



**Roller Cleaner Kit
for
Grading Lines**

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INTRODUCTION

This manual provides the information for the adjustment and maintenance of your Standen Roller Cleaner Kit to help you obtain the best results from the machine. Before putting the machine to work, read through the manual carefully to obtain a full understanding of what the machine should do and how to obtain it.

The Roller Cleaner Kit consists of plain and spiral rubber rollers hydraulically driven from an electrically powered power-pack. The cleaner units are designed to be incorporated within a grading line with the crop being fed onto the rollers from the gearbox end. The contra-rotating rollers then trap loose clod, stone and trash and eliminate them from the sample.

The cleaner units are manufactured in different sizes from 6 to 28 rollers wide with double hydraulic motors on the 12 to 28 roller tables. The power-pack is available in three sizes: 8 gpm capacity for 6-10 roller tables and 16 gpm capacity for 12-20 roller table, and 30 gpm for 22-28 roller tables.

IMPORTANT

All revolving drive machinery is potentially dangerous and should therefore be properly shielded. After installing this machinery, safety guards must be made and fitted to the roller cleaner units to comply with Health and Safety regulations and so avoid the possibility of injury to personnel. The machinery should never be operated with any of the safety guards removed. Make sure that the guards are always kept in good condition and are fitted correctly when the machine is in work.

All electrical work should be carried out by a qualified electrician to comply with current regulations.

All hydraulic hoses should be secured so as not to entangle with any moving part or drag on the ground.

Before starting a new machine, check that all nuts, bolts, keys and grub screws are tight (see 'Nut/Bolt Tightening Torque' in Technical Data section).

SAFETY PRECAUTIONS

NEVER attempt to service, adjust or unclog the machinery until all motion of the machinery has stopped and the electricity supply to the power-pack is disconnected.

NEVER set the machinery in motion before ensuring that everyone in the vicinity is aware of your intention.

NEVER operate the machinery with any of the safety guards removed.

NEVER operate the machinery in a state of disrepair.

The above list of precautions is not exhaustive. All machinery is potentially dangerous and great care must be exercised by the operator/s at all times.



Standen Engineering Limited will not accept liability for damage or injury caused by their products except when such liability is specifically imposed by English Statute.

ROLLER CLEANER UNITS

The roller cleaner units consist of rubber rollers mounted on solid steel shafts which are supported on taper roller bearings within the gear casing. They are unrestricted at the discharge end to eliminate the possibility of blockage from loose top and stone. The rollers are driven by a gear train, each pair of rollers contra-rotating to trap loose clod, stone and trash and eliminate them from the sample. The gear casing should be filled with BP Energrease F-GL.

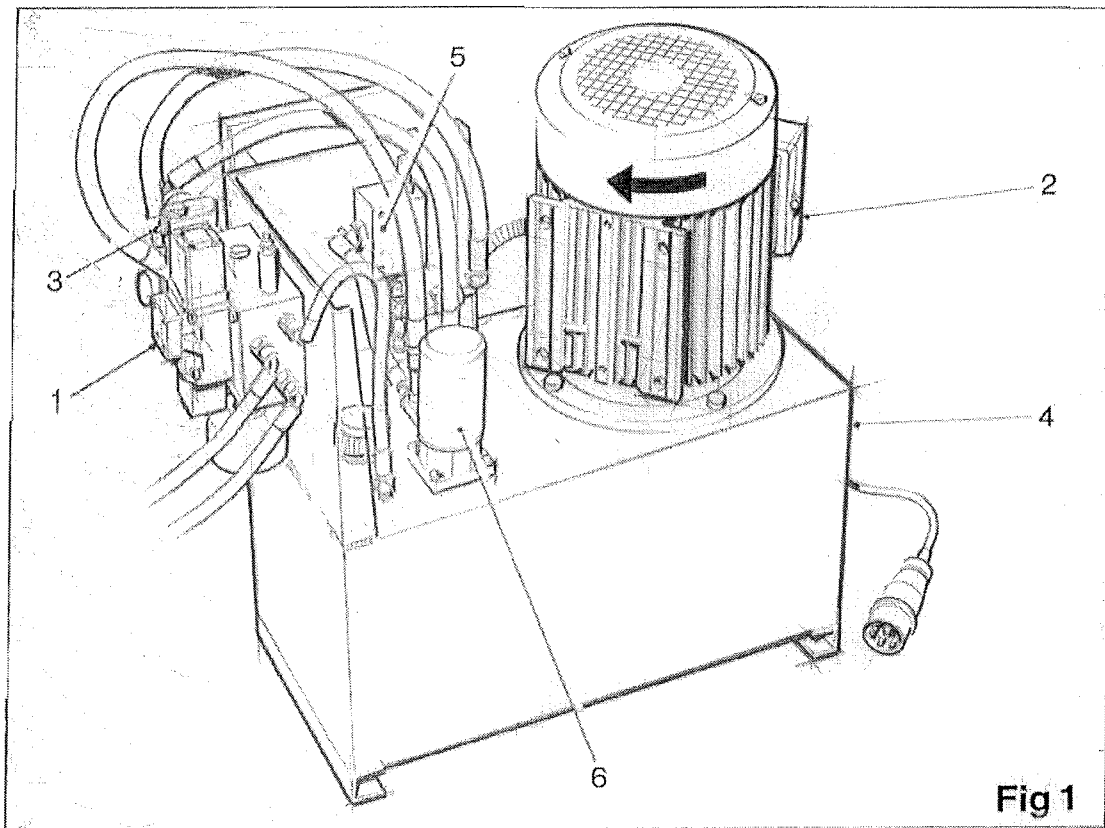


Fig 1

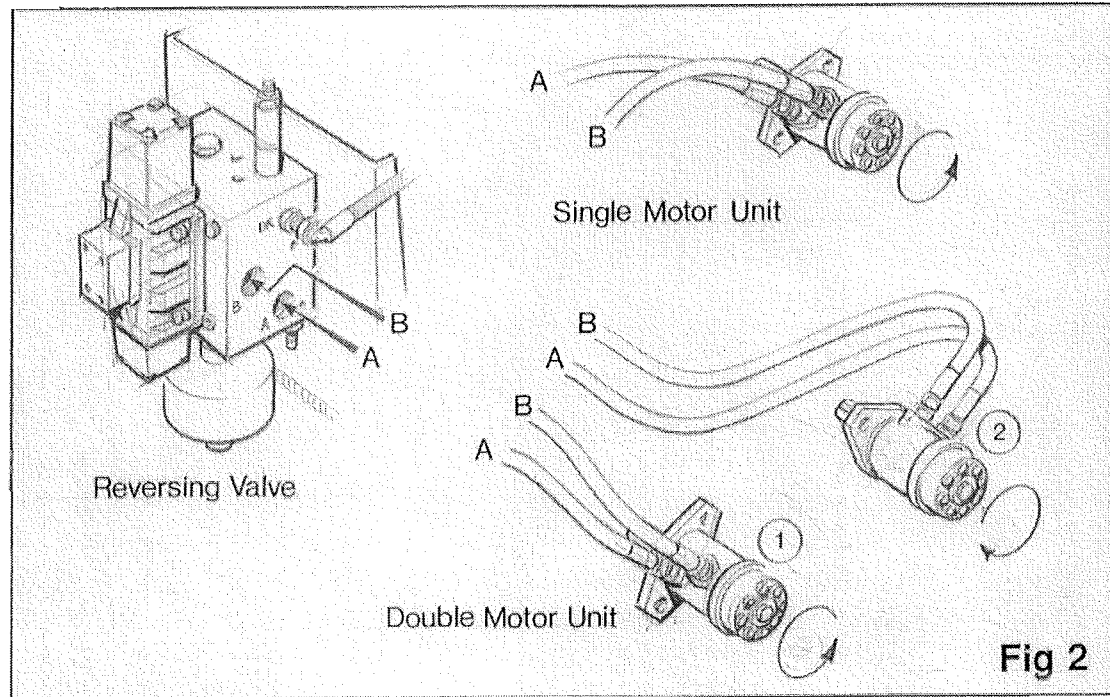
POWER-PACK

The pressure and return hoses from the reversing valve unit (item 1, fig 1) to the hydraulic motors should be fitted as shown in Figure 2.

