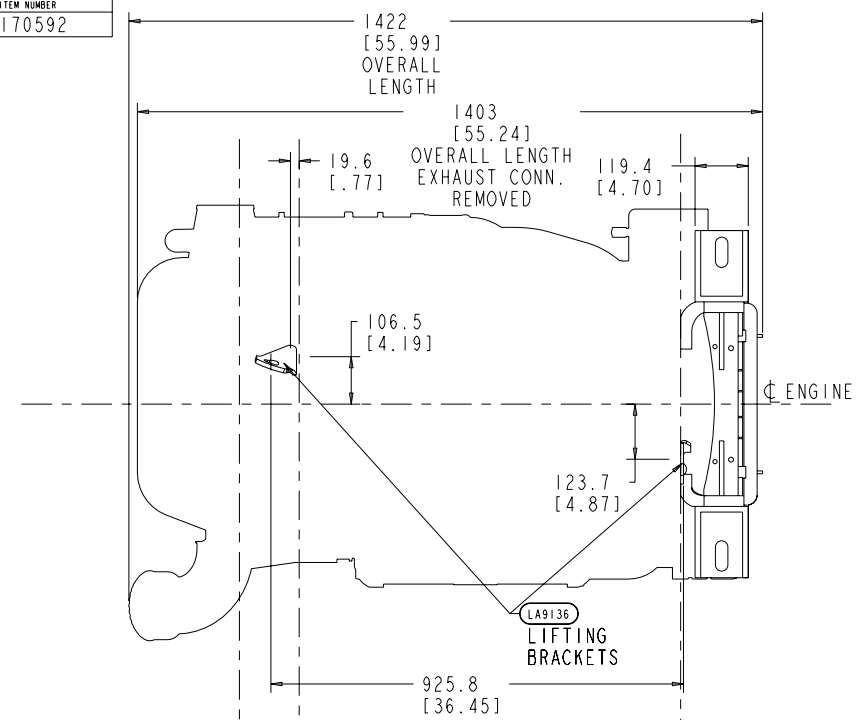
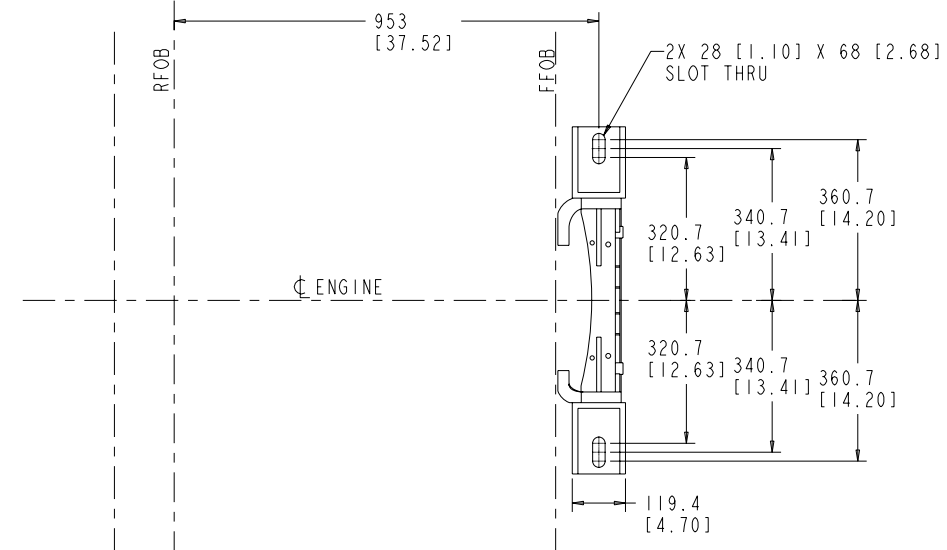


ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	

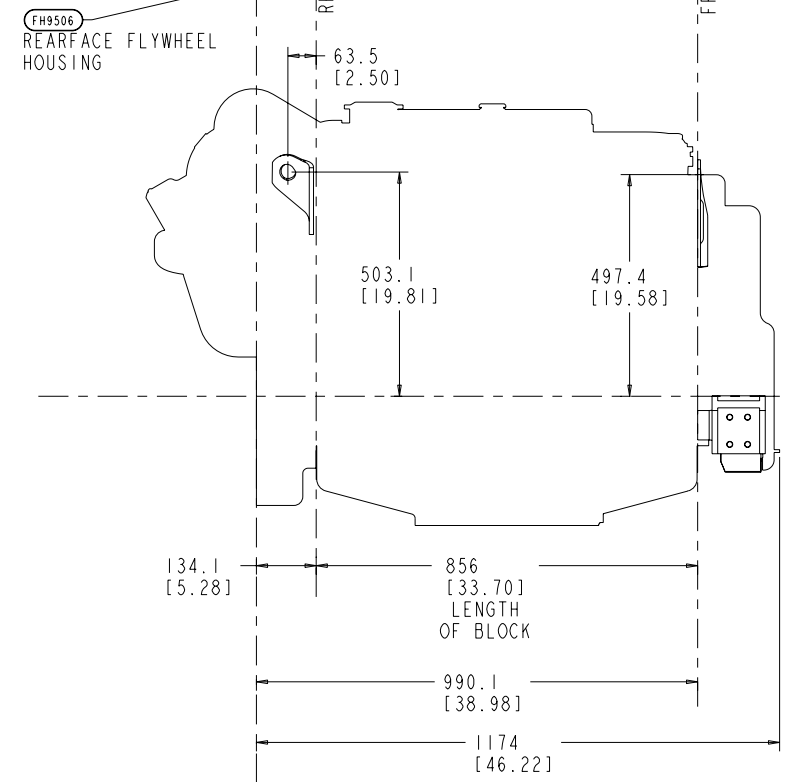


TOP VIEW

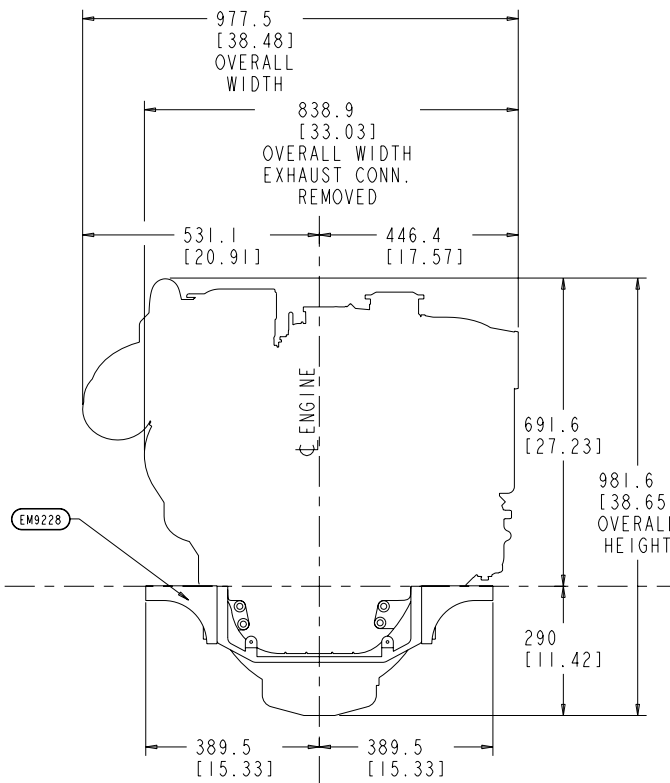


FOUNDATION LAYOUT
QSC MARINE

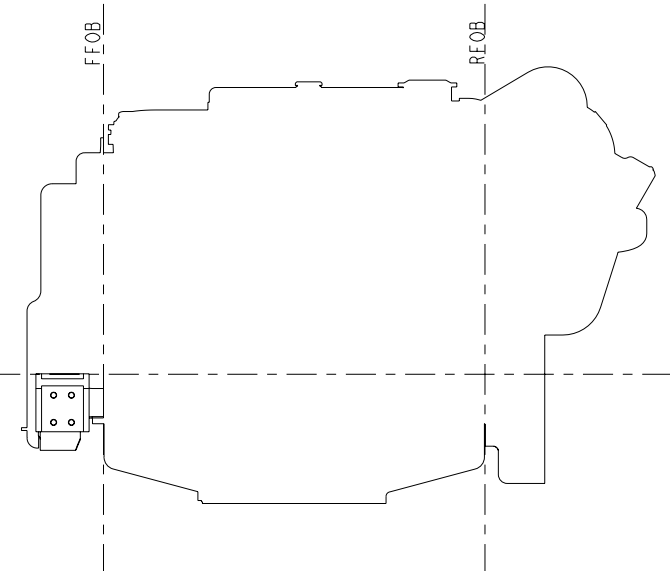
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DRAWING / SUB-SYSTEM	SHEET
DIMENSION OUTLINE	1
ASSEMBLY DRAWING	2
ACCESSORY DRIVES & PTOS	3
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ELECTRICAL SYSTEM	9-12
EXHAUST SYSTEM	13-14
FUEL SYSTEM	15-16
LUBE OIL SYSTEM	17-22
MOUNTING SYSTEM	23-31
STARTING SYSTEM	32



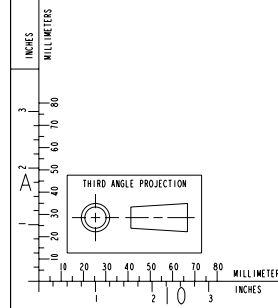
EXHAUST SIDE



FRONT VIEW



FUEL PUMP SIDE



PRODUCT GRAPHICS FILE
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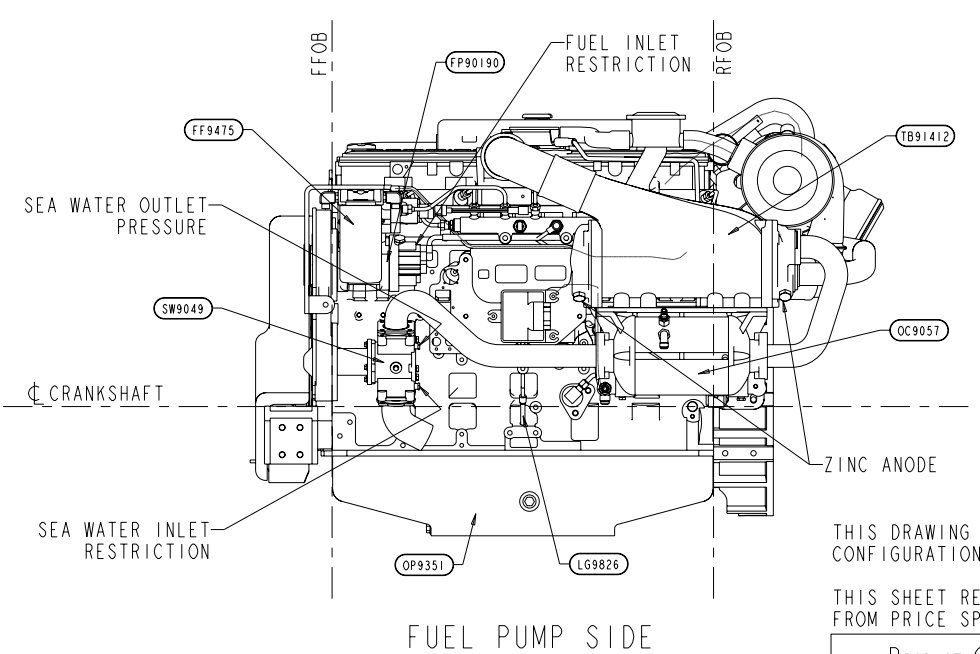
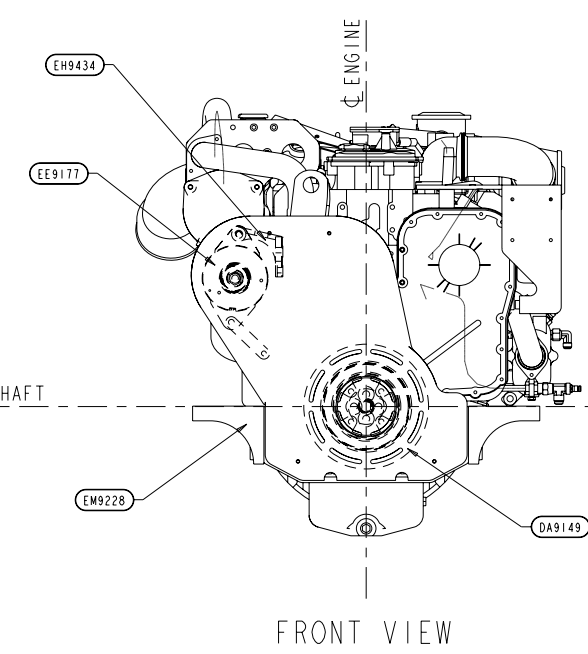
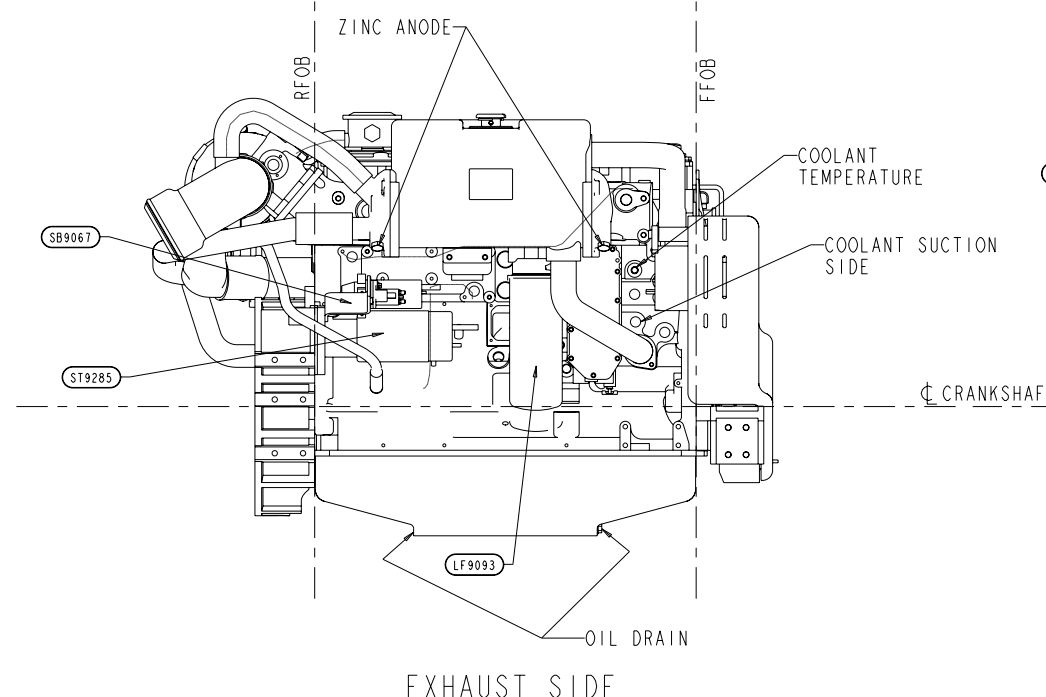
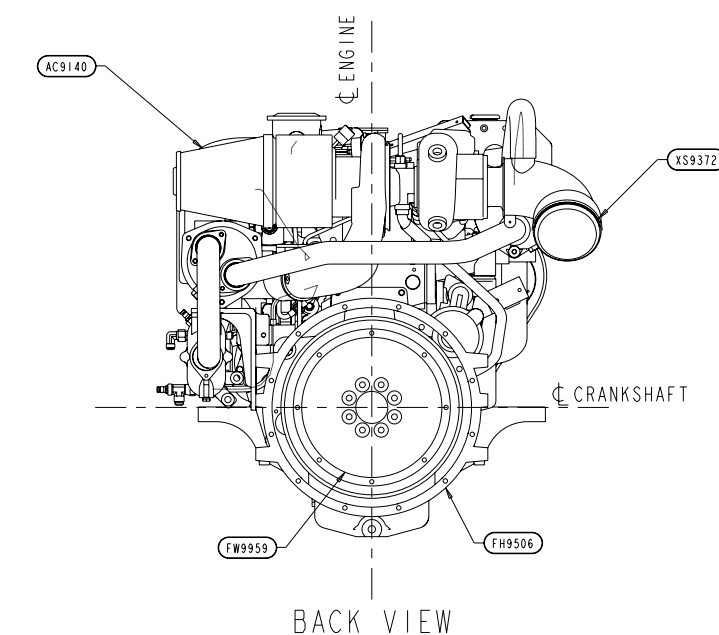
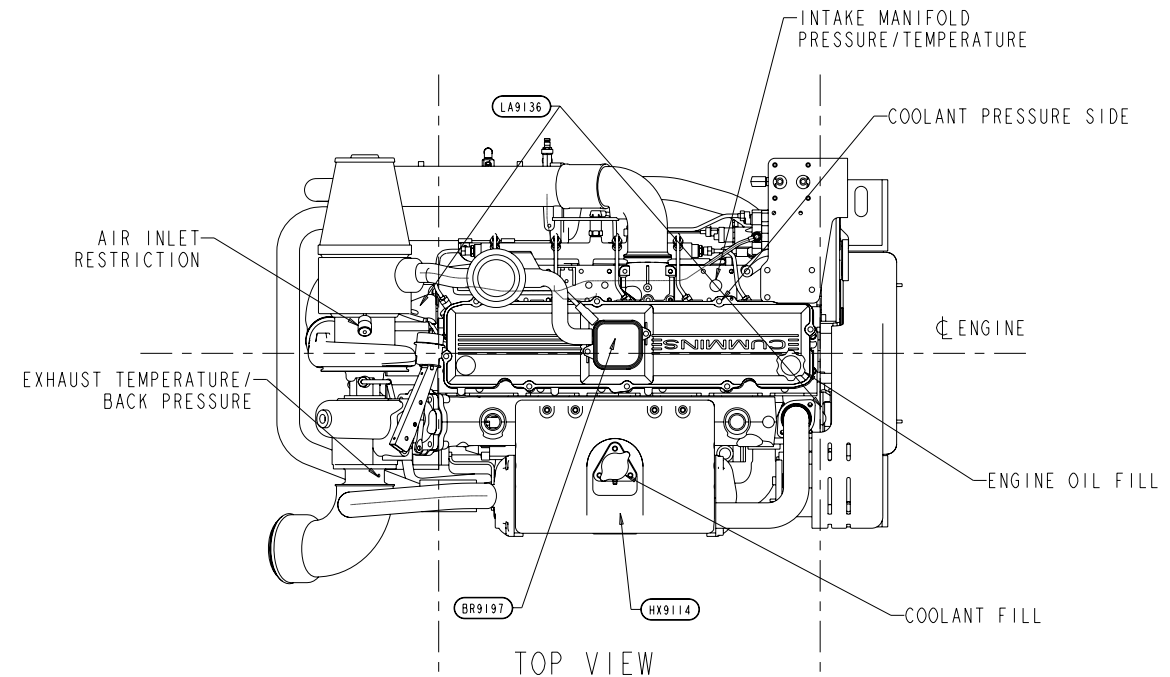
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LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DWN: TMO/TGANG	APPD: UNCHECKED	SIZE CODE IDENT. NO.	ITEM NUMBER 3170592
SCALE: 2x	ITEM CONTROL: MCS	SHEET 1 OF 32	

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SCHW 3-28-97



THIS DRAWING IS BASED ON CONFIGURATION D413038MX03
THIS SHEET REPRESENTS OPTIONS FROM PRICE SPEC. #3123

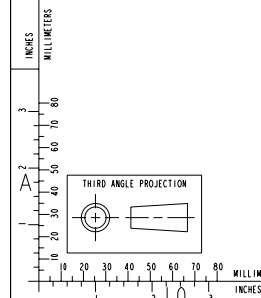
PRODUCT GRAPHICS FILE
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ENGINE SERVICE TEST PORTS

AIR INLET RESTRICTION:	1/8-27 NPT	ENGINE OIL DRAIN FRONT:	M18 X 1.5	SEA WATER INLET RESTRICTION:	1/4-18 NPT
BLOW-BY CONNECTION:	Ø 35.4 [1.39] O.D. HOSE	ENGINE OIL DRAIN REAR:	9/16-18 UN	SEA WATER OUTLET PRESSURE:	1/4-18 NPT
COOLANT FILL:	F8/F9	ENGINE OIL FILL:	29.5 [1.16]	TURBO BOOST PRESSURE:	M8 X 1.25
COOLANT PRESSURE SIDE:	1/2 NPT	EXHAUST TEMPERATURE/BACK PRESSURE:	1/8 NPT	ZINC ANODE:	N/A
COOLANT SUCTION SIDE:	3/4 NPT	FUEL INLET RESTRICTION:	M10 x 1.0		
COOLANT TEMPERATURE:	M14 X 1.5	FUEL RETURN PRESSURE:	9/16-18 UNF		
ENGINE LUBRICATION OIL PRESSURE:	M10 X 1.0	INTAKE MANIFOLD PRESSURE/TEMPERATURE:	3/4 NPT		

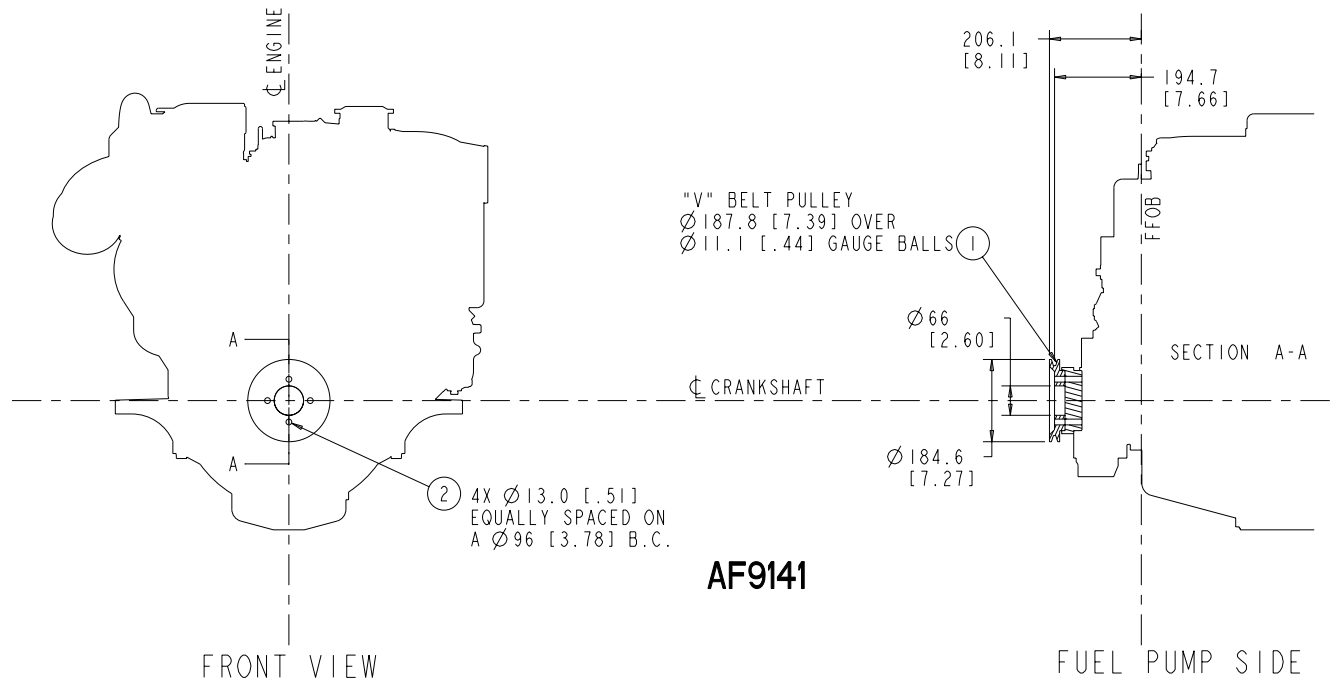
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A	ANSI Y14.5M ISO 81101	ITEM NAME	QSC 8.3-HX
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	IDENTIFIER	SIZE CODE (IDENT. NO.)	ITEM NUMBER
DWN UNCHECKED	J		3170592
APPD UNCHECKED	SCALE: 2x	ITEM CONTROL: MCS	SHEET 2 OF 32

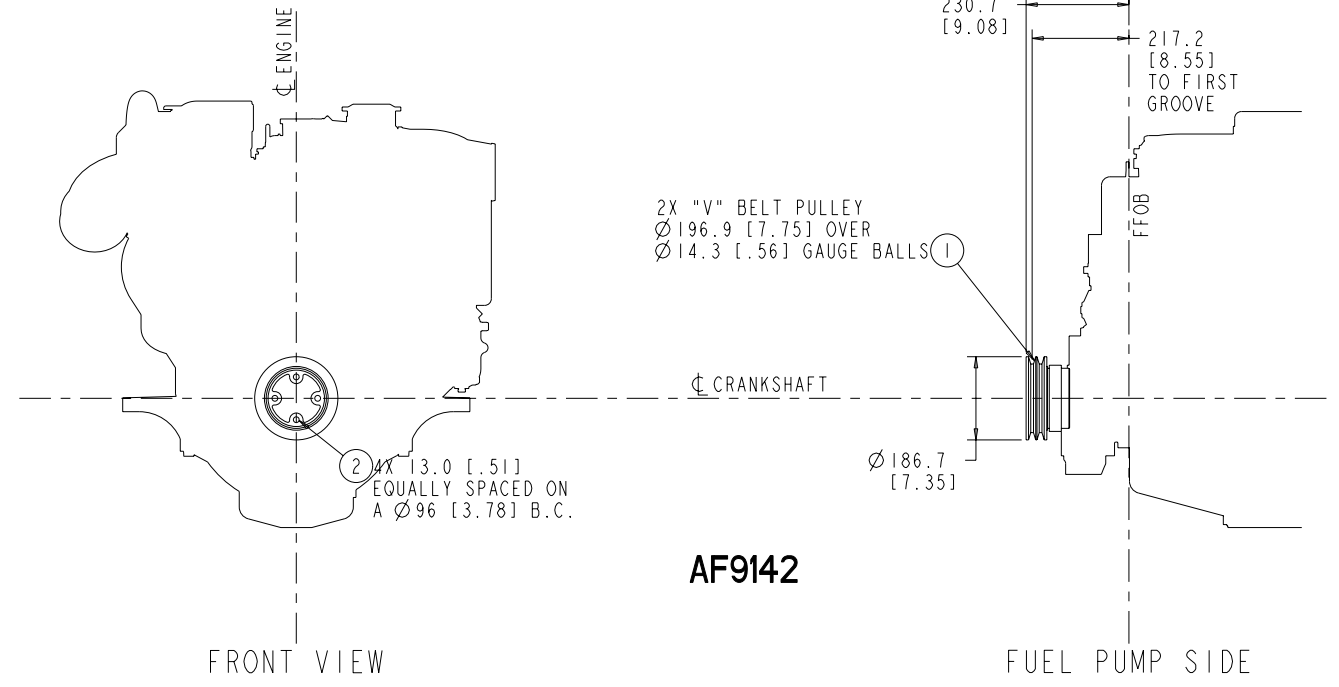


ITEM NUMBER
3170592

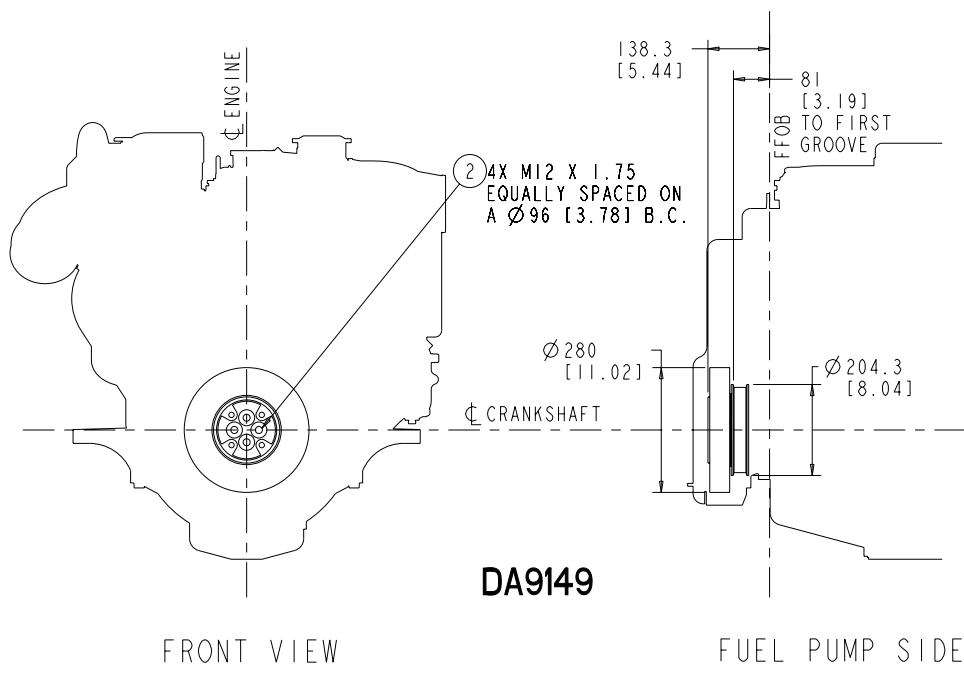
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ZONE REV	DESCRIPTION	DWN	APP'D
03	QSC 8.3-HX	S. SMITH	



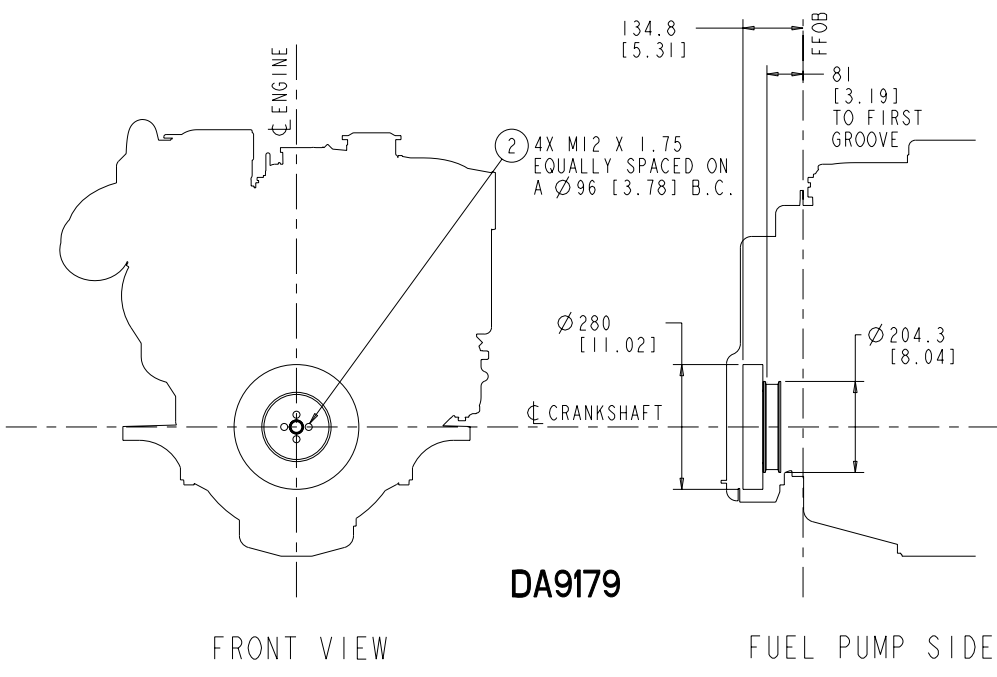
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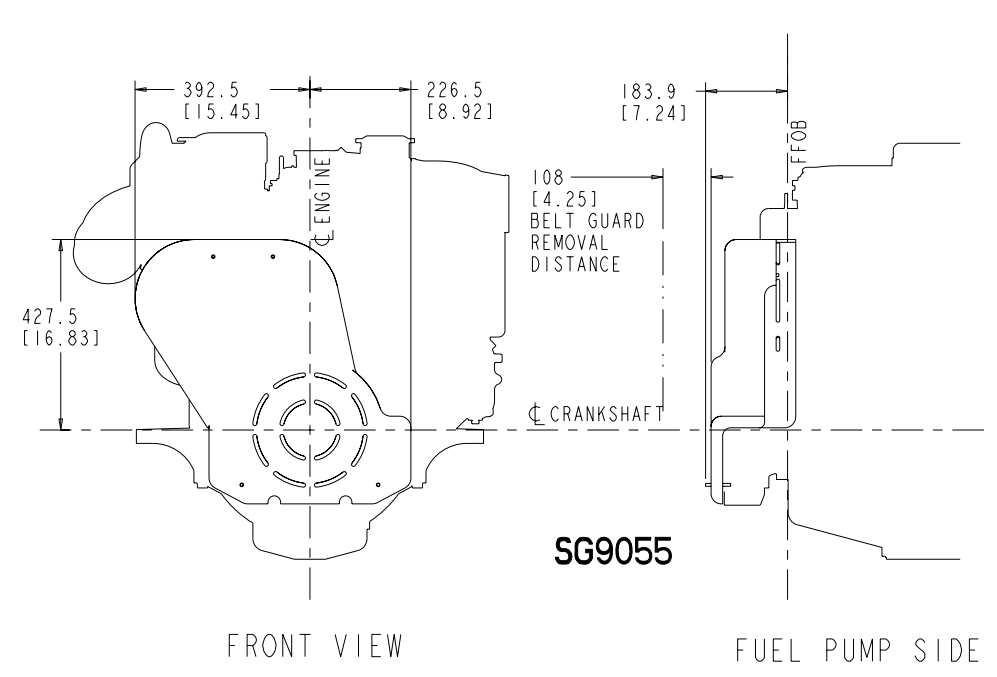
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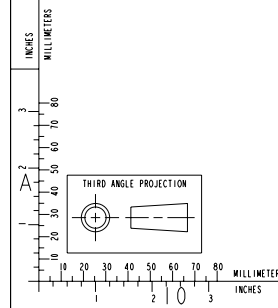
DA9149



