

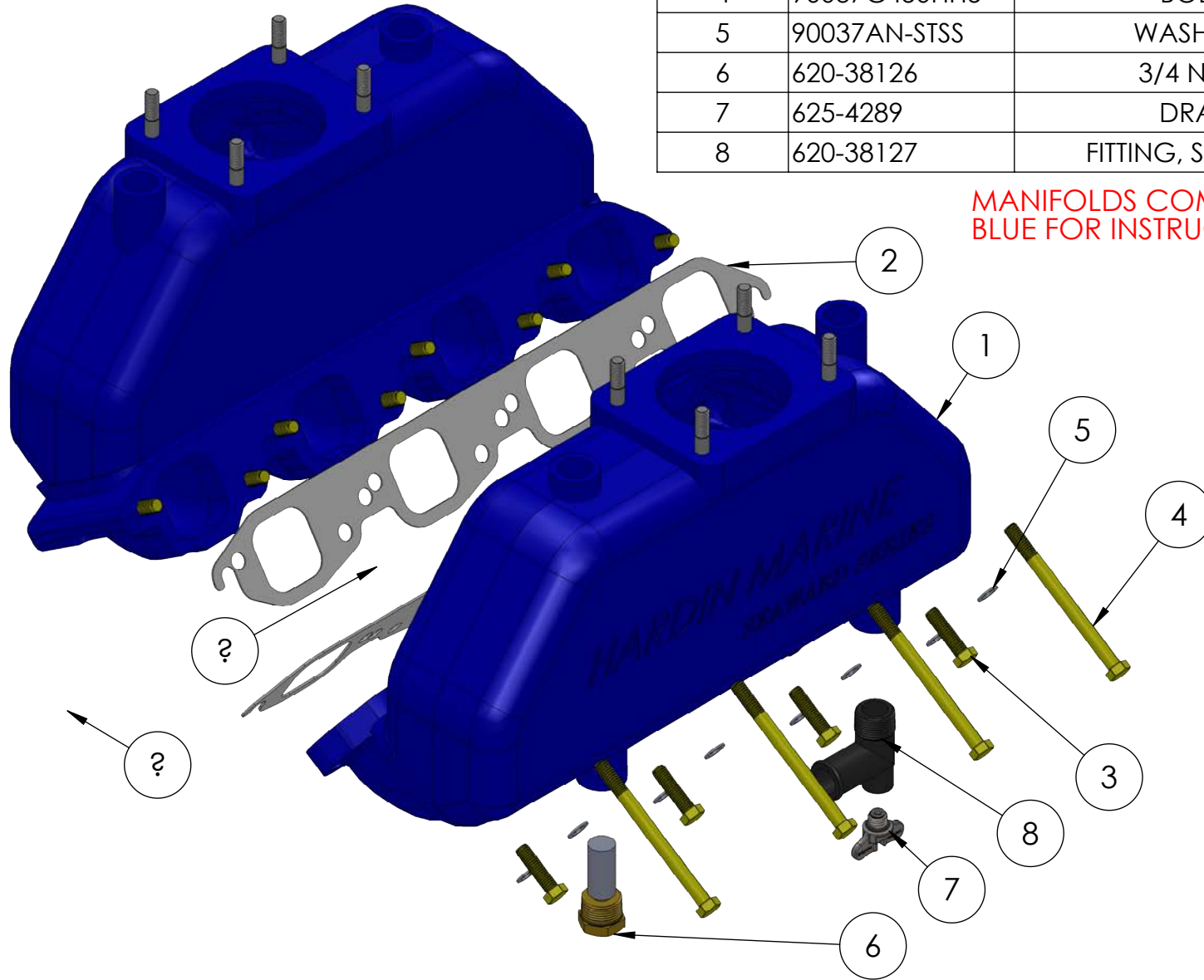
HARDIN MARINE 11 Industry Dr. Palm Coast, FL 32137
386-445-2500 / FAX 386-445-1122

PART NO.
620-38000
620-38100

TITLE: SEAWARD BBC MANIFOLDS PARTS
BREAKDOWN 620-38000& 620-38100

www.hardin-marine.com

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	620-38001	MANIFOLD ASSEMBLY	2
2	300-1413	GASKET	2
3	90037C137HH5	BOLT, 3/8-16	8
4	90037C450HH5	BOLT, 3/8-16	8
5	90037AN-STSS	WASHER, 3/8 AN	16
6	620-38126	3/4 NPT ANODE	2
7	625-4289	DRAIN PLUG	2
8	620-38127	FITTING, SEAWARD INLET	2



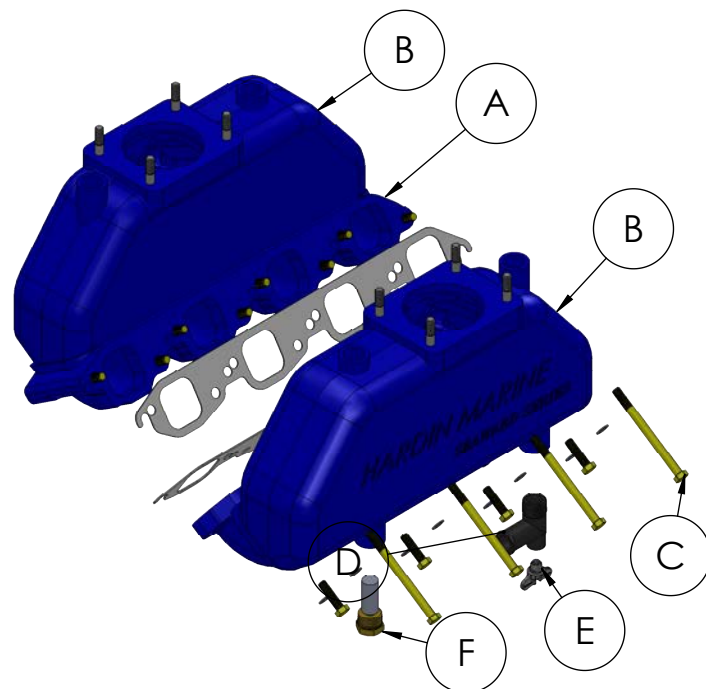
MANIFOLDS COME BLACK. SHOWN IN BLUE FOR INSTRUCTION PURPOSES.

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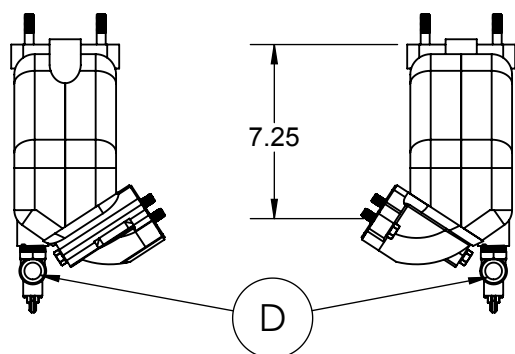
PART NO.
620-38000
620-38100

TITLE: SEAWARD BBC MANIFOLDS INSTALLATION
620-38000 & 620-38100

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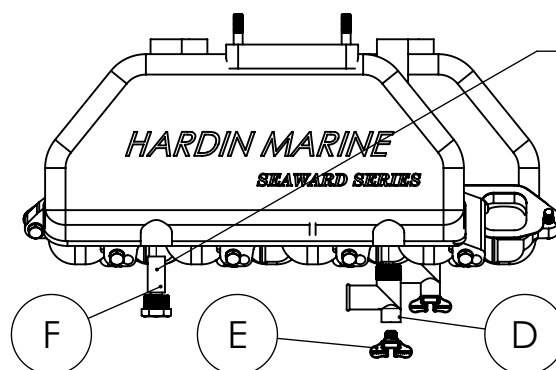


MANIFOLDS COME BLACK. SHOWN
IN BLUE FOR INSTRUCTION PURPOSES.



- INSTALLATION INSTRUCTIONS:
- 1) MAKE SURE CYLINDER HEAD EXHAUST MOUNTING SURFACE IS FREE OF KNICKS AND ANY OLD GASKET MATERIAL IS REMOVED. SEALANT IS NOT REQUIRED ON THE NEW SUPPLIED GASKETS, FIG. A.
 - 2) THE PORT AND STARBOARD MANIFOLDS ARE THE SAME PART AND CAN BE USED ON EITHER SIDE OF THE ENGINE, FIG. B.
 - 3) INSTALL MANIFOLDS WITH THE SUPPLIED 3/8 BOLTS AND WASHERS. APPLY ANTI-SIEZE TO 3/8 MOUNTING BOLTS, FIG. C . TORQUE TO 30 FT. LBS..
 - 4) SIDE VIEW BELOW AND ISSOMETRIC VIEW TO THE LEFT SHOWS PORT SIDE TYPICAL WATER INLET POSITION. INSTALL 1" HOSE BARB FITTING INTO BOTTOM OF THE MANIFOLD, FIG. D. NO ADDITIONAL SEALANT IS NEEDED. CAREFULL NOT TO CROSS THREAD THE FITTING. DO NOT OVER TIGHTEN.
 - 5) INSTALL DRAIN PLUG, FIG E, INTO THE BOTTOM OF THE INLET FITTING.
 - 6) INSTALL 3/4 ANODE PLUG, FIG. F, INTO THE OPPOSITE WATER INLET BUNG. NO ADDITIONAL SEALANT IS NEEDED.
 - 7) ATTACH 1" WATER INLET HOSE FROM THERMOSTAT HOUSING TO FIG. E FITTINGS (MAKE SURE IT IS A CONSTANT FLOW WATER SUPPLY).
 - 8) GO TO 620-38036 TAILPIPE INSTRUCTIONS TO COMPLETE INSTALLATION.

