AMERIFLO

MODEL
AF6-114C

UL - cUL LISTED RATINGS BHP & KW

ENGINE MODEL:	AF6-114C
EMISSIONS:	TIER 0
DATE:	09/01/2020
DRAWING NUMBER:	AF6-114C.00
PERFORMANCE CURVE NUMBER:	C06114C
RATED POWER:	248 BHP @ 2100 RPM
	185 KW @ 2100 RPM
REFERENCE NUMBER:	14DS001E
VERSION:	A

UL LISTED

GENERAL ENGINE DATA		
TYPE:		4 CYCLE; INLINE; WATER COOLED
NUMBER OF CYLINDERS:		6
ASPIRATION:		TURBOCHARGED + WATER COOLED
BORE & STROKE - IN [MM]:		4.49 x 5.32 [114 x 135]
CYLINDER LINER TYPE:		■ WET ☐ DRY
DISPLACEMENT - IN^3 [L]:		523 [8.27]
COMPRESSION RATIO:		18:01
FIRING ORDER:		1 - 5 - 3 - 6 - 2 - 4
COMBUSTION SYSTEM:		DIRECT INJECTION
ROTATION (AS VIEWED FROM FRONT OF ENGINE):		CCW
VALVES PER CYLINDER:		INTAKE: 1 EXHAUST: 1
VALVE LASH (COLD ENGINE):	INTAKE - IN [MM]:	0.012 [0.30]
	EXHAUST - IN [MM]:	0.032 [0.50]
IGNITION TYPE:		COMPRESSION (DIESEL)
CHARGE AIR COOLING TYPE:		RAW WATER
WEIGHT (FUEL PUMP CONFIGURATION) - LBS [KG]:		2035 [1020]
DIMENSIONS (L x W x H) - IN [MM]:		59 x 38 x 62 [1505 x 960 x 1570]
FLYWHEEL / FLYWHEEL HOUSING DIMENSIONS:		11.50 / SAE #2
TORQUE @ RATED RPM - LB-FT [N-M]:		692 [939]

ENGINE PERFORMANCE DATA		
ESTIMATED FREE FIELD SOUND PRESSURE LEVEL AT 3 FEET [1 METER] WITH FULL-LOAD GOVERNED SPEED (INCLUDES NOISE FROM EXHAUST, COOLING SYSTEM AND DRIVEN COMPONENTS)	dBa	≤ 108
ALL DATA IS BASED ON ENGINE OPERATIONG WITH FUEL SYSTEM, LUBRICATING OIL PUMP, AIR CLEANER AND ALTERNATOR. DOES NOT INCLUDE AIR COMPRESSOR, FAN & OPTIONAL EQUIPMENT. DATA IS BASED ON SAE STANDARD J1349 CONDITIONS AT 300 FEET [91.4 METERS] ALTITUDE, 29.61 INCHES [752 MILLIMETERS] HG DRY BAROMETER AND 77°F [25°C] INTAKE AIR TEMPERATURE USING #0 DIESEL FUEL FOLLOWING THE GB 252-2011 STANDARD.		
ALTITUDE ABOVE WHICH OUTPUT SHOULD BE DERATED:	FEET [METER]	300 [91]
DERATE PER 1,000 FEET [305 METERS] ABOVE ALTITUDE LIMIT:	3%	
TEMPERATURE ABOVE WHICH OUTPUT SHOULD BE DERATED:	°F [°C]	77 [25]
DERATE PER 10°F [5.6°C] ABOVE TEMPERATURE LIMIT:	1%	

❶ ALL DATA CERTIFIED WITHIN ±5%.

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EXHAUST SYSTEM		
EXHAUST GAS TEMPERATURE @ MAXIMUM RATING (POWER) - °F [°C]:		≤ 1112 [600]
EXHAUST GAS FLOW @ MAXIMUM OUTPUT - CFM [M³/HR]:		1102 [1872]
MAXIMUM ALLOWABLE BACK PRESSURE - PSI [KPA]:		1.45 [10]
MINIMUM EXHAUST PIPE DIAMETER - IN [MM]:		4 [100]
AIR INTAKE SYSTEM		
AIR CLEANER TYPE:		DRY TYPE, DISPOSABLE
AIR FLOW - CFM [M³/HR]:		505 [858]
AIR INLET RESTRICTION (DIRTY) - PSI [KPA]:		≤ 0.87 [6]
AIR INLET RESTRICTION (CLEAN) - PSI [KPA]:		≤ 0.44 [3]
LUBRICATION SYSTEM		
OIL CAPACITY (ENGINE ONLY) - QTS [L]:		20.1 [19]
MAXIMUM SUMP OIL TEMPERATURE - °F [°C]:		248 [120]
NORMAL OPERATING OIL PRESSURE RANGE - PSI [BAR]:		> 29.0 [2.0]
OIL PRESSURE @ IDLE - PSI [BAR]:		≥ 14.5 [1.0]
COOLING SYSTEM		
COOLANT CAPACITY (ENGINE & HEAT EXCHANGER) - QTS [L]:		27.5 [26]
THERMOSTAT RANGE:	START OPEN - °F [°C]:	180 [82]
	FULL OPEN - °F [°C]:	199 [93]
COOLANT PRESSURE MAXIMUM - PSI [BAR]:		13 [0.9]
MAXIMUM ENGINE COOLANT TEMPERATURE - °F [°C]:		≤ 208 [98]
ENGINE COOLANT FLOW @ FULL SPEED - GPM [M³/HR]:		74.8 [14]
RAW WATER COOLING CAPACITY - GPM [M³/HR]:		44 [10]
RAW WATER PRESSURE - PSI [BAR]:		36.3 [2.5]
MAXIMUM RAW WATER TEMPERATURE - °F [°C]:		100 [37.8]
RAW WATER INTAKE PIPE SIZE:	RAW WATER INLET - IN:	1.00 NPT
	RAW WATER OUTLET - IN:	1.25 NPT
HEATER SYSTEM		
WATTAGE - W:		2000
VOLTAGE (AC) - V:		220
DC ELECTRICAL SYSTEM		
NORMAL SYSTEM VOLTAGE - V:		24
STARTER MOTOR - HP [KW]:		10.1 [7.5]
RECOMMENDED MINIMUM BATTERY SIZE - AH:		180
COLD CRANKING AMPS @ 0°F (-18°C):		900
RESERVE CAPACITY - AMPS:		360
CHARGING ALTERNATOR OUTPUT - AMPS:		55
STARTER CRANKING AMPS, ROLLING @ 0°F (-18°C):		420
MINIMUM CRANKING SPEED REQUIRED FOR UNAIDED COLD START - RPM:		230

