CATERPILLAR®

3600 Marine Engine Application and Installation Guide

● **Drawings**

LEKM8469 8-98

CATERPILLAR®

Drawings

General Drawing Datums and Conventions

Caterpillar Drawing Datums And General Conventions

Zero Datum

All dimensions identified on standard Caterpillar General Arrangement Drawings are referenced to three (3) principal datums:

01 Horizontal Centerline Of Engine
02 Vertical Centerline Of Engine
03 Rear Face Of Crankshaft Adapter

The rear of the engine has been established as the flywheel end with right and left identified as looking forward from that location.

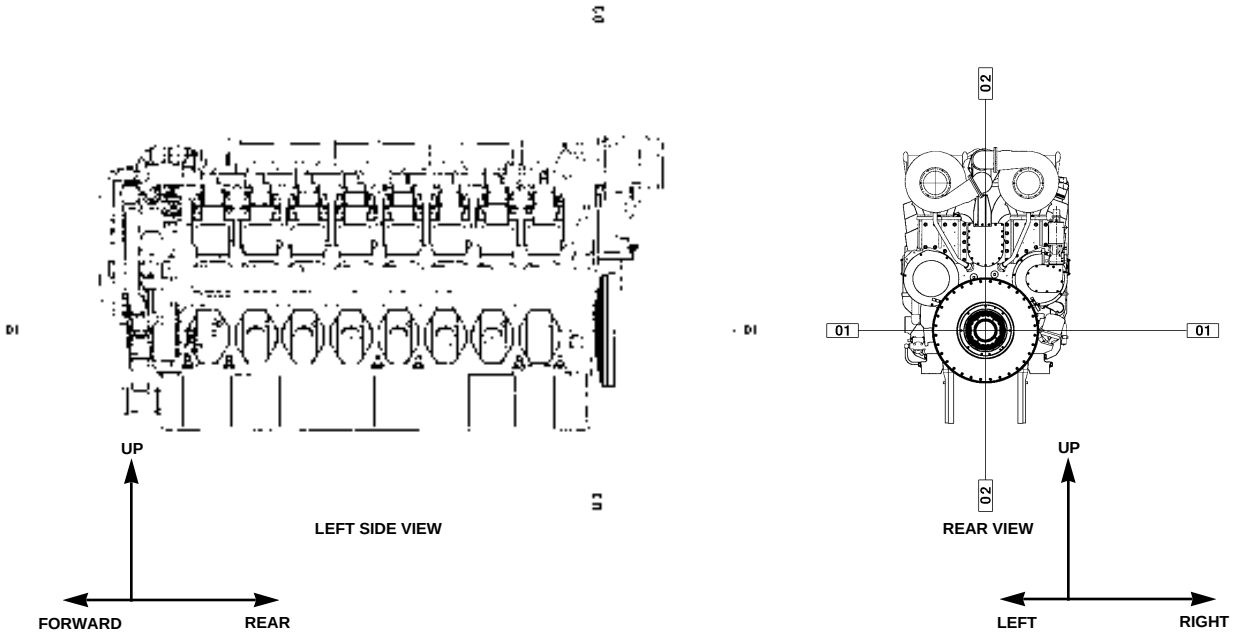


Figure 1

Engine Installation Drawings

Installation Drawings numbered, 3606 MAR, 3608 MAR, 3612 MAR and 3616 MAR represent the 3600 engines with marine propulsion configurations. See LEKX1120 generator set *Technical Data* for drawings of typical marine auxiliary generator set engine configurations.

Engine Room Installations

The engine room machinery layout is normally made by the shipyard and/or the owner and consultant. However, the engine builder requirements must be considered to ensure all systems function properly and service requirements are met. Pumps, coolers, starting air compressors, etc., must be serviceable. Piping attached to equipment such as coolers should allow cooler end bonnets to be removed for tube bundle service. Cooler tubes must be removable without interfering with piping, wiring or machinery. Access covers, grease points, etc., must be accessible.

Provide sufficient floor space or service platforms near the engine and marine gear for major parts removed during service (cylinder heads, pistons, etc.). Reinforce service platform plates subject to heavy loads. All engine and marine gear service and inspection areas must be accessible without removing floorplates, pipes, or wiring.

The engine room should have storage space, preferably near the engine, for major spare parts. Locate a bridge crane above the engine. Provide additional monorails with hoists throughout the engine room to move heavy equipment and spares from the storage area. The ship design must allow movement of heavy parts to and from the engine room.

When two or more engines are connected to the propeller through reduction gears, the center distance between engines must allow access space for servicing each engine. The sketches that follow allow for a 2.44 m (8 ft) between engine centerlines. This is minimum for inspection and service. If closer spacing is required it is considered marginal, and the design should be reviewed with the operator.

The instrument panel, bypass oil filters, lube oil filling connection, fuel and lube filters located on the engine inboard side facilitates inspection and service for twin engine installations.

Engine installation cost can be reduced by factory ordering an auxiliary module (fresh water expansion tank, heat exchanger, etc.). The module comes complete with associated engine auxiliary equipment. It can be mounted at the forward end of the engine as shown in Figure 2.

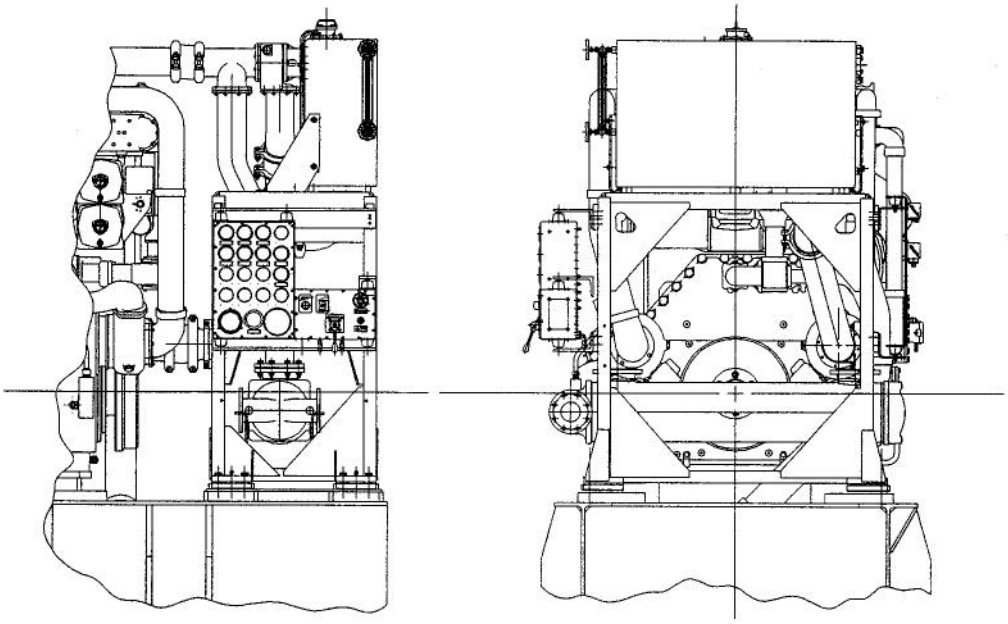


Figure 2 **Typical Accessory Module**

Flexible connections should be used between the module and shipyard piping.

If possible, place the fuel treatment and service equipment within a separate, dedicated room. This allows the majority of fuel handling equipment to be located in one area and confines fire potential areas. Provide separate ventilation and fire extinguishing systems.

Enclose the ship's service generators within a sound proof room to minimize engine room noise. This allows the operators to service the main engines in port at reasonable engine room noise levels.

The machinery casing above the engine room must allow for installation, inspection and maintenance of the engine exhaust piping and silencers, and for ventilation air ducting and air trunks.

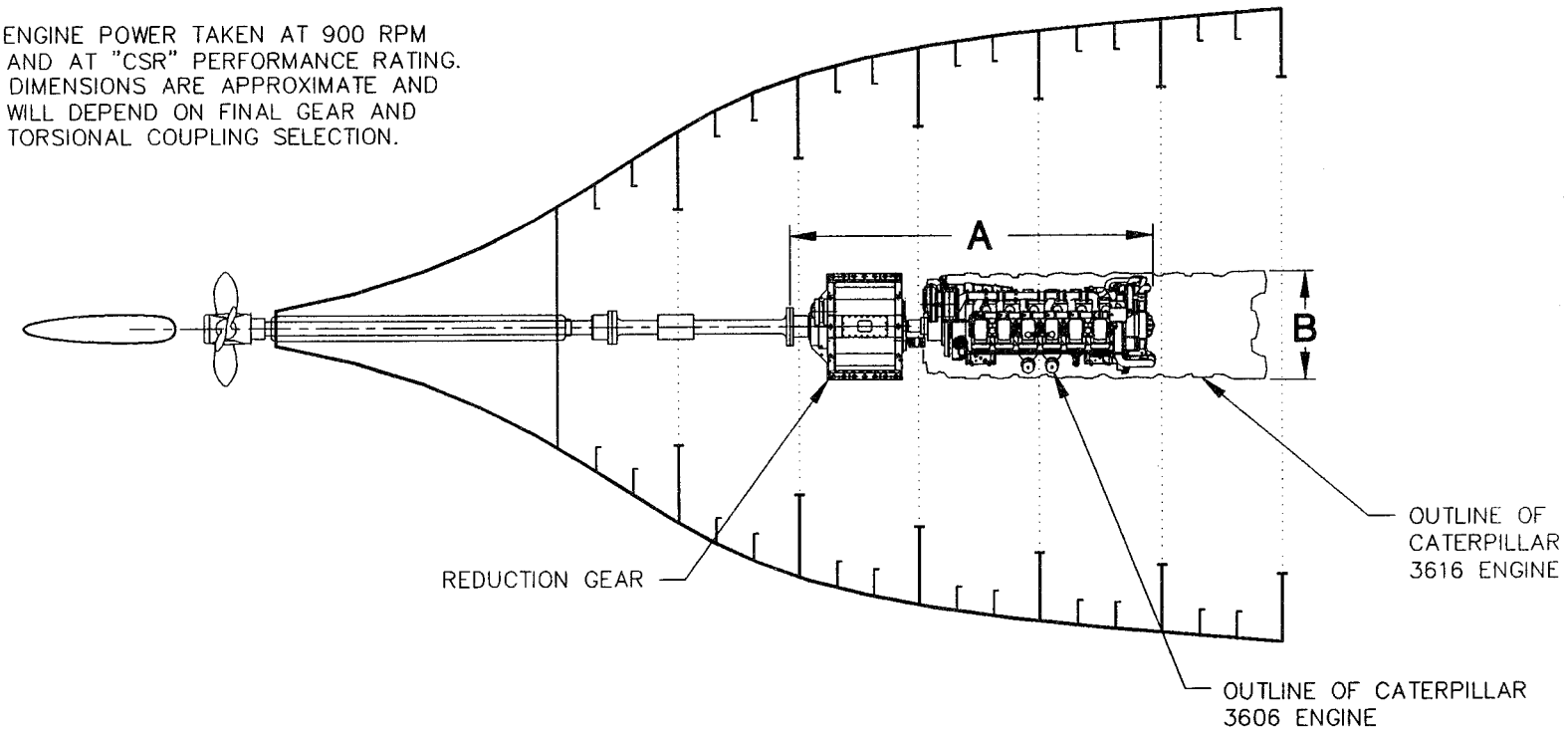
Give consideration to keeping the machinery casings separate from living accommodations to minimize noise and vibration.

The following drawings indicate overall dimensions for various engine/marine gear configurations. The dimensions shown are approximate and can change based on marine gear manufacturer, torsional coupling selected, horsepower and speed of engine, propeller rpm, etc. The dimensions shown can be used for preliminary design and configuration arrangement. The table of horsepower ranges is based on the Continuous Service Rating (CSR) at an engine speed of 900 rpm.

Figure 3

INSTALLED ENGINE POWER AND OVERALL DIMENSIONS				
ENGINE CYLINDERS	KW	H.P.	DIMENSIONS	
			A	B
6	1730	2320	6.1m (20')	1.75mm (5.74')
8	2300	3080	7.0m (23')	1.75mm (5.74')
12	3460	4640	6.7m (22')	1.71mm (5.62')
16	4600	6170	7.6m (25')	1.71mm (5.62')

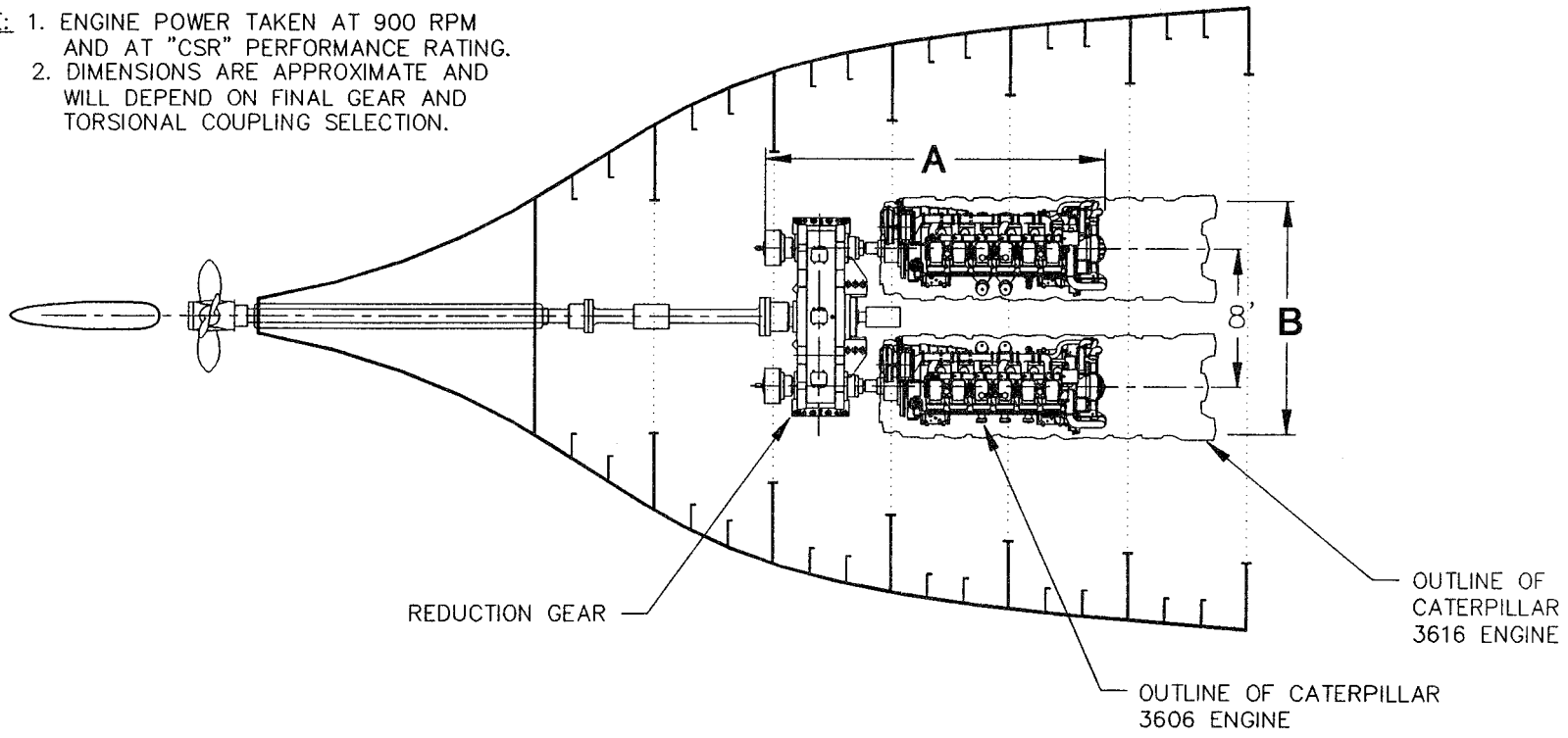
NOTE: 1. ENGINE POWER TAKEN AT 900 RPM AND AT "CSR" PERFORMANCE RATING.
2. DIMENSIONS ARE APPROXIMATE AND WILL DEPEND ON FINAL GEAR AND TORSIONAL COUPLING SELECTION.



Single Engine - Single Screw

INSTALLED ENGINE POWER AND OVERALL DIMENSIONS				
ENGINE CYLINDERS	KW	H.P.	DIMENSIONS	
			A	B
6	3460	4640	6.1m (20')	4.2m (13.7')
8	4600	6160	7.0m (23')	4.2m (13.7')
12	6920	9280	6.7m (22')	4.2m (13.7')
16	9200	12,340	7.6m (25')	4.2m (13.7')

NOTE: 1. ENGINE POWER TAKEN AT 900 RPM AND AT "CSR" PERFORMANCE RATING.
2. DIMENSIONS ARE APPROXIMATE AND WILL DEPEND ON FINAL GEAR AND TORSIONAL COUPLING SELECTION.



