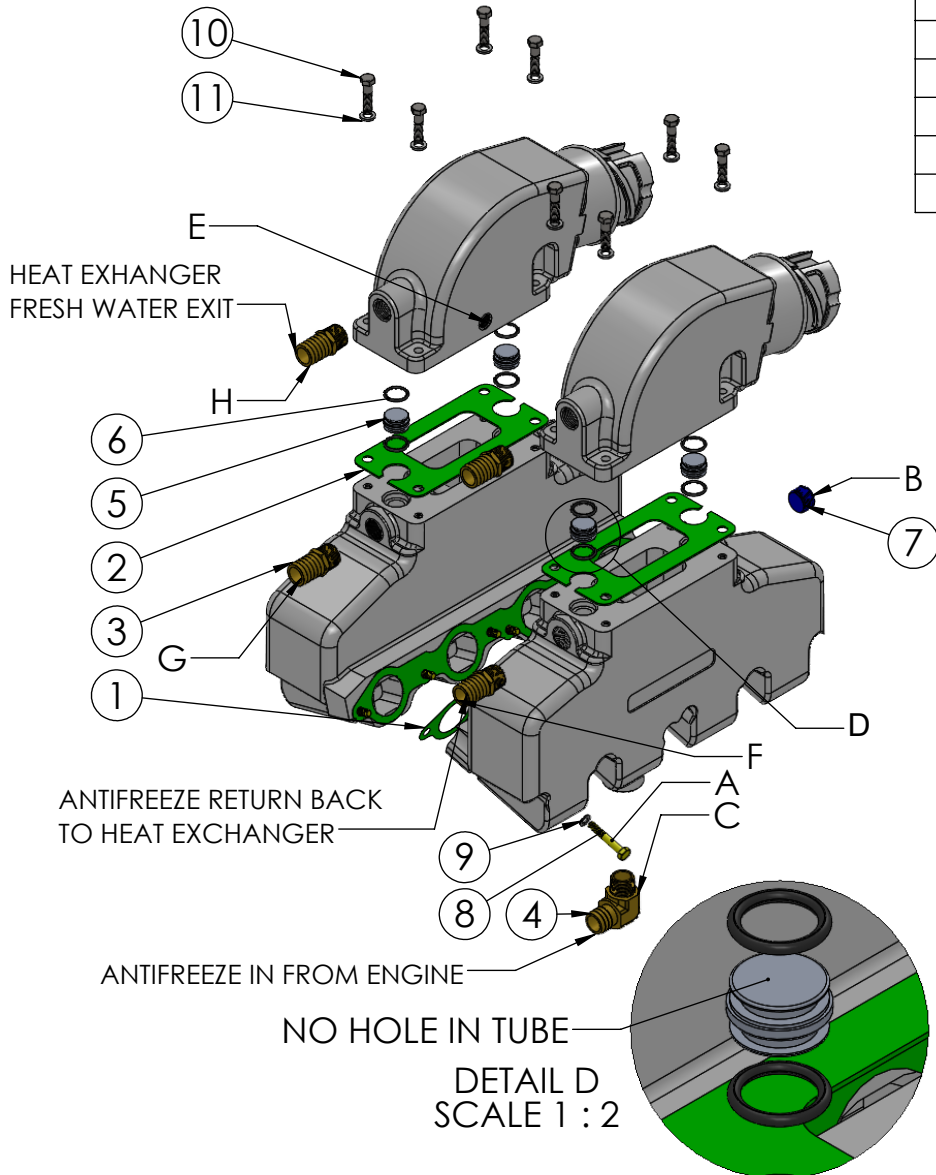


TITLE: **LS MANIFOLD AND RISER INSTALLATION FOR CLOSED COOLING FULL SYSTEMS**

www.hardin-marine.com



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	302-C5818-030	GASKET, LS EXHAUST	2
2	620-32494	GASKET, RISER	2
3	540-2221 10B	FITTING, 3/4NPTx 1.00 BARB	4
4	540-222120B	FITTING, 3/4NPTx1.00 BARB	2
5	620-32947	TUBE, SEALING - CLOSED COOLING	4
6	625-1211	O-RING	8
7	625-2035	PIPE PLUG, 3/4 NPT	2
8	900M08C050HH8	BOLT, 8MM	12
9	90031AN-STSS	WASHER, 5/16 AN	12
10	90037C150HHS	BOLT, 3/8-16x1-1/2	8
11	90037SL-STSS	WASHER, LOCKING - 3/8	8