DA9179



SG9055



- 1 BELT DRIVE CONNECTION
- 2 DRIVE CONNECTION BOLT PATTERN
- 3 PTO FLYWHEEL HOUSING BOLT PATTERN - N/A

ACCESSORY DRIVES & PTO'S

DO NOT SCALE THIS DRAWING

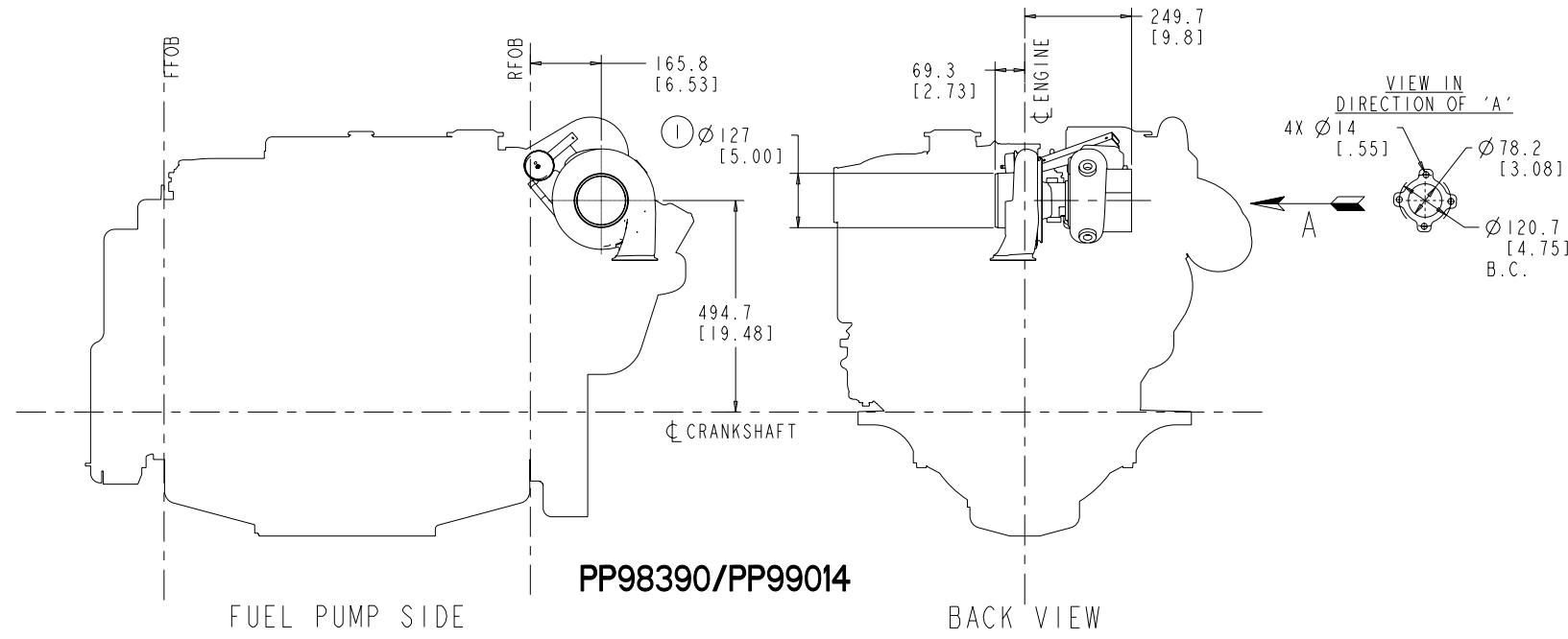
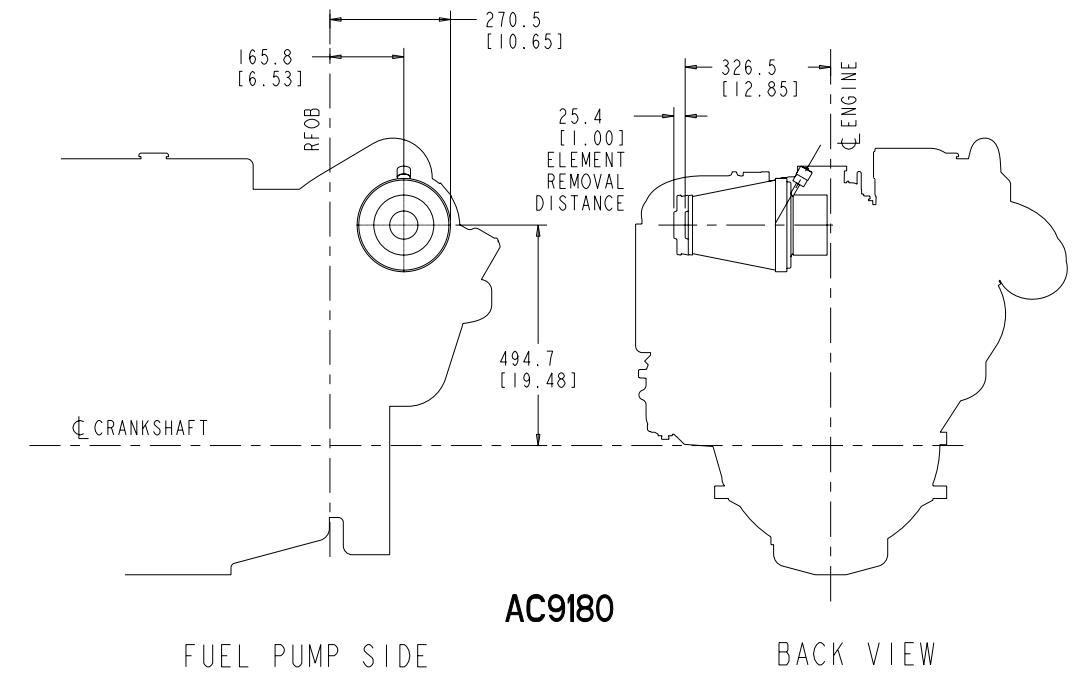
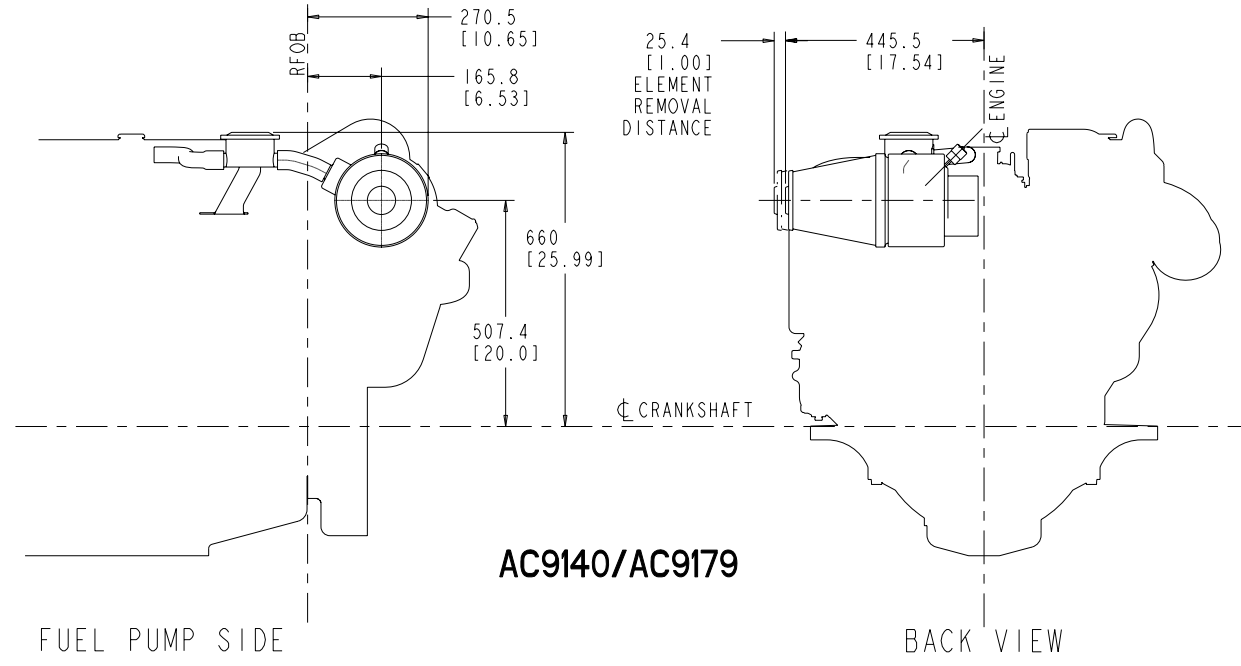
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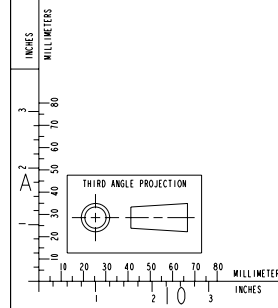
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DWN	TWO/TANG	SIZE CODE IDENT. NO.	ITEM NUMBER	
CHD	UNCHECKED		3170592	
APPD		SCALE: 2x	ITEM CONTROL: MCS	SHEET 3 OF 32

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03	QSC	8.3-HX	B. SCHWAB



- ① AIR INLET CONNECTION, COMPRESSOR
- ② AIR INLET RESTRICTION GAUGE/PORT
- ③ INTAKE MANIFOLD PRESSURE PORT
- ④ INTAKE MANIFOLD TEMPERATURE PORT
- ⑤ TURBO BOOST PRESSURE PORT- N/A



AIR INDUCTION SYSTEM

PRODUCT GRAPHICS FILE
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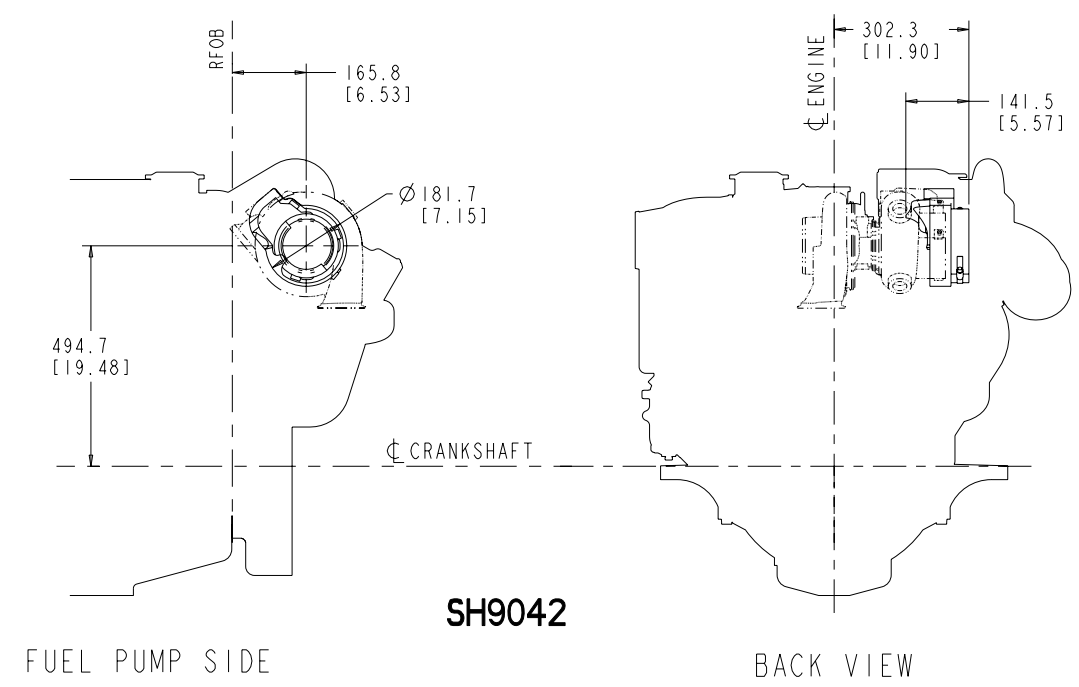
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN: UNCHECKED	APPD: UNCHECKED	SIZE CODE IDENT. NO.: J	ITEM NUMBER 3170592
SCALE: 2x		ITEM CONTROL: MCS	SHEET 4 OF 32

ITEM NUMBER
3170592

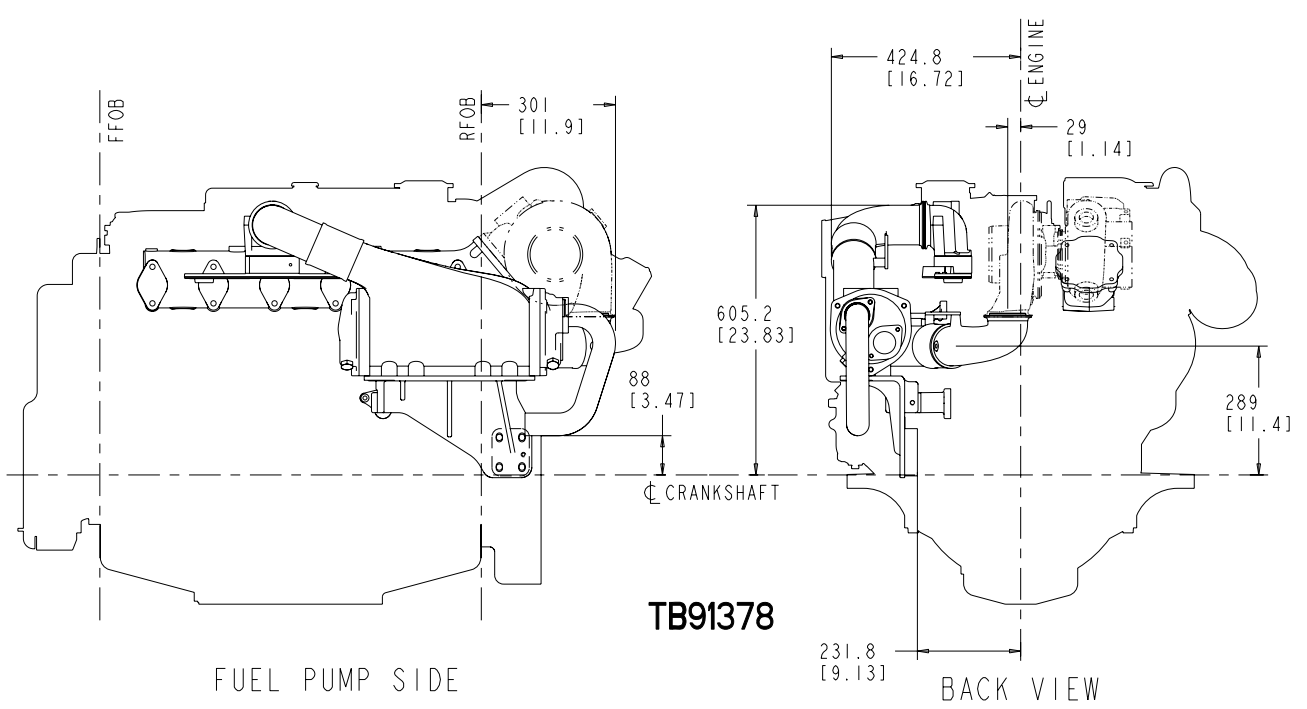
REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SCHWAB



SH9042

FUEL PUMP SIDE

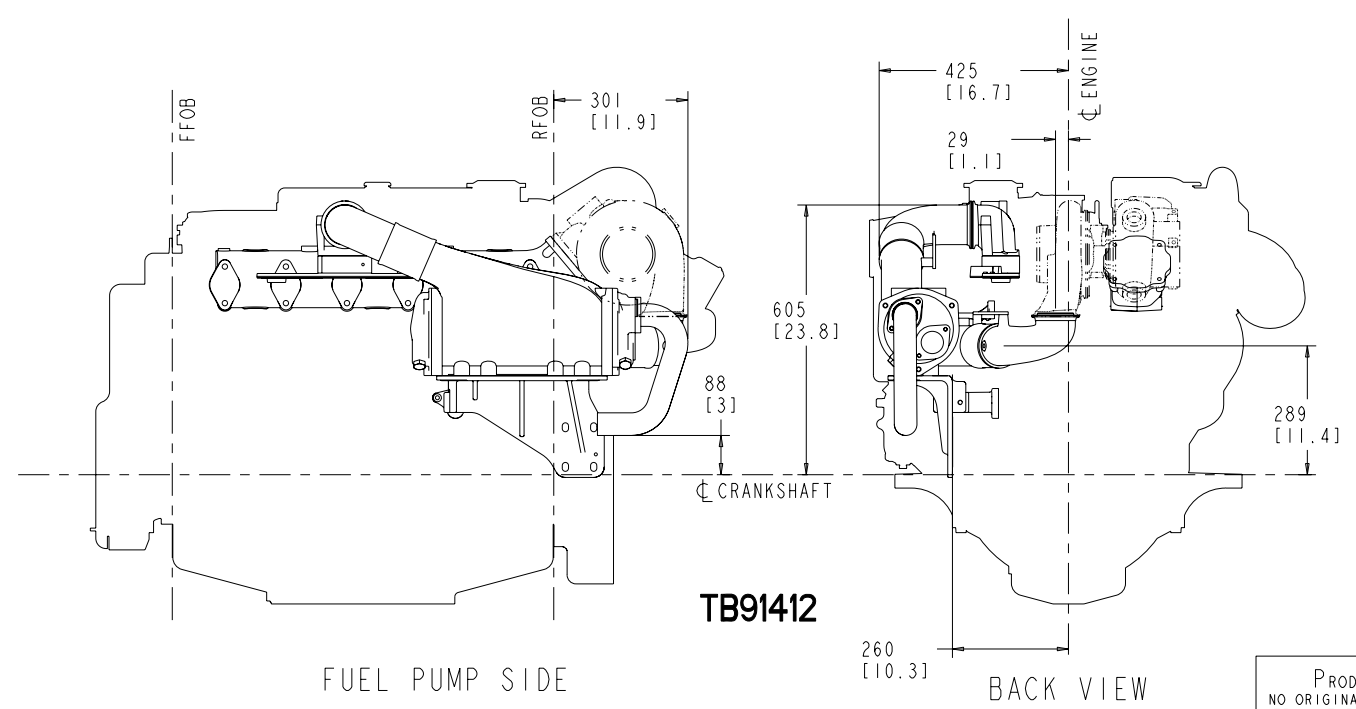
BACK VIEW



TB91378

FUEL PUMP SIDE

BACK VIEW



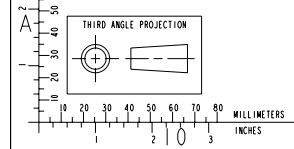
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FUEL PUMP SIDE

BACK VIEW

PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

- ① AIR INLET CONNECTION, COMPRESSOR
- ② AIR INLET RESTRICTION GAUGE/PORT
- ③ INTAKE MANIFOLD PRESSURE PORT
- ④ INTAKE MANIFOLD TEMPERATURE PORT
- ⑤ TURBO BOOST PRESSURE PORT- N/A



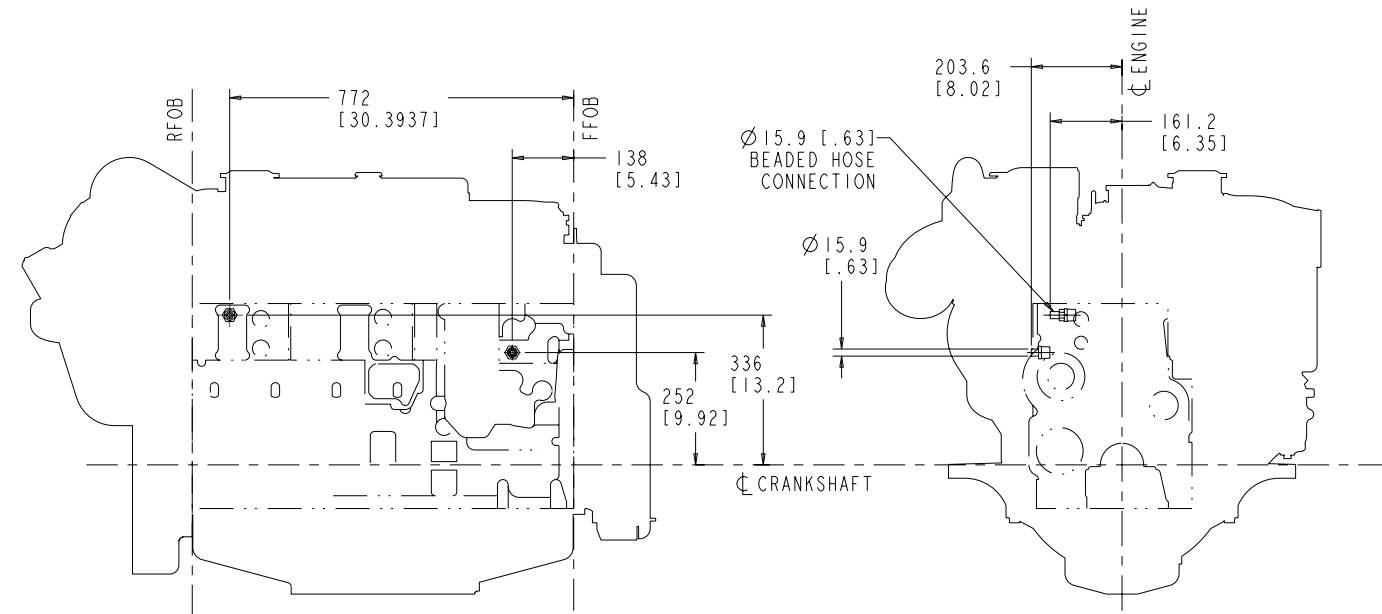
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AIR INDUCTION SYSTEM

LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	
DWN: TMO/TGANG CHD: UNCHECKED APPD:	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592	SCALE: 2x
	ITEM CONTROL: MCS	SHEET 5 OF 32	

ITEM NUMBER
3170592

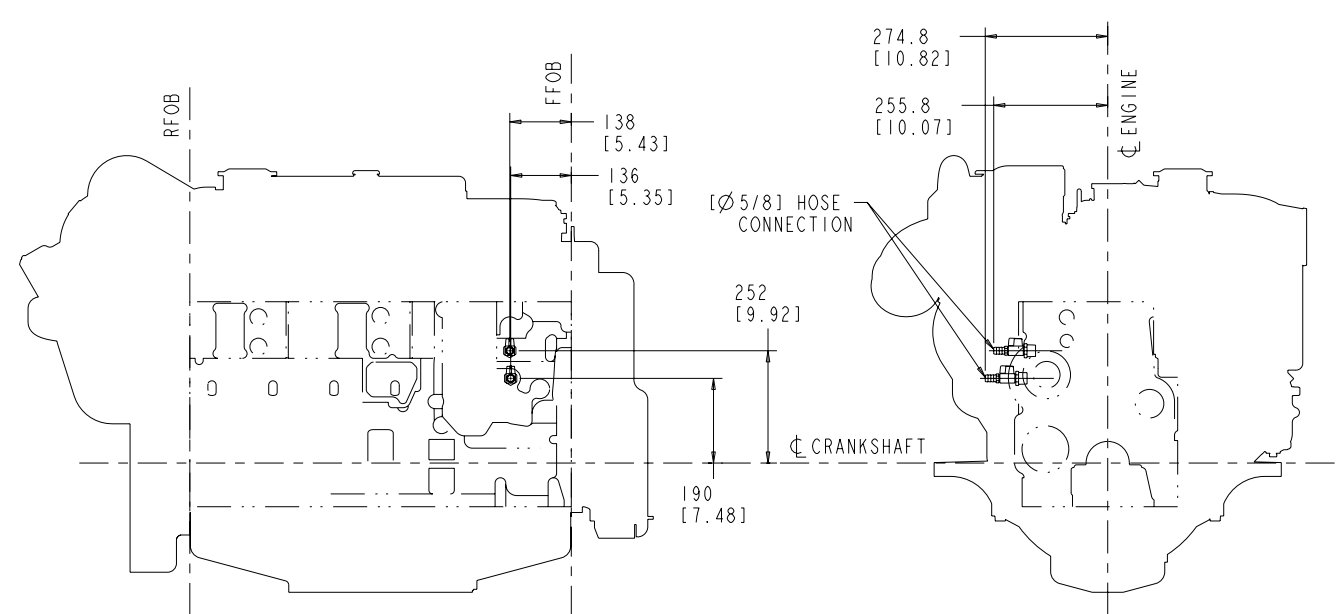
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03		QSC 8.3-HX	



HC9059

EXHAUST SIDE

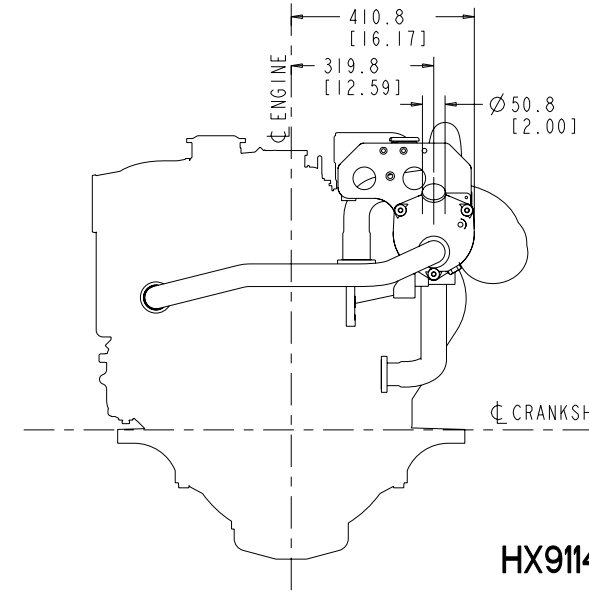
FRONT VIEW



HC9083

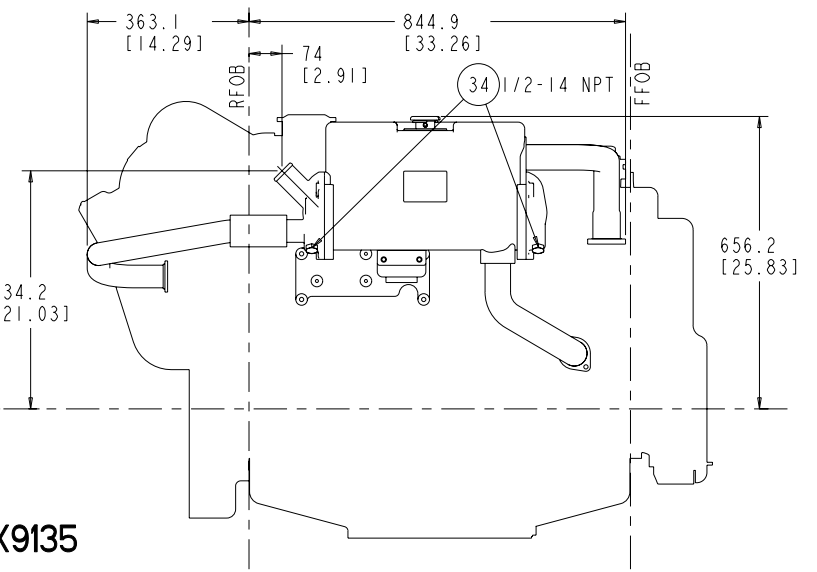
EXHAUST SIDE

FRONT VIEW



HX9114/HX9135

BACK VIEW



EXHAUST SIDE

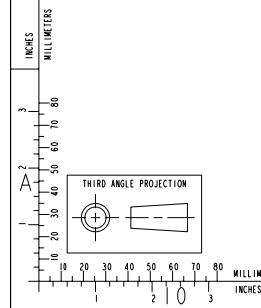
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| 2 COOLANT ACCESSORY SUPPLY CONNECTION | 11 COOLANT LEVEL SWITCH PORT | 20 COOLANT RETURN TEMP. PORT, GEAR OIL COOLER- N/A | 29 SEA WATER INLET CONNECTION |
| 3 COOLANT BLOCK HEATER PORT | 12 COOLANT OUTLET CONNECTION- N/A | 21 COOLANT VENT FITTING PORT | 30 SEA WATER OUTLET CONNECTION |
| 4 COOLANT BLOCK PRESSURE PORT | 13 COOLANT OUTLET PRESSURE PORT | 22 EXPANSION TANK MAKE-UP CONNECTION | 31 SEA WATER OUTLET TEMPERATURE |
| 5 COOLANT DRAIN, AFTERCOOLER | 14 COOLANT OUTLET TEMPERATURE PORT | 23 LTA COOLANT OUTLET CONNECTION | 32 SEA WATER PUMP INLET PRESSURE PORT |
| 6 COOLANT DRAIN, CYLINDER BLOCK | 15 COOLANT OUTLET CONNECTION, GEAR OIL COOLER- N/A | 24 LTA COOLANT OUTLET PRESSURE PORT | 33 SEA WATER PUMP OUTLET PRESSURE PORT |
| 7 COOLANT DRAIN, PUMP | 16 COOLANT OUTLET PRES. PORT, GEAR OIL COOLER- N/A | 25 LTA COOLANT OUTLET TEMPERATURE PORT | 34 ZINC ANODE |
| 8 COOLANT INLET CONNECTION- N/A | 17 COOLANT OUTLET TEMP. PORT, GEAR OIL COOLER- N/A | 26 LTA COOLANT RETURN CONNECTION INLET | |
| 9 COOLANT INLET PRESSURE PORT | 18 COOLANT RETURN CONNECTION, GEAR OIL COOLER- N/A | 27 LTA COOLANT RETURN PRESSURE PORT INLET | |

COOLING SYSTEM

PRODUCT GRAPHICS FILE
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	IDENTIFIER QSC 8.3-HX	SIZE CODE (IDENT. NO.) J
DWN UNCHECKED	APPD UNCHECKED	ITEM NUMBER 3170592
SCALE: 2x	ITEM CONTROL: MCS	SHEET 6 OF 32

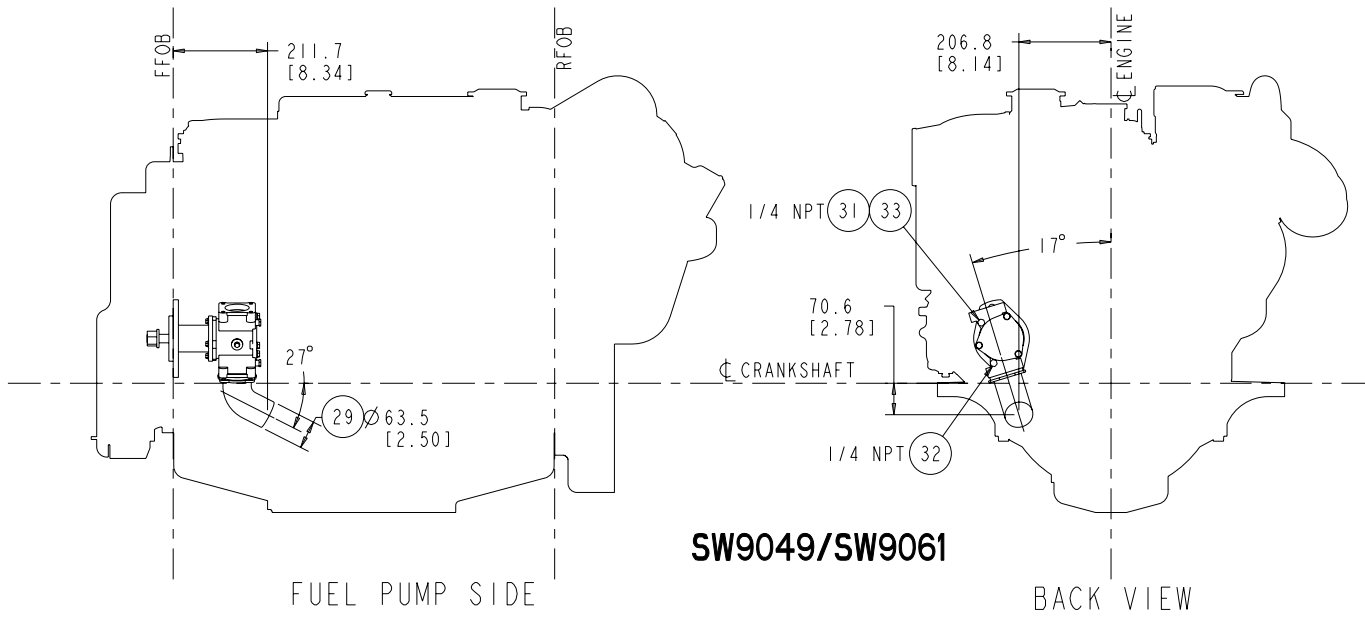
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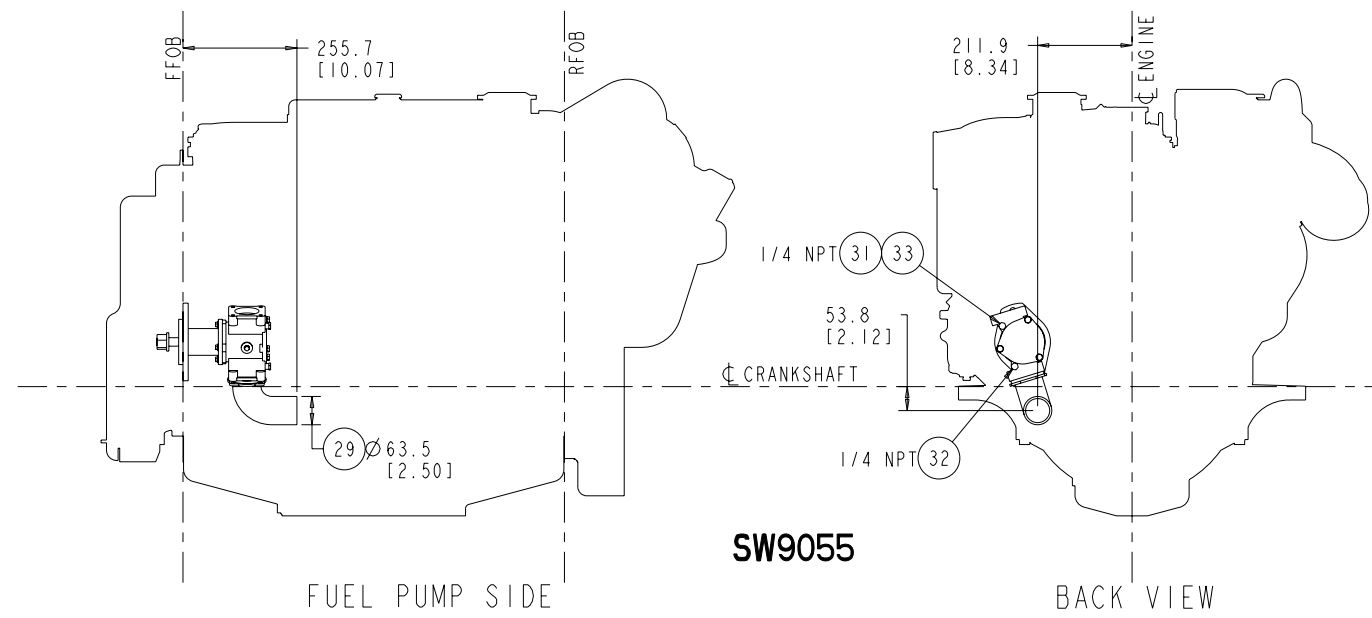
INCHES
MILLIMETERS

ITEM NUMBER
3170592

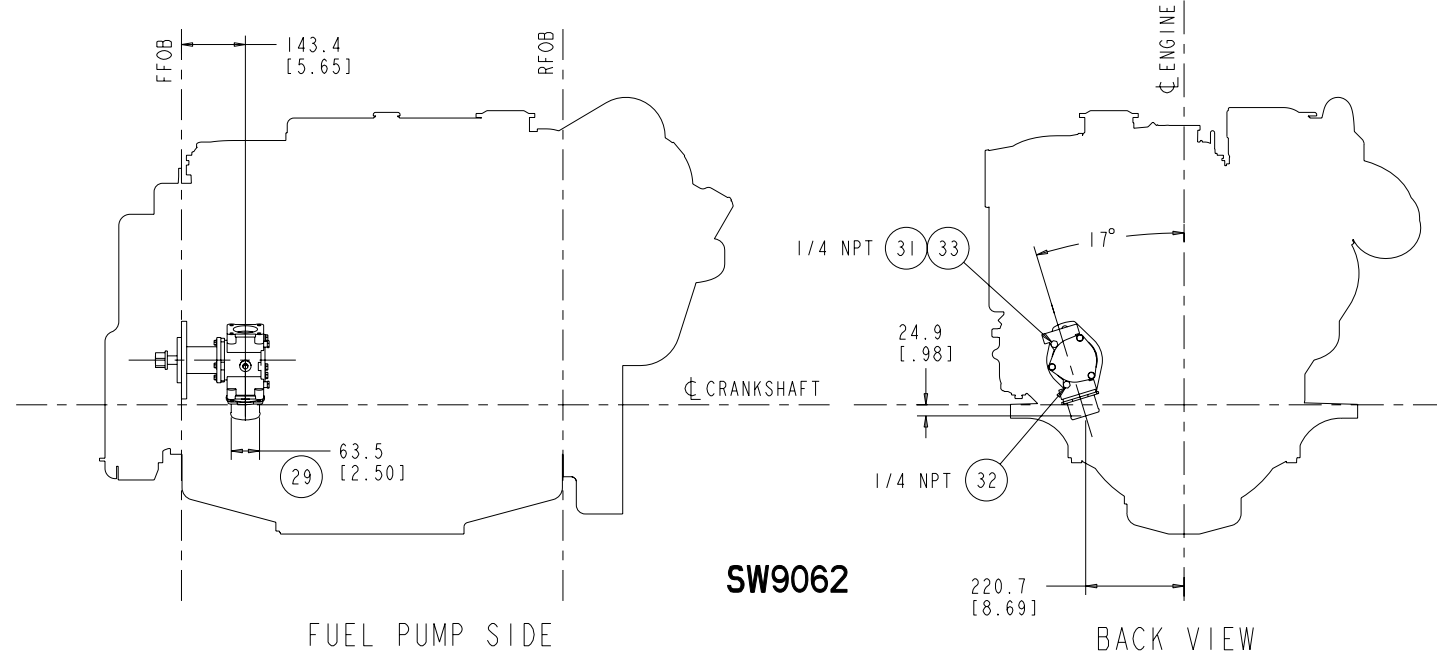
REVISIONS		DWN	APP'D
ZONE	REV	DESCRIPTION	
03		QSC 8.3-HX	



SW9049/SW9061



SW9055



SW9062

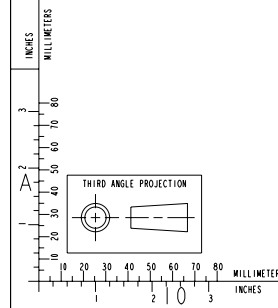
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COOLING SYSTEM