The power-pack should be connected to a 3-phase 415 v 50 Hz mains supply. The unit should be wired so that the electric motor (item 2, fig 1) rotates in the same direction as the arrow on the electric motor. The power-pack should be fused to accept the motor load requirement shown in the data table.

All electrical installations should be carried out by a qualified electrical engineer.

The 3 phase electric motor (item 2, fig 1) mounted on top of the power-pack drives a hydraulic pump which in turn powers the hydraulic motors driving the cleaner units. The reversing valve unit (item 1, fig1) mounted on the side of the power-pack is designed to automatically reverse the direction of the cleaner rollers for a few revolutions to release any object which cannot pass between the rollers, and then return the drive to the normal contra-rotating direction.



ROLLER CLEANER SPEED CONTROL

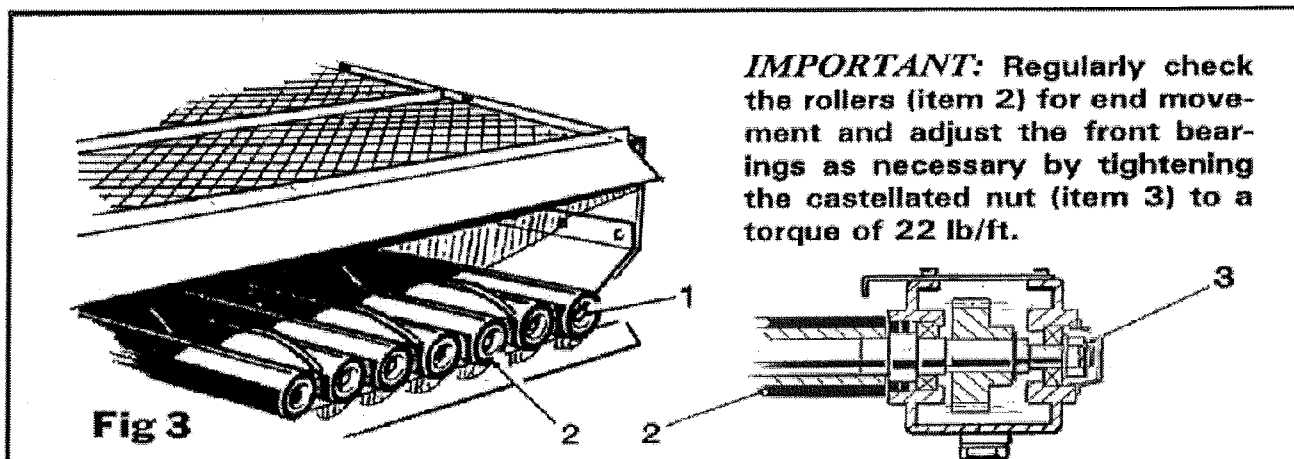
The rollers rotate at a maximum speed of 420 rpm by rotating the dial knob on the flow divider (item 3, fig 1) mounted on the power-pack. This speed can be varied; the lower the number on the dial relative to the marker, the slower the speed of the rollers.

In general, the slower the roller speed, the longer the crop is on the cleaner table and the greater the separation. However, especially with very small potatoes, if the rollers are slowed too much then it is possible that potatoes will also be taken out with the trash. The speed control is therefore very much determined by the crop and trash conditions.

ROLLER CHANGING

The cleaner is fitted with two types of roller, a $3\frac{3}{4}$ " dia. roller with a 6" pitch spiral and a plain rubber roller. The plain rubber roller can be supplied in two sizes, $3\frac{3}{4}$ " dia. where very small tubers need to be retained, or $2\frac{15}{16}$ " dia. where maximum cleaning is required with mature crops.

The rollers are retained on steel shafts by a single bolt (item 1, fig 3) at the discharge end, and located on a spigot at the gearbox end. To remove a roller, remove the bolt and slide the roller off the discharge end of the shaft. The rollers are a close fit on the spigot and may need to be prised off the spigot in some cases. Replacement is the reverse of removal.



All revolving drive machinery, chains shafts gears, etc., are potentially dangerous. Before attempting any adjustment or maintenance of the drive equipment, the electricity supply to the power-pack must be disconnected. Failure to observe the above precaution could result in serious injury to personnel.

CLEANER HYDRAULIC SYSTEM

The hydraulic tank (item 4, fig 1) should be filled with 46 Centistroke Oil and should be kept full at all times. A level gauge is positioned on the tank below the control box, or a dipstick fitted in the filler cap.

The hydraulic pump, mounted inside the hydraulic tank, produces a flow rate of 8 gpm, 16 gpm or 30 gpm. Pressurised oil from the hydraulic pump bypasses the system relief valve (item 5, fig 1) to a variable flow divider (item 3, fig 1) which controls the speed of the rollers. The pressurised oil then passes through the reversing valve unit (item 1, fig 1) to drive the hydraulic motors. The return oil from the motors travels back through the reversing valve unit and then passes through a filter unit (item 6, fig 1) before returning back to the hydraulic tank.

To allow the pump to be started 'off load' and to be able to wire in remote stop/start and emergency stop switches, a 240 V normally open dump valve is fitted to the power-pack which has to be energised 'closed' for the table to run.

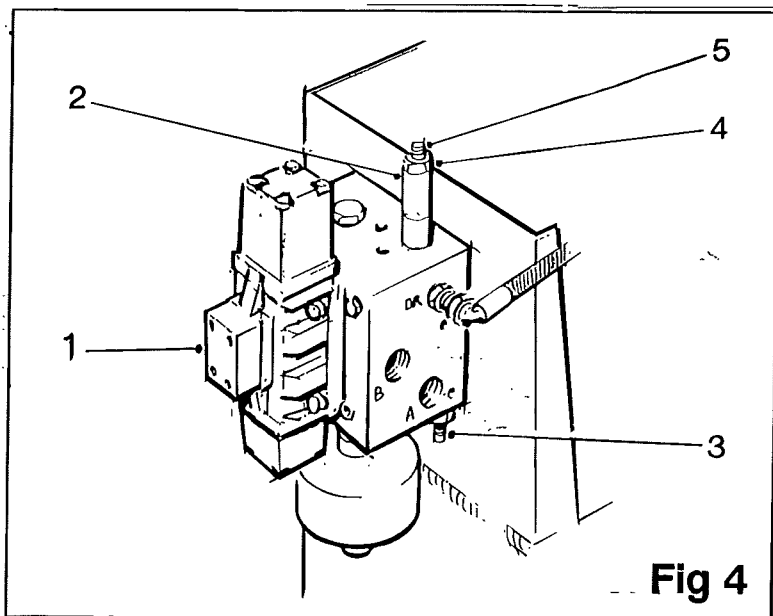


The pressure relief valve (item 5, fig 1) is fitted to protect the hydraulic system should any major blockage occur. It is an essential safety feature pre-set at the factory and should never be tampered with.