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AF6-114C

FUEL SYSTEM	
INJECTION PUMP:	INLINE, PLUNGER TYPE
INJECTION PUMP ADVANCE ANGLE - °:	6
MINIMUM SUPPLY LINE SIZE - IN [MM]:	0.394 [10]
MINIMUM RETURN LINE SIZE - IN [MM]:	0.394 [10]
FUEL MANAGEMENT CONTROL:	MECHANICAL
FUEL CONSUMPTION @ 2100 RPM - LB/BHP-HR [G/KW-HR]:	0.395 [240]
IDLE SPEED - RPM:	700
MAXIMUM GOVERNED SPEED - RPM:	2310
MAXIMUM ALLOWABLE FUEL HEIGHT ABOVE FUEL PUMP - FT [M]:	9.8 [3]
GOVERNED SPEED RATE - %:	≤ 10

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MODEL
AF6-114C

ENGINE MATERIALS & CONSTRUCTION

ENGINE

CAMSHAFT:	
TYPE	GROUND
MATERIAL	CARBON STEEL
LOCATION	IN BLOCK
DRIVE	SPUR GEAR
CONNECTING RODS:	
TYPE	I-BEAM, FRACTURE
MATERIAL	FORGED STEEL
CRANKSHAFT:	
TYPE	GROUND
MATERIAL	DUCTILE IRON
MAIN BEARINGS:	
TYPE	PRECISION, HALF SHELL
MATERIAL	TIM ALUMINUM ALLOY
CYLINDER BLOCK:	
TYPE	GANTRY
MATERIAL	CAST IRON
CYLINDER HEAD:	
TYPE	ONE PIECE
MATERIAL	CAST IRON
CYLINDER LINERS:	
TYPE	WET LINED
MATERIAL	CAST IRON ALLOY
PISTONS:	
TYPE	TRUNK
MATERIAL	ALUMINUM ALLOY
PISTON PINS:	
TYPE	FULL FLOATING
MATERIAL	ALLOY STEEL
PISTON RINGS:	
FIRST	DUCTILE CAST IRON
SECOND	ALLOY CAST IRON
THIRD	ALLOY CAST IRON
VALVES:	
TYPE	POPPET
ARRANGEMENT	OVERHEAD
VALVE # PER CYLINDER	1 INTAKE, 1 EXHAUST
OPERATING MECHANISM	MECHANICAL ROCKER ARM
LIFTER TYPE	LARGE HEAD

AIR INTAKE

AIR CLEANER:	
TYPE	DRIP PROOF
MATERIAL	PLEATED PAPER

COOLING SYSTEM

COOLANT HEAT EXCHANGER:	
TYPE	TUBE & SHELL
MATERIAL	
ELECTRODE	ZINC
HEADERS	ALUMINUM
SHELL	ALUMINUM
TUBES	COPPER
COOLANT PUMP:	
TYPE	CENTRIFUGAL
DRIVE	V-BELT
THERMOSTAT:	
TYPE	NON-BLOCKING
QUANTITY	1
COOLING LOOP (GALVANIZED):	
TEES, ELBOWS, PIPE	GALVANIZED STEEL
BALL VALVES	BRASS
SOLENOID VALVE	BRASS
PRESSURE REGULATOR	BRASS
STRAINER	BRASS
COOLING LOOP (316 STAINLESS STEEL):	
TEES, ELBOWS, PIPE	316 STAINLESS STEEL
BALL VALVES	316 STAINLESS STEEL
SOLENOID VALVE	316 STAINLESS STEEL
PRESSURE REGULATOR	316 STAINLESS STEEL
STRAINER	316 STAINLESS STEEL