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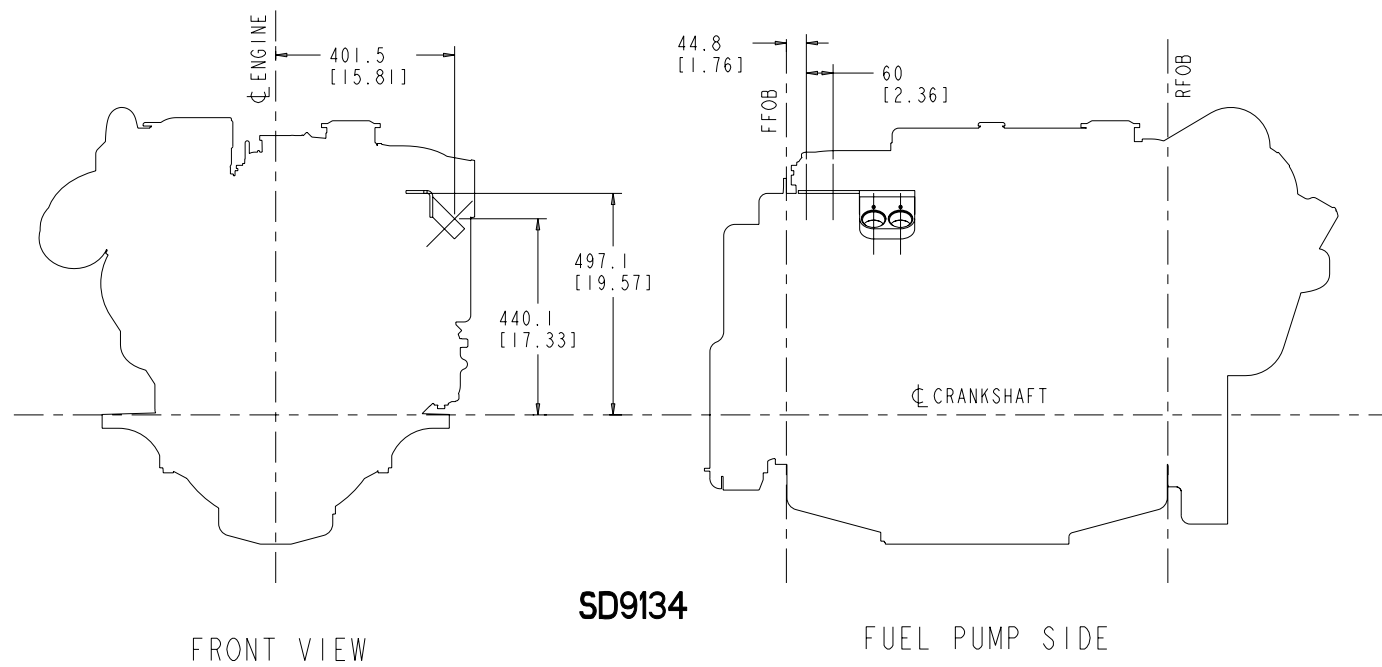
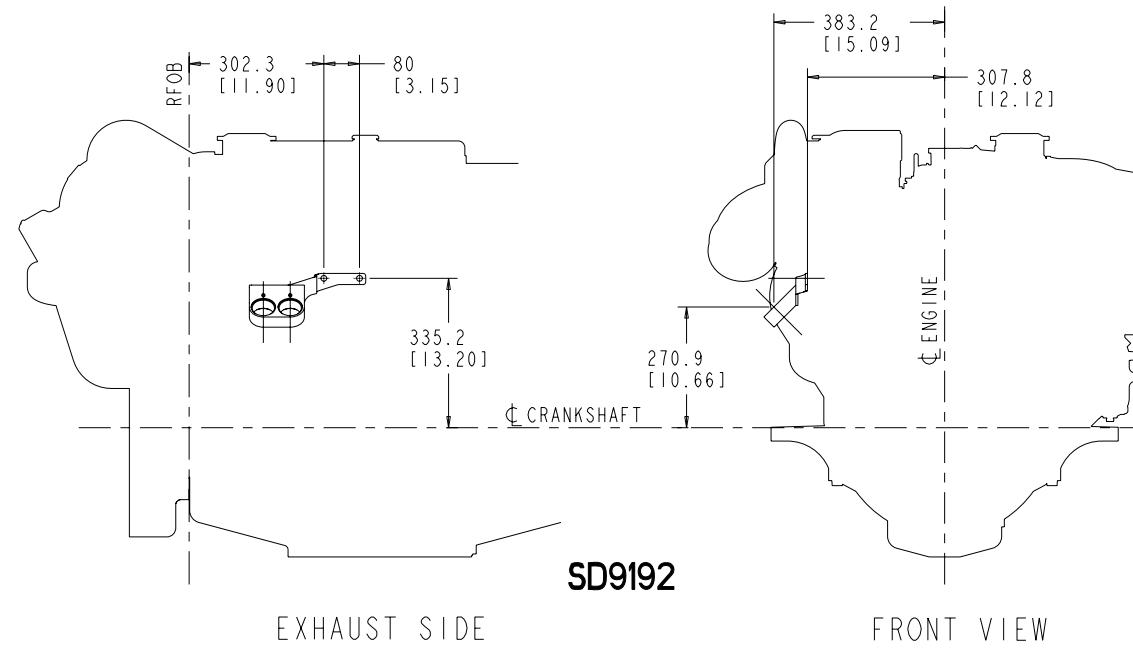
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	IDENTIFIER QSC 8.3-HX	SIZE CODE (IDENT. NO.) J
DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	ITEM NUMBER 3170592	ITEM CONTROL: MCS
	SCALE: 2x	SHEET 7 OF 32

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ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SCHWAB

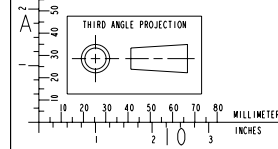


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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS () ARE IN INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DWN	TWOLGANG	SIZE CODE IDENT. NO.	ITEM NUMBER
CHD	UNCHECKED	J	3170592
APPD		SCALE: 2x	ITEM CONTROL: MCS SHEET 8 OF 32

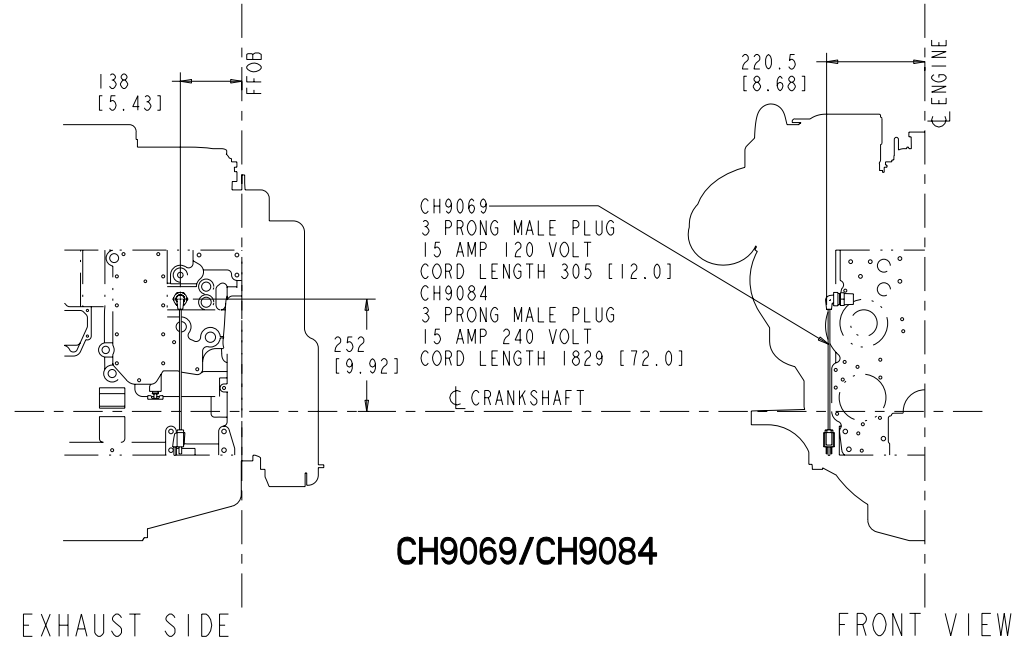
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CONTROLS, GUAGES AND ALARMS

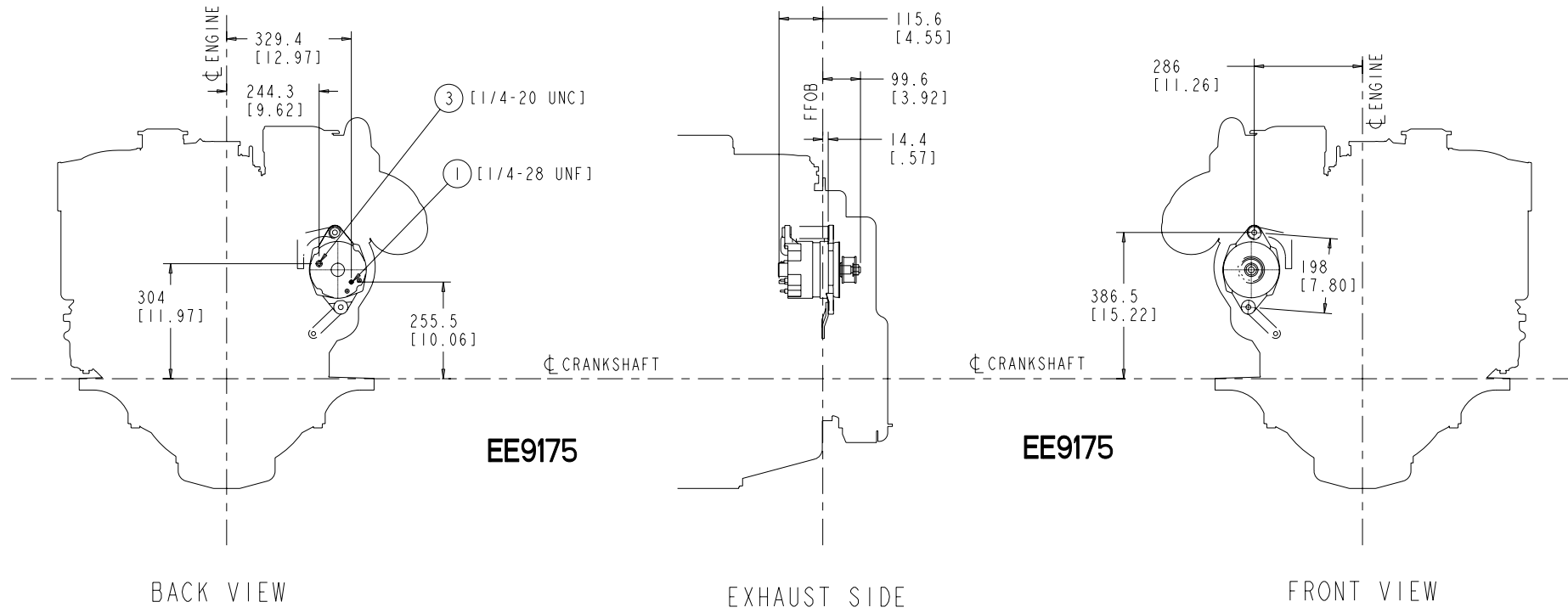


ITEM NUMBER
3170592

REVISIONS		OWN	APP'D
ZONE	REV	DESCRIPTION	
03		QSC 8.3-HX	



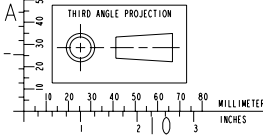
CH9069/CH9084



EE9175

EE9175

- ① ALTERNATOR POSITIVE B+ TERMINAL
- ② WIRE HARNESS INTERCONNECT
- ③ GROUND TERMINAL



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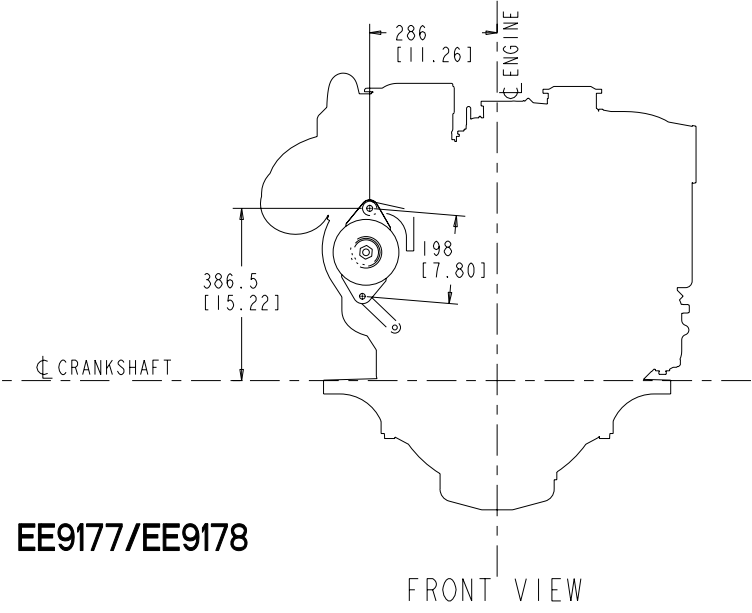
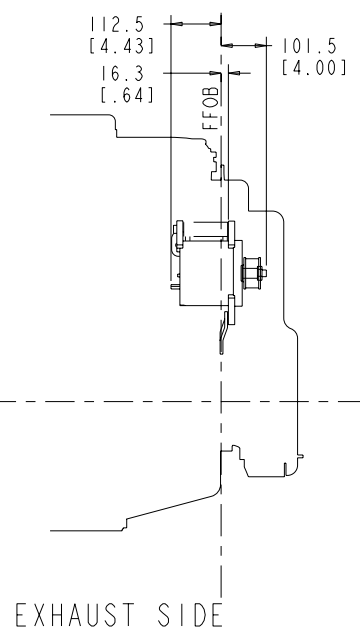
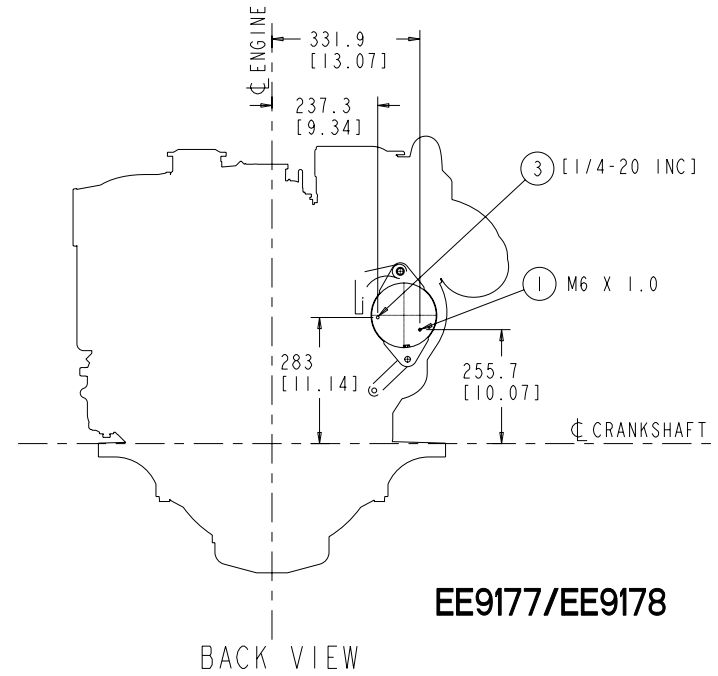
PRODUCT GRAPHICS FILE
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	ITEM NUMBER
DWN: TMO/TGANG CHD: UNCHECKED APPD:	SCALE: 2x	SIZE CODE IDENT. NO.:	3170592
		ITEM CONTROL: MCS	SHEET 9 OF 32

ELECTRICAL SYSTEM

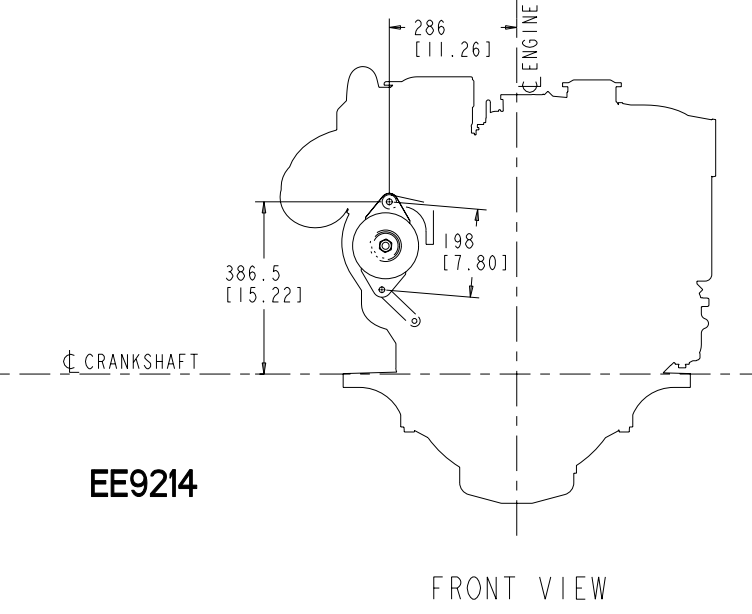
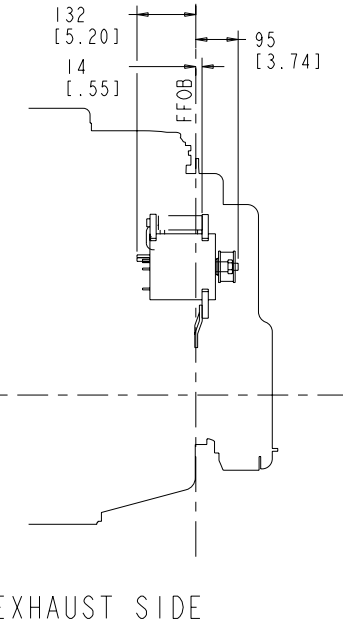
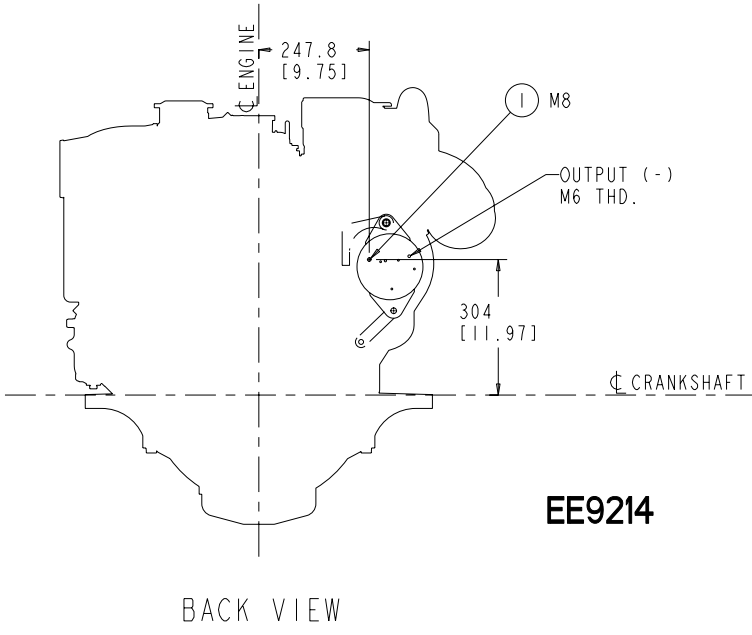
ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SCHW 5-28-97



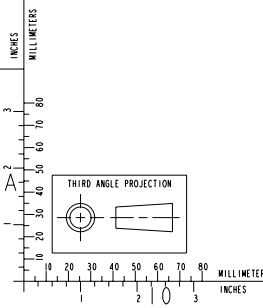
EE9177/EE9178

EE9177/EE9178



EE9214

EE9214



- 1 ALTERNATOR POSITIVE B+ TERMINAL
- 2 WIRE HARNESS INTERCONNECT
- 3 GROUND TERMINAL

ELECTRICAL SYSTEM

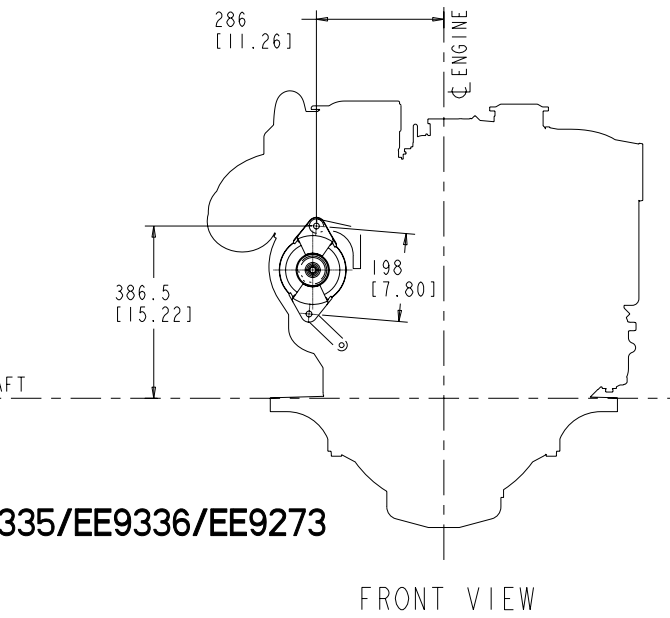
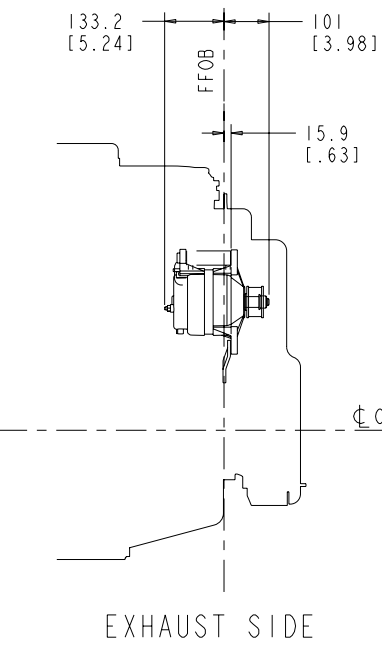
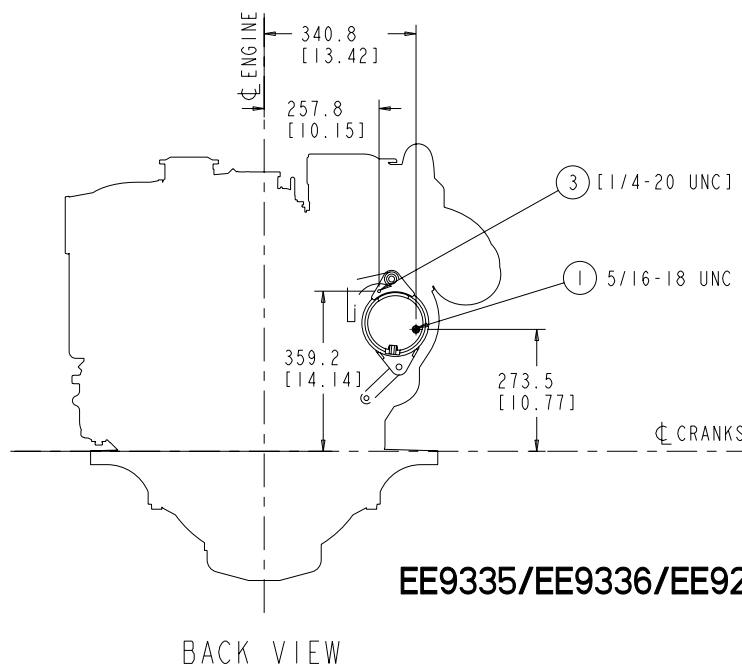
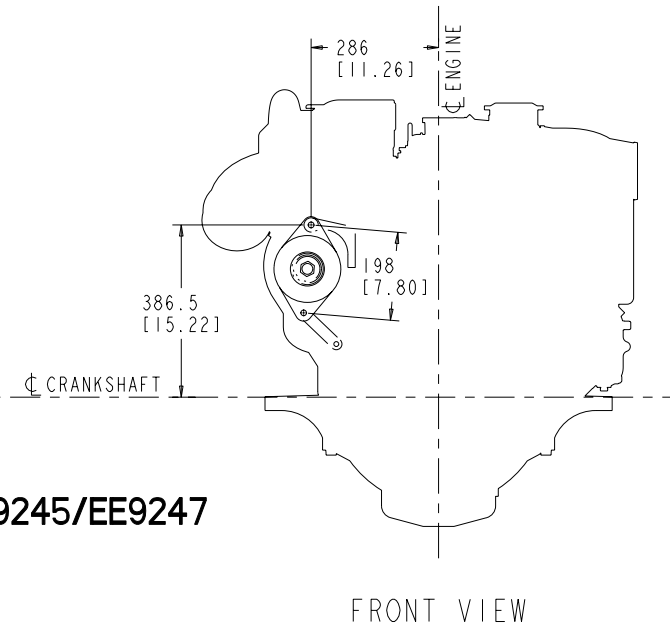
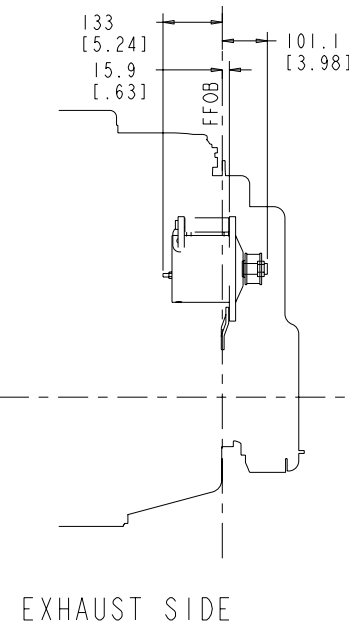
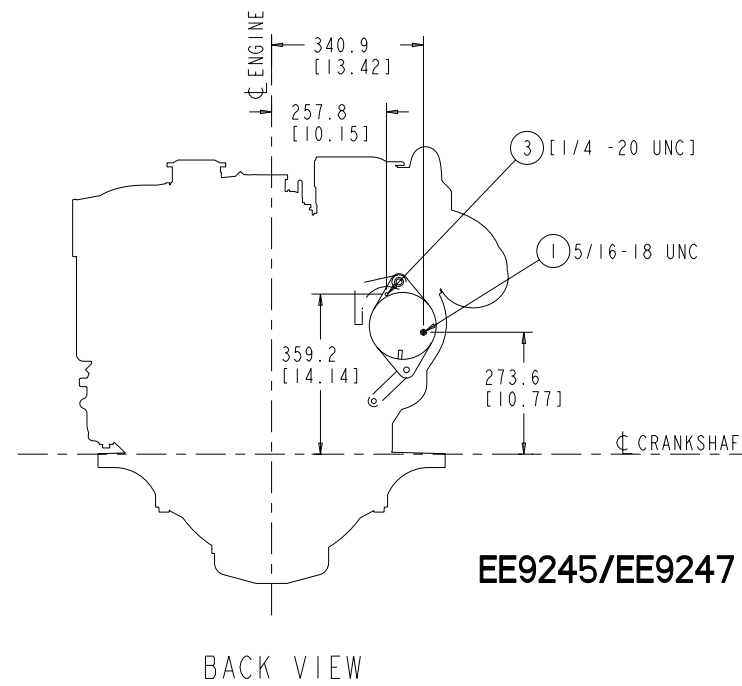
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN: TMO/TGANG CHD: UNCHECKED APPD:	SCALE: 2x	SIZE CODE IDENT. NO.: J	ITEM NUMBER 3170592
		ITEM CONTROL: MCS	SHEET 10 OF 32

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SCHWAB



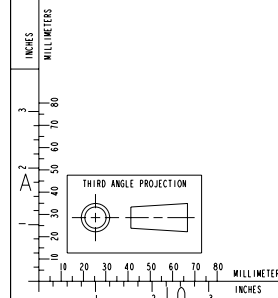
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DWN: TMO/TGANG	CHD: UNCHECKED	SIZE CODE IDENT. NO.	ITEM NUMBER
APPD:		J	3170592
		SCALE: 2x	ITEM CONTROL: MCS SHEET 11 OF 32

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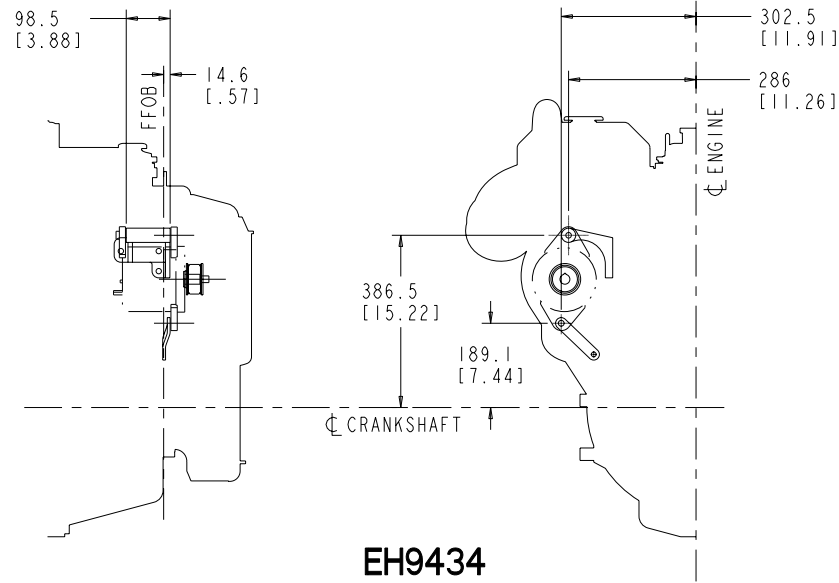
ELECTRICAL SYSTEM

- ① ALTERNATOR POSITIVE B+ TERMINAL
- ② WIRE HARNESS INTERCONNECT
- ③ GROUND TERMINAL



ITEM NUMBER
3170592

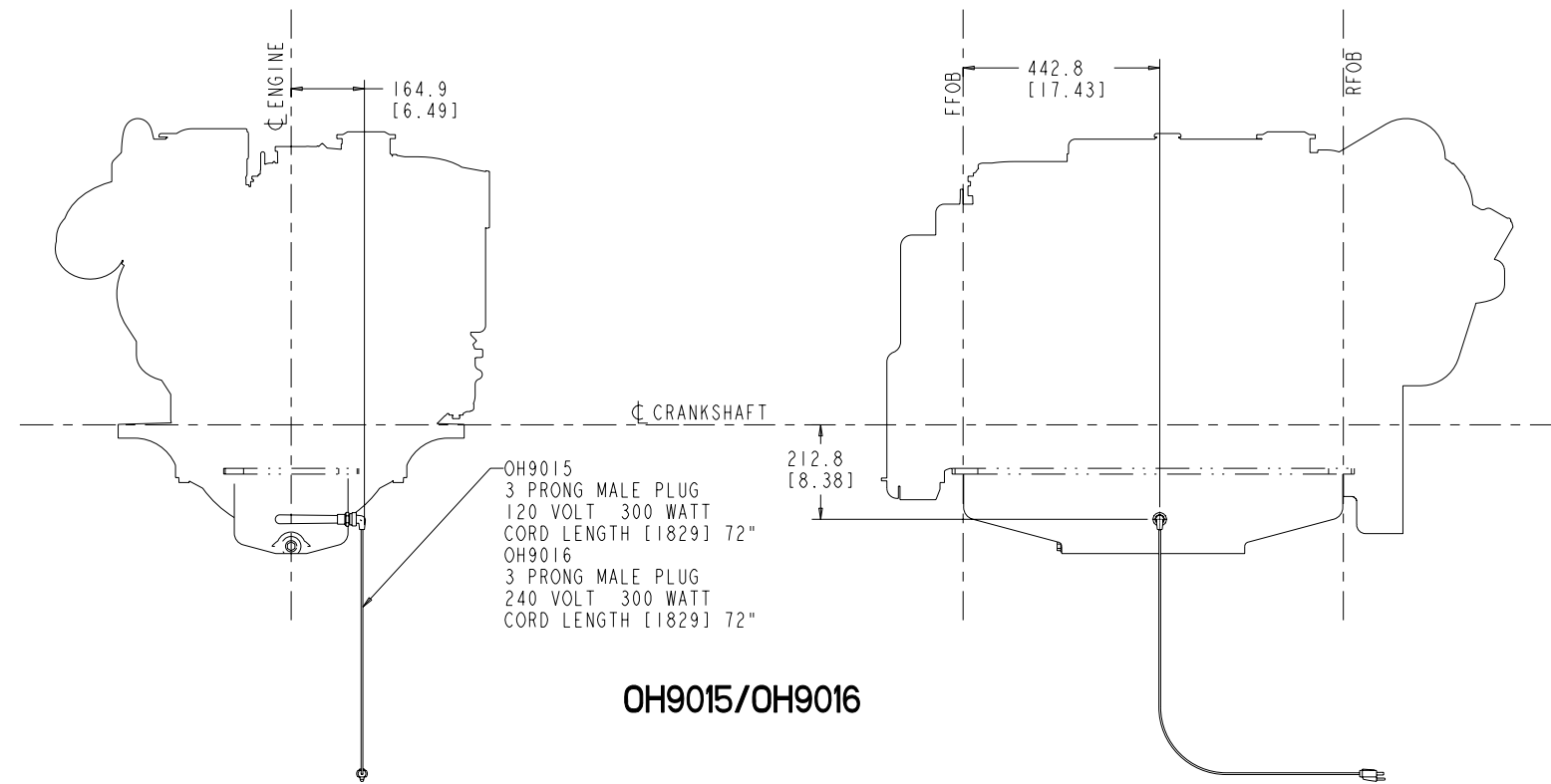
REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	



EXHAUST SIDE

EH9434

FRONT VIEW

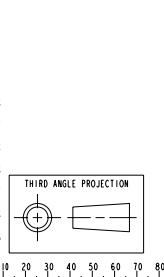


OH9015/OH9016

FRONT VIEW

FUEL PUMP SIDE

INCHES
MILLIMETERS



- ① GROUND TERMINAL
- ② ALTERNATOR POSITIVE B+ TERMINAL
- ③ WIRE HARNESS INTERCONNECT

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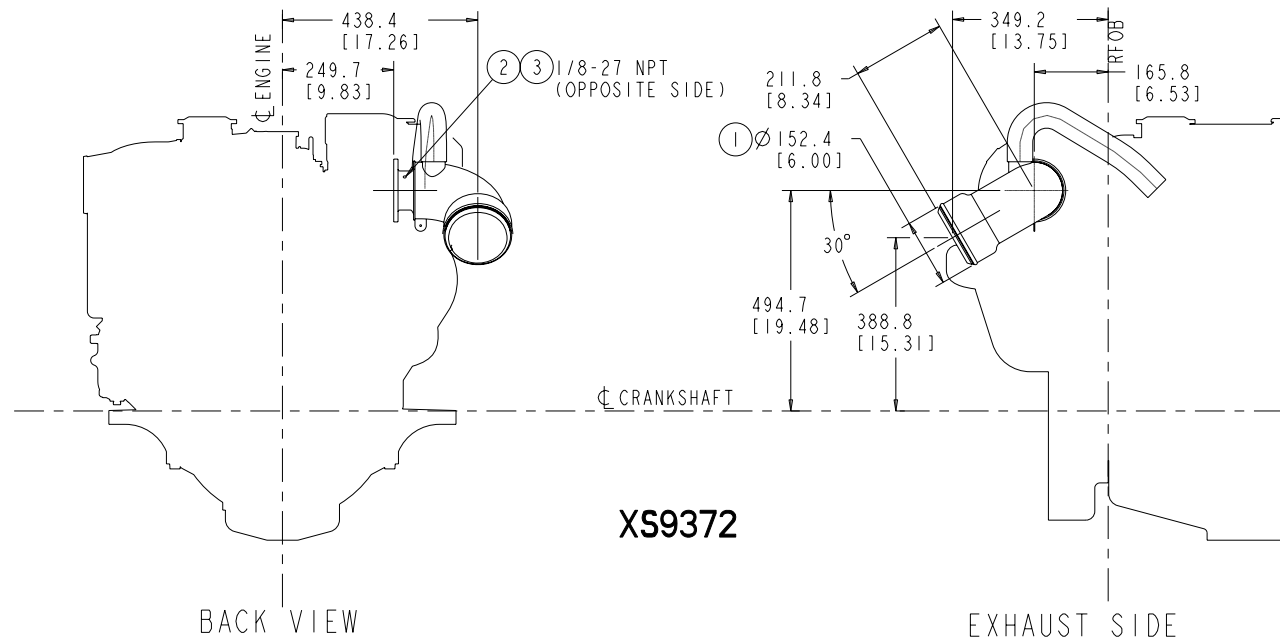
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DWN: TMO/FGANG	DATE: 1-20-04	SIZE CODE IDENT. NO.	ITEM NUMBER
CHD: UNCHECKED	APPD:	3170592	
APPD:	SCALE: 2x	ITEM CONTROL: MCS	SHEET 12 OF 32

