

MODEL BD SUZUKI SERIES 30 HP
ASSEMBLY INSTRUCTIONS
SUZUKI MODEL DT30SK6, 2 CYLINDER, 2 STROKE, 30.5 CU. IN.

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, remove the bolts holding the gearbox to the exhaust housing and remove the gearbox assembly.
2. Remove the water pump assembly from the propeller drive, 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 drive key removed from the propeller drive. Lock in place using four 1/4-20 x 1 3/4 bolts and lock washers. Grease the threads.
5. Remove the nut and hex coupling from the gearbox and motor mid section shift rods. Thread the nut and coupling all the way onto the shift rod guide #1911, and tighten the nut against the coupling. Thread the coupling onto the motor shift rod and tighten it against the shift rod.
6. The large 3/4 inch adapter plate is attached to the exhaust housing to hold the jet drive. 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.
7. Grease the o-rings on the white plastic driveshaft shield and install it in the cooling water pump.
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 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, and rubber water tube sleeve and guide the jet into place. Tighten the five 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, torsional damper and nut retainer on the shaft, and bring the nut up snug by hand.

Place the water intake in position and secure with two nuts. Observe the clearance between the impeller blade edge and the intake liner. Then remove the intake.

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.

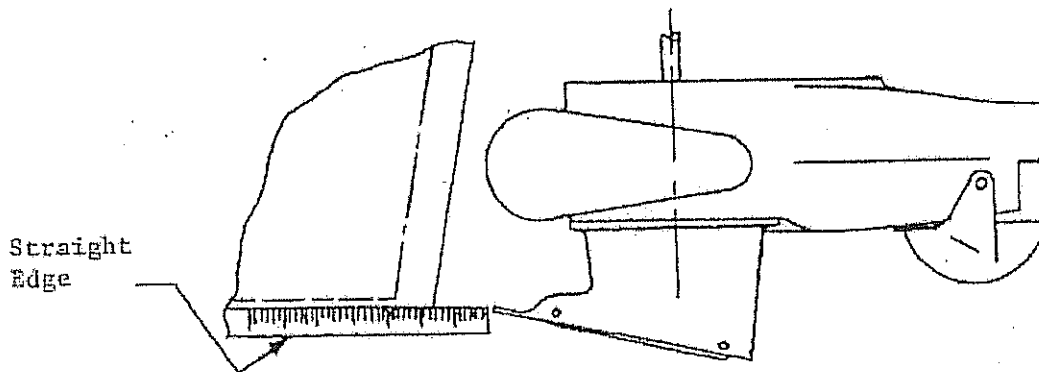
Shims should not be used above the impeller on new installations where no wear has occurred unless the blade clearance exceeds 1/32 inch. Insufficient blade clearance will do more harm than good from any performance gains it might provide.

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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.

10. 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.
11. If your motor uses a steering tiller handle, proceed as instructed in the "Shift Rod Assembly Instructions Sheet" attached, #1934.
12. When converting to jet drive, your motor will have to be raised to the height shown in the diagram below, 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 over speeds in spurts and shakes considerably in the engine mount. This is not a normal condition and should be avoided by proper adjustment of the engine height on 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.

