

SPECIAL TORQUE LIST
required for assembly of the

HOMELITE 4-Cycle-55

Number of Fasteners	Description	Inch - Lbs.
POWER HEAD		
3	Relief valve mounting screws	80
3	Oil pan baffle plate screws	140
4	Oil pump body screws	90
10	Main bearing studs	140
10	Main bearing cap nuts	200
8	Connecting rod socket head screws	300
2	#5 Main bearing cap sock head screws	85
1	Locating stud nut at tower shaft end of cylinder block	150
1	Tower shaft adjustment nut on cam end of tower shaft	120
2	Drive end seal cup socket head screws	85
2	Oil pump mounting screws	150
14	Oil pan mounting screws	140
5	Screws holding oil filler plate to oil pan	90
8	Camshaft bearing screws	100
2	Camshaft cover studs	100
20	Water jacket screws	80
16	Carburetor mounting plate, exhaust elbow, and manifold assembly screws	140
4	Manifold mounting bolts	275
2	Starter bracket mounting screws	275
4	Alternator stator mounting screws	25
1	Flywheel nut - 175 FOOT LBS.	2100

SPECIAL TORQUE LIST

(continued)

Number of Fasteners	Description	Inch - Lbs.
1	Lifting bracket to block screw	250
1	Bendix drive - shaft nut	300
4	Spark plugs - 25 FOOT LBS.	300
4	Carburetor air horn mounting screws	20
* 1	Oil pan clamp nut on through bolt from upper leg	40
 LOWER UNIT		
2	Gear housing studs	160
2	Nuts on studs holding gear housing to lower leg	275
4	Water pump mounting screws	60
6	Socket head screws holding lower leg to upper leg	250
* 13	Screws holding upper leg to mounting plate	100
1	Nut clamp lower shockmount yoke to pivot pin	275
1	Nut on end of pivot pin	600
2	Lower shock mount bolts	550
2	Nuts holding transom clamps to pivot bracket	350

STANDARD TORQUE LIST

recommended for standard fasteners

SCREW SIZE	THREADS PER INCH	MAXIMUM TORQUE (in. lbs.)	SCREW SIZE	THREADS PER INCH	MAXIMUM TORQUE (in. lbs.)
0	80	1	1/2	13	550
				20	575
1	64	1 1/2	9/16	12	725
	72	2		18	800
2	56	2 1/4	5/8	11	1250
	64	2 3/4		18	1400
3	48	3 1/2	3/4	10	1720
	56	4		16	1680
4	40	4 3/4	7/8	9	2620
	48	6		14	2610
5	40	7	1	8	3870
	44	8 1/2		14	3500
6	32	8 3/4			
	40	11			(ft. lbs.)
8	32	18	1 1/8	7	465
	36	20		12	440
10	24	23	1 1/4	7	590
	32	32		12	540
1/4	20	80	1 1/2	6	1000
	28	100		12	790
5/16	18	140	1 3/4	5	1620
	24	150			
3/8	16	250	2	4 1/2	2370
	24	275			
7/16	14	400			
	20	425			

OUTBOARD - SPECIAL TOOLS

Ricky

- ✓1. T-14043 Valve spring compressor
2. T-14053 Sleeve to protect propeller shaft seal during installation.
- ✓3. T-14064 Guide for pressing "O" ring cap and "O" ring onto intake valve guides.
4. T-14078 Guide for pressing nylon bushings into pivot bracket.
- ✓5. T-14503 Guide for pressing upper needle bearing into lower leg.
- ✓6. T-14504 Guide for pressing lower needle bearing into lower leg.
- ✓7. T-14544 Sleeves to protect seal during installation on tapered end of crankshaft.
- ✓8. T-14569 Strap (with screws) - use with T-14043 valve spring compressor.
- ✓9. T-14570 Valve support fixture for valve installation.
- ✓10. T-14571 Guide for pressing tower shaft bushings into and out of cylinder block and crankcase.
- ✓11. T-14572 Guide for pressing bearing housing into gear housing.
- ✓12. T-14573 Guide for pressing bearing cup of (A-90549) into gear housing.
- ✓13. T-14574 Flywheel puller
- ✓14. T-14575 Guide for pressing seal into crankshaft thrust bearing retainer.
- ✓15. T-14576 Flywheel lock (with bolt) to prevent rotation of flywheel during removal and installation.
- ✓16. T-14577 Puller to remove bearing housing from gear housing.
- ✓17. T-14578 Piston pin assembling guide.
- ✓18. T-14579 Piston pin punch.
- ✓19. T-14603 Plug to align distributor hole in cam cover.

* These tools are available from local sources, not supplied by Homelite.

- ✓ *20. Snap-on Puller to remove bearing cup of (A-90549) from gear housing.
SPECIAL
CG-250-10
- ✓ *21. Snap-on Puller to remove needle bearings from lower leg.
CG-240
- *22. Waldes #7 Truarc pliers to remove and install large snap ring in gear housing.
- *23. Corbin pliers to remove fuel and water line clamps.

Poly

25 HOUR DEALER CHECK PROCEDURE

1-1 Transom Clamp Screws

1. Loosen the transom clamp screws as far as possible, then coat the threads with Lubriplate Marine Lube "A". **Valvoline X ALL Grease**
2. Thread the screws in and out several times to spread the Lubriplate thoroughly. **HOMELITE RM-4768**

1-2 Shifting, Throttle, and Carburetor Linkage

1. Lightly coat all friction points with Lubriplate Marine Lube "A". **Valvoline X ALL Grease**

HOMELITE RM-4768

1-3 Pivot Bracket and Shift Lever Fittings

1. Remove both protective caps from the grease fittings and use a grease gun filled with Lubriplate Marine-Lube "A". **Valvoline X ALL Grease**
2. Be sure to re-install both fitting caps to keep out dirt and moisture. **HOMELITE RM-4768**

1-4 Gear Housing

1. To check the lubricant level, remove the vent plug screw and "O" ring.
2. If oil does not appear at the vent hole, remove the drain plug screw and "O" ring and quickly insert the nozzle of the tube into the drain hole.
3. Squeeze in oil until the level reaches the vent hole. (Gear housing capacity: 12 oz.)
4. Re-install the drain and vent plug screws and "O" rings.