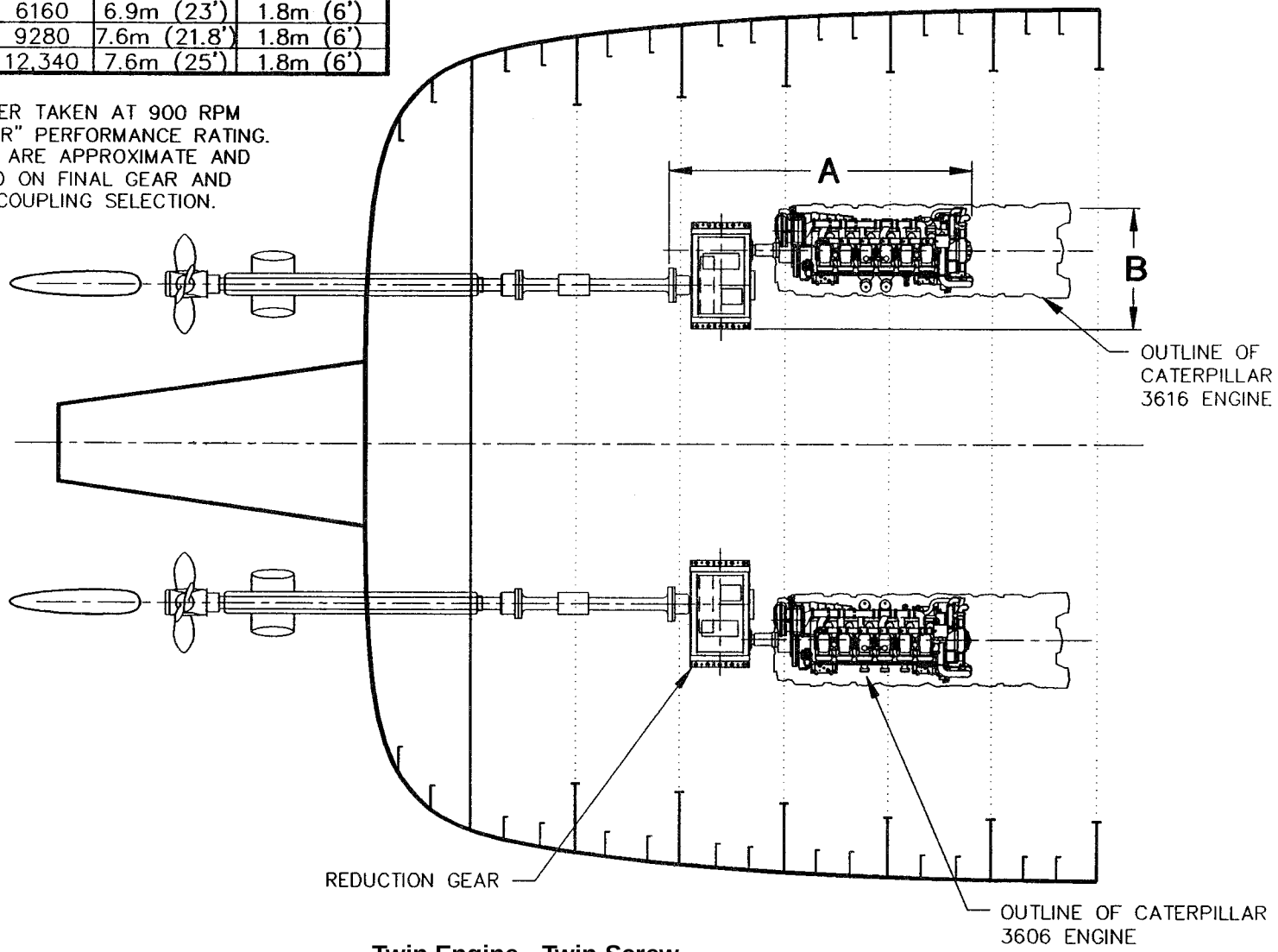
Twin Engine - Single Screw

Figure 4

Figure 5

INSTALLED ENGINE POWER AND OVERALL DIMENSIONS				
ENGINE CYLINDERS	KW	H.P.	DIMENSIONS	
			A	B
6	3460	4640	6.1m (20')	1.8m (6')
8	4600	6160	6.9m (23')	1.8m (6')
12	6920	9280	7.6m (21.8')	1.8m (6')
16	9200	12,340	7.6m (25')	1.8m (6')

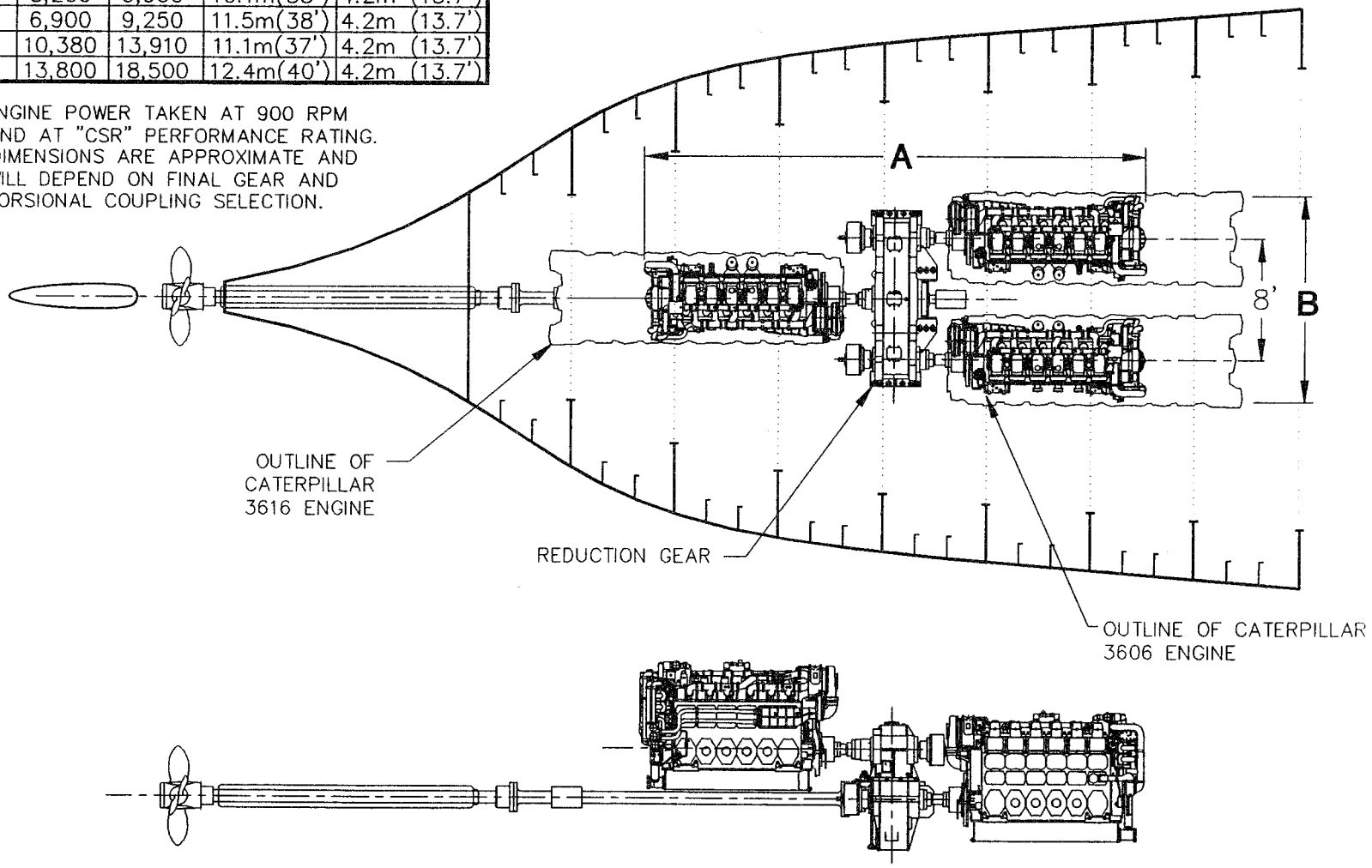
NOTE: 1. ENGINE POWER TAKEN AT 900 RPM AND AT "CSR" PERFORMANCE RATING.
2. DIMENSIONS ARE APPROXIMATE AND WILL DEPEND ON FINAL GEAR AND TORSIONAL COUPLING SELECTION.



Twin Engine - Twin Screw

INSTALLED ENGINE POWER AND OVERALL DIMENSIONS				
ENGINE CYLINDERS	KW	H.P.	DIMENSIONS	
			A	B
6	5,200	6,960	10.1m(33')	4.2m (13.7')
8	6,900	9,250	11.5m(38')	4.2m (13.7')
12	10,380	13,910	11.1m(37')	4.2m (13.7')
16	13,800	18,500	12.4m(40')	4.2m (13.7')

NOTE: 1. ENGINE POWER TAKEN AT 900 RPM AND AT "CSR" PERFORMANCE RATING.
2. DIMENSIONS ARE APPROXIMATE AND WILL DEPEND ON FINAL GEAR AND TORSIONAL COUPLING SELECTION.



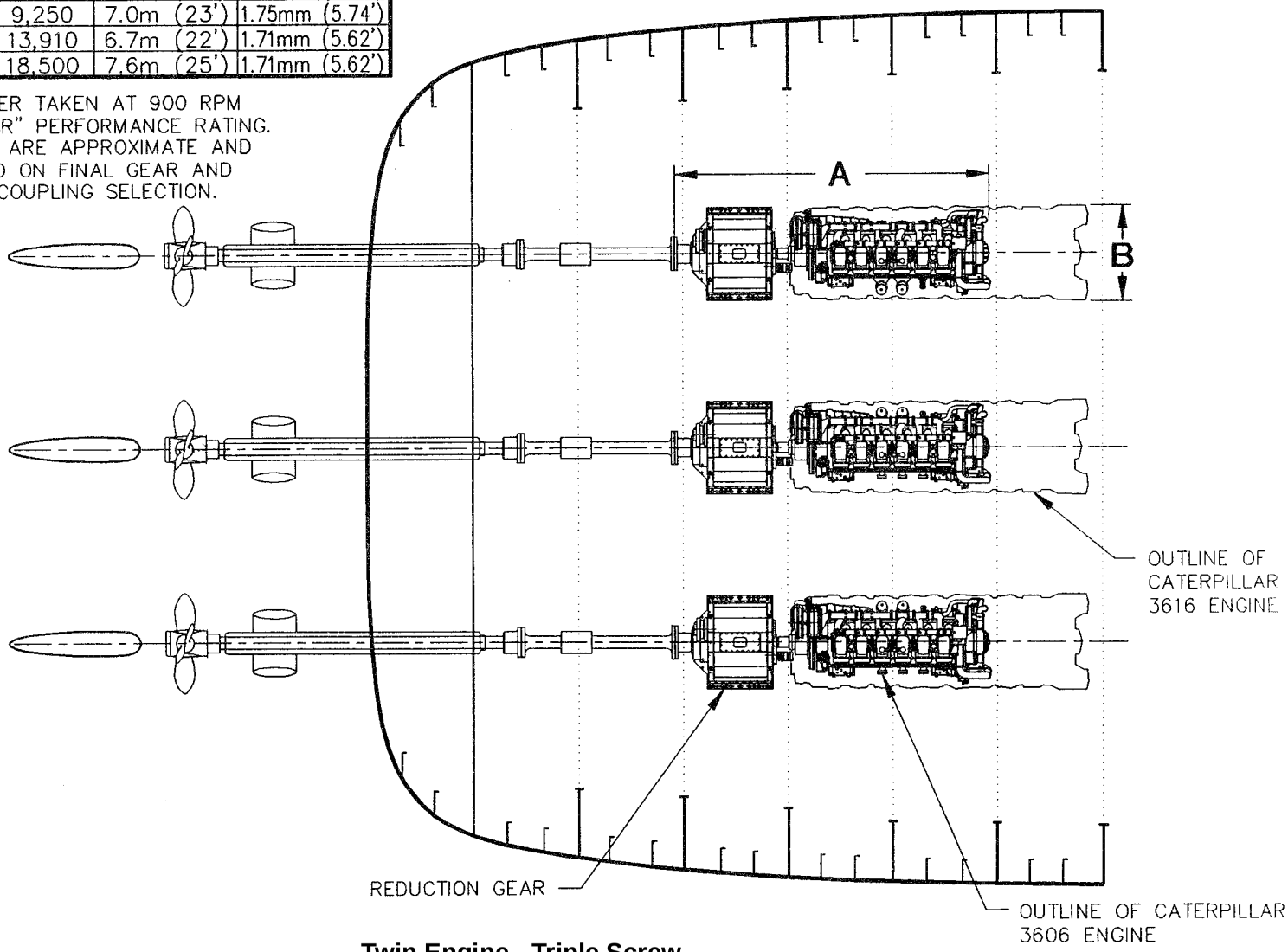
Three Engine - Single Screw

Figure 6

Figure 7

INSTALLED ENGINE POWER AND OVERALL DIMENSIONS				
ENGINE CYLINDERS	KW	H.P.	DIMENSIONS	
			A	B
6	5,200	6,960	6.1m (20')	1.75mm (5.74')
8	6,900	9,250	7.0m (23')	1.75mm (5.74')
12	10,380	13,910	6.7m (22')	1.71mm (5.62')
16	13,800	18,500	7.6m (25')	1.71mm (5.62')

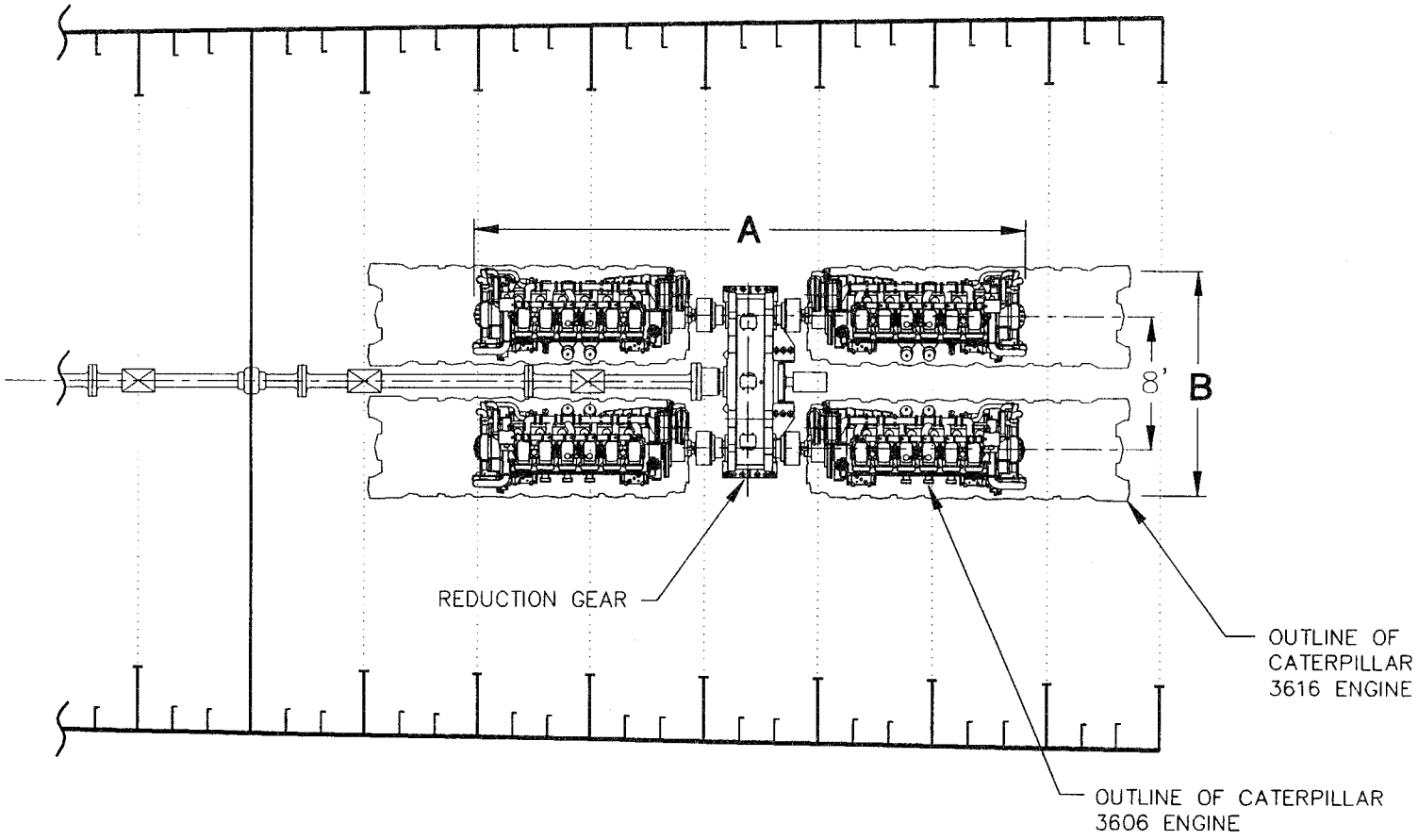
NOTE: 1. ENGINE POWER TAKEN AT 900 RPM AND AT "CSR" PERFORMANCE RATING.
2. DIMENSIONS ARE APPROXIMATE AND WILL DEPEND ON FINAL GEAR AND TORSIONAL COUPLING SELECTION.



Twin Engine - Triple Screw

INSTALLED ENGINE POWER AND OVERALL DIMENSIONS				
ENGINE CYLINDERS	KW	H.P.	DIMENSIONS	
			A	B
6	6,920	9,280	10.1m(33')	4.2m (13.7')
8	9,200	12,320	11.9m(39')	4.2m (13.7')
12	13,840	18,560	11.3m(37')	4.2m (13.7')
16	18,400	24,680	13.0m(43')	4.2m (13.7')

NOTE: 1. ENGINE POWER TAKEN AT 900 RPM AND AT "CSR" PERFORMANCE RATING.
2. DIMENSIONS ARE APPROXIMATE AND WILL DEPEND ON FINAL GEAR AND TORSIONAL COUPLING SELECTION.



