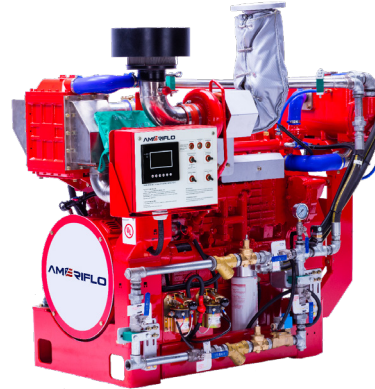


FM - APPROVED RATINGS BHP & KW

ENGINE MODEL:	AF6-108E
EMISSIONS:	TIER 0
DATE:	09/01/2020
DRAWING NUMBER:	AF6-108E.00
PERFORMANCE CURVE NUMBER:	C06108E
RATED POWER:	335 BHP @ 2950 RPM 250 KW @ 2950 RPM
REFERENCE NUMBER:	DS06108EF
VERSION:	A



GENERAL ENGINE DATA

TYPE:	4 CYCLE; INLINE; WATER COOLED	
NUMBER OF CYLINDERS:	6	
ASPIRATION:	TURBOCHARGED + WATER COOLED	
BORE & STROKE - IN [MM]:	4.25 x 5.04 [108 x 125]	
CYLINDER LINER TYPE:	<input checked="" type="checkbox"/> WET <input type="checkbox"/> DRY	
DISPLACEMENT - IN ³ [L]:	419 [6.871]	
COMPRESSION RATIO:	17.5:01	
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]:	0.016 ~ 0.018 [0.40 ~ 0.46]
	EXHAUST - IN [MM]:	0.018 ~ 0.021 [0.46 ~ 0.52]
IGNITION TYPE:	COMPRESSION (DIESEL)	
CHARGE AIR COOLING TYPE:	RAW WATER	
WEIGHT (FUEL PUMP CONFIGURATION) - LBS [KG]:	2035 [923]	
DIMENSIONS (L x W x H) - IN [MM]:	64 x 39 x 58 [1620 x 1000 x 1465]	
FLYWHEEL / FLYWHEEL HOUSING DIMENSIONS:	11.50 / SAE #2	
TORQUE @ RATED RPM - LB-FT [N-M]:	597 [809]	

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 OPERATING 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%	

● ALL DATA CERTIFIED WITHIN ±5%.

EXHAUST SYSTEM

EXHAUST GAS TEMPERATURE @ MAXIMUM RATING (POWER) - °F [°C]:	≤ 1112 [600]
EXHAUST GAS FLOW @ MAXIMUM OUTPUT - CFM [M ³ /HR]:	2066 [3510]
MAXIMUM ALLOWABLE BACK PRESSURE - PSI [KPA]:	1.31 [9]
MINIMUM EXHAUST PIPE DIAMETER - IN [MM]:	5 [125]

AIR INTAKE SYSTEM

AIR CLEANER TYPE:	DRY TYPE, DISPOSABLE
AIR FLOW - CFM [M ³ /HR]:	756 [1284]
AIR INLET RESTRICTION (DIRTY) - PSI [KPA]:	≤ 0.07 [5.5]

LUBRICATION SYSTEM

OIL CAPACITY (ENGINE ONLY) - QTS [L]:	25.4 [24]
MAXIMUM SUMP OIL TEMPERATURE - °F [°C]:	176 - 248 [80 - 120]
NORMAL OPERATING OIL PRESSURE RANGE - PSI [BAR]:	36.3 - 87.0 [2.5 - 6.0]
OIL PRESSURE @ IDLE - PSI [BAR]:	> 14.5 [1.0]

