

# MLS Series

3 Phase Electric Grease Pump Kit  
for Open Top Drums.

## Product Manual



# MLS Series

3 Phase Electric Grease Pump Kit for Open Top Drums.

## Contents

<u>Pump Specifications</u>	<u>Page 3</u>
<u>Electric Grease Pump 20kg</u>	<u>Page 4</u>
<u>Electric Grease Pump 55kg</u>	<u>Page 5</u>
<u>Electric Grease Pump 180kg</u>	<u>Page 6</u>
<u>Pump Spare Kits</u>	<u>Page 7</u>
<u>Installation</u>	<u>Page 9</u>
<u>Maintenance</u>	<u>Page 10</u>
<u>Troubleshooting</u>	<u>Page 10</u>
<u>Parts List and Exploded View</u>	<u>Page 11</u>

## Pump Specifications

Designed and manufactured in Australia by Tecaletmit, the grease pump is electrically powered and directly mounted onto an open top grease drum.

The pump is used for high pressure grease supply for automatic greasing systems.

### Features

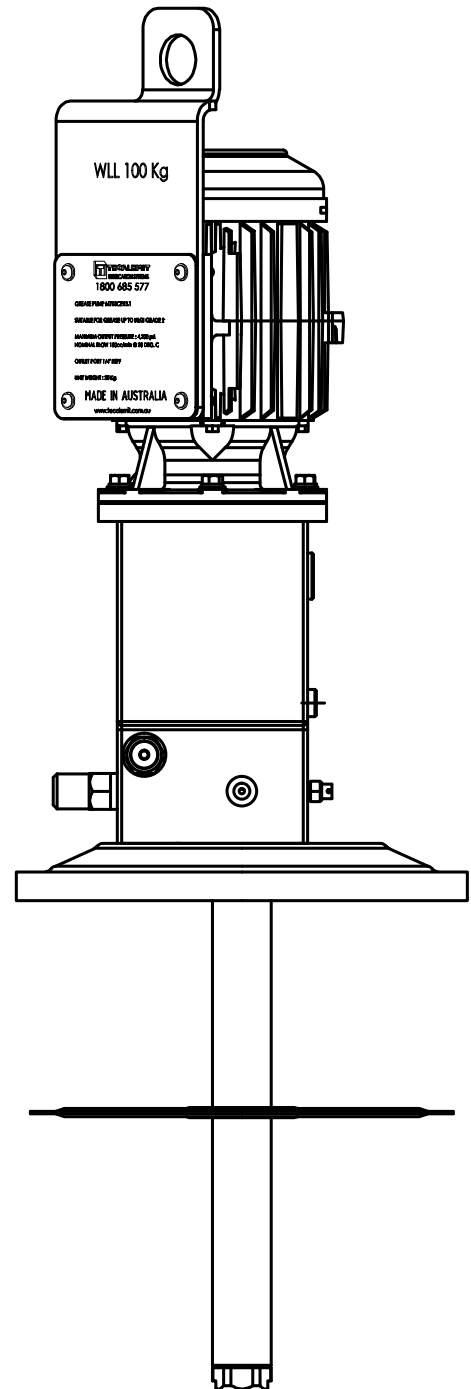
- Proven delivery of 18,000kg @ 4,200psi
- Cast iron motor and fan
- Stainless steel lifting bracket
- Mine site specification motor
- Follower with sealing wiper
- Drum low level switch option

### Technical Data

- Maximum grease pressure 290 Bar (4,200psi)
- Grease output 150cc/minute
- Grease Grade 0-2
- Motor Teco or customer spec
- Rating IP66
- Power 0.37 kW
- Voltage 415V 3 Phase, 50 Hz
- RPM 1,405

### Part Numbers

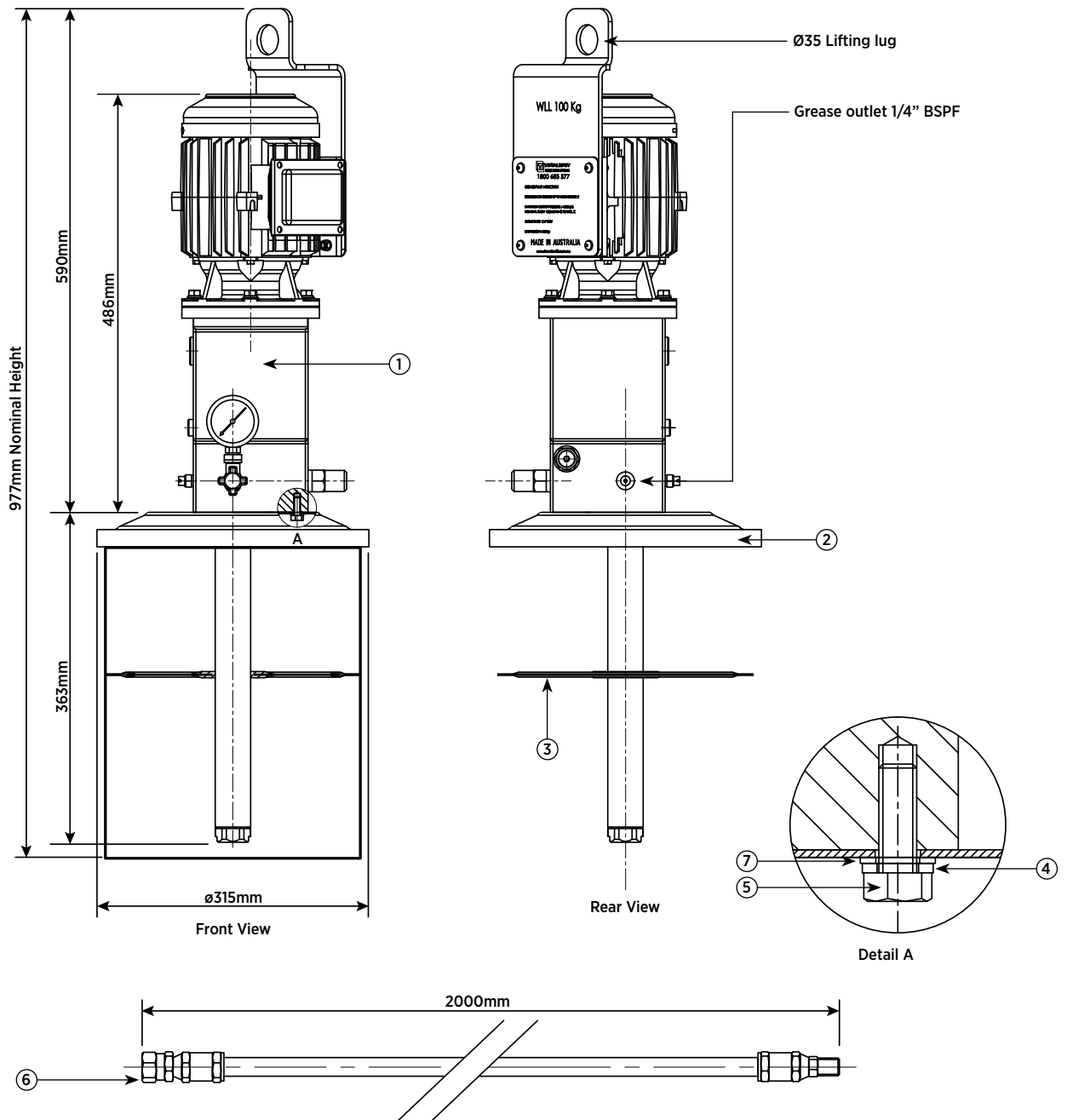
Description	MLS.CPX3.1 20KG Pump	MLS.CPX3.2 55KG Pump	MLS.CPX3.3 180KG Pump
Bare pump	<b>M703CPX3.1</b>	<b>M703CPX3.2</b>	<b>M703CPX3.3</b>
Drum cover	<b>V17229</b>	<b>V17091</b>	<b>V19522E</b>
Follower	<b>V5412.3</b>	<b>BK8150</b>	<b>BK8151E</b>
Pump mounting bolt	<b>SWA1105.6</b>	<b>SWA1105.6</b>	<b>SWA1105.6</b>
Spring washer	<b>28463.7</b>	<b>28463.7</b>	<b>28463.7</b>
Flat washer	<b>WWA1005</b>	<b>WWA1005</b>	<b>WWA1005</b>
2m Grease outlet hose	<b>V17105</b>	<b>V17105</b>	<b>V17105</b>
Low level switch	<b>V17109</b>	<b>V17109</b>	<b>V17109</b>
Grease filter	<b>TECGF150G</b>	<b>TECGF150G</b>	<b>TECGF150G</b>
Pump seal kit	<b>MLS.SK</b>	<b>MLS.SK</b>	<b>MLS.SK</b>
Gearbox kit	<b>MLS.GBK</b>	<b>MLS.GBK</b>	<b>MLS.GBK</b>