REVERSING VALVE UNIT

The reversing valve unit (item 1, fig 4) mounted on the side of the power-pack is fully automatic in its operation. The reversing is actuated by a sequence valve (item 2, fig 4) which is mounted on top of the reversing valve block. When an object starts to block the rollers, the operating pressure increases to the pre-set pressure of the sequence valve. Once this pressure is reached, the valve reverses the motors for a pre-set time; this time being controlled by a small bleed screw (item 3, fig 4) mounted beneath the valve block. This is factory set and should not need altering.

To increase the delay period, the bleed screw (item 3, fig 4) is screwed in, but care should be taken not to screw in fully as this will cause the rollers to stay in reverse.



The sequence valve (item 2, fig 4) is pre-set at the factory to operate at 1450 psi. In exceptionally stony or trash conditions, this setting may need to be increased to avoid the cleaner reversing too often. The pressure is increased or decreased by slackening the lock nut (item 4, fig 4) and turning the top screw (item 5, fig 4). This must be done with a pressure gauge and throttle valve fitted between the pressure port of the reversing valve and pressure hose to the hydraulic motors. Should this equipment not be available, then consult your dealer. The sequence valve setting must never exceed 1800 psi.



Should the occasion arise that a blockage occurs where an object jams the rollers such that the motors cannot reverse, then the electricity supply to the power-pack must be disconnected before attempting to remove any object manually.

POWER-PACK INSTALLATION

The power-pack is controlled with two separate control boxes each having a different power supply. Connect the large control box to a 3 phase 415 v 50 hz mains supply. The unit should be wired so that the electric motor rotates in the direction of the arrow. Connect a suitable control box to a single phase 240 v 50 hz mains supply and use this to switch on/off the dump valve.



All electrical installations should be carried out by a qualified electrical engineer.

OPERATING THE POWER-PACK

The main on/off control for the power-pack is provided by the three switches on the large control box (item 1).

During work the power-pack should be kept running and the roller table switched ON and OFF using the switches on the separate customer fitted control box only. This will prevent the roller table stalling when re-starting under load.

Starting the Power-pack:

Turn the main ON/OFF switch (item 2) on the large control box to the ON position and then press the green START button (item 3). Allow the power-pack to run up to full speed before proceeding.

Starting the Roller Table:



Before starting the roller table, ensure all safety guards are in place.

With the power-pack running at full speed, press the green START button on the additional control box.

Stopping the Roller Table:

Press the red STOP button on the additional control box.

Stopping the Power-pack:

Switch off the roller table and then press the red STOP button (item 4) on the large control box. Finally, turn the main ON/OFF switch (item 2) to the OFF position.



Before attempting any adjustment or maintenance of the drive equipment, the electricity supply to the power-pack must be disconnected. Failure to observe the above precaution could result in serious injury to personnel.

MAINTENANCE

The components utilised in the design of the hydraulic system have been chosen for their maintenance free characteristics. The only components requiring maintenance are the following:-

After the first 50 hours running:

Replace the filter element (item 6, fig 1).

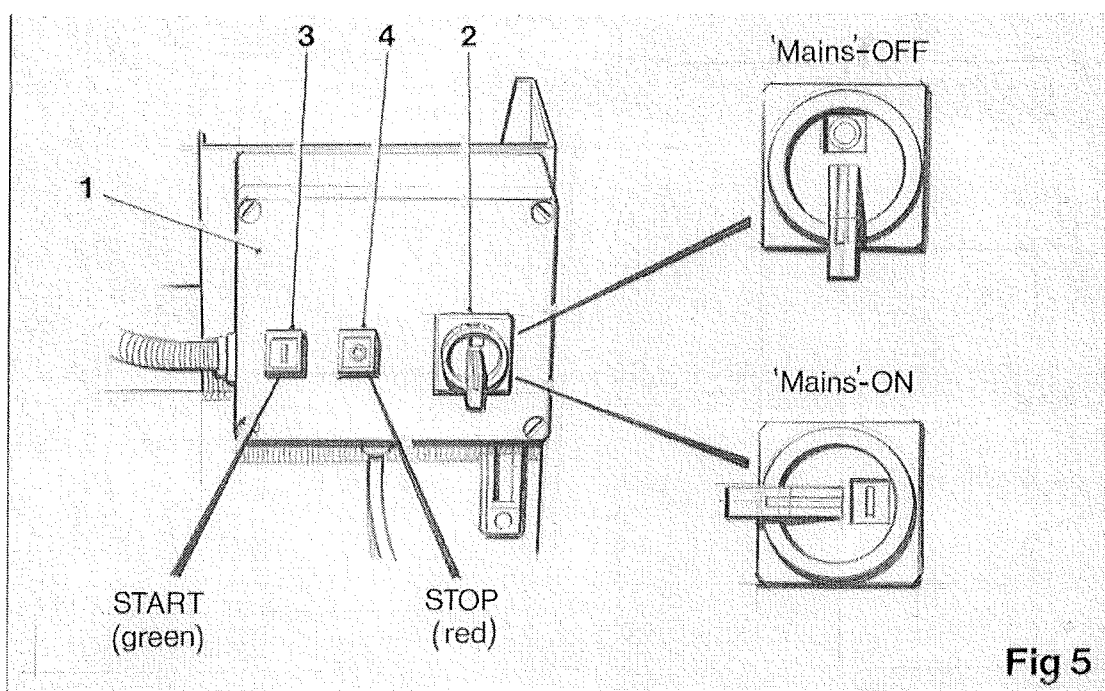
Every 500 hours/end of every season:

Replace filter element (item 6, fig 1).

Drain the hydraulic tank reservoir (item 4, fig 1) and refill with Nuto 46 Centristroke Oil (12 gallons – Small Power-pack / 30 gallons – Large Power-pack).



When carrying out any maintenance to the hydraulic system, cleanliness is of the utmost importance. Avoid any dirt entering the system.



CLEANER UNIT OIL SEAL REPLACEMENT

The cleaner unit roller shafts (item 1, fig 6) are each fitted with two oil seals (item 2, fig 6) at the gear box end (one behind the other). The seals prevent oil from escaping the gear box housing and also prevent dirt from entering.

Depending on conditions, the oil seals (item 2, fig 6) may eventually become worn or damaged and begin to leak. At this point the oil seals will need to be replaced as follows:-

Removing the worn oil seals

1. The rollers are retained on the steel roller shafts (item 1, fig 6) by a single bolt (item 1, fig 3) at the discharge end, and located on a spigot at the gear box end. Remove the bolt and slide the roller off the discharge end of the shaft. The rollers are a close fit and may need to be prised off in some cases.
2. Prise out the damaged oil seals, 2 off (item 2, fig 6) from the gear housing taking care not to scratch the seal apertures. Remove any dirt deposits.

