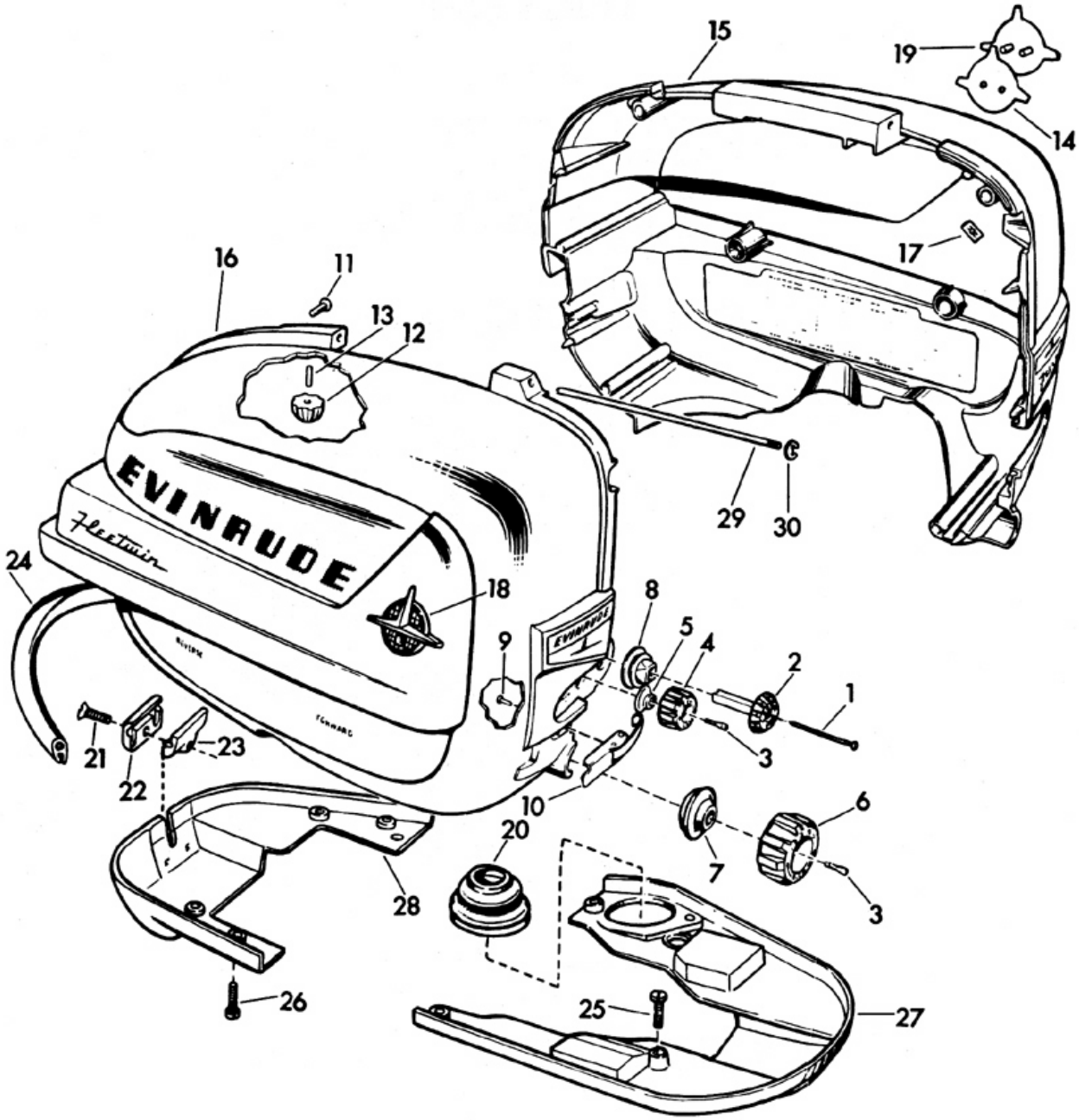
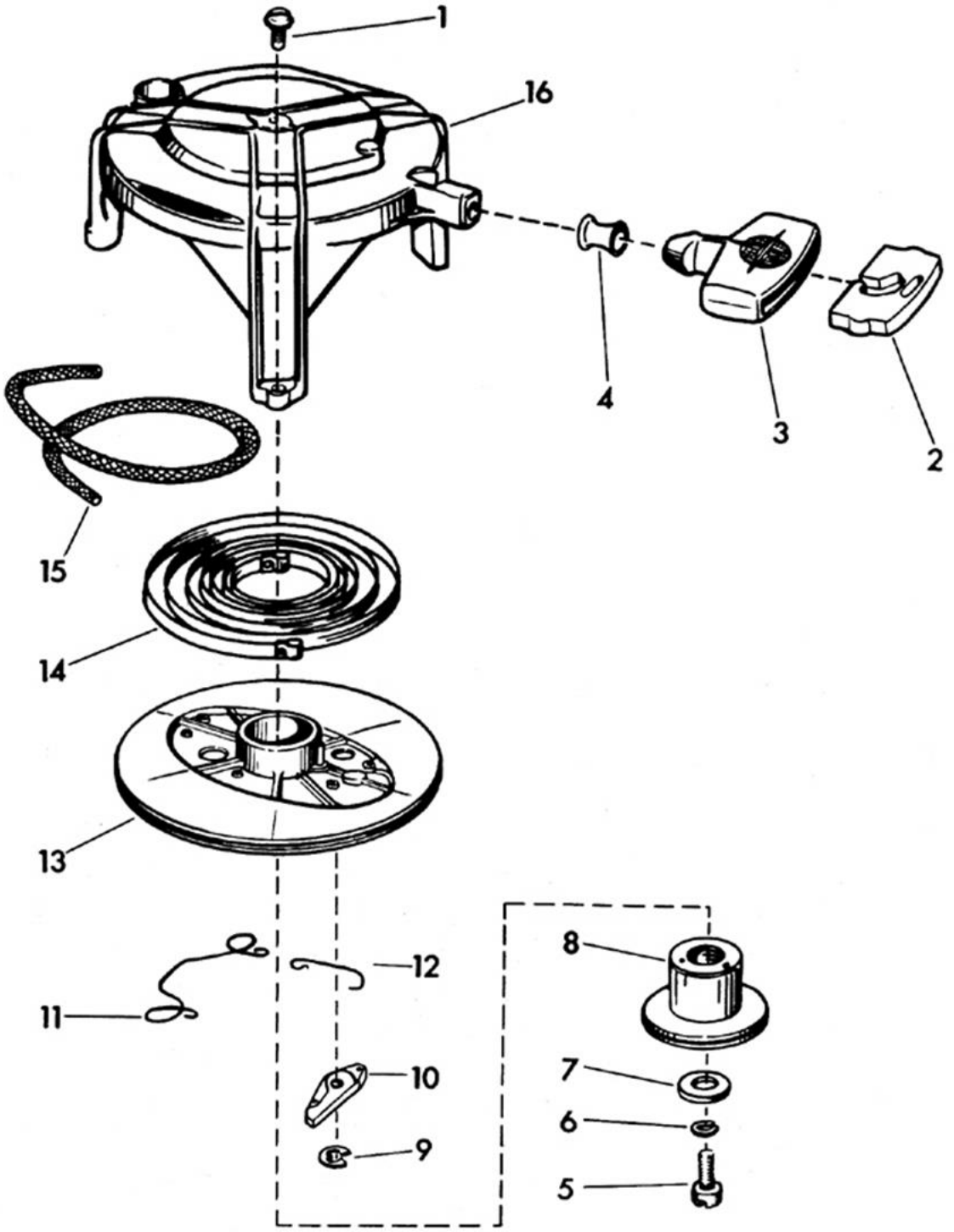
FLEETWIN MOTOR COVER



REF. NO.	PART NO.	NAME OF PART	QTY.	REF NO.	PART NO.	NAME OF PART	QTY.
1	203676	Choke knob screw	1	17	203786	Medallion to motor cover nut	4
2	203602	Choke control knob	1	18	203785	Motor cover medallion - Starboard	1
3	551517	High and low speed knob screws	2	19	203784	Motor cover medallion - Port	1
4	203601	Control knob and stop pin, slow speed	1	20	304296	Control shaft grommet	1
5	203617	Low speed knob cover grommet	1	21	304022	Seal to lower cover clamp screw	1
6	203600	Control knob and stop pin, high speed	1	22	304021	Outer seal to lower cover clamp	1
7	203616	High speed knob cover grommet	1	23	304020	Inner seal to lower cover clamp	1
8	203361	Choke knob grommet	1	24	304297	Lower motor cover seal	1
9	71X1001	Latch to cover rivet	4	25	304015	Lower cover to exhaust housing screw, front	1
10	277284	Cover latch assembly	2	26	304012	Lower cover to exhaust housing screw	6
11	203290	Motor cover bumper	4	27	304239	Lower motor cover, front	1
12	203455	Cover to starter housing bumper	1	28	304240	Lower motor cover, rear	1
13	203897	Cover to starter housing pin	1	29	277615	Motor cover hinge pin assembly	1
14	203971	Motor cover medallion gasket	2	30	203949	Motor cover hinge pin retaining ring	1
15	277513	Motor cover assembly - Port	1	*		Set of decals	1
16	277514	Motor cover assembly - Starboard	1				

*Not Shown

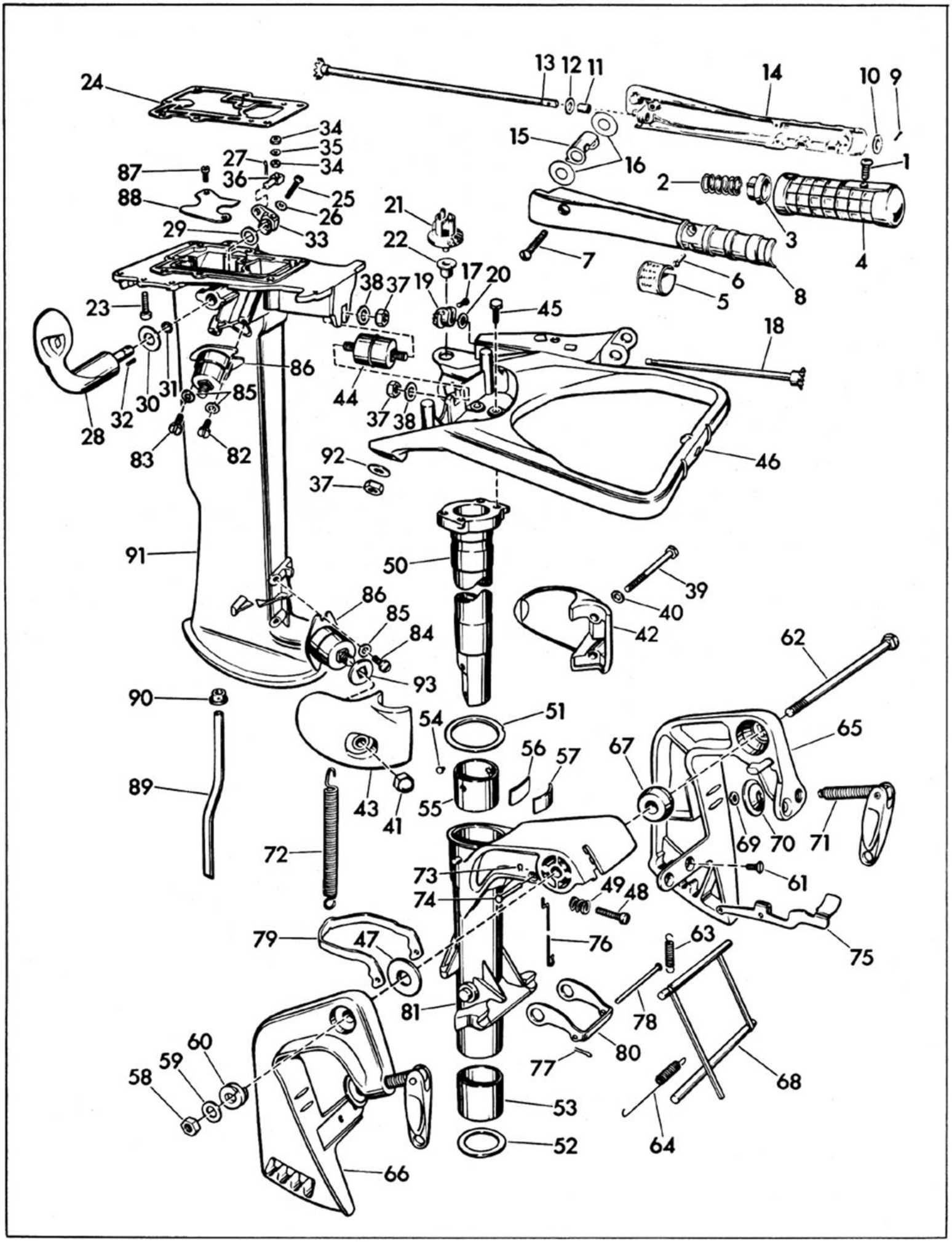
FLEETWIN STARTER



REF. NO.	PART NO.	NAME OF PART	QTY.	REF. NO.	PART NO.	NAME OF PART	QTY.
*	277565	Starter housing assembly	1	8	203699	Starter spindle	1
1	303288	Starter housing to powerhead screw	3	9	203470	Starter pawl retainer ring	1
2	304323	Starter rope to handle anchor . . .	1	10	203698	Starter pawl	1
3	203814	Starter handle, to motors 08000 .	1	11	203697	Starter friction spring	1
3	203903	Starter handle, motors 08001 and up	1	12	203713	Friction spring to pawl link . . .	2
				13	376670	Starter pulley	1
4	303560	Rope to cover eyelet	1	14	41B197	Starter spring	1
5	13X588	Spindle to starter housing screw .	1	15	203819	Starter rope	1
6	13X51	Starter retaining screw lock-washer	1	16	277556	Starter housing	1
				*	304500	Starter housing guide pin, motors 08001 and up	2
7	202356	Starter spindle washer	1				