CAUTION** HARDIN MARINE MANIFOLD SYSTEMS ARE DESIGNED FOR USE ON ENGINES WITH FULL TIME CONSTANT WATER CIRCULATION AT ALL TIMES. NOTE** AFTER APPROXIMATELY 2-5 HOURS USE OR NUMEROUS ENGINE HEAT CYCLES ALL HARDWARE MUST BE RETORQUED AND OR TIGHTENED.



WARNING** ANODES ARE A SERVICEABLE PART AND SHOULD BE INSPECTED ROUTINELY DEPENDING ON THE NATURE OF THE BOATING ENVIRONMENT.

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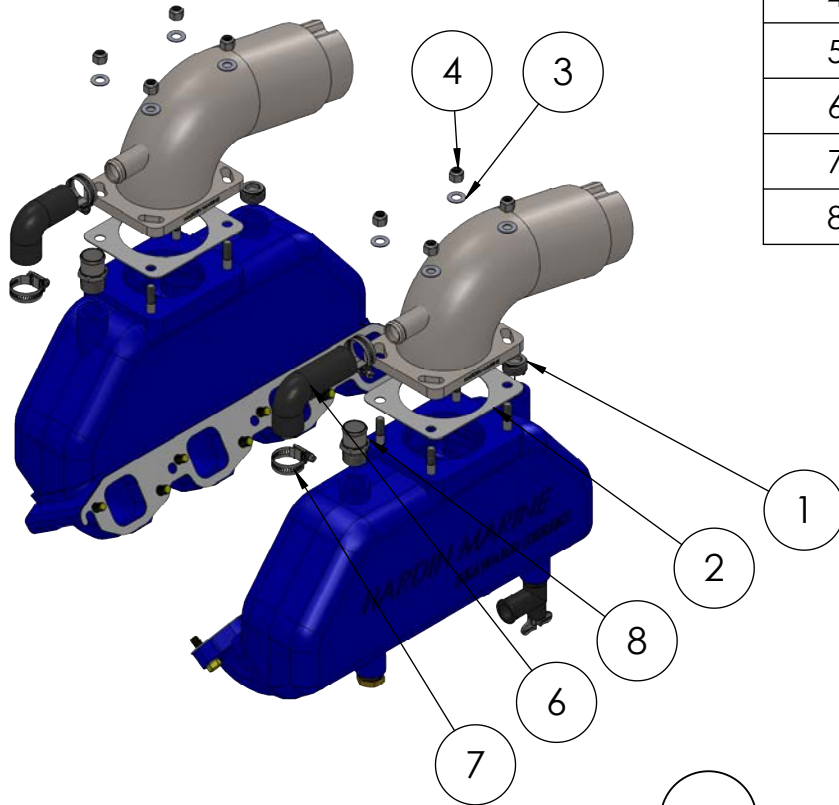
HARDIN MARINE 11 Industry Dr. Palm Coast, FL 32137
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PART NO.
620-38036

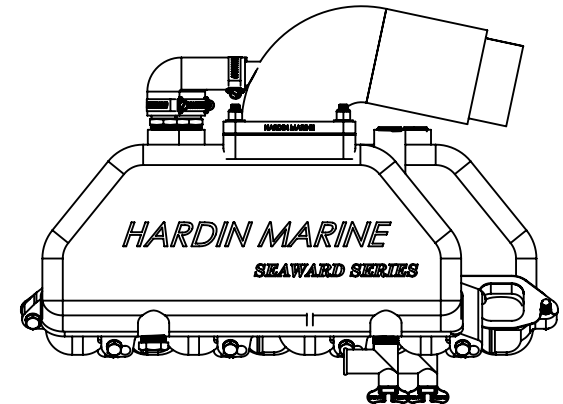
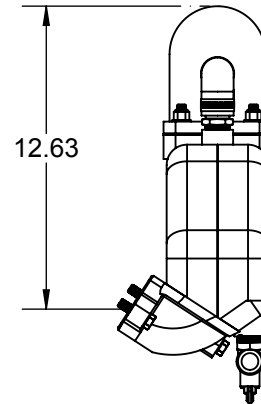
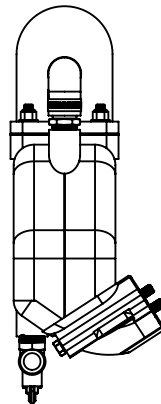
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	540-222999	3/4NPT PIPE PLUG	2
2	620-38006	RISER GASKET	2
3	90037SA-STSS	WASHER, 3/8 SAE	8
4	90037CN-FNSS	NUT, 3/8-16	8
5	620-38030	HOSE, RISER - STRB	1
6	620-38029	HOSE, RISER - PORT	1
7	100-720-6316	HOSE CLAMP	4
8	540-222132	FITTING, 1" BARB	2

TITLE:
SEAWARD BBC RISER INSTALL KIT-PARTS BREAKDOWN

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MANIFOLDS COME BLACK. SHOWN IN BLUE FOR INSTRUCTION PURPOSES.



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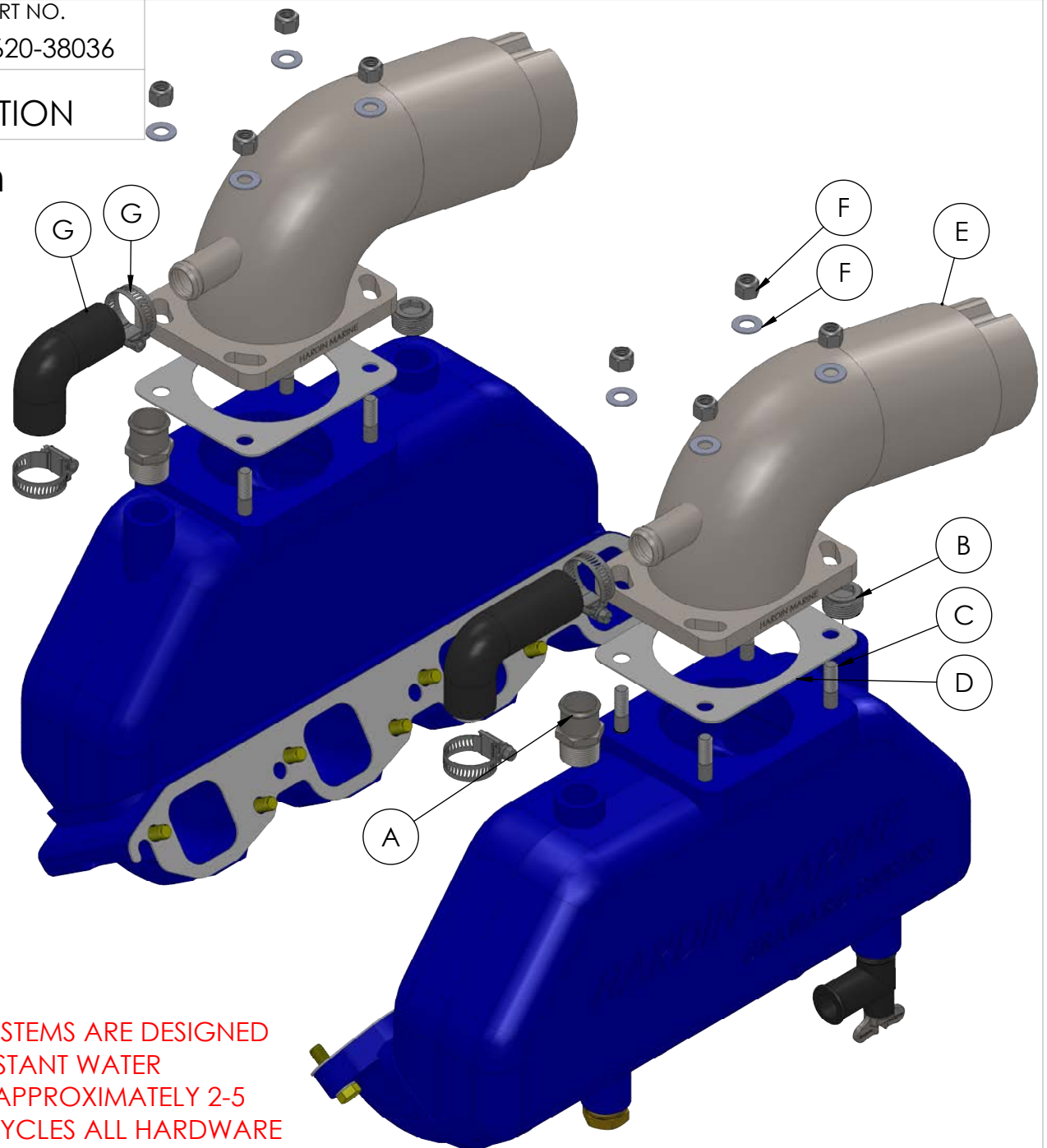
TITLE:

