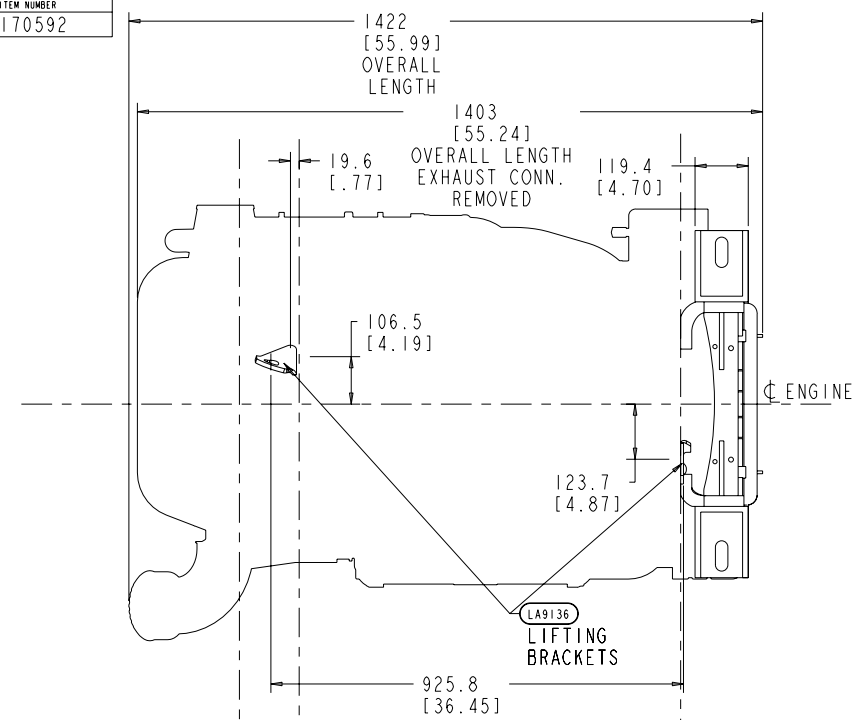
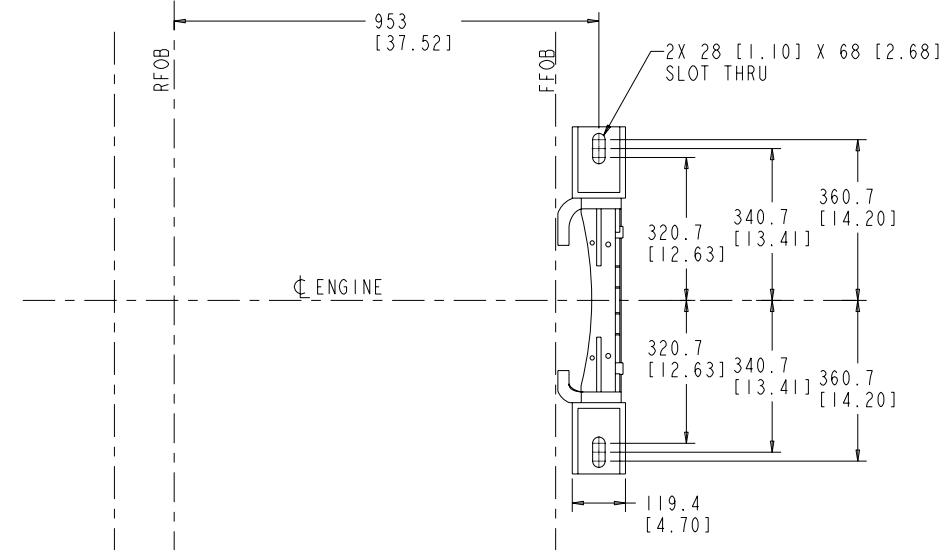


ITEM NUMBER
3170592

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

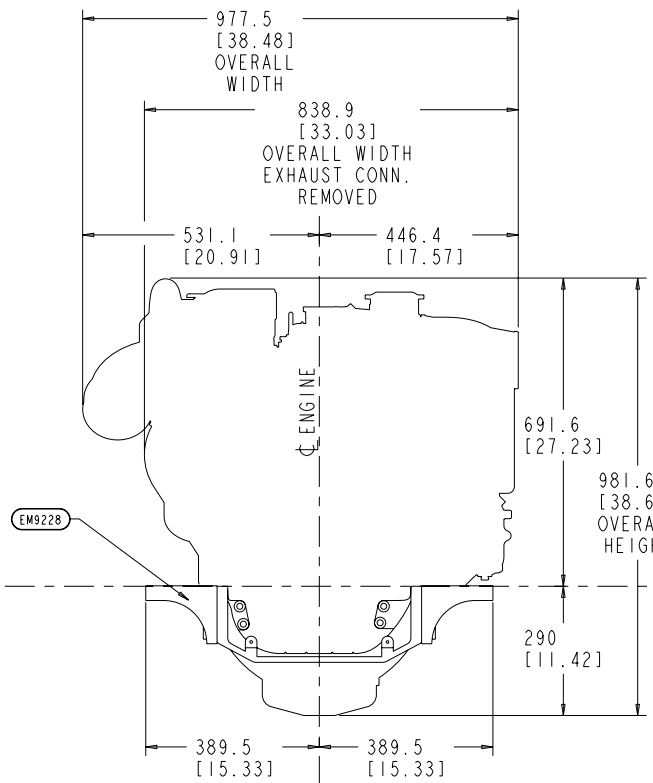


TOP VIEW

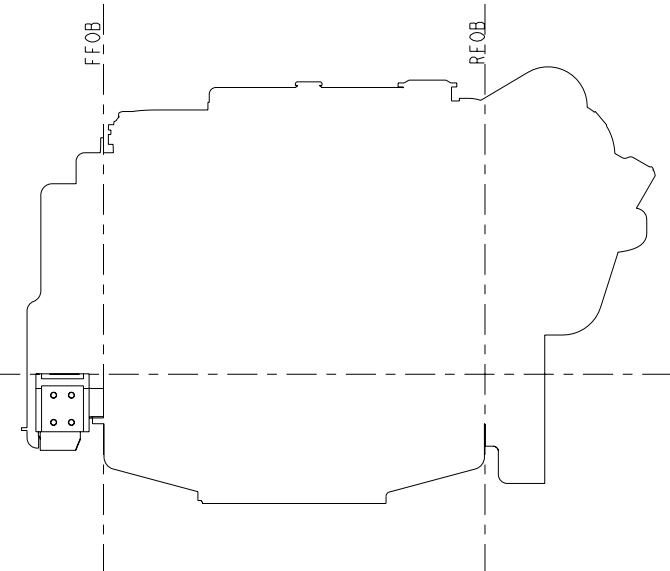


FOUNDATION LAYOUT
QSC MARINE

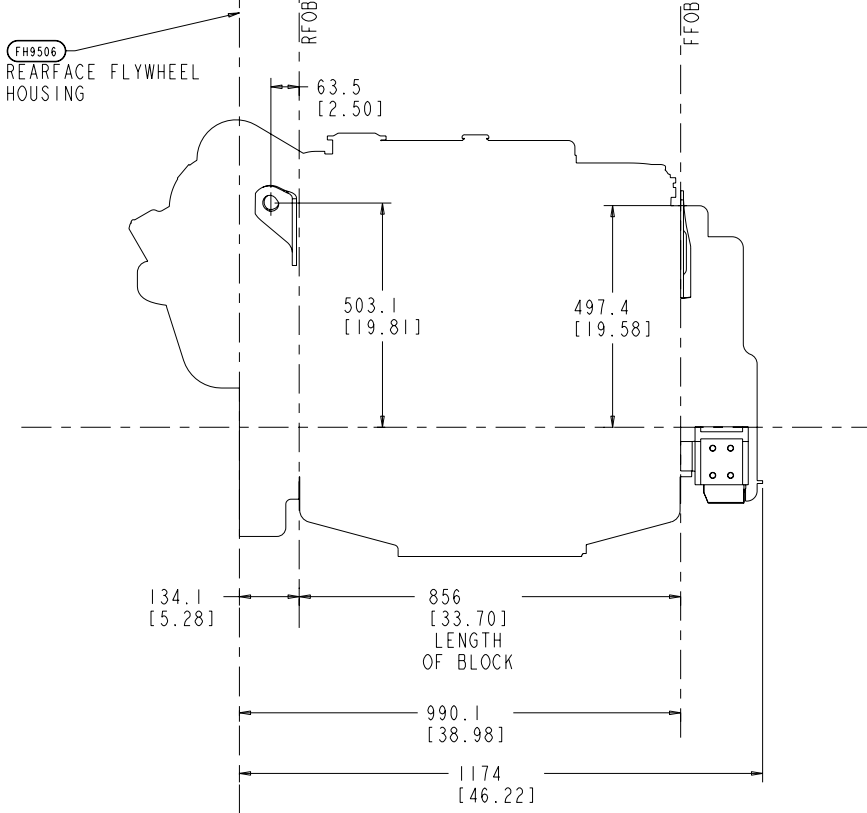
TABLE OF CONTENTS	
DRAWING / SUB-SYSTEM	SHEET
DIMENSION OUTLINE	1
ASSEMBLY DRAWING	2
ACCESSORY DRIVES & PTOS	3
AIR INDUCTION SYSTEM	4-5
COOLING SYSTEM	6-7
CONTROLS, GUAGES AND ALARMS	8
ELECTRICAL SYSTEM	9-12
EXHAUST SYSTEM	13-14
FUEL SYSTEM	15-16
LUBE OIL SYSTEM	17-22
MOUNTING SYSTEM	23-31
STARTING SYSTEM	32



FRONT VIEW

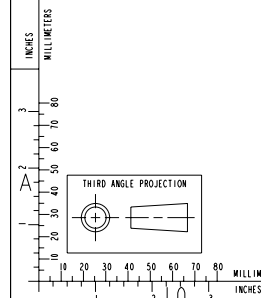


FUEL PUMP SIDE



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.

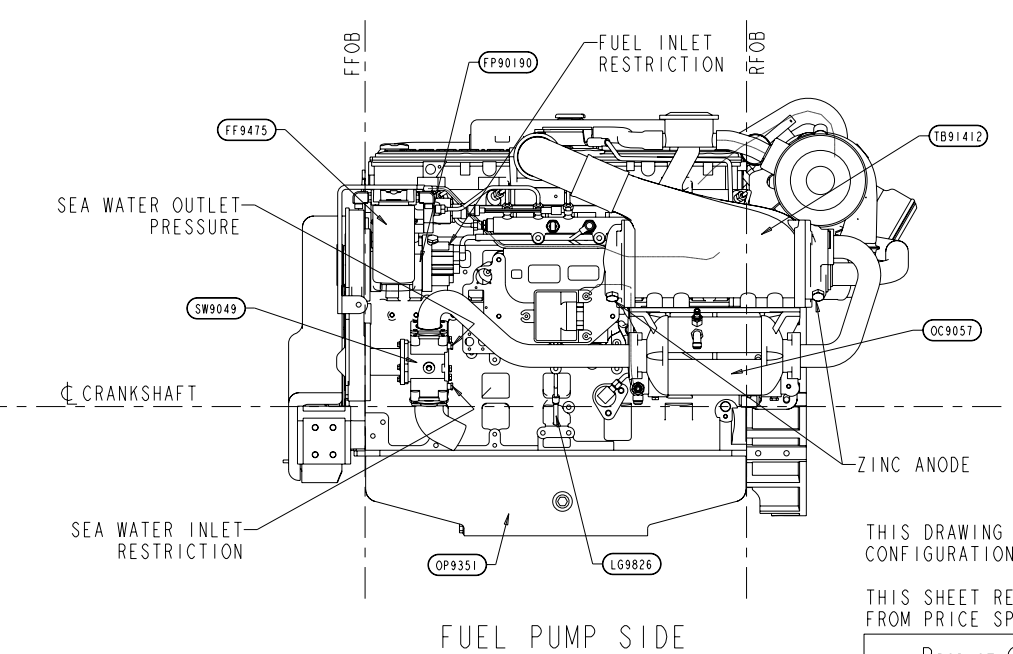
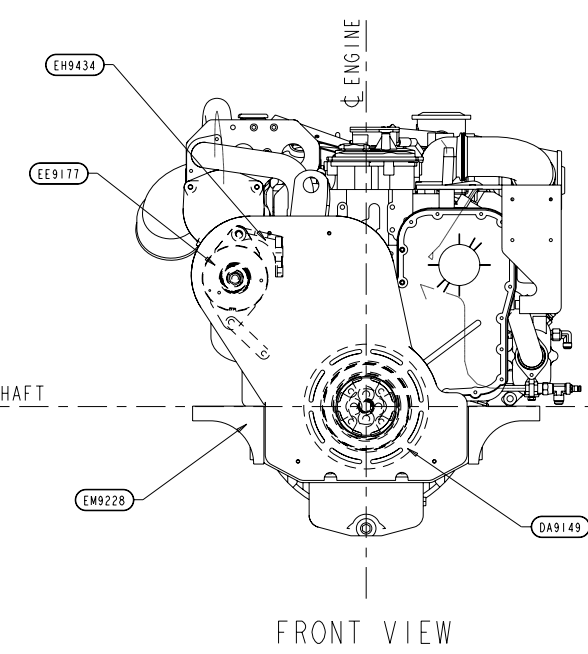
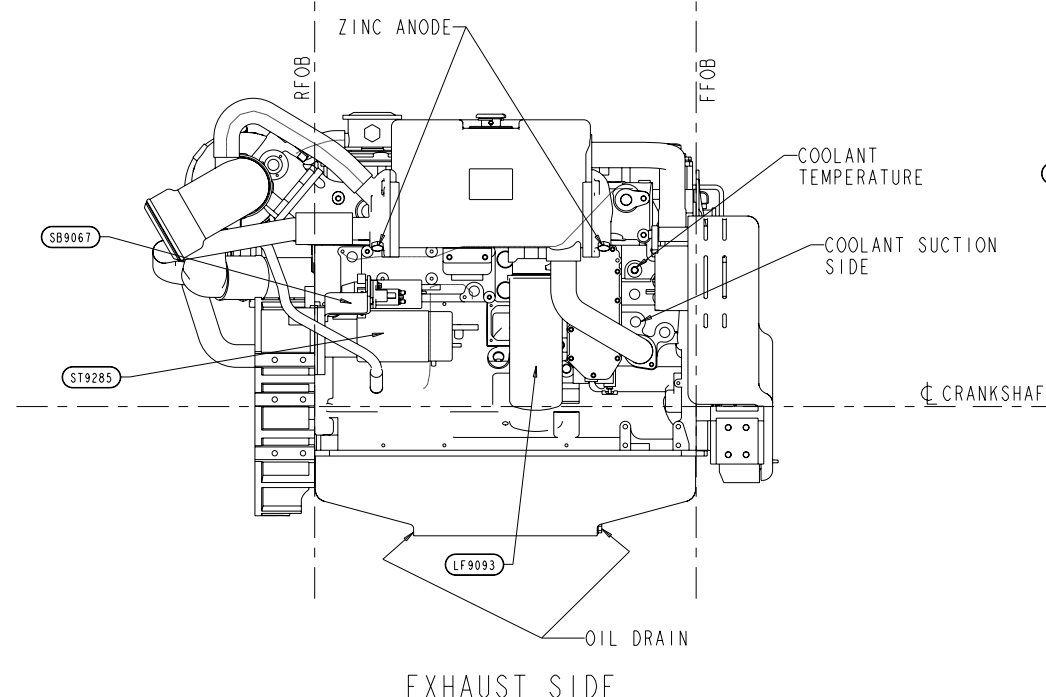
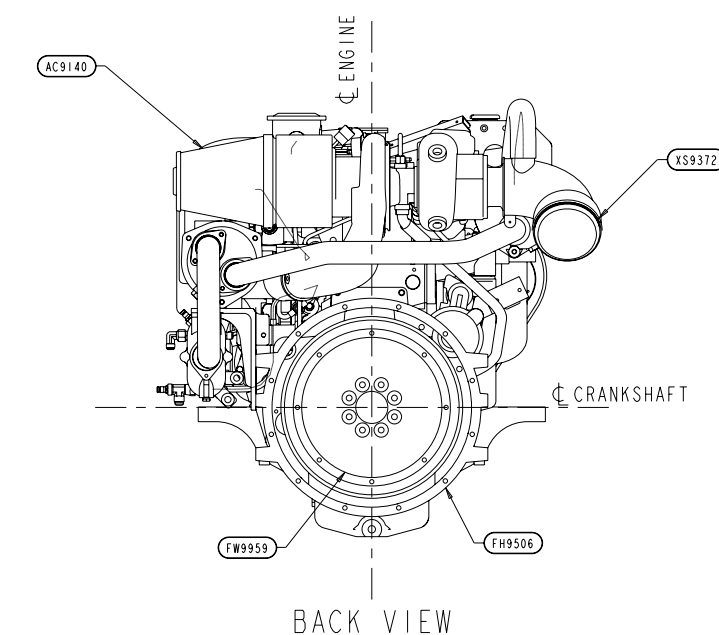
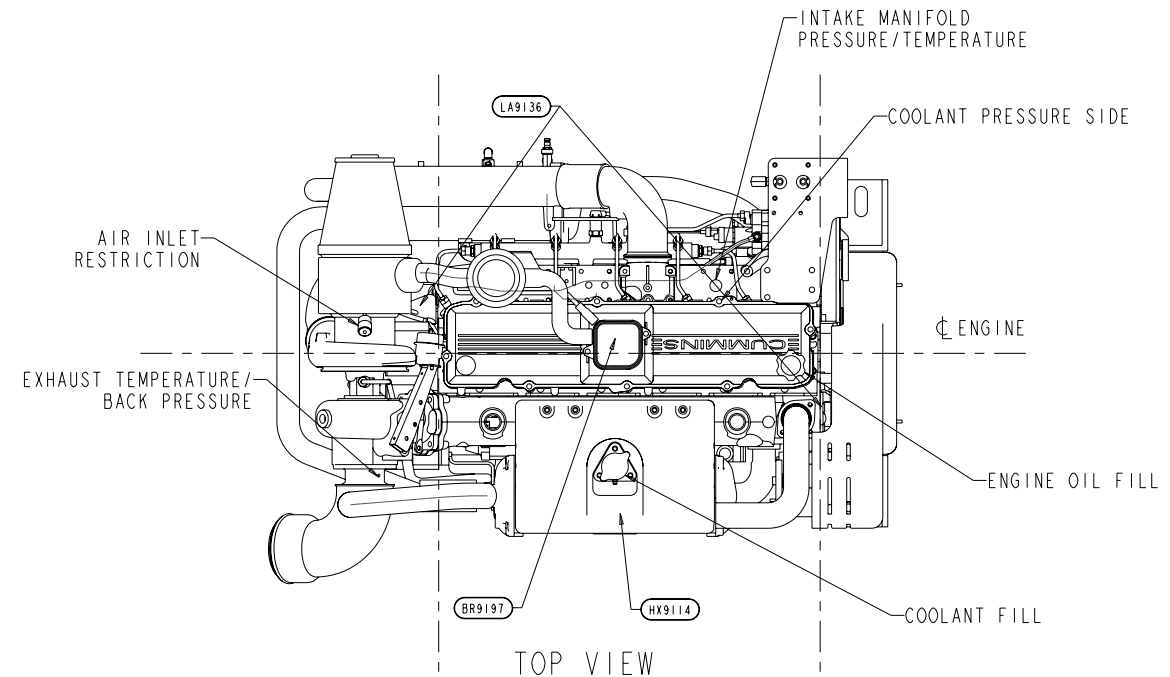


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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	IDENTIFIER	SIZE CODE IDENT. NO. ITEM NUMBER
DWN: UNCHECKED	APPD: UNCHECKED	J 3170592
SCALE: 2x	ITEM CONTROL: MCS	SHEET 1 OF 32

ITEM NUMBER
3170592

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



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

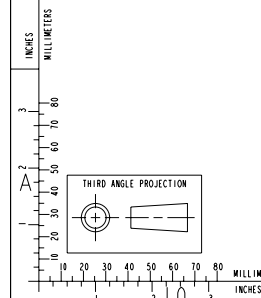
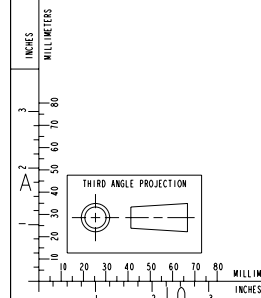
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ENGINE SERVICE TEST PORTS

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		

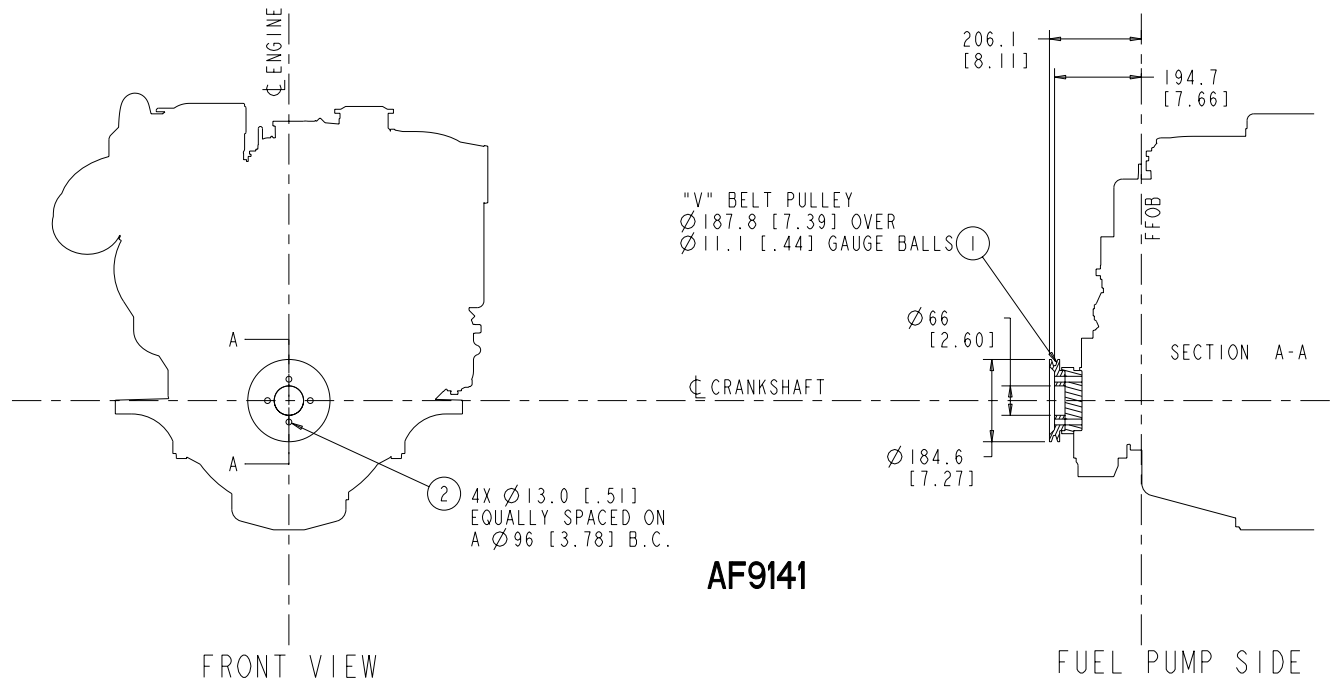
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER J	ITEM NUMBER 3170592
DWN UNCHECKED CHD UNCHECKED APPD UNCHECKED	SCALE: 2x	ITEM CONTROL: MCS	SHEET 2 OF 32

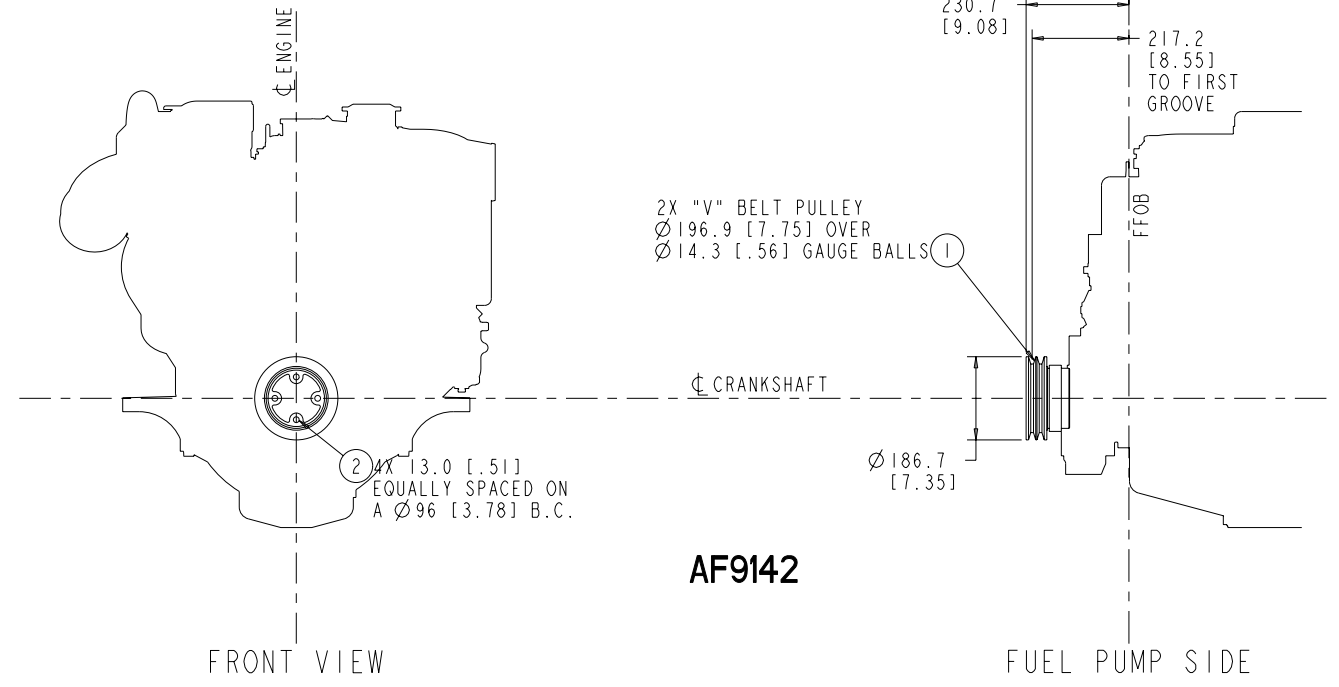


ITEM NUMBER
3170592

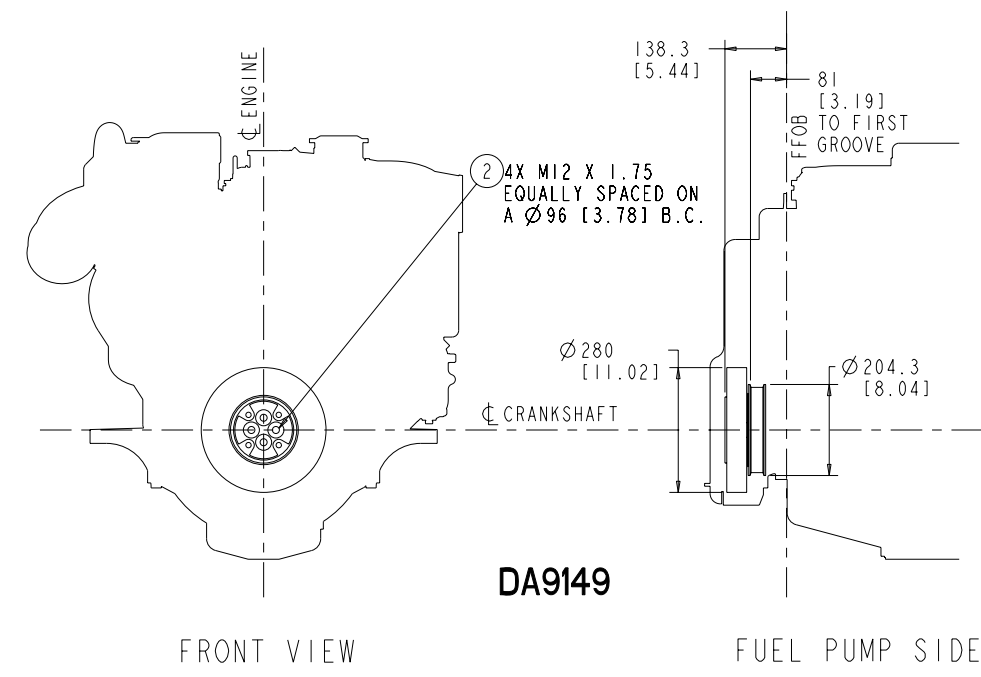
REVISIONS		OWN	APP'D
ZONE REV	DESCRIPTION	DWN	APP'D
03	QSC 8.3-HX	S. SMITH	



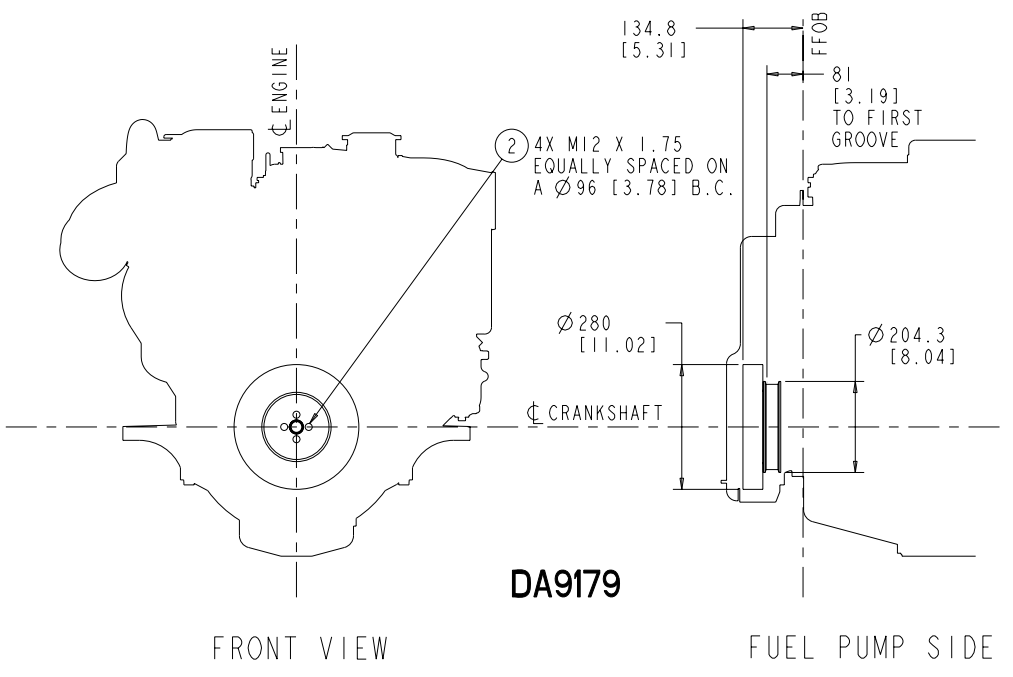
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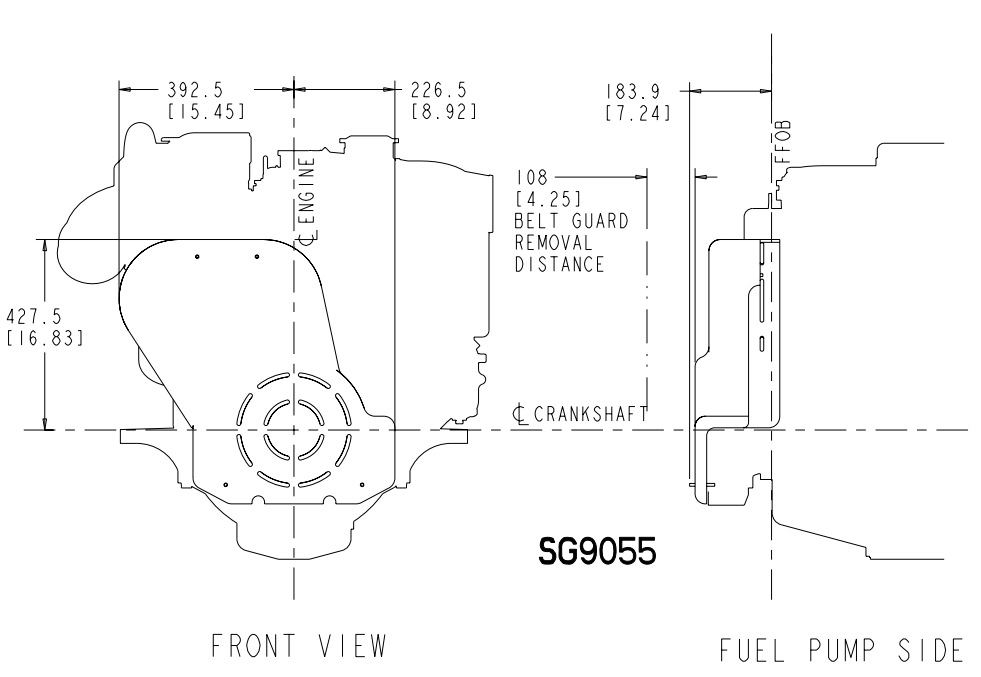
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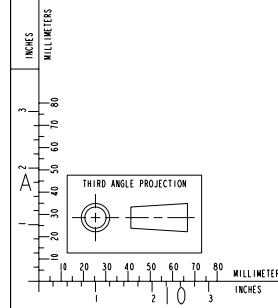
DA9149