- INSTALLATION INSTRUCTIONS FOR CLOSED COOLING FULL SYSTEM:
- 1) INSTALL MANIFOLDS ON THE ENGINE USING #8 900M08C050HH8 BOLTS AND #9 90031AN-STSS WASHERS, FIG A. APPLY ANTI-SIEZE TO THE THREADS. TORQUE FIRST PASS TO 11 FT. LBS.. THE FINAL PASS IS 18 FT. LBS.. THE MANIFOLD IS THE SAME FOR BOTH SIDES.
  - 2) INSTALL #7 625-2035 3/4 NPT PIPE PLUG INTO THE REAR OF THE MANIFOLDS, FIG. B.
  - 3) INSTALL #4 540-222120B FITTING INTO THE BOTTOM OF MANIFOLDS FIG. C. MAKE SURE TO USE TEFLON SEALANT TO ON THREADS.
  - 4) INSTALL #6 625-1211 ON BOTH OF THE GROOVES IN #5 620-32947 TUBES, DETAIL D.
  - 5) INSTALL TUBES INTO MANIFOLDS. SLIDE #2 620-32494 GASKET ON THE MANIFOLDS.
  - 6) ONE OF THE RISERS WILL BE THREADED FOR O-2 SENSOR, FIG. E. ON THE STARBOARD SIDE IT WILL BE INBOARD. ON THE PORT SIDE IT WILL BE OUTBOARD. IF YOU ARE NOT USING O-2 SENSOR YOU WILL NEED TO PURCHASE 620-50031 PLUG SEPARATELY.
  - 7) INSTALL RISERS TO THE MANIFOLDS WITH THE #10 90037C150HHS BOLTS AND # 11 90037SL-STSS LOCKING WASHERS. APPLY ANTI-SIEZE TO THE THREADS. TORQUE TO 30 FT. LBS..
  - 8) INSTALL #3 540-2221 10B FITTINGS INTO THE FRONT OF BOTH MANIFOLDS AND RISERS, FIG. F. MAKE SURE TO USE TEFLON SEALANT TO ON THREADS.
  - 9) CONNECT ANTIFREEZE HOSE FROM THE ENGINE TO THE 1" HOSE BARB IN THE BOTTOM OF THE MANIFOLD. FIG, C.
  - 10) CONNECT 1" HOSE FROM THE MANIFOLD BACK TO THE HEAT EXCHANGE, FIG. G.
  - 11) CONNECT 1" HOSE FROM FRESH WATER DISCHARGE FROM THE HEAT EXCHANGER TO THE 1" HOSE BARB IN THE RISER, FIG. H.