SEAWARD BBC RISER INSTALLATION

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INSTALLATION INSTRUCTIONS:

- 1) APPLY LIQUID THREAD SEALANT TO THE SUPPLIED 1" HOSE BARB FITTING & 3/4 NPT PIPE PLUGS.
- 2) INSTALL 1" HOSE BARB FITTINGS INTO FRONT OF THE MANIFOLDS, FIG. A.
- 3) INSTALL 3/4NPT PIPE PLUGS INTO THE REAR OF THE MANIFOLDS, FIG.B.
- 4) APPLY ANTI-SIEZE TO THE 8 STUDS, FIG. C.
- 5) SLIDE GASKETS OVER STUDS, FIG. D. DO NOT USE SEALANT ON THE GASKETS.
- 6) INSTALL RISERS, FIG. E.
- 7) IF YOU ARE INSTALLING 620-38051 SHIFT BRACKET AND 620-38050 OIL FILTER RELOCATION BRACKET, INSTALL THEM NOW. USE THE INSTRUCTIONS THAT CAME WITH THOSE KITS.
- 8) INSTALL WASHERS AND NUTS, FIG F. TORQUE TO 30 FT. LBS..
- 9) INSTALL JUMPER HOSE AND HOSE CLAMPS. STARBOARD SIDE IS SHORTER HOSE, FIG.G.



MANIFOLDS COME BLACK. SHOWN IN BLUE FOR INSTRUCTION PURPOSES.

CAUTION HARDIN MARINE MANIFOLD SYSTEMS ARE DESIGNED FOR USE ON ENGINES WITH FULL TIME CONSTANT WATER CIRCULATION AT ALL TIMES. NOTE** AFTER APPROXIMATELY 2-5 HOURS USE OR NUMEROUS ENGINE HEAT CYCLES ALL HARDWARE MUST BE RETORQUED AND OR TIGHTENED.**

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PART NO.
620-38035
620-38035Z

TITLE:

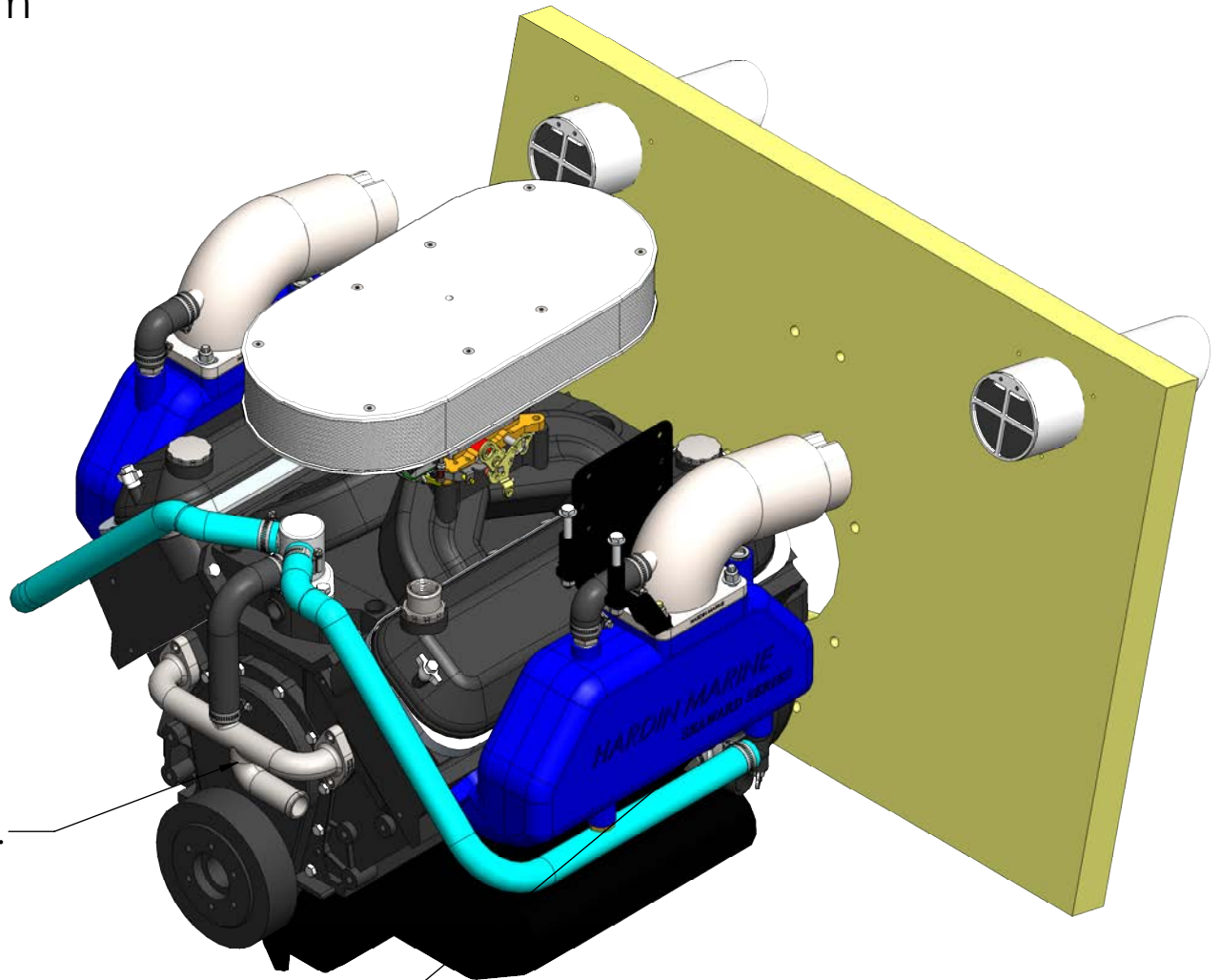
SEAWARD STD. BRAVO HOSE DIAGRAM

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SEAWARD EXHAUST MANIFOLDS REQUIRE A CONSTANT FLOW OF COOLING WATER. COOLING SYSTEM PLUMBING TO BE PLUMBED FROM THE ENGINES TOP WATER DISCHARGE OR THERMOSTAT HOUSING TO THE BOTTOM INLET PROVISION OF THE EXHAUST MANIFOLD. WATER FLOW VERTICALLY THROUGH THE EXHAUST MANIFOLD AND IS DISCHARGED THROUGH A JUMP CONNECTION HOSE TO THE EXHAUST RISER FOR COOLING.

SHOWN WITH 620-300100
CROSSOVER w/BYPASS KIT.

FOR ENGINES WITH A 4 PORT THERMOSTAT HOUSING
YOU NEED TO PURCHASE 420-910311 "Y" FITTING.