DA9179



SG9055



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

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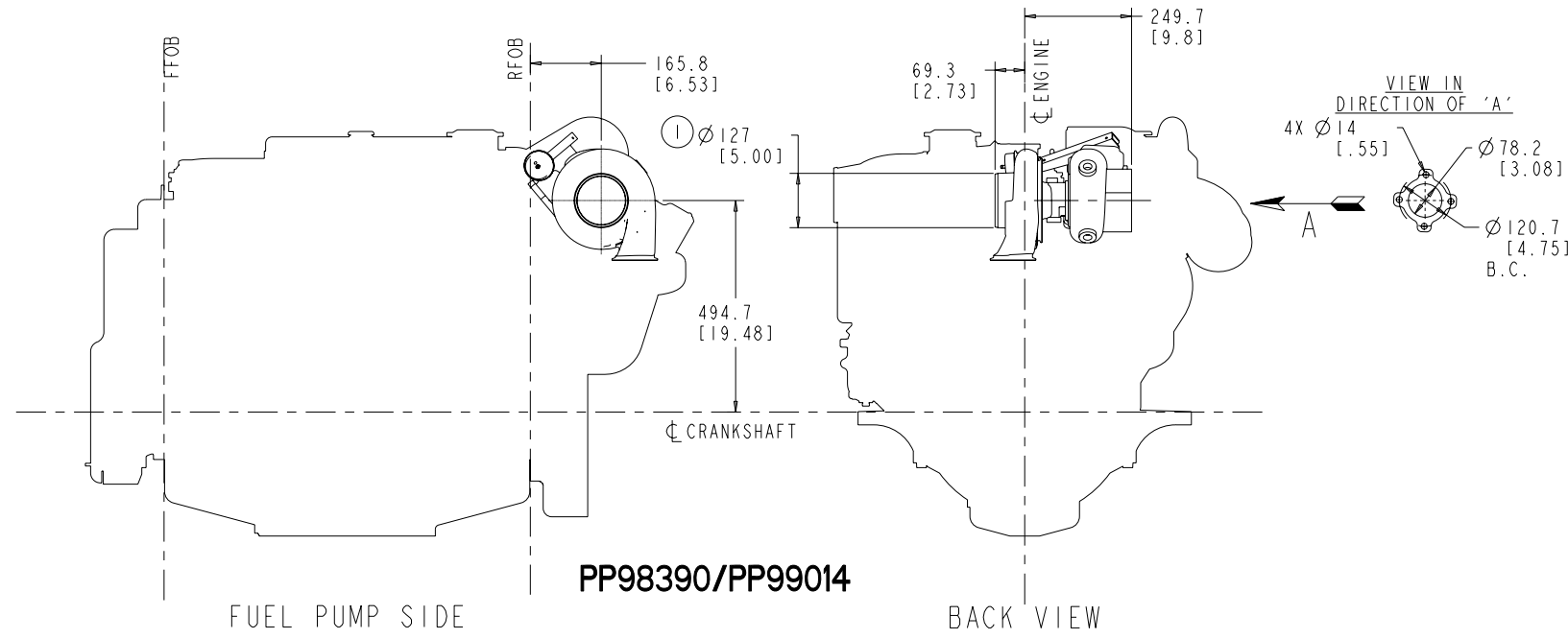
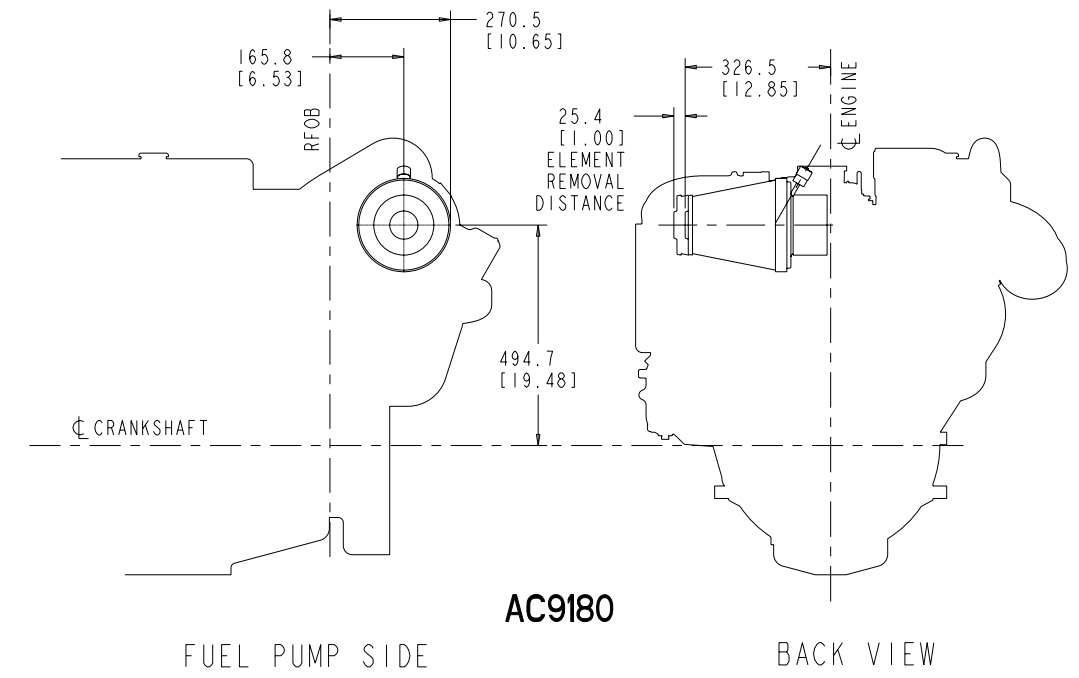
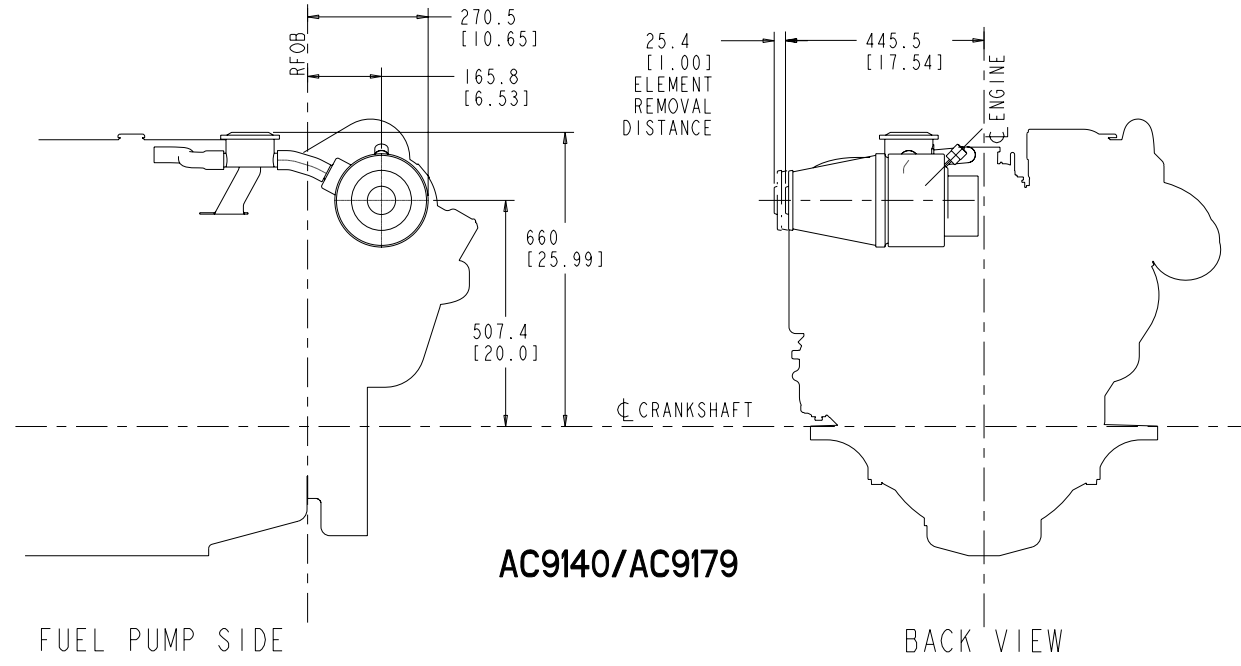
PRODUCT GRAPHICS FILE
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LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER J	SIZE CODE IDENT. NO. ITEM NUMBER 3170592
DWN: TMO/TGANG	SCALE: 2x	ITEM CONTROL: MCS	SHEET 3 OF 32

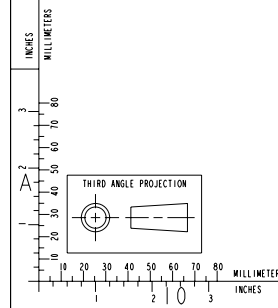
ACCESSORY DRIVES & PTO'S

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

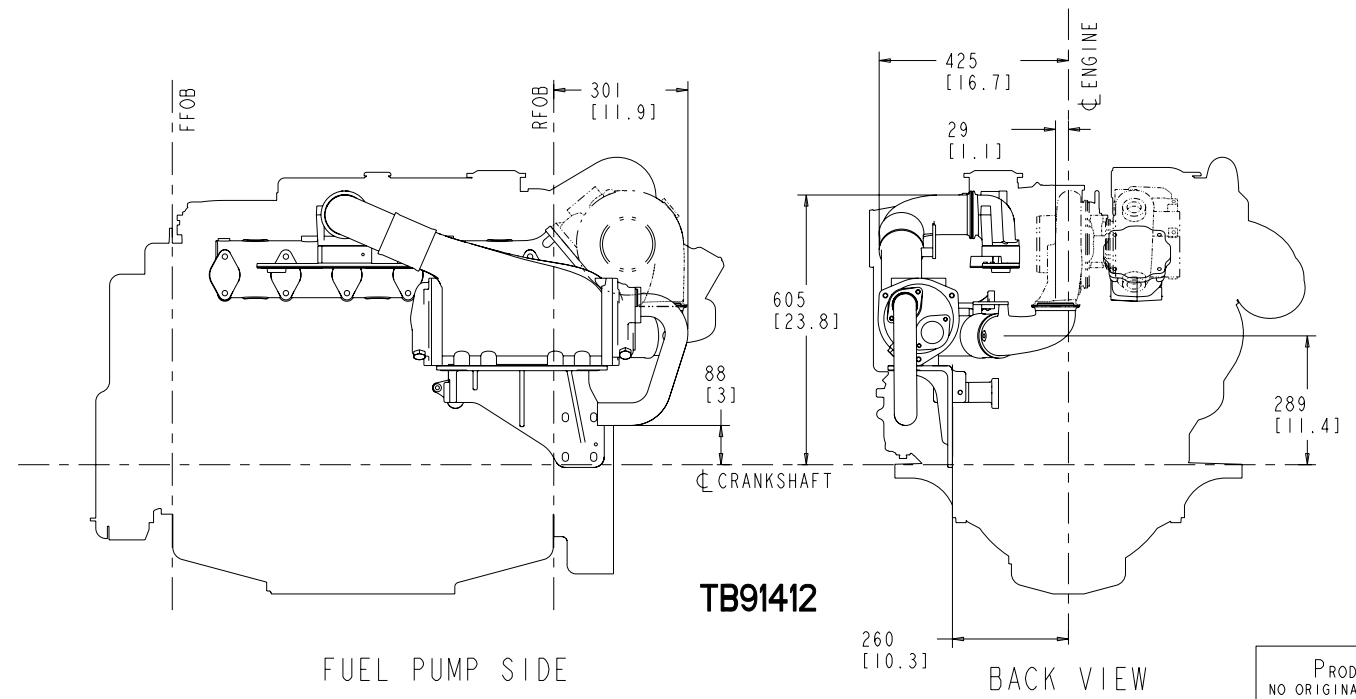
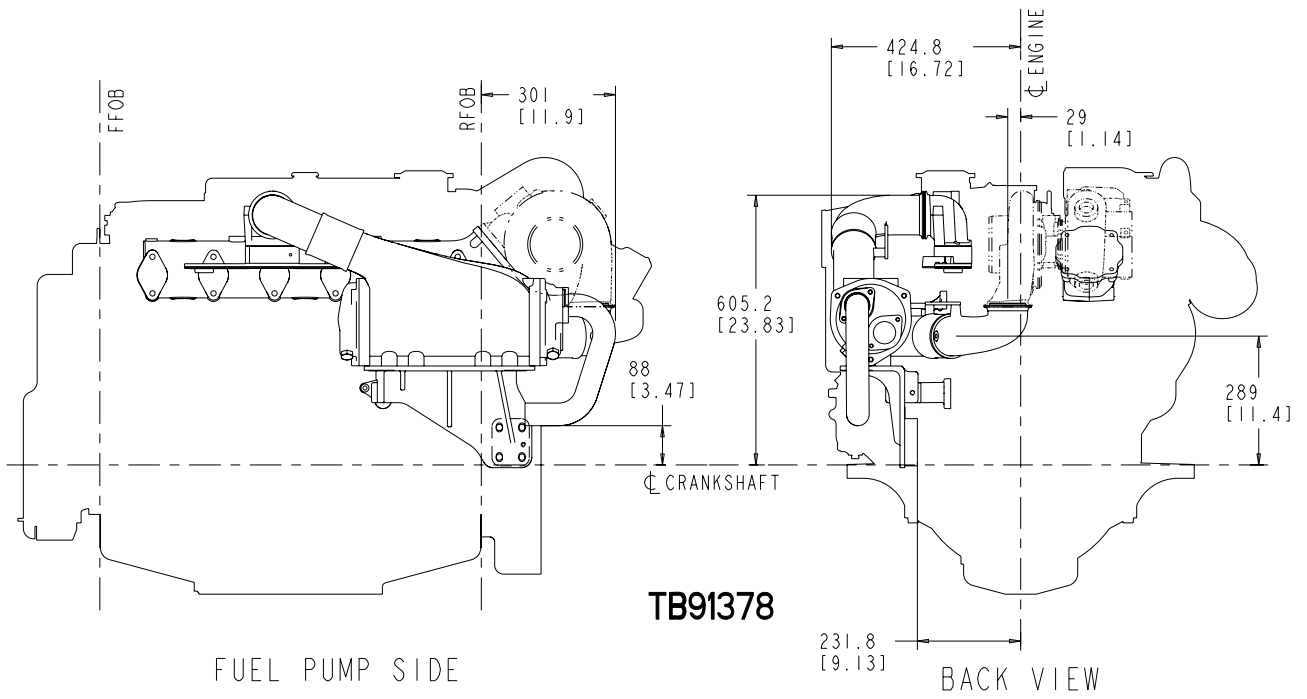
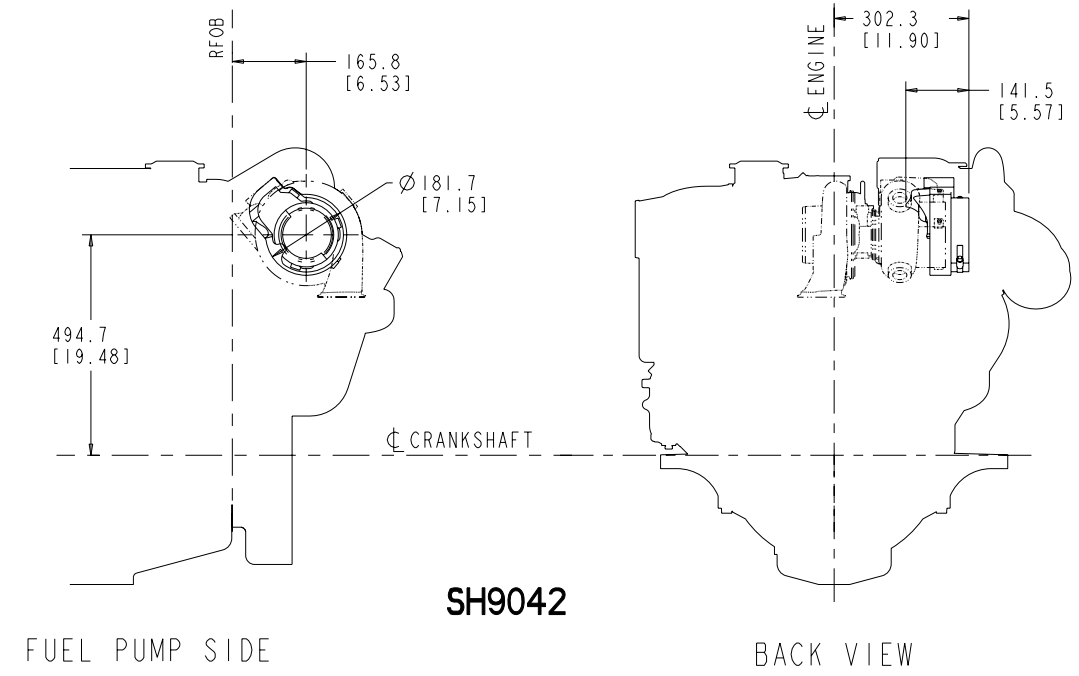
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN: UNCHECKED APPD: UNCHECKED	SCALE: 2X	SIZE CODE IDENT. NO.: J	ITEM NUMBER 3170592
		ITEM CONTROL: MCS	SHEET 4 OF 32

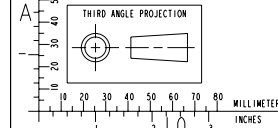
ITEM NUMBER
3170592

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



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- 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



DO NOT SCALE THIS DRAWING

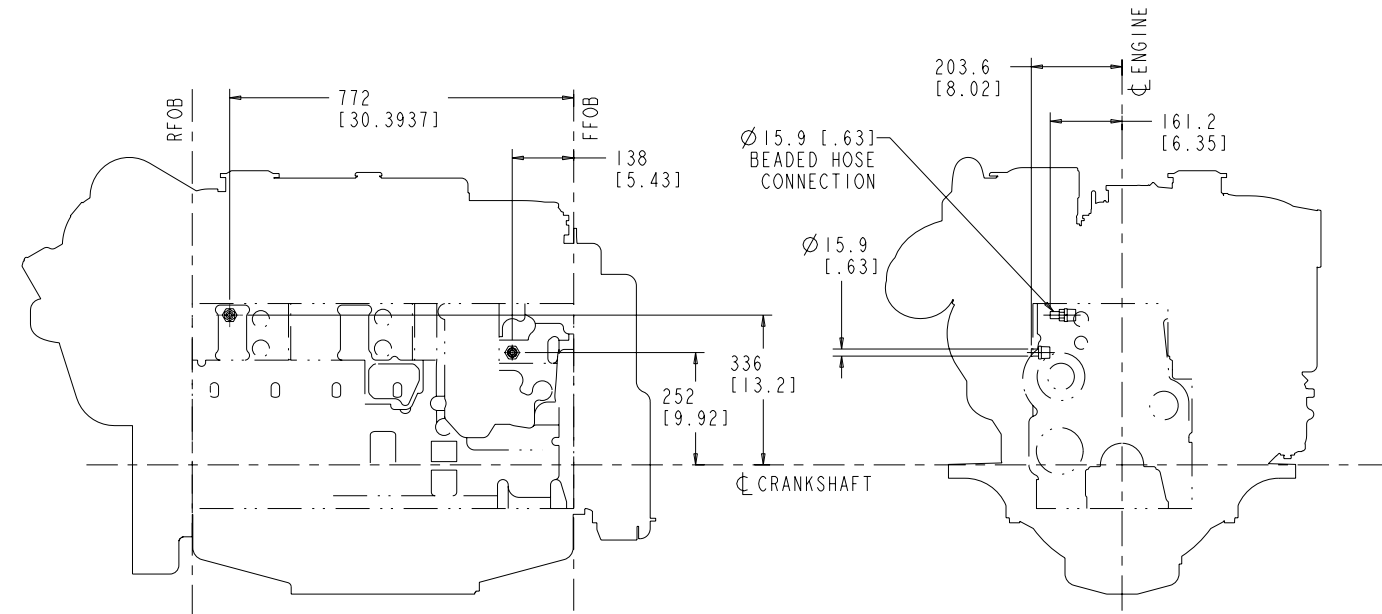
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AIR INDUCTION SYSTEM

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: UNCHECKED CHD: UNCHECKED APPD:	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592	SCALE: 2x
ITEM CONTROL: MCS		SHEET 5 OF 32	

ITEM NUMBER
3170592

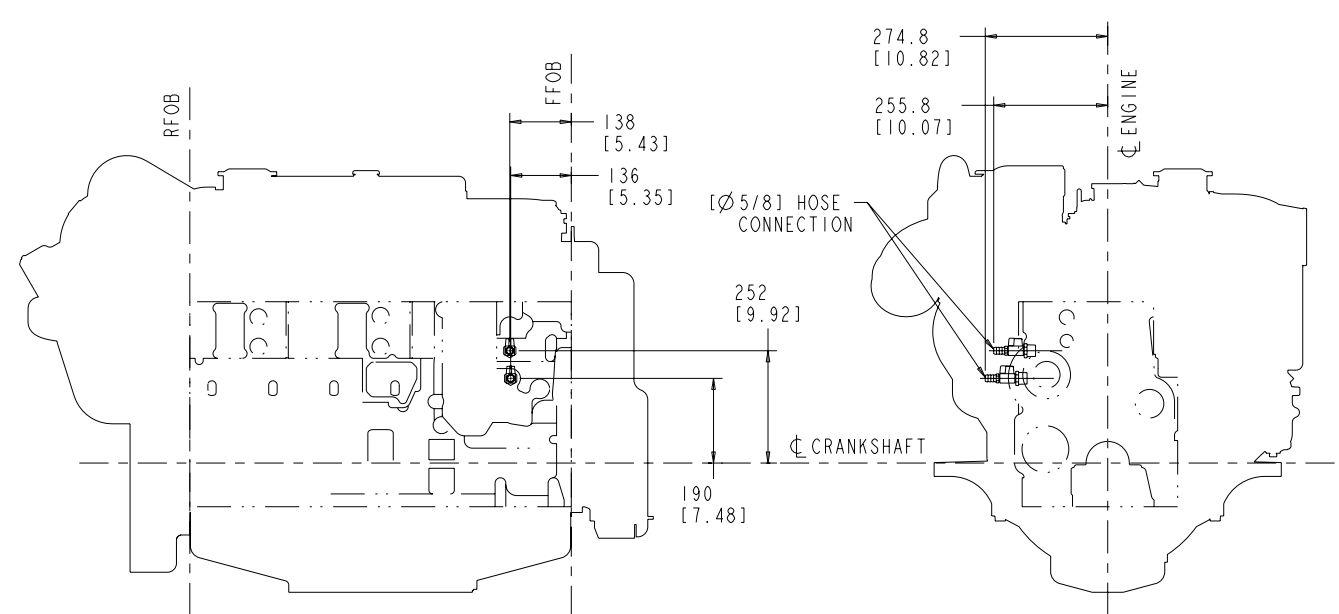
REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	



HC9059

EXHAUST SIDE

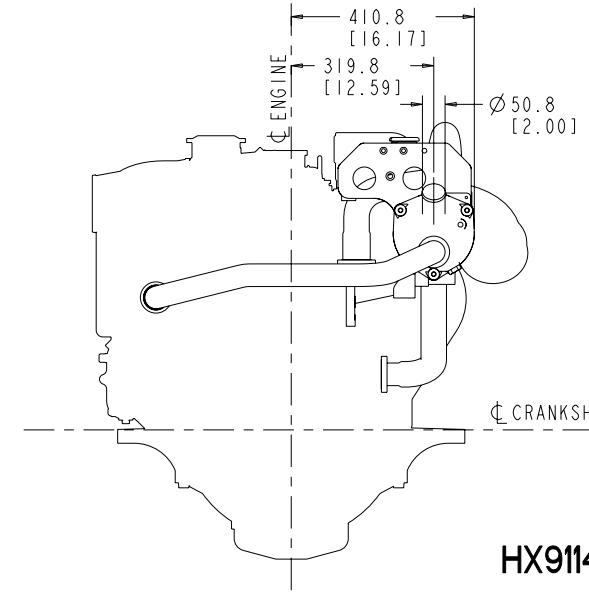
FRONT VIEW



HC9083

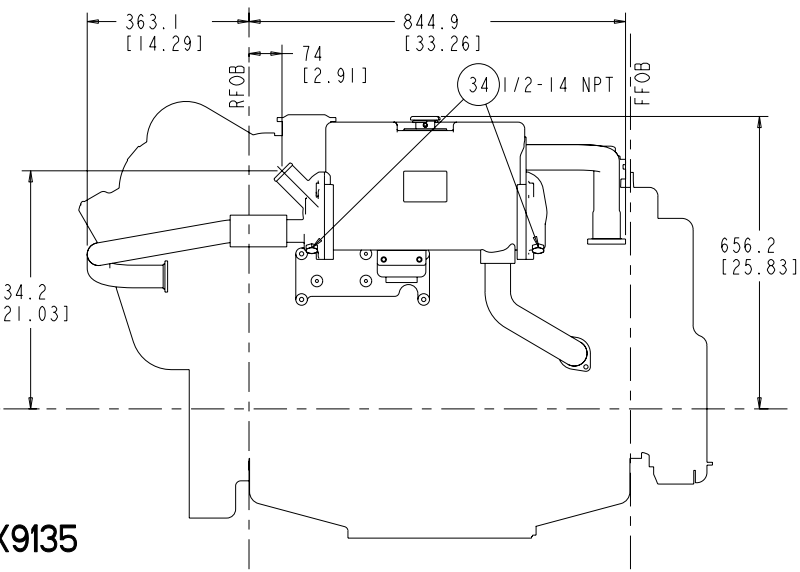
EXHAUST SIDE

FRONT VIEW



HX9114/HX9135

BACK VIEW



EXHAUST SIDE

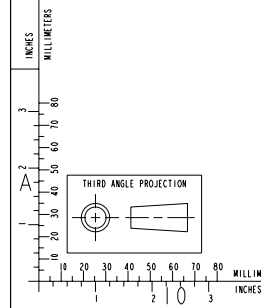
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2 COOLANT ACCESSORY SUPPLY CONNECTION	11 COOLANT LEVEL SWITCH PORT	20 COOLANT RETURN TEMP. PORT, GEAR OIL COOLER- N/A	29 SEA WATER INLET CONNECTION
3 COOLANT BLOCK HEATER PORT	12 COOLANT OUTLET CONNECTION- N/A	21 COOLANT VENT FITTING PORT	30 SEA WATER 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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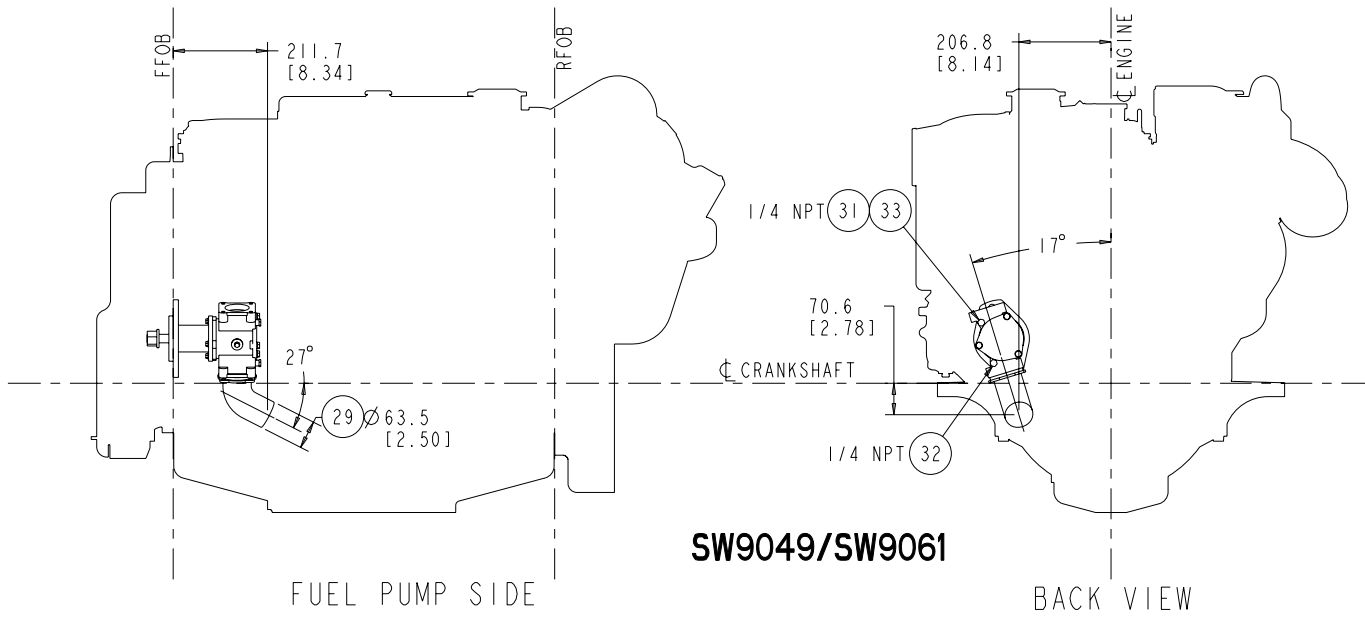
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		IDENTIFIER QSC 8.3-HX		
DWN: UNCHECKED		SIZE CODE (IDENT. NO.) ITEM NUMBER J 3170592		
APPD: UNCHECKED		SCALE: 2X ITEM CONTROL: MCS SHEET 6 OF 32		

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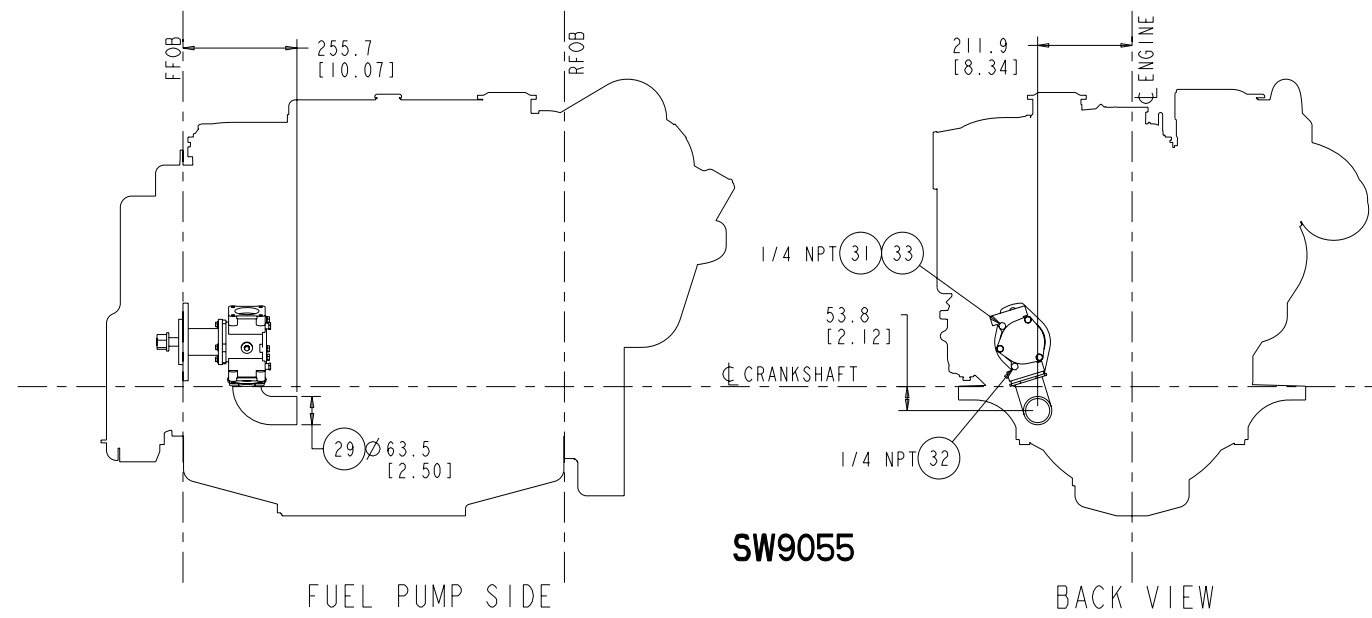


ITEM NUMBER
3170592

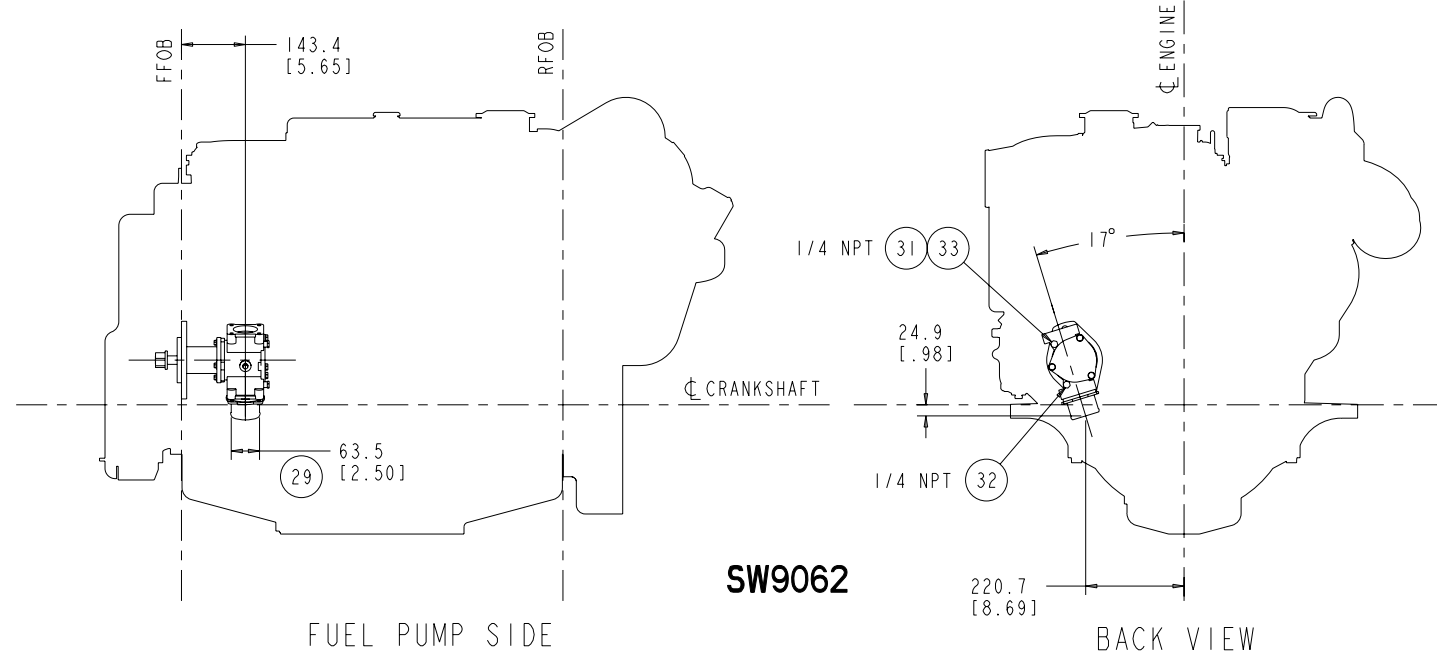
REVISIONS		DWN	APP'D
ZONE	REV	DESCRIPTION	
03		QSC 8.3-HX	



SW9049/SW9061



SW9055



SW9062

1 COOLANT ACCESSORY RETURN CONNECTION	10 COOLANT INLET TEMPERATURE PORT	19 COOLANT RETURN PRES. PORT, GEAR OIL COOLER- N/A	28 LTA COOLANT RETURN TEMP. PORT INLET
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
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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

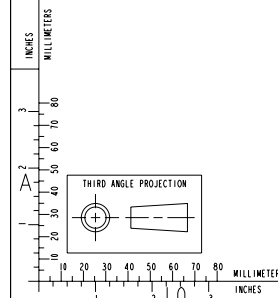
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	IDENTIFIER QSC 8.3-HX	SIZE CODE (IDENT. NO.) J
DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	ITEM NUMBER 3170592	ITEM CONTROL: MCS
	SCALE: 2x	SHEET 7 OF 32

