

MODEL T SERIES
ASSEMBLY INSTRUCTIONS

For Suzuki Motors 50 to 85HP, 1979 to present

1. Temporarily clamp the engine on the transom of your boat or an engine stand so that the gearbox can be removed.
2. Disconnect the upper end of the gearbox shift rod. On the early 50HP motors you may have to remove the lower carburetor. On later motors, remove the 2 nuts on the control shaft and slide it sideways to disengage the shift rod.
3. Remove the bolts and nuts holding the gearbox to the exhaust housing and remove the gearbox.
4. Remove any studs from the exhaust housing.
5. Mount the adapter plate to the exhaust housing using 6 metric bolts with lockwashers and centering sleeves around 2 bolts. The 50/65HP units use 6 M8 x 1-1/4 bolts. The 85HP units use four M8 x 1-1/4 and two M10 x 1-3/8 bolts.
6. Install the jet driveshaft assembly into the spiral pump housing locking it in place with the four $5/16-18$ x 1 bolts, AND LOCKWASHERS. Use grease on the threads.
7. Remove the water pump assembly from the propeller drive and install it in the jet drive. Be sure when removing the lower stainless steel pump plate to note which side is up so that it is not installed upside down. Be sure also, to install the water pump impeller drive key removed from the propeller drive. Lock in place using four $5/16-18$ x $7/8$ bolts and lockwashers. Grease the threads.

Install the brass water tube extension, with "O" ring, into the water pump outlet.

8. Next, attach the jet drive to the motor. Two $3/16$ x $1/2$ dowel pins center the jet drive on the adapter plate. Four $3/8-16$ bolts and lockwashers from below and one $3/8-16$ x $1-1/2$ bolt with lockwasher from above rear, are used. Select the lower bolt lengths to suit the different counter bore depths so that all bolts enter the exhaust housing the same depth.

Grease the bolt threads, driveshaft spline generously, and rubber water tube pilot and guide the jet into place. Tighten the 5 bolts.

9. 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 eight 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.

MODEL T

When, after use in sand and gravel, the blade clearance becomes more than about 1/32" between the impeller edge and the water intake casing wall, one or more of the 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". Insufficient blade clearance will do more harm than good from any performance gains it might provide.

10. Place the intake casing in position with the lower end at the rear and tighten the six NUTS. No lockwashers are used. Grease the threads.
11. Attach the shift cable and cable anchor bracket to the jet drive.

Using a light finger pressure on the gate, move the gate toward reverse until the cam roller is nested in the neutral notch of the cam.

Adjust the shift cable end and the cable anchor bracket on the jet drive such that the roller is in the neutral notch when the shift handle is in neutral. Tighten hardware.

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.

12. If the neutral position is too far out of adjustment, the tendency of the gate to move toward reverse, under water pressure, will put tension on the cable in neutral. In some remote control boxes, this makes it difficult to re-engage the shift mode with the motor running in the high speed idle, cold start setting. It is then necessary to stop the motor, operate the shift handle to engage the shifting pin and then restart the motor.

Proper cable adjustment will prevent this problem but it is most important that the forward locking condition be met if a compromise is to be made.

13. 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 5/16" at a time to obtain the best results.

The motor has three sets of upper mounting holes. You will use one set to begin with. Mark pencil lines on the boat transom through the other sets. Then if you wish to go up or down 5/16", you can drill one alternate set of holes 5/16" up or down from the pencil marks. By alternating between these two sets of transom holes and the three sets of motor holes, the motor can be moved in 5/16" increments over almost one inch. The transom height should be about 26" measured vertically from the boat bottom.

If you raise it too much it will suck air and cavitate, either on start up or when banking on turns. When cavitating, the motor overspeeds in spurts and shakes considerably in the motor mount. This is not a normal condition and should be avoided by proper adjustment of motor height on each individual boat. If you lower it too much you will have excessive drag, therefore mount the motor as high as possible without allowing cavitation.