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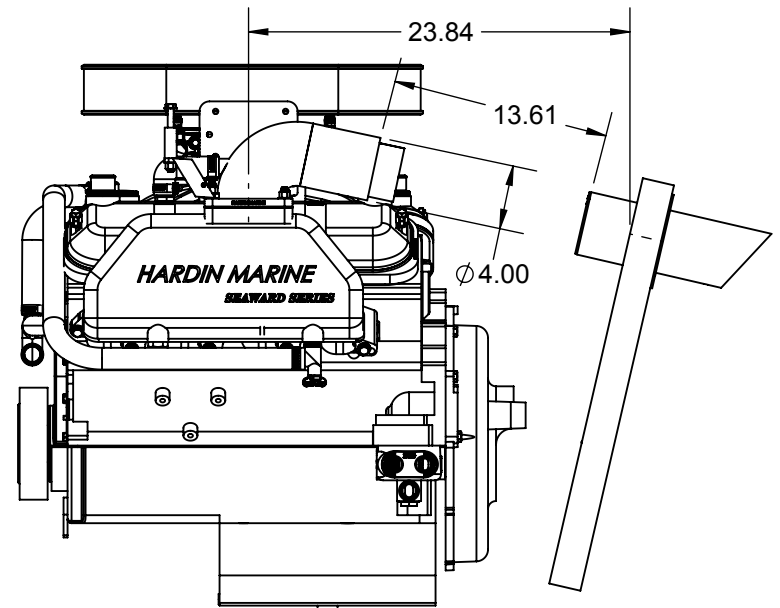
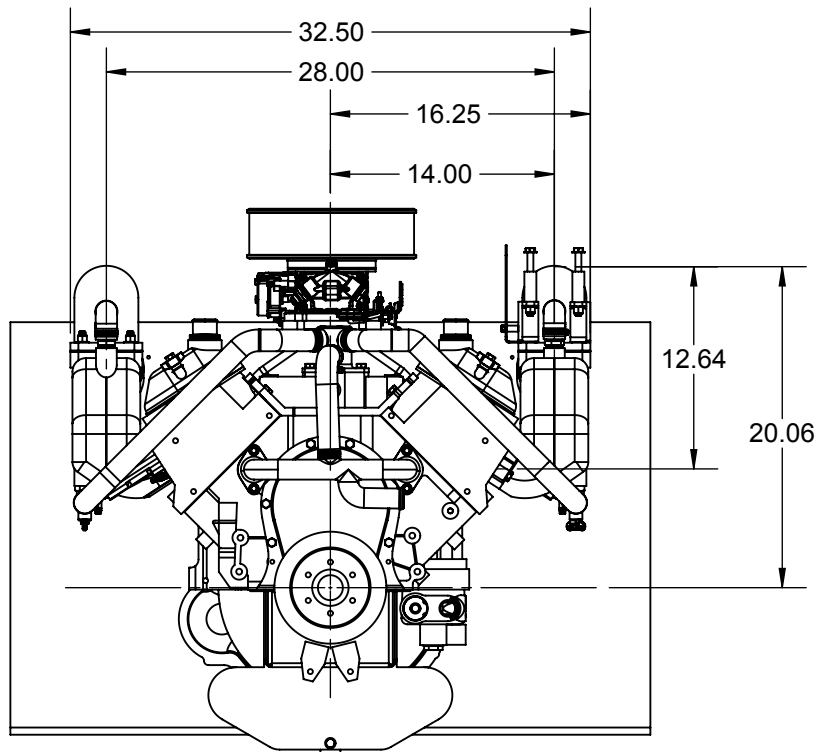
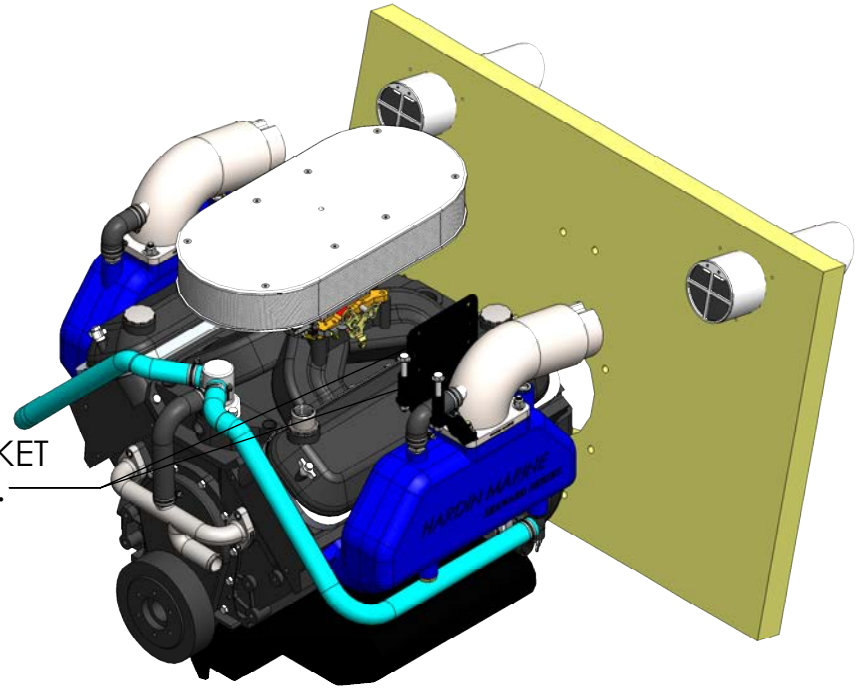
PART NO.
620-38035
620-38035Z

TITLE:

SEAWARD STD. BRAVO

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SHOWN WITH OPTIONAL
620-38050 OIL FILTER BRACKET
& 620-38051 SHIFT BRACKET.



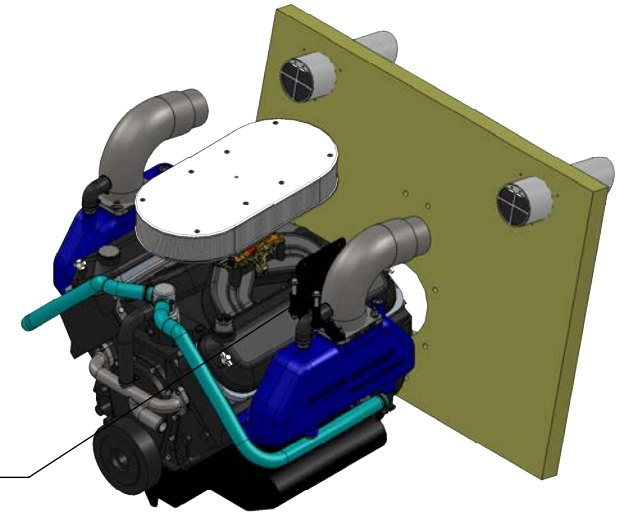
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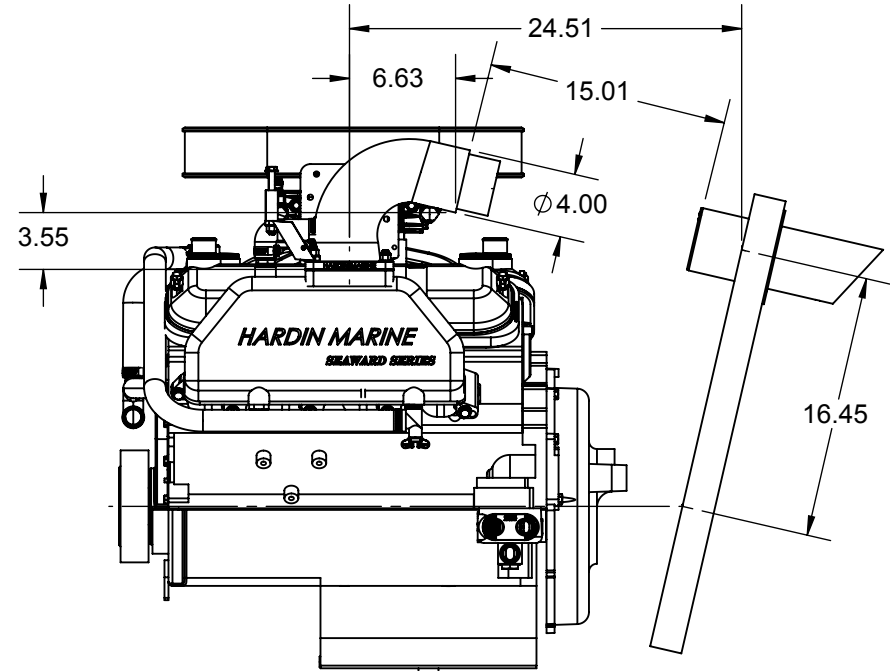
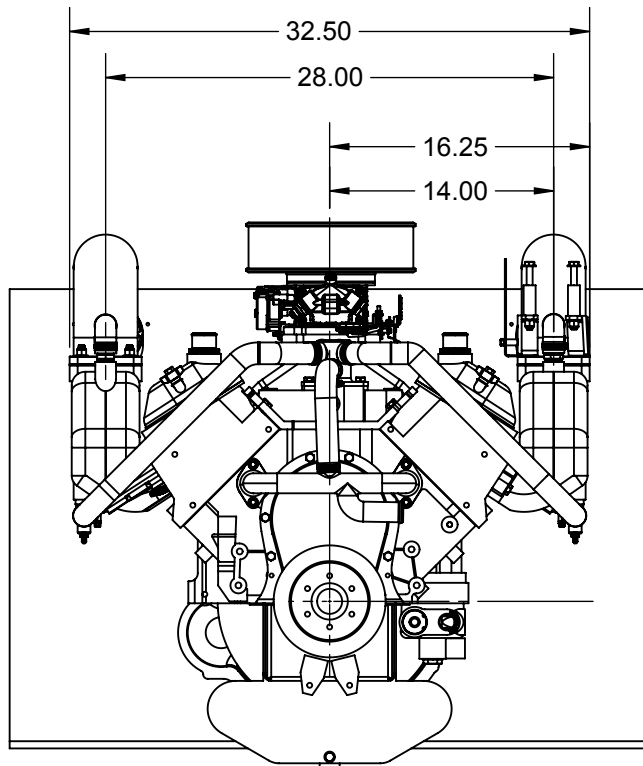
PART NO.
620-38037
620-38037Z

TITLE:
SEAWARD BBC w 3" TALLER STD. RISER

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SHOWN WITH OPTIONAL
620-38050 OIL FILTER BRACKET
& 620-38051 SHIFT BRACKET.



