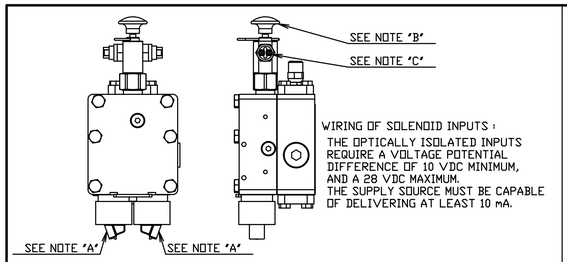
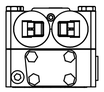



WIRING OF SOLENOID INPUTS :
THE OPTICALLY ISOLATED INPUTS REQUIRE A VOLTAGE POTENTIAL DIFFERENCE OF 10 VDC MINIMUM, AND A 28 VDC MAXIMUM. THE SUPPLY SOURCE MUST BE CAPABLE OF DELIVERING AT LEAST 10 mA.

NOTES :

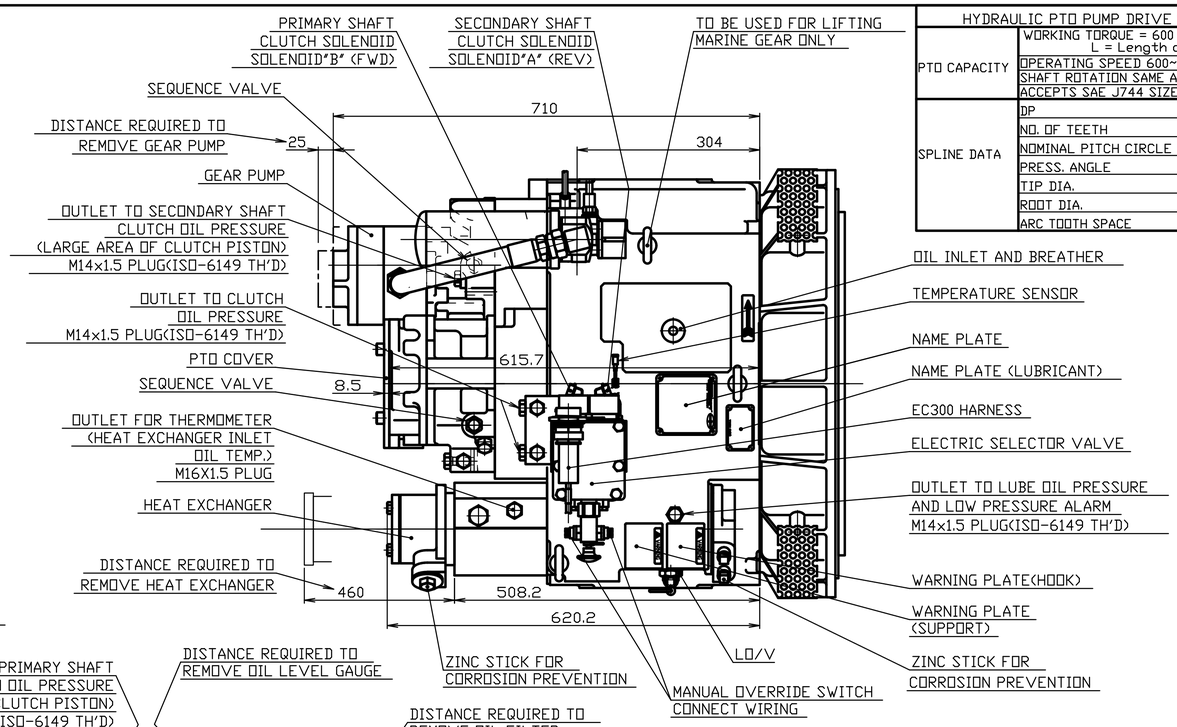
A. PROPORTIONAL CONTROL VALVE OPERATION
1. WARNING DO NOT CONNECT VALVE COIL DIRECTLY TO BATTERY/POWER SUPPLY VOLTAGE.
2. OPERATION TO BE PERFORMED WITH ONLY TWIN DISC CONTROL SYSTEMS OR MODULES.