SETTING MOTOR HEIGHT



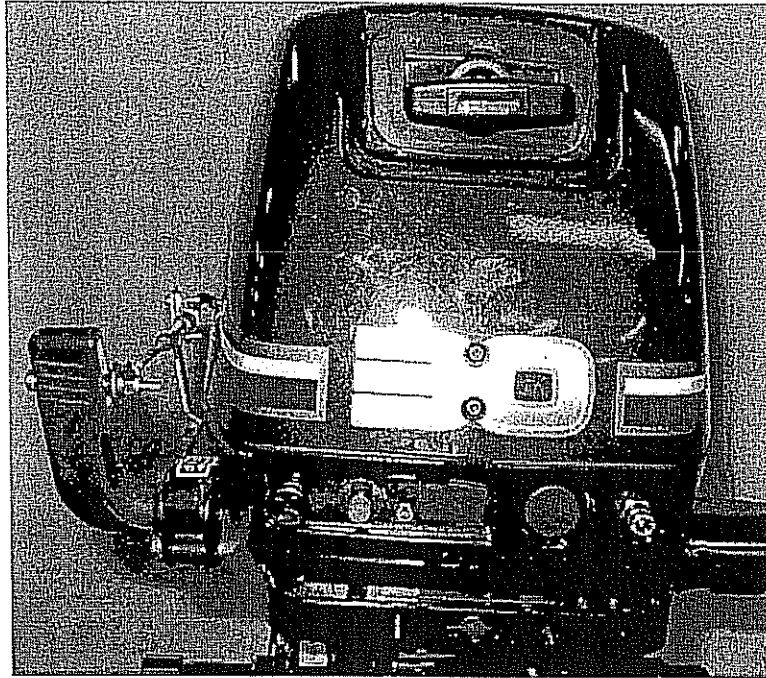
CAUTION

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.

TILLER SHIFT CABLE ASSY
SUZUKI MODEL BD 30 HP
1934



1. Cut out the paper template to locate the mounting holes for the cable anchor bracket. Attach it to the motor cowl using masking tape as shown in the photo.
2. Bend the wiring harness clip inside the cowl and move the wires to the side, out of the path of the drill. Center punch and drill the two holes using a 1/4 inch drill.
3. Remove the paper template and attach the cable anchor bracket using two 1/4-20 x 5/8 hex head bolts and fiber lock nuts. Move the wires back into position and secure with the clip.
4. Place the shift handle plug #1933 inside the pocket in the shift handle and drill through the handle using a 3/16 inch drill.
5. With a washer under the head, insert the 10-32 x 2 inch screw through the handle and plug with a second washer against the plug.
6. Attach the shift cable to the bracket with the shim between the cable and bracket, using two 10-24 x 5/8 screws and lock nuts.
7. Thread the rod end on the cable, threaded on about 3/8 inch. Slide the rod end on the shift handle screw and install the outer lock nut. Tighten the nut.
