

MP-25 User Manual

60010121 ASSY, MP 25-HO - 3 PHASE - 220V

60010122 ASSY, MP 25-SO - 3 PHASE - 220V

Revision 1 - 05-08-2009

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www.machine-technologies.com

Dear Customer,
Before starting this machine please complete the following;
Machine Date of purchase
Machine serial number

Please read the following information contained within this manual and fully familiarize yourself with the equipment.

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Section 1 - General Safety information

Danger

Follow these instructions very carefully, in order to avoid injury to yourself or others.

Electrically powered machine.

Always ensure that all power to the machine has been turned off and isolated before ANY maintenance / repair work is carried out on the machine.

Ensure that all guards are correctly fitted before starting or attempting to operate the machine.

Ensure that all fasteners are present and correctly fitted before attempting to start or operate the machine.

Ensure that the pump unit is correctly fastened to the front of the hopper unit of the machine, and free of damage before attempting to start or operate the machine.

Ensure that the main electric drive motor assembly, is secured to the rear of the hopper, clamped in place and free from damage before attempting to start or operate the machine.

The MP-25 mixing pump unit can produce high pressures, high torques and can use high voltages. Care must be taken by all users.

Only authorized and trained persons should work with this machine.

Section 2 - Machine Description

Function

The MP-25 is a mixing pump.

The machine has a drive motor, that turns a drive shaft within a material hopper that in turn feeds material through a mixing / hydration chamber to a progressive cavity rotor stator pump unit that delivers the material from the hopper to the dispense head or otherwise via a material hose / hoses.

The machine is driven by an electric motor powered by 220VAC 3 phase 50/60Hz, via an electronic variable speed inverter supplied by two phase (commonly called single phase) OR three phase 208/240VAC 50/60 Hz grounded electrical supply.

All styles of drives transmit their rotary action through a drive shaft equipped with bridge breakers, and metering flights, which convey the material from the hopper into the mixing / hydration chamber, where surface hardened mixing arms mix and shear the material with water, towards the pump unit, where further mixing occurs.

The pump unit is a progressive cavity pump unit comprising of a helical rotating "rotor" with the rubber lined "stator". As the rotor rotates, material is drawn / fed into open rubber cavities, which then transform into "pockets". The series of pockets, then move from one end of the stator to the other as the rotor turn with respect to the stationary stator, causing the material to be conveyed from the hopper towards the outlet.

Once the material has reached the outlet, it is guided through an output flange assembly, into the dispense hose, through to the hose outlet, where typically a spray nozzle is attached allowing, with the assistance of an auxiliary air supply, the material to be "sprayed" on to the substrate, or simply allowed to discharge from the end of the hose.

A number of different devices can be fitted to the outlet of the tube for different means of application. For details of these different devices please contact your supplier of Machine-Technologies equipment or Machine-Technologies directly.

The primary difference between the three models is the combination of, rotor stator size (D or R style), water flow meter capacity (4 GPM or 7 GPM), and motor HP (5.4 or 7.5).

Machine illustrations

Photographs

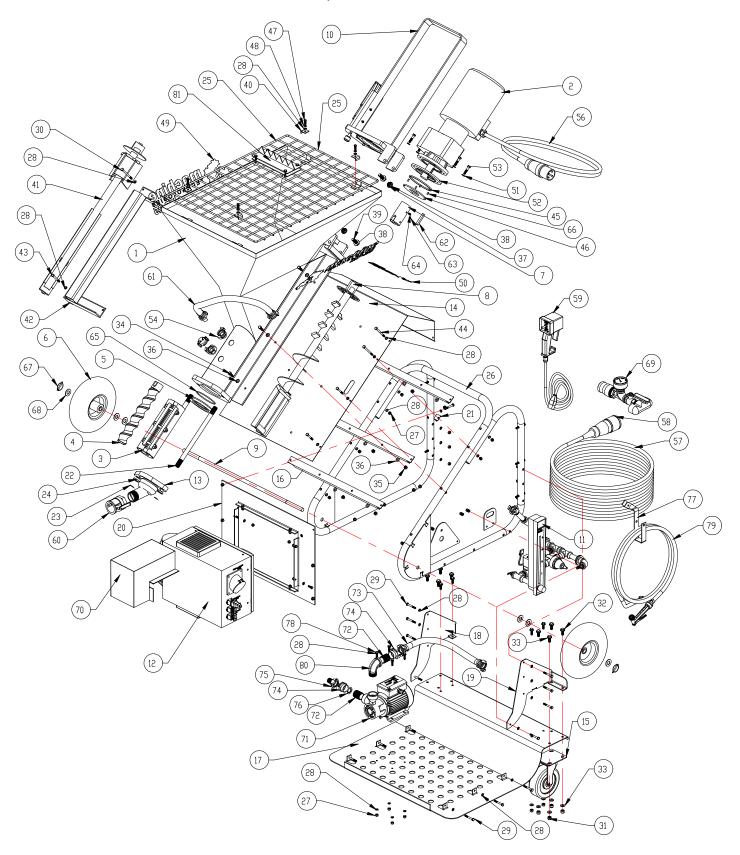
Single phase, STD output, unit shown





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Illustration – 60010120 ASSY, MP 25-SO - SINGLE PHASE 220V

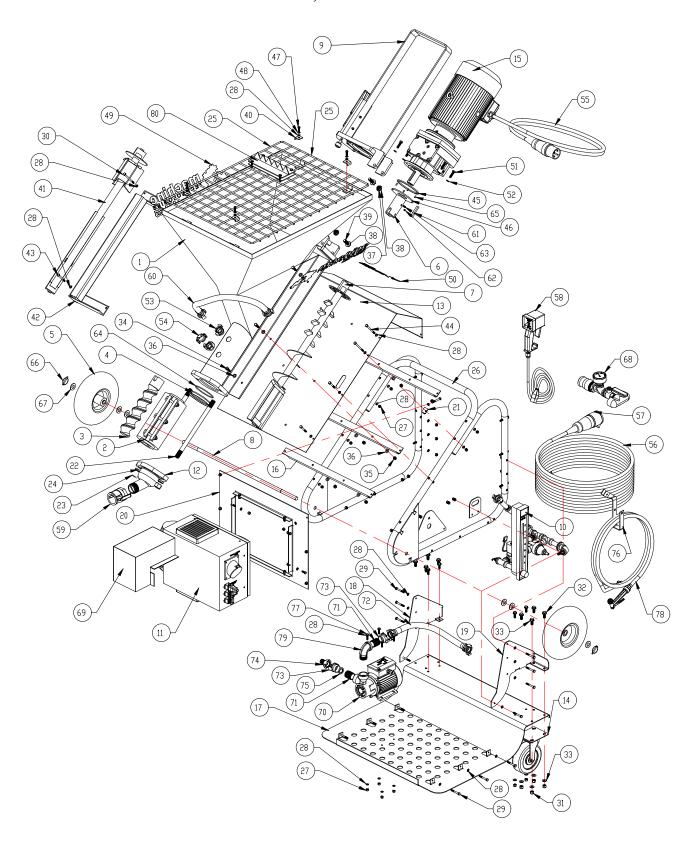


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$Bill \ of \ Materials - 60010120 \ ASSY, MP \ 25\text{-}SO \ - \ SINGLE \ PHASE \ 220V$