HARDIN  
MARINE

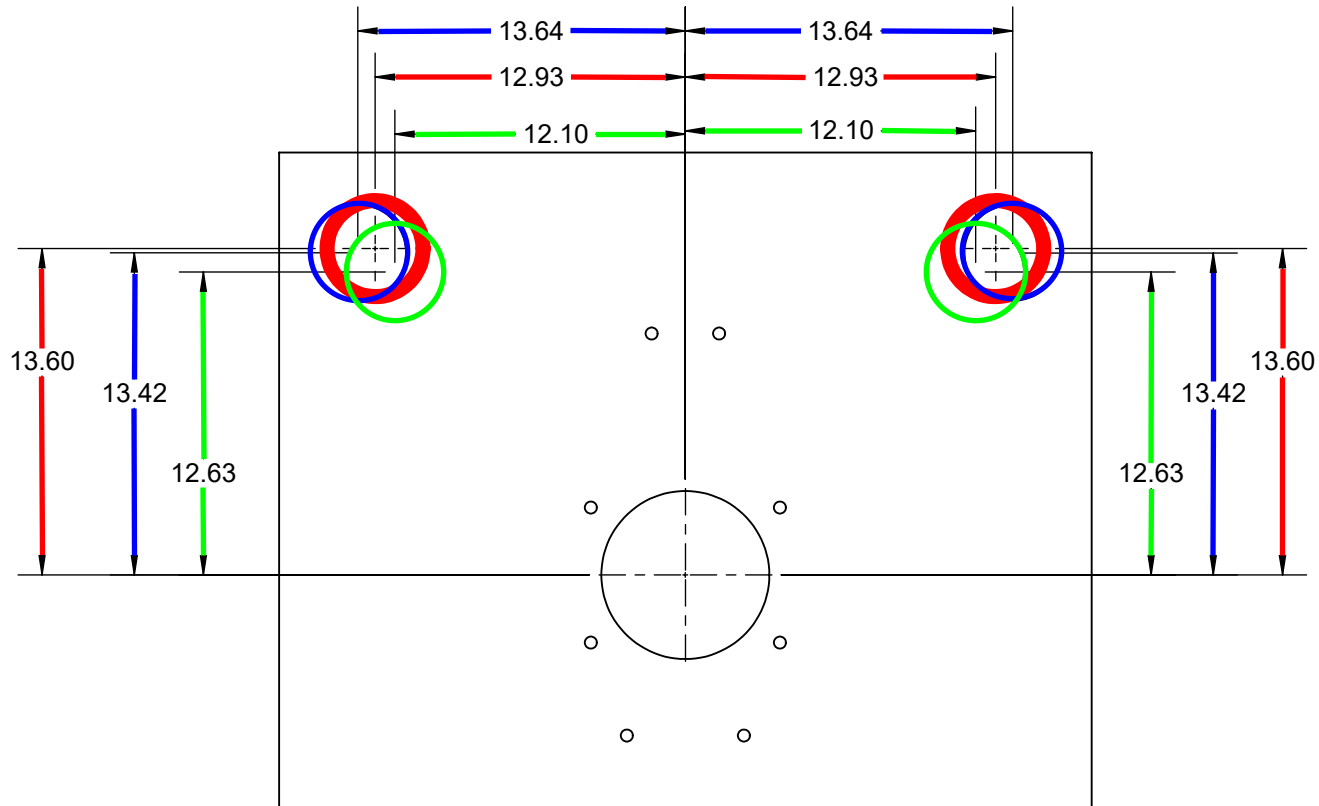
11 Industry Dr. Palm Coast, FL 32137  
386-445-2500 / FAX 386-445-1122

PART NO.  
620-32950 &  
620-32951

TITLE:

LS MANIFOLD & RISER TIP LOCATION.

[www.hardin-marine.com](http://www.hardin-marine.com)



RED CIRCLE IS LS ALUMINUM MANIFOLD EXIT.

BLUE CIRCLE IS BBC/BRAVO EXIT.

GREEN CIRCLE IS SBC/ALPHA EXIT.