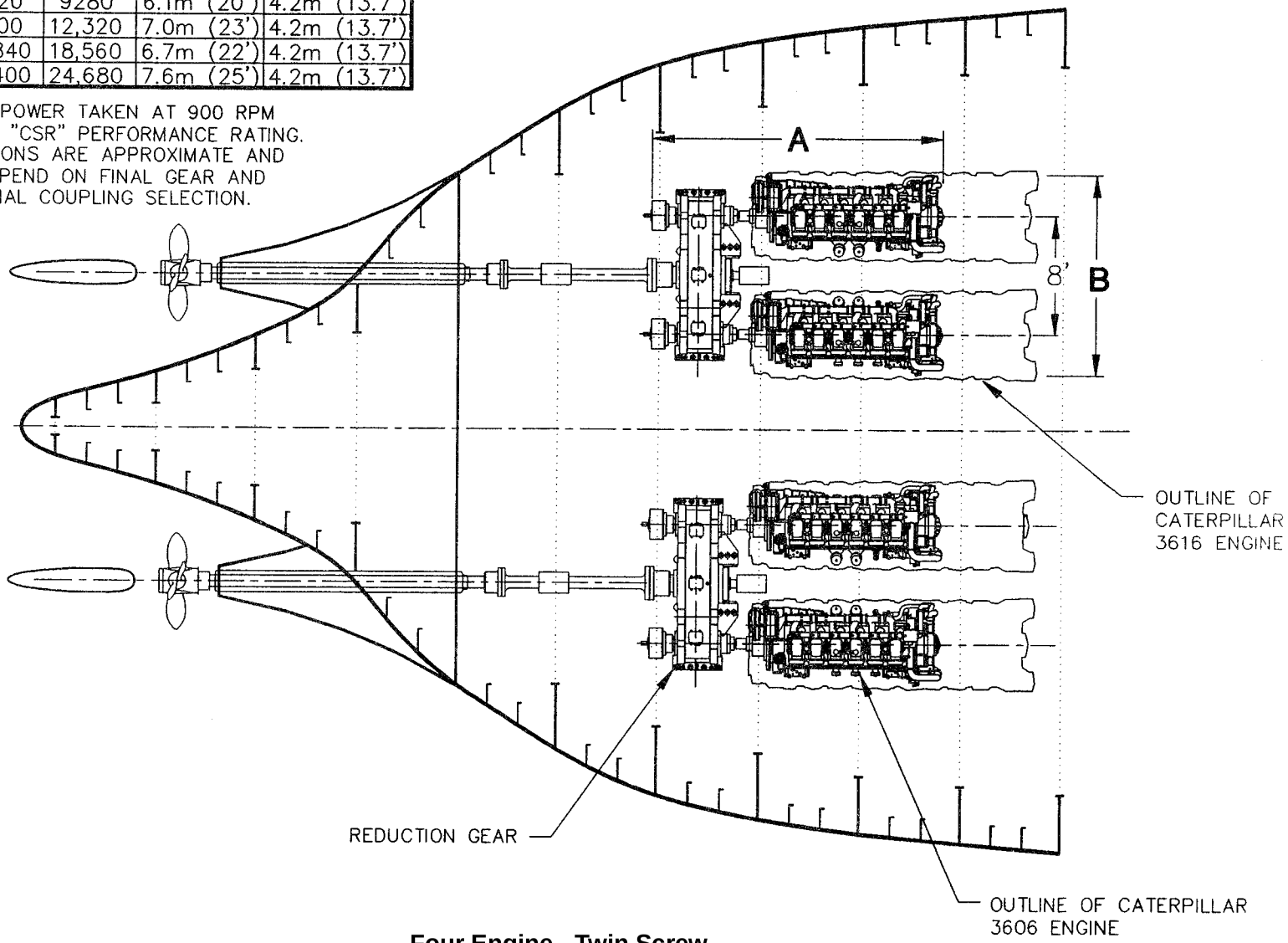
Four Engine - Single Screw

Figure 8

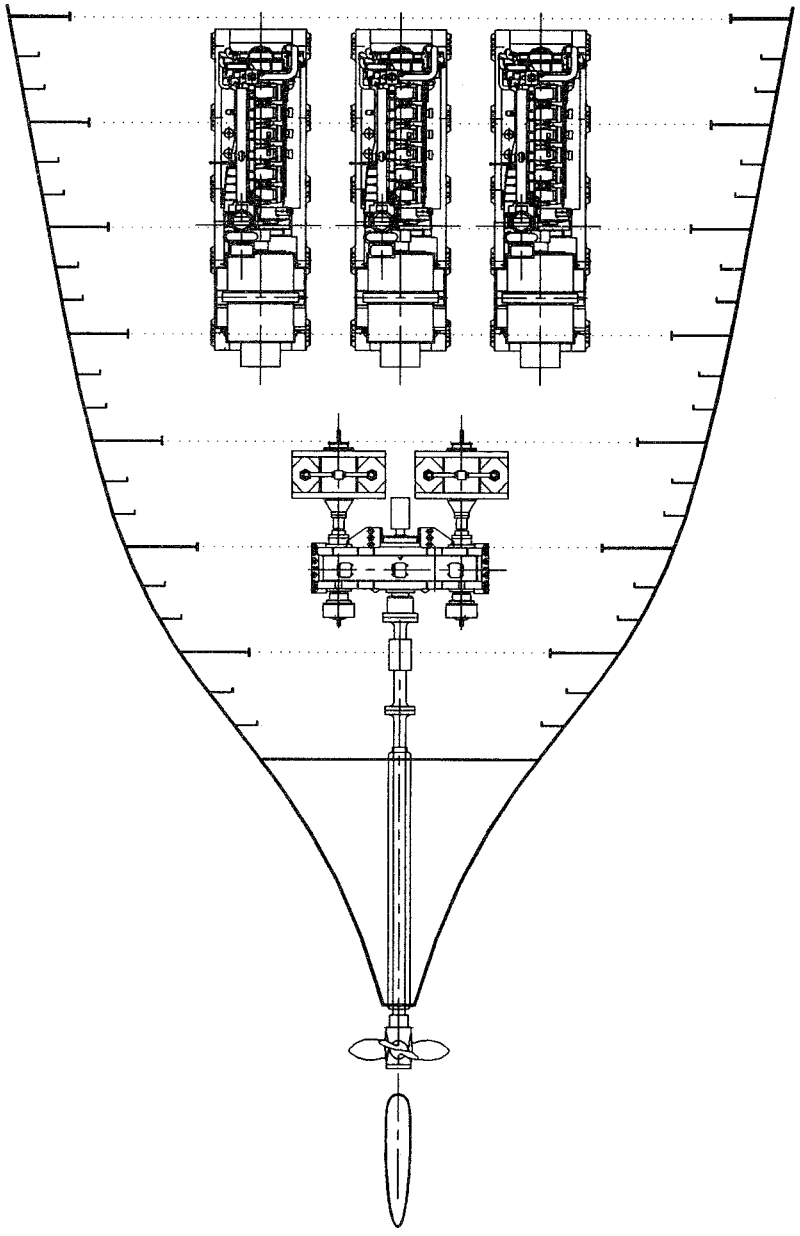
Figure 9

INSTALLED ENGINE POWER AND OVERALL DIMENSIONS				
ENGINE CYLINDERS	KW	H.P.	DIMENSIONS	
			A	B
6	6920	9280	6.1m (20')	4.2m (13.7')
8	9200	12,320	7.0m (23')	4.2m (13.7')
12	13,840	18,560	6.7m (22')	4.2m (13.7')
16	18,400	24,680	7.6m (25')	4.2m (13.7')

NOTE: 1. ENGINE POWER TAKEN AT 900 RPM AND AT "CSR" PERFORMANCE RATING.
2. DIMENSIONS ARE APPROXIMATE AND WILL DEPEND ON FINAL GEAR AND TORSIONAL COUPLING SELECTION.