8. Attach the lower cable anchor bracket to the jet drive, centered over the slots. Attach the cable to the anchor bracket and the reverse gate cam rod end.
9. The cable anchor brackets have the lower holes slotted so that the cable can be lined up for free cable travel. Make this adjustment at both ends of the cable and tighten the screws.
10. 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.
11. 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.
12. 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.
13. Lock the nuts on the cable against the rod ends to complete the adjustment.

CAUTION

**YOU MUST RETURN THE THROTTLE
TO IDLE BEFORE SHIFTING.**

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

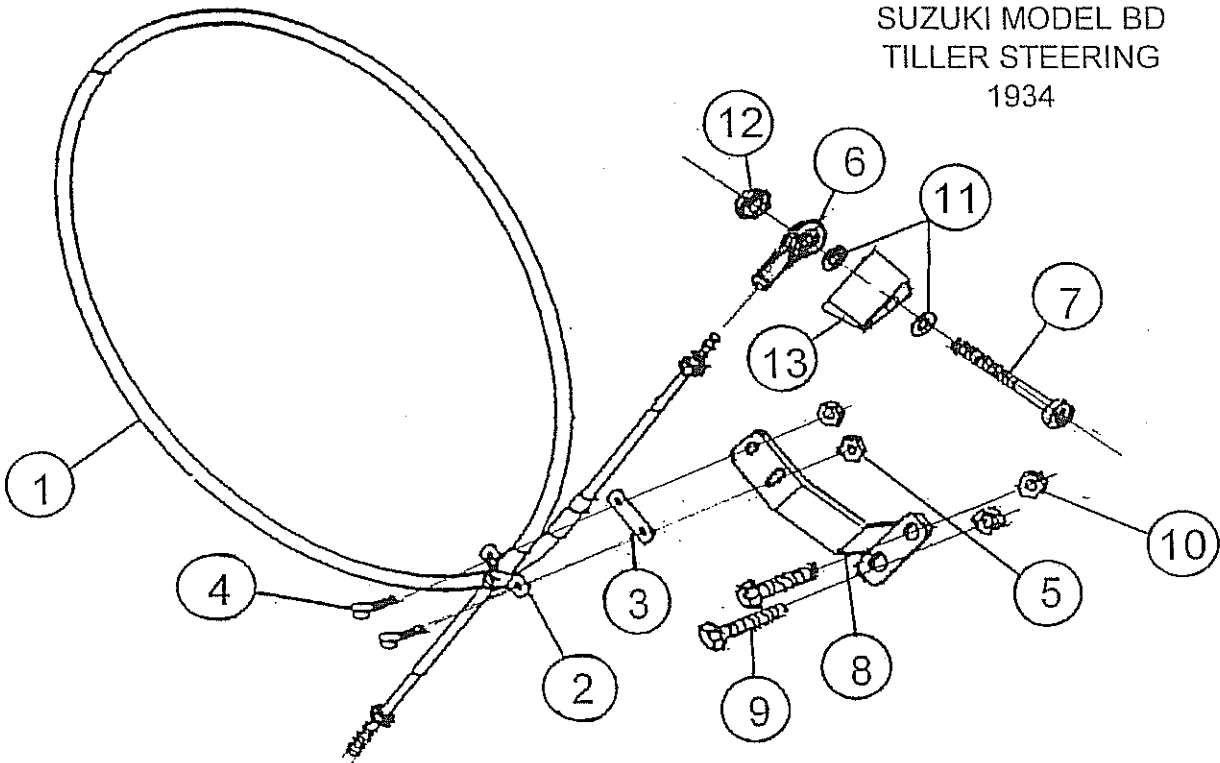
Aluminum and stainless steel have been used in the construction of your jet drive. These materials have either been treated or are inherently resistant to corrosion. It is recommended, however, that when not in use the motor be tipped up so that the jet unit is out of the water. When used in salt water 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