*Not Shown

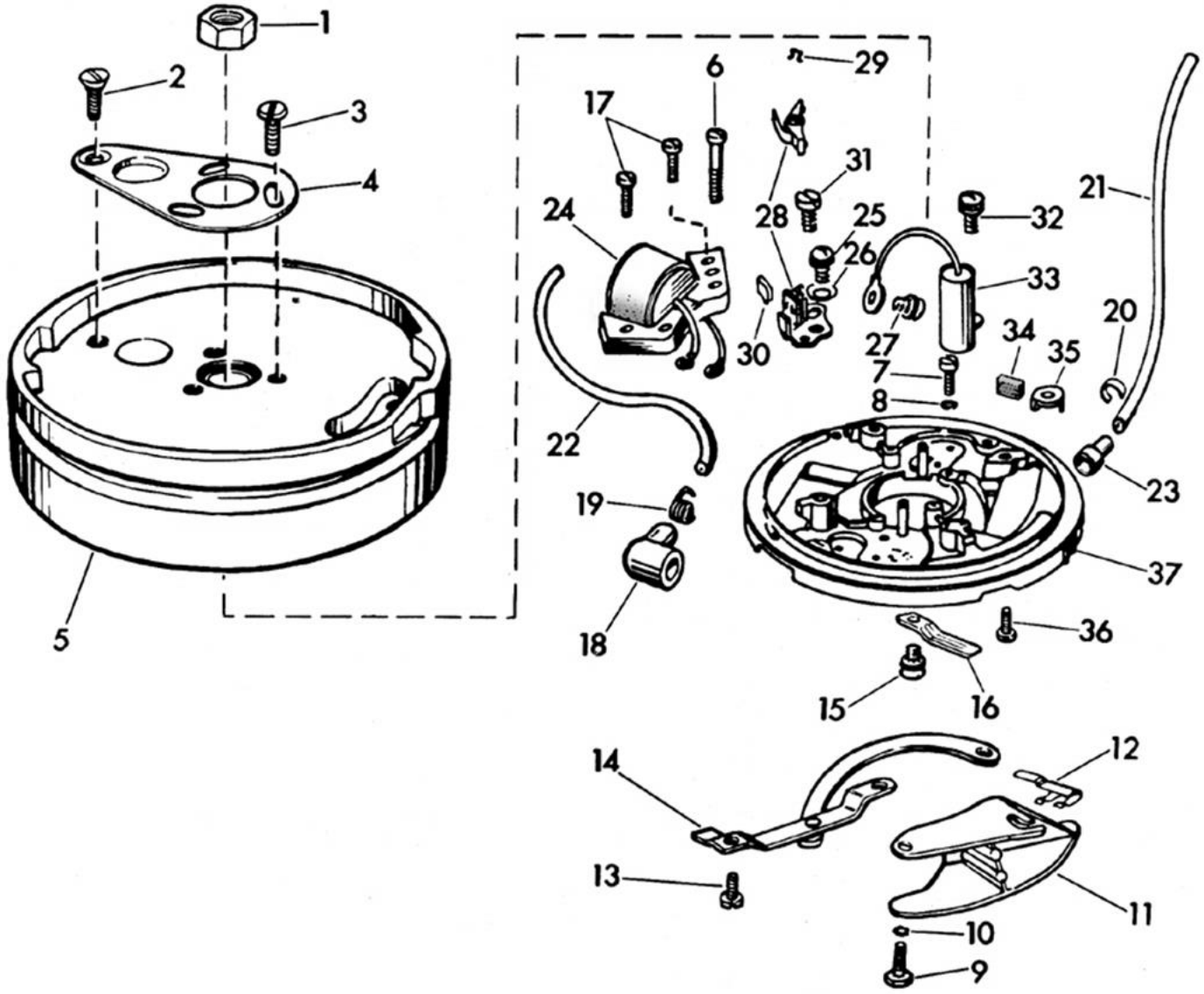
FLEETWIN EXHAUST TUBE AND SWIVEL BRACKET



FLEETWIN EXHAUST TUBE AND SWIVEL BRACKET

REF. NO.	PART NO.	NAME OF PART	QTY.
1	302710	Steering handle grip screw	1
2	301656	Grip to friction block spring	1
3	303282	Grip friction block	1
4	203882	Steering handle grip	1
5	303110	Steering handle throttle control plate	1
6	133452	Steering handle halves screw	2
7	303078	Steering handle halves screw	1
8	303093	Steering handle - inner half	1
9	300346	Gear and shaft assy groove pin	1
10	303252	Steering handle to spring washer	1
11	302717	Steering handle bushing	1
12	302712	Steering handle washer	1
13	376416	Throttle control gear and shaft assy - long, to motors 08000	1
13	376691	Throttle control gear and shaft assy. - long, motors 08001 and up	1
14	303094	Steering handle - outer half	1
15	303096	Steering handle gears cover	1
16	303079	Steering bracket to handle washer	2
17	71X1352	Pinion screw	1
18	376415	Gear and shaft assembly - short, to motors 08000	1
18	376689	Gear and shaft assy. - short, motors 08001 and up	1
19	303142	Throttle control pinion	1
20	303107	Throttle control pinion gear washer	1
21	304298	Throttle control gear	1
22	303140	Throttle control bushing	1
23	21X167	Flange to cylinder screw	7
24	304314	D/S casing to cylinder gasket	1
25	303714	Shift lever to shaft screw	1
26	303715	Shift lever to shaft washer	1
27	15X268	Upper shift rod cotter pin	1
28	376490	Shift lever and shaft assembly	1
29	303775	Shift lever and shaft washer - inner	1
30	303864	Shift lever and shaft assy washer - outer	1
31	303191	Shift lever "O" ring	1
32	303236	Shift lever and shaft assembly to washer spring	1
33	376922	Shift rod lever and bushing assy.	1
34	85X64	Shift rod to connector nut	2
35	303701	Shift rod nut lockwasher	1
36	303702	Shift rod to lever connector	1
37	303889	Upper mount nut	4
38	303884	Shock absorber screw washer - large	2
39	304299	Lower mount housing to pilot shaft screw	2
40	39X17	Lower mount housing screw lockwasher	2
41	303890	Rubber mount to lower housing nut	2
42	304286	Lower mount housing - Port	1
43	304285	Lower mount housing - Starboard	1
44	303880	Upper center mount	1
45	304027	Steering brkt to pilot shaft screw	4
46	376495	Steering bracket assembly and bushing	1
47	304278	Stern bracket to swivel bracket washer	1
48	132679	Co-pilot plate screw	1
49	551113	Co-pilot plate screw spring	1
50	304293	Steering bracket pilot shaft	1
51	304290	Steering bracket to swivel bracket thrust washer	1
52	304289	Swivel bracket to lower mount housing thrust washer	1
53	303371	Swivel bracket shock absorber - lower	1
54	303696	Swivel bracket to upper liner pin	1
55	303370	Upper liner	1
56	303697	Co-pilot plate to upper liner spacer	1
57	303363	Co-pilot plate	1
58	17X182	Tilting bolt nut	1
59	25X196	Spring to tilting bolt nut washer	1
60	302051	Tilting bolt spring	1
61	303396	Stern bracket screw - Port to Starboard	2
62	304277	Tilting bolt	1
63	202021	Tilting lever spring	1
64	304283	Tilting lever stabilizer spring	1
65	376494	Stern bracket assy - Port	1
66	376493	Stern bracket assy - Starboard	1
67	301983	Conical washer	1
68	376505	Tilting lever assy	1
69	302420	Swivel plate retainer	2
70	41A48	Clamp screw swivel plate	2
71	375744	Clamp screw, plate and retainer	2
72	304282	Reverse lock spring	1
73	303049	Pivot shaft cotter pin	1
74	303930	Reverse lock lever pivot shaft	1
75	304279	Reverse lock arm	1
76	303978	Reverse lock arm to shaft link	1
77	15X268	Reverse lock rod cotter pin	1
78	303949	Reverse lock rod	1
79	303948	Reverse lock locking lever	1
80	303950	Reverse lock link	1
81	304291	Swivel bracket	1
82	302416	Upper mount screw - front	2
83	302416	Upper mount screw - rear	2
84	39X176	Lower mount screw	4
85	303887	Shock absorber screw washer - small	8
86	303879	Upper and lower side mounts	4
87	303393	Exhaust relief plate to exhaust housing screw	2
88	304304	Exhaust housing cover plate	1
89	304317	Water tube	1
89	304318	Water tube, 5 in. longer	1
90	302497	Water tube grommet	1
91	376779	Exhaust housing assembly	1
92	304376	Upper side mounts washer	2
93	304168	Rubber mount to lower housing gasket	2

