

MODEL G MERCURY SERIES
ASSEMBLY INSTRUCTIONS
4 & 6 CYLINDER, 65 – 150 HP, 1965 TO 1987

1. Place the engine on the transom of your boat so that it is mounted vertically, in the normal fashion. Remove the trim tab and 6 upper and lower nuts holding the gearbox to the upper housing, and remove the gearbox.
2. Remove the 3 rear gearbox mounting studs from the upper housing using a pipe wrench. The rearmost 3/8 stud hole must now be drilled through to the top of the housing to receive the rear jet mounting bolt from above. Drill through with the 25/64 stepped drill. A 5/8 diameter x 1/2 long steel spacer fits here, under the bolt head. The drills and spotfacer are available on loan or from you dealer. If it is ever desired to remount the propeller gearbox, a 3/8-16 bolt can be used at this rear hole.
3. Remove the top “O” ring and water pump assembly from the gearbox driveshaft, leaving the studs in place. Remove the rubber cushion which supports the base of the engine exhaust tube.
4. Install the three 7/16 studs in the jet unit. Use a little grease on the threads. Two 7/16 nuts are provided to be used as jam nuts for locking in the studs. Thread the nuts onto a stud and jam the nuts against each other, not against the end of the thread. Wind in the stud and tighten. Loosen the 2 nuts, remove and repeat with the other 2 studs.
5. Next, install the jet pump driveshaft assembly into the spiral pump housing, locking it in place with the four 5/16-18 x 1 long bolts and lockwashers.
6. Seal the flushing inlet on the lower water pump housing with the 3/8-16 set screw provided. It may be necessary to thread the hole with the tap found in the drill kit. Not required on late model motors.
7. Older water pumps must use a 2-1/4 inch aluminum ring to center the pump in the jet main housing. This ring goes on the water pump above the large “O” ring, to hold it in place. Now install the water pump onto the jet driveshaft, using gasket. Be sure to install the pump impeller drive key. Lock pump in place firmly with the two 1/4-20 x 2-3/4 and one 5/16-18 x 2-3/4 bolts and lockwashers. Replace the rubber sleeve and upper “O” ring on the driveshaft. Place the plastic guide sleeve for the cooling water tube into the water pump. Late model motors do not use “O” ring on the driveshaft.
8. A tilt latch mechanism is provided to keep the engine from tilting up in reverse. A splined shift lever attaches to the engine gearshift-tilt latch shaft and guides into a 3/8 hole in the front of the jet housing. A fiber washer is placed between the shift lever and the aluminum housing. This lever shifts the jet reverse gate. Place the engine gearshift control in “forward” position. The reverse gate shift arm is installed rotated back against the housing. This is the position for the reverse gate with the remote control in “forward.” Then remove the shift lever from the jet housing and insert it into the engine spline in the same position.
9. Place the rubber cushion for the engine exhaust tube in the jet housing. It helps assembly to glue the rubber cushion into the jet housing with contact cement so it won't slip out of place. Remove any sharp lower edges from the exhaust tube with a file so that the tube will enter the rubber cushion easily.
10. Now you are ready to mount the jet to the engine. Tip the engine up toward the horizontal. Lubricate the mating parts of the shift shaft, fiber washer, driveshaft spline, water tube, exhaust tube and their rubber seats onto the engine, guiding the shift shaft, driveshaft, water tube and exhaust tube into place. As you tighten the 3 nuts and rear bolt, look inside the exhaust pipe with a light and be sure the rubber seat for the exhaust tube has not slipped out of position. Operate the remote control to be sure the tilt latch cams are assembled properly. Then tighten the 3 nuts and rear bolt firmly.

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11. Next, install the impeller. Grease the shaft threads, key and impeller bore. Place the plastic sleeve inside the impeller, hold the key in the nose of the impeller with your forefinger and slide onto the driveshaft. Install the 8 shim washers and nut retainer on the shaft, up against the impeller, and bring the nut up snug by hand. Be careful that the retainer does not fall into the thread groove and jam the nut.