# MLS Series

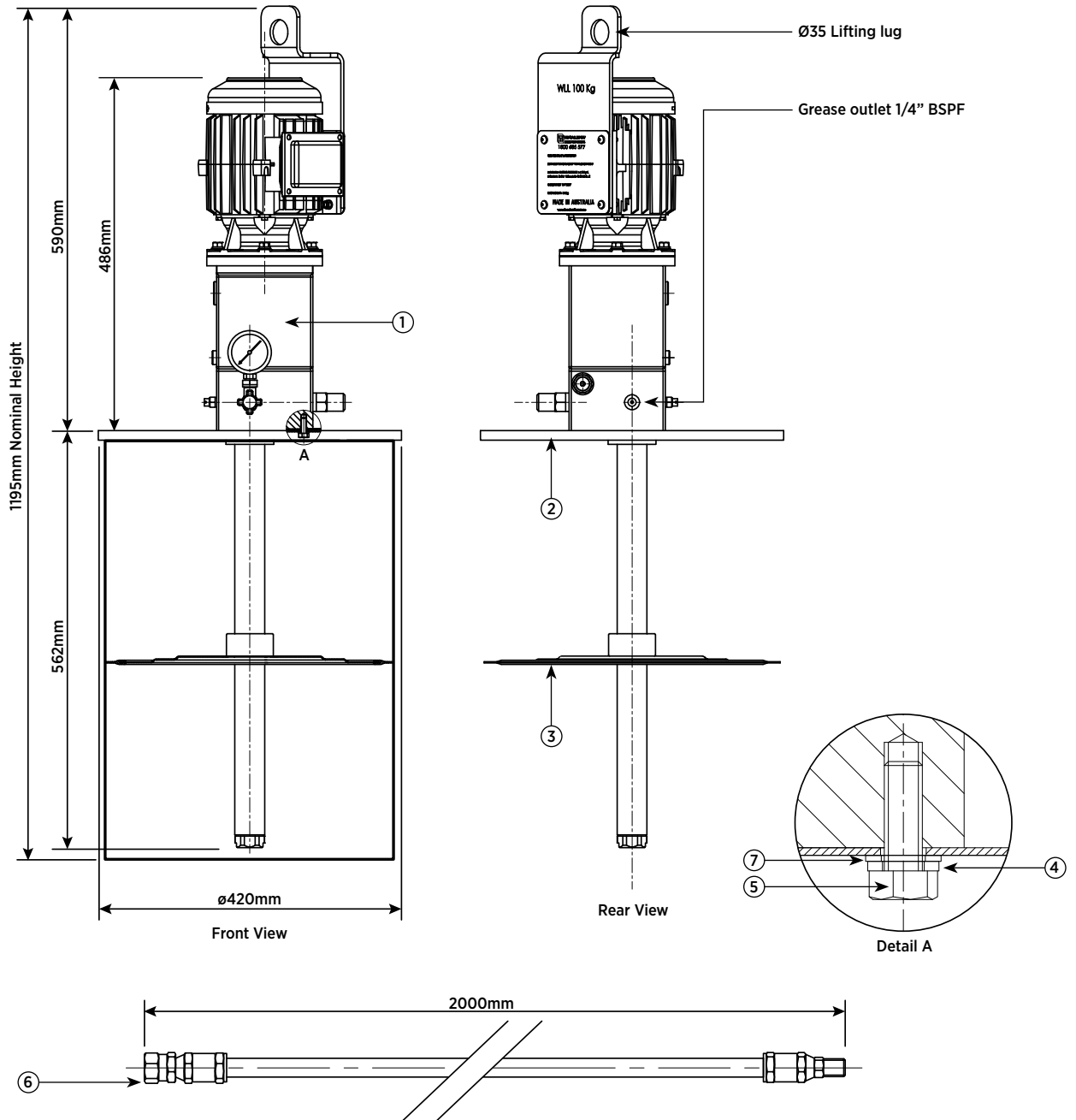
3 Phase Electric Grease Pump Kit for Open Top Drums.

