

QSM11G

G-Drive

Sales Handbook

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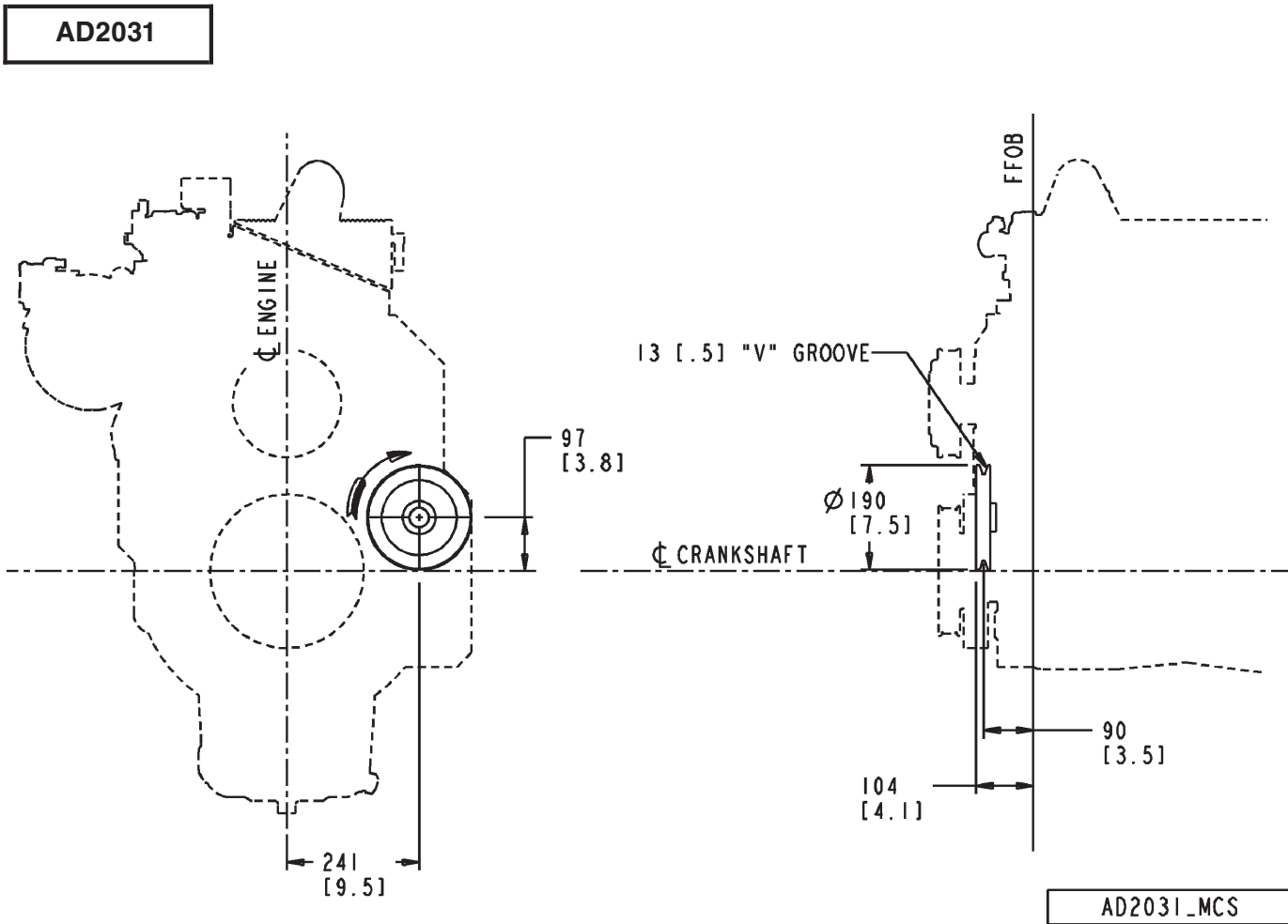
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**QSM11G G-DRIVE ENGINE
PRODUCT SUMMARY**

January 2001

Model Name	Configuration #	Application	Max Gross BHP	
			1500 rpm	1800 rpm
QSM11-G1	D353017GX03	Standby	345	395
		Prime	314	359
		Continuous	TBD	TBD
QSM11-G2	D353017GX03	Standby	430	470
		Prime	391	427
		Continuous	TBD	TBD

AD - Accessory Drive Pulley



AD2031 [G]

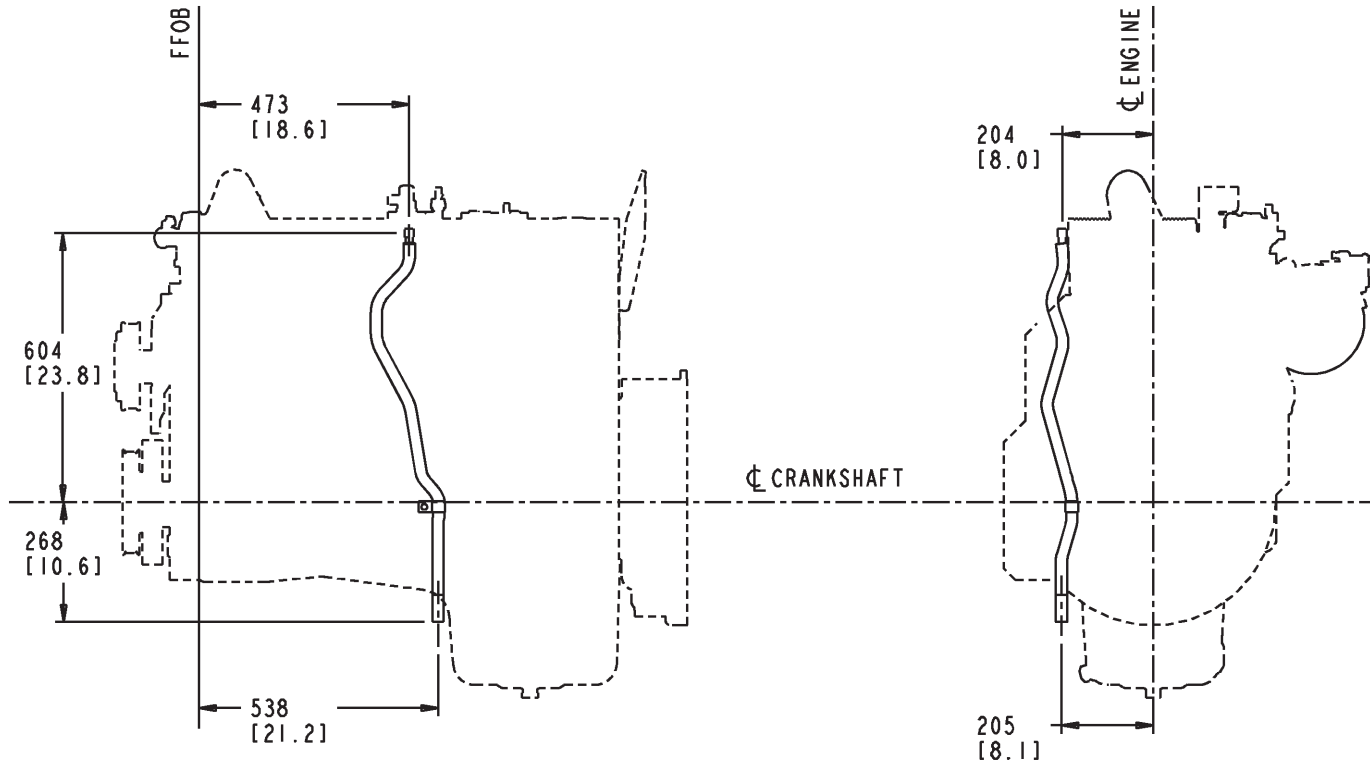
Option #	Groove	Bolt Circle	Max. Torque@ Rated RPM	Drive Ratio	Notes	Weight	Value Code
AD 2031	Single 13 mm [0.5 in.] V	N/A	20 Hp	Turns at engine speed	7.55 in. diameter	-	-

Single groove drive pulley for 13 mm [0.5 in.] (Dim. W) V-belt mounted on fuel pump (left) side of engine.
 Side Load Limitation: 163 kg [360 lb.]
 Pulley Rotation: Same as engine crankshaft
 Pulley Groove Location: 90.0 mm [3.54 in.]

Can be adapted for customer supplied alternator and mounting. If no drive requirement from left side, use this option for timing marks.

BR - Crankcase Breather

BR2033



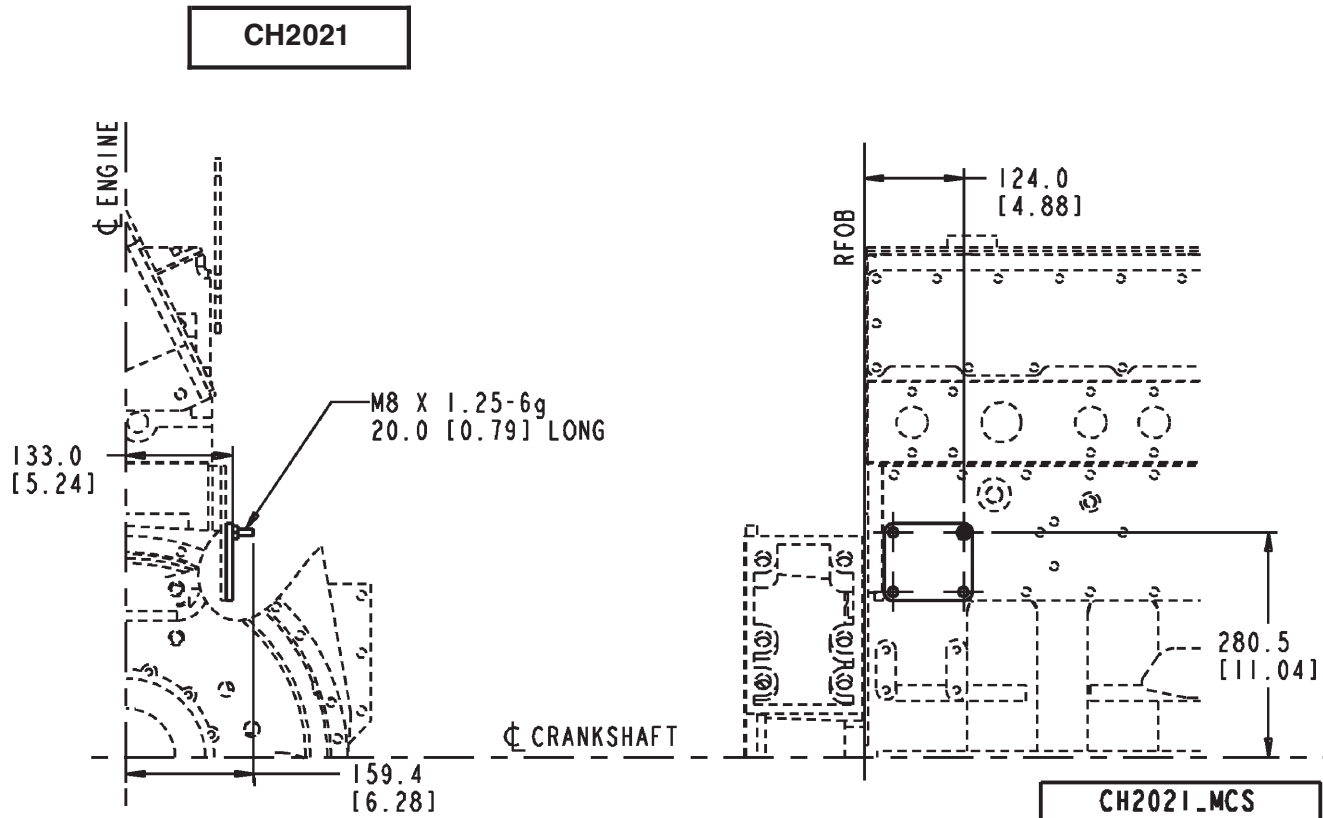
BR2033_MCS

BR2033 [M]

Option #	Mounting Location	Notes	Weight	Value Code
BR 2033	Breather System: Open	152 mm [6.0 in.] below pan rail	1 lb	Best Value

Vent Location: Side
 Vent Tube Routing: Left Center
 Vent Tube End Location: 6 in. below pan rail
 Breather System: Open

CH - Coolant Heater Starting Aid



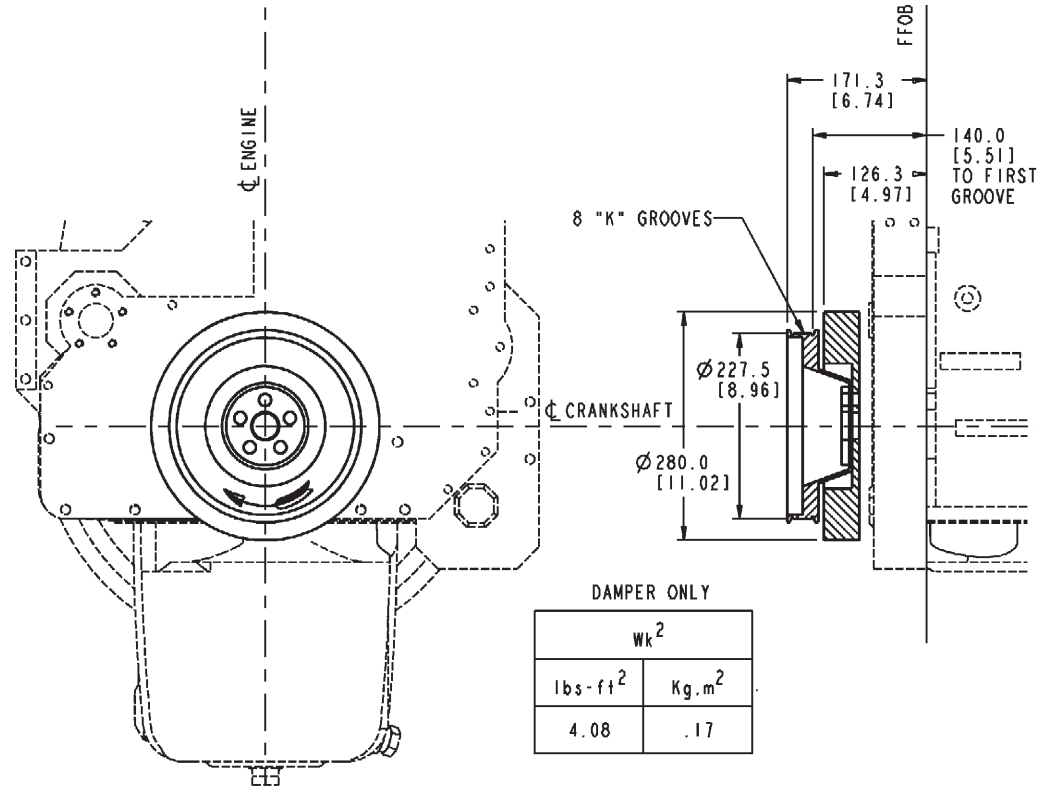
CH2021 [M]

Option #	Volts/Wattage	Cord Length	Location	Notes	Weight	Value Code
CH 2021	No Heater	N/A	N/A	Cover plate	n/a	-

Heater element supplier: None
 No future requirement to install an engine coolant heater, Kim Hotstart or other external heaters mounted in heater housing located right rear on water header plate.
 Heating Element mounting style: No element - Blanking plate installed.
 Heater housing acc. plumbing hole: None
 Stud provided: Stud - upper R.H. corner

DA - Vibration Damper

DA2110



DA2110_MCS

DA2110 [M]