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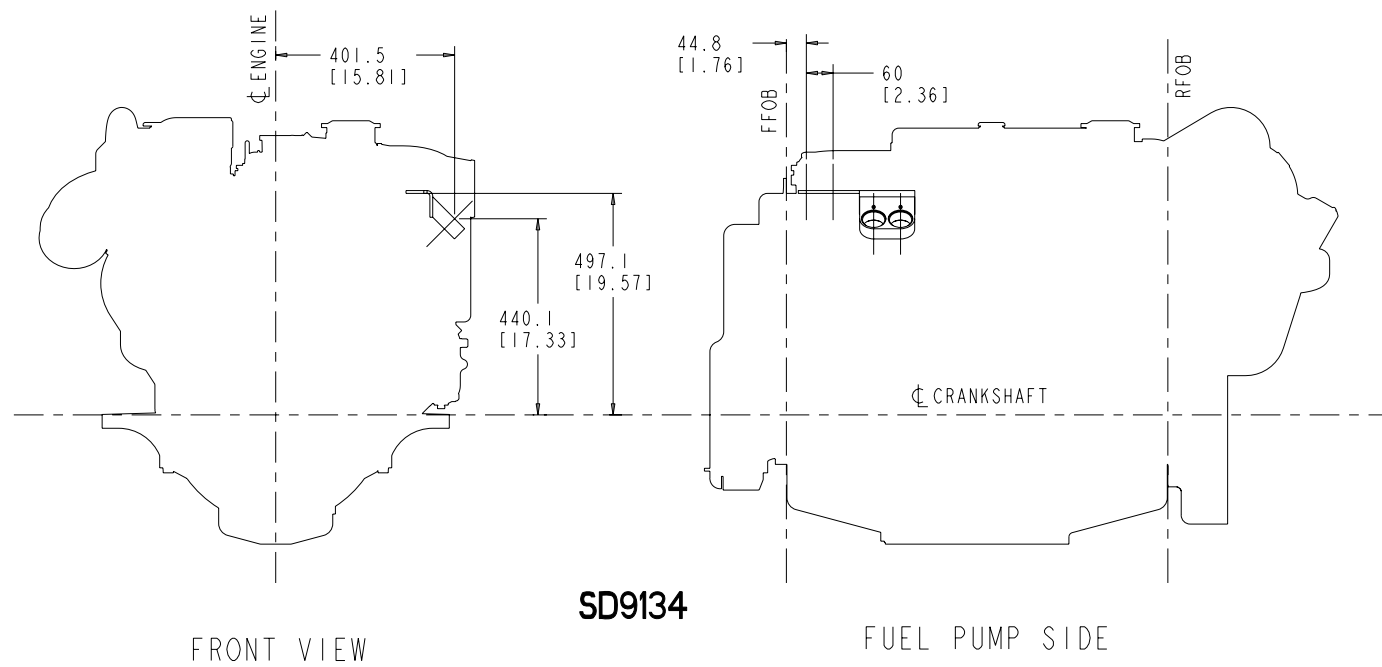
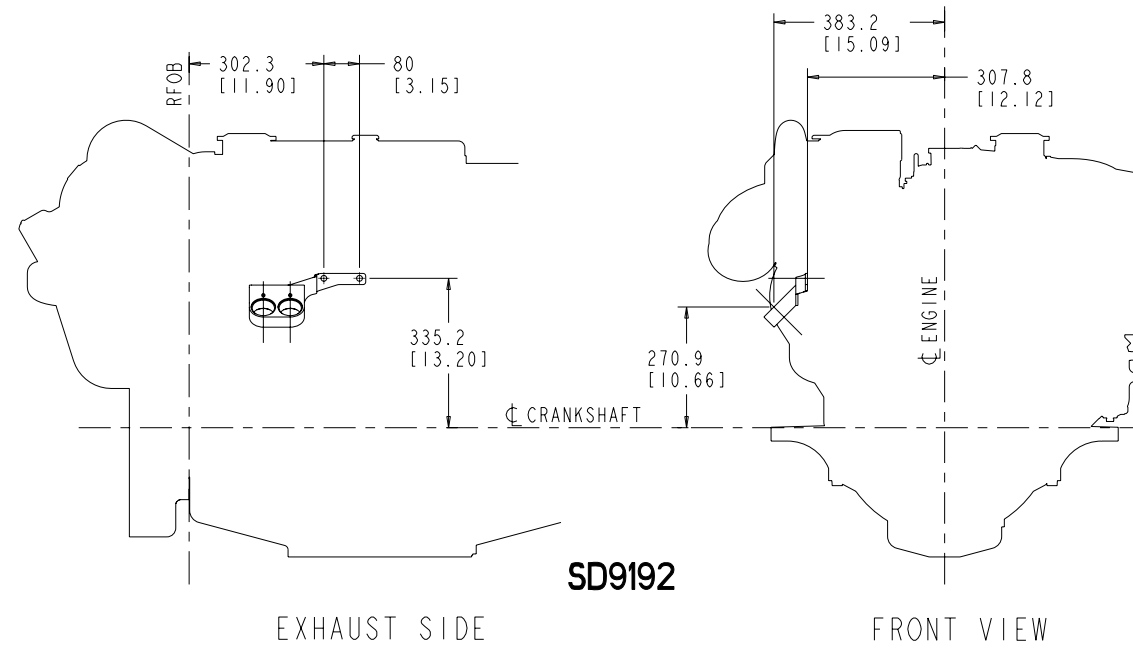
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ITEM NUMBER
3170592

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

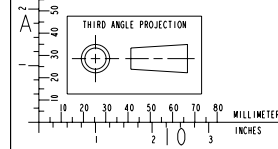


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DWN: TMO/TGANG	APPD: UNCHECKED	SIZE CODE IDENT. NO.:	ITEM NUMBER 3170592
SCALE: 2x	ITEM CONTROL: MCS	SHEET 8 OF 32	

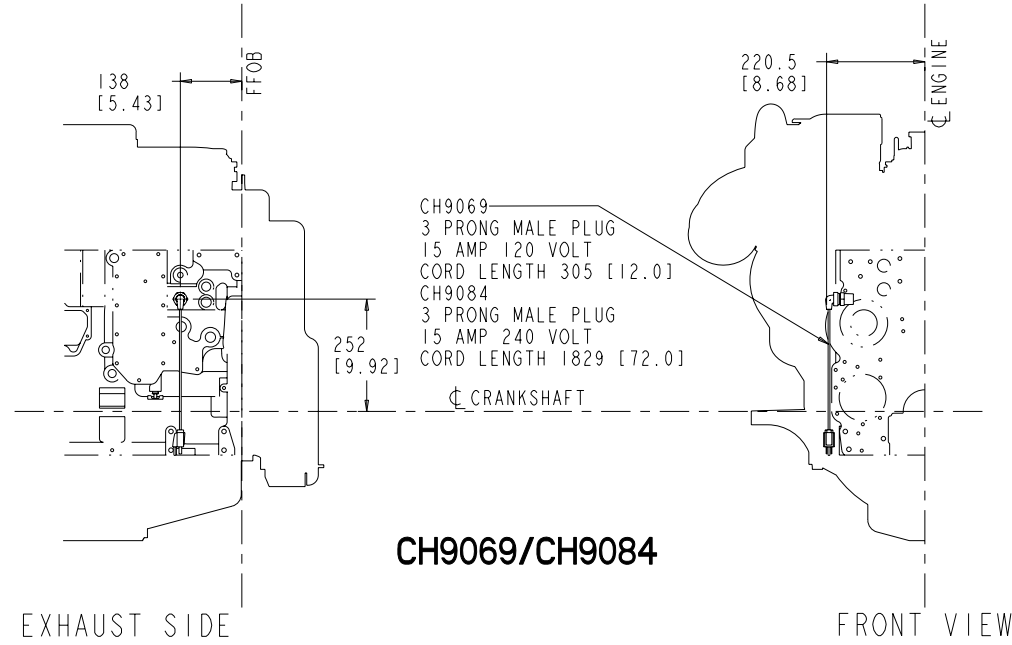
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CONTROLS, GUAGES AND ALARMS

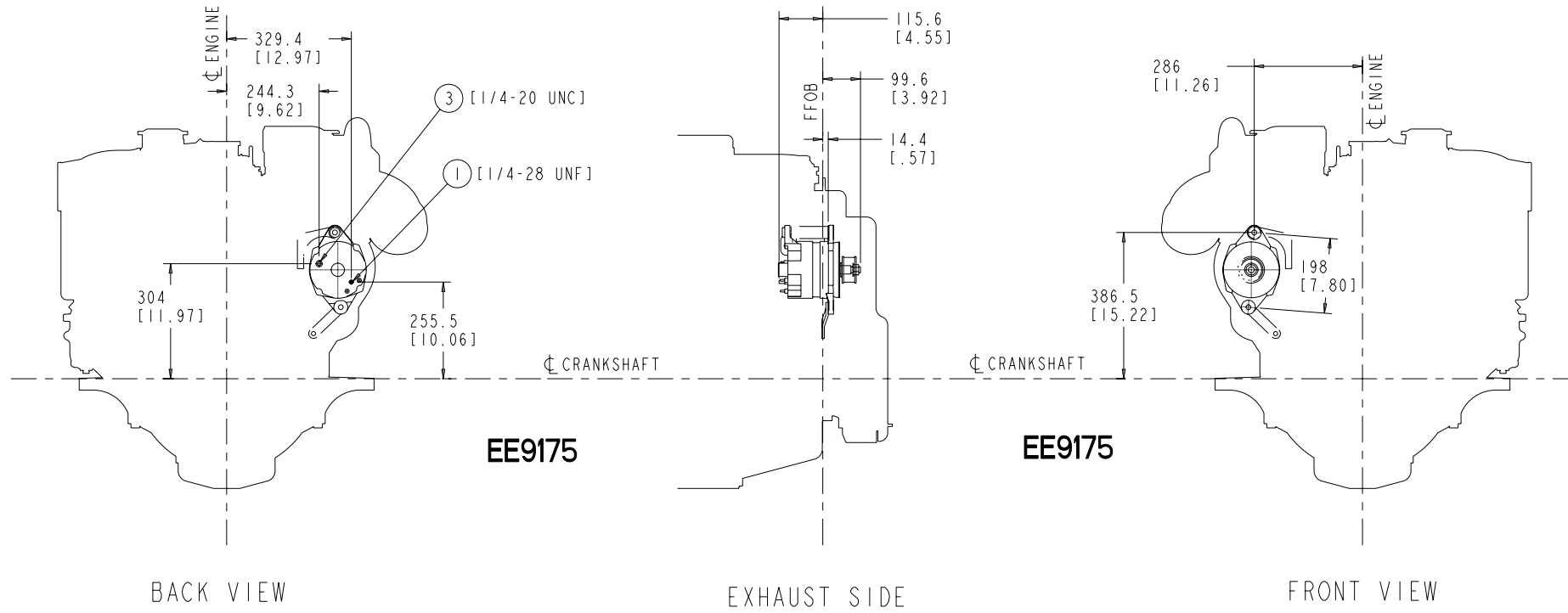


ITEM NUMBER
3170592

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



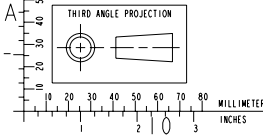
CH9069/CH9084



EE9175

EE9175

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



INCHES
MILLIMETERS

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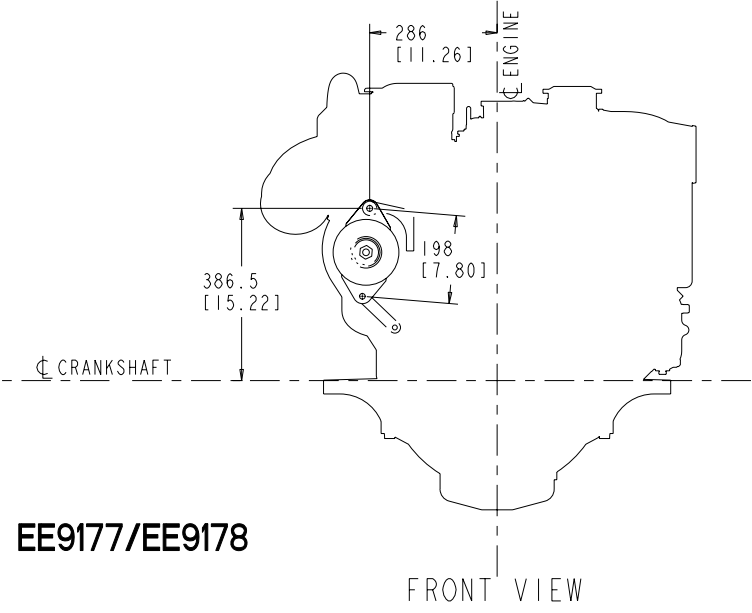
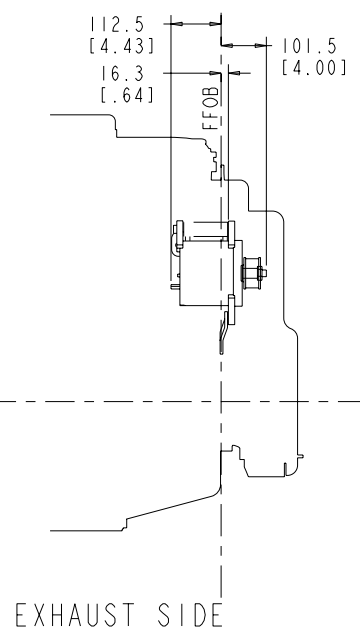
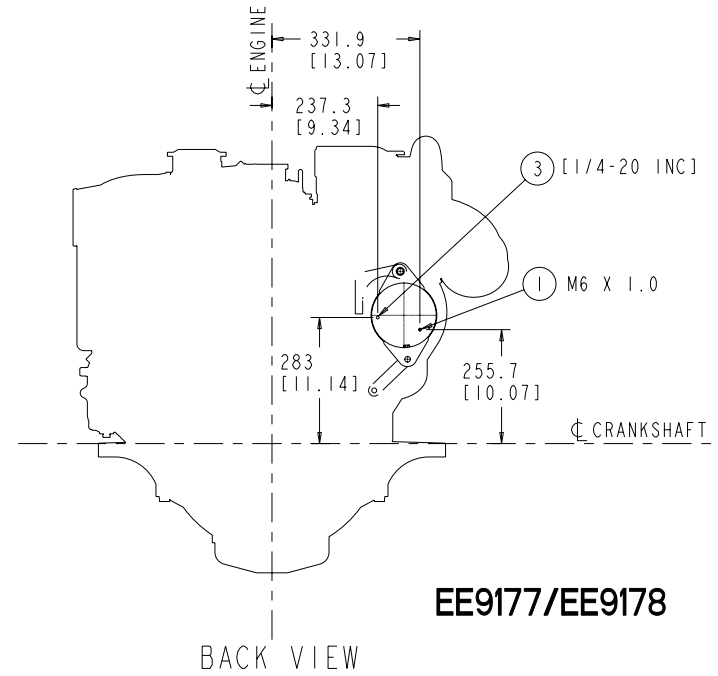
PRODUCT GRAPHICS FILE
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	ITEM NUMBER
DWN: TMO/TGANG CHD: UNCHECKED APPD:	SIZE CODE IDENT. NO.: J	3170592	
	SCALE: 2x	ITEM CONTROL: MCS	SHEET 9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

ELECTRICAL SYSTEM

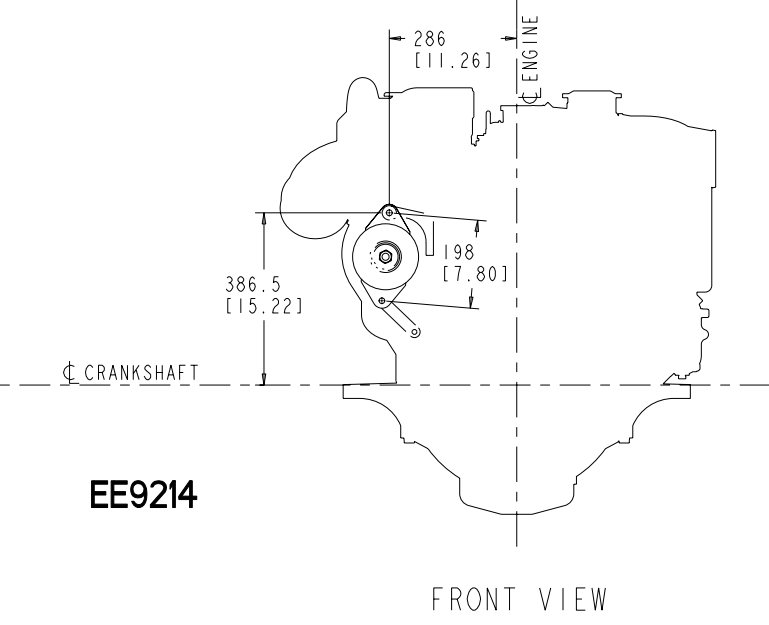
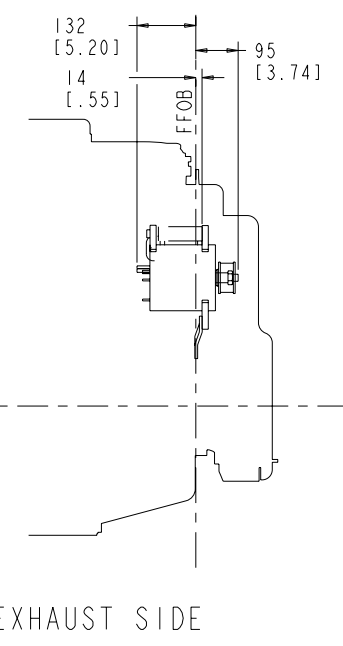
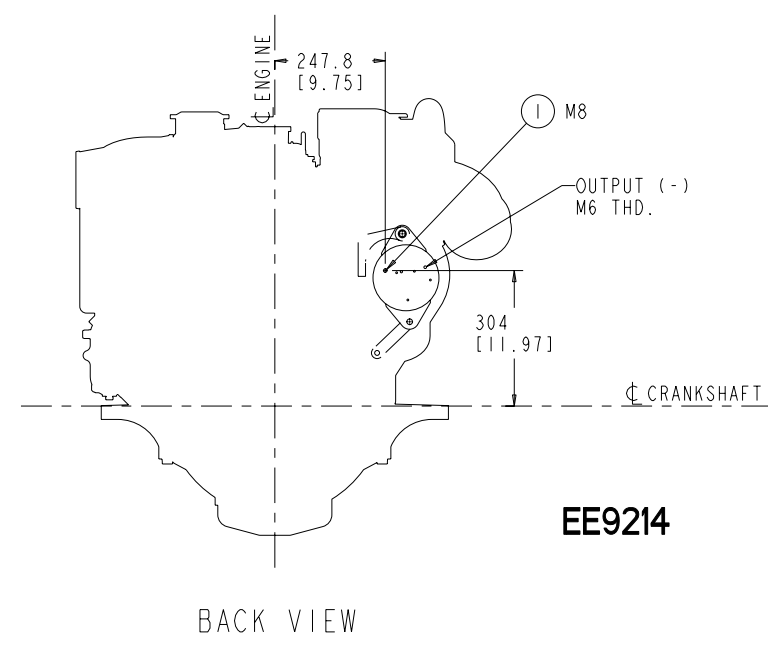
ITEM NUMBER
3170592

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



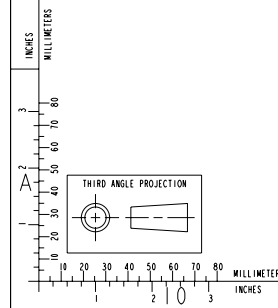
EE9177/EE9178

EE9177/EE9178



EE9214

EE9214



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

ELECTRICAL SYSTEM

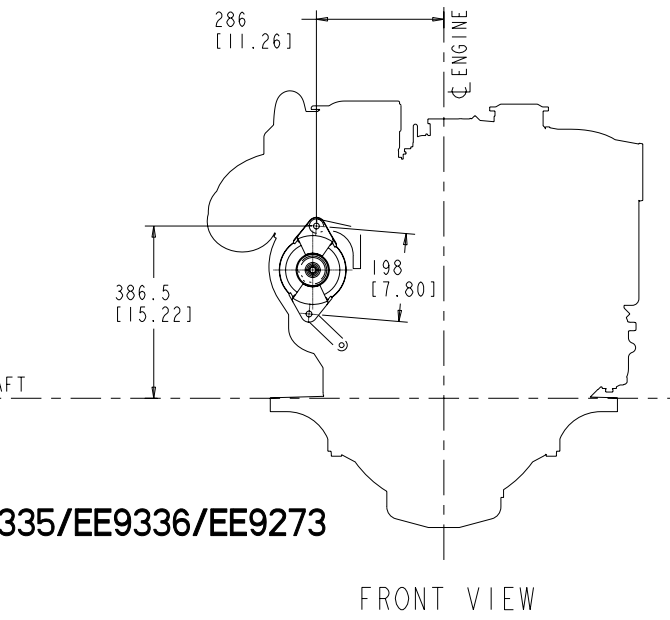
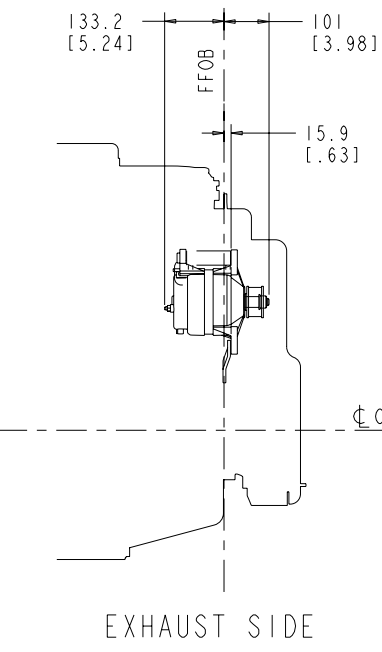
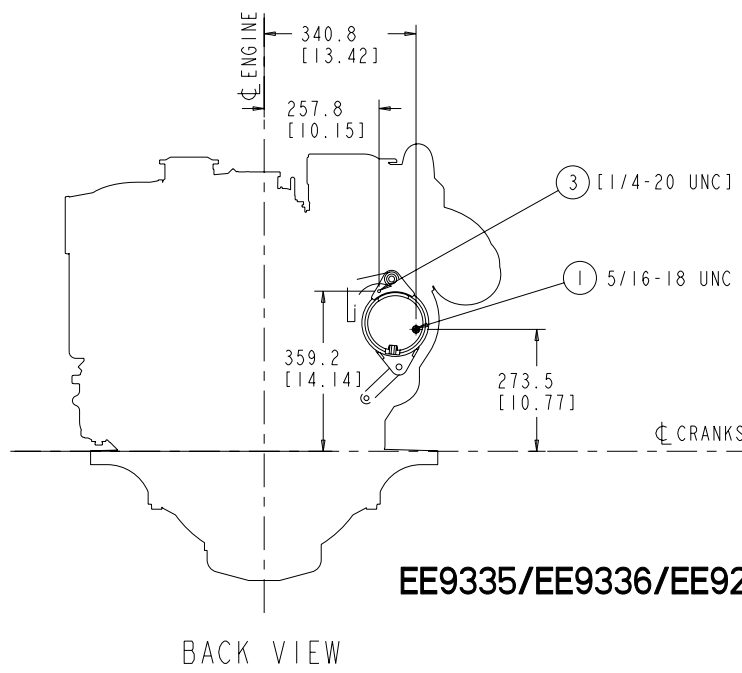
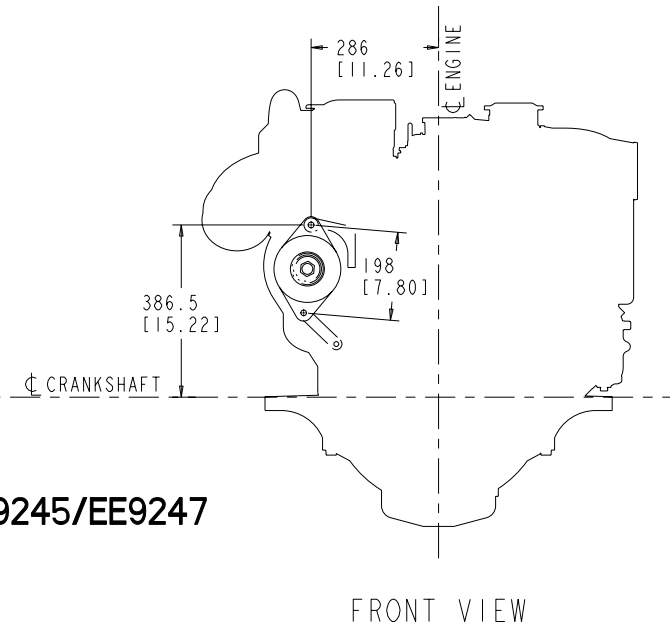
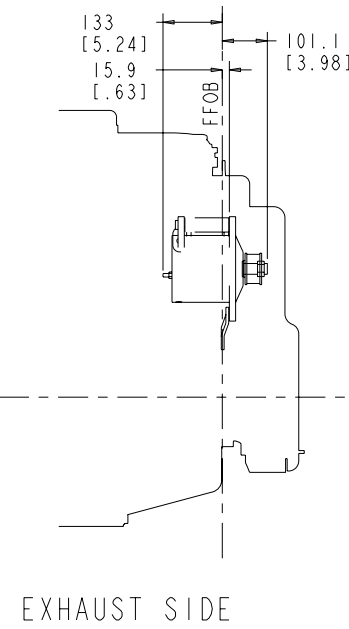
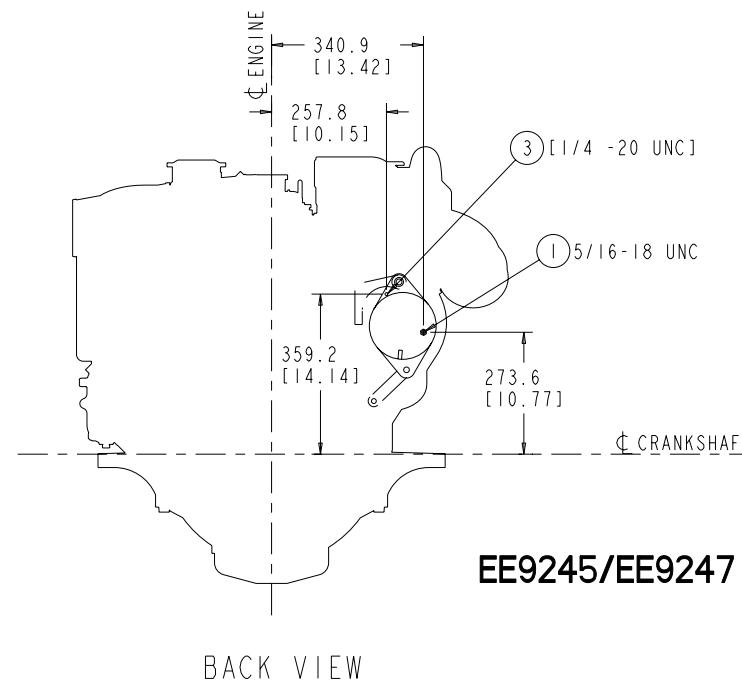
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DWN: TMO/TGANG	SCALE: 2x	SIZE CODE IDENT. NO. ITEM NUMBER J 3170592	ITEM CONTROL: MCS SHEET 10 OF 32
CHD: UNCHECKED			
APPD:			

ITEM NUMBER
3170592

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



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

DO NOT SCALE THIS DRAWING

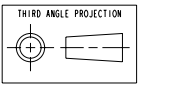
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	ITEM NUMBER
DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	SIZE CODE IDENT. NO.:	3170592	
	SCALE: 2x	ITEM CONTROL: MCS	SHEET 11 OF 32

ELECTRICAL SYSTEM

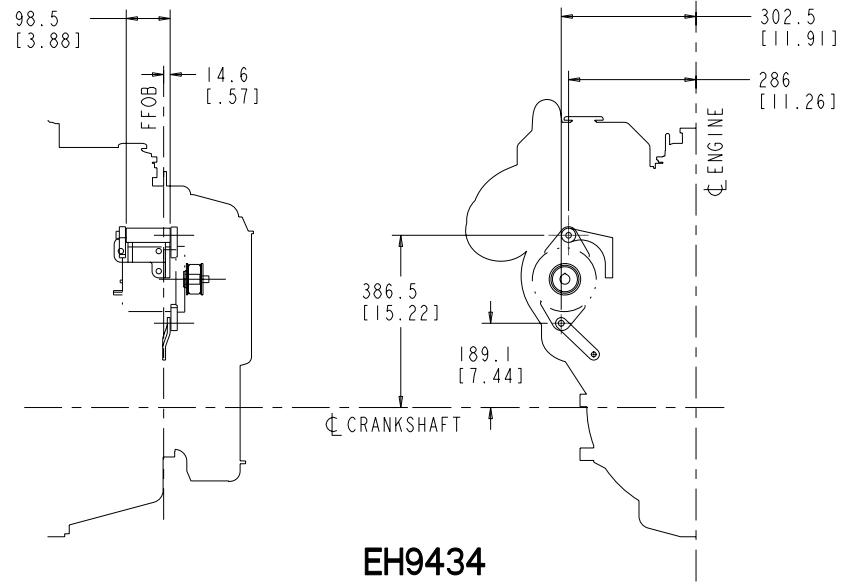
INCHES
MILLIMETERS



INCHES
MILLIMETERS

ITEM NUMBER
3170592

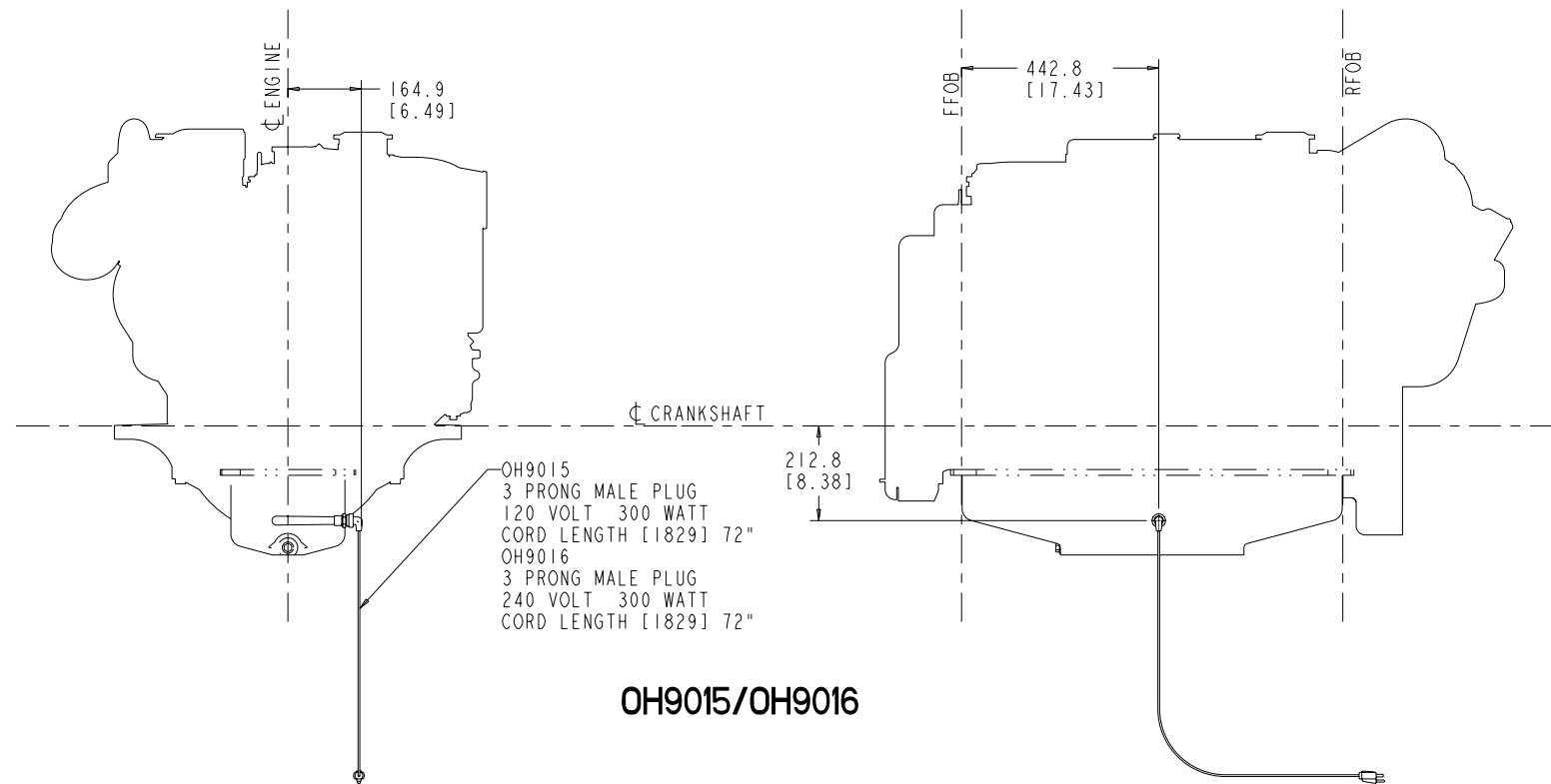
REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	