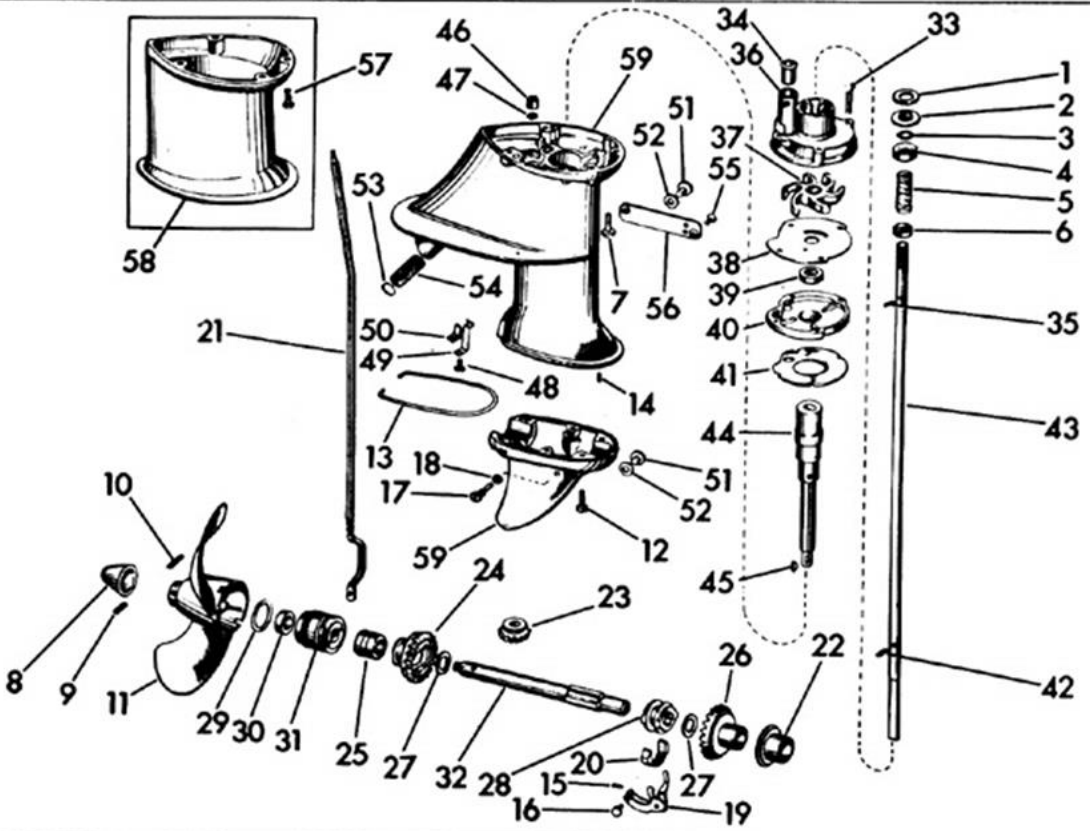
FLEETWIN MAGNETO



REF. NO.	PART NO.	NAME OF PART	QTY.	REF. NO.	PART NO.	NAME OF PART	QTY.
1	301988	Flywheel nut	1	20	120783	Marker	1
2	510293	Inspection hole cover screw	1	21	510256	High tension lead, upper	1
3	203751	Inspection hole cover screw	3	*	580178	High tension lead assembly, upper	1
4	510292	Inspection hole cover	1	22	510257	High tension lead, lower	1
5	580217	Flywheel and cover assembly	1	*	580179	High tension lead assembly, lower	1
6	510191	Armature plate mounting screw	2	23	510289	Coil to H.T. lead grommet	2
7	510192	Armature plate mounting screw	2	24	580118	Coil assembly	2
8	3X28	Lockwasher	2	25	510278	Breaker mounting screw	2
9	302750	Cam to armature plate screw	2	26	510208	Bow washer	2
10	303952	Throttle cam to armature plate screw washer	1	27	510194	Breaker terminal screw	2
11	203888	Armature plate cam	1	28	580148	Breaker assembly	2
12	303146	Armature plate link spring clip	1	29	71A1052	Spring clip	2
13	510193	Linkage assembly to armature plate screw	2	30	510204	Breaker spring clip	2
14	376064	Throttle control plate and link assembly	1	31	510185	Breaker eccentric screw	2
15	510193	High tension lead clip mounting screw	1	32	510193	Condenser mounting screw	2
16	510259	High tension lead clamp	1	33	510173	Condenser	2
17	510195	Lamination mounting screw	4	34	510189	Oiler wick	1
18	510232	Spark plug rubber cover	2	35	510188	Oiler clip	1
19	510231	Spring terminal	2	36	510278	Hole plug screw	1
				37	580210	Armature plate and post	1
				*	580206	Armature plate assembly	1
				*	43A128	Feeler gauge	1

*Not Shown

FLEETWIN GEAR CASE

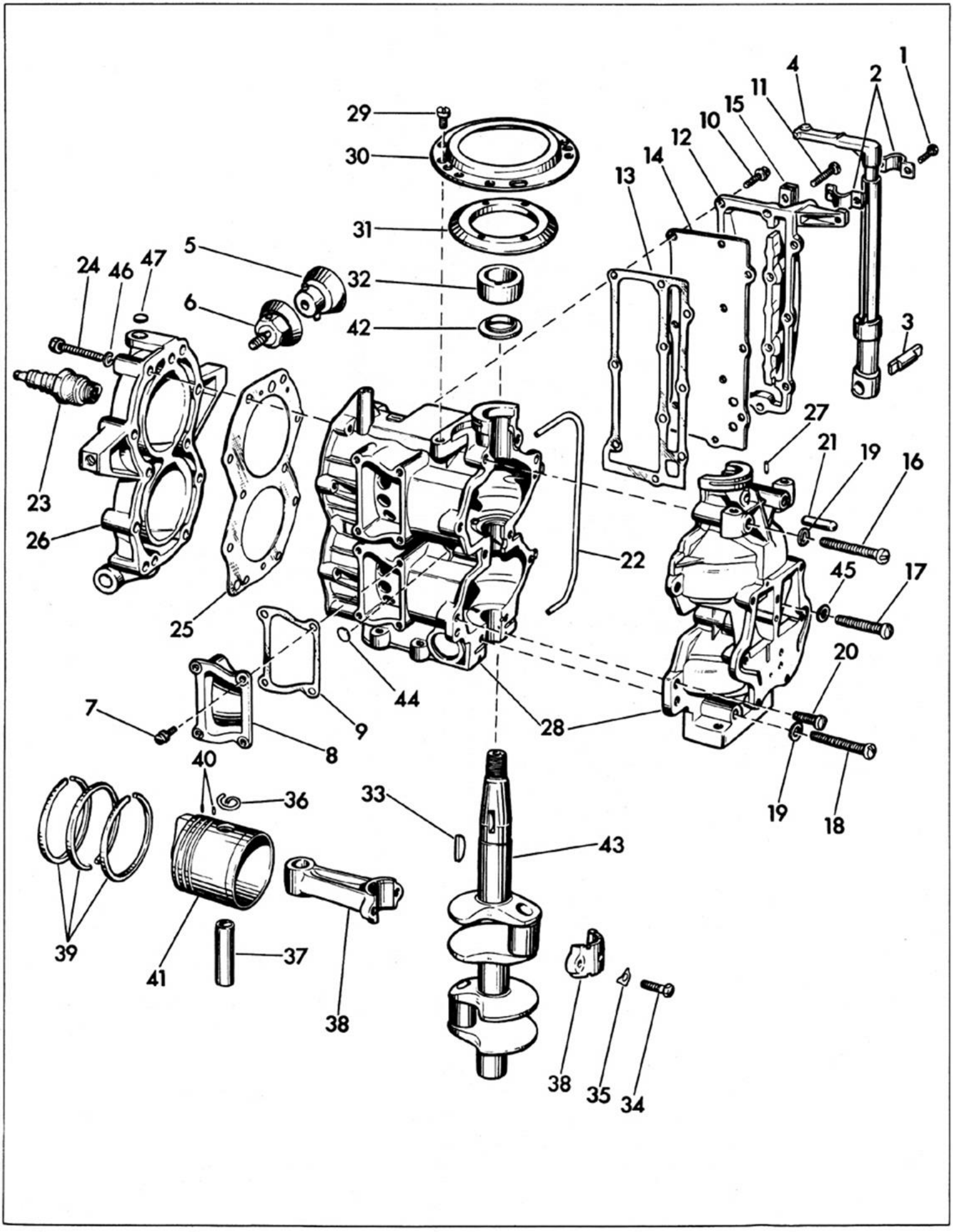


REF. NO.	PART NO.	NAME OF PART	QTY.
*	376607	Gear case assembly complete, to motors 08000	1
*	376791	Gear case assembly complete, motors 08001 and up	1
1	303355	Drive shaft to crankcase gasket	1
2	303356	Drive shaft to crankcase plate	1
3	303347	Lower bearing seal to drive shaft "O" ring	1
4	303391	Lower bearing to drive shaft seal.	1
5	303357	Lower brg. to crankcase seal spring	1
6	303327	Lower brg. seal spring washer	1
7	302325	Gear case to D/S casing screw	4
8	303365	Propeller shaft cap	1
9	13X332	Propeller shaft cotter pin	1
10	302333	Drive pin	1
11	277276	Propeller assy., to motors 08000	1
11	277588	Propeller assembly to motors 08001 and up	1
12	304071	Gear case screw	6
13	303328	Upper to lower gear case seal	1
14	300611	Front bearing dowel	1
15	15X268	Shift lever pin cotter pin	1
16	302504	Shift rod pin	1
17	303358	Shifter lever pivot pin	1
18	304083	Pivot pin washer	1
19	303340	Shifter lever	1
20	303381	Cradle	1
21	303401	Shift rod	1
21	303666	Shift rod, 5 in. longer	1
22	303380	Bearing, front	1
23	304009	Drive shaft pinion	1
24	304010	Rear reversing gear	1
25	303998	Rear reverse gear bushing	1
26	376345	Front gear and bushing	1
27	303361	Propeller shaft thrust washer	2
28	376078	Clutch dog shifter assembly	1
29	303360	Gear case head "O" ring	1
30	303345	Gear case head seal	1
31	376069	Gear case head and bearing assy., to motors 08000	1
31	376776	Gear case head and bearing assy., motors 08001 and up	1
32	303443	Propeller shaft	1
33	303395	Impeller housing screw	4
34	302497	Water tube grommet	1
35	303261	Drive shaft drive pin	1
36	303442	Impeller housing	1
37	277181	Impeller assembly	1
38	303376	Impeller housing plate	1
39	300599	Bearing housing seal	1
40	376074	Bearing housing and bearing assembly	1
41	303339	Gear case to bearing housing gasket	1
42	300771	Pump impeller pin	1
43	376787	Drive shaft	1
43	376788	Drive shaft, 5 in. longer	1
44	376073	Pinion shaft and shock absorber assembly	1
45	1X135	Pinion to pinion shaft key	1
46	303332	Upper gear housing shift rod bushing	1
47	301877	Shift rod "O" ring	1
48	43X147	Upper gear case spring screw	1
49	303466	Upper gear case spring detent	1
50	303700	Detent spring back up spring	1
51	27A283	Drain and water flush plug	2
52	27X284	Drain and water flush plug gasket	2
53	300314	Plug	1
54	303331	Water intake screen	1
55	302681	Water by-pass cover screw	2
56	304579	Gear case water by-pass cover, upper	1
57	302325	Gear case ext. screw, 5 in. longer	4
58	303672	Gear case extension, 5 in. longer	1
59	376606	Gear case assembly, upper and lower, to motors 08000	1
59	376775	Gear case assy., upper and lower motors 08001 and up	1

*Not Shown

ORDER YOUR PARTS FROM YOUR DISTRICT SERVICE STATION.