FUEL SYSTEM

FUEL INJECTION PUMP:	
TYPE	FULL MECHANICAL, CENTRIFUGAL
DRIVE	GEAR DRIVEN

LUBRICATION SYSTEM

TYPE	GEROTOR
DRIVE	GEAR

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MODEL
AF6-114C

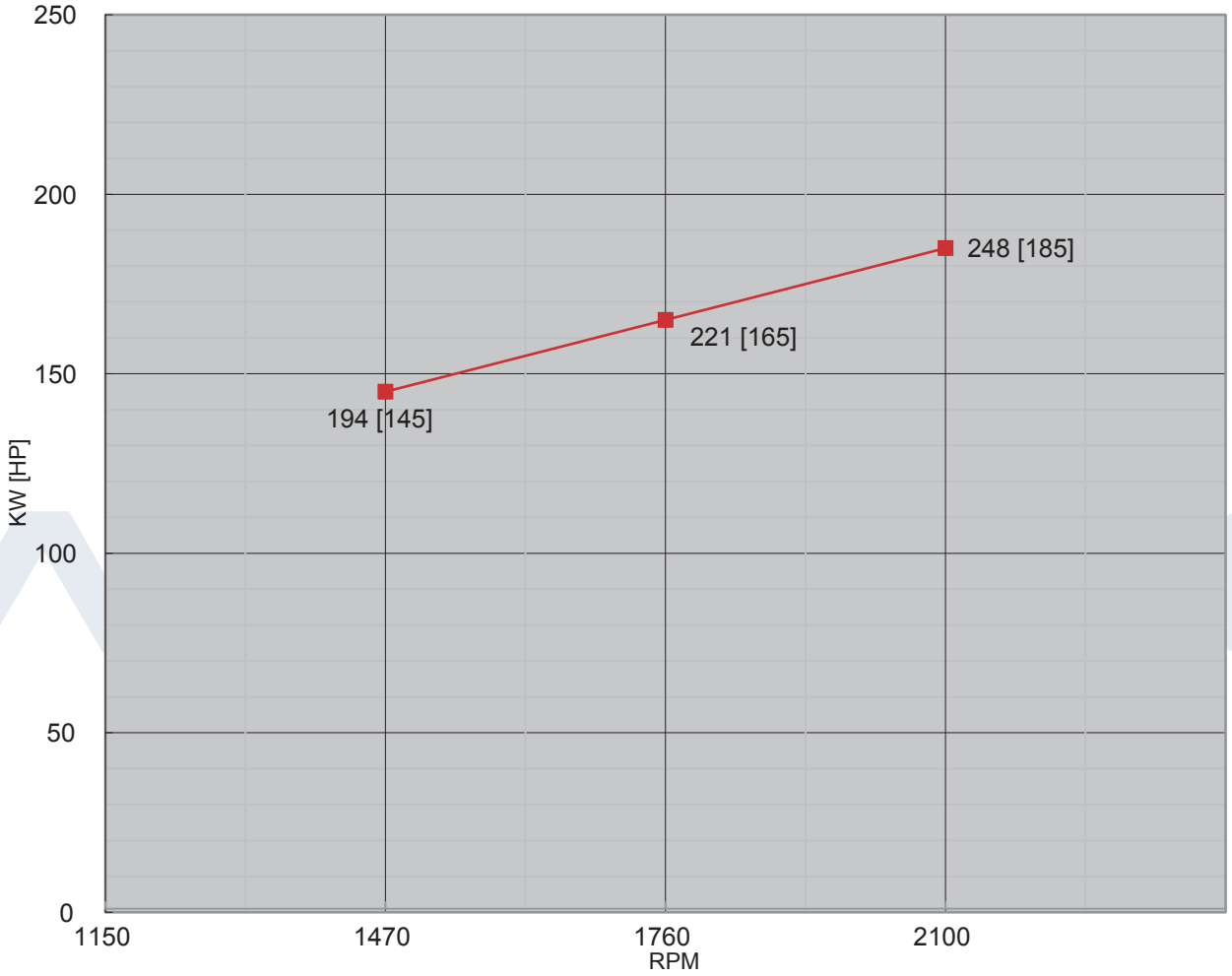
SPARE PARTS LIST			
PART DESCRIPTION	**QUANTITY**	**PART NUMBER**	**REMARKS**
LUBRICATION SYSTEM			
OIL FILTER	1 PIECE	AF-D17-002-02	
OIL PRESSURE SENSOR	1 PIECE	AF-21103-OPS	
FUEL SYSTEM			
FUEL FILTER	1 PIECE	AF-D638-000-02	
INJECTION PUMP	1 PIECE	AF-S00003018+01	
FUEL SUPPLY & RETURN HOSE	1 PIECE	AF6-114C-6.1	
	1 PIECE	AF6-114C-6.2	
COOLING SYSTEM			
HEAT EXCHANGER	1 PIECE	AF-C300ZJ-HE	
COOLING LOOP	1 SET	AF-CL1-00-CL	
COOLANT HOSE (90° ELBOW)	1 PIECE	AF-E90-60/80P4	
COOLANT HOSE (90° ELBOW)	1 PIECE	AF-RE90-60-57/150P4	
COOLING HOSE	1 PIECE	AF-8-3-700-CH	
	2 PIECES	AF-16-5-850-CH	
WATER PUMP	1 PIECE		
RUNNING WATER TEMPERATURE SENSOR	1 PIECE	AF-00708-WTR	
STANDBY WATER TEMPERATURE SENSOR	1 PIECE	AF-00105-WTR	
THERMOSTAT	1 PIECE	AF-D22-102-05	
THERMOSTAT	1 PIECE	AF-D22-102-06	
PREHEATER	1 PIECE	AF-SH220200045 OR AF-SH110200045	
FLOW SENSOR	1 PIECE	AF	
CONTROL SYSTEM			
STARTER	1 PIECE	AF-S00022618+01	
ALTERNATOR	1 PIECE	AF-D11-102-13+A	
BATTERY	2 PIECES	AF-N200	
STARTER CONTACTOR	2 PIECES	AF	
OVERSPEED SHUTDOWN	1 PIECE	AF	
SPEED SENSOR	1 PIECE	AF	
INSTRUMENT PANEL	1 SET	AF-ENL-AB-ETS/R-B	
TRANSMISSION SYSTEM			
BELT	2 PIECES	AF-D16A-106-06	
STOP SOLENOID	1 PIECE	AF-5295568-SN	
INTAKE & EXHAUST SYSTEM			
AIR FILTER	1 PIECE	AF-ECC105004	
TURBOCHARGER	1 PIECE	AF	

MODEL

AF6-114C

POWER CURVE			
CURVE NUMBER:	C06114C	DATE:	09/01/2020
DISPLACEMENT - IN³ [L]:	523 [8.27]	ASPIRATION:	TURBOCHARGED + WATER COOLED
POWER STANDARD:	UL	BORE & STROKE - IN [MM]:	4.49 x 5.32 [114 x 135]
NUMBER OF CYLINDERS:	6	FUEL SYSTEM:	INLINE, MECHANICAL

❶ ALL DATA CERTIFIED WITHIN ±5%.



