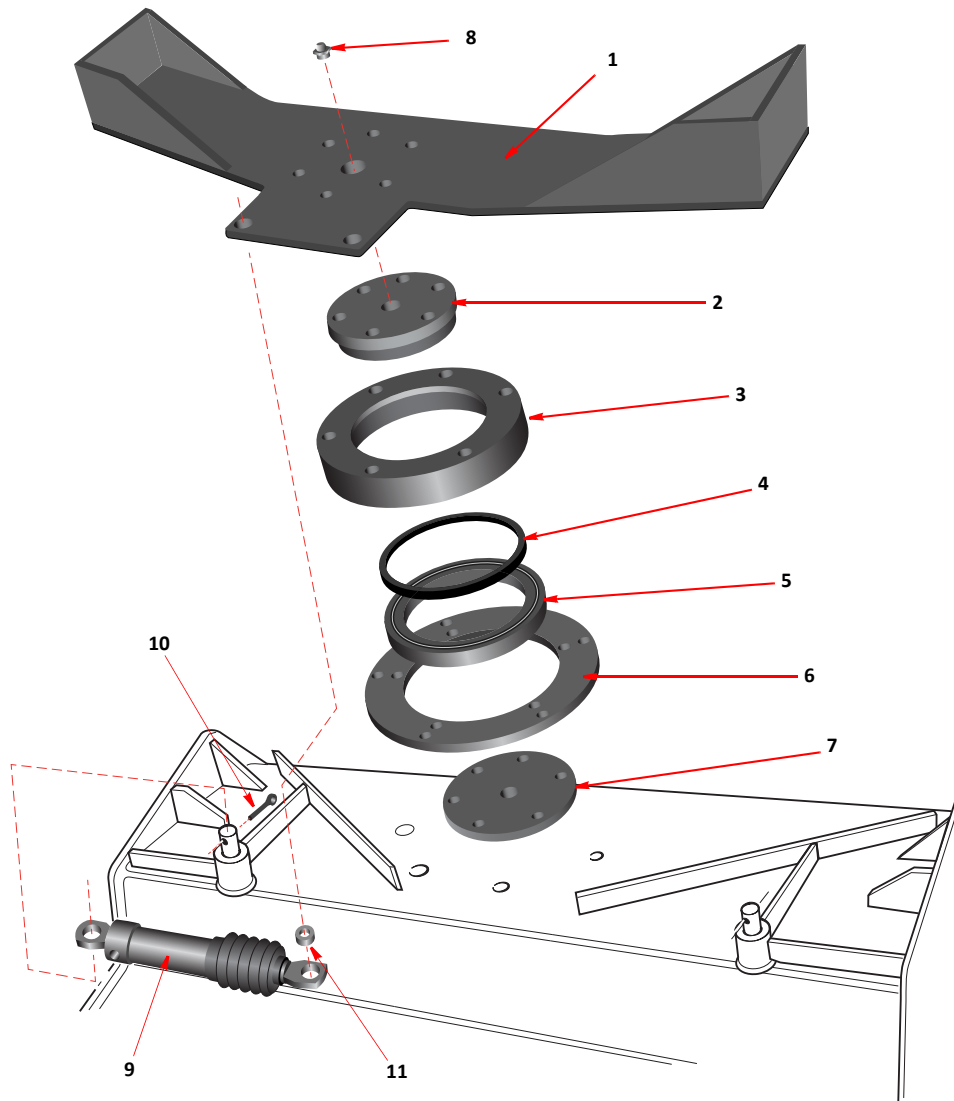
Item	Part Number	Quantity	Description
			<b>Wide Sweep Slewing Arrangement</b>
1	024155	1	Support, wide sweep
2	024150	1	. Spigot
	000178	6	. . Screw, socket countersunk, M10 x 65mm
	011075	8	. . Nut, M10, Nyloc
3	024152	1	. Housing, bearing
4	024148	1	. . Oil seal
5	024149	1	. . Bearing
6	024154	1	. . Clamp ring
	011032	8	. . . Setscrew, M10 x 30mm
	011075	8	. . . Nut, M10, Nyloc
	000167	6	. . . Screw, socket countersunk, M10 x 40mm
7	024151	1	. . Plate, clamp
8	013792*	1	. . Grease point, straight, $\frac{1}{4}$ " BSP
8	010901*	1	. . Grease point, 135°, $\frac{1}{8}$ " BSP
9	024539	2	. Ram, hydraulic . . . . . Page F41
10	011122	1	. . Pin, split, cotter, $\frac{3}{16}$ " x $1\frac{1}{2}$ "
11	011724	2	. . Spacer, 20mm OD x 12.5mm ID x 11mm
	011069	1	. . Setscrew, M12 x 40mm
	011096	1	. . Washer, M12
	011077	1	. . Nut, M12, Nyloc

## Notes:-

\* Please ensure you get the correct size of grease point.



**WIDE SWEEP BEARING ASSEMBLY**



**WIDE SWEEP SLEWING ARRANGEMENT**

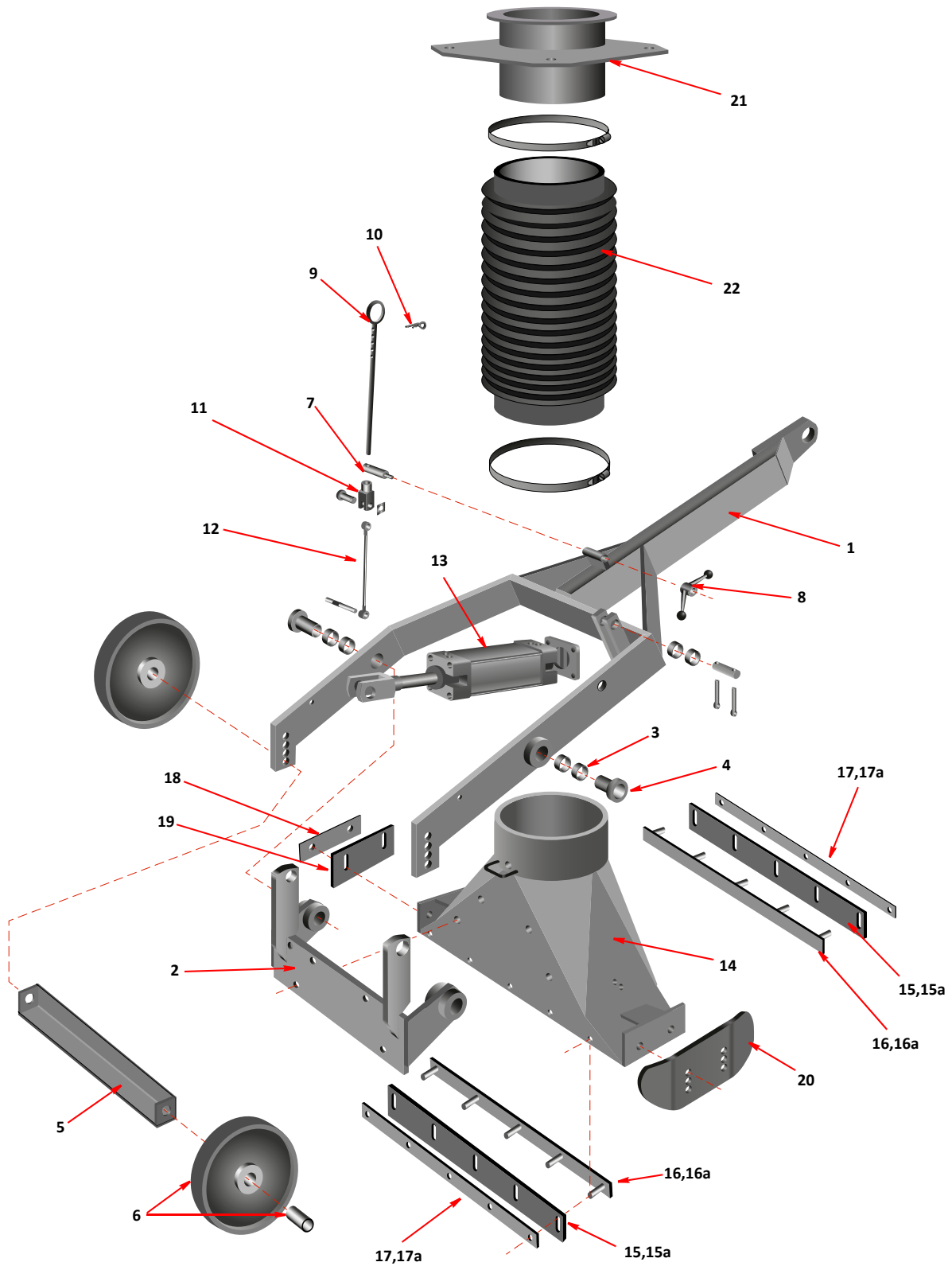
# D13

# MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Tilting Suction Nozzle Assembly - Pneumatic Tilt</b>			
1	023606	1	Frame, RH
NI	023605	1	Frame, LH
2	023607	1	. . Pivot (pneumatic tilt only)
	000351	2	. . . Bolt, M14 x 70mm
	011127	2	. . . Nut, M14, Nyloc
3	024682	8	. . Bush, hardened
4	021416	2	. . Sleeve
5	031833	1	. Axle
6	031831	2	. . Wheel, ø250mm, complete with spacer
	011135	4	. . . Washer, M16
	011133	2	. . . Bolt, M16 x 100mm
	011060	2	. . . Nut, M16, Nyloc
7	023625	1	. Adjuster, nozzle
NI	000182	1	. . Special lock nut (adjuster nozzle)
8	024051	1	. . Turn wheel, nozzle adjust
9	023610	1	. . Rod, nozzle adjust
10	021944	1	. . Double wound grip, R clip ø3mm wire
11	020291	1	. . . Clevis, M10 x 1.25
12	025681	1	. . . Leash assembly, nozzle adjust
	039766	1	. . . . Stud, leash cable
	011074	1	. . . . Nut, M10
13	032119	1	. Cylinder, pneumatic, nozzle tilt, assembly . . . . . Page G7
14	023604*	1	. Nozzle ( <b>Merlin/Magnum/XP</b> )
NI	027136*	1	. Nozzle ( <b>Magnum Plus</b> )
	011031	4	. . Setscrew, M10 x 25mm
	011075	4	. . Nut, M10, Nyloc
15	013023	2	. . Flap, nozzle ( <b>Merlin/Magnum/XP</b> )
15a	027146	2	. . Flap, nozzle ( <b>Magnum Plus</b> )
16	013362	2	. . . Retainer, bolt, flap ( <b>Merlin/Magnum/XP</b> )
16a	027210	2	. . . Retainer, bolt, front/rear flap ( <b>Magnum Plus</b> )
17	013025	1	. . . Clamp strip, flap ( <b>Merlin/Magnum/XP</b> )
17a	027147	1	. . . Clamp strip, flap ( <b>Magnum Plus</b> )
	011073	10	. . . . Nut, M8, Nyloc
18	013283	1	. . Flap, nozzle, side
19	013024	1	. . . Clamp, retaining, side flap
	011012	2	. . . . Setscrew, M8 x 30mm
	011073	2	. . . . Nut, M8, Nyloc
	011010	5	. . . . Setscrew, M8 x 20mm (front flap plate)
20	013277	1	. . Skid plate, nozzle
	011021	2	. . . Screw, socket cap head, M8 x 25mm
	011073	2	. . . Nut, M8, Nyloc
21		1	Suction spigot . . . . . Page D21
22	013028	1	. Suction hose . . . . . Page D21
	012933	2	. . Clamp, worm drive, 235-267mm

## Notes:-

\* These items can also be supplied with a PU coating. Please contact the Scarab Parts Department.

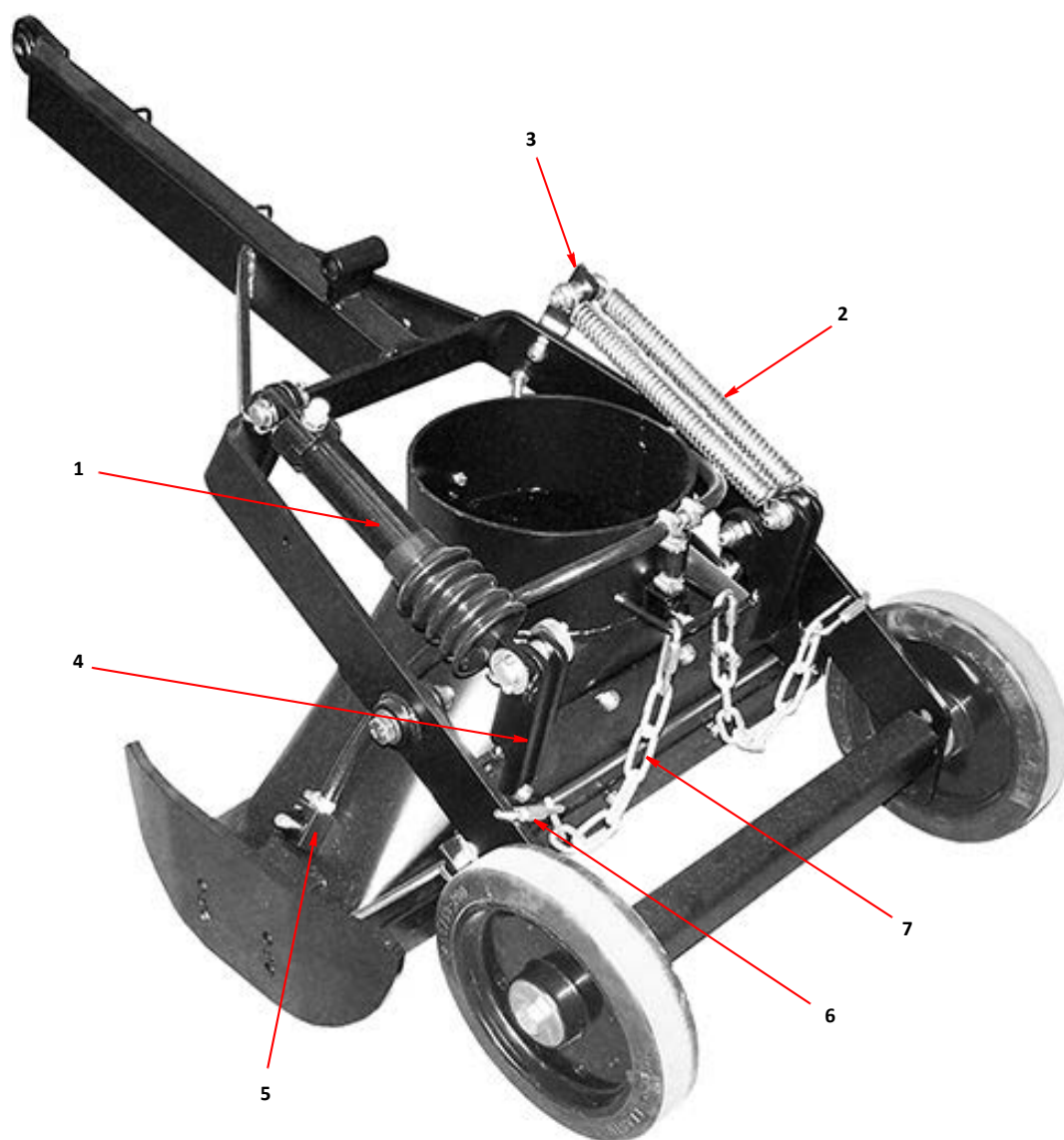


**i** Frame tow-point ball ends are welded to the frame but can be procured as replacements if required. Please contact the Scarab Parts Department for details.  
Right hand shown, left hand similar.

## TILTING SUCTION NOZZLE ASSEMBLY - PNEUMATIC TILT

Item	Part Number	Quantity	Description
<b>Tilting Suction Nozzle Assembly - Hydraulic Variable Tilt *</b>			
1	024539**	1	Ram, hydraulic, variable tilt (option) . . . . .Page F41
2	010017**	2	. Spring, variable tilt (option)
	011724	2	. . Spacer, ø20OD x ø12.5ID x 11mm
	013363	1	. . Spacer, ø20OD x ø10.5ID x 30mm
	011036	2	. . . Bolt, M10 x 60mm
	011074	4	. . . Washer, M10
	011075	2	. . Nut, M10 Nyloc
3	025100**	1	. . Bracket, spring support, RH
NI	025099**	1	. . Bracket, spring support, LH
	011032	2	. . . Setscrew, M10 x 30mm
	011075	2	. . . Nut, M10, Nyloc
4	020328**	1	. . Pivot (hydraulic tilt only)
5		4	. Jet, water spray . . . . . Page E19
6	010606	4	. Carabiner
7	010525	AR	. . Chain, large link, welded

**Notes:-**  
\* For all other components of this assembly please refer to Page D13.  
\*\* When procuring replacement parts for the ram and return springs on hydraulically operated nozzle tilt setups, please contact the Scarab Parts Department.



**i** Left hand shown, right hand similar.  
For all other components of this assembly please refer to Page D13.

**TILTING SUCTION NOZZLE ASSEMBLY - HYDRAULIC VARIABLE TILT**

# D17

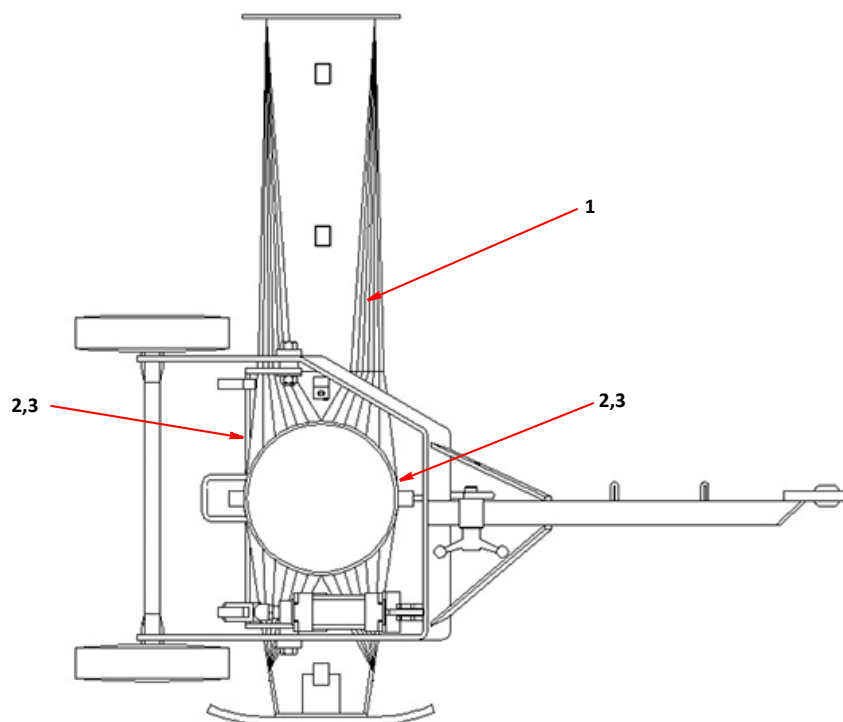
## MERLIN and MAGNUM

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
			<b>Full Width Suction Nozzle Assembly (Merlin) - (Option)</b>
1	030928*	1	Nozzle full width, RH
NI	030929*	1	Nozzle full width, LH
2	030940	2	. Flap, front/rear
3	030939	2	. Retainer, bolt, front/rear
3	030941	2	. Clamp, front/rear
	011073	18	. . Nut, M8, Nyloc

### Notes:-

\* These items can also be supplied with a PU coating. Please contact the Scarab Parts Department.





**FULL-WIDTH NOZZLE ASSEMBLY, MERLIN**

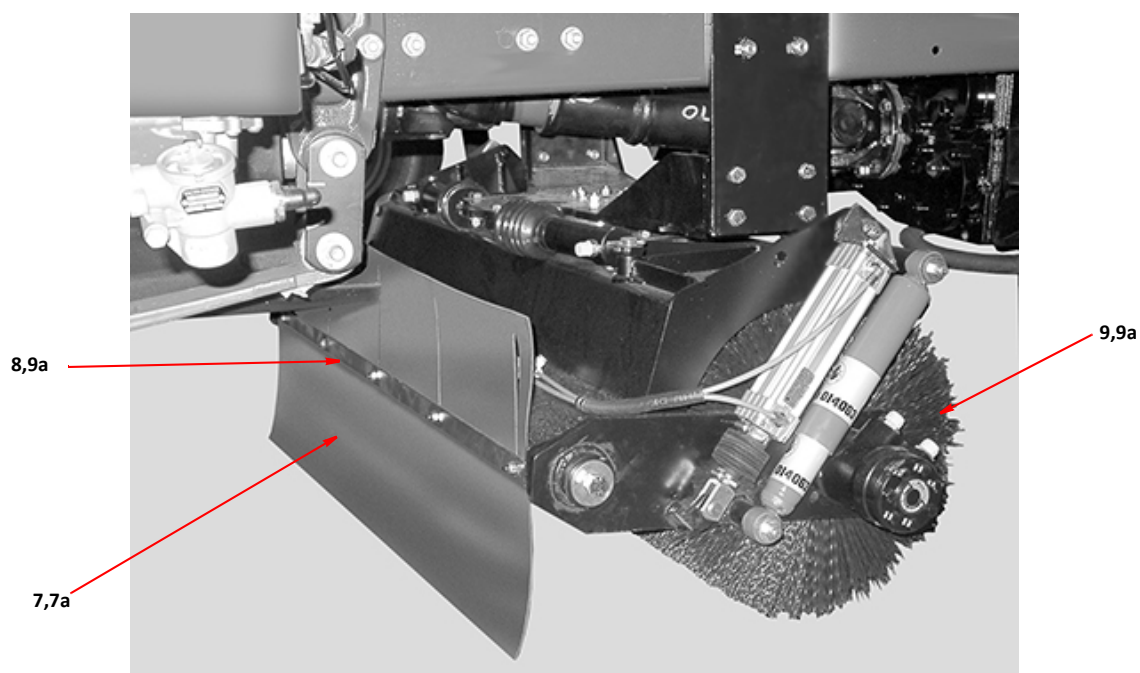
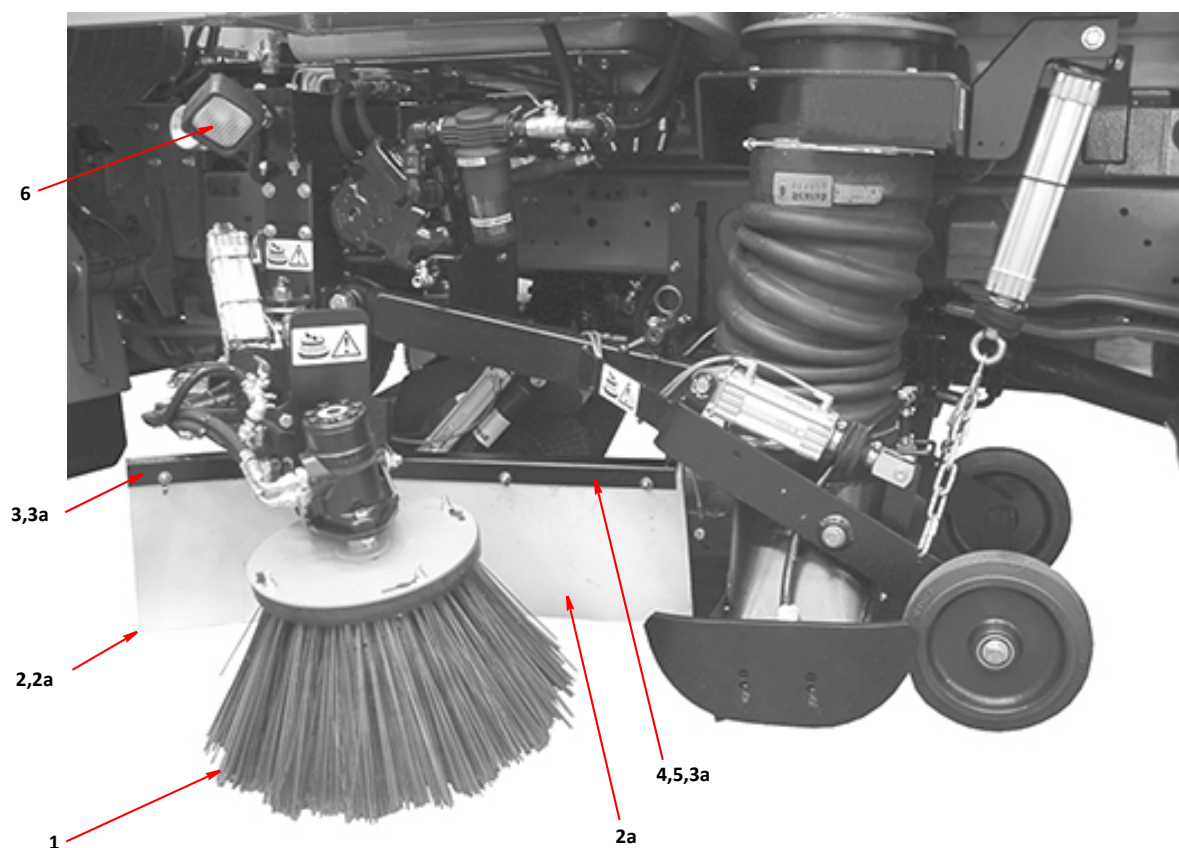
Item	Part Number	Quantity	Description
Associated Sweeping Equipment			
1	023470	AR	Side brush, ø315mm, 4 stud (steel)
NI	023473	AR	Side brush, ø400mm, 3 stud (steel)
NI	020921	AR	Side brush, ø400mm, 3 stud (weed ripping)
NI	025744	AR	Side brush, ø400mm, 4 stud (poly)
2	012216	AR	. Skirt, side brush, front, 2 slot
3		1	. . Clamp, skirt, 2 hole
	011011	2	. . . Setscrew, M8 x 25mm
	011092	4	. Washer, M8
	011073	2	. Nut, M8 Nyloc
2a	010247	AR	. Skirt, side brush, front, 3 slot
3a		1	. . Clamp, skirt, 3 stud
	011092	6	. . . Washer, M8
	011073	3	. . . Nut, M8, Nyloc
4	013145	AR	. . . Clamp, angle, 3 hole
5	010606	AR	. . . . Carabiner
6	037084	AR	Work light . . . . . Page H5
7	022516	1	Skirt, wide sweep
8	022517	1	. Clamp, wide sweep
	011073	5	. . Nut, M8, Nyloc
7a	026026	1	Skirt, wide sweep, extended
8a	026025	1	. Clamp, wide sweep
	011073	5	. . Nut, M8, Nyloc
9	023168	AR	Brush element, ø300mm, wide sweep core
9a	023169	AR	Brush element, ø400mm, wide sweep core
NI	023472	AR	. Spacer
NI	023471*	1	Brush element, ø300mm
NI	023474*	1	Brush element, ø400mm

Per Skirt

Per Skirt

complete refill =  
33 brush elements + 32 spacers

Notes:-  
\* For extended wide sweep brush element refills add an extra 12 brushes + 12 spacers.



**i** Please note that pneumatic cylinders are no longer fitted with bellows.

**ASSOCIATED SWEEPING EQUIPMENT**

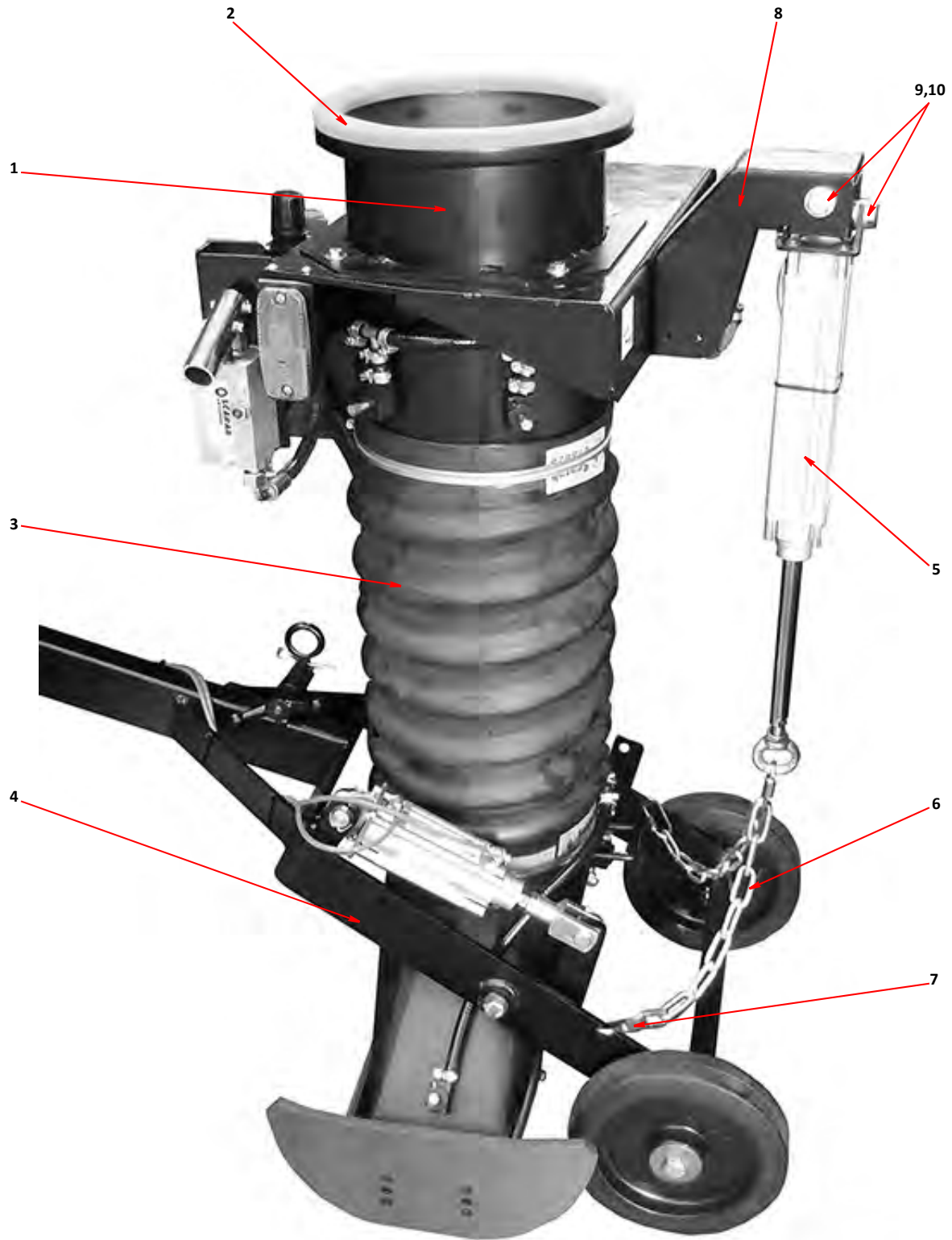
# D21

# MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Suction Spigot And Nozzle Lifting Arrangement</b>			
1	013111*	1	Suction spigot, 220mm long
1	023896*	1	Suction spigot, 300mm long
1	013976*	1	Suction spigot, 380mm long
1	024514*	1	Suction spigot, 400mm long
1	020801*	1	Suction spigot, 440mm long
1	024512*	1	Suction spigot, 500mm long
1	024735*	1	Suction spigot, 600mm long
2	013601	1	. Seal, spigot
3	013028	1	Suction hose
	012933	2	. Clamp, worm drive, 235-267mm
4			Suction nozzle assembly . . . . . Page D13
5		1	. Cylinder, pneumatic, nozzle lift, assembly . . . . . Page G7
6	010525	AR	. . Chain, large link, welded
7	010606	3	. . . Carabiner
8	030775	1	. . Cylinder mounting bracket
	011033	4	. . . Setscrew, M10 x 35mm
	011075	4	. . . Nut M10, Nyloc
9	030776	1	. . . Cylinder pivot block
	011057	1	. . . . . Bolt, M12 x 100mm
	011077	1	. . . . . Nut, M12, Nyloc
	011096	4	. . . . . Washer, M12
10	030777	1	. . . . Cylinder pivot
	011057	1	. . . . . Bolt, M12 x 100mm
	011077	1	. . . . . Nut, M12, Nyloc
	011096	4	. . . . . Washer, M12

## Notes:-

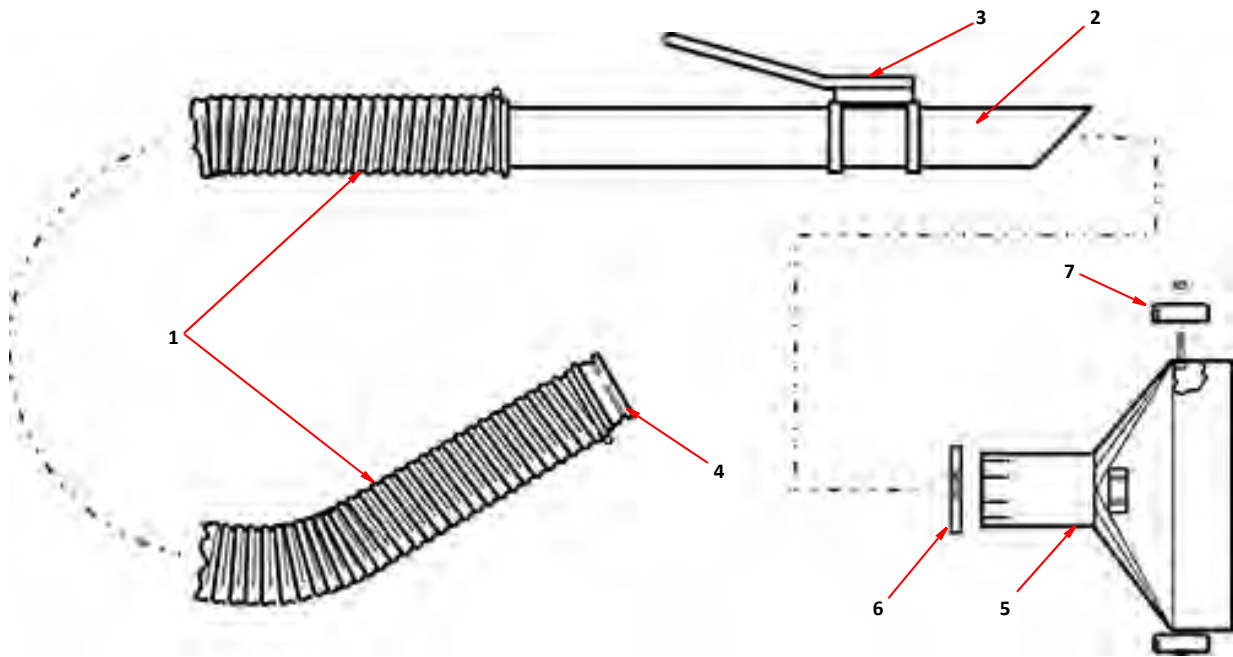
- \* These items can also be supplied with a PU coating. Please contact the Scarab Parts Department.
- The Scarab sweeping equipment is mounted on a wide range of chassis types. The height of the chassis determines which type of suction spigot is fitted. It may be advisable to obtain either the length of spigot and/or the machine serial number and contact the Scarab Parts Department.



**i** Left hand with pneumatic lift version shown, right hand similar.

**SUCTION SPIGOT AND NOZZLE LIFTING ARRANGEMENT**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Wander Hose Arrangement</b>			
1	010119	1	Hose/trunking, flexible, ø160mm x 3m
2	010587	1	. Pipe, nozzle
	010519	2	. . Clamp, worm drive, 135-165mm
3	010321	1	. . Handle
4	012488	1	. . Spigot
NI	013537	1	. . . Gasket
5	012873	1	. . Fishtail (option)
6	011808	1	. . . Clip, over-centre fastening
7	010508	2	. . . Wheel
	011035	1	. . . .Setscrew, M10 x 50mm (axle)
	011075	1	. . . . Nut, M10, Nyloc



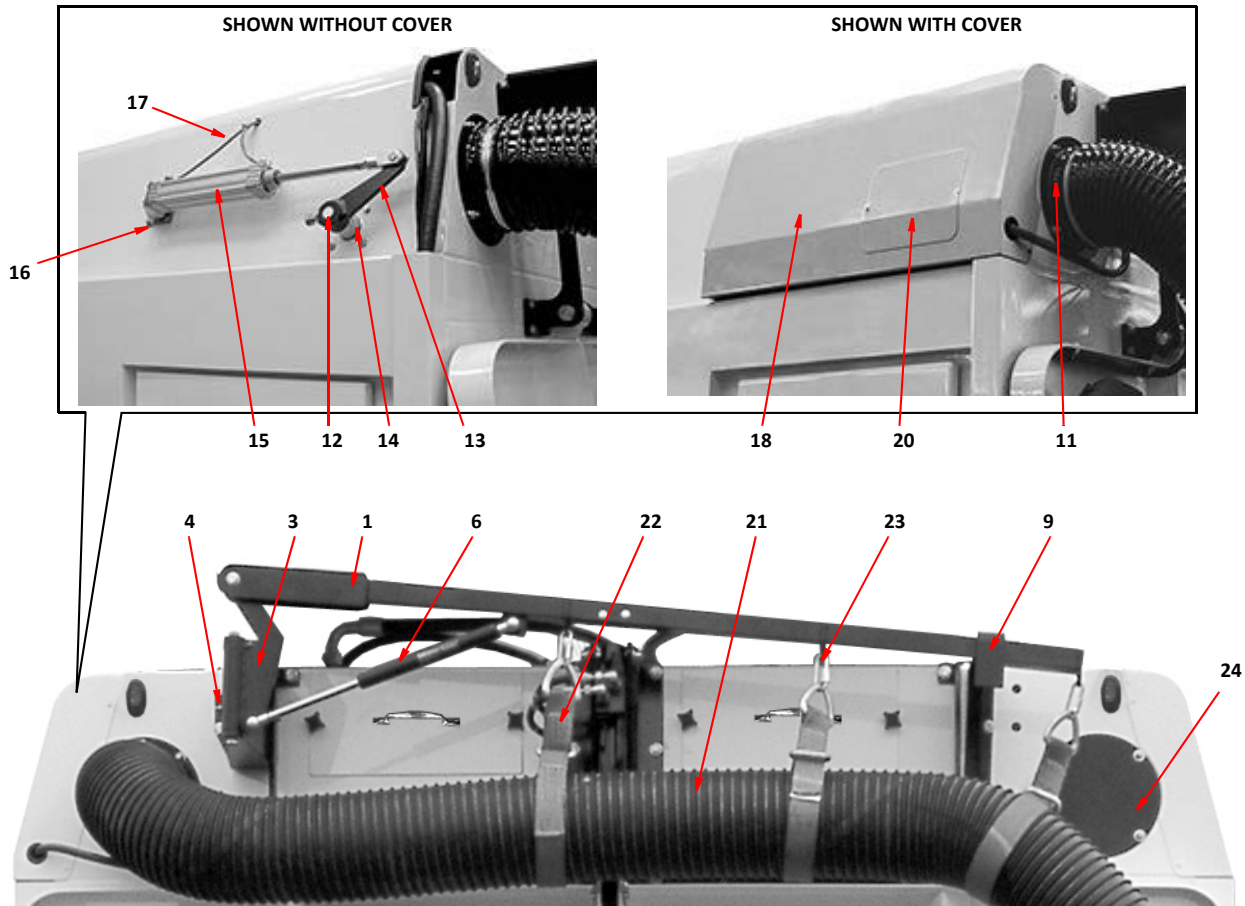
**WANDER HOSE ARRANGEMENT**  
Showing Fishtail Option

# D25

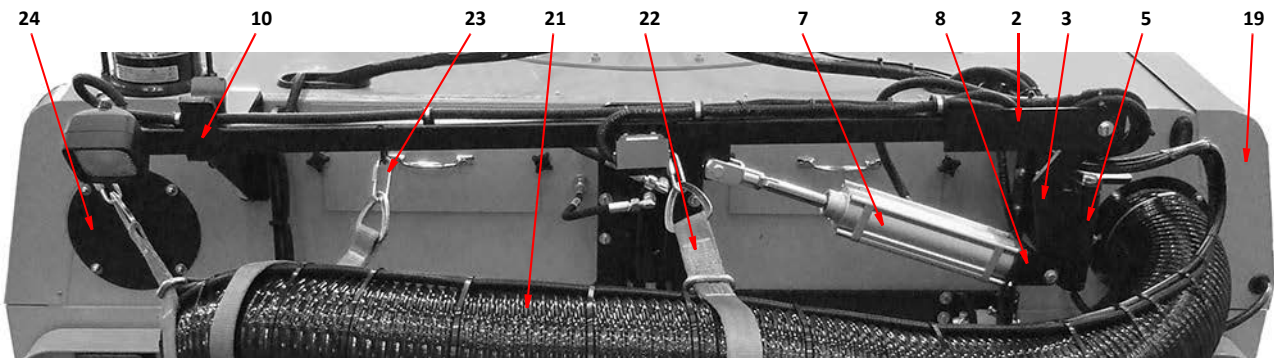
# MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Wander Boom - Rear Mounted - With Remote Control</b>			
1	025218	1	Support boom arm, wander hose ( <b>gas strut</b> )
2	027926	1	Support boom arm, wander hose ( <b>pneumatic</b> )
NI	014399	1	. Spacer 20 x 10.5 x 41mm
		1	. . Bolt, M10 x 55mm, stainless steel
		2	. . Washer, M10, stainless steel
		1	. . Nut, M10, Nyloc
3	025219	1	. Hinge, support, boom, wander hose
NI	013662	2	. . Bush
NI	023490	1	. . Hinge shaft
		2	. . Bolt, M12 x 40mm, stainless steel
4	025220	1	. Support, wander hose, LH
5	025574	1	. Support, wander hose, RH
6	021993	1	. Gas strut, boom support arm ( <b>gas strut</b> )
7	028306	1	. Cylinder, pneumatic, wander boom raise lower ( <b>pneumatic</b> ) . . . . . Page G13
NI	021158	2	. . Restrictor
	011034	1	. . Setscrew, M10 x 40mm
	011075	1	. . Nut, M10, Nyloc
8	028305	1	. . Pivot, cylinder
	011010	4	. . . Setscrew, M8 x 20mm
	011093	4	. . . Washer, spring, M8
9	034313	1	. Bracket, stowage hook ( <b>gas strut</b> )
10	027929	1	. Bracket, stowage ( <b>pneumatic</b> )
11	025225	1	. Wander hose sleeve
12	025476	1	. . Flap arm, wander hose
NI	025487	1	. . . Blanking flap, wander hose
13	025254	1	. . . Flap lever
14	025471	1	. . . . Pivot tube - wander hose flap (bolt on)
NI	013488	2	. . . . Bush
NI	010903	1	. . . . . Grease point, straight $\frac{1}{8}$ " BSP
15	021467	1	. . Cylinder, pneumatic, wander hose blanking . . . . . Page G13
16	025524	1	. . . Pivot plate, cylinder
17	024550	1	. . . Air pipe, nylon, 6mm
NI	012316	1	. . Spray jet
NI	010915	1	. . . Elbow, galvanised, $\frac{3}{8}$ " BSP
NI	010922	2	. . . Hose tail, $\frac{1}{4}$ " BSP x $\frac{3}{8}$ " hose
NI	010950	AR	. . . Hose, plastic reinforced, $\frac{3}{8}$ " bore
NI	010516	2	. . . . Clamp, worm drive, 11-16mm
18	025980	1	. . Cover, LH, ( <b>Merlin</b> )
NI	025979	1	. . Cover, RH, ( <b>Merlin</b> )
NI	026104	1	. . Cover, LH, ( <b>Magnum</b> )
19	026105	1	. . Cover, RH, ( <b>Magnum</b> )
20	030674	1	. . . Cover, inspection, ( <b>Merlin</b> )
NI	030675	1	. . . Cover, inspection, ( <b>Magnum</b> )
21	025214	1	Wander hose
NI	012933	2	. Clamp, worm drive, 235-267mm
22	025235	3	. Strap, wander hose
23	010606	1	. . Carabiner
24	025486	1	. Cover plate
25	028270	1	. Remote control unit, rear boom ( <b>pneumatic</b> )
26	028355	1	. . Holster, for remote control

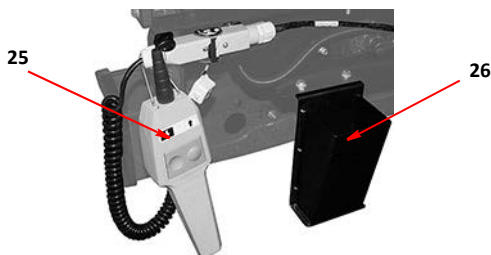




**GAS STRUT REAR MOUNTED WANDER BOOM**

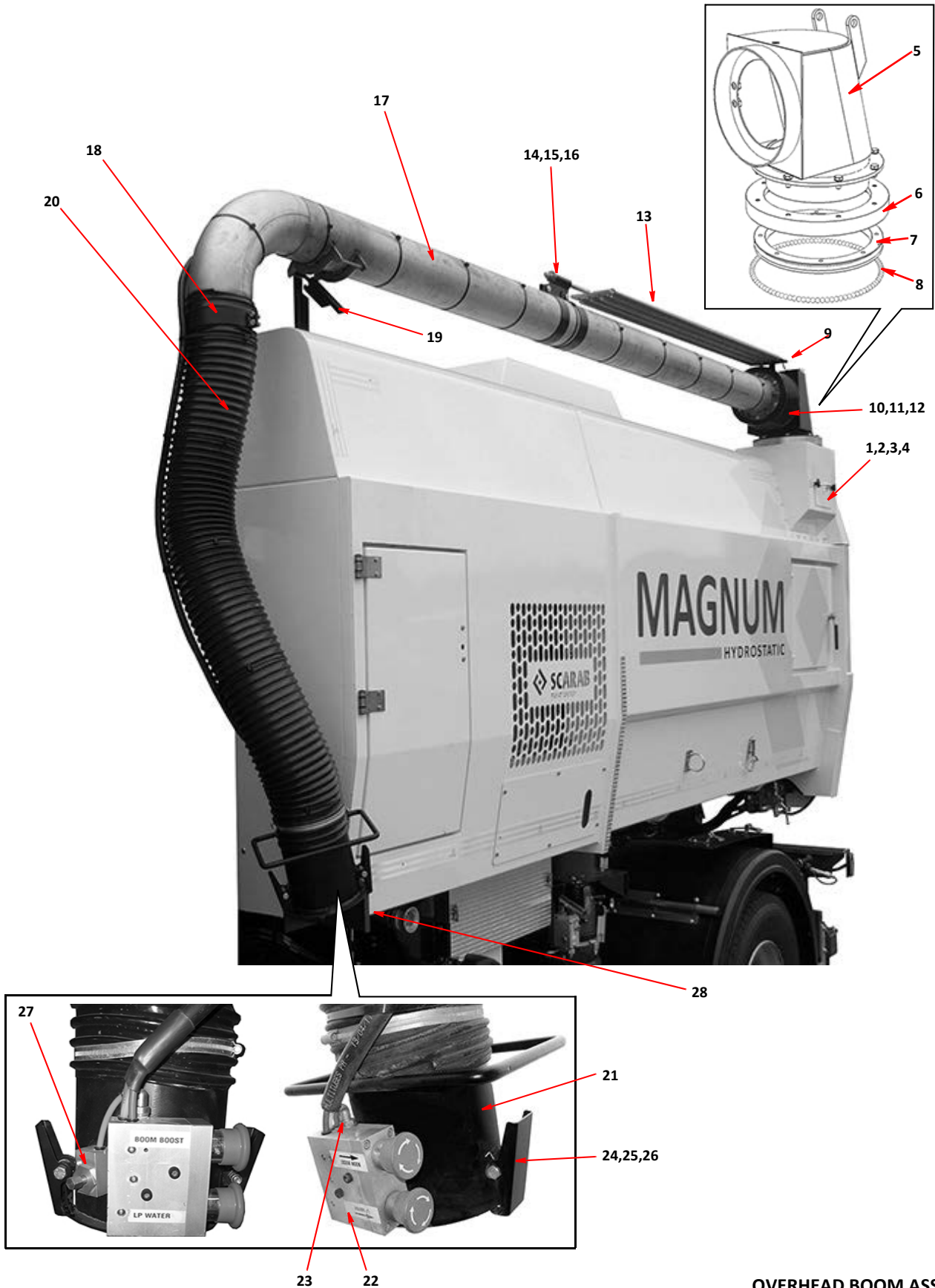


**PNEUMATIC REAR MOUNTED WANDER BOOM  
SHOWN WITH OPTIONAL WORK LIGHT  
AND REAR VIEW CAMERA**



**WANDER BOOM - REAR MOUNTED  
WITH REMOTE CONTROL**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Overhead Boom Assembly - (Option)</b>			
1	032160	1	Boom carrier, LH
NI	034068	1	Boom carrier, RH
	000257	26	. Setscrew, M8 x 25mm, stainless steel
	000264	31	. Washer M8, stainless steel
	000263	31	. Nut, M8, Nyloc, stainless steel
2	032351	1	. Access cover
3	010502	1	. Handle
4	000248	2	. Locking handle M8
5	013793	1	. Boom elbow
6	013788	1	. . Outer slew ring
7	013789	1	. . Inner slew ring
8	013791	92	. . . Ball, ø10mm
NI	013792	1	. . . Grease point, straight, $\frac{1}{4}$ " BSP
	011031	22	. . Setscrew, M10 x 25mm
	011095	17	. . Washer, spring, M10
9	013801	1	. Bracket, spring anchor
	011141	2	. . Setscrew, M16 x 35mm
	011060	2	. . Nut, M16, Nyloc
10	014223	1	. Suction hose
11	036174	1	. Pivot boom
12	013796	2	. Pivot block
	012933	1	. . Clamp, worm drive, 235-267mm
	011036	4	. . Bolt, M10 x 60mm
13	013805	4	. Spring, 800mm long
14	013802	1	. Bracket, tensioner anchor
15	013804	1	. Bracket, tensioner
16	036099	2	. Tensioner clamp
	011053	2	. . Setscrew, M12 x 35mm
	011077	5	. . Nut, M12, Nyloc
17	036851	1	. Suction tube, <b>Magnum</b>
18	036100	1	. Hose, clamp ring
	000257	6	. . Setscrew, M8 x 25mm, stainless steel
	011073	8	. . Nut, M8, Nyloc, stainless steel
19	036354	1	. Bracket, boom hook retaining
	000280	2	. . Setscrew, M10 x 25mm, stainless steel
	000270	2	. . Washer, M10, stainless steel
	011075	2	. . Nut, M10, Nyloc, stainless steel
20	035990	AR	. Wander hose ø160mm ID x 3m
	010519	2	. . Clamp, worm drive, 135-165mm
21	033402	1	. Hose coupling
22	033110	1	. Control valve
23	023203	1	. Elbow, ø6mm tube $\frac{1}{4}$ " BSP
	000137	2	. . Screw, socket cap head, M5 x 50mm
24	033536	2	. Clamp handle
25	034802	4	. Spring
26	033463	2	. Spacer
	011016	2	. . Setscrew, M8 x 50mm
27	034342	1	. Low pressure water nozzle
	011087	1	. . Setscrew, M6 x 25mm
28	033400	1	. Bracket, hose coupling stowage ( <b>LH shown</b> )
NI	034067	1	. Bracket, hose coupling stowage, ( <b>RH</b> )

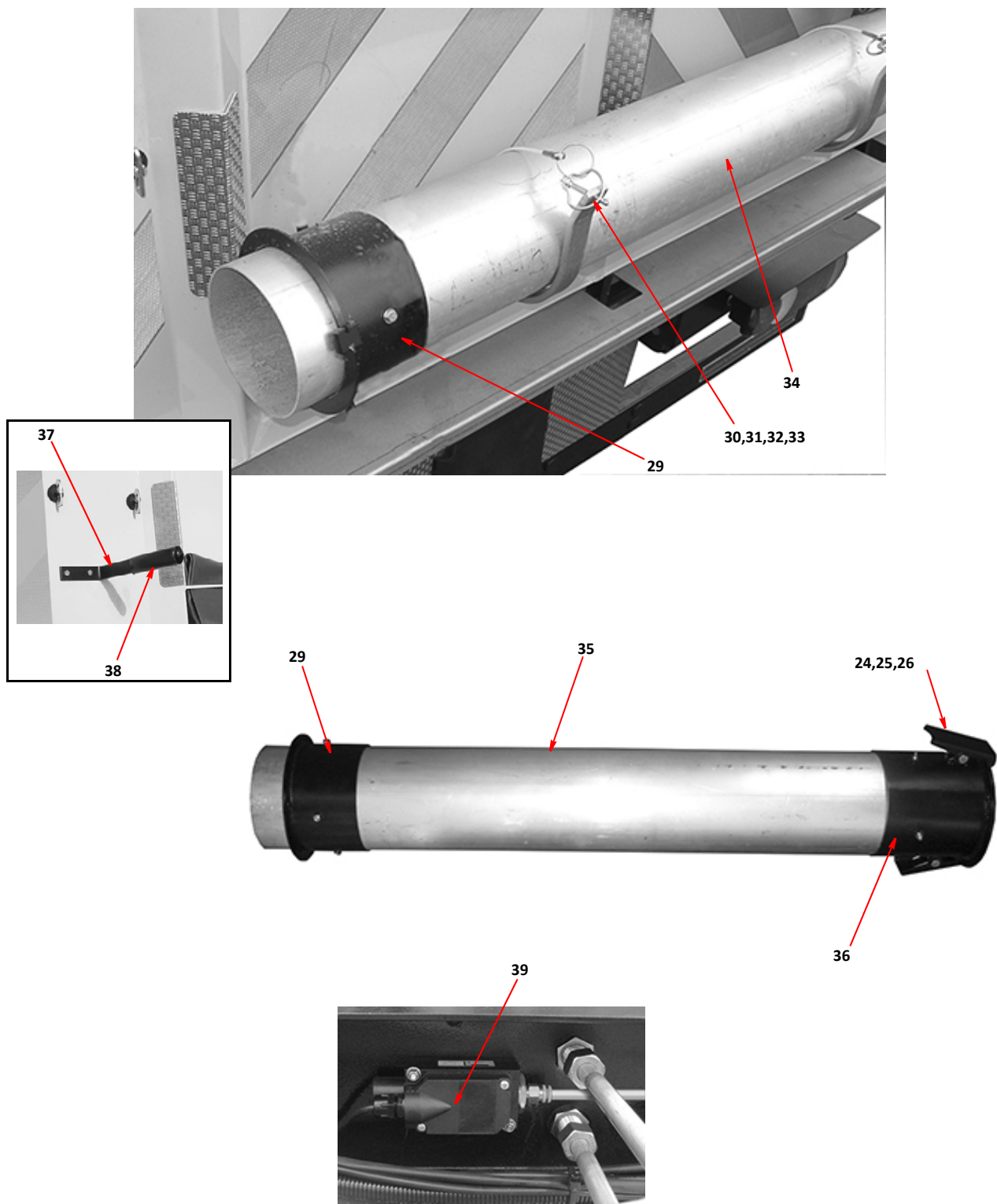


**OVERHEAD BOOM ASSEMBLY**

## D29

## MERLIN and MAGNUM

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Overhead Boom Assembly - (Option) - Continued</b>			
29	033403	1	Boom tube coupling
	000250	4	. Setscrew, M6 x 20mm, stainless steel
	000253	4	. Nut, M6, stainless steel
30	013507	2	Linch pin
31	020711	2	Leash cable
32	023599	2	Pull ring
33	022747	2	Hook
34	034551	1	Lower section tube
35	034552	1	. Extension tube
36	034065	1	. . Extension tube coupling top
	000250	4	. . Setscrew, M6 x 20mm, stainless steel
	000253	4	. . . Nut, M6, Nyloc, stainless steel
37	026239	2	Bracket, lower suction tube retaining
38	014997	2	. Plastic handle grip
39	028117	1	Switch, air pressure

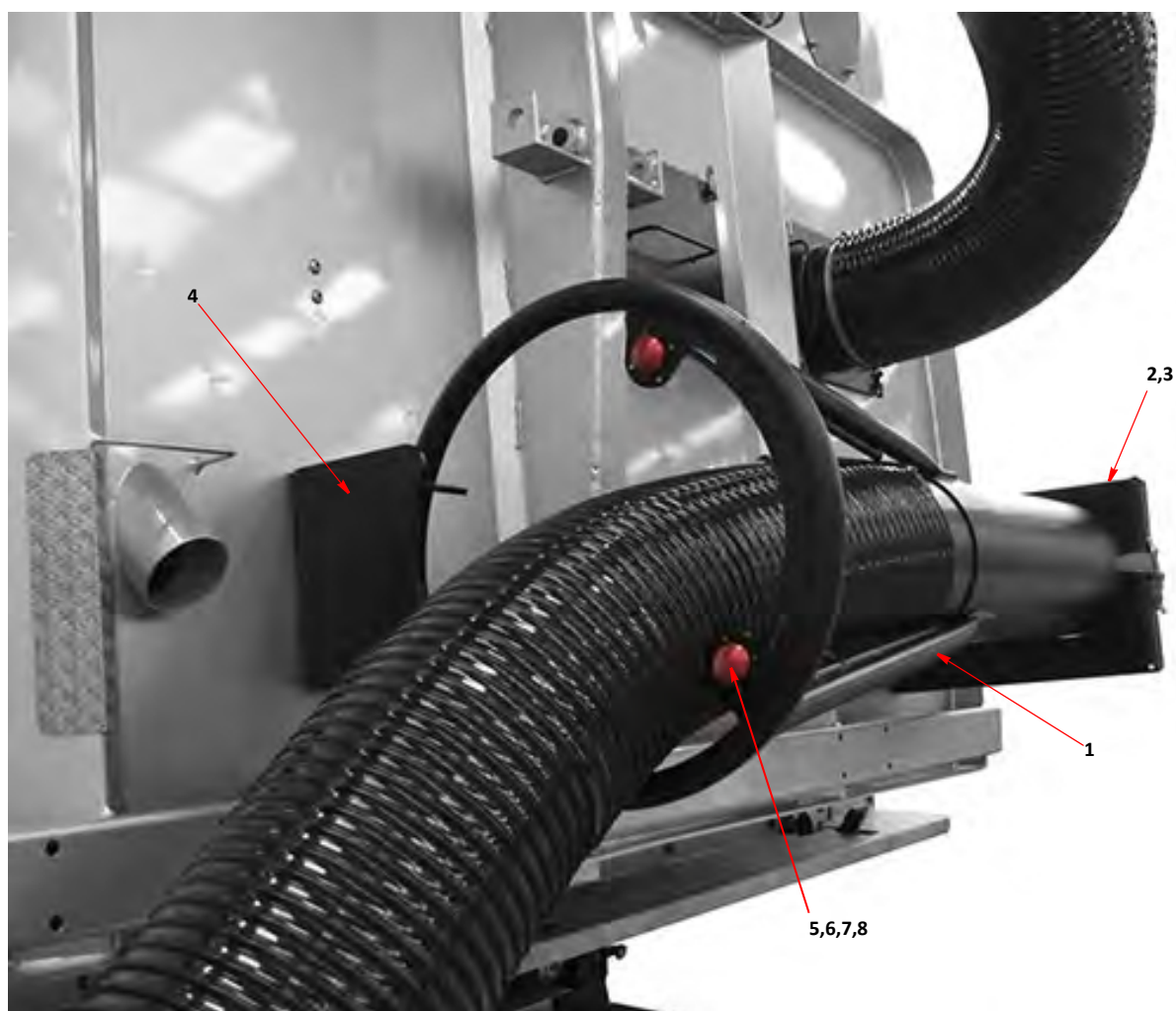


**OVERHEAD BOOM ASSEMBLY**

D31

MERLIN and MAGNUM

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Suction Tube Control Yoke - (Option)</b>			
1	035293	1	Rear boom handle
2	034822	1	. Boom mounting cup
3	034823	1	. . Boom mounting lock
4	034821	1	. Boom mounting hook
5	035947	2	. Switch
6	035294	2	. . Switch plate cover
7	035474	2	. . . Cable gland
8	035370	1	. . . Wiring loom



