



MODELS: M 100T, M 106T, M 100S/T, M 106S/T,
M 120T, M 126T

**OPERATING INSTRUCTIONS, INSTALLATION & MAINTENANCE
MANUAL INCLUDING SPARE PARTS LIST**



Mody Pumps Inc.

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LIFE IS PRECIOUS - THINK SAFETY

1. Most accidents can be avoided by using COMMON SENSE.
2. Please read the operation and maintenance instruction manual supplied with the pump. If you did not receive one, please call your local distributor before pump installation.
3. Do not wear loose apparel that may become entangled in the impeller or other moving parts.
4. Always use appropriate safety equipment, such as safety glasses, when working on the pump or piping.
5. Pumps build up heat and pressure during operation-allow time for pumps to cool before handling or servicing.
6. Only qualified service personnel should install, operate and repair pump.
7. Keep clear of suction and discharge openings. DO NOT insert fingers in pump with power connected.
8. Do not pump flammable or hazardous materials (gasoline, acids, alkalis, etc.)
9. Do not block or restrict discharge hose, as it may whip or burst catastrophically under pressure.
10. Make sure lifting handles/hooks are securely fastened each time before lifting.
11. Do not lift pump by the power cord under any circumstances.
12. Do not exceed manufacturer's recommendation for optimum performance, as this could cause the motor/pump to overheat and lead to premature wear or failure.
13. Secure the pump in its operating position so it does not tip over, fall or slide.
14. Keep away from impeller when power is connected.
15. Submersible Pumps are not approved for use in swimming pools, recreational water installations, decorative fountains or any installation where human contact with the pumped fluid is common.
16. Do not operate pump without adequate protection and safety devices in place.
17. Always replace safety devices that have been removed during service or repair.
18. To reduce risk of electrical shock, pump must be properly grounded in accordance with the National Electric Code and all applicable state and local codes and ordinances.
19. To reduce risk of electrical shock, always disconnect the pump from the power source before handling or servicing.
20. Any wiring of pumps should be performed by a qualified electrician.
21. Never operate a pump with a power cord that has frayed or brittle insulation.
22. Cable should be protected at all times to avoid punctures, cuts, and abrasions - inspect frequently.
23. Never handle connected - "hot" power cords with wet hands.
24. Never operate a pump with a plug-in type power cord without a ground fault circuit interrupter, adequate overload and short circuit protection.

IMPORTANT !!! MODY Pumps Inc. is not responsible for losses, injury, or death resulting from a failure to observe these safety precautions, misuse or abuse of pumps or equipment.

WARNING !!!



Many Single Phase Pumps Must be Run Using a Capacitor Pump Panel.

Wiring Schematic is Attached.

Run Capacitor (Rc): 35mfd, 370-440v. MARS # 12243

Start Capacitor (Sc): 215-259mfd, 220-250v. Mars # 11052

**Potential Relay 130v: 111-134v pickup, 15-40v Dropout. MARS # 19550
OR**

Potential Relay 332v: 244-270v pickup, 40-90v Dropout. MARS # 19551

Warranty is void if pump is operated without suitable Control Panel.

**DO NOT CONNECT POWER SUPPLY TO
PUMP DIRECTLY**

INTRODUCTION

THE *“mody”* MOTOR DRIVEN PORTABLE SUBMERSIBLE PUMPS HAVE BEEN DEVELOPED DUE TO A LONG FELT NEED OF HAVING A TRULY MAINTENANCE FREE PUMPSET FOR VARIOUS APPLICATIONS. THE PUMP IS A LIGHTWEIGHT, COMPACT UNIT ENABLING IT TO BE USED IN MOST SEA-CRAFT AND DIFFICULT LAND INSTALLATIONS. THE UNIT CONSISTS OF A VERTICAL CENTRIFUGAL PUMP WITH AN IN-BUILT SQUIRREL CAGE, INDUCTION ELECTRIC MOTOR WHICH IS AVAILABLE FOR VARIOUS ELECTRIC SUPPLY CONFIGURATIONS. THE PUMPED WATER IS USED AS A COOLING MEDIUM WHICH COOLS THE ELECTRIC MOTOR. THE PUMPSET CAN ALSO BE USED IN ANY POSITION THUS MAKING IT IDEAL FOR DEWATERING IN DIFFICULT LOCATIONS.

THE SERVICE LIFE OF A SUBMERSIBLE PUMP DEPENDS MAINLY ON TWO THINGS: THE DEPENDABILITY OF THE SEALING SYSTEM AND THE WEAR RESISTANCE OF THE PUMP WEAR PARTS.

ALL *“mody”* SUBMERSIBLE SUMP PUMPS INCORPORATE A UNIQUE SEALING SYSTEM. THE CONSTRUCTION CONSISTS OF TWO MECHANICAL SEALS, ARRANGED IN TANDEM, IMMERSSED IN AN OIL BATH. THE COMPLETE PACKAGE IS A PRESSURE COMPENSATED SEALING DEVICE WHICH ENSURES A MINIMAL PRESSURE DIFFERENTIAL ACROSS THE SEAL FACES, IRRESPECTIVE OF THE DEPTH SETTING OF THE PUMP OR THE HEAD AGAINST WHICH THE PUMP IS OPERATING.

IN *“mody”* SUBMERSIBLE SUMP PUMPS, ALL WEAR PARTS ARE RUBBER LINED/COVERED AND ARE READILY REPLACEABLE AS NEEDED. BOTH WEAR AND ELECTRICITY CONSUMPTION ARE STILL FURTHER REDUCED WHEN THE PUMPS ARE FITTED WITH BUILT-IN LEVEL CONTROLS FOR AUTOMATIC STARTING AND STOPPING. **IT IS HOWEVER RECOMMENDED THAT IRRESPECTIVE OF TYPE OF PUMP, ADEQUATE MOTOR PROTECTION SWITCHGEAR SHOULD BE USED AT THE INSTALLATION. WE STRONGLY RECOMMEND THE USE OF SUITABLE CONTROL PANELS WHICH ARE AVAILABLE FROM US INCORPORATING ALL REQUIRED PROTECTION DEVICES.**

IT IS IN THE INTEREST OF THE USER THAT HE GO THROUGH THIS MANUAL IN DETAIL PRIOR TO USING THE PUMP. THE MANUAL WILL HELP HIM UNDERSTAND THE CONSTRUCTIONAL FEATURES AND TO OBTAIN TROUBLE FREE SERVICE FROM THE PUMP.