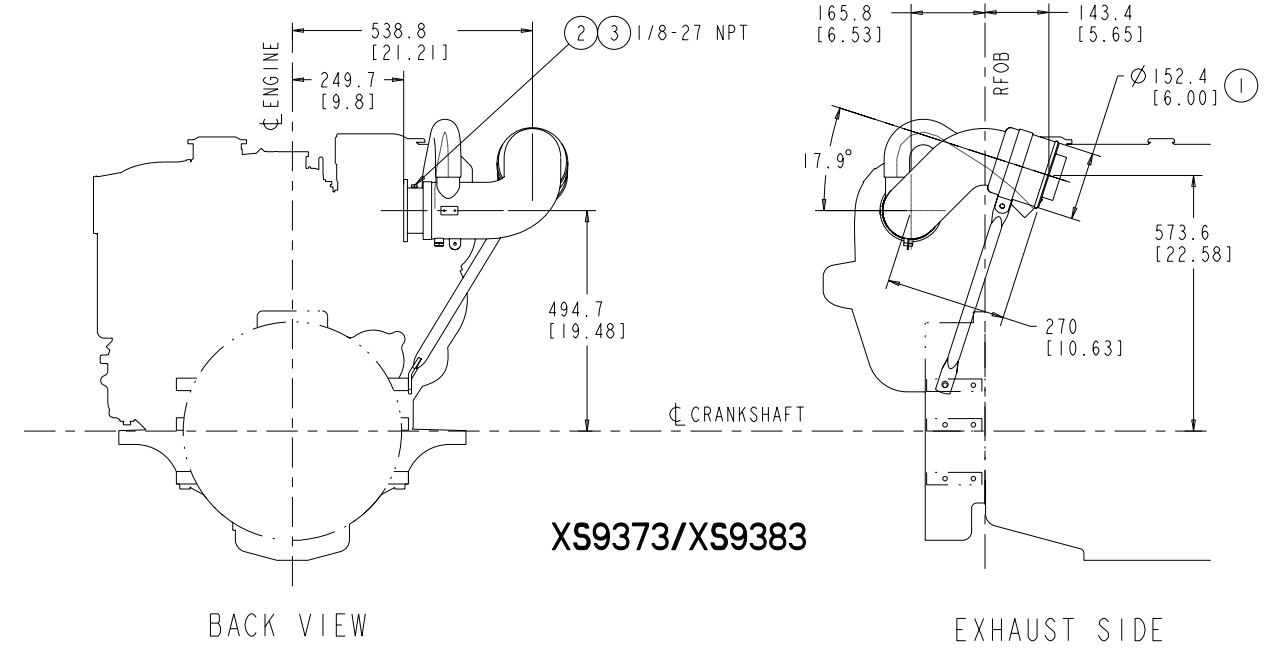
ELECTRICAL SYSTEM

ITEM NUMBER
3170592

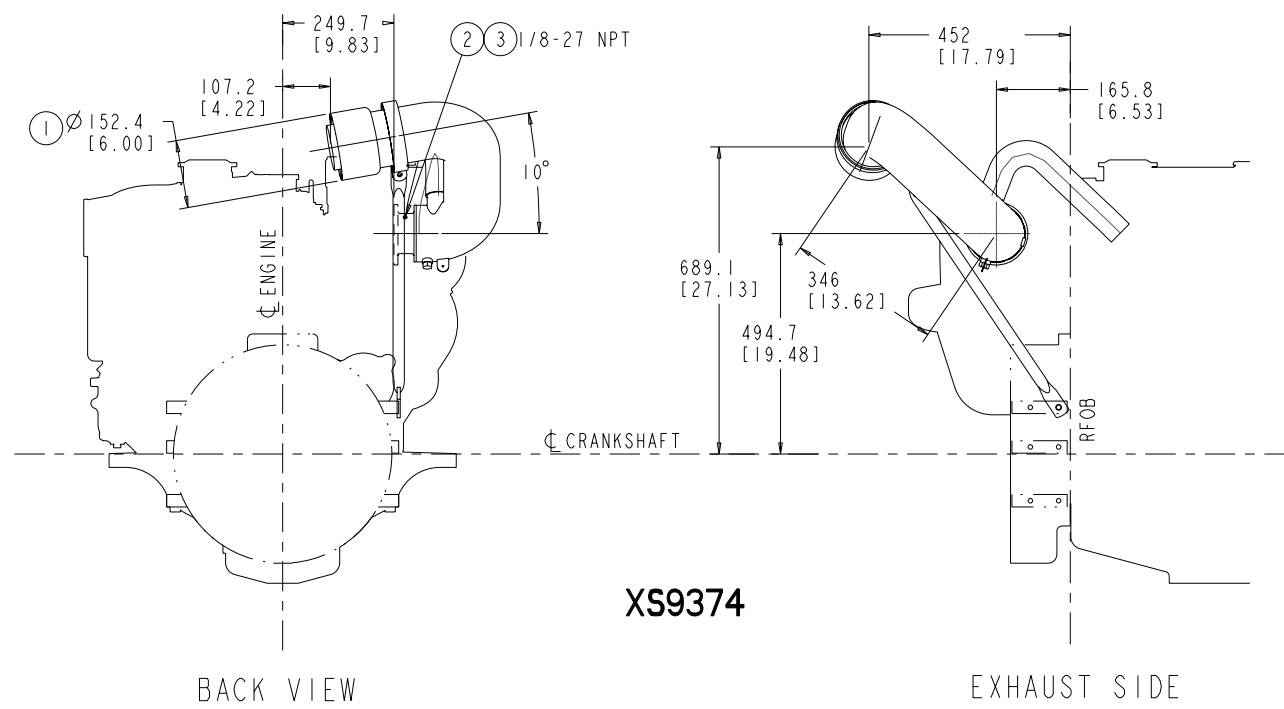
REVISIONS		DWN	APP'D
03	QSC 8.3-HX	B. SORIN	3-28-97



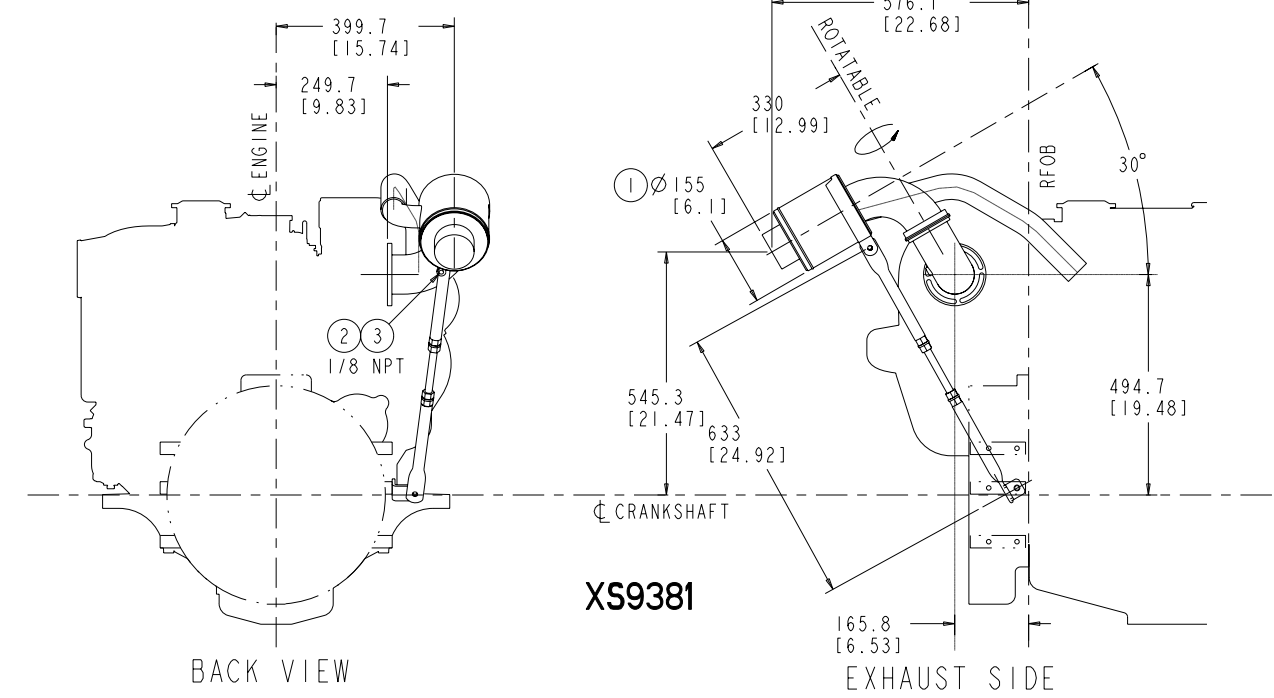
XS9372



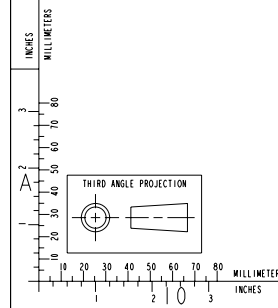
XS9373/XS9383



XS9374



XS9381



- ① EXHAUST OUTLET CONNECTION
- ② EXHAUST PRESSURE PORT
- ③ EXHAUST TEMPERATURE PORT

EXHAUST SYSTEM

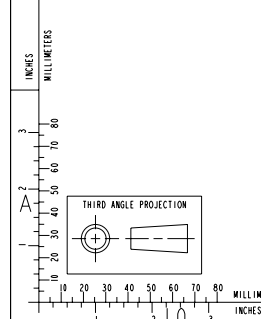
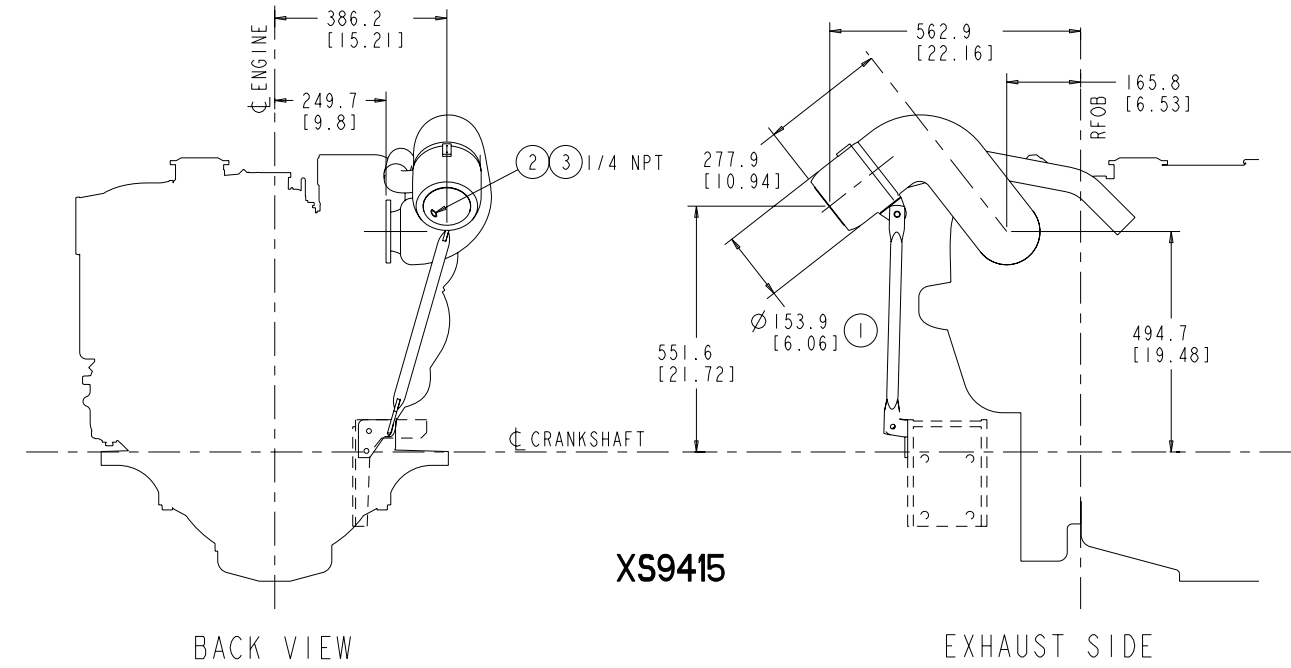
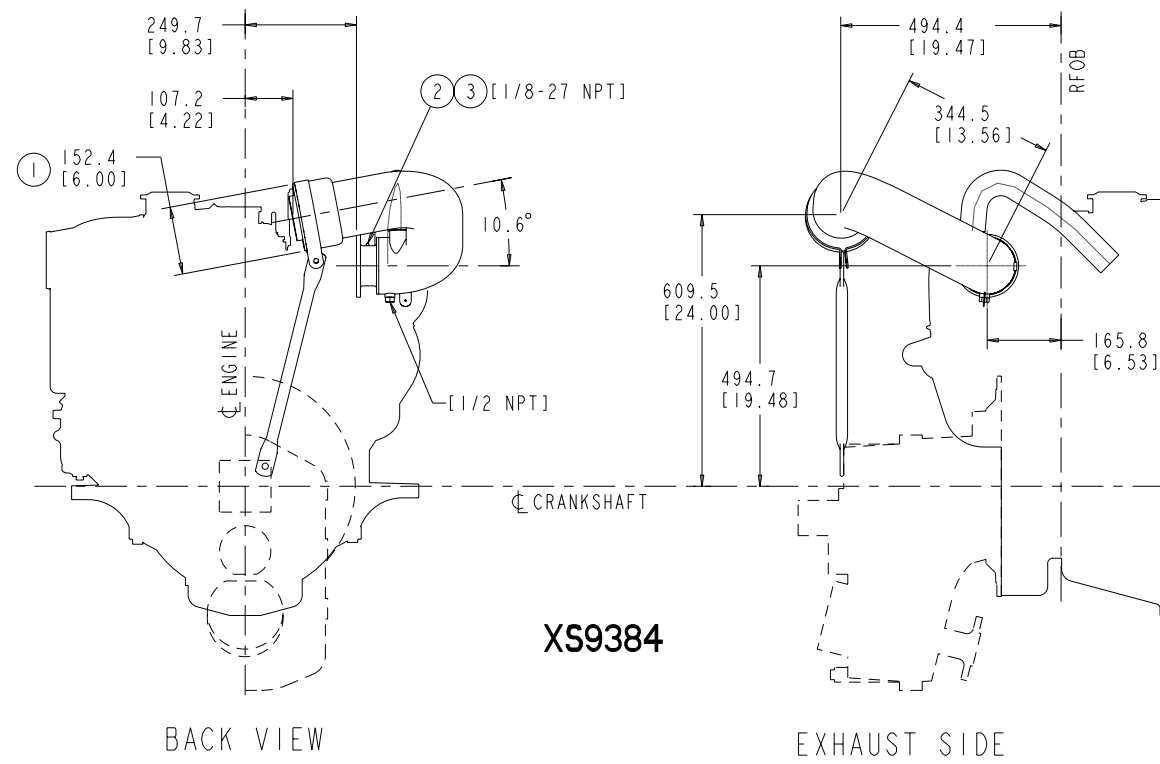
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LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 8101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	ITEM NUMBER
DWN: TMO/ENG CHD: UNCHECKED APPD: UNCHECKED	SIZE CODE IDENT. NO.:	3170592	
	SCALE: 2x	ITEM CONTROL: MCS	SHEET 13 OF 32

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SMITH 3-28-97



- ① EXHAUST OUTLET CONNECTION
- ② EXHAUST PRESSURE PORT
- ③ EXHAUST TEMPERATURE PORT

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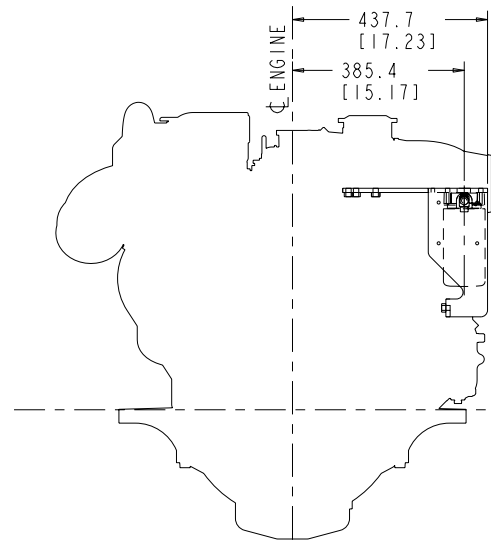
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	
DWN: TMO/CSG CHD: UNCHECKED APPD:	SIZE CODE IDENT. NO. J	ITEM NUMBER 3170592	SCALE: 2x
ITEM CONTROL: MCS		SHEET 14 OF 32	

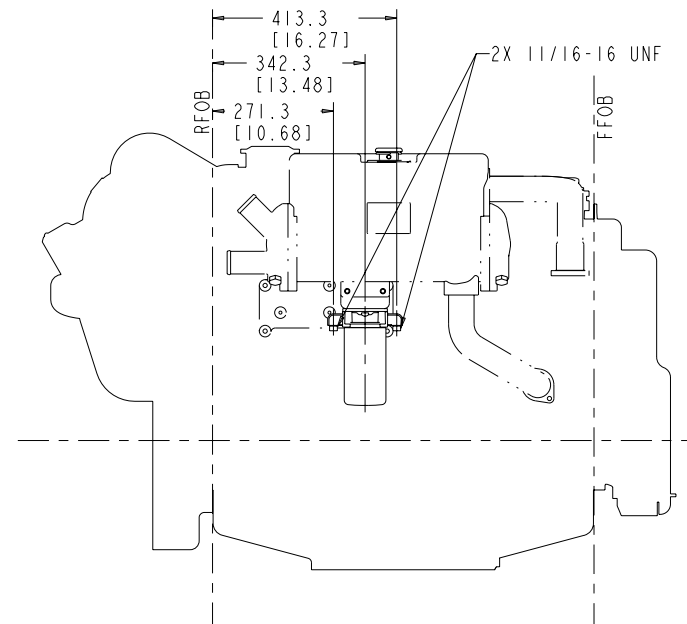
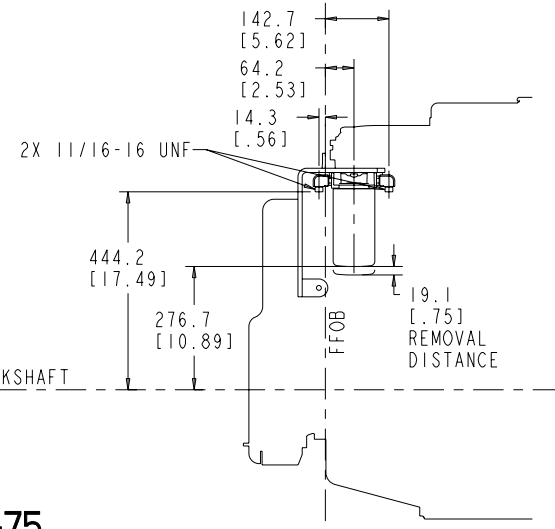
EXHAUST SYSTEM

ITEM NUMBER
3170592

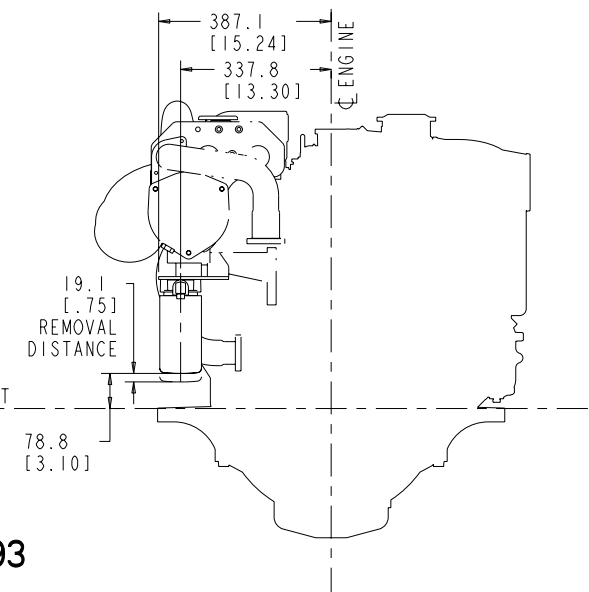
REVISIONS		OWN	APP'D
ZONE REV	DESCRIPTION		
03	QSC 8.3-HX	B. SMITH	



FF9475

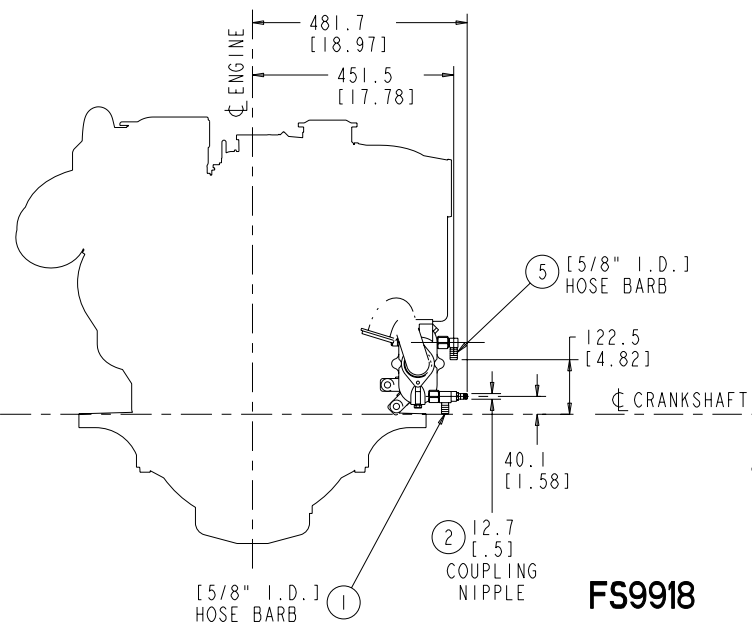


FF9493

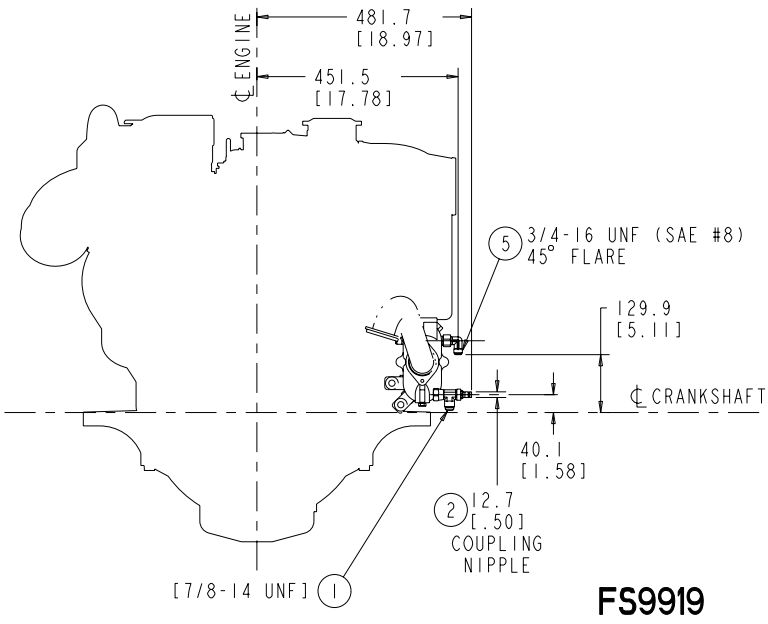
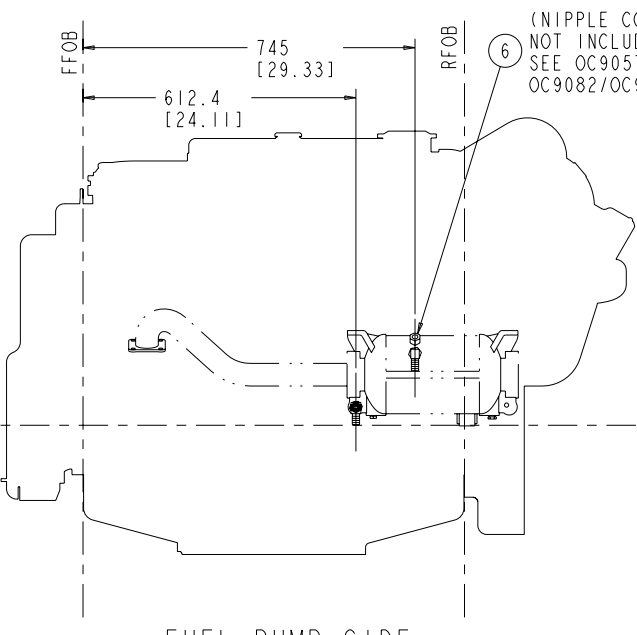


EXHAUST SIDE

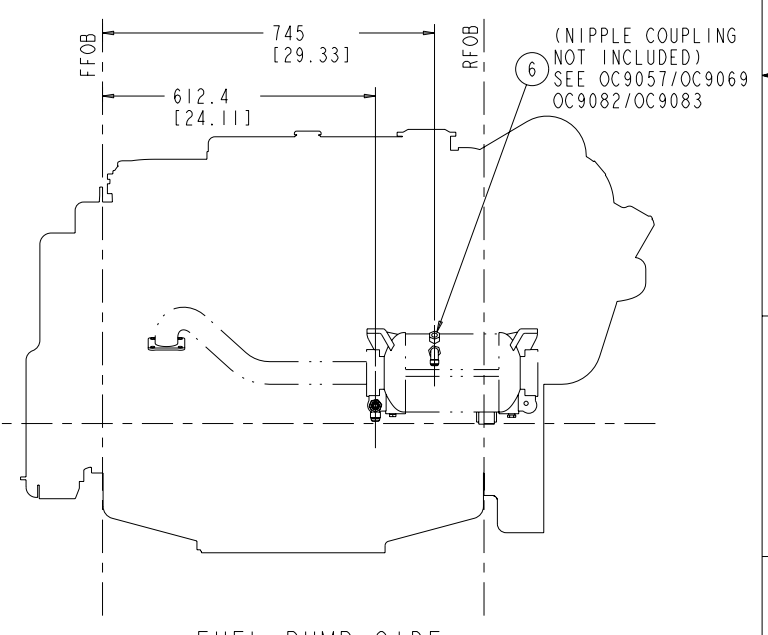
FRONT VIEW



FS9918

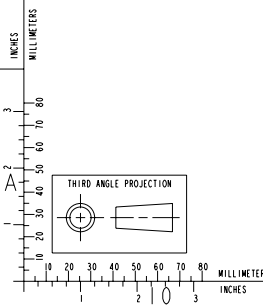


FS9919



FUEL PUMP SIDE

FRONT VIEW



- ① FUEL INLET CONNECTION
- ② FUEL INLET PRESSURE PORT
- ③ FUEL INLET TEMPERATURE PORT - N/A
- ④ FUEL PUMP OUT (RAIL) PRESSURE PORT
- ⑤ FUEL RETURN CONNECTION
- ⑥ FUEL RETURN PRESSURE PORT
- ⑦ FUEL RETURN TEMPERATURE - N/A

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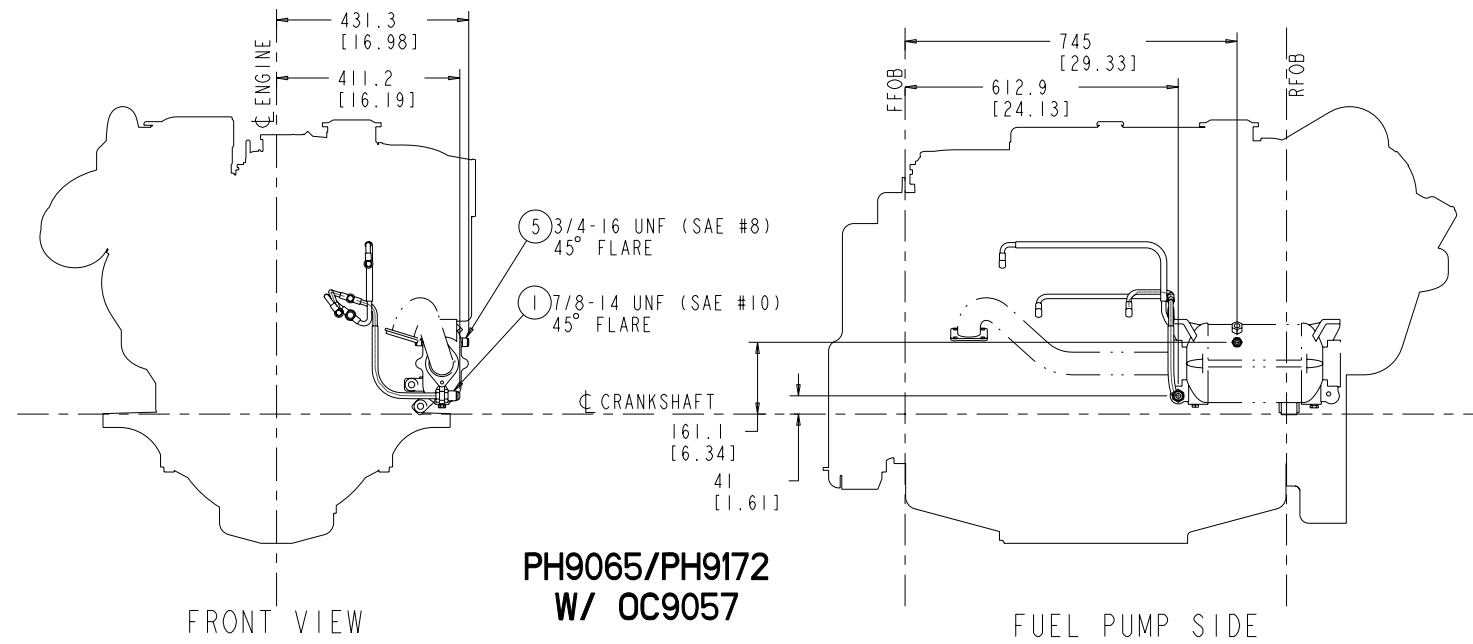
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DWN: TMO/TGANG CHD: UNCHECKED APPD: UNCHECKED		SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592
SCALE: 2X		ITEM CONTROL: MCS	SHEET 15 OF 32

FUEL SYSTEM

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SMITH 3-28-97



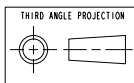
PH9065/PH9172
W/ OC9057

FRONT VIEW

FUEL PUMP SIDE

INCHES
MILLIMETERS

0 10 20 30 40 50 60 70 80
0 1 2 3
INCHES
MILLIMETERS



- | | |
|--------------------------------------|--------------------------------|
| ① FUEL INLET CONNECTION | ⑤ FUEL RETURN CONNECTION |
| ② FUEL INLET PRESSURE PORT | ⑥ FUEL RETURN PRESSURE PORT |
| ③ FUEL INLET TEMPERATURE PORT | ⑦ FUEL RETURN TEMPERATURE- N/A |
| ④ FUEL PUMP OUT (RAIL) PRESSURE PORT | |

FUEL SYSTEM

DO NOT SCALE THIS DRAWING

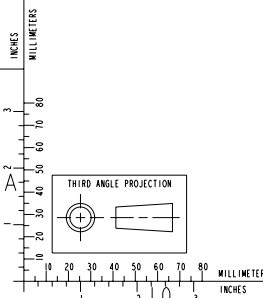
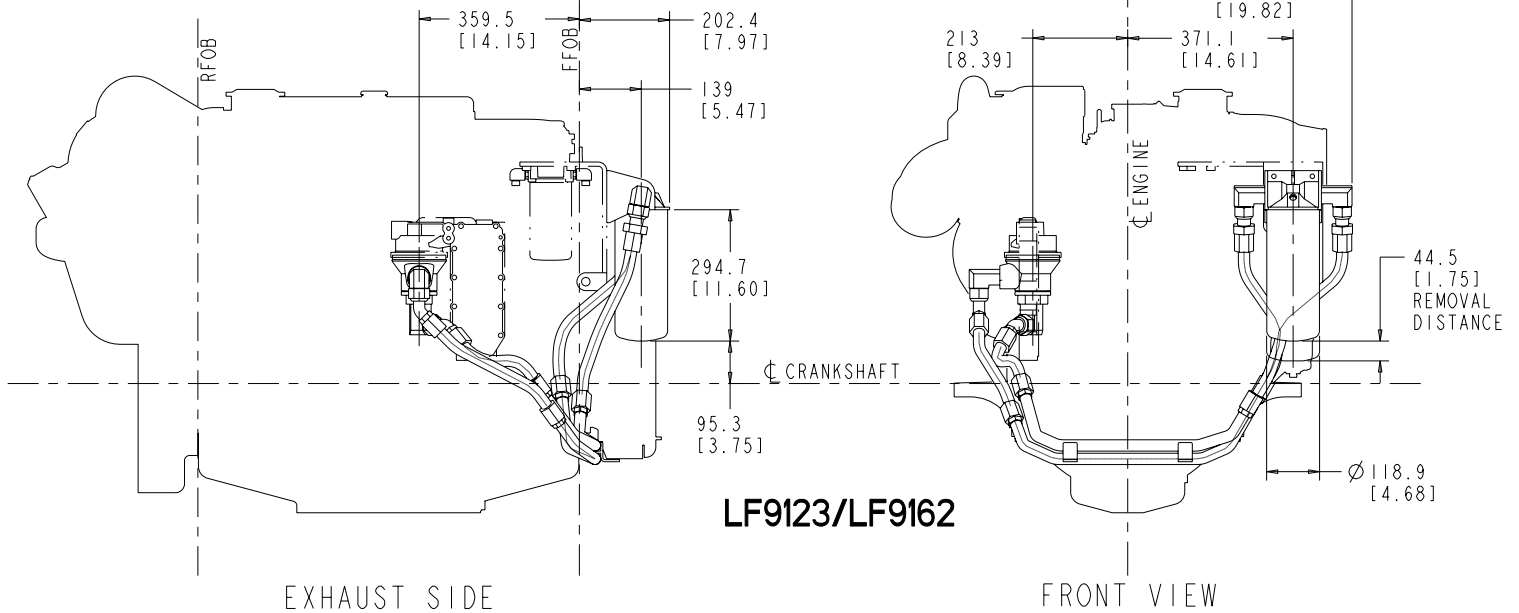
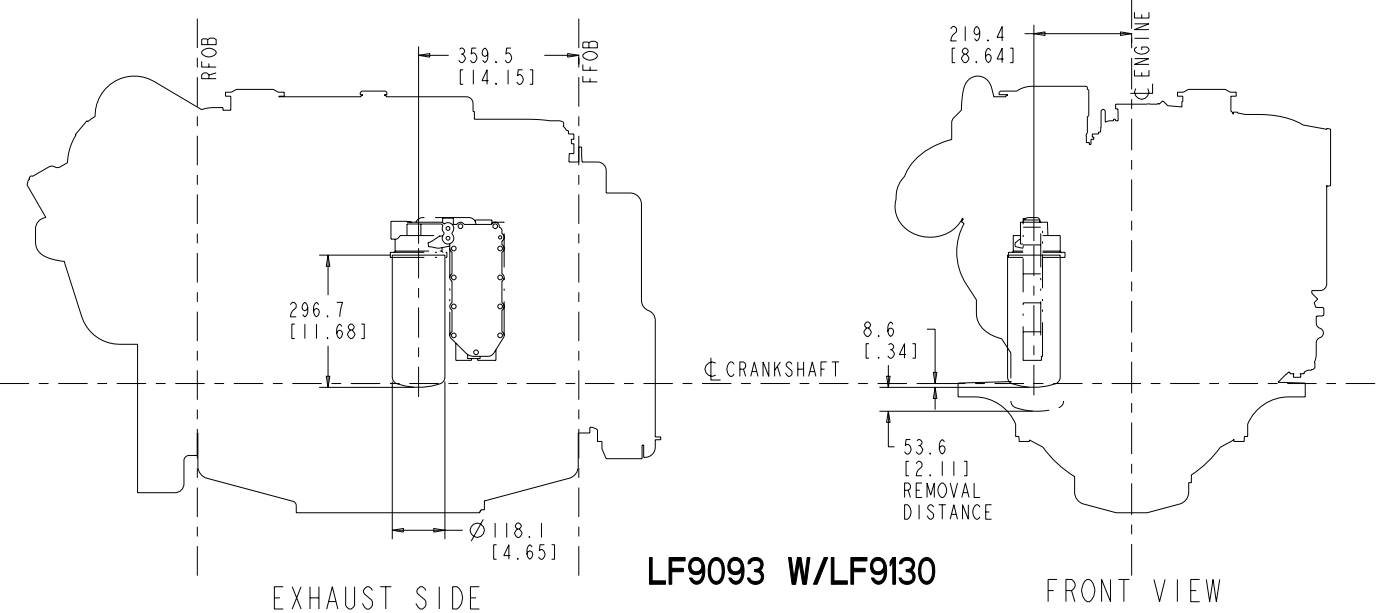
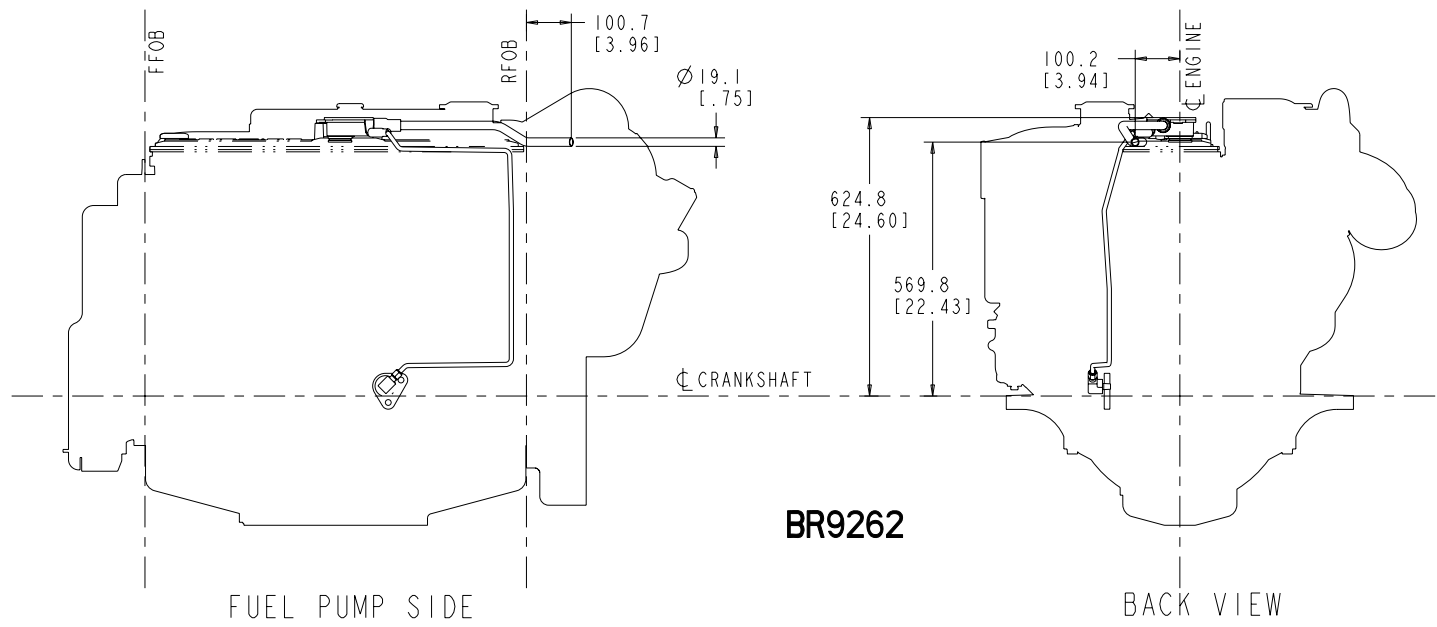
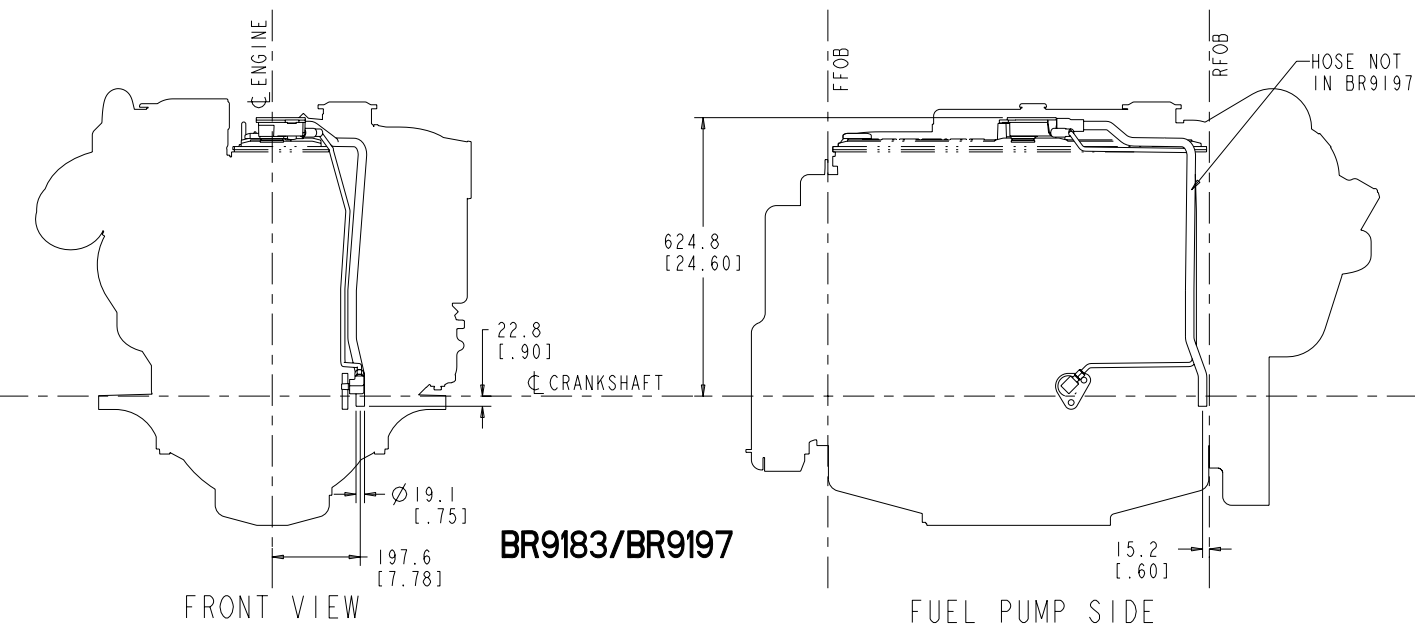
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN: TMO/TGANG CHD: UNCHECKED APPD:	SCALE: 2x	SIZE CODE IDENT. NO.: J	ITEM NUMBER 3170592
		ITEM CONTROL: MCS	SHEET 16 OF 32

