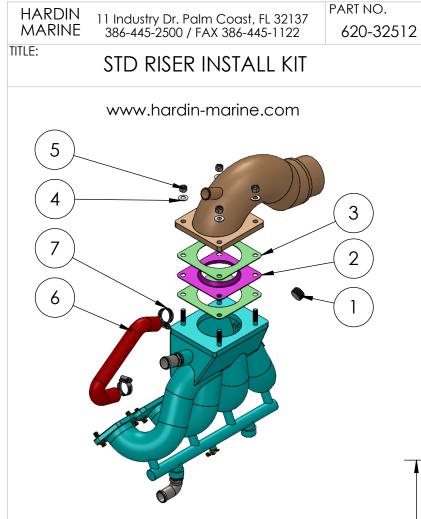
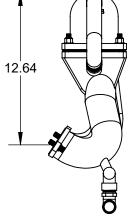
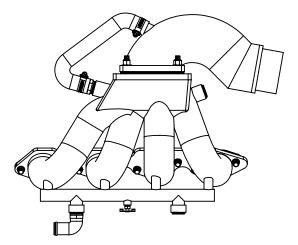


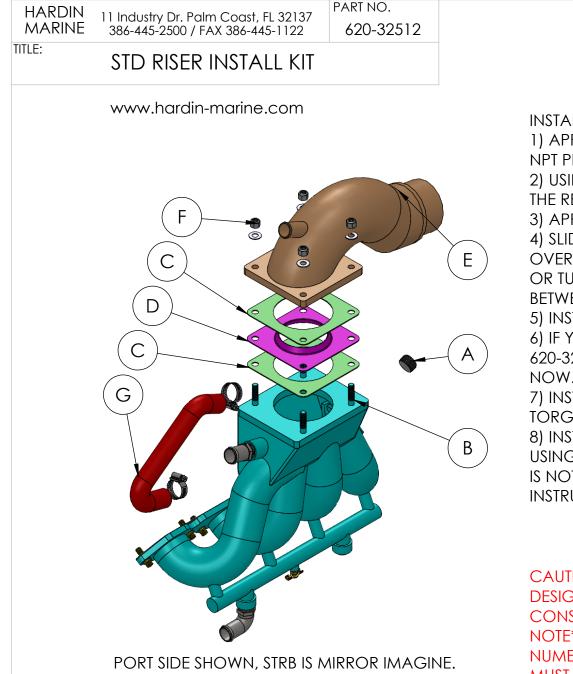
RETORQUED AND OR TIGHTENED.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	540-222999	3/4NPT PIPE PLUG	1
2	420-907060	TURBULATOR	1
3	420-906321	GASKET, RISER	2
4	90037SA-STSS	WASHER, 3/8 SAE	4
5	90037CN-FNSS	NUT, 3/8-16	4
6	420-906500	hose, jump	1
7	100-720-6316	HOSE CLAMP	2







1) APPLY LIQUID THREAD SEALANT TO THE SUPPLIED 3/4 NPT PIPE PLUGS.

2) USING 9/16 ALLEN KEY, INSTALL 3/4NPT PIPE PLUGS INTO THE REAR OF THE MANIFOLDS, FIG.A.

3) APPLY ANTI-SIEZE TO THE 8 STUDS, FIG. B.

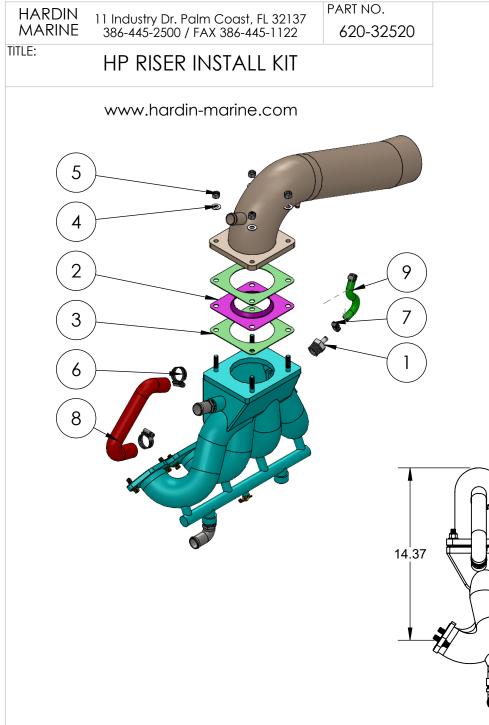
4) SLIDE RISER GASKET, FIG. C & TURBULATORS, FIG. D, OVER STUDS. DO NOT USE ANY SEALANT ON THE GASKETS OR TURBULATORS. AS SHOWN, THE TURBULATOR IS BETWEEN THE 2 GASKETS.