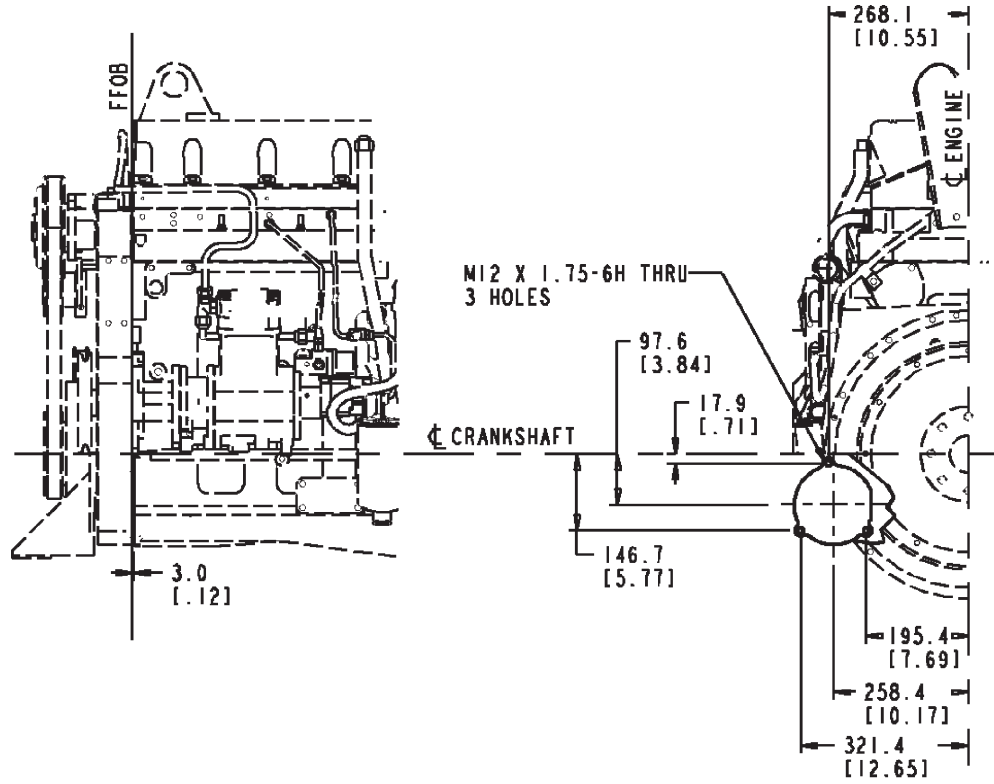
Option #	Fan Drive Crank Pulley Dia.	Addt'l Drive Pulleys	PTO Provision	Engine Rated Speed	Notes	Weight	Value Code
DA 2110	229.52 mm [9.04 in.]	No	No	2100 rpm	Poly V 8 Rib 'K'/Dia.	-	Best Value

Vibration Damper
 Intended drive: Fan Drive Only
 Crank Pulley Diameter: 229.52 mm [9.04 in.]
 Crank Pulley Groove Type: Poly V 8 Rib "K"

PTO Provision: None

DF - Front Gear Train Accessory Drive

DF2036



DF2036-SHB

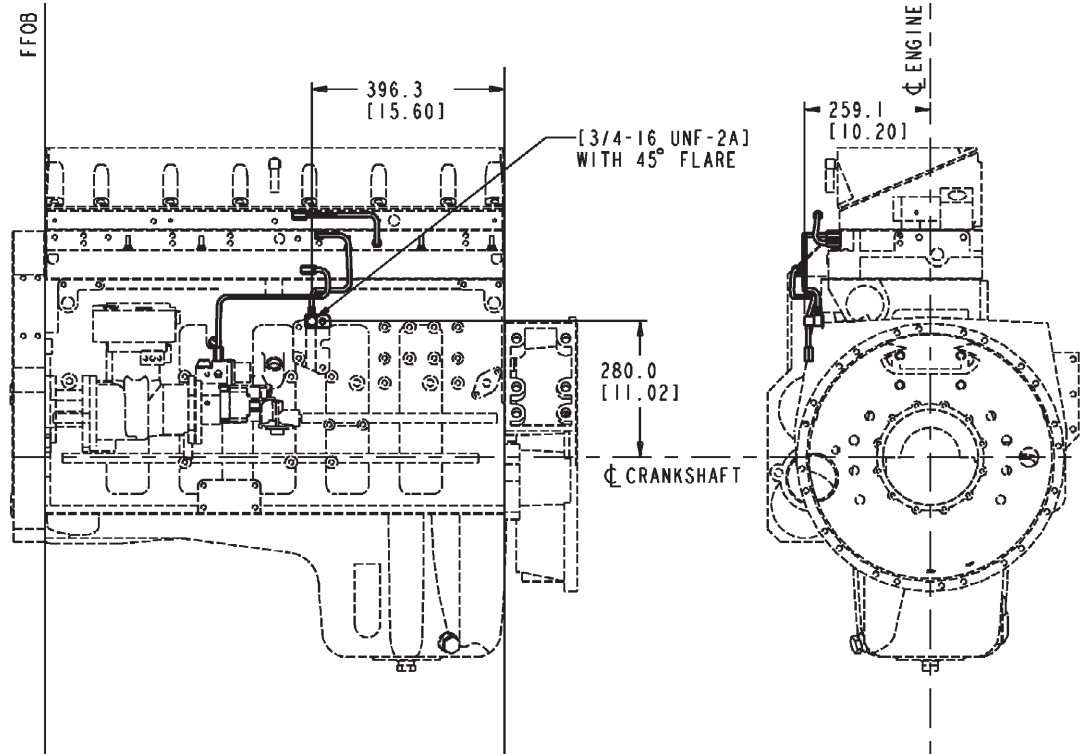
DF2036 [M]

Option #	Description	Shaft	Max Torque @ Rated RPM	Drive Ratio	Notes	Weight	Value Code
DF 2036	None	N/A	N/A	N/A	-	-	-

No provision for hydraulic pump drive. Gear housing cover.

DL - Drain Location

DL2031



DL2031_MCS

DL2031 [G]

Option #	Plumbing for	Attachment Location	Attachment Size	Notes	Weight	Value Code
DL 2031	Fuel drain	See drawing	[3/4 -16 UNF-2A] with 45 deg. flare	-	-	-

Fuel pump type: SELECT

Drain position vertical from crank C/L: 290.0 mm [11.42 in.]

Drain position from RFOB: 395.0 mm [15.55 in.]

Drain position from engine C/L: 257.0 mm [10.12 in.]

EB - Engine Brake Control

EB2047

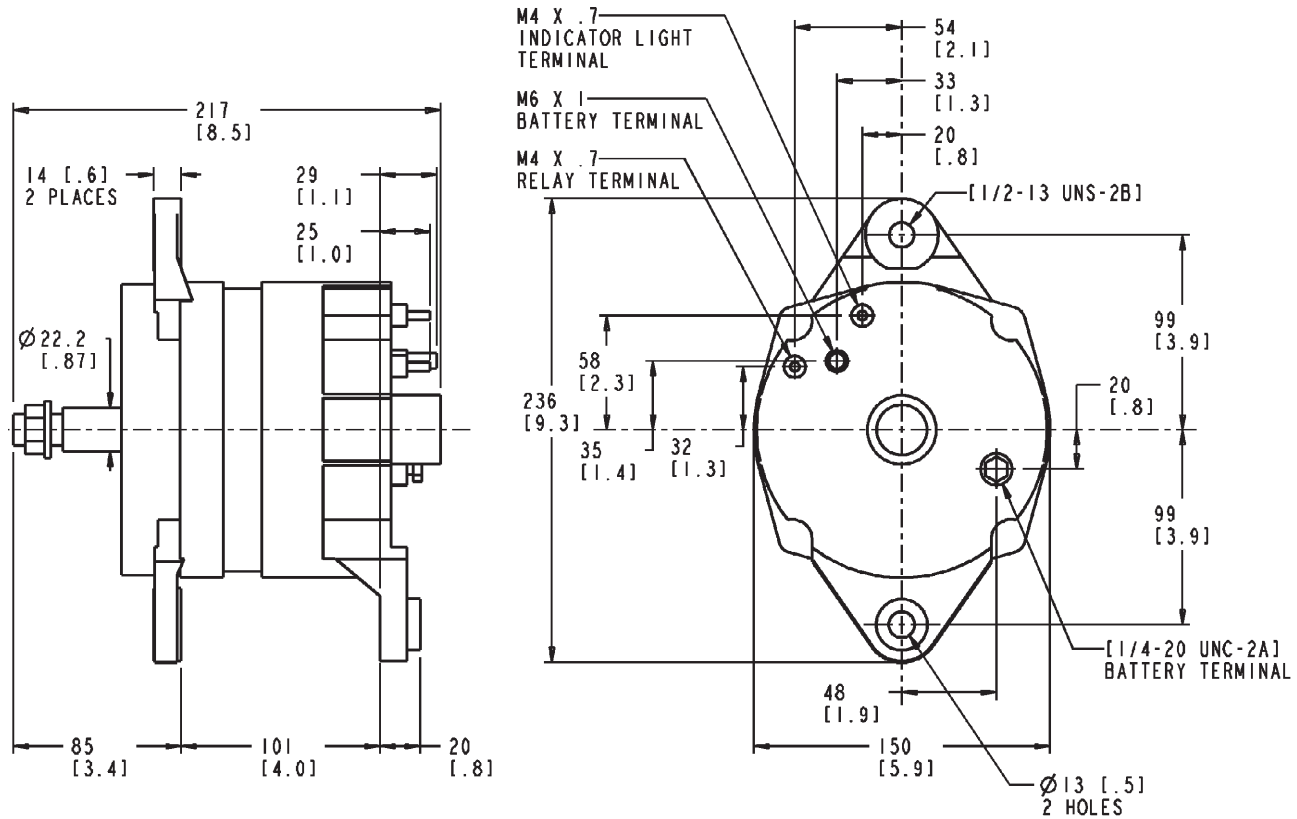
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EB2047 [M]

Option #	Volts	Type	Notes	Weight	Value Code
EB 2047	N/A	Not required	No Brake	0	

EE - Alternator

EE2050



EE2050_MCS

EE2050 [G]

Option #	Mfg./Model	Voltage/Amps	Notes	Weight	Value Code
EE 2050	Delco Remy/22 SI-350/355	24V/70A	-	-	-

Grounding Method: Negative
 Insulation Provision: No
 Built-In Voltage Regulator: Yes
 Ground Wire Supplier: Customer
 Alternator Length: 162 mm [6.38 in.]

QSM11G

Charging system: 1 wire

Battery terminal: M6

R or D terminal: M4

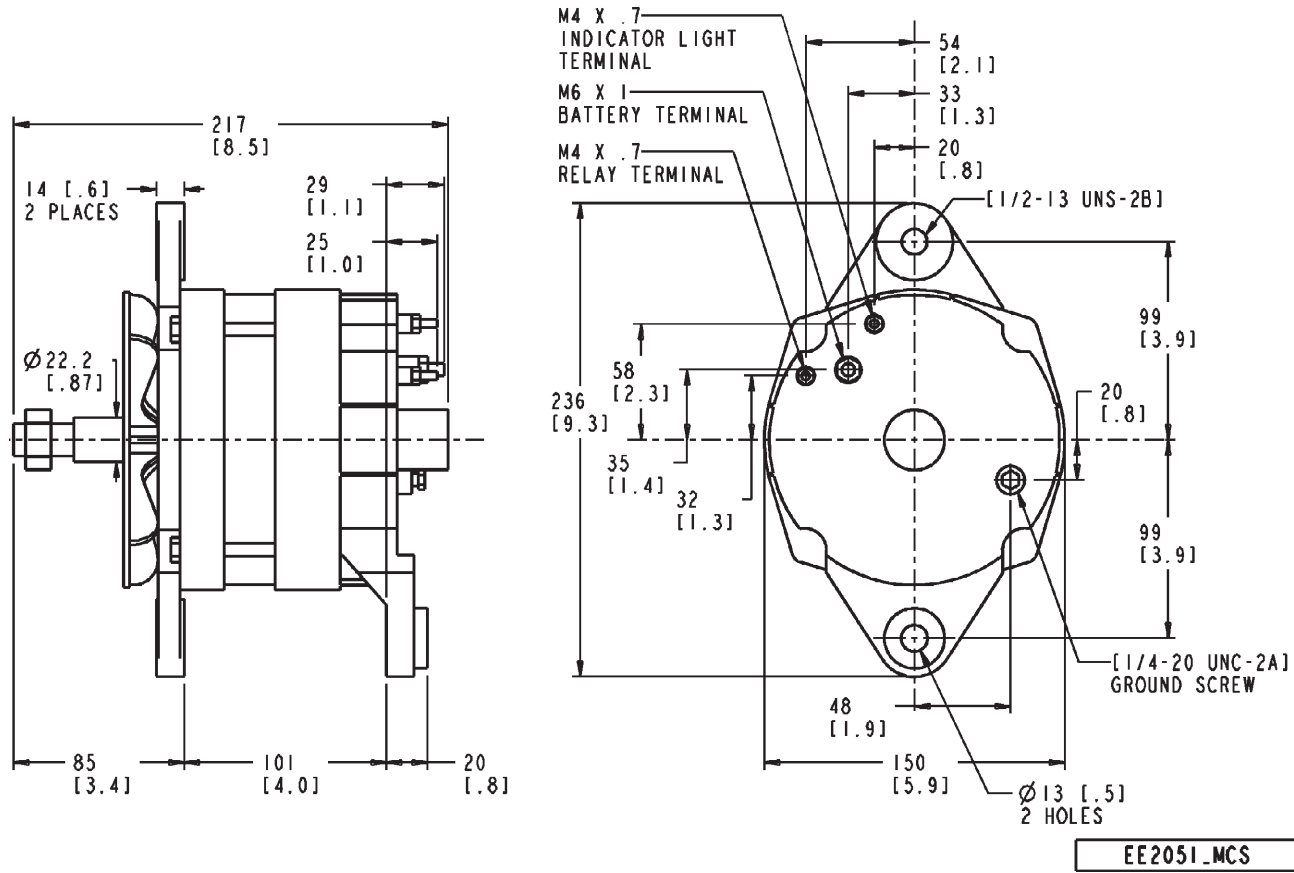
I terminal: M4

Cummins Branded: Yes

Alternator mounting style: 101.6 mm [4 in.] double lug.

