

Parts Section



VT & VS

**500 • 605 • 650 • 800
Range of Twin Engine
& Hydrostatic Sweepers
From Manufacture
Sequence No. 06/1863**

With Mk II Supawash Pump

Part No 02617-3-P

Revision Level 29

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Foreword

This section of the manual will help you when ordering parts and serves as an assembly/disassembly reference when used in conjunction with the Maintenance Section procedures.

About this section

Chapters 20 to 34, listed on the front sheet, cover the major areas of the machine. Some of the more popular options such as the Supawash hi-pressure water system, Channel Brush Rotatilt, Powaboom and Littasnatch wanderhoses are also covered in these chapters. Other more specialised options will be found in the Optional Equipment Chapter 35.

The Table of Contents on page 1 of each chapter locates the exact page a particular illustration or parts list is on. Parts that have been superseded and are not interchangeable with the new items are shown in a 'Superseded Parts' section at the end of the chapter.

The BoM numbers above the parts lists are for Johnston internal reference only.

On pages that have more than one part number column, the symbol '<' indicates that the number in that column is the same as that in the column on the left.

The symbol '>' in front of an item number indicates that item has changed from the one shown on the previous issue of that page.

Chassis Related Parts

The items listed below vary depending on what chassis the Johnston sweeper equipment is mounted to. If any parts for these areas are required, contact the Johnston Parts Department quoting the machine serial number shown on the plate fitted to the subframe crossmember below the body rear door.

- Batteries and battery mounting
- Cab - Sweep control installations (Chapter 32)
- Cab - single and dual steer parts
- Body discharge interlock
- Rear mounted fuel tank
- Gutter and wide sweep brush water spraybar mountings (Chapters 24 and 26)
- Supawash hose reel and front bumper spraybar mountings (Chapter 30.SW)
- Rear underrun bumper
- Rear mudguards and mudflaps
- Subframe to chassis mounts
- Work lights (Chapter 31)
- Channel brush pivot frame support posts (Chapter 24)
- Channel brush hydraulic hoses 75 and 84 (Chapter 24)
- Wide sweep brush hydraulic hoses 70 to 74 (Chapter 26)
- Customer options i.e. autolube, special beacons, reversing camera, handwash etc.

CHAPTER **P**

Page Issue Levels

Description

This chapter lists each page in the Parts section, it's issue level and whether it has changed since the previous revision level. Changed pages are indicated by the letter 'C' in the changed column, and new pages by the letter 'N'.

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20 Chapter - Body/Rear Door/Cowl

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21 Chapter - Subframe/Body Prop

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22 Chapter - Powapak

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35 Chapter - Optional Equipment (continued)

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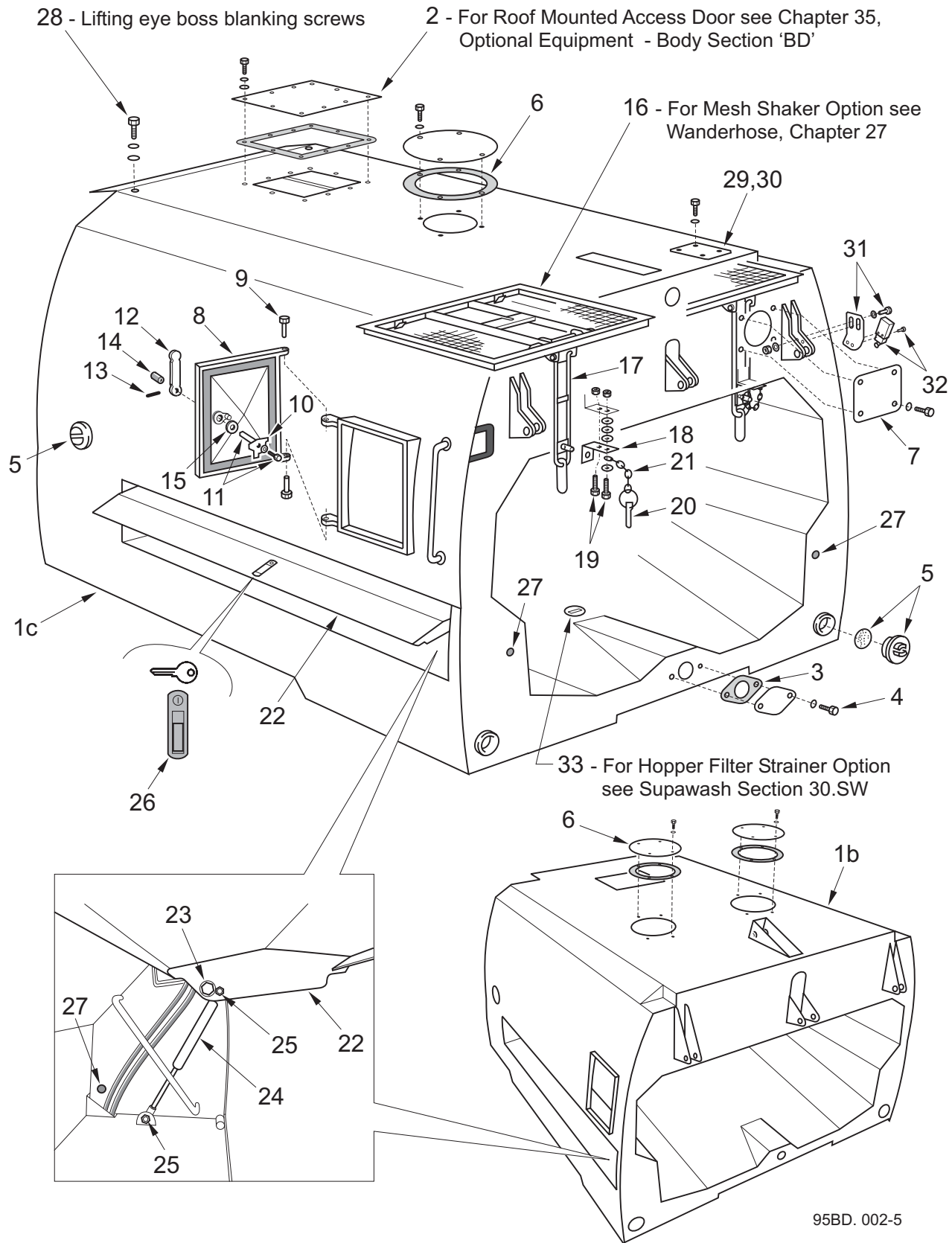
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CHAPTER

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Body Common Parts (1) - Mesh Screens and Doors



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Body Common Parts (1) - Mesh Screens and Doors

BoM 940611

Item No.	Part No.	Description	Quantity			
			500	605	650	800
1a	294001-2	500 Body, Chrome Steel (4003) Not shown	✓	-	-	-
	294001-3	500 Body, Stainless Steel (316) Not shown	✓	-	-	-

BoM 950611

1b	295100-2	605 Body, Chrome Steel (4003)	-	✓	-	-
	295100-3	605 Body, Stainless Steel (316)	-	✓	-	-
1c	295000-2	650 Body, Chrome Steel (4003)	-	-	✓	-
	295000-3	650 Body, Stainless Steel (316)	-	-	✓	-

BoM 960611

1d	296000-2	800 Body, Chrome Steel (4003) Not Shown	-	-	-	✓
	296000-3	800 Body, Stainless Steel (316) Not Shown	-	-	-	✓

BoMs 940611, 950611, 960611

2	280528-2	Roof Access Panel (4003)	-	1	1	1
	280528-3	Roof Access Panel (316)	-	1	1	1
	283613-1	Gasket	-	1	1	1
	124-437	Screw M8 x 25	-	10	10	10
	460-10	Washer - Spring Ø8	-	10	10	10
3	280582-2	Blanking Plate - Recirculation (4003)	-	1	1	1
	280582-4	Blanking Plate - Recirculation (316)	-	1	1	1
	282574-1	Gasket	-	1	1	1
4	118-169	Screw M10 x 25 - Stainless Steel	-	2	2	2
	451-6	Washer - Sealing M10	-	2	2	2

Body Welded Assemblies comprise items 1 to 4 above

5	284040-1	Cap - Plastic	4	4	4	4
	40643-1	Cap Seal	4	4	4	4
6	281376-2	Wanderhose Blanking Plate (4003)	2	2	1	1
	5955-1	Seal	2	2	1	1
	118-199	Screw M12 x 20 Stainless Steel	8	8	4	4
	458-12	Washer - Spring Ø12 Stainless Steel	8	8	4	4
7	281947-2	Blanking Plate - Littasnatch (4003)	-	-	1	1
	118-167	Screw M10 x 20 Stainless Steel	-	-	4	4
	458-10	Washer - Spring Ø10 Stainless Steel	-	-	4	4
> 8	284345-1	Access Door	2	2	2	2
	281217-1	Seal	2	2	2	2
9	123-149	Bolt M12 x 55	4	4	4	4
	425-16	Nut M12	4	4	4	4
10	200342-2	Catch	2	2	2	2
> 11	284348-1	Spindel	2	2	2	2
	124-100	Screw M6 x 12	2	2	2	2
	457-2	Washer - Plain Ø6	2	2	2	2
	460-8	Washer - Spring Ø6	2	2	2	2
12	63065-2	Handle	2	2	2	2
13	59-1	Cotter Pin	2	2	2	2

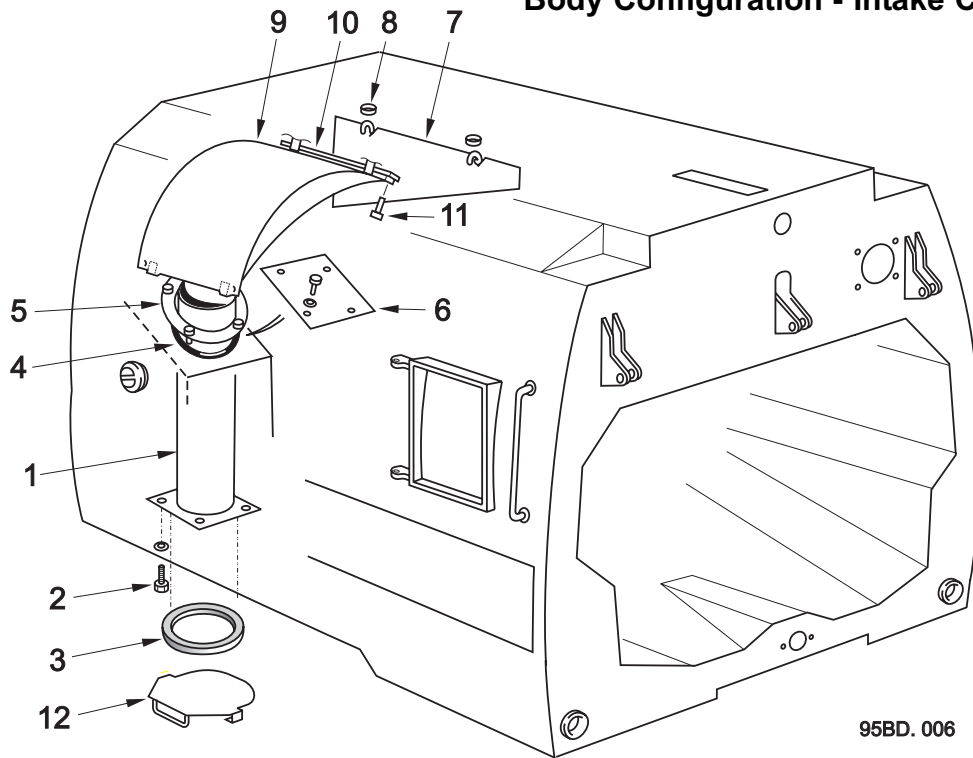
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Body Common Parts (1) - Mesh Screens and Doors

Item No.	Part No.	Description	Quantity			
			500	605	650	800
14	290-28	Buffer	2	2	-	-
15	455-14	Washer - Plain Ø16	2	2	-	-
16	200712-1	Mesh	2	2	2	-
	280043-1	Mesh	-	-	-	2
17	200714-9	Handle	2	2	-	-
>	200714-13	Handle	-	-	2	4
18	42111-2	Eye - Mesh Handle	-	-	2	4
	63761-2	Eye - Mesh Handle	2	2	-	-
19	118-141	Screw M8 x 35 Stainless Steel	4	4	4	8
	415-8	Nut M8 Stainless Steel	4	4	4	8
	458-8	Washer - Spring Ø8 Stainless Steel	4	4	4	8
	454-8	Washer - Plain Ø8 Stainless Steel	12	12	12	24
20	60-21	Lynch Pin / Chain - 9 Links	2	2	2	4
21	-					
	282872-2	Locker Door Installation - 4003)				
	282872-3	Locker Door Installation - St. Stl.)				
		Each comprising items 22 to 26				
22	282873-2	Locker Door (4003)	-	2	2	-
	282873-3	Locker Door (316)	-	2	2	-
23	129-183	Screw M12 x 25 Cap Head	-	2	2	-
24	293-14	Gas Strut	-	4	4	-
25	425-14	Nut - Nyloc M8	-	8	8	-
26	211-34	Latch	-	2	2	-
	211-35	Latch Key	-	4	4	-
27	288-39	Blanking Plug	-	2	2	-
28	124-265	Screw M16 x 25	2	2	2	2
	455-14	Washer - Plain Ø16	2	2	2	2
	460-14	Washer - Spring Ø16	2	2	2	2
29	281377-2	Blanking Plate - Mesh Shaker (4003)	2	2	2	2
	118-135	Screw M8 x 20 - Stainless Steel	8	8	8	8
	454-8	Washer - Plain Ø8 - Stainless Steel	8	8	8	8
	458-8	Washer - Spring Ø8 - Stainless Steel	8	8	8	8
30	281377-3	Blanking Plate - Mesh Shaker (316)	2	2	2	2
	118-135	Screw M8 x 20 - Stainless Steel	8	8	8	8
	454-8	Washer - Plain Ø8 - Stainless Steel	8	8	8	8
	458-8	Washer - Spring Ø8 - Stainless Steel	8	8	8	8
31	282958-1	Limit Switch Mount	1	1	1	1
	118-139	Screw M3 x 30 - Stainless Steel	2	2	2	2
	454-8	Washer - Plain Ø8 - Stainless Steel	2	2	2	2
	417-8	Nut - Nyloc M8 - Stainless Steel	2	2	2	2
32	282186-1	Limit Switch	1	1	1	1
	84-51	Switch Actuator Arm - Spares item				
	129-36	Screw M4 x 20 Cap Head	2	2	2	2
33	200479-1	Plug	1	1	1	1
	80-65	'O' Ring	1	1	1	1

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Body Configuration - Intake Components



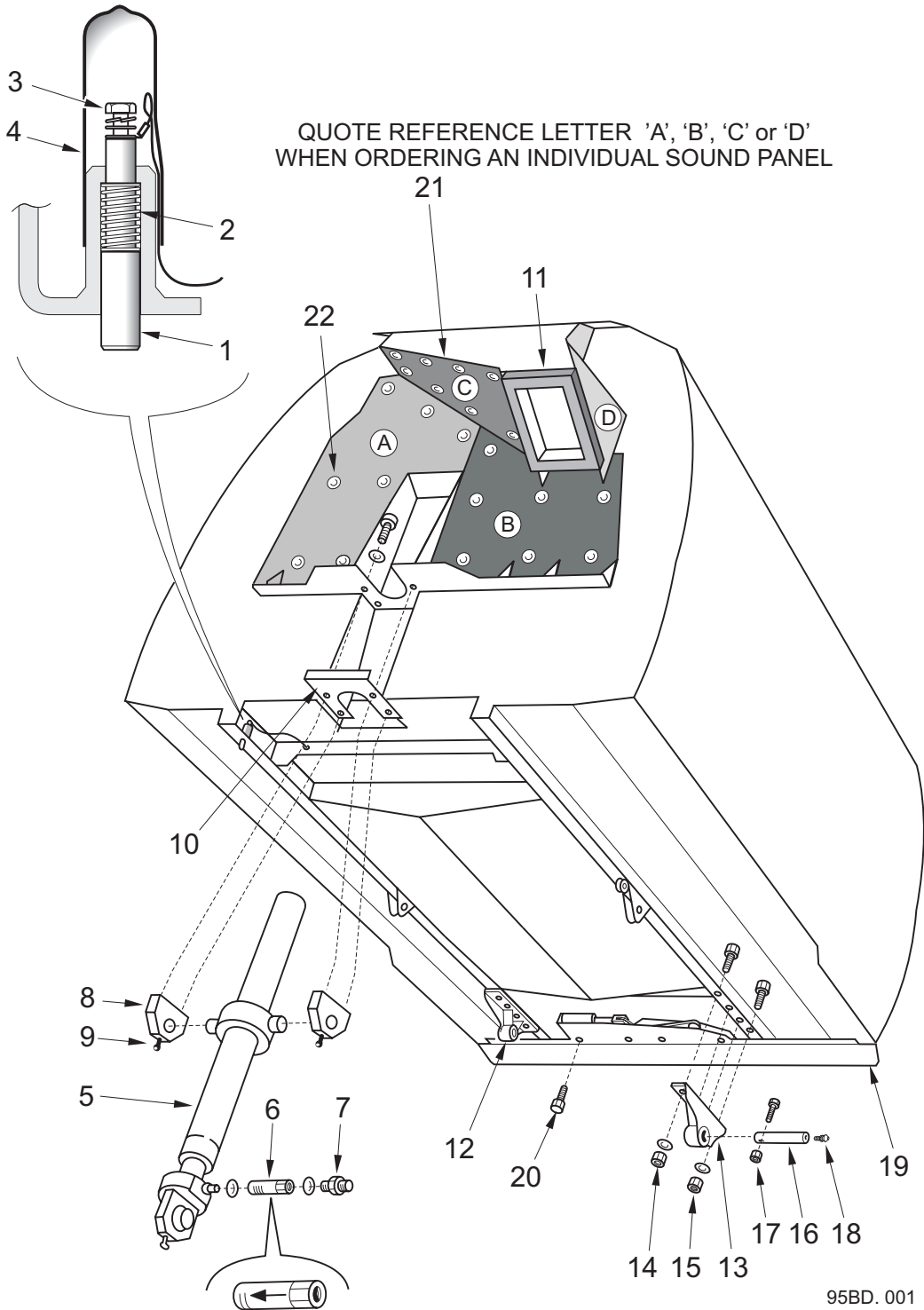
BoM 950612, 960612

Item No.	Part No.	Description	Quantity	
			Single	Dual
*	1	280694-1	1	2
		296031-1	1	2
2	118-201	Screw M12 x 25 Stainless Steel	4	8
	485-12	Washer - Spring Ø12 Stainless Steel	4	8
3	93404-1	Make/Break Seal	1	2
4	93400-1	Sealing Ring	1	2
5	95775-1	Seal Ring Clamp	1	2
	118-205	Screw M12 x 35 Stainless Steel	4	8
6	95774-2	Blanking Plate (Redundant Inlet)	1	-
	135-1	Screw M12 x 25	4	-
	460-12	Washer - Spring Ø12	4	-
7	40243-1	Centre Baffle - V650, V800	-	1
	63745-1	Centre Baffle - V500, V605 Lo-Top	-	1
8	41234-1	Locking Ring	-	2
*9	281190-2	LH Wear Plate V500, V605 Lo-Top	1	1
	281190-1	RH Wear Plate V500, V605 Lo-Top	1	1
	40249-1	LH and RH Wear Plate - V650, V800	1	2
10	40223-1	Clamp Bar	1	2
> 11	118-171	Screw M10 x 20 Stainless Steel	2	4
	458-10	Washer - Spring Ø10 Stainless Steel	2	4
	454-10	Washer - Plain Ø10 Stainless Steel	2	4
12	97944-1	Blanking Plate - Used with Wanderhose	1	-

*For heavy duty intake ducts and wear plates see Optional Equipment Chapter 35 Body Section BD

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Body Common Parts (2) - Discharge Components



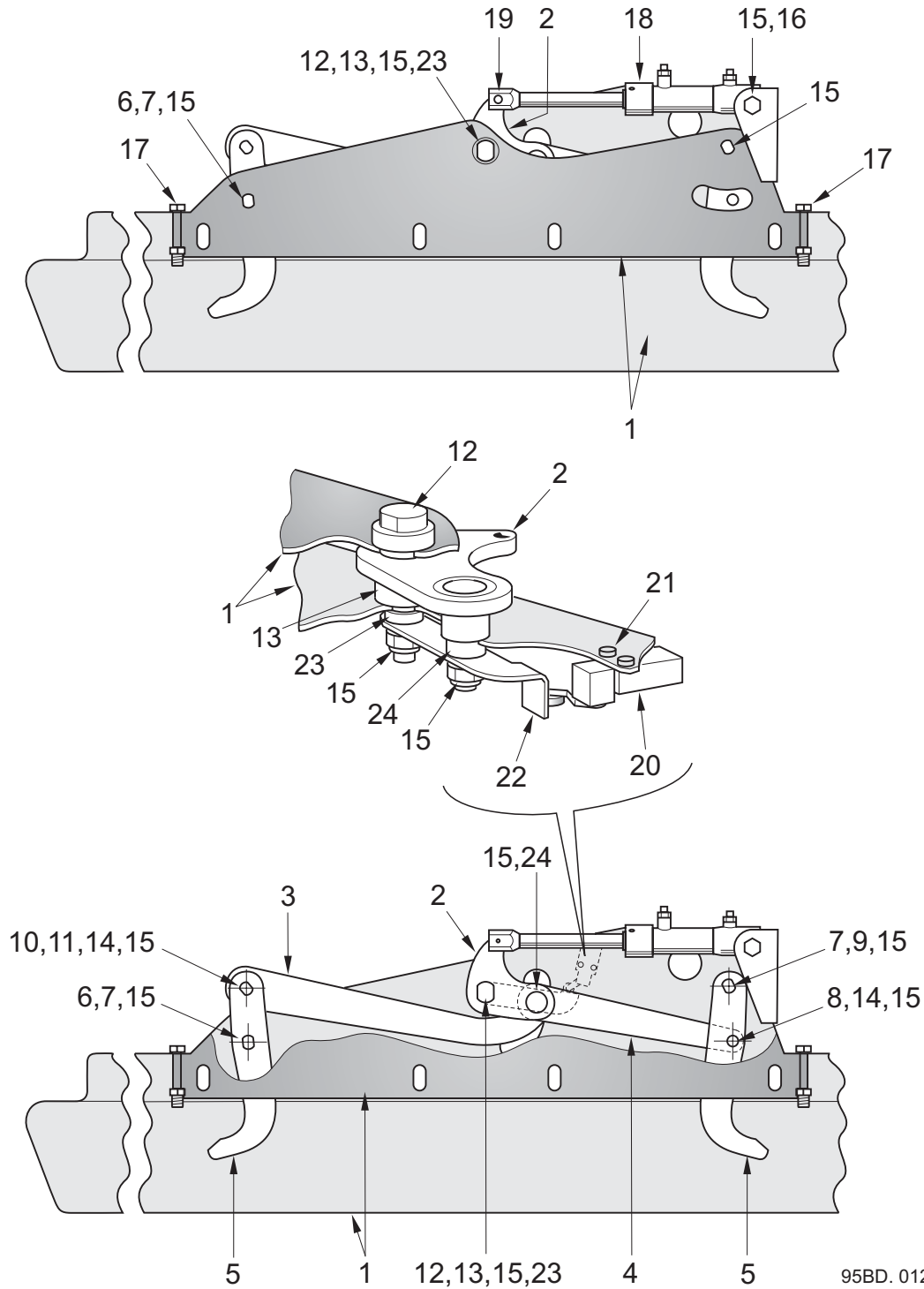
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Body Common Parts (2) - Discharge Components

BoM's 940611, 950611, 960611.

Item No.	Part No.	Description	Quantity
1	800862-1	Piston	1
2	200755-1	Spring	1
3	118-70	Screw M5 x 16 - Stainless Steel	1
	458-5	Washer - Spring Ø5 - Stainless Steel	1
	454-105	Washer - Plain Ø5 - Stainless Steel	1
4	32-131	Boot	1
5	28940-4	Body Tip Cylinder - 500/605/650 Series	1
	28940-5	Body Tip Cylinder - 800 Series Only	1
6	253-14	PC Flow Valve	1
	451-18	Washer - Sealing 3/8"	1
7	263-3	Adaptor G3/8"	1
	451-18	Washer - Sealing 3/8"	1
8	42072-1	Trunnion Block	2
9	38-1	Grease Nipple	2
10	41817-1	Sealing Plate	1
	123-203	Setscrew M12 x 30	4
	460-12	Washer - Spring Ø12	4
11	282396-1	Body Make/Break Seal	1
12	282473-1	RH Pivot Bracket - 605/650/800 Series	1
	294060-2	RH Pivot Bracket - 500 Series Only	1
13	282473-2	LH Pivot Bracket - 605/650/800 Series	1
	294060-1	LH Pivot Bracket - 500 Series Only	1
14	124-207	Screw M12 x 40	2
	425-16	Nut M12	2
	455-12	Washer - Plain Ø12	2
15	124-239	Screw M14 x 40	8
	425-17	Nut M14	8
	455-13	Washer - Plain Ø14	8
16	201248-1	Body Pivot Pin	2
17	123-159	Bolt M12 x 110	2
	425-16	Nut N12 Nyloc	2
18	38-30	Grease Nipple	2
19	281443-1	Door Clamp Assembly - See over page	1
20	124-277	Screw M16 x 70	4
	455-14	Washer - Plain Ø16	4
	460-14	Washer - Spring Ø16	4
21	281200-2	Sound Attenuation Kit - 800 Series Only	1
	281196-3	Sound Attenuation Kit - Lo-Top Body	1
	280805-2	Sound Attenuation Kit - Hi-Top Body	1
22	283-23	Retainer Nail	22
	283-25	Retainer Cap	22

Body Common Parts (2) - Door Clamp Assembly



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Body Common Parts (2) - Door Clamp Assembly

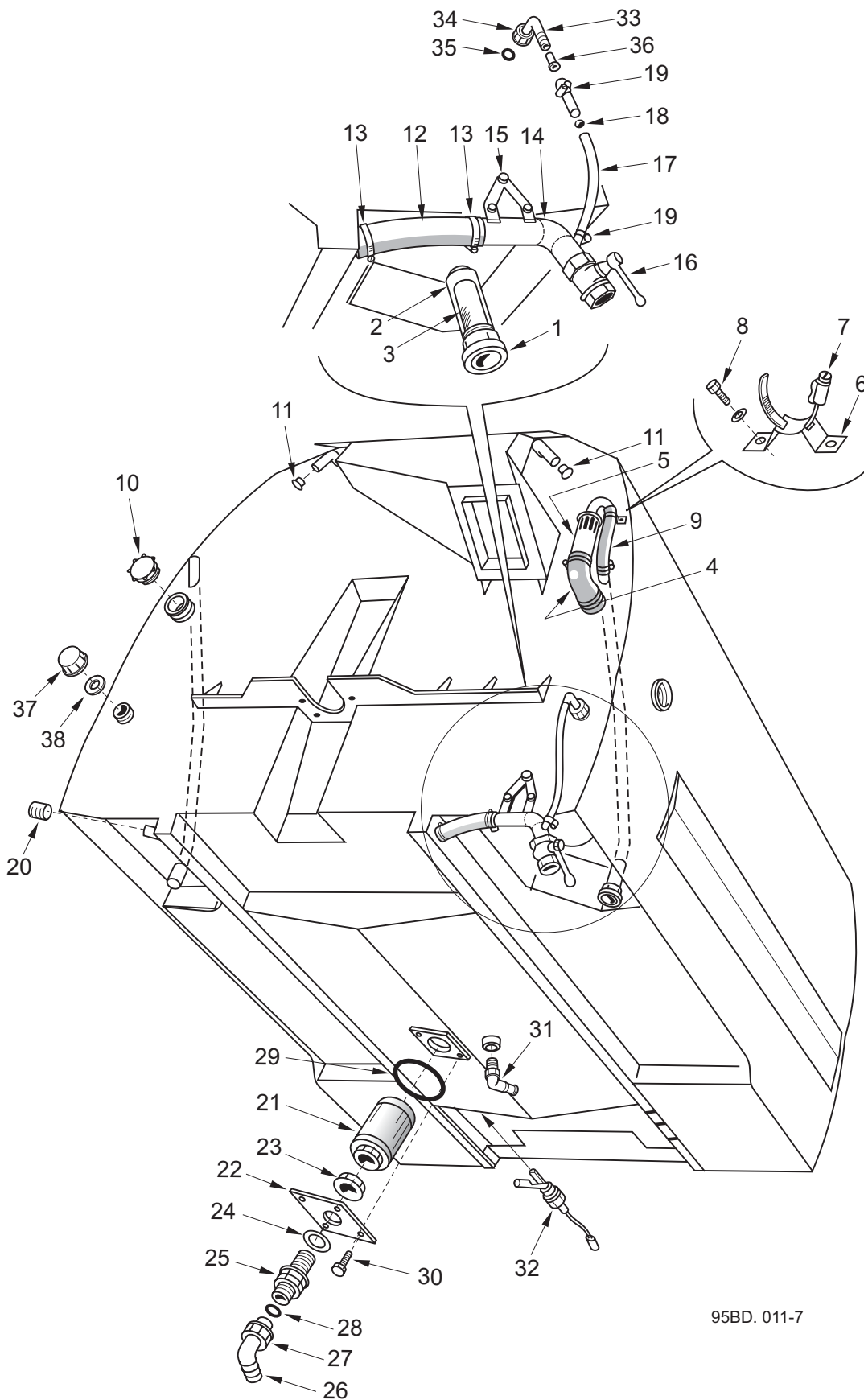
Drg. No. 281443 Rev.07

Item No.	Part No.	Description	Quantity
	281443-1	Door Clamp Assembly	
1	281427-1	Chute Weld Assembly	1
2	282845-1	Fulcrum	1
3	281429-1	Lever - Cranked	1
4	281431-1	Lever	1
5	281430-1	Claw	2
6	281442-3	Pivot Bolt	1
7	281434-3	Spacer	2
8	281435-3	Pin	1
9	281439-3	Pivot Bolt	1
10	281964-3	Pivot Bolt	1
11	282579-3	Spacer	1
12	281958-3	Pivot Pin	1
13	282026-3	Spacer	1
14	455-12	Washer - Plain M12	3
15	425-16	Nut - Nyloc M12	6
16	123-190	Bolt M16 x 90	1
	425-18	Nut - Nyloc M16	1
	455-14	Washer - Plain M16	2
17	124-215	Setscrew M12 x 80	2
	420-16	Nut M12	2
18	281565-1	Cylinder	1
19	29145-1	Clevis Pin	1
	39624	Spring Clip	1
20	282187-1	Limit Switch	1
21	129-38	Screw Cap Head M4 x 25	2
	455-5	Washer - Plain Ø4	2
	460-5	Washer - Spring Ø4	2
22	282676-1	Actuating Arm	1
23	282705-3	Spacer	1
24	282706-3	Spacer	1

Notes

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Body Common Parts (3) - Water Components



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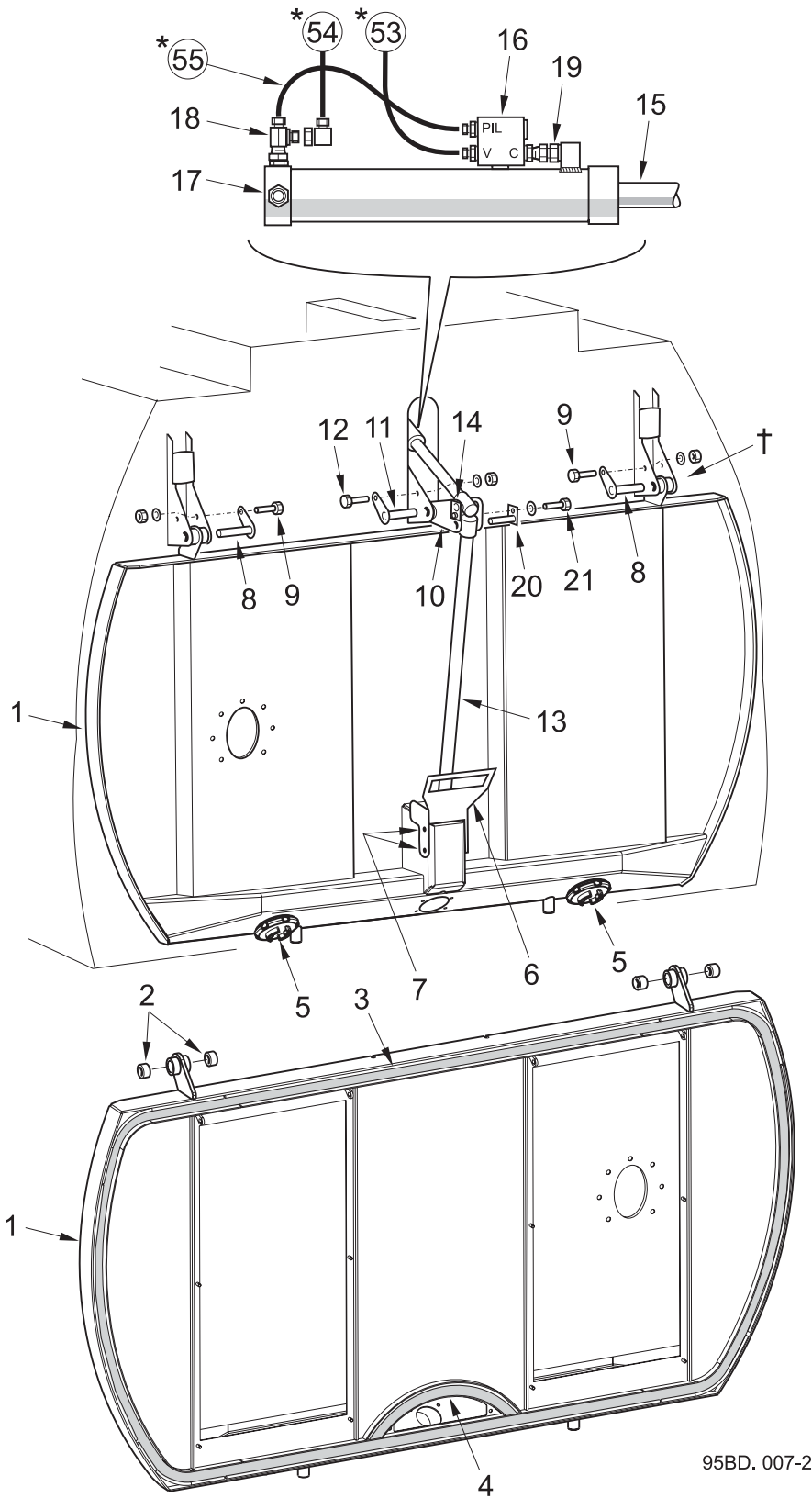
Body Common Parts (3) - Water Components

BoM's 940611, 950611, 960611

Item No.	Part No.	Description	Quantity
1	667-31	Hydrant Coupling - Stortz	1
	18684-1	Hydrant Coupling - UK Machines only	1
2	42119-1	Body Hydrant Filler	1
3	39402	Filter Element	1
4	61096-2	Rubber Elbow	1
	501-9	Hose Clip - Elbow to Body	1
	501-7	Hose Clip - Elbow to Basket	1
> 5	284075-1	Water Filler Basket	1
6	95813-1	Bracket	1
7	501-11	Hose Clip	1
8	124-99	Screw M6 x 10	2
	460-8	Washer - Spring Ø6	2
9	272-33	Hose x 0.3m	1
	501-11	Hose Clip	1
10	44-28	Plastic Cap	1
11	45-29	Plastic Cap	2
12	42213-1	Hose	1
13	501-6	Hose Clip	2
14	283632-1	Tube	1
15	22773-1	Spacer	3
	124-139	Screw M8 x 30	3
	425-14	Nut M8	3
	455-10	Washer - Spring Ø8	3
16	39253	Ball Valve	1
17	15656-1	Sight Tube	1
18	22-7	Ball Float	1
19	501-2	Hose Clip	2
20	55-4	Plug R1 - 1/4"	1
	283062-2	Body Filter Assembly - Comprising items 21 to 28	
21	6974-1	Suction Element	1
22	283033-1	Flange	1
23	277-198	Backnut 1 1/2" BSP	1
24	277-214	Gasket 1 1/2"	1
25	277-212	Nipple 1 1/2" BSP	1
26	277-213	Hose Tail 1 1/2" BSP x 90°	1
27	277-170	Fly-nut 1 1/2" BSP	1
28	277-171	'O' Ring	1
29	80-143	'O' Ring	1
30	124-135	Screw M8 x 20	4
	460-10	Washer - Spring Ø8	4
31	277-230	Elbow	1
32	48-328	Level Switch	1
33	277-186	Elbow	1
34	277-159	Fly Nut	1
35	277-188	'O' Ring	1
36	44-55	Insert	1
37	277-189	Blanking Cap	1
38	277-160	Gasket	1

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Door Assembly and Installation



95BD.007-2

† For Limit Switch details see Body Common Parts (1)

* For Hoses see Body Discharge - Hydraulic Hoses

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Rear Door Assembly and Installation

BoM 950811 - Door Assembly

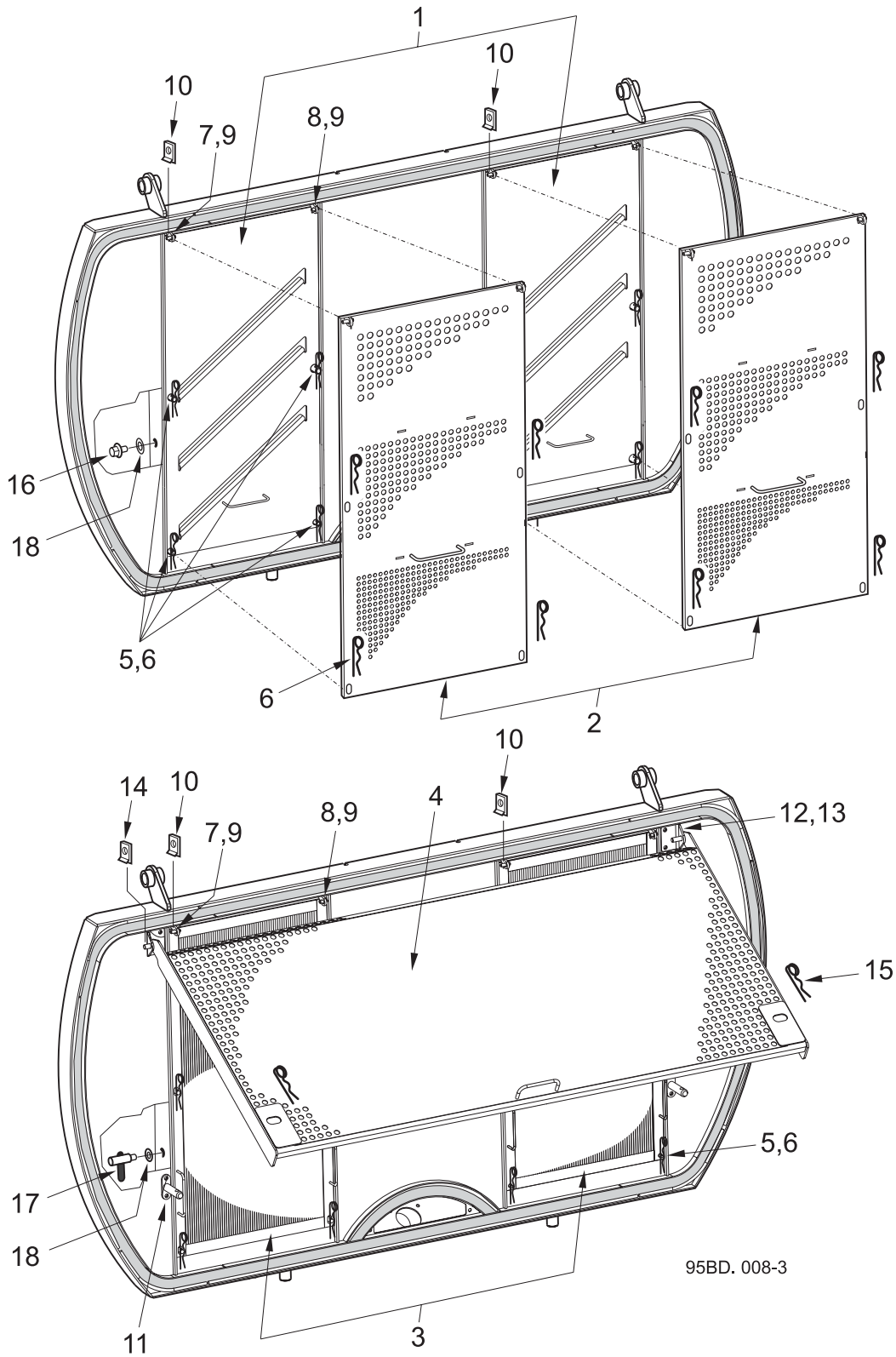
Item No.	Part No.	Description	Quantity	
			4003	316
1	281620-2	Rear Door - Chrome Steel (4003)	1	
	281620-3	Rear Door - Stainless Steel (316)		1
2	29128-3	Bush	4	4
3	281777-1	Door Seal	1	1
4	281778-1	Door Seal - Re-circulation Port	1	1
> 5	284040-1	Cap - Plastic	2	2
	40643-1	Seal	2	2
> 6	282451-2	Guard/Stowage - Chrome Steel	1	
	282451-3	Guard/Stowage - Stainless Steel		1
> 7	118-135	Screw M8 x 20 - Stainless Steel	4	4
	458-8	Washer - Spring Ø8 - Stainless Steel	4	4
	454-8	Washer - Plain Ø8 - Stainless Steel	4	4

BoM 950813 - Door Installation

8	282952-1	Hinge Pin		2
9	118-137	Screw M8 x 25 - Stainless Steel		2
	454-8	Washer - Plain Ø8 - Stainless Steel		2
	417-8	Nut - Nyloc M8 - Stainless Steel		2
10	40897-1	Relay		1
	29128-3	Bush		2
11	282952-2	Hinge Pin		1
12	118-137	Screw M8 x 25 - Stainless Steel		1
	454-8	Washer - Plain Ø8 - Stainless Steel		1
	417-8	Nut - Nyloc M8 - Stainless Steel		1
13	60113-9	Door Actuation Shaft		1
14	40572-1	Hinge Pin		1
	118-137	Screw M8 x 25 - Stainless Steel		1
	454-8	Washer - Plain Ø8 - Stainless Steel		1
15	29170-1	Hydraulic Cylinder		1
16	283325-1	Pilot Check Valve		1
17	40553-1	Pin		1
	425-18	Nut - Nyloc M16		2
18	255-11	Swivel Tee 1/4"		1
19	242-10	Swivel Adaptor G 1/4"		1
20	40572-1	Hinge Pin		1
21	124-132	Screw M8 x 12		1
	460-10	Washer - Spring Ø8		1

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Rear Door Screens



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Rear Door Screens

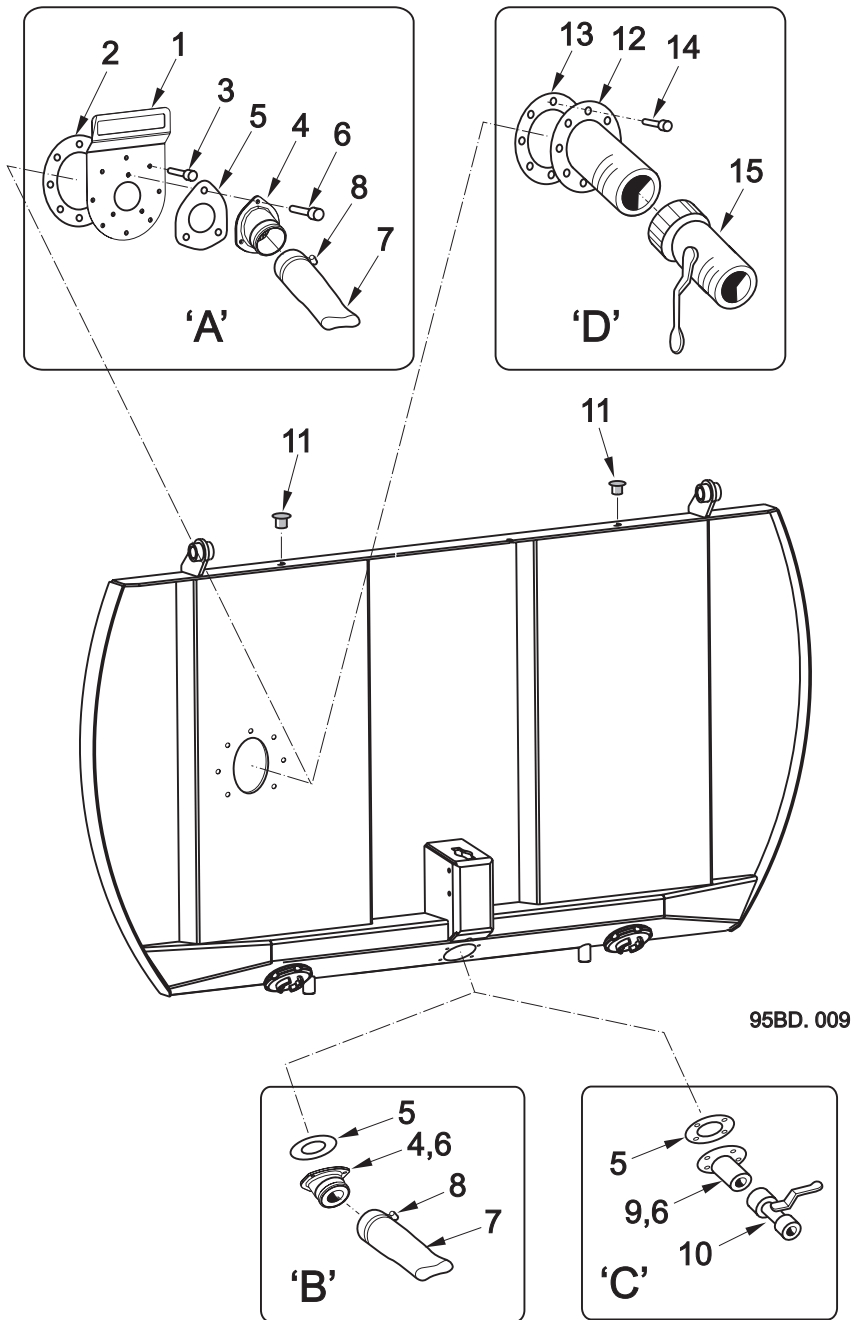
BoM 950812

Item No	Part No.	Description	Quantity			
			Standard	Perforated	Wedge Wire	Primary
1	283530-1	Standard Panel Assembly	2	-	-	-
2	283420-1	Perforated Panel Assembly	-	2	-	-
3	283531-1	Wedge Wire Panel Assembly	-	-	2	-
4	281680-1	Primary Panel Assembly	-	-	-	1
5	281664-3	Pin Mesh Retainer	8	8	8	-
	417-8	Nut - Nyloc M8 - Stainless St'l	8	8	8	-
6	289-38	'R' Spring Clip	8	8	8	-
7	283508-1	L.H. Hinge Bracket	2	2	2	-
8	283508-2	R.H. Hinge Bracket	2	2	2	-
9	118-137	Screw M8 x 25 - Stainless St'l	8	8	8	-
	454-8	Washer - Plain Ø8 - Stainless St'l	8	8	8	-
	458-8	Washer - Spring Ø8 - Stainless St'l	8	8	8	-
10	283-2	Spring Clip	2	2	2	-
11	281685-1	Locking Bracket	-	-	-	2
12	281684-2	Pivot Bracket	-	-	-	2
13	118-137	Screw M8 x 25 - Stainless St'l	-	-	-	8
	454-8	Washer - Plain Ø8 - Stainless St'l	-	-	-	8
	458-8	Washer - Spring Ø8 - Stainless St'l	-	-	-	8
14	283-2	Spring Clip	-	-	-	1
15	289-39	'R' Spring Clip	-	-	-	2
16	3162	Plug - R 1/4"	1	1	-	-
17	88-15	Ball Valve - 1/4"M/F	-	-	1	-
18	451-124	Copper Washer G 1/4"	1	1	1	-

Notes

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Rear Door Drains



- Base System comprises assemblies 'A' and 'B'
- De-watering and Recirculation Systems comprise assemblies 'A' and 'C'
- 4" Valve Option comprises assembly 'D'. This can be fitted with Base or De-watering/Recirculation Systems as required.

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Rear Door Drain

BoM 950814

Item No.	Part No.	Description	Quantity		
			'A'	'B'	'C'
Assemblies 'A', 'B' and 'C' comprising items 1 to 10:					
1	282727-1	Layflat Stowage Plate	1	-	-
2	281395-1	Gasket	1	-	-
3	118-167	Screw M10 x 20 - Stainless Steel	8	-	-
	451-140	Washer - Brass Ø10	8	-	-
4	281452-1	Drain Spigot	1	1	-
5	281411-1	Gasket	1	1	1
6	118-137	Screw M8 x 25 - Stainless Steel	3	3	3
	451-82	Washer - Brass Ø8	3	3	3
7	9983	Layflat Hose x 1m	1	1	-
8	501-7	Circlip	1	1	-
9	281715-3	1 1/2" Valve Drain Spigot	-	-	1
10	39253	1 1/2" Ball Valve	-	-	1
11	288-29	Lifting Eye Plug x 2			

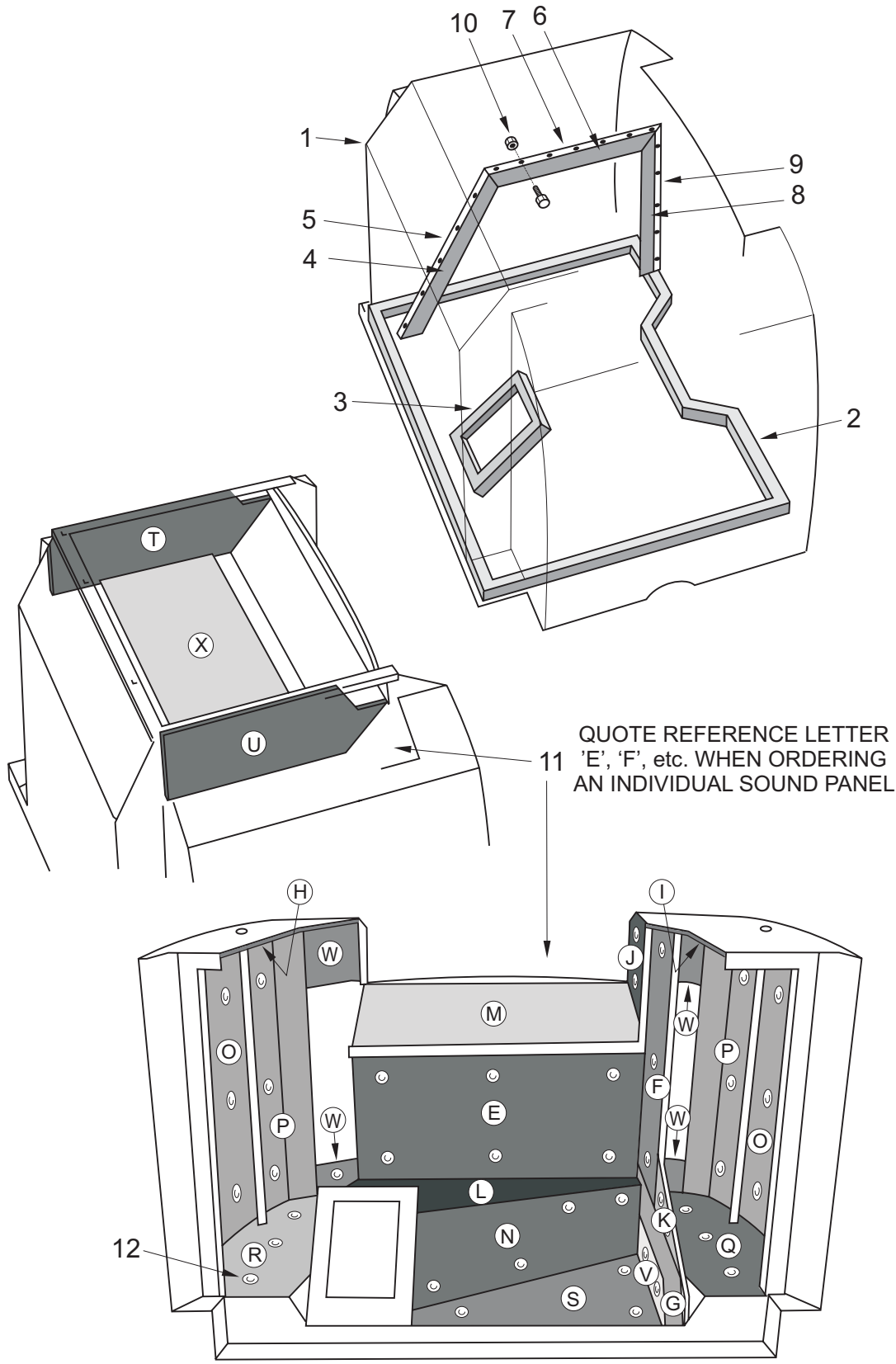
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Assembly 'D' comprising items 12 to 15:			'D'		
12	281393-3	4" Valve Drain Spigot		1	
13	281395-1	Gasket		1	
14	118-167	Screw M10 x 20 - Stainless Steel		8	
	451-6	Washer - Sealing Ø10		8	
15	88-24	4" Drain Valve		4	

Notes

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Cowl - Common Parts (1) - Seals and Soundproofing



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Cowl - Common Parts (1) - Seals and Soundproofing

BoM 951511 - 500, 605, 650

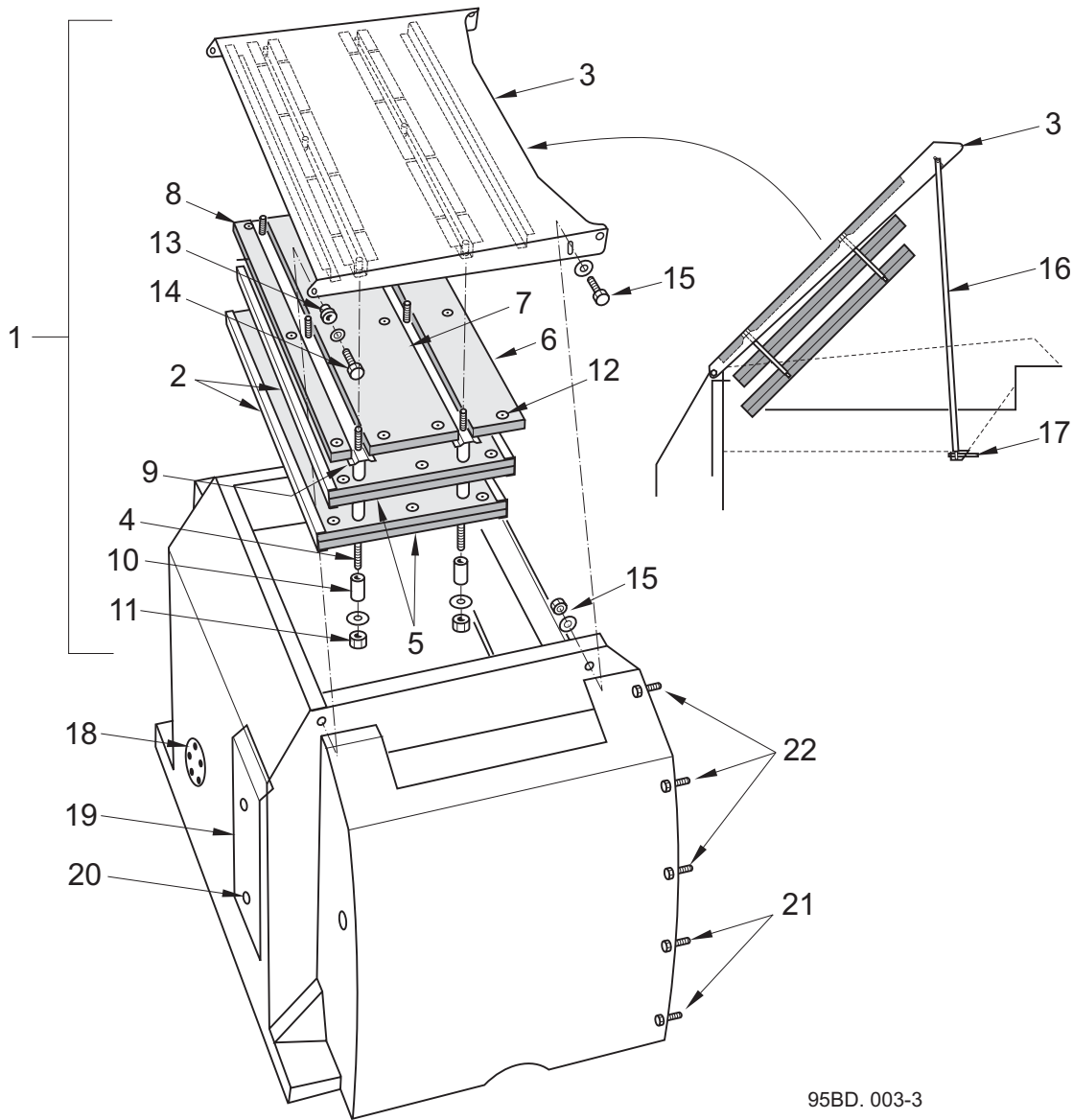
Item No.	Part No.	Description	Quantity
1	281170-1	Cowl - Lo-Top Mild Steel	1
	281170-2	Cowl - Lo-Top Chrome Steel (4003)	1
	281170-3	Cowl - Lo-Top Stainless Steel (316)	1
	280700-1	Cowl - Hi- Top Mild Steel	1
	280700-2	Cowl - Hi- Top Chrome Steel (4003)	1
	280700-3	Cowl - Hi- Top Stainless Steel (316)	1

Cowl BoM 961511 - 800

	280930-1	Cowl - Hi-Top Mild Steel	1
	280930-2	Cowl - Hi-Top Chrome Steel (4003)	1
	280930-3	Cowl - Hi-Top Stainless Steel (316)	1
2	282225-1	Cowl Seal	1
3	282397-1	Cowl/Fan Case Seal	1
4	42613-1	Radiator Rubber Seal	1
5	42610-1	Radiator Rubber Clamp	1
6	42612-1	Radiator Rubber Seal	1
7	42611-1	Radiator Rubber Clamp	1
8	42607-1	Radiator Rubber Seal	1
9	42610-1	Radiator Rubber Clamp	1
10	124-135	Screw M8 x 20	17
	420-14	Nut M8	17
	460-10	Washer - Spring Ø8	17
11	281196-1	Sound Attenuation Kit - Lo-Top Cowl - 500, 605 Series	1
	280805-1	Sound Attenuation Kit - Hi-Top Cowl - 650 Series	1
	281200-1	Sound Attenuation Kit - 800	1
12	283-23	Retainer Nail	100
	283-25	Retainer Cap	100

Notes

Cowl Common Parts (2) - Wafer Pack and Wear Plates



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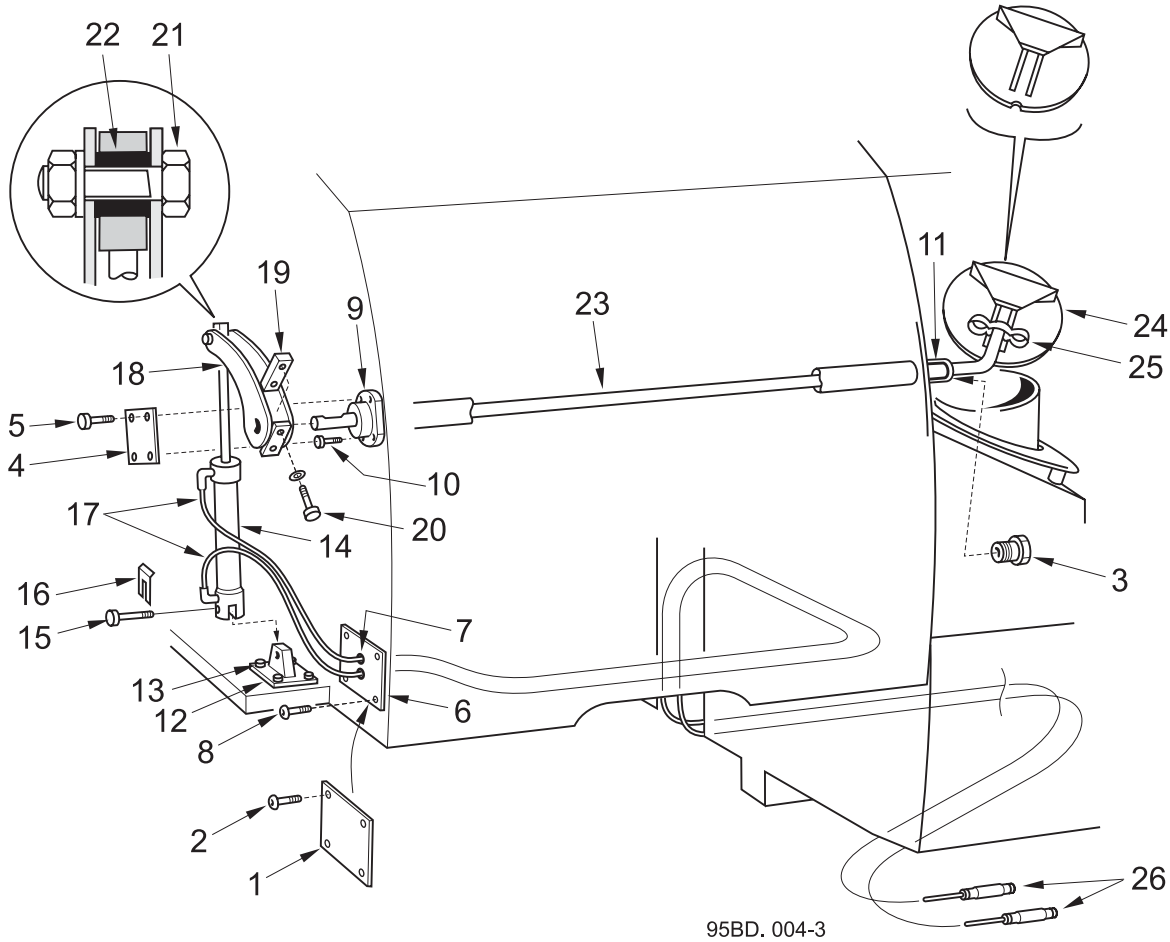
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Cowl Common Parts (2) - Wafer Pack and Wear Plates

Bom's 951511, 961511

Item No.	Part No.	Description	Quantity
1	282371-1	Cowl Hood/Wafer Pack Assembly - Comprising Items 2-12	
2	282370-1	Wafer Plate	2
3	282369-1	Hood	1
4	282955-1	Stud	6
	282385-1	Sound Attenuating Foam Kit - Comprising Items 5-8	
5	282385-5	Sound Attenuating Foam - Wafer Panels	4
6	282385-2	Sound Attenuating Foam - Hood Rear Section	1
7	282385-3	Sound Attenuating Foam - Hood Mid Section	1
8	282385-4	Sound Attenuating Foam - Hood Front Section	1
9	803555-1	Retainer Strip	2
10	283307-1	Spacer - Black Nylon	12
> 11	425-15	Nut - Nyloc M10	6
	457-5	Washer - Extra Large Ø10	6
12	283-25	Retainer Cap	64
13	280905-3	Spacer Hood Pivot	2
14	124-137	Screw M8 x 25	2
	460-10	Washer - Spring Ø8	2
15	124-135	Screw M8 x 20	2
	457-4	Washer - Spring Ø8	4
	425-14	Nut - Nyloc M8	2
16	280537-1	Hood Stay	1
17	124-185	Screw M10 x 90	1
	425-15	Nut M10	1
18	42739-1	Cover Plate - Hydraulic Tank Access	1
	135-56	Screw M6 x 12	5
19	61005-1	Wear Plate - 800 Series	1
	42663-1	Wear Plate - 500,605,650 Series	1
20	135-60	Screw M10 x 20	2
	420-15	Nut M10	2
	460-11	Washer - Spring Ø10	2
21	124-203	Screw M12 x 30	4
	460-11	Washer - Spring Ø12	4
	455-12	Washer - Plain Ø12	4
22	124-171	Screw M10 x 30	6
	460-11	Washer - Spring Ø10	6
	455-11	Washer - Plain Ø10	6

Cowl Configuration - Intake Duct Flaps



BoM 951512 - 500, 605, 650
 BoM 961512 - 800

Single Sweep without Powered Flap Plate - Items 1 to 5:

Item No.	Part No.	Description	Quantity
1	42940-1	Blanking Plate	2
2	138-91	Screw M6 x 12	8
	460-8	Washer - Spring M6	8
3	42956-1	Blanking Plug	2
4	40250-1	Blanking Plate	2
5	124-139	Screw M8 x 30	8
	460-10	Washer - Spring M8	8

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Cowl Configuration - Intake Duct Flaps

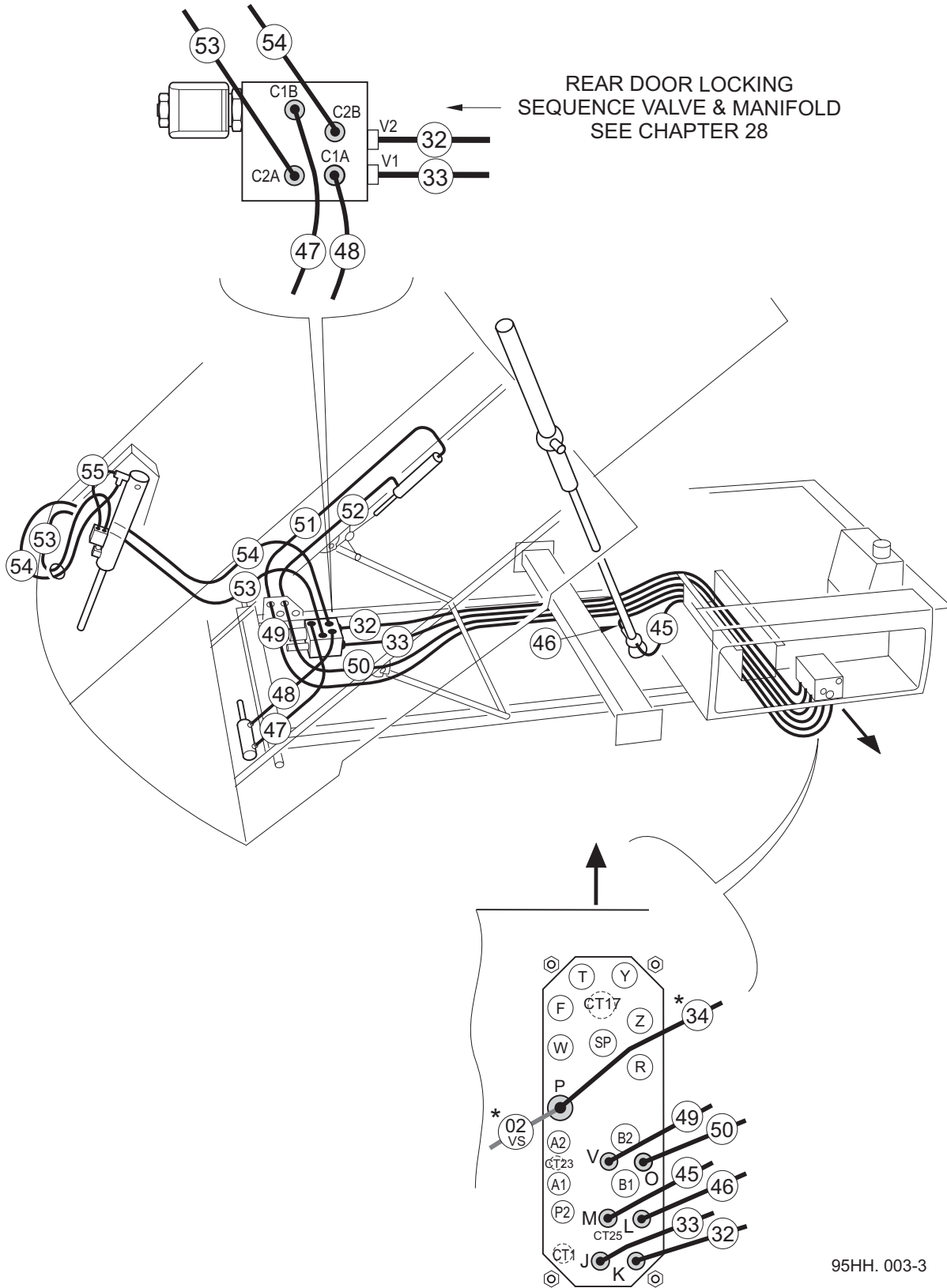
BoM 951512 - 500, 605, 650
BoM 961512 - 800

Single and Dual Sweep with Powered Flap Plate - Items 6 to 25:

Item No.	Part No.	Description	Quantity	
			Single	Dual
6	283299-1	Cover Plate	1	2
7	287-38	Grommet	2	4
8	460-8	Washer - Spring M6	4	8
	138-91	Screw M6 x 12	4	8
	460-8	Washer - Spring M6		
9	63523-1	Flap Bearing	1	2
10	124-139	Screw M8 x 30	4	8
	460-10	Washer - Spring M8	4	8
11	29128-2	Bush	1	2
12	281030-1	Bracket - 800 Series	1	2
	42216-1	Bracket - 500, 605, 650 Series	1	2
13	124-135	Screw M8 x 20	4	8
	420-14	Nut M8	4	8
	460-10	Washer - Spring M8	4	8
14	280840-1	Pneumatic Cylinder	1	2
15	29149-1	Pin - Spares item only	1	2
16	39624	Spring Clip - Spares item only	1	2
17	273-20	Tube - Pneumatics Ø6 Blue	2m	4m
18	280424-1	Lever	1	2
19	40456-2	Bar	1	2
20	124-179	Screw M10 x 60	2	4
	460-11	Washer - Spring M10	2	4
21	124-208	Screw M12 x 45	1	2
	420-16	Nut M12	1	2
	460-12	Washer - Spring M12	1	2
22	42733-1	Bush	1	2
23	40442-12	Shaft	1	2
24	282577-1	Flap Plate	1	2
25	40516-1	Clip - Hairpin	2	4
26	277-47	Connector - located at pivot point at rear of subframe	2	4

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Body Discharge - Hydraulic Hoses



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Body Discharge - Hydraulic Hoses

Subframe - BoM 950714

Item No.	Part No.	Description
32	HC04001-352	Hydraulic Hose
33	HC04001-352	Hydraulic Hose

Body - BoM 950611, BoM 960611

Item No.	Part No.	Description
45	HC04001-146	Hydraulic Hose
46	HC06001-191	Hydraulic Hose
47	HC04002-95	Hydraulic Hose
48	HC04002-95	Hydraulic Hose

Body Prop - BoM 950720, BoM 960720

Item No.	Part No.	Description
49	HC04001-370	Hydraulic Hose
50	HC04001-370	Hydraulic Hose
51	HC04002-189	Hydraulic Hose
52	HC04002-155	Hydraulic Hose

Rear Door - BoM 950813

Item No.	Part No.	Description
53	HC04002-420	Hydraulic Hose
54	HC04002-420	Hydraulic Hose
55	HCO4002-28	Hydraulic Hose

Notes

* For hoses 02(VS) and 34 see Emergency Discharge Pump, chapter 28.

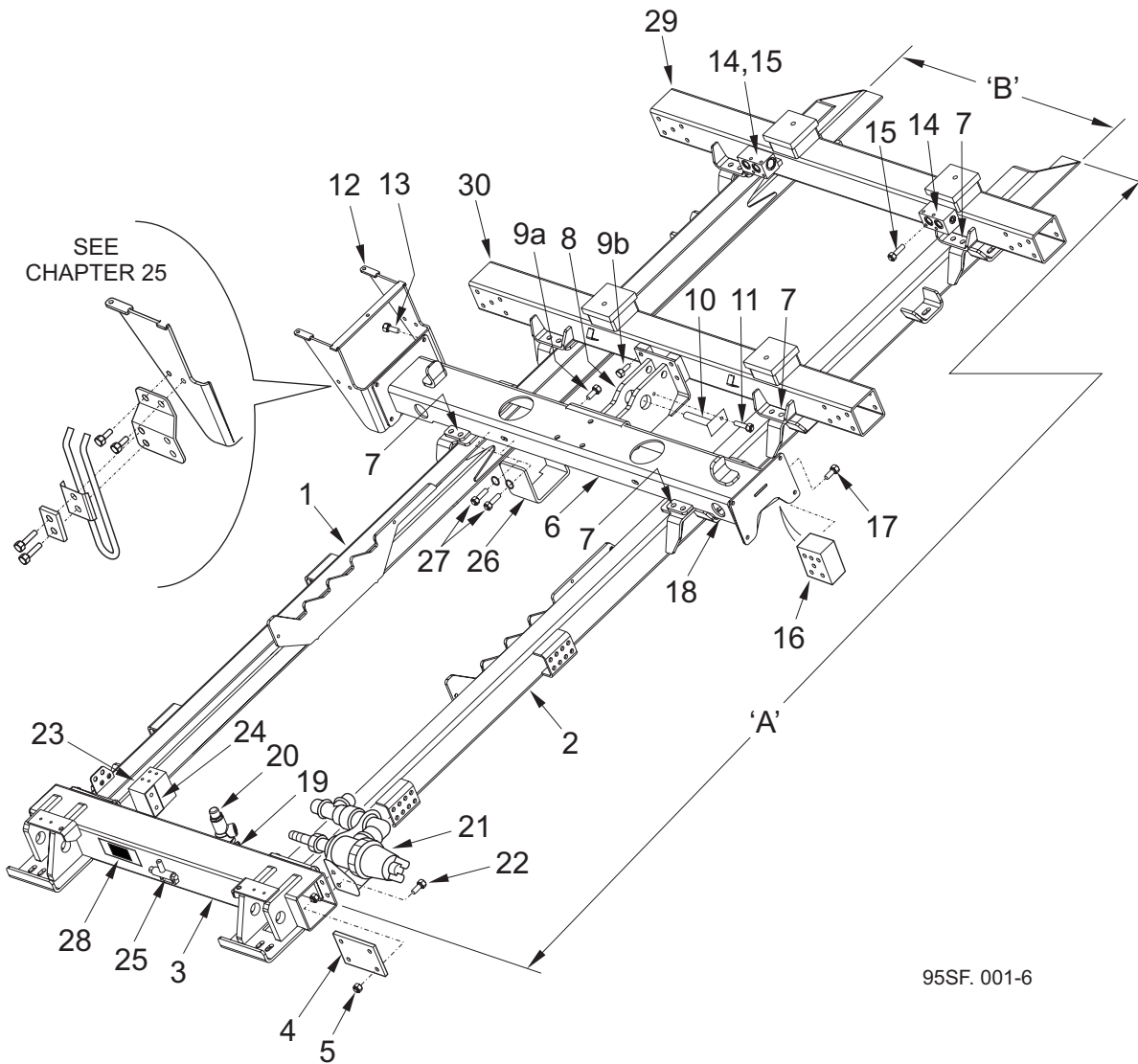
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CHAPTER

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Subframe Assembly



Dimension 'A' Side Rail Lengths

VT500 only = 3060

VT605/650/800 Short = 3245 Medium = 3635 *Long = 4085

Lengths are chassis dependent.

* Long rails used when additional water tank is fitted.

Dimension 'B' Side Rail Widths

Standard = 864, using outer fixing holes in Items 3, 6, 35, 36

Narrow = 790, using inner fixing holes in Items 3, 6, 35, 36

95SF.001-6

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Subframe Assembly

Side Rails 940711 - 500 Series

Item No.	Part No.	Description	Quantity
1	294050-1	Side Rail LH	1
2	294051-1	Side Rail RH	1

Side Rails 950711 - 605, 650 Series

1	281512-1	Side Rail LH Short	1
	281512-2	Side Rail LH Medium	1
	281512-3	Side Rail LH Long	1
2	281513-1	Side Rail RH Short	1
	281513-2	Side Rail RH Medium	1
	281513-3	Side Rail RH Long	1

Side Rails 960711 - 800 Series

1	281759-1	Side Rail LH Short	1
	281759-2	Side Rail LH Medium	1
	281759-3	Side Rail LH Long	1
2	281758-1	Side Rail RH Short	1
	281758-2	Side Rail RH Medium	1
	281758-3	Side Rail RH Long	1

Crossmembers 950712, 960712

3	281511-1	Rear Pivot Member	1
4	281519-1	Stretch Plate	2
5	122-164	Bolt M14 x 45	8
	455-13	Washer - Plain M14	8
6	283680-1	Centre Crossmember	1
> 7	122-164	Bolt M14 x 45) Also Used	12
	404-17	Nut - Nyloc M14) with	12
	455-13	Washer - Plain M14) Items 29 and 30	24
8	283790-1	Body Tip Mount - 605, 650 Series	1
	283785-1	Body Tip Mount - 500, 800 Series	1
9a	124-203	Bolt M12 x 30	3
	455-12	Washer - Plain M12	3
	460-12	Washer - Spring M12	3
9b	124-199	Bolt M12 x 20	4
	460-12	Washer - Spring M12	4
10	42432-1	Pivot Pin	1
11	124-134	Screw M8 x 16	1
	460-10	Washer - Plain M8	1

Configuration 940713, 950713

			Single	Dual
12	280880-1	Bracket - Intake Seat	1	2
13	124-171	Screw M10 x 30	4	8
	460-11	Washer - Plain M10	4	8
	420-1	Nut M10	4	8

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Subframe Assembly
Configuration 940713, 950713 - continued

Item No.	Part No.	Description	Quantity	
			Single	Dual
14	281548-1	Manifold - Hydraulic	1	2
15	124-147	Screw M8 x 60	2	4
	460-10	Washer - Spring M8	2	4
16	-	Shuttle/Exhaust Valve Block - See Chapter 26	-	2
17	124-102	Screw M6 x 16	-	4
	460-8	Washer - Spring M6	-	4
18	-	Regulator - See Chapter 26	2	4

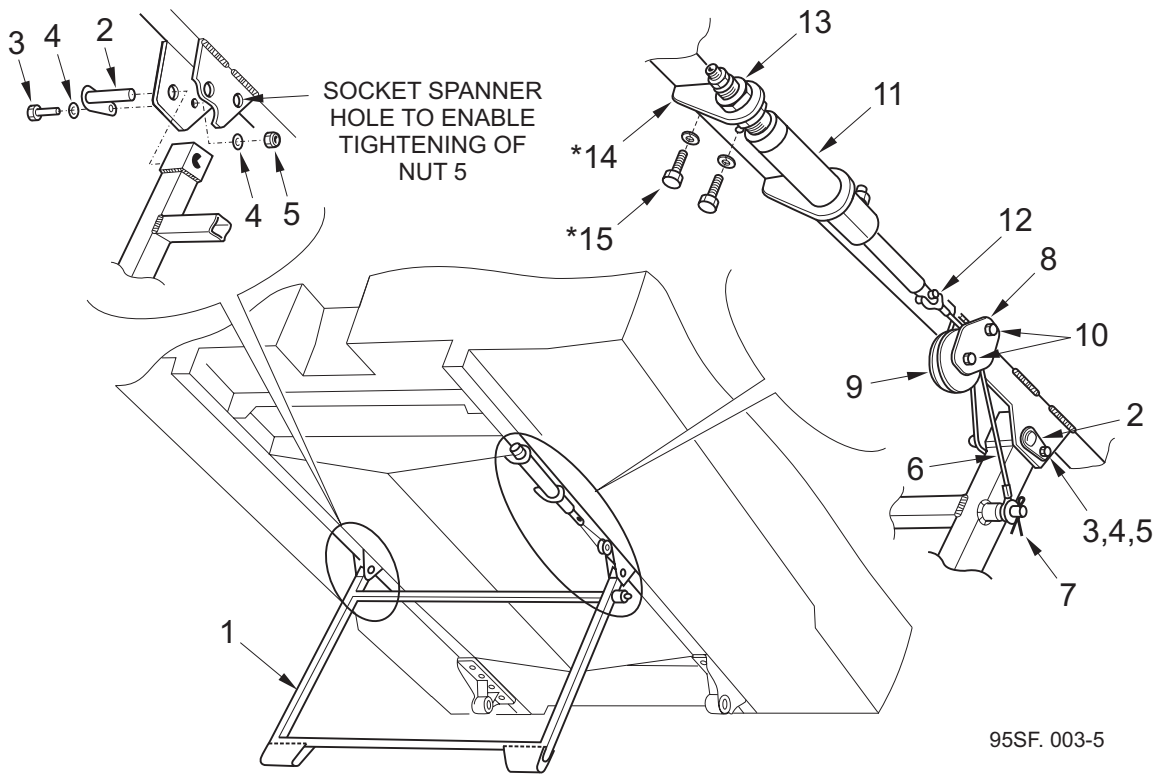
Services 950714

Item No.	Part No.	Description	Quantity	
			Single	Dual
19	-	Manifold - Water Relief Valve - See Chapter 30	1	
20	-	Water Relief Valve - See Chapter 30	1	
21	-	Water Filter Sub-Assembly - See Chapter 30	1	
22	124-137	Screw M8 x 25	2	
	455-10	Washer - Plain M8	2	
	425-14	Nut - Nyloc M8	2	
23	-	Sequence Valve - 12 volt) See	1	
	-	Sequence Valve - 24 volt) Chapter 28	1	
24	281952-1	Plate	1	
	124-121	Screw M6 x 90	2	
	460-8	Washer - Spring M6	1	
25	-	Wanderhose Water Manifold - See Chapter 30	1	
26	281653-1	Body Pump Bracket	1	
27	124-169	Screw M10 x 25	4	
	460-11	Washer - Spring M10	4	
	455-11	Washer - Plain M10	4	
28	806953-1	Serial Number Plate	1	

Various - See Chapter 22.CP

29	281283-1	Engine Beam Front - Reference	1	
30	281282-1	Engine Beam Rear - Reference	1	

Auto Release Body Prop



BoM 960720

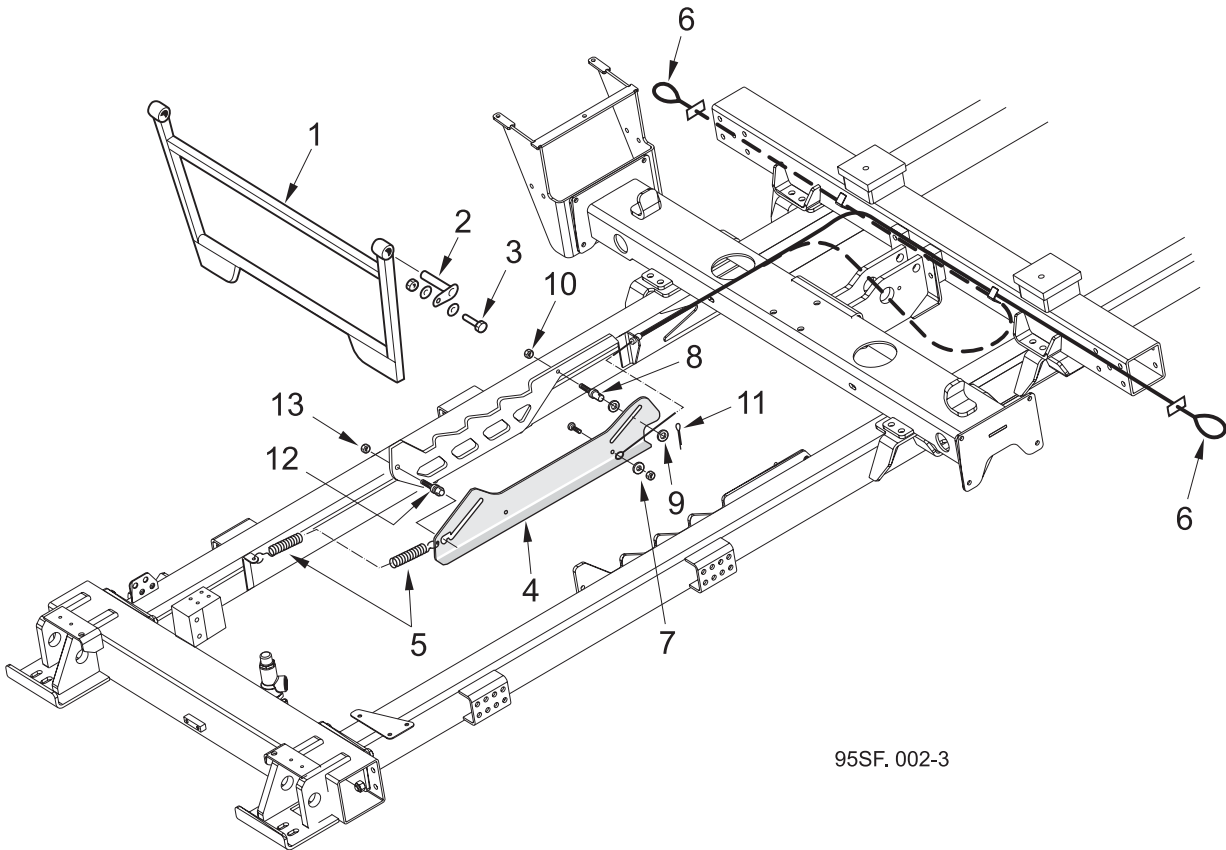
Item No.	Part No.	Description	Quantity	
1	200475-3 281022-1	Prop 500, 650 Series Prop - 800 Series	1	
2	283445-1	Pivot Pin	2	
3	124-137	Screw M8 x 25	2	
4	455-10	Washer - Plain M8	2	
5	425-14	Nut - Nyloc M8	2	
6	21216-12	Cable	1	
7	457-7 500-103	Washer - Large Ø14 Split Pin	1 1	
8	94972-1	Plate Pulley	1	
9	70484-1	Pulley	1	
10	124-141 94971-1 420-14	Screw M8 x 35 Spacer Nut - Nyloc M8	2 2 2	
11	29345-1	Cylinder	1	
12	124-139 420-14	Screw M8 x 30 Nut - Nyloc M8	2 2	
13	421-7	Nut Lock M20F	2	
>	* 14	280138-1 Bracket) Not required	1
>	* 15	124-137 Screw M8 x 25) on	2
		460-10 Washer - Spring Ø8) current bodies	2

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Superseded Parts

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Manual Release Body Prop


95SF.002-3

BoM 950720 and 960720

Item No.	Part No.	Description	Quantity
1	200475-3	Prop - 500, 650 Series	1
	281022-1	Prop - 800 Series	1
2	283445-1	Pivot Pin	2
3	124-137	Screw M8 x 25	2
	455-10	Washer - Plain M8	2
	425-14	Nut - Nyloc M8	2
4	295105-1	Release Cam Plate	1
5	280163-1	Spring	1
6	280146-1	Release Cable - 500, 650 Series	1
	280146-3	Release Cable - 800 Series	1
7	124-70	Screw M5 x 16	1
	455-7	Washer - Plain	1
	425-12	Nut - Nyloc M5	1
8	295104-1	Front Pin	1
9	457-5	Washer - Plain M8	2
10	425-14	Nut - Nyloc M8	1
11	500-104	Split Pin	1
12	295103-1	Rear Button	1
13	425-15	Nut - Nyloc M10	1

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CHAPTER

22

Powapak

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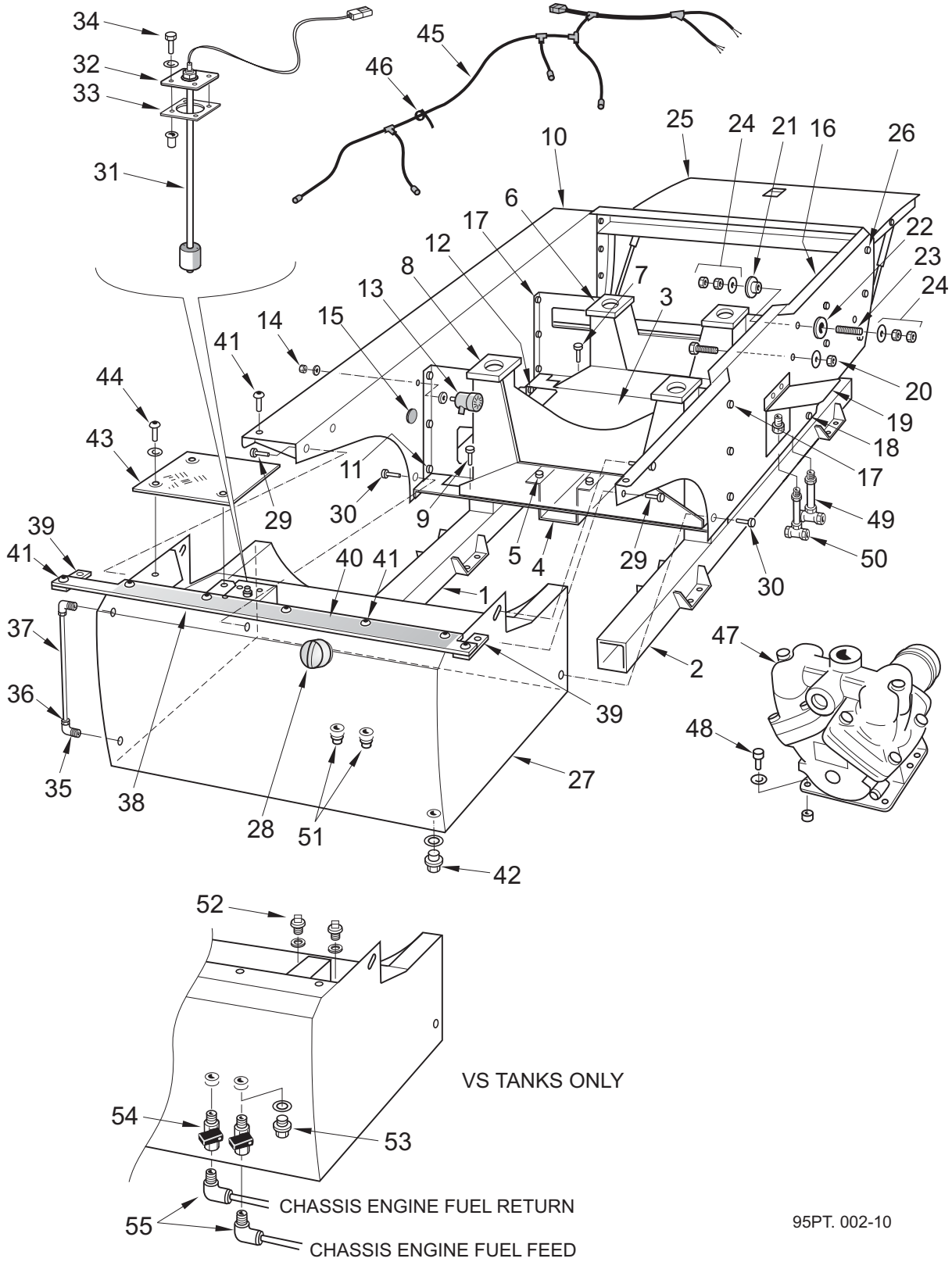
22.CP

VT & VS Common Parts

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Powapak Tub



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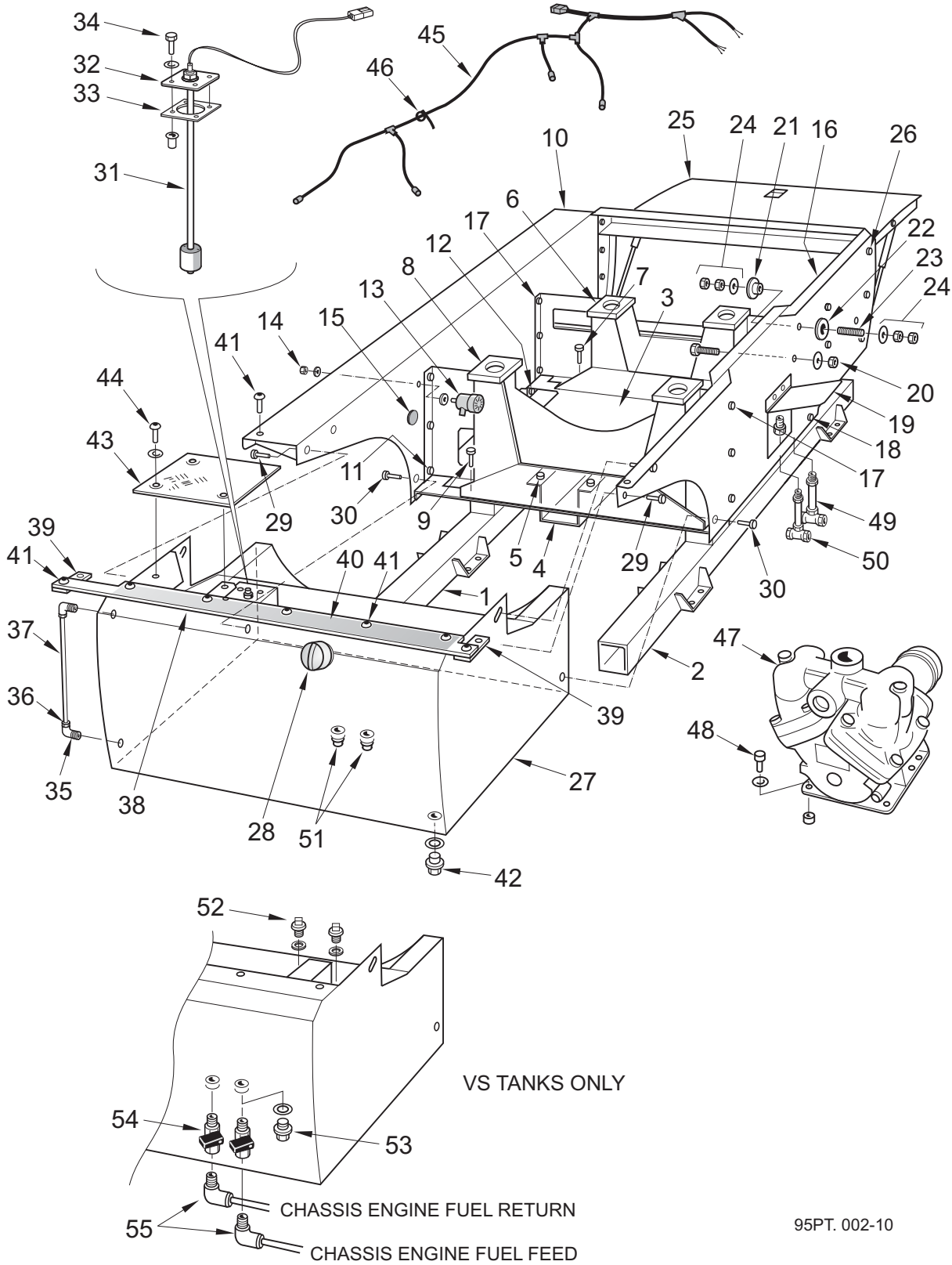
BoM 950512

Item No.	Part No.	Description	Quantity
1	281283-1	Engine Beam - Front	1
2	281282-1	Engine Beam - Rear	1
3	281643-1	Deck Plate	1
4	281881-1	Hose Tray	1
5	124-134	Screw M8 x 16	6
	460-10	Washer - Spring M8	6
6, 7	-	Engine Front Cradle/Panel and Screws See Chapter 22.ET(VT) and Chapter 22.HI(VS)	
8	282375-1	Rear Engine Cradle	1
9	124-272	Screw M16 x 45	2
	460-14	Washer - Spring M16	2
10	200510-1	Front Valance	1
11	124-169	Screw M10 x 25	6
	425-15	Nut - Nyloc M10	6
	455-11	Washer - Plain M10	6
12	124-137	Screw M8 x 25	2
	455-10	Washer - Plain M8	2
	425-14	Nut - Nyloc M8	2
13	30-184	Reverse Alarm with Connector	1
14	283229-6	Spacer	1
	457-2	Washer - Large M6	2
	420-13	Nut - M6	1
15	287-12	Grommet	1
16	282818-1	Rear Valance	1
17	124-169	Screw M10 x 25	6
	455-11	Washer - Plain M10	6
18	124-137	Screw M8 x 25	2
	455-10	Washer - Plain M8	2
	425-14	Nut - Nyloc M8	2
19	-	Flap - Valance - See Chapter 22.ET(VT) and 22.HI(VS)	
> 20-24	-	Starter and Earth Connections - See Chapter 22.EI (Iveco Engines) and 22.EJ (John Deere Engines)	
25	-	Systems Locker Assembly - See Chapter 23	1
26	124-135	Screw M8 x 20	7
	425-14	Nut - Nyloc M6	4
*27	283801-2	190 Litre Fuel Tank - Type 'B' Current	1
	282340-2	190 Litre Fuel Tank - Type 'A' Superseded	1

*See Technical Bulletin TB 1336 for introduction of Type 'B' Tank

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Powapak Tub



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Powapak Tub

Item No.	Part No.	Description	Quantity
28	69-27	Locking Filler Cap (Large)	1
29	124-169	Screw M10 x 25	4
	455-11	Washer - Plain M10	6
	425-15	Nut - Nyloc M10	4
30	124-167	Screw M10 x 20	2
	460-11	Washer - Spring M10	2
31	283323-1	Fuel Level Sender (Curtis)	1
32	283432-1	Adaptor Plate - Curtis Sender	1
33	283433-1	Gasket - Adaptor Plate	1
34	124-103	Screw M6 x 20	4
	460-8	Washer - Spring M6	4
	433-2	Clufix M6	4
35	521-8	Adaptor Elbow	2
36	510-4	Nut - Tubing Ø8	2
	511-4	Sleeve - Tubing Ø8	2
37	39024	Tubing - Nylon Ø8	0.4
38	281902-1	Walkway	1
39	281600-1	Support Strip	2
40	211-12	Anti-slip Surface x 1240 Long	1
41	135-57	Screw - Button Head M8 x 20	9
	425-14	Nut - Nyloc M8	9
42	7684-1	Plug G1/2"	1
	451-19	Washer - Sealing G1/2"	1
43	281610-1	Plate - Walkway	1
44	135-57	Screw - Button Head M8 x 20	3
	457-4	Washer - Large Flat M8	3
45	283263-1	Powapak Services Loom	1
46	24-1	Cable Tie	5
47	282812-1	Water Pump Assembly	1
48	124-137	Screw M8 x 25	4
	455-10	Washer - Plain M8	4
49	281669-1,2	Water Pump 1" Feed Pipe Assembly) See Over	1
50	281670-1	Water System 3/4" Feed Pipe Assembly) Page	1
51	3823	Collar Plug G3/8")	2
	451-18	Washer - Sealing) VT Only	2

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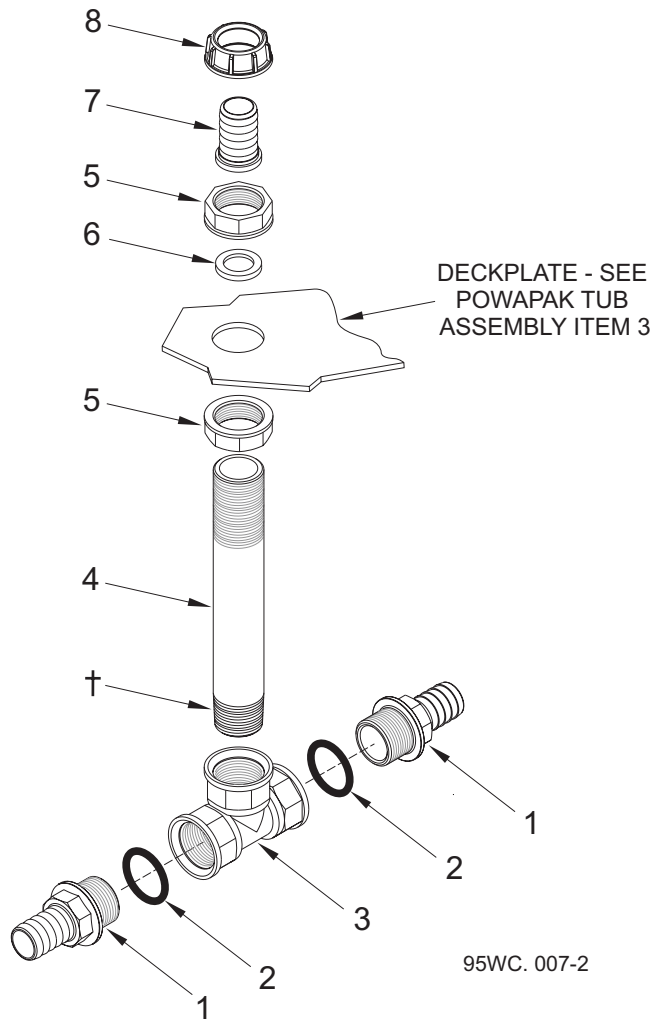
Powapak Tub
VS Only

Item No.	Part No.	Description	Quantity
52	3162	Collar Plug G1/4"	2
	451-17	Washer - Sealing	2
53	3823	Collar Plug G3/8") ESU Units	2
	451-18	Washer - Sealing) only	2
54	88-28	Tap G3/8"	2
	451-18	Washer - Sealing	2
* 55	83-77	Elbow R3/8" for Ø8 Fuel Pipe	2
	83-81	Elbow R3/8" for Ø10 Fuel Pipe	2
	83-83	Elbow R3/8" for Ø12 Fuel Pipe	2
	802776-2	Special Mercedes Adaptor G3/8" for 12mm I.D. Fuel Pipe	2

Notes

* Item 55 lists a range of fittings required for various fuel pipe sizes - Select as required.
The Fuel Pipe is that supplied with the chassis.

3/4" Water System Feed Pipe Assembly



BoM 950512

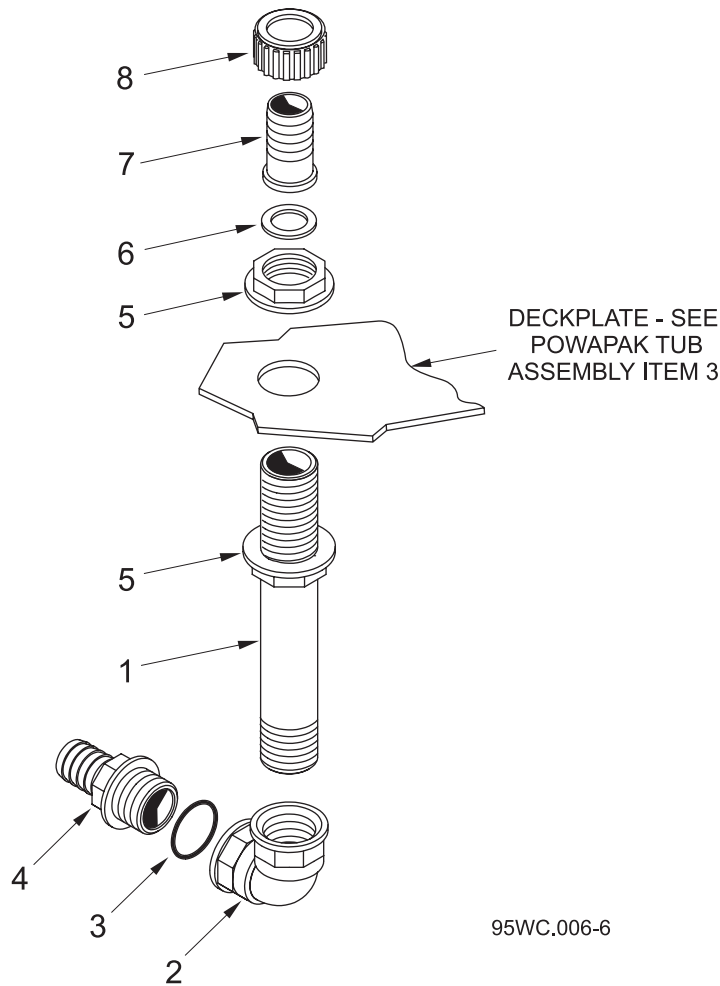
Item No.	Part No.	Description	Quantity
	281670-1	3/4" System Feed Pipe Assembly	
1	277-130	Hose Tail 3/4" NB x G3/4"	2
2	277-148	'O' Ring	2
3	277-133	Equal Tee	1
4	281668-1	PVC Pipe	1
5	277-164	Backnut G3/4"	2
6	277-160	Gasket	1
7	277-158	Hose Tail Flat Seat G3/4"	1
8	277-159	Flynut G3/4"	1

Notes

Use Loctite 5331 to seal thread marked †.
Do not use PTFE (Teflon) based tape to seal other threads.
To avoid breakage do not over tighten screwed fitting.

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1" Water Pump Suction Pipe Assembly



Use Loctite 5331 to seal thread marked †.
Do not use PTFE (Teflon) based tape to seal other threads.
To avoid breakage, do not over tighten screwed fitting.

1" Water Pump Suction Pipe Assembly

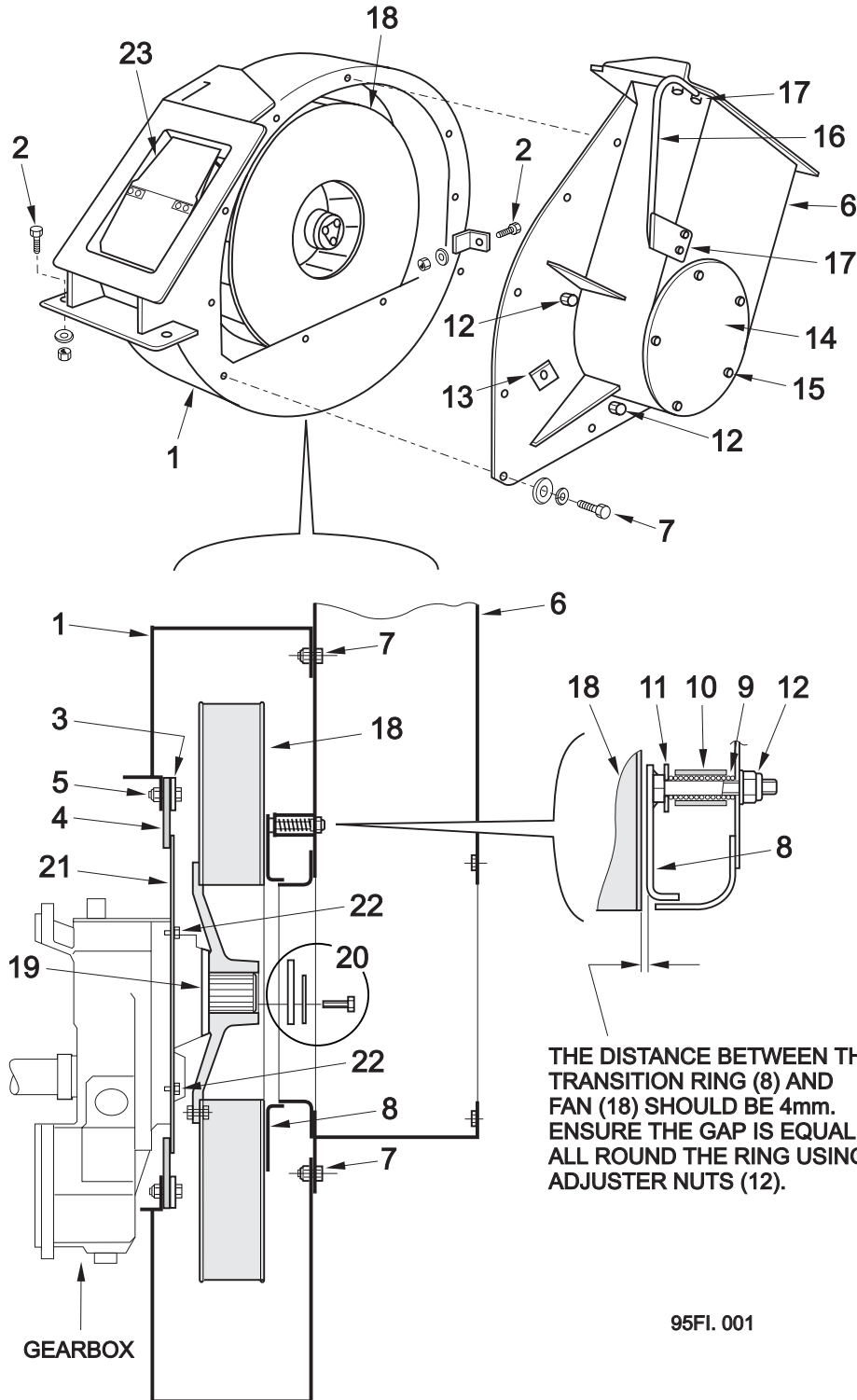
BoM 950512

Item No.	Part No.	Description	Quantity
	283793-2	1" Pump Suction Pipe Assembly	
1	281667-1	Pipe - Water 1"	1
2	277-129	Elbow 1" BSP x 90°	1
3	277-149	'O' Ring	1
4	277-125	Hosetail 1" BSP / 1" NB Hose	1
5	277-165	Backnut 1"	2
6	277-163	Gasket	1
7	277-161	Hosetail 1" BSP	1
8	277-162	Flynut 1" BSP	1

Notes

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Suction System - Fan Case and Impeller



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Suction System - Fan Case and Impeller

BoM 950513

Item No.	Part No.	Description	Quantity
Fan Case Common Parts			
1	282390-1	Fan Case	1
2	124-169	Screw M10 x 25	4
	455-11	Washer - Plain M10	4
	425-15	Nut - Nyloc M10	4
3	42239-2	Flange	1
4	42382-1	Diaphragm	1
5	124-137	Screw M8 x 25	12
	425-14	Nut - Nyloc M8	12
6	93875-1	Fan Case Cover	1
7	124-135	Screw M8 x 20	10
	460-10	Washer - Spring M8	10
	457-4	Washer - Extra Large M8	10
8	42401-1	Transition Ring	1
9	285-2	Spring - Compression	3
10	62770-1	Sleeve	3
11	457-5	Washer	3
12	425-15	Nut - Nyloc M10	3
	455-11	Washer - Plain M10	3
13	42587-1	Cover Plate	1
	124-134	Screw M8 x 16	1
	460-10	Washer - Spring M8	1
14	42238-1	Access Cover	1
15	124-134	Screw M8 x 16	5
	460-10	Washer - Spring M8	5
>	455-10	Washer - Plain M8	5
16	62407-1	Grab Handle	1
17	124-135	Screw M8 x 20	4
	460-10	Washer - Spring M8	2
	426-4	Nut M8	2
Fan Case Variable Parts			
18	-	Suction Fan Impeller)	
19	-	Spinner - Gearbox)	
20	-	Impeller Retention)	See 22.ET for VT
21	-	Mask - Fan Case)	See 22.HI for VS
22	-	Screw - Special)	
23	-	Safety Flap Assembly - See next page	1

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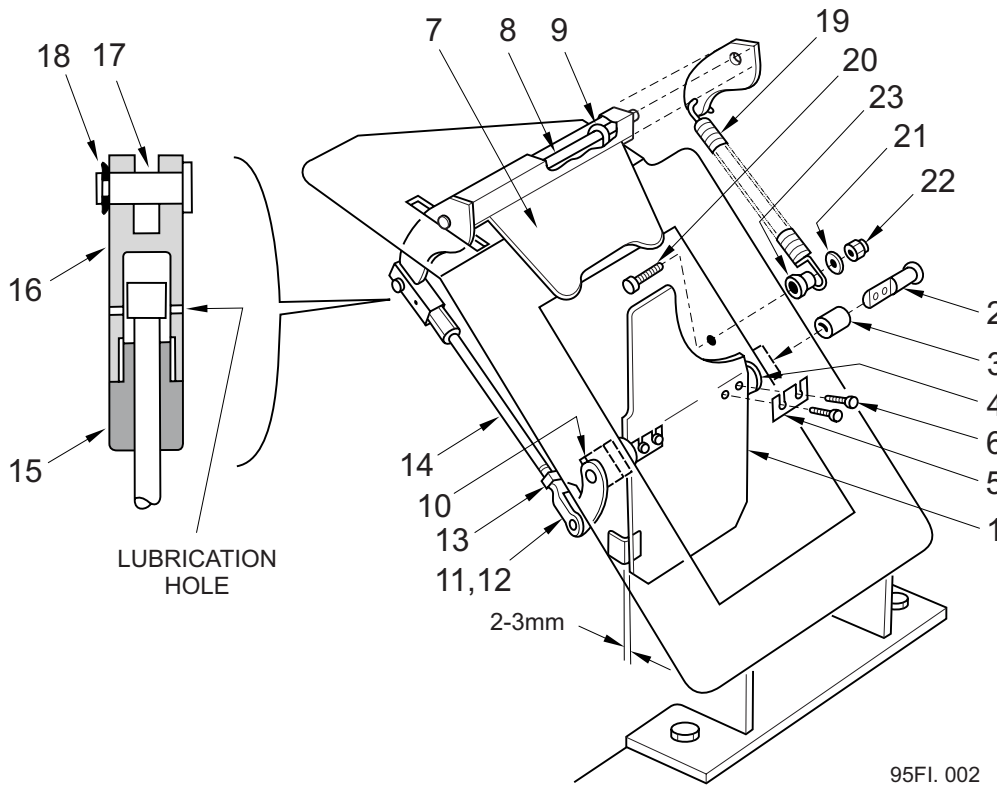
Fan Case Outlet Flap



Safety Precautions



Ensure the outlet flap is correctly set - see below.



Setting Procedures

There should be 2-3mm of free play between the flap (1) and the angle stop inside the fan outlet, as shown, when the flap actuator (7) is fully depressed against the fan case seal face. Adjustment is made by releasing the yoke end locknut (13) and rotating the actuation rod (14) to move the yoke end up or down the rod as required. Having achieved the correct setting, retighten the locknut.

Fan Case Outlet Flap

Item No.	Part No.	Description	Quantity
	282383-1	Safety Flap Assembly comprising:	
1	42582-1	Safety Flap	1
2	42729-1	Rod - Pivot	1
3	29128-1	Bush	2
4	42728-1	Spacer	2
5	42723-1	Tab - Washer	2
6	124-134	Screw M8 x 16	4
7	42947-1	Flap - Actuator	1
8	42993-1	Actuator Rod	1
9	42992-1	U-Bolt	2
	460-8	Washer - Spring M6	4
	420-13	Nut M6	4
10	42952-1	Actuator Flap	1
11	289-4	Yoke End	1
12	289-21	Pin - Spring	1
13	420-15	Locknut M10	1
14	42990-5	Actuation Rod	1
15	42986-1	Sleeve	1
16	42988-1	Clevis	1
17	29145-2	Pin - Clevis	1
18	39624	Spring Retaining Clip	1
19	80766-1	Tension Spring	1
20	123-108	Bolt M8 x 40	1
21	457-4	Washer - Plain M8	1
22	425-14	Nut - Nyloc M8	1
23	42586-1	Spacer	1

Notes

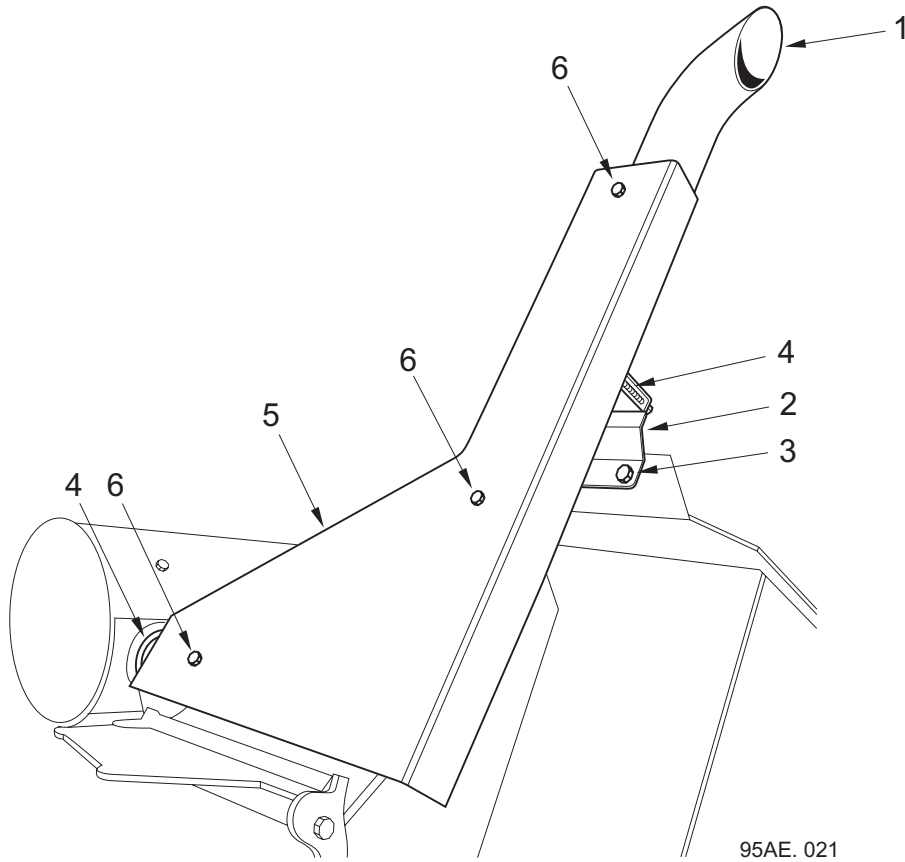
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22.EC

Engine Common Parts

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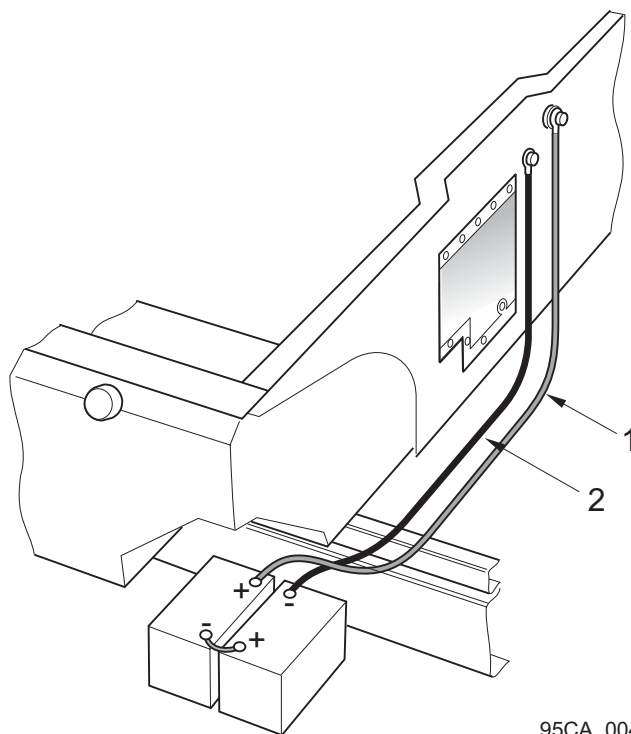
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Electrical Items Starter and Earth Cables	22.EC : 3

Tailpipe Installation

BoM 950520 and 960520

Item No.	Part No.	Description	Quantity
1	42649-3	Tailpipe - VT 500, 605	1
	42649-1	Tailpipe - VT 650	1
	281946-1	Tailpipe - VT 800	1
2	200063-1	Support - VT 500, 605, 650	1
	281945-1	Support - VT 800	1
3	124-169	Screw M10 x 25	2
	455-11	Washer - Plain	2
	426-5	Nut - Philidas M10	2
> 4	6645-13	Exhaust Clamp 2 5/8"	2
5	42647-1	Heat Sheild	1
6	124-100	Screw M6 x 12	3
	460-8	Washer - Spring	3

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Starter and Earth Cables



95CA.004

Drg. 807340

Item No.	Part No.	Description	Quantity
> 1	92105-301	Starter Cable Ø10 x 3010 Long - Red	1
2	17936-305	Earth Cable 3050 Long - Black	1
	282147-1	Chassis Interface Loom - ESU's only (Not shown)	

Notes

Also covered in 'Looms' Chapter 31

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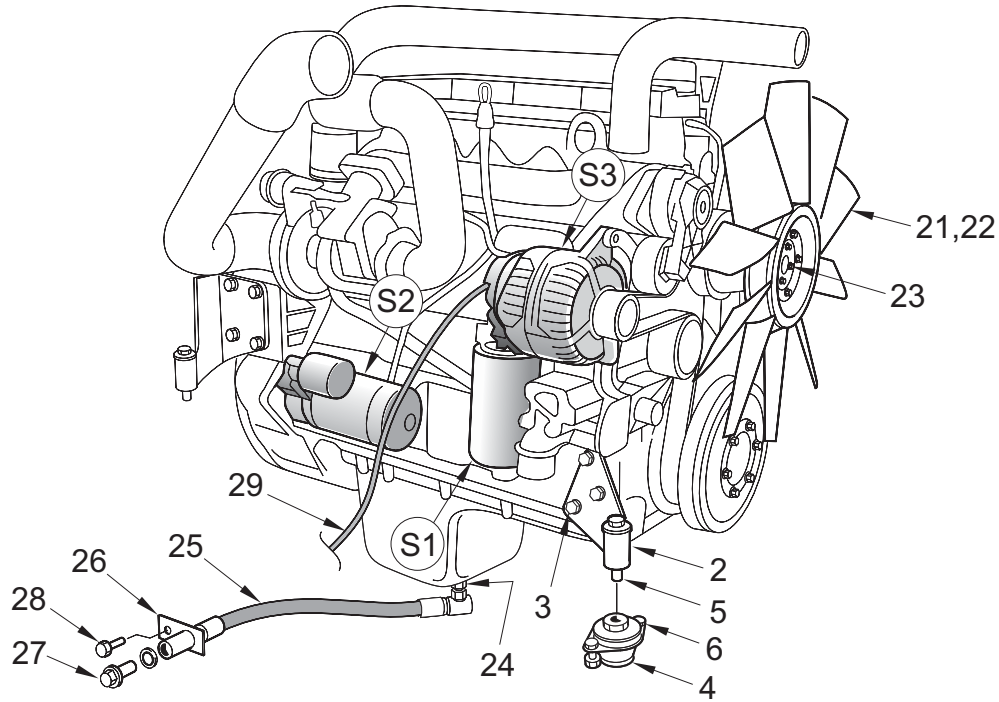
22.EI

Iveco Engines

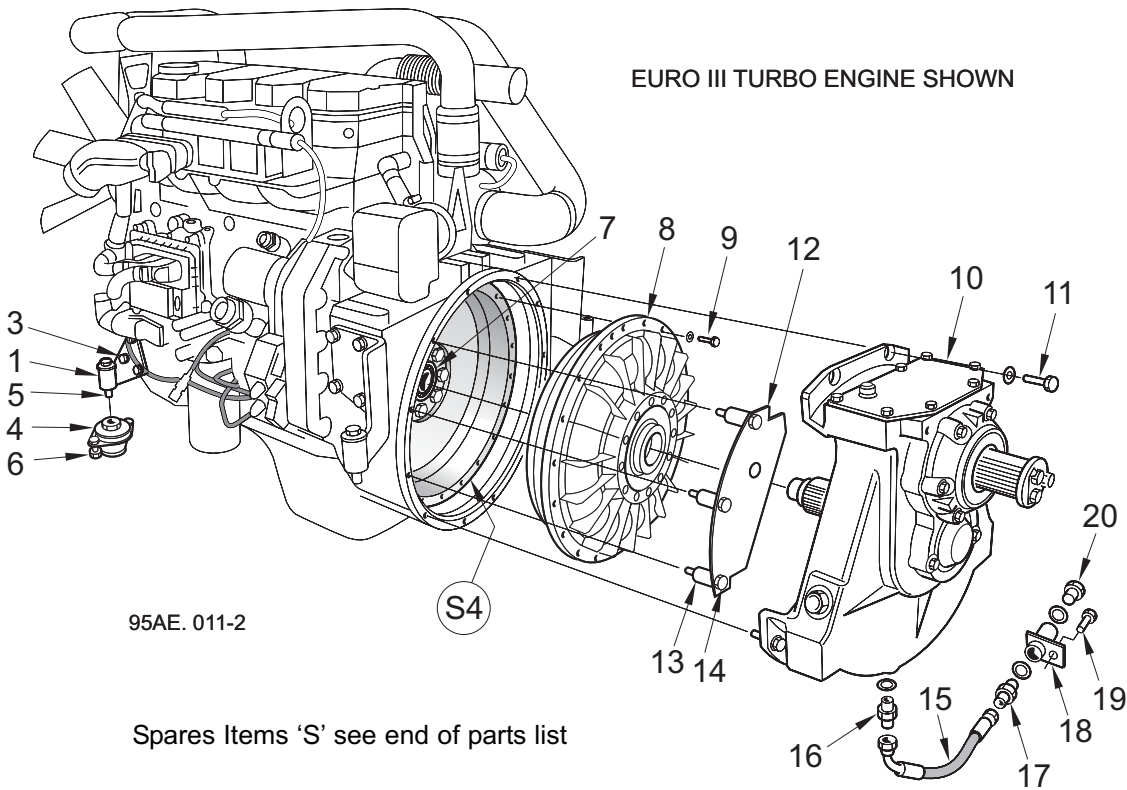
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Iveco Nat. Asp. and Turbo Dressed Engines - Common Parts



EURO III TURBO ENGINE SHOWN



95AE. 011-2

Spares Items 'S' see end of parts list

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Iveco Nat. Asp. and Turbo Dressed Engines - Common Parts

BoM 950511

Item No.	Part No.	Description	Quantity
1	281448-1	L.H. Front Engine Mount	1
2	281448-2	R.H. Front Engine Mount	1
3	124-205	Screw M12 x 35	6
	460-12	Washer - Spring	6
4	6953	Mount - Metacone	2
5	123-154	Bolt M12 x 80	2
	460-12	Washer - Spring	2
	457-6	Washer - Plain	2
6	124-171	Screw M10 x 30	4
	460-11	Washer - Spring	4
	420-15	Nut M10	4
7	14-7	Bearing	1
8	42501-3	Fluid Coupling	1
9	129-127	Cap Head Screw M8 x 30	20
	452-57	Washer - Plain	20
10	42270-1	Gearbox	1
11	123-131	Bolt M10 x 55	6
	460-11	Washer - Spring	6
12	42299-1	Safety Cover	2
13	920000-32	Spacer - Plain	6
14	123-134	Bolt M10 x 70	6
	460-11	Washer - Spring	6
15	HC08001-48	Hose 1/2"	1
16	263-4	Adaptor G 1/2"	1
	451-19	Washer - Sealing	1
17	265-4	Adaptor G3/8" x 1/2"	1
	451-18	Washer - Sealing G 3/8"	1
18	40525-1	Drain - Gearbox	1
19	124-167	Screw M10 x 20	1
	460-11	Washer - Spring	1
	420-15	Nut M10	1
20	3823	Plug 3/8" BSP	1
	451-18	Washer - Sealing G 3/8"	1
21	281-7	Cooling Fan	1
22	281458-1	Cooling Fan Spacer	1
23	129-166	Cap Screw M10 x 70	4
	460-11	Washer - Spring	4
24	282513-1	Adaptor M22 x 3/4"	1
	282513-2	'O' Ring	1
25	HE12003-57	Hose	1
26	62903-1	Drain - Engine	1
27	7684-1	Collar Plug 1/2" BSP Brass	1
	451-19	Washer Sealing	1

Iveco Nat. Asp. and Turbo Dressed Engines - Common Parts

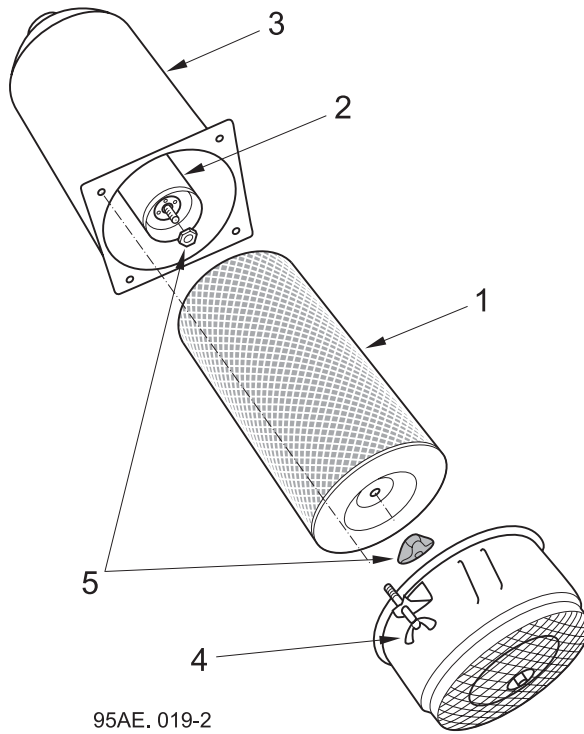
Item No.	Part No.	Description	Quantity
28	124-167	Screw M10 x 20	1
	460-11	Washer - Spring	1
	420-15	Nut M10	1
29	282034-3	Alternator Cable	1

Spares Items

S1	845-100	Oil Filter
S2	845-103	Starter Motor 24v
S3	845-104	Alternator 28v
S4	-	Flywheel
	845-159	Starter Ring Gear

Notes

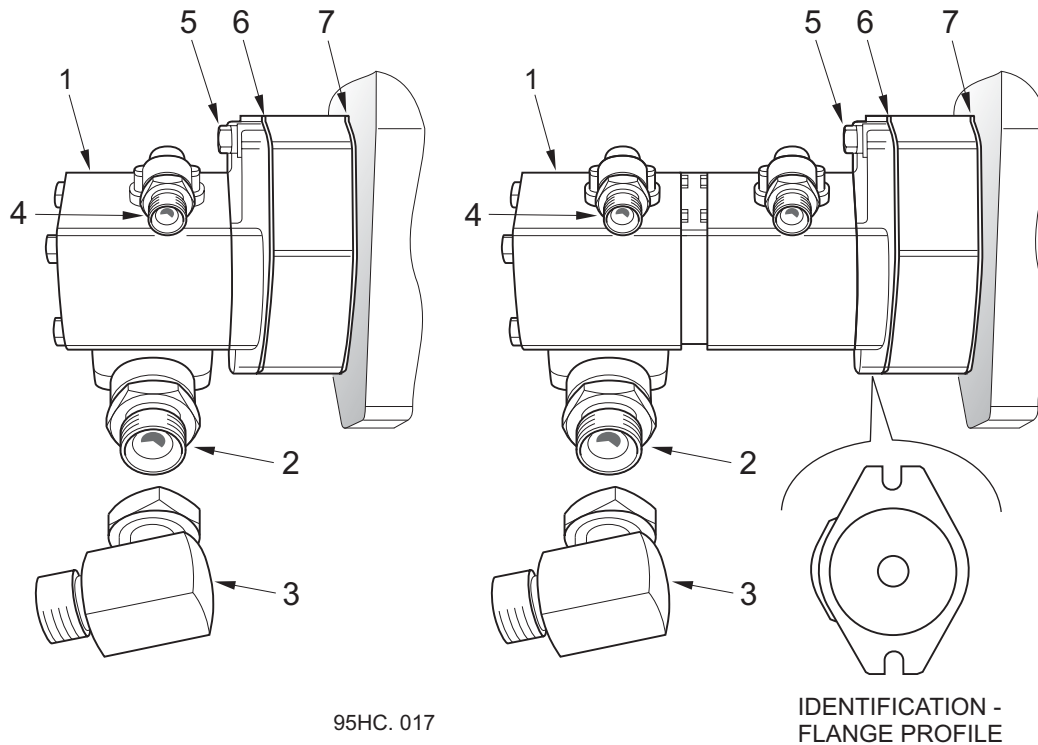
Combi Filter - Spares Items



Item No.	Part No.	Description	Quantity
	280850-1	Combi Filter Assembly comprising:-	
1	280850-2	Main Element	1
2	280850-3	Safety Element	1
3	280850-4	Housing	1
4	280850-5	Wing Bolt Kit - Metric	
5	280850-6	Element Nut Kit - Imperial	

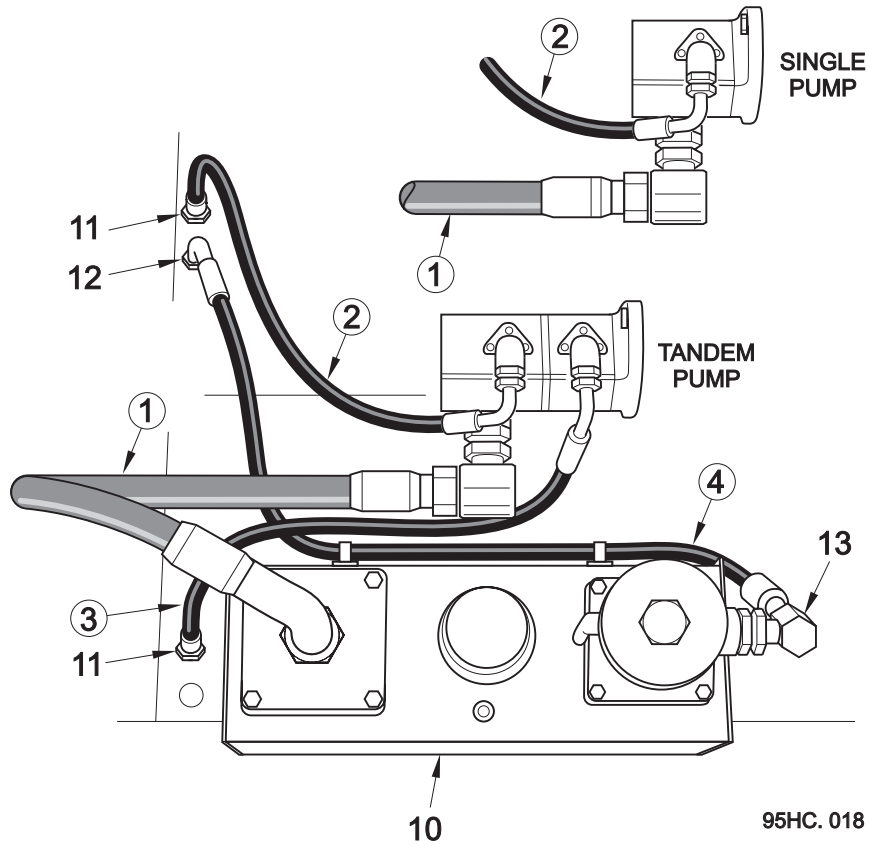
Notes

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Iveco P.T.O. Pumps

BoM 950514

Item No.	Part No.	Description	Quantity	
			Single	Tandem
1	239-39	Pump - Single	1	-
	239-40	Pump - Tandem	-	1
2	263-8	Adaptor 1 1/4"	1	1
	451-111	Washer - Sealing 1 1/4"	1	1
3	262-8	Swivel Elbow 90° 1 1/4	1	1
4	263-4	Adaptor 1/2"	1	2
	451-19	Washer - Sealing 1/2"	1	2
5	123-154	Bolt Head M12 x 80	2	2
	457-6	Washer - Plain	2	2
	460-12	Washer - Spring	2	2
6	845-156	Gasket - Pump to Adaptor	1	1
7	845-157	Gasket - Adaptor to Engine	1	1

Pump Installations - Iveco Engines



95HC.018

BoM 950514

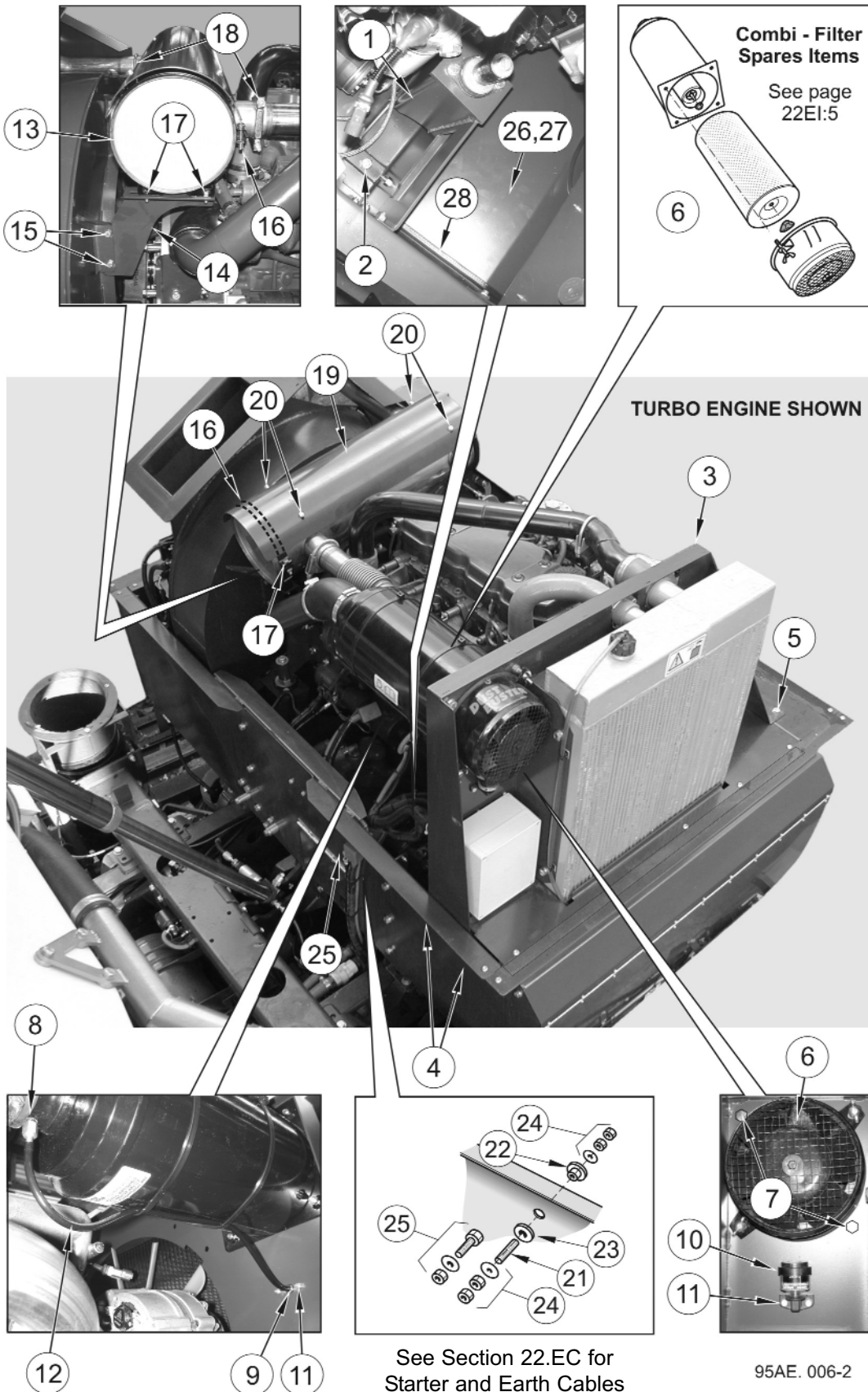
Item No.	Part No.	Description	Quantity	
			Single	Tandem
1*	HX 20002-94	Suction Hose - Nat. Asp. Engine	1	1
	HX 20002-72	Suction Hose - Turbo Engine	1	1
2*	HCO8002-108	Sweep Systems Hydraulic Hose	1	1
3*	HCO8002-91	Auxiliary Systems Hydraulic Hose	1	1
4*	HE12001-122	Tank Return Hydraulic Hose	1	1
5-9	-			
10	-	Hydraulic Tank - Covered elsewhere in this chapter		
11	264-4	1/2" Bulkhead Adaptor + Locknut	2	2
12	264-6	3/4" Bulkhead Adaptor + Locknut	1	1
13	262-6	Swivel Elbow 3/4"	1	1

Notes

*Hose item numbers correspond with those in Hydraulic diagrams SH521a01 and SH531a01 in Chapter 8.