EXHAUST SIDE

EH9434

FRONT VIEW

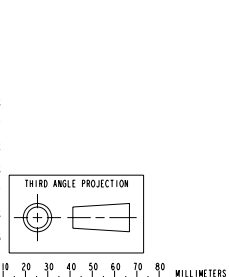


OH9015/OH9016

FRONT VIEW

FUEL PUMP SIDE

INCHES
MILLIMETERS



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

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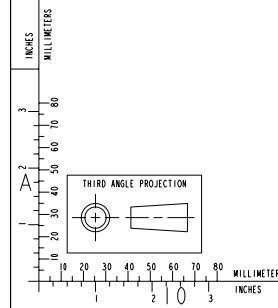
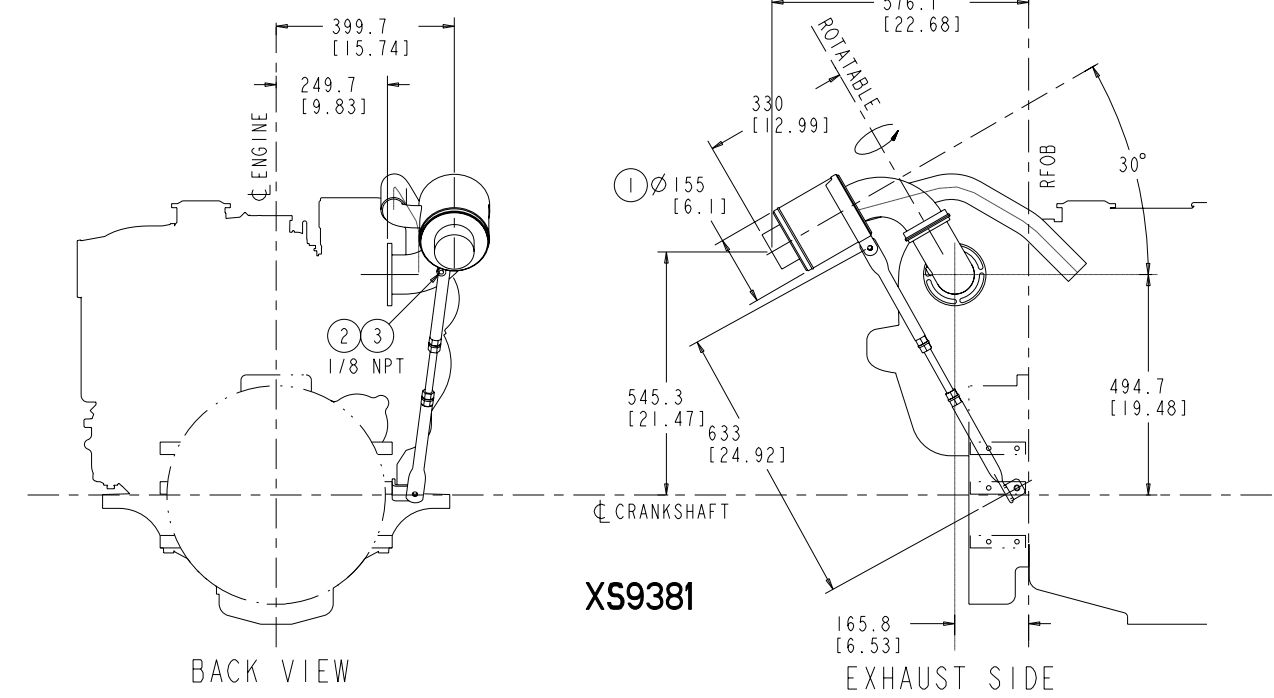
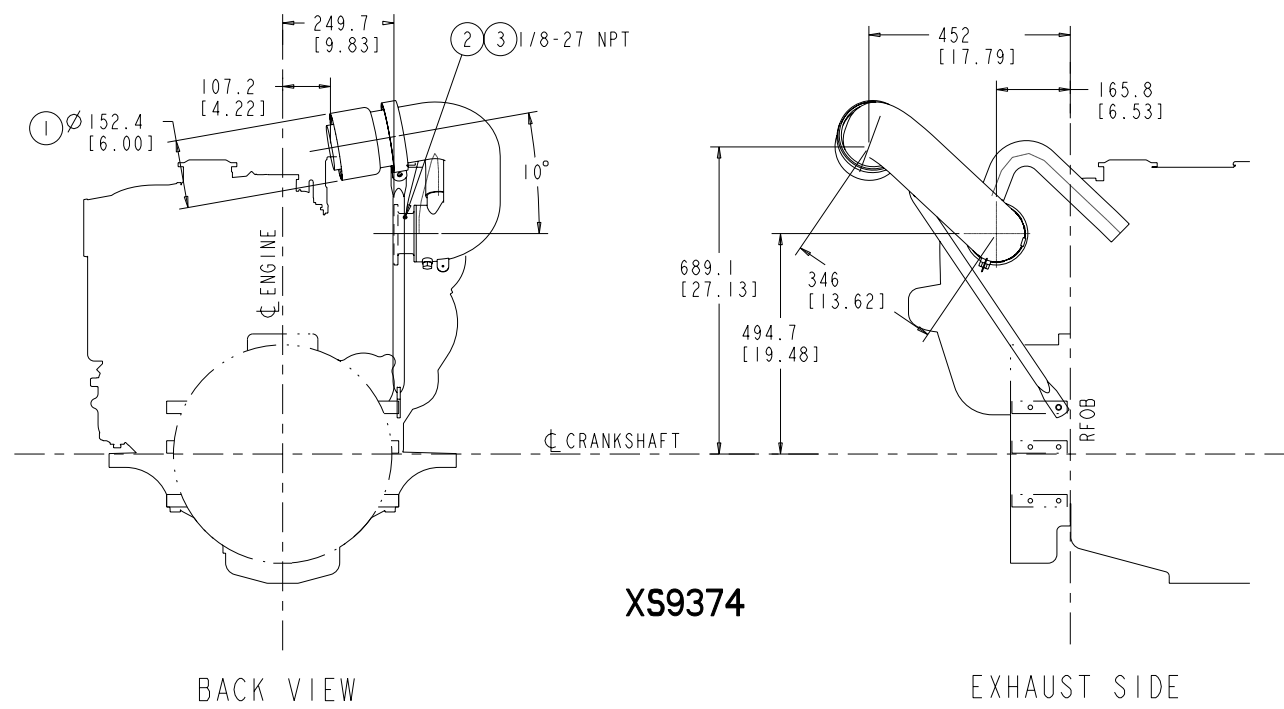
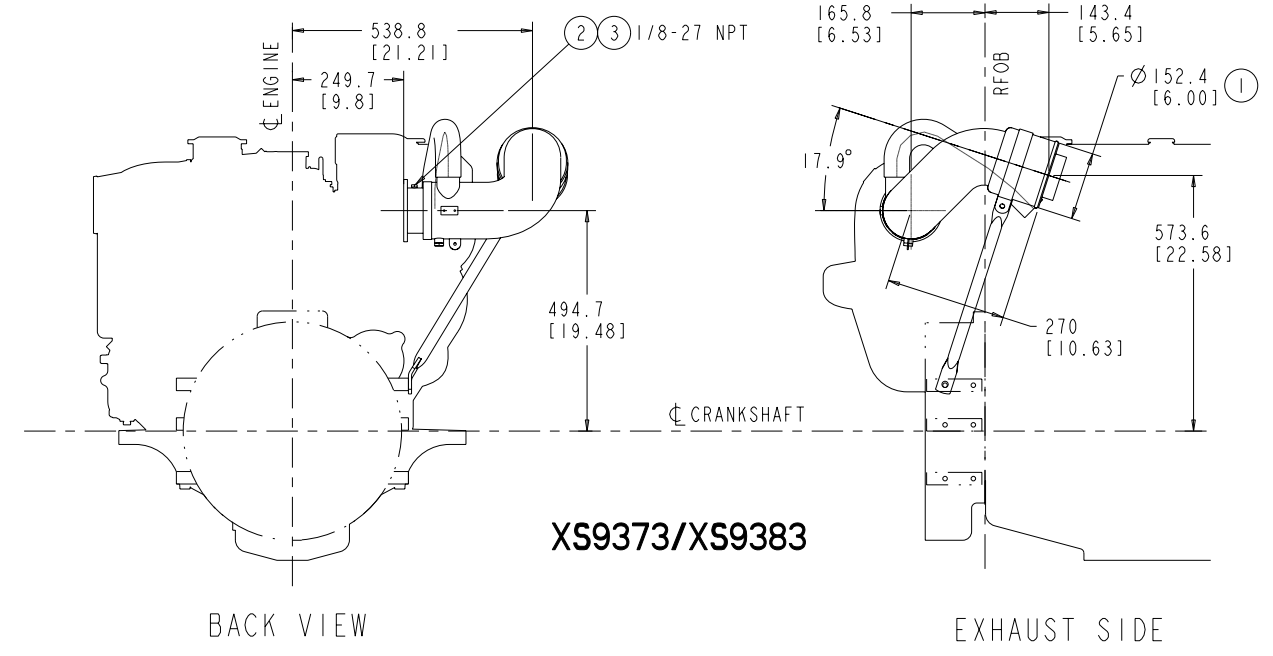
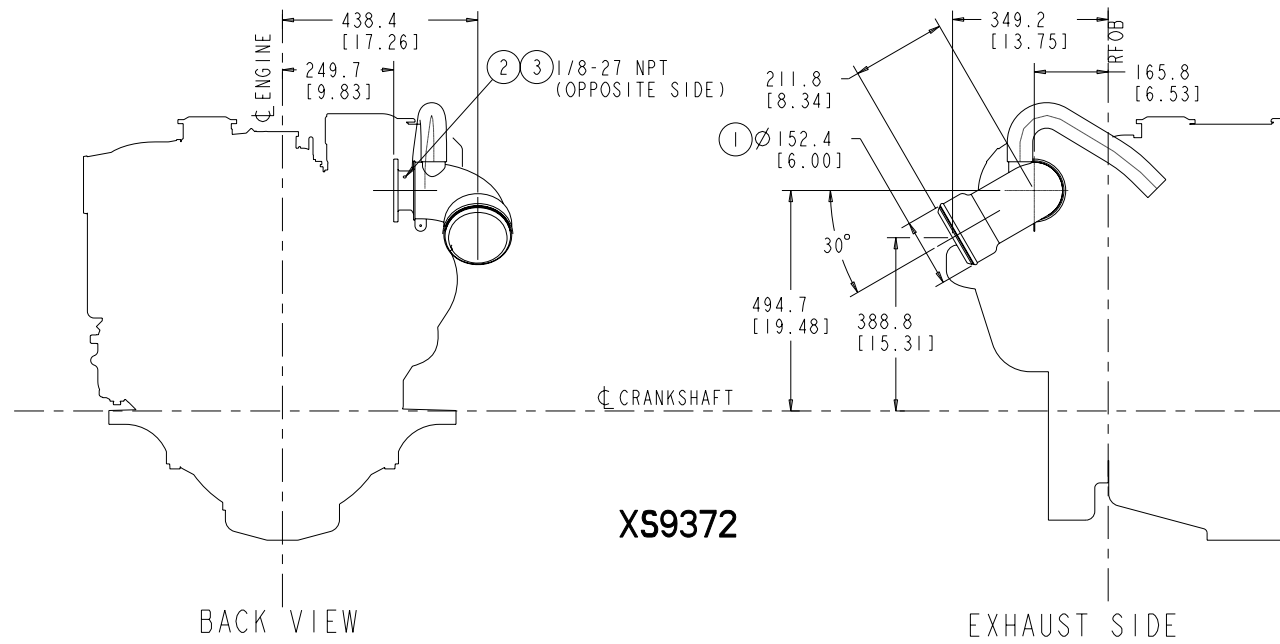
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS () ARE IN INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DWN: TMO/TGANG CHD: UNCHECKED APPD:		SIZE CODE IDENT. NO. ITEM NUMBER J 3170592	SCALE: 2x ITEM CONTROL: MCS SHEET 12 OF 32

ELECTRICAL SYSTEM

ITEM NUMBER
3170592

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



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

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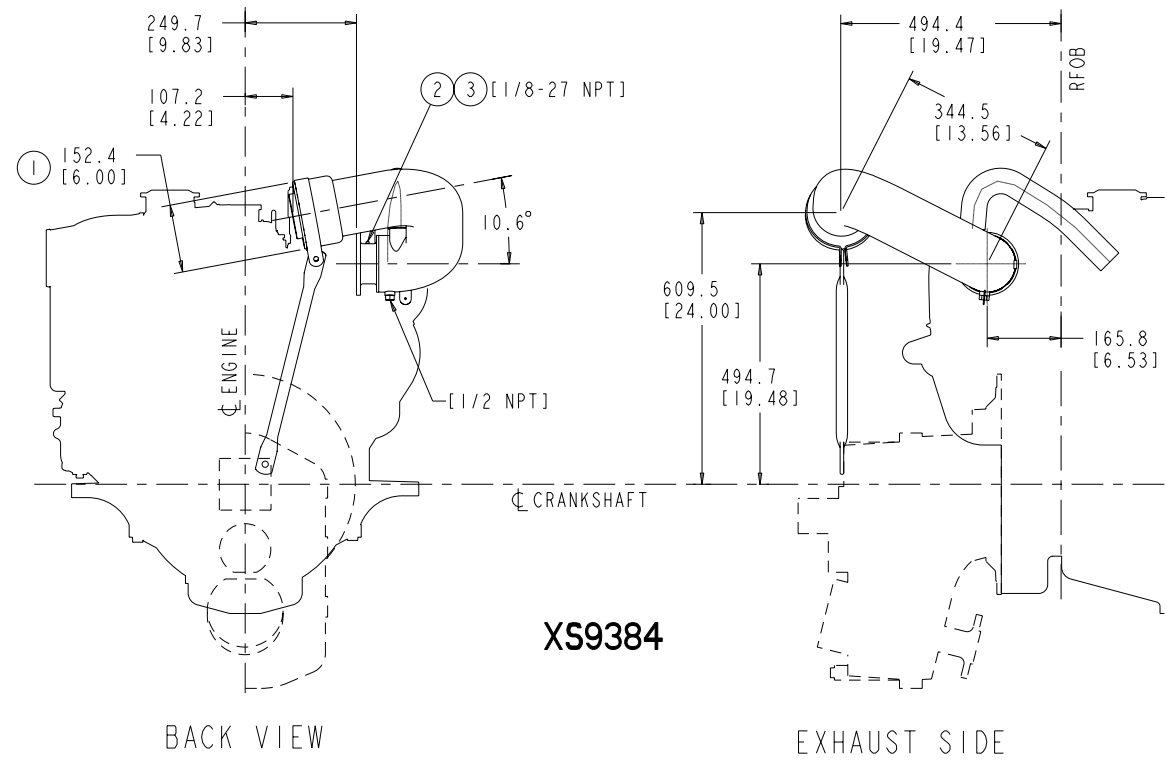
EXHAUST SYSTEM

PRODUCT GRAPHICS FILE
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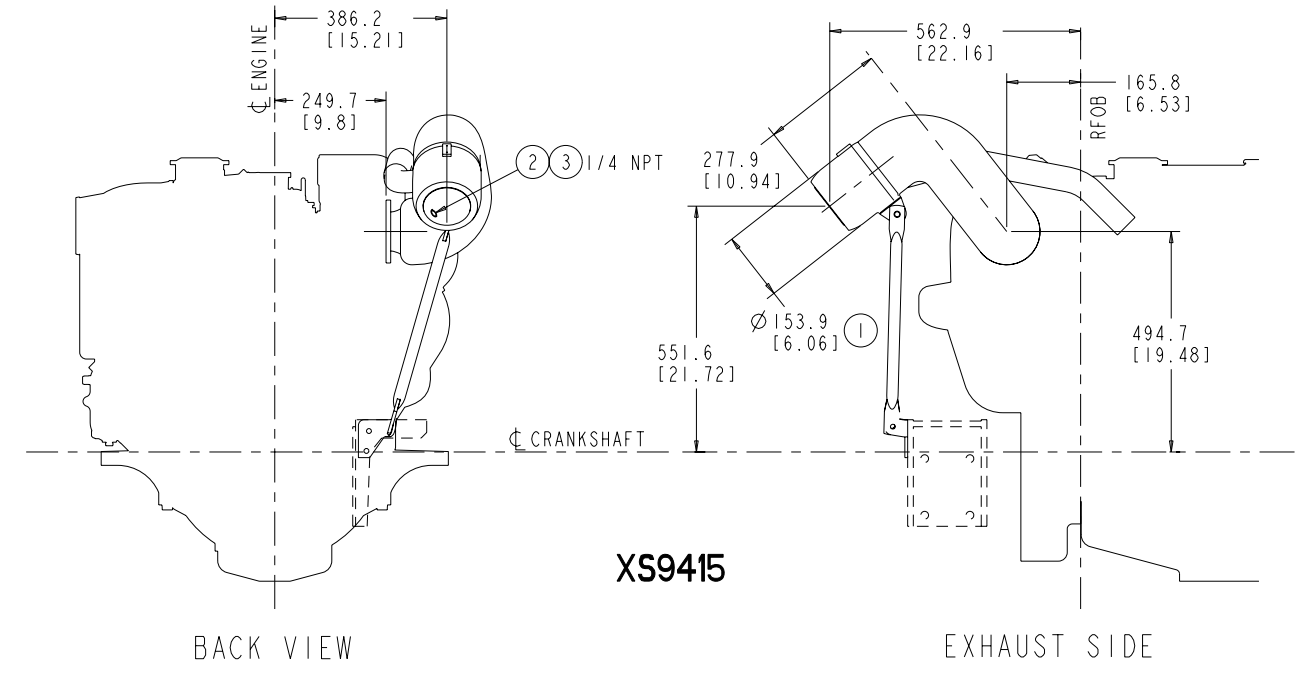
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER J	SIZE CODE IDENT. NO. ITEM NUMBER 3170592
DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	SCALE: 2x	ITEM CONTROL: MCS	SHEET 13 OF 32

ITEM NUMBER
3170592

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



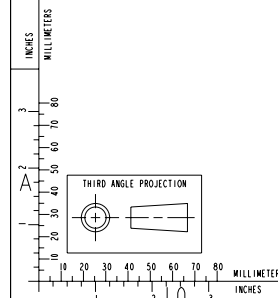
XS9384



XS9415

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

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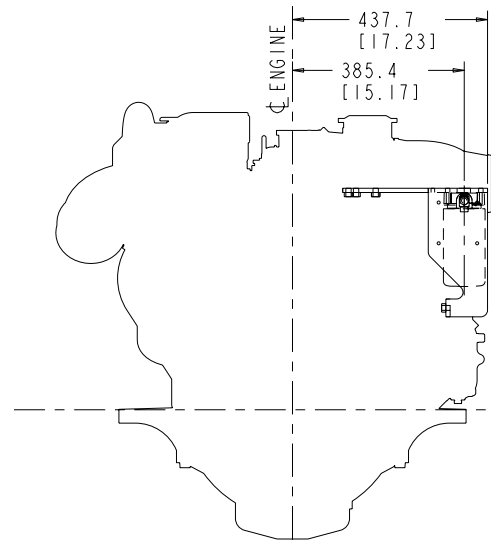
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DWN: TMO/CSG CHD: UNCHECKED APPD:	SCALE: 2X	SIZE CODE IDENT. NO. ITEM NUMBER J 3170592	ITEM CONTROL: MCS
		SHEET 14 OF 32	

EXHAUST SYSTEM

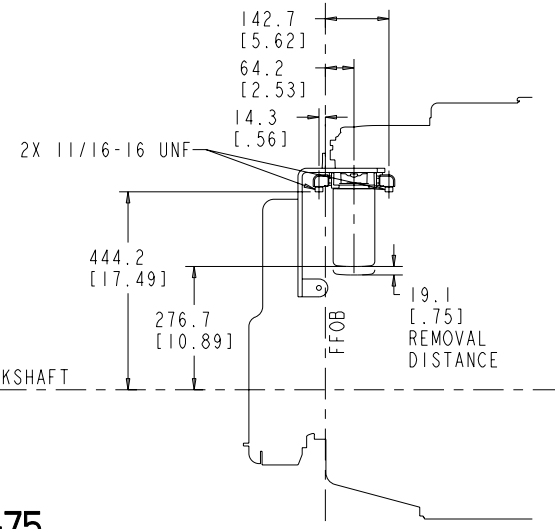
ITEM NUMBER
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REVISONS		OWN	APP'D
ZONE	REV	DESCRIPTION	
03		QSC 8.3-HX	

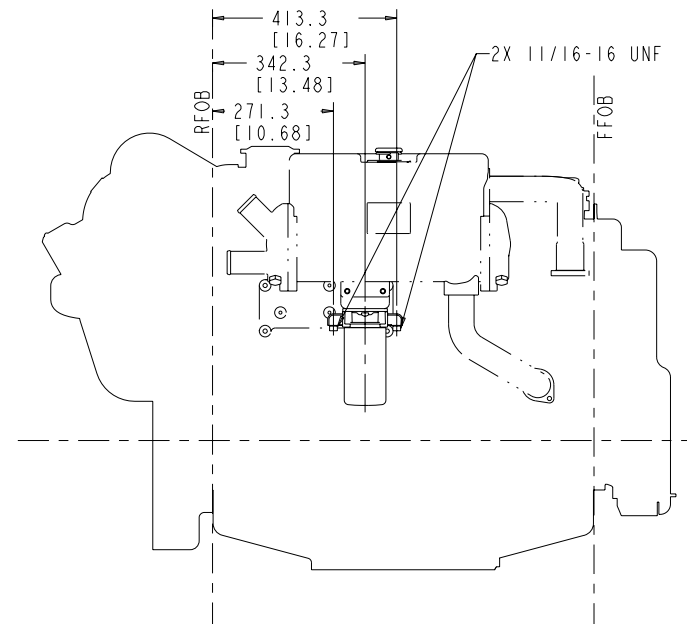


FF9475

FRONT VIEW

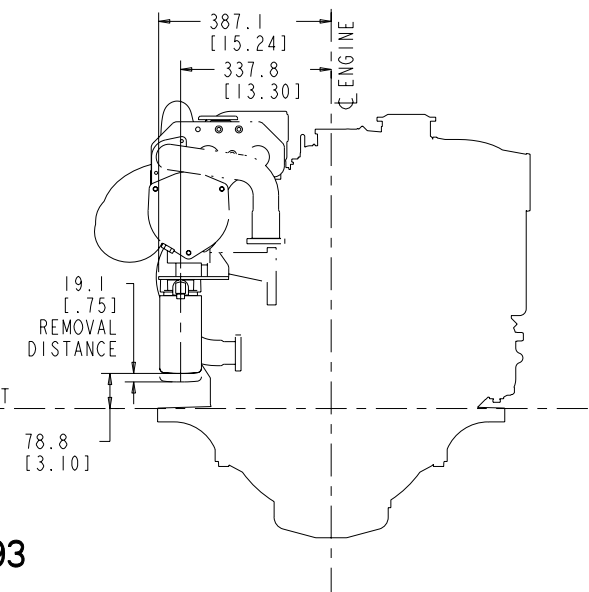


FUEL PUMP SIDE

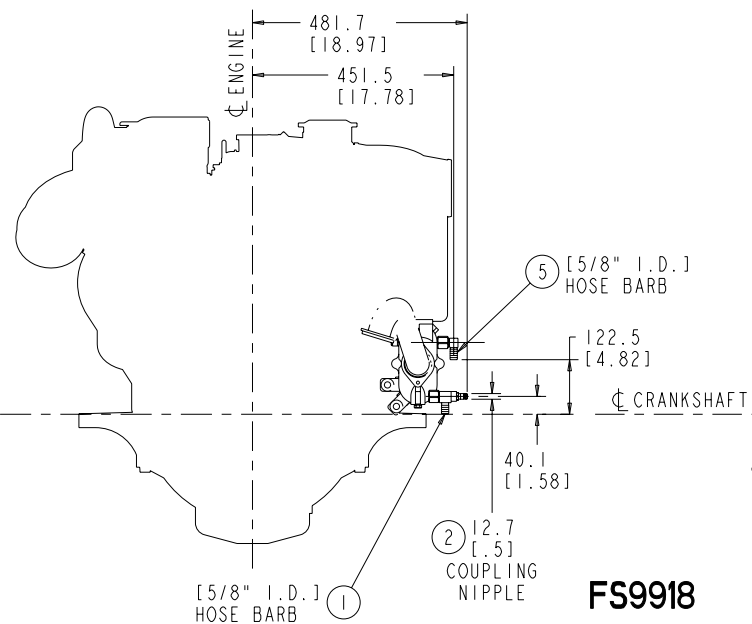


FF9493

EXHAUST SIDE

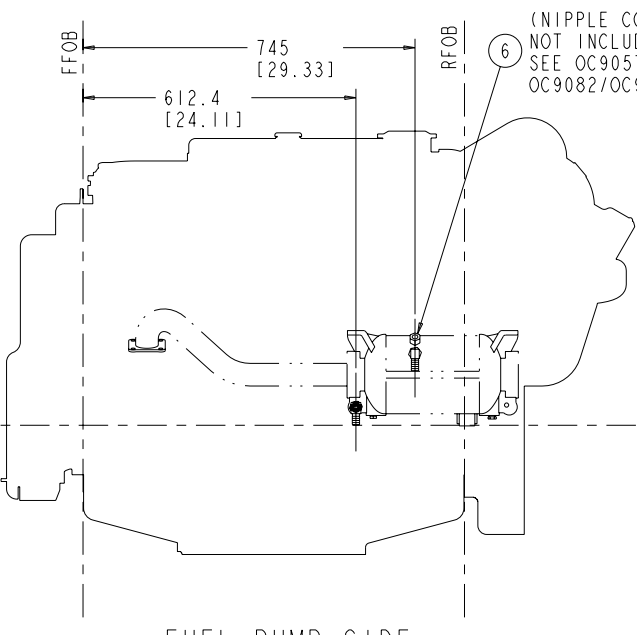


FRONT VIEW

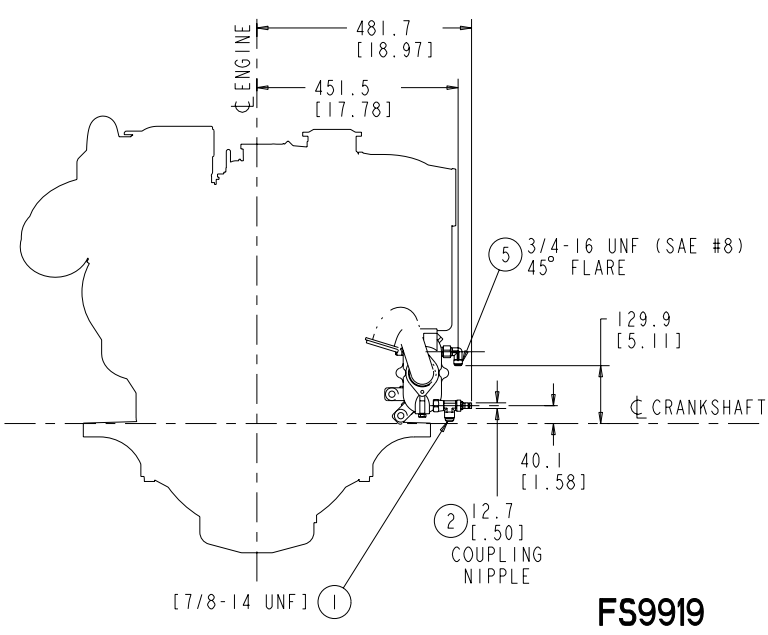


FS9918

FRONT VIEW

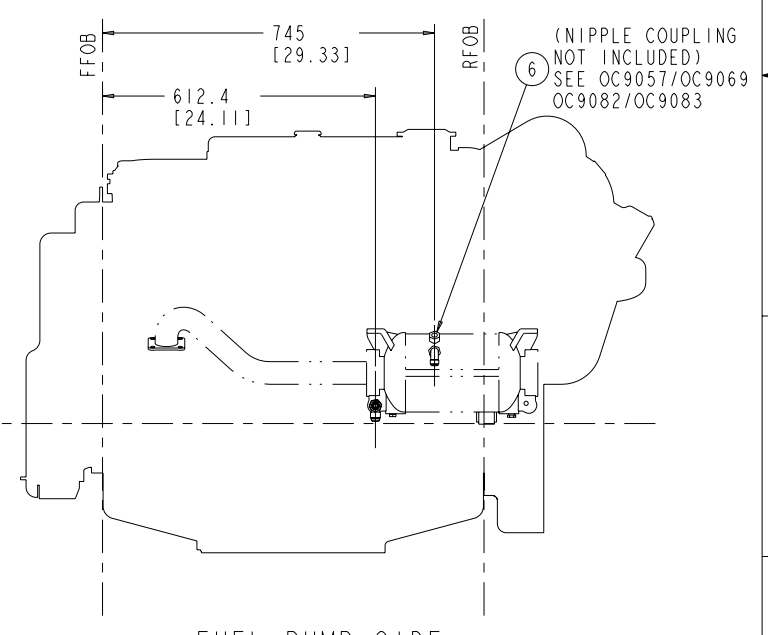


FUEL PUMP SIDE

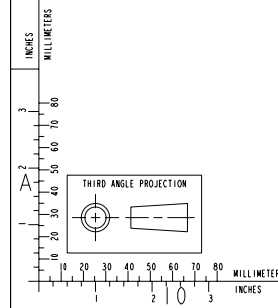


FS9919

FRONT VIEW



FUEL PUMP SIDE



- 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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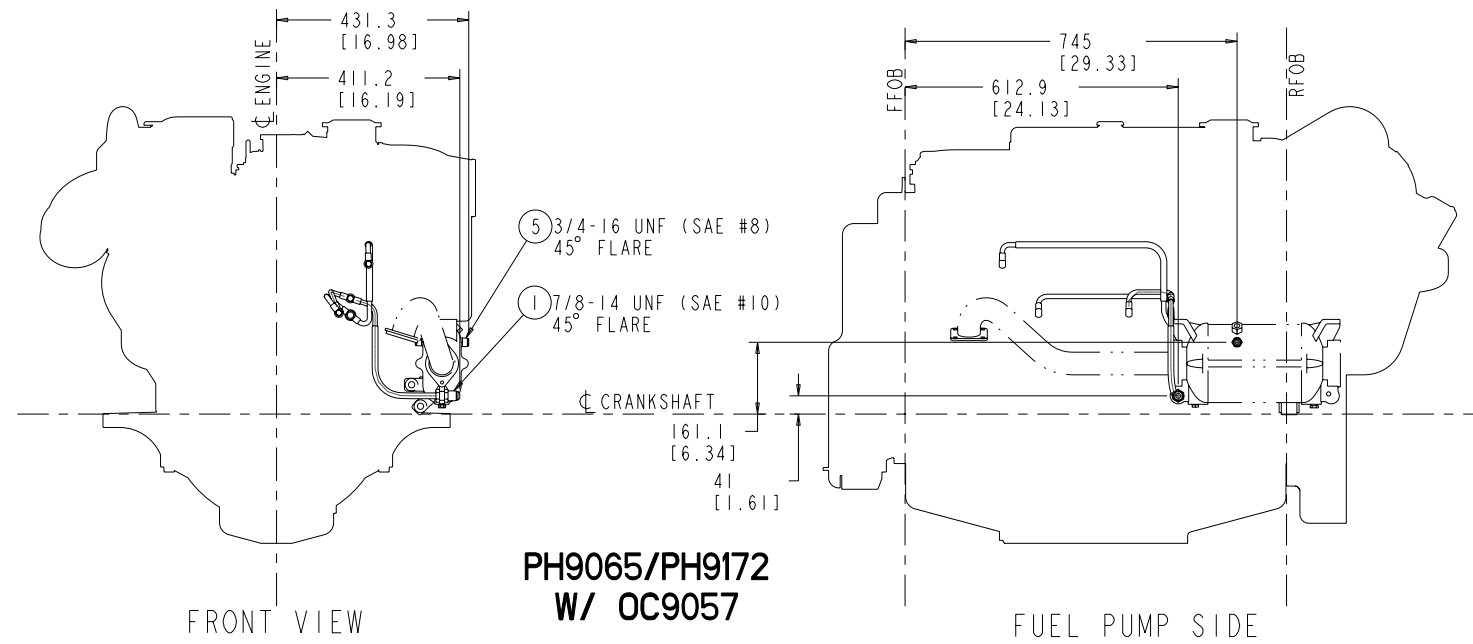
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DWN: TMO/TGANG CHD: UNCHECKED APPD: []		SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592
SCALE: 2x		ITEM CONTROL: MCS	SHEET 15 OF 32

FUEL SYSTEM

ITEM NUMBER
3170592

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

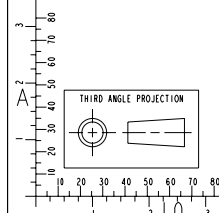


PH9065/PH9172
W/ OC9057

FRONT VIEW

FUEL PUMP SIDE

INCHES
MILLIMETERS



- | | |
|--------------------------------------|--------------------------------|
| 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