1-5 Battery Cables

1. Inspect for broken insulation and corrosion.
2. If corrosion is evident, use a solution of baking soda and water to wash it off while scraping with a wire brush.
3. Check cable terminals for tight connections.

1-6 Battery

1. The electrolyte (water) level must be above the tops of the plates in each cell. Add distilled water if necessary to bring level above the plates.
2. Clean the terminals and connections as described in 1-5.2 above, then coat them with grease or paint.

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1-7 Crankcase Sump

1. Drain the oil from the sump by removing the socket head screw next to the lower shock mount on the port side of the upper leg.
2. Inspect the used oil for metal chips or evidence of bearing wear.
3. Re-install the drain plug.
4. Add 2 quarts of Homelite 4-Cycle Marine Engine Oil.

1-8 Starter

1. To lubricate the jackshaft bushings, squirt a few drops of engine oil between the jackshaft nut and the jackshaft housing.

1-9 Spark Plugs

1. Inspect for cracked porcelain insulators and check the electrodes for burning or fouling.
2. Be sure the electrode gap is set to .025".

1-10 Breaker Points

1. Remove the distributor cap and rotor.
2. Spread the points and inspect for signs of burning or pitting.
3. Be sure the gap is set between .017" - .022", then clean the points by drawing a piece of linen tape through them.

1-11 Fuel Filter

1. Remove the bowl, cork gasket, and screen, then wash the bowl and screen in clean gas or solvent.
2. Re-install the screen first, then the gasket, and finally the bowl. Be sure the screen does not fall from its seat.
3. Test for leaks by connecting the fuel tank and pumping the primer bulb until it becomes firm.

1-12 Fuel Tank

1. Remove the cap and clean the vent by blowing compressed air through it.
2. Unscrew the fuel outlet fitting and clean the fuel outlet tube and strainer. Soak in solvent, then blow clean with compressed air.
3. Re-install in the tank.

1-13 Carburetors

1. Back off the idle stop screws until they just touch the stop pins, then turn each screw clockwise 1/4 turn.
2. Start the engine and allow it to reach normal operating temperature.
3. Set the idle speed to 600 R. P. M. by adjusting both idle stop screws at the same time.
4. Adjust the idle mixture screws only if necessary to obtain a smooth idle.

1-14 Entire Unit

1. Examine the entire unit for oil leaks, corrosion, external damage, and loose fasteners.
2. Use the special torque list as a guide for checking all fasteners.

1-15 Valve Clearances

1-15.1 Disassembly

1. Remove the #1 spark plug (the lowest one, at the tower shaft end of the cylinder block.)
2. Place your finger over the spark plug hole and rotate the flywheel counterclockwise until you feel air blow out of the cylinder. The #1 piston is now on the compression stroke.
3. Continue turning the flywheel until the T/C marks on the crankshaft and flywheel line up exactly with the center of the lifting bracket eye. The #1 piston is now at top dead center.

NOTE: If the T/C mark on the flywheel and the corresponding mark on the end of the crankshaft are not in line with each other it means that the flywheel has moved on the shaft.

Pull the flywheel and realign it as described in Section 1-16.

4. Remove the distributor cap, then disconnect the ground and coil wires from the distributor body.
5. Scribe a line on the distributor body adjacent to the rotor tip and a second line from the distributor body to the distributor body clamp. (For alignment during installation.)
6. Loosen the clamp screw and remove the distributor.
7. Disconnect the fuel lines at the fuel pump.

8. Remove the glass bowl from the fuel strainer, then rotate the strainer body counterclockwise 1/4 turn.
9. Remove the two screws holding the electrical panel straps to the crankshaft cover, loosen the strap screws on the electric panel, and swing the straps aside.
10. Remove the two nuts holding the camshaft cover, then lift the cover from the cylinder block. Tap the cover lightly if it sticks.

1-15.2 Checking Clearances

1. Rotate the flywheel counter-clockwise until the nose of the cam lobe nearest the tower shaft points away from the cylinder block.
2. Make a list from 1 to 8, then insert a thickness gauge between the #1 cam lobe and the cam follower to determine the clearance.
3. When the clearance has been determined write it down next to #1 on your list. Rotate the crankshaft until the next cam lobe points away from the cylinder block. Check each valve in this manner, working toward the distributor end of the camshaft.
4. Starting from the tower shaft, valves 2, 3, 6, 7 are intakes, valves 1, 4, 5, 8 are exhausts. Correct clearances are .012" - .014" intake, .015" - .017" exhaust.

1-15.3 Re-assembly

1. Discard the old camshaft cover gasket and scrape the parting surfaces of the block and cover clean.
2. Coat the parting surface of the camshaft cover with gasket cement and lay a new gasket in place.
3. Coat the camshaft, cam followers, and bearings liberally with oil, then install the camshaft cover. Be sure to put the two round vellumoid gaskets and flat washers over the studs before installing the two hold down nuts.
4. Insert alignment tool T-14603 into the distributor hole in the camshaft cover, then tighten the retaining nuts while rotating the tool in the hole. When the tool starts to bind, STOP tightening the nuts. Never tighten the nuts to more than 100 in. lb.
5. Determine the compression stroke for the #1 piston as in 1-15.1 above and line up the T/C mark on the flywheel tooth with the lifting bracket eye.
6. Coat the distributor "O" ring with Lubriplate.
7. Align the rotor tip with the scribe mark made on the distributor body.