COOLING SYSTEM

COOLANT CAPACITY (ENGINE & HEAT EXCHANGER) - QTS [L]:	31.7 [30]	
THERMOSTAT RANGE:	START OPEN - °F [°C]:	167 [75]
	FULL OPEN - °F [°C]:	185 [85]
COOLANT PRESSURE MAXIMUM - PSI [BAR]:	13 [0.9]	
MAXIMUM ENGINE COOLANT TEMPERATURE - °F [°C]:	≤ 208 [98]	
ENGINE COOLANT FLOW @ FULL SPEED - GPM [M ³ /HR]:	101 [23]	
RAW WATER COOLING CAPACITY - GPM [M ³ /HR]:	44 [10]	
MINIMUM RAW WATER FLOW @ ENGINE SPEED (RPM)	2950	
RAW WATER TEMPERATURES TO 60.8°F [16°C] - GPM [M ³ /HR]:	26.4 [6]	
RAW WATER TEMPERATURES TO 100.4°F [38°C] - GPM [M ³ /HR]:	35.2 [8]	
RAW WATER INTAKE PIPE SIZE:	RAW WATER INLET - IN:	1.00 NPT
	RAW WATER OUTLET - IN:	1.25 NPT

HEATER SYSTEM

WATTAGE - W:	3000
VOLTAGE (AC) - V:	220

DC ELECTRICAL SYSTEM

NORMAL SYSTEM VOLTAGE - V:	24
STARTER MOTOR - HP [KW]:	8.05 [6]
RECOMMENDED MINIMUM BATTERY SIZE - AH:	180
COLD CRANKING AMPS @ 0°F (-18°C):	950
CHARGING ALTERNATOR OUTPUT - AMPS:	55

① ALL DATA CERTIFIED WITHIN ±5%.

FUEL SYSTEM

INJECTION PUMP:	INLINE, PLUNGER TYPE
INJECTION PUMP ADVANCE ANGLE - °:	16
MINIMUM SUPPLY LINE SIZE - IN [MM]:	0.394 [10]
MINIMUM RETURN LINE SIZE - IN [MM]:	0.394 [10]
FUEL MANAGEMENT CONTROL:	MECHANICAL
IDLE SPEED - RPM:	750
GOVERNED SPEED RATE - %:	< 10

① ALL DATA CERTIFIED WITHIN ±5%.



ENGINE MATERIALS & CONSTRUCTION

ENGINE		AIR INTAKE	
CAMSHAFT:		AIR CLEANER:	
TYPE	GROUND	TYPE	DRIP PROOF
MATERIAL	CARBON STEEL	MATERIAL	PLEATED PAPER
LOCATION	IN BLOCK	COOLING SYSTEM	
DRIVE	SPUR GEAR	COOLANT HEAT EXCHANGER:	
CONNECTING RODS:		TYPE	TUBE & SHELL
TYPE	I-BEAM, FRACTURE	MATERIAL	
MATERIAL	FORGED STEEL	ELECTRODE	ZINC
CRANKSHAFT:		HEADERS	COPPER
TYPE	GROUND	SHELL	ALUMINUM
MATERIAL	DUCTILE IRON	TUBES	COPPER
MAIN BEARINGS:		COOLANT PUMP:	
TYPE	PRECISION, HALF SHELL	TYPE	CENTRIFUGAL
MATERIAL	TIM ALUMINUM ALLOY	DRIVE	V-BELT
CYLINDER BLOCK:		THERMOSTAT:	
TYPE	GANTRY	TYPE	NON-BLOCKING
MATERIAL	CAST IRON	QUANTITY	1
CYLINDER HEAD:		COOLING LOOP (GALVANIZED):	
TYPE	ONE PIECE/3 CYLINDERS	TEES, ELBOWS, PIPE	GALVANIZED STEEL
MATERIAL	CAST IRON	BALL VALVES	BRASS
CYLINDER LINERS:		SOLENOID VALVE	BRASS
TYPE	WET LINED	PRESSURE REGULATOR	BRASS
MATERIAL	CAST IRON ALLOY	STRAINER	BRASS
PISTONS:		COOLING LOOP (316 STAINLESS STEEL):	
TYPE	TRUNK	TEES, ELBOWS, PIPE	316 STAINLESS STEEL
MATERIAL	ALUMINUM ALLOY	BALL VALVES	316 STAINLESS STEEL
PISTON PINS:		SOLENOID VALVE	316 STAINLESS STEEL
TYPE	FULL FLOATING	PRESSURE REGULATOR	316 STAINLESS STEEL
MATERIAL	ALLOY STEEL	STRAINER	316 STAINLESS STEEL
PISTON RINGS:		FUEL SYSTEM	
FIRST	DUCTILE CAST IRON	FUEL INJECTION PUMP:	
SECOND	ALLOY CAST IRON	TYPE	FULL MECHANICAL, CENTRIFUGAL
THIRD	ALLOY CAST IRON	DRIVE	GEAR DRIVEN
VALVES:		LUBRICATION SYSTEM	
TYPE	POPPET	TYPE	GEROTOR
ARRANGEMENT	OVERHEAD	DRIVE	GEAR
VALVE # PER CYLINDER	1 INTAKE, 1 EXHAUST		
OPERATING MECHANISM	MECHANICAL ROCKER ARM		
LIFTER TYPE	LARGE HEAD		