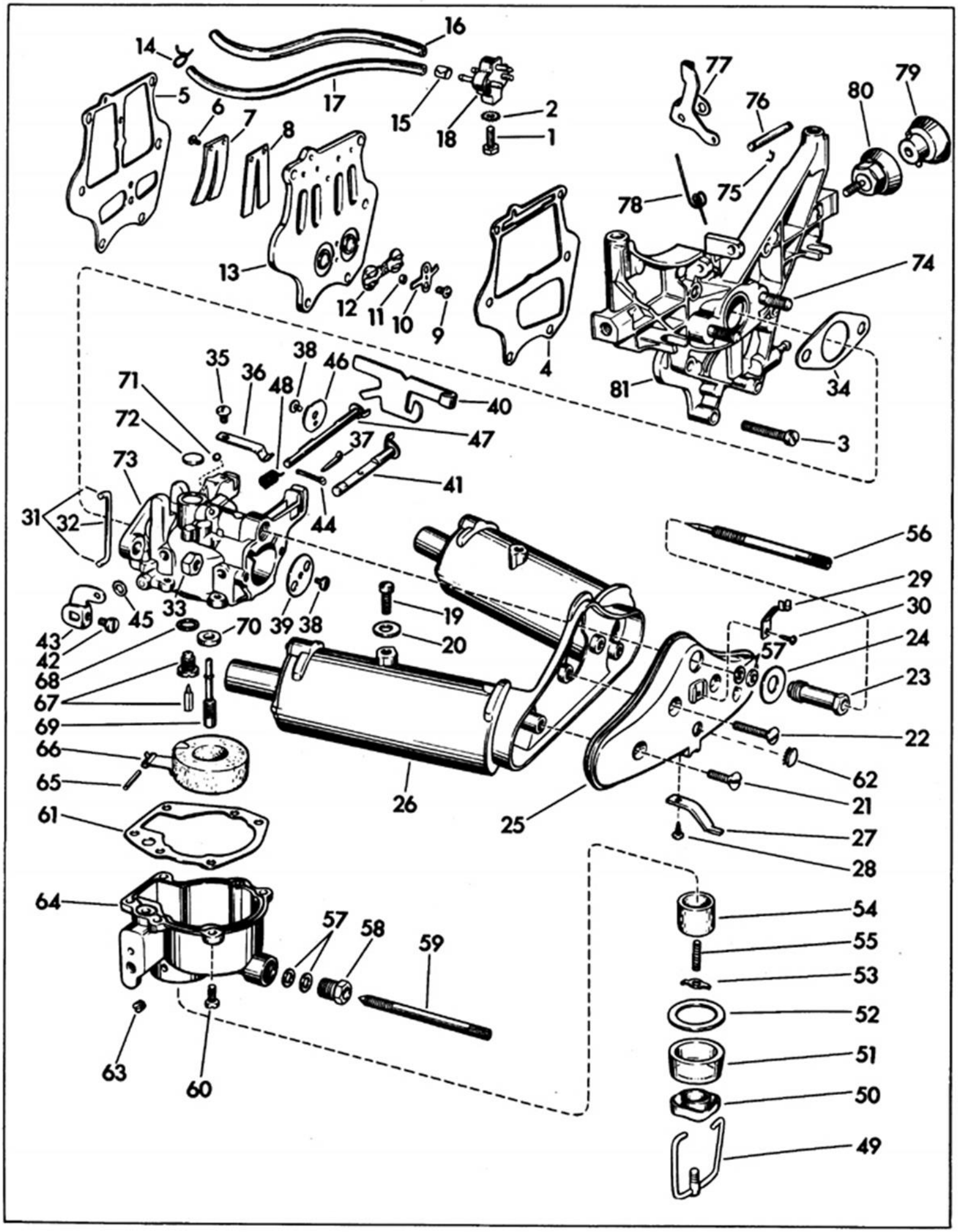
FLEETWIN POWER HEAD



FLEETWIN POWER HEAD

REF. NO.	PART NO.	NAME OF PART	QTY.	REF. NO.	PART NO.	NAME OF PART	QTY.
1	510193	Bearing clamp screw	2	24	303459	Cylinder head cap screw	10
2	303109	Control lever bracket clamp	2	25	203034	Cylinder head gasket	1
3	304155	Armature plate control lever pin	1	26	277375	Cylinder head and plug	1
4	203710	Armature plate control lever	1	27	202094	Oil drain line plug	2
5	203654	Cover mount	2	28	277446	Cylinder and crankcase assembly	1
6	277368	Cover mount retainer	2	29	304442	Armature plate support screw	4
*	277369	Cover mount and retainer assembly	1	30	303278	Armature plate support	1
				31	303277	Armature plate retaining ring	1
7	43X259	By-pass cover plate screw	8	32	510168	Magneto cam	1
8	202527	By-pass cover	2	33	120395	Flywheel key	1
9	202528	By-pass cover gasket	2	34	43A44	Connecting rod screw	4
10	13X558	Exhaust cover plate screw	9	35	41A17	Connecting rod screw lock plate	4
11	132346	Exhaust cover to cylinder screw, long	1	36	120325	Piston pin spring ring	4
				37	202522	Piston pin	2
12	202374	Exhaust cover plate	1	37	202523	Piston pin .005 O.S.	2
13	202580	Exhaust cover plate gasket	1	38	277401	Connecting rod	2
14	203020	Exhaust cover plate water baffle	1	39	202524	Piston ring	6
15	304693	High tension leads clamp	1	39	203232	Piston ring .020 O.S.	6
16	302431	Cylinder to crankcase screw, upper	2	40	300288	Piston dowel pin	6
17	203681	Cylinder to crankcase screw, center	2	41	276790	Piston less rings	2
				41	277200	Piston less rings .020 O.S.	2
18	71X1084	Cylinder to crankcase screw, lower	2	42	41A362	Oil slinger	1
19	300399	Cylinder to crankcase washer, upper and lower	4	43	203375	Crankshaft	1
				44	7X178	Oil reservoir welch plug	1
20	21X167	Cylinder to crankcase screw	4	45	552499	Cylinder to crankcase center screw washer	2
21	300402	Cylinder to crankcase taper pin	2				
22	203433	Oil transfer tube (upper bearing)	1	46	43X302	Cylinder head screw washer	10
†23	200322	Spark plug, Champion J-6J	2	47	27X309	Cylinder head welch plug	3
†23	376290	Spark plug, Auto-Lite A3X	2	*	277596	Set of gaskets	1

*Not Shown
†We recommend either Champion or Auto-Lite spark plugs.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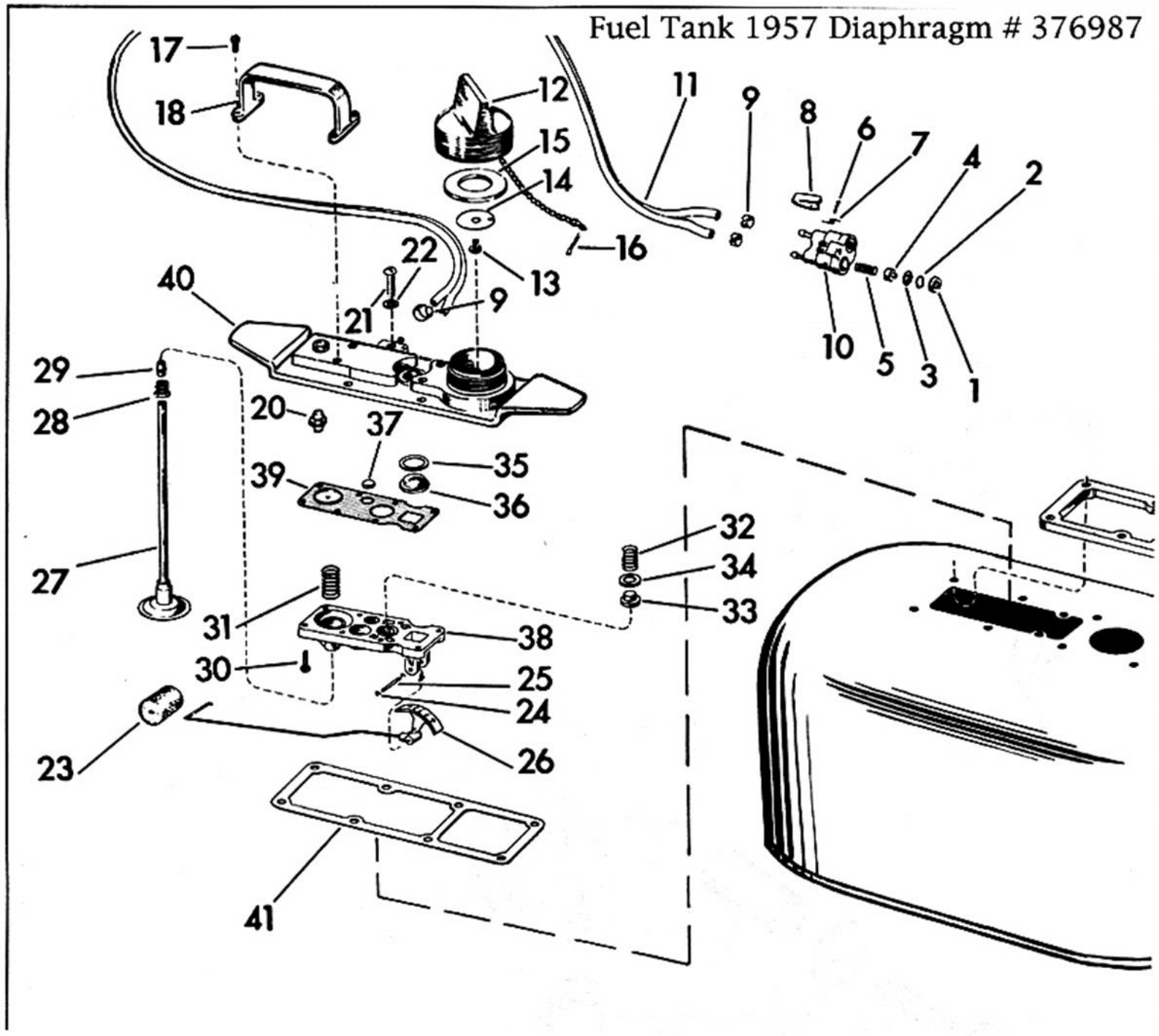
FLEETWIN CARBURETOR

REF. NO.	PART NO.	NAME OF PART	QTY.	REF. NO.	PART NO.	NAME OF PART	QTY.
*	376685	Carburetor assembly	1	42	304572	Throttle lever screw	1
1	21X359	Fuel connector body screw	1	43	376725	Lever and screw assembly	1
2	51X137	Fuel connector-steering bracket lockwasher	1	44	303049	Throttle shaft cotter pin	1
				45	303048	Throttle shaft washer	1
3	133451	Manifold to crankcase screw	6	46	303477	Throttle valve	1
4	203379	Manifold to leaf plate gasket	1	47	375922	Throttle shaft and lever assembly	1
5	203378	Leaf plate to crankcase gasket	1	48	302996	Throttle shaft spring	1
6	303761	Leaf screw	4	49	375992	Yoke and screw assembly	1
7	202668	Leaf back-up plate	2	50	375989	Thumb nut and swivel cup assembly	1
8	202667	Leaf	2				
*	277275	Carburetor leaf plate assembly	1	51	303121	Filter bowl	1
9	19X191	Check valve to leaf plate screw	2	52	303122	Filter bowl gasket	1
10	302048	Check valve spring	1	53	304539	Filter nut	1
11	302046	Check valve spacer	2	54	303133	Filter element	1
12	302042	Air line check valve	1	55	304518	Filter stud	1
13	203377	Leaf plate only	1	56	303448	Slow speed needle valve	1
14	302647	Carburetor and manifold hose clamp	2	57	43X123	High and slow speed valve packing	4
15	301822	Fuel connector hose clamp	2	58	300179	High speed needle valve nut	1
16	203286	Fuel connector to manifold hose	1	59	303476	High speed needle valve	1
17	303171	Fuel connector to carburetor hose	1	60	71X1589	Float chamber to carburetor body screw	5
18	375788	Fuel connector body	1				
19	25X74	Silencer to manifold screw	2	61	302994	Carburetor body to float chamber gasket	1
20	21X200	Silencer to manifold screw washer	2				
21	302124	Cover plate to silencer body screw	2	62	203652	Silencer button plug	1
22	200931	Silencer to carburetor screw	2	63	303041	Float chamber drain screw	1
23	303479	Slow speed needle valve nut	1	64	376681	Float chamber and nipple assembly	1
24	203355	Slow speed carburetor packing nut washer	1	65	300096	Float arm hinge pin	1
				66	375919	Float and arm	1
25	203387	Air silencer cover plate	1	67	375985	Float valve and seat	1
26	277286	Air silencer body and loading tube	1	68	301996	Float valve seat washer	1
27	203479	High speed needle stop	1	69	303478	High speed nozzle	1
28	303780	High speed needle stop screw	1	70	302984	Float chamber to carburetor boss gasket	1
29	203465	Slow speed needle stop	1				
30	61X109	Slow speed needle stop screw	1	71	304201	Carburetor lead shot	5
31	41A110	Cam follower link pin	2	72	27X309	Expansion plug	1
32	203383	Throttle lever to cam follower link	1	73	376248	Carburetor body only	1
				74	85A101	Manifold to carburetor stud	2
33	19X136	Carburetor to manifold nut	2	75	71A1052	Cam follower clip	2
34	303437	Carburetor to manifold gasket	1	76	203384	Cam follower pin	1
35	302430	Carburetor body to spring screw	1	77	203381	Cam follower	1
36	302977	Choke control rod spring	1	78	203382	Cam follower spring	1
37	21X163	Choke control rod cotter pin	1	*	277369	Cover mount and retainer assembly	1
38	303760	Throttle and choke valve to shaft screw	2	79	203654	Cover mount	2
				80	277368	Cover mount retainer	2
39	303709	Choke valve	1	81	277444	Intake manifold and nipple assembly	1
40	302997	Choke control rod	1				
41	375921	Choke shaft and lever assembly	1				

*Not Shown

Fuel Tank 1957 Diaphragm # 376987



EVINRUDE MOTORS · MILWAUKEE 16, WISCONSIN

In Canada: Evinrude Motors, Peterborough, Ontario

Form No. R633-11M252 NW

Part No. 203227 Printed in U.S.A.

Operating and General

Instructions

EVINRUDE FLEETWIN

MODELS 4447-4448
AND 7512-7513

OPERATING AND GENERAL INSTRUCTIONS

EVINRUDE FLEETWIN

FLEETWIN MODELS 4447-4448

(For Mechanical Specifications See Page 27)

FOREWORD The Evinrude Fleetwin is simple to understand, easy to operate, and built to give first-class service, but before you attempt to operate motor, read pages 2 to 8 carefully. The remaining instructions are for later reference and may be read at leisure.

MAKE WARRANTY EFFECTIVE NOW MAKE OUR WARRANTY ON YOUR MOTOR EFFECTIVE by filling out Registration Card (packed in tool bag) and mailing immediately. BE SURE CORRECT MOTOR NUMBER, located on port side of stern bracket, appears on card.

INDEX

ASSEMBLY INSTRUCTIONS Starboard (right) and port (left) are designated while facing bow (front). The motor as packed for shipment, comes completely assembled ready to be attached to boat. The spark plugs are in place in cylinders and wires are properly attached. Gear housing has been filled with OIL.

TOOLS AND EQUIPMENT The STEERING HANDLE is also a screw driver and can be easily unscrewed when needed. A spark plug wrench and a small feeler gauge for spark plug and breaker point setting are enclosed with this manual.