8. Slide the distributor into position and align the scribe mark on the body with the scribe mark on the clamp. Then tighten the clamp screw, The timing will now be the same as before dis-assembly.
9. Connect the ground and coil lead wires.

1-16 Flywheel Installation

1. Clean the taper in the flywheel and on the crankshaft with Inhibisol; make sure both tapers are clean and dry.
2. Wipe out the inside of the rotor to make sure that no chips or fasteners are stuck to the magnets.
3. Carefully place the flywheel over the crankshaft, and align the chisel mark on the end of the crankshaft with the chisel mark in the flywheel counter bore as accurately as possible.
4. Tap the flywheel to lock the tapers together. Install the flat washer and the flywheel lock nut, then tighten to 175 foot lbs.

NOTE: A second chisel mark is located just outside the counterbore to provide a check during and after tightening the lock nut. When the flywheel is properly registered, the mark on the crankshaft, as well as the visible mark on the flywheel, are exactly in line.

HOMELITE 4-CYCLE -55
 PERIOD MAINTENANCE CHART

	Dealer Check After First 25 Hours of Operation	Every Time Motor Is Used	Monthly	Every 100 Hours of Motor Use
Crankcase Sump - check oil level		X		
Transom Clamp Screws - check tightness		X		
Transom Clamp Screws - lubricate *	X		X	
Shifting, Throttle, and Carburetor Linkage - lubricate *	X		X	
Pivot Bracket and Shift Lever Fittings - grease *	X		X	
Gear Housing - check lubricant level	X		X	
Starter - lubricate jackshaft bushings ***	X		X	X
Battery Cables - check tightness and condition	X		X	
Battery - check water level	X		X	
Battery - check specific gravity				X
Gear Housing - drain and refill (capacity 12 oz.)				X
Crankcase Sump - change oil (capacity 2 qt.)	X			X
Oil Filter - change				X
Spark Plugs - check gap (.025") and condition	X			X
Breaker Points - check gap (.020") and condition	X			X
Distributor - lubricate **				X
Fuel Filter - clean bowl and screen	X			X
Fuel Tank - clean vent and strainer	X			X
Carburetor - check adjustment	X			X
Entire Unit - check for general condition and all fasteners for tightness	X			X
Valves - check clearances	X			X
Cylinders - check compression				X

Use Valvoline X ALL Grease
 HOMELITE RM-4763

* Use Lubriplate Marine - Lubriplate

** Use lithium base grease on cam.
 Use two drops of engine oil on wick under rotor.

*** Use engine oil, squirt sparingly under jackshaft nut.

Robley

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HOMELITE

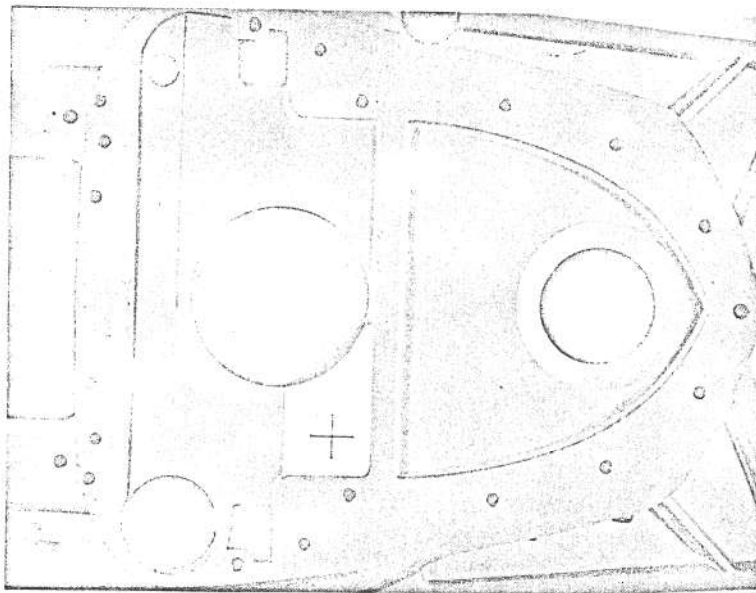
MARINE ENGINE THERMOSTAT CONVERSION

First check the thermostat conversion kit to be sure that you have each of the following parts:

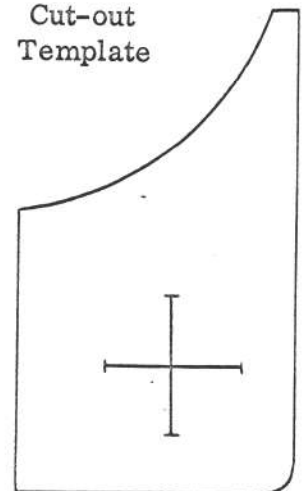
(1) A-91297	15" Water Return Line/or	(1) 91275	Exhaust "O" Ring Shield
(1) A-91299	20" Water Return Line	(1) 90187-B	Exhaust Elbow
(1) A-90043-B	Water Jacket Inlet Plate	(1) 80908-1	10-24 x 1 1/2" Hexhd. Screws
(1) A-90967-A	Water Pump Body	(4) 91277	Cover
(1) 91263	Water Pump Return Line Bushing	(1) 91279	Valve Spring
(1) 90237-B	Water Pump Outlet Wear Plate	(1) A-91292	Valve Assembly
(1) 91355	Hose	(1) 91278	Valve Plate
(2) 90290	Hose Clamps	(1) 91284	Thermostat Element
(1) 91341-1	Grommet	(1) 91280	Element Spring
(1) 90587-A	Exhaust "O" Ring	(1) 91285	Element Shield
		(1) 91286	Gasket