TORQUE		
SPEED RPM	LB-FT	N-M
1150		
1470	693	939
1760	662	898
2100	622	843

OUTPUT POWER		
SPEED RPM	HP	KW
1150		
1470	194	145
1760	221	165
2100	248	185

FUEL CONSUMPTION		
SPEED RPM	LB/BHP-HR	G/KW-HR
1150		
1470	0.362	220
1760	0.378	230
2100	0.395	240

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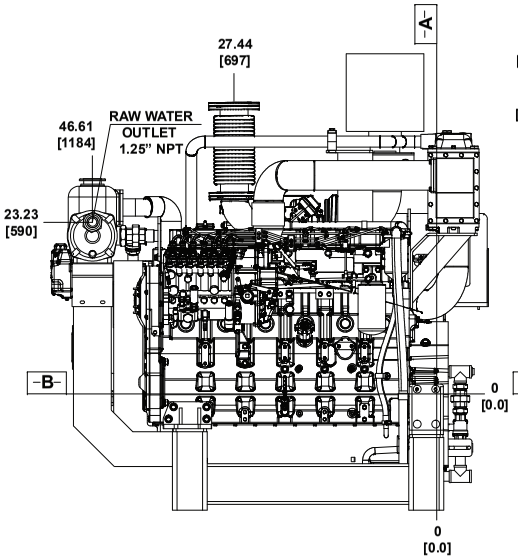
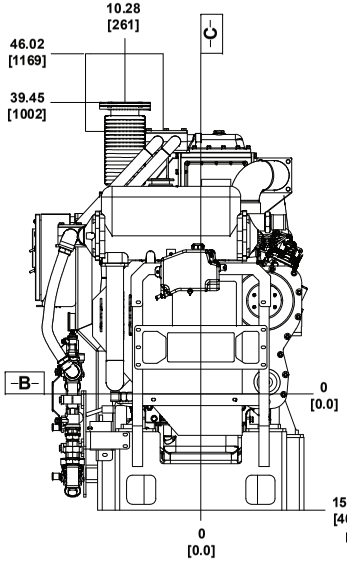
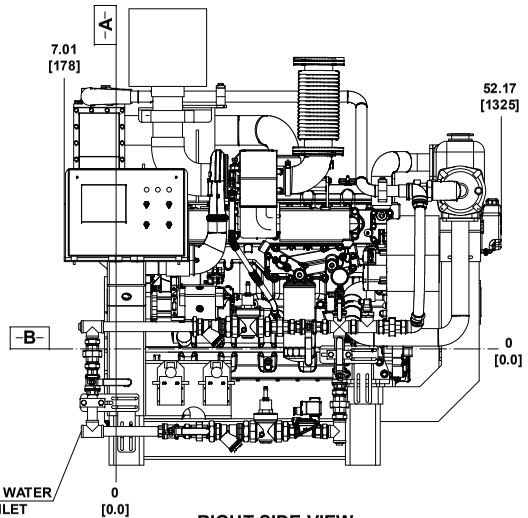


LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW

DATUMS:

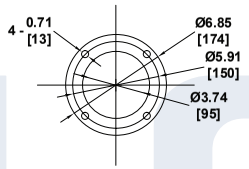
-A- — DIMENSIONAL FACE OF FLYWHEEL
-B- — ENGINE HORIZONTAL CENTER (CRANKSHAFT)
-C- — ENGINE VERTICAL CENTER (CRANKSHAFT)

NOTES:

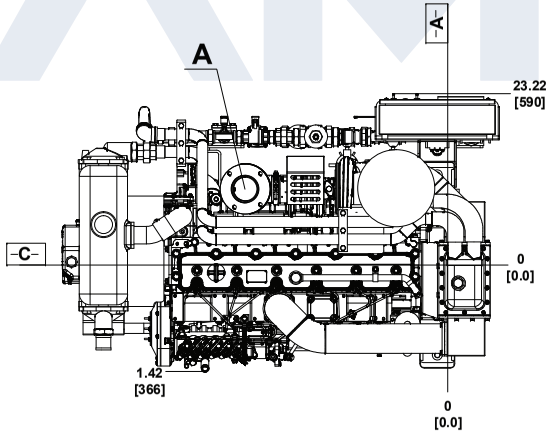
1. FUEL SUPPLY PIPING MINIMUM INSIDE DIAMETER FROM TANK TO ENGINE MUST BE ≥ 0.398 [10].
2. FUEL RETURN PIPING MINIMUM INSIDE DIAMETER FROM TANK TO ENGINE MUST BE ≥ 0.398 [10].

DRAWING SUBJECT TO CHANGE WITHOUT NOTICE.

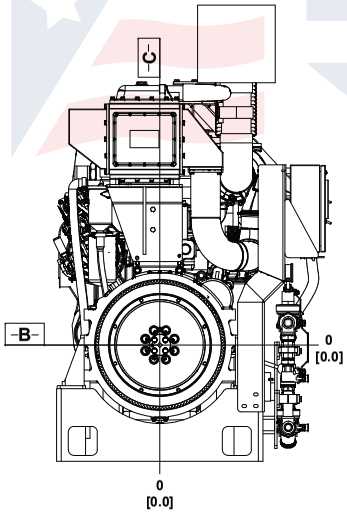
A - EXHAUST FLANGE (4")



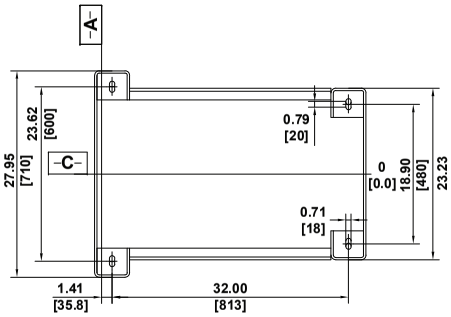
SCALE 2:1



TOP VIEW

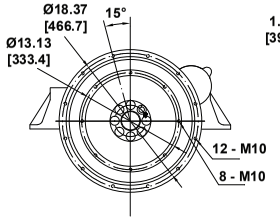


REAR VIEW

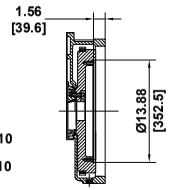


MOUNTING DIMENSIONS

FLYWHEEL HOUSING SAE #2



FLYWHEEL 11.50



NOTES:

1. ALL PLUMBING MUST BE SUPPORTED AND/OR ISOLATED SO THAT NO WEIGHT OR STRESS IS APPLIED TO ANY ENGINE COMPONENT.
2. REFER TO SPECIFIC MODELS' INSTALLATION, OPERATION & MAINTENANCE MANUAL FOR INSTALLATION GUIDELINES.