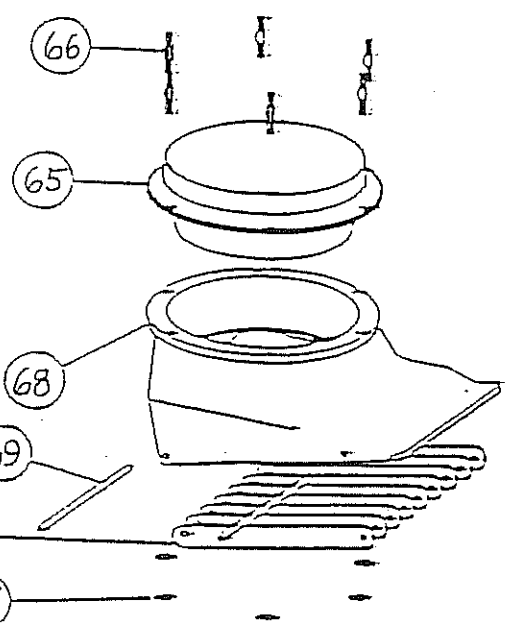
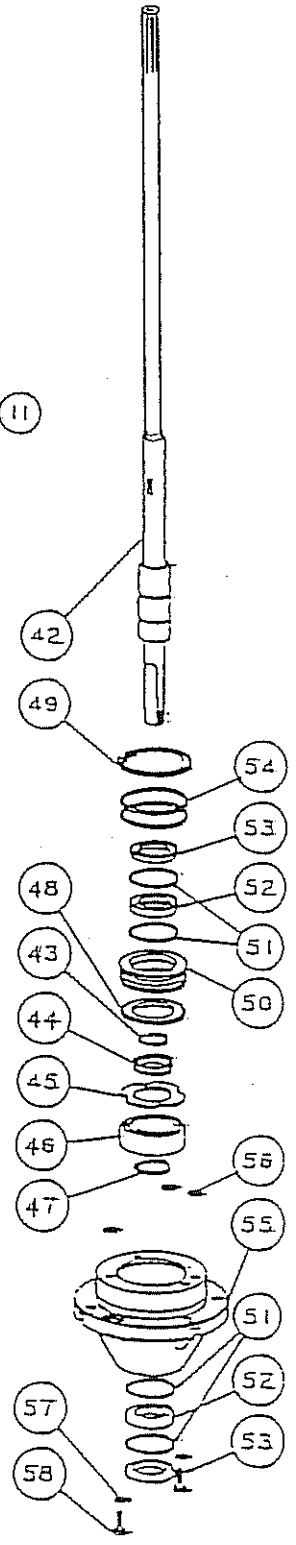
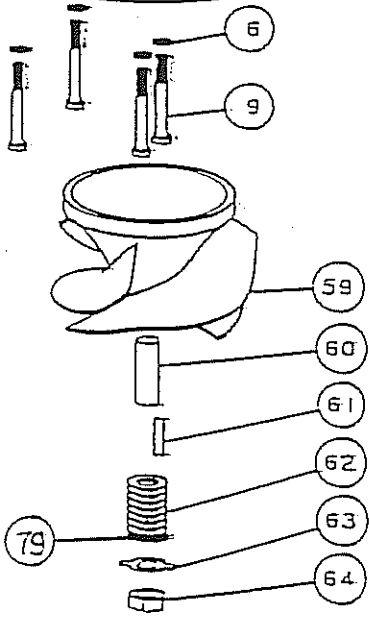
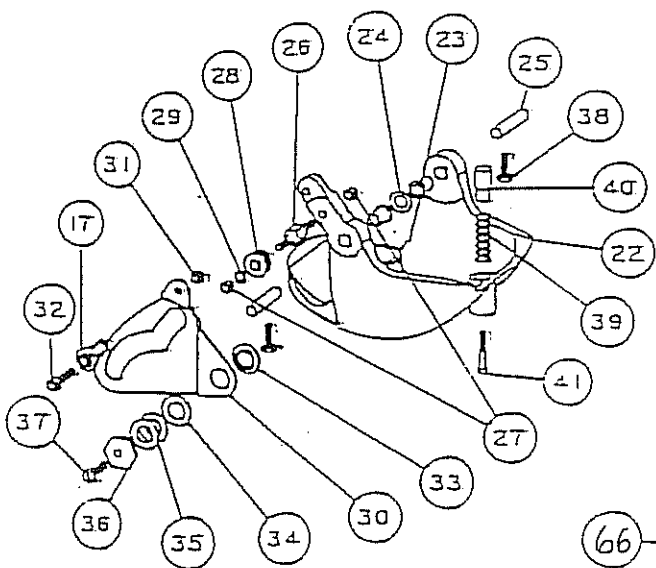
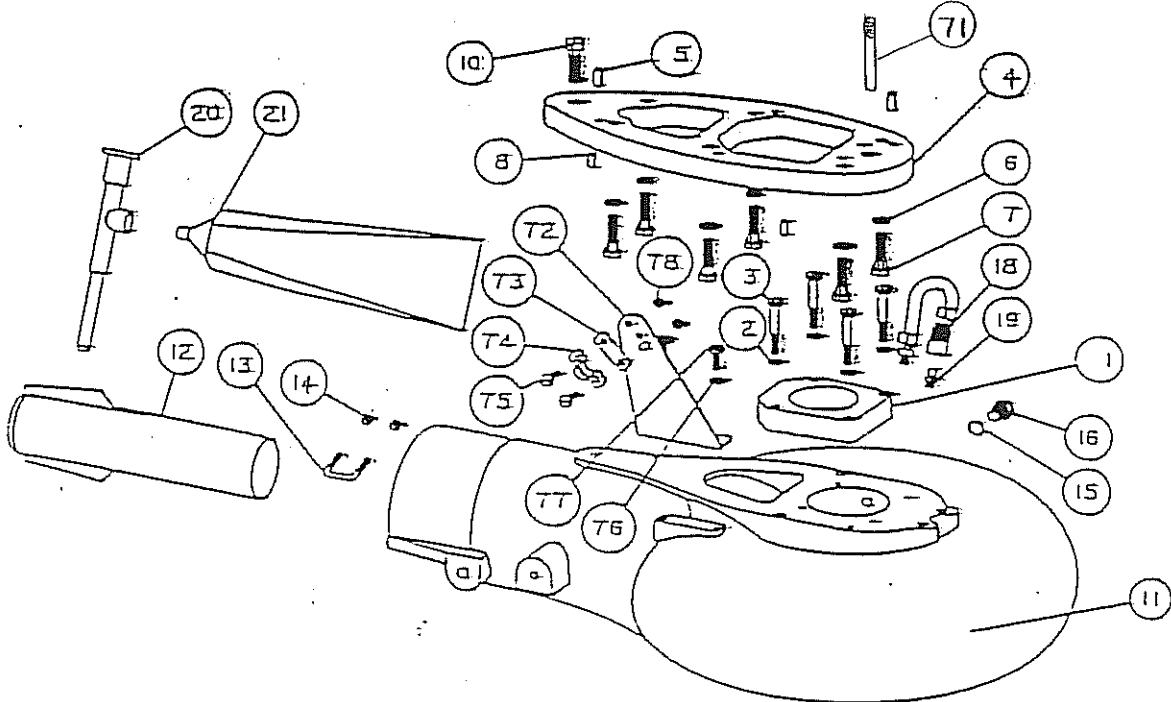
Due to inflexible government regulation, we do not have a written warranty. We have, however, a good reputation for fairness with our customers which we intend to maintain. If you think you have a warranty situation, regarding material, workmanship, call us before making repairs.