1. Remove the powerhead from the mounting plate, then disassemble the mounting plate and lower leg from the upper leg.
2. Cut out the template drawn on this page, and position it on the bottom of the mounting plate as shown in figure 1.
3. Center punch through the center of the template cross. Drill a 1/4" hole through the mounting plate, then re-drill the hole to 23/32". Remove all burrs, and insert the grommet into the hole. Insert the return line through the grommet from the bottom of the mounting plate.

figure 1



Cut-out
Template



THE FISHER-PIERCE CO., INC.
ENGINE DIVISION

INSTALLATION INSTRUCTIONS BY-PASS COOLING KIT SK 44

Kit SK-44 is provided to update existing Homelite Engines. It consists of the parts in the attached list.

Installation of By-Pass Cooling Kit SK-44 will very greatly enhance life of all engine parts exposed to salt water corrosion and, by superior head cooling, do the same for valves. To realize these advantages on engines in service several months and to secure new warranty where available make sure of the following besides installing the kit:

- Serious scale removed from block water passages.
- Replace (usually under warranty) any badly corroded parts.
- Be sure valve lash and compression are within required limits.

To install By-Pass Cooling, use the following procedure:

1. Remove power head from mounting plate. Refer to Section 7-1 of the Service Manual.
2. Remove the starting motor. Refer to Section 4-2.1 of the Service Manual.
3. Remove inlet water jacket plate and discard. Install new inlet water jacket plate, A-91534, with inlet at the top (1-Fig. 3). Use new gasket, No. 90305-A. Install parts removed from water jacket plate, and new nipple No. 90339 (8-Fig. 3) using gasket cement on threads.
4. Reinstall starting motor.
5. Remove manifold and exhaust elbow with carburetors attached. Remove carburetors with the air silencer attached and assemble to new manifold and elbow assembly, No. A-91549. Use new gasket supplied in kit. Assemble new thermostat assembly, No. 91568, (2-Fig. 1) to manifold and elbow assembly using element, spring, and shield from old thermostat or replacement if required. Don't remove retaining wire until thermostat is ready for tightening, otherwise it will fly apart and be difficult to assemble. Fit temperature sensing switch into elbow and secure with keeper, No. 91224.
6. Remove outlet water jacket plate and discard. Install new outlet water jacket plate, No. A-91535, with outlet elbow at the top. Use new gasket, No. 90305-A.
7. Install new manifold assembly (See 5 above) on power head, attaching outlet water jacket water elbow to manifold water elbow using corbin clamps and a 2-1/4" long hose (4-Fig. 1), cut off the old water inlet hose. Use the new gasket, No. 91538, with protruding bump on the top front (5-Fig. 1). Install telltale nipple, No. 90339 (1-Fig. 1) into carburetor plate. The power head is now ready. Work on leg assembly next.

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8. Remove lower leg-gear housing assembly. Remove water return line grommet from water pump. Plug water pump body opening with plug, No. 91304-A (6-Fig. 1) using gasket cement.
9. Remove and discard water return line tube. This tube is the one which formerly went from pump to thermostat. Plug the opening in the mounting plate water return line grommet with plug, No. 91276-A using gasket cement. This is important to prevent exhaust gases from reaching the carburetors which might cause serious fouling.
10. Reinstall lower leg-gear housing assembly.
11. Remove plastic silencer material from outboard mounting plate and discard.
12. Cut the telltale hose to 10", cutting the end opposite the restriction piece, which must remain in the hose. Leave telltale hose in mounting plate during this operation.
13. Using template "A" placed over tab (6-Fig. 3), center punch and then drill a 17/32" hole in the mounting plate. Install drain valve, No. 91563 with the hinge toward the front (7-Fig. 3) from the outside. Using gasket cement, screw elbow No. 90341 (1-Fig. 2) into drain valve from inside the mounting plate and tighten until the threads bottom. The elbow when tightened must face toward the water jacket plate.
14. Install the long piece of the old water inlet hose (2-Fig. 3) on water inlet "Tee", No. 91545, (3-Fig. 3) and the other end to the inlet tube from the pump. This procedure is not as pictured in Fig. 3. It's easier to attach the inlet hose (4-Fig. 3) and by-pass hose (5-Fig. 3) to the powerhead later. Install inlet hose, No. 91541 (13" long), to vertical opening of the "Tee" and install by-pass hose, No. 91541, (5-Fig. 3) to the horizontal opening of the "Tee". Secure with corbin clamps.
15. Install power head, using new "O" rings provided and new oil pan boot "O" ring (9-Fig. 3). Do not install stainless steel exhaust "O" ring shield. Attach water inlet hose to water jacket inlet elbow, and by-pass hose to thermostat cover. Secure by-pass hose with clamp, No. 90381, screw No. 80039, washers No.'s 84068-1, 83096, 84003-1, and nut No. 81010-1. The clamp is shown at (7-Fig. 1) on hose, ready to attach and also at (8-Fig. 1) in position on a sample piece of hose. Attach drain hose (2-Fig. 2) to drain nipple (8-Fig. 3) and elbow (1-Fig. 2). Install telltale hose to nipple in carburetor plate (3-Fig. 1).
16. Peel backing from engine drain label, No. 91564 and place label on the mounting plate with the arrow pointing towards the drain. Keep the label 3/4" from the bottom of the mounting plate and 1/4" to the rear of the 2 power head bolts (10-Fig. 3).
17. Boat or tank test: Look for water at telltale at idle speed. Absence of water leaks on drain line or drain plug, absence of oil leaks, normal operation.