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03	QSC	8.3-HX	



- | | | |
|--|---|--|
| <ul style="list-style-type: none"> ① CENTINEL VALVE OIL SUPPLY CONNECTION- N/A ② CRANKCASE PRESSURE PORT ③ GEAR OIL INLET TO COOLER CONNECTION ④ GEAR OIL INLET TO COOLER PRESSURE PORT- N/A ⑤ GEAR OIL INLET TO COOLER TEMPERATURE PORT- N/A | <ul style="list-style-type: none"> ⑥ GEAR OIL OUTLET FROM COOLER CONNECTION ⑦ GEAR OIL OUTLET FROM COOLER PRESSURE PORT- N/A ⑧ GEAR OIL OUTLET FROM COOLER TEMPERATURE PORT- N/A ⑨ OIL DRAIN BOSS ⑩ OIL GALLERY TEMPERATURE PORT | <ul style="list-style-type: none"> ⑪ OIL PRESSURE GAUGE PORT, AFTER FILTER ⑫ OIL SUMP TEMPERATURE PORT ⑬ REMOTE OIL FILTER RETURN CONNECTION ⑭ REMOTE OIL FILTER SUPPLY CONNECTION |
|--|---|--|

LUBE OIL SYSTEM

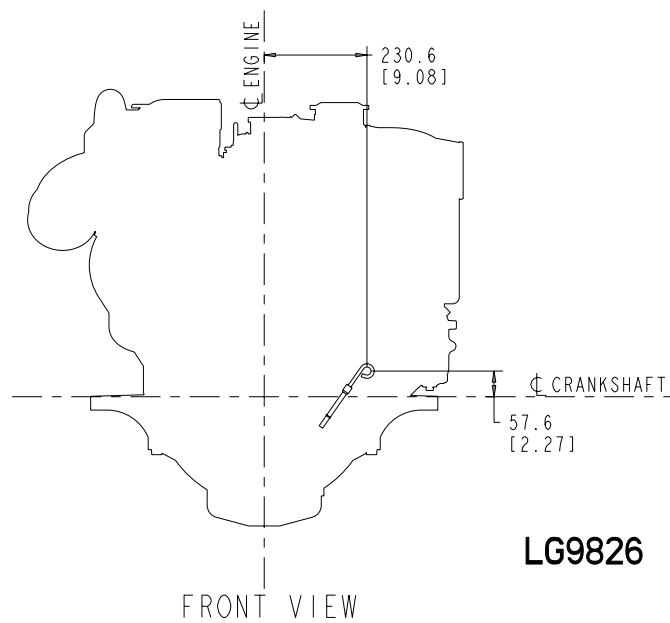
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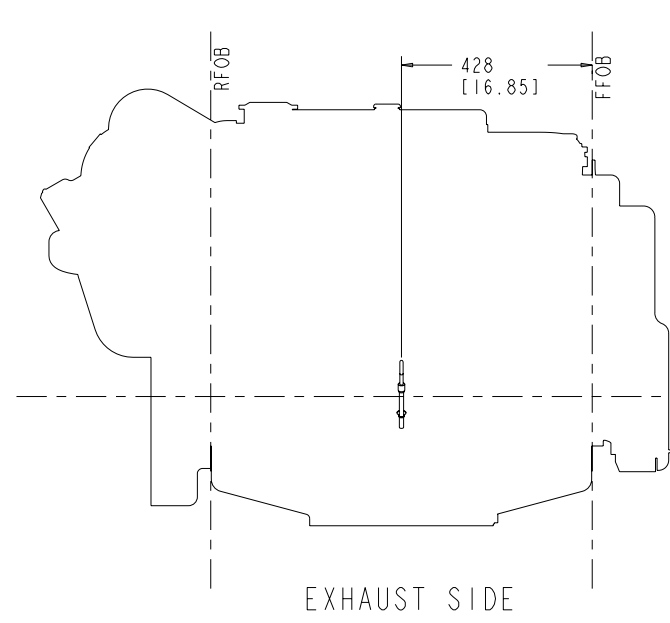
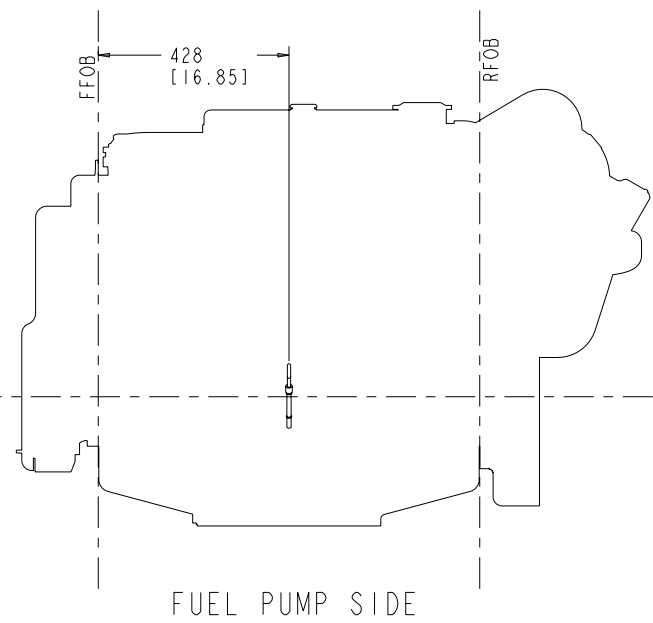
LAST SECTION LETTER USED: A		REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN CHD APPD	TW/STG/ANG UNCHECKED	DATE 1-20-04	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592
SCALE: 2x		ITEM CONTROL: MCS	SHEET 17 OF 32	

ITEM NUMBER
3170592

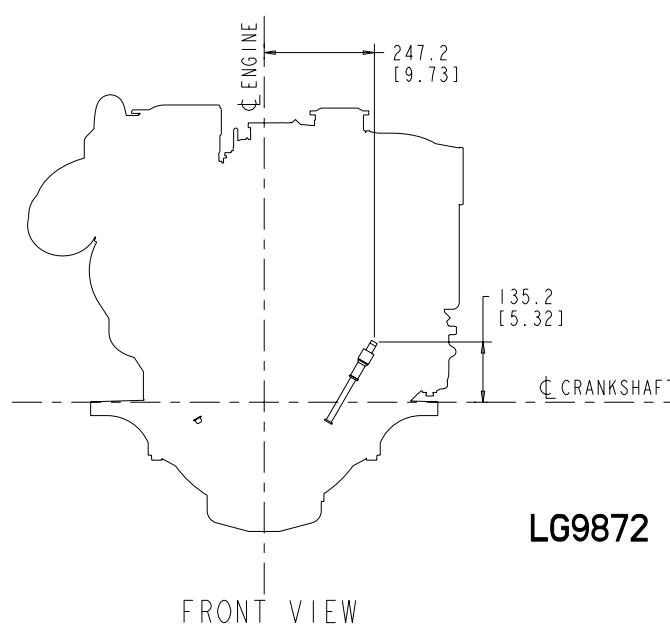
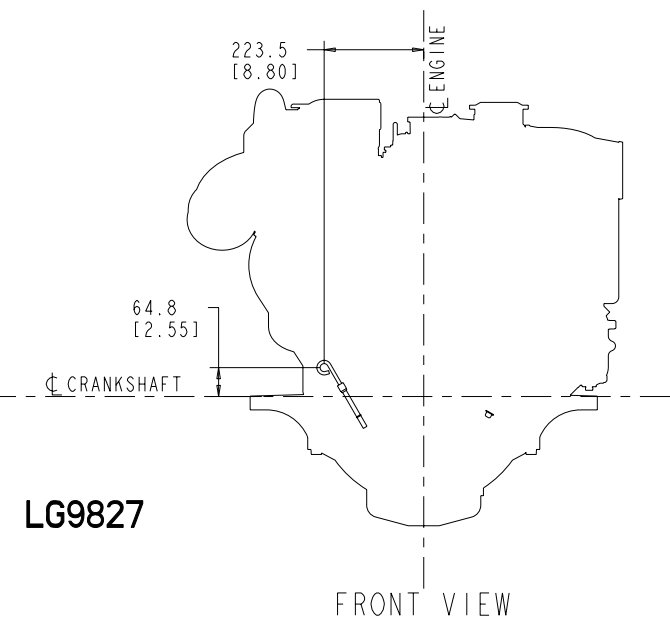
REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SOWIN



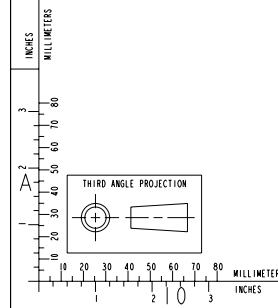
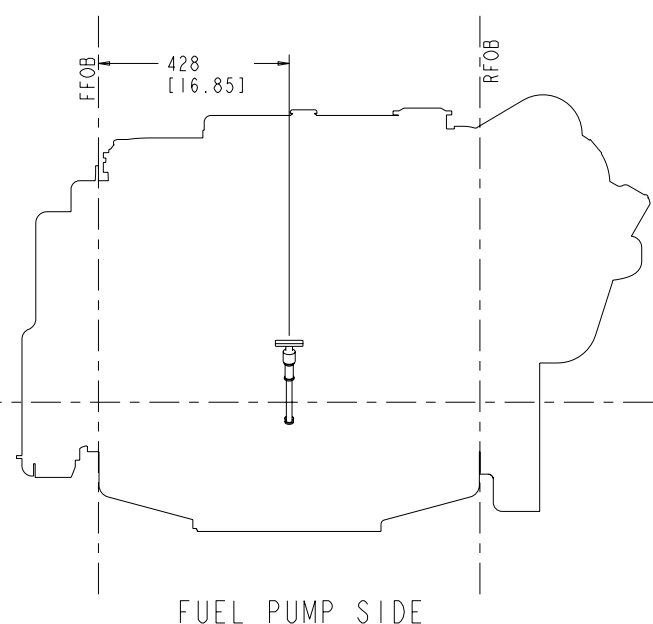
LG9826



LG9827



LG9872



- ① CENTINEL VALVE OIL SUPPLY CONNECTION- N/A
- ② CRANKCASE PRESSURE PORT
- ③ GEAR OIL INLET TO COOLER CONNECTION
- ④ GEAR OIL INLET TO COOLER PRESSURE PORT- N/A
- ⑤ GEAR OIL INLET TO COOLER TEMPERATURE PORT

- ⑥ GEAR OIL OUTLET FROM COOLER CONNECTION
- ⑦ GEAR OIL OUTLET FROM COOLER PRESSURE PORT
- ⑧ GEAR OIL OUTLET FROM COOLER TEMPERATURE PORT- N/A
- ⑨ OIL DRAIN BOSS
- ⑩ OIL GALLERY TEMPERATURE PORT

- ⑪ OIL PRESSURE GAUGE PORT, AFTER FILTER
- ⑫ OIL SUMP TEMPERATURE PORT
- ⑬ REMOTE OIL FILTER RETURN CONNECTION
- ⑭ REMOTE OIL FILTER SUPPLY CONNECTION

LUBE OIL SYSTEM

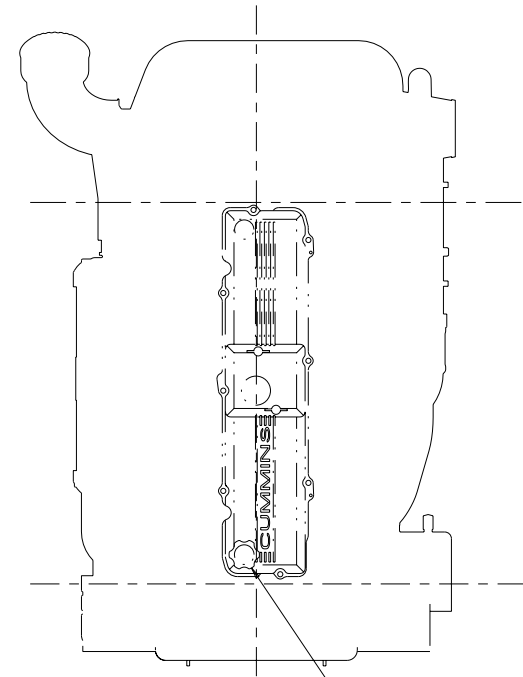
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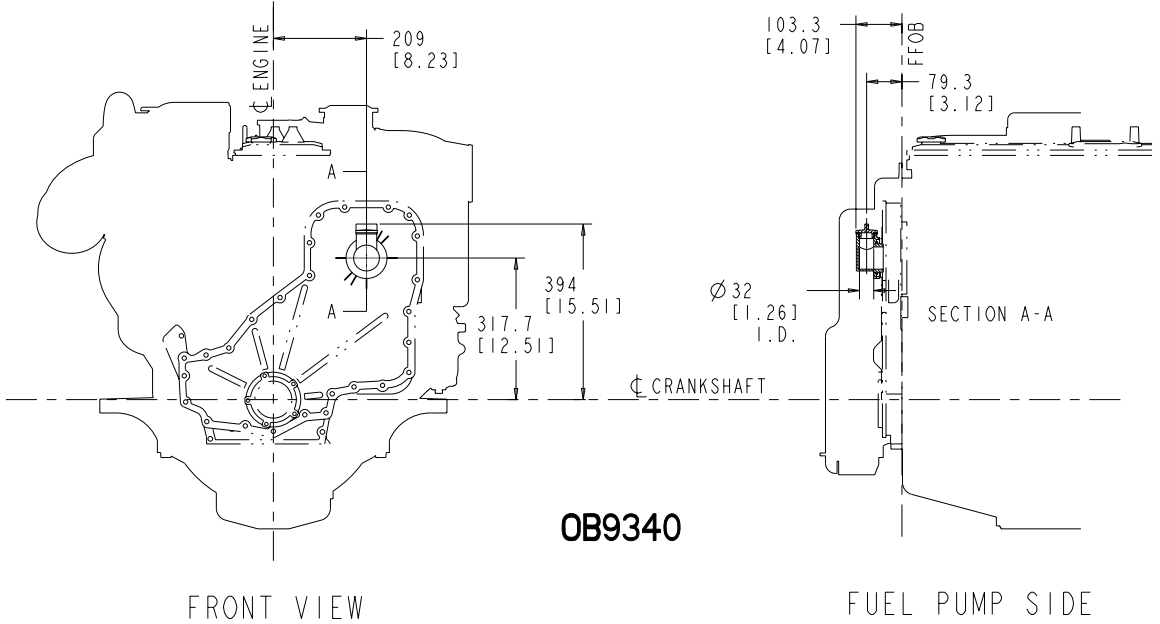
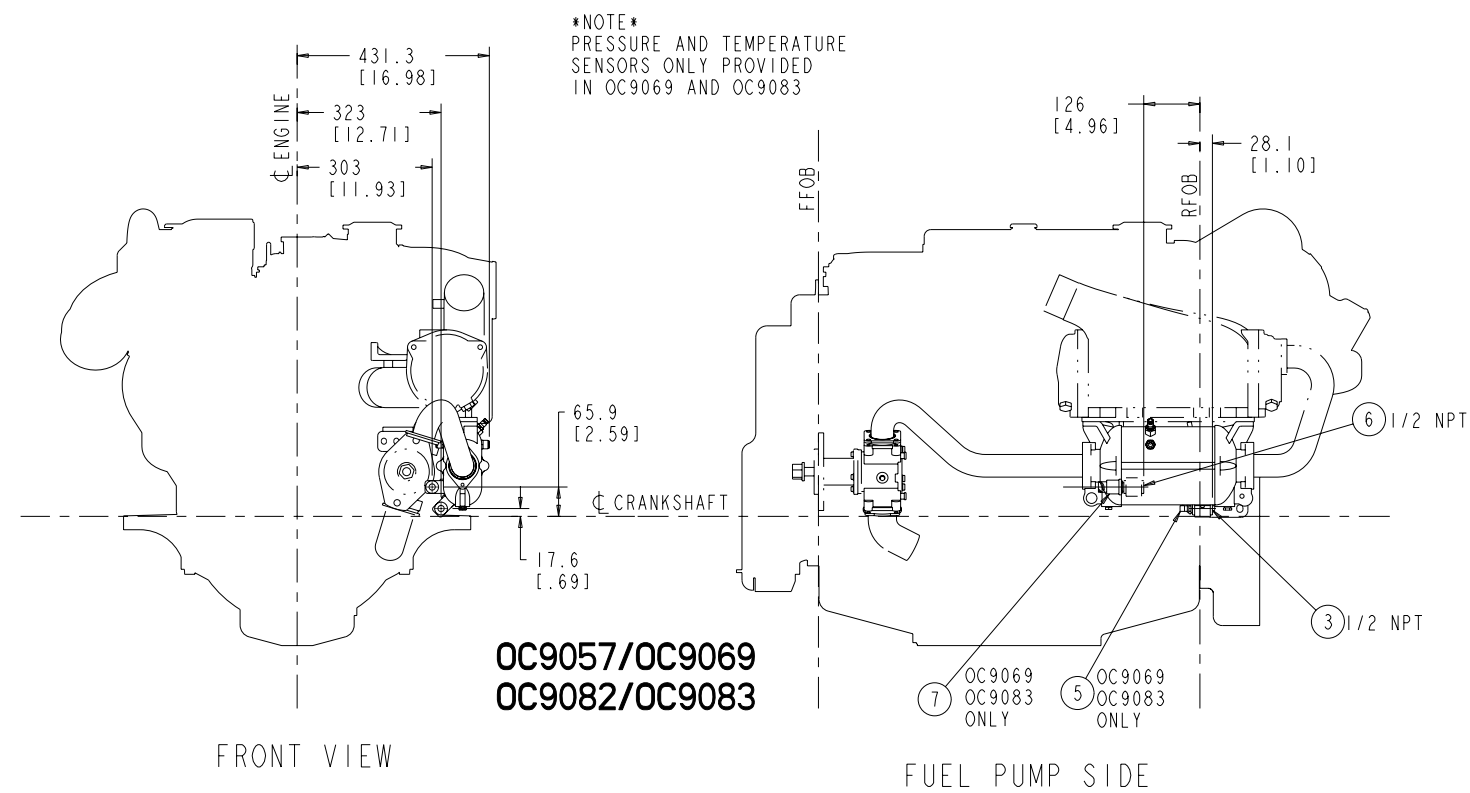
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	
DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592	ITEM CONTROL: MCS
SCALE: 2x		SHEET 18 OF 32	

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SMITH 3-28-97



NOTE
FILL LOCATION FOR OB9291
TOP OF VALVE COVER.



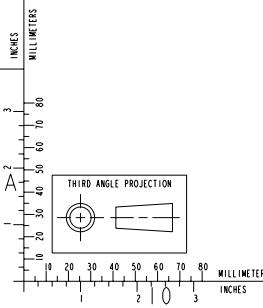
- | | | |
|---|--|--|
| <ul style="list-style-type: none"> ① CENTINEL VALVE OIL SUPPLY CONNECTION- N/A ② CRANKCASE PRESSURE PORT ③ GEAR OIL INLET TO COOLER CONNECTION ④ GEAR OIL INLET TO COOLER PRESSURE PORT- N/A ⑤ GEAR OIL INLET TO COOLER TEMPERATURE PORT | <ul style="list-style-type: none"> ⑥ GEAR OIL OUTLET FROM COOLER CONNECTION ⑦ GEAR OIL OUTLET FROM COOLER PRESSURE PORT ⑧ GEAR OIL OUTLET FROM COOLER TEMPERATURE PORT- N/A ⑨ OIL DRAIN BOSS ⑩ OIL GALLERY TEMPERATURE PORT | <ul style="list-style-type: none"> ⑪ OIL PRESSURE GAUGE PORT, AFTER FILTER ⑫ OIL SUMP TEMPERATURE PORT ⑬ REMOTE OIL FILTER RETURN CONNECTION ⑭ REMOTE OIL FILTER SUPPLY CONNECTION |
|---|--|--|

LUBE OIL SYSTEM

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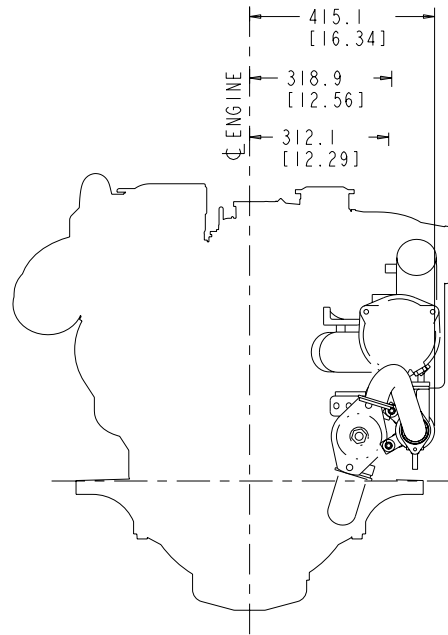
PRODUCT GRAPHICS FILE
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DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592	SHEET 19 OF 32

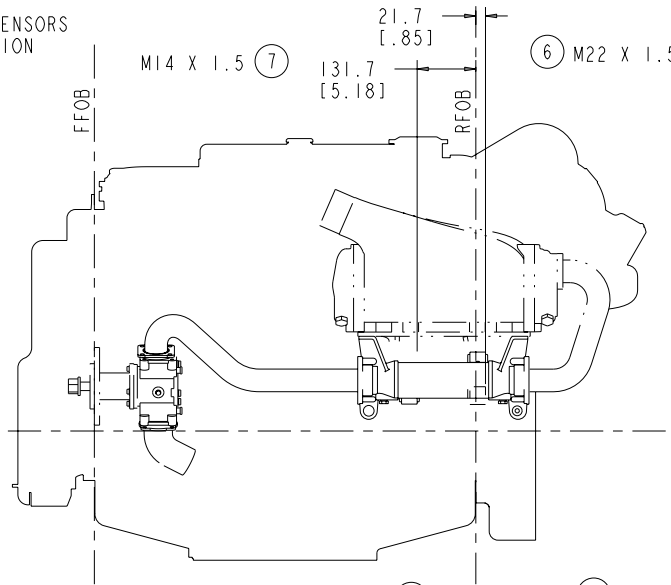


ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	



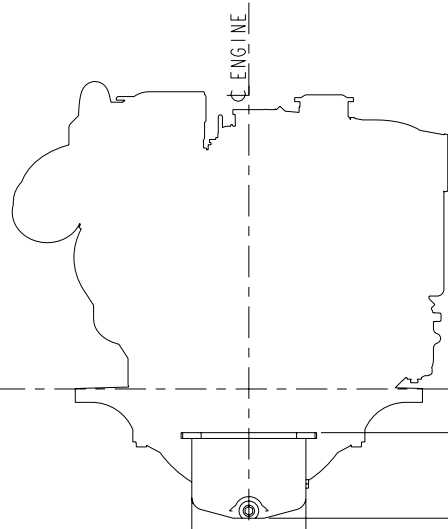
NOTE: PRESS & TEMP SENSORS INCLUDED IN THIS OPTION



FRONT VIEW

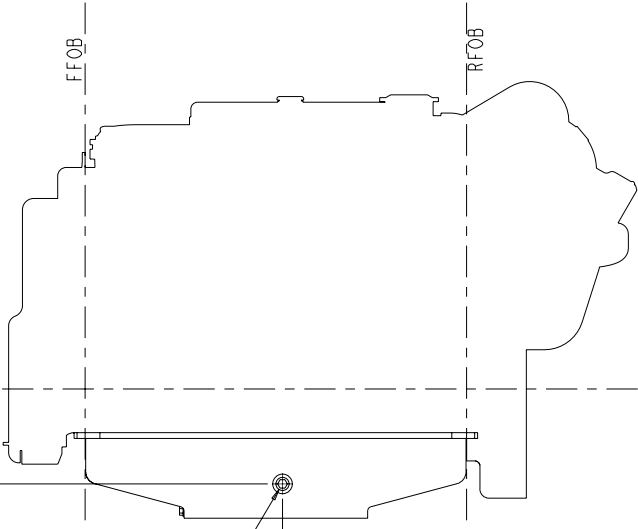
OC9080

FUEL PUMP SIDE

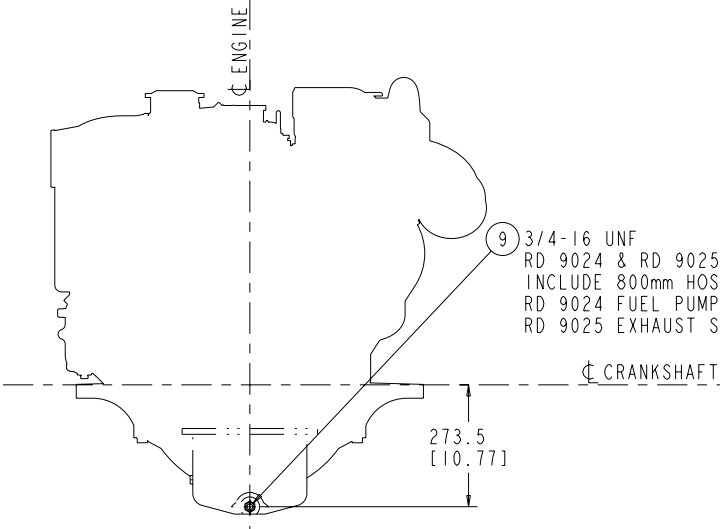


OP9351

FRONT VIEW

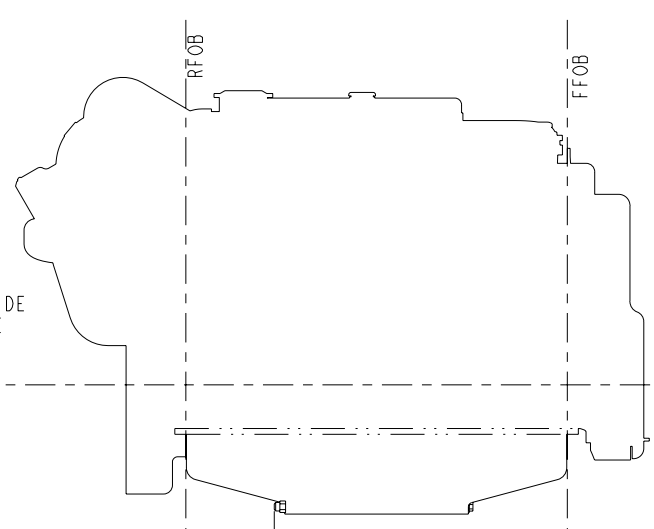


FUEL PUMP SIDE



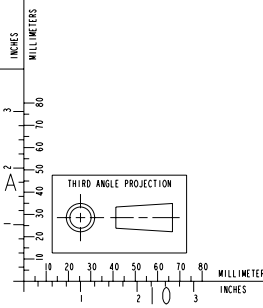
RD9019/RD9024/RD9025

BACK VIEW



EXHAUST SIDE

9 3/4-16 UNF
RD 9024 & RD 9025
INCLUDE 800mm HOSE
RD 9024 FUEL PUMP SIDE
RD 9025 EXHAUST SIDE



- ① CENTINEL VALVE OIL SUPPLY CONNECTION- N/A
- ② CRANKCASE PRESSURE PORT
- ③ GEAR OIL INLET TO COOLER CONNECTION
- ④ GEAR OIL INLET TO COOLER PRESSURE PORT- N/A
- ⑤ GEAR OIL INLET TO COOLER TEMPERATURE PORT

- ⑥ GEAR OIL OUTLET FROM COOLER CONNECTION
- ⑦ GEAR OIL OUTLET FROM COOLER PRESSURE PORT
- ⑧ GEAR OIL OUTLET FROM COOLER TEMPERATURE PORT- N/A
- ⑨ OIL DRAIN BOSS
- ⑩ OIL GALLERY TEMPERATURE PORT

- ⑪ OIL PRESSURE GAUGE PORT, AFTER FILTER
- ⑫ OIL SUMP TEMPERATURE PORT
- ⑬ REMOTE OIL FILTER RETURN CONNECTION
- ⑭ REMOTE OIL FILTER SUPPLY CONNECTION

LUBE OIL SYSTEM

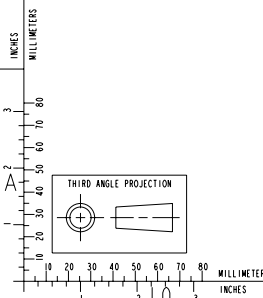
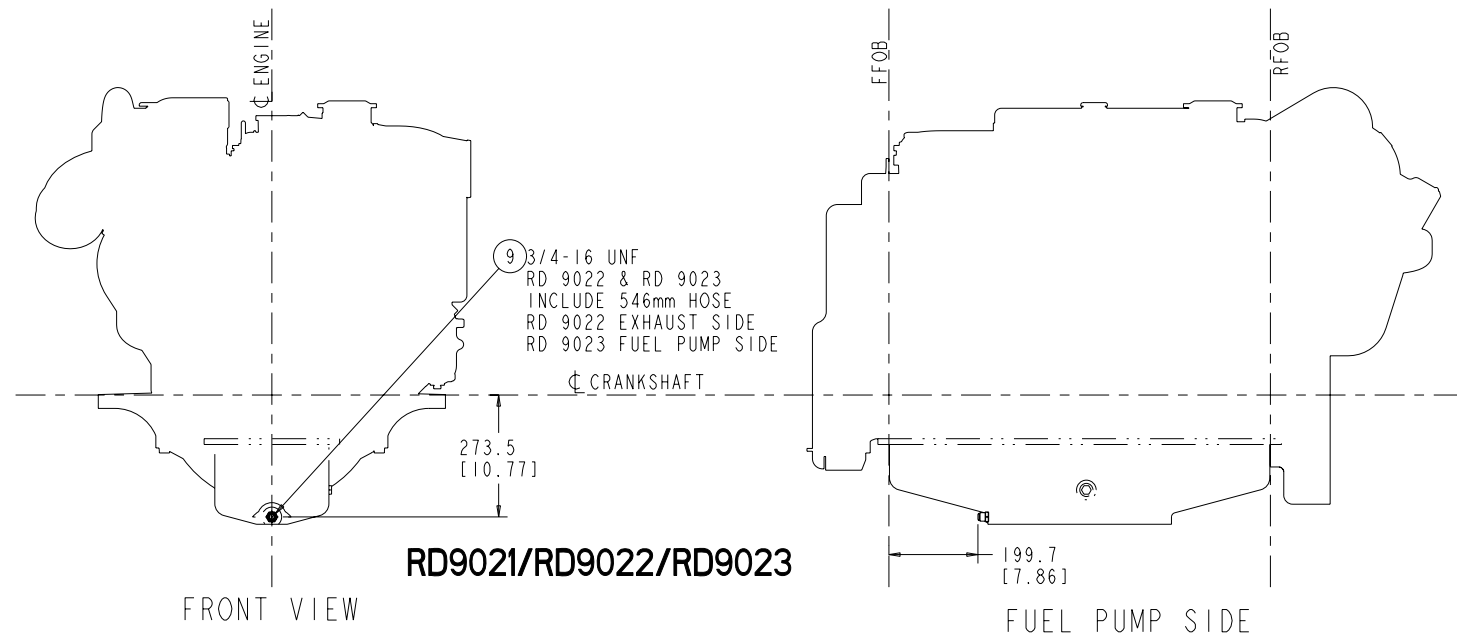
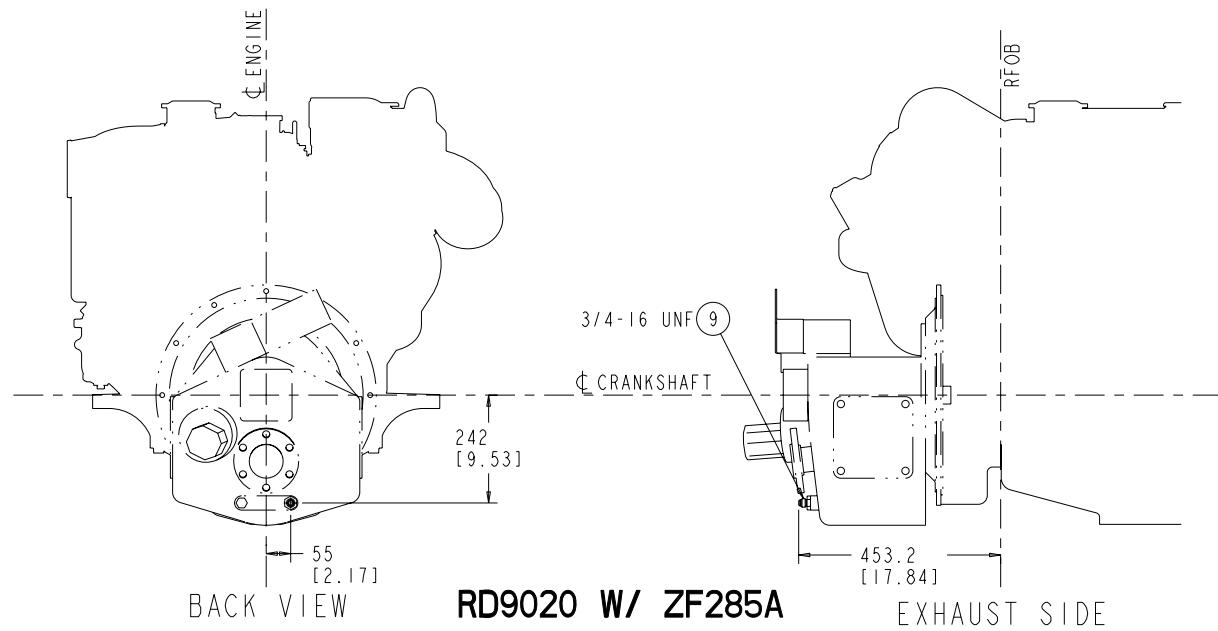
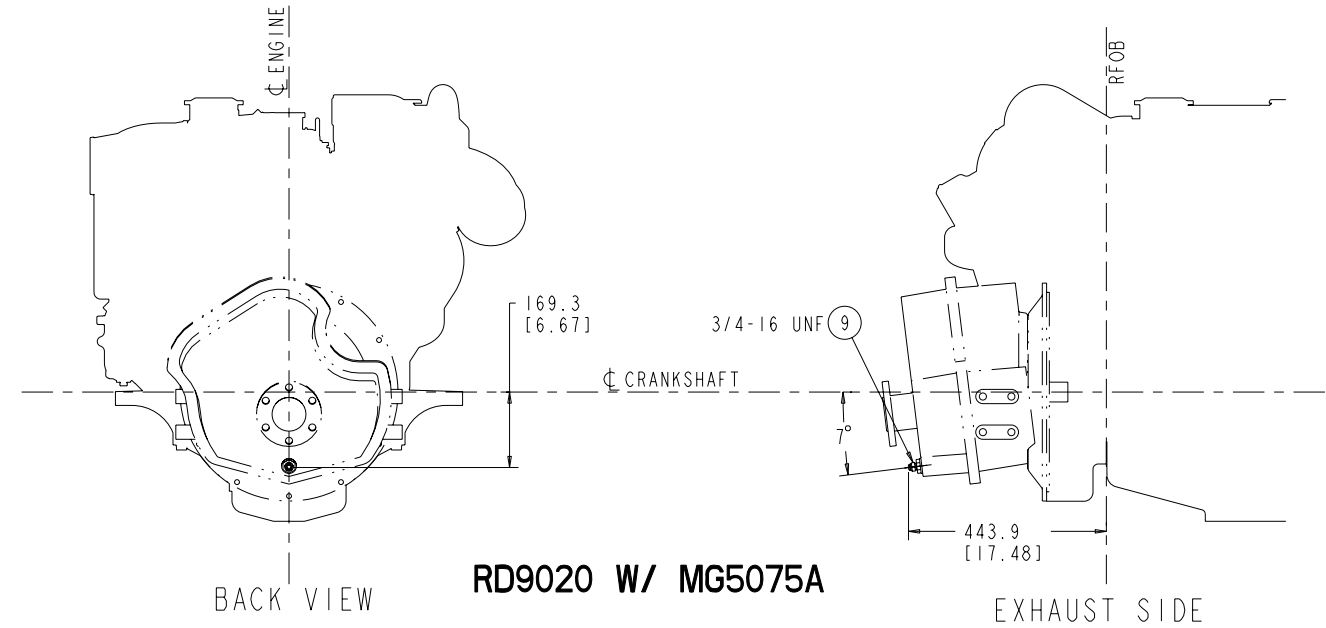
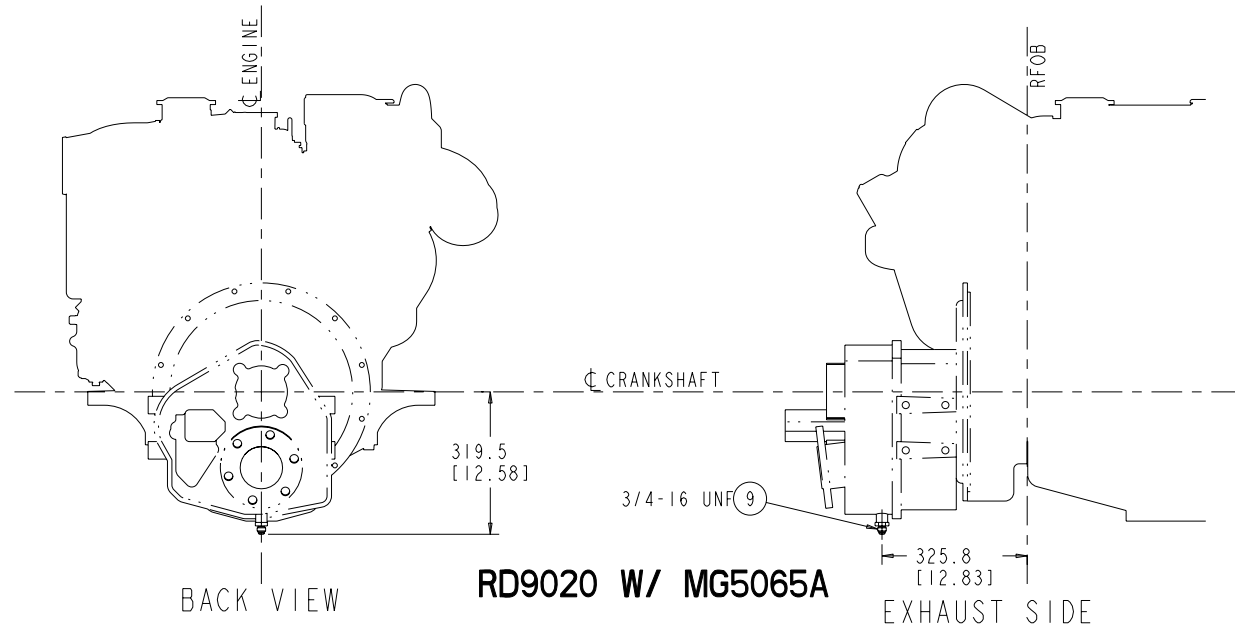
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DWN	TWOTGANG	DATE	SIZE CODE (IDENT. NO.)	ITEM NUMBER
CHD	UNCHECKED			3170592
APPD			SCALE: 2x	ITEM CONTROL: MCS
APPD				SHEET 20 OF 32