ATTACHING MOTOR TO BOAT Our motors are designed for transoms that conform to S.A.E. boat standards. (See illustration Fig. 1). "A" denotes pitch or angle; "B", maximum transom thickness; "C", vertical transom height, not including keel.

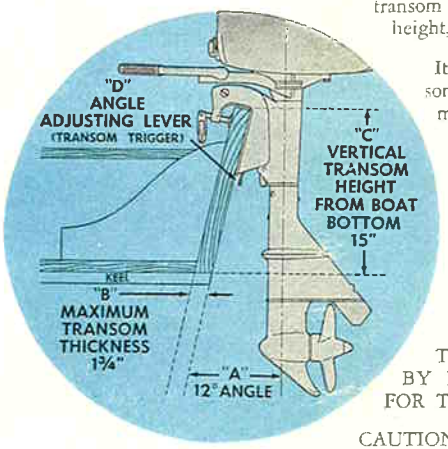


Fig. 1

It is advisable not to use a transom over 15 inches high, as this may cause propeller slippage (cavitation). However, if boat has an extremely high transom and it is not desirable to cut to 15 inches, a Fleetwin with 5 inch longer shaft is offered at moderate extra cost.

With boat afloat, place motor on transom, preferably in center, and SECURELY TIGHTEN CLAMP SCREWS BY HAND. USE NO TOOLS FOR THIS PURPOSE.

CAUTION: It is "good insurance" to tie motor to boat with stout rope so that if motor becomes loose accidentally, rope will prevent loss overboard. Rope should be fastened to hole in stern bracket. (Fig. 3).

A short ⅜ inch lag screw may also be screwed into outside of boat transom at a point where the slot in the bottom of the stern bracket will engage the head of lag screw, which should be left protruding about ⅜ inch. Holes are provided in thumb screw handles thru which a padlock may be applied.

ANGLE ADJUSTMENT LEVER (Transom Trigger). (See illustration "D" Fig. 1). By tilting motor slightly and then lifting up on the lever and moving it either ahead or back, motor can be instantly adjusted to the desired angle. On some boats it may be necessary to correct angle adjustment to maintain motor in a vertical position when changing load from one to more passengers. Always try to arrange load so boat runs on an even keel.

LUBRICATION AND FUEL INSTRUCTIONS

Correct lubrication is the most important factor in the operation of an internal combustion engine, as it insures longer life and satisfactory performance.

In the Fleetwin's two-cycle engine, the lubrication of pistons, cylinders. crankshaft and connecting rod bearings is solely supplied by oil which must be thoroughly MIXED with gasoline BEFORE it is poured into fuel tank. NEVER POUR CLEAR GASOLINE OR OIL INTO FUEL TANK.

Fuel tank capacity 1.1 Gallons or approximately 8¾ pints.

TYPE OF GASOLINE: Use a good grade of regular gasoline (such as used in automobiles). High octane or leaded fuel gives no advantage.

LUBRICANT: We recommend a high grade straight mineral oil of S.A.E. 30 body, such as Mobiloil Outboard or another outboard oil, or a REGULAR (NOT PREMIUM) type.

QUANTITY OF OIL REQUIRED: For the first four hours of operation, mix ¾ pint of oil to each gallon of gasoline, and thereafter reduce quantity of oil to ½ pint to each gallon. Do not run motor faster than 2/3 speed for first four hours.

FUEL FILLER PLUG: For convenience, when filling fuel tank, hang filler plug over top of open filler plug cover. Turn counter-clockwise to open, clockwise to close.

STRAIN ALL FUEL: Due to condensation, water is often present in gasoline when you get it from the vendors. But it may also accumulate in your own fuel container from condensation due to changes in temperature.

Because the presence of water in fuel is a frequent cause of hard starting, all fuel should be poured through a fine mesh strainer. This will eliminate the water and also the dirt which might otherwise clog fuel passages. USE METAL CONTAINERS ONLY.

Fig. 2

GEAR LUBRICATION: The Fleetwin's new design gear housing uses oil instead of grease. Remove plug on port side marked "LUB" (Fig. 2). Also remove the lower drain or vent plug on same side (Fig. 2) and with motor in a vertical position, permit housing to drain. Lay motor on its side and after replacing drain plug, fill housing with Mobilube GX-90 or any other good grade of oil suitable for automotive hypoid gears meeting U. S. Army spec. No. 2 — 105B grade 90. If hypoid gear oil is not available use a high grade oil of SAE 30 body such as Mobiloil Outboard or comparable straight mineral oil, until possible to replace with suitable hypoid lubricant. Check gear housing for oil after the first 5 hours of operation to be sure grease seals are tight, then periodically at least every 50 hours. The housing should be drained and refilled at the end of the season, before storing motor.
DO NOT USE GREASE.

EQUIPMENT NECESSARY WHEN OUTBOARDING

Although the following articles may not always be needed, it is advisable to have them aboard when motoring.

An extra can of fuel, properly mixed. The fuel capacity is about 8¾ pints and should run motor from 1⅓ to 1½ hours depending upon type of boat and boat load.

Funnel with strainer. Rope to tie motor to boat.
Tools. Extra spark plug.

Starting cord (see page 9, Fig. 7).

Oars and any equipment required by law when outboarding in federal waters. See page 25.

TILTING OF MOTOR: The tilting feature becomes very necessary in many situations. It is designed to permit self tilting when striking any submerged object while running in forward position. Care, however, should be taken in obstructed waters, not to operate motor at too high a speed. This tilting feature is also used when motor is not in operation, as in boat launching, beaching, rowing in shallow waters, etc.

Tilting is accomplished by grasping rear handle and pulling motor toward you. Never try to tilt motor by bearing down on steering handle. Before tilting motor make sure fuel valve is in "OFF" position, and vent screw is closed.

TILTING FRICTION: Proper tilting friction is set at factory, but through continued use, friction may have to be increased occasionally, so motor will retain a tilted position. To increase friction, first tilt the motor as far as it will go. Then, tighten the friction screws on both sides of stern bracket (Fig. 16), using a brace and bit screw driver. It is also necessary to hold the jam nut (Fig. 16) on the inside while tightening.

STARTING AND OPERATING INSTRUCTIONS

1. **Open fuel valve by turning Fuel Valve Knob** located on port side of control panel (Fig. 3) counter-clockwise as far as possible.

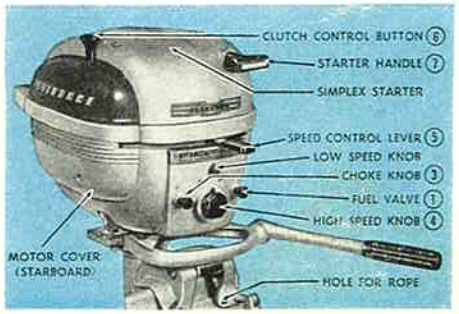


Fig. 3

2. Open vent screw on top of Filler Plug by turning counter-clockwise.
3. Pull out Choke Knob located at starboard side of control panel (Fig. 3) all the way.
4. Turn High Speed Knob (large knob in center of control panel) (Fig. 3) to "RICH" position.
5. Set Speed Control Lever (Fig. 3) to "START NEUTRAL" position.
6. Pull up Clutch Control Button located at starboard side of motor on top of starter housing. (Fig. 3). This sets clutch to "NEUTRAL" position.

7. Pull Starter Handle slowly until starter engages, then pull forcibly (Do not pull cord out more than 30 inches). Repeat until motor starts. Allow starter cord to rewind before you release grip. Premature release of grip may injure starter or cord.
8. After motor starts push in Choke Knob (Fig. 3) and push Clutch Control Button down. (Fig. 3) This engages clutch.

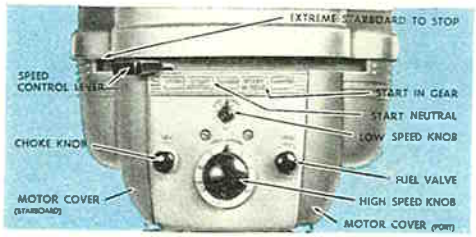


Fig. 4

9. Move Speed Control Lever in direction "FASTER" as shown by indicator on control panel and slowly adjust High Speed Knob (Fig. 3) until motor runs smoothly.
10. To control speed move Speed Control Lever (Fig. 3) in directions "FASTER" or "SLOWER" as shown by indicators on control panel.
11. To STOP motor move Speed Control Lever to extreme direction "STOP" as shown by indicator on control panel.

KEEP FUEL VALVE CLOSED when motor is not in operation.

FLOODING Flooding is a condition which can be created by OVER-CHOKING or sometimes cranking a warm or hot motor which may cause too much fuel to be drawn into crankcase and cylinders. The fuel mixture thus becomes too rich for combustion.

To correct, first note the approximate setting of the carburetor HIGH SPEED Knob, then close both High Speed Knob and Fuel Valve (Fig. 4) and pull Starter Handle until motor starts, allowing motor to run until it stops. Now, open Fuel Valve, reset HIGH SPEED Knob back to its original setting and follow instructions relative to starting WARM motor.

TO "START IN GEAR" NOTE: Clutch Control Button (Fig. 3) must be down before Speed Control Lever can be placed to "START IN GEAR"; otherwise above instructions apply.

STARTING WARM MOTOR Do not disturb High Speed Knob (Fig. 3) otherwise above instructions apply.

PROPER CARBURETOR ADJUSTMENTS Although both HIGH and LOW speed carburetor Knobs (located on control panel) (Fig. 4) are adjusted at the factory, due to difference in altitudes, climatic conditions and a possible change in fuel mixture, it may be necessary to re-adjust them under actual running conditions to obtain best performance. After motor gets under way, with Speed Control Lever fully advanced it is advisable to adjust the HIGH Speed Knob (Fig. 4) by slowly turning clockwise for leaner mixture and counter-clockwise for richer mixture, until motor runs smoothly at its highest speed.

To adjust LOW SPEED Knob (Fig.4) slowly move SPEED CONTROL lever toward "SLOW" position, then adjust the LOW SPEED Knob by slowly turning clockwise or counter-clockwise until motor runs smoothly at its lowest speed.

It may be necessary to again slightly re-adjust the HIGH SPEED Knob after LOW SPEED Knob is properly adjusted.

CAUTION: To eliminate the necessity of readjusting the carburetor adjusting knobs every time motor is used, it is advisable to measure the quantity of lubricating oil mixed with the gasoline very accurately. Also care should be taken that the same grade and type of both oil and gasoline are always used.

REVERSE The Fleetwin motor permits full 360° steering. Reversing is accomplished by turning motor one-half turn. It is advisable to slow the motor down to "START NEUTRAL" position before attempting to swing motor into reverse. The clutch may also be disengaged by pulling up on Clutch Control Button (Fig. 3) if so desired. A special lock arrangement built into the drive housing locks the motor against tilting while reversing. Use extra care while running in reverse, so as not to strike any obstruction, thus avoiding possible damage to lower unit parts, as tilting feature functions only in "FORWARD" position.

DUO-CLUTCH The Fleetwin motor is equipped with two separate clutches — namely NEUTRAL CLUTCH and SAFTI-GRIP-DRIVE — both of which are mounted on propeller shaft inside of the gear housing (Fig. 16-19) and constantly run in a bath of oil during motor operation.

NEUTRAL CLUTCH: The purpose of the "NEUTRAL CLUTCH" is to dis-engage the motor power from the propeller, which is done by pulling up on the Clutch Control Button. (Fig. 3) This permits easier and safer starting of motor and aids in the maneuverability of the boat in confined or crowded places. Engagement is accomplished by pressing the CLUTCH CONTROL BUTTON down. This shifting of clutch can be done only with the speed control lever at "START NEUTRAL" or slower positions.

The NEUTRAL CLUTCH can also be used when swinging motor into "REVERSE" position.

SAFTI-GRIP-DRIVE: The SAFTI-GRIP-DRIVE (Fig. 16-19) is an integral part of the DUO-CLUTCH and provides for propeller protection in shoal waters. Multiple discs release propeller on impact with underwater obstructions, absorbing all collision shocks and again gripping firmly for normal operations after obstruction has been passed over, thus preventing damage to propeller, gears, shafting and other mechanism. Should obstruction become jammed, locking propeller, the clutch will slip momentarily and then stall engine, thus avoiding the possibility of wearing out the clutch, and preventing undue strain on motor.

OPERATION OF FUEL VALVE The FUEL VALVE, (Fig. 4) located on port side of control panel, when closed stops flow of fuel from fuel tank to carburetor. This VALVE and Vent screw on top of Filler Plug should always be closed when motor is not in operation, when transported or during storage.