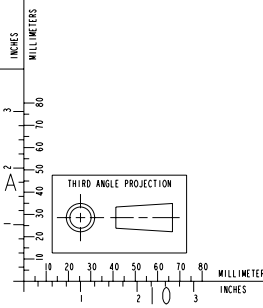
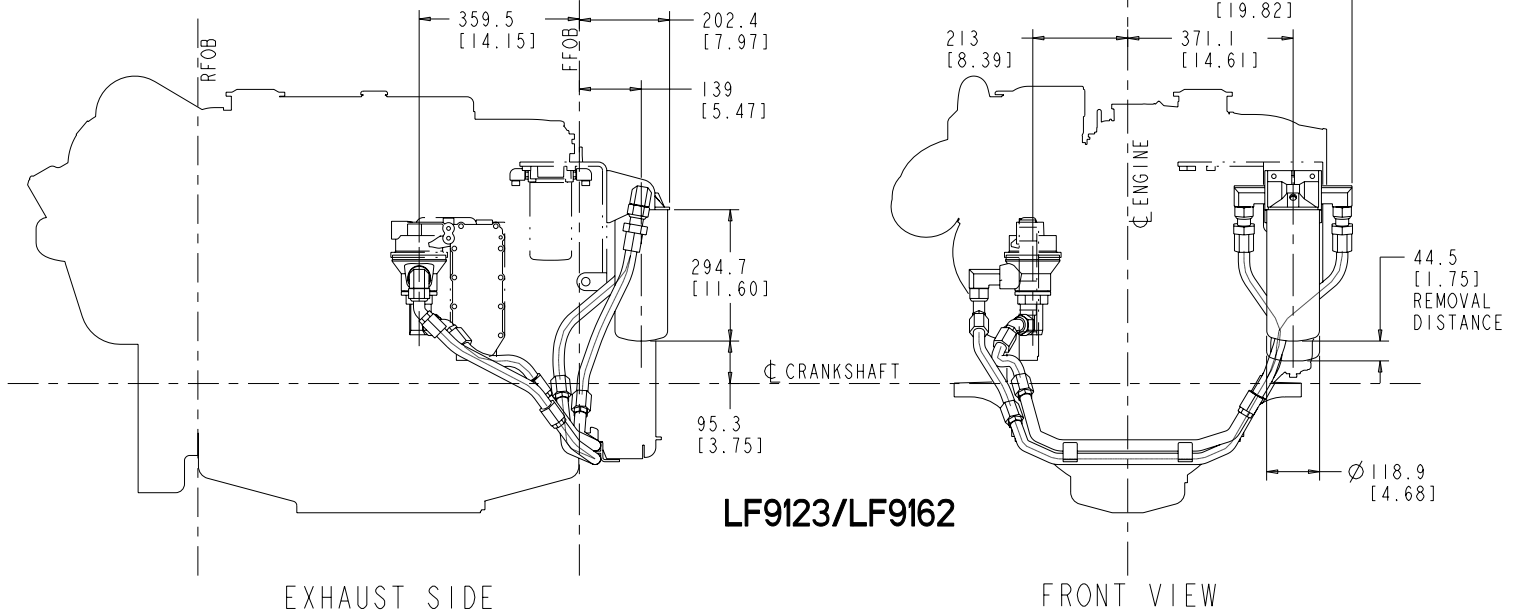
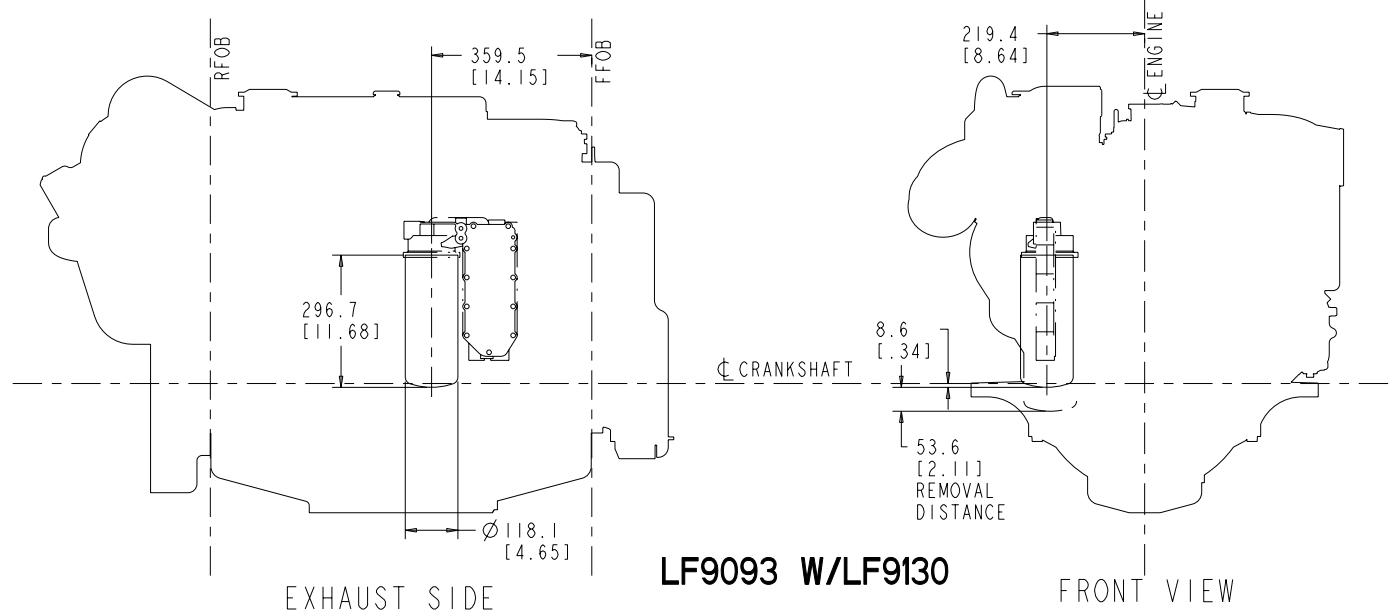
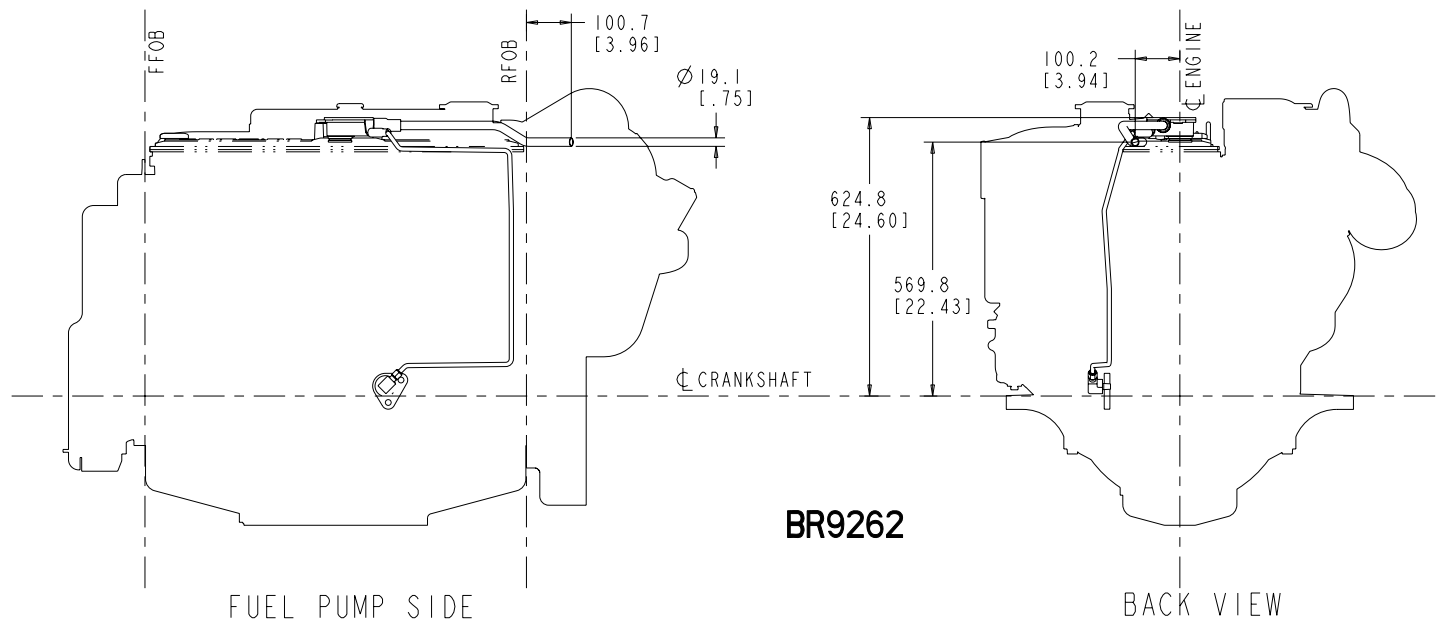
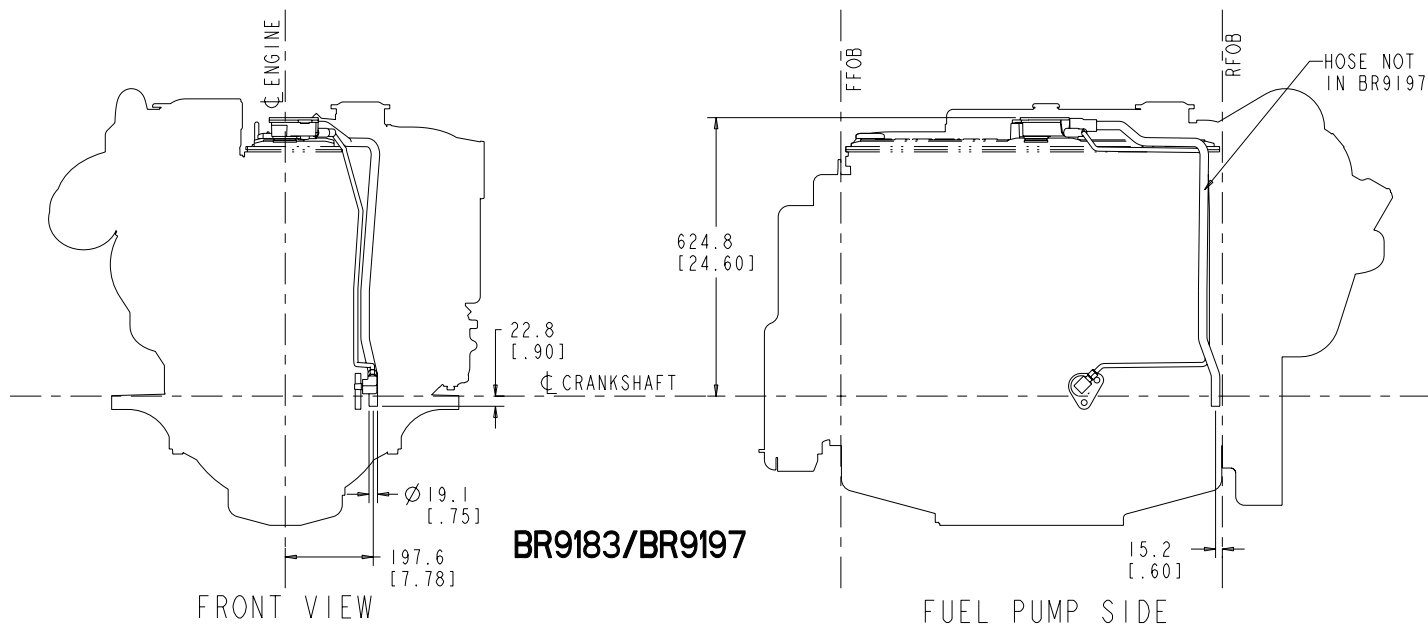
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DWN: TMO/TGANG	SCALE: 2x	SIZE CODE IDENT. NO. ITEM NUMBER J 3170592	ITEM CONTROL: MCS
CHD: UNCHECKED			SHEET 16 OF 32
APPD:			

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

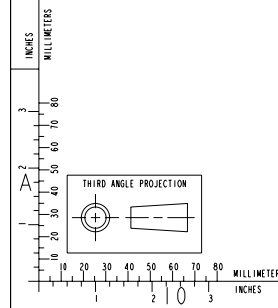
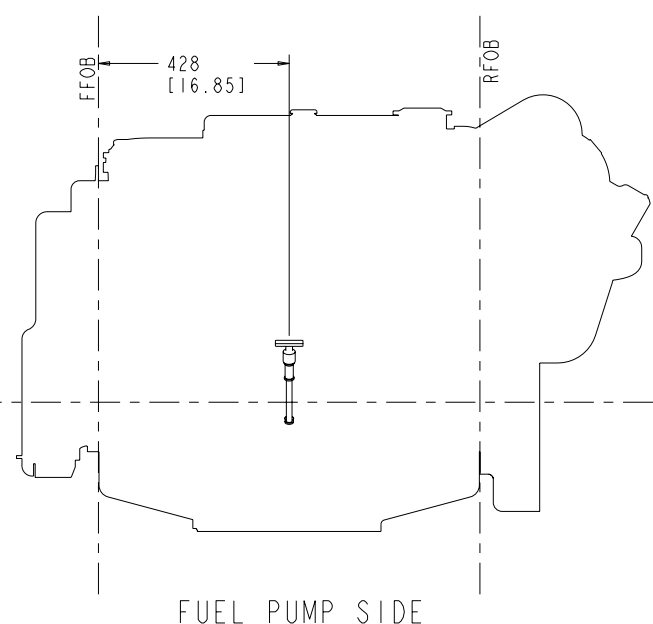
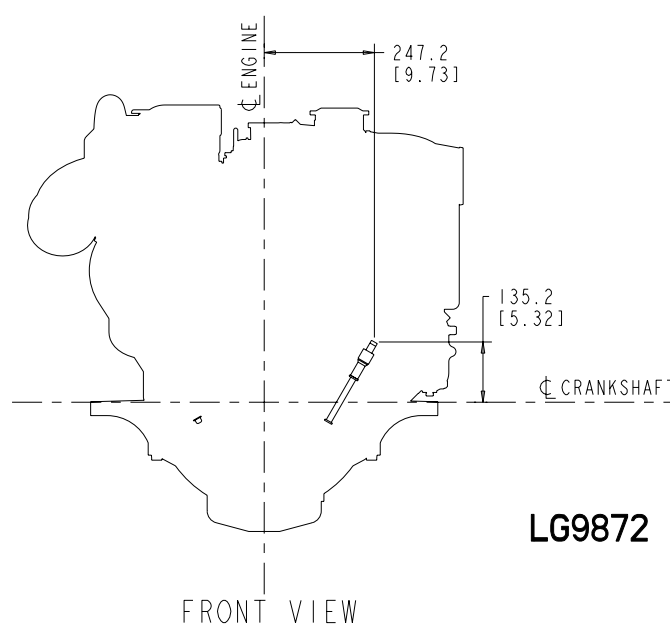
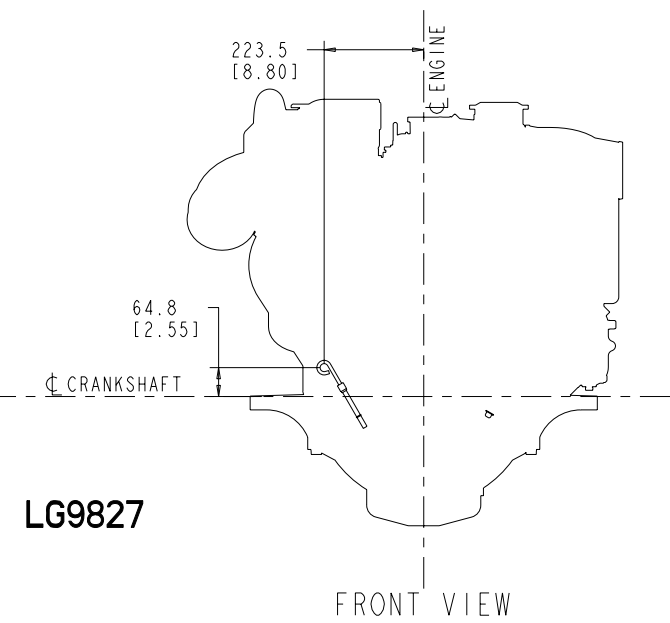
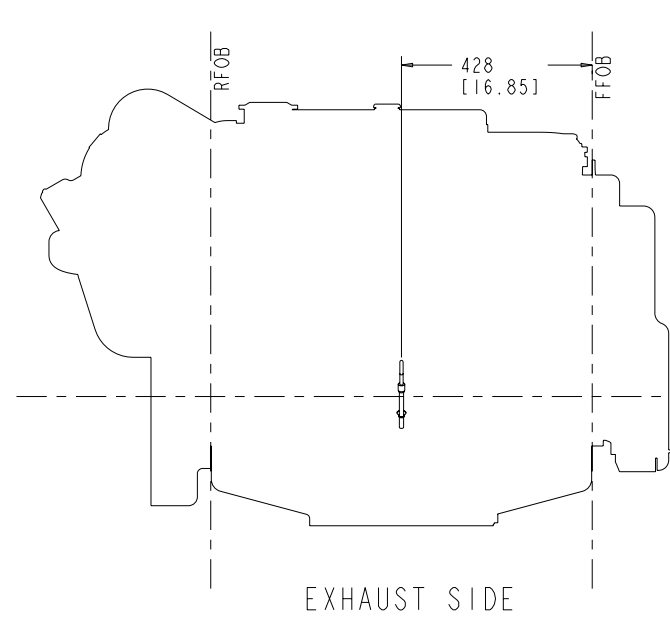
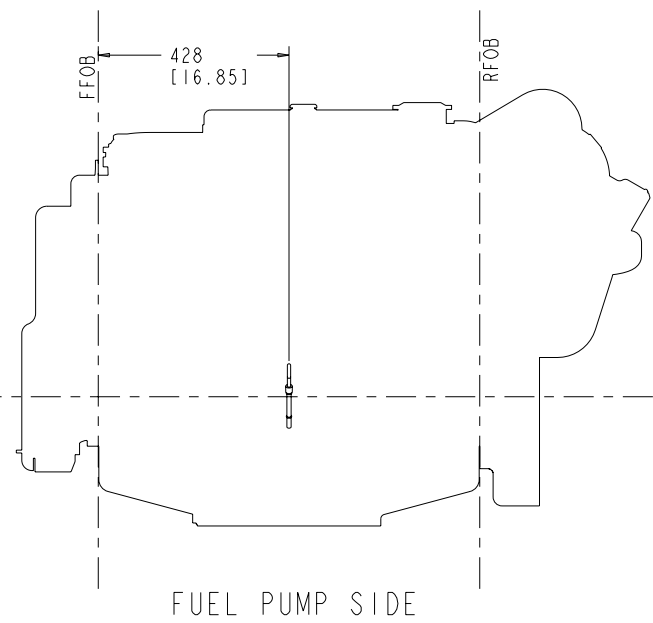
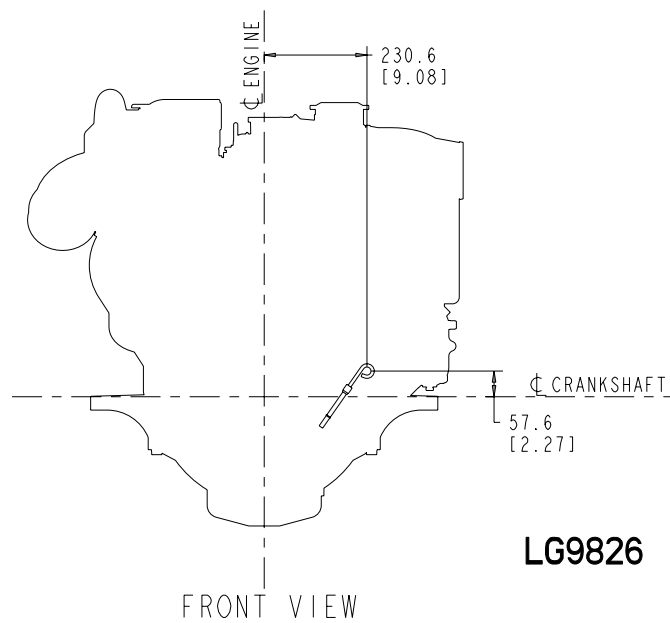
DO NOT SCALE THIS DRAWING
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PRODUCT GRAPHICS FILE
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LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592	ITEM CONTROL: MCS
SCALE: 2x		SHEET 17 OF 32	

ITEM NUMBER
3170592

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



- 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

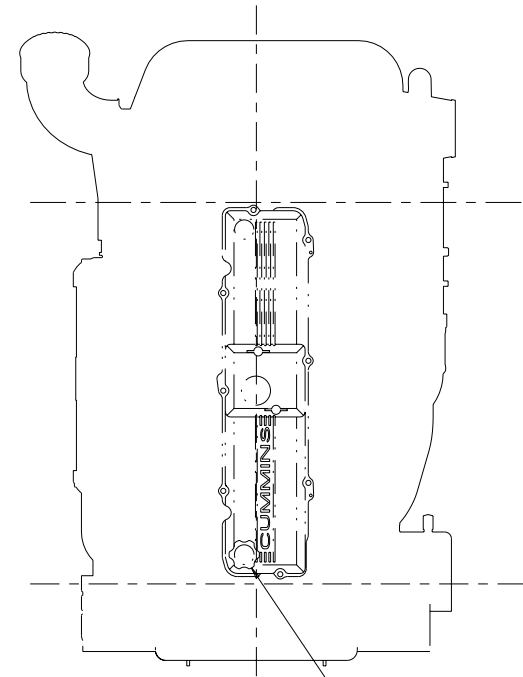
DO NOT SCALE THIS DRAWING
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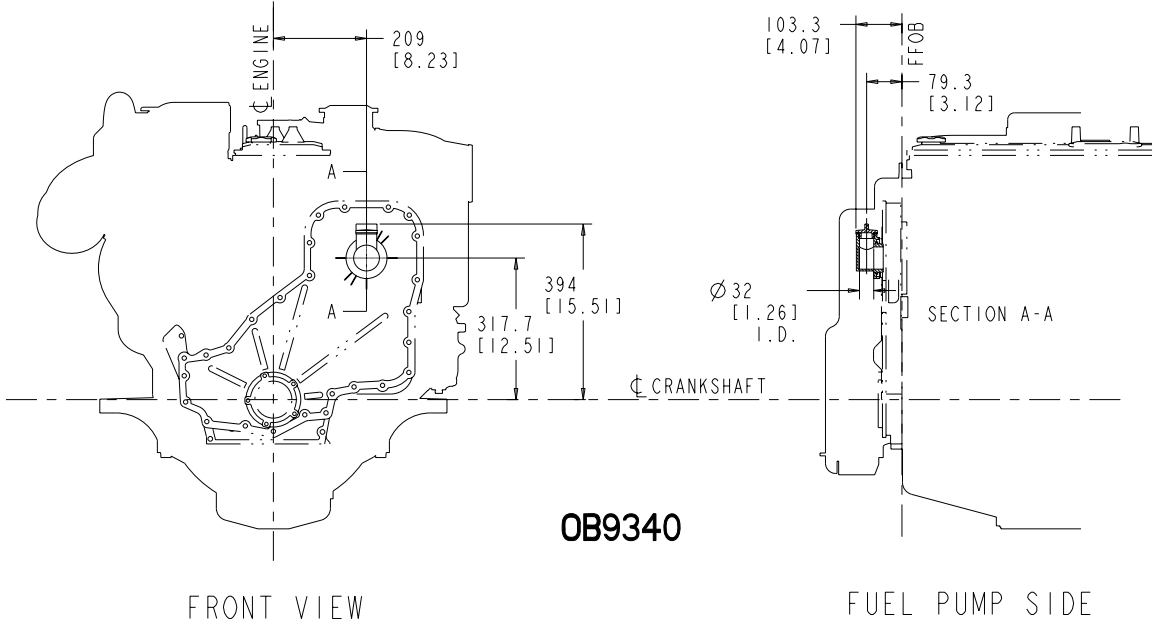
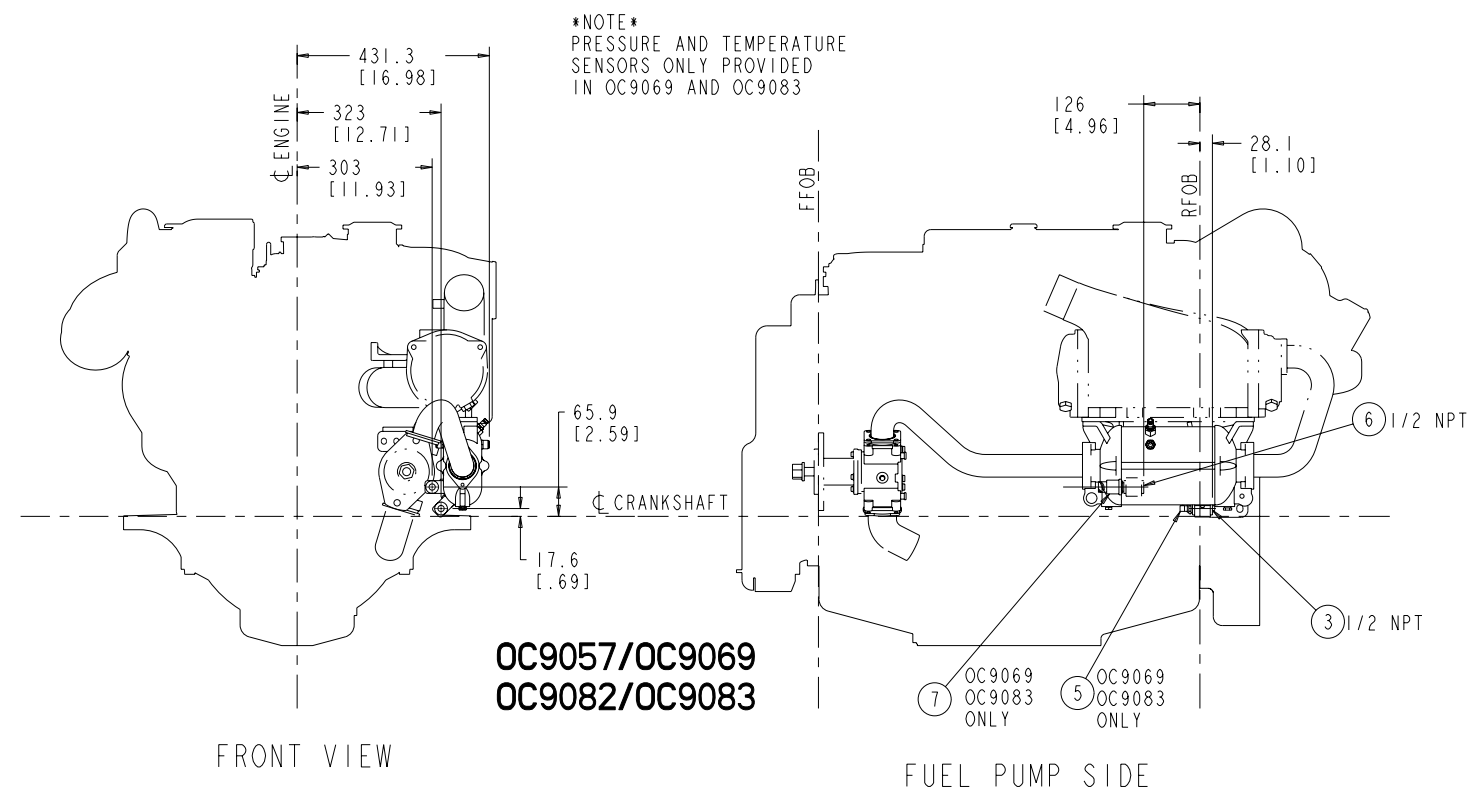
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	
DWN: UNCHECKED CHD: UNCHECKED APPD:	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592	ITEM CONTROL: MCS
SCALE: 2x		SHEET 18 OF 32	

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.



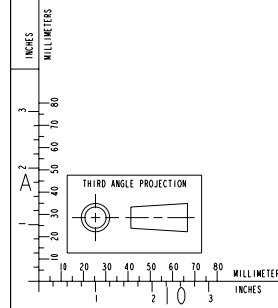
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|---|--|--|
| <ul style="list-style-type: none"> ① CENTINEL VALVE OIL SUPPLY CONNECTION- N/A ② CRANKCASE PRESSURE PORT ③ GEAR OIL INLET TO COOLER CONNECTION ④ GEAR OIL INLET TO COOLER PRESSURE PORT- N/A ⑤ GEAR OIL INLET TO COOLER TEMPERATURE PORT | <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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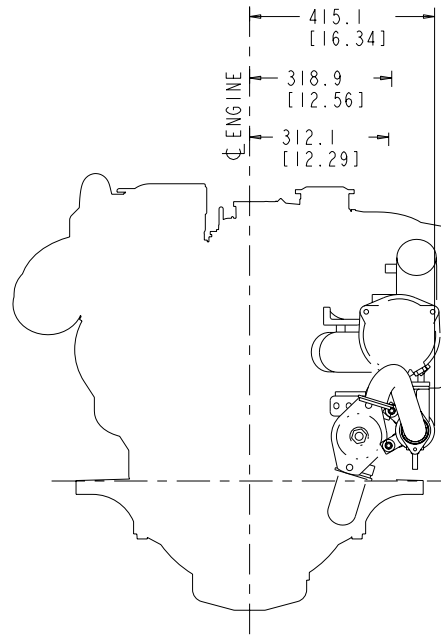
PRODUCT GRAPHICS FILE
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DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592	SCALE: 2x
	ITEM CONTROL: MCS	SHEET 19 OF 32	



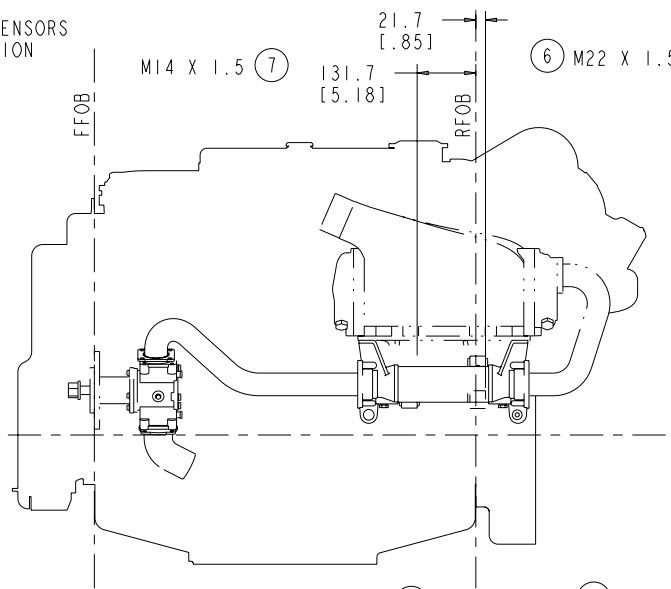
ITEM NUMBER
3170592

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

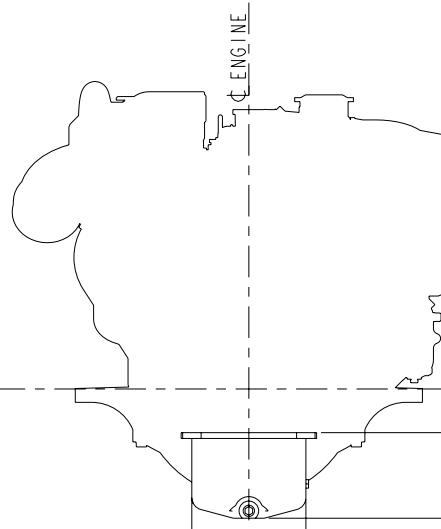


FRONT VIEW

OC9080

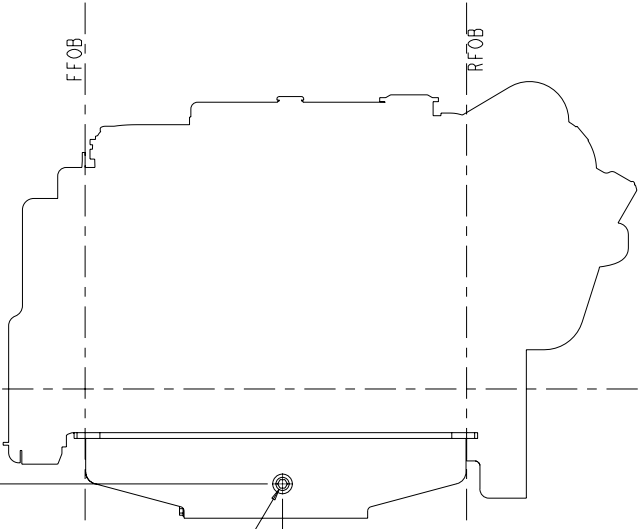


FUEL PUMP SIDE

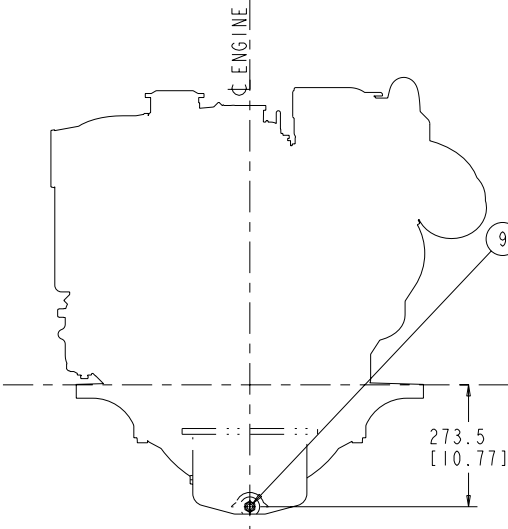


FRONT VIEW

OP9351

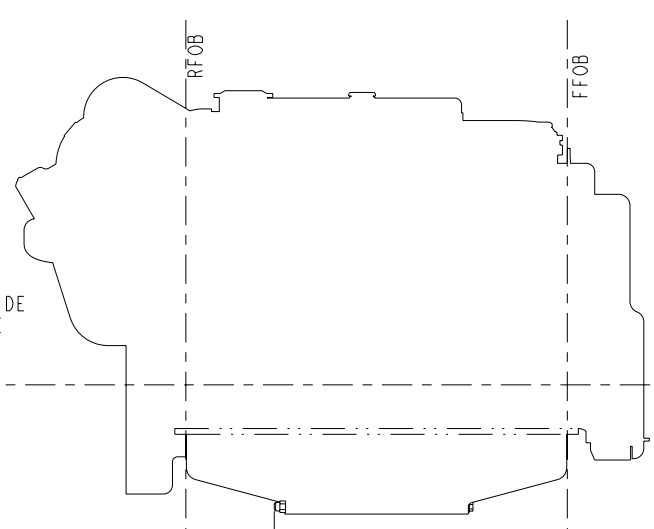


FUEL PUMP SIDE



BACK VIEW

RD9019/RD9024/RD9025



EXHAUST SIDE

NOTE: PRESS & TEMP SENSORS INCLUDED IN THIS OPTION

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

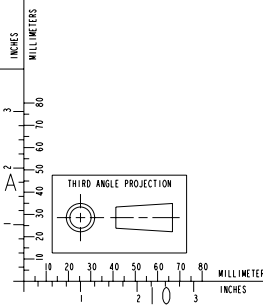
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- | | | |
|---|---|---|
| ① CENTINEL VALVE OIL SUPPLY CONNECTION- N/A | ⑥ GEAR OIL OUTLET FROM COOLER CONNECTION | ⑪ OIL PRESSURE GAUGE PORT, AFTER FILTER |
| ② CRANKCASE PRESSURE PORT | ⑦ GEAR OIL OUTLET FROM COOLER PRESSURE PORT | ⑫ OIL SUMP TEMPERATURE 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 | |