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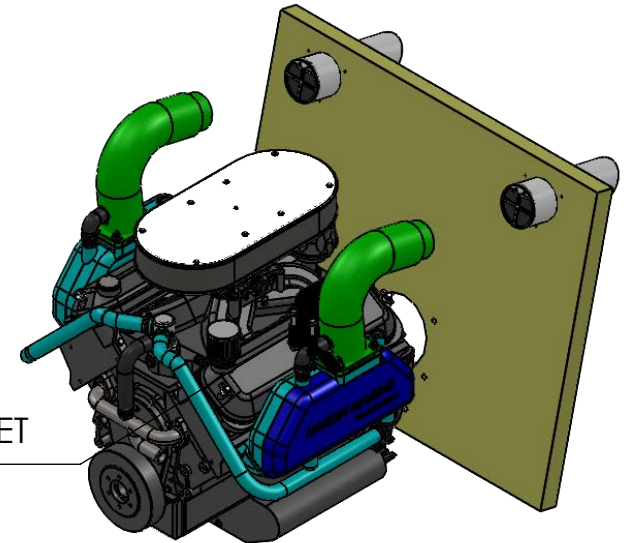
HARDIN MARINE 11 Industry Dr. Palm Coast, FL 32137
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PART NO.
620-38108
620-38108Z

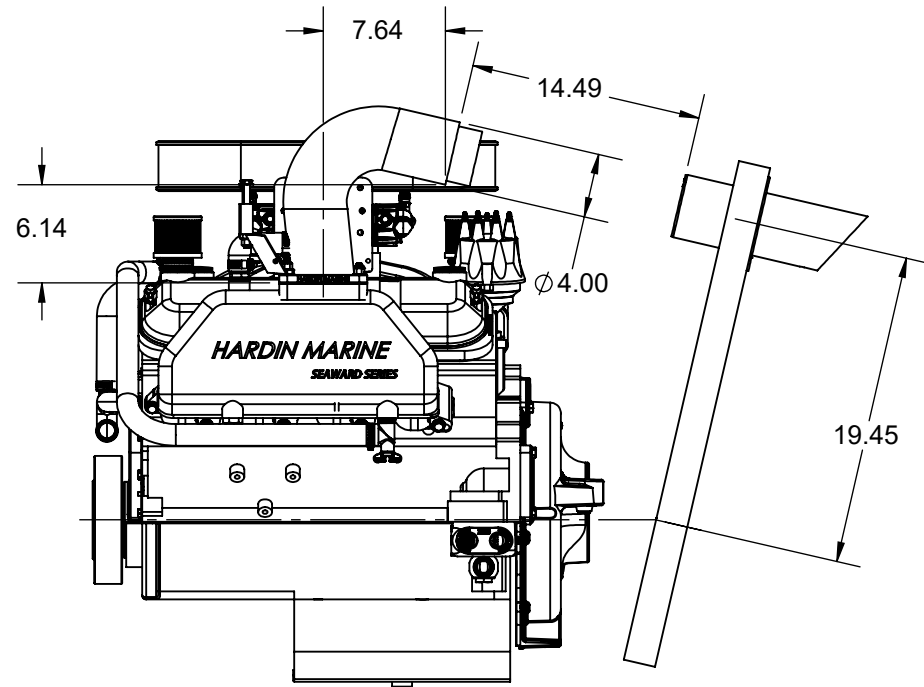
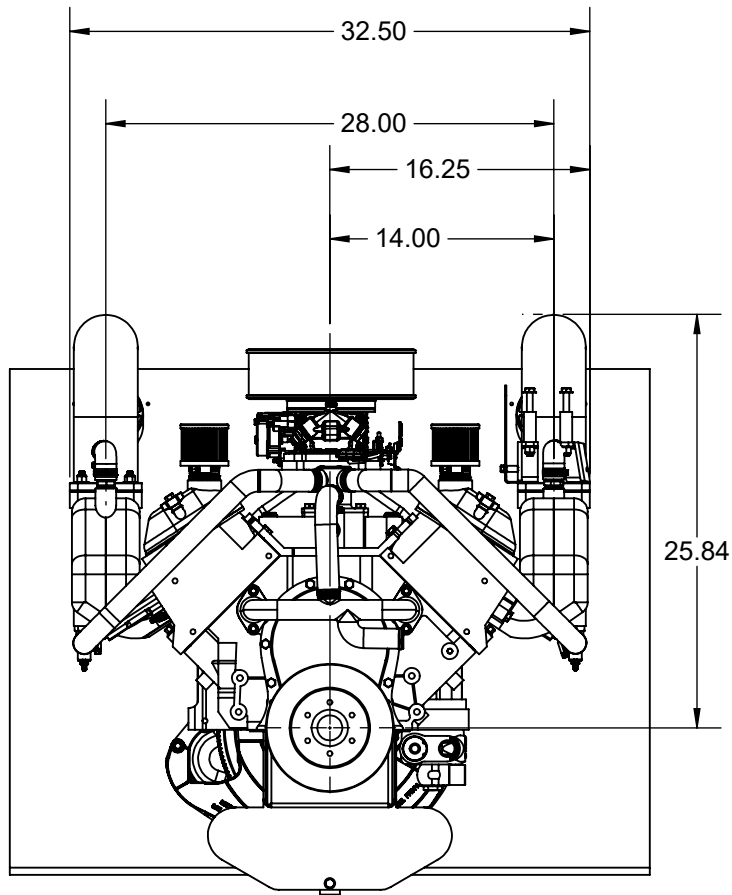
TITLE:

SEAWARD BBC w 6" TALLER STD. RISER

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SHOWN WITH OPTIONAL
620-38050 OIL FILTER BRACKET
& 620-38051 SHIFT BRACKET.



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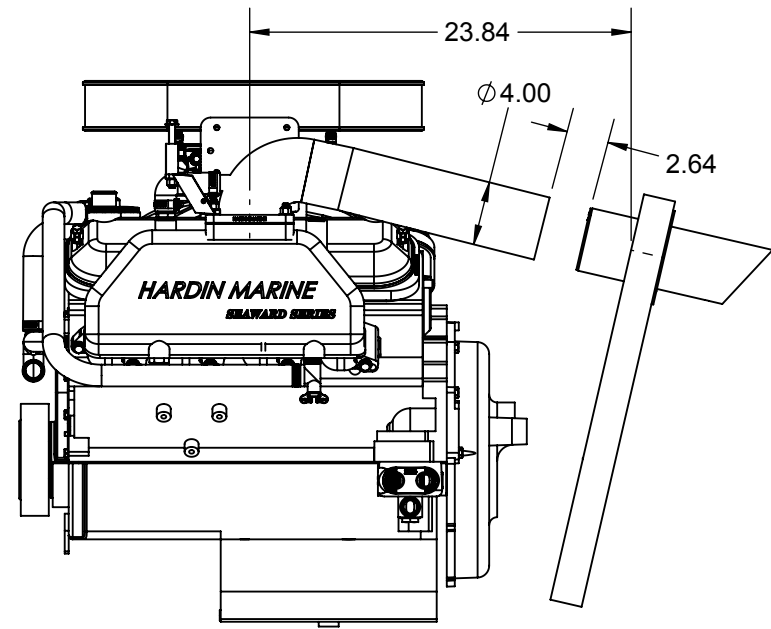
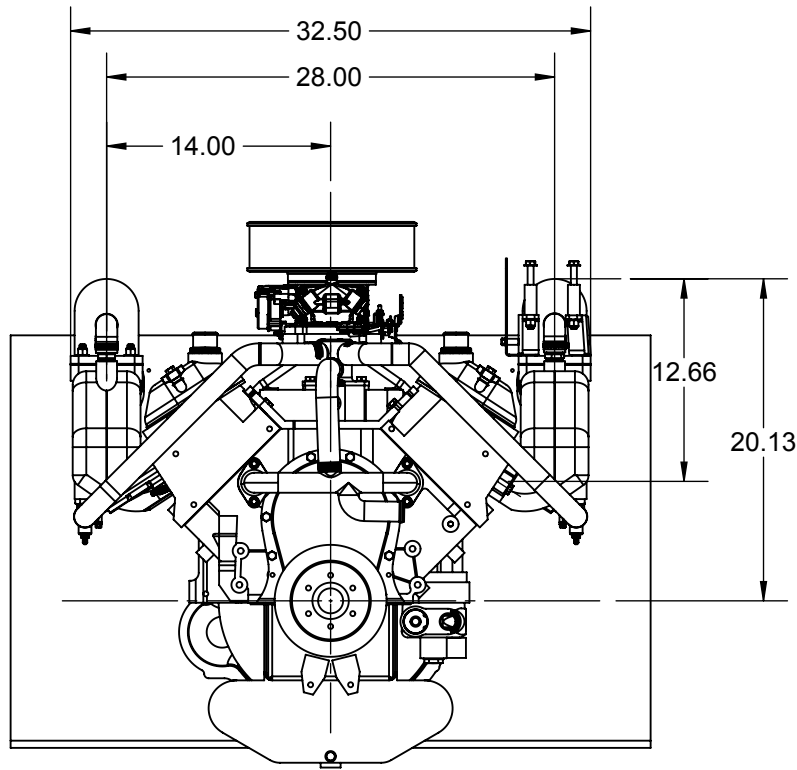
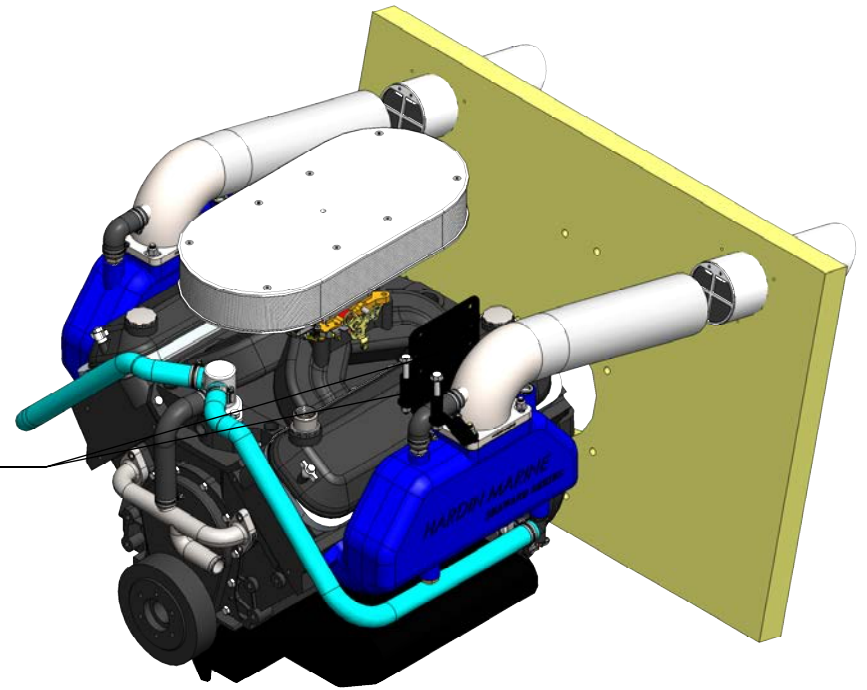
PART NO.
620-38038
620-38038Z