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Iveco Nat. Asp. and Turbo Engine Powapak - Common Parts



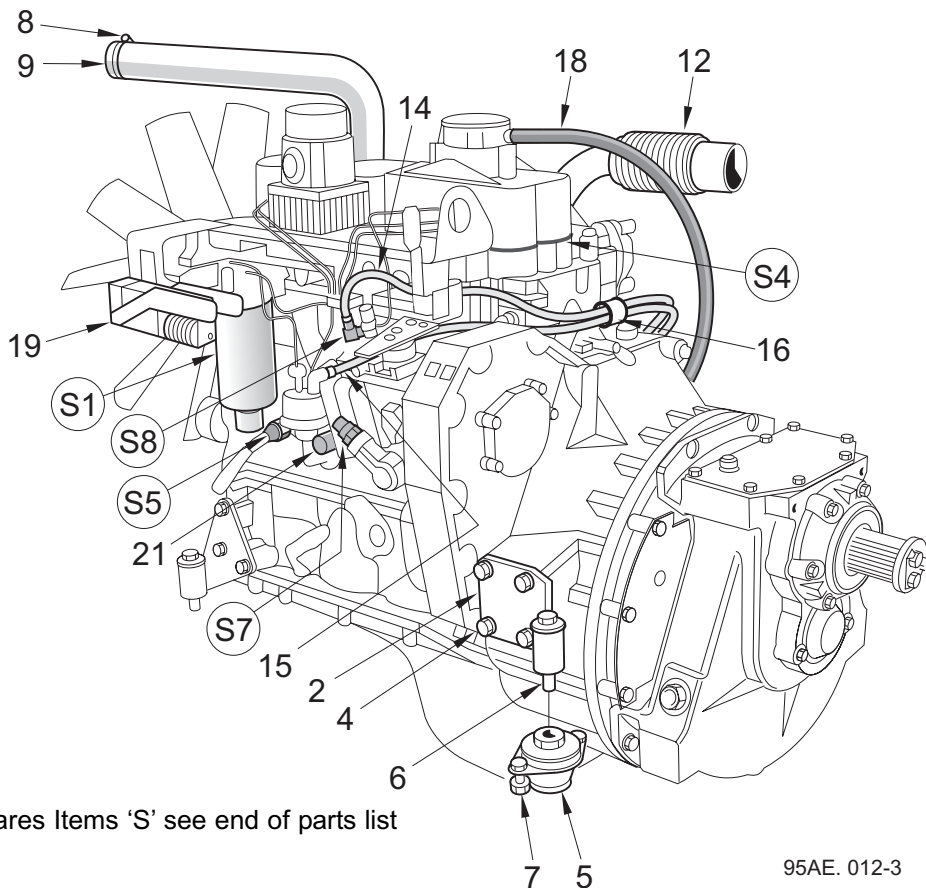
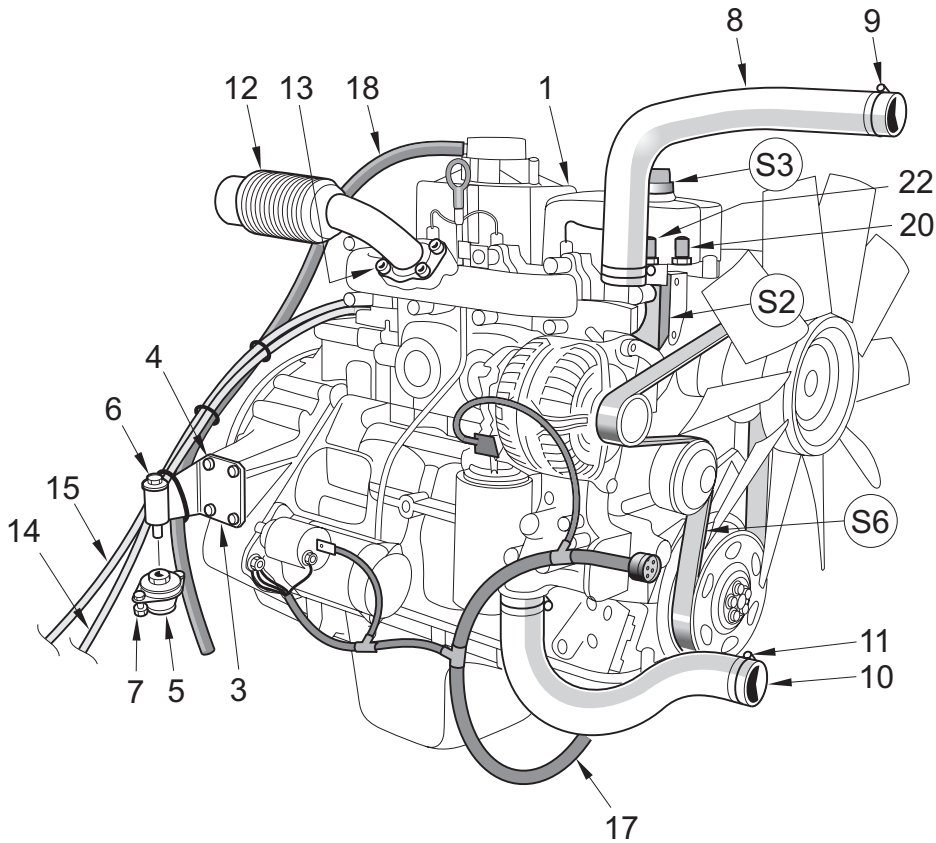
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Iveco Nat. Asp. and Turbo Engine Powapak Common Parts

BoM 950511

Item No.	Part No.	Description	Quantity
1	281475-1	Front Engine Cradle	1
2	124-272	Screw M16 x 45	2
	460-14	Washer - Spring	2
3	281455-1	Radiator Shroud	1
4	124-167	Screw M10 x 20	2
	460-11	Washer - Spring	2
5	124-167	Screw M10 x 20	2
	425-15	Nut - Nyloc M10	2
6	280850-1	Combi - Filter	1
7	124-167	Screw M10 x 20	2
	460-11	Washer - Spring	2
8	904-58	Adaptor - Restriction Pipe	1
9	904-56	Connector	1
10	904-55	Restriction Indicator	1
11	124-103	Screw M6 x 20	2
	457-2	Washer - Plain	2
	425-13	Nut - Nyloc M6	2
12	12870	Tube - Black Nylon Ø8 x 0.8m	1
13	281418-1	Silencer - For Tailpipe etc., See Section 22:EE	1
> 14	295444-1	Mounting Bracket	1
15	124-135	Screw M8 x 20	2
	460-10	Washer - Spring	2
	420-14	Nut M8	2
16	903-9	Mounting Band	1
17	124-135	Screw M8 x 20	2
	460-10	Washer - Spring	2
	420-14	Nut M8	2
18	6645-12	Exhaust Clip 2 1/2"	3
19	281704-1	Heat Shield	1
20	124-97	Screw M6 x 6	4
	457-2	Washer - Large	4
21	42421-3	Stud M10 x 65	1
22	42660-1	Spacer - Nylon	1
23	42661-1	Washer - Nylon	1
24	410-49	Nut - Brass M10	4
	455-11	Washer - Plain	2
25	124-175	Screw M10 x 40	1
	455-11	Washer - Plain	1
	420-15	Nut M10	2
26	281563-1	System Locker Cover Plate	1
27	124-134	Screw M8 x 16	4
	460-10	Washer - Spring	4
28	217-2	Rubber Seal	1

Iveco Tier II Nat. Asp. Dressed Engine Parts and Spares Items



Spares Items 'S' see end of parts list

95AE. 012-3

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Iveco Tier II Nat. Asp. Dressed Engine Parts and Spares Items

BoM 950511

Item No.	Part No.	Description	Quantity
1	282500-1	Engine - Iveco F4AE0407AD 24v NAT2	
2	282460-1	L.H. Rear Engine Mount	1
3	282460-2	R.H. Rear Engine Mount	1
4	124-205	Screw M12 x 35	4
	460-12	Washer Spring	4
5	22826-1	Mount - Metacone	2
6	123-154	Bolt M12 x 80	2
	460-12	Washer - Spring	2
	457-6	Washer - Plain	2
7	124-171	Screw M10 x 30	4
	460-11	Washer - Spring	4
	420-15	Nut M10	4
8	282467-1	Radiator Hose - Top	1
9	501-5	Hose Clip	2
10	282468-1	Radiator Hose - Bottom	1
11	501-6	Hose Clip	2
12	282595-1	Exhaust Inlet	1
13	124-137	Screw M8 x 25	4
	460-10	Washer - Spring	4
14	282667-1	Fuel Line - Feed	1
	501-30	Clip	1
15	282668-1	Fuel Line - Return	1
	501-30	Clip	1
16	664-8	Pipe Clamp 1"	1
	124-99	Screw M6 x 10	1
	460-8	Washer - Spring	1
17	282042-1	Engine Loom	1
18	496-P02	Breather Pipe	1
19	-	Throttle Actuator - See over page	1
20	845-162	Water Temperature Sensor	1

KT00695 - Optional Oil Pressure / Water Temperature Gauge Pack

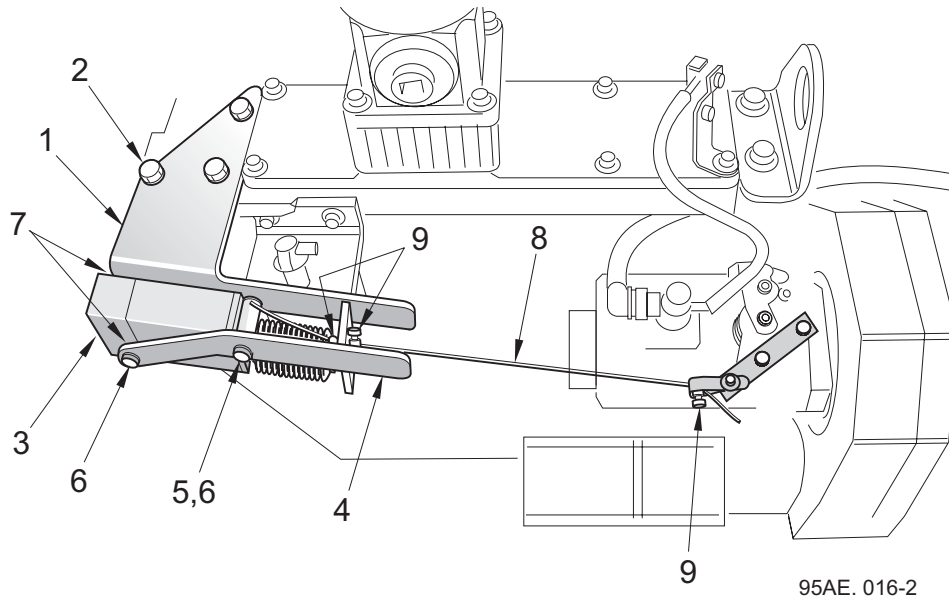
21	87-16	Oil Pressure Sender	1
	283215-1	Adaptor	1
	80-43	'O' Ring	1
22	87-54	Water Temperature Sender	1
	282043-1	Gauge Sender Loom (Not Shown)	1
	282740-1	Water Temp./ Oil Press. Gauge - See Powapak Control Panels, Chapter 32	

Iveco Tier II Nat. Asp. Dressed Engine Parts and Spares Items**Spares Items**

S1	845-144	Fuel Filter
S2	845-145	Thermostat
	845-146	Thermostat Seal
S3	845-151	Oil Filler Cap
	845-152	Oil Filler Seal
S4	845-147	Rocker Cover Gasket
S5	281942-1	Oil Pressure Switch
	283215-1	Adaptor
	80-43	'O' Ring
S6	845-158	Alternator/Fan Belt
S7	845-195	ESOS Valve 24V
S8	845-194	KSB Solenoid 24V

Notes

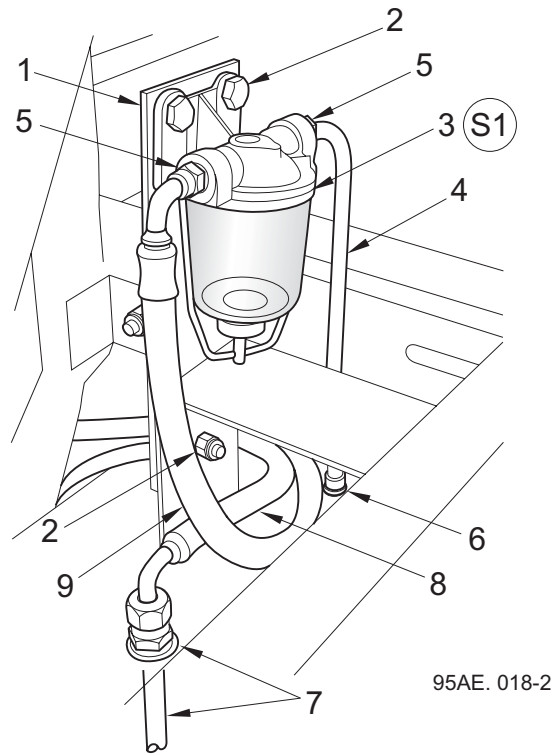
Throttle Actuator - Iveco Tier II Nat. Asp. Engine



95AE. 016-2

Item No.	Part No.	Description	Quantity
1	283150-1	Actuator Mount	1
2	124-167	Screw M10 x 20	2
	460-11	Washer - Spring	2
> 3	281729-24	Actuator Assembly 24v	1
4	281707-1	Actuator Side Plate	1
5	42774-4	Spacer x 36 Long	1
6	124-102	Screw M6 x 16	4
	460-8	Washer - Spring	4
7	455-8	Washer - Plain. Act as spacers between Actuator/Mount and Actuator/Side Plate	3
8	281728-1	Throttle Cable	1
9	38-32	Solderless Nipple	3

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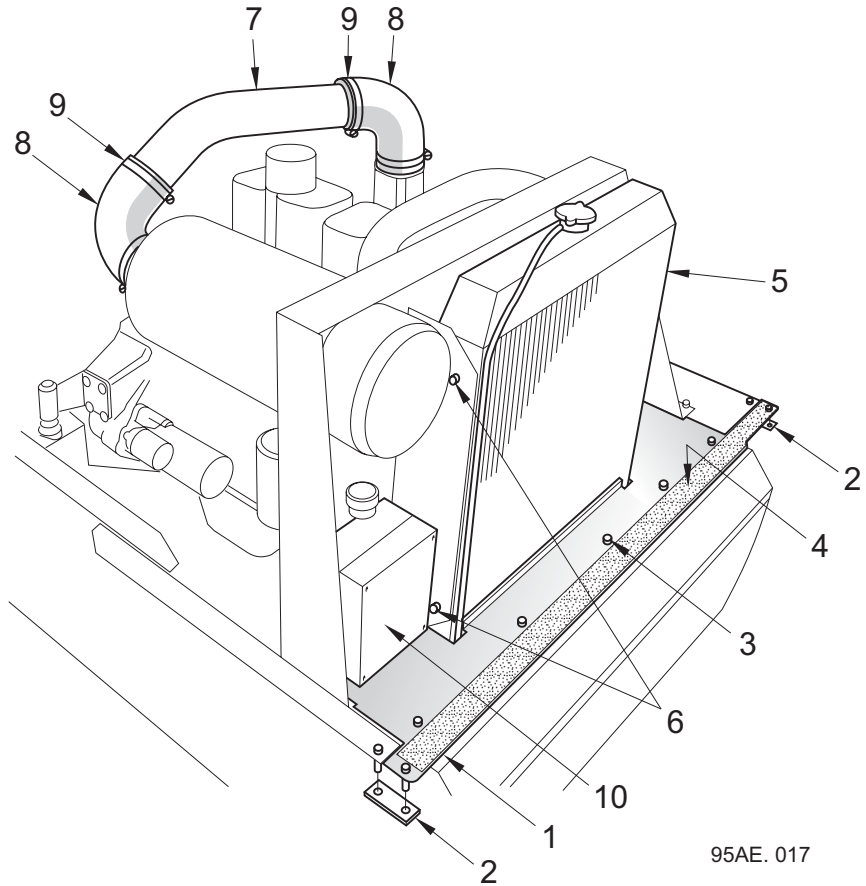
Fuel Pre-Filter Installation - Iveco Tier II Nat. Asp. Engines

BoM 950511

Item No.	Part No.	Description	Quantity
1	42295-1	Mounting Plate	1
2	124-135	Screw M8 x 20	4
	425-14	Nut-Nyloc M8	4
3	15314-1	Pre-Filter	1
4	42683-4	Fuel Pipe	1
5	25977-1	Nut - Sleeve	2
	511-4	Olive	2
6	40448-1	Adaptor	1
	451-17	Washer - Sealing	1
	510-4	Nut - Sleeve	1
	511-4	Olive	1
> 7	283938-1	Fuel Return Pipe	1
	451-17	Washer - Sealing	1
> 8	282668-1	Fuel Return Hose	1
> 9	282667-1	Fuel Suction Hose	1

Spares Items

S1	15314-1	Pre-Filter (Item 3)	
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Radiator and Air Cleaner Installations - Iveco Tier II Nat. Asp. Engine



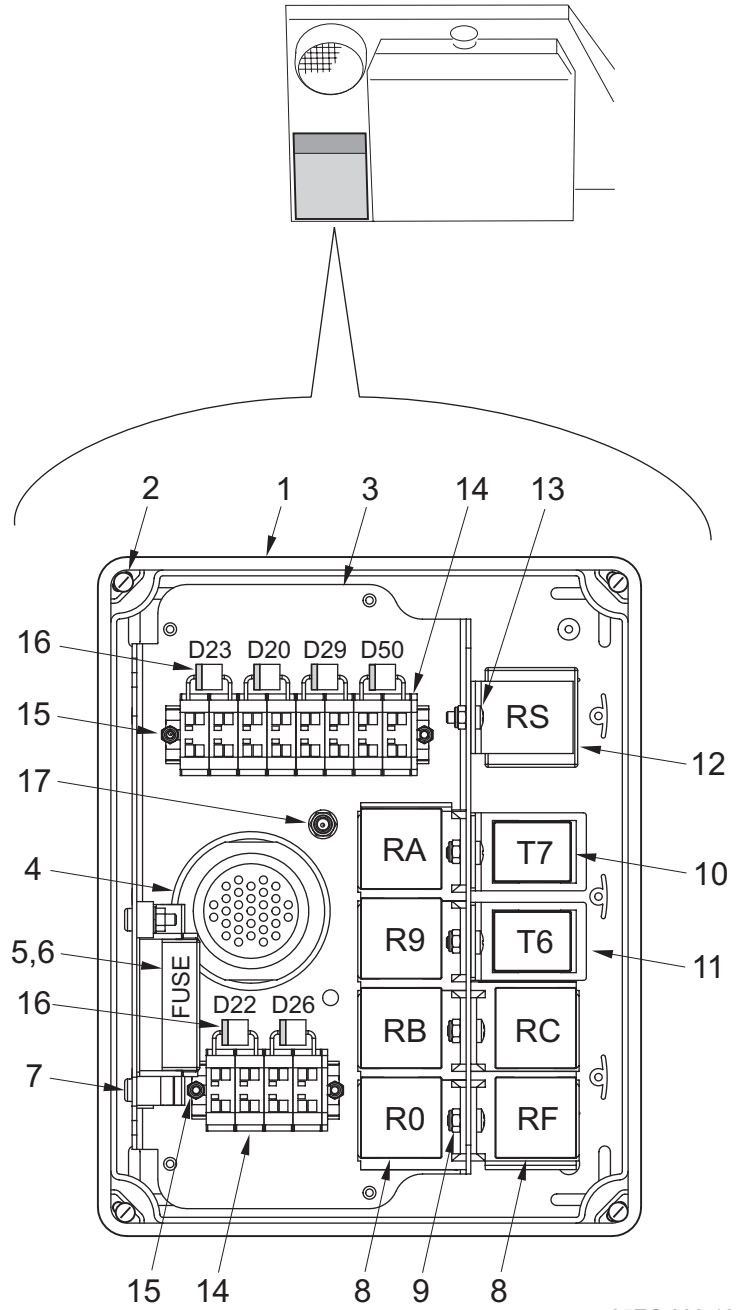
BoM 950511

Powapak Parts

Item No.	Part No.	Description	Quantity
1	281562-2	Walkway	1
2	281600-1	Support Strip	2
> 3	138-125	Screw - Button Head M8 x 25	9
	455-10	Washer - Plain	4
	425-14	Nut - Nyloc M8	4
4	211-12	Anti - Slip Surface x 0.03m	1
5	200923-1	Radiator	1
6	124-166	Screw M10 x 16	4
	460-11	Washer - Spring	4
	455-11	Washer - Plain	4
7	282516-1	Induction Pipe	1
8	904-8	Elbow 90°	2
9	501-8	Hose Clip	4
10	-	Engine Management Box - See Over Page	

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Engine Management Box - Iveco Tier II Nat. Asp. Engines



95EC.006-13

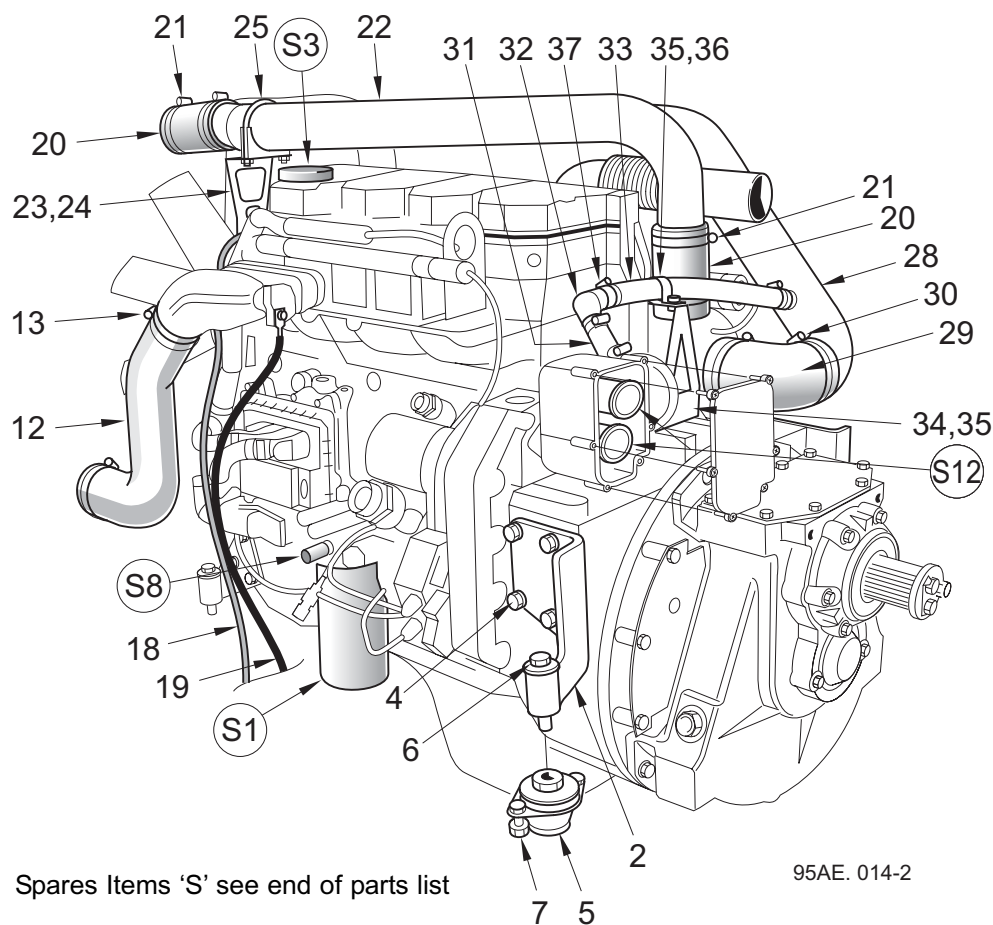
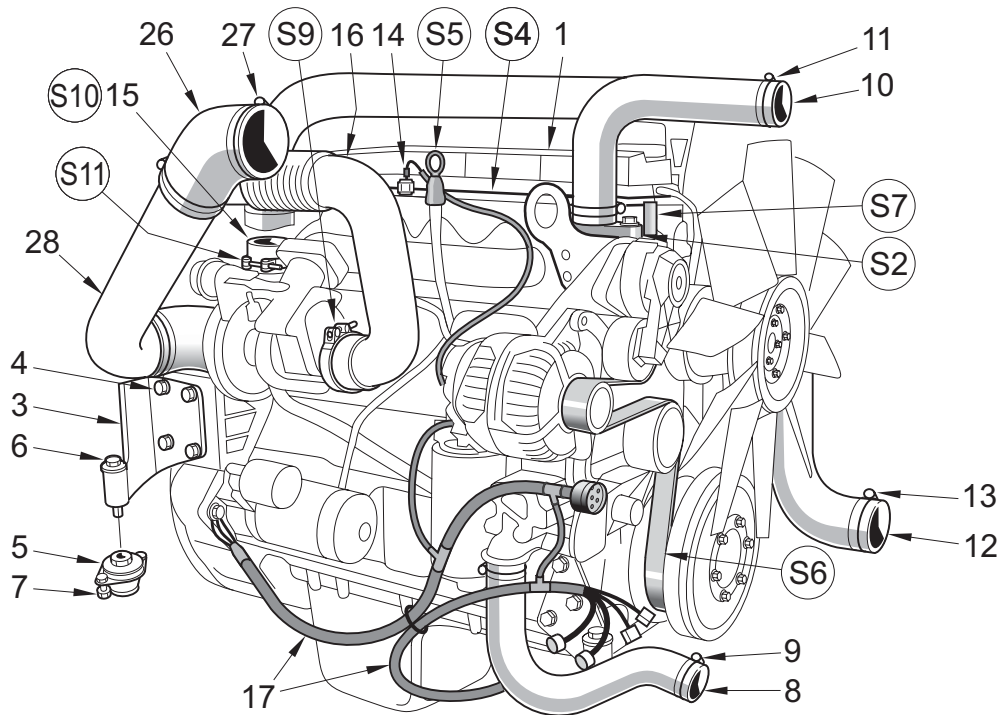
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Engine Management Box - Iveco Tier II Nat. Asp. Engines

BoM 950511

Item No.	Part No.	Description	Quantity	
	282134-1	Engine Management Box 24v Rev. 10 comprising:-		
1	283848-1	Box and Lid	1	
2	134-44	Screw Pan Head M4 x 20	4	
	425-11	Nut-Nyloc M4	4	
3	282125-1	Mounting Plate	1	
4	283846-1	Loom - includes:	1	
	710-67	HDP 31 Way Socket Housing	1	
	710-70	Jam Nut	1	
	281545-2	Sealing Washer	1	
5	30-267	Fuse Holder	1	
6	30-268	Midi Link 30 Amp	1	
7	134-43	Screw M4 x 16	2	
	455-5	Washer Plain	2	
	425-11	Nut Nyloc M4	2	
8	13194	Relay 24v	6	
9	134-41	Screw Pan Head M4 x 10	4	
	425-11	Nut - Nyloc M4	4	
10	13982	Timer Relay 24v	2	
11	283198-1	Timer Relay Bracket	2	
>	12	48-361	Relay 24v	1
	13	134-41	Screw Pan Head M4 x 10	2
		455-5	Washer - Plain	2
		425-11	Nut - Nyloc M4	2
>	14	30-256	4 Way Terminal Block	12
		30-254	End Plate - Terminal Block	2
	15	134-12	Screw Pan Head M3 x 10	4
		455-3	Washer - Plain	4
		425-10	Nut - Nyloc M3	4
>	16	13984	Diode 6 Amp	6
	17	134-60	Screw Pan Head M5 x 25	1
		420-12	Nut - M5	1

Iveco Euro III Turbo Dressed Engine Parts and Spares Items



Spares Items 'S' see end of parts list

95AE. 014-2

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Iveco Euro III Turbo Dressed Engine Parts and Spares Items

BoM 950511/005

Item No.	Part No.	Description	Quantity
1	280888-1	Engine - Iveco F4AEO487AC 24v TCA E3	
2	281450-1	L.H. Rear Engine Mount	1
3	281450-2	R.H. Rear Engine Mount	1
4	124-205	Screw M12 x 35	8
	460-12	Washer - Spring	8
5	22826-1	Mount - Metacone	2
6	123-154	Bolt M12 x 80	2
	460-12	Washer - Spring	2
	457-6	Washer - Plain	2
7	124-171	Screw M10 x 30	4
	460-11	Washer - Spring	4
	420-15	Nut M10	4
8	281506-1	Radiator Hose - Bottom	1
9	501-5	Hose Clip	2
10	281507-1	Radiator Hose - Top	1
11	501-6	Hose Clip	2
12	281561-1	CAC Hose	1
13	501-7	Hose Clip	2
14	87-59	Switch Water Temperature	1
	845-216	Insert	1
	845-217	Washer - Copper	1
15	281414-1	Turbocharger Charge Air Outlet Adaptor	1
16	281417-1	Exhaust Inlet Pipe	1
17	282031-1	Engine Loom 24v	1
18	282034-4	Heat Start Cable - Red. See 'Radiator and Heat Start' elsewhere in this section.	1
19	282035-2	Heat Start Cable - Black	1
20	271-23	Cuff	2
21	501-6	Hose Clip	4
22	281480-1	Charge Air Pipe	1
23	281708-1	Pipe Support	1
24	124-166	Screw M10 x 16	2
	460-11	Washer - Spring	2
25	6645-12	Exhaust Clip 2 1/2"	1
26	904-51	Rubber Elbow 45°	1
27	507-4	Hose Clip	2
28	281415-1	Induction Air Tube	1
29	904-57	Rubber Elbow 90°	1
30	507-4	Hose Clip	1

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Iveco Euro III Turbo Dressed Engine Parts and Spares Items

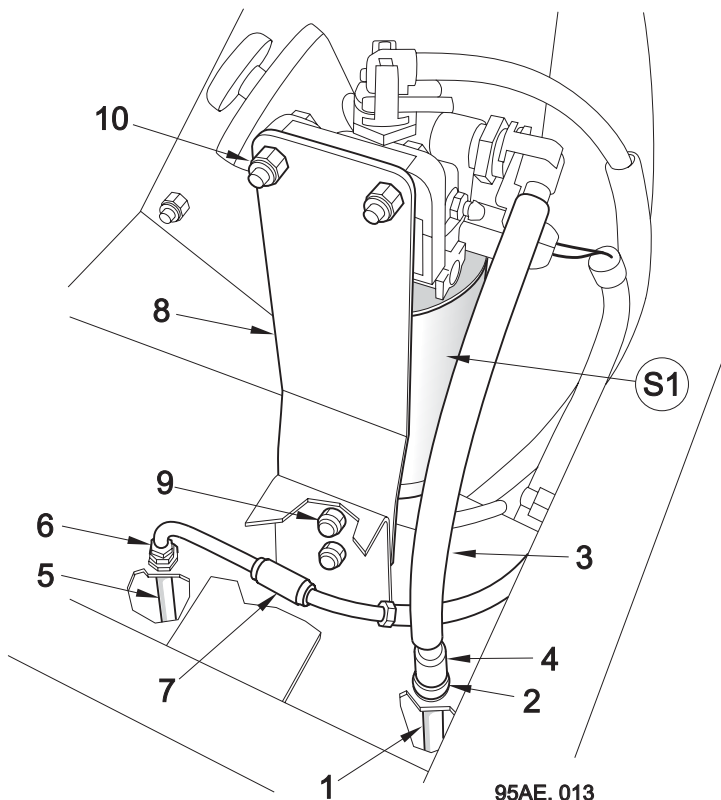
Item No.	Part No.	Description	Quantity
31	497-P02	Hose 3/4" x 0.06	1
32	231-42	Elbow 3/4"	1
33	497-P02	Hose 3/4" x 0.45	1
34	281939-1	Bracket	1
35	124-99	Screw M6 x 10	3
	460-8	Washer - Spring	3
	420-13	Nut M6	1
36	664-8	Pipe Clamp 1"	1
37	501-3	Hose Clip	4

Spares Items

S1	845-101	Fuel Filter
S2	845-153	Thermostat
	845-146	Thermostat Seal
S3	845-149	Oil Filler Cap
S4	845-150	Rocker Cover Gasket
S5	845-148	Oil Level Dipstik
S6	845-142	Alternator/Fan Belt
S7	845-161	Water Temp. Sensor
S8	845-160	Oil Sensor
S9	845-108	Clamp
S10	845-109	'O' Ring - Used with item 14
S11	845-110	Clamp
S12	845-183	Blow-By Filter Kit

Notes

Fuel Pre-Filter Installation - Iveco Euro III Turbo Engine



BoM 950511/005

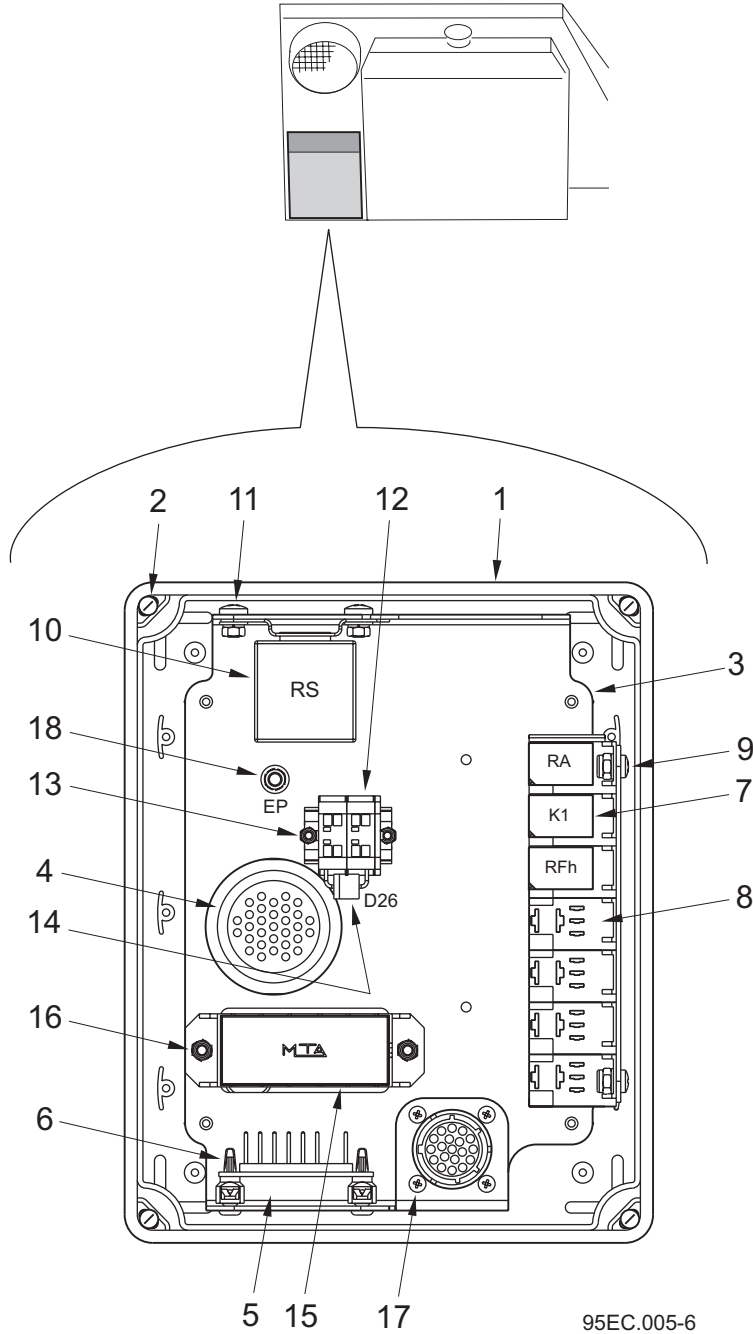
Item No.	Part No.	Description	Quantity
1	281487-1	Suction Pipe	1
2	451-17	Washer - Sealing 1/4" BSP	1
3	282488-1	Fuel Hose	1
4	277-85	Straight Connector x Ø10	1
5	42683-3	Return Pipe	1
6	40448-1	Adaptor 1/4" BSP x Ø8	1
	451-17	Washer - Sealing 1/4" BSP	1
	510-4	Tubing Nut Ø8	1
	511-4	Tubing Sleeve Ø8	1
7	277-48	Straight Connector x Ø8	1
8	281470-1	Mounting Plate	1
9	124-135	Screw M8 x 20	2
	460-10	Washer - Spring	2
	420-14	Nut M8	2
10	124-139	Screw M8 x30	2
	460-10	Washer Spring	2
	420-14	Nut M8	2

Spares Items

>	SI	845-102	Fuel Pre-Filter Element
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Engine Management Box - Iveco Euro III Turbo Engine



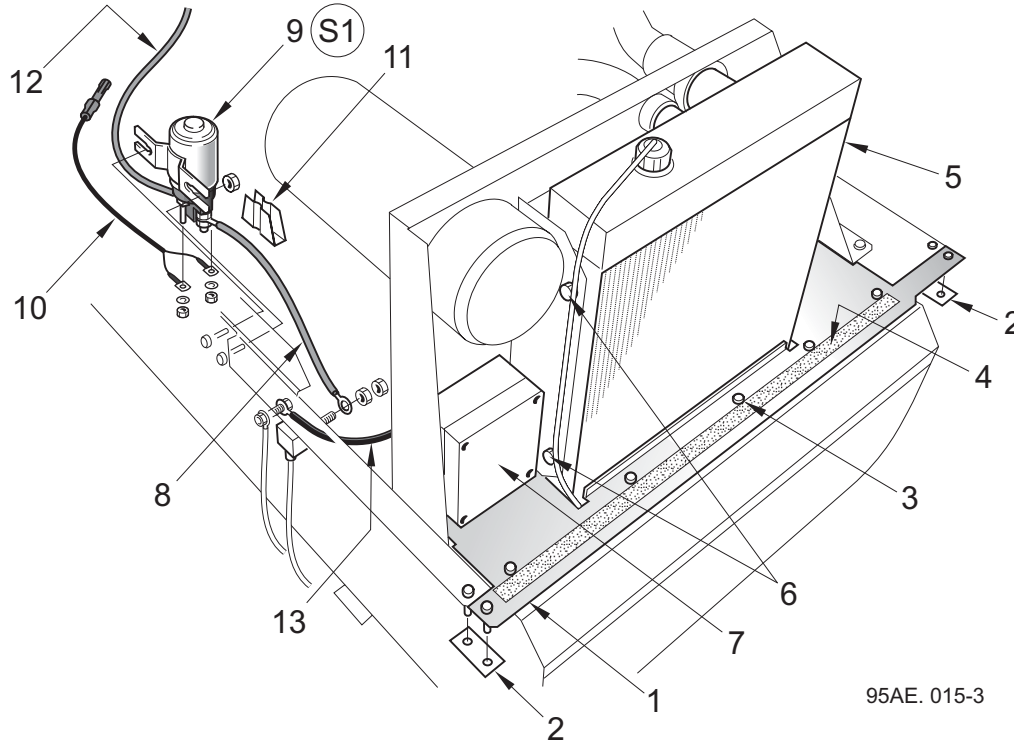
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Engine Management Box - Iveco Euro III Turbo Engine

BoM 950511

Item No.	Part No.	Description	Quantity
	282120-1	Engine Management Box 24v comprising:-	
1	283848-1	Box and Lid	1
2	134-44	Screw Pan Head M4 x 20	4
	425-11	Nut - Nyloc M4	4
3	283894-1	Mounting Plate	1
4	283842-1	Loom - includes item 15	1
5	282130-1	Resistor Board Assembly	1
6	30-280	Snap Rivet	4
7	725-153	Micro Relay 24v 10/5 Amp	3
8	48-371	Micro Relay Base	4
9	134-40	Screw Pan Head M4 x 8	2
	455-5	Washer - Plain	2
	425-11	Nut - Nyloc M4	2
10	48-36	Relay 24v	1
11	134-40	Screw Pan Head M4 x 10	2
	460-5	Washer - Spring	2
	455-5	Washer - Plain	2
	420-11	Nut M4	2
12	30-256	4 Way Terminal Block	2
	30-254	End Plate	2
13	134-13	Screw Pan Head M3 x 12	2
	455 - 3	Washer - Plain	2
	420-10	Nut M3	2
14	13984	Diode 6 Amp	1
15	30-279	Fuse Holder - containing:	1
	30-99	Fuse 30 Amp	1
	30-45	Fuse 15 Amp	2
	30-93	Fuse 5 Amp	2
16	134-42	Screw Pan Head M4 x 12	2
	455-5	Washer - Plain	2
	420-11	Nut M4	2
17	134-12	Screw Pan Head M3 x10	4
	425-10	Nut - Nyloc M3	4
18	134-60	Screw Pan Head M5 x 25	1
	460-7	Washer - Spring	1
	455-7	Washer - Plain	1
	420-12	Nut M5	1
	425-12	Nut - Nyloc M5	1

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Radiator and Heat Start Relay - Iveco Euro III Turbo Engine


95AE. 015-3

BoM 950511
Powapak Parts

Item No.	Part No.	Description	Quantity
1	281562-1	Walkway	1
2	281600-1	Support Strip	2
3	135-69	Screw - Button Head M8 x 25	9
	455-10	Washer - Plain	4
	425-14	Nut - Nyloc M8	4
4	211-12	Anti-slip Surface x 0.03m	1
5	281570-1	Radiator / Intercooler	1
6	124-166	Screw M10 x 16	4
	460-11	Washer - Spring	4

Dressed Engine Parts

7	282120-1	Engine Management Box 24v - See Previous Pages	1
	134-44	Screw Pan Head M4 x 20	4
	425-11	Nut - Nyloc M4	4

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Radiator and Heat Start Relay - Iveco Euro III Turbo Engine

BoM 950511

Item No.	Part No.	Description	Quantity
8	282034-3	Heat Start Cable - Red x 500 Long	1
9	845-139	Heat Start 'Intelligent' Relay	1
10	845-140	'Intelligent' Relay Loom	1
11	845-141	Cover	1
12	282034-4	Heat Start Cable - Red x 2500 Long) See Notes	1
13	282035-2	Heat Start Cable - Black) below	1

Spares Items

S1	845-139	Heat Start 'Intelligent' Relay (Item 9)	
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Notes

Items 12 and 13, see 'Dressed Engine Parts and Spares Items' elsewhere in this section, items 17 and 18 respectively.

22.EJ

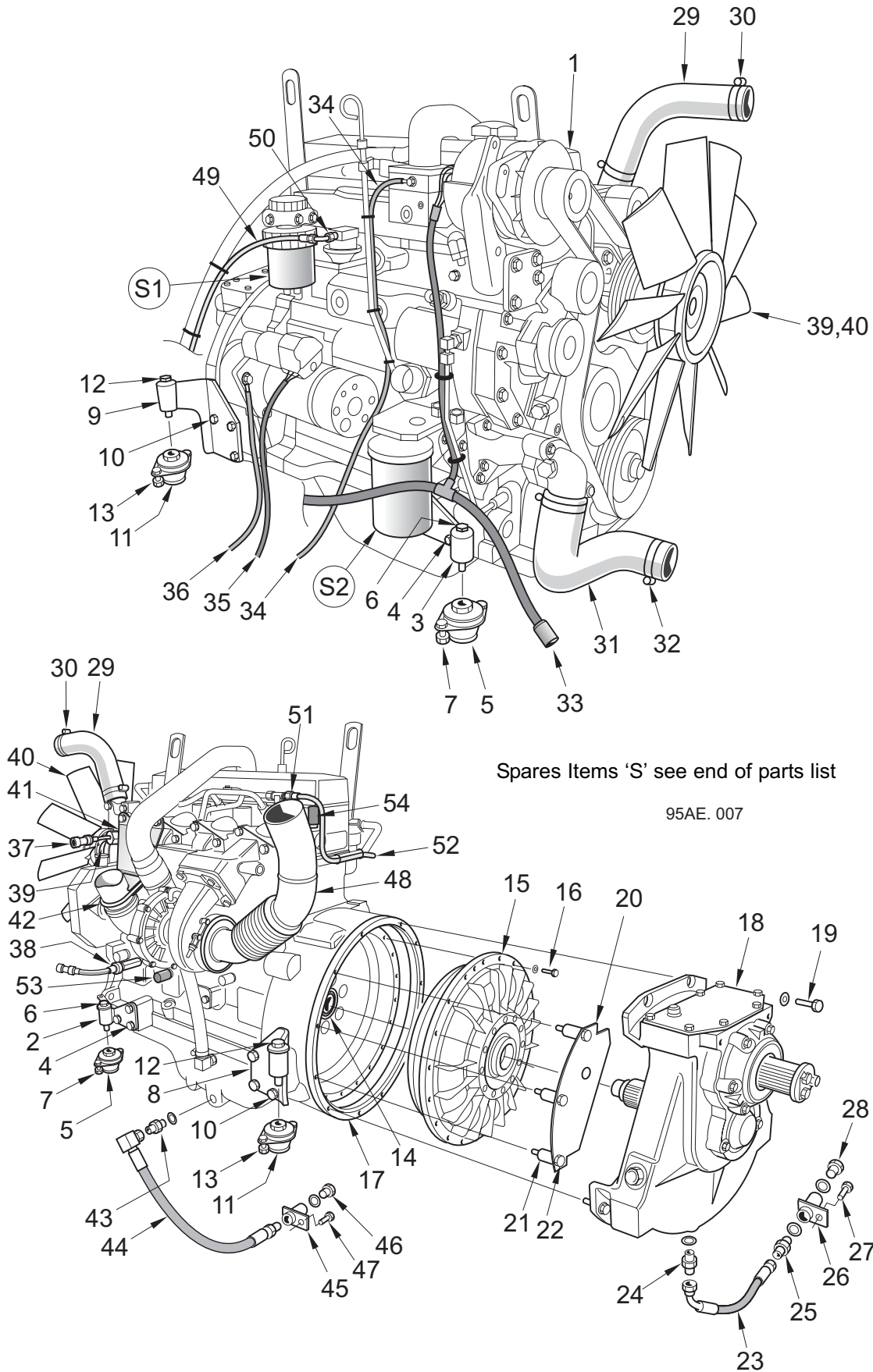
John Deere Engines

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Pump Installations - Current	22.EJ : 9
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'HP' Engine Management Box	22.EJ : 12
Powapaks	
Powapak Parts	22.EJ : 14
Air Cleaner Installation	22.EJ : 18

John Deere 'LP' and 'HP' Dressed Engines - Common Parts

The 'LP' Engine can be identified by having a Throttle Actuator as shown on page 22.EJ:7
 The 'HP' Engine is controlled electronically by an ECU unit



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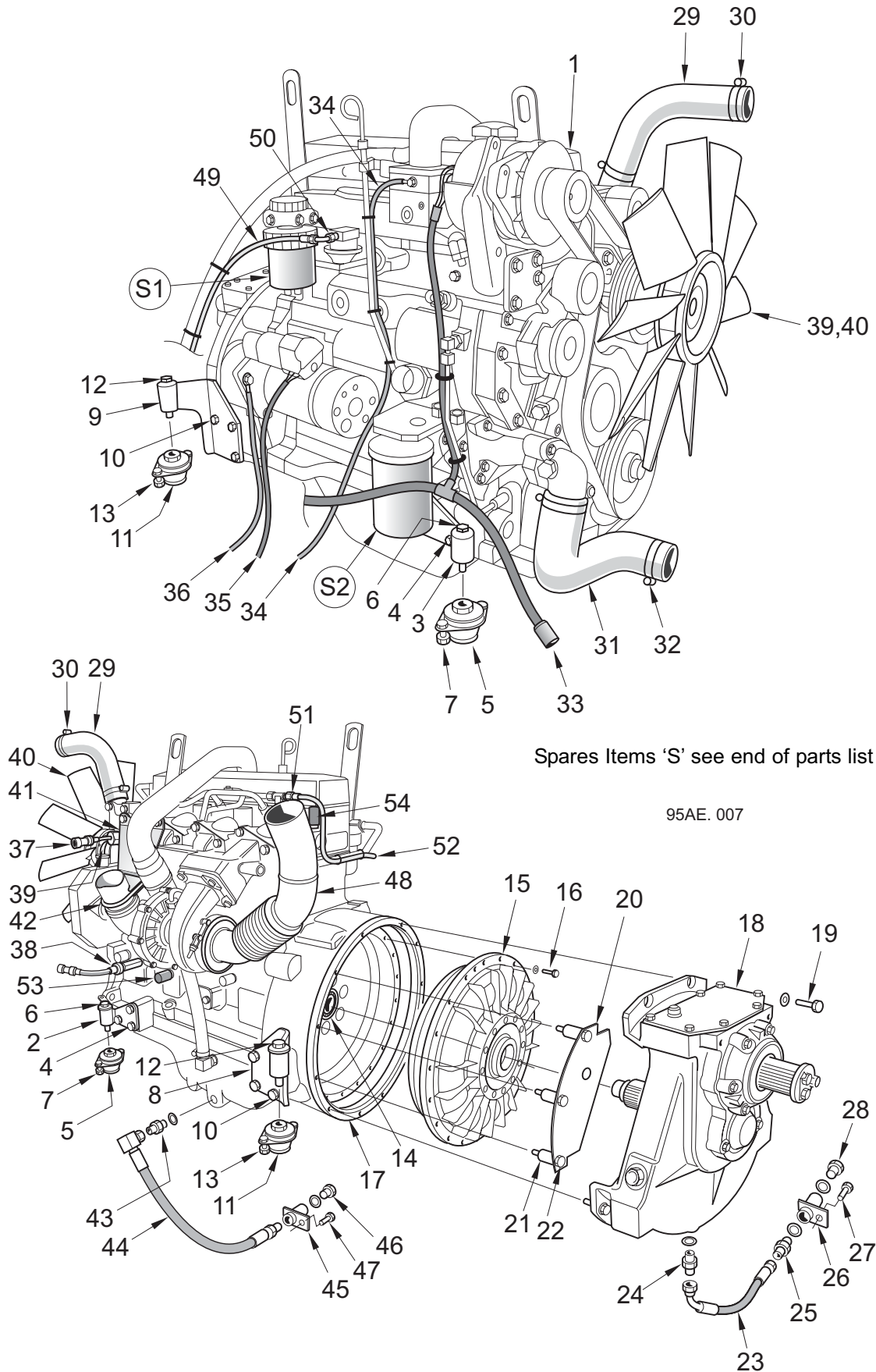
John Deere 'LP' and 'HP' Dressed Engines - Common Parts

BoM 950511

Item No.	Part No.	Description	Quantity
1	282420-1	'LP' Engine - John Deere 4045TF 270 12v TC LP T2 With Mechanically Controlled Fuel Injection	
	282860-1	'HP' Engine - John Deere 4045TF 275 12v TC HP T2 With Electronically Controlled Fuel Injection	
2	280150-4	Bracket - Engine Mounting LH Front	1
3	280150-2	Bracket - Engine Mounting RH Front	1
4	124-199	Screw M12 x 20	6
	460-12	Washer - Spring	6
> 5	6953	Mount - Metacone	2
6	123-151	Bolt M12 x 65	2
	457-6	Washer - Plain	2
	460-12	Washer - Spring	2
7	124-171	Screw M10 x 30	4
	460-11	Washer-Spring	4
	420-15	Nut M10	4
8	280135-1	Bracket - Engine Mounting LH Rear	1
9	280135-2	Bracket - Engine Mounting RH Rear	1
10	124-199	Screw M12 x 20	8
	460-12	Washer - Spring	8
> 11	22826-1	Mount Metacone	2
12	123-152	Bolt M12 x 70	2
	457-6	Washer - Plain	2
	460-12	Washer - Spring	2
13	124-171	Screw M10 x 30	4
	460-11	Washer - Spring	4
	420-15	Nut M10	4
14	14-7	Bearing	1
	77-39	Shaft Oil Seal	1
15	42501-2	Fluid Coupling - See Section 22.ET	1
16	146-98	Flanged Head Bolt M6 x 30	20
	457-2	Washer - Plain	20
17	63641-1	Transmission Ring Adaptor	1
18	42270-1	Gearbox - Fan Drive - See Section 22.ET	1
19	123-131	Bolt M10 x 55	6
	460-11	Washer - Spring	6
20	42299-1	Safety Cover	2
21	920000-32	Spacer - Plain	6
22	123-137	Bolt M10 x 85	6
	460-11	Washer - Spring	6
23	HC08001-48	Hose 1/2" - Megaflex straight 45°s	1
24	263-4	Adaptor G1/2"	1
	451-19	Washer - Sealing 1/2"	1
25	265-4	Adaptor G3/8" x 1/2"	1
	451-18	Washer - Sealing G3/8"	1

John Deere 'LP' and 'HP' Dressed Engines - Common Parts

The 'LP' Engine can be identified by having a Throttle Actuator as shown on page 22.EJ:7
 The 'HP' Engine is controlled electronically by an ECU unit



Spares Items 'S' see end of parts list

95AE.007

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John Deere 'LP' and 'HP' Dressed Engines - Common Parts

BoM 950511

Item No.	Part No.	Description	Quantity	
26	40525-1	Drain - Gearbox	1	
27	124-167	Screw M10 x 20	1	
	460-11	Washer - Spring	1	
	420-15	Nut M10	1	
28	3823	Plug 3/8" BSP	1	
	451-18	Washer - Sealing G 3/8"	1	
29	280088-1	Hose - Radiator Inlet - Top	1	
30	501-6	Hose Clip	2	
31	280089-1	Hose - Radiator - Lower	1	
32	501-6	Hose Clip	1	
33	282041-1	'LP' Engine Loom	1	
	282048-1	'HP' Engine Loom	1	
	508-4	'P' Clip	6	
34	282044-1	Cable - Relay to Heat Start	1	
35	281224-1	Starter Cable	1	
36	281224-2	Earth Cable	1	
37	282590-1	Temperature Switch	1	
38	281942-1	Oil Pressure Switch	1	
	283401-1	Extender Adaptor	1	
39	282587-1	Spacer - Cooling Fan	1	
40	281-7	Cooling Fan	1	
>	41	284136-1	Air Inlet Bracket	1
	42	6645-21	Exhaust Clamp 3 5/8"	1
	43*	7004768	Adaptor	1
		80-46	'O' Ring	1
	44	HE12003-80	Hydraulic Hose	1
	45	62903-1	Drain	1
	46	7684-1	Collar Plug 1/2" BSP Brass	1
		451-19	Washer - Sealing	1
	47	124-167	Screw M10 x 20	1
		460-11	Washer - Spring	1
		420-15	Nut M10	1
	48	282585-1	Exhaust Inlet Pipe	1
	49	282689-1	Fuel Suction Hose	1
	50	848-24	Lift Pump Adaptor - 'LP' Engine only	1
	51	282697-1	Adaptor G 1/4"	1
		848-21	Seal	1
	52	282692-1	Fuel Return Hose	1
KT00695 - Optional Oil Pressure / Water Temperature Gauge Pack - 'LP' Engines only				
	53	87-16	Oil Pressure Sender	1
	54	87-54	Water Temperature Sender	1
		282043-1	Gauge Sender Loom (Not Shown)	1

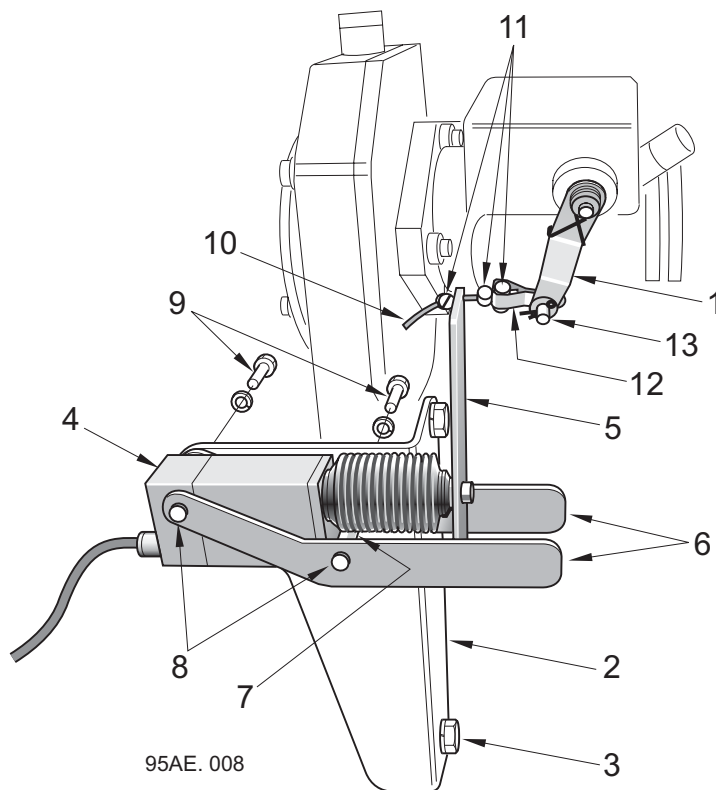
John Deere 'LP' and 'HP' Dressed Engines - Common Parts**KT00695 - Optional Oil Pressure / Water Temperature Gauge Pack**

Item No.	Part No.	Description	Quantity
	282740-1	Water Temp./ Oil Press. Gauge - See Powapak Control Panels, Chapter 32	1
Spares Items			
>	S1	848-35	Fuel Filter - 'LP' Engine
>		848-37	Fuel Filter - 'HP' Engine
>	S2	848-22	Oil Filter - 'LP' and 'HP' Engines

Notes

* Refer to TB 1451 for the introduction of these parts.

Throttle Actuator - John Deere 'LP' Engine Only

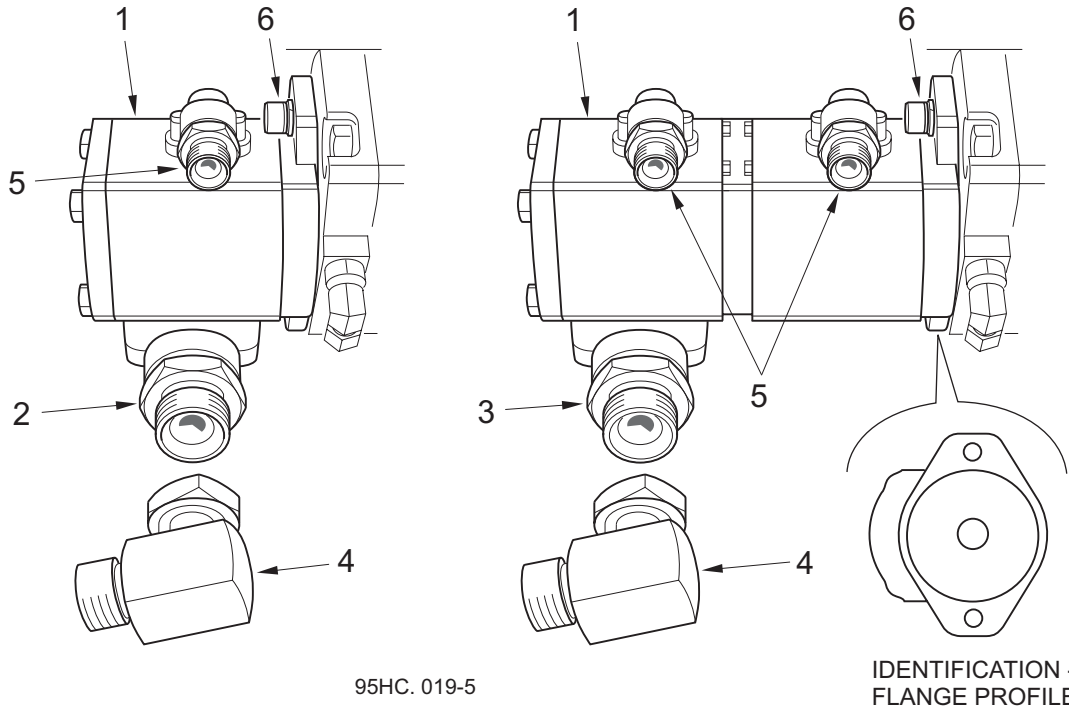


95AE.008

BoM 950511

Item No.	Part No.	Description	Quantity
1	282643-1	Throttle lever	1
2	282645-1	Actuator Mount	1
3	124-263	Screw M16 x 20	2
	460-14	Washes - Spring	2
> 4	281729-12	Throttle Actuator 12v	1
5	282644-1	Actuator Lever	1
6	281707-1	Actuator Side Plate	2
7	42774-4	Spacer x 36	1
8	124-100	Screw M6 x 12	2
	460-8	Washer - Spring	2
9	124-101	Screw M6 x 16	2
	460-8	Washer Spring	2
10	281728-1	Throttle Cable	1
11	38-32	Solderless Nipple	3
12	837-47	Fork	1
13	837-48	Pin	1
	837-49	Split Pin	1

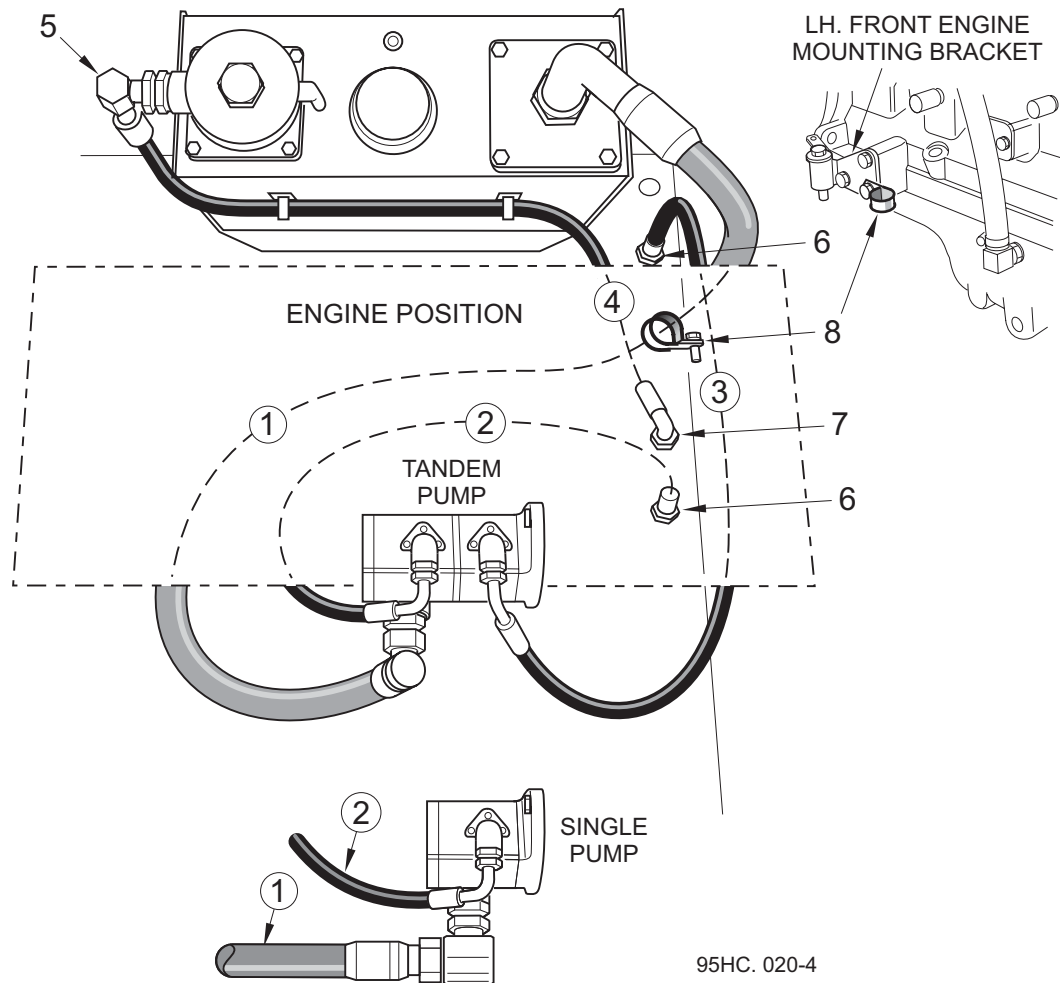
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John Deere P.T.O. Pumps

BoM 950514

Item No.	Part No.	Description	Quantity	
			Single	Tandem
1	239-27	Pump - Single	1	-
	239-34	Pump - Tandem	-	1
2	265-16	Adaptor 1 1/4" x 3/4"	1	-
	451-21	Washer - Sealing 3/4"	1	-
3	263-8	Adaptor 1 1/4"	-	1
	451-111	Washer - Sealing 1 1/4"	-	1
4	262-8	Swivel Elbow 1 1/4" x 90°	1	1
5	263-4	Adaptor 1/2"	1	2
	451-19	Washer - Sealing 1/2"	1	2
6	129-156	Screw Cap Skt. Head M10 x 30	2	2
	460-11	Washer - Spring	2	2

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Pump Installations - John Deere Engines



BoM 950514

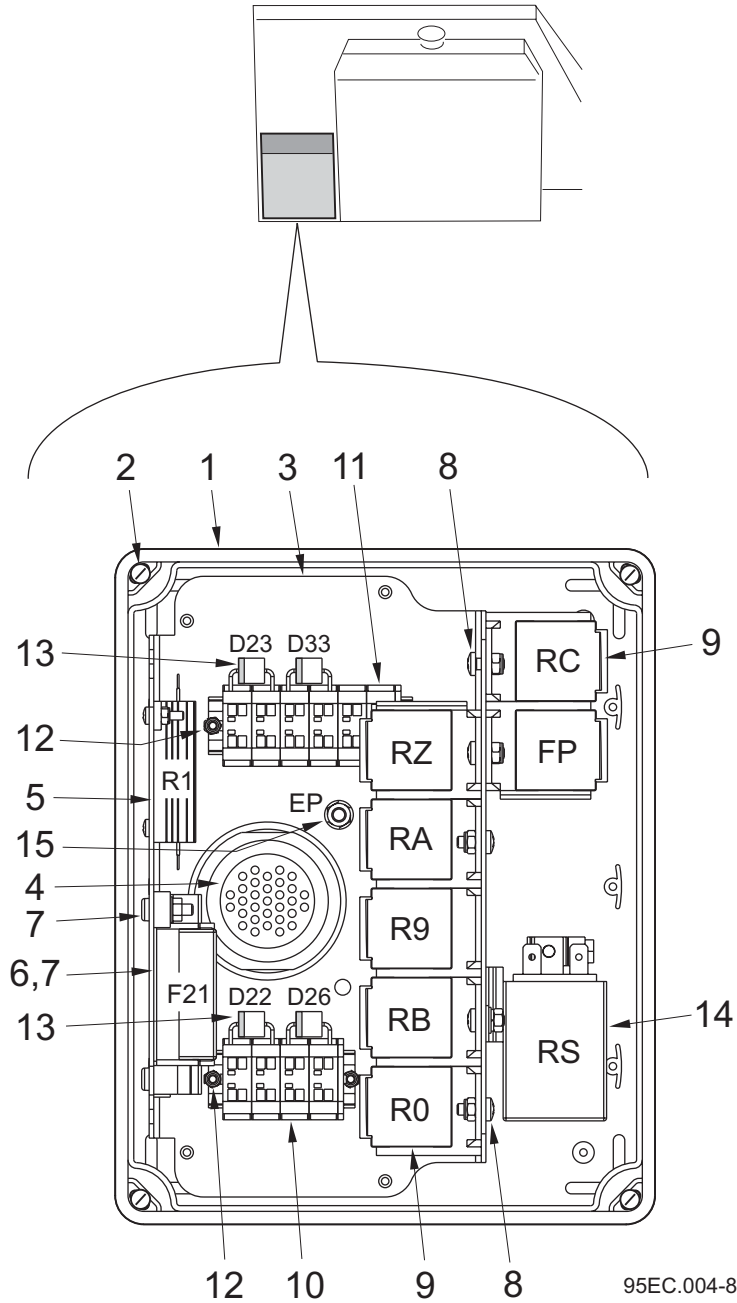
Item No.	Part No.	Description	Quantity		
			Single	Tandem	
1*	HX 20002-175	Suction Hose	1	1	
2*	HC08000-114	Sweep Systems Hose	1	1	
3*	HC08002-170	Auxiliary Systems Hose	-	1	
4*	HE12001-122	Tank Return Hose	1	1	
}	5	262-6	Swivel Elbow 3/4"	1	1
	6	264-4	1/2" Bulkhead Adaptor + Locknut	1	2
	7	264-6	3/4" Bulkhead Adaptor + Locknut	1	1
	8	508-12	'P' Clip	1	1

Notes

* Hose numbers in circles correspond with those on Hydraulic diagrams SH521a01 and SH531a01 in Chapter 8.

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**Engine Management Box - John Deere 'LP' Engine
with Mechanically Controlled Fuel Injection Pump**



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Engine Management Box - John Deere 'LP' Engine with Mechanically Controlled Fuel Injection Pump

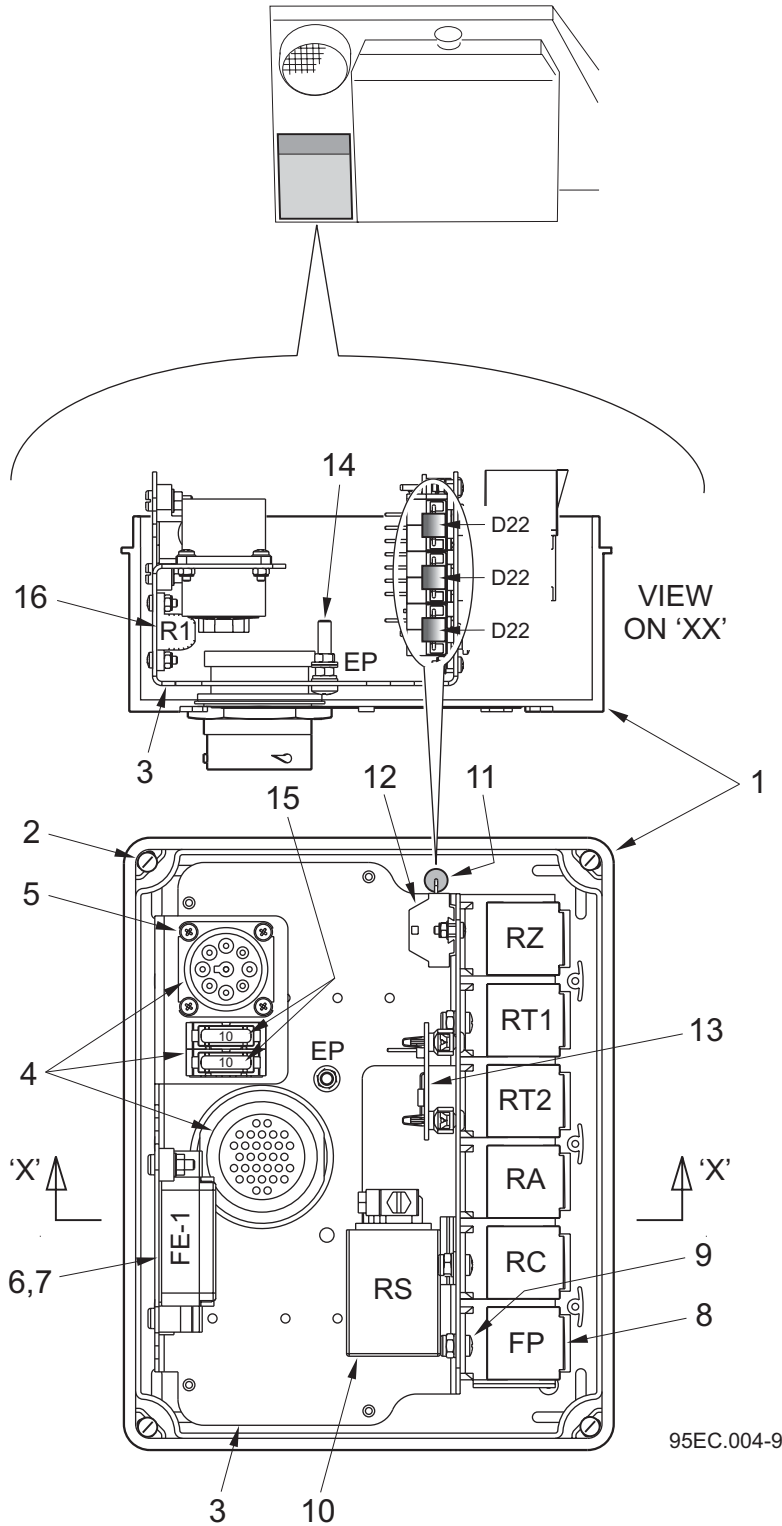
BoM M010511

Item No.	Part No.	Description	Quantity
	282137-1	'LP' Engine Management Box 12v Comprising:-	
1	283848-1	Box and Lid	1
2	134-44	Screw Pan Head M4 x 20	4
	425-11	Nut - Nyloc M4	4
3	282125-1	Mounting Plate	1
4	283843-1	Loom	1
5	721-12	Resistor 50R 50 Watt	1
6	30-267	Fuse Holder	1
7	30-269	Midi Link 60 Amp	1
8	134-41	Screw Pan Head M4 x 10	4
	425-11	Nut - Nyloc M4	4
9	13193	Relay	7
10	30-256	Terminal Block - 4 Way	4
	30-254	Terminal Block - End Plate	1
11	30-256	Terminal Block - 4 Way	6
	30-254	Terminal Block - End Plate	1
12	134-13	Screw Pan Head M3 x 12	4
	425-10	Nut - Nyloc M3	4
13	13984	Diode 6 Amp	4
> * 14	48-360	Relay	1
15	134-60	Screw Plan Head M5 x 25	1
	420-12	Nut M5	1
	425-12	Nut - Nyloc M5	1
	460-7	Washer - Spring	1
	455-7	Washer - Plain	1

Notes

* Refer to TB 1453 for the introduction of this relay.

Engine Management Box - John Deere 'HP' Engine with Electronically Controlled Fuel Injection Pump



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Engine Management Box - John Deere 'HP' Engine
with Electronically Controlled Fuel Injection Pump

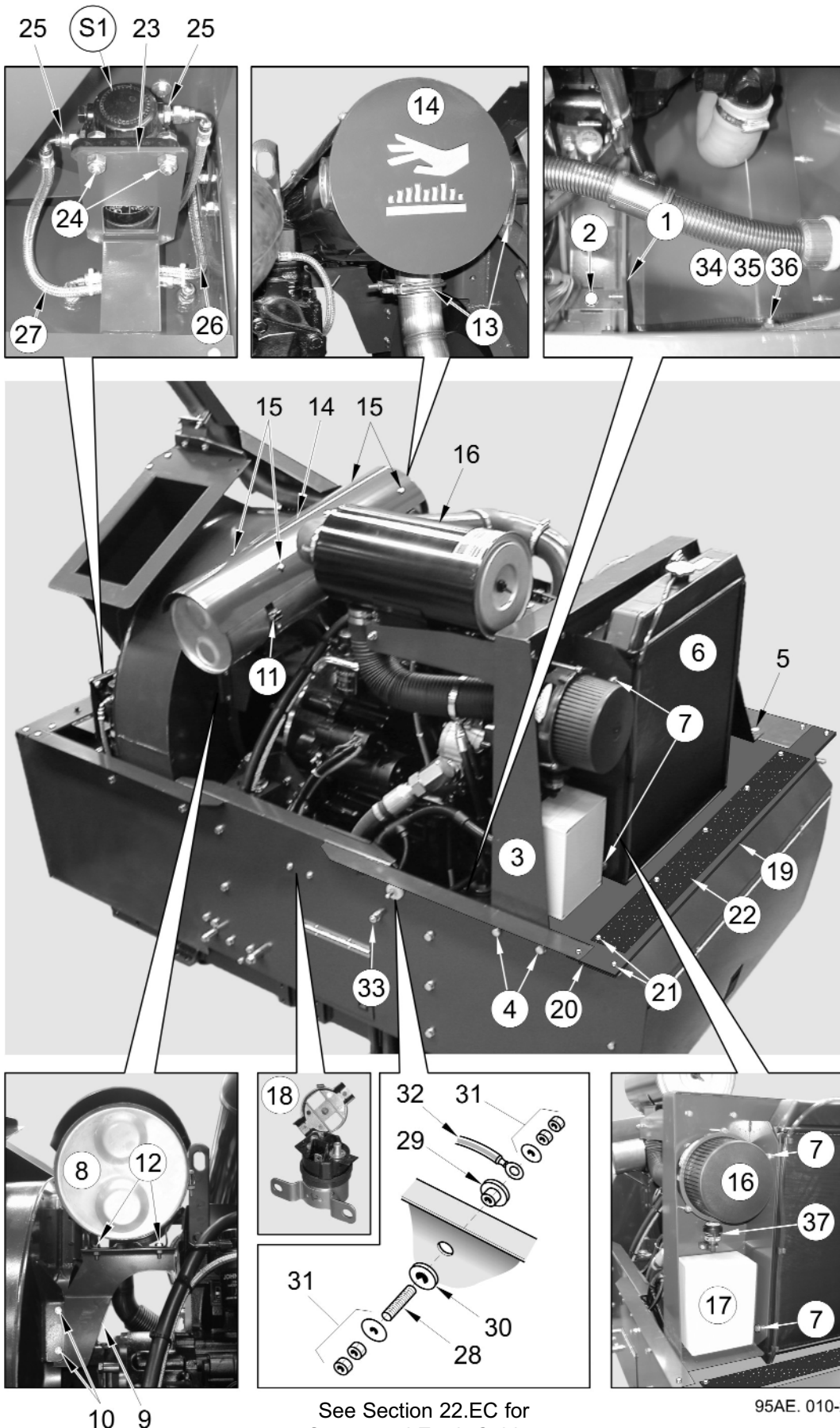
M M010511

Item No.	Part No.	Description	Quantity
	282138-1	'HP' Engine Management Box 12v Comprising:-	
1	283848-1	Box and Lid	1
2	134-44	Screw Pan Head M4 x 20	4
	425-11	Nut - Nyloc M4	4
3	283897-1	Mounting Plate	1
4	283844-1	Management Box Loom	1
5	134-12	Screw - Pan Head M3 x 10	4
	455-3	Washer Plain	4
	425-10	Nut Nyloc M3	4
6	30-267	Fuse Holder	1
7	30-269	Midi Link 60 Amp	1
8	13193	Relay 12v	6
9	134-40	Screw Pan Head M4 x 8	4
	455-5	Washer Plain	4
	425-12	Nut - Nyloc M4	4
> *10	48-360	Relay	6
11	13984	Diode 6 Amp	3
12	30-256	Terminal Block - 4 Way	4
	30-254	Terminal Block - End Plate	1
13	282171-1	Resistor Board	1
14	134-60	Screw Plan Head M5 x 25	1
	460-7	Washer - Spring	1
	455-7	Washer - Plain	1
	420-12	Nut M5	1
15	30-95	Blade Fuse 10 Amp (Red)	2
16	721-12	Resistor 50R 50 Watt	1

Notes

* Refer to TB 1453 for the introduction of this relay.

John Deere Powapak Parts



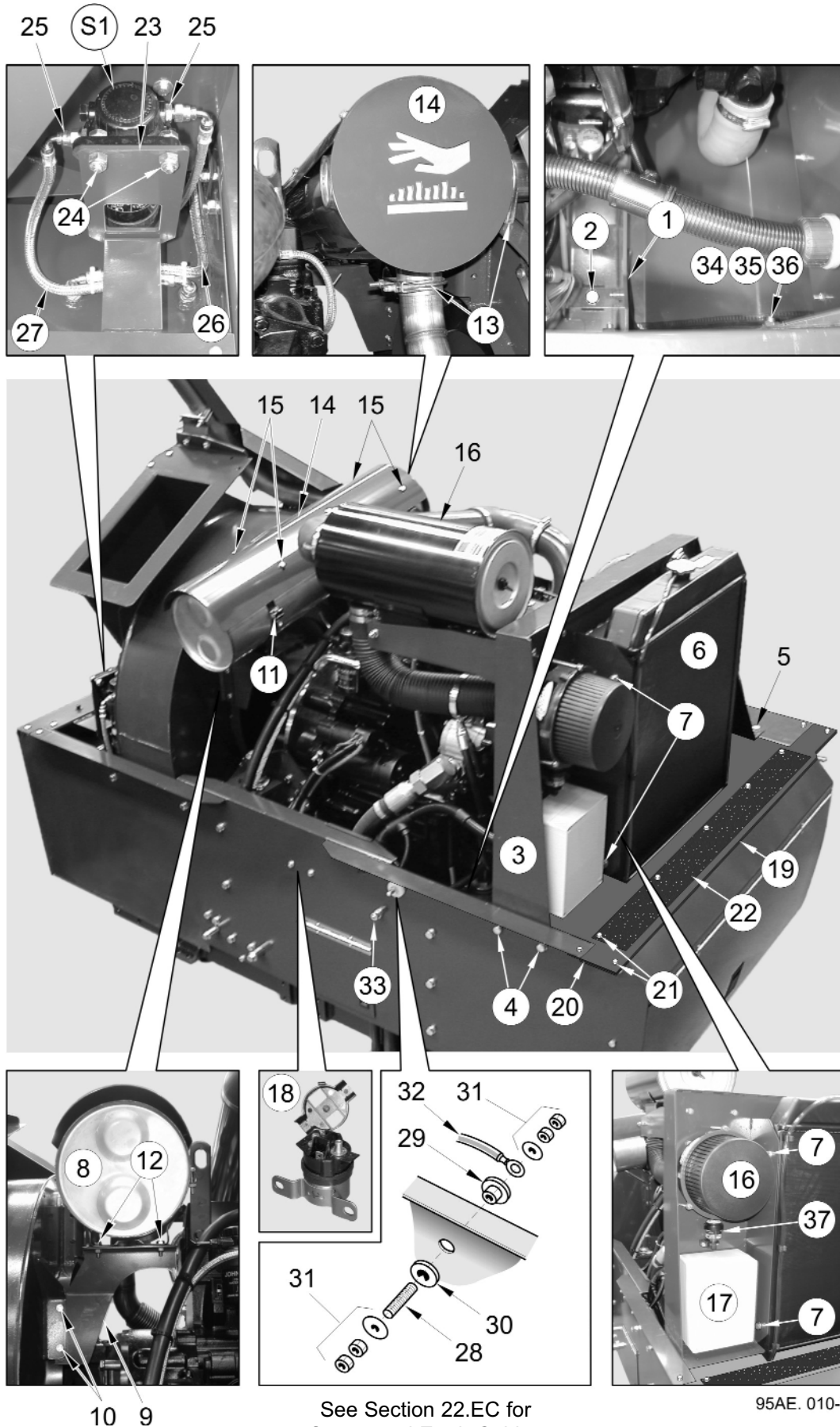
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BoM 950511

Item No.	Part No.	Description	Quantity
1	282425-1	Front Engine Cradle	1
2	124-272	Screw M16 x 45	2
	460-14	Washer - Spring M16	2
3	282490-1	Radiator Shroud	1
4	124-167	Screw M10 x 20	2
	460-11	Washer - Spring M10	2
5	124-169	Screw M10 x 25	2
	425-15	Nut - Nyloc M10	2
6	200923-1	Radiator	1
7	124-166	Screw M10 x 16	4
	460-11	Washer - Spring M10	4
	455-11	Washer - Plain M10	4
8	283781-1	Silencer - For Tailpipe etc. See sections 22.EE	1
9	295444-1	Mount - Silencer	1
10	124-135	Screw M8 x 20	2
	460-10	Washer - Spring M8	2
	420-14	Nut M8	2
11	903-9	Mounting Band	1
12	124-135	Screw M8 x 20	2
	460-10	Washer - Spring M8	2
	420-14	Nut M8	2
> 13	6645-14	Exhaust Clip	1
14	281704-1	Heat Shield	1
15	457-2	Washer - Large M6	4
	124-100	Screw M6 x 12	4
16	-	Air Filter and Prefilter Installation - Covered In This Section	
17	-	Engine Management Box - See Previous Pages	
18	48-271	Heat Start Relay	1
	124-101	Screw M6 x 16	2
	455-8	Washer - Plain	2
	425-8	Nut - Nyloc M6	2
19	282605-1	Walkway	1
20	281600-1	Support Strip	2
21	135-69	Screw - Button Head M8 x 25	9
	455-10	Washer - Plain M8	4
	425-14	Nut - Nyloc M8	4
22	211-12	Anti-slip Surface x 1240 Long	1
23	282629-1	Plate - Pre-Filter Mounting	1
24	124-134	Screw M8 x 16	2
	455-10	Washer Plain	2
	425-14	Nut - Nyloc M8	2

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John Deere Powapak Parts



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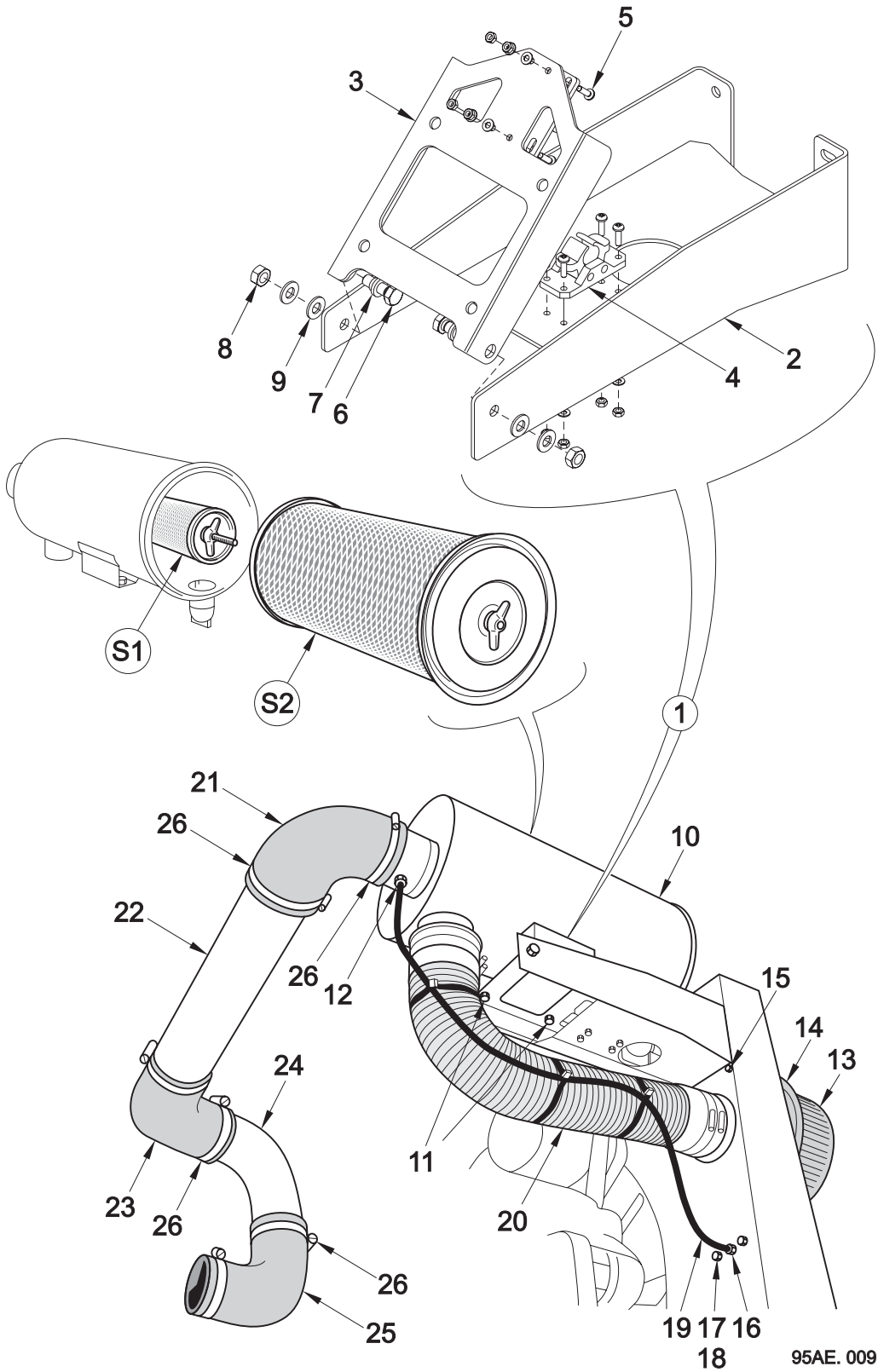
BoM 950511

Item No.	Part No.	Description	Quantity
25	80-40	'O' Ring	2
26	282696-1	Suction Pipe	1
	451-17	Washer - Sealing 1/4" BSP	1
27	282691-1	Fuel Suction Hose with Adaptor	1
28	42421-3	Stud M10 x 65	1
29	42660-1	Spacer - Nylon	1
30	42661-1	Washer - Nylon	1
31	455-11	Washer - Plain M10	2
	410-49	Nut - Brass M10	4
32	282034-1	Heat Start Cable - Power to Relay (18)	1
33	124-175	Screw M10 x 40 - Earthing Point	1
	455-11	Washer - Plain M10	1
	420-15	Nut M10	2
34	282586-1	Systems Locker Cover Plate	1
35	124-134	Screw M8 x 16	4
	460-10	Washer - Spring M8	4
36	217-2	Rubber Seal 455 Long	2
37	904-55	Restriction Indicator - 7.5kPa	1
Spares Items			
>	S1	848-38	Fuel Pre Filter - 'LP' Engine
		848-36	Fuel Pre Filter - 'HP' Engine

Notes

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Air Cleaner Installation



95AE.009

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Air Cleaner Installation

BoM 950511

Item No.	Part No.	Description	Quantity
1	281048-1	Air Filter Mount Assembly comprising items 2 - 9:-	
2	280125-1	Mounting Bracket	1
3	281047-1	Pivot Bracket	1
4	436-10	Catch	1
5	134-44	Screw M4 x 20 Pan Head	8
	455-5	Washer Plain	8
	425-11	Nut - Nyloc M4	8
6	124-135	Screw M8 x 20	2
7	441-1	Screw M8 x 4 Insert	2
8	425-14	Nut - Nyloc M8	2
9	455-10	Washer Plain	4
10	94954-1	Air Cleaner	1
11	124-135	Screw M8 x 20	4
	460-10	Washer - Spring	4
12	904-58	Adaptor	1
13	904-23	Pre Cleaner	1
14	282497-1	Securing Ring	1
15	123-98	Bolt M6 x 100	3
	455-8	Washer - Plain	6
	425-13	Nut - Nyloc M6	3
16	904-56	Connector	1
17	124-103	Screw M6 x 20	2
	457-2	Washer - Plain	2
	425-13	Nut - Nyloc M6	2
18	904-55	Restriction Indicator - 7.5kPa	1
19	12870	Tube - Black Nylon 8 O/D x 0.8	1
20	276-13	Flexible Ducting	1
21	61096-3	Elbow - Rubber	1
22	280154-1	Pipe - Air Inlet	1
23	904-12	Elbow 3 1/2"	1
24	280156-1	Elbow - Air Inlet	1
25	61096-3	Elbow - Rubber	1
26	501-8	Hose Clip	6

Spares Items

S1	61026-3	Safety Element
S2	94954-2	Main Element

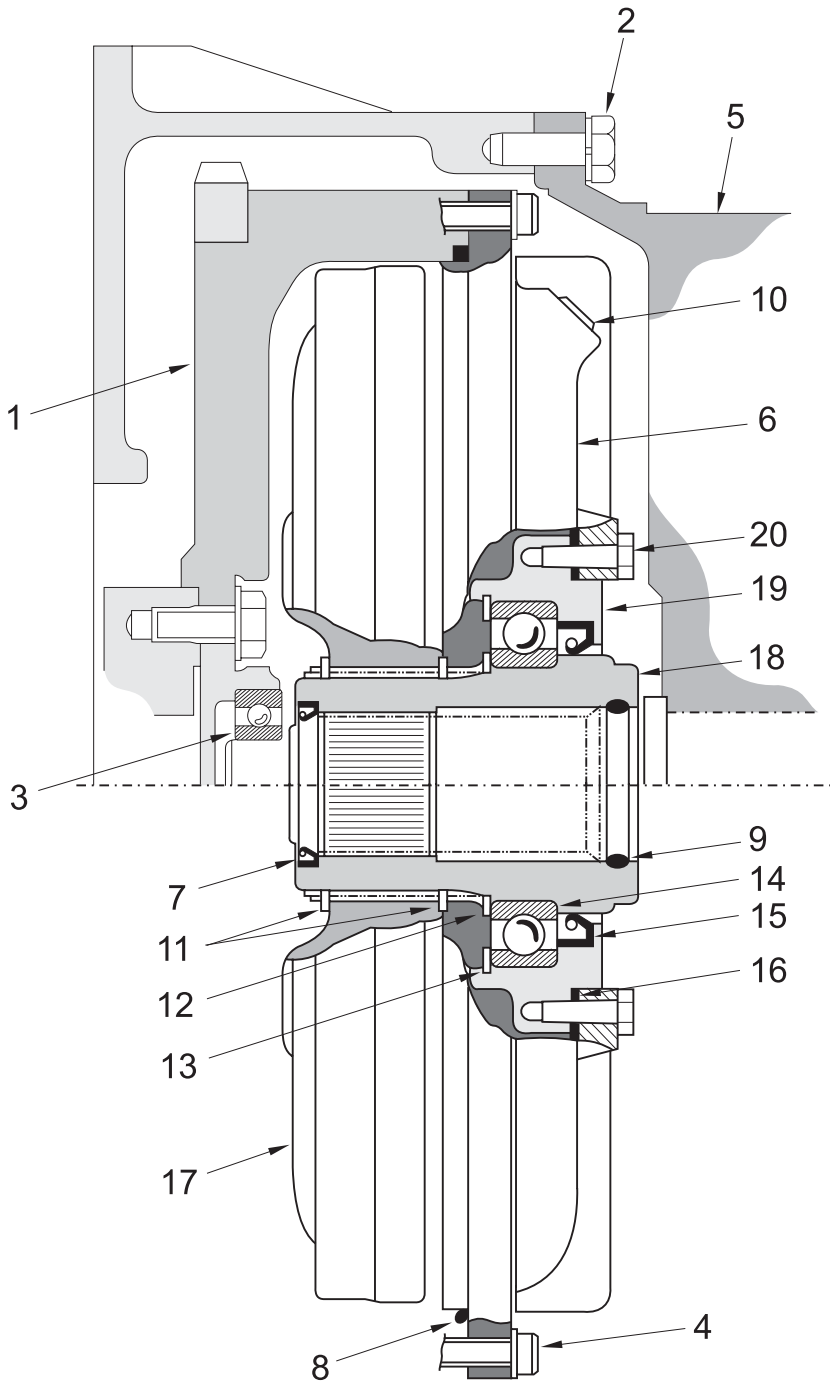
22.ET

Transmission, Impeller and Powapak Tub

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Fluid Coupling



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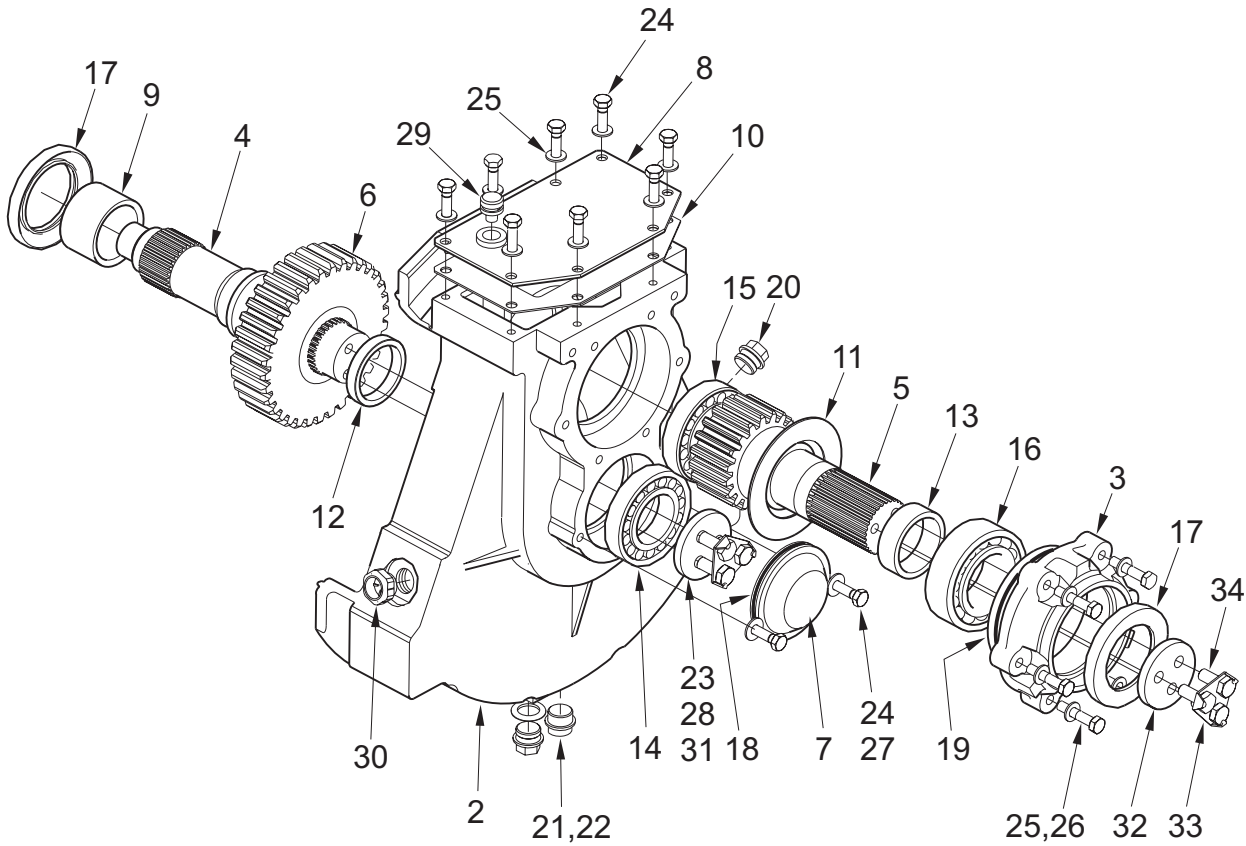
Fluid Coupling

Item No.	Part No.	Description	Quantity
1	-	Flywheel - See relevant Dressed Engine Section	
2,3,4	-	Covered in Dressed Engine Sections	
5	-	Gearbox - See next page	1
> 6	295151-1	Fluid Coupling - John Deere	1
	295150-1	Fluid Coupling - Iveco	1
7	77-39	Rotary Seal	1
8	656-1	'O' Ring	1
9	656-2	'O' Ring	1
10	656-3	Fusible Plug	1
11	656-4	Circlip - External	2
12	656-5	Circlip - External	1
13	656-6	Circlip - Internal	1
14	656-7	Bearing	1
15	656-8	Oil Seal	1
16	656-9	Gasket	1
17	656-10	Impeller Inner	1
18	656-12	Centre Hub	1
19	656-13	Bearing Carrier	1
20	656-14	Screw	12
	42501-500	Overhaul Kit Comprising Items:- 3, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	

Notes

On assembly, coat internal spline of Item 18 with Kluber Paste 46MR410, JSL Part No. 94-24

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Fan Drive Gearbox


95FG.001-2

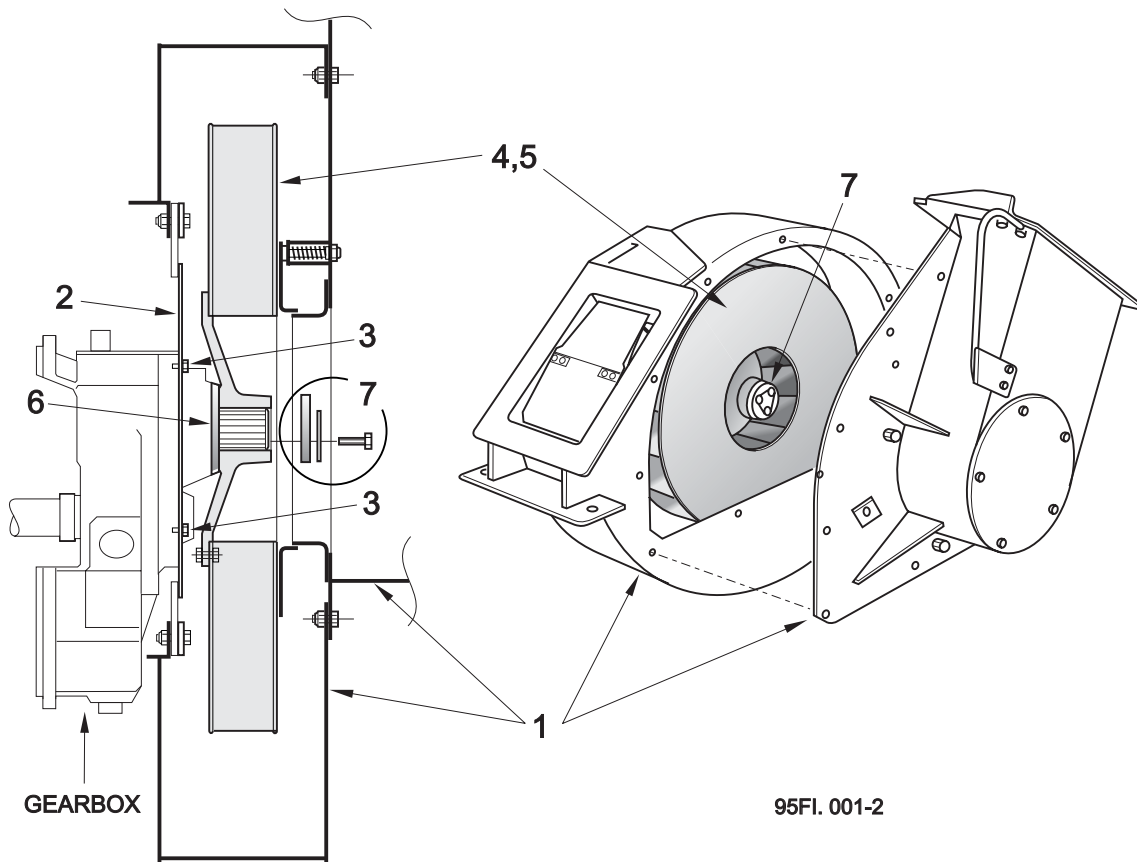
Item No.	Part No.	Description	Quantity
	42270-1	Gearbox comprising:	1
2	42271-2	Casing - Gearbox	1
3	42272-2	Housing - Bearing	1
4	42466-1	Shaft - Input	1
5	42274-19	Shaft - Output	1
6	42275-34	Gear	1
7	42255-1	Cap - Bearing	1
8	42277-1	Plate - Cover	1
9	42278-1	Spacer	1
10	42279-1	Gasket	1
11	42280-1	Washer	1

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Fan Drive Gearbox

Item No.	Part No.	Description	Quantity
12	42281-1	Spacer	1
13	42283-1	Spacer	1
14	10-21	Bearing	1
15	10-22	Bearing	1
16	14-46	Bearing	1
17	77-21	Seal - Rotary	2
18	80-95	Seal - 'O' Ring	1
19	80-100	Seal - 'O' Ring	1
20	54-4	Plug - Collar	3
21	13109	Plug - Magnetic	1
22	451-126	Washer - Copper	1
> 23	121-41	Screw M10F x 25	3
24	124-137	Screw M8 x 25	10
25	460-10	Washer - Spring M8	16
26	124-143	Screw M8 x 40	6
27	457-4	Washer - Extra Large M8	2
> 28	42659-1	Tab Washer	1
29	16978-1	Breather	1
30	87-7	Oil Level Indicator	1
> 31	42282-2	Clamp Plate	1
>	283803-1	Fixing Kit comprising items 32 - 34:-	
> 32	42282-3	Clamp Plate	1
> 33	42659-1	Tab Washer	1
> 34	121-43	Screw M10F x 30	3

Notes

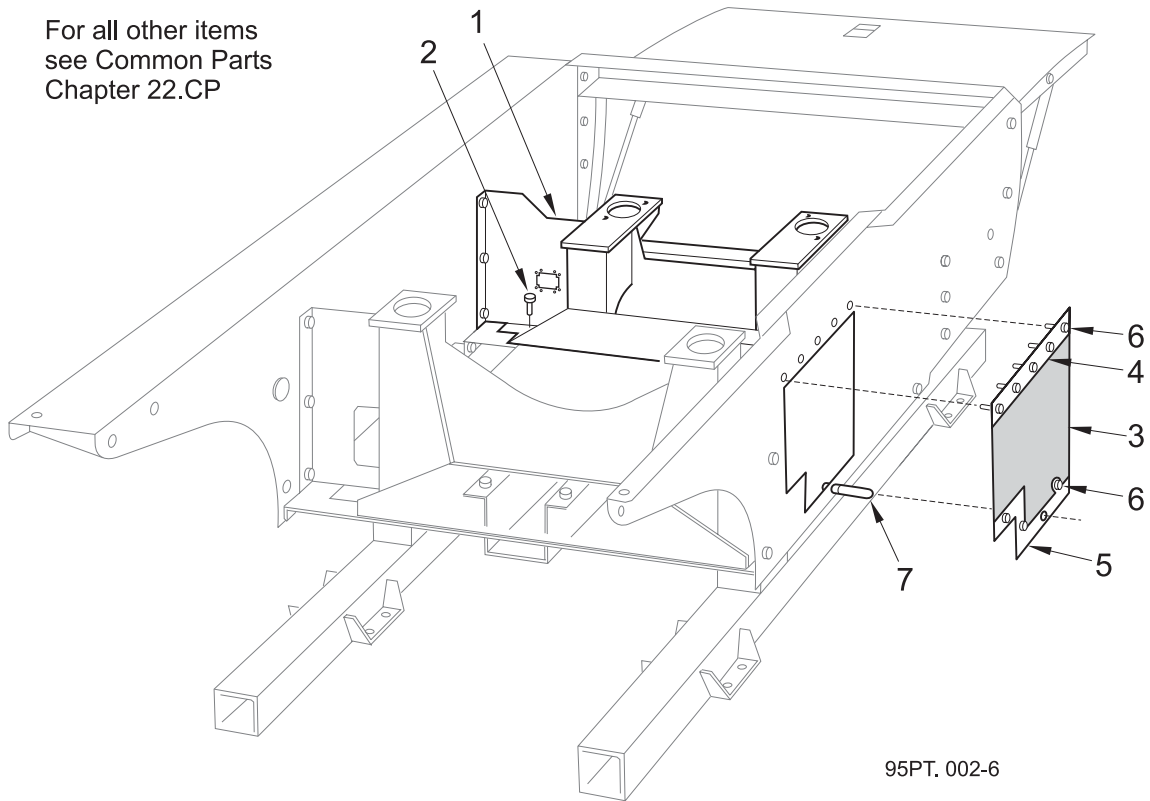
Fan Case Installation and Impeller

BoM 950513

Item No.	Part No.	Description	Quantity
1		Fan Case and Fittings - See Section 22:CP	
2	42284-1	Mask - Fan Case	1
3	837-37	Screw - Special M8 x 20	4
4	280730-1	Suction Fan Impeller - Ø760 Nat. Asp. Engine	1
5	280830-1	Suction Fan Impeller - Ø800 Turbo charged Engine	1
6	62025-1	Spinner - Gearbox	1
7		Impeller Retention - See Gearbox on previous page	

Note

See Maintenance section Chapter 12, Fan Impeller, when fitting a replacement fan.

Powapak Tub - VT Parts Only



For all other items
see Common Parts
Chapter 22.CP

BoM 950511

Item No.	Part No.	Description	Quantity
1	281475-1	Front Engine Cradle - Iveco Engine (shown)	1
	282425-1	Front Engine Cradle - John Deere Engine	1
2	124-272	Screw M16 x 45	2
	460-14	Washer - Spring	2

BoM 950512

	282816-1	Valance Access Hatch comprising items 3 to 7	
3	282801-1	Neoprene Flap	1
4	282804-1	Securing Plate	1
5	282802-1	Tension Plate	1
6	124-135	Bolt M8 x 20	8
	455-10	Washer - Plain	8
	425-14	Nut - Nyloc M8	8
7	283-36	Drop - Loc Bolt	1
	455-10	Washer - Plain	1
	425-14	Nut - Nyloc M8	1

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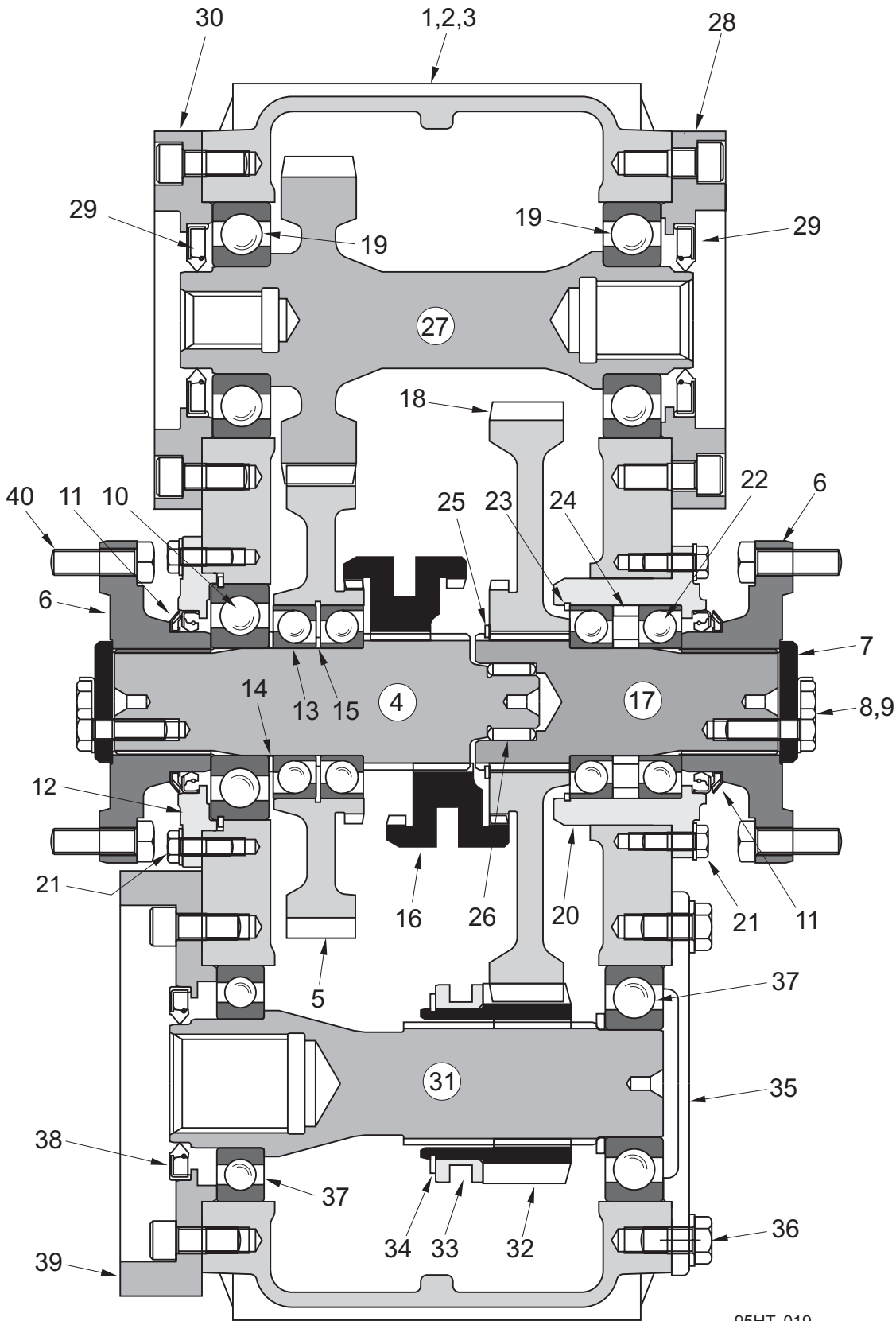
22.HD

HydroDrive Transmission

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Mk III Gearbox Assembly

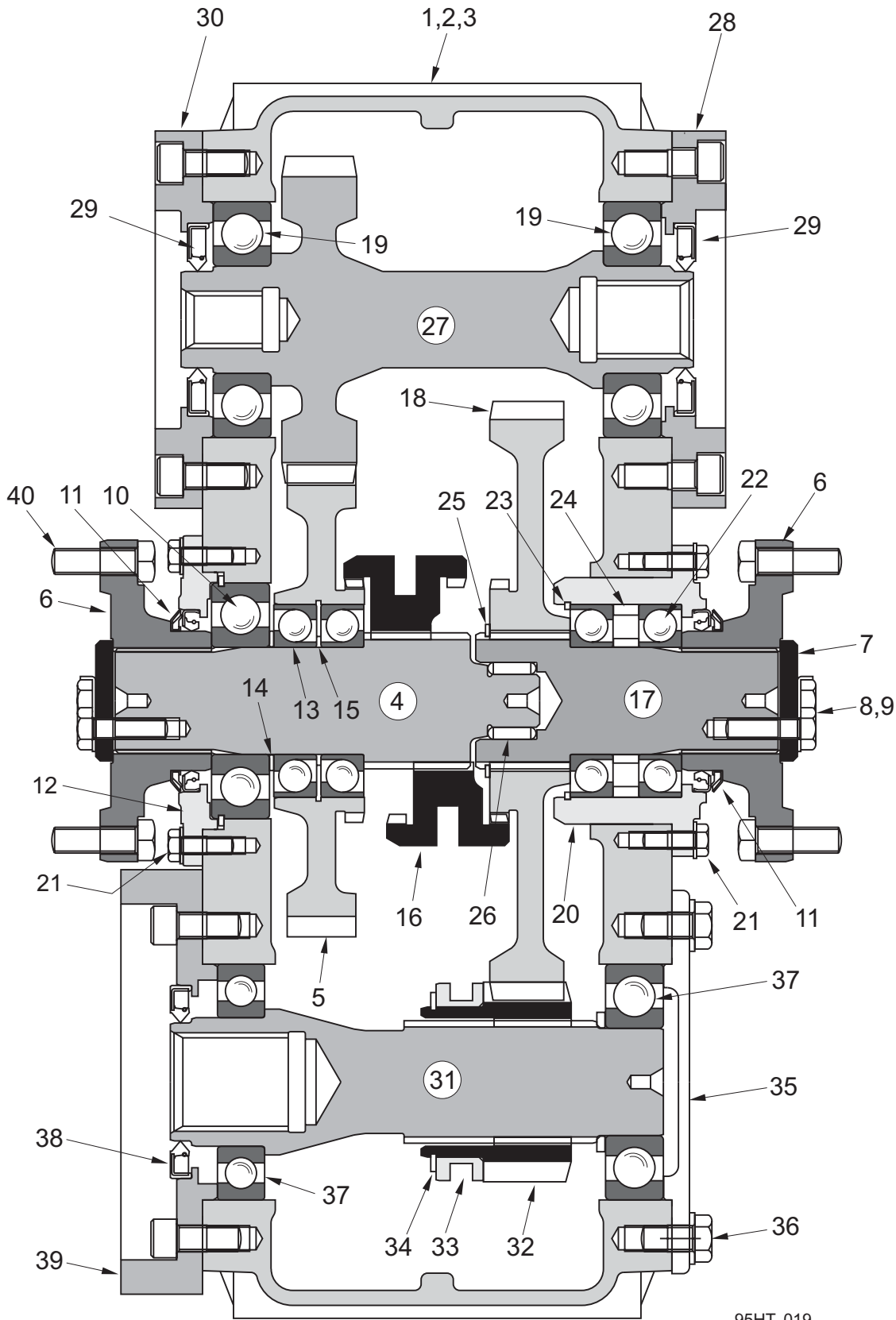


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Mk III Gearbox Assembly

Item No.	Part No.	Description	Quantity	
	29800-3	Gearbox Assembly comprising:		
1	29701-1	Case	1	
2	280195-1	Lid	1	
3	124-134	Screw M8 x 16	12	
	460-10	Washer - Spring M8	12	
	29770-1	Gear Set comprising items 4,5,6, 16,17,18, 27, 31,32.		
4	29706-1	Shaft - Input	1	
5	29708-1	Gear - Input	1	
6	29714-1	Drive Flange	2	
7	29518-1	Washer	2	
8	121-45	Screw M10F x 35	6	
9	29521-1	Tab Washer	2	
10	14-53	Ball Bearing - Snap Ring	1	
11	77-40	Combi Seal	2	
12	29722-1	Housing - Input	1	
13	14-37	Bearing - Angular Contact	2	
14	29732-1	Spacer - Input	1	
15	29512-1	Ring and Circlip	1	
16	29715-1	Sliding Dog Gear	1	
17	29767-1	Shaft - Output	1	
18	29766-1	Output Gear	1	
19	14-54	Ball Bearing	2	
20	29771-1	Housing - Output, See notes over page.	1	
21	124-37	Screw M8 x 25	14	
	460-10	Washer - Spring M8	1	
22	14-55	Bearing - Angular Contact	2	
23	28-36	Circlip - Internal	1	
24	29772-1	Spacer Assembly - Output Bearings Comprises Inner and Outer Spacers	1	
25	27-23	Circlip	1	
26	12-24	Needle Roller	17	
27	29746-1	Shaft - Trans Pump/Water Pump Drive	1	
28	29729-1	Adaptor Flange - Motor (Transmission)	1	
29	77-42	Oil Seal	2	
30	29728-1	Adaptor Flange - Pump (Fan)	1	
31	29712-1	Shaft - Trans. Motor Driven	1	
32	29765-1	Gear - Trans. Motor Driven	1	
>	33	29765-3	Sleeve	1
	34	27-13	Circlip	1

Mk III Gearbox Assembly



95HT. 019

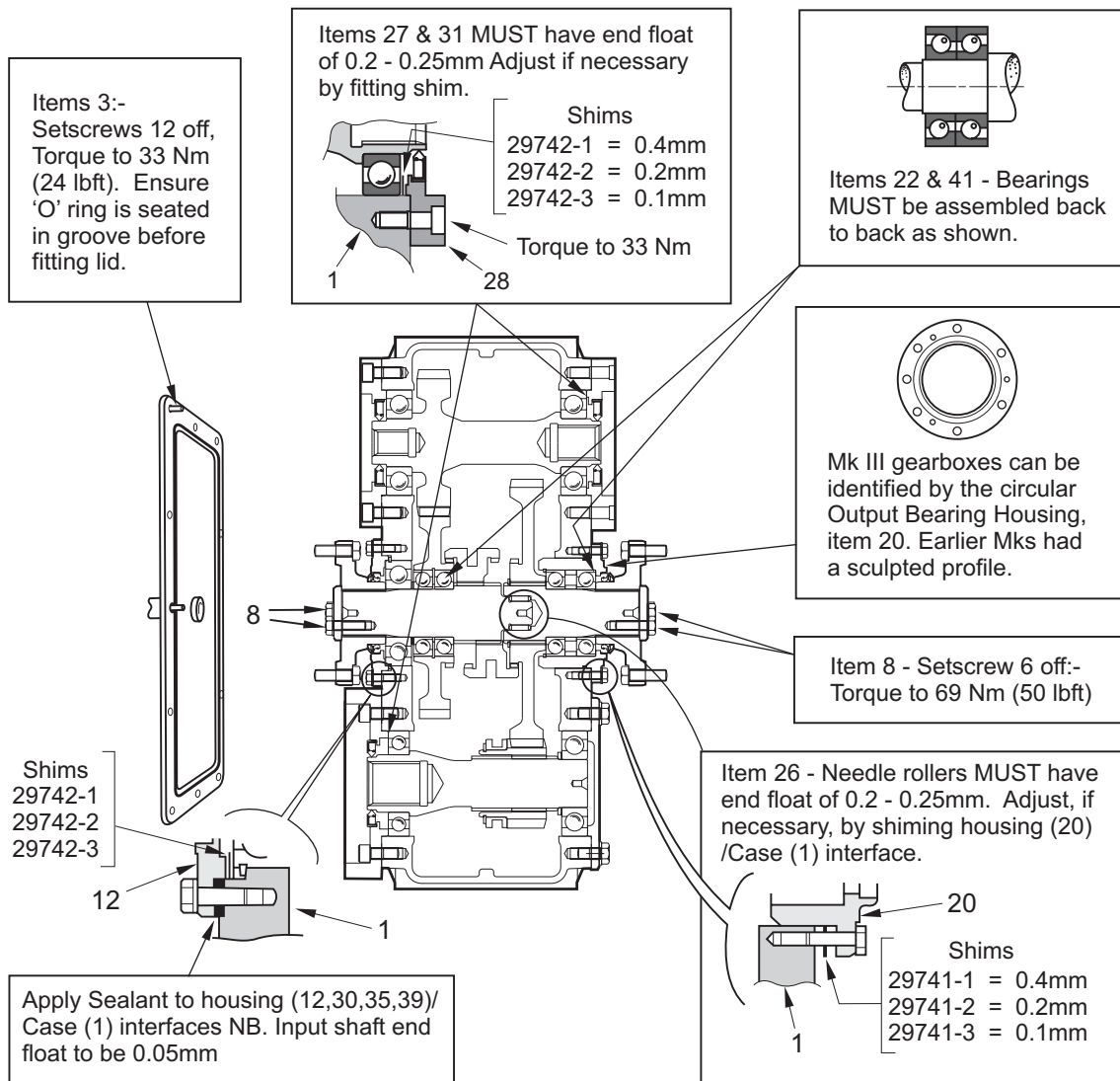
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Mk III Gearbox Assembly

Item No.	Part No.	Description	Quantity
35	29730-1	End Cap	2
36	124-201	Screw M12 x 25	4
	460-12	Washer - Spring M12	4
37	14-26	Ball Bearing	2
38	77-41	Oil Seal	1
39	29726-1	Flange - Motor Adaptor	1
40	121-81	Bolt M12f x 50	8
	419-12	Nut M12f Torque Prevailing	8

Notes

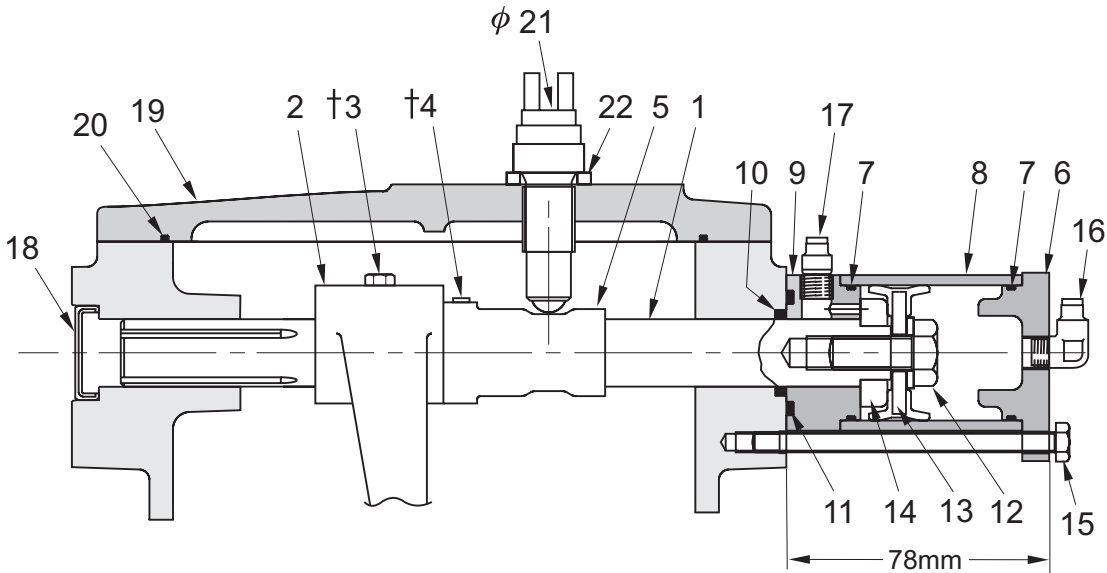
Mk I and Mk II gearboxes have never been fitted to VS machines



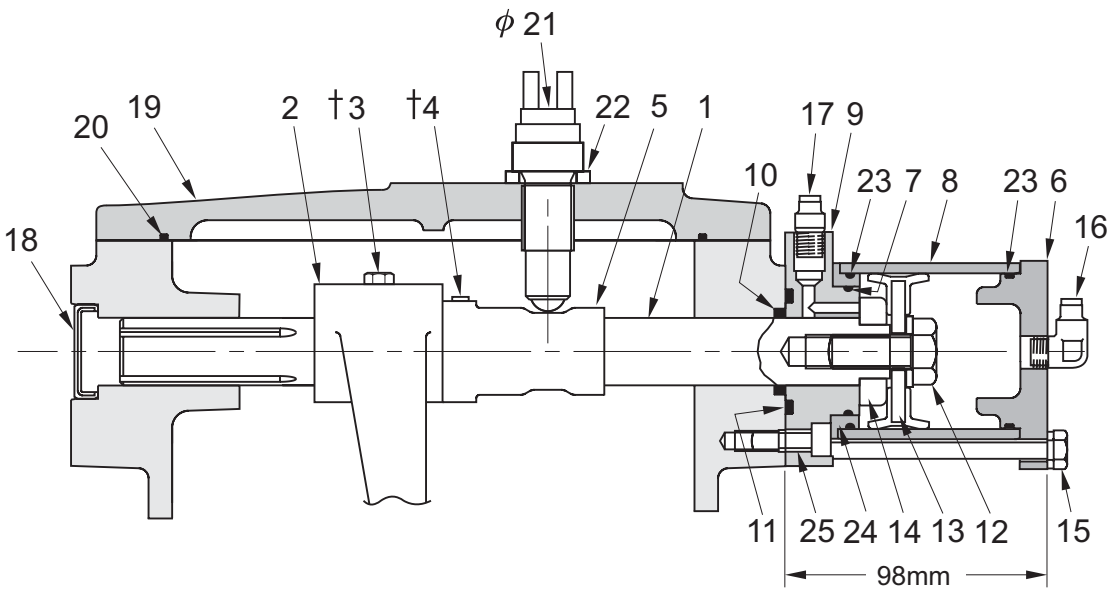
95HT. 023

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Gear Selector Assemblies



INPUT SELECTOR (PUMP DRIVE)



OUTPUT SELECTOR (MOTOR DRIVE)

HT. 0007-3

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Gear Selector Assemblies

Item No.	Part No. Input Selector	Part No. Output Selector	Description	Quantity Per Cylinder
1	29731-2	29731-1	Rod Air-shift	1
2	29523-1	29751-1	Yoke	1
† 3	29527-1	<	Bolt Retaining M10F	1
† 4	135-23	<	Grubscrew M6	1
5	29747-1	29748-1	Guide Sensor	1
6	29528-1	29763-1	Head	1
7	80-33	<	'O' Ring	2/1
8	29531-2	29764-1	Barrel	1
9	29529-1	29761-1	Gland	1
10	663-71	<	'O' Ring	1
11	80-55	<	'O' Ring	1
12	124-171	<	Setscrew M10 x 30	1
	455-11	<	Plain - Washer M10	1
13	28868-12	28868-15	Piston Seal	1
14	29533-1	<	Stroke Limiter	1
15	126-121		Setscrew M6 x 90	3
		124-123	Setscrew M6 x 100	3
	460-8	<	Washer - Spring M6	3
> 16	552-3	<	Adaptor Elbow 6 x 1/8" BSP	1
> 17	537-3	<	Adaptor 6 x 1/8" BSP	1
18	221-2	<	End Cap	1
19	280195-1		Lid Cover	1
20	40-82	<	'O' Ring	1
∅ 21	282054-1	<	Switch Sensor	1
22	29756-1	<	Sensor Spacer	1
23	N/A	80-265	'O' Ring	2
24	N/A	29762-1	Sleeve	1
25	N/A	129-93	Bolt M6 x 16 Cap. Hd.	3

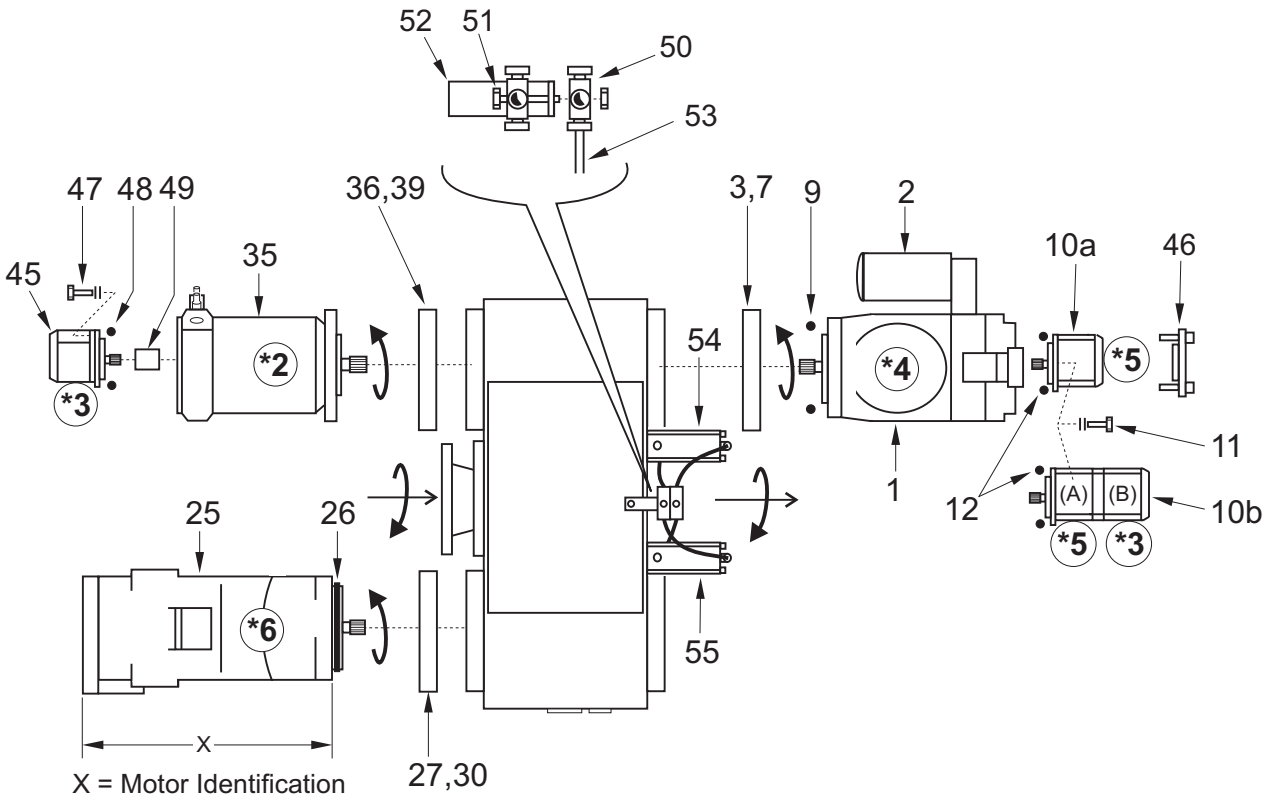
> † Apply Loctite 275 to items 3 and 4. Torque retaining bolt item 3 to 58 Nm (43 Lbft)