Then bump the nut up snug with a wrench. If the ears of the retainer do not line up with the flats on the nut, spin the nut off, turn the retainer over and tighten the nut again. In one of these two positions you will have alignment and can fold the ears up against the nut to retain it. The flat in the retainer is angled to the ears to allow this.

When, after use in sand and gravel, the blade clearance becomes more than about 1/32 inch between the impeller edge and the water intake liner, one or more of the stainless shim washers can be transferred from the bottom stack to the top of the impeller, which moves the impeller down into the tapered casing to reduce the clearance.

Shims should not be used above the impeller on new installations where no wear has occurred unless the blade clearance exceeds 1/32 inch. Insufficient blade clearance will do more harm than good from any performance gains it might provide.

12. Place the intake casing in position with the lower end at the rear and tighten the six nuts. Grease the threads.
13. With the remote control in forward, thread the shift rod into the pivot on the splined shift lever and adjust the thread engagement so that the reverse gate is in the full forward position with the cam roller on the gate at the end of the slot in the cam. Install the washer and cotter pin. If your motor uses a tiller steering handle, call us for information.
14. Remove the shift cable from inside the cowl and prepare to attach it directly to jet drive. The shift cable must be attached to the jet drive for the system to operate properly. An aluminum sleeve, 7/16 diameter x 3/8 long, is placed on the pin in the power head, where the cable end normally attaches, so that the cable end keeper can be secured. If this is not done, the keeper may turn sideways and jam the mechanism.
15. Attach the cable anchor bracket to the jet drive using 2 – 1/4-20 x 5/8 bolts and flat washers. Attach the cable.

Using a light finger pressure on the gate, move the gate toward reverse until the cam roller is in the neutral notch when the shift handle is in neutral. Secure hardware, while allowing enough looseness for rotation of the cable anchor and cable end.

16. Shift to forward. The roller should be well onto the flat section of the cam such that the gate cannot be forcibly rotated toward reverse. Pull on the gate by hand to verify this.

If this forward lock condition is not met, readjust the cable positions, giving less importance to the roller position in neutral.

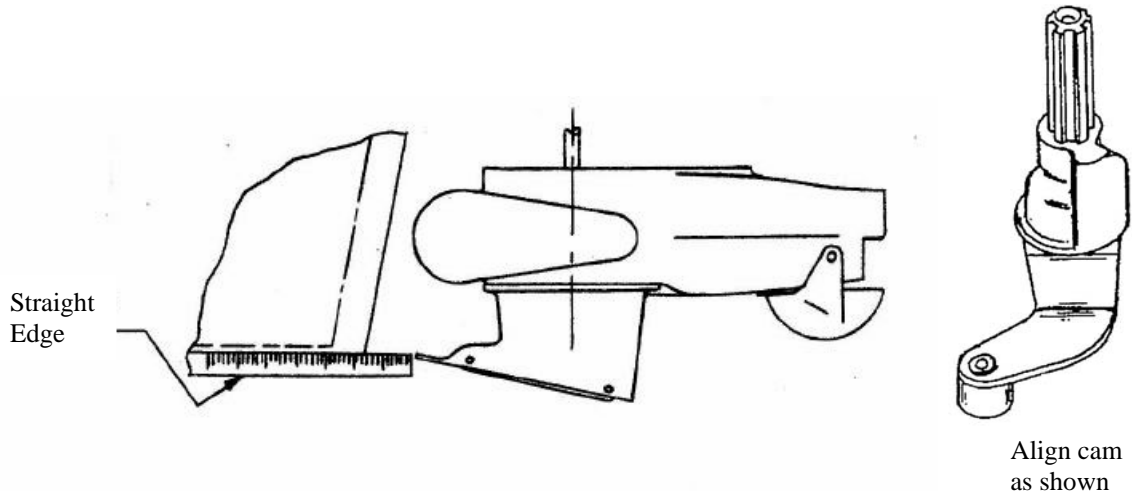
17. When converting to jet drive, your motor will have to be raised to height shown in diagram on page 3, using a straight edge under the boat. Test run the boat and then raise or lower the motor 1/4 inch at a time to obtain the best results. If you raise it too much it will suck air and cavitate, either on start up or when banking on turns. When cavitating, the engine overspeeds in spurts and shakes considerably in the engine mount. This is not a normal condition and should be avoided by proper adjustment of engine height on