PURPOSE:

THE PUMP HAS BASICALLY BEEN DESIGNED AS A DEWATERING UNIT TO PUMP OUT FLOODED INSTALLATIONS OR ANY CONDITIONS THAT NEED DEWATERING OF UNWANTED FLUIDS. THE PUMP HAS BEEN DESIGNED TO HANDLE WATER CONTAMINATED WITH OIL AS WELL AS ABRASIVE PARTICLES NORMALLY ASSOCIATED WITH RAW WATER. THE MAXIMUM SIZE OF PARTICLES THAT CAN BE HANDLED IS APPROX. 0.4". **THE MAXIMUM SPECIFIC GRAVITY OF THE PUMPED FLUID SHOULD NOT EXCEED 1.1.**

TECHNICAL DATA

MOTOR

2-POLE SQUIRREL-CAGE AC MOTOR FOR 3-PHASE OR SINGLE PHASE ELECTRIC SUPPLY. MOTOR RATED 1.3 HP (M100T/M100S/T) AND 2 HP (M120T/M126T) ROTATING AT 3450 RPM (APPROX.) AT 60 HZ SUPPLY.

PUMP TYPE	HP	VOLTS	PHASE	HZ	F.L.AMPS	WEIGHT
M-100T	1.3	230/460	3	50/60	4/2	30 Lb.
M-106T	1.5	230/460	3	60	4/2	30 Lb.
M-100S/T	1.3	115/230	1	50/60	19/9	36 Lb.
M-106S/T	1.5	115/230	1	60	19/9	36 Lb.
M-120T	2.0	230/460	3	50/60	3.4	36 Lb.
M-126T	2.0	230/460	3	60	3.4	36 Lb.

CABLE

3 PHASE UNIT 50 Feet 14/4 SOOW CABLE.
1 PHASE UNIT 50 Feet 12/4 SOOW CABLE.

6 CORE CABLE AVAILABLE FOR THERMALS

DISCHARGE OUTLET

2" SS NPT. HOSE/BSPT TYPE OUTLET CAN BE SUPPLIED ON REQUEST.

MATERIALS

PUMP/MOTOR HOUSING	EPOXY COATED ALUMINUM EXTRUSIONS
IMPELLER	410SS NITRIDE HARDENED STAINLESS STEEL
RUBBER PARTS	NITRILE RUBBER
STRAINER	STAINLESS STEEL
HARDWARE	STAINLESS STEEL

SAFETY PRECAUTIONS:

1. ENSURE THAT THE INSULATION RESISTANCE OF THE MOTOR IS AT LEAST 1 MEG. OHM BEFORE ENERGIZING THE UNIT.
2. CHECK THAT THE AVAILABLE POWER SUPPLY (VOLTAGE, PHASE, FREQUENCY) MATCHES WITH THE DETAILS ON THE PUMP NAMEPLATE.
3. ENSURE THAT THE GROUND WIRE IN THE 4 CORE CABLE SUPPLIED WITH THE PUMP IS SECURELY EARTHED.
4. ENSURE DISCHARGE CONNECTION IS CORRECTLY AND SECURELY FITTED
5. ENSURE DELIVERY HOSE IS FREE FROM KINKS AND SHARP BENDS.
6. **DO NOT LIFT OR PULL THE PUMP UNDER ANY CIRCUMSTANCES BY MEANS OF THE CABLE.** THE PUMP MUST BE LOWERED/LIFTED FROM THE SPACE TO BE PUMPED BY USING A LIFTING ROPE ATTACHED TO THE HANDLE/EYEBOLT PROVIDED IN THE PUMP.
7. AT THE STARTING MOMENT THE PUMP SHALL MAKE A KICK WHICH IS OPPOSITE TO THE DIRECTION OF ROTATION OF THE IMPELLER. ENSURE THE KICK IS IN THE CORRECT DIRECTION (SEE THE ARROW ON THE PUMP). SHIFT ANY TWO PHASES IN THE MALE PLUG IF THE KICK IS WRONG. SINGLE PHASE UNITS THE DIRECTION OF ROTATION IS PRE-SET AT THE FACTORY.
8. DRY RUNNING OF THE PUMP IS NOT DESIRABLE. HOWEVER THE PUMP WILL NOT BE DAMAGED OR SUFFER ANY ILL EFFECTS IF IT IS RUN DRY FOR SHORT PERIODS (UPTO APPROX. 30 MINUTES).
9. THE MAXIMUM PUMP SUBMERGENCE RECOMMENDED IS 50 FEET.
10. **THE MAXIMUM SPECIFIC GRAVITY OF PUMPED FLUID SHOULD NOT EXCEED 1.1.** PUMP IS DESIGNED TO OPERATE IN FLUIDS WITH pH from 5 - 8.
11. **IF PUMP IS NOT USED AND LYING IN STORAGE FOR MORE THAN 30 DAYS PLEASE ENSURE THAT THE SEAL FACES ARE NOT GAUGE LOCKED - ROTATE THE IMPELLER/KICK START THE UNIT ONCE A MONTH. REFER TO INSTRUCTIONS ON DISASSEMBLY/REASSEMBLY OF MECH. SEALS IN THE EVENT THE FACES HAVE LOCKED.**
12. ENSURE CORRECT OVERLOAD BREAKERS ARE INSTALLED IN POWER CIRCUIT BEFORE STARTING THE PUMP. (REFER TO AMP RATING ON NAMEPLATE).

FAULT FINDING IN THE UNIT.

TROUBLE GUIDE	CAUSE	REMEDY
<u>PUMP DOES NOT START.</u>	1.FUSES BLOWN. 2.CABLE DAMAGED 3.NO POWER. 4.BLOCKED IMPELLER. 6.STATOR WINDING BURNT.	1.REPLACE FUSES 2.SHORTEN/REPLACE CABLE 3.CHECK POWER SUPPLY. 4.CLEAN BOTTOM PARTS. 6.REPLACE STATOR/REWIND
<u>PUMP STARTS BUT STOPS.</u>	1.BLOCKED IMPELLER. 2.IMPELLER ROT.WRONG 3.CONNECTED FOR WRONG VOLTAGE. 4.VOLTAGE LOW/HIGH 5.CLOGGED STRAINER 6.PUMP RUNNING DRY 7.WATER TOO WARM (ABOVE 60 DEGREES C)	1.CLEAN BOTTOM PARTS. 2.SHIFT TWO PHASE CONN. 3.CHECK & RECONNECT. 4.CONTACT POWER CO. 5.CLEAN STRAINER 6.SWITCH OFF POWER 7.SWITCH OFF POWER
<u>PUMP GIVES TOO LITTLE OUTPUT</u>	1.IMPELLER ROT.BACKWARD. 2.PUMP WORN DOWN. 3.LONG HOSE AND DIAMETER TOO SMALL. 4.PRESSURE HEAD TOO HIGH 5.DISCHARGE HOSE TORN 6.LEAKING/CRACKED OUTLET	1.SHIFT TWO PHASE CONN. 2.REPLACE WEAR PARTS 3.CHECK PRESSURE LOSSES 4.USE PUMPS IN TANDEM. 5.USE NEW HOSE 6.REPL.OUTLET/GASKET.