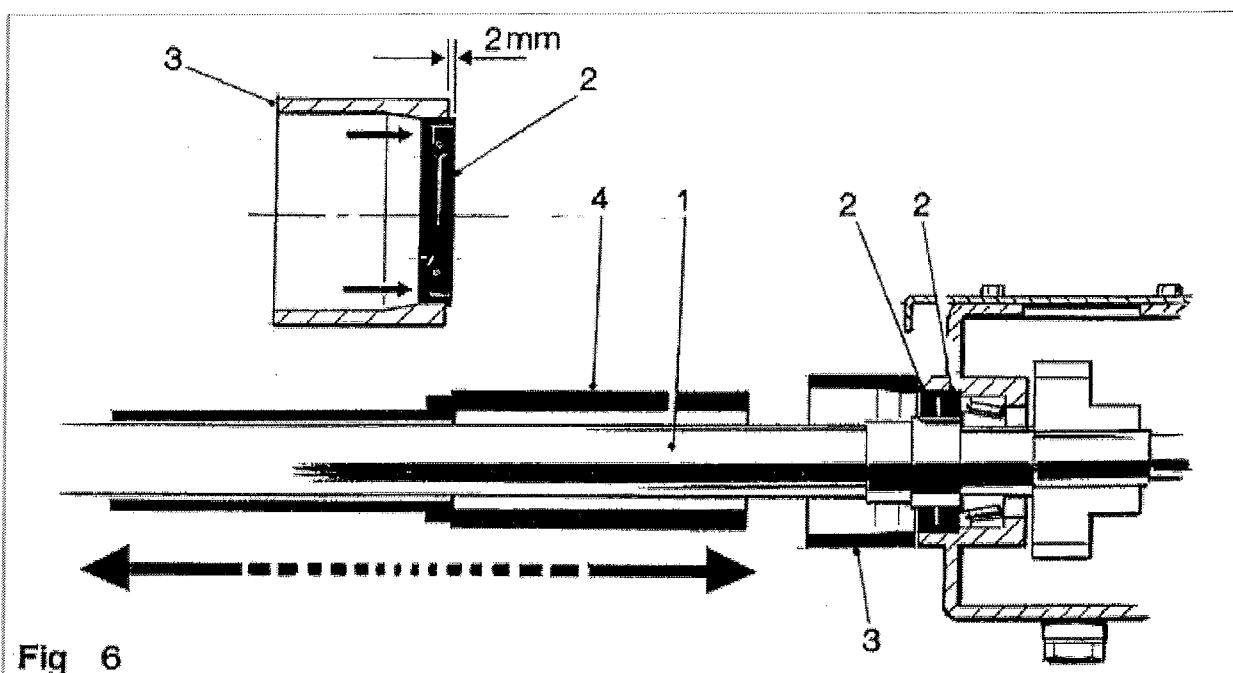


Fig 6

Fitting the new oil seals using the seal insertion kit

1. Grease the inner and outer faces of the new seals to be fitted.
2. Push one of the seals into the compression ring (item 3, fig 6) so that the seals protrudes 1-2 mm beyond the ring face (see Fig 6).
3. Locate the seal in the gear housing aperture and hold the ring firmly against the housing face.
4. Press the seal firmly home by sliding the hammer (item 4, fig 6) along the roller shaft (item 1, fig 6).
5. Repeat for the second seal.
6. Re-assemble roller onto roller shaft and tighten the bolt (item 1, fig 3).