## MLS.CPX3.1 Electric Grease Pump 20kg



Item	Description	Part No.	Qty	Notes
1	Electric Pump	<b>M703CPX3.1</b>	1	Bare Pump
2	Drum Cover	<b>V17229</b>	1	
3	Follower Plate	<b>V5412.3</b>	1	
4	Spring Washer	<b>28463.7</b>	4	5/16"
5	Pump Mounting Bolt	<b>SWA1105.6</b>	4	5/16" x 3/4" long
6	2m Grease Outlet Hose	<b>V17105</b>	1	1/4" SWB Hose, 1/4" BSP M/F Ends
7	Flat Washer	<b>WWA1005</b>	4	5/16" x 5/8" x 18G

# MLS.CPX3.2 Electric Grease Pump 55kg

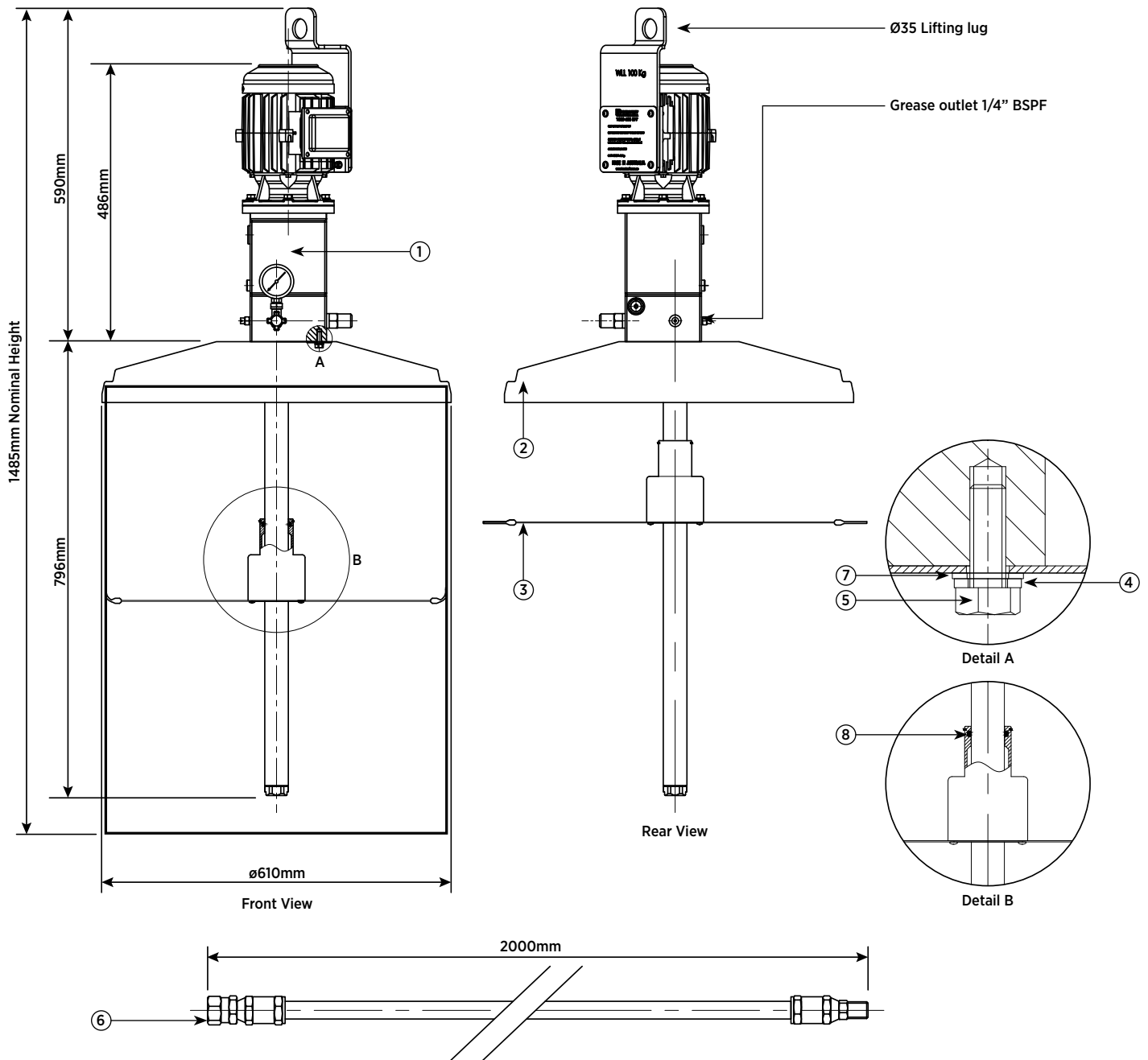


Item	Description	Part No.	Qty	Notes
1	Electric Pump	<b>M703CPX3.2</b>	1	Bare Pump
2	Drum Cover	<b>V17091</b>	1	
3	Follower Plate	<b>BK8150</b>	1	
4	Spring Washer	<b>28463.7</b>	4	5/16"
5	Pump Mounting Bolt	<b>SWA1105.6</b>	4	5/16" x 3/4" long
6	2m Grease Outlet Hose	<b>V17105</b>	1	1/4" SWB Hose, 1/4" BSP M/F Ends
7	Flat Washer	<b>WWA1005</b>	4	5/16" x 5/8" x 18G

# MLS Series

3 Phase Electric Grease Pump Kit for Open Top Drums.

## MLS.CPX3.3 Electric Grease Pump 180kg

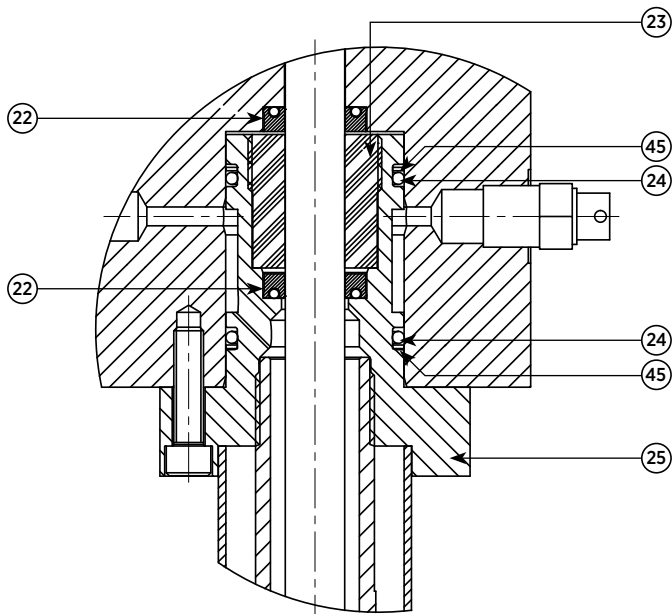


Item	Description	Part No.	Qty	Notes
1	Electric Pump	<b>M703CPX3.3</b>	1	Bare Pump
2	Drum Cover	<b>V19522E</b>	1	
3	Follower Plate	<b>BK8151E</b>	1	S/S Plate, Aluminium Hub
4	Spring Washer	<b>28463.7</b>	4	5/16"
5	Pump Mounting Bolt	<b>SWA1105.6</b>	4	5/16" x 3/4" long
6	2m Grease Outlet Hose	<b>V17105</b>	1	1/4" SWB Hose, 1/4" BSP M/F Ends
7	Flat Washer	<b>WWA1005</b>	4	5/16" x 5/8" x 18G
8	Guide Tube O-Ring	<b>BK8159</b>	1	Check O-Ring When Changing Drums