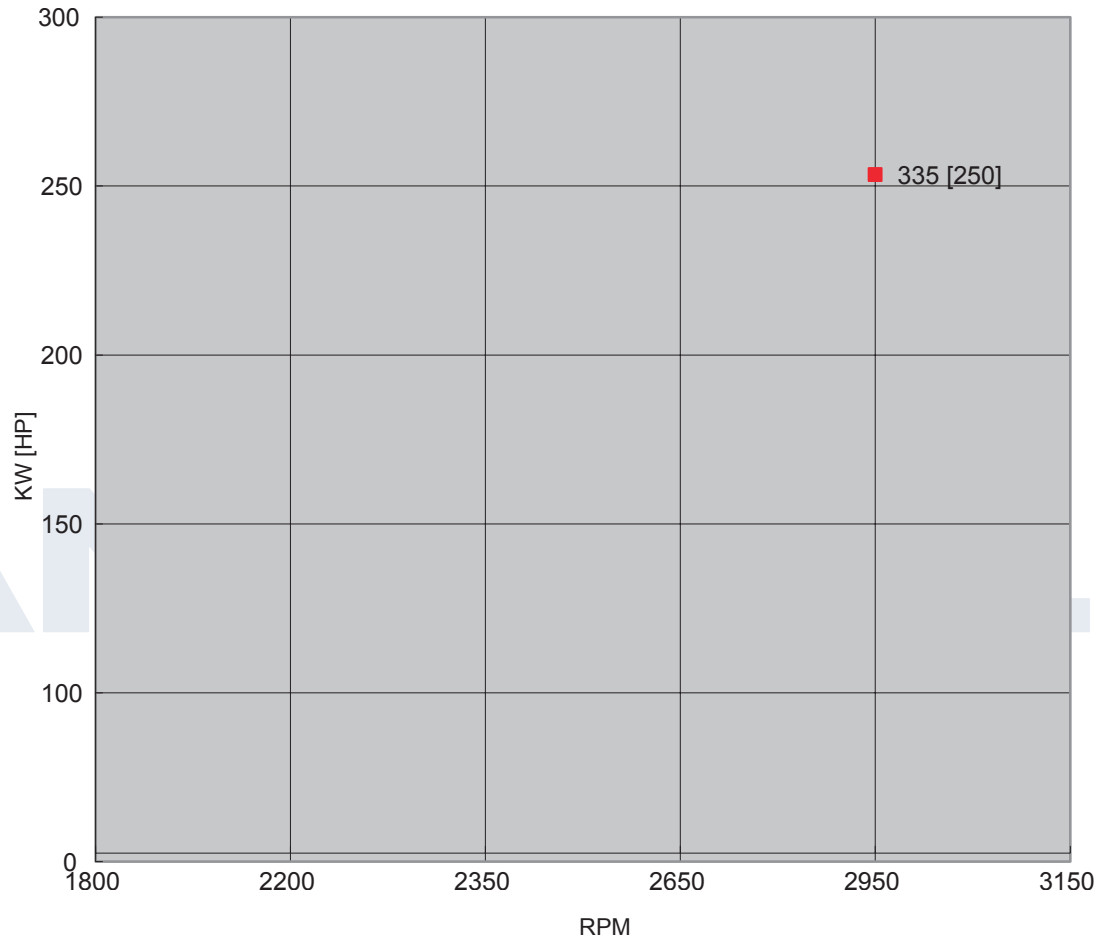
SPARE PARTS LIST

PART DESCRIPTION	PART NUMBER	REMARKS
AFTERCOOLER	AF120041-IC	KL9
HEAT EXCHANGER	AFC300ZJ-HE	MAX. WORKING PRESSURE 72.5 PSI [5 BAR]
ALTERNATOR	A35X1-3701100	28 V / 35 A
STARTING SYSTEM	J630C-3708100A	24 V / 4.5 KW
TURBOCHARGER	JA8B0-1118100SF1-383	N/A
FUEL PUMP WITH SPEED CONTROLLER	JA7B0-1111100-493	N/A
FUEL INJECTORS	J3400-1112010	0.26 MM
CONTROLLER	AF.ENG.AB-ETS-R-B	N/A
BATTERY	908DFT	12 V / 200 AH
EMERGENCY STARTERS	535-0098	24 VDC 800 A
OIL PRESSURE SENSOR	KE21103	11.6 ± 4.35 PSI [80 ± 30 KPA]
HIGH TEMPERATURE COOLANT SENSOR	KE00105	203 ± 37 °F [95 ± 3°C]
LOW COOLANT TEMPERATURE SENSOR	KE00105	104 ± 37 °F [40 ± 3°C]
HIGH TEMPERATURE RAW WATER SENSOR	204.040.15GO.1.IP65	104 ± 37 °F [40 ± 3°C]