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each individual boat. If you lower it too much you will have excessive drag, therefore mount the engine as high as possible without allowing cavitation.

GOOD BOATING AND HAVE FUN!

SETTING MOTOR HEIGHT

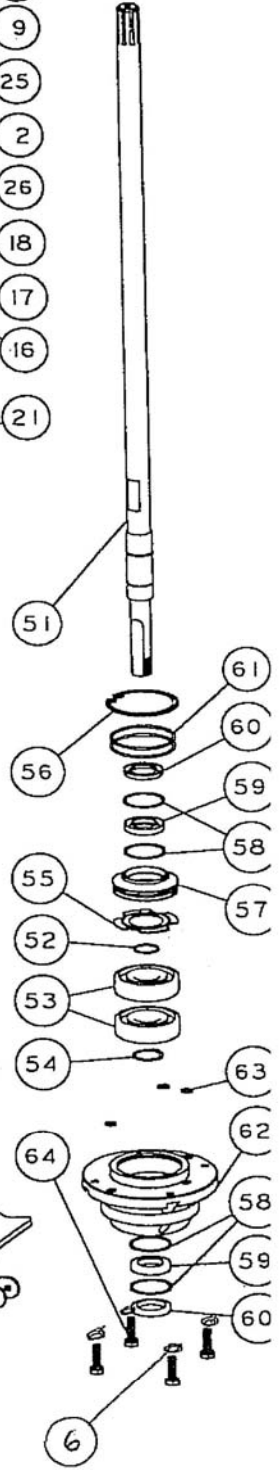
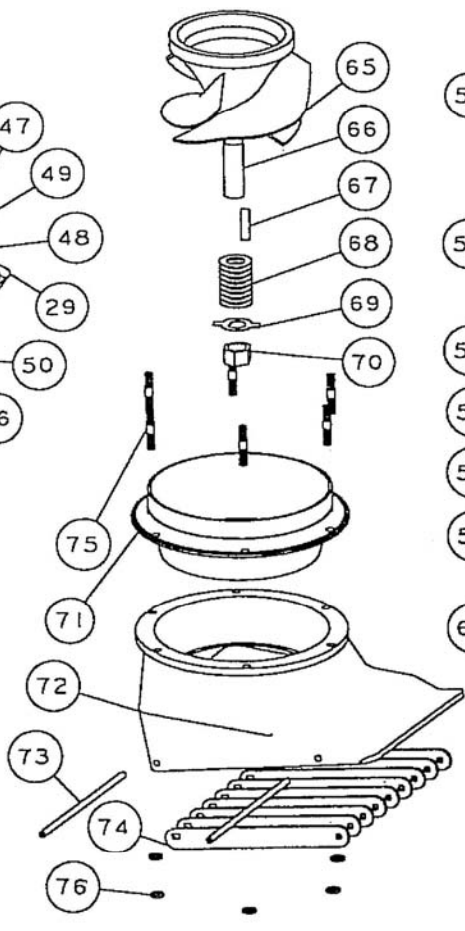
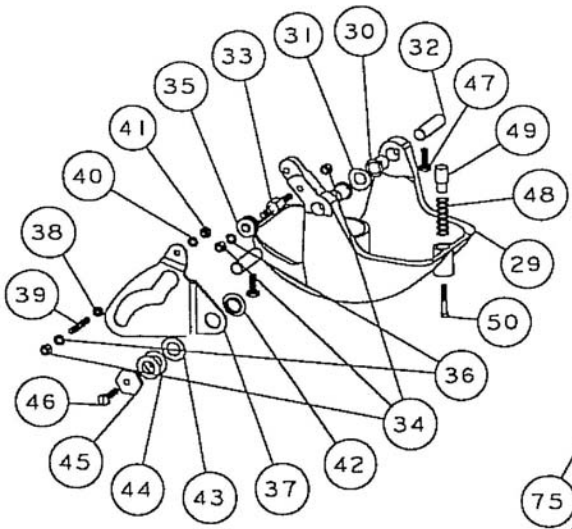
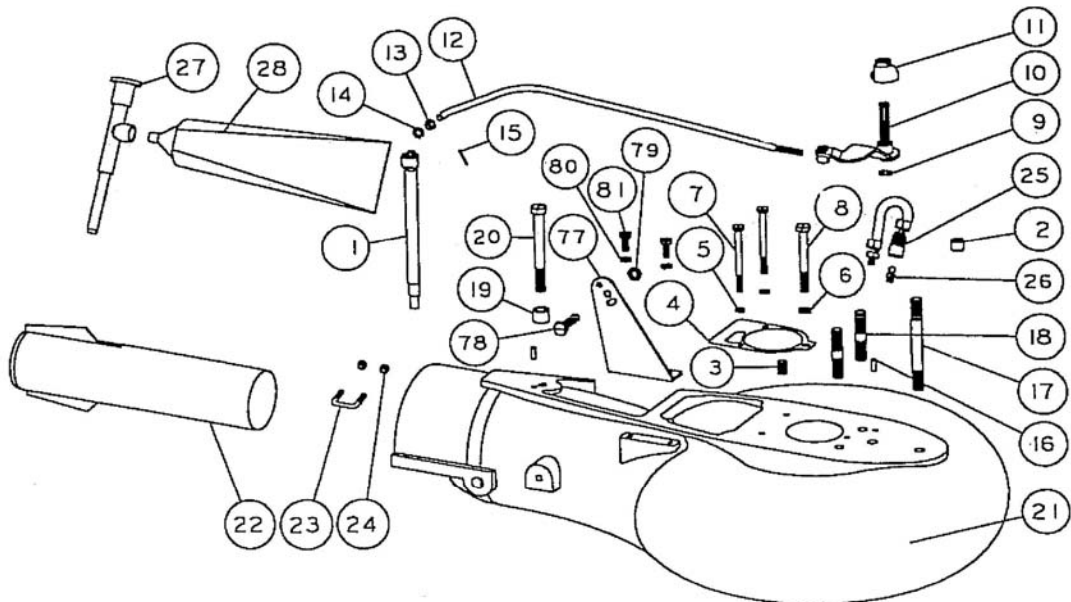