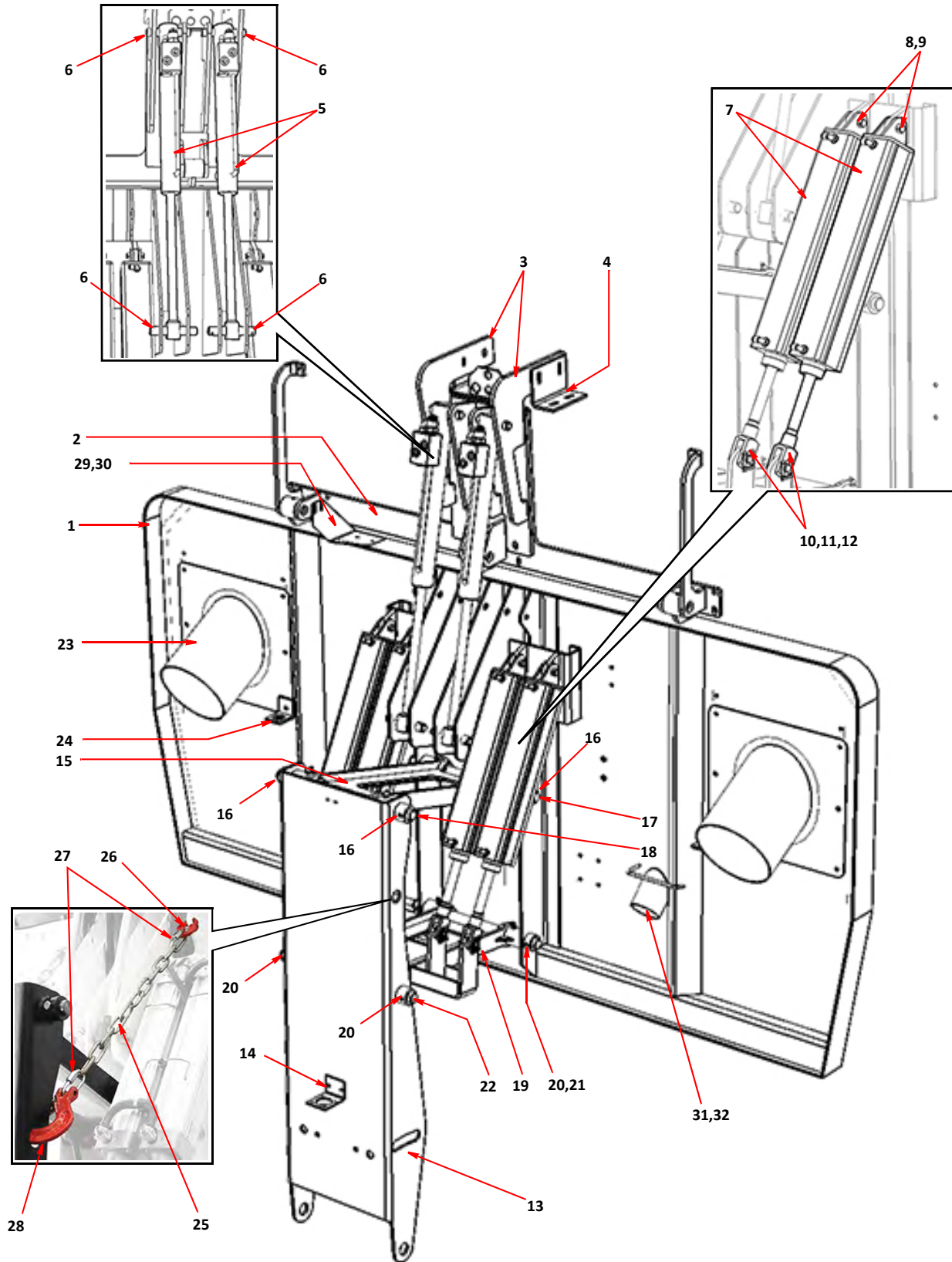
**SUCTION TUBE CONTROL YOKE OPTION**

# D33

## MERLIN and MAGNUM

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Rear Suction Nozzles - Door Mounted - (Option)</b>			
1	026962	1	Rear Door - special
2	025660	1	. Hinge plate, adjustable
3	026426	1	. . Ram mount, adjustable
4	026427	2	. . . Bracket, ram mount
5	028873	2	. . . Cylinder assembly, rear door
6	022558	2	. . . . Pivot pin, ram
7	026968	4	. Cylinder, pneumatic
8	026392	4	. . Pivot, pneumatic cylinder
9	023123	4	. . . Pin, cylinder pivot
10	020299	4	. . Clevis M16 x 1.5mm
11	022673	4	. . . Clevis pin
12	022674	4	. . . . Clip retaining
13	026967	1	. Main support
14	026190	1	. . Bracket, ITT connector
15	026384	1	. . Top link
16	013792	4	. . . Grease point, $\frac{1}{4}$ " BSP
17	026402	1	. . . Linkage pin, front
18	026401	1	. . . Linkage pin, rear
19	026385	1	. . Bottom link
20	013792	4	. . . Grease point, $\frac{1}{4}$ " BSP
21	026402	1	. . . Linkage pin, front
22	026401	1	. . . Linkage pin, rear
23	027674	2	. Spigot plate, suction hose
24	028446	1	. . Bracket, hose
25	010525	2	. Chain, safety support
26	026809	1	. . Connecting shackle
27	010606	2	. . Carabiner
28	026810	1	. . Safety hook
29	026808	1	. Proximity switch, door open
30	026750	1	. . Bracket, proximity switch
NI	026974	2	Suction hose, trunking (between door spigot and suction nozzle)
31	002116	1	Valve, ball 3 c/w handle, hopper drain
32	002117	AR	. Hose Straight 3



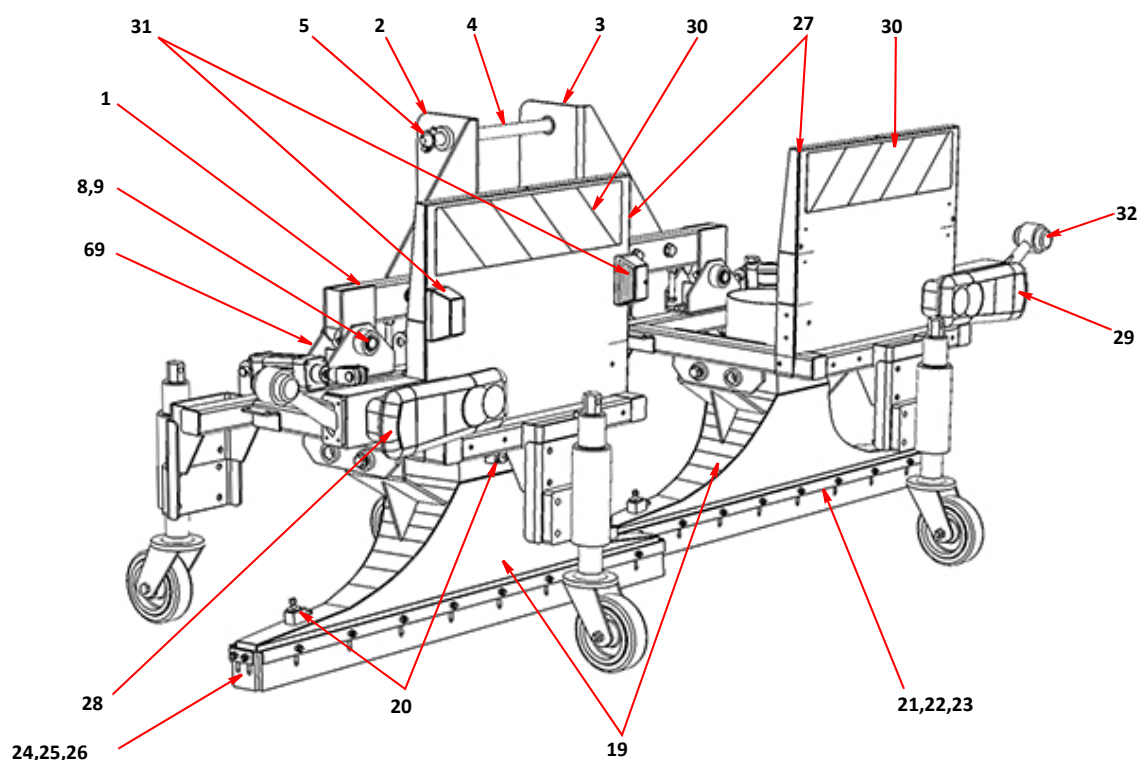
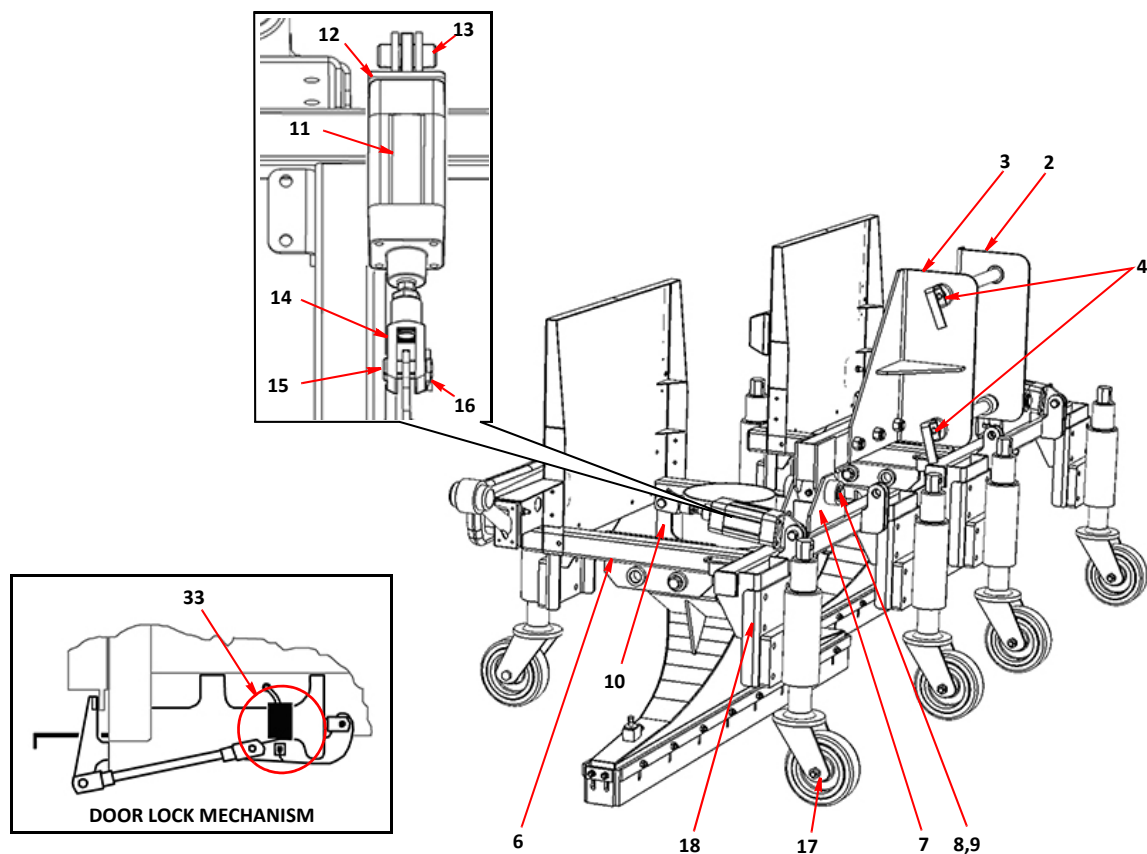


**REAR SUCTION NOZZLE - DOOR & MOUNTING**

# MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Rear Mounted Suction Nozzles - (Option)</b>			
1	027817	1	Central support beam
2	028710	1	. Bracket, support beam mounting LH
3	028711	1	. Bracket, support beam mounting RH
4	026400	2	. Linkage pin, removable
5	013053	1	. . Linch pin
6	033073	2	. Nozzle frame, tilting nozzle
NI	030591	2	. Nozzle frame, fixed nozzle
7	028655	1	. . Bracket, pivot, tilting nozzle
NI	030592	1	. . Bracket, pivot, fixed nozzle
8	026395	1	. . . Pivot pin
9	013662	4	. . . Bush
10	033074	1	. . Pivot bracket, nozzle tilt
11	023608	1	. . Air cylinder, nozzle tilt
12	023827	1	. . . Ram end assembly
13	010067	1	. . . . Pin 20 x 20
NI	011122	2	. . . . Split pin, $\varnothing \frac{3}{16}'' \times 1 \frac{1}{2}''$
14	020299	1	. . . Clevis M16 x 1.5mm
15	022673	1	. . . . Clevis pin
16	022674	1	. . . . . Clip retaining
17	033549	6	. . Jacking castor wheel assembly
18	028445	1	. . . Bracket, castor wheel assembly
19	026969	2	. . Suction nozzle, rear
20	013360	4	. . . Spray jet, suction box
21	026404	2	. . . Flap, suction nozzle, front/rear
22	027826	4	. . . . Flap retainer, front/rear (located inside nozzle)
23	026405	1	. . . . Clamp, front/rear flaps
24	026407	2	. . . Flap, suction nozzle, end
25	027827	4	. . . . Flap retainer, end (located inside nozzle)
26	026406	1	. . . . Clamp, end flaps
27	027819	2	. Mounting panel, rear lighting
28	013482	1	. . Rear lamp LH
29	013483	1	. . Rear lamp RH
30	022389	1	. . Rear marker plate
31	030690	1	. . Lamp, rear number plate
32	033019	2	. . Lamp, outline marker
NI	026964	2	. Spray bar
NI	030251	AR	. . Jets, spray bar
NI	026197	2	. . Bracket, spray bar
NI	014983	2	. . . U Clamp $1 \frac{5}{8}''$
33	026808	2	Proximity switch, door locking
NI	021416	4	Sleeve
NI	012597	1	Quick release coupling $\frac{1}{2}''$
NI	028656	2	Bracket, safety interlock switch
NI	023595	2	Leash cable, suction hose
NI	025222	AR	Titanfast DX78
NI	010997	1	Hose $\frac{1}{2}'' \times 6170$ mm straight
NI	013792	13	Grease point $\frac{1}{4}''$ BSP
NI	026048	2	Reed switch, air cylinder
NI	006019	2	Quick release coupling male
NI	006020	2	Quick release coupling female
NI	010950	3	Hose, reinforced $\frac{3}{8}''$

Tilting Nozzles only



**REAR-MOUNTED SUCTION NOZZLES OPTION**

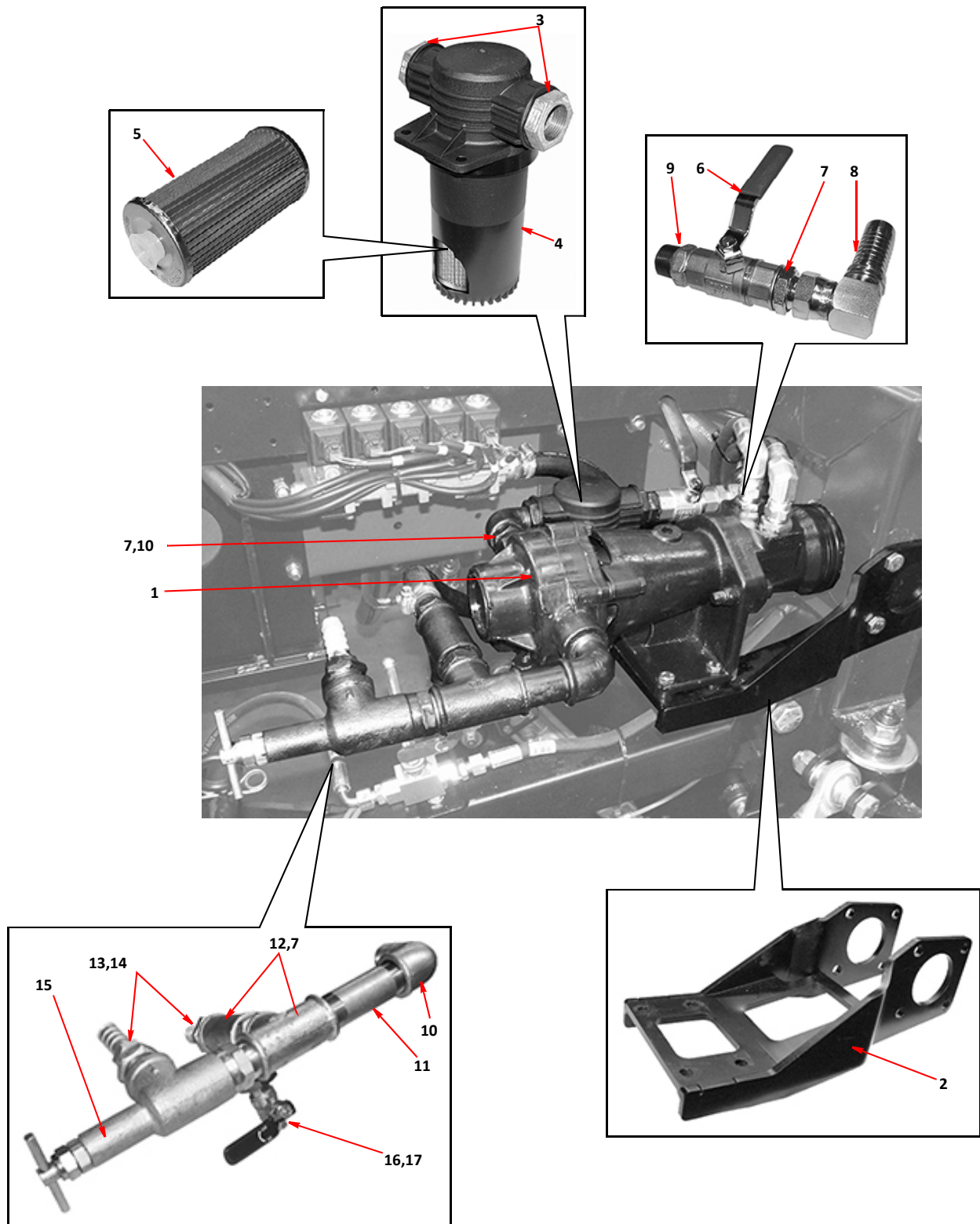


## WASHING AND DUST SUPPRESSION SECTION E

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Item	Part Number	Quantity	Description
<b>Low Pressure Water Pump - Roller - Arrangement</b>			
1	037812	1	Water pump, low pressure (roller type) . . . . . Page E3
	011013	4	. Setscrew, M8 x 35mm
	011073	4	. Nut, M8, Nyloc
2	037813	1	. Bracket, pump support
	011407	4	. . Bolt, M10 x 120mm
	011075	4	. . Nut, M10, Nyloc
3	000154	2	. Adaptor, galvanised, M/F, 1" x $\frac{3}{4}$ " BSP
4	023862	1	. Filter (complete)
5	023863	1	. . Filter, element
6	013757	1	Valve, ball, $\frac{3}{4}$ " BSP
7	011161	1	. Adaptor, M/M, $\frac{3}{4}$ " BSP
	011155	1	. Seal, Dowty, $\frac{3}{4}$ " BSP
8	011210	1	. Elbow, hose tail, $\frac{3}{4}$ " BSP x 1" hose
9	010916	2	. Adaptor, galvanised, M/M, $\frac{3}{4}$ " BSP
10	010917	1	. Elbow, galvanised, M/F, $\frac{3}{4}$ " BSP
11	010933	1	. Connector, M/M, $\frac{3}{4}$ " BSP
12	010919	2	. Tee, galvanised, F/F/F, $\frac{3}{4}$ " BSP
13	010946	2	. Adaptor, galvanised, M/F, $\frac{3}{4}$ " x $\frac{3}{8}$ " BSP
14	010930	2	. Hose tail, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " hose
15	010101	1	. Valve, flow control, $\frac{3}{4}$ " BSP
16	011164	1	. Adaptor, M/M, $\frac{3}{4}$ " x $\frac{1}{4}$ " BSP
17	011743	1	. Valve, ball, $\frac{1}{4}$ " BSP



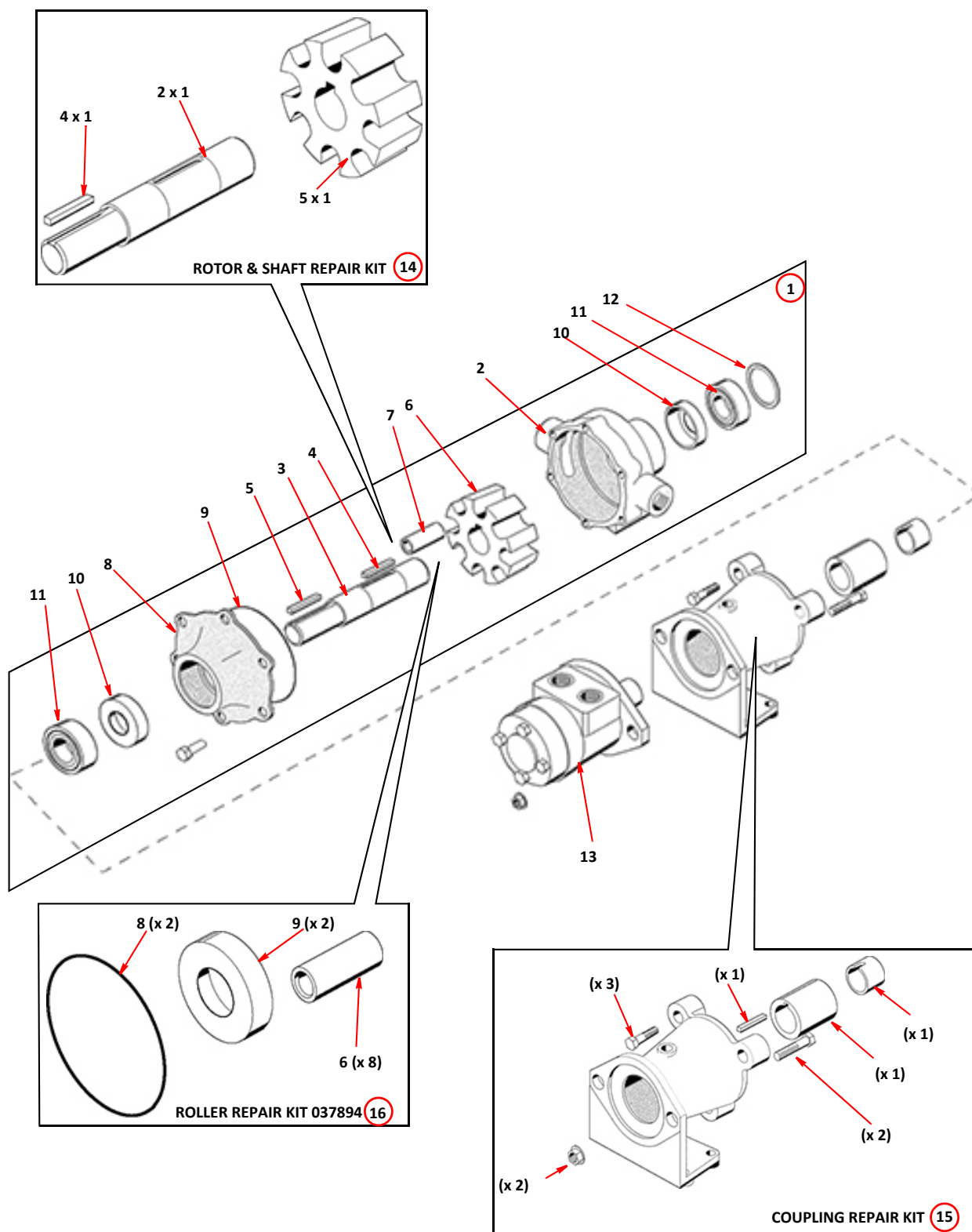
**LOW PRESSURE WATER PUMP - ROLLER - ARRANGEMENT**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Low Pressure Water Pump - Roller - Components</b>			
1	037893	1	Pump, body, complete
2	*	1	Pump, body
3	*	1	. Shaft, drive
4	*	1	. Key, drive
5	*	1	. Key, drive
6	*	1	. Rota
7	*	8	. . Roller
8	*	1	. End plate
9	*	1	. . O-ring
	*	3	. . Setscrew
	*	3	. . Setscrew
	*	6	. . Nut
10	*	2	. . Seal (Viton)
11	*	2	. . Bearing
12	*	1	. . . Cover, bearing
	*	1	. Flange, mounting
	*	1	. Coupling, drive
	*	1	. . Spacer
13	040906	1	. Motor, hydraulic
	*	2	. . Setscrew
	*	2	. . Nut
14	*	1	Repair kit, rotor and shaft
15	040905	1	Repair kit, coupling
16	037894	1	Repair kit, roller

**Notes:-**

\* These part number are To Be Advised, please contact Scarab Parts Department if you require any of these parts.



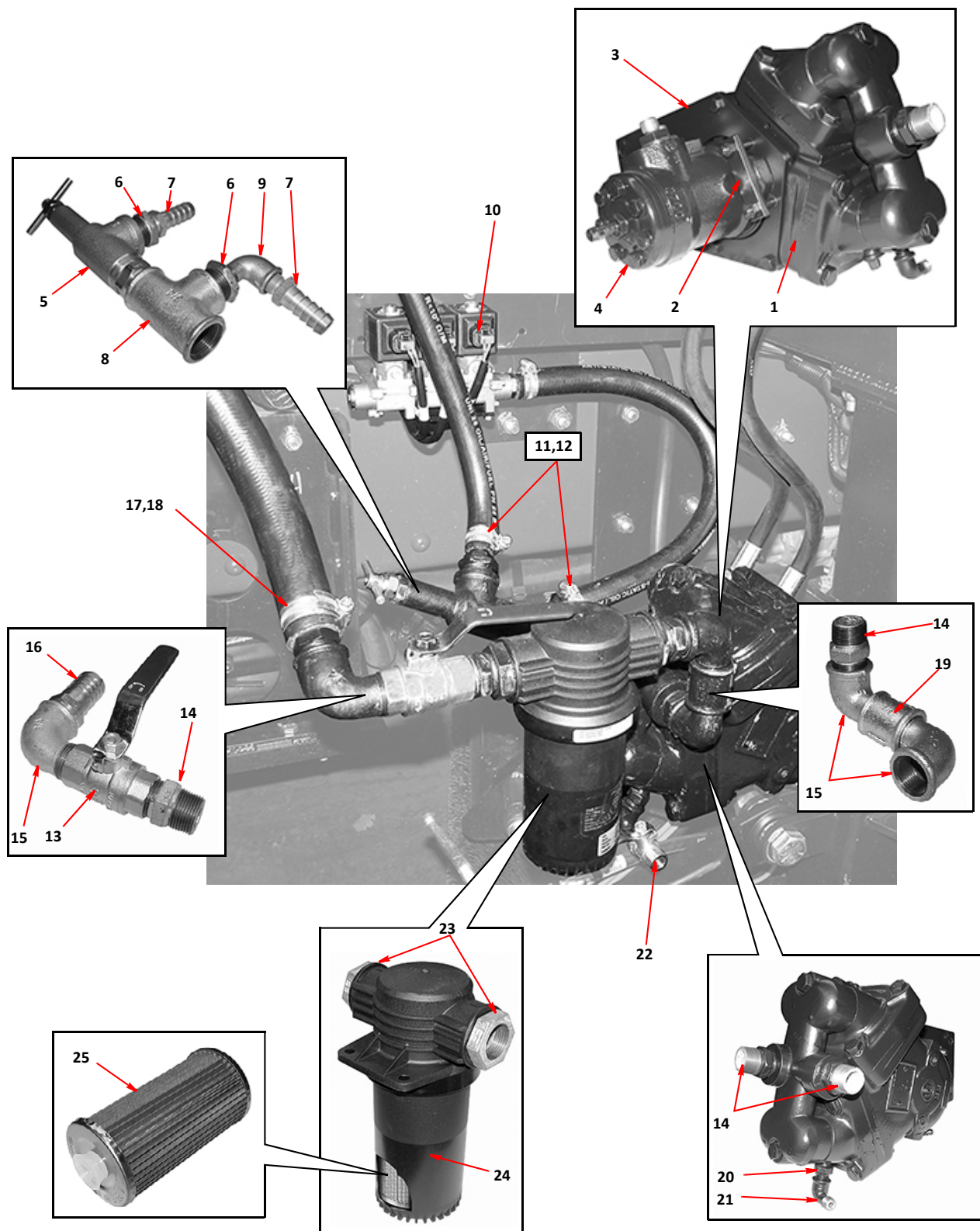


**LOW PRESSURE WATER PUMP - ROLLER - COMPONENTS**

Item	Part Number	Quantity	Description
<b>Low Pressure Water Pump - Twin Diaphragm - Arrangement</b>			
1	024385*	1	Pump, twin diaphragm, assembly
NI	010903	1	. Greasing point, straight, $\frac{1}{8}$ " BSP
NI	024241	1	. Locating ring
2	024245	2	. Clamp, pump
3	024243	1	. Plate, pump mounting
NI	014873	4	. Spacer 37 x 20 x 11
	011018	4	. . Bolt, M8 x 90mm
	011073	4	. . Nut, M8, Nyloc
NI	024908	4	. . Stud
	011073	4	. . . Nut, M8, Nyloc
4	013527	1	. Motor, hydraulic . . . . . Page F37
5	010101	1	. Valve, pressure relief, $\frac{3}{4}$ " BSP
6	010946	2	. . Adaptor, galvanised, M/F, $\frac{3}{4}$ " x $\frac{3}{8}$ " BSP
7	010930	2	. . Hose tail, $\frac{3}{8}$ " BSP x $\frac{5}{8}$ " hose
8	010919	1	. . Tee, galvanised, F/F/F, $\frac{3}{4}$ " BSP
9	010913	1	. . Elbow, galvanised, M/F, $\frac{3}{8}$ " BSP
10		1	. Water valve assembly . . . . . Page E9
11	010517	4	. . Clamp, worm drive, 18-25mm
12	011000	AR	. . . Tube, rubber, $\frac{5}{8}$ " bore
13	013757	1	. Valve, ball, $\frac{3}{4}$ " BSP
14	010916	2	. . Adaptor, galvanised, M/M, $\frac{3}{4}$ " BSP
15	010917	3	. . Elbow, galvanised, M/F, $\frac{3}{4}$ " BSP
16	010931	1	. . Hose Tail, $\frac{3}{4}$ " BSP x 1" hose
17	010518	2	. . Clamp, worm drive, 30-40mm
18	010959	AR	. . . Tube, rubber, 1" bore
19	010934	1	. . Socket, galvanised, F/F, $\frac{3}{4}$ " BSP
20	010944	1	. Adaptor, galvanised, M/M, $\frac{1}{4}$ " BSP
21	010910	1	. Elbow, galvanised
22	011743	1	. . Valve, Ball, $\frac{1}{4}$ " BSP
23	000154	2	. . Adaptor, galvanised, M/F, 1" x $\frac{3}{4}$ " BSP
24	023862	1	. Filter (complete)
25	023863	1	. . Filter, element
NI	023897	1	. . O-ring

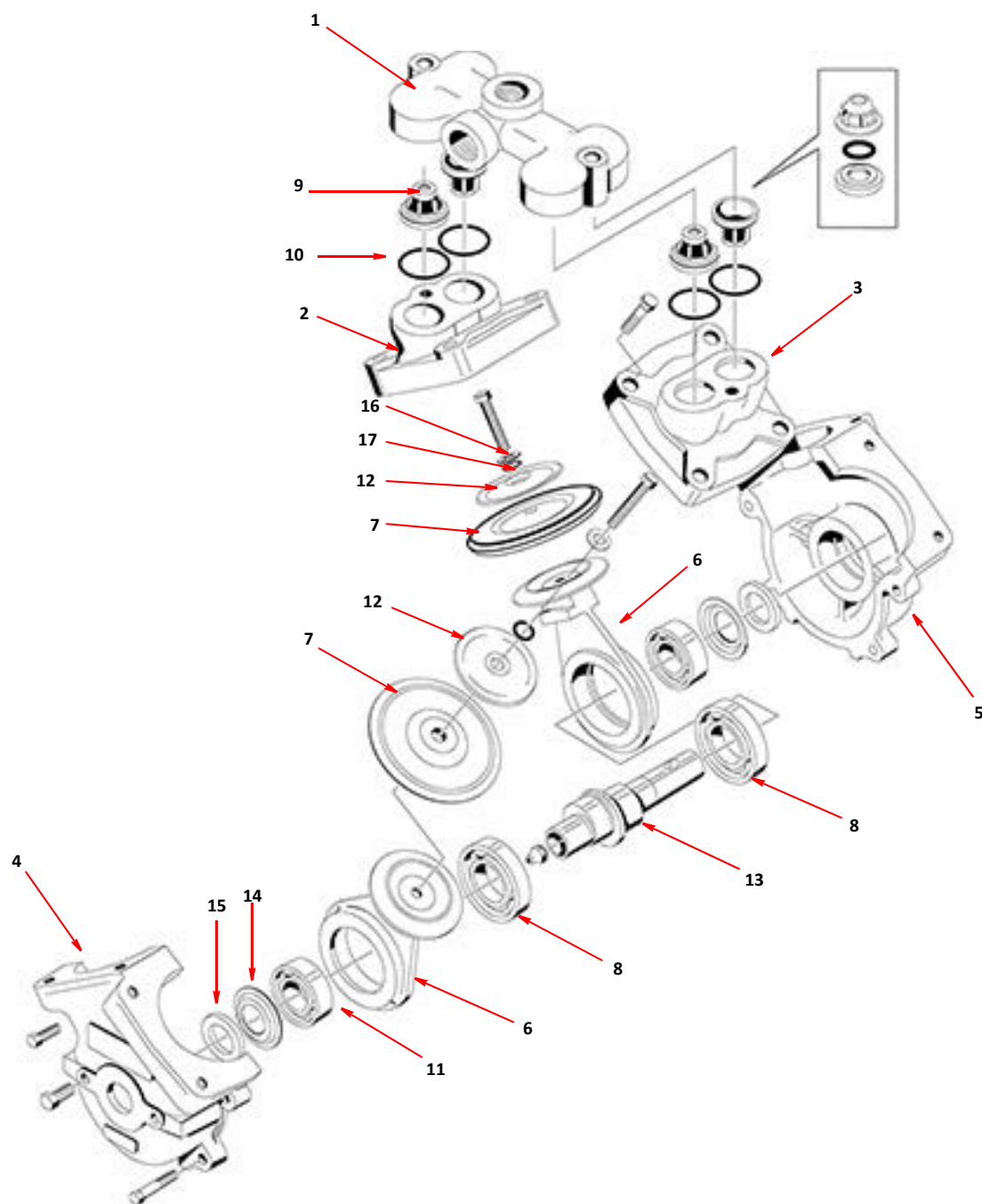
**Notes:-**

\* A service exchange unit is available by ordering part number 024385SE.



**LOW PRESSURE WATER PUMP - TWIN DIAPHRAGM**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Low Pressure Water Pump - Twin Diaphragm - Components</b>			
1	020460	1	Pump bridge
2	020464	1	Pump head (mod)
3	020463	1	Pump head
4	020461	1	Pump crankcase
5	020462	1	Pump crankcase (mod)
6	014682	2	. Conrod
7	013629	2	. Diaphragm
8	013522	2	. Bearing, ball 6007
9	013627	4	. Poppet valve
10	013628	1	. . Sealing ring
11	022726	1	. Bearing ball 6205
12	014882	2	. Pump backing plate
13	014869	1	. Pump eccentric
14	014881	1	. Retainer
15	014879	1	. . Felt washer
16	031560	2	. Seal
17	031561	2	. Washer

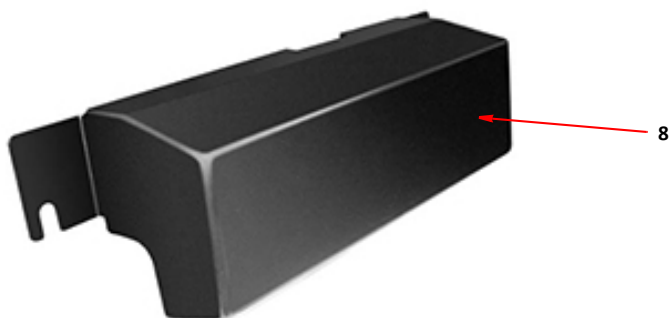
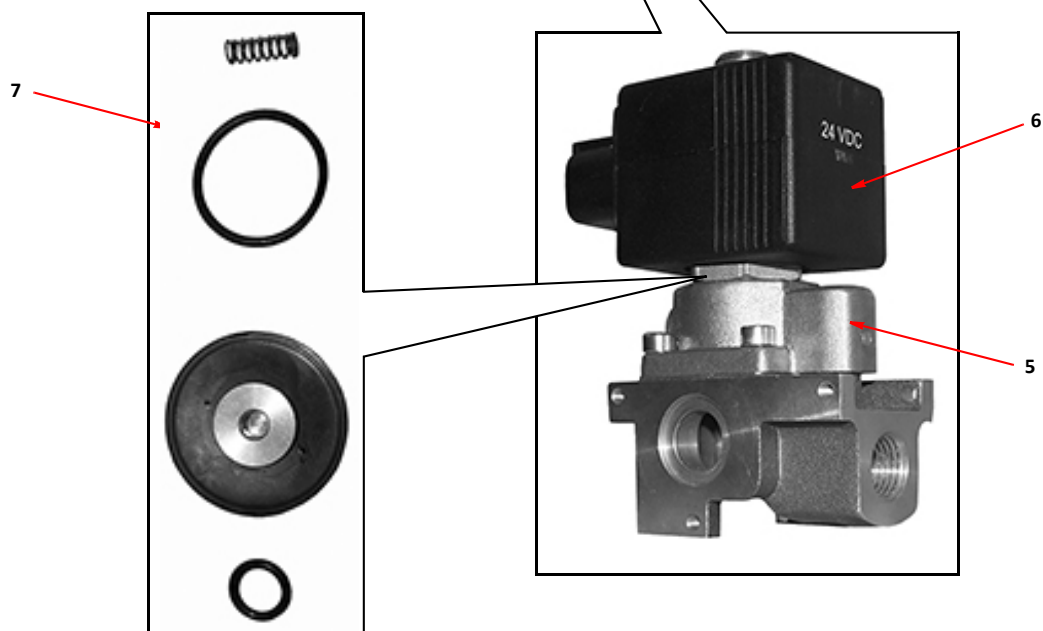
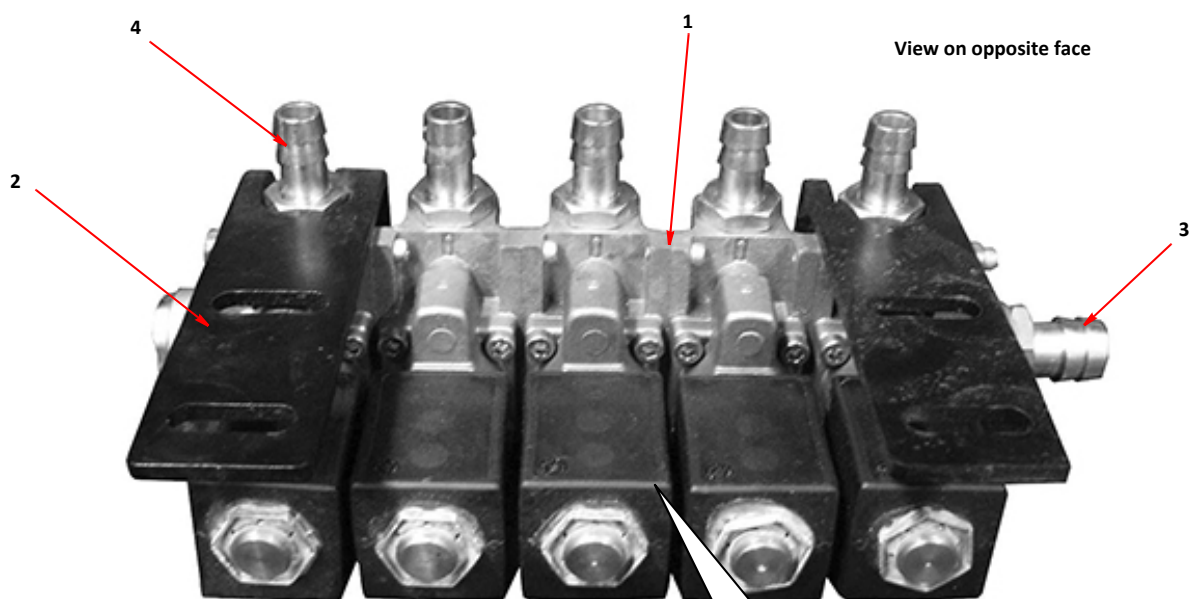


**LOW PRESSURE WATER PUMP - TWIN DIAPHRAGM - COMPONENTS**

Item	Part Number	Quantity	Description
			<b>Water Valve Assembly *</b>
1	037033	1	Water valve, 2 way assembly, complete
1	037034	1	Water valve, 3 way assembly, complete
1	037035	1	Water valve, 4 way assembly, complete
1	037036	1	Water valve, 5 way assembly, complete (shown)
1	037037	1	Water valve, 6 way assembly, complete
1	037038	1	Water valve, 7 way assembly, complete
2	034616	2	. Mounting bracket
3	010930	AR	. Hose tail, $\frac{3}{8}$ " BSP X $\frac{5}{8}$ " hose
NI	010517	1	. . Clamp, worm drive, 18-25mm
4	010922	AR	. Hose tail, $\frac{1}{4}$ " BSP x $\frac{3}{8}$ " hose
NI	010516	AR	. . Clamp, worm drive, 11-18mm
NI	010950	AR	. . Hose, plastic reinforced, $\frac{3}{8}$ " bore
5	037969	AR	. . Solenoid, complete body assembly, BSV122NC24D
6	037059	AR	. . Coil, 24 Volt, 8 Watt, BVC24D
7	034624	AR	. . Repair kit, BSVRK
8	037995	1	. Water splash cover
NI	038070	1	. Water splash cover ( <b>Merlin XP</b> )
	011012	2	. . Setscrew, M8 x 30mm
	011092	2	. . Washer, M8
	011072	2	. . Nut, M8
NI	000248	2	. . Plastic knob

**Notes:-**

- \* The number of valves and related fittings, is dependent on chassis/options fitted, and therefore, which version of Item 1 has been installed.



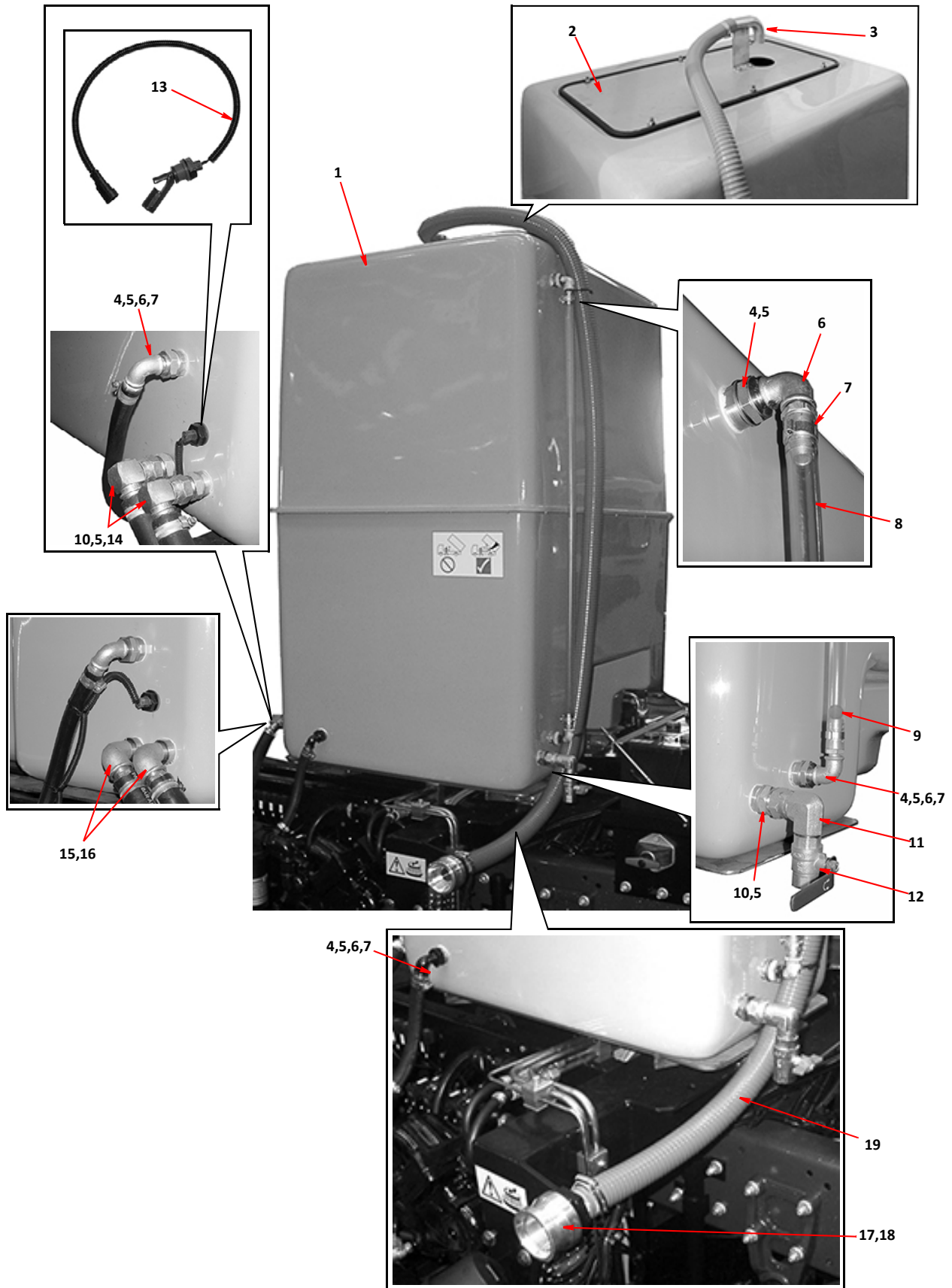
**WATER VALVE ASSEMBLY**

Item	Part Number	Quantity	Description
<b>GRP Water Tank Assembly - 900 litre and 1250 litre</b>			
1	026324	1	Water tank, 900 litres
1	026325	1	Water tank, 1250 litres
	012969	14	. Washer, rubber, $\varnothing 40 \times 12 \times 6$
	011096	7	. Washer M12
	011077	7	. Nut, Nyloc, M12
2	025271*	1	. Lid, water tank
	013951	AR	. . Lid seal
NI	025893	1	. Tank base (900 litre)
NI	028338	1	. Tank base (1250 litre)
	011051	5	. . Setscrew, M12 x 25mm
	011096	10	. . Washer, M12
	011077	5	. . Nut, M12, Nyloc
3	024586*	1	. Hydrant filler pipe
	011010	2	. . Setscrew, M8 x 20mm
	011072	8	. . Nut, M8, Nyloc
	011092	6	. . Washer, M8
4	011224	4	. Adaptor, M/M, $\frac{3}{4}'' \times \frac{3}{8}''$ BSP
5	011155	1	. . Seal, Dowty, $\frac{3}{4}''$ BSP
6	010915	4	. Elbow, galvanised, F/F, $\frac{3}{8}''$ BSP
7	010930	4	. Hose tail, $\frac{3}{8}''$ BSP x $\frac{5}{8}''$ hose
8	001046	AR	. Hose $\frac{5}{8}''$ clear
9	025335	1	. . Ball, plastic, $\varnothing \frac{1}{2}''$
	000202	2	. . O-Clip $\frac{7}{8}''$
10	011161	3	. Adaptor, M/M, $\frac{3}{4}''$ BSP
11	011174	1	. Elbow, swivel, M/F, $\frac{3}{4}''$ BSP
12	013757	1	. . Ball valve $\frac{3}{4}''$ BSP
13	036871	1	. Switch, water level . . . . . Page H5
14	002079	2	. Elbow, swivel, hose tail, $\frac{3}{4}''$ BSP x 1 hose (900 litre tanks)
15	010918	2	. Elbow, galvanised, M/F, $\frac{3}{4}''$ BSP, (1250 litre tanks)
16	010931	1	. . Hose tail, $\frac{3}{4}''$ x 1 tube, (1250 litre tanks only)
17	013169*	1	. Hydrant adaptor
18	003026*	1	. . Back-nut, $1\frac{1}{2}''$ BSP
19	001045*	AR	. . Hose, green, medium duty $1\frac{1}{2}''$

**Notes:-**

\* Reversed position on opposite side, on LH drive vehicles.





**GRP WATER TANK 900 and 1250 litre**  
RH drive vehicle shown

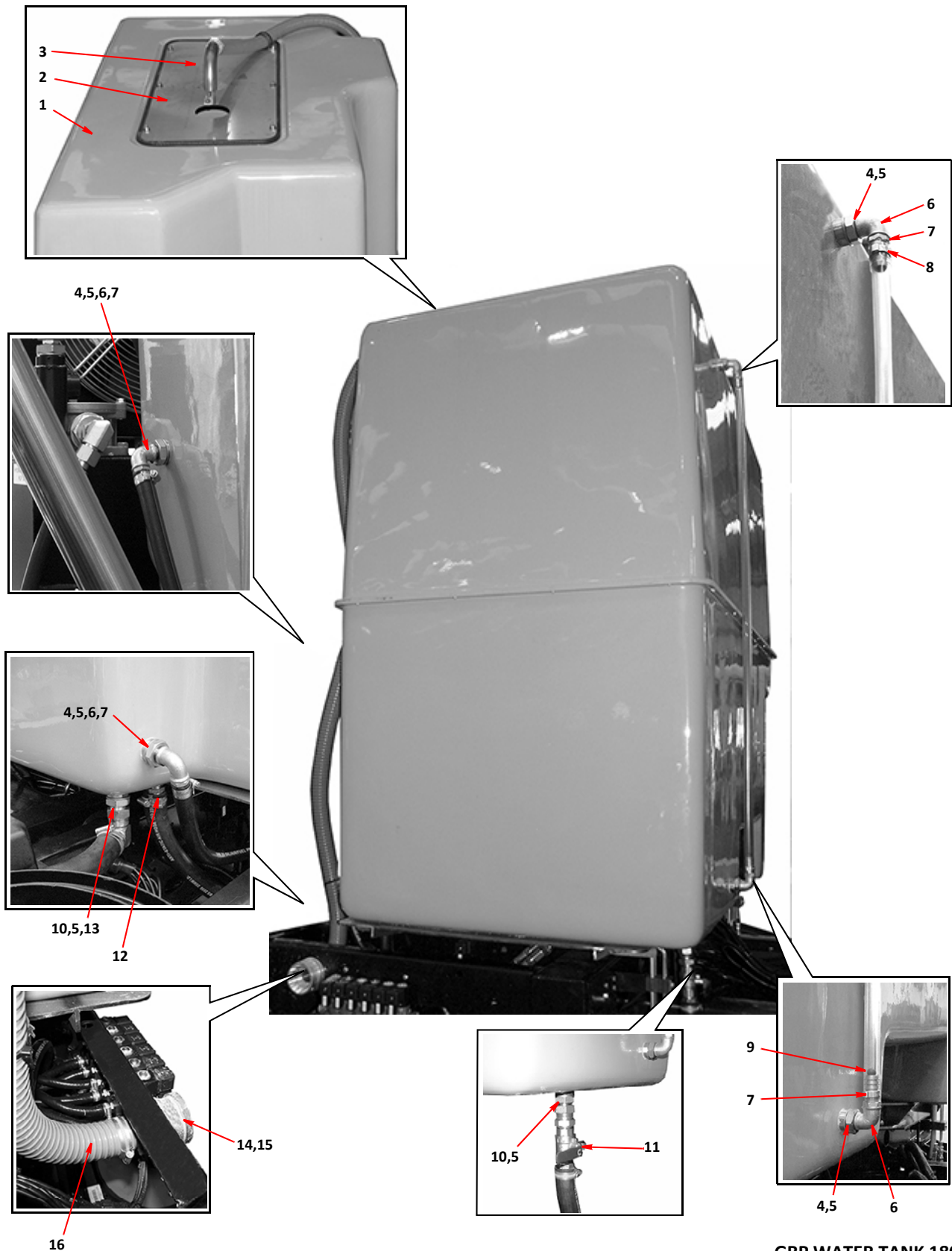
# E13

# MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>GRP Water Tank Assembly - 1800 litre</b>			
1	026326	1	Water tank (GRP), 1800 litre
	012969	7	. Washer, rubber, $\varnothing 40 \times 12 \times 6$
	011096	7	. Washer M12
	011077	7	. Nut, M12, Nyloc
NI	014743	1	. Support mat, rubber
2	025271*	1	. Lid, water tank
	013951	AR	. . Lid seal
NI	024984	1	. Tank base
	011051	6	. . Setscrew, M12 x 25mm
	011096	12	. . Washer, M12
	011077	6	. . Nut, M12, Nyloc
3	024586*	1	. Hydrant filler pipe
	011010	2	. . Setscrew, M8 x 20mm
	011072	8	. . Nut, M8, Nyloc
	011092	6	. . Washer, M8
4	011224	4	. Adaptor, M/M, $\frac{3}{4}$ " x $\frac{3}{8}$ " BSP
5	011155	6	. . Seal, Dowty, $\frac{3}{4}$ " BSP
6	010915	4	. Elbow, galvanised, F/F, $\frac{3}{8}$ " BSP
7	010930	4	. Hose tail, $\frac{3}{8}$ " BSP x $\frac{5}{8}$ " hose
8	001046	AR	. Hose $\frac{5}{8}$ " clear
9	025335	1	. . Ball, plastic, $\varnothing \frac{1}{2}$ "
	000202	2	. . O-Clip $\frac{7}{8}$ "
10	011161	3	. Adaptor, M/M, $\frac{3}{4}$ " BSP
11	013757	1	. Ball valve $\frac{3}{4}$ " BSP
12	010931	2	. Hose Tail, $\frac{3}{4}$ " x 1" tube
13	002079	2	. Elbow, swivel, hose tail, $\frac{3}{4}$ " BSP x 1" hose
14	013169*	1	. Hydrant adaptor
15	003026*	1	. . Back-nut, 1 $\frac{1}{2}$ " BSP
16	001045*	AR	. . Hose, green, medium duty 1 $\frac{1}{2}$ "
NI	036871	1	. Switch, water level . . . . . Page H5

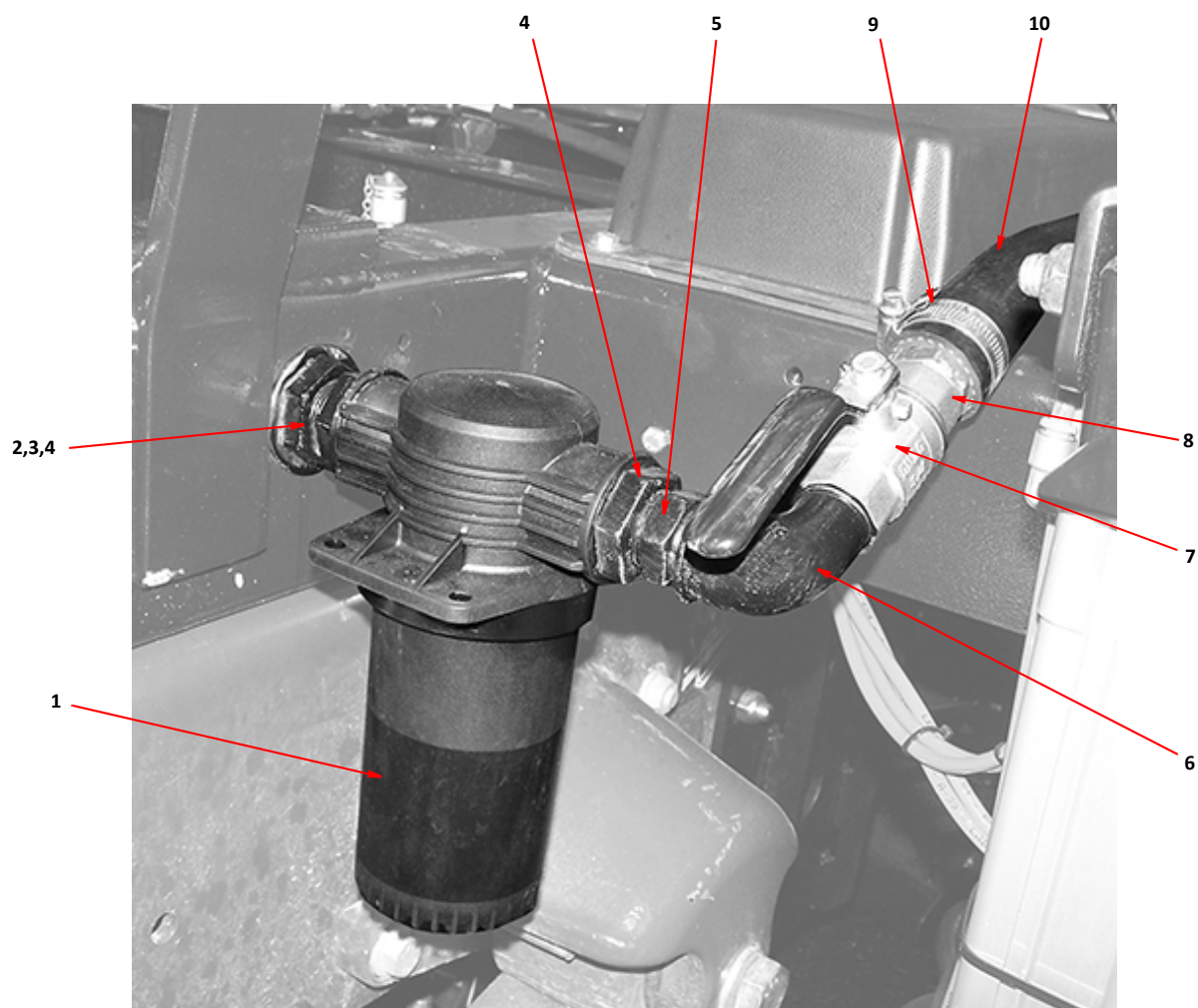
## Notes:-

\* Reversed position on opposite side, on LH drive vehicles.



**GRP WATER TANK 1800 litre**  
RH drive vehicle shown

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Water Filter Assembly - High-Pressure Pump</b>			
1	023862	1	Filter, water
NI	023863	1	. Element, gauze
NI	023897	1	. O-Ring
2	024924	1	. Hose tail, galvanised, $\frac{3}{4}$ " BSP
3	010935	2	. Back nut, galvanised, $\frac{3}{4}$ " BSP
4	000154	2	. Adaptor, galvanised, M/M, 1" x $\frac{3}{4}$ " BSP
5	010916	1	. Adaptor, galvanised, M/M, $\frac{3}{4}$ " BSP
6	010917	1	. Elbow, galvanised, M/F, $\frac{3}{4}$ " BSP
7	013757	1	. . Ball valve $\frac{3}{4}$ " BSP
8	010931	1	. . Hose tail, 1" x $\frac{3}{4}$ " BSP
9	010518	2	. . . Clamp, worm drive, 30-40mm
10	010959	AR	. . . Hose, rubber, 1" bore



**WATER FILTER ASSEMBLY - HIGH-PRESSURE PUMP**

# E17

## MERLIN and MAGNUM

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Low Pressure Front Spray Bar - Plastic</b>			
1	030323	1	Low pressure spray bar
2	030632	7	. Jet
3	030634	7	. Nozzle holder
4	030635	7	. Cap jet
5	030633	7	. Filter
6	030636	7	. Washer, rubber
7	031338	2	Clamp
8	031339	1	Hose tail
9	*	3	Bracket

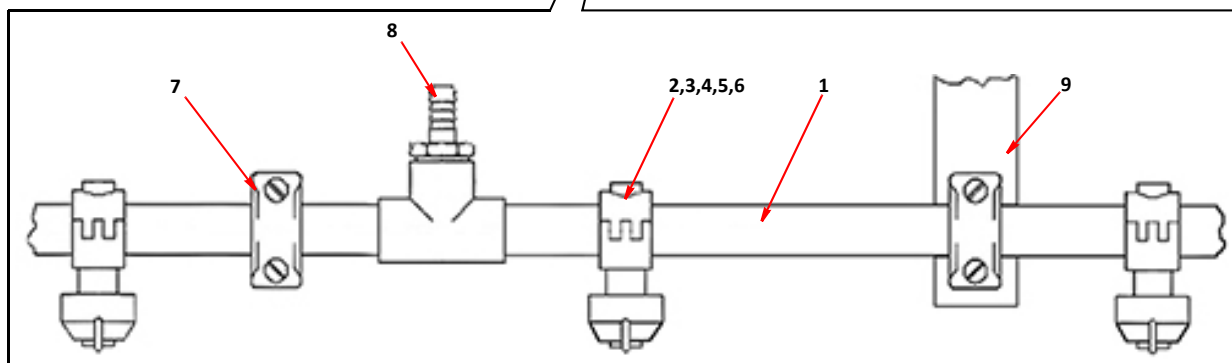
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Low Pressure Side Brush Spray Nozzle</b>			
1	036044	1	Spray jet assembly complete
	030746	2	. Spray body cap
	030748	2	. Spray jet
	030633	2	. Filter
	030636	2	. Washer, rubber
2	011199	1	. . Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP
3	011743	1	. . Valve, ball, $\frac{1}{4}$ " BSP
4	010922	1	. . Hose tail
5	010950	AR	. . . Hose, water
6	010516	1	. . . . Clamp, worm drive, 11-16mm
7	036043	1	Bracket, double spray jet, LH
NI	036042	1	Bracket, double spray jet, RH
	011031	1	. Bolt, M10 x 25mm
	011075	1	. Nut, M10, Nyloc

### Notes:-

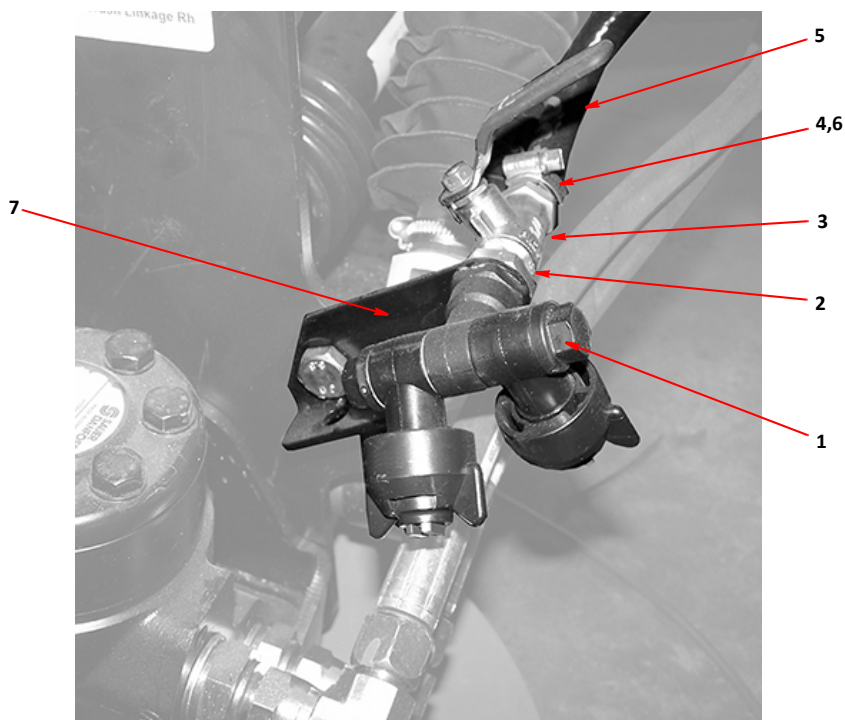
\* This item is chassis specific, please contact Scarab Parts Department.