OVERLOAD PROTECTION.

IT IS ESSENTIAL THAT A STARTER BE USED WHEN OPERATING THE PUMP. CHOOSE THE CORRECT RATING OF STARTER AS PER THE NAME PLATE OF THE PUMP. THE OVERLOAD SETTING ON THE STARTER RELAY SHOULD BE SET TO THE FULL LOAD CURRENT OF THE PUMP AS INDICATED ON THE NAME PLATE. FOR SINGLE PHASE PUMPS A PANEL BOARD IS NECESSARY.

SPECIAL CONTROL BOXES SUITABLE FOR THE PUMP ARE AVAILABLE WITH US INCORPORATING ALL PROTECTIONS NECESSARY.

LUBRICATION.

NO ROUTINE MAINTENANCE OR LUBRICATION IS NECESSARY. THE BEARINGS ARE GREASE LUBRICATED AND SEALED FOR LIFE. THE MECHANICAL SEAL AND OIL SEAL RUN IN AN OIL BATH. NO TOPPING UP IS NECESSARY BUT THE CONDITION OF THE OIL SHOULD BE CHECKED ONCE IN SIX MONTHS. THIS IS BY FAR THE EASIEST WAY TO ASCERTAIN THE INTEGRITY OF THE SEAL FACES. (REFER OVERHAUL INSTRUCTIONS)

GENERAL OVERHAUL(REFER DRG. DWE/005/00-SHEET 1&2)

THE PUMP SHOULD BE OVERHAULED EVERY ONE YEAR (APPROX. 2500 WORKING HOURS) UNDER NORMAL WORKING CONDITIONS. IF THE WATER BEING PUMPED CONTAINS A HIGH PERCENTAGE OF SLUDGE AND ABRASIVES IT IS ADVISABLE TO DO THE OVERHAUL EVERY SIX/EIGHT MONTHS (APROX. 2000 HRS). THE OVERHAUL INCLUDES REPLACEMENT OF SHAFT SEALS, WEAR COMPONENTS, CHECKING THE ELECTRICAL SYSTEM, AND GENERAL INSPECTION OF WEAR AND OTHER PARTS.

DISMANTLING (REFER DRG. DWE/005/00-- SHEET 1 & 2).