CAUTION

When starting the engine for the first time, watch to see that the cooling water comes out of the small hole at the rear side of the engine just below the power head. This is to check your assembly of the cooling water pump and its connections.

MAINTENANCE AND LUBRICATION

See last page.



MODEL G65, 80, 100 MERCURY

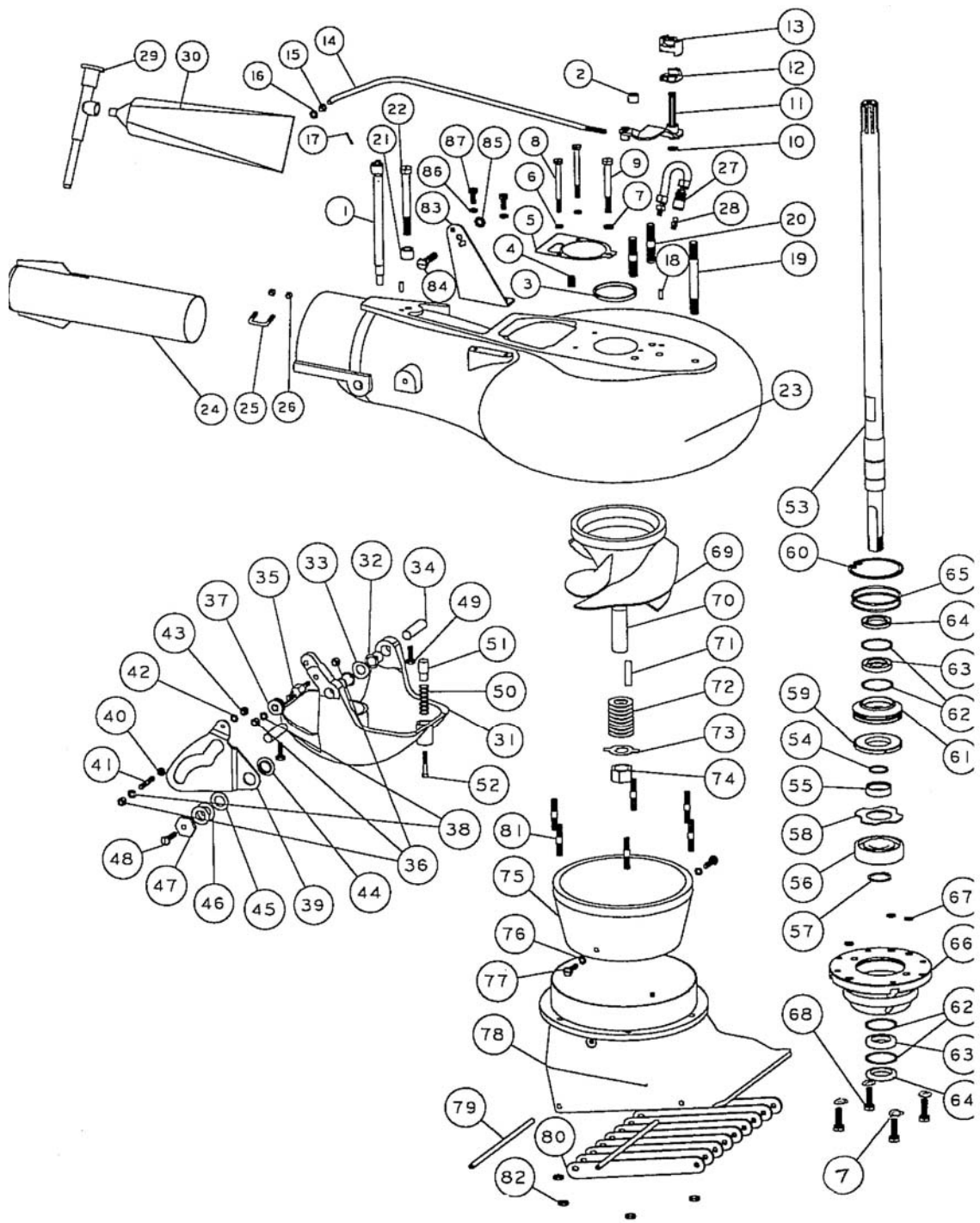
4 6 CYL 60-150 HP 1965-1987

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
1	1	403.23	SPOTFACER & DRILL KIT 5/8			142.1	DSHAFT ASSY GS - 5/16
2	1	335	SPACER CABLE END EFGP	52	1	114	DRIVESHAFT & SLV GS
3	1	189	RING WATER PUMP G			143.1	DSHAFT ASSY GL - 5/16
4	1	565	SET SCR HOLLOW HD 3/8-16 X 1/2	53	1	126	DRIVESHAFT & SLV GL
5	1	119	GASKET WATER PUMP G			468	BRG & SEAL BACKFIT 5305/7305
6	2	638	WASHER SPRING LOCK 1/4	54	1	41	SHAFT BEARING THRUST RING
7	5	640	WASHER SPRING LOCK 5/16	55	1	467	COLLAR BACKFIT 7305
8	2	581	BOLT HEX HD 1/4-20 X 2 3/4	56	1	502	BEARING 7305B-UA
9	1	599	BOLT HEX HD 5/16-18 X 2 3/4	57	1	511	TRUARC 5100-98SPP
10	1	643	WASHER FIBER 1X1/32 BLACK	58	1	830	THRUST WASHER LARGE
11	1	118	TILT ARM ASSY G OBSOLETE	59	1	831	SPACER 7305 MILLED
12	1	130	CAM MILLED	60	1	513	TRUARC N5002-250ZDL
12	1	131	CAM 37422 MACH	61	1	432	SEAL RING ASSY LARGE
13	1	132	CAM 37421 MACH	62	4	517	SPIROLOX RR-150S
14	1	111	SHIFT ROD FORMED	63	2	506	SEAL INNER 0857
15	1	533	NYLINER 4L4F 1/4 ID	64	2	507	SEAL OUTER 1317 REV B
16	1	635	1/4 WASHER AN960C416	65	2	527	O RING 568-141
17	1	645	COTTER PIN 1/16 X 1/2	66	1	108.5	BRG CARR SEALS LARGE - 5/16
18	2	631	DOWEL PIN 3/16 X 1/2	67	3	521	O RING 568-011 1/16X5/16X7/16
19	1	120	STUD LONG G	68	4	602.1	BOLT HEX HD 5/16-18 X 1 PATCH
20	2	123	STUD SHORT GP	69	1	106.21	IMPELLER 6 5/8 136, 1706(2)
21	1	181	SPACER, REAR MOUNTING BOLT	69	1	106.23	IMPELLER 6 7/8 136, 1706(2)