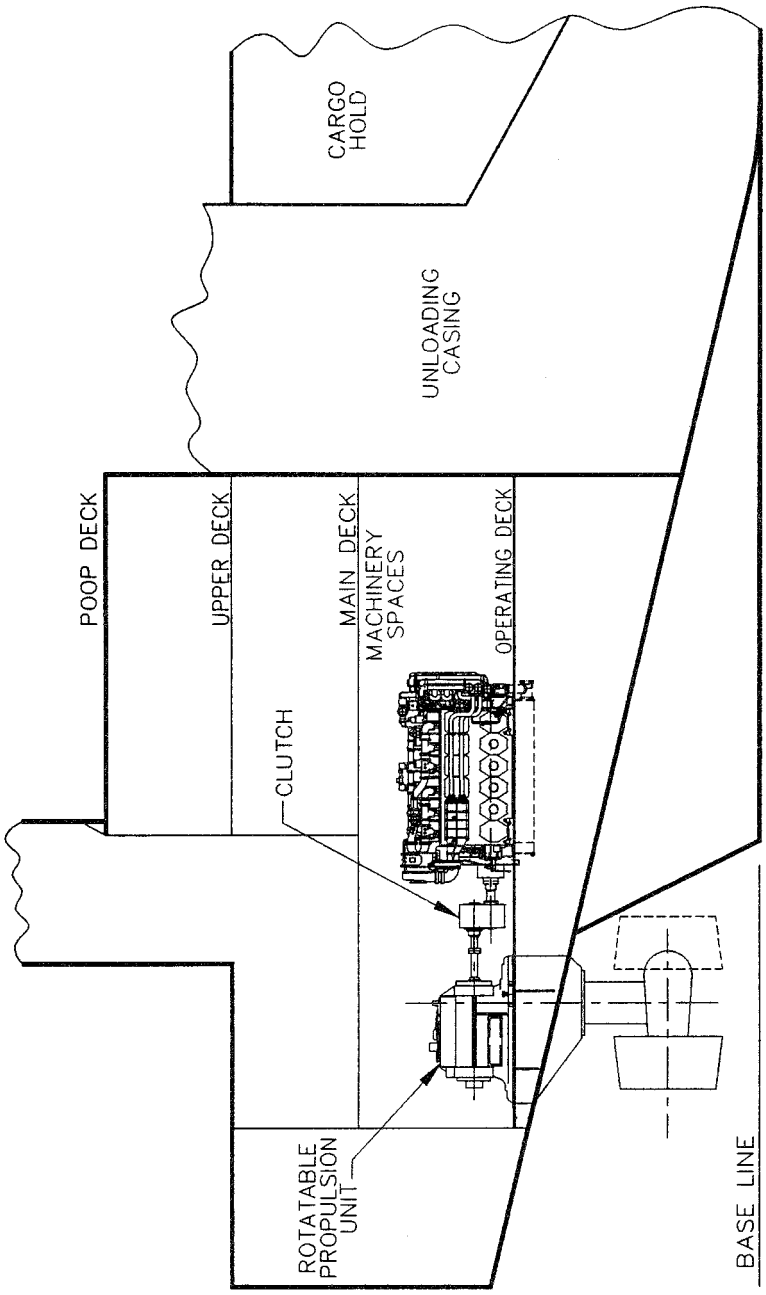


Four Engine - Twin Screw



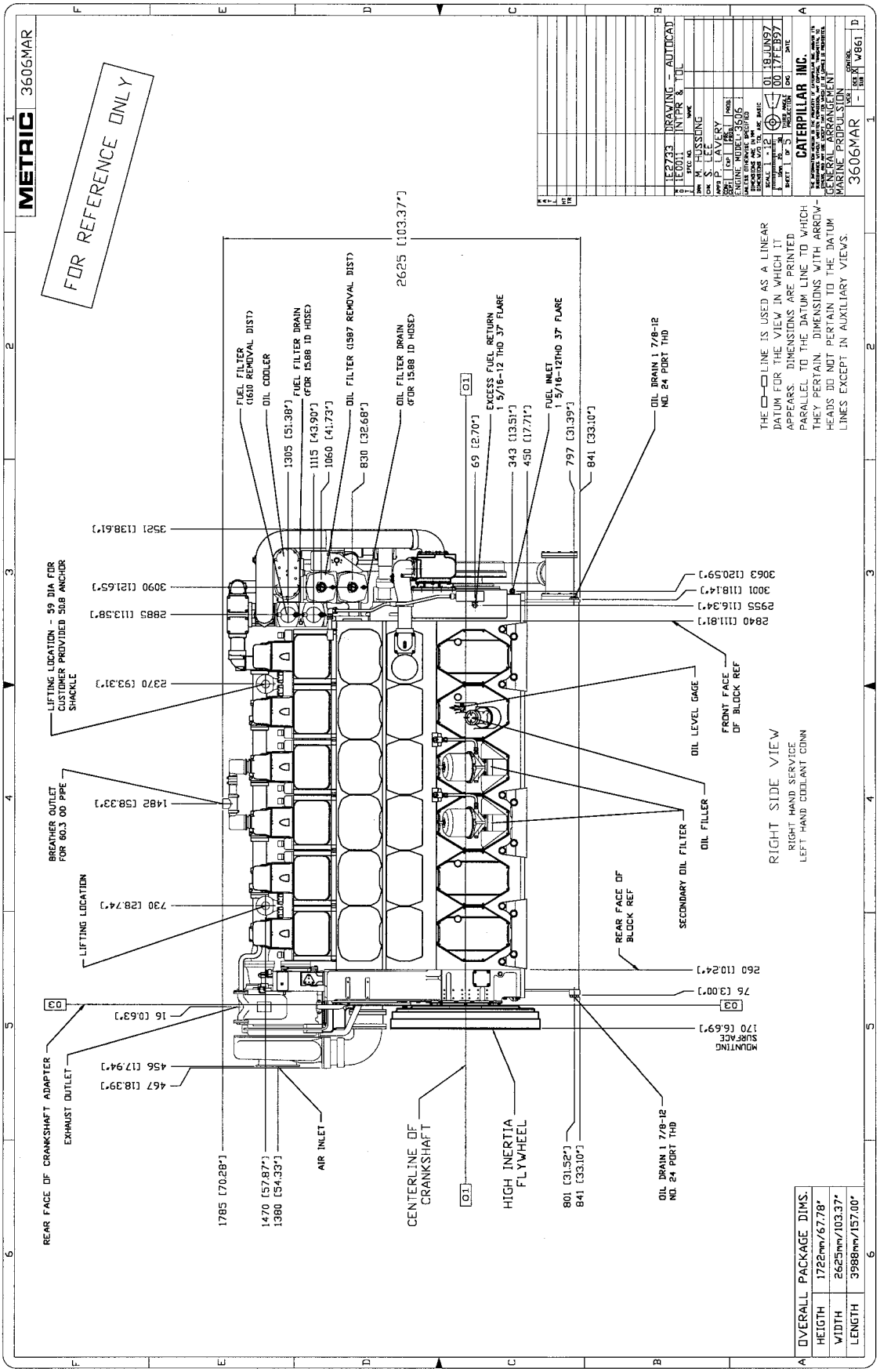
Typical Electric Drive

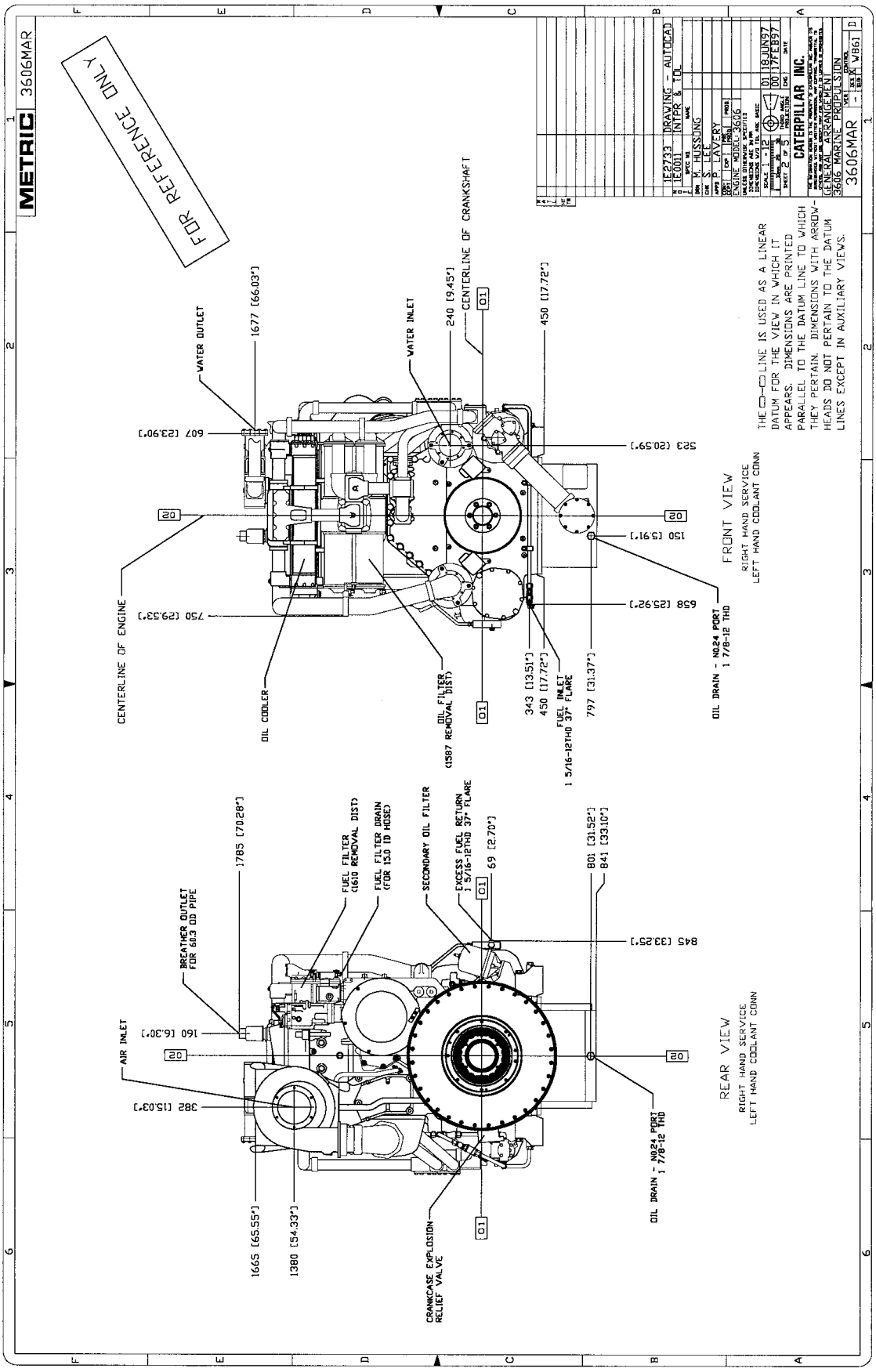
Figure 10

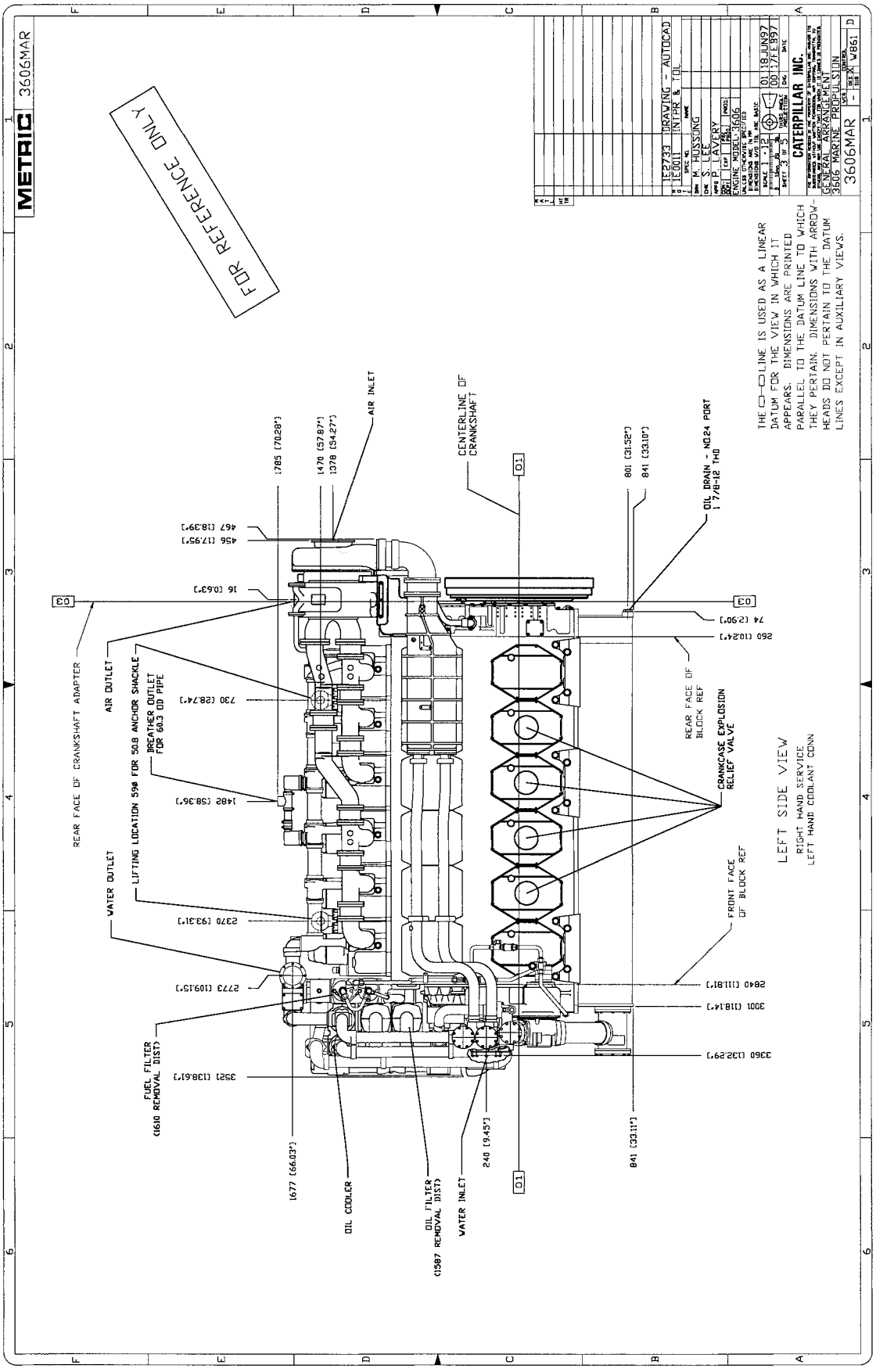


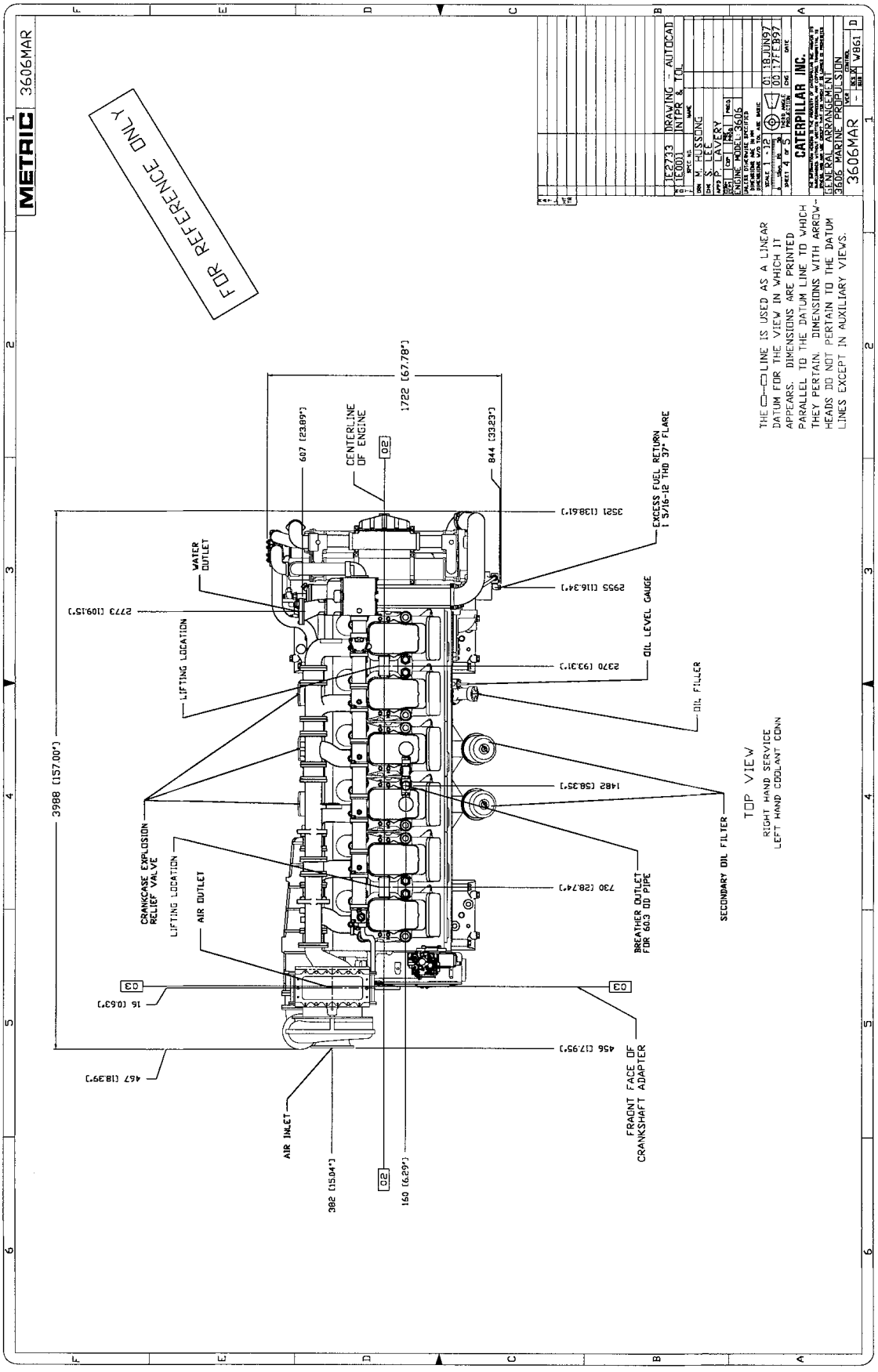
Typical Rotatable Drive

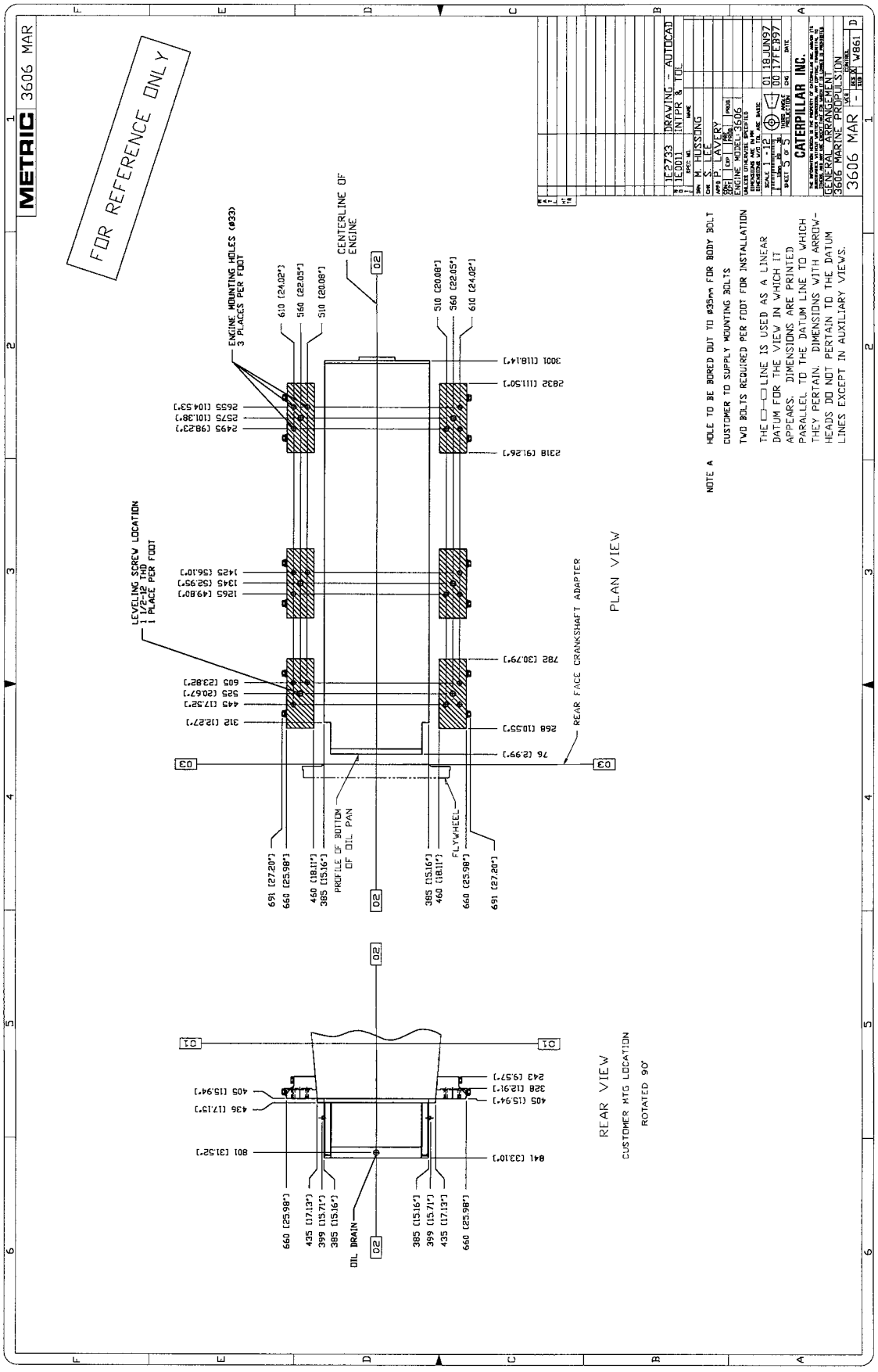
Figure 11

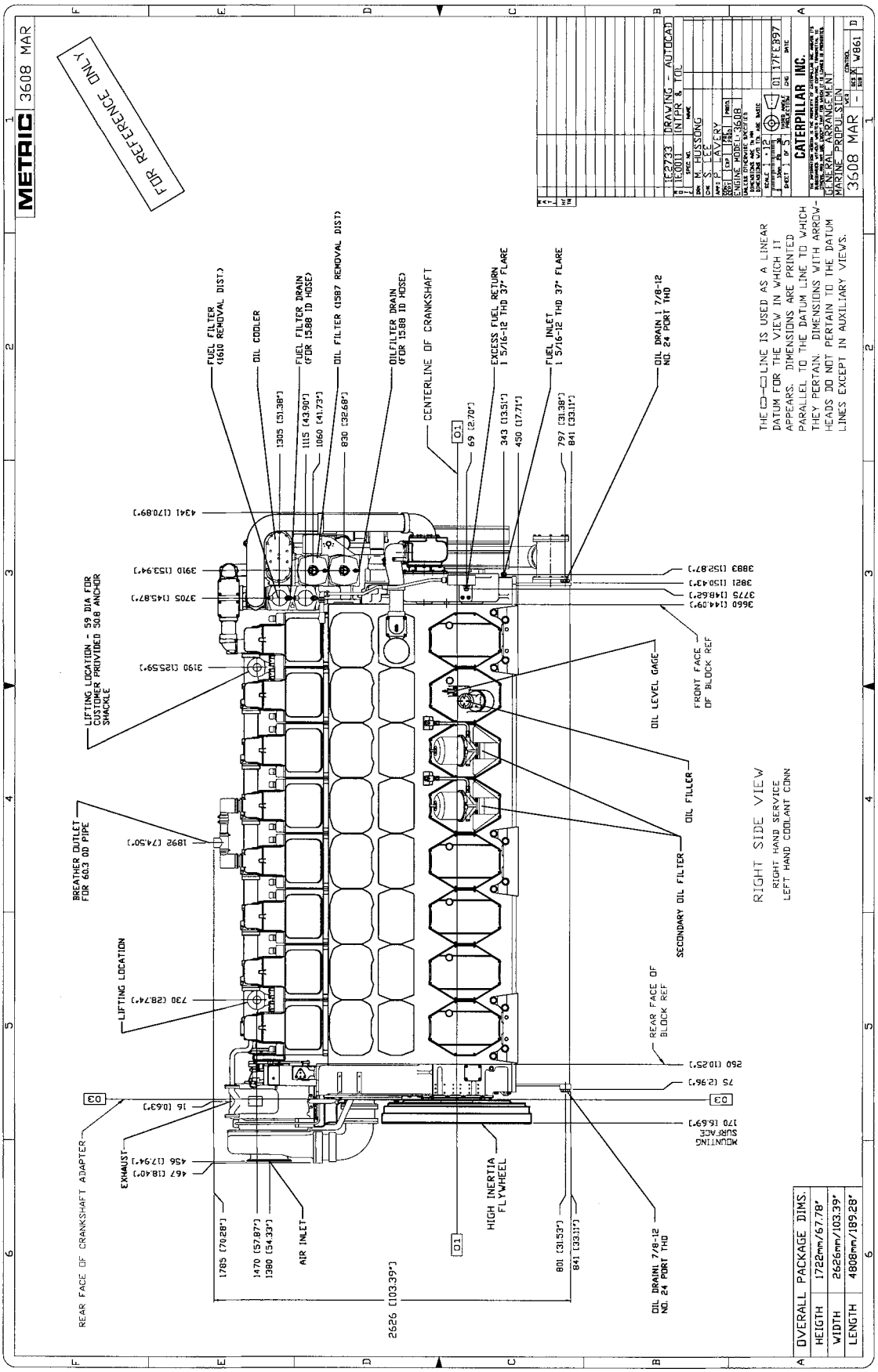

METRIC 3606MAR
FOR REFERENCE ONLY
RIGHT SIDE VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
FUEL FILTER (1610 REMOVAL DIST)
OIL COOLER
FUEL FILTER DRAIN (FOR 15.88 ID HOSE)
OIL FILTER (1587 REMOVAL DIST)
OIL FILTER DRAIN (FOR 15.88 ID HOSE)
EXCESS FUEL RETURN 1 5/16-12 THD 37° FLARE
FUEL INLET 1 5/16-12THD 37° FLARE
OIL DRAIN 1 7/8-12 NO. 24 PORT THD
LIFTING LOCATION - 59 DIA FOR CUSTOMER PROVIDED 50.8 ANCHOR SHACKLE
BREATHER OUTLET FOR 60.3 OD PIPE
LIFTING LOCATION
OIL LEVEL GAGE
FRONT FACE OF BLOCK REF
OIL FILLER
SECONDARY OIL FILTER
REAR FACE OF BLOCK REF
MOUNTING SURFACE
REAR FACE OF CRANKSHAFT ADAPTER
EXHAUST OUTLET
AIR INLET
CENTERLINE OF CRANKSHAFT
HIGH INERTIA FLYWHEEL
OIL DRAIN 1 7/8-12 NO. 24 PORT THD
2625 [103.37"]
1785 [70.28"]
1470 [57.87"]
1380 [54.33"]
801 [31.52"]
841 [33.10"]
OVERALL PACKAGE DIMS.
HEIGTH 1722mm/67.78"
WIDTH 2625mm/103.37"
LENGTH 3988mm/157.00"
CATERPILLAR INC.
GENERAL ARRANGEMENT
MARINE PROPULSION
3606MAR

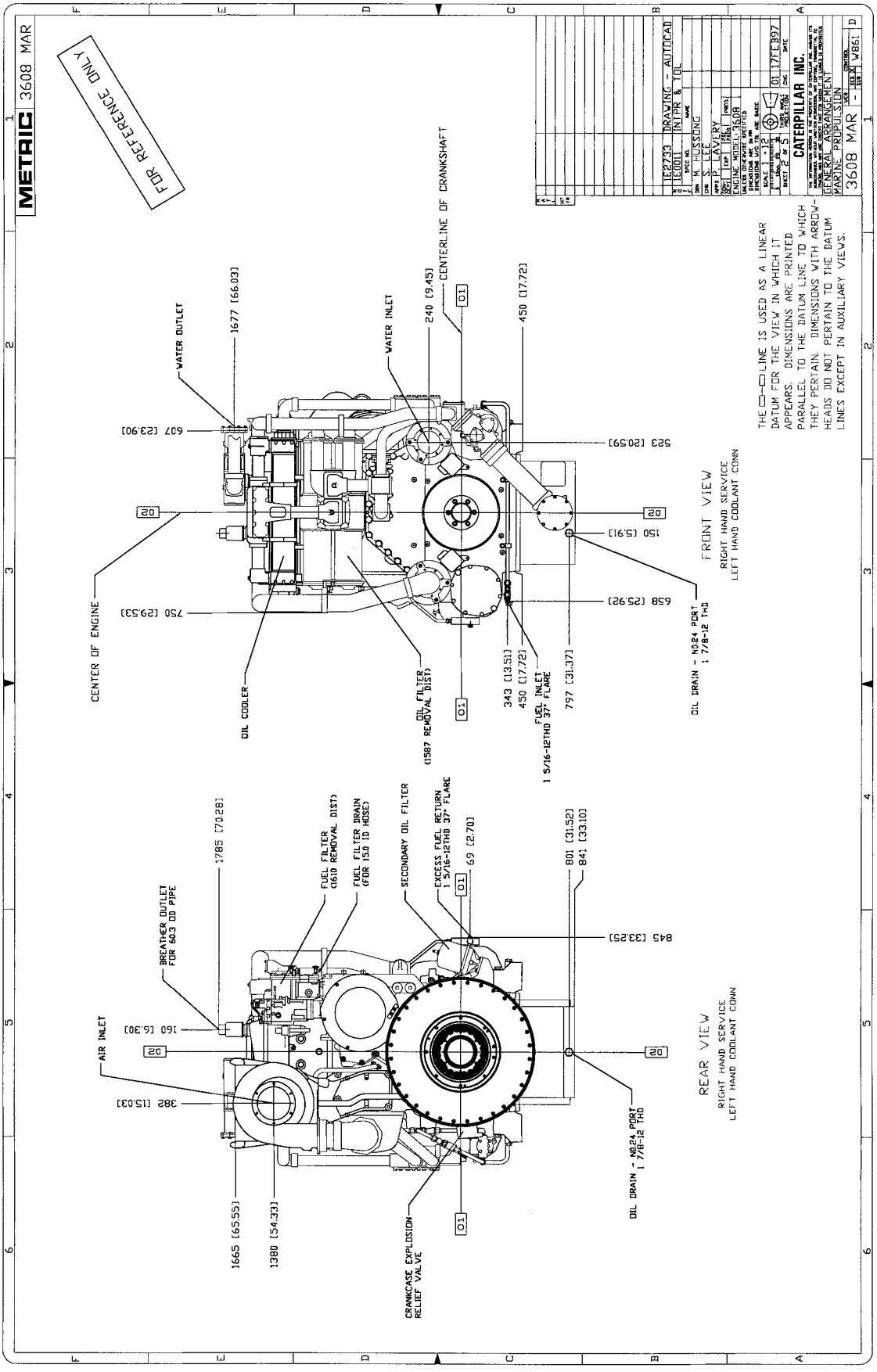

METRIC 3606MAR
FOR REFERENCE ONLY
FRONT VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
REAR VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
CENTERLINE OF ENGINE
CENTERLINE OF CRANKSHAFT
WATER OUTLET
WATER INLET
OIL COOLER
OIL FILTER (1587 REMOVAL DIST)
FUEL INLET 1 5/16-12THD 37° FLARE
OIL DRAIN - N0.24 PORT 1 7/8-12 THD
AIR INLET
BREATHER OUTLET FOR 60.3 OD PIPE
FUEL FILTER (1610 REMOVAL DIST)
FUEL FILTER DRAIN (FOR 15.0 ID HOSE)
SECONDARY OIL FILTER
EXCESS FUEL RETURN 1 5/16-12THD 37° FLARE
CRANKCASE EXPLOSION RELIEF VALVE
CAT
CATERPILLAR INC.
3606MAR
3606 MARINE PROPULSION
GENERAL ARRANGEMENT