MODEL T

CAUTION

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

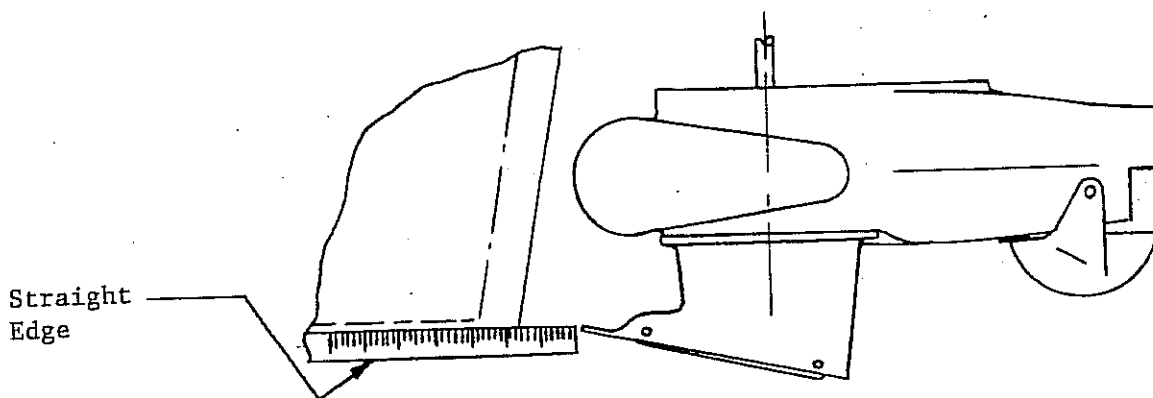
The cooling system can be flushed by removing the slotted screw next to the grease fitting. A hose coupling No. 24789A1 is available from a Mercury