REV	DESCRIPTION	DWN	APVD	DATE
A	CREATION	MJF		09/01/2020

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REV	
UNITS	IN[MM]
DRW BY: MJF	DATE: 09/01/2020
CHK BY:	DATE:
APPROVED:	DATE:
NAME:	INSTALLATION DRAWING DIESEL FIRE PUMP DRIVER MODEL AF6-114C
PART NO.:	AF6-114C-00
MATERIAL:	
PROJECTION:	
PROJECT:	
SCALE:	NONE
PAGE	1
OF	1

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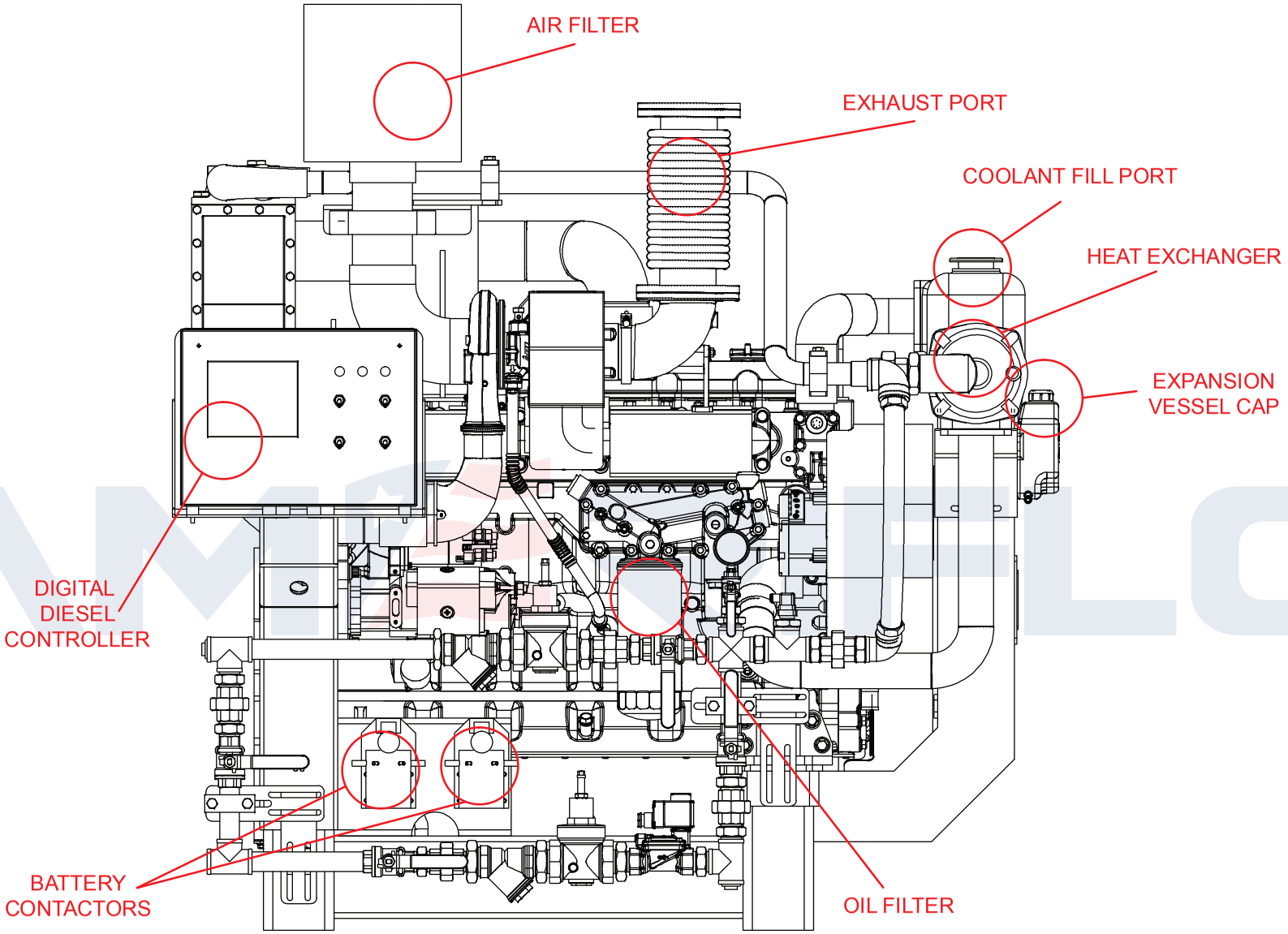

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REV	DESCRIPTION	DWN	APVD	DATE
A	CREATION	MJF		09/01/2020

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REV

UNITS IN[MM]

DRW BY: MJF DATE: 09/01/2020
CHK BY: DATE:
APPROVED: DATE:

NAME: INSTALLATION DRAWING DIESEL FIRE PUMP DRIVER MODEL AF6-114C

PART NO.: AF6-114C-RIGHT

MATERIAL:

PROJECTION:

PROJECT:

