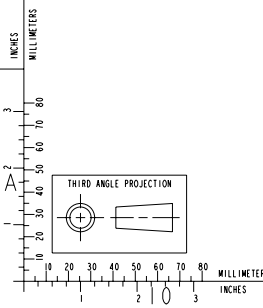
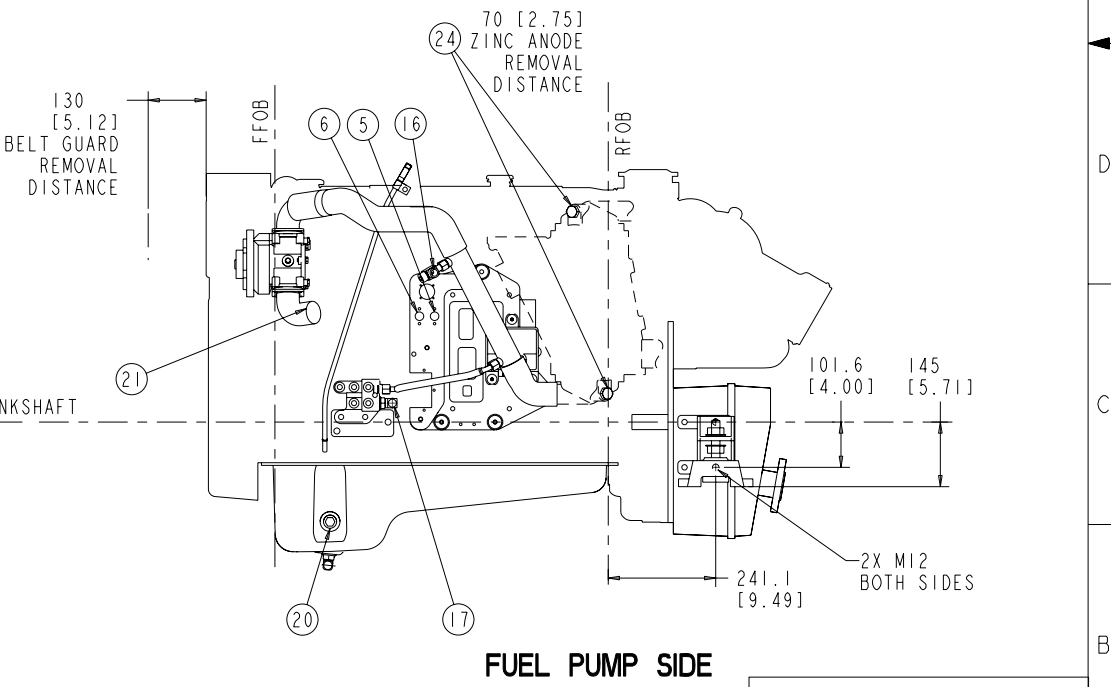
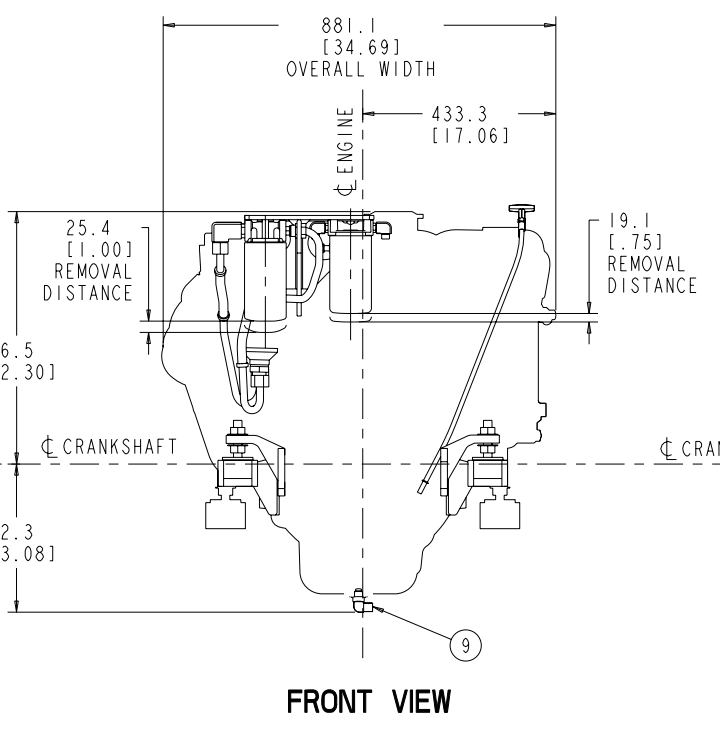
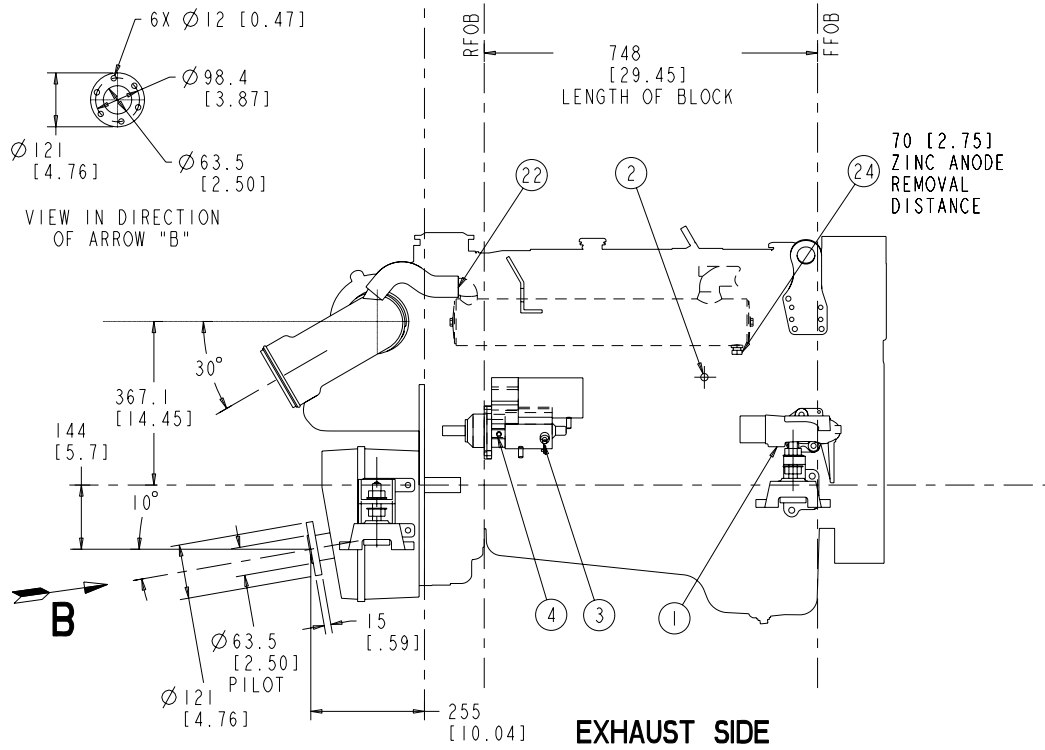
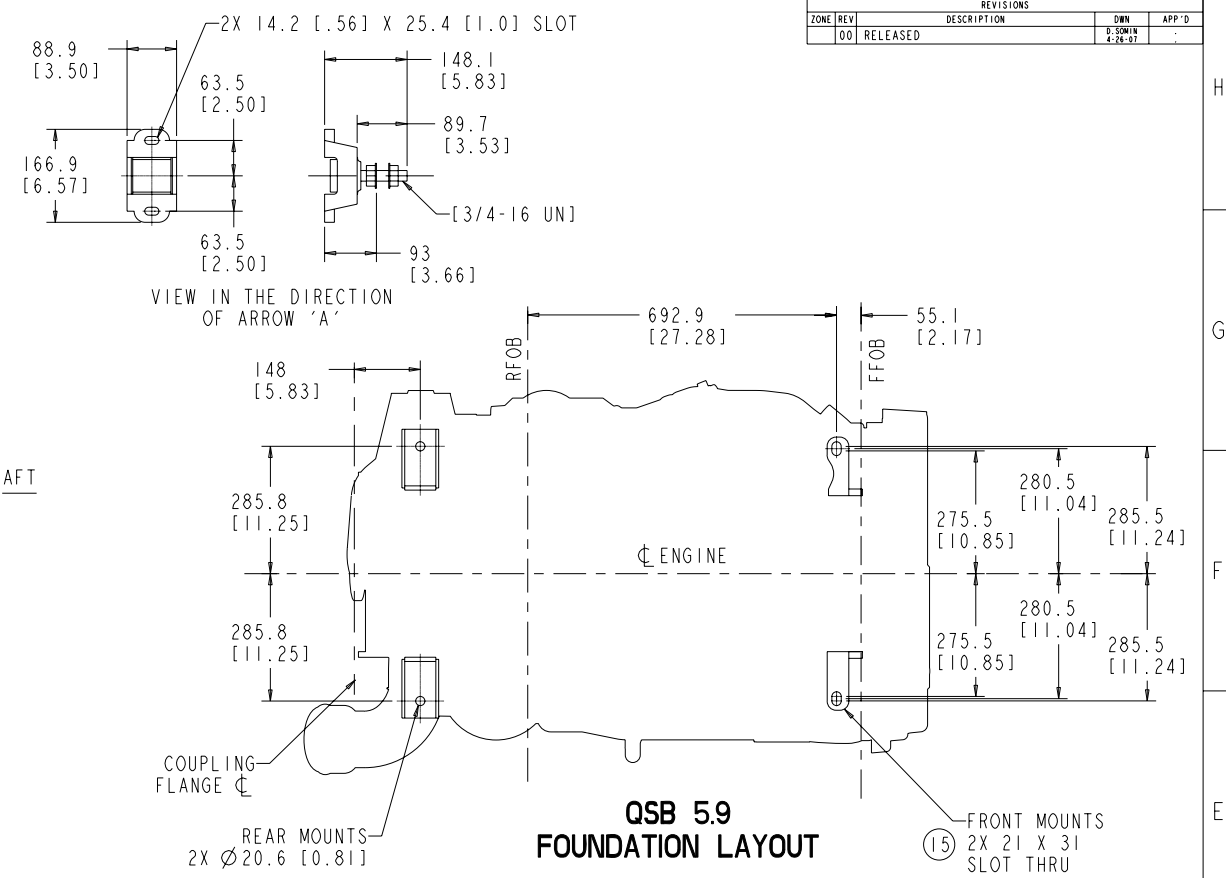
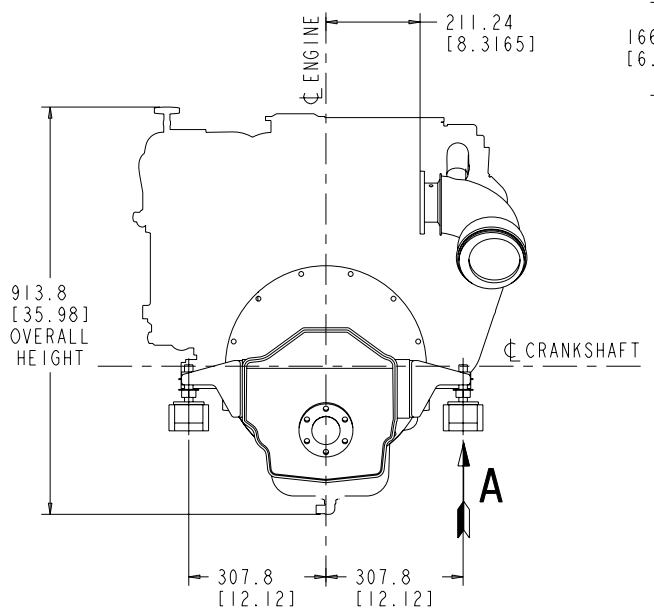
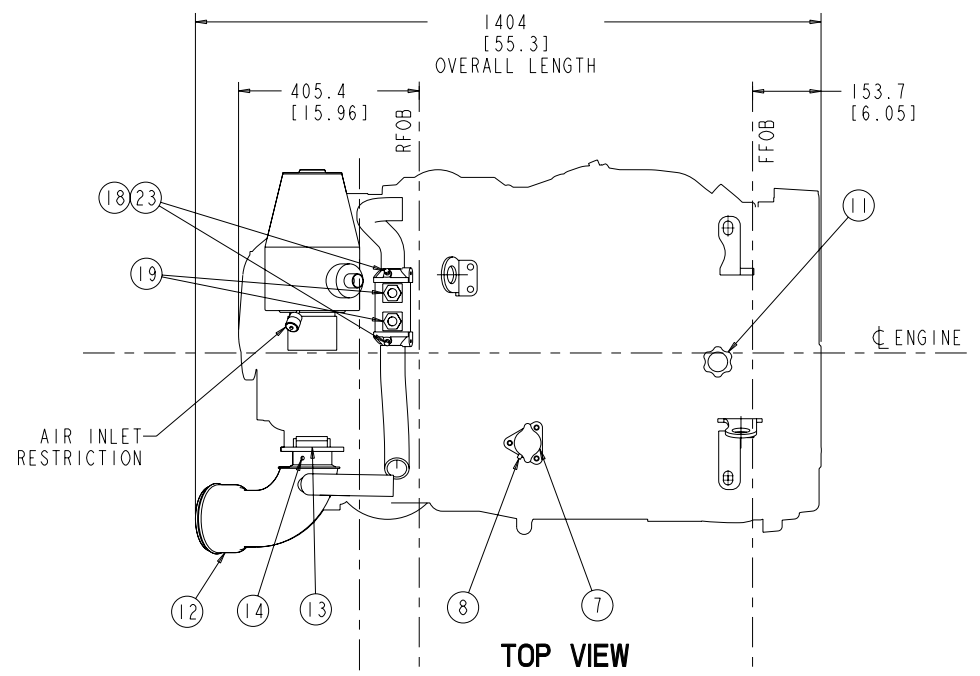


ITEM NUMBER	4953807
OPTIONS LIST	
AC9176	
BR9188	
EE9229	
EM9280	
FF9559	
FH9446	
FS9834	
FW9350	
HX9121	
LA9098	
LF9140	
LG9971	
OC9058	
OP9315	
PH9152	
RD9033	
RG9250	
SA9047	
ST9322	
SW9057	
TB9965	
VB9031	
WI9215	
XS9313	