∅ Apply Thread Sealant Loctite 542 to item 21

Notes

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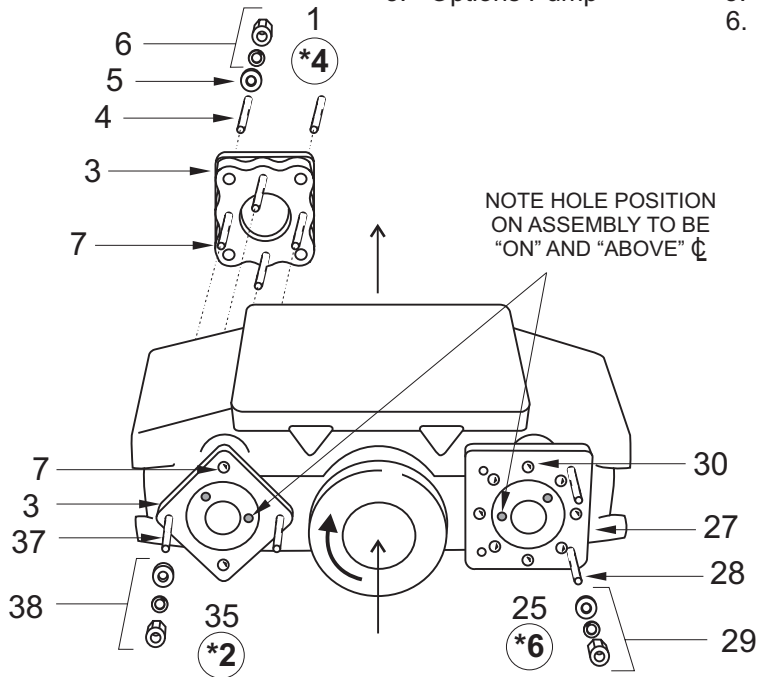
Pumps & Motors



X = Motor Identification
 374mm = 160cc Motor
 333mm = 110cc Motor

* Pump and motor identification numbers, 2 to 6, in balloons correspond with those used elsewhere in this chapter, i.e.:-

- | | |
|-------------------|-----------------------|
| 2. Fan Drive Pump | 4. Transmission Pump |
| 3. Options Pump | 5. Sweepgear pump |
| | 6. Transmission Motor |



MOUNTING FLANGES AND HARDWARE

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Pumps & Motors

BoM 950412

Item No.	Part No.	Description	Quantity
1	97161-1	Transmission Pump - 55 series (CCW)	1
	97161-2	Forward/Reverse Servo Valve + EDC (Service Item)	
	97161-3	EDC (Solenoid + 'Mil' Plug Service Items)	
2	224-15	Filter Element - (Service item)	
3	29729-1	Adaptor Flange	1
4	29569-1	Stud - Shankd M12 x 65	4
5	45014-8	Spacer Ø13 x 8	4
6	460-12	Washer - Spring	4
	420-16	Nut M12	4
7	129-183	Cap Hd. Setscrew M12 x 25	4
8	-		
9	79-99	'O' Ring	1

BoM 950413

10a	239-7	Pump - Sweepgear (14cc/rev CCW Rotation)	1
10b	239-33	Tandem Pump - (A) Sweepgear, (B) Options (CCW Rotation) (Used when there is insufficient room to fit item (45) 2 x 14cc/rev)	
11	103-39	Bolt 3/8" UNC x 1 1/4"	2
	455-11	Washer - Plain M10	2
	460-11	Washer - Spring M10	2
12	79-97	'O' Ring - (Spares Item)	1
13 - 24	-		

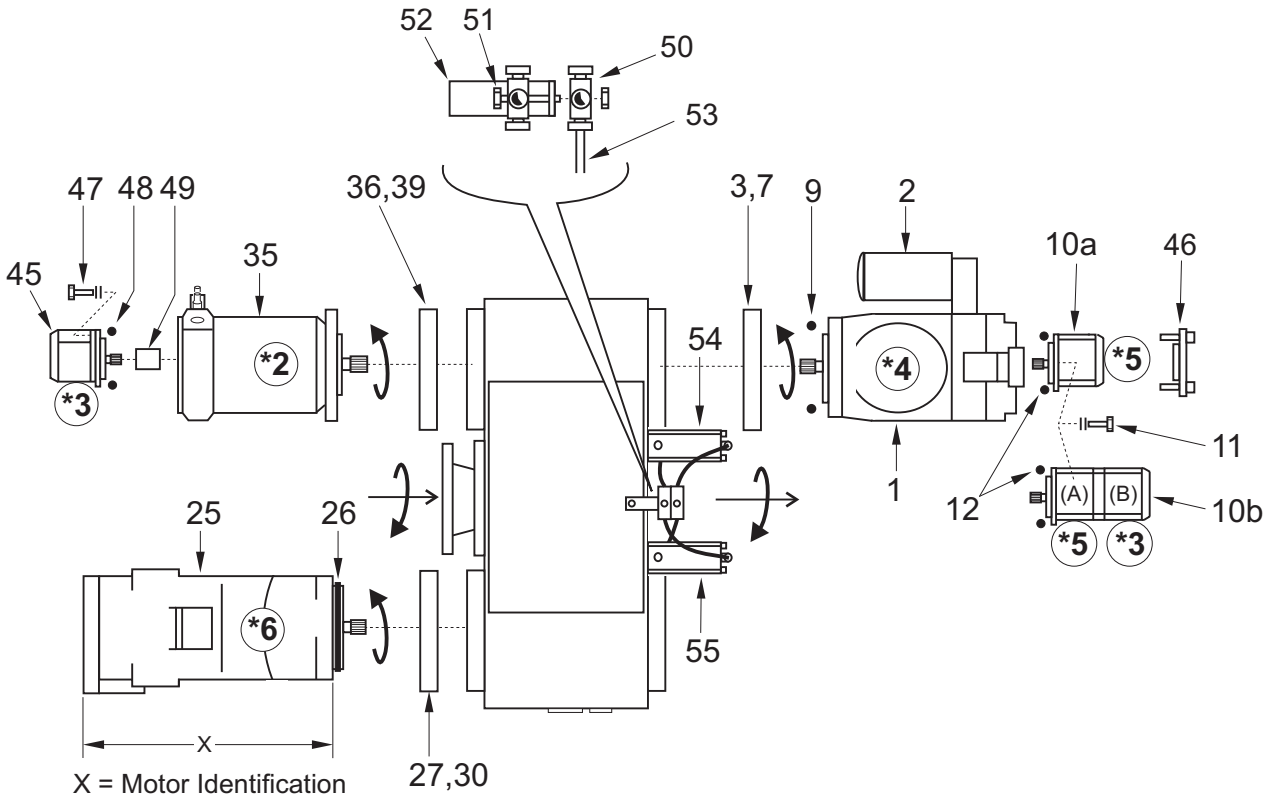
BoM 950412

25	29752-1	160cc Trans. Motor (HSR2) (CW Rotation) X = 374mm	1*
	29753-1	110cc Trans. Motor (HSR2) (CW Rotation) X = 333mm	1*
26	80-109	'O' Ring - (Spares item)	1
27	29726-1	Adaptor Flange	1
28	29758-1	Stud - Shankd M20 x 85	4
29	455-16	Washer - Plain M20	2
	460-16	Washer - Spring M20	2
	420-20	Nut M20	2
30	129-185	Cap Hd. Setscrew M12 x 30	8
31	-		

BoM 950412

35	29749-1	Pump - Fan Drive (CW Rotation)	1
36	29728-1	Adaptor Flange	1
37	29557-1	Stud - Shankd M12 x 80	2
38	455-12	Washer - Plain M12	2
	460-12	Washer - Spring M12	2
	420-16	Nut M12	2
39	129-183	Cap Hd. Setscrew M12 x 25	4

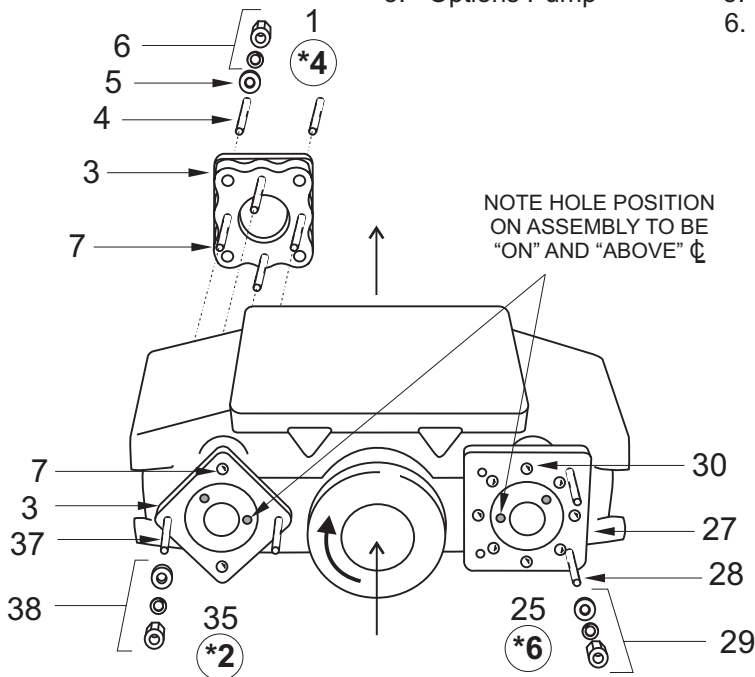
Pumps & Motors



X = Motor Identification
 374mm = 160cc Motor
 333mm = 110cc Motor

* Pump and motor identification numbers, 2 to 6, in balloons correspond with those used elsewhere in this chapter, i.e.:-

- | | |
|-------------------|-----------------------|
| 2. Fan Drive Pump | 4. Transmission Pump |
| 3. Options Pump | 5. Sweepgear pump |
| | 6. Transmission Motor |



MOUNTING FLANGES AND HARDWARE

95HT. 024

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Pumps & Motors

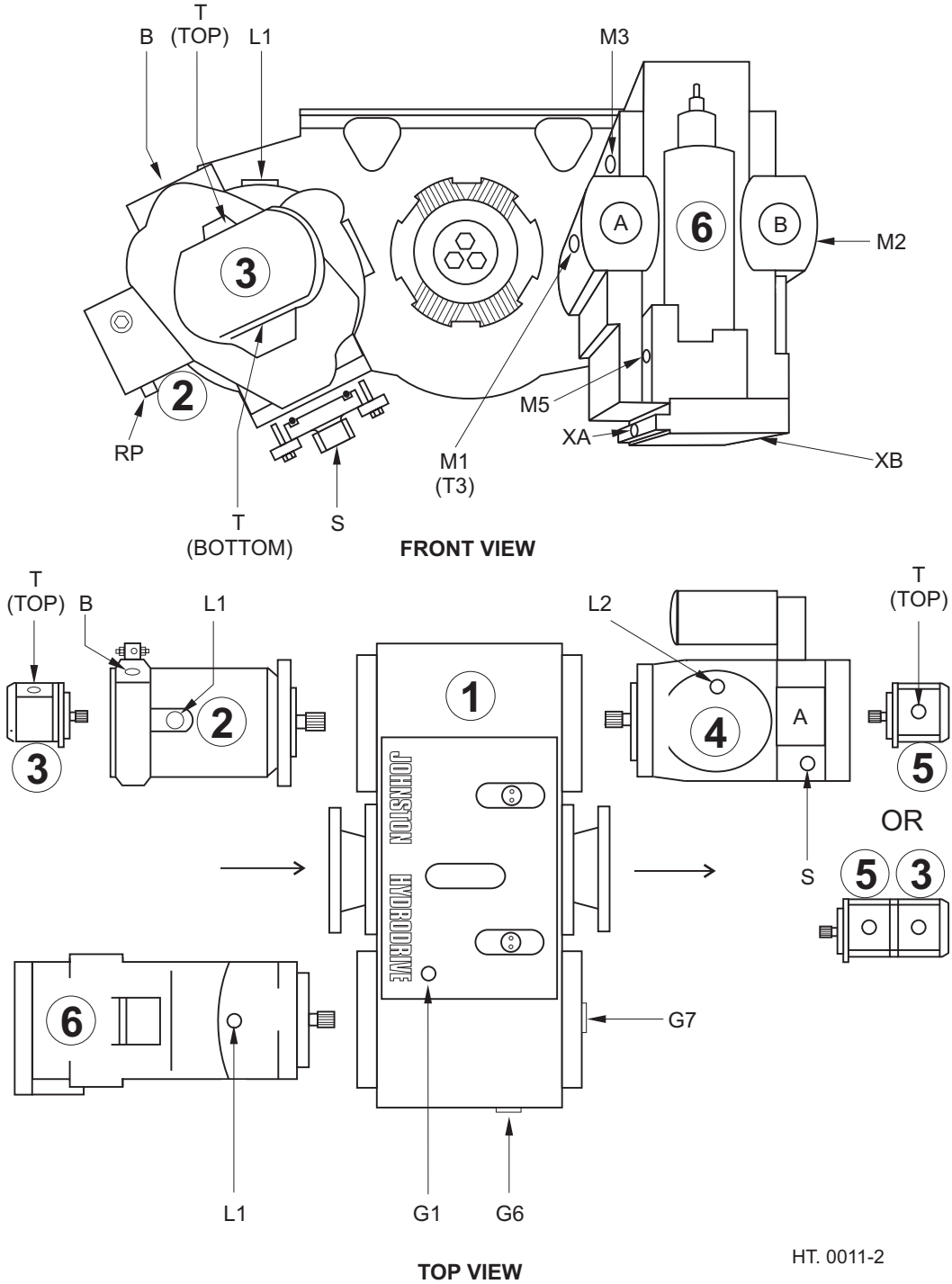
BoM 950411

Item No.	Part No.	Description	Quantity
45	239-11	Pump - Options (14.4cc/rev CW Rotation) 1	
46	-	Blanking Plate - Supplied with Item 35	
	129-154	Cap Hd. Screw M10 x 25	2
	460-11	Washer - Spring M10	2
47	103-39	Bolt 3/8"UNC x 1 1/4"	2
	455-11	Washer - Plain M10	2
	460-11	Washer - Spring M10	2
48	80-94	'O' Ring (Service item)] Spares	
49	294-22	Drive Adaptor - 9 x 23 Spline] Items	
50	527-3	Tee	2
51	124-112	Setscrew M6 x 45	1
	425-13	Nut M6 Nyloc	1
52	29559-1	Bracket - Mounting	1
53	273-20	Tubing Ø6mm Blue	0.6m
	4104-1	Sleeve	
	510-3	Nut	4
	511-3	Olive	4
54	-	Input selector assembly] See Gear Selector	
55	-	Output selector assembly] Assemblies	

Notes

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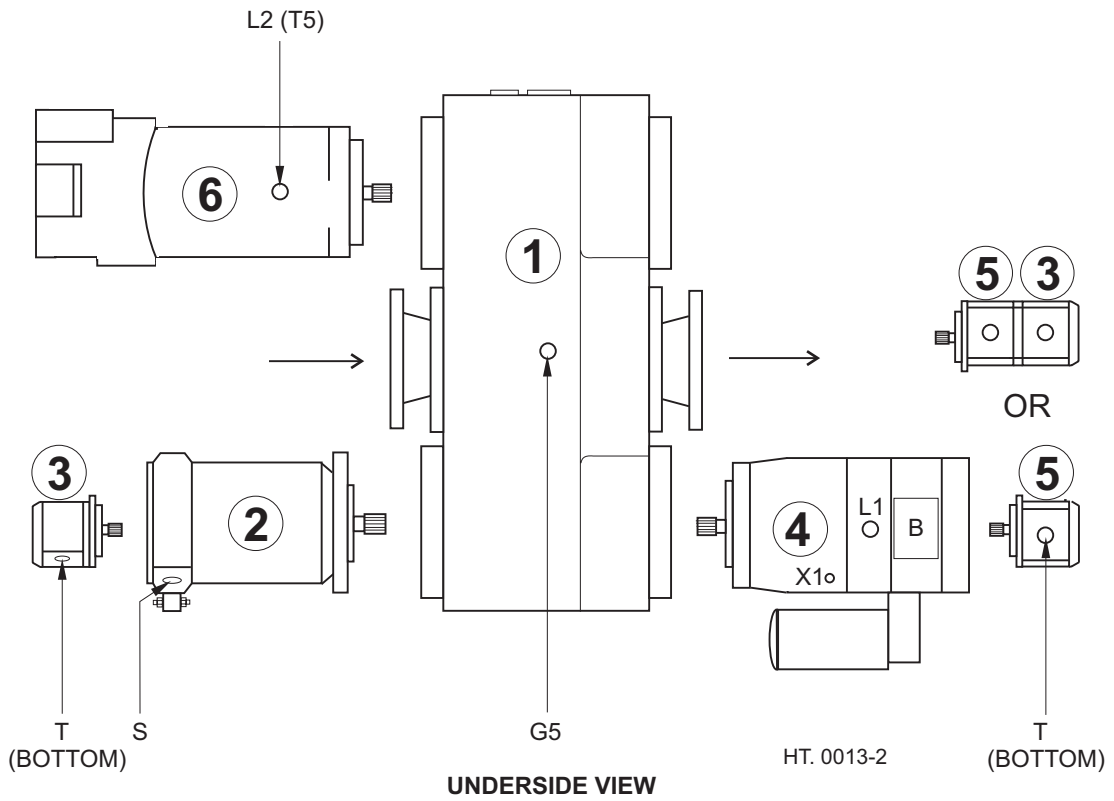
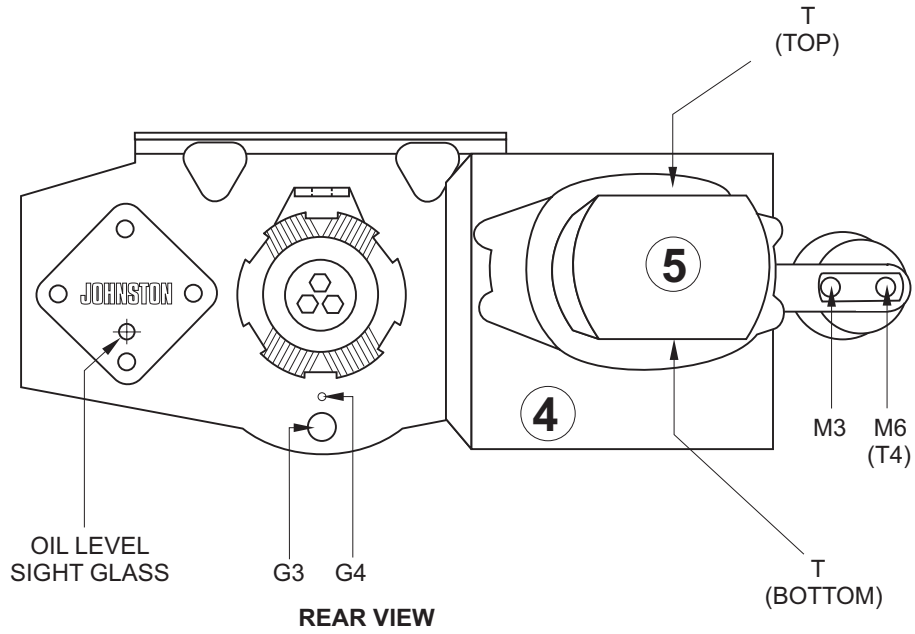
Port Fittings - Underside & Rear Views



HT. 0011-2

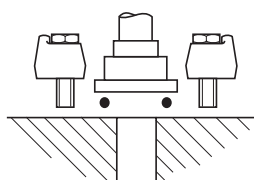
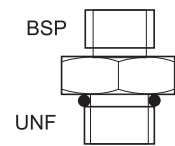
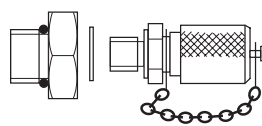
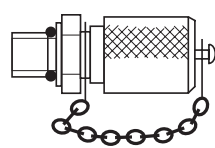
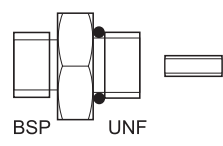
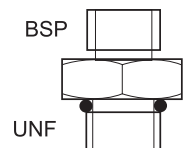
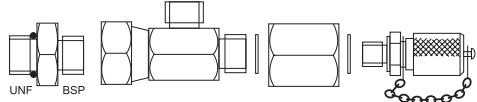
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Port Fittings - Underside & Rear Views



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Port Fittings
BoM 950412
Transmission Motor (Item 6)

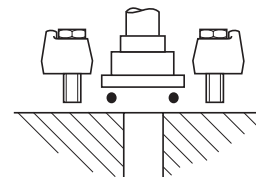
Port	Part No.	Description		
A & B	498-N09	1" H.P. Flange Kit - Comprising:-		
	40-74	'O' Ring Seal)Spares Item	1 off	
	N.S.S.	Flange Half	2 off	
	103-58	Bolt - Cap Head 7/16" UNC x 1 3/4"	4 off	
	450-30	Washer - Spring	4 off	
Tow Valve Option				
A & B	29757-1	Adaptor Block		
	151-100	Bolt 7/16" UNC x 3"		
	40-74	'O' Ring) Spares Item		
	263-4	Adaptor - 1/2" BSP		
L1 (Top)	499-4	Adaptor 1 1/16" UNF x 3/4" BSP for 110cc Motor		
	499-15	Adaptor 1 5/18" UNF x 3/4" BSP for 160cc Motor		
	79-18	'O' Ring Seal for 110cc Motor) Spares		
	80-?	'O' Ring Seal for 160cc Motor) Items		
L2 (Bottom)	90671-1	Test Point Adaptor 1 1/16" UNF for 110cc motor		
	66086-1	Test Point Adaptor 1 5/16" UNF for 160cc motor		
	79-18	'O' Ring Seal for 110cc Motor) Spares		
	80-54	'O' Ring Seal for 160cc Motor) Items		
	665-17	Test Point Valve		
	79-48	'O' Ring Seal) Spares Items		
M1 (Forward)	665-17	Test Point Valve		
	79-48	'O' Ring Seal) Spares Item		
M2 (Reverse)	29671-1	Adaptor 9/16" UNF x 1/4" BSP		
	79-48	'O' Ring Seal)Spares Item		
	28753-5	Orifice		
M3, M5 XA	499-2	Adaptor 9/16" UNF x 1/4" BSP		
	79-48	'O' Ring) Spares Item		
XB	79-48	'O' Ring) Spares Item		
	499-2	Adaptor 9/16" UNF x 1/4" BSP		
	255-11	Swivel Tee		
	457-17	Washer - Sealing	2 Off	
	2565-6	Adaptor G 1/4"		
	665-18	Test point G 1/4"		

Port Fittings

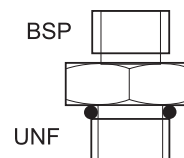
BoM 950412

Transmission Pump (Item 4)

Port	Part No.	Description	
A	498-N09	1" H.P. Flange Kit - Comprising:	
	40-74	'O' Ring Seal	1 off
	N.S.S.	Flange Half	2 off
	103-58	Bolt 3/8" UNC x 1 1/2"	4 off
	450-30	Washer - Spring)	4 off
B	498-N09	1" H.P. Flange Kit - Comprising:-	
	40-74	'O' Ring Seal	1 off
	N.S.S.	Flange Half	2 off
	103-58	Bolt 7/16" UNC x 1 3/4"	4 off
	450-30	Washer - Spring)	4 off



X1	499-2 79-13	Adaptor 9/16" UNF x G 1/4" 'O' Ring Seal) Spares Item
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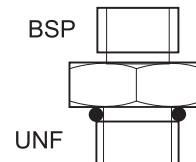


L1	499-4 79-18	Adaptor 1 1/16" UNF x G 3/4, includes:- 'O' Ring Seal) Spares Item
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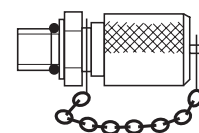
L2	499-4 79-8	Adaptor 1 5/16" UNF x G 3/4", includes:- 'O' Ring Seal) Spares Item
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M3	499-2 79-48 255-11	Adaptor 9/16" UNF x G 1/4" 'O' Ring Seal) Spares Item Swivel Tee
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S	499-5 80-54	Adaptor 1 5/16" UNF x G 1", includes:- 'O' Ring Seal) Spares Item
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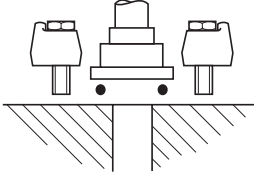
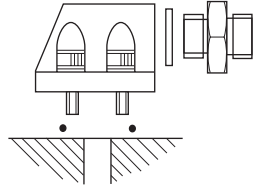
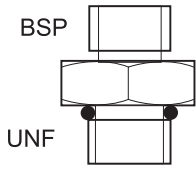
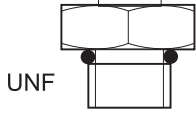


M6	665-17 79-48	Test Point Valve 'O' Ring Seal) Spares Item
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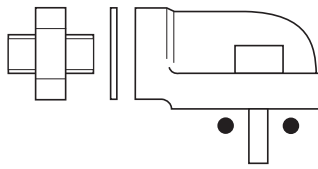


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Port Fittings
BoM 950412
Fan Drive Pump (Item 2)

Port	Part No.	Description	Spares Items	Quantity	Diagram
B	498-N03	1" L.P. Flange Kit - Comprising:-		1 off	
	79-78	'O' Ring Seal		2 off	
	N.S.S.	Flange Half		4 off	
	103-41	Bolt 3/8" UNC x 1 1/2"			
	450-29	Washer - Spring	4 off		
S	802853-1	Adaptor Block			
	79-85	'O' Ring Seal			
	151-115	Cap Hd. Screw 1/2" UNC x 1 1/2"			
>	450-31	Washer - Spring			
	263-8	Adaptor 1 1/4" BSP			
	451-111	Washing - Sealing			
L	499-12	Adaptor 7/8" UNF x G 1/2", includes:-			
	79-8	'O' Ring Seal) Spares Item			
RP	499-1	Adaptor 7/16" UNF x G 1/4", includes:-			
	79-13	'O' Ring Seal) Spares Item			

BoM 950413 and 950414
Sweep Gear Pump (Item 5)

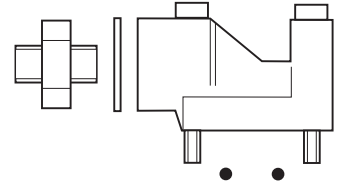
T	262-7	Elbow 1" BSP)		
Inlet	79-34	'O' Ring Seal) Spares		
(Top)	129-123	Cap Hd. Screw M8c x 20mm) Items		
	460-10	Washer - Spring M8)		
	265-10	Adaptor 3/4" x 1" BSP			
	451-22	Washer - Sealing 1" BSP			
T	262-4	Elbow 1/2" BSP)		
Outlet	79-34	'O' Ring Seal) Spares		
(Bottom)	129-123	Cap Hd. Screw M8c x 20mm) Items		
	460-10	Washer - Spring M8)		
	263-4	Adaptor 1/2" BSP			
	451-19	Washer - Sealing 1/2" BSP			

Port Fittings

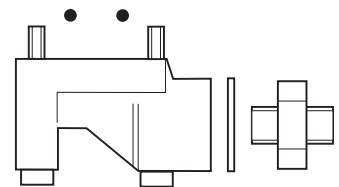
BoM950413

Options Pump (Item 3)

Port	Part No.	Description
T	247-1	Elbow 1/2" BSP
Outlet (Top)	79-34	'O' Ring Seal)
	51-55	Cap Hd. Screw) Spares 5/16" UNC x 2 1/4") Items
	450-28	Washer - Spring)
	263-4	Adaptor 1/2" BSP
	451-19	Washer - Sealing 1/2" BSP



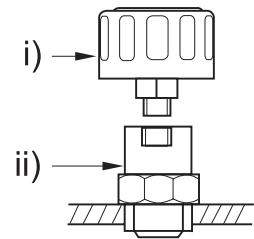
T	247-2	Elbow 3/4" BSP)
Inlet (Bottom)	79-34	'O' Ring Seal) Spares
	151-55	Cap Hd. Screw) Items 5/16" UNC x 2 1/4")
	450-28	Washer - Spring
	263-6	Adaptor 3/4" BSP
	451-21	Washer - Sealing 3/4" BSP



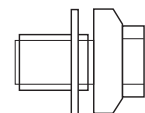
BoM 950411

Gearbox (Item 1)

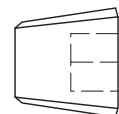
G1	13538	i) Breather
	41963-1	ii) Adaptor
	451-18	Washer - Sealing



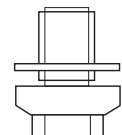
G2	7684	Collar Plug 1/2" BSP
	451-19	Washer - Sealing 1/2" BSP



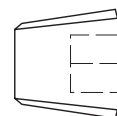
G4	5259	Plug 1/8" BSPT - Socket Hd.
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G3, G5	54-50	Magnetic Plug 1/4" BSP
	451-124	Washer - Copper



G6	18892	Plug 3/8" BSPT - Socket Hd.
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G7	87-25	Oil Level Gauge
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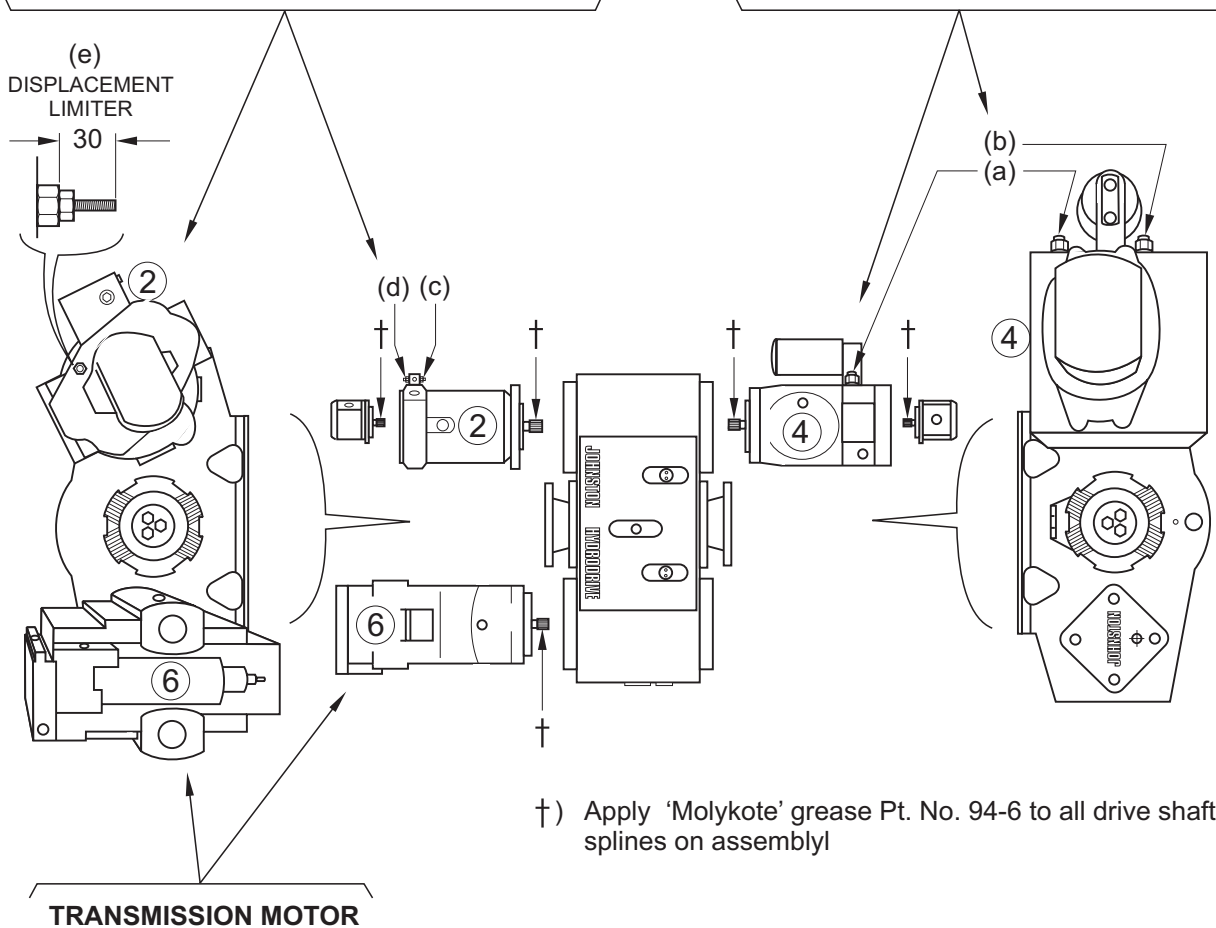
Settings and Assembly Details

2. FANDRIVE PUMP:-

- c) "Standby" differential pressure setting
- d) Main relief valve maximum pressure setting
- e) Set displacement limiter dimension to 30mm

4. TRANSMISSION PUMP:-

- Charge Pump pre-set to **24 Bar**
- a) Forward drive relief setting **420 Bar**
- b) Reverse drive relief setting **350 Bar**

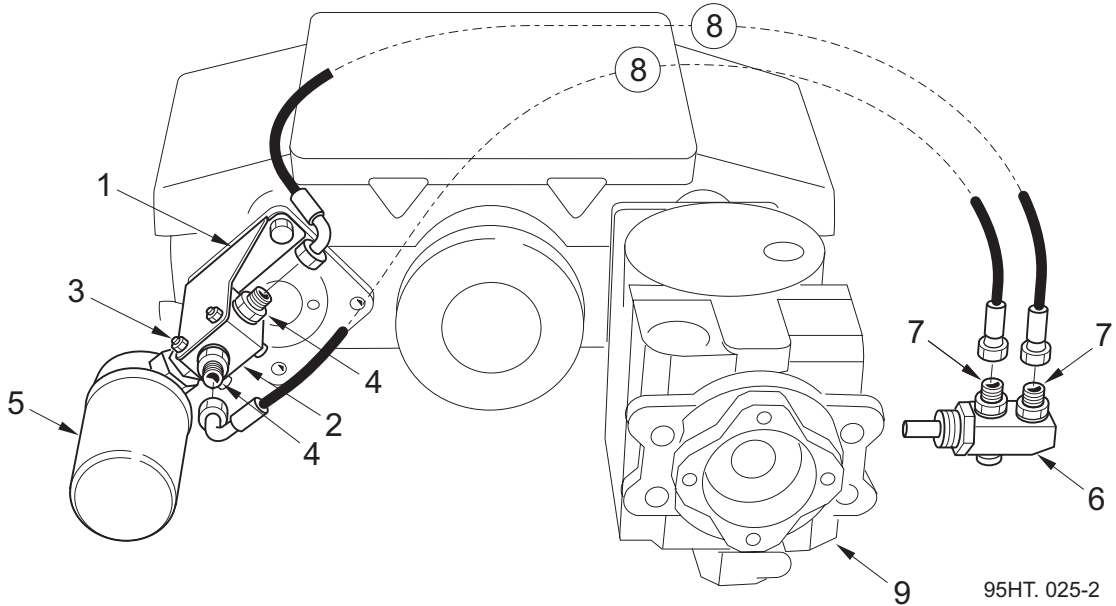


- Test assembly for leaks
- Test 'free movement' of sliding gears at 1.0 bar maximum air pressure
- Test switches for on/off operation/engagement

95HC. 022

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Remote Transmission Filter

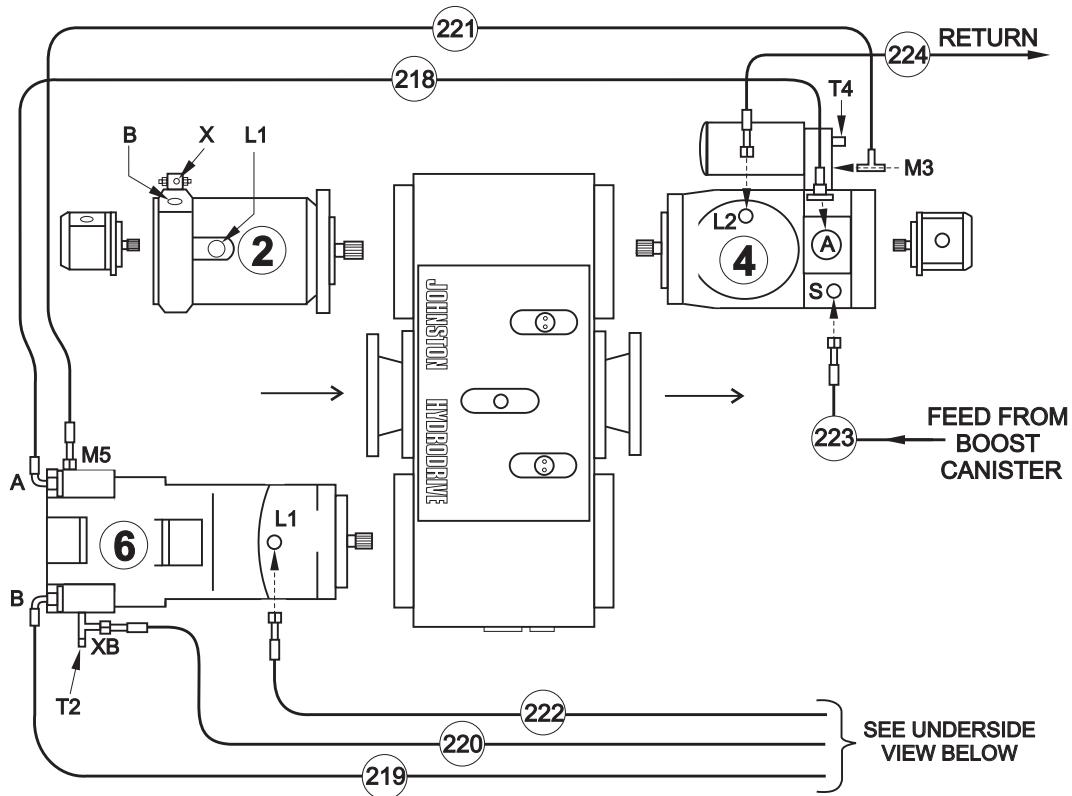


Item No.	Part No.	Description	Quantity
	810094-1	Remote Filter Installation comprising:	
1	800661-1	Filter Bracket	1
2	97840-1	Adaptor Block	1
3	123-90	Bolt M6 x 60	2
	455-8	Washer - Plain	4
	425-13	Nut - Nyloc M6	2
4	499-12	Adaptor	2
5	283926-1	Oil Filter Assembly	-
6	97841-1	Filter Remote Block (Replaces Filter on Pump)	1
7	499-12	Adaptor	2
8	HC08002-115	Hydraulic Hose	2
9	-	Transmission Pump	-

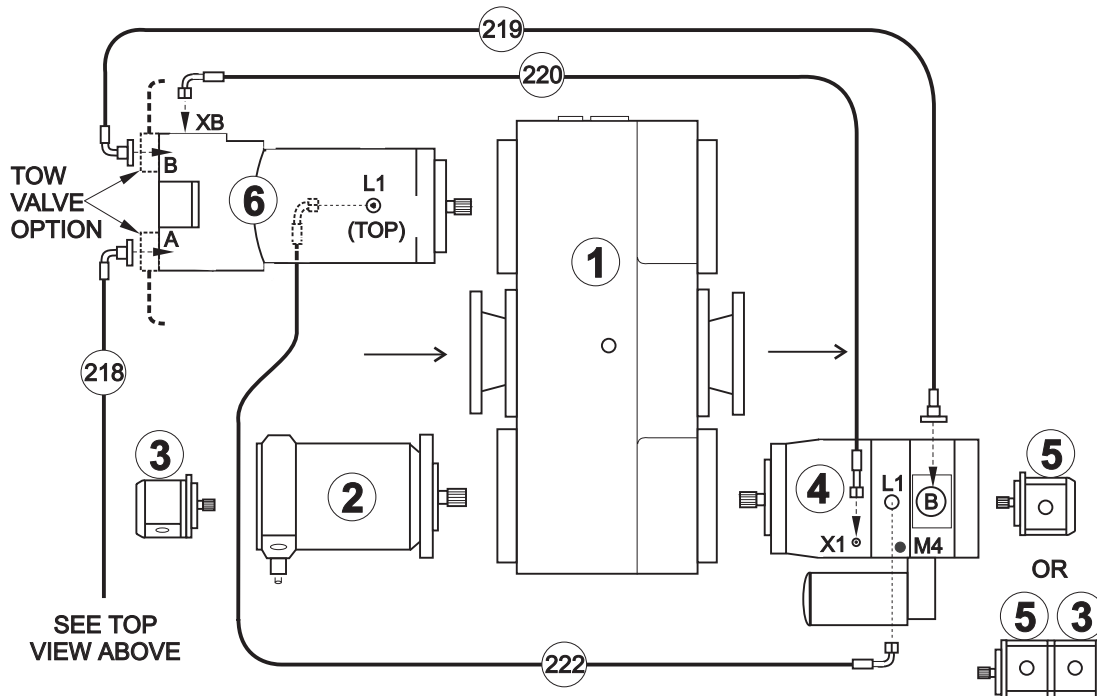
Notes

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Hydrodrive Hydraulic Hoses



TOP VIEW



UNDERSIDE VIEW

95HT. 022

- | | | | |
|---|----------------|---|--------------------|
| 1 | Gearbox | 4 | Transmission Pump |
| 2 | Fan Drive Pump | 5 | Sweepgear Pump |
| 3 | Options Pump | 6 | Transmission Motor |

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Hydrodrive Hydraulic Hoses

BoM 950414

Item No.	Part No.	Description
2	-	Fan Drive Pump
3	-	Options Pump
4	-	Transmission Pump
5	-	Sweepgear Pump
6	-	Transmission Motor
218	HB16148-117-275	1" Hydraulic Hose
219	HB16148-200-275	1" Hydraulic Hose
220	HF04002-140	1/4" Hydraulic Hose
221	HF04002-150	1/4" Hydraulic Hose
222	HE12063-113-310	3/4" Hydraulic Hose
*223	HE16023-170-190	1/4" Hydraulic Hose
*224	HE12002-151	1/4" Hydraulic Hose

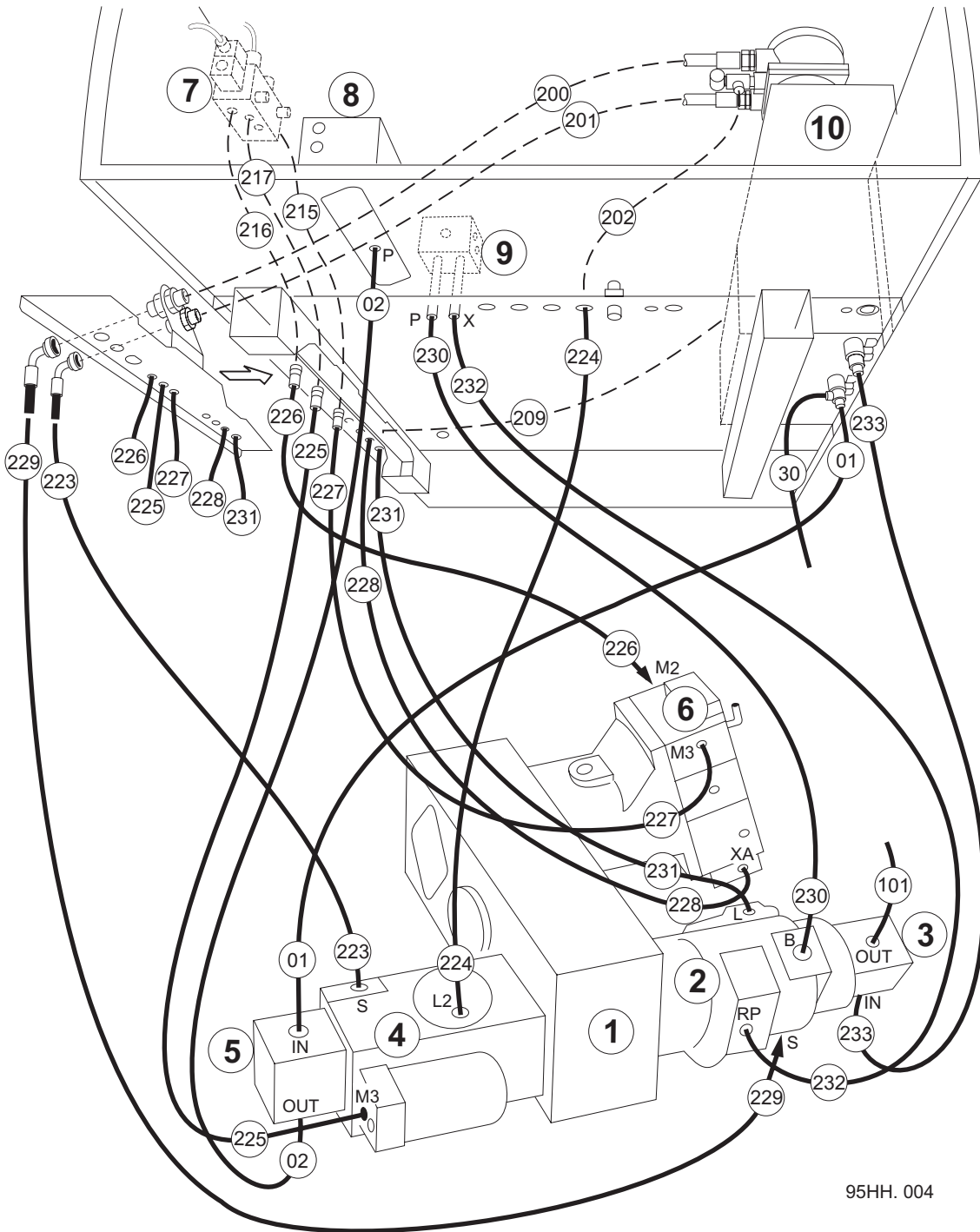
Notes

Hose item numbers correspond with those in diagram SH525z01 in Chapter 8 of the Maintenance Section.

*Hoses 223 and 224 see Hydrodrive Transmission Installation diagram over the page.

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Hydrodrive Installation



95HH. 004

Key - Components with Circuit Diagram references - See Maintenance Section Chapter 8

- | | |
|---------------------------------|--|
| 1. Gear Box | 6. Transmission Motor - SH525z01 |
| 2. Fan Drive Pump - SH524z01 | 7. Antiskid Module - SH525z01 |
| 3. Options Pump - SH528a02 | 8. Sweepgear Valve Block - SH523z01 |
| 4. Transmission Pump - SH525z01 | 9. Fan Drive Valve Block - SH524z01 |
| 5. Sweepgear Pump - SH531b01 | 10. Hydraulic Oil Reservoir - SH521b01 |

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Hydrodrive Installation - Hydraulic Hoses

BoM 950414

Item No.	Part No.	Description	Diagram
01	HE16003-300	1" Hydraulic Hose	Hose shown on SH531b01
02	-	See Emergency Discharge Pump - Chapter 28	

BoM 950714

30	-	See Emergency Discharge Pump - Chapter 28	
----	---	---	--

BoM 950514

101	-	See Options Pump Valve Block Chapter 28	
200	-		
201	-		
202	-	See Fan Tub Hydraulic Hoses Section 22.HI	
209	-		
215	-		
216	-		
217	-		

BoM 950414

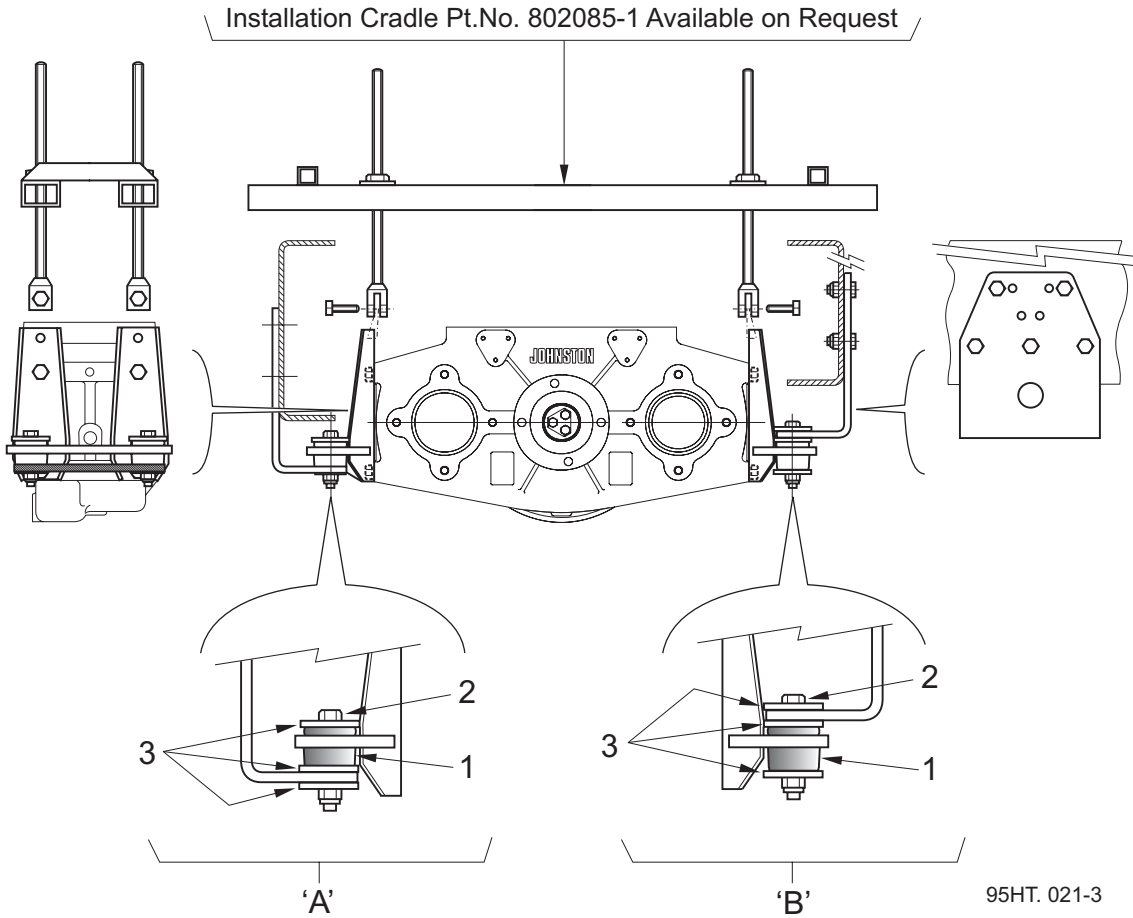
223	HE16023-170-190	1" Hydraulic Hose	
224	HE12002-151	3/4" Hydraulic Hose	
225	HFO4003-104	1/4" Hydraulic Hose	These hoses are shown on SH525z01
226	HFO4003-114	1/4" Hydraulic Hose	
227	HFO4003-114	1/4" Hydraulic Hose	
228	HFO4003-114	1/4" Hydraulic Hose	
229	HE20001-214	1 1/4" Hydraulic Hose	
230	HF12307-100	3/4" Hydraulic Hose	These hoses are shown on SH525z01
231	HCO8002-118	1/2" Hydraulic Hose	
232	HFO4002-124	1/4" Hydraulic Hose	
233	HE16001-75	1" Hydraulic Hose	

Notes

See Maintenance Section Chapter 8 for Hydraulic Diagrams.

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Gearbox installation



'A' - Some chassis have above bracket mounting
 'B' - Some chassis have below bracket mounting

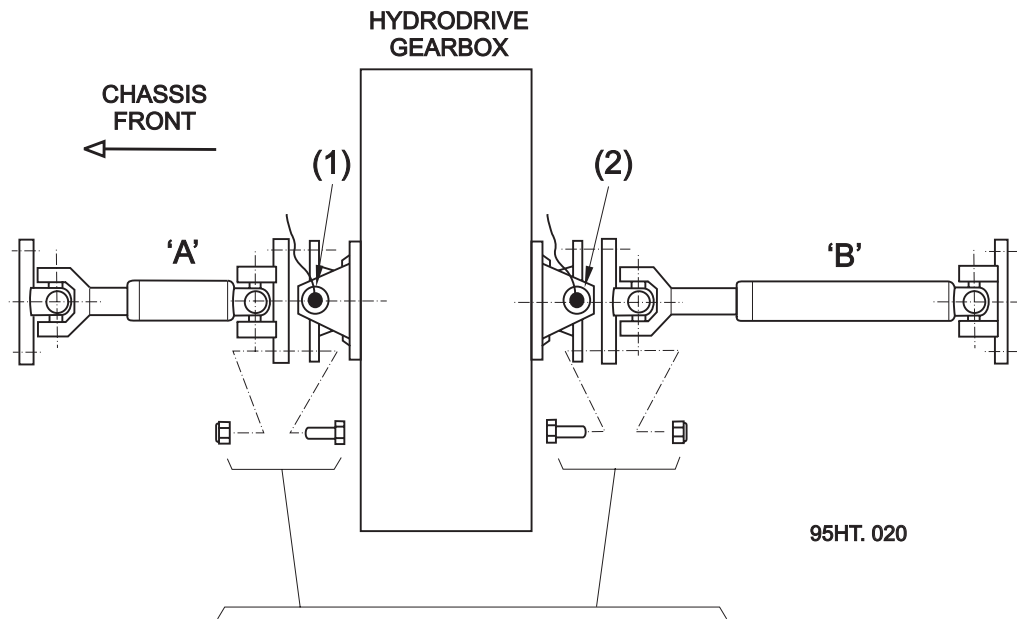
Item No.	Part No.	Description	Quantity
	801089	Gearbox Support Installation drawing (Reference)	
1	290-11	Rubber Mount	4
2	123-156	Bolt M12 x 90	4
	425-16	Nut - Nyloc M12	4
3	90449-1	Washer	12

Chassis	Installation Drawing
Mercedes 13/5	807520
AF LF-55-220 & 180	806622
MAN 15	808226
Renault 12	807979
DAF 12 (3150 W/B)	810405
DAF 12 (3550 W/B)	809819

>
>

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Prop Shafts & Sensors



95HT. 020

124-109 Setscrew M12 x 50 8 off
426-6 Nut M12 Philidas 8 off

Torque to 117 Nm (86 lbf)

Chassis

A & B Propshaft Drawing Ref.

Mercedes 13/5	807383
DAF LF-55-220 & 180	806884
MAN 15	808225
Renault 12	807907

Sensors

Item No	Part No.	Description
1	280856-1	Engine Speed Sensor Assembly
	282810-1	Mounting Bracket
2	280856-1	Road Speed Sensor Assembly
	282424-1	Mounting Bracket

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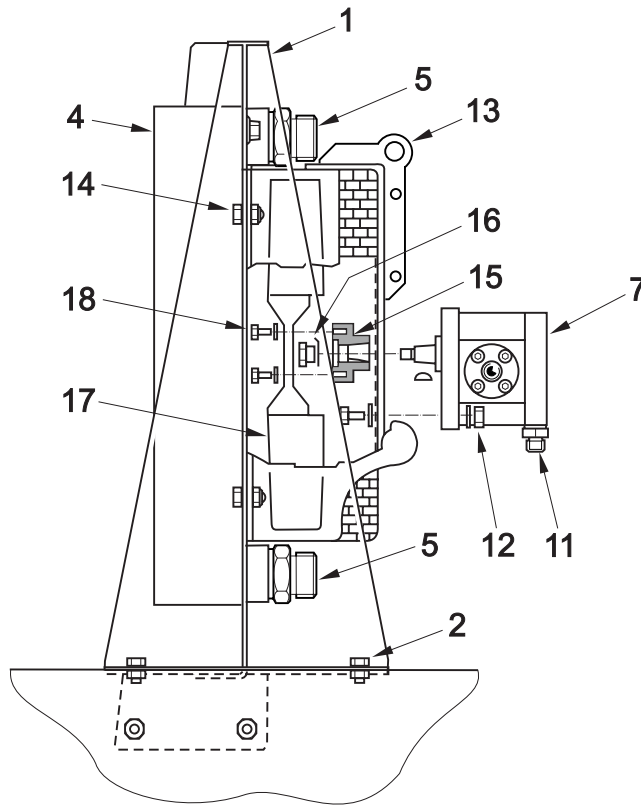
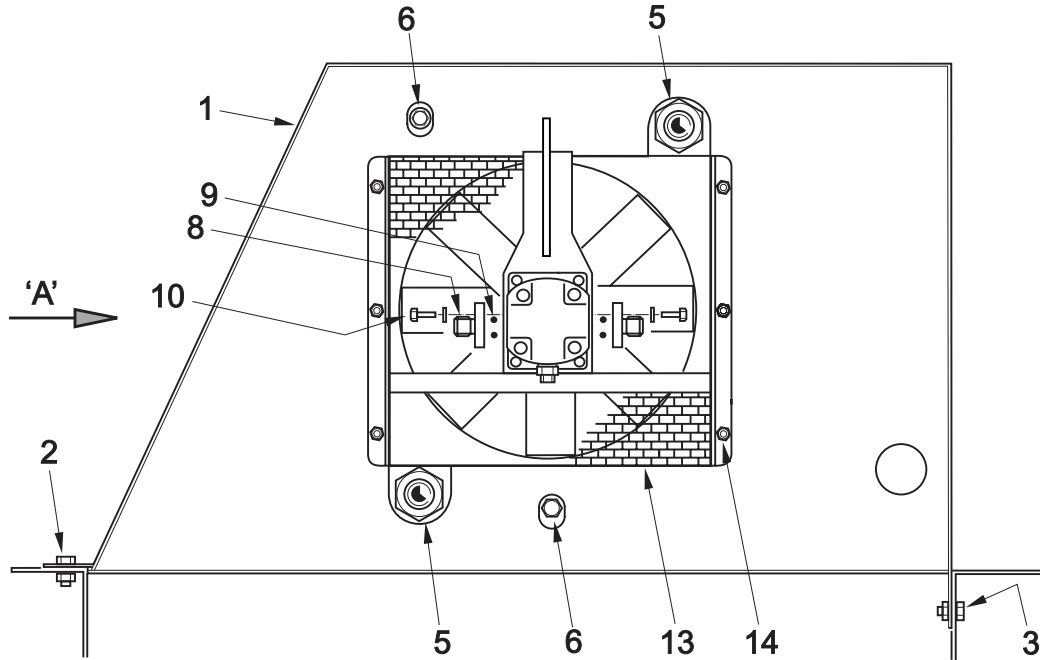
22.HI

Hydrostatic Impeller Drive, Cooler and Controls

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Hydraulic Hoses	
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Oil Cooler and Fan Installation



VIEW ON ARROW 'A'

95HC. 023

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Oil Cooler and Fan Installation

Bom 950511

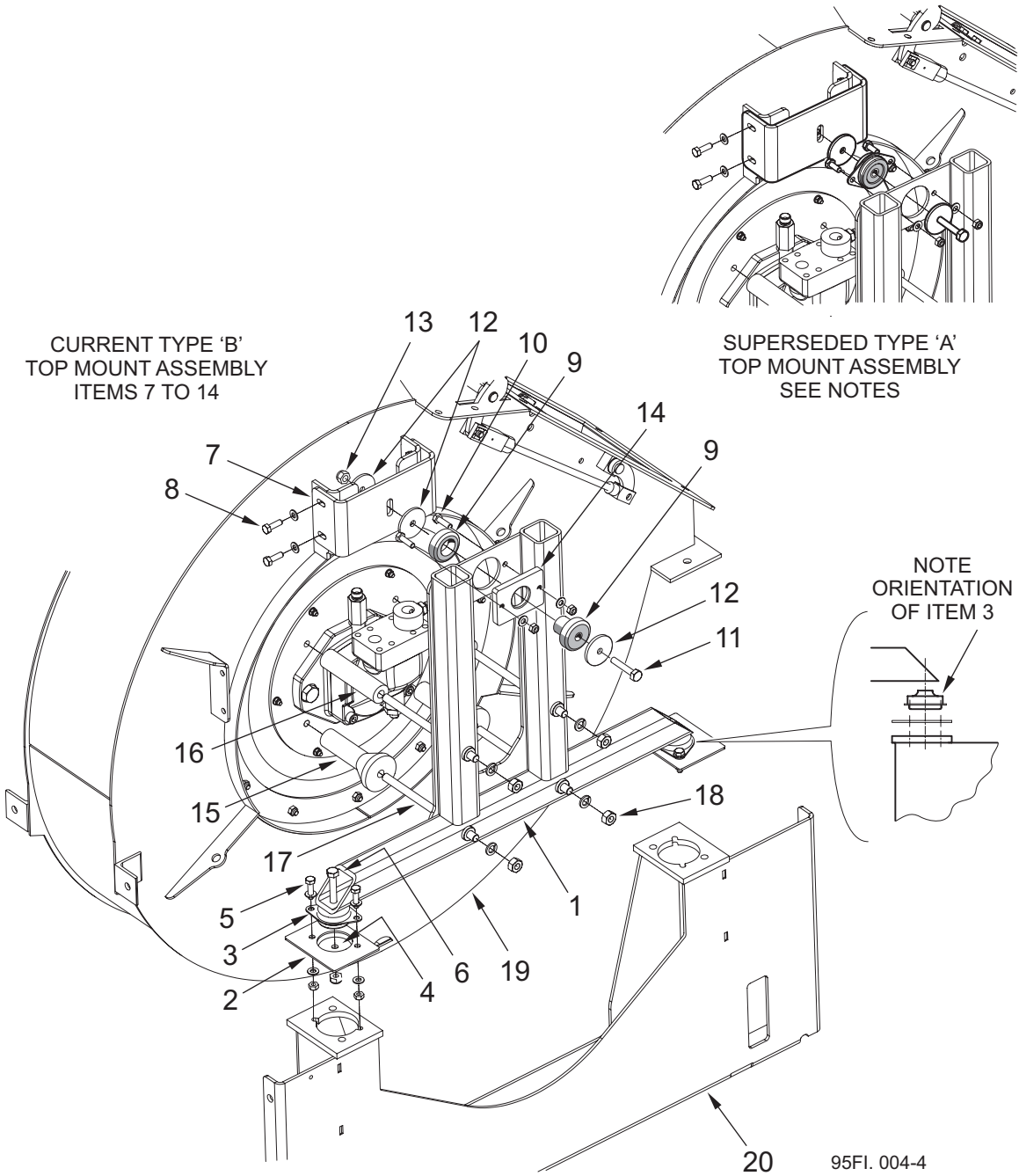
Item No.	Part No.	Description	Quantity
1	66075-1	Oil Cooler Shroud	1
2	124-167	Screw M10 x 20	2
	460-11	Washer - Spring	2
3	124-167	Screw M10 x 20	2
	425-15	Nut - Nyloc M10	2
4	90536-1	Oil Cooler	1
5	265-11	Adaptor 1 1/4" BSP x 1" BSP	2
	451-111	Washer - Sealing 1 1/4" BSP	2
6	54-3	Plug - With Integral Seal	2
> *7	295046-1	Oil Cooler Motor	1
8	90549-1	Adaptor - Special	2
9	79-34	'O' Ring	2
10	151-50	Capscrew 5/16" UNC x 3/4"	8
	450-28	Washer - Spring 5/16"	8
11	263-2	Adaptor 1/4" BSP	1
	451-17	Washer - Sealing	1
12	124-141	Screw M8 x 35	4
	460-10	Washer - Spring	4
13	90532-1	Motor Mount and Shroud	1
14	124-137	Screw M8 X 25	6
	425-14	Nut - Nyloc M8	6
> 15	283925-1	Boss - Fan Drive	1
16	-	Nut) Supplied	1
	-	Tab Washer) with motor	1
17	90829-1	Cooling Fan	1
18	124-103	Screw M6 x 20	4
	460-8	Washer - Spring	4

Notes

* Previous Oil Cooler Motor 70540-1 no longer available

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Fan Drive Mount Assembly



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Fan Drive Mount Assembly

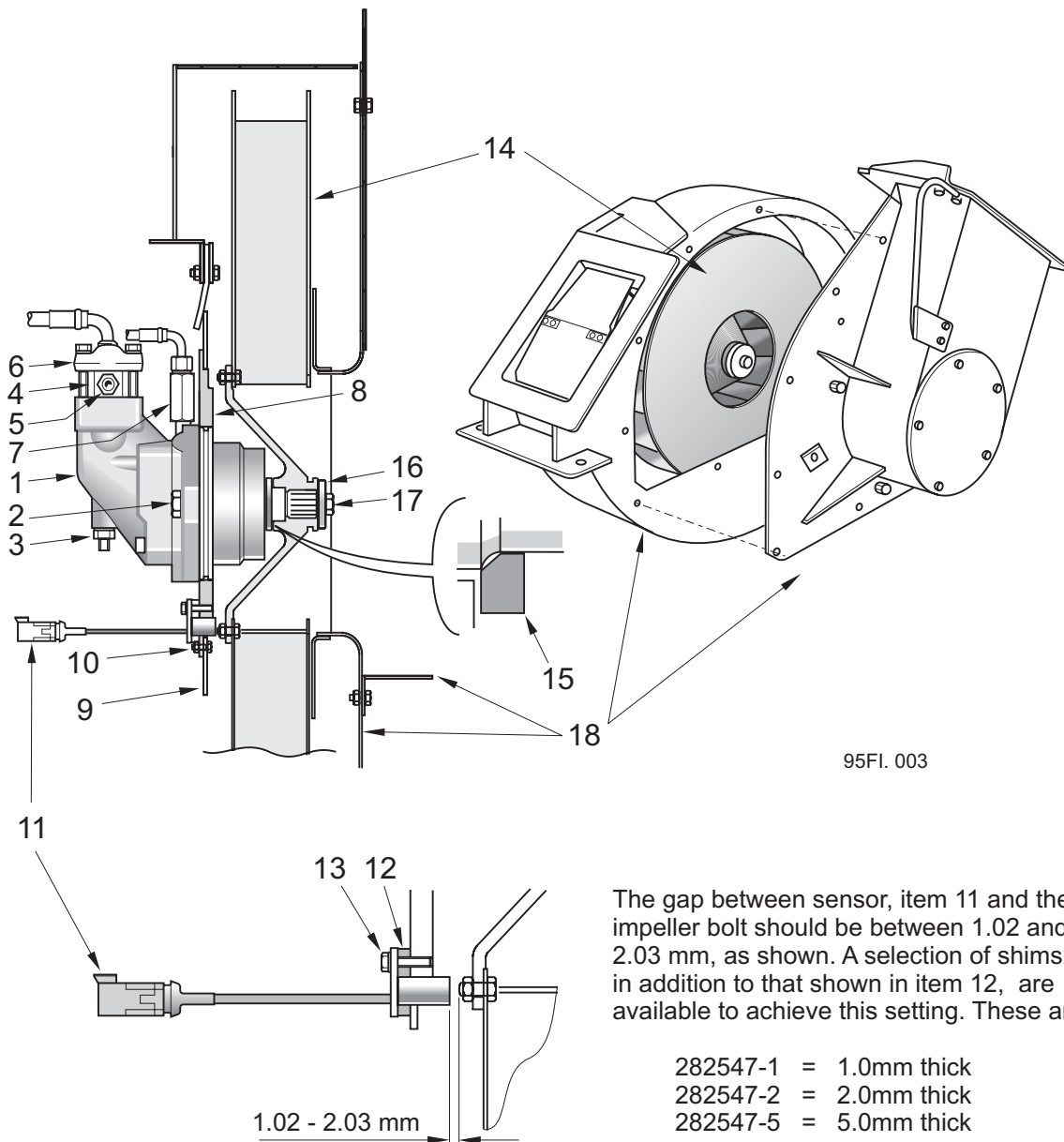
IBoM 950513, Drg: 282415-1

Item No.	Part No.	Description	Quantity	
1	282405-1	Fan Drive Frame	1	
2	282407-1	Adaptor Plate	1	
3	290-29	Anti-vibration Mount	2	
4	282885-1	Rebound Washer	2	
5	124-139	Screw M8 x 30	4	
	460-10	Washer - Spring M8	4	
	455-10	Washer - Plain M8	4	
	420-14	Nut - M8	4	
6	123-131	Bolt M10 x 55	2	
	425-15	Nut - Nyloc M10	2	
	457-5	Washer - Large M10	2	
7	284018-1	Top Mount Plate	1	
8	124-135	Screw M8 x 20	4	
	455-10	Washer - Plain	4	
9	290-45	Anti-vibration Mount	1	
10	124-141	Screw M8 x 35	2	
	455-10	Washer - Plain M8	2	
	425-14	Nut - Nyloc M8	2	
11	123-156	Bolt M12 x 90	1	
>	12	284026-1	Rebound Washer	3
>	13	425-16	Nut - Nyloc - M12	1
	14	284011-1	Mount Spacer	1
	15	66049-1	Spacer - Tapered	2
	16	66048-1	Spacer - Parellel	2
	17	66071-1	Stud M12 x 215	4
	18	420-16	Nut M12	4
		460-12	Washer - Spring M12	4
	19	-	Fancase - See Section 22.CP	
	20	-	Rear Cradle - See Section 22.CP	

Notes

When upgrading machines with the superseded type 'A' top mount to the current type 'B' arrangement see Technical Bulletin TB 1406.

Fan Drive Motor Installation



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Fan Drive Motor Installation

BoM 950513

Item No.	Part No.	Description	Quantity
1	78184-1	Fan Motor	1
2	124-269	Screw M16 x 35	2
3	90949-1	Adaptor - Vent Line	1
	451-8	Washer - Sealing	1
4	29667-1	Adaptor	2
	79-32	'O' Ring	1
5	263-2	Adaptor 1/4" BSP	1
	451-17	Washer - Sealing	1
* 6	498-N08	Flange Kit - See notes below	2
7	66104-1	Adaptor 3/8" x M14	1
	451-112	Washer - Spring	1
8	66072-2	Motor Mount	1
9	66073-1	Mask	1
10	124-103	Screw M6 x 20	6
	460-8	Washer - Spring	6
	425-13	Nut - Nyloc M6	6
11	280856	Speed Sensor	1
12	282547-10	Shim x 10 Thick	1
13	124-109	Bolt M6 x 35	1
	460-8	Washer - Spring	1
14	280830-2	Fan Impeller x 800 Dia	1
15	78401-1	Spacer	1
16	78404-1	Washer	1
17	124-205	Screw M12 x 35	1
	460-12	Washer- Spring	1
18	-	Fan Case and Fittings - See VT/VS Section 22:CP	

Notes

* Bolts and washers supplied with Flange Kits item 6 must be replaced with the following:-

123-131	Bolt M10 x 55 - Port 'A' (with adaptor item 4)	4 off
123-128	Bolt M10 x 40 - Port 'B'	4 off
460-11	Washer - Spring	8 off

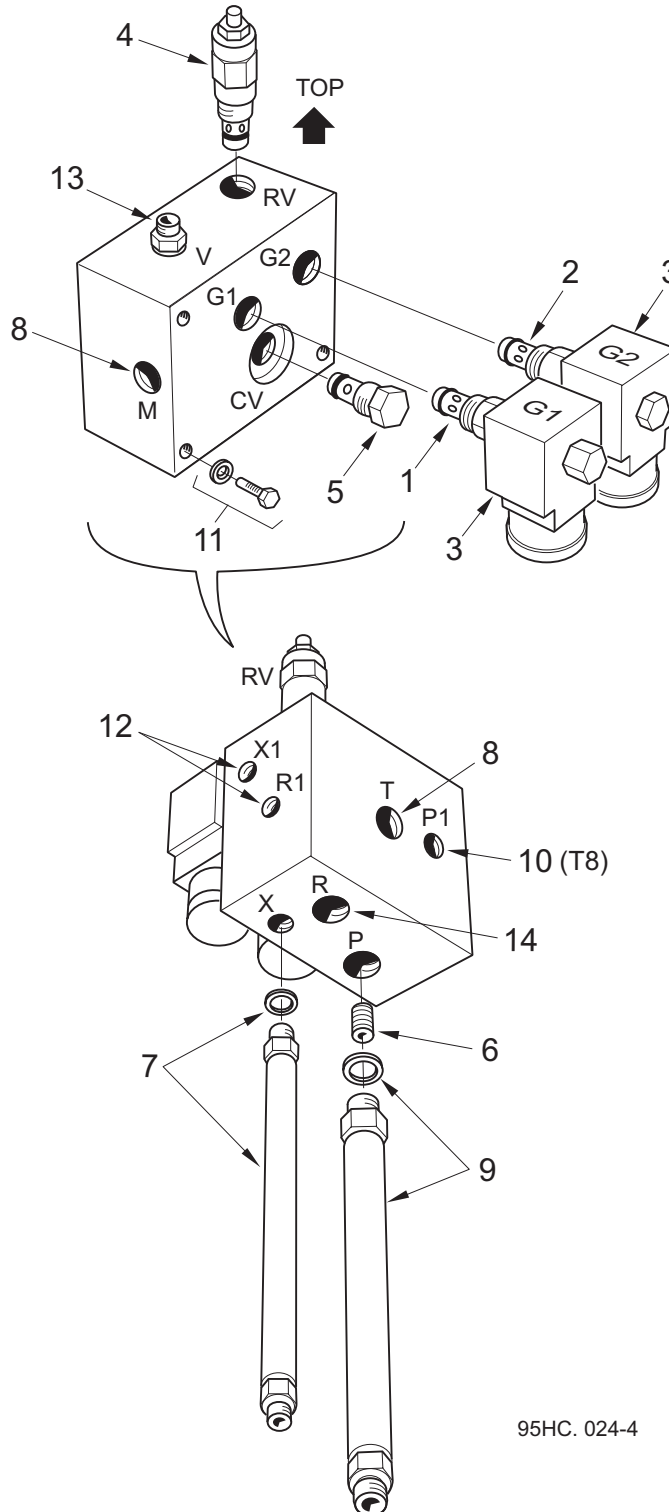
See Maintenance section Chapter 12, Fan Impeller, when fitting a replacement fan.

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Fan Drive Block - Current

Identification

This current assembly has a yellow/gold anodized block whereas the superseded one had a natural aluminium finish. See notes.



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Fan Drive Block - Current

BoM 950511

Item No.	Part No.	Description	Quantity
	283647-12	Valve Block Assembly - 12v)	Comprising items 1 to 6
	283647-24	Valve Block Assembly - 24v)	
1	847-65	Valve Cartridge NO	1
2	847-45	Valve Cartridge NC	1
3	847-3	Coil - 12v	2
	847-68	Coil - 24v	2
4	847-78	Relief Valve Cartridge	1
5	847-11	Check Valve Cartridge	1
6	847-67	Orifice	1
>	7	281712-1	Extension Pipe 1/4" BSP
	451-17	Washer - Sealing 1/4" BSP	1
8	263-6	Adaptor 3/4" BSP	2
	451-21	Washer - Sealing 3/4" BSP	2
9	281649-1	Extention Pipe 3/4" BSP	1
	451-21	Washer - Sealing 3/4" BSP	1
10	665-6	Test Point Valve	1
11	124-132	Setscrew M8c x 12mm	3
	460-10	Washer - Spring	3
12	5104	Collar Plug 1/8" BSP	2
	451-4	Washer - Sealing 1/8" BSP	2
13	265-2	Adaptor 3/8" x 1/4" BSP	1
	451-17	Washer - Sealing 1/4" BSP	1
>	14	6587-1	Adaptor 3/4" BSP
>	451-21	Washer - Sealing 3/4" BSP	1

'O' Ring Seal Kit for items 2 - 5

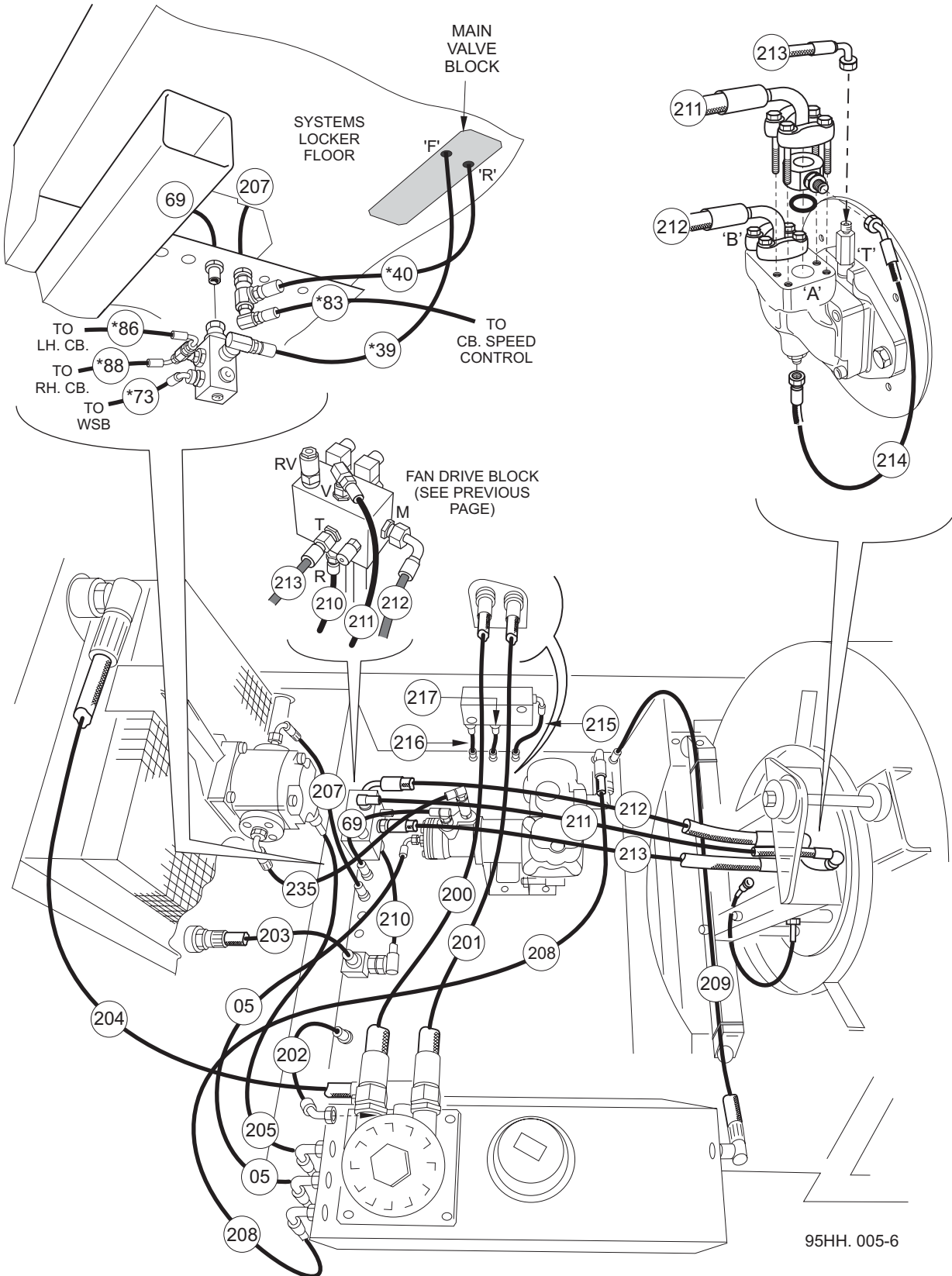
Notes

The previous Fan Drive Block is shown in Superseded Parts at the end of this chapter.

See Technical Bulletin TB 1342 for the introduction of the new block.

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Fan Tub - Hydraulic Hoses



95HH. 005-6

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Fan Tub - Hydraulic Hoses

BoM 950514

Item No.	Part No.	Description	Diagram
> 200	HE20000-108	1 1/4" Hydraulic Hose	These hoses are shown on SH521b01
201	HE16000-108	1" Hydraulic Hose	
202	HE12001-68	3/4" Hydraulic Hose	
203	HE16003-90	1" Hydraulic Hose	
204	HE16000-65	1" Hydraulic Hose	
208	HCO4002-180	1/4" Hydraulic Hose	
05	HCO4002-105	1/4" Hydraulic Hose	These hoses are shown on SH522/523z01
69	HCO8003-40	1/2" Hydraulic Hose	
205	HCO4003-85	1/4" Hydraulic Hose	
207	HCO8002-75	1/2" Hydraulic Hose	
235	HCO8002-91	1/2" Hydraulic Hose	
209	HCO8003-135	1/2" Hydraulic Hose	These hoses are shown on SH524z01
210	HE12003-42	3/4" Hydraulic Hose	
211	HF12011-101	3/4" Hydraulic Hose	
212	HF12052-102-270	3/4" Hydraulic Hose	
213	HCO6002-113	3/8" Hydraulic Hose	
214	HCO4001-45	1/4" Hydraulic Hose	
215	HFO4002-41	1/4" Hydraulic Hose	These hoses are shown on SH525z01
216	HFO4000-34	1/4" Hydraulic Hose	
217	HFO4000-34	1/4" Hydraulic Hose	

Notes

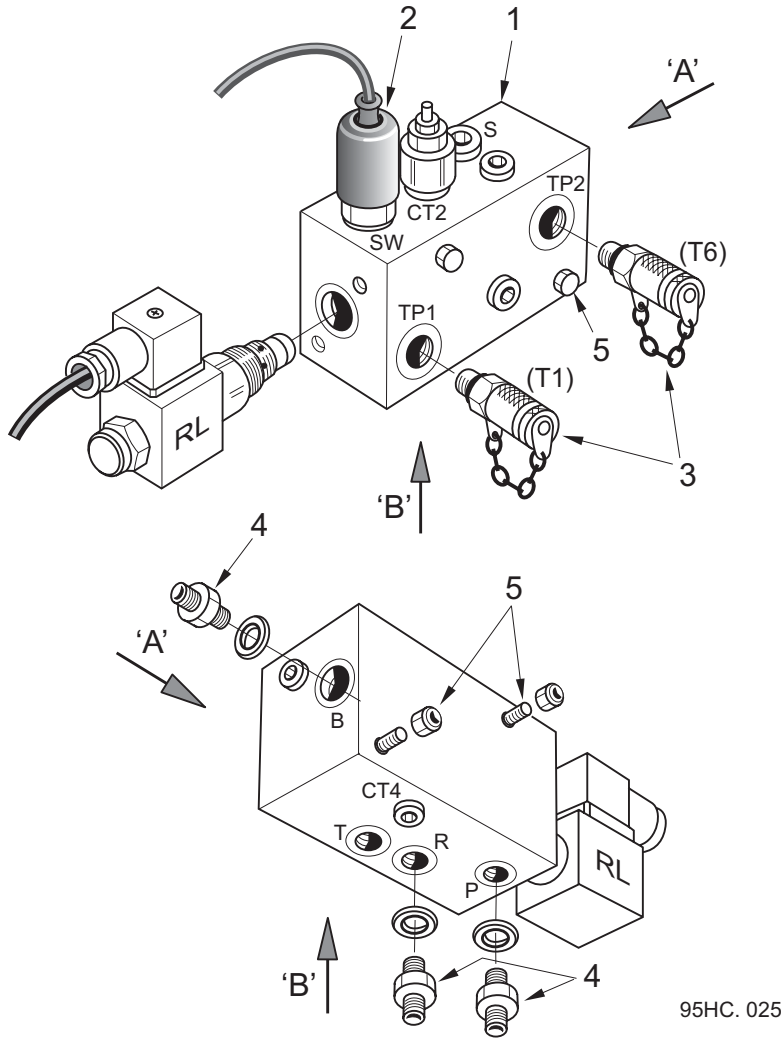
See Maintenance Section Chapter 8 for Hydraulic Diagrams.

*For hoses 39 and 73 see Chapter 26, WSB Installation - Hydraulic Hoses.

*For hoses 40, 83, 86 and 88 see Chapter 24, CB Installation - Hydraulic Hoses.

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Antiskid Module

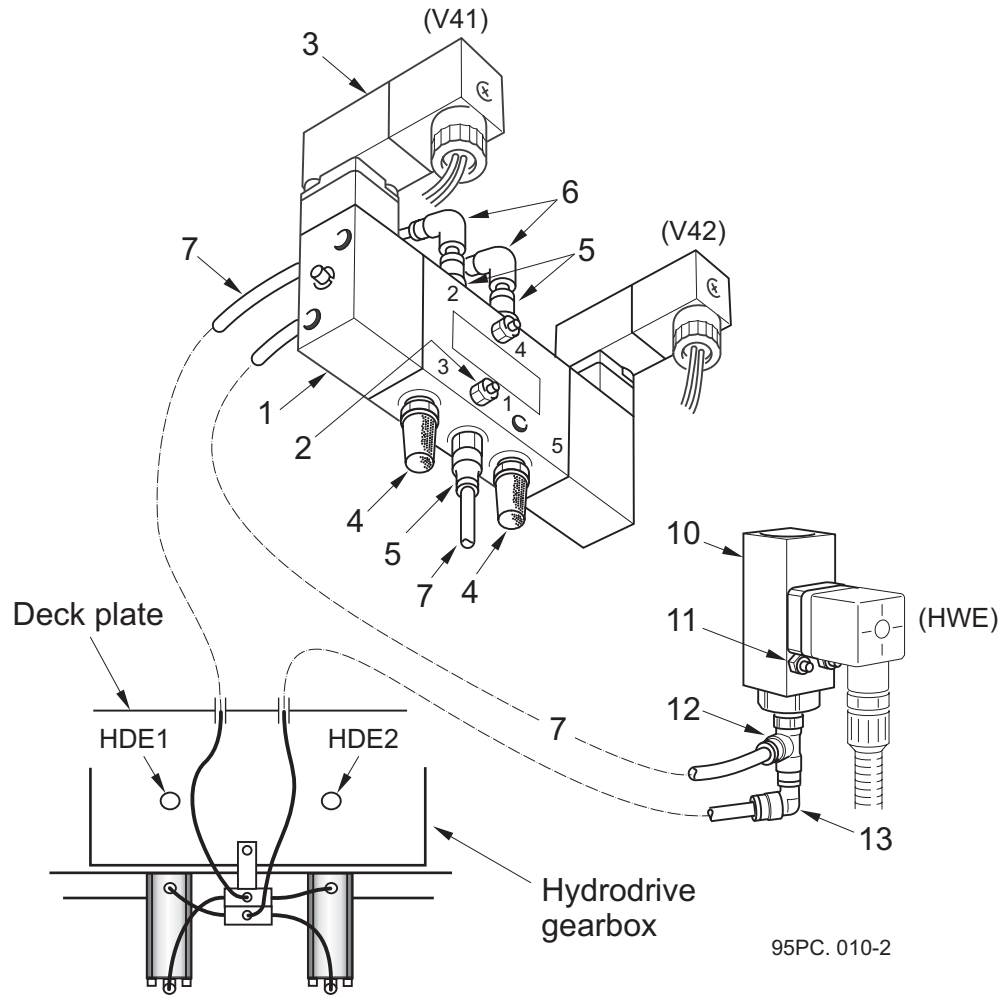


BoM 950511

Item No.	Part No.	Description	Quantity
1	66110-1	Antiskid Manifold Assembly 24v	1
	66110-2	Antiskid Manifold Assembly 12v	1
2	70849-1	Brake Light Switch	1
	451-17	Washer - Sealing	1
3	665-17	Test Point Valve 9/19" UNF	2
4	263-2	Adaptor 1/4" BSP	3
	451-17	Washer - Sealing	3
5	124-148	Screw M8 x 65	2
	425-14	Nut - Nyloc M8	2

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Hydrodrive Selector Valve & HWE Switch



95PC. 010-2

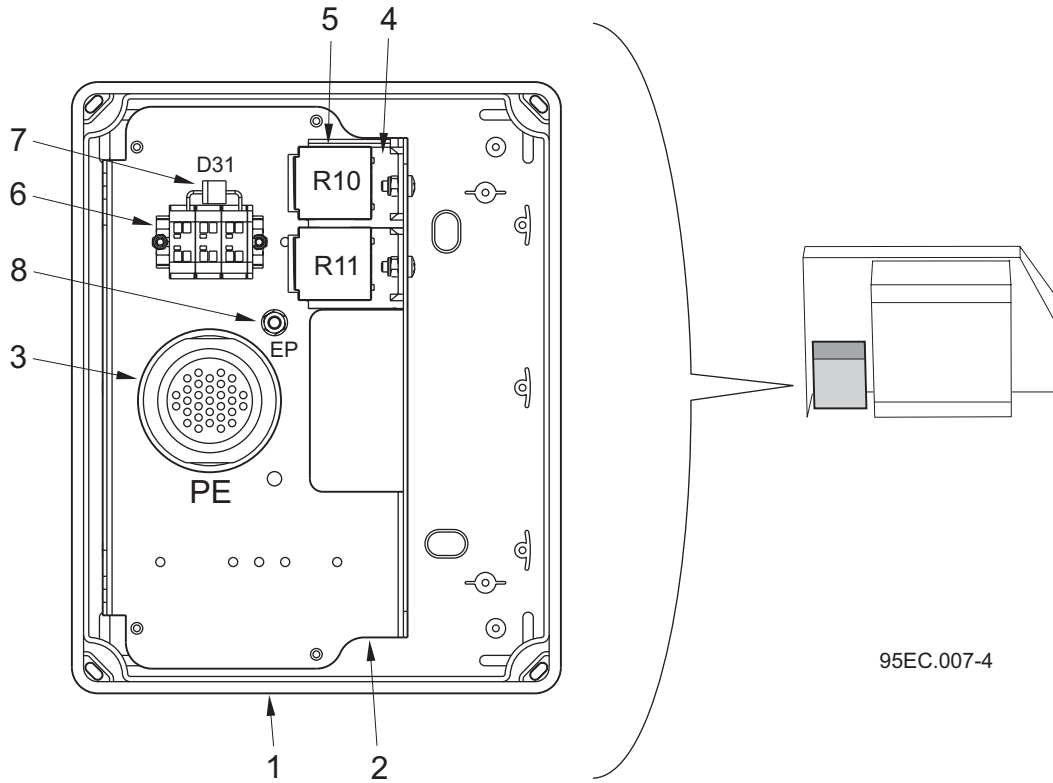
BoM 950511

Item No.	Part No.	Description	Quantity
1	72-21	Hydrodrive Selector Valve	1
2	124-75	Screw M5 x 30	2
	425-12	Nut - Nyloc M5	2
3	72-22	Coil - 24v	
4	72-17	Silencer	2
5	537-3	Adaptor 1/8" BSP x 06	3
6	551-1	Stem Elbow Ø6	2
7	273-20	Tube Ø6 - Blue	As required
8, 9	-		
10	72-52	HWE Air Switch	1
11	129-74	Screw - Cap Head M5 x 45	2
	425-12	Nut - Nyloc M5	2
12	540-3	Tee x Ø6	1
13	551-1	Stem Elbow x Ø6	1

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*** Current 'Type B' Management Box**

* See notes on next page



BoM 950511

Item No.	Part No.	Description	Quantity
	282135-1	Hydro Management Box 12v	
	282135-2	Hydro Management Box 24v	
> 1	283848-1	Box and Lid	1
	134-44	Screw Pan Head M4 x 20	4
	425-11	Nut - Nyloc M4	4
2	282125-1	Mounting Plate	1
> 3	283847-1	Management Box Loom includes:-	1
	710-67	HDP 31 Way Socket Housing	1
	710-70	Jam Nut	1
	281545-2	Sealing Washer	1
4	48-89	Relay Base	2
5	13193	Relay 12v Type 6RA	2
	13194	Relay 24v Type 6RA	2

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Current 'Type B' Management Box

BoM 950511

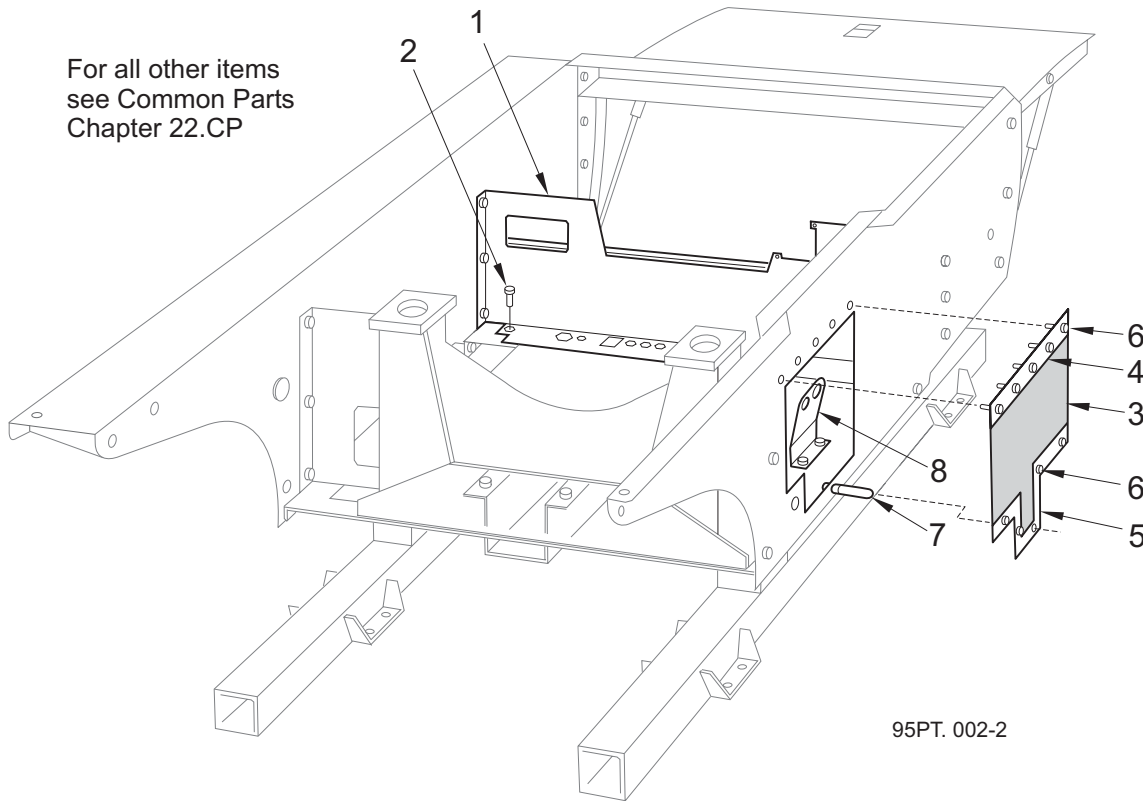
Item No.	Part No.	Description	Quantity
6	30-256	Terminal Block - 4 Way	3
	30-254	Terminal Block - End Plate	1
7	13984	Diode 6 Amp	1
> 8	134-60	Screw - Pan Head M5 x 25	1
	455-7	Washer Plain	1
	420-12	Nut M5	1

Notes

The current type 'B' box has been introduced from Manufacture sequence No. 08/2835.

Refer to Technical Bulletin TB 1364 when retrofitting this box to earlier machines.

The previous type 'A' box is shown in 'Superseded Parts' at the end of this chapter.

Fan Tub VS Parts Only

BoM 950511

Item No.	Part No.	Description	Quantity
1	281695-1	Rear Panel - System Locker	1
2	124-272	Screw M16 x 45	2
	460-14	Washer - Spring	2

BoM 950512

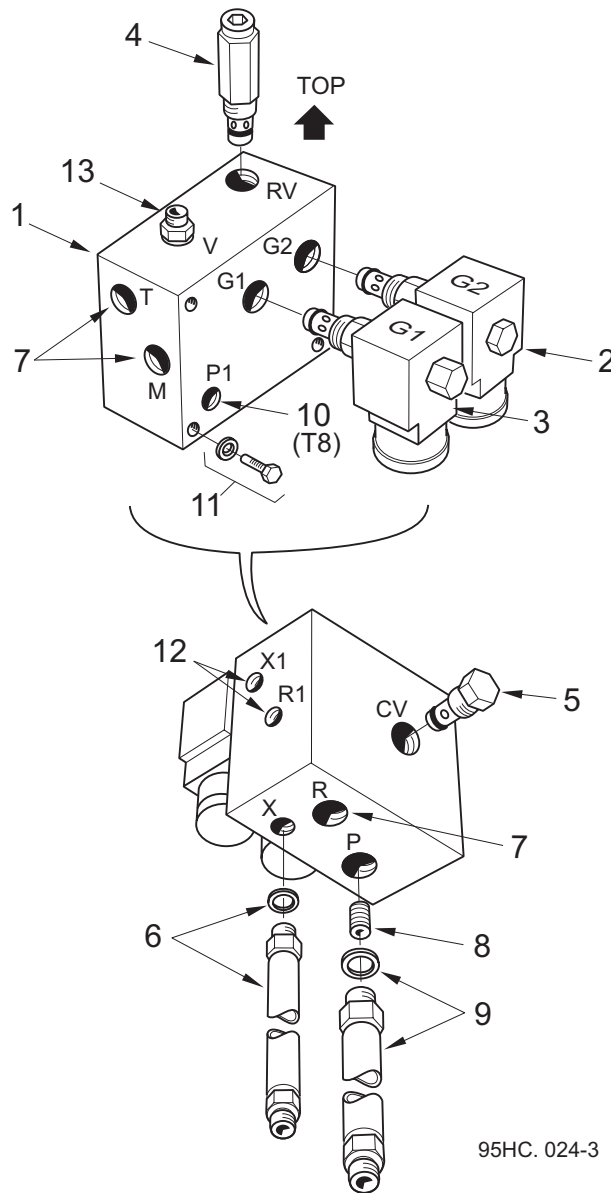
	282816-2	Valance Access Hatch comprising items 3 to 7	
3	282803-1	Neoprene Flap	1
4	282804-1	Securing Plate	1
5	282802-1	Tension Plate	1
6	124-135	Bolt M8 x 20	8
	455-10	Washer - Plain	8
	425-14	Nut - Nyloc M8	8
7	283-36	Drop - Loc Bolt	1
	455-10	Washer - Plain	1
	425-14	Nut - Nyloc M8	1
8	281922-1	Bracket - Hose Support	1
	124-137	Screw M8 x 25	2
	455-10	Washer - Plain	2
	425-14	Nut - Nyloc M8	2

Superseded Parts

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Type 'A' Management Box	22.HI : 20

Fan Drive Block - Superseded

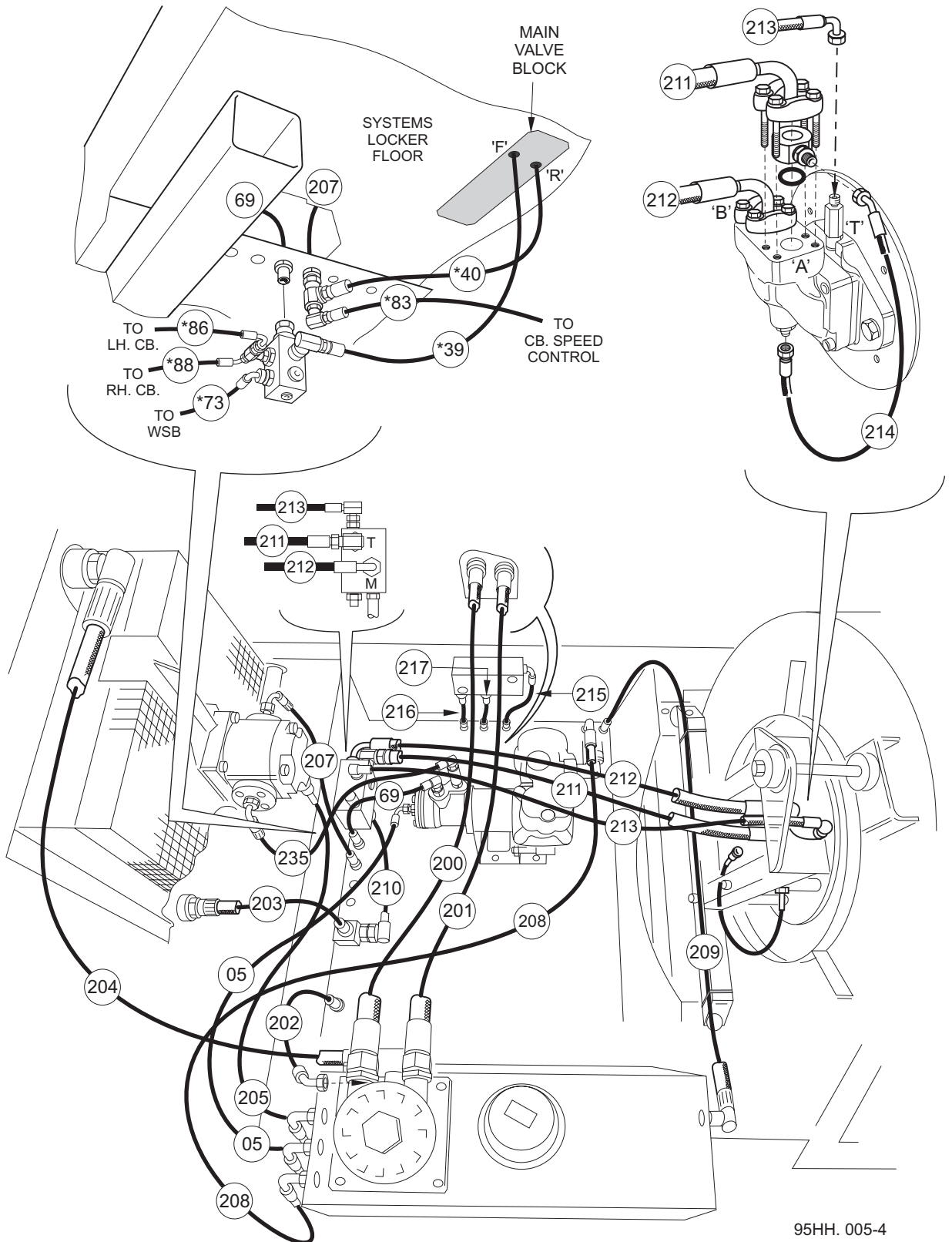


Item No.	Part No.	Description	Quantity
	90875-2	Valve Block Assembly - 12v	
	90875-1	Valve Block Assembly - 24v	
1	29542-1	Block	1
2	90261-2	Solenoid Valve NC - 12v (Coil 254-4)	1
	90261-1	Solenoid Valve NC - 24v (Coil 254-3)	1
3	90262-2	Solenoid Valve NO - 12v (Coil 254-4)	1
	90262-1	Solenoid Valve NO - 24v (Coil 254-3)	1
4	90264-1	Relief Valve Cartridge	1
5	90265-1	Check Valve Cartridge	1
8	28753-3	Orifice	1

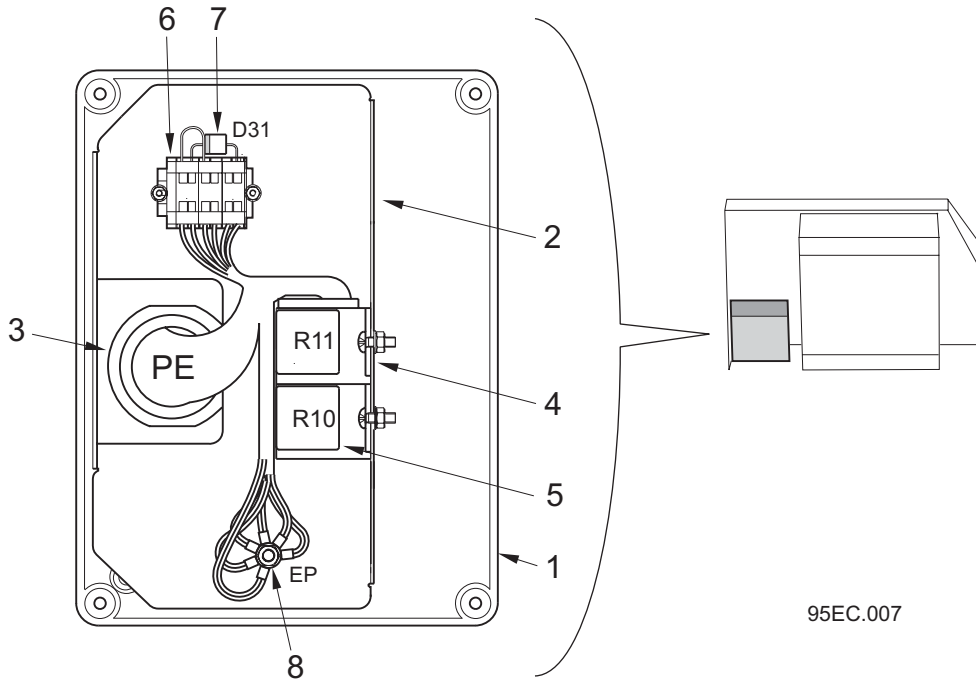
All other items are as the current assembly on pages 22.H:9 onwards.

Fan Tub Hydraulic Hose Connections - Superseded

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95HH. 005-4

Superseded Type 'A' Management Box

BoM 950511

Item No.	Part No.	Description	Quantity
	282135-1	Hydro Management Box 12v	
	282135-2	Hydro Management Box 24v	
1	282122-1	Box and Lid	1
	134-44	Screw Pan Head M4 x 20	4
	425-11	Nut - Nyloc M4	4
2	282125-1	Mounting Plate	1
3	710-67	HDP 31 Way Socket Housing	1
	710-70	Jam Nut	1
	281545-2	Sealing Washer	1
4	48-89	Relay Base	2
5	13193	Relay 12v Type 6RA	2
	13194	Relay 24v Type 6RA	2
6	30-256	Terminal Block - 4 Way	3
	30-254	Terminal Block - End Plate	1
7	13984	Diode 6 Amp	1
8	124-73	Screw M5 X 25	1
	460-7	Washer - Spring	1
	420-12	Nut M5	1
	455-7	Washer Plain	1
	425-12	Nut Nyloc M5	1

Note

Internal components can be supplied but not the box and lid which is no longer available..

CHAPTER

23

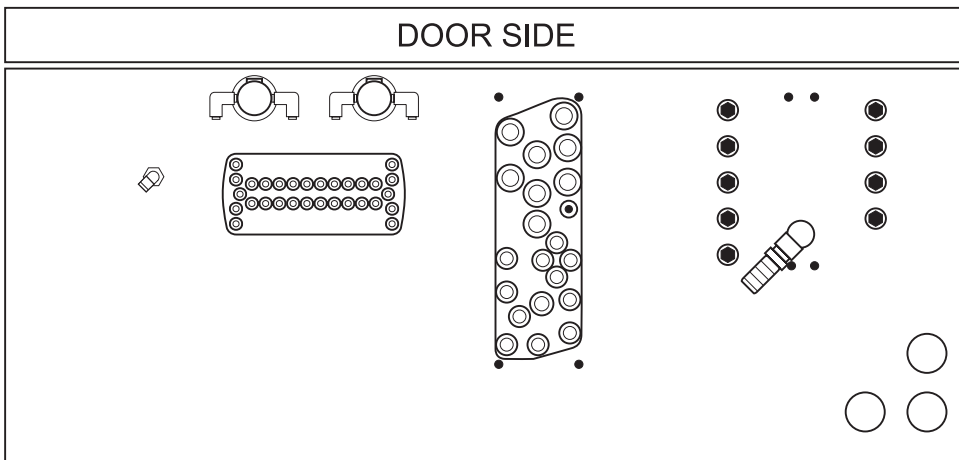
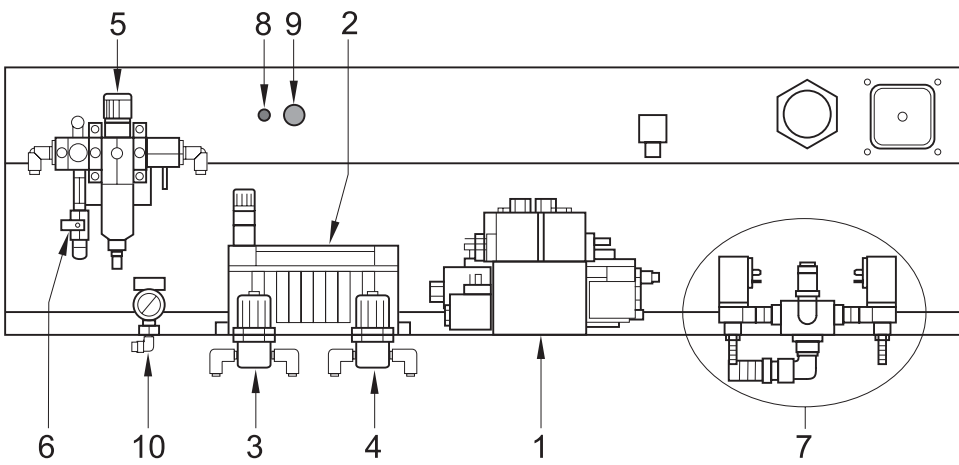
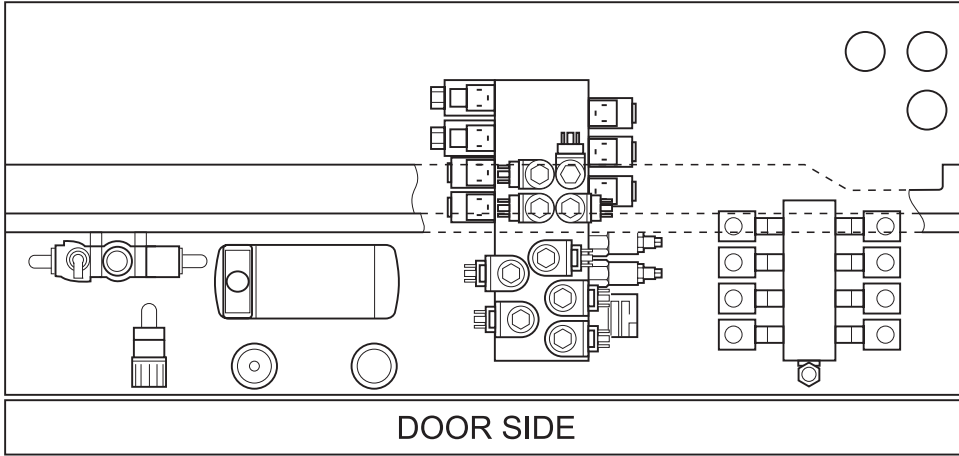
Systems Locker

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Systems Wafer Assembly



95SL. 003-3

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Systems Wafer Assembly

Base Assemblies

Part No.	Description
950912-021	Wafer Assembly - 12v Single
950912-022	Wafer Assembly - 12v Dual
950912-023	Wafer Assembly - 24v Single
950912-024	Wafer Assembly - 24v Dual

Options Assemblies for:

Recirculating Water and Autoloc Cylinders

950912-029	Wafer Assembly - 12v Single
950912-030	Wafer Assembly - 12v Dual
950912-031	Wafer Assembly - 24v Single
950912-032	Wafer Assembly - 24v Dual

Components

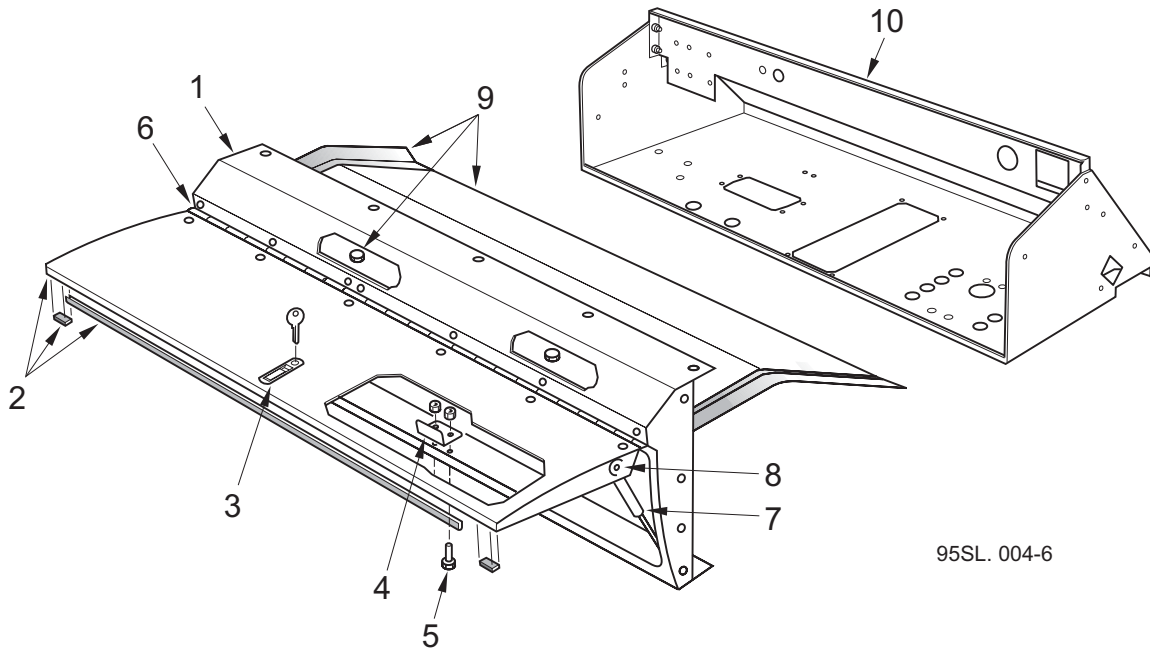
Item No.	Part No.	Description	See Chapter
1	-	Main Hydraulic Valve Block	28
2	-	Pneumatic Valve Assemblies	29
3	-	Powascrub Regulator (R2)	29
4	-	Powathrust Regulator (R3)	29
5	-	FRL Unit	29
6	-	Pressadrain Purge Block (WDT)	29
7	-	Water Manifold Assembly	30
8		Thermal Trip:-	
	719-2	MCB Cutout - 12v = 50Amp	-
	719-1	MCB Cutout - 24v = 30Amp	-
9		Emergency Discharge Pump Switch comprising:-	
	99-67	Button	1
	99-2	Body	1
	99-4	Contact	1
10	-	System Protection Valve	29

Notes

Wiring Looms - Spares Items

Looms for the Wafer pneumatic, hydraulic and water control systems are shown in Chapter 31.

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Systems Locker Enclosure


95SL. 004-6

BoM 950512

Item No.	Part No.	Description	Quantity
	282868-1	Frame and Door Assembly, comprising items 1 to 8	1
1	281660-1	Locker Frame	1
2	282869-1	Locker Door	1
	211-33	Edge Trim x 1m	1
	217-58	Rubber Strip x 25 Long	2
3	211-34	Latch	1
	211-35	Latch Key	2
> 4	282871-1	Latch Plate	1
5	135-91	Button Head Screw M6c x 20	2
	425-13	Nut - Nyloc M6	2
6	42597-5	Hinge	1
	134-41	Screw Pozidrive M4 x 10	12
	425-11	Nut - Nyloc M4	12
7	39435	Gas Spring	2
8	420-12	Nut M5	2
9	-	Cover Plate, Screws and Rubber Seals See Chapter 22 - Powapak Sections	
10	283826-1	Wafer Base Assembly	1

CHAPTER

24

Channel Brush

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Pivot Frame Assembly

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Arm Assembly

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Head Assembly

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Channel Brush Installations

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Hydraulic Hoses

24 : 14

Pneumatic Tubing

24 : 16

Water Sprays

24 : 17

Rotatilt Option

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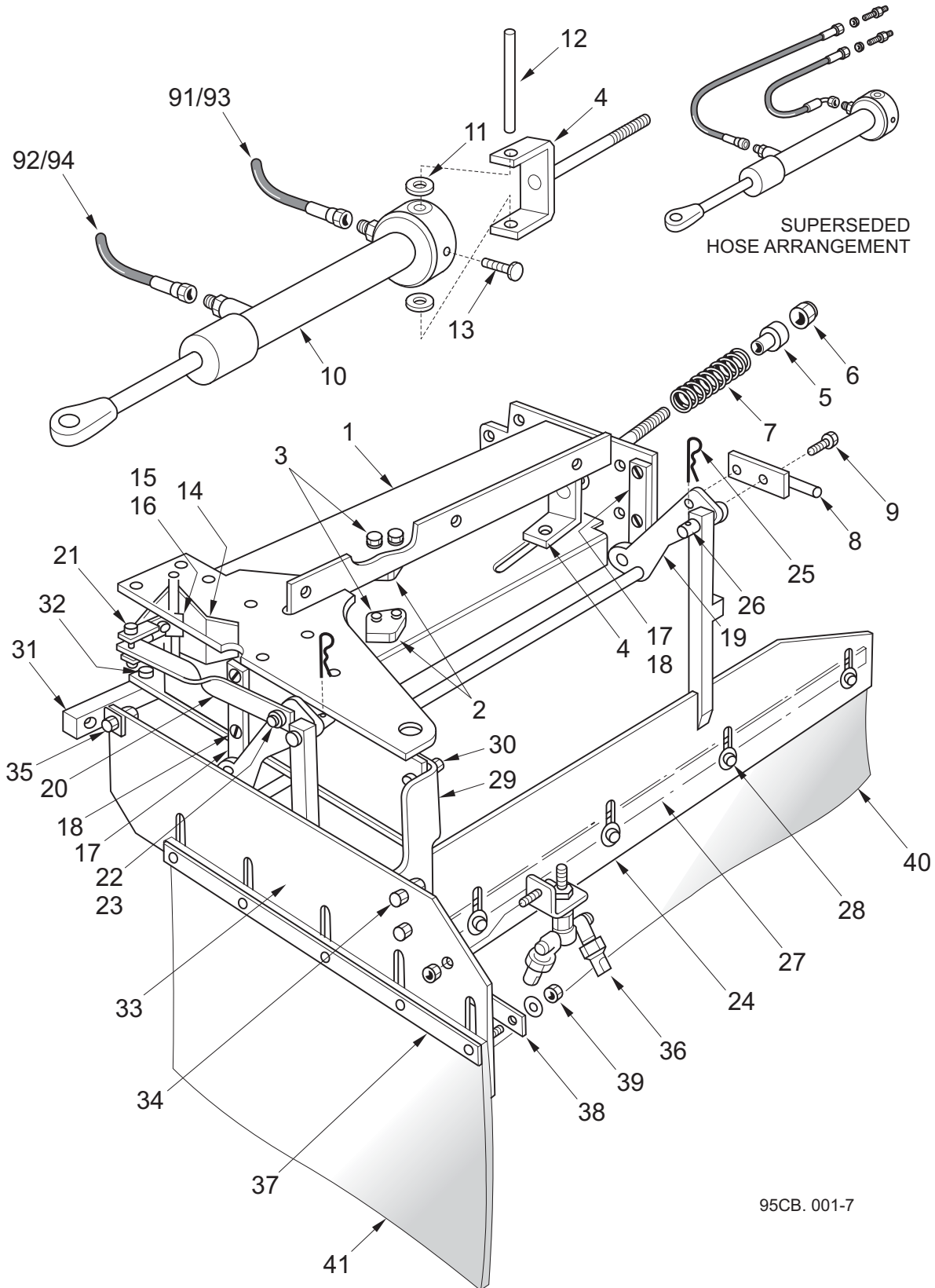
> **Superseded Parts**

Channel Brush Installation - Hydraulic Hoses

24 : 21

Current Channel Brush - Pivot Frame Assembly

See 'Superseded Parts' at the end of this chapter for the previous arrangement.



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Current Channel Brush - Pivot Frame Assembly

BoM 951211

Item No.	Part No.	Description	Quantity		
			Single	Dual	
1	200075-1	Pivot Frame	1	2	
2	281587-1	Stop	2	4	
3	124-169	Screw M10 x 25	4	8	
	460-11	Washer - Spring M10	4	8	
4	67348-1	Fork	1	2	
5	41911-1	Washer - Kick Back Spring	1	2	
6	425-18	Nut - Nyloc M16	1	2	
7	41895-2	Compression Spring	1	2	
8	40295-1	Nozzle Tow Pin	1	2	
9	123-146	Screw M12 x 40	2	4	
	425-16	Nut - Nyloc M12	2	4	
10	281601-1	Cylinder	1	2	
11	40421-1	Spacer	2	4	
12	40420-1	Pin	1	2	
13	123-109	Bolt M8 x 45	1	2	
14	800678-1	Lever - Brush Curtain	1	2	
15	40384-1	Catch	1	2	
16	124-103	Screw M6 x 20	1	2	
	460-8	Washer - Spring M6	1	2	
	420-13	Nut M6	1	2	
17	200051-1	Davit Hinge	2	4	
18	127-139	Screw - Csk M8 x 30	4	8	
	460-10	Washer - Spring M8	4	8	
	420-14	Nut M8	4	8	
19	200046-1	Davit	1	2	
20	40382-1	Link	1	2	
21	40383-1	Bush - Curtain	1	2	
	124-143	Screw M8 x 40	1	2	
22	40385-1	Link Retaining Pin	1	2	
23	124-141	Screw M8 x 35	1	2	
	460-10	Washer - Spring M8	1	2	
	420-14	Nut M8	1	2	
24	200050-1	Curtain	1	2	
>	25	289-27	Spring Clip	2	4
>	26	63582-1	Curtain Quick Release Pin	2	4
27	62454-1	Clamp Strip	1	2	
28	124-169	Screw M10 x 25	5	10	
	457-5	Washer - Plain M10	5	10	

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Current Channel Brush - Pivot Frame Assembly

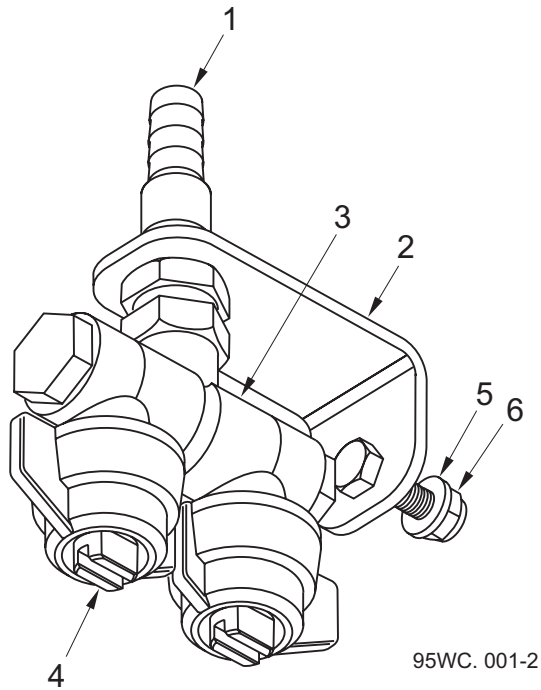
Item No.	Part No.	Description	Quantity	
			Single	Dual
29	62822-1	Bracket - Mudflap Mounting	1	2
30	124-169	Screw M10 x 25	2	4
	460-11	Washer - Spring M10	2	4
	420-15	Nut M10	2	4
31	62819-1	Tow Point	1	2
32	123-151	Bolt M12 x 65	2	4
	460-12	Washer - Spring M12	2	4
	420-16	Nut M12	2	4
33	67375-1	Plate - Mud Flap	1	2
34	124-167	Screw M10 x 20	2	4
	460-11	Washer - Spring M10	2	4
	420-15	Nut M10	2	4
35	124-201	Screw M12 x 25	1	2
	460-12	Washer - Spring M12	1	2
	420-16	Nut M12	1	2
36	282207-1	Water Jet Assembly - See next page	1	2
37	67372-1	Clamp Strip	1	2
38	67378-1	Clamp Bar	1	2
39	457-4	Washer - Plain M8	5	10
	425-14	Nut - Nyloc M8	5	10
Curtains				
>	40	63334-1	Rubber Curtain	1 2
>	41	67368-1	Rubber Mudflap	1 2
Hydraulic Hoses				
>	*91/93	-	See 'Hydraulic Hoses'	- -
>	*92/94	-	elsewhere in this chapter	- -

Notes

* Hose item numbers correspond with those on diagrams SH522 and SH523 in Maintenance Section, Chapter 8.

- > Refer to Technical Bulletin 1390 for the introduction of this current assembly. This current assembly can be identified by the single hydraulic hose to each cylinder port rather than two used on the previous assembly. See 'Superseded Parts' at the end of this chapter for the previous arrangement.

> C.B. and Gutter Water Jet Assemblies



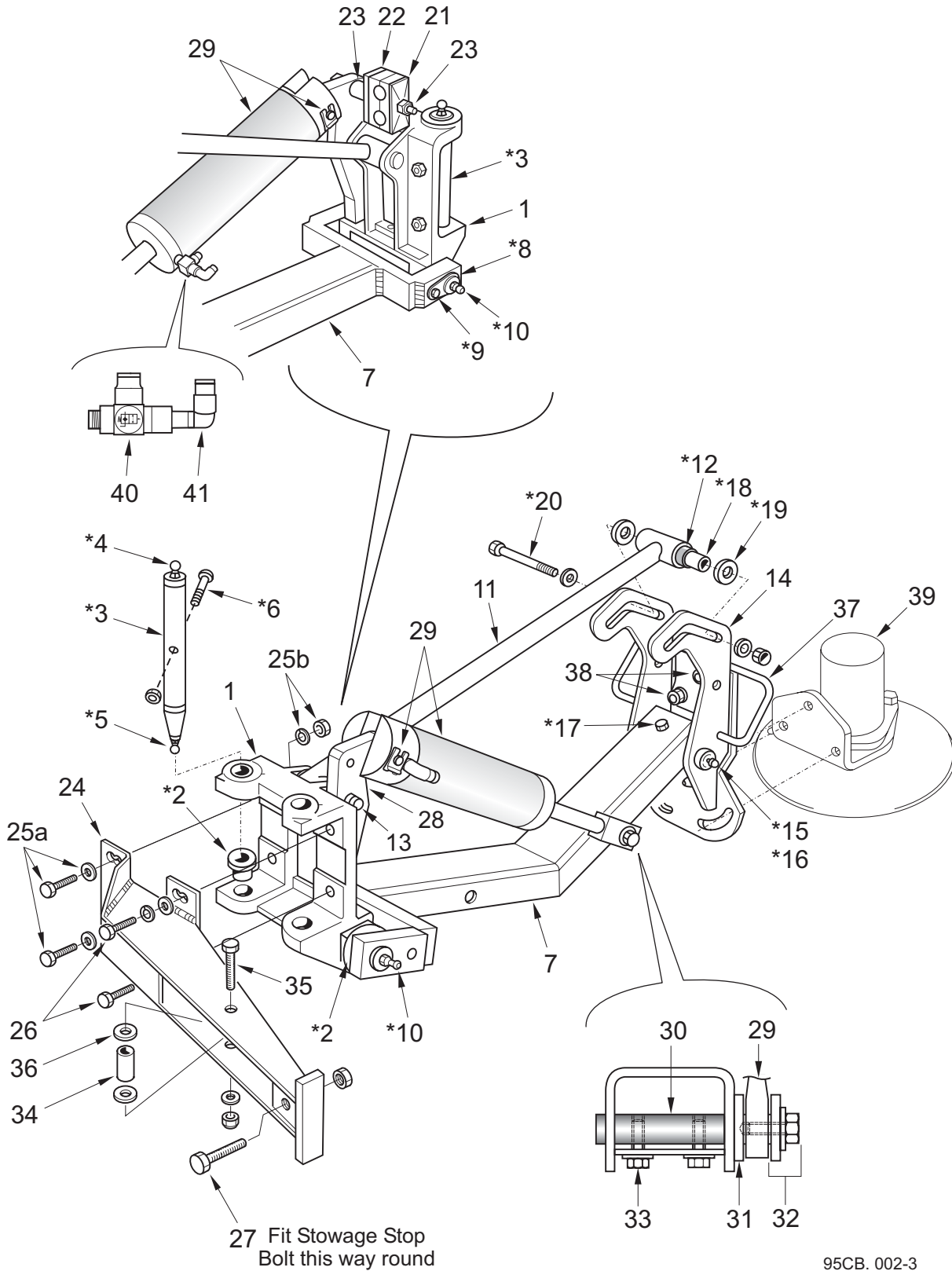
BoM 951211

Item No.	Part No.	Description	Quantity
	282207-1	Jet Assembly comprising:	
1	282214-1	Pipe - Hose Adaptor	1
2	282206-1	Angle Bracket	1
3	21-67	Double Swivel Nozzle Holder	1
4	21-66	Fan Tip Jet - Red	2
5	455-8	Washer - Plain M6	1
6	425-13	Nut - Nyloc M6	1

Notes

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Channel Brush - Arm Assembly



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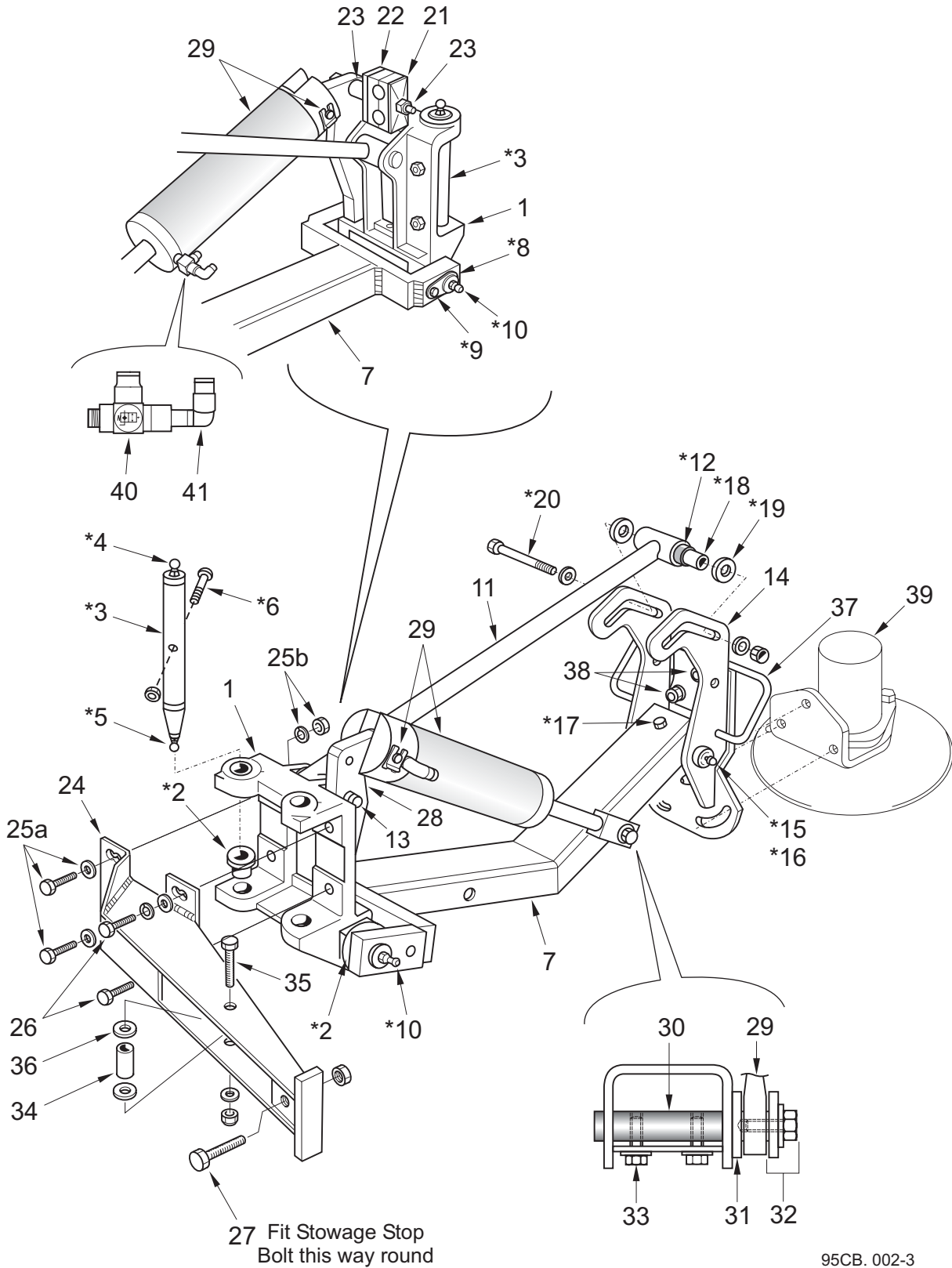
Channel Brush - Arm Assembly

BoM 951212

Item No.	Part No.	Description	Quantity
1	40272-2	Pivot Head	1
* 2	40292-1	Bush	4
* 3	40360-1	Pivot Pin - Channel Brush Head	1
* 4	38-1	Grease Nipple Straight G1/8"	1
* 5	38-1	Grease Nipple Straight G1/8"	1
* 6	124-178	Screw M10 x 55	1
	420-15	Nut M10	1
7	200025-1	Lower Arm	1
* 8	282028-1	Pivot Pin	1
* 9	124-135	Screw M8 x 20	1
	460-10	Washer - Spring	1
* 10	38-1	Grease Nipple Straight G1/8"	2
11	200026-1	Upper Arm Assembly	1
* 12	29128-4	Bush - Non Lube, Part of Item 11	4
13	40361-1	Pivot Pin - Upper Arm	1
	460-12	Washer - Spring M12	1
	420-16	Nut M12	1
14	282505-1	Motor Mount	1
* 15	40389-1	Pivot Pin	1
* 16	38-1	Grease Nipple Straight G1/8"	2
* 17	124-146	Screw M8 x 55	1
	460-10	Washer - Spring M8	1
	420-14	Nut M8	1
* 18	40362-1	Bush - Upper Arm	1
* 19	40363-1	Spacer M12	2
* 20	123-159	Bolt M12 x 110	1
	9331-1	Washer - Packing	2
	425-16	Nut - Nyloc M12	1
21	51-43	Plate - Top Clamp	1
	51-44	Clamp	1
22	200082-1	Plate - Clamp Spacer	1
23	123-120	Bolt M8 x 100	1
	56569-8	Spacer	1
	425-14	Nut - Nyloc M8	1
24	800677-1	Lever - Pivot Head	1
25a	124-173	Screw M10 x 35	2
	455-11	Washer - Plain M10	2
25b	460-11	Washer - Spring M10	2
	420-15	Nut M10	2
26	124-173	Screw M10 x 35	2
	460-11	Washer - Spring M10	2
	455-11	Washer - Plain M10	2

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Channel Brush - Arm Assembly



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Channel Brush - Arm Assembly

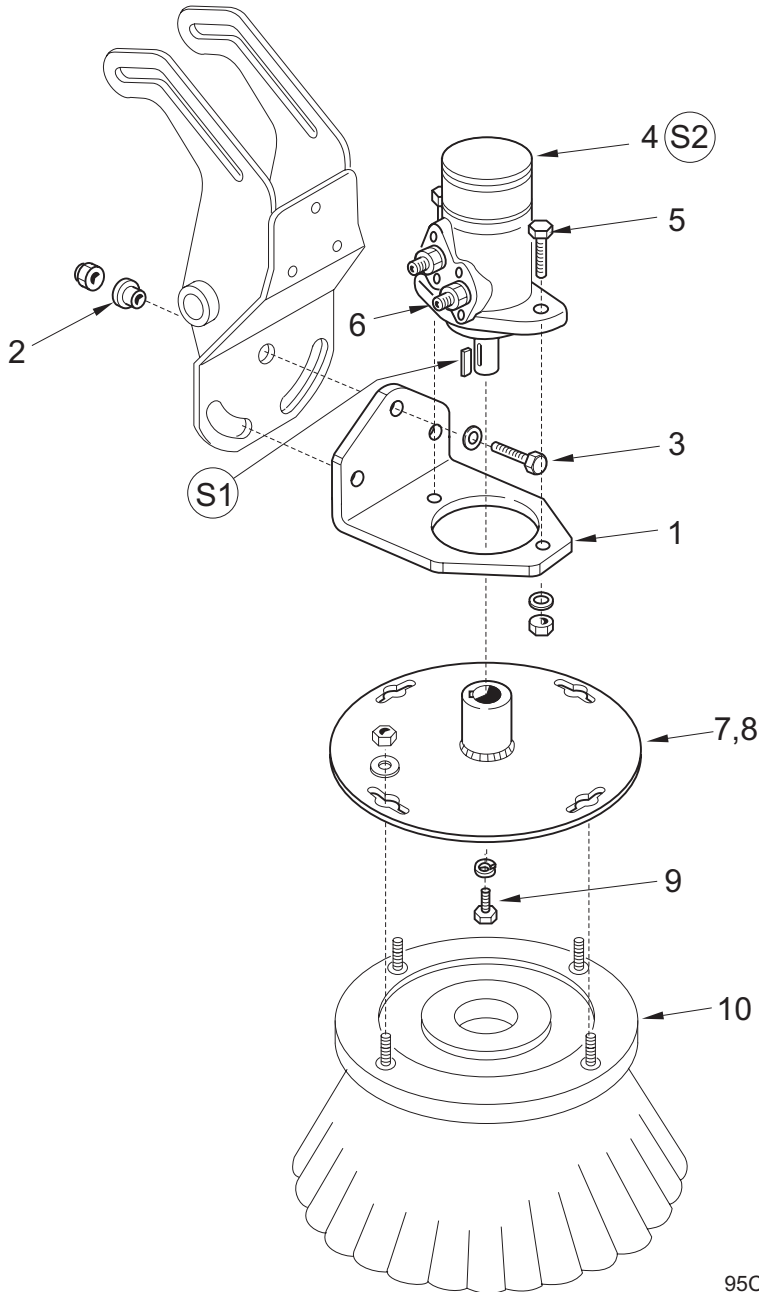
BoM 951212

Item No.	Part No.	Description	Quantity
27	121-115	Screw M14 x 60	1
	420-4	Nut M14	1
28	200071-1	Mast	1
29	200355-2	Lift Cylinder	1
	29149-4	Clevis Pin) Spares	1
	39624	Retaining Clip) Items	2
30	200463-1	Pin	1
31	200462-1	Collar	1
32	457-5	Washer - Large M10	1
	124-169	Screw M10 x 25	1
	460-11	Washer - Spring M10	1
33	124-139	Screw M8 x 30	2
	460-10	Washer - Spring M8	2
34	40377-1	Bush	1
35	124-178	Setscrew M10 x 55	1
>	455-11	Washer - Plain M10	1
	420-15	Nut M10	1
36	90624-1	Spacer	2
37	282965-1	Hose Guard	1
38	124-169	Bolt M10 x 25	3
	455-11	Washer	3
	425-15	Nut Nyloc M10	3
39	-	Brush Motor and Drive Plate - See Over Page	
40	72-64	Pilot Valve	1
41	553-20	Elbow	1
	* 282945-1	Channel Brush Overhaul Kit comprising items: 2 to 6, 8 to 10, 12, 15 to 20 Plus two Pivot Pin Bosses pt.no. 40293-1 which are part of Motor Mount welded assembly, item 14.	