B. MANUAL DIRECTIONAL CONTROL VALVE OPERATION
1. WITH MANUAL DIRECTIONAL CONTROL VALVE IN CENTERED POSITION, PUSH TO ENGAGE SECONDARY SHAFT CLUTCH
2. WITH MANUAL DIRECTIONAL CONTROL VALVE IN CENTERED POSITION, PULL TO ENGAGE PRIMARY SHAFT CLUTCH

C. MANUAL DIRECTIONAL CONTROL VALVE MODE SWITCH
1. SWITCH IS NORMALLY CLOSED WHEN MANUAL DIRECTIONAL CONTROL VALVE IS IN THE CENTERED POSITION AND OPEN WHEN LEVER IS ACTUATED FROM CENTERED POSITION
2. CURRENT = 20 AMPS MAX.
3. FOR WIRING SCHEMATIC, REFER TO CONTROL MODULE DRAWING.

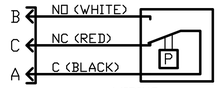
CONTROL VALVE (GENERAL PURPOSE VALVE)




| HYDRAULIC PTO PUMP DRIVE SPECIFICATIONS | | |
|---|---|---|
| PTO CAPACITY | WORKING TORQUE = 600 x L/40 (N·m) L = Length of pump spline | |
| | OPERATING SPEED 600~1800 $min^{-1}$ | |
| | SHAFT ROTATION SAME AS ENGINE ROTATION | |
| | ACCEPTS SAE J744 SIZE "C" PUMP | |
| SPLINE DATA | DP | 12/24 |
| | NO. OF TEETH | 14 |
| | NOMINAL PITCH CIRCLE DIA. | 29.633 |
| | PRESS. ANGLE | 30° |
| | TIP DIA. | $27.591^{+0.021}_{0}$ |
| | ROOT DIA. | $31.785^{0}_{-0.034}$ |
| | ARC TOOTH SPACE | $3.325^{+0.040}_{+0.002}$ |

| MGX-6599A MARINE GEAR SPECIFICATIONS | | | |
|---|---|---|---|
| GEAR RATIO | 1.34 1.51 1.74 2.03 2.24 2.48 2.80 | | |
| MASS | TOTAL MASS (DRY) | | APPROX. 530 kg |
| | BASIC UNIT (DRY) | | APPROX. 445 kg |
| | INPUT HOUSING | | 20 kg |
| | INPUT COUPLING AND FLANGE | | 65 kg |
| | - | | - kg |
| OIL QUANTITY | APPROX. 18 L | | |
| OIL PRESSURE | CLUTCH OIL | 2.2~2.4 MPa | AT RATED ENGINE SPEED OIL TEMP. 65~70°C |
| | LUBE OIL | 0.4~0.6 MPa | |
| OIL VISCOSITY | SAE #40 (MULTI-GRADE OIL IS NOT APPROVED) | | |
| OIL & GREASE CHANGE INTERVAL | THE FIRST OIL CHANGE AT 100 HOURS OF OPERATION AND SUBSEQUENTLY EVERY 1000 HOURS OF OPERATION | | |
| STRAINER | WIRE NETTING | | |
| SHIFTING RESTRICTION | SHIFT TO FORWARD OR REVERSE FROM NEUTRAL AND SHIFT ACROSS NEUTRAL SHALL BE MADE AT ENGINE SPEED LOWER THAN 50% OF THE RATED SPEED | | |
| HEAT EXCHANGER | WATER FLOW (RAW WATER) | | 80~85 L/min. |
| | TEMPERATURE OF COOLING WATER | | 32°C MAX. |