### Washing and Dust Suppression

Manual Number Z039752 / E&OE



**LOW-PRESSURE SPRAY BAR**

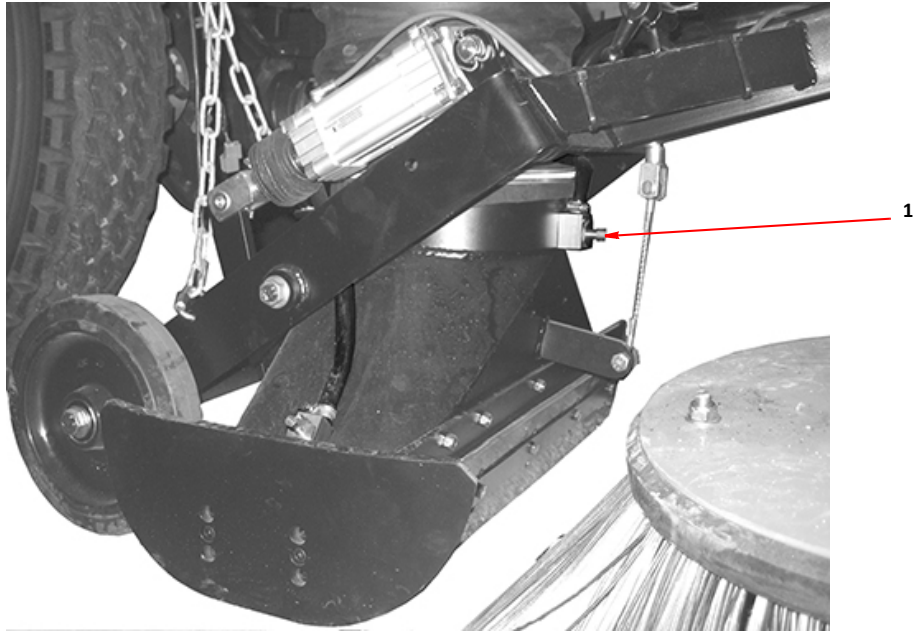


**SIDE BRUSH LOW-PRESSURE SPRAY NOZZLE**

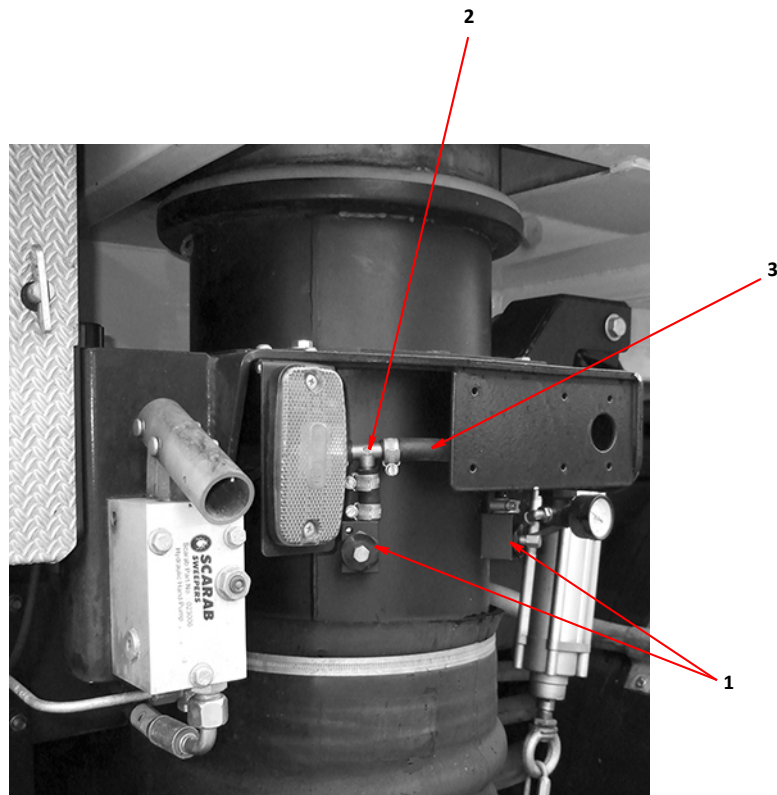
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Suction Box Dust Suppression</b>			
1	013360	4	Jet assembly
	011001	4	. Bolt, M6 x 16mm
NI	003000	3	. Tee
NI	010950	AR	. . Hose, plastic reinforced, $\frac{3}{8}$ " bore
NI	010516	11	. . . Clamp, worm drive, 11-16mm

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Suction Tube Dust Suppression</b>			
1	013360	4	Jet assembly
	011001	4	. Bolt, M6 x 16mm
2	003000	5	. Tee
3	010950	AR	. . Hose, plastic reinforced, $\frac{3}{8}$ " bore
	010516	18	. . . Clamp, worm drive, 11-16mm





**SUCTION BOX DUST SUPPRESSION**

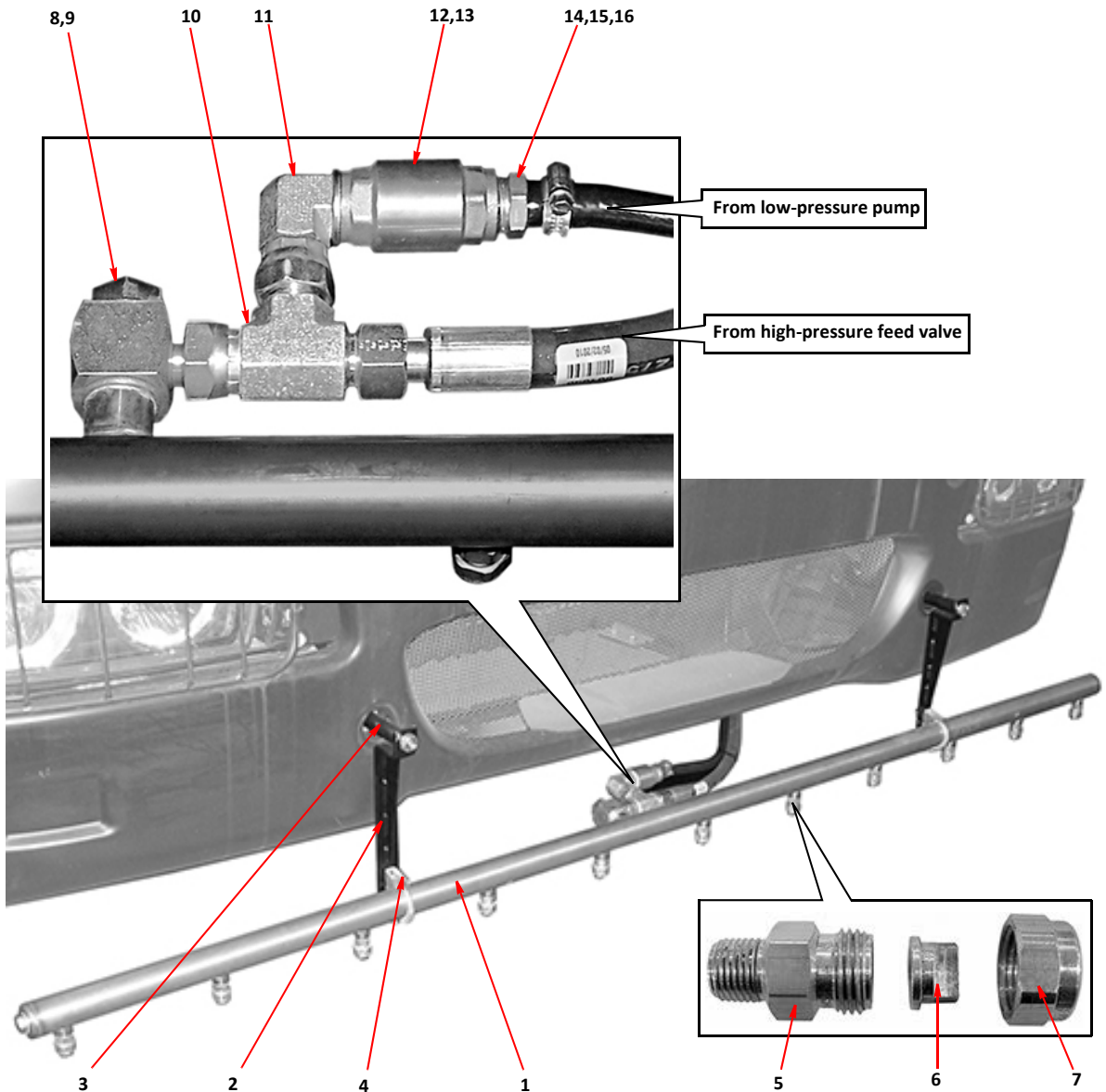
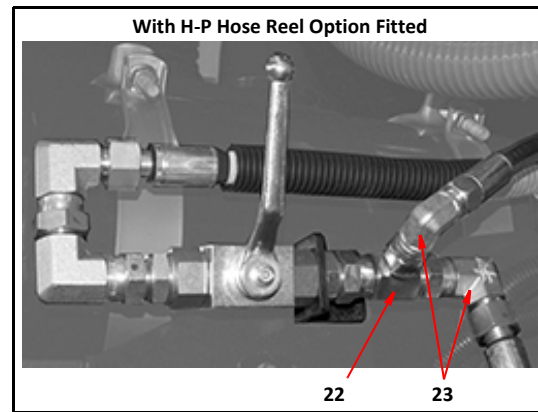
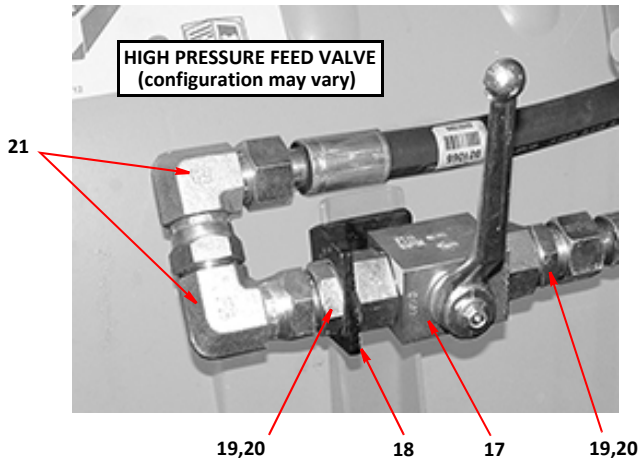


**SUCTION TUBE DUST SUPPRESSION**

Item	Part Number	Quantity	Description
<b>Combined High &amp; Low Pressure Spray Bar - (Option)</b>			
1	020405	1	Spray bar
2	*	2	. Bracket, front spray bar
3	*	1	, , Spacer
4	014983	2	. Clamp
5	010112	11	. Nozzle body
6	023377	1	. . . Jet
7	030951	1	. . . Nozzle cap
8	011188	1	. Banjo elbow $\frac{1}{2}$ " BSP (complete)
9	011154	4	. . Seal, Dowty, $\frac{1}{2}$ " BSP
10	011182	1	. . Tee, swivel, M/M/F, $\frac{1}{2}$ " BSP
11	011173	2	. . . Elbow, swivel, M/F, $\frac{1}{2}$ " BSP
12	003033	1	. . . . Valve, non-return, $\frac{1}{2}$ " BSP
13	011154	4	. . Seal, Dowty, $\frac{1}{2}$ " BSP
14	003034	1	. . . . . Hose tail, $\frac{1}{2}$ " BSP x $\frac{3}{8}$ " hose
15	010958	1	. Hose, plastic reinforced, $\frac{3}{8}$ " bore
16	010516	1	. . Clamp, worm drive, 11-16mm
17	023176	1	. Ball valve - (mounted at rear of cab)
18	025007	1	. . Bracket, valve support
19	011159	2	. . Adaptor, M/M, $\frac{3}{8}$ " BSP
20	011153	1	. . . Seal, Dowty, $\frac{3}{8}$ " BSP
21	011172	2	. . Elbow, swivel, M/F, $\frac{3}{8}$ " BSP
22	002110**	1	. . Tee, M/F/M, $\frac{1}{2}$ " x $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
23	011172**	AR	. . Elbow, swivel, M/F, $\frac{3}{8}$ " BSP

**Notes:-**

- \* These items are chassis specific, if you require to procure them then please contact the Scarab Parts Department quoting your machine's model and serial number.
- \*\* Required when the high-pressure hose reel has been fitted.

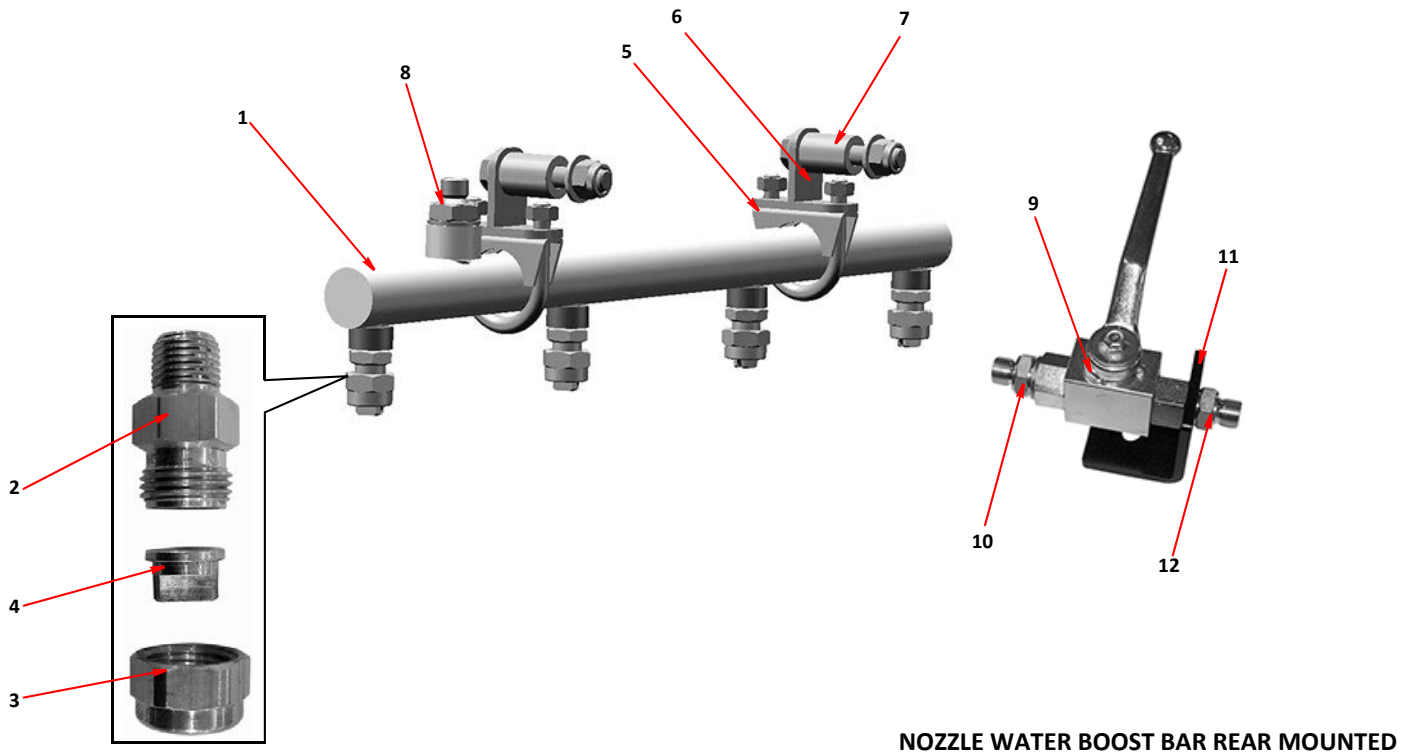
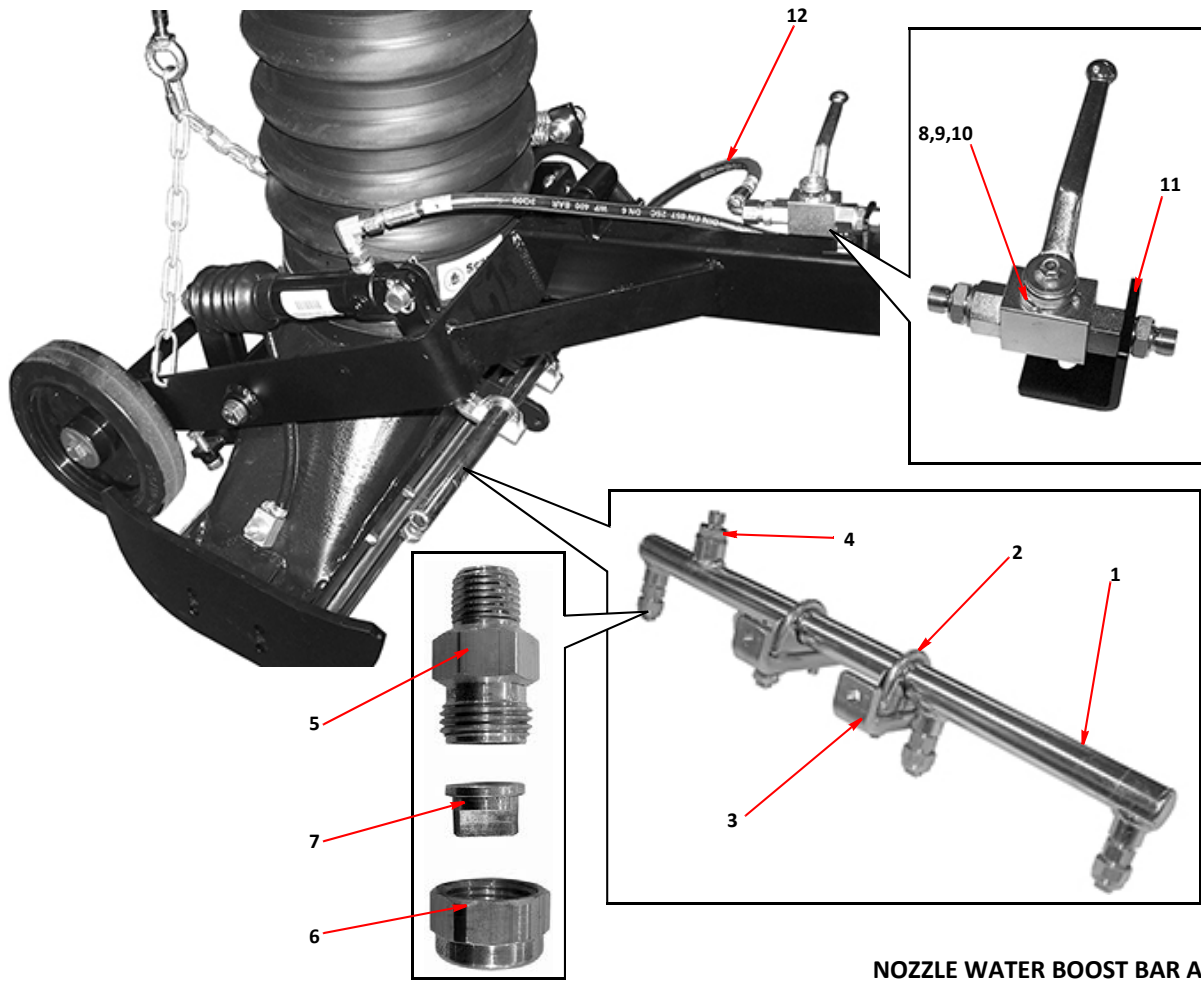


**COMBINED HIGH & LOW PRESSURE SPRAY BAR ASSEMBLY**

Item	Part Number	Quantity	Description
<b>High &amp; Low Pressure Nozzle Water Boost - (Option)</b>			
1	020589	1	Spray bar - boost
1	028616	1	Spray bar - boost (high pressure)
2	020774	2	. Clamp
3	020590	1	. Bracket
	011051	2	. . Setscrew, M10 x 25mm
	011075	2	. . Nut, M10, Nyloc
4	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP, (high pressure)
NI	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
NI	010923	1	. Hose tail, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " hose (low pressure)
NI	010950	AR	. . Hose, plastic reinforced, $\frac{3}{8}$ " bore (low pressure)
NI	010516	1	. . . Clamp, worm drive, 11-16 (low pressure)
5	010112	4	. Nozzle body
6	030951	11	. Nozzle cap
7	012316	AR	. Spray jet LF4-80
7	030251	AR	. Spray jet 4004
8	011257	1	. Ball valve, high pressure, $\frac{1}{4}$ " BSP
9	011158	2	. . Adaptor, M/M, $\frac{1}{4}$ " BSP
10	011152	1	. . . Seal, Dowty, $\frac{1}{4}$ " BSP
11	025007	1	. . Bracket, valve mounting
	011030	1	. . . Setscrew, M10 x 20mm
12	001100	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 460mm, straight/90° ends (H/P supply)

} High pressure

Item	Part Number	Quantity	Description
<b>Nozzle Water Boost Bar Rear Mounted High Pressure - (Option)</b>			
1	020589	1	Spray bar - boost
2	010112	4	. Nozzle body
3	030951	4	. Nozzle cap
4	012316	4	. Spray jet LF4-80
5	020744	2	. Clamp, 'U'
6	041646	2	. Bracket
	011036	2	. . Bolt, M10 x 60mm
7	012981	2	. . Spacer
	011094	4	. . Washer, M10
	011075	2	. . Nut, M10, Nyloc
8	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP, (high pressure)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
NI	001104	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 900mm, straight/90° ends
9	011257	1	. Ball valve, high pressure, $\frac{1}{4}$ " BSP
10	011158	1	. . Adaptor, M/M, $\frac{1}{4}$ " BSP
	011152	1	. . . Seal, Dowty, $\frac{1}{4}$ " BSP
11	012548	1	. . Bracket, valve mounting
12	011269	1	. . Adaptor, bulkhead, M/M, $\frac{1}{4}$ " BSP
	011030	1	. . . Setscrew, M10 x 20mm
	011095	1	. . . Washer, spring, M10



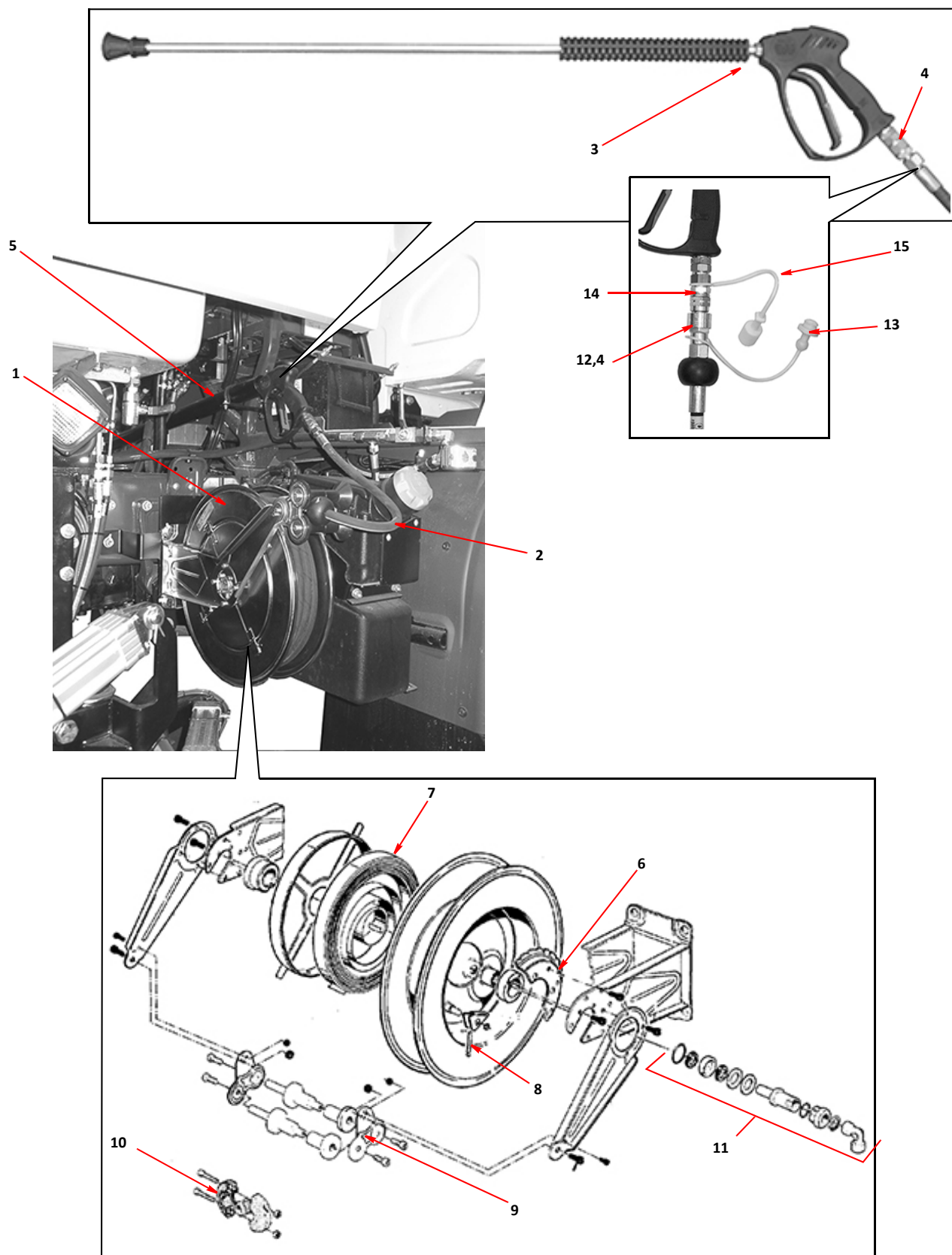
Item	Part Number	Quantity	Description
<b>Hose Reel and Lance *- (Option)</b>			
1	020451	1	Automatic hose-reel complete (less hose)
NI	026996	1	Automatic hose-reel (for use with 250 bar Pratissoli pump)
2	010601**	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 13 metres, straight ends
3	010748	1	. Hand-lance
NI	030120	1	. Hand-lance (for use with 250 bar Pratissoli pump)
4	011159	1	. . Adaptor, M/M, $\frac{3}{8}$ " BSP
NI	011167	1	. . Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
NI	030252	1	. . Jet
5	025473	1	. . Lance stowage
NI	005055	2	. . . Clip 50mm I/D
6	030570	1	. Ratchet
7	026753	1	. . Rewind torsion spring
8	026754	1	. . Tension spring, ratchet pawl
9	025238	1	. Roller assembly, hose feed
10	026217	1	. Clamp (hose feed stop)
11	024230	1	. Swivel elbow assembly (water supply)
NI	024463	1	. . Swivel joint
12	023359	1	. . Coupling, quick release, female
13	014999	1	. . . Coupling plug
14	023360	1	. . Coupling, quick release, male
15	114998	1	. . . Coupling cap

Used when lance  
stowage not fitted

**Notes:-**

\* Position of hose reel and lance are determined by chassis make and model.

\*\* When Ordering a replacement hose for H-P systems using the Pratissoli pump, please contact the Scarab Parts Department, stating your model and serial number.



**AUTOMATIC HOSE REEL**

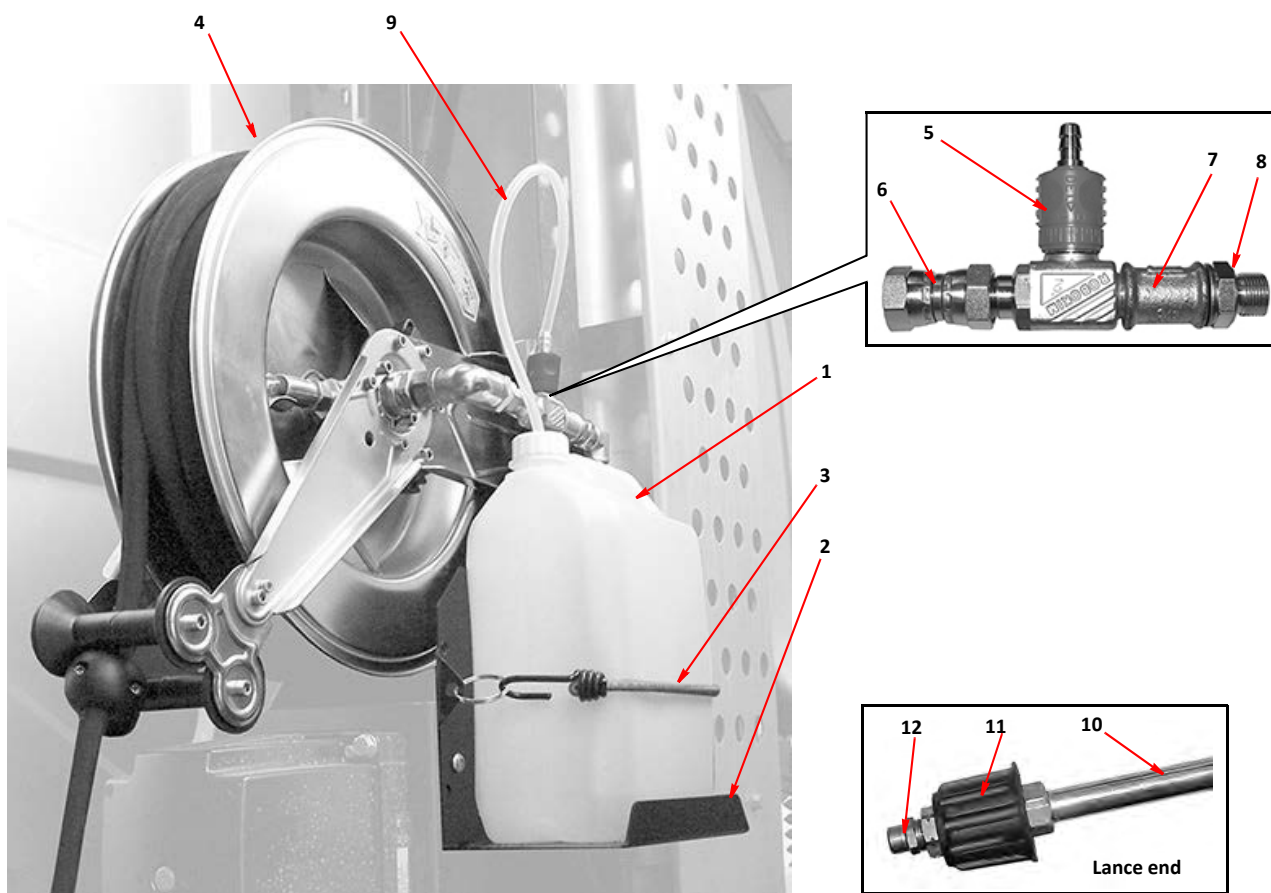
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Hand Lance Detergent Kit - (Option)</b>			
1	013553	1	. Bottle
9	010393	1	. . Bracket, bottle mounting
3	013602	1	. . Bungee cord, hook ends
4		1	Hose reel . . . . . Page E25
5	013573	1	. Detergent Injector
6	011214	1	. . Adaptor, F/F, $\frac{3}{8}$ " BSP
7	010940	1	. . Adaptor, galvanised, F/F, $\frac{3}{8}$ " BSP
8	011159	1	. . . Adaptor, M/M, $\frac{3}{8}$ " BSP
9	013575	AR	. Tubing, silicon rubber
10		1	Hand lance . . . . . Page E25
11	013574	1	. Detergent nozzle
12	030252	1	. . Jet, detergent nozzle

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Hand Wash Basin - (Option)</b>			
1	028228	1	Teal hand basin - Electric 24 Volt
NI	*	2	. Support Leg
	011011	2	. . Setscrew, M8 x 25mm
	011073	2	. . Nut, M8, Nyloc
2	033274	1	. Frame
	000003	2	. . Screw, socket countersunk, M8 x 20mm
	011071	4	. . Nut, M6, Nyloc
NI	032532	2	. Wiring loom

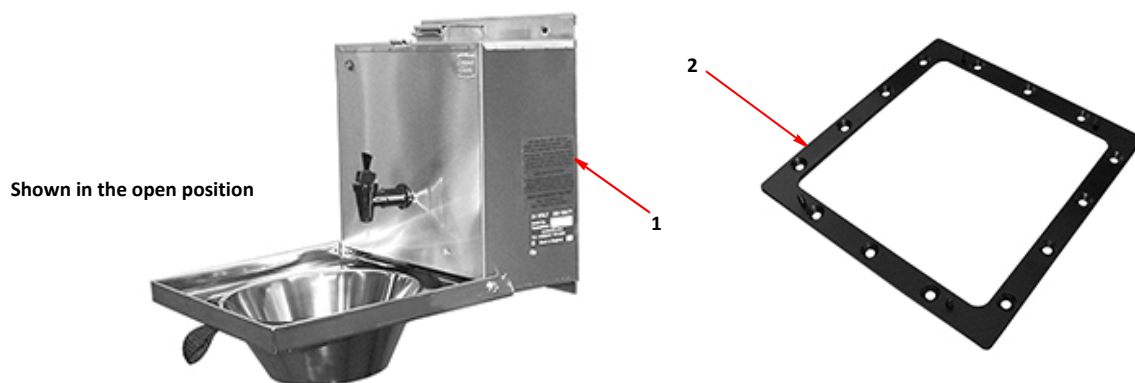
**Notes:-**

- \* Teal hand basin support legs vary according to chassis manufacture, when ordering please contact your nearest Scarab Distributor or Scarab Parts Department.





**HAND LANCE DETERGENT KIT - OPTION**

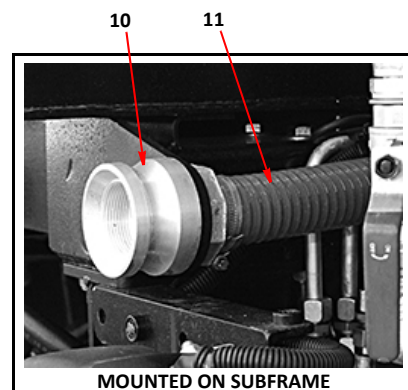
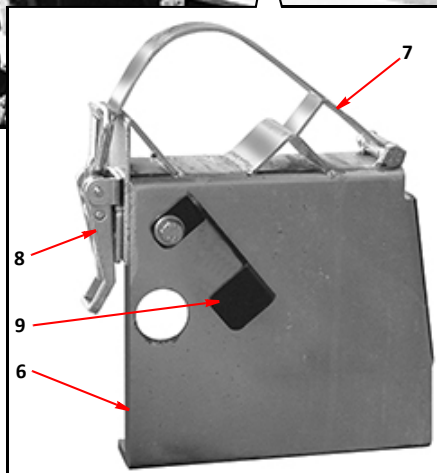
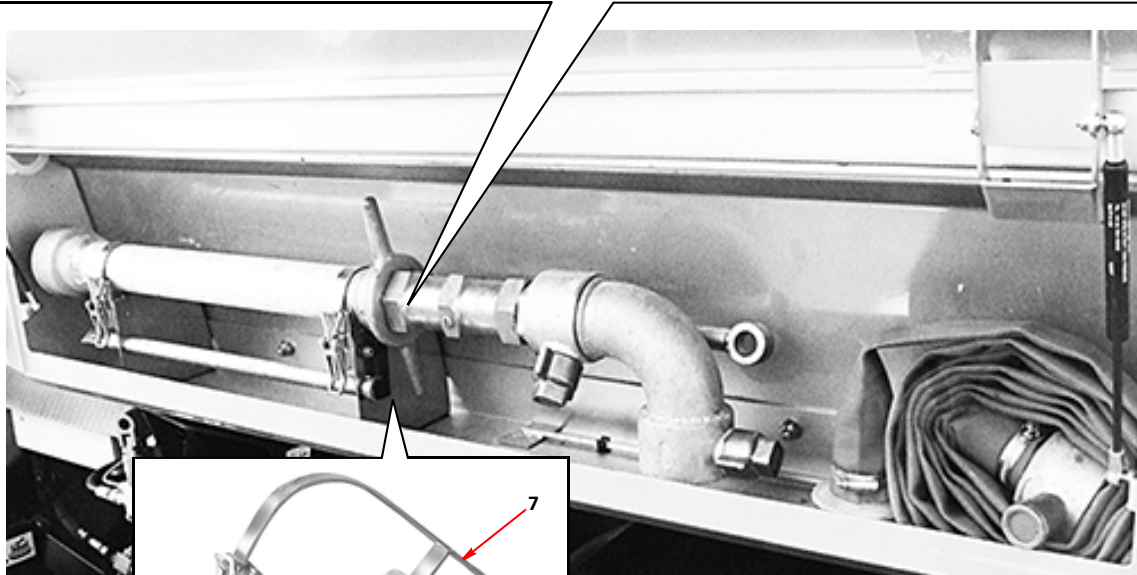
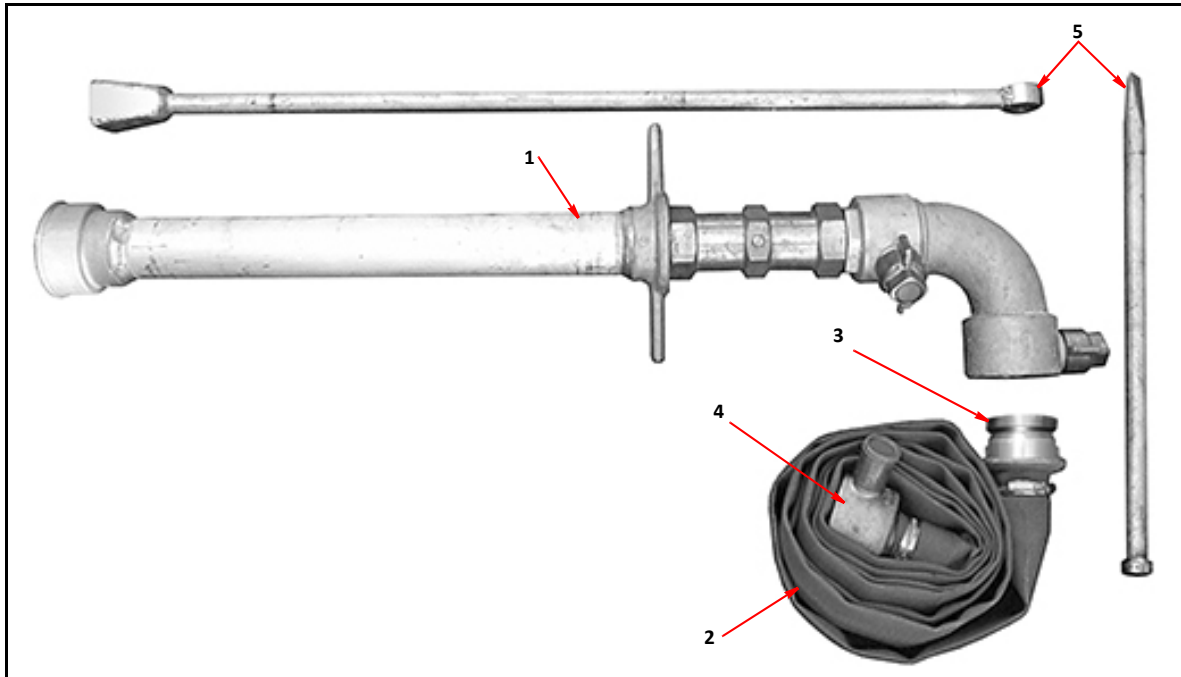


**TEAL WASH BASIN**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Locker Mounted Water Hydrant Kit * - (Option)</b>			
1	014544	1	Standpipe
2	014547	1	. Hose, lay flat, 4 m long
3	014546	1	. Hydrant instantaneous coupling, 2½" male x 2" hose tail
4	013171	1	. Hydrant coupling, 2½" female x 2" hose tail
NI	012927	2	. . Hose clamp, worm drive, 40-55mm
5	014545	1	. Hydrant key and bar
6	020484	2	. Bracket, standpipe mounting
7	020483	2	. . Strap, standpipe mounting
8	010509	2	. . Fastener with hinged toggle
	000021	2	. . . Setscrew, M6 x 40mm
	011002	4	. . . Screw, countersunk slot head, M6 x 16mm
	011071	6	. . . Nut, M6, Nyloc
	011010	4	. . . Setscrew, M8 x 20mm
	011073	4	. . . Nut, M8, Nyloc
9	031504	1	. . . Hydrant bar stop (auxiliary tool locker only)
	011010	1	. . . . Setscrew, M8 x 20mm
	011073	1	. . . . Nut, M8, Nyloc
10	025140	1	. Adaptor, male (with back nut)
11	001045	AR	. . Hose, green, medium duty 1½" bore
	003007	2	. . . Hose clamp, worm drive, 35-50mm

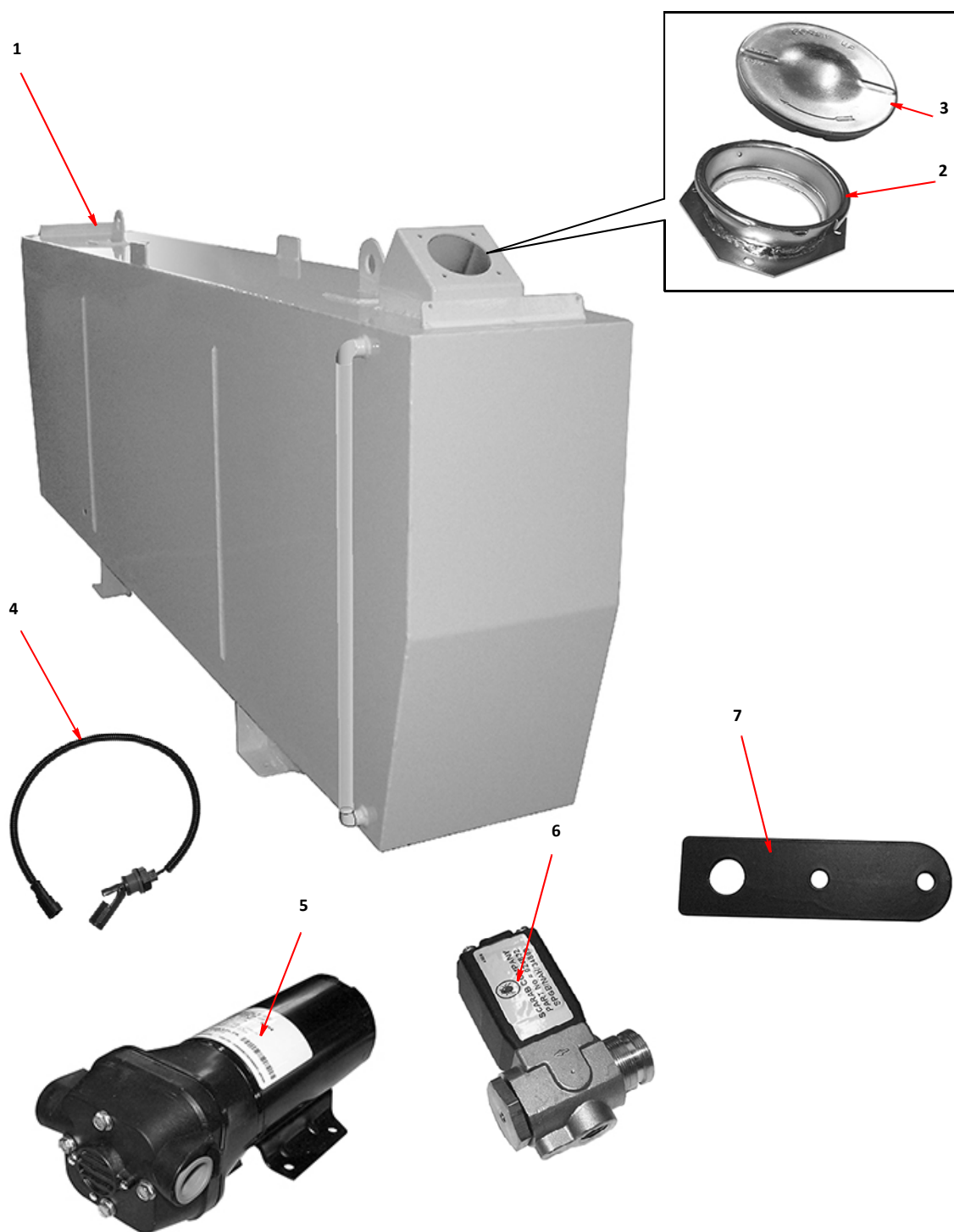
**Notes:-**

\* Hydrant kits are located in the hopper locker (**Merlin/XP**) or, the auxiliary tool locker (**Magnum**).



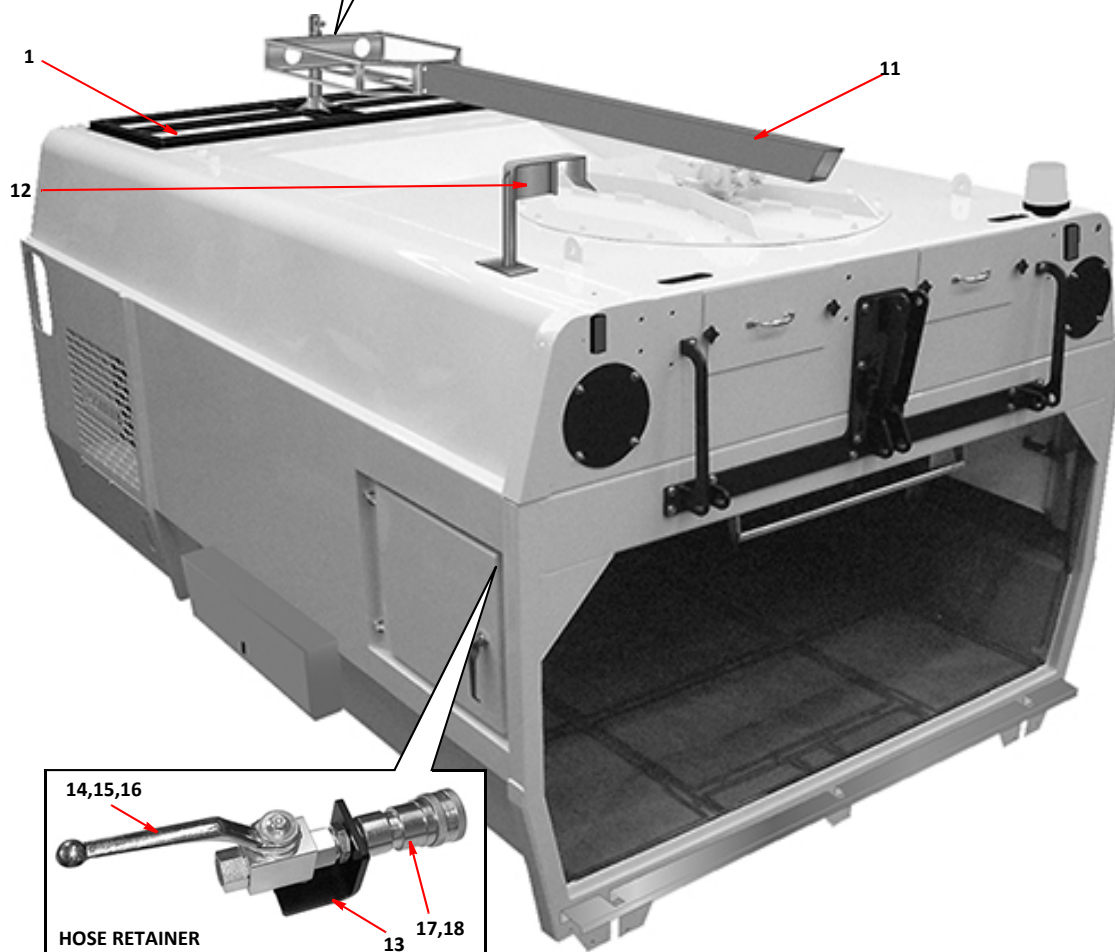
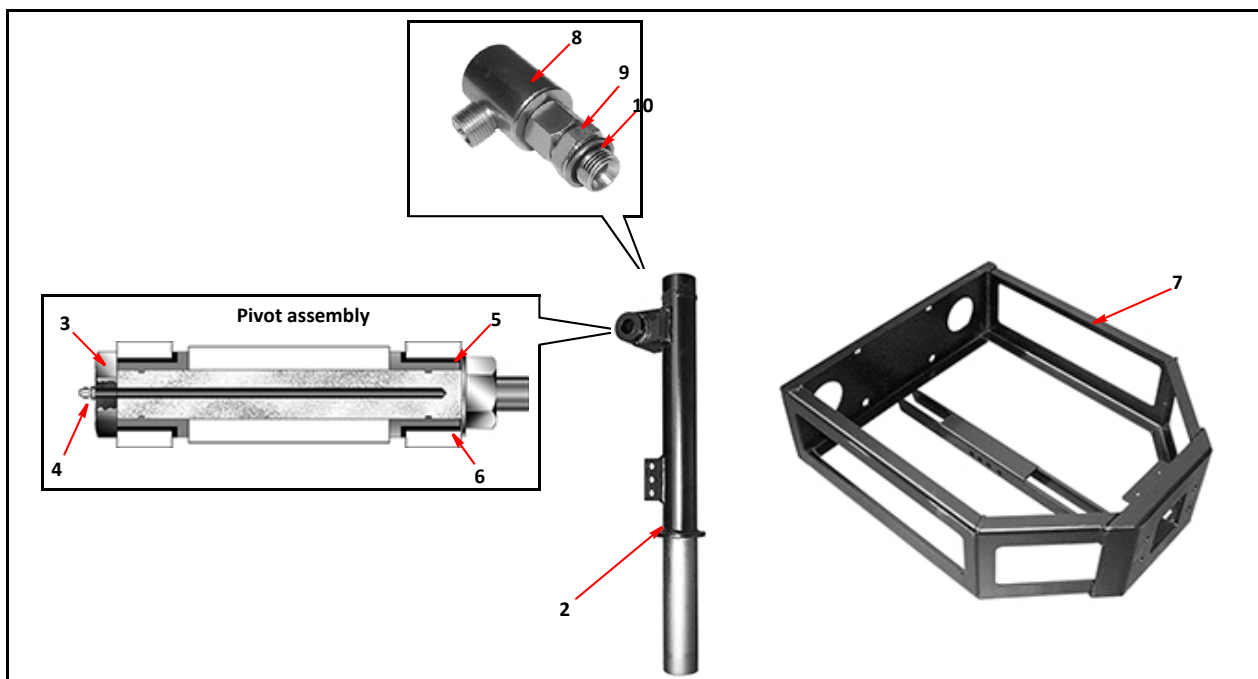
**LOCKER MOUNTED WATER HYDRANT KIT**

E31		MERLIN and MAGNUM	
Item	Part Number	Quantity	Description
<b>Front Spray Bar Detergent Tank Kit - (Option)</b>			
1	*	1	Detergent tank
NI	*	1	. Base, detergent tank
2	014040	1	. Filler assembly
	000252	4	. . Setscrew, M6 x 20mm, stainless steel
	000254	4	. . Washer, M6, stainless steel
	000253	4	. . Nut, M6, Nyloc, stainless steel
3	013661	1	. . Filler cap
4	036871	1	. Float switch . . . . . Page H5
5	032710	1	. Detergent pump
6	024832	1	. Water valve
7	024835	1	. . Bracket, mounting, water valve
NI	030323	1	Spray bar . . . . . Page E17



**FRONT SPRAY BAR DETERGENT TANK KIT**

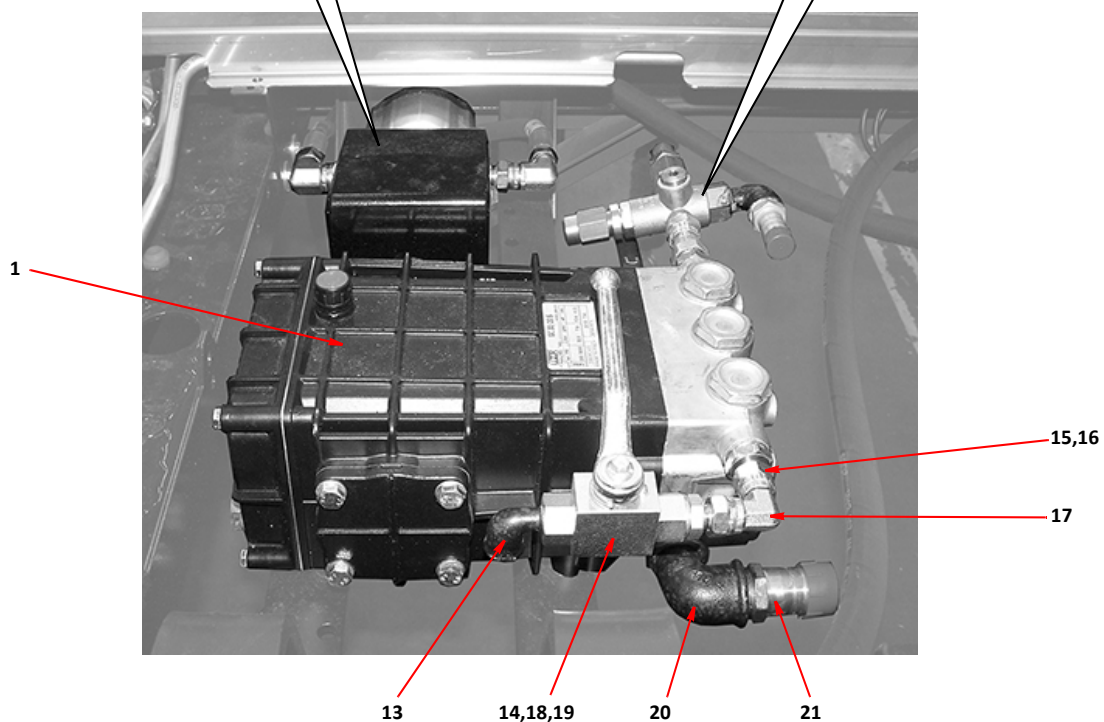
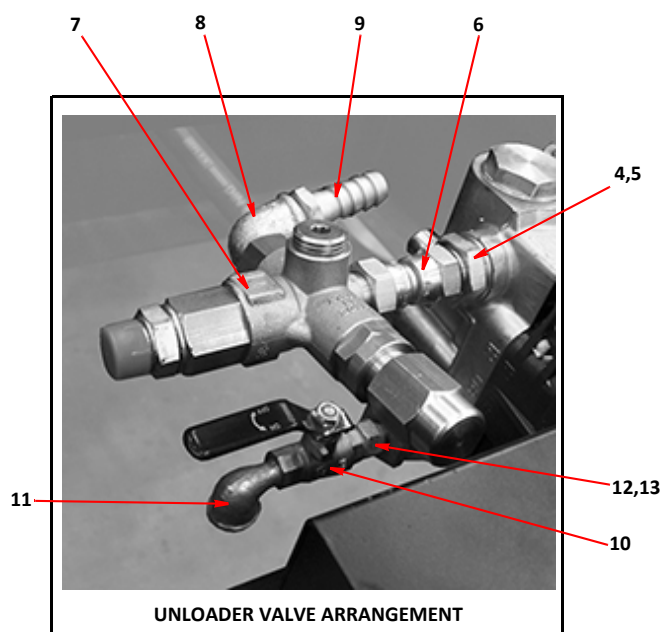
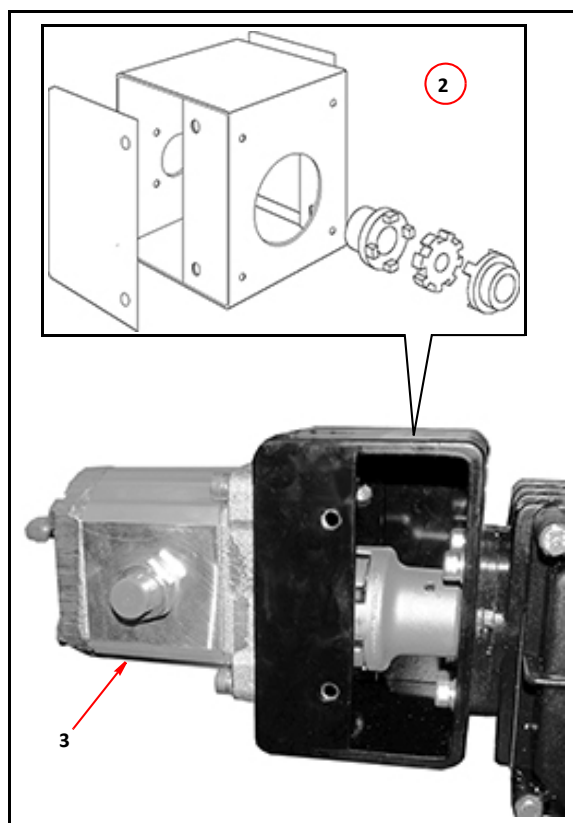
Item	Part Number	Quantity	Description
<b>Water Boom Assembly - Merlin and Magnum - (Option)</b>			
1	028613	1	Support bracket ( <b>Merlin</b> )
	011031	13	. Setscrew, M10 x 25mm
	011074	13	. Washer, M10
	011075	13	. Nut, M10, Nyloc
NI	030522	1	Support bracket ( <b>Magnum</b> )
	011031	8	. Setscrew, M10 x 25mm
	011074	8	. Washer, M10
	011075	8	. Nut, M10, Nyloc
2	027945	1	Universal joint
3	014796	1	. Pivot bolt
4	010903	1	. Grease point $\frac{1}{8}$ " BSP
	011060	1	. Nut, M16, Nyloc
	011135	1	. Washer, M16
5	014799	2	. Spacer sleeve
6	013012	2	. Bush, king pin
7	027952	1	Hose-reel carrier
	000205	4	. Setscrew, M14 x 25mm
	011127	4	. Nut, M14, Nyloc
NI	013486	2	. Gas strut
8	010422	2	. Rotating joint, M/F, $\frac{1}{2}$ " BSP
9	011160	2	. . Adaptor, M/M, $\frac{1}{2}$ " BSP
10	011154	2	. . Seal, Dowty, $\frac{1}{2}$ " BSP
11	027949	1	Hose support bar ( <b>Merlin</b> )
NI	030523	1	Hose support bar ( <b>Magnum</b> )
	011051	4	. Setscrew, M12 x 25mm
	011077	4	. Nut, M12, Nyloc
NI	014799	3	. Spacer, $\varnothing 20 \times 41 \times 10.5$ bore
	011055	3	. Bolt, M12 x 65mm
12	028614	1	Stowage hook
	011031	2	. Setscrew, M10 x 25mm
	011074	2	. Washer, M10
13	028155	1	Bracket, hose retainer
14	011257	1	. Ball valve $\frac{1}{4}$ " BSP
15	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP
16	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
17	023360	1	. Quick-release coupling, female $\frac{3}{8}$ " BSP
18	011153	2	. . Seal, Dowty, $\frac{3}{8}$ " BSP
NI	035627	2	Side spacer bracket, hose-reel carrier. (1250 water tank)
NI	035628	1	Front spacer bracket, hose-reel carrier. (1250 water tank)
NI	023538	1	Hose reel assembly . . . . . Page E25
NI	010970	1	. Hose, rubber, $\frac{1}{2}$ " BSP x 460mm, straight ends