22	1	613	BOLT HEX HD 3/8-16 X 3 1/2	69	1	106.24	IMPELLER 7 3/16 136, 1706(2)
		14400	RECOUP GATE G CAM	70	1	136	IMPELLER 7 3/16 136, 1706(2)
23	1	144	RECOUP TUBE G	71	1	434	KEY, TEE IMPELLER LARGE 3/16
24	1	128	EXHAUST TUBE ASSY LARGE 2 1/2	72	9	121	SHIM WASHER LARGE
25	1	847	CLIP EXHAUST TUBE 3/4	73	1	781	NUT KEEPER FOLDED LARGE
26	2	621	NYLOC 10-32	74	1	122.1	SHAFT NUT 3/4-16 BRASS
27	1	975	LUBE HOSE ASSY			141.1	INTAKE ASSY 6 5/8
28	1	539	1/4-28 THREAD HYDRAULIC ZIRC	75	1	134	LINER 6 5/8 W/HARDWARE
29	1	550	GREASE GUN 30195			141.2	INTAKE ASSY 6 7/8
30	1	552	GREASE 10 OZ TUBE NO.630-AA	75	1	135	LINER 6 7/8 W/HARDWARE
31	1	1172	GATE PAINTED LARGE 1/2 CAM			141.3	INTAKE ASSY 7 3/16
32	2	536	NYLINER 4217A 1/2ID X .82	75	1	137	LINER 7 3/16 W/HARDWARE
33	1	1178	SPRING GATE PIVOT 1/2	76	2	638	WASHER SPRING LOCK 1/4
34	2	823	PIN GATE PIVOT 1/2 LARGE	77	2	575	BOLT HEX HD 1/4-20 X 7/8
35	1	1043	SHAFT ROLLER	78	1	104	INTAKE PAINTED LARGE
36	3	624	NYLOC 1/4-28	79	2	14	GRILL ROD
37	1	1042	ROLLER ASSY	80	9	117	GRILL BAR LARGE
38	2	635	1/4 WASHER AN960C416	81	6	1319	STUD - INTAKE LARGE
39	1	1034	SHIFT CAM LARGE	82	6	625	NYLOC 5/16-18
40	1	62	NUT HEX JAM 1/4-28			334	BRACKET ASSY MERC
41	1	1199	PIVOT - CABLE END	83	1	153	BRACKET CABLE SUPT MERCURY
42	1	638	WASHER SPRING LOCK 1/4	84	1	597	BOLT HEX HD 5/16-18 X 1 1/4
43	1	622	NUT HEX 1/4-28	85	1	625	NYLOC 5/16-18
44	1	1037	BUSHING CAM	86	2	635	1/4 WASHER AN960C416
45	1	1038	WASHER CAM	87	2	572	BOLT HEX HD 1/4-20 X 5/8
46	2	1039	SHIM - CAM				
47	1	1036	CAM ECCENTRIC DRILLED				
48	1	574.1	BOLT HEX HD 1/4-20 X 1 PATCH				
49	2	574	BOLT HEX HD 1/4-20 X 3/4 PATCH				
50	1	1170	SPRING GATE BUMPER				
51	1	1497	GATE BUMPER - LONG				
52	1	559.2	FIL HD SLOT 10-32X 1 1/4 PATCH				