5) INSTALL RISERS, FIG. E.

6) IF YOU ARE INSTALLING 620-32505 SHIFT BRACKET AND 620-32500 OIL FILTER RELOCATION BRACKET, INSTALL THEM NOW. USE THE INSTRUCTIONS THAT CAME WITH THOSE KITS. 7) INSTALL WASHERS AND NUTS, FIG F. USING 9/16 SOCKET, TORGUE TO 30 FT. LBS..

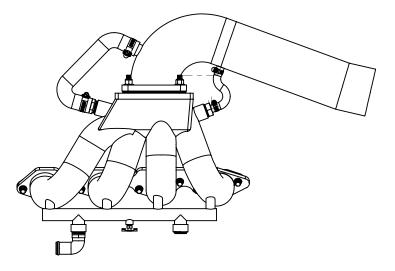
8) INSTALL JUMPER HOSE AND HOSE CLAMPS, FIG.G. IF USING WITH FULL CLOSED COOLING KIT, THE JUMPER HOSE IS NOT USED. SEE FULL CLOSED COOLING KIT INSTRUCTIONS.

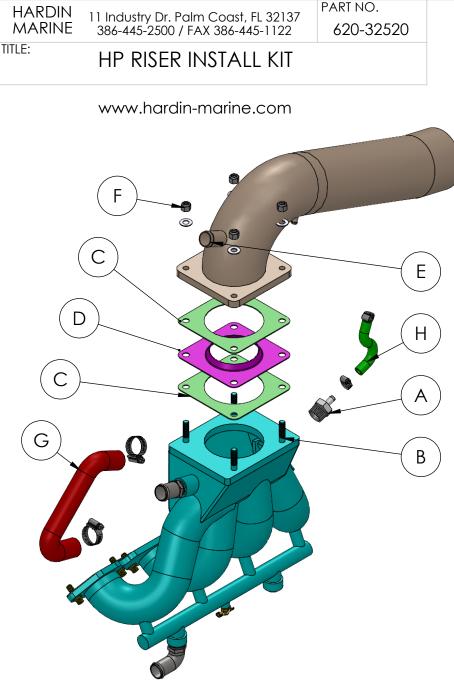
CAUTION** HARDIN MARINE MANIFOLD SYSTEMS ARE DESIGNED FOR USE ON ENGINES WITH FULL TIME CONSTANT WATER CIRCULATION AT ALL TIMES. NOTE** AFTER APPROXIMATELY 2-5 HOURS USE OR NUMEROUS ENGINE HEAT CYCLES ALL HARDWARE MUST BE RETORQUED AND OR TIGHTENED.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	420-910331	FITTING, STEAM	1
2	420-907060	TURBULATOR	1
3	420-906321	GASKET, RISER	2
4	90037SA-STSS	WASHER, 3/8 SAE	4
5	90037CN-FNSS	NUT, 3/8-16	4
6	100-720-6316	HOSE CLAMP	2
7	100-720-6306	HOSE CLAMP	2
8	420-906500	HOSE, JUMP	1
9	100350-0383	HOSE, 3/8	1

#9 100350-0383 HOSE IS NOT MOLDED LIKE SHOWN.





PORT SIDE SHOWN, STRB IS MIRROR IMAGINE.

INSTALLATION INSTRUCTIONS:

1) APPLY LIQUID THREAD SEALANT TO THE SUPPLIED STEAM VENT FITTINGS. USING 1-1/16 WRNCH, INSTALL FITTING INTO THE REAR OF THE MANIFOLDS, FIG.A.