## Pump Seal Kit\*

### Part Number MLS.SK

Item	Description	Part No.	Qty
22	Seal Pump Rod	V17486	2
23	Bush Threaded	M10211	1
24	O-Ring	M1013	2
25	Body Upper Seal	M10210	1
28	HP Valve Spring	M2503	1
32	Piston Ball	163922.7	1
33	Washer - Aluminium	M10200	2
35	HP Grease Cylinder	V22958	1
36	Foot Valve Retainer	V22953	1
39	HP Grease Piston	V22957	1
40	HP Piston Ball Seat	V22959	1
41	Foot Valve Ball	163922.19	1
45	Back-Up Washer	M1029	2
58	O-Ring	BK8237	1

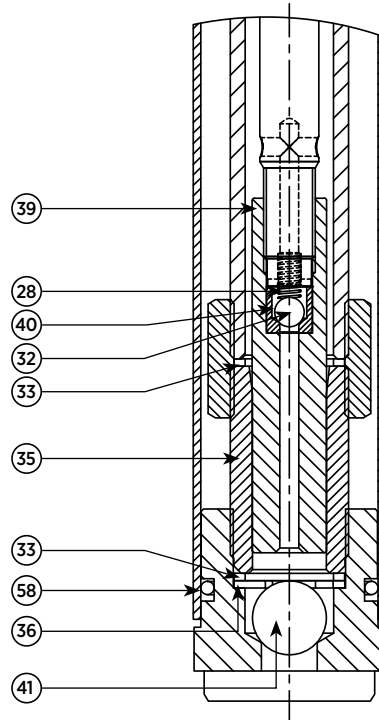


## Gearbox Kit^

### Part Number MLS.GBK

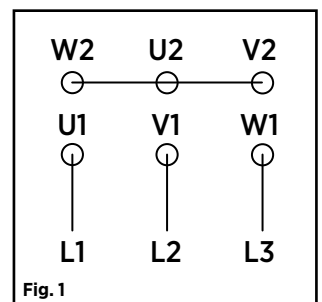
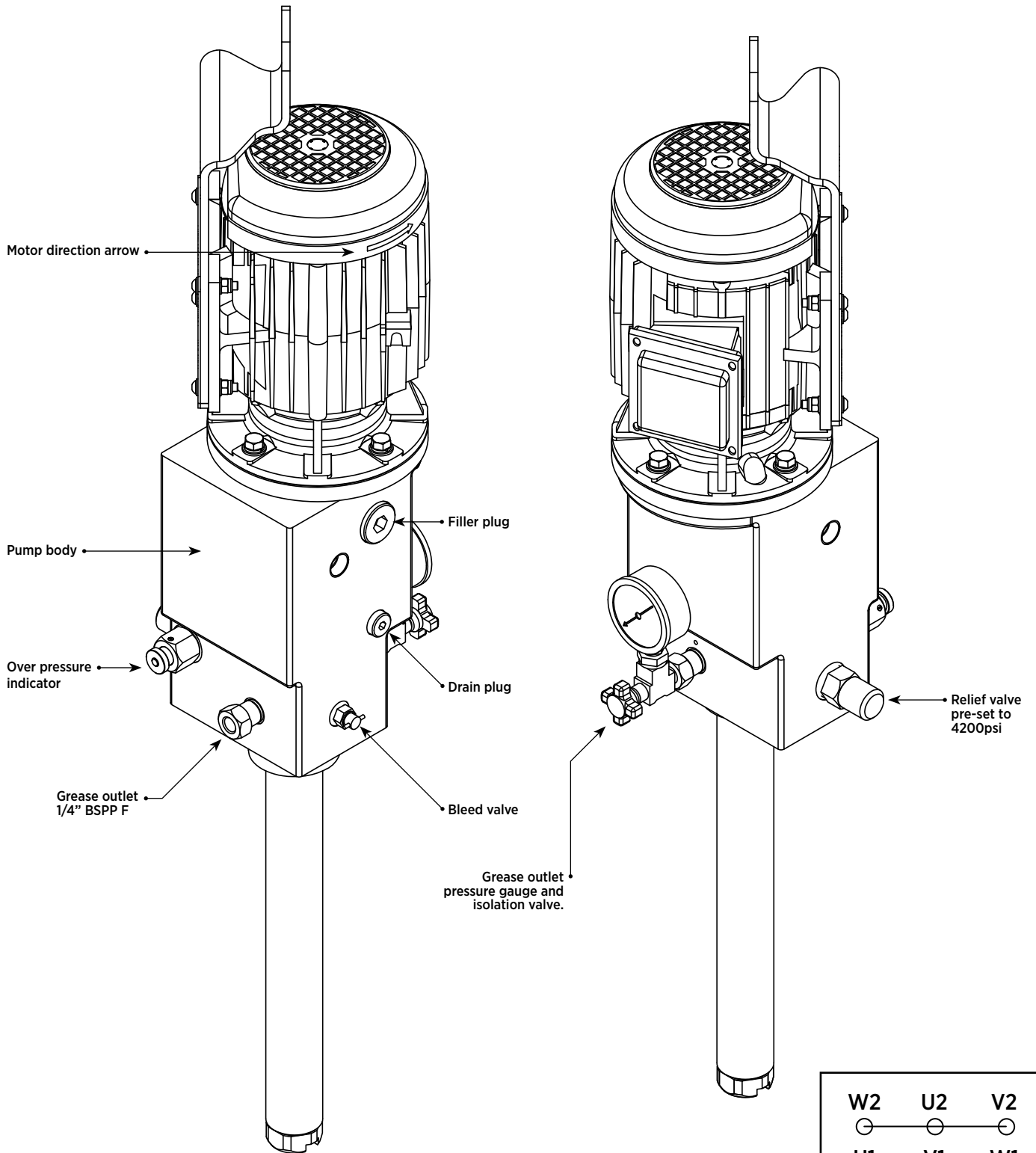
Item	Description	Part No.	Qty
3	Worm Wheel	V22962	1
4	Sheave Eccentric	V22963	1
17	Worm Shaft	V22961	1
6	Circlip	M1502	1
10	Pin Pump Rod	M10019	1
11	Circlip	M1501	2

**NOTE:** Items 3,4 & 17 are manufactured as a set and not available separately.



# MLS Series

3 Phase Electric Grease Pump Kit for Open Top Drums.



## Installation

**Pre installation:** Identify an area where there is access to change the grease drum. A lifting lug is provided with the pump and we recommend a ratchet pulley system is used. Pump mass 30kg.

### Step 1

Refer to the relevant assembly drawing (pages 4-6) for your pump model. Care must be taken during the following steps to avoid dirt and contamination entering the system to ensure the pump operates correctly.