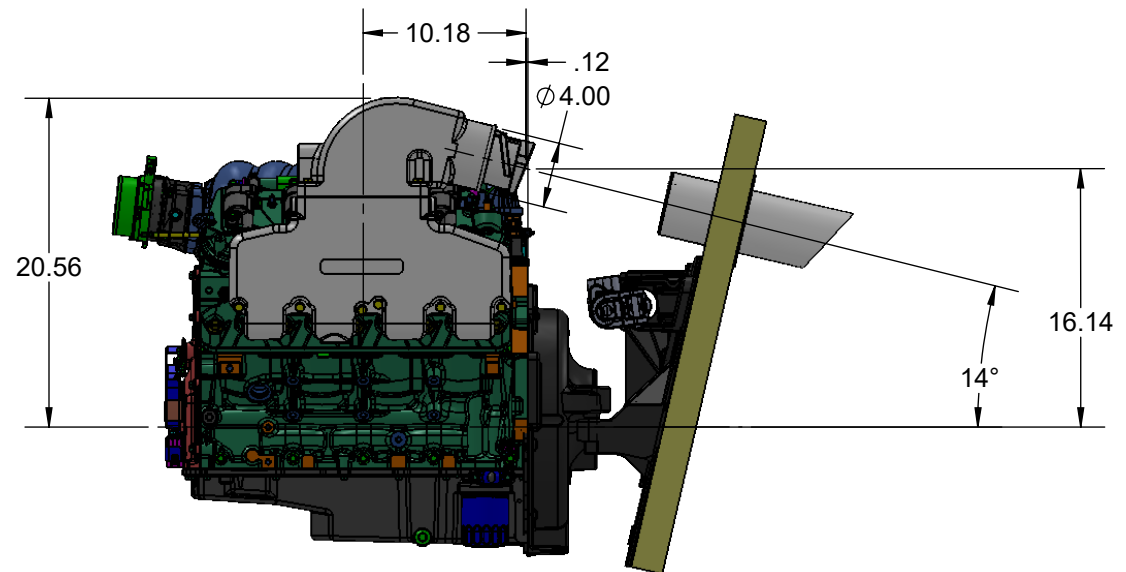
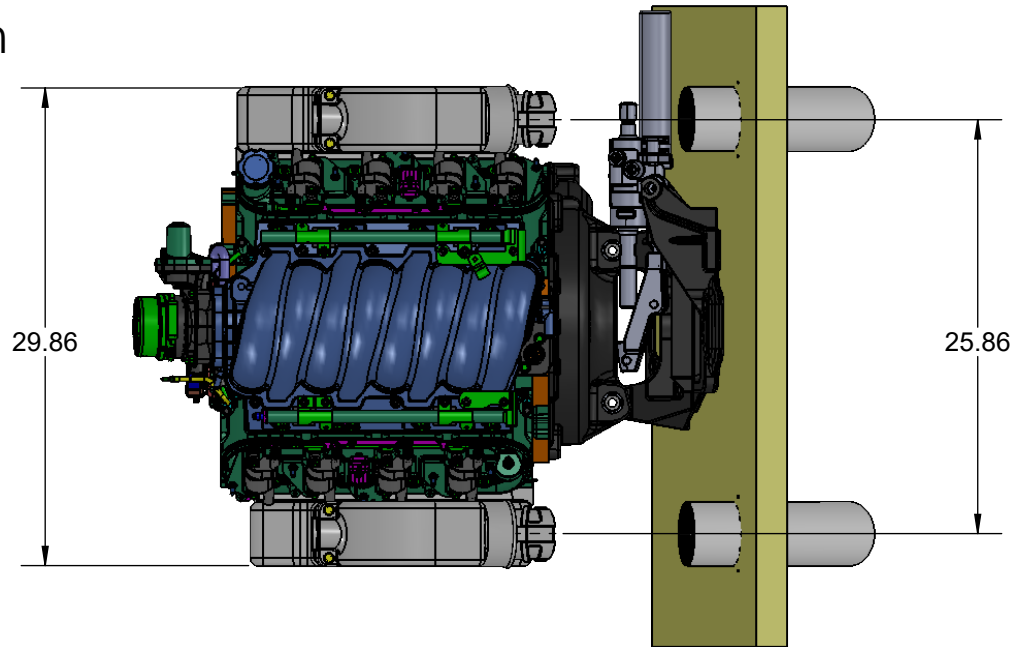
HARDIN MARINE 11 Industry Dr. Palm Coast, FL 32137  
386-445-2500 / FAX 386-445-1122

PART NO.  
620-32950  
& 620-32951

TITLE:

LS MANIFOLD AND RISER

[www.hardin-marine.com](http://www.hardin-marine.com)



THIS DRAWING IS CONFIDENTIAL AND IS SUPPLIED ON EXPRESS CONDITION THAT IT SHALL NOT BE LENT, COPIED OR DISCLOSED TO ANY OTHER PERSON OR USED FOR ANY OTHER PURPOSE WITHOUT WRITTEN CONSENT OF HARDIN MARINE INC.. BREACH OF THIS CONTRACT WILL HOLD ..... AND IT'S PRINCIPALS LIABLE FOR LOSS AND DAMAGES.