FLOW SENSOR	WK150B	N/A
OVERSPEED SHUTDOWN DEVICE	YC-ENL-A0	N/A
SPEED SENSOR	KE10040	N/A
ENGINE HEATER	FH220300065	220 V / 2 KW MAX. TEMP 113°F [45°C]
	FH110200065	110 V / 2 KW MAX. TEMP 113°F [45°C]
OIL FILTERS	430-1012240	1 PIECE
FUEL FILTERS	A3000-1105030	1 PIECE
AIR FILTERS	JA8B0-1109100	1 PIECE
BELTS	YC80-8PK-1920B	1 PIECE
THERMOSTATS	J8000-1306004	1 PIECE
EXHAUST BLANKET	AF6108E0602-EI	DN100
FUEL SUPPLY & RETURN LINES	AF6-110D-09.03 AF4-90-09.03	N/A

POWER CURVE

CURVE NUMBER:	C06108E	DATE:	09/01/2020
DISPLACEMENT - IN ³ [L]:	419 [6.871]	ASPIRATION:	TURBOCHARGED + WATER COOLED
POWER STANDARD:	UL/FM	BORE & STROKE - IN [MM]:	4.25 x 5.04 [108 x 125]
NUMBER OF CYLINDERS:	6	FUEL SYSTEM:	INLINE, MECHANICAL

❶ ALL DATA CERTIFIED WITHIN ±5%.