dealer. Turn on the water gently, start the motor, set to idle and watch for cooling water at the tell tale. Adjust water pressure if needed. Replace the screw after flushing.

MAINTENANCE AND LUBRICATION

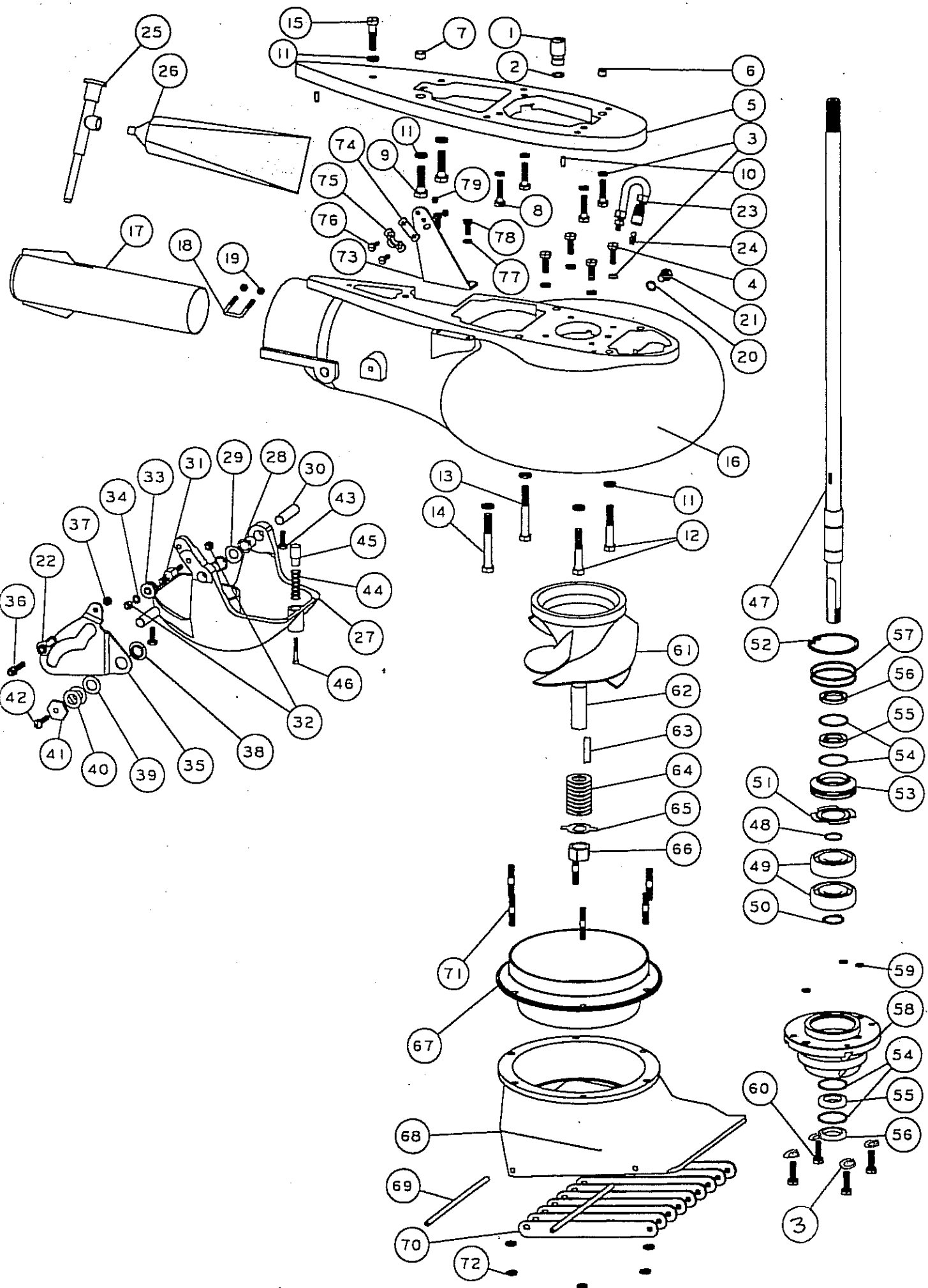
See separate sheet.