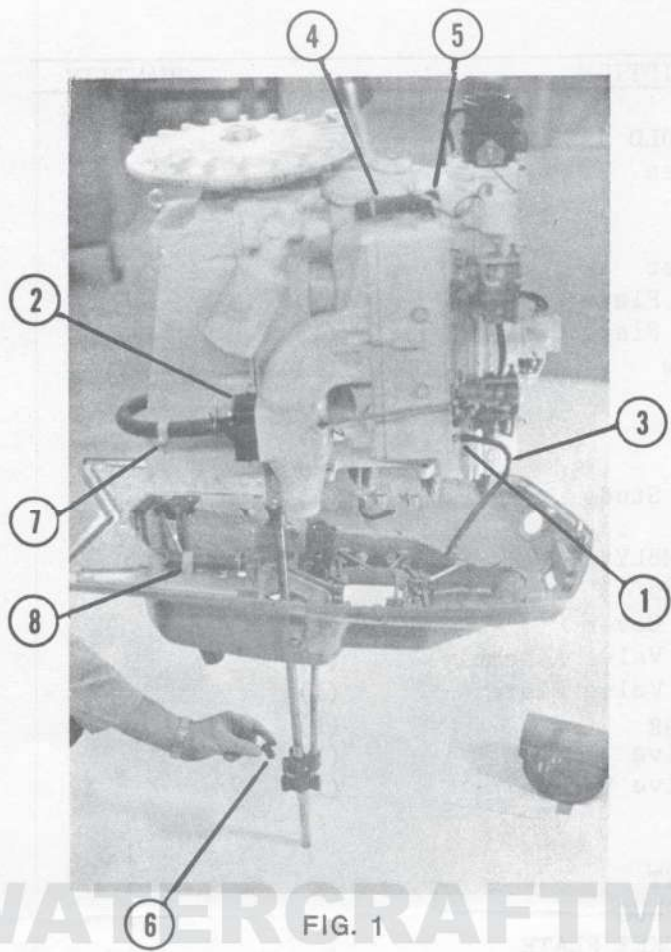


FIG. 1

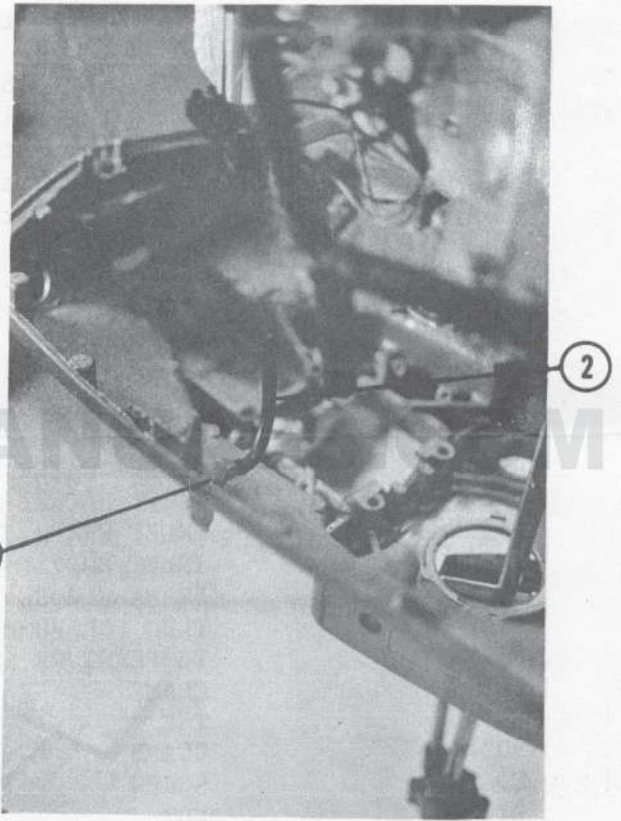


FIG. 2

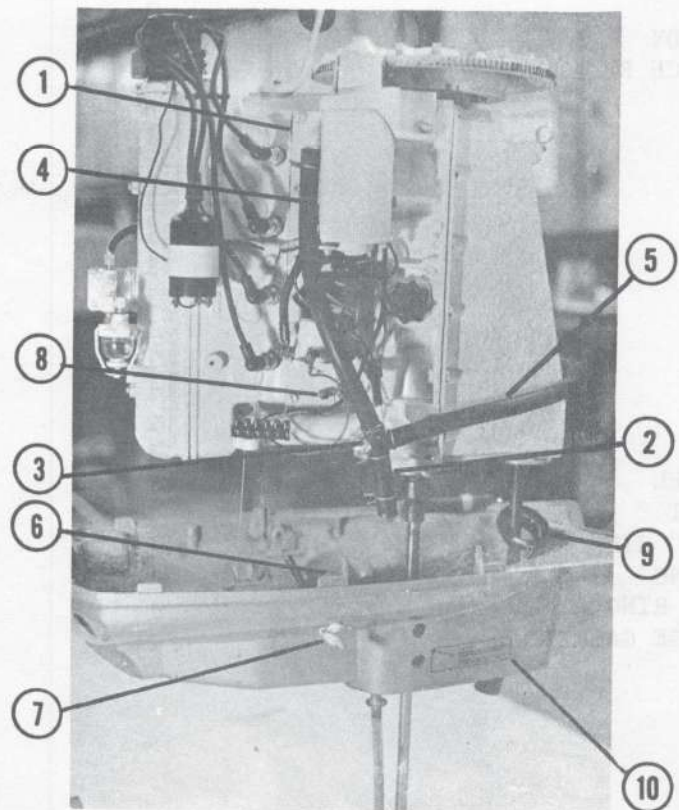


FIG. 3

PARTS LIST FOR BY-PASS COOLING KIT SK-44

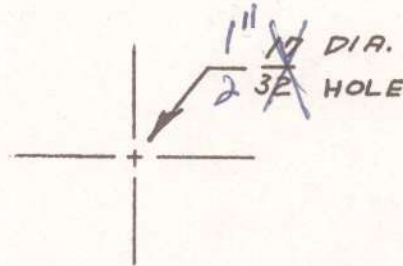
PART NO.	DESCRIPTION	QUANTITY
A-91549	ELBOW AND MANIFOLD ASSEMBLY	1
	Includes	
90187-D	Elbow	(1)
91543	Manifold	(1)
90344-A	Elbow Gasket	(1)
90009-A	Carburetor Plate	(1)
90008	Carburetor Plate Gasket	(1)
91544	Water Elbow	(1)
80083-1	Screw	(8)
80084-1	Screw	(8)
80968-1	Screw	(2)
90071-A	Carburetor Studs	(4)
SK-43	THERMOSTAT ASSEMBLY	1
	Includes	
91536	Thermostat Cover	(1)
A-91537	Thermostat Valve Assembly	(1)
91278	Thermostat Valve Plate	(1)
91279	Valve Spring	(1)
91531	By-pass Valve	(1)
91532	By-pass Valve Spring	(1)
91538	MANIFOLD GASKET	1
91286	THERMOSTAT GASKET	1
91276-A	MOUNTING PLATE PLUG	1
A-91535	OUTLET WATER JACKET PLATE	1
90305-A	WATER JACKET PLATE GASKET	2
A-91534	INLET WATER JACKET PLATE	1
91541	INLET HOSE	1
91542	BY-PASS HOSE	1
91304-A	PLUG FOR PUMP BODY	1
91224	TEMPERATURE SWITCH RETAINING RING	1
90290	CLAMP	4
91545	TEE	1
90381	CLAMP	1
80039	SCREW	1
81010-1	NUT	1
84068-1	FLAT WASHER	1
83096	LOCK WASHER	1
84003-1	FLAT WASHER	1
91563	DRAIN PLUG	1
91565	DRAIN HOSE	1
90339	NIPPLE	2
90341	ELBOW	1
91564	ENGINE DRAIN LABEL	1
FP-10100	INSTRUCTION SHEET	1
90587-B	EXHAUST ELBOW "O" RING	1
90572-A	CRANKCASE "O" RING	1
90495-C	OIL PAN BOOT "O" RING	1
90007	CARBURETOR, FLANGE GASKET	2

CUT
OUT

PLACE CUT OUT OVER
COVER ALIGNING TAB (6-FIG3)

FOLD HERE ----- PLACE FOLD OVER TOP EDGE OF MOUNTING PLATE ----- FOLD HERE

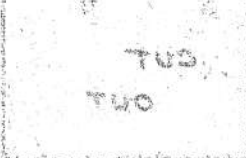
TEMPLATE "A" FOR
DRAIN PLUG



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(6-Figs)

PLEASE CUT OUT OVER
COVER SHEETING TAB



PLEASE FOLD OVER TOP EDGE OF HOLES TO BE CUT

FOLD HERE

TEMPERATURE LOG
DRAIN PLUG



WATERCRAFTMANUALS.COM

May 3, 1963

Technical Publications, Inc.
934 Wyandotte Street
Kansas City 5, Missouri

Attn: Mr. C. G. Ewing:

Dear Mr. Ewing:

The valve springs which you questioned are not reversible. New springs are marked with red paint on the end that contacts the cylinder block. This end is close coiled, see enclosed print No. 90227.


If the red paint marker has been removed from a used spring, take a small drill and slide it between the two end coils at each end of the spring. If the drill just fits between the coils of one end but not the other, the tight end should be marked with red paint. This end contacts the cylinder block.

Each new crankshaft has a timing mark stamped on the spline end as shown by figure 7-4 in the Service Manual. When the timing mark on the crankshaft gear is lined up with the mark on the spline end of the crankshaft, the timing mark on the gear tooth is aligned with the No. 1 crankpin. It is important to note that before installing the crankshaft, the No. 1 crankpin must be in top-dead-center position. See figure 7-5 and paragraph 7-6.3.

The tolerance ring No. 91184 is shown in print No. 91184. It is used to permit hand assembly of the rear propeller shaft ball bearing and prevent the inner race of the bearing from turning on the shaft. This procedure avoids the necessity of an interference-type press fit. It is only necessary to inspect for signs of cracking due to careless handling of the ring.

Sincerely,

H O M E L I T E



Karl J. Wiemer
Technical Publications

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OUTBOARD MOTOR SERVICE MANUAL Questionnaire

HOMELITE SECTION

Recommended piston ring side clearance is:

Compression rings	<u>.0025</u>	-	<u>.0040</u>
Oil Control ring	<u>.0000</u>	-	<u>.0065</u>

Standard crankshaft journal diameters are:

No. 5 Main Bearing	<u>1.4990</u>	-	<u>1.5000</u>
No. 1,2,3,4, Main Bearing	<u>1.3740</u>	-	<u>1.3750</u>
Crankpins	<u>1.3740</u>	-	<u>1.3750</u>

Recommended crankshaft bearing clearances are:

Main Bearings, Cross-shaft C	<u>.0015</u>	-	<u>.0040</u>
Piston C	<u>.0005</u>	-	<u>.0030</u>
Connecting Rods, Cross-shaft C	<u>.0015</u>	-	<u>.0040</u>
Piston C	<u>.0005</u>	-	<u>.0030</u>