EE - Alternator

EE2051



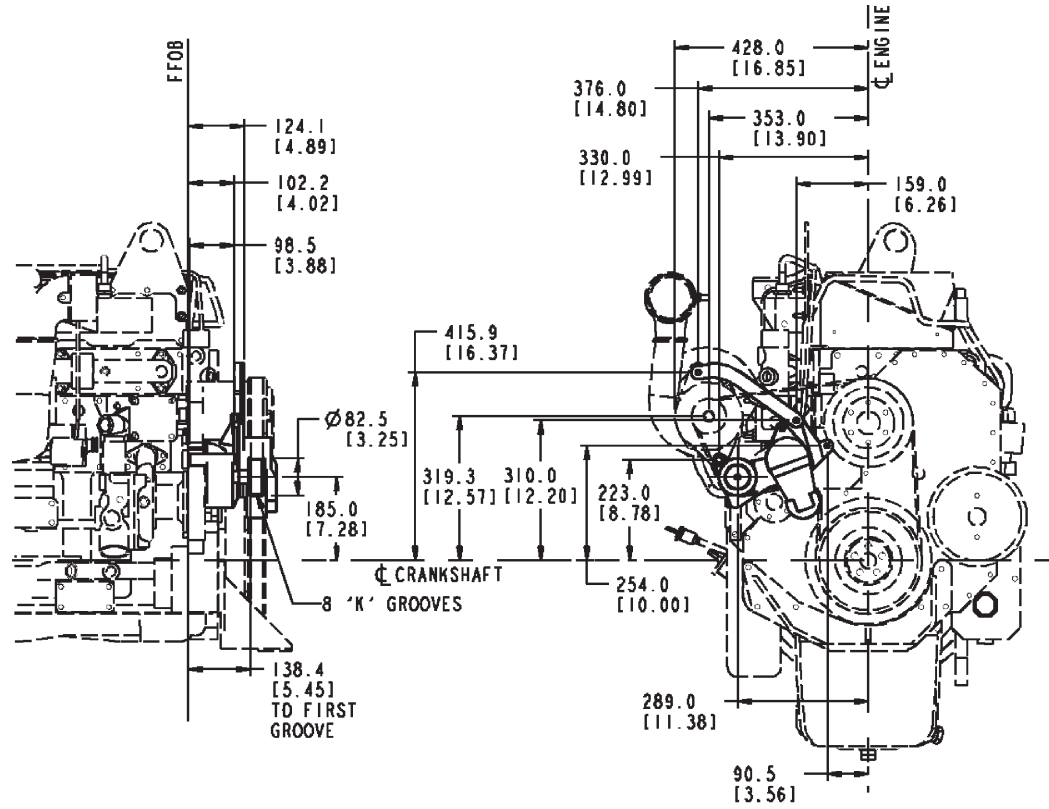
EE2051 [G]

Option #	Mfg./Model	Voltage/Amps	Notes	Weight	Value Code
EE 2051	Delco Remy 22 SI-350/355	24V/50A	-	-	-

Grounding Method: Negative
 Insulation Provision: No
 Built-In Voltage Regulator: Yes
 Ground Wire Supplier: Customer
 Alternator Length: 162 mm [6.38 in.]

EH - Alternator Mounting

EH2127



EH2127.MCS

EH2127 [M]

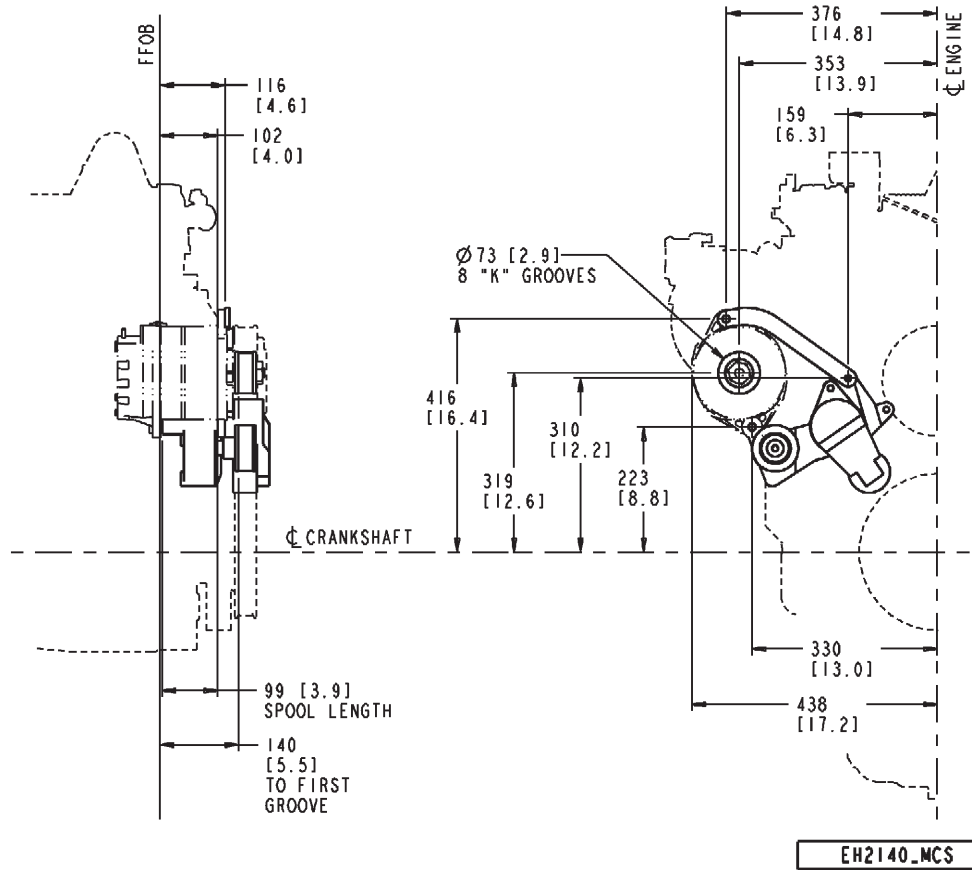
Option #	Use With	Mount Type	Drive Ratio	Notes	Weight	Value Code
EH 2127	Delco Remy or Leece Neville	Spool	3:1	Automatic Tensioner, Right Side	-	-

Alternator Quantity: One
 Serpentine Alternator/Fan Drive: Yes
 Drive Location: Crankshaft
 Alt. Pulley Dia. 76.20 mm [3 in.]

Alt. Pulley Groove: Poly V 8 Rib 'K'
Alt. Pulley Groove Location: 140.0 mm [5.51 in.]
Required Drive Pulley Dia: 229.52 mm [9.04 in.]
Horizontal Attachment Point: 330 mm [12.99 in.]
Vertical Attachment Point: 223 mm [8.78 in.]
Reference Point from FFOB: 102 mm [4.02 in.]
Alternator Pulley Supplied: Customer
Alternator Mtg Brkt Supplied: On Engine
Adjusting Link Supplied: On Engine

EH - Alternator Mounting

EH2140



EH2140 [G]

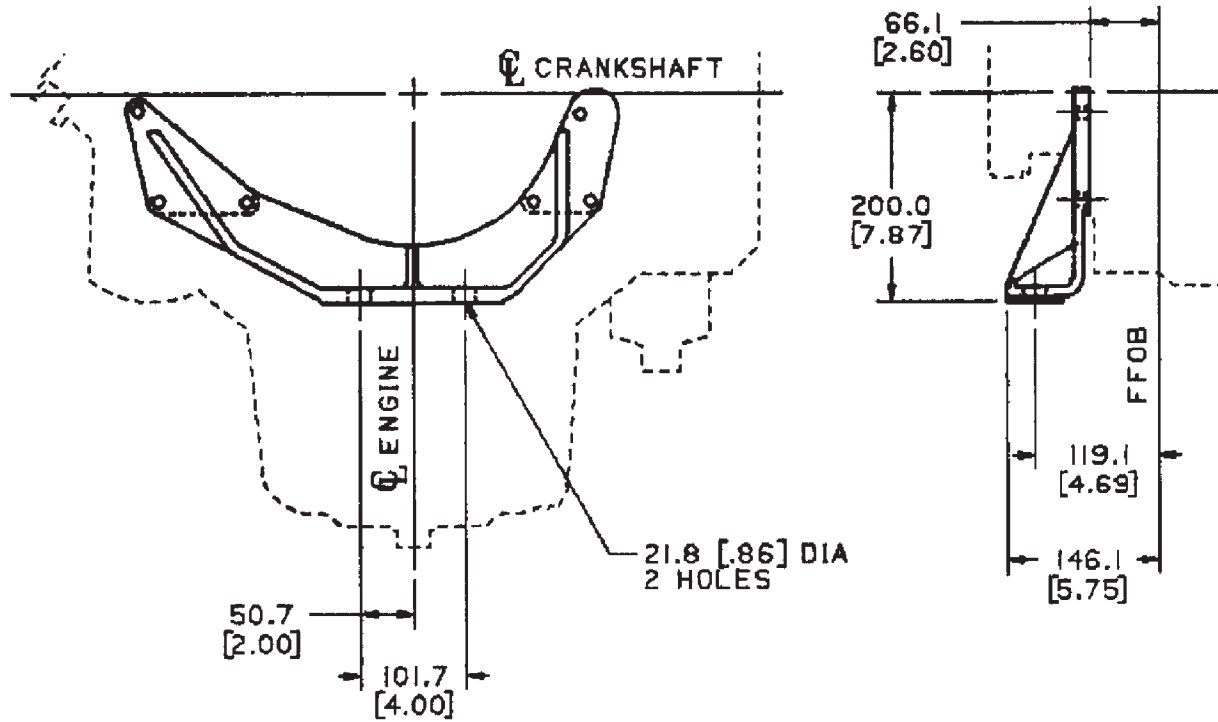
Option #	Use With	Mount Type	Drive Ratio	Notes	Weight	Value Code
EH 2140	Delco Remy or Leece Neville	Spool	3.01	Automatic Belt Tensioner, Right Side		

Alternator Quantity: One
 Manufacturer: Delco Remy or Leece Neville
 Mtg. Location: Right Side
 Serpentine Alternator / Fan Drive: Yes

Drive Location: Crankshaft
Alt. Pulley Dia. 76.20 mm [3 in.]
Alt. Pulley Groove: Poly V 8 Rib 'K'
Alt. Pulley Groove Location: 140.0 mm [5.51 in.]
Required Drive Pulley Dia: 229.52 mm 9.04 in.]
Horizontal Attachment Point: 330 mm [12.99 in.]
Vertical Attachment point: 223 mm [8.78 in.]
Reference Point from FFOB: 102 mm [4.02 in.]
Alternator Pulley Supplied: Customer
Alternator Mtg Brkt Supplied: On Engine
Adjusting Link Supplied: On Engine

EM - Front Engine Support

EM2038



EM2038 [G]

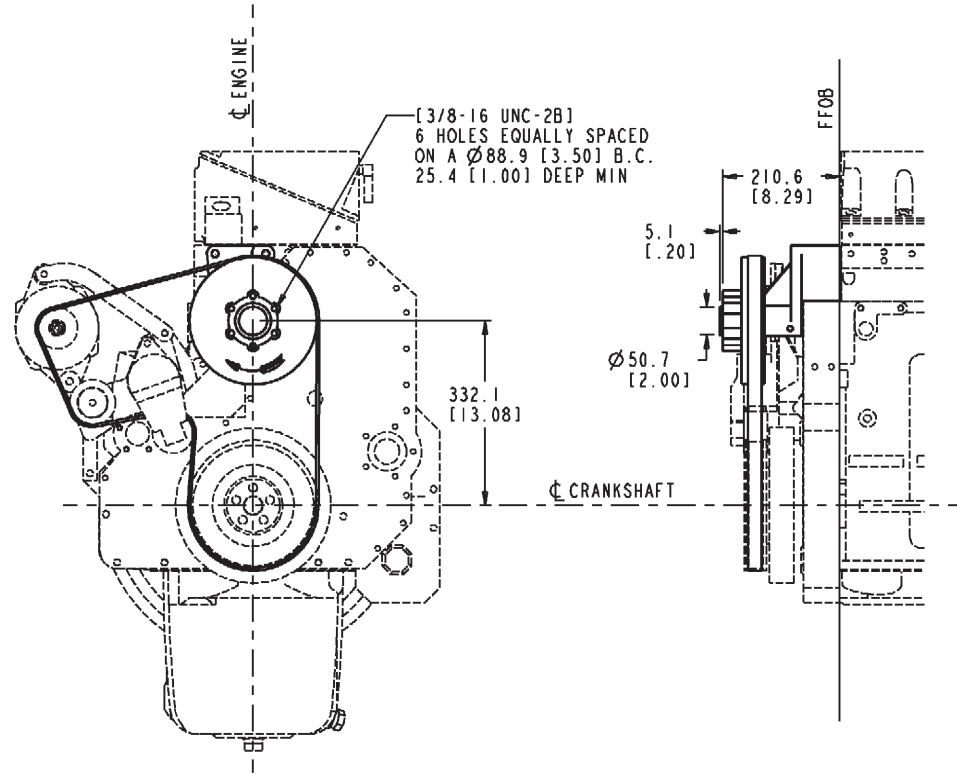
Option #	Type	Attachment Hole	Damper	Notes	Weight	Value Code
EM 2038	Cummins Supplied	Two hole 21.8 mm [0.85 in.] Pad, equally spaced	Yes	Attachment Point from FFOB: 119.12 mm [4.69 in.] Attachment Point from Crank Centerline: 200 mm [7.87 in.]	-	-

Support Material: Cast Iron

Attachment Point from FFOB: 119.12 mm [4.69 in.]
Attachment Point from Crank Centerline: 200 mm [7.87 in.]
Engine Position: Vertical Standard

FA - Fan Drive

FA2267



FA2267_MCS

FA2267 [M]

Option #	Bolt Circle mm	Drive Ratio	Fan Center mm	Tensioner Type	Notes	Weight	Value Code
FA 2267	88.90 mm [3.5 in.]	1.00:1	330 mm [13.00 in.]	Automatic	-	-	-

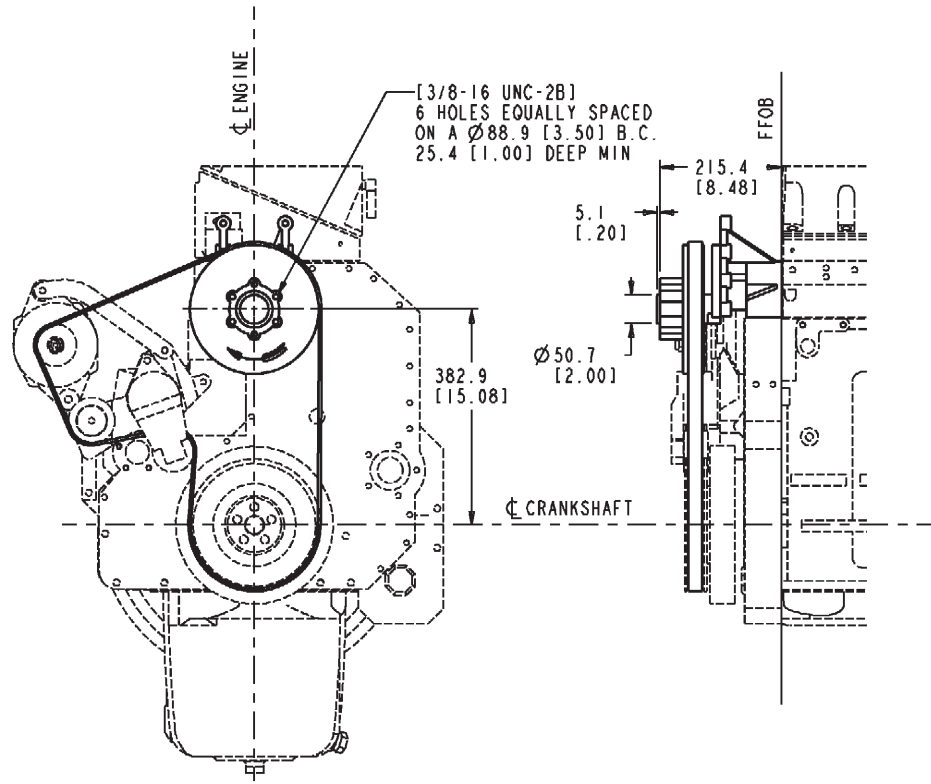
Fan Pulley Diameter: 229.52 mm [9.04 in.]
 Pulley Groove Location: 140.0 mm [5.51 in.]
 Pulley Groove Type: Poly V 8 Rib 'K'
 Max Torque Capability: 177.898 N•m [131 lb.-ft]
 Fan Mtg Nomenclature: 3/8-16 UNC 2B

Cummins Supplied Items: Automatic Tensioner, Fan Belt, Horton/Kysor Fixed Fan Hub
Pilot Diameter: 50.80 mm [2 in.]