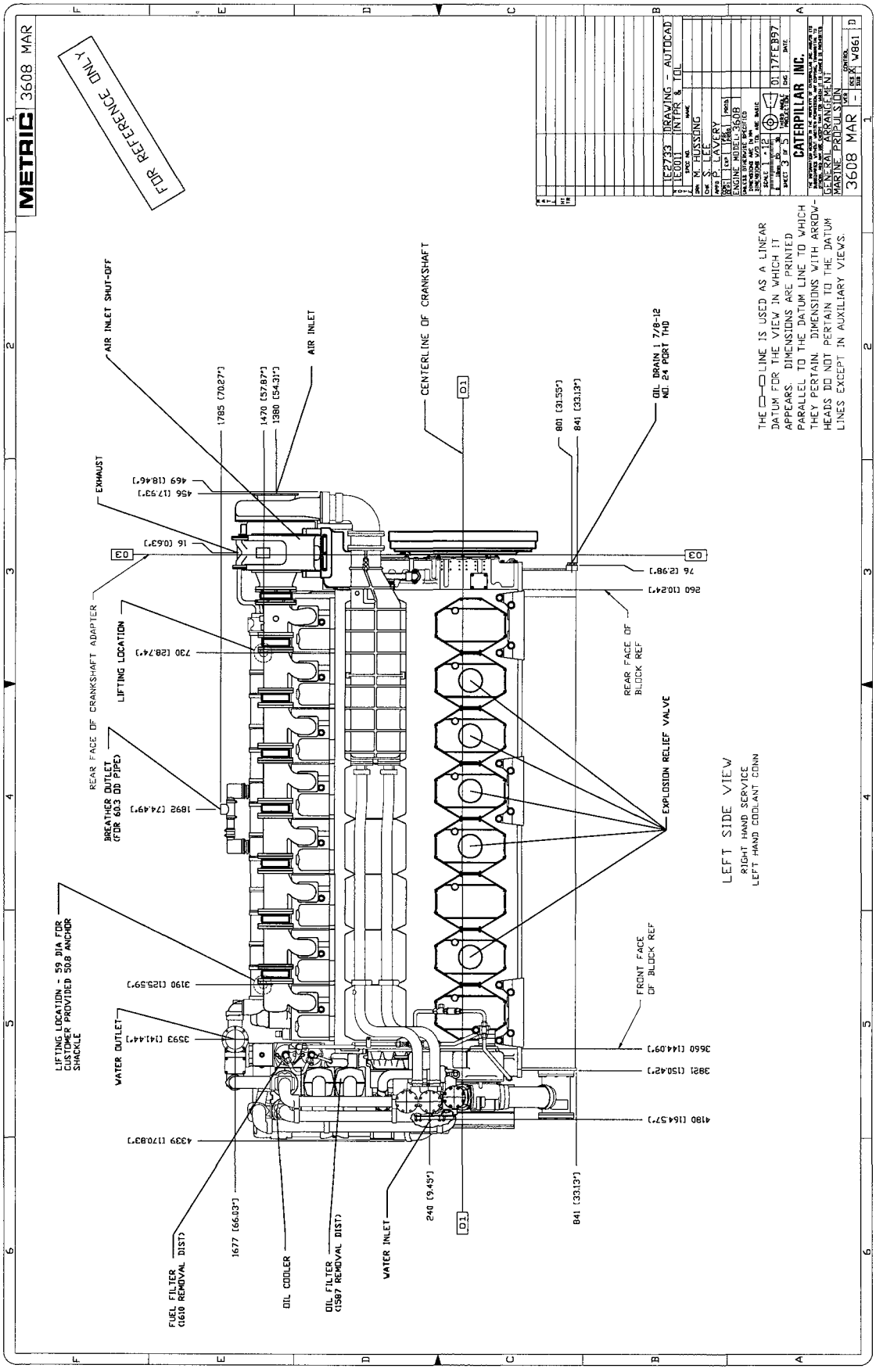

METRIC 3606MAR
FOR REFERENCE ONLY
LEFT SIDE VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE ⊐—⊏ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
CATERPILLAR INC.
GENERAL ARRANGEMENT
3606 MARINE PROPULSION
3606MAR
1E2733 DRAWING - AUTOCAD
1E0011 INITPR & TOL
AIR INLET
CENTERLINE OF CRANKSHAFT
OIL DRAIN - M24 PORT 1 7/8-12 THD
REAR FACE OF CRANKSHAFT ADAPTER
AIR OUTLET
BREATHER OUTLET FOR 60.3 OD PIPE
LIFTING LOCATION 590 FOR 50.8 ANCHOR SHACKLE
WATER OUTLET
FUEL FILTER (1610 REMOVAL DIST)
OIL COOLER
OIL FILTER (1587 REMOVAL DIST)
WATER INLET
REAR FACE OF BLOCK REF
CRANKCASE EXPLOSION RELIEF VALVE
FRONT FACE OF BLOCK REF
785 [70.28"]
1470 [57.87"]
1378 [54.27"]
801 [31.52"]
841 [33.10"]
467 [18.39"]
456 [17.95"]
16 [0.63"]
74 [2.90"]
260 [10.24"]
730 [28.74"]
1482 [58.36"]
2370 [93.31"]
2773 [109.15"]
2840 [111.81"]
3001 [118.14"]
3360 [132.29"]
3521 [138.61"]
1677 [66.03"]
240 [9.45"]
841 [33.11"]

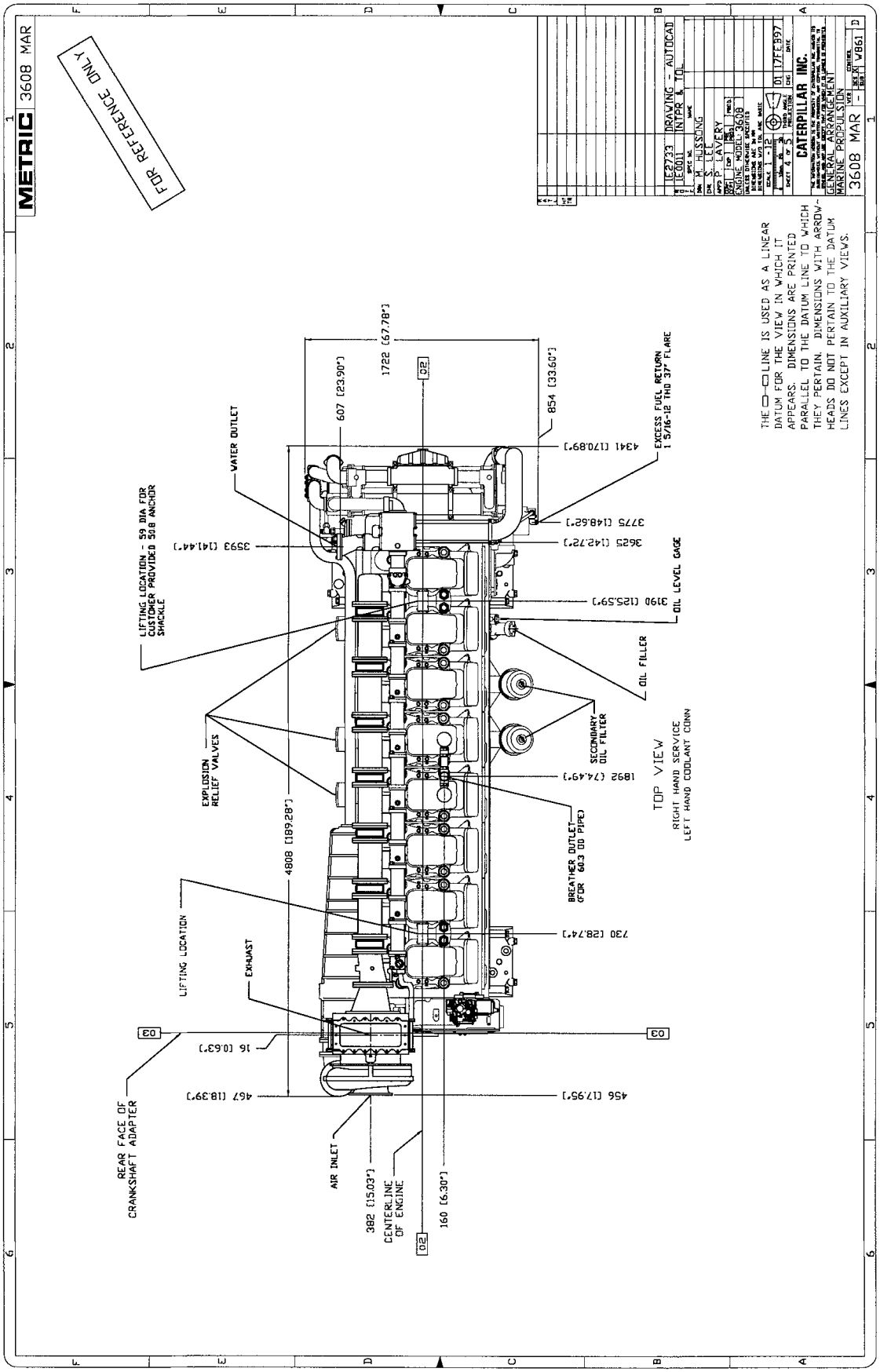

METRIC 3606MAR
FOR REFERENCE ONLY
DRAWING - AUTOCAD
INTPR & TOL
1E2723
1E0001
M. HUSSONG
S. LEE
P. LAVERY
CATERPILLAR INC.
3606MAR
3606 MARINE PROPULSION
GENERAL ARRANGEMENT
TOP VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
1722 [67.78"]
607 [23.89"]
844 [33.23"]
CENTERLINE OF ENGINE
02
3521 [138.61"]
EXCESS FUEL RETURN 1 5/16-12 THD 37° FLARE
2955 [116.34"]
OIL LEVEL GAUGE
2370 [93.31"]
OIL FILLER
1482 [58.35"]
SECONDARY OIL FILTER
730 [28.74"]
BREATHER OUTLET FOR 60.3 OD PIPE
456 [17.95"]
FRADNT FACE OF CRANKSHAFT ADAPTER
3988 [157.00"]
2773 [109.15"]
WATER OUTLET
LIFTING LOCATION
CRANKCASE EXPLOSION RELIEF VALVE
AIR OUTLET
03
16 [0.63"]
467 [18.39"]
AIR INLET
382 [15.04"]
160 [6.29"]

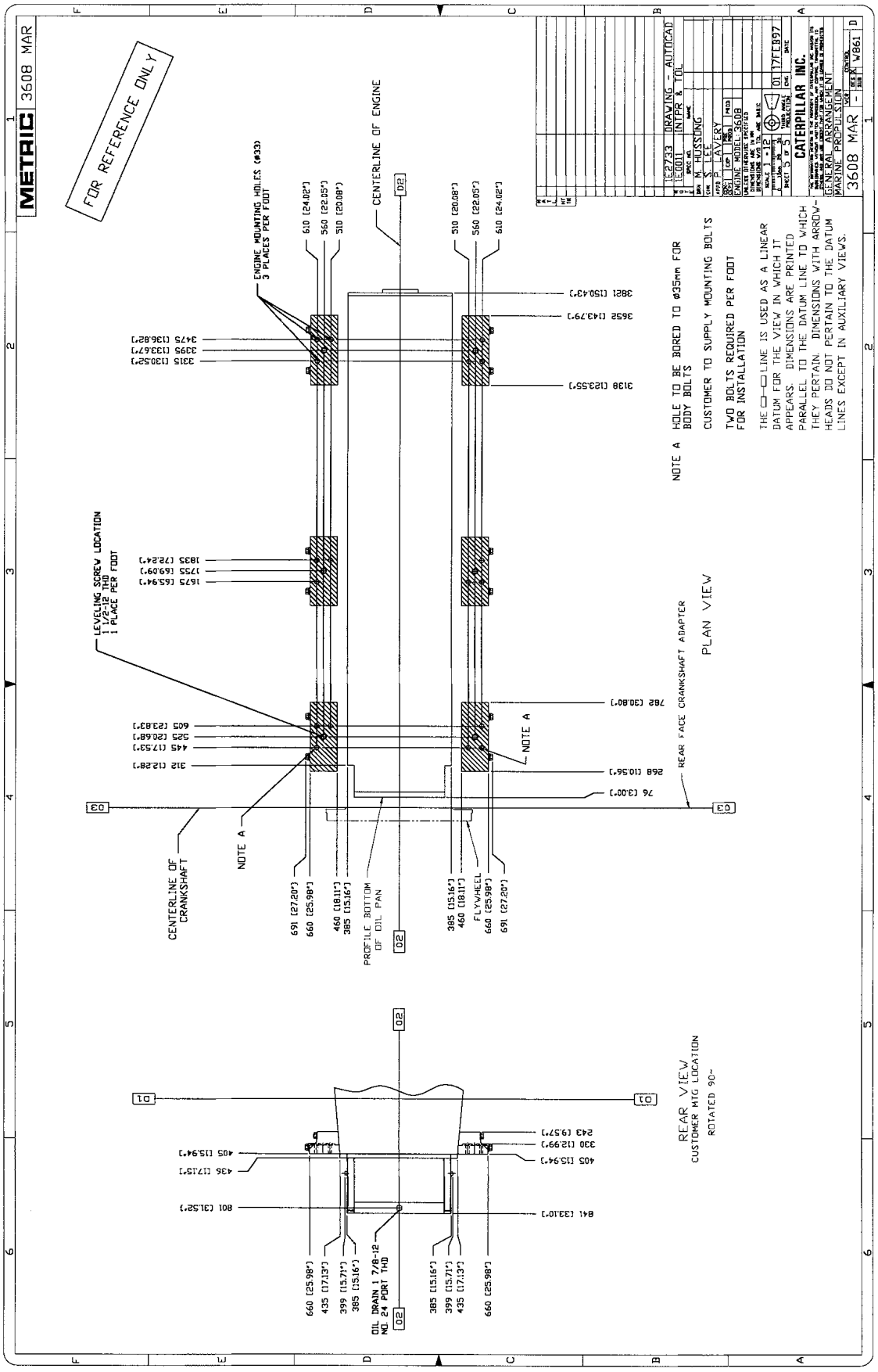

FOR REFERENCE ONLY
METRIC 3606 MAR
PLAN VIEW
REAR VIEW
CUSTOMER MTG LOCATION
ROTATED 90°
ENGINE MOUNTING HOLES (Ø33)
3 PLACES PER FOOT
CENTERLINE OF ENGINE
LEVELING SCREW LOCATION
1 1/2-12 THD
1 PLACE PER FOOT
REAR FACE CRANKSHAFT ADAPTER
PROFILE OF BOTTOM OF OIL PAN
FLYWHEEL
OIL DRAIN
NOTE A HOLE TO BE BORED OUT TO Ø35mm FOR BODY BOLT
CUSTOMER TO SUPPLY MOUNTING BOLTS
TWO BOLTS REQUIRED PER FOOT FOR INSTALLATION
THE ▭—▭ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
DRAWING — AUTOCAD
CATERPILLAR INC.
GENERAL ARRANGEMENT
3606 MARINE PROPULSION
3606 MAR

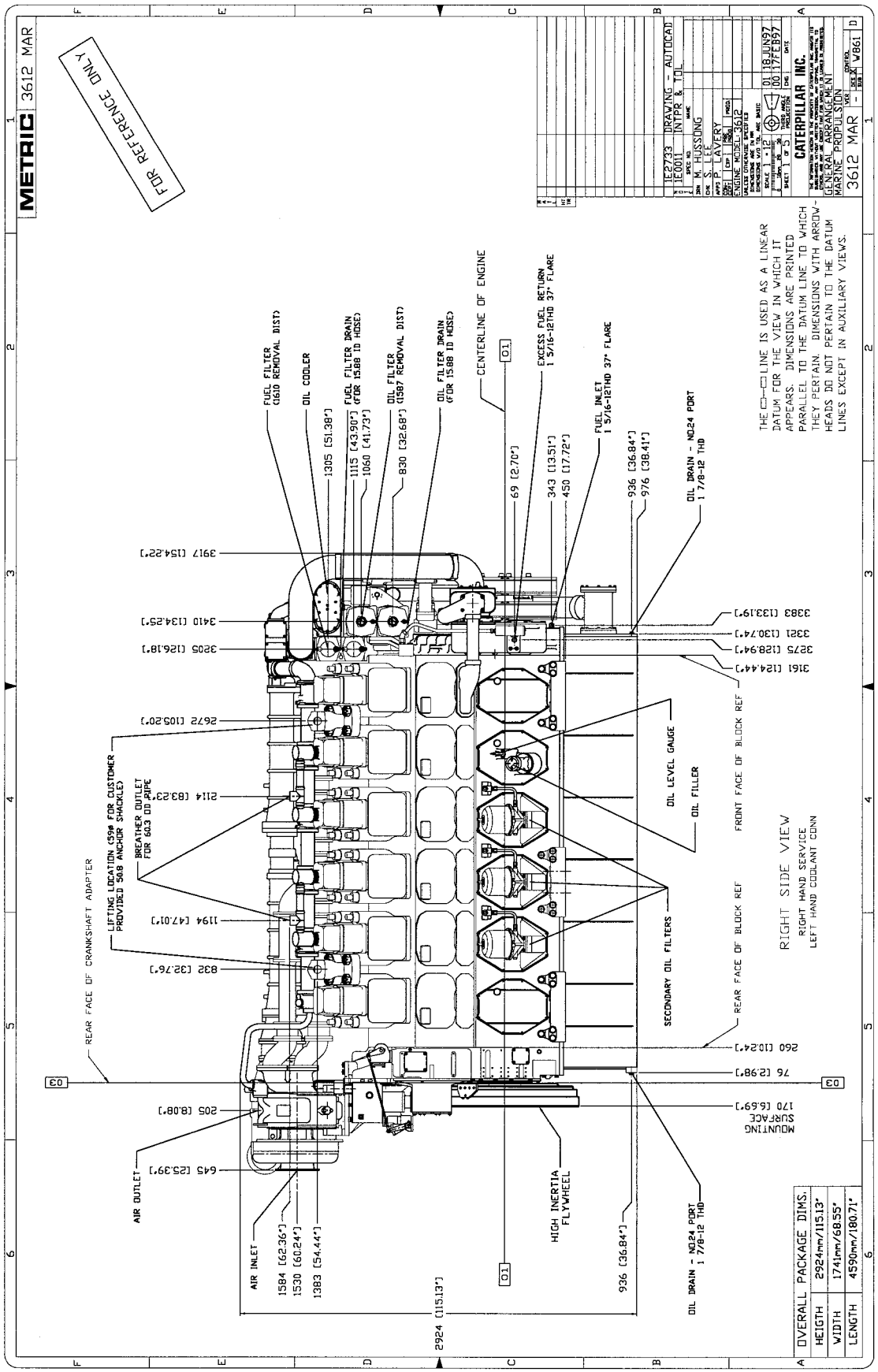

METRIC 3608 MAR
FOR REFERENCE ONLY
RIGHT SIDE VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE ⌀—⌀ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
CATERPILLAR INC.
GENERAL ARRANGEMENT
MARINE PROPULSION
3608 MAR
DRAWING - AUTOCAD
INTPR & TOL
M. HUSSONG
S. LEE
P. AVERY
FUEL FILTER (1610 REMOVAL DIST.)
OIL COOLER
FUEL FILTER DRAIN (FOR 1588 ID HOSE)
OIL FILTER (1587 REMOVAL DIST.)
OILFILTER DRAIN (FOR 1588 ID HOSE)
CENTERLINE OF CRANKSHAFT
EXCESS FUEL RETURN 1 5/16-12 THD 37° FLARE
FUEL INLET 1 5/16-12 THD 37° FLARE
OIL DRAIN 1 7/8-12 NO. 24 PORT THD
LIFTING LOCATION - 59 DIA FOR CUSTOMER PROVIDED 50.8 ANCHOR SHACKLE
BREATHER OUTLET FOR 60.3 OD PIPE
LIFTING LOCATION
OIL LEVEL GAGE
FRONT FACE OF BLOCK REF
OIL FILLER
SECONDARY OIL FILTER
REAR FACE OF BLOCK REF
MOUNTING SURFACE
HIGH INERTIA FLYWHEEL
EXHAUST
AIR INLET
REAR FACE OF CRANKSHAFT ADAPTER
OIL DRAIN 1 7/8-12 NO. 24 PORT THD
2626 [103.39"]
OVERALL PACKAGE DIMS.
HEIGTH 1722mm/67.78"
WIDTH 2626mm/103.39"
LENGTH 4808mm/189.28"