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	



- | | | |
|---|---|---|
| ① CENTINEL VALVE OIL SUPPLY CONNECTION- N/A | ⑥ GEAR OIL OUTLET FROM COOLER CONNECTION | ⑪ OIL PRESSURE GAUGE PORT, AFTER FILTER |
| ② CRANKCASE PRESSURE PORT | ⑦ GEAR OIL OUTLET FROM COOLER PRESSURE PORT | ⑫ OIL SUMP TEMPERATURE PORT |
| ③ GEAR OIL INLET TO COOLER CONNECTION | ⑧ GEAR OIL OUTLET FROM COOLER TEMPERATURE PORT- N/A | ⑬ REMOTE OIL FILTER RETURN CONNECTION |
| ④ GEAR OIL INLET TO COOLER PRESSURE PORT- N/A | ⑨ OIL DRAIN BOSS | ⑭ REMOTE OIL FILTER SUPPLY CONNECTION |
| ⑤ GEAR OIL INLET TO COOLER TEMPERATURE PORT | ⑩ OIL GALLERY TEMPERATURE PORT | |

LUBE OIL SYSTEM

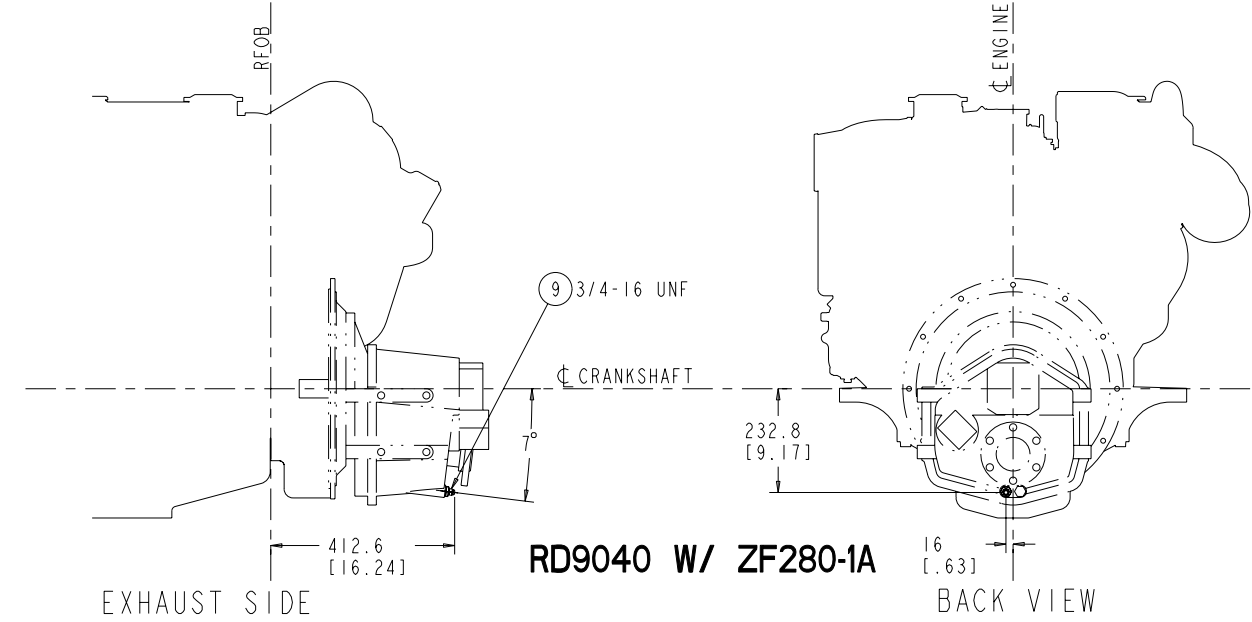
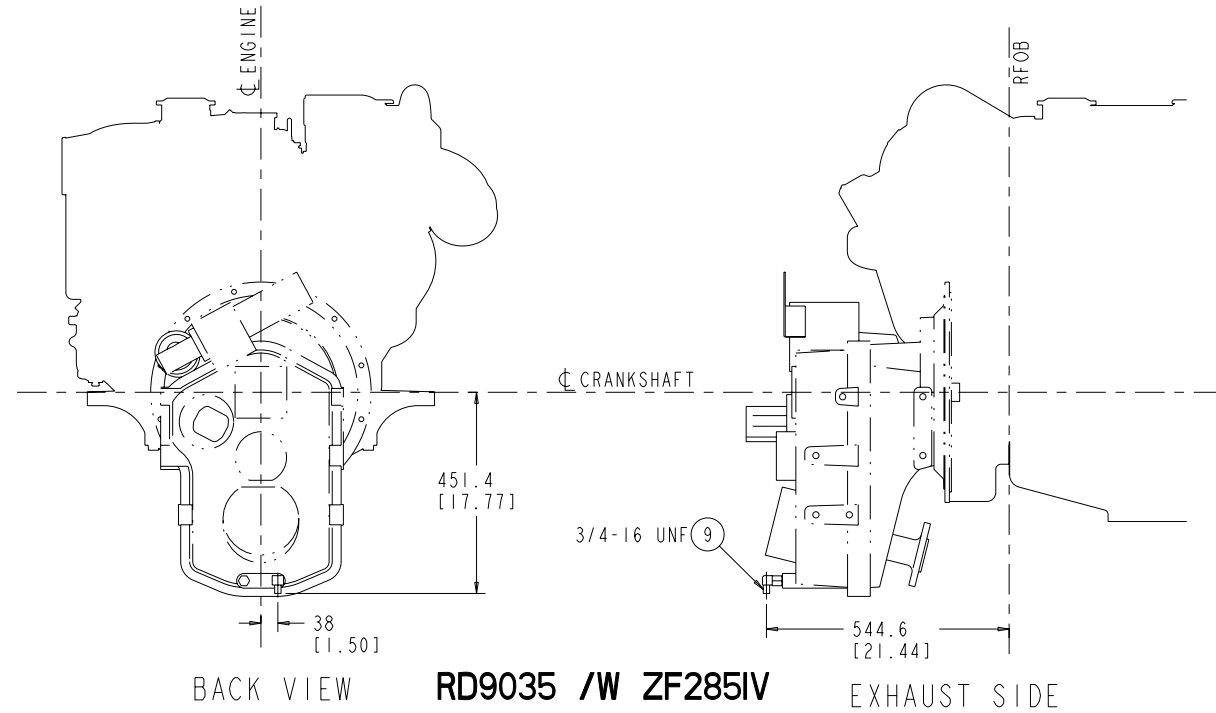
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DWN: UNCHECKED	SIZE CODE (IDENT. NO.):	ITEM NUMBER 3170592	
APPD: UNCHECKED	SCALE: 2x	ITEM CONTROL: MCS	SHEET 21 OF 32

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03	QSC	8.3-HX	B. SMITH 3-28-97



RD9040 W/ ZF280-1A

BACK VIEW

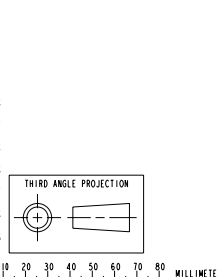
RD9035 /W ZF285IV

EXHAUST SIDE

EXHAUST SIDE

BACK VIEW

INCHES
MILLIMETERS



- ① CENTINEL VALVE OIL SUPPLY CONNECTION- N/A
- ② CRANKCASE PRESSURE PORT
- ③ GEAR OIL INLET TO COOLER CONNECTION
- ④ GEAR OIL INLET TO COOLER PRESSURE PORT- N/A
- ⑤ GEAR OIL INLET TO COOLER TEMPERATURE PORT

- ⑥ GEAR OIL OUTLET FROM COOLER CONNECTION
- ⑦ GEAR OIL OUTLET FROM COOLER PRESSURE PORT
- ⑧ GEAR OIL OUTLET FROM COOLER TEMPERATURE PORT- N/A
- ⑨ OIL DRAIN BOSS
- ⑩ OIL GALLERY TEMPERATURE PORT

- ⑪ OIL PRESSURE GAUGE PORT, AFTER FILTER
- ⑫ OIL SUMP TEMPERATURE PORT
- ⑬ REMOTE OIL FILTER RETURN CONNECTION
- ⑭ REMOTE OIL FILTER SUPPLY CONNECTION

LUBE OIL SYSTEM

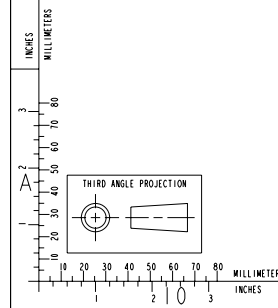
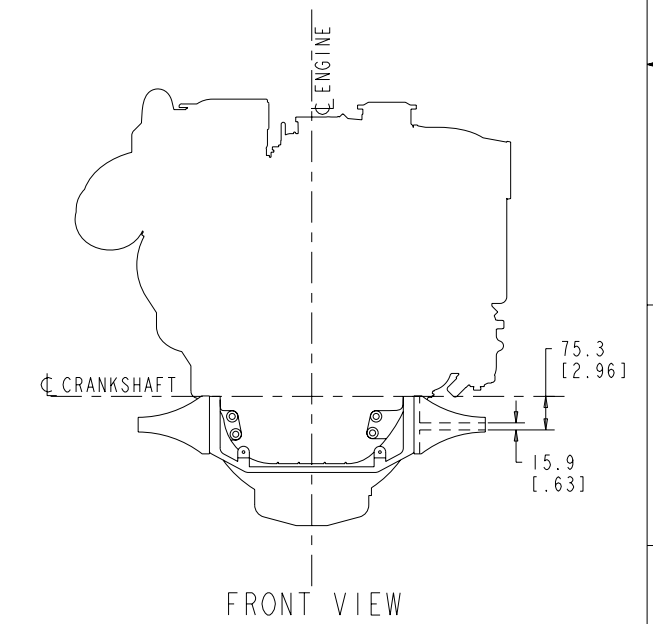
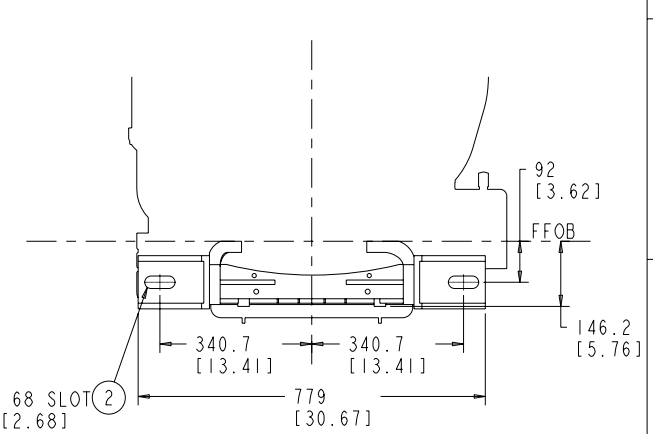
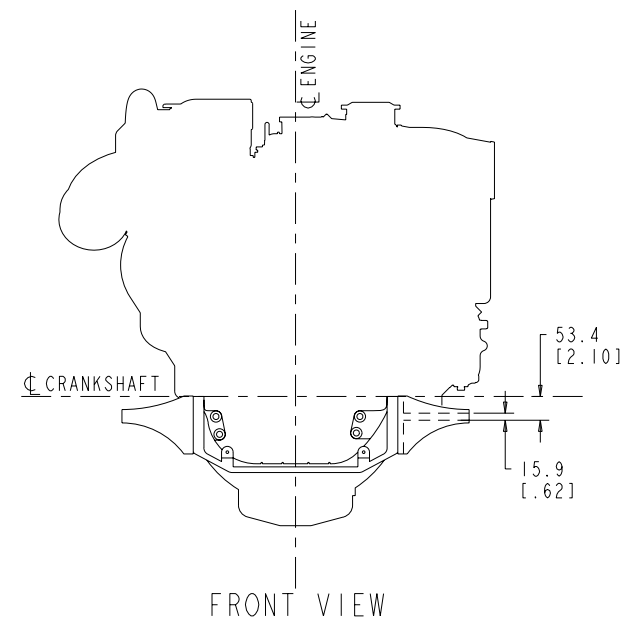
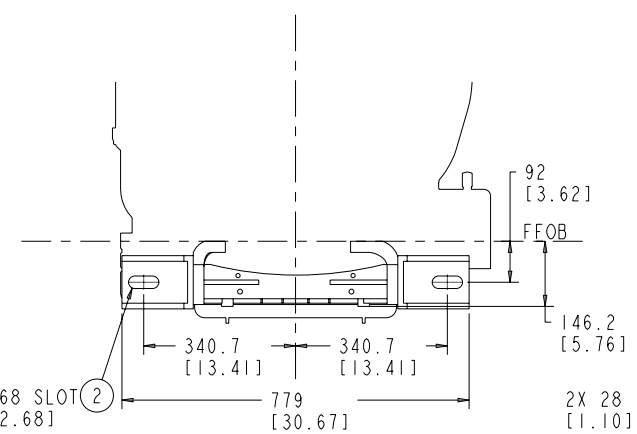
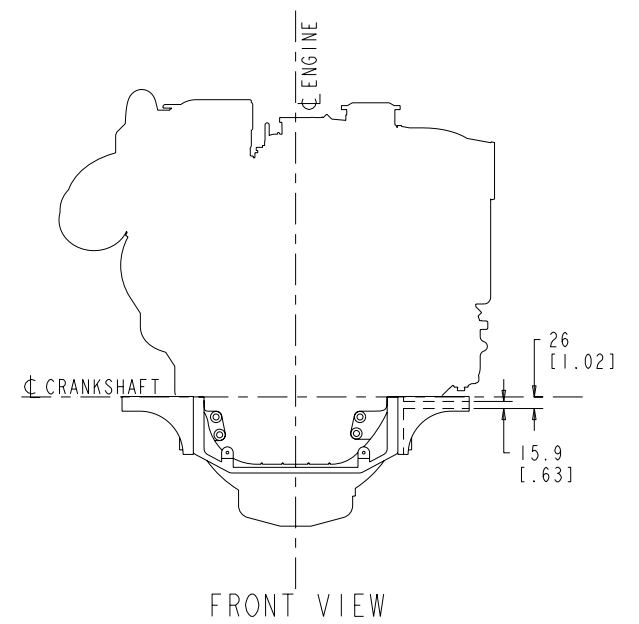
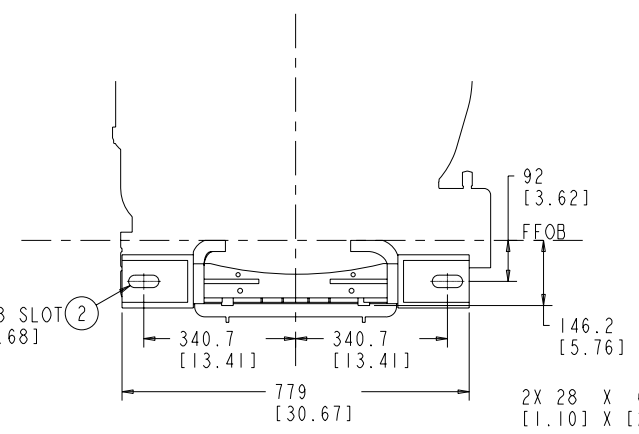
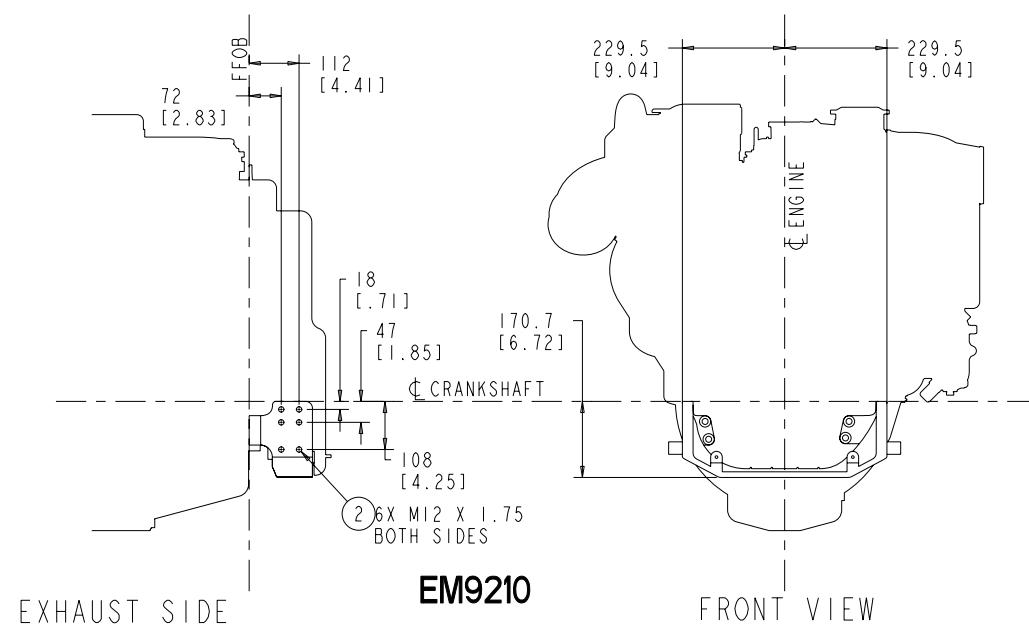
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DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	SIZE CODE IDENT. NO.: J	ITEM NUMBER 3170592	SCALE: 2x ITEM CONTROL: MCS SHEET 22 OF 32

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SCHWAB



- ① FLYWHEEL HOUSING BOLT HOLES
- ② FRONT MOUNT BOLT HOLE
- ③ JACKING SCREW BOLT HOLE
- ④ REAR MOUNT BOLT HOLE
- ⑤ SPEED SENSOR (ECM) PORT
- ⑥ SPEED SENSOR (TACHOMETER) PORT

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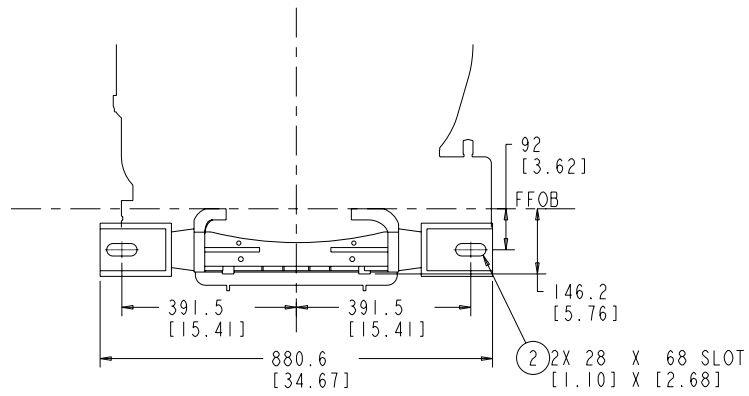
MOUNTING SYSTEM

PRODUCT GRAPHICS FILE
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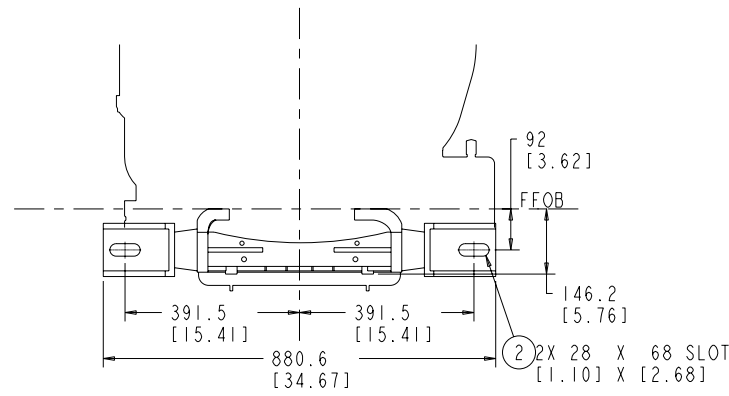
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	ITEM NUMBER
DWN: TMO/TGANG	SIZE CODE (IDENT. NO.):	J	3170592
CHD: UNCHECKED	SCALE: 2x	ITEM CONTROL: MCS	SHEET 23 OF 32
APPD:			

ITEM NUMBER
3170592

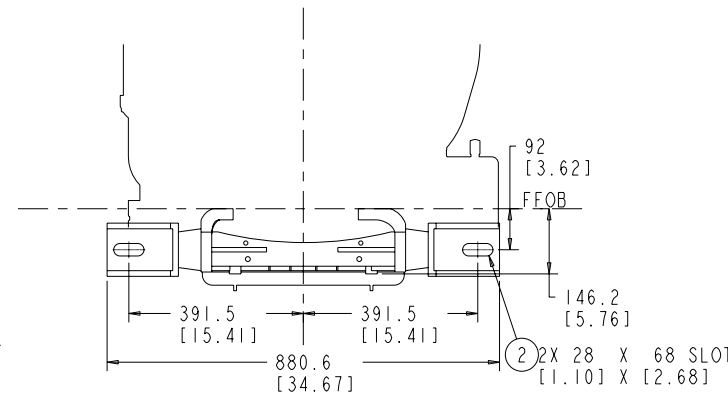
REVISIONS		OWN	APP'D
03	QSC 8.3-HX	B. SMITH	



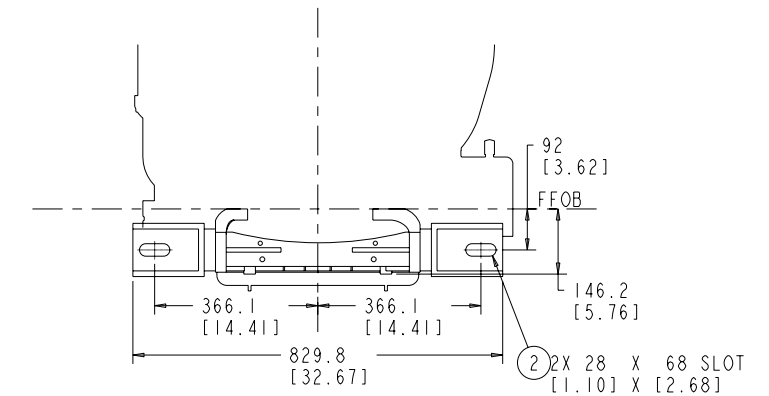
TOP VIEW



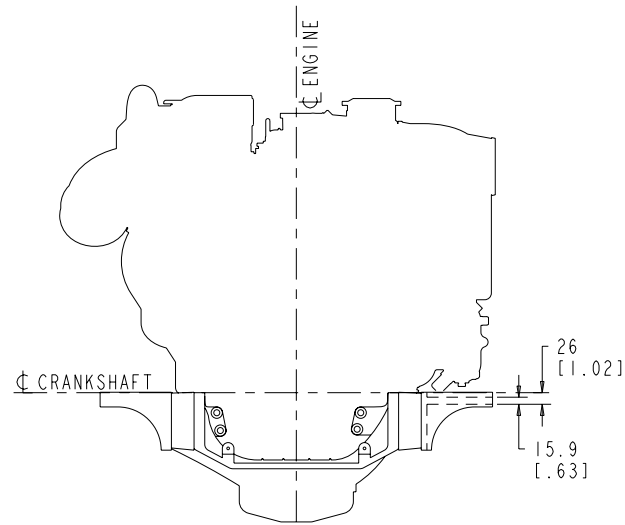
TOP VIEW



TOP VIEW

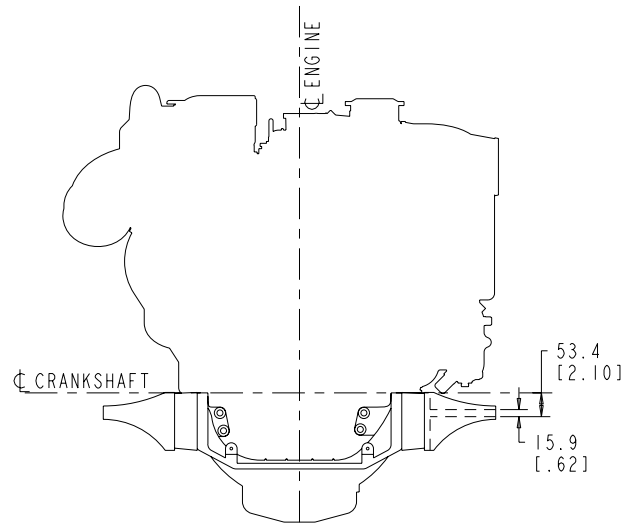


TOP VIEW



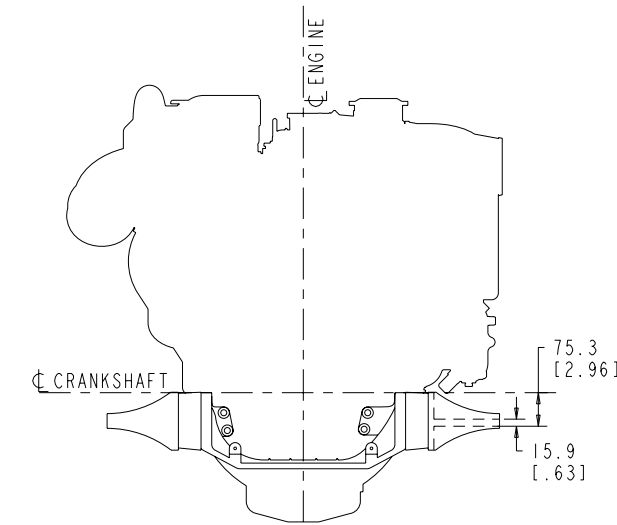
FRONT VIEW

EM9231



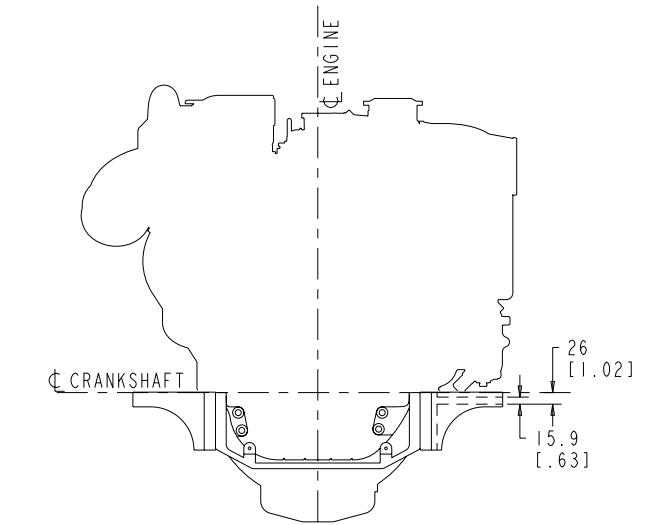
FRONT VIEW

EM9232



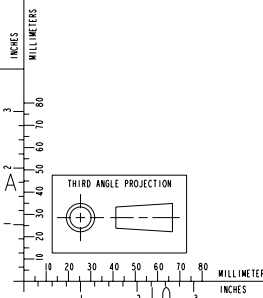
FRONT VIEW

EM9233



FRONT VIEW

EM9252



- | | |
|-------------------------------|----------------------------------|
| ① FLYWHEEL HOUSING BOLT HOLES | ④ REAR MOUNT BOLT HOLE |
| ② FRONT MOUNT BOLT HOLE | ⑤ SPEED SENSOR (ECM) PORT |
| ③ JACKING SCREW BOLT HOLE | ⑥ SPEED SENSOR (TACHOMETER) PORT |

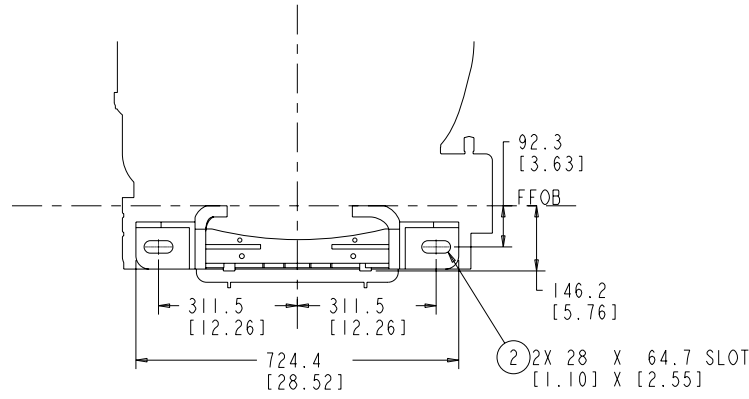
PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DO NOT SCALE THIS DRAWING		SIZE CODE IDENT. NO.	ITEM NUMBER
OWN: TMO/TGANG	APPD: UNCHECKED	J	3170592
THIS DRAWING/DATA FILE (AND THE INFORMATION SHOWN THEREON) IS CONFIDENTIAL AND PROPRIETARY AND SHALL NOT BE USED, DISCLOSED TO OTHERS, OR REPRODUCED BY ANY MEANS FOR ANY PURPOSE IN HARD COPY FORM OR IN MACHINE READABLE FILES, WITHOUT WRITTEN CONSENT OF CUMMINS INC., MARKETING CAD SERVICES DEPARTMENT.		SCALE: 2x	ITEM CONTROL: MCS SHEET 24 OF 32

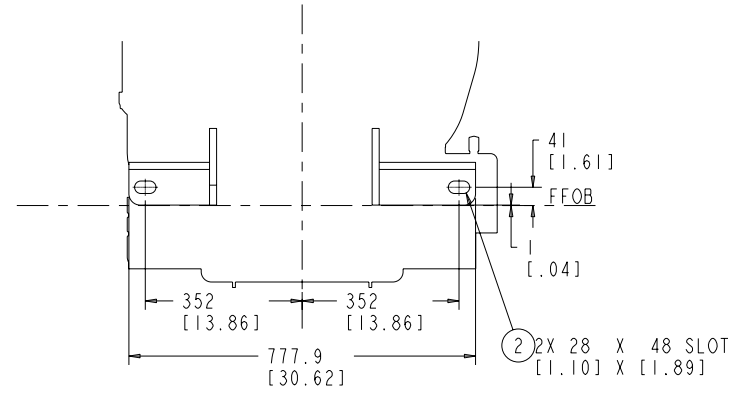
MOUNTING SYSTEM

ITEM NUMBER
3170592

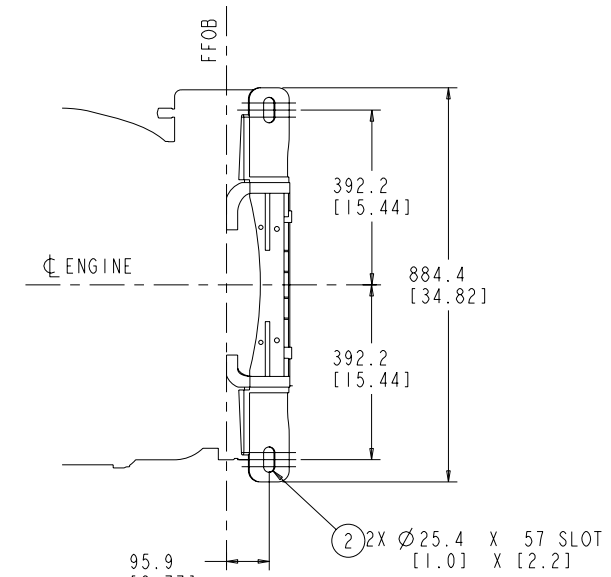
REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SMITH 3-28-97



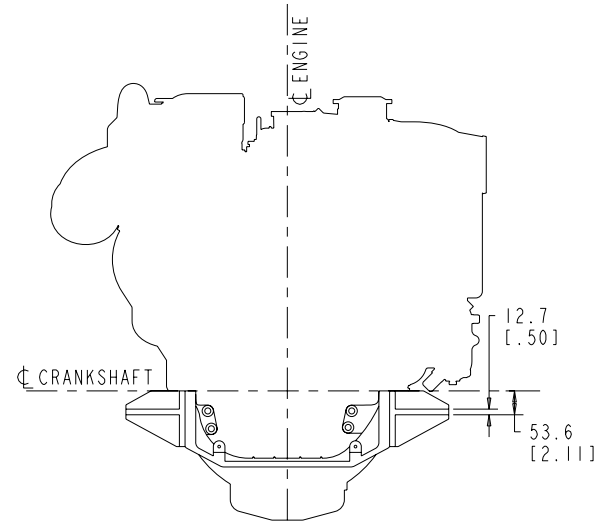
TOP VIEW



TOP VIEW

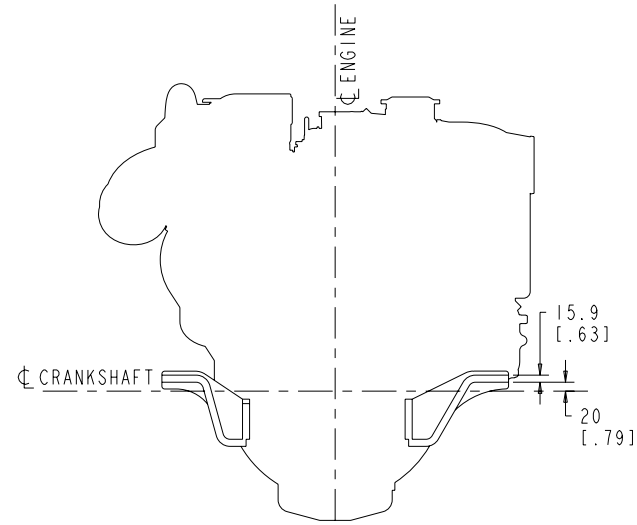


TOP VIEW



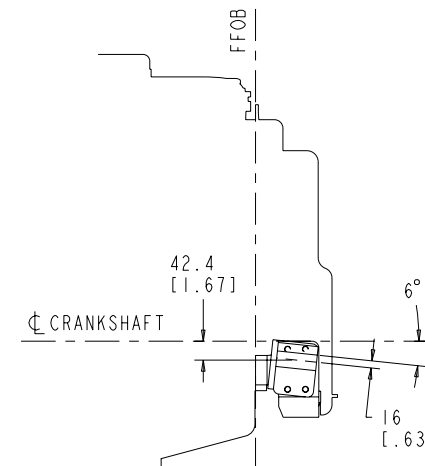
FRONT VIEW

EM9259



FRONT VIEW

EM9261



EXHAUST SIDE

EM9286

PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

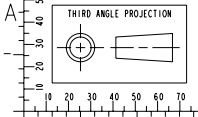
LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	ITEM NUMBER
DWN: UNCHECKED	SIZE CODE (IDENT. NO.):	J	3170592
APPD:	SCALE: 2x	ITEM CONTROL: MCS	SHEET 25 OF 32