3) APPLY ANTI-SIEZE TO THE 8 STUDS, FIG. B.

4) SLIDE RISER GASKET, FIG. C & TURBULATORS, FIG. D, OVER STUDS. DO NOT USE ANY SEALANT ON THE GASKETS OR TURBULATORS. AS SHOWN, THE TURBULATOR IS BETWEEN THE 2 GASKETS.

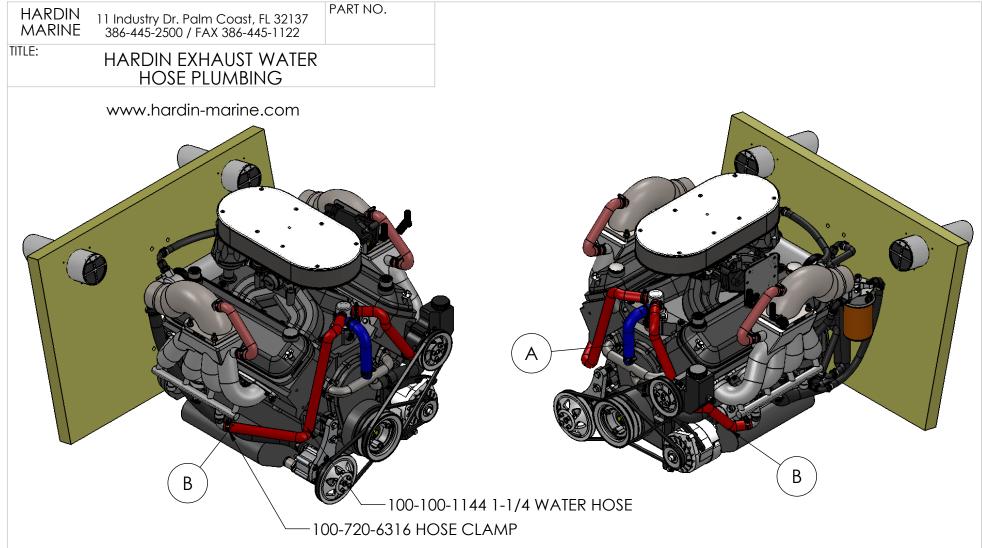
5) INSTALL RISERS, FIG. E.

6) IF YOU ARE INSTALLING 620-32505 SHIFT BRACKET AND 620-32500 OIL FILTER RELOCATION BRACKET, INSTALL THEM NOW. USE THE INSTRUCTIONS THAT CAME WITH THOSE KITS. 7) INSTALL WASHERS AND NUTS, FIG F. USING 9/16 SOCKET, TORGUE TO 30 FT. LBS..

8) INSTALL JUMPER HOSE AND HOSE CLAMPS, FIG.G. IF
USING WITH FULL CLOSED COOLING KIT, THE JUMPER HOSE
IS NOT USED. SEE FULL CLOSED COOLING KIT INSTRUCTIONS.
9) CUT STEAM VENT HOSE TO LENGTH, FIG H, AND INSTALL
ON TO THE STEAM VENT FITTING AND THE BUNG ON THE
UNDERSIDE OF THE RISERS.

10) THE STEAM VENT IS ONLY USED ON LONG RISER AND HP 500 TAILPIPES.