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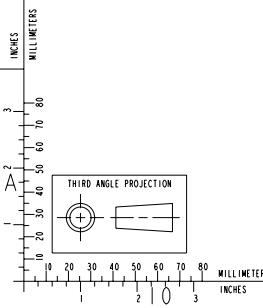
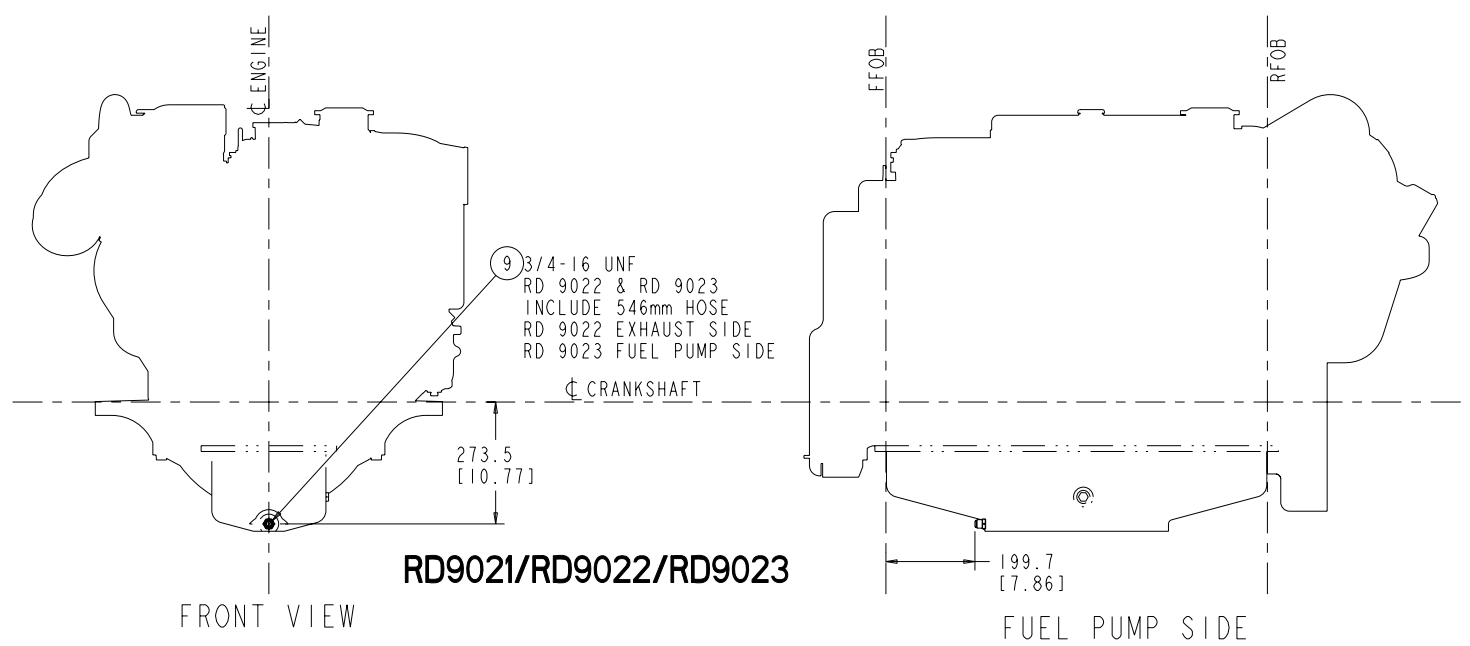
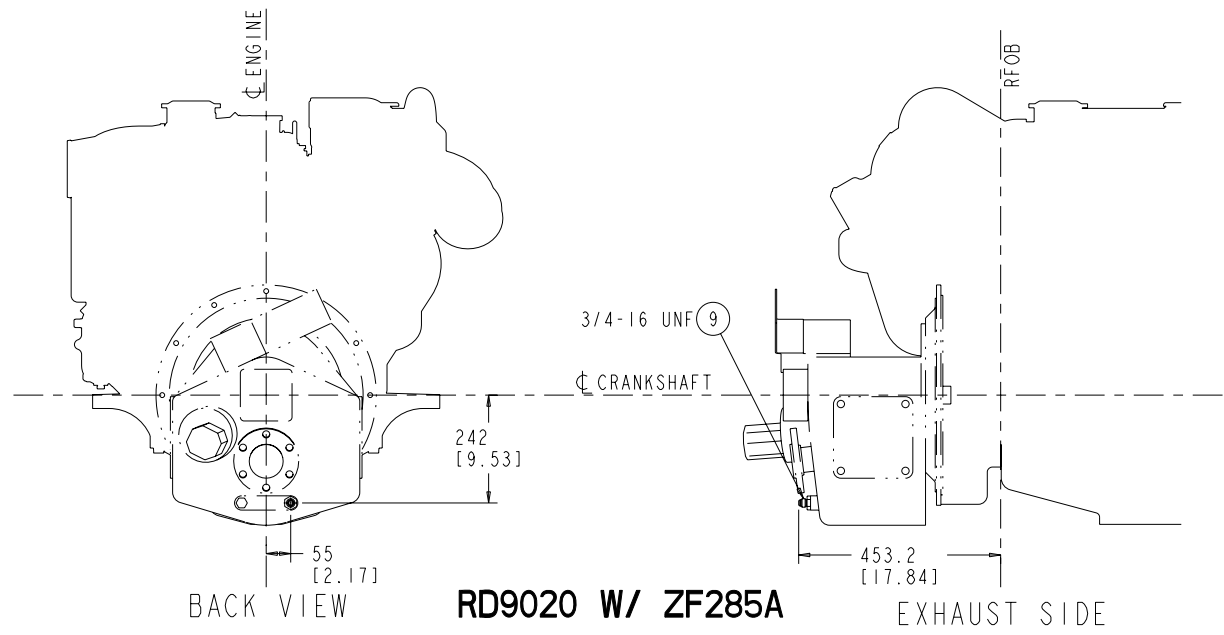
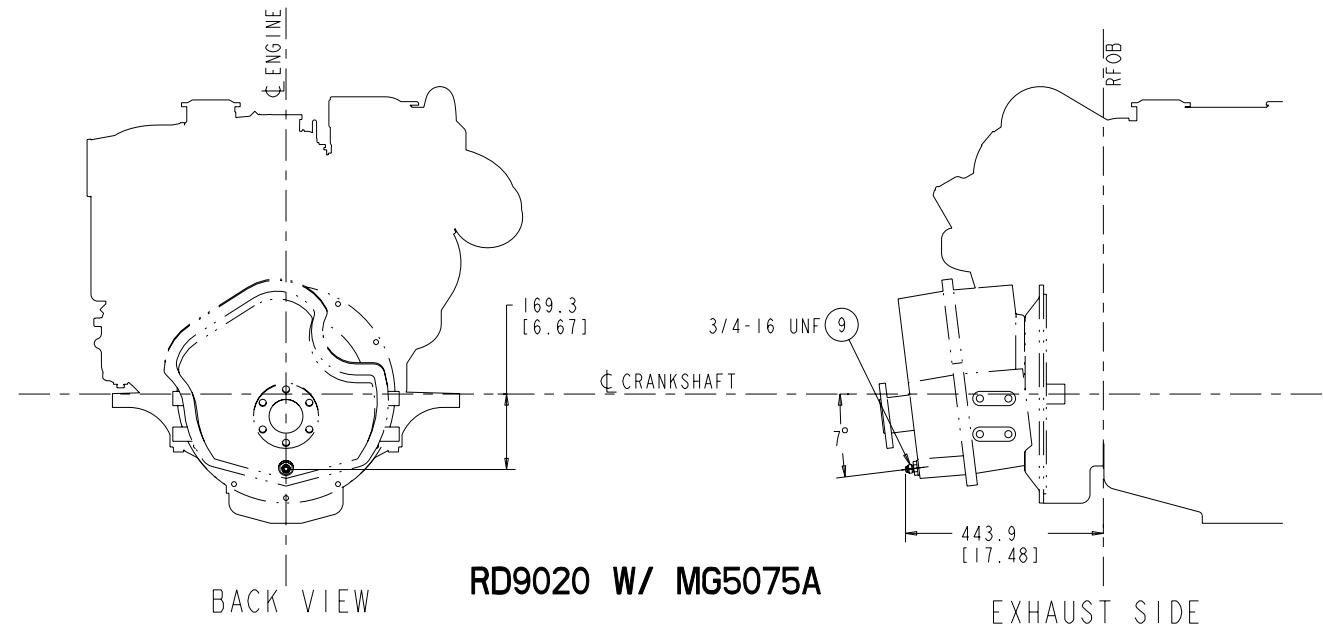
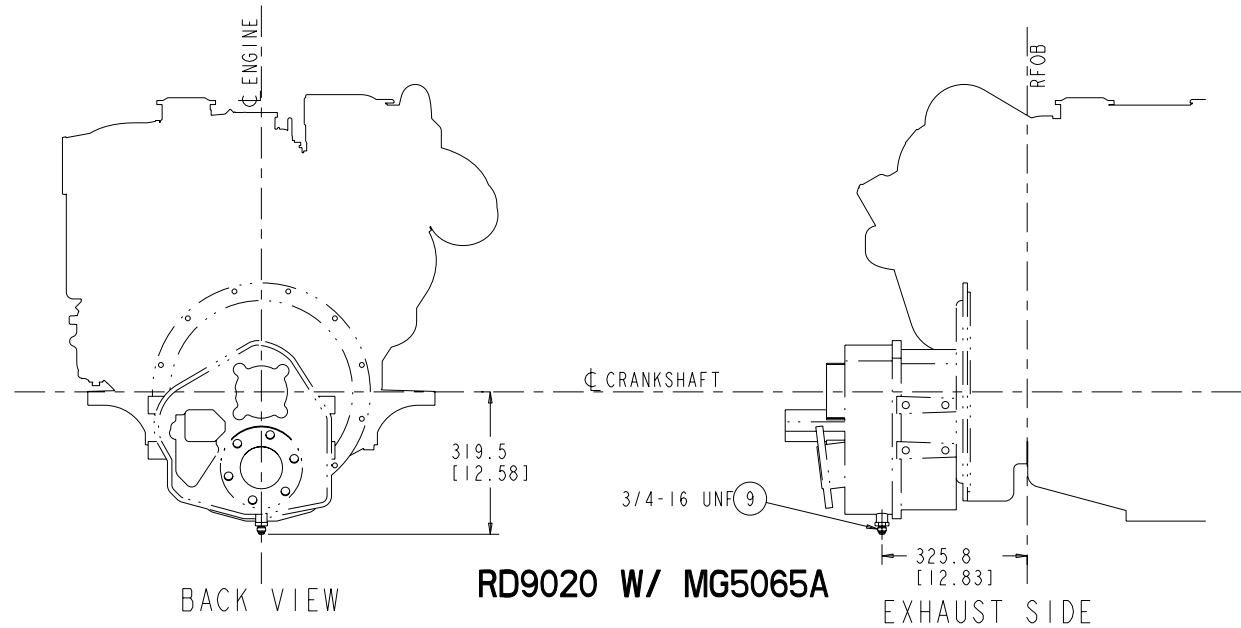
LUBE OIL SYSTEM

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



ITEM NUMBER
3170592

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



- | | | |
|---|---|---|
| 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

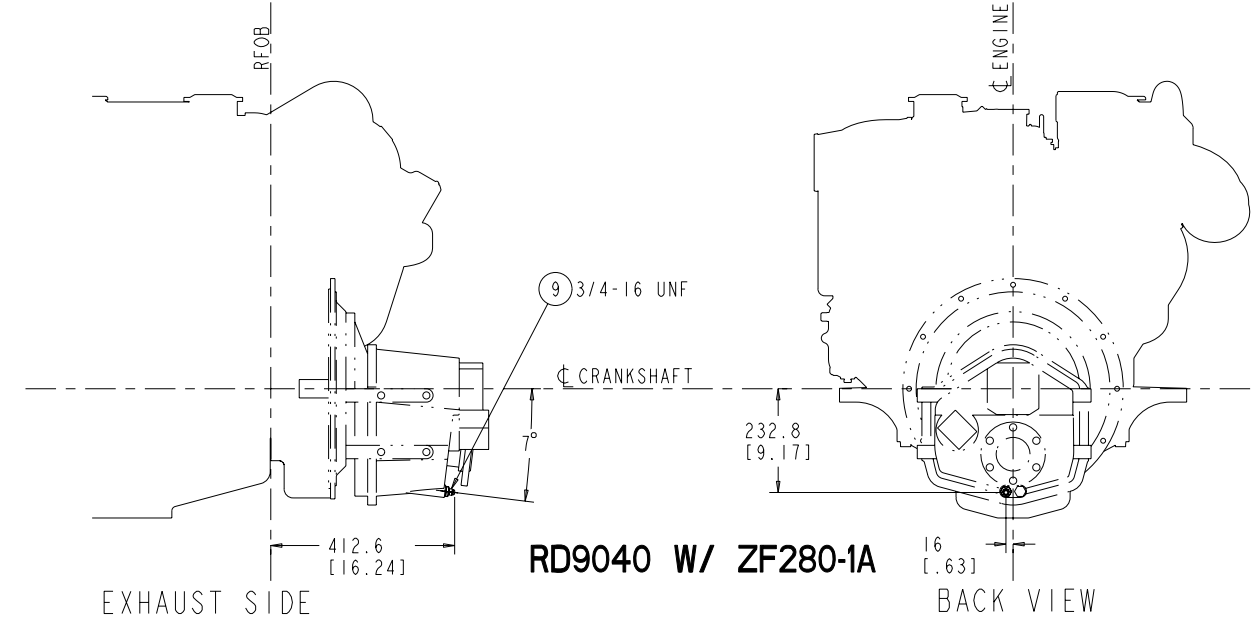
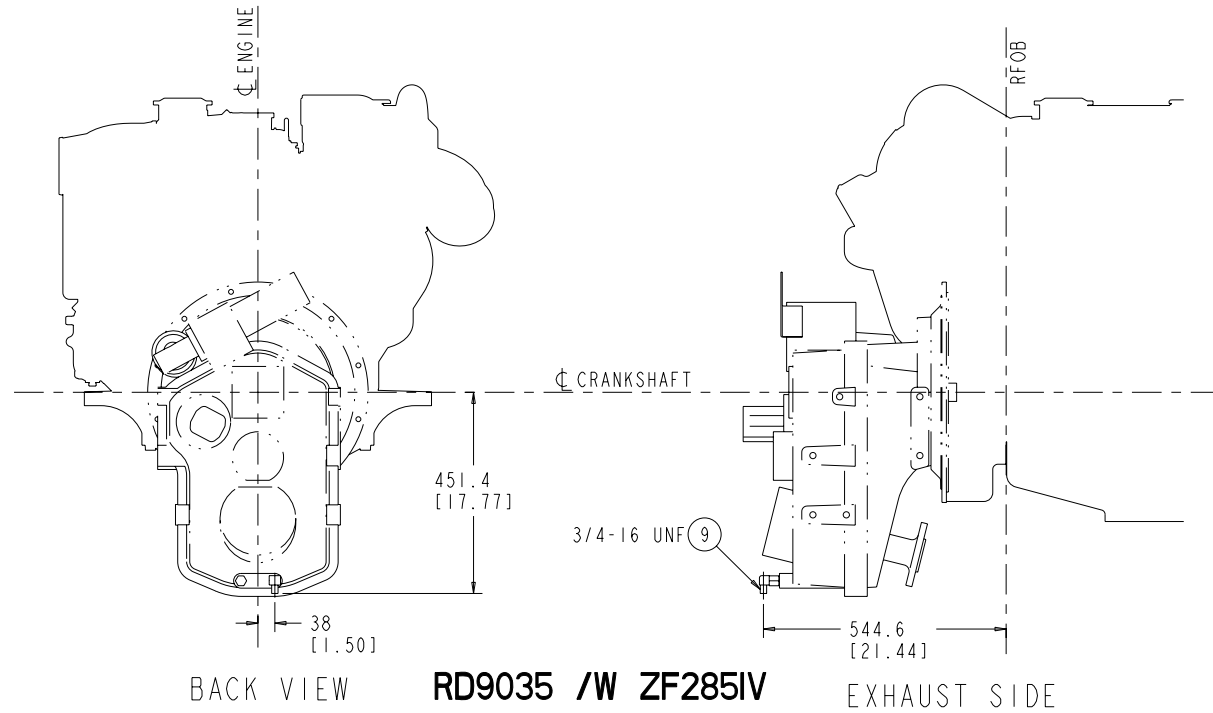
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DWN: UNCHECKED CHD: UNCHECKED APPD: UNCHECKED	SIZE CODE (IDENT. NO.) J	ITEM NUMBER 3170592
	SCALE: 2x	ITEM CONTROL: MCS SHEET 21 OF 32

PRODUCT GRAPHICS FILE
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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

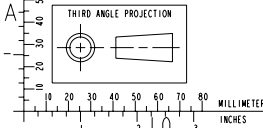
RD9035 /W ZF285IV

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

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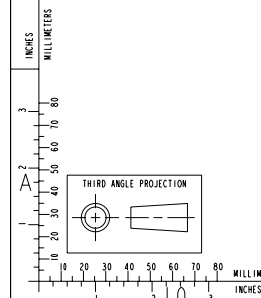
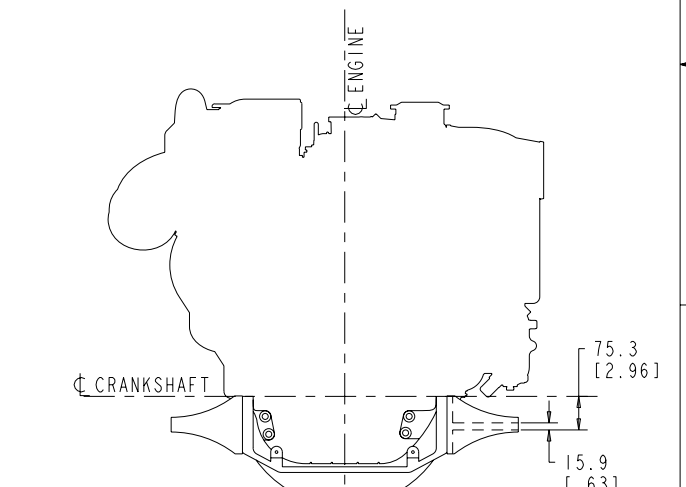
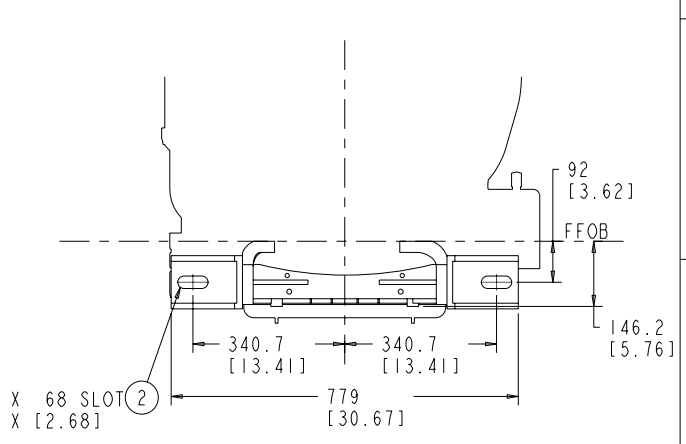
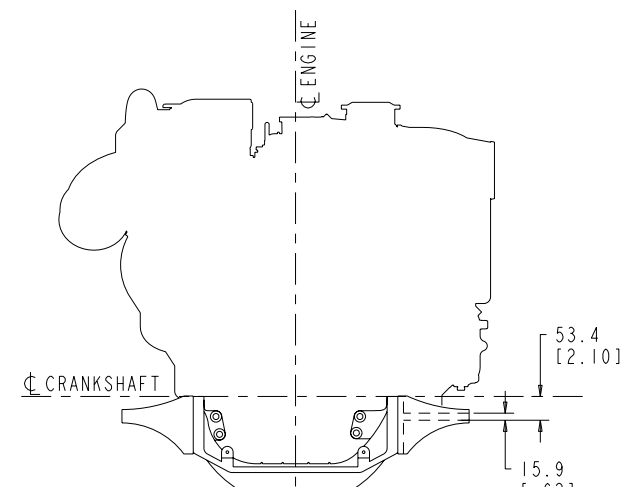
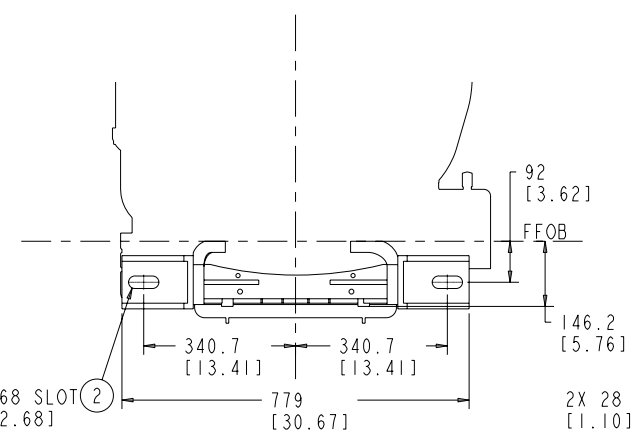
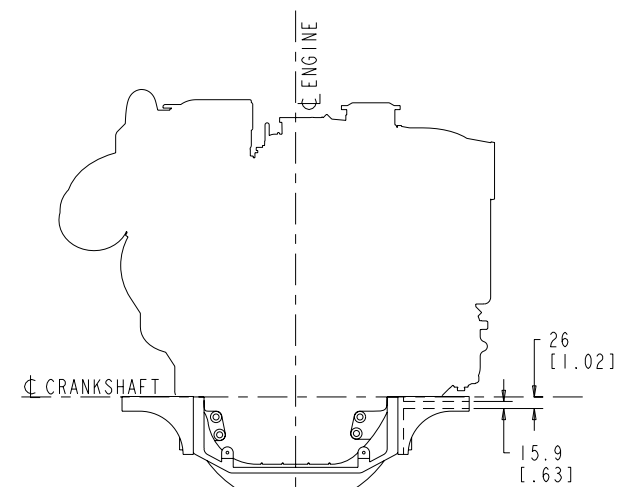
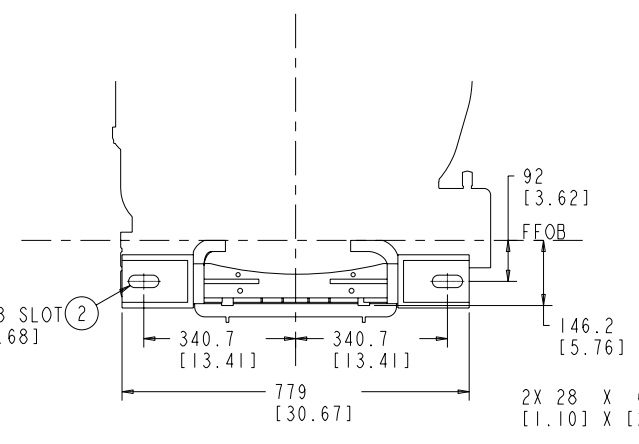
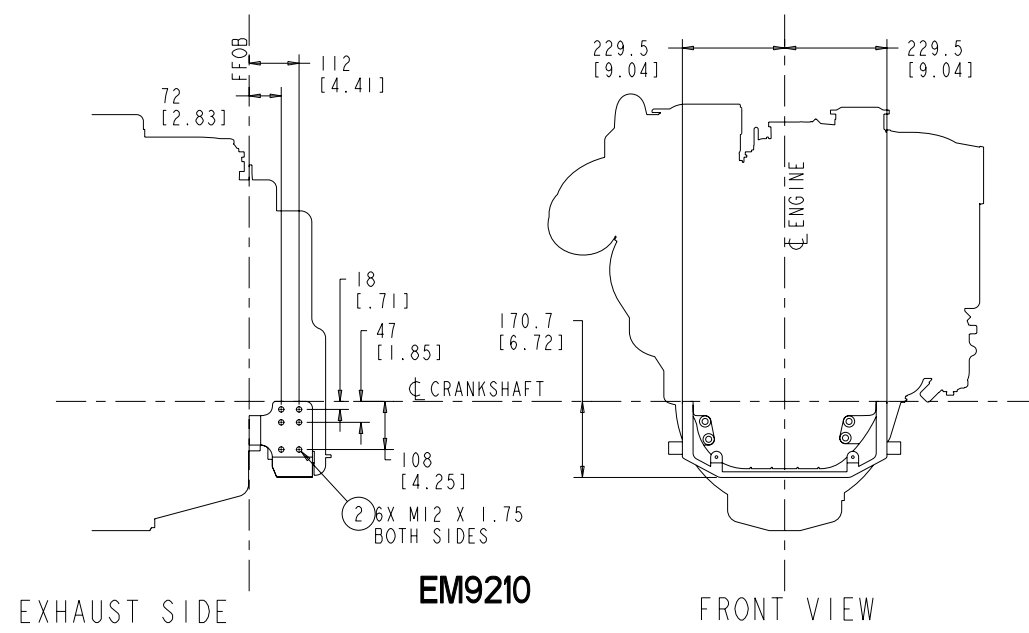
LUBE OIL SYSTEM

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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. SMITH



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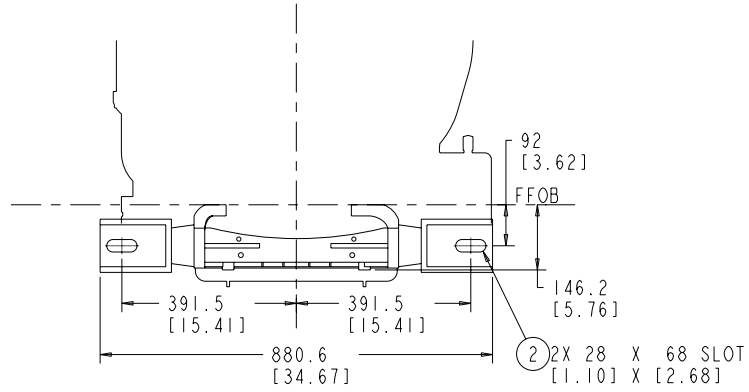
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER	ITEM NUMBER
DWN: TMO/TGANG	SIZE CODE (IDENT. NO.):	J	3170592
CHD: UNCHECKED	SCALE: 2x	ITEM CONTROL: MCS	SHEET 23 OF 32
APPD:			

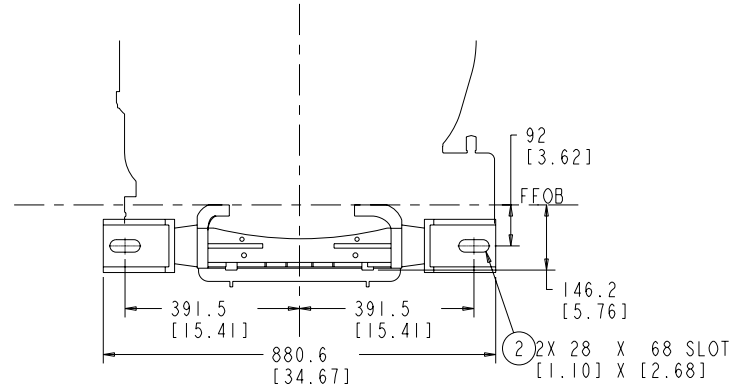
MOUNTING SYSTEM

ITEM NUMBER
3170592

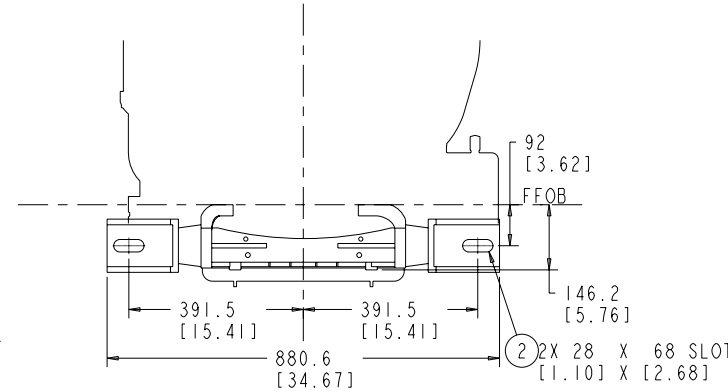
REVISIONS		OWN	APP'D
03	QSC 8.3-HX	B. SMITH	



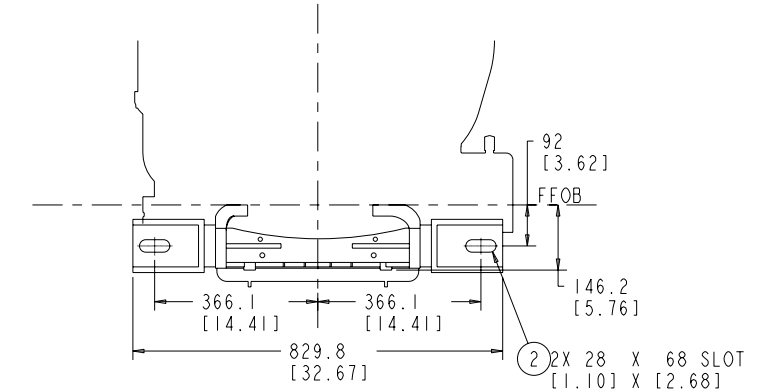
TOP VIEW



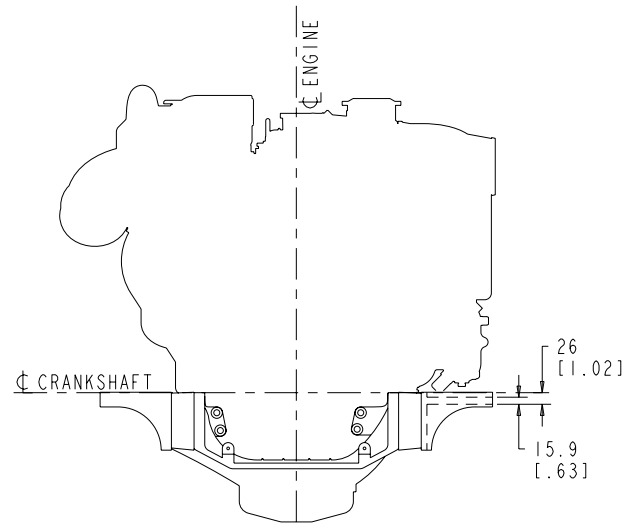
TOP VIEW



TOP VIEW

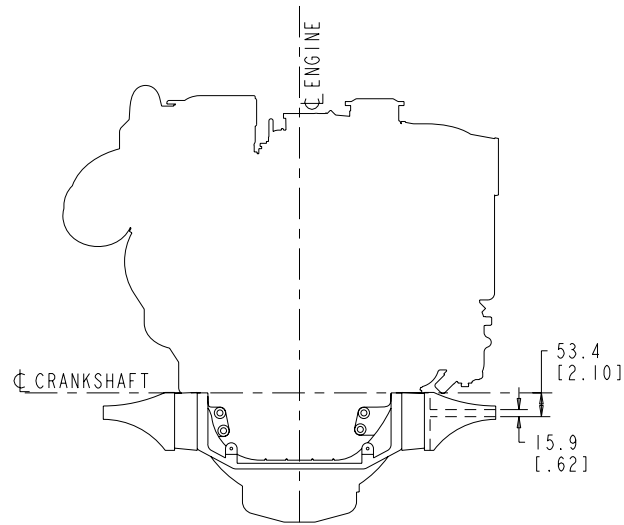


TOP VIEW



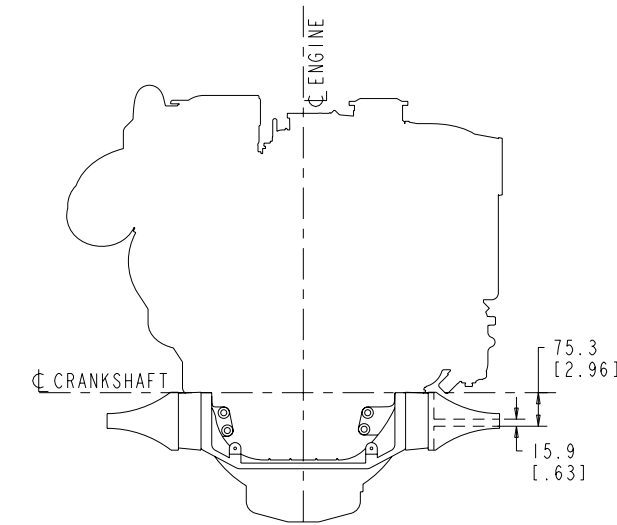
FRONT VIEW

EM9231



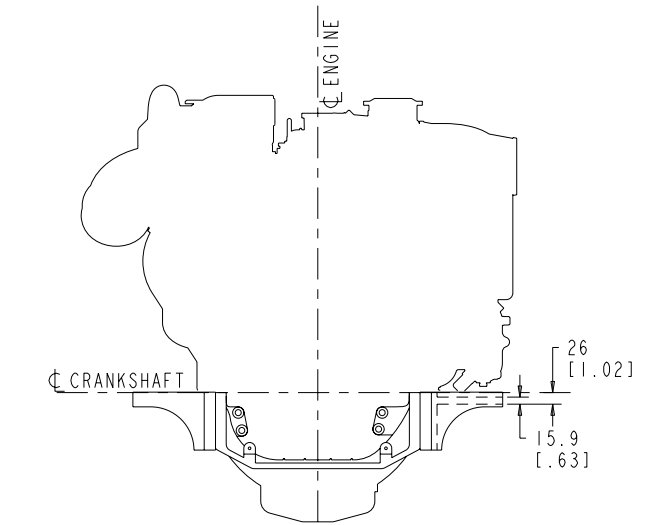
FRONT VIEW

EM9232



FRONT VIEW

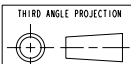
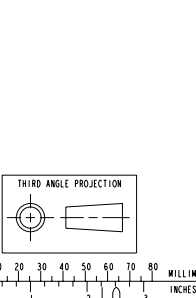
EM9233



FRONT VIEW

EM9252

INCHES
MILLIMETERS



- | | |
|-------------------------------|----------------------------------|
| 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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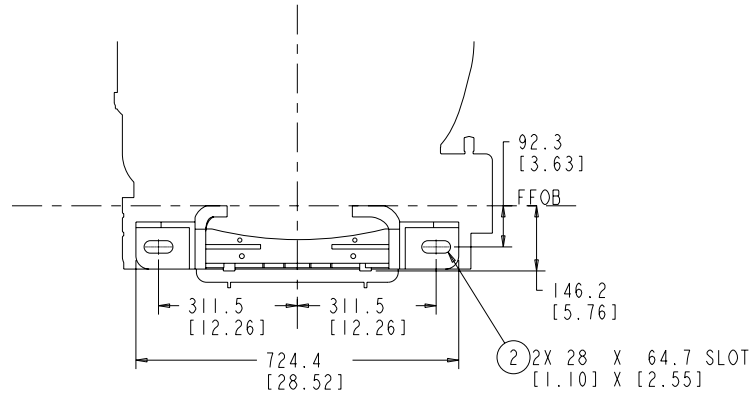
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DWN: TMO/TGANG	DATE: 1-20-04	SIZE CODE (IDENT. NO.)	ITEM NUMBER
CHD: UNCHECKED	APPD: UNCHECKED	3170592	
APPD:	SCALE: 2X	ITEM CONTROL: MCS	SHEET 24 OF 32

MOUNTING SYSTEM

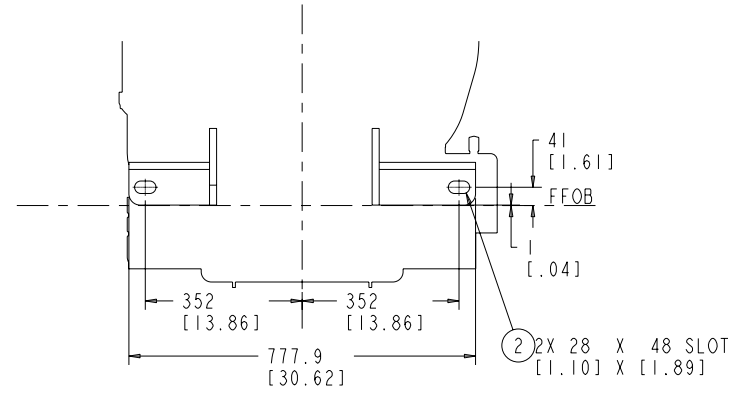
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ITEM NUMBER
3170592

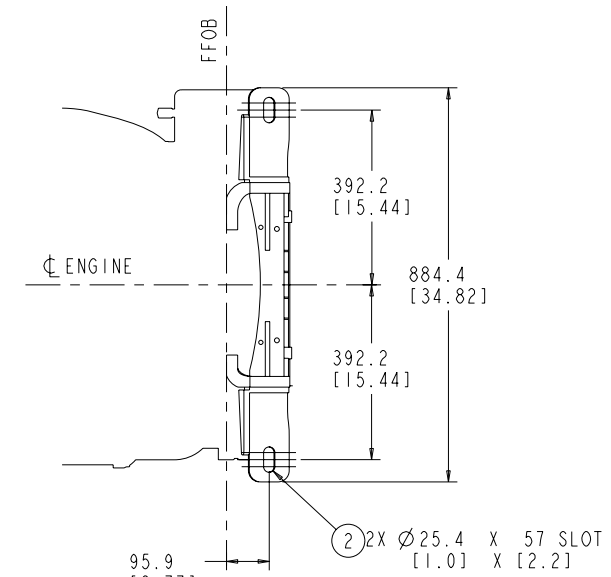
REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SCHWAB



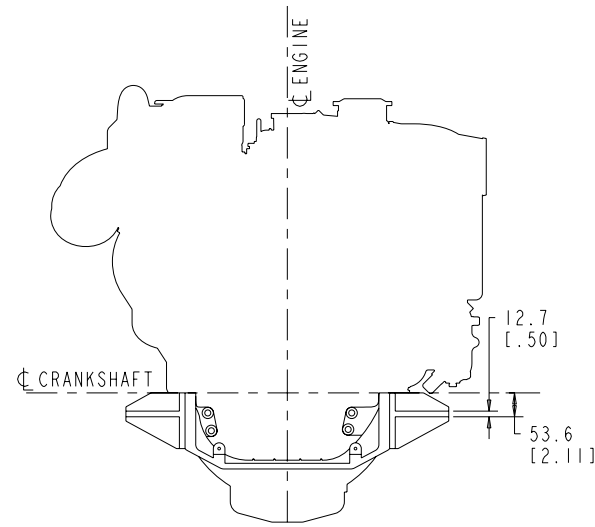
TOP VIEW



TOP VIEW

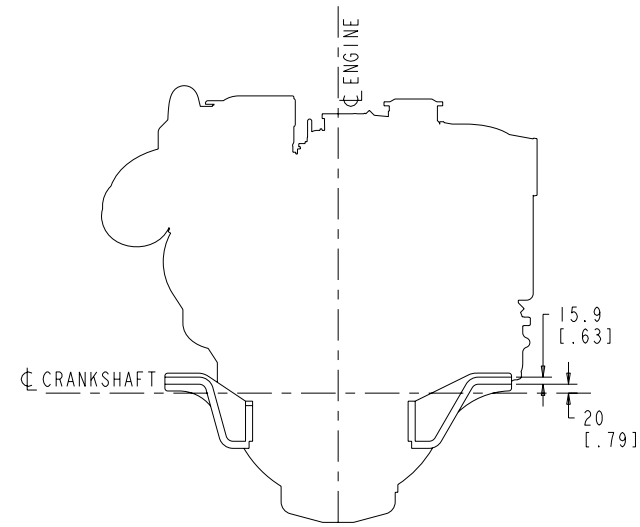


TOP VIEW



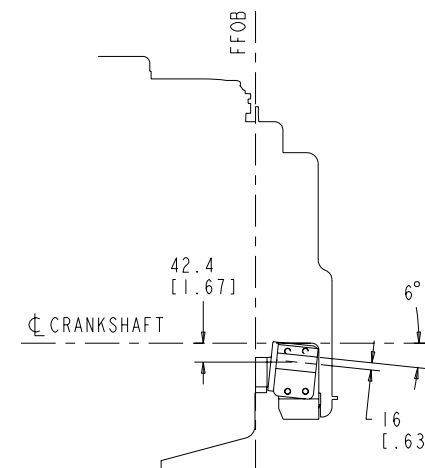
FRONT VIEW

EM9259



FRONT VIEW

EM9261



EXHAUST SIDE

EM9286

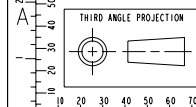
PRODUCT GRAPHICS FILE
NO ORIGINAL DRAWING EXISTS FOR THIS ITEM. THE ENGINEERING GRAPHICS DATA FOR THIS ITEM RESIDES IN THE PRODUCT GRAPHICS FILE AND IS CONTROLLED BY THE AGENCY DESIGNATED AS HAVING ITEM CONTROL.