NOTE: All belt drive arrangements rotate in the same direction as crankshaft.

FA - Fan Drive

FA2268



FA2268_MCS

FA2268 [M]

Option #	Bolt Circle mm	Drive Ratio	Fan Center mm	Tensioner Type	Notes	Weight	Value Code
FA 2268	88.90 mm [3.5 in.]	1.00:1	381 mm [15.00 in.]	Automatic	-	-	-

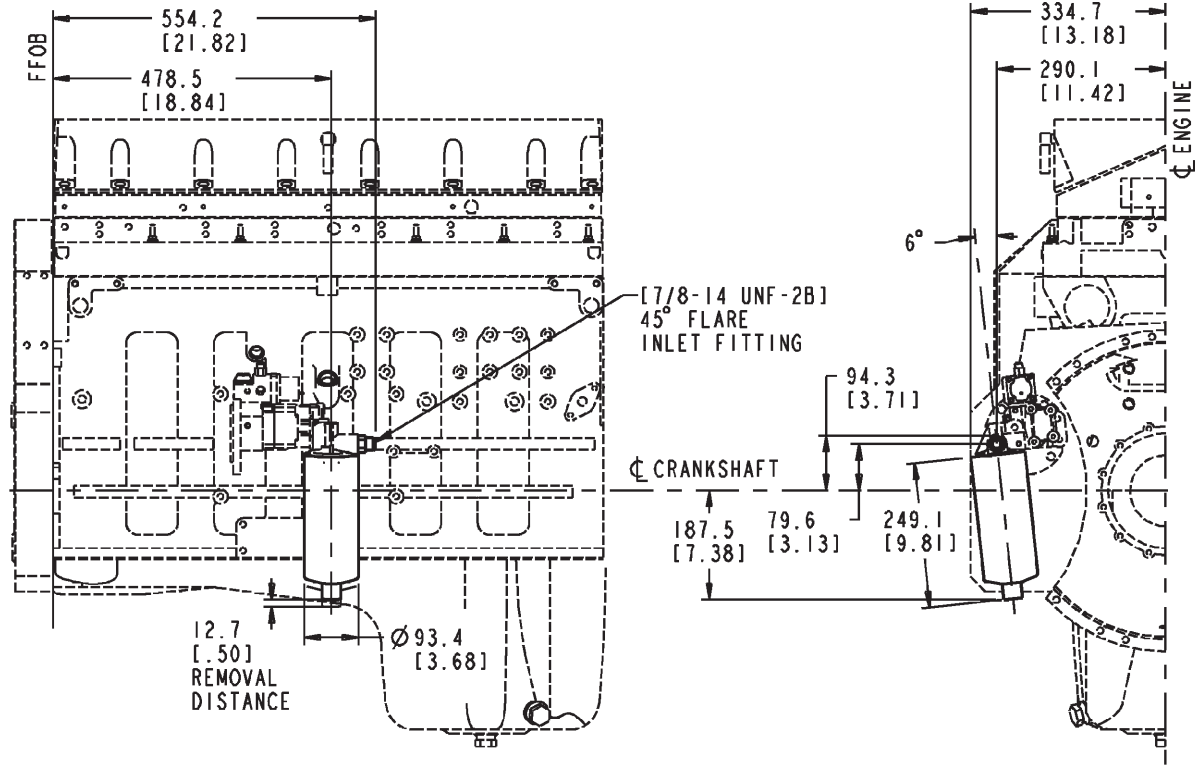
Fan Pulley Diameter: 229.52 mm [9.04 in.]
 Pulley Groove Location: 140.0 mm [5.51 in.]
 Pulley Groove Type: Poly V 8 Rib 'K'
 Max Torque Capability: 177.898 N•m [131 lb.-ft]
 Fan Mtg Nomenclature: 3/8-16 UNC 2B

Cummins Supplied Items: Automatic Tensioner, Fan Belt, Horton/Kysor Fixed Fan Hub
Pilot Diameter: 50.80 mm [2 in.]

NOTE: All belt drive arrangements rotate in the same direction as crankshaft.

FF - Fuel Filter

FF2241



FF2241_MCS

FF2241 [M]

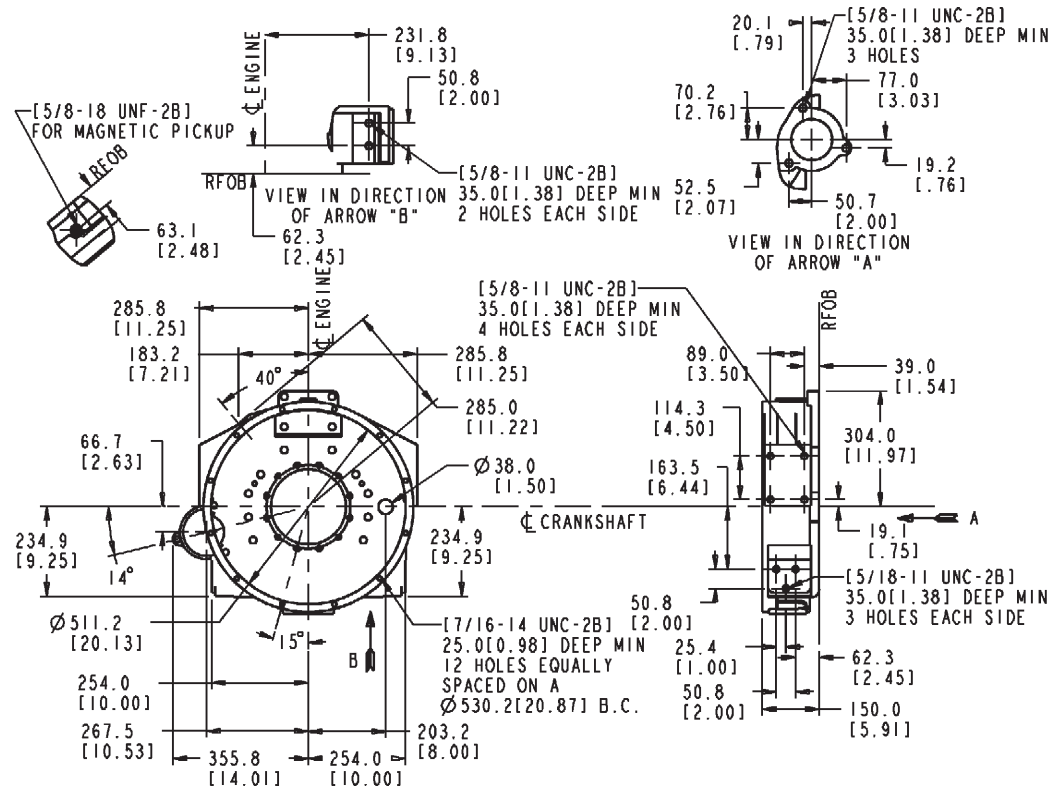
Option #	Element	Filtration	Water Separator/WIF Sensor	Location	Notes	Weight	Value Code
FF 2241	Single Spin-on	FS1000 (10 micron)	Yes/No	Fuel Pump Mounted	-	-	-

Water in Fuel Sensor Included: No
 Fuel Filter Supplier: Cummins
 Fuel Pump Type: CELECT

Drain Provision: Yes
Check Valve: No
Filter Inlet Fitting: Straight
Heater Element: No
Decal: Fleetguard
Fuel Plumbing Routing: Pressure Side
Filtration Measurement (microns): 10
Pump Inlet Diagnostic Provision: No

FH - Flywheel Housing

FH2197



FH2197_MCS

FH2197 [M]

Option #	SAE/Wet or Dry	Application	Housing Material	Starter Quadrant
FH 2197	#1/Dry	Vertical Pads	Aluminum	3rd

Flywheel housing SAE size or type: 1
 Flywheel housing material: Aluminum
 Engine mount type: Vertical pads
 Transmission mounting hole nomenclature: SAE
 Starting motor mounting screws: SAE

Starter center distance: 275.59 mm [10.85 in.]
Starter bore diameter: 92.06 mm [3.62 in.] with sleeve
Clutch type provision: Dry
Sensor mounting hole nomenclature:
 Quad 2, 3/4 - 16
 Quad 4, 3/4 - 16
Rear gear drive: No
Starter location: 3rd quadrant
Sensor mounting hole count: 2
Engine Position: Vertical standard

FR - Fuel Rating

FR2930

(No Graphics Required)

FR2930 [G]

Option #	Horsepower/ Kilowatts	Speed	CPL	Certified
FR 2930	295 kWm [395 BHP]/ 257 kWm [345 BHP]	1800 rpm/ 1500 rpm	8062	EPA Tier 2, CARB

Engine Control System: CELECT
 Altitude Restriction: 1030.22 m [3380 ft]
 Application: Power Generation
 Standby Power: 395 bhp @ 1800 rpm
 Prime Power: 359 bhp @ 1800 rpm
 Continuous Power: NA bhp @ 1800 rpm
 Standby Power: 345 bhp @ 1500 rpm
 Prime Power: 314 bhp @ 1500 rpm
 Continuous Power: NA bhp @ 1500 rpm

FR - Fuel Rating

FR2940

(No Graphics Required)

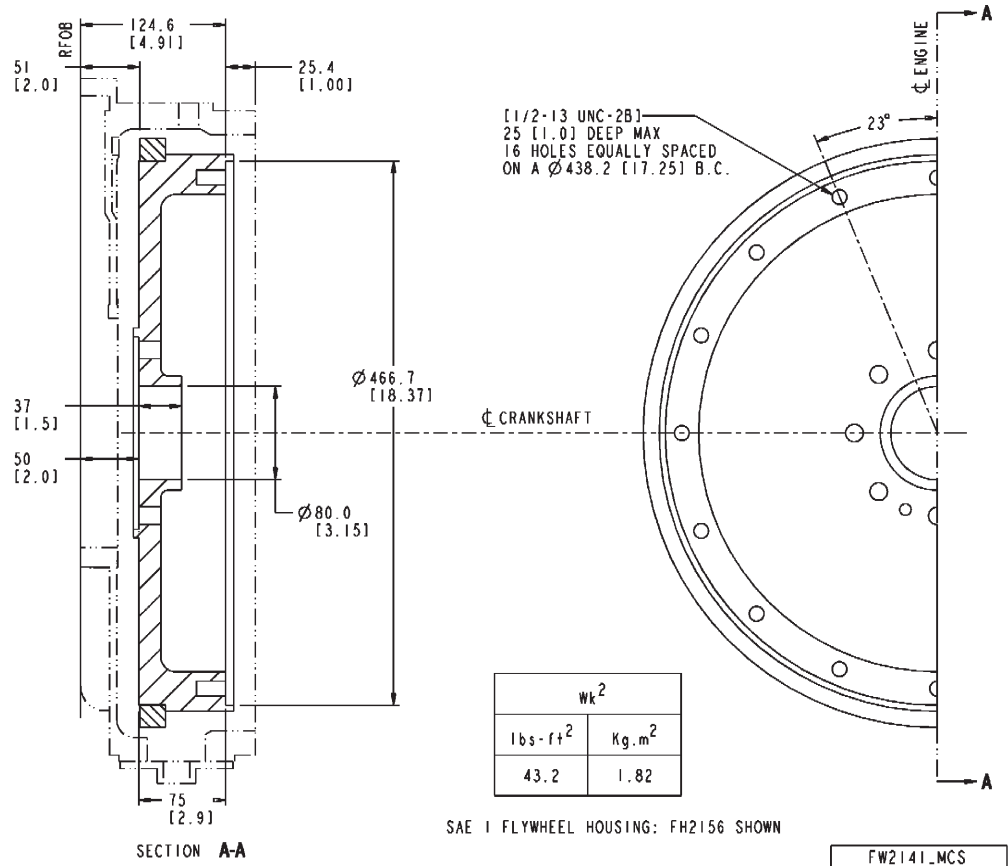
FR2940 [G]

Option #	Horsepower/Kilowatts	Speed	CPL	Certified
FR 2940	351 kWm [470 HP]/ 321 kWm [430 bHP]	1800 rpm/ 1500 rpm	8062	EPA Tier 2, CARB

Engine Control System: CELECT
 Altitude Restriction: 1030.22 m [3380 ft]
 Application: Power Generation
 Standby Power: 470 bhp @ 1800 rpm
 Prime Power: 427 bhp @ 1800 rpm
 Continuous Power: NA bhp @ 1800 rpm
 Standby Power: 430 bhp @ 1500 rpm
 Prime Power: 391 bhp @ 1500 rpm
 Continuous Power: NA bhp @ 1500 rpm

FW - Flywheel

FW2141



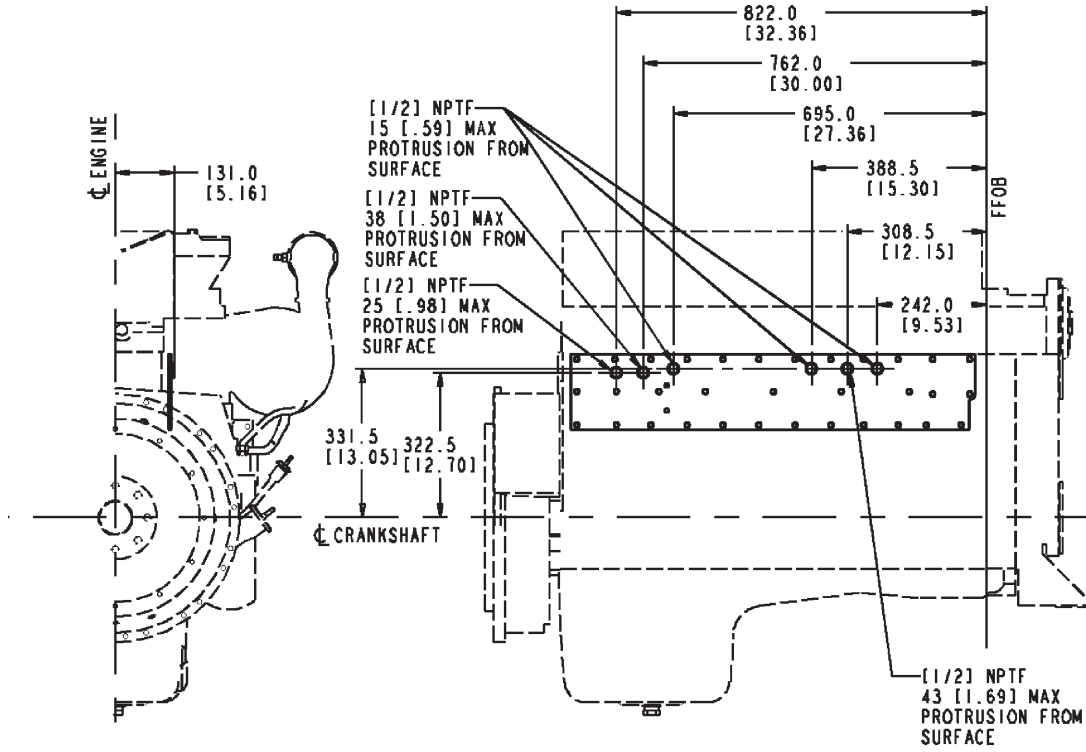
FW2141 [M]

Option #	SAE	Pilot Bearing Bore Dia.	Ring Gear Pitch/Teeth	Indicated Drive	Notes	Weight	Value Code
FW 2141	SAE 1	80 mm [3.15 in.]	6/8-118	SP-114-P Twin Disc	Starter Distance 10.85 in., Starter Spacer No		