TITLE:

SEAWARD BBC w/ XL RISER

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SHOWN WITH OPTIONAL
620-38050 OIL FILTER BRACKET
& 620-38051 SHIFT BRACKET.



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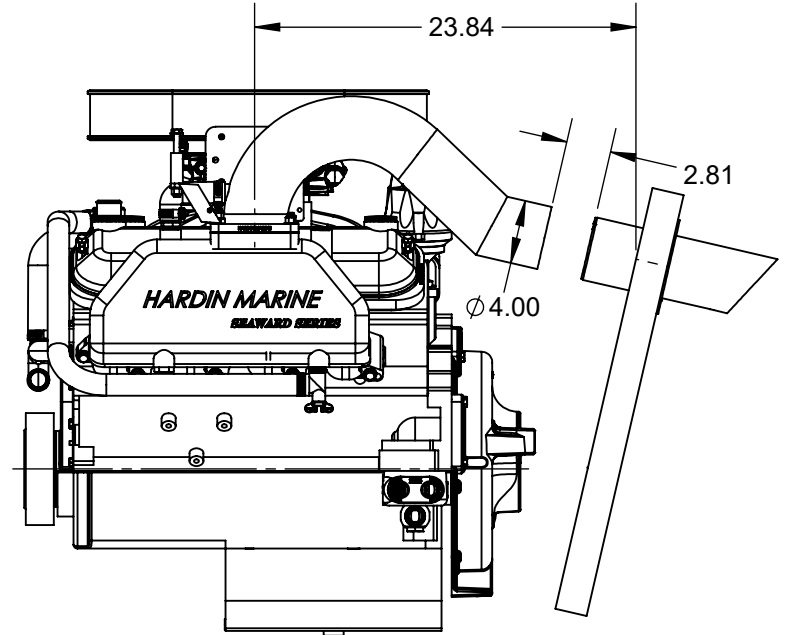
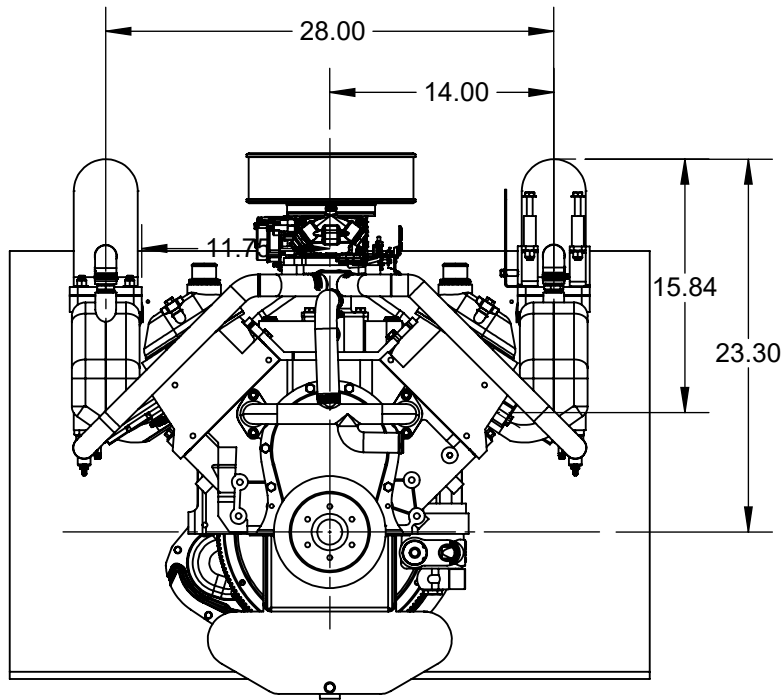
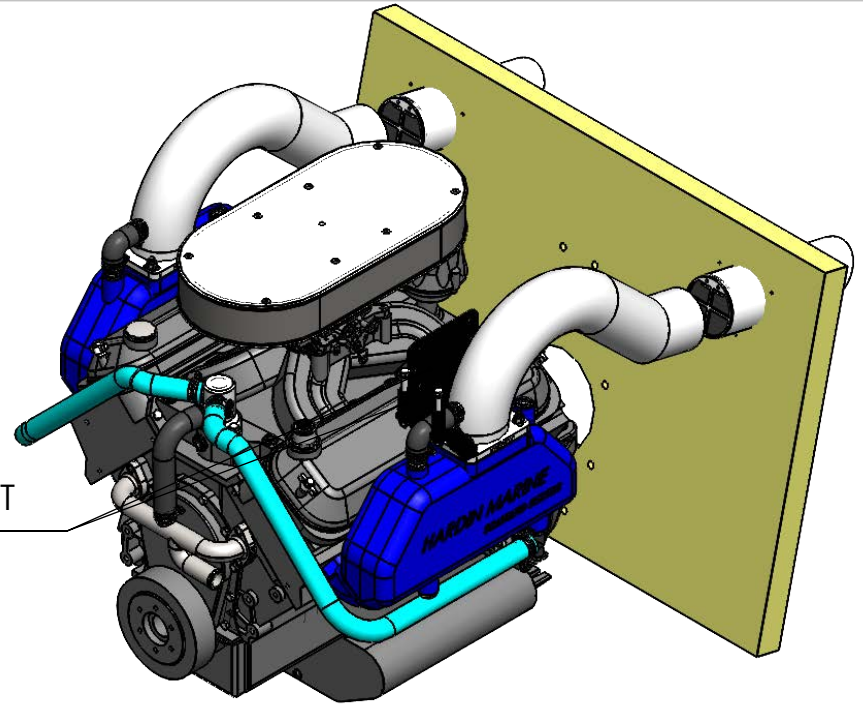
PART NO.
620-38039
620-38039Z

TITLE:

SEAWARD HP500 KIT

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SHOWN WITH OPTIONAL
620-38050 OIL FILTER BRACKET
& 620-38051 SHIFT BRACKET.