SCALE: NONE

PAGE 1 OF 1

ENGINE MODEL AF6-114C

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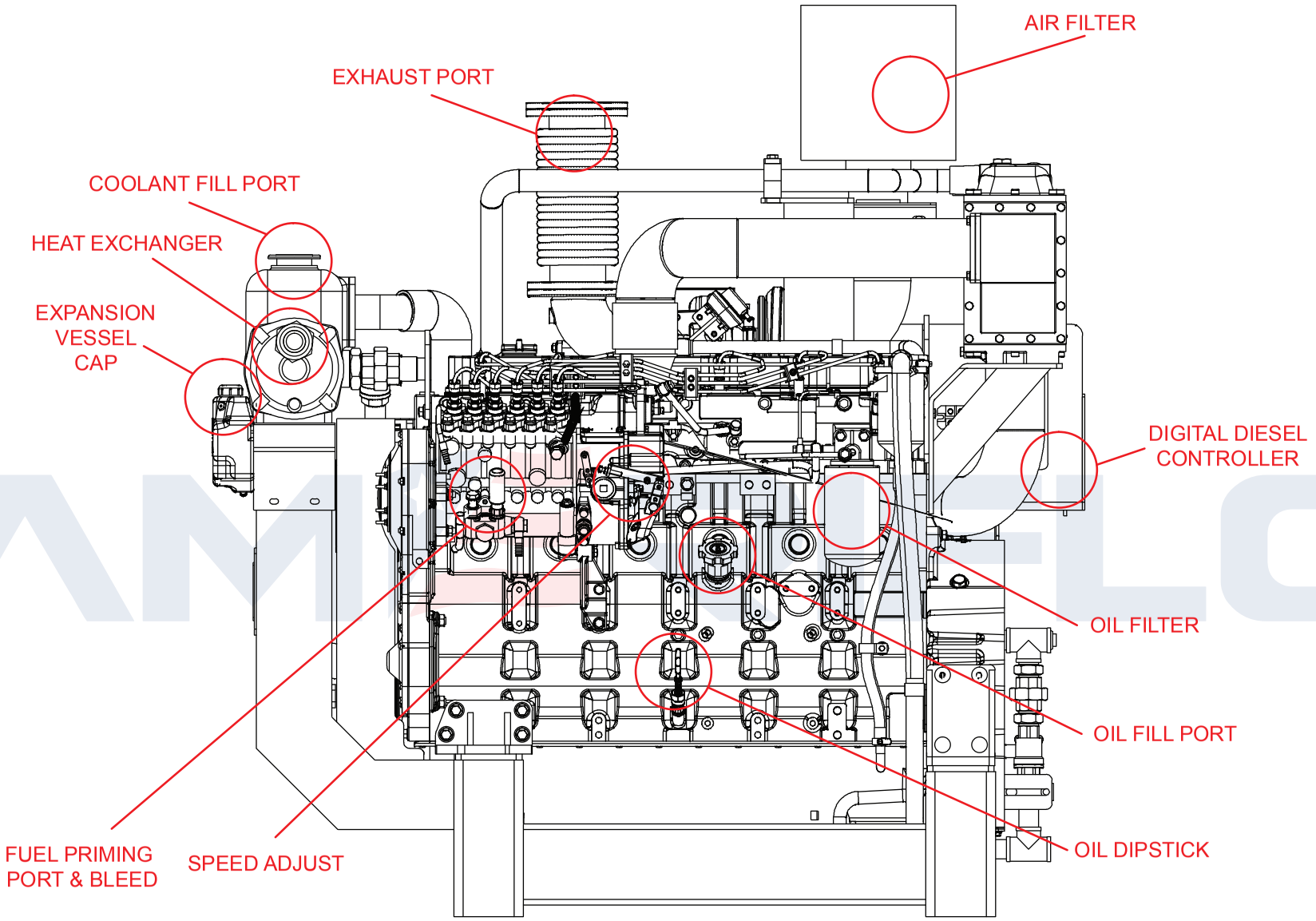

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A	CREATION	MJF		09/01/2020

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REV

UNITS IN[MM]

DRW BY: MJF DATE: 09/01/2020
CHK BY: DATE:
APPROVED: DATE:

NAME: INSTALLATION DRAWING DIESEL FIRE PUMP DRIVER MODEL AF6-114C

PART NO.: AF6-114C-LEFT

MATERIAL:

PROJECTION:

PROJECT:

SCALE: NONE

PAGE 1 OF 1

ENGINE MODEL AF6-114C

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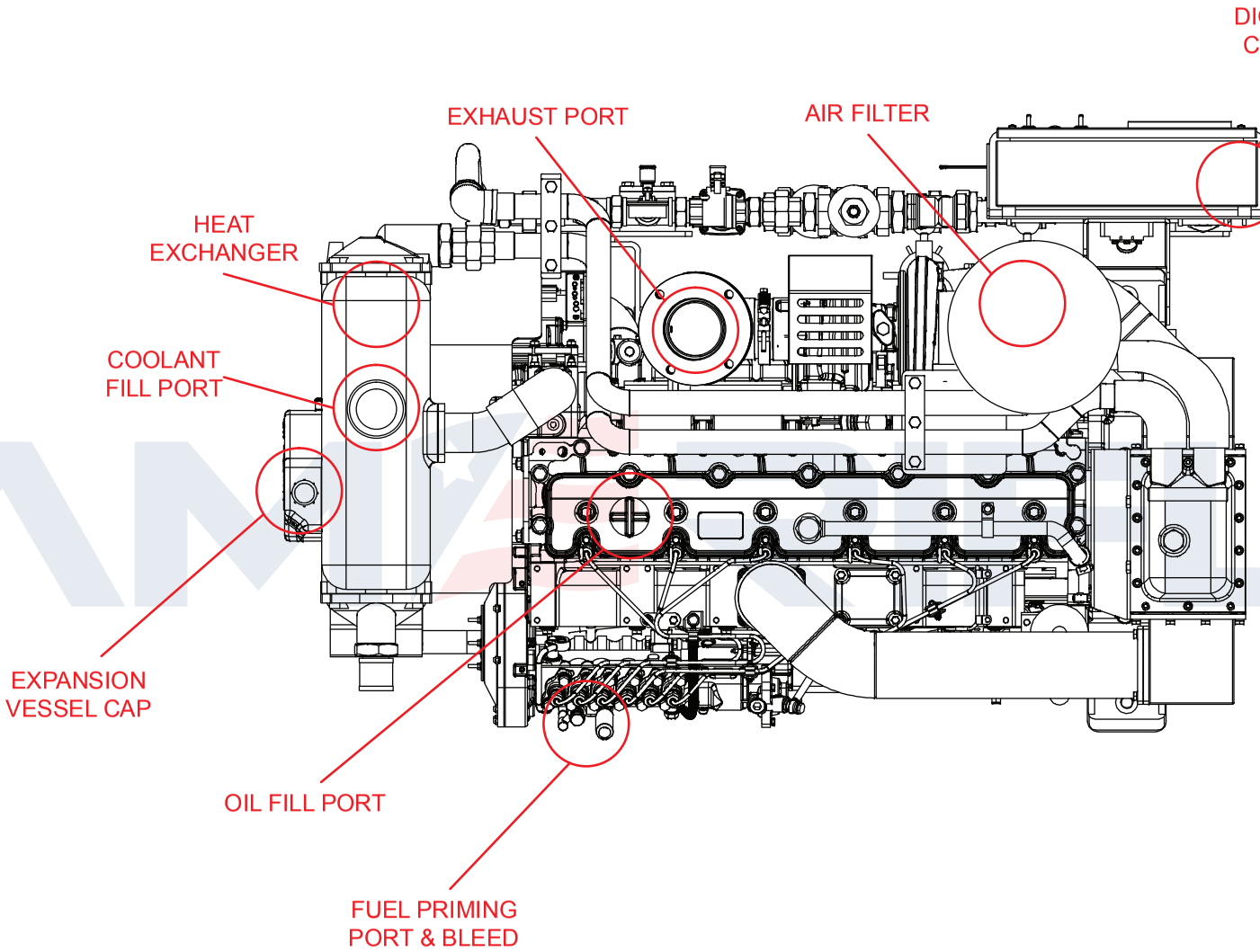

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REV	DESCRIPTION	DWN	APVD	DATE
A	CREATION	MJF		09/01/2020

AMERIFLO

REV

UNITS IN[MM]

DRW BY: MJF DATE: 09/01/2020

CHK BY: DATE:

APPROVED: DATE:

NAME: INSTALLATION DRAWING DIESEL FIRE PUMP DRIVER MODEL AF6-114C

PART NO.: AF6-114C-TOP

MATERIAL:

PROJECTION:

PROJECT:

SCALE: NONE

PAGE 1 OF 1

ENGINE MODEL AF6-114C

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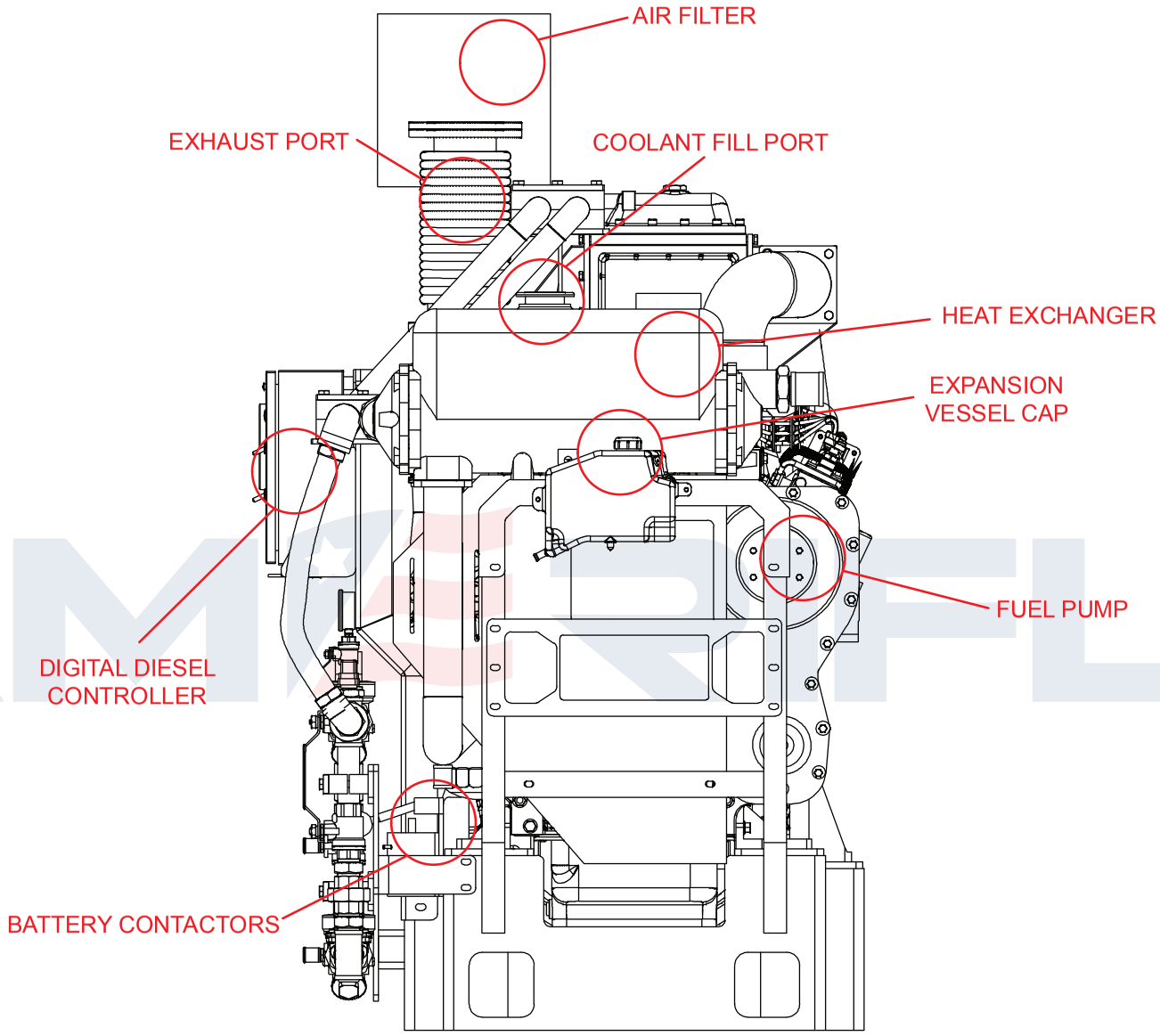

