

1 INPUT GROUP REFERENCE PLANE

2 PTO GROUP MOUNTING FACE

3 LEFT MOUNTING BRACKET FACE

4 RIGHT MOUNTING BRACKET FACE

5 PUMP MOUNTING FACE

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 SYSTEM MODULES

B. MANUAL DIRECTIONAL CONTROL VALVE OPERATION

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

C. MANUAL DIRECTIONAL CONTROL VALVE MODE SWITCH

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

- D. UNLESS OTHERWISE SPECIFIED FASTENER TORQUE VALUES AS PER S574 STANDARD.

- E. ALL POINTS AVAILABLE FOR TESTING CODED

FLYWHEEL OUTLINE MUST CONFORM TO SAE J620, NO.460

SECTION A-A

OIL INLET FROM HEAT EXCHANGER
M33x2.0 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 88±8 Nm
REMOVE ALUMINIUM THREAD
PROTECTOR BEFORE
OPERATING UNIT.

MAIN PRESSURE PORT
M10x1.0 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 12±1.5 Nm

16 HOLES EQUALLY SPACED
USE 8.8 PROPERTY CLASS QUALITY
CAPSCREWS PER ISO 898-1 AND TORQUE
TO S574 OR SERVICE MANUAL VALUES

LUBE PRESSURE PORT
M14x1.5 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 20±2 Nm

PRIMARY
SHAFT \varnothing

CENTER OF
GRAVITY

OIL STRAINER
M12x1.75 THREAD, 12.0 DEEP
90 mm CLEARANCE REQUIRED
TO REMOVE OIL STRAINER

OIL DRAIN PLUG
M33x2.0 THREAD
CONFORMS TO ISO 6149
15 mm CLEARANCE REQUIRED
TO REMOVE PLUG

TEMPERATURE PORT
M14x1.5 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 20 ± 2 Nm

VIEW B-B

\varnothing 16.1 DRILL THRU
8 HOLES EQUALLY SPACED

DIRECTION OF OUTPUT
FLANGE ROTATION
(R.H. ENGINE DRIVING
THRU PRIMARY CLUTCH)

\varnothing 196.0 H.C.
REF.

FILTER DRAIN
M10x1.0 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 12±1 Nm

SECONDARY CLUTCH(FIRST)
PRESSURE PORT
M14x1.5 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 20±2 Nm

OIL OUTLET TO
HEAT EXCHANGER
M33x2.0 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 88±8 Nm
REMOVE ALUMINIUM THREAD
PROTECTOR BEFORE
OPERATING UNIT.

SECONDARY CLUTCH(SECOND)
PRESSURE PORT
M14x1.5 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 20±2 Nm

M20X2.5, THREAD, 32.5 DEEP
12 HOLES. USE ALL (12) HOLES,
6 PER SIDE FOR MOUNTING.
USE GRADE 8.8 PROPERTY CLASS
CAPSCREWS PER ISO 898-1
AND TORQUE TO S574.

CENTER OF
GRAVITY

OIL FILTER
19.0 mm CLEARANCE REQUIRED
TO REMOVE FILTER CANISTER.
APPLY OIL TO FILTER GASKET.
TIGHTEN FILTER AN ADDITIONAL
2/3 OF TURN AFTER FILTER
GASKET MAKES CONTACT

BREATHER OR
OIL FILLER HOLE

\varnothing 17.5 DRILL THRU,
4 HOLES FOR LIFTING
MARINE TRANSMISSION ONLY.

MAIN PRESSURE PORT
M12x1.5 METRIC PORT
CONFORMS TO ISO 6149
CONNECT OIL PRESSURE
GAUGE LINE HERE.
TIGHTENING TORQUE 16±1.5 Nm

LUBE PRESSURE PORT
M14x1.5 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 20±2 Nm

OIL GAUGE

PRIMARY CLUTCH(SECOND)
PRESSURE PORT
M14x1.5 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 20±2 Nm

OUTPUT
SHAFT \varnothing

OUTPUT SPEED
SENSOR BRACKET
TARGET WHEEL: 64 TEETH

PRIMARY CLUTCH(FIRST)
ACTUATING PRESSURE PORT
M12x1.5 METRIC PORT
CONFORMS TO ISO 6149
TIGHTENING TORQUE 16±1.5 Nm

ZpC

SEE NOTE "A"

INPUT SPEED SENSOR PORT
5/8-18UNF-2B THD.
TARGET WHEEL 45 TEETH

S1

ZPC1

SEE NOTE "C"

ZPC2

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EQUIPMENT SHOWN:

- MGX-5146SC PER T027661 ASSEMBLY
- SAE #0 / SAE 460 CF-R-318-HR
- GP VALVE WITH EC050 PROFILE MODULE
- LIVE SAE 127-4 PTO HSG. ADAPTER
- 82-2, 16-4 LIVE PTO ADAPTER

FIRST USE ASSEMBLY: FIRST USE MODEL: MGX-5146SC SIMILAR TO:	WEIGHT: 362.0 kg WR: kg m ³	THIRD ANGLE PROJECTION	MATERIAL:
METRIC		UNLESS OTHERWISE SPECIFIED MACHINED DIMENSIONS XX ±0.75 XX ±0.25 XX ±0.15 XX ±0.10 ALL ANGULAR TOLERANCES ±1° GEOMETRIC TOLERANCING PER ASME Y14.5M 1994	HEAT TREAT:
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DATE: 12/21/2015 SCALE: 1:4 DRAWN BY: PM CHECKED BY: JMF APPROVED BY: JMF	DATE: 12/22/2015 CHANGE NO. DATE
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REV	NDWF-06322	12/22/2015
REV	CHANGE NO.	DATE
TWIN DISC RACINE, WI 53403 - USA		
1027662A		
DWG SIZE: A1	SHEET: 1 OF 1	REV: -