1.1	fTCV NO	htv	DADT NO	DEGODIDITION
2 1 2000004 MOTION-CEARBOXABM-4KW 3 1 30000034 DB-1.S STATER-DI-GREEN-INTCLAMP 4 1 30000034 DB-1.S STATER-DI-GREEN-INTCLAMP 5 1 44010251 DB-1.S STATER-DI-GREEN-INTCLAMP 6 2 3000016 TIRE_10* PNEUMATIC_5/8* BDRE_3_1/2*WIDE 7 1 44010251 DRIVE_AUGER_PUMP Y 8 1 60010124 ASSY, DRIVE_MIX_STATER_PUMP Y 8 1 60010124 ASSY, DRIVE_MIX_STATER_PUMP X 9 1 44010256 ASSY, DRIVE_MIX_STATER_PUMP X 9 1 44010256 ASSY, DRIVE_MIX_STATER_PUMP X 11 1 60010134 ASSY, DRIVE_MIX_STATER_PUMP X 12 1 20000047 BUX_CUNTREL_MP-25 SOV-IPH 13 1 60010129 ASSY, PROVINCE_PUMP_STATER_PCS_4GPM 12 1 20000047 BUX_CUNTREL_MP-25 SOV-IPH 13 1 60010129 ASSY, NOZIZLE_DUTPUT-90MM-MP-25 15 2 3000095 G* CASTER_SWIVEL_W/BRAKE_LARGE_PLATE 16 3 44010253 BRACE_FRAME_MP-25 17 1 44010254 PANP_LATE_MP-25 18 1 44010252 SUPPERT_SIDE_PAN-RIS-MP-25 19 1 44010252 SUPPERT_SIDE_PAN-RIS-MP-25 20 1 44010252 SUPPERT_SIDE_PAN-RIS-MP-25 21 2 44010253 DRAVEL_MOUNTS_DRAV	TEM NO.	QTY.	PART NO.	DESCRIPTION
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32 8 10000055 BDLT,HEX 3/8-16-UNC X 1' LNG 33 16 10000044 WASHER 3/8' STEEL 34 10 10000094 BDLT HEX 5/16-18 UNC 1' LDNG 35 10 10000092 NUT,NYLDC 5/16-18 GD2 36 20 1000093 WASHER,FLAT 5/16 37 2 10000090 NUT,NYLDC 1/2-13 THIN THK 38 4 10000033 WASHER,FLAT 5/16 39 2 10000096 BDLT,HEX 1/2-13X1,25LNG-GD5 40 4 44010042 KEEPER,PLATE GRID HDPPER 41 1 60010126 ASSY,SHAFT CLEAN DUT-MP-25 42 1 60010131 ASSY,RACK CLEANDUT MP-25 43 1 10000079 BDLT, 1/4-20x2 1/2'LNG 44 3 10000079 BDLT,HEX 1/4-20x3-1-4'LNG 45 1 44010014 ADAPTER,MITDR-FLANGE 46 1 44010013 SEAL,GREASE MITDR G/BDIX 47 12 10000015 BDLT,HEX 1/4-20x0.75' 48 4 10000008 BDLT,HEX 1/4-20x0.75' 49 2 44010275 LABEL,SIDE MP-25 50 1 44010276 LABEL,SIDE MP-25 51 4 1000008 BDLT,HEX 5/16-18 GD5 1 1/2' 52 1 44010283 SPACER, MP-25 4KW MDTDR 53 4 10000098 BDLT,HEX 5/16-18 GD5 1 1/2' 54 2 40000010 GEKA STYLE HDSE END CAP 55 1 20000011 GEKA STYLE HDSE END CAP 56 1 20000021 ASSY,CABLE MDTDR 4KW 57 1 20000011 GEKA STYLE HDSE END CAP 56 1 20000011 GEKA STYLE HDSE END CAP 56 1 20000011 GEKA STYLE HDSE END CAP 57 1 20000011 GEKA STYLE HDSE END CAP 58 1 20000011 GEKA STYLE HDSE END CAP 59 1 20000019 SCREW,STE 1/4-20x1/4' 59 1 20000019 SCREW,STE 1/4-20x1/4' 50 1 44010015 KEY,SPECIAL, DRIVE DDG 35 DIA SHAFT 57 1 20000010 SDCKET,ALTEC 2PH 59 1 20000010 SCREW,SET 1/4-28-1/28-1/3/8SHK 64 1 10000099 SCREW,SET 1/4-28-1/28-1/3/8SHK 65 1 40000009 GEWEL, SEAL RETAINER 66 1 1000019 WASHER,ANDER DBUNANN 66 4 10000009 DWEL, SEAL RETAINER 67 2 10000086 PINLINCH 3/16x1-1/8x1-3/8SHK 68 6 1000019 WASHER,ANDER PRESS - 35MM-MALE-600PSI 70 1 60010140 TESTER,WATER PRESS - 35MM-MALE-600PSI 71 1 20000055 PUMP,WATER PRESS - 35MM-MALE-600PSI 72 2 3000010 SEKA STYLE HDSE COMPLETE MP-25 73 1 40000029 GEKA STYLE HDSE COMPLETE MP-25 74 2 40000010 GEKA STYLE HDSE COMPLETE MP-25 75 1 40000023 BDLT, HEX 1/4-20UNCXI' 79 1 60010140 ASSY,WASHDUNN HDSE COMPLETE MP-25 76 1 30000109 STRAINER,WASHER-1' NPT-60/50MESH 77 1 44010287 BRACKET,HDSE MP-25 78 1 10000055 ELBUW 90 '''NPT-MALE-FEMALE				NUT.NYL DK 3/8-16 GD5
33 16 10000044 WASHER 3/8' STEEL 34 10 10000992 NUT,NYLDC 5/16-18 GD2 36 20 10000993 WASHER,FLAT 5/16 37 2 10000090 NUT,NYLDC 1/2-13 THIN THK 38 4 10000093 WASHER,FLAT 5/16 38 4 10000093 WASHER,FLAT 5/16 39 2 10000096 BDLT,HEX 1/2-13xL25LNG-GD5 40 4 44010042 KEEPER,PLATE GRID HDPPER 41 1 60010131 ASSY,RACK CLEANDUT MP-25 42 1 60010131 ASSY,RACK CLEANDUT MP-25 43 1 10000079 BDLT,1/4-20x2 1/2'LNG 44 3 10000091 BDLT,HEX 1/4-20x3-1-4'LNG 45 1 44010014 ADAPTER,MITDR-FLANGE 46 1 44010013 SEAL,GREASE MDTDR G/BDX 47 12 10000018 BDLT,HEX 1/4-20x0.75' 48 4 10000008 WASHER,SPLIT 1/4' 49 2 44010275 LABEL,SIDE MP-25 50 1 44010275 LABEL,SIDE MP-25 51 4 10000069 WASHER,SPLIT 5/16' 52 1 44010276 LABEL,END MP-25 51 4 10000069 WASHER,SPLIT 5/16' 52 1 44010283 SPACER, MP-25 4KW MDTDR 53 4 10000098 BDLT,HEX 1/4-20x0.75' 54 2 40000010 GEKA STYLE FITTING 3/4' MALE PIPE 55 1 20000011 CDRD PDWER 50FT 3 CDRE 56 1 20000021 ASSY,CABLE MOTIOR 4KW 57 1 20000011 CDRD PDWER 50FT 3 CDRE 58 1 20000010 SDCKET,ALTEC 2PH 59 1 20000010 SDCKET,ALTEC 2PH 60 1 30000029 CDUPLER,35MM-CAMLDCK-FMALE-1 1/2' 61 1 60010139 ASSY, WATER HDSE-CDMPLETE-MP-25 62 1 440100099 SCREW,SET 1/4-28-1/2LNG 63 1 10000099 REWS,SET 1/4-28-1/2LNG 64 1 10000099 SCREW,SET 1/4-28-1/2LNG 65 1 40000030 D-RING,0.139*x4.012*DD-BBUNA-N 66 4 10000099 SCREW,SET 1/4-28-1/2LNG 67 2 100000069 PINLINCH 3/16x1-1/8x1-3/8SHK 68 6 10000019 WASHER,AXLE 5/8'-1.313'X0.093' 70 1 60010144 ASSY,FAN DUCT MP-25 71 1 2 2 30000108 RUPLE 1' NPT - 1 1/2' LNG SCH 40 73 1 60010147 ASSY,PAN DUCT MP-25 74 2 40000010 GEKA STYLE FITTING 1' NPT FEMALE 75 1 40000029 GEKA STYLE FITTING 1' NPT FEMALE 76 2 10000086 PINLINCH 3/16x1-1/8x1-3/8SHK 77 1 40000029 GEKA STYLE FITTING 1' NPT FEMALE 78 1 60000030 D-RING,0.139*x4.012*DD-BBUNA-N 79 1 6000148 ASSY,WASHDUN HDSE CDMPLETE MP-25 74 2 40000010 GEKA STYLE FITTING 1' NPT FEMALE 75 1 40000020 SDLT, HEX 1/4-20UNCX1' 79 1 60010144 ASSY,WASHDUN HDSE CDMPLETE MP-25 70 1 4000023 BDLT, HEX 1/4-20UNCX1' 71 1 4000025 EIBBUW 90				
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36 20 10000093 WASHER,FLAT 5/16 37 2 10000096 NUT,NYLDC 1/2-13 THIN THK 38 4 10000033 WASHER,PLAIN 1/2' 39 2 10000096 BDLT,HEX 1/2-13x1.25LNG-GD5 40 4 44010042 KEEPER,PLAIT GRID HDPPER 41 1 60010136 ASSY,SAFT CLEAN DUT-MP-25 42 1 60010131 ASSY,RACK CLEANDUT MP-25 43 1 10000079 BDLT 1/4-20x2 1/2'LNG 44 3 10000079 BDLT,HEX 1/4-20x3-1-4'LNG 45 1 44010014 ADAPTER,MITDER-FLANGE 46 1 44010013 SEAL,GREASE MDTDR G/BDX 47 12 10000015 BDLT,HEX 1/4-20x0.75' 48 4 10000008 WASHER,SPLIT 1/4' 49 2 44010275 LABEL,END MP-25 50 1 44010276 LABEL,END MP-25 51 4 10000098 BDLT,HEX 5/16-18 GD5 1 1/2' 52 1 44010283 SPACER, MP-25 4KW MOTOR 53 4 10000098 BDLT,HEX 5/16-18 GD5 1 1/2' 54 2 40000009 GEKA STYLE FITTING 3/4' MALE PIPE 55 1 40000011 GEKA STYLE HDSE END CAP 56 1 20000011 GEKA STYLE HDSE END CAP 57 1 20000011 GEKA STYLE HDSE END CAP 58 1 20000019 SDCKET,ALTEC 2PH 59 1 20000019 REMOTE, SIECE 2DH 60 1 3000029 CDUPLER,35MM-CAMLDCK-FMALE-1 1/2' 61 1 60010139 ASSY WATER HDSE-COMPLETE-MP-25 62 1 440100005 SCREW,SET 1/4-28-1/2LNG 63 1 10000005 SCREW,SET 1/4-28-1/2LNG 64 1 10000009 DDWEL, SEAL RETAINER 67 2 10000014 ASSY,PCABLE MOTOR BUNNANNANNANNANNANNANNANNANNANNANNANNANNA				MILT NIVERCE 5/16_10 GNO 1 EDING
37				
38				WHISTER, FLAT J/16
39				
40				WASHER, PLAIN 1/2*
1 60010126 ASSY,SHAFT CLEAN DUT-MP-25				BUL 1,HEX 1/2-13x1.25LNG-GD5
1 60010131 ASSY,RACK CLEANDUT MP-25				
1 10000079 BDLT 1/4-20x2 1/2*LNG 44 3 10000071 BDLT,HEX 1/4-20x3-1-4*LNG 45 1 44010013 BDLT,HEX 1/4-20x3-1-4*LNG 46 1 44010013 SEAL,GREASE MDTDR G/BDX 47 12 10000015 BDLT,HEX 1/4-20x0.75* 48 4 10000008 WASHER,SPLIT 1/4* 49 2 44010275 LABEL,SIDE MP-25 50 1 44010276 LABEL,END MP-25 51 4 10000069 WASHER,SPLIT 5/16* 52 1 44010283 SPACER, MP-25 4KW MDTDR 53 4 10000098 BDLT,HEX 5/16-18 GD5 1 1/2* 54 2 4000009 GEKA STYLE FITTING 3/4* MALE PIPE 55 1 40000011 GEKA STYLE HIDSE END CAP 55 1 20000021 ASSY,CABLE MDTDR 4KW 57 1 20000021 ASSY,CABLE MDTDR 4KW 57 1 20000019 SDCKET,ALTEC 2PH 59 1 20000019 SDCKET,ALTEC 2PH 59 1 20000019 REMDITE,WIRED-P/D-25 60 1 30000029 CDUPLER,35MM-CAMLDCK-FMALE-1 1/2* 61 1 60010139 ASSY WATER HDSE-CUMPLETE-MP-25 62 1 44010015 KEY,SPECIAL, DRIVE DIGG 35 DIA SHAFT 63 1 10000005 SCREW,SET 1/4-20x1/4* 64 1 10000099 SCREW,SET 1/4-20x1/4* 65 1 4000003 DRING,0139*x4.012*DD-BUNA-N 66 4 10000006 DRIVEL, SEAL RETAINER 67 2 10000086 PIN,LINCH 3/16x1-1/8x1-3/8SHK 68 6 10000019 WASHER,AXLE 5/8*-1.313*X0.093* 69 1 60010140 TESTER,WATER PRESS - 35MM-MALE-600PSI 70 1 60010147 ASSY,PAM DUCT MP-25 71 1 20000055 PUMP,WATER 220V - 1PH 0.33kW 72 2 30000108 NIPPLE 1* NPT - 1 1/2* LNG SCH 40 73 1 60010147 ASSY,PUMP HDSE CUMPLETE MP-25 74 2 40000010 GEKA STYLE HIDSE TAIL 3/4* HDSE 75 1 40000029 GEKA STYLE HIDSE TAIL 3/4* HDSE 76 1 30000019 STRAINER,WASHER-1* NPT-60/50MESH 77 1 44010287 BRACKET,HDSE MP-25 78 4 10000025 ELBDW 90-1*NPT-MALE-FEMALE 79 1 60010148 ASSY,WASHDDWN HDSE CUMPLETE MP-25 70 1 60010148 ASSY,WASHDDWN HDSE CUMPLETE MP-25 70 1 60010158 BRACKET,HDSE MP-25 70 1 6001059 BRACKET,HDSE MP-25 70 1 600		1		
44 3 10000091 BDLT,HEX 1/4-20x3-1-4*LNG 45		1	60010131	
44 3 10000091 BDLT,HEX 1/4-20x3-1-4*LNG 45	43		10000079	BDLT 1/4-20x2 1/2"LNG
46	44	3	10000091	BDLT,HEX 1/4-20x3-1-4"LNG
46	45	1	44010014	ADAPTER,MOTOR-FLANGE
12 10000015 BDLT,HEX 1/4-20x0.75"		1	44010013	SEAL,GRÉASE MOTOR G/BOX
48 4 10000008 WASHER,SPLIT 1/4' 49 2 44010275 LABEL,SIDE MP-25 50 1 44010276 LABEL,END MP-25 51 4 10000069 WASHER,SPLIT 5/16' 52 1 44010283 SPACER, MP-25 4KW MDTDR 53 4 10000098 BDLT,HEX 5/16-18 GD5 1 1/2' 54 2 40000009 GEKA STYLE FITTING 3/4' MALE PIPE 55 1 40000011 GEKA STYLE HIDSE END CAP 56 1 20000021 ASSY,CABLE MDTDR 4KW 57 1 20000011 CDRD PDWER 50FT 3 CDRE 58 1 20000010 SDCKET,ALTEC 2PH 59 1 20000019 REMDITE,WIRED-P/D-25 60 1 30000029 CDUPLER,3SMM-CAMLDCK-FMALE-1 1/2' 61 1 60010139 ASSY WATER HDSE-CDMPLETE-MP-25 62 1 44010015 KEY,SPECIAL, DRIVE DDG 35 DIA SHAFT 63 1 10000009 SCREW,SET 1/4-28-1/2LNG 64 1 10000099 SCREW,SET 1/4-28-1/2LNG 65 1 40000033 D-RING,0139'x4.012'1D-BUNA-N 66 4 10000002 DDWEL, SEAL RETAINER 67 2 10000008 PIN,LINCH 3/16x1-1/8x1-3/8SHK 68 6 1000019 WASHER,AXLE 5/8'-1.313'X0.093' 69 1 60010140 TESTER,WATER PRESS - 35MM-MALE-600PSI 70 1 60010144 ASSY,FAN DUCT MP-25 71 1 20000015 PUMP,WATER 220V - 1PH 0.33kW 72 2 30000108 NIPPLE 1' NPT - 1 1/2' LNG SCH 40 73 1 60010147 ASSY,PUMP HDSE CDMPLETE MP-25 74 2 40000010 GEKA STYLE HDSE TAIL 3/4' HDSE 75 1 40000029 GEKA STYLE HDSE TAIL 3/4' HDSE 76 1 3000019 STRAINER,WASHER-1' NPT-60/50MESH 77 1 44010287 BRACKET,HDSE MP-25 78 4 10000028 BDLT, HDSE MP-25 78 1 60010148 ASSY,WASHDDWN HDSE CDMPLETE MP-25 80 1 30000055 ELBDW 90-1'NPT-MALE-FEMALE		12		
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1 20000021 ASSY,CABLE MUTUR 4KW				
1 20000011 CDRD POWER SOFT 3 CORE				
58 1 20000010 SDCKET,ALTEC 2PH 59 1 20000049 REMDTE,WIRED-P/D-25 60 1 30000029 CDUPLER,3SMM-CAML.DCK-FMALE-1 1/2" 61 1 60010139 ASSY WATER HDSE-CDMPLETE-MP-25 62 1 44010015 KEY,SPECIAL, DRIVE DDG 35 DIA SHAFT 63 1 10000005 SCREW,SET 1/4-20x1/4" 64 1 10000009 SCREW,SET 1/4-28-1/2LNG 65 1 40000033 D-RING,0.139"x4.012"DD-BUNA-N 66 4 10000002 DDWEL, SEAL RETAINER 67 2 10000086 PIN,LINCH 3/16x1-1/8x1-3/8SHK 68 6 10000019 WASHER,AXLE 5/8"-1.313"X0.093" 69 1 60010140 TESTER,WATER PRESS - 35MM-MALE-600PSI 70 1 60010144 ASSY,FAN DUCT MP-25 71 1 2 3000018 NIPPLE 1" NPT - 1 1/2" LNG SCH 40 73 1 60010147 ASSY,PUMP HDSE CDMPLETE MP-25 74 2 40000002			200000044	
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66 4 1000002 DDWEL, SEAL RETAINER 67 2 10000086 PIN,LINCH 3/16x1-1/8x1-3/8SHK 68 6 1000019 WASHER,AXLE 5/8'-1.313"X0.093" 69 1 60010140 TESTER,WATER PRESS - 35MM-MALE-600PSI 70 1 60010144 ASSY,FAN DUCT MP-25 71 1 20000055 PUMP,WATER 220V - 1PH 0.33kW 72 2 30000108 NIPPLE 1" NPT - 1 1/2" LNG SCH 40 73 1 60010147 ASSY,PUMP HDSE CDMPLETE MP-25 74 2 40000010 GEKA STYLE FITTING 1" NPT FEMALE 75 1 40000029 GEKA STYLE FITTING 1" NPT FEMALE 76 1 30000109 STRAINER,WASHER-1" NPT-60/50MESH 77 1 44010287 BRACKET,HDSE MP-25 78 4 10000023 BDLT, HEX 1/4-20UNCX1" 79 1 60010148 ASSY,WASHDDWN HDSE CDMPLETE MP-25 80 1 30000055 ELBDW 90- 1"NPT-MALE-FEMALE				
67 2 10000086 PIN,LINCH 3/16x1-1/8x1-3/8SHK 68 6 10000019 WASHER,AXLE 5/8*-1.313*X0.093* 69 1 60010140 TESTER,WATER PRESS - 35MM-MALE-600PSI 70 1 60010144 ASSY,FAN DUCT MP-25 71 1 20000055 PUMP,WATER 220V - 1PH 0.33kW 72 2 30000108 NIPPLE 1* NPT - 1 1/2* LNG SCH 40 73 1 60010147 ASSY,PUMP HOSE COMPLETE MP-25 74 2 40000010 GEKA STYLE FITTING 1* NPT FEMALE 75 1 40000029 GEKA STYLE FITTING 1* NPT FEMALE 76 1 30000109 STRAINER,WASHER-1* NPT-60/50MESH 77 1 44010287 BRACKET,HOSE MP-25 78 4 10000023 BOLT, HEX 1/4-20UNCX1* 79 1 60010148 ASSY,WASHDDWN HOSE COMPLETE MP-25 80 1 30000055 ELBOW 90- 1*NPT-MALE-FEMALE				
68 6 10000019 WASHER,AXLE 5/8'-1.313"X0.093" 69 1 60010140 TESTER,WATER PRESS - 35MM-MALE-600PSI 70 1 60010144 ASSY,FAN DUCT MP-25 71 1 20000055 PUMP,WATER 220V - 1PH 0.33kW 72 2 30000108 NIPPLE 1' NPT - 1 1/2' LNG SCH 40 73 1 60010147 ASSY,PUMP HOSE COMPLETE MP-25 74 2 40000010 GEKA STYLE FITTING 1' NPT FEMALE 75 1 40000029 GEKA STYLE HOSE TAIL 3/4' HOSE 76 1 30000109 STRAINER,WASHER-1' NPT-60/50MESH 77 1 44010287 BRACKET,HOSE MP-25 78 4 10000023 BOLT, HEX 1/4-20UNCX1' 79 1 60010148 ASSY,WASHDDWN HOSE COMPLETE MP-25 80 1 30000055 ELBOW 90- 1'NPT-MALE-FEMALE				
68 6 10000019 WASHER,AXLE 5/8'-1.313"X0.093" 69 1 60010140 TESTER,WATER PRESS - 35MM-MALE-600PSI 70 1 60010144 ASSY,FAN DUCT MP-25 71 1 20000055 PUMP,WATER 220V - 1PH 0.33kW 72 2 30000108 NIPPLE 1' NPT - 1 1/2' LNG SCH 40 73 1 60010147 ASSY,PUMP HOSE COMPLETE MP-25 74 2 40000010 GEKA STYLE FITTING 1' NPT FEMALE 75 1 40000029 GEKA STYLE HOSE TAIL 3/4' HOSE 76 1 30000109 STRAINER,WASHER-1' NPT-60/50MESH 77 1 44010287 BRACKET,HOSE MP-25 78 4 10000023 BOLT, HEX 1/4-20UNCX1' 79 1 60010148 ASSY,WASHDDWN HOSE COMPLETE MP-25 80 1 30000055 ELBOW 90- 1'NPT-MALE-FEMALE				
69 1 60010140 TESTER,WATER PRESS - 35MM-MALE-600PSI 70 1 60010144 ASSY,FAN DUCT MP-25 71 1 20000055 PUMP,WATER 220V - 1PH 0.33kW 72 2 30000108 NIPPLE 1' NPT - 1 1/2' LNG SCH 40 73 1 60010147 ASSY,PUMP HDSE CDMPLETE MP-25 74 2 40000010 GEKA STYLE FITTING 1' NPT FEMALE 75 1 40000029 GEKA STYLE HDSE TAIL 3/4' HDSE 76 1 3000019 STRAINER,WASHER-1' NPT-60/50MESH 77 1 44010287 BRACKET,HDSE MP-25 78 4 10000023 BDLT, HEX 1/4-20UNCX1' 79 1 60010148 ASSY,WASHDDWN HDSE CDMPLETE MP-25 80 1 30000055 ELBDW 90- 1'NPT-MALE-FEMALE	68	6	10000019	WASHER, AXLE 5/8"-1.313"X0.093"
70				TESTER,WATER PRESS - 35MM-MALE-600PSI
71				
72 2 30000108 NIPPLE 1" NPT - 1 1/2" LNG SCH 40 73 1 60010147 ASSY,PUMP HOSE COMPLETE MP-25 74 2 4000010 GEKA STYLE FITTING 1" NPT FEMALE 75 1 40000029 GEKA STYLE HOSE TAIL 3/4" HOSE 76 1 30000109 STRAINER,WASHER-1" NPT-60/50MESH 77 1 44010287 BRACKET,HOSE MP-25 78 4 10000023 BOLT, HOSE MP-25 78 1 60010148 ASSY,WASHDDWN HOSE COMPLETE MP-25 80 1 30000055 ELBOW 90- 1"NPT-MALE-FEMALE				
73 1 60010147 ASSY,PUMP HDSE CDMPLETE MP-25 74 2 40000012 GEKA STYLE FITTING 1' NPT FEMALE 75 1 40000029 GEKA STYLE HDSE TAIL 3/4' HDSE 76 1 3000019 STRAINER,WASHER-1' NPT-60/50MESH 77 1 44010287 BRACKET,HDSE MP-25 78 4 10000023 BDLT, HEX 1/4-20UNCX1' 79 1 60010148 ASSY,WASHDDWN HDSE CDMPLETE MP-25 80 1 30000055 ELBDW 90- 1'NPT-MALE-FEMALE				
74 2 4000010 GEKA STYLE FITTING 1' NPT FEMALE 75 1 4000029 GEKA STYLE HDSE TAIL 3/4' HDSE 76 1 30000109 STRAINER,WASHER-1' NPT-60/50MESH 77 1 44010287 BRACKET,HDSE MP-25 78 4 10000023 BDLT, HEX 1/4-20UNCX1' 79 1 60010148 ASSY,WASHDDWN HDSE CDMPLETE MP-25 80 1 30000055 ELBDW 90- 1'NPT-MALE-FEMALE				
75 1 4000029 GEKA STYLE HDSE TAIL 3/4" HDSE 76 1 30000109 STRAINER,WASHER-1" NPT-60/50MESH 77 1 44010287 BRACKET,HDSE MP-25 78 4 10000023 BDLT, HEX 1/4-20UNCX1" 79 1 60010148 ASSY,WASHDUWN HDSE COMPLETE MP-25 80 1 30000055 ELBDW 90- 1"NPT-MALE-FEMALE				
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77 1 44010287 BRACKET,HDSE MP-25 78 4 10000023 BDLT, HEX 1/4-20UNCX1' 79 1 60010148 ASSY,WASHDDWN HDSE CDMPLETE MP-25 80 1 30000055 ELBDW 90- 1'NPT-MALE-FEMALE		_		
78 4 10000023 BDLT, HÉX 1/4-20UNCX1' 79 1 60010148 ASSY, WASHDDWN HDSE COMPLETE MP-25 80 1 30000055 ELBOW 90- 1'NPT-MALE-FEMALE				
79				
80 1 30000055 ELBOW 90- 1"NPT-MALE-FEMALE				VOOA MVOADUN'N HUSE CUMDIELE MU SE
RI I I PONTONPR IMPRANT RKFAKFK - CTINI WIX				
	ΓΩΙ	1	POUNTUNDS	JASSI,DAU BKEAKEK - CUNI MIX