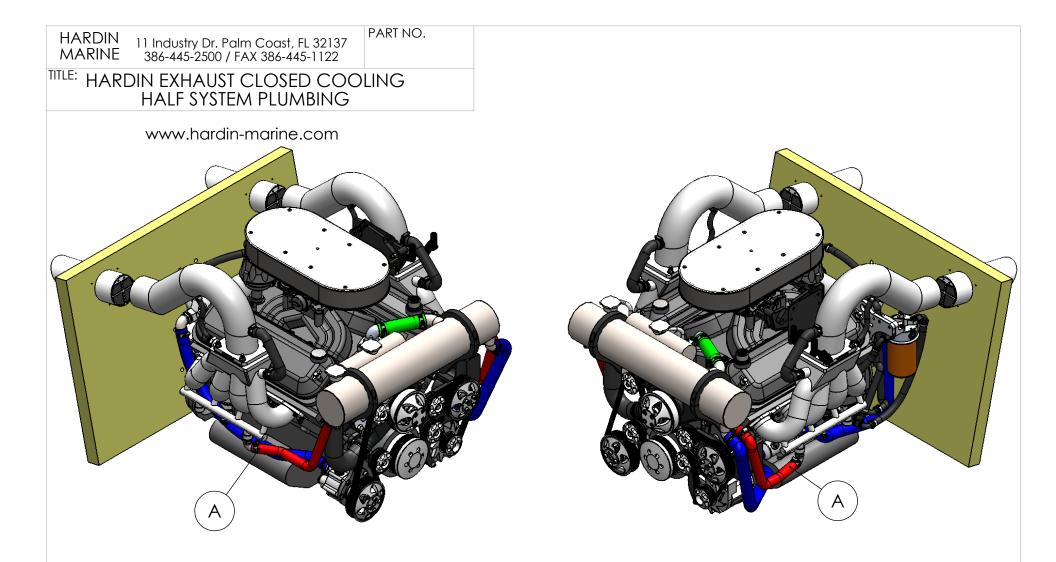
CAUTION** HARDIN MARINE MANIFOLD SYSTEMS ARE DESIGNED FOR USE ON ENGINES WITH FULL TIME CONSTANT WATER CIRCULATION AT ALL TIMES. NOTE** AFTER APPROXIMATELY 2-5 HOURS USE OR NUMEROUS ENGINE HEAT CYCLES ALL HARDWARE MUST BE RETORQUED AND OR TIGHTENED.



1) SAME INSTALLATION FOR ALL CYCLONE, GIL AND SEAWARD SYSTEMS.

2) ALL EXHAUST SYSTEMS, REQUIRES FULL TIME CONSTANT WATER CIRCULATION AT ALL TIMES. THIS ENGINE IS SHOWN WITH 620-300100 CROSSOVER KIT. FIG. A SHOWS THE WATER BYPASS HOSE, SHOWN IN BLUE. THE WATER BYPASS HOSE WILL PROVIDED WATER TO THE EXHAUST TILL THE THERMOSTAT OPENS.

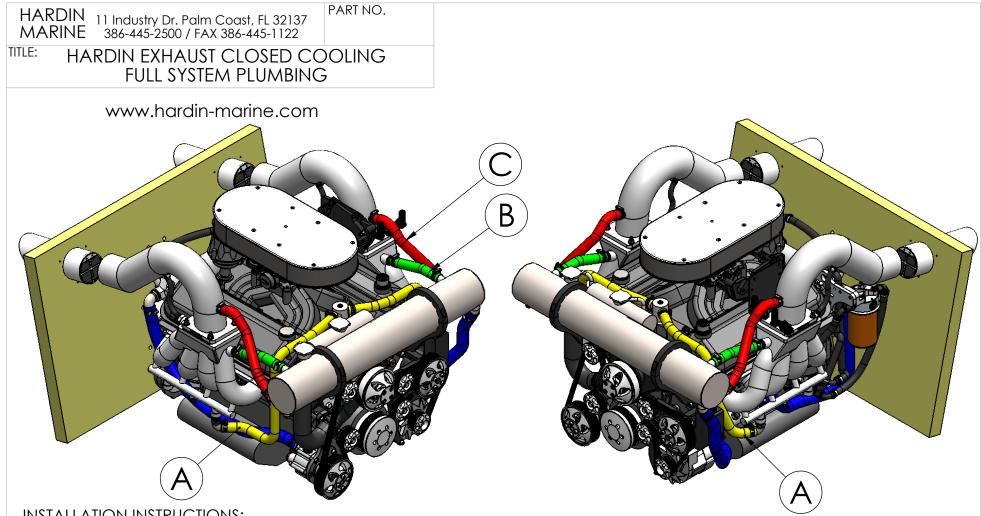
3) THE EXHAUST IS FED BY THE FRESH WATER DISCHARGED FROM THE THERMOSTAT HOUSING. BOTH SIDES ARE SHOWN IN RED, FIG. B. THE HOSE CONNECTS TO THE WATER INLET FITTINGS ON THE BOTTOM OF THE HEADER/MANIFOLD.