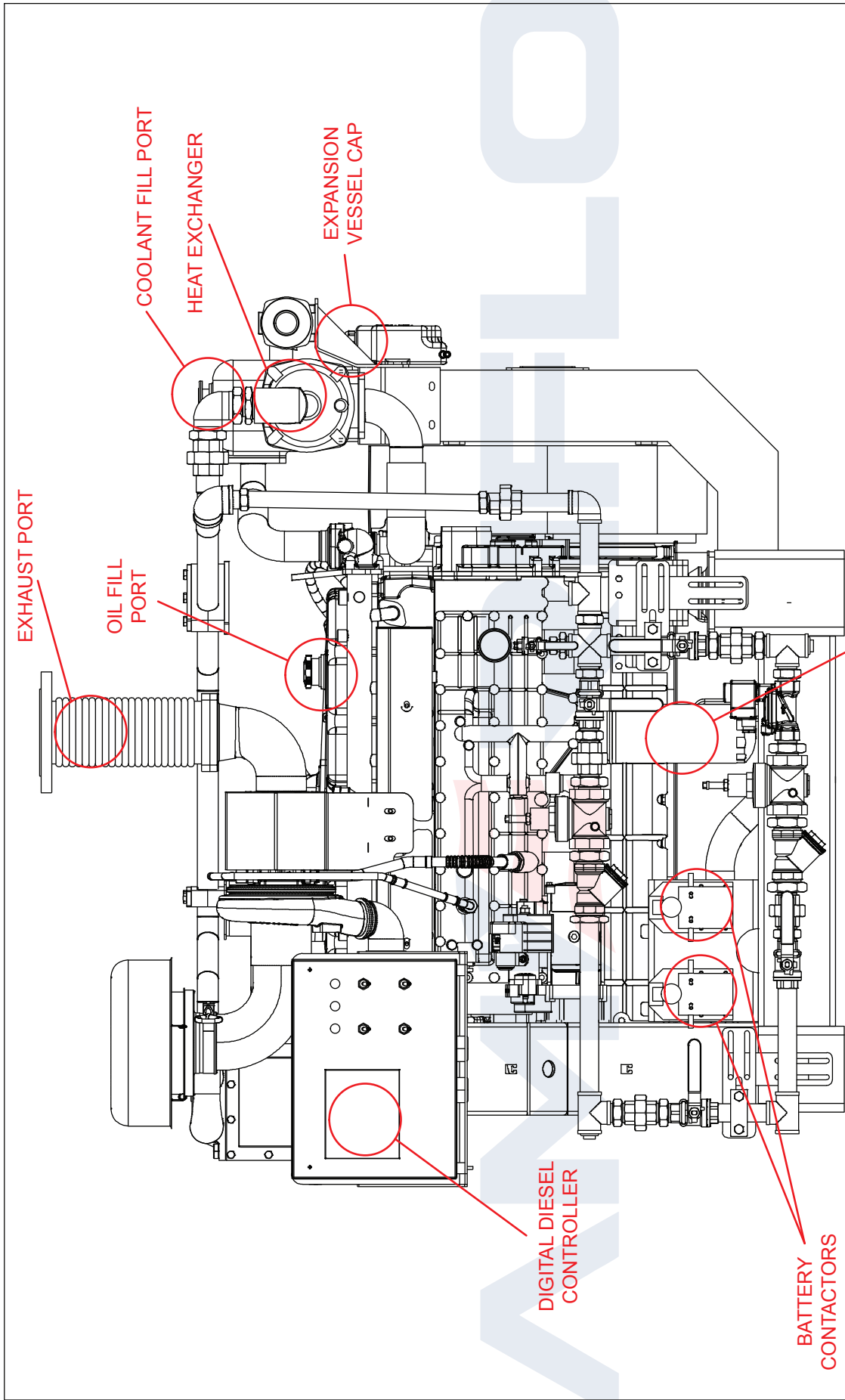


TORQUE		
SPEED	LB-FT	N-M
RPM		
1800		
2200		
2350		
2650		
2950	597	809
3150		

OUTPUT POWER		
SPEED	HP	KW
RPM		
1800		
2200		