TO AVOID FUEL LEAKAGE WHEN CARRYING OR HANDLING MOTOR It is important that the FUEL VALVE (Fig. 4) and vent screw are fully closed.

Toward end of run, just before stopping motor, close the FUEL VALVE and then permit motor to run for a minute or two, until it stops. This will drain the

carburetor and motor can then be carried without leakage. For complete safety, always empty fuel tank when transporting motor.

REMOVING MOTOR FROM BOAT When removing motor from boat it is important to keep powerhead higher than lower unit, to prevent water from entering into cylinders and crankcase through exhaust ports.

Therefore, while lifting motor off boat, hold in an upright position until all water has drained from lower unit.

WRITE US If you are in need of information see your dealer or write us immediately for service on your motor. Our Service Department is always ready to cheerfully and promptly answer your letter, and to make helpful suggestions. When writing, be sure to give Motor Model, Name and Serial Number.

The following instructions to be read at leisure.

CYLINDER CONSTRUCTION The Fleetwin cylinder construction is of the hothead type, although the cylinder heads are partially water cooled at the outer diameter. The heads are removable, which enables cleaning out of the water jackets and water passages after extensive use. The exhaust ports are also easily accessible for cleaning by removing the plate on exhaust side of cylinder. (Fig. 5)

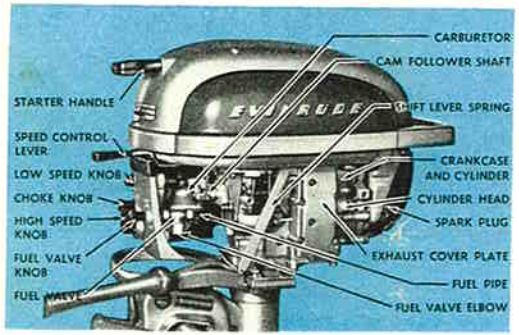


Fig. 5

SIMPLEX STARTER . . . EMERGENCY STARTING

This starter is built to give the best possible service. However, should starter failure occur, motor can still be continued in service by removing starter. This is accomplished by removing the four screws holding it to fuel tank, two in front on top of starter and two in rear below fuel tank. (Fig. 6). Next remove screw holding filler plug strap and starter can then be lifted off of fuel tank. A length of ¼" cord with a knot tied on one end can be placed into notched pulley atop flywheel, wound clockwise, and r or started in usual manner ee Fig. 7).


Fig. 6

If trouble appears to be in starter, we recommend it be sent to dealer for repairs while motor continues in use.

CO-PILOT AND STEERING ADJUSTMENT The Co-Pilot is your relief steersman, helps you keep a true course. It provides a cushioned, yielding grip, holding course, whenever you let go of steering handle.

Fig. 7

Proper adjustment is made at factory. Should Co-Pilot steering become too loose, adjustment can be made by tightening screw located on upper port side of pivot bearing.

SPARK PLUG The Champion J6J spark plugs should be used. They are carefully adjusted to .030 inch gap at factory, but continued use may necessitate resetting. A gage for this is provided in tool kit. Use end marked "Spark Plug".

When placing spark plugs into cylinders, be sure gaskets are intact, and tighten plugs securely. (Wrench furnished in tool kit). It is important that spark plug terminals are tightened with pliers.

RUBBER SPARK PLUG HOOD

Magneto high tension wires are equipped with special spark plug hoods, (Fig. 8) that fit tightly over spark plug and prevent plugs from shorting due to moisture.

When attaching wire to spark plug, press hood down securely and give hood a half turn to right.

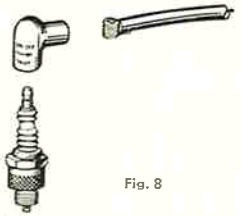


Fig. 8

CARBURETOR (Fig. 9-10) The Carburetor is designated as a single barrel horizontal type, having throttle and choke valves.

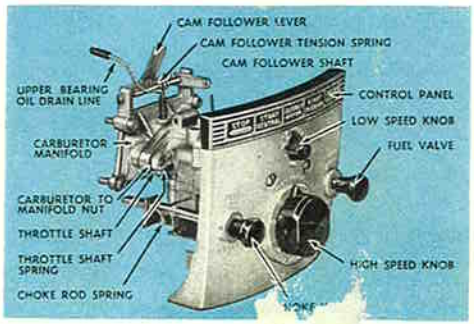


Fig. 9

Carburetion is controlled by a butterfly type throttle valve. A single jet supplies fuel at high speed. This jet has a separate angle jet located ahead of it, which acts as an air bleed. A high speed adjusting needle protrudes from front of carburetor and is regulated by large Knob located in center of control panel (Fig. 9).

Two low speed jets are located in ceiling of throat

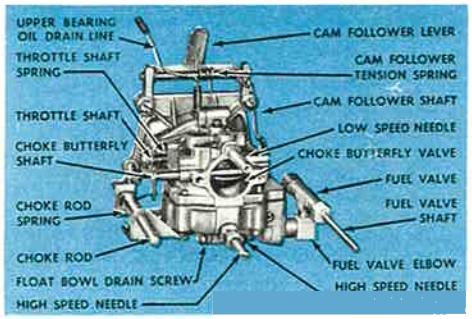


Fig. 10

of carburetor and supply fuel when the throttle valve is closed. The fuel is brought to these jets through a small tube with a fitting, which passes up through the high speed jet. The proper mixture for low speed is regulated by an AIR ADJUSTING NEEDLE protruding from upper front of carburetor and is controlled by the LOW SPEED Adjusting Knob (Fig. 9) near top of control panel.

A butterfly type choke valve for starting is located just ahead of Venturi and is controlled by a choke knob (Fig. 9) located on starboard side of control panel.

IMPORTANT — KEEP CARBURETOR CLEAN No matter what precaution is used in straining fuel before filling fuel tank, there is always a chance of dirt, sediment, or water accumulating in tank or pipe, therefore it is advisable to clean the carburetor at regular intervals. To do this first remove motor covers, then remove fuel pipe from shut off valve (Fig. 5) and drain tank. Remove four screws holding manifold to crankcase, (care should be taken in removal that reed plate which is set in manifold does not drop out) and remove complete carburetor and manifold assembly. (Since control panel is fastened to carburetor it will also be removed with carburetor) (Fig. 9).

To clean and drain float bowl remove small brass screw located in front at bottom of bowl. (Fig. 10)

FUEL FILTER: The fuel filter assembly is located in the bottom starboard side of fuel tank, (Fig. 11) to which the fuel line is attached. It consists of a porous metal element, which is inserted vertically in bottom of tank, and is about 2 inches in length. The extremely fine porosity of this metal filters out all foreign matter, water etc., permitting only the fuel to pass through. Due to its large outer area, it may never become totally clogged, but can be removed for occasional cleaning. To remove filter, remove starboard motor cover, disconnect fuel line (Fig. 11) and unscrew filter fitting from Tank (Fig. 11). Tank should preferably be empty as there is no shut-off at this point. It may be wise to flush out tank with clean fuel. before replacing filter.

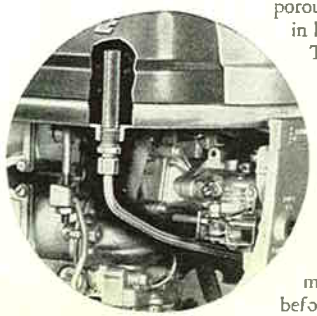


Fig. 11

REED PLATE: The reed plate (Fig. 12) is located between the carburetor manifold and crankcase and consists of two phosphor bronze reeds and two steel reed stops. The purpose of the reed plate is to entrap all fuel and air mixture which is sucked into the crankcase.

Fig. 12

As the general performance of the motor depends largely on the fit of these reeds, it is necessary that they seat flat on reed plate surface, assuring an air tight seal.

Although these reeds are designed to withstand the normal life of the motor, it is well to examine them anytime the carburetor is removed.

The reeds should be checked for dirt that may have become lodged between reed and reed plate or for possible fracture in the reeds themselves.

Care should be taken not to mar reed seat on plate and not to bend reeds during inspection.

COOLING SYSTEM (Fig. 13) Water for cooling purposes is provided by the action of the "CENTRI-MATIC" pump, which consists of a single stage rubber impeller centrifugal pump. It functions as a positive full displacement pump (Fig. 13) assuring adequate water supply at the lowest motor speed. At the higher speeds, it becomes a centrifugal pump, (Fig. 14) as the increased water pressure bends back the impeller blades, decreasing the impeller diameter, thereby eliminating wear and conserving power. Under average conditions the pump should give satisfactory service for many seasons.

Fig. 13

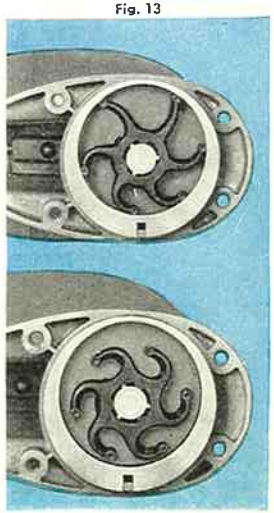


Fig. 14

The water inlet (Fig. 16) is a slot located below exhaust outlet directly behind propeller where the constantly swirling slip-stream makes the inlet virtually clog-proof.

While operating motor at full speed, should it show signs of slowing down, immediately check water discharge at water outlet (Fig. 16) located at rear of motor somewhat above water level.

In case no water is being discharged, immediately shut off motor and check water inlet slot (Fig. 16) for obstruction. If no obstruction is found it may be necessary to check the pump itself.

LARGE ADJUSTING KNOB FRICTION Should large adjusting knob become too loose and not retain proper setting it can be tightened to the desired friction by drawing up on the packing nut. After considerable use, it is desirable to add new packing in the nut which is located just behind the control panel. (Fig. 10)

UNIFIED SPEED CONTROL The spark and throttle are correctly synchronized under a single positive Speed Control Lever, which provides a perfect means of controlling the speed of the motor.

It consists of a cam plate fastened beneath the magneto base which travels with any movement of the Speed Control Lever. This plate contacts a cam follower lever (Fig. 10-11) on carburetor, which is connected directly to the throttle valve on the carburetor. The moving of the Speed Control Lever (Fig. 2) to "FAST" advances the spark and opens the throttle valve; to "SLOW" retards the spark and closes the throttle valve.

HOW TO REMOVE FLYWHEEL Never remove the flywheel of your motor unless it is absolutely necessary to do so. The only reasons for removing flywheel are for replacing points, condenser, coil or high tension wires, or for checking for loose or broken wires.

Remove motor covers and remove Fuel valve assembly from carburetor. (See instructions on Fuel Valve, page 7).

Remove Simplex Starter (See instructions on Simplex Starter Emergency Operation, page 8).

Remove Gasoline Tank by removing screws holding tank to motor, located underneath the tank. Two in front and two in rear. (Fig. 16).

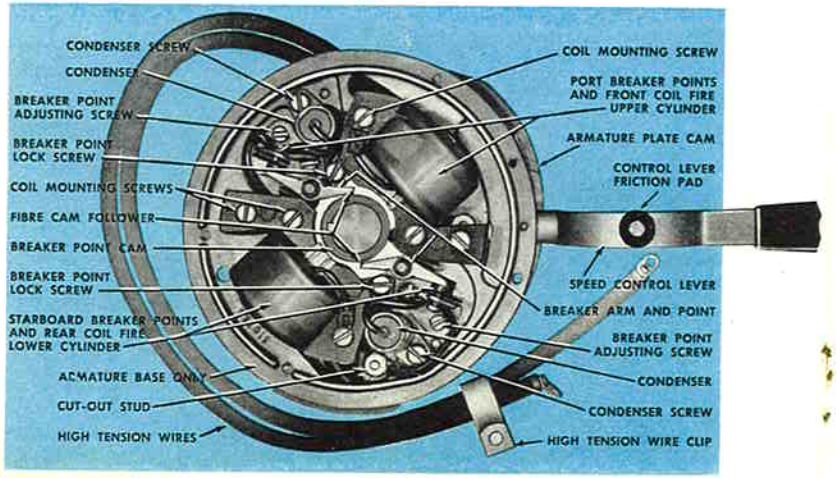


Fig. 15

Holding the flywheel rigid, unscrew the flywheel nut several turns, using a ¾" wrench. Pull up on flywheel at the same time tapping flywheel nut several sharp blows with a hammer. When flywheel comes off, use care not to lose the key which holds flywheel and breaker point cam in engagement with crankshaft.

