

MODEL U4-60 SUZUKI SERIES 60 HP
ASSEMBLY INSTRUCTIONS
57.4 CU. IN. STARTING 2010

1. Place the motor on the transom of your boat so that it is mounted vertically, in the normal fashion. Disconnect the gearshift rod coupling near the gearbox and remove the bolts holding the gearbox to the exhaust housing. Remove the gearbox assembly.
2. Remove the water pump assembly from the gear box, including the lower stainless steel plate and impeller drive key.
3. Next, install the jet pump driveshaft assembly into the spiral pump housing, locking it in place with two #10-24 fil head screws and spring lock washers.
4. Install the water pump assembly on top of the 3/4 inch thick aluminum adapter and stainless steel plate. Be sure also to install the water pump impeller and drive key removed from the propeller drive. Lock in place using four 1/4-20 x 2 1/4 bolts and lock washers. Grease the threads. 8 Ft-lbs.
5. The large 3/4 inch adapter plate is attached to the exhaust housing to hold the jet drive. The tube guides the disconnected shift rod. Two 6 x 16 mm dowels locate the plate and six M8 x 30 mm hex head bolts and lock washers secure it. Grease the bolt threads and the threaded end of the shift rod where it slides in the tube. 12 ft-lbs.
6. 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 5/16-18 x 2 3/4 bolts and lock washers from below and one 3/8-16 x 1 1/4 bolt from above rear are used. Grease the bolt threads, driveshaft spline generously, rubber water tube sleeve and guide the jet into place. Tighten the 5 bolts, 5/16 bolts to 12 ft-lbs and 3/8 bolt to 22 ft-lbs.
7. 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 shim washers, torsional damper and nut retainer on the shaft, and bring the nut up snug by hand.

Place the liner wear ring in position and observe the clearance between the impeller blade edge and the intake liner.

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

When the impeller clearance is satisfactory, bump the nut up tight 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.

8. Place the intake casing in position with the lower end at the rear and tighten the six 1/4-20 fiber lock nuts. No lock washers are used. Grease the threads. See the diagram on page 3.
9. If your jet drive was ordered for use with a steering tiller handle, see the attached shift cable assembly instruction page for installing shift cable #2039.

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10. **Caution:** Two cables will be attached to the cable anchor bracket and roller cam to provide neutral start protection. The inner cable comes from the remote control box or tiller handle to operate the reverse gate. It does not enter the motor housing. The 5 foot neutral cable assembly #1318 enters the motor housing to operate the neutral start safety switch and is driven by the movement of the reverse gate. The neutral start switch prevents starting the motor in forward or reverse.

11. With the shift handle in forward and the reverse gate in forward, **with the cam roller at the end of the slot,** adjust the cable and/or cable anchor position to this condition. **Shift to reverse and back to forward. The roller should be at the end of the cam slot 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.

Shift to neutral and adjust the cable end in the motor housing so that the neutral start switch is activated. Check adjustment coming from both forward and reverse to compensate free play in cable linkage.

12. **When converting to jet drive, your motor will have to be raised to the height shown in the diagram on page 3 below, using a straight edge under the boat.** Test run the boat and then raise or lower the motor 5/16 inch at a time to obtain the best results.

The motor has four 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 inch, you can drill one alternate set of holes 5/16 inch up or down from the pencil marks. By alternating between these two sets of transom holes and the four sets of motor holes, the motor can be moved in 5/16 inch increments over almost one inch. The transom height should be about 21" measured vertically from the boat bottom for short shaft motors, and 26" for long shaft motors.

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 over speeds 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.