Notes

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Channel Brush - Head Assembly



95CB. 003-3

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Channel Brush - Head Assembly

BoM 951213

Item No.	Part No.	Description	Quantity	
			500 Dia. Brush	650 Dia. Brush
1	42533-1	Mounting - Brush Motor	1	1
2	281325-2	Bush	3	3
3	123-148	Bolt M12 x 50	3	3
	425-16	Nut - Nyloc M12	3	3
	455-12	Washer - Plain M12	3	3
4	40550-1	Hydraulic Motor	1	-
	61108-1	Hydraulic Motor	-	1
5	124-208	Setscrew M12 x 45	2	2
	460-12	Washer - Spring M12	2	2
	420-16	Nut - M12	2	2
	263-4	Adaptor G1/2"	2	2
6	451-126	Washer - Copper G1/2"	2	2
	281586-1	Adaptor - Drive Plate	1	-
8	281584-1	Adaptor - Drive Plate	-	1
9	135-58	Bolt - Tuflock M8 x 25	1	1
	460-10	Washer - Spring M8	1	

Brushes. BoM 951230

}	10	835-55	Brush Ø500 with Bright Steel Tines - Plastic Top	1	-
		46631-1	Brush Ø500 with Polypropylene Tines - Natural Top	1	-
		281899-2	Brush Ø650 with Bright Steel Tines - Green Top	-	1
		835-24	Brush Ø650 with Polypropylene Tines - Natural Top	-	1

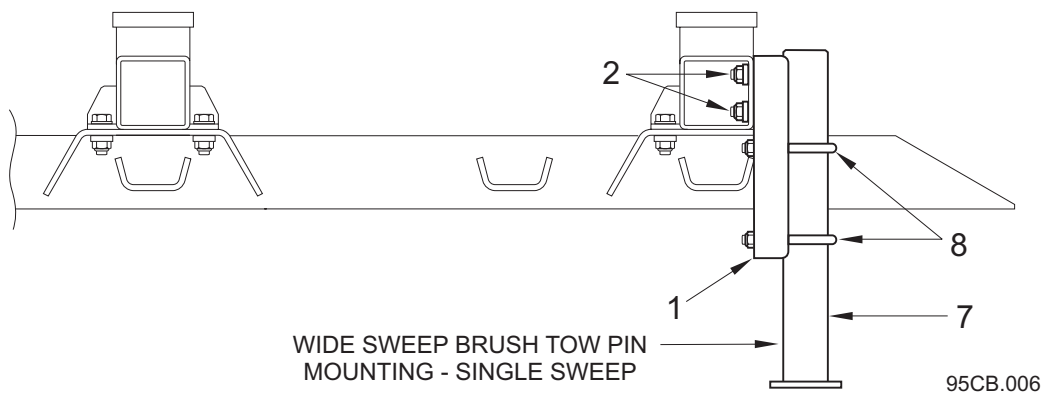
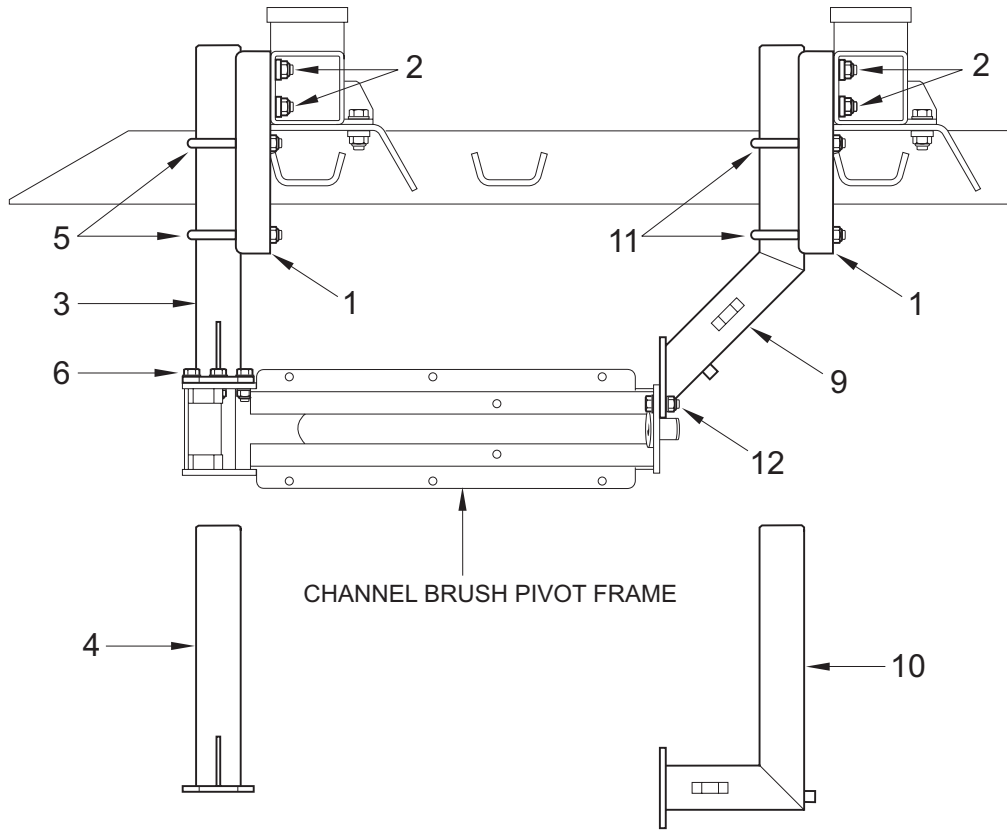
Spares Items

S1	11879	Drive Key
S2	240-2	Motor Seal Kit - Universal (for item 4)

Notes

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CB Installation - Pivot Frame to Subframe



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CB Installation - Pivot Frame to Subframe

BoM 951220

Item No.	Part No.	Description	Quantity	
			Single	Dual
1	282502-1	Mounting Bracket	3	4
2	123-147	Bolt M12 x 45	12	16
	45014-25	Spacer	12	16
	425-16	Nut - Nyloc M12	12	16
* 3	281292-1	Support Post - Front 0.9 to 0.99m in Chassis Height	1	2
	281292-2	Support Post - Front 1.0 to 1.099m in Chassis Height	1	2
* 4	281292-3	Support Post - Front 0.8 to 0.89m in Chassis Height	1	2
5	281274-1	U-Bolt M12	2	4
	455-12	Washer - Plain M12	4	8
	425-16	Nut - Nyloc M12	4	8
> 6	124-207	Screw M12 x 40	5	10
	455-12	Washer - Plain M12	10	20
	425-16	Nut - Nyloc M12	5	10
* 7	281296-1	Support Post - WSB 0.9 to 0.99m in Chassis Height	1	-
	281296-2	Support Post - WSB 1.0 to 1.099m in Chassis Height	1	-
	281296-3	Support Post - WSB 0.8 to 0.89m in Chassis Height	1	-
8	281274-1	U-Bolt M12	2	-
	455-12	Washer - Plain M12	4	-
	425-16	Nut - Nyloc M12	4	-
* 9	281298-1	Support Post - Rear 0.9 to 0.99m in Chassis Height	1	2
	281298-2	Support Post - Rear 1.0 to 1.099m in Chassis Height	1	2
*10	282541-1	Support Post - Rear 0.8 to 0.89m in Chassis Height	1	2
11	281274-1	U-Bolt M12	2	4
	455-12	Washer - Plain M12	4	8
	425-16	Nut - Nyloc M12	4	8
> 12	124-207	Screw M12 x 40	2	4
	455-12	Washer - Plain M12	4	8
	425-16	Nut - Nyloc M12	2	4

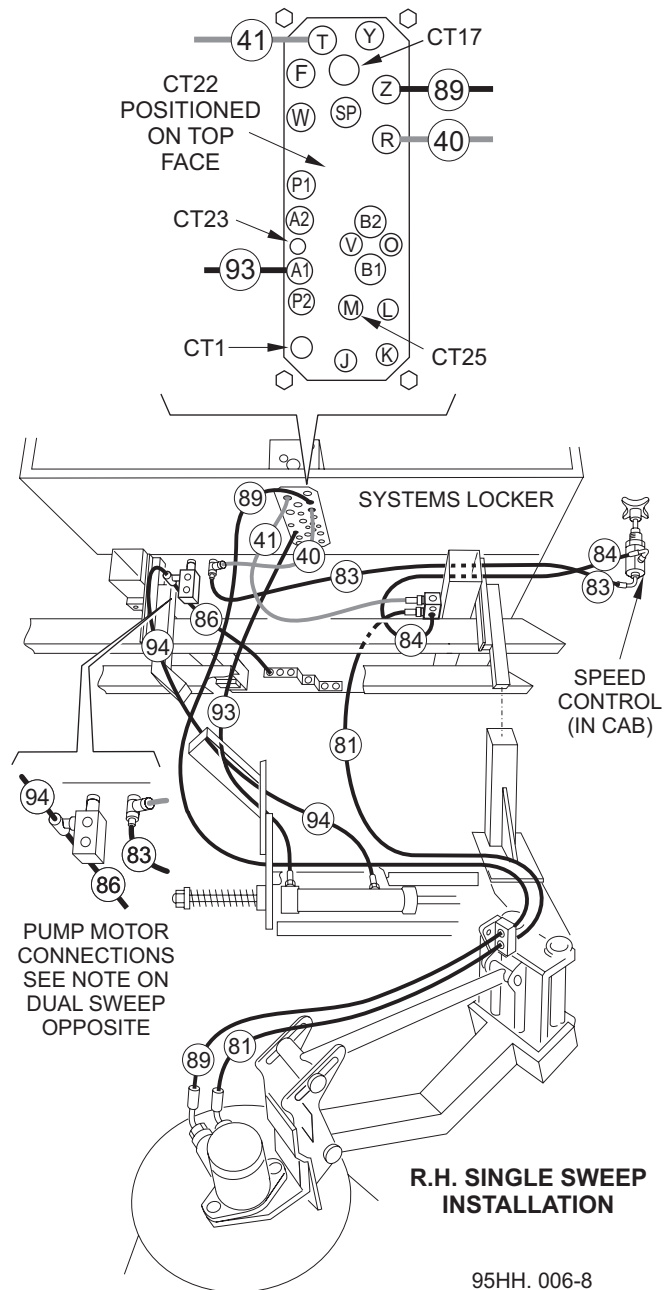
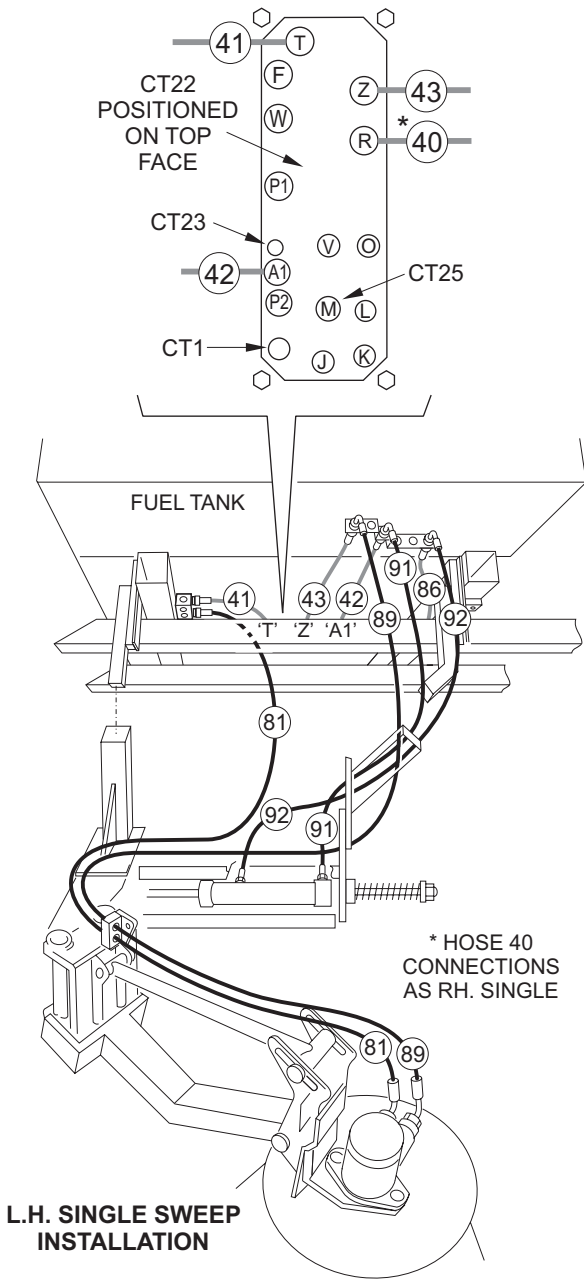
Notes

* Support Posts items 3, 4, 7, 9, 10 see Chapter 33
Post, Item 7, is also shown in Wide Sweep Brush section

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Current CB Single Sweep Installation - Hydraulic Hoses

See 'Superseded Parts' at the end of his chapter for the previous installation



95HH. 006-8

BoM 950713

Item Nos.	Part No.	Description	Quantity	
			Single	Dual
40	HC08001-86	1/2" Hydraulic Hose	1	1
41	HC08001-146	1/2" Hydraulic Hose	1	1
42	HC04001-141	1/4" Hydraulic Hose	1	1
43	HC08001-167	1/2" Hydraulic Hose	1	1
44	HC08001-167	1/2" Hydraulic Hose	-	1

Continued on next page

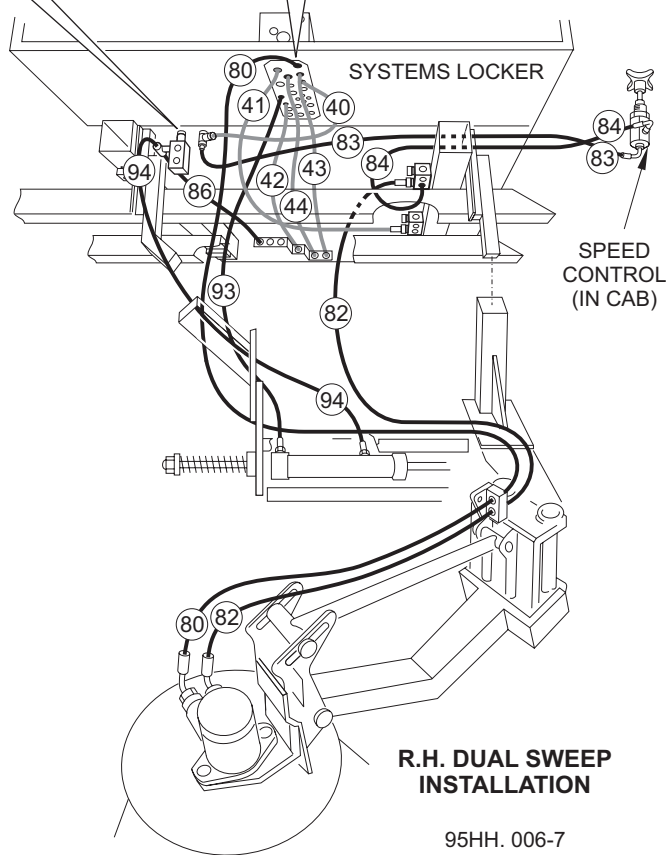
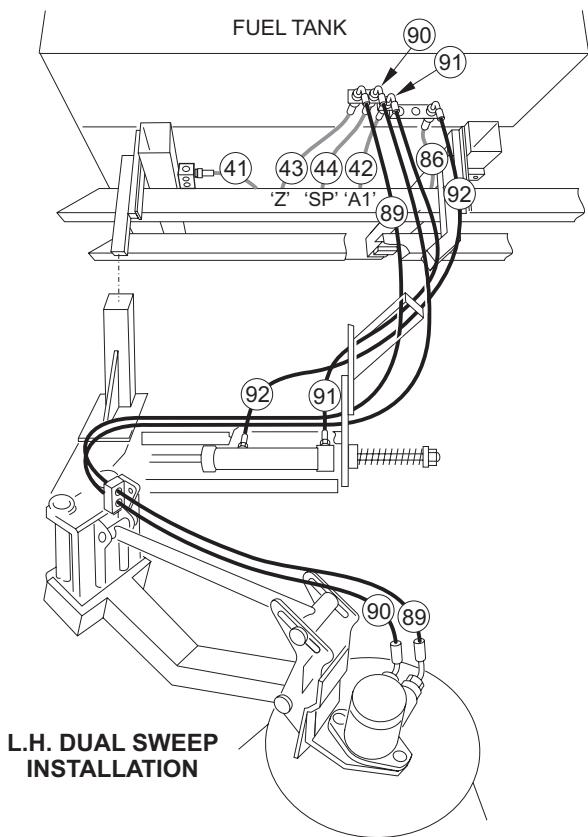
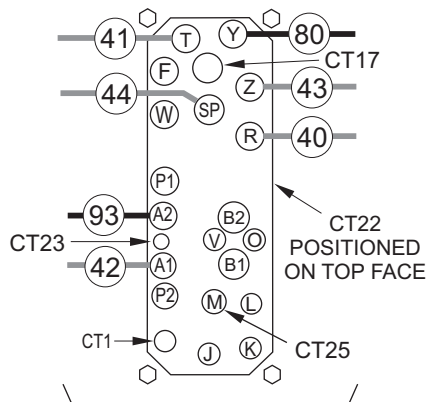
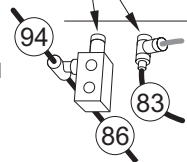
Current CB Dual Sweep Installation - Hydraulic Hoses

See 'Superseded Parts' at the end of his chapter for the previous installation

FOR WATER PUMP MOTOR CONNECTIONS:-

VT MACHINES - SEE LP. WATER PUMP
INSTALLATION CHAPTER 30

VS MACHINES - SEE FAN TUB,
HYDRAULIC HOSES CHAPTER 22.HI



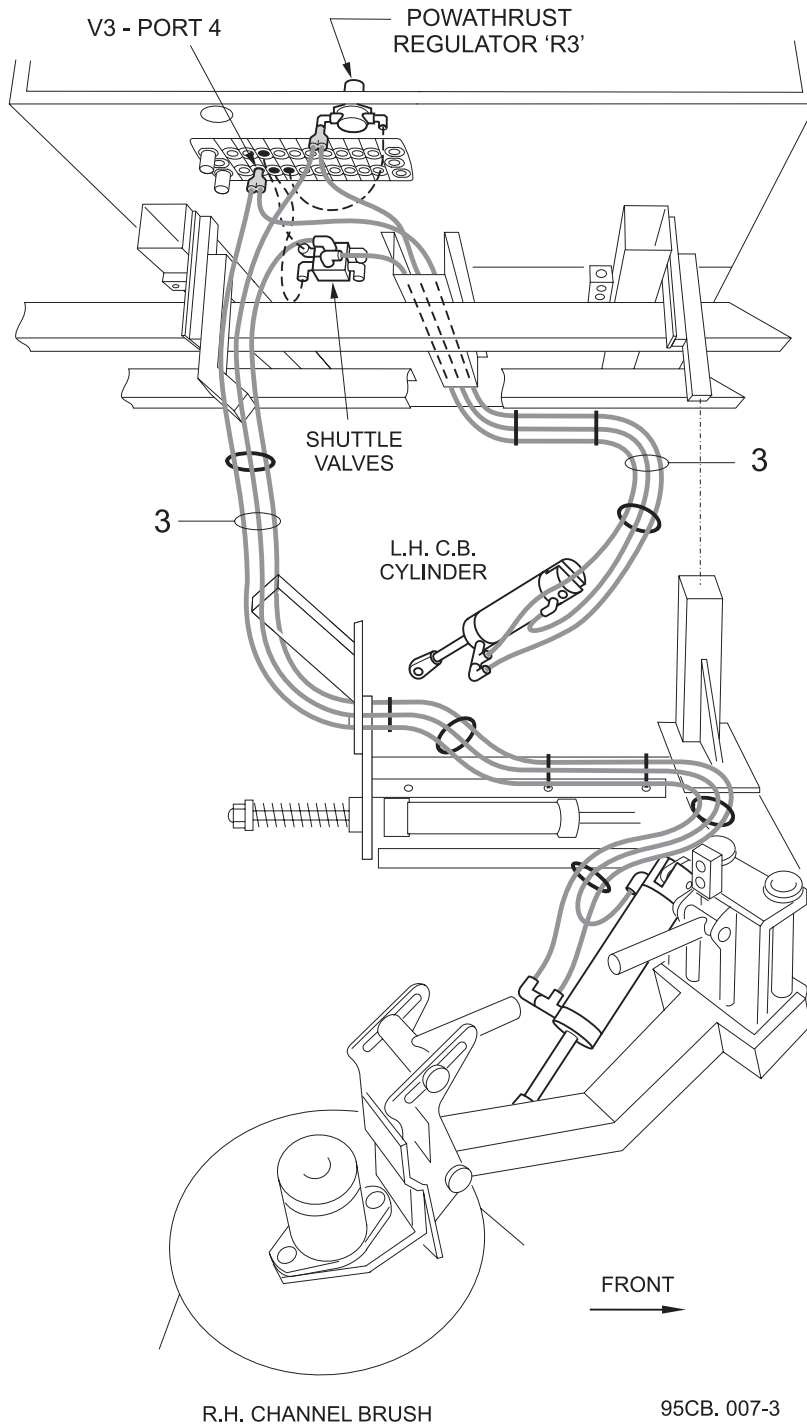
95HH. 006-7

BoM 951220

Item No.	Part No.	Description	Quantity	
			Single	Dual
83/84	-	See Chapter 33		
81/82	HC08002-290	1/2" Hydraulic Hose	1	1
80/89	HC08002-290	1/2" Hydraulic Hose	1	2
90	HC08002-290	1/2" Hydraulic Hose	-	1
86	HC04002-130	1/4" Hydraulic Hose	1	1
91/93	HC04001-120	1/4" Hydraulic Hose	1	2
92/94	HC04001-120	1/4" Hydraulic Hose	1	2

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CB Installation - Pneumatic Tubing

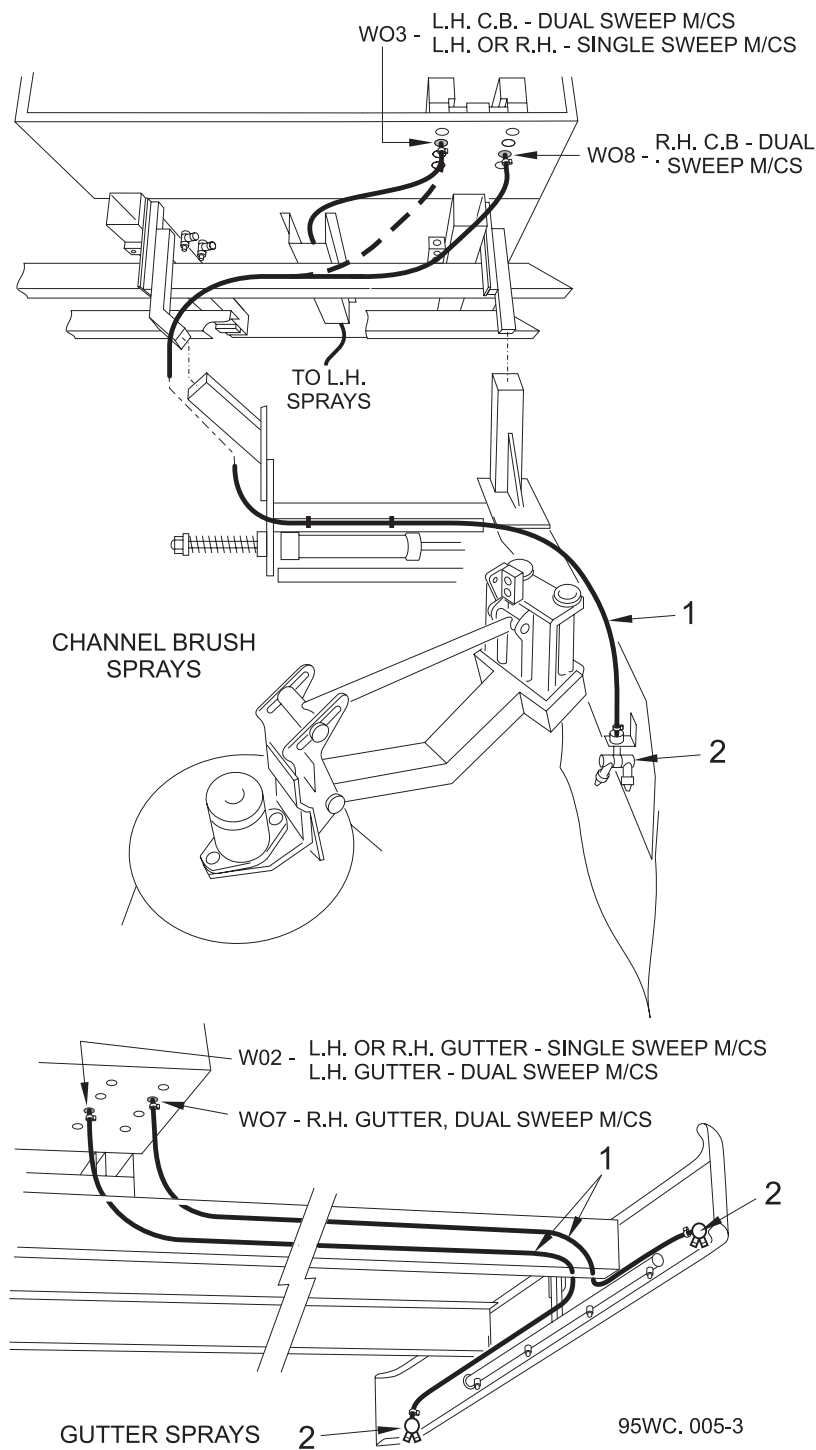


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BoM 951220

Item Nos.	Part No.	Description	Quantity	
			Single	Dual
1	510-4	Tubing Nut	-	1
	511-4	Olive M8	-	1
2	521-8	Elbow	-	1
3	273-20	Blue Tubing 6 Diameter	12m	18m

CB Installation - Water Sprays

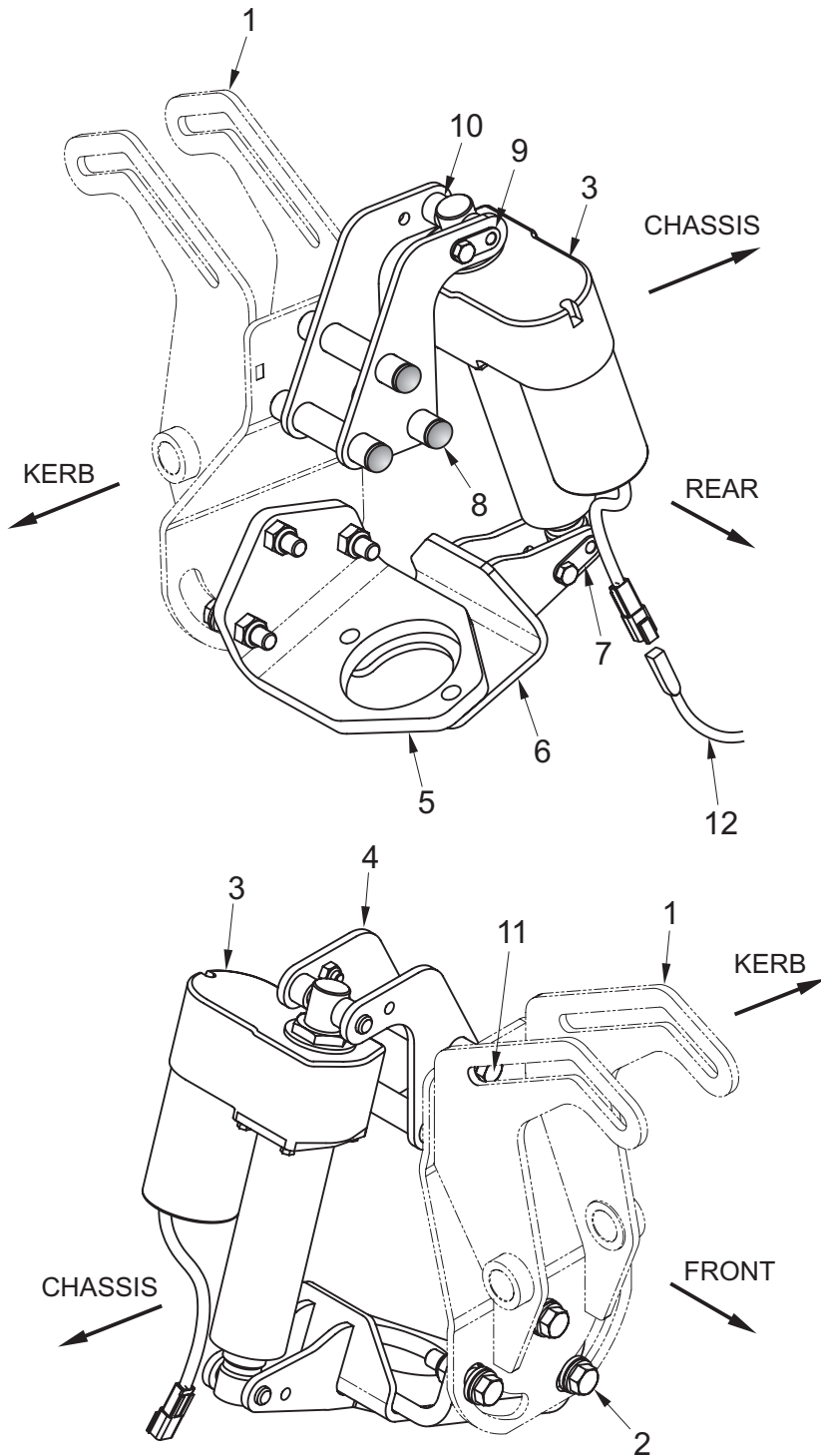


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BoM 951220

Item Nos.	Part No.	Description	Quantity
1	-	Water Hoses - See Chapter 30	-
2	282207	Water Jet Assembly - See elsewhere in this chapter	-

Rotatilt Option



95CB. 008

L.H. ASSEMBLY SHOWN
(R.H. ASSEMBLY IS A MIRROR IMAGE)

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KT 02295

Item No.	Part No.	Description	Quantity
	282509-1	Rotatilt Installation 12v	
	282509-2	Rotatilt Installation 24v	
1	282505-1	Motor Mount	1
2	123-148	Screw M12 x 50	3
	281325-1	Bush x 6.5 Long	3
	455-12	Washer	3
	425-16	Nut - Nyloc M12	3
3	282508-12	Electric Actuator 12v	1
	282508-24	Electric Actuator 24v	1
4	282506-1	Pylon	1
5	42533-1	Brush Motor Mount	1
6	282507-1	Lower Mount Bracket	1
7	281330-2	Clevis Pin	1
	124-135	Bolt M8 x 20	1
	425-14	Nut - Nyloc M8	1
> 8	44-63	Plug - Black	3
9	281330-1	Clevis Pin	1
	124-135	Bolt M8 x 20	1
	425-14	Nut - Nyloc M8	1
10	281314-1	Spacer	2
11	124-171	Bolt M10 x30	3
	460 - 11	Washer	3
12	282053-1	Loom - Switch Panel to Actuator 12v	1
	282053-2	Loom - Swtich Panel to Actuator 24v	1

Notes

The Rotatilt option requires an Options Switch Panel, see Chapter 32, that includes the necessary switches and wiring.

See Diagram SE571z01 in Chapter 9 of the Maintenance Section for wiring details.

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Superseded Parts

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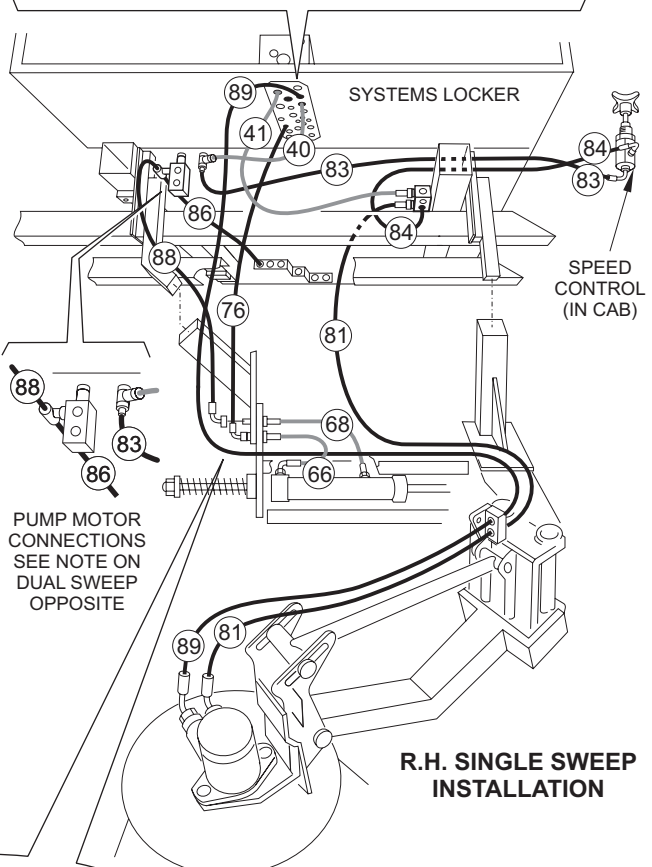
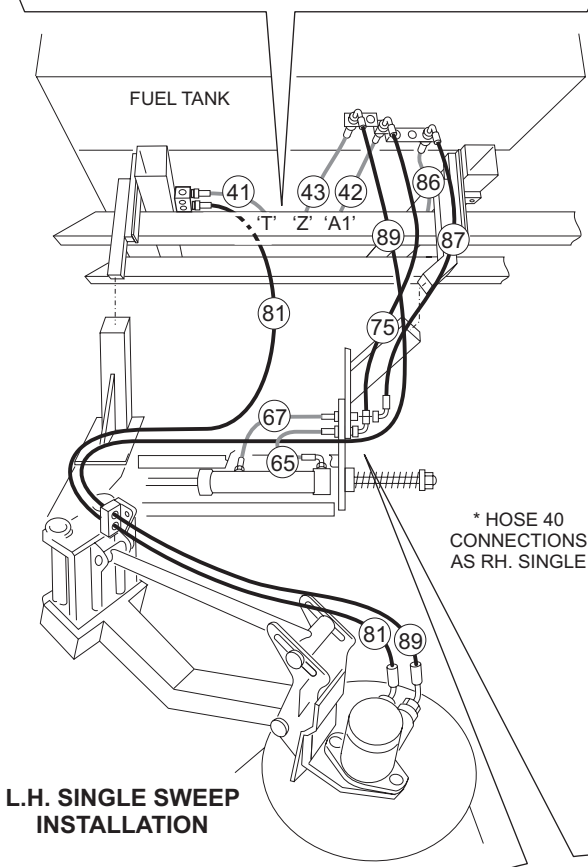
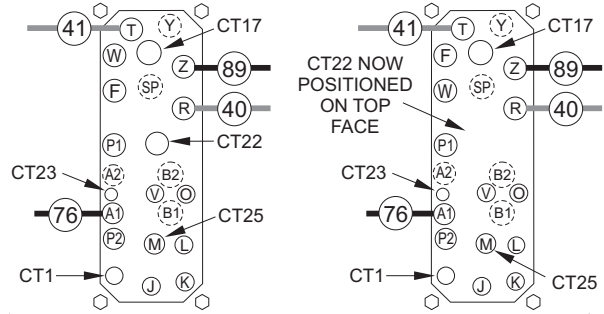
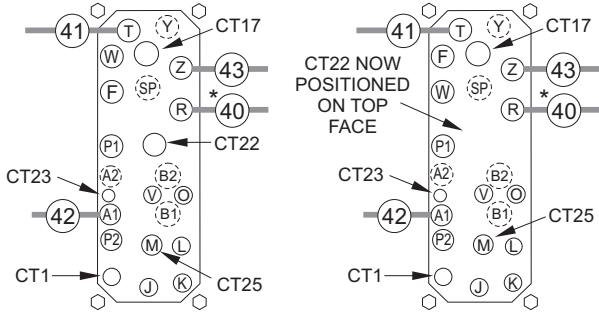
CB Single Sweep Installation - Hydraulic Hoses

SUPERSEDED TYPE 'B'
GOLD BLOCK SILVER LABEL

CURRENT TYPE 'C'
GOLD BLOCK YELLOW LABEL

SUPERSEDED TYPE 'B'
GOLD BLOCK SILVER LABEL

CURRENT TYPE 'C'
GOLD BLOCK YELLOW LABEL

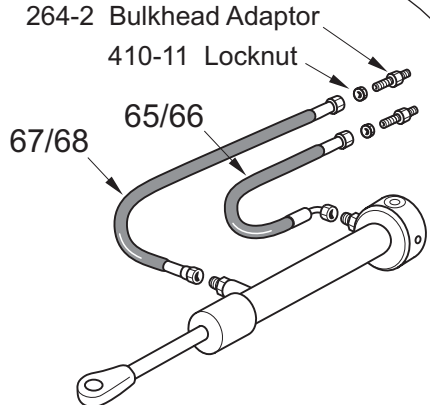


* HOSE 40 CONNECTIONS AS RH. SINGLE

PUMP MOTOR CONNECTIONS SEE NOTE ON DUAL SWEEP OPPOSITE

SPEED CONTROL (IN CAB)

R.H. SINGLE SWEEP INSTALLATION



95HH. 006-9

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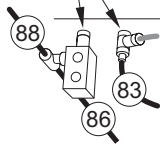
CB Dual Sweep Installation - Hydraulic Hoses

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FOR WATER PUMP MOTOR CONNECTIONS:-

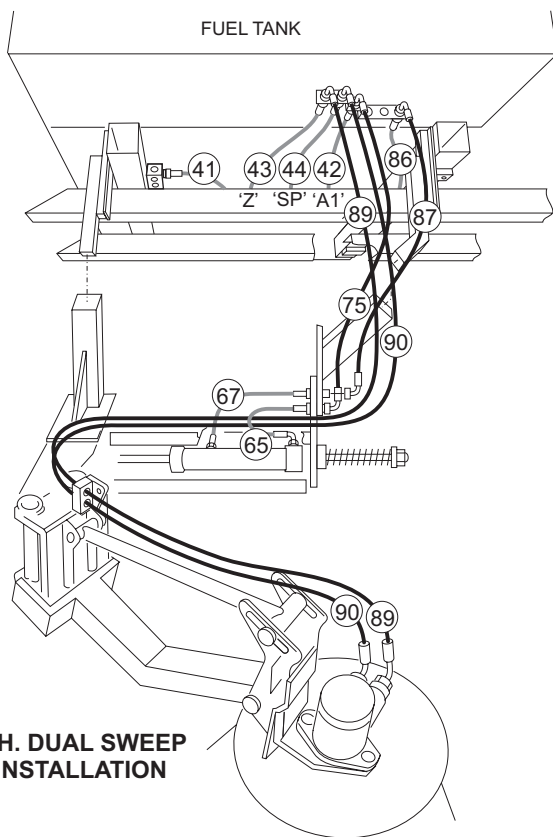
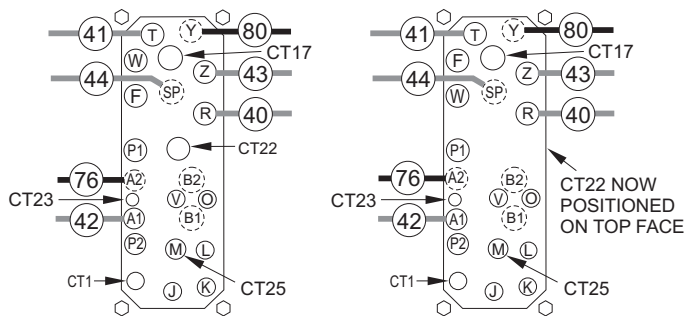
VT MACHINES - SEE LP. WATER PUMP
INSTALLATION CHAPTER 30

VS MACHINES - SEE FAN TUB,
HYDRAULIC HOSES CHAPTER 22.HI

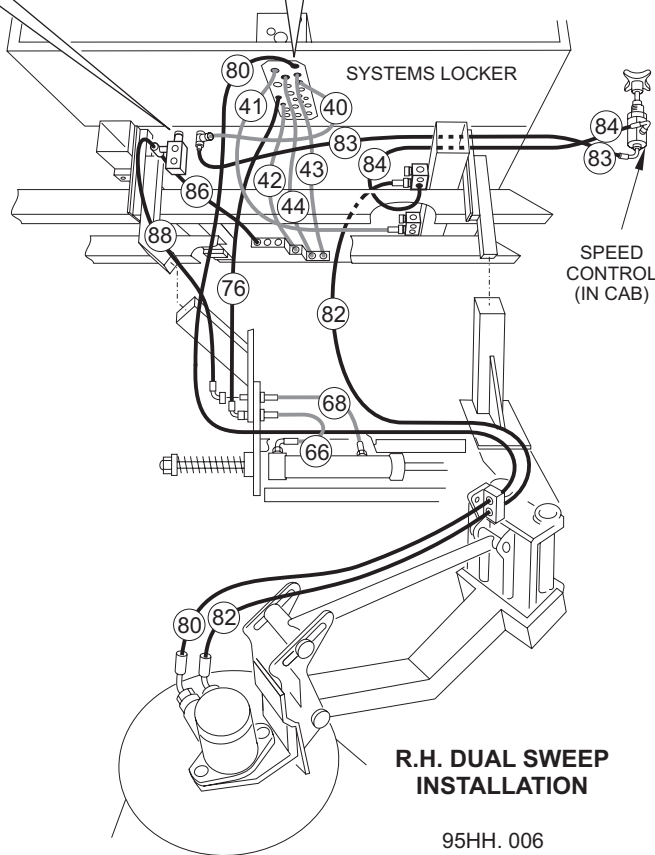


SUPERSEDED TYPE 'B'
GOLD BLOCK SILVER LABEL

CURRENT TYPE 'C'
GOLD BLOCK YELLOW LABEL



L.H. DUAL SWEEP
INSTALLATION



R.H. DUAL SWEEP
INSTALLATION

95HH. 006

Item No.	Part No.	Description	Quantity	
			Single	Dual
75/76	HC04001-78	Hose, 0.8 to 0.99m Chassis Height	1	2
	HC04001-98	Hose, 0.9 to 0.99m Chassis Height	1	2
	HC04001-98	Hose, 1.0 to 1.099m Chassis Height	1	2
87/88	HC04002-80	1/4" Hydraulic Hose	1	2
65/66	HC04002-42	Hose - Megaflex 1/4" Straight x 90°s	1	2
67/68	HC04000-37	Hose - Megaflex 1/4" Straight x Straight	1	2

All other hoses are the same as the current installation shown elsewhere in this chapter

CHAPTER

25

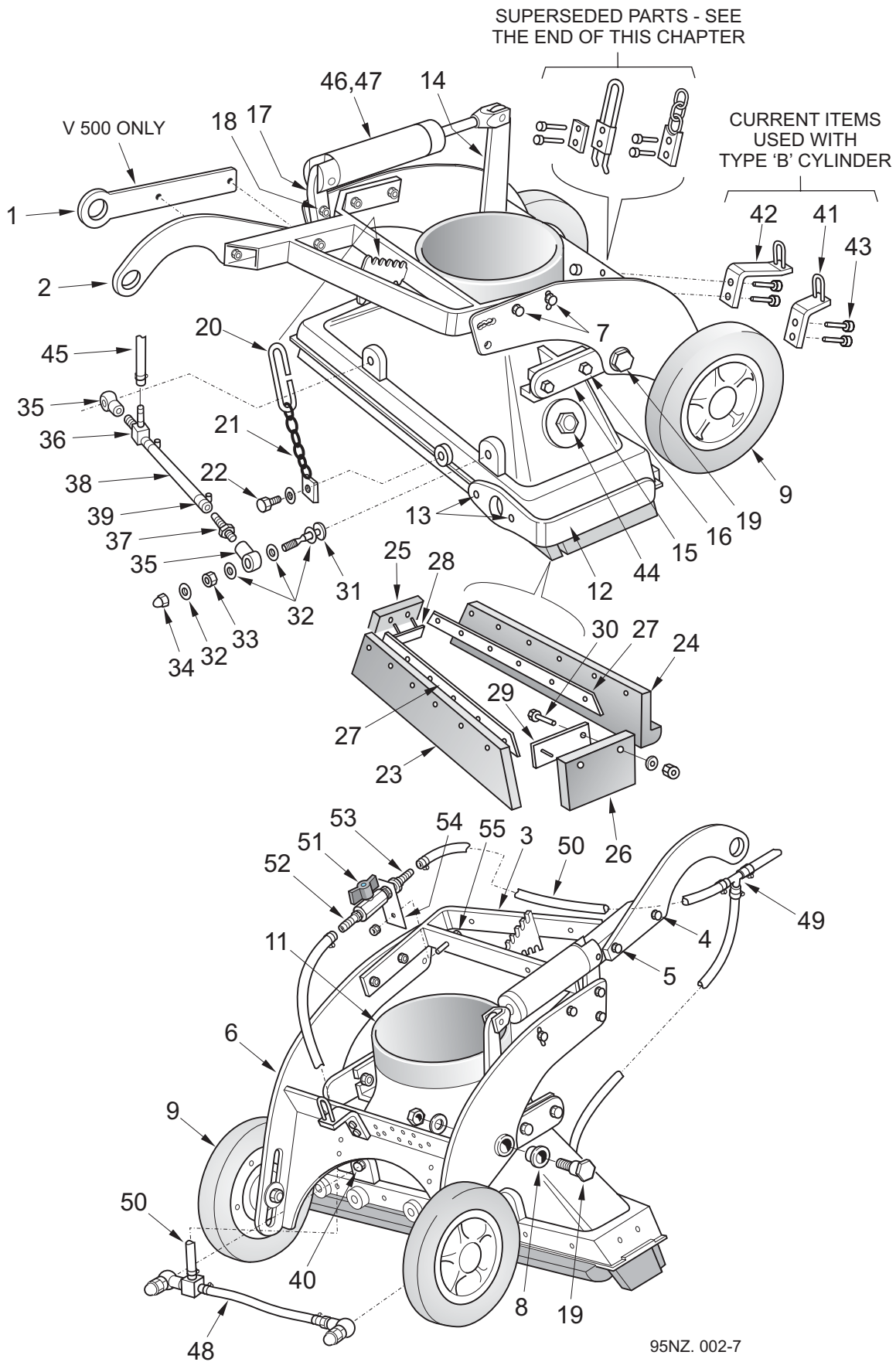
Nozzle

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Wheel Assembly	25 : 8 <
Superseded Parts	25 : 9 <

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Nozzle Assembly



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Nozzle Assembly

Item No.	Part No.	Description	Quantity
Carriage. BoM 941111, 951111			
Carriage Assembly comprising items 2 to 8:-			
1	294081-1	Tow Eye - V 500 Only	1
2	201227-1	Tow Eye - V 605, 650, 800	1
3	201240-1	Towbar	1
4	124-173	Screw M10 x 35	1
	455-11	Washer - Plain M10	2
	425-15	Nut M10	1
5	124-181	Screw M10 x 70	1
	455-11	Washer - Plain M10	2
	425-15	Nut M10	1
6	283360-1	Cradle	1
7	124-173	Screw M10 x 35	4
	425-15	Nut M10	4
	457-5	Washer Ø10	4
8	283374-1	Pivot Bush	2
9	63491-1	Nozzle Wheel - See over page	2
10	-		
Dressing. BoM 951112			
11	281420-2	Nozzle - Fully Lined	1
12	281754-1	Bumper	1
13	124-207	Screw M12 x 40	2
	425-16	Nut M12	2
	455-12	Washer Ø12	2
14	281752-1	Actuator Arm	1
15	281751-1	Pivot Arm	1
16	124-175	Screw M10 x 40	4
	425-15	Nut M10	4
	455-11	Washer Ø10	4
17	280866-1	Mast	1
18	124-175	Screw M10 x 40	2
	455-11	Washer Ø10	2
	425-15	Nut M10	2
19	283363-1	Pivot Bolt	2
	425-20	Nut M20	2
	455-16	Washer Ø20	2
20	282968-1	Hook	1
21	62353-4	Link	1
22	124-201	Screw M12 x 25	1
	425-16	Nut M12	1
	455-12	Washer Ø12	1

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Nozzle Assembly

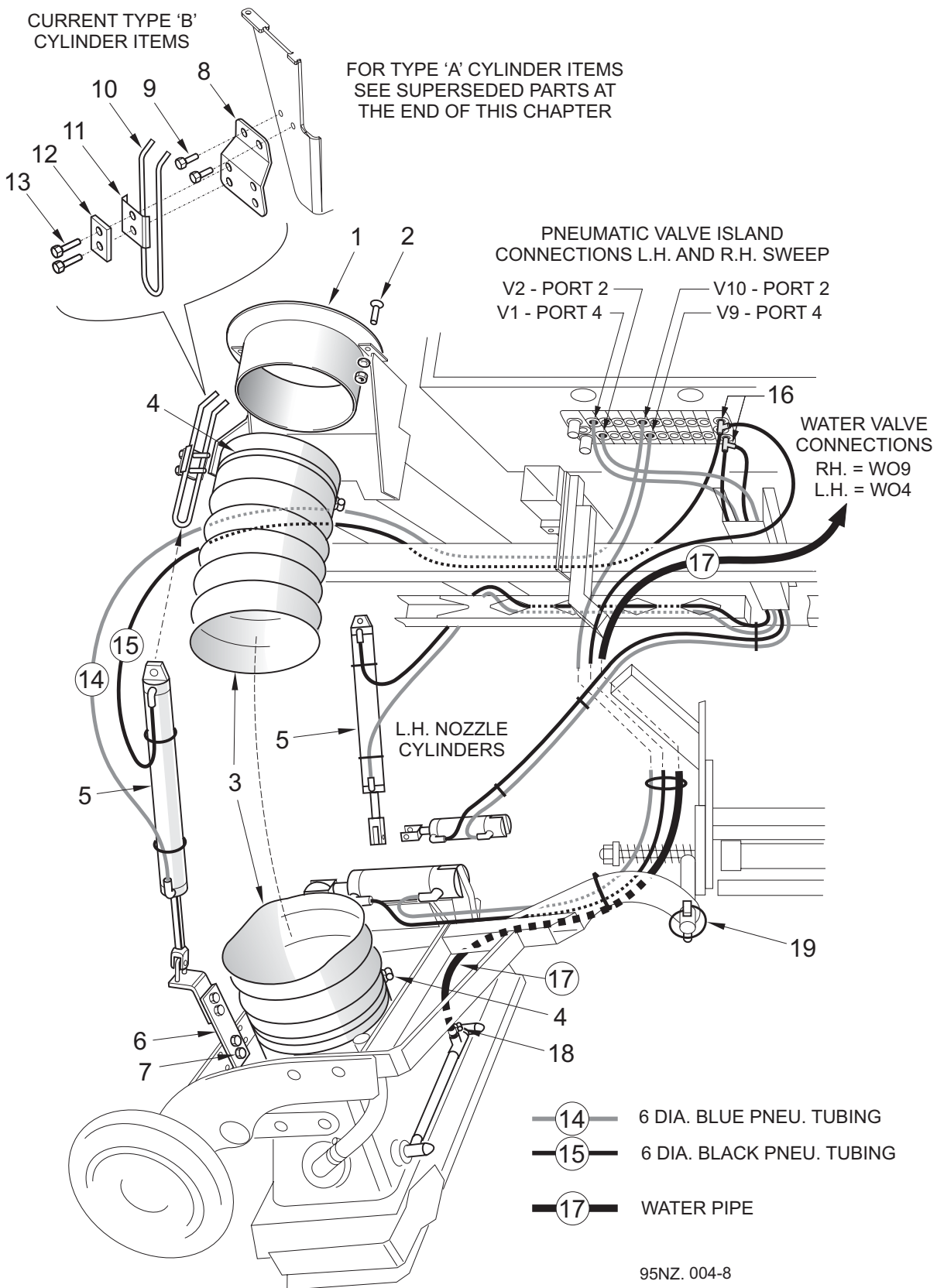
Item No.	Part No.	Description	Quantity
	282538-1	Nozzle Rubber Spares Kit comprising items 23 to 26:-	
23	62005-1	Nozzle Rubber - Front	1
24	282230-1	Nozzle Rubber - Rear	1
25	281045-1	Nozzle Rubber - Inner	1
26	281044-1	Nozzle Rubber - Outer	1
	282538-3	Nozzle Strip Spares Kit comprising items 27, 28, 29:-	
27	94017-1	Clamp Plate - Front/Rear	2
28	63667-1	Clamp Plate - Inner	1
29	63666-1	Clamp Plate - Outer	1
30	136-23	Carriage Bolt M8 x 45	16
	455-10	Washer Ø8	16
	415-8	Nut M8 - Stainless Steel	16
31	282781-1	Water Jet 1.6mm	2
32	453-1	Fibre Washer Ø20 - 4 Per Jet	8
33	416-12	Locknut M12 - Stainless Steel	2
34	418-12	Domed Nut - Stainless Steel	2
35	26997-1	Banjo Connector	2
36	90696-1	Tee Connector	1
37	46382-3	Hose Adaptor	1
38	39444	Hose	0.34m
39	501-1	Hose Clip	2
40	124-203	Screw M12 x 30) Not required when	2
	455-12	Washer Ø12) Additional Water Option	2
	425-16	Nut M12) items 48 - 55 are fitted	2
41	284072-1	Lift Cylinder Bracket - V605, 650, 800	1
42	284079-1	Lift Cylinder Bracket - V500 Only	1
43	124-171	Screw M10 x 30	2
	425-15	Nut Nyloc M10	2
44	281755-1	Plug G3/4"	1
	410-57	Nut G3/4"	1
45	-	Hose - See chapter 30	
Actuation. BoM 951113			
46	290001-1	Maxigap Cylinder	1
47	-	Varagap Cylinder - See Options Section 35.SG	1
Additional Water Option KT 00995			
48	-	Injection Parts - as standard Front Sprays, items 31 to 39	
49	277-2	Tee Connector	1
50	39444	Hose	0.34m
	501-1	Hose Clip	4

Nozzle Assembly

Item No.	Part No.	Description	Quantity
51	88-4	Ball Valve	1
52	46382-3	Hose Adaptor	1
53	282214-1	Bulkhead Hose Adaptor	1
	410-11	Lock Nut 1/4" BSP	
54	7006682	Mounting Plate	1
55	124-139	Setscrew M8 x 30	1
	455-10	Washer - Plain Ø8	1
	425-14	Nut - Nyloc M8	1

Notes

Nozzle Installation with Current Type 'B' Lift Cylinder



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Nozzle Installation with Current Type 'B' Lift Cylinder

BoM 951120

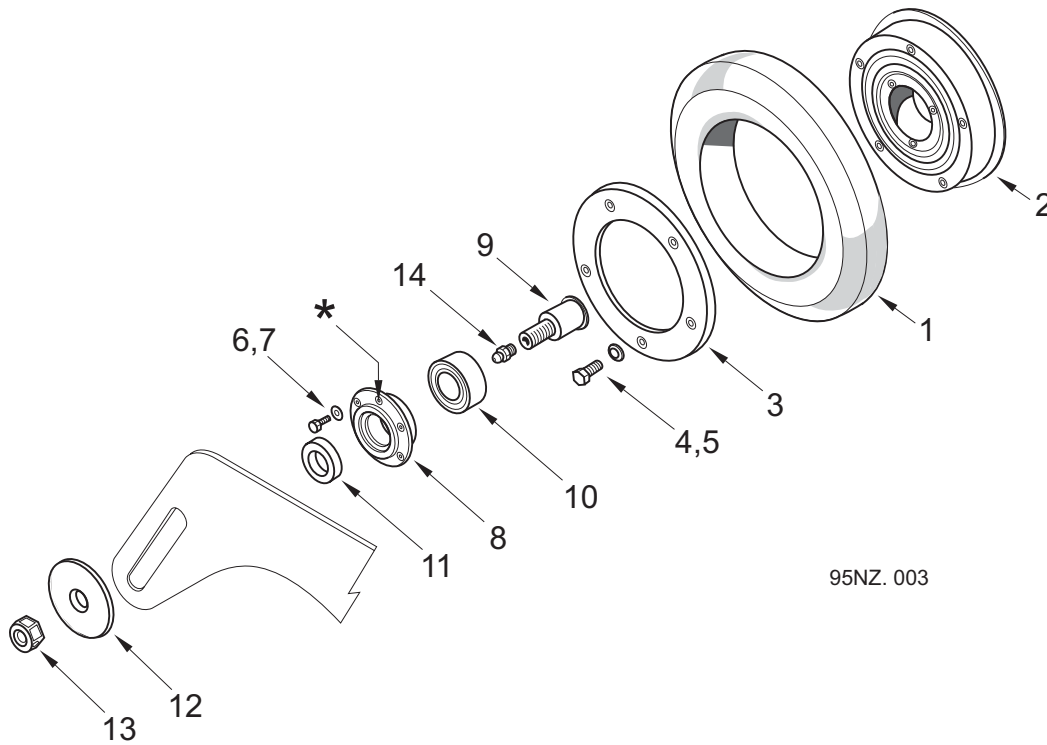
Item No.	Part No.	Description	Quantity	
			Single	Dual
* 1	94990-1	Intake Seat - 0.8 to 0.99m Chassis Height	1	2
	94990-3	Intake Seat - 1.0 to 1.099m Chassis Height	1	2
2	127-139	Screw - Countersunk M8 x 30	3	6
	460-10	Washer M8	3	6
	420-10	Nut M8	3	6
3	94992-2	Nozzle Trunking	1	2
4	504-54	Hose Clip	2	4
† 5	29284-2	Lift Cylinder	1	2
>	284015	High Chassis Installation Drawing Items 6 and 7:		
6	807182-1	Adaptor Plate	1	2
> 7	124-171	Screw M10 x 30	2	4
	455-11	Washer M10	2	4
	425-15	Nut - Nyloc	2	4
8	284017-1	Cylinder Mounting Plate	1	2
9	124-171	Screw M10 x 30	2	4
	425-15	Nut M10	2	4
10	40405-1	Lifting Eye	1	2
11	40404-1	Clamp Washer	1	2
12	63345-1	Clamp Block	1	2
13	124-176	Screw M10 x 45	2	4
	425-15	Nut M10	2	4
14	273-20	Pneumatic Tubing Ø6 Blue	10m	16m
15	12869	Pneumatic Tubing Ø6 Black	6m	9m
16	554-3	Tee Adaptor	-	2
17	39444	Water Pipe	5m	8m
18	501-1	Hose Clip	2	4
19	60-1	Linch Pin	1	2

Notes

* For Heavy Duty Rubber Lined Intake Seat see Optional Equip't Chapter 35 - Body Section BD.

Quick release couplings for the air and water pipes can be fitted if nozzles are to be regularly changed, i.e. standard Maxigap for a full width type as covered in the Sweep Gear section of chapter 35. Drawing 283544 is available from the parts department listing parts used.

† The superseded Type 'A' Lift Cylinder Installation is shown on the next page.

Nozzle Wheel


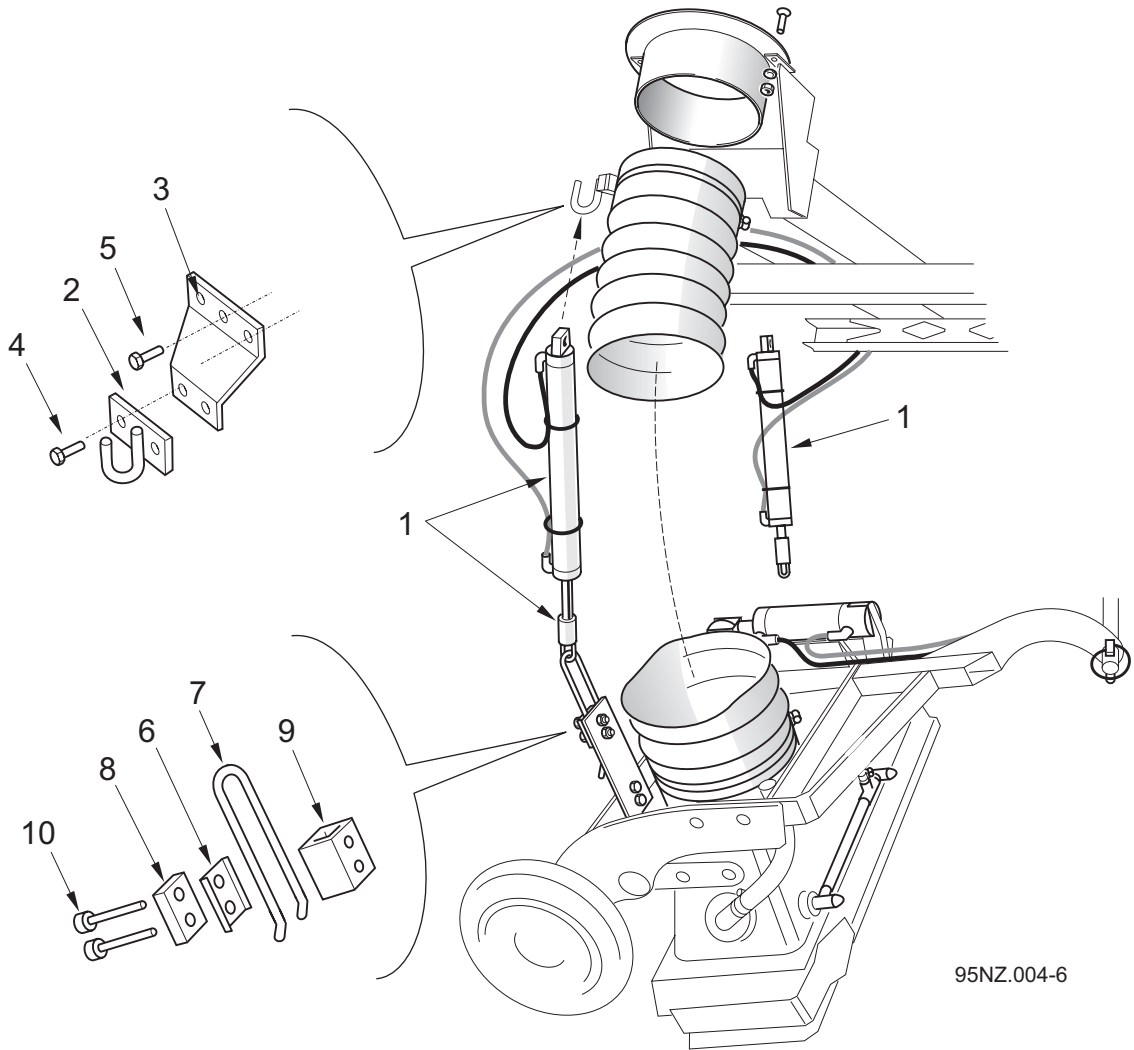
Item No.	Part No.	Description	Quantity
	63491-1	Nozzle Wheel comprising:	
1	16752	Tyre	1
2	63493-1	Hub	1
3	16750-1	Backplate - Tyre	1
4	124-134	Screw M8 x 16	5
5	460-10	Washer - Spring M8	5
6	124-102	Screw M6 x 16	3
7	460-8	Washer - Spring M6	3
8	63495-1	Retainer Plate	1
9	63492-1	Spindle	1
10	14-52	Bearing	1
11	63494-1	Collar	1
12	9114-2	Washer - Special	2
13	425-18	Nut - Nyloc M16	2
14	38-30	Grease Nipple M6 Straight	1

Notes

To withdraw bearing, remove wheel assembly from carriage and refit washer and nut, items 12 and 13. Insert M6c x 50mm screws (124-113) in the three unused retainer plate holes*. Tighten each bolt half a turn at a time to extract bearing.

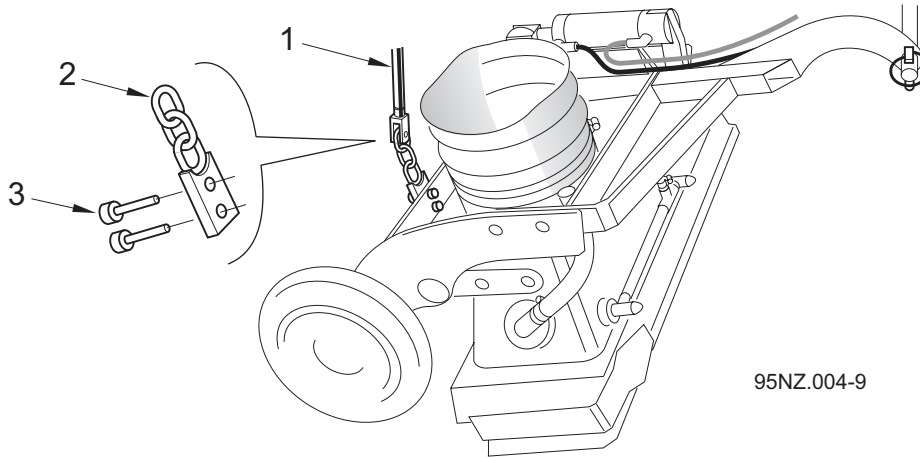
Superseded Parts - Type 'A' Lift Cylinder Installation

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95NZ.004-6

Item No.	Part No.	Description	Quantity
1	28903-1	Lift Cylinder	1
	28903-111	Rod Eye	1
2	40269-1	Cylinder Hook - Nozzle Lift	1
3	50603-1	Cylinder Hook Bracket - chassis dependant	1
4	124-173	Screw M10 x 35	2
	425-15	Nut M10	2
5	124-171	Screw M10 x 30 - 605, 650, 800 Series	2
	425-15	Nut M10	2
6	40404-1	Clamp Washer	1
7	40405-1	Lifting Eye	1
8	63345-1	Clamp Block	1
9	294123-1	Spacer Box - V500 Only	1
10	124-178	Screw M10 x 55 - V605, 650, 800	2
	123-138	Bolt M10 x 90 - V500 Only	2
	425-15	Nut Nyloc M10	2

Superseded Parts - Type 'B' Lift Cylinder Parts


Item No.	Part No.	Description	Quantity
1	-	Lift Cylinder - Type 'B'	1
2	284012-1	Nozzle Lift Link	1
3	124-171	Screw M10 x 30	2
	425-15	Nut M10	2

Notes

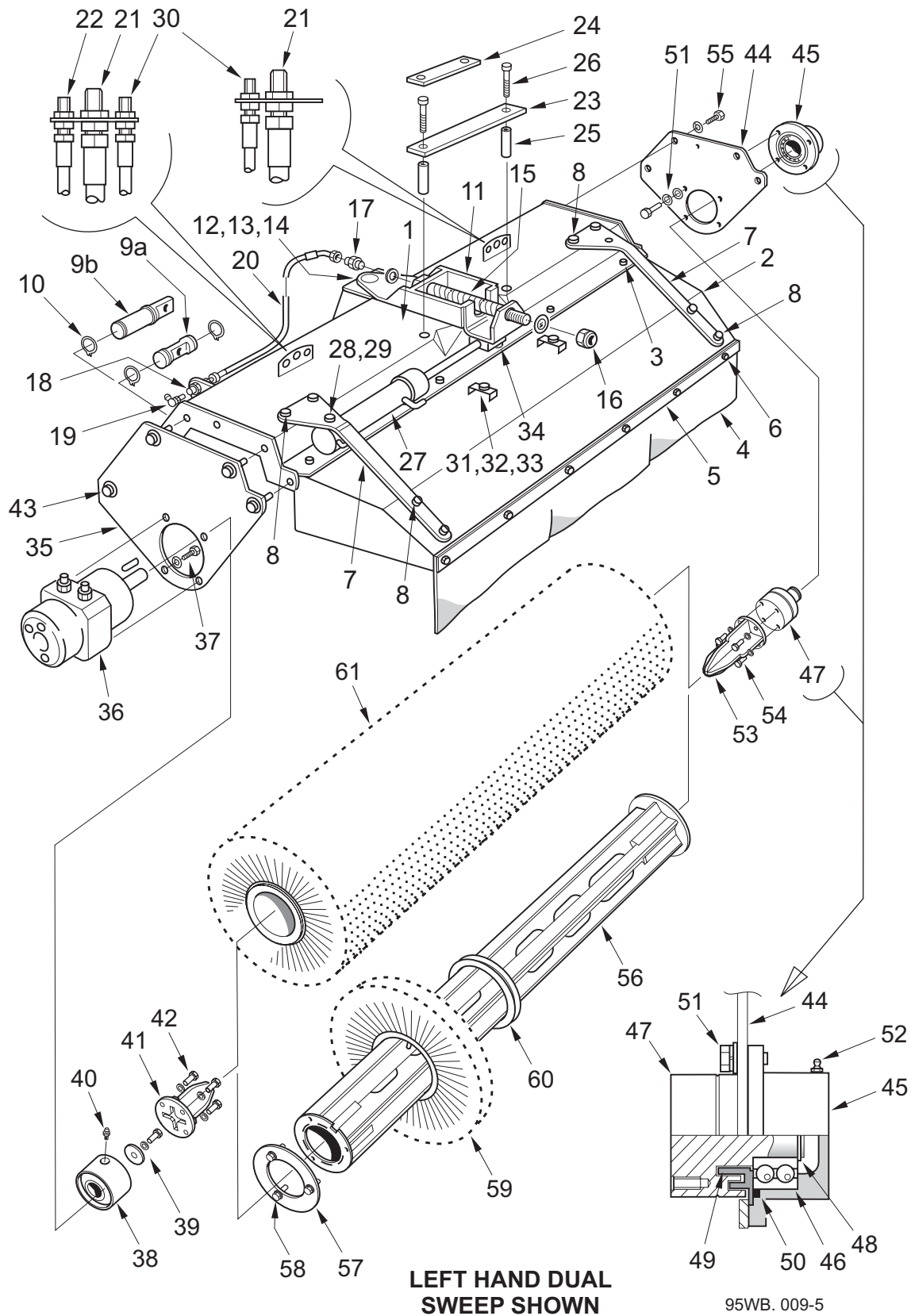
CHAPTER

26**Wide Sweep Brush****Table of Contents**

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Wide Sweep Brush Assembly

Note: Hydraulic hoses are listed on pages 26:10 and 26:12



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Wide Sweep Brush Assembly

Carriage Assembly - BoM 941011 (V500), 951011 (V650, 800)

Item No.	Part No.	Description	Quantity	
1	283102-1	Carriage	1	
2	283091-1	Curtain	1	
3	124-169	Screw M10 x 25	4	
	455-11	Washer - Plain M10	8	
	425-15	Nut - Nyloc M10	4	
4	200055-1	Rubber Curtain	1	
5	283126-1	Retaining Strip	1	
6	124-137	Screw M8 x 25	6	
	455-10	Washer - Plain M8	12	
	425-14	Nut - Nyloc M8	6	
7	283090-1	Curtain Support	2	
8	124-171	Screw M10 x 30	8	
	455-11	Washer - Plain M10	16	
	425-15	Nut - Nyloc M10	8	
>	9a	62097-1	Anchor Pin - V Range except VT500	2
>	9b	809715-1	Lift Cylinder Pin - VT500 only	2
	10	27-2	Circlip (Quantity for V Range except VT500)	4
>		27-2	Circlip (Quantity for VT500)	2
11	283103-1	Compensator	1	
12	62095-1	Plate - Keeper	1	
13	29395-2	Bearing	1	
14	124-135	Screw M8 x 20	2	
	460-10	Washer - Spring M8	2	
15	283092-1	Shaft	1	
16	455-16	Washer - Plain M20	1	
	425-7	Nut - Nyloc M20	1	
17	265-1	Adaptor 1/8" x 1/4" BSP	1	
	451-4	Washer - Sealing 1/8" BSP	1	
18	262-2	Adaptor - Bulkhead G1/4"	1	
19	38-11	Grease Nipple - 90°	1	
20	HC04036-87	Hose - 1/4" Megaflex	1	
21	264-4	Adaptor - Bulkhead G1/2"	2	
22	264-2	Adaptor - Bulkhead G1/4"	1	

WSB Slew - BoM 951012

			Single	Dual
23	283127-1	Slew Retainer	-	1
24	283127-2	Slew Retainer	1	-
25	283128-1	Spacer	-	2
26	123-154	Bolt M12 x 80	2	2
	455-12	Washer - Plain M12	4	4
	425-16	Nut - Nyloc M12	2	2

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Wide Sweep Brush Assembly
WSB Slew - BoM 951012

Item No.	Part No.	Description	Quantity	
			Single	Dual
27	29160-1	Cylinder	-	1
28	283129-1	Bush - Cylinder Mount	-	1
29	123-140	Bolt M10 x 100	-	1
	455-11	Washer - Plain M10	-	2
	457-5	Washer - Plain M10 Large	-	1
	425-15	Nut - Nyloc M10	-	1
30	264-2	Adaptor - Bulkhead G1/4"	-	2
31	51-51	Clamp - Single	2	-
32	51-50	Clamp - Twin	-	2
33	124-111	Screw M6 x 40	2	2
	425-13	Nut - Nyloc M6	2	2
34	124-199	Screw M12 x 20	-	1
	460-12	Washer - Spring M12	-	1
	457-6	Washer - Plain M12 Large	-	1

Motor Assembly - BoM 941013, 951013

	283110-1	Motor Plate Assembly - V605, 650, 800) both comprising		
	283110-3	Motor Plate Assembly - V500) items 36 to 42		
35	283112-1	End Plate - V605, 650, 800	1	
	283231-1	End Plate - V500 Only	1	
36	99972-1	Motor - OMPW 200	1	
>	240-2	Motor Seal Kit - Universal		
37	124-171	Screw - M10 x 30	4	
	460-11	Washer - Spring M10	4	
	455-11	Washer - Plain M10	4	
38	283109-1	Drive Motor Adaptor	1	
39	62064-1	Washer - Special	1	
	124-136	Screw M8 x 22	1	
	460-10	Washer - Spring M8	1	
40	38-30	Grease Nipple	1	
41	283105-1	Drive Dog	1	
42	124-137	Setscrew M8 x 25	4	
	460-10	Washer - Spring M8	4	
43	124-169	Screw M10 x 25	4	
	460-11	Washer - Spring M10	4	
	455-11	Washer - Plain M10	4	

Bearing Assembly - BoM 941014, 951014

	283111-1	Bearing Plate Assembly - V605, 650, 800) both comprising		
	283111-3	Bearing Plate Assembly - V500 only) items 44 to 54		

Wide Sweep Brush Assembly

Item No.	Part No.	Description	Quantity
44	283112-1	Side Plate - V605, 650, 800	1
	293530-1	Side Plate - V500 only	1
45	283107-1	Bearing - Housing	1
46	14-47	Bearing	1
47	283108-1	Drive Adaptor	1
48	27-15	Circlip - External	1
49	283121-1	Labyrinth	1
50	80-94	'O' Ring	1
51	124-169	Screw M10 x 25	4
	460-11	Washer - Spring M10	4
	455-11	Washer - Plain M10	4
52	38-30	Grease Nipple	1
53	283106-1	Driven Dog	1
54	124-137	Setscrew M8 x 25	4
	460-10	Washer - Spring M8	4
55	124-169	Screw M10 x 25	4
	460-11	Washer - Spring M10	4
	455-11	Washer - Plain M10	4

WSB Dressing - BoM 941030, 951030

Segment System

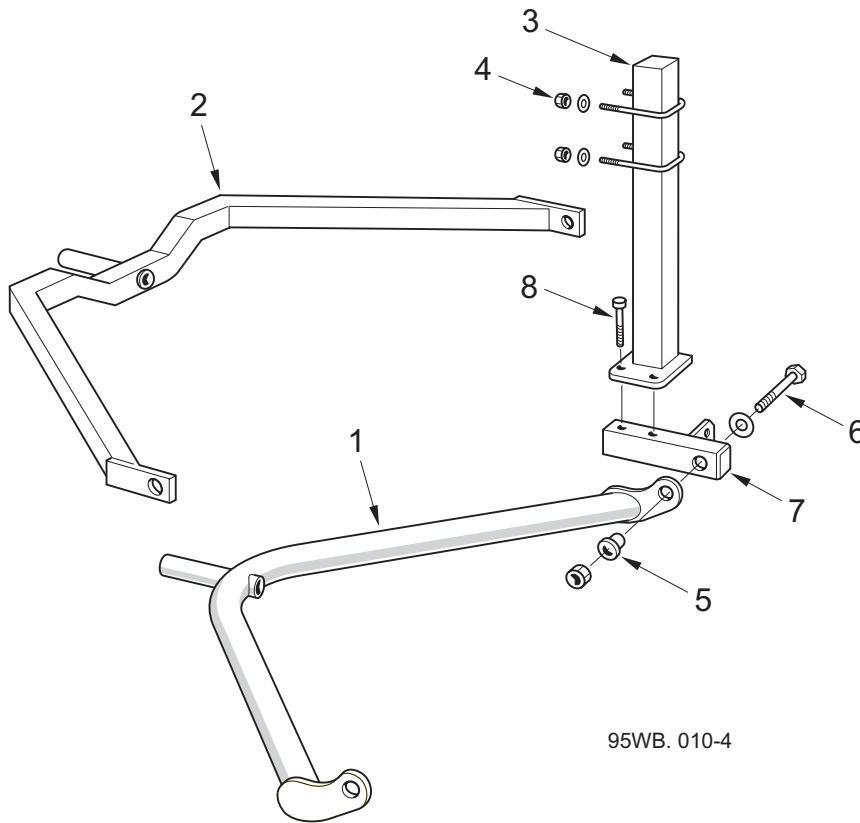
	283114-1	Stock Assembly comprising items 56 to 58:-	
56	283101-1	Stock - One Piece	1
57	283115-1	Closing Plate - Driven End	1
58	118-137	Screw M8 x 25 - Stainless Steel	4
	454-8	Washer - Plain M8 Stainless Steel	4
	458-8	Washer - Spring M8 Stainless Steel	4
59	834-1	Poly Segment - V605, 650, 800	44
	283385-340	Poly Segment - V500	44
60	13515	Spacer	42

Modular System

61	295050-406	Poly Brush Stock - V605, 650, 800	1
	295050-340	Poly Brush Stock - V500	1

Notes

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Towbar Installations


95WB. 010-4

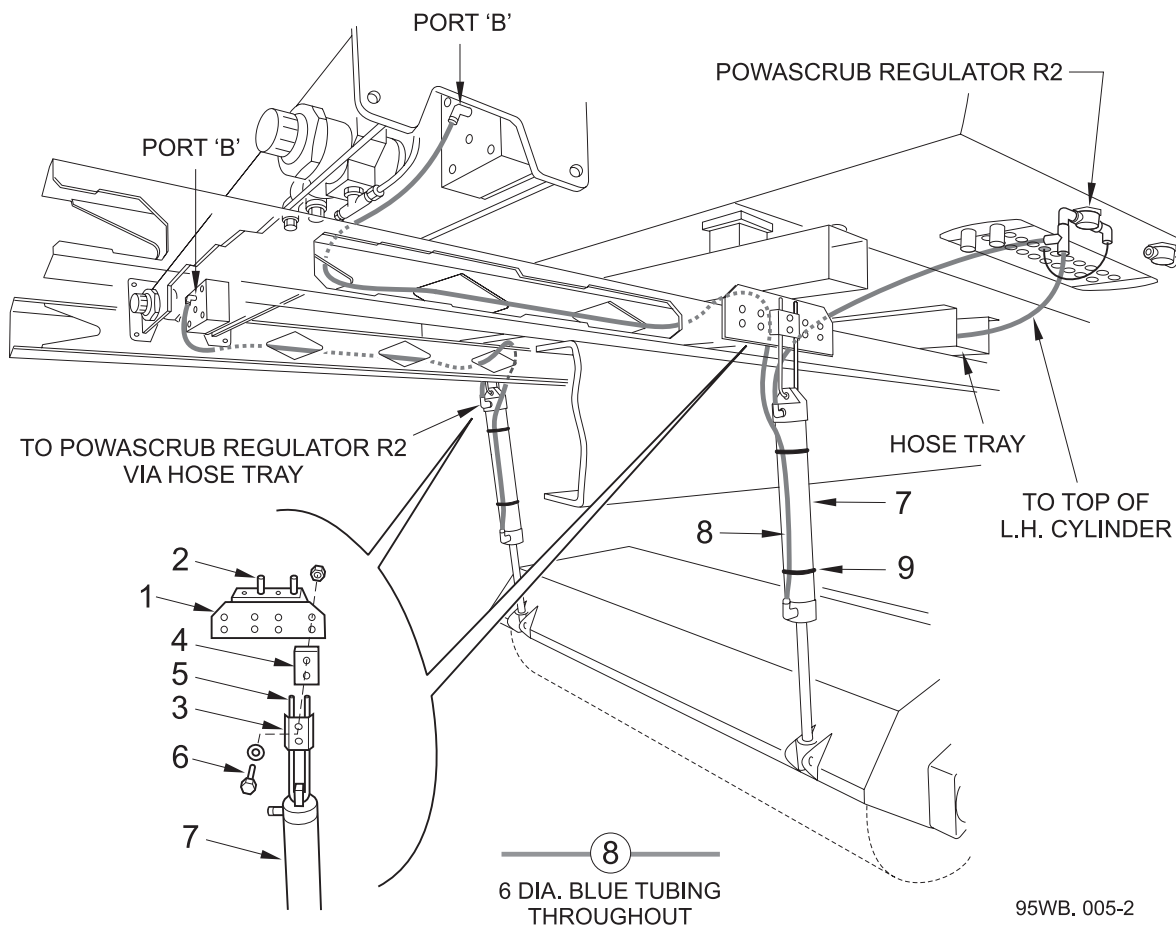
Towbar Assembly - BoM 951015 (V650, 800). BoM 941015 (V500)

>	1	283662-1	Towbar - V650, 800 Range, Type 'B' Current	1
>		293550-1	Towbar - V500 Range	1
>	2	62070-1	Towbar - V650, 800 Range, Type 'A' Superseded	1

WSB Installation - BoM 951020

				Single	Dual
3	281296-1	Support - Chassis Height 0.9 - 0.99m		1	-
	281296-2	Support - Chassis Height 1.0 - 1.099m		1	-
	281296-3	Support - Chassis Height 0.8 - 0.99m		1	-
4	281274-1	U-Bolt M12		2	-
	455-12	Washer - Plain		4	-
	425-16	Nut - Nyloc M12		4	-
5	62099-2	Tow Point - Bush		2	2
6	124-217	Screw M12 x 90		2	2
	455-12	Washer - Plain M12		2	2
	425-16	Nut - Nyloc M12		2	2
7	62819-1	Box - Towpoint		1	-
8	123-151	Bolt M12 x 65		2	-
	460-12	Washer - Spring		2	-
	425-16	Nut - Nyloc M12		2	-

WSB Installation - Pneumatics - Suspension Cylinders

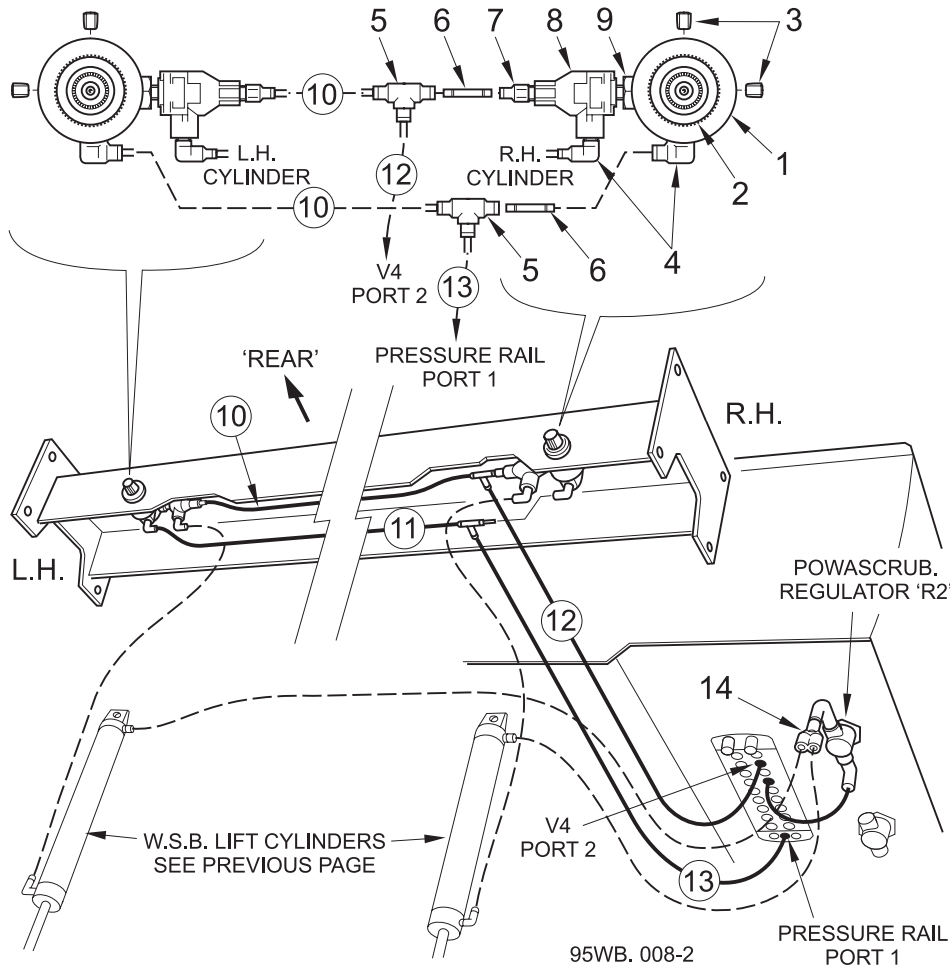


95WB.005-2

BoM 951020

Item No.	Part No.	Description	Quantity
1	281549-1	Suspension Bracket	2
2	124-199	Screw M12 x 20	4
	460-12	Washer - Spring M12	4
3	40404-1	Clamp Washer	2
4	63345-1	Clamp Block	2
5	40405-1	Lifting Eye	2
6	124-178	Screw M10 x 55	4
	455-11	Washer - Plain M10	4
	425-15	Nut - Nyloc M10	4
7	29284-2	Pneumatic Cylinder	2
8	273-20	Tube - Blue Nylon 6mm OD	
		0.9 to 0.99m Chassis Height	6m
		1.0 to 1.099m Chassis Height	6.5m
9	24-1	Cable Tie	4

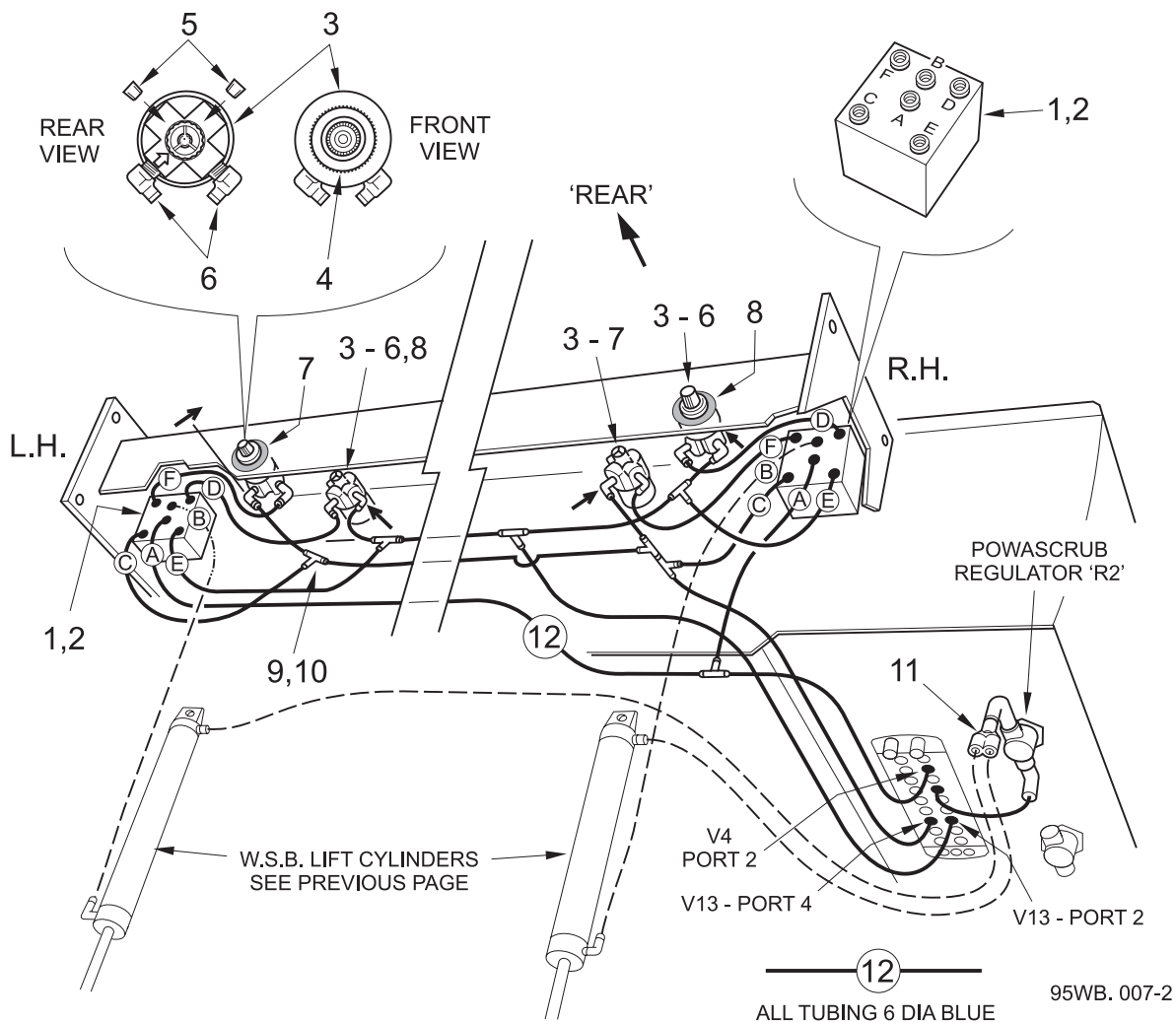
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WSB Pneumatics - Suspension Regulation, Single Sweep

BoM 950713

Item No.	Part No.	Description	Quantity
1	253-9	Regulator	2
2	410-86	Panel Nut	2
3	9756	Plug R1/4"	4
4	552-8	Elbow R1/4" x Ø6	4
5	554-3	Tee Ø6	2
6	549-3	Stem Connector Ø6	2
7	537-8	Straight Adaptor R1/4" x Ø6	2
8	41211-1	Quick Exhaust Valve	2
9	266-2	Adaptor G1/4" x R1/4"	2
	451-17	Washing - Sealing	2
10	273-20	Tubing Ø6 Blue	1.16m
11	273-21	Tubing Ø6 Red	0.95m
12	273-20	Tubing Ø6 Blue	0.62m
13	273-21	Tubing Ø6 Red	0.74m
14	559-6	'Y' Connector Ø6	1

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WSB Pneumatics - Suspension Regulation, Dual Sweep



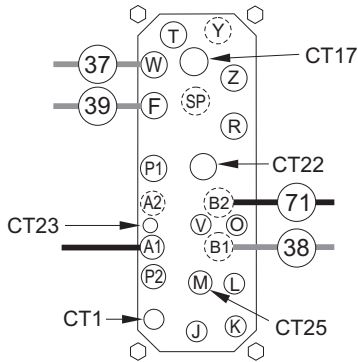
BoM 950713

Item No.	Part No.	Description	Quantity
1	200577	Shuttle/Exhaust Valve Block	2
2	124-102	Screw M6 x 16	4
	460-8	Washer - Spring M6	4
3	253-9	Regulator	4
4	410-86	Panel Nut	4
5	9756	Plug R1/4"	8
6	552-8	Elbow R1/4" x Ø6	8
7	282855-2	Red Disc	2
8	282855-1	Green Disc	2
9	554-3	Tee Ø6	4
10	549-3	Stem Connector Ø6	4
11	559-6	'Y' Connector Ø6	1
12	273-20	Tubing Ø6 Blue x 1 Reel	1

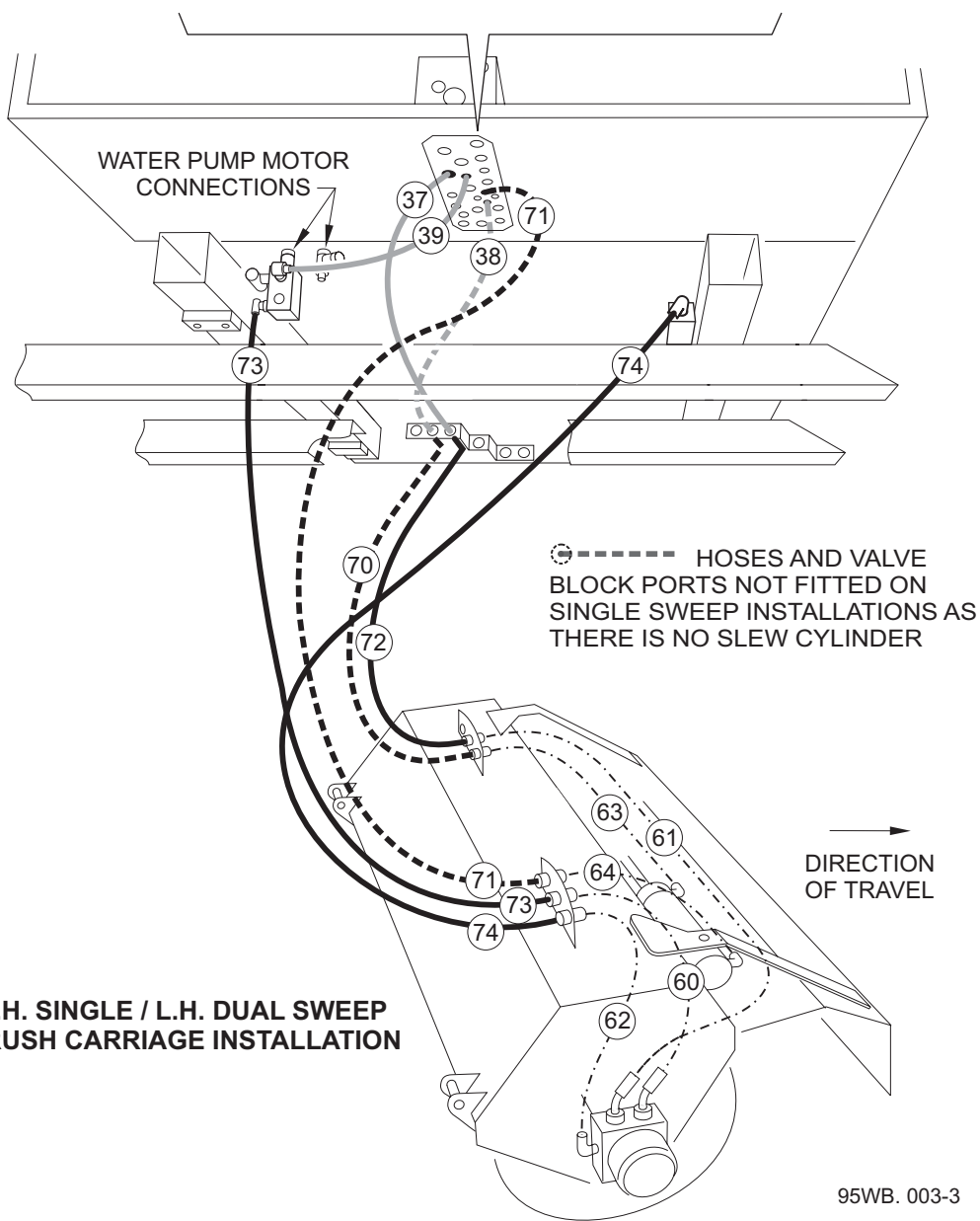
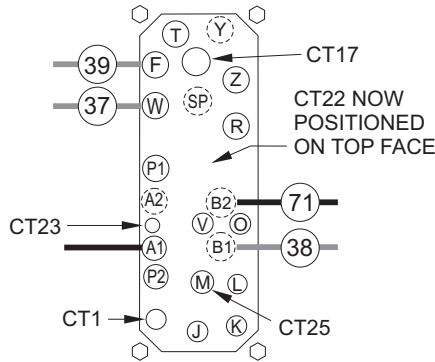
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WSB Installation - Hydraulic Hoses

SUPERSEDED TYPE 'B'
GOLD BLOCK SILVER LABEL



CURRENT TYPE 'C'
GOLD BLOCK YELLOW LABEL



95WB. 003-3

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WSB Installation - Hydraulic Hoses

Subframe Configuration BoM 950713, 940713

Item No.	Part No.	Description	Quantity
37	HC08001-155	Hydraulic Hose - Single and Dual Sweep	1
> 38	HC04001-144	Hydraulic Hose - Dual Sweep Only	1
39	HC08001-49	Hydraulic Hose - Single and Dual Sweep	1

Carriage Assembly BoM 951011

60	HC08001-73	Hydraulic Hose - Single and Dual Sweep	1
61	HC08001-160	Hydraulic Hose - Single and Dual Sweep	1
62	HC04002-87	Hydraulic Hose - Single and Dual Sweep	1

WSB Slew - BoM 951012

63	HC04003-95	Hydraulic Hose - Dual Sweep Only	1
64	HC04003-36	Hydraulic Hose - Dual Sweep Only	1

WSB Installation BoM 951020

			Chassis Height
70 †	HC04002-95	Hydraulic Hose - Dual Sweep Only	0.8 to 0.99m
	HC04002-115	Hydraulic Hose - Dual Sweep Only	0.9 to 0.99m
	HC04002-115	Hydraulic Hose - Dual Sweep Only	1.0 to 1.099m
71 †	HC04001-128	Hydraulic Hose - Dual Sweep Only	0.8 to 0.99m
	HC04001-148	Hydraulic Hose - Dual Sweep Only	0.9 to 1.099m
	HC04001-148	Hydraulic Hose - Dual Sweep Only	1.0 to 1.099m
72 †	HC08002-105	Hydraulic Hose - Single and Dual Sweep	0.9 to 0.99m
	HC08002-115	Hydraulic Hose - Single and Dual Sweep	1.0 to 1.099m
73 †	HC08002-95	Hydraulic Hose - Single and Dual Sweep	0.9 to 0.99m
	HC08002-115	Hydraulic Hose - Single and Dual Sweep	1.0 to 1.099m
74 †	HC04002-136	Hydraulic Hose - Dual Sweep Only	0.9 to 0.99m
	HC04002-146	Hydraulic Hose - Dual Sweep Only	1.0 to 1.099m
	HC04002-196	Hydraulic Hose - Single Sweep Only	0.9 to 0.99m
	HC04002-206	Hydraulic Hose - Single Sweep Only	1.0 to 1.099m

Notes

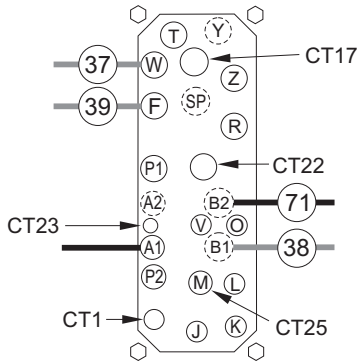
Item numbers correspond to those on Diagram SH522z01 in Maintenance Section, Chapter 8.

† Hoses 70 to 74 see Chapter 33 - Chassis Related Parts.

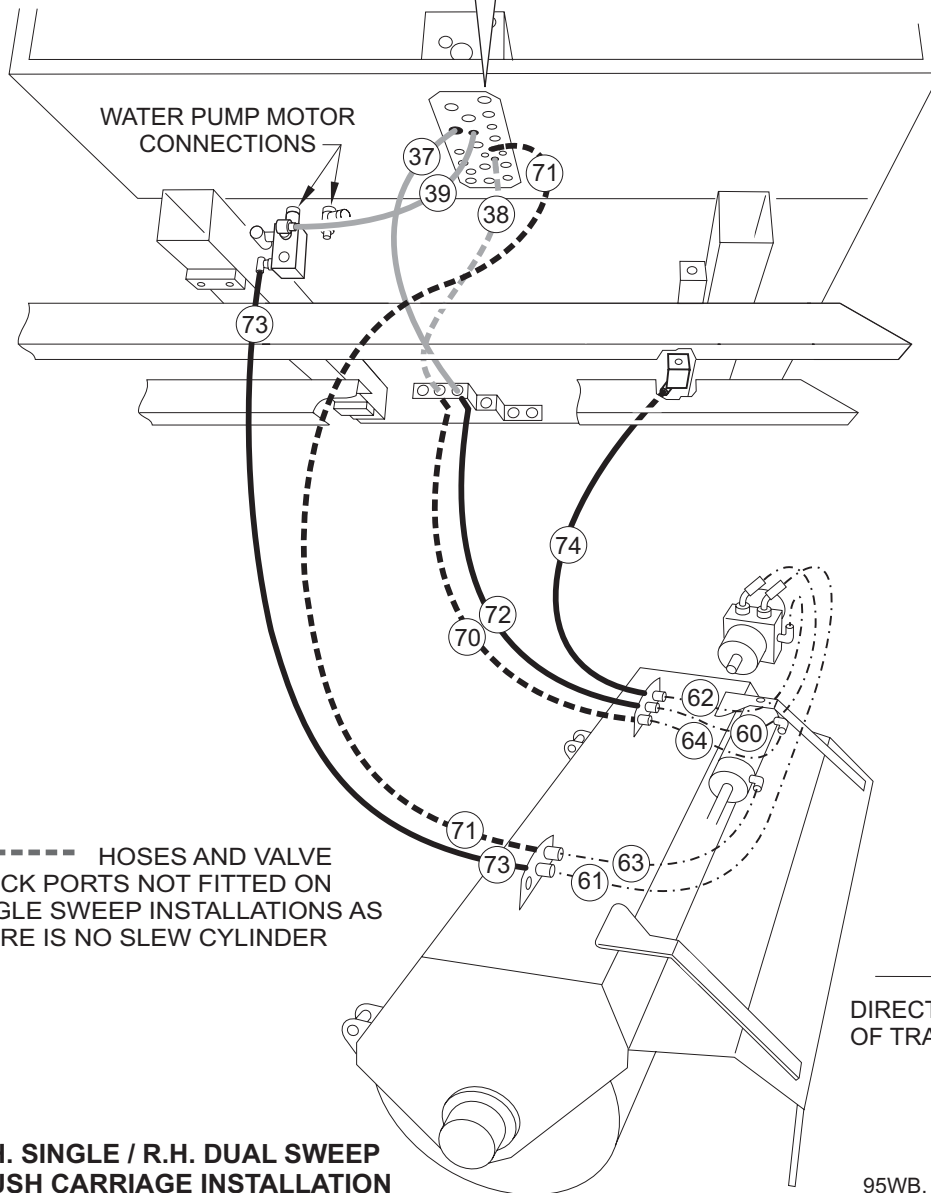
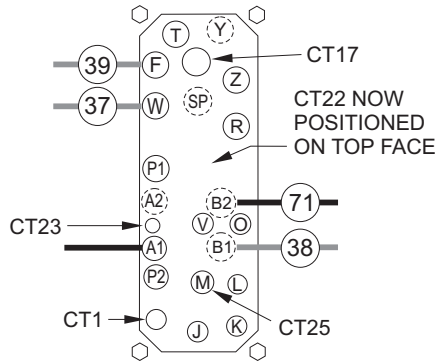
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WSB Installation - Hydraulic Hoses

SUPERSEDED TYPE 'B'
GOLD BLOCK SILVER LABEL



CURRENT TYPE 'C'
GOLD BLOCK YELLOW LABEL



----- HOSES AND VALVE
BLOCK PORTS NOT FITTED ON
SINGLE SWEEP INSTALLATIONS AS
THERE IS NO SLEW CYLINDER

**R.H. SINGLE / R.H. DUAL SWEEP
BRUSH CARRIAGE INSTALLATION**

95WB. 004-3

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WSB Installation - Hydraulic Hoses

Subframe Configuration BoM 950713, 940713

Item No.	Part No.	Description	Quantity
37	HC08001-155	Hydraulic Hose - Single and Dual Sweep	1
38	HC04001-144	Hydraulic Hose - Dual Sweep Only	1
39	HC08001-49	Hydraulic Hose - Single and Dual Sweep	1

Carriage Assembly BoM 951011

60	HC08001-73	Hydraulic Hose - Single and Dual Sweep	1
61	HC08001-160	Hydraulic Hose - Single and Dual Sweep	1
62	HC04002-87	Hydraulic Hose - Single and Dual Sweep	1

WSB Slew - BoM 951012

63	HC04003-95	Hydraulic Hose - Dual Sweep Only	1
64	HC04003-36	Hydraulic Hose - Dual Sweep Only	1

WSB Installation BoM 951020

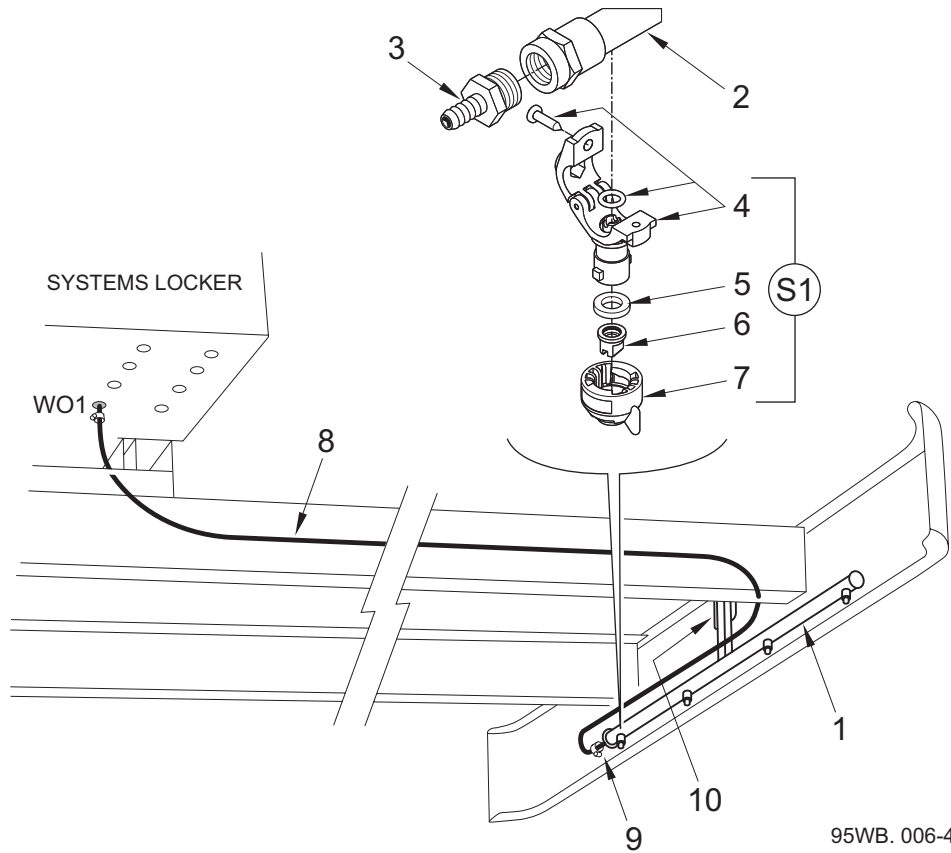
			Chassis Height
70 †	HC04002-95	Hydraulic Hose - Dual Sweep Only	0.8 to 0.99m
	HC04002-115	Hydraulic Hose - Dual Sweep Only	0.9 to 0.99m
	HC04002-115	Hydraulic Hose - Dual Sweep Only	1.0 to 1.099m
71 †	HC04001-128	Hydraulic Hose - Dual Sweep Only	0.8 to 0.99m
	HC04001-148	Hydraulic Hose - Dual Sweep Only	0.9 to 0.99m
	HC04001-148	Hydraulic Hose - Dual Sweep Only	1.0 to 1.099m
72 †	HC08002-105	Hydraulic Hose - Single and Dual Sweep	0.9 to 0.99m
	HC08002-115	Hydraulic Hose - Single and Dual Sweep	1.0 to 1.099m
73 †	HC08002-95	Hydraulic Hose - Single and Dual Sweep	0.9 to 0.99m
	HC08002-115	Hydraulic Hose - Single and Dual Sweep	1.0 to 1.099m
74 †	HC04002-136	Hydraulic Hose - Dual Sweep Only	0.9 to 0.99m
	HC04002-146	Hydraulic Hose - Dual Sweep Only	1.0 to 1.099m
	HC04002-196	Hydraulic Hose - Single Sweep Only	0.9 to 0.99m
	HC04002-206	Hydraulic Hose - Single Sweep Only	1.0 to 1.099m

Notes

Item numbers correspond to those on Diagram SH522z01 in Maintenance Section, Chapter 8.

† Hoses 70 to 74 see Chapter 33 - Chassis Related Parts.

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WSB Installation - Low Pressure Water Spray Bar

BoM 951020

Item No.	Part No.	Description	Quantity
1	282236-1	Spray Bar Assembly, comprising items 2 to 7:-	1
2	21-334	Spraybar	1
3	21-335	Hosetail	1
4	21-60	Nozzle Holder	1
5	21-64	Seal	1
6	21-66	Fan Tip - Red	1
7	21-63	Bayonet Cap	1
8	39444	Hose	5m
9	501-1	Hose Clip	2
10	-	Spray Bar Mounting - varies with chassis (Contact the Johnston Parts Department for further information)	

Spares Items

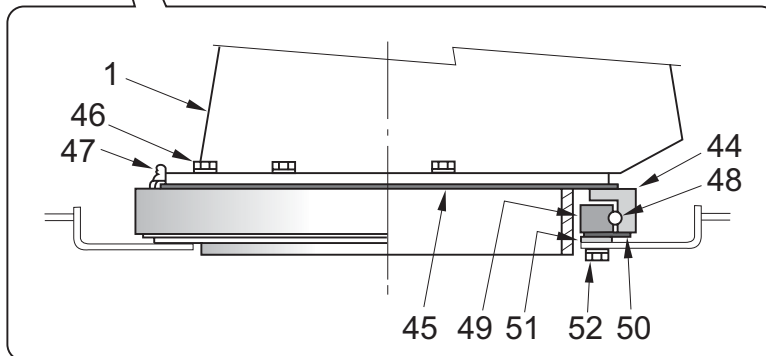
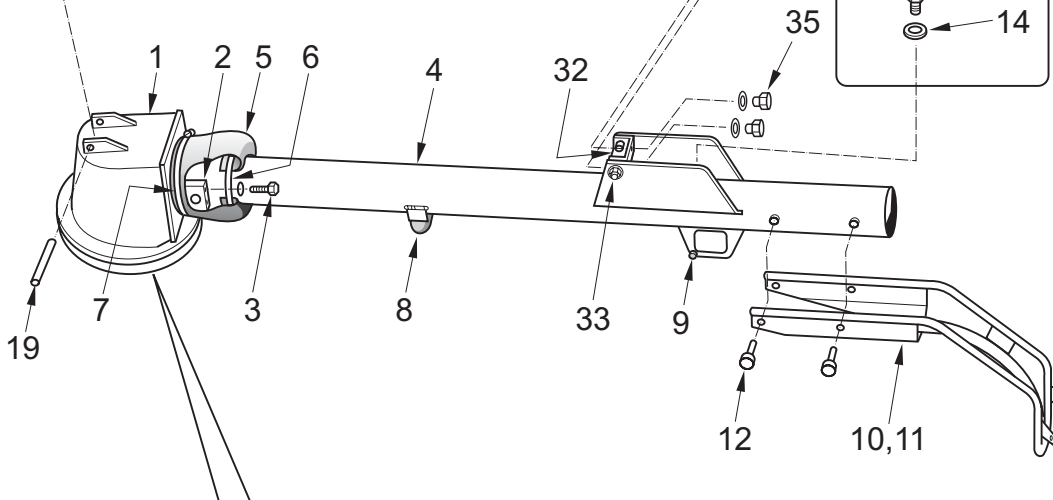
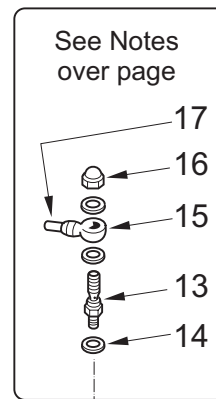
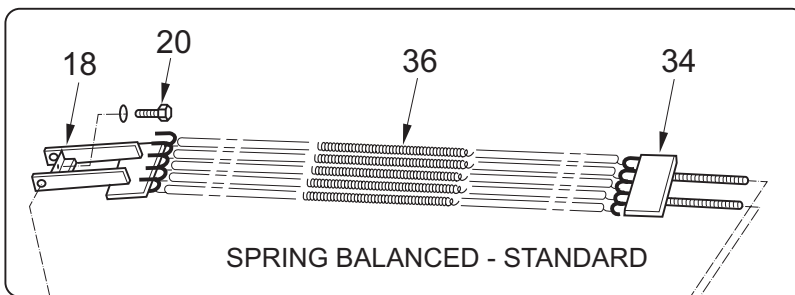
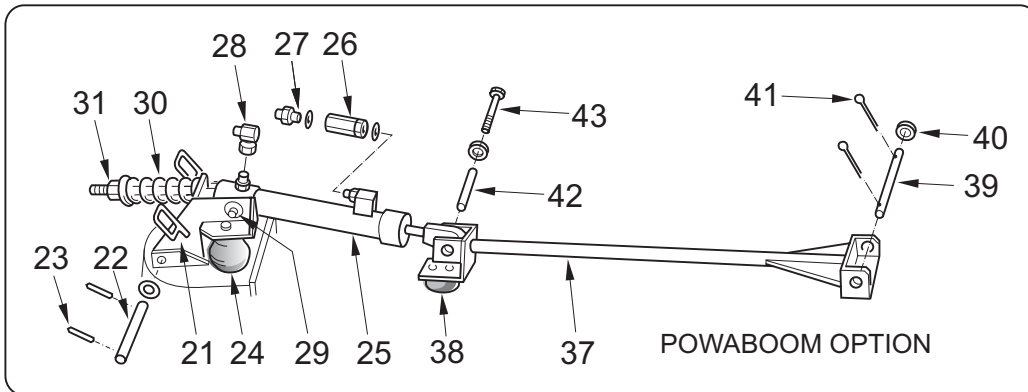
>	S1	282236-2	Spray Bar Kit comprising items 4 to 7
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CHAPTER

27**Wanderhose/Littasnatch****Table of Contents**

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Top Mounted Wanderhoses



95WH. 001-4

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Top Mounted Wanderhoses

Wanderhose Assembly - BoM 941311, 951311

Item No.	Part No.	Description	Quantity		
			150 Dia.	200 Dia.	
1	41803-1	Turret	1	1	
2	41833-1	Pivot Block	2	-	
	40728-1	Pivot Block	-	2	
3	123-131	Bolt M10 x 55	4	4	
	460-11	Washer M10	4	4	
4	294085-1	Boom x 150 Dia. - V 500 Only	1	-	
	294086-1	Boom x 200 Dia. - V 500 Only	-	1	
	281255-1	Boom x 150 Dia. - V 605, 650, 800 Only	1	-	
	281089-1	Boom x 200 Dia. - V 605, 650, 800 Only	-	1	
5	40780-1	Flexible Joint	1	1	
6	504-51	Hose Clip	1	-	
	504-52	Hose Clip	-	1	
7	504-55	Hose Clip	1	1	
8	39382	Rubber Stop	1	1	
	129-65	Screw M5 x 20	2	2	
	455-7	Washer M5	2	2	
	425-12	Nut M5	2	2	
9	290-28	Bump Stop	1	1	
	124-36	Screw M4 x 12	1	1	
	460-5	Washer - Spring	1	1	
10	282470-1	Jib	1	-	
11	282545-1	Jib	-	1	
12	124-199	Screw M12 x 20	4	4	
	460-12	Washer M12	4	4	
>	13	40755-2	Water Jet	1	1
	14	453-1	Fibre Washer	3	3
	15	26997-1	Banjo	1	1
	16	418-12	Domed Nut M12	1	1
	17	46382-3	Hose Adaptor	1	1
18	40746-1	Claw	1	-	
	41814-1	Claw	-	1	
19	40420-1	Pin	1	1	
20	124-137	Screw M8 x 25	1	1	
	460-10	Washer M8	1	1	
21	62367-1	Anchor	1	1	
22	41374-1	Pin	1	1	
	455-14	Washer Ø16	2	2	
23	59-10	Cotter Pin	2	2	
24	290-3	Rubber Spring	2	2	
	124-207	Screw M12 x 40	2	2	
	425-16	Nut M12	2	2	

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Top Mounted Wanderhoses
Wanderhose Assembly - BoM 951310 - Continued

Item No.	Part No.	Description	Quantity	
			150 Dia.	200 Dia.
> 25	29170-1	Hydraulic Cylinder - See Chapter 28	1	1
	26	29301-1	Flow Control Valve	1
27	451-17	Washer - Sealing 1/4	1	1
	263-2	1/4" Adaptor	1	1
28	451-17	Washer - Sealing 1/4	1	1
	262-2	1/4" Elbow Adaptor	1	1
29	62365-1	Pivot Pin	1	1
	455-16	Washer Ø20	2	2
	500-106	Split Pin	2	2
30	62366-1	Fork	1	1
	13501	Spring	1	1
31	44031-1	Locater	1	1
	425-7	Nut M20F	1	1
32	62952-1	Pivot	1	-
	49051-1	Pivot	-	1
33	49053-1	Pivot Pin	2	-
	49052-1	Pivot Pin	-	2
	455-14	Washer Ø16	2	2
	425-18	Nut M16	2	-
34	40746-2	Claw	1	-
	41814-2	Claw	-	1
35	41836-1	Nut - Special M16	2	2
	455-16	Washer Ø20	2	2
36	40691-1	Spring	5	6
37	62953-1	Extension Tube	1	-
	62608-1	Extension Tube	-	1
38	39382	Rubber Stop	1	1
	124-27	Screw M5 x 20	2	2
	455-7	Washer Ø5	2	2
	425-12	Nut M5	2	2
39	62254-2	Pin	1	-
	62254-1	Pin	-	1
40	455-16	Washer Ø20	2	2
41	500-106	Split Pin	2	2
42	40377-4	Bush	1	1
	124-182	Screw M10 x 75	1	1
	457-5	Washer Ø10	2	2
43	425-15	Nut M10	1	1

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Top Mounted Wanderhoses

Turret Turntable - BoM 951322

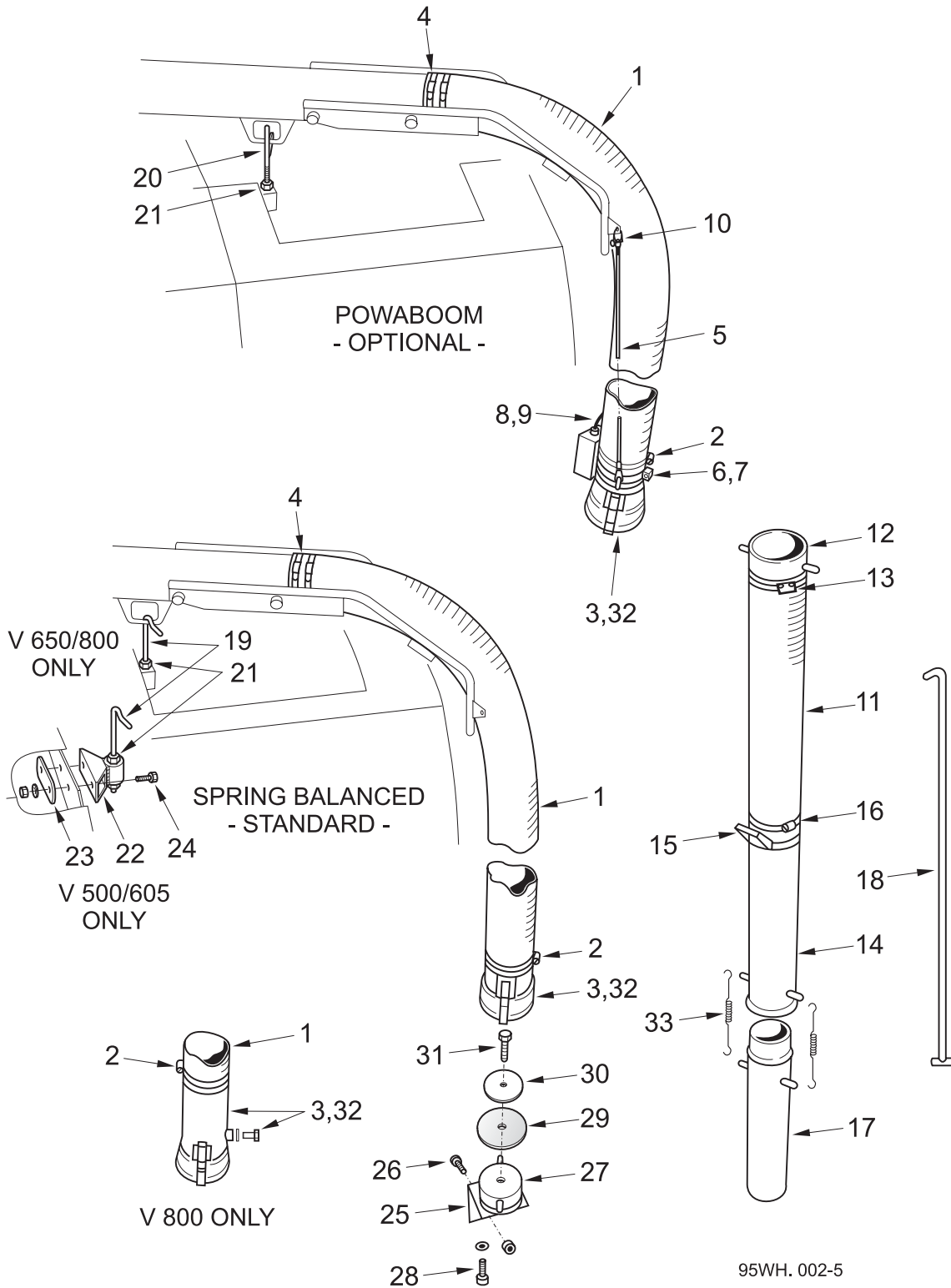
Item No.	Part No.	Description	Quantity
44	40722-1	Outer Race	1
45	5955-1	Seal - Cork	1
46	124-167	Screw M10 x 20	6
	460-11	Washer Ø10	6
47	38-3	Grease Nipple	1
48	22-8	Steel Ball	105
49	40721-1	Inner Race	1
50	40723-1	Seal Plate - Nylon	1
51	5955-1	Seal - Cork	1
52	124-169	Screw M10 x 25	8
	460-11	Washer Ø10	8

Notes

For Lo-Level Water Injection see Chapter 35 Optional Equipment - Sweep Gear 'SG'.