2350		
2650		
2950	335	250
3150		

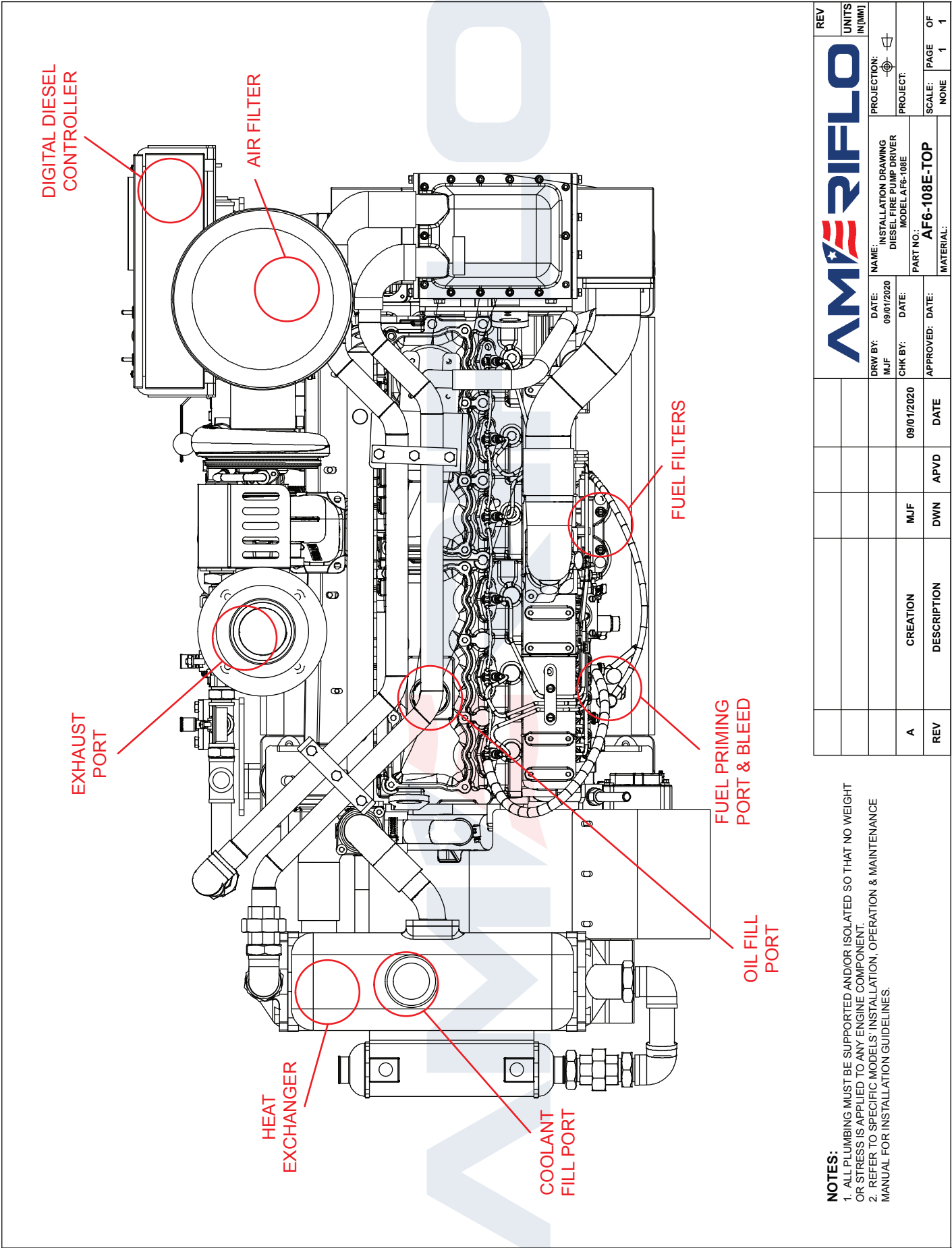
FUEL CONSUMPTION		
SPEED	LB/BHP-HR	G/KW-HR
RPM		
1800		
2200		
2350		
2650		
2950	0.421	256
3150		