- Should optional level switch be required, drill a 12mm hole into the drum cover approximately equal distance from the center to the edge. Mount the level switch assembly and modify the chain length to enable the switch to actuate 75mm from the bottom of the drum or as required.
- Assemble pump and drum cover with spring washers and drum mounting bolts (pages 4-6 detail A).
- Remove the lid from the grease drum.
- Place the follower plate as shown on top of the grease and press it down ensuring full contact.
- Remove plastic bag and red sealing cap from the spear.
- Place the pump and drum cover assembly into the drum inserting the spear through the follower plate.

**Note:** Failure to use a follower will cause pump cavitation and only allow 50% of the grease to be pumped from the drum.

### Step 2

Connect the ¼" BSP male hose fitting into the pump outlet and the ¼" BSP female swivel to the customer supply line. Should an optional filter be used install it to the pipe work allowing adequate hose length to change the drum.

### Step 3

Check the voltage is suitable for the motor. Once confirmed, connect electrical power to the motor. See Fig. 1.

### Step 4

Start pump and check motor rotation. Rotation is Anti-clockwise looking down onto the motor fan as shown by the motor direction arrow.

**Note:** Rewire to change the motor direction if necessary.

### Step 5

Open the bleed valve on the side of the pump and run the pump until grease starts to flow from the bleed valve.

### Step 6

Close the bleed valve.

### Step 7

The grease pressure gauge on the pump will show the pressure required to pump grease through the system. The pump is ready to operate through the system controller. The pressure gauge isolation valve should only be open when reading the pressure gauge. When not in use the isolation valve must be closed.

**Note:** The over pressure indicator pin (item 24) will pulse indicating grease is relieving on top of the follower plate at approximately 4,200psi. (or as set by relief valve)

This indicates there is a blockage downstream or incorrect system design. Please contact Tecalemit on 1800 68 55 77 for assistance.

# MLS Series

## 3 Phase Electric Grease Pump Kit for Open Top Drums.

### Maintenance

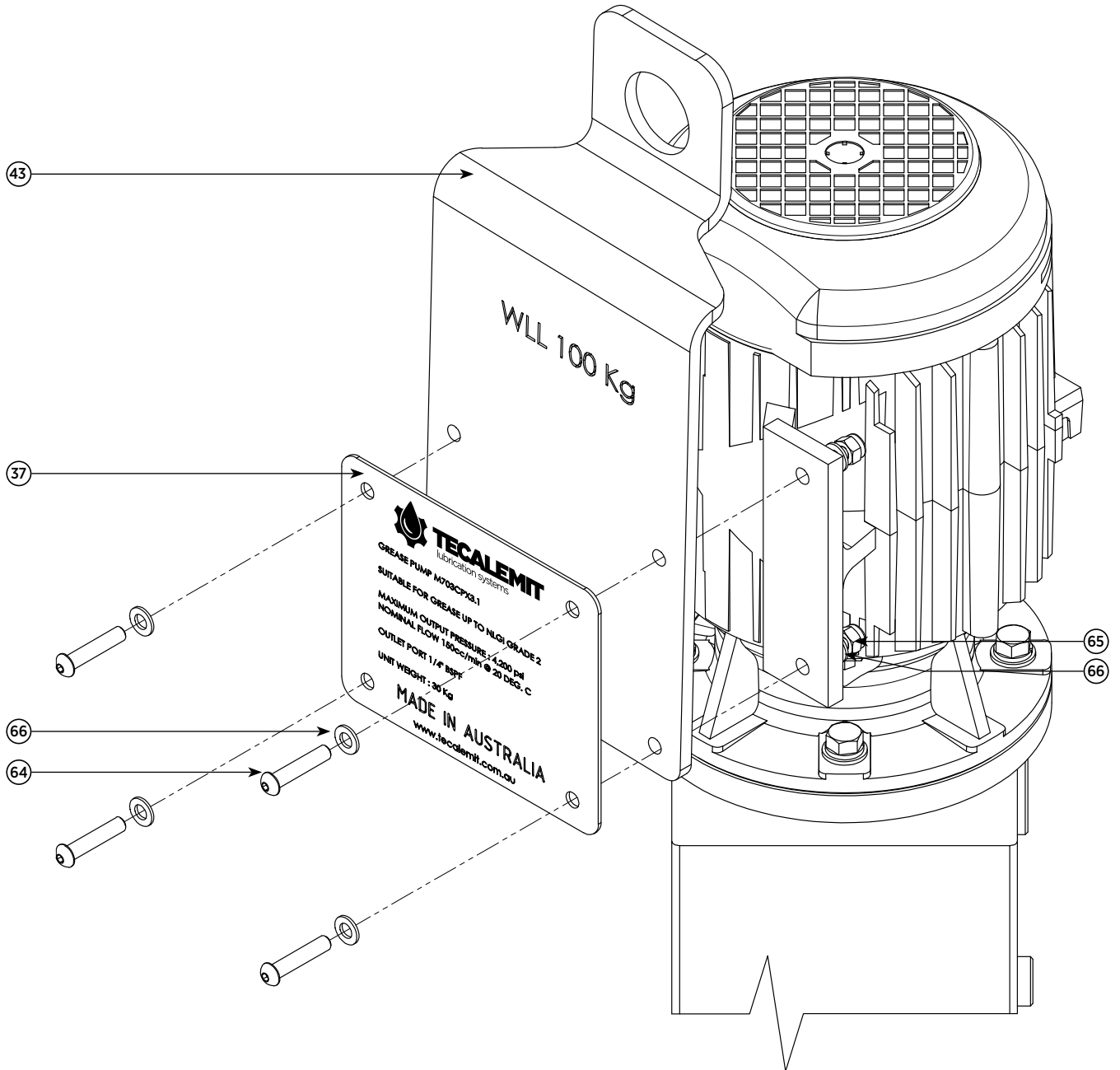
Check oil level in pump body every 12 months by removing fill plug (see Page 13). The Oil should be level with the bottom of the hole. Top up with ISO 150 oil through filler hole if required and refit plug.

Change oil every 3 years by removing the fill plug (item 9) and drain oil from drain plug (item 54) see Page 13. Once drained refit drain plug and fill with 1 litre of grade ISO 150 oil, through filler plug. Once the oil is level with the base of the fill hole, refit fill plug and filling is now complete.