$Illustration-60010121\,ASSY, MP\,25\text{-}HO-3\,PHASE-220V$



$Bill\ of\ Materials - 60010121\ ASSY,\ MP\ 25\text{-HO} - 3\ PHASE - 220V$

3 1 3000046 R8-1.5 RITUR 4 1 44010258 ADAPTER,PUMP 1 5 2 3000016 TIRE,10° PNEUMA 6 1 44010011 DRIVE, AUGER F 7 1 60010125 ASSY, DRIVE/MI 8 1 44010256 AXLE, HIDPER M 9 1 60010134 ASSY, UPPER MT 10 1 60010142 ASSY, WATER CII 11 1 20000046 BDX, CUNTRUL M 12 1 60010130 ASSY, WATER CII 13 1 44010255 CDVER-TDP-MP 14 2 30000095 6' CASTER,SWIV 15 1 20000051 MOTORGEARBDX 16 3 44010255 BRACE FRAME M 17 1 44010253 SUPPDRT,SIDE P 18 1 44010253 SUPPDRT,SIDE P 19 1 44010253 SUPPDRT,SIDE P 19 1 44010251 PANEL,MOUNT CI 20 1 44010251 PANEL,MOUNT CI 21 2 44010250 SPACER-ANGLE 22 2 10000062 ALL-THREAD-3/ 23 2 10000062 ALL-THREAD-3/ 23 2 10000063 NUT,HEX STEEL 24 2 1000064 ASSY,GRID HDPP 26 1 60010132 ASSY,FRAME TUI 27 40 10000017 NUT,NYLDK 1/4- 28 84 1000009 WASHER SPLIT 27 40 10000017 NUT,NYLDK 1/4- 28 84 1000009 WASHER,FLAT I, 29 23 10000082 BDLT,HEX 1/4-2 30 1 10000087 BDLT,HEX 3/8-1 31 8 10000097 BDLT,HEX 3/8-1 32 8 10000097 BDLT,HEX 3/8-1 33 16 10000094 BDLT,HEX 3/8-1 34 10 10000094 BDLT,HEX 5/16-1 35 10 10000099 NUT,NYLDC 5/16 36 19 10000099 NUT,NYLDC 5/16 36 19 10000099 NUT,NYLDC 5/16 37 2 10000090 NUT,NYLDC 5/16 38 4 10000090 NUT,NYLDC 1/2-1 38 4 10000090 BDLT,HEX 1/2-1 40 4 4401024 KEEPER,PLATE (L 41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLEA 42 1 60010131 ASSY,RACK CLEA	DJ-BLACK-INTCLAMP 3.5MM-MP-25 IC-5/8' BORE,3 1/2'WIDE JMP X SHAFT MP-25 P-25 MNT MP-25 TRDL MP-25-7GPM P-25 220V-3PH JTPUT-113MM-MP-25 IE W/BRAKE,LARGE PLATE SKW - SEW-EURD 200 -25 IN W-BRAKE,LARGE PLATE SKW - SEW-EURD 200 -25 IN W-BRAKE,LARGE PLATE SKW - SEW-EURD 200 -25 IN COLL 3/4-13 IN
3 1 3000046 R8-1.5 RDTUR 4 1 44010258 ADAPTER,PUMP 1 5 2 3000016 TIRE,10° PNEUME 6 1 44010011 DRIVE, AUGER F 7 1 60010125 ASSY, DRIVE/MI 8 1 44010256 AXLE, HUPPER MT 10 1 60010142 ASSY, WATER CD 11 1 2000046 BDX, CDNTROL M 12 1 60010130 ASSY, NDZLE I 13 1 44010265 CDVER-TDP-MP 14 2 3000095 6' CASTER,SWIV 15 1 2000051 MDTURGEARBUX 16 3 44010265 DRVER-TDP-MP 17 1 44010265 DRACE FRAME M 17 1 44010253 SUPPURT,SIDE P 19 1 44010253 SUPPURT,SIDE P 19 1 44010251 PANEL,MUNT CD 20 1 44010251 PANEL,MUNT CD 21 2 44010250 SPACER-ANGLE 22 2 10000062 ALL-THREAD-3/ 23 2 10000053 NUT,HEX STEEL 24 2 10000089 WASHER SPLIT 25 1 60010132 ASSY,FRAME TUI 27 40 10000017 NUT,NYLDK 1/4- 28 84 10000009 WASHER,FLAT I, 29 23 10000082 BDLT,HEX 1/4-2 30 1 10000072 BDLT HEX 1/4-2 31 8 10000097 BDLT,HEX 3/8-1 32 8 10000097 BDLT,HEX 3/8-1 33 16 10000097 BDLT,HEX 3/8-1 34 10 10000097 NUT,NYLDK 3/8-1 35 10 10000098 NUT,NYLDC 5/16 36 19 10000099 NUT,NYLDC 5/16 36 19 10000099 NUT,NYLDC 5/16 37 2 10000090 NUT,NYLDC 5/16 38 4 10000099 NUT,NYLDC 5/16 39 2 10000090 NUT,NYLDC 5/16 36 19 10000091 NUT,NYLDC 5/16 37 2 10000090 NUT,NYLDC 5/16 38 4 10000091 NUT,NYLDC 5/16 39 2 10000096 BDLT,HEX 1/2-1 40 4 44010042 KEEPER,PLATE (41 1 60010131 ASSY,SARFT CLE 42 1 60010131 ASSY,SARFT CLE 42 1 60010131 ASSY,SARFT CLE 42 1 60010131 ASSY,SARFT CLE	3.5MM-MP-25
4 1 44010258 ADAPTER,PUMP 1 5 2 30000016 TIRE,10° PNEUME 6 1 44010011 DRIVE, AUGER F 7 1 60010125 ASSY, DRIVE/MI 8 1 44010256 AXLE, HDPPER M 9 1 60010134 ASSY,UPPER MTF 10 1 60010142 ASSY,UPPER MTF 11 1 20000046 BDX, CDNTRDL M 12 1 60010130 ASSY, NDZZLE D 13 1 44010265 CDVER-TDP-MP- 14 2 30000095 6' CASTER,SWIV 15 1 20000051 MDTDRGEARBDX 16 3 44010255 BRACE FRAME M 17 1 44010254 PAN,PLATE MP-2 18 1 44010253 SUPPURT,SIDE P 19 1 44010253 SUPPURT,SIDE P 19 1 44010253 SUPPURT,SIDE P 20 1 44010251 PANEL,MDUNT CD 21 2 44010250 SPACER-ANGLE 22 2 10000062 ALL-THREAD-3/ 23 2 10000035 NUT,HEX STEEL 24 2 10000089 WASHER, SPLIT 25 1 60010132 ASSY,FRAME TUI 27 40 1000007 NUT,NYLDE 1/4- 28 84 1000009 WASHER, SPLIT 28 84 1000009 WASHER, SPLIT 29 23 10000082 BDLT,HEX 1/4-2 30 1 10000072 BDLT HEX 1/4-2 31 8 10000097 BDLT,HEX 3/8-1 32 8 10000098 BDLT,HEX 3/8-1 33 16 10000099 NUT,NYLDC 5/16 35 10 10000099 NUT,NYLDC 5/16 35 10 10000099 NUT,NYLDC 5/16 36 19 10000099 NUT,NYLDC 5/16 37 2 10000099 NUT,NYLDC 5/16 38 4 10000099 NUT,NYLDC 5/16 39 2 10000099 BDLT,HEX 3/8-1 37 2 10000099 NUT,NYLDC 5/16 38 4 10000099 NUT,NYLDC 5/16 39 2 10000098 BDLT,HEX 1/4-2-1 40 4 44010264 KEEPER,PLATE (41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLE/4	IC-5/8" BORE,3 1/2"WIDE IMP X SHAFT MP-25 P-25 MNT MP-25 REDL MP-25-7GPM P-25-25 220V-3PH DITPUT-113MM-MP-25 IL W/BRAKE,LARGE PLATE SKW - SEW-EURD 200 -25 N-RHS-MP-25 N-RHS-MP-25 ITROL-MP-25 RAME MP-25 ITROL-MP-25 RAME MP-25 ITROL-MP-25 RAME MP-25 ITROL-MP-25 RAME MP-25 ICULL 3/4-13 R ASSY MP-25 FULLRAD-SPACER 0 UNC I' X2"LNG X3" 3/4" 6 GD5 -UNC x 1" LNG EEL 8 UNC 1" LDNG 18 GD2 16
5 2 3000016 TIRE,10* PNEUMA 6 1 44010011 DRIVE, AUGER F 7 1 60010125 ASSY, DRIVE/MI 8 1 44010256 ASLE, HIDPER N 9 1 60010134 ASSY, UPPER MTF 10 1 60010142 ASSY, WATER CDI 11 1 20000046 BDX, CDNTRDL N 12 1 60010130 ASSY, NDZZLE I 13 1 44010265 CDVER-TDP-MP- 14 2 30000095 6* CASTER,SWIV 15 1 20000051 MDTDREGARBIX 16 3 44010255 BRACE FRAME M 17 1 44010254 PAN,PLATE MP- 18 1 44010253 SUPPIRT,SIDE P 19 1 44010253 SUPPIRT,SIDE P 20 1 44010250 SPACER-ANGLE 21 2 44010250 SPACER-ANGLE 22 2 10000062 ALL-THREAD-3/ 23 2 10000035 NUT,HEX STEEL 24 2 10000089 WASHER SPLIT 25 1 60010133 ASSY,FRAME TUI 26 1 60010132 ASSY,FRAME TUI 27 40 10000017 NUT,NYLDE 1/4- 28 84 10000009 WASHER,FLAT 1/4- 29 23 10000082 BDLT,HEX 1/4- 30 1 10000072 BDLT HEX 1/4- 31 8 10000087 NUT,NYLDE 3/8- 32 8 10000095 BDLT,HEX 3/8- 33 16 10000097 BDLT HEX 3/8- 34 10 10000099 BDLT,HEX 3/8- 35 10 10000099 BDLT,HEX 3/8- 36 19 10000099 BDLT,HEX 3/8- 37 2 10000099 NUT,NYLDE 5/16 36 19 10000099 BDLT,HEX 3/8- 37 2 10000099 BDLT,HEX 3/8- 38 4 10000099 BDLT,HEX 3/8- 39 2 10000099 BDLT,HEX 3/8- 31 10 10000099 BDLT,HEX 3/8- 32 10000099 BDLT,HEX 3/8- 35 10 10000099 BDLT,HEX 3/8- 36 19 10000099 BDLT,HEX 3/8- 37 2 10000099 BDLT,HEX 3/8- 38 4 10000099 BDLT,HEX 3/8- 39 2 10000096 BDLT,HEX 1/4-2 30 1 10000091 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLE/	IC-5/8" BORE,3 1/2"WIDE IMP X SHAFT MP-25 P-25 MNT MP-25 REDL MP-25-7GPM P-25-25 220V-3PH DITPUT-113MM-MP-25 IL W/BRAKE,LARGE PLATE SKW - SEW-EURD 200 -25 N-RHS-MP-25 N-RHS-MP-25 ITROL-MP-25 RAME MP-25 ITROL-MP-25 RAME MP-25 ITROL-MP-25 RAME MP-25 ITROL-MP-25 RAME MP-25 ICULL 3/4-13 R ASSY MP-25 FULLRAD-SPACER 0 UNC I' X2"LNG X3" 3/4" 6 GD5 -UNC x 1" LNG EEL 8 UNC 1" LDNG 18 GD2 16
6 1 44010011 DRIVE, AUGER F 7 1 60010125 ASSY, DRIVE/MI 8 1 44010256 ASXLE, HIDPPER N 9 1 60010134 ASSY, UPPER N 10 1 60010142 ASSY, WATER CD 11 1 20000046 BDX, CDNTRDL N 12 1 60010130 ASSY, NDZZLE I 13 1 44010265 CDVER-TDP-MP- 14 2 30000095 6' CASTER, SWIV 15 1 20000051 MDTURGEARBOX 16 3 44010255 BRACE FRAME M 17 1 44010255 BRACE FRAME M 17 1 44010253 SUPPURT, SIDE P 18 1 44010253 SUPPURT, SIDE P 19 1 44010253 SUPPURT, SIDE P 20 1 44010251 PANPLATE MP-2 20 1 44010250 SPACER-ANGLE 21 2 44010250 SPACER-ANGLE 22 2 10000062 ALL-THREAD-3/ 23 2 10000035 NUT, HEX STEEL 24 2 10000089 WASHER SPLIT 25 1 60010132 ASSY, FRAME TUI 27 40 10000017 NUT, NYL DK 1/4- 28 84 1000009 WASHER SPLIT 27 40 10000017 NUT, NYL DK 1/4- 28 84 1000009 WASHER, FLAT T 29 23 10000082 BDLT, HEX 1/4-2 30 1 10000072 BDLT HEX 1/4-2 31 8 10000087 NUT, NYL DK 3/8- 32 8 10000098 BDLT, HEX 3/8-1 33 16 10000099 WASHER SJR 34 10 10000099 WASHER SJR 35 10 10000099 WASHER SJR 36 19 10000099 WASHER SJR 37 2 10000099 WASHER SJR 38 4 10000099 WASHER SJR 39 2 10000090 NUT, NYL DC 5/16 36 19 10000099 WASHER SJR 39 2 10000090 BDLT, HEX 5/16- 31 39 2 10000090 BDLT, HEX 1/4-1 31 40 10000090 BDLT, HEX 1/4-1 32 4 10000090 BDLT, HEX 1/4-1 33 4 10 10000090 BDLT, HEX 1/4-1 34 1 1 60010126 ASSY, SHAFT CLE 44 1 1 60010126 ASSY, SHAFT CLE 45 1 60010131 ASSY, RACK CLEA	JMP X SHAFT MP-25 D-25 MNT MP-25 TRDL MP-25-7GPM25 220V-3PH JTTPUT-113MM-MP-25 JS JC L W/BRAKE,LARGE PLATE JS N-RHS-MP-25 N-LHS-MP-25 N-LHS-MP-25 N-LHS-MP-25 N-LHS-MP-25 RAME MP-25 -10x13' B/4'-10 UNC I CDLL 3/4-13 R ASSY MP-25 FULLRAD-SPACER 0 UNC I' x2'LNG JS3 3/4' 6 GD5UNC x 1' LNG EEL 8 UNC 1' LDNG 18 GD2 18 GD2 18 GD2 18 GD2 18 GD2
7 1 60010125 ASSY, DRIVE/MI 8 1 44010256 AXLE, HIPPER MF 9 1 60010134 ASSY, UPPER MF 10 1 60010142 ASSY, WATER CDI 11 1 20000046 BDX, CDNTRDL M 12 1 60010130 ASSY, NDZZLE D 13 1 44010265 CDVER-TDP-MP 14 2 30000095 6' CASTER, SWIV 15 1 20000051 MDTDRGEARBDX 16 3 44010255 BRACE FRAME M 17 1 44010253 SUPPDRT, SIDE P 18 1 44010253 SUPPDRT, SIDE P 19 1 44010253 SUPPDRT, SIDE P 20 1 44010251 PANEL, MDUNT CD 21 2 44010251 PANEL, MDUNT CD 21 2 44010251 PANEL, MDUNT CD 22 2 10000062 ALL-THREAD-3/ 23 2 10000062 ALL-THREAD-3/ 23 2 10000063 NUT, HEX STEEL 24 2 10000069 WASHER SPLIT 27 40 1000007 NUT, NYLDK 1/4- 28 84 1000009 WASHER, FLAT 1/2 29 23 10000082 BDLT, HEX 1/4-6 30 1 10000072 BDLT, HEX 1/4-6 31 8 10000072 BDLT, HEX 1/4-6 31 8 10000075 BDLT, HEX 1/4-6 31 8 10000075 BDLT, HEX 1/4-6 31 8 10000095 BDLT, HEX 1/4-6 31 8 10000097 NUT, NYLDK 3/8-1 32 8 10000095 BDLT, HEX 1/4-6 33 16 10000044 WASHER 3/8' S 34 10 10000094 BDLT, HEX 5/16-3 35 10 10000095 BDLT, HEX 5/16-3 36 19 10000094 BDLT, HEX 5/16-3 37 2 10000096 BDLT, HEX 1/4-1 38 4 10000033 WASHER, PLAIT 1/4 39 2 10000096 BDLT, HEX 1/2-1 40 4 44010042 KEEPER, PLAIT 1/4 41 1 60010126 ASSY, SHAFT CLE 42 1 60010131 ASSY, SHAFT CLE 44 1 60010131 ASSY, SHAFT CLE 44 1 60010131 ASSY, SHAFT CLE 45 1 60010131 ASSY, SHAFT CLE 46 1 60010131 ASSY, SHAFT CLE	SHAFT MP-25 P-25 SHAFT MP-25 P-25 SHAFT MP-25 SHAFT MP
8 1 44010256 AXLE, HDPPER M 9 1 60010134 ASSY, UPPER MTI 10 1 60010134 ASSY, UPPER MTI 11 1 20000046 BDX, CDNTROL M 12 1 60010130 ASSY, NDZZLE D 13 1 44010265 CDVER-TDP-MP-14 2 30000095 6' CASTER, SWI V 15 1 20000051 MDTDRGEARBDX 16 3 44010255 BRACE FRAME M 17 1 44010254 PAN, PLATE MP-2 1 44010253 SUPPURT, SIDE P 19 1 44010253 SUPPURT, SIDE P 19 1 44010253 SUPPURT, SIDE P 19 1 44010253 SUPPURT, SIDE P 20 1 44010251 PANEL, MDUNT CC 21 2 44010250 SPACER-ANGLE 22 2 10000062 ALL-THREAD-3/23 2 10000035 NUT, HEX STEEL 24 2 10000069 WASHER, SPLIT 25 1 60010133 ASSY, GRID HDPP 26 1 60010133 ASSY, FRAME TUI 27 40 1000007 NUT, NYLDIK 1/4-28 84 1000009 WASHER, SPLIT 28 84 1000009 WASHER, FLAT 1/29 23 10000082 BDLT, HEX 1/4-23 1 8 10000087 NUT, NYLDIK 3/8-3 1 1 10000095 BDLT, HEX 3/8-3 1 1 10000095 BDLT, HEX 3/8-3 1 1 10000095 BDLT, HEX 3/8-3 1 1 10000099 NUT, NYLDIC 5/16 35 10 10000099 NUT, NYLDIC 1/2-38 4 10000099 BDLT, HEX 1/2-1 40 4 44010026 KEEPER, PLATE (41 1 60010126 ASSY, SHAFT CLE 42 1 60010131 ASSY, RACK CLE/4 1 1 60010126 ASSY, SHAFT CLE 42 1 60010131 ASSY, RACK CLE/4	P-25 MNT MP-25 TRDL MP-25-7GPM P-25-220V-3PH JTPUT-113MM-MP-25 S L W/BRAKE,LARGE PLATE .5KW - SEW-EURD 200 -25 N-RHS-MP-25 N-LHS-MP-25 ATROL-MP-25 ATROL-MP-25 ITROL-MP-25 ITR