1) SAME INSTALLATION FOR ALL CYCLONE, GIL & SEAWARD SYSTEMS.

2) ON HALF SYSTEM CLOSED COOLING SYSTEMS, ONLY THE ENGINE IS COOLED BY ANTIFREEZE. THE EXHAUST IS NOT PART OF THE CLOSED COOLER SYSTEM.

3) THE EXHAUST IS COOLED BY THE FRESH WATER DISCHARGE IN THE HEAT EXCHANGER, BOTH SIDES ARE SHOWN IN RED C, FIG. A. THE HOSE CONNECTS FROM THE HEAT EXCHANGER EXIT ON BOTH SIDES TO THE WATER INLET FITTINGS ON THE BOTTOM OF THE EXHAUST, AS SHOWN.



1) SAME INSTALLATION FOR ALL CYCLONE, GIL & SEAWARD SYSTEMS.

2) ON FULL SYSTEM CLOSED COOLING SYSTEMS, BOTH THE ENGINE AND EXHAUST MANIFOLD/HEADER IS COOLED BY ANTIFREEZE. THE EXHAUST RISER IS NOT PART OF THE CLOSED COOLING SYSTEM.

3) THE EXHAUST MANIFOLD/HEADER IS COOLED BY HOSES COMING FROM THE THERMOSTAT HOUSING, BOTH SIDES ARE SHOWN IN YELLOW, FIG. A. THE HOSE CONNECTS TO THE WATER INLET FITTINGS ON THE BOTTOM OF THE EXHAUST, AS SHOWN.

4) THE ANTIFREEZE IN THE MANIFOLD/HEADER IS RETURNED BACK THE HEAT EXCHANGER, BOTH SIDES ARE SHOWN IN GREEN, FIG.B.

5) THE FRESH WATER DISCHARGES FROM BOTH SIDES OF THE HEAT EXCHANGER AND CONNECTS TO THE BOTH SIDES OF THE RISER WATER INLET FITTINGS, BOTH SIDES ARE SHOWN IN RED, FIG. C.

				11	
HARDIN MARINE 11 Industry Dr. Palm Coast, FL 32137 386-445-2500 / FAX 386-445-1122	PART NO. 620-38057	ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
TITLE: 525 COOLANT TANK RELOCATION BRKTS.		1	90031C075HHS	BOLT, 5/16-18	3
		2	90031C125HHS	BOLT, 5/16-18	3
www.hardin-marine.cc	m	3	90031SA-STSS	WASHER, 5/16 SAE	9
INSTALLATION INSTRUCTIONS: 1) UNBOLT COOLANT TANK FROM VALVE COVER AND LIFTING RING BRACKET. 2) APPLY ANTI SIEZE TO THE NEW 5/16-18 BOLTS THAT COME IN THE KIT.		4	90031CN-HNSS	NUT, NYLON, HALF, 5/16-18	3
		5	620-33553	BRACKET, SEAWARD 525 COOLANT TANK	1
		6	620-33556	BRACKET, SEAWARD 525 COOLANT TANK	1
 3) INSTALL 620-33556 BRACKET, #6 TO THE VALVE COVER HOLES, FIG. A. USE #1 BOLTS AND #3 WASHERS. DO NOT TIGHTEN YET. 4) INSTALL 620-33553 BRACKET, #5, TO THE LIFTING RING BRACKET, FIG. B. USE #1 BOLT AND #3 WASHERS. DO NOT TIGHTEN. 5) INSTALL #2 BOLTS AND #3 WASHERS INTO THE COOLANT TANK GROMMETS, FIG. C. 6) INSTALL COOLANT TANK ONTO THE NEW RELOCATION. BRACKET. USE #3 WASHER AND #4 NUTS. DO NIGHT TIGHTEN. 7) RECONNECT HOSES FROM HEAT EXCHANGER. 8) AFTER MANIFOLDS AND RISERS ARE INSTALL. POSITION COOLANT TANK AWAY FROM THE RISERS. TIGHTEN ALL BOLTS TO 20 FT. LBS 			STOCK COOL		$\begin{array}{c} 2 \\ -3 \\ \hline \\ \end{array}$

-STOCK VALVE COVER & LIFTING RING.