### Troubleshooting

Issues	Possible Cause	Remedy
Motor not running	Power off	Switch on
	Thermal overload activated	Check and reset
	Motor burnt out	Replace motor
Motor running but, pressure gauge sitting on 0, no movement	Pressure gauge faulty	Check and replace
	Empty drum	Replace drum
	No follower plate in drum	Check or install follower
	Follower o-ring damaged	Check or replace
	Dented drum follower stuck	Replace drum
No grease flow, pressure gauge fluctuates between 0 - 1000psi and will not build.	Contamination at both piston ball (item 32) and foot valve ball (item 41)	Clean out and reassemble. Contact Tecalemit to order pump seal kit MLS.SK.
	Worm gear (Item 3) worn	Check worm gear and contact Tecalemit for assistance
	Relief valve (Item 44) setting	Contact Tecalemit for assistance
Grease leak from Ø3 by-pass hole behind pressure gauge	O-Ring (Item 24) faulty	Replace seals. Contact Tecalemit to order pump seal kit MLS.SK
	Rod Seal (Item 22) worn	Replace seals. Contact Tecalemit to order pump seal kit MLS.SK

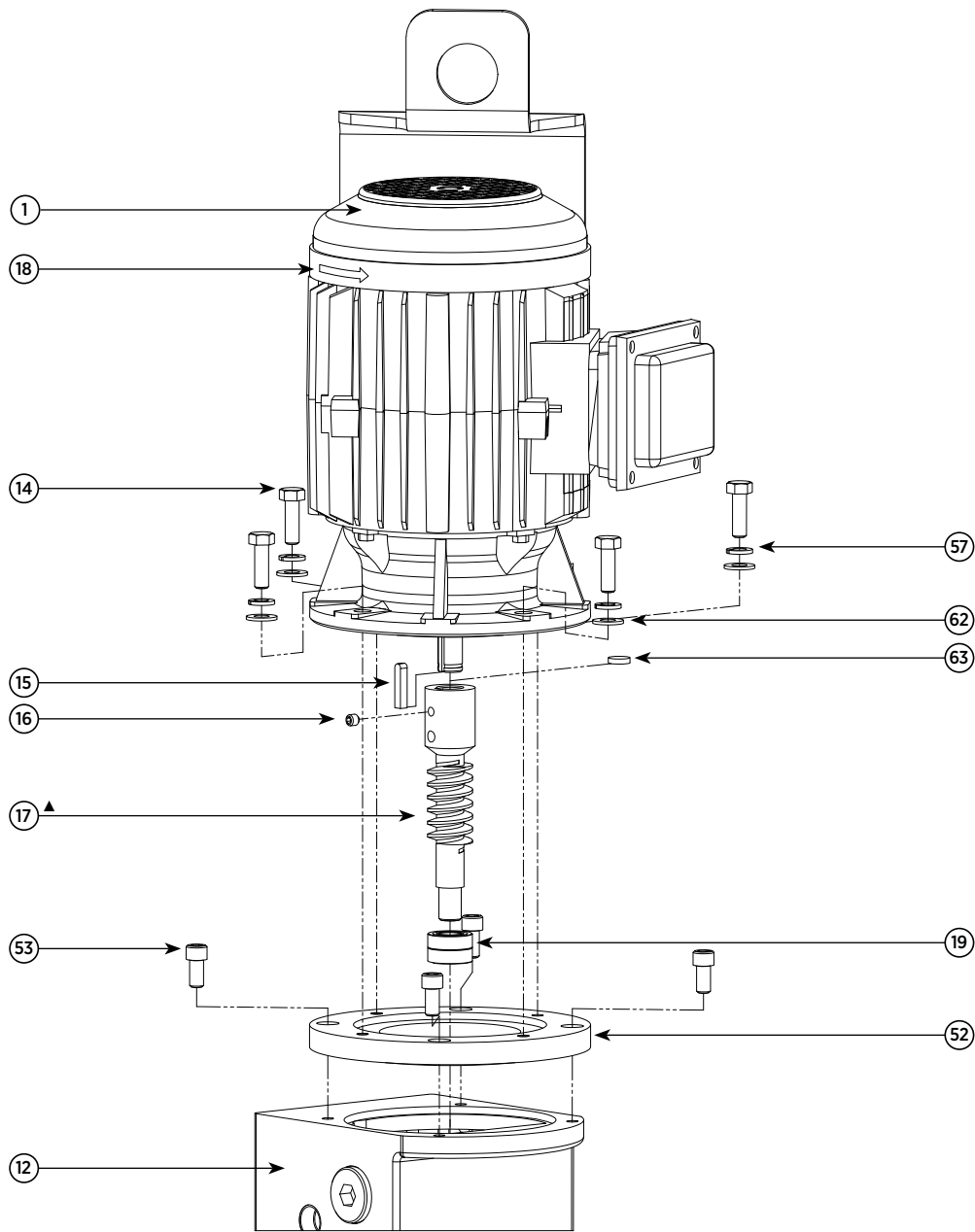
## Parts List and Exploded View



Item	Description	Part No.	Qty
37	ID Plate	V22960.-	1
43	M7 Series Pump Lifting Bracket	V22965	1
64	M6x25 Button HD Socket Screw SS316	SME1506.25S316	4
65	M6 Nyloc Nut 316 SS	NMA1106.8	4
66	M6 Flat Washer 316 SS	WMA1006.S316	8