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
00	RELEASED		



ENGINE SERVICE TEST PORTS/INSTALLATION CONNECTIONS					
1	AUXILIARY HEATER RETURN:	3/4 NPT	9	ENGINE OIL DRAIN FRONT:	M18 X 1.5
2	AUXILIARY HEATER SUPPLY:	3/4 NPT w/ ORIFICE	10	ENGINE OIL DRAIN REAR:	N/A
3	BATTERY CONNECTION (STARTER) (+):	M10 X 1.5	11	ENGINE OIL FILL:	Ø34.5 [1.3]
4	BATTERY CONNECTION (STARTER) (-):	M10 X 1.5	12	EXHAUST OUTLET CONNECTION (ELBOW):	Ø152.4 [6.00] O.D.
5	BATTERY CONNECTION (ECM) (+):	1/4-20 UN	13	EXHAUST OUTLET CONNECTION (TURBO):	Ø66 [2.60] I.D.
6	BATTERY CONNECTION (ECM) (-):	1/4-20 UN	14	EXHAUST TEMPERATURE/BACK PRESSURE:	1/8 NPT
7	COOLANT FILL:	Ø30 [1.18]	15	FRONT ENGINE SUPPORT:	2X Ø21 [0.83] X 31 [1.2] SLOT
8	COOLANT RECOVERY/OVERFLOW CONNECTION:	Ø8.39 [0.33]	16	FUEL RETURN TO TANK CONNECTION:	3/8-18 NPT
			17	FUEL INLET CONNECTION:	3/4-16 UN, 37° FLARE
			18	GEAR OIL COOLER DRAIN:	4X 1/8 NPT
			19	GEAR OIL COOLER INLET AND OUTLET:	2X 1/2 NPT
			20	OIL HEATER CONNECTION:	M22 X 1.5
			21	SEA WATER INLET:	Ø50.8 [2.0] O.D.
			22	SEA WATER OUTLET:	Ø38.1 [1.5] O.D.
			23	SHAFT LOG SEA WATER SUPPLY:	4X 1/8 NPT
			24	ZINC ANODE:	3X 1/2 NPT

DO NOT SCALE THIS DRAWING

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LAST SECTION LETTER USED:	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	ITEM NAME	CUMMINS INC.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	IDENTIFIER	QSB 5.9 W/ ZF 220A	
DWN: D. SOMIN	SIZE CODE (IDENT. NO.)	ITEM NUMBER	4953807
APPD: UNCHECKED	SCALE: N/A	ITEM CONTROL: MCS	SHEET 1 OF 1