Camshaft Bearing Diameter is .6265 - .6270

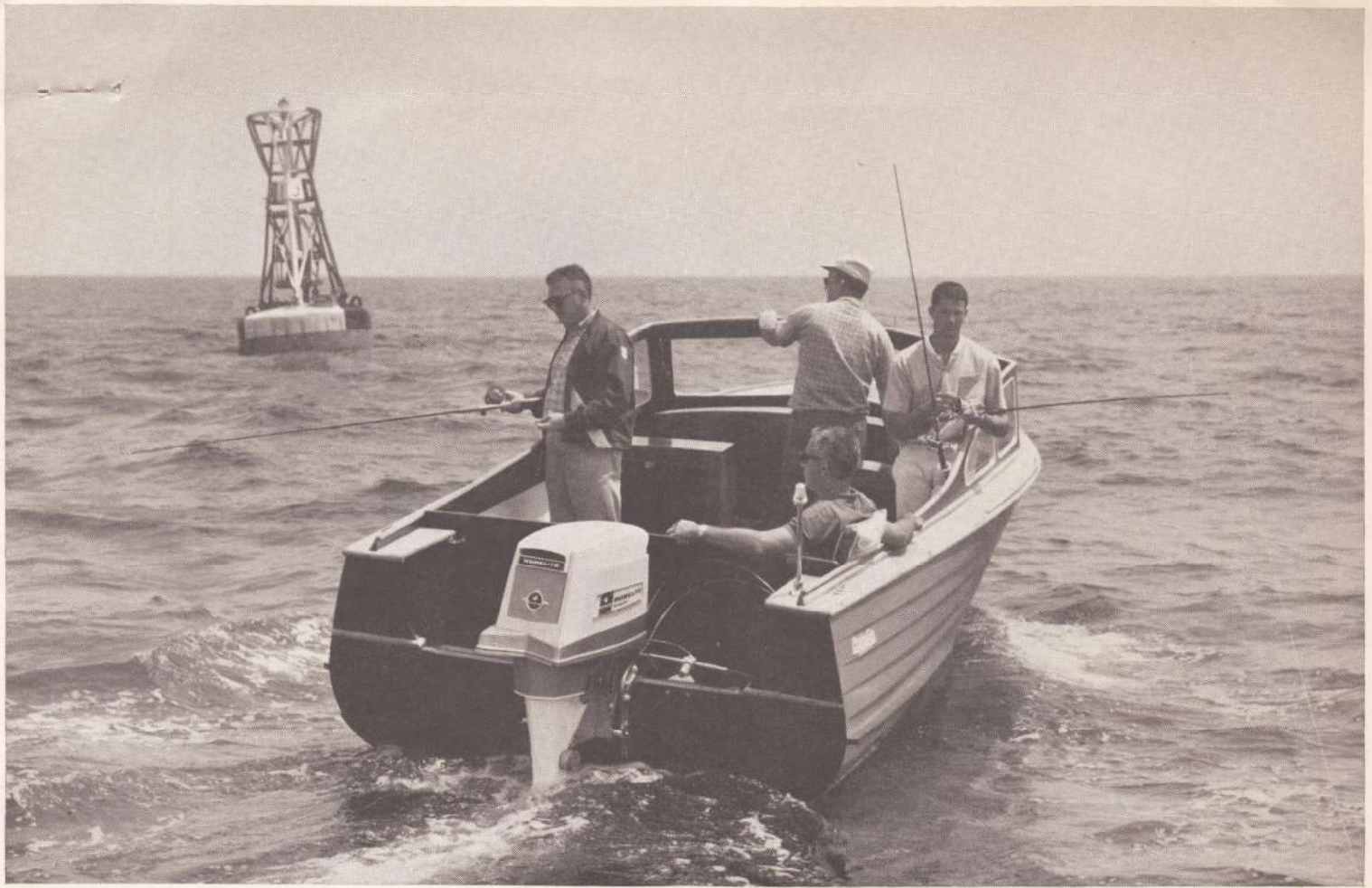
Camshaft Journal Diameter is .6235 - .6240

Camshaft Bearing Clearance is .0025 - .0035

Intake Valve Stem Diameter is .3135 - .3140

Exhaust Valve Stem Diameter is .3130 - .3135

Recommended Piston Skirt Clearance is .0033 - .0047



WATERCRAFTMANUALS.COM

it trolls on less than a quart of gas an hour!

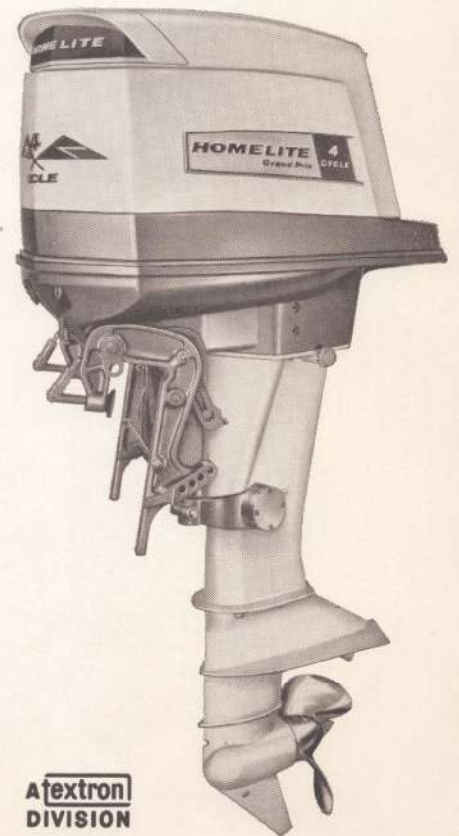
That's a performance record made by the Homelite 4-Cycle-55 that not even many so-called "fishing" motors can match. And it's one that is almost guaranteed to land your next fishing customer.