Starter Center Distance: 275.59 mm [10.85 in.]
Rear Gear Drive: No

HC - Cabin Heater Plumbing

HC2001



HC2001.NCS

HC2001 [M]

Option #	Location	Connection & Orientation	# of Connections	Notes	Weight	Value Code
HC 2001	Right foot and rear	1/2 in. NPTF	Two	With WF2031, WF2047, WF2071, WF2072		

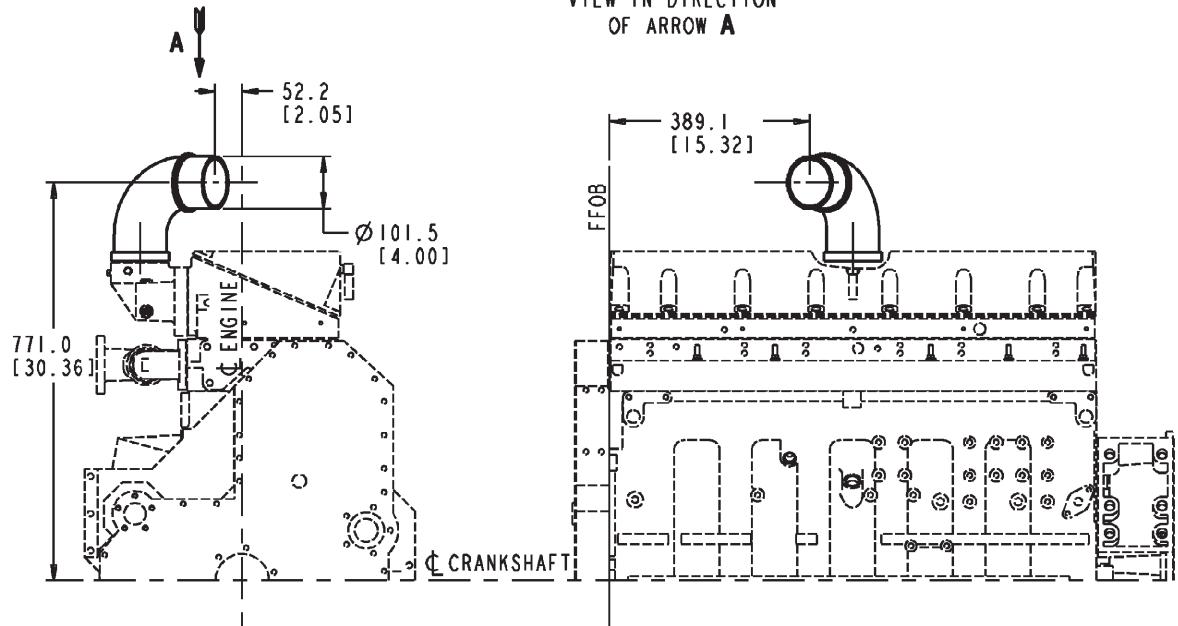
Cab heater plumbing bosses located at right front and rear of engine on water header plate.

IC - Air Intake Connection

IC2013



VIEW IN DIRECTION OF ARROW A



IC2013_MCS

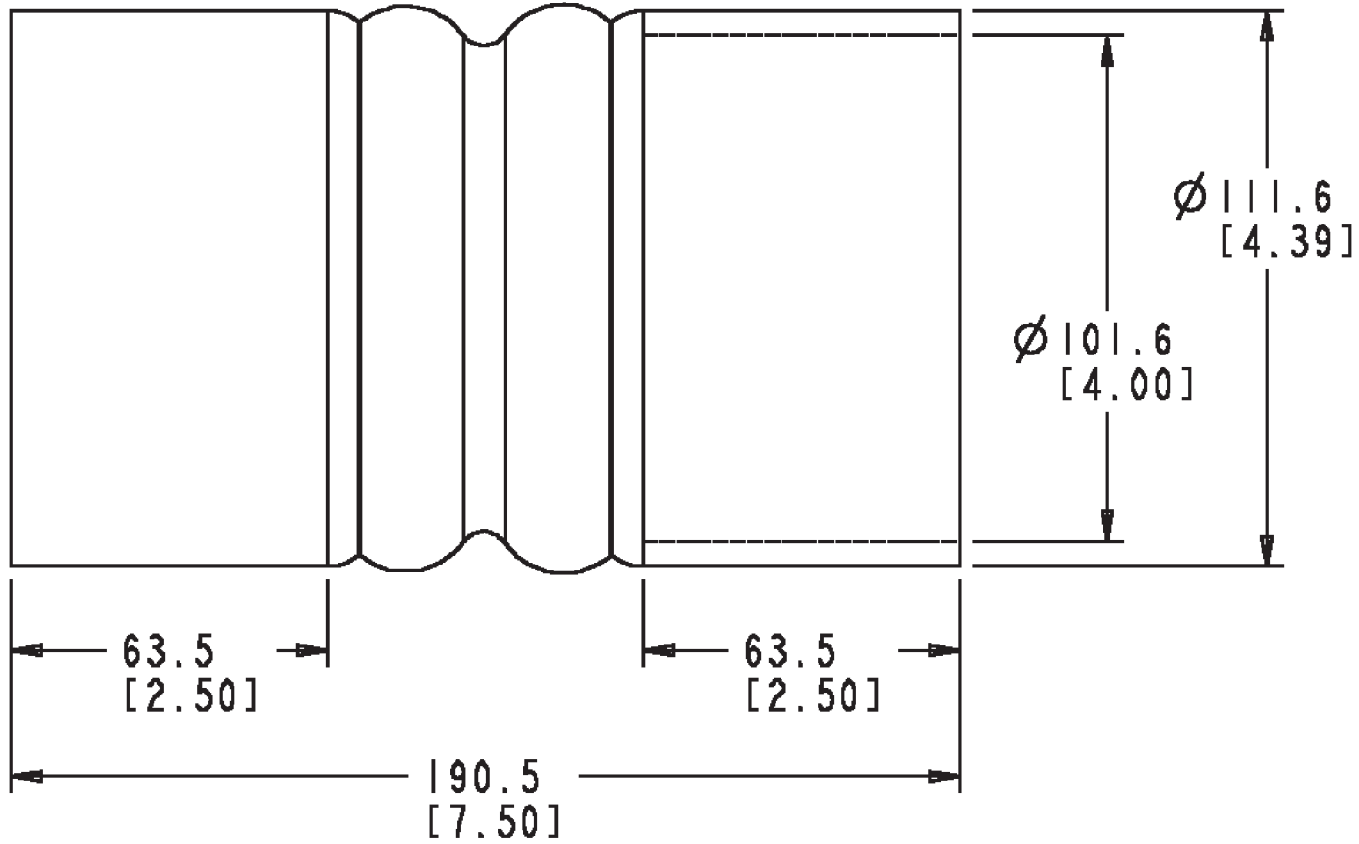
IC2013 [M]

Option #	Description/Dia	Orientation/Location	Notes	Weight	Value Code
IC 2013	90 degree elbow/101.5 mm [4 in.]	Top Inboard	-	-	-

Air Inlet Connection Supplier: Cummins
 Engine Aspiration: Charged air cooled

IC - Air Intake Hose

IC2030



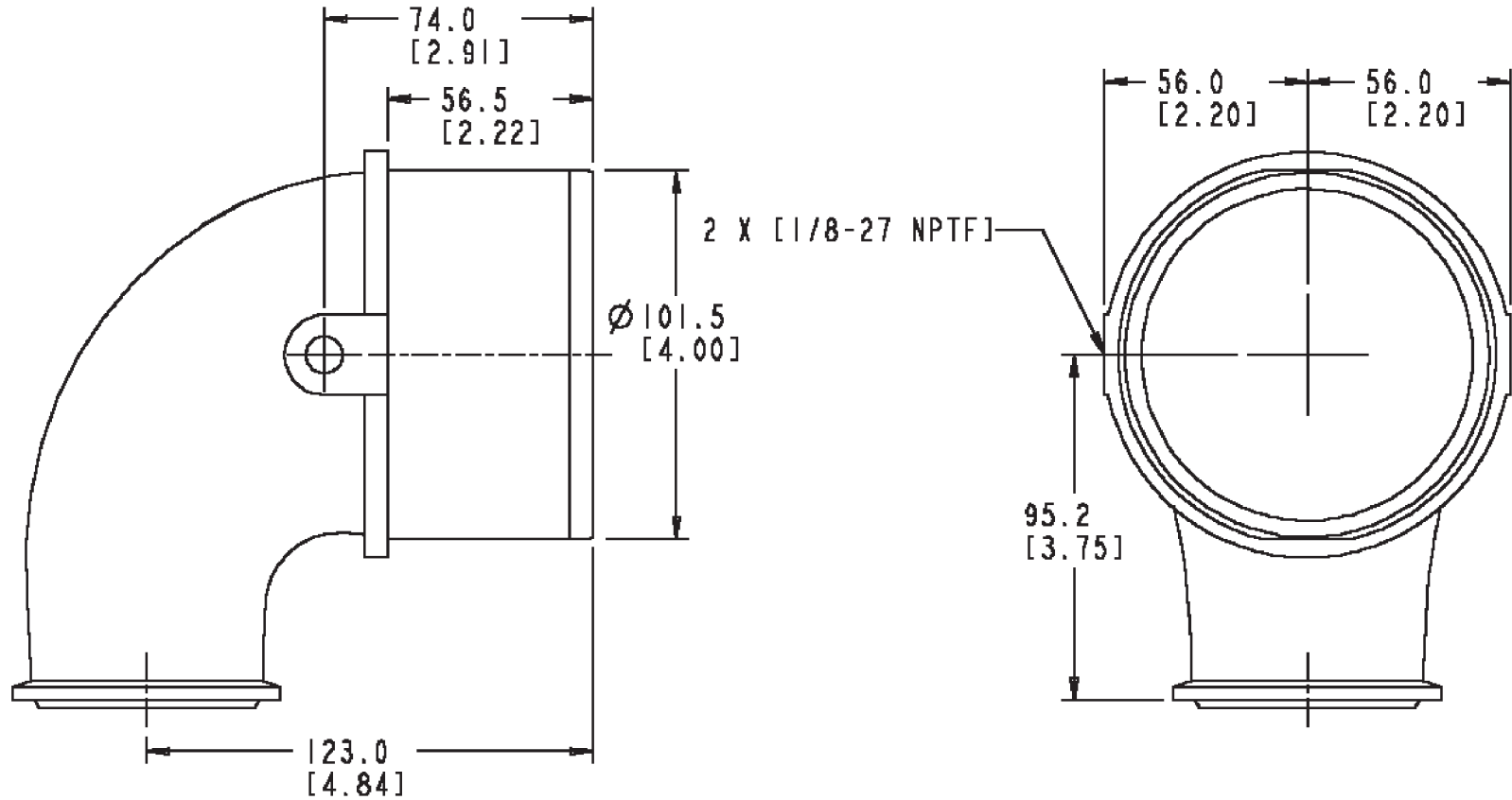
IC2030 [M]

Option #	Description/Dia	Orientation/Location	Notes	Weight	Value Code
IC 2030	Four intake hoses	N/A	-	-	-

Intake Hose Count: Four
 Engine Aspiration: Charged air cooled

IT - Air Transfer Connection

IT2003

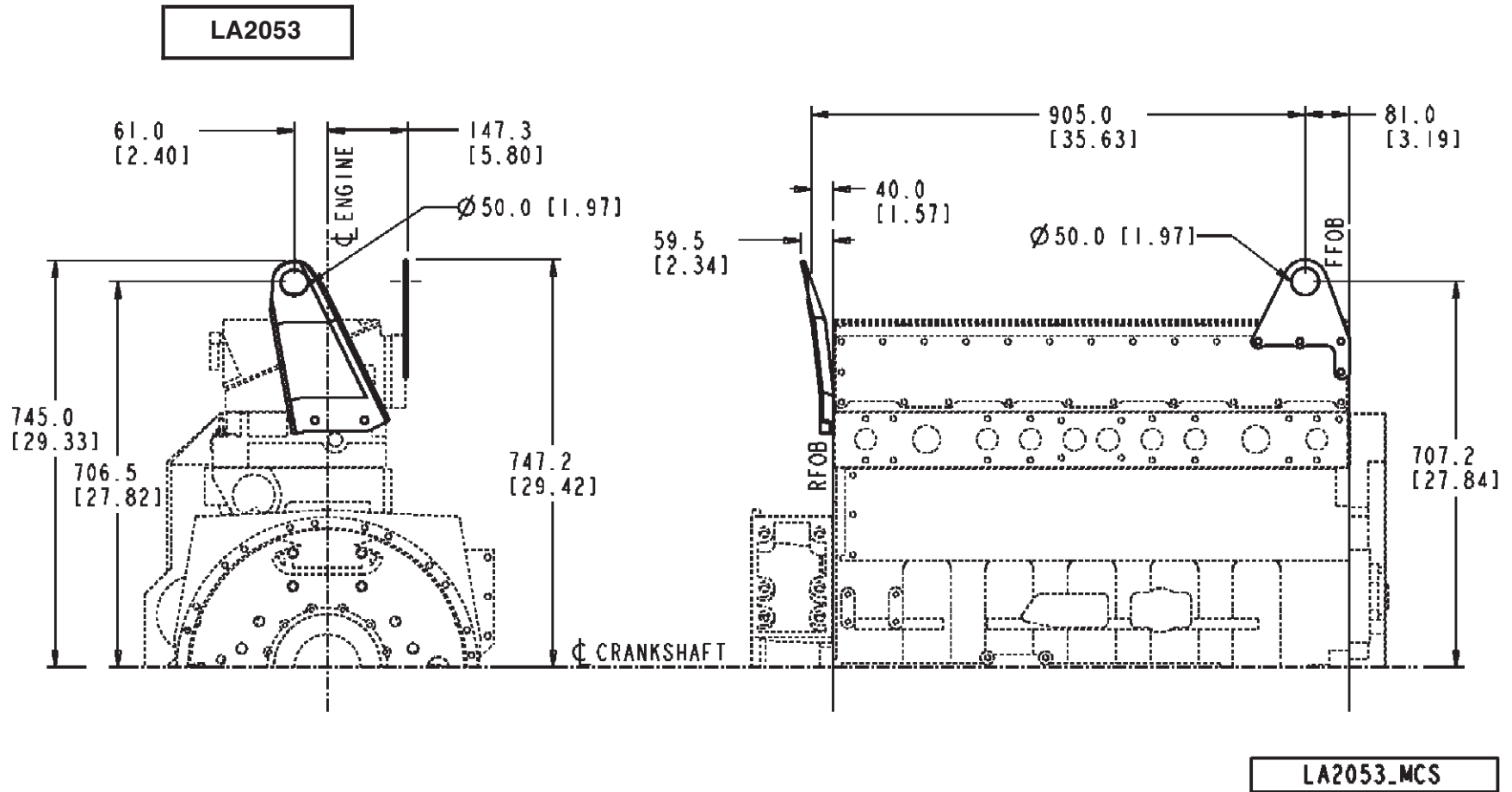


IT2003 [G]

Option #	Description	Connection Location	Connection O.D. dia	Notes	Weight	Value Code
IT 2003	90 degree rotatable elbow	Turbo Compressor Outlet	101.5 mm [4 in.]	-	-	-

Engine Aspiration: Charged air cooled
 Intake Air Pressure Compuchek Fitting Inc.: Yes