9 1 60010134 ASSY,UPPER MTF 10 1 60010142 ASSY,WATER CDI 11 1 20000046 BDX, CDNTRDL M 12 1 60010130 ASSY, NDZZLE I 13 1 44010265 CDVER-TDP-MP- 14 2 3000095 6' CASTER,SWIV 15 1 20000051 MDTDRGEARBDX 16 3 44010255 BRACE FRAME M 17 1 44010254 PAN,PLATE MP- 26 1 44010253 SUPPDRT,SIDE P 19 1 44010253 SUPPDRT,SIDE P 20 1 44010251 PANEL,MDUNT CD 21 2 44010250 SPACER-ANGLE 22 2 10000062 ALL-THREAD-3/ 23 2 10000035 NUT,HEX STEEL 24 2 10000089 WASHER SPLIT 25 1 60010133 ASSY,GRID HDPP 26 1 60010133 ASSY,FRAME TUI 27 40 10000017 NUT,NYLDK 1/4- 28 84 10000009 WASHER,FLAT 1/4- 29 23 10000082 BDLT,HEX 1/4-2 30 1 10000072 BDLT HEX 1/4-2 31 8 10000087 NUT,NYLDK 3/8- 32 8 10000087 NUT,NYLDK 3/8- 33 16 10000087 NUT,NYLDK 3/8- 34 10 10000094 BDLT,HEX 3/8-1 35 10 10000095 BDLT,HEX 3/8-1 36 19 10000095 NUT,NYLDC 5/16 37 2 10000099 NUT,NYLDC 5/16 38 4 10000099 NUT,NYLDC 5/16 39 2 10000099 BDLT,HEX 1/4-1 39 2 10000099 BDLT,HEX 1/4-1 39 2 10000099 BDLT,HEX 1/4-1 31 4 10000099 BDLT,HEX 1/4-1 31 1 10000099 BDLT,HEX 1/4-1 32 1 10000099 BDLT,HEX 1/4-1 33 1 10000099 BDLT,HEX 1/4-1 34 1 10000099 BDLT,HEX 1/4-1 35 10 10000099 BDLT,HEX 1/4-1 36 19 10000099 BDLT,HEX 1/4-1 37 2 10000099 BDLT,HEX 1/4-1 38 4 10000099 BDLT,HEX 1/4-1 39 2 10000099 BDLT,HEX 1/4-1 40 4 44010020 KEEPER,PLATE (LEPER,PLATE (LEPER,	MNT MP-25 TROL MP-25-7GPM P-25-220V-3PH DTPUT-113MM-MP-25 TS TL W/BRAKE,LARGE PLATE TS TS TS N-HS-MP-25 TROL MP-25 TOX13'' B/4''-10 UNC T COLL 3/4-13 R ASSY MP-25 TOULL 3/4-13 R ASSY MP-25 TOULL RAD-SPACER TO UNC T' X2'LNG TOWN MP-25 TOUL MP-
10	TRDL MP-25-7GPM 25 220V-3PH JTPUT-113MM-MP-25 5 EL W/BRAKE,LARGE PLATE .5KW - SEW-EURD 200 -25 3 N-RHS-MP-25 N-LHS-MP-25 N-LHS-MP-25 RAME MP-25 -10x13' 3/4'-10 UNC I CDLL 3/4-13 R ASSY MP-25 - FULLRAD-SPACER 0 UNC 1' x2'LNG 0x3 3/4' 6 GD5 UNC x 1' LNG EEL 8 UNC 1' LDNG 18 GD2 16
11	P-25 220V-3PH JTPUT-113MM-MP-25 JTPUT-113MM-MP-25 JS
12	JTPUT-113MM-MP-25 :5 :5 :L W/BRAKE,LARGE PLATE :5KW - SEW-EURD 200 -25 :5 N-RHS-MP-25 N-LHS-MP-25 N-LHS-MP-25 RAME MP-25 -10x13' 374'*-10 UNC I COLL 3/4-13 R ASSY MP-25 I COLL 3/4-13 R ASSY MP-25 I COLL 3/4-13 R ASSY MP-25 -UNC LY 1/2 1/2 1/2 1/3 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4
13	25 1. W/BRAKE,LARGE PLATE 1. SKW - SEW-EURD 200 -25 5 N-RHS-MP-25 N-LHS-MP-25 N-LHS-MP-25 RAME MP-25 -10x13' 3/4'-10 UNC 1 CDLL 3/4-13 R ASSY MP-25 1 FULLRAD-SPACER 0 UNC 1' x2'LNG UNC 1' x2'LNG UNC 1' SEL BUNC x 1' LNG EEL BUNC x 1' LDNG 18 GD2 18 GD2 16
14	L W/BRAKE,LARGE PLATE .5KW - SEW-EURD 200 -25 5 N-RHS-MP-25 N-LHS-MP-25 NTRDL-MP-25 ITRDL-MP-25 -10x13' 8/4'-10 UNC I CDLL 3/4-13 R ASSY MP-25 - FULLRAD-SPACER 0 UNC I' x2'LNG J\data 3/4' 6 GD5 -UNC x 1' LNG EEL 8 UNC 1' LDNG 18 GD2 18 GD2
15	.5KW - SEW-EURD 200 -25 .5 .N-RHS-MP-25 .N-LHS-MP-25 .TRDL_MP-25 .TRDL_MP-25 .TRDL_MP-25 .TOLX13' .74'-10 UNC .TCDLL 3/4-13 .R ASSY MP-25 .FULLRAD-SPACER .O UNC .I' .YE'LNG .NS 3/4' .GGD5UNC x 1' LNG .EEL .8 UNC 1' LDNG .18 GD2 .18 GD2 .18 .18 GD2 .19 .19 .19 .19 .19 .19 .19 .19 .19 .19
16	-25 5 N-RHS-MP-25 N-LHS-MP-25 N-LHS-MP-25 ITRDL-MP-25 RAME MP-25 -10x13* 3/4*-10 UNC I COLL 3/4-13 R ASSY MP-25 - FULLRAD-SPACER 0 UNC I* x2*LNG x2*LNG x3*3/4* 6 GD5 -UNC x 1* LNG EEL 8 UNC 1* LDNG IB GD2 IB GD2 IB GD2
17	N-RHS-MP-25 N-LHS-MP-25 N-LHS-MP-25 RAME MP-25 -10x13' 3/4'-10 UNC I CDLL 3/4-13 R ASSY MP-25 FULLRAD-SPACER 0 UNC I' x2'LNG 033 3/4' 6 GD5 -UNC x 1' LNG EEL 8 UNC 1' LDNG 18 GD2 16
19	N-LHS-MP-25 ITRIL-MP-25 ITRIL-MP-25 RAME MP-25 -10x13' 8/4'-10 UNC I CDLL 3/4-13 R ASSY MP-25 -5 FULLRAD-SPACER 0 UNC I' *x2'LNG 0 UNC I' *6 GD5 -UNC x 1' LNG EEL 8 UNC 1' LDNG 18 GD2 16
20	ITRDL-MP-25 RAME MP-25 -10x13' 3/4'-10 UNC I COLL 3/4-13 R ASSY MP-25 - FULLRAD-SPACER 0 UNC 1' x2''LNG 1)x3 3/4' 6 GD5 -UNC x 1' LNG EEL 8 UNC 1' LONG 18 GD2 16
21 2 44010250 SPACER-ANGLE 22 2 10000062 ALL-THREAD-3/ 23 2 10000062 ALL-THREAD-3/ 23 2 10000035 NUT,HEX STEEL 24 2 10000089 WASHER SPLIT 25 1 60010133 ASSY,GRID HDPP 26 1 60010132 ASSY,FRAME TUI 27 40 10000017 NUT,NYLIG 1/4- 28 84 10000009 WASHER,FLAT 1/ 29 23 10000082 BDLT,HEX 1/4-2 30 1 10000072 BDLT HEX 1/4-2 31 8 10000072 BDLT HEX 1/4-2 31 8 10000072 BDLT HEX 1/4-2 32 8 10000072 BDLT HEX 1/4-2 33 16 10000072 BDLT HEX 5/6-3 34 10 10000074 BDLT HEX 5/6-3 35 10 10000075 BDLT,HEX 3/8-1 35 10 10000079 NUT,NYLDC 5/16 35 10 10000079 NUT,NYLDC 5/16 35 10 10000079 NUT,NYLDC 5/16 36 19 10000079 NUT,NYLDC 5/16 37 2 10000079 NUT,NYLDC 1/2- 38 4 10000073 WASHER,FLAT 5. 37 2 10000070 NUT,NYLDC 1/2- 38 4 10000073 WASHER,PLAT 6. 40 4 44010042 KEEPER,PLATE (41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLEA	RAME MP-25 -10x13" 3/4"-10 UNC I CDLL 3/4-13 R ASSY MP-25 - FULLRAD-SPACER 0 UNC I" x2"LNG x3" 3/4" 6 GD5 -UNC x 1" LNG EEL 8 UNC 1" LDNG 18 GD2 16
22 2 10000062 ALL-THREAD-3/ 23 2 10000035 NUT,HEX STEEL 24 2 10000089 WASHER SPLIT 25 1 60010133 ASSY,GRID HDPP 26 1 60010132 ASSY,FRAME TUI 27 40 10000017 NUT,NYLDK 1/4- 28 84 1000009 WASHER,FLAT 1/ 29 23 10000082 BDLT,HEX 1/4-2 30 1 10000072 BDLT HEX 1/4-2 31 8 10000087 BDLT,HEX 1/4-2 31 8 10000087 BDLT,HEX 3/8-1 32 8 10000095 BDLT,HEX 3/8-3 32 8 10000095 BDLT,HEX 3/8-3 34 10 10000094 BDLT,HEX 3/8-3 35 10 10000094 BDLT,HEX 5/16-3 35 10 10000094 BDLT,HEX 5/16-3 35 10 10000094 BDLT,HEX 5/16-3 36 19 10000093 WASHER,FLAT 5/16-3 37 2 10000096 BDLT,HEX 1/2-1 38 4 10000033 WASHER,PLATN 1 39 2 10000096 BDLT,HEX 1/2-1 40 4 44010042 KEEPER,PLATE (41 1 60010131 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLEA	-10x13" 7/4"-10 UNC I CDLL 3/4-13 R ASSY MP-25 F FULLRAD-SPACER 0 UNC I" x2"LNG bx3 3/4" 6 GD5 -UNC x 1" LNG EEL 8 UNC 1" LDNG 18 GD2
23	8/4"-10 UNC I COLL 3/4-13 R ASSY MP-25 E FULLRAD-SPACER 0 UNC 1" x2"LNG 03x3 3/4" 6 GD5 -UNC x 1" LNG EEL 8 UNC 1" LDNG 18 GD2 16
24 2 10000089 WASHER SPLIT 25 1 60010133 ASSY,GRID HIDPP 26 1 60010132 ASSY,FRAME TUI 27 40 10000017 NUT,NYLDK 1/4- 28 84 1000009 WASHER,FLAT 1/ 29 23 10000082 BOLT,HEX 1/4-2 30 1 10000072 BOLT HEX 1/4-2 31 8 10000087 NUT,NYLDK 3/8- 32 8 10000095 BOLT,HEX 3/8-1 33 16 10000094 WASHER 3/8'S 34 10 10000094 BOLT HEX 5/16- 35 10 10000094 NUT,NYLDL 5/16 36 19 10000094 NUT,NYLDL 5/16 36 19 10000094 NUT,NYLDL 5/16 37 2 10000090 NUT,NYLDL 1/2- 38 4 10000033 WASHER,FLAT 5 37 2 10000096 BOLT,HEX 1/2-1 40 4 44010042 KEEPER,LATE 5 40 4 44010042 KEEPER,LATE CLE 41 1 60010126 ASSY,SHAFT CLE 42	I COLL 3/4-13 R ASSY MP-25 - FULLRAD-SPACER 0 UNC 1' *X2'LNG 0x3 3/4' 6 GD5 -UNC x 1' LNG EEL 8 UNC 1' LDNG 18 GD2 16
25 1 60010133 ASSY,GRID HDPP 26 1 60010132 ASSY,FRAME TUI 27 40 10000017 NUT,NYLDK 1/4- 28 84 10000009 WASHER,FLAT 1/ 29 23 10000082 BDLT,HEX 1/4-(2) 30 1 10000072 BDLT HEX 1/4-(2) 31 8 10000097 NUT,NYLDK 3/8- 32 8 10000095 BDLT,HEX 3/8-1 33 16 10000094 BDLT,HEX 3/8-1 34 10 10000094 BDLT HEX 5/16- 35 10 10000094 BDLT HEX 5/16- 35 10 10000094 NUT,NYLDC 5/16 36 19 10000093 WASHER,FLAT 5. 37 2 10000090 NUT,NYLDC 1/2- 38 4 10000033 WASHER,PLAT 1/2-1 39 2 10000096 BDLT,HEX 1/2-1 40 4 44010042 KEEPER,LATE (4) 41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLEA	R ASSY MP-25 T FULLRAD-SPACER 0 UNC 1' x2'LNG 1x3 3/4" 6 GD5 -UNC x 1' LNG EEL 8 UNC 1' LDNG 18 GD2
26 1 60010132 ASSY,FRAME TUI 27 40 10000017 NUT,NYLDIK 1/4- 28 84 10000009 WASHER,FLAT 1, 29 23 10000082 BDLT,HEX 1/4-2 30 1 10000072 BDLT HEX 1/4-2 31 8 10000087 NUT,NYLDIK 3/8- 32 8 10000095 BDLT,HEX 3/8-1 33 16 10000094 BDLT,HEX 3/8-1 34 10 10000094 BDLT HEX 5/16- 35 10 10000094 NUT,NYLDIC 5/16 36 19 10000093 WASHER,FLAT 5, 37 2 10000090 NUT,NYLDIC 1/2- 38 4 10000033 WASHER,PLAIN 1 39 2 10000096 BDLT,HEX 1/2-1 40 4 44010042 KEEPER,PLATE (41 1 60010131 ASSY,SHAFT CLE 42	FULLRAD-SPACER O UNC I' X2'LNG X3 3/4' 6 GD5 -UNC x 1' LNG EEL BUNC 1' LONG 18 GD2
27	0 UNC 1' x2'LNG by3 3/4' 6 GD5 -UNC x 1' LNG EEL 8 UNC 1' LDNG 18 GD2
28 84 1000009 WASHER,FLAT 1/29 23 10000082 BILT,HEX 1/4-2 30 1 10000072 BILT HEX 1/4-2 31 8 10000087 NUT,NYLDK 3/8- 32 8 10000095 BILT,HEX 3/8-1 33 16 10000094 BILT HEX 5/16- 35 10 10000094 BILT HEX 5/16- 35 10 10000092 NUT,NYLDC 5/16- 36 19 10000093 WASHER,FLAT 5 37 2 10000090 NUT,NYLDC 1/2- 38 4 10000033 WASHER,FLAT 5 39 2 10000096 BILT,HEX 1/2-1 40 4 44010042 KEEPER,LATE 6 41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLE/2	1" x2"LNG x3 3/4" 6 GD5 -UNC x 1" LNG EEL 8 UNC 1" LDNG 18 GD2
29 23 10000082 BDLT,HEX 1/4-2 30 1 10000072 BDLT HEX 1/4-3 31 8 10000087 NUT,NYLDK 3/8-3 32 8 10000095 BDLT,HEX 3/8-1 33 16 10000094 BDLT HEX 5/16-3 35 10 10000092 NUT,NYLDC 5/16 35 10 10000092 NUT,NYLDC 5/16 36 19 10000093 WASHER,FLAT 5 37 2 10000090 NUT,NYLDC 1/2-3 38 4 10000033 WASHER,PLAT 10 39 2 10000096 BDLT,HEX 1/2-1 40 4 44010042 KEEPER,LATE 6 41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLEA	x2"LNG)x3 3/4" 6 GD5 -UNC x 1" LNG EEL 8 UNC 1" LONG 18 GD2
30	0x3 3/4" 6 GD5 -UNC x 1" LNG EEL 8 UNC 1" LDNG 18 GD2
31 8 10000087 NUT,NYLDK 3/8-32 8 10000095 BDLT,HEX 3/8-13 33 16 10000044 WASHER 3/8' S 34 10 10000094 BDLT HEX 5/16-35 10 10000092 NUT,NYLDC 5/16 36 19 10000093 WASHER,FLAT 5 37 2 10000090 NUT,NYLDC 1/2-38 4 10000033 WASHER,FLAT 5 38 4 10000033 WASHER,PLAIN 1 39 2 10000096 BDLT,HEX 1/2-1 40 4 44010042 KEEPER,PLATE (41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLE7 42 1 60010131 ASSY,RACK CLE7 40 4 4001042	6 GD5 -UNC x 1" LNG EEL 8 UNC 1" LDNG 18 GD2 16
32 8 10000095 BDLT,HEX 3/8-1 33 16 10000044 WASHER 3/8" S 34 10 10000094 BDLT HEX 5/16- 35 10 10000094 BDLT HEX 5/16- 36 19 10000093 WASHER,FLAT 5 37 2 10000090 NUT,NYLDC 1/2- 38 4 10000033 WASHER,FLATN 1 39 2 10000096 BDLT,HEX 1/2-1 40 4 44010042 KEEPER,PLATE (41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLEA	-UNC x 1' LNG EEL
33 16 10000044 WASHER 3/8" S 34 10 10000094 BELT HEX 5/16- 35 10 10000092 NUT,NYLDC 5/16- 36 19 10000093 WASHER,FLAT 5 37 2 10000090 NUT,NYLDC 1/2- 38 4 10000033 WASHER,PLATN 1 39 2 10000096 BELT,HEX 1/2-1 40 4 44010042 KEEPER,LATE 6 41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLEA	EEL 18 UNC 1" LONG 18 GD2 16
34 10 1000094 Būlt HEX 5/16- 35 10 1000092 NUT,NYLIC 5/16- 36 19 1000093 WASHER,FLAT 5 37 2 10000090 NUT,NYLIC 1/2- 38 4 1000003 WASHER,PLAIN 1 39 2 10000096 Būlt,HEX 1/2-1 40 4 44010042 KEEPER,LATE (41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLE	18 UNC 1" LONG 18 GD2 16
35 10 1000092 NUT,NYLIC 5/16 36 19 1000093 WASHER,FLAT 5 37 2 1000090 NUT,NYLIC 1/2-38 4 1000033 WASHER,PLAIN 1 39 2 1000096 BILT,HEX 1/2-1 40 4 44010042 KEEPER,PLATE (18 GD2 16
36 19 1000093 WASHER,FLAT 5. 37 2 1000090 NUT,NYLDC 1/2- 38 4 10000033 WASHER,PLATN 1 39 2 10000096 BDLT,HEX 1/2-1 40 4 44010042 KEEPER,PLATE (41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLE	16
37 2 10000090 NUT,NYLDC 1/2- 38 4 10000033 WASHER,PLAIN 1 39 2 10000096 BDLT,HEX 1/2-1 40 4 44010042 KEEPER,PLATE (41 1 60010126 ASSY,SHAFT CLE 42 1 60010131 ASSY,RACK CLE	
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42 1 60010131 ASSY,RACK CLEA	RID HOPPER
	AN DUT-MP-25
1 42 1 10000070 DULT 1/4 20 2	
44 3 10000091 BDLT,HEX 1/4-2	
45 1 44010014 ADAPTER,MOTOR-	
46 1 44010013 SEAL, GREASE ME	
47 12 10000015 BDLT,HEX 1/4-2	
48 4 10000008 WASHER,SPLIT 1 49 2 44010275 LABEL,SIDE MP-	
49 2 44010275 LABEL,SIDE MP- 50 1 44010276 LABEL,END MP-	J D5
	8 UNC 1 1/4" LONG
52 4 10000069 WASHER,SPLIT 5	
53 2 40000009 GEKA STYLE FI	TING 3/4" MALE PIPE
54 1 40000011 GEKA STYLE HD	E END CAP
55 1 20000021 ASSY,CABLE MOT	
56 1 20000027 CORD POWER 50	T 4 0005
57 1 20000033 SDCKET,ALTEC 3	
58 1 20000049 REMOTE, WIRED-F	′D-25
59 1 30000029 COUPLER,35MM-0	AMLOCK-FMALE-1 1/2"
60 1 60010139 ASSY WATER HE	E-COMPLETE-MP-25
61 1 44010015 KEY,SPECIAL, DR	IVE DOG 35 DIA SHAFT
62 1 10000005 SCREW,SET 1/4-	
63 1 10000099 SCREW,SET 1/4-	
64 1 40000033 D-RING,0.139"×4.	
65 4 10000002 DDWEL, SEAL R	
66 2 10000086 PIN,LINCH 3/16>	
67 6 10000019 WASHER,AXLE 5	
	RESS - 35MM-MALE-600PSI
69 1 60010144 ASSY,FAN DUCT	
	V - 3PH 0.33kW
	1 1/2" LNG SCH 40
	COMPLETE MP-25
	TING 1" NPT FEMALE
	E TAIL 3/4" HOSE
	R-1" NPT-60/50MESH
76 1 44010287 BRACKET,HDSE M 77 4 10000023 BDLT, HEX 1/4-	
79 1 30000055 ELBOW 90- 1"NF	
80 1 60010063 ASSY,BAG BREAK	HOSE COMPLETE MP-25