**WATER BOOM ASSEMBLY - MERLIN AND MAGNUM**

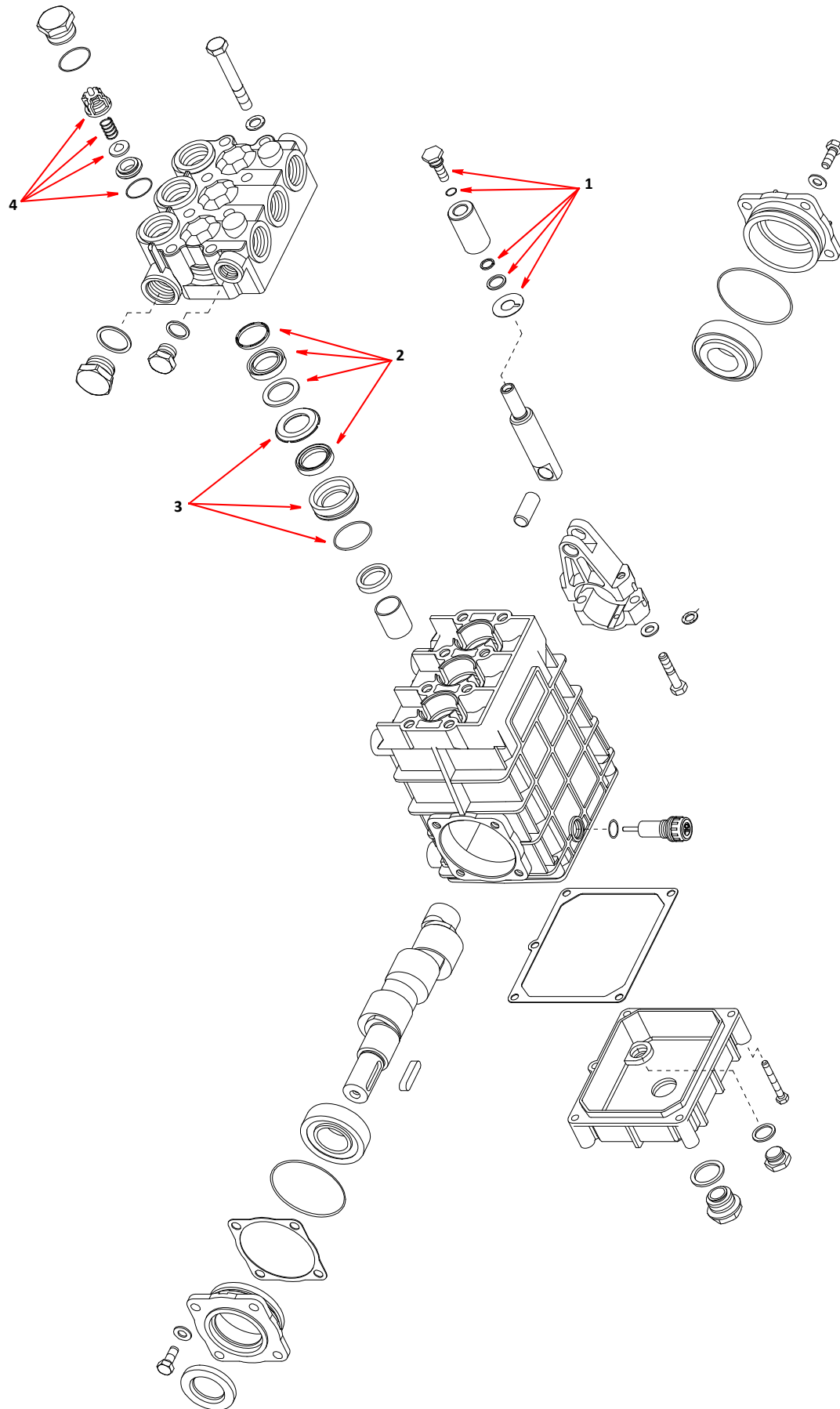
Item	Part Number	Quantity	Description
<b>High Pressure Water Pump - 30 litres/minute - Arrangement - (Option)</b>			
1	039940	1	Pump, High-Pressure, 30 litres/minute - 160 bar
	011031	4	. Setscrew, M10 x 25mm
	011095	4	. Spring washer, M10
2	036654	1	. Drive box kit (with cover plate)
	000017	4	. . Screw, socket cap head, M8 x 30mm
	011093	4	. . Spring washer, M8
3	025373	1	. Motor, hydraulic, 19cc, (Reversible) . . . . .Page F37
	000017	4	. . Screw, socket cap head, M8 x 30mm
	011093	3	. . Spring washer, M8
4	011159	1	. . Adaptor, M/M, $\frac{3}{8}$ " BSP
5	011153	1	. . . Seal, Dowty, $\frac{3}{8}$ " BSP
6	011214	1	. . Adaptor, F/F, $\frac{3}{8}$ " BSP
7	010599	1	Valve unloader (160 bar pump only)
8	010913	1	. Elbow, galvanised, M/F, $\frac{3}{8}$ " BSP
9	010930	1	. , Hose tail, $\frac{3}{8}$ " BSP x $\frac{5}{8}$ " hose
10	011743	1	. Valve, ball $\frac{1}{4}$ " BSP, pump low pressure drain
11	010910	2	. . Elbow, galvanised, M/F, $\frac{1}{4}$ " BSP
12	003006	1	. Adaptor, galvanised, M/F, $\frac{3}{4}$ " x $\frac{1}{4}$ " BSP
13	010944	1	. Adaptor, galvanised, M/M, $\frac{1}{4}$ " BSP
14	011257	1	. Ball valve, $\frac{1}{4}$ " BSP, pump high pressure drain
15	011199	1	. . Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP
16	011153	1	. . . Seal, Dowty, $\frac{3}{8}$ " BSP
17	011171	1	. . Elbow, swivel, F/F, $\frac{1}{4}$ " BSP
18	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
19	011158	1	. . Adaptor, M/M, $\frac{1}{4}$ " BSP
20	010918	1	. Elbow, galvanised, M/F, $\frac{3}{4}$ " BSP
21	010931	1	. . Hose tail, $\frac{3}{4}$ " BSP x 1" hose





**HIGH PRESSURE WATER PUMP 30 LITRES/MINUTE - ARRANGEMENT**

Item	Part Number	Quantity	Description
			High Pressure Water Pump - 30 litres/minute - Kit Parts- (Option)
1	*	1	. Seal kit (KIT 6 )
2	*	1	. Water seal kit (KIT 11)
3	*	1	. Water seal kit (KIT 18)
4	*	1	. Valve kit Including (KIT 31)

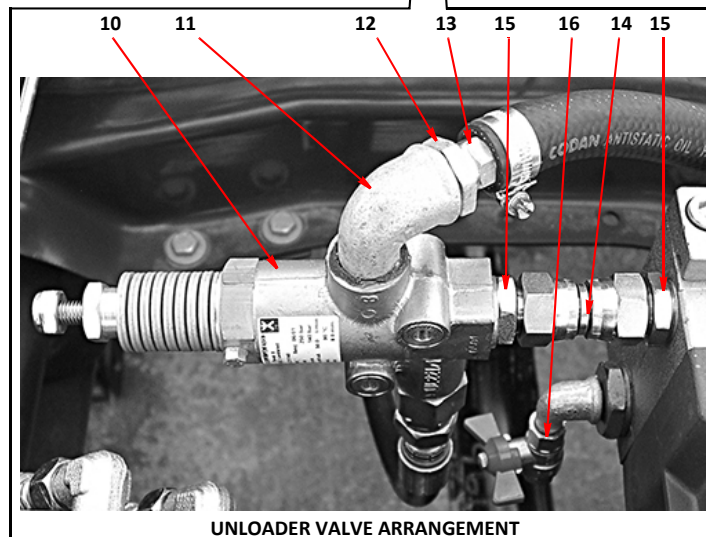
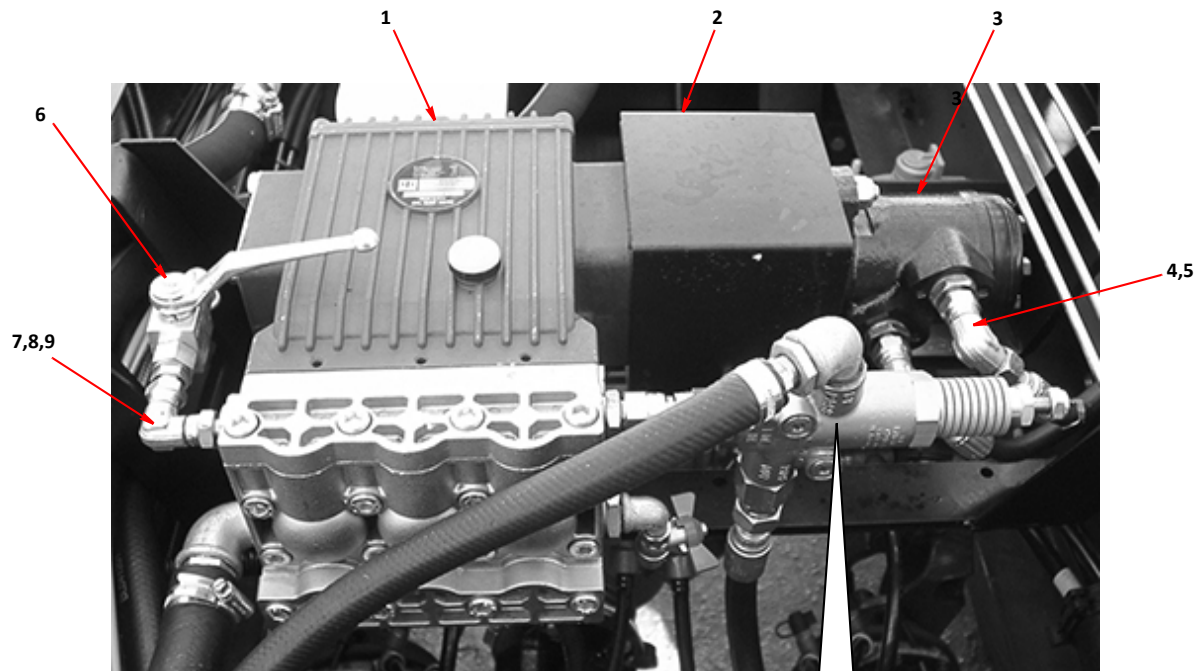


**HIGH PRESSURE WATER PUMP 30 LITRE/MINUTE - SEAL KITS**

Item	Part Number	Quantity	Description
<b>High Pressure Water Pump - 42 litres/minute - Arrangement - (Option)</b>			
1	020308*	1	Pump, high-pressure, 42 litres/minute
NI	020311	1	. Coupling half, 1 bore
NI	020309	1	. Coupling half, 35 bore
NI	020312	1	. Sleeve, coupling
2	020643	1	. . Guard, coupling
3	013527	1	Motor, hydraulic . . . . .Page F37
4	011167	2	. Adaptor, $\frac{1}{2}$ " BSP x $\frac{3}{8}$ " BSP
NI	011154	1	. . Seal, Dowty, $\frac{1}{2}$ "
5	011172	2	. Elbow, swivel, M/F, $\frac{3}{8}$ " BSP
NI	020347	1	. Mounting bracket, motor
6	011257	1	Ball valve $\frac{1}{4}$ " BSP, pump high pressure drain
NI	010910	1	. Elbow, $\frac{1}{4}$ " BSP
7	011158	1	. Adaptor, $\frac{1}{4}$ " BSP x $\frac{1}{4}$ " BSP
NI	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
8	011169	1	. Elbow, swivel, F/F, $\frac{1}{4}$ " BSP
9	011199	1	. . Adaptor, $\frac{3}{8}$ " BSP x $\frac{1}{4}$ " BSP
NI	011153	1	. . . Seal, Dowty, $\frac{3}{8}$ "
10	022739	1	Valve, unloader ( $\frac{1}{2}$ " BSP ports)
11	010942	1	. Elbow, M/F, $\frac{1}{2}$ " BSP
12	010914	1	. . Bush, reducing, $\frac{1}{2}$ " BSP x $\frac{3}{8}$ " BSP
13	010930	1	. . Hose tail $\frac{3}{8}$ " BSP x $\frac{5}{8}$ " BSP
14	011178	1	. Adaptor, F/F, $\frac{1}{2}$ " BSP 16/8/8
15	011160	2	. . Adaptor, $\frac{1}{2}$ " x $\frac{1}{2}$ "
NI	011154	1	. . . Seal, Dowty, $\frac{1}{2}$ " BSP
16	011743	1	Valve, ball $\frac{1}{4}$ " BSP, pump low pressure drain

**Notes:-**

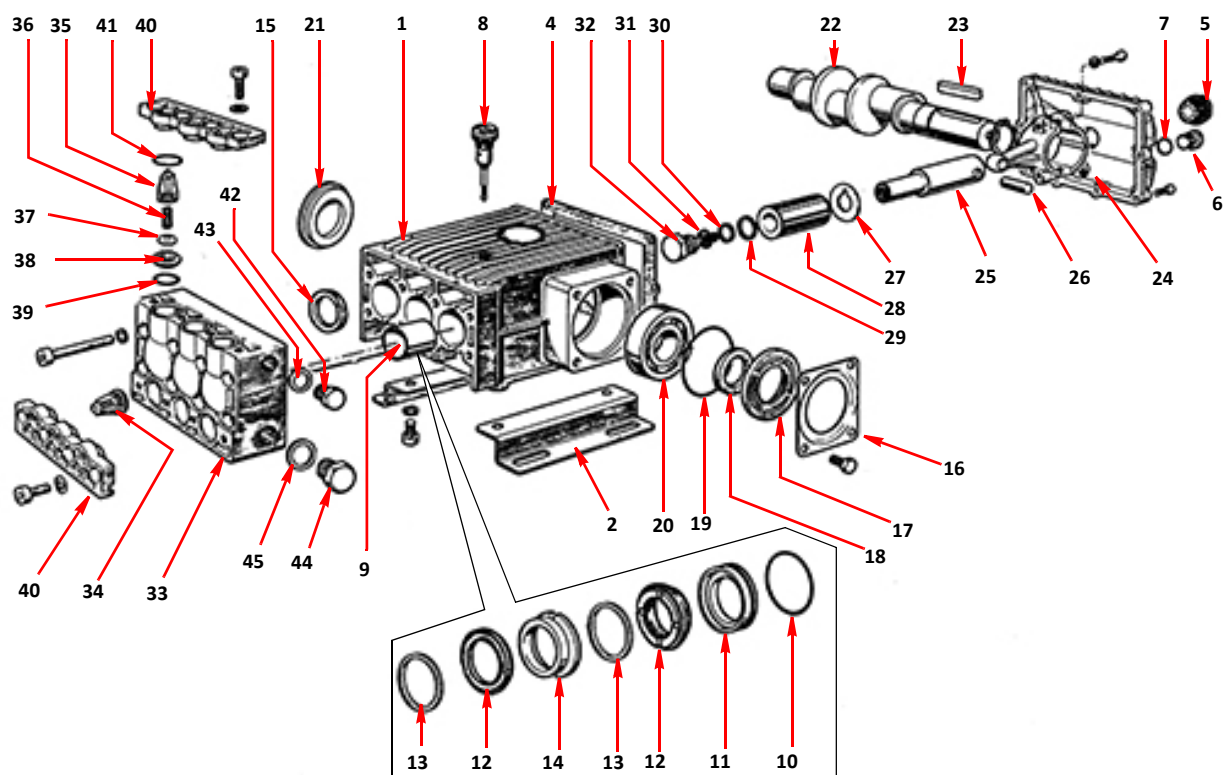
\* For pump components see Page E41.



UNLOADER VALVE ARRANGEMENT

HIGH PRESSURE WATER PUMP 42 LITRES/MINUTE - ARRANGEMENT

Item	Part Number	Quantity	Description
<b>High Pressure Water Pump - 42 litres/minute - Components - (Option)</b>			
1	022110	1	<b>CRANKCASE</b>
2	022136	2	. Foot
	022139	4	. . Bolt
	022138	4	. . Washer
3	022119	1	. Rear cover
	022126	9	. . Bolt
4	022112	1	. . Gasket, rear cover
5	022124	1	. . Oil sight glass
6	022125	1	. . Cap
7	022123	1	. . . O-Ring
8	022111	1	. Dipstick
9	022137	3	. Cylinder guide
10	022144	3	. O-Ring
11	022145	3	. Oil seal
12	022146	6	. Oil seal
13	022147	6	. Oil seal
14	022148	3	. Collar
15	022109	3	. Oil seal
16	022131	2	. Crankcase cover, bearing assembly
	022130	8	. . Bolt
17	022132	1	. Spacer
18	022133	1	. Seal
19	022134	2	. O-Ring
20	022135	2	. Bearing
21	022151	1	. Spacer
22	022118	1	<b>CRANKSHAFT</b>
23	022149	1	. Key
	022150	1	. Circlip
24	022120	3	. Connecting rod
25	022128	3	. . Piston guide
26	022127	3	. . . Pin
27	022129	3	. . . Washer
28	022117	3	. . . Piston
29	022116	3	. . . Washer
30	022115	3	. . . Washer
31	022114	3	. . . O-Ring
32	022113	3	. . . . Piston bolt
33	022143	1	<b>HEAD</b>
	022098	8	. Bolt, M10 x 80mm
	022099	8	. Washer
34	022105	6	. Valve, complete
35	022104	6	. . Valve
36	022103	6	. . Spring
37	022102	6	. . Valve ring
38	022101	6	. . Valve seat
39	022100	6	. . O-Ring
40	022107	2	. Cover
	022108	4	. . Bolt
	022099	4	. . Washer
41	022106	6	. . O-Ring
42	022125	2	. Cap
43	022142	1	. . Washer
44	022140	1	. Plug
45	022141	1	. . Washer

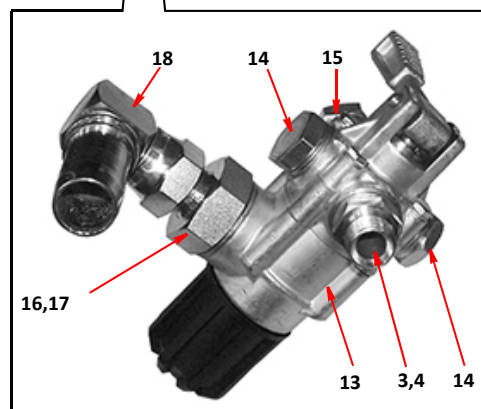
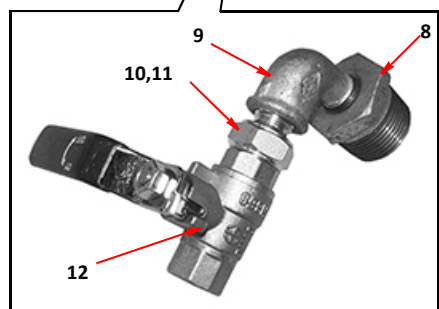
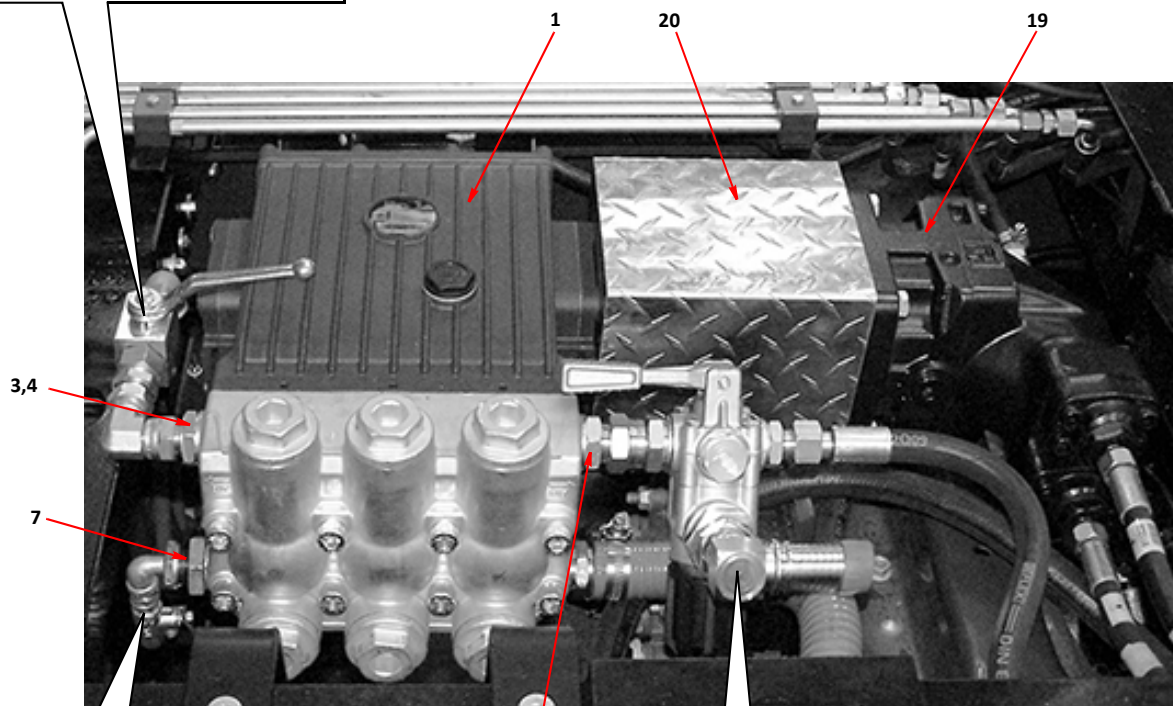
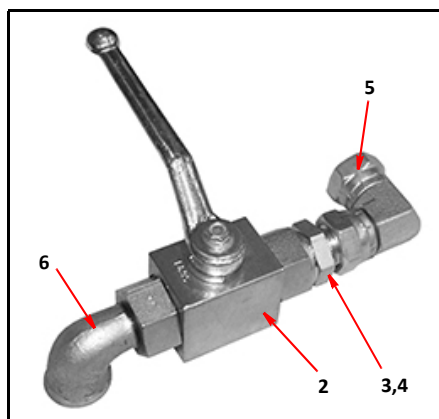


HIGH PRESSURE WATER PUMP, 42 LITRE/MINUTE - COMPONENTS

Item	Part Number	Quantity	Description
<b>High Pressure Water Pump - 42 litres/minute - Kit Parts</b>			
NI	022152	1	<b>Kit No 32</b> , Comprising 2 x Item 18
NI	022153	1	<b>Kit No 37</b> , Comprising 3 x Item 15
NI	022154	1	<b>Kit No 38</b> , Comprising 3 x Item 12
NI	022155	1	<b>Kit No 39</b> , Comprising Items 10, 11, 12, 13 & 14
NI	022156	1	<b>Kit No 40</b> , Comprising 3 x Items 10 & 11
NI	022157	1	<b>Kit No 41</b> , Comprising 6 x Item 13
NI	022158	1	<b>Kit No 42</b> , Comprising 6 x Item 14
NI	022159	1	<b>Kit No 62</b> , Comprising 6 x Items 35, 36, 37, 38 & 39
NI	022160	1	<b>Kit No 74</b> , Comprising 3 x Items 29, 30, 31 & 32

Item	Part Number	Quantity	Description
<b>High Pressure Water Pump - 75 litres/minute - Arrangement - (Option)</b>			
1	027862	1	Pump, high pressure, 75 litres/minute
2	023176	1	. Ball valve, drain, high pressure, $\frac{1}{2}$ " BSP
3	011160	1	. . Adaptor, M/M, $\frac{1}{2}$ " BSP
4	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
5	011173	1	. . Elbow, swivel, F/F, $\frac{1}{2}$ " BSP
6	010942	1	. . Elbow, galvanised, M/F, $\frac{1}{2}$ " BSP
7	000154	1	. Adaptor, galvanised, M/F, $1\frac{1}{4}$ " x $\frac{3}{4}$ " BSP
8	003006	1	. Adaptor, galvanised, M/F, $\frac{3}{4}$ " x $\frac{1}{4}$ " BSP
9	010910	1	. Elbow, galvanised, M/F, $\frac{1}{4}$ " BSP
10	011158	1	. Adaptor, M/M, $\frac{1}{4}$ " BSP
11	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
12	017743	1	. Ball valve, $\frac{1}{4}$ " BSP
13	020307	1	. Valve, unloader
14	011243	2	. . Plug, $\frac{1}{2}$ " BSP
15	022277	1	. . Adaptor, M/F, $\frac{1}{2}$ " BSP
16	011193	1	. . Adaptor, M/M, $1\frac{1}{4}$ " x $\frac{3}{4}$ " BSP
17	011156	1	. . . Seal, Dowty, 1" BSP
18	011210	1	. . Hose tail, swivel elbow, $\frac{3}{4}$ " BSP x 1" hose
NI	003029	1	. Hose tail, 1" BSP x $1\frac{1}{4}$ " hose
19	027866	1	. Motor, hydraulic, pump drive . . . . .Page F37
NI	021465	1	. . Bracket, motor mounting
	011034	4	. . Setscrew, M10 x 40mm
	011095	4	. . Spring washer, M10
	011054	4	. . Setscrew, M12 x 45mm
	011077	4	. . Nut, M12
NI	027863	1	. Coupling, pump drive
20	027931	1	. Cover, drive coupling
	011001	4	. . Setscrew, M6 x 16mm
	011091	4	. . Spring washer, M6
	011090	4	. . Washer, M6

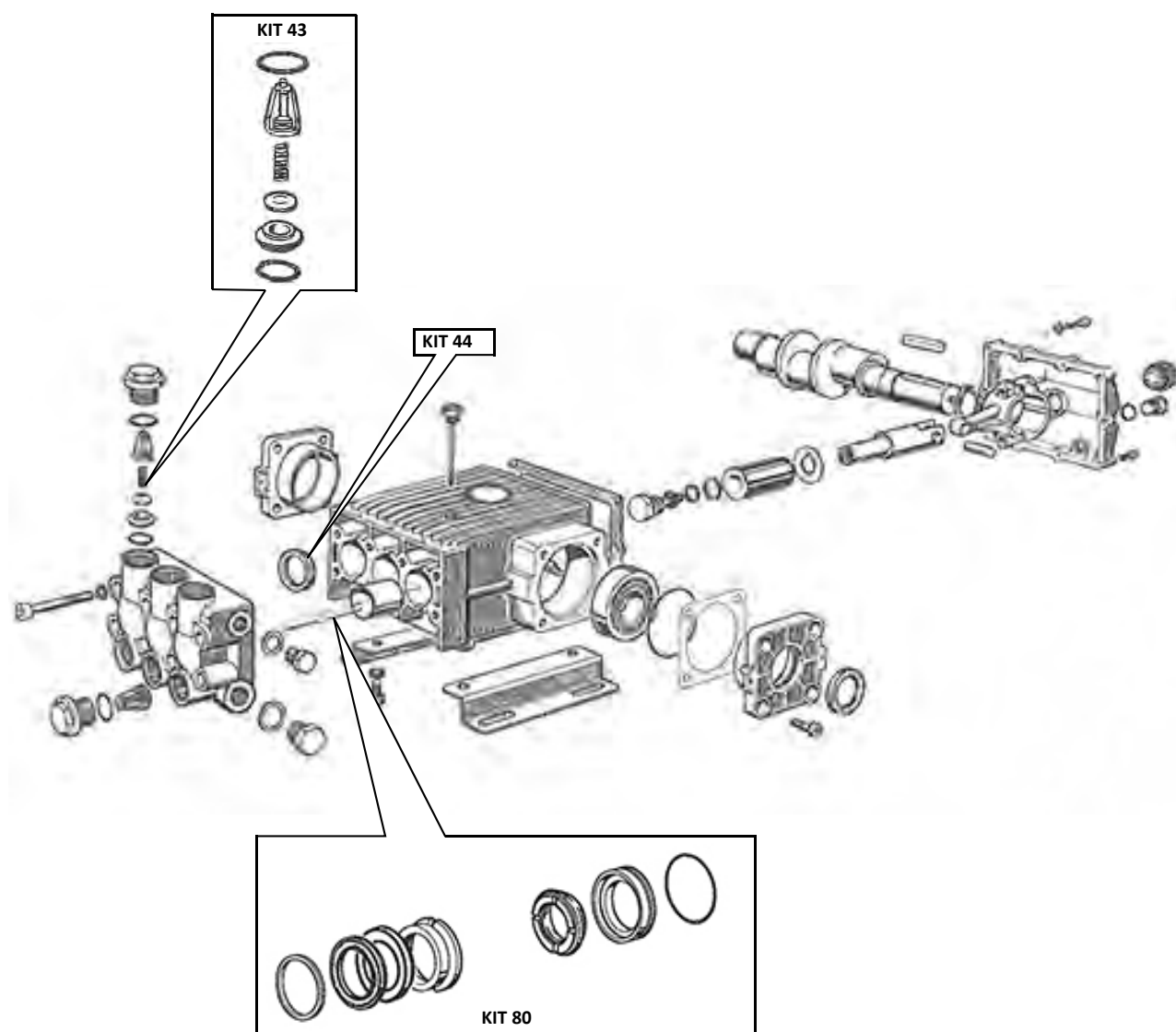




**HIGH PRESSURE WATER PUMP 75 LITRES/MINUTE - ARRANGEMENT**

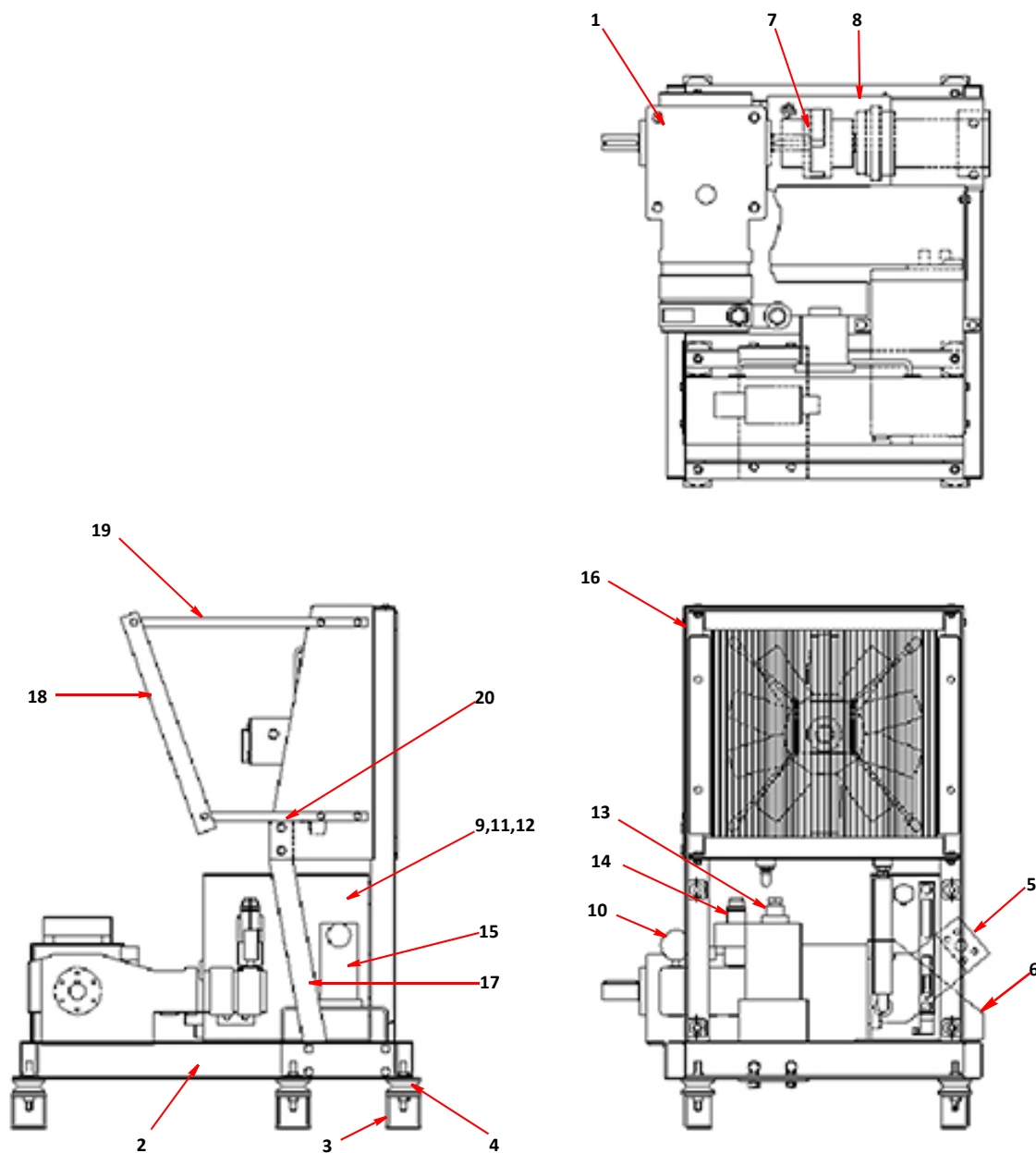
Item	Part Number	Quantity	Description
*			High Pressure Water Pump - 75 litres/minute - Components - (Option)

Notes:-  
\* Please contact Scarab Parts Department for all internal components of this pump.



**HIGH PRESSURE WATER PUMP 75 LITRES/MINUTE - COMPONENTS**

Item	Part Number	Quantity	Description
<b>High Pressure Water Pump - Pratissoli 59 litres/minute - (Option)</b>			
1	026992	1	Water pump, Pratissoli, 250 bar
2	026987	1	. Frame, water pump
3	026990	6	. . Mounting pad
4	026999	6	. . . A/V mount AVM 2314S
5	026993	1	. . Motor hydraulic A2FM90/61W-VBB
6	026988	1	. . . Mounting hydraulic motor
7	026884	1	. . Coupling 250 bar high-volume pump
8	026989	1	. . . Coupling cover
9	022616	1	Oil tank assembly
10	002105	1	. Pressure gauge 0-400 bar
11	025623	1	. Float switch
12	023515	1	. Temp switch N/O $\frac{3}{8}$ " BSP
13	026994	1	. Regulator valve
14	026995	1	. Safety valve (250 bar)
15	026998	1	. Manifold, control
NI	028595	1	. . Manifold mounting bracket
16	025374	1	Oil cooler assembly
17	026991	1	. Leg, cooler frame
18	027001	2	. Deflector, oil cooler
19	027013	4	. Top support, oil cooler
20	027014	4	. Bottom support, oil cooler
NI	003027	1	Tee 1" galvanised
NI	003028	1	Elbow $\frac{3}{4}$ " galvanised
NI	001091	1	Hose $\frac{3}{8}$ " x 2800mm, stainless steel
NI	001120	1	Hose $\frac{3}{4}$ " x 1000mm, stainless steel
NI	001122	1	Hose $\frac{3}{4}$ " x 1000mm, stainless steel
NI	001123	1	Hose $\frac{3}{4}$ " x 1300mm, stainless steel



**PRATISSOLI 59 LITRE/MINUTE-250 BAR HIGH PRESSURE PUMP**

# MERLIN and MAGNUM

## HYDRAULIC SYSTEM & GANTRY ARRANGEMENT SECTION F

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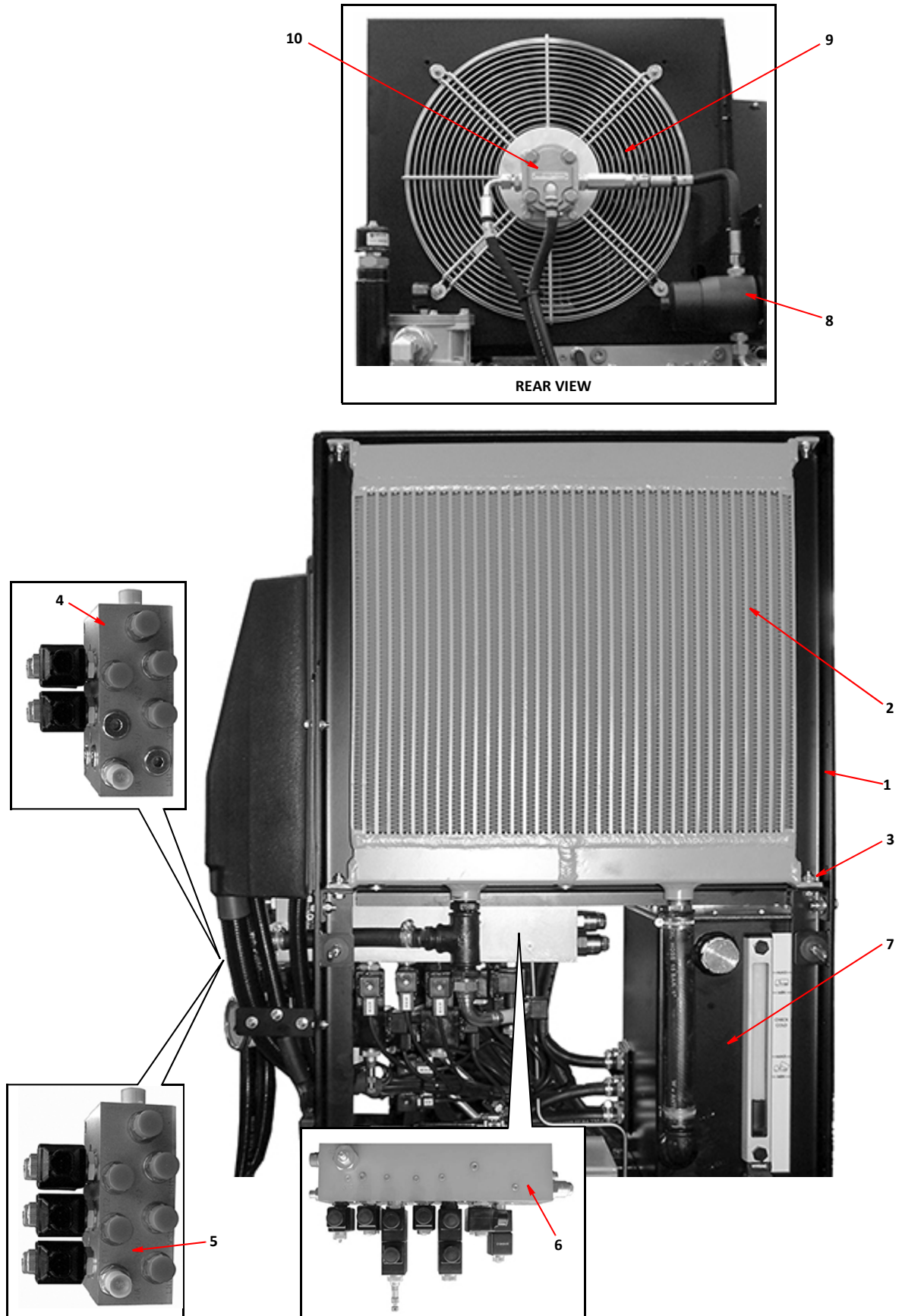
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Item	Part Number	Quantity	Description
<b>Gantry General Arrangement</b>			
1	037086	1	Oil cooler frame . . . . . Page C5
2	031732	1	. Oil cooler . . . . . Page F3
3	030487	2	. . Bracket, oil cooler
	011011	6	. . . Setscrew, M8 x 25mm
	011073	6	. . . Nut, M8, Nyloc
	011092	12	. . . Washer, M8
	028646	AR	. . . Washer, packing, rubber
4	*	1	. Valve block, options . . . . . Page F19
	011143	1	. . Setscrew, M6 x 70mm
	011071	1	. . Nut, M6, Nyloc
	011010	1	. . Setscrew, M8 x 20mm
	011073	1	. . Nut, M8, Nyloc
5	*	1	. Valve block, brushes . . . . . Page F19
	011143	1	. . Setscrew, M6 x 70mm
	011071	1	. . Nut, M6, Nyloc
	011010	1	. . Setscrew, M8 x 20mm
	011073	1	. . Nut, M8, Nyloc
6	*	1	. Valve block, main control . . . . . Page F11, F15
7	022616	1	. Hydraulic oil tank, assembly, HYDROSTATIC . . . . . Page F5
NI	023743	1	. Hydraulic oil tank, assembly, UNIDRIVE . . . . . Page F7
8	025103	1	. Filter, high pressure . . . . . Page F31
9	031734	1	. Cooler fan assembly . . . . . Page F3
	023504	4	. . Anti vibration mounting
	023505	4	. . Anti vibration mounting
	011092	4	. . Washer, M8
	011013	4	. . Setscrew, M8 x 35mm
	011073	4	. . Nut, M8 Nyloc
10	028752	1	. Motor. hydraulic, 16cc . . . . . Page F39

**Notes:-**

\* Please contact your nearest Scarab Distributor or the Scarab Parts Department if you require to purchase these items.

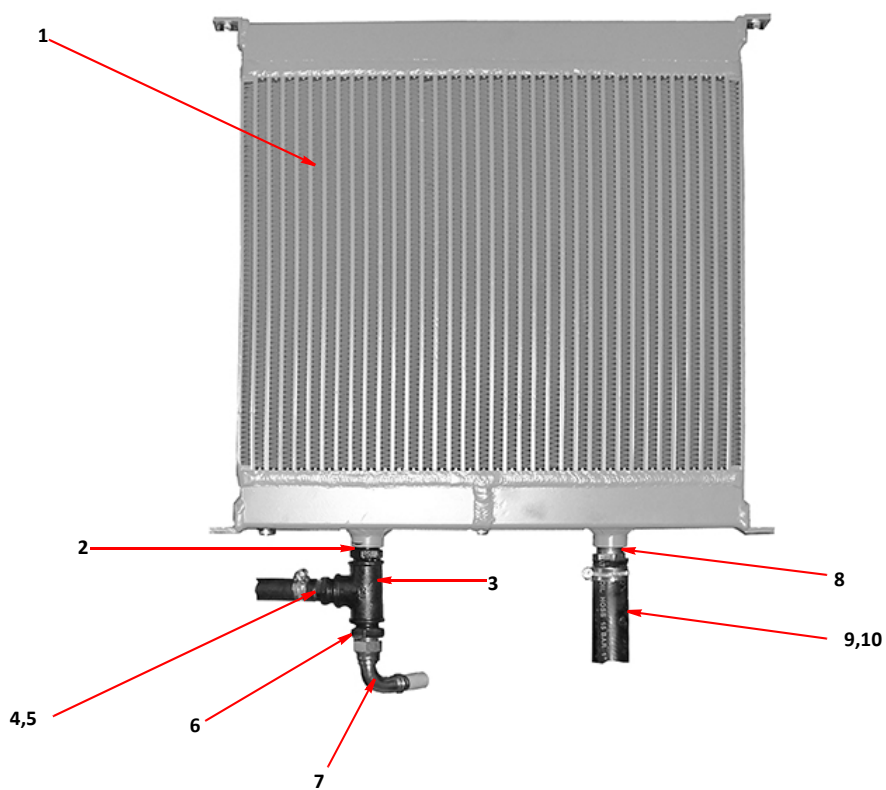




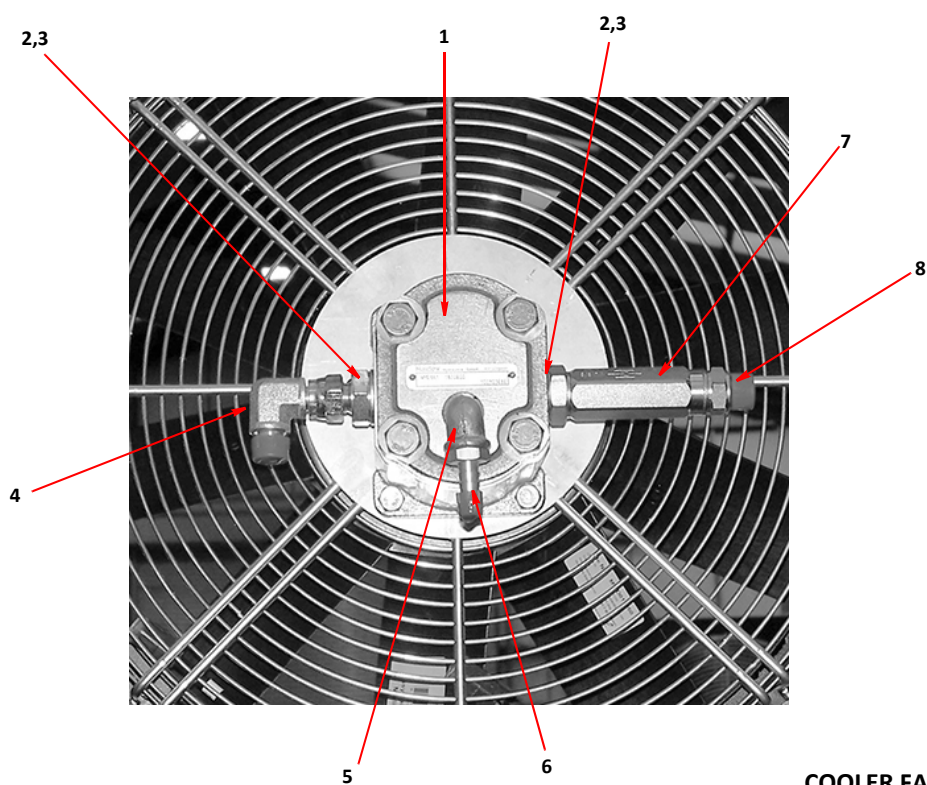
**GANTRY GENERAL ARRANGEMENT**

Item	Part Number	Quantity	Description
<b>Oil Cooler - Components</b>			
1	031732	1	Oil cooler . . . . . Page F1
2	010916	1	. Adaptor, galvanised, M/M, $\frac{3}{4}$ " BSP
3	010919	1	. . Tee, galvanised, M/M, $\frac{3}{4}$ " BSP
4	010946	1	. . Adaptor, galvanised, M/F, $\frac{3}{4}$ " x $\frac{3}{8}$ " BSP
5	010930	1	. . Hose tail, $\frac{3}{8}$ " BSP x $\frac{5}{8}$ " hose
6	011166	1	. . Adaptor, $\frac{3}{4}$ " BSP x $\frac{5}{8}$ " hose
7	011234	1	. . Elbow, hose tail, $\frac{1}{2}$ " BSP x $\frac{5}{8}$ " hose
8	010931	1	. Hose tail, $\frac{3}{4}$ " BSP x 1" hose
9	011000	1	. . Pipe, rubber, 1" bore x 200mm
10	010518	1	. . Clamp, worm drive, 30-40mm

Item	Part Number	Quantity	Description
<b>Cooler Fan Motor - Assembly</b>			
1	028752	1	Motor, hydraulic, 16cc . . . . . Page C5
	020883	1	Bracket, fan mounting
2	011166	2	Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
3	011152	2	Seal, Dowty, $\frac{1}{2}$ " BSP
4	011172	1	Elbow, swivel, M/F, $\frac{3}{8}$ " BSP
5	010910	1	Elbow, galvanised, M/M, $\frac{1}{4}$ " BSP
6	010922	1	Hose Tail $\frac{1}{4}$ " x $\frac{3}{8}$ " hose
7	011829	1	Valve, non return, M/M, $\frac{1}{4}$ " BSP
8	011167	1	Adaptor, M/M, $\frac{3}{8}$ " BSP

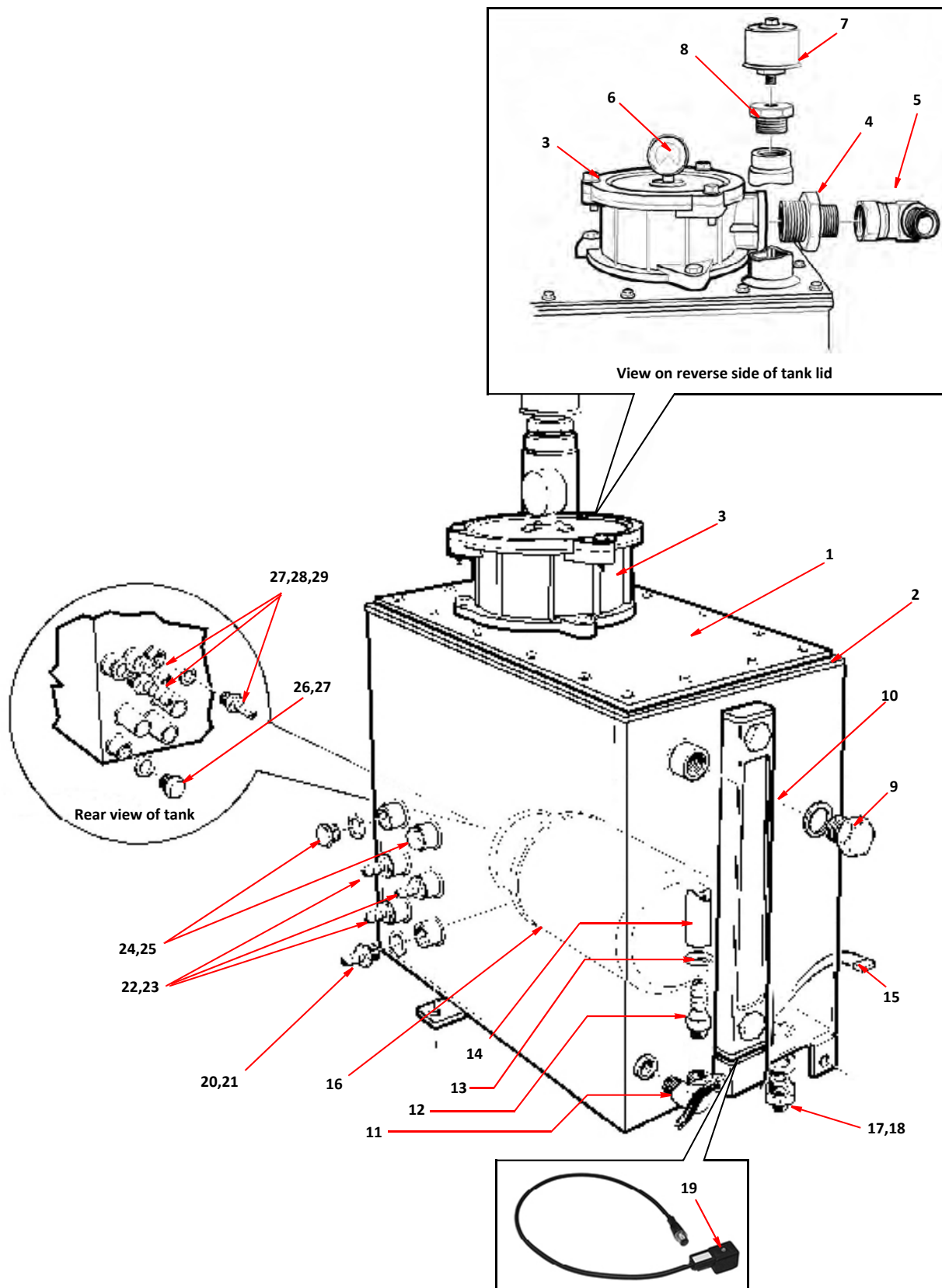


**OIL COOLER**

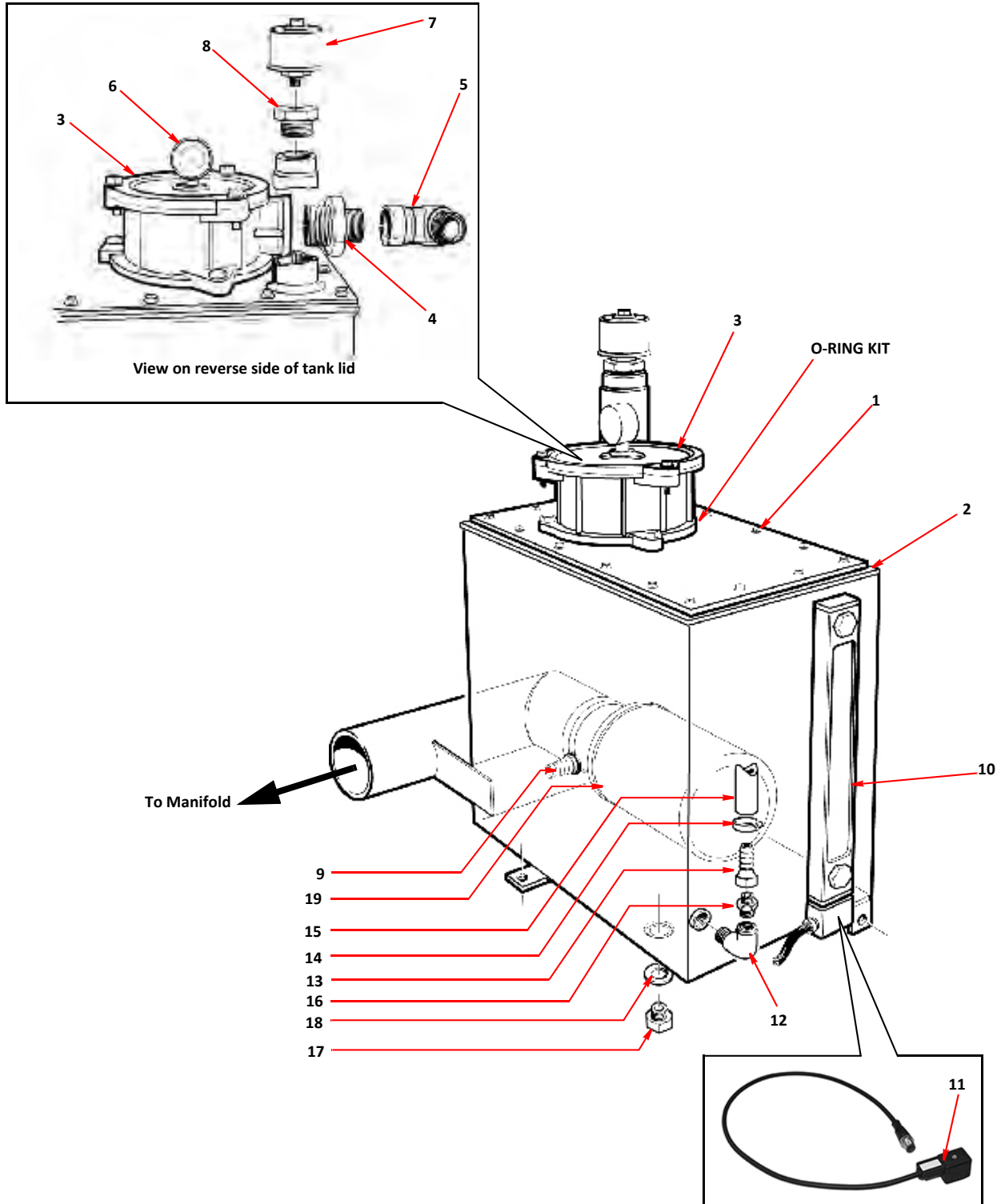


**COOLER FAN MOTOR - ASSEMBLY**

Item	Part Number	Quantity	Description
<b>Hydraulic Tank Arrangement - Hydrostatic Machines</b>			
1	022410	1	Tank, hydraulic oil, c/w lid . . . . . Page F1
	011031	3	. Setscrew, M10 x 25mm (tank to sub frame)
	011094	6	. Washer, M10
	011075	3	. Nut, M10, Nyloc
	011111	16	. Screw, 10-32 x $\frac{1}{2}$ " (tank lid)
2	022478	1	. Gasket, tank lid
3	013123	1	. Filter, return
NI	024405	1	. . O-Ring kit for 013123
	011032	3	. . Setscrew, M10 x 30mm
	011075	3	. . Nut, M10, Nyloc
NI	013125	1	. . Element, return filter
4	011184	1	. . Adaptor, M/M, $\frac{1}{4}$ " x $\frac{3}{4}$ " BSP
NI	011150	1	. . . Seal, Dowty, $\frac{1}{4}$ " BSP
5	011175	1	. . Elbow, swivel, M/F, $\frac{3}{4}$ " BSP
6	021719	1	. Gauge
7	020688	1	. Cap, filler/breather
NI	011156	1	. . Seal, Dowty, 1" BSP
8	020689	1	. . Plug, filler
9	011136	1	. Plug, blanking, $\frac{1}{4}$ " BSP
NI	011156	1	. . Seal, Dowty, 1" BSP
10	024039	1	. Gauge, fluid level . . . . . Page H5
NI	021979	2	. . Washer, sealing, rubber
11	011234	1	. Elbow, galvanised, M/F, $\frac{3}{4}$ " BSP
12	010959	1	. . Hose tail, $\frac{3}{4}$ " BSP x 1" hose
13	010518	2	. . Clamp, worm drive, 30-40mm
14	011000	AR	. . Hose, Rubber 1" bore
15	010305	1	. Magnet
16	020687	1	. Element, suction filter
17	011224	1	. Adaptor, M/M, $\frac{3}{4}$ " x $\frac{3}{8}$ " BSP
18	011124	1	. . Seal, Dowty, $\frac{3}{4}$ " BSP
19	036842	1	. Plug with cable and connector . . . . . Page H3
20	010923	1	. Hose tail, $\frac{3}{8}$ " BSP x $\frac{5}{8}$ " hose
21	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
22	010923	4	. Hose tail, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " hose
23	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
24	011242	2	. Plug, blanking, $\frac{3}{8}$ " BSP
25	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
26	011124	1	. Plug, blanking, $\frac{3}{4}$ " BSP (single hydraulic pump)
27	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
27	010931	1	. Hose tail, $\frac{3}{4}$ " BSP x 1" hose (double hydraulic pump)
NI	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
28	011235	3	. Hose tail, $\frac{1}{2}$ " BSP x $\frac{5}{8}$ " hose
29	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP



Item	Part Number	Quantity	Description
<b>Hydraulic Tank Arrangement - UniDrive Machines</b>			
1	023742	1	Tank, hydraulic oil, c/w lid . . . . . Page F1
	011031	3	. Setscrew, M10 x 25mm (tank to sub frames)
	011094	6	. Washer, M10
	011075	3	. Nut, M10, Nyloc
	011111	16	. Screw, 10-32 x $\frac{1}{2}$ " (tank lid)
2	022478	1	. Gasket, tank lid
3	013123	1	. Filter, return
NI	024405	1	. . O-Ring kit for 013123
NI	013125	1	. . Element, return filter
	011032	3	. . . Setscrew, M10 x 30mm
	011075	3	. . . Nut, M10, Nyloc
4	011252	1	. . Adaptor, M/M, $\frac{1}{4}$ " x $\frac{3}{4}$ " BSP
NI	011150	1	. . . Seal, Dowty, $\frac{1}{4}$ " BSP
5	011175	1	. . Elbow, swivel, M/F, $\frac{3}{4}$ " BSP
6	021719	1	. . Gauge
7	020688	1	. Cap, filler/breather
NI	011156	1	. . Seal, Dowty, 1" BSP
8	020689	1	. . Plug, filler
9	011235	1	. Hose tail, $\frac{3}{8}$ " BSP x $\frac{5}{8}$ " hose
NI	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
10	024039	1	. Gauge, fluid level (c/w screws - max torque = 10 Nm)
NI	021979	2	. . Washer, sealing, rubber
11	036842	1	. . Plug with cable and connector . . . . . Page H3
12	011234	1	. Elbow, galvanised, M/F, $\frac{3}{4}$ " BSP
13	011160	1	. . Hose tail, $\frac{3}{4}$ " BSP x 1" hose
14	010517	2	. . Clamp, worm drive, 18-25mm
15	010959	AR	. . Hose, rubber $\frac{1}{4}$ " bore
16	011224	1	. Adaptor, $\frac{3}{4}$ " x $\frac{3}{8}$ " BSP
17	011244	1	. Plug, blanking, $\frac{3}{4}$ " BSP
18	011155	1	. Seal, Dowty, $\frac{3}{4}$ " BSP
19	020687	1	. Element, suction filter
NI	010305	1	. Magnet



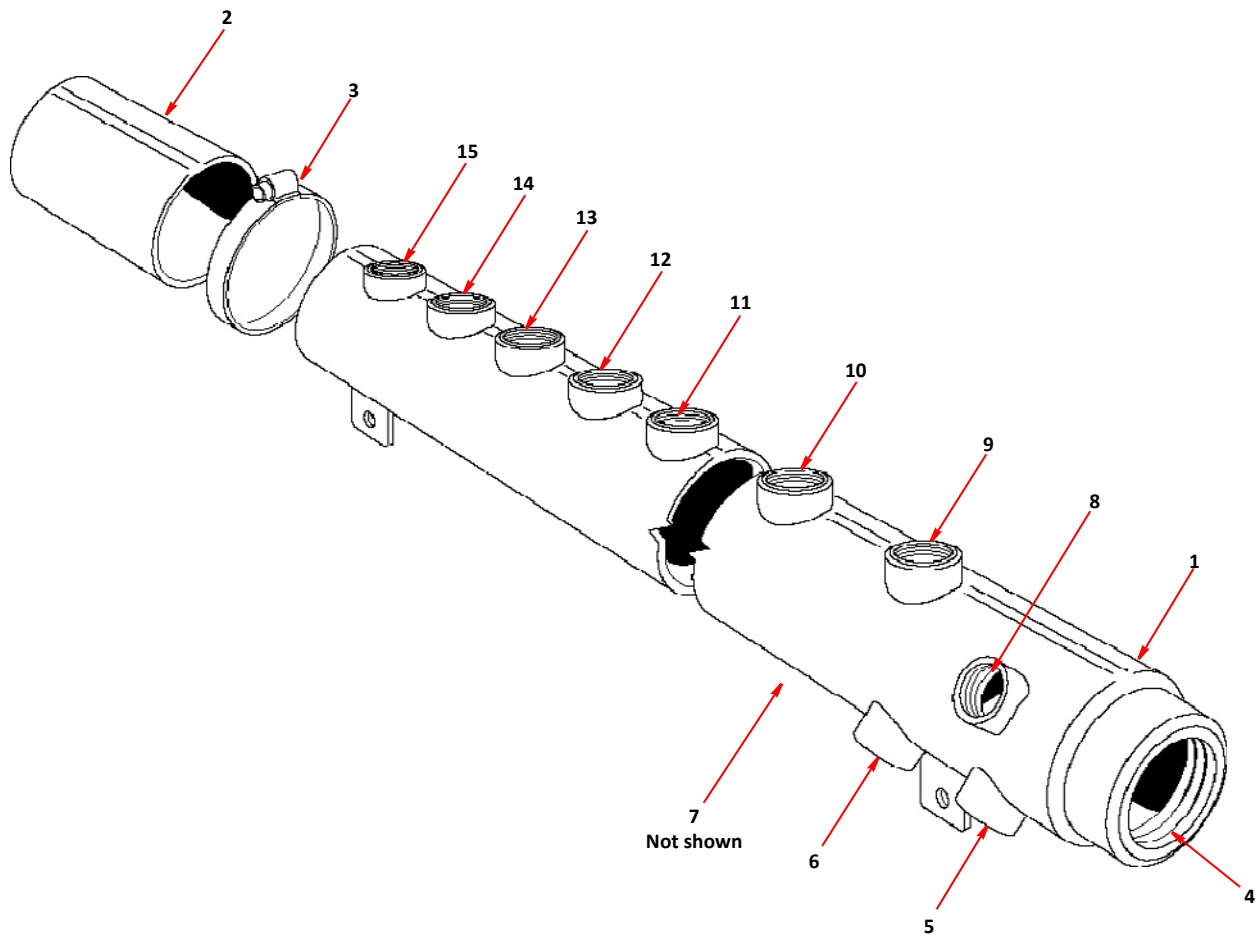
**HYDRAULIC TANK ARRANGEMENT - UNIDRIVE MACHINES**

Item	Part Number	Quantity	Description
<b>Hydraulic Manifold - UniDrive Machines *</b>			
1	026701	1	Manifold, Magnum/Merlin Unidrive
2	022762	1	. Hose, rubber, 2" bore x 250mm
3	028778	2	. . Clamp, worm drive, hi-torque, size 70mm
4	003029	1	. Hose tail, $\frac{1}{4}$ " BSP x $\frac{1}{4}$ " hose
5	010931	1	. Hose tail, $\frac{3}{4}$ " BSP x 1" hose
6	011244	1	. Plug, $\frac{3}{4}$ " BSP
	011155	1	. Seal, Dowty, $\frac{3}{4}$ " BSP
6	010931	1	. Hose tail, $\frac{3}{4}$ " BSP x 1" hose (dual gear pump)
7	011243	1	. Plug, $\frac{1}{2}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
8	011160	1	. Adaptor, M/M, $\frac{1}{2}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
	011234	1	. . Elbow, swivel, swept, $\frac{1}{2}$ " BSP x $\frac{5}{8}$ " hose
9	011243	1	. Plug, $\frac{1}{2}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
9	011160	1	. Adaptor, M/M, $\frac{1}{2}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
	011234	1	. . Elbow, swivel, swept, $\frac{1}{2}$ " BSP x $\frac{5}{8}$ " hose
10	011243	1	. Plug, $\frac{1}{2}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
11	011243	1	. Plug, $\frac{1}{2}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
11	011167	1	. Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
	002048	1	. . Elbow, swivel, swept, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " hose (high pressure pump)
12	011167	1	. Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
	002048	1	. . Elbow, swivel, swept, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " hose
13	011167	1	. Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
	002048	1	. . Elbow, swivel, swept, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " hose
14	011167	1	. Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
	002048	1	. . Elbow, swivel, swept, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " hose
15	023515	1	. Switch, temperature operated (90° C), $\frac{3}{8}$ " BSP . . . . . Page H5
NI	011787	1	. Support bracket, front
NI	028537	1	. Support bracket, rear
NI	034014	1	. Support bracket, front, (XP)
NI	034015	1	. Support bracket, rear (XP)

**Notes:-**

\* The hydraulic fittings are determined by the amount of options. Please contact the Scarab Parts Department quoting your machine's model and serial number, to ensure you procure the correct items.