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Wanderhoses - Stowage and Trunkings



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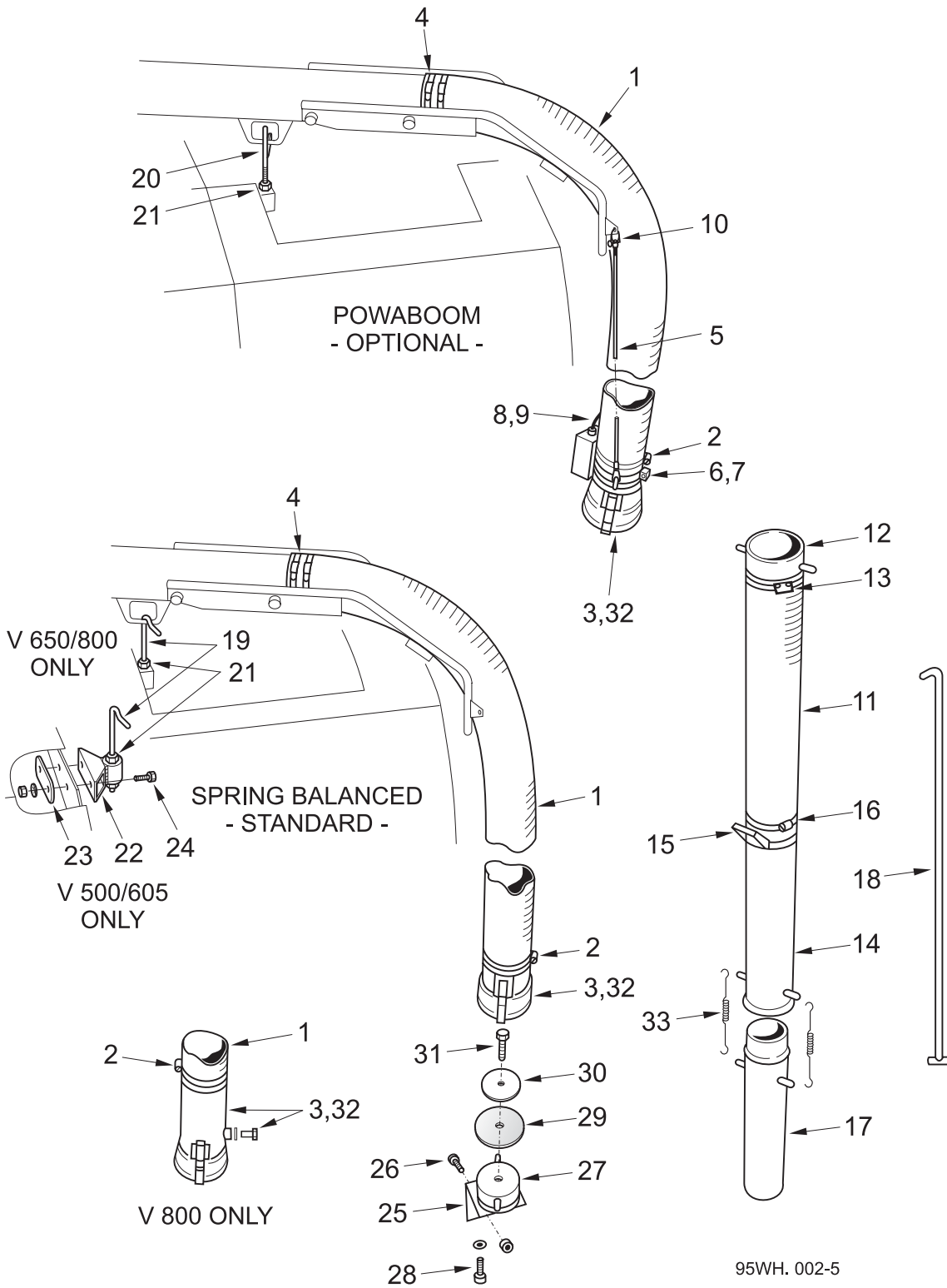
Wanderhoses - Stowage and Trunkings

Dressing - BoM 951330 and 961330

Item No.	Part No.	Description	Quantity		
			Ø150	Ø200	
	282897-1	Trunking Assembly Ø150 - V 605,650)	1	-	
	282897-2	Trunking Assembly Ø200 - V 605,650)	-	1	
	282900-1	Trunking Assembly Ø150 - V 800 only)	1	-	
	282900-2	Trunking Assembly Ø200 - V 800 only)	-	1	
1	6004-1	Trunking Ø150	1	-	
	15916-1	Trunking Ø200	-	1	
2	504-51	Hose Clip	2	-	
	503-52	Hose Clip	-	2	
3	6003-1	Coupling Ø150 - V 605,650	1	-	
	6003-8	Coupling Ø200 - V 605,650	-	1	
	61045-2	Coupling Ø150)	1	-	
	61045-1	Coupling Ø200)	-	1	
	124-201	Setscrew M12c x 25) V 800 only	1	1	
	453-1	Fibre Washer)	1	1	
4	504-51	Hose Clip	1	-	
	504-52	Hose Clip	-	1	
Powaboom Additions - Items 5 to 10:					
5	21216-8	Lift Cable	2	2	
6	282637-1	Cable Support	1	-	
	282638-1	Cable Support	-	1	
7	123-114	Bolt M8 x 70	1	1	
	425-14	Nut M8	1	1	
8	-	Control Loom) Covered elsewhere			
9	-	Extension Loom) in this Chapter			
10	6032-1	'D' Shackle			
11	6005-1	Trunking	1	-	
	15917-1	Trunking	-	1	
12	5996-1	Coupling	1	-	
	5996-4	Coupling	-	1	
13	504-51	Hose Clip	1	-	
	504-52	Hose Clip	-	1	
14	6027-1	Hose End Fitting	1	-	
	15899-1	Hose End Fitting	-	1	
15	6212-1	Handle	1	-	
	15920-1	Handle	-	1	
16	504-51	Hose Clip	1	-	
	504-52	Hose Clip	-	1	
>	17	282893-1	Extension x 1250 long - Includes Clips item 33	1	-
		282890-3	Extension x 1250 long - Includes Clips item 33	-	1

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Wanderhoses - Stowage and Trunkings



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Wanderhoses - Stowage and Trunkings

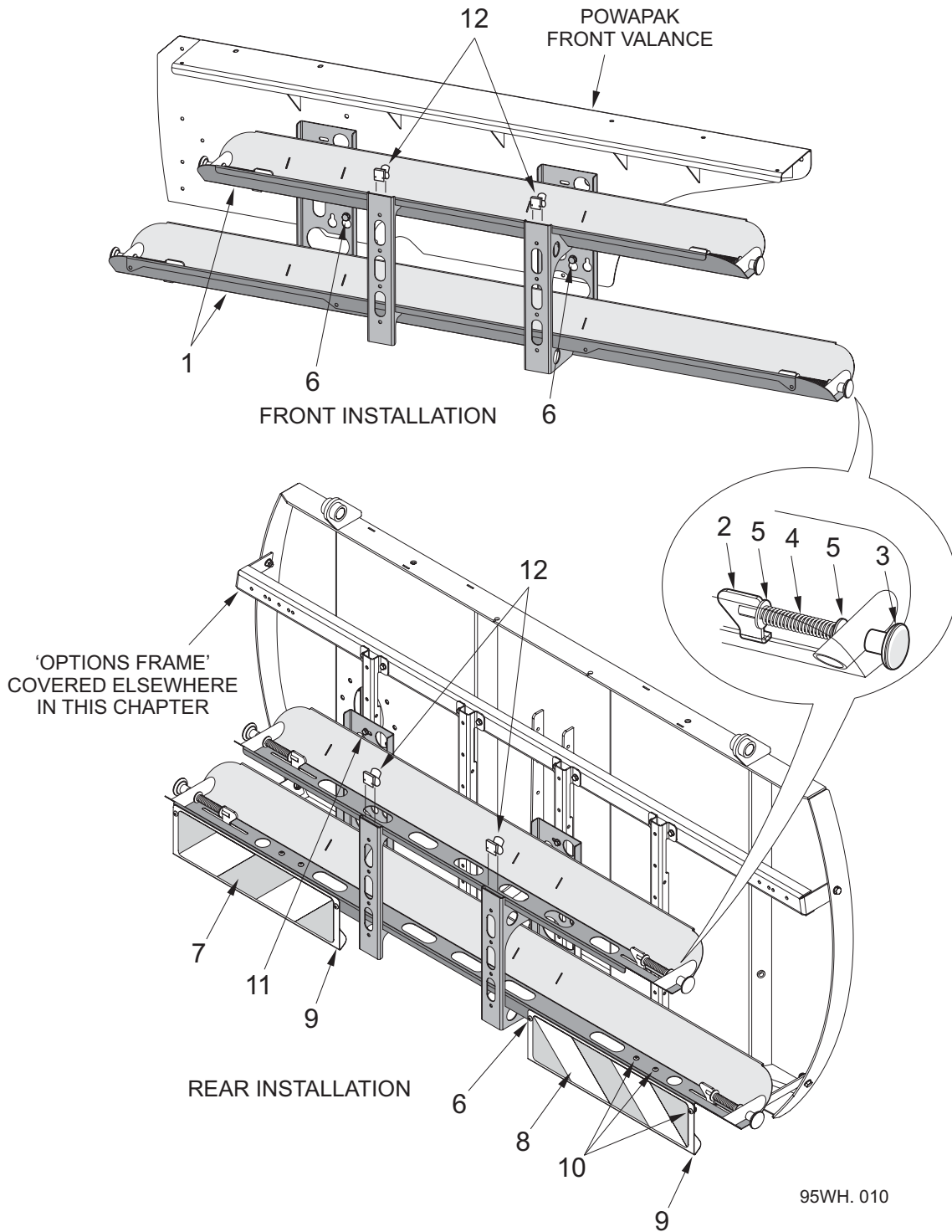
Stowage - BoM 951321 and 961321

Item No.	Part No.	Description	Quantity	
			Ø150	Ø200
18	40781-1	Grab - Spring Balanced Only	1	1
19	40207-1	Hook	1	1
20	294120-1	Boom Support - Powaboom only	1	1
21	420-18	Nut M16	2	2
22	283506-1	Stand-off)	1	1
23	282738	Plate)	1	1
24	124-137	Screw M8 x 25) V 500, 605 only	2	2
	455-10	Washer - Plain)	2	2
	425-14	Nut - Nyloc M8)	2	2
25	42463-1	Anchor Bracket - V 605, 650	1	1
	61044-1	Anchor Bracket - V 800 only	1	1
26	135-57	Screw M8 x 20	2	2
	460-10	Washer	2	2
	420-14	Nut M8	2	2
27	42462-1	Anchor	1	-
	42738-1	Anchor	-	1
28	124-167	Screw M10 x 20	2	2
	460-11	Washer	2	2
29	5688-1	Rubber Disc	1	-
	5688-2	Rubber Disc	-	1
30	6043-1	Retaining Plate	1	1
31	124-135	Screw M8 x 20	1	1
	455-10	Washer - Plain	1	1
	425-14	Nut - Nyloc M8	1	1
Spare Parts Items				
32		Coupling Assemblies Item 3 comprising:		
	5992-1	Sleeve Ø150 - V 605, 650	1	-
	15895-1	Sleeve Ø200 - V 605, 650	-	1
	61063-1	Sleeve Ø150 - V 800 only	1	-
	61046	Sleeve Ø200 - V 800 only	-	1
	5999-1	Catch	2	2
	58-6	Pin	2	2
	6002-1	Spring	2	2
	193-8	Screw Pan Head	6	6
33	6216-1	Spring Clip	2	2

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Extension Hose Stowage Trays

Standard on V 500 and 800 machines, optional on 605/650 machines
(500 and 800 bodies have no side lockers)



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Extension Hose Stowage Trays

BoM KT 05795

Item No.	Part No.	Description	Quantity	
			Front	Rear
	282867-1	Front Installation	✓	-
	281995-1	Rear Installation	-	✓
1	282698-1	Hose Tray Assembly	1	1
2	282879-1	Plunger	4	4
> 3	23-21	Knob	4	4
4	285-27	Spring	4	4
5	457-5	Washer - Large	8	8
* 6	124-169	Screw M10 x 25	6	-
	455-10	Washer - Plain	6	-
+ 7	20674-1	L.H. Reflective Marker	-	1
+ 8	20674-2	R.H. Reflective Marker	-	1
+ 9	282704-1	Marker Mounting Bracket	-	2
+ 10	138-123	Screw - Socket Hd. Button M8 x 20	-	8
	455-10	Washer - Plain	-	8
	425-14	Nut - Nyloc M8	-	8
11	124-137	Bolt M8 x 25	-	6
	455-10	Washer - Plain	-	6
	425-14	Nut - Nyloc M8	-	6
† 12	52-7	Cable / Pipe Clip	2	2

Notes

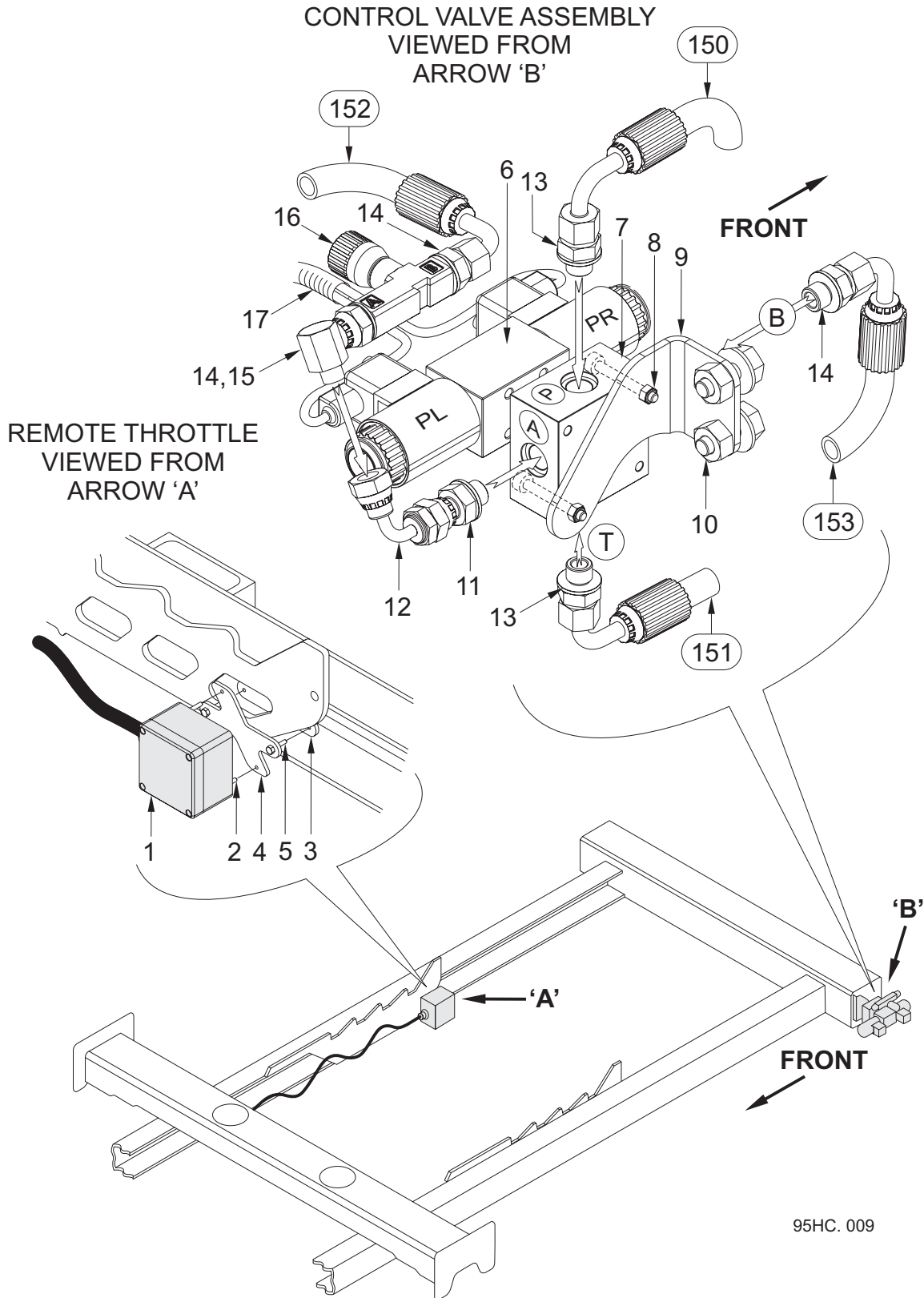
* Item 6 - These are the existing screws and washers used to fix the front valance to the Powapak cradles.

+ Items 7 to 10 are only required on UK spec. machines.

† Item 12 Pipe Clips required for stowing the grab hook on V500 and 800 machines with no body lockers.

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Powaboom Controls - Installation



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95HC. 009

Powaboom Controls - Installation

BoM KT 07595

Item No.	Part No.	Description	Quantity
	282055-1	Powaboom Control 12v	
	282055-2	Powaboom Control 24v	
		Throttle Installation Items 1to 5:	
1	-	Throttle Loom - See Item 17	1
2	129-36	Screw - Socket Head M4 x 20	2
	425-11	Nut - Nyloc M4	2
3	282056-1	Throttle Mount Plate Clamp	1
4	282057-1	Throttle Mount Plate	1
5	124-71	Bolt M5 x 20	2
	425-12	Nut - Nyloc M5	2
		Control and Lock Valves Installation Items 6 to 16:	
> 6	78352-5	Solenoid Valve 12v	1
> 7	78352-25	Solenoid Valve 24v	1
8	201098-1	Solenoid Base	1
	129-71	Screw - Socket Head M5 x 35	2
	425-12	Nut - Nyloc M5	2
9	282533-1	Mounting Bracket	1
10	123-104	Screw M8 x 30	2
	455-10	Washer Ø8	2
	425-14	Nut - Nyloc M8	2
11	267-2	1/4" Swivel Adaptor	1
	451-17	Washer - Sealing 1/4"	1
12	262-2	1/4" Adaptor 90°	1
13	263-2	1/4" Adaptor	2
	451-17	Washer - Sealing 1/4"	2
14	263-2	1/4" Adaptor	3
	451-17	Washer - Sealing 1/4"	3
15	242-2	1/4" Swivel Elbow	1
16	241-150	Regulator	1
17	-	Looms - See over page	
150 to 153		Hoses - See over page	

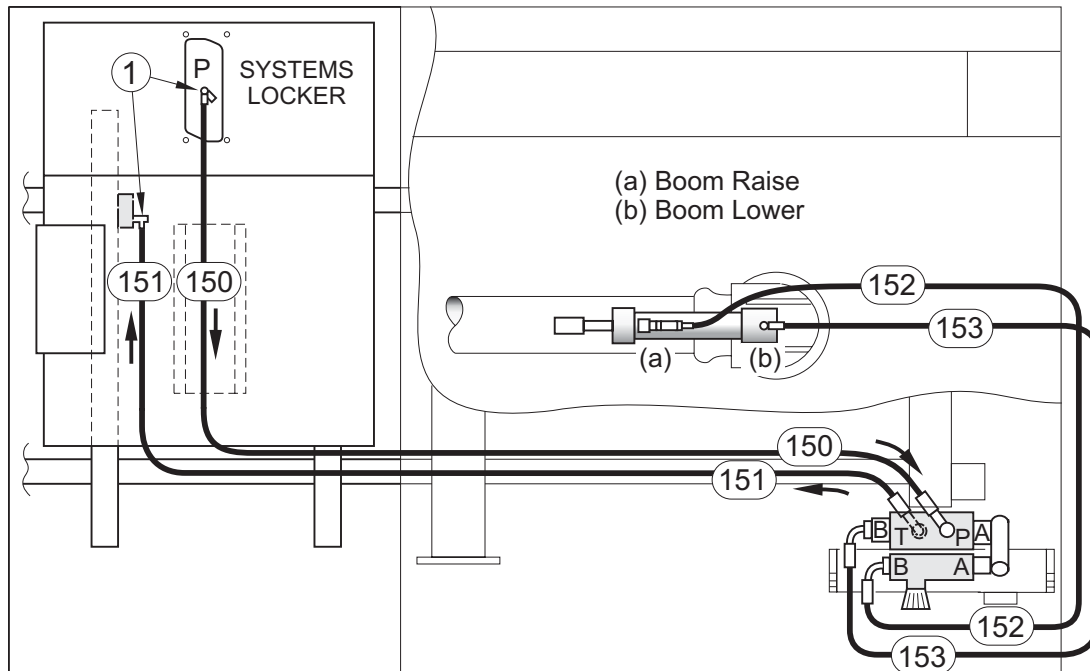
Notes

* Hose item numbers correspond with those in hydraulic diagram SH527z01 in Chapter 8.

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Powaboom - Hydraulic Hoses

. Drg 282055



95HC. 010

KT07595

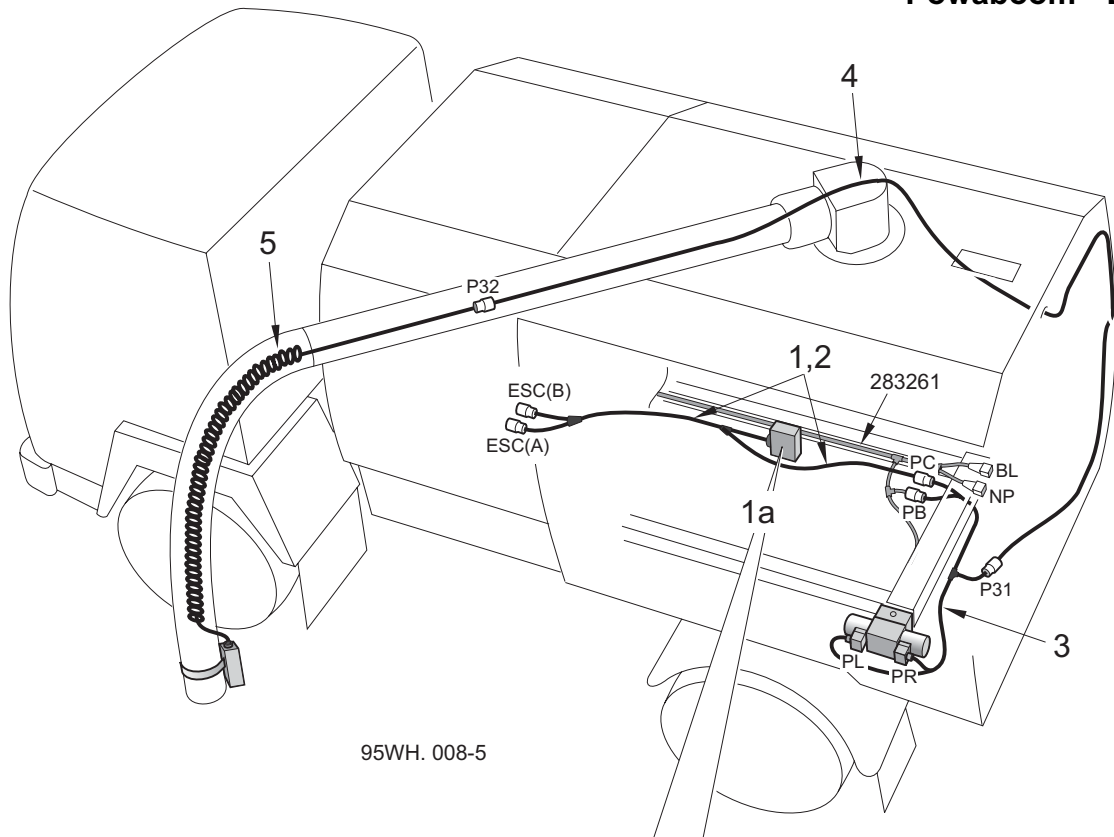
Item No.	Part No.	Description	Quantity
1	255-30	Swivel Tee	2
150	HC04002-430	Hydraulic Hose 1/4"	1
151	HC04002-324	Hydraulic Hose 1/4"	1
152	HC04002-730	Hydraulic Hose 1/4"	1
153	HC04002-600	Hydraulic Hose 1/4"	1

Notes

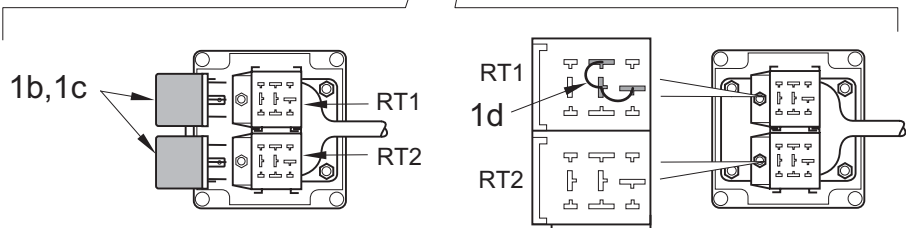
Hose item numbers correspond with those in hydraulic diagram SH527z01 in Chapter 8

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Powaboom - Looms



95WH. 008-5



Iveco 'SP' and 'HP' and John Deere 'SP' engines. For John Deere 'HP' engine see item 2.

VT 12v Loom Assembly 282140-1 comprising items 1 and 1b
VT 24v Loom Assembly 282140-2 comprising items 1 and 1c

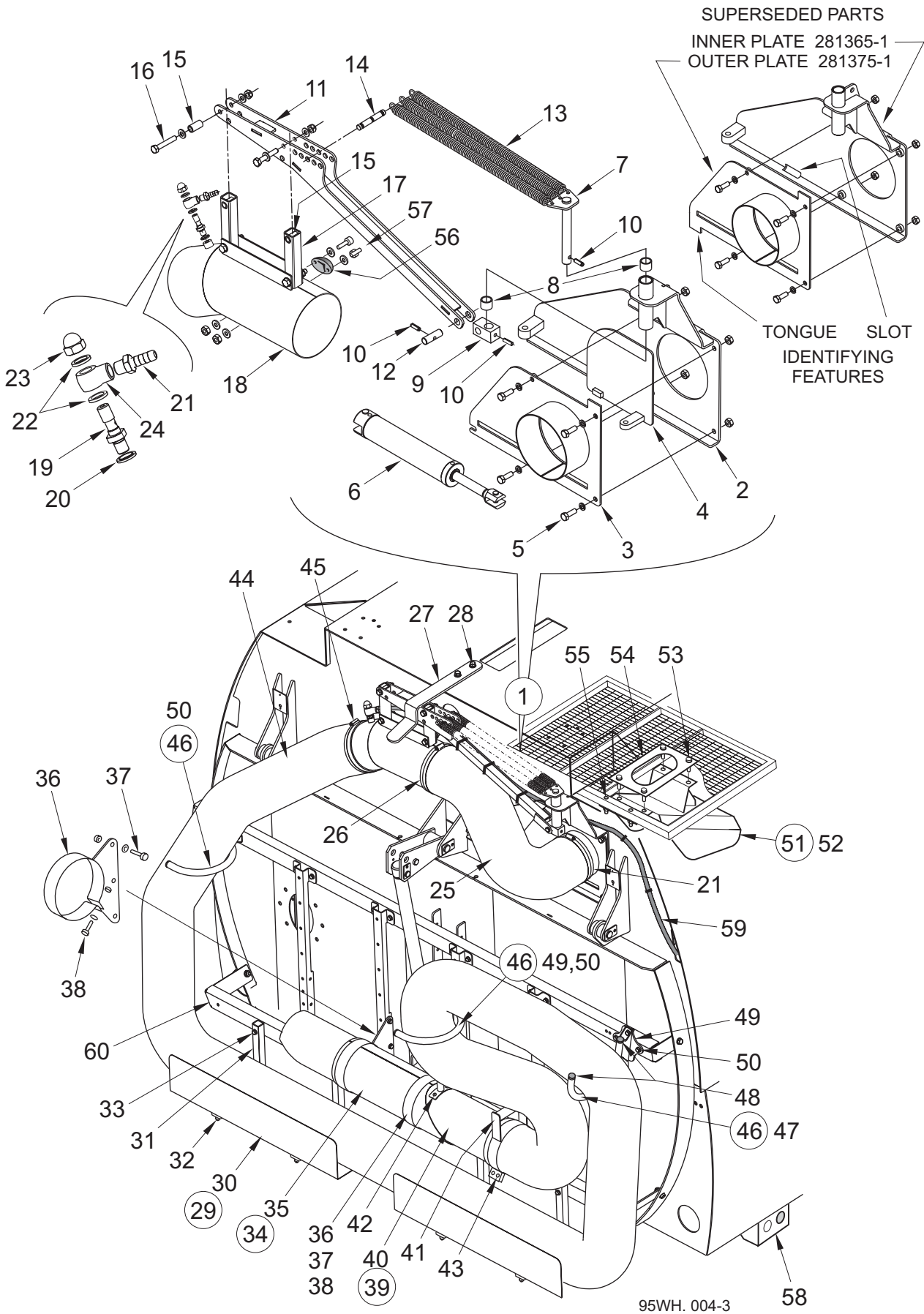
VS Loom Assembly 282140-3 comprising items 1 and 1d

KT07595

Item No.	Part No.	Description	Quantity
1	282060-1	Remote Throttle Loom (Includes Relay Box 1a)	1
1a		Relay Box - requires the addition of components 1b,1c or 1d	
1b	13193	Relay 12v (28RA) - 12v VT only.	2
1c	13194	Relay 24v (28RA) - 24v VT only.	2
1d	282119-1	Shorting Link - VS only.	1
2	283140-1	Remote Throttle Loom - John Deere 'HP' engines	1
3	282062-1	Powaboom Loom	1
4	282063-1	Extension Loom	1
5	282061-1	Control Loom VT Series	1
	282061-2	Control Loom VS Series	1

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Littasnatch



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BoM KT04795

Item No.	Part No.	Description	Quantity
1	282476-1	Cassette Assembly comprising items 2 to 26	
> 2	284081-1	Inner Plate	1
> 3	284083-1	Outer Plate	1
4	281370-1	Gate	1
5	118-171	Screw M10 x 30 Stainless Steel	4
	458-10	Washer - Spring M10 Stainless Steel	4
	420-15	Nut M10	4
6	63449-1	Cylinder - See Chapter 29	1
7	60303-1	Pivot Pin	1
8	29128-1	Bush	2
9	60309-1	Universal Joint	1
10	59-8	Tension Pin	2
11	282990-1	Davit	1
12	60317-1	Pivot Pin	1
13	3637-1	Spring	3
14	60326-1	Location Pin	1
15	60734-1	Spacer	4
16	123-132	Bolt M10 x 60	4
	455-11	Washer - Plain M10	8
	425-15	Nut - Nyloc M10	4
17	60724-1	Link Tube - Suspension	2
18	283328-1	Tube - Hose Connection	1
> 19	40755-2	Water Jet M12	1
20	451-17	Washer - Sealing G1/4"	1
21	46382-3	Hose Adaptor	1
22	453-1	Fibre Washer	2
23	418-12	Domed Nut - M12 Stainless Steel	1
24	26997-1	Banjo	1
25	60744-1	Duct	1
26	504-51	Hose Clip	2
27	280821-1	Stowage Plate -VT650	1
	281101-1	Stowage Plate - VT800	1
28	118-169	Screw M10 x 25 Stainless Steel	2
	458-10	Washer - Spring M10 Stainless Steel	2
	454-10	Washer - Plain M10 Stainless Steel	2
29	282482-1	Trough Assembly comprising items 30 to 33	2
30	801928-1	Trough	1
31	281580-1	Post	2
32	138-123	Screw Button Head M8 x 20	4
	455-10	Washer - Plain M8	4
	425-14	Nut - Nyloc M8	4
33	123-110	Bolt M8 x 50	2
	455-10	Washer - Plain M8	2
	425-14	Nut - Nyloc M8	2

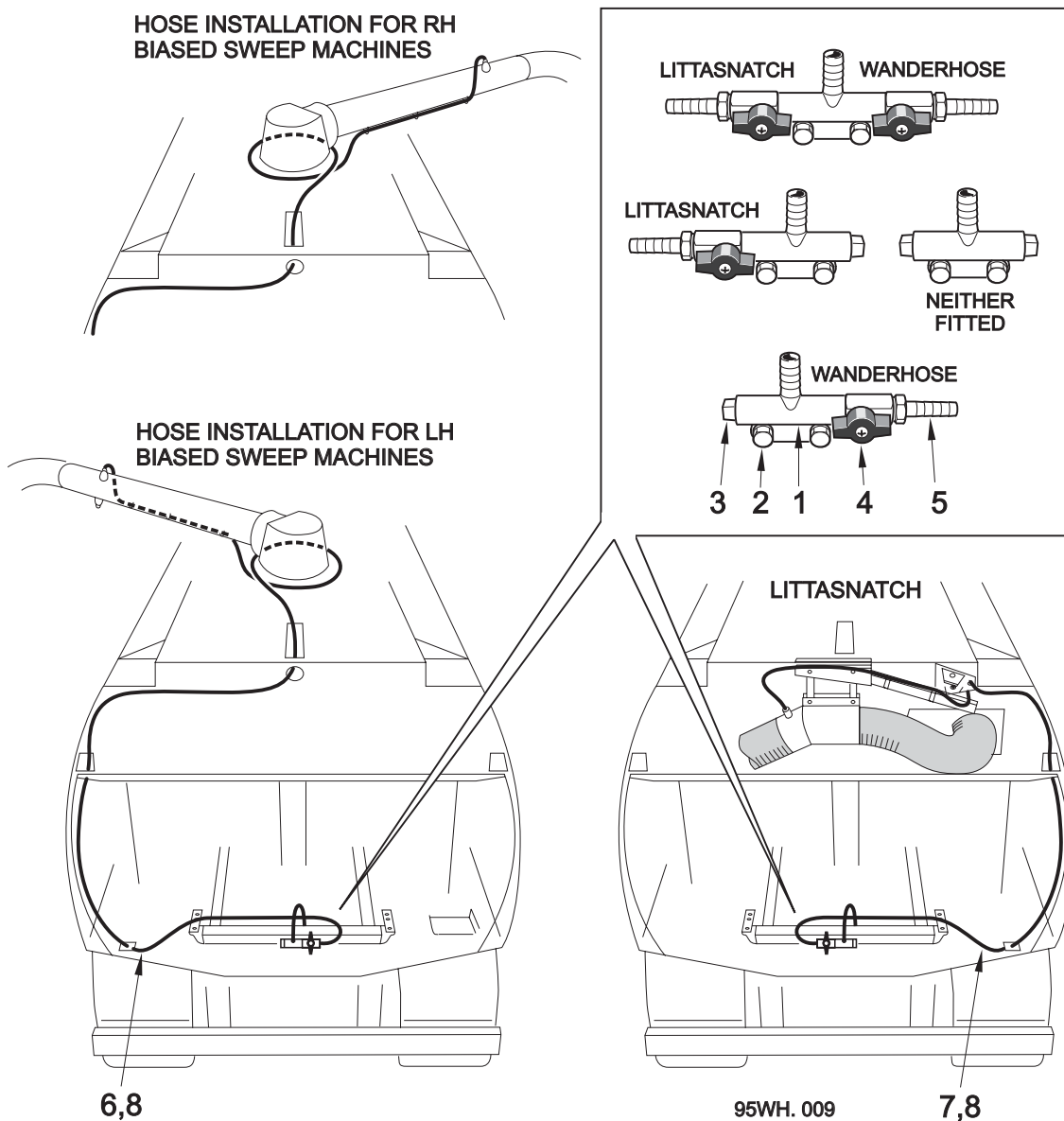
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Littasnatch
BoM KT04795

Item No.	Part No.	Description	Quantity
34	282484-1	Holster Assembly comprising items 35 to 38	1
35	280560-1	Holster	1
36	282483-1	Support	2
37	124-137	Screw M8 x 25	6
	455-10	Washer - Plain M8	6
	425-14	Nut - Nyloc M8	6
38	123-82	Bolt M6 x 30	4
	455-8	Washer - Plain M6	4
	425-13	Nut - Nyloc M6	4
39	282448-2	Suction Tube Assembly comprising items 40 to 43	1
40	60739-2	Section Tube	1
41	60716-2	Handle	1
42	138-94	Screw Button Head M6 x 20	2
	457-2	Washer - Large M6	2
	425-13	Nut - Nyloc M6	2
43	124-105	Screw M6 x 25	2
	455-8	Washer - Plain M6	2
	425-13	Nut - Nyloc M6	2
44	60744-2	Duct	1
45	504-51	Hose Clip	1
46	282504-1	Hook Assembly comprising items 47 and 48	3
47	280563-1	Hook	1
48	220-65	Plastic Plug	2
49	281579	Star Plate	2
50	124-137	Screw M8 x 25	10
	455-10	Washer - Plain M8	20
	425-14	Nut - Nyloc M8	10
51	280423-1	Baffle Installation comprising items 52 and 53	
52	280360-1	Baffle	1
53	118-135	Screw M8 x 20	4
	454-10	Washer - Plain M8	8
	425-14	Nut - Nyloc M8	4
54	282881-1	Spreader Plate	1
55	127-137	Screw Csk. Head M8 x 25	2
	288-33	Round Insert	2
56	39382	Rubber Stop	1
57	129-65	Cap Hd Bolt M5 x 20	2
	455-7	Washer - Plain M5	4
	425-12	Nut - Nyloc M5	2
58	282523-3	Pneumatic Controls - Covered elsewhere in this chapter	
59	-	Water Hose - Covered elsewhere in this chapter	
60	-	Mounting Frame - Covered elsewhere in this chapter	

Wanderhose/Littasnatch - Water Hose Installation

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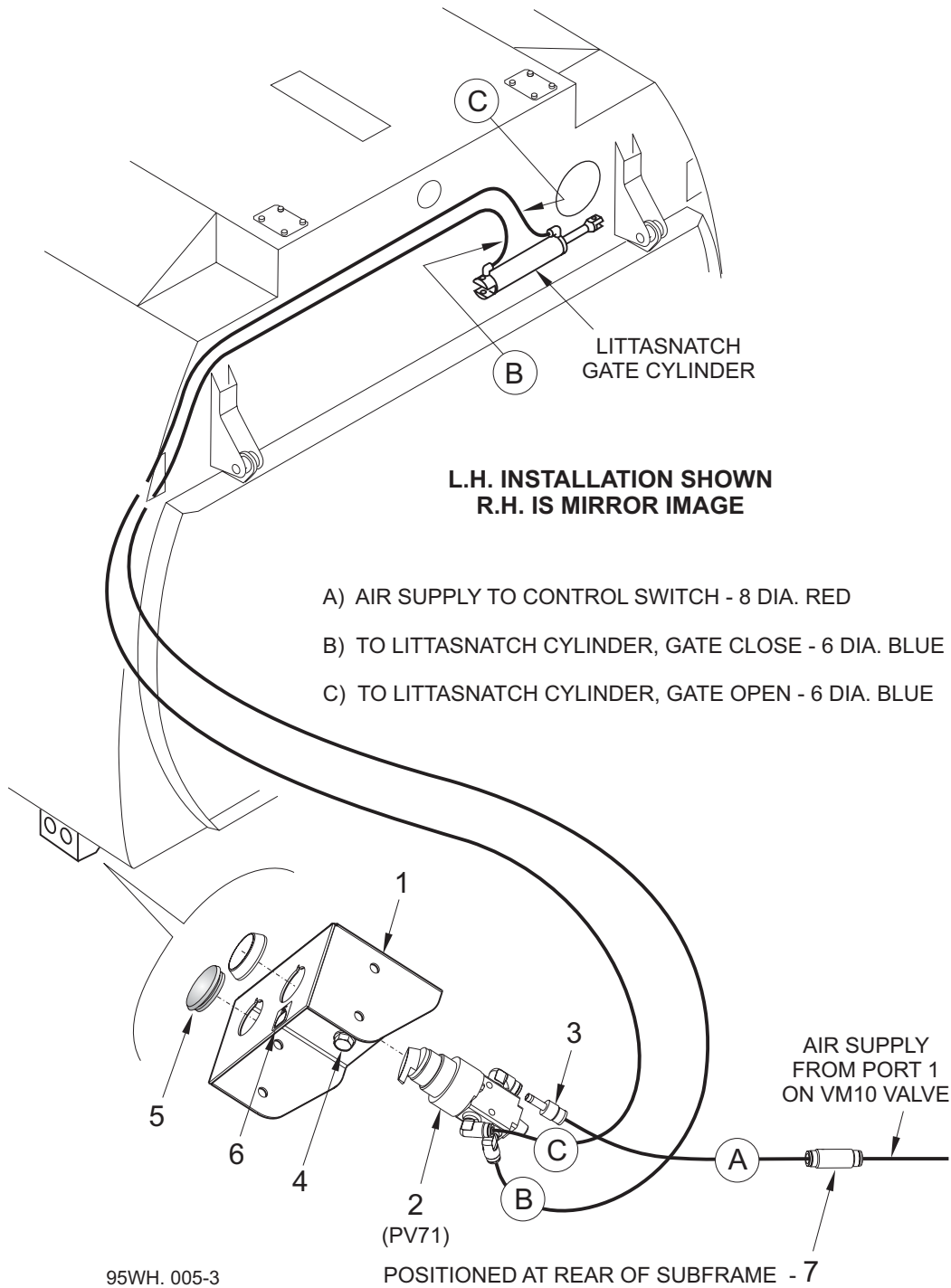


BoM 950714 - Subframe Services

Item No.	Part No.	Description	Quantity
1	281076-1	Manifold	1
2	124-134	Screw M8 x 16	2
	460-10	Washer - Spring Ø8	2
3	18892	Plug R3/8"	As Req'd

BoM 951330 - Wanderhose, KT04795 - Littasnatch

4	88-5	Ball Valve	As Req'd
5	41006-3	Adaptor - Hose Tail	As Req'd
6	39444	Hose Ø10 - Wanderhose	7m
7	39444	Hose Ø10 - Littasnatch	5m
8	501-1	Hose Clip	2



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BoM KT03695

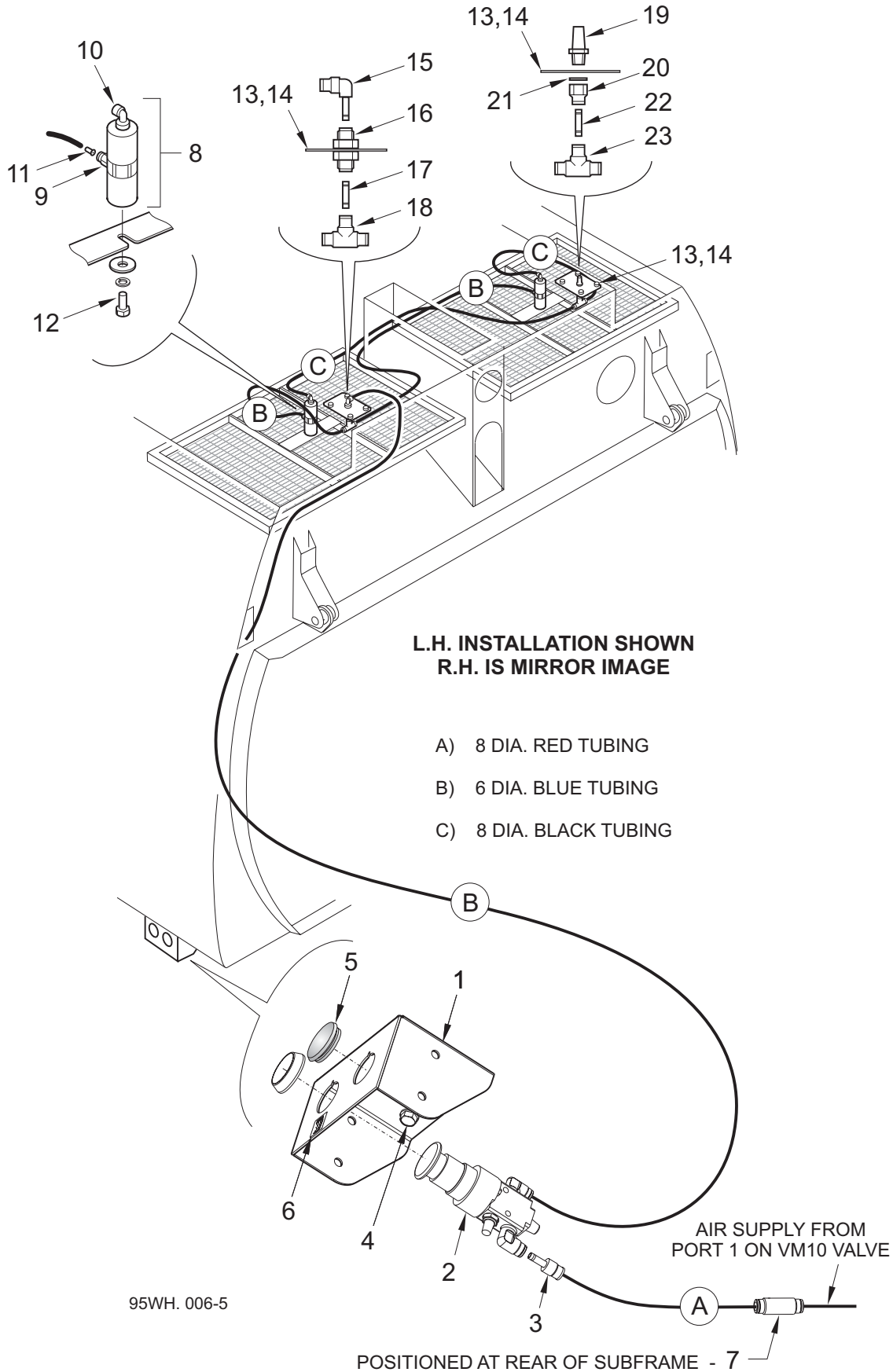
Item No.	Part No.	Description	Quantity
	282523-3	Pneumatic Controls comprising items:	
1	282522-1	Switch Box	1
2	72-50	Air Switch	1
3	548-20	Reducing Stem Ø8 x Ø6	1
4	124-135	Screw M8 x 20	2
	455-10	Washer - Plain M8	4
	425-14	Nut - Nyloc M8	2
5	288-28	Grommet	1
6	282458-1	Littasnatch Label No. 2.14 - See Chapter 34	1
7	547-4	Connector	1
Tubing			
A	273-23	Tube - Red Ø8	6.5m
B,C	273-20	Tube - Blue Ø6	20m

Notes

For Circuit Diagram see SP545a02 in Chapter 11 of the Maintenance Manual.

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Mesh Shaker



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Mesh Shaker

BoM KT03695

Item No.	Part No.	Description	Quantity
	282523-2	Pneumatic Controls comprising items 1 to 7 + A and B	
1	282522-1	Switch Box	1
2	72-51	Push Button	1
3	548-20	Reducing Stem Ø8 x Ø6	1
4	124-135	Screw M8 x 20	2
	455-10	Washer - Plain M8	4
	425-14	Nut - Nyloc M8	2
5	288-28	Grommet	1
6	282458-1	Mesh Shaker Label No. 2.13 - See Chapter 34	1
7	547-4	Connector	1
A	273-23	Tube - Red Ø8	6.5m
B	273-20	Tube - Blue Ø6	10m

BoM KT03195

	282519-1	Mesh Shaker Installation comprising items 8 to 23 + C	
8	283806-1	Vibrator Assembly - includes items 9 and 10	2
9	546-3	Adaptor G1/8" x Ø6	2
10	553-9	Elbow G1/4" x Ø8	2
11	41041-1	Restrictor Sleeve	2
12	118-201	Screw M12 x 25)	2
	460-12	Washer - Spring M12) Stainless Steel	2
	457-6	Washer - Large M12)	2
13	282515-2	Connection Plate (4003)	2
14	118-135	Screw M8 x 20)	8
	454-10	Washer - Plain M8) Stainless Steel	8
	460-10	Washer - Spring M8)	8
15	551-1	Stem Elbow Ø6	1
16	555-3	Bulkhead Adaptor Ø6	1
17	549-3	Stem Connector Ø6	1
18	554-3	Tee Ø6	1
19	72-20	Silencer	1
20	541-8	Adaptor G1/4" x Ø8	1
21	451-17	Washer - Sealing	1
22	549-4	Stem Connector Ø8	1
23	554-4	Tee Ø8	1
C	12870	Tube - Black Ø8	3.5m

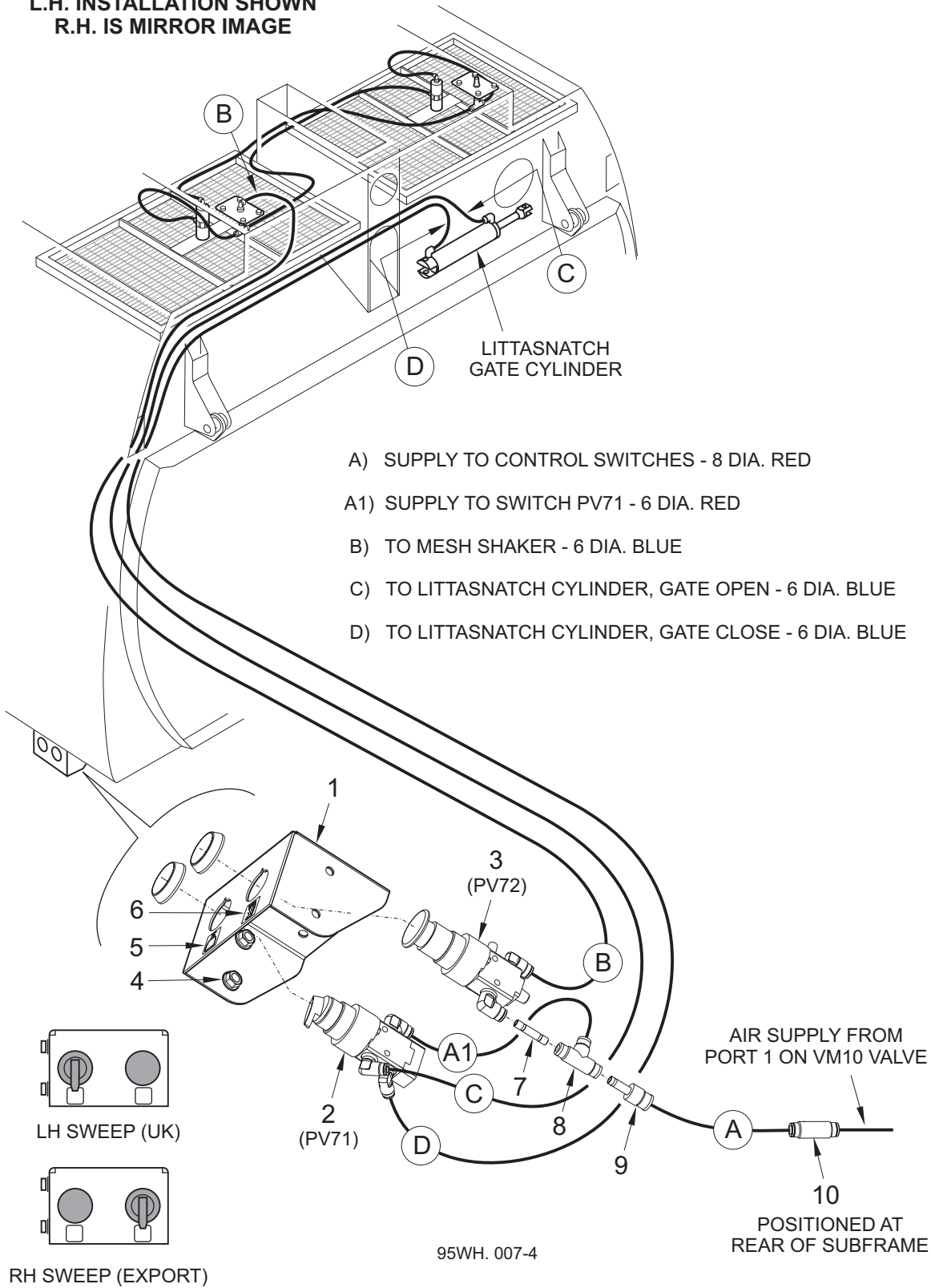
Notes

For Circuit Diagram see SP545a02 in Chapter 11 of the Maintenance Manual.

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Littasnatch Combined Mesh Shaker Controls

L.H. INSTALLATION SHOWN
R.H. IS MIRROR IMAGE



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Littasnatch Combined Mesh Shaker Controls

BoM KT03695

Item No.	Part No.	Description	Quantity
	282523-1	Pneumatic Controls comprising items 1 to 10 plus tubing	
1	282522-1	Switch Box	1
2	72-50	Air Switch	1
3	72-51	Push Button	1
4	124-135	Screw M8 x 20	2
	455-10	Washer - Plain M8	4
	425-14	Nut - Nyloc M8	2
5	282458-1	Littasnatch Label No. 2.14) See	1
6	282458-1	Mesh Shaker Label No. 2.13) Chapter 34	1
7	549-3	Stem Ø6	1
8	554-3	Tee Ø6	1
9	548-20	Reducing Stem Ø8 x Ø6	1
10	547-4	Connector	1
Tubing			
A	273-23	Tube - Red Ø8	6.5m
A1	273-21	Tube - Red Ø6	0.25m
B,C,D	273-20	Tube - Blue Ø6	20m

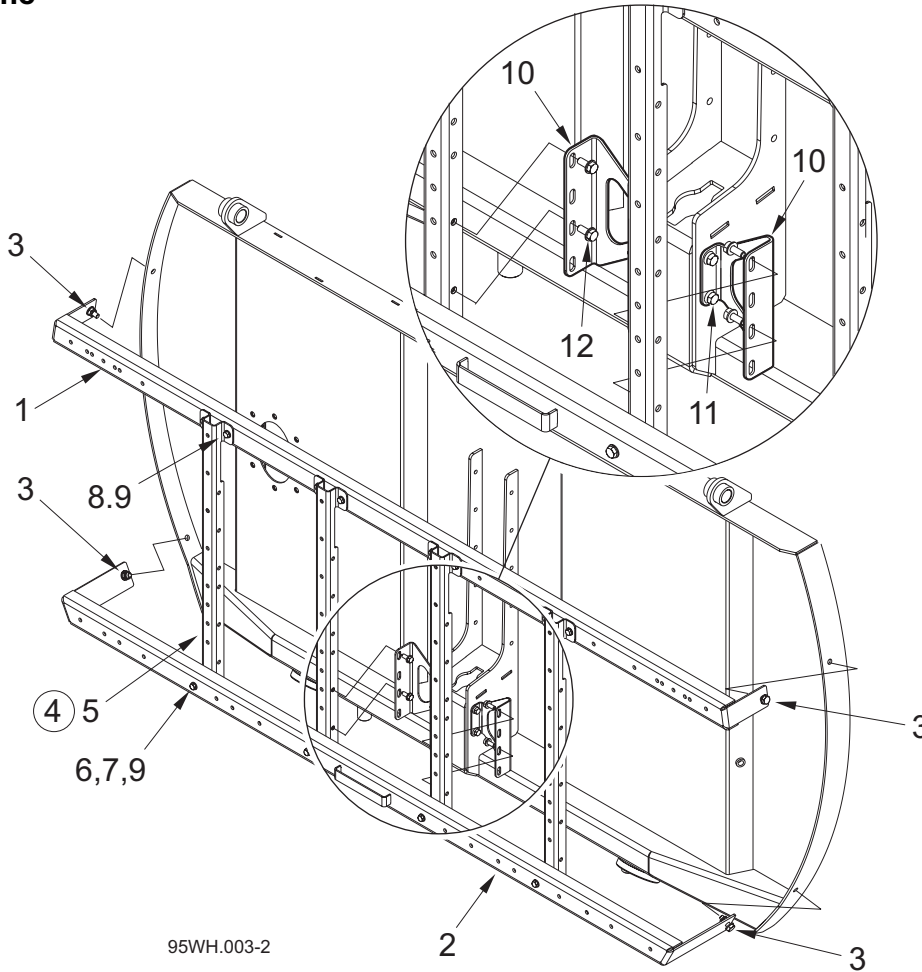
Littasnatch and Mesh Shaker Installations are shown on previous pages

Notes

For Circuit Diagram see SP545a02 in Chapter 11 of the Maintenance Manual.

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Options Frame



95WH.003-2

BoM KT01695

Item No.	Part No.	Description	Quantity
	282437-1	Options Frame Assembly comprising items 1 to 9	
1	282432-1	Upper Cross Member	1
2	282433-1	Lower Cross Member	1
3	124-171	Screw M10 x 30	4
	455-11	Washer - Plain M10	8
	425-15	Nut - Nyloc M10	4
4	282439-1	Vertical Strut Assembly comprising items 5 to 9	4
5	282435-1	Strut	1
6	282438-37	Spacer	1
7	123-110	Bolt M8 x 50	1
8	124-137	Screw M8 x 25	2
9	455-10	Washer - Plain M8	6
	425-14	Nut - Nyloc M8	3
> 10	283849-1	Fixing Bracket	2
11	124-135	Screw M8 x 20	4
	460-10	Washer - Spring M8	4
	455-10	Washer - Plain M8	4
11	124-135	Screw M8 x 20	4
	455-10	Washer - Plain M8	4

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CHAPTER

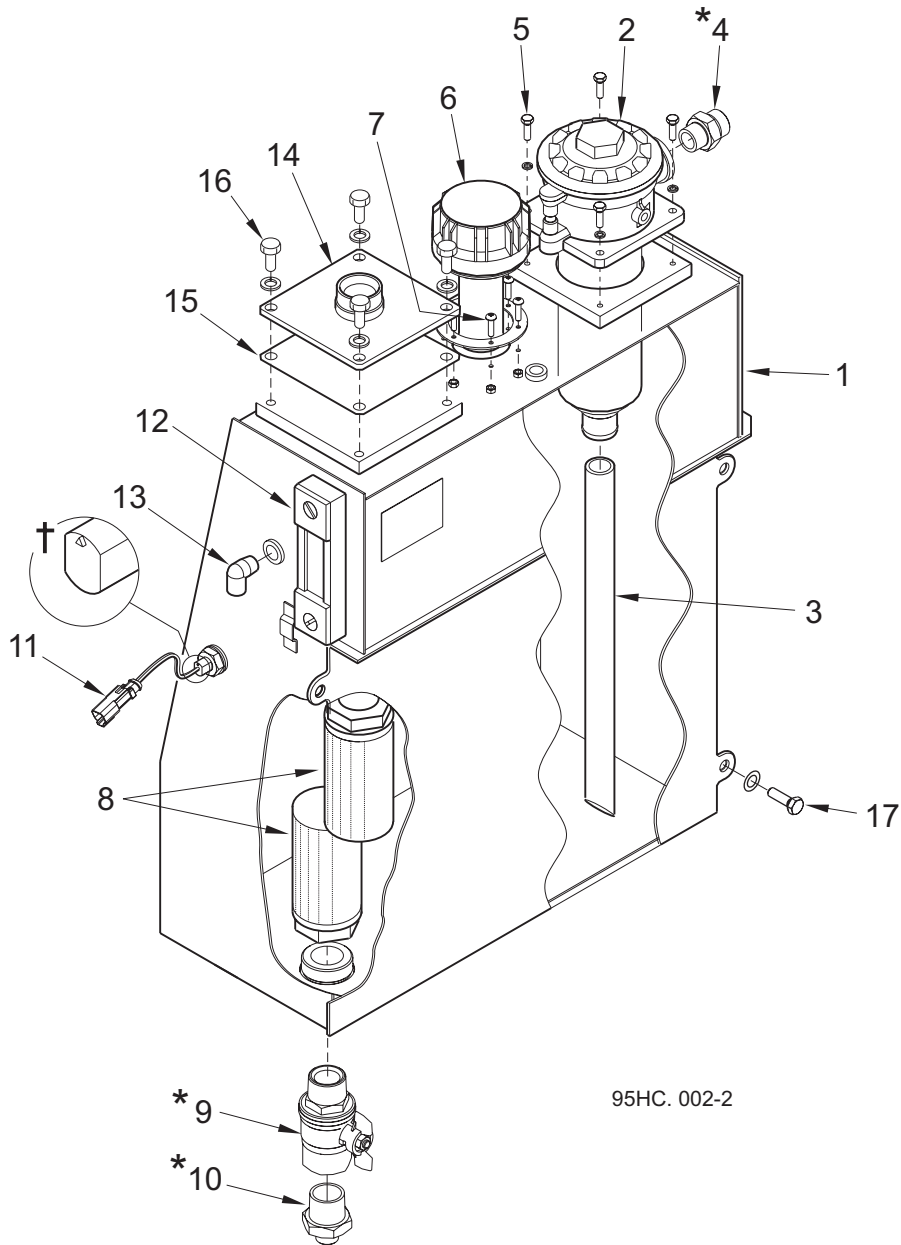
28

Hydraulics

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Hydraulic Tank Assembly - VT Range



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Hydraulic Tank Assembly - VT Range

BoM 950514

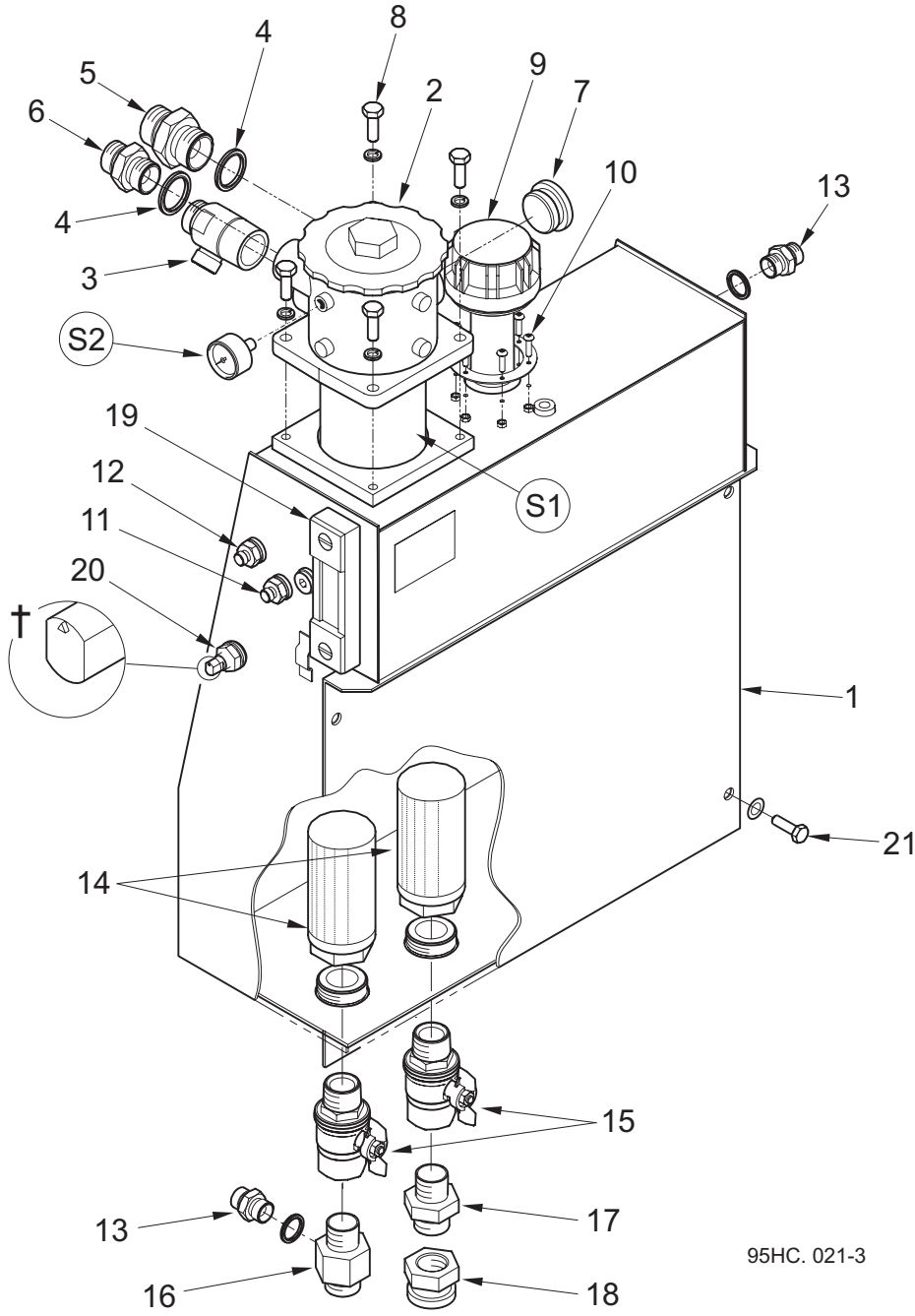
Item No.	Part No.	Description	Quantity
	281761-1	Hydraulic Tank Assembly Comprising Items 1 to 16:	1
1	281640-1	Tank	1
2	282852-1	Multiflow Filter	1
3	42206-1	Return Pipe	1
4	266-6	Adaptor G3/4"	1
5	124-103	Screw M6 x 20	4
	460-8	Washer - Spring M6	4
6	69-30	Filler Breather	1
7	134-59	Screw Pan Head M5 x 20	6
	425-12	Nut - Nyloc M5	6
8	15411	Filter	2
9 *	89-15	Valve R1" x G1"	1
10 *	277-137	Adaptor G 1/2" x R1"	1
11	48-328	Level Switch with Connector	1
12	87-1	Level Gauge	1
> 13	521-12	Elbow R3/8" x Ø8) Current	
	265-2	Adaptor G1/4" x 3/8")	1
	451-18	Washer - Sealing G3/8") Superseded	1
14	281960-1	Suction Pipe	1
15	281965-1	Gasket	1
16	124-167	Screw M10 x 20	4
	460-11	Washer - Spring M10	4
Mounting Screws			
17	124-167	Screw M10 x 20	4
	457-5	Washer - Large M10	4

Notes

† Arrow on level switch, Item 11, must point towards top of tank as shown.

* Apply Loctite 542 to tapered threads on Items 4, 9 and 10.

Hydraulic Tank Assembly - VS Range



95HC. 021-3

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Hydraulic Tank Assembly - VS Range

BoM 950514

Item No.	Part No.	Description	Quantity
	281880-1	Tank Assembly comprising:-	
1	281635-1	Tank	1
2	281779-1	Suction/Return Filter	1
3	66105-1	Adaptor R1 1/4" x G1 x G3/4"	1
4	451-22	Washer - Sealing 1" BSP	2
> 5	263-7	Adaptor G1	1
> 6	265-11	Adaptor G1 1/4" x G1	1
7	54-7	Collar Plug 1 1/4"	1
8	124-171	Screw M10 x 30	4
	460-11	Washer - Spring	4
9	69-30	Filler/Breather	1
10	134-59	Screw M5 x 20	6
	425-12	Nut - Nyloc M5	6
11	54-3	Collar Plug 3/8"	1
12	265-2	Adaptor G1 1/4" x G3/8"	2
	451-18	Washer - Sealing 3/8"	2
13	264-4	Adaptor G1/2"	2
	451-19	Washer - Sealing 1/2"	2
14	15411	Suction Filter	2
15	89-15	1" Valve	2
16	66162-1	Adaptor R1" x G1" x G1/2"	1
17	266-7	Adaptor R1" x G1"	1
18	68-26	Swivel Blanking Cap G1"	1
19	87-1	Level Gauge	1
20	48-328	Level Switch	1
		Mounting Screws	
21	124-167	Screw M10 x 20	4
	457-5	Washer - Large M10	4
Spares Items			
S1	281779-2	Filter Element	
S2	281779-3	Filter Gauge	

Notes

† Arrow on level switch, Item 18, must point towards top of tank as shown.

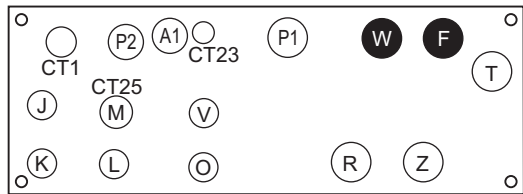
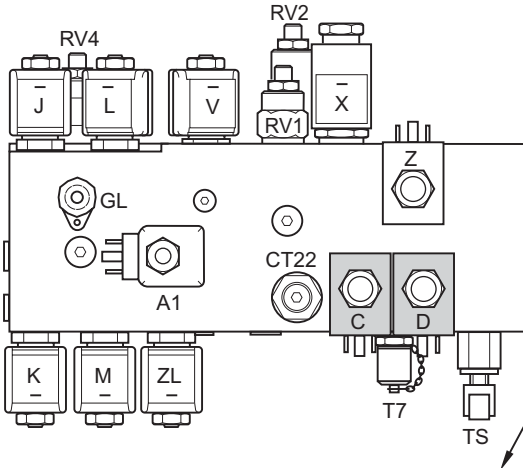
Types 'B' and 'C' Main Valve Blocks in Systems Locker

CURRENT TYPE 'C' VALVE BLOCK

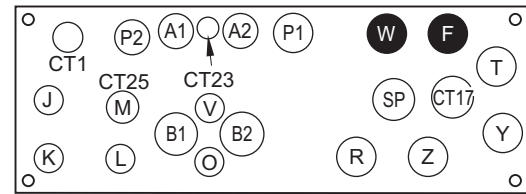
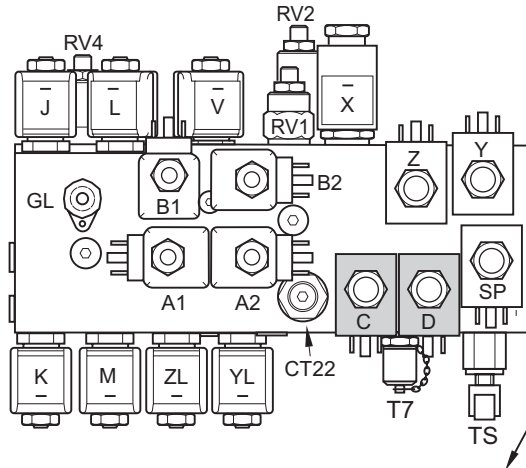
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SINGLE SWEEP



DUAL SWEEP

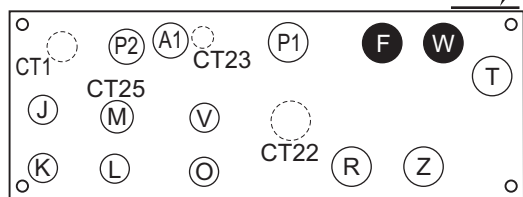
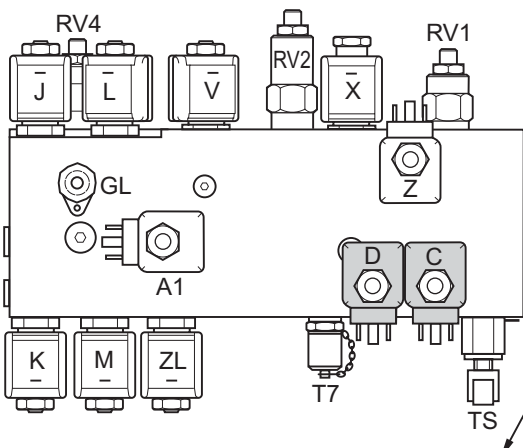


SUPERSEDED TYPE 'B' VALVE BLOCK

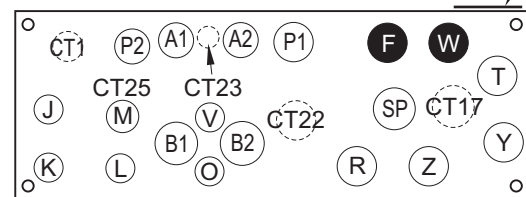
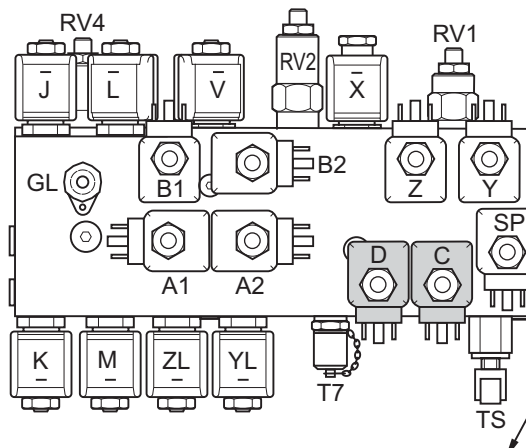
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SINGLE SWEEP



DUAL SWEEP



95HC. 016-2

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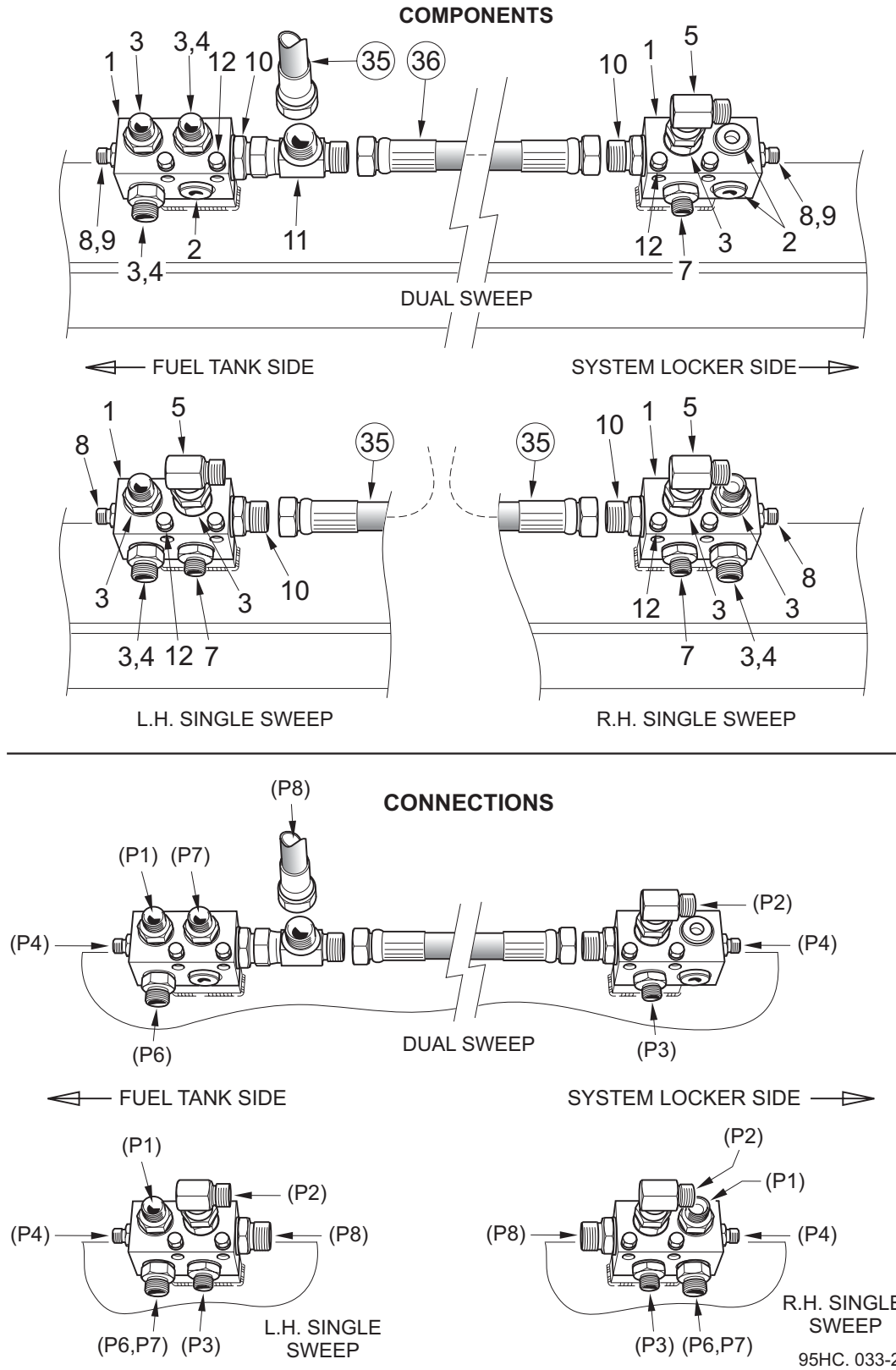
Types 'B' and 'C' Main Valve Blocks in Systems Locker

Part No.	Description
283730-12	Main Valve Block - 12v Single Sweep
283730-24	Main Valve Block - 24v Single Sweep
283731-12	Main Valve Block - 12v Dual Sweep
283731-24	Main Valve Block - 24v Dual Sweep

Valve	Spares Items	
A1, A2, B1, B2	847-53	Valve Cartridge
	847-54	Seal Kit
	847-3	Coil 12v
	847-68	Coil 24v
C, Y, Z	847-93	Valve Cartridge
	847-95	Seal Kit
	847-9	Coil 12v
	847-80	Coil 24v
> M, YL, ZL	847-5	Valve Cartridge
	847-4	Seal Kit
	847-3	Coil 12v
	847-68	Coil 24v
> K	847-2	Valve Cartridge (See TB 1409)
	847-4	Seal Kit
	847-69	Coil 12v
	847-70	Coil 24v
J, L, V	847-63	Valve Cartridge
	847-48	Seal Kit
	847-69	Coil 12v
	847-70	Coil 24v
D, SP, X	847-59	Valve Cartridge
	847-95	Seal Kit
	847-9	Coil 12v
CT1, CT22,	847-19	Check Cartridge
	847-20	Seal Kit
CT17	847-94	Check Cartridge
	847-20	Seal Kit
CT23, CT25	847-92	M6 x 0.75 Orifice
RV1	847-78	Relief Cartridge (175 bar)
	847-75	Seal Kit
RV2	847-39	Relief Cartridge (225 bar)
	847-75	Seal Kit
RV4	847-62	Relief Cartridge (80 bar)
	847-75	Seal Kit
TS	282920	Temperature Switch (See TB 1225)
T7, GL	665-8	Test Point G1/4" with 'O' Ring

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Return Manifolds



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Return Manifolds

BoM 940713, 950713

Components

Item No.	Part No.	Description	Quantity	
			Single	Dual
	282336	Manifold Installation Drawing		
1	281548-1	Return Manifold	1	2
2	54-4	Plug 1/2"	-	3
3	263-4	Adaptor 1/2"	3	4
	451-19	Washer - Sealing 1/2"	3	4
4	68-17	Cap - Sealing G1/2" - Req'd when Tandem Pump is not fitted.	1	2
5	262-4	Swivel Elbow 90° 1/2"	1	1
6	-	-	-	-
7	265-4	Adaptor 1/2" x 3/8"	1	1
	451-19	Washer - Sealing 1/2"	1	1
8	263-2	Adaptor 1/4"	1	2
	451-17	Washer - Sealing 1/4"	1	2
9	68-19	Cap - Sealing G1/4" - Fitted to Fuel Tank side on R.H. Sweep and Systems Locker side on L.H. Sweep	-	1
10	263-6	Adaptor 3/4"	1	2
	451-21	Washer - Sealing 3/4"	1	2
11	255-15	Tee Adaptor	-	1
12	124-147	Screw M8 x 60	2	4
	460-10	Washer - Spring M8	2	4
> * 35	HE12003-80	Hydraulic Hose 3/4"	1	1
* 36	HE12000-38	Hydraulic Hose 3/4"	-	1

* Hose numbers correspond with those in diagrams SH521a01 and b01 in Chapter 8

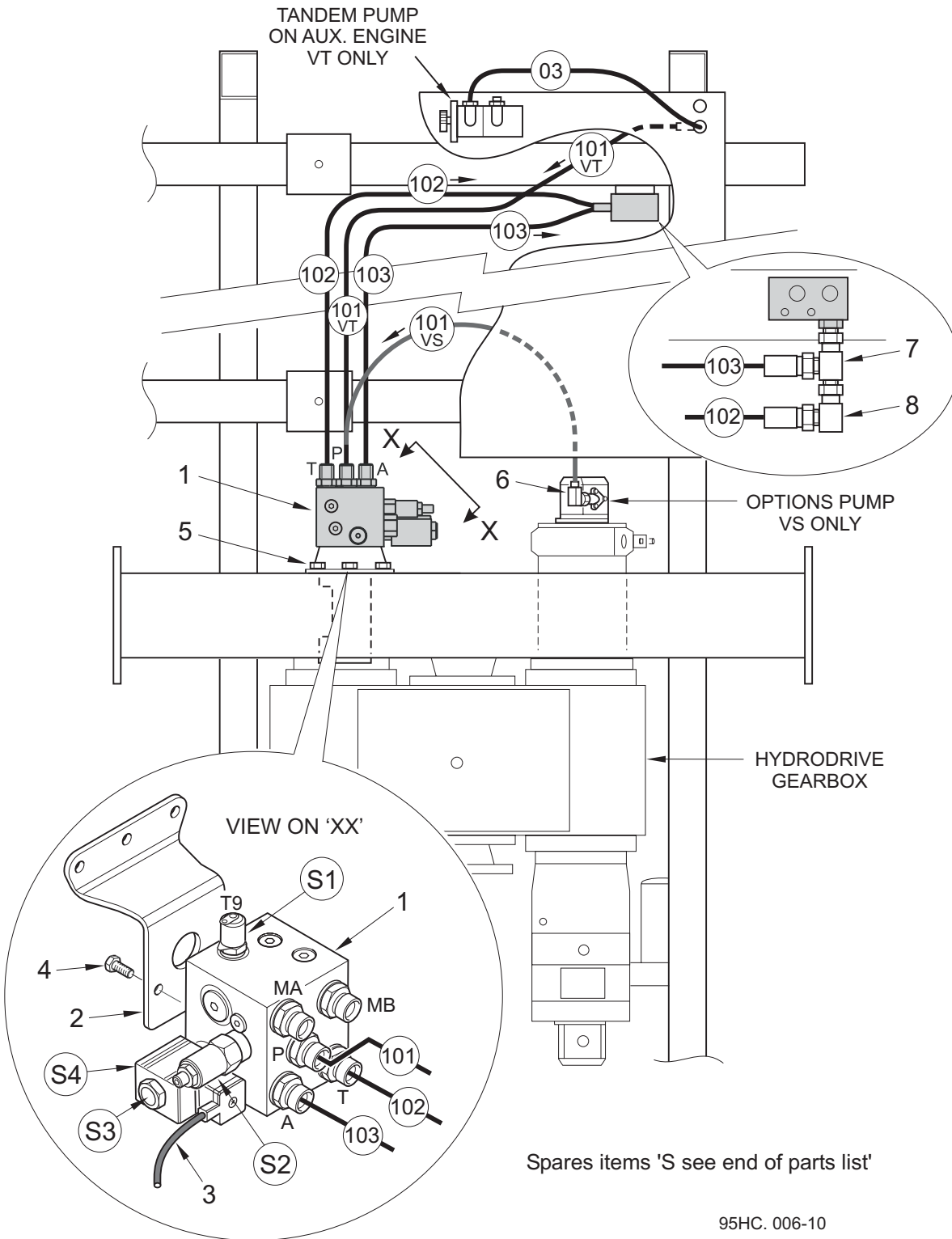
Connections

Port	Connection
(P1)	From Port 'T' on Systems Locker Main Valve Block (Hose 41)
(P2)	From Channel Brush motor (Hose 81 Single Sweep, Hose 82 Dual Sweep)
(P3)	From Channel Brush Speed Control in cab (Hose 84)
(P4)	From WSB Motor Drain (Hose 74) - Fuel Tank Side, R.H. Sweep - Systems Locker Side, L.H. Sweep
(P5)	-
(P6)	From Tandem/Options Pump Valve Block Port 'T' (Hose 102)
(P7)	From Tandem/Options Pump Valve Block Port 'A' (Hose 103) See Tandem/Options Pump Valve Block, over page for single sweep fittings.
(P8)	VT Series - From Hydraulic Tank Return Filter via hose 04 and Powapak floor plate See Engine PTO Pump Installations, Chapter 22. VS Series - From Oil Cooler via hose 203 and Powapak floor plate See Fan Tub - Hydraulic Hoses, Chapter 22.HI

Port numbers correspond with those in diagrams SH521a01 and b01 in Chapter 8

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Tandem/Options Pump Valve Block Installation



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Tandem/Options Pump Valve Block Installation

KT12195

Item No.	Part No.	Description	Quantity
	283699-24	Valve Block Assembly 24v	1
	283699-12	Valve Block Assembly 12v	1
1	283689-24	Valve Block - 24v	1
	283689-12	Valve Block - 12v	1
2	283685-1	Mounting Bracket	1
3	282069-1	Loom	1
4	124-136	Screw M8 x 22	2
	455-10	Washer - Plain Ø8	2
	460-10	Washer - Spring Ø8	2
5	124-171	Screw M10 x 30	3
	455-10	Washer - Plain Ø10	3
	460-10	Washer - Spring Ø10	3
03 ^	See Chapters 22.EI, EJ and EP - Tandem PTO Pumps		-
101VT *	HC08001-200	Hydraulic Hose 1/2"	1
102 *	HC08000-168	Hydraulic Hose 1/2"	1
103 *	HC08000-168	Hydraulic Hose 1/2"	1

BoM 950414 - Hoses, VS Hydrodrive Gearbox

6	262-4	Swivel Elbow 90° 1/2"	1
101VS *	HC08001-245	Hydraulic Hose 1/2"	1

BoM 950713 - Return Manifold (also see previous page)

7	255-13	Swivel Tee 1/2"	1
8	262-4	Swivel Elbow 90° 1/2"	1

Spares Items

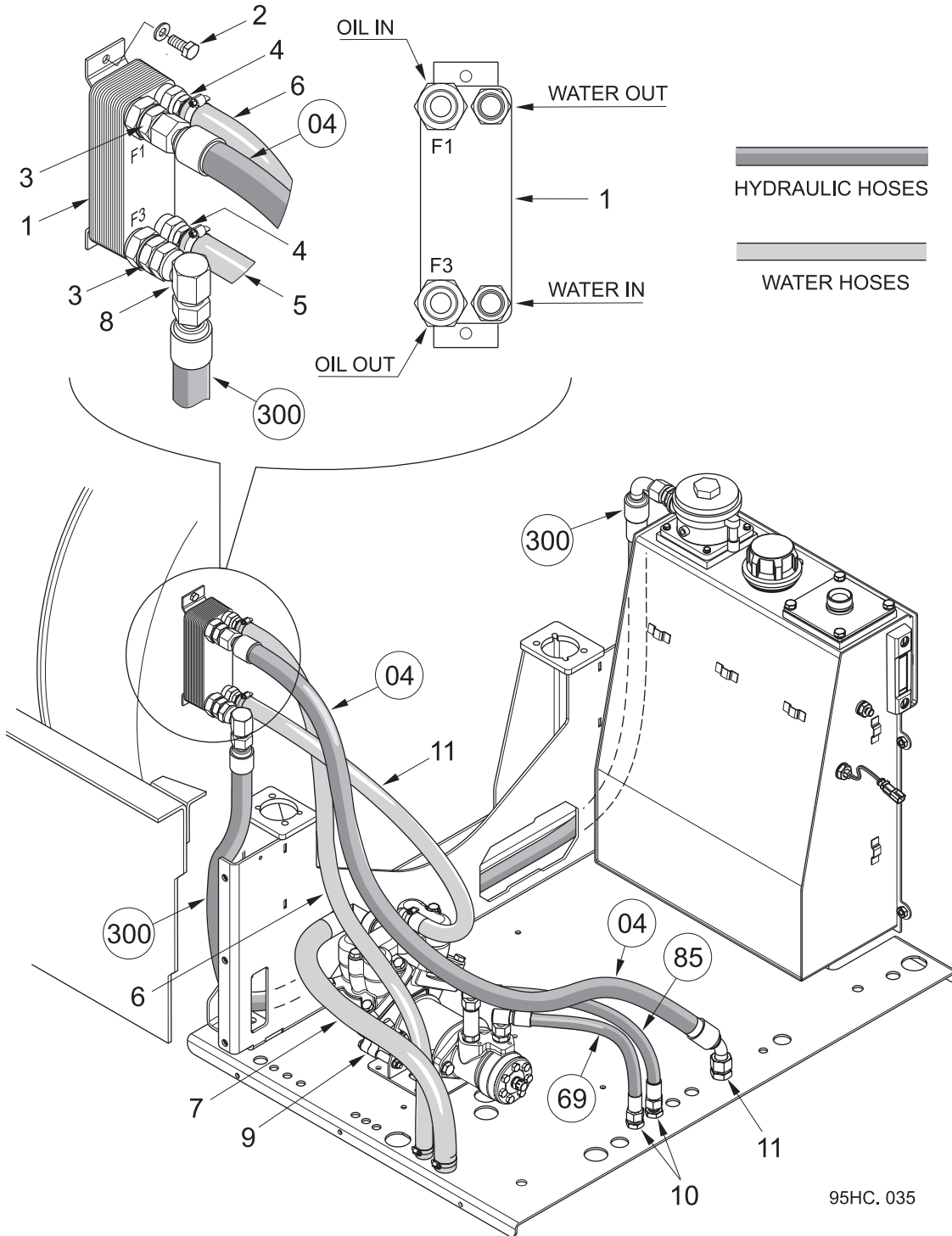
S1	665-18	Test Point G 1/4"	1
S2	847-39	Relief Valve Cartridge	1
S3	847-72	Solenoid Valve Cartridge	1
S4	847-74	Coil - 24v	1
	847-73	Coil - 12v	1

Notes

* Hose item numbers correspond with those in hydraulic diagram SH528a01 in Chapter 8.

^ Hose item number corresponds with that in hydraulic diagram SH531a01 in Chapter 8.

Oil Cooler Installation - Tandem Pump Circuit



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Oil Cooler Installation - Tandem Pump Circuit

Drg. 283641

Item No.	Part No.	Description	Quantity
1	282963-3	Oil Cooler	1
2	124-135	Screw M8 x 20	2
	460-10	Washer - Spring M8	2
3	263-6	Adaptor 3/4" BSP	2
	451-21	Washer - Sealing 3/4" BSP	2
4	231-43	Hosetail Adaptor	2
5	497-H12	Hose 3/4" (See Chapter 30 - Water Hoses - item 7)	1.0m
6	497-H12	Hose 3/4"	0.5m
	501-3	Hose Clip	2
7	6117	Hose 1" (See Chapter 30 - Water Hoses - Item 6)	1
8	262-6	Swivel Elbow 3/4" x 90°	1
9	282812-2	Water Pump Assembly	1
10	264-4	Bulkhead Adaptor 1/2" BSP	2
	410-80	Backnut 1/2" BSP	2
11	264-6	Bulkhead Adaptor 3/4" BSP	1
	410-57	Backnut 3/4" BSP	1

Hoses

04	HE12001-122	Hydraulic Hose 3/4"	1
300	HE12002-180	Hydraulic Hose 3/4"	1

These hose item numbers correspond with those in hydraulic diagram SH521a01 Rev. 03

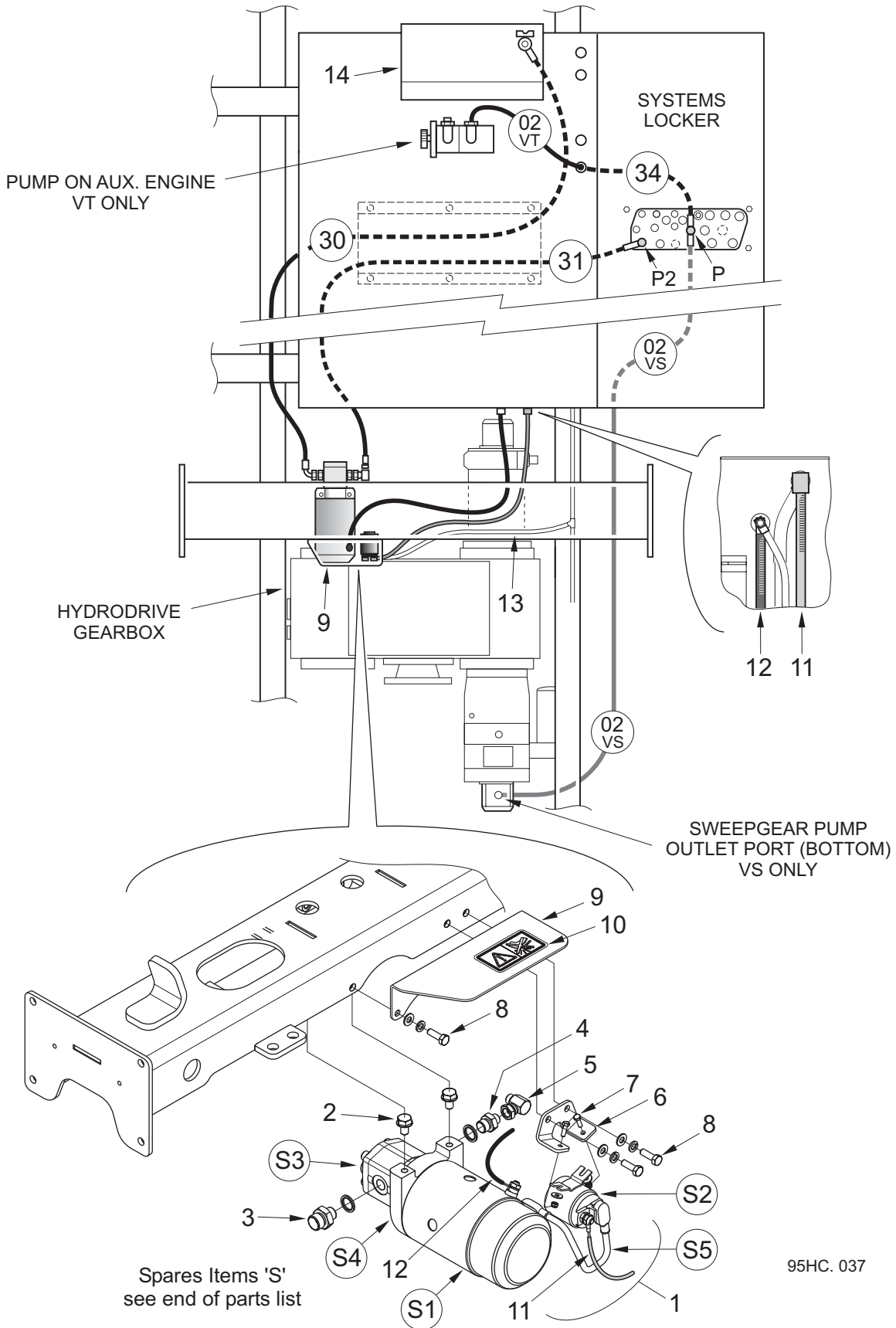
69	HC08003-40	Hydraulic Hose	1
85	HC08003-45	Hydraulic Hose	1

These hose item numbers correspond with those in hydraulic diagrams SH522z01 Rev. 10 and SH523z01 Rev. 09

Notes

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Emergency Discharge Pump



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Emergency Discharge Pump

BoM 950714

Item No.	Part No.	Description	Quantity
	283707-24	Emergency Discharge Assembly - 24v	
	283707-12	Emergency Discharge Assembly - 12v	
		Both Assemblies comprise items 1 to 10:-	
1	283706-24	Motor/Pump Unit - 24v	1
	283706-12	Motor/Pump Unit - 12v	1
2	125-185	Flanged Bolt M10 x 16	2
3	265-4	Adaptor 1/2" x 3/8"	1
	451-18	Washer - Sealing 3/8"	2
4	265-2	Adaptor 1/4" x 3/8"	1
	451-18	Washer - Sealing 3/8"	1
5	262-2	Swivel Elbow 1/4" x 90°	1
6	283687-1	Mounting Plate	1
7	124-70	Screw M5 x 16	2
	457-1	Washer - Plain Large Ø5	2
	425-12	Nut - Nyloc M5	2
8	124-137	Screw M8 x 25	3
	455-10	Washer - Plain Ø8	3
	460-10	Washer - Spring Ø8	3
9	283688-1	Guard	1
10	283709-1	Label	1
11	282036-1	Pump Cable - Red	1
12	282036-21	Pump Cable - Black	1
	282156-1	EDS Solenoid Earth Cable (Not Shown)	1
13	-	Subframe Loom	Ref.
14	-	Hydraulic Tank - covered elsewhere in this chapter	
30 *	HC08003-224	Hydraulic Hose 1/2"	1
31 *	HC04001-194	Hydraulic Hose 1/4"	1

BoM 950713 - VT Hoses

34 *	HC08001-49	Hydraulic Hose 1/2"	1
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BoM 950515 - VT Hoses

02VT	See Chapters 22.EI, EJ, and EP - Pump Installations		
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BoM 950414 - VS Hoses

02VS ^	HC08001-239	Hydraulic Hose 1/2"	1
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See Spares Items over page

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Emergency Discharge Pump**Spares Items**

Item No.	Part No.	Description
S1	283706-241	Motor - 24v
	283706-121	Motor - 12v
S2	283706-242	Starter Solenoid - 24v
	283706-122	Starter Solenoid - 12v
S3	283706-30	Hydraulic Pump
S4	283706-31	Mounting Plate
S5	283706-32	Link Cable

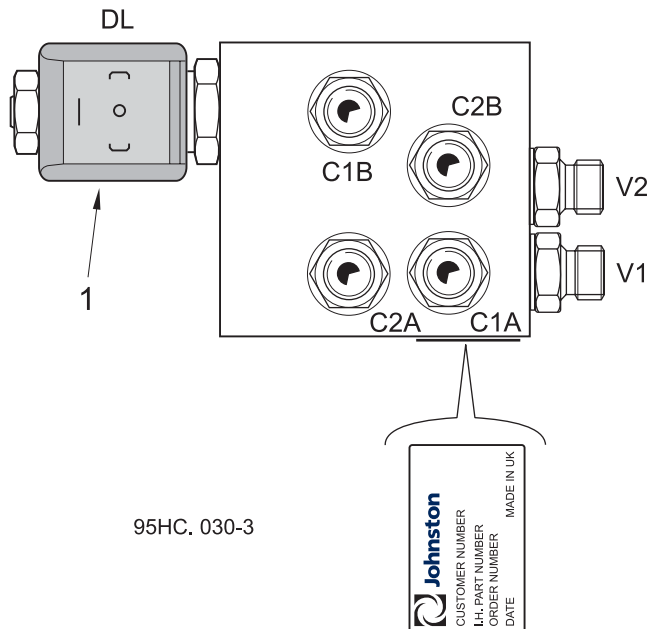
Notes

* Hose item numbers correspond with those in hydraulic diagram SH531a01 in Chapter 8.

^ Hose item number corresponds with that in hydraulic diagram SH531b01 in Chapter 8.

Sequence Valve - Rear Door Locking

SPARES ITEMS



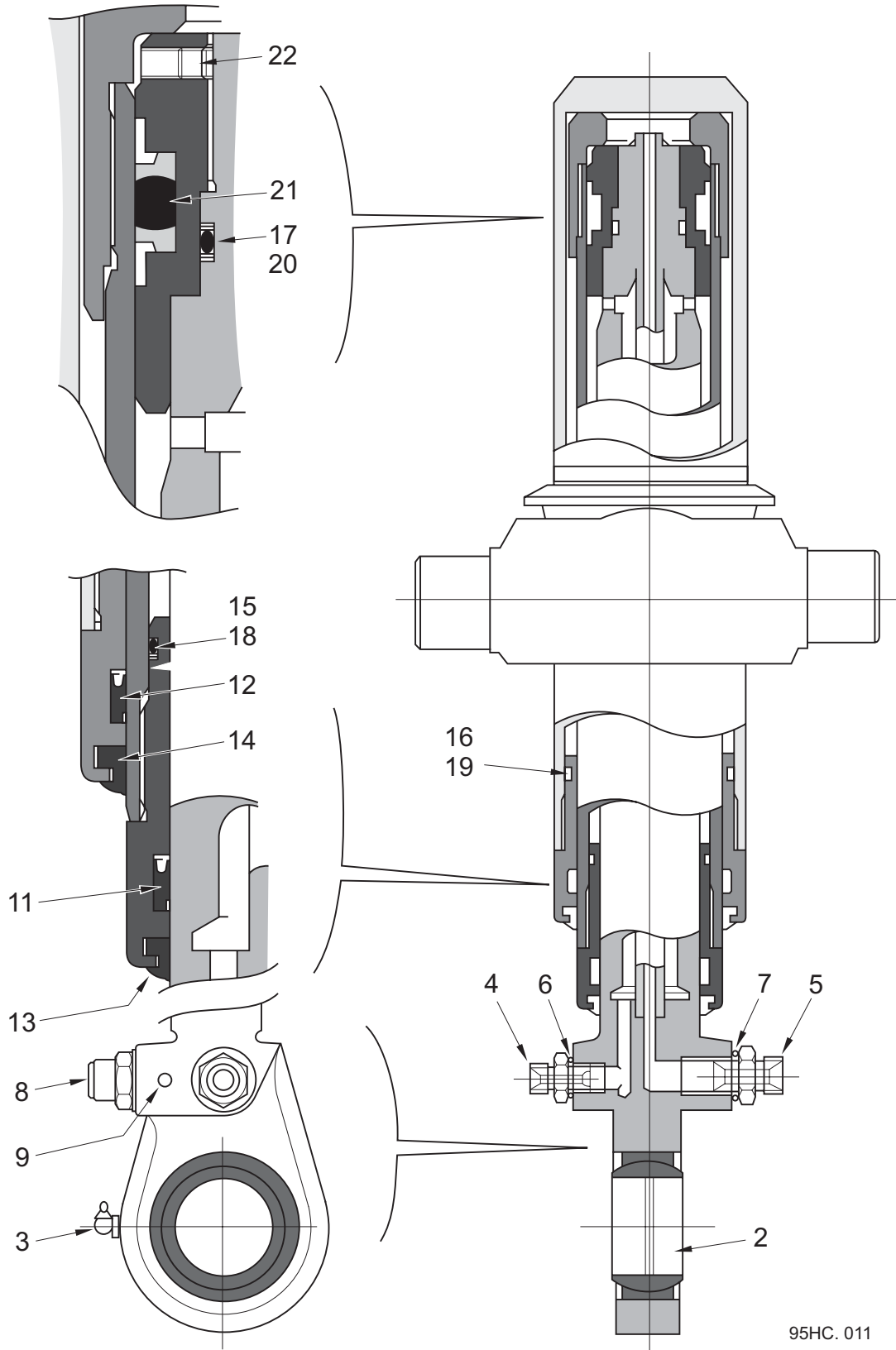
Item No.	Part No.	Description
	283405-12	12v Rear Door Valve Assembly
	283405-24	24v Rear Door Valve Assembly
1	847-5	Valve Cartridge (DL)
	847-3	Coil - 12v
	847-68	Coil - 24v

Notes

Valve fitted to rear of subframe - See Chapter 21 for fitting details

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Body Tip Cylinder



95HC. 011

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Body Tip Cylinder

BoM 950611 Drg. 28940

Item No.	Part No.	Description	Quantity	
	500/605/650 800			
1	28940-4	28940-5	Body Tip Cylinder Assembly	1
2	29100-7	<	Spherical Bearing	1
3	38-8	<	Grease Nipple 1/8" 90°	1
4	263-2	<	Adaptor 1/4"	1
5	263-4	<	Adaptor 3/8" x 1/2"	1
6	451-17	<	Washer - Sealing 1/4"	1
7	451-19	<	Washer - Sealing 1/2"	1
> 8	241-265	<	Valve - Over Centre	1
9	5259	<	Plug 1/8"	1

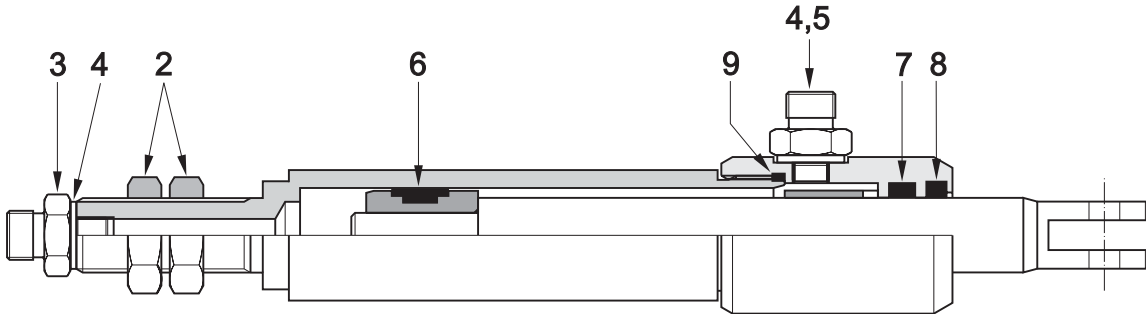
Seal Kit 28940-500 comprising:

Item No	Description	Quantity
11	Seal - 2nd Stage Rod	1
12	Seal - 1st Stage Rod	1
13	Wiper Seal - 2nd Stage Rod	1
14	Wiper Seal - 1st Stage Rod	1
15	'O' Ring	1
16	'O' Ring	1
17	'O' Ring	1
18	Spirol Back-up Ring	1
19	Spirol Back-up Ring	1
20	Spirol Back-up Ring	2
21	Seal - 2nd Stage Piston	1
22	Grub Screw	1

Notes

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Body Prop Cylinder



95HC. 013

Item No.	Part No.	Description	Quantity
	29345-1	Body Prop Cylinder Assembly	
2	421-7	Locknut M20	2
3	265-1	Adaptor 1/8" x 1/4"	1
4	451-4	Washer - Sealing	2
5	29332-1	Special Adaptor 1/8" x 1/4"	1

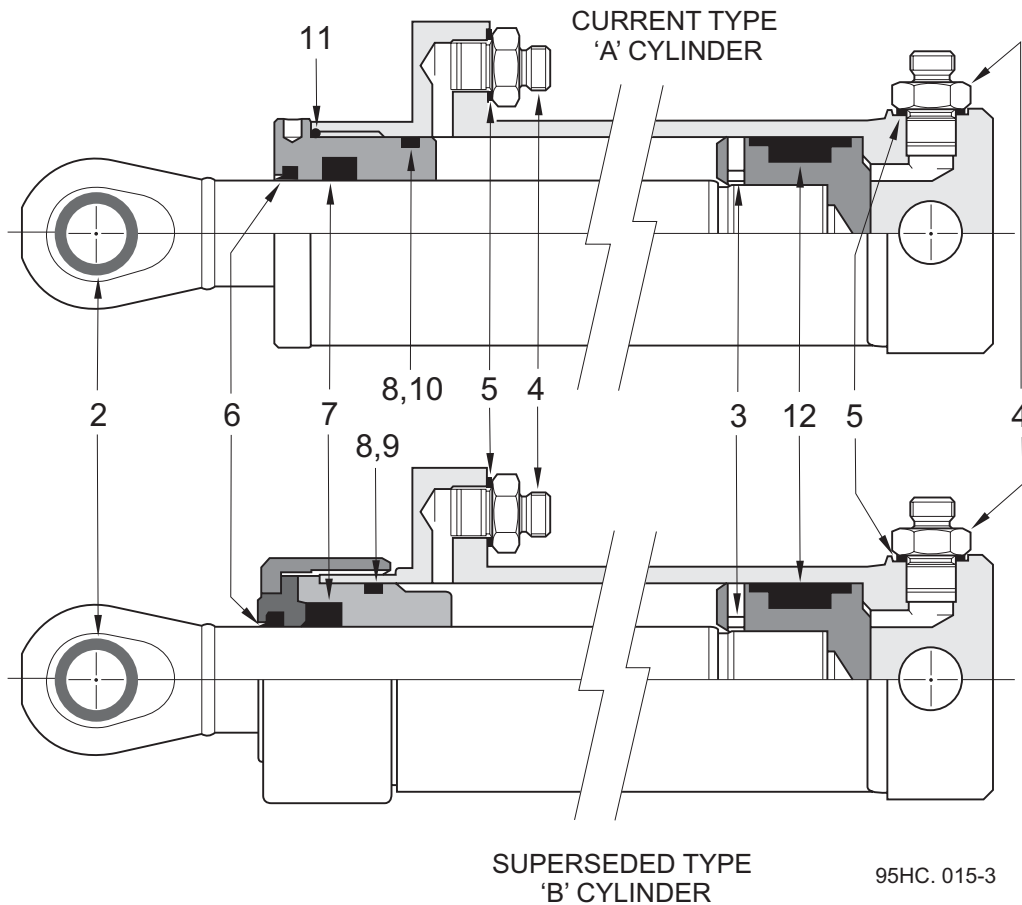
Seal Kit 29345-50 comprising:

Item No.	Description	Quantity
6	Piston Seal	1
7	Rod Seal	1
8	Wiper Seal	1
9	'O' Ring	1

Notes

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Rear Door and Powaboom Cylinders



95HC. 015-3

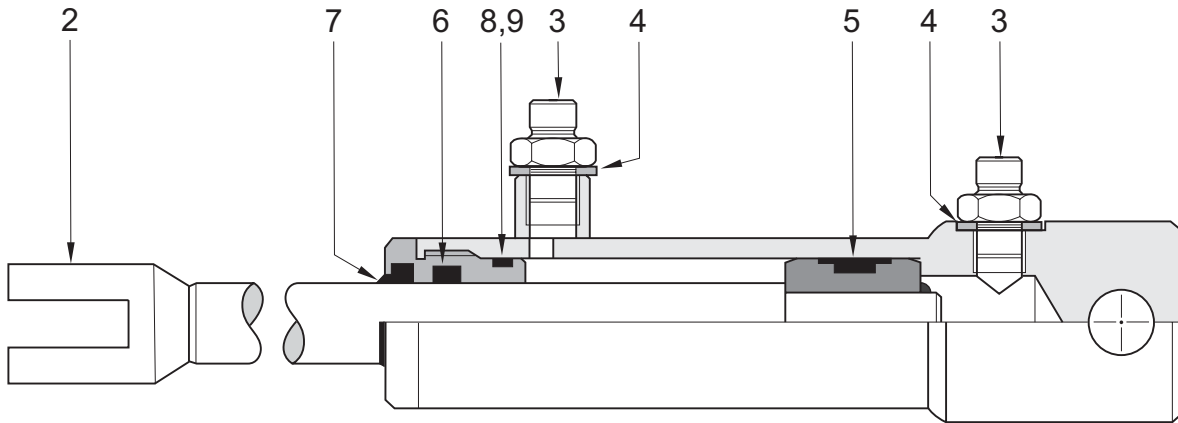
BoM 950813, 951312

Item No.	Part No.	Description	Quantity
>	29170-1	Rear Door/Powaboom Cylinder	
2	29128	Bush	2
3	135-2	Grubscrew M6c x 6mm	1
4	265-2	Adaptor 1/4" x 3/8"	2
5	451-18	Washer - Sealing 3/8"	2

Seal Kit 29170-500 comprising:

Item No.	Description	Quantity
2	Bush	2
6	Wiper Seal	1
7	Rod Seal	1
8	'O' Ring	1
9	Back-up Ring	1
10	Back-up Ring	1
11	'O' Ring	1
12	Piston Seal	1

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Rear Door Clamping Cylinder


95HC. 014-2

Item No.	Part No.	Description	Quantity
	281565-1	Cylinder Assembly	
2	28929-1	Fork End	1
3	263-2	Adaptor	2
4	451-17	Washer - Sealing	2

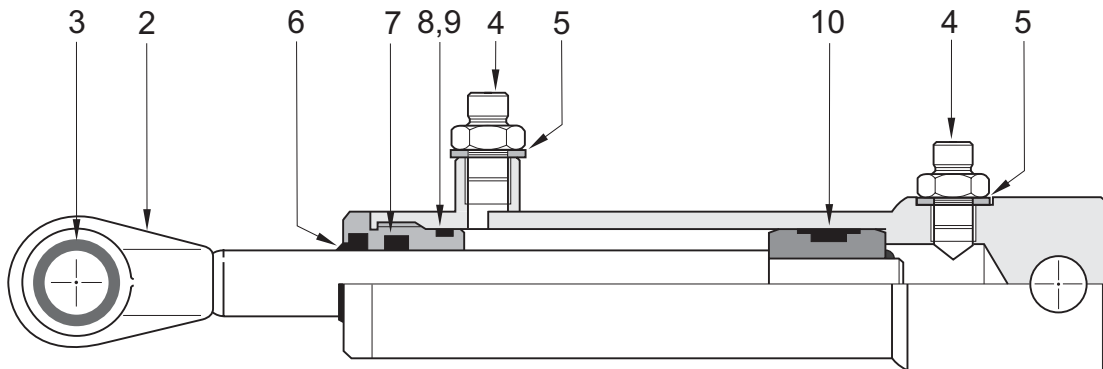
Seal Kit 29465-500 comprising:

Item No.	Description	Quantity
5	Piston Seal	1
6	Rod Seal	1
7	Wiper Seal	1
8	'O' Ring	1
9	Back-up Ring	1

Notes

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Wide Sweep Brush Slew Cylinder



HC. 0014-3

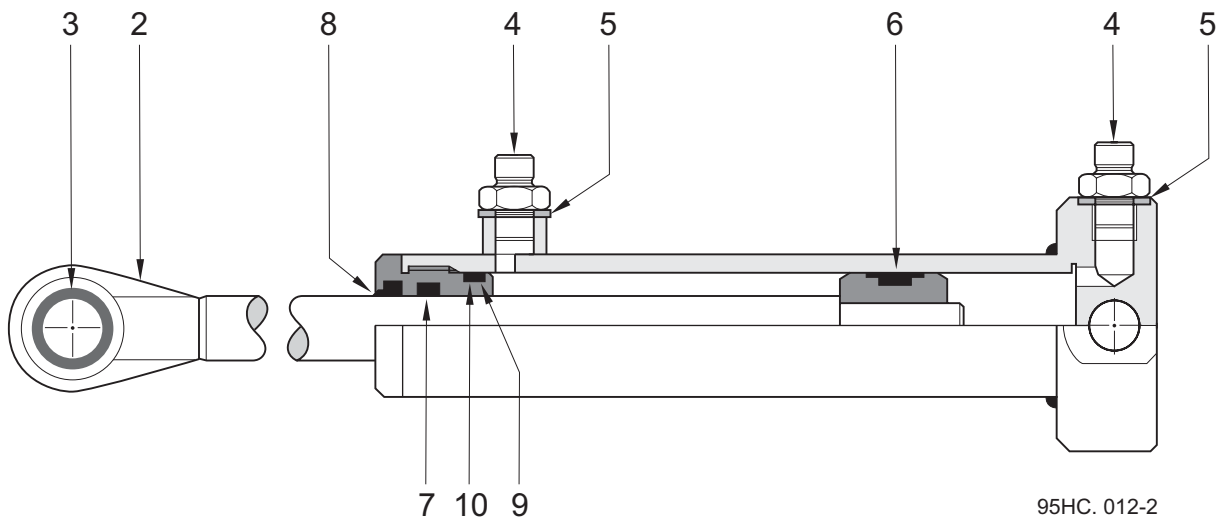
Item No.	Part No.	Description	Quantity
1	29160-1	Wide Sweep Brush Slew Cylinder	
2	28928-1	Eye	1
3	29128-1	Bush	1
4	263-2	Adaptor 1/4"	2
> 5	451-17	Washer - Sealing 1/4"	2

Seal Kit 29160-500 comprising:

Item No.	Description	Quantity
3	Bush	1
6	Wiper Seal	1
7	Rod Seal	1
8	Back-up Ring	1
9	'O' Ring	1
10	Piston Seal	1

Notes

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Channel Brush Pivot Cylinder


95HC. 012-2

Item No.	Part No.	Description	Quantity
	281601-1	Cylinder Assembly	1
2	28928-1	Eye	1
3	29128-1	Bush	1
4	263-2	Adaptor 1/4"	2
5	451-17	Washer - Sealing	2

Seal Kit 29160-500 comprising:

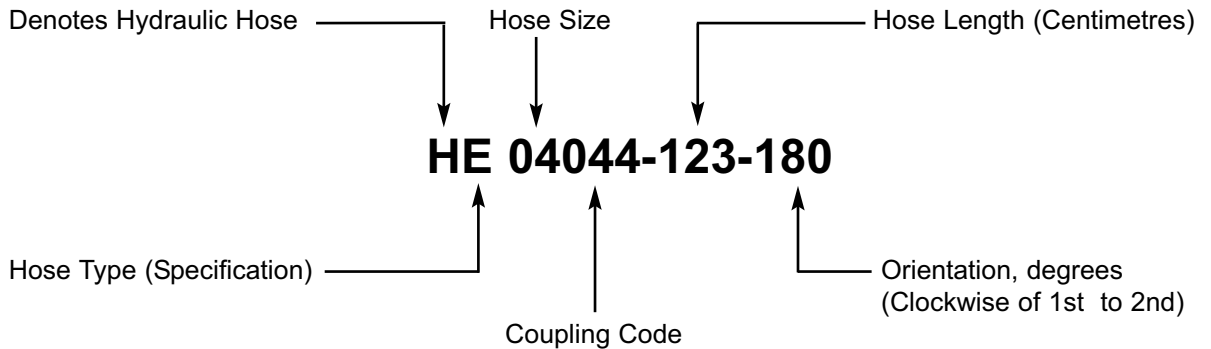
Item No.	Description	Quantity
3	Bush	1
6	Piston Seal	1
7	Rod Seal	1
8	Wiper Seal	1
9	'O' Ring	1
10	Back-up Ring	1

Notes

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Hydraulic Hose Part Numbering System

Example



Denoted by

B
C
E
F
K

JEL hose type**

Type B
Type C
Type E
Type F
Type K

Gates

MegaSpiral Plus (6 Braid)
Megaflex (M1T)
Sng. Braid (BE7)
Twinflex (CM2T)
MegaSpiral (4 Braid)

**B497 :- For full specification of hose.

Hose Diameter (Bore Size)

03 :- Denotes 3/16" Hose.
04 :- Denotes 1/4" Hose.
05 :- Denotes 5/16" Hose.
06 :- Denotes 3/8" Hose.
08 :- Denotes 1/2" Hose.

12 :- Denotes 3/4" Hose.
16 :- Denotes 1" Hose.
20 :- Denotes 1 1/4" Hose.
24 :- Denotes 1 1/2" Hose.
32 :- Denotes 2" Hose.

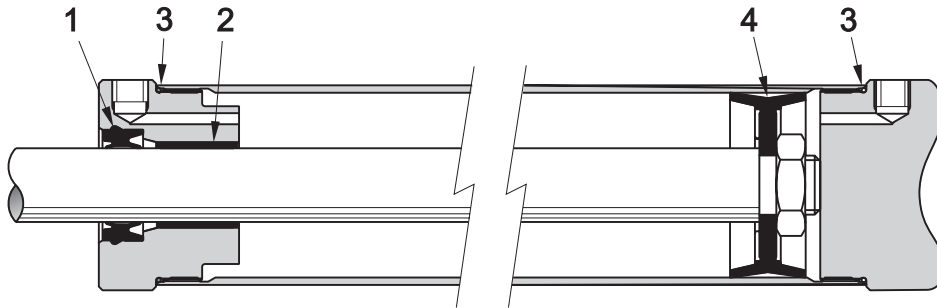
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CHAPTER

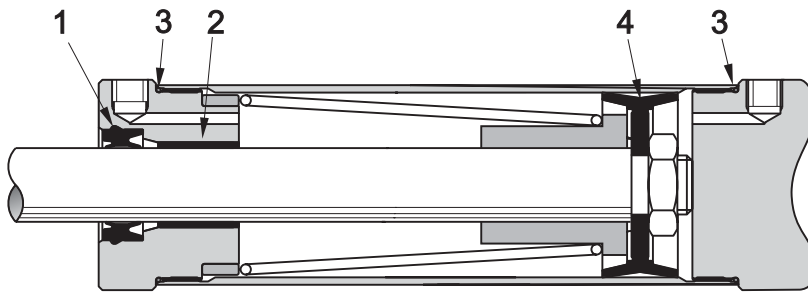
29**Pneumatics****Table of Contents**

Section	Page
Cylinders	
Cylinder Seal Kits	29 : 2
Systems Locker Components	
VM10 Valve Island	29 : 4
Regulators	29 : 6
Filter/Regulator (FR)	29 : 7
System Protection Valve	29 : 8
Shuttle Valve	29 : 9

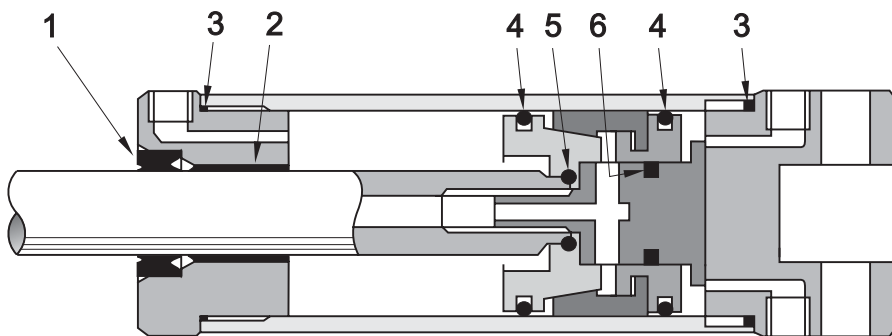
Cylinder Seal Kits



Ø 70mm Bore Cylinder - A
 Ø 50mm Bore Cylinders - B, E, F, and G



Ø 50mm Bore Cylinder - C



Ø 50mm Bore Cylinder - D

95PC. 002

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Cylinder Seal Kits

Channel Brush Cylinders

Cylinder Letter	Cylinder Part No.	Cylinder Description	Seal Kit Part No.
A	200355-1	Lift Cylinder	200355-500
Not Shown	281614-1	Latch Cylinder	Not Repairable

Nozzle Cylinders

B	28903-1	Lift Cylinder	290001-500
C	290001-1	Maxigap Cylinder	290001-500
D	290002-1	Varagap Cylinder	290002-500

Wide Sweep Brush Cylinders

E	29284-2	Lift Cylinders	290001-500
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Littasnatch Cylinder

F	63449-1	Gate Cylinder (6")	290001-500
---	---------	--------------------	------------

Intake Flap Cylinder

G	280840-1	Flap Cylinder	290001-500
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Seals Included in Kits 290001-500 and 200355-500

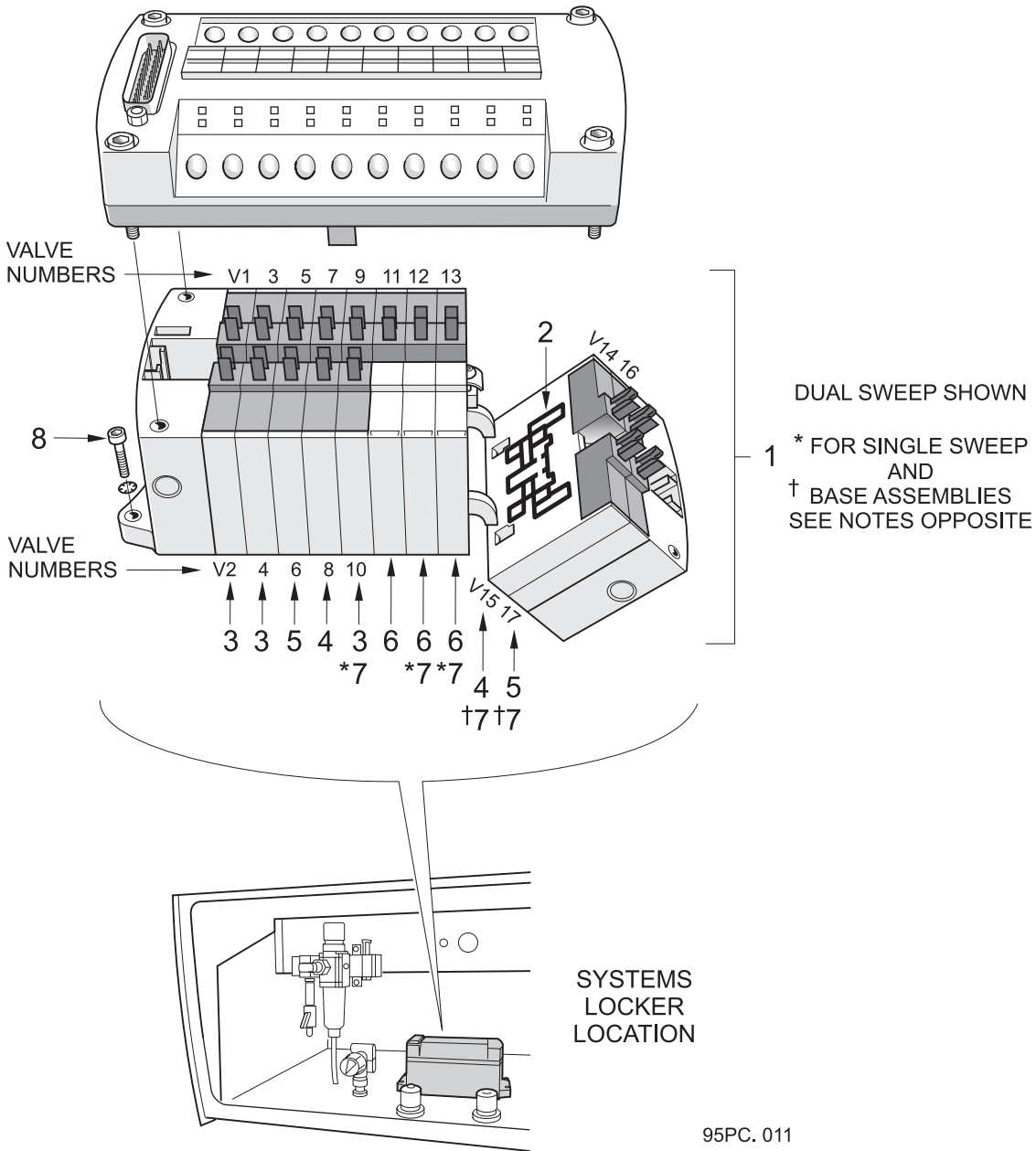
Item No.	Description	Quantity	Item No.	Description	Quantity
1	Rod Seal	1	3	'O' Ring	2
2	Bearing	1	4	Piston Seal	1

Seals Included in Kit 290002-500

Item No.	Description	Quantity	Item No.	Description	Quantity
1	Rod Seal	2	4	Piston Seal Ø50	2
2	Bearing	1	5	'O' Ring	1
3	'O' Ring	2	6	Piston Seal Ø25	1

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VM10 Valve Island



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VM10 Valve Island

VM10 Valve Island

Item No.	Part No.	Description
1	283305-021	Valve Island 12v - Single Base
	283305-029	Valve Island 12v - Single Options
	283305-022	Valve Island 12v - Dual Base
	283305-030	Valve Island 12v - Dual Options
	283305-023	Valve Island 24v - Single Base
	283305-031	Valve Island 24v - Single Options
	283305-024	Valve Island 24v - Dual Base
	283305-032	Valve Island 24v - Dual Options

Spares Items

Quantity

Item No.	Part No.	Description	Single Base	Single` Options	Dual Base	Dual Options
2	860-1	Gasket - Black		1		
	860-2	Gasket - Red		1		
Valve Segments:-						
3	860-5	Segment Code TC6U (12v)	2	2	3	3
	860-6	Segment Code NC6U (24v)	2	2	3	3
4	860-9	Segment Code TA6U (12v)	1	2	1	2
	860-10	Segment Code NA6U (24v)	1	2	1	2
5	860-7	Segment Code TB6U (12v)	1	2	1	2
	860-8	Segment Code NB6U (24v)	1	2	1	2
6	860-3	Segment Code TG6U (12v)	1	1	3	3
	860-4	Segment Code NG6U (24v)	1	1	3	3
7	860-30	Blanking Segment B000	5	3	2	-
8	129-35	Screw - Socket Head M4 x 16		4		
	450-269	Washer - Shakeproof M4		4		

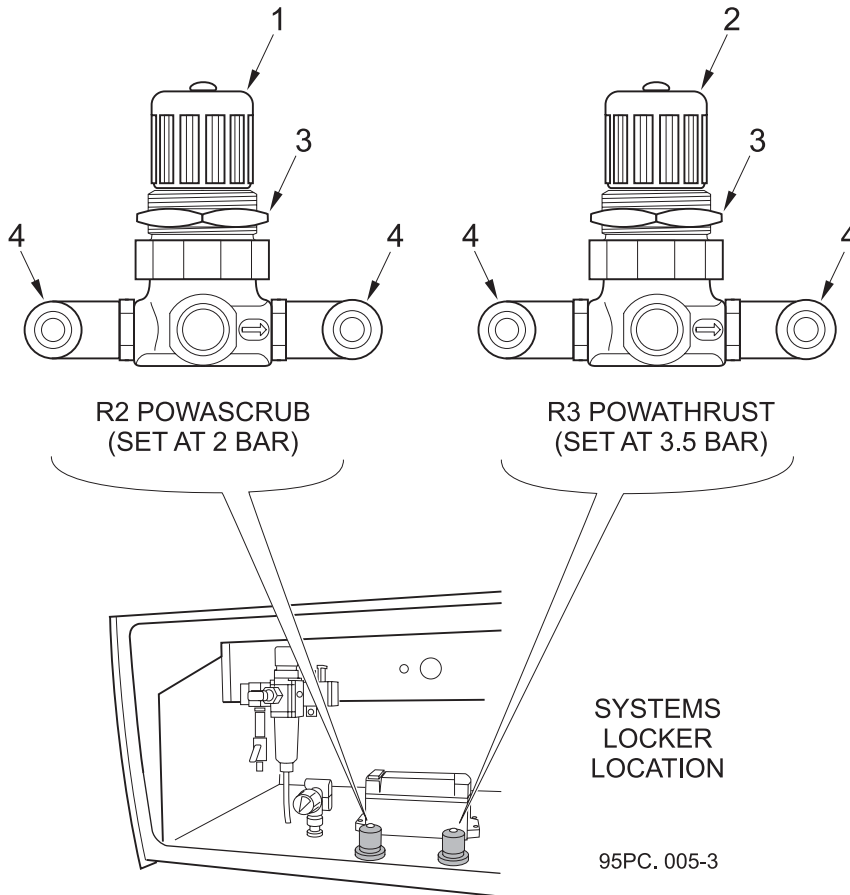
Notes

> 12v Segments start with T*** 24v Segments start with N***

* Valve Segments V9/V10, 12 and V13 are replaced with blanking segments (7) on Single Sweep.
 † Valve Segments V14/15, V16/17 are replaced with blanking segments (7) on No Options.

For circuit connections see diagrams SP541a02, Single Sweep and SP542a02, Dual Sweep in Chapter 11.

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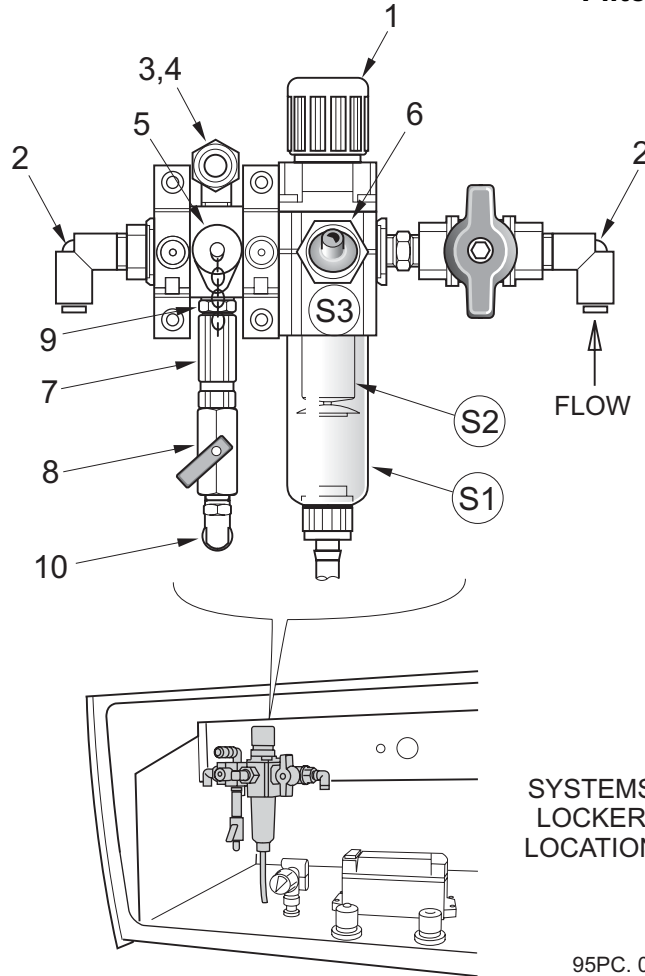
Regulators


Item No.	Part No.	Description	Quantity	
			R2	R3
	283526-1	Powascrub (R2) Regulator Assembly	✓	-
	283524-1	Powathrust (R3) Regulator Assembly	-	✓
1	283526-2	Pre-set Regulator	1	-
2	283524-2	Pre-set Regulator - with Yellow Top	-	1
3	72-15	Panel Nut	1	1
4	538-3	Swivel Elbow 1/8" x Ø6	2	2

Notes

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Filter/Regulator (FR) Unit



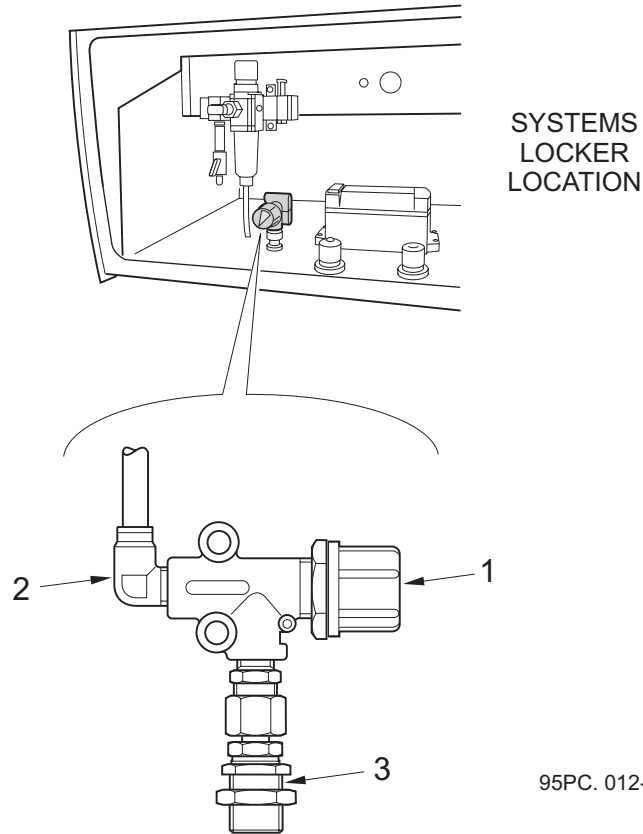
95PC. 006-4

Item No.	Part No.	Description	Quantity
	221498-1	Filter/Regulator Assembly comprising:-	
1	283510-2	Filter/Regulator	1
2	538-9	Swivel Elbow R1/4" x Ø8	2
3	559-121	Quick Release Plug G1/4"	1
	559-120	Quick Release Socket G1/4"	1
4	72-60	Elbow R1/4" x G1/4"	1
5	665-26	Test Point	1
6	72-71	Pressure Switch	1
	509-5	Adaptor 1/8" NPTF x R1/8"	1
7	72-73	Non Return Valve G1/8"	1
> 8	72-35	Ball Valve G1/8"	1
9	558-2	Nipple R1/4" x R1/8"	1
10	553-3	Swivel Elbow G1/8" x Ø6	1

Spares Items for Filter Unit

S1	72-30	Air Filter Bowl
S2	72-39	Air Bowl Filter
S3	72-29	Gasket Kit - Not Shown

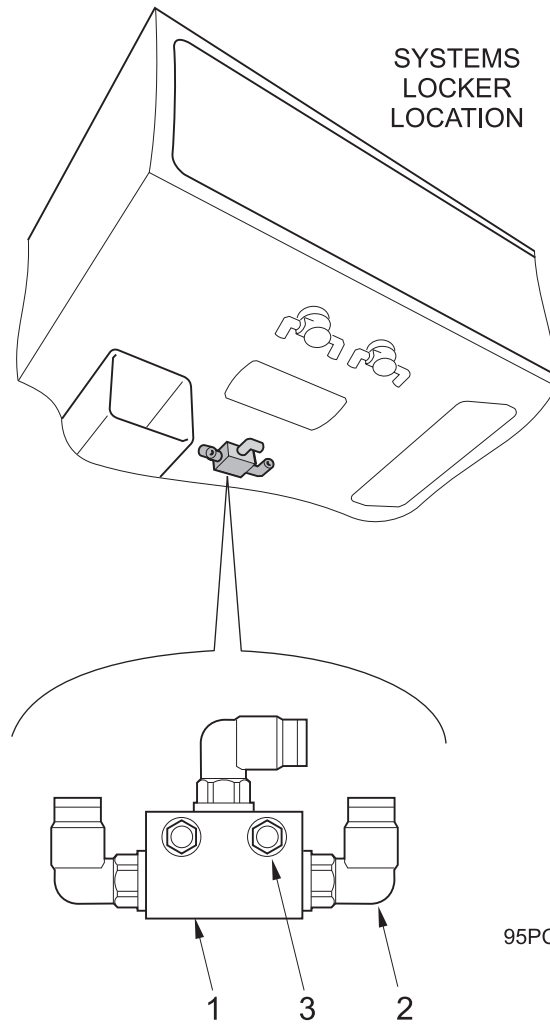
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System Protection Valve


Item No.	Part No.	Description	Quantity
>	283860-1	Valve Assembly comprising:-	
1	6779	Valve	1
2	538-9	Swivel Elbow	1
3	558-3	Bulkhead Connector	1

Notes

Shuttle Valve Assembly



95PC. 013

Item No.	Part No.	Description	Quantity	
			Single	Dual
	283527-1	Shuttle Valve Assembly comprising:-	1	2
1	72-1	Shuttle Valve	1	2
2	553-3	Swivel Elbow G1/8" x Ø6	3	6
3	129-38	Socket Capscrew M4 x 25	2	-
	129-44	Socket Capscrew M4 x 44	-	2
	455-5	Washer - Plain M4	2	2
	450-269	Washer - Shakeproof M4	2	2
	420-11	Nut M4	2	2

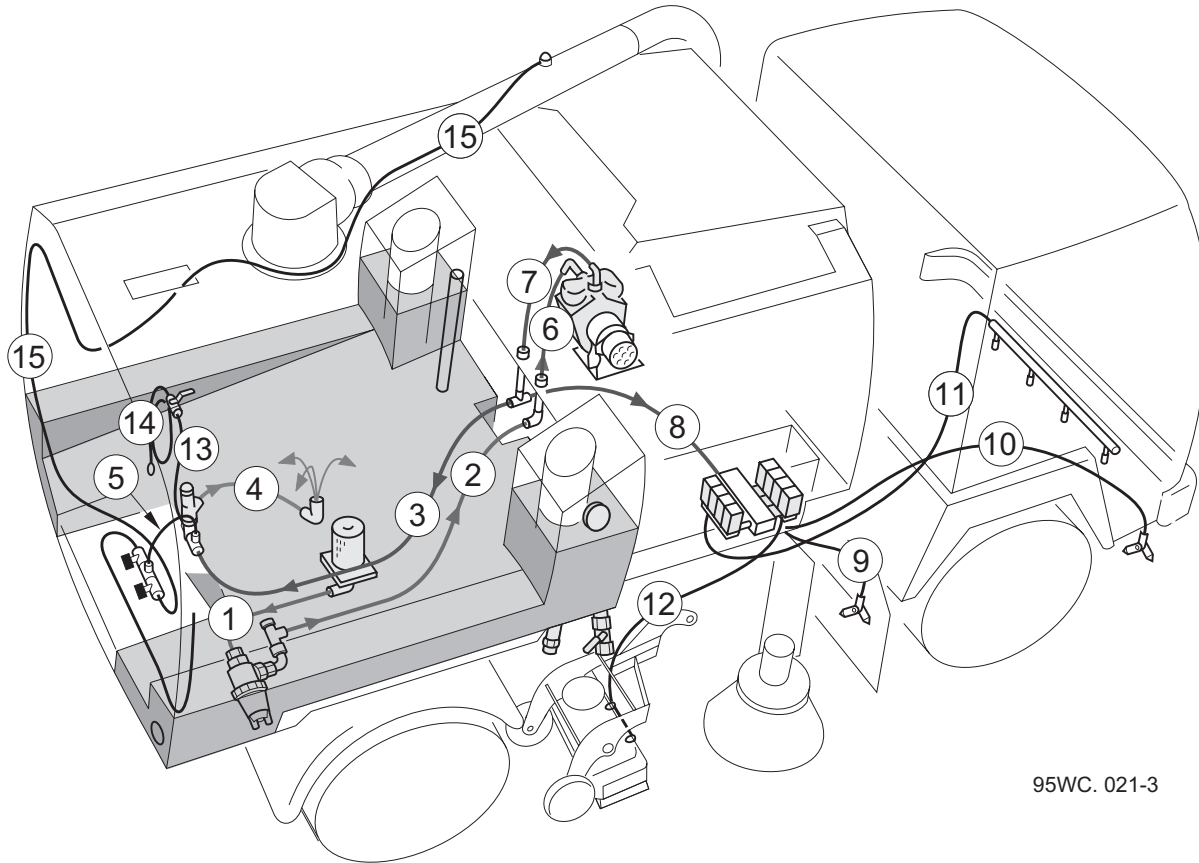
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CHAPTER

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Water Hoses - Basic System



95WC. 021-3

BoM 950714 - Subframe Services

Item No.	Part No.	Description	Quantity
1	497-H24	Hose 1 1/2"	1.5m
	501-4	Hose Clip	2
2	6117	Hose 1"	2.0m
	501-4	Hose Clip	2
	24-1	Cable Tie	3
3	497-H12	Hose 3/4"	2.5m
	501-3	Hose Clip	2
	24-1	Cable Tie	4
4	497-H12	Hose 3/4"	1.2m
	501-3	Hose Clip	2
5	6111	Hose 1/2"	0.4m
	501-2	Hose Clip	2

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Water Hoses - Basic System

BoM 950512 - Powapak Tub

Item No.	Part No.	Description	Quantity
6	6117	Hose 1" - Pump Suction	0.7m
	501-4	Hose Clip	2
	24-1	Cable Tie	2
7	497-H12	Hose 3/4" - Pump Feed	0.5m
	501-3	Hose Clip	2
8	497-H12	Hose 3/4"	1.0m
	501-3	Hose Clip	2

BoM 951220 - C.B. Installation, See Chapter 24

9	39444	Hose 3/8" - R.H. Brush Spray (Shown)	3.0m
	501-1	Hose Clip	2
	39444	Hose 3/8" - L.H. Brush Spray	5.0m
	501-1	Hose Clip	2
10	39444	Hose 3/8" - R.H. Gutter Spray (Shown)	6.2m
	501-1	Hose Clip	2
	39444	Hose 3/8" - L.H. Gutter Spray	11.3m
	501-1	Hose Clip	2

BoM 951020 - W.S.B. Installation, See Chapter 26

11	39444	Hose 3/8"	5.0m
	501-1	Hose Clip	2

BoM 951120 - Nozzle Installation, See Chapter 25

12	39444	Hose 3/8" - R.H. Nozzle Sprays (Shown)	5.0m
	501-1	Hose Clip	2
	39444	Hose 3/8" - L.H. Nozzle Sprays	8.0m
	501-1	Hose Clip	2

Drg. 807839 - Washdown Hose, See this Chapter

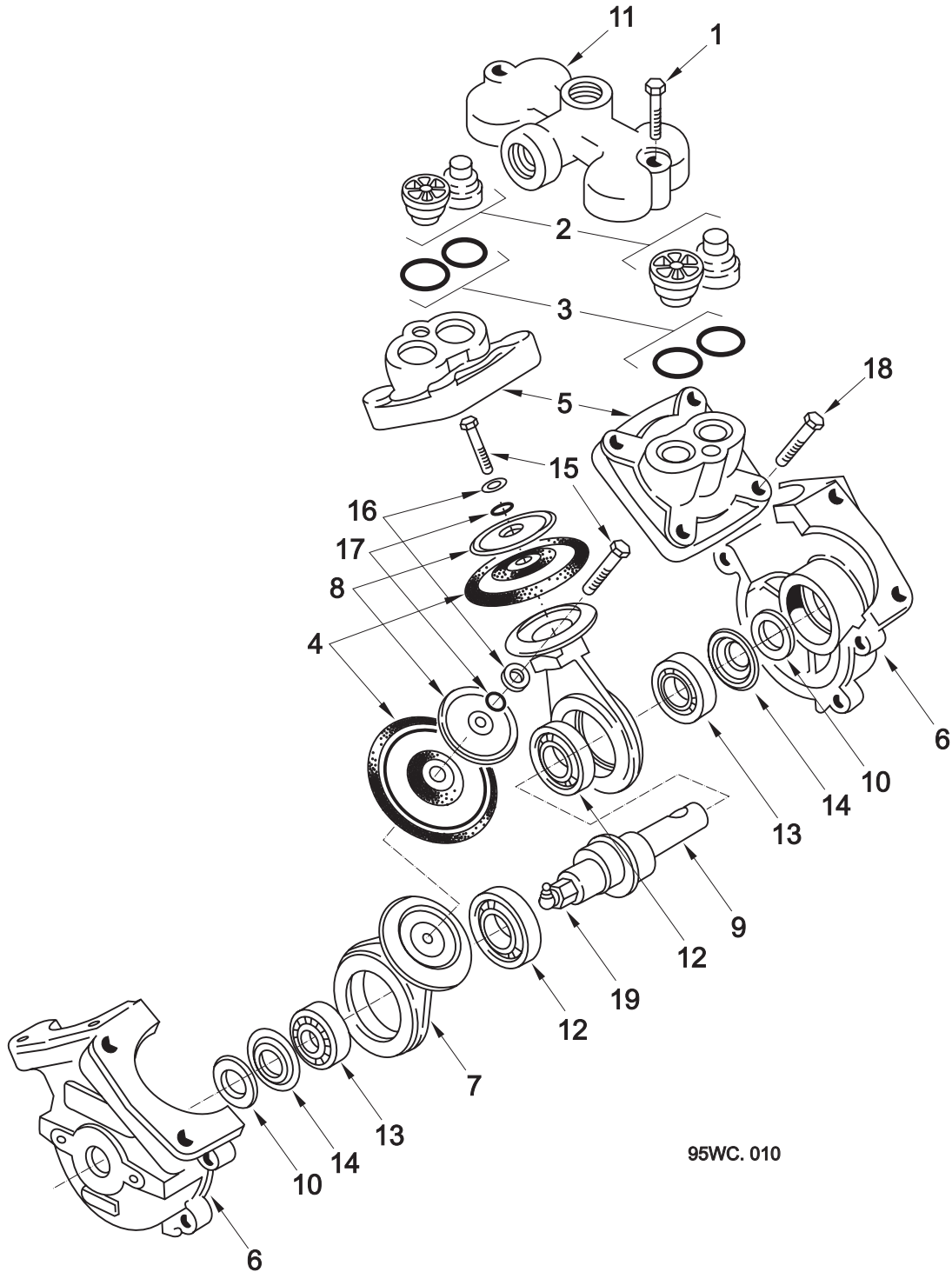
13	6111	Hose 1/2"	1.0m
	501-2	Hose Clip	2
14	6111	Hose 1/2"	6.0m
	501-2	Hose Clip	2

BoM 951330 - Wanderhose Installation, See Chapter 27

15	39444	Hose 3/8"	7.0m
	501-1	Hose Clip	2

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Pump Assembly



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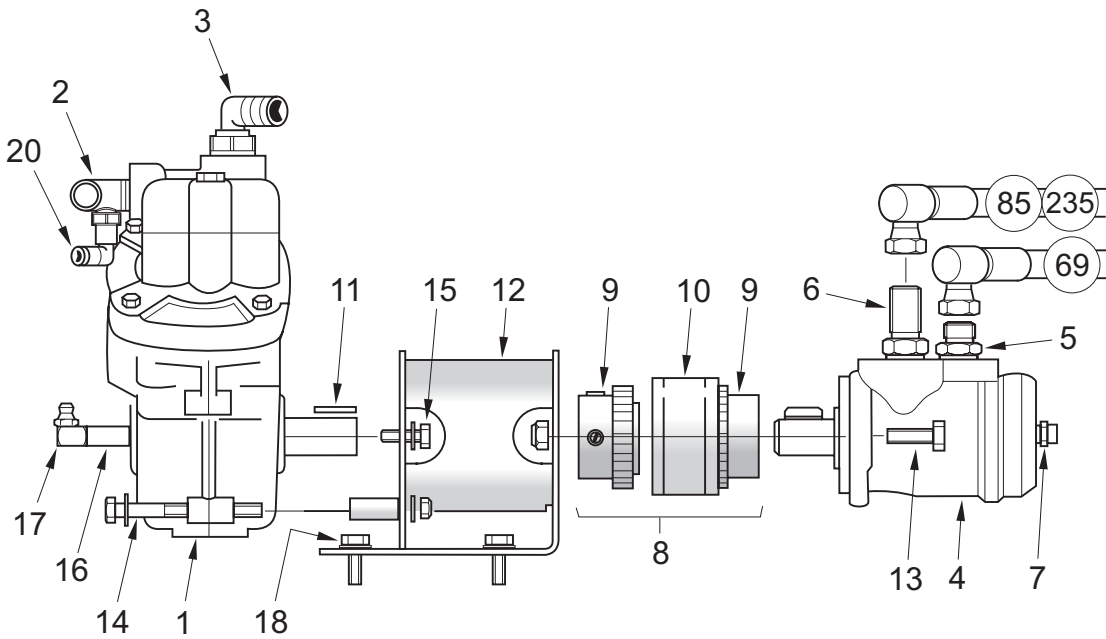
Pump Assembly

Item No.	Part No.	Description	Quantity
	22599-1	Water Pump Assembly comprising:	
1	15824-2	Bolt	4
2	15824-3	Valve Assembly	4
3	15824-4	'O' Ring	4
4	15824-5	Diaphragm	2
5	15824-7	Cylinder Head	2
6	15824-8	Crankcase	1 Pair
7	15824-9	Connecting Rod	2
8	15824-10	Tension Pad	2
9	22599-2	Crankshaft	1
10	15824-12	Felt Ring	2
11	15824-13	Manifold	1
12	14-18	Bearing - Connecting Rod	2
13	14-32	Bearing - Crankshaft	2
14	15824-16	Dust Cover	2
15	15824-17	Bolt - Tension Pad	2
16	15824-18	Washer	2
17	15824-19	'O' Ring	2
18	15824-2	Bolt	8
19	-	See Pump Installation over page	-
	15824-6	Repair Kit comprising items 2, 3 and 4	

Notes

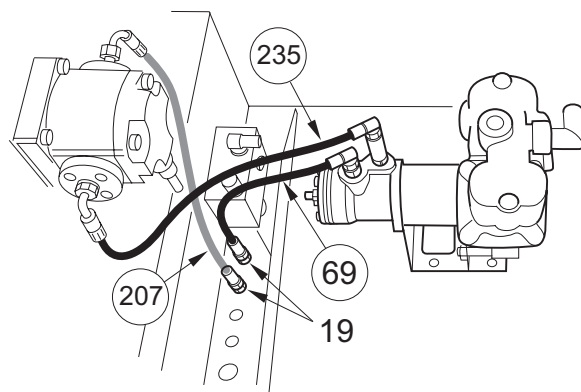
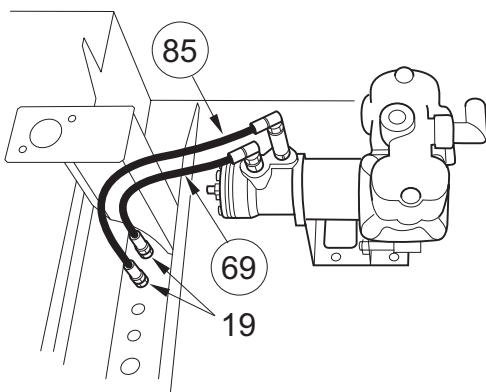
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Low Pressure Pump Installation



VT HYDRAULIC HOSE ROUTING

VS HYDRAULIC HOSE ROUTING



95WC. 009-10

Note: The Pump Low Water By-pass Valve option is covered in the Water System Section (35.WS) of Chapter 35.