Photographs of

30000039 D8-1.5 STATOR-ADJ-GREEN-INTCLAMP

30000040 D8-1.5 ROTOR



30000041 D6-3 STATOR-FIXED-ORANGE

30000042 D6-3 ROTOR



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30000043 D4-3 STATOR-FIXED-GREEN

30000044 D4-3 ROTOR



30000045 R8-1.5 STATOR-ADJ-BLACK-INTCLAMP\

30000046 R8-1.5 ROTOR



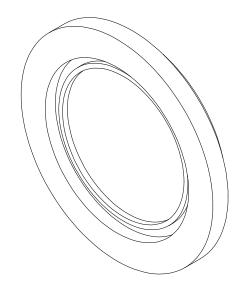
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Pump adapters

44010257- ADAPTER, PUMP 90MM-MP-25

(to suit "D" series rotors and stators)

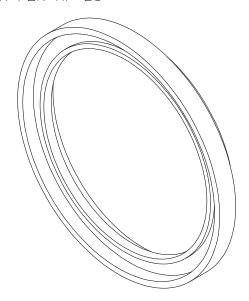
"D" PUMP ADAPTER FOR MP-25



44010258 - ADAPTER,PUMP 113.5MM-MP-25

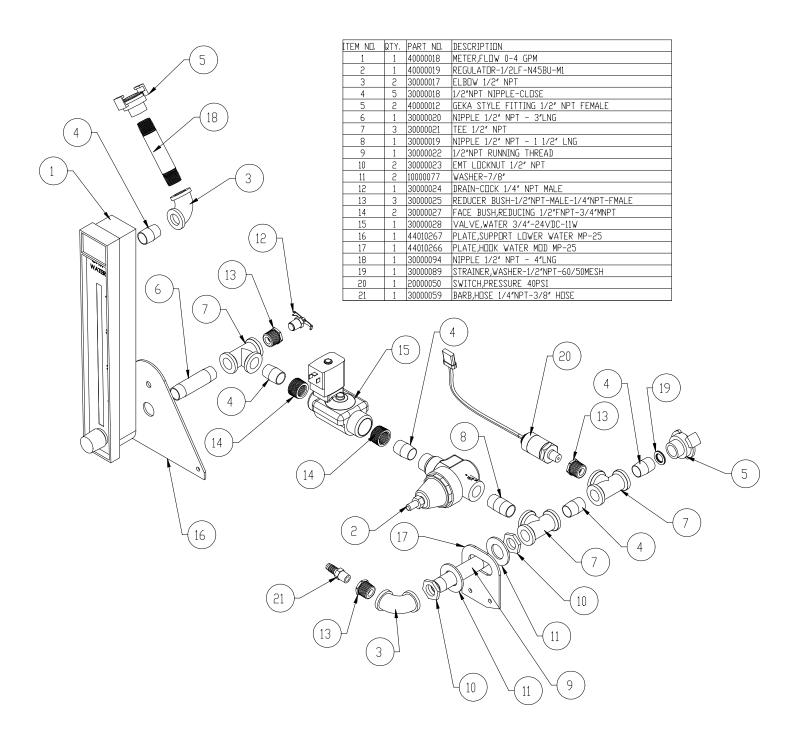
(to suit "R" series rotors and stators)