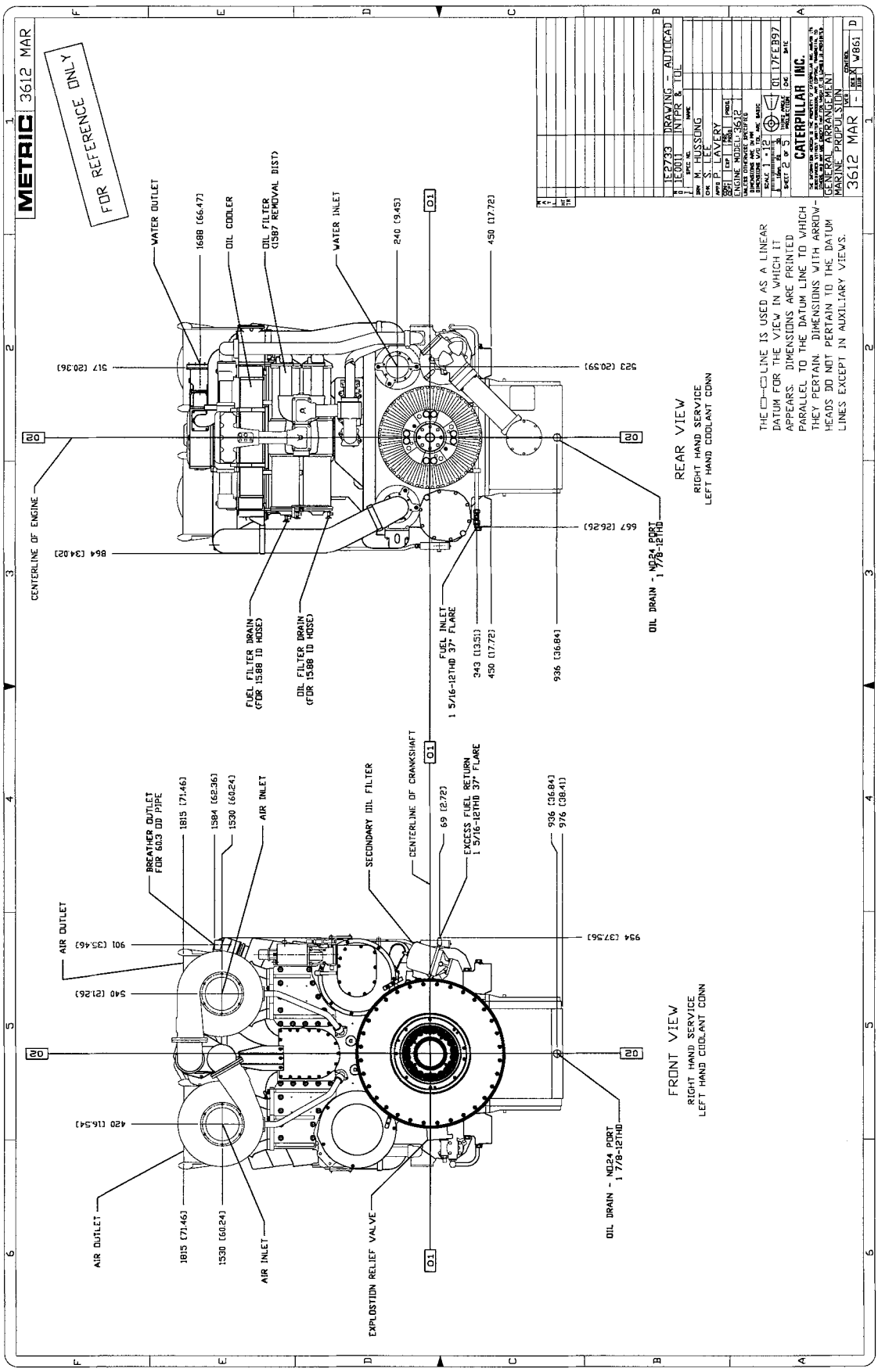

METRIC 3608 MAR
FOR REFERENCE ONLY
CENTERLINE OF CRANKSHAFT
WATER OUTLET
WATER INLET
1677 [66.03]
240 [9.45]
450 [17.72]
607 [23.90]
523 [20.59]
150 [5.91]
750 [29.53]
658 [25.92]
CENTER OF ENGINE
OIL COOLER
OIL FILTER (1587 REMOVAL DIST)
343 [13.51]
450 [17.72]
FUEL INLET 1 5/16-12THD 37° FLARE
797 [31.37]
OIL DRAIN - M28 PORT 1 7/8-12 THD
FRONT VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE ⊏—⊐ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROWHEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
1785 [70.28]
BREATHER OUTLET FOR 60.3 OD PIPE
FUEL FILTER (1610 REMOVAL DIST)
FUEL FILTER DRAIN (FOR 150 ID HOSE)
SECONDARY OIL FILTER
EXCESS FUEL RETURN 1 5/16-12THD 37° FLARE
69 [2.70]
801 [31.52]
841 [33.10]
845 [33.25]
160 [6.30]
AIR INLET
382 [15.03]
1665 [65.55]
1380 [54.33]
CRANKCASE EXPLOSION RELIEF VALVE
REAR VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
CATERPILLAR INC.
GENERAL ARRANGEMENT
MARINE PROPULSION
3608 MAR
DRAWING - AUTOCAD
INTPR & TOL
M. HUSSONG
S. LEE
P. AVERY
01 17FEB97

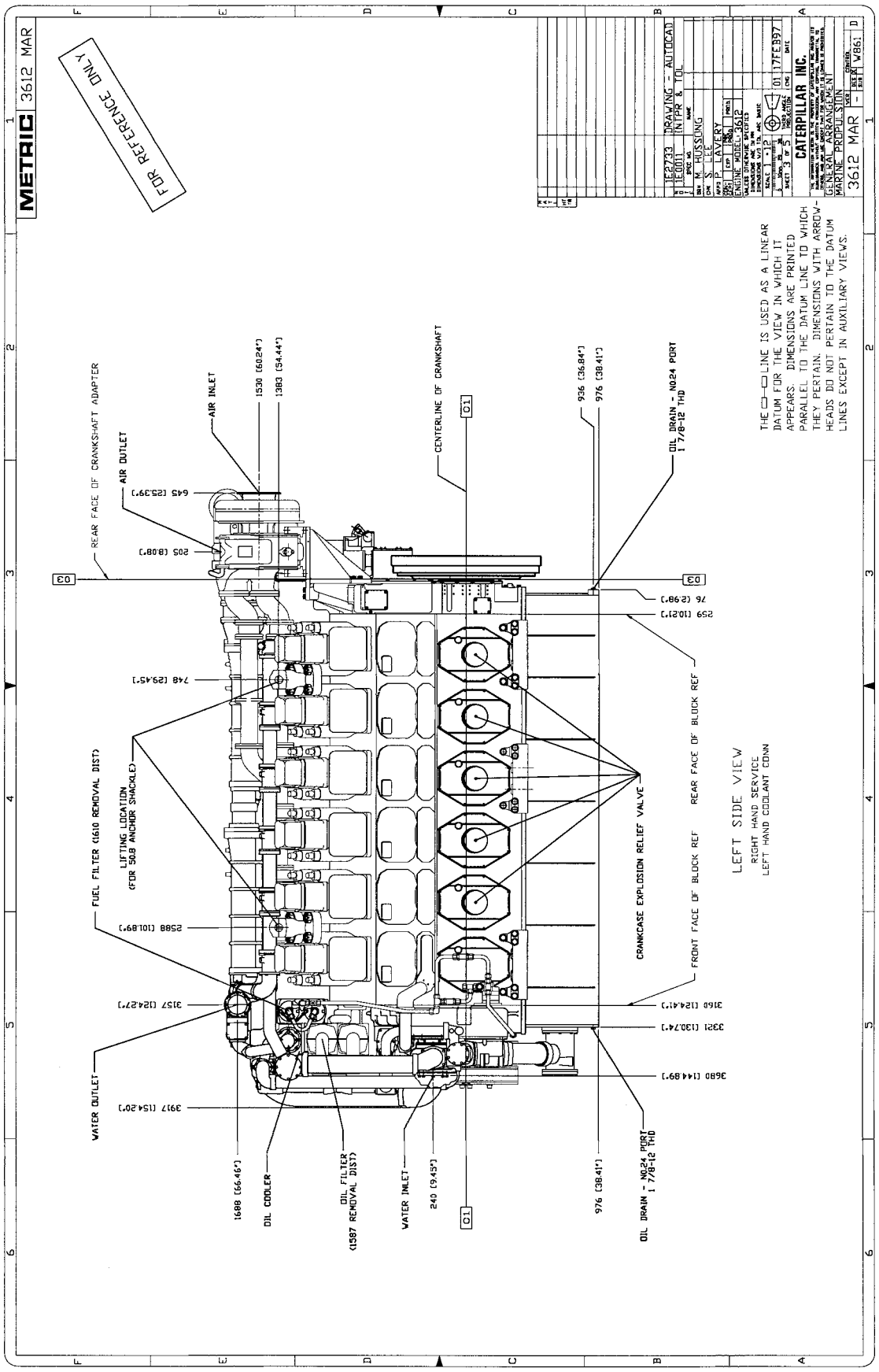

METRIC
3608 MAR
FOR REFERENCE ONLY
CATERPILLAR INC.
3608 MAR
MARINE PROPULSION
GENERAL ARRANGEMENT
LEFT SIDE VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROWHEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
AIR INLET SHUT-OFF
AIR INLET
CENTERLINE OF CRANKSHAFT
OIL DRAIN 1 7/8-12 NO. 24 PORT THD
EXHAUST
LIFTING LOCATION
REAR FACE OF CRANKSHAFT ADAPTER
REAR FACE OF BLOCK REF
BREATHER OUTLET (FOR 60.3 OD PIPE)
EXPLOSION RELIEF VALVE
FRONT FACE OF BLOCK REF
LIFTING LOCATION - 59 DIA FOR CUSTOMER PROVIDED 50t ANCHOR SHACKLE
WATER OUTLET
FUEL FILTER (1610 REMOVAL DIST)
OIL COOLER
OIL FILTER (1587 REMOVAL DIST)
WATER INLET
D1
D3

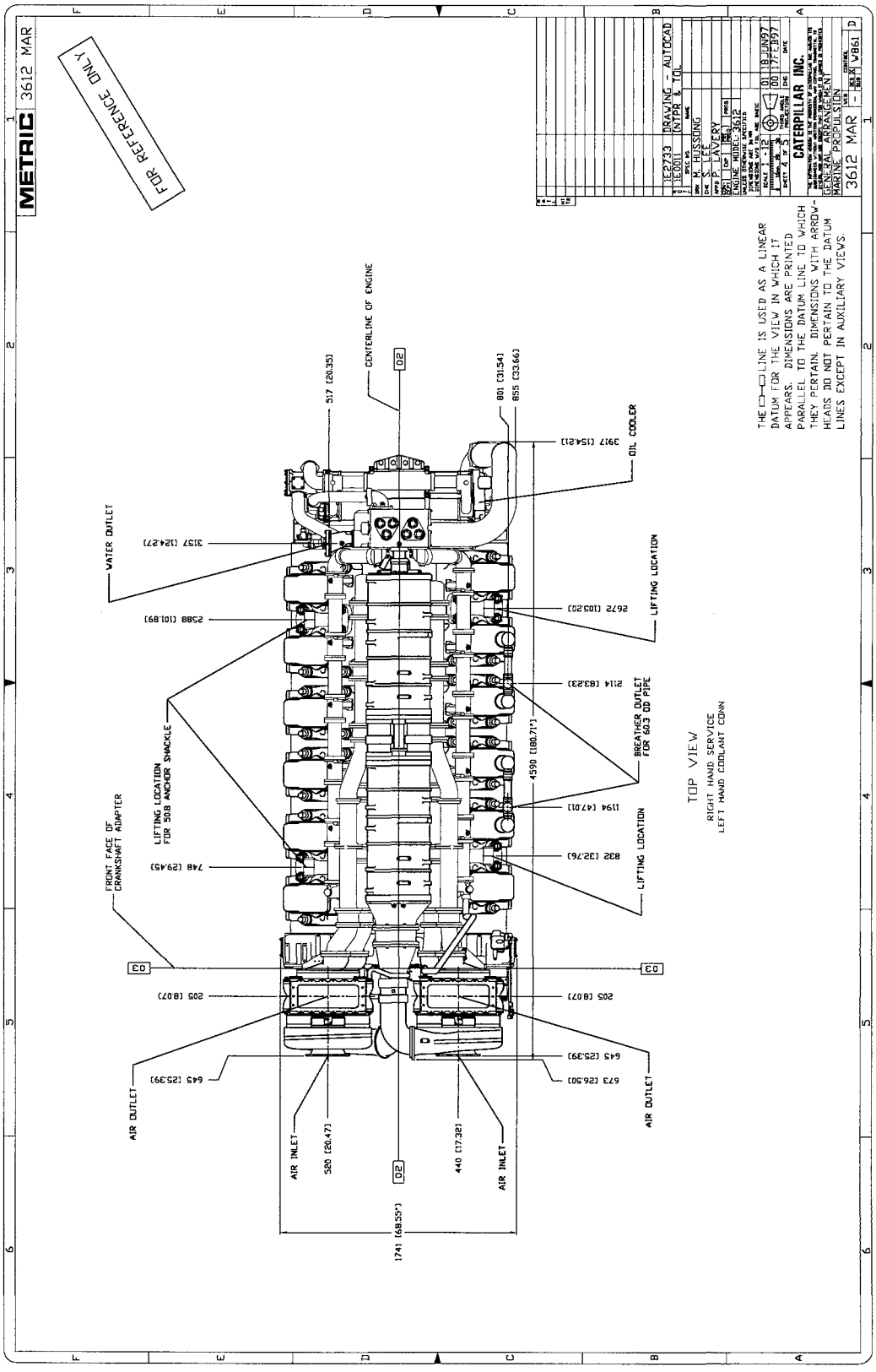

METRIC 3608 MAR
FOR REFERENCE ONLY
TOP VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
1722 [67.78"]
607 [23.90"]
854 [33.60"]
4341 [170.89"]
3775 [148.62"]
3625 [142.72"]
3593 [141.44"]
3190 [125.59"]
1892 [74.49"]
4808 [189.28"]
730 [28.74"]
456 [17.95"]
467 [18.39"]
16 [0.63"]
382 [15.03"]
160 [6.30"]
WATER OUTLET
EXCESS FUEL RETURN 1 5/16-12 THD 37° FLARE
OIL LEVEL GAGE
OIL FILLER
SECONDARY OIL FILTER
BREATHER OUTLET (FOR 60.3 OD PIPE)
EXPLOSION RELIEF VALVES
LIFTING LOCATION - 59 DIA FOR CUSTOMER PROVIDED 50t ANCHOR SHACKLE
LIFTING LOCATION
EXHAUST
REAR FACE OF CRANKSHAFT ADAPTER
AIR INLET
CENTERLINE OF ENGINE
THE ⊏—⊐ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
CATERPILLAR INC.
GENERAL ARRANGEMENT
MARINE PROPULSION
3608 MAR
DRAWING - AUTOCAD
INTPR & TOL
M. HUSSONG
S. LEE
P. LAVERY
17FEB97

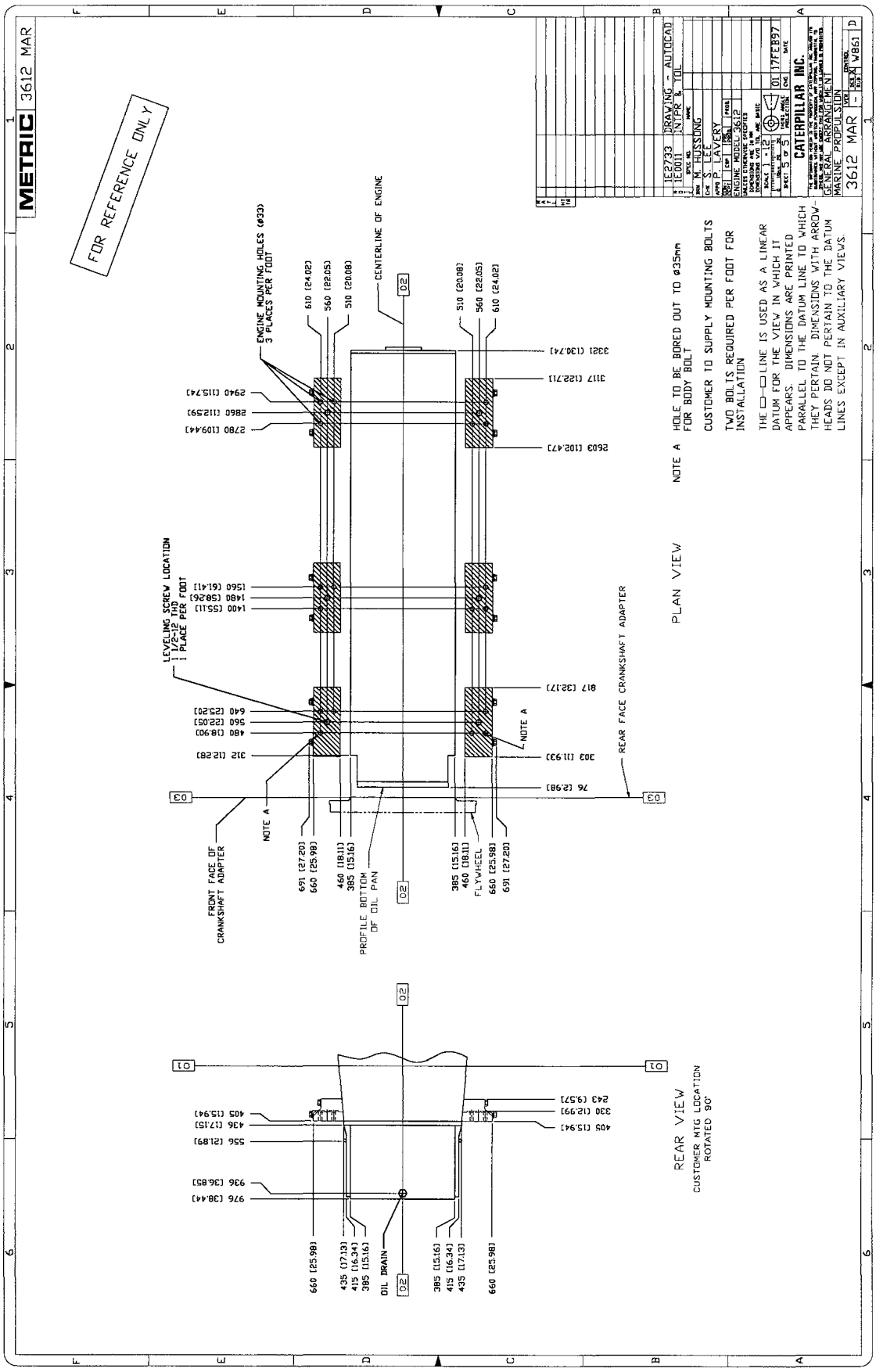

METRIC 3608 MAR
FOR REFERENCE ONLY
CENTERLINE OF ENGINE
ENGINE MOUNTING HOLES (ø33) 3 PLACES PER FOOT
LEVELING SCREW LOCATION 1 1/2-12 THD 1 PLACE PER FOOT
NOTE A HOLE TO BE BORED TO ø35mm FOR BODY BOLTS
CUSTOMER TO SUPPLY MOUNTING BOLTS
TWO BOLTS REQUIRED PER FOOT FOR INSTALLATION
THE □—□ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROWHEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
PLAN VIEW
REAR FACE CRANKSHAFT ADAPTER
CENTERLINE OF CRANKSHAFT
PROFILE BOTTOM OF OIL PAN
FLYWHEEL
REAR VIEW
CUSTOMER MTG LOCATION
ROTATED 90-
OIL DRAIN 1 7/8-12 NO. 24 PORT THD
CATERPILLAR INC.
3608 MARINE PROPULSION
GENERAL ARRANGEMENT
3608 MAR