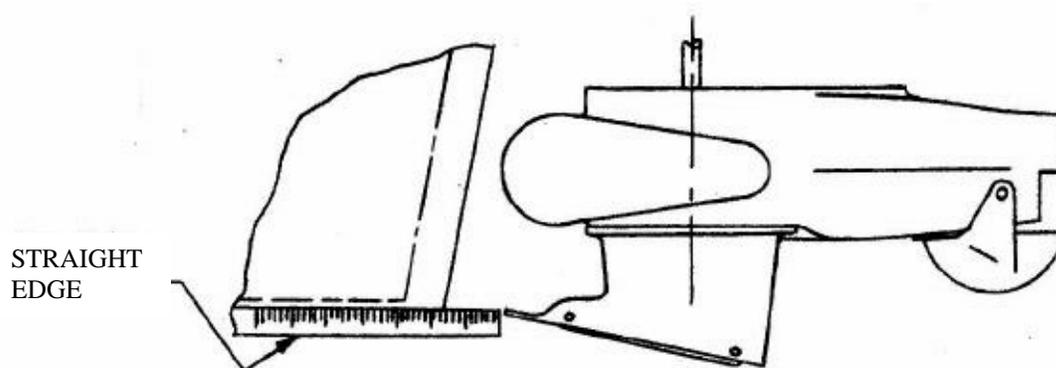
Caution: When starting the engine for the first time, watch to see that cooling water comes out of the small hole at the rear side of the engine, just below the power head. This verifies that your assembly of the cooling water pump and its connections are correct.

The cooling system can be flushed by removing the hex bolt next to the grease fitting. A hose coupling, 24789A1, is available from a Mercury dealer. Turn on the water gently, and start the motor set to idle. Watch for cooling water at the tell tale. Adjust the water pressure if needed. **Be sure to replace the bolt after flushing.**

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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 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.