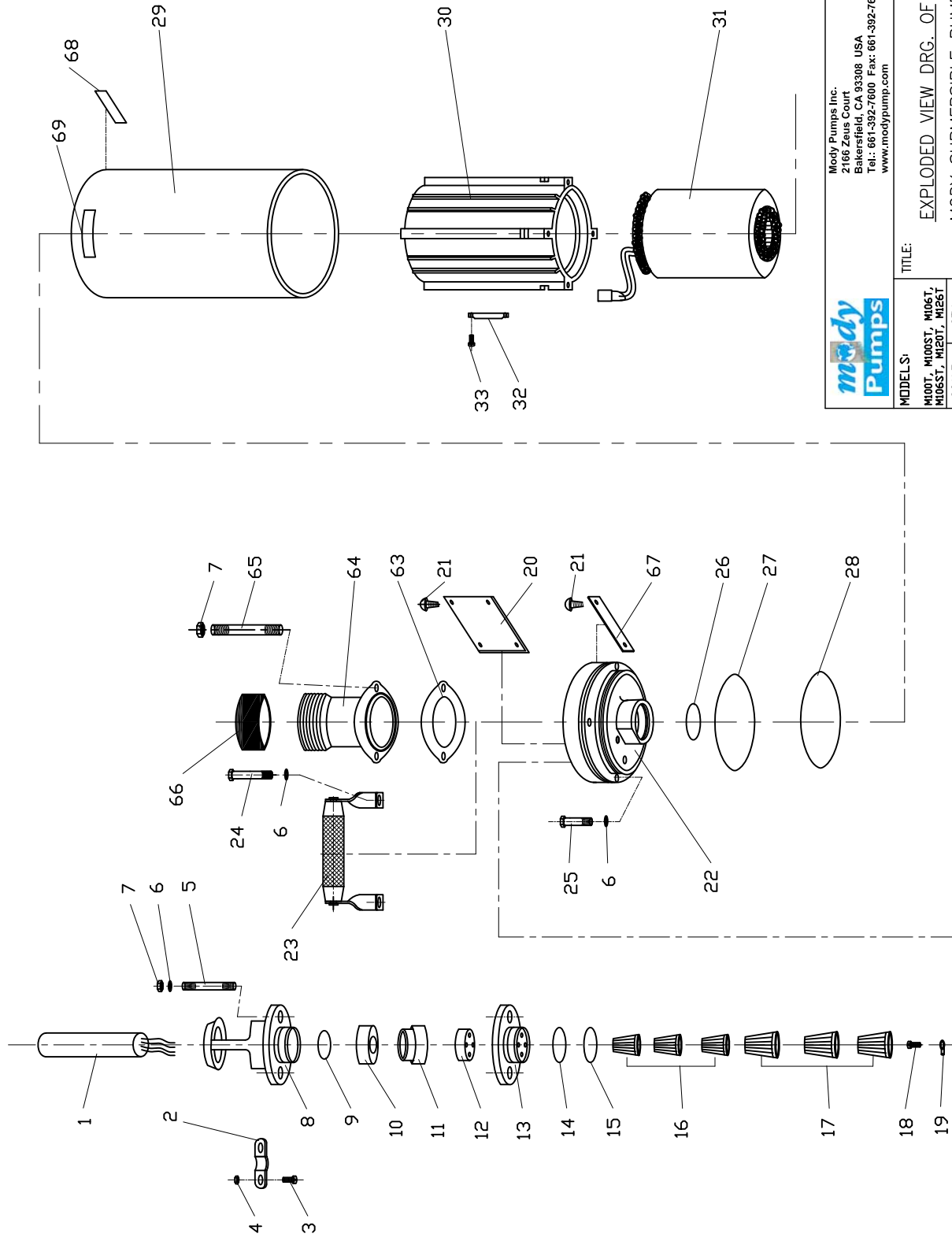
- BACK OFF THE TWO DISCHARGE OUTLET NUTS (7) AND LIFT OFF THE OUTLET (64). PUT ASIDE THE OUTLET GASKET (63).
- BACK OFF FOUR NOS. NUTS AND WASHERS(6,7) AND REMOVE THE STRAINER (62).
- BACK OFF FOUR NOS. NUTS (7) FROM THE STUD BOLT ASSY. (54) HOLDING THE DIFFUSER (61) AND REMOVE THE DIFFUSER.
- PULL OUT OUTER CASING (29) AND KEEP ASIDE.
- LOCK IMPELLER (58) BY MEANS OF IMPELLER LOCKING SPANNER (TOOL NO.T7001) TO PREVENT ROTATION AND UNSCREW IMPELLER NUT (60). REMOVE LOCK WASHER (59) AND SLIDE IMPELLER OFF SHAFT. THE RUBBER SLINGER WILL COME OFF WITH THE IMPELLER. (IF TOOL IS NOT AVAILABLE, YOU MAY USE A GOOD STRONG SCREWDRIVER FOR LOCKING THE IMPELLER)
- REMOVE IMPELLER KEY (56) AND REMOVE TRIMMING SPACERS (55) AND KEEP ASIDE.
- UNSCREW FOUR NOS. STUD BOLT ASSEMBLY (54) AND REMOVE WEAR PLATE (53).
- UNSCREW THE PHILLIPS SCREWS (52) HOLDING THE SAND GUARD (51) FROM SEAL HOUSING (47).
- UNSCREW OIL PLUG (41) AND REMOVE "O" RING (40) FROM CAVITY. DRAIN OUT THE OIL FROM THE OIL CHAMBER. THE CHAMBER CONTAINS APPROX. 150 ML OF OIL. CHECK IF THE OIL IS EMULSIFIED. IF SO, THE MECHANICAL SEAL IS WORN OUT AND NEEDS TO BE REPLACED. IF NO EMULSIFICATION HAS TAKEN PLACE THE MECHANICAL SEAL IS O.K. AND THE OIL CAN BE RE-USED.
- REMOVE CAP FOR CIRCLIP (50), CIRCLIP (45) AND SLIDE OUT COMPLETE MECHANICAL SEAL FROM THE ROTOR SHAFT. BE VERY CAREFUL WITH THE RUBBER BELLOWS AND THE TUNGSTEN CARBIDE SEAL FACE. LEAVE THE TUNGSTEN CARBIDE SEAT IN THE HOUSING UNLESS IT IS TO BE REPLACED.
- BY MEANS OF TWO SCREWDRIVERS LEVER OUT THE SEAL HOUSING FROM THE LOWER BEARING BRACKET (38)
- THE COMPLETE ROTOR WITH THE LOWER BEARING BRACKET AND BEARING CAN BE PULLED OUT OF THE STATOR CASING. USE TWO SCREWDRIVERS BETWEEN THE LOWER BEARING BRACKET AND THE STATOR CASING (30) AND PULL OUT THE COMPLETE ASSEMBLY.
- REMOVE CIRCLIP (45), AND TAKE OFF UPPER SEAL CAREFULLY.
- UNSCREW HEX. BOLT (39) AND LOOSEN BEARING COVER (36). THE ROTOR COMPLETE WITH LOWER BEARING (37), CAN BE REMOVED FROM THE LOWER BEARING BRACKET. THE STATIONARY MECHANICAL SEAL SEAT WILL REMAIN IN THE LOWER BEARING BRACKET. THE LOWER BEARING CAN NOW BE PRESSED OUT IF IT NEEDS TO BE REPLACED. EXAMINE UPPER BEARING FOR RADIAL OR AXIAL PLAY AND REPLACE IF NECESSARY.
- IF STATOR CHECKS OUT O.K. ELECTRICALLY AND THE CABLE IS O.K. DO NOT REMOVE THE TOP BRACKET FROM THE STATOR CASING. IF STATOR IS TO BE REWOUND THEN IT IS ESSENTIAL TO DISMANTLE GLAND ASSEMBLY.
- UNSCREW NUTS (4) AND REMOVE CABLE CLAMP (2). UNSCREW NUTS (7) AND PRY OFF CABLE GLAND (8). THE CABLE GROMMET (10) WILL COME OUT WITH THE GLAND. ALWAYS REPLACE CABLE GROMMET. REMOVE GLAND SPACER (11) AND PRY OUT CABLE GLAND BASE (13). REMOVE LEAD GROMMET (12) AND REPLACE. LOOSEN CABLE WIRES SO THAT ENOUGH SLACK EXISTS SO THAT THE TOP BRACKET CAN BE DISASSEMBLED.
- UNSCREW BOLTS (24) AND REMOVE HANDLE (23). THE TOP BRACKET (22) CAN BE REMOVED BY INSERTING TWO SCREWDRIVERS BETWEEN THE TOP BRACKET AND THE OUTER CASING AND PRYING THE SAME OUT OR TAPPING THE OUTLET WITH A RUBBER Mallet. DISCARD "O" RINGS.

RE-ASSEMBLY(REFER DRG. NO. DW/005/00-- SHEET 1 & 2).