HARDIN 11 Industry Dr. Palm Coast, FL 32137	PART NO.
MARINE 386-445-2500 / FAX 386-445-1122	620-32101
TITLE:	

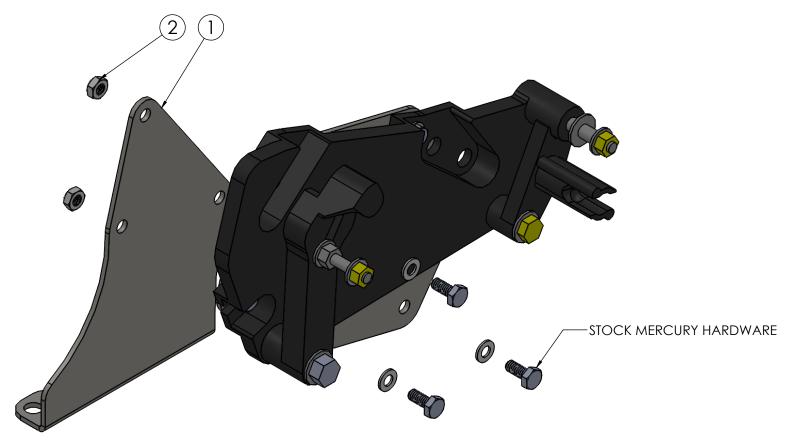
CYCLONE 525/700 SHIFT BRACKET

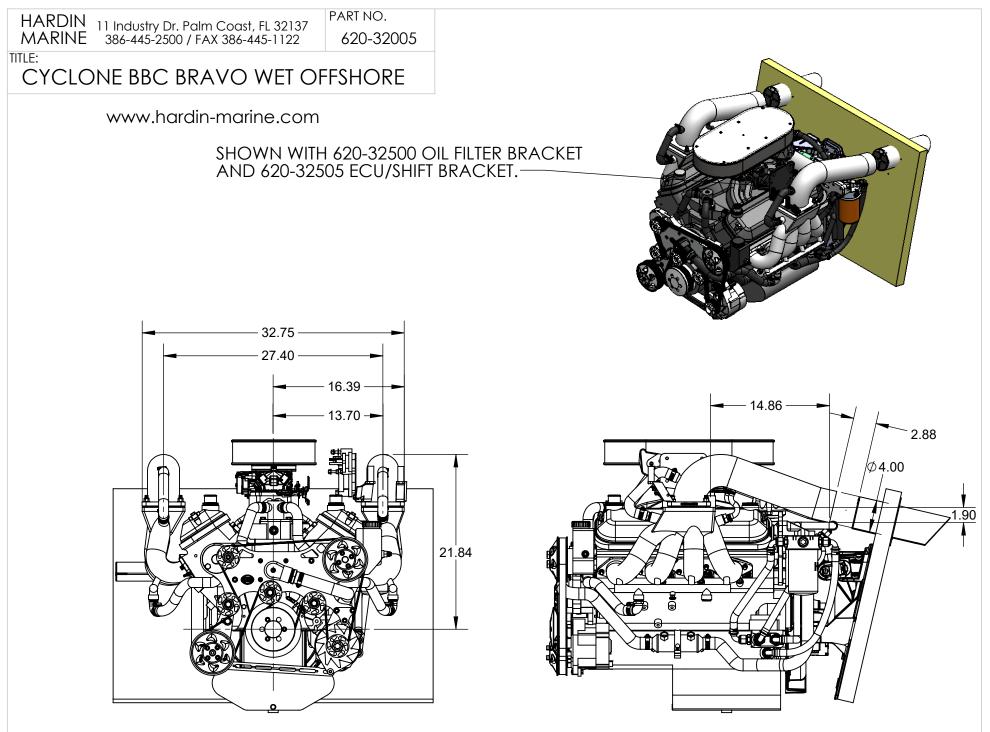
IIEM NO.	PARI NUMBER	DESCRIPTION
1	620-32101K	BRACKET, SHIFT, CYCLONE 525/700
2	90025CN-HNSS	NUT, 1/4-20 HALF LOCKING