SIZE	TORQUE
1/4-20 (M6)	8-9 FT-LBS
5/16-18 (M8)	12 FT-LBS
3/8-16 (M10)	22 FT-LBS

SHIFT ROD ASSY 1385, 1491, SEE PAGE 17

BEARING, SEAL, SNAP & "O" RING KIT 803.1



MODEL G125 MERCURY / MARINER

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
1	1	403.23	SPOTFACER & DRILL KIT 5/8			931.1	DSHAFT ASSY GDL - 5/16
2	1	335	SPACER CABLE END EFGP	51	1	930	DRIVESHAFT & SLV GDL
3	1	565	SET SCR HOLLOW HD 3/8-16 X 1/2			429	BRG & SEAL KIT 2 7305
4	1	119	GASKET WATER PUMP G	52	1	41	SHAFT BEARING THRUST RING
5	2	638	WASHER SPRING LOCK 1/4	53	2	502	BEARING 7305B-UA
6	5	640	WASHER SPRING LOCK 5/16	54	1	511	TRUARC 5100-98SPP
7	2	581	BOLT HEX HD 1/4-20 X 2 3/4	55	1	404	BACKUP WASHER LARGE PLATED
8	1	599	BOLT HEX HD 5/16-18 X 2 3/4	56	1	513	TRUARC N5002-250ZDL
9	1	643	WASHER FIBER 1X1/32 BLACK	57	1	432	SEAL RING ASSY LARGE
10	1	118	TILT ARM ASSY G OBSOLETE	58	4	517	SPIROLOX RR-150S
11	1	130	CAM MILLED	59	2	506	SEAL INNER 0857
12	1	111	SHIFT ROD FORMED	60	2	507	SEAL OUTER 1317 REV B
13	1	533	NYLINER 4L4F 1/4 ID	61	2	527	O RING 568-141
14	1	635	1/4 WASHER AN960C416	62	1	393.5	BRG CARR SEALS DOUBLE - 5/16
15	1	645	COTTER PIN 1/16 X 1/2	63	3	521	O RING 568-011 1/16X5/16X7/16
16	2	631	DOWEL PIN 3/16 X 1/2	64	4	602.1	BOLT HEX HD 5/16-18 X 1 PATCH
17	1	120	STUD LONG G	65	1	106.25	IMPELLER 7 3/8 136, 1706(2)
18	2	123	STUD SHORT GP	66	1	136	SHAFT SLEEVE PLASTIC LARGE
19	1	181	SPACER, REAR MOUNTING BOLT	67	1	434	KEY, TEE IMPELLER LARGE 3/16
20	1	613	BOLT HEX HD 3/8-16 X 3 1/2	68	9	121	SHIM WASHER LARGE
		14400	RECOUP GATE G CAM	69	1	781	NUT KEEPER FOLDED LARGE
21	1	144	RECOUP TUBE G	70	1	122.1	SHAFT NUT 3/4-16 BRASS
22	1	128	EXHAUST TUBE ASSY LARGE 2 1/2			1333	INTAKE ASSY 7 3/8 FLANGED
23	1	847	CLIP EXHAUST TUBE 3/4	71	1	1431	LINER 7 3/8 FLANGED
24	2	621	NYLOC 10-32	72	1	1332	INTAKE PAINTED 7 3/8 FLANGED
25	1	975	LUBE HOSE ASSY	73	2	14	GRILL ROD
26	1	539	1/4-28 THREAD HYDRAULIC ZIRC	74	9	117	GRILL BAR LARGE
27	1	550	GREASE GUN	75	6	1319	STUD - INTAKE LARGE
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35	1	1042	ROLLER ASSY				
36	2	635	1/4 WASHER AN960C416				
37	1	1035	SHIFT CAM MEDIUM				
38	1	62	NUT HEX JAM 1/4-28				
39	1	1199	PIVOT - CABLE END				
40	1	638	WASHER SPRING LOCK 1/4				
41	1	622	NUT HEX 1/4-28				
42	1	1037	BUSHING CAM				
43	1	1038	WASHER CAM				
44	2	1039	SHIM - CAM				
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50	1	559.2	FIL HD SLOT 10-32X 1 1/4 PATCH				