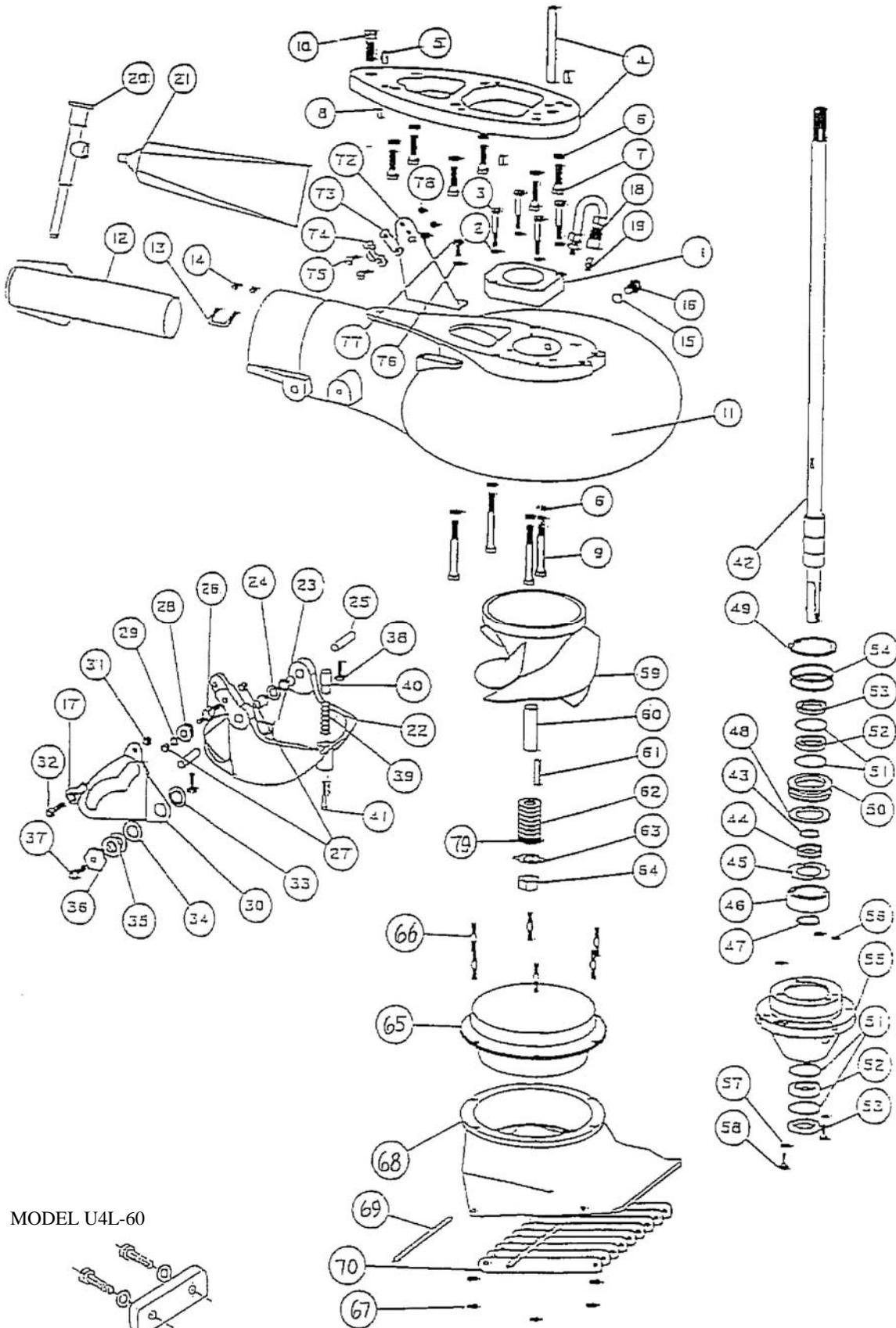
SALT WATER USE

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



MODEL U4L-60

ANODE KIT 1693

MODEL U4-60 SUZUKI

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
1	1	860	PUMP ADAPTER , U4	44	1	477	COLLAR BACKFIT 7205
2	4	638	WASHER SPRING LOCK 1/4	45	1	1536	THRUST WASHER
3	4	586	BOLT HEX HD 1/4-20 X 2 1/4	46	1	504	BEARING 7205B-UA
4	1	869	ADAPTER PLATE & TUBE U4	47	1	511	TRUARC 5100-98
5	2	616	DOWEL PIN 6 X 16 MM	48	1	1535	SPACER
6	10	640	WASHER SPRING LOCK 5/16	49	1	512	TRUARC N5002-212ZD
7	6	591	BOLT HEX HD M8-1.25 X 30MM	50	1	433	UPPER SEAL CARRIER W/SEALS & "O" RINGS
8	2	631	DOWEL PIN 3/16 X 1/2	51	4	517	SPIROLOX RR-150S
9	4	599	BOLT HEX HD 5/16-18 X 2 3/4	52	2	506	SEAL INNER
10	1	606	BOLT HEX HD 3/8-16 X 1 1/4	53	2	507	SEAL OUTER 6324-S
		89200	VOLUTE WITH GATE U4	54	2	526	O RING 568-135 3/32X1 15/16X2 1/8
11	1	892	VOLUTE WITH EXHAUST TUBE U4	55	1	912	BEARING CARRIER W/SEALS & "O" RINGS U4
12	1	80	EXHAUST TUBE ASSY MEDIUM 2	56	3	521	'O" RING 568-011 1/16X5/16X7/16
13	1	846	CLIP EXHAUST TUBE 1	57	2	637	WASHER SPRING LOCK #10
14	2	621	NYLOC 10-32	58	2	561	FIL HD SLOTTED 10-24 X 5/8
15	1	1023	WASHER FIBER 3/8	59	1	8.23	6 1/8 ALUM/ZINC IMPELLER W/136 SLEEVE
16	1	1022	BOLT HEX HD 3/8-16 X 1/2	59	1	1737	6 1/8 STANLESS STEEL IMPELLER W/136 SLEEVE
17	1	553.2	BALL END 1/4X10-32 CABLE	60	1	36	SHAFT SLEEVE PLASTIC MEDIUM
18	1	975	LUBE HOSE ASSY	61	1	782	IMPELLER TEE KEY - SQUARE
19	1	539	ZIRC FITTING 1/4-28	61	1	1705	IMPELLER TEE KEY - 1/2 ROUND
20	1	550	GREASE GUN	62	8	21	SHIM WASHERS MEDIUM
21	1	552	GREASE 10 OZ TUBE NO. 630-AA	63	1	805	NUT KEEPER MED/PKG. 2 PER BAG
22	1	1175	REVERSE GATE, MEDIUM	64	1	22.1	SHAFT NUT 5/8-18 BRASS
23	2	535	NYLINER 3/8 ID X 11/16			1447.04	INTAKE ASSY 6 1/8 WITH GRILL & LINER
24	1	1177	SPRING GATE PIVOT 3/8	65	1	1521	LINER 6 1/8 W/HARDWARE
25	2	822	PIN GATE PIVOT 3/8 MEDIUM	66	6	1300	STUD - INTAKE SMALL, MEDIUM
26	1	1043	SHAFT ROLLER	67	6	623	NYLOC 1/4-20
27	2	624	NYLOC 1/4-28	68	1	7	INTAKE PAINTED ONLY
28	1	1042	ROLLER ASSY	69	2	14	GRILL ROD
29	1	635	1/4 WASHER AN960C416	70	9	16	GRILL BAR MEDIUM
30	1	1035	SHIFT CAM MEDIUM	72	1	156	BRACKET CABLE SUPPORT
31	1	623	NYLOC 1/4-20	73	2	542	SHIM MORSE AO35777-SUZUKI
32	1	573	BOLT HEX HD 1/4-20 X 3/4	74	2	543	CLAMP CHRYS 154317-SUZUKI
33	1	1037	BUSHING CAM	75	2	561.1	FL HD SLOTTED 10-24 X 3/4 - SUZUKI
34	1	1038	WASHER CAM	76	2	635	1/4 WASHER AN960C416
35	2	1039	SHIM-CAM	77	2	572	BOLT HEX HD 1/4-20 X 5/8
36	1	1036	CAM ECCENTRIC DRILLED	78	2	619	NYLOC 10-24
37	1	574.1	BOLT HEX HD 1/4-20 X 1 PATCH	79	1	1718	TORSIONAL DAMPER 5/8
38	2	574	BOLT HEX HD 1/4-20 X 3/4 PATCH				
39	1	1170	SPRING GATE BUMPER				
40	1	1169	GATE BUMPER				
41	1	559.2	FIL JD SLOTTED 10-32 X 1 1/4 PATCH				
		2070	SHAFT ASSY COMPLETE, U4L-60 12 T				
42	1	2069	SHAFT ONLY, U4L-60, 12T 27 1/2 LG.				
		2101	SHAFT ASSY COMPLETE, U4S-60 12 T				
42	1	2100	SHAFT ONLY, U4S-60, 12T 22 3/4 LG.				
43	1	41	SHAFT BEARING THRUST RING				