Specialty Manufacturing Company
Outboard Jets
2035 Edison Avenue
San Leandro, CA 94577

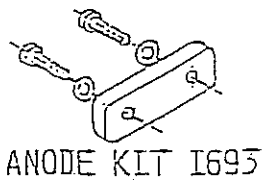
SHIFT CABLE ASSEMBLY
 SUZUKI MODEL BD
 TILLER STEERING
 1934



REF	QTY	PART NO.	DESCRIPTION
1	1	549	CABLE 3 1/2 FT MOR 33C SUPREME
2	1	543	CLAMP CHRYS 154317
3	1	542	SHIM MORSE A035777
4	2	561	FIL HD SLOTTED 10-24 X 5/8
5	2	619	NYLOC 10-24
6	1	553.1	BALL END #10X10-32 CABLE
7	1	558.6	PAN HD PHILLIPS 10-32 X 2
8	1	1905	CABLE ANCHOR BC, BD
9	2	572	BOLT HEX HD 1/4-20 X 5/8
10	2	623	NYLOC 1/4-20
11	2	632	WASHER M5
12	1	621	NYLOC 10-32
13	1	1933	SHIFT HANDLE PLUG BD



MODEL BD



ANODE KIT I693

MODEL BD SUZUKI

2 STROKE, 2 CYL, 30.5 CU. IN.

REF	QTY	PART NO.	DESCRIPTION	REF	QTY	PART NO.	DESCRIPTION
1	1	860	PUMP ADAPTER, U4	46	1	504	BEARING 7205B-UA
2	4	638	WASHER SPRING LOCK 1/4	47	1	511	TRUARC 5100-98
3	4	578	BOLT HEX HD 1/4-20 X 1 3/4	48	1	833	SPACER
4	1	1920	ADAPTER PLATE BD	49	1	512	TRUARC N5002-212ZD
5	2	616	DOWEL PIN 6 X 16 MM	50	1	433	UPPER SEAL CARRIER W/SEALS & O RINGS
6	10	640	WASHER SPRING LOCK 5/16	51	4	517	SPIROLOX RR-150S
7	6	591	BOLT HEX HD M8-1.25 X 30MM	52	2	506	SEAL INNER
8	2	631	DOWEL PIN 3/16 X 1/2	53	2	507	SEAL OUTER 6324-S
9	4	599	BOLT HEX HD 5/16-18 X 2 3/4	54	2	526	O RING 568-135 3/32X1 15/16X2 1/8
10	1	606	BOLT HEX HD 3/8-16 X 1 1/4	55	1	1936	BEARING CARRIER W/SEALS & "O" RINGS BD
		1924	VOLUTE WITH GATE BD	56	3	521	O RING 568-011 1/16X5/16X7/16
11	1	1923	VOLUTE WITH EXHAUST TUBE BD	57	2	637	WASHER SPRING LOCK #10
12	1	80	EXHAUST TUBE ASSY MEDIUM 2	58	2	561	FIL HD SLOTTED 10-24 X 5/8
13	1	846	CLIP EXHAUST TUBE 1	59	1	8.21	IMPELLER 5 7/8, ALUM/ ZINC, W/36.1 SLEEVE
14	2	621	NYLOC 10-32	60	1	36.1	SHAFT SLEEVE PLASTIC MEDIUM
15	1	1025	WASHER FIBER M8	61	1	1705	IMPELLER TEE KEY - 1/2 ROUND
16	1	1024	BOLT HEX HD M8-1.25 X 12	62	8	21	SHIM WASHERS MEDIUM
17	1	553.2	BALL END 1/4X10-32 CABLE	63	1	805	NUT KEEPER MED/PKG. 2 PER BAG
18	1	975	LUBE HOSE ASSY	64	1	22.1	SHAFT NUT 5/8-18 BRASS
19	1	539	ZIRC FITTING 1/4-28			1448	INTAKE ASSY 5 7/8 FLANGED W/ GRILL & LINER
20	1	550	GREASE GUN	65	1	1678	LINER 5 7/8 FLANGED
21	1	552	GREASE 10 OZ TUBE NO. 630-AA	66	6	1300	STUD - INTAKE MEDIUM
22	1	1175	REVERSE GATE, MEDIUM	67	6	623	NYLOC 1/4-20
23	2	535	NYLINER 3/8 ID X 11/16	68	1	1326	INTAKE PAINTED ONLY MED FLANGED
24	1	1177	SPRING GATE PIVOT 3/8	69	2	14	GRILL ROD
25	2	822	PIN GATE PIVOT 3/8 MEDIUM	70	9	16	GRILL BAR MEDIUM
26	1	1043	SHAFT ROLLER	71	1	1911	SHIFT ROD GUIDE
27	2	624	NYLOC 1/4-28			171	BRACKET ASSY MORSE
28	1	1042	ROLLER ASSY	72	1	156	BRACKET CABLE SUPPORT
29	1	635	1/4 WASHER AN960C416	73	1	542	SHIM MORSE AO35777
30	1	1035	SHIFT CAM MEDIUM	74	1	543	CLAMP CHRYS 154317
31	1	623	NYLOC 1/4-20	75	2	561	FIL HD SLOTTED 10-24 X 5/8
32	1	573	BOLT HEX HD 1/4-20 X 3/4	76	2	635	1/4 WASHER AN960C416
33	1	1037	BUSHING CAM	77	2	572	BOLT HEX HD 1/4-20 X 5/8
34	1	1038	WASHER CAM	78	4	619	NYLOC 10-24
35	2	1039	SHIM-CAM	79	1	1718	TORSIONAL DAMPER 5/8
36	1	1036	CAM ECCENTRIC DRILLED				
37	1	574.1	BOLT HEX HD 1/4-20 X 1 PATCH				
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				
		1927	SHAFT ASSY COMPLETE, BD, 10T				
42	1	1926	SHAFT ONLY, BD, 10T, 25 LG.				
43	1	41	SHAFT BEARING THRUST RING				
44	1	477	COLLAR BACKFIT 7205				
45	1	832	THRUST WASHER				