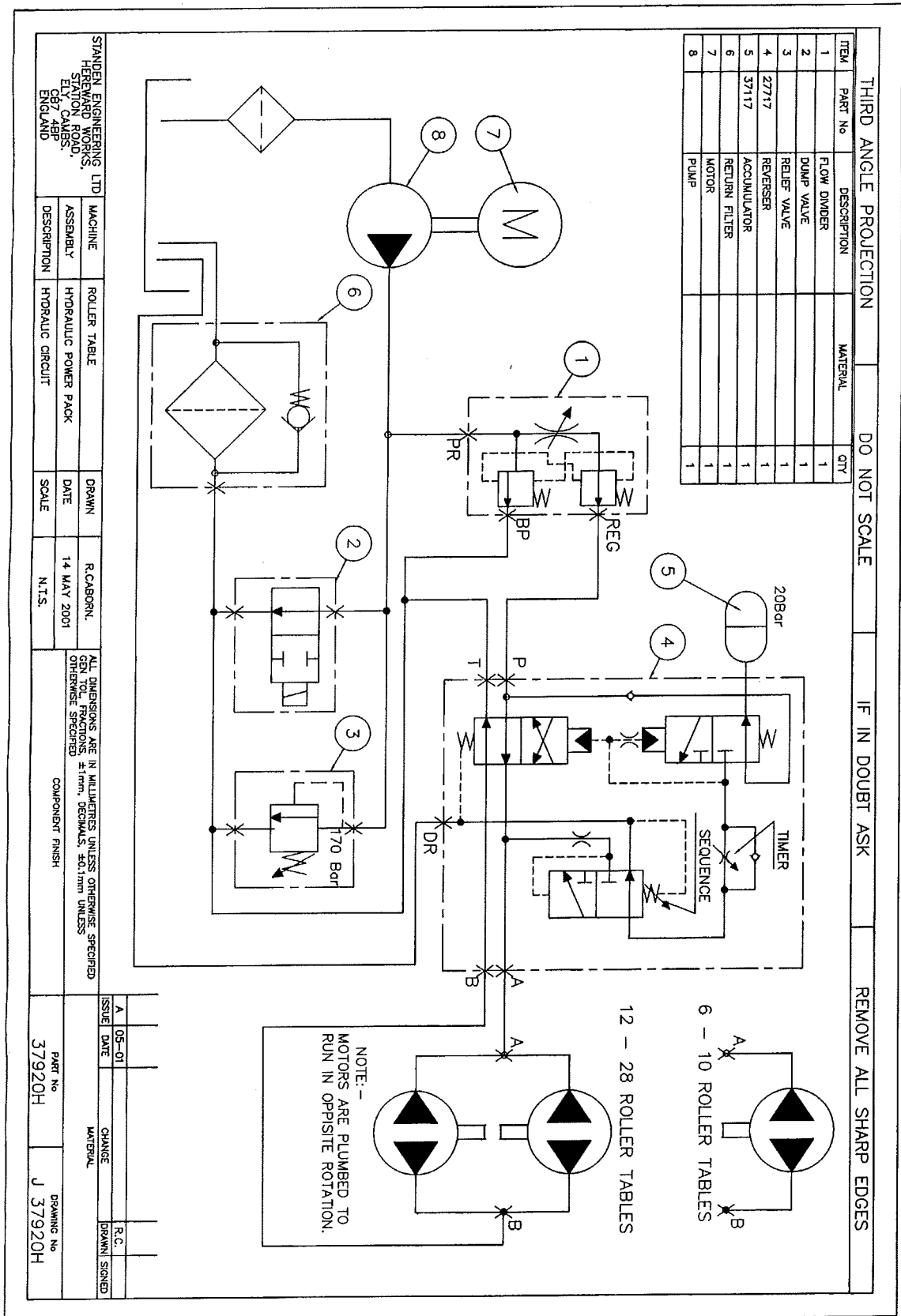
TECHNICAL DATA

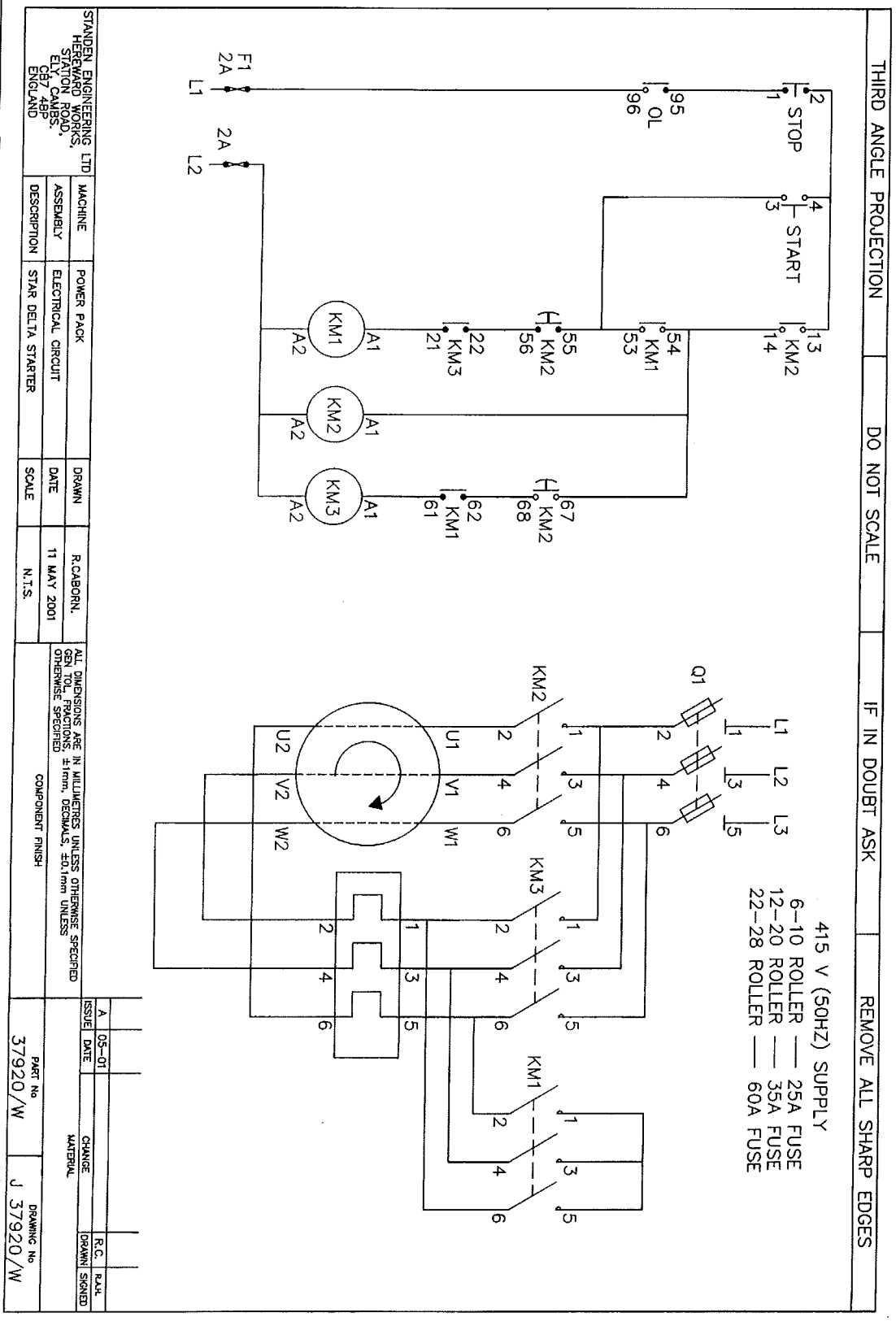
Table Size	6-10 ROLLER	12-20 ROLLER	22-28 ROLLER
Hydraulic Pump Flow	8 GPM 36 LT/M	16 GPM 72 LT/M	30 GPM 135 LT/M
Hydraulic Tank Capacity Castrol AWS 46	12 Gallons 54 Litres	30 Gallons 135 Litres	66 Gallons 300 Litres
Relief Valve Setting	2465 PSI 170 Bar	2465 PSI 170 Bar	2465 PSI 170 Bar
Sequence Valve Setting Max 1800 PSI/124 Bar	1450 PSI 100 Bar	1450 PSI 100 Bar	1450 PSI 100 Bar
Electric Motor (3 Phase)	11 KW/15 HP 415 V (50HZ) 20.5A	20 KW/25 HP 415 V (50HZ) 33.0A	30 KW/40 HP 415 V (50HZ) 52.0A
Supply Fuse Rating	25A	35A	60A
Gearcasing Oil (Roller Table)	BP Energrease FGL.000	BP Energrease FGL.000	BP Energrease FGL.000

NUT/BOLT TIGHTENING TORQUE			
Description	Torque	Description	Torque
(Cleaner Unit Roller Shaft) Castellated Nut	22 LB/FT	-Bolt/Steel Nut-	
-Nyloc/Zinc Plated Nut-		M6	7 LB/FT
M6	10 LB/FT	M8	19 LB/FT
M8	23 LB/FT	M10	38 LB/FT
M10	44 LB/FT	M12	70 LB/FT
M12	87 LB/FT	M16	170 LB/FT
M16	208 LB/FT	M20	325 LB/FT
M20	380 LB/FT	M24	565 LB/FT
M24	690 LB/FT		

ROLLER TABLE GREASE CAPACITIES

Number Of Rollers In Roller Table	Number Of Litres Of Grease	Grease Kg.
28	23.7	15.5
20	17.0	11.1
18	15.4	10.1
16	13.8	9.0
12	10.5	6.9
10	8.8	5.8
8	7.2	4.7
6	5.5	3.6

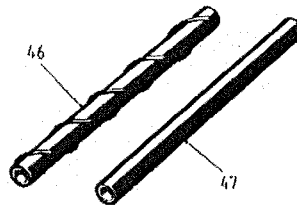
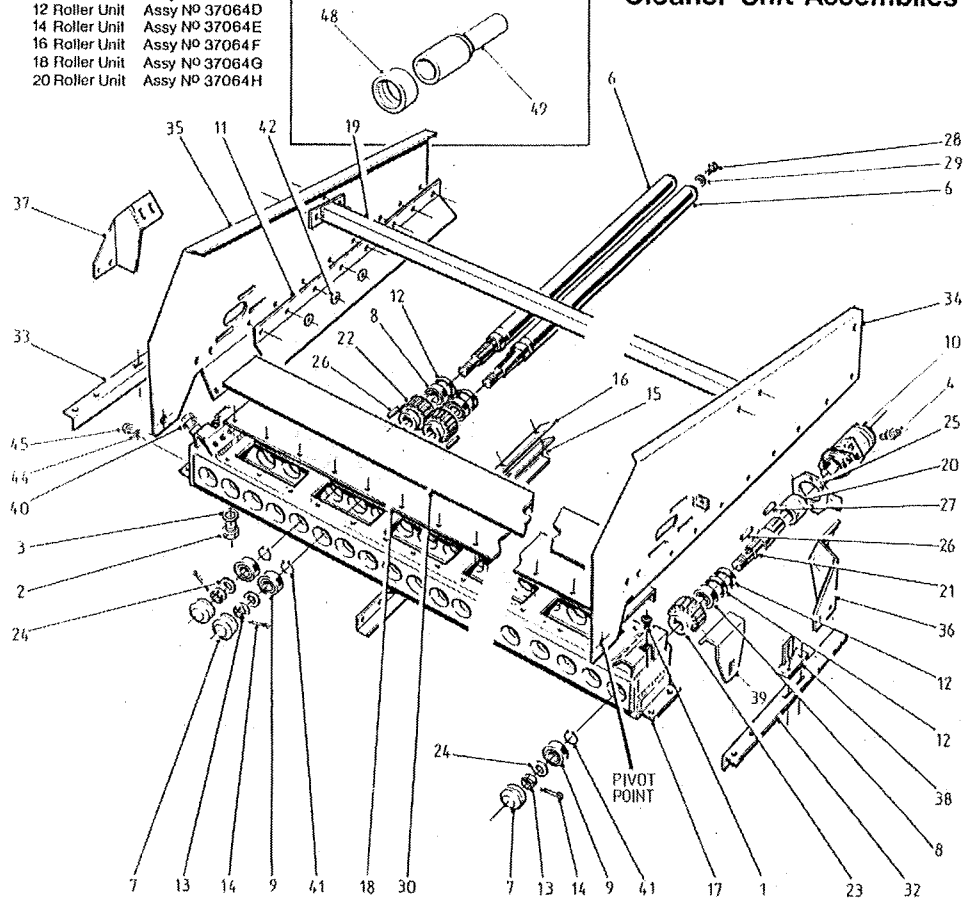