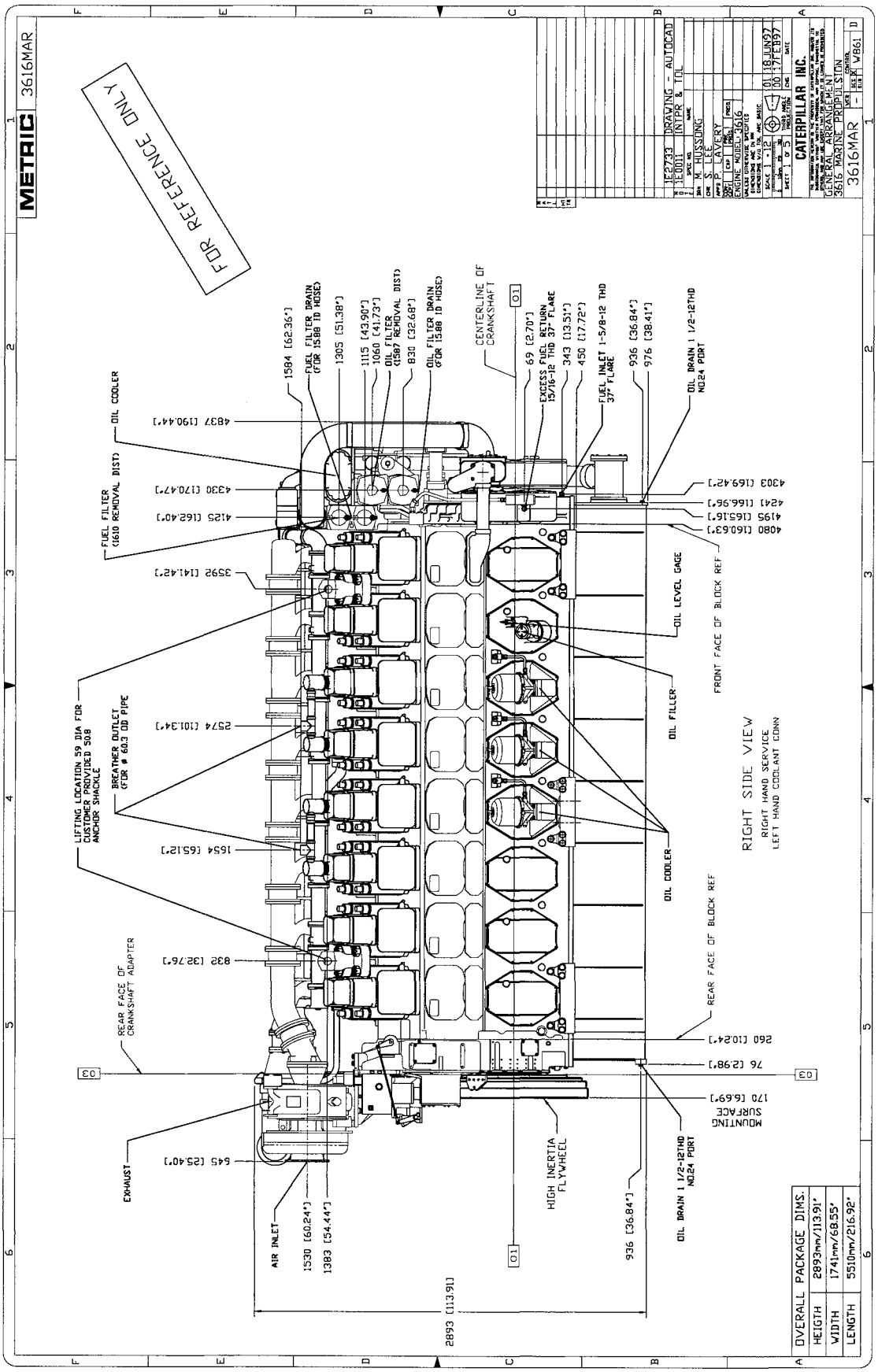

METRIC 3612 MAR
FOR REFERENCE ONLY
RIGHT SIDE VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE ℄—℄LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
CATERPILLAR INC.
3612 MAR - V861
MARINE PROPULSION
ENGINE MODEL 3612
DRAWING - AUTOCAD
INTPR & TOL
M. HUSSONG
S. LAVERY
P
01 18JUN97
00 17FEB97
1E2733
1E0011
CENTERLINE OF ENGINE
FUEL FILTER (660 REMOVAL DIST)
OIL COOLER
FUEL FILTER DRAIN (FOR 15.88 ID HOSE)
OIL FILTER (587 REMOVAL DIST)
OIL FILTER DRAIN (FOR 15.88 ID HOSE)
EXCESS FUEL RETURN 1 5/16-12THD 37° FLARE
FUEL INLET 1 5/16-12THD 37° FLARE
OIL DRAIN - NO24 PORT 1 7/8-12 THD
BREATHER OUTLET FOR 60.3 OD PIPE
LIFTING LOCATION (590 FOR CUSTOMER PROVIDED 50.8 ANCHOR SHACKLE)
REAR FACE OF CRANKSHAFT ADAPTER
OIL LEVEL GAUGE
OIL FILLER
FRONT FACE OF BLOCK REF
REAR FACE OF BLOCK REF
SECONDARY OIL FILTERS
MOUNTING SURFACE
HIGH INERTIA FLYWHEEL
AIR OUTLET
AIR INLET
OVERALL PACKAGE DIMS.
HEIGTH 2924mm/115.13"
WIDTH 1741mm/68.55"
LENGTH 4590mm/180.71"

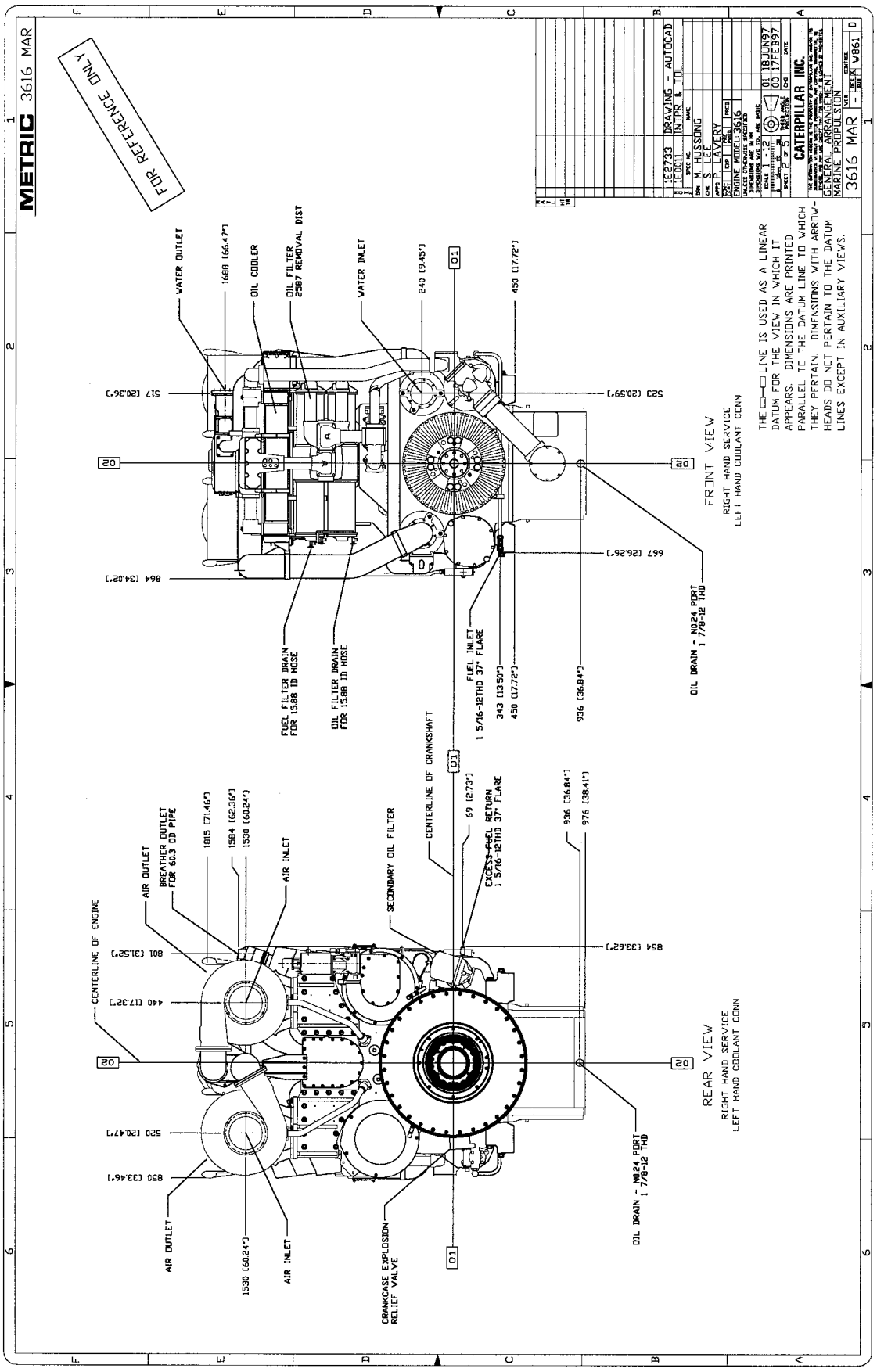

METRIC 3612 MAR
FOR REFERENCE ONLY
WATER OUTLET
1688 [66.47]
OIL COOLER
OIL FILTER (1587 REMOVAL DIST)
WATER INLET
240 [9.45]
450 [17.72]
517 [20.36]
523 [20.59]
CENTERLINE OF ENGINE
864 [34.02]
667 [26.26]
FUEL FILTER DRAIN (FOR 15.88 ID HOSE)
OIL FILTER DRAIN (FOR 15.88 ID HOSE)
FUEL INLET 1 5/16-12THD 37° FLARE
343 [13.51]
450 [17.72]
936 [36.84]
OIL DRAIN - ND24 PORT 1 7/8-12THD
REAR VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE ⊏-⊐ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
BREATHER OUTLET FOR 60.3 OD PIPE
1815 [71.46]
1584 [62.36]
1530 [60.24]
AIR INLET
SECONDARY OIL FILTER
CENTERLINE OF CRANKSHAFT
69 [2.72]
EXCESS FUEL RETURN 1 5/16-12THD 37° FLARE
936 [36.84]
976 [38.41]
AIR OUTLET
901 [35.46]
954 [37.56]
540 [21.26]
420 [16.54]
AIR OUTLET
1815 [71.46]
1530 [60.24]
AIR INLET
EXPLOSION RELIEF VALVE
OIL DRAIN - ND24 PORT 1 7/8-12THD
FRONT VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
1E2733 DRAWING - AUTOCAD
1E0011 INTPR & TOL
DRN M. HUSSONG
CHK S. LEE
APPD P. LAVERY
17FEB97
CATERPILLAR INC.
GENERAL ARRANGEMENT
MARINE PROPULSION
3612 MAR
W861

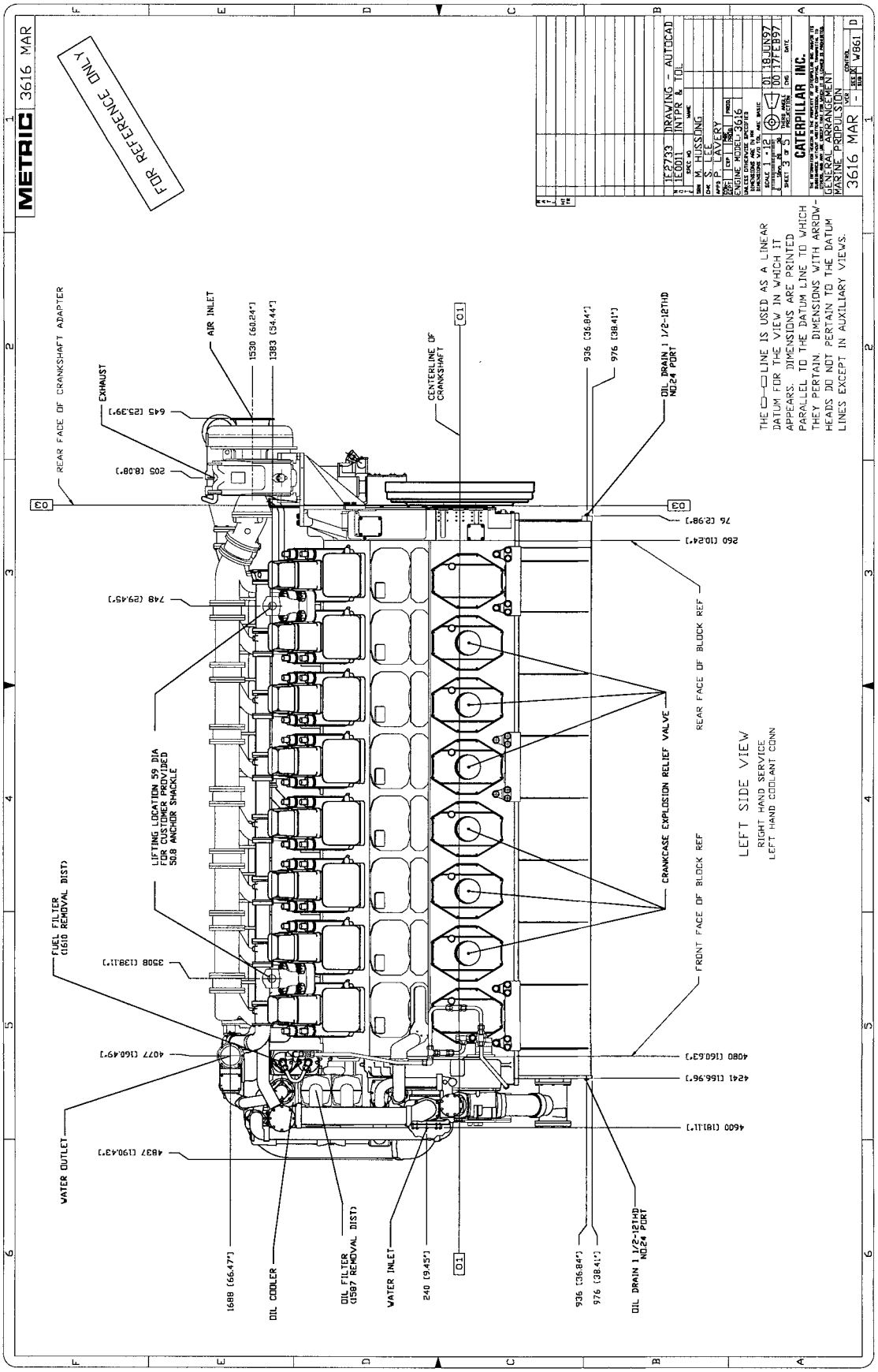

METRIC 3612 MAR
FOR REFERENCE ONLY
CATERPILLAR INC.
3612 MAR
DRAWING - AUTOCAD
(NTPR & TOL)
GENERAL ARRANGEMENT
MARINE PROPULSION
REAR FACE OF CRANKSHAFT ADAPTER
AIR OUTLET
AIR INLET
CENTERLINE OF CRANKSHAFT
OIL DRAIN - N024 PORT 1 7/8-12 THD
FUEL FILTER (1610 REMOVAL DIST)
LIFTING LOCATION (FOR 50.8 ANCHOR SHACKLE)
CRANKCASE EXPLOSION RELIEF VALVE
REAR FACE OF BLOCK REF
FRONT FACE OF BLOCK REF
WATER OUTLET
OIL COOLER
OIL FILTER (1587 REMOVAL DIST)
WATER INLET
LEFT SIDE VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROWHEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.