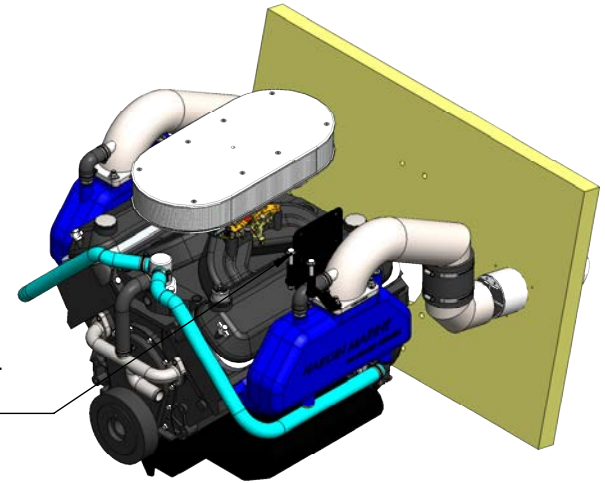
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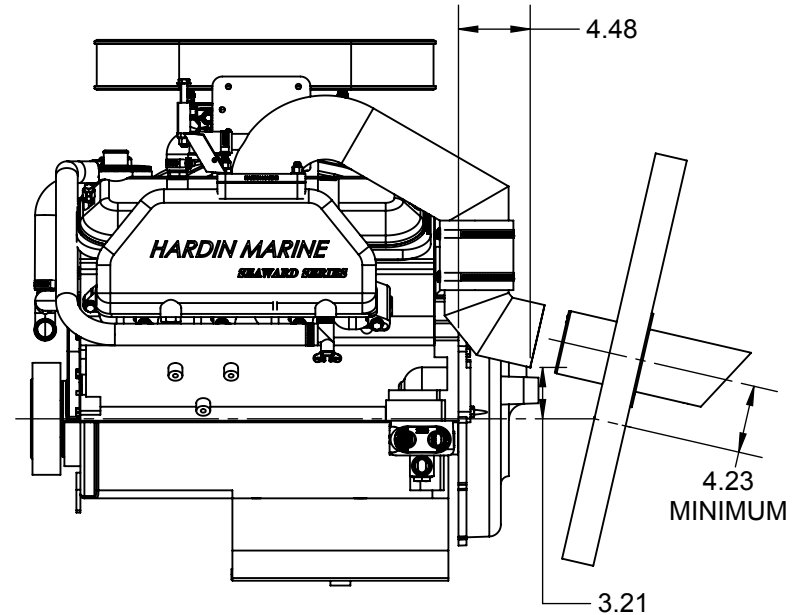
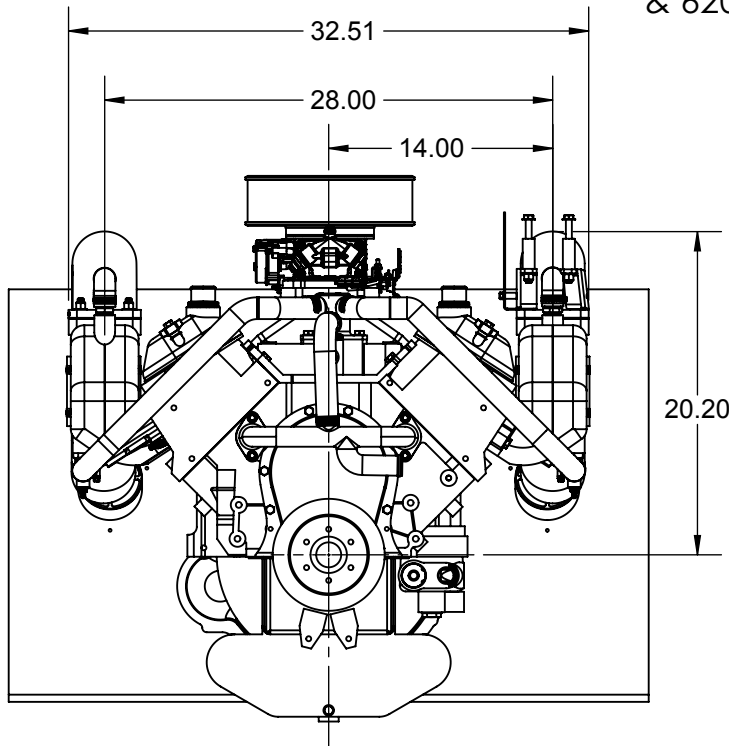
PART NO.
620-38105
620-38105Z

TITLE:
SEAWARD BBC W/ LOW EXIT TAILPIPES

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SHOWN WITH OPTIONAL
620-38050 OIL FILTER BRACKET
& 620-38051 SHIFT BRACKET.



MINIMUM LENGTH IS 9-5/8 WITH 5" OF HOSE AND 12-5/8 WITH 8" OF HOSE. WE SUPPLY KIT WITH 16" OF HOSE AND 4 HOSE CLAMPS. IF YOU NEED IT TO BE LOWER YOU WILL NEED TO BUY MORE 100-200-4004 4" EXHAUST HOSE. MAKE SURE TO HAVE MINIMUM 2-1/2 OF HOSE CLAMPING ON BOTH THE UPPER TAILPIPE AND THE LOWER EXIT. DIMENSIONS ABOVE ARE THE MINIMUM ASSEMBLED HEIGHT.

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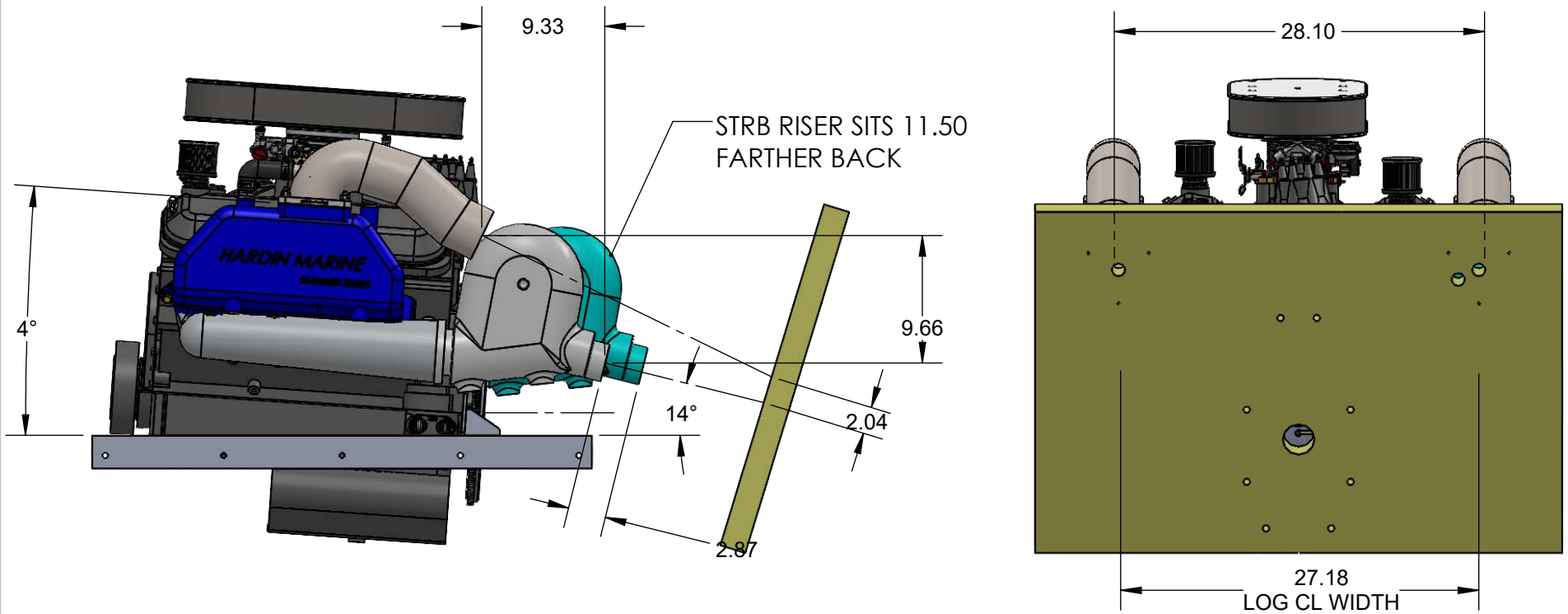
PART NO.

620-38181

TITLE:

SEAWARD BBC JET BOAT 4" SYSTEM

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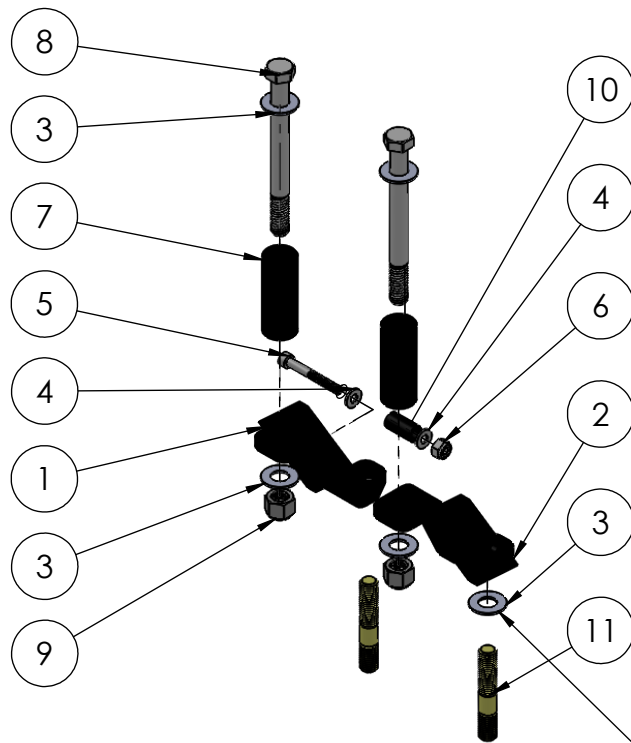
HARDIN MARINE 11 Industry Dr. Palm Coast, FL 32137
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PART NO.
620-38050

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	620-38052	BRKT, OIL FILTER - SEAWARD - STRB	1
2	620-32500R	BRKT, OIL FILTER - PORT	1
3	90037SA-STSS	WASHER, 3/8 SAE	5
4	90010AN-STSS	WASHER, #10 AN	2
5	90010C150SHS	BOLT	1
6	90010CN-FNSS	NUT, 10-24	1
7	620-32500C	SPACER, OIL FILTER RELOCATION	2
8	90037C400HHS	BOLT, 3/8	2
9	90037CN-FNSS	NUT, 3/8-16	2
10	620-38054	SPACER, OIL FILTER BRKT - SEAWARD	1
11	420-100	STUD, EXHAUST	2