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 INSTALLATION DIAGRAM	
DWN	TWO/2004	J	SIZE CODE (IDENT. NO.)	ITEM NUMBER 3170592
CHD	UNCHECKED		SCALE: 2x	ITEM CONTROL: MCS
APPD				SHEET 25 OF 32

DO NOT SCALE THIS DRAWING

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MOUNTING SYSTEM



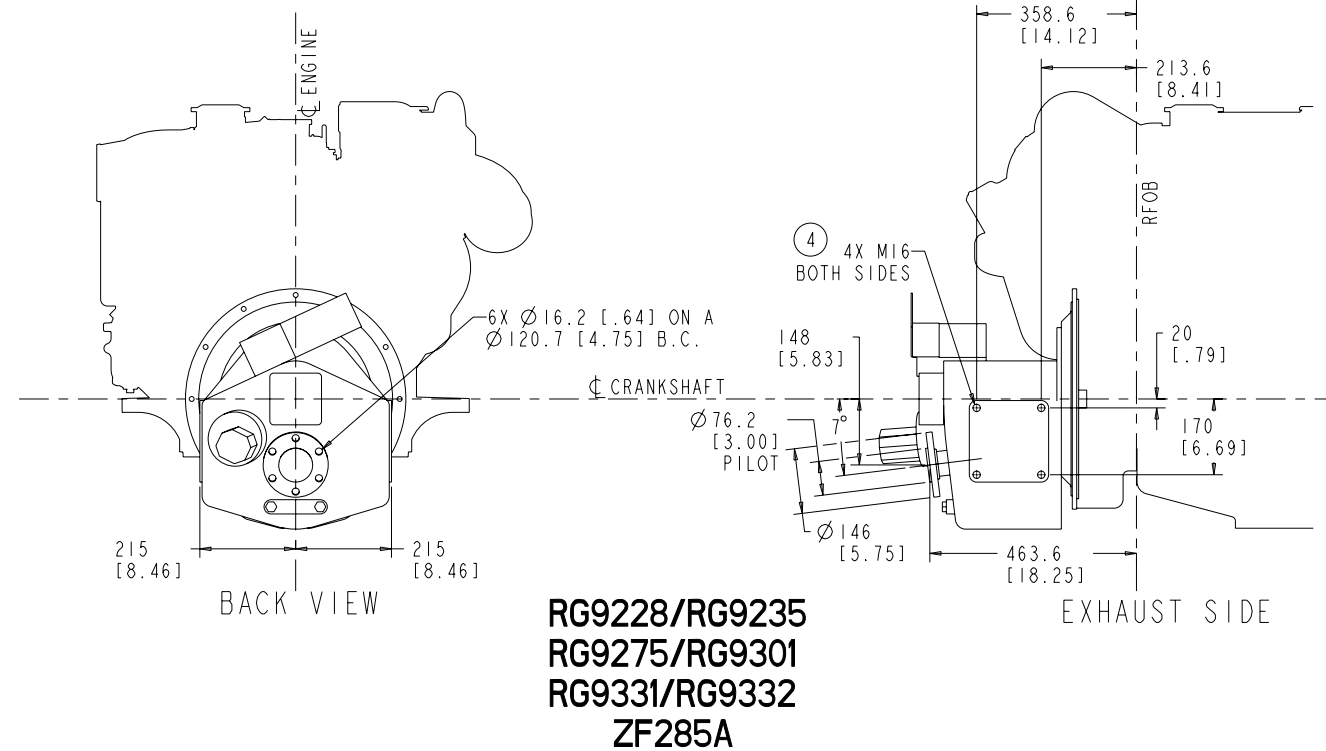
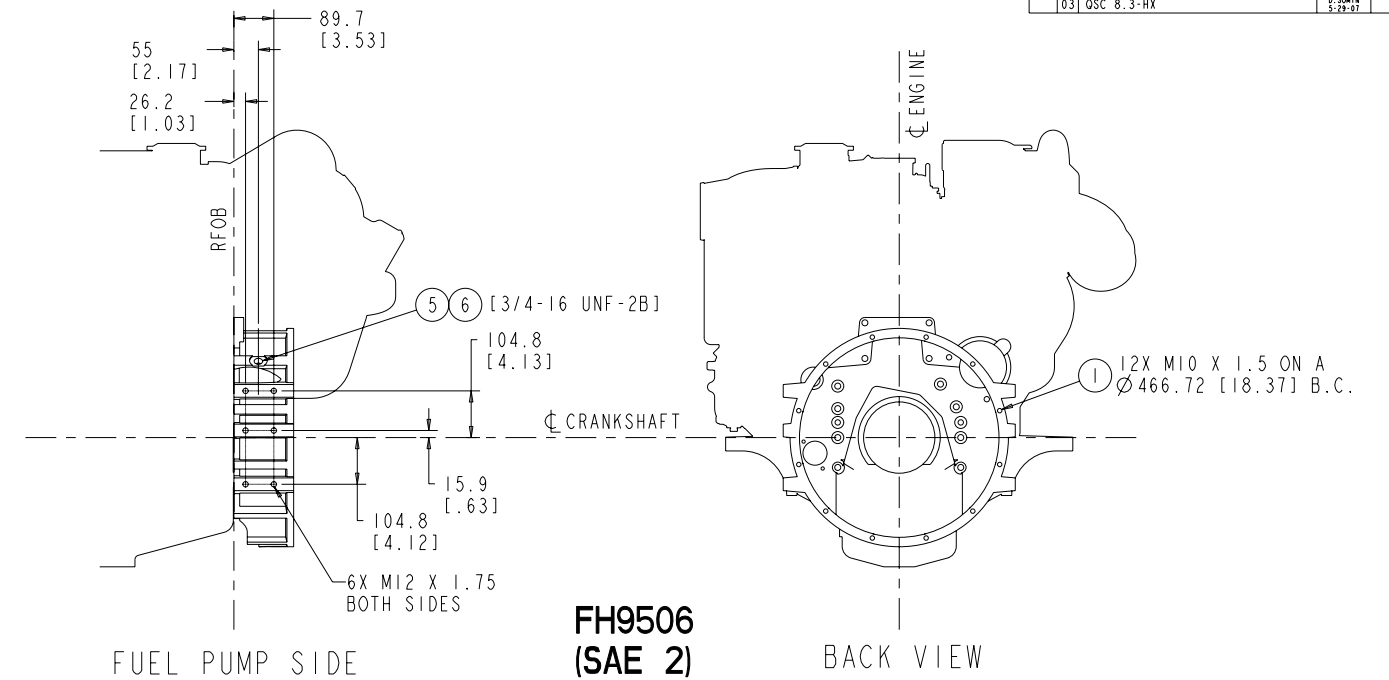
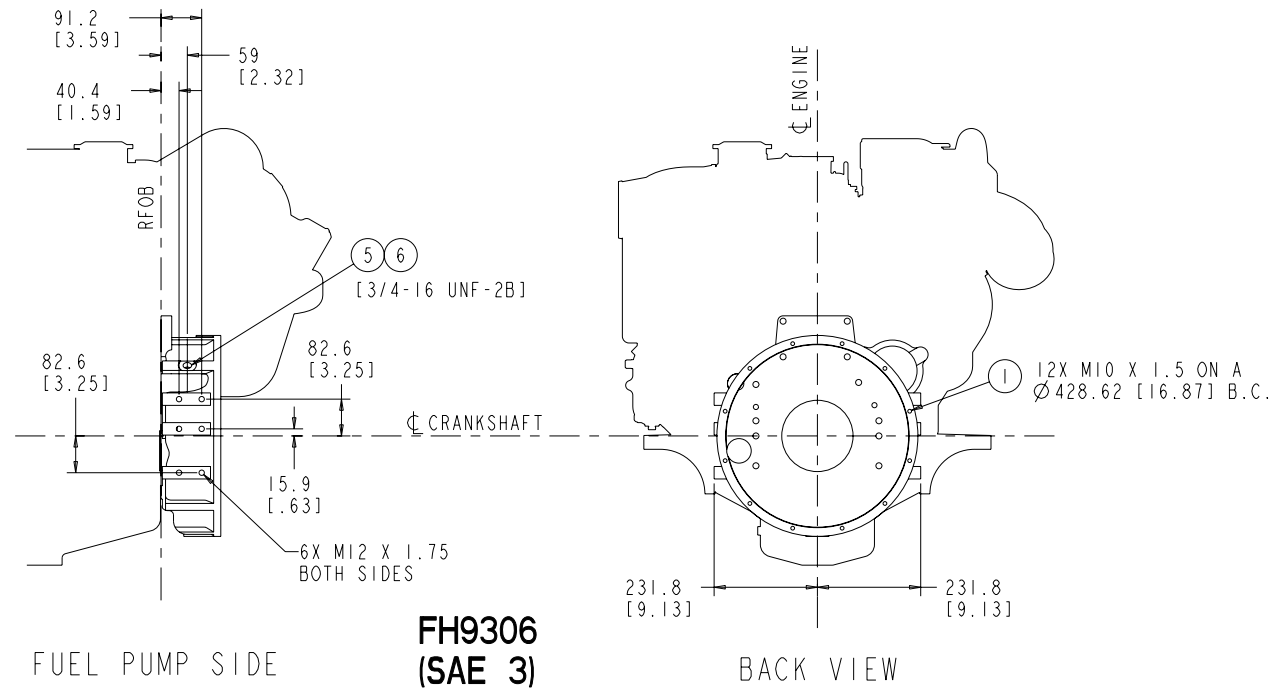
- | | |
|-------------------------------|----------------------------------|
| ① FLYWHEEL HOUSING BOLT HOLES | ④ REAR MOUNT BOLT HOLE |
| ② FRONT MOUNT BOLT HOLE | ⑤ SPEED SENSOR (ECM) PORT |
| ③ JACKING SCREW BOLT HOLE | ⑥ SPEED SENSOR (TACHOMETER) PORT |

INCHES
MILLIMETERS

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 |

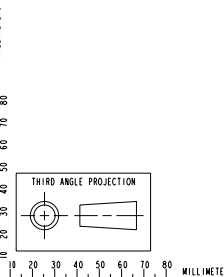
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LAST SECTION LETTER USED: A	REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES	ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN: TMO/TGANG	SCALE: 2x	SIZE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

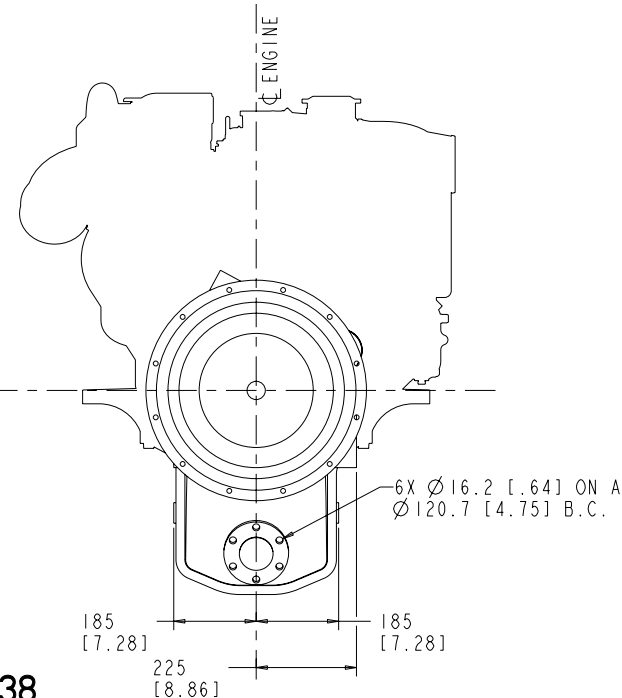
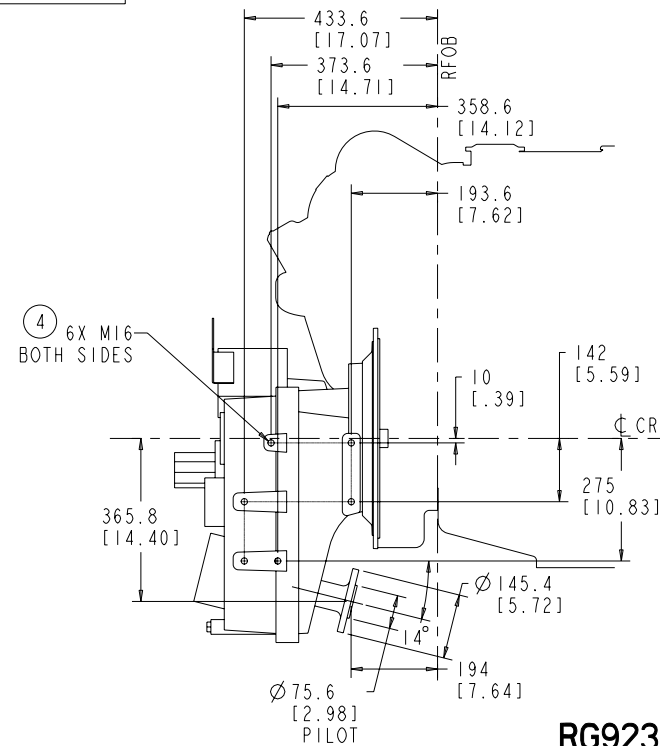
MOUNTING SYSTEM

INCHES
MILLIMETERS

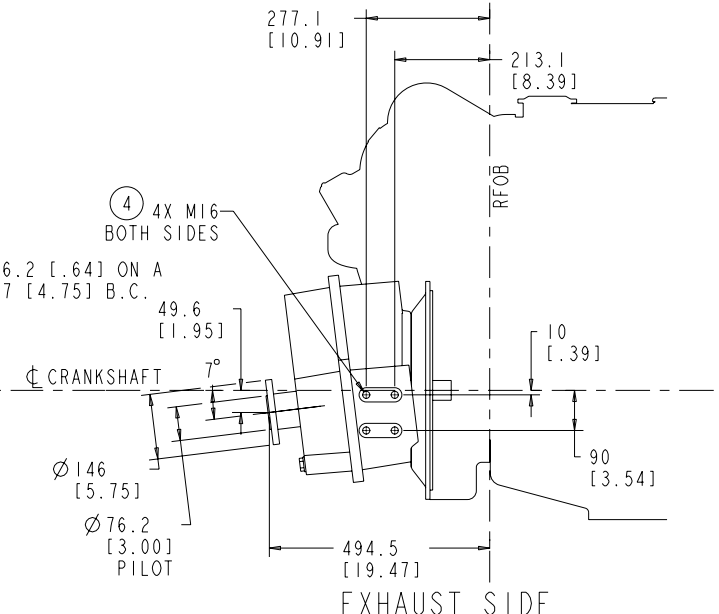
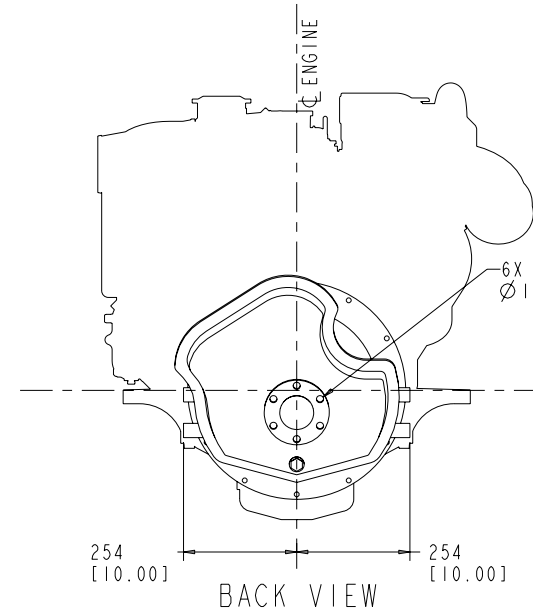


ITEM NUMBER
3170592

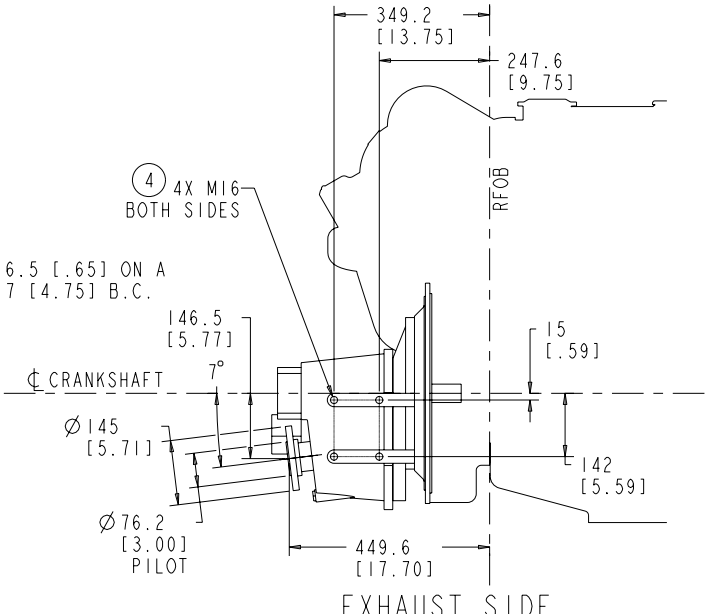
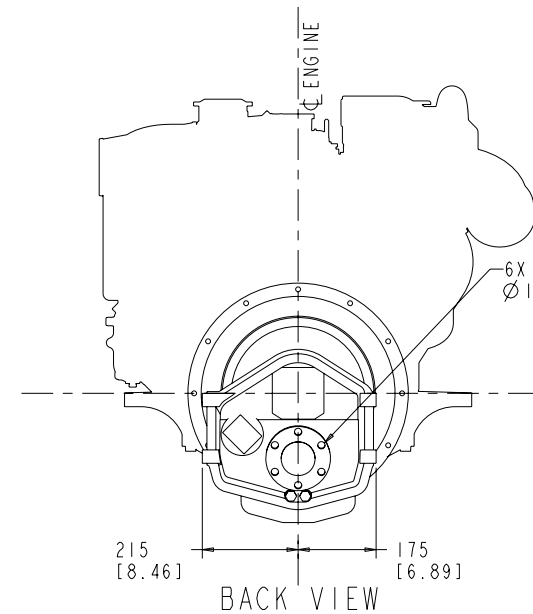
REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03	QSC	8.3-HX	



EXHAUST SIDE
RG9237/RG9238
RG9320/RG9335
ZF285IV



RG9243/RG9244
MG5075A



RG9302/RG9308
ZF280-1A

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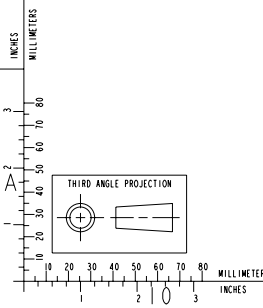
- ① FLYWHEEL HOUSING BOLT HOLES
- ② FRONT MOUNT BOLT HOLE
- ③ JACKING SCREW BOLT HOLE
- ④ REAR MOUNT BOLT HOLE
- ⑤ SPEED SENSOR (ECM) PORT
- ⑥ SPEED SENSOR (TACHOMETER) PORT

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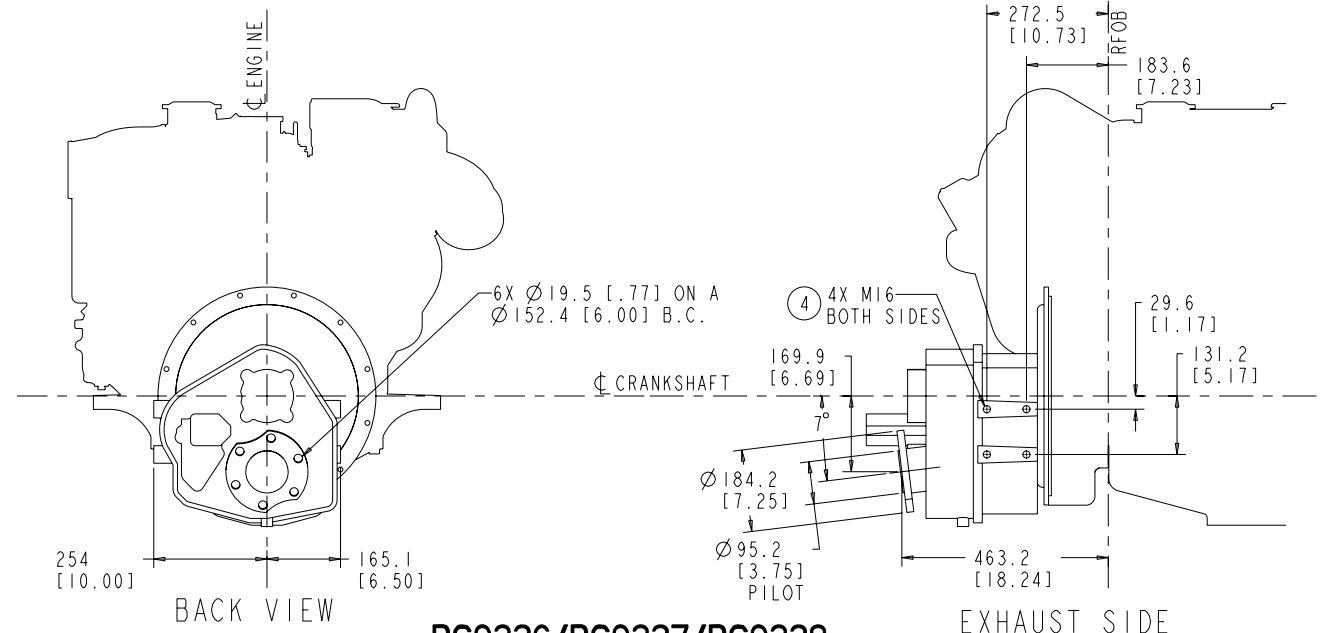
MOUNTING SYSTEM

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

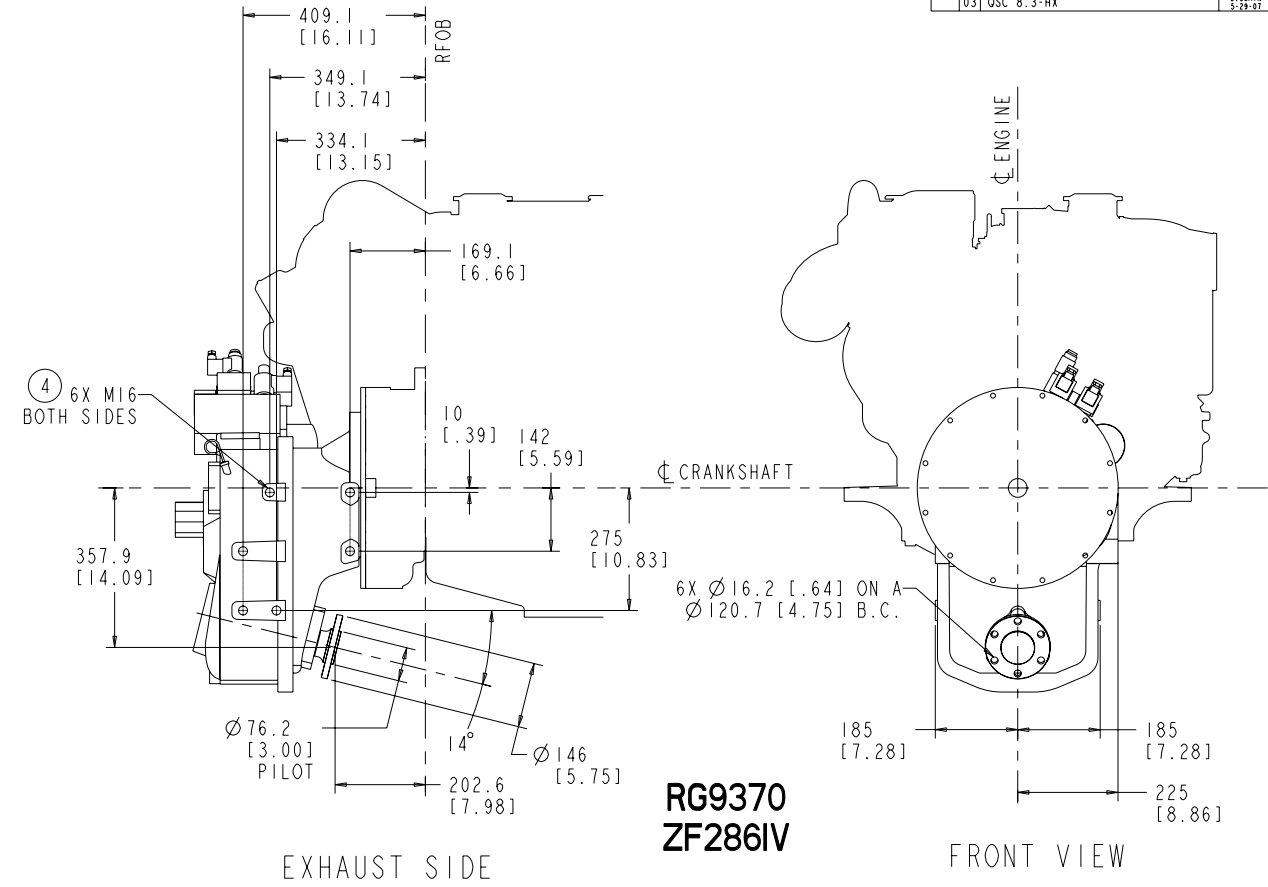


ITEM NUMBER
3170592

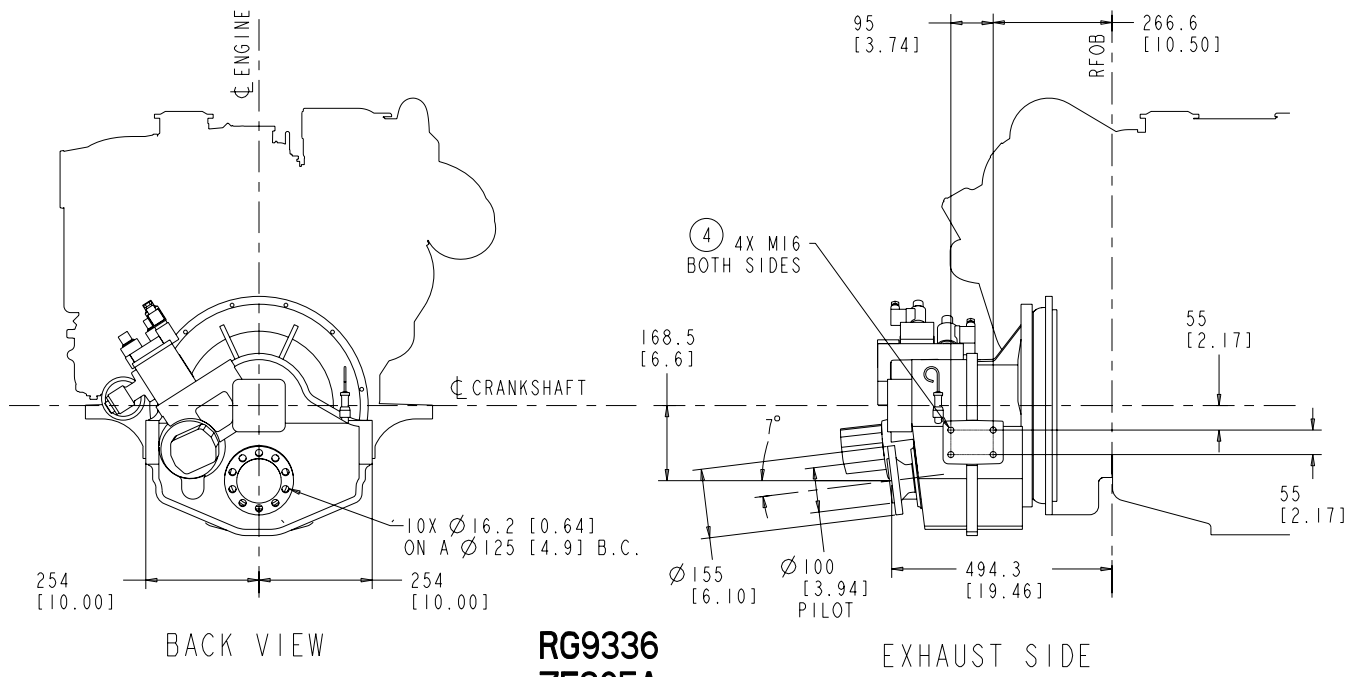
REVISIONS		OWN	APP'D
03	QSC 8.3-HX	B. SMITH	



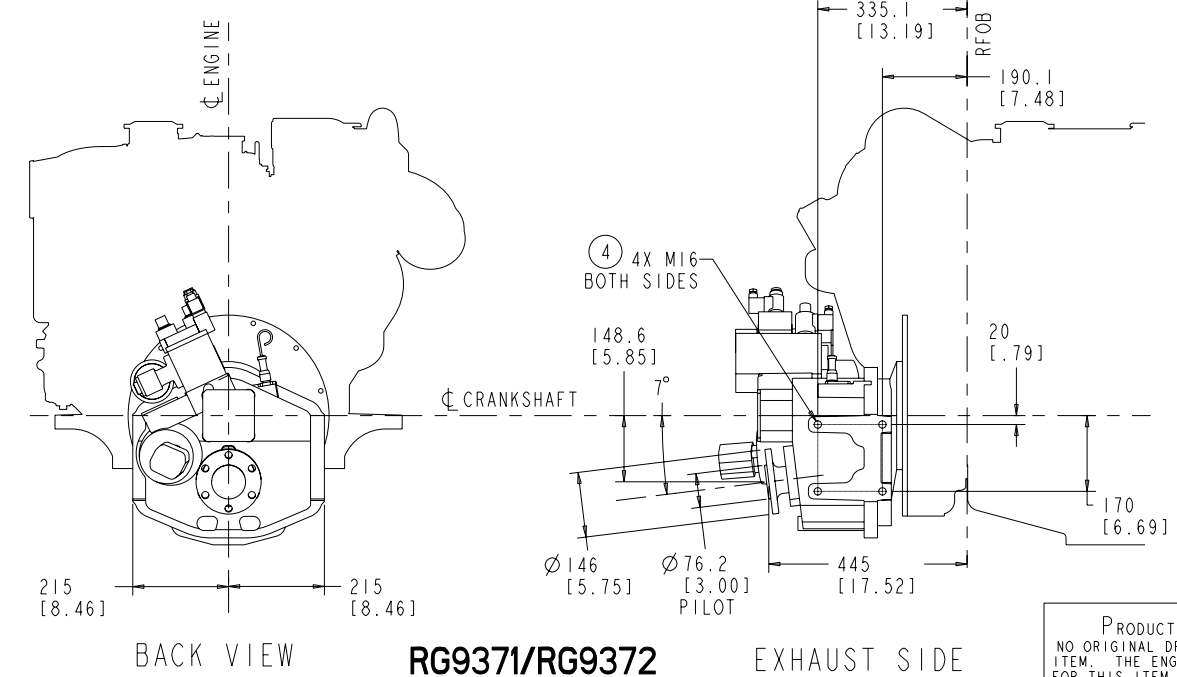
**RG9326/RG9327/RG9328
TD MG5065A**



**RG9370
ZF286IV**



**RG9336
ZF305A**



**RG9371/RG9372
RG9374
ZF286A**

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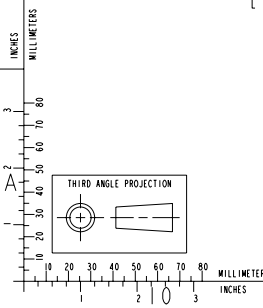
- | | |
|-------------------------------|----------------------------------|
| ① FLYWHEEL HOUSING BOLT HOLES | ④ REAR MOUNT BOLT HOLE |
| ② FRONT MOUNT BOLT HOLE | ⑤ SPEED SENSOR (ECM) PORT |
| ③ JACKING SCREW BOLT HOLE | ⑥ SPEED SENSOR (TACHOMETER) PORT |