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REV	DESCRIPTION	DWN	APVD	DATE
A	CREATION	MJF		09/01/2020

AMERIFLO

REV

UNITS IN[MM]

DRW BY: MJF DATE: 09/01/2020
CHK BY: DATE:
APPROVED: DATE:

NAME: INSTALLATION DRAWING DIESEL FIRE PUMP DRIVER MODEL AF6-114C

PART NO.: AF6-114C-FRONT

MATERIAL:

PROJECTION:

PROJECT:

SCALE: NONE

PAGE 1 OF 1

ENGINE MODEL AF6-114C

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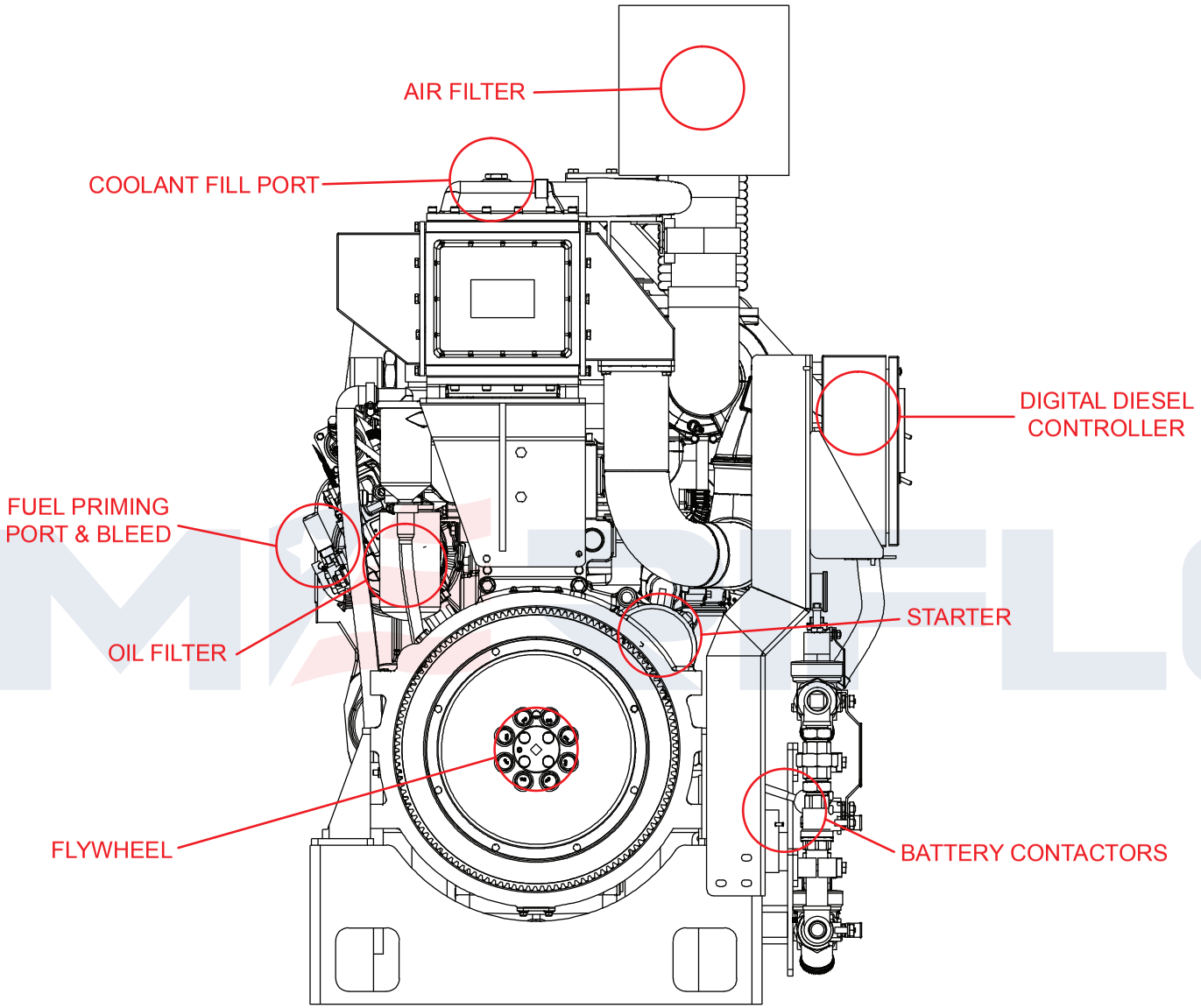

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REV	DESCRIPTION	DWN	APVD	DATE
A	CREATION	MJF		09/01/2020

AMERIFLO

REV

UNITS IN[MM]

DRW BY: MJF DATE: 09/01/2020
CHK BY: DATE:
APPROVED: DATE:

NAME: INSTALLATION DRAWING DIESEL FIRE PUMP DRIVER MODEL AF6-114C

PART NO.: AF6-114C-REAR

MATERIAL:

PROJECTION:

PROJECT:

SCALE: NONE

PAGE 1 OF 1

ENGINE MODEL AF6-114C