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Low Pressure Pump Installation

BoM 950512

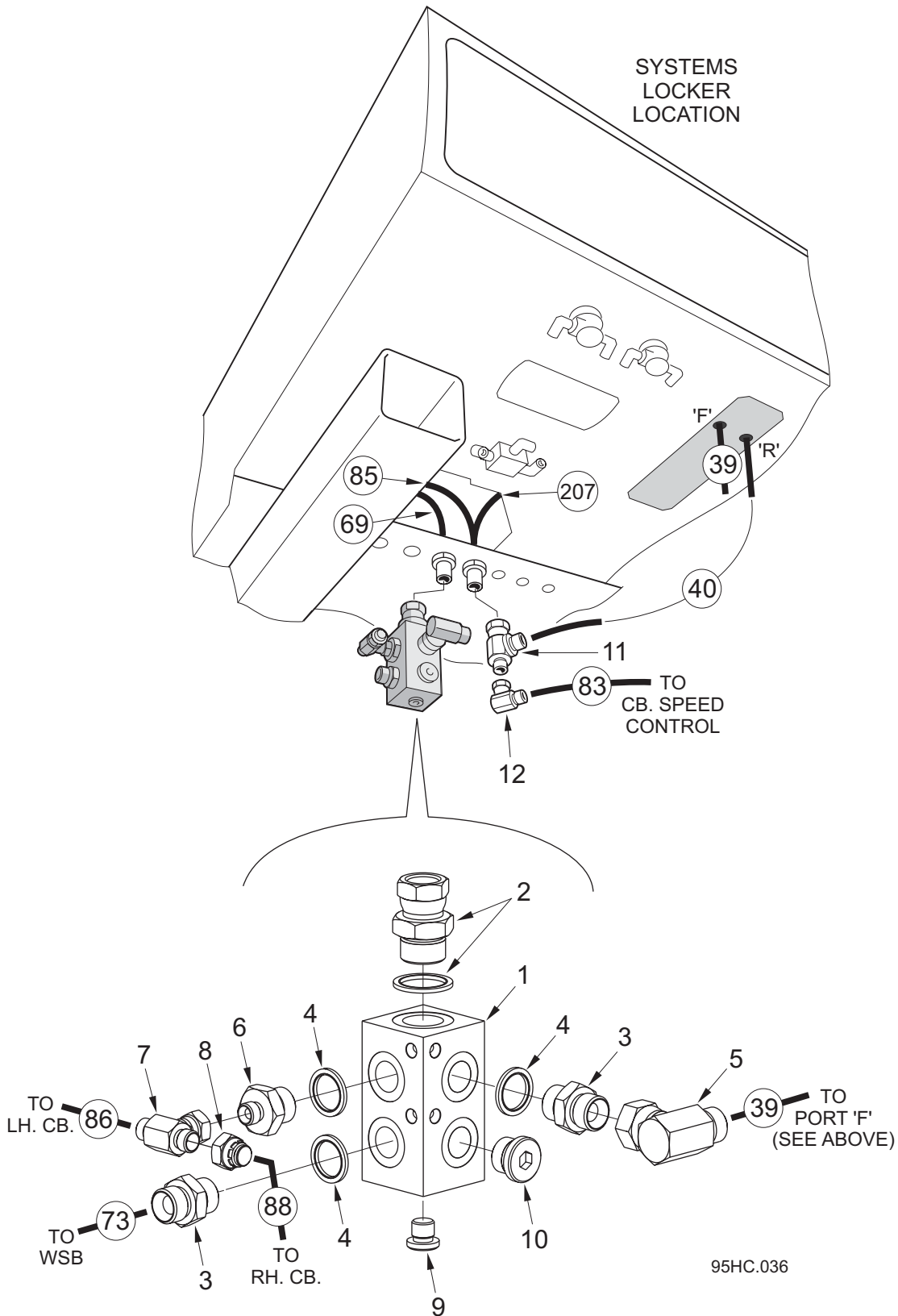
Item No.	Part No.	Description	Quantity
	282812-2	Water Pump Assembly comprising:	
1	22599-1	Water Pump	1
2	49827-1	Elbow	1
3	277-231	Elbow	1
4	244-10	Hydraulic Motor OMP 32	1
	244-500	Motor Seal Kit	
	11879	Key	
5	263-4	Adaptor 1/2"	1
	451-126	Copper Washer - Sealing 1/2"	1
6	264-22	Adaptor 1/2" Extended	2
	451-126	Copper Washer - Sealing 1/2"	2
7	518-8	Adaptor 1/4" x Ø8	1
8	282809-1	Drive Coupling comprising:	1
9	282809-2	Drive Coupling) Spares	2
10	282809-3	Drive Coupling - Sleeve) Items	1
11	282817-1	Key	1
12	282811-1	Mounting Bracket	1
13	124-207	Screw M12 x 40	2
	455-12	Washer Ø12	2
	425-16	Nut - Nyloc M12	2
14	123-118	Bolt M8 x 90	2
	455-10	Washer Ø8	4
	425-14	Nut - Nyloc M8	2
15	124-169	Screw M10 x 25	2
	460-11	Washer - Spring M10	2
	455-11	Washer - Plain M10	2
16	95780-1	Adaptor	1
17	38-8	Grease Nipple 1/8" x 90°	1
18	264-4	Bulkhead Adaptor 1/2" BSP	2
	410-80	Backnut 1/2" BSP	2
> 19	538-8	Elbow - Pressadrain connection	1
† 69	HC08003-40	Hydraulic Hose 1/2") See	1
† 85	HC08003-45	Hydraulic Hose 1/2" - VT Only) Manifold	1
† 207	-	See Fan Tub Hoses Chapter 22.HI - VS Only) over	
† 235	HC08002-91	Hydraulic Hose 1/2" - VS Only) page	1

Notes

† Hose item numbers correspond with those in hydraulic diagrams SH522z01, SH523z01 and SH534z01 in Chapter 8 of the Maintenance Section.

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Hydraulic Manifold - L.P. Water Pump



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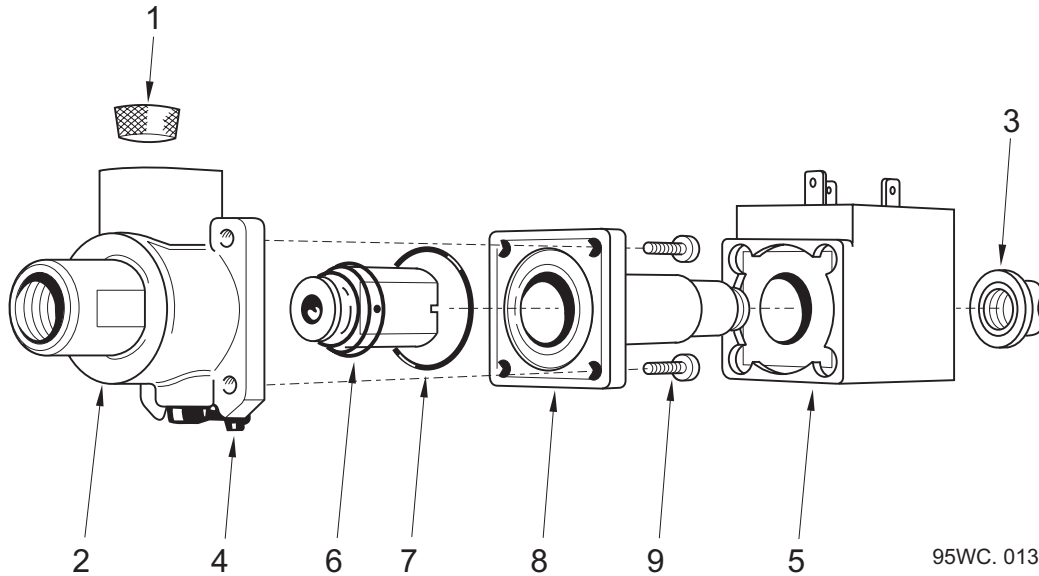
Hydraulic Manifold - L.P. Water Pump

BoM 950512

Item No.	Part No.	Description	Quantity
	283533-1	Manifold Assembly comprising items 1 to 10	
1	281548-1	Manifold	1
2	252-16	Swivel Adaptor	1
	451-21	Washer - Sealing 3/4" BSP	1
3	263-4	Adaptor 1/2" BSP	2
4	451-19	Washer - Sealing 1/2" BSP	2
5	262-4	Swivel Elbow 1/2" BSP	1
6	265-100	Restricting Adaptor Ø 0.8	1
7	255-2	Swivel Tee 1/4" BSP	1
8	68-19	Blanking Cap - L.H. Single Only	1
9	54-2	Collar Plug 1/4" BSP	1
10	54-4	Collar Plug 1/2" BSP	1
11	277-56	Swivel Tee 1/2" x 1/2" x 3/8" BSP	1
12	262-3	Swivel Elbow 3/8" BSP	1
Hoses			
	69, 85, 207	See Previous Page	
	39, 73	See WSB Hydraulic Hoses Chapter 26	
	40, 83, 86, 88	See CB Hydraulic Hoses Chapter 24	

Notes

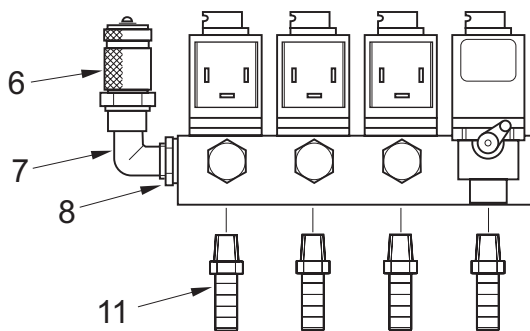
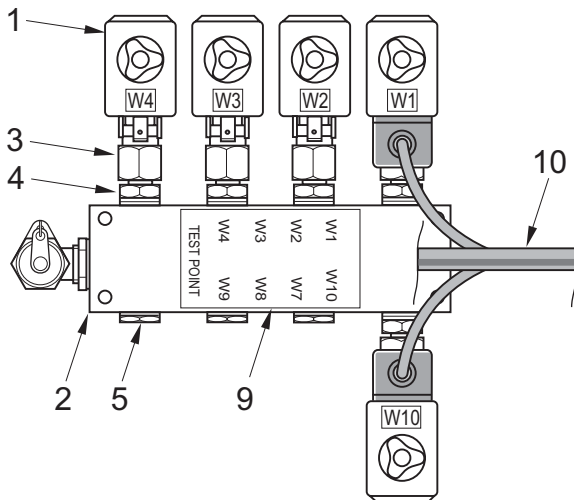
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Solenoid Valve Assembly


95WC. 013

Item No.	Part No.	Description	Quantity
	281372-1	Water Valve Assembly 12v	
	281372-2	Water Valve Assembly 24v	
		Each comprising:	
1	13170	Filter	1
2	NSS	Base	1
3	281372-5	Lock Nut	1
4	40664-13	Lever Kit comprising: Lever, 'O' Ring and Circlip	
5	281372-12	Coil 12v	1
	281372-24	Coil 24v	1
6	NSS	Armature	1
7	NSS	'O' Ring	1
8	NSS	Armature Housing	1
9	NSS	Setscrews	4
	281372-3	Overhaul Kit comprising items 1, 2, 4, 6, 7, 8 and 9	
	281372-4	Seal Kit comprising items 6 and 7	

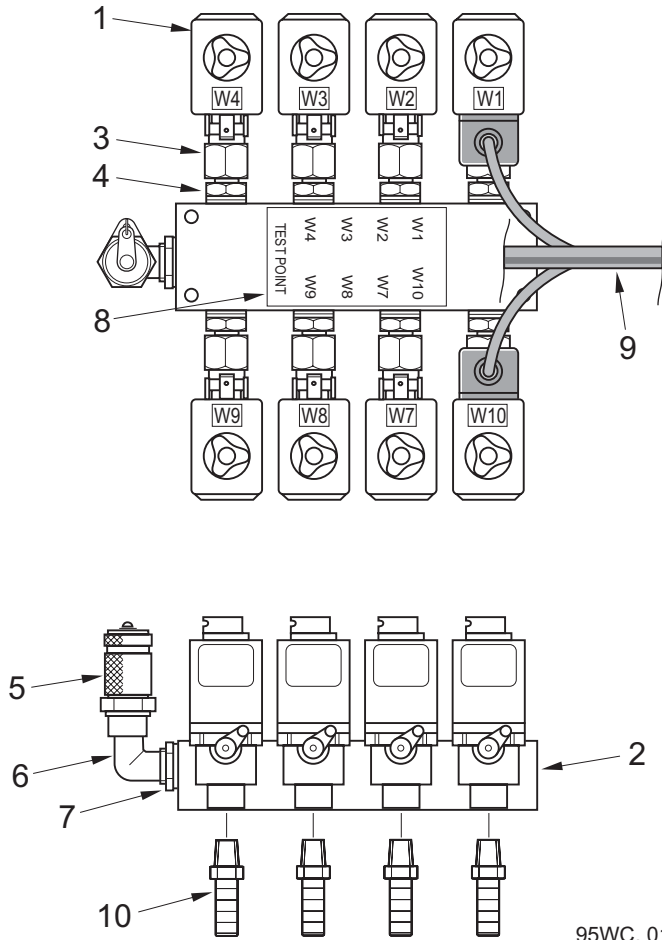
Valves and Manifold - Single Sweep



95WC. 012-3

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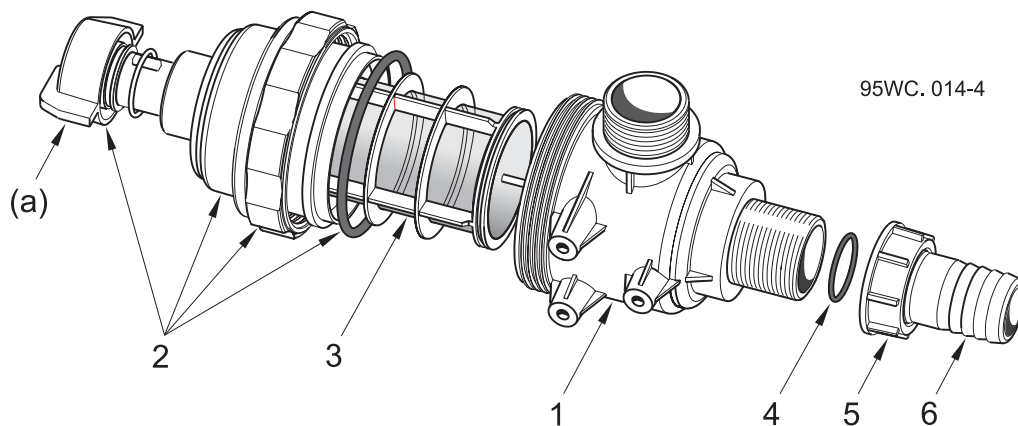
Item No.	Part No.	Description	Quantity
	283861-12	Water Manifold Assembly - Single Sweep 12v	
	283861-24	Water Manifold Assembly - Single Sweep 24v	
1	281372-1	Valve 12v N.C.	5
	281372-2	Valve 24v N.C.	5
2	283528-1	Manifold	1
3	601-11	Adaptor 1/4"	5
4	601-10	Stem Adaptor 1/4"	5
5	54-14	Plug 1/4"	3
6	665-26	Test Point	1
7	72-60	Elbow 1/4"	1
8	559-110	Reducer 3/8" x 1/4"	1
9	283629-1	Label	1
10	-	Main Loom - See Chapter 31	
11		Hose Tail	5

Water Valve and Manifold - Dual Sweep


95WC. 011-3

Item No.	Part No.	Description	Quantity
	221499-12	Water Manifold Assembly - Dual Sweep 12V	
	221499-24	Water Manifold Assembly - Dual Sweep 24V	
1	281372-1	Valve 12v N.C.	8
	281372-2	Valve 24v N.C.	8
2	283528-1	Manifold	1
3	601-11	Adaptor 1/4"	8
4	601-10	Stem Adaptor 1/4"	8
5	665-26	Test Point	1
6	72-60	Elbow 1/4"	1
7	559-110	Reducer 3/8" x 1/4"	1
8	283529-1	Label	1
9	-	Main Loom - See Chapter 31	
10		Hose Tail	8

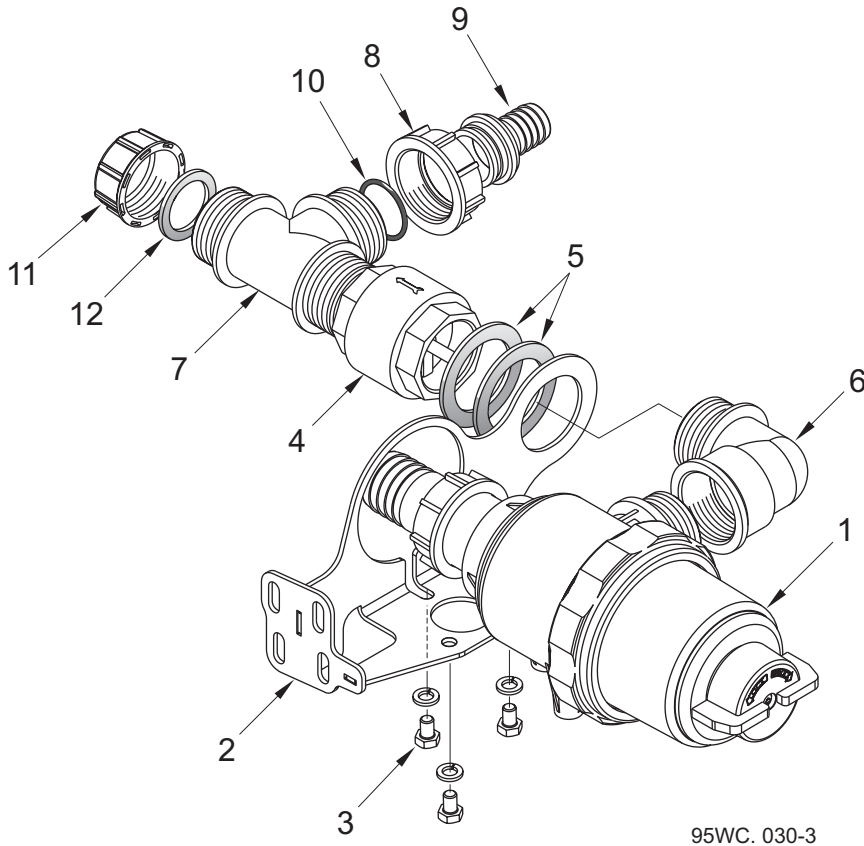
Rear Water Filter



Item No.	Part No.	Description	Quantity
	281750-3	Water Filter Assembly comprising items 1 to 6:-	
1	277-181	Body	1
2	277-185	Bowl - Red Plug (a)	1
> 3	277-247	Mesh - Grey (200 Micron)	1
4	277-171	'O' Ring	2
5	277-170	Flynut	2
6	277-183	Hose Tail - Straight Ø38	1

Notes

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Water Filter Sub- Assembly


95WC. 030-3

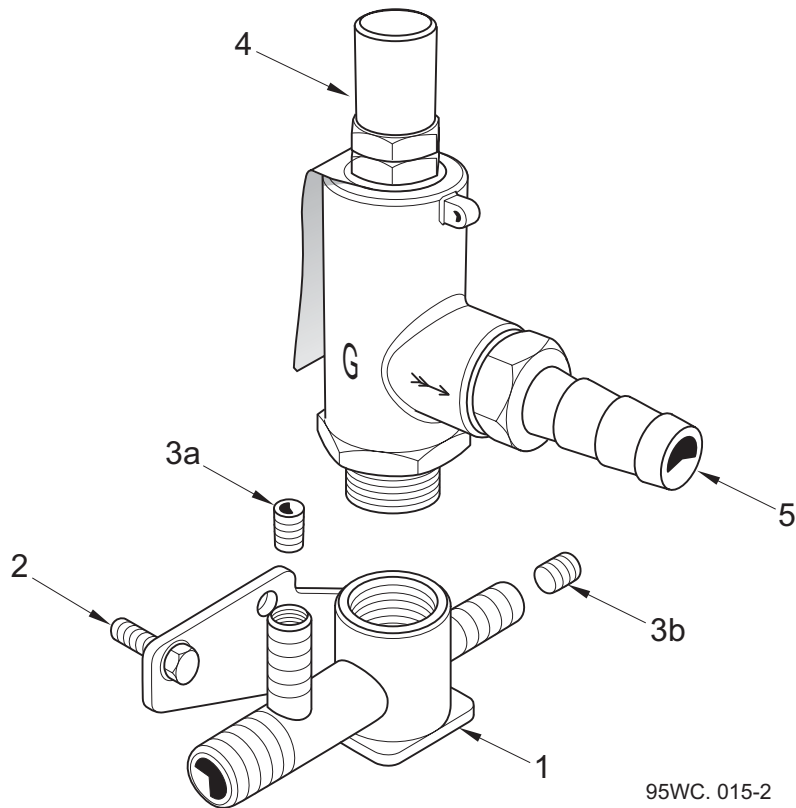
BoM 950714

Item No.	Part No.	Description	Quantity	
>	* 293979-1	Filter Sub-Assembly comprising items 1 to 12:-		
1	-	Filter Assembly - See previous page		
>	2	293976-1	Bracket	1
	3	124-132	Screw M8 x 12	3
		460-10	Washer - Spring	3
	4	277-260	Check Valve	1
	5	277-214	Gasket	2
	6	277-261	Elbow	1
	7	277-215	Tee	1
	8	277-170	Flynut	1
	9	277-169	Hose Tail Straight Ø25	1
	10	277-171	'O' Ring	1
* 11	277-203	Blanking Cap	1	
* 12	277-262	Gasket	1	

> * Assembly 293979-2 is available without items 11 and 12 which are not required with Supawash.

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Safety Relief Valve Installation



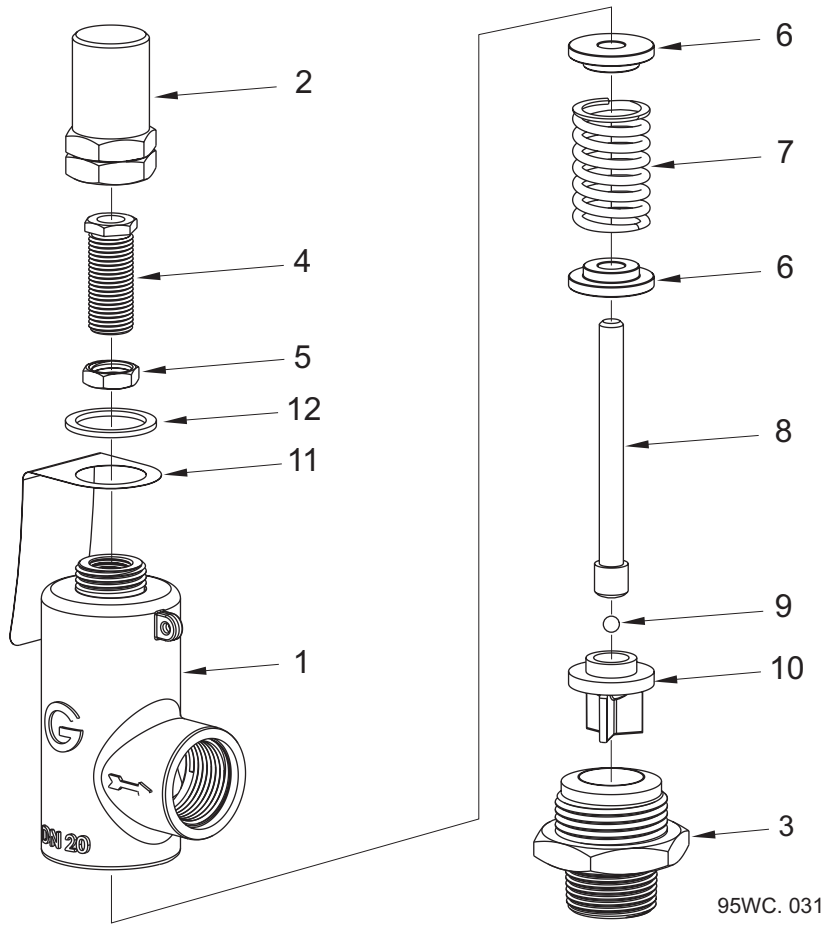
Subframe Services BoM 950714

Item No.	Part No.	Description	Quantity
1	281075-1	Manifold	1
2	124-134	Screw M8 x 16	2
	460-10	Washer - Spring Ø8	2
3a	5259	Plug - Used when Wanderhose/Littasnach is not fitted	1
3b	5259	Plug - Used to blank off washdown port when Supawash is fitted	1
4	284150-1	Relief Valve - See over page	1
> 5	277-297	Hose Adaptor 3/4" BSP	1
	451-21	Washer - Sealing	1

Note

Relief Valve item 4, shown above and on the next page, has replaced the previous valve pt. no. 3698-11 which is no longer available. Both valves are interchangeable. Refer to Technical Bulletin TB 1423 for the introduction of this current valve.

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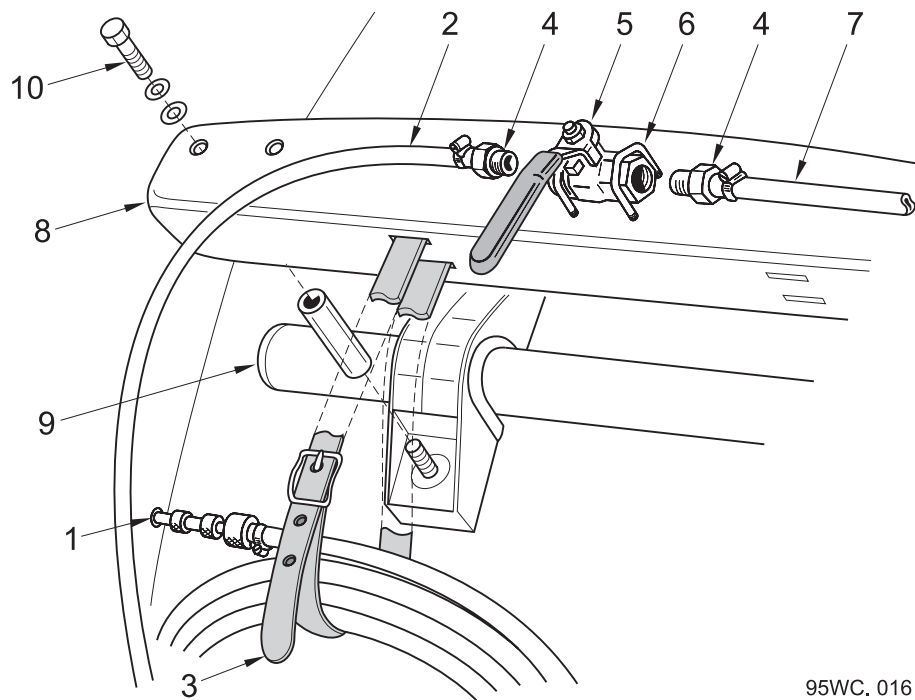
Safety Relief Valve Assembly

BoM 950714

Item No.	Part No.	Description	Quantity
	284150-1	Relief Valve Assembly comprising:	1
1	284150-2	Body	1
2	284150-3	Dome Top	1
3	284150-4	Base	1
4	284150-5	Adjusting Screw	1
5	284150-6	Locknut	1
6	284150-7	Spring End Plate	2
7	284150-12	Spring	1
8	284150-8	Spindle	1
9	284150-9	Ball	1
10	284150-10	Valve	1
11	284150-11	Label	1
12	284150-13	Washer	1

Note

For the introduction of this valve see the note on the previous page.

Washdown Hose - Not fitted with Supawash Option



95WC. 016

Item No.	Part No.	Description	Quantity
1	6137	Spray Nozzle	1
2	6111	Hose 1/2" Bore	6m
	501-2	Hose Clip	2
3	3786	Strap and Buckle	1
4	41006-1	Hose Adaptor	2
5	89-1	Valve 3/8" BSP	1
6	6105-1	'U' Bolt	2
	455-8	Washer - Plain	4
	425-13	Nut - Nyloc M6	4
7	6111	Hose 1/2" Bore x 1m	1
	501-2	Hose Clip	2
8,9,10	-	See notes below	

Notes

Items 8,9,10 - valve mounting and hose stowage are chassis dependant. Contact the Johnston Parts Department, quoting the machine serial number, for further information.

These parts are not supplied with a standard ESU.

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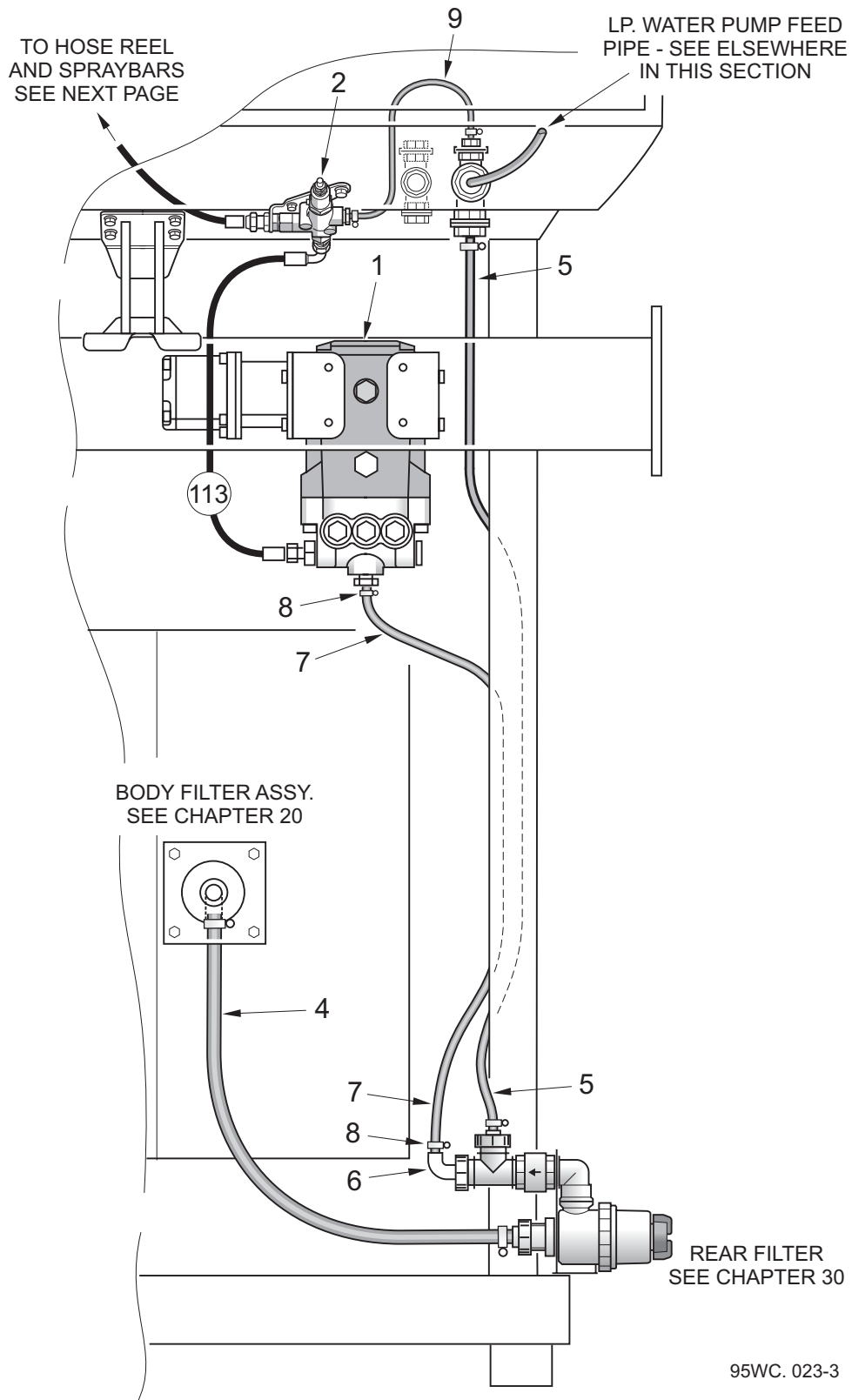
30.SW

Mk II Supawash Option

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Circuit and Hoses - Feed and Bypass



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Circuit and Hoses - Feed and Bypass

BoM KT00195

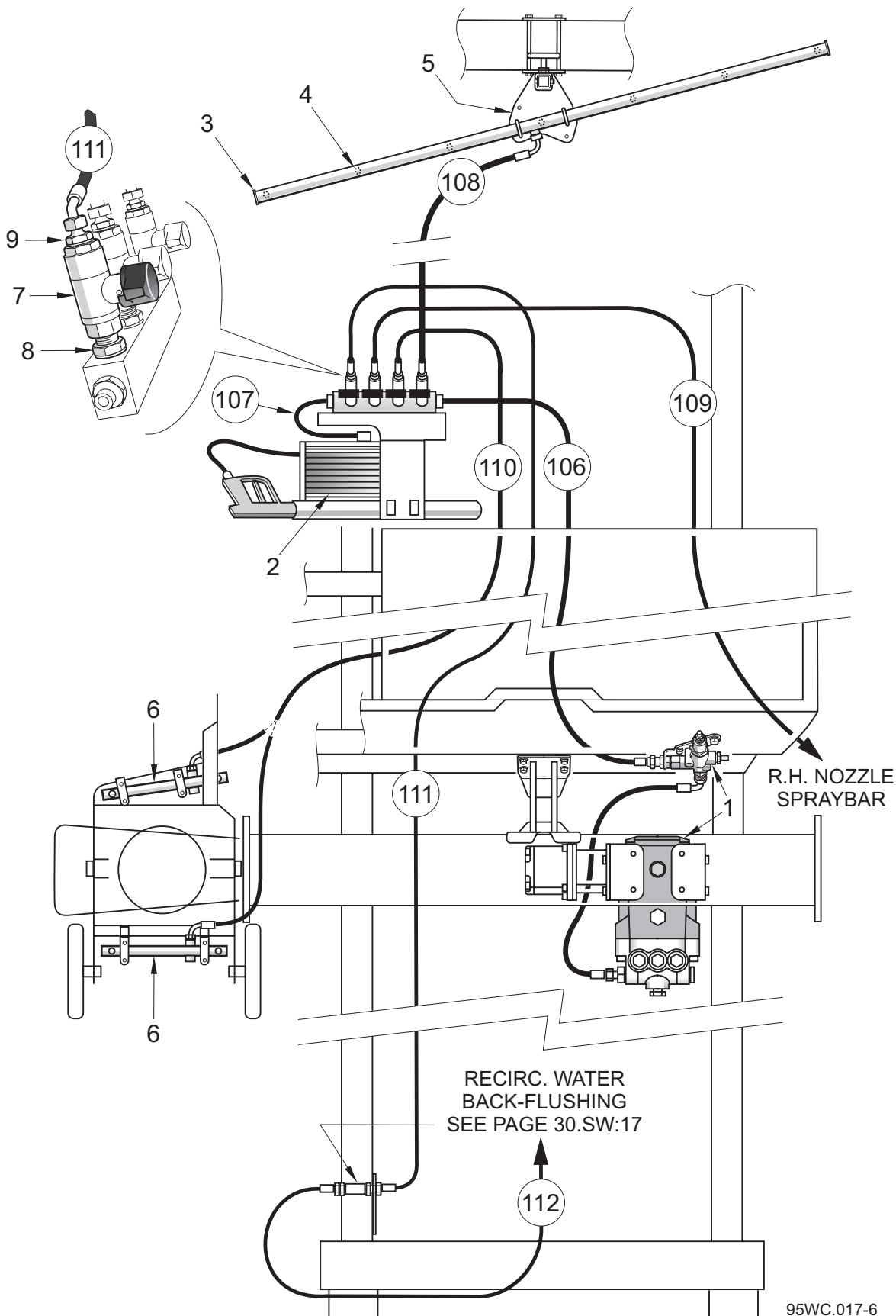
Item No.	Part No.	Description	Quantity
1, 2	-	Pump and Unloader - See Page 30.SW:8	
3	-	-	
4	-	See Chapter 30 - Water Hoses, Item 1	
5	-	See Chapter 30 - Water Hoses, Item 2	
6	277-244	Hose Tail 90° x 1" Elbow	1
	277-170	Flynut 1 1/2" BSP	1
7	6117	Hose 1" NB x 1.5m	1
8	501-4	Hose Clip	2
9	6111	Hose 1/2" NB x 0.5m	1
	501-2	Hose Clip	2
>	*113	HCO8002-95 Hydraulic Hose 1/2" BSP	1

Notes

* Hose item number corresponds with that on Supawash diagram SW513a02 elsewhere in this section.

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Circuit and Hoses - Hose Reel and Spraybars



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Circuit and Hoses - Hose Reel and Spraybars

BoM KT00195 - Supawash Pump

Item No.	Part No.	Description	Quantity
1	-	Pump and Unloader - See Page 30.SW:8	

BoM KT06195 - Hose Reel

2	-	Hose Reels - See Pages 30.SW:12 to 16	
106	HC08002-320	Hydraulic Hose 1/2" BSP - V 605, 650, 800	1
107	HC06043-51-190	Hydraulic Hose 3/8" BSP - V 605, 650	1
	HC06002-51-30	Hydraulic Hose 3/8" BSP - V 800	1

BoM KT05995 - Front Spraybar

3	282466-1	Front Spraybar	1
4	21-31	Spray Jet	7
5	-	Front Spraybar Installation - See Page 30.SW:18	
108	HC08002-372	Hydraulic Hose 1/2" BSP	1

BoM KT02595 - Nozzle Spraybars

> 6	-	Nozzle Spraybar Installation - See Page 30.SW:19	
109	HC06002-400	Hydraulic Hose 3/8" BSP	1
110	HC06002-320	Hydraulic Hose 3/8" BSP	1

BoM KT05895 - Recirc. Backflushing

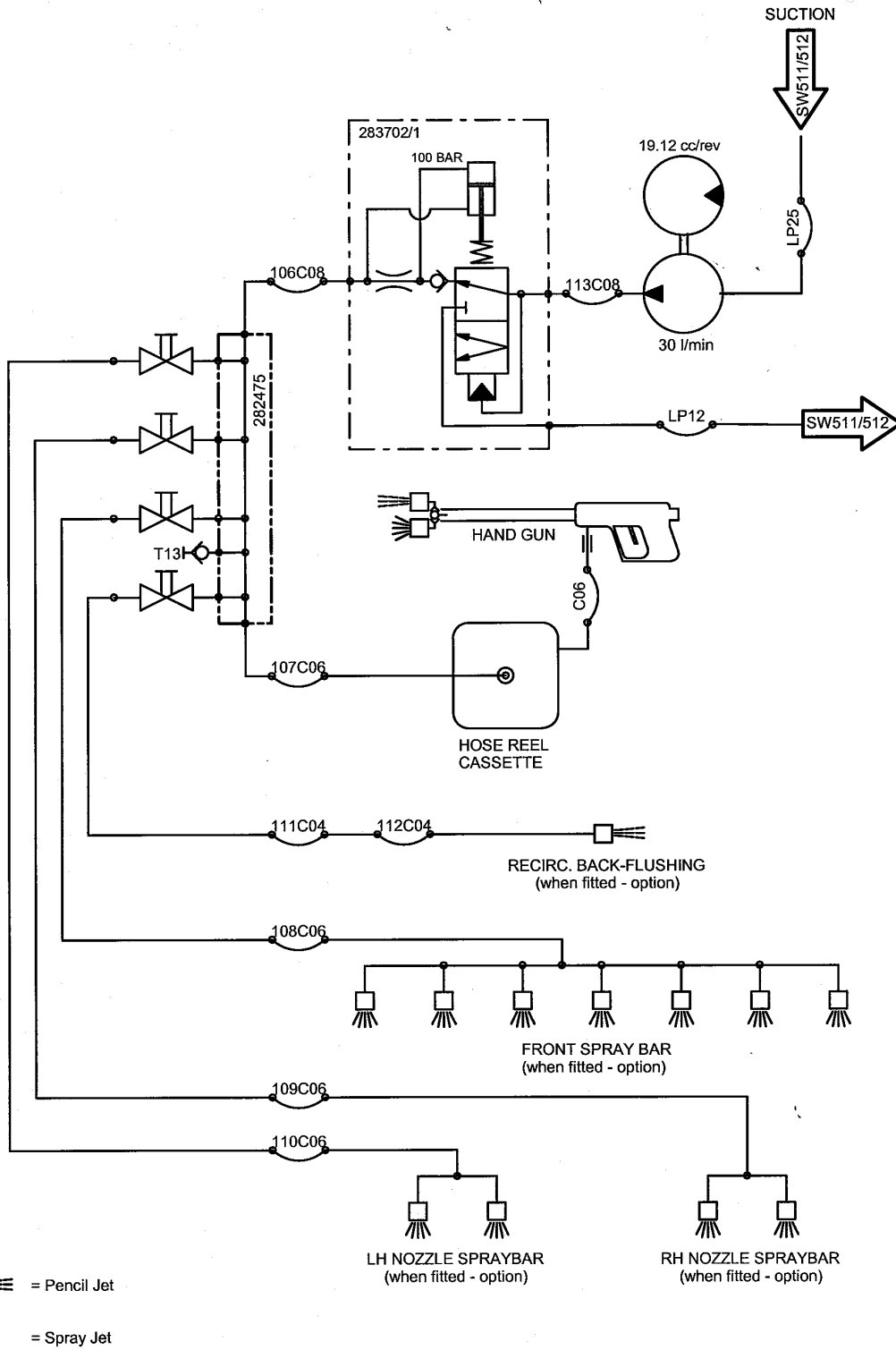
7	88-33	Valve 1/2" BSPF	1
8	266-4	Adaptor 1/2" BSP x 1/2" BSPT	1
	451-19	Washer - Sealing 1/2" BSP	1
9	265-3	Adaptor 1/2" x 1/4" BSP	1
	451-19	Washer - Sealing 1/2" BSP	1
111	HC04001-454	Hydraulic Hose 1/4" BSP	1
112	HC04002-290	Hydraulic Hose 1/4" BSP	1

Notes

Hose item numbers correspond with those on Supawash diagram SW513a02 on the next page.

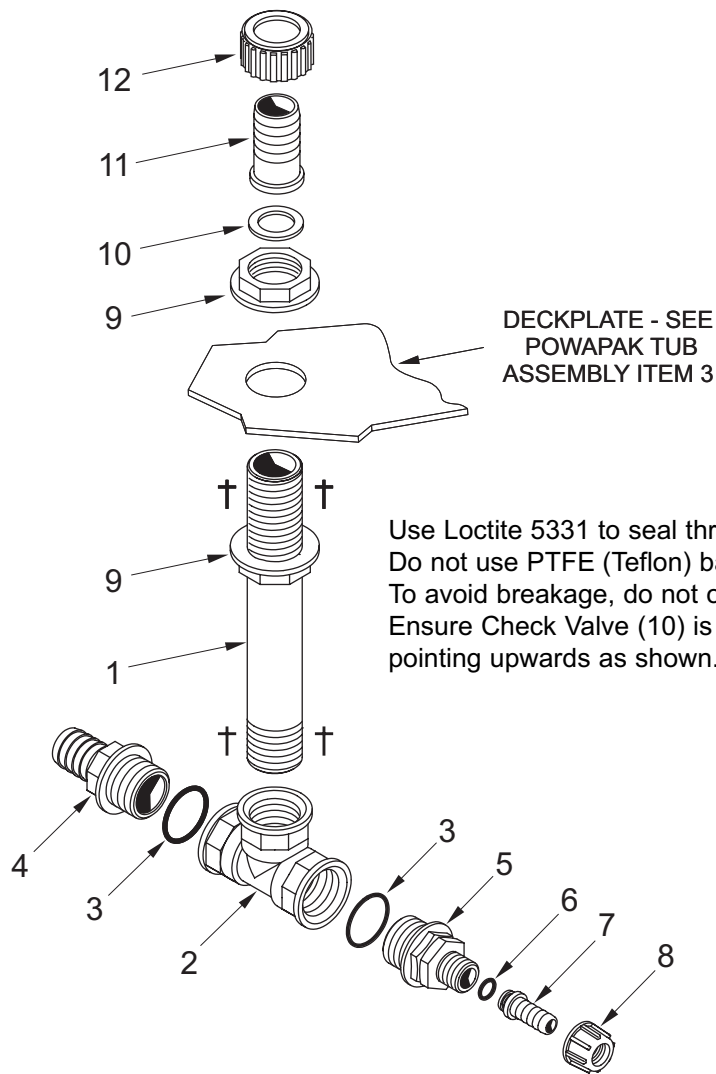
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Circuit Diagram SW513a02



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1" Water Pump Feed Pipe Assembly



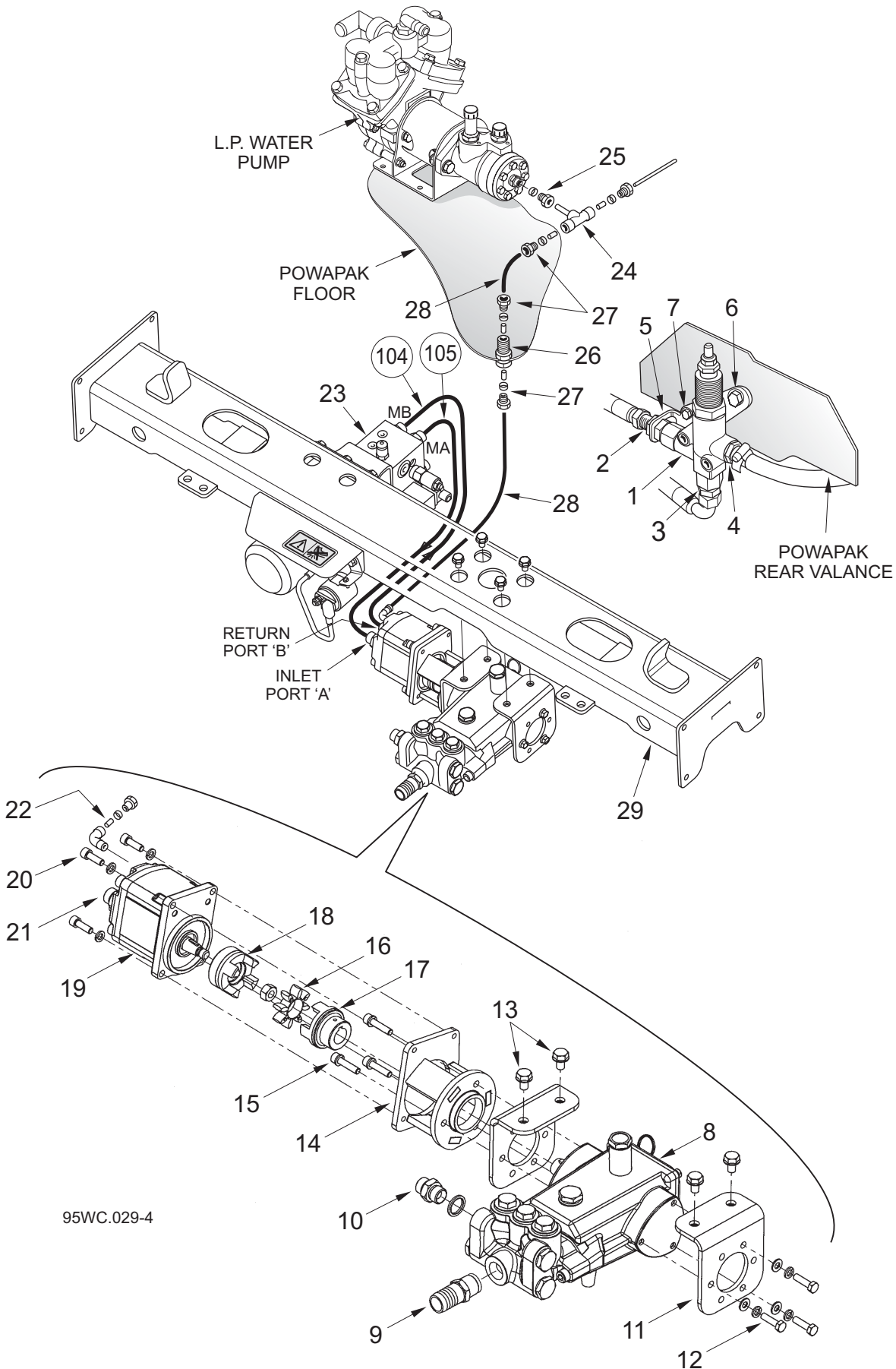
95WC.006-5

BoM KT00195

Item No.	Part No.	Description	Quantity
	283793-1	1" Pump Feed Pipe Assembly for Supawash	
1	281667-1	Pipe - Water 1"	1
2	277-128	Tee 1" BSP	1
3	277-149	'O' Ring	2
4	277-125	Hosetail 1" BSP / 1" NB Hose	1
5	277-216	Reducer 1" x 1/2" BSP	1
6	277-220	'O' Ring	1
7	277-217	Hosetail	1
8	277-218	Flynut 1/2" BSP	1
9	277-165	Backnut 1" BSP	2
10	277-163	Gasket	1
11	277-161	Hosetail 1" BSP	1
12	277-162	Flynut 1" BSP	1

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Supawash Pump and Unloader Installation



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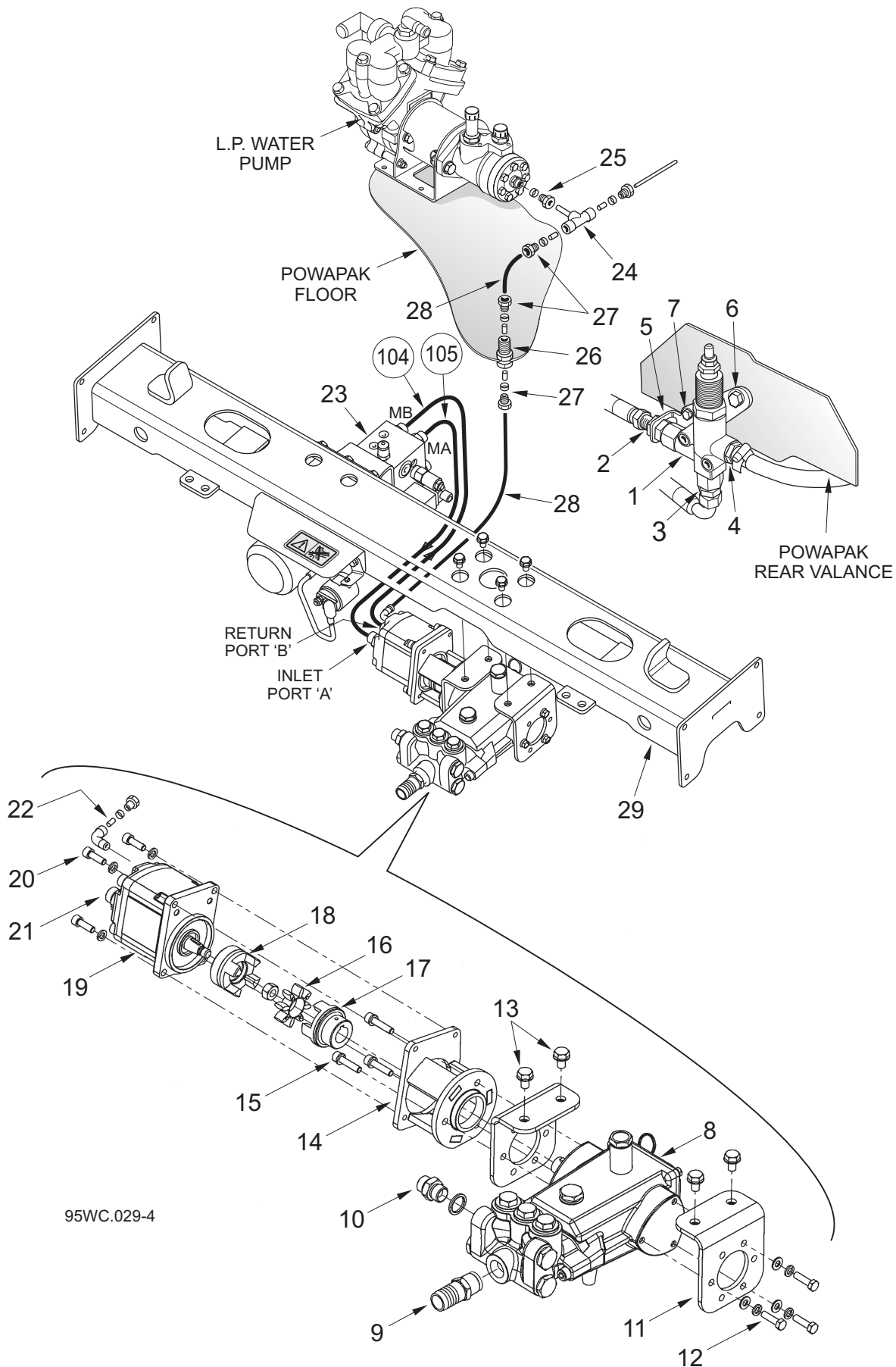
Supawash Pump and Unloader Installation

KT00195

Item No.	Part No.	Description	Quantity
	283700-1	Installation Drawing	
	283710-1	Unloader Assembly comprising items 1 to 7:-	
1	283702-1	Unloader	1
2	264-4	Bulkhead Adaptor 1/2" BSP	1
	451-19	Washer - Sealing Ø1/2"	1
3	263-4	Adaptor 1/2" BSP	1
	451-19	Washer - Sealing Ø1/2"	1
4	231-66	Hose Tail 1/2"	1
5	283804-1	Mounting Plate	1
6	124-171	Screw M10 x 30	1
	460-11	Washer - Spring Ø10	1
	455-11	Washer - Plain Ø10	1
7	124-139	Screw M8 x 30	1
	460-10	Washer - Spring Ø8	1
	455-10	Washer - Plain Ø8	1
	283839-1	Pump Assembly Installation comprising items 8 to 22:-	
8	283701-1	Pump Assembly	1
	283701-10	Seal Kit)	
	283701-11	Valve Kit) Spares Items	
	283701-12	Ceramic Pipe)	
9	231-65	Hose Tail	1
10	263-4	Adaptor 1/2" BSP	1
	451-19	Washer - Sealing	1
11	283698-1	Mounting Foot	2
12	123-104	Bolt M8 x 30	3
	460-10	Washer - Spring Ø8	3
	455-10	Washer - Plain Ø8	3
13	125-185	Bolt - Flanged Head M10 x 16	4
14	283695-1	Bell Housing	1
15	129-129	Bolt - Cap Head M8 x 35	3
	283681-1	Drive Coupling comprising items 16 to 18:-	
16	283684-1	Spider	1
17	283682-1	Hub Ø22 Bore	1
18	283683-1	Hub - Taper Bore	1
19	244-15	Hydraulic Motor	1
>	240-2	Motor Seal Kit - Universal	
20	129-125	Screw - Cap Head M8 x 25	4

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Supawash Pump and Unloader Installation



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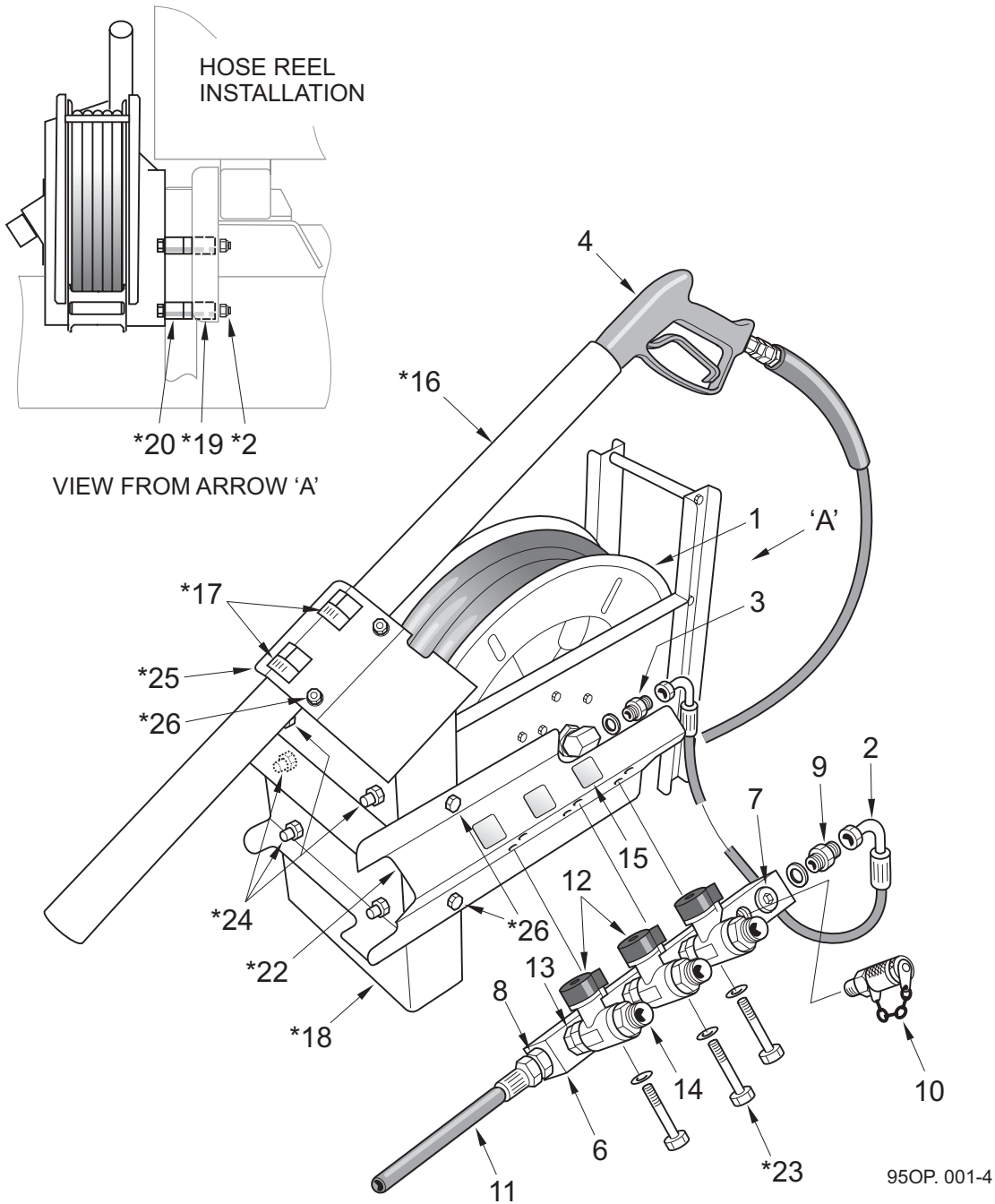
Supawash Pump and Unloader Installation

Item No.	Part No.	Description	Quantity	
21	263-4	Adaptor 1/2" BSP	2	
	451-19	Washer - Sealing	2	
22	521-8	Adaptor - Elbow Ø8	1	
	511-4	Olive Ø8	1	
	510-4	Tubing Nut	1	
	41038-1	Sleeve	1	
23	-	Valve Block - See Chapter 28, Tandem/Options Valve Block Installation		
}	24	532-23	Stem Tee Ø8	1
	25	511-4	Olive Ø8	1
		510-4	Tubing Nut	1
	26	532-4	Bulkhead Adaptor	1
		532-5	Locknut	1
	27	511-4	Olive Ø8	3
		510-4	Tubing Nut	3
		41038-1	Sleeve	3
	28	12870	Tube - Black Nylon Ø8	2
	BoM 950712			
>	29	283680-1	Subframe Crossmember - See Chapter 21	
	* 104	HCO8003-76	Hydraulic Hose 1/2"	1
	* 105	HCO8003-76	Hydraulic Hose 1/2"	1

Notes

* Hose item numbers 104 and 105 correspond with those in hydraulic diagram SH528a01 in chapter 8.

**Supawash Lance & Reel - V 605, 650, Left Hand Installation
Iveco 13 and 15 Tonne Chassis only**



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Supawash Lance & Reel - V 605, 650, Left Hand Installation
Iveco 13 and 15 Tonne Chassis only

BoM KT 06195

Item No.	Part No.	Description	Quantity
1	667-49	Hose Reel	1
2	-	Hydraulic Hose - See item 107 on page 30.SW:4	1
3	263-3	Adaptor 3/8" BSP	1
	451-18	Washer - Sealing 3/8" BSP	1
4	21-71	Lance	1
> 5	-		
	282475-1	Manifold Assembly comprising items 5 to 9	
6	282229-1	Water Manifold	1
7	54-4	Collared Plug (Remove as Required - See item 11)	6
8	263-4	Adaptor 1/2" BSP	1
	451-19	Washer - Sealing 1/2" BSP	1
9	265-4	Adaptor 1/2" x 3/8" BSP	1
	451-19	Washer - Sealing 1/2" BSP	1
10	665-8	Test Point	1
11	-	Hydraulic Hose - See item 106 on page 30.SW:4	1
Valves and Decal Quantities, Items 11 to 14, depend on Supawash equipment fitted			
12	88-33	Valve 1/2" BSPF	As Req'd
13	266-4	Adaptor 1/2" x 1/2" BSPT	1 per Valve
	451-19	Washer - Sealing	1 per Valve
14	265-4	Adaptor 1/2" x 3/8" BSP	1 per Valve
	451-19	Washer - Sealing 1/2"	1 per Valve
15	-	Decals - See Chapter 34	
*16 - *26	-	See notes below	

Notes

* Items 16 to 26 - Hose reel and hand lance installation parts are chassis related. Contact the Johnston Parts Department, quoting the machine serial number, for further information.

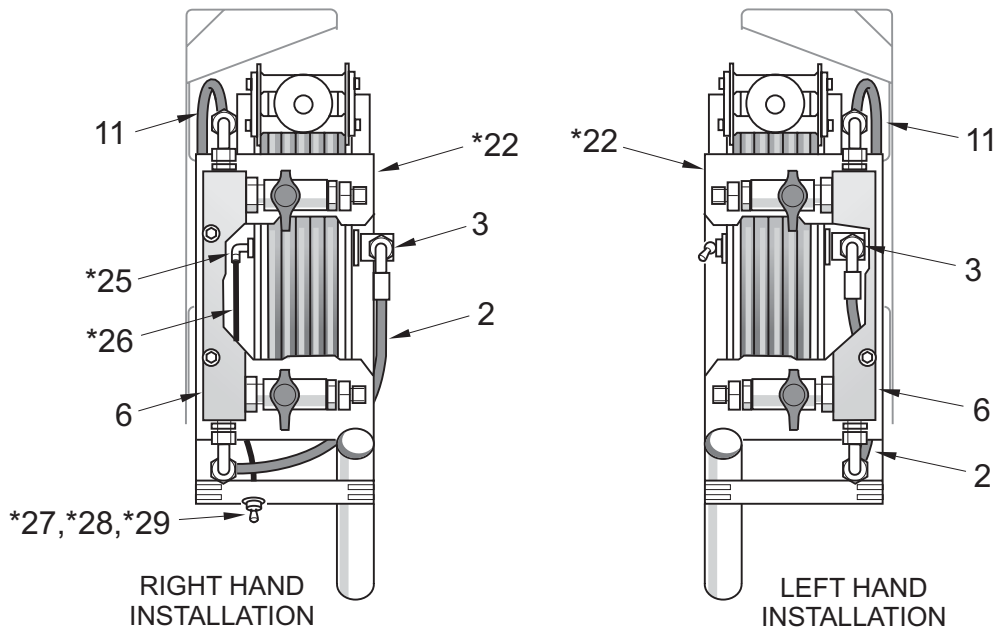
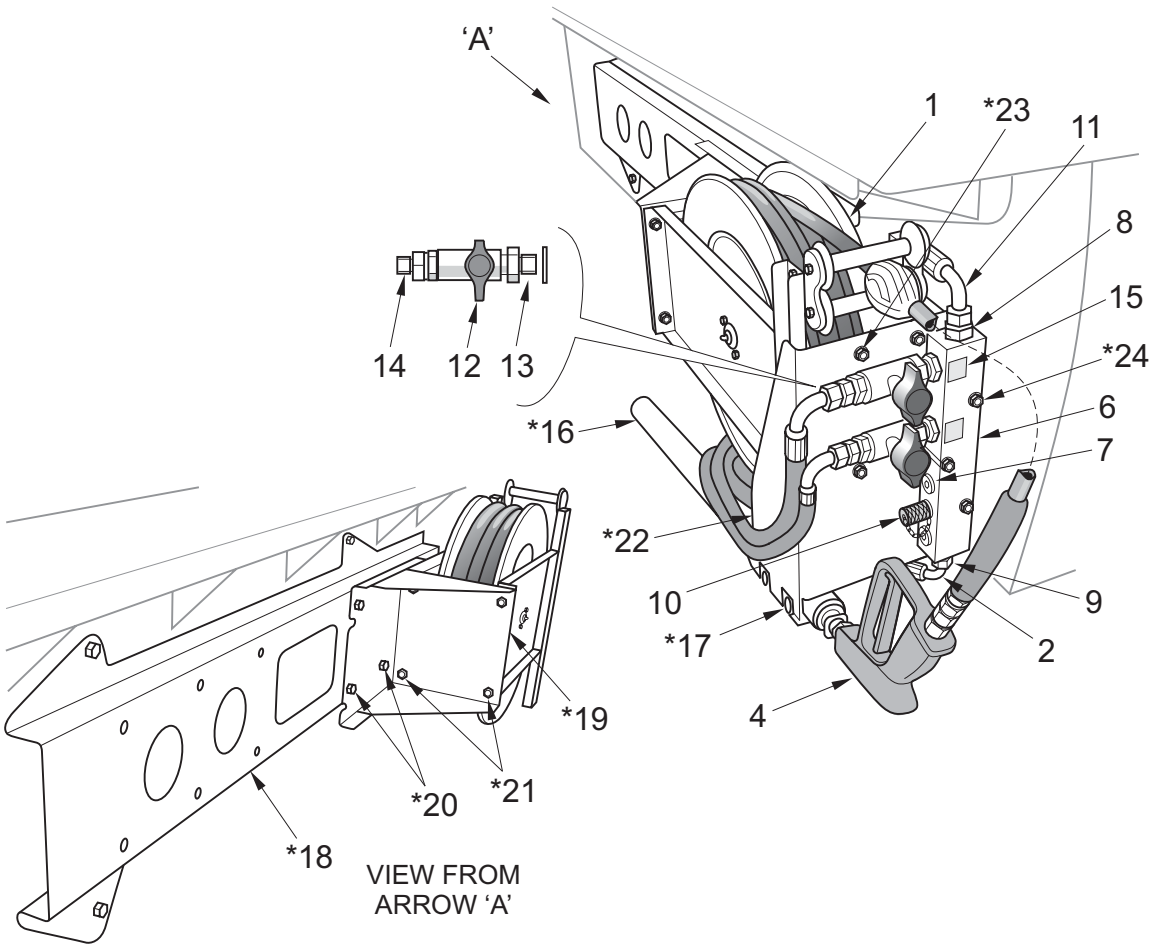
These parts are not supplied with standard ESU's.

Johnston reference drawings:

The relevant installation drawing can be found via the Chassis Drawing Matrix shown in chapter 33 page 33:2.

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**Supawash Lance & Reel - V 605, 650, Multiuse Left and Right Hand Installations
Used on most chassis except Ivecos**



VIEWS SHOWN WITH ITEMS 19 AND 22 CUT AWAY FOR CLARITY 95OP. 002-4

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**Supawash Lance & Reel - V 605, 650, Multiuse Left and Right Hand Installations
Used on most chassis except Ivecos**

BoM KT 06195

Item No.	Part No.	Description	Quantity
1	667-49	Hose Reel	1
2	-	Hydraulic Hose - See item 107 on page 30.SW:4	1
3	263-3	Adaptor 3/8" BSP	1
	451-18	Washer - Sealing 3/8" BSP	1
4	21-71	Lance	1
> 5	-		
	282475-1	Manifold Assembly comprising items 5 to 9	
6	282229-1	Water Manifold	1
7	54-4	Collared Plug (Remove as Required - See item 11)	6
8	263-4	Adaptor 1/2" BSP	1
	451-19	Washer - Sealing 1/2" BSP	1
9	265-4	Adaptor 1/2" x 3/8" BSP	1
	451-19	Washer - Sealing 1/2" BSP	1
10	665-8	Test Point	1
11	-	Hydraulic Hose - See item 106 on page 30.SW:4	1
Valves and Decal Quantities, Items 12 to 15, depend on Supawash equipment fitted			
12	88-33	Valve 1/2" BSPF	As Req'd
13	266-4	Adaptor 1/2" x 1/2" BSPT	1 per Valve
	451-19	Washer - Sealing	1 per Valve
14	265-4	Adaptor 1/2" x 3/8" BSP	1 per Valve
	451-19	Washer - Sealing 1/2"	1 per Valve
15	-	Decals - See Chapter 34	
*16 - *29	-	See notes below	

Notes

* Items 16 to 29 - Hose reel and hand lance installation parts are chassis related. Contact the Johnston Parts Department, quoting the machine serial number, for further information.

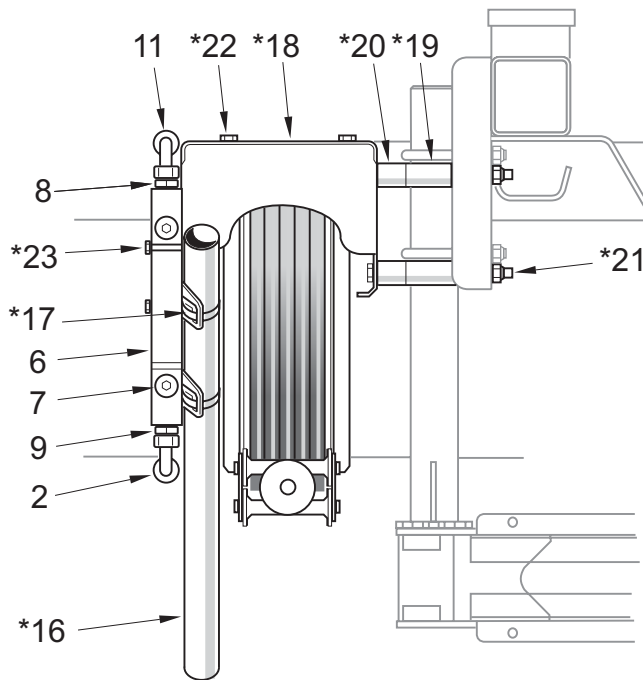
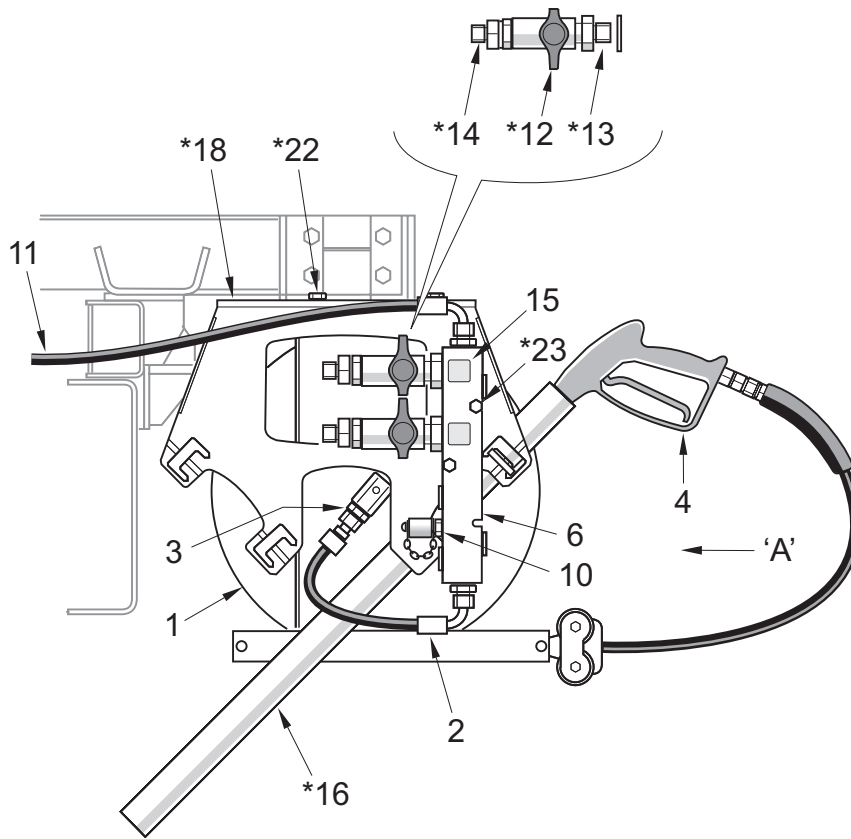
These parts are not supplied with standard ESU's.

Johnston reference drawings:

The relevant installation drawing can be found via the Chassis Drawing Matrix shown in chapter 33 page 33:2.

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Supawash Lance & Reel - V 650, 800 Multiuse Installation



VIEW FROM ARROW 'A'

95OP. 003-4

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Supawash Lance & Reel - V 650, 800 Multiuse Installation

BoM KT 06195

Item No.	Part No.	Description	Quantity
1	667-49	Hose Reel	1
2	-	Hydraulic Hose - See item 107 on page 30.SW:4	1
3	263-3	Adaptor 3/8" BSP	1
	451-18	Washer - Sealing 3/8" BSP	1
4	21-71	Lance	1
> 5	-		
	282475-1	Manifold Assembly comprising items 5 to 9	
6	282229-1	Water Manifold	1
7	54-4	Collared Plug (Remove as Required - See item 11)	6
8	263-4	Adaptor 1/2" BSP	1
	451-19	Washer - Sealing 1/2" BSP	1
9	265-4	Adaptor 1/2" x 3/8" BSP	1
	451-19	Washer - Sealing 1/2" BSP	1
10	665-8	Test Point	1
11	-	Hydraulic Hose - See item 106 on page 30.SW:4	1
Valves and Decal Quantities, Items 12 to 15, depend on Supawash equipment fitted			
12	88-33	Valve 1/2" BSPF	As Req'd
13	266-4	Adaptor 1/2" x 1/2" BSPT	1 per Valve
	451-19	Washer - Sealing	1 per Valve
14	265-4	Adaptor 1/2" x 3/8" BSP	1 per Valve
	451-19	Washer - Sealing 1/2"	1 per Valve
15	-	Decals - See Chapter 34	
*16 - *23	-	See notes below	

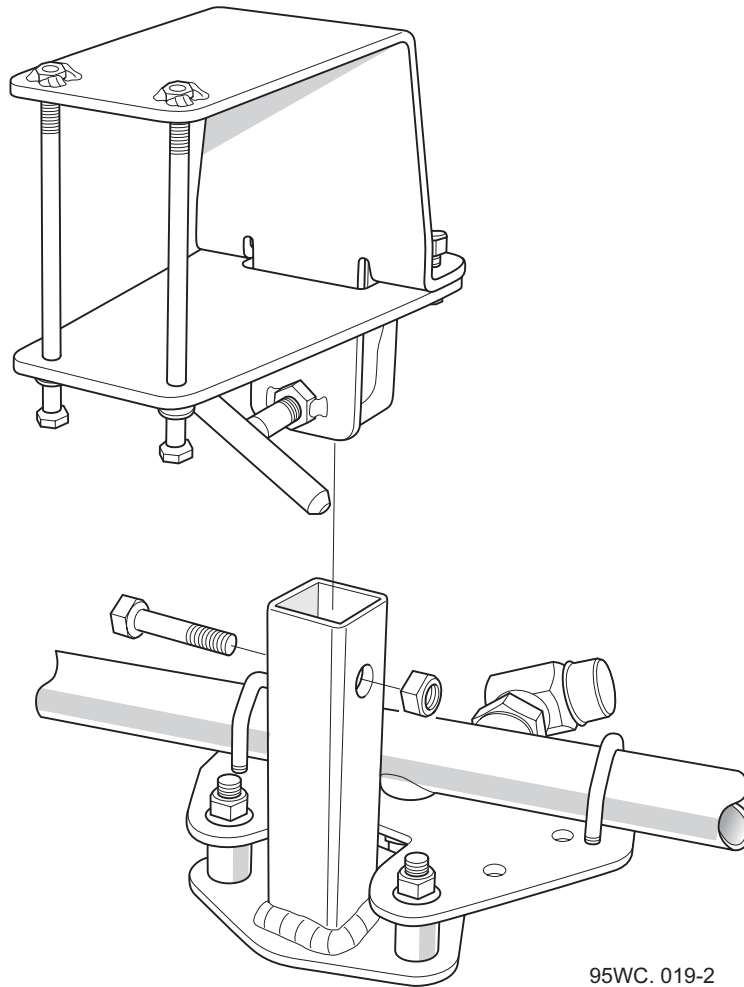
Notes

* Items 16 to 23 - Hose reel and hand lance installation parts are chassis related. Contact the Johnston Parts Department, quoting the machine serial number, for further information.

These parts are not supplied with standard ESU's.

Johnston reference drawings:

The relevant installation drawing can be found via the Chassis Drawing Matrix shown in chapter 33 page 33:2.

Front Spraybar Installation

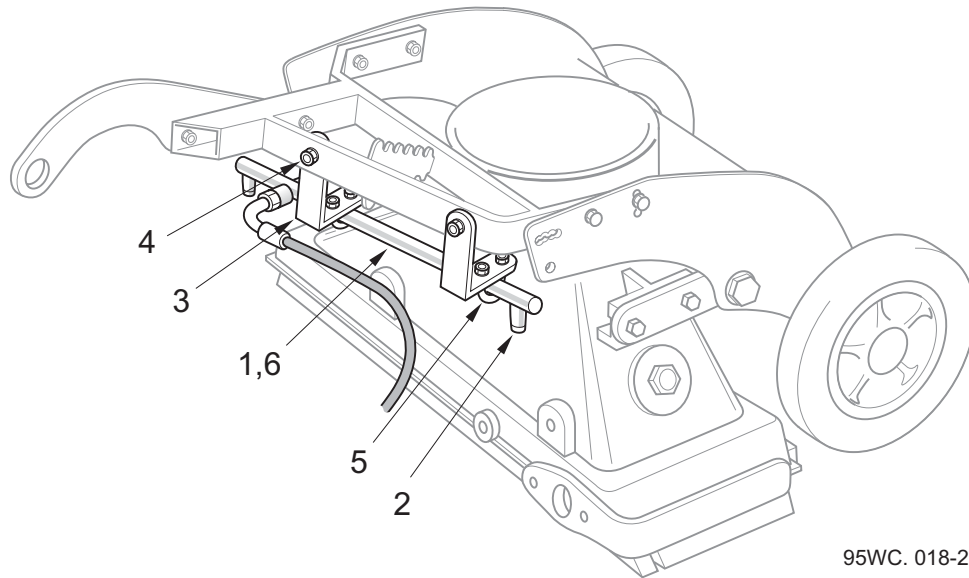
The Front Spraybar Installation parts are chassis related. Contact the Johnston Parts Department, quoting the machine serial number, for further information.

These parts are not supplied with standard ESU's.

Johnston reference drawings:

The relevant installation drawing can be found via the Chassis Drawing Matrix shown in chapter 33 page 33:2.

Nozzle Spraybar Installation



95WC. 018-2

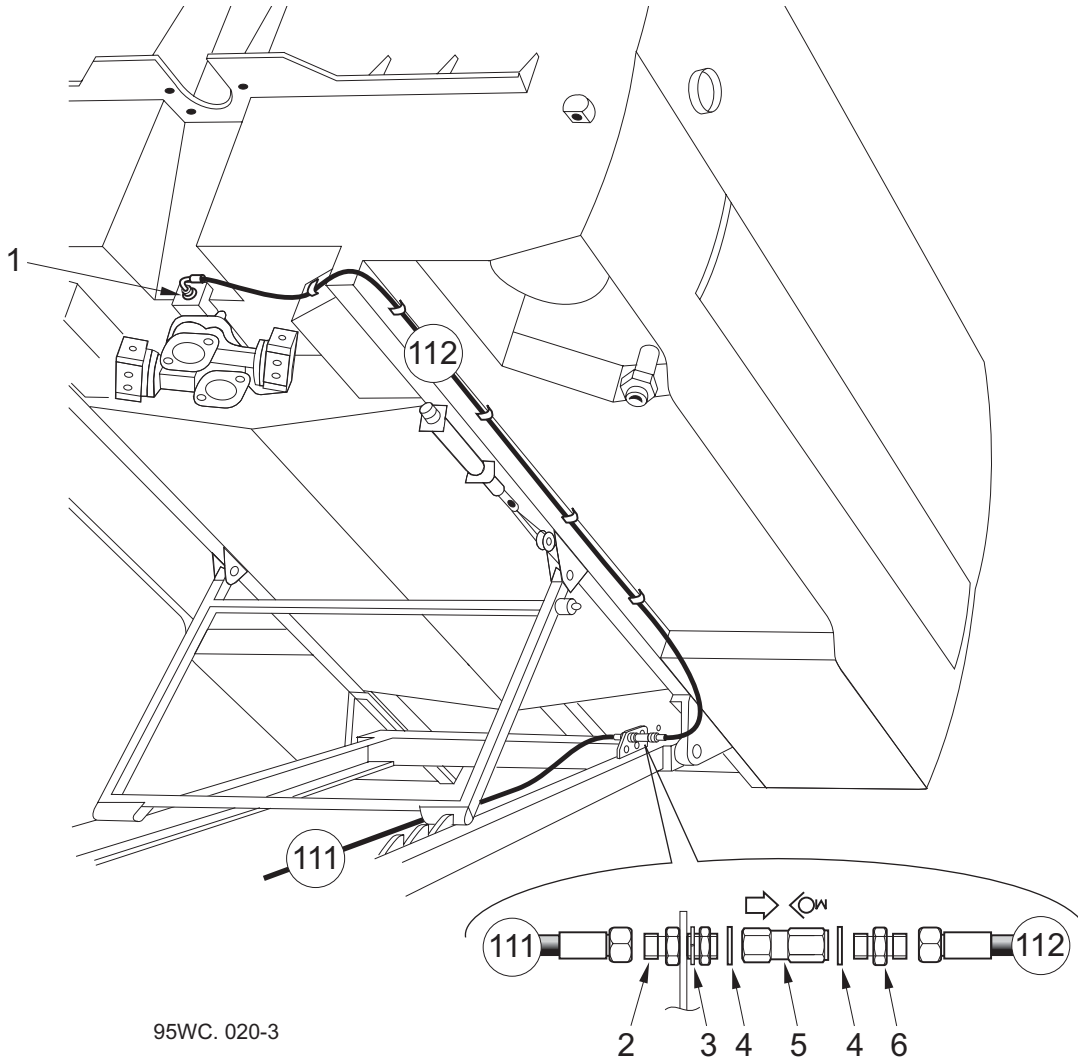
BoM KT 02595

Item No.	Part No.	Description	Quantity
	282240-1	Spraybar Installation comprising items 1 to 5	
1	282231-1	Spraybar	1
2	21-31	Spray Jet	2
3	282238-1	Mounting Bracket	2
> 4	124-139	Screw M8 x 30	2
	455-10	Washer - Plain M8	2
	425-14	Nut - Nyloc M8	2
5	6105-1	'U' Bolt M6	2
	455-8	Washer - Plain	4
	425-13	Nut - Nyloc M6	4
6	68-18	Swivel Blanking Cap	1

Notes

For Supawash nozzle spraybar with PM10 spraybars see Options Chapter 35.WS

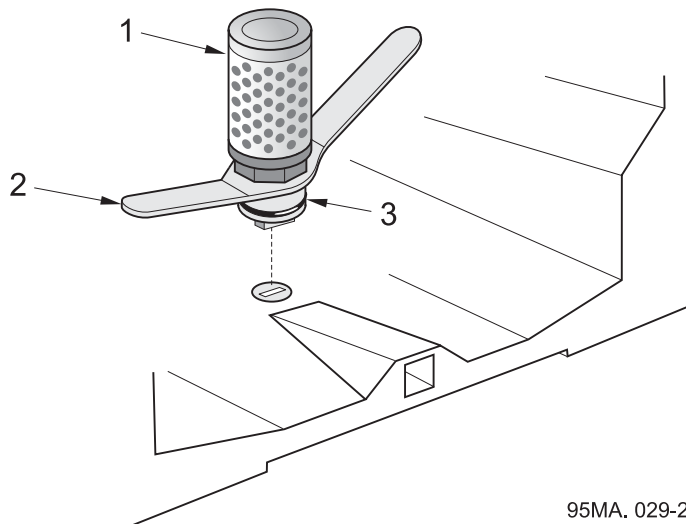
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Recirculating Water Option - Backflushing Installation

BoM KT 05895

Item No.	Part No.	Description	Quantity
1	265-3	Adaptor 1/2" x 1/4" BSP	1
	451-19	Washer - Sealing 1/2" BSP	1
2	264-2	Bulkhead Adaptor	1
3	460-13	Washer - Spring M14	1
4	451-17	Washer - Sealing 1/4" BSP	2
5	241-279	Check Valve 1/4" BSP	1
6	263-2	Adaptor 1/4" BSP	1
111	-	Hydraulic Hose - See Circuit and Hoses page 30.SW:4	
112	-	Hydraulic Hose - See Circuit and Hoses page 30.SW:4	

Hose item numbers correspond with those on Supawash diagram SW513a01 on page 30.SW:6.

Hopper Filter Strainer Option



BoM KT 08695

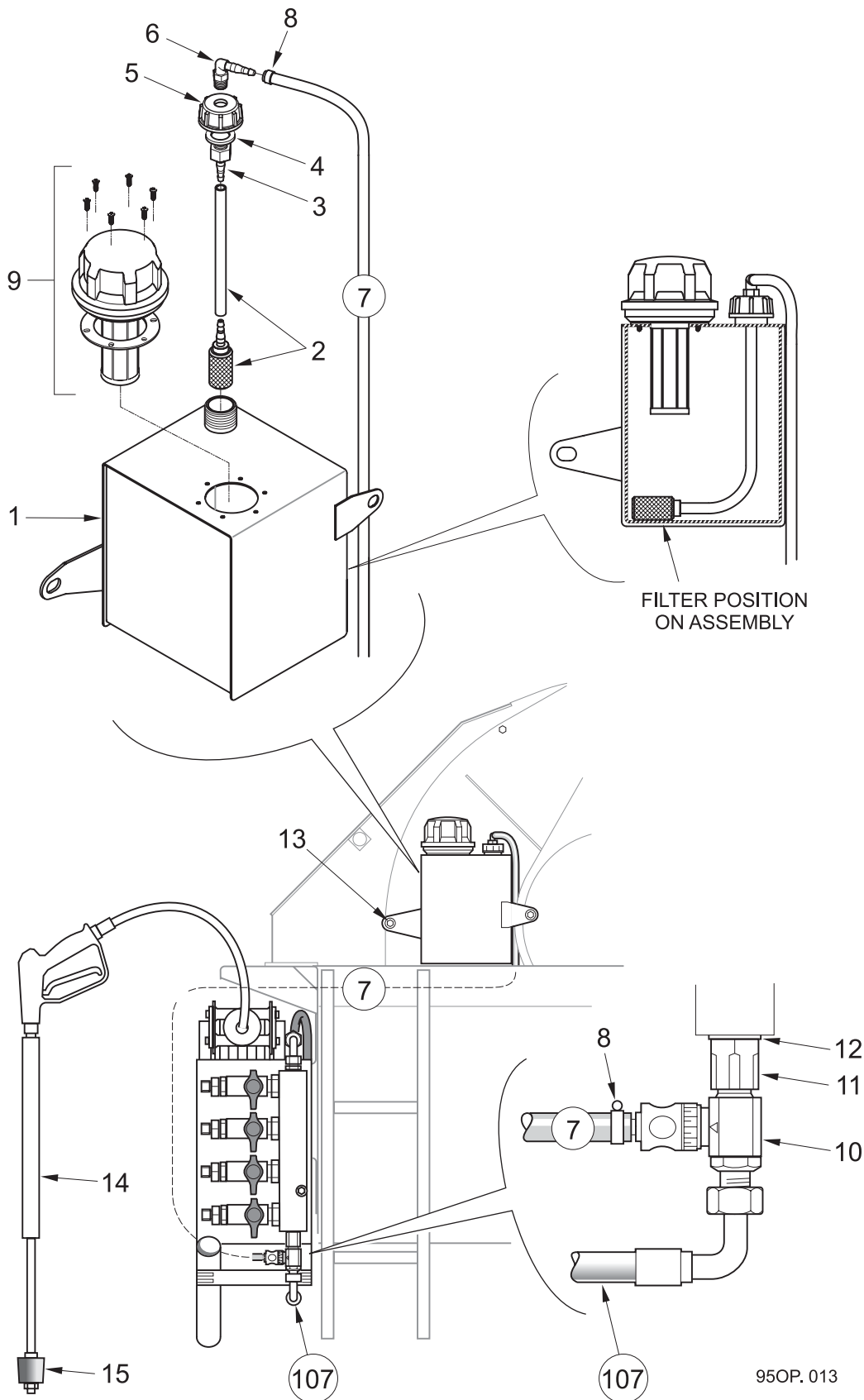
Item No.	Part No.	Description	Quantity
	282736-1	Water Strainer Adaptor Installation comprising items 1 to 3	
1	6974-1	Filter Element	1
2	282606-1	Water Strainer Adaptor	1
3	80-65	'O' Ring	1

Notes

Refer to Product Information Sheet PI 539 for a description of the use of this Filter Strainer option for extended Supawash operating times.

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Supawash Optional Detergent Injection System



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Supawash Optional Detergent Injection System

BoM KT 10795, 10796

Item No.	Part No.	Description	Quantity
	283314-1	Tank Assembly comprising items 1 to 9:-	
1	283313-1	Detergent Tank - 6 Litre	1
2	21-351	Filter and Hose	1
3	277-233	Hose Tail - Straight	1
4	740-3	Washer	1
5	277-221	Cap	1
6	277-232	Hose Tail - 90°	1
> 7	272-35	Water Hose - Clear Ø8 I.D.	2m
8	501-1	Hose Clip	2
9	69-30	Filler Breather - 10 Micron	1
	283315-1 283315-2	System Installation - V650) System Installation - V800)	Comprising items 10 to 15:-
10	21-350	Chemical Injector	1
11	492-13	Adaptor	1
12	451-19	Washer - Sealing 1/2" BSP	1
13	124-137	Screw M8 x 25	1
14	-	Lance - See "Supawash Lance and Reel" elsewhere in this chapter.	1
15	21-72	Detergent Jet 1/4" NPT - Specific for this application.	1
* 107	HC06043-60-190	Hydraulic Hose 3/8" BSP - V650	1
	HC06002-60-30	Hydraulic Hose 3/8" BSP - V800	1

Notes

* Item 107 - These hoses replace the standard ones listed on page 30.SW:4

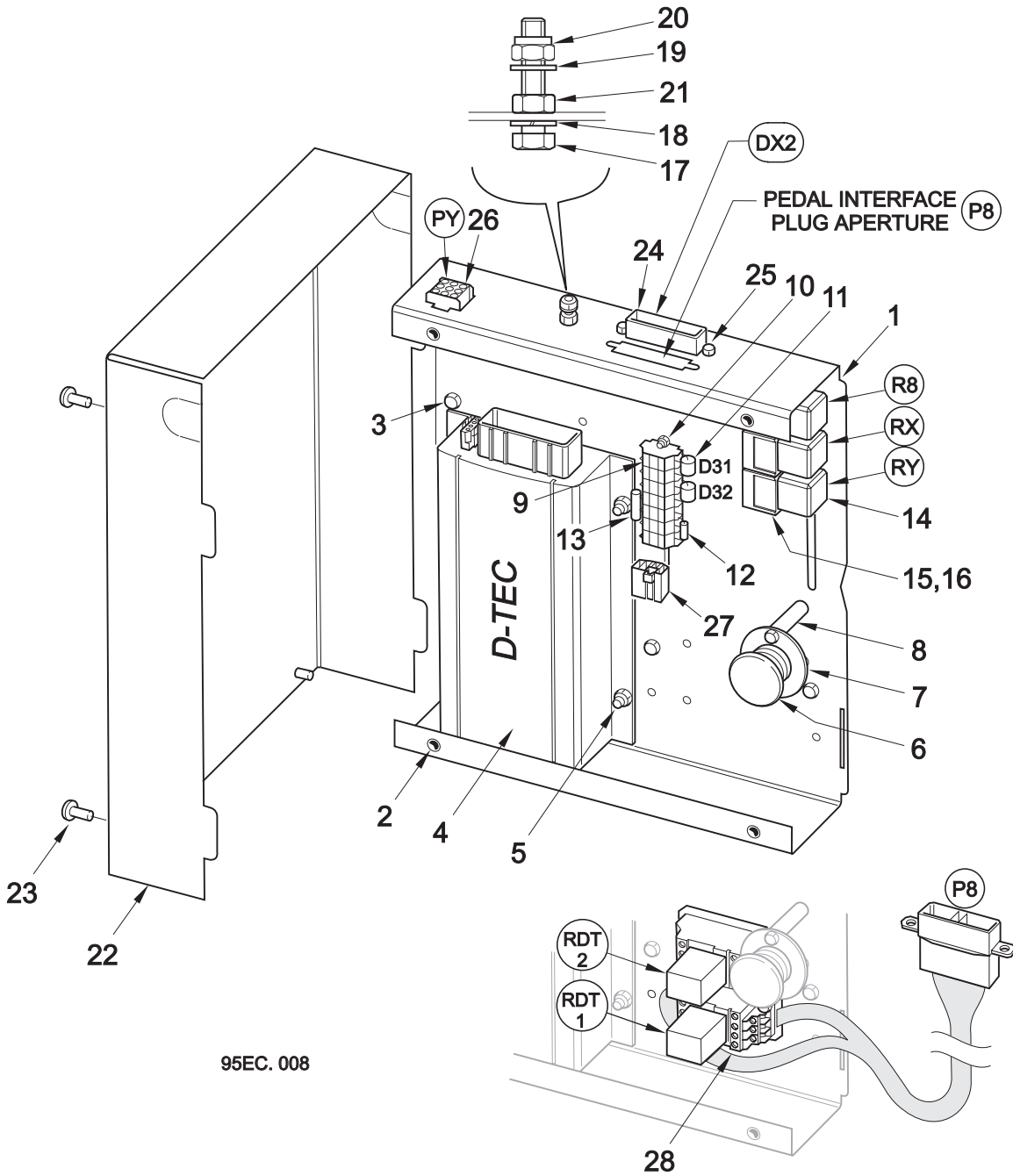
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CHAPTER

31**Electrical System****Table of Contents**

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VS Hydrodrive Control Box Core Module



95EC. 008

Note: The Control Box Module assemblies listed below comprise the core module, shown on this page, plus a specific Foot Pedal Module, item 28.

Chassis Type	Core Module	Foot Pedal Module
MAN	283189-1	+
DAF	283189-1	+ 809908-1
Renault	283189-1	+ 283191-1
Iveco	283189-1	+ 809917-1
Mercedes	283893-1	+ 809882-1

The Mercedes box is unique and is shown over the page.

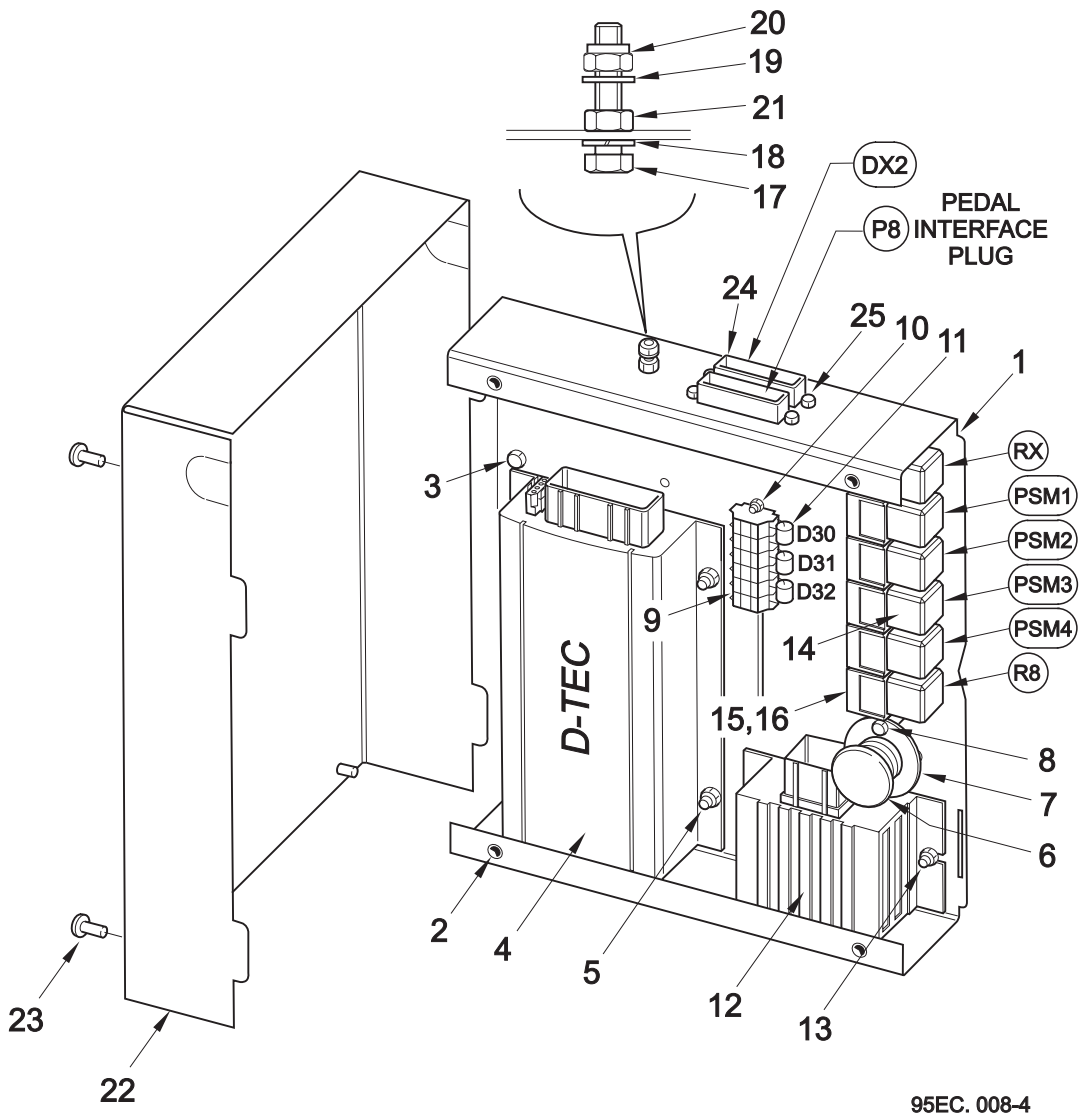
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VS Hydrodrive Control Box Core Module

BoM 950420

Item No.	Part No.	Description	Quantity
>	283189-1	Control Box Core Module comprising:-	
1	282823-1	Base	1
2	433-2	Clufix fastening M6	4
3	124-100	Bolt M6 x 12	4
4	200469-4	D-Tec 910 V04 Unit - See over page	1
5	124-102	Bolt M6 x 16	4
	455-8	Washer - Plain	4
	425-13	Nut - Nyloc M6	4
6	99-29	Override Button	1
	99-2	Body Contact N.C.	1
7	282857-1	Support Plate	1
8	42774-5	Spacer	2
	124-100	Bolt M6 x 12	4
9	30-256	Dual Terminal Block	7
	30-254	End Plate	1
10	124-4	Bolt M3 x 12	2
	455-3	Washer - Plain	2
	425-10	Nut - Nyloc M3	2
11	13984	Diode 6A	2
12	30-229	Resistor 2k2 21watt	1
13	30-173	Resistor 300 Ohm 6watt	1
14	13194	Relay 24V	3
15	48-89	Relay Base	3
16	124-67	Bolt M5 x 10	3
	455-7	Washer - Plain	3
	425-12	Nut - Nyloc M5	3
17	124-113	Bolt M6 x 50	1
18	460-8	Washer - Spring	1
19	455-8	Washer - Plain	4
20	420-13	Nut M6	1
21	425-13	Nut - Nyloc M6	1
22	282824-1	Lid	1
23	138-91	Socket Button Head Bolt	4
24	31-218	Plug - 17 Way	1
25	124-69	Bolt M5 x 14	2
26	31-391	Plug Housing - 9 - Way	1
27	31-127	Receptacle Housing - 7 Way (DTO1, loose item)	1
28	-	Foot Pedal Module - Typical not part of Core Module	

VS Mercedes Hydrodrive Control Box



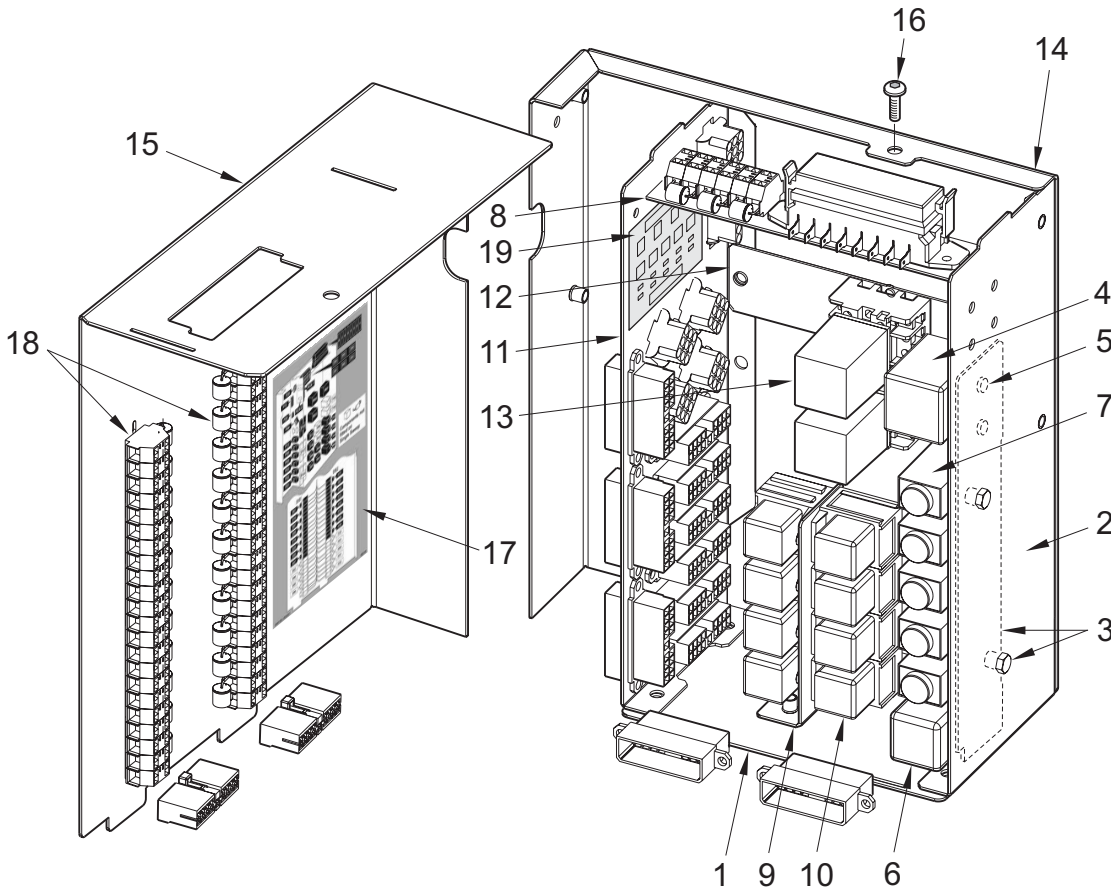
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VS Mercedes Hydrostatic Control Box Module

BoM 950420

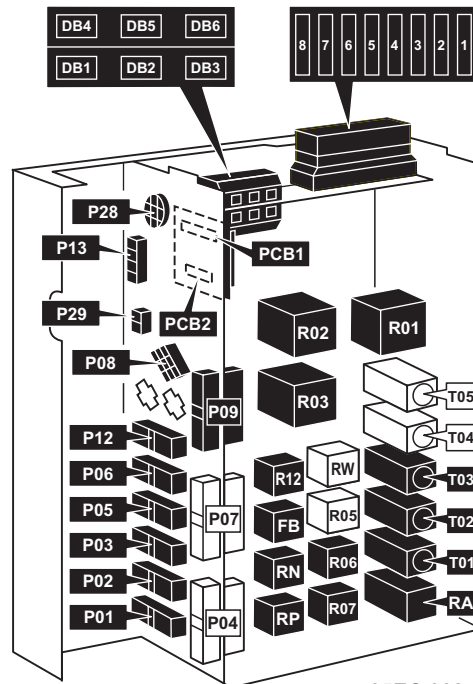
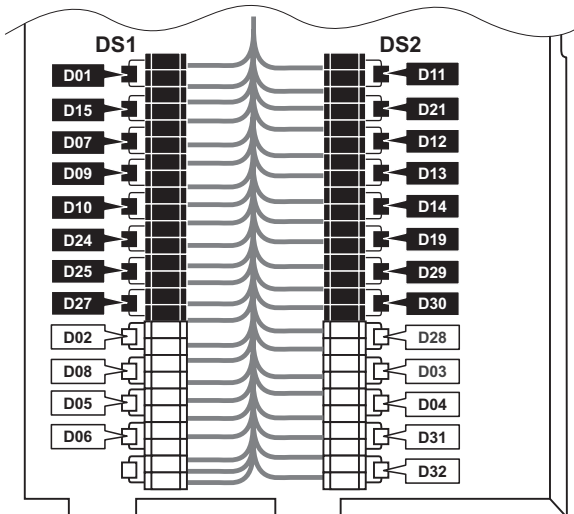
Item No.	Part No.	Description	Quantity
>	283893-1	Mercedes Control Box Module comprising:-	
1	282823-1	Base	1
2	433-2	Clufix fastening M6	4
3	124-100	Bolt M6 x 12	4
4	200441-1	D-Tec 910 V04 Unit	1
5	124-102	Bolt M6 x 16	4
	455-8	Washer - Plain	4
	425-13	Nut - Nyloc M6	4
6	99-29	Override Button	1
	99-2	Body Contact N.C.	1
7	282857-1	Support Plate	1
8	42774-5	Spacer	2
	124-100	Bolt M6 x 12	4
9	30-256	Dual Terminal Block	7
	30-254	End Plate	1
10	124-4	Bolt M3 x 12	2
	455-3	Washer - Plain	2
	425-10	Nut - Nyloc M3	2
11	13984	Diode 6A	2
12	200440-1	Pedal Interface	1
13	124-68	Bolt M5 x 12	2
	455-7	Washer - Plain	2
	425-12	Nut - Nyloc M5	2
14	13194	Relay 24V	3
15	48-89	Relay Base	3
16	124-67	Bolt M5 x 10	3
	455-7	Washer - Plain	3
	425-12	Nut - Nyloc M5	3
17	124-113	Bolt M6 x 50	1
18	460-8	Washer - Spring	1
19	455-8	Washer - Plain	4
20	420-13	Nut M6	1
21	425-13	Nut - Nyloc M6	1
22	282824-1	Lid	1
23	138-91	Socket Button Head Bolt	4
24	31-218	Plug - 17 Way	2
25	124-69	Bolt M5 x 14	4

Relay Box - VT & VS



COMPONENT IDENTIFICATION CODES

Components not fitted on Single Sweep



95EC.002-5

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Relay Box - VT & VS

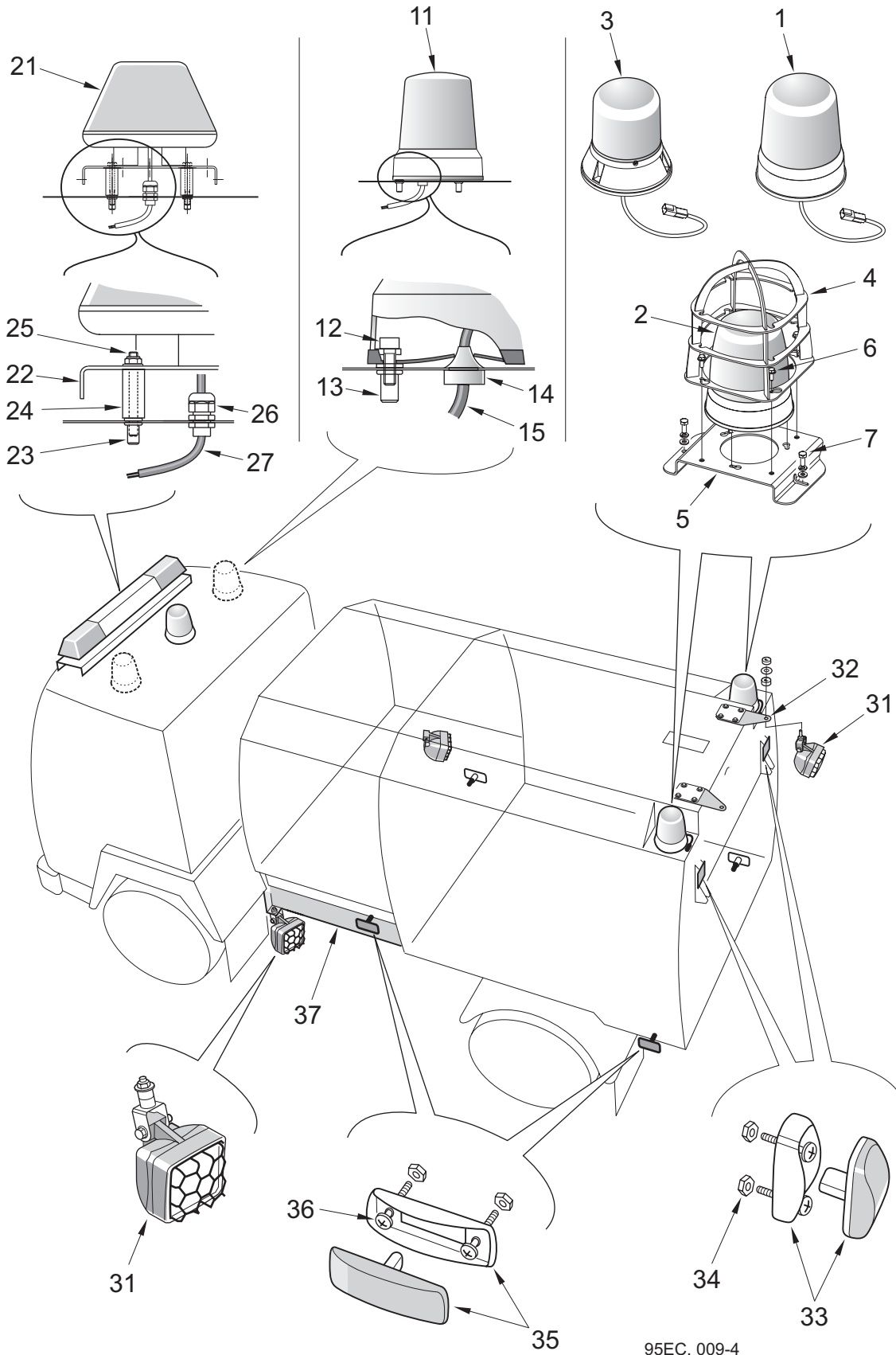
BoM 950311

Item No.	Part No.	Description	Quantity		
			Single	Dual	
1	282108-1	Base Plate	1	1	
2	282114-1	Side Wall	1	1	
	433-2	Clufix Threaded Insert M6	4	4	
	138-91	Screw M6 x 12	2	2	
3	282117-1	Relay Plate	1	1	
	433-2	Clufix Threaded Insert M6	2	2	
	138-91	Screw M6 x 12	2	2	
4	48-34	Relay 12v	1	1	
	48-37	Relay 24v	1	1	
5	181-1	Screw Pozidriv M5 x 10	2	2	
	420-12	Nut M5	2	2	
6	48-252	Audible Warning Relay 12v	1	1	
	48-253	Audible Warning Relay 24v	1	1	
7	13981	Relay - Timer 12v	3	5	
	13982	Relay - Timer 24v	3	5	
	13983	Timer Relay - Base	3	5	
8	281904-1	Arm - Fuse Box Support	1	1	
	433-2	Clufix Insert M6	2	2	
	138-91	Screw M6 x 12	2	2	
9	282115-1	Relay Support Plate	1	1	
	433-2	Clufix Insert M6	2	2	
	138-91	Screw M6 x 12	2	2	
10	13193-1	Relay 12v	6	8	
	13194-1	Relay 24v	6	8	
11	282112-1	Plate - Plug Mounting	1	1	
	433-2	Clufix Insert M6	4	4	
	138-91	Screw M6 x 12	2	2	
12	281903-1	Tee Plate	1	1	
	433-2	Clufix Insert M6	2	2	
	138-91	Screw M6 x 12	2	2	
13	12904	Relay - 3 Channel 12v	2	2	
	13867	Relay - 3 Channel 24v	2	2	
14	282109-1	Back Plate	1	1	
	138-91	Screw M6 x 12	4	4	
	283-14	Clip	1	1	
15	282110-1	Front Plate	1	1	
16	138-94	Screw - Button Hd M6 x 20	1	1	
17	283242-1	Label	1	1	
>	18	283501-1	Diode Pack	1	-
	283398-1	Diode Pack	-	1	
	13984	Diode (Spares item)	16	26	
>	19	283644-1	Printed Circuit Board	1	1

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Beacons, Lights and Looms

Note: Beacons, Marker and Work lights are not supplied on standard ESU's. They are available as options.



95EC. 009-4

Beacons, Lights and Looms

BoM KT 01195 - Rear Beacons

Item No.	Part No.	Description	Quantity
1	282793-12	Beacon 12v - Rotating	2
	282793-24	Beacon 24v - Rotating	2
2	282462-1	Beacon 24v - Xenon	2
3	282959-12	Beacon 12v - Airport Flashing	2
	282959-24	Beacon 24v - Airport Flashing	2

Rear Beacon Installation Drawings:-

	283981	Rotating Beacon	
	283982	Xenon Beacon	
	283983	Airport Flashing Beacon	
		Each comprising a beacon, item 1, 2 or 3, plus items 4 to 7	
4	295078-1	Cage	1
5	295079-1	Base	1
> 6	116-155	Flanged Bolt M6 x 16	4
7	124-102	Screw M6 x 20	2
	460-10	Washer - Spring	2
	455-10	Washer - Plain	2
8 - 10	-	-	-

BoM KT 070999 - Front Beacons

11	46-15-24	Beacon 24v - Rotating	1 or 2
	46-265	Beacon 24v - Xenon	1 or 2
	46-264	Beacon 24v - Airport	1 or 2

Front Beacon Installation Drawings:-

	807193-1	24v Rotating Beacon (Includes Wiring, Item15)	
	807193-2	24v Xenon Beacon (Includes Wiring, Item15)	
	807193-3	24v Airport Flashing Beacon (Includes Wiring, Item15)	
		Each comprises a beacon, item 11, plus items 12 to 15:-	
12	129-94	Capscrew M6 x 20	3 per beacon
13	433-11	Blind Rivet M6	3 per beacon
14	86-23	Cable Gland	1 per beacon
15	32-17	Cable x 3m (Fittings listed on 807193)	1 per beacon
16 - 20	-	-	-

Front Beacon Positioning Drawings:-

807198	Single Beacon - Cab Mounted
807199	Dual Beacons - Cab Mounted

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Beacons, Lights and Looms
BoM KT 070999 - Front Beacon Bars

Item No.	Part No.	Description	Quantity
21	46-290	Beacon Bar 24v - Rotating	1
	46-291	Beacon Bar 24v - Xenon	1
	46-292	Beacon Bar 4 Mod	1
	46-289	Beacon Bar LED	1

Front Beacon Bar Installation Drawings:-

	807195-1	24v Rotating Beacon (Includes Wiring, Item 27)	
	807195-2	24v Xenon Beacon (Includes Wiring, Item 27)	
	807195-3	24v 4 Mod Beacon (Includes Wiring, Item 27)	
	807195-4	24v 3 LED Beacon (Includes Wiring, Item 27)	
		Each comprises a beacon bar, item 21, plus items 22 to 27:-	
22	807232-1	Support Plate	1
23	433-12	Blind Rivet M8	4
24	808749-1	Spacer	4
25	145-1	Studding M8 x 95	4
	455-10	Washer - Plain	4
	425-14	Nut - Nyloc M8	4
26	86-20	Cable Gland	1
27	32-78	Cable (Fittings listed on 807195)	3m
28 - 30	-	-	-

KT01095 - Worklight Installation

31	283230-1	Worklight - 12V	As req'd
	47-10	Bulb 12v - 55 Watt	
	283230-2	Worklight - 24V	As req'd
	47-9	Bulb 24v - 70 Watt	

283984 - Rear Worklight Installation

32	283984-1	Mounting Plate	2
----	----------	----------------	---

807418/1/INST - Rear Marker Lights

33	46-270	Marker Light	2
34	124-103	Screw Pan Head M3 x 15	4
	425-13	Nut M3	4

807412/1/INST - Side Marker Lights

35	46-267	Marker Light	4
36	134-42	Screw Pan Head M4 x 12	2 per light
	455-5	Washer - Plain	2 per light
	425-11	Nut - Nyloc M4	2 per light

Beacons, Lights and Looms

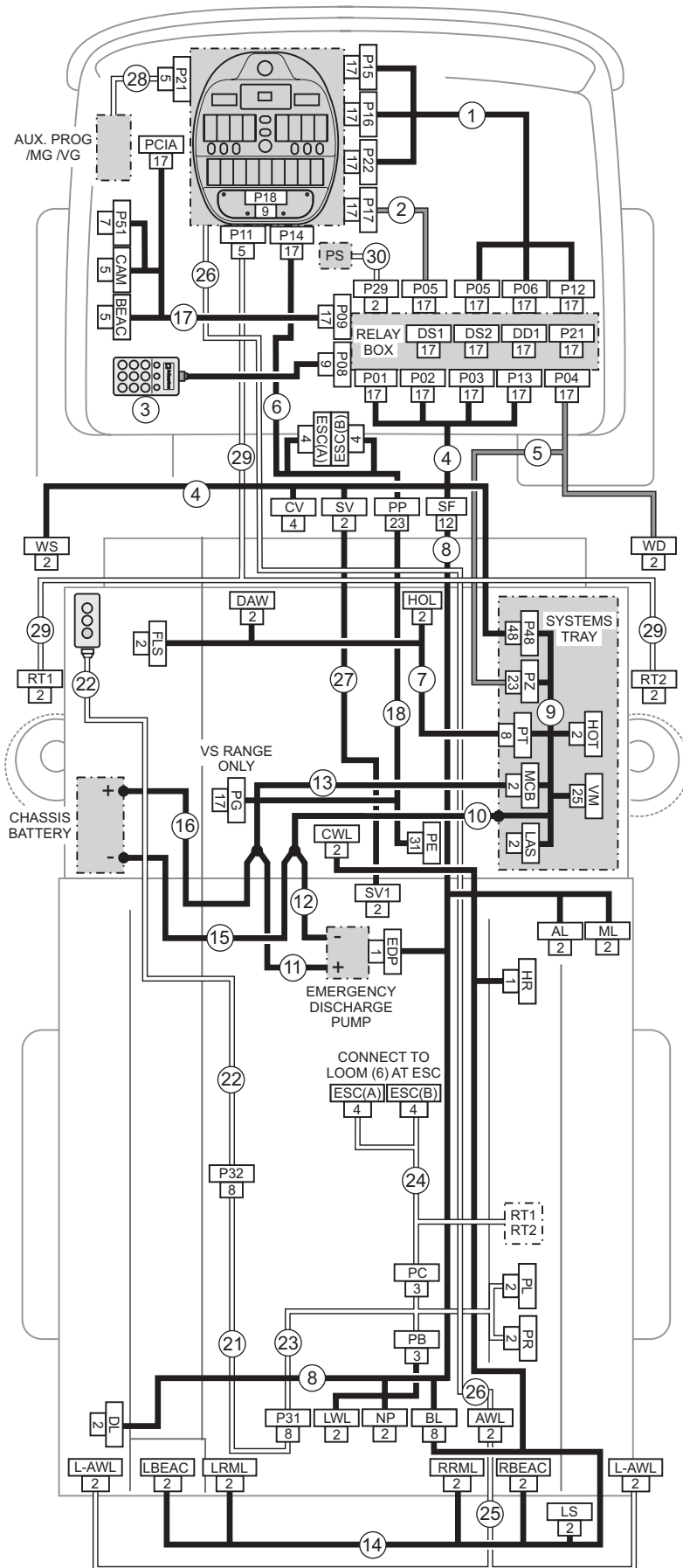
BoM 950324 - Valance and Fittings

Item No.	Part No.	Description	Quantity
> 37		Fuel Tank Valance - See Chapter 33, Access Ladder and Valance	
	808575-1	Systems Locker Valance (RH Side) - Not Shown	1
	124-103	Screw M6 x 20)	4
	455-8	Washer - Plain M6)	4
	425-13	Nut - Nyloc M6)	4
		Valance to Systems Locker	

Notes

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Looms



LEGEND

— SINGLE SWEEP LOOMS

== DUAL SWEEP LOOMS
(REQUIRED IN ADDITION
TO SINGLE SWEEP
LOOMS ON DUAL
MACHINES)

- - - - - OPTIONS LOOMS

XXX *CONNECTOR REF.
X NO. OF WAYS

* SEE ABBREVIATIONS
OPPOSITE

⊗ LOOM ITEM NOS.
SEE NEXT PAGE

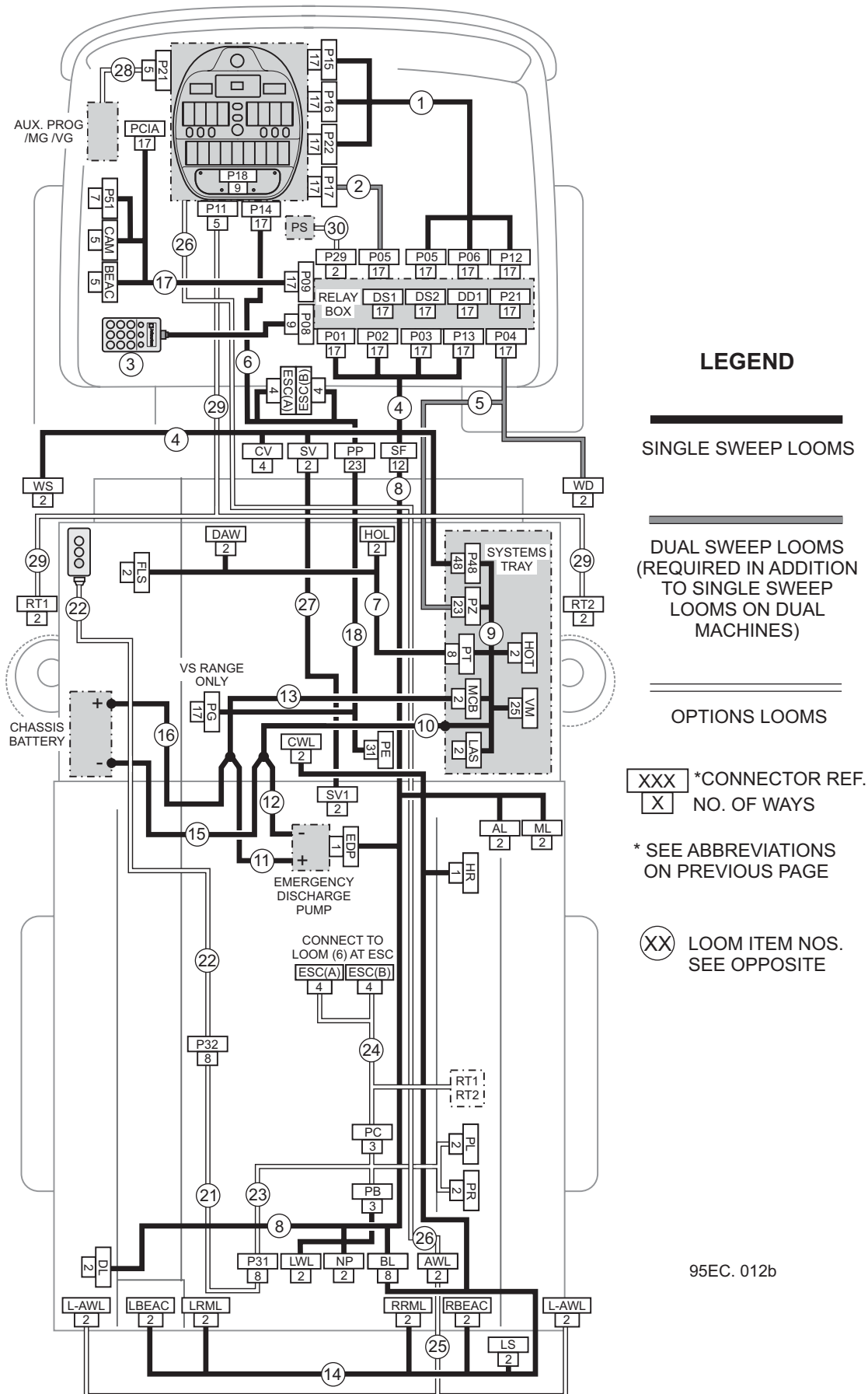
95EC. 012a

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Abbreviations

AL	=	Auto Lube
AWL	=	Additional Work Lights - L = Left, R = Right
BEAC	=	Beacon - L = Left, R = Right
BL	=	Body Loom
CAM	=	Camera
CWL	=	Cowl Work Light
CV	=	Combivac
DAW	=	Discharge Audible Warning
DD	=	Diode Dual
DS	=	Diode Single
DL	=	Door Lock
EDP	=	Emergency Discharge Pump
ESC	=	Engine Speed Control
FLS	=	Fuel Load Sensor
HOL	=	Hydraulic Oil Level
HOT	=	Hydraulic Oil Temperature
HR	=	Hopper Raised Switch
LAS	=	Low Air Pressure Switch
LS	=	Limit Switch
MCB	=	Master Circuit Breaker
MG	=	Maxigap
ML	=	Marker Light - LR = Left Rear, RR = Right Rear
NP	=	Number Plate
P	=	Plugs i.e. 'B', 'C', 'T' and 'Z'
PCIA	=	Plug 'A' - Chassis Interface
PE	=	Plug - Engine Management Box
PP	=	Powapack Plug
PS	=	Powasave Valve (Channel Brush)(
PL	=	Powaboom Lower
PR	=	Powaboom Raise
RT1	=	Relay 'T1', 'T2'
SF	=	Subframe
SV	=	Supawash Valve
VG	=	Variagap
VM	=	Pneumatic Valve Unit
W	=	Work Light - S = Single, D = Dual

Looms



95EC. 012b

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Looms

SE551z02

Item No	Part No	Description	Quantity
1	282022-1	Interlink Loom	1
2	282023-1	Interlink Loom - Dual addition	1
3	283440-2	Discharge Pendant	1
4	283260-1	Main Loom	1
5	283265-1	Main Loom - Dual addition	1
6	282020-1	Main Loom - Powapak	1
7	283263-1	Powapak Service Loom	1
8	283261-1	Subframe Loom	1
9	283807-12	Systems Wafer Loom - 12v)	1
	283807-24	Systems Wafer Loom - 24v) Single Sweep	1
	283264-12	Systems Wafer Loom - 12v)	1
	283264-24	Systems Wafer Loom - 24v) Dual Sweep	1
10	283276-1	System Earth Loom	1
11	282036-1	Emergency Pump Feed - Red	1
12	282036-2	Emergency Pump Feed - Black	1
13	283275-1	System Power Cable	1
14	283262-1	Body Main Loom	1
15	17936-305	Earth Cable - Black	1
> 16	92105-301	Starter Cable	1
17	283186-1	Cab Main Loom	1

VT Range Engine Looms

18	282031-1	Iveco NEF4 Euro 3 (Turbocharged)	1
	282042-1	Iveco N45MNA (Naturally Aspirated)	1
	282041-1	John Deere 'LP' - (Non Electronic)	1
	282048-1	John Deere 'HP' - (Electronic)	1

NB. Plug 'PG' is not fitted to the above looms

VS Range Systems Loom

18	282050-1	Hydrostatic Systems Loom	1
----	----------	--------------------------	---

Ref. only

VT Range Engine Management Boxes (PE)

	282120-1	Iveco NEF4 Euro 3 (Turbocharged)	1
	282134-1	Iveco N45MNA (Naturally Aspirated)	1
	282137-1	John Deere 'LP' - (Non Electronic)	1
	282138-1	John Deere 'HP' - (Electronic)	1

Ref. only

VS Range Management Box (PE)

19 - 20	282135-1	Hydrostatic Management Box	1
	-	-	

Options - See over page

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Looms
SE551z02

Item No	Part No	Description	Quantity
Options			
Powaboom			
21	282063-1	Extension Loom	1
22	282061-1	Control Loom	1
* 23	282062-1	Powaboom Control Loom	1
24	282060-1	Remote Throttle Control Loom	1
	283140-1	Remote Throttle Control Loom - John Deere 'HP' (Electronic) Engine	
* Remote Throttle without Powaboom			
23	282160	Throttle Control Loom - VT Range	1
	282161	Throttle Control Loom - VS Range	1
Additional Worklights			
25	293774-1	Additional Rear Worklights Loom	1
26	283235-1	Main Loom - Rear Door Accessories	1
Supawash			
27	282069	Supawash Loom	1
Maxigap / Varagap			
28	283233	Maxigap / Varagap Link Loom	1
Channel Brush			
29	282053	Rotatilt Loom	1
30	283504	Powasave Loom	1

Notes

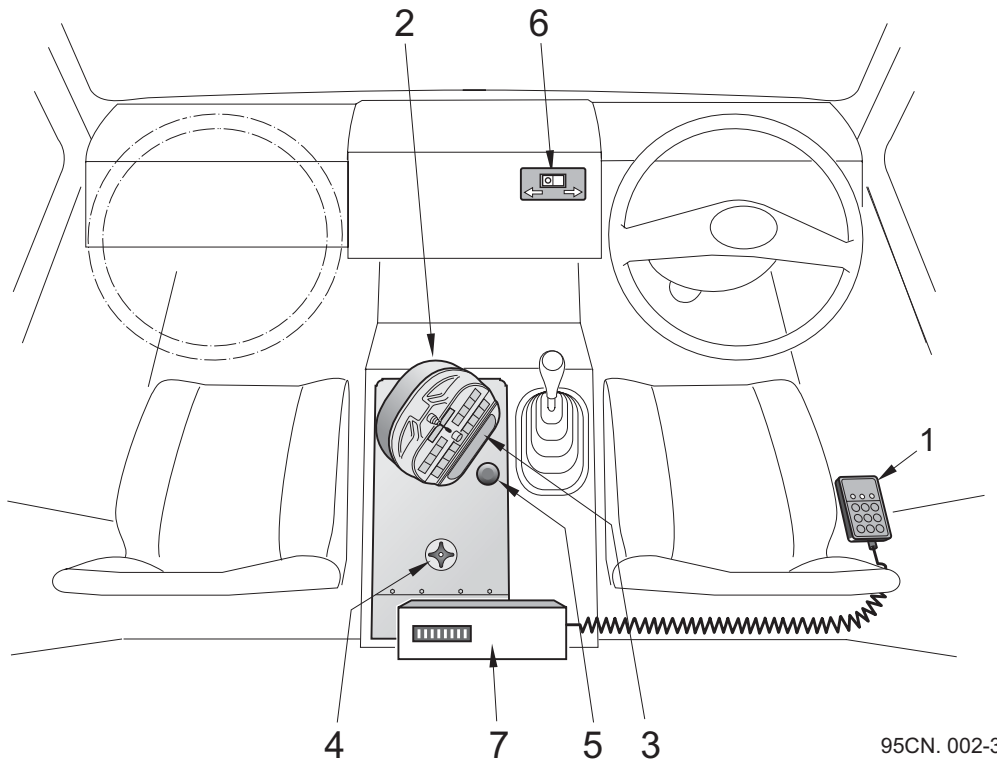
CHAPTER

32

Cab Controls

Table of Contents

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Switch Panel	
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Powapak Control Panel - VS Range	32 : 10
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Channel Brush Speed Control	32 : 11
Powasave Control - Option	32 : 12
Dual Steer	
Dual Steer Changeover Control	32 : 13

Cab Mounted Controls


95CN.002-3

Item No.	Description	Page
1	Load Discharge Pendant	32 : 3
* 2	Switch Panel	32 : 4
* 3	Powapak Control Panel	32 : 8 - 10
* 4	Channel Brush Speed Control	32 : 11
* 5	Powasave Pressure Control	32 : 12
* 6	Dual Steer Changeover Control	32 : 13
7	Control Relay Box	Chapter 31

Notes

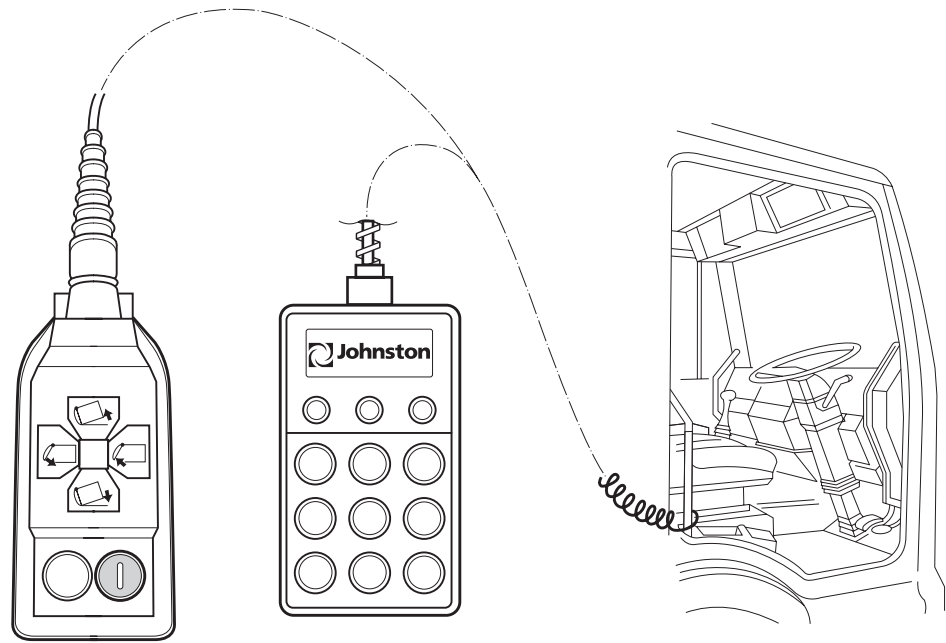
* The Mountings and positions of these controls are chassis related. Contact the Johnston Parts Department, quoting the machine serial number, for further information.