6 Roller Unit	Assy N° 37064A
8 Roller Unit	Assy N° 37064B
10 Roller Unit	Assy N° 37064C
12 Roller Unit	Assy N° 37064D
14 Roller Unit	Assy N° 37064E
16 Roller Unit	Assy N° 37064F
18 Roller Unit	Assy N° 37064G
20 Roller Unit	Assy N° 37064H

Seal Insertion Kit Assy N° 37145

Cleaner Unit Assemblies



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CLEANER UNIT ASSEMBLIES – Assy No. 37064A, B, C, D, E, F, G, H, M

Item	Part no.	Description	Qty	Remarks
	37064A	6 Roller Cleaner Unit		
	37064B	8 Roller Cleaner Unit		
	37064C	10 Roller Cleaner Unit		
	37064D	12 Roller Cleaner Unit		
	37064E	14 Roller Cleaner Unit		
	37064F	16 Roller Cleaner Unit		
	37064G	18 Roller Cleaner Unit		
	37064H	20 Roller Cleaner Unit		
	37064M	28 Roller Cleaner Unit		
		<u>Assemblies Consist of:</u>		
1	42653	3/8" BSP Breather	2	
2	11116	1" BSP Blanking Plug	1	
3	11122	1" BSP Dowty Seal	1	
4	13191	¾" BSP x 7/8" UNF Male Adaptor	a/r	
5				
6	27840S	Roller Shaft (Solid)	a/r	
	27840T	Roller Shaft (Tubular)	a/r	
7	27841	End Cap	a/r	
8	27843	Rear Bearing	a/r	
9	27844	Front Bearing	a/r	
10	27846	Hydraulic Motor (100 cc)	1	(6-10 Roller Units)
	27846	Hydraulic Motor (100 cc)	2	(12-20 Roller Units)
	27842	Hydraulic Motor (145 cc)	2	(12-20 Roller Units)
	37660	Hydraulic Motor (150 cc)	2	(12-28 Roller Units)
11	27876	Rubber Deflector	2	
12	27895A	Oil Seal	a/r	
13	27917	Castellated Nut	a/r	
14	27918	Split Pin	a/r	
15	27922	Scraper Arm (blade holes at 300 mm pitch)	a/r	(Used prior to 1995 only)
	37556	Scraper Arm (blade holes at 325 mm pitch)	a/r	
	42295	Scraper Arm (blade holes staggered)	a/r	
	37855	Vertical Scraper Arm (optional)	a/r	(Used with blade 37557)
16	27923	Scraper Blade (3 slots at 300 mm pitch)	a/r	(Used prior to 1995 only)
	37557	Scraper Blade (3 slots at 325 mm pitch)	a/r	
	42297	Scraper Blade (3 slots staggered)	a/r	
17	27926MA	6 Roller Gearcase	1	
	27926MB	8 Roller Gearcase	1	
	27926MC	10 Roller Gearcase	1	

27926MD	12 Roller Gearcase	1	
27926ME	14 Roller Gearcase	1	
27926MF	16 Roller Gearcase	1	
27926MG	18 Roller Gearcase	1	
27926MH	20 Roller Gearcase	1	
27926MM	28 Roller Gearcase	1	

CLEANER UNIT ASSEMBLIES – Assy No. 37064A, B, C, D, E, F, G, H, M

Item	Part no.	Description	Qty	Remarks
18	27929A	6 Roller Cover Plate	1	
	27929B	8 Roller Cover Plate	1	
	27929C	10 Roller Cover Plate	1	
	27929D	12 Roller Cover Plate	1	
	27929E	14 Roller Cover Plate	1	
	27929F	16 Roller Cover Plate	1	
	27929G	18 Roller Cover Plate	1	
	27929H	20 Roller Cover Plate	1	
	27929M	28 Roller Cover Plate	1	
19	27930A	6 Roller Tie Bar	1	
	27930B	8 Roller Tie Bar	1	
	27930C	10 Roller Tie Bar	1	
	27930D	12 Roller Tie Bar	1	
	27930E	14 Roller Tie Bar	1	
	27930F	16 Roller Tie Bar	1	
	27930G	18 Roller Tie Bar	1	
	27930H	20 Roller Tie Bar	1	
	27930M	28 Roller Tie Bar	1	
20	27935	Motor Coupling	a/r	
21	27936	Input Shaft	a/r	
22	27937	35 t Gear	a/r	
23	27938	45 t Motor Gear	a/r	
24	27942	Flat Washer	a/r	
25	27928	Motor Mounting Plate	1	(6-10 Roller Units)
	27945	Motor Mounting Plate	2	(12-28 Roller Units)
26	27948	Key	a/r	
27	27949	Key	a/r	
28	27950	Hex Head Setscrew	a/r	
29	SS025011/003	Washer	a/r	
30	32592A	6 Roller Top Plate	1	
	32592B	8 Roller Top Plate	1	
	32592C	10 Roller Top Plate	1	
	32592D	12 Roller Top Plate	1	
	32592E	14 Roller Top Plate	1	
	32592F	16 Roller Top Plate	1	
	32592G	18 Roller Top Plate	1	

	32592H	20 Roller Top Plate	1	
	32592M	28 Roller Top Plate	1	
31				
32	37039LH	LH Mounting Angle	1	(12-28 Roller Units)
33	37039RH	RH Mounting Angle	1	(12-28 Roller Units)
34	37048	LH Side Panel	1	
35	37049	RH Side Panel	1	