- THE REVERSE OF LAST TWO STEPS (OF THE DIS-ASSEMBLY PROCEDURE) CAN BE FOLLOWED FOR ASSEMBLY OF THE TOP BRACKET AND THE GLAND ASSEMBLY. REMEMBER TO FIT "O" RING (26) IN THE TOP BRACKET.
- FIT THE TOP BEARING ON THE ROTOR.
- SLIDE BEARING COVER (36) ON ROTOR SHAFT AND FIT LOWER BEARING ON ROTOR BY MEANS OF A HAND PRESS OR ANY OTHER SUITABLE METHOD.
- FIT MECHANICAL SEAL (44) ON ROTOR SHAFT AND LOCK THE ABOVE BY MEANS OF CIRCLIP (45).
- FIT LOWER BEARING BRACKET (47) ON LOWER BEARING ALIGNING THE TAPPED HOLES WITH THE HOLES IN THE BEARING COVER. FIT HEX BOLTS (39) AND TIGHTEN BEARING COVER AGAINST BEARING.
- THE COMPLETE ROTOR ASSEMBLY WITH THE LOWER BEARING BRACKET CAN NOW BE INSERTED INTO THE STATOR CASING. REMEMBER TO FIT THE "O" RING IN THE LOWER BEARING BRACKET BEFORE FITTING IN STATOR. ALIGN HOLES IN LOWER BEARING BRACKET WITH THE TAPPED HOLES IN THE STATOR CASING.
- FIT "O" RING IN SEAL HOUSING. FIT TUNGSTEN CARBIDE SEAL SEAT WITH SEAT CUP IN SEAL HOUSING AND PRESS HOME. ENSURE THE SEAT IS FITTING SQUARE IN CAVITY. FIT SEAL HOUSING IN LOWER BEARING BRACKET. ALIGN HOLES IN SEAL HOUSING WITH HOLES IN LOWER BEARING BRACKET.
- LIGHTLY OIL THE TUNGSTEN CARBIDE SEAT AND SLIDE MECHANICAL SEAL ON SHAFT. BE CAREFUL NOT TO DAMAGE THE BELLWS OF THE SEAL. FIT CIRCLIP ON SHAFT AND LOCK THE SEAL. FIT SAND GUARD IN SEAL HOUSING.
- FIT WEAR PLATE IN RECESS OF SEAL HOUSING. FIT 4 STUD BOLTS (54) THROUGH THE HOLES IN THE LOWER BEARING BRACKET AND SEAL HOUSING AND SCREW THE SAME IN THE STATOR CASING. THE NUT (WELDED) WILL SEAT IN THE RECESS OF THE WEAR PLATE.
- FIT RUBBER SLINGER (57) ON IMPELLER HUB.
- SLIDE IMPELLER ON SHAFT AND ADJUST CLEARANCE BETWEEN THE IMPELLER AND WEAR PLATE BY MEANS OF THE TRIMMING SPACERS. THE IMPELLER SHOULD RUN FREE OF THE WEAR PLATE. PLACE THE LOCK WASHER AGAINST THE IMPELLER GUIDING THE TONGUE OF THE WASHER INTO THE IMPELLER KEYWAY. LOCK THE IMPELLER BY MEANS OF THE LOCKNUT (60) AND BEND THE WASHER OVER THE FLAT OF THE NUT.
- SLIDE THE OUTER CASING OVER THE WEAR PLATE AND LOWER BEARING BRACKET TILL IT SITS AGAINST THE RECESS GUIDE OF THE TOP BRACKET. ENSURE THE "O" RING IS FITTED IN THE TOP BRACKET BEFORE FITTING THE OUTER CASING.
- FIT THE DIFFUSER (61) THROUGH THE STUD BOLTS AND TIGHTEN AGAINST THE OUTER CASING BY MEANS OF THE NUTS (7). SEE THAT THE IMPELLER RUNS FREELY AND THE CLEARANCE BETWEEN THE DIFFUSER AND THE IMPELLER IS MINIMUM. IF ADJUSTMENT IS NECESSARY, THIS CAN BE DONE BY INCREASING THE TRIMMING SPACERS.
- PUT THE STRAINER ON THE STUD BOLTS AND TIGHTEN BY MEANS OF NUTS.
- MAKE THE ELECTRICAL CONNECTIONS AS REQUIRED AND THE EARTHING CONNECTION. FIT THE CABLE GLAND AND GLAND LOCK AND CLAMP THE CABLE. FIT THE OUTLET GASKET AND THE OUTLET (63). (ALWAYS REPLACE THE RUBBER PARTS OF THE CABLE GLAND ASSEMBLY --- DO NOT USE OLD RUBBER PARTS.)

RECOMMENDED SPARES FOR TWO YEARS OPERATION

<u>SR. NO.</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>	<u>RECOMMENDED QTY.</u>
1.	MECHANICAL SEAL	535-032-00	4 NOS.
2.	"O" RING SET	375-100-66	2 SETS.
3.	CABLE GROMMET	260-034-66	2 NOS.
4.	CABLE LEAD GROMMET	260-016-66	2 NOS.
5.	UPPER BEARING	020-002-07	1 NO.
6.	LOWER BEARING	020-004-07	1 NO.
7.	IMPELLER (M100 60Hz)	300-060-22	1 NO.
8.	DIFFUSER	155-015-80	1 NO.
9.	WEAR PLATE	715-001-22	1 NO.
10.	LOCK WASHER	695-006-21	2 NOS.
11.	SLINGER	590-003-66	2 NOS.



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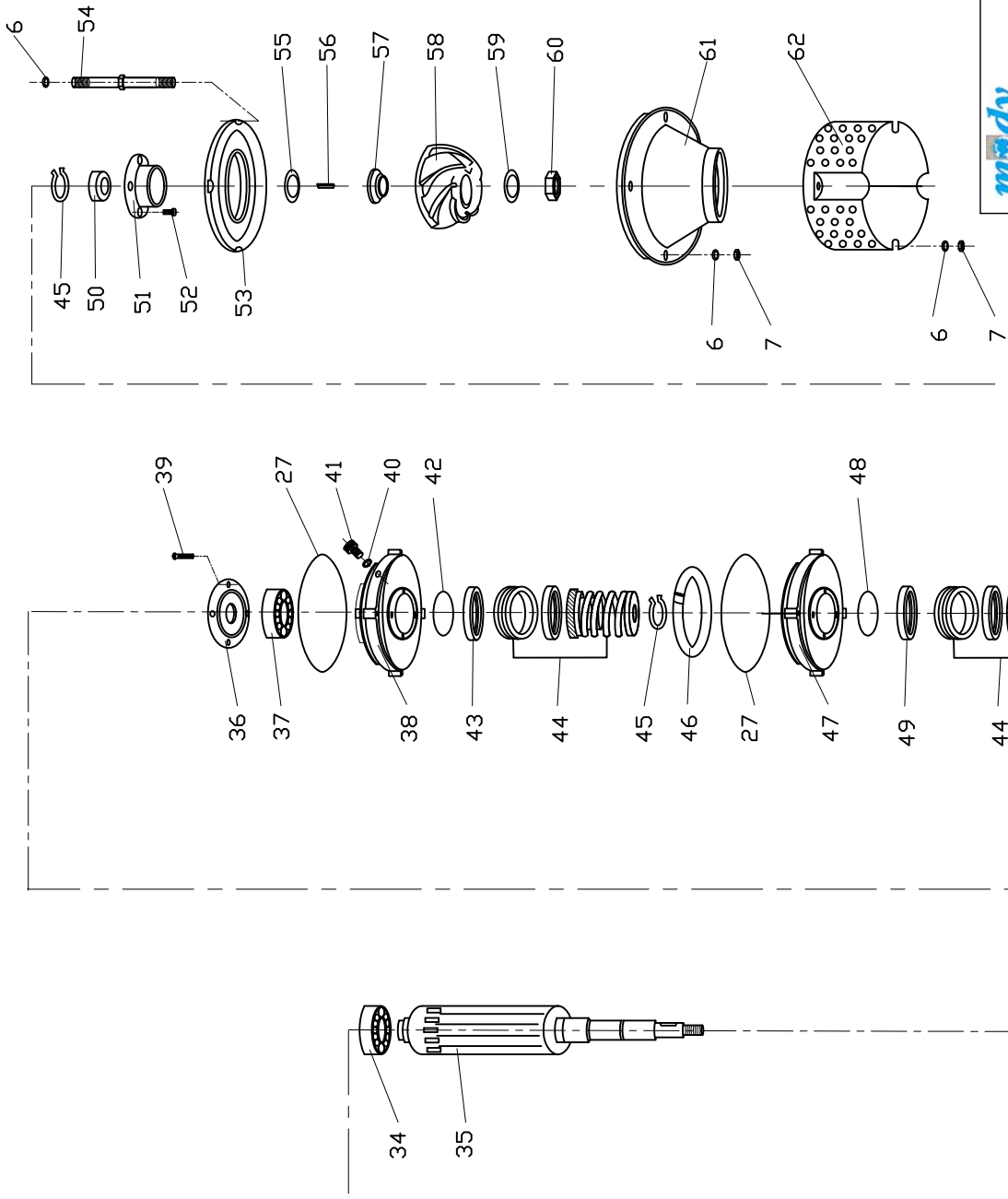
DRN.	NAME	DATE
CKD.	BALAJI	21/11/07
APPD.		