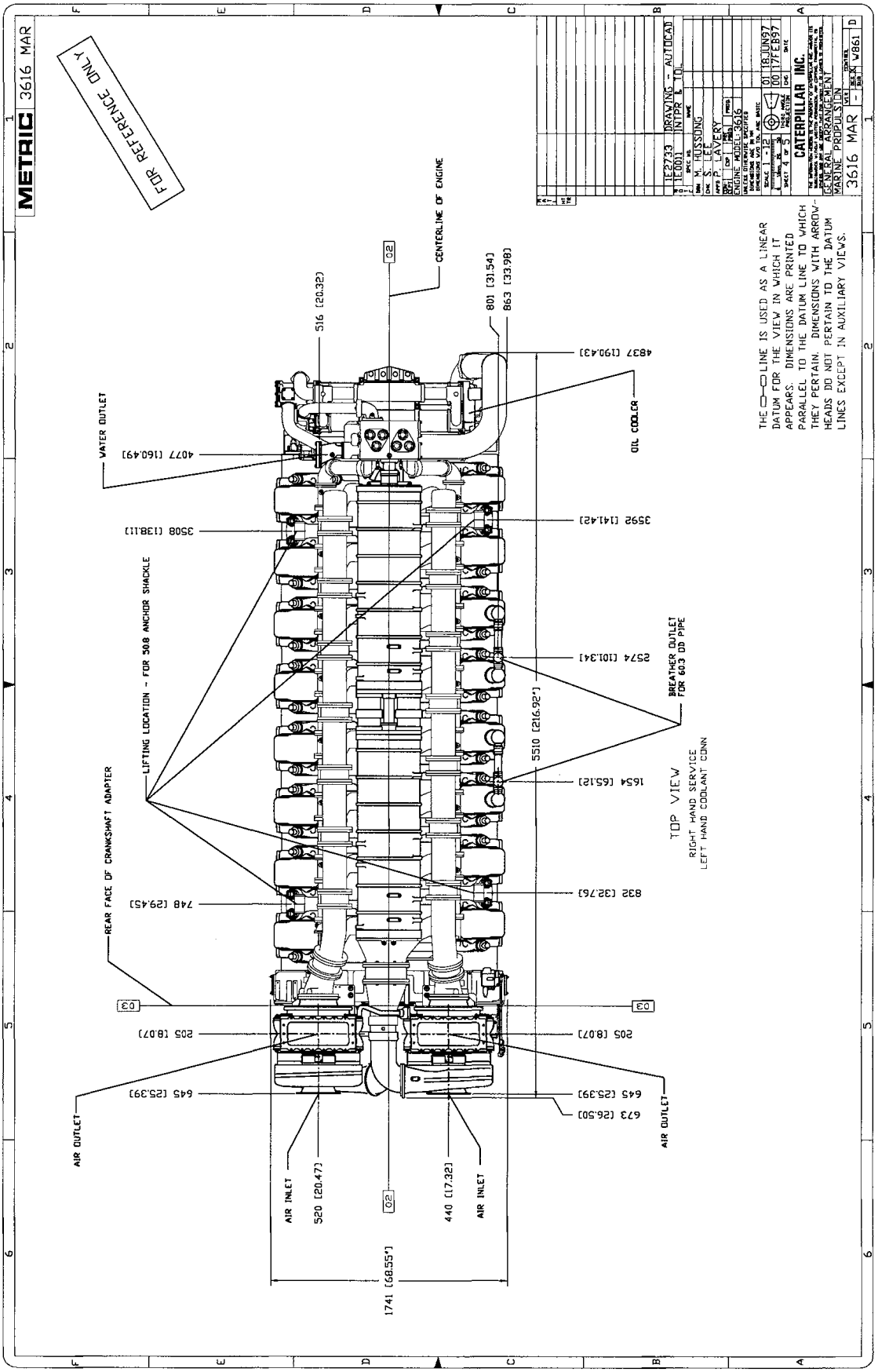

METRIC 3612 MAR
FOR REFERENCE ONLY
CENTERLINE OF ENGINE
02
517 (20.35)
801 (31.54)
855 (33.66)
3917 (154.21)
OIL COOLER
WATER OUTLET
3157 (124.27)
2588 (101.89)
LIFTING LOCATION
2672 (105.20)
2114 (83.23)
BREATHER OUTLET
FOR 60.3 OD PIPE
4590 (180.71)
1194 (47.01)
LIFTING LOCATION
832 (32.76)
748 (29.45)
LIFTING LOCATION
FOR 508 ANCHOR SHACKLE
FRONT FACE OF
CRANKSHAFT ADAPTER
03
205 (8.07)
205 (8.07)
645 (25.39)
645 (25.39)
673 (26.50)
AIR OUTLET
AIR OUTLET
AIR INLET
AIR INLET
520 (20.47)
440 (17.32)
1741 (68.55")
TOP VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE ⊏▷ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
1E2733 DRAWING - AUTOCAD
1E0011 (NTPR & TOL
DRN M. HUSSONG
CHK S. LEE
APVD P. LAVERY
ENGINE MODEL 3612
01 18JUN97
00 17FEB97
CATERPILLAR INC.
MARINE PROPULSION
3612 MAR - 1 W861

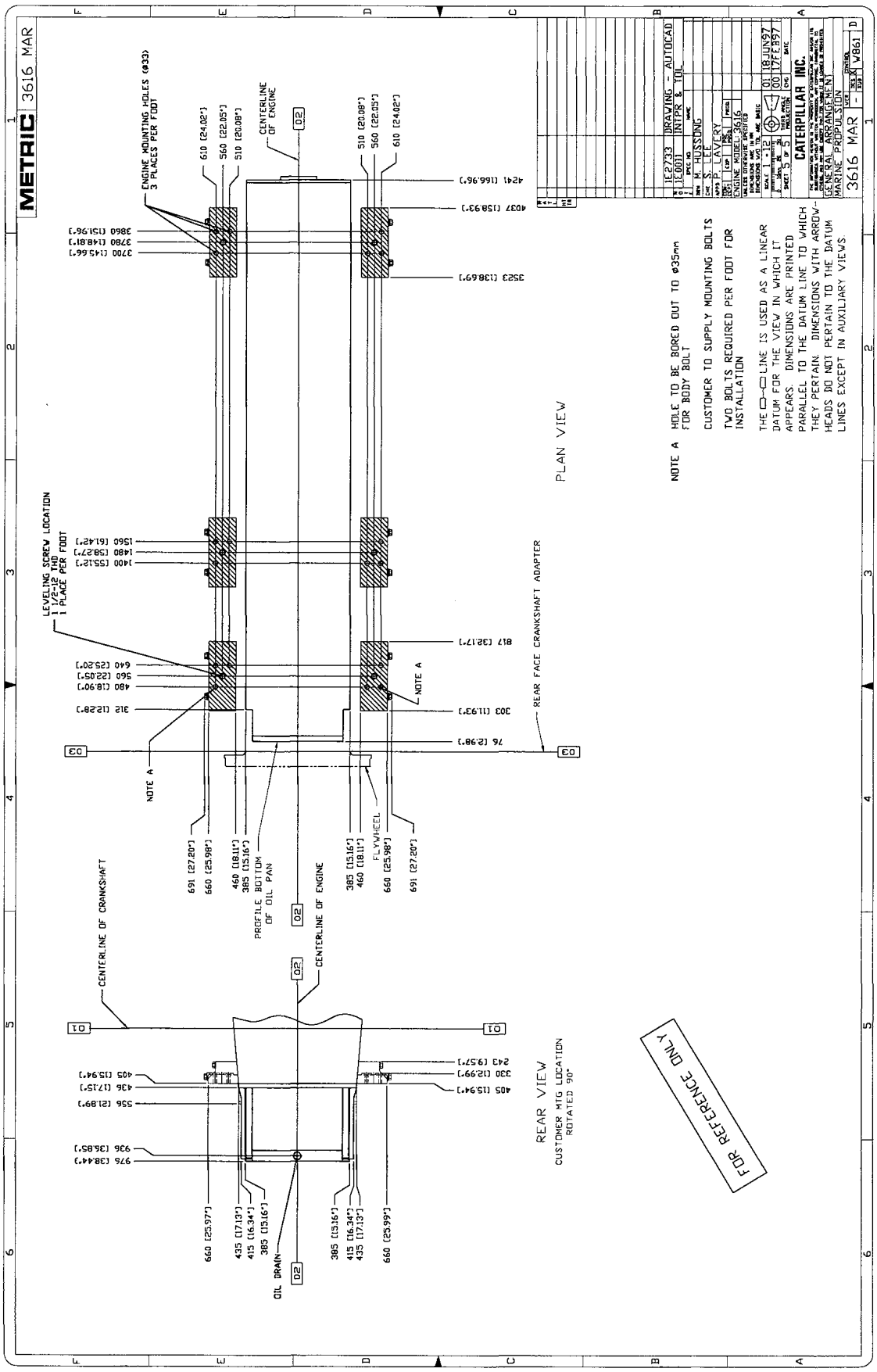

METRIC 3612 MAR
FOR REFERENCE ONLY
ENGINE MOUNTING HOLES (ø33)
3 PLACES PER FOOT
CENTERLINE OF ENGINE
610 (24.02)
560 (22.05)
510 (20.08)
3321 (130.74)
3117 (122.71)
2603 (102.47)
2940 (115.74)
2860 (112.59)
2780 (109.44)
LEVELING SCREW LOCATION
1 1/2-12 THD
1 PLACE PER FOOT
1560 (61.41)
1480 (58.26)
1400 (55.11)
817 (32.17)
640 (25.20)
560 (22.05)
480 (18.90)
312 (12.28)
303 (11.93)
76 (2.98)
NOTE A
REAR FACE CRANKSHAFT ADAPTER
FRONT FACE OF
CRANKSHAFT ADAPTER
691 (27.20)
660 (25.98)
460 (18.11)
385 (15.16)
PROFILE BOTTOM
OF OIL PAN
FLYWHEEL
PLAN VIEW
NOTE A HOLE TO BE BORED OUT TO ø35mm
FOR BODY BOLT
CUSTOMER TO SUPPLY MOUNTING BOLTS
TWO BOLTS REQUIRED PER FOOT FOR
INSTALLATION
THE □—□ LINE IS USED AS A LINEAR
DATUM FOR THE VIEW IN WHICH IT
APPEARS. DIMENSIONS ARE PRINTED
PARALLEL TO THE DATUM LINE TO WHICH
THEY PERTAIN. DIMENSIONS WITH ARROW-
HEADS DO NOT PERTAIN TO THE DATUM
LINES EXCEPT IN AUXILIARY VIEWS.
1E2733 DRAWING - AUTOCAD
1E0011 INTPR & TOL
M. HUSSONG
S. LEE
P. LAVERY
CATERPILLAR INC.
GENERAL ARRANGEMENT
MARINE PROPULSION
3612 MAR
W861
405 (15.94)
436 (17.15)
556 (21.89)
936 (36.85)
976 (38.44)
330 (12.99)
243 (9.57)
435 (17.13)
415 (16.34)
385 (15.16)
DIL DRAIN
REAR VIEW
CUSTOMER MTG LOCATION
ROTATED 90°


FOR REFERENCE ONLY
METRIC
3616MAR
RIGHT SIDE VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
FRONT FACE OF BLOCK REF
REAR FACE OF BLOCK REF
REAR FACE OF CRANKSHAFT ADAPTER
CENTERLINE OF CRANKSHAFT
OIL COOLER
OIL FILTER (1610 REMOVAL DIST)
FUEL FILTER DRAIN (FOR 15.88 ID HOSE)
OIL FILTER (1587 REMOVAL DIST)
OIL FILTER DRAIN (FOR 15.88 ID HOSE)
EXCESS FUEL RETURN 15/16-12 THD 37° FLARE
FUEL INLET 1-5/8-12 THD 37° FLARE
OIL DRAIN 1 1/2-12THD M124 PORT
OIL LEVEL GAGE
OIL FILLER
BREATHER OUTLET (FOR ø 60.3 OD PIPE
LIFTING LOCATION 59 DIA FOR CUSTOMER PROVIDED 50t ANCHOR SHACKLE
EXHAUST
AIR INLET
HIGH INERTIA FLYWHEEL
MOUNTING SURFACE
1584 [62.36"]
1305 [51.38"]
1115 [43.90"]
1060 [41.73"]
830 [32.68"]
69 [2.70"]
343 [13.51"]
450 [17.72"]
936 [36.84"]
976 [38.41"]
4837 [190.44"]
4330 [170.47"]
4125 [162.40"]
4303 [169.42"]
4241 [166.96"]
4195 [165.16"]
4080 [160.63"]
3592 [141.42"]
2574 [101.34"]
1654 [65.12"]
832 [32.76"]
260 [10.24"]
76 [2.98"]
170 [6.69"]
645 [25.40"]
1530 [60.24"]
1383 [54.44"]
936 [36.84"]
2893 [113.91"]
OVERALL PACKAGE DIMS.
HEIGTH 2893mm/113.91"
WIDTH 1741mm/68.55"
LENGTH 5510mm/216.92"
CATERPILLAR INC.
3616 MARINE PROPULSION
GENERAL ARRANGEMENT
3616MAR
DRAWING - AUTOCAD
INTPR & TOL
M. HUSSONG
S. LEE
S. AVERY
ENGINE MODEL 3616
SCALE 1 - 12
SHEET 1 OF 5
01 18JUN97
00 17FEB97


METRIC 3616 MAR
FOR REFERENCE ONLY
WATER OUTLET
1698 [66.47"]
OIL COOLER
OIL FILTER 2587 REMOVAL DIST
WATER INLET
240 [9.45"]
450 [17.72"]
517 [20.36"]
523 [20.59"]
667 [26.26"]
864 [34.02"]
FUEL FILTER DRAIN FOR 15.88 ID HOSE
OIL FILTER DRAIN FOR 15.88 ID HOSE
FUEL INLET 1 5/16-12THD 37° FLARE
343 [13.50"]
450 [17.72"]
936 [36.84"]
OIL DRAIN - M24 PORT 1 7/8-12 THD
FRONT VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE ⊏⊐ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROWHEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
CENTERLINE OF ENGINE
AIR OUTLET
BREATHER OUTLET FOR 60.3 OD PIPE
1815 [71.46"]
1584 [62.36"]
1530 [60.24"]
AIR INLET
SECONDARY OIL FILTER
CENTERLINE OF CRANKSHAFT
69 [2.73"]
EXCESS FUEL RETURN 1 5/16-12THD 37° FLARE
936 [36.84"]
976 [38.41"]
801 [31.52"]
854 [33.62"]
440 [17.32"]
520 [20.47"]
850 [33.46"]
AIR OUTLET
1530 [60.24"]
AIR INLET
CRANKCASE EXPLOSION RELIEF VALVE
OIL DRAIN - M24 PORT 1 7/8-12 THD
REAR VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
1E2733 DRAWING - AUTOCAD
1E0011 INTPR & TOL
DRN M. HUSSONG
CHK S. LEE
APPD P. LAVERY
ENGINE MODEL 3616
SCALE 1 : 12
SHEET 2 OF 5
CATERPILLAR INC.
GENERAL ARRANGEMENT
MARINE PROPULSION
3616 MAR
01 18JUN97
00 17FEB97


METRIC 3616 MAR
FOR REFERENCE ONLY
DRAWING - AUTOCAD
CATERPILLAR INC.
3616 MAR
GENERAL ARRANGEMENT
MARINE PROPULSION
LEFT SIDE VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
THE ⊏— LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
REAR FACE OF CRANKSHAFT ADAPTER
EXHAUST
AIR INLET
1530 [60.24"]
1383 [54.44"]
645 [25.39"]
205 [8.08"]
CENTERLINE OF CRANKSHAFT
936 [36.84"]
976 [38.41"]
OIL DRAIN 1 1/2-12THD NO.24 PORT
76 [2.98"]
260 [10.24"]
748 [29.45"]
REAR FACE OF BLOCK REF
CRANKCASE EXPLOSION RELIEF VALVE
LIFTING LOCATION 59 DIA FOR CUSTOMER PROVIDED 50.8 ANCHOR SHACKLE
FUEL FILTER (1610 REMOVAL DIST)
3508 [138.11"]
FRONT FACE OF BLOCK REF
4077 [160.49"]
4080 [160.63"]
4241 [166.96"]
4600 [181.11"]
WATER OUTLET
4837 [190.43"]
1688 [66.47"]
OIL COOLER
OIL FILTER (1587 REMOVAL DIST)
WATER INLET
240 [9.45"]
936 [36.84"]
976 [38.41"]
OIL DRAIN 1 1/2-12THD NO.24 PORT


METRIC 3616 MAR
FOR REFERENCE ONLY
CENTERLINE OF ENGINE
516 [20.32]
801 [31.54]
863 [33.98]
4837 [190.43]
OIL COOLER
WATER OUTLET
4077 [160.49]
3508 [138.11]
3592 [141.42]
LIFTING LOCATION - FOR 508 ANCHOR SHACKLE
2574 [101.34]
BREATHER OUTLET FOR 603 OD PIPE
5510 [216.92"]
1654 [65.12]
TOP VIEW
RIGHT HAND SERVICE
LEFT HAND COOLANT CONN
REAR FACE OF CRANKSHAFT ADAPTER
748 [29.45]
832 [32.76]
205 [8.07]
205 [8.07]
645 [25.39]
673 [26.50]
645 [25.39]
AIR OUTLET
AIR OUTLET
AIR INLET
520 [20.47]
440 [17.32]
AIR INLET
1741 [68.55"]
THE ⊐—□ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROWHEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
CATERPILLAR INC.
3616 MAR
MARINE PROPULSION
GENERAL ARRANGEMENT
DRAWING - AUTOCAD
SCALE 1 - 12
SHEET 4 OF 5
01 18JUN97
00 17FEB97


METRIC 3616 MAR
ENGINE MOUNTING HOLES (Ø33) 3 PLACES PER FOOT
610 [24.02"]
560 [22.05"]
510 [20.08"]
CENTERLINE OF ENGINE
4241 [166.96"]
4037 [158.93"]
3860 [151.96"]
3780 [148.81"]
3700 [145.66"]
3523 [138.69"]
LEVELING SCREW LOCATION 1 1/2"-12 UNF-2B 1 PLACE PER FOOT
1560 [61.42"]
1480 [58.27"]
1400 [55.12"]
817 [32.17"]
640 [25.20"]
560 [22.05"]
480 [18.90"]
312 [12.28"]
303 [11.93"]
NOTE A
76 [2.98"]
REAR FACE CRANKSHAFT ADAPTER
PLAN VIEW
691 [27.20"]
660 [25.98"]
460 [18.11"]
385 [15.16"]
PROFILE BOTTOM OF OIL PAN
FLYWHEEL
CENTERLINE OF CRANKSHAFT
CENTERLINE OF ENGINE
243 [9.57"]
330 [12.99"]
405 [15.94"]
436 [17.17"]
556 [21.89"]
936 [36.85"]
976 [38.44"]
415 [16.34"]
435 [17.13"]
OIL DRAIN
REAR VIEW
CUSTOMER MTG LOCATION ROTATED 90°
NOTE A HOLE TO BE BORED OUT TO Ø35mm FOR BODY BOLT
CUSTOMER TO SUPPLY MOUNTING BOLTS
TWO BOLTS REQUIRED PER FOOT FOR INSTALLATION
THE ⊏—⊐ LINE IS USED AS A LINEAR DATUM FOR THE VIEW IN WHICH IT APPEARS. DIMENSIONS ARE PRINTED PARALLEL TO THE DATUM LINE TO WHICH THEY PERTAIN. DIMENSIONS WITH ARROW-HEADS DO NOT PERTAIN TO THE DATUM LINES EXCEPT IN AUXILIARY VIEWS.
FOR REFERENCE ONLY
CATERPILLAR INC.
GENERAL ARRANGEMENT
3616 MAR - 3516 V861
MARINE PROPULSION

Materials and specifications are
subject to change without notice.

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