LA - Lifting Arrangement



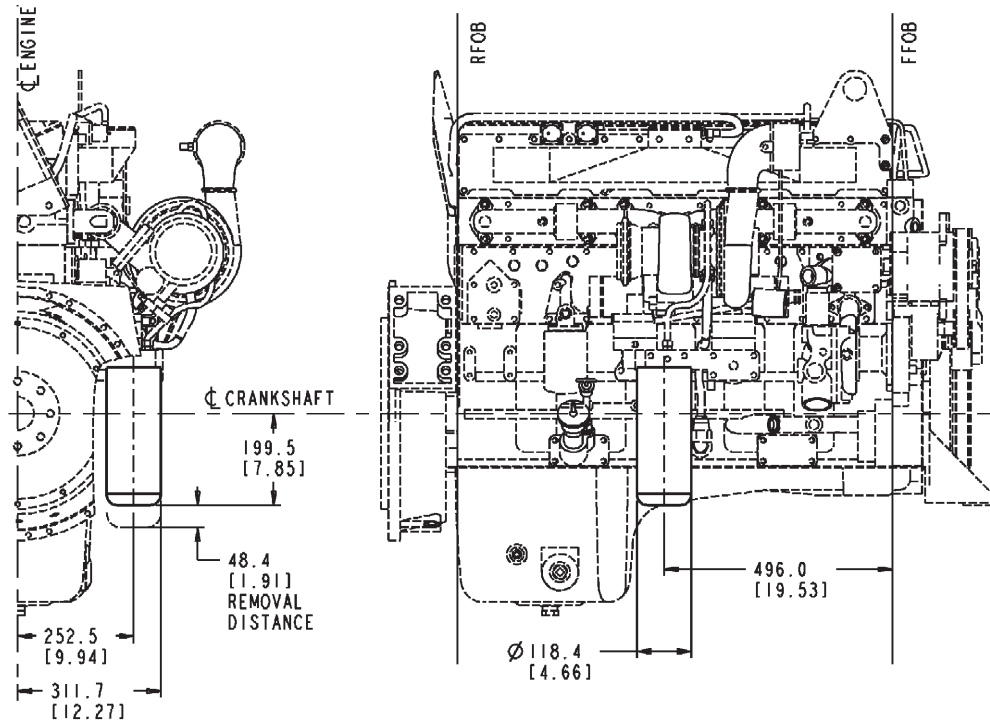
LA2053 [M]

Option	Bracket	Bracket Provided	Max. Lifting Load	Notes	Weight	Value Code
LA 2053	Two	Yes	N/A	For top intake	-	-

Front lifting bracket mounts on front of aftercooler. Rear lifting bracket mounts on the rear of the cylinder head. Front lifting bracket is mounted (attached) with three stud head capscrews for wiring harness or hose clip attachment.

LF - Lube Oil Filter

LF2054



LF2054_MCS

LF2054 [M]

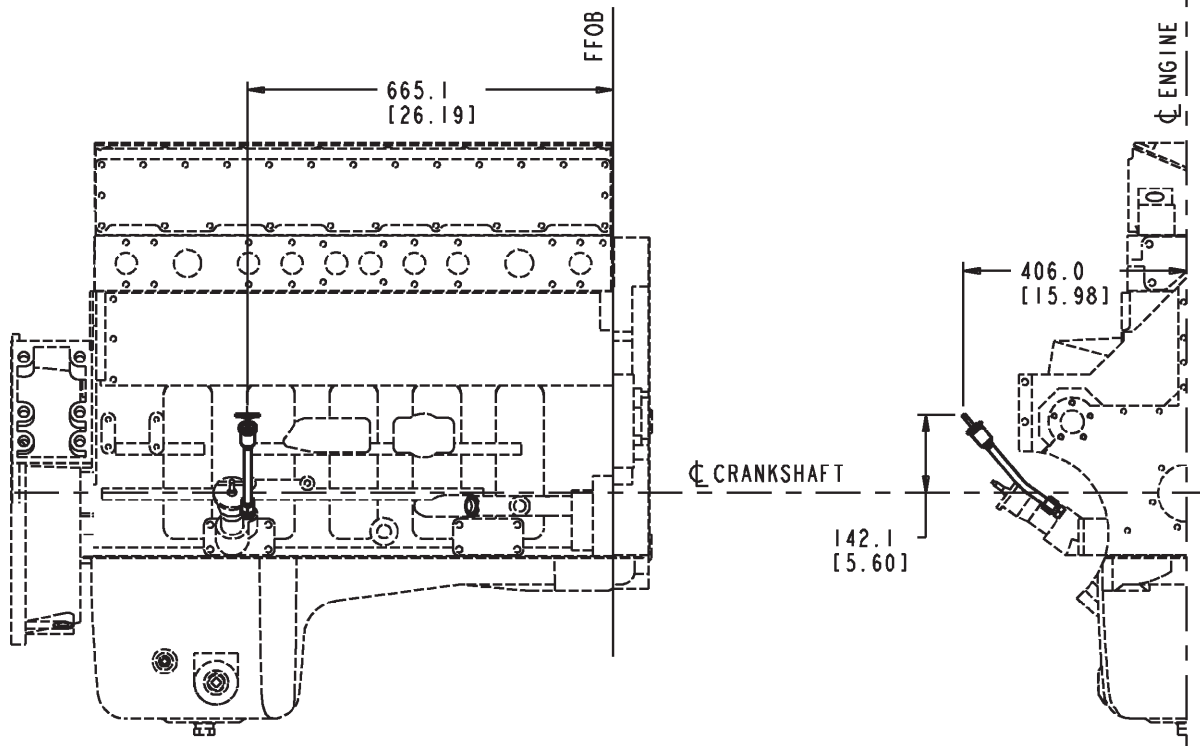
Option #	Type	Hose Length	Location	Notes	Weight	Value Code
LF 2054	Combination full flow/ bypass LF 9001	N/A	Direct to Filter Head	Heater Housing Capable	-	Best Value

Oil Filter Supplier: Cummins
 Filter Model: LF 9001
 Filter Length: 299.5 mm [11.79 in.]
 Filter Removal Clearance: 48.4 mm [1.91 in.]

Oil Filter Thread Size: M95 x 2.5
Oil Flow Control Thermostat Opening Temp 107 °C [225 °F]

LG - Oil Level Gauge

LG2066



LG2065_MCS

LG2066 [M]

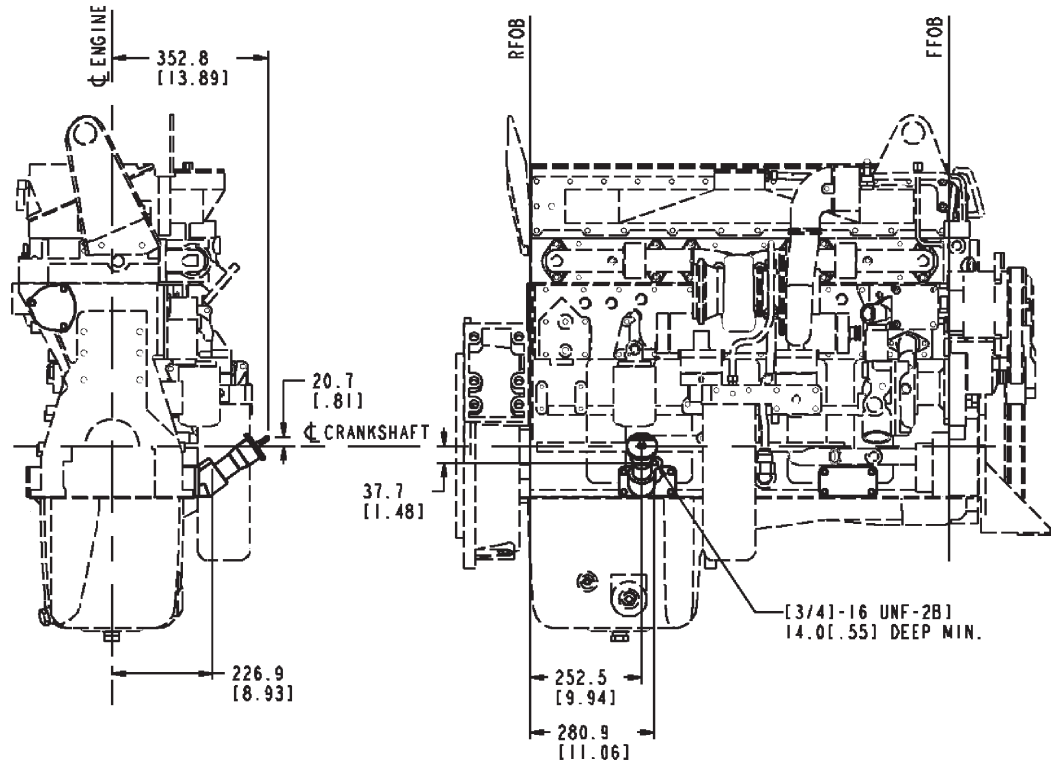
Option	Handle Orientation	Location of Entry into Oil Pan	Use With	Power Angle	Notes	Weight	Value Code
LG 2066	Right low	Rear HHC; with oil fill	OB 2430, 2458, 2467, 2478	0 deg.	-	-	-

Dipstick Supplier: Cummins
 Oil Gauge Tube Type: Solid
 Dipstick Location: Right Side Rear HHC

Oil Pan Material: Cast Aluminum Shallow Sump
Sump Location: Rear
High Oil Pan Capacity: 34.065 litre [9.0 gal.]
Low Oil Pan Capacity: 30.28 litre [8.0 gal.]
Power Angle (deg.) 0.0
Tilt Angle (deg): 0

OB - Oil Fill Arrangement

OB2430



OB2430.NCS

OB2430 [M]

Option #	Location	Fill Type	With Dipstick	Notes	Weight	Value Code
OB 2430	Right side rear HHC	T-Handle	Yes			

Oil Fill Supplier: Cummins supplied
 Fill Tube Horiz. Position: 251.5 mm [9.9 in.] from RFOB
 Fill Tube Vertical Position: -3.5 mm [-0.14 in.]
 Fill Tube Position Horiz. from Eng C/L 318.7 mm [12.55 in.]
 Dipstick Location: Right Side Rear HHC

Dipstick Tube Attachment Method: 3/4-16 UNF
Oil Fill Tube Length from HHC Mtg Surface: 132.2 mm [5.2 in.]

OP - Oil Pan

OP2082

op2082_mcs

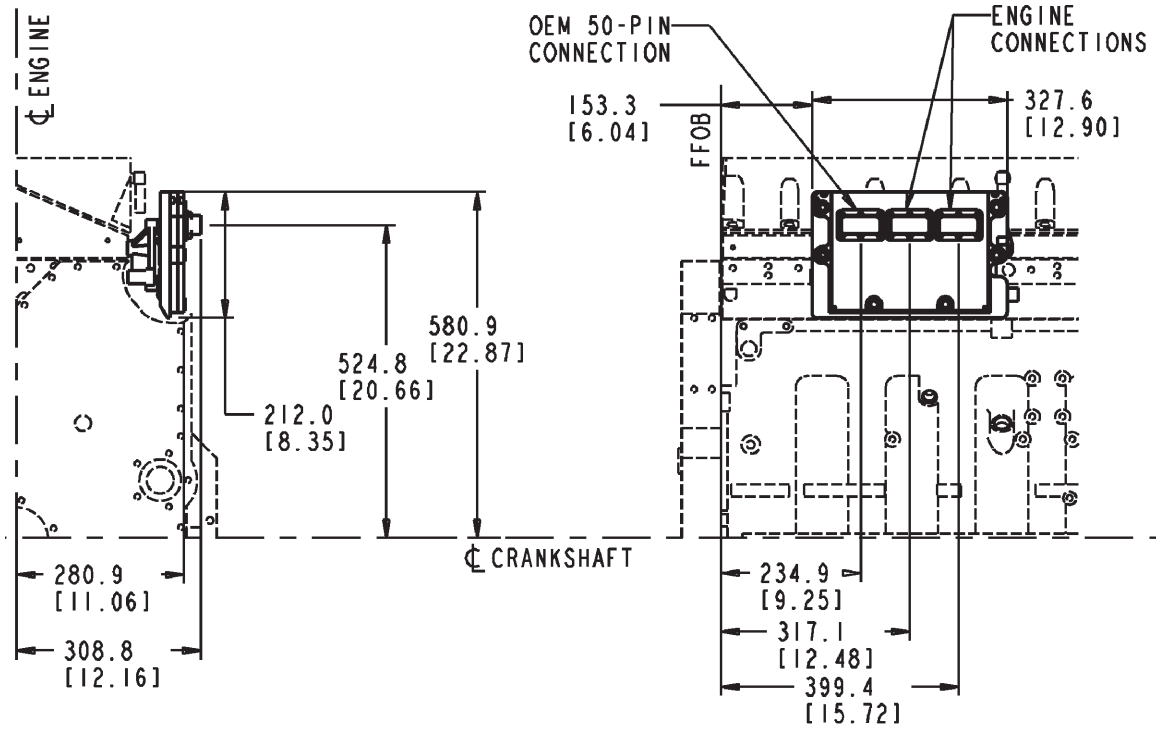
OP2082 [G]

Option #	Type/Material	Drain Location	Angularity	Capacity
OP 2082	Cast Aluminum Shallow Sump	Side	25 deg. front down, 25 deg. rear down, 30 deg. fuel pump down, 35 deg. exhaust down	High:34.0 L [9.0 U.S.gal.], Low:30.0 L [8.0 U.S.gal.]

Lube Oil Suction Tube: Oil pan mounted
 Noise Panel Provision: No
 Oil Heater Boss (1 in. NPTF): Right side
 Oil Temperature Boss (1/2 in. NPTF): Left Side
 Low Oil Level Sensor Boss (3/8 in. NPTF): None
 Rust Inhibitor Required: No
 Sump Location: Rear

PH - Engine Control Module

PH2017



PH2017_MCS

PH2017 [G]

Option #	Notes
PH 2017	High mount front CM570

ECM Location: 581.1 mm [22.88 in.] Vert./153.4 mm [6.03 in.] Horz.
 Vertical distance measured from the crank C/L to the top of the ECM. Horizontal distance measured from the FFOB to the front of the ECM.
 ECM Input Voltage: 12

QSM11G

OEM Conn Vert from Crank C/L: 525 mm [20.67 in.]
OEM Conn Horz from FFOB: 235 mm [9.25 in.]
OEM Conn Horz from Engine C/L: 310.4 mm [12.22 in.]