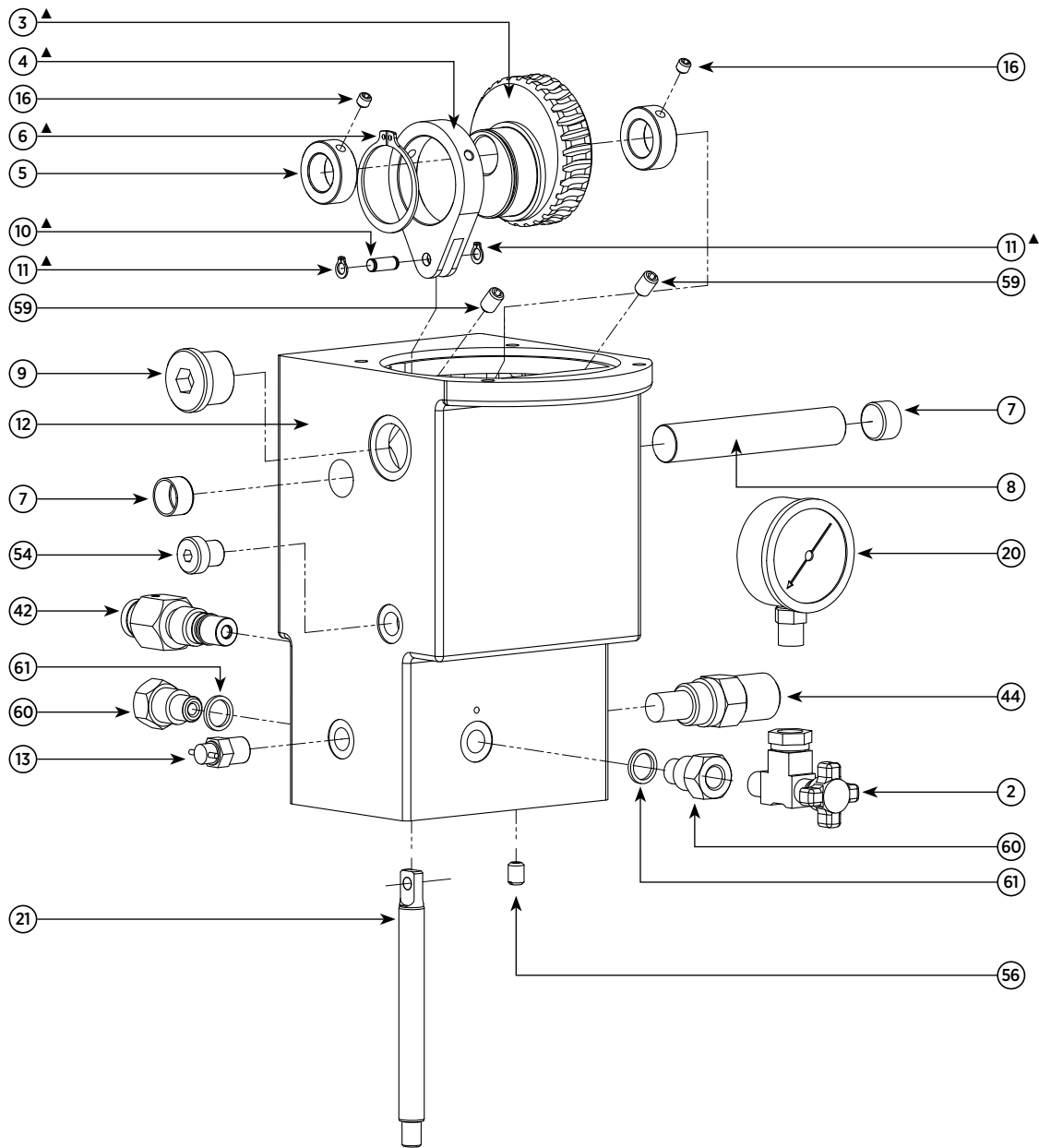
# MLS Series

3 Phase Electric Grease Pump Kit for Open Top Drums.



Item	Description	Part No.	Qty
1	Electric Motor	<b>M5042.F</b>	1
12	Pump Body	<b>M20023</b>	1
14	Hex Head Screw - Motor	<b>BWA1105.8</b>	4
15	Key	<b>M10017</b>	1
16	Socket Set Screw	<b>GWE004.4</b>	3
17 <sup>^</sup>	Worm Shaft	<b>V22961</b>	1
18	Motor Direction Arrow	<b>CSTARROW</b>	1
19	Needle Roller Brg	<b>M002/M003</b>	1
52	Flange Motor Adaptor	<b>M10242</b>	1
53	Socket Cap Screw	<b>SWE705.6</b>	4
57	Washer - Spring	<b>28463.7</b>	4
62	Washer - Flat	<b>WWA1005</b>	4
63	Worm Shaft Disc	<b>V22985</b>	1