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

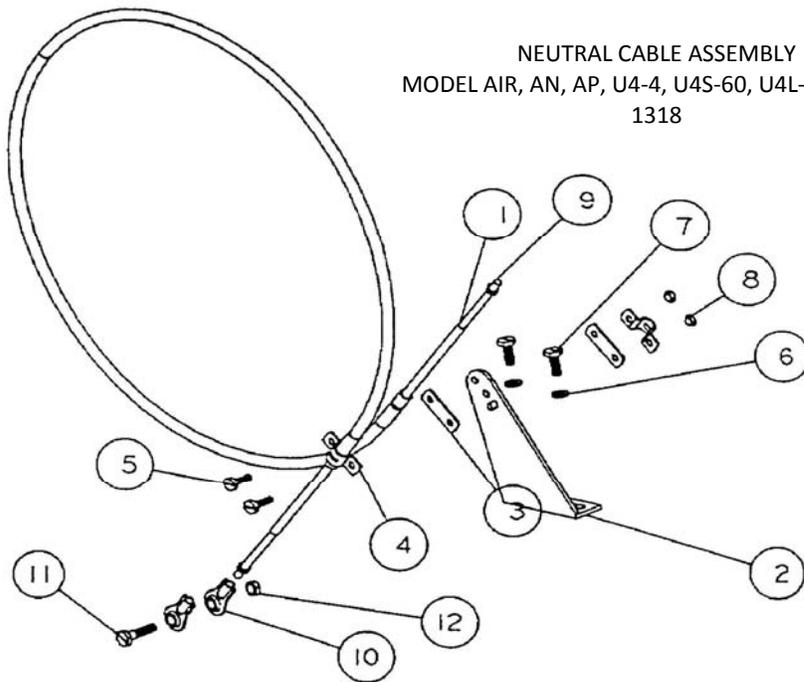
NEUTRAL CABLE ASSEMBLY:
SUZUKI 1318 SEE PG. 31 MED.