Should breaker point cam (Fig. 15) be removed for any reason be sure when replacing that side marked "TOP" is up.

Before replacing flywheel check key in crankshaft to make sure it is a tight fit also see that keyway in flywheel lines up perfectly with key on crankshaft. It is also advisable to place a few drops of oil on felt oiler (Fig. 15) and be sure breaker points are clean and dry. Make sure flywheel nut is tightened securely by using a hammer on wrench.

IGNITION TROUBLES AND HOW TO LOCATE THEM

In locating ignition trouble, the first and most common cause may be spark plugs. Remove plugs, and examine them carefully. Should the points and inner porcelain appear wet from either oil or water, plug is definitely fouled. Also check plugs for dirt across points, proper gap and for cracked porcelain.

If no faulty spark plugs are found, proceed to check strength of spark from magneto. Leaving plugs out of cylinder, remove rubber spark plug hoods and ground one high tension wire onto motor, then, holding the other one ¼" away, pull on starter handle. A good spark should jump this gap.

Repeat this procedure on the other wire, and if there is any evidence of spark failure, it will then be necessary to check magneto. Before attempting to do this, read instructions "Adjustment of Magneto Breaker Points", page 13, and follow them carefully.

If trouble does not appear to be in breaker points, then check over the complete magneto base. Search for any broken or loose wires on coils, condensers, breaker assemblies, etc. If no visible defect is apparent, the trouble may be either in a coil or condenser, in which case it is advisable to send complete magneto to nearest dealer. (See instructions on removing flywheel, page 12). To remove magneto base from motor, remove high tension wire from spark plugs and then remove the four hold down screws located near center of base. (Fig. 15)

The magnet, composed of the improved "Alnico" steel, will retain its magnetic charge practically indefinitely. Therefore, the magneto should not be considered to have lost its "pep" until such diagnoses have been made by a competent authority.

ADJUSTMENT OF MAGNETO BREAKER POINTS

After extensive service, the breaker points may become dirty or out of adjustment. To check, it is necessary to remove simplex starter. (See Fig. 6) (See Simplex Starter Page 8). It is not necessary to remove flywheel, as there is a hole in

FLEETWIN WITH STARBOARD COVER REMOVED

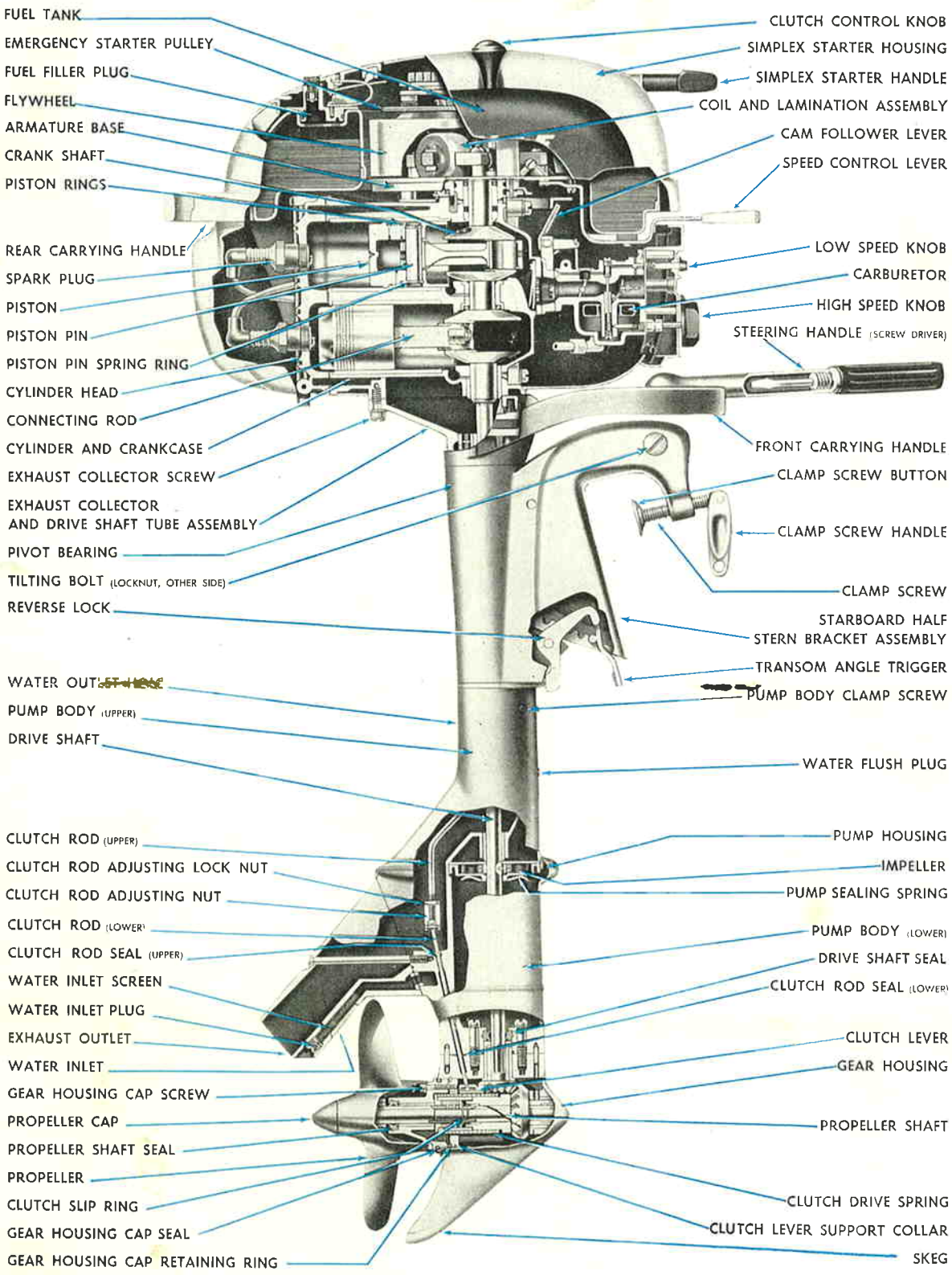


Fig. 16

When writing for instructions on motor refer to above illustration for names of parts. Starboard (right) and port (left) are designated while facing bow. (front)

FISHERMAN'S RULE

Fig. 17

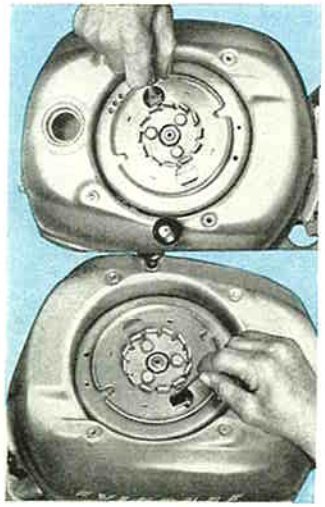


Fig. 18

flywheel for this purpose. (See Fig. 17-18). After removing starter, turn flywheel until one of the breakers lines up with hole, and then insert gage (furnished with motor). Use end marked "Breaker". Points should check .020". If necessary to re-adjust, insert screw driver through hole and loosen breaker point lock screw (Fig. 15). Now with screw driver turn breaker point adjusting screw (Fig. 15) clockwise to open points, anti-clockwise to close points. After proper adjustment has been made lock breaker by tightening breaker point lock screw (Fig. 15). Recheck points for correct gap.

Turn flywheel ½ turn and repeat for other set of points.

If, after considerable service, points need filing or replacing or if it is necessary to check complete magneto base, flywheel will have to be removed. (See how to remove Flywheel, page 12). When adjusting points with flywheel removed, turn crankshaft until flywheel key is in line with fibre cam follower (Fig. 15) on breaker arm. This is the high point of the cam, and breaker points should check .020".

The starboard breaker points fire the lower cylinder through the rear coil and the port breaker points fire the upper cylinder through the front coil. (Fig. 15)

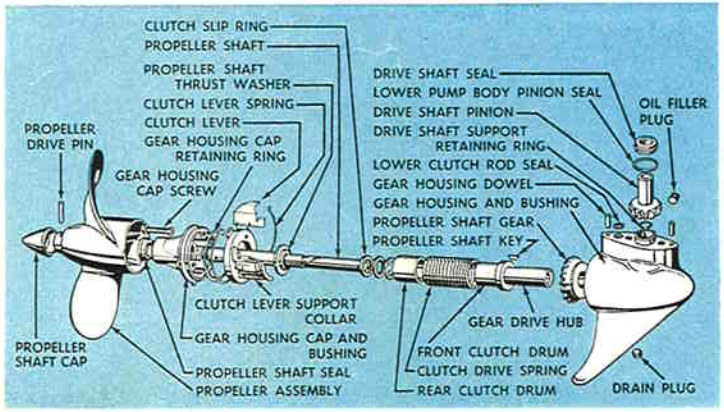


Fig. 19

HOW TO REMOVE PROPELLER SHAFT WITH DUO-CLUTCH ASSEMBLY AND GEARS (See Illustration Fig. 19).

Engage clutch, remove propeller cap and drive pin (Fig. 19) then remove propeller. Remove three screws holding gear housing cap in place, then remove cap. Remove propeller shaft by twisting clockwise and counter-clockwise while pulling out on shaft. Push in on clutch lever support collar (Fig. 19) and remove gear housing cap retaining ring (Fig. 19). Clutch lever support collar, propeller gear and drive gear can now also be removed. To re-assemble, reverse above procedure.

IN CASE OF TROUBLE

Gasoline and ignition troubles are by far the most prevalent ailments among all types of gasoline engines. Therefore, if your motor does not behave properly, it is wise to look for the most common form of trouble before attempting to dismantle the engine — don't try to find something when you don't really know what you're looking for.

If your motor has fuel properly mixed and carefully strained, but refuses to start, or behaves badly, consult the check chart. If you have no idea what the trouble may be, start making a systematic check through the list of symptoms described below. If you do this, the chances are ninety-nine out of a hundred that you'll quickly locate your trouble and be ready to remedy it.

CHECK CHART

The following chart aims to provide an outline for the systematic tracing down of trouble with the least amount of effort. Finding the cause of trouble usually suggests the remedy.

Motor won't start —

GASOLINE TROUBLE

- Tank empty.
- Shut-off valve closed.
- Carburetor flooded, if motor is warm.
- Mixture too lean, if engine is cold.
- Too much oil mixed with gasoline
- Water in carburetor, tank or strainer
- Pipe clogged.
- Spray nozzle or feed hole in carburetor clogged.
- Vent screw closed

NO SPARK

- Wire to spark plug too close to motor covers.
- Wire to breaker disconnected.
- Wire to spark plug disconnected.
- Water, oil, on breaker points.
- Breaker points do not come together when flywheel is revolved.
- Breaker points do not separate when flywheel is revolved.

SPARK PLUG FAULTY

- Fouled with carbon, oil or moisture.
- Porcelain cracked.
- Center pole loose.
- Points not properly adjusted—should be apart .030.

Motor overheats —

- Lack of oil or water.

Motor knocks —

- Spark too far advanced.
- Carbon in cylinders (caused by too much oil in gasoline).
- Motor too hot, causing pre-ignition.
- Bearings loose or worn.
- Piston or cylinder worn.
- Flywheel nut loose.

Motor is stiff or cranks hard —

- Rust in cylinder.
- Bearings out of line
- Crankshaft bent.
- Gear shaft bent.
- No oil on bearings.

Water stops circulating —

Obstruction in water intake.

Leak in water system.

Motor not setting deep enough in water.

Poor compression —

Piston rings carbonized and stuck in groove.

Cylinder scored.

No oil in cylinder.

Motor misses —

WIRING

Spark plug wire shorting on motor covers.

Broken or loose wiring.

Poor insulation.

Wires short circuited with moisture, oil or foreign material.

MAGNETO

Breaker points corroded.

Breaker points improperly spaced.

Weak coil.

Weak condenser.

Weak magnet.

Foreign matter or oil on breaker points.

CARBURETOR

Foreign matter in spray nozzle or needle valve or feed hole.

Supply impeded.

Water in carburetor.

IMPROPER CARBURETOR ADJUSTMENT

IMPROPER MIXTURE

Too rich (will slow down and knock).

Too lean (will knock).

LACK OF COMPRESSION

Lack of oil.

Scored cylinder.

Worn rings.

Rings stuck in grooves.

Motor vibrates —

No spark in one cylinder.

Loose pivot bearing.

Bent propeller wheel.

Motor loose on boat.

Too lean or rich a mixture of gas.