TITLE:

EXPLODED VIEW DRG. OF
MODY SUBMERSIBLE PUMPS

MODELS:	QTY.	1NO.
M100T, M100ST, M105T, M105ST, M120T, M125T		
SCALE		
NTS		

CODE No.	REV.
DWE\005\00	0



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TITLE:

EXPLODED VIEW DRG. OF
MODY SUBMERSIBLE PUMPS

MODEL S:	QTY.	1NO.
M100T, M100ST, M106T, M106ST, M120T, M126T		
SCALE		
NTS		

DRN.	NAME	DATE
CKD.	BALAJI	21/11/07
APPD.		

CODE No.	REV.
DWE\005\00	0

PUMP MODELS M100T/100ST/106T/106ST/120T/126T

1/2/2008

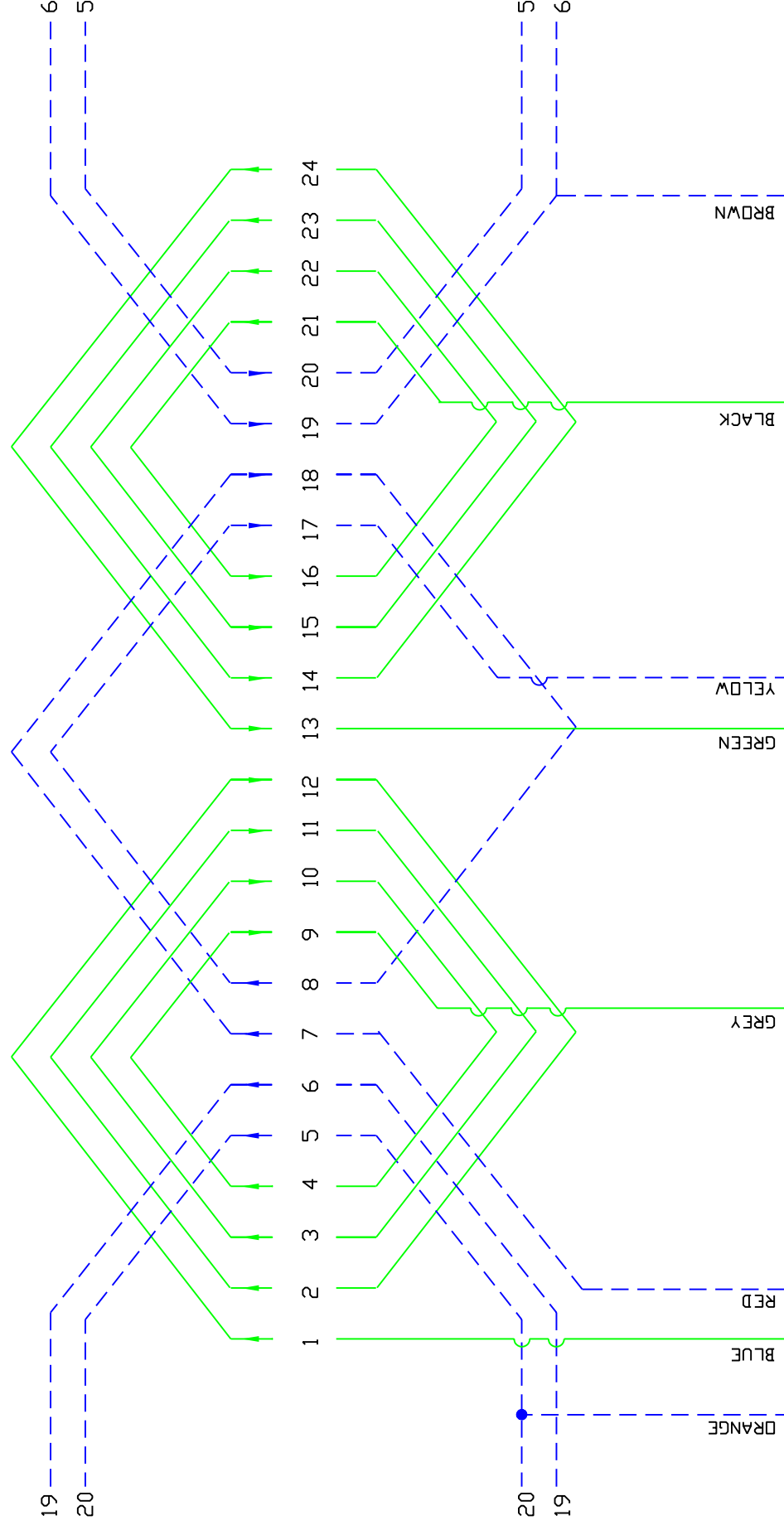
D.NO.	PART NO.	DESCRIPTION	QTY
1a	065-014-79	CABLE 100/106/120/126	50'
1b	065-015-79	CABLE 100ST/106ST (115V)	50'
1c	14/6	CABLE 6 CORE	50'
2	085-003-21	CABLE CLAMP	2
3	370-002-21	HEX NUT	2
4	525-022-21	CH.HD.SCREW	2
5	650-004-21	STUD	2
6	700-002-21	WASHER	18
7	370-005-21	HEX NUT	12
8	230-001-21	CABLE GLAND	1
9	380-007-66	"O" RING	2
10	260-034-66	CABLE GROMMET	1
11	600-011-40	CABLE GLAND SPACER	1
12	260-016-66	CABLE LEAD GROMMET	1
13	235-007-21	CABLE GLAND BASE	1
14	380-005-66	"O" RING	1
15	380-009-66	"O" RING	1
16	365-025-00	WIRE NUT CONNECTOR BLUE	3
17	365-026-00	WIRE NUT CONNECTOR ORANGE	3
18	525-007-40	EARTHING SCREW	1
19	740-001-46	EARTHING WIRE LUG	1
20	350-015-21	NAME PLATE	1
21	465-006-24	RIVET	6
22	035-005-30	TOP BRACKET	1
23	660-080-00	HANDLE	1
24	045-007-21	HEX HD.BOLT	2
25	045-006-21	HEX HD.BOLT	2
26	380-012-66	"O" RING	1
27	380-023-66	"O" RING	3
28	380-027-66	"O" RING	1
29A	400-001-33	OUTER CASING (M100T/106T)	1
29B	400-002-33	OUTER CASING (M100ST/M106ST)	1
29C	400-003-33	OUTER CASING (M120T/126T)	1
30A	625-001-33	STATOR CASING (M100T/106T)	1
30B	625-002-33	STATOR CASING (M100ST/106ST/120T/126T)	1
31A	619-002-00	BARE STATOR (M100T/106T)	1
31B	619-062-00	BARE STATOR 575V (M100T/106T)	1
31C	619-004-00	BARE STATOR (M100ST/106ST)	1
31D	619-006-00	BARE STATOR (M120T/126T)	1
32	010-001-26	ZINC ANODE	2
33	525-021-21	PH.PAN HD.SCREW	4
34	020-002-07	UPPER BEARING	1
35A	480-076-00	ROTOR COMPLETE (M100T/106T)	1
35B	480-071-00	ROTOR COMPLETE (M100ST/106ST/120T/126T)	1
36	037-001-30	BEARING COVER	1
37	020-004-07	LOWER BEARING	1