TILLER STEERING CABLE ASSEMBLY:
SUZUKI 2039, SEE PG. 25.5 LRG.

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

LARGE SERIES

NEUTRAL CABLE ASSEMBLY
 MODEL AIR, AN, AP, U4-4, U4S-60, U4L-60 SUZUKI
 1318



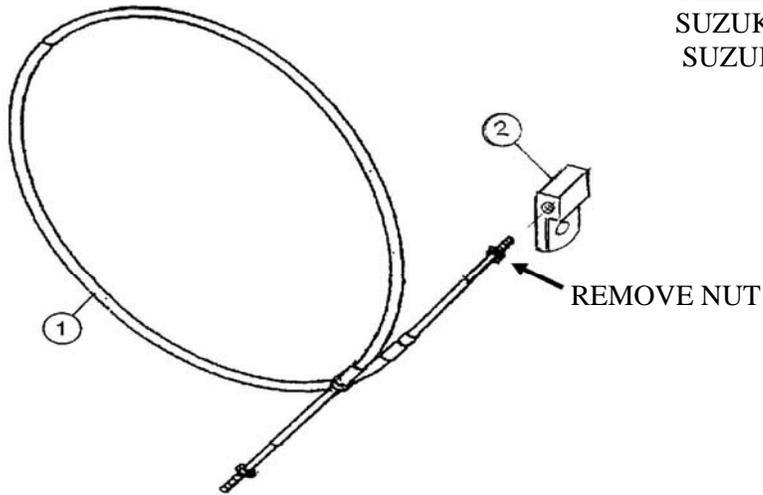
REF	QTY	PART NO.	DESCRIPTION
1	1	547.2	CABLE 5 FT MOR 33C SUPREME
2	1	156	BRACKET CABLE SUPT OMC, MORSE
3	2	542	SHIM MORSE A035777
4	2	543	CLAMP CHRYS 154317
5	2	561.1	FIL HD SLOTTED 10-24 X 3/4
6	2	635	1/4 WASHER AN960C416
7	2	572	BOLT HEX HD 1/4-20 X 5/8
8	2	619	NYLOC 10-24
9	2	621.1	NUT HEX 10-32
10	2	553.2	BALL END 1/4 X 10-32 CABLE
11	1	585	BOLT HEX HD 1/4-20 X 1 1/4
12	1	623	NYLOC 1/4-20



1. Remove the lower plastic cover from the steering handle.
2. Remove the shift cable
3. Install the 4 1/2 ft. standard 33C cable, using the cable end 2036.
4. Attach the lower end of the cable to the jet drive with the ball rod end threaded on the cable as far as it will go and the cable anchor bracket centered and locked. Twist the cable in the U-clamp so that the cable rests against the motor cowling and tighten the clamp screws. The clamp base is slotted to allow alignment for minimum cable bending.
5. Place the shift handle in forward, solidly in the detent. The reverse gate cam roller must be at the end of the slot in the cam. If these conditions are not met, slide the cable anchor bracket on the jet drive and/or adjust the threaded rod end on the cable.
6. Shift to reverse and back to forward. Do not be concerned if the gate does not reach reverse. There is clearance at this position and water pressure will close the gate.
7. In forward, with the roller at the end of the cam slot, the gate cannot be forcibly rotated toward reverse. Pull on the gate by hand to verify this.
8. Lock the nuts on the cable against the rod ends to complete the adjustment and reassemble the lower cover of the steering arm.

CAUTION: YOU MUST RETURN THE THROTTLE TO IDLE BEFORE SHIFTING.

TILLER SHIFT CABLE ASSY
 SUZUKI BH STARTING 2009
 SUZUKI U4L-60 STARTING
 2010
 2039



REF	QTY	PART NO.	DESCRIPTION
1	1	547.1	CABLE 4 1/2 FT MOR 33C SUPREME LONG
2	1	2036	CABLE END SUZUKI 2009 TILLER