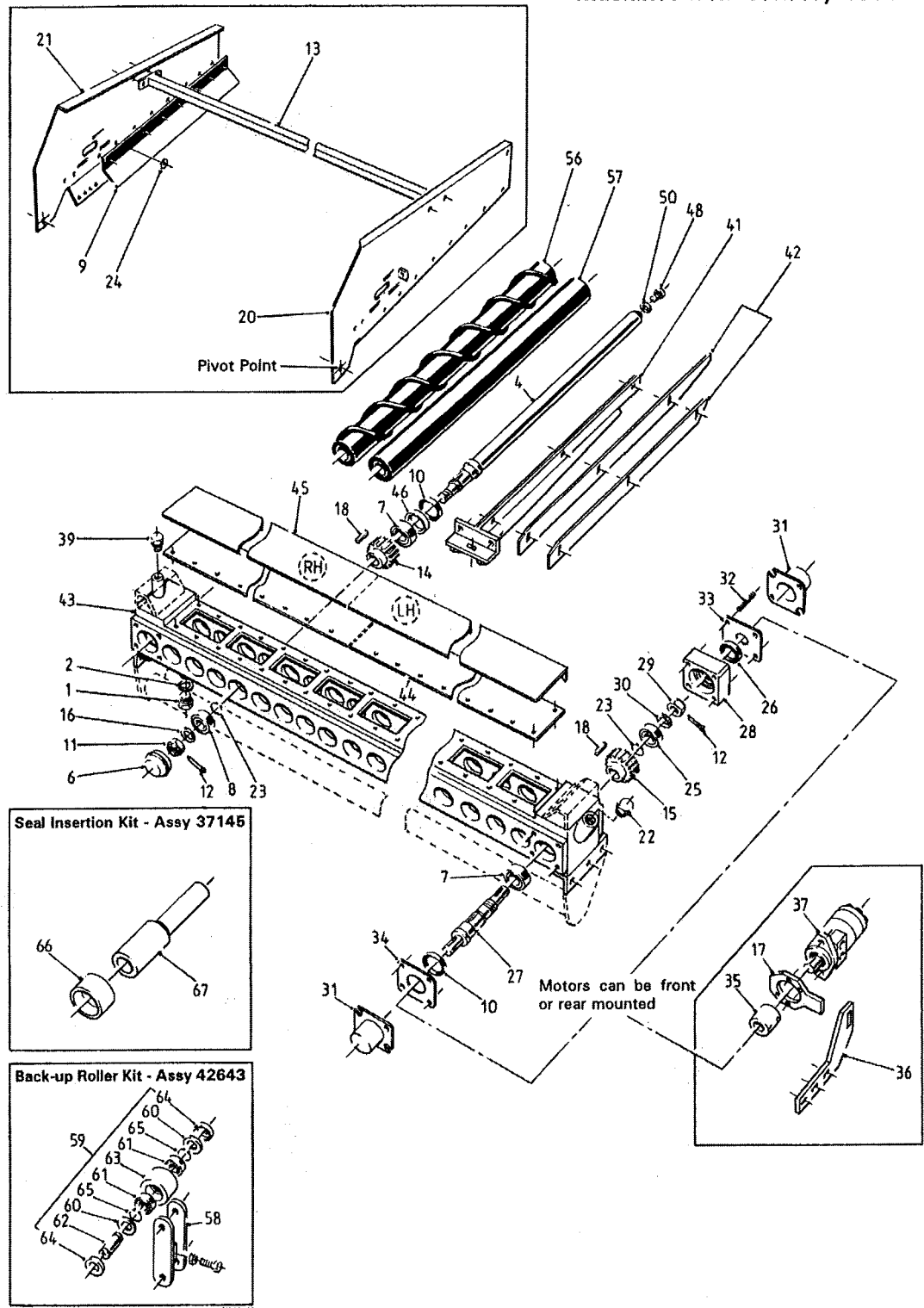
CLEANER UNIT ASSEMBLIES – Assy No. 37064A,B,C,D,E,F,G,H,M

Item	Part no.	Description	Qty	Remarks
36	37050	Rear Support	1	(12-28 Roller Units)
37	37051	Rear Support	1	(12-28 Roller Units)
38	37052	Motor Reaction Plate	2	(12-28 Roller Units)
39	27927	Motor Reaction Plate	1	(6-10 Roller Units)
40	37076	1" BSP Nylon Filler Plug	1	
41	37086	External Circlip	a/r	
42	37108	Deflector Washer	16	
43				
44	11337	¼" BSP Dowty Seal	1	
45	11876/8	¼" BSP Level Plug	1	
		<u>Rubber Rollers</u>		
46	37057A	Rubber Spiral Roller (Ø75 x 975 mm)	a/r	Options
	37058A	Rubber Spiral Roller (Ø75 x 1125 mm)	a/r	
	37783A	Rubber Spiral Roller (Ø82 x 975 mm)	a/r	
	37784A	Rubber Spiral Roller (Ø82 x 1125 mm)	a/r	
47	37057B	Rubber Plain Roller (Ø82.5 x 975 mm)	a/r	
	37057C	Rubber Plain Roller (Ø74.5 x 975 mm)	a/r	
	37058B	Rubber Plain Roller (Ø82.5 x 1125 mm)	a/r	
	37058C	Rubber Plain Roller (Ø74.5 x 1125 mm)	a/r	
		<u>Polyurethane Rollers</u>		
46	37057AP	Poly' Spiral Roller (Ø75 x 975 mm)	a/r	
	37058AP	Poly' Spiral Roller (Ø75 x 1125 mm)	a/r	
	37783AP	Poly' Spiral Roller (Ø82.5 x 975 mm)	a/r	
	37784AP	Poly' Spiral Roller (Ø82.5 x 1125 mm)	a/r	
47	37057BP	Poly' Plain Roller (Ø82.5 x 975 mm)	a/r	
	37057CP	Poly' Plain Roller (Ø74.5 x 975 mm)	a/r	
	37058BP	Poly' Plain Roller (Ø82.5 x 1125 mm)	a/r	
	37058CP	Poly' Plain Roller (Ø74.5 x 1125 mm)	a/r	
		<u>Steel Rollers</u>		
46	27961	Steel Spiral Roller (Ø76 x 1125 mm)	a/r	
	27961S	Steel Spiral Roller (Ø76 x 975 mm)	a/r	
47	37265A	Steel Plain Roller (Ø70 x 975 mm)	a/r	
	37265B	Steel Plain Roller (Ø76 x 975 mm)	a/r	

	37265C	Steel Plain Roller (Ø82.5 x 975 mm)	a/r	
	37266A	Steel Plain Roller (Ø70 x 1125 mm)	a/r	
	37266B	Steel Plain Roller (Ø76 x 1125 mm)	a/r	
	37266C	Steel Plain Roller (Ø82.5 x 1125 mm)	a/r	
		<u>Rubber Pintle Rollers</u>		
47	37781	Rubber Pintle Roller (Ø82.5 x 1125 mm)	a/r	
	37781S	Rubber Pintle Roller (Ø82.5 x 975 mm)	a/r	
	37782	Rubber Pintle Roller (Ø74.5 x 1125 mm)	a/r	
	37782S	Rubber Pintle Roller (Ø74.5 x 975 mm)	a/r	
	37145	<u>Seal Insertion Kit Consists of:</u>		
48	37146	Seal Compression Ring	1	
49	37147	Slide Hammer	1	