PUMP MODELS M100T/100ST/106T/106ST/120T/126T

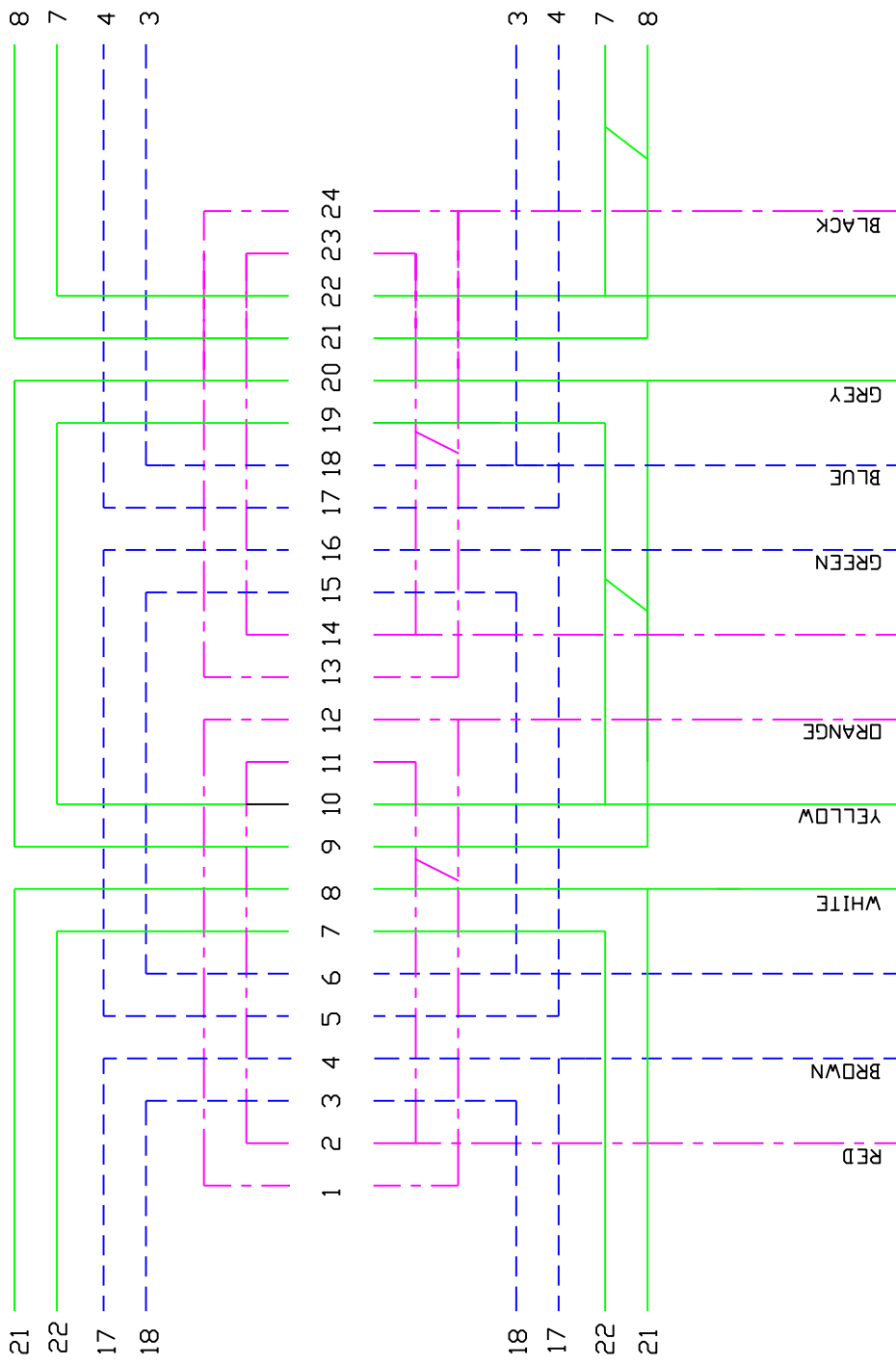
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D.NO.	PART NO.	DESCRIPTION	QTY
38A	035-074-30	LOWER BEARING BRACKET	*
38B	660-083-00	LOWER BEARING BRACKET COMPLETE (38A, 42, 43)	1
39	045-001-21	HEX HD.BOLT	4
40	380-001-66	"O" RING	2
41	520-002-21	OIL PLUG	2
42	380-083-66	"O" RING	*
43	570-004-22	SEAL SEAT HOLDER	*
44	535-032-00	MECHANICAL SEAL	2
45	080-002-21	CIRCLIP	2
46	660-110-00	AIR VOLUME	1
47A	545-019-30	SEAL HOUSING	*
47B	660-079-00	SEAL HOUSING COMPLETE (47A, 48, 49)	1
48	380-012-66	"O" RING	*
49	570-002-22	SEAL SEAT HOLDER	*
50	600-076-21	CAP FOR CIRCLIP	1
51	515-010-21	SAND GUARD	1
52	525-025-21	PH.PAN HD.SCREW	3
53	715-001-22	WEAR PLATE	1
54	660-033-00	LOWER STUD ASSY	4
55	600-009-21	TRIMMING SPACER	AS REQD
56	320-002-22	KEY	1
57	590-003-66	SLINGER	1
58A	300-017-22	IMPELLER M100T/M100ST (50Hz)	1
58B	300-018-22	IMPELLER M100T/M100ST (60Hz)	1
58C	300-088-22	IMPELLER M106T/M106ST (60Hz)	1
58D	300-020-21	IMPELLER M120 (50Hz)	1
58E	300-021-22	IMPELLER M120 (60Hz)	1
58F	300-090-22	IMPELLER M126 (60Hz)	1
59	695-003-21	LOCK WASHER	1
60	370-008-21	LOCK NUT	1
61	175-015-80	DIFFUSER	1
62	640-007-21	STRAINER	1
63	220-003-66	GASKET	1
64A	405-036-21	OUTLET 2" NPT SS	1
64B	405-009-21	OUTLET 2" HOSE SS	1
64C	405-033-21	OUTLET 2" BSPT SS	1
65	650-003-21	STUD	2
66	375-100-66	CAP FOR OUTLET	1
67	635-010-21	ROTATON ARROW	1
68	635-002-50	CAUTION STICKER	1
69	635-001-50	FINAL INSPECTION STICKER	1
70	375-100-66	"O" RING SET	1