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MOUNTING SYSTEM

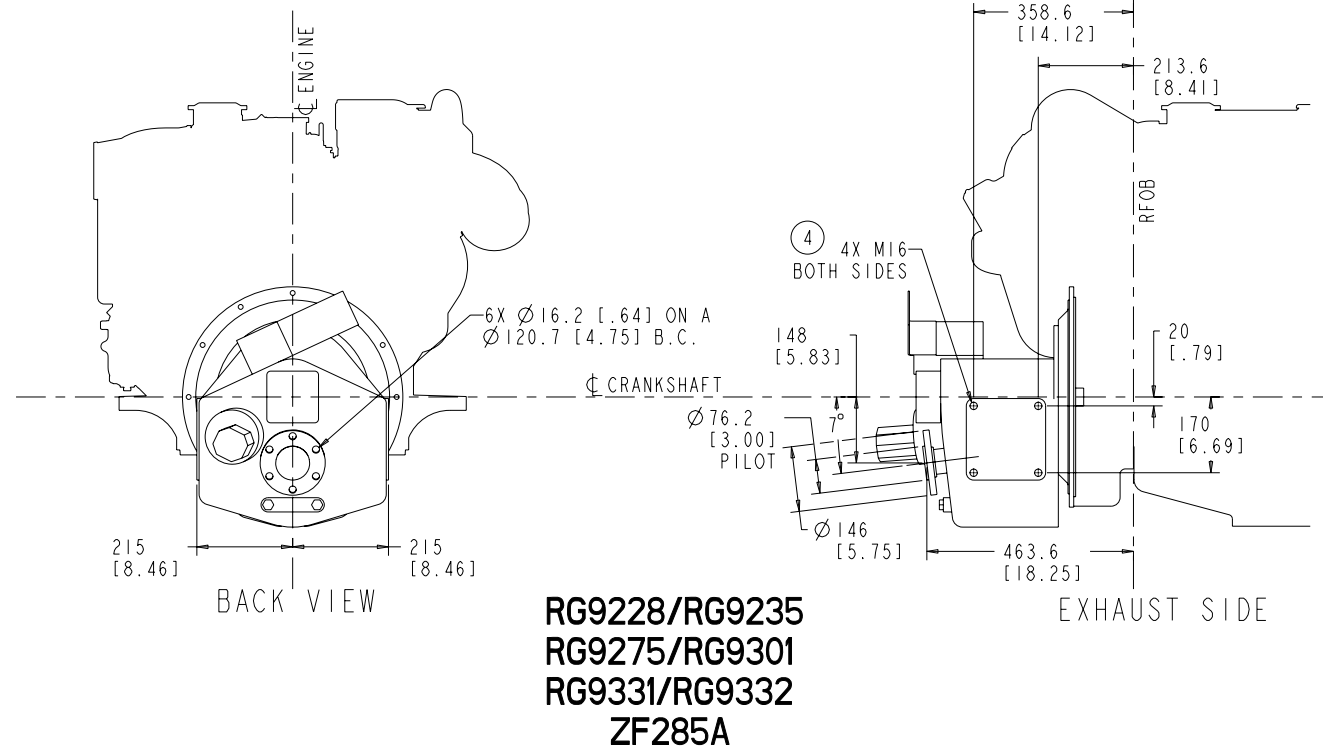
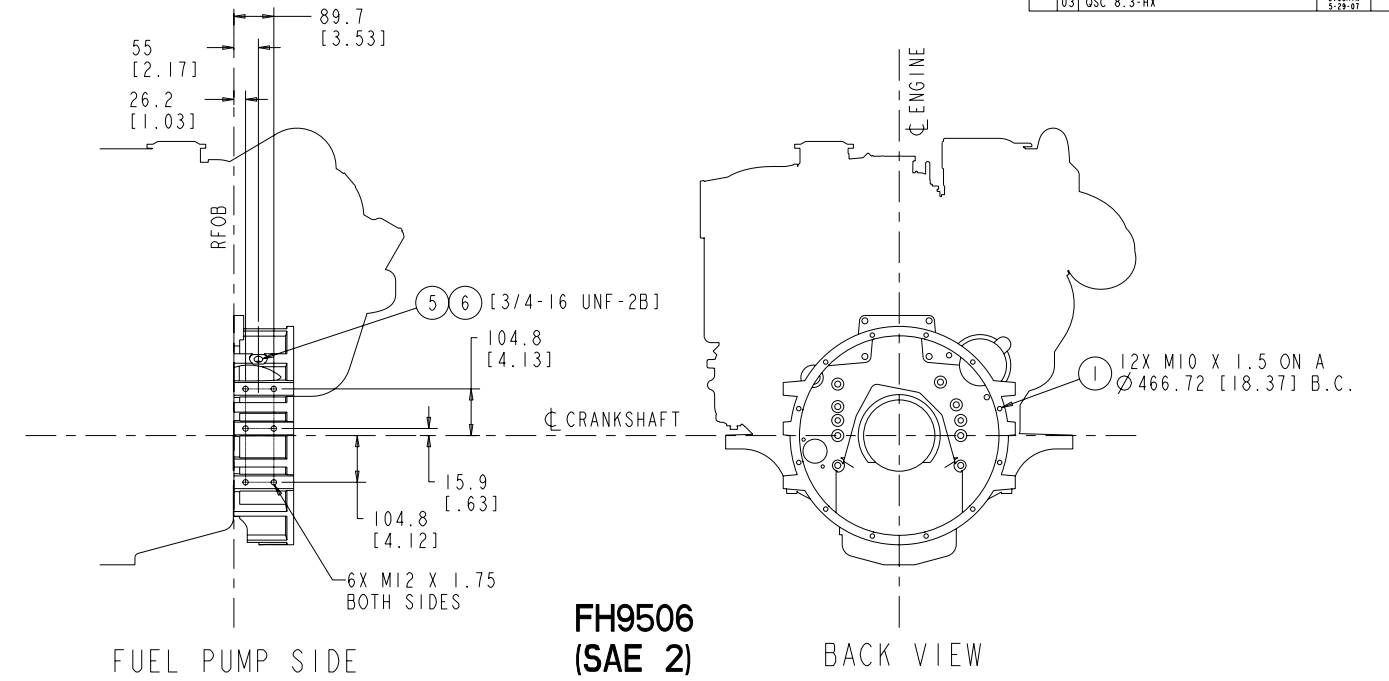
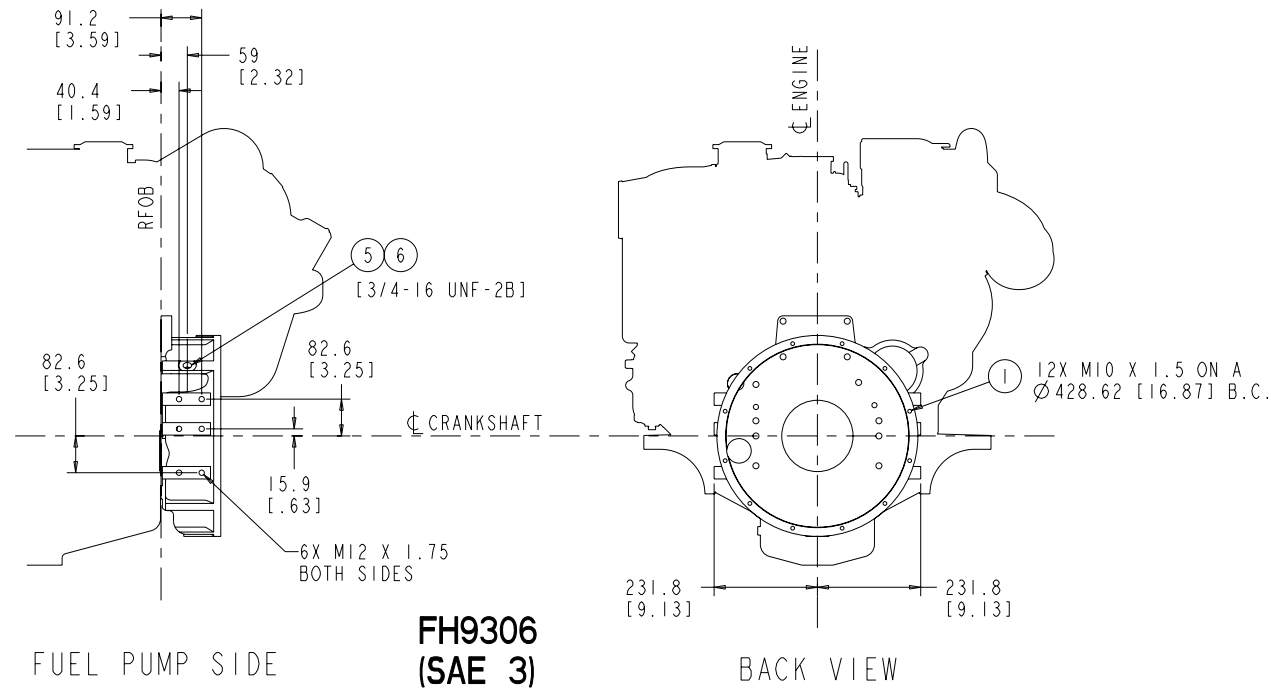
- | | |
|-------------------------------|----------------------------------|
| ① FLYWHEEL HOUSING BOLT HOLES | ④ REAR MOUNT BOLT HOLE |
| ② FRONT MOUNT BOLT HOLE | ⑤ SPEED SENSOR (ECM) PORT |
| ③ JACKING SCREW BOLT HOLE | ⑥ SPEED SENSOR (TACHOMETER) PORT |



INCHES
MILLIMETERS

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	



- | | |
|-------------------------------|----------------------------------|
| ① FLYWHEEL HOUSING BOLT HOLES | ④ REAR MOUNT BOLT HOLE |
| ② FRONT MOUNT BOLT HOLE | ⑤ SPEED SENSOR (ECM) PORT |
| ③ JACKING SCREW BOLT HOLE | ⑥ SPEED SENSOR (TACHOMETER) PORT |

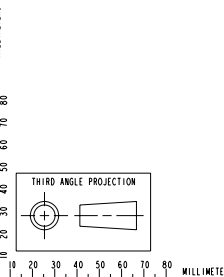
DO NOT SCALE THIS DRAWING

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LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN: TMO/TGANG	SCALE: 2x	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592
CHD: UNCHECKED	ITEM CONTROL: MCS	SHEET 26 OF 32	

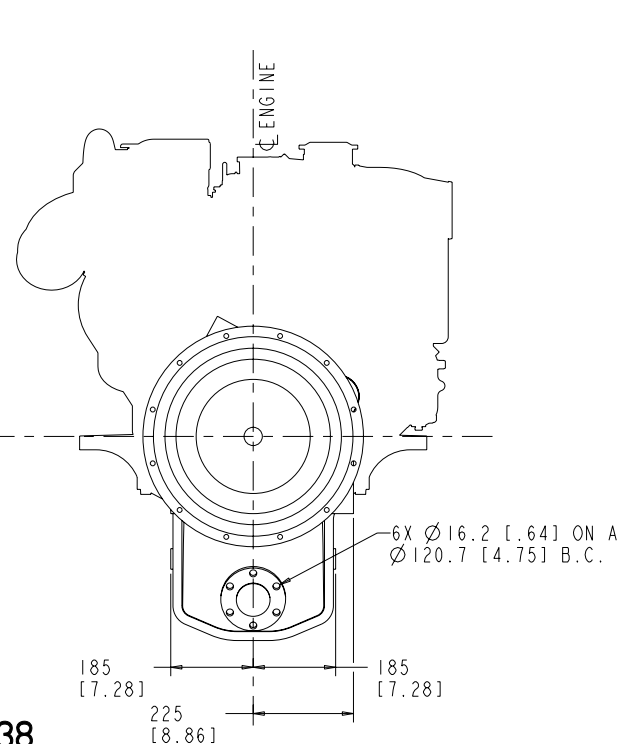
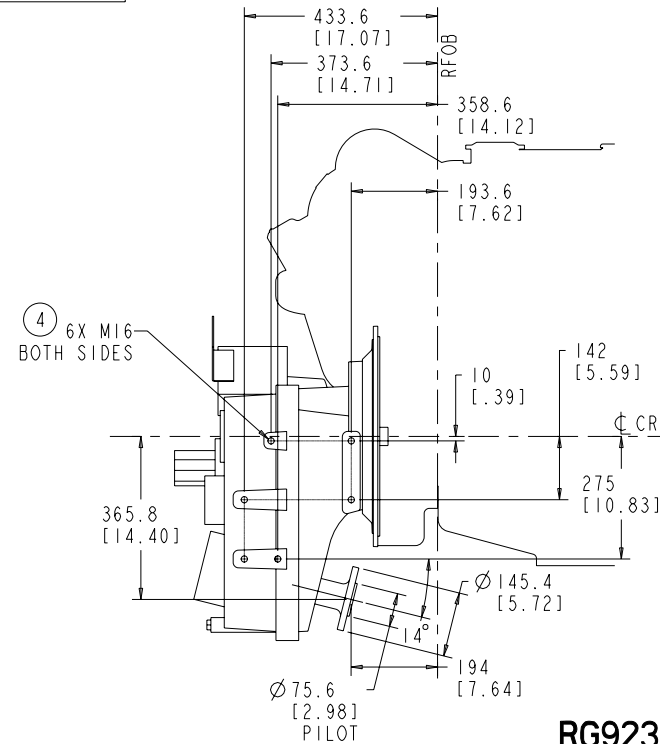
MOUNTING SYSTEM

INCHES
MILLIMETERS



ITEM NUMBER
3170592

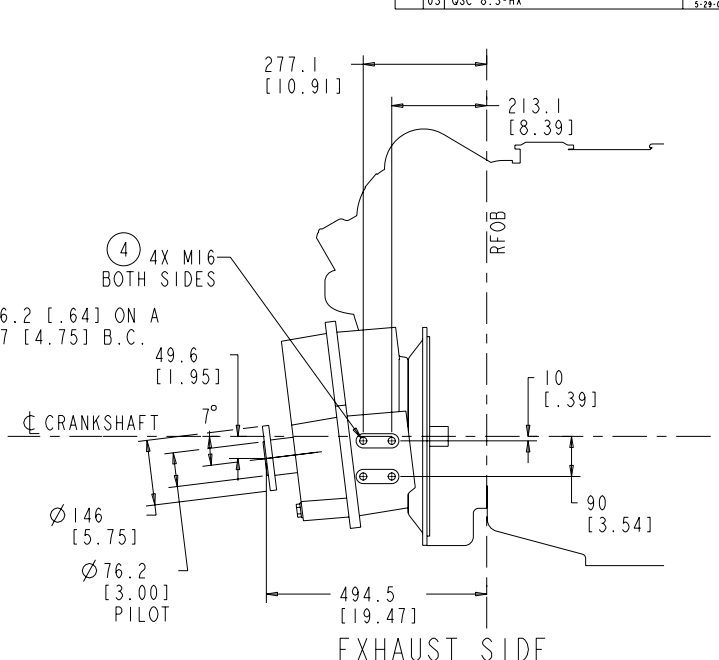
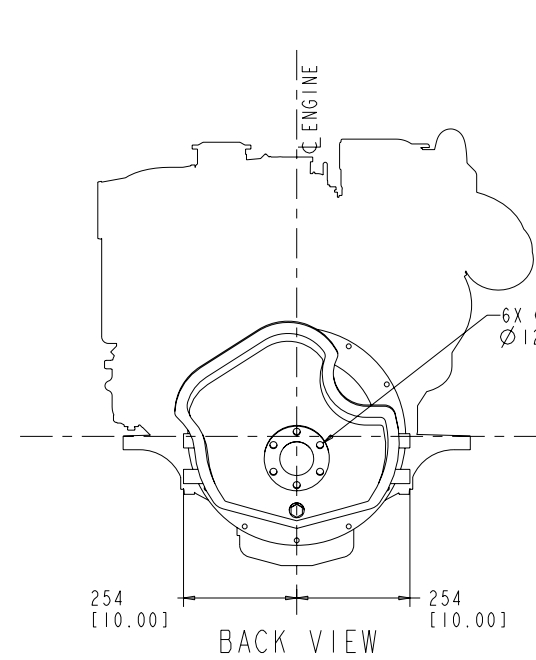
REVISIONS		OWN	APP'D
ZONE REV	DESCRIPTION	B. SMITH	
03	QSC 8.3-HX		



RG9237/RG9238
RG9320/RG9335
ZF285IV

EXHAUST SIDE

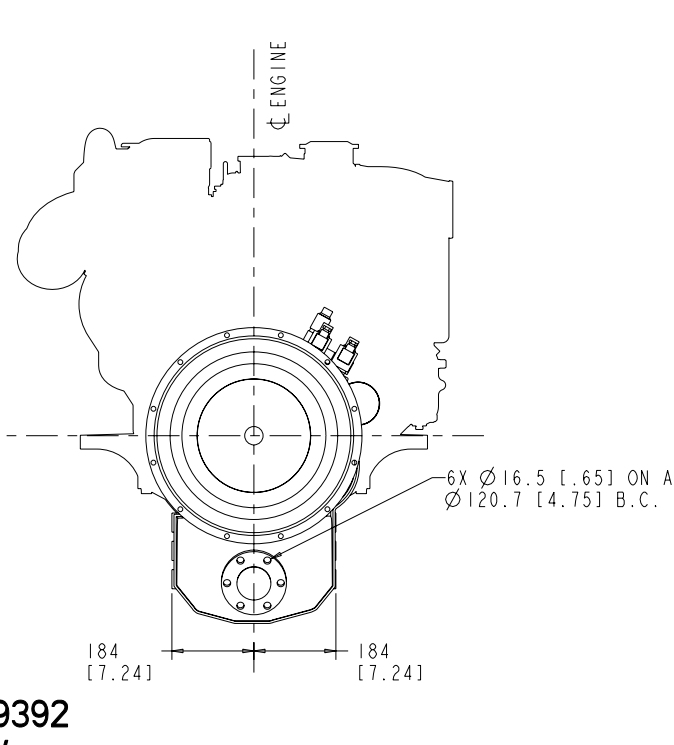
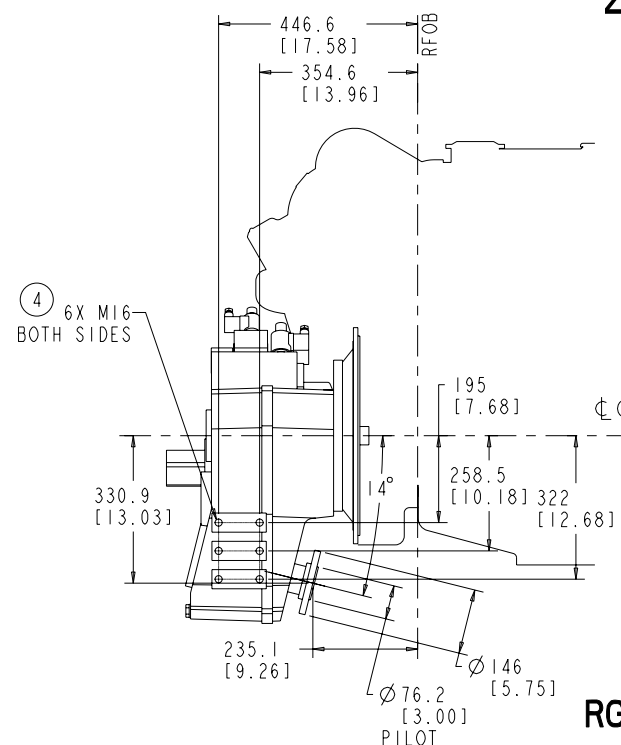
FRONT VIEW



RG9243/RG9244
MG5075A

BACK VIEW

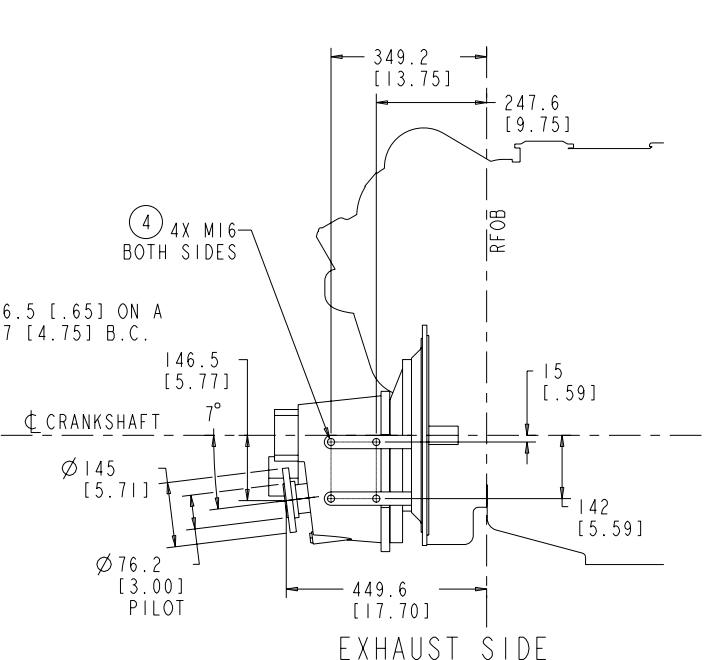
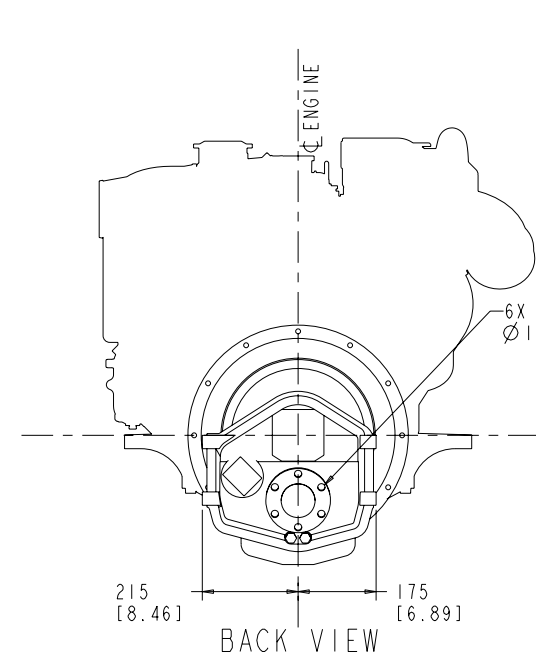
EXHAUST SIDE



RG9291/RG9392
ZF280IV

EXHAUST SIDE

FRONT VIEW



RG9302/RG9308
ZF280-1A

BACK VIEW

EXHAUST SIDE

PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

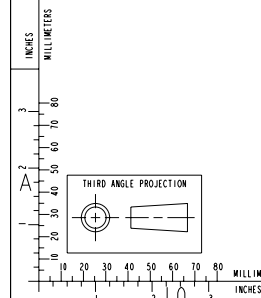
DO NOT SCALE THIS DRAWING

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MOUNTING SYSTEM

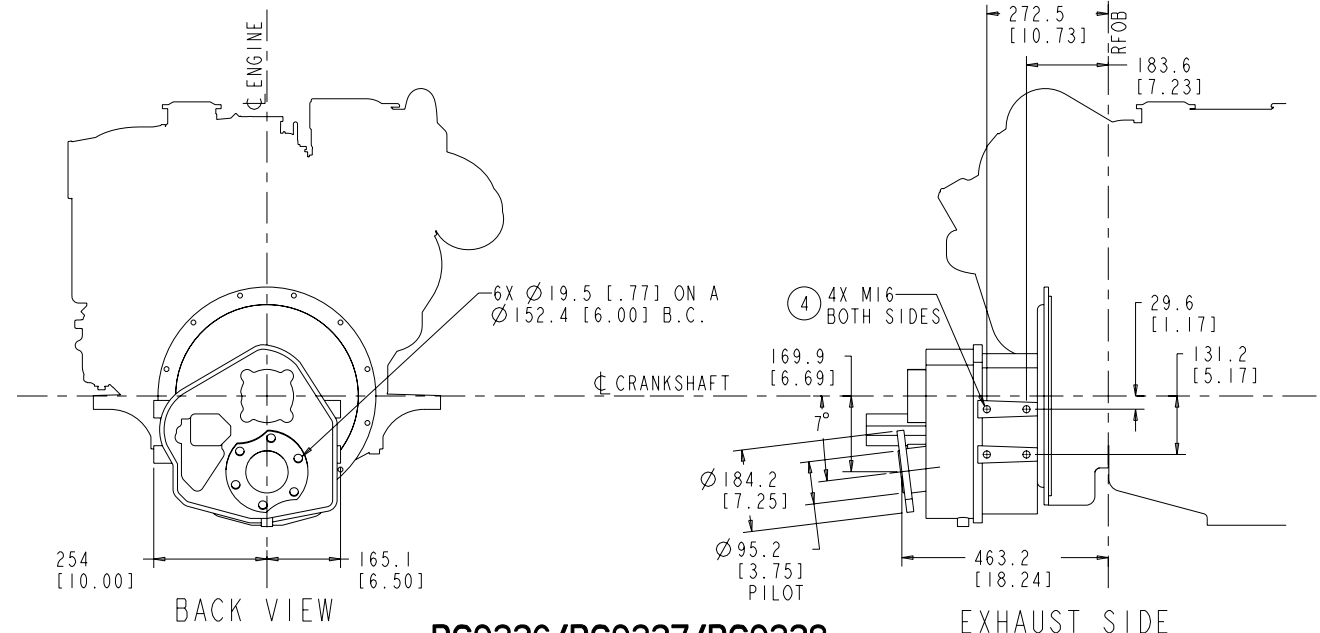
- | | |
|-------------------------------|----------------------------------|
| ① FLYWHEEL HOUSING BOLT HOLES | ④ REAR MOUNT BOLT HOLE |
| ② FRONT MOUNT BOLT HOLE | ⑤ SPEED SENSOR (ECM) PORT |
| ③ JACKING SCREW BOLT HOLE | ⑥ SPEED SENSOR (TACHOMETER) PORT |

LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	ITEM NAME CUMMINS INC.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	IDENTIFIER QSC 8.3-HX	SIZE CODE (IDENT. NO.) J
DWN UNCHECKED	APPD UNCHECKED	ITEM NUMBER 3170592
SCALE: 2x	ITEM CONTROL: MCS	SHEET 27 OF 32

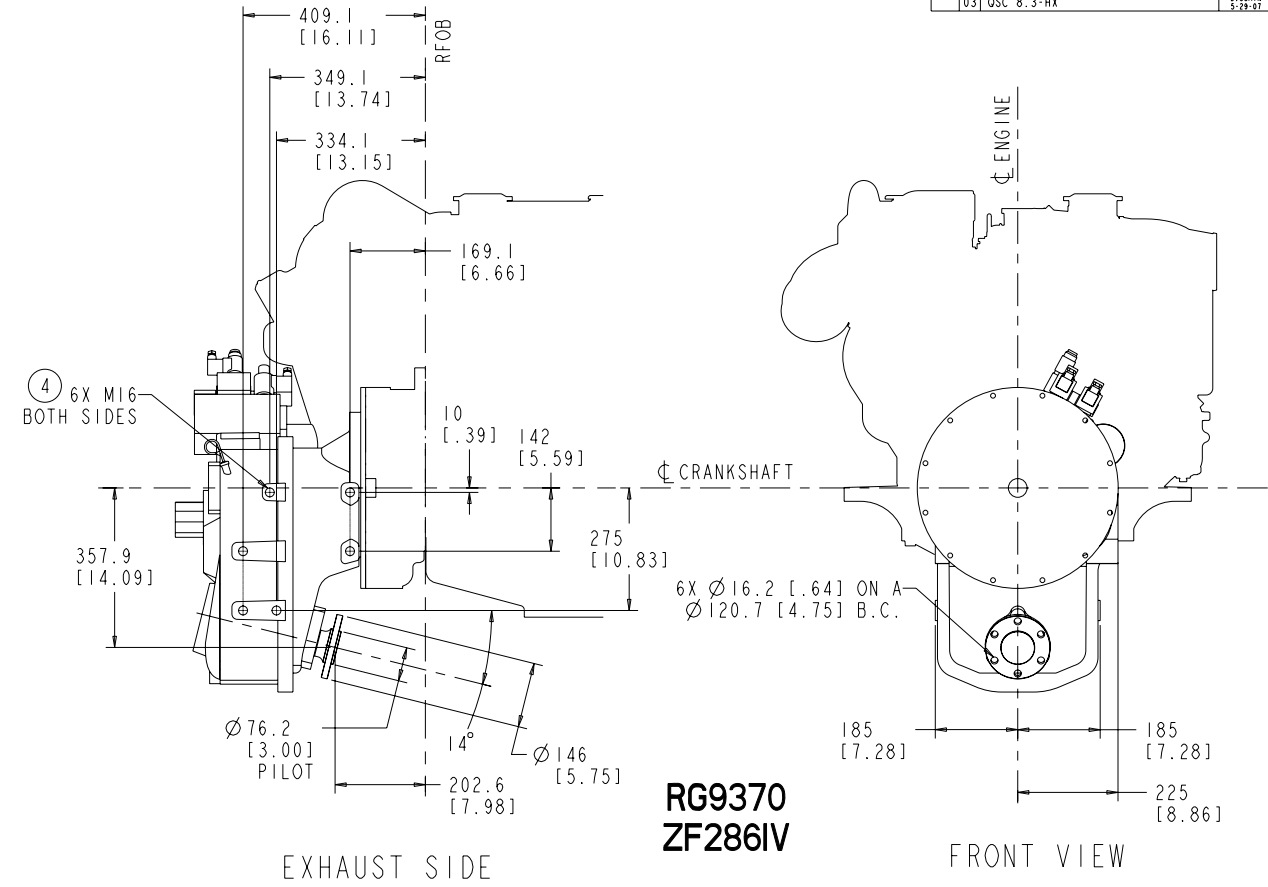


ITEM NUMBER
3170592

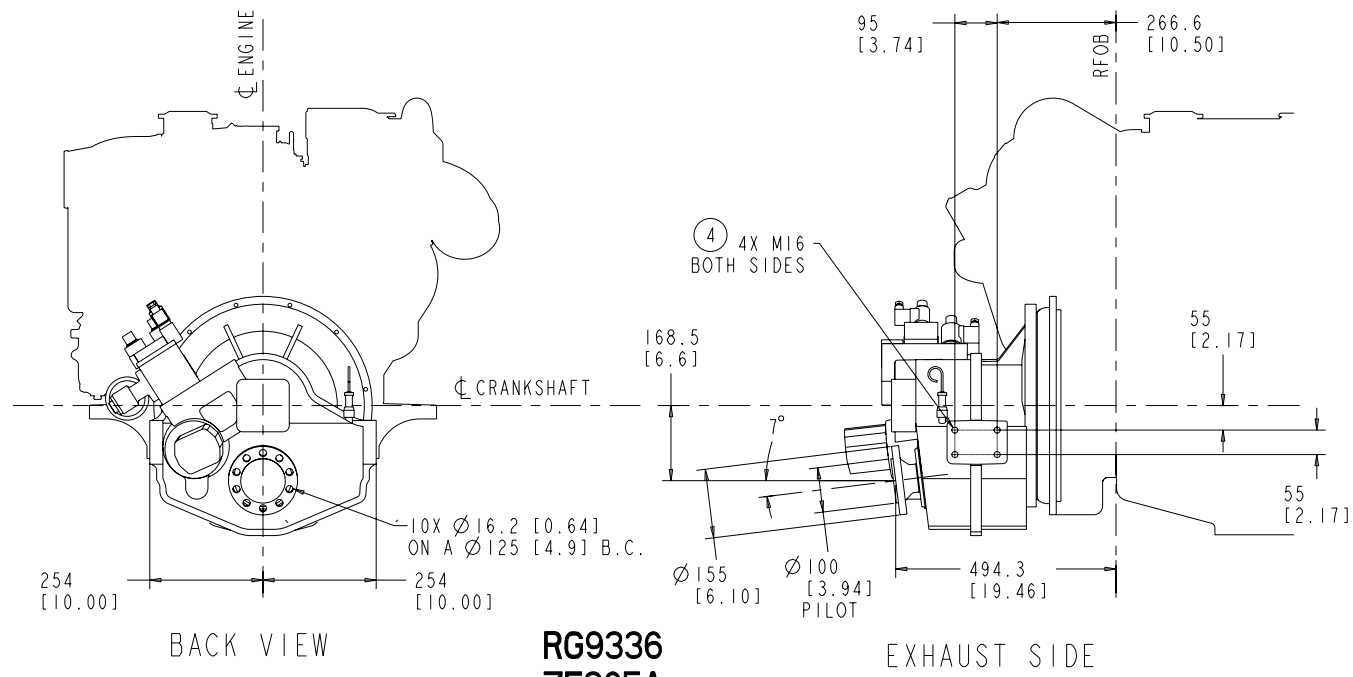
REVISIONS		OWN	APP'D
03	QSC 8.3-HX	B. SMITH	



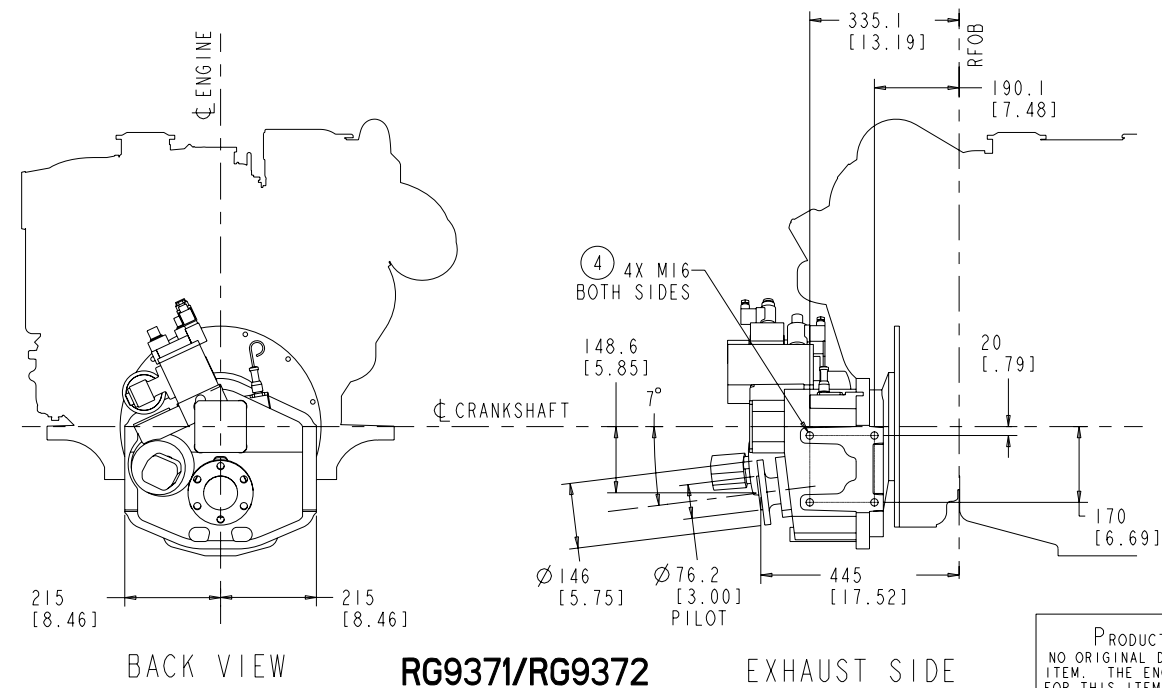
**RG9326/RG9327/RG9328
TD MG5065A**



**RG9370
ZF286IV**



**RG9336
ZF305A**



**RG9371/RG9372
RG9374
ZF286A**

PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

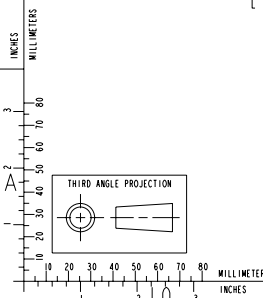
- | | |
|-------------------------------|----------------------------------|
| ① FLYWHEEL HOUSING BOLT HOLES | ④ REAR MOUNT BOLT HOLE |
| ② FRONT MOUNT BOLT HOLE | ⑤ SPEED SENSOR (ECM) PORT |
| ③ JACKING SCREW BOLT HOLE | ⑥ SPEED SENSOR (TACHOMETER) PORT |