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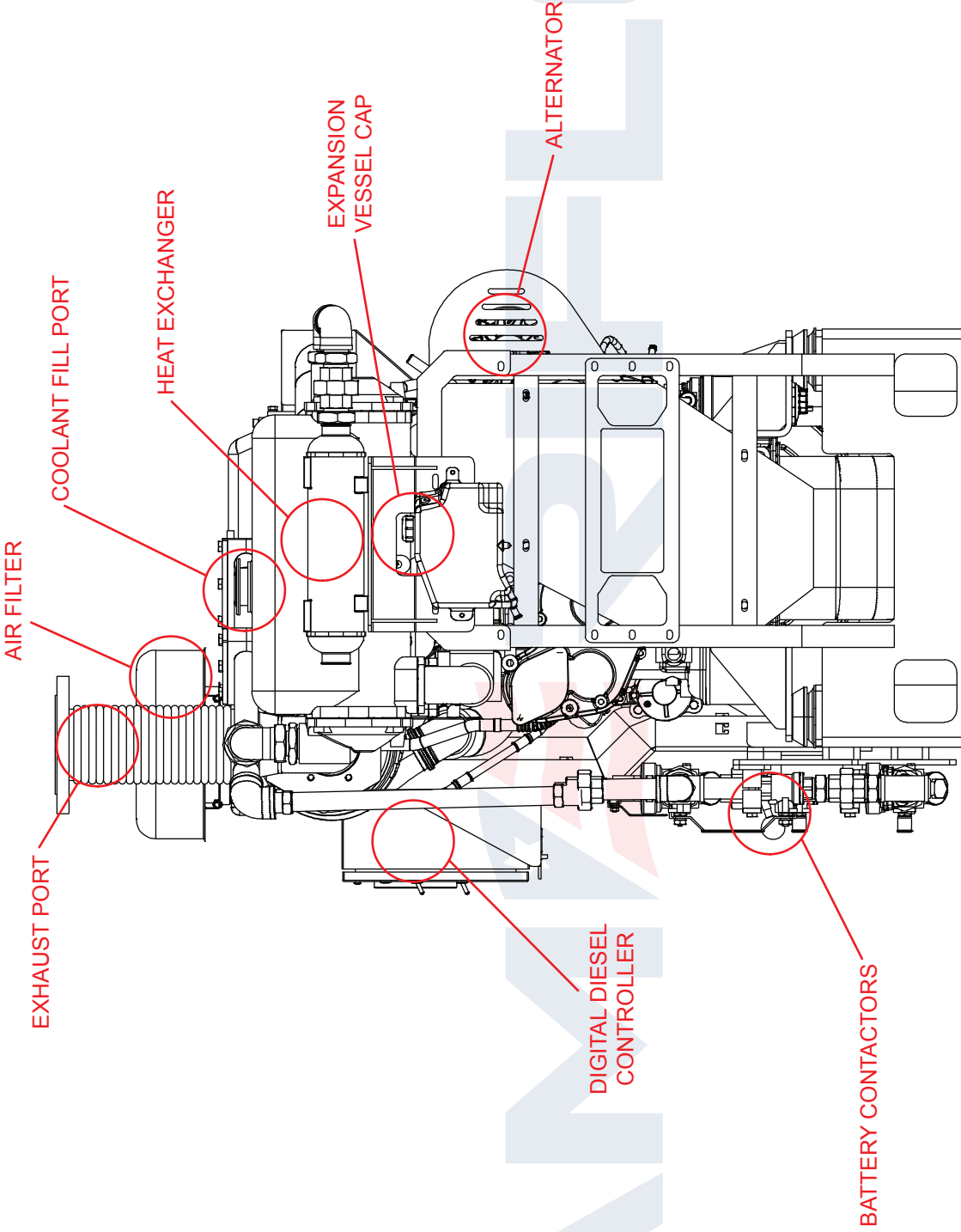
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			DATE:	09/01/2020					
			DRW BY:	MJF					
			CHK BY:						
			DATE:						
			APPROVED:						
			DATE:						
			DATE:	09/01/2020					
			APVD						
			DWN	MJF					
			DESCRIPTION						
			CREATION						
			REV	A					

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.



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REV	UNITS	PROJECT	SCALE	PAGE	OF
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		AMERIFLO			
DATE:	NAME:	PROJECT:	SCALE:	PAGE	OF
09/01/2020	INSTALLATION DRAWING	DIESEL FIRE PUMP DRIVER		1	1
CHK BY:	DATE:	PROJECT:			
MJF	09/01/2020	MODEL AF6-108E			
APPROVED:	DATE:	PART NO.:			
MJF	09/01/2020	AF6-108E-TOP			
		MATERIAL:			
REV	DESCRIPTION	DWN	APVD	DATE	
A	CREATION	MJF		09/01/2020	



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REV	UNITS	
	IN (MM)	
A		
REV		

NAME:	INSTALLATION DRAWING	PROJECT:	
DATE:	09/01/2020	PROJECT:	
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DATE:	09/01/2020	PAGE	1
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		DATE	