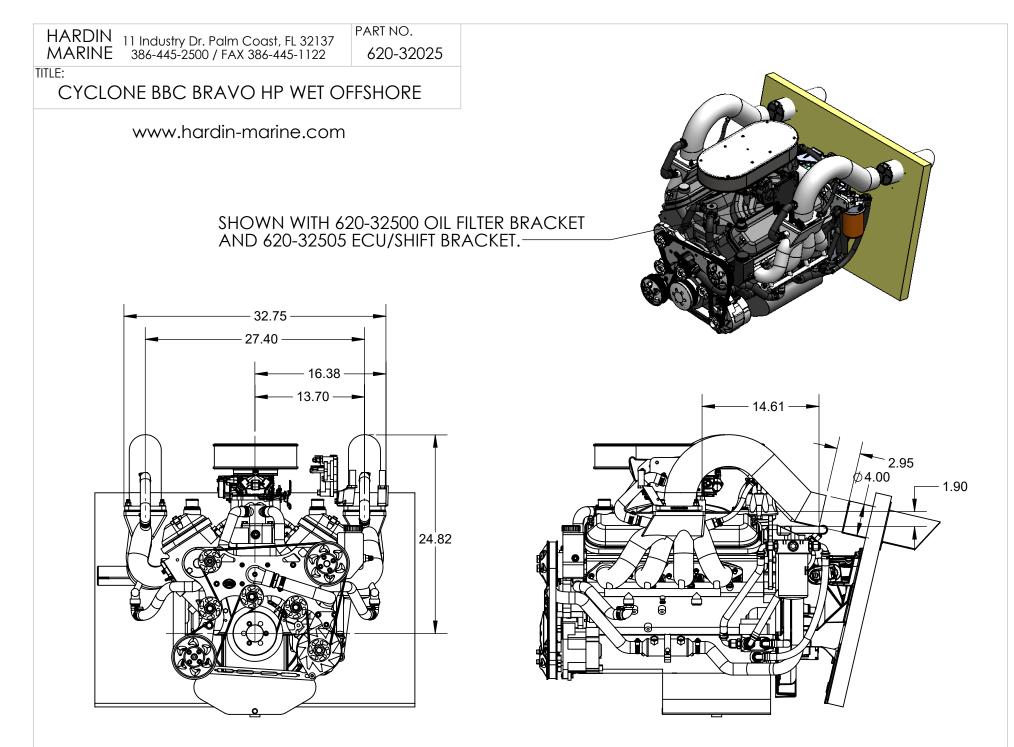
www.hardin-marine.com

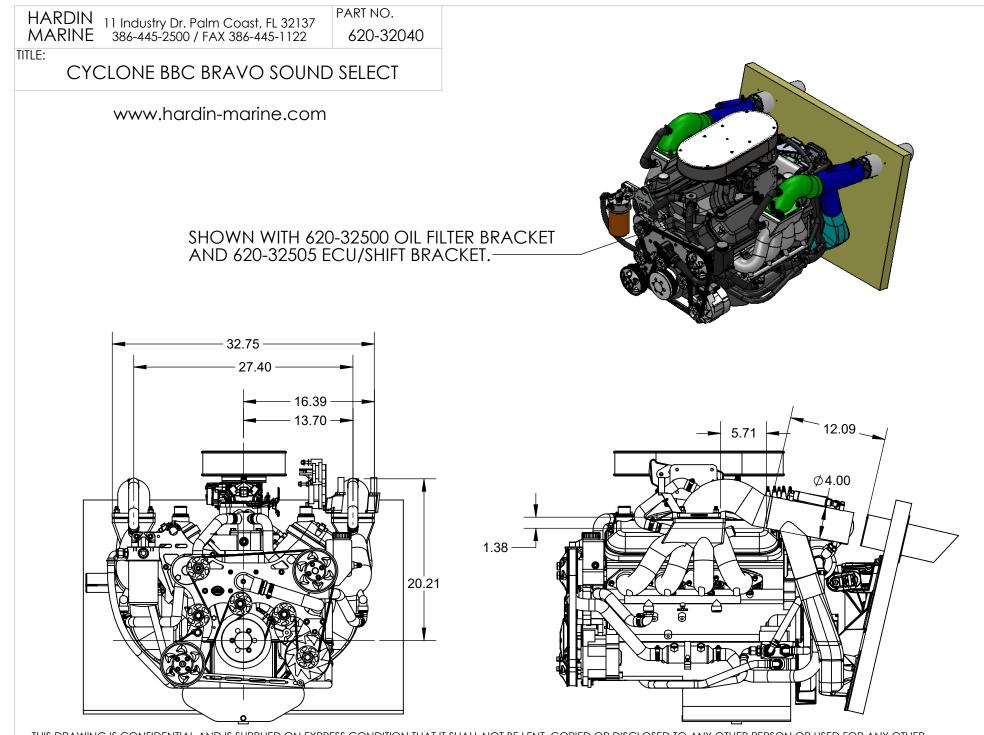
INSTALLATION INSTRUCTIONS:
1) MOUNT #1 BRACKET ON THE INBOARD STARBOARD MANIFOLD.
2) USE 7/16 WRENCH TO HOLD THE SUPPLIED #2 NUTS.