MODY DUAL VOLTAGE 1 Ph, 115/230V WINDING DIAGRAM.



MODY DUAL VOLTAGE, 3Ph-230/460v 9 LEAD WINDING DIAGRAM



460 VOLT CONNECTION

JOIN A2 X - BLACK AND ORANGE
A2 Y - WHITE AND GREY
C2 Z - GREEN AND BROWN

POWER TO A1(RED), B1(YELLOW), C1(BLUE)

230 VOLT CONNECTION

SHORT XYZ
JOIN A1 A2 - RED AND BLACK-POWER
B1 B2 - YELLOW AND WHITE-POWER
C1 C2 - BLUE AND GREEN-POWER

POINTS X1 Y1 Z1 ARE PERMANENTLY SHORT CIRCUITED



LIMITED WARRANTY

We warrant to our immediate customer and to the ultimate consumer that products of our manufacture will be free of defects in material and workmanship under normal use and service for the following time periods, when installed and maintained in accordance with our instructions.

PUMPS: One (1) year from date of installation or (18) months from date of shipment, whichever occurs first. As used herein, "the ultimate consumer" is defined as the purchaser who first uses the product after it's initial installation or, in the case for product designed for non-permanent installation, the first owner who uses the product. It is the purchaser's or any sub-vendor's obligation to make known to the ultimate consumer the terms and conditions of this warranty. This warranty gives you specific legal rights, and there may also be other rights which vary from state to state. In the event the product is covered by the Federal Consumer Product Warranties Law (1) the duration of any implied warranties associated with the product by virtue of said law is limited to the same duration as stated herein, (2) this warranty is a **LIMITED WARRANTY**, and (3) no claims of any nature whatsoever shall be made against us, until the ultimate consumer, his successor, or assigns, notifies us in writing of the defect, and delivers the product and/or defective part(s) freight prepaid to our facility or nearest authorized service station. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply. **THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF ANY AND ALL WARRANTIES WITH RESPECT TO ANY PRODUCT SHALL BE TO REPLACE OR REPAIR AT OUR ELECTION, FOB POINT OF MANUFACTURE OR AUTHORIZED REPAIR STATION, SUCH PRODUCTS AND/OR PARTS AS PROVEN DEFECTIVE. THERE SHALL BE NO FURTHER LIABILITY, WHETHER BASED ON WARRANTY, NEGLIGENCE OR OTHERWISE.**

Unless expressly stated otherwise, guarantees in the nature of performance specifications furnished in addition to the foregoing material and workmanship warranties on a product manufactured by *Mody*, if any, are subject to laboratory tests corrected for field performance. Any additional guarantees, in the nature of performance specifications must be in writing and such writing must be signed by our authorized representative. Due to inaccuracies in field testing if a conflict arises between the results of field testing conducted by or for user, and laboratory tests corrected for field performance, the latter shall control. Components or accessories supplied by us but manufactured by others are warranted only to the extent of and by the terms and conditions of the original manufacturer's warranty.

RECOMMENDATIONS FOR SPECIAL APPLICATIONS OR THOSE RESULTING FROM SYSTEMS ANALYSES AND EVALUATIONS WE CONDUCT, WILL BE BASED ON OUR BEST AVAILABLE EXPERIENCE AND PUBLISHED INDUSTRY INFORMATION. SUCH RECOMMENDATIONS DO NOT CONSTITUTE A WARRANTY OF SATISFACTORY PERFORMANCE AND NO SUCH WARRANTY IS GIVEN.

This warranty shall not apply when damage is caused by (a) improper installation, (b) improper voltage, (c) lightning, (d) sand or other abrasive materials, (e) scale or corrosion build-up due to excessive chemical content. Any modification of the equipment will also void the warranty. We will not be responsible for loss, damage or labor cost due to interruption of service caused by defective parts. Neither will we accept charges incurred by others without our prior written approval. This warranty is void if our inspection reveals the product was used in a manner inconsistent with normal industry practice and/or our specific recommendations. The purchaser is responsible for communication of all necessary information regarding the application and use of the product. **UNDER NO CIRCUMSTANCES WILL WE BE RESPONSIBLE FOR ANY OTHER DIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOST PROFITS, LOST INCOME, LABOR CHARGES, DELAYS IN PRODUCTION, IDLE PRODUCTION, WHICH DAMAGES ARE CAUSED BY ANY DEFECTS IN MATERIAL, AND/OR WORKMANSHIP AND/OR DELAYS IN SHIPMENT. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

No rights extended under this warranty shall be assigned to any person, whether by operation or otherwise, without our prior written approval.