GOOD BOATING AND HAVE FUN!

PROPER ENGINE HEIGHT



Specialty Manufacturing Company
OUTBOARD JETS
2035 Edison Avenue
San Leandro, CA 94577

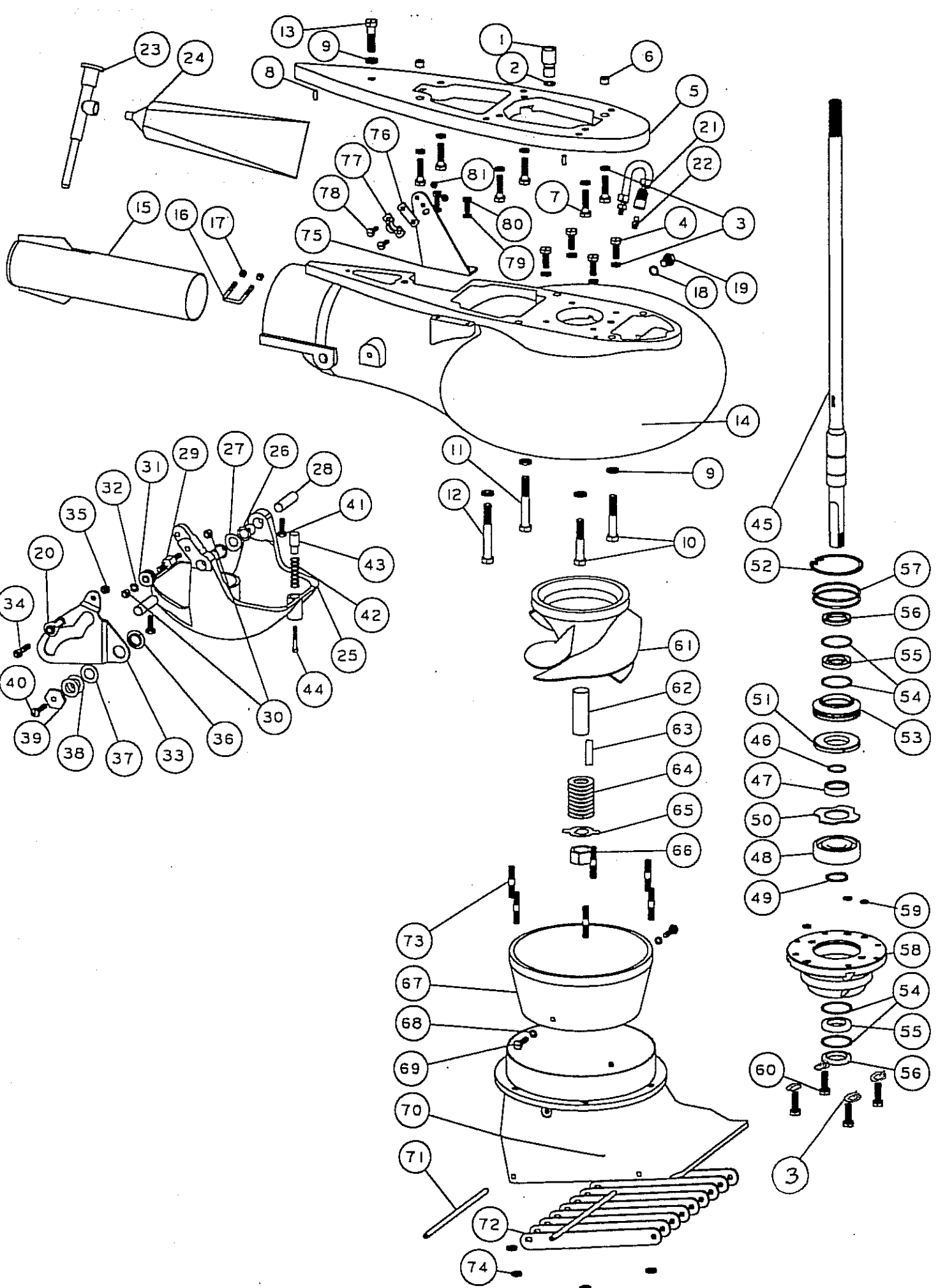


MODEL T85 SUZUKI

REF	QTY	PART NO	DESCRIPTION	REF	QTY	PART NO	DESCRIPTION
1	1	452	WATER TUBE EXT T85 W/ O-RING	56	2	507	SEAL OUTER 6324-S
2	1	530	O-RING 568-014 1/16X1/2X5/8	57	2	527	O RING 568-141 3/32X2 5/16X2 1/2
3	12	640	WASHER SPRING LOCK 5/16	58	1	393.5	BEARING CARRIER W/SEALS & O RINGS 5/16
4	4	596	BOLT HEX HD 5/16-18 X 7/8	59	3	521	O RING 568-011 1/16X5/16X7/16
5	1	444	ADAPTER PLATE T85	60	4	602.1	BOLT HEX HD 5/16-18 X 1 PATCH
6	1	448	SLEEVE CENTERING SMALL SUZ	61	1	106.25	IMPELLER 7 3/8 W/136 SLEEVE 85 HP
7	1	449	SLEEVE CENTERING LARGE SUZ	62	1	136	SHAFT SLEEVE PLASTIC LARGE
8	4	591	BOLT HEX HD M8-1.25 X 30MM	63	1	434	IMPELLER TEE KEY
9	2	592	BOLT HEX HD M10-1.25 X 35MM	64	9	121	SHIM WASHER LARGE
10	2	631	DOWEL PIN 3/16 X 1/2	65	1	781	NUT KEEPER LARGE/PKG 2 PER BAG
11	7	636	WASHER SPRING LOCK M10	66	1	122.1	SHAFT NUT 3/4-16 BRASS
12	2	608	BOLT HEX HD 3/8-16 X 2 1/4			1333	INTAKE ASSY FLANGED WITH GRILL & LINER
13	1	609	BOLT HEX HD 3/8-16 X 2 3/4	67	1	1431	LINER 7 3/8 FLANGED
14	1	610	BOLT HEX HD 3/8-16 X 3	68	1	1332	INTAKE PAINTED ONLY
15	1	607	BOLT HEX HD 3/8-16 X 1 1/2	69	2	14	GRILL ROD
		46100	VOLUTE WITH GATE T	70	9	117	GRILL BAR LARGE
16	1	461	VOLUTE WITH EXHAUST TUBE T	71	6	1319	STUD - INTAKE LARGE
17	1	128	EXHAUST TUBE ASSY LARGE 2 1/2	72	6	625	NYLOC 5/16-18