The Mounting Parts are not supplied with standard ESU's.

Johnston reference drawings:

The relevant installation drawing can be found via the Chassis Drawing Matrix shown in Chapter 33 page 33:2.

Load Discharge Pendant



TYPE 'A'
PENDANT

TYPE 'B'
PENDANT

95CN. 006-2

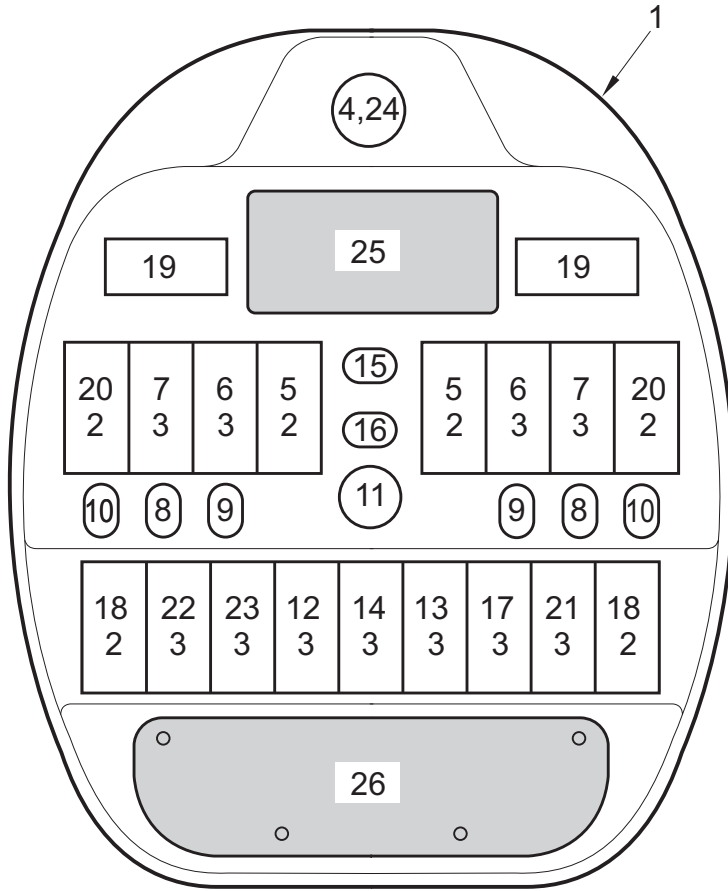
BoM 950313

Item No.	Part No.	Description	Quantity
	282199-1	Type 'A' Discharge Pendant Assembly	1
	283440-2	Type 'B' Discharge Pendant Assembly	1

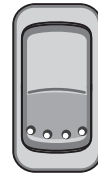
Notes

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Switch Panel



TYPE 'A'
SWITCH



TYPE 'B'
SWITCH

95CN. 003-3

BoM 950310

VT Panels

Part No.

With Type 'A' Switches

950312-021 to 024
950312-009 to 012

With Type 'B' Switches

950312-51 to 54
950312-39 to 42

Description

Iveco NA 24v Switch Panels
Iveco Turbo 24v Switch Panels

950312-001 to 004
950312-025 to 028

950312-31 to 34
950312-55 to 58

John Deere 12v 'LP' (Mechanical) Switch Panels
John Deere 12v 'HP' (Electronic) Switch Panels

VS Panels

950312-013 to 016
950312-017 to 020

950312-43 to 46
950312-47 to 50

Hydrodrive 12v Switch Panels
Hydrodrive 24v Switch Panels

Note

Quote machine serial number when ordering a replacement panel.

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Switch Panel

Assembly List 282191-282194

Item No.	Part No.		Description	Quantity	
	Type 'A' Switches	Type 'B' Switches		Single	Dual
1	282350-1	<	Switch Panel Casing	1	1
2	48-170	735-70	Switch Frame - End Piece	6	6
3	48-171	735-71	Switch Frame - Centre Piece	11	11
4			Maxigap:		
	99-95	<	Joystick - 2 Position	1	1
	99-1	<	Body Contact	1	1
5			Wide Sweep Brush:		
	42-11	735-07	Switch - 3 Position, Detent 12v	1	2
	42-21	735-27	Switch - 3 Position, Detent 24v	1	2
	42-103	735-103	Decal - Wide Sweep Brush	1	2
	48-19	735-60	Blanking Plate	1	-
6			Nozzle:		
	42-11	735-07	Switch - 3 Position, Detent 12v	1	2
	42-21	735-27	Switch - 3 Position, Detent 24v	1	2
	42-102	735-102	Decal - Nozzle	1	1
	48-19	735-60	Blanking Plate	1	-
7			Channel Brush:		
	42-11	735-07	Switch - 3 Position, Detent 12v	1	2
	42-21	735-27	Switch - 3 Position, Detent 24v	1	2
	42-101	735-101	Decal - Channel Brush	1	1
	48-19	735-60	Blanking Plate	1	-
8			Gutter Spray:		
	43-100	<	Switch - Low Pressure Water 12v	1	2
	43-200	<	Switch - Low Pressure Water 24v	1	2
	43-1	<	Blanking Plate	1	-
9			Inlet Flap:		
	43-102	<	Switch - Inlet Flap 12v	-	2
	43-202	<	Switch - Inlet 24v 24v	-	2
	43-1	<	Blanking Plate	2	-
10			Worklamp:		
	43-101	<	Switch - Worklamp 12v	1	2
	43-201	<	Switch - Worklamp 24v	1	2
	43-1	<	Blanking Plate	1	-
11			Programme Switch:		
	99-92	<	Base + Light 12v	1	1
	99-93	<	Base + Light 24v	1	1
	99-4	<	Contact - N.O.	1	1
	99-94	<	Operating Head	1	1
12	48-19	735-60	Blanking Plate	1	1

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Switch Panel

Item No.	Part No.		Description	Quantity		
	Type 'A' Switches	Type 'B' Switches		Single	Dual	
13			Beacon:			
	42-12	735-06	Switch - 2 Position, Detent 12v	1		1
	422-22	735-26	Switch - 2 Position, Detent 24v	1		1
	42-108	735-108	Decal - Beacon	1		1
> 14			Low Water/Speed Selector			
	735-09		Switch - 3 Position, Spring Centre 12v)	1		1
	735-29		Switch - 3 Position, Spring Centre 24v) Part of	1		1
	735-121		Rocker with Low Water/Speed Select) item 26	1		1
			Decal)			
Options						
15			Powathrust - KT00395			
	43-104		Switch 12v	1		1
	43-204	<	Switch 24v	1		1
	43-1	<	Blanking Plate (when not fitted)	1		1
16			Powascrub - KT00495			
	43-103	<	Switch 12v	1		1
	43-203	<	Switch 24v	1		1
	43-1	<	Blanking Plate (when not fitted)	1		1
17			Supawash - KT06595			
	42-12	735-06	Switch - 2 Position, Detent 12v	1		1
	42-22	735-26	Switch - 2 Position, Detent 24v	1		1
	42-106	735-106	Decal - Supawash	1		1
	48-19	735-60	Blanking Plate (when not fitted)	1		1
18			Recirculation Water - KT07795			
	42-12	735-06	Switch - 2 Position, Detent 12v	1		2
	42-22	735-26	Switch - 2 Position, Detent 24v	1		2
	42-107	735-107	Decal - Recirculation Water	1		2
	48-19	735-60	Blanking Plate	1		-
	48-19	735-60	Blanking Plate (when not fitted)	2		2
19			Variabrush - KT00295	LHS	RHS	Dual
	42-13	735-11	Switch - 3 Position, Spring Centre 12v	1	1	2
	42-23	735-31	Switch - 3 Position, Spring Centre 24v	1	1	2
	42-110	735-110	Decal - LH Variabrush	1	-	1
	42-111	735-111	Decal - RH Variabrush	-	1	1
	48-19	735-60	Blanking Plate (when not fitted)	1	1	2
20			Rotatilt - KT07695			
	42-13	735-11	Switch - 3 Position, Spring Centre 12v	1	1	2
	42-23	735-31	Switch - 3 Position, Spring Centre 24v	1	1	2
	42-104	735-104	Decal - LH Rotatilt	1	-	1
	42-105	735-105	Decal - RH Rotatilt	-	1	1
	48-19	735-60	Blanking Plate (when not fitted)	1	1	2

Switch Panel

Item No.	Part No.		Description	Quantity	
	Type 'A' Switches	Type 'B' Switches		Single	Dual
21			Additional Lights - KT08195		
	42-12	735-06	Switch - 2 Position, Detent 12v	1	1
	42-22	735-26	Switch - 2 Position, Detent 24v	1	1
	42-120	735-120	Decal - Additional Lights	1	1
	48-19	735-60	Blanking Plate (when not fitted)	1	1
22			Additional Worklight - KT07995		
	42-12	735-06	Switch - 2 Position, Detent 12v	1	1
	42-22	735-26	Switch - 2 Position, Detent 24v	1	1
	42-118	735-118	Decal - Additional Worklight	1	1
	48-19	735-60	Blanking Plate (when not fitted)	1	1
23			Additional WSB Water - KT08095		
	42-12	735-06	Switch - 2 Position, Detent 12v	1	1
	42-22	735-26	Switch - 2 Position, Detent 24v	1	1
	42-119	735-119	Decal - Additional WSB Water	1	1
	48-19	735-60	Blanking Plate (when not fitted)	1	1
24			Varagap - KT07895		
	99-96	<	Joystick - 3 Position Spring Return	1	1
	99-1	<	Body Contact	1	1

BoM 950312

25	282237-2	Instrument Panel - Iveco Euro 3 Turbo Engines	1
	282237-3	Instrument Panel - VS Hydrodrive	1
	282237-4	Instrument Panel - Iveco Nat. Asp. and John Deere Engines	1
26		Powapak Control Panel - See over page	

Notes

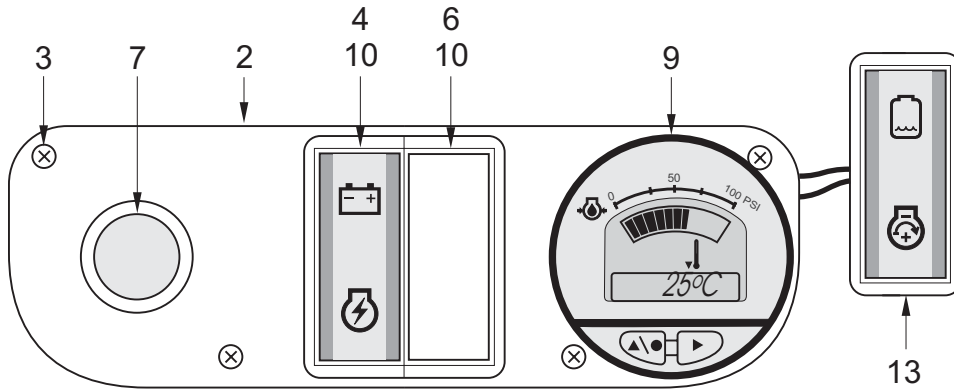
Instrument panels, item 25, have a code number on a label on the back. Quote this number when ordering a replacement.

The numbers are:-

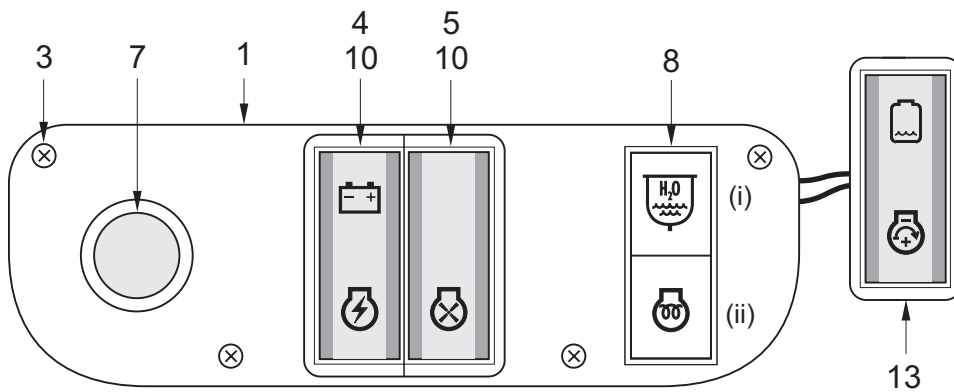
Iveco E3 - Code No.0003
 Hydrodrive - Code No.0005
 Iveco NA &
 John Deere - Code No.0004

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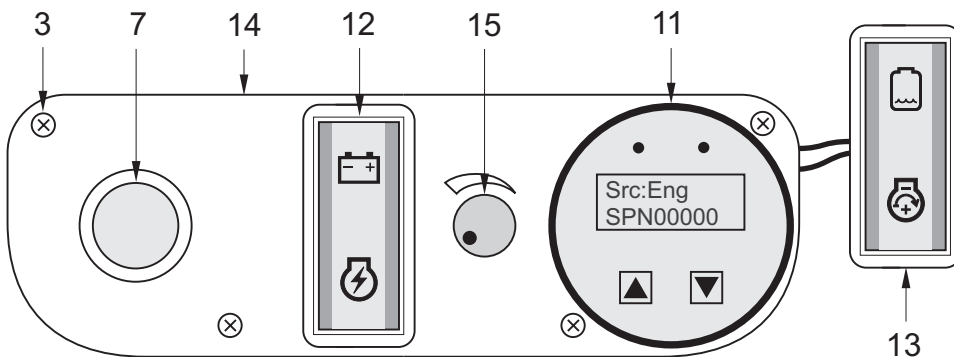
VT Range Powapak Control Panels



Assembly with Type 'A' Switches (Shown)	Assembly with Type 'B' Switches	Chassis
282181-01 282183-01	283586-1 283587-1	John Deere 12v - 'LP' Mechanical Iveco Nat. Asp. 24v



Type 'A' Switches	Type 'B' Switches	Chassis
282184-01	283588-1	Iveco Euro 3 Turbo 24v



Type 'A' Switches	Type 'B' Switches	Chassis
282956-1	283590-1	John Deere 12v - 'HP' Electronic (Less Gauge 11)

95CN. 004-12

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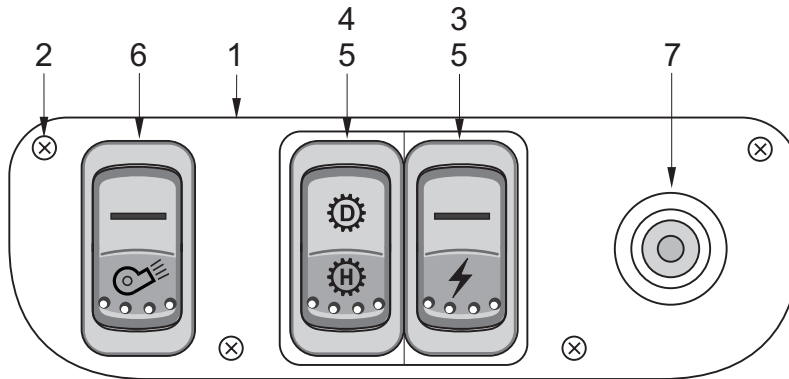
VT Range Powapak Control Panels

Item No.	Part No.		Description	Quantity
	Type 'A' Switches	Type 'B' Switches		
1	282353-1	<	Plate - Iveco Euro 3 Only	1
2	282353-2	<	Plate - All Other Engine	1
3	135-151	<	Screw Pan Hd. M4 x 16	4
4			Engine Ignition:	
	42-14	735-10	Switch - 3 Position, Spring centre 12v (JD 'LP' Only)	1
	42-24	735-30	Switch - 3 Position, Spring centre 24v (All Others)	1
	42-125	735-125	Insert - Engine Ignition/Alternator	1
6			PTO Resume - Iveco Euro 3 Only	
	42-26	735-28	Switch - 3 Position, Spring centre 24v	1
	42-116	735-116	Insert - Auxiliary Engine PTO	1
6	43-1	735-60	Blanking Plate	1
7			Engine Start:	
	99-92	<	Base + Light 12v (John Deere Only)	1
	99-93	<	Base + Light 24v (All Others)	1
	99-4	<	Contact - N.O.	1
	† 99-5	<	Contact - N.C.	1
	99-67	<	Operating Head	1
8			Warning Lights - Iveco Euro 3 Only	
	48-10	735-500	Pilot Light 24v	1
	48-336	735-600	Decal (i) Water In Fuel	1
	48-337	735-600	Decal (ii) Thermostart	1
9			Optional Gauge Pack - KT00695	
	282740-1	<	Water Temperature/Oil Pressure Gauge	1
	12705	<	Blanking Plate (when not fitted)	1
10	48-170	735-70	Switch Frame - End Piece	2
11	282934-1	<	Diagnostics Gauge	1
12	42-12	735-14	Switch - 2 Position, Detent 12v	1
	42-125	735-125	Insert - Engine Ignition/Alternator	1
> 13	-	-	Switch - Low Water/Speed Selector See 'Switch Panel' item 14.	1
> 14	282353-4	<	Plate	1
> 15	31-497	<	Potentiometer 4k7 - Engine Speed Control	1

Notes

* Items 13 and 14 are part of Control Panel Loom 282947-1

† Technical Bulletin TB.1408 covers the introduction of this component.

VS Range Powapak Control Panel


95CN. 004-11

**Assembly with
Type 'A' Switches**

 282185-12
282185-24

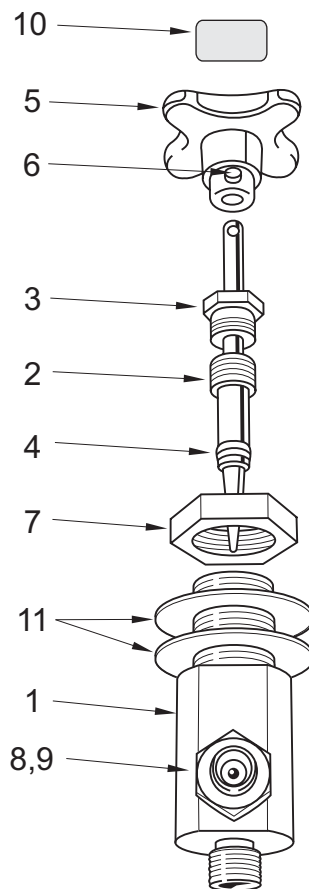
**Assembly with
Type 'B' Switches
(Shown)**

 283589-1
283589-2

 HydroDrive 12v
HydroDrive 24v

Item No.	Part No.		Description	Quantity
	Type 'A' Switches	Type 'B' Switches		
1	282353-3	<	Plate - Hydrodrive	1
2	135-151	<	Screw Pan Hd. M4 x 16	4
3	42-16	735-08	Switch - 3 Position, Spring Centre 12v	1
	42-26	735-28	Switch - 3 Position, Spring Centre 24v	1
	42-109	735-109	Insert - Master Switch	1
4	42-16	735-08	Switch - 3 Position, Spring Centre 12v	1
	42-26	735-28	Switch - 3 Position, Spring Centre 24v	1
	42-113	735-113	Insert - Gearbox Engage	1
5	48-170	735-70	Switch Frame - End Piece	2
6	42-11	735-07	Switch - 3 Position, Detent 12v	1
	42-21	735-27	Switch - 3 Position, Detent 24v	1
	42-114	735-114	Insert - Suction Fan	1
7	48-83	<	Joystick - Forward/Neutral/Reverse	1
	48-85	<	Contact	2

Channel Brush Speed Control



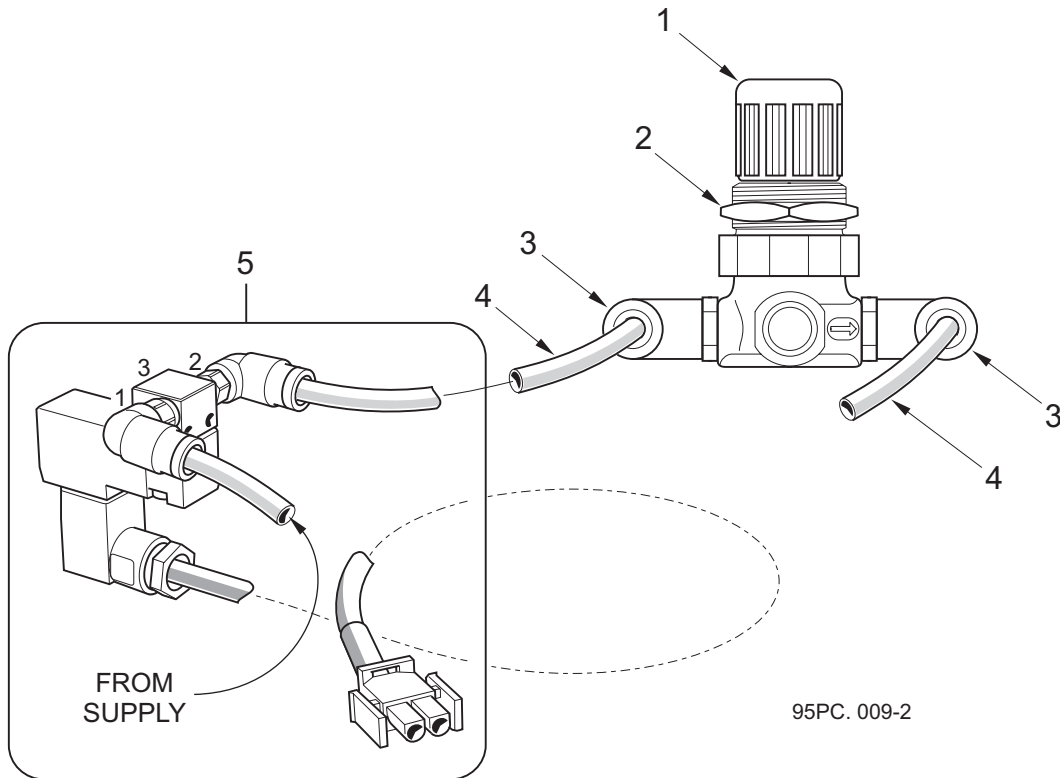
95CN. 005-2

BoM 950322

Item No.	Part No.	Description	Quantity
	3730-1	Flow Control Valve comprising:	1
1	26106-1	Body	1
2	26107-1	Spindle	1
3	26108-1	Gland	1
4	79-52	'O' Ring	2
5	41045-2	Handwheel	1
6	135-9	Grubscrew M6c x 8	1
7	410-18	Nut - Mounting 3/4"	1
8	265-2	Adaptor - Reducing 3/8" x 1/4" BSP	1
9	451-17	Washer - Sealing 1/4" BSP	1
10	-	Label 2:12 on Decals Chapter 34	-
11	450-16	Washer - Plain, for mounting valve	2

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Powasave Pressure Control - Option



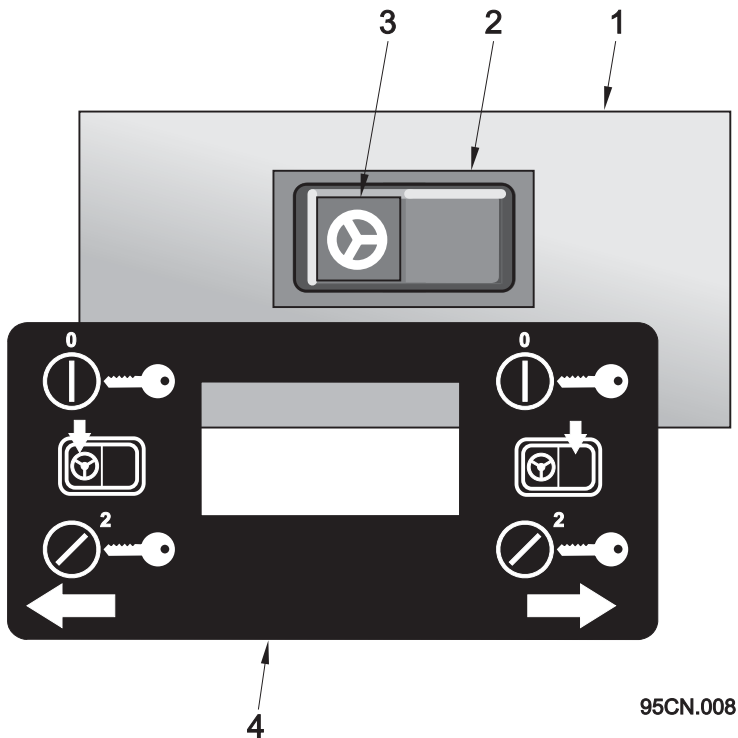
KT00395

Item No.	Part No.	Description	Quantity
	282627	Regulator Assembly comprising items 1 to 3:	
1	72-14	Regulator	1
2	72-15	Panel Nut	1
3	538-3	Swivel Elbow 1/8" x Ø6	2
4	273-21	Tube - Red Ø6	12m
*5	283648-12	Powasave Control Valve Assembly - 12v	1
	283648-24	Powasave Control Valve Assembly - 24v	1

Notes

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Dual Steer Changeover Control



KT 10095

Item No.	Part No.	Description	Quantity
	808013-1	Power Switch Assembly Comprising:-	
1	808014-1	Blank - Cab Facia	1
2	48-88	Rocker Switch	1
3	48-111	Lens Insert	1
4	808045-1	Label	1

Notes

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CHAPTER

33**Chassis Application****Table of Contents**

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Weight Load Indicator - Steel Suspension	33 : 3
Weight Load Indicator - Air Suspension	33 : 5
Fuel Tank Access Ladder - Type 'B'	33 : 6
VS Hydrodrive	
Clutch Safety Switch Installation	33 : 8
Superseded Parts	33 : 9

Chassis Related Parts

The items listed below vary depending on what chassis the Johnston sweeper equipment is mounted to.

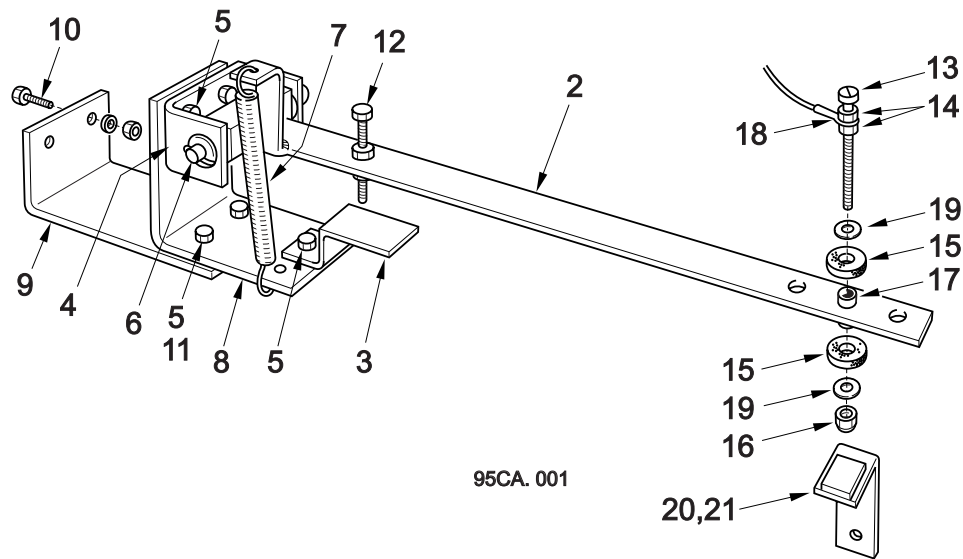
If any parts for these areas are required, contact the Johnston Parts Department quoting the machine serial number shown on the plate fitted to the subframe crossmember below the body rear door.

- Batteries and battery mounting
- Cab - Sweep control installations (Chapters 24 and 32)
- Cab - single and dual steer parts
- Body discharge interlock
- Rear mounted fuel tank
- Gutter and wide sweep brush water spraybar mountings (Chapters 24 and 26)
- Supawash hose reel and front bumper spraybar mountings (Chapter 30.SW)
- Rear underrun bumper
- Rear mudguards and mudflaps
- Subframe to chassis mounts
- Work lights (Chapter 31)
- Channel brush pivot frame support posts (Chapter 24)
- Channel brush hydraulic hoses 75 and 84 (Chapter 24)
- Wide sweep brush hydraulic hoses 70 to 74 (Chapter 26)
- Customer options i.e. autolube, special beacons, reversing camera, handwash etc.

Chassis Specification Sheets plus Drawing Lists covering the above components are as follows:

Chassis	Chassis Spec. No.		Chassis Matrix List No.	
	*T	*S	*T	*S
DAF FA LF45 12 Tonne	C201	-	CM202	-
DAF FA LF55 13 Tonne	C202	-	CM202	-
DAF FA LF55 15 Tonne	C203	C103	CM203	CM103
DAF FA LF55 18 Tonne	C204	-	CM204	-
IVECO ML 130E 13 Tonne Tector	C209	-	CM209	-
IVECO ML 150E 15 Tonne Tector	C210	-	CM210	-
IVECO ML 180E 18 Tonne Tector	C211	-	CM211	-
IVECO ML 120E 12 Tonne Tector	C212	C112	CM212	CM112
MAN 15.225 LK 15 Tonne	C216	C116	CM216	CM116
MERCEDES ATEGO 10.5 Tonne, KO	C219	-	CM219	-
MERCEDES ATEGO 13.5 Tonne, LKO	C220	-	CM220	-
MERCEDES ATEGO 15 Tonne, LKO	C221	-	CM221	-
MERCEDES ATEGO 18 Tonne, K	C222	C122	CM222	CM122
RENAULT MIDLUM 220-12 'Balayeuse'	C223	C123	CM223	CM123
RENAULT MIDLUM 220-14 'Balayeuse'	C224	-	CM224	-
RENAULT MIDLUM 220-15 'Balayeuse'	C225	C125	CM225	CM125
SCANIA P94DB NZ	C227	-	CM227	-
VOLVO FLH 15 Tonne	C228	-	CM228	-
VOLVO FLE 18 Tonne	C229	-	CM229	-

Weight Load Indicator - Steel Suspension Chassis



Chassis Matrix - Various

Item No.	Part No.	Description	Quantity
	807336-1	Load Indicator - Short, comprising items 1 and 20	
	807336-2	Load Indicator - Long, comprising items 1 and 21	
1	20724-1	Weight Load Indicator Assembly comprising items 2 to 19	
2	281745-1	Arm	1
3	281739-1	Stop Plate	1
4	281738-1	Support Bracket	1
5	124-103	Screw M6 x 20	5
	460-8	Washer - Spring M6	5
	420-13	Nut M6	5
6	281742-1	Pin	1
	455-10	Washer - Plain M8	4
	500-70	Split Pin	2
7	6275-1	Spring	1
8	20723-1	Support Link	1
9	20722-1	Support Bracket	1
10	124-105	Screw M6 x 25	2
	460-8	Washer - Spring M6	2
	420-13	Nut M6	2
11	455-8	Washer - Plain M6	2
12	124-113	Screw M6 x 50	1
	420-13	Nut M6	2

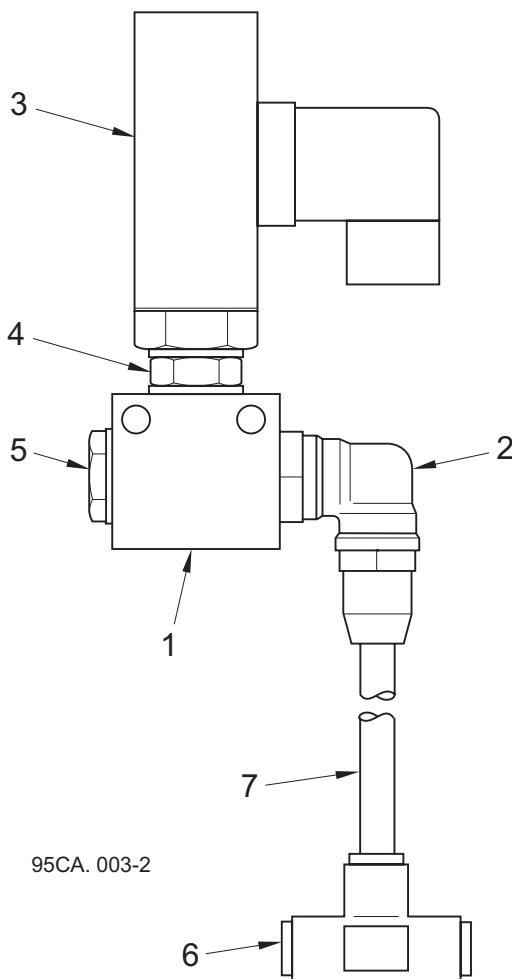
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Weight Load Indicator Switch - Steel Suspension Chassis

Item No.	Part No.	Description	Quantity
13	124-113	Setscrew M6c x 50	1
14	410-27	Nut - M6c x 50	2
15	453-20	Washer - Nylon	2
16	425-13	Nut - Nyloc M6c	1
> 17	17369	Insulator - Nylon Tube	1
18	50-43	Ring Terminal	1
19	457-2	Washer - Large M6	2
20	6369-1	Contact Bracket - Short	
21	6369-9	Contact Bracket - Long	

Notes

Weight Load Indicator Switch - Air Suspension Chassis

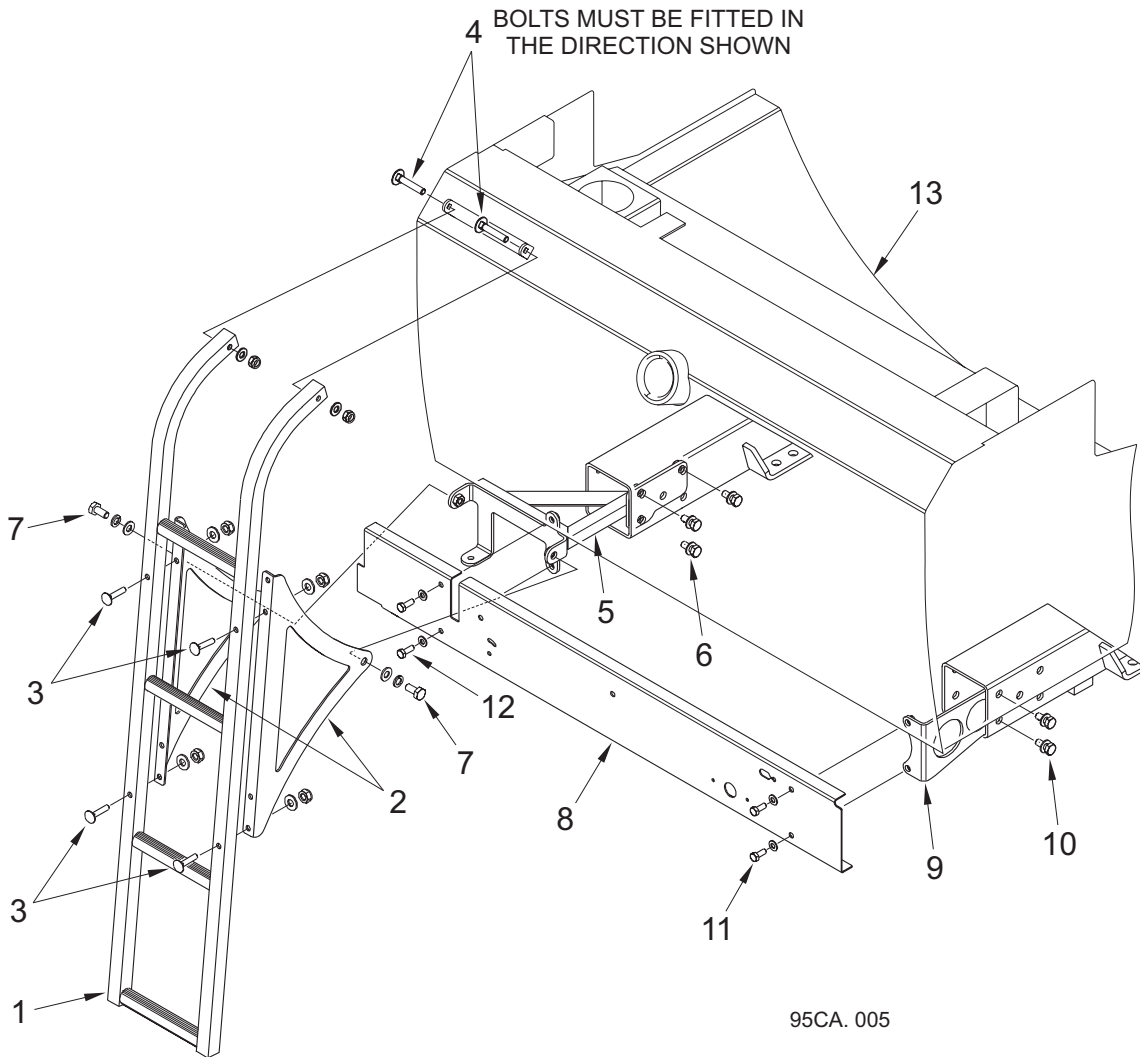


Chassis Matrix - Various

Item No.	Part No.	Description	Quantity
	802780-2	Air Switch Assembly comprising:	
1	802779-1	Air Switch Block	1
2	4505-469	Elbow x Ø8 Tube	1
3	72-52	Air Pressure Switch	1
4	263-2	Adaptor 1/4" BSP	1
	451-17	Washer - Sealing 1/4" BSP	2
5	54-12	Collar Plug	1
	451-17	Washer - Sealing 1/4" BSP	1
6	277-54	Equal Tee x Ø8 Tube	1
7	39394	Air Brake Tube	As Req'd

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Access Ladder and Valance Installation
***Current Type 'B' Fuel Tank**



Chassis Matrix - Various

Item No.	Part No.	Description	Quantity
	282440	Ladder Installation Drawing	
1	282561-1	Access Ladder	1
2	283657-1	Stay	2
3	136-22	Carriage Bolt M8 x 40	4
	455-10	Washer - Plain M8	4
	425-14	Nut - Nyloc M8	4
4	136-23	Carriage Bolt M8 x 45	2
	455-10	Washer - Plain M8	2
	425-14	Nut - Nyloc M8	2

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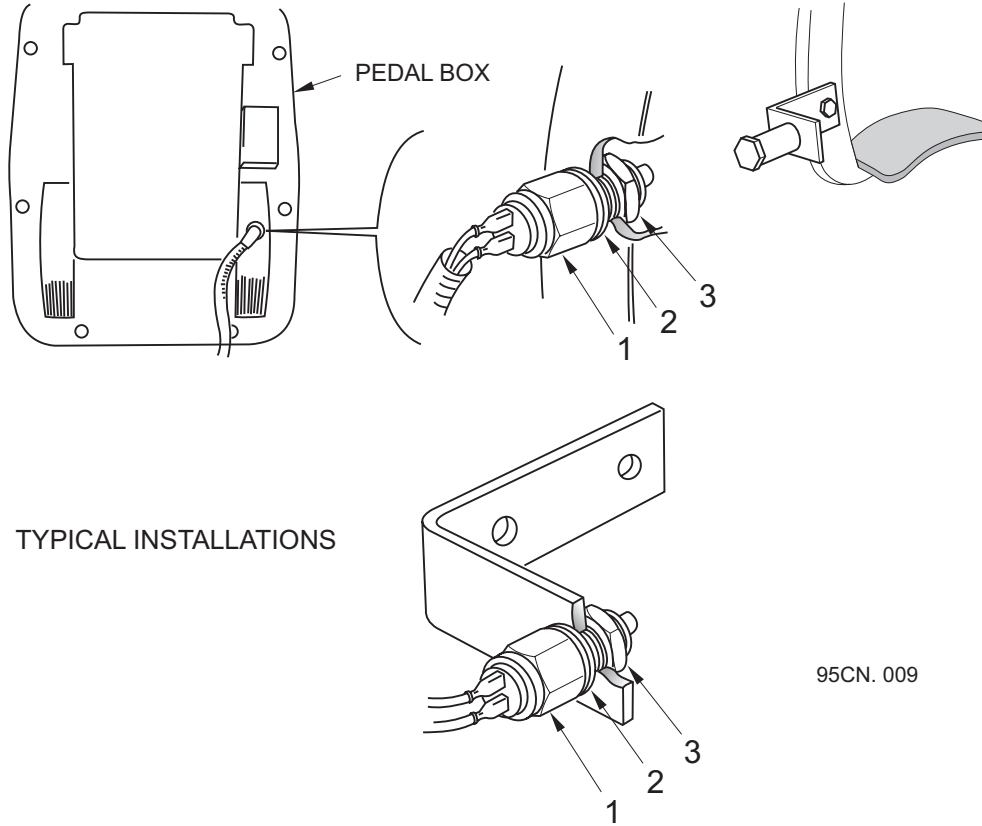
Access Ladder and Valance Installation
*Current Type 'B' Fuel Tank

Item No.	Part No.	Description	Quantity
5	283650-1	Mount	1
6	135-29	Screw - Self Locking M10 x 25	3
	455-11	Washer - Plain M10	3
7	124-168	Screw M10 x 22	2
	460-11	Washer - Spring M10	2
	455-11	Washer - Plain M10	2
8	283655-1	Valance	1
9	283658-1	Bracket	1
10	124-203	Screw M12 x 30	2
	460-12	Washer - Spring M12	2
	455-12	Washer - Plain M12	2
11	124-135	Screw M8 x 20	2
	455-10	Washer - Plain M8	2
12	124-136	Screw M8 x 22	2
	455-10	Washer - Plain M8	2
13		Type 'B' Fuel Tank - See Chapter 22	

*The previous Type 'A' Fuel Tank Ladder Installation is shown in the Superseded Parts Section at the end of this chapter

Notes

See Technical Bulletin TB 1336 for introduction of Type 'B' Fuel Tank Pt. No. 283801-2

VS Clutch Switch Safety Feature


Item No.	Part No.	Description	Quantity
* 1	48-149	Sensor Switch	1
* 2	457-6	Washer - Plain Ø12	2
* 3	410-33	Lock Nut	1

Note

* These parts are chassis related. Contact the Johnston Parts Department, quoting the machine serial number, for further information.

The above parts are not supplied with standard ESU's.

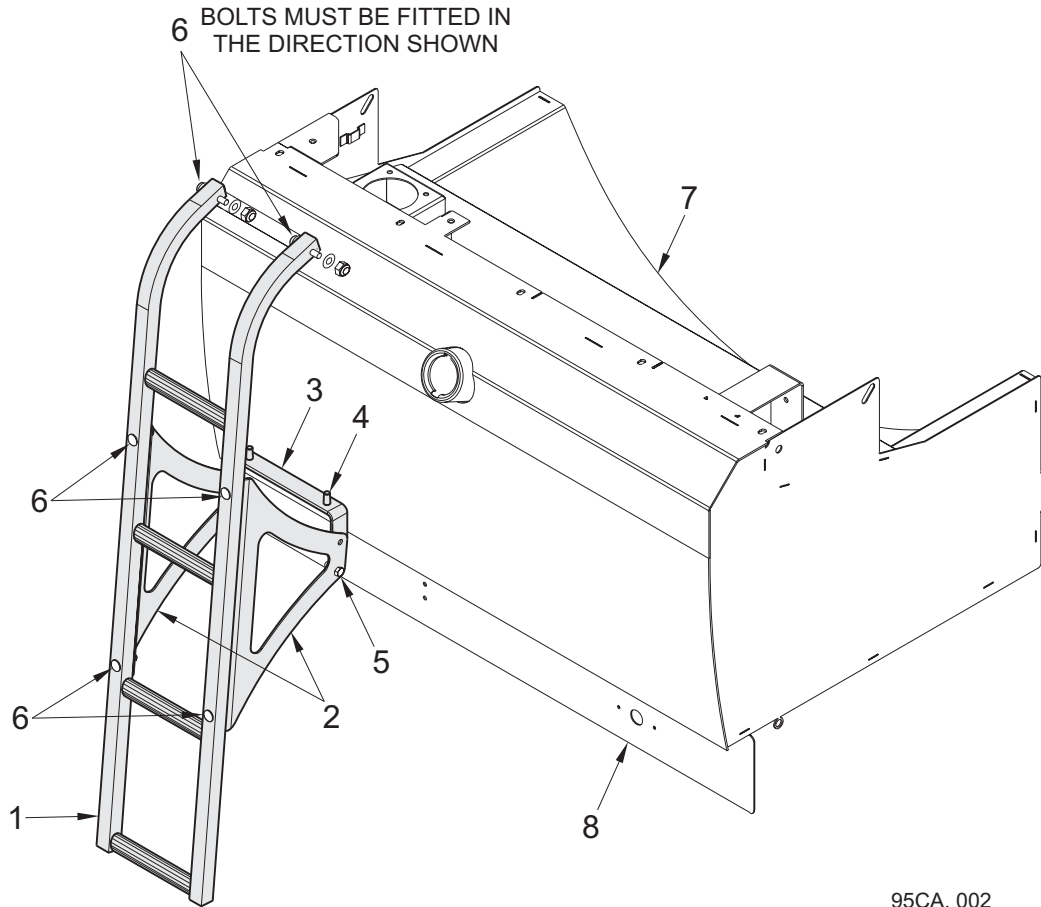
Johnston reference drawings:

The relevant installation drawing can be found via the Chassis Drawing Matrix shown in chapter 33 page 33:2.

Superseded Parts

Table of Contents

Section	Page
Access Ladder Installation - Type 'A' Fuel Tank	33 : 10

Superseded Access Ladder Installation


95CA. 002

Chassis Matrix - Various

Item No.	Part No.	Description	Quantity
	282440	Installation Drawing comprising items 1 to 6	
1	282561-1	Access Ladder	1
2	200517-1	Stay	2
3	282575-1	Bottom Mount	1
4	124-169	Screw M10 x 25	2
	460-11	Washer - Spring	2
5	124-137	Screw M8 x 25	2
	455-10	Washer - Plain	2
	425-14	Nut - Nyloc M8	2
6	136-22	Carriage Bolt M8 x 40	6
	455-10	Washer - Plain	6
	425-14	Nut - Nyloc M8	6
7	-	Type 'A' Fuel Tank - See Chapter 22	-
8	-	Valance - See Chapter 31	-

CHAPTER

34

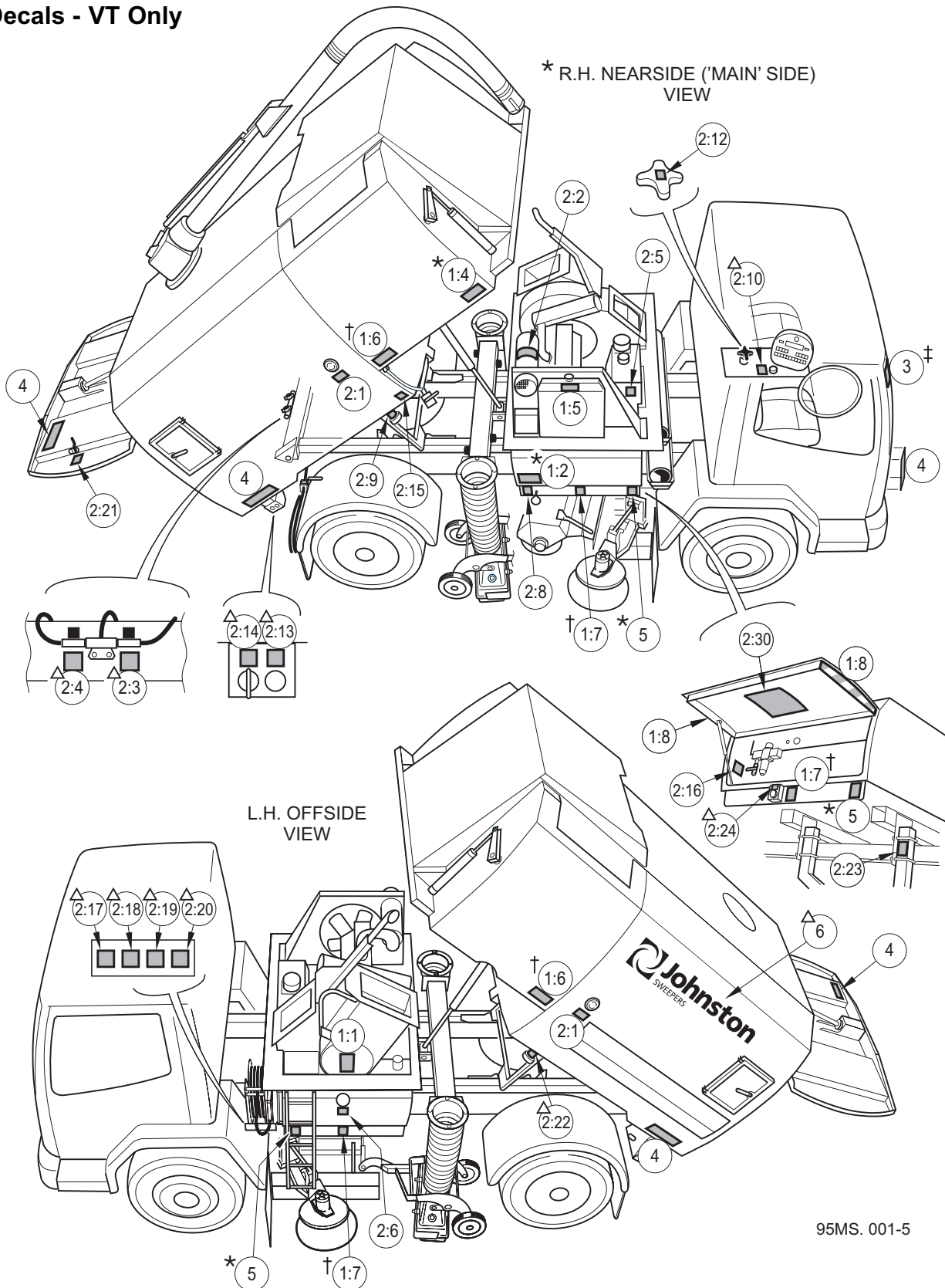
Miscellaneous

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Lubricants and Tool Kit	34 : 6

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Decals - VT Only



* 1:2, 1:4 & 5 Fit to 'main' side of machine, i.e. R.H. dual sweep machine R.H. side (As shown)
L.H. dual sweep machine L.H. side

† 1:6 & 1:7 Fit to both sides of machine, single & dual sweep machines.

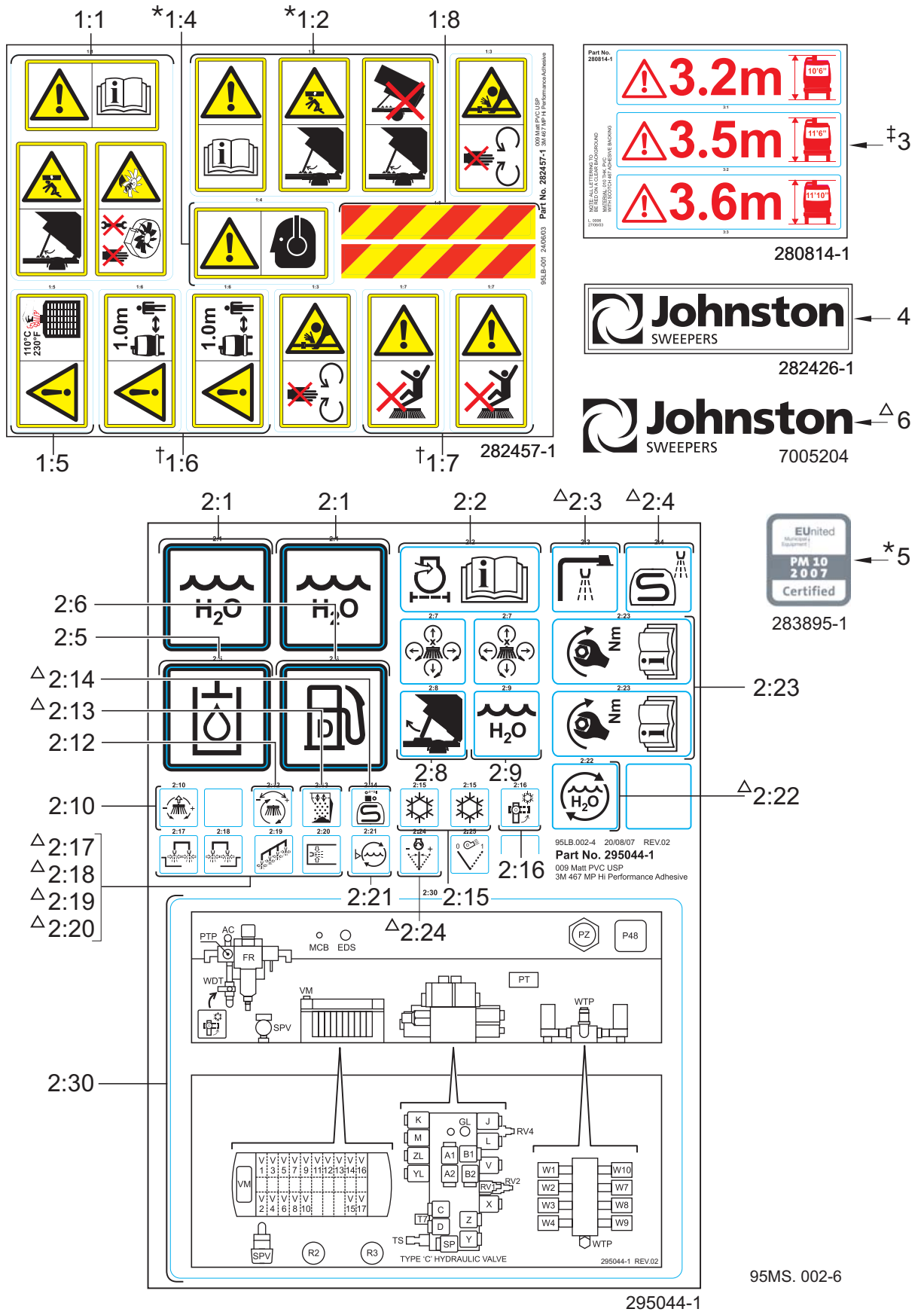
‡ 3 Fit label appropriate to vehicle height + 50mm.

△X:XX Optional equipment.

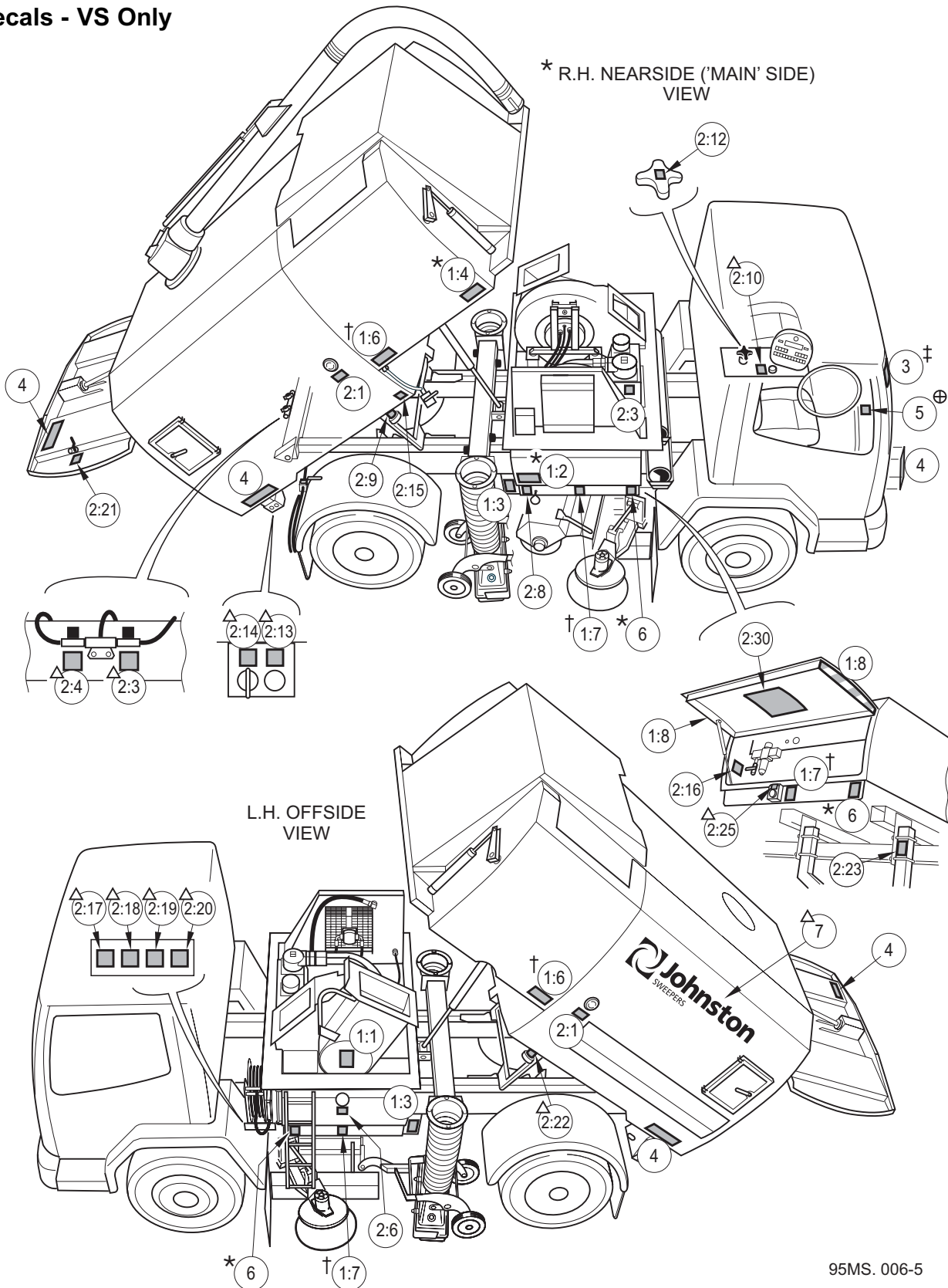
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BoM 951811

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Decals - VS Only



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95MS. 006-5

* 1:2, 1:4 & 6 Fit to 'main' side of machine, i.e. R.H. dual sweep machine R.H. side (As shown)
L.H. dual sweep machine L.H. side

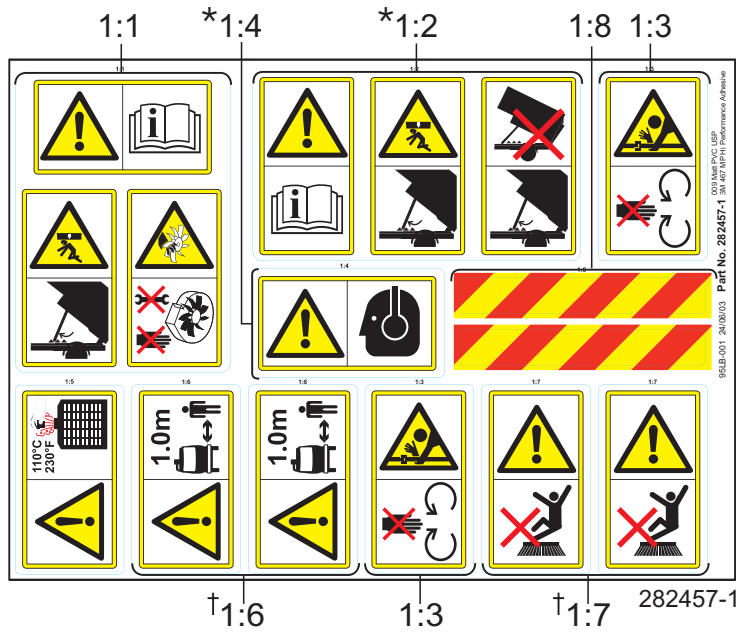
† 1:6 & 1:7 Fit to both sides of machine, single & dual sweep machines.

‡ 3 Fit label appropriate to vehicle height + 50mm.

⊕ 5 Chassis gearbox direct (1:1) drive. Actual gear depends on chassis.

BoM 951811

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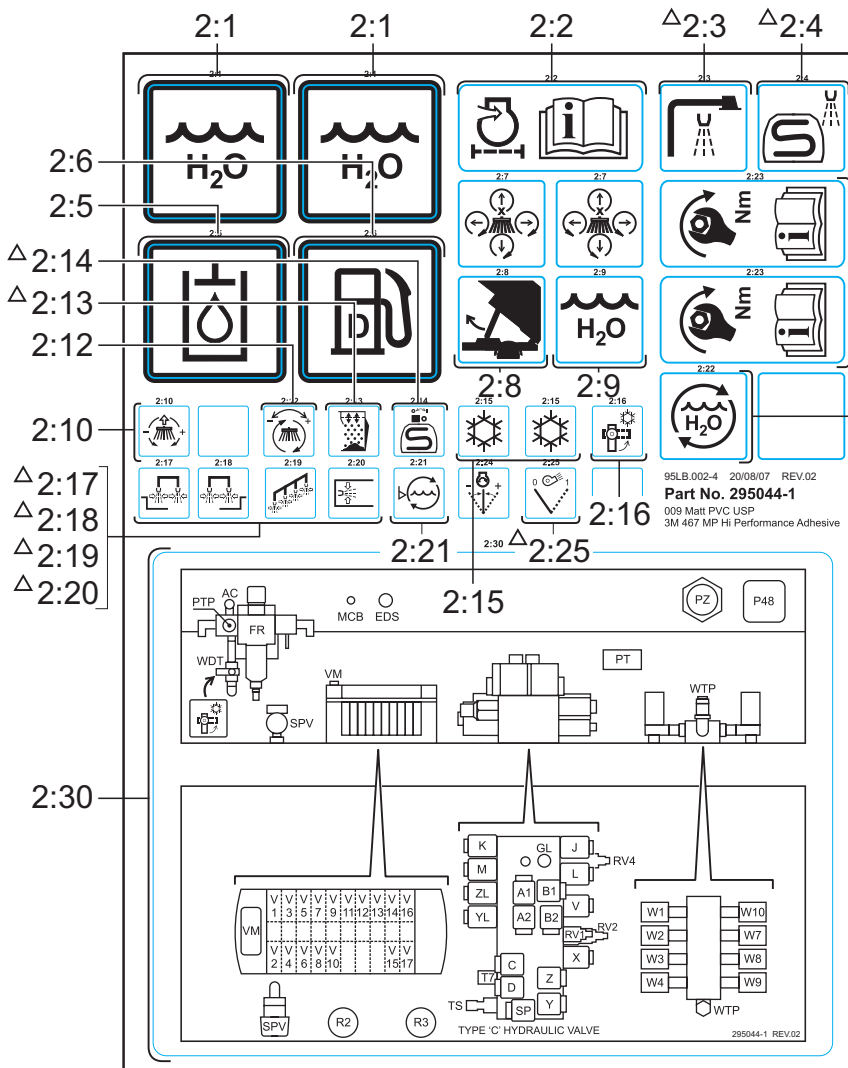
280814-1



282426-1



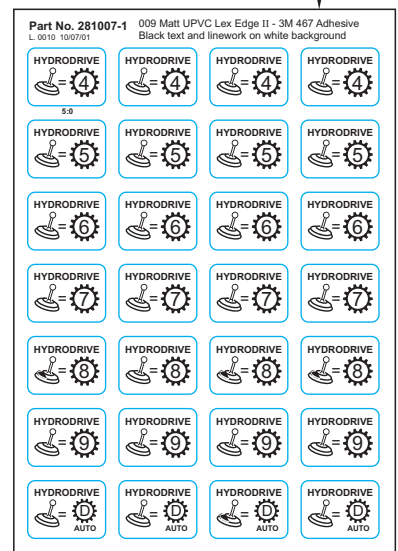
7005204



295044-1



283895-1

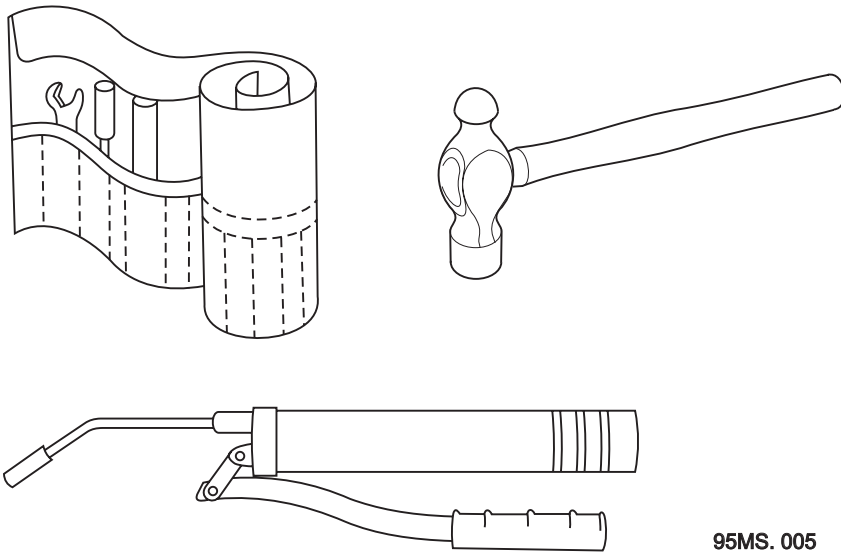


281007-1

95MS. 007-6

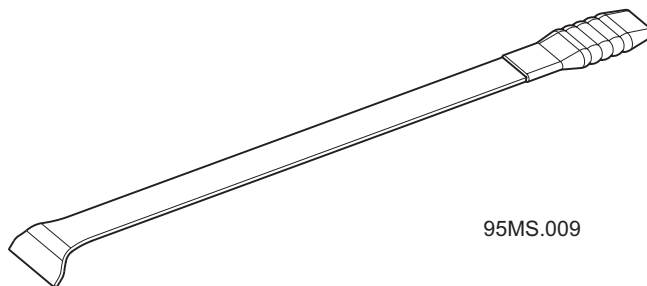
Lubricants

Part No.	Description	Quantity
39671	Vitaliser Fluid	Top Up Bottle
39672-5	Hydraulic Oil	5 Litre Can
39673-5	Fluid Flywheel Oil	5 Litre Can
39675-5	Automatic Transmission and Power Steering Fluid	5 Litre Can
39676-5	Engine Oil	5 Litre Can
39677-5	Gearbox Oil	5 Litre Can
39678-5	Antifreeze	5 Litre Can

Tool Kit - KT03995


95MS.005

Part No.	Description
282499-1	Tool Kit

Fan Scraper - Option


95MS.009

Suction Fan Scraper Pt. No. 283665-1 for cleaning debris from underside of blades to prevent vibration. See Operator's Guide, Chapter 6, Routine Maintenance, Suction Fan Impeller and Casing.

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CHAPTER

35

Optional Equipment

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CCTV Cameras	35.AE : 5
Water Hydrant Kit	35.AE : 9
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Heavy Duty Intake Components	35.BD : 3
Contractors Rear Door	35.BD : 5
> 'Johnston' Front Brush	
Supplement pt.no. 02618-1 Available on request	35.FB
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Pump Low Water By-pass Valve	35.WS : 21

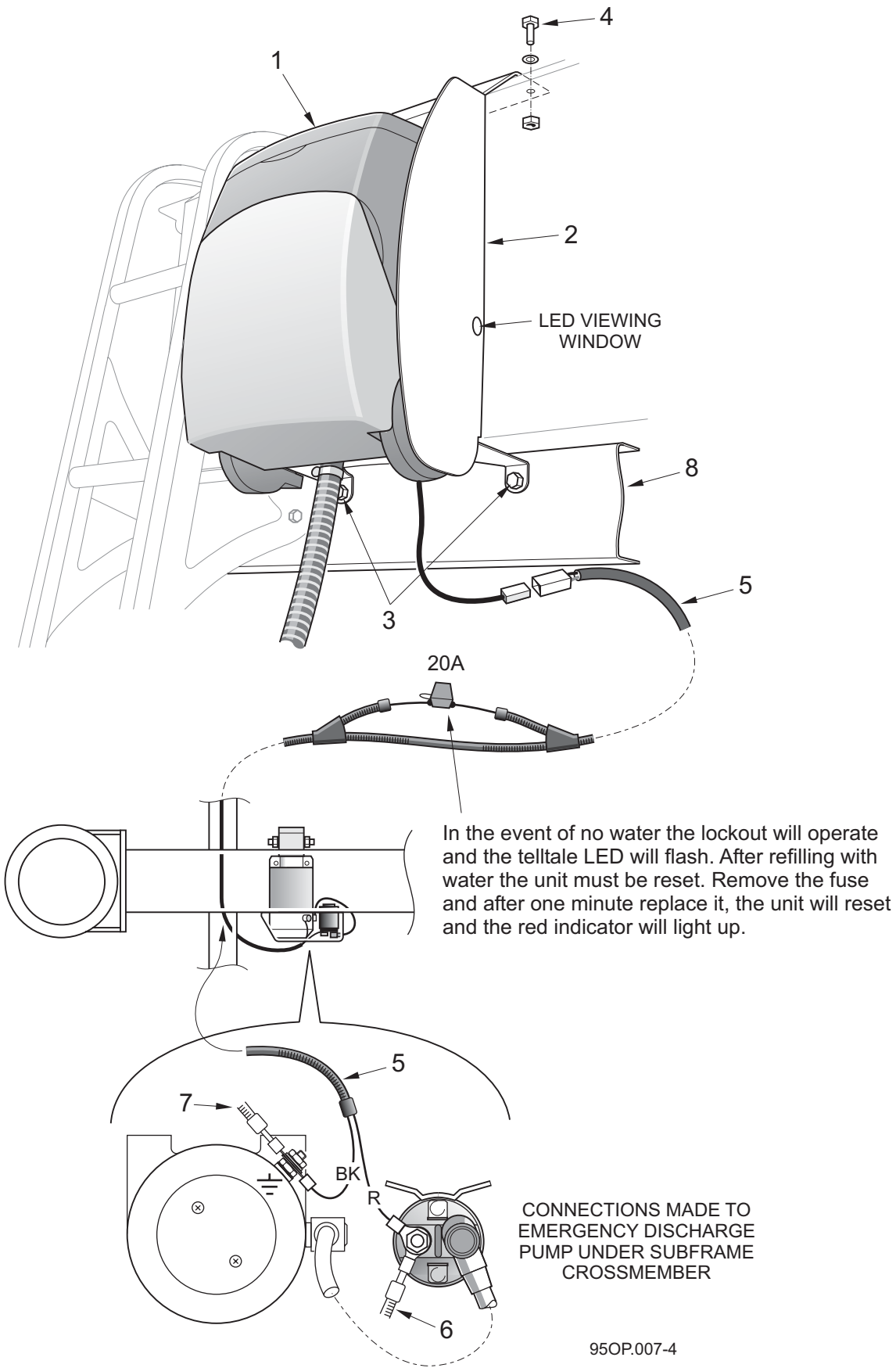
35.AE

Ancillary Equipment - Handwash Unit

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Handwash Unit



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Handwash Unit

BoM KT04095

Item No.	Part No.	Description	Quantity
	807350-1	Handwash - L.H. Installation	
1	222-93	Handwash Unit - 24V	1
2	283779-1	Bracket)	1
3	124-136	Screw M8 x 22) Used with superseded	2
	455-10	Washer - Plain M8) Type 'B' Fuel Tank	2
	425-14	Nut - Nyloc M8)	2
2	807711-1	Bracket)	1
3	124-171	Screw M10 x 30) Used with superseded	1
	455-11	Washer - Plain) Type 'A' Fuel Tank	1
	95200-1	Spacer Ø11 I.D. x 12)	1
4	135-69	Screw M8 x 25	2
	455-10	Washer - Plain	2
	425-14	Nut - Nyloc M8	2
5	293763-1	Handwash Loom	1
6	-	Pump Cable - Red) See Emergency Discharge	
7	-	Pump Cable - Black) Pump - Chapter 28	
8	-	Valance - See Chapter 33, Access Ladder and Valance Installation, Type 'B' Fuel Tank	

Notes

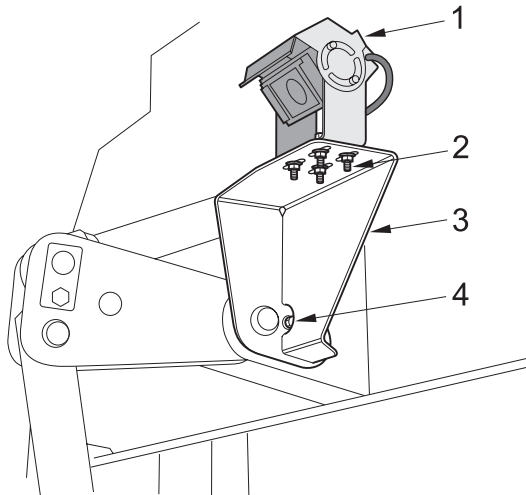
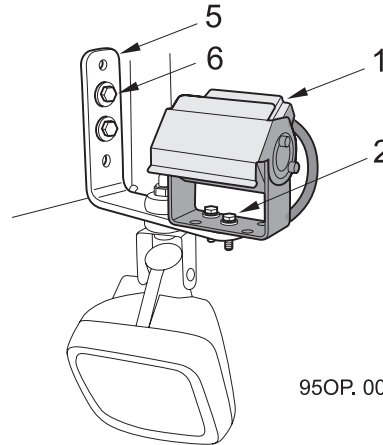
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35.AE

Ancillary Equipment - CCTV Cameras

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Monitor Installation	35.AE : 7

Camera/Monitor Kits and Camera Installations

BODY REAR

BODY SIDE - VALANCE

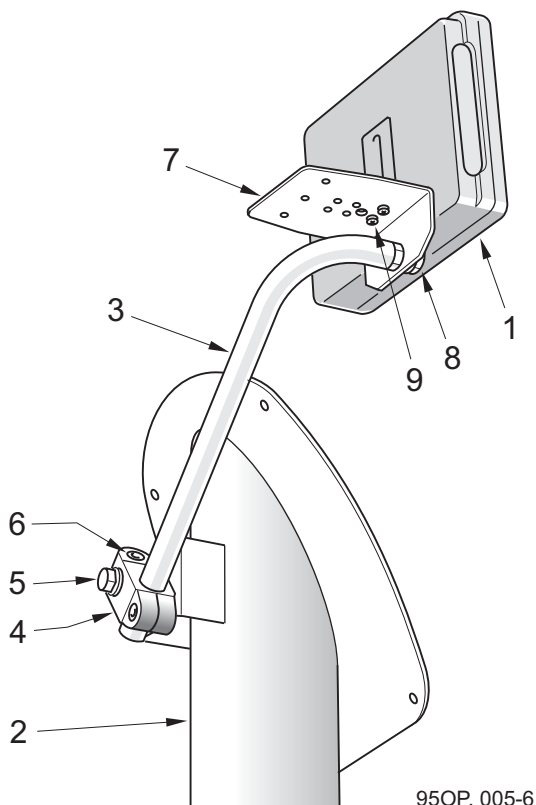
95OP.005-4

Item No.	Part No.	Description	Quantity	
Ultra Low Light Colour Camera and High Definition Flat Screen Monitor Kits:				
	657-1	One Camera and one 5.6" Monitor		
	657-2	Two Cameras and one 5.6" Monitor		
	657-31	One Camera and one 7.0" Monitor		
	657-32	Two Cameras and one 7.0" Monitor		
	655-33	Three Cameras and one Quad Split Screen Monitor		
BoM KT03795				
			Rear	Side
* 1	-	Camera	1	1
	657-15	Camera Lead x 15m	As Required	
	657-23	Camera Lead x 23m	As Required	
2	124-103	Screw M6 x 20	4	2
	460-8	Washer - Plain	4	2
	420-13	Nut - Nyloc M6	4	2
3	283438-1	Mount	1	-
4	124-132	Screw M8 x 12	1	-
	460-10	Washer - Spring	1	-
> 5	284019-1	Camera/Worklight Bracket	-	1
6	124-103	Screw M6 x 20	-	2
	460-8	Washer - Plain	-	4
	420-13	Nut - Nyloc M6	-	2

* Quote the machine serial number and the camera system fitted (if known) when ordering replacement parts.

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Monitor Installation



BoM KT03795

Item No.	Part No.	Description	Quantity
	809390-2	Monitor Installation	
* 1	-	5.6" or 7.0" Monitor with Power Leads	
2	807229-1	Pedestal	1
3	809387-1	Monitor Post	1
4	220-251	Cross Clamp 16mm	1
5	124-144	Screw M8 x 45	1
	56569-8	Spacer	1
	455-10	Washer - Plain Ø8	1
6	129-93	Screw - Cap Head M6 x 16	2
	425-13	Nut - Nyloc M6	2
7	809389-1	Monitor Mount	1
8	124-134	Screw M8 x 16	1
	460-10	Washer Spring Ø8	1
	455-10	Washer - Plain Ø8	1
9	134-10	Screw - Pan Head M3 x 6	2
	460-3	Washer Spring Ø3	2
	455-3	Washer - Plain Ø3	2

* Quote the machine serial number and the camera system fitted (if known) when ordering replacement parts.

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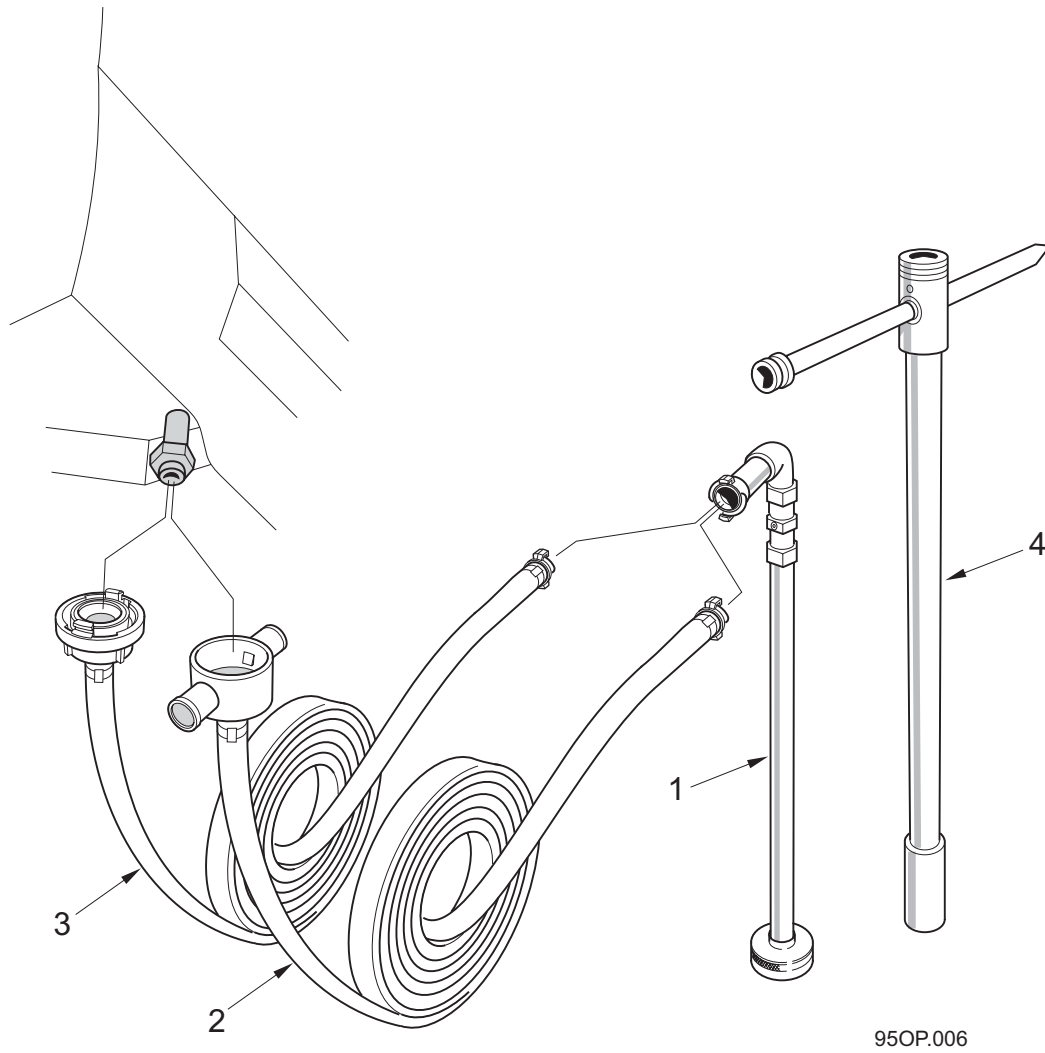
35.AE

Ancillary Equipment - Water Hydrant Kit

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Water Hydrant Kit



BoM KT04095

Item No.	Part No.	Description	Quantity
1	72688-1	Standpipe Assembly - UK	1
	72688-2	Standpipe Assembly - German	1
	72688-11	Standpipe Assembly - Belfast	1
2	72689-6	Hose Assembly - 2 1/2" Instantaneous Coupling (UK only)	1
3	72689-1	Hose Assembly - Stortz Coupling (66mm between lugs)	1
4	667-6	Key Poker	1

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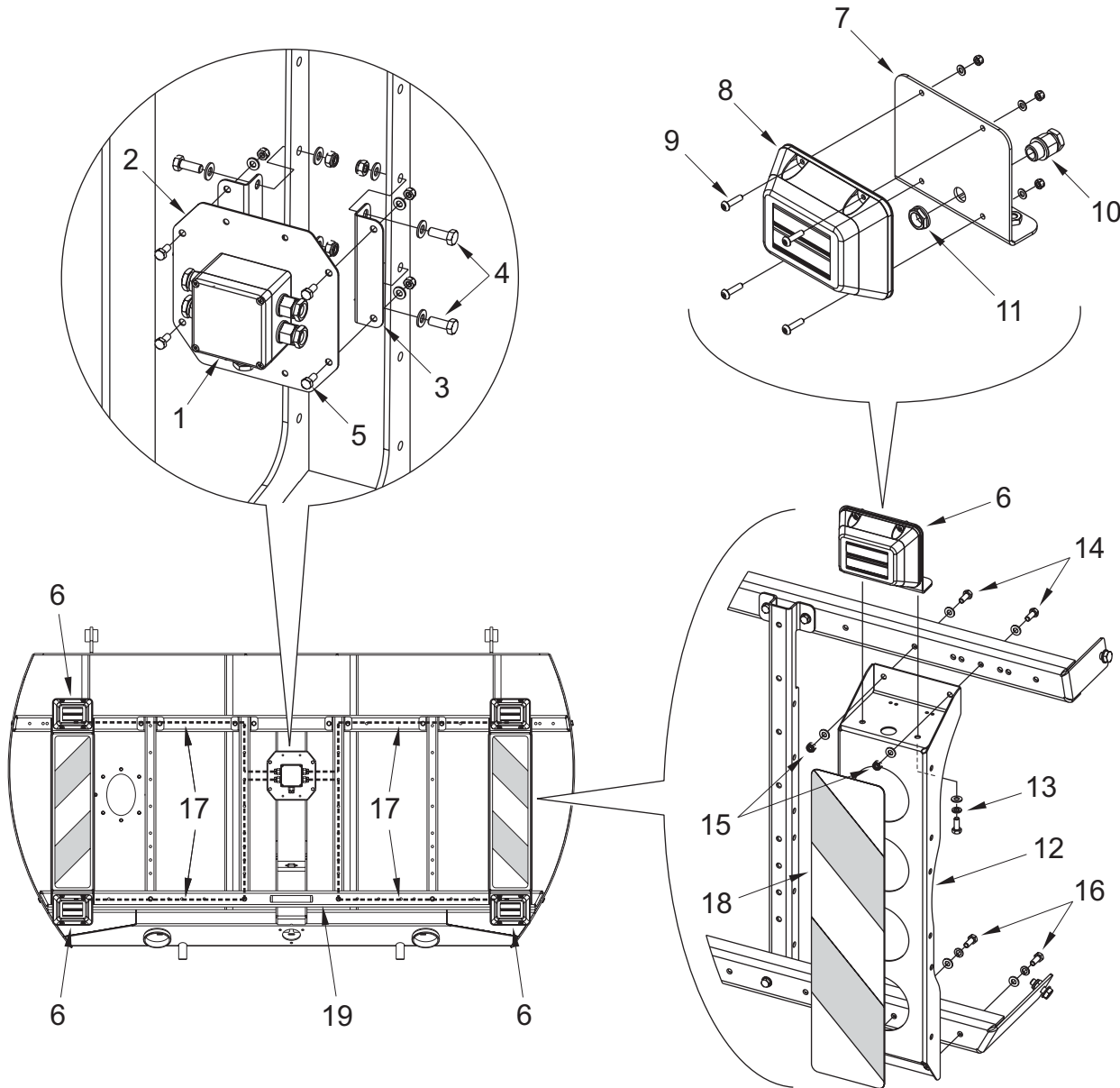
35.AE

Ancillary Equipment - LED Warning Lights

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Rear LED Warning Light Installation



95OP.016

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Rear LED Warning Light Installation

BoM KT01295

Item No.	Part No.	Description	Quantity
	284117-2	LED Warning Light Installation comprising items 1 to 16:-	
1	284116-1	LED/ Enclosure comprising items 1 and 2:-	1
	284120-1	Control Module	1
	134-41	Screw - Pan Head M4 x 10	4
	455-5	Washer - Plain Ø4	4
	425-11	Nut - Nyloc M4	4
2	283285-1	Mounting Plate	1
3	283284-1	Mounting Bracket	2
4	124-136	Screw M8 x 22	4
	455-10	Washer - Plain Ø8	8
	425-14	Nut - Nyloc M8	4
5	124-101	Screw M6 x 14	4
	455-8	Washer - Plain Ø6	4
	425-13	Nut - Nyloc M6	4
6	284118-1	LED/ Bracket Assembly comprising items 7 to 11:-	4
7	284111	Bracket	1
8	745-5	LED Directional Beacon - Amber	1
9	138-65	Screw - Button Head M5 x 20	4
	455-7	Washer - Plain Ø5	4
	425-12	Nut - Nyloc M5	4
10	86-11	Cable Gland	1
11	700-93	Locknut M16	1
12	282975-1	Base Plate	2
13	124-135	Screw M8 x 20	4
	460-10	Washer - Spring Ø8	4
	455-10	Washer - Plain Ø8	4
14	124-135	Screw M8 x 20	4
	455-10	Washer - Plain Ø8	4
15	455-10	Washer - Plain Ø8	4
	425-14	Nut - Nyloc M8	4
16	124-135	Screw M8 x 20	4
	460-10	Washer - Spring Ø8	4
	455-10	Washer - Plain Ø8	4
17	-	LED Cables Routed Behind the Options Frame	
18	20674-3	Rear Marker Boards - UK only	
19	-	Options Frame - See Chapter 27	

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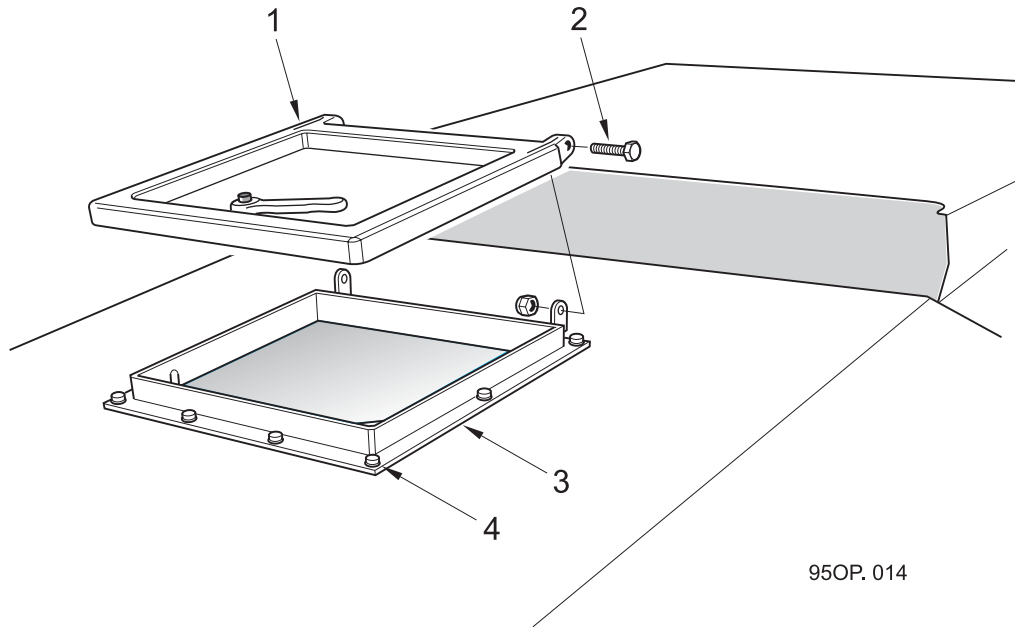
35.BD

Body - Roof Mounted Access Door

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Roof Mounted Access Door


95OP.014

BoM KTO3095

Item No.	Part No.	Description	Quantity
	283595-2	Roof Access Door Assembly comprising items 1 to 3	
1	-	Access Door Assembly - As Standard Door See Body Common Parts (1) - Chapter 20	
2	123-148	Bolt M12 x 50	2
	425-16	Nut - Nyloc M12	2
3	283596-2	Frame	1
4	124-137	Screw M8 x 25	10
	460-10	Washer - Spring M8	10

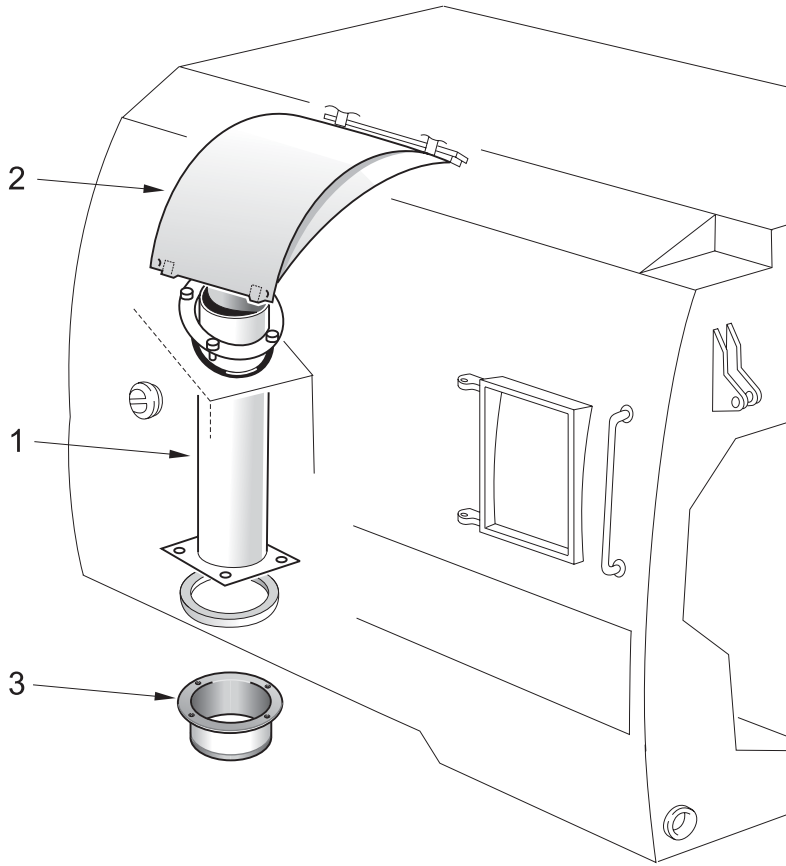
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35.BD

Body - Heavy Duty Intake Components

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Heavy Duty Intake Components


95BD.006-2

KT05395, 05396

Item No.	Part No.	Description	Quantity	
			Single	Dual
>	1	280694-50	1	2
		296031-2	1	2
2	281190-6	L.H. Heavy Duty Wear Plate - Lo-Top	1	2
	281190-5	R.H. Heavy Duty Wear Plate - Lo-Top	1	2
	61102-2	L.H. and R.H. Heavy Duty Wear Plate V650, V800	1	2

KT05295

3	94990-11	Intake Seat - Rubber Lined - 0.8 to 0.99m Chassis Height	1	2
	94990-13	Intake Seat - Rubber Lined 1.0 to 1.099m Chassis Height	1	2

Notes

Installation hardware and components as standard parts.

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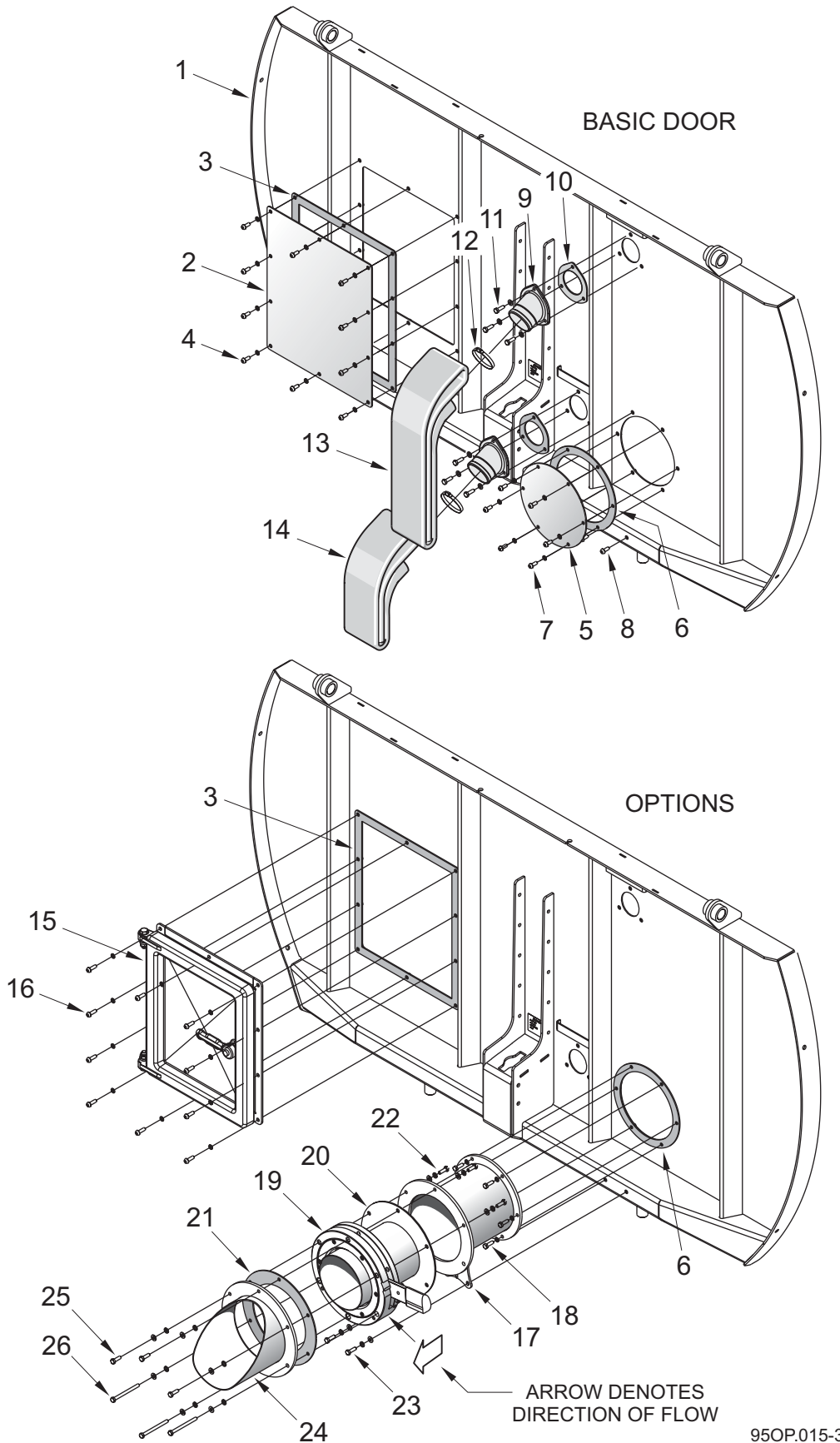
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Body - Contractors Rear Door

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Contractors Rear Door



950P.015-3

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Contractors Rear Door

BoM 950811

Item No.	Part No.	Description	Quantity	
	283930-2 283930-3	Contractors Rear Door - Chrome Steel (4003)) Comprising Contractors Rear Door - Stainless Steel (316)) items 1 to 8		
1	283871-2 283871-3	Door - Chrome Steel (4003) Door - Stainless Steel (316) Hinge Bushes and Door Seal as standard door in chapter 20.	- - -	
>	2	280528-2 280528-3	Access Panel - Chrome Steel (4003) Access Panel - Stainless Steel (316)	1 1
	3	283613-1	Gasket	1
	4	117-123 451-3	Screw M8 x 20 Stainless Steel Washer - Sealing	10 10
>	5	283862-2 283862-3	Blanking Plate - Chrome Steel (4003) Blanking Plate - Stainless Steel (316)	1 1
	6	283865-1	Gasket	1
	7	117-123 451-3	Screw M8 x 20 Stainless Steel Washer - Sealing	6 6
	8	117-123 451-3	Screw M8 x 20 Stainless Steel Washer - Sealing	2 2
Options				
	9	281452-1	Drain Spigot	2
	10	281411-1	Gasket	2
	11	118-137 451-82	Screw M8 x 25 Stainless Steel Washer - Brass	6 6
	12	501-7	Hose Clip	2
	13	9983	Layflat Hose x 1.6m	1
	14	9983	Layflat Hose x 1.0m	1
	15	283595-2	Roof / Rear Access Door Assembly - See page 35.BD:1	1
	16	117-125 451-3	Screw M8 x 25 Stainless Steel Washer - Sealing	10 10
	17	283879-1	Extension Tube	1
	18	118-137 451-3	Screw M8 x 25 Stainless Steel Washer - Sealing	6 6
	19	88-45	Iris Valve	1
	20	88-48	Iris Valve Liner	1
	21	283866-1	Gasket	1
	22	124-137 460-10	Screw M8 x 25 Washer - Spring M8	3 3
>		455-10	Washer - Plain M8	3
	23	124-137 460-10	Screw M8 x 25 Washer - Spring M8	2 2
		455-10	Washer - Plain M8	2

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Contractors Rear Door
BoM 950811

Item No.	Part No.	Description	Quantity
24	283864-1	Chute	1
	124-137	Screw M8 x 25	3
	460-10	Washer - Spring M8	3
	455-10	Washer - Plain M8	3
26	123-119	Screw M8 x 95	3
	460-10	Washer - Spring M8	3
	455-10	Washer - Plain M8	3

Notes

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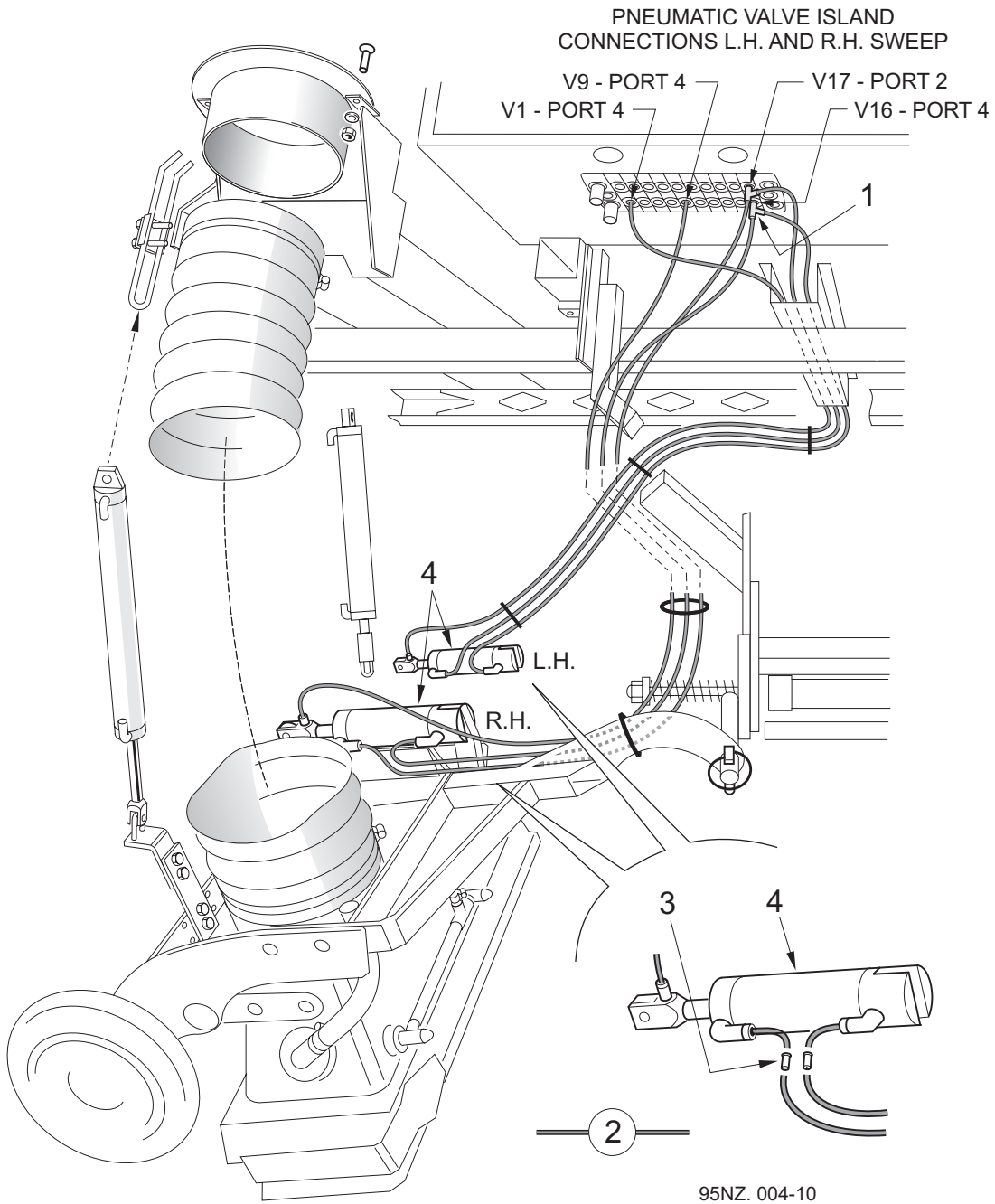
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Sweep Gear - Varagap Nozzle

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Varagap Nozzle Installation



DUAL SWEEP INSTALLATION SHOWN

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Varagap Nozzle Installation

BoM KT 07895

Item No.	Part No.	Description	Quantity Dual Sweep
1	554-3	Tee Adaptor - Dual Sweep Only	2
2	273-20	Pneumatic Pipe Ø6 Blue	18m
3	41041-1	Restrictor Ø6 Pipe	4

BoM 951113

4	290002-1	Varagap Cylinder	2
---	----------	------------------	---

Notes

For Varagap Joystick Control see Switch Panel chapter 32

For Varagap Cylinder Seal Kit see chapter 29

Refer to Electrical Diagram SE574z02 in chapter 9

Refer to Pneumatic Diagram SP547a02 in chapter 11

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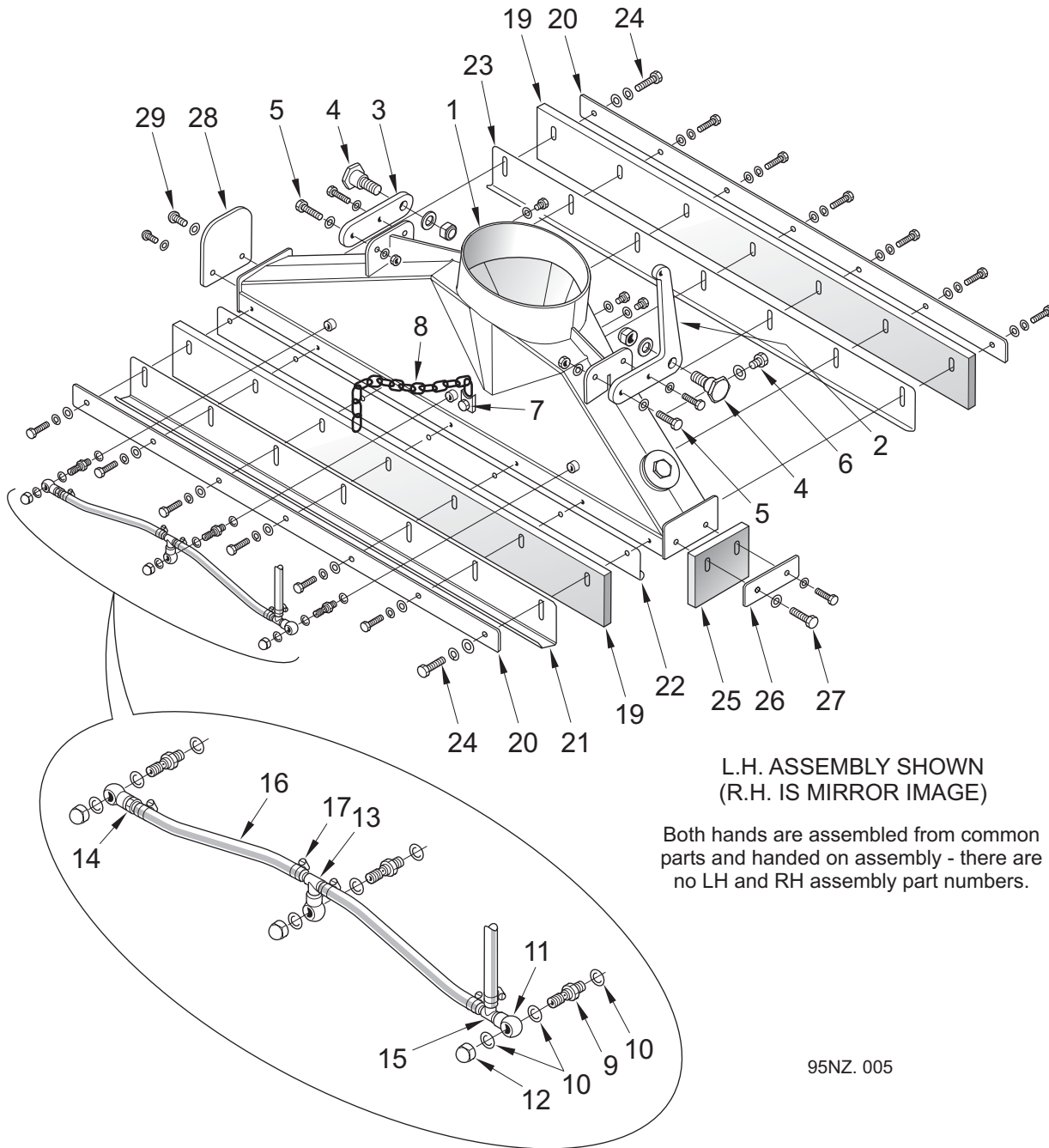
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Sweep Gear - Full Width Nozzles

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'Wide Mouth' Nozzle (Maxigap/Varagap)	35.SG : 6
'Narrow Mouth' Chipping Nozzle	35.SG : 8
'Narrow Mouth' Fluid Recovery Nozzle	35.SG : 10
Carriage	
> Carriage and Cradle Assemblies	35.SG : 12

Full Width 'Wide Mouth' Nozzle



L.H. ASSEMBLY SHOWN
(R.H. IS MIRROR IMAGE)

Both hands are assembled from common parts and handed on assembly - there are no LH and RH assembly part numbers.

95NZ. 005

BoM KT08995

Item No.	Part No.	Description	Quantity per Nozzle
>	* 283480-1	Full Width 'Wide Mouth' Nozzle Assembly comprising:-	
1	283460-1	Nozzle - 'Wide Mouth'	1
2	281752-1	Actuator Arm	1
3	281751-1	Pivot Arm	1
4	283363-1	Pivot Bolt	2
	455-16	Washer Plain M20	2
	425-20	Nut - Nyloc M20	2

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Full Width 'Wide Mouth' Nozzle

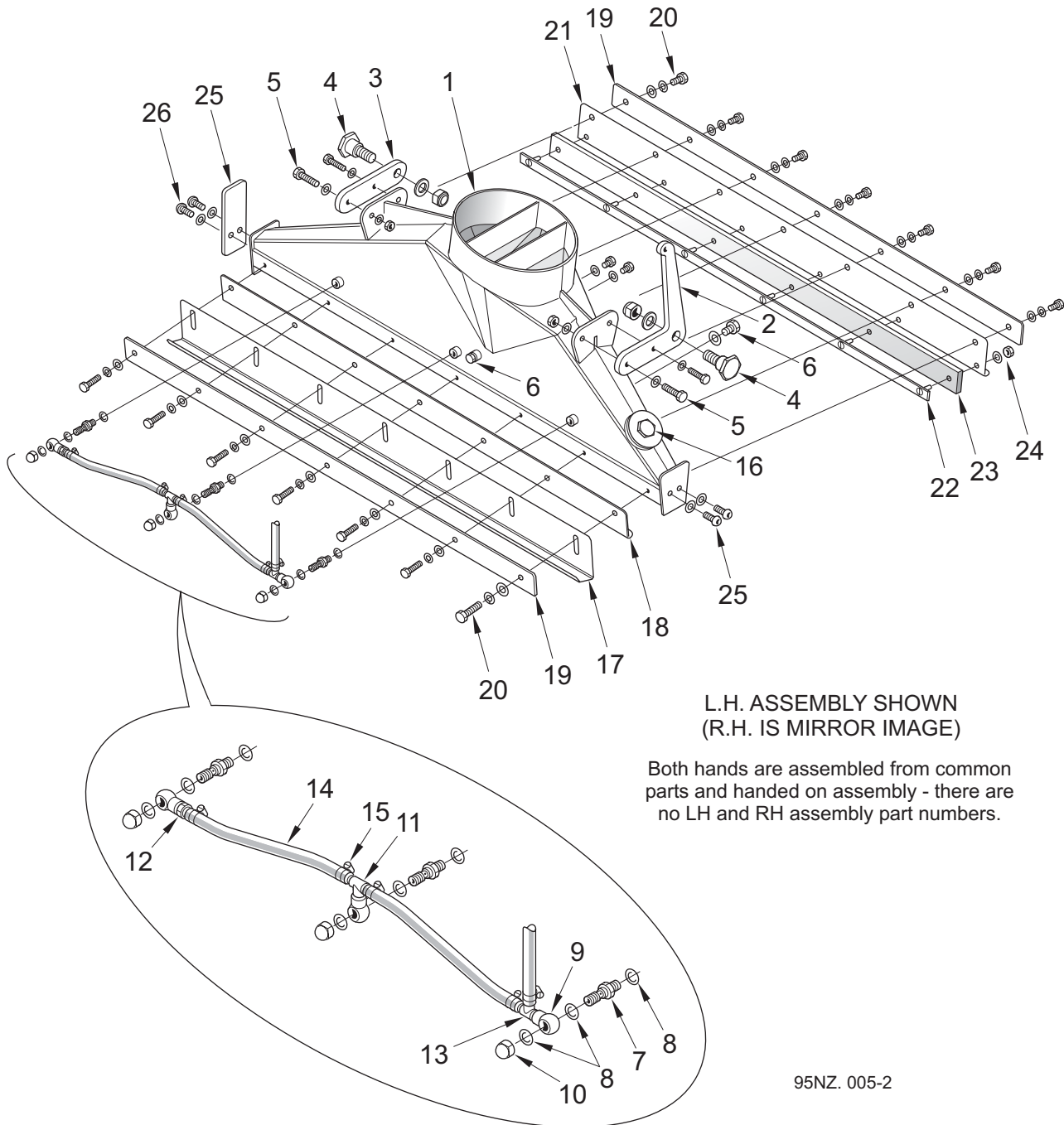
Item No.	Part No.	Description	Quantity per Nozzle
5	124-175	Screw M10c x 40	4
	455-11	Washer - Plain M10	4
	425-15	Nut - Nyloc M10	4
6	124-198	Screw M12 x 16	4
	455-12	Washer - Plain M12	4
7	124-203	Screw M12 x 30	1
	455-12	Washer - Plain M12	1
	460-12	Washer - Spring M12	1
8	62353	Link	1
> 9	40755-2	Water Jet - M12	3
10	453-1	Washer - Fibre (Red)	9
11	26997-1	Banjo Body	3
12	418-12	Dome Nut M12	3
13	62746-1	Hose Adaptor	1
14	46382-3	Adaptor - Hose	1
15	90696-1	Tee Piece	1
16	39444	Water Hose 3/8" Bore x 3m	1
17	501-1	Hose Clip	5
18	281755-1	Plug	1
	410-57	Back Nut G 3/4"	1
19	283471-1	Front / Rear Curtain	2
20	283474-1	Curtain Retainer	2
21	283479-2	Leading Shoe	1
22	283478-2	Deflector	1
23	283494-1	Trailing Curtain Support	1
24	119-128	Bolt M10 x 40 Stainless Steel	14
	458-10	Washer - Spring M10 Stainless Steel	14
	454-10	Washer - Plain M10 Stainless Steel	14
25	283473-1	Side Curtain	1
26	283475-1	Curtain Retainer - Side	1
27	119-130	Bolt M10 x 50 Stainless Steel	2
	454-10	Washer - Plain M10	2
	417-10	Nut - Nyloc M10 Stainless Steel	2
28	283537-1	Guide	1
29	138-156	Button Head Screw M10 x 25	2
	455-11	Washer - Plain M10	2
	425-15	Nut - Nyloc M10	2

Note

* This assembly is part of Carriage Assemblies 283497-1 and 283498-1 shown on page 35.SG:13

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Full Width Chipping Nozzle



L.H. ASSEMBLY SHOWN
(R.H. IS MIRROR IMAGE)

Both hands are assembled from common parts and handed on assembly - there are no LH and RH assembly part numbers.

95NZ. 005-2

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Full Width Chipping Nozzle

BoM KT08995

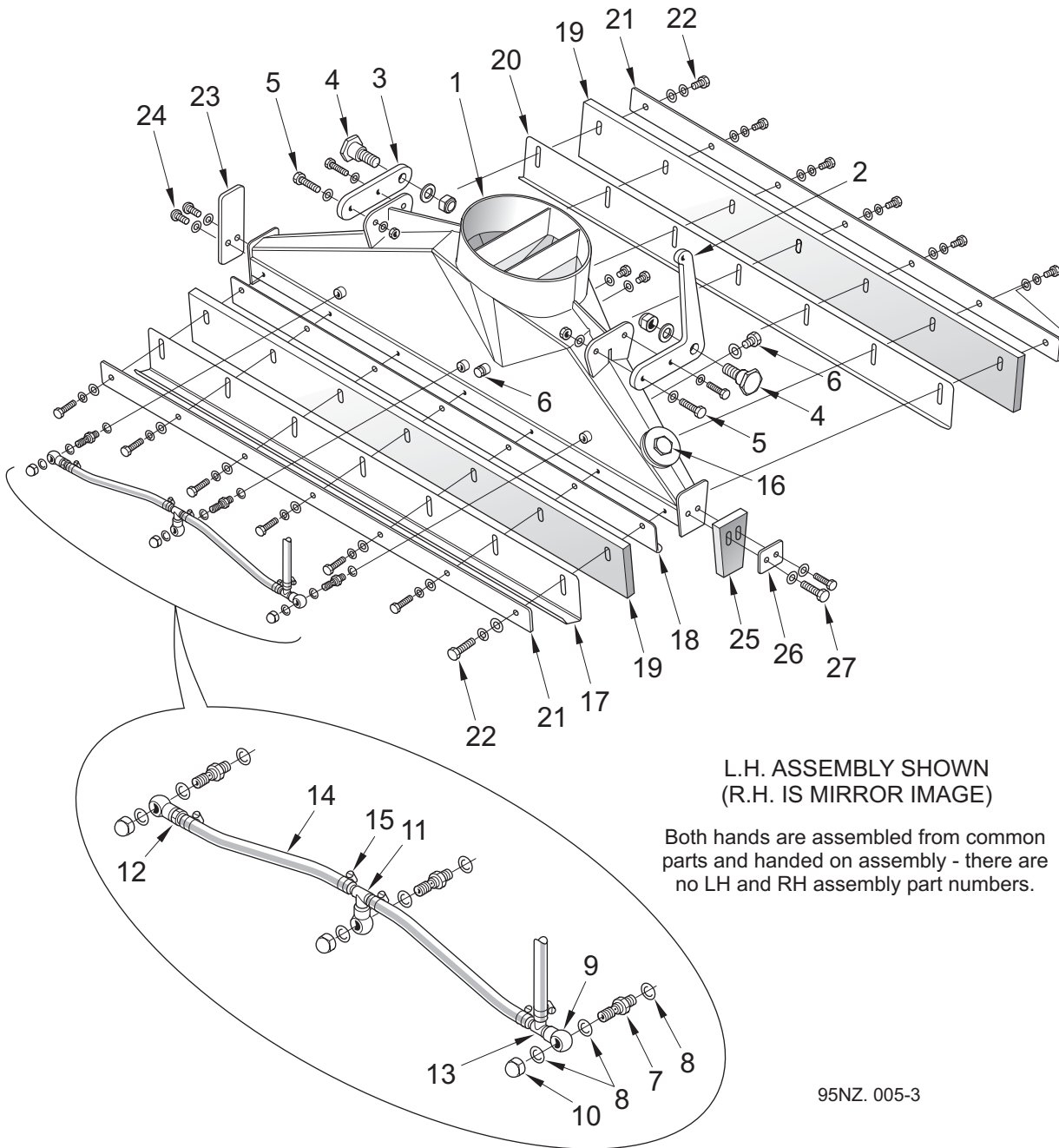
Item No.	Part No.	Description	Quantity per Nozzle	
>	* 283490-1	Full Width 'Chipping Nozzle' Assembly comprising:-		
1	283470-1	Nozzle - Narrow Mouth	1	
2	281752-1	Actuator Arm	1	
3	281751-1	Pivot Arm	1	
4	283363-1	Pivot Bolt	2	
	455-16	Washer - Plain M20	2	
	425-20	Nut - Nyloc M20	2	
5	124-175	Screw M10c x 40	4	
	455-11	Washer - Plain M10	4	
	425-15	Nut - Nyloc M10	4	
6	124-198	Screw M12 x 16	4	
	455-12	Washer - Plain M12	4	
>	7	40755-2	Water Jet - M12	3
	8	453-1	Washer - Fibre (Red)	9
	9	26997-1	Banjo Body	3
	10	418-12	Dome Nut M12	3
	11	62746-1	Hose Adaptor	1
	12	46382-3	Adaptor - Hose	1
	13	62736-1	Tee Piece	1
	14	39444	Water Hose 3/8" Bore x 3m	1
	15	501-1	Hose Clip	5
	16	281755-1	Plug	1
	410-57	Back Nut G 3/4"	1	
	17	283479-2	Leading Shoe	1
	18	283478-2	Deflector	1
	19	283474-1	Curtain Retainer	2
	20	119-128	Bolt M10 x 40 Stainless Steel	14
	458-10	Washer - Spring M10 Stainless Steel	14	
	454-10	Washer - Plain M10 Stainless Steel	14	
	21	283477-2	Trailing Shoe	1
	22	40815-1	Clamp Strip	1
	23	40823-1	Rubber	1
	24	454-8	Washer - Plain M8 Stainless Steel	6
	417-8	Nut - Nyloc M8 Stainless Steel	6	
	25	283538-1	Guide	1
	26	138-156	Button Head Screw M10 x 30	4
	455-11	Washer - Plain M10	4	
	425-15	Nut - Nyloc M10	4	

Note:

* This assembly is part of Carriage Assembly 283500-1 shown on page 35.SG:13

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Full Width Fluid Recovery Nozzle



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Full Width Fluid Recovery Nozzle

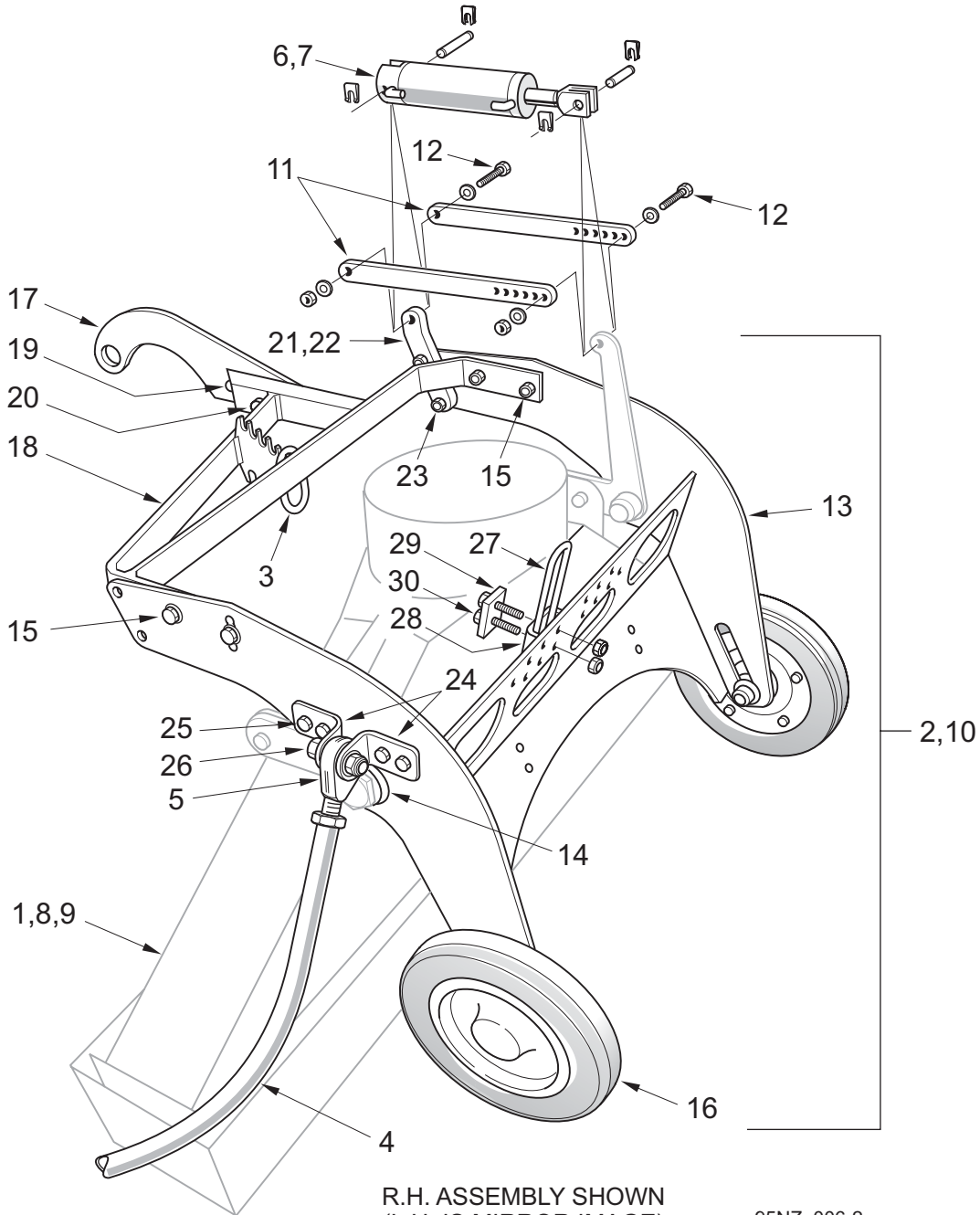
BoM KT08995

Item No.	Part No.	Description	Quantity per Nozzle
	* 283490-2	Full Width 'Fluid Recovery' Nozzle Assembly comprising:-	
1	283470-1	Nozzle - Narrow Mouth	1
2	281752-1	Actuator Arm	1
3	281751-1	Pivot Arm	1
4	283363-1	Pivot Bolt	2
	455-16	Washer - Plain M20	2
	425-20	Nut - Nyloc M20	2
5	124-175	Screw M10c x 40	4
	455-11	Washer - Plain M10	4
	425-15	Nut - Nyloc M10	4
6	124=198	Screw M12 x 16	4
	455-12	Washer - Plain M12	4
> 7	40755-2	Water Jet - M12	3
8	453-1	Washer - Fibre (Red)	9
9	26997-1	Banjo Body	3
10	418-12	Dome Nut M12	3
11	62746-1	Hose Adaptor	1
12	46382-3	Adaptor - Hose	1
13	90696-1	Tee Piece	1
14	39444	Water Hose 3/8" Bore x 3m	1
15	501-1	Hose Clip	5
16	281755-1	Plug	1
	410-57	Back Nut G 3/4"	1
17	283479-2	Leading Shoe	1
18	283478-2	Deflector	1
19	283471-1	Front / Rear Curtain	2
20	283494-1	Rear Curtain Support	1
21	283474-1	Curtain Retainer	2
22	119-128	Bolt M10 x 40 Stainless Steel	14
	458-10	Washer - Spring M10 Stainless Steel	14
	454-10	Washer - Plain M10 Stainless Steel	14
23	283538-1	Guide	1
24	138-156	Button Head Screw M10 x 30	2
	455-11	Washer - Plain M10	2
	425-15	Nut - Nyloc M10	2
25	283472-1	Side Curtain	1
26	282476-1	Curtain Retainer - Side	1
27	119-128	Bolt M10 x 40 Stainless Steel	2
	454-10	Washer - Spring M10 Stainless Steel	2
	417-10	Nut - Nyloc M10 Stainless Steel	2

Note:

* This assembly is part of Carriage Assembly 283500-1 shown on page 35.SG:13

Full Width Nozzle Carriage



R.H. ASSEMBLY SHOWN
(L.H. IS MIRROR IMAGE)

95NZ. 006-2

Both hands are assembled from common parts and handed on assembly.
There are no L.H. and R.H. assembly part numbers.