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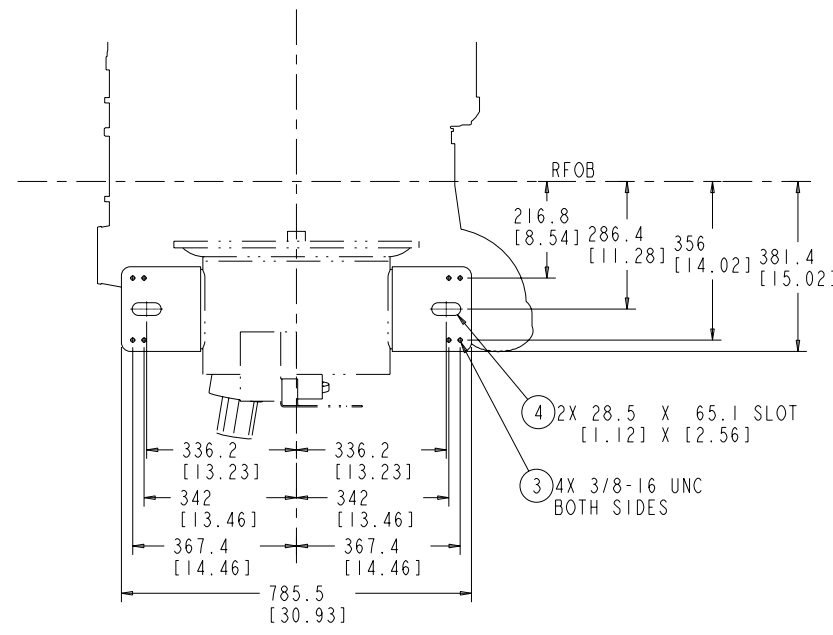
MOUNTING SYSTEM

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

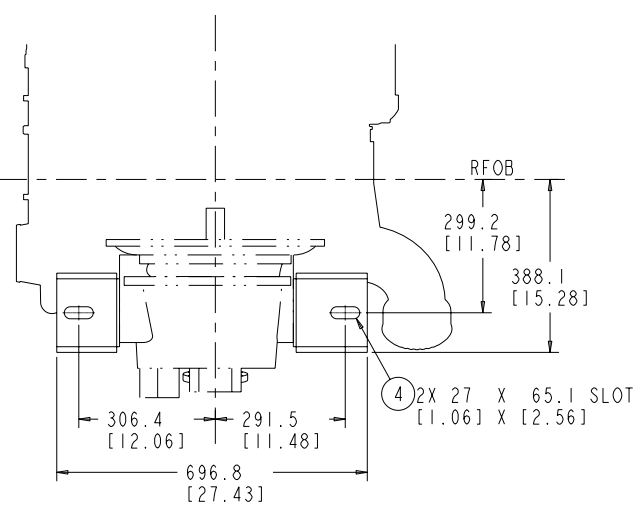


ITEM NUMBER
3170592

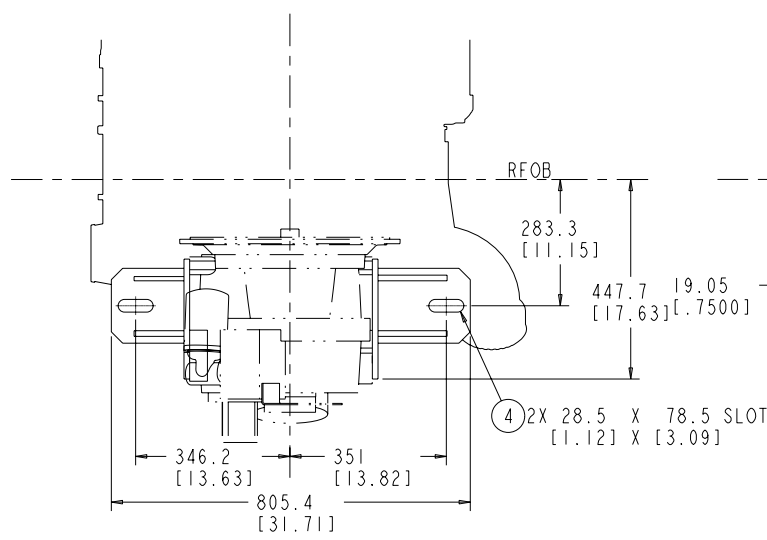
REVISIONS		OWN	APP'D
ZONE	REV	DESCRIPTION	
03		QSC 8.3-HX	



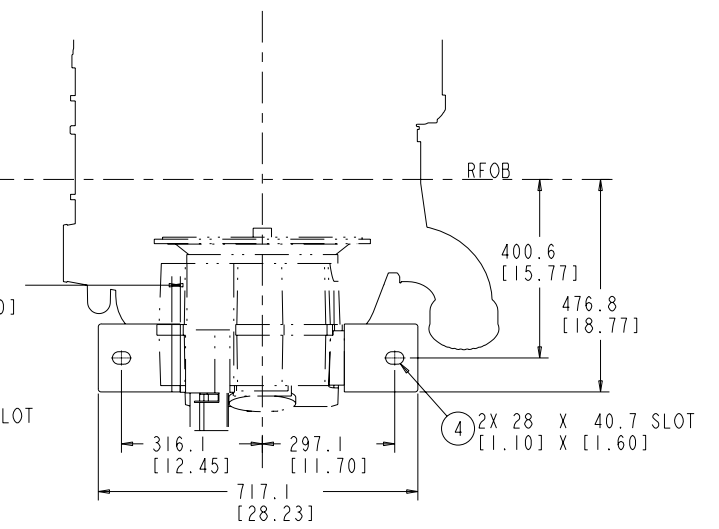
TOP VIEW



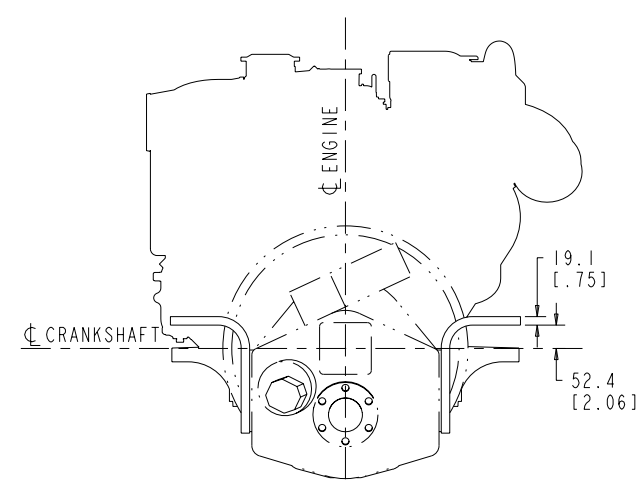
TOP VIEW



TOP VIEW

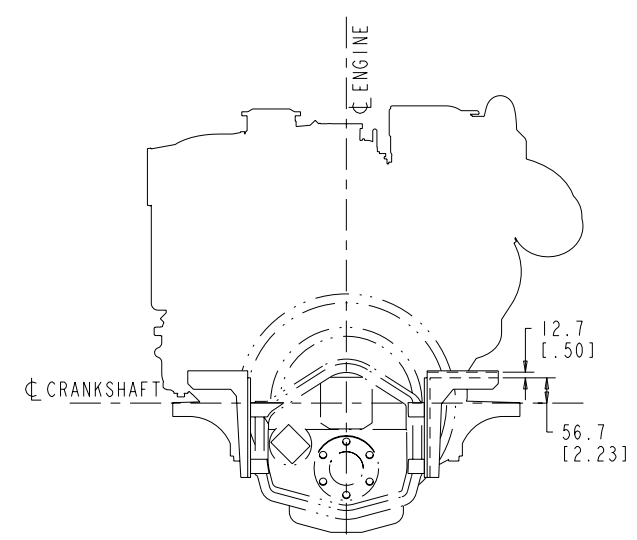


TOP VIEW



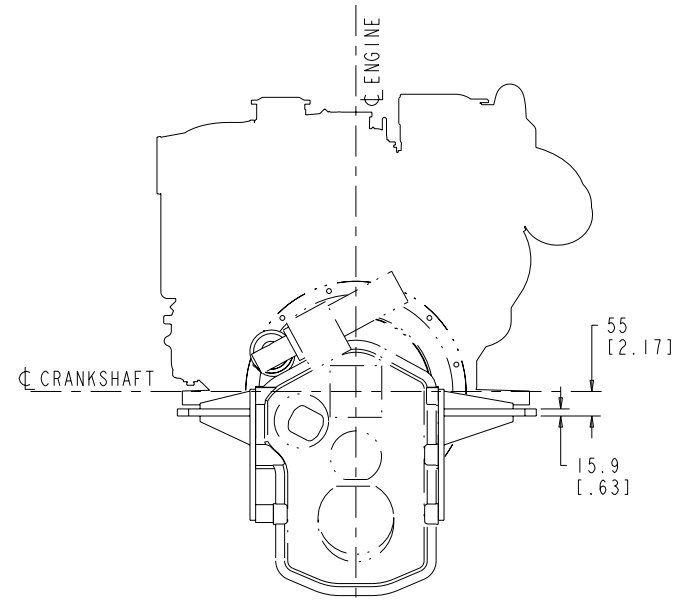
BACK VIEW

SA9035
ZF285A/ZF286A



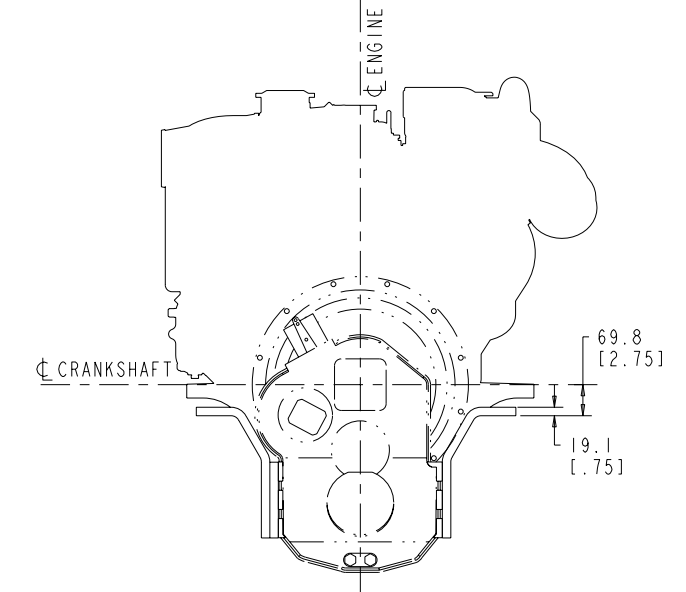
BACK VIEW

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.

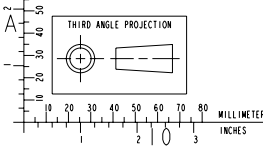
LAST SECTION LETTER USED: A		REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN	TWO/2004	SCALE: 2:1	SIZE CODE IDENT. NO.	ITEM NUMBER 3170592
CHD	UNCHECKED	ITEM CONTROL: MCS	SHEET 29 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 |

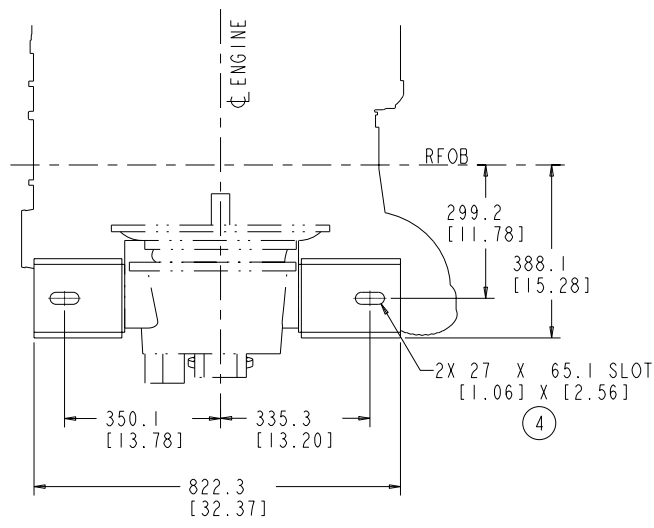


INCHES
MILLIMETERS

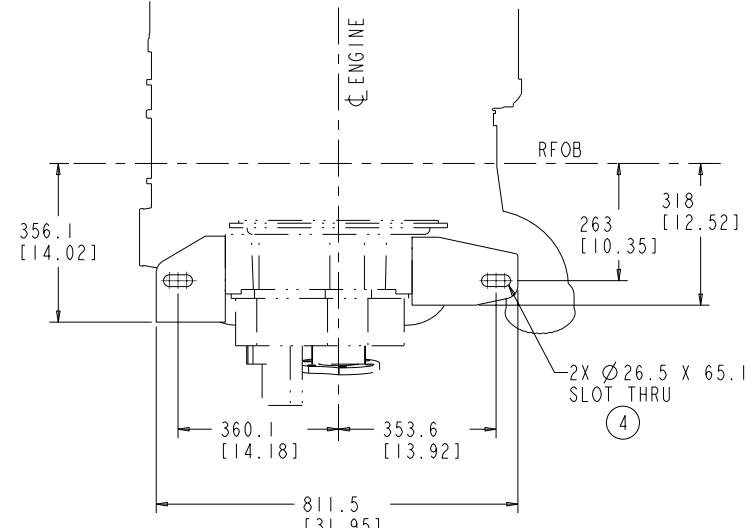
INCHES
MILLIMETERS

ITEM NUMBER
3170592

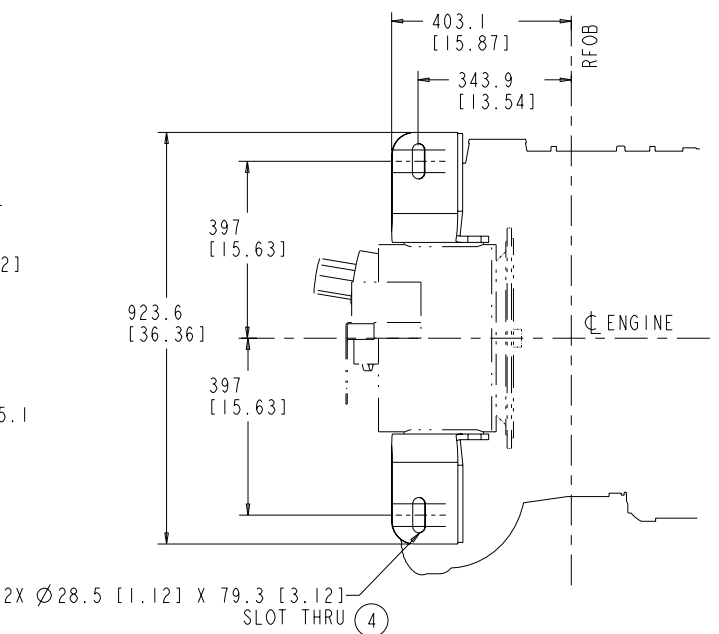
REVISIONS			
ZONE	REV	DESCRIPTION	APP'D
03		QSC 8.3-HX	B. SMITH 3-28-97



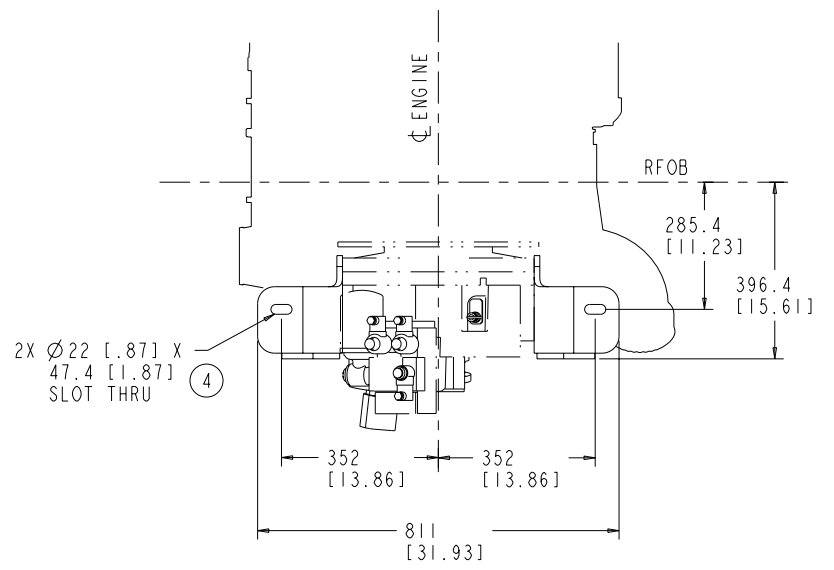
TOP VIEW



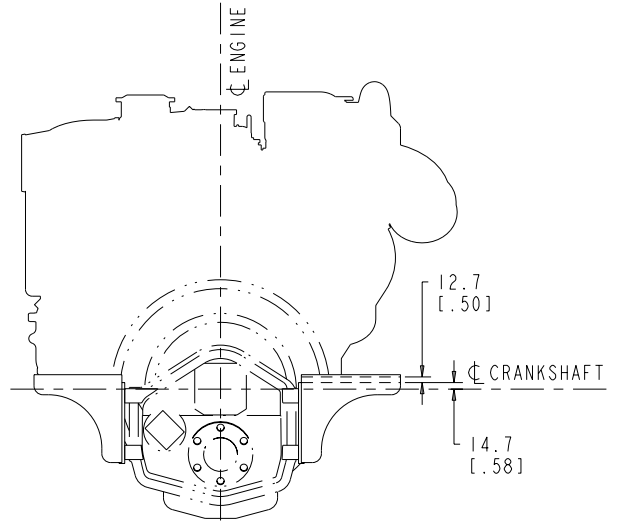
TOP VIEW



TOP VIEW

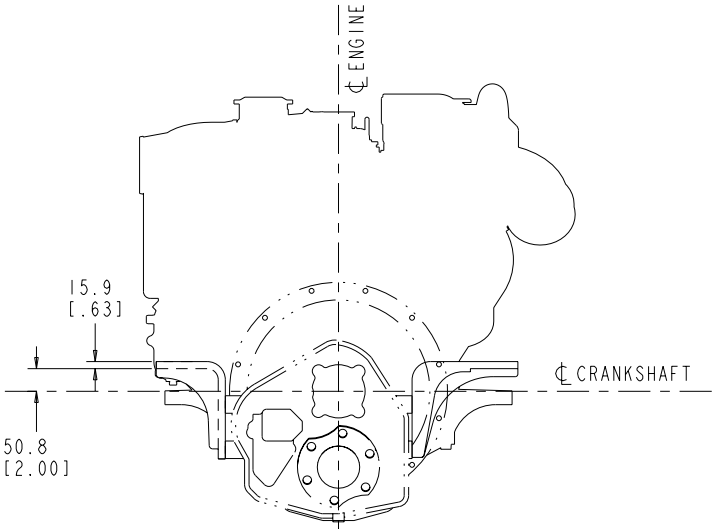


TOP VIEW



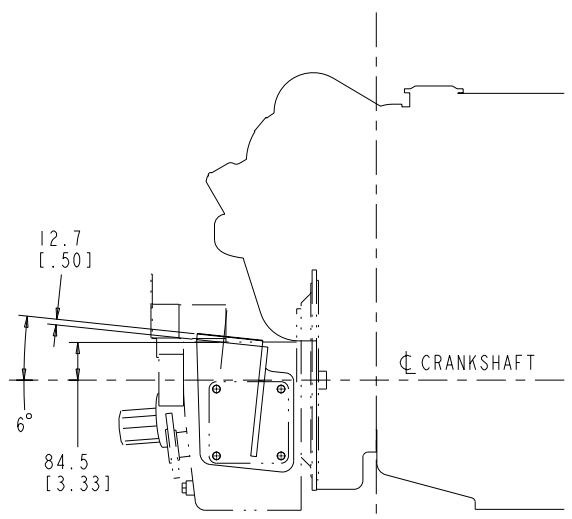
BACK VIEW

SA9060
ZF280-1A



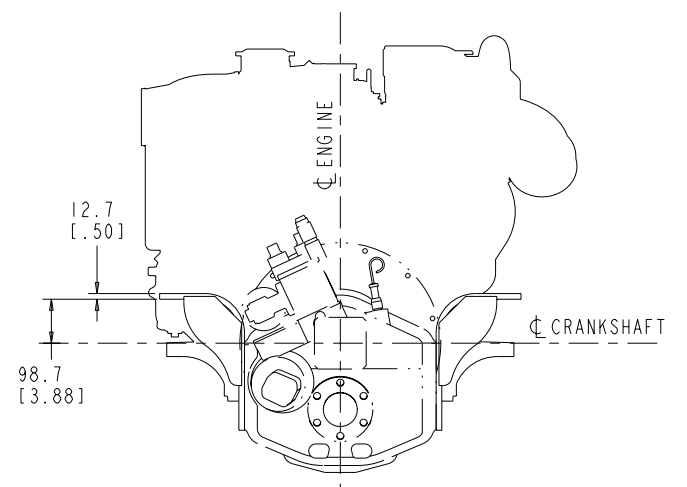
BACK VIEW

SA9063
TD MG5065A



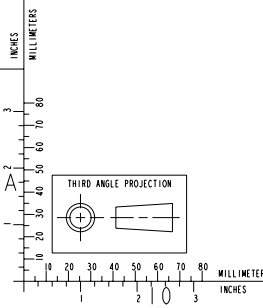
EXHAUST SIDE

SA9065
ZF285A/ZF286A



BACK VIEW

SA9068
ZF285A/ZF286A



- 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

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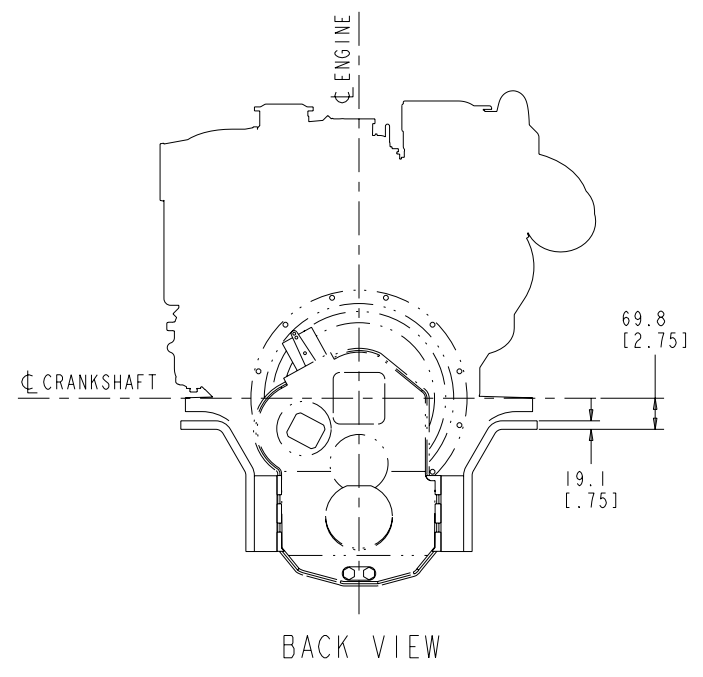
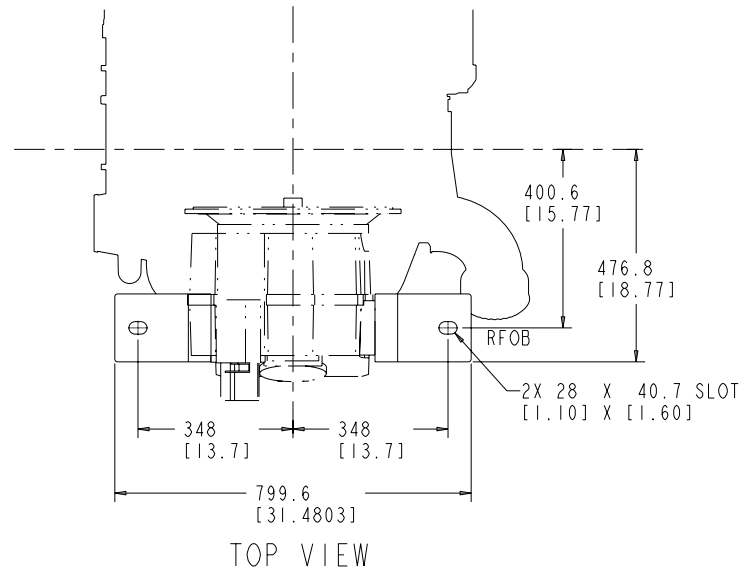
LAST SECTION LETTER USED: A		REF. DRAWING STANDARDS: ANSI Y14.5M ISO 81101	CUMMINS INC.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER INSTALLATION DIAGRAM	
DWN: TMO/FGANG	APPD: UNCHECKED	SIZE CODE (IDENT. NO.):	ITEM NUMBER 3170592	ITEM CONTROL: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

MOUNTING SYSTEM

DO NOT SCALE THIS DRAWING
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ITEM NUMBER
3170592

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



SA9071
ZF280IV

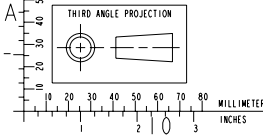
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN: MILLIMETERS () ARE IN: INCHES		ITEM NAME QSC 8.3-HX	IDENTIFIER
DWN	TWO/TANG	SIZE CODE IDENT. NO.	ITEM NUMBER
CHD	UNCHECKED	J	3170592
APPD		SCALE: 2x	ITEM CONTROL: MCS SHEET 31 OF 32

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MOUNTING SYSTEM

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

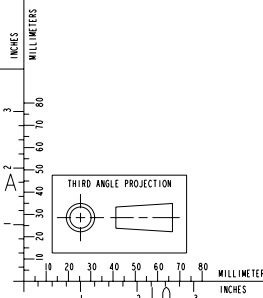
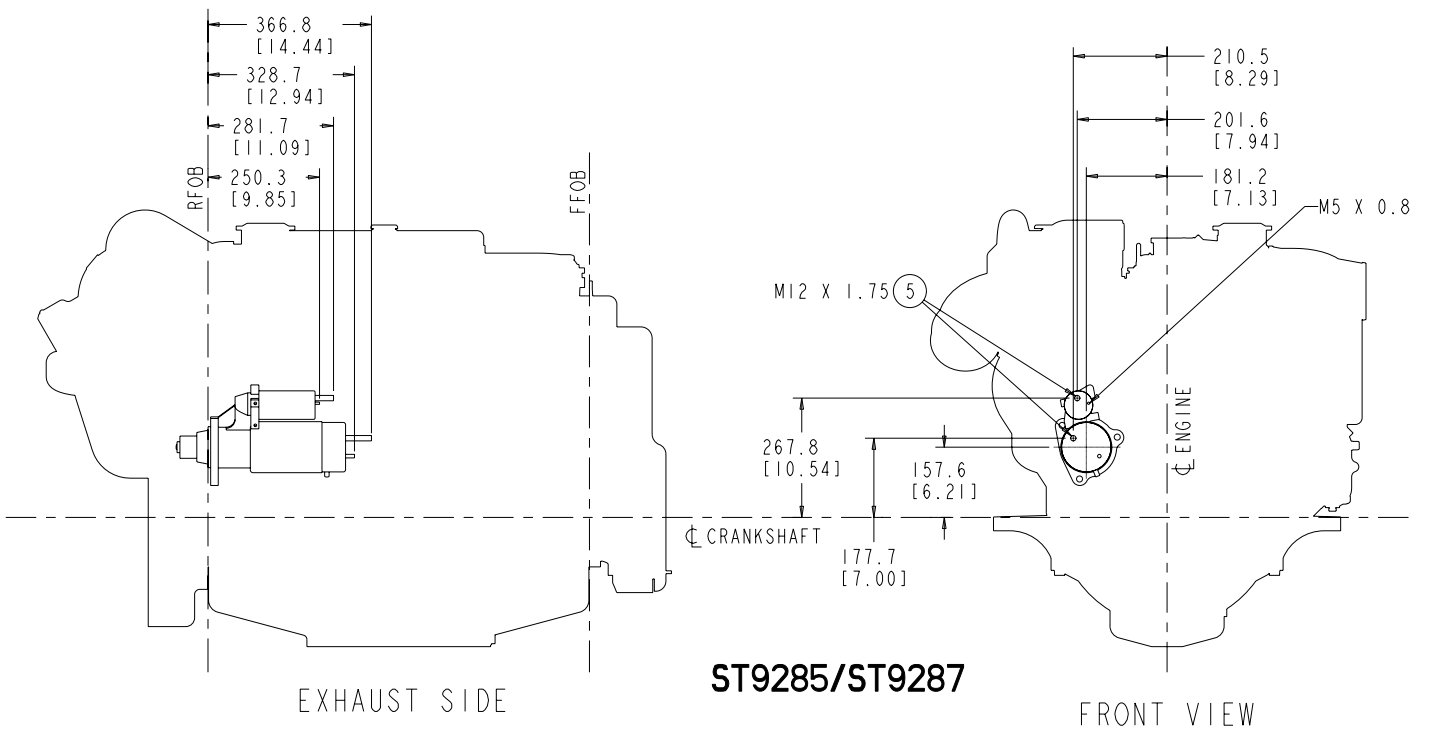
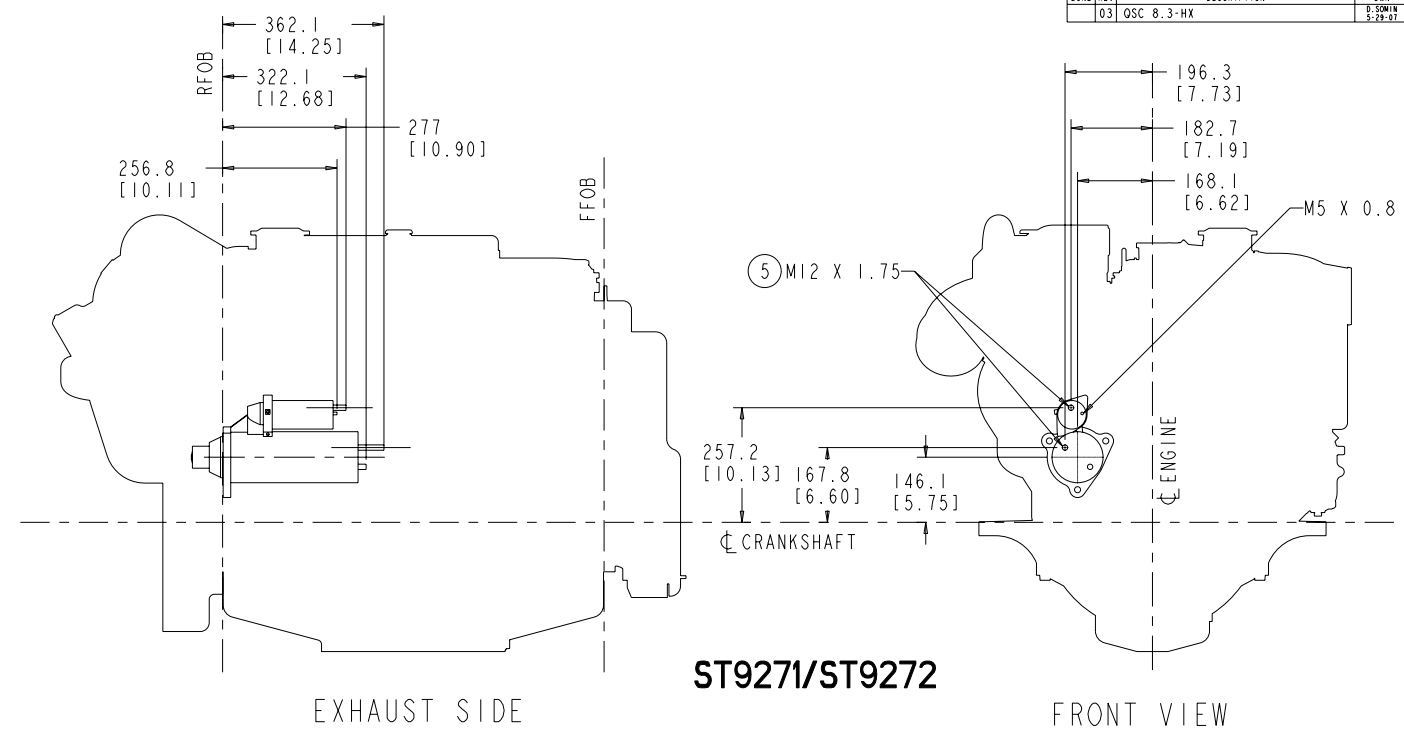
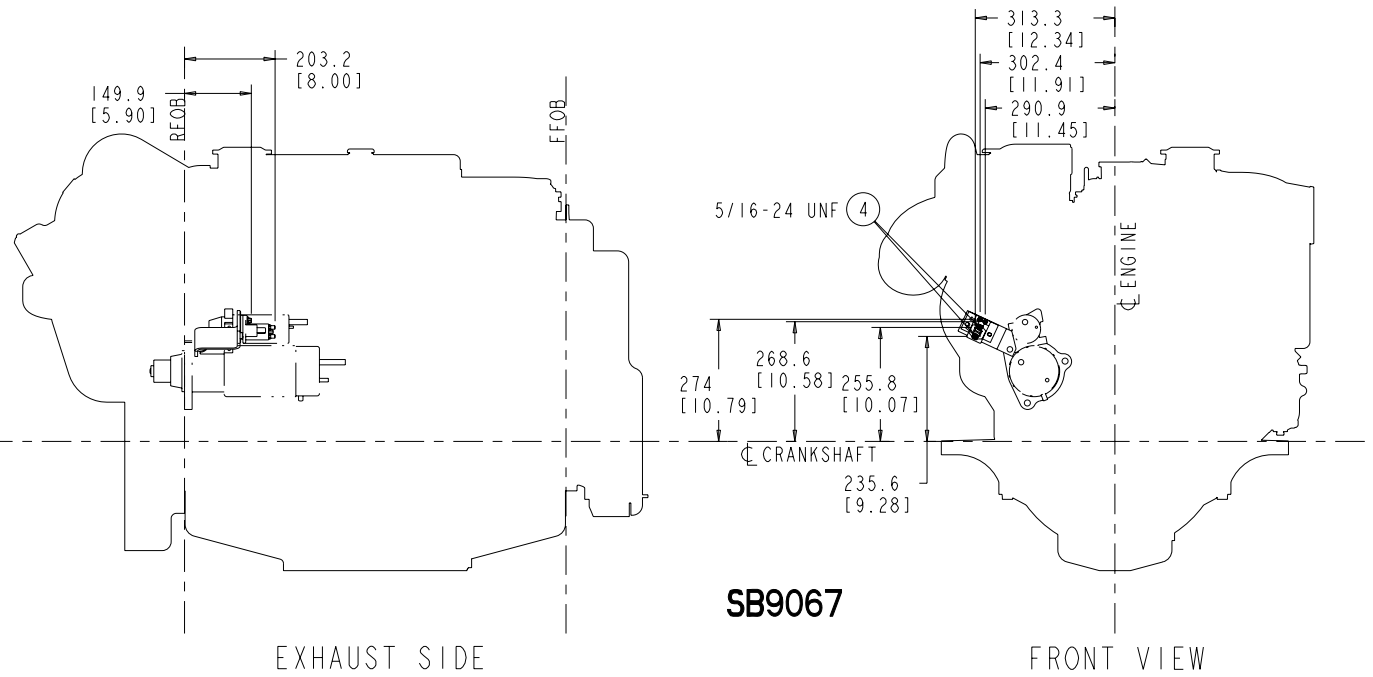


INCHES
MILLIMETERS



ITEM NUMBER
3170592

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



- (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

STARTING SYSTEM

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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
DWN: TMO/EGANG	CHK: UNCHECKED	SIZE CODE (IDENT. NO.)	ITEM NUMBER
APPD:		J	3170592
SCALE: 2x		ITEM CONTROL: MCS	SHEET 32 OF 32