"R" PUMP ADAPTER FOR MP-25

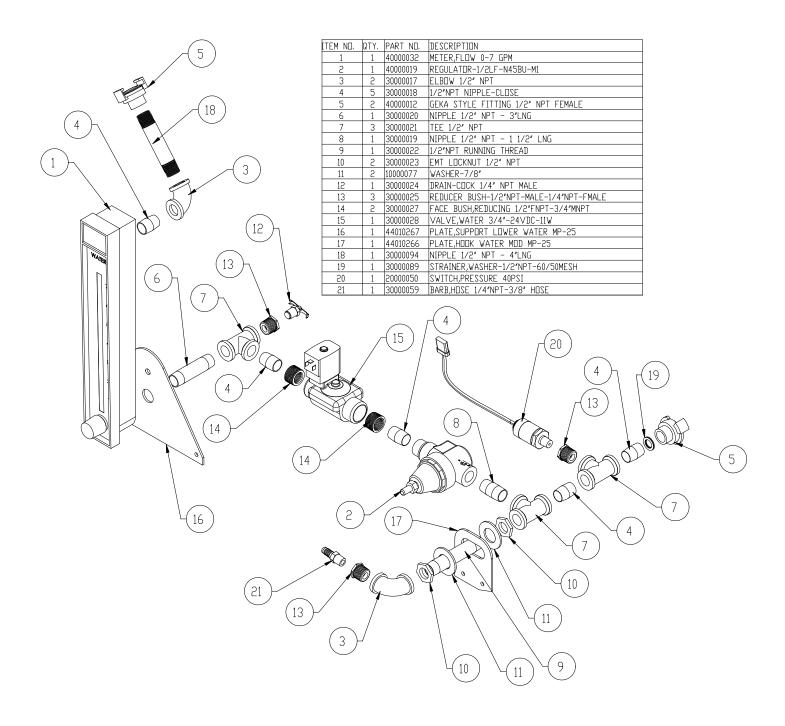


Water plate assemblies

60010136 ASSY,WATER CONTROL MP-25-4GPM

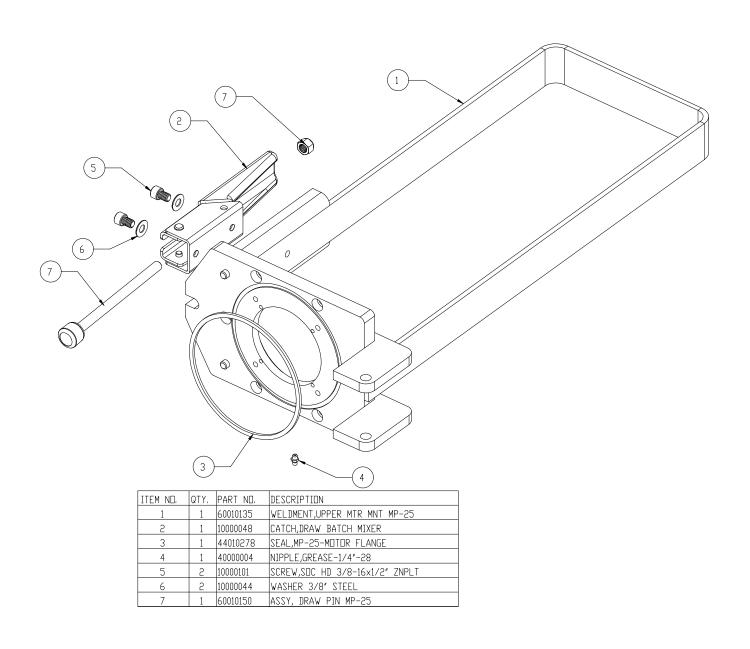


60010142 ASSY,WATER CONTROL MP-25-7GPM



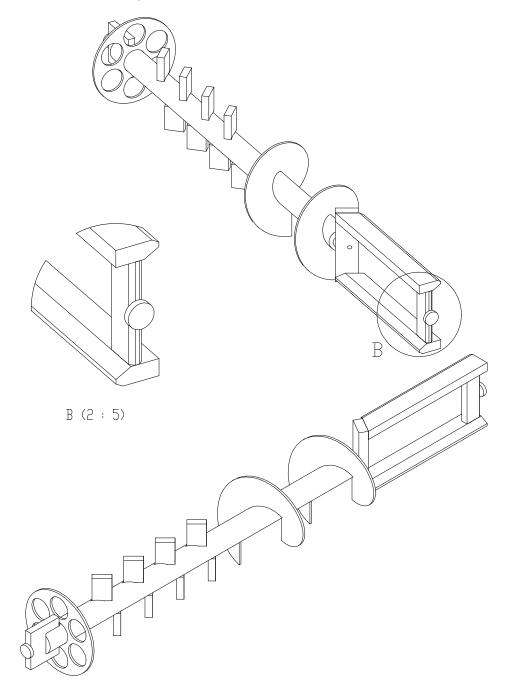
Motor mount

60010134 ASSY,UPPER MTR MNT MP-25

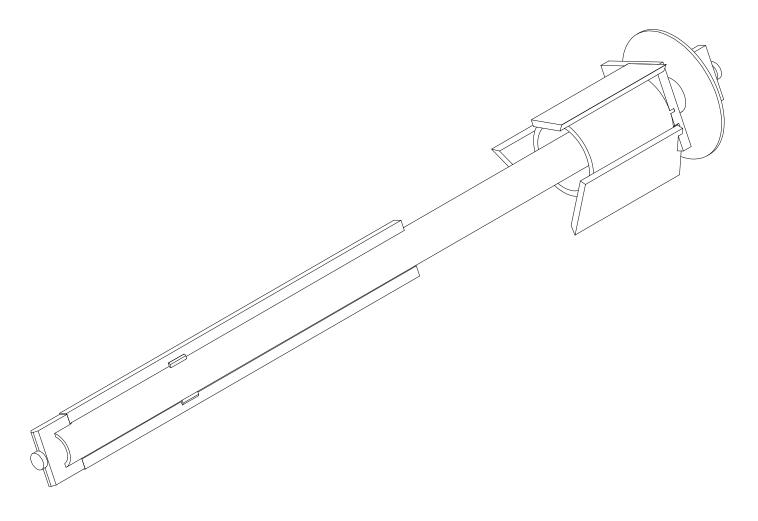


Mixing shaft complete, and clean out shaft complete

60010125 ASSY, DRIVE/MIX SHAFT MP-25

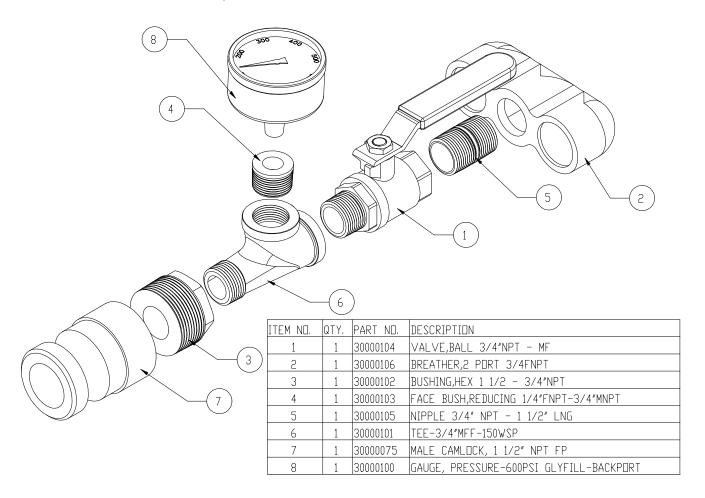


60010126 ASSY, SHAFT CLEAN OUT-MP-25

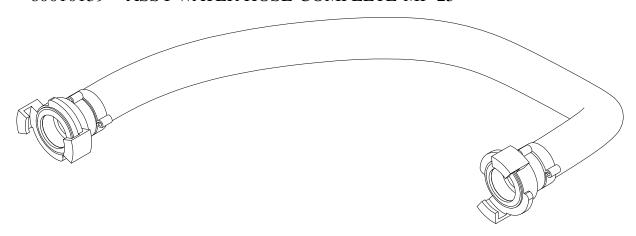


Water pressure tester, water hoses and fan duct

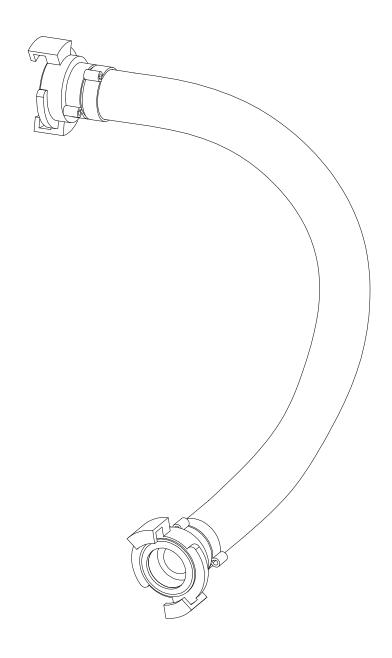
60010140 TESTER, WATER PRESS - 35MM-MALE-600PSI



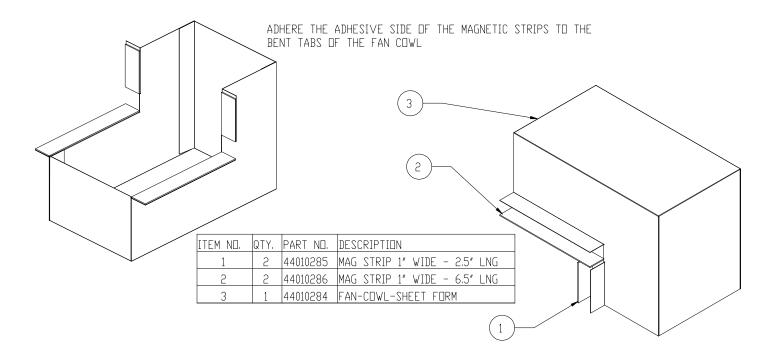
60010139 ASSY WATER HOSE-COMPLETE-MP-25



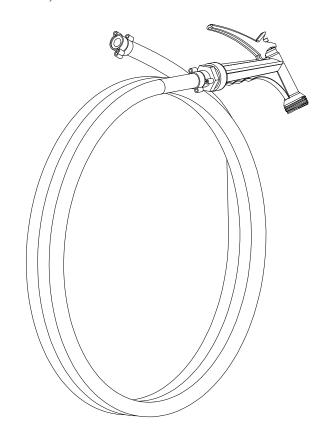
60010147 ASSY,PUMP HOSE COMPLETE MP-25



60010144 ASSY,FAN DUCT MP-25

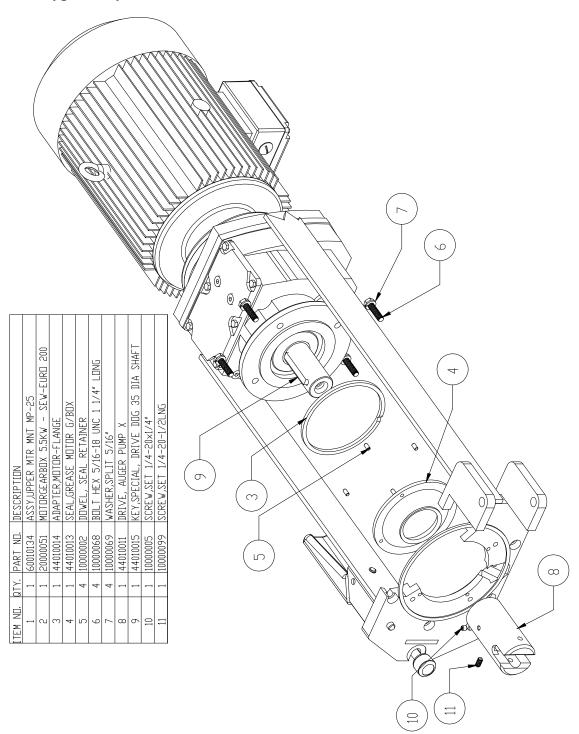


60010148 ASSY,WASHDOWN HOSE COMPLETE MP-25



Electric Drive unit

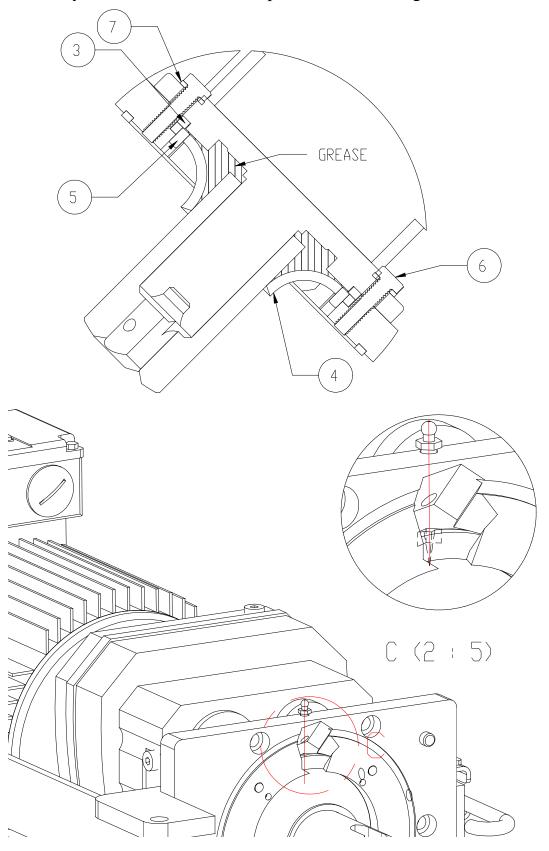
Typical layout – 7.5HP (5.5kW) shown



Note 5.3 HP (4kW) Single phase unit uses an additional spacer between motor flange and item 3, due to a longer shaft length. Item 6 are then $1\frac{1}{2}$ long. – see page 8

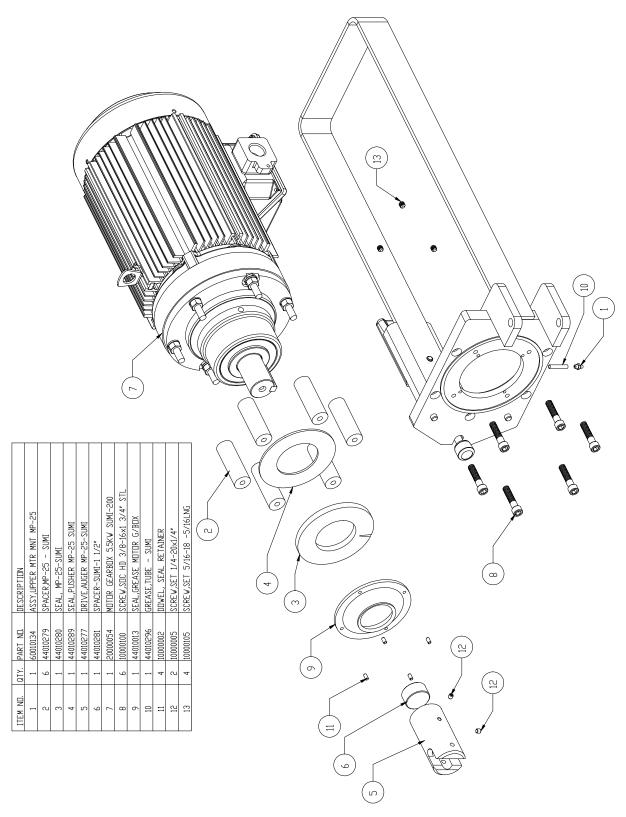
Shown in cutaway view of upper motor mount. Unit must be greased on a daily / job-by-job basis.