TITLE:
SEAWARD OIL FILTER BRACKET-PARTS BREAKDOWN

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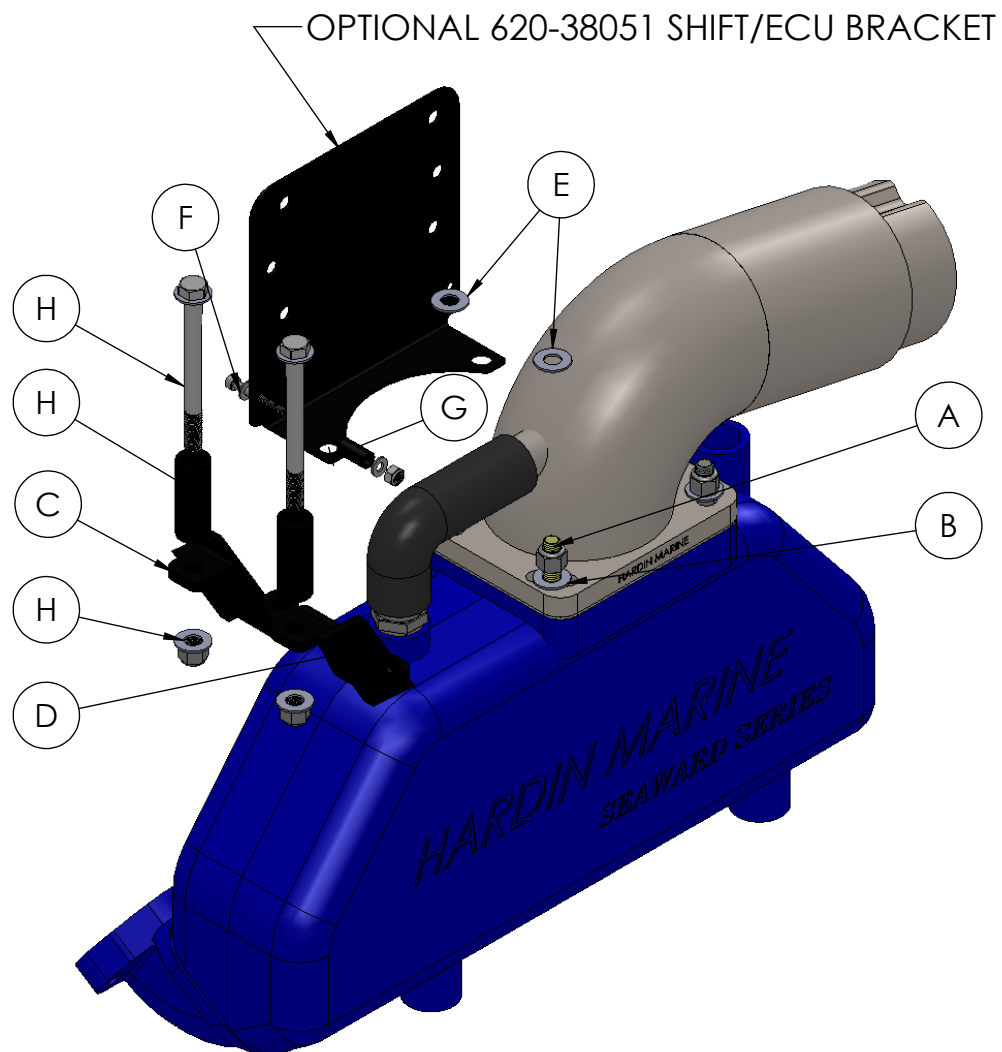
IMPORTANT NOTES:

- 1) ALWAYS USE ANTI-SIEZE ON ALL BOLTS.
- 2) TORQUE #10 BOLTS TO 100 IN. LBS..
- 3) TORQUE 3/8 BOLTS TO 35 FT. LBS..
- 4) PARTS 4,5,6 & 10 ARE ONLY USED WHEN INSTALLING BRACKET WITH 620-38051 SHIFT/ECU BRACKET.
- 5) REPLACE THE EXISTING MANIFOLD STUDS WITH #11 STUDS.

THIS WASHER IS ONLY USED WHEN INSTALL THIS KIT AND 620-38051 SHIFT/ECU BRACKET

TITLE:
SEAWARD OIL FILTER BRACKET-EXPLODED VIEW

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INSTALLATION INSTRUCTIONS:

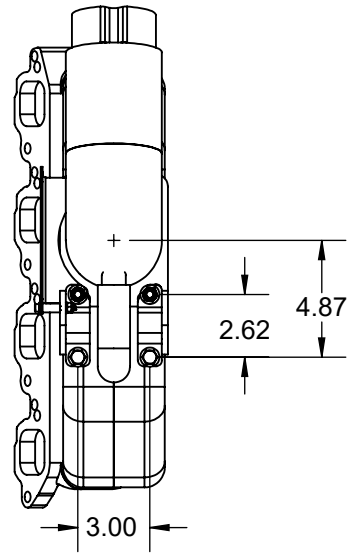
- 1) SEE PRINT 620-38050 PARTS FOR EXACT LIST OF PARTS THAT COME IN THIS KIT.
- 2) ASSEMBLY SHOWN WITH OPTIONAL 620-38051 SHIFT/ECU BRACKET. IF BRACKET IS NOT USED SKIP LINES 4,5, 7,8 & 9.
- 3) REPLACE THE EXISTING 2 STUDS THAT ARE IN THE MANIFOLD WITH THE SUPPLIED LONGER STUDS, FIG. A.
- 4) INSTALL WASHER OVER STUD. SEE FIG. B. **THIS WASHER IS ONLY USED WITH THE 620-38051 BRACKET!**
- 5) INSTALL 620-38051 BRACKET OVER THE STUDS.
- 6) SLIDE 620-38052 BRACKET, FIG C, & 620-32500R BRACKET, FIG. D OVER THE 2 STUDS. APPLY ANTI-SIEZE TO THE STUDS. INSTALL WASHER AND NUT FROM HEADER INSTALL KIT, FIG E. DO NOT TIGHTEN NUTS.
- 7) INSTALL #10BOLT WITH WASHER THRU THE 620-38051 BRACKET, FIG. F.
- 8) POSITION 620-38054, FIG G. SPACER BETWEEN THE 620-38051 & 620-38052 BRACKET.
- 9) APPLY ANTI-SIEZE TO THE BOLT. INSTALL #10 NUT AND WASHER ON THE INSIDE OF 620-38052 BRACKET. TORQUE TO 100 IN. LBS..
- 10) INSTALL FACTORY OIL FILTER BRACKET USING THE LONG 3/8 BOLTS, WASHERS, NUTS & SPACERS. SEE FIG. H.
- 11) NOW TORQUE ALL THE 3/8 NUTS, TO 35 FT. LBS..

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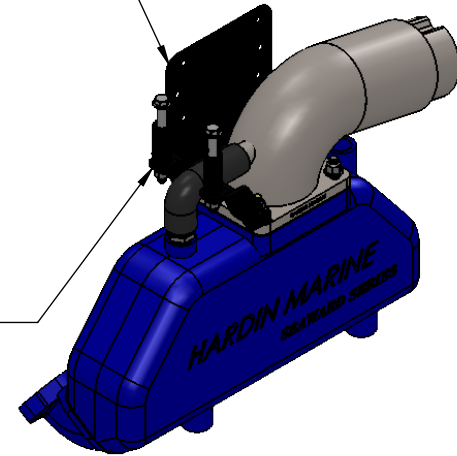
PART NO.
620-38050

TITLE:
SEAWARD OIL FILTER BRACKET-DIMENSIONS

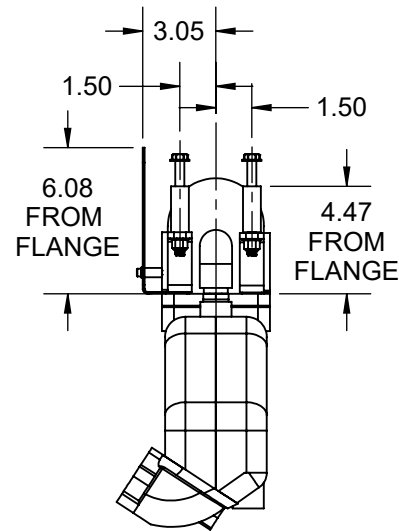
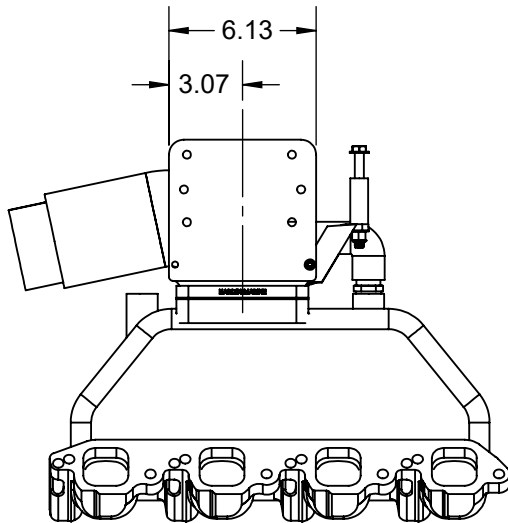
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620-38051 SHIFT/ECU BRACKET,
NOT INCLUDED IN 620-38050 KIT



620-38050 OIL FILTER BRACKET



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