<sup>^</sup> Refer to page 7 for the MLS.GBK gearbox kit

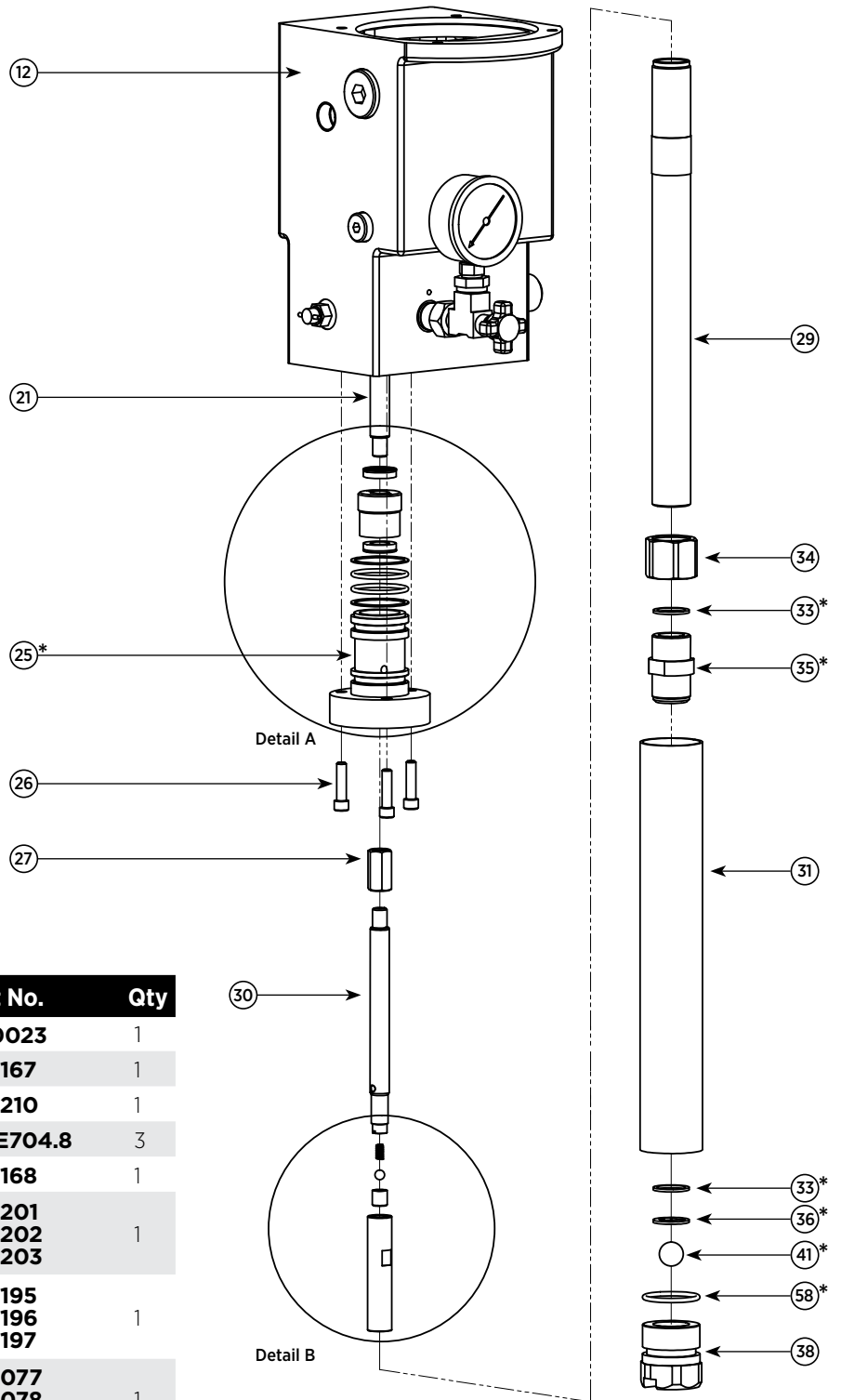


Item	Description	Part No.	Qty	Item	Description	Part No.	Qty
2	Pressure Gauge Isolation Valve	<b>FT291</b>	1	13	Air Bleed	<b>M5009</b>	1
3 <sup>▲</sup>	Worm Wheel	<b>V22962</b>	1	16	Socket Set Screw	<b>GWE004.4</b>	3
4 <sup>▲</sup>	Sheave Eccentric	<b>V22963</b>	1	20	Pressure Gauge	<b>V15964P</b>	1
5	Collar - Small	<b>M5005</b>	2	21	Rod Pump Upper	<b>M10167</b>	1
6 <sup>▲</sup>	Circlip	<b>M1502</b>	1	42	Over Pressure Indicator Assy	<b>M10212</b>	1
7	Welsh Plug	<b>M5006</b>	2	44	Pressure Relief Valve	<b>M2002.4200</b>	1
8	Shaft Worm Wheel	<b>M10012</b>	1	54	Drain Plug - 1/4" BSP	<b>O36858</b>	1
9	Filler Plug - 3/4" BSP	<b>O36864</b>	1	56	Bleed Plug	<b>M10337</b>	1
10 <sup>▲</sup>	Pin Pump Rod	<b>M10019</b>	1	59	Set Screw	<b>GWE005.6</b>	2
11 <sup>▲</sup>	Circlip	<b>M1501</b>	2	60	1/4" BSPP F Adaptor	<b>V22968</b>	2
12	Pump Body	<b>M20023</b>	1	61	1/4" BSPF Bonded Washer	<b>SB511.SS</b>	2

<sup>▲</sup> Refer to page 7 for the MLS.GBK gearbox kit

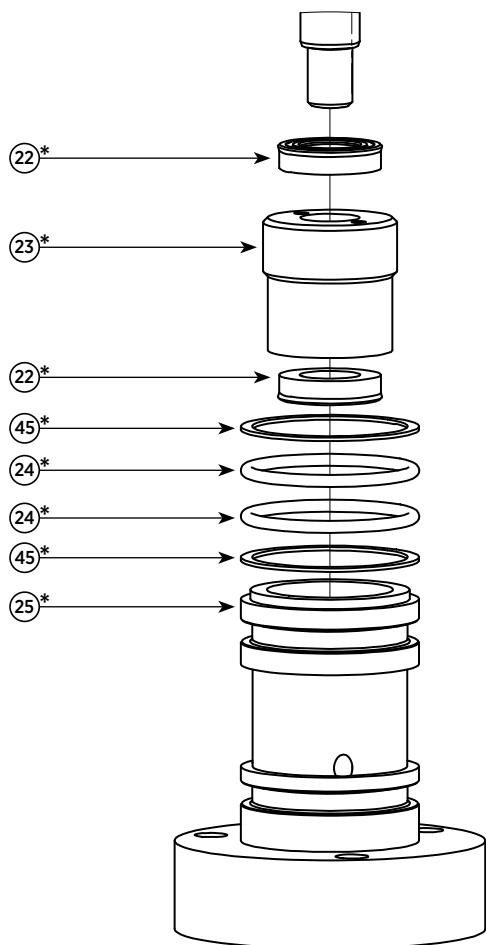
# MLS Series

## 3 Phase Electric Grease Pump Kit for Open Top Drums.

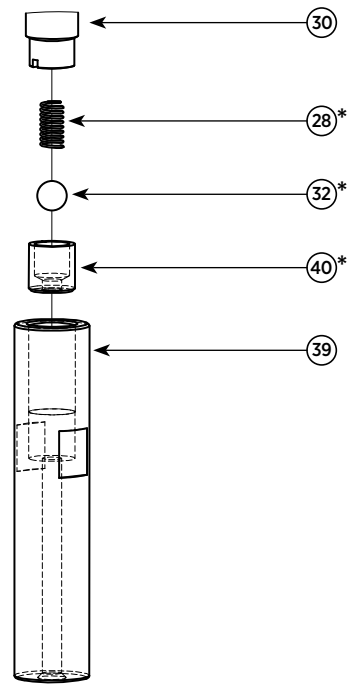


Item	Description	Part No.	Qty
12	Pump Body	<b>M20023</b>	1
21	Rod Pump Upper	<b>M10167</b>	1
25*	Body Upper Seal	<b>M10210</b>	1
26	Socket Cap Screw	<b>SWE704.8</b>	3
27	Coupling - Pump Rod	<b>M10168</b>	1
29	Pump Tube 20Kg	<b>M10201</b>	1
	Pump Tube 55Kg	<b>M10202</b>	
	Pump Tube 180Kg	<b>M10203</b>	
30	Pump Rod Lower 20Kg	<b>M10195</b>	1
	Pump Rod Lower 55Kg	<b>M10196</b>	
	Pump Rod Lower 180Kg	<b>M10197</b>	
31	Outer Tube 20Kg	<b>M10077</b>	1
	Outer Tube 55Kg	<b>M10078</b>	
	Outer Tube 180Kg	<b>M10079</b>	
33*	Washer - Aluminium	<b>M10200</b>	2
34	Coupling - Pump Tube	<b>M10204</b>	1
35*	Hp Grease Cylinder	<b>V22958</b>	1
36*	Foot Valve Retainer	<b>V22953</b>	1
38	Foot Valve Body	<b>M10084</b>	1
41*	Foot Valve Ball	<b>163922.19</b>	1
58*	O-Ring	<b>BK8237</b>	1

\* Refer to page 7 for the MLS.SK seal kit



Detail A



Detail B

Item	Description	Part No.	Qty
22*	Seal Pump Rod	V17486	2
23*	Bush Threaded	M10211	1
24*	O-Ring	M1013	2
25*	Body Upper Seal	M10210	1
45*	Back-Up Washer	M1029	2

Item	Description	Part No.	Qty
28*	HP Valve Spring	M2503	1
30	Pump Rod Lower 20Kg Pump Rod Lower 55Kg Pump Rod Lower 180Kg	M10195 M10196 M10197	1
32*	Piston Ball	163922.7	1
39	HP Grease Piston	V22957	1
40*	HP Piston Ball Seat	V22959	1

\* Refer to page 7 for the MLS.SK seal kit



2B Cardiff Court,  
Cavan, South Australia 5094.

Customer Support  
**1800 685 577**

Customer Facsimile  
**1800 685 533**

[sales@tecalemmit.com.au](mailto:sales@tecalemmit.com.au)

[tecalemmit.com.au](http://tecalemmit.com.au)

Tecalemit Pty Limited reserves the right to change specifications, modify designs and discontinue items without incurring obligation and whilst every effort is made to ensure that descriptions, specifications and other information in this document are correct, no warranty is given in respect thereof and the company shall not be liable for any error therein. All images are for illustration purposes.

©2018 Tecalemit Pty Limited. All Rights Reserved. TEC008 MLS MANUAL V23003 Version 4