PS - Sump Pump

PS2002

ps2002_mcs

PS2002 [G]

Option #	Description	Used With	Notes
PS 2002	Sump Pump	-	-

Function: Lube Oil Sump Pump
 Type: Rotary
 Operation: Manual
 Flow Rate: 10 Gal per 115 Rev
 Supply Method: Supplied in kit
 Intake Port Size/Type (in.): 3/4 Female
 Outlet Port Size/Type (in.): 3/4 Female
 Plumbing Supplied: 30 in. (760 mm) #10 hose
 Oil Drain: Mounted in Oil Pan

PU - Accessory Drive Pulley

PU2006

(No Graphics Required)

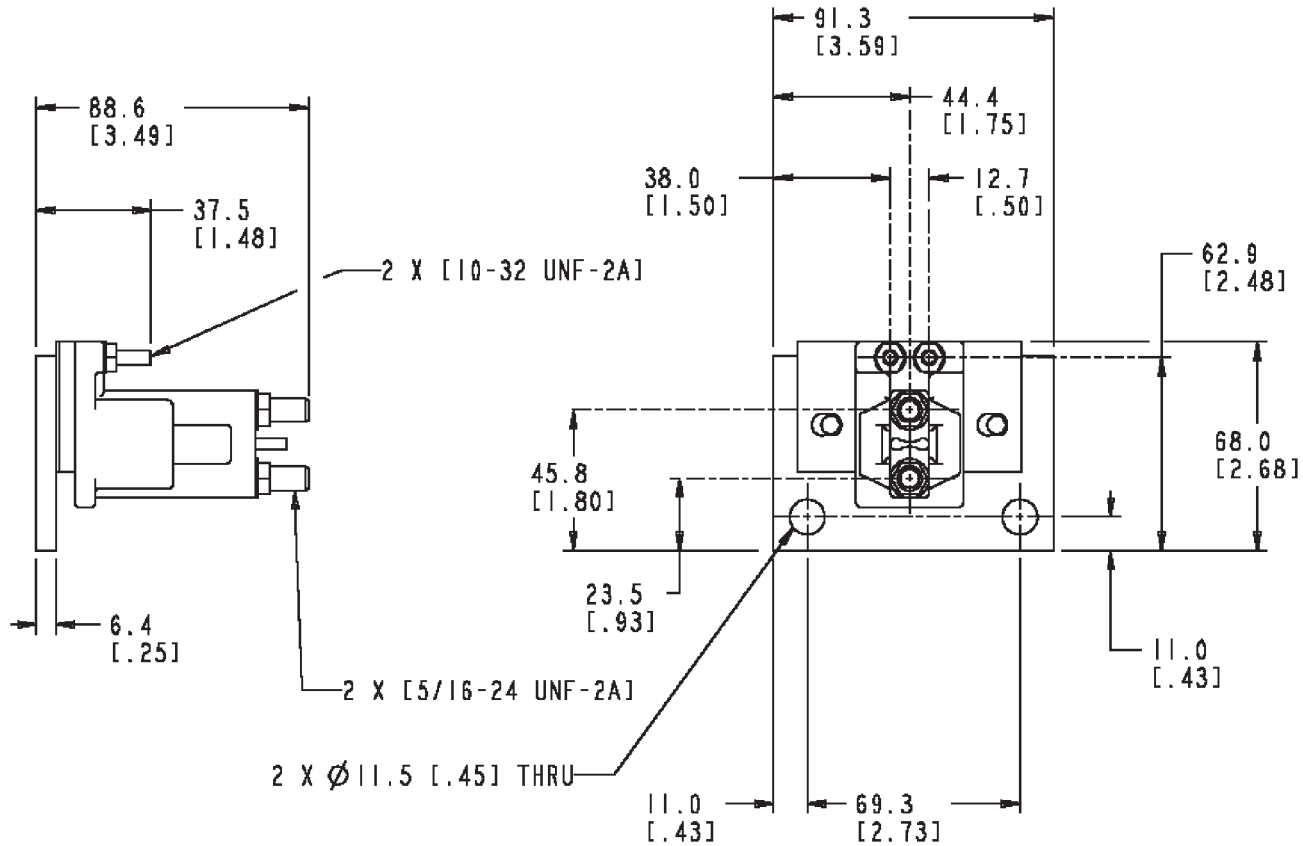
PU2006 [M]

Options #	Drive Location	Drive Ratio	Pulley Supplier	Notes	Weight	Value Code
PU 2006	No Provision	N/A	N/A	No content Pointer Option	-	Best Value

No accessory drive provision on front right [exhaust] side of the engine. This option is required when the customer has no right side accessory drive requirement from the water pump shaft.

SB - Electric Starting Accessories

SB2008



SB2008 [M]

Option #	Description	Voltage/Amps	Notes
SB 2008	Electric Relay (magnetic)	24/100	Mounted

Component Supplied: Starter Switch
 Magnatic Switch Mtg Location:
 Block Mtd., Left Side, Holes #321 & #322
 Starter Engagement: Positive
 Starter Quantity: 1 or 2

Starter Ground Location: External

SK - Shipping Arrangement

SK2001

(No Graphics Required)

SK2001 [M]

Option #	Description	Disposition	Material	Notes	Weight	Value Code
SK 2001	Shipping container	Not returnable	Wood skid	International use only		

Skid Capability: Bare Engine Only (Fan to Flywheel)

SK - Shipping Arrangement

SK2002

(No Graphics Required)

SK2002 [M]

Option #	Description	Disposition	Material	Notes	Weight	Value Code
SK 2002	Shipping container	Not returnable	Export Box	International use only		

Skid Capability: Bare Engine Only (Fan to Flywheel)

SK - Shipping Arrangement

SK2003

(No Graphics Required)

SK2003 [M]

Option #	Description	Disposition	Material	Notes	Weight	Value Code
SK 2003	Shipping skid	Returnable	Wood	Domestic use only	-	-

Skid Capability: Bare Engine Only (Fan to Flywheel)

SS - Paint

SS2007

(No Graphics Required)

SS2007 [M]

Option #	Description	Notes	Weight	Value Code
SS 2007	Paint Color: Cummins beige	Paint provides over land and sea freight shipping capability.	-	-

ST - Starting Motor

ST2009

st2009_mcs

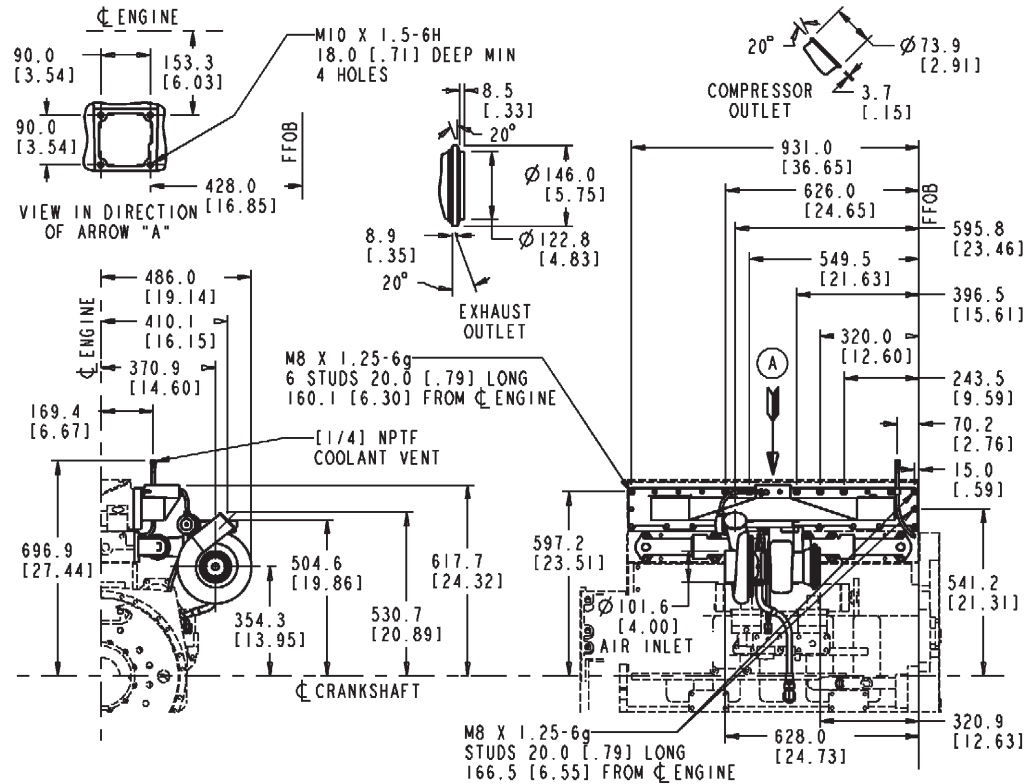
ST2009 [M]

Option #	Voltage/kW	Mfg/Model	Pinion Gear Pitch	Notes
ST 2009	24	Delco Remy/42 MT Type 400	-	Solenoid Angle (degrees): 82

Rotation: Right hand
 Length: 393.7 mm [15.5 in.]
 Power Supply: Electric
 Solenoid Drain Hole Includes: No

TB - Turbocharger Arrangement

TB2287



TB2287.MCS

TB2287 [M]

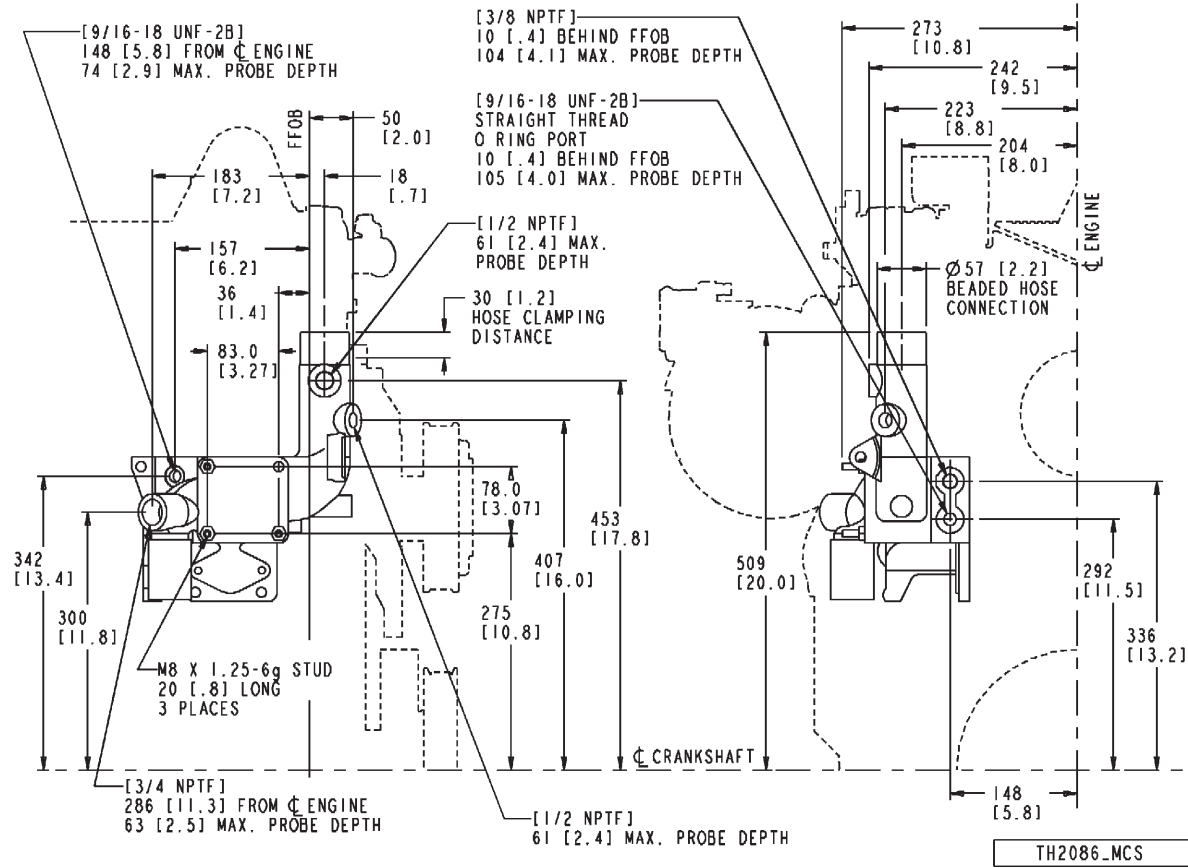
Option #	Mount/Exhaust Outlet Location	Wastegate	Water-Cooled	Notes
TB 2287	Low mount/Front out	Yes	No	Top intake manifold

Engine Aspiration: Charged air cooled
 Turbocharger Location: Low Mount
 Exhaust Outlet Location: Front Out
 Exhaust Outlet Size: 146.05 mm [5.75 in.]
 Turbocharger Model: HX55

Turbocharger Type: Wastegate
Wastegate Rod-to-Crank Angle (Deg): 113
Turbo Compressor Housing Style: Rotatable
Turbocharger C/L Vertically from Crank C/L: 353 mm [13.9 in.]
Turbocharger C/L Horizontally from Crank C/L: 370 mm [14.57 in.]
Exhaust Outlet Flange Type: V-band Marmon
Exhaust Manifold Mtg Included: No
Turbocharger Oil Supply Line Type: O-Ring Face Seal
Turbo Mtg Flange Bolt Circle Dia.: 129.06 mm [5.08 in.]
Intake Manifold Location: Right Side
Int. Manifold Air Inlet Location: Top
Requires "Bolt-on" Air Intake Connection
Int. Man. Compuchek Fitting Included: No
Air Cleaner Mounting Provision: No
Heat Shield Included: No
Intake Manifold Mtg Included: In TB Dependent Option
Engine Vent Included: In RP Dependent Option
Int. Man. Temp. Sensor Mtg. Loc: Throat
Int. Boost Sensor Mtg. Loc.: Front
90 deg. Boost Sensor Fitting Included: No
Exhaust Pipe Provision: No
Intake Manif/Aftcrlr Mtg Flange Thickness: 25 mm [0.98 in.]
Range of Rotation: 163 Degrees Total
From 58 Degrees to -105 Degrees
Rotation Reference: Centerline of compressor outlet is at zero degrees when pointing horizontal out from engine and at 90 degrees when pointing straight up. 90 degree elbow used in determining range of rotation.