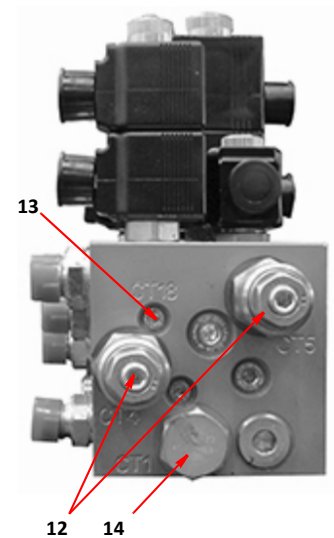
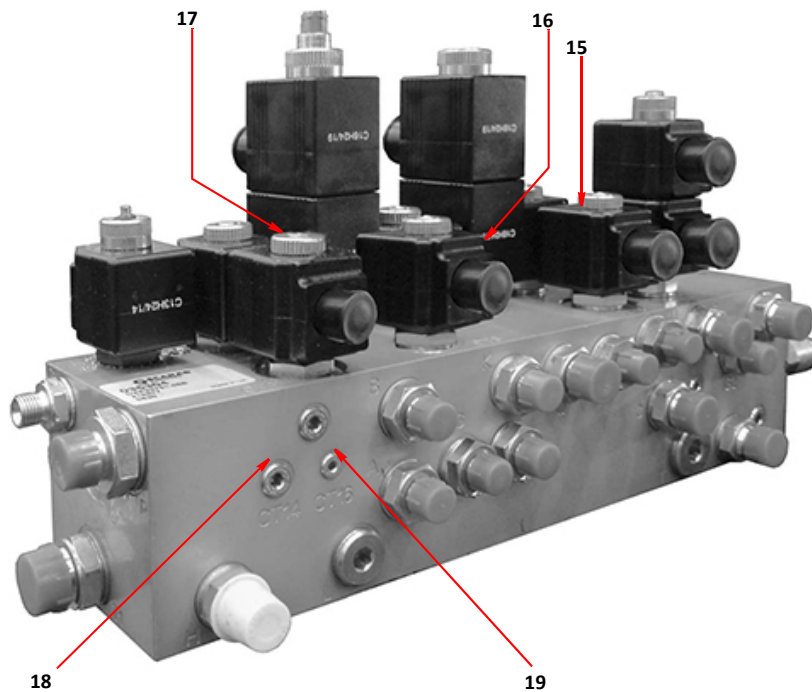
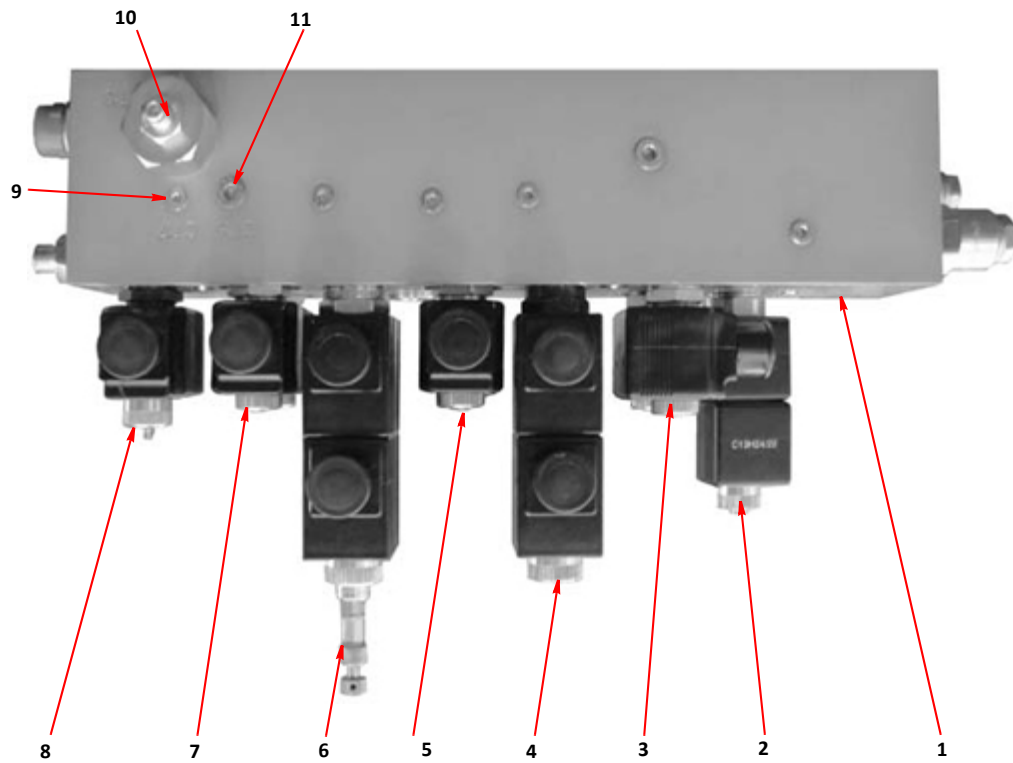


**HYDRAULIC MANIFOLD - UNIDRIVE MACHINES**

Item	Part Number	Quantity	Description
<b>Valve Block Assembly - Main Control</b>			
1	*	1	Valve block, main control, assembly . . . . . Page F1
2	034994	1	. Valve, solenoid, S271N (CT3)
	036922	2	. . Coil, 24 V, C13DM24/22 UN-D
	034996	1	. . . Seal kit, SK974
3	034982	1	. Valve, solenoid, S202N (CT9)
	036924	1	. . Coil, 24 V, C13DM24/14 UN-D
	034984	1	. . . Seal kit, SK1043
4	034992	1	. Valve, solenoid, S570N (CT2)
	036921	2	. . Coil, 24 V, C16DM24/19 UN-D
	034993	1	. . . Seal kit, SK1034
5	035210	1	. Valve, solenoid, S242N (CT7)
	036922	1	. . Coil, 24 V, C13DM24/22 UN-D
	034996	1	. . . Seal kit, SK974
6	035218	1	. Valve, solenoid, S571N-5 (CT19)
	036921	2	. . Coil, 24 V, C16DM24/19 UN-D
	034984	1	. . . Seal kit, SK1043
7	034982	1	. Valve, solenoid, S202N (CT12) complete with fly lead
	034986	1	. . Coil, 24 V, AXP25115
	034984	1	. . . Seal kit, SK1043
8	034999	1	. Valve, solenoid, S201N-3 (CT10)
	036924	1	. . Coil, 24 V, C13DM24/14 UN-D
	034984	1	. . . Seal kit, SK1043
9	035216	1	. Jet, M6 (ø0.7 orifice), AXP 14067 - 070 (CT17)
10	035212	1	. Valve, relief, 1VR100P20SA8TMUP (CT13)
11	036217	1	. Jet, M6 (ø2.0 orifice), AXP 6645 - 200 (CT15)
12	034997	2	. Valve, sequence, 1PSC30 - F - 20S (CT4/5)
	034998	2	. . Seal kit, SK395
13	035217	1	. Jet, M6 (ø1.0 orifice), AXP 14067 - 100 (CT18)
14	034990	1	. Valve, check, 4CK30 - 1S - 3 (CT1)
	034991	1	. . Seal kit, SK430
15	034982	1	. Valve, solenoid, S202N (CT8)
	036924	1	. . Coil, 24 V, C13DM24/14 UN-D
	034984	1	. . . Seal kit, SK1043
16	035241	1	. Cavity plug, AXP8444 -10T (CT6)
17	034982	1	. Valve, solenoid, S202N (CT11) complete with fly-lead
	034986	1	. . Coil, 24 V, AXP25115
	034984	1	. . . Seal kit, SK1043
18	035214	1	. Jet, M6 (ø2.8 orifice), AXP 6645 - 280 (CT14)
19	036218	1	. Jet, M6 (ø1.6 orifice), AXP 14067 - 160 (CT16)
NI	035241	AR	. Cavity plug, AXP8444-10T

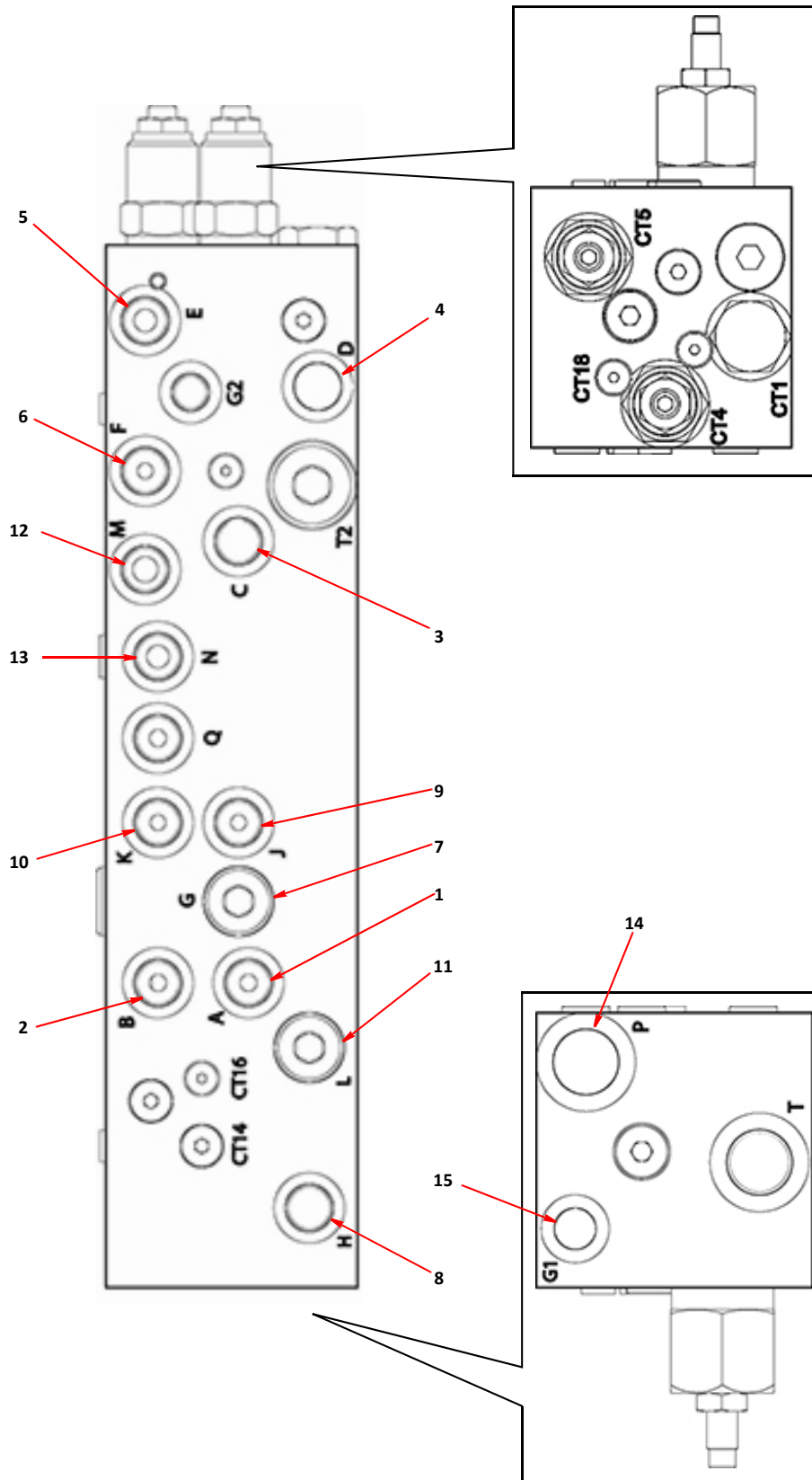
**Notes:-**

\* Please contact the Scarab Parts Department quoting your machine's serial number and model.



**MAIN CONTROL VALVE BLOCK**

Item	Part Number	Quantity	Description
<b>Valve Block Assembly - Main Control, Fittings</b>			
1	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP (PORT A)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
2	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP (PORT B)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
3	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT C)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
4	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT D)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
5	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT E)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
6	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT F)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
7	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP (PORT G)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
8	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT H)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
9	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP (PORT J)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
10	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP (PORT K)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
11	035242	1	. Plug, $\frac{3}{8}$ " BSP (PORT L)
12	025160	1	. Stud, male, $\frac{3}{8}$ " BSP x 6mm pipe, (PORT M)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
13	025160	1	. Stud, male, $\frac{3}{8}$ " BSP x 6mm Pipe, (PORT N)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
14	011167	1	. Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP (PORT P)
	011154	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
	011205	1	. . . Elbow, swivel, M/F, $\frac{1}{4}$ " BSP
15	011158	1	. Adaptor, M/M, $\frac{1}{4}$ " BSP (PORT G1)
	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP

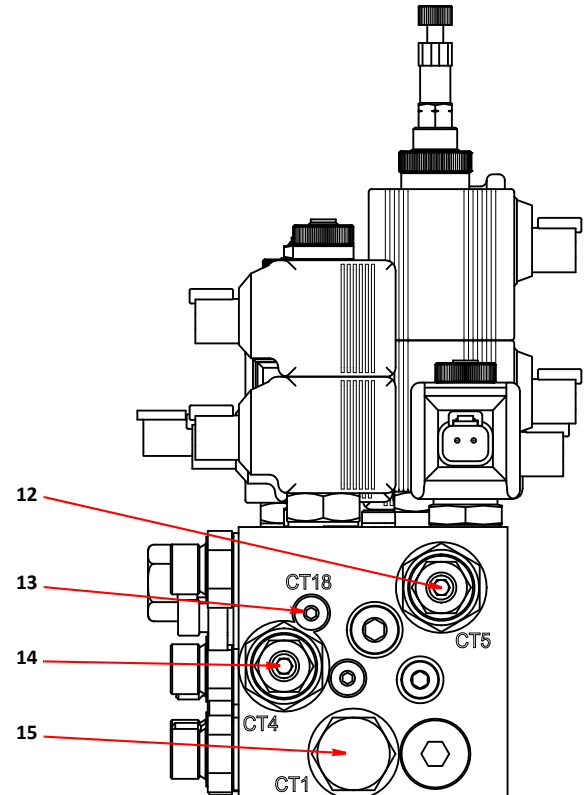
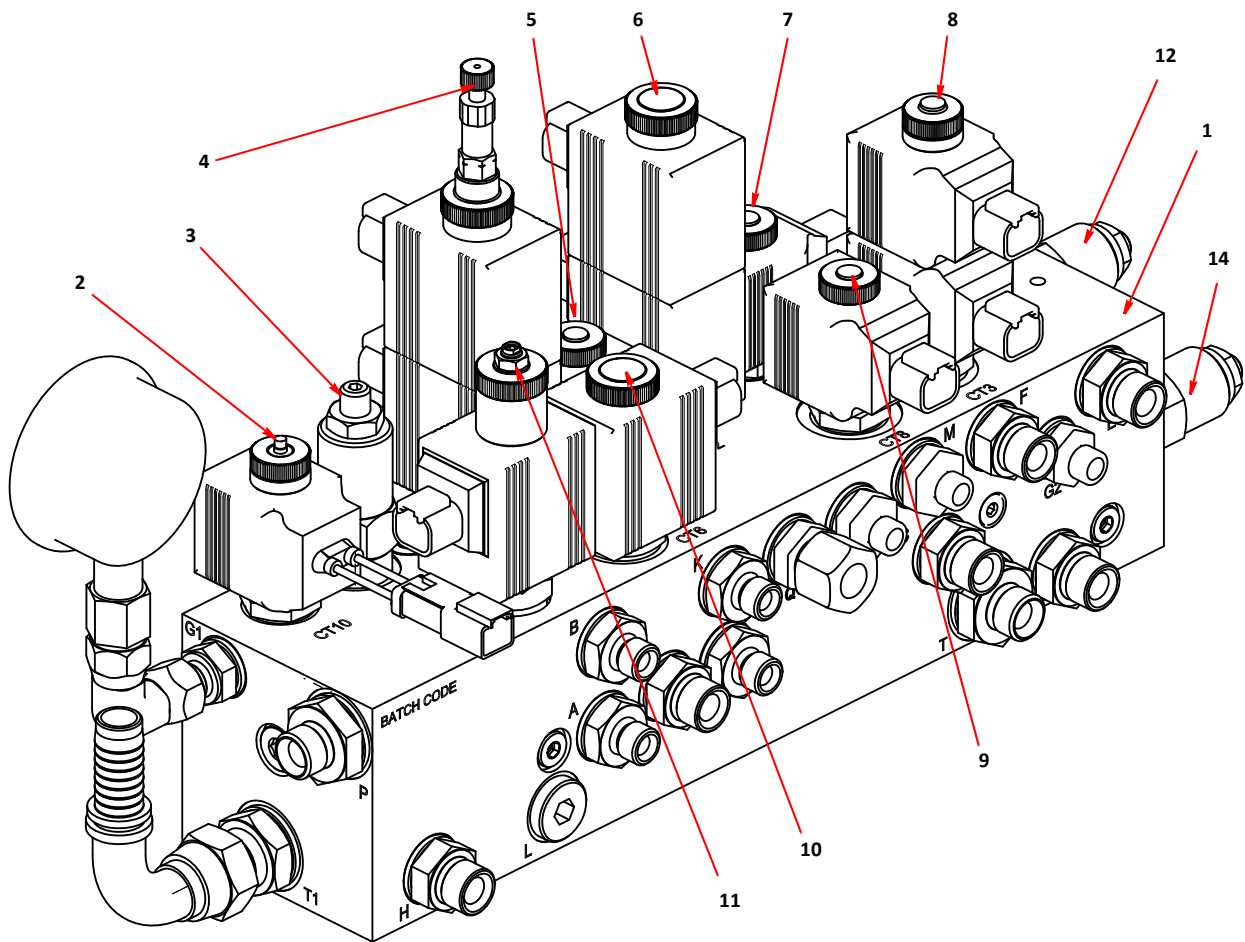


**MAIN VALVE BLOCK FITTINGS**

Item	Part Number	Quantity	Description
<b>Valve Block - Main Control, Variable Brush Speed, Assembly</b>			
1	*	1	Valve block, main control with variable brush speed, assembly . . . . . Page F1
2	034999	1	. Solenoid valve, S201N-3 (CT10)
	034986	1	. . Coil, 24V/14W UN-D
	034993	1	. . . Seal kit, SK1034
3	039315	1	. Relief valve, 1DR30-P-40S (CT11)
4	035218	1	. Solenoid valve, 571N-4 (CT19)
	036921	2	. . Coil, C16DM24/21 UN-D
	034993	1	. . . Seal kit, SK1034
5	035210	1	. Solenoid valve, S242HN (CT7)
	036922	1	. . Coil, C16DM24/22 UN-D
	034996	1	. . . Seal kit, SK974
6	034992	1	. Solenoid valve, 570N (CT2)
	036921	2	. . Coil, C16DM24/21 UN-D
	034993	1	. . . Seal kit, SK1034
7	034982	1	. Solenoid valve, S202N (CT9)
	036924	1	. . Coil, C13DM24/14 UN-D
	034993	1	. . . Seal kit, SK1034
8	034994	1	. Solenoid valve, S271N (CT3)
	036922	1	. . Coil, C16DM24/22 UN-D
	034996	1	. . . Seal kit, SK974
9	034982	1	. Solenoid valve, S202N (CT9)
	036924	1	. . Coil, C13DM24/14 UN-D
	034993	1	. . . Seal kit, SK1034
10	034979	1	. Solenoid valve, S502N (CT6)
	036921	2	. . Coil, C16DM24/21 UN-D
	034993	1	. . . Seal kit, SK1034
11	039316	1	. Solenoid valve, proportional, PFR2-4AN (CT12)
	036921	2	. . Coil, C16DM24/21 UN-D
	034993	1	. . . Seal kit, SK1034
12	034997	1	. Sequence valve, 1PSC30-F-20S (CT8)
13	035217	1	. M6 Jet (1.0 Orifice) AXP14067-100 (CT18)
14	034997	1	. Sequence valve, 1PSC30-F-20S (CT4)
15	034990	1	. Check valve, 4CK30-1S-3 (CT1)

**Notes:-**

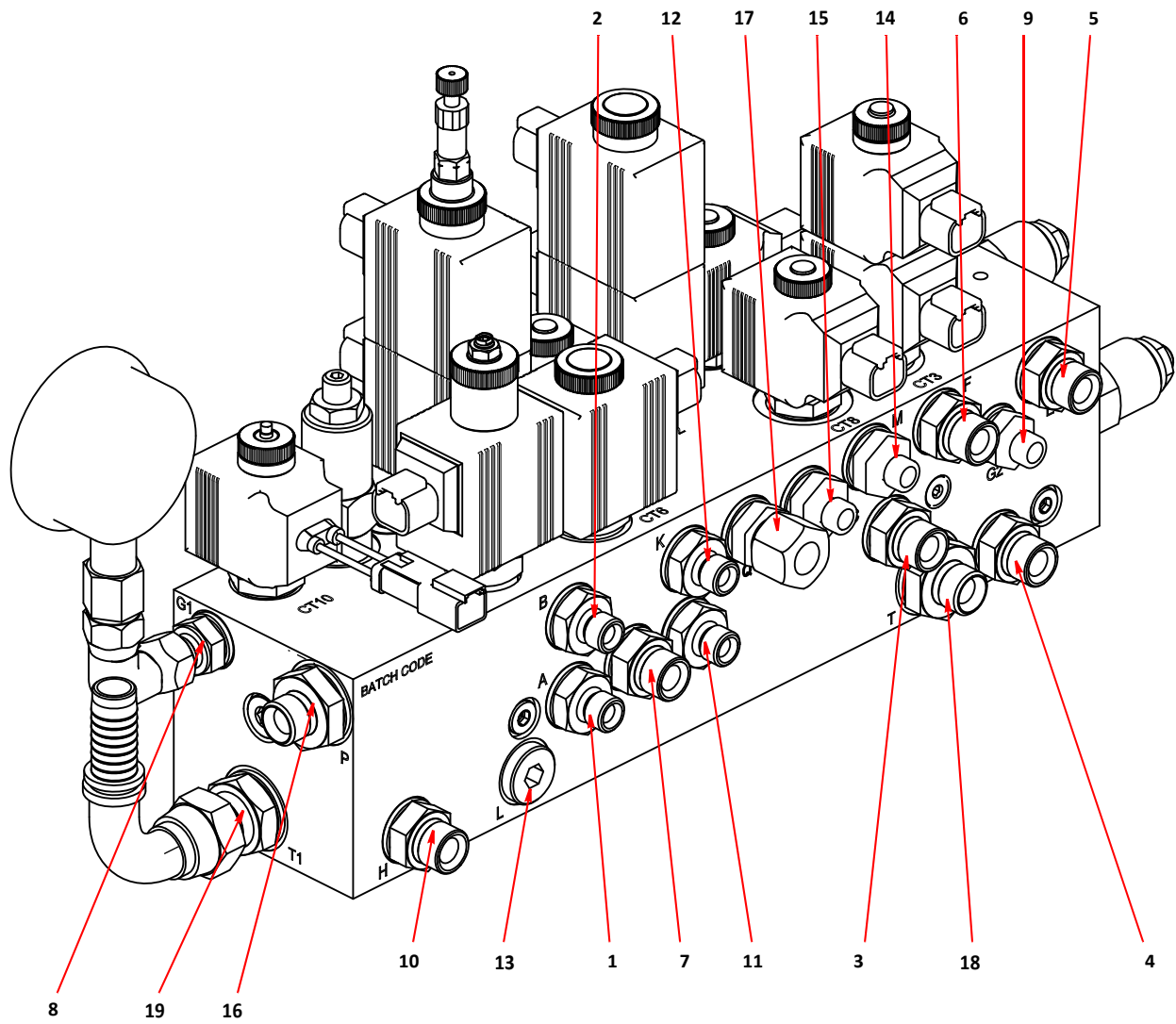
- \* This is a fully populated valve block. Please contact the Scarab Parts Department quoting your machine's serial number and model for variations of this block depending on the options fitted to your sweeper.



**MAIN CONTROL VALVE BLOCK WITH VARIABLE BRUSH SPEED**

Item	Part Number	Quantity	Description
<b>Valve Block - Main Control, Variable Brush Speed, Fittings</b>			
1	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP (PORT A)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
2	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP (PORT B)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
3	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT C)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
4	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT D)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
5	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT E)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
6	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT F)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
7	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT G)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
8	011158	1	. . Adaptor, M.M, $\frac{1}{4}$ " BSP (PORT G1)
	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
	011169	1	. . . Elbow, swivel, F/F, $\frac{1}{4}$ " BSP
	002014	1	. . . . Adaptor, M/F, $\frac{1}{4}$ " BSP
	002104	1	. . . . . Gauge, pressure, 0-250 Bar
9	020902	1	. Stud, male, 6L x $\frac{1}{4}$ " BSP (PORT G2)
	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
10	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP (PORT H)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
11	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP (PORT J)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
12	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP (PORT K)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
13	035242	1	. Plug, VSR, $\frac{3}{8}$ " BSP (870VSR13) (PORT L)
14	025160	1	. Stud, male, $\frac{3}{8}$ " BSP x 6mm pipe (PORT M)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
15	025160	1	. Stud, male, $\frac{3}{8}$ " BSP x 6mm Pipe (PORT N)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
16	011167	1	. Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP (PORT P)
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
17	020903	1	. Stud, male, 12 x $\frac{3}{8}$ " BSP (PORT Q)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
18	011167	1	. Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP (PORT T)
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
19	011160	1	. Adaptor, M/M, $\frac{1}{2}$ " BSP (PORT T1)
	011154	1	. . Seal, Dowty, $\frac{1}{2}$ " BSP
	011234	1	. . . Elbow, $\frac{1}{2}$ " BSP to $\frac{5}{8}$ " Hose





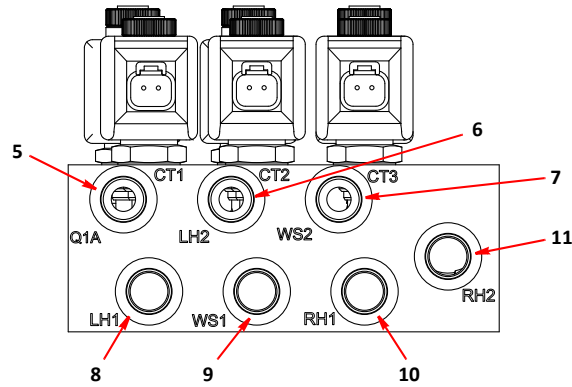
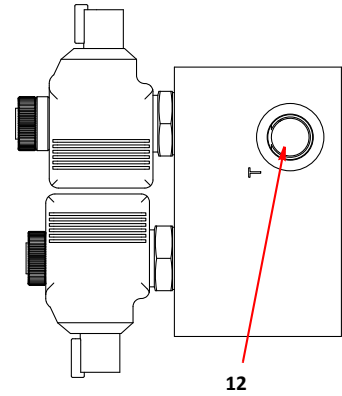
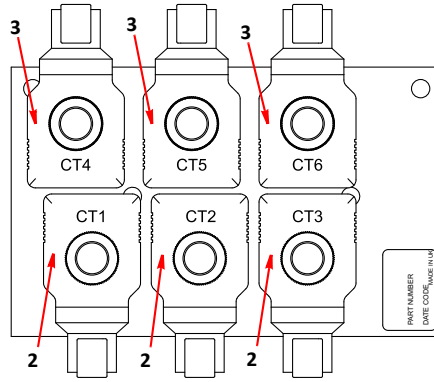
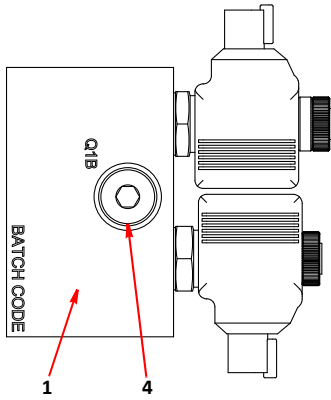
**MAIN VALVE BLOCK FITTINGS**

Item	Part Number	Quantity	Description
<b>Valve Block Assembly - Brush Control</b>			
1	*	1	Valve block . . . . . Page F1
2	034982	3	. Valve, solenoid, S202N
	036924	3	. . Coil, 24 V, C13DM24/14 UN-D
	034984	3	. . Seal kit, SK1043
3	034985	3	. Valve, solenoid, S203N
	036924	3	. . Coil, 24 V, C13DM24/14 UN-D
	034984	3	. . Seal kit, SK1043
4	035242	1	. Plug, $\frac{3}{8}$ " BSP (PORT Q1B)
5	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT Q1A)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
6	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT LH2)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
7	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT WS2)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
8	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT LH1)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
9	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT WS1)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
10	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT RH1)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
11	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT RH2)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
12	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT T)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP

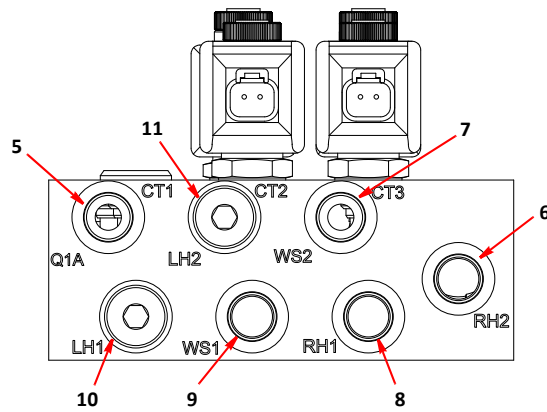
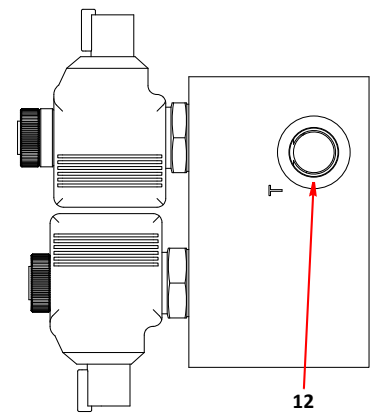
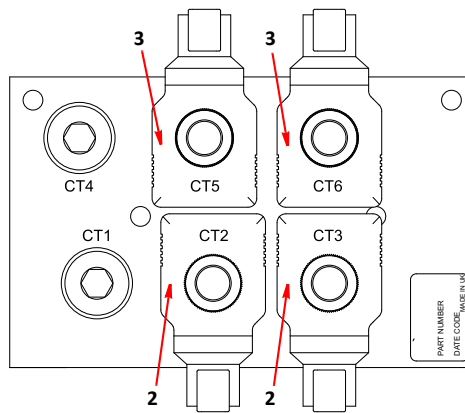
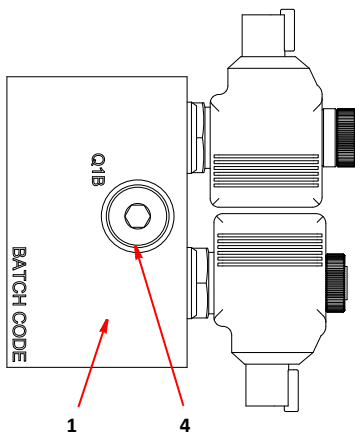
Item	Part Number	Quantity	Description
<b>Valve Block Assembly - Options</b>			
1	*	1	Valve block . . . . . Page F1
2	034982	2	. Valve, solenoid, S202N
	036924	2	. . Coil, 24 V, C13DM24/14 UN-D
	034984	2	. . Seal kit, SK1043
3	034985	2	. Valve, solenoid, S203N
	036924	2	. . Coil, 24 V, C13DM24/14 UN-D
	034984	2	. . Seal kit, SK1043
4	035242	1	. Plug, $\frac{3}{8}$ " BSP (PORT Q1B)
5	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT Q1A)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
6	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT RH2)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
7	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT WS2)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
8	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT RH1)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
9	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT WS1)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
10	020903	1	. Plug, $\frac{3}{8}$ " BSP (PORT LH1)
11	020903	1	. Plug, $\frac{3}{8}$ " BSP (PORT LH2)
12	020903	1	. Stud, male, $\frac{3}{8}$ " BSP x 12mm pipe (PORT T)
	011153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP

**Notes:-**

\* Please contact the Scarab Parts Department if you require to order these items.



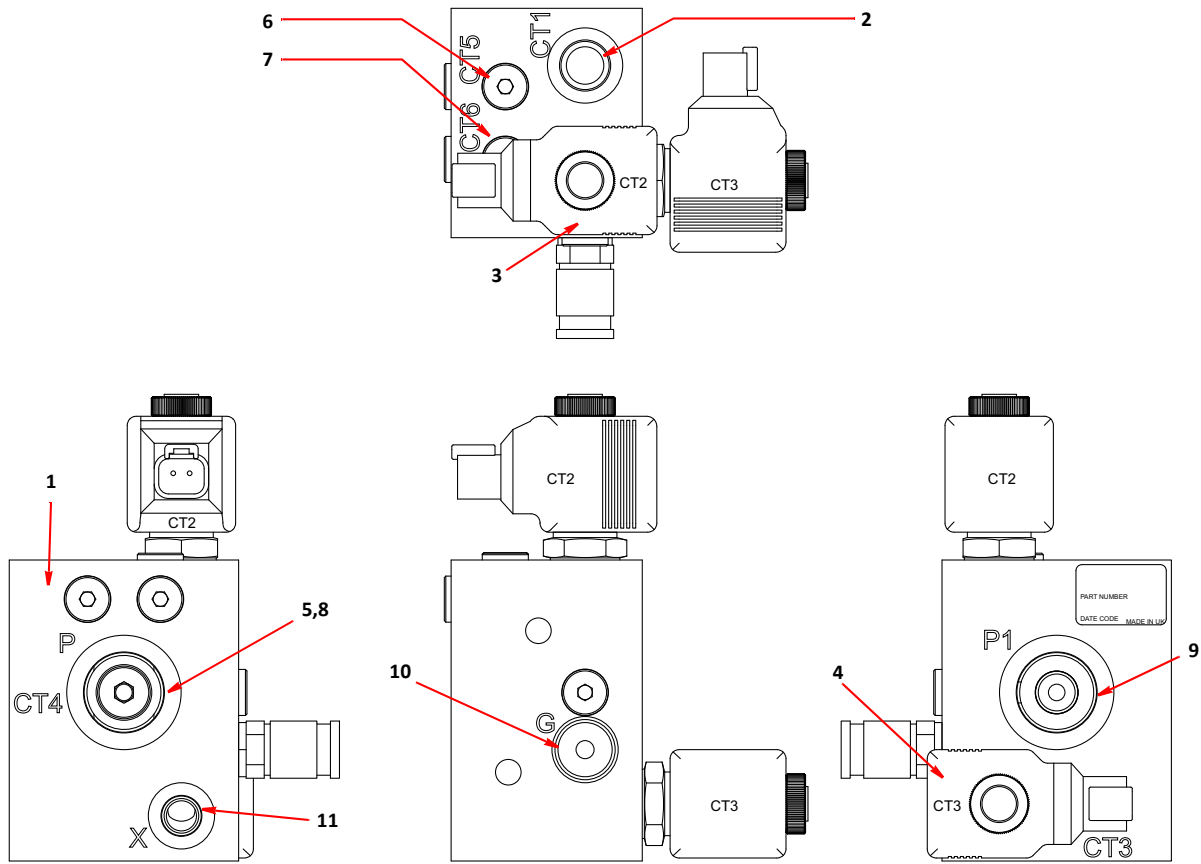
**BRUSH CONTROL VALVE BLOCK**



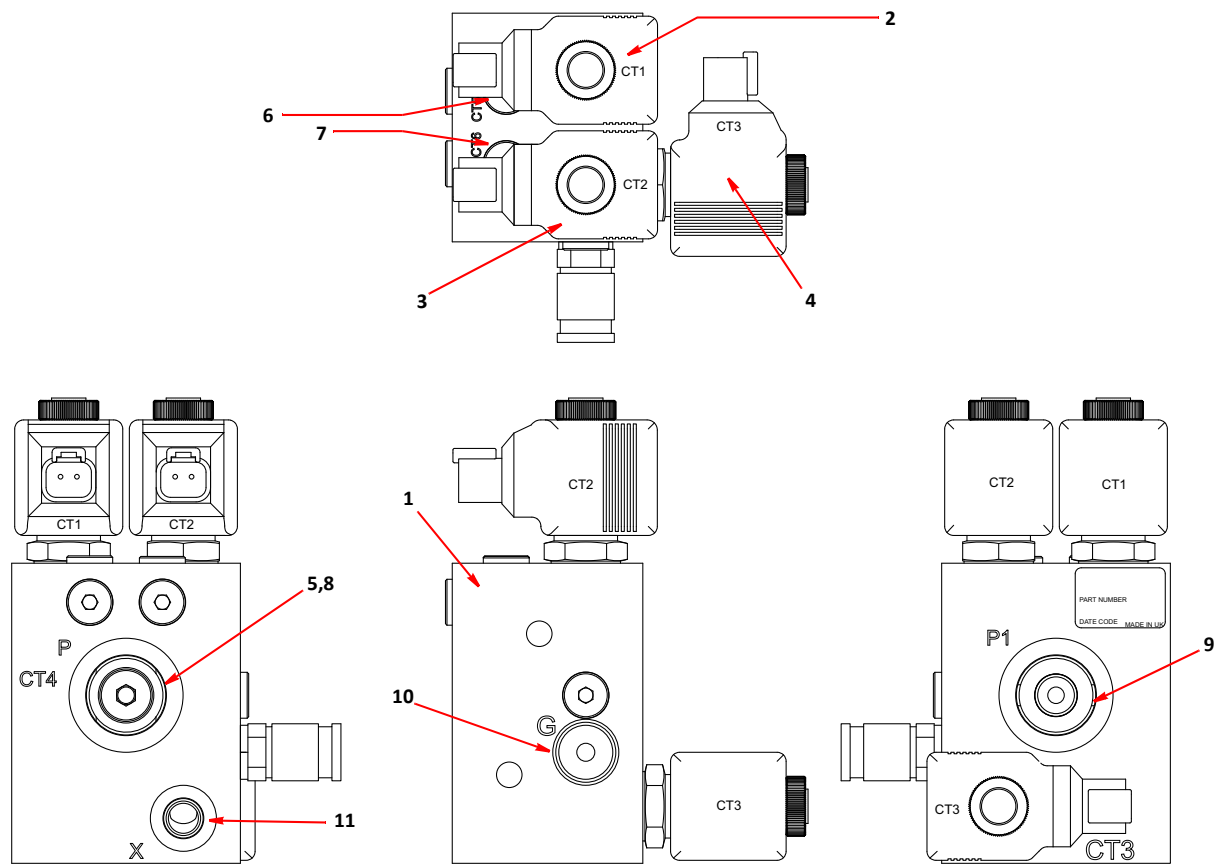
**OPTIONS VALVE BLOCK  
(DUAL SWEEP MODEL SHOWN)**

Item	Part Number	Quantity	Description
<b>Valve Block Assembly - Two Speed Suction Fan Boost</b>			
1	036972	1	Valve Block. MR45183 (complete with items, 2,3,4,6,7,8)
2	035948	1	. Plug, (Port CT1)
3	034982	1	. Valve, solenoid, S202N (Port CT2)
	036924	1	. Coil, 24 V, C13DM24/14 UN-D
	034984	1	. . Seal kit, SK1043
4	034982	1	. Valve, solenoid, S202N (Port CT3)
	036924	1	. Coil, 24 V, C13DM24/14 UN-D
	034984	1	. . Seal kit, SK1043
5	011161	1	. Adaptor, M/M, $\frac{3}{4}$ " BSP (Port CT4)
	011155	1	. . Seal, Dowty, $\frac{3}{4}$ " BSP
6	034988	1	. Jet, M6 (ø2.5 orifice) (Port CT5)
7	034989	1	. Jet, M6 (ø2.0 orifice) (Port CT6)
8	034987	1	. Jet, M6 (ø5.5 orifice) (Port CT4)
9	011161	1	. Adaptor, M/M, $\frac{3}{4}$ " BSP (Port P1)
	011155	1	. . Seal, Dowty, $\frac{3}{4}$ " BSP
10	013036	1	. Test point, $\frac{1}{4}$ " BSP (Port G)
	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
11	011158	1	. Adaptor, M/M, $\frac{1}{4}$ " BSP (Port X)
	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
	011171	1	. . Elbow, swivel, M/F, $\frac{1}{4}$ " BSP

Item	Part Number	Quantity	Description
<b>Valve Block Assembly - Three Speed Suction Fan Boost</b>			
1	036974	1	Valve Block. MR45183 (complete with items, 2,3,4,6,7,8)
2	034982	1	. Valve, solenoid, S202N (Port CT1)
	036924	1	. Coil, 24 V, C13DM24/14 UN-D
	034984	1	. . Seal kit, SK1043
3	034982	1	. Valve, solenoid, S202N (Port CT2)
	036924	1	. Coil, 24 V, C13DM24/14 UN-D
	034984	1	. . Seal kit, SK1043
4	034982	1	. Valve, solenoid, S202N (Port CT3)
	036924	1	. Coil, 24 V, C13DM24/14 UN-D
	034984	1	. . Seal kit, SK1043
5	011161	1	. Adaptor, M/M, $\frac{3}{4}$ " BSP (Port CT4)
	011155	1	. . Seal, Dowty, $\frac{3}{4}$ " BSP
6	034988	1	. Jet, M6 (ø2.5 orifice) (Port CT5)
7	034989	1	. Jet, M6 (ø2.0 orifice) (Port CT6)
8	034987	1	. Jet, M6 (ø5.5 orifice) (Port CT4)
9	011161	1	. Adaptor, M/M, $\frac{3}{4}$ " BSP (Port P1)
	011155	1	. . Seal, Dowty, $\frac{3}{4}$ " BSP
10	013036	1	. Test point, $\frac{1}{4}$ " BSP (Port G)
	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
11	011158	1	. Adaptor, M/M, $\frac{1}{4}$ " BSP (Port X)
	011152	1	. . Seal, Dowty, $\frac{1}{4}$ " BSP
	011171	1	. . Elbow, swivel, M/F, $\frac{1}{4}$ " BSP



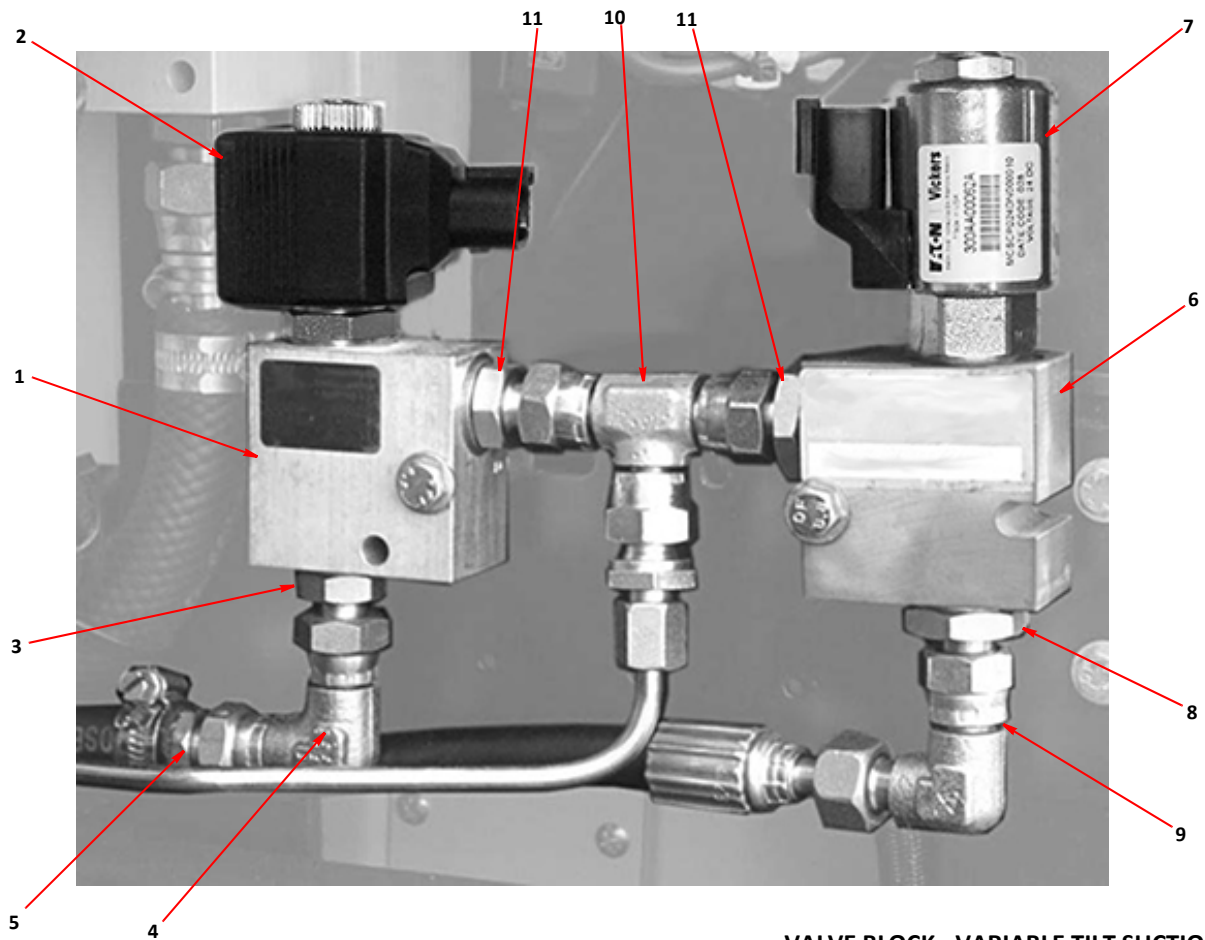
**VALVE BLOCK - 2 SPEED SUCTION FAN BOOST**



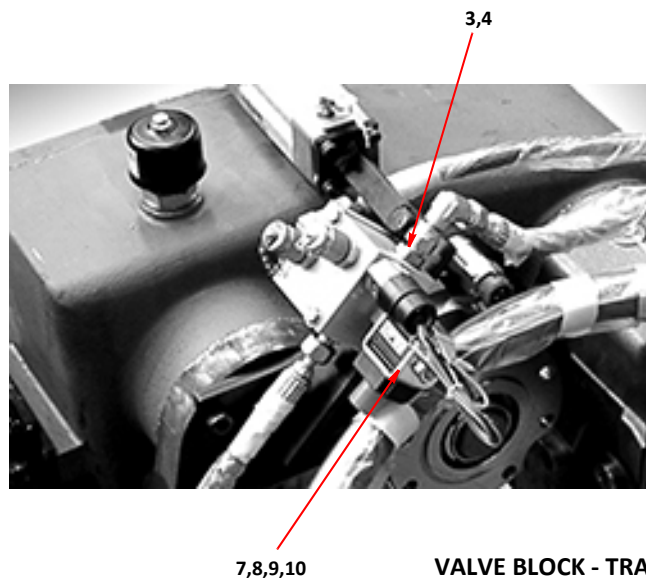
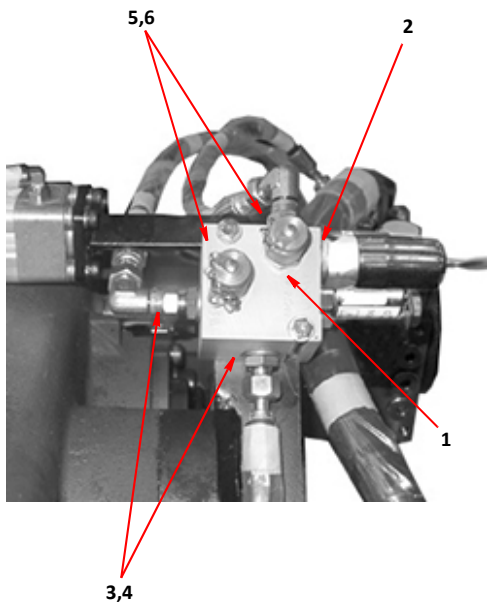
**VALVE BLOCK - 3 SPEED SUCTION FAN BOOST**

Item	Part Number	Quantity	Description
<b>Valve Block Assembly - Variable Tilt Suction Nozzle</b>			
1	037461	1	Valve block, solenoid, N/C
NI	034982	1	. Valve spool, solenoid
2	036924	1	. . Coil, 24V
3	011158	1	. . Adaptor, M/M, $\frac{1}{4}$ " BSP
NI	011150	3	. . . Seal, Dowty, $\frac{1}{4}$ " BSP
4	011169	1	. . . Elbow, swivel, F/F, $\frac{1}{4}$ " BSP
5	010922	1	. . . Hose tail, $\frac{1}{4}$ " BSP x $\frac{3}{8}$ " hose
6	037464	1	Valve block, solenoid
NI	037670	1	. Valve spool, solenoid
7	037680	1	. . Coil, 24 Volt
8	011199	1	. . Adaptor, $\frac{3}{8}$ " BSP x $\frac{1}{4}$ " BSP
NI	011153	1	. . . Seal, Dowty $\frac{3}{8}$ " BSP
9	011171	1	. . . Elbow, swivel, M/F, $\frac{1}{4}$ " BSP
10	002005	1	Tee, swivel, F/F/F, $\frac{1}{4}$ " BSP
11	011158	1	. Adaptor, M/M, $\frac{1}{4}$ " BSP
NI	036917	2	Loom

Item	Part Number	Quantity	Description
<b>Valve Block Assembly - Transmission</b>			
1	036905	1	Valve block (with solenoid valve and coil)
2	036872	1	. Pressure switch, <b>(Port PS)</b> . . . . . Page H5
3	011199	3	. . Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP <b>(Ports 1A,3A,3B)</b>
4	011153	3	. . . Seal, Dowty $\frac{3}{8}$ " BSP
5	013036	2	. Test point $\frac{1}{4}$ " BSP, <b>(Ports B1,2)</b>
6	011152	3	. . Seal, Dowty $\frac{1}{4}$ " BSP
7	024731	2	. Valve blanking cartridge
8	024895	1	. . O-Ring 9.25 x 1.78
9	037679	1	. Valve, SV11-8-3-0-00, <b>(Port CT1)</b>
10	037680	1	. . Coil 24V
NI	024731	2	. Valve blanking cartridge
NI	024895	2	. . O-Ring 9.25 x 1.78
NI	010980	1	. Hose $\frac{1}{4}$ " x 422mm
NI	010990	1	. Hose $\frac{1}{4}$ " x 600mm



**VALVE BLOCK - VARIABLE TILT SUCTION NOZZLE**



**VALVE BLOCK - TRANSMISSION**

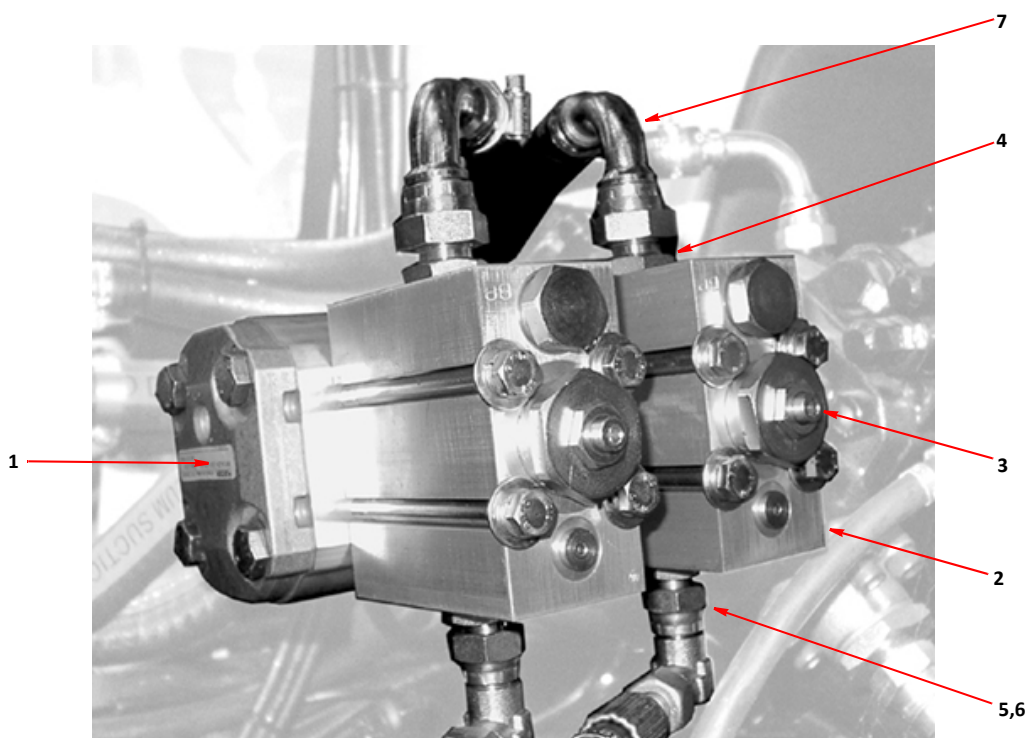
Item	Part Number	Quantity	Description
<b>Gear Pump Arrangements</b>			
1	024590	1	Double gear pump - complete assembly
NI	024592	1	. Gear pump 23cc (double)
NI	027865*	1	. Gear pump 27cc/23cc, double
NI	030629	1	. . Seal kit, gear pump 23cc, double
NI	024589	1	Single gear pump - complete assembly
NI	024593	1	. Gear pump 23cc (single)
NI	028496*	1	. Gear pump 27cc, single
NI	030628	1	. . Seal kit, gear pump 23cc, single
2	024537**	1	. Valve, flow control
	000227	4	. . Bolt, M8 x 110mm
	000056	4	. . Bolt, M8 x 120mm
	011093	4	. . Spring washer, M8
NI	002127	1	. . O-Ring kit for 024537
3	031531	1	. . Valve, pressure relief
4	011160	2	. . Adaptor, M/M $\frac{1}{2}$ " BSP
NI	011154	1	. . . Seal, Dowty $\frac{1}{2}$ " BSP
5	011160	2	. . Adaptor, M/M $\frac{1}{2}$ " BSP
NI	011154	1	. . . Seal, Dowty $\frac{1}{2}$ " BSP
6	011172	2	. . Elbow, Swivel, M/F, $\frac{3}{8}$ " BSP
7	011234	2	. . Hose tail, swept 90° $\frac{3}{8}$ " BSP x $\frac{5}{8}$ " hose
NI	024591	2	Hose tail 1" BSP
NI	013518	2	O-Ring 31 ID x 3.5
NI	011012	8	Bolt, M8 x 30mm
NI	030132**	1	Remote flow regulator kit (single)
NI	030133**	1	Remote flow regulator kit (double)

**Notes:-**

\* Used when a 75lpm high pressure water pump is fitted.

\*\* On some chassis the flow control is remotely mounted. Not the same as described on Page F27.