3) APPLY ANTI-SIEZE TO YOUR STOCK HARDWARE TO MOUNT YOUR STOCK MERCURY SHIFT BRACKET. TORQUE TO 110 IN. LBS..

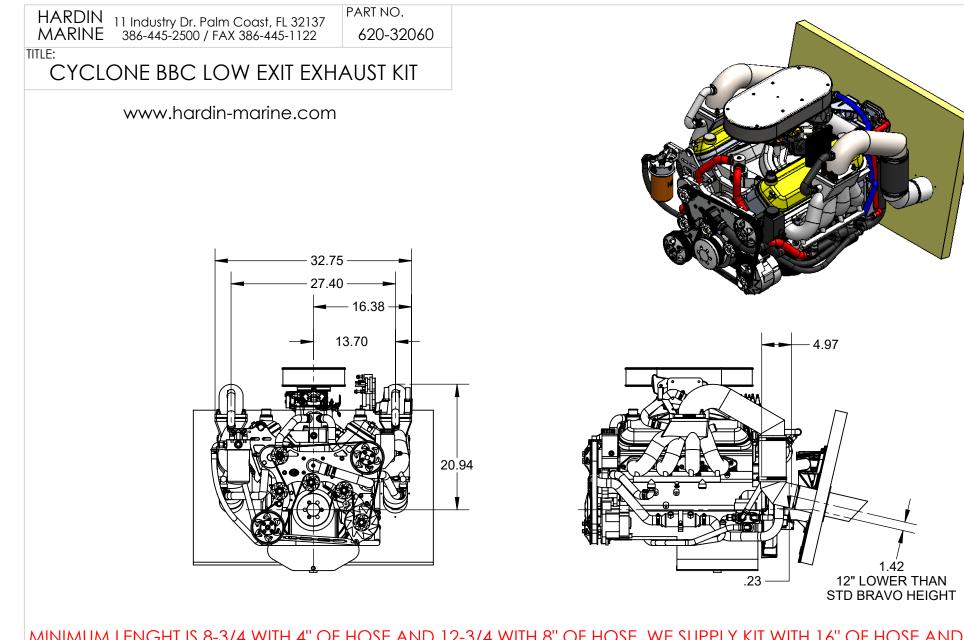
QTY. 1 3











MINIMUM LENGHT IS 8-3/4 WITH 4" OF HOSE AND 12-3/4 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.