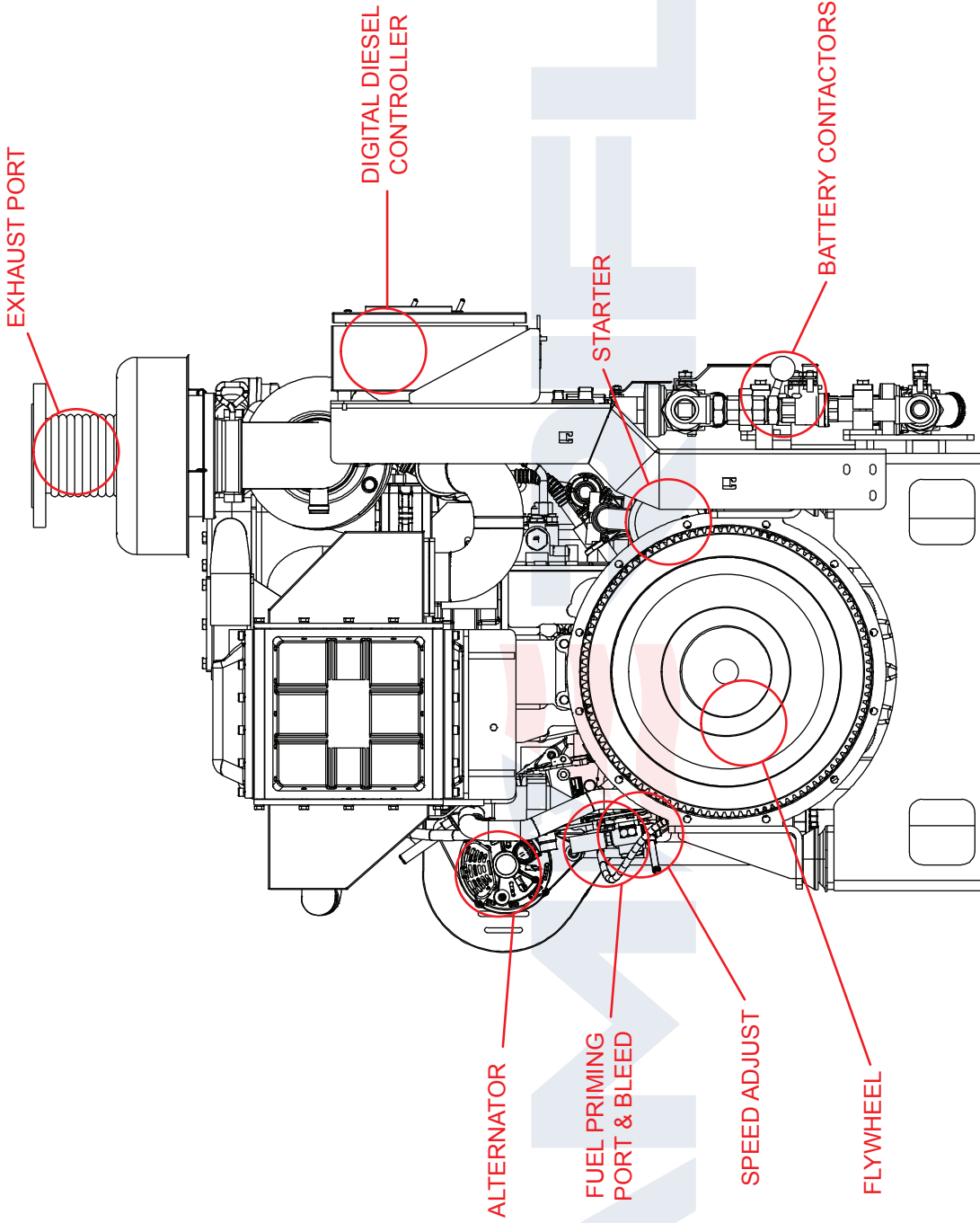


PROJECT:

NAME: DIESEL FIRE PUMP DRIVER
MODEL AF6-108E

PART NO.: AF6-108E-FRONT

MATERIAL:



NOTES:

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2. REFER TO SPECIFIC MODELS' INSTALLATION, OPERATION & MAINTENANCE MANUAL FOR INSTALLATION GUIDELINES.

REV	UNITS			PROJECT:
	IN (MM)	NAME: INSTALLATION DRAWING DIESEL FIRE PUMP DRIVER MODEL AF6-108E	DATE: 09/01/2020 DRW BY: MJF	PROJECT:
		PART NO.: AF6-108E-REAR MATERIAL:	DATE: 09/01/2020 CHK BY: MJF	SCALE: NONE
		DESCRIPTION	DATE	PAGE OF 1 1
A		CREATION MJF	APVD	
REV		DESCRIPTION	DWN MJF	