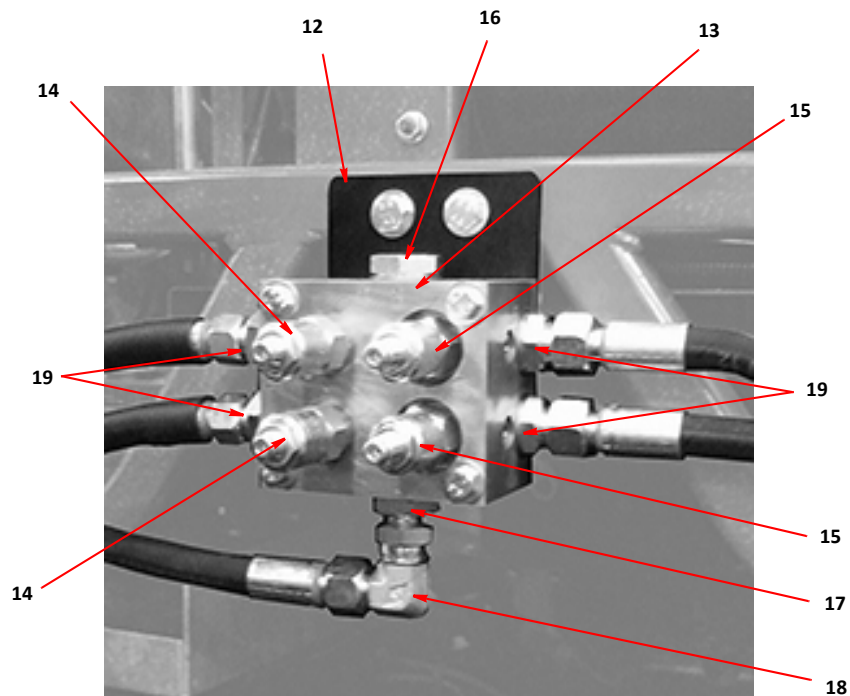
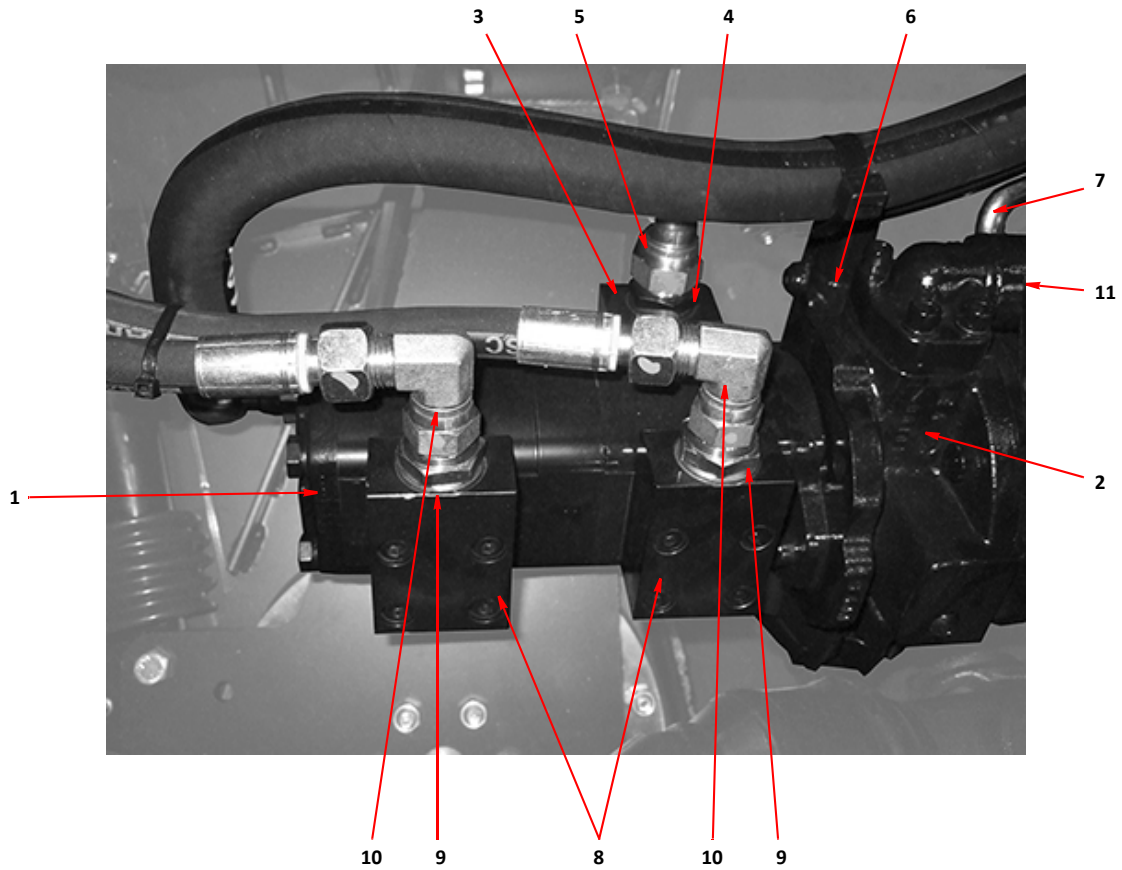
**GEAR PUMP ARRANGEMENT**  
(Double gear pump shown)

Item	Part Number	Quantity	Description
<b>Gear Pump Arrangements with Remote Mounted Flow Control</b>			
1	024590	1	Double gear pump - complete assembly (shown)
	031970	1	. Gear pump 23cc/23cc, double
NI	027865*	1	. Gear pump 27cc/23cc, double
NI	030629	1	. . Seal kit, gear pump 23cc, double
1	024589	1	Single gear pump - complete assembly
NI	031971	1	Gear pump 23cc, single
NI	028496*	1	Gear pump 27cc, single
NI	030628	1	. Seal kit, gear pump 23cc, single
2	023620	1	Pump, suction fan, A10V045 . . . . .Page F35
3	026335**	AR	Adaptor block
NI	013517	AR	. Seal, O-Ring
	000096	AR	. . Screw, cap head, M8 x 40mm
4	011151	AR	. Adaptor, M/M, $\frac{3}{4}$ " BSP
NI	011155	AR	. . Seal, Dowty, $\frac{3}{4}$ " BSP
5	002079	AR	. . Elbow, $\frac{3}{4}$ " BSP x 1" hose
6	014217	1	DFR valve
7	011234	1	Elbow, $\frac{1}{2}$ " BSP x $\frac{5}{8}$ " hose
NI	011160	1	. Adaptor, M/M, $\frac{1}{2}$ " BSP
NI	011154	AR	. . Seal, Dowty, $\frac{1}{2}$ " BSP
NI	010518	1	. . Clamp, worm drive, $\varnothing$ 18mm-25mm
8	026335**	AR	Adaptor block
NI	013517	AR	. Seal, O-Ring
	000096	AR	. . Screw, cap head, M8 x 40mm
9	011166	AR	. Adaptor, M/M, $\frac{3}{4}$ " BSP x $\frac{1}{2}$ " BSP
NI	011155	AR	. . Seal, Dowty, $\frac{3}{4}$ " BSP
10	011173	AR	. . . Elbow, M/F, $\frac{1}{2}$ " BSP
11	011196	1	Elbow, M/F, $\frac{3}{4}$ " BSP
12	039953	1	Mounting bracket
	011038	2	. Setscrew, M10 x 80mm
	011094	4	. . Washer, M10
	011075	2	. . . Nut, M10, Nyloc
NI	038512	1	. Flow control block (single), includes flow regulator and relief valve
13	038513	1	. Flow control block (double), includes flow regulators and relief valves
NI	039061	2	. . Plug, hollow, $\frac{1}{4}$ " SAE
	011020	4	. . Bolt, M8 x 100mm
	011092	8	. . . Washer, M8
	011073	4	. . . . Nut, M8, Nyloc
14	040288	AR	. . Flow regulator
15	039063	AR	. . Relief valve
16	011244	1	. . Plug, $\frac{3}{4}$ " BSP
NI	011155	1	. . . Seal, Dowty, $\frac{3}{4}$ " BSP
17	011166	1	. . Adaptor, M/M, $\frac{3}{4}$ " BSP x $\frac{1}{2}$ " BSP
NI	011155	1	. . . Seal, Dowty, $\frac{3}{4}$ " BSP
18	011173	AR	. . . . Elbow, M/F, $\frac{1}{2}$ " BSP
19	011160	AR	. . Adaptor, M/M, $\frac{1}{2}$ " BSP
NI	011154	AR	. . . Seal, Dowty, $\frac{1}{2}$ " BSP

**Notes:-**

\* Used when a 75lpm high pressure water pump is fitted.

\*\* Depending on chassis configuration these blocks could be rotated and different fittings attached.

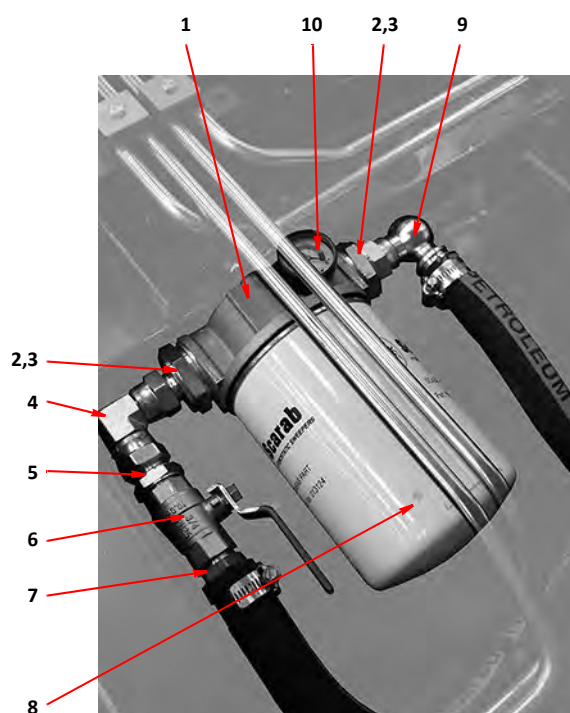


**REMOTE MOUNTED FLOW CONTROL**

**GEAR PUMP ARRANGEMENT WITH REMOTE MOUNTED FLOW CONTROL**

Item	Part Number	Quantity	Description
<b>Suction Filter Assembly</b>			
1	013122	1	Filter, suction - complete with filter head
2	011184	2	. Adapter, M/M, $1\frac{1}{4}$ " x $\frac{3}{4}$ " BSP
3	011150	2	. . Seal, Dowty, $1\frac{1}{4}$ " BSP
4	011174	1	. . Elbow, swivel, F/F, $\frac{3}{4}$ " BSP
5	011161	1	. . Adapter, M/E, $\frac{3}{4}$ " BSP
6	013757	1	. . Valve, ball, $\frac{3}{4}$ " BSP
7	010931	1	. . Hose tail, $\frac{3}{4}$ " BSP x 1" hose
8	013124	1	. Element, suction filter . . . . .Page F49
9	002203	2	. Elbow, swivel, hose tail, $\frac{3}{4}$ " BSP x 1" hose
10	021720	1	. Gauge
NI	026247	1	. Bracket, filter body
	011010	2	. . Setscrew, M8 x 20mm
	011093	2	. . Spring washer, M8

Item	Part Number	Quantity	Description
<b>Hydraulic Service Kits - (Not Illustrated)</b>			
	030352	1	<b>100 HOUR SERVICE KIT - HYDROSTATIC MACHINES</b>
	013124	1	. Filter, suction element
	013125	2	. Filter, return element
	030353	1	<b>1800 HOUR SERVICE KIT - HYDROSTATIC MACHINES</b>
	013124	1	. Filter, suction element
	013125	1	. Filter, return element
	025104	1	. Filter, high-pressure
	020687	1	. Filter, suction element
	030357	1	<b>100 HOUR SERVICE KIT - UNIDRIVE MACHINES</b>
	013125	1	. Filter, return element
	005046	1	. Lubricant, 50ml bottle
	020687	1	. Filter, suction element
	030358	1	<b>1800 HOUR SERVICE KIT - UNIDRIVE MACHINES</b>
	013125	1	. Filter, return element
	025104	1	. Filter, high-pressure
	020687	1	. Filter, suction element



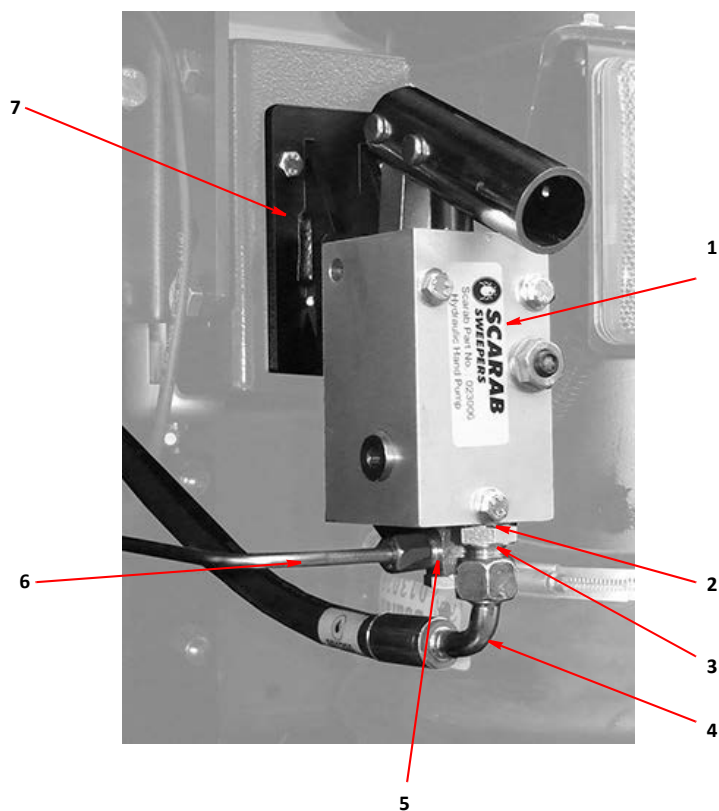
**SUCTION FILTER ASSEMBLY**

Item	Part Number	Quantity	Description
<b>Auxiliary Hand Pump</b>			
1	023006	1	Hand pump
	011143	3	. Bolt, M6 x 70mm
	011071	3	. Nut, M6, Nyloc
NI	030103	1	. Handle
2	011153	3	. Seal, Dowty, $\frac{3}{8}$ " BSP
3	011199	1	. . Adaptor, M/M, $\frac{3}{8}$ " BSP x $\frac{1}{4}$ " BSP
4	001255	1	. . . Hose, rubber, $\frac{1}{4}$ " BSP x 475mm, straight+90° ends
5	002190	1	. Banjo, $\frac{3}{8}$ " BSP x 6mm pipe
6	025129	1	. . . Pipe, steel, 6mm ( <b>Magnum</b> )
6	025194	1	. . . Pipe, steel, 6mm ( <b>Merlin</b> )
7	038254	1	. Plate, pump mounting
	011001	3	. . Bolt, M6 x 16mm
	011071	3	. . . Nut, M6, Nyloc

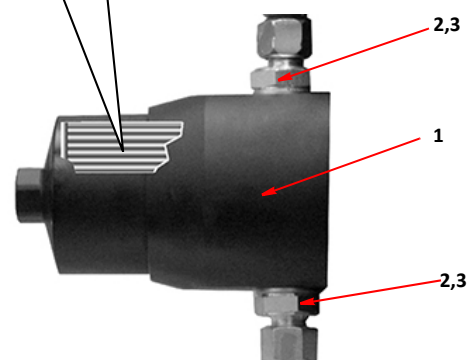
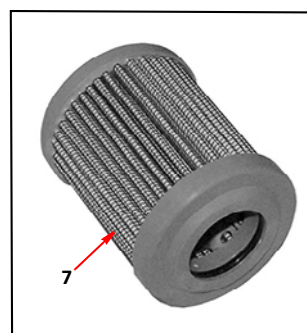
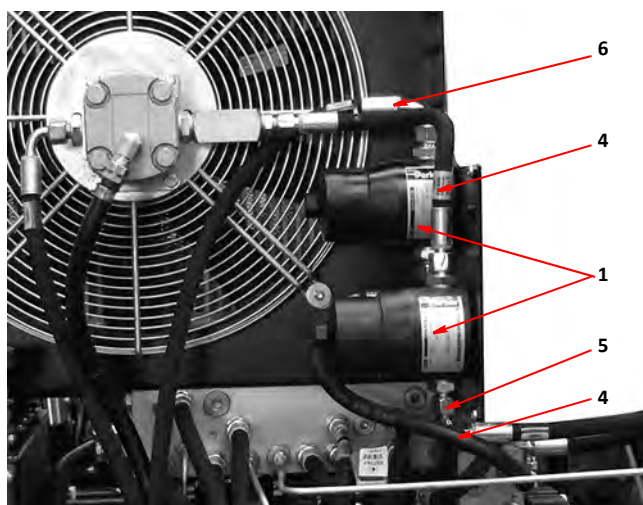
Item	Part Number	Quantity	Description
<b>Filter(s), High Pressure - Components</b>			
1	025103*	2	. Filter, high pressure, with element
2	011167	4	. . Adaptor, M/M, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
3	011154	4	. . . Seal, Dowty, $\frac{1}{2}$ " BSP
4	011310	1	. . . Hose, rubber, $\frac{3}{8}$ " BSP x 300mm, straight ends
5	001255	2	. . . Hose, rubber, $\frac{3}{8}$ " BSP x 475mm, straight+90° ends
6	001084	1	. . . Hose, rubber, $\frac{3}{8}$ " BSP x 2300mm, straight+90° ends
7	025104	2	. . Element, filter

**Notes:-**

- \* May not have a second filter and its fittings, which is attached to the brush and LP water valve block, then item 6 connects direct into the brush and LP water valve block.



**AUXILIARY HAND PUMP**

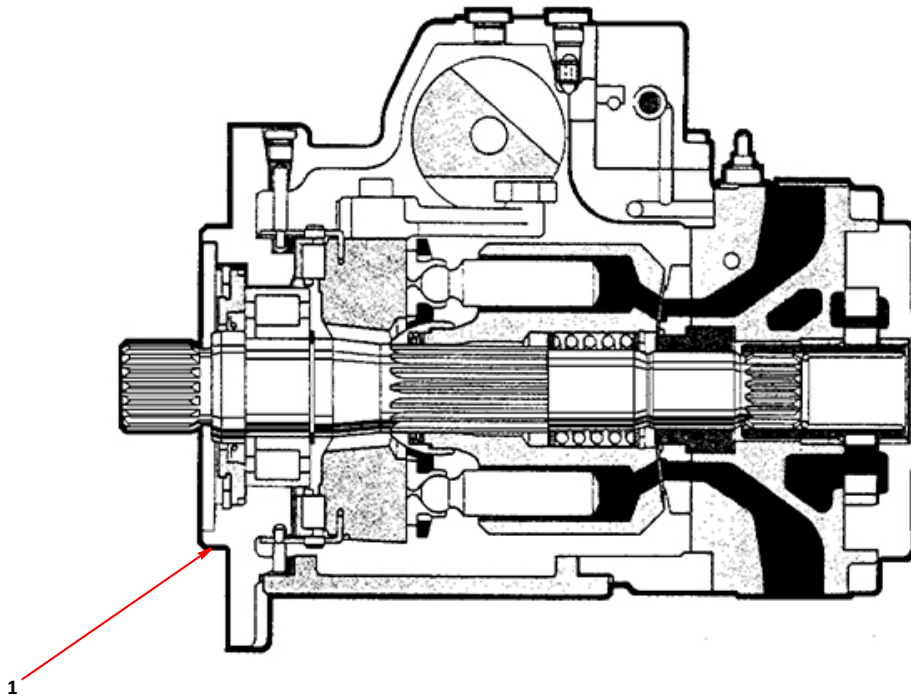


**HIGH PRESSURE FILTER(S)**

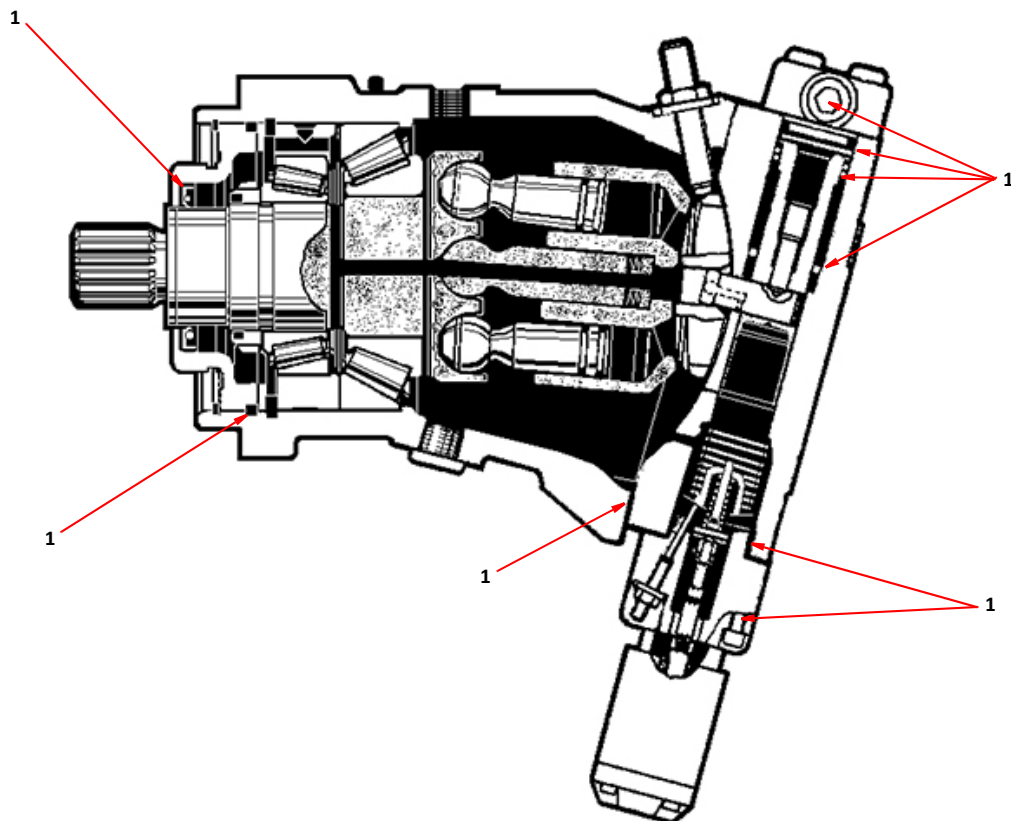
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
			<b>Hydrostatic Drive Pump</b>
1	037015	1	Hydrostatic drive pump . . . . . Page B9
NI	037080	2	. Coil, Forward/Reverse
NI	031480	1	. Pipe, top, transmission (metal)
NI	031481	1	. Pipe, bottom, transmission (metal)

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
			<b>Hydrostatic Drive Motor</b>
	040705	1	Hydrostatic drive motor . . . . . Page B9
	011069	4	. Setscrew, M12 x 40mm
	011097	4	. Spring washer, M12
1	023224	1	. Seal Kit
NI	027887	1	. Change-over block
NI	000037	4	. . Setscrew, M6 x 40mm
NI	028175	4	. Break-off pins
NI	028049	1	. Piston
NI	028047	1	. . Spring, large
NI	028050	1	. Cap
NI	028048	1	. . Spring, small
NI	024946	1	. O-Ring kit, bottom change-over block (has the following)
NI	024893	2	. . O-Ring, 5.28 x 1.78
NI	024894	3	. . O-Ring, 7.65 x 1.78
NI	024895	2	. . O-Ring, 9.25 x 1.78
NI	024896	1	. . O-Ring, 29.87 x 1.78
NI	024731	1	. Blanking plug





**HYDROSTATIC DRIVE PUMP**



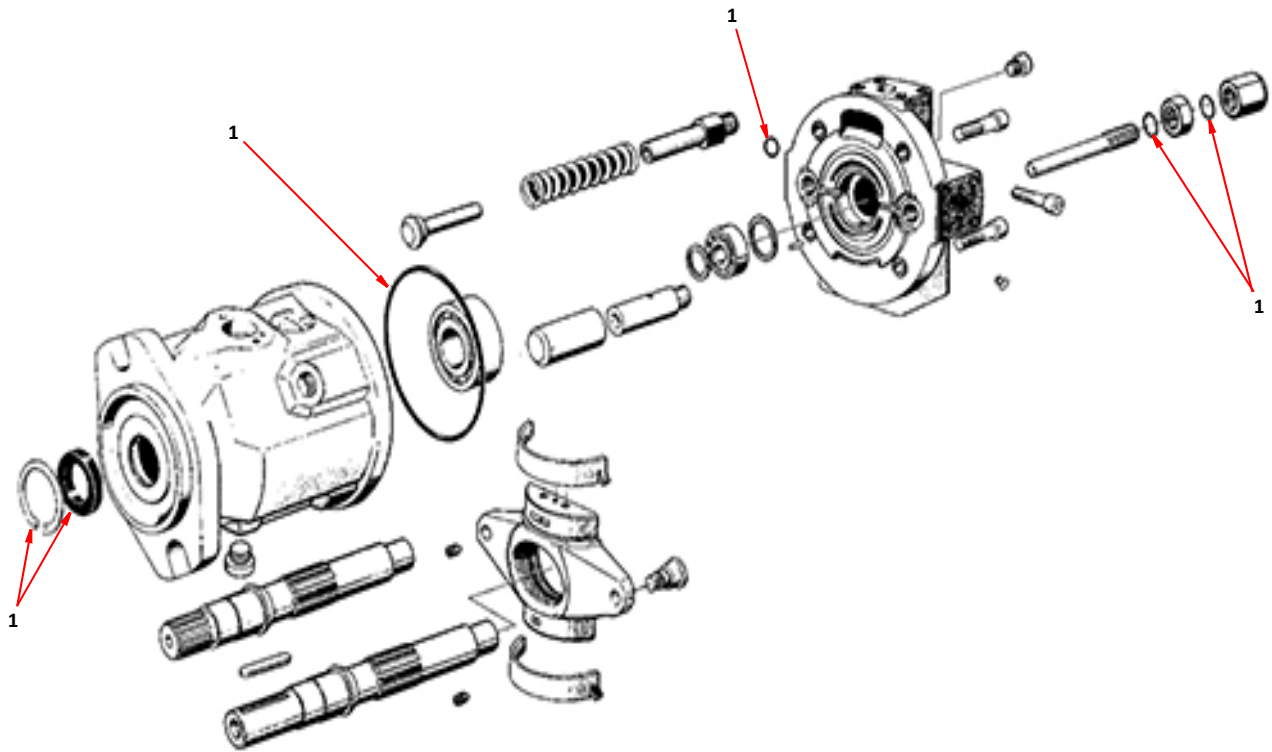
**HYDROSTATIC DRIVE MOTOR**

Item	Part Number	Quantity	Description
<b>Suction Fan Pump and Related Spares</b>			
	023620	1	Fan pump, A10V045
	026235	1	Fan pump, A10V060 high output ( <b>Magnum Unidrive</b> )
	024770	1	Fan pump, A10V045 SAE B-B ( <b>French option</b> )
	011053	2	. . Setscrew, M12 x 35mm
	011097	4	. . Spring washer, M12
1	014552*	1	. Seal kit, for pump (023620 Fan pump A10V045 only)
1	030561	1	. Seal kit, for pump (026235 Fan pump A10V060 only)
		1	. . O-Ring, Ø167mm
		4	. . O-Ring, Ø15mm
		3	. . O-Ring, Ø7.65mm
		1	. . O-Ring, Ø9.25mm
		2	. . O-Ring, Ø14mm
		1	. . O-Ring, Ø31.47mm
		1	. . Shaft seal (V-Ring)
		1	. . Circlip
		6	. . Seal, Dowty
NI	025804	1	. Gasket, fan pump to engine PTO (Unidrive installations only)
NI	024715	1	Splined adaptor (used on Mercedes chassis)
NI	014217	1	Flow-control valve

Item	Part Number	Quantity	Description
<b>Suction Fan Motor</b>			
1	024641	1	Motor, hydraulic, fan, VOAC F12-030-MF-CH-K . . . . . Page C29
NI	000343	2	. Bolt, socket cap, M14 x 50mm
NI	011127	2	. . Nut, M14, Nyloc
2	011052	1	. Fan mounting bolt, M12 x 30mm
3	024791	1	. . Cap washer VOAC motor
4	035967	1	. Valve block assembly
5	013523	2	. . O-ring, Ø25mm ID
6	000048	8	. . Screw, socket cap head, M10 x 80mm
7	011095	8	. . . Spring washer, M10
8	011151	2	. . Adaptor, M/M <sub>3/4</sub> BSP
9	011155	2	. . . Seal, Dowty, $\frac{3}{4}$ BSP
10	011248	1	. . Adaptor, M18 x $\frac{3}{8}$ BSP
11	011247	1	. . . Seal, Dowty, M18
12	010921	1	. . . Hose tail, $\frac{3}{8}$ BSP nut x $\frac{3}{8}$ hose
NI	025184	1	. . Speed sensor

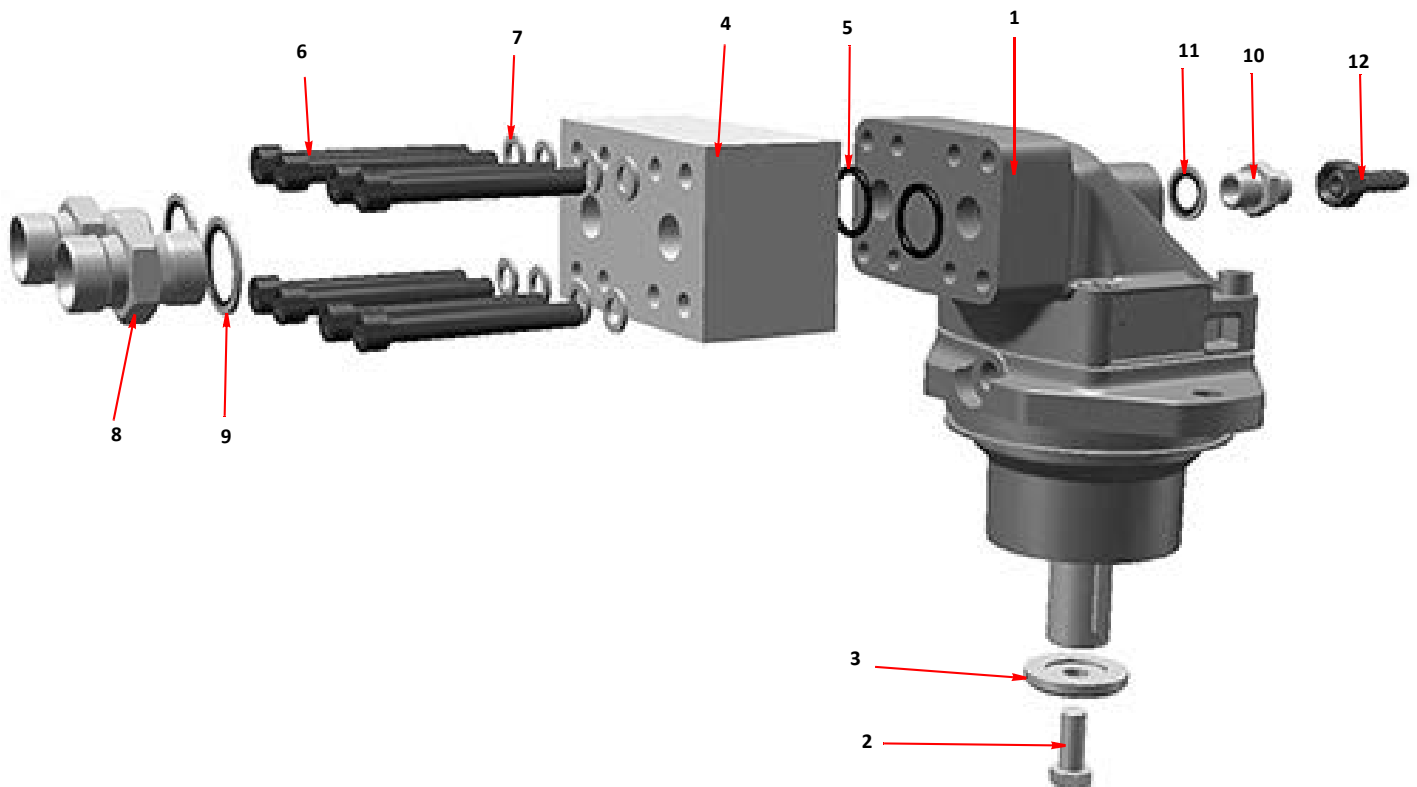
**Notes:-**

\* Some items in the seal kit are intended for use in the pump's control valve.



**i** Ports are on sides and not as shown

**SUCTION FAN PUMP**



**SUCTION FAN MOTOR ASSEMBLY**

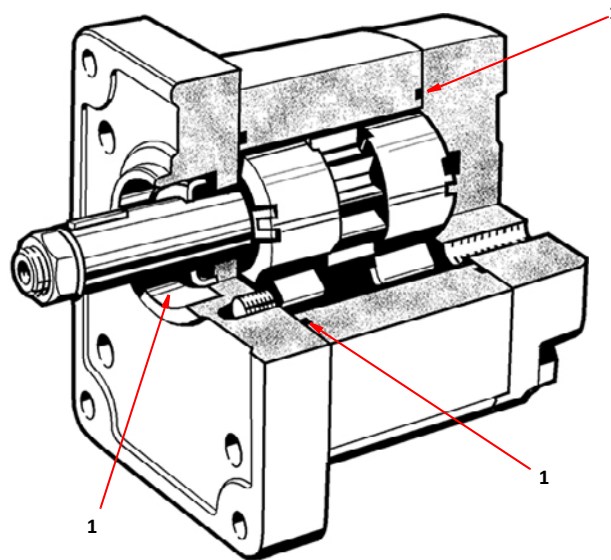
Item	Part Number	Quantity	Description
<b>Motor - 30 Litre High Pressure Water Pump</b>			
	025373	1	Motor, hydraulic, 19cc . . . . . Page E35, F45
	000020	4	. Setscrew, M6 x 30mm
	011090	8	. Washer, M6
	011071	4	. Nut, M6, Nyloc
1	*	1	. Seal kit

Item	Part Number	Quantity	Description
<b>Motor - Low Pressure Water Pump</b>			
<b>Motor - 42 Litre High Pressure Water Pump</b>			
1	013527	1	Motor, hydraulic, . . . . . Page E39, F45
	011069	2	. Setscrew, M12 x 40mm
	011077	2	. Nut, M12, Nyloc
2	*	1	. Seal kit
		1	. . Dust seal, shaft
		1	. . KBADH-Ring
		1	. . O-Ring
		3	. . O-Ring
		7	. . Plain washer
		1	. . Plain washer

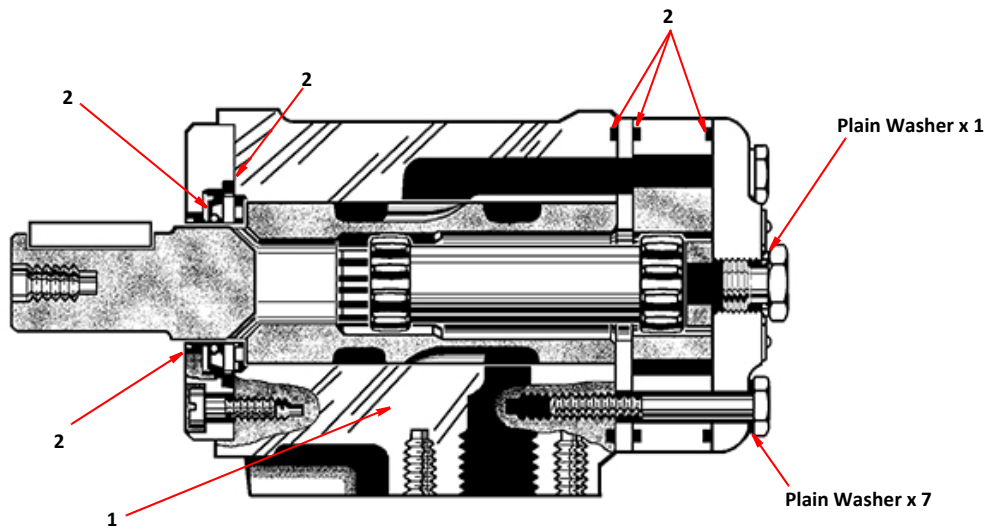
Item	Part Number	Quantity	Description
<b>Motor - 75 Litre High Pressure Water Pump</b>			
1	027866	1	Motor, hydraulic . . . . . Page E43, F45
	011034	4	. Setscrew, M10 x 40mm
	011075	4	. Nut, M10, Nyloc
NI	*	1	. Seal kit
2	022698	2	. Flange, $\frac{3}{4}$ " BSP
	000055	8	. . Setscrew, socket cap head, M10 x 40mm
3	011155	2	. . Seal, Dowty, $\frac{3}{4}$ " BSP
4	011224	2	. . . Adaptor, $\frac{3}{4}$ " BSP x $\frac{3}{8}$ " BSP
5	011218	1	. . Seal, Dowty, 22mm
6	012472	1	. . . Adaptor, 22mm x $\frac{3}{8}$ " BSP

**Notes:-**

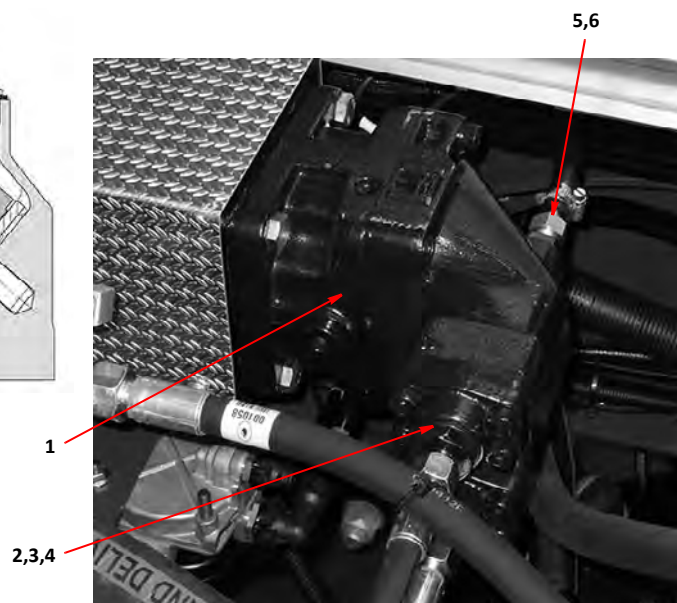
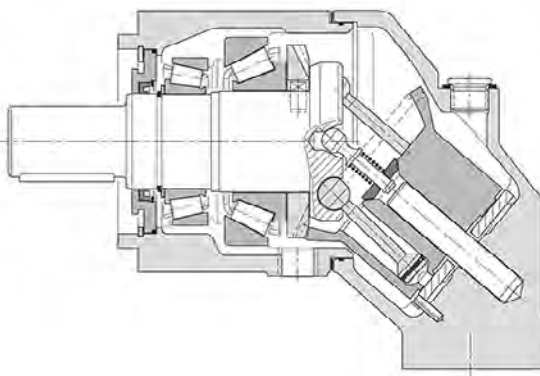
\* Please contact Scarab Parts Department before ordering.



**HYDRAULIC MOTOR - 30 LITRE H-P WATER PUMPS**



**HYDRAULIC MOTOR - L-P WATER PUMP & 42 LITRE H-P WATER PUMP**



**HYDRAULIC MOTOR - 75 LITRE H-P WATER PUMP**

# F39

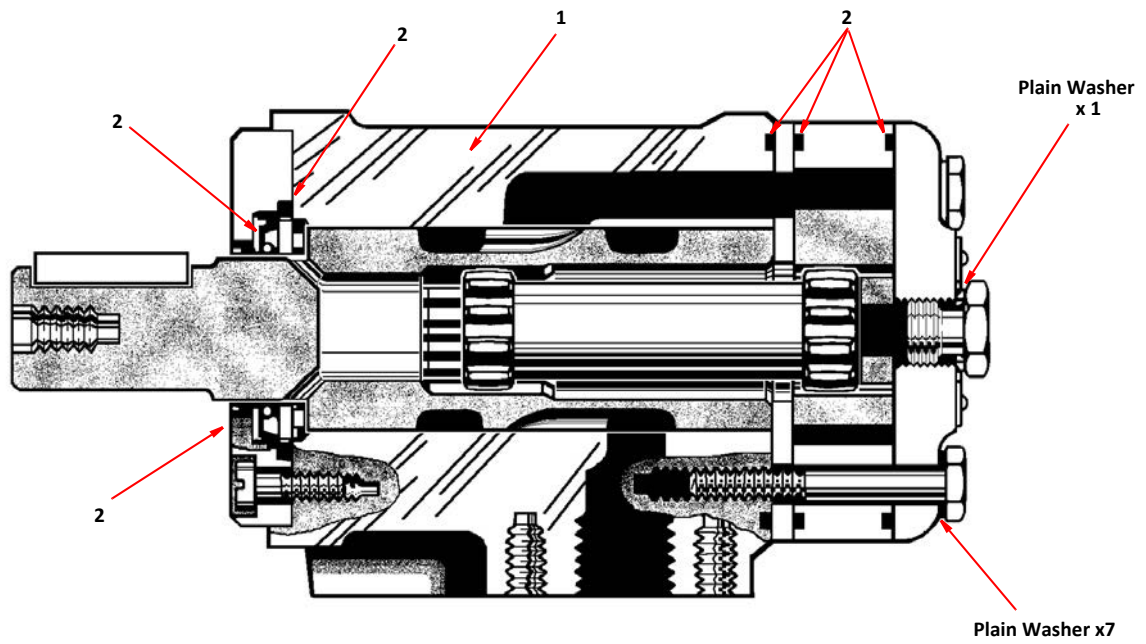
# MERLIN and MAGNUM

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
			<b>Brush Drive Motors</b>
1	010566	1	Motor, hydraulic, (wide sweep)
1	010749	1	Motor, hydraulic, (side/front brush)
	011053	2	. Setscrew, M12 x 35mm
	011069	2	. Setscrew, M12 x 40mm
	011077	2	. Nut, M12, Nyloc
2	*	1	. Seal kit

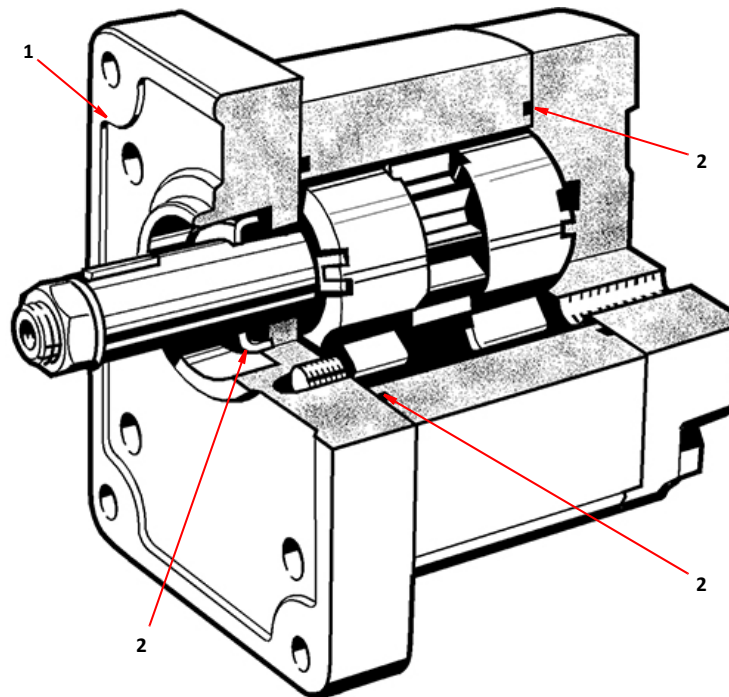
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
			<b>Cooling Fan Motor</b>
1	028752	1	Motor, hydraulic, 16cc . . . . . Page F3
	000020	4	. Setscrew, M6 x 30mm
	011090	8	. Washer, M6
	011071	4	. Nut, M6, Nyloc
2	*	1	. Seal kit

**Notes:-**

\* Please contact the Scarab Parts Department before ordering.



**HYDRAULIC MOTOR - WIDE SWEEP, FRONT & SIDE BRUSHES**



**HYDRAULIC MOTOR - COOLING FAN**

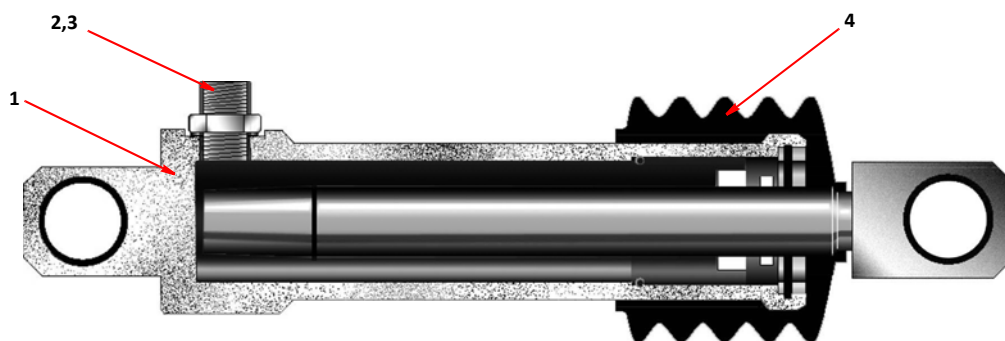
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Brush and Nozzle Hydraulic Ram Assemblies</b>			
1	024539	1	Ram, nozzle tilt . . . . .Page F51
1	024539	1	Ram, side brush lift (RH & LH) . . . . .Page F55
1	024539	1	Ram, wide sweep slewing . . . . .Page F55
2	012539	1	. Restrictor, No. 5 White, M/M, $\frac{1}{4}$ " BSP
3	011152	1	. Seal, Dowty, $\frac{1}{4}$ " BSP
4	014473	1	. Bellows
NI	011629	1	. Seal kit, ram

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Rear Door Open/Close Hydraulic Ram Assembly</b>			
1	022511	1	. Hopper rear-door open/close ram . . . . .Page F53
NI	022777	1	. . Seal kit, hydraulic ram
NI	011158	2	. . Adaptor, M/M, $\frac{1}{4}$ " BSP
NI	011152	4	. . . Seal, Dowty, $\frac{1}{4}$ " BSP

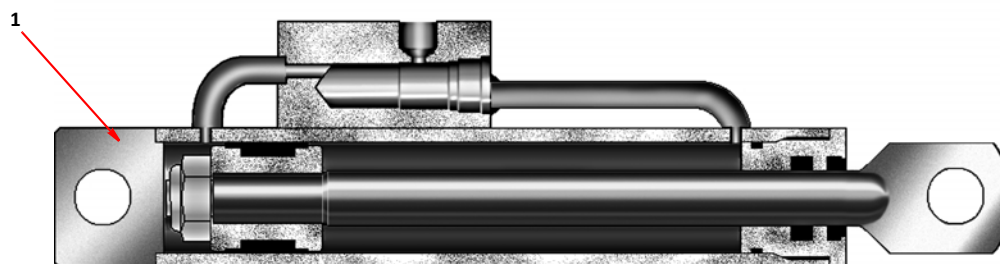
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Rear Door Locking Hydraulic Ram Assembly</b>			
1	022350	1	Hopper rear-door locking ram . . . . .Page F53
2	002017	2	. Elbow, Banjo, M/M, $\frac{1}{4}$ " BSP
3	011152	4	. . Seal, Dowty, $\frac{1}{4}$ " BSP
NI	022776	1	. Seal kit, hydraulic ram

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Hopper Lift Two Stage Hydraulic Ram Assembly</b>			
1	024249	1	Hopper lift ram, dual stage . . . . .Page C7, F53
2	027785	1	. Seal kit
NI	028178	1	. Check valve, (Integrated ICEB30F)
3	011159	1	. Adaptor, M/M, $\frac{3}{8}$ " BSP
NI	11153	1	. . Seal, Dowty, $\frac{3}{8}$ " BSP
4	012881	1	. Bearing, spherical





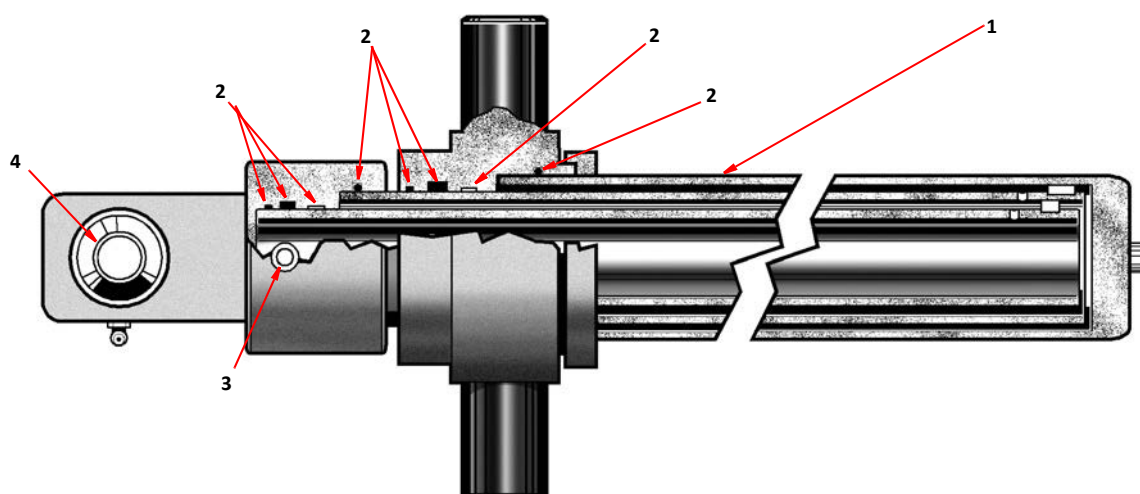
**HYDRAULIC BRUSH RAM ASSEMBLY**



**REAR DOOR OPEN/CLOSE RAM**

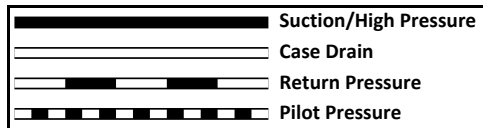
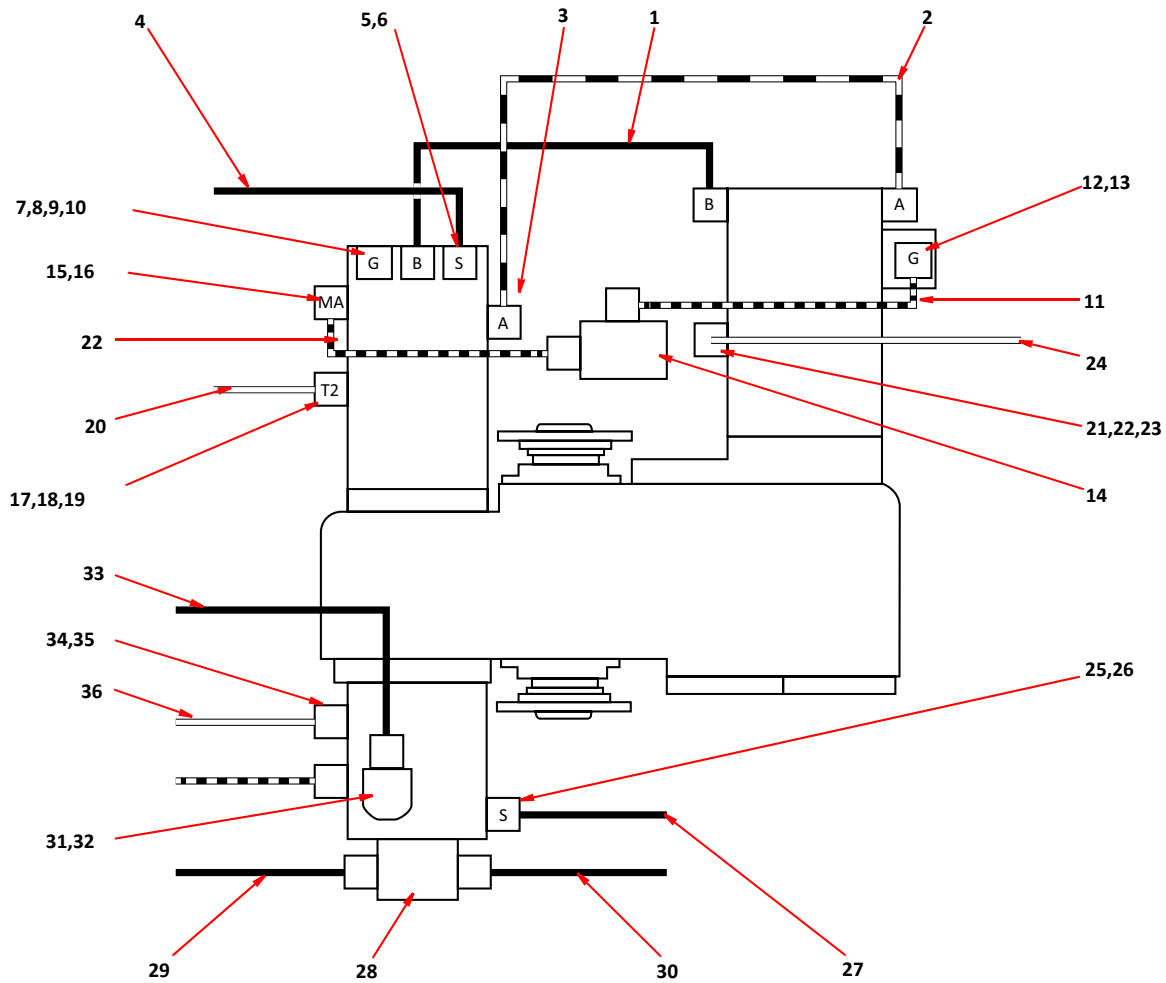


**HOPPER REAR DOOR LOCKING RAM**



**TWO STAGE HOPPER-LIFT RAM ASSEMBLY**

Item	Part Number	Quantity	Description
<b>Scarab Hydrostatic Gearbox Piping Arrangements</b>			
1	031481	1	Transmission pipe, bottom assembly, metal c/w flanges
2	031480	1	Transmission pipe, top assembly, metal c/w flanges
3	022876	1	. Spacer, HP, $\frac{3}{4}$ " SAE x 10mm thick (between split flange & pump)
4	014827		Hose, rubber, 1" bore (from suction filter on chassis)
5	022706	1	. Adaptor, M33 x $\frac{3}{4}$ " BSP
NI	002019	1	. . Seal, Dowty, M33
6	011210	1	. . Elbow, $\frac{3}{4}$ " BSP x 1" hose
7	011158	1	Adaptor, M/M, $\frac{1}{4}$ " BSP
8	011169	1	. . Elbow, swivel, F/F, $\frac{1}{4}$ " BSP
9	011935	1	Adaptor, M/F, $\frac{1}{4}$ " BSP x M12
NI	011150	4	. Seal, Dowty, $\frac{1}{4}$ " BSP
10	013035	1	. Coupling, pressure test point, M12
11	023741	1	Hose, rubber, $\frac{1}{4}$ " x 500mm, ( $\frac{1}{4}$ " BSP x 8mm straight. pipe ends)
12	011158	1	. Adaptor, M/M, $\frac{1}{4}$ " BSP
13	002045	1	. . Banjo coupling, 14mm
14	027241	1	Valve Block Assembly - Transmission . . . . . Page F23
15	011158	1	. Adaptor, M/M, $\frac{1}{4}$ " BSP
16	011169	1	. . Elbow, swivel, F/F, $\frac{1}{4}$ " BSP
17	012472	1	Adaptor, M22 x $\frac{3}{8}$ " BSP
NI	011218	1	. Seal, Dowty, M22
18	011205	1	. Elbow, swivel, F/F, $\frac{3}{8}$ " BSP
19	010930	1	. . Tail piece, hose, $\frac{5}{8}$ " BSP x $\frac{5}{8}$ " hose
20	011000		. . . Hose, rubber, $\frac{5}{8}$ " bore (drive pump case-drain)
21	011248	1	Adaptor, M18 x $\frac{3}{8}$ " BSP
NI	011247	1	. Seal, Dowty, M18
22	011205	1	. Elbow, swivel, F/F, $\frac{3}{8}$ " BSP
23	010930	1	. . Tail piece, hose, $\frac{5}{8}$ " BSP x $\frac{5}{8}$ " hose
24	011000		. . . Hose, rubber, $\frac{5}{8}$ " bore (drive motor case-drain)
25	011230	2	Flange, split, $1\frac{1}{2}$ " SAE
	011108	4	. Cap screw, socket head, $\frac{1}{2}$ " UNC x $1\frac{1}{2}$ "
26	011231	1	. Elbow, hose, $1\frac{1}{2}$ " SAE x 1"
27	014827		Hose, rubber, 1" bore (from suction filter in hydraulic tank)
28			Gear Pump . . . . . Page F25,F27
29	014827	1	. Hose, rubber, 1" bore (tank suction filter/gear pump)
30	001020	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 2680mm (gear pump/main valve block)
31	014104	1	Elbow, 1" SAE x $\frac{3}{4}$ " BSP
	000045	4	. Cap screw, socket head, $\frac{3}{8}$ " UNC x $1\frac{1}{2}$ "
	011406	4	. Spring washer, $\frac{3}{8}$ "
32	011193	1	Adaptor, reducing, 1" BSP x $\frac{3}{4}$ " BSP
NI	011156	1	. Seal, Dowty 1"
33	011733	1	. Hose, rubber, $\frac{3}{4}$ " BSP, $\frac{5}{8}$ " bore x 510mm (fan pump/fan block)
34	011226	1	Adaptor, $\frac{7}{8}$ " UNF x $\frac{1}{2}$ " BSP
NI	011218	1	. Seal, Dowty, M22
35	011234	1	. Elbow, hose, 90° sweep, $\frac{1}{2}$ " BSP x $\frac{5}{8}$ "
36	011000		. Hose, rubber, $\frac{5}{8}$ " bore (fan pump case-drain)

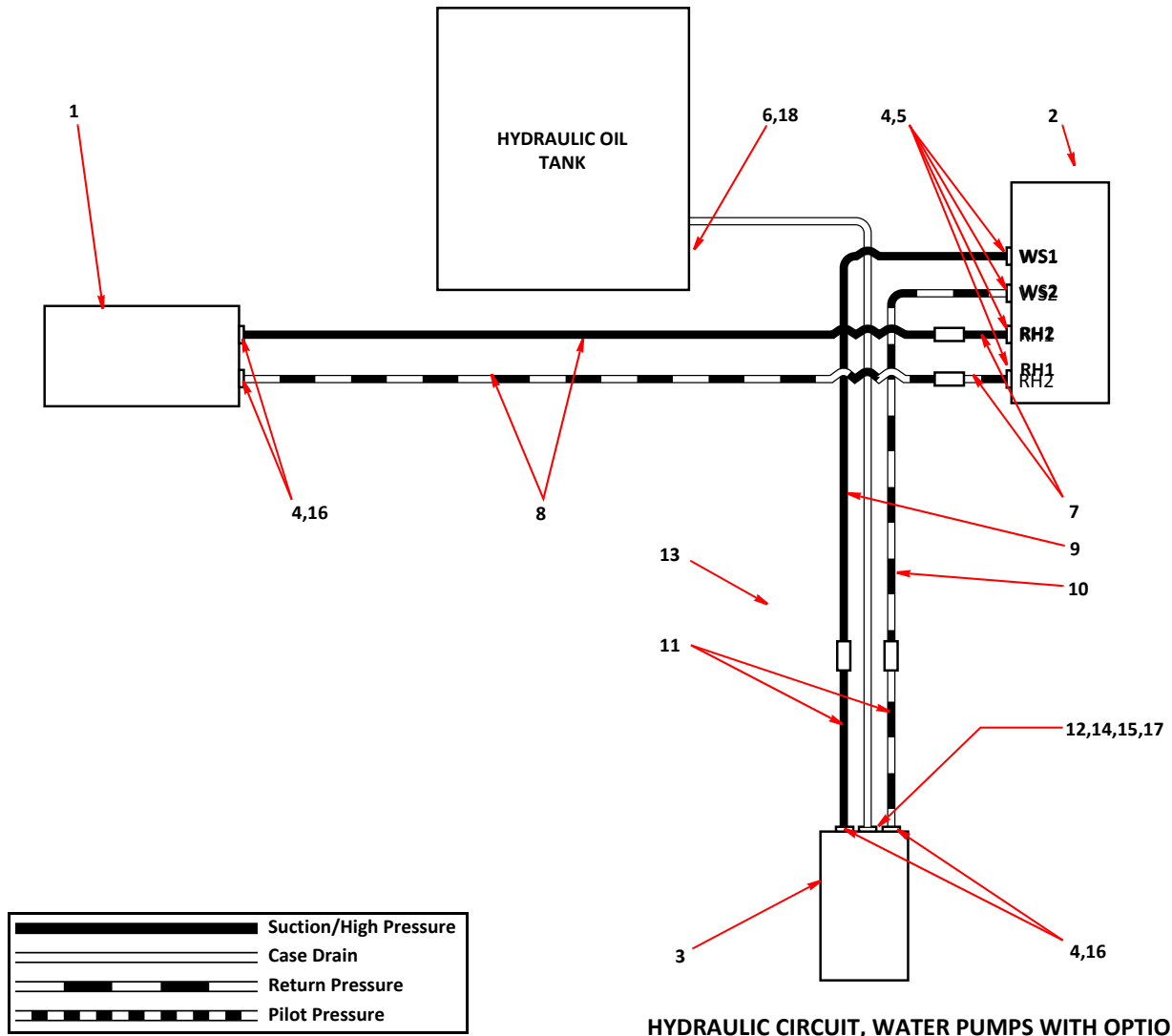


**SCARAB TRANSFER GEARBOX - PIPING ARRANGEMENT**

Item	Part Number	Quantity	Description
<b>Hydraulic Circuit, Water Pumps With Option Block</b>			
1	025373	1	Motor, hydraulic, 30 LPM. HP water pump . . . . .Page F37
1	013527	1	Motor, hydraulic, 42 LPM. HP water pump . . . . .Page F37
1	027866	1	Motor, hydraulic, 75 LPM. HP water pump . . . . .Page F37
2	*	2	. Valve block . . . . .Page F11
3	013527	1	. Motor, hydraulic, LP water pump . . . . .Page F37
4	011154	8	. . Seal, Dowty, $\frac{1}{2}$ " $\times$ $\frac{3}{8}$ "
5	020903	4	. . Adaptor, $\frac{1}{2}$ " $\times$ $\frac{3}{8}$ " BSP
6	011153	4	. . Seal, Dowty, $\frac{1}{2}$ "
7	031481	2	. . Pipe, steel
8	011305	2	. Hose, rubber $\frac{3}{8}$ " BSP x 1500mm ( <b>MERLIN</b> )
8	011330	2	. Hose rubber $\frac{3}{8}$ " BSP x 1620mm ( <b>MAGNUM</b> )
9	031508	1	. . Pipe, steel
10	031509	1	. . Pipe, steel
11	001255	2	. Hose, rubber, $\frac{3}{8}$ " BSP x 475mm, straight+90° ends
12	010910	2	. . Elbow, M/F, $\frac{3}{8}$ " BSP
13	010958	AR	. Hose, rubber $\frac{3}{8}$ " bore
14	010516	2	. . Hose clip, worm drive
15	010922	1	. . Hose tail $\frac{3}{8}$ " $\times$ $\frac{1}{4}$ " BSP
16	011167	4	. . Adaptor $\frac{1}{2}$ " BSP $\times$ $\frac{3}{8}$ " BSP
17	011152	1	. . . Seal, Dowty $\frac{1}{4}$ "
18	020923	1	. . Hose tail $\frac{3}{8}$ " BSP $\times$ $\frac{3}{8}$ " hose

**Notes:-**

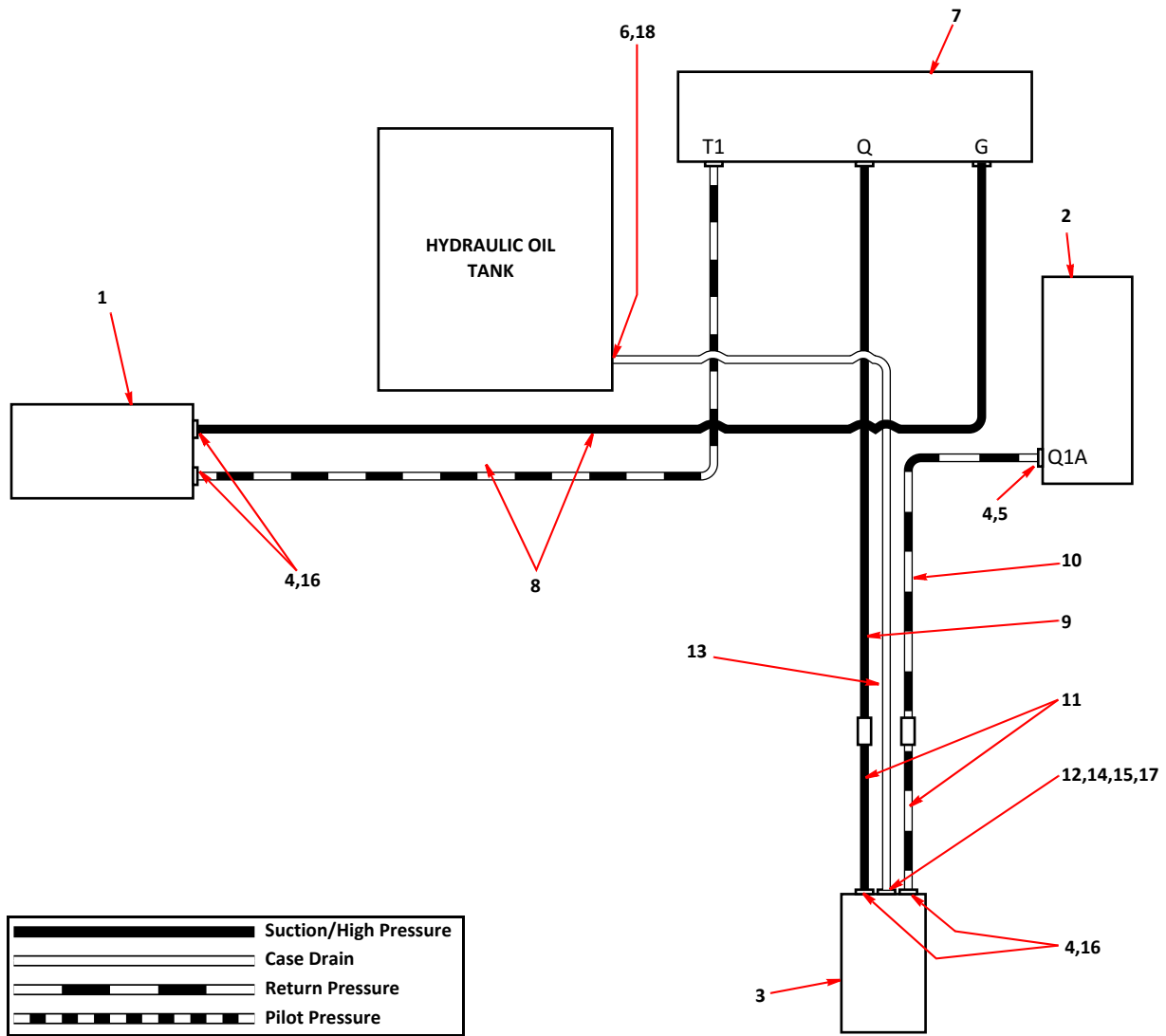
- \* If you need to order this item then please contact the Scarab Parts Department quoting you machine's serial number and model.