Cutaway view of seal, dowel, adapter and shaft arrangement



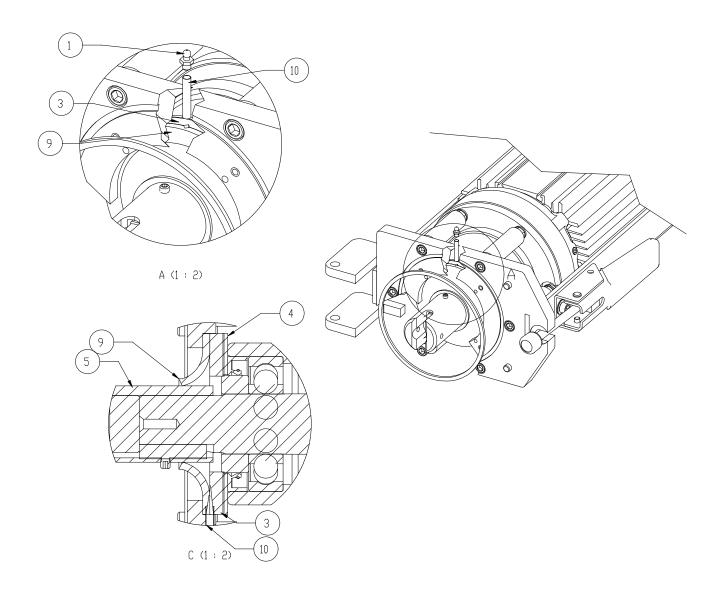
Showing relationship between grooves in adaptor and seal, to allow grease to flow

Alternate motor fitment and seal configuration.



Shown in exploded view of upper motor mount. Unit must be greased on a daily / job-by-job basis.

Cutaway view of Grease seal, Sumi seal, seal pusher, and grease tube



Pay particular attention to the alignment of the grooves in the seals and the grease tube.

Unit must be greased on a job by job basis.

Electronic Drive module – 20000046 / 47

Function

The drive module takes the input power via an isolator and breakers and supplies to the drive motor via an adjustable frequency phase inverter. Prior to the power being provided to the motor various addition functions have to be completed, such as water pressure signal, and remote present / by-passed. The module runs at full speed after a 2 second acceleration period at an operator selected speed chosen from three preconfigured options, when the "Start" button is pressed either on the panel or on the remote. The unit decelerates to zero RPM following the "stop" button being pressed on either the panel or the remote.

Whenever the reverse switch is actuated, the unit will turn in reverse, either from stationary or from a forward running condition after decelerating to rest. Upon the unit turning in reverse, the water solenoid is de-energized, until forward motion is reselected.

Important note.

The control module is resistant to water splashes, ONLY when the fan cowl is fitted. Failure to keep the cowl in place allows water splashed under the machine top cover to enter into the box allowing contact with the internal electrical components and causing damage.

After each use and subsequent clean down, the module must be disconnected from the electrical supply, opened and the inside inspected for debris and / or water ingress. ALL water and debris must be removed immediately, using wipe cloths then compressed air.

The electronic Drive module comprises of a variable speed frequency inverter, allowing the use of 208 / 220VAC two phase, on 60010120, or 208 / 220VAC 3PH on the other models to run the high torque 3 Phase gear motor. The inverter unit is rated at 7.5 HP providing plenty of power to run the MP-25 unit.

The module is supplied with an input plug allowing immediate wiring into your own 220VAC 2 phase or 3 Phase (as applicable depending up on the model) supply (Must be carried out by an approved installer). The motor is supplied with a pre-wired plug that fits into the 3 Phase outlet of the drive module.

The module has a main power isolator, a combined stop / start switch, a spring loaded reverse switch, a speed control (three speed positions), a series of indicator lights, an inverter drive, internal breakers for each input phase, a water pump motor contactor, a water pressure switch relay, and a large capacity cooling fan, with removable shroud and filter enclosure, in addition to the fan fitted to the inverter, a water pump connection socket, a water pressure switch socket and a water solenoid socket, a remote socket providing the optional capability for remote operation.

Single-phase drive module

The Single-phase drive module, in addition to the previously mentioned items is equipped with an inverter error signal light, which illuminates if the inverter goes into overload for example.

The three phase unit has a phase reversal switch on the front panel in place of the inverter error indicator on the single-phase unit, allowing the rotation change of the water pump motor only. Main machine motor direction is set at the factory, but should changes be required, phase swap should be carried out at the motor plug NOT the input phases.

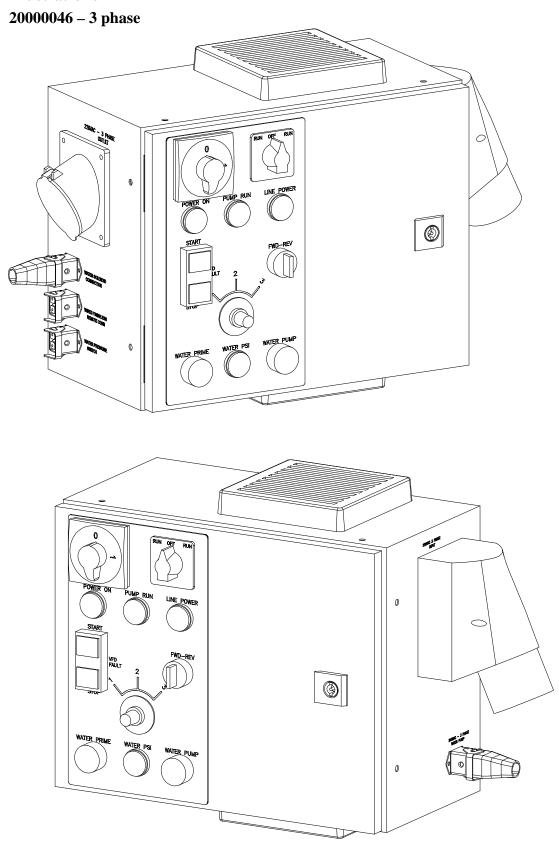
Fixed to the sides of the control module are a series of polarized plugs, each is color coded to suit the mating socket.

Each machine is equipped with a water pump, used as a booster pump to help ensure consistent water pressure, and as such the unit will not run unless the water pressure switch is closed. For maintenance the water pressure switch can be over ridden using the supplied "dummy" plug, attached to the side of the module.

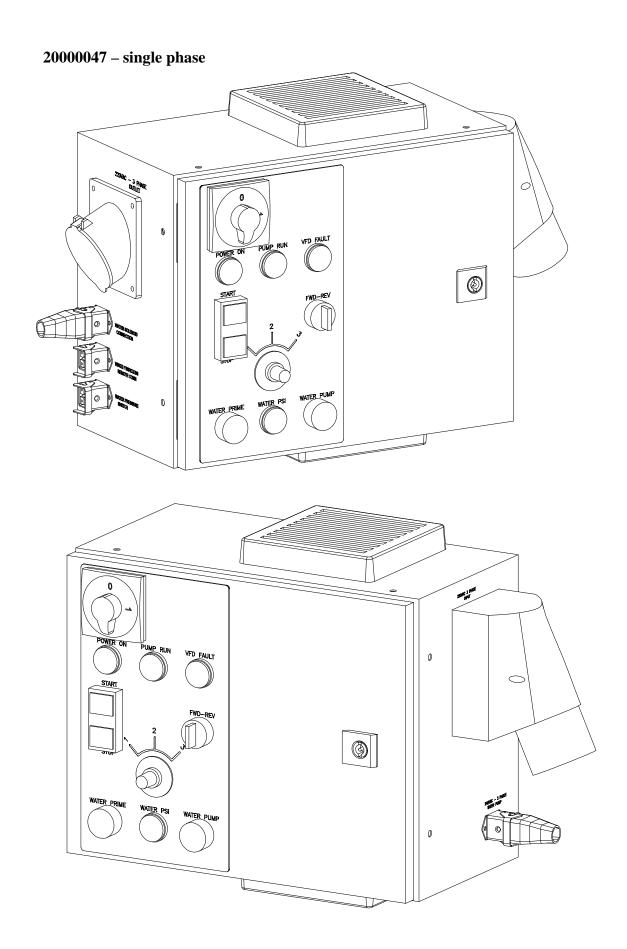
Each machine is equipped with a water supply module which is operated by a signal from the control module to open and close a solenoid valve which starts and stops the water flow

Each machine is supplied with a wired remote pendant, allowing the operation of the machine from up to 10 feet from the connection. The remote provides stop / start functionality only. The machine will NOT run without either the remote being attached, or the remote "dummy" plug being attached, the "dummy" plug is attached to the side of the module and color coded similarly to the water pressure "dummy" plug

Illustrations

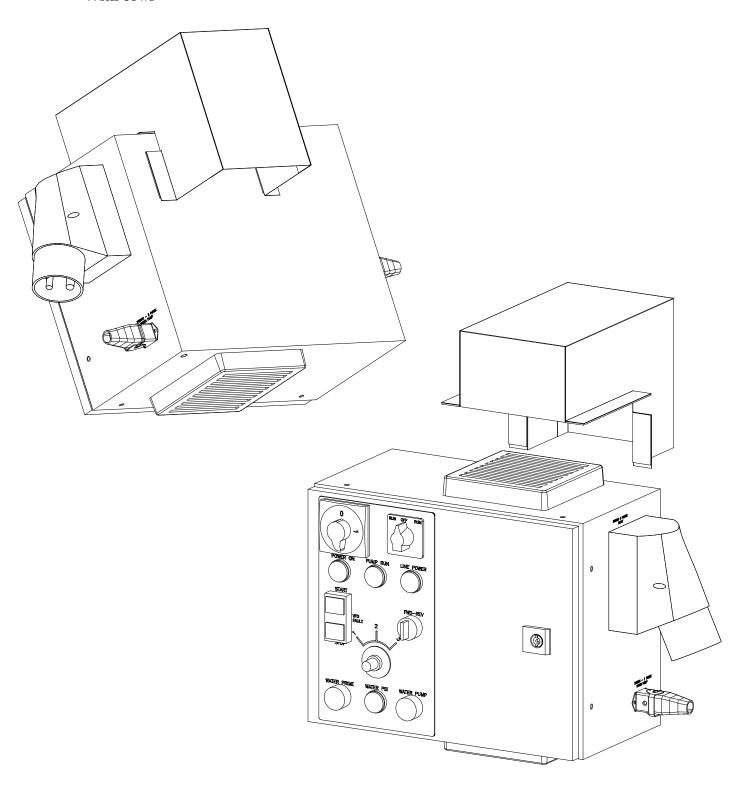


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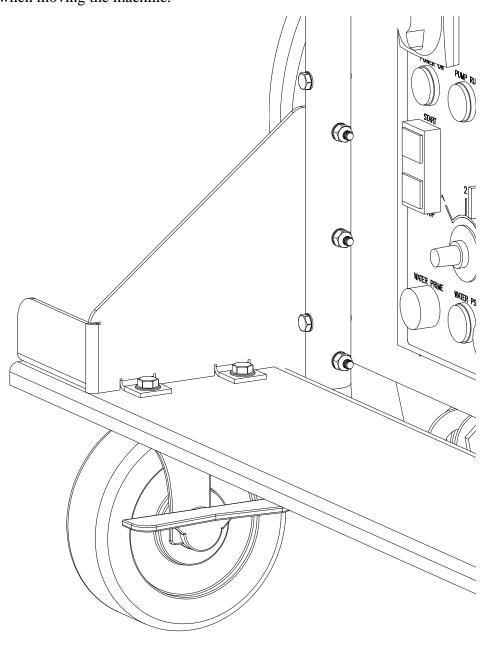
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With cowl

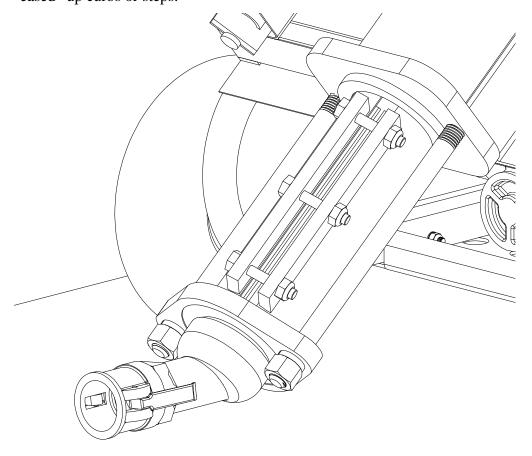


Section 3 – Transportation and positioning

The machine is typically manually transported around the job site using the two swivel casters at the rear of the machine to steer, with the larger wheels at the front. The machine can be picked up using a forklift, by simply inserting the forks under the base from the rear, and ensuring that they are close enough together to prevent damage to the casters. Each caster has a locking lever, which, when in the horizontal position the brake is OFF, and when angled in either direction are locked. Ensure that the locks are OFF when moving the machine.



Care must be taken when transporting the machine due to the minimal clearance between the output connector of the pump and the ground. As the unit is "pushed" the pump connector is the furthermost point of the machine and thus prone to damage from impact with objects in front of the machine or from the ground itself. The machine must be "eased" up curbs or steps.



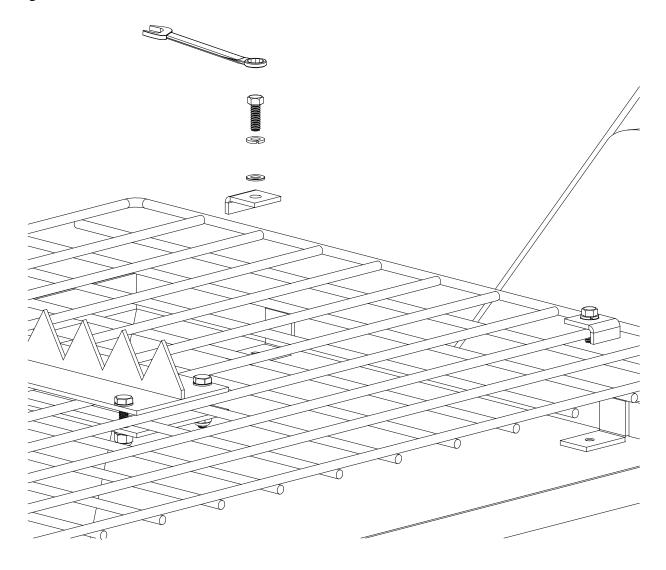
Once the machine has been positioned then the locks on the rear swivel casters should be set.

Pay consideration to water source, power and material locations when setting the machine in position. The site must be flat and level to ensure that the machine operates from a horizontal position.

Section 4 – Machine set up

Unpacking

Remove the safety grid from the top of the machine by removing the 4 bolts, clips and washers, using the provided 7/16" AF wrench. Keep all parts to be used to replace the grid later.

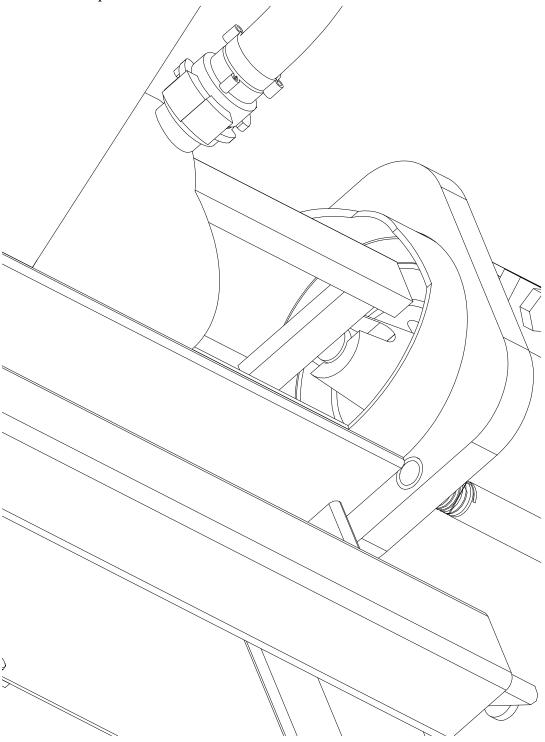


Remove all items from the hopper, excluding the mixing shaft, but including the pressure tester, the power cord and socket assembly, the Quality check sheet and user manual, and the wired remote. Check that the hopper inside is clear of all items except for the mixing shaft..