NOTE: SHORT SHAFT AND 2 HOLE LINER INTAKE ASSEMBLIES SHOWN ON MODEL G65, 80, 100 VIEW

SIZE	TORQUE
1/4-20 (M6)	8-9 FT-LBS
5/16-18 (M8)	12 FT-LBS
3/8-16 (M10)	22 FT-LBS

MAINTENANCE AND LUBRICATION OUTBOARD JET DRIVE

BEARING LUBRICATION

A grease gun and tube of grease is supplied with your jet drive. We recommend greasing the bearing every 10 hours. Make greasing a part of your cleanup after the days use. Pump in just enough grease to fill the lube hose. Then reconnect the lube hose coupling to the zerk grease fitting.

Every 30-40 hours, pump in extra grease so as to purge any moisture. The texture of the grease coming out gives an indication of conditions inside the bearing housing. A gradual increase in moisture content indicates seal wear. If the grease begins to turn dark, dirty gray, the bearing and seals should be inspected and replaced if necessary. Some discoloration of the grease is normal during the break in period on new sets of seals.

We have selected a water resistant grease of the proper consistency for this application. If you use a substitute grease, be sure it is water resistant and of the same consistency.

IMPELLER

Your jet drive is equipped with a key to protect the unit in the event of a rock jam. This can be reached by removing the water intake, and then the driveshaft nut, similar to a propeller drive. After replacing the key, pull the shaft nut up tight to remove any play between the impeller and shaft. Note the position of the impeller shim washers, and replace them in the same order.

REVERSE GATE MECHANISM

Occasionally check adjustment of the gate shifting linkage. In "forward" the gate should be firmly locked in position. Pull on the gate by hand to verify this. This will prevent wave action from accidentally shifting the gate into reverse as the boat is violently maneuvered

GENERAL

Check all mounting bolts, intake screws, linkage connections, etc., occasionally to be sure they are tight.

SALT WATER USE

Aluminum and stainless steel have been used in the construction of your jet drive. These materials have either been treated or are inherently resistant to corrosion. It is recommended, however, that when not in use the motor be tipped up so that the jet unit is out of the water. When used in salt water more than in fresh water, remove mounting hardware, grease, and reassemble once a year. Failure to do this may result in hardware that is difficult if not impossible to remove at a later date.

GUARANTEE

Due to inflexible government regulation, we do not have a written warranty. We have, however, a good reputation for fairness with our customers which we intend to maintain. If you think you have a warranty situation, regarding material, workmanship, call us before making repairs.

Specialty Manufacturing Company
Outboard Jets
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San Leandro, CA 94577