Item	Part Number	Quantity	Description
<b>Hydraulic Circuit, Water Pumps Without Option Block</b>			
1	025373	1	Motor, hydraulic, 30 LPM. HP water pump . . . . .Page F37
1	013527	1	Motor, hydraulic, 42 LPM. HP water pump . . . . .Page F37
1	022769	1	Motor, hydraulic, 75 LPM. HP water pump . . . . .Page F37
2	*	2	. Valve block, brush control . . . . .Page F19
3	013527	1	. Motor, hydraulic. LP water pump . . . . .Page F37
4	011154	8	. . Seal, Dowty, $\frac{1}{2}$ " $\frac{3}{8}$ "
5	020903	4	. . Adaptor, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
6	011153	4	. . Seal, Dowty $\frac{3}{8}$ "
7	*	1	Main valve block, . . . . .Page F11, Page F15
8	001009	2	. Hose, Rubber $\frac{3}{8}$ " BSP x 2200mm
9	031588	1	. . Pipe, steel
10	031589	1	. . Pipe, steel
11	001255	2	. Hose, rubber, $\frac{3}{8}$ " BSP x 475mm, straight+90° ends
12	010910	2	. . Elbow, M/F, $\frac{3}{8}$ "
13	010958	AR	. Hose, rubber, $\frac{3}{8}$ " bore
14	010516	2	. . Hose clip, worm drive
15	010922	1	. . Hose tail, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP
16	011167	4	. . Adaptor, $\frac{1}{2}$ " BSP x $\frac{3}{8}$ " BSP
17	011152	1	. . Seal, Dowty, $\frac{1}{4}$ "
18	020923	1	. . Hose tail, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " hose

**Notes:-**

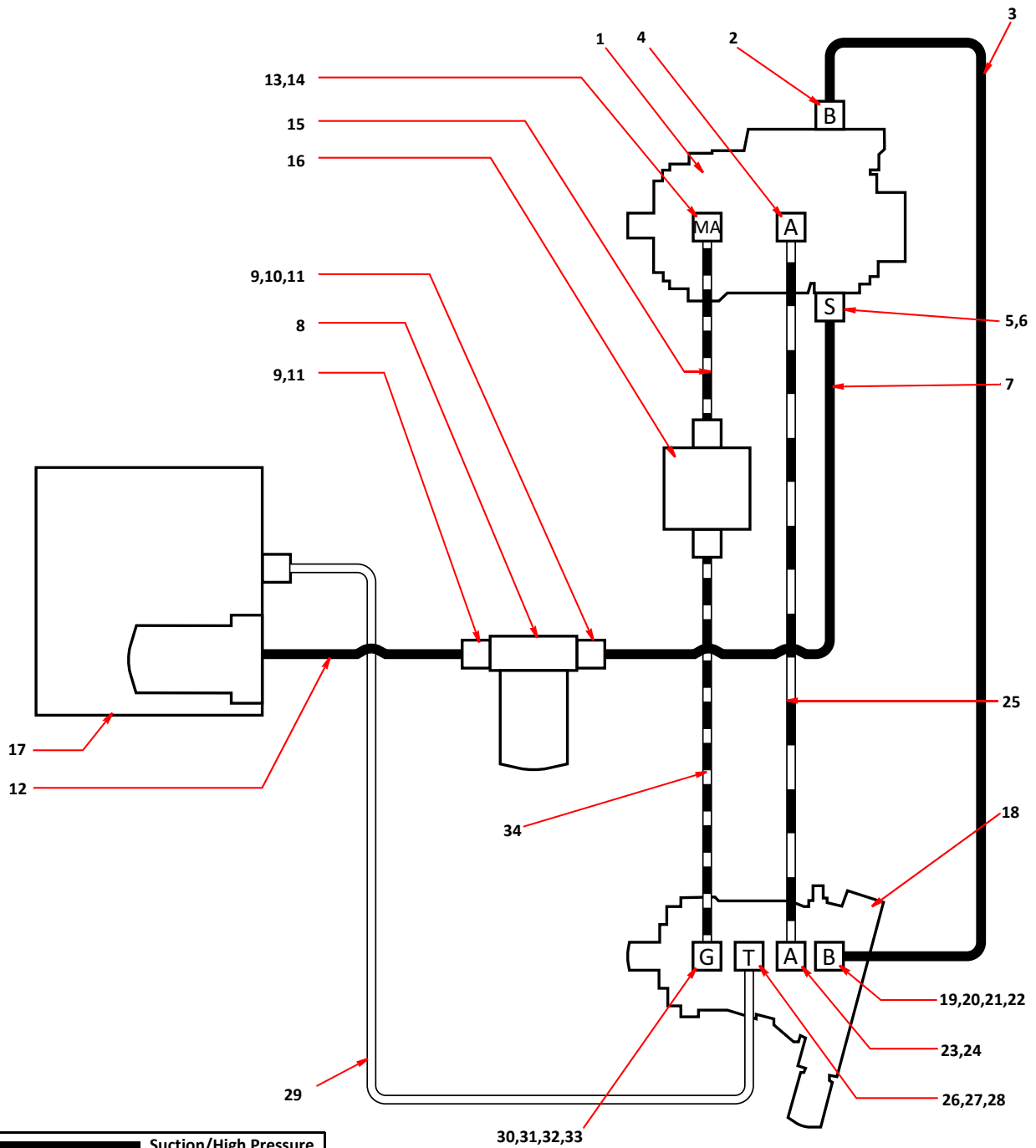
- \* If you need to order this item then please contact the Scarab Parts Department quoting you machine's serial number and model.



**HYDRAULIC CIRCUIT, WATER PUMPS WITHOUT OPTION BLOCK**

Item	Part Number	Quantity	Description
<b>Hydraulic Circuit, Hydrostatic Drive</b>			
1	028895	1	Pump, hydraulic, hydrostatic drive . . . . .Page F33
2	002000	2	. Flange, split, $\frac{3}{4}$ " SAE
	011408	3	. . Cap screw, socket head, M10 x 30mm
	011032	1	. . Bolt, M10 x 30mm
	011095	1	. . Spring washer, M10
3	022700	1	. Hose assembly, transmission, $\frac{3}{4}$ " SAE
NI	013523	1	. . O-Ring
4	002000	2	. Flange, split, $\frac{3}{4}$ " SAE
	011408	3	. . Cap screw, socket head, M10 x 30mm
	011032	1	. . Bolt, M10 x 30mm
	011095	1	. . Spring washer, M10
5	022076	1	. Adaptor, M33 x $\frac{3}{4}$ " BSP
NI	002019	1	. . Seal, Dowty, M33
6	011210	1	. . Elbow, hose, $\frac{3}{4}$ " BSP x 1"
7	014827	AR	. Hose, rubber, 1" bore
8	013122	1	. . Filter, suction
	011010	2	. . Bolt, M8 x 20mm
	011093	2	. . Spring washer, M8
NI	013124	1	. . Element, suction filter . . . . .Page F29
NI	021720	1	. . Gauge, pressure
9	011184	2	. . Adaptor, $\frac{1}{4}$ " BSP x $\frac{3}{4}$ " BSP
NI	011155	2	. . . Seal, Dowty, $\frac{3}{4}$ "
10	013757	1	. . . Valve, ball, $\frac{3}{4}$ " BSP
11	011210	2	. . . Elbow, hose, $\frac{3}{4}$ " BSP x 1"
12	014827	AR	Hose, rubber, 1" bore
13	011915	1	. Adaptor, $\frac{1}{4}$ " BSP x $\frac{1}{4}$ " BSP
NI	011150	3	. . Seal, Dowty, $\frac{1}{4}$ "
14	011169	1	. . Elbow, swivel, F/F, $\frac{1}{4}$ " BSP
15	011324	1	Hose, rubber, $\frac{1}{4}$ " BSP x 360mm
16	027241	1	Transmission valve assembly . . . . .Page F23
17	022616	1	Tank assembly, hydraulic oil . . . . .Page F5
18	022724	1	Motor, hydraulic, hydrostatic drive . . . . .Page F33
19	002001	2	. Flange, split, 1" SAE
	011412	2	. . Cap screw, socket head, M12 x 40mm
	011069	2	. . Bolt, M12 x 40mm
20	002020	1	. . Elbow, 1" SAE x $\frac{3}{4}$ " BSP
21	011196	1	. . Elbow, 90° swept, $\frac{3}{4}$ " BSP
22	012228	1	. . . Stud, coupling adaptor, M/F, $\frac{3}{4}$ " BSP x $\frac{3}{4}$ " BSP
23	002001	2	. Flange, split, 1" SAE
	011412	3	. . Cap screw, socket head, M12 x 40mm
	011069	1	. . Bolt, M12 x 40mm
24	002020	1	. . Elbow, 1" SAE x $\frac{3}{4}$ " BSP
NI	013517	1	. . . O-Ring
25	022722	1	Hose, rubber, transmission, $\frac{3}{4}$ " SAE
26	011248	1	. Adaptor M18 x $\frac{3}{8}$ " BSP
NI	011247	1	. . Seal, Dowty, M18
27	011205	1	. . Elbow, swivel, F/F, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " BSP
28	010930	1	. . . Tail piece, hose, $\frac{3}{8}$ " BSP x $\frac{5}{8}$ "
29	011000	AR	Hose, rubber, $\frac{5}{8}$ " bore
30	011158	1	. Adaptor, $\frac{1}{64}$ " BSP x $\frac{1}{4}$ " BSP
NI	011150	2	. . Seal, Dowty, $\frac{1}{4}$ "
31	011169	1	. . Elbow, swivel, F/F, $\frac{1}{4}$ " BSP x $\frac{1}{4}$ " BSP, F/F
32	011935	1	. . . Adaptor, M/F, $\frac{1}{4}$ " BSP x M12
33	013035	1	. . . . Coupling, pressure test point, M12
34	011090	1	Hose, rubber, $\frac{1}{4}$ " BSP x 550mm

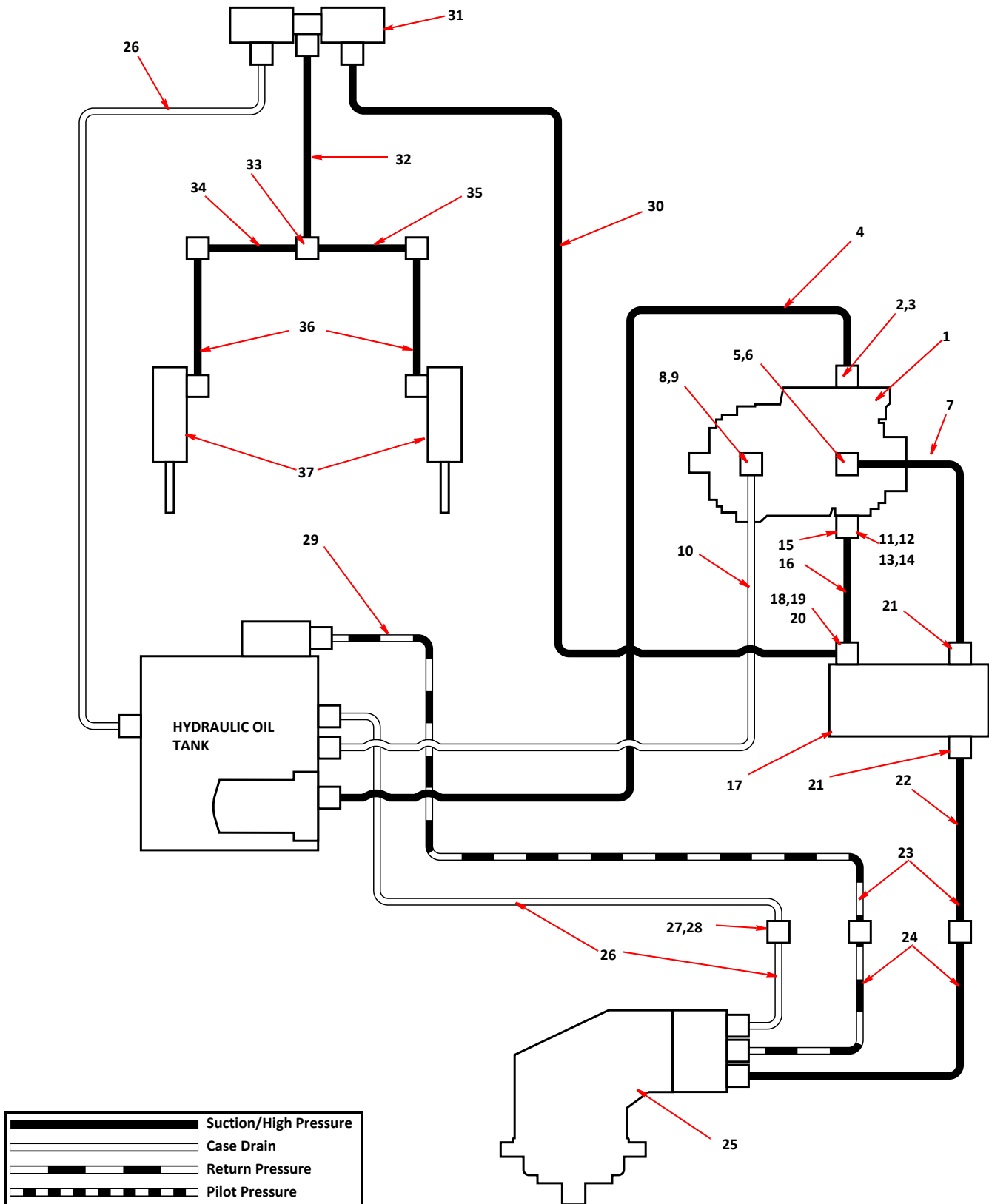




	Suction/High Pressure
	Case Drain
	Return Pressure
	Pilot Pressure

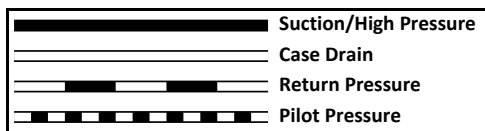
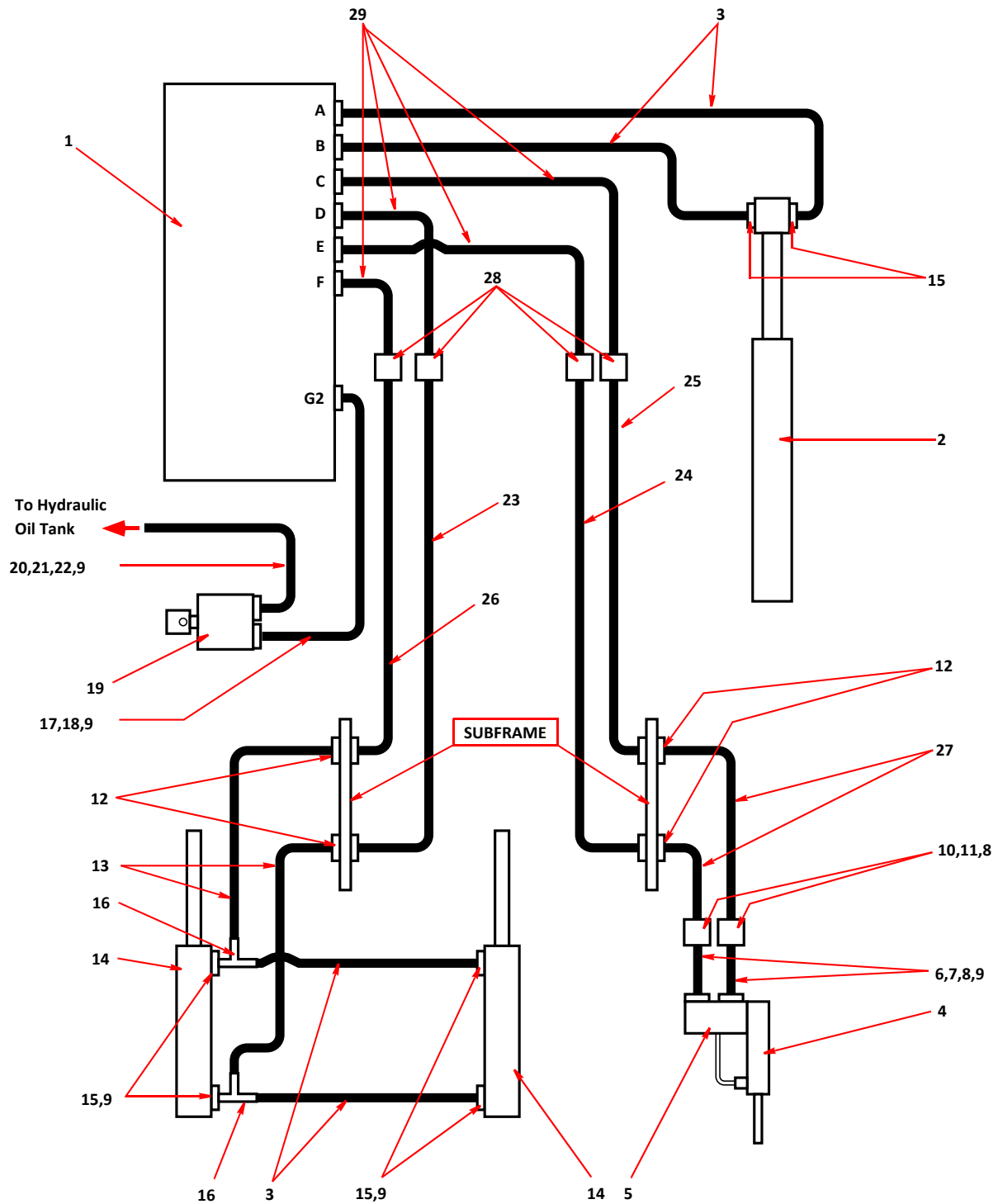
**HYDRAULIC CIRCUIT, HYDROSTATIC DRIVE**

Item	Part Number	Quantity	Description
<b>Hydraulic Circuit, Suction Fan &amp; Variable Nozzle Tilt</b>			
1	023620	1	Pump, hydraulic, suction fan . . . . .Page F35
1	026235	1	Pump, hydraulic, suction fan ( <b>Magnum/Unidrive</b> ) . . . . .Page F35
2	011230	1	. Flange, split, $1\frac{1}{2}$ " SAE
	011108	4	. . Cap screw, socket head, $\frac{1}{2}$ " UNC x $1\frac{1}{2}$ "
3	011231	1	. Elbow, hose, $1\frac{1}{2}$ " SAE x 1
4	014827	AR	Hose, rubber, 1" bore (from suction filter in hydraulic tank)
5	014104	1	. Elbow, 1" SAE x $\frac{3}{4}$ " BSP
	000045	4	. . Cap screw, socket head, $\frac{3}{8}$ " UNC x $1\frac{1}{2}$ "
	011406	4	. . Washer, spring, $\frac{3}{8}$ "
6	002040	1	. . Adaptor, reducing, M/M, 1" BSP x $\frac{5}{8}$ " BSP
NI	011156	1	. . . Seal, Dowty, 1"
7	023640	1	Hose, rubber, $\frac{5}{8}$ " BSP, $\frac{5}{8}$ " bore Megaflex (fan pump/fan block)
8	011226	1	. Adaptor, $\frac{7}{8}$ " UNF x $\frac{1}{2}$ " BSP
NI	011218	1	. . Seal, Dowty, M22
9	011234	1	. . Elbow, hose, 90° sweep, $\frac{1}{2}$ " BSP x $\frac{5}{8}$ " hose
10	011000		. Hose, $\frac{5}{8}$ " bore
11	011227	1	. . Adaptor, $\frac{7}{16}$ " UNF x $\frac{1}{4}$ " BSP
NI	011215	2	. . . Seal, Dowty, M12
12	011169	1	. . Elbow, swivel, F/E, $\frac{1}{4}$ " BSP
13	002014	1	. . . Adaptor, M/F, $\frac{1}{4}$ " BSP
14	013036	1	. . . . Coupling, pressure test point, $\frac{1}{4}$ " BSP
15	011227	1	. Adaptor, $\frac{7}{16}$ " UNF x $\frac{1}{4}$ " BSP
16	011324	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 360mm (fan pump/fan block)
17		1	. Valve block, fan boost, suction fan . . . . .Page F21
	011017	2	. Bolt, M8 x 60mm
	011092	2	. Washer, M8
	011073	2	. Nut, M8, Nyloc
NI	013036	1	. Coupling, pressure test point, $\frac{1}{4}$ " BSP
NI	011150	1	. . Seal, Dowty, $\frac{1}{4}$ "
18	011158	1	. Adaptor, $\frac{1}{4}$ " BSP x $\frac{1}{4}$ " BSP
19	011171	1	. . Elbow, swivel, M/F, $\frac{1}{4}$ " BSP
20	002005	1	. . . Tee, F/M/M, $\frac{1}{4}$ " BSP
21	002041	2	. Adaptor, reducing, M/M, $\frac{3}{4}$ " BSP x $\frac{5}{8}$ " BSP
NI	011155	2	. . Seal, Dowty, $\frac{3}{4}$ "
22	001038	1	. Hose, rubber $\frac{3}{4}$ " BSP x 3600 ( <b>Merlin/XP</b> )
22	023642	1	. Hose, rubber $\frac{3}{4}$ " BSP x 3300 ( <b>Magnum</b> )
23	002148	2	. . . Elbow, M/F, $\frac{3}{4}$ " BSP
24	001150	2	. Hose, rubber, $\frac{3}{4}$ " BSP x 2800mm ( <b>Merlin/Magnum</b> )
24	001223	2	. Hose, rubber, $\frac{3}{4}$ " BSP x 2500mm ( <b>XP</b> )
25	025564	1	. Hydraulic motor assembly, suction fan ( <b>Merlin</b> )
25	025392	1	. Hydraulic motor assembly, suction fan ( <b>Magnum</b> )
26	010958	AR	. Hose, $\frac{3}{8}$ " bore, low pressure, fan motor case-drain
27	013333	2	. . Hose connector $\frac{3}{8}$ "
28	010516	2	. . . Hose clip, worm drive
NI	010923	1	. . Hose tail, $\frac{3}{8}$ " BSP x $\frac{3}{8}$ " hose
29	023641	1	. Hose, rubber $\frac{3}{4}$ " x 2900 ( <b>Merlin/XP</b> )
29	001029	1	. Hose, rubber $\frac{3}{4}$ " x 3900 ( <b>Magnum</b> )
30	011328	1	. Hose, rubber $\frac{1}{4}$ " BSP x 1780mm
31	025003	1	. Valve assembly, variable nozzle tilt . . . . .Page F23
32	031747	1	. . Pipe, steel, 6mm
33	002085	1	. . Tee, 6mm pipe
34	03178	1	. . Pipe, steel, 6mm (LH )
35	031749	1	. . Pipe, steel, 6mm (RH)
36	010988	2	. . Hose, rubber $\frac{1}{4}$ " x 1473mm
37	024539	2	. Ram, hydraulic, nozzle tilt



**HYDRAULIC CIRCUIT, SUCTION FAN & VARIABLE NOZZLE TILT**

Item	Part Number	Quantity	Description
<b>Hydraulic Circuit, Hopper and Door</b>			
1	028400	1	Valve block, main hydraulic . . . . . Page F11, F15
2	024249	1	Ram, hydraulic, two stage, hopper lift . . . . . Page F41
3	010987	2	. Hose, rubber, $\frac{1}{4}$ " BSP X 1660mm, hopper ram ports A & B
4	022511	1	Ram. hydraulic, door raise/lower . . . . . Page F41
5	024844	1	. Valve, check
6	011324	2	Hose, rubber $\frac{1}{4}$ " BSP x 295mm
7	011158	2	. Adaptor, M/M, $\frac{1}{4}$ " BSP
8	011171	4	. Elbow, swivel, M/F, $\frac{1}{4}$ " BSP
9	011152	14	. Seal, Dowty $\frac{1}{4}$ " BSP
10	011269	2	. Adaptor, bulkhead, M/M, $\frac{1}{4}$ " BSP
11	000277	4	. Washer, M12
12	032773	4	. Adaptor, bulkhead, M12 x 6mm pipe
13	001060	2	Hose, rubber $\frac{1}{4}$ " BSP x 1020mm, straight+90° ends
14	022350	2	Ram, hydraulic, door locking . . . . . Page F41
15	002017	4	. Elbow, Banjo, $\frac{1}{4}$ " BSP
16	011206	2	. Tee, M/F/F, $\frac{1}{4}$ " BSP
17	031498	1	. Pipe, steel 6mm
17	031496	1	. Pipe, steel 6mm ( <b>Magnum</b> )
17	035705	1	. Pipe, steel 6mm, hinge down pneumatic box
17	035706	1	. Pipe, steel 6mm ( <b>Magnum</b> ), hinge down pneumatic box
18	002014	1	. Adaptor, $\frac{1}{4}$ " BSP x 6mm pipe
19	028307	1	Hand pump
20	011309	1	Hose, rubber, $\frac{3}{8}$ " x 432mm
21	011199	1	. Adaptor, M/M, $\frac{3}{8}$ " x $\frac{1}{4}$ " BSP
22	002014	1	. Adaptor, M/F, $\frac{1}{4}$ " BSP
23	032981	1	. Pipe, steel ( <b>Merlin</b> )
23	032556	1	. Pipe, steel ( <b>Magnum</b> )
23	032974	1	. Pipe, steel ( <b>XP</b> )
24	032983	1	. Pipe, steel ( <b>Merlin</b> )
24	032554	1	. Pipe, steel ( <b>Magnum</b> )
24	032976	1	. Pipe, steel ( <b>XP</b> )
25	032984	1	. Pipe, steel ( <b>Merlin</b> )
25	032555	1	. Pipe, steel ( <b>Magnum</b> )
25	032977	1	. Pipe, steel ( <b>XP</b> )
26	032982	1	. Pipe, steel ( <b>Merlin</b> )
26	032557	1	. Pipe steel ( <b>Magnum</b> )
26	032975	1	. Pipe steel ( <b>XP</b> )
27	001061	2	Hose, rubber, $\frac{1}{4}$ " BSP x 4100mm, straight+90° ends
27	001222	2	Hose, rubber, $\frac{1}{4}$ " BSP x 3800mm, straight+90° ends ( <b>XP</b> )
28	020903	4	. Stud, $\frac{3}{8}$ " BSP x 12mm pipe
29	001254	4	Hose, rubber, $\frac{3}{8}$ " BSP x 1500mm, straight+90°

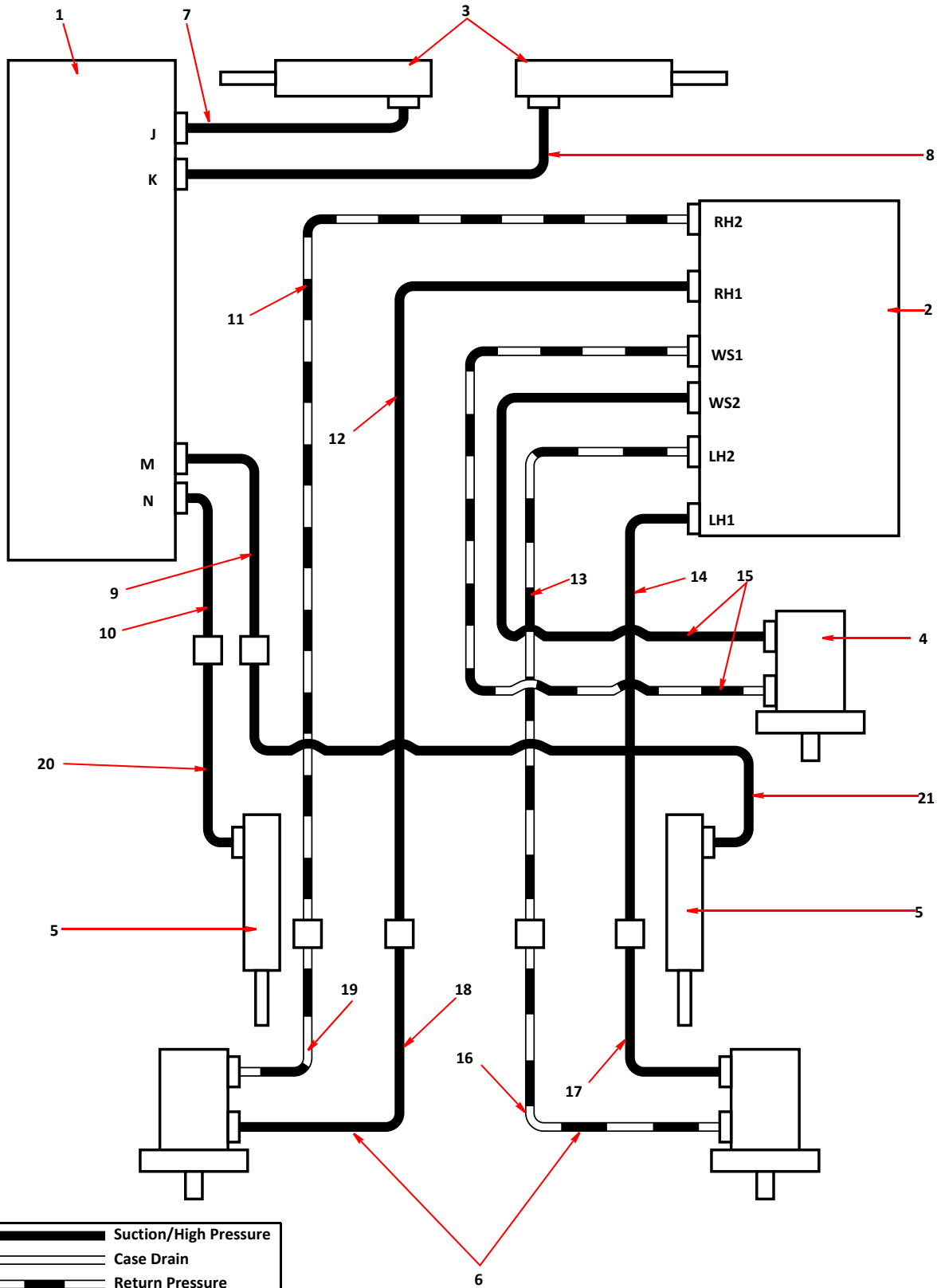


## HYDRAULIC CIRCUIT, HOPPER AND DOOR

Item	Part Number	Quantity	Description
<b>Hydraulic Circuit, Side Brush and Wide Sweep</b>			
1	028400	1	Valve block, main hydraulic . . . . .Page F11
2	024786	1	Valve block, brush control . . . . .Page F19
3	024539	2	Ram, hydraulic, wide sweep slew . . . . .Page F41
4	010566	1	Motor, hydraulic, wide sweep brush . . . . .Page F39
5	024539	2	Ram, hydraulic, side brush raise/lower . . . . .Page F41
6	010749	2	Motor, hydraulic, RH/LH side brush . . . . .Page F39
NI	011205	1	Elbow, $\frac{3}{8}$ " BSP F/F ( <b>Merlin</b> ) used with Item 14
NI	020903	1	Stud, $\frac{3}{8}$ " BSP x 12mm pipe ( <b>Merlin</b> ) used with Item 14
7	010985	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 2150mm
8	001037	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 2650mm
9	031545	1	. . Pipe, steel, 6mm ( <b>Merlin</b> )
9	032319	1	. . Pipe, steel, 6mm ( <b>XP</b> )
9	032320	1	. . Pipe, steel, 6mm ( <b>XP</b> )
9	031579	1	. . Pipe, steel, 6mm ( <b>Magnum</b> )
10	031470	1	. . Pipe, steel, 6mm ( <b>Merlin</b> )
10	032325	1	. . Pipe, steel, 6mm ( <b>XP</b> )
10	031580	1	. . Pipe, steel, 6mm ( <b>Magnum</b> )
11	031543	1	. . Pipe, steel, 12mm ( <b>Merlin</b> )
11	032322	1	. . Pipe, steel, 12mm ( <b>XP</b> )
11	031582	1	. . Pipe, steel, 12mm ( <b>Magnum</b> )
12	031544	1	. . Pipe, steel, 12mm ( <b>Merlin</b> )
12	032321	1	. . Pipe, steel, 12mm ( <b>XP</b> )
12	031582	1	. . Pipe, steel, 12mm ( <b>Magnum</b> )
13	031506	1	. . Pipe, steel, 12mm ( <b>Merlin</b> )
13	032324	1	. . Pipe, steel, 12mm ( <b>XP</b> )
13	031577	1	. . Pipe, steel, 12mm ( <b>Magnum</b> )
14	031507	1	. . Pipe, steel, 12mm ( <b>Merlin</b> )
14	032323	1	. . Pipe, steel, 12mm ( <b>XP</b> )
14	031578	1	. . Pipe, steel, 12mm ( <b>Magnum</b> )
15	011305	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 1500mm
16	011307*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 1300mm ( <b>Merlin/Magnum</b> )
16	001042*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 680mm ( <b>XP</b> )
17	001224*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 1250mm ( <b>Merlin</b> )
17	001023*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 710mm ( <b>XP</b> )
17	011307*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 1300mm ( <b>Magnum</b> )
18	011307*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 1300mm ( <b>Merlin/Magnum</b> )
18	001023*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 710mm ( <b>XP</b> )
19	001224*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 1250mm ( <b>Merlin</b> )
19	001042*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 680mm ( <b>XP</b> )
19	011307*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 1300mm ( <b>Magnum</b> )
20	001160*	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 950mm ( <b>Merlin</b> )
20	010991*	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 550mm ( <b>XP</b> )
20	001101*	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 1125mm ( <b>Magnum</b> )
21	011323*	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 1020mm ( <b>Merlin</b> )
21	010991*	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 550mm ( <b>XP</b> )
21	001101*	1	. Hose, rubber, $\frac{1}{4}$ " BSP x 1125mm ( <b>Magnum</b> )

**Notes:-**

\* Are for standard models, in certain cases the lengths may vary. If in any doubt contact Scarab Parts Department, quoting your machine's serial number and model.



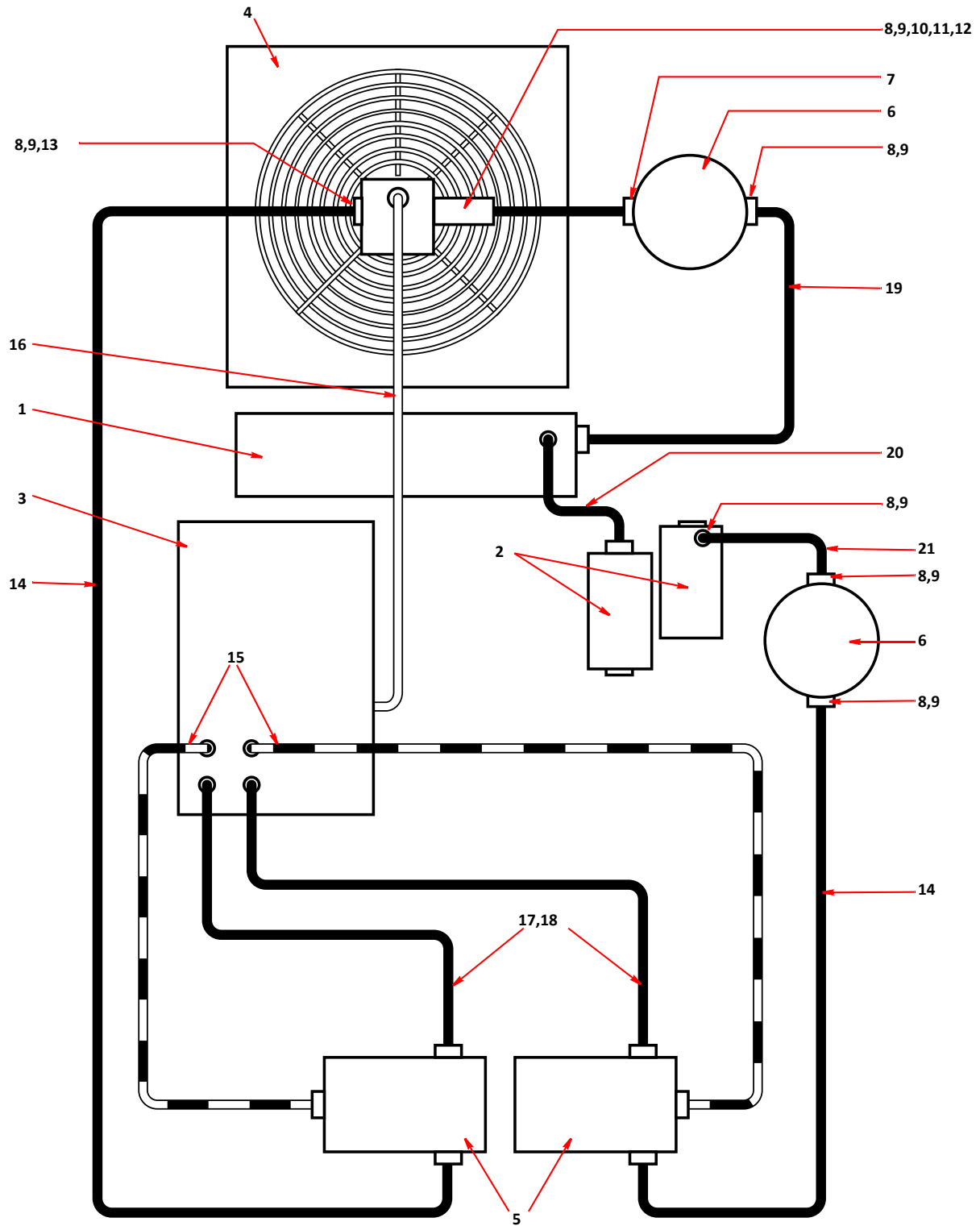
**HYDRAULIC CIRCUIT, SIDE BRUSH AND WIDE SWEEP**

Item	Part Number	Quantity	Description
<b>Hydraulic Circuit, Gear Pump</b>			
1	028400	1	Valve block, main hydraulic . . . . .Page F11
2	024786	1	Valve block, brush and LP water control . . . . .Page F19
3	022616	1	Hydraulic oil tank . . . . . Page F1
4	028756	1	Oil cooler and fan assembly . . . . . Page F1
5	024590	1	Gear pump . . . . . Page F25,F27
6	025103*	2	Filter, high pressure . . . . .Page F31
7	011310	3	. Hose, rubber, $\frac{3}{8}$ " BSP x 300mm, straight ends
8	011167	7	. . Adaptor, $\frac{1}{2}$ " x $\frac{3}{8}$ " BSP
9	011154	7	. . Seal, Dowty, $\frac{1}{2}$ " BSP
10	011829	1	. . Valve, non-return, M/M, $\frac{3}{8}$ " BSP
11	011153	1	. . Seal, Dowty $\frac{3}{8}$ " BSP
12	011159	1	. . Adaptor, M/M, $\frac{3}{8}$ " BSP
13	011172	3	. . Elbow, swivel, M/F, $\frac{3}{8}$ " BSP
14	001084	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 2330mm, straight+90° ends
15	011000	AR	. Hose, rubber, $\frac{5}{8}$ " bore
16	010958	AR	. Hose, rubber, $\frac{3}{8}$ " bore
17	014827	AR	. Hose, rubber, 1" bore (Red Line)
18	014828	4	. . Clamp, worm drive, hi-torque
10	001255	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 475mm, straight+90° ends
20	002092	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 320mm, straight+90° ends
21	001255*	1	. Hose, rubber, $\frac{3}{8}$ " BSP x 475mm, straight+90° ends

**Notes:-**

- \* May not have second filter and its fittings, which is attached to the brush and LP water valve block, then item 14 connects direct into the brush and LP water valve block.





**HYDRAULIC CIRCUIT, GEAR PUMP**

<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Clamps For Steel Piping</b>		
027980	AR	Clamp block, single, 6mm
027981	AR	Clamp block, single, 12mm
027982	AR	Clamp block, single, 25mm
027983	AR	Clamp block, double, 6mm x 6mm
027984	AR	Clamp block, double, 12mm x 12mm
027985	AR	Clamp block, double, 6mm x 12mm
027986	AR	Clamp block, double, 12mm x 14mm
027987	AR	Clamp block, double, 17.2mm x 17.2mm
027988	AR	Clamp block, double, 18mm x 18mm
027989	AR	Top plate 2-hole, small
027990	AR	Top plate 2-hole, large
027991	AR	Bottom plate 2-hole, small
027992	AR	Bottom plate 2-hole, large
027993	AR	Bottom plate 1-hole, small
027994	AR	Bottom plate 1-hole, medium
027995	AR	Bottom plate 2-hole, large
027996	AR	Top plate 1-hole, small
027997	AR	Top plate 1-hole, medium
027998	AR	Top plate 1-hole, large

# MERLIN and MAGNUM

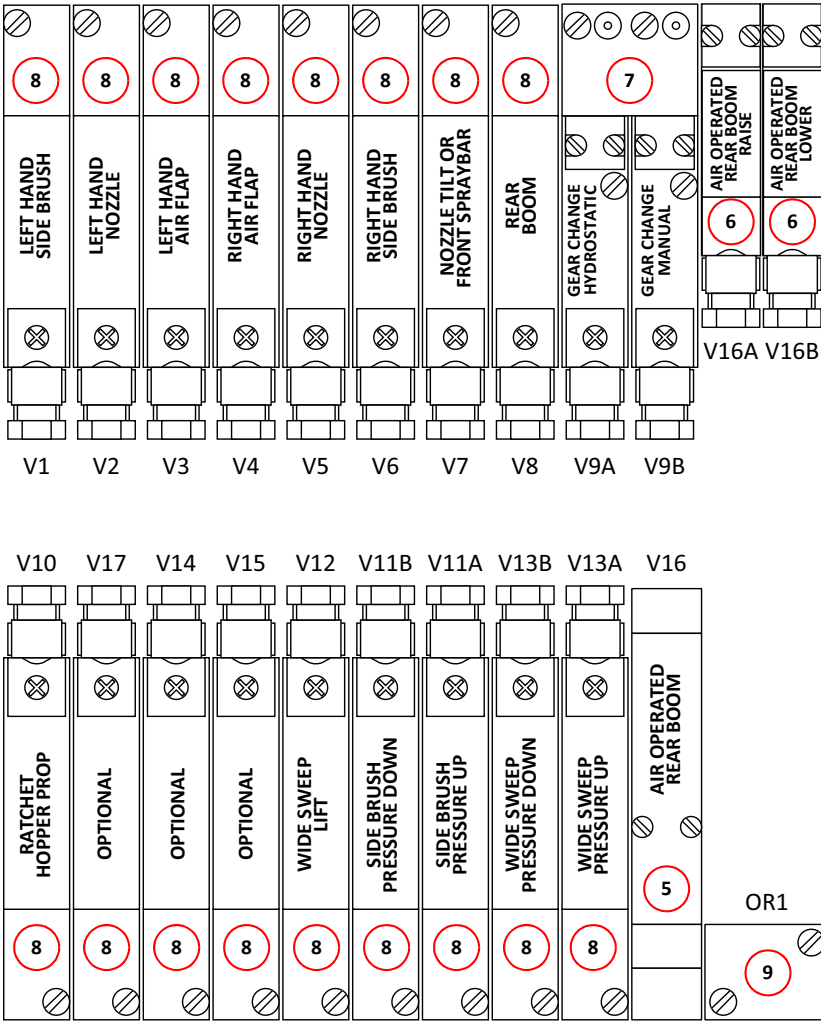
## PNEUMATIC SYSTEM

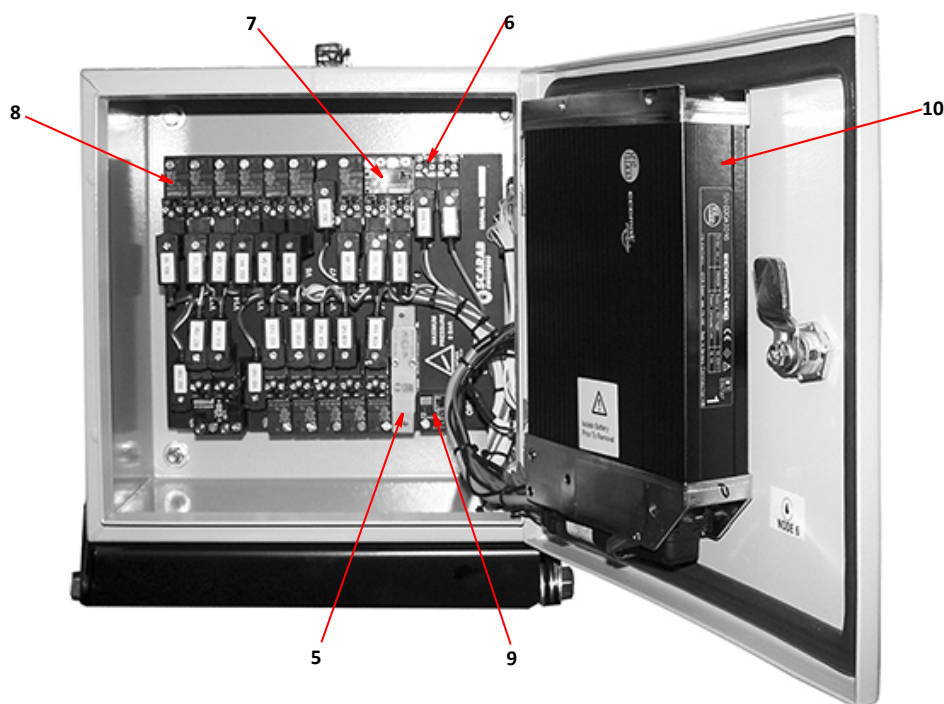
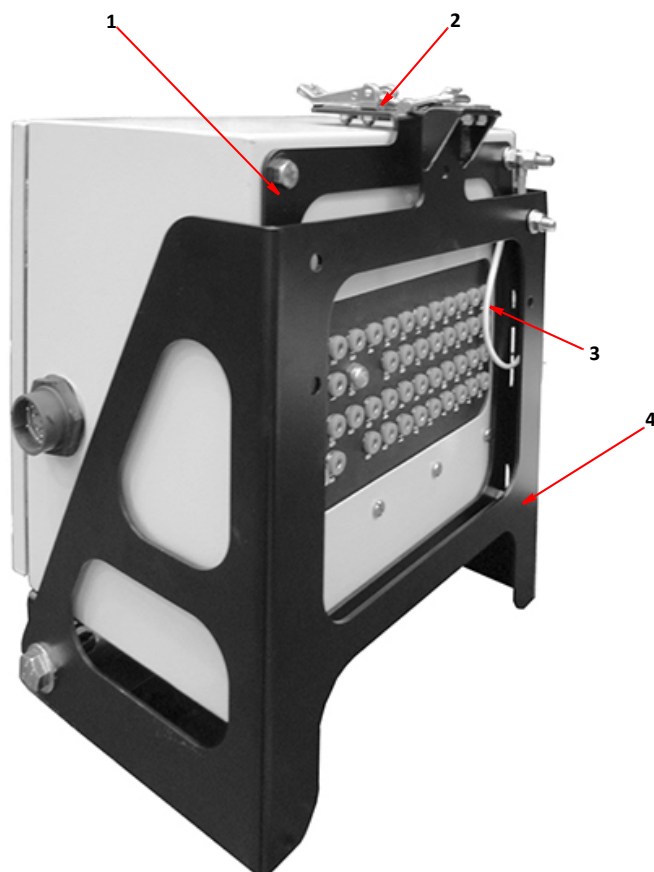
### SECTION G

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Item	Part Number	Quantity	Description
Pneumatic Control Box - Hinged			
1	034113	1	. Support bracket, pneumatic control box
	011011	3	. . Setscrew, M8 x 25mm
	011013	1	. . Setscrew, M8 x 35mm
	011073	4	. . Nut, M8, Nyloc
2	010509	1	. . Latch
	021841	1	. . Hook, latch
	000161	6	. . . Screw, slotted countersunk, 2BA x $\frac{1}{2}$ "
	011078	6	. . . , Nut, 2BA
3	020711	1	. . . Leash
4	034114	1	. . Hinge bracket
	011052	2	. . . Setscrew, M12 x 30mm
	011096	2	. . . Washer, M12
	011077	2	. . . Nut, M12, Nyloc
5	035675	AR	. Valve, 5/3 pilot/pilot, inc. solenoid, rear boom (option)
6	035685	2	. Valve, inc. solenoid
7	035674	1	. Valve, 4/2 pilot/pilot, inc. solenoid
8	035673	AR	. Valve, 4/2 pilot spring, inc. solenoid
9	032710	1	. Valve, OR-gate, wide sweep up/down pressure (option)
NI	035653	AR	. Blanking plate for valve 035673
NI	035671	1	. Blanking plate for valve 035675
NI	035672	1	. Blanking plate for valve 032710
10	036797	1	. Controller, CR0020, (Node 6) . . . . . Page H3





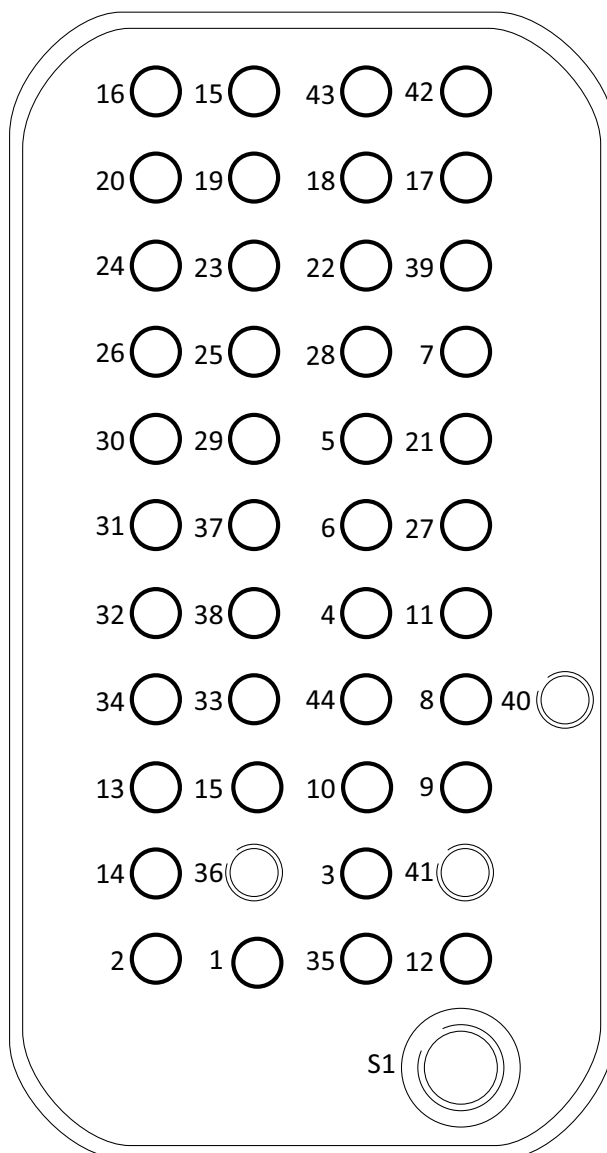
**PNEUMATIC CONTROL BOX - HINGED**

Table 1: Port Identification &amp; Valve Reference Chart

PORT	FUNCTION	VALVE REF	DEVICE POSITION	CYLINDER POSITION
1	Main feed to P3. Wide sweep pressure UP/DOWN	V13A V13B	N/A	N/A
2	Wide sweep pressure UP	V13A	LIFT	RETRACT
2	Wide sweep LIFT	V12	LIFT	RETRACT
3	Wide sweep pressure DOWN	V13B	DOWN	EXTEND
4	Regulated feed from P3. - Wide sweep pressure UP/DOWN	V13A V13B	N/A	N/A
5	Right-hand side brush pressure DOWN	V11B	DOWN	EXTEND
6	Right-hand side brush pressure UP	V11A	UP	RETRACT
7	Main feed to P4. - Front brush pressure DOWN	V15	DROP	EXTEND
8	Rear boom LOWER	V16 V16B	LIFT	RETRACT
9	Rear boom RAISE	V16 V16A	DOWN	EXTEND
10	Reg. feed from P4. Front brush pressure DOWN	N/A	N/A	N/A
11	Reg. feed from P2. Side brush pressure UP/DOWN	V11A V11B	N/A	N/A
12	Main feed to P2. Side brush pressure UP/DOWN	V11A V11B	N/A	N/A
13	Gear change hydrostatic	V9B	HYDRO	EXTEND
14	Gear change manual	V9A	MANUAL	RETRACT
15	Ratchet Hopper Prop Down	V10	DOWN	EXTEND
16	Ratchet Hopper Prop Up	V10	UP	RETRACT
17	OPTIONAL	V14	N/A	N/A
18	OPTIONAL	V14	N/A	N/A
19	Left-hand side brush OUT	V1	OUT	RETRACT
20	Left-hand side brush IN	V1	IN	EXTEND
21	V11B Left-hand side brush pressure DOWN	V11B	DOWN	EXTEND
22	Left-hand nozzle LIFT	V2	LIFT	RETRACT
23	Left-hand air flap OPEN	V3	OPEN	EXTEND
24	Left-hand air flap CLOSED	V3	CLOSE	RETRACT
25	Right-hand air flap OPEN	V4	OPEN	EXTEND
26	Right-hand air flap CLOSED	V4	CLOSE	RETRACT
27	Left-hand side brush pressure UP	V11A	UP	RETRACT
28	Right-hand nozzle LIFT	V5	LIFT	RETRACT
29	Right-hand side brush OUT	V6	OUT	RETRACT
30	Right-hand side brush IN	V6	IN	EXTEND
31	Left-hand suction nozzle tilt or Front spray bar	V7	UP	EXTEND
32	Left-hand suction nozzle tilt or Front spray bar	V7	DOWN	RETRACT
33	Rear boom flap OPEN	V8	OPEN	RETRACT
34	Rear boom flap CLOSED	V8	CLOSE	EXTEND
35	Mains in (BLACK AIR PIPE)		N/A	N/A
36	Breather		N/A	N/A
37	Right-hand suction nozzle tilt or Front spray bar	V7	UP	EXTEND
38	Right-hand suction nozzle tilt or Front spray bar	V7	DOWN	RETRACT

PORT	FUNCTION	VALVE REF	DEVICE POSITION	CYLINDER POSITION
39	OPTIONAL	V15	N/A	N/A
40	Left-hand side brush out, relief valve	N/A	N/A	N/A
41	Right-hand side brush out, relief valve	N/A	N/A	N/A
42	OPTIONAL	V17	N/A	N/A
43	OPTIONAL	V17	N/A	N/A
44	Reg. feed from P4. Front brush press. DOWN	N/A	DOWN	EXTEND

## BULKHEAD CONNECTORS - PNEUMATICS CONTROL BOX



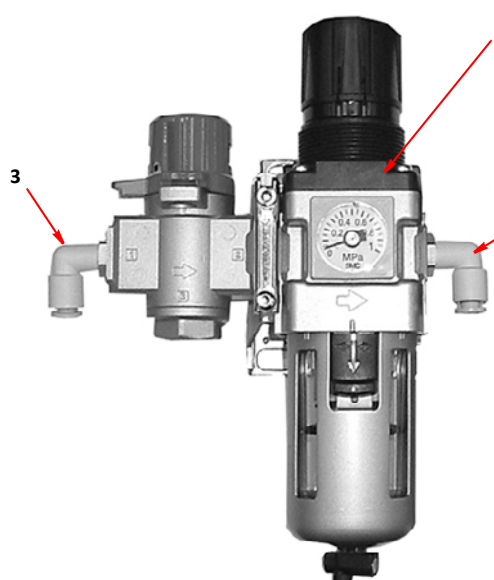
# G5

## MERLIN and MAGNUM

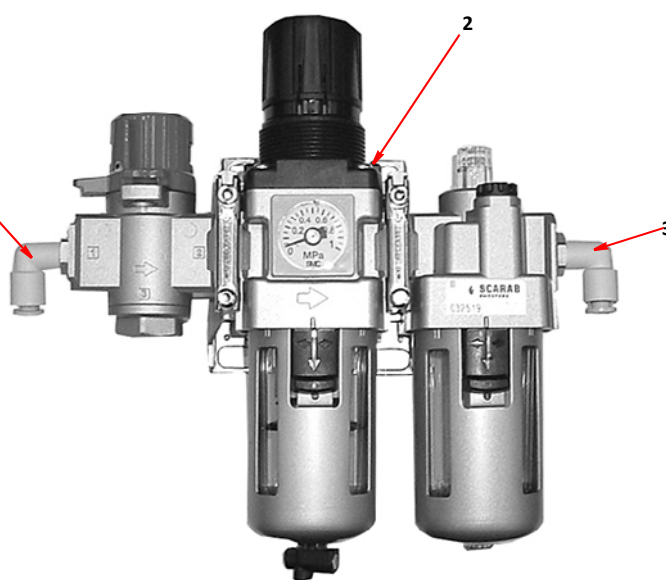
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Pneumatic Filter/Regulator/Lubricator</b>			
1	032519	1	Pneumatic filter/regulator without lubricator, assembly
2	039753	1	Pneumatic filter/regulator with lubricator, assembly
3	023203	2	. Elbow, push-in, 6mm x $\frac{1}{4}$ " BSP
	011010	4	. Setscrew, M8 x 20mm
	011092	8	. Washer, M8
	011073	4	. Nut, M8, Nyloc
NI	005046	50ml	. Lubrication fluid

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Wide Sweep/Side Brush Pressure Regulator and Gauge - (Option)</b>			
1	023242	1	Valve, pressure regulator - side brush
2	023246	1	. Gauge 0 - 10 bar, $\frac{1}{4}$ " BSP
3	023245	1	. Bracket
	011087	2	. . Setscrew, M6 x 25mm
	011071	2	. . Nut, M6, Nyloc
4	006007	4	. Elbow, push-in, 6mm to $\frac{1}{8}$ " BSP
5	020735	1	. Connector, straight, $\frac{1}{8}$ " BSP