Up to this point, of course, you have impressed the prospect with the Homelite's complete lack of smoke and fumes . . . with its ability to troll for hours on end without ever loading up or fouling a plug . . . with its happy versatility in being able to please the water skiers in his family as well as the fishermen.

But the economy is the clincher. With gas savings like that there's a lot of fishing in a six-gallon tank!

It's fun to sell when you are selling the unique advantages of the remarkable Homelite 4-Cycle-55. It's profitable, too, because YOU are Homelite in your area. Your profit potential is clean — based on high turnover and low inventory investment. Factory support is strong in advertising, merchandising and service through 51 Homelite Factory Branches — more than all other outboard manufacturers combined.

Get all the facts. Just write or call Mr. Ramsey Allen, Marine Market Manager. You'll quickly learn that a Homelite franchise will earn you handsome profits and happy customers.



**A textron
DIVISION**

HOMELITE 4-CYCLE-55

4912 Riverdale Ave., Port Chester, N.Y. Area Code 914, WE 9-3400

when you sell the **HOMELITE 4-CYCLE 55**

PHONE SELLING

makes the difference



January 6, 1965

Mr. Homelite Dealer, your telephone will:

- Increase sales volume by obtaining a greater share of the market.
- Decrease sales cost by qualifying prospective customer.
- Improve customer service.
- Make a difference in your net profit.

Here are five (5) ways a telephone call can generate profits for Homelite dealers:

- Qualify and make appointments for demonstrations of the Homelite 4-cycle 55-HP OUTBOARD.
- Make appointments for seasonal service, 25-hour check-up, winterizing, etc., stressing your high-caliber service.
- After the sale, congratulate new owner; explain the Homelite warranty and offer your assistance. (Builds good will and paves the way for future business.)
- Obtain an "OK" for additional maintenance or repairs while work is being done. (This builds confidence, shows the customer you're on his side.)
- Collect overdue accounts. (Be polite. Give him an excuse why he hasn't paid: "Probably slipped your mind".)

Don't play a "waiting game". Bring business to yourself and keep it coming. Call these types of prospects:

- Existing boat owners
- New boat owners
- Regular cash customers
- New residents in neighborhood
- Former customers
- Local businessmen and executives



HOMELITE 4-CYCLE 55

(OVER)

NINE SECRETS PROFESSIONALS USE TO SELL BY TELEPHONE

Telephone selling is easy. All it takes is confidence, practice, belief in what you're selling and know-how!

Confidence comes with practice. The belief you've already got licked . . . you know your product and business inside out. And here's the know-how:

The success of every telephone call depends on two factors:

1. Everything you say must give the customer the feeling that this call was made with his best interest in mind.
2. You need a pattern to plan your call. Calls should be planned, not canned.

Here are the nine parts of a successful telephone selling pattern:

1. IDENTIFICATION

Tell the customer who you are (first and last name) and where you are located.

2. HINGE

The reason you are calling: "To introduce the new Homelite 4-cycle 55 outboard motor".

3. INTEREST - CREATING REMARKS

Offer the customer a benefit, develop a need for what you're offering, awaken his interest and let him know he's more important. Use the customer's name throughout the conversation. You will gain his interest.

4. WORD PICTURES

Explain your product -- the Homelite 4-cycle 55 -- by drawing mental pictures for him with words. Tell him what it is, why he needs it, what it will do for him, etc.

5. MEASURE YOUR SELFISH INTEREST

Some prospects naturally won't be interested. So don't waste time. Find out if they are interested by asking questions.

6. TEST QUESTIONS

No point in going further until you know how the customer feels. So ask him whether he agrees or not. His answer will give a clue to whether you go on or not.

7. ANSWERS TO OBJECTIONS

If the customer voices an objection, counter with a benefit.

8. "ACTIONIZER"

You must have a reason for the prospect to take action now. It is a device to change inaction to action. For example: "I would like to invite you to take a Homelite demonstration ride this coming Saturday", or, "We are offering a special bonus package for pre-season Homelite orders". In this way, you are appealing to his desire for special treatment.

9. ALWAYS BE CLOSING

Do not assume anything. If you are calling for an appointment, you must ask him for an appointment. Always offer a choice on appointment calls. Once the customer says "yes", confirm and get off the line.


IMPORTANT PHONE SALES TECHNIQUES TO BE REMEMBERED:

- | | |
|----------------------------|---------------------------------|
| 1. Be ready. | 6. Be persistent. |
| 2. Be enthusiastic. | 7. Paint word pictures. |
| 3. Repeat customer's name. | 8. Offer helpful service hints. |
| 4. Listen carefully. | 9. Close sale. |
| 5. Be tactful | 10. Repeat customer's name. |

SUGGESTED TIME TO CALL:

Chemists and Engineers	Between four and five p. m.
Clergymen	Any time after Tuesday.
Contract Workers and Builders	Before nine a. m. or after five p. m.
Dentists	Before nine-thirty a. m.
Druggists	Between one and three p. m.
Executives and heads of Business	After Ten-thirty a. m.
Housewives	Between eleven and noon Between two and four-thirty p. m.
Lawyers	Between eleven a. m. and two p. m.
Physicians and Surgeons	Between nine a. m. and eleven a. m. Between one p. m. and three p. m.
Professors and School Teacher	Between seven-thirty and nine p. m.
Public Accountants	Any time except January 15 to April 15.
Publishers and Printers	After three p. m.
Retail Butchers and Grocers	Before nine a. m. Between one p. m. and two-thirty p. m.

Application of the above thoughts and principles will MAKE THE DIFFERENCE!


John L. Bird
Ass't. to Marine Marketing Manager

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