Cleaner Unit Assemblies

Machines from January 1999



Issue 2 1.99

CLEANER UNIT ASSEMBLIES – Machines from January 1999

Item	Part no.	Description	Qty	Remarks
1	11116	1" BSP Blanking Plug	1	(If required)
2	11122	1" BSP Dowty Seal	1	
3				
4	27840S	Roller Shaft (Solid)	a/r	
	27840T	Roller Shaft (Tubular)	a/r	
5				
6	27841	End Cap	a/r	
7	27843	Bearing	a/r	
8	27844	Bearing	a/r	
9	27876	Rubber Deflector	2	
10	27895A	Oil Seal	a/r	
11	27917	Castellated Nut	a/r	
12	27918	Split Pin	a/r	
13	27930A	6 Roller Tie Bar	1	(If required)
	27930B	8 Roller Tie Bar	1	
	27930C	10 Roller Tie Bar	1	
	27930D	12 Roller Tie Bar	1	
	27930E	14 Roller Tie Bar	1	
	27930F	16 Roller Tie Bar	1	
	27930G	18 Roller Tie Bar	1	
	27930H	20 Roller Tie Bar	1	
	27930L	28 Roller Tie Bar	1	
14	27937	35 t Gear	a/r	(If required)
15	27938	45 t Gear	2	
16	27942	Flat Washer	a/r	
17	27945	Motor Mounting Plate	a/r	
18	27948	3/8" x 3/8" x 2 RBE Key	a/r	(If required)
19				
20	37048	LH Side Panel	1	
21	37049	RH Side Panel	1	
22	37076	1" BSP Nylon Filler Plug	1	
23	37086	1 ½" External Circlip	a/r	
24	37108	Deflector Washer	16	
25	37882	Bearing (27844 - splined motor)	2	
26	37883	Oil Seal	2	
27	37884	Drive Shaft (42298 - splined motor)	2	
28	37885	Seal Housing (37755 – splined motor)	2	
29	37886	Castle Nut (27917 – splined motor)	2	
30	37887	Flat Washer	2	
31	37888	Drive Shaft Guard	a/r	
32	37889	Stud (42288 – splined motor)	8	
33	37890	Protection Plate	2	
34	37891	Protection Plate	2	
35	37892	Motor Coupling	a/r	(If required)
36	37893	Motor Reaction Plate	a/r	(If required)
37	37897	Hydraulic Motor (100 cc)	a/r	(If required)
	37898	Hydraulic Motor (125 cc)	a/r	(If required)
	37660	Hydraulic Motor (150 cc splined)	2	
38				
39	42653	3/8" BSP Breather Plug	1	
40				
41	44779	Scraper Mounting	a/r	

42	44780 44801	Long Scraper (for 1125 mm rollers) Short Scraper (for 975 mm rollers)	a/r a/r	
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CLEANER UNIT ASSEMBLIES – Machines from January 1999

Item	Part no.	Description	Qty	Remarks
43	46332/6	6 Roller Gearcase	1	
	46332/8	8 Roller Gearcase	1	
	46332/10	10 Roller Gearcase	1	
	46332/12	12 Roller Gearcase	1	
	46332/14	14 Roller Gearcase	1	
	46332/16	16 Roller Gearcase	1	
	46332/18	18 Roller Gearcase	1	
	46332/20	20 Roller Gearcase	1	
	46332/22	22 Roller Gearcase	1	
	46332/28	28 Roller Gearcase	1	
	46332/32	32 Roller Gearcase	1	
44	46333/6	6 Roller Gearcase Cover	1	
	46333/8	8 Roller Gearcase Cover	1	
	46333/10	10 Roller Gearcase Cover	1	
	46333/12	12 Roller Gearcase Cover	1	
	46333/14	14 Roller Gearcase Cover	1	
	46333/16	16 Roller Gearcase Cover Half	2	
	46333/18LH	18 Roller Gearcase Cover Half (Long)	1	
	46333/18RH	18 Roller Gearcase Cover Half (Short)	1	
	46333/20	20 Roller Gearcase Cover Half	2	
	46333/22	22 Roller Gearcase Cover Half	2	
	46333/28	28 Roller Gearcase Cover Half	2	
	46332/32	32 Roller Gearcase Cover Half	2	
45	46334/6	6 Roller Cover Plate	1	
	46334/8	8 Roller Cover Plate	1	
	46334/10	10 Roller Cover Plate	1	
	46334/12	12 Roller Cover Plate	1	
	46334/14LH	14 Roller Cover Plate LH Half	1	
	46334/14RH	14 Roller Cover Plate RH Half	1	
	46334/16LH	16 Roller Cover Plate LH Half	1	
	46334/16RH	16 Roller Cover Plate RH Half	1	
	46334/18LH	18 Roller Cover Plate LH Half	1	
	46334/18RH	18 Roller Cover Plate RH Half	1	
	46334/20LH	20 Roller Cover Plate LH Half	1	
	46334/20RH	20 Roller Cover Plate RH Half	1	
	46334/22LH	22 Roller Cover Plate LH Half	1	
	46334/22RH	22 Roller Cover Plate RH Half	1	
	46334/28LH	28 Roller Cover Plate LH Half	1	
	46334/28RH	28 Roller Cover Plate RH Half	1	
	46334/32LH	32 Roller Cover Plate LH Half	1	
	46334/32RH	32 Roller Cover Plate RH Half	1	
46	46406	Steel Spacer	a/r	
47				
48	22011010/025	M10 x 25 Hex Head Setscrew	a/r	
49				
50	SS030011/005	Flat Washer	a/r	
51				
52				

53				
54				
55				
56	37057A 37058A 37783A 37784A	<u>Rubber Rollers</u> Rubber Spiral Roller (Ø75 x 975 mm) Rubber Spiral Roller (Ø75 x 1125 mm) Rubber Spiral Roller (Ø82 x 975 mm) Rubber Spiral Roller (Ø82 x 1125 mm)	a/r a/r a/r a/r	Options
57	37057B 37057C 37058B 37058C	Rubber Plain Roller (Ø82.5 x 975 mm) Rubber Plain Roller (Ø74.5 x 975 mm) Rubber Plain Roller (Ø82.5 x 1125 mm) Rubber Plain Roller (Ø74.5 x 1125 mm)	a/r a/r a/r a/r	

CLEANER UNIT ASSEMBLIES – Machines from January 1999

Item	Part no.	Description	Qty	Remarks
56	37057AP 37058AP 37783AP 37784AP	<u>Polyurethane Rollers</u> Poly' Spiral Roller (Ø75 x 975 mm) Poly' Spiral Roller (Ø75 x 1125 mm) Poly' Spiral Roller (Ø82.5 x 975 mm) Poly' Spiral Roller (Ø82.5 x 1125 mm)	a/r a/r a/r a/r	Options
57	37057BP 37057CP 37058BP 37058CP	Poly' Plain Roller (Ø82.5 x 975 mm) Poly' Plain Roller (Ø74.5 x 975 mm) Poly' Plain Roller (Ø82.5 x 1125 mm) Poly' Plain Roller (Ø74.5 x 1125 mm)	a/r a/r a/r a/r	
56	27961 27961S	<u>Steel Rollers</u> Steel Spiral Roller (Ø76 x 1125 mm) Steel Spiral Roller (Ø76 x 975 mm)	a/r a/r	
57	37265A 37265B 37265C 37266A 37266B 37266C	Steel Plain Roller (Ø70 x 975 mm) Steel Plain Roller (Ø76 x 975 mm) Steel Plain Roller (Ø82.5 x 975 mm) Steel Plain Roller (Ø70 x 1125 mm) Steel Plain Roller (Ø76 x 1125 mm) Steel Plain Roller (Ø82.5 x 1125 mm)	a/r a/r a/r a/r a/r a/r	
57	37781 37781S 37782 37782S	<u>Rubber Pintle Rollers</u> Rubber Pintle Roller (Ø82.5 x 1125 mm) Rubber Pintle Roller (Ø82.5 x 975 mm) Rubber Pintle Roller (Ø74.5 x 1125 mm) Rubber Pintle Roller (Ø74.5 x 975 mm)	a/r a/r a/r a/r	
58	42643 42633	<u>Back-Up Roller Kit Consists of:</u> Roller Arm	2	
59	KA16023	Roller Assembly	2	

	KA16023	<u>Roller Assembly Consists of:</u>		
60	0000300504	Felt Seal	2	
61	6005RS	Bearing	2	
62	KA16021/4	Open Bore Spindle	1	
63	KA16023/1	Plain Steel Roller (Ø80 mm)	1	
64	PH408	Seal	2	
65	PS843	25 mm External Circlip	2	
	37145	<u>Seal Insertion Kit Consists of:</u>		
66	37146	Seal Compression Ring	1	
67	37147	Slide Hammer	1	