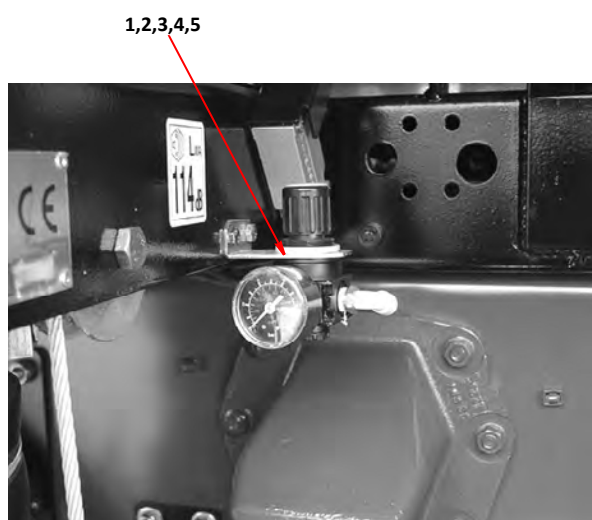




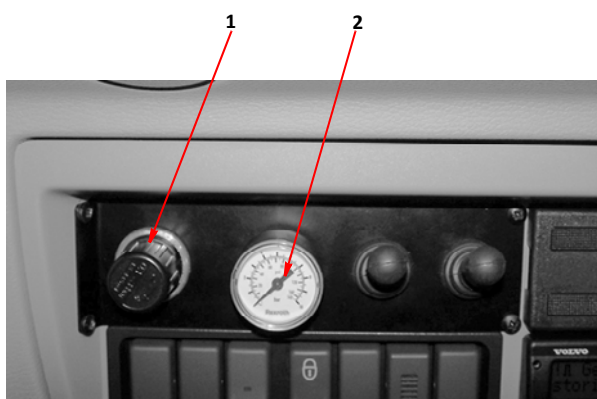
**PNEUMATIC FILTER/REGULATOR**



**PNEUMATIC FILTER/REGULATOR/LUBRICATOR**



**WIDE SWEEP PRESSURE REGULATOR VALVE**

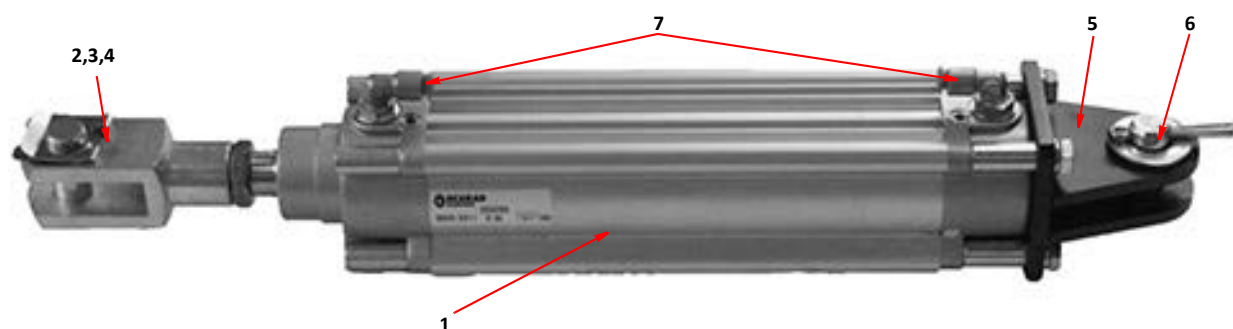


**SIDE BRUSH PRESSURE REGULATOR VALVE**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Side Brush Pressure - (Option)</b>			
1	020298	1	Pneumatic cylinder 50 x 160 . . . . . Page D3, D5
NI	024990	1	. Seal kit, pneumatic cylinder
2	020299	1	. Clevis
3	022673	1	. . Retaining pin, clevis
4	022674	1	. . . Clip, clevis retaining pin
5	020534	1	. Pivot bracket
	011010	4	. . Setscrews, M8 x 20mm
	011093	4	. . Washer, M8
6	023123	1	. Retaining pin
	011135	2	. Washer, M16
	011122	2	. Split pin, $\frac{3}{16}$ " x $1\frac{1}{2}$ "
7		2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Suction Nozzle - Raise/Lower</b>			
1	030772	2	Pneumatic cylinder 50 x 200 . . . . . Page D21
NI		1	. Seal kit, pneumatic cylinder
2	032293	1	. . Ring nut
3	021158	1	. Regulator, flow, push-in, $\frac{1}{4}$ " BSP x 6mm tube
4	030777	1	. Pivot bracket
5	000003	4	. . Screw, slotted countersunk, M8 x 20mm
6	030776	1	. Pivot block
	011057	1	. . Bolt, M12 x 100mm
	011096	2	. . Washer, M12
	011077	2	. . Nut, M12, Nyloc
7	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

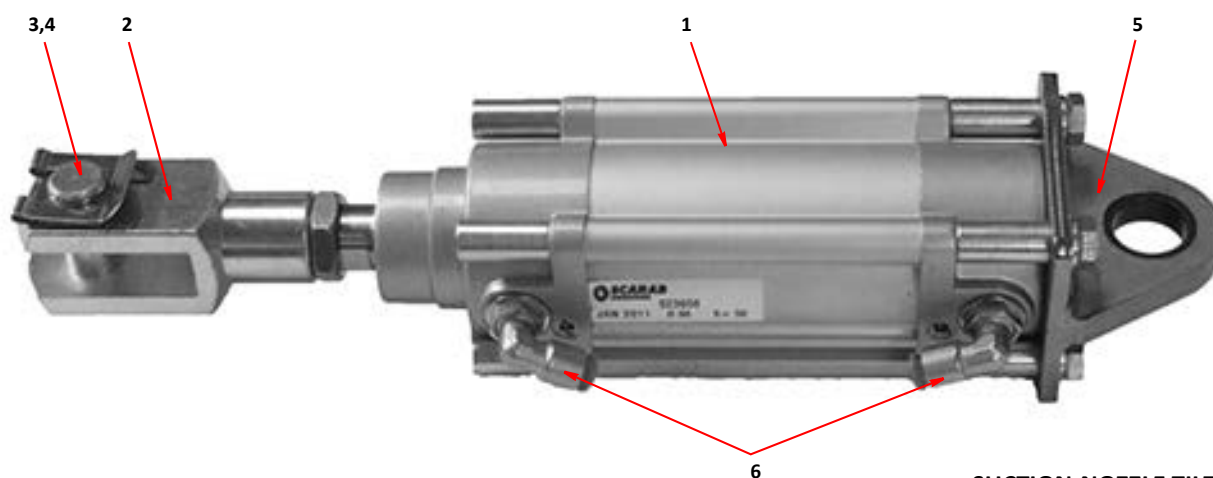
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Suction Nozzle - Tilt</b>			
1	023608	1	Pneumatic cylinder, 40 x 160 . . . . . Page D13
2	020299	1	. Clevis
3	022673	1	. . Retaining pin, clevis
4	022674	1	. . . Clip, clevis retaining pin
5	023827	1	. Pivot bracket
	011010	4	. . Bolt, M8 x 20mm
	011093	4	. . Spring washer, M8
6	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube



**SIDE BRUSH UP/DOWN-PRESSURE CYLINDER**



**NOZZLE-LIFT CYLINDER**



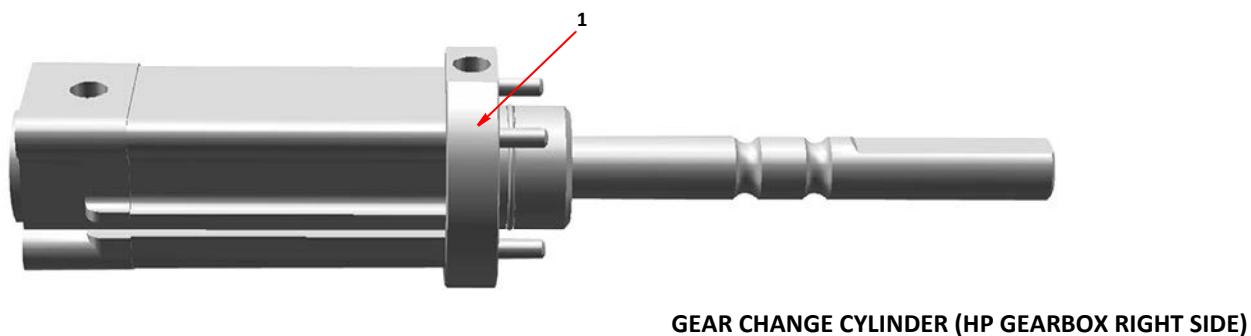
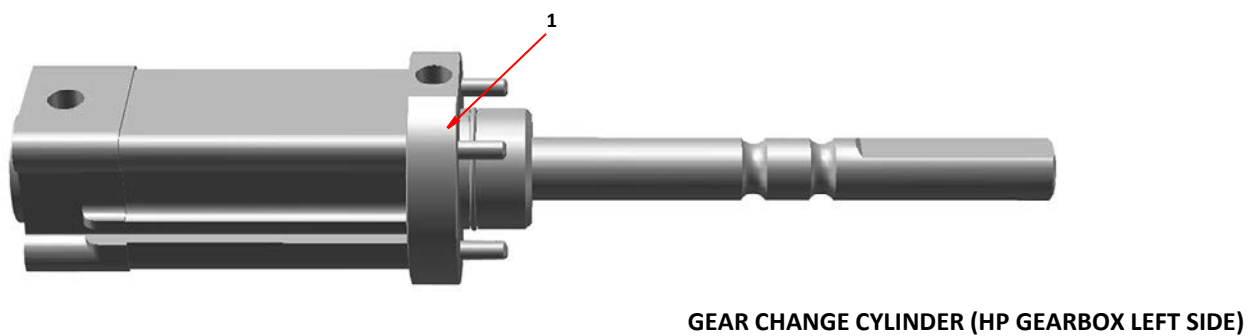
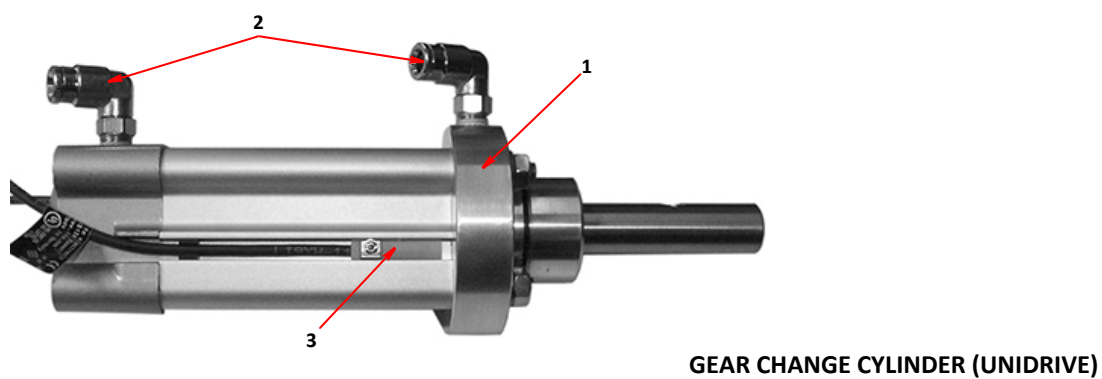
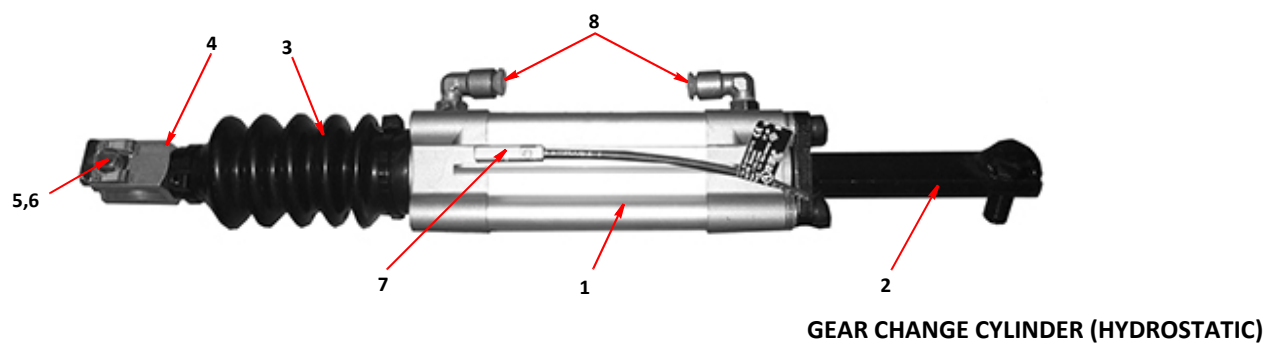
**SUCTION-NOZZLE TILT CYLINDER**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Gear Change (Hydrostatic Gearbox)</b>			
1	020287	1	Cylinder, pneumatic, 32 x 50 . . . . . Page B7
NI	024998	1	. Seal kit, pneumatic cylinder
2	020295	1	. Pivot bracket
	000038	4	. . Screw, socket cap head, M6 x 25mm
	011091	4	. . Spring washer, M6
	011090	12	. . Washer, M6
3	021511	1	. Bellows
4	020291	1	. Clevis
5	026163	1	. . Retaining pin, clevis
6	026164	1	. . . Clip, retaining pin
7	036800	2	. Sensor, magnetic, cylinder position . . . . . Page H5
8	006007	2	. Elbow, push-in/ M/F, $\frac{1}{4}$ " BSP x 6mm tube

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Gear Change (UniDrive Gearbox)</b>			
1	026087	1	Pneumatic cylinder, 32 x 40
2	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube
3	036800	2	. Sensor, magnetic, cylinder position . . . . . Page H5

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Gear Change (HP Gearbox Left Side)</b>			
1	035373	1	Pneumatic cylinder, 40 bore x 46 stroke . . . . . Page B11
NI	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Gear Change (HP Gearbox Right Side)</b>			
1	035374	1	Pneumatic cylinder, 40 bore x 52 stroke . . . . . Page B11
NI	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

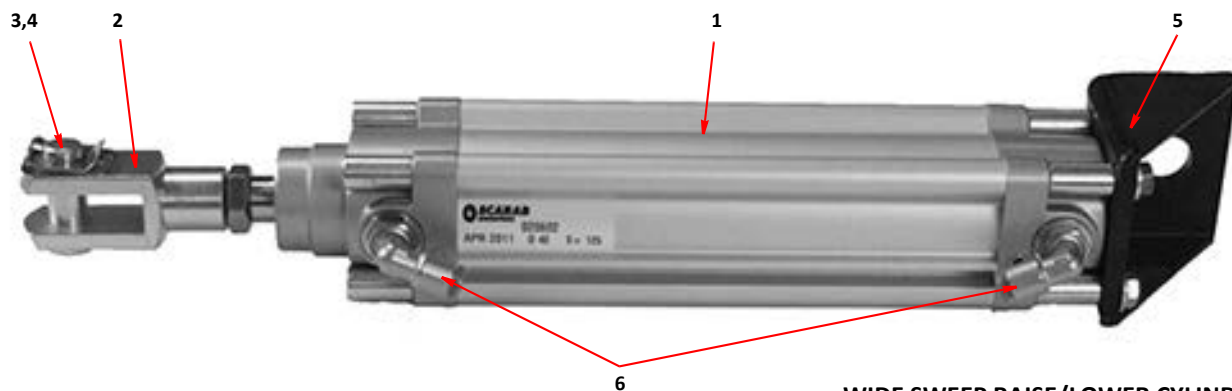


<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Wide Sweep - Raise/Lower</b>			
1	020602	1	Pneumatic cylinder, 40 x 125 . . . . . Page D9
2	014469	1	. Clevis
3	025270	1	. . Retaining pin, clevis
4	023269	1	. . . Clip, clevis retaining pin
5	030532	1	. Pivot bracket
	011067	4	. . Setscrew, M6 x 20mm
	011091	4	. . Spring washer, M6
6	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

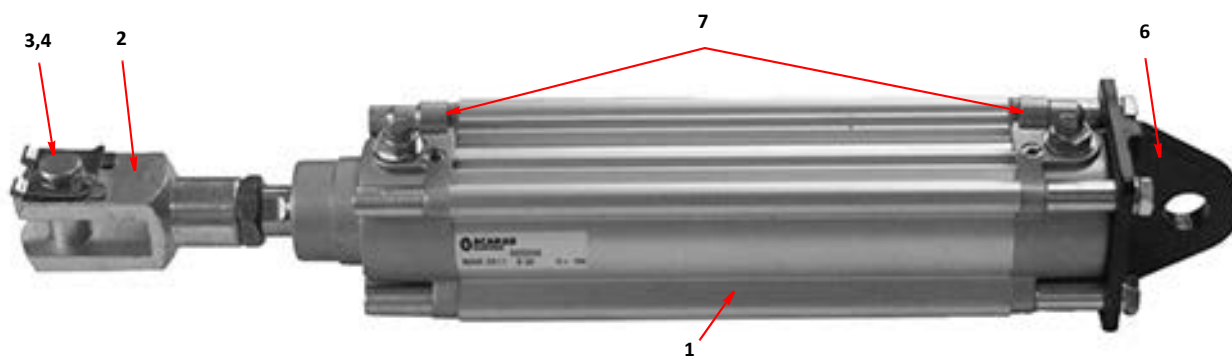
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Side Brush - Swing Out</b>			
1	020298	1	Pneumatic cylinder, 50 x 160 . . . . . Page D3
2	020298	1	. Clevis
3	022673	1	. . Retaining pin, clevis
4	022674	1	. . . Clip, clevis retaining pin
5	020534	1	. Pivot bracket
	011010	4	. . Setscrew, M8 x 20mm
	011093	4	. . Spring washer, M8
6	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Auto Blanking</b>			
1	021467	1	Pneumatic cylinder, 40 x 200 . . . . . Page C21
2	014469	1	. Clevis
3	023270	1	. . Retaining pin, clevis
4	023269	1	. . . Clip, clevis retaining pin
5	014457	1	. Pivot bracket
	011087	4	. . Setscrew, M6 x 25mm
	011090	12	. . Washer, M6
	011091	4	. . Spring washer, M6
6	021158	1	. Flow regulator
7	006007	1	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

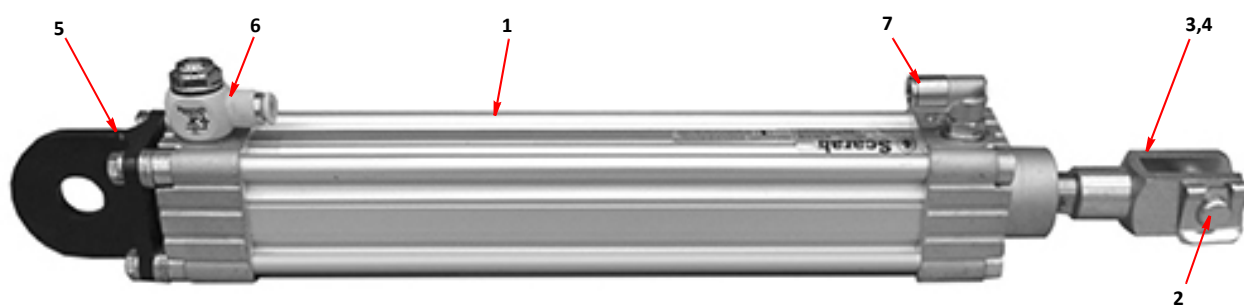
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Magnum Plus Rear Door Auto Blanking</b>			
1	020602	1	Pneumatic cylinder, 40 x 125 . . . . . Page C25
2	014469	1	. Clevis
3	023270	1	. . Retaining pin, clevis
4	023269	1	. . . Clip, clevis retaining pin
5	014457	1	. Pivot bracket
	011067	4	. . Setscrew, M6 x 20mm
	011091	4	. . Spring washer, M6
6	021158	1	. Flow regulator
7	006007	1	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube



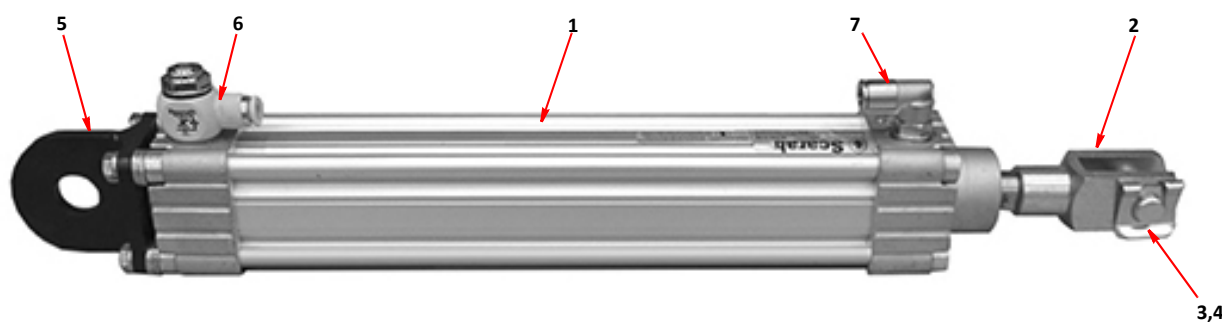
**WIDE SWEEP RAISE/LOWER CYLINDER**



**SIDE BRUSH SWING IN/OUT CYLINDER**



**AUTO BLANKING CYLINDER**



**REAR DOOR AUTO-BLANKING, CYLINDER**

# G13

## MERLIN and MAGNUM

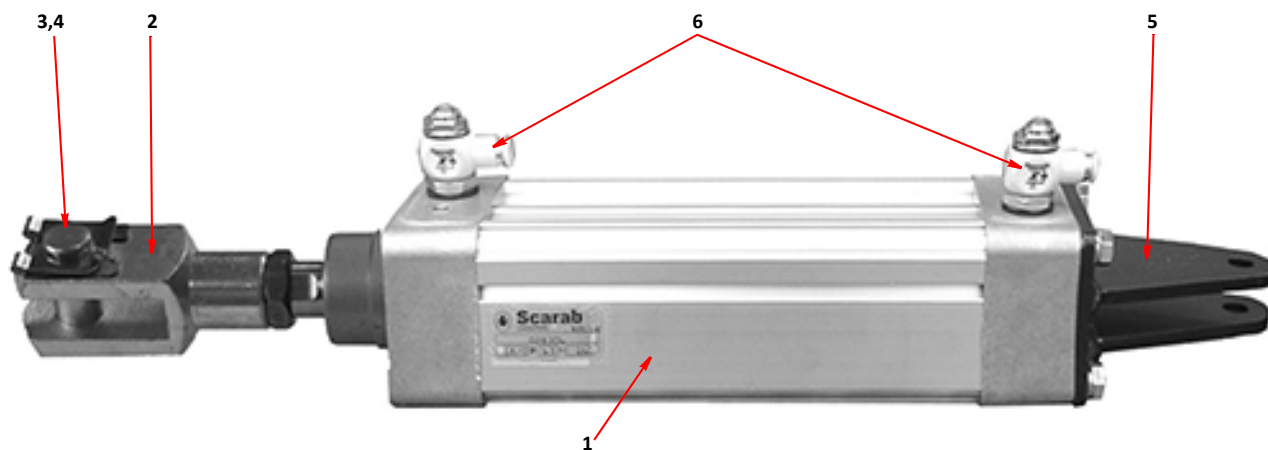
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Rear Wander Boom - Raise/Lower</b>			
1	028306	1	Pneumatic cylinder, 63 x 160 . . . . . Page D25
2	020299	1	. Clevis
3	022673	1	. . Retaining pin, clevis
4	022674	1	. . . Clip, clevis retaining pin
5	028305	1	. Pivot bracket
	000257	4	. . Setscrew, M8 x 25mm
	000265	4	. . Spring washer, M6
6	021158	2	. Flow regulator

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Rear Wander Boom - Blanking</b>			
1	021467	1	Pneumatic cylinder, 40 x 200 . . . . . Page D25
2	014469	1	. Clevis
3	023270	1	. . Retaining pin, clevis
4	023269	1	. . . Clip, clevis retaining pin
5	030532	1	. Pivot bracket
	011067	4	. . Setscrew, M6 x 20mm
	011091	4	. . Spring washer, M6
6	021158	1	. Flow regulator
7	006007	1	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

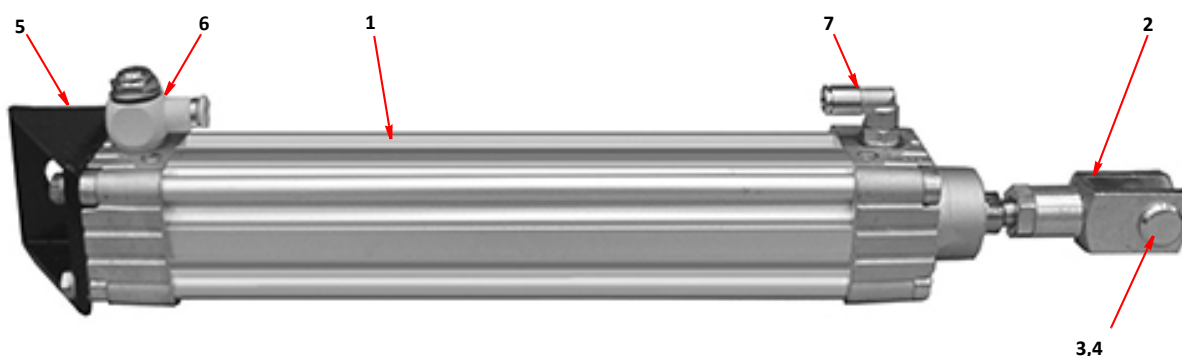
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Automatic Hopper Prop - (Option)</b>			
1	030156	1	Pneumatic cylinder, 40 x 250 . . . . . Page C7
2	014469	1	. Clevis
3	023270	1	. . Retaining pin, clevis
4	023269	1	. . . Clip, clevis retaining pin
5	030100	1	. Pivot bracket
	011067	4	. . Setscrew, M6 x 20mm
	011091	4	. . Spring washer, M6
NI	022673	1	. . Pin, turned, clevis retaining
NI	022674	1	. . . Safety clip
6	021158	2	. Flow regulator

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Auxiliary Side Brush - Extend/Retract</b>			
1	026396	1	Pneumatic Cylinder, 63 x 320 . . . . . Page D5
2	030859	1	. Pivot bracket
	011010	4	. . Setscrew, M8 x 20mm
	011093	4	. . Spring washer, M8
3	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

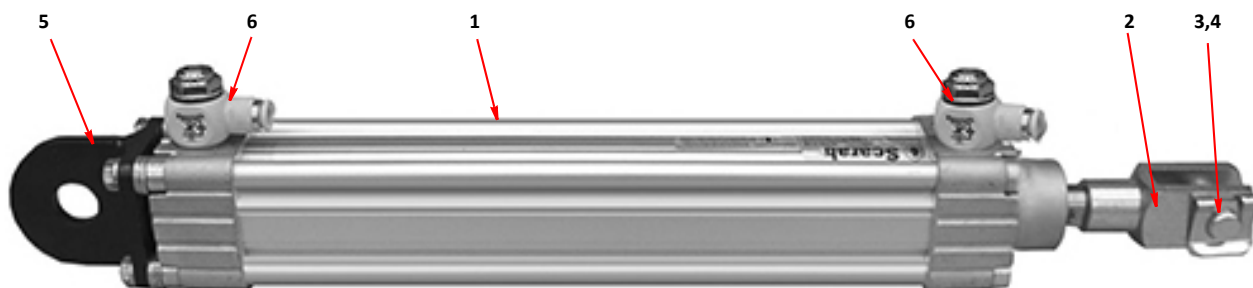




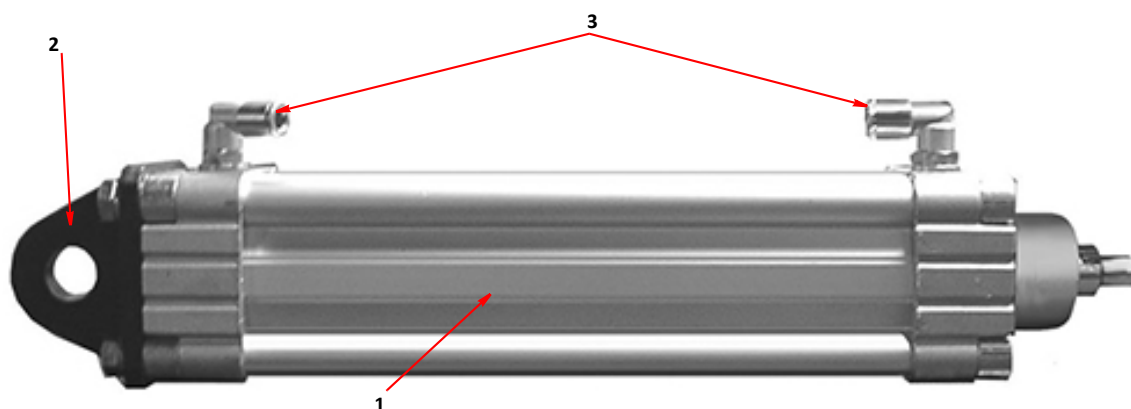
**REAR WANDER BOOM RAISE/LOWER CYLINDER**



**REAR WANDER BOOM BLANKING CYLINDER**



**AUTO HOPPER PROP, CYLINDER**



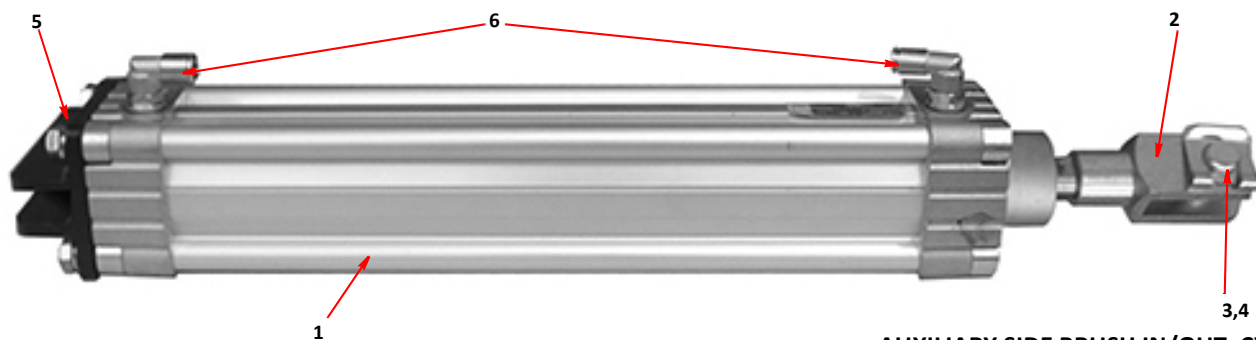
**AUXILIARY SIDE BRUSH EXTEND/RETRACT, CYLINDER**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Auxiliary Side Brush - Swing In/Out</b>			
1	021521	1	Pneumatic cylinder, 50 x 250 . . . . . Page D5
2	020299	1	. Clevis
3	022673	1	. . Retaining pin, clevis
4	022674	1	. . . Clip, clevis retaining pin
5	030860	1	. Pivot bracket
	000257	4	. . Setscrew, M8 x 25mm
	000265	4	. . Spring washer, M8
6	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Front Spray Bar - Raise/Lower</b>			
1	020602	1	Pneumatic cylinder, 40 x 125
2	014469	1	. Clevis
3	023270	1	. . Retaining pin, clevis
4	023269	1	. . . Clip, clevis retaining pin
5	020731	1	. Pivot bracket
	011067	4	. . Screw, socket cap head, M6 x 20mm
	011091	4	. . Spring washer, M6
6	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Cylinder Assembly, Ratchet Hopper Prop</b>			
1	040456	1	Pneumatic cylinder, 32 x 50 spring return . . . . . Page C7
2	020291	1	. Clevis
3	026163	1	. . Retaining pin, clevis
4	026164	1	. . . Clip, clevis retaining pin
5	039892	1	. Pivot bracket
	011067	4	. . Setscrew, M6 x 20mm
	011091	4	. . Spring washer, M6
6	006007	2	. Elbow, push-in, M/F, $\frac{1}{4}$ " BSP x 6mm tube

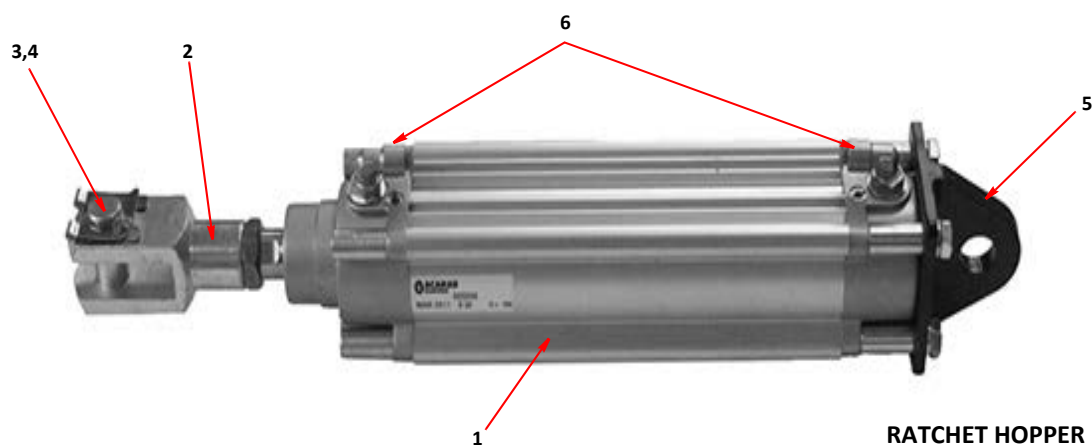
<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Overhead Boom Air-Pressure Switch</b>			
1	028117	1	Switch, air-pressure, 5 bar, N/O



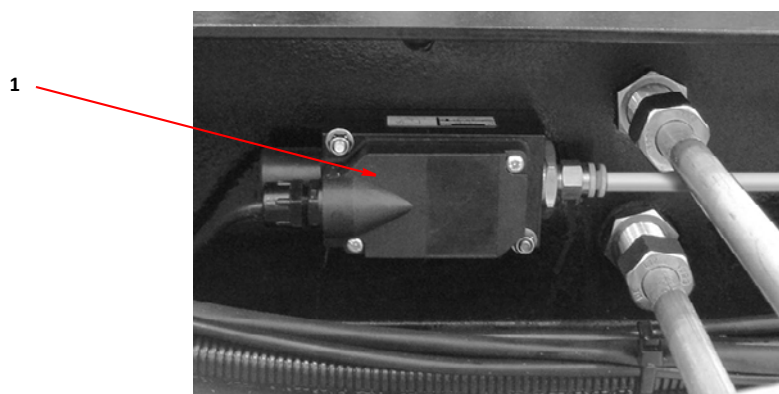
**AUXILIARY SIDE BRUSH IN/OUT, CYLINDER**



**FRONT SPRAY BAR RAISE/LOWER, CYLINDER**



**RATCHET HOPPER PROP, CYLINDER**



**OVERHEAD BOOM AIR-PRESSURE SWITCH**

# MERLIN and MAGNUM

# MERLIN and MAGNUM

## ELECTRICAL SYSTEM

### SECTION H

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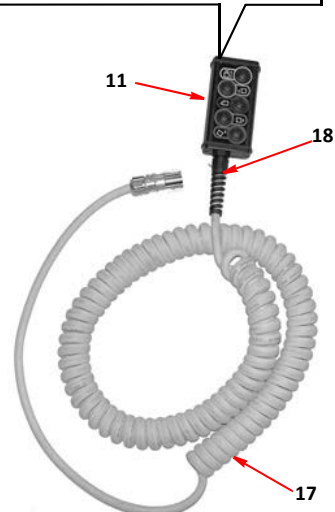
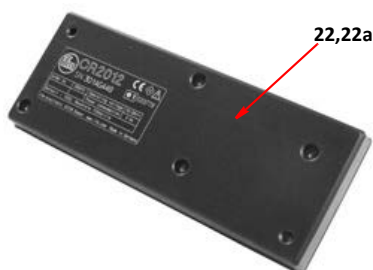
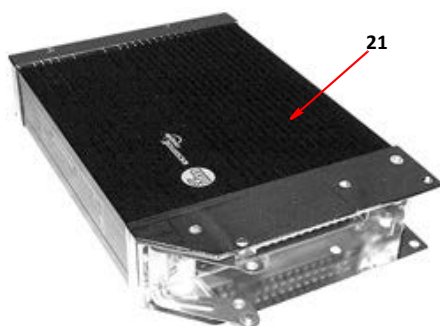
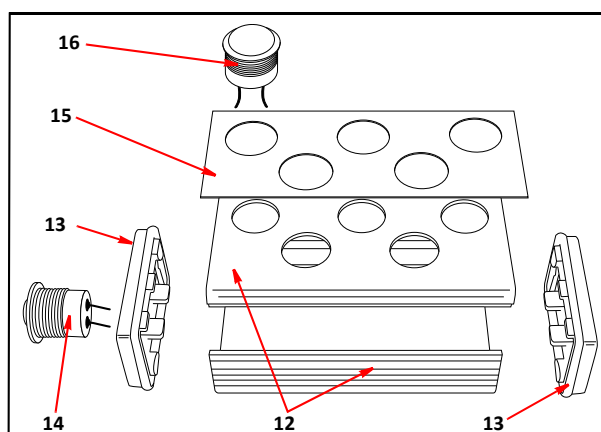
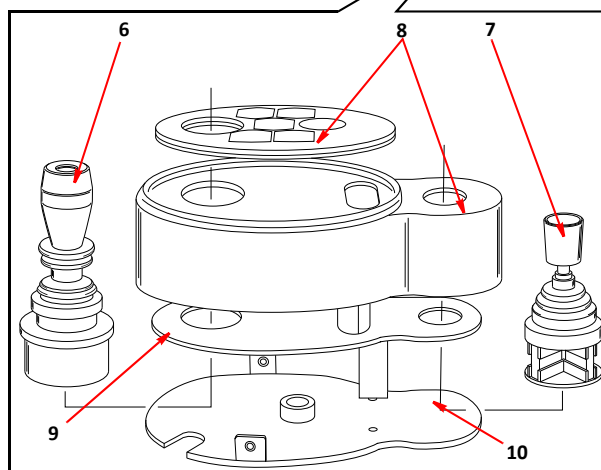
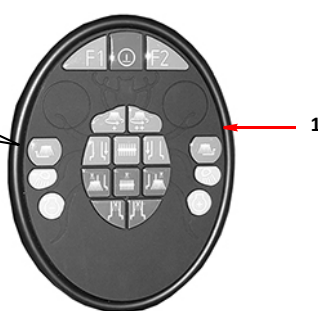
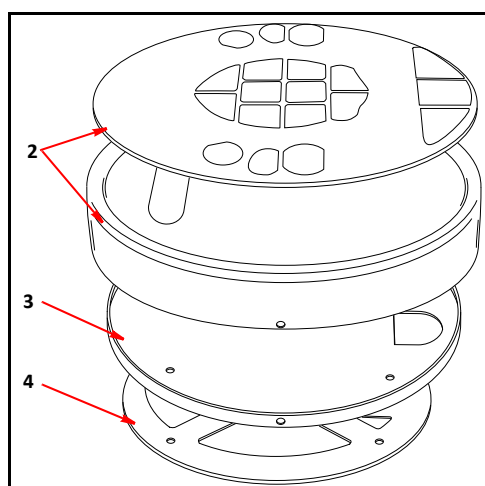
<i>Assembly/Description</i>	<i>Page</i>
Electrical Components - Cab .....	1
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Wiring Looms .....	3
Wiring Looms .....	5
Electrical Switches and Sensors .....	5
List of Mini Fuses .....	5
Additional Electrical Components .....	5

Item	Part Number	Quantity	Description
<b>Electrical Components - Cab</b>			
1		1	Keypad, main control panel (two speed brushes) . . . . . Page A1
NI		1	Keypad, main control panel (variable brush speed) . . . . . Page A3
2	038102 *	1	. Keypad and enclosure assembly (two speed brushes)
NI	037602 *	1	. Keypad and enclosure assembly (variable speed brushes)
3	037053	1	. Enclosure, back
4	037055	1	. . Fixing plate, main control panel
	000304	8	. . . Screw, socket button head, M4 x 10mm
	000134	8	. . . Nut, M4, Nyloc
5		1	Auxiliary controller, (Hydrostatic) . . . . . Page A1
NI		1	Auxiliary controller, (Hydrostatic) (new fan symbol) . . . . . Page A3
NI		1	Auxiliary controller, (UniDrive) . . . . . Page A1
NI		1	Auxiliary controller, (UniDrive) (new fan symbol) . . . . . Page A3
6	036874	1	. Lever, forward/reverse (joystick) (Hydrostatic)
7	036873	1	. Multi-function switch
8	038103 *	1	. Keypad and enclosure assembly
8	037608 *	1	. Keypad and enclosure assembly (new fan symbols)
9	037057	1	. Support plate
10	037056	1	. Back plate, LH mounting
10	037058	1	. Back plate, RH mounting
	000346	5	. . Screw, socket button head, M5 x16mm
11	037074	1	Hopper controller (complete) . . . . . Page A1,A3
12	037065	1	. Hopper controller, body
13	037066	1	. . End cap, (drilled), complete with screws
14	038223	1	. . Switch, push button (green) . . . . . Page H5
NI	038224	1	. . . Switch protection bezel
15	037072	1	. . Facia, hopper controls
16	037068	5	. . . Switch, push button . . . . . Page H5
17	037069	1	. . Hopper controller cable, complete with connector
18	037069	1	. . . Gland, cable strain relief
NI	037071	1	. . . . Nut, cable strain relief gland
19	042348	1	Display screen, CANbus v3.0 ((programmed) . . . . . Page A3
20	042360	1	Display screen, CANbus v3.1 (programmed) . . . . . Page A3
21	042340	1	Controller, CR0505 . . . . . Page A5
22	036799 **	3	Node, cabinet module (CR2012) . . . . . Page A5
22a	038985 **	3	Node, E9G212, cabinet module (CR2012) . . . . . Page A5
NI	014718	2	Relay, 24 V
NI	039060	2	LED current source . . . . . Page A5
NI	040353	1	Loom, power supply, rear camera . . . . .Page A3,C31,H3
NI	040355	1	Loom, rear camera . . . . .Page A3,C31,H3

**Notes:-**

\* These items are factory bonded as a single unit and must be purchased as such.

\*\* Contact Scarab Parts Department regarding these nodes.



**ELECTRICAL COMPONENTS - CAB**

# H3

## MERLIN and MAGNUM

Item	Part Number	Quantity	Description
<b>Oil Cooler/Hydraulics Gantry - Electrical Items</b>			
1	036843	1	Electrical power post, M6, Red
	100103	2	. Screw, pan Pozidriv, M5 x 12mm
2	036844	2	Electrical power connection link, Black
	100103	4	. Screw, pan Pozidriv, M5 x 12mm
3	042336	2	Controller, CR0020 . . . . . Page C5

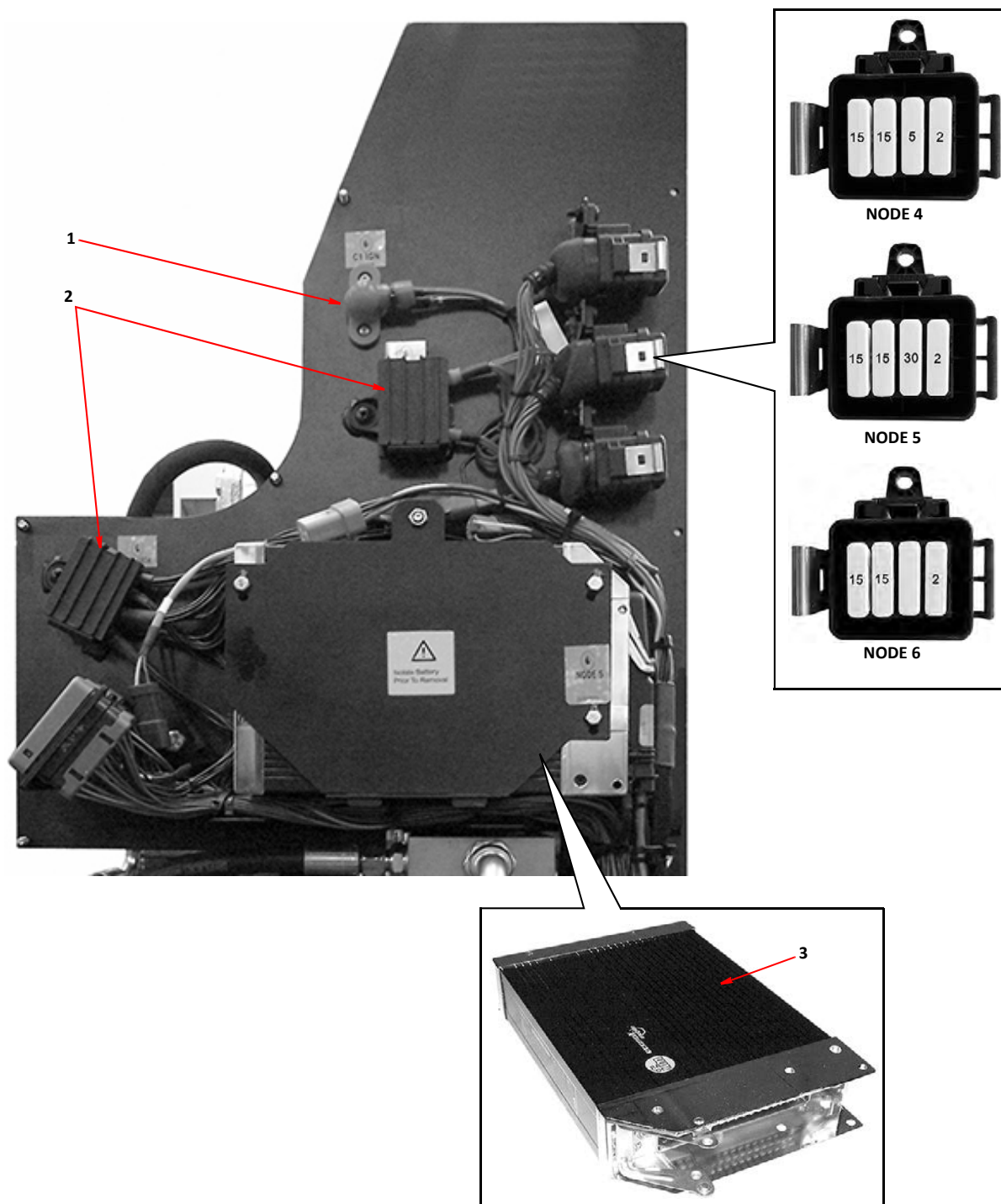
Item	Part Number	Quantity	Description
<b>List of Blade Type Fuses - (Not Illustrated)</b>			
	014286		5 Amp
	014287		7.5 Amp
	014288		10 Amp
	014289		15 Amp
	014290		20 Amp
	014291		25 Amp
	014292		30 Amp

Item	Part Number	Quantity	Description
<b>Wiring Looms* - (Not Illustrated)</b>			
	036842	1	Loom, hydraulic oil level . . . . .Page F5,F7
	036800	1	Loom and sensor, gear change cylinder
	036916	1	Loom, display screen, CANbus 3 . . . . . Page A1
	040349	1	Loom, display screen, CANbus 3.1 . . . . . Page A3
	036666	1	Loom, Node 3, cab . . . . . Page A1,A3
	036912	1	Loom, keypad, main control panel . . . . . Page A1,A3
	036914	1	Loom, keypad, main control panel, power/CANbus . . . . . Page A1,A3
	036913	1	Loom, keypad, auxiliary control panel . . . . . Page A1,A3
	036915	1	Loom, keypad, auxiliary control panel, power/CANbus . . . . . Page A1,A3
	037047	1	Loom, hopper controller (in cab) . . . . . Page A1,A3
	037069	1	Loom, hopper remote controller lead with connector
	036920	1	Loom, hopper auto prop (option) . . . . . Page C9
	037331	1	Loom, brush pressure (option)
	036910	1	Loom, rear lights . . . . . Page C3
	036907	1	Loom, clutch switch . . . . . Page A1,A3
	036909	1	Loom, load indicator (option)
	036917	1	Loom, variable tilt (option)
	036919	1	Loom, rear boom (option)
	032532	1	Loom, teal hand wash (option)
	036611	1	Loom, Node 4
	036612	1	Loom, Node 5
	036613	1	Loom, Node 6A
	036614	1	Loom, Node 6B
	038016	1	Loom, 3rd fan speed
	038017	1	Loom, 3rd fan speed switch
	036908	1	Loom, Rear boom switch
	036911	1	Loom, Hopper
	036873	1	Loom, Ergo joystick
	040353	1	Loom, power supply, rear camera
	040355	1	Loom, rear camera

### Notes:-

- \* If the loom you require is not in the above list, please contact your nearest Scarab Distributor or the Scarab Parts Department, quoting machine model and serial number.





**OIL COOLER/HYDRAULICS GANTRY-ELECTRICAL ITEMS**

**Part Number****Description****Wiring Looms\* - (Not Illustrated) - (Continued)**

036874	Loom, Forward/Reverse joystick
038123	Loom, Keypad extension
038163	Loom, Door pod, Dual steer (option)
038164	Loom, Twin core, Tyco positive
038165	Loom, Twin core, Tyco earth
038226	Loom, J1939 (Iveco)
038227	Loom, Expansion module (Iveco)

**Part Number****Description****Electrical Switches and Sensors - (Not Illustrated)**

036800	Sensor, magnetic, cylinder position . . . . .	Page B7,B11,B17,G9
036871	Float switch, water tank . . . . .	Page E11
036872	Pressure switch, hydro braking . . . . .	Page F23
024039	Switch & level gauge, hydraulic oil tank . . . . .	Page F5
037248	Toggle switch, on/off/on (option) . . . . .	Page A5
037249	Toggle switch, on/off (option) . . . . .	Page A5
032627	Sensor, hopper 'RAISED' . . . . .	Page C7
037068	Switch, push button, hopper controller . . . . .	Page H1
025184	Sensor, suction fan speed . . . . .	Page C29
025922	Tacho sender . . . . .	Page B17
030158	Switch, proximity (option) . . . . .	Page C9
023515	Switch, hydraulic oil temperature . . . . .	Page F9
038223	Switch, push button (green) . . . . .	Page H1
022224	Sensor, clutch . . . . .	Page A5
022225	Magnet, clutch sensor . . . . .	Page A5

**Part Number****Description****List of Mini Fuses - (Not Illustrated)**

004495	2 Amp
004392	7. 5 Amp
004393	10 Amp
004394	15 Amp
004395	20 Amp
004397	30 Amp

**Part Number****Description****Additional Electrical Components - (Not Illustrated)**

037084	Work light, 24V/70W . . . . .	Page D19
014064	Beacon, 24V, (Standard) . . . . .	Page C13
030773	Rear marker lamp, hopper, (LED) . . . . .	Page C13
037048	Sounder . . . . .	Page A5
039660	M12 Plug to M12 Socket Jumper lead 1m	
040354	Rear camera . . . . .	Page C31
041534	Camera splitter . . . . .	Page A3
040597	USB memory stick, 2GB	

**Notes:-**

- \* If the loom you require is not listed, please contact your nearest Scarab Distributor or the Scarab Parts Department, quoting machine model and serial number.

# MERLIN and MAGNUM

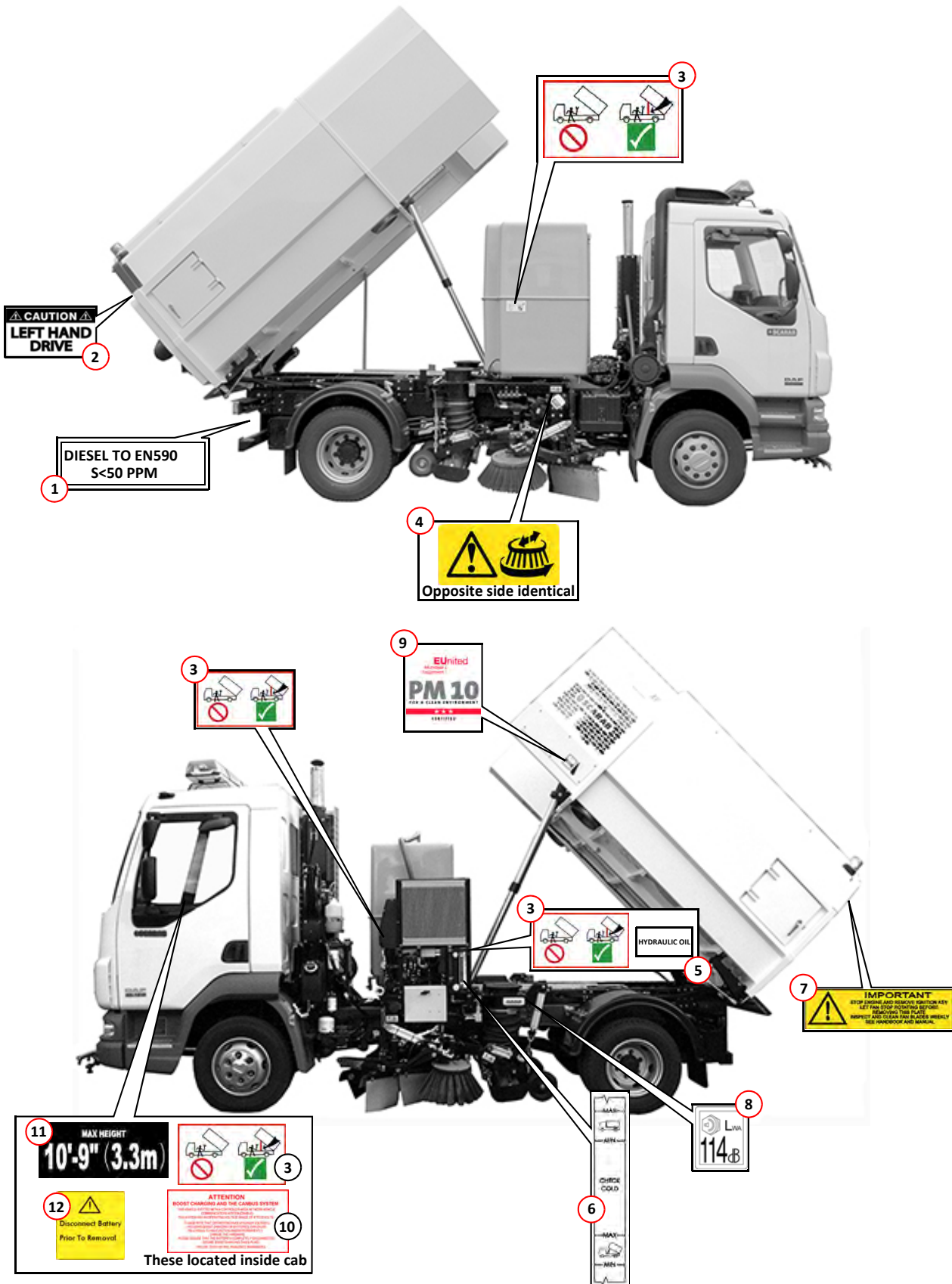
## LABELS AND DECALS

### SECTION I

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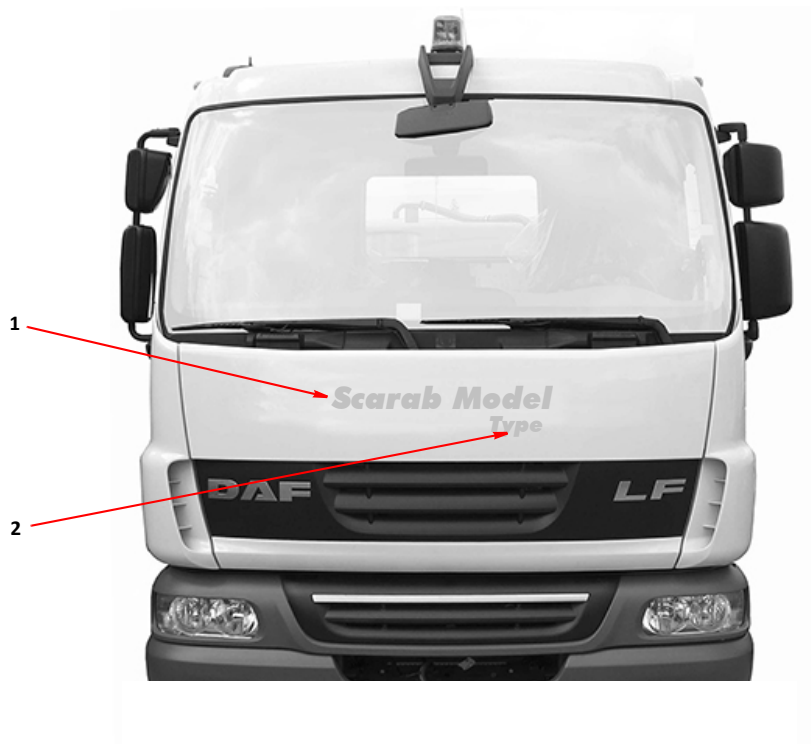
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Badges and Vinyl Decals.....	3

Item	Part Number	Quantity	Description
Warning, Caution and Advice Labels			
1	036222	2	Diesel Fuel Grade
2	028408	1	CAUTION, Left - Hand Drive
3	022384	3	WARNING, Hopper Prop Deployment . . . . . Page C5
4	022383	6	WARNING, Brush Rotating . . . . . Page C5
5	028408	1	Hydraulic Oil
6	034548	1	Hydraulic Oil Level
7	021061	1	WARNING, Fan Inspection (inside inspection cover)
8	027774	1	Sound Level (114 dB)
9	034814	1	EUnited - PM10
10	032409	1	WARNING, Battery Charging
11	021291	1	Max Height, 9' 10" (3m)
NI	037720	1	Max Height, 10' 4" (3.15m)
NI	021292	1	Max Height, 10' 9" (3.3m)
12	036170	1	Disconnect Battery . . . . . Page C5

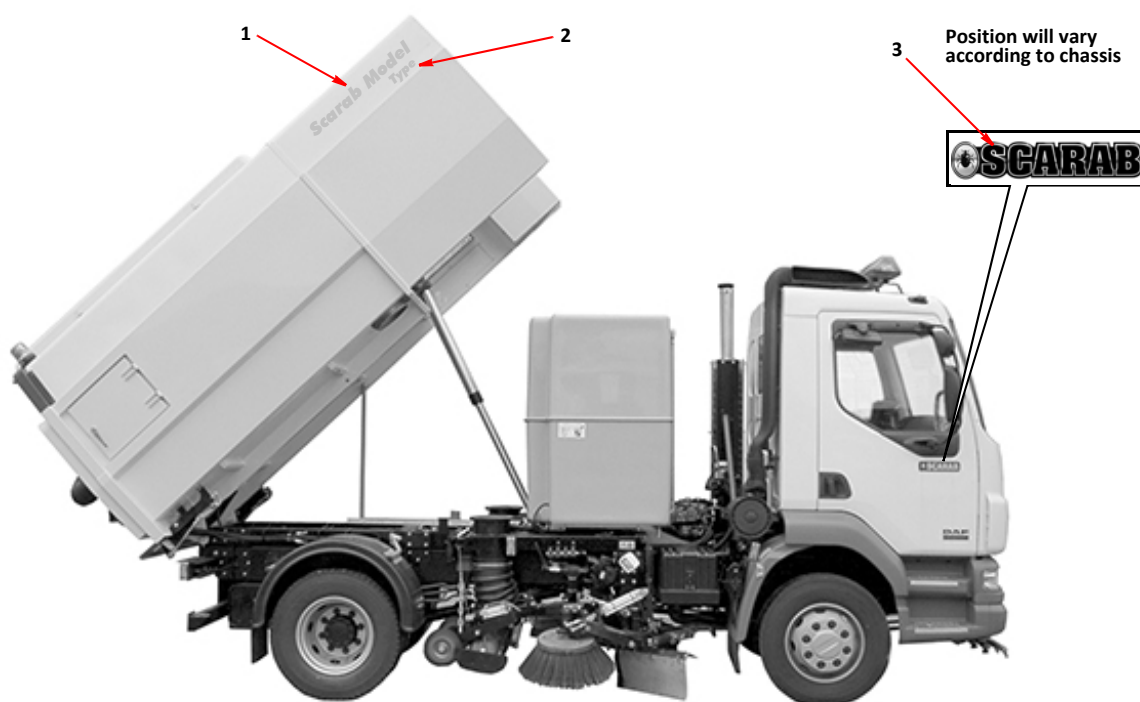


**WARNING, CAUTION & ADVICE LABELS**

<i>Item</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Description</i>
<b>Badges and Vinyl Decals</b>			
1	026706	3	Vinyl Decal - SCARAB MAGNUM
	026019	3	Vinyl Decal - SCARAB MERLIN
	022893	3	Vinyl Decal - SCARAB MAJOR (France only)
NI	026092	3	Vinyl Decal - 5001
NI	026093	3	Vinyl Decal - 5501
NI	026094	3	Vinyl Decal - 7001
NI	026095	3	Vinyl Decal - 7501
NI	026096	3	Vinyl Decal - 8000
NI	034071	3	Vinyl Decal - 8001
NI	026097	3	Vinyl Decal - 8500
3	026020	3	Vinyl Decal - HYDROSTATIC
	026021	3	Vinyl Decal - UNIDRIVE
	032992	3	Vinyl Decal - XP Hydrostatic (Red)
	038147	3	Vinyl Decal - XP Unidrive (Green)
4	030200	2	Body badge, vacuum-plated plastic



Typical application shown but individual vehicles might differ depending upon livery requirements



**SCARAB BADGES & VINYL DECALS**

# MERLIN and MAGNUM