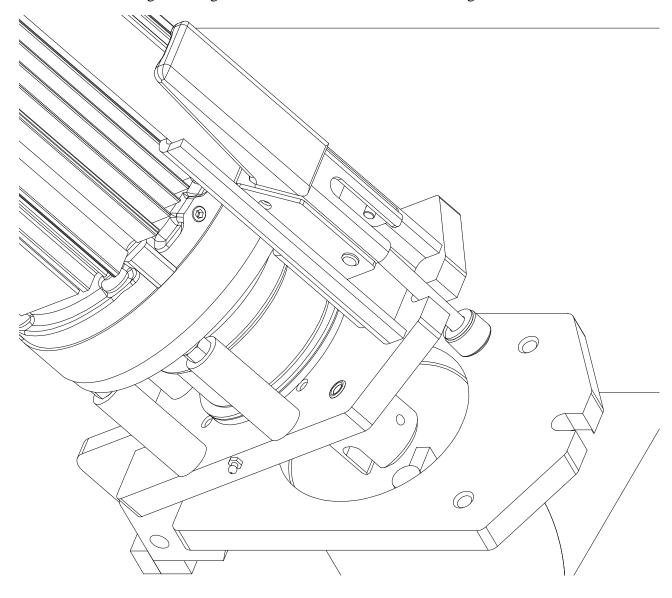
Consult the final inspection record supplied in the packaging for details of your machine and the items checked prior to shipment. Keep this document for your records.

Machine assembly

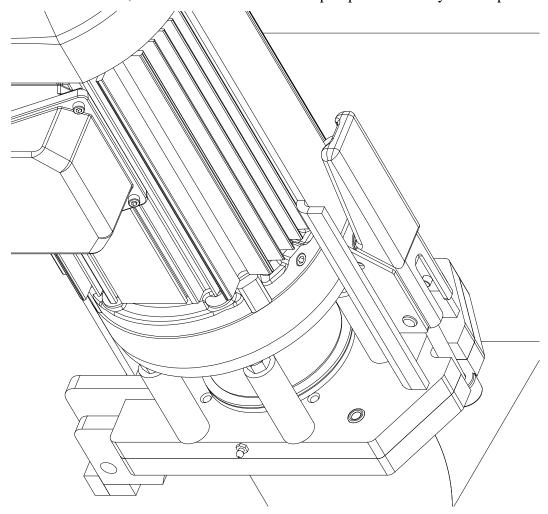
Ensure that the drive shaft is fully engaged in the rotor at the pumping end of the machine. It is essential that the round center guide be in the pilot hole of the rotor and that the lower spar be in the slot.



Rotate the motor output shaft and auger drive by hand, or a suitable lever until the flat end of the mixing shaft aligns with the slot in the end of the hauling bracket on the motor.



swing the motor assembly into position, checking that the shaft assembles into the slot in the auger drive, and that the location dowels on the motor assembly locate into the pilot holes in the hopper assembly. It maybe necessary to swing with some momentum to enable full closure, if the either the motor or the pump have recently moved position.



Note: the drive shaft will likely become tight between the two drive slots during static assembly. Once the unit has been running, the compressive force will be reduced or eliminated to within working limits. During pumping the compression will be present, during reverse the compression will be relieved.

If full closure cannot be achieved with reasonable force, then replace the safety grid with all fasteners in place and the clamp held shut as far as possible, then briefly "jog" the motor using the stop start switch and the water pressure bypass fitted, and the motor assembly will close to fully shut.

Important

Replace the safety grid back onto the top of the hopper and secure using the 4 clips, bolts and washers. Operation of this machinery without the grid in place is prohibited.

Electrical connections.

To be carried out by a licensed / qualified electrician.

- 1. Ensure that there are no power connections to the Electronic drive module.
- 2. Site the machine within 50 feet of the power source.
- 3. Obtain the power cord (supplied with the machine) 3 core for single-phase 220VAC and 4 core for 3 phase. The power source must be 208 -240VAC, and capable of supplying 30A Min on each leg / phase. 45-60A is the recommended level to avoid nuisance tripping at high loads. Turn the breakers OFF in the power source distribution box, and remove them from the bus bars to ensure that no voltage exists on the cables.
- 4. Make the connection between the power cord and the main distribution box, using the supplied electric cord with plug and your power source. Ensure that the Earth is connected.
- 5. Connect the plug to the machine, and ensure that the drive module rotary isolator switch is turned OFF.
- 6. Replace the breakers into the distribution box, onto the bus bar and turn them ON.
- 7. Turn the machine's drive module isolator to ON, and listen for the cooling fan to turn on, and the "system power" light to illuminate. (when using the 3-phase machine, the water pump may run in the reverse direction changing the position of the "run off run" switch, which reverses the phases. Pump direction is shown on the front casting, clockwise looking from the fan end, but a flow increase through the water indicates correct rotation)

Pre-run setting and test

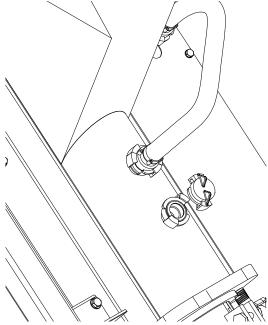
The following must be conducted by a supervisor or a qualified individual experienced in electro-mechanical equipment.

Ensure that there are no persons close to the machine.

Ensure that there are no obstructions in or around the machine.

Turn the speed selection knob to speed 1.

- 8. Attach a suitable water feed hose to the machine using the "Geka" style hose tail supplied, and turn the water on at the spigot.
- 9. Press the "water prime" button for a couple of seconds, to expel air from the hosepipe and to allow some water into the mixing chamber of the machine. (The lower plug can be removed and be used as a "level". Once water flow from the lower port, the prime button should be released and the port plug replaced.



- 10. Press the START button and observe the machine to turn the drive shaft and in turn the pump unit. PRESS THE STOP button,
- 11. Turn the direction switch from FWD to REV, and hold in position, as it is spring returned, to prevent excessive reverse running.
- 12. Press the start button and observe the machine to turn the drive shaft and in turn the pump unit, in reverse. PRESS THE STOP button within 5 seconds, or damage will result to the pump unit.

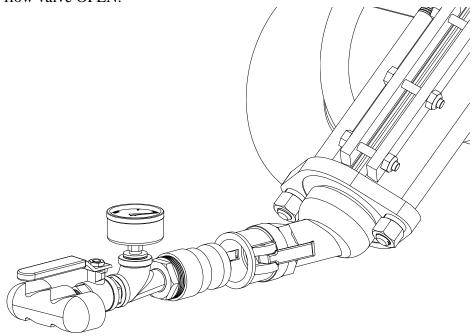
Note It maybe necessary to try reverse prior to forwards as this often take less power than forwards when initially breaking free a rotor unit.

13. The machine is now ready for use, by trained and qualified operators.

Section 5 – Machine operation / stator pressure setting

The following are to be completed by trained and experienced persons, familiar with the pumping system provided.

1. Connect the pressure tester to the output coupler on the end of the pump unit, with its flow valve OPEN.



- 2. Fill, up to the lower mixing chamber port of the MP-25 hopper with water using the prime button, and also set the flow meter flow to suit the your material. For this pressure calibration only add a couple of squirts of a suitable lubricant, such as dish soap.
- 3. Connect the pressure switch to the drive module.
- 4. Turn the water pump on by pressing the water pump button
- 5. Turn on the machine in the FWD direction and observe fluid to be displaced from the pump through the pressure tester.
- 6. Increase the speed of the machine to your chosen setting, and slowly close the valve on the pressure tester, and observe the pressure to increase. Adjust, if necessary, the clamping force on the stator to achieve your chosen pumping pressure. Too much pressure will wear out your stator prematurely, too little will not give you your optimum output for the RPM chosen.

Keep the pump run time to a minimum during pressure setting to maintain the life of the stator.

- 7. Once the pressure has been set by adjusting, evenly, the bolts, stop the machine, open the pressure tester valve fully, and disconnect from the coupler.
- 8. Turn OFF the water pump.

NEVER allow the water pump to operate with no flow for more than 5 minutes as the water can become overheated and provide a hazard and or damage to the pump.

Ideal set up method, to be amended to suit your actual application.

The rotor stator pump is a positive displacement, progressive cavity pump, the positive displacement aspect being controlled by the clamping tension on the stator.

- 1. Adjust the stator to have minimal tension.
- 2. Place the desired length of hose on the pump unit, and elevate, if required to suit your actual discharge height, complete with any output device fitted.
- 3. Set your water flow rate to the recommended reading
- 4. Start the machine at your chosen speed with just water and a small amount of dish soap running through the machine.
- 5. Measure the flow of output at the discharge point
- 6. Progressively and evenly tighten the clamp on the stator until no more output is achieved.
- 7. Stop the machine.
- 8. Remove the output hose, and connect the pressure tester
- 9. Turn on the machine, close the pressure tester valve and note the pressure. This is the pressure you require to set the rotor stator to, to pump at your required rate.

Note. Actual material will typically produce higher pressures and lower flow rates, and will require some experimentation, but this method will provide a good approximation

Excessive clamping force just generates more heat more wear, higher energy consumption and a high potential damage in the event of a plugged hose, blockage or other emergency.

General notes for operation

- Grease auger drive seal daily, with water resistant, corrosion inhibiting grease.
- For starting the pump, Ensure that the speed control is at selection 1.
- Turn main power switch on.
- Prime the mixing chamber with water.
- Start the water pump.
- Push start button, and prime the hoses and wet out the system while setting the water flow rate.
- Adjust speed to desired output.
- To stop machine push the stop button.
- If a hose plugs while pumping, reverse the direction on pump to relieve line pressure.
- Never point hose towards personnel when pump is working.
- Stop and clean the machine every 2 hours until experience is gained with your material.
- When cleaning the pump, do not remove grate while pump is running. Wash out hopper with water and let it run out of the hose. When the hopper and mixing chamber is clean, run foam balls through hose with clean water. Do not spray water on or in control box. Control box should be wiped down with a damp rag. Remove the mixing shaft and clean off ALL material
- If access is required in to the hopper, disconnect power source before removing grate. Motor can be "swung" out of the way, this facilitates easier final clean up.
- Mixing Pump is supplied with an adjustable stator. The sleeve can be tightened to bring working pressure back to normal range as the stator wears down. This should be done in small increments. Over tightening the stator will cause premature wear and heat up material.
- Always check hoses and cords for wear.
- If excessive material is allowed to build up the output of the machine will decrease, if cleaning with water does not remove all material from with the mixing chamber, then the clean out shaft should be employed. (See simple maintenance)
- The unit runs on high voltage and is capable of high pressures in the hoses.
- NEVER spray water under the machine under the fan shroud, or water will enter the drive module and damage the components is side

Section 6 – Simple maintenance

The MP-25 mixing pump unit is very simple to maintain.

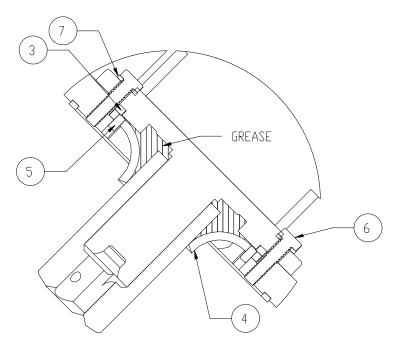
By far the biggest part of maintenance of the MP-25 machine is cleaning during and after a job. Failure to clean properly after use will damage seals, paint, and moving parts due to material build up causing wear.

Pay particular attention, when cleaning, to the material build up inside the mixing tube, around and on the mixing shaft. Pay attention to the seal around the auger drive / hauling bracket fixed to the drive shaft at the rear of the machine.

DO NOT spray water inside the fan shroud or direct the jet towards the shroud or water can get into the drive module and damage electrical parts.

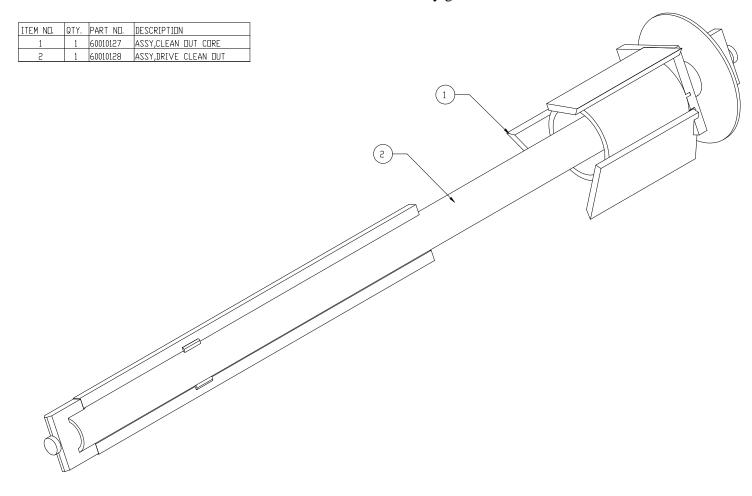
Prior each clean down, the drive module should be disconnected from the power. After each clean down the drive module should be opened, and ANY moisture or debris removed with a soft towel then compressed air. DO NOT blow the water or debris into the components.

Ensure that the seal between the hauling bracket and the motor is greased each day, with a water resistant, corrosion inhibiting grease. Grease until a small amount of grease can be seen "oozing" from around the hauling bracket. If there is grease in the seal then material cannot get in!



Clean out shaft - using

- 1. The clean out shaft should only be used in the event that normal cleaning practices do not remove all the material from the job.
- 2. The clean out shaft can cause significant damage if used incorrectly.
- 3. The clean out shaft is designed to be used on fresh material, that cannot be removed using normal wash down and manual means.
- 4. The clean out shaft will become damaged if trying to clean out fully cured and hardened material.
- 5. The clean out shaft is to be turned at the lowest speed, with plenty of running water, as any debris created will be passed through the stator and the water will minimize any damage.
- 6. The clean out shaft is loaded into the machine in the same manner as the mixing shaft. While the shaft is turning the cutter head will self-feed into the mixing chamber cleaning material form the sides as it descends. It will automatically stop feeding when it reaches the end of its travel, limited by two areas of weld on the shaft.
- 7. Do not use the clean out shaft without the safety grid fitted.



Section 7 – Notes on wear of rotor stator pump unit

Wear issues

Dry running of a rotor-stator pump

A screw pump can only work reliably if there is adequate and appropriate lubrication. The lubricant produces sliding friction between the rotor and the stator. If this lubricating film is damaged, high temperatures are reached and the elastomer wears within a very short time. Even if dry running lasts only a few seconds with new parts, the effect resembles that of a wheel spin on a car tire, dramatically affecting length of service.



LIMITED WARRANTY POLICY

Machine Technologies warrants each of its new machines to be free of defects in material and workmanship under normal use and services for a period of one (1) year from the date of delivery.

The warranty is issued ONLY to the INITIAL USER. The warranty period begins when the product is delivered to the initial user or when first put into service, whichever occurs first. Said warranty is void if the machine is subject to misuse, neglect, accident or abuse.

Machine Technologies' obligation under this warranty is limited to correcting without charge, at its warehouse, any parts or parts thereof which shall be returned to its warehouse, transportation/shipping prepaid and upon Machine Technologies' examination proves to have been originally defective. Correction of such defects by repair or replacement shall constitute fulfillment of all obligations to the initial user. This warranty does not include labor or transportation charges unless specifically identified and authorized in writing by Machine Technologies. Nor does the warranty apply to any unit upon which repairs or unauthorized alterations have been made.

The warranty does not apply to normal maintenance service or to normal replacement of certain machine parts which are subject to normal wear (including but not limited to pins, bushings, rotors, stators, hoses, spray caps, spray nozzles, mixing shafts, shaft couplings and connectors, dosing shafts, pump shafts, filter elements and tires).

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