

MFH-5229

Block Only Freshwater Cooling Kit Instructions



MONITOR PRODUCTS, INC.

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FRESH WATER COOLING
INSTRUCTIONS
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IMPORTANT

Before you unpack the kit and start installation, make sure you have the right kit for your engine by studying these installation instructions. These instructions have been written to cover most stern-drive and inboard installations on late model Chevy small block engine conversions made by the major marine engine manufacturers. The system is front mounted at the level of the thermostat housing and the engine must have the alternator and/or the power steering pump mounted low or to the extreme port side of the engine. The heat exchanger is flush with the extreme starboard side of the engine and this kit is, therefore, not suitable for V-drive engines. Other kits are available for these engines. This kit is intended for both V-belt and serpentine belt installations. Kit MFH 5229 will not work with fuel injection.

These instructions cover a normal installation situation. Sometimes problems can occur due to engine variations and boat-builder or owner modifications. If you run into such problems you can call Monitor Products for advice during normal business hours. The phone number is 1-800-334-4591.

If you, by mistake, received the wrong kit for your type of engine or run into other insurmountable installation problems you may return an undamaged kit for exchange or credit. To get return authorization, call Monitor Products with information about the problem and how the kit was purchased.

The installer must make sure that the overall installation is safe and in accordance with Coast Guard and industry standards.

Installation Steps

1. Drain water from block by removing plugs from both lower sides of engine.
2. Remove hoses from the existing thermostat housing. Save all hose clamps. See Fig. 2.
3. Disconnect wire from temperature sender and remove unit from intake manifold or thermostat housing. Place them on the side for use later.
4. Remove and discard existing thermostat housing, thermostat, gasket and bolts. Scrape gasket surface clean.
5. Flush engine. If new, flush engine briefly with fresh water through thermostat opening. Use a garden hose with a rag around it. If used, more thorough flushing may be needed. See separate instructions.
6. Remove 1 3/4" factory molded hose from inlet of jacket water pump and discard.
7. It is important to use RTV silicone sealer on both sides of gaskets as well as on the bolts. Install support bracket, item #1, using 3/8" x 1" bolts, item #4, and gasket, item #2. Install four pieces of 3/4" ID hose, item #'s 26 & 27, onto ears of support bracket, item # 1.
NOTE: If your engine is a 1998 model or newer you will also need to install a 1" spacer item #29(included) to avoid interference between the exchanger and the serpentine belt. The purpose of the spacer is to raise the bracket since the newer intake manifolds are lower. An additional thermostat gasket item #2 and 2 3/8 x 2" bolts item #30 are included for this purpose.