TH - Thermostat Housing

TH2086



TH2086 [M]

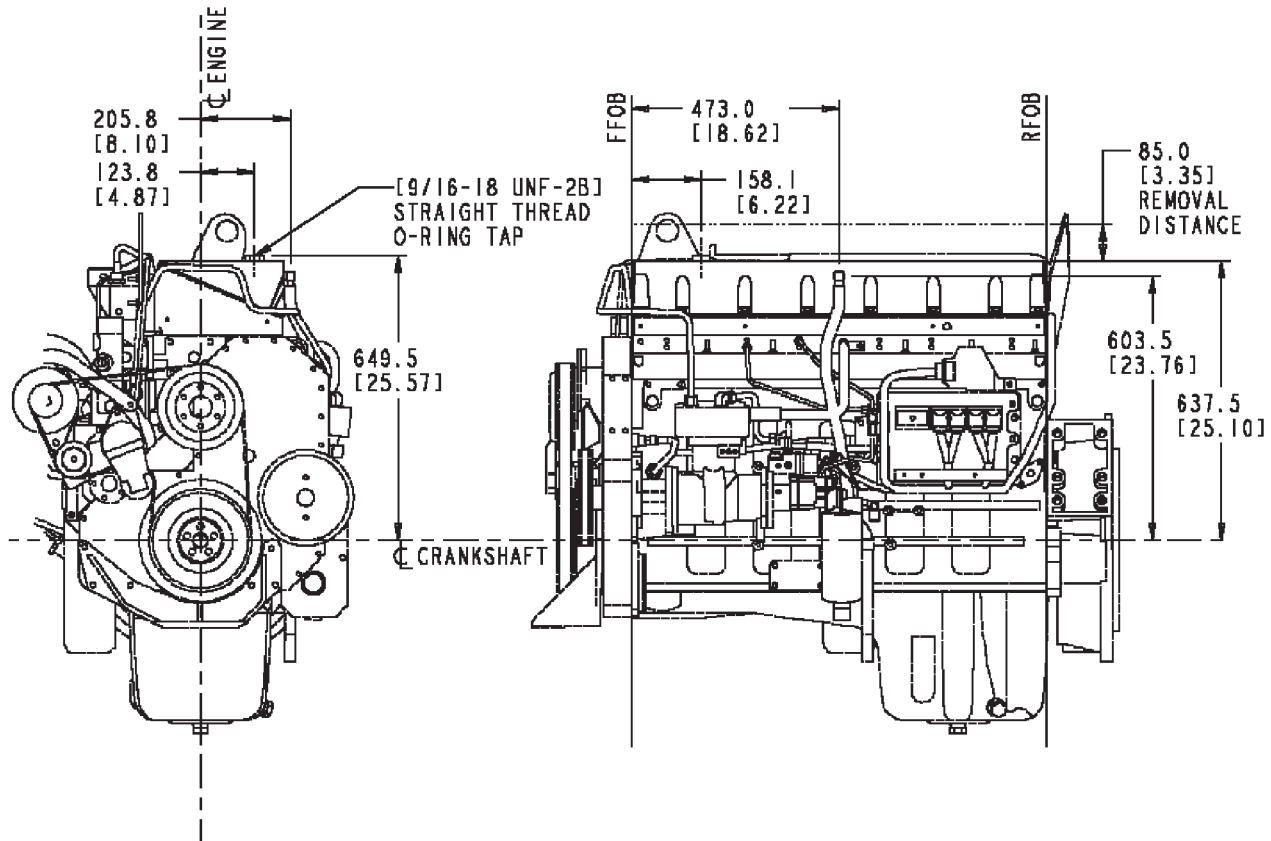
Option #	Description	Outlet Diameter	Notes	Weight	Value Code
TH 2086	Cast	57 mm [2.24 in.]	509 mm [20.2 in.] crank centerline	-	-

Water Outlet Direction: Vertical
 Thermostat Support Top Front Water Port Size: 3/8 NPTF
 Thermostat Support Bottom Front Water Port Size: 9/16-18 UNF
 Thermostat Support Rear Water Port Size: 9/16 UNF

Water Outlet Horizontal Distance: 204.6 mm [8.06 in.]
Water Outlet Vertical Distance: 508 mm [20 in.]
Water Outlet Horizontal Distance from FFOB: 17.5 mm [0.69 in.]
OEM Attachment Stud Location: Upper Left, Lower Left, Lower Right
Alternator Mounting Tab Vertical from Crank C/L: 362.96 mm [14.29 in.]
Thermostat Opening Temperature: 82 °C [179.6 °F]
Thermostat Full Open Temperature: 94 °C [201.2 °F]
Thermostat Vent Arrangement: Non-Vented

VC - Valve Cover

VC2084



VC2084 [M]

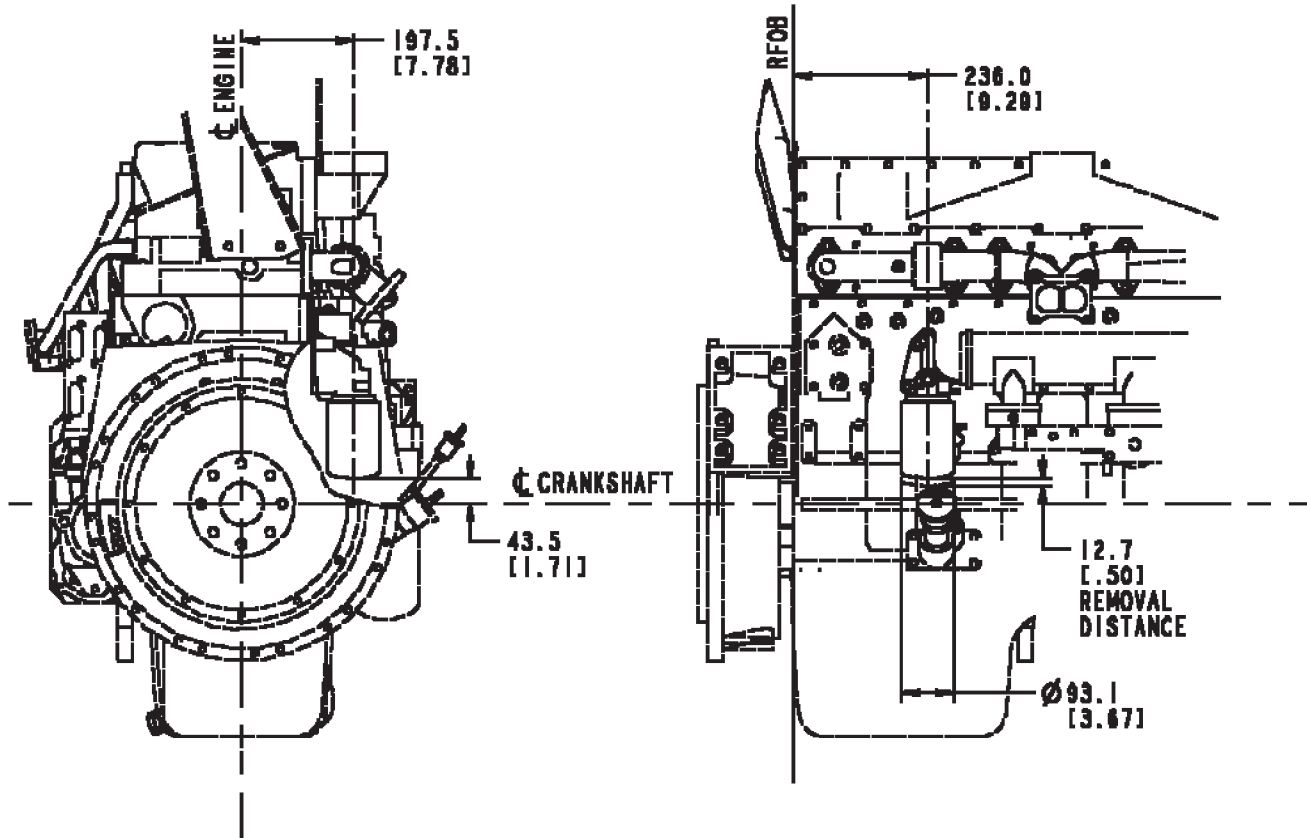
Option #	Description	Oil Fill Location	Breather Included	Notes	Weight	Value Code
VC 2084	Plastic	None - 9/16-18 Straight Thread O-ring	Yes, Side Vent	Black		

Breather Mounting Arrangement: Internal
 Breather Vent Location: Side
 Material: Plastic
 Engine Position: Vertical standard

Straight Thread O-ring Port Dia.: 9/16-18
Valve Cover Pitch (Degrees): 23
Breather Type: Baffled/Screened

WF - Corrosion Resistor

WF2031



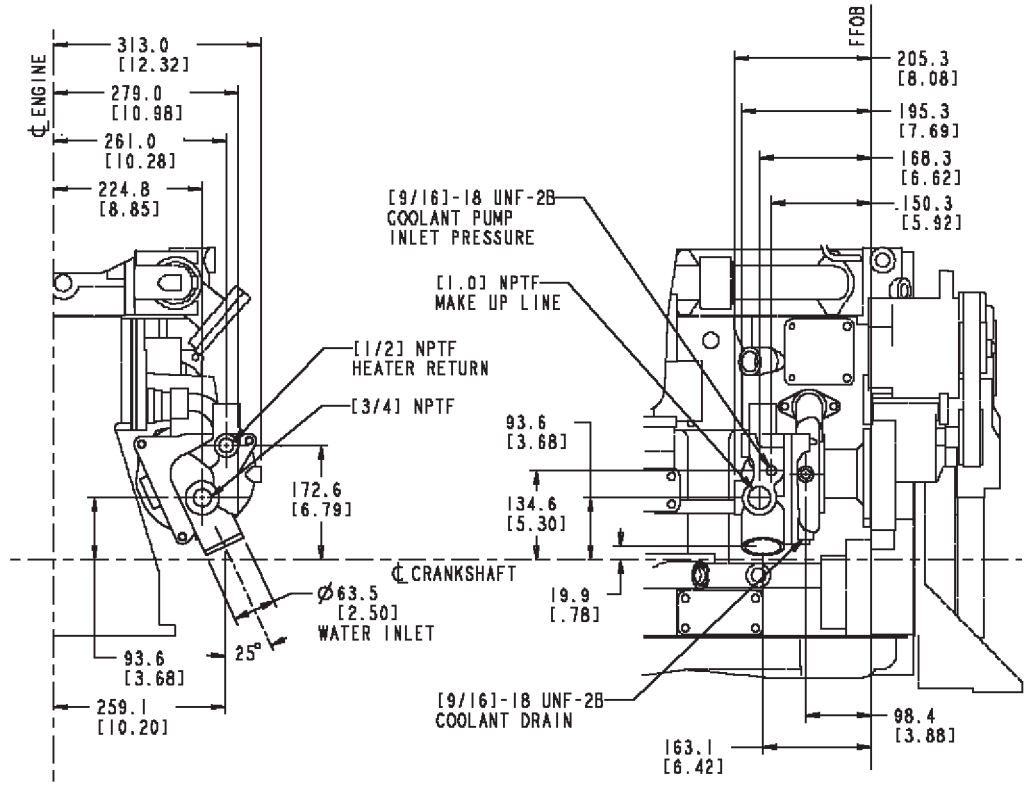
WF2031 [M]

Option #	Supplier/Type	Mounting	DCA4 Plus Units	Notes	Weight	Value Code
WF 2031	Cummins/Single spin-on	Engine direct-right rear water header plate	15	-	-	-

Cooling Capacity Min. Value: 18.92 litres [5 U.S. gal.]
 Cooling Capacity Max. Value: 37.85 litres [10 U.S. gal.]

WP - Water Pump

WP2020



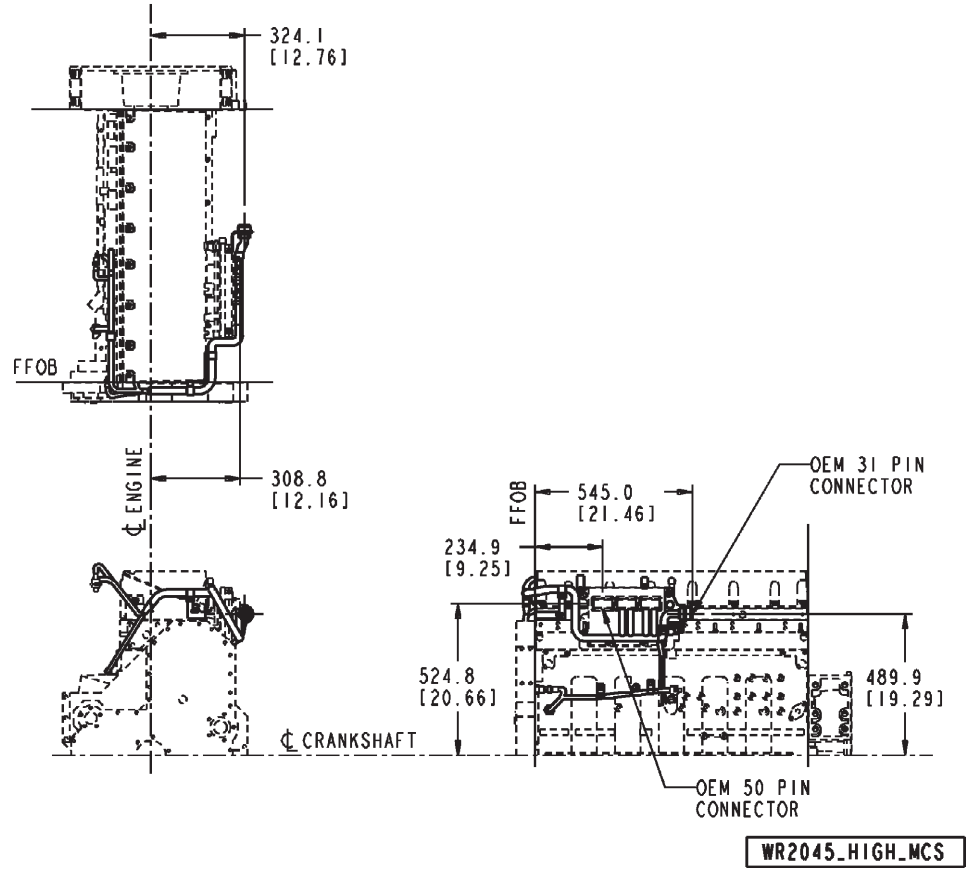
WP2020 [M]

Option #	Description
WP 2020	Straight inlet connection

Water pump with straight inlet connection for use with two pass lube oil cooler.

WR - Wiring Harness

WR2045hi



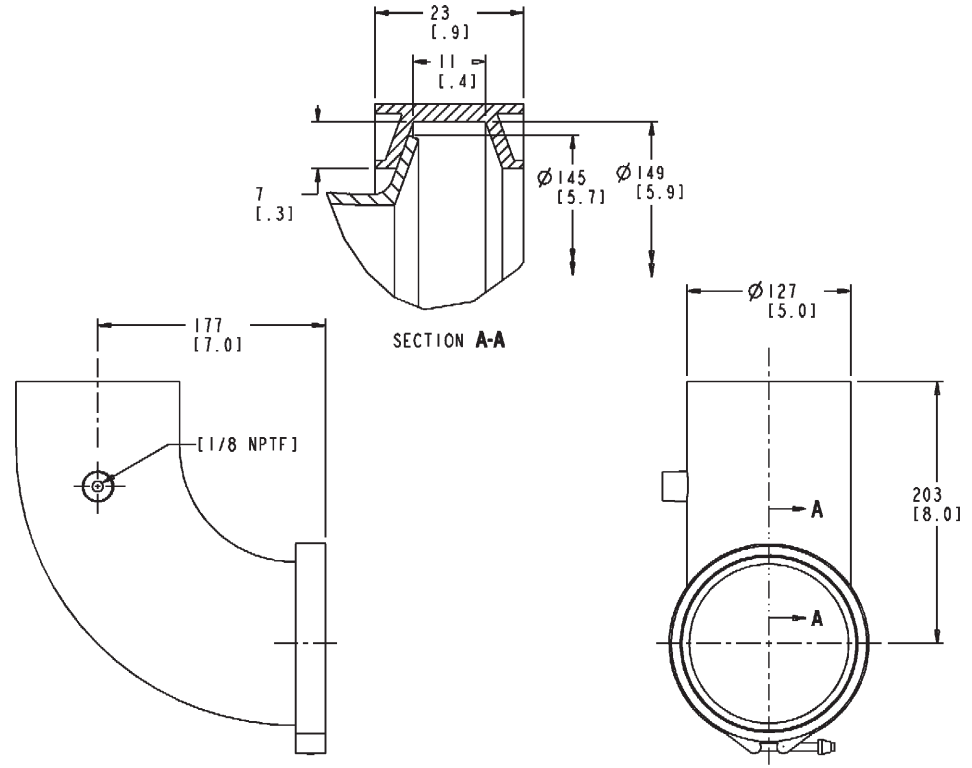
WR2045hi [M]

Option #	Engine Control System	Temp. Sensor Mount. Location	OEM Interface Conn. Orientation
WR 2045hi	CELECT CM570 high mount	N/A	Rearward projection left center

ECM Version: CM Series
 OEM Interface Conn Orientation: Rearward Projection from ECM
 See PH Option for location of OEM interface connection.

XS - Exhaust Outlet Connection

XS2021



XS2021_MCS

XS2021 [M]

Option #	Description	Connection O.D.	Marmon Type	Notes
XS 2021	90 deg. elbow	127 mm [5.in.]	V-band	Includes clamp

Turbo Outlet Connection O.D. 127 mm [5 in.]
 Outlet Connection Clamp Quantity: One
 Outlet Connection Clamp Diameter: 127 mm [5 in.]
Supplied in kit.