18	1	845	CLIP EXHAUST TUBE 1 3/8			171	BRACKET ASSY MORSE W/CLAMP & HARDWARE
19	2	621	NYLOC 10-32	73	1	156	BRACKET CABLE SUPPORT
20	1	1023	WASHER FIBER 3/8	74	1	542	SHIM MORSE A035777
21	1	1022	BOLT HEX HD 3/8-16 X 1/2	75	1	543	CLAMP CHRYS 154317
22	1	553.2	BALL END 1/4X10-32 CABLE	76	2	561	FIL HD SLOTTED 10-24 X 5/8
23	1	975	LUBE HOSE ASSY	77	2	635	1/4 WASHER AN960C416
24	1	539	ZIRC FITTING 1/4-28	78	2	572	BOLT HEX HD 1/4-20 X 5/8
25	1	550	GREASE GUN	79	2	619	NYLOC 10-24
26	1	552	GREASE 10 OZ TUBE NO.630-AA				
27	1	1172	REVERSE GATE, LARGE				
28	2	536	NYLINER 1/2 10 X 13/16				
29	1	1178	SPRING GATE PIVOT 1/2				
30	2	823	PIN GATE PIVOT 1/2 LARGE				
31	1	1043	SHAFT ROLLER				
32	2	624	NYLOC 1/4-28				
33	1	1042	ROLLER ASSY				
34	1	635	1/4 WASHER AN960C416				
35	1	1034	SHIFT CAM LARGE				
36	1	573	BOLT HEX HD 1/4-20 X 3/4				
37	1	623	NYLOC 1/4-20				
38	1	1037	BUSHING CAM				
39	1	1038	WASHER CAM				
40	2	1039	SHIM - CAM				
41	1	1036	CAM ECCENTRIC DRILLED				
42	1	574.1	BOLT HEX HD 1/4-20 X 1 PATCH				
43	2	574	BOLT HEX HD 1/4-20 X 3/4 PATCH				
44	1	1170	SPRING GATE BUMPER				
45	1	1497	GATE BUMPER				
46	1	559.2	FIL HD SLOTTED 10-32 X 1 1/4 PATCH				
		965.1	SHAFT ASSY COMPLETE, TD85, 18T 5/16				
47	1	964	SHAFT ONLY, TD85, 18T 29 1/2 LG				
48	1	41	SHAFT BEARING THRUST RING				
49	2	502	BEARING 7305B-UA				
50	1	511	TRUARC 5100-98				
51	1	404	BACKUP WASHER				
52	1	513	TRUARC N5002-250ZD				
53	1	432	UPPER SEAL CARRIER W/SEALS & O RINGS				
54	4	517	SPIROLOX RR-150S				
55	2	506	SEAL INNER				