8. Install 1 ½" x 3" hose, item #14, onto fittings on support bracket. Secure with clamps, item #17. Place heat exchanger onto bracket while inserting 1 ½" elbow on thermostat housing on heat exchanger into item #14, secure with clamp, item #17. Secure heat exchanger to support bracket with clamps, item #18.
9. Install 45 degree molded hose, item #23, on circulating pump with existing clamps and leave clamps loose. Install tubular assembly, item #11, into molded hose, item #23, using existing clamps. Install straight hose, item #22, onto tubular assembly item #11 to the heat exchanger using item #22 and two clamps item #31. Install both hoses running from the bottom of the exhaust manifolds onto the tee fitting assembly, item #3, using two hose clamps, item #19. **Note: The hoses from the bottom of the exhaust manifold and the tee assembly, should be routed above the support bracket, and behind the heat exchanger. The elbow on the tee assembly should be on the top and facing the left of the engine.**
10. Install 1" x 16" hose, item #15, from elbow on the tee assembly to the top 1" elbow on the left side of the heat exchanger using two clamps, item #19.
11. Install the reducer coupling, item #28, into raw water supply hose located vertically along the front portside of the engine under the heat exchanger bracket using clamp #19.
12. Install item #15 onto reducer coupling, item #28, using clamp #19. Attach opposite end to lower 1" elbow on left side of heat exchanger using clamp #19.
13. Install 5/8" x 24" hose, item #21, to straight fitting on thermostat housing and elbow onto tubular assembly, item #11. Use two clamps, item #20. **Note: Hose should be routed under heat exchanger.**
14. If temp. sensors were not in thermostat housing originally, install NPT plug item #16.
15. Thread plastic elbow, item #8, into bottom of overflow bottle, item #9, using sealer.
16. This system does not have provisions for an on-engine mounted expansion tank. Install on vertical surface, keeping as close to the heat exchanger as is practical with top of tank level with top of exchanger. Connect to filler neck with 5/16 clear PVC hose, item # 13 and two clamps, item #12.
17. Some model Mercury Marine engines only: Remove hoses from exhaust elbows and discard. The kit includes two rubber caps, item #24, as well as two ¾" NPT pipe plugs, item #25. Depending on the type of connection use one or the other to plug the connection of each exhaust elbow.
18. Use tie wraps, item #7, to make sure that hoses or other parts are not in contact with critical engine components, such as V belt and fuel lines.
19. Reinstall engine block drain plugs.
20. Double-check total installation and make sure all fasteners, fittings, and hose clamps are tightened properly. See separate Filling and Start-Up Instructions.
21. We strongly recommend that you install an audible "buzzer" type alarm. These overheat alarms are usually combined with low oil pressure alarms and are very reasonable in price. Be sure that they are 3/8" NPT.

PARTS LIST MFH-5229

Part Number	Item Number	Quantity	Description
5001-1971PC	1	1	Support Bracket Assembly
4500-1381	2	2	Thermostat Gasket
5000-1976PC	3	1	Tee Fitting Assembly
4300-1138	4	2	3/8-16 x 1" Hex Bolt
4300-1345	5	4	1/8 x 3/4" Screw
4300-1346	6	4	Washer 1/8"
5000-1154	7	5	Plastic Tie Wrap 11"
5000-1343	8	1	Plastic Elbow 1/8" x 5/16"
5001-1327	9	1	Expansion Tank-3 Qt modified
5000-1763	10	1	Expansion Tank Cap
5001-1992PC	11	1	Tubular Assembly Connection
5200-1344	12	2	Hose Clamp 7/16 O.D. Hose
5102-2125	13	1	Clear PVC Hose(5/16"x48")
5102-2127	14	1	Hose 1 1/2" x 3"
5108-2126	15	2	Hose 1" x 16"
4400-1314	16	1	3/8" NPT Plug
5200-1143	17	2	Hose Clamp 1 1/8" x 2"
5200-1610	18	2	Hose Clamp 4" – 4 7/8"
5200-1144	19	7	Hose Clamp 3/4" – 1 1/2"
5200-1353	20	2	Hose Clamp 7/8" O.D. Hose
5110-2128	21	1	5/8" x 24" Heater Hose
5101-2129	22	1	Hose 1 3/4" x 3 3/8"
5100-1991	23	1	Molded Hose
5100-1772	24	2	Rubber Cap Manifold 1 5/16"OD
4400-1377	25	2	3/4" NPT Fitting
5102-2124	26	2	3/4" x 2" Heater Hose
5105-2124	27	2	3/4" x 4" Heater Hose
3202-1140PC	28	1	Hose Coupling 1" x 1-1/4"
4003-2003	29	1	1" Thermostat Spacer
4300-1575	30	2	3/8-16" x 2" Hex Bolt
5200-1475	31	2	Hose Clamp 1 1/4" – 2 1/8"

REPLACEMENT SERVICE PARTS

Part Number	Description
4400-1044	Zinc Anode
5000-1709	Thermostat
4500-1381	Gasket, Thermostat Housing
4500-1622	Gasket, Rubber Thermostat
4500-2005	Gasket, 4" (End Cover)