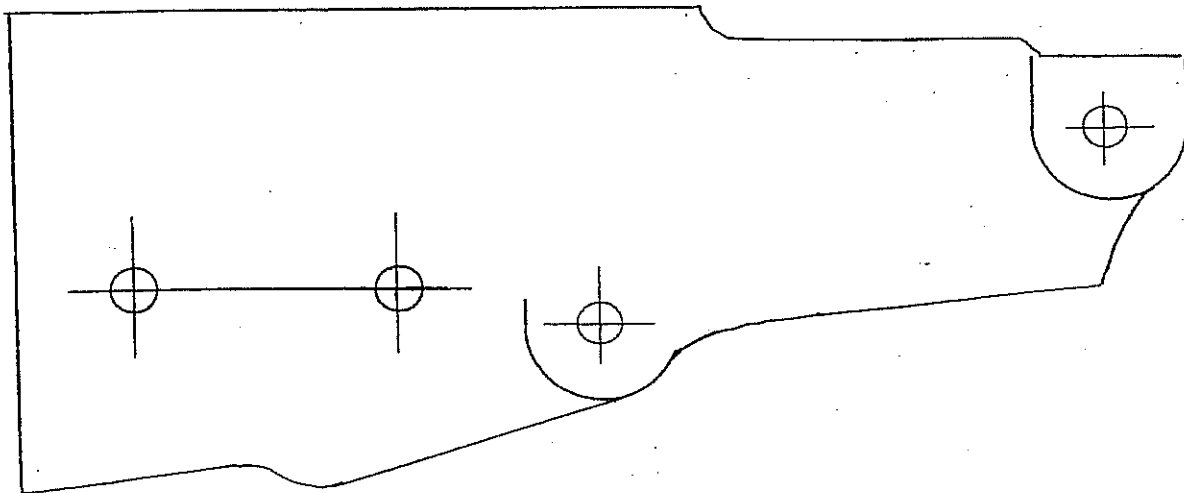
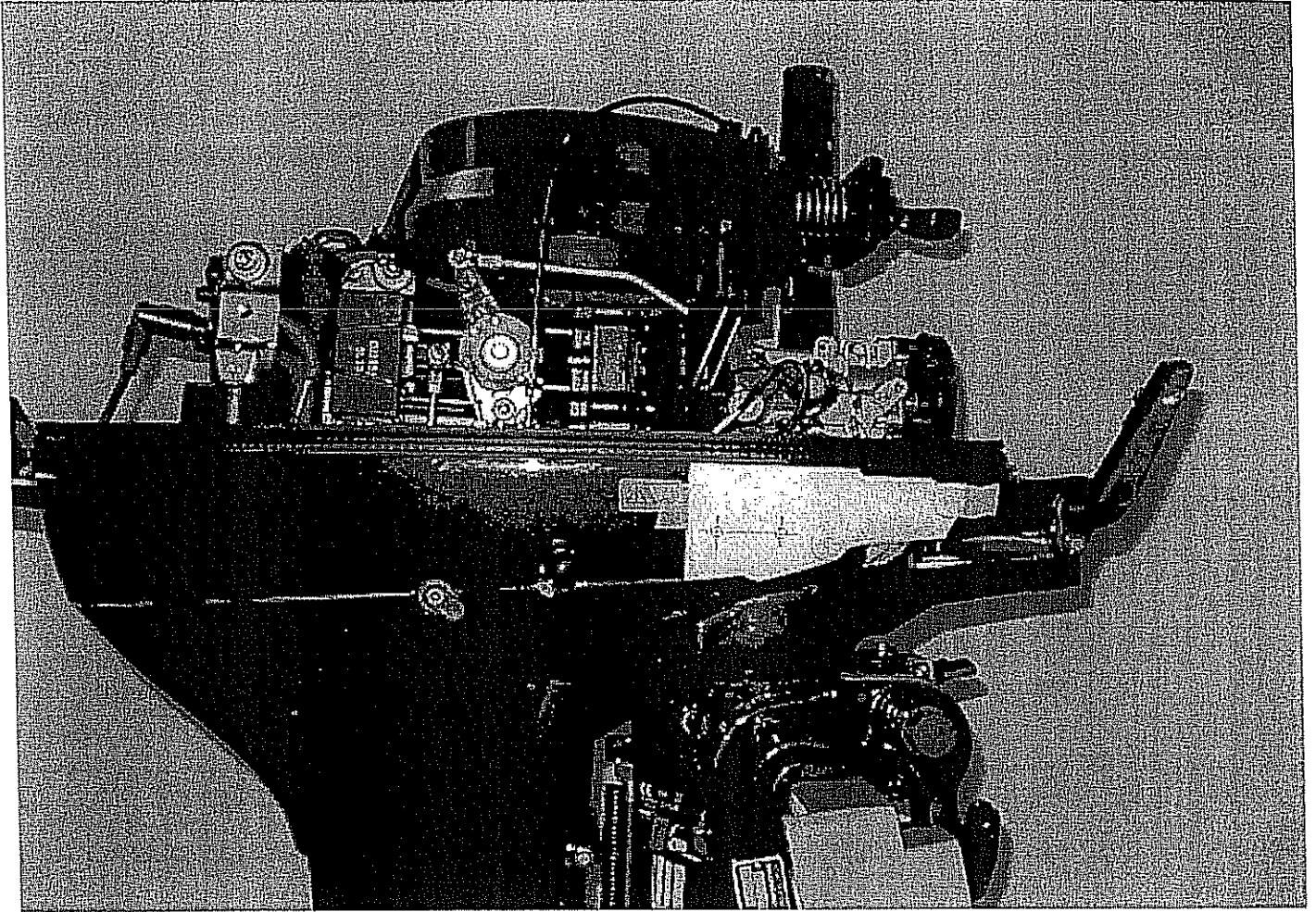
SIZE	TORQUE
1/4-20 (M6)	8-9 FT-LBS
5/16-18 (M8)	12 FT-LBS
3/8-16 (M10)	22 FT-LBS

TILLER STEERING:

SHIFT CABLE ASSY 1934

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

MODEL BD



MODEL BD