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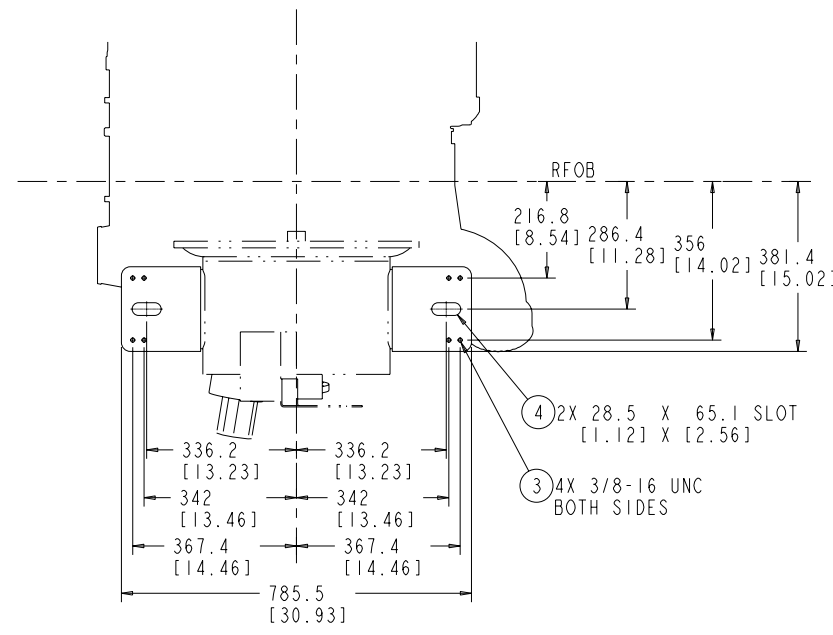
MOUNTING SYSTEM

LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DWN: TMO/TGANG CHD: UNCHECKED APPD:		SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592
		SCALE: 2x	ITEM CONTROL: MCS SHEET 28 OF 32

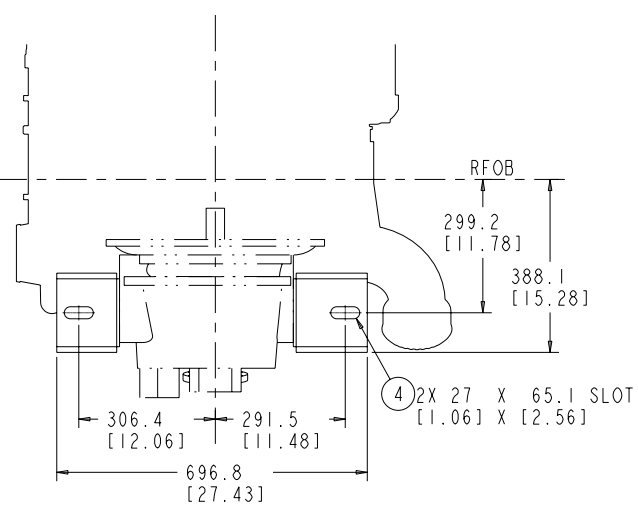


ITEM NUMBER
3170592

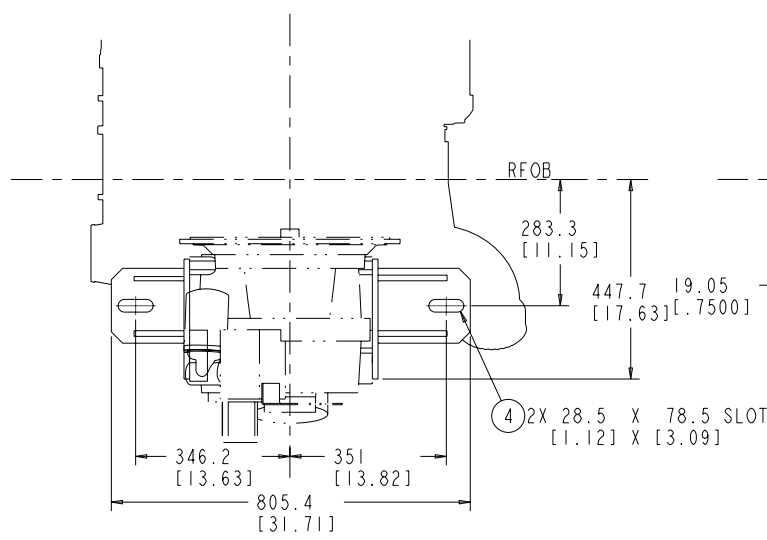
REVISIONS		OWN	APP'D
ZONE	REV	DESCRIPTION	
03		QSC 8.3-HX	



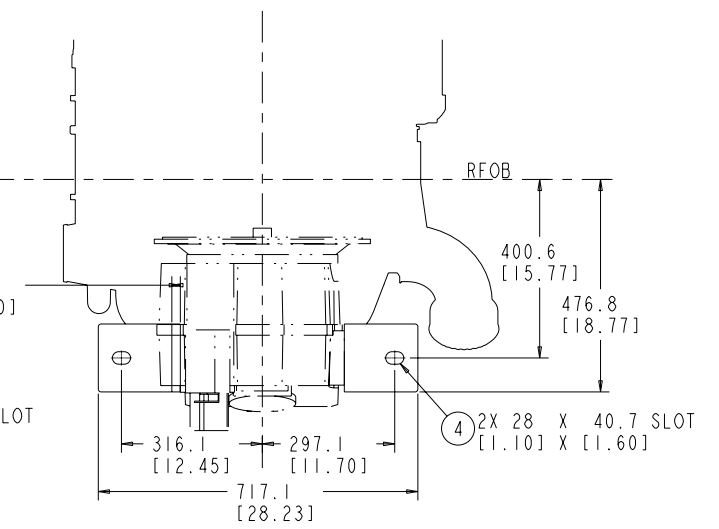
TOP VIEW



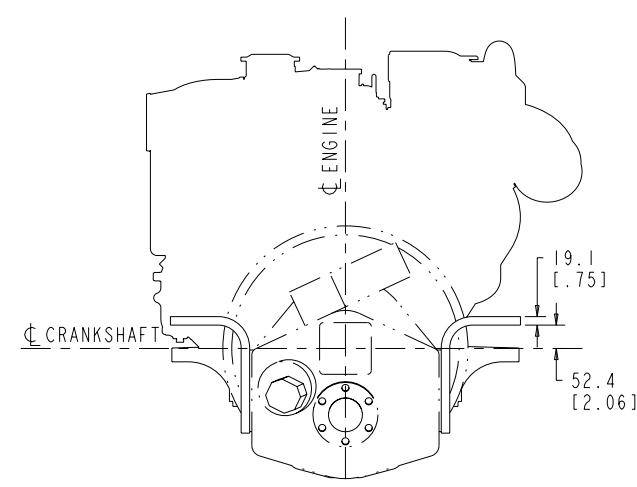
TOP VIEW



TOP VIEW

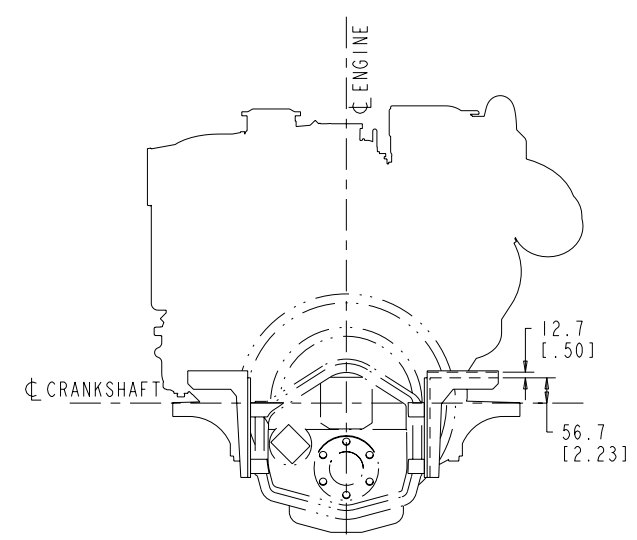


TOP VIEW



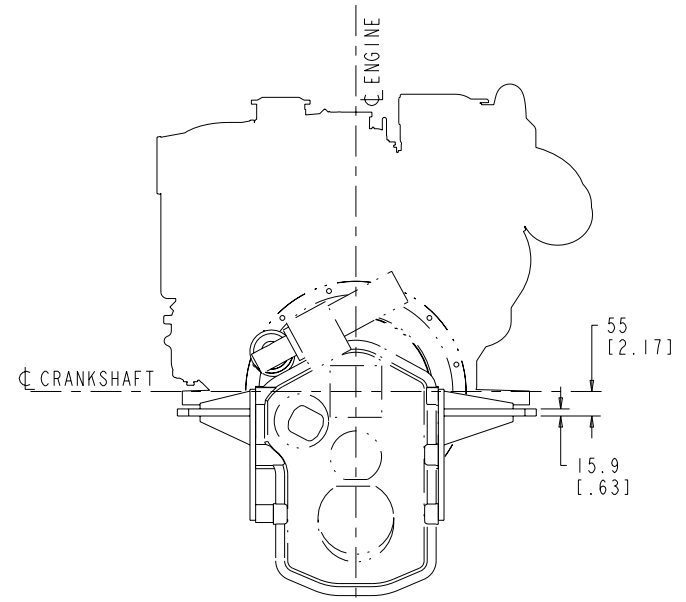
BACK VIEW

SA9035
ZF285A/ZF286A



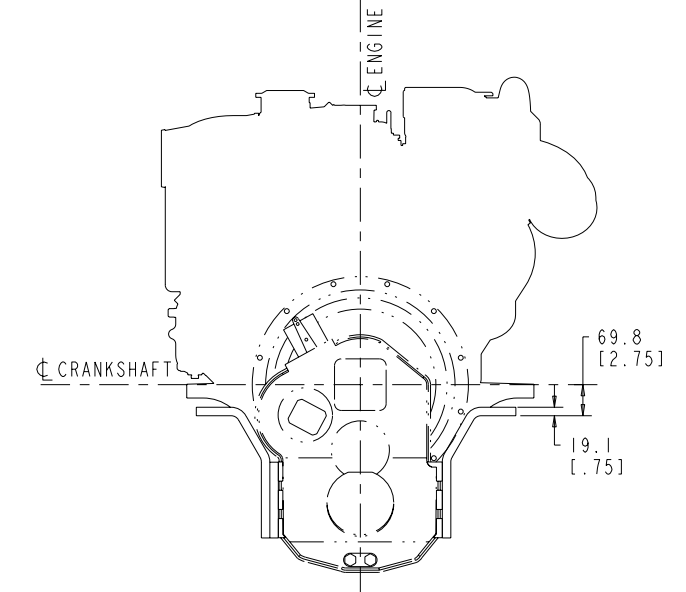
BACK VIEW

SA9046
ZF280-1A



BACK VIEW

SA9051
ZF285IV/ZF286IV



BACK VIEW

SA9058
ZF280IV

PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

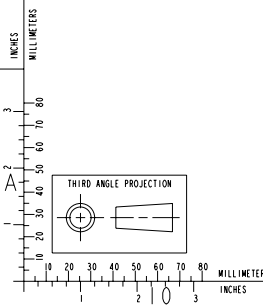
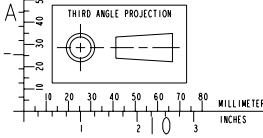
LAST SECTION LETTER USED: A		REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN	TWO/2004	SCALE: 2X	SIZE CODE IDENT. NO.	ITEM NUMBER 3170592
CHD	UNCHECKED	SCALE: 2X	ITEM CONTROL: MCS	SHEET 29 OF 32
APPD				

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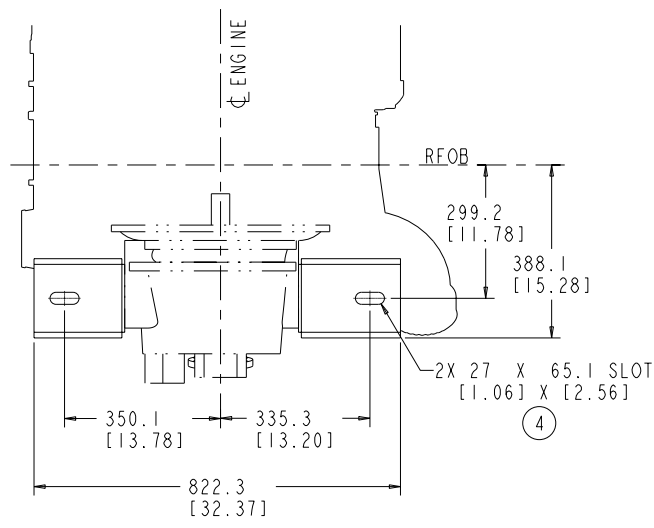
MOUNTING SYSTEM

- | | |
|-------------------------------|----------------------------------|
| ① FLYWHEEL HOUSING BOLT HOLES | ④ REAR MOUNT BOLT HOLE |
| ② FRONT MOUNT BOLT HOLE | ⑤ SPEED SENSOR (ECM) PORT |
| ③ JACKING SCREW BOLT HOLE | ⑥ SPEED SENSOR (TACHOMETER) PORT |



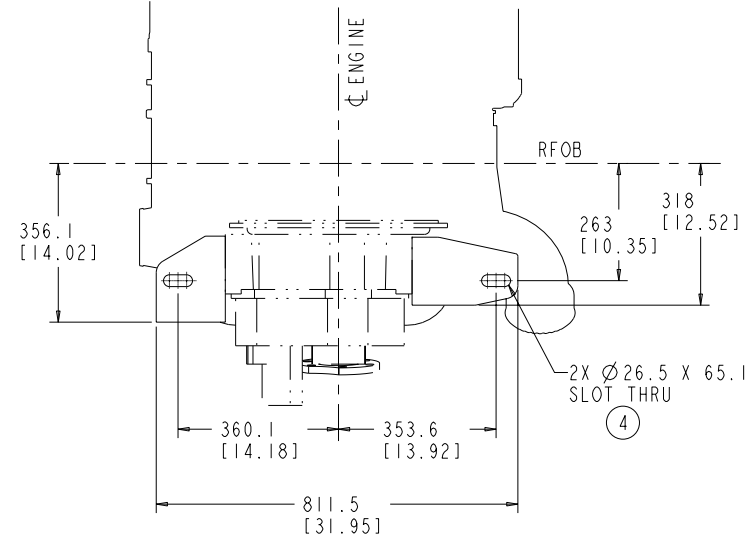
ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	



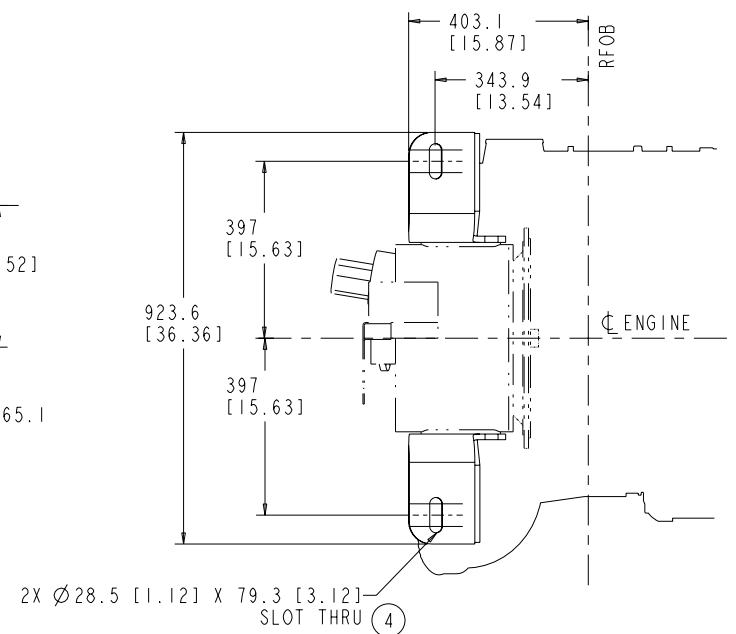
TOP VIEW

SA9060
ZF280-1A



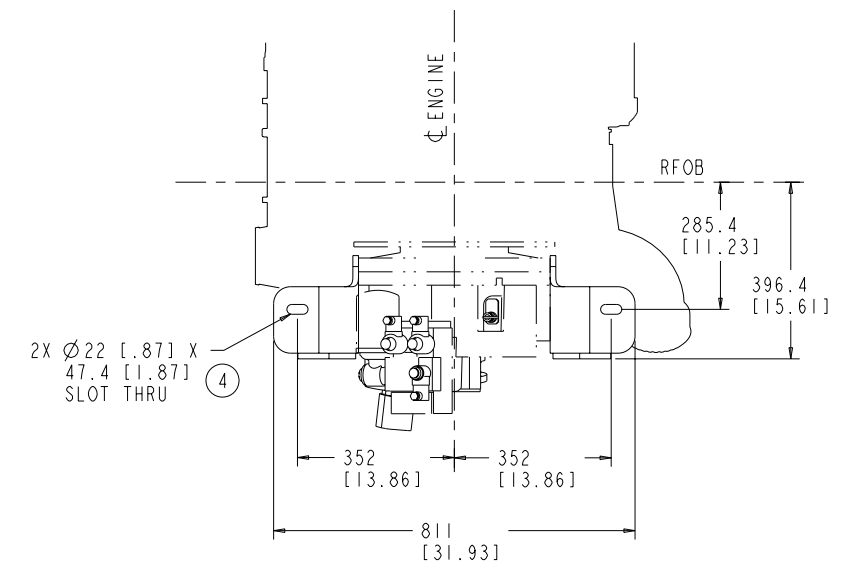
TOP VIEW

SA9063
TD MG5065A



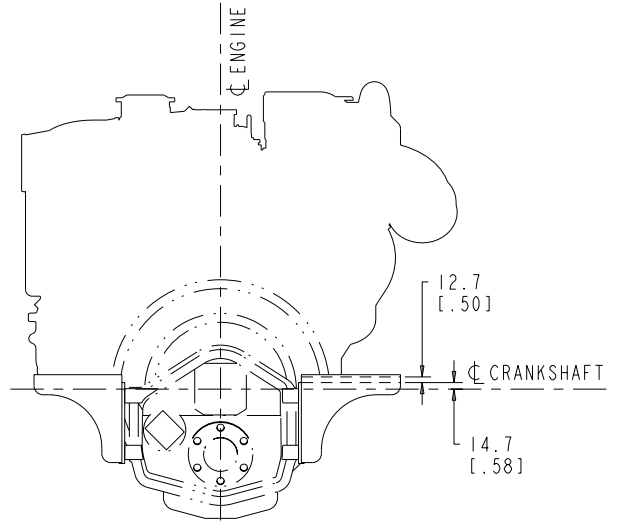
TOP VIEW

SA9065
ZF285A/ZF286A

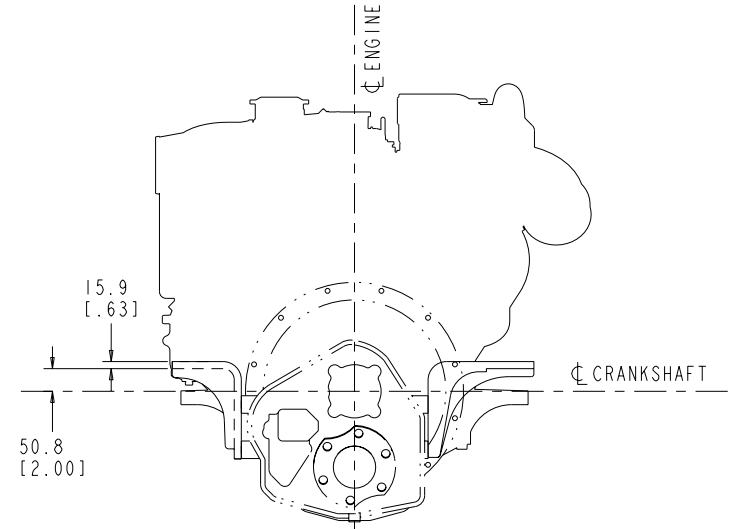


TOP VIEW

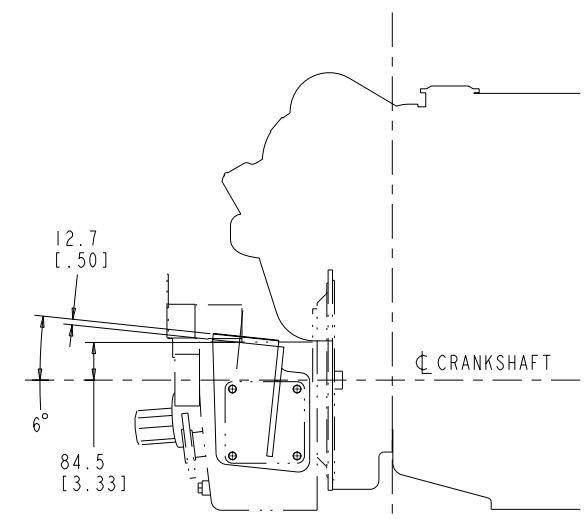
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ZF285A/ZF286A



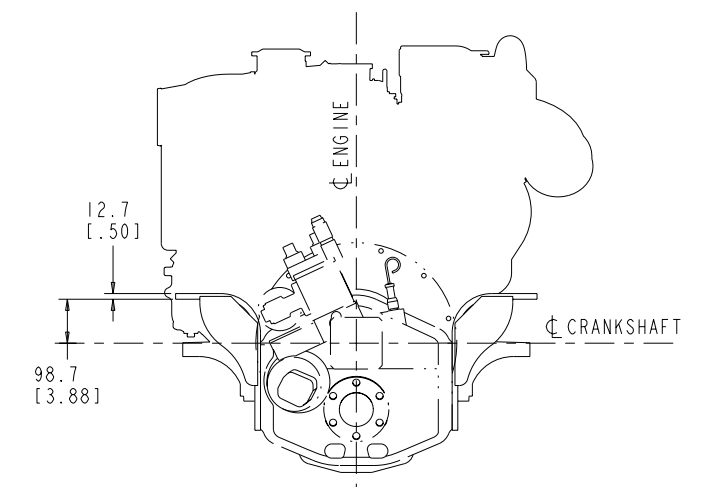
BACK VIEW



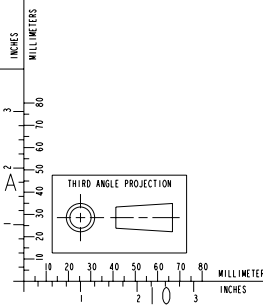
BACK VIEW



EXHAUST SIDE



BACK VIEW



- ① FLYWHEEL HOUSING BOLT HOLES
- ② FRONT MOUNT BOLT HOLE
- ③ JACKING SCREW BOLT HOLE
- ④ REAR MOUNT BOLT HOLE
- ⑤ SPEED SENSOR (ECM) PORT
- ⑥ SPEED SENSOR (TACHOMETER) PORT

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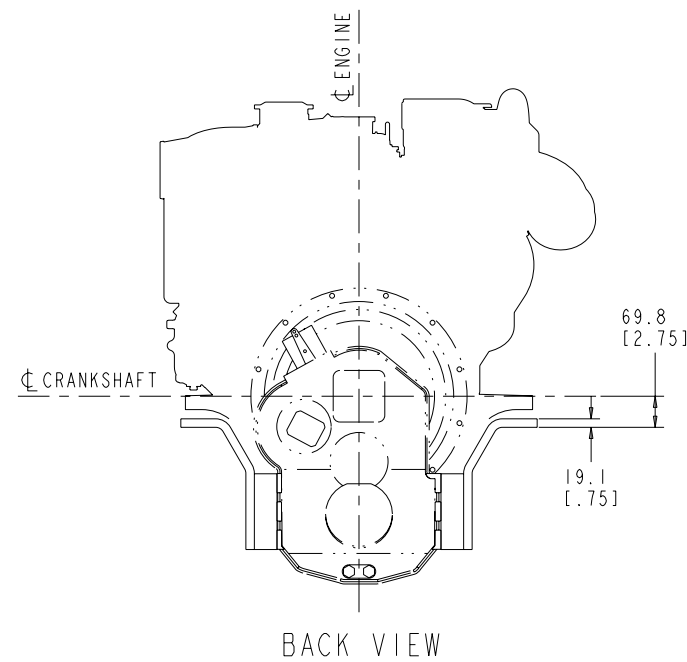
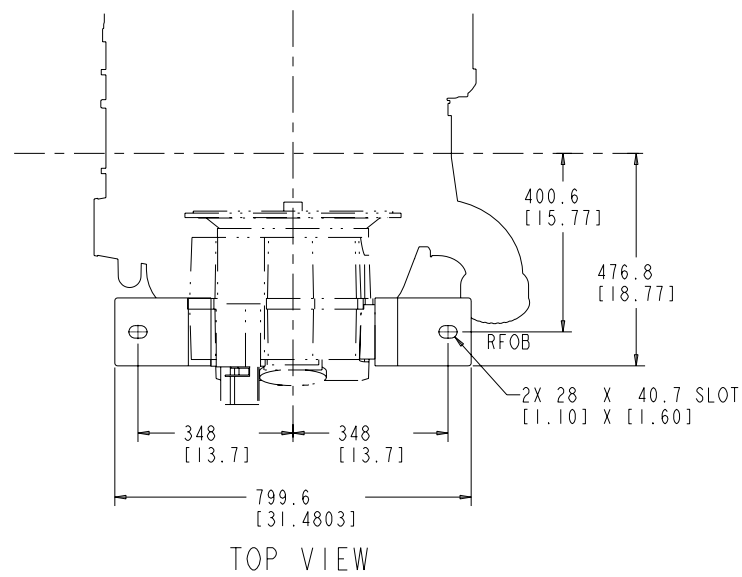
LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DWN: TMO/FGANG CHD: UNCHECKED APPD:		SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592
		SCALE: 2x	ITEM CONTROL: MCS SHEET 30 OF 32

MOUNTING SYSTEM

PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

ITEM NUMBER
3170592

REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SCHWAB



SA9071
ZF280IV

PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

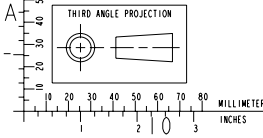
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	IDENTIFIER QSC 8.3-HX	INSTALLATION DIAGRAM
DWN: UNCHECKED APPD: UNCHECKED	SIZE CODE IDENT. NO. ITEM NUMBER J 3170592	SCALE: 2x ITEM CONTROL: MCS SHEET 31 OF 32

DO NOT SCALE THIS DRAWING

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MOUNTING SYSTEM

- ① FLYWHEEL HOUSING BOLT HOLES
- ② FRONT MOUNT BOLT HOLE
- ③ JACKING SCREW BOLT HOLE
- ④ REAR MOUNT BOLT HOLE
- ⑤ SPEED SENSOR (ECM) PORT
- ⑥ SPEED SENSOR (TACHOMETER) PORT

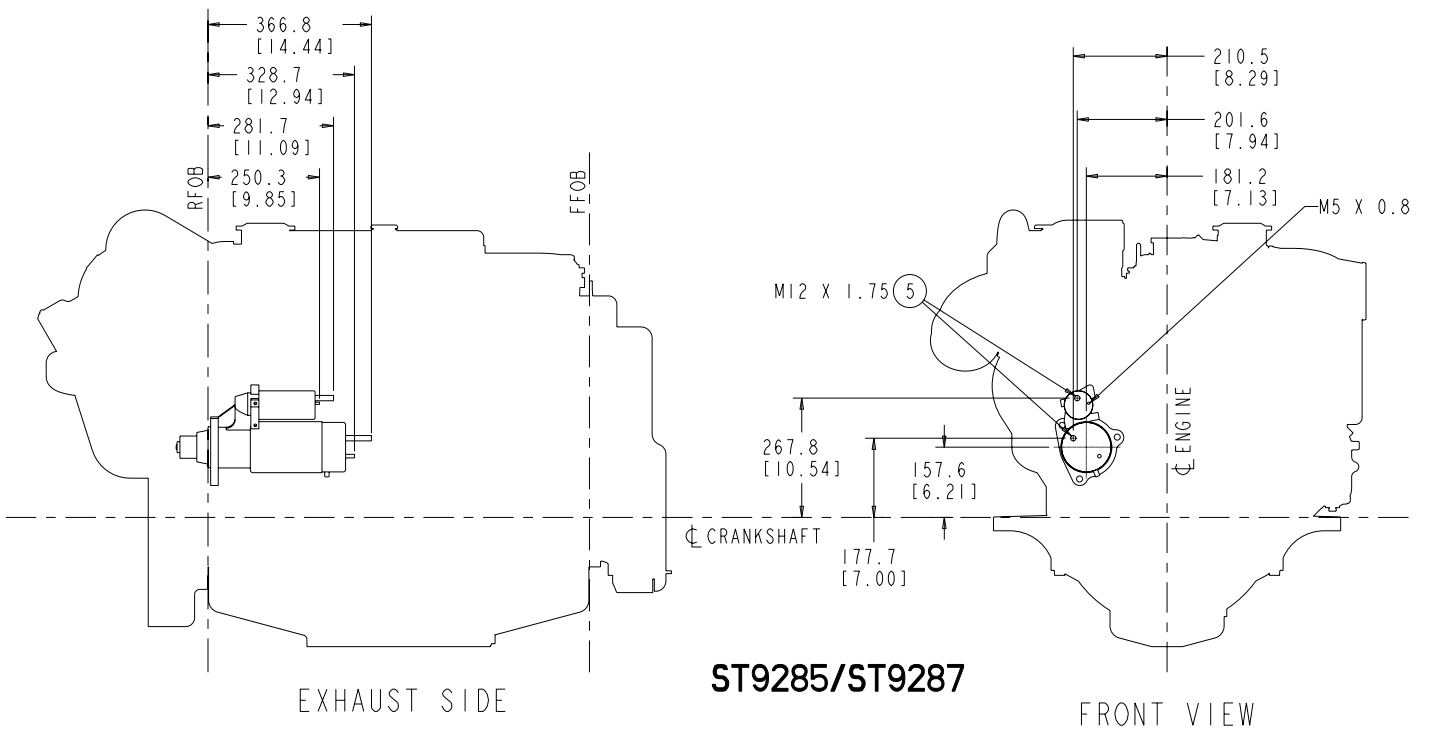
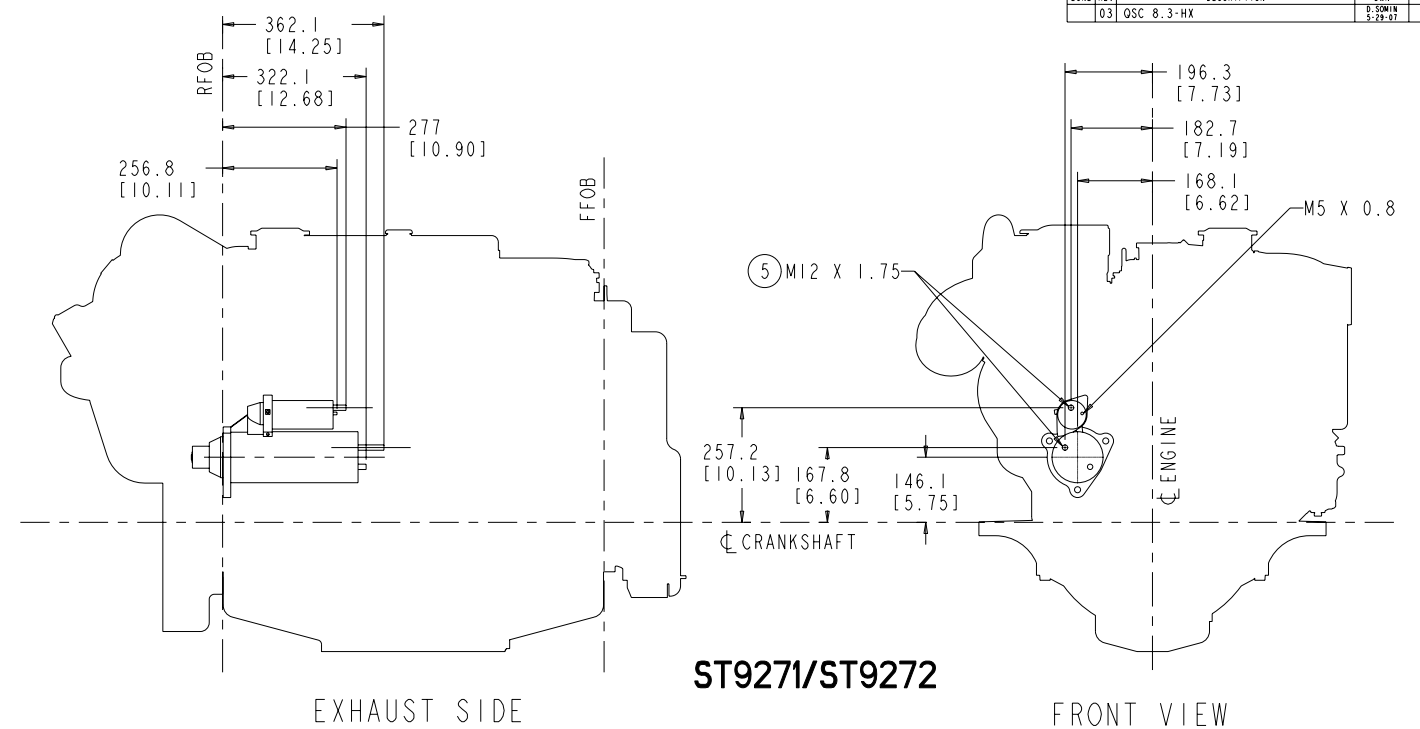
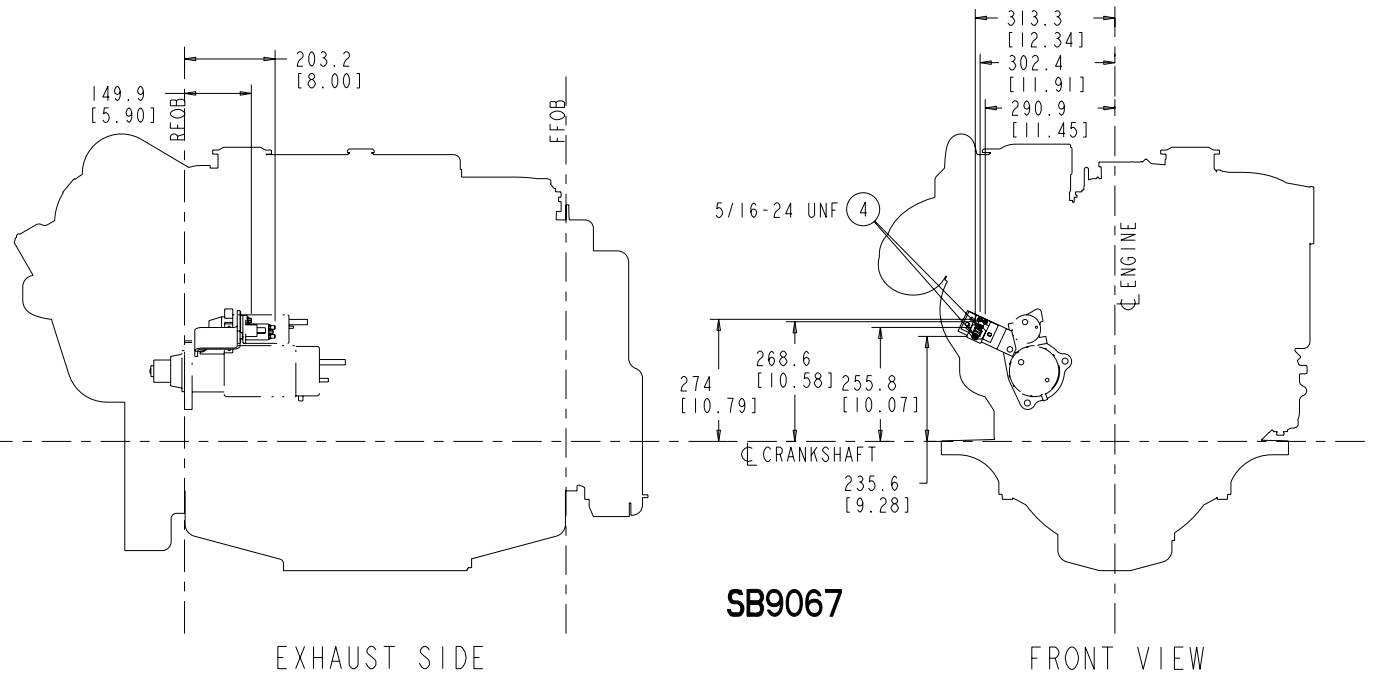


INCHES
MILLIMETERS



ITEM NUMBER
3170592

REVISIONS		DWN	APP'D
03	QSC 8.3-HX	B. SMITH	



PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

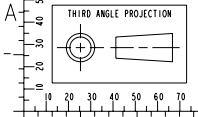
LAST SECTION LETTER USED: A		REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN: TMO/TSANG	CHK: UNCHECKED	APPD: UNCHECKED	SIZE CODE (IDENT. NO.):	ITEM NUMBER 3170592
SCALE: 2:1		ITEM CONTROL: MCS		SHEET 32 OF 32

DO NOT SCALE THIS DRAWING

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STARTING SYSTEM

- ① COMPRESSED AIR SUPPLY CONNECTION- N/A
- ② ENGAGEMENT CONTROL (AIR IN)- N/A
- ③ ENGAGEMENT CONTROL (AIR OUT)- N/A
- ④ STARTER RELAY SWITCH TERMINALS
- ⑤ STARTER TERMINALS



INCHES
MILLIMETERS

INCHES
MILLIMETERS