Motor runs but boat makes little or no progress —

Propeller blades bent.

Rope or other obstruction dragging in water.

Motor runs at excessive speed

Foreign matter on propeller or gear housing.

SALT WATER INSTRUCTIONS

EVINRUDE MOTORS ARE BUILT FOR USE IN EITHER FRESH OR SALT WATER. Yet science has not succeeded in developing any metal which is totally impervious to the corrosive action of salt water. The materials with which your motor is built are commercially "salt water proof".

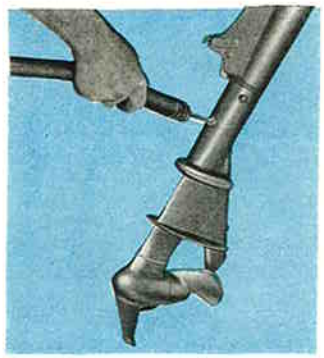


Fig. 20

A few instructions, easily carried out, will extend the life and satisfactory performance of your motor when it is used in salt water.

If you've been out on salt water all day, it isn't much trouble to flush your motor with fresh water when you come ashore. The cylinder jackets, water pipes and muffler jacket can all be easily flushed with fresh water by using a flushing nozzle. (Fig. 20) This nozzle is inserted in hole in upper pump body marked "WATER FLUSH", (Fig. 20) after removing the pipe plug.

Drain and fill Gear Housing per instructions on page 4 "GEAR LUBRICATION".

CARE OF MOTOR IN COLD WEATHER

Your motor will freeze in cold weather just as the radiator of an automobile will, if not given proper attention. A frozen motor usually means cracked pipes and water jackets.

There is not the slightest danger of your motor freezing while running. But, when your motor is idle, or before storing it away in cold weather, drain the motor by setting it in an upright position and revolving flywheel. This lets the water out of the cylinder jackets and pipes, preventing costly freezing and bursting of parts.

Drain and fill Gear Housing per instructions on page 4 "GEAR LUBRICATION".

STORING THE MOTOR AWAY

If you are not going to use your motor for a while, don't store it away in a cellar or other place where it will be exposed to dampness or dust. No sportsman would do such a thing with his guns or fishing rods, and there is no reason why your motor should not receive the same care that would be accorded to other personal property of even less value. Dampness and dust may injure the magneto of your motor, cause deterioration and do other damage almost beyond repair.

Fig. 21

When storing your motor away PUT IT IN A DRY PLACE. If it has been used in salt water, flush it thoroughly with fresh water, and let it dry before putting it away. Drain the water out of the pipes and cylinder jackets as instructed under "CARE OF MOTOR IN COLD WEATHER". Drain all fuel from Fuel Tank and Carburetor. (Fig. 21). It is also a wise precaution to remove the spark plugs, put a couple of teaspoonfuls of pure lubricating oil into the cylinders (Fig. 22) and then revolve the flywheel several times to spread the oil over the cylinder walls before putting the spark plugs back. Drain and fill Gear Housing per instructions on page 4. "GEAR LUBRICATION". Wipe the entire motor with a cloth saturated with oil. (Fig. 23) An exterior film of oil won't hurt any piece of machinery, but dampness and rust WILL. When these instructions have been carried out, wrap the motor in a piece of canvas, an old blanket, or in heavy paper. (Fig. 24) and store in a dry place.

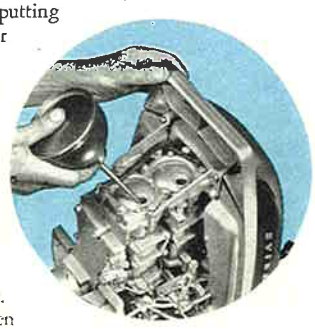


Fig. 22

If these simple instructions are carried out, storing will not injure your motor in the least. Further, it will be ready to run faithfully when you are ready to use it again.

EVINRUDE FLEETWIN

WHEN READY TO USE IT AGAIN

If your motor has been idle for some time, or has been stored without following the instructions, "Storing the Motor Away", it is a good plan to squirt a little pure lubricating oil into the cylinders through the spark plug holes. (Fig. 22) This done, the flywheel should be revolved a few times, to spread the oil around the cylinder walls.


Fig. 23

When you take the motor out, clean it up. Inspect the gears, propeller shaft and bearings to see that they are in good condition. Fill Gear Housing per instruction on page 4 "GEAR LUBRICATION".

Clean the contact points (Fig. 15) by running a piece of hard paper or cardboard between them. If they are very dirty or rough, use a very fine file to polish them. See that the points are adjusted to correct gap.

Clean the fuel filter. Clean out the fuel tank, the fuel feed pipe and the carburetor.

Mix your gasoline and oil in a clean can, and in the right proportion. Strain all fuel; use only metal containers. Fill the tank. See that the fuel is flowing to the carburetor.

Thoroughly clean the spark plugs. Replace with new ones if cracked, broken, or badly burnt.

If, in going over the motor, you find any parts damaged, replace them at once.

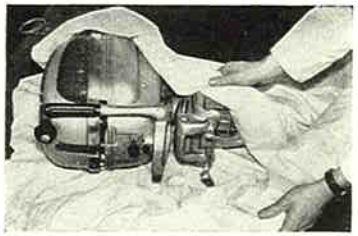


Fig. 24

Tighten up all screws and nuts.

Put the motor on the boat and start it. Carefully adjust the carburetor. See that cooling water is flowing.

After long, continuous, hard service, a very complete overhauling may be advisable. This should be done by an expert. If you desire, return the motor to our distributor or dealer, and you will get a workmanlike job at a fair charge for time and materials.

MOTORS THAT HAVE BEEN SUBMERGED

Accidents may happen to the most careful person, and it is by no means impossible to drop an outboard motor overboard. Careful boatsmen safeguard themselves against such mishaps by tying a length of rope to their motors and tying the other end to the boat. A motor so secured cannot be lost.

A motor that has been submerged is temporarily out of commission. Such a motor must, of course, be dried out thoroughly before it can be restored to service.

For cleaning and drying motor, proceed as follows:

1. Drain and clean fuel tank, flushing thoroughly with clean gasoline.

2. Remove and clean carburetor (see instructions, page 10 — "Keep Carburetor Clean") fuel line and spark plugs. Make sure all water has been removed from these parts.

3. Hold motor in position with carburetor opening in crankcase down, and revolve flywheel slowly to remove water from cylinders and crankcase.

4. Check Spark as follows: Remove the spark plugs and make sure they are dry, then leaving plugs out of cylinder, attach the high tension wires to plugs and ground the plugs to some part of motor, and pull flywheel over rapidly with starter handle. A good spark should be produced at both spark plug points.

5. If no spark or a very faint spark is produced it is an indication that there is some water on the armature base or contact points. Remove magneto. (See instructions, page 12 — "How to Remove Flywheel".) After flywheel has been removed, thoroughly dry armature base, also breaker points and check points for proper spacing (.020).

6. Replace magneto and again check for spark as above. If still no spark is apparent, again remove flywheel and check complete magneto. (See instructions, page 13 — "Ignition Troubles and How to Locate Them"). If after thoroughly checking magneto a satisfactory spark is not produced, return complete magneto to nearest dealer.

7. Reassemble carburetor and fuel line.

8. Put about two to three tablespoonfuls of oil, of the kind you mix with gasoline, in each cylinder, through each spark plug hole, (Fig. 22) and with the spark plugs removed and both wires grounded rotate flywheel rapidly by pulling starter handle. Repeat this process several times, then put spark plugs in cylinders, fill fuel tank with new fuel mixture and proceed to start motor.

9. Due to the excess oil in cylinders as well as the possibility of some water which may still remain in cylinders, it may be necessary to remove and clean the spark plugs once or twice during the process of starting.

DON'T HESITATE TO WRITE US

We realize that our business success depends largely upon the service that users derive from our products. We want every owner to feel that he is getting MORE THAN HIS MONEY'S WORTH in service out of his outboard.

If we can be of further help to you in increasing the pleasure you derive from your motor, don't hesitate to write us. Tell us your troubles — if you have any; also your joys. Such correspondence will receive prompt attention. Our Service Department is maintained for your benefit. When writing, give model, name and serial number.

FACTORY WARRANTY

WE WARRANT each new unit to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good at the factory any part or parts thereof which shall, within three months after delivery of such unit to original purchaser, be returned to us with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties and representations, expressed or implied, and of all other liabilities in connection with the sale or use of any unit.

This warranty shall not apply to any unit which shall have been repaired or altered outside the factory in any way so as to affect its stability or reliability, or in which other than our genuine parts have been installed, or which has been subject to misuse, negligence, accident or racing*, or operation at more than our recommended r.p.m. as expressed in the horsepower designation. We make no warranty in respect to trade accessories not of our manufacture inasmuch as they are usually warranted separately by their respective manufacturers.

All deliveries are contingent upon conditions beyond our control, but we will make replacements as promptly as the situation will permit.

*The use of the engine for racing voids our warranty. Should you risk the effects of using your motor for racing (resulting in increased revolutions), minimize the injurious effect by mixing ½ pint of S.A.E. 60 high grade oil, such as Mobiloil Extra Heavy which is a straight mineral oil, with each gallon of gasoline.

SERVICE POLICY

In accordance with our warranty, parts will be repaired or replaced under the following conditions:

1. That permission has been expressly granted by manufacturer for return of parts.
2. That manufacturer's examination discloses actual defect.
3. That customer has paid or will pay transportation charges on replacement or repaired parts.
4. WE WILL NOT BE RESPONSIBLE FOR TIME SPENT AND WORK PERFORMED BY OTHERS THAN THE FACTORY, UNLESS SUCH REPAIRS ARE FIRST AUTHORIZED BY US IN WRITING.

Final decision as to defect rests solely with the factory at Milwaukee, Wisconsin, and no repairs or replacement agreement other than the above will be recognized.

SPURIOUS PARTS AND THE FACTORY WARRANTY

Be sure that you get genuine parts. Your dealer can be relied upon to furnish nothing else. There are, however, spurious parts for outboard motors, just as there are for all makes of automobiles, and nearly everything else mechanical. THE USE OF PARTS OTHER THAN THOSE MANUFACTURED BY US VOIDS OUR WARRANTY.

REPAIR SERVICE Dealers usually carry a complete stock of spare parts. If you need parts, or repair service, consult your dealer. If the name and address of the nearest dealer is not known, write us.

PARTS BOOKS Parts books for all current models are available. If you need a parts book, write us.

INSURE YOUR BOAT AND MOTOR AT SMALL COST

Through the Outboard Boating Club of America you may now insure your boat and/or motor on nearly the same basis as you would your motor car. Members of the Outboard Boating Club of America are entitled to the full privilege of this insurance service. *Premiums are exceptionally low* and include protection against fire, theft and marine perils. For further details write OUTBOARD BOATING CLUB OF AMERICA, 307 North Michigan, Chicago 1, Illinois.

THE IMPORTANCE OF QUIET OPERATION

A noisy motor is unwelcome in the boating scene, and gives the sport of boating a black eye.

That is one big reason why Evinrude Motors has spent, and is continuing to spend, thousands of dollars annually to make Evinrude motors run more quietly.

We count on all Evinrude owners to cooperate with all their fellow boatmen and with us by:

Operating their motors as silently as possible.

Refusing to tamper with or removing all or any part of exhaust and silencing mechanisms.

Promptly repairing silencing mechanisms if these become faulty in operation.

Evinrude dealers recognize the desirability of having all outboards operate quietly, and will gladly cooperate with motor owners in reaching this worthy objective.

Your courtesy in conserving the quiet of the great outdoors will be gratefully recognized by all your boating and shoreside neighbors. We also will sincerely appreciate your cooperation.

"RULES OF THE ROAD FOR OUTBOARD OWNERS"†

1. Boats under sail always have the right of way.
2. Motor boats must keep clear of sailing craft and row boats at all times.
3. Always keep on the right side of the channel or fairway when possible.
4. Any boat overtaking another boat must keep out of the way.
5. When meeting another boat head on or nearly so, each boat shall alter its course to right so as to pass on the left side of the other and each boat should give one short blast of the whistle. In other words, always keep to the right.
6. If a boat is well over to the right in passing, it should keep straight on and give one toot to the whistle. If you are well over to the left, keep straight on and give two toots to the whistle. The other boat should do the same.
7. When two boats are crossing and approaching obliquely, the one that has the other on her own left side should keep her course and speed, and the one which has the other on her right side should get out of the way as best she can, but, if possible, not by crossing ahead. "The giving away vessel" should give one short toot if