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Full Width Nozzle Carriage

BoM KT08995

Item No.	Part No.	Description	Quantity per Nozzle	
			Maxigap	Varagap
	283497-1	'Wide Mouth' Carriage Assembly	✓	-
	283498-1	'Wide Mouth' Carriage Assembly	-	✓
		Assemblies comprise items 1 to 7:-		
1	283480-1	'Wide Mouth' Nozzle Assembly - See page SG:6	1	1
2	283491-1	Cradle Assembly - See items 13 to 30	1	1
3	282968-1	Adjuster Link	1	1
	283493-1	Link Arm Assembly comprising items 4 and 5		
4	283489-1	Link Arm	1	1
5	16-10	Rod End	2	2
	421-18	Lock Nut M16	2	2
6	290001-1	Maxigap Cylinder	1	-
7	290001-2	Varagap Cylinder	-	1
			Fluid Recovery	Chipping Nozzle
	283499-1	'Narrow Mouth' Carriage Assembly	✓	-
	283500-1	'Narrow Mouth' Carriage Assembly	-	✓
		Assemblies comprise items 8 to 12:-		
8	283490-2	Fluid Recovery Nozzle Assembly - See page SG:10	1	-
9	283490-1	Chipping Nozzle Assembly - See page SG:8	-	1
10	283492-1	Cradle Assembly - See items 13 to 30	1	1
11	283487-1	Tie Bar	2	2
12	123-130	Bolt M10 x 50	2	2
	455-11	Washer - Plain M10	4	4
	425-15	Nut - Nyloc M10	2	2
	283493-1	Link Arm Assembly comprising items 4 and 5 above		
		Cradle Assemblies	Maxigap/ Varagap	Chipping/ Fluid Recovery
	283491-1	'Wide Mouth' Cradle Assembly	✓	-
	283492-1	'Narrow Mouth' Cradle Assembly	-	✓
		Assemblies comprise items 13 to 30:-		
13	283481-1	Cradle	1	1
14	283374-1	Pivot Bush	2	2
15	124-173	Screw M10 x 35	4	4
	457-5	Washer - Large M10	4	4
	425-15	Nut - Nyloc M10	4	4
16	63491-1	Wheel Assembly - See Chapter 25	2	2

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Full Width Nozzle Carriage

Item No.	Part No.	Description	Quantity per Cradle	
			Maxigap/ Varagap	Chipping/ Fluid Recovery
17	283495-1	Tow Eye	1	1
18	283484-1	Tow Bar	1	1
19	123-126	Screw M10 x 35	1	1
	455-11	Washer - Plain M10	2	2
	425-15	Nut - Nyloc M10	1	1
20	123-134	Screw M10 x 70	1	1
	455-11	Washer - Plain M10	2	2
	425-15	Nut - Nyloc M10	1	1
21	280866-1	Mast - Cylinder Mount ('Wide Mouth' Nozzle)	1	-
22	280866-2	Mast - Tie Bar Mount ('Narrow Mouth' Nozzle)	-	1
23	124-175	Screw M10 x 40	2	2
	455-11	Washer - Plain M10	2	2
	425-15	Nut - Nyloc M10	2	2
24	283488-1	Link Arm Anchor	2	2
25	124-139	Screw M8 x 30	4	4
	455-10	Washer - Plain M8	4	4
	425-14	Nut - Nyloc M8	4	4
26	123-184	Bolt M16 x 60	1	1
	455-14	Washer - Plain M16	2	2
	425-18	Nut - Nyloc M16	1	1
27	40405-1	Lifting Eye	1	1
28	40404-1	Clamp Washer	1	1
29	63345-1	Clamp Block	1	1
30	123-130	Bolt M10 x 50	2	2
	455-11	Washer - Plain M10	2	2
	425-15	Nut - Nyloc M10	2	2

Notes

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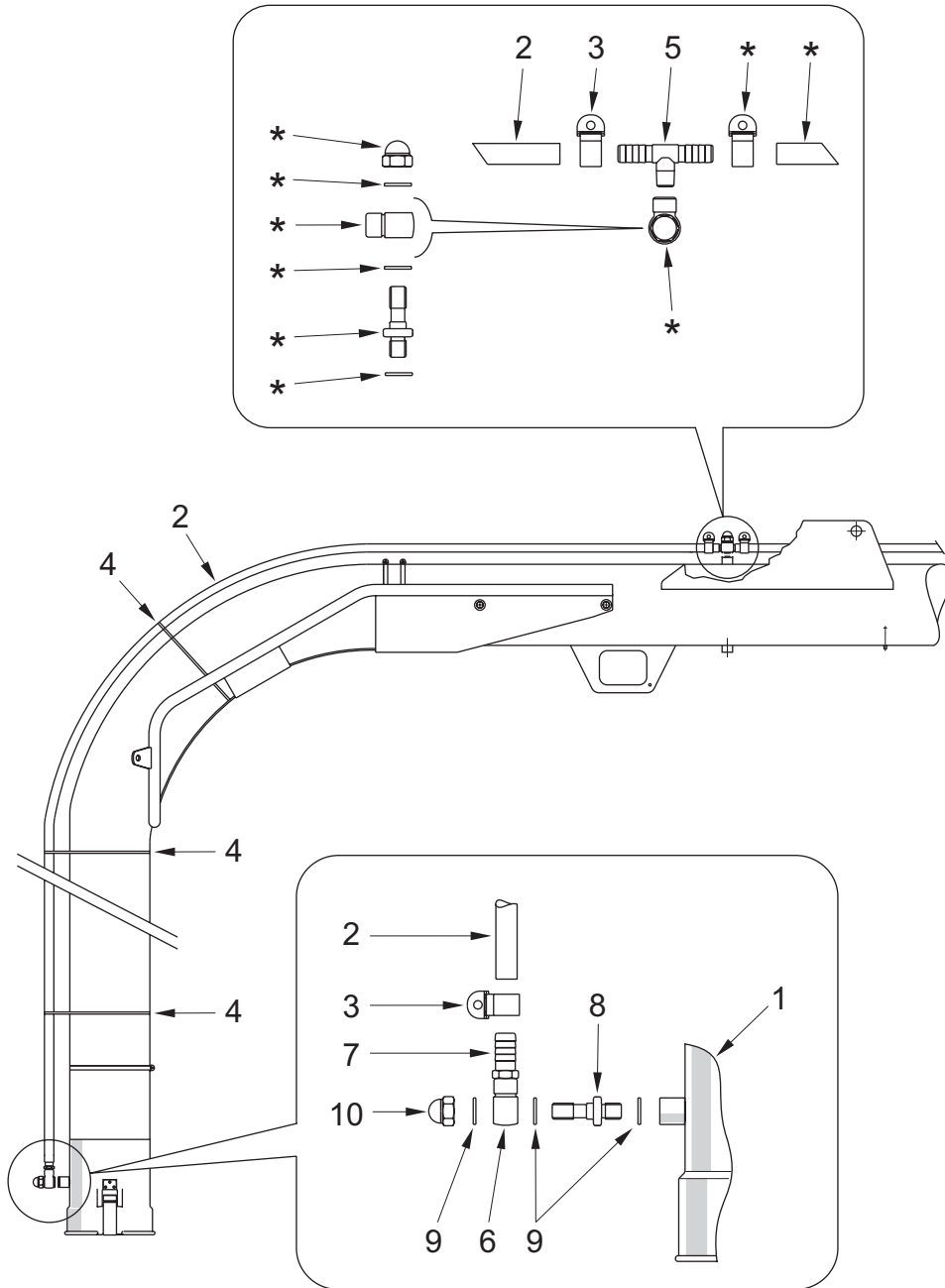
Sweep Gear - Wanderhose Lo-Level Water Injection

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Wanderhose Lo-Level Water Injection



95WH. 011

* These items are used on standard Top Mounted and optional Powaboom Wanderhoses shown in chapter 27.

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Wanderhose Lo-Level Water Injection

KT00895

Item No.	Part No.	Description	Quantity
	283534-6	Lo-Level Water Injection Installation 150 dia. Boom	
	283534-8	Lo-Level Water Injection Installation 200 dia. Boom	
1	6003-10	Coupling Assembly 150 dia.	1
	6003-80	Coupling Assembly 200 dia.	1
2	39444	Hose 3/8" x 2.6m	1
3	501-1	Hose Clip	2
4	24-10	Cable Tie	3
5	277-254	Tee	1
6	26997-1	Banjo	1
7	46382-3	Hose Adaptor	1
> 8	40755-2	Water Jet	1
9	453-1	Washer - Fibre	3
10	418-12	Domed Nut M12	1

Notes

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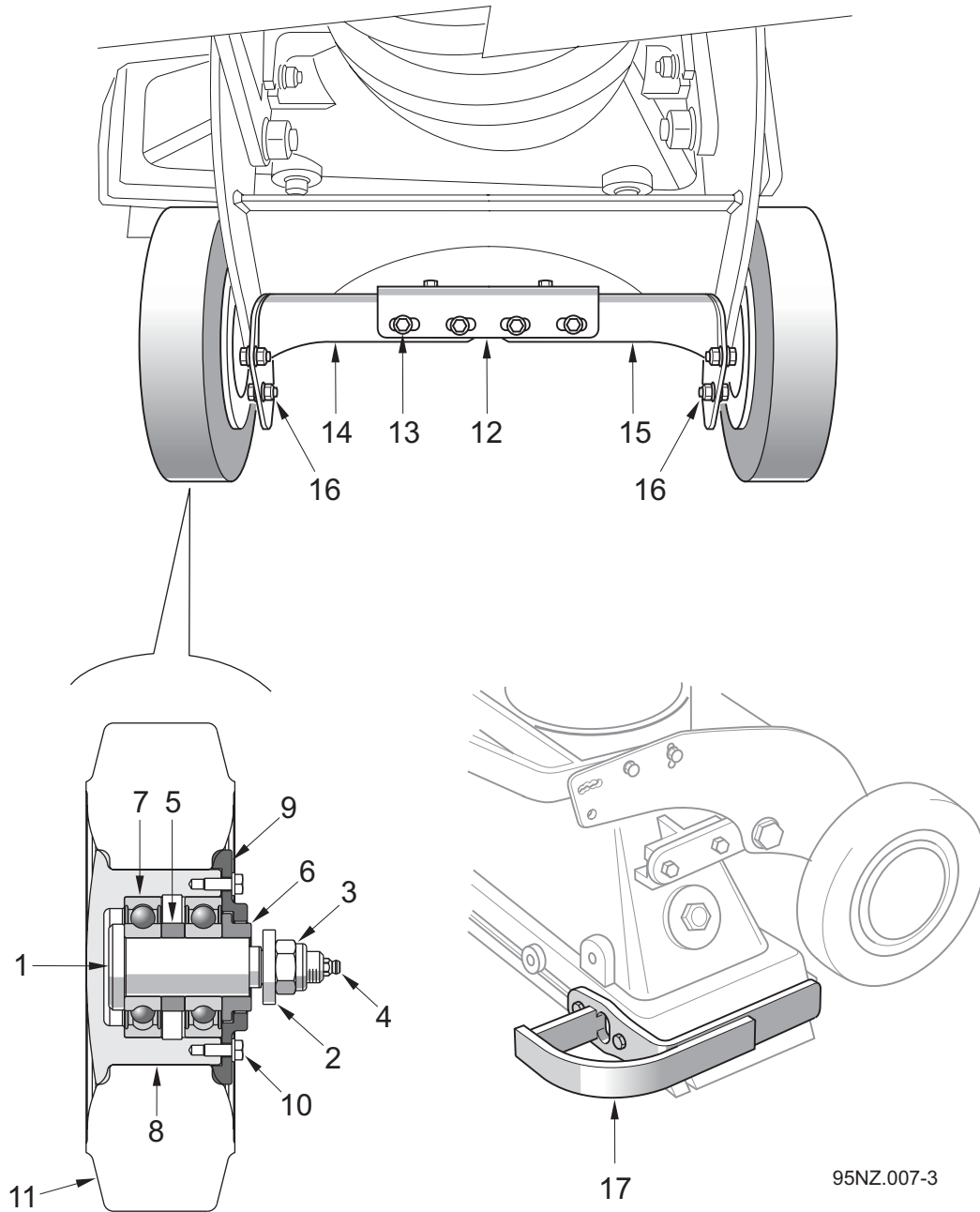
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Heavy Duty Nozzle and Carriage Components



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Heavy Duty Nozzle and Carriage Components

KT08595

Item No.	Part No.	Description	Quantity Per Wheel
	283358-1	Heavy Duty Wheel Assembly comprising items 1 to11:-	
1	283353-1	Axle	1
2	9114-2	Special Washer	1
3	425-18	Nut - Nyloc M16	1
4	38-30	Grease Nipple - Straight M6	3
5	283354-1	Spacer	1
6	283356-1	Labyrinth	1
7	14-62	Ball Bearing	2
8	283355-1	Hub	1
9	283357-1	Flange	1
10	124-102	Screw M6 x 16	6
	460-8	Washer - Spring M6	6
11	44122-2	Tyre 10"	1
			Quantity Per Nozzle
	283450-1	Brace Assembly - Standard)	
	283450-2	Brace Assembly - Wide) comprising items 12 to16:-	
12	283449-1	Brace Bar - Standard	1
	283448-1	Brace Bar - Wide	1
13	124-137	Screw M8 x 25	6
	455-10	Washer - Plain	6
	425-14	Nut - Nyloc M8	6
14	283364-1	Brace End - L.H.	1
15	283364-1	Brace End - R.H.	1
16	124-135	Screw M8 x 20	4
	455-10	Washer - Plain	8
	425-14	Nut - Nyloc M8	4
17	7005546	Bumper	1

Notes

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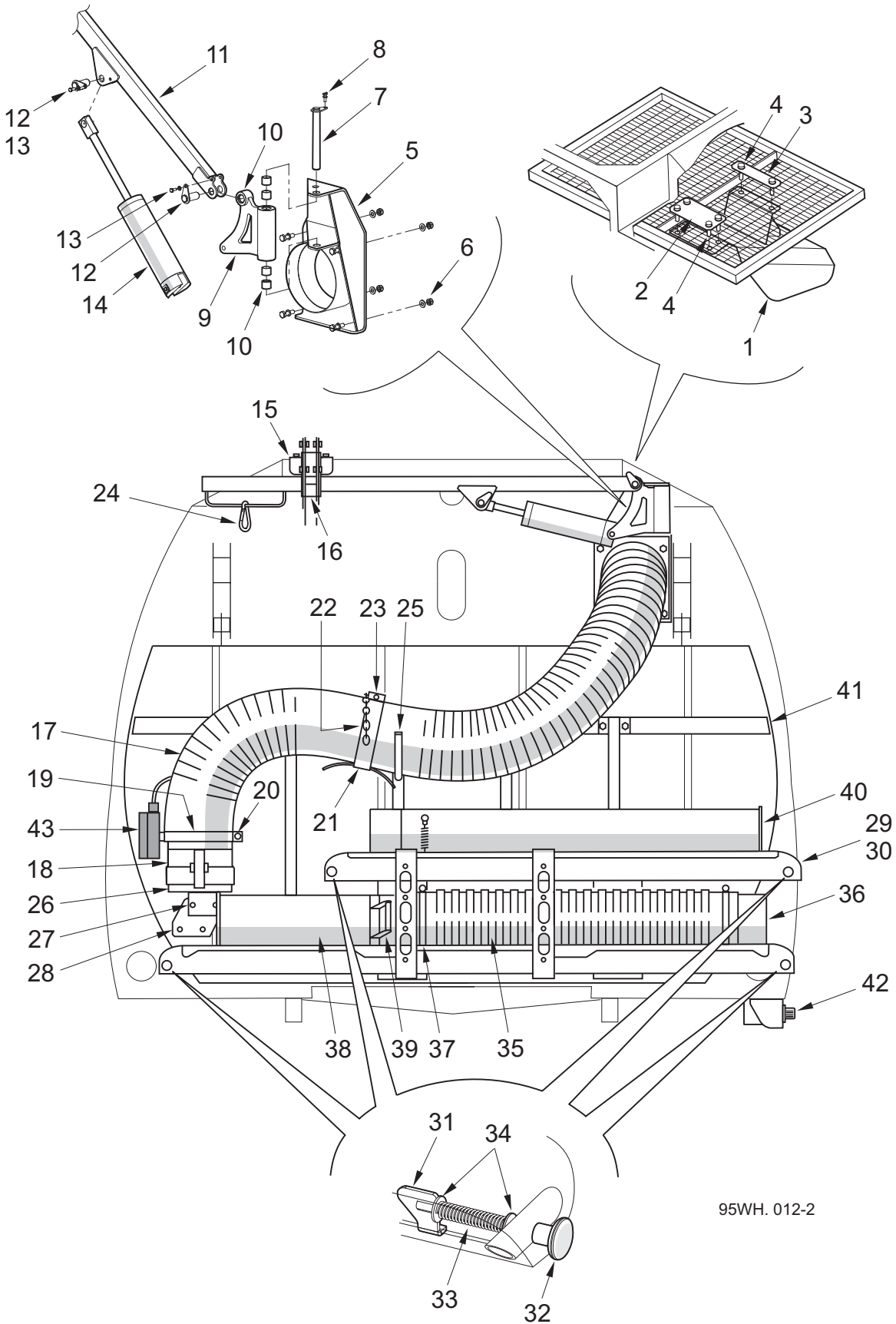
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Sweep Gear - Rear Mounted Wanderhose

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Rear Mounted Wanderhose



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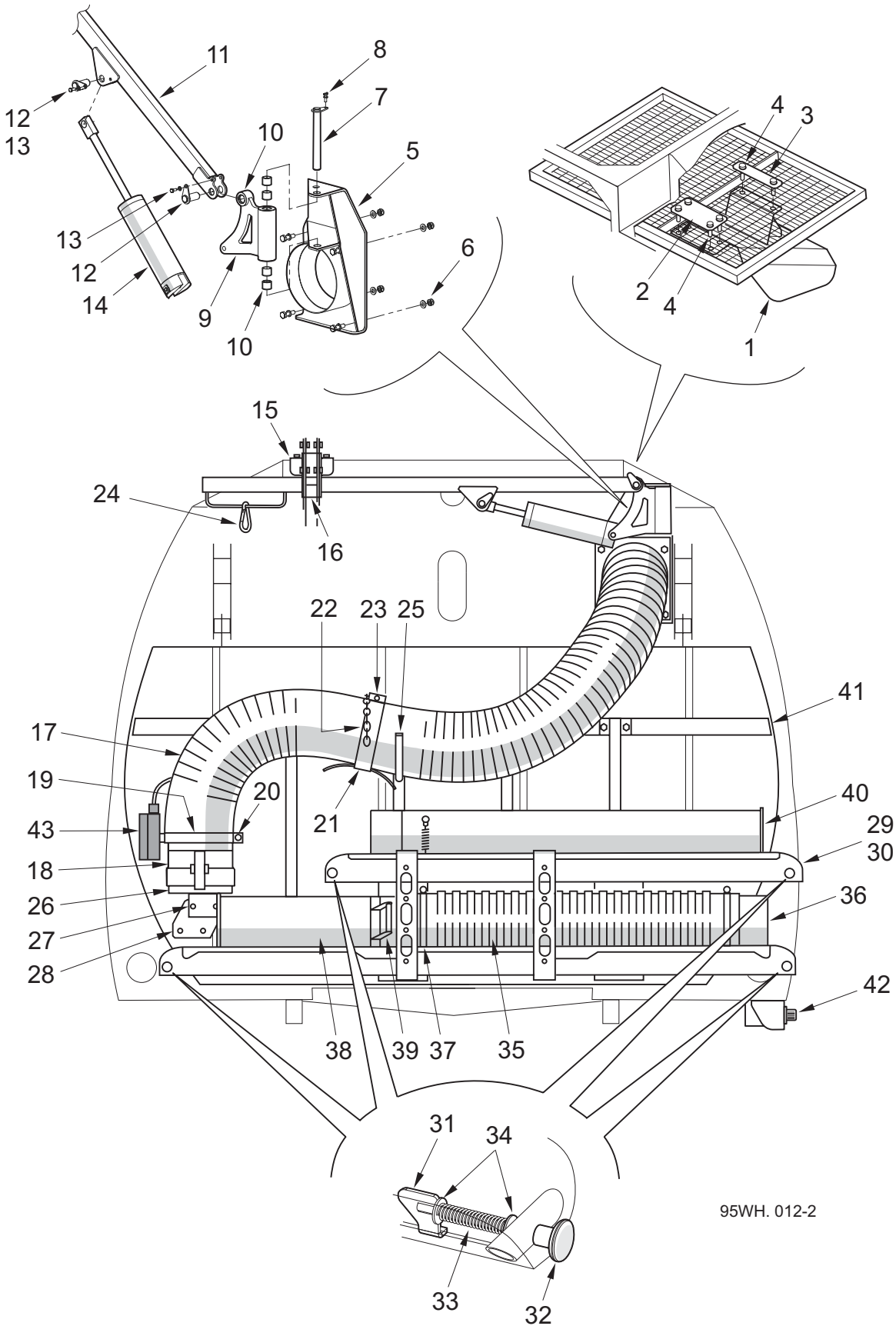
Rear Mounted Wanderhose

BoM KT05695

Item No.	Part No.	Description	Quantity
	283756-1	Wanderhose Installation Drawing	
1	280360-1	Baffle	1
2	221741-1	Spreader Plate	1
3	221742-1	Spreader Plate	1
4	118-135	Screw M8 x 20 - Stainless Steel	6
	454-8	Washer - Plain Ø8 - Stainless Steel	6
	417-8	Nut - Nyloc M8 - Stainless Steel	6
	283755-1	Pivot Assembly comprising items 5 to 14:	
5	283745-1	Pivot Bracket	1
6	118-175	Screw M10 x 40 - Stainless Steel	4
	458-10	Washer - Spring Ø10 - Stainless Steel	4
	454-10	Washer - Plain Ø10 - Stainless Steel	4
	417-10	Nut - Nyloc M10 - Stainless Steel	4
7	283751-2	Pivot Pin	1
8	124-103	Screw M6 x 20	1
	460-8	Washer - Spring Ø6	1
9	283740-1	Pivot	1
10	29128-1	Bush	5
11	283738-1	Arm	1
12	283751-1	Pivot Pin	2
13	124-102	Screw M6 x 16	2
	460-8	Washer - Spring Ø6	2
14	200355-1	Cylinder - Pneumatic	1
15	283759-1	Mount - Fitted on top of standard blanking plate if Mesh Shaker option is not fitted, see chapter 20	1
	118-135	Screw M8 x 20 - Stainless Steel	4
	454-8	Washer - Plain Ø8 - Stainless Steel	4
	458-8	Washer - Spring Ø8 - Stainless Steel	4
16	283760-1	Stowage Hook	1
	118-201	Screw M12 x 25	4
	425-16	Nut - Nyloc M12	4
	290-43	Rubber Buffer	1
17	221771-1	Trunking Ø200	1
* 18	6003-8	Coupling Ø200	1
19	282638-2	Cable Support	1
20	123-114	Bolt M8 x 70	1
	425-14	Nut M8	1
21	93863-1	Hose Support Clamp	1
22	93865-1	Spigot and Chain	1

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Rear Mounted Wanderhose



95WH. 012-2

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Rear Mounted Wanderhose

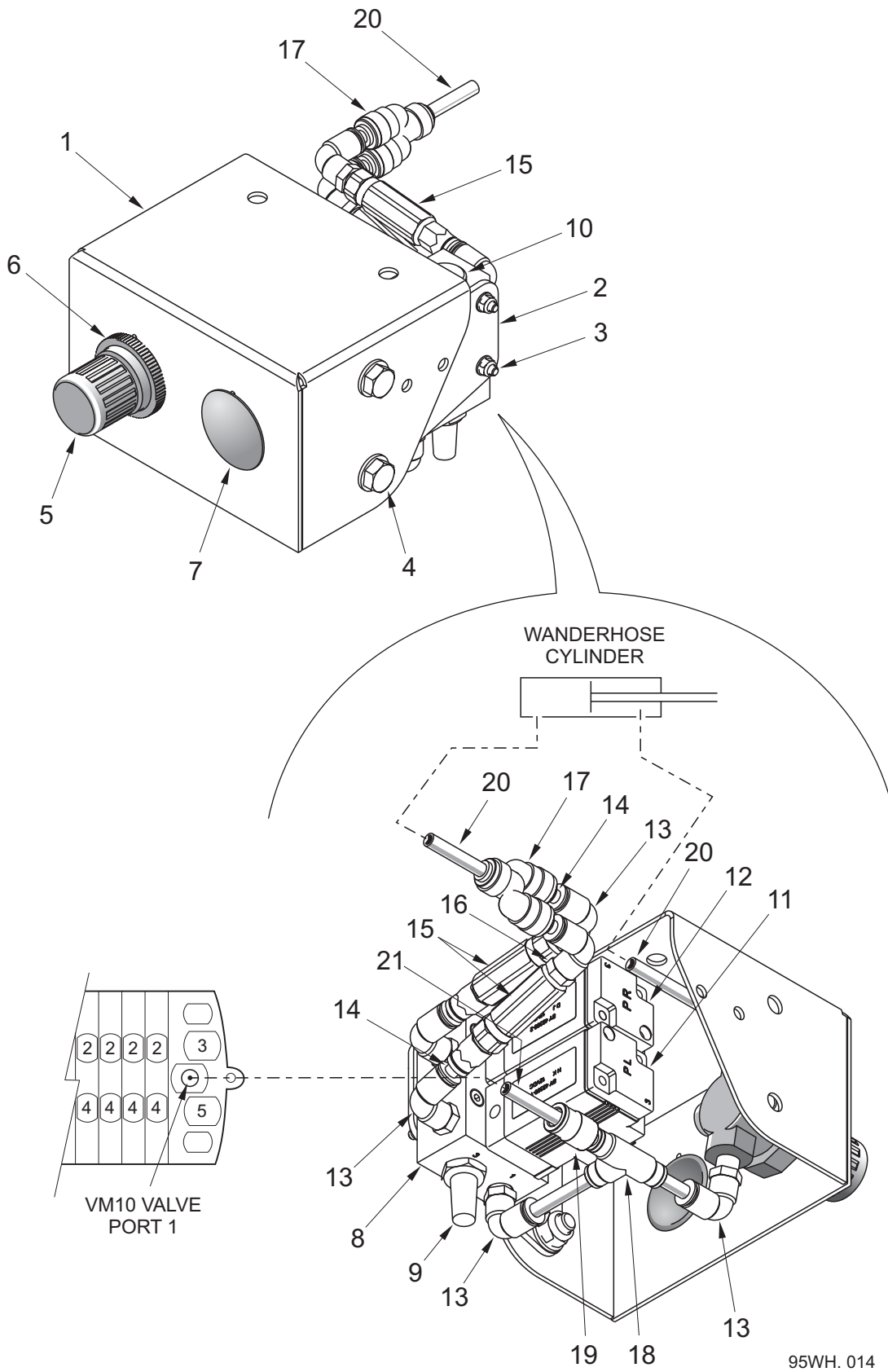
Item No.	Part No.	Description	Quantity
23	123-110	Bolt M8 x 50	1
	455-10	Washer - Plain Ø8	1
	425-14	Nut - Nyloc M8	1
24	284-21	Carbine Hook	1
25	282504-1	Hook - includes plastic plug 220-65	1
	124-137	Screw M8 x 25	2
	455-10	Washer - Plain Ø8	1
	425-14	Nut - Nyloc M8	1
* 26	42738-1	Anchor	1
	124-167	Screw M10 x 20) Anchor to	2
	460-11	Washer- Spring Ø10) Bracket	2
27	42463-1	Anchor Bracket	1
	124-135	Screw M8 x 20)	2
	455-10	Washer - Plain Ø8) Bracket	2
	425-14	Nut - Nyloc M8) to Plate	2
28	283899-1	Plate	1
	124-135	Screw M8 x 20)	2
	455-10	Washer - Plain Ø8) Plate to	2
	425-14	Nut - Nyloc M8) Options Frame	2
29	221830-1	Hose Tray	1
30	123-113	Bolt M8 x 65	4
	282438-41	Spacer	4
	455-10	Washer - Plain Ø8	4
	457-4	Washer - Plain Large Ø8	4
	425-14	Nut - Nyloc M8	4
31	282879-1	Plunger	4
32	23-21	Knob	4
33	285-27	Spring	4
34	457-5	Washer - Plain Large	4
35	15917-1	Trunking Ø200	1
36	5996-4	Coupling	1
37	504-52	Hose Clip	1
38	15899-1	Hose End Fitting	1
39	15920-1	Handle	1
40	282890-3	Extension x 1250 long - Includes spring clips 6216-1	1
41	-	Options Frame - See chapter 27	
42	-	Pneumatic Controls - See over page	
43	-	Looms - See elsewhere in this section	

Notes

* Refer to Standard Wanderhose in chapter 27 for a more detailed description of these items.

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Pneumatic Controls



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Pneumatic Controls

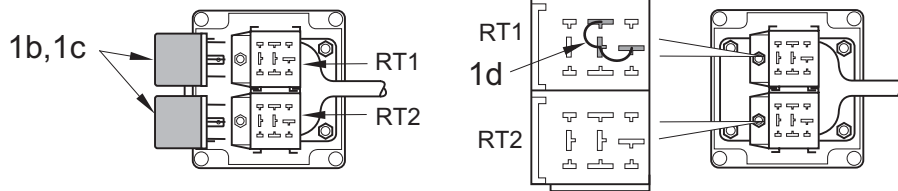
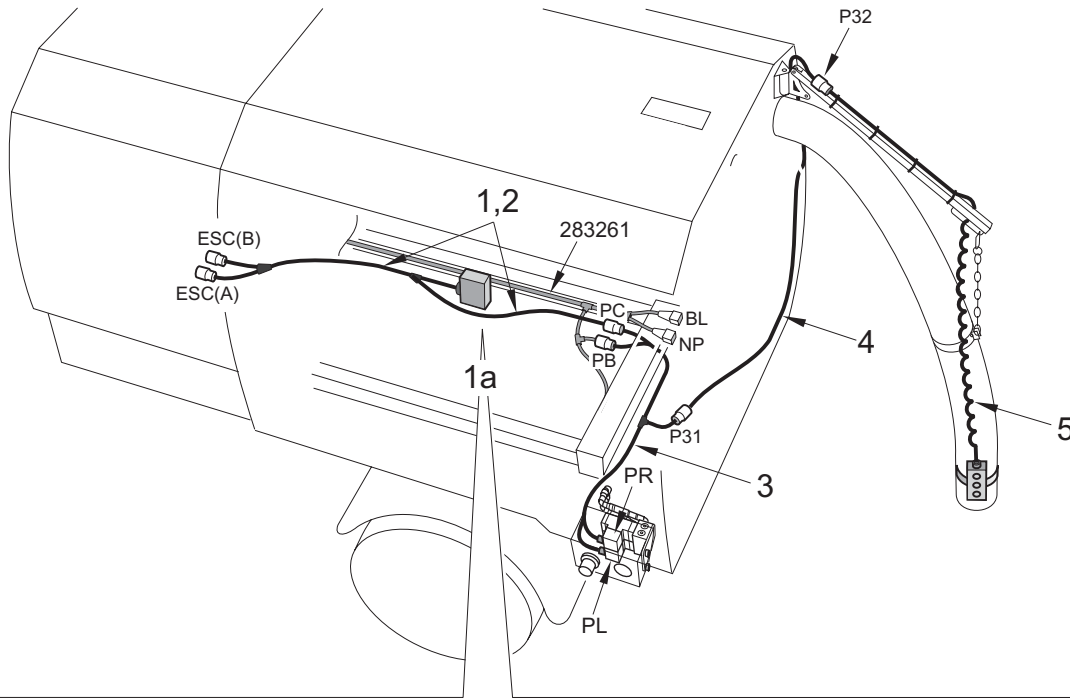
BoM KT07595

Item No.	Part No.	Description	Quantity
	283835-12	Pneumatic Control Assembly 12v	
	283835-24	Pneumatic Control Assembly 24v	
1	282522-1	Box	1
2	283833-1	Plate - Valve Mounting	1
3	129-42	Bolt - Socket Head M4 x 35	2
	455-5	Washer - Plain Ø4	2
	425-11	Nut - Nyloc M4	2
4	124-135	Screw M8 x 20	2
	455-10	Washer - Plain Ø8	2
	425-14	Nut - Nyloc M8	2
5	72-14	Mini Regulator	1
6	72-15	Panel Ring	1
7	288-28	Grommet - Blind	1
8	40602-2	Valve Block	1
9	72-20	Air Silencer	1
> 10	3162	Collar Plug G1/4" - Brass	2
	451-17	Washer - Sealing 1/4" BSP	2
11	42300-1	Control Valve 12v (N.C.)	1
	42300-3	Control Valve 24v (N.C.)	1
12	42300-2	Control Valve 12v (N.O.)	1
	42300-4	Control Valve 24v (N.O.)	1
> 13	538-8	Swivel Elbow G1/4" x Ø6	6
14	549-3	Stem Connector	4
15	72-4	Valve - Non Return	2
> 16	537-3	Adaptor - Push In 1/8" BSPT x Ø8	2
17	559-6	'Y' Connector	1
18	554-3	Tee Connector	1
19	548-20	Reducing Stem Connector	1
20	273-20	Nylon Tube Ø6 Blue x 10m	1
21	273-21	Nylon Tube Ø6 Red x 20m	1

Notes

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Looms



Iveco Nat. Asp. & Turbo & John Deere 'LP' engines.
For John Deere 'HP' engine see item 2.

VT 12v Loom Assembly 282140-1 comprising items 1 and 1b
VT 24v Loom Assembly 282140-2 comprising items 1 and 1c

VS Loom Assembly 282140-3 comprising items 1 and 1d

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KT07595

Item No.	Part No.	Description	Quantity
1	282060-1	Remote Throttle Loom (Includes Relay Box 1a)	1
1a		Relay Box - requires the addition of components 1b,1c or 1d	
1b	13193	Relay 12v (28RA) - 12v VT only.	2
1c	13194	Relay 24v (28RA) - 24v VT only.	2
1d	282119-1	Shorting Link - VS only.	1
2	283140-1	Remote Throttle Loom - John Deere 'HP' engines	1
3	282062-1	Powaboom Loom	1
4	282063-1	Extension Loom	1
5	282061-1	Control Loom VT Series	1
	282061-2	Control Loom VS Series	1

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35.SG

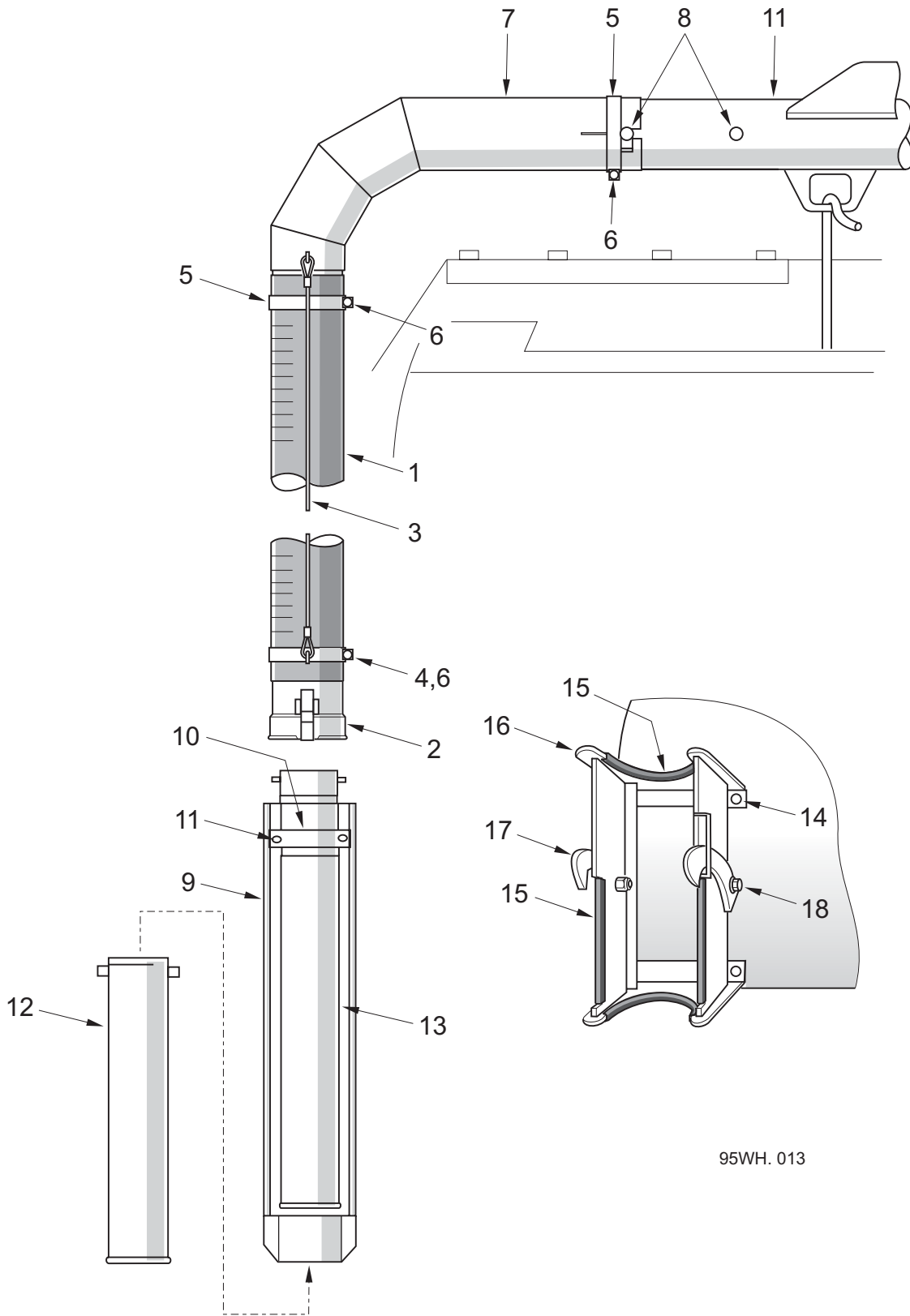
Wanderhose Gully Pack

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Wanderhose Gully Pack



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Wanderhose Gully Pack

BoM 951331

Item No.	Part No.	Description	Quantity
	284031-1	Ø150 Gully Pack Installation:-	
1	48824-1	Flexible Extension	1
2	6003-1	Coupling	1
3	21216-14	Lift Cable x 1040 long	2
4	282637-3	Cable Support - with hooks	1
5	282637-4	Cable Support - without hooks	2
6	123-114	Bolt M8 x 70	3
	425-14	Nut - Nyloc M8	3
7	282600-1	Gully Extension	1
8	124-199	Screw M12 x 20	4
	460-12	Washer - Spring Ø12	4

BoM 951332

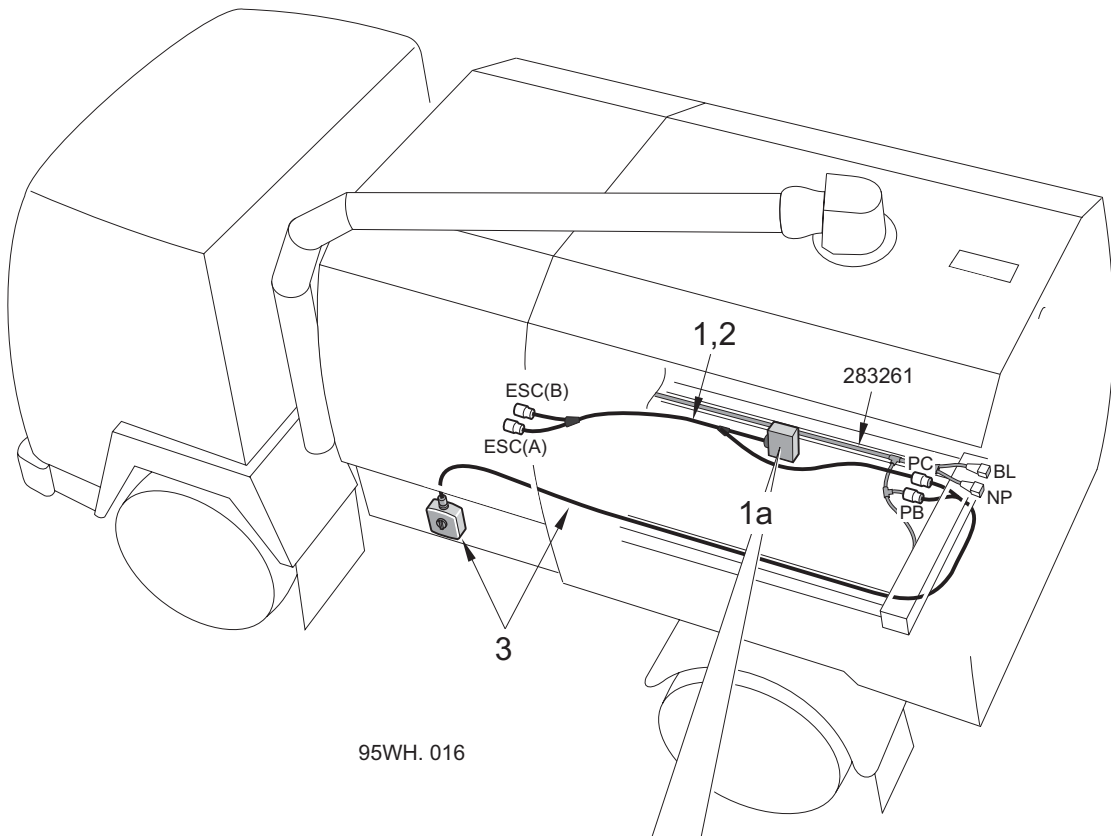
	284032-1	Ø150 Gully Pack Extension Installation:-	
9	41070-1	Cradle	1
10	41063-1	Support	1
11	124-134	Screw M8 x 16	2
	455-10	Washer - Plain Ø8	2
	420-14	Nut M8	2
12	41150-1	Extension	1
13	41067-1	Extension	1

BoM 951333

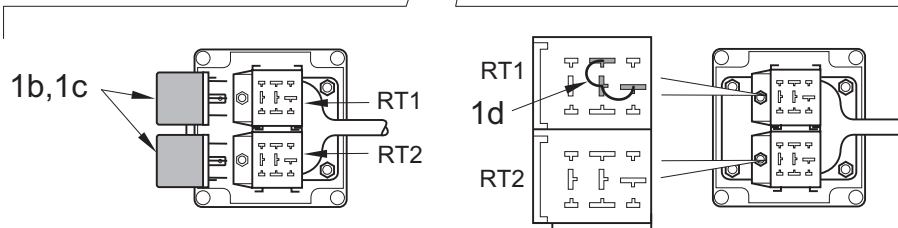
	284033-1	Holster Installation:-	
14	124-135	Screw M8 x 30	4
	425-14	Nut - Nyloc M8	4
	457-4	Washer - Large	4
> 15	6849	Titanfast Trim	4
	41061-1	Hose Guide/Clamp Assembly comprising:-	
16	284061-1	Holster	1
17	41183-1	Latch	2
18	124-139	Screw M8 x 30	2
	41184-1	Pivot	2
	425-14	Nut - Nyloc M8	2

Notes

Remote Throttle



95WH. 016



Iveco 'SP' and 'HP' and John Deere 'SP' engines. For John Deere 'HP' engine see item 2.

VT 12v Loom Assembly 282140-1 comprising items 1 and 1b
 VT 24v Loom Assembly 282140-2 comprising items 1 and 1c

VS Loom Assembly 282140-3 comprising items 1 and 1d

KT09995

Item No.	Part No.	Description	Quantity
1	282060-1	Remote Throttle Loom (Includes Relay Box 1a)	1
1a		Relay Box - requires the addition of components 1b,1c or 1d	
1b	13193	Relay 12v (28RA) - 12v VT only.	2
1c	13194	Relay 24v (28RA) - 24v VT only.	2
1d	282119-1	Shorting Link - VS only.	1
2	283140-1	Remote Throttle Loom - John Deere 'HP' engines	1
3	282160-1	External Throttle Loom	1

Note

Relay Box (1a) mountings are as Powaboom Controls in chapter 27

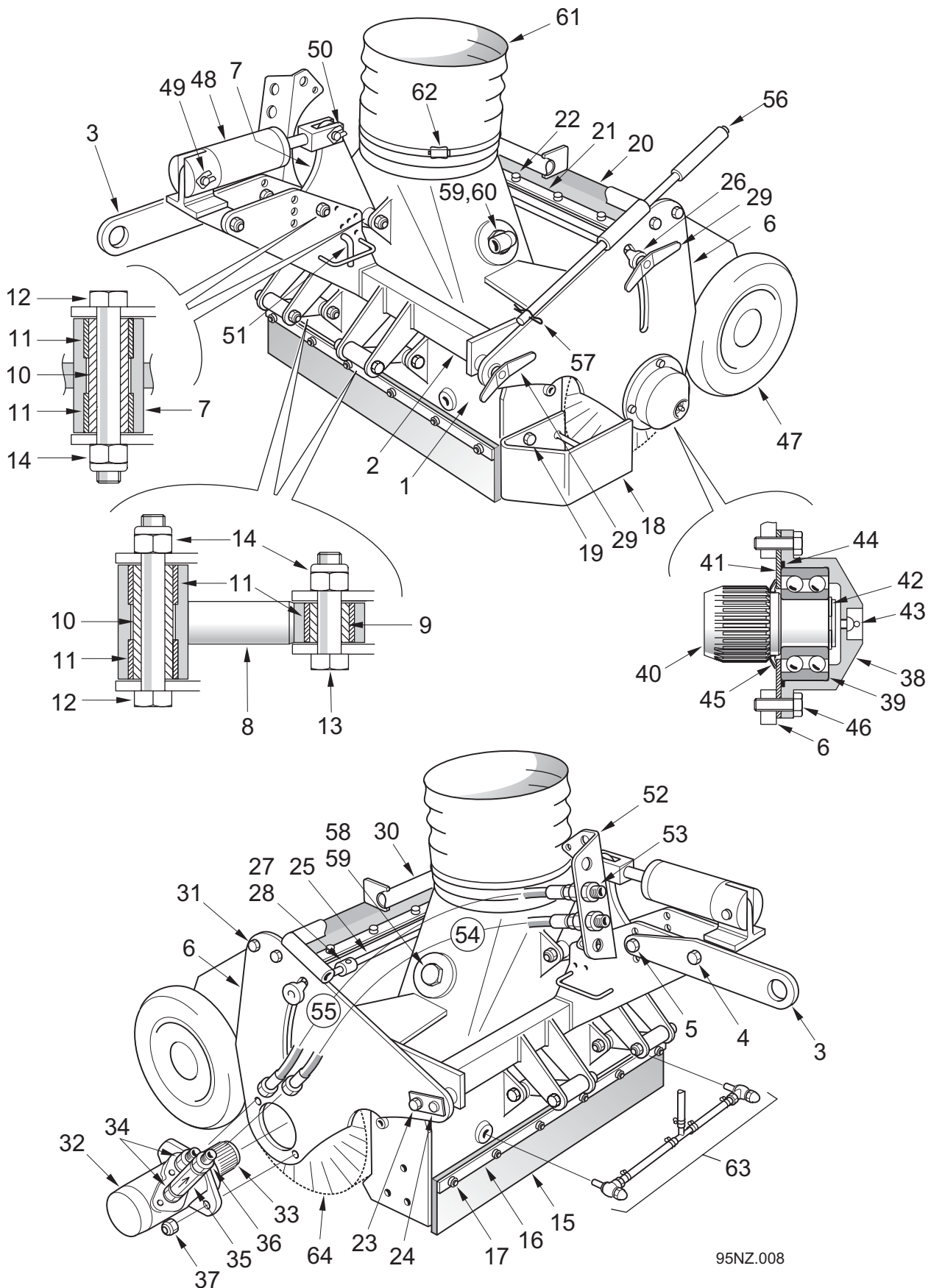
35.SG

Combivak Nozzle

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Combivak Nozzle Assembly



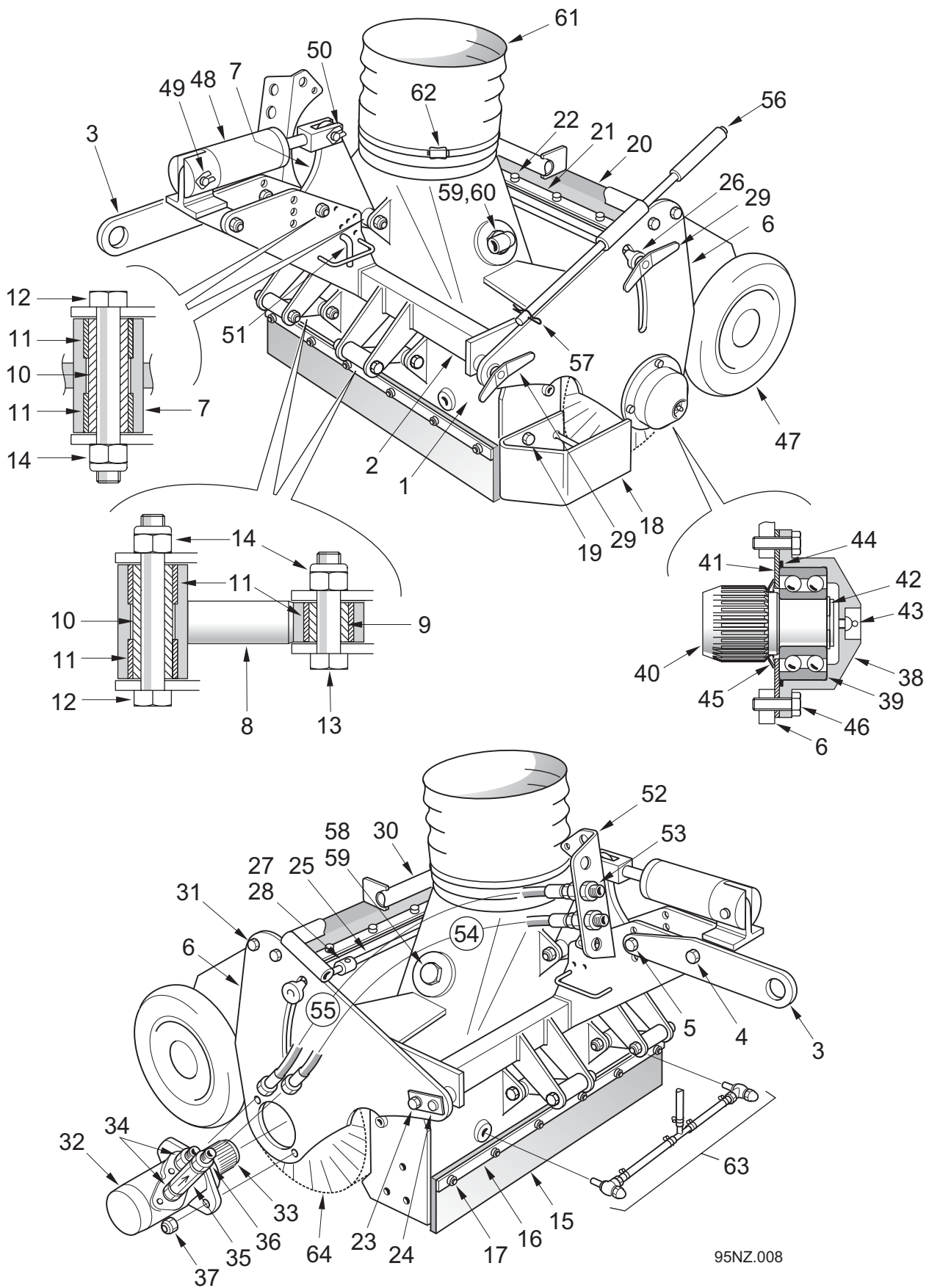
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Combivak Nozzle Assembly

Item No.	Part No.	Description	Quantity
	281887-1	LH Nozzle Assembly	
	281887-2	RH Nozzle Assembly	
1	280920-2	Lined Nozzle	1
2	62882-2	Carriage	1
3	200377-1	Tow Bracket	1
4	123-158	Bolt M12c x 100mm	1
	425-16	Nut M12c Nyloc	1
5	124-205	Setscrew M12c x 35mm	1
	425-16	Nut M12c Nyloc	1
6	802725-1	Cheek Plate	2
7	281884-1	Actuator	1
8	62567-1	Pivot Arm	2
9	42733-1	Bush - Bearing	2
10	42733-2	Bush - Bearing	4
11	29128-1	Bush - Bearing	10
12	123-156	Bolt M12c x 90mm	4
13	123-148	Bolt M12c x 50mm	2
14	425-16	Nut M12c Nyloc	6
15	62138-1	Front Rubber	1
16	62148-1	Clamp Strip	1
17	124-177	Setscrew M10c x 50mm	6
	425-15	Nut M10c Nyloc	6
18	62170-1	Skid	1
19	124-208	Setscrew M12c x 45mm	3
	425-16	Nut M12c Nyloc	3
20	41615-1	Rubber Curtain	1
21	41457-1	Clamp Strip	1
22	124-103	Setscrew M6c x 20mm	6
	425-13	Nut M6c Nyloc	6
23	62123-1	Pivot Pin	1
24	124-134	Setscrew M8c x 15mm	1
	460-10	Spring Washer M8	1
25	62124-1	Adjuster	1
26	62167-2	Slider	1
27	62157-1	Clamp Tube	1
28	135-23	Grub Screw M6c x 10mm	1
29	281305	Handle	2
30	62828-1	Cross Beam	1
31	124-169	Setscrew M10c x 25mm	4
	460-11	Spring Washer M10	4
32	40550-1	Hydraulic Motor	1
33	42489-1	Adaptor	1

Combivak Nozzle Assembly



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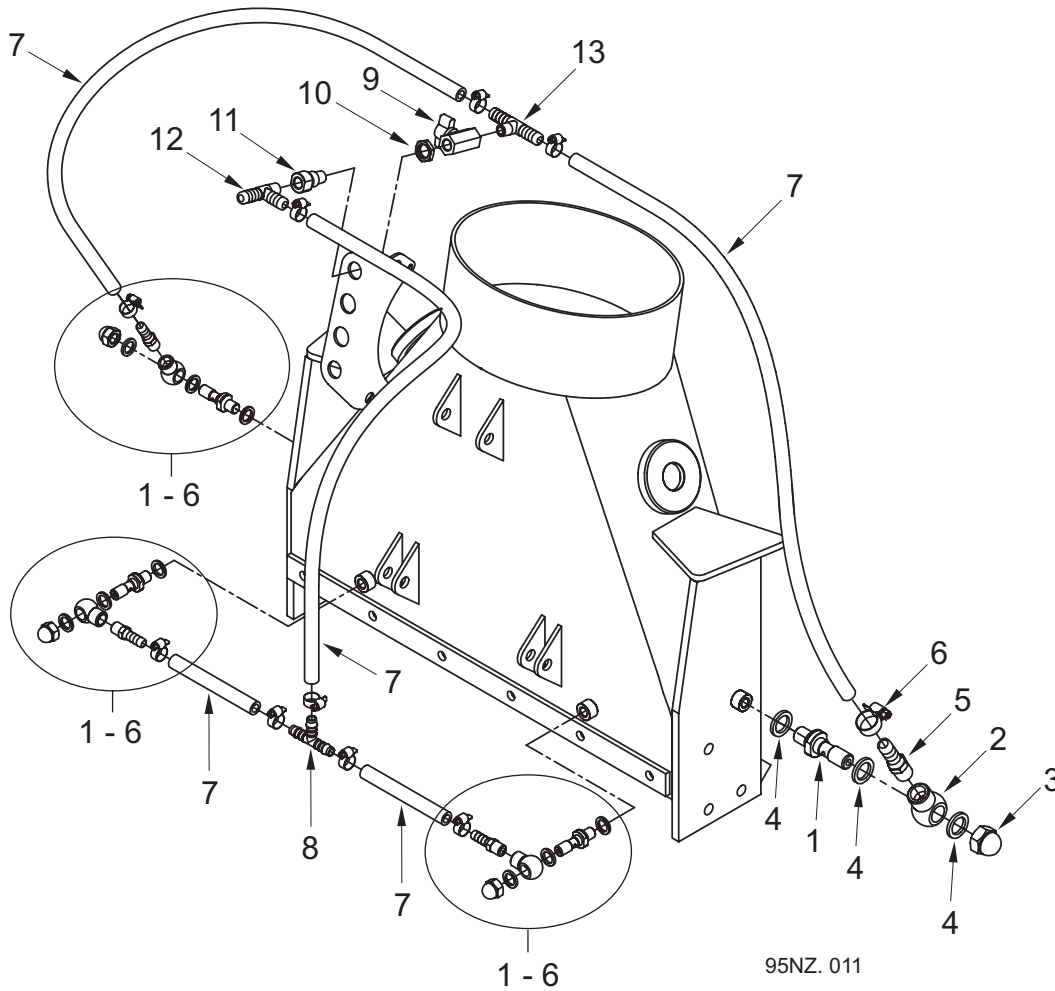
Combivak Nozzle Assembly

Item No.	Part No.	Description	Quantity
34	263-4	Adaptor 1/2" BSP	2
	451-126	Washer - Copper 1/2" BSP	2
35	71457-1	Check Valve	1
36	42490-1	Adaptor	1
37	124-208	Setscrew M12c x 45mm	2
	425-16	Nut M12c	2
38	94737-1	Bearing Housing	1
39	14-47	Bearing	1
40	42490-1	Adaptor	1
41	42819-1	Bearing Support Plate	1
42	27-15	Circlip	1
43	38-1	Grease Nipple 1/8" Str.	1
44	80-94	'O' Ring	1
45	77-26	Oil Seal	1
46	124-137	Setscrew M8c x 25mm	4
	460-10	Spring Washer M8	4
47	-	Nozzle Wheel - See Chapter 25	2
48	29362-2	Cylinder	1
	290001-500	Cylinder Seal Kit	
49	29149-2	Clevis Pin)	1
	39624	Retaining Clip) Spares	1
50	62098-1	Clevis Pin) Items	1
	39624	Retaining Clip)	1
51	62135-1	Pin - Nozzle Stop	1
52	63321-1	Bracket	1
	124-137	Setscrew M8c x 25mm	1
	425-14	Nut M8c Nyloc	1
53	410-12	Black Nut 1/2"	2
54	-	See 'Hydraulic Hoses' items 161 and 162	-
55	-	See 'Hydraulic Hoses' items 163 and 164	-
56	62167-1	Handle	1
57	59-26	Split Pin	1
58	281755-1	Plug	2
59	410-57	Locknut	2
* 60	200493-1	Elbow	1
61	-	Nozzle Trunking) As Standard Nozzle	1
62	-	Hose Clip) See Chapter 25	1
63	-	Water Spray Jets, Hoses and Fittings - See Next Page	
64	-	Brush Assembly - See Over Page	

Notes

* Elbow, item 60, only fitted with Recirculating Water Option

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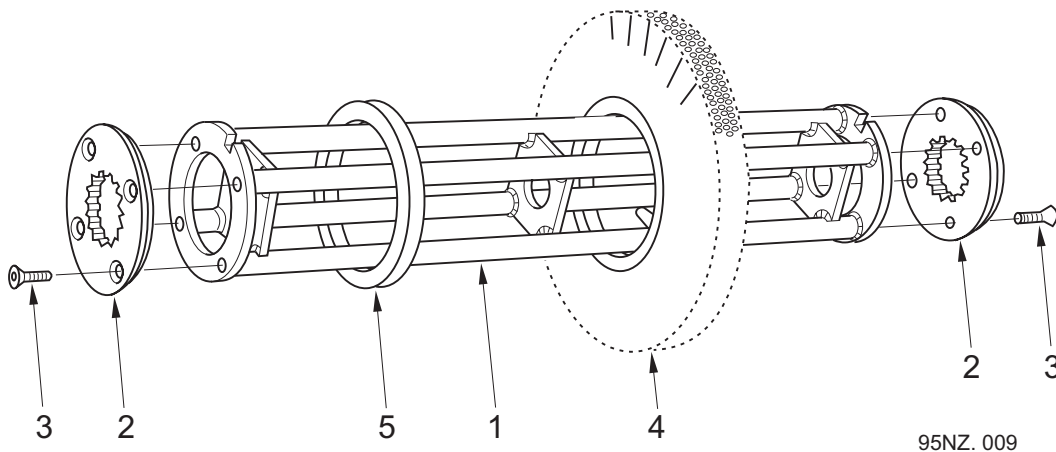
Combivak Nozzle - Water Jets and Hoses


95NZ. 011

Item No.	Part No.	Description	Quantity
1	40755-2	Water Jet	4
2	26997-1	Banjo	4
3	418-12	Domed Nut	4
4	453-1	Fibre Washer	12
5	46382-3	Hose Adaptor	4
6	501-1	Hose Clip	10
7	39444	Hose	2.5m
8	277-2	Tee Connector	1
9	88-4	Ball Valve	1
10	410-3	Locknut 3/8" BSP	1
11	283640-1	Bulkhead Adaptor	1
12	90696-1	Hose Adaptor	1
13	62746-1	Hose Adaptor	1

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Combivak Nozzle - Brush Assembly

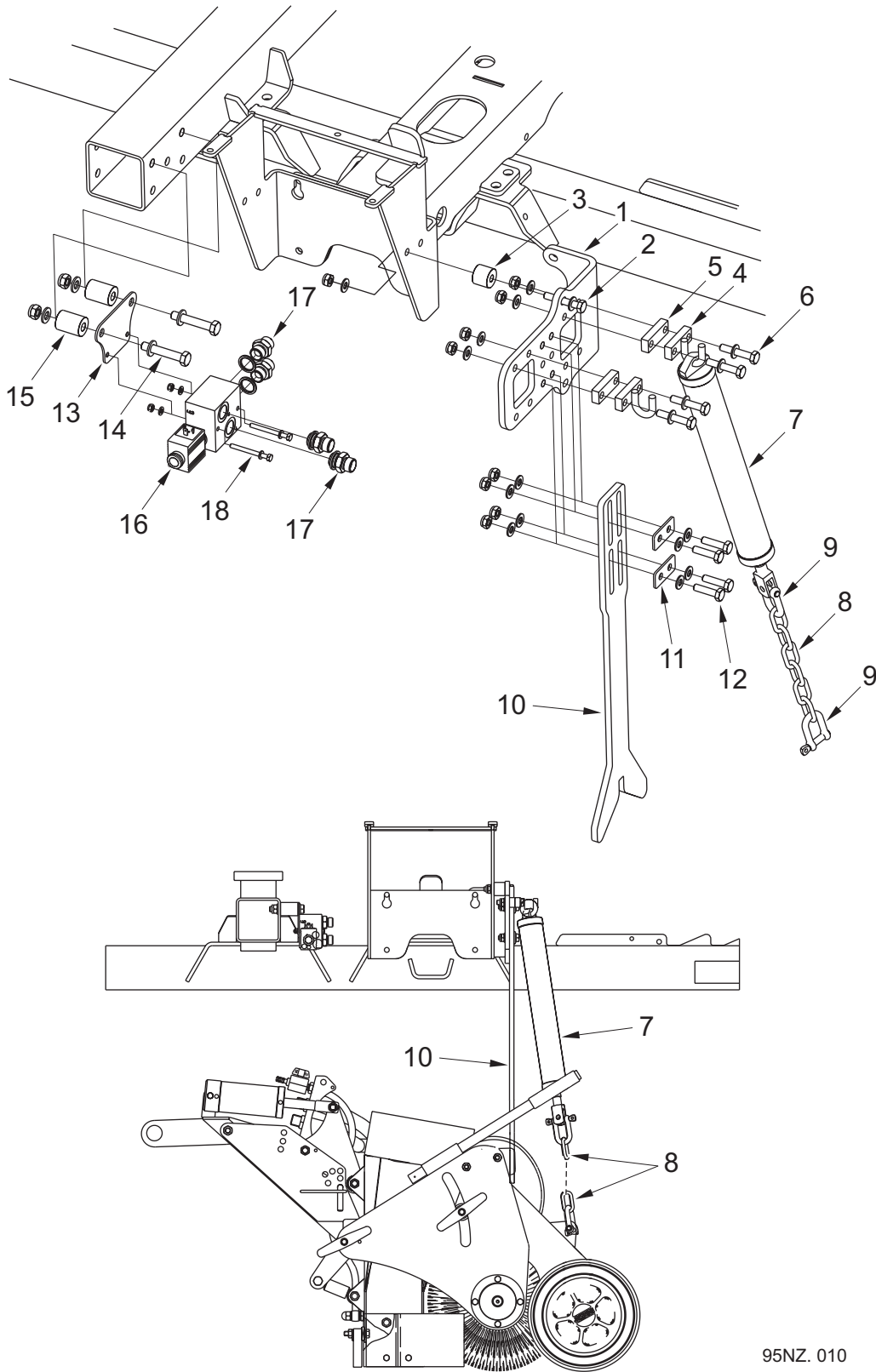


Item No.	Part No.	Description	Quantity
1	41433-5	Stock	1
2	41436-2	End Plate	2
3	131-131	Screw Csk. Soc. Hd. M8c x 40mm	8
4	15130	Brush Segment	42
5	15131	Brush Spacer	2

Notes

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Combivak Nozzle - Installation



95NZ. 010

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Combivak Nozzle - Installation

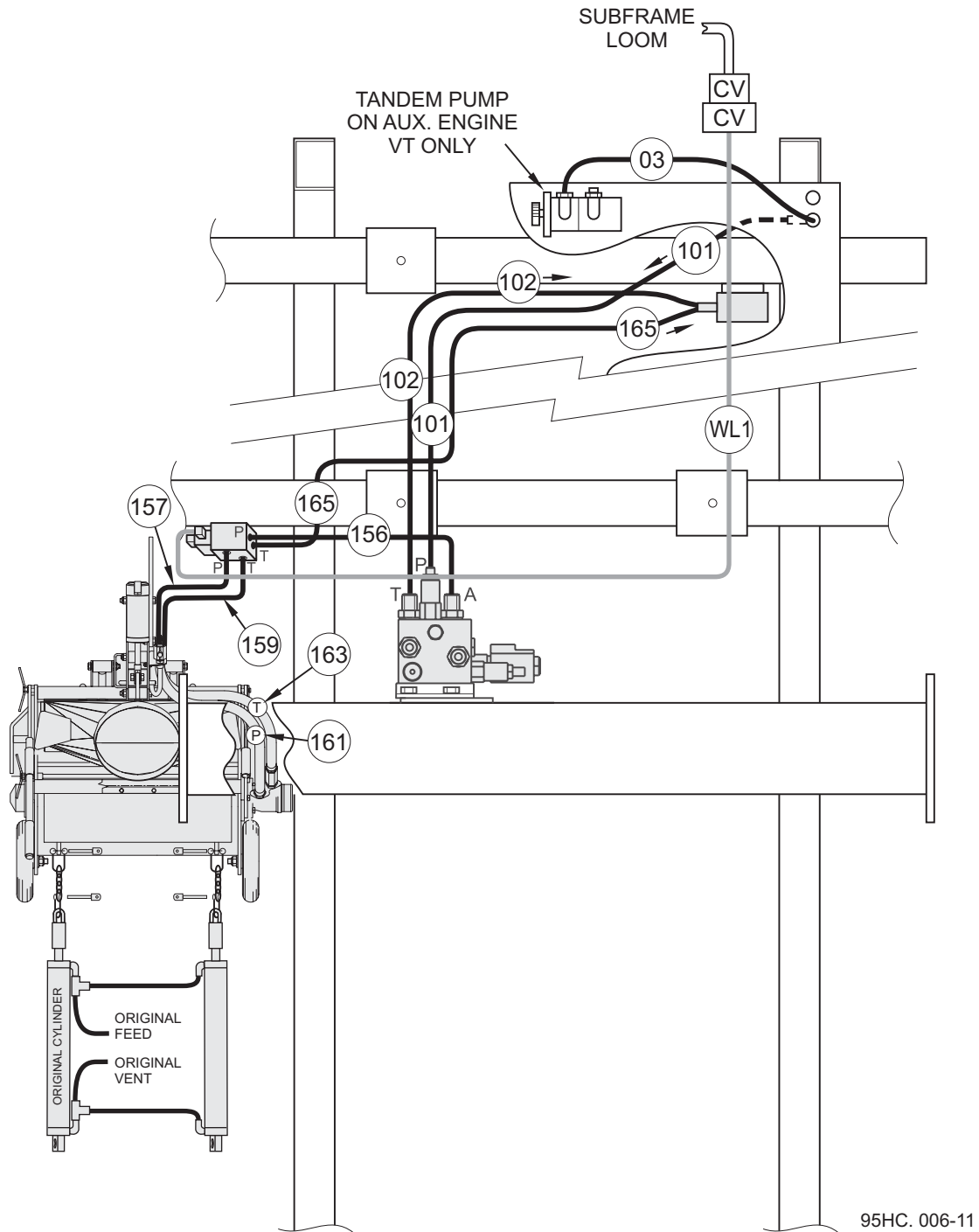
BoM KT06695

Item No.	Part No.	Description	Quantity
1	283540-1	Bracket	1
2	124-179	Screw M10 x 60	1
	455-11	Washer - Plain	2
	425-15	Nut - Nyloc M10	1
3	283307-3	Spacer - Nylon	1
4	40269-1	Lifting Hook	2
5	40457-2	Bar	2
6	124-178	Screw M10 x 55	4
	455-11	Washer - Plain	8
	425-15	Nut - Nyloc M10	4
7	29284-2	Cylinder	2
8	62165-6	Chain	2
9	62172-1	Shackle - Stainless Steel	4
10	283542-1	Arm	1
11	283567-1	Clamping Plate	2
12	124-175	Screw M10 x 40	4
	455-11	Washer - Plain	8
	425-15	Nut - Nyloc M10	4
13	283543-1	Plate	1
14	124-213	Screw M12 x 70	2
	455-12	Washer - Plain	4
	425-16	Nut - Nyloc M12	2
15	283307-4	Spacer - Nylon	1
16	283565-12	Valve Block Assembly - 12v	1
	283565-24	Valve Block Assembly - 24v	1
17	263-4	Adaptor G1/2"	4
	451-19	Washer - Sealing	4
18	124-116	Screw M6 x 65	2
	455-8	Washer - Plain	4
	425-13	Nut - Nyloc M6	2

Notes

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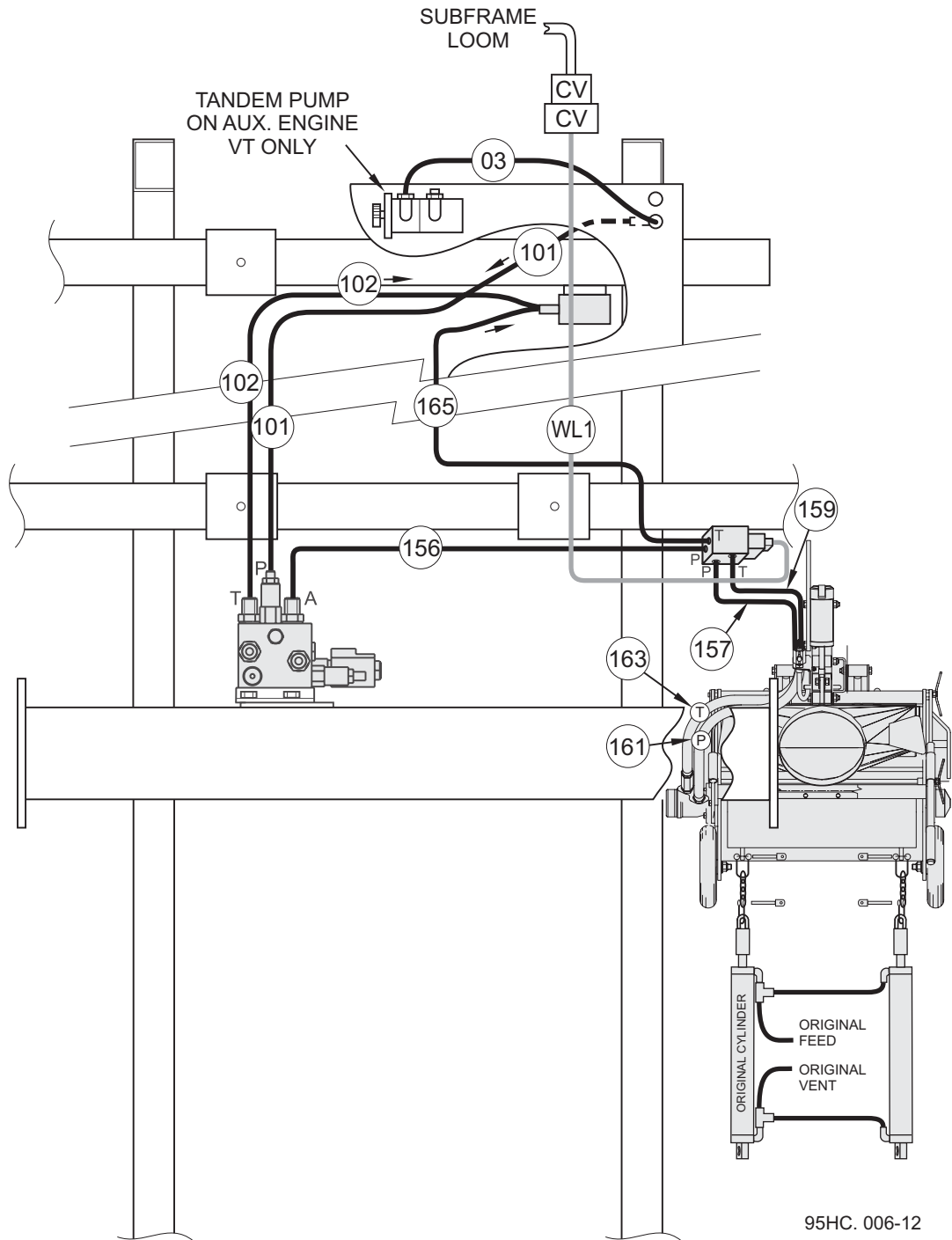
Hydraulic Hoses and Wiring Loom - L.H. Combivak Nozzle



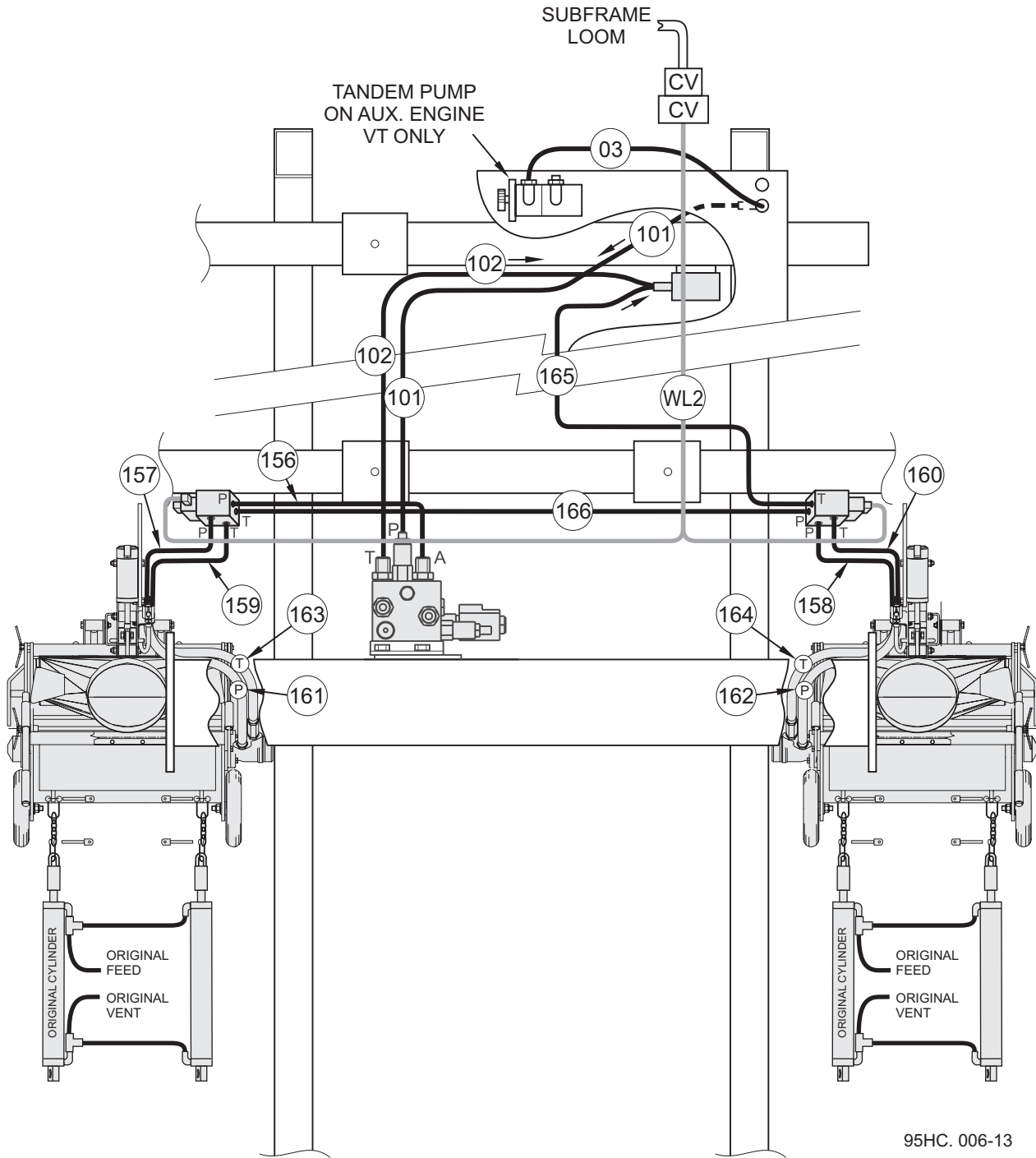
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Hydraulic Hoses and Wiring Loom - R.H. Combivak Nozzle

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Hydraulic Hoses and Wiring Loom - Dual Combivak Nozzles



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Hydraulic Hoses and Wiring Looms - Combivak Nozzle

BoM KT06695, Drg. 281887

Item No.	Part No.	Description	Quantity
03	-) See chapter 22.EI/EJ, Iveco/JD Engines -) 'PTO Pump Installations'	
101	-) See chapter 28 -	
102	-) 'Tandem/Options Pump Valve Block Installations'	
156	HC08000-168	1/2" Hydraulic Hose	1
157	HC08002-85	1/2" Hydraulic Hose	1
158	HC08002-85	1/2" Hydraulic Hose	1
159	HC08002-85	1/2" Hydraulic Hose	1
160	HC08002-85	1/2" Hydraulic Hose	1
161	HC06004-87	3/8" Hydraulic Hose	1
162	HC06004-87	3/8" Hydraulic Hose	1
163	HC06004-77	3/8" Hydraulic Hose	1
164	HC06004-77	3/8" Hydraulic Hose	1
165	HC08000-168	1/2" Hydraulic Hose	1
166	HC08000-168	1/2" Hydraulic Hose	1
Looms			
WL1	283566-1	Combivak Loom - Single	1
WL2	283566-2	Combivak Loom - Dual	1

Notes

Hose item numbers 156 to 166 correspond with those in Hydraulic diagram SH529z01 in Chapter 8.

35.WS

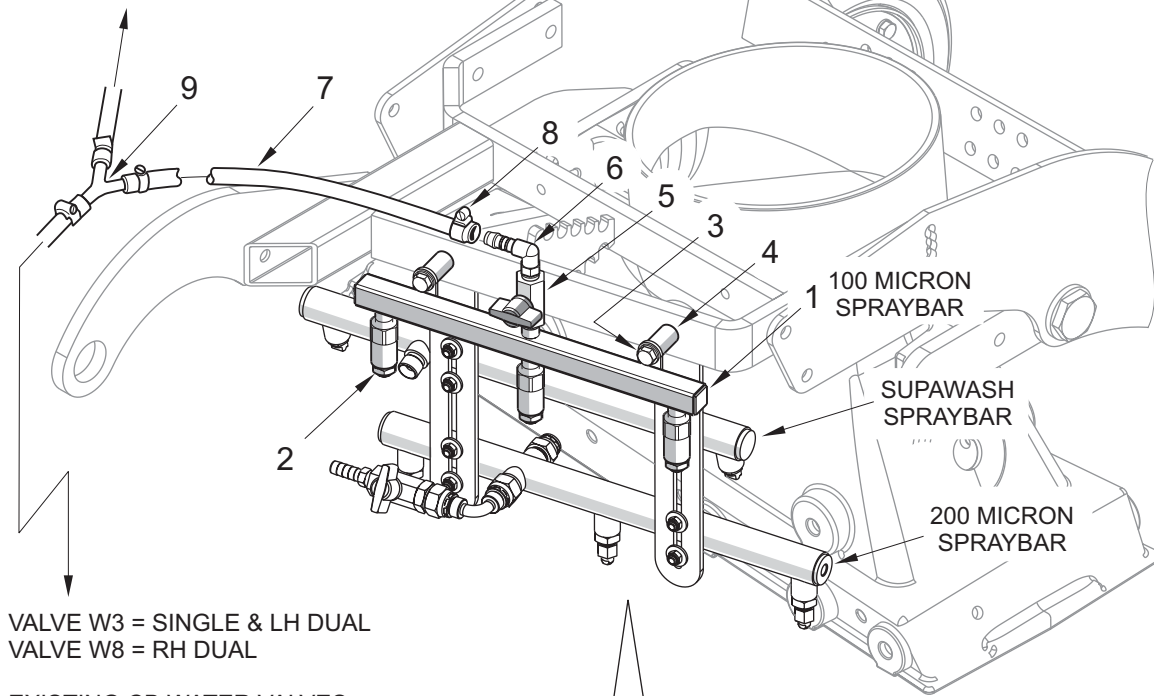
Water System - Microtrap Sprays

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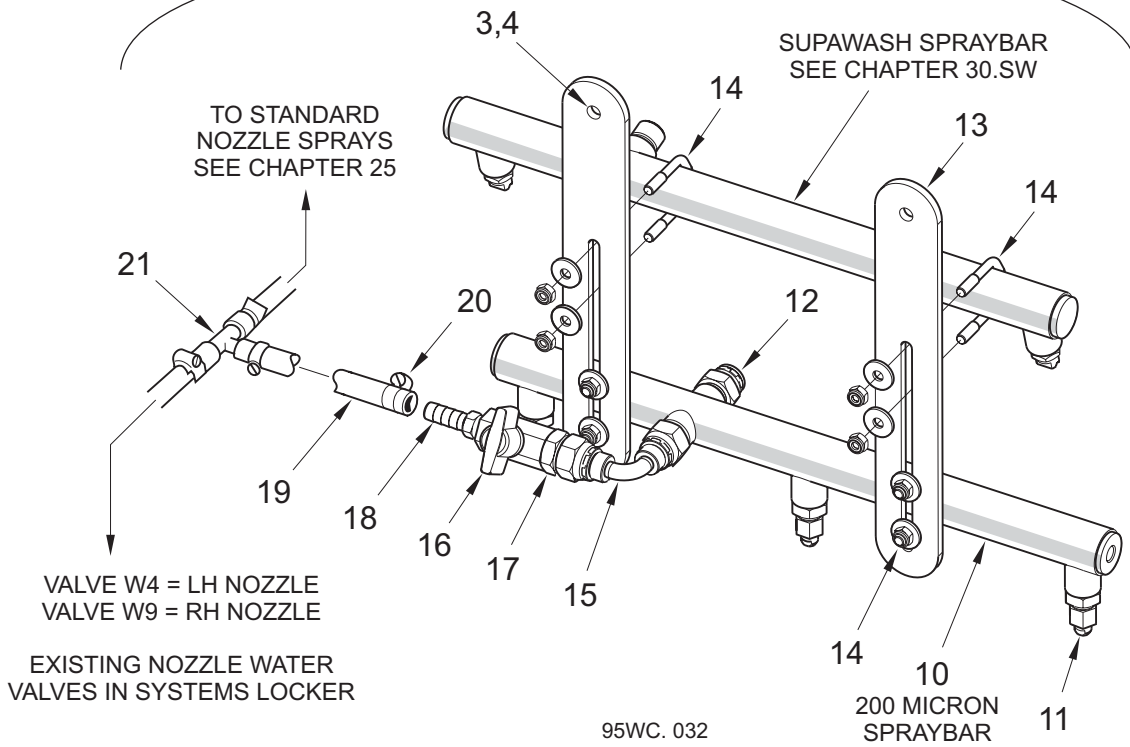
PM10 (plus Supawash) Spray Bar Installations - Nozzle Draw Bar

CHANNEL BRUSH
ATOMISING SPRAY BAR
SEE NEXT PAGE



VALVE W3 = SINGLE & LH DUAL
VALVE W8 = RH DUAL

EXISTING CB WATER VALVES
IN SYSTEMS LOCKER



TO STANDARD
NOZZLE SPRAYS
SEE CHAPTER 25

SUPAWASH SPRAYBAR
SEE CHAPTER 30.SW

VALVE W4 = LH NOZZLE
VALVE W9 = RH NOZZLE

EXISTING NOZZLE WATER
VALVES IN SYSTEMS LOCKER

95WC. 032

200 MICRON
SPRAYBAR

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PM10 (plus Supawash) Spray Bar Installations - Nozzle Draw Bar

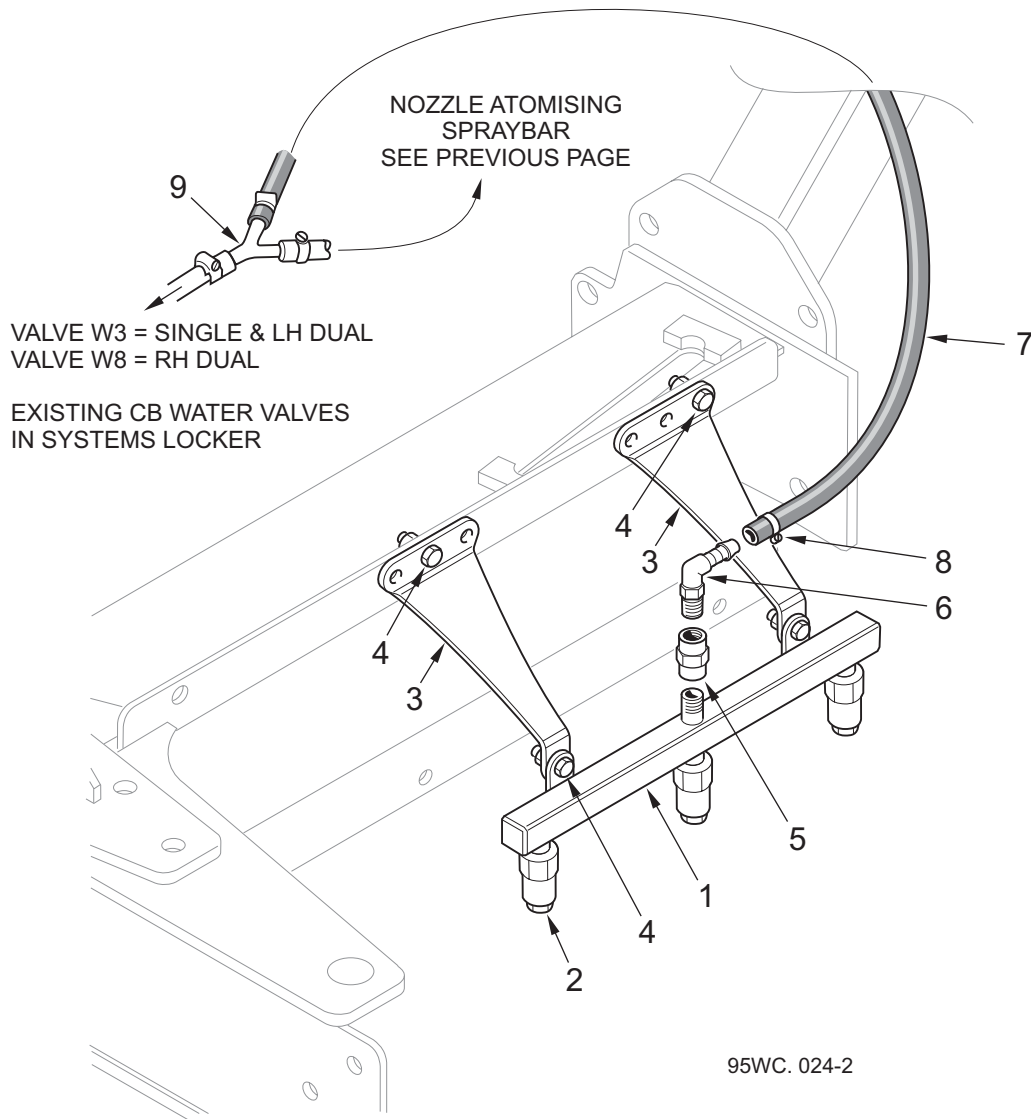
BoM KT01995

Item No.	Part No.	Description	Quantity
	283393-2	100 Micron (Atomising) Spray Bar Assembly Comprising items 1 to 6:-	
1	201076-1	Spray Bar	1
2	21-319	Nozzle Jet	3
3	124-148	Screw M8 x 65	2
	455-10	Washer - Plain M8	4
	425-14	Nut - Nyloc M8	2
4	56589-8	Spacer	2
5	88-4	Tap	1
6	277-20	Elbow - Hose Connector	1
7	39444	Hose 3/8" Bore	As Req'd
8	501-1	Hose Clip	2
9	39640	'Y' Connector	1
	283393-3	200 Micron Spray Bar Assembly Comprising items 10 to 18:-	
10	63584-1	Spray Bar	1
11	263-2	Adaptor 1/4" BSP	3
	60690-1	Nozzle Jet	3
	60689-1	Union Nut	3
12	68-18	Blanking Cap	1
13	201232-1	Mounting Plate	2
* 14	6105-1	U-Bolt M6	2
	457-2	Washer - Plain Large M6	4
	425-13	Nut - Nyloc M6	4
15	242-51	Elbow 3/8" BSP - Swivel	1
16	88-4	Tap	1
17	265-2	Adaptor 1/4" x 3/8" BSP	1
18	46382-3	Hose Adaptor	1
19	39444	Hose	As Req'd
20	501-1	Hose Clip	4
21	277-2	Tee Connector	1

Notes

* If a Supawash Spray Bar is fitted an additional two U-bolts, items 14, will be required.

For Water Circuit diagrams see SW511b01 (Single) and SW512b011 (Dual) in Chapter 10

100 Micron Spray Installation - Channel Brush Pivot Frame

BoM KT01995

Item No.	Part No.	Description	Quantity
1	201076-1	Spray Bar	1
2	21-319	Nozzle - Water Atomising	3
3	283317-1	Mounting Bracket	2
4	124-138	Setscrew M8 x 28	4
	425-14	Nut - Nyloc M8	4
5	66-36	Adaptor G1/4"	1
6	277-20	Hose Connector Elbow R1/4" x Ø10	1
7	39444	Hose 3/8" Bore	As Req'd
8	501-1	Hose Clip	1
9	-	'Y' Connector (See Nozzle Atomising Spraybar on previous page)	

For Water Circuit diagrams see SW511b01 (Single) and SW512b011 (Dual) in Chapter 10

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35.WS

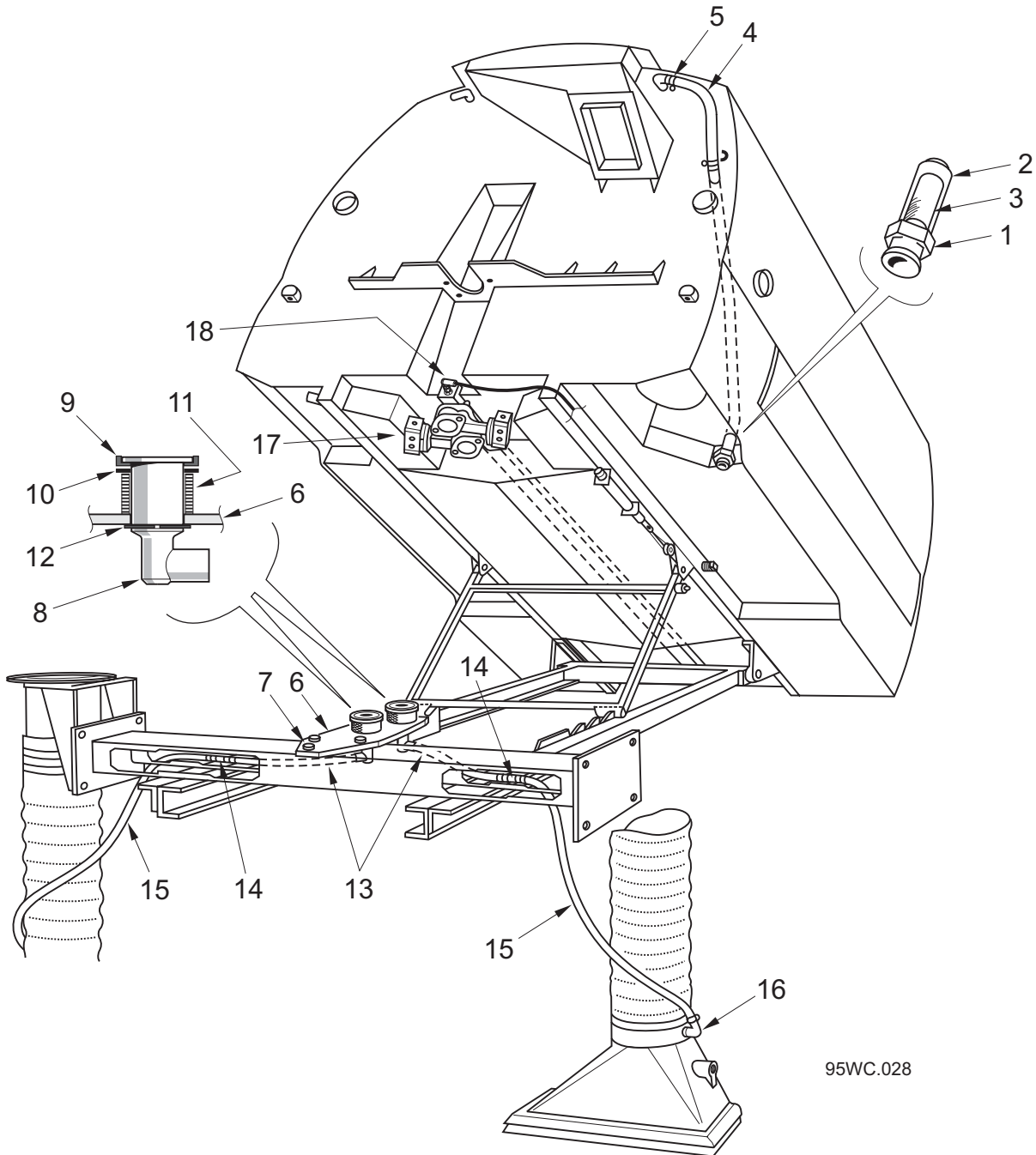
Water System - Water Recirculation

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Recirculation System Components



95WC.028

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Recirculation System Components

BoM KT09195

Item No.	Part No.	Description	Quantity	
			Single	Dual
1	667-31	Hydrant Coupling - Stortz	1	1
	186481-1	Hydrant Coupling - UK Machines only	1	1
2	42119-1	Body - Hydrant Filler Filter	1	1
3	39402	Filter Element	1	1

BoM KT05495

4	272-21	Hose 'Lay Flat' x 750mm long	1	1
5	501-4	Hose Clip	2	2
6	200429-1	Mounting Plate	1	1
7	124-169	Screw M10 x 25	3	3
	455-11	Washer - Plain	3	3
	460-11	Washer - Spring	3	3
		Make and Break Seal comprising items 8 to 12		
8	282751-1	Stem	1	2
9	282765-1	Seal	1	2
10	282752-1	Seal Support	1	2
11	200174-1	Wave Spring	1	2
12	27-5	Circlip	1	2
13	272-20	Hose - Clear	0.4m	0.8m
	501-4	Hose Clip	2	4
14	281576-1	Support	1	2
	124-135	Screw M8 x 20	1	2
	455-10	Washer - Plain	1	2
	425-14	Nut - Nyloc M8	1	2

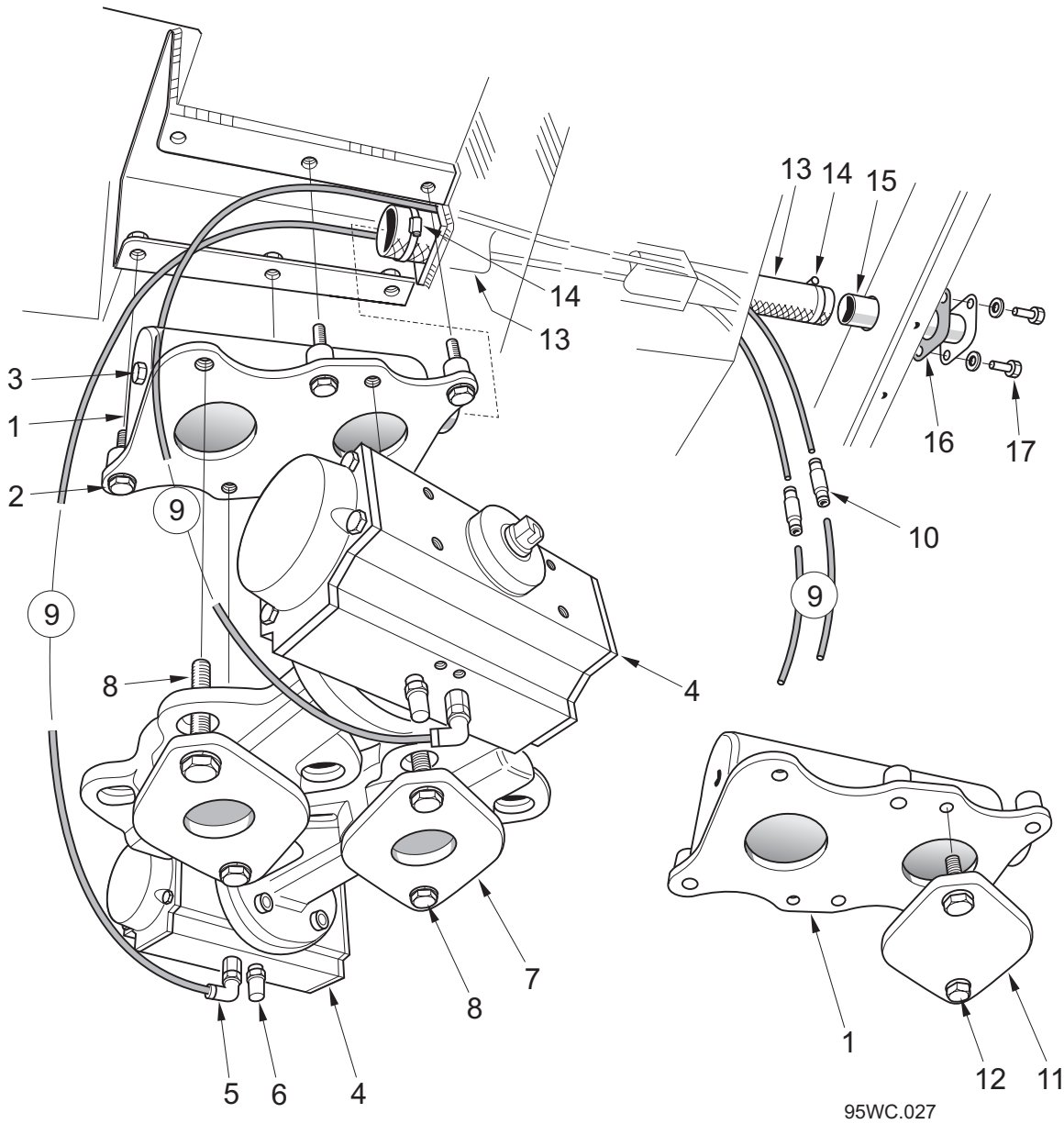
BoM KT05595

15	272-20	Hose - Clear	1.5m	3.0m
>	501-25	Hose Clip	2	4
16	200493-1	Elbow	1	2
	410-57	Locknut	2	4
17	-	Valves - See next page	-	-
18	-	Supawash Backflush System - See Supawash Section 30.SW		

Notes

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Valve Installation



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Valve Installation

BoM KT05495

Item No.	Part No.	Description	Quantity	
			Single	Dual
1	280586-2	Valve Box	1	1
2	123-129	Bolt M10 x 45	4	4
	460-11	Washer - Spring M10	4	4
3	54-4	Plug G 1/2" Brass - Used when Supawash Backflush is not fitted. See Chapter 30.SW	1	1
4	200402-1	Butterfly Valve - Pneumatic	1	2
5	552-3	Elbow G 1/8" x Ø6	1	2
6	72-17	Exhaust	1	2
7	200431-1	Clamp Plate	1	2
8	124-181	Screw M10 x 70	2	4
	460-11	Washer - Spring M10	2	4
9	273-20	Tubing - Blue Ø6	10m	20m
10	547-3	Straight Connector	1	2
11	200788-1	Blanking Plate - Seals redundant port on singles	1	-
12	124-166	Screw M10 x 16	2	-
	460-11	Washer - Spring M10	2	-
13	272-15	Flexible Tube x Ø50 Bore	2m	2m
14	504-6	Hose Clip	2	2
15	280581-2	Stub Tube	1	1

BoM 950611, 960611

16	282574-1	Gasket	1	1
17	118-169	Screw M10 x 25 - Stainless Steel	2	2
	451-6	Washer - Sealing M10	2	2

Notes

For Pneumatic Circuit see diagram SP543a01 in Chapter 11

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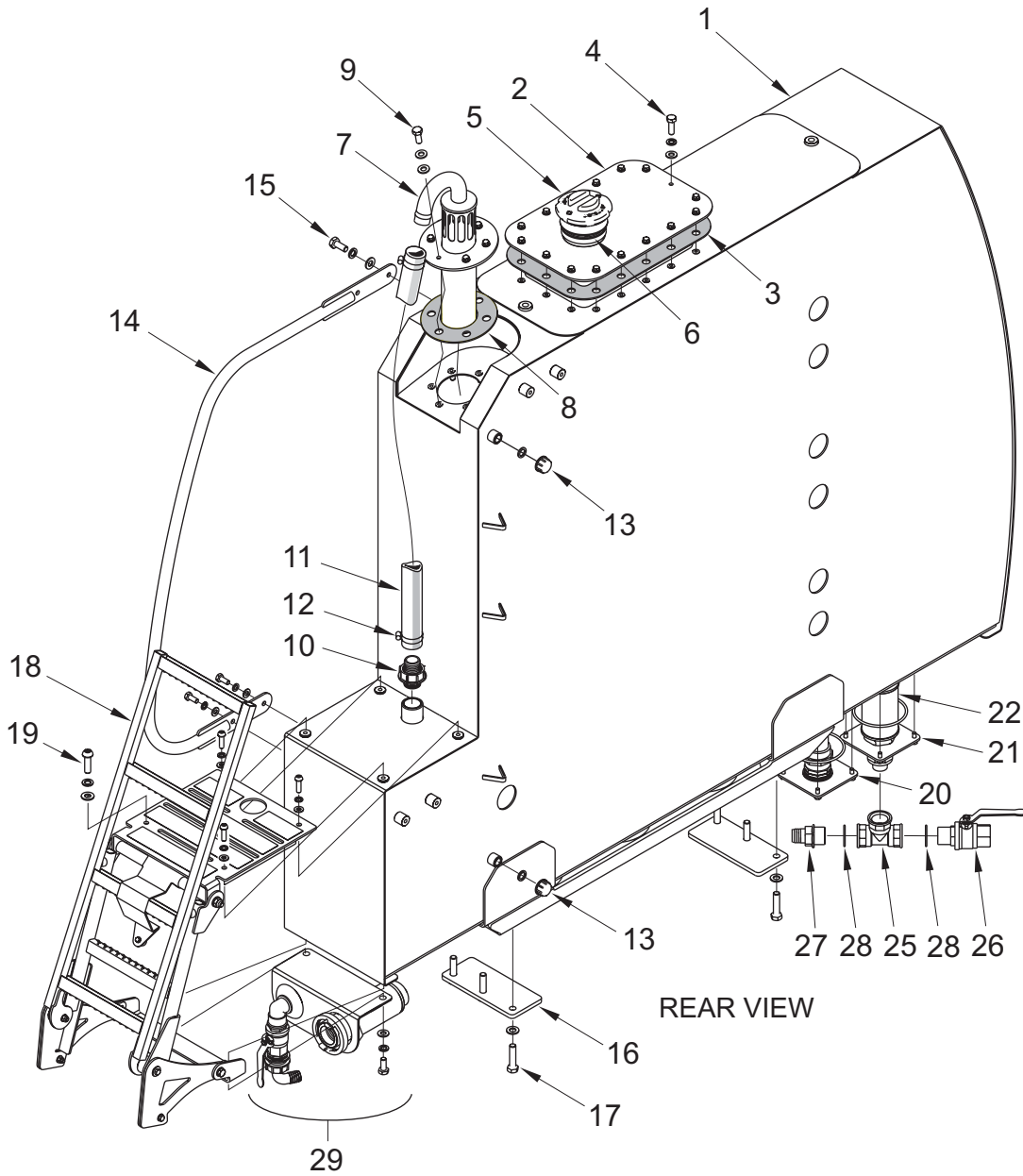
35.WS

Water System - Auxiliary Tank

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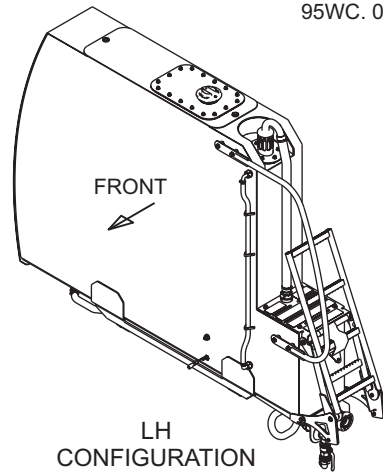
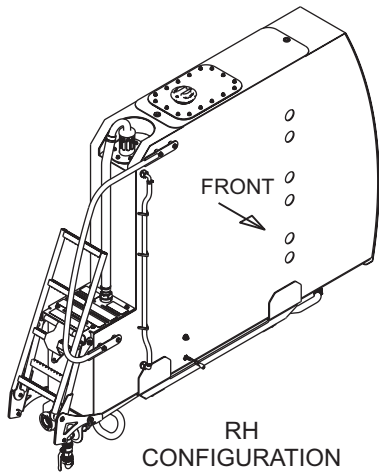
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Auxiliary Tank Assembly



REAR VIEW

95WC. 033



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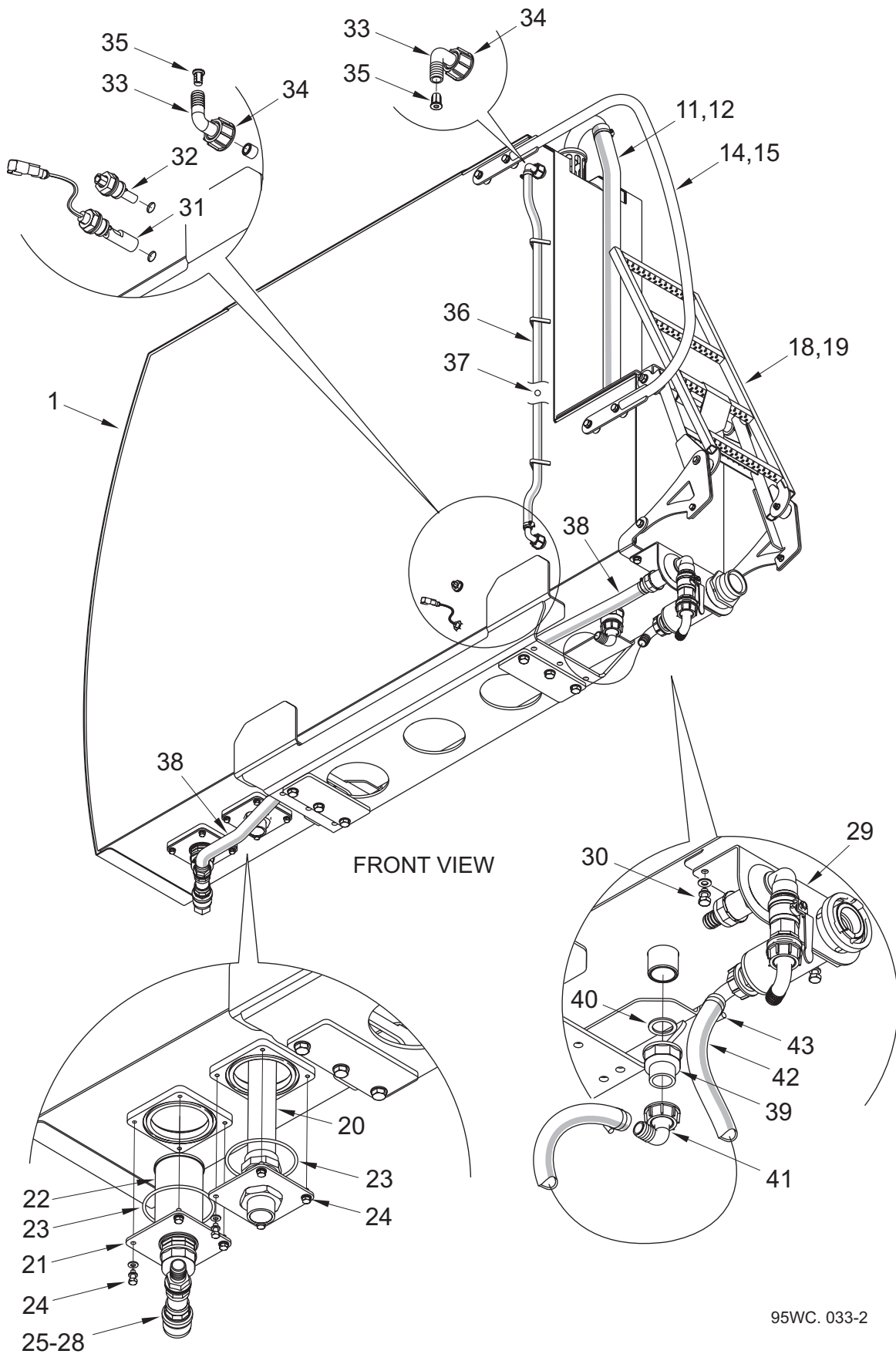
Auxiliary Tank Assembly

BoM KT09795

Item No.	Part No.	Description	Quantity
	283000-1	Auxiliary Water Tank Assembly L.H. Export Market	
	283000-2	Auxiliary Water Tank Assembly L.H. U.K. Market (Different Hydrant Couplings - See item 29)	
1	283001-1	Auxiliary Tank	1
2	283024-1	Cover Plate	1
3	283023-1	Gasket	1
4	124-137	Screw M8 x 24	16
	460-10	Washer - Spring M8	16
	455-10	Washer - Plain M8	16
5	284040-1	Cap	1
6	40643-1	Cap Seal	1
7	283823-1	Water Break Valve	1
8	283026-1	Gasket	1
9	124-135	Screw M8 x 20	6
	460-10	Washer - Spring M8	6
	455-10	Washer - Plain M8	6
10	277-199	Spigoted 1 1/2" (F) Cap + Ø35 Barb	1
11	272-17	Hose Ø35 I/D x 1.0m	1
12	501-5	Hose Clip	2
13	277-189	Blanking Cap 3/4"(F)	2
	277-160	Gasket 3/4"	2
14	283039-1	Grab Rail	1
15	124-169	Screw M10 x 25	4
	460-11	Washer - Spring M10	4
	455-11	Washer - Plain M10	4
16	283073-1	Anti Vibration Mount	2
17	122-167	Bolt M14 x 60	6
	455-13	Washer - Plain M14	6
18	-	Ladder Assembly - Covered elsewhere in this section	1
19	138-158	Screw, Button Hd M10 x35	4
	460-11	Washer - Spring M10	4
	455-11	Washer - Plain M10	4
20	283032-1	Overflow Assembly	1
21	283062-1	Filter Assembly	1
22	6974-1	Filter Element - Spares item	1
23	80-143	'O' Ring	2
24	124-135	Screw M8 x 20	8
	460-10	Washer - Spring M8	8
	455-10	Washer - Plain M8	8
25	277-128	Tee G1"(F)	1
26	88-26	Ball Valve	1
27	277-125	Hosetail G1" x Ø1"	1
28	277-220	'O' Ring	2

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Auxiliary Tank Assembly



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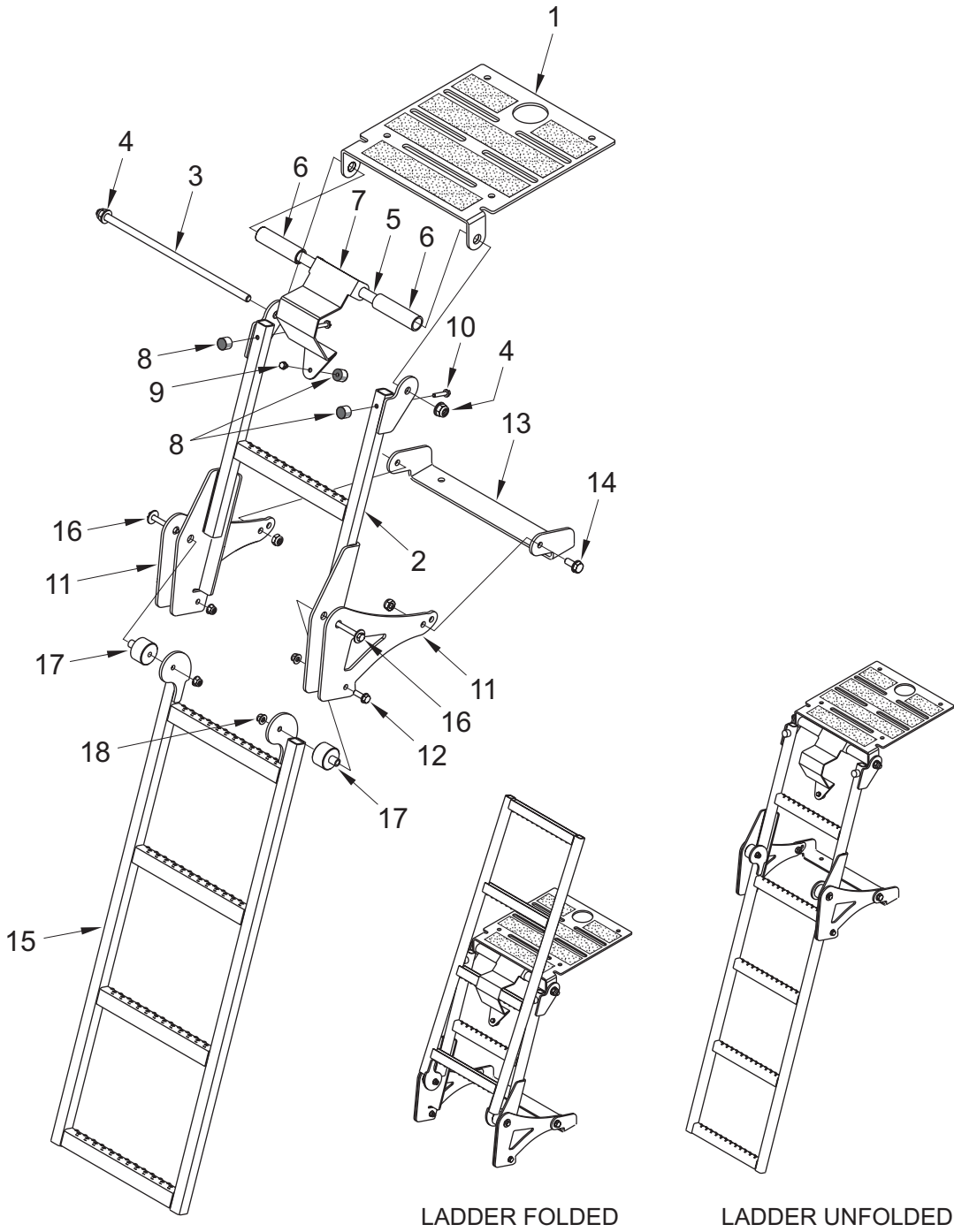
Auxiliary Tank Assembly

Item No.	Part No.	Description	Quantity
29	-	Valve Plate Assemblies - Covered elsewhere in this section.	
30	124-167	Screw M10 x 20	2
	460-11	Washer - Spring M10	2
	455-11	Washer - Plain M10	2
31	48-328	Level Switch	1
32	48-356	Switch - Float Blank	1
33	277-186	Hosetail Barb 90°	2
34	277-159	Flynut 3/4" BSP	2
35	44-55	Insert M6	2
36	15656-1131	Sight Tube	1
	501-2	Hose Clip	2
37	22-7	Ball	1
38	272-20	Clear Tube Ø25 I/D	1
	501-25	Hose Clip	2
39	277-138	Reducing Bush	1
40	277-262	Gasket	1
41	277-140	Spigoted 1 1/4"(F) BSP Cap + 90° Barb	1
42	272-20	Clear Tube Ø25 I/D	1
43	501-25	Hose Clip	2

Notes

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Ladder Assembly



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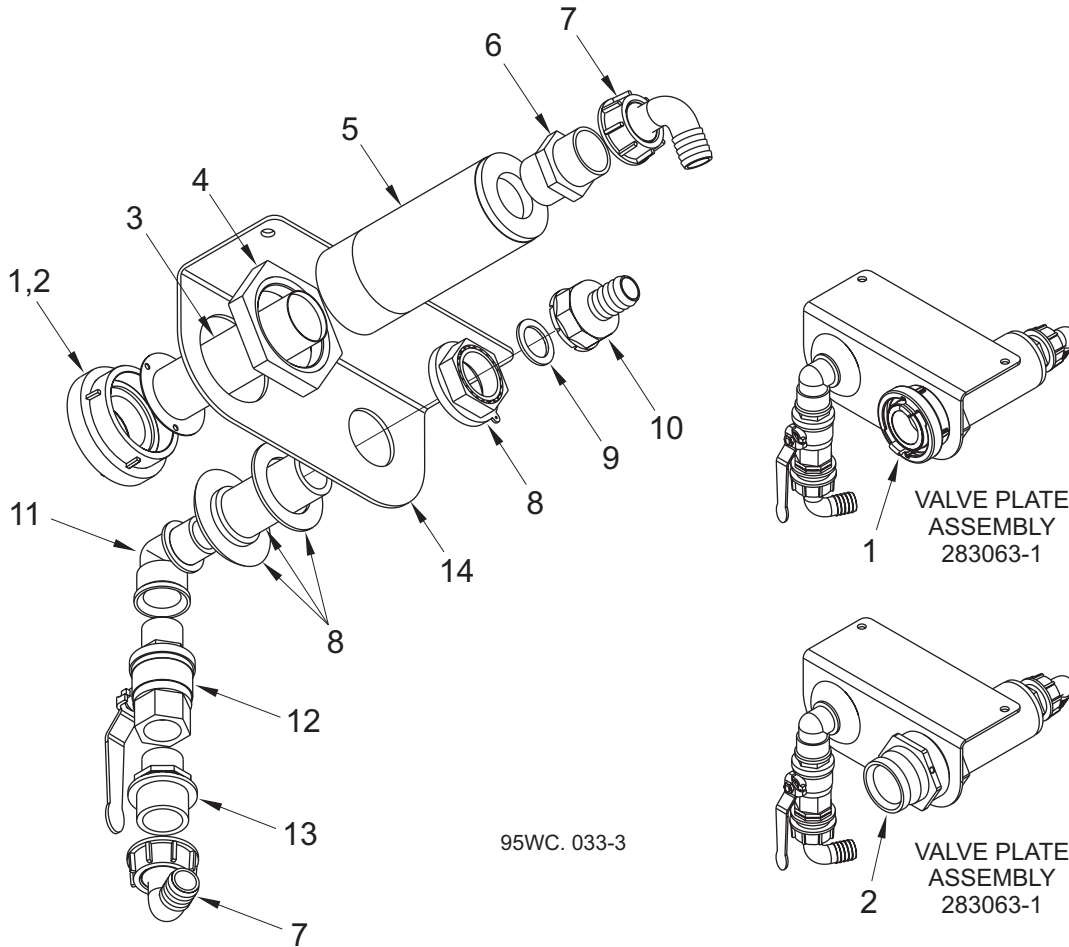
Ladder Assembly

BoM KT09795

Item No.	Part No.	Description	Quantity
	283042-1	Ladder Assembly comprising items 1 to 18:-	
1	283043-1	Foot Plate	1
	283045-1	Upper Ladder Assembly comprising items 2 to 5:-	
2	283046-1	Upper Ladder	1
3	283053-1	Pivot Stud	1
4	455-12	Washer - Plain M12	2
	425-16	Nut - Nyloc M12	2
5	283052-1	Pivot Tube	1
6	283367-1	Hook Locator	2
7	283297-1	Hook	1
8	290-31	Anti-vibration Mount	3
9	124-99	Screw M6 x 10	1
	455-8	Washer - Plain M6	1
10	124-108	Screw M6 x 32	2
	455-8	Washer - Plain M6	2
11	283288-1	Stay	2
12	124-137	Screw M8 x 25	2
	455-10	Washer - Plain M8	2
13	283054-1	Mounting Bracket	1
14	124-169	Screw M10 x 25	2
	455-11	Washer - Plain M10	2
	283055-1	Lower Ladder Assembly comprising items 15 to 18:-	
15	283056-1	Lower Ladder	1
16	123-112	Bolt M8 x 60	2
	457-4	Washer - Large Plain M8	2
17	283058-1	Pivot Spacer	2
18	455-12	Washer - Plain M8	2
	425-16	Nut - Nyloc M8	2

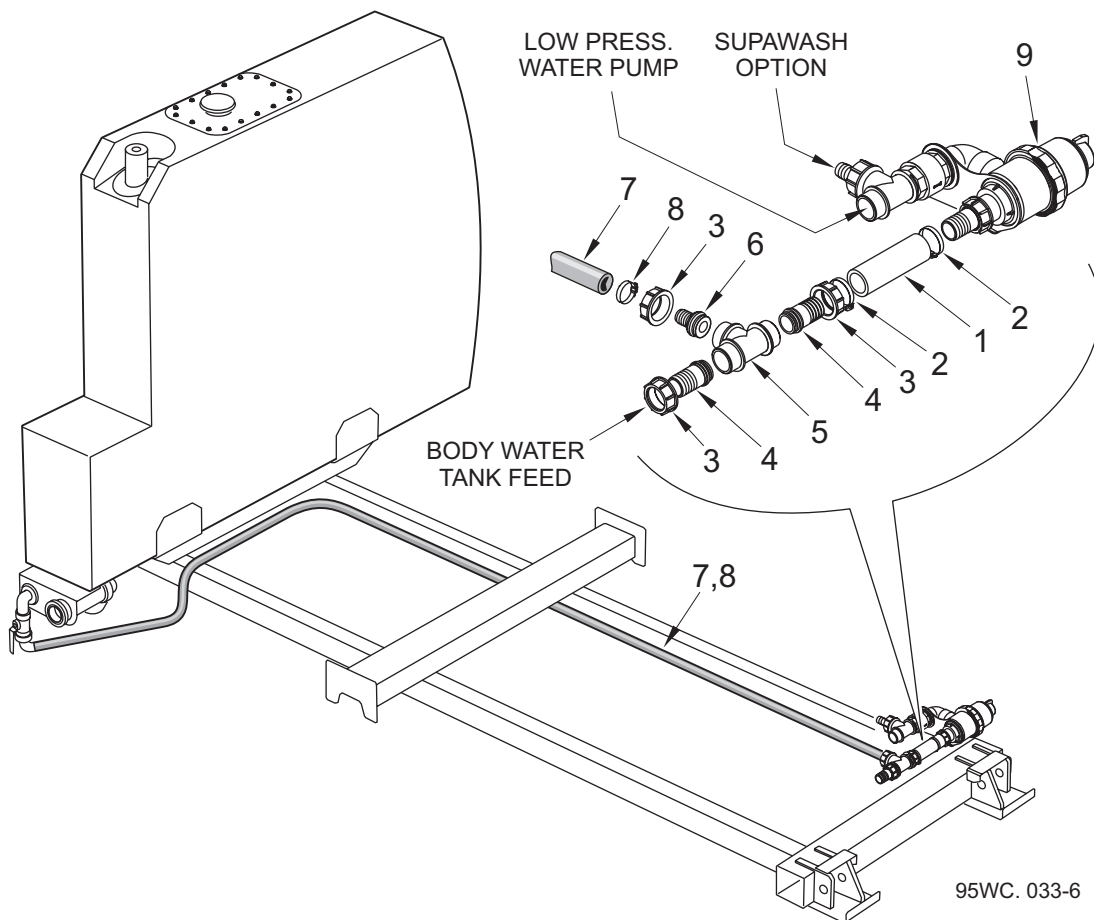
Notes

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BoM KT09795

Item No.	Part No.	Description	Quantity
	283063-1	Valve Plate Assembly - Export, with Stortz Hydrant coupling, item 1	
	283063-2	Valve Plate Assembly - UK, with Instantaneous Hydrant coupling, item 2	
1	667-31	Hydrant Coupling - Stortz, 2 1/2" Female	1
2	18684-1	Hydrant Coupling - Instantaneous, 2 1/2" Female	1
3	39402	Filter Element	1
4	410-210	Backnut G 2 1/2"	1
5	42119-2	Body - Hydrant Filler	1
6	277-194	Nipple G 1 1/4"	1
7	277-140	Spigoted 1 1/4"(F) BSP Cap + 90° Barb	1
8	277-195	Tank Outlet/Bulkhead G1"(F) x G 1 1/4"(M)	1
9	277-268	Gasket 1 1/4"	1
10	277-266	Hose Tail	1
11	277-261	Elbow 90°	1
12	88-26	Ball Valve 1" BSP	1
13	277-197	Reducing Nipple G1"(M) x G 1 1/4"(M)	1
14	283064-1	Valve Plate	1

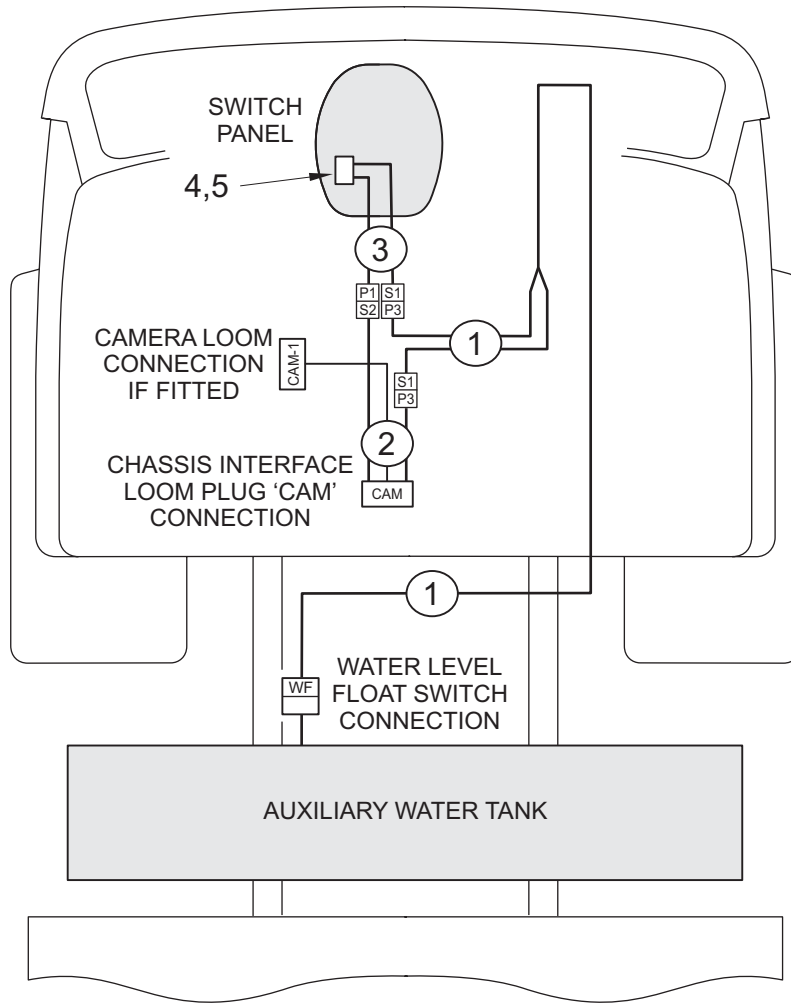
Water Hose Layout



BoM KT09795

Item No.	Part No.	Description	Quantity
	809201-1	Hose Layout and Fittings	
1	497-H24	Hose, 1 1/2" (Ø38) Bore	1
2	504-5	Hose Clip - Stainless Steel	2
3	277-170	Flynut G1 1/2"	3
4	277-183	Hosetail Straight Ø38	2
	277-171	'O' Ring	2
5	277-215	Tee G1 1/2" Male Equal	1
6	277-169	Hosetail Straight Ø25	1
	277-171	'O' Ring	1
7	6117	Hose, 1" (Ø25) Bore x 4.5m	1
8	504-4	Hose Clip - Stainless Steel	2
9	-	Water Filter - See Chapter 30	-

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Low Water Level Warning Light Wiring


95WC. 033-5

BoM KT09795

Item No.	Part No.	Description	Quantity
	809486-1	Wiring Layout - 24v) Comprising	
	809486-3	Wiring Layout - 12v) items 1 to 5:-	
1	809487-1	Loom - Cab to Tank	1
2	809488-1	Loom - Base Unit	1
3	809489-1	Loom - Switch Panel/Pedestal	1
4	735-500	Indicator Base - 24v	1
	735-400	Indicator Base - 12v	1
5	735-603	Indicator Cover incorporating Tank Low/Full Decals	1

Note

Warning indicator (items 4 and 5) is mounted in any spare options position on the switch panel.

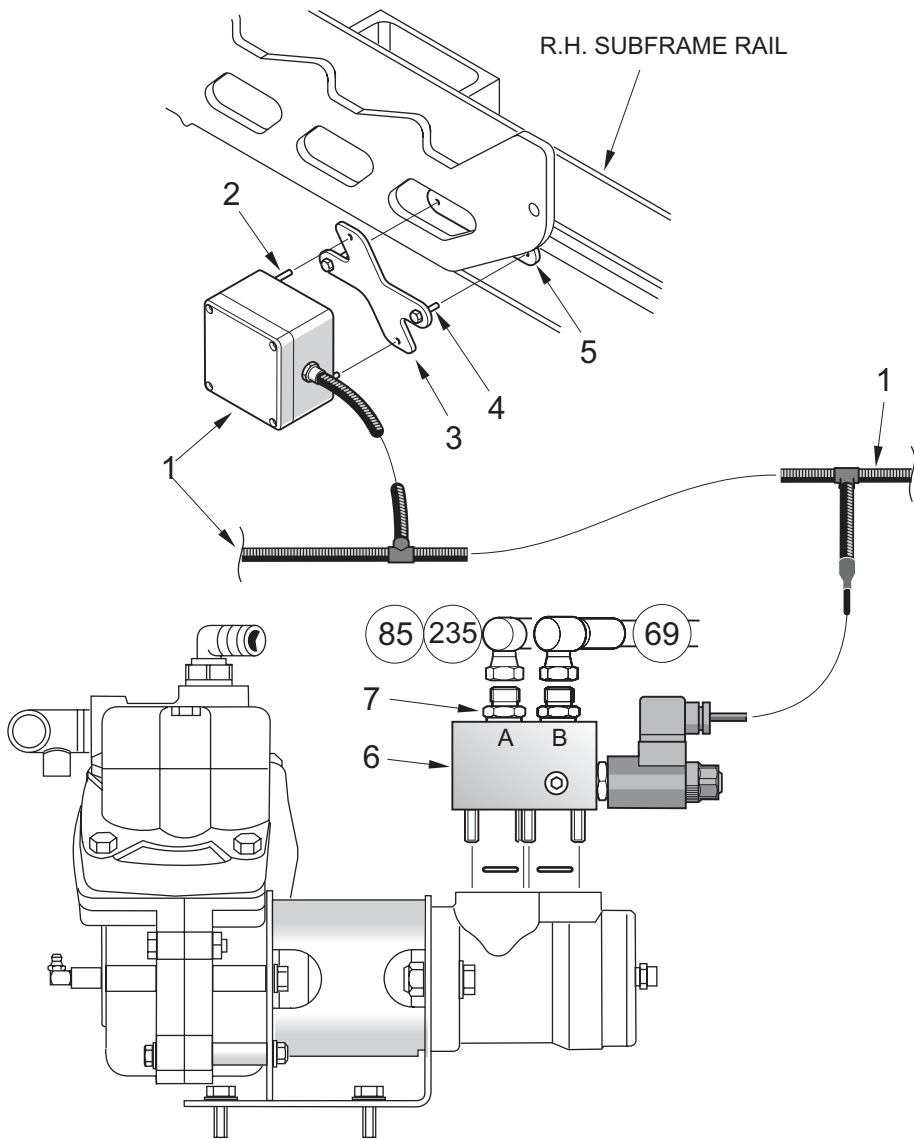
35.WS

Pump Low Water By-Pass Valve

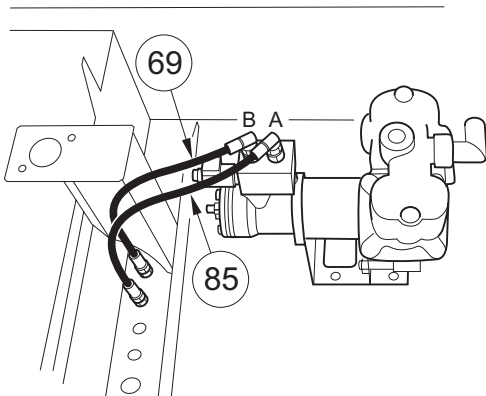
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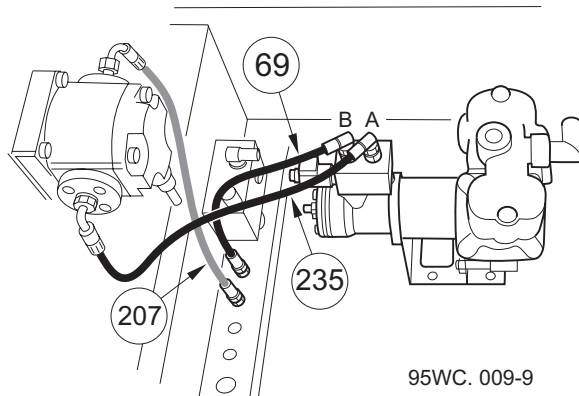
Pump By-pass Valve Installation



VT HYDRAULIC HOSE ROUTING



VS HYDRAULIC HOSE ROUTING



95WC. 009-9

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Pump By-pass Valve Installation

BoM KT12795

Item No.	Part No.	Description	Quantity
	284064-1	Pump Low Water Shut Down drg. Showing items 1 to 5	
1	284065-12	Low Water Shut Down Loom 12v	1
	284065-24	Low Water Shut Down Loom 24v	1
2	134-40	Screw M4 x 8 Pan Hd. Pozidrive	2
	460-5	Washer - Spring M4	2
3	282057-1	Mounting Plate	1
4	124-41	Screw M4 x 25	2
	460-5	Washer - Spring M4	2
5	282056-1	Mounting Plate Clamp	1
6	241-299	By-pass Solenoid Valve Manifold - 12v	1
	241-300	By-pass Solenoid Valve Manifold - 24v	1
7	263-4	Adaptor 1/2"	2
	451-126	Copper Washer - Sealing 1/2"	2
† 69,85	-	Hydraulic Hoses - As standard pump installation in chapter 30	

Notes

† Hose item numbers correspond with those in hydraulic diagrams SH522z01, SH523z01 and SH534z01 in Chapter 8 of the Maintenance Section.

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