27. JUN. 97

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



MODEL T50/65 T5-65 SUZUKI

REF	QTY	PART NO	DESCRIPTION	REF	QTY	PART NO	DESCRIPTION
1	1	451	WATER TUBE EXT T50 W/ O-RING('84&PRIOR)	48	1	502	BEARING 73058-UA
1	1	452	WATER TUBE EXT T85 W/ O-RING('85&LATER)	49	1	511	TRUARC 5100-98
2	1	529	O RING 568-013 1/16X7/16X9/16(451)	50	1	830	THRUST WASHER
2	1	530	O RING 568-014 1/16X1/2X5/8 (452)	51	1	831	SPACER
3	14	640	WASHER SPRING LOCK 5/16	52	1	513	TRUARC N5002-250ZD
4	4	596	BOLT HEX HD 5/16-18 X 7/8	53	1	432	UPPER SEAL CARRIER W/SEALS & O RINGS
5	1	437	ADAPTER PLATE T50	54	4	517	SPIROLOX RR-150S
6	2	448	SLEEVE CENTERING SMALL SUZ	55	2	506	SEAL INNER
7	6	591	BOLT HEX HD M8-1.25 X 30MM	56	2	507	SEAL OUTER 6324-S
8	2	631	OWEL PIN 3/16 X 1/2	57	2	527	O RING 568-141 3/32X2 5/16X2 1/2
9	5	636	WASHER SPRING LOCK M10	58	1	108.5	BEARING CARRIER W/SEALS & O RINGS 5/16
10	2	608	BOLT HEX HD 3/8-16 X 2 1/4	59	3	521	O RING 568-011 1/16X5/16X7/16
11	1	609	BOLT HEX HD 3/8-16 X 2 3/4	60	4	602.1	BOLT HEX HD 5/16-18 X 1 PATCH
12	1	610	BOLT HEX HD 3/8-16 X 3	61	1	106.21	IMPELLER 6 5/8 W/136 SLEEVE 50 HP
13	1	607	BOLT HEX HD 3/8-16 X 1 1/2	61	1	106.23	IMPELLER 6 7/8 W/136 SLEEVE 65 HP
		46100	VOLUTE WITH GATE T	62	1	136	SHAFT SLEEVE PLASTIC LARGE
14	1	461	VOLUTE WITH EXHAUST TUBE T	63	1	434	IMPELLER TEE KEY
15	1	128	EXHAUST TUBE ASSY LARGE 2 1/2	64	9	121	SHIM WASHER LARGE
16	1	845	CLIP EXHAUST TUBE 1 3/8	65	1	781	NUT KEEPER LARGE/PKG 2 PER BAG
17	2	621	NYLOC 10-32	66	1	122.1	SHAFT NUT 3/4-16 BRASS
18	1	1023	WASHER FIBER 3/8			141.1	INTAKE ASSY 6 5/8 WITH GRILL & LINER
19	1	1022	BOLT HEX HD 3/8-16 X 1/2	67	1	134	LINER 6 5/8 W/HARDWARE
20	1	553.2	BALL END 1/4X10-32 CABLE			141.2	INTAKE ASSY 6 7/8 WITH GRILL & LINER
21	1	975	LUBE HOSE ASSY	67	1	135	LINER 6 7/8 W/HARDWARE
22	1	539	ZIRC FITTING 1/4-28	68	2	638	WASHER SPRING LOCK 1/4
23	1	550	GREASE GUN	69	2	575	BOLT HEX HD 1/4-20 X 7/8
24	1	552	GREASE 10 OZ. TUBE NO.630-AA	70	1	104	INTAKE PAINTED ONLY
25	1	1172	REVERSE GATE, LARGE	71	2	14	GRILL ROD
26	2	536	NYLINER 1/2 ID X 13/16	72	9	117	GRILL BAR LARGE
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39	1	1036	CAM ECCENTRIC DRILLED				
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41	2	574	BOLT HEX HD 1/4-20 X 3/4 PATCH				
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43	1	1497	GATE BUMPER				
44	1	559.2	FIL HD SLOTTED 10-32 X 1 1/4 PATCH				
		458.1	SHAFT ASSY COMPLETE, T50-65S, 12T 5/16				
45	1	440	SHAFT ONLY, T50-65S, 12T 25 LG				
		459.1	SHAFT ASSY COMPLETE, T50-65L, 12T 5/16				
45	1	443	SHAFT ONLY, T50-65L, 12T 29 1/2 LG				
		997.1	SHAFT ASSY COMPLETE, T5-65S, 12T 5/16				
45	1	996	SHAFT ONLY, T5-65S, 12T 25 5/8 LG				
		1000.1	SHAFT ASSY COMPLETE, T5-65L, 12T 5/16				
45	1	999	SHAFT ONLY, T5-65L, 12T 30 1/8 LG				
46	1	41	SHAFT BEARING THRUST RING				
47	1	467	COLLAR BACKFIT 7305				

27. JUN. 97

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

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
2035 Edison Avenue
San Leandro, CA 94577