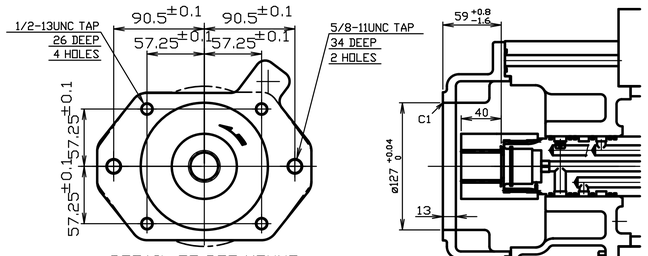
| | |
|---|---|
| SECTIONAL VIEW DWG NO. | 7-40501-H |
| GEAR PUMP TOOTH WIDTH | 44 mm |



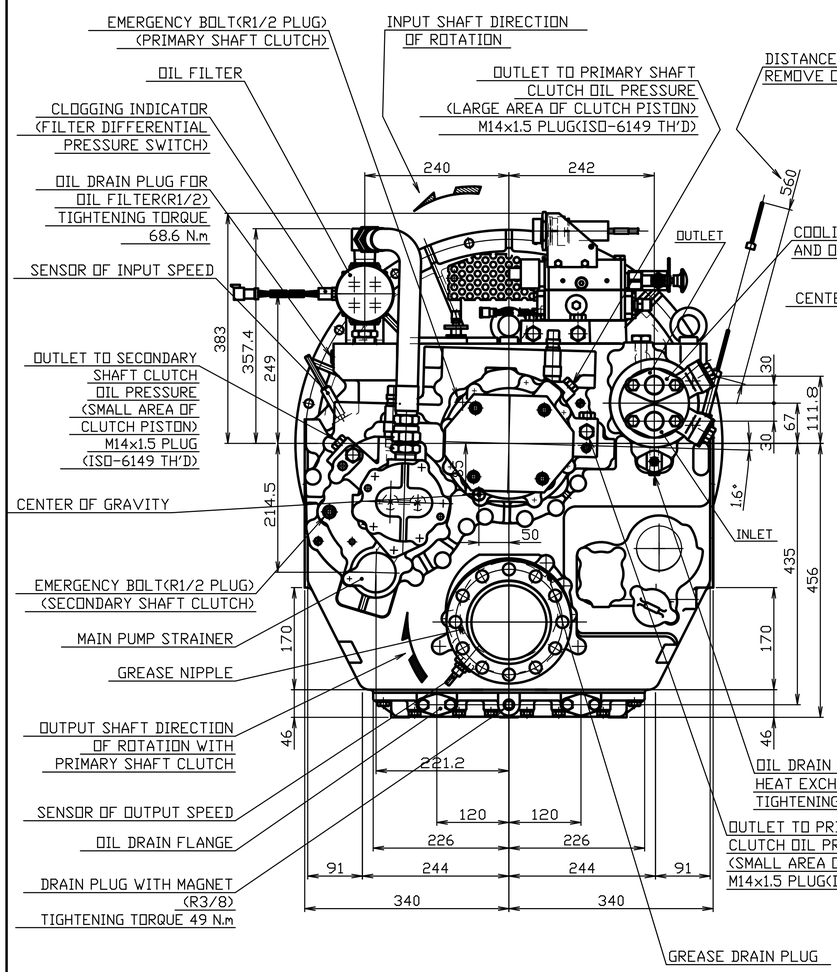

WIRING

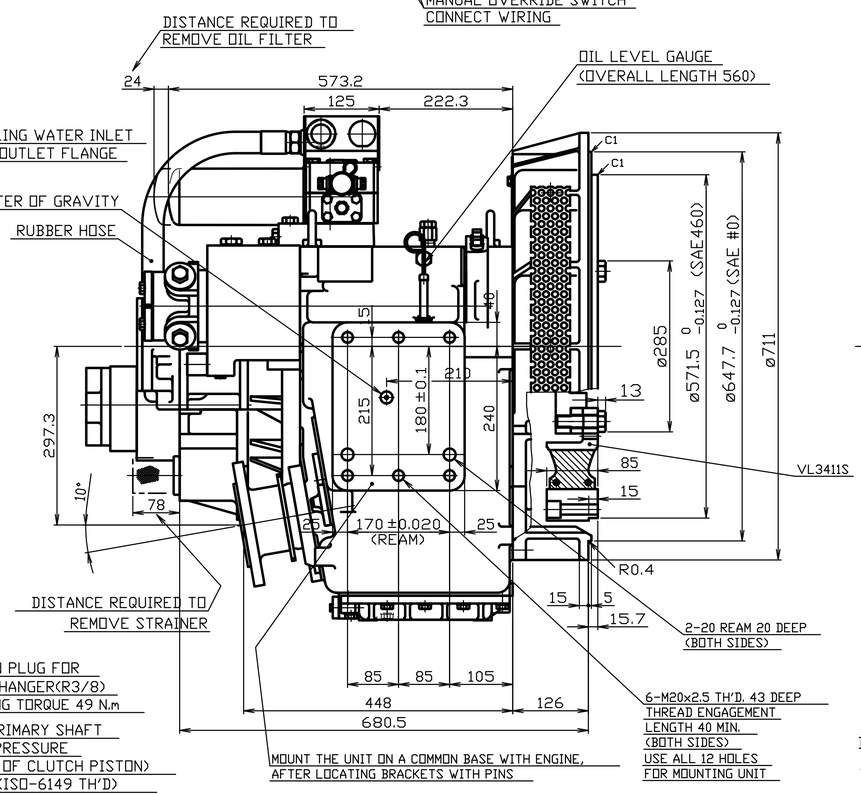
6~30 VDC, MAX.CURRENT 100 mA ; 2-POLE
PRESSURE SWITCH POINT=0.28 $^{\pm 0.03}$ MPa
BYPASS OPENING AT 0.35 $^{\pm 0.03}$ MPa

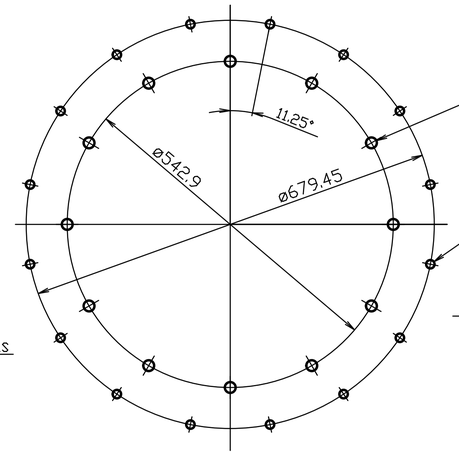
DETAIL OF CLOGGING INDICATOR

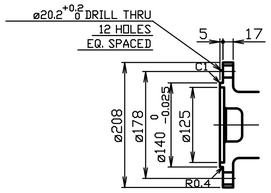



DETAIL OF PTO MOUNT
(SAE J744 SIZE "C") (scale 1:3)

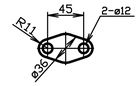


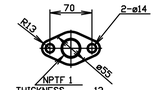




DETAIL OF OUTPUT FLANGE




THICKNESS 10
MATERIAL JIS-SS400

OIL DRAIN FLANGE




THICKNESS 12
MATERIAL JIS-CAC403

COOLING WATER INLET AND OUTLET FLANGE

METRIC
THIRD ANGLE PROJECTION
SIMILAR TO
7-40500-M

| REV | BY | APPD. |
|---|---|---|
| | | |

| REV | ZONE | CH. NO. | DATE | REV | ZONE | CH. NO. | DATE |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

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MATERIAL: -
HEAT TREAT: -
SURFACE TREATMENT: -
MASS: XXXX kg
VR #: Nm #
FIRST USE
ASSY.
MODEL: MGX-6599A
NAME: GENERAL VIEW

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE mm
MACHINED DIMENSIONS
X. ±0.75
X.X ±0.25
X.XX ±0.13
ALL ANGULAR TOLERANCES ±1°
GEOMETRIC TOLERANCING PER ANSI Y14.5M 1982

DATE 111205
SCALE 1:5
DRN. H.Ishii
CHK. AY
APPD. KS

TWIN DISC INCORPORATED RACINE, WI 53403 - USA
7-40500-N
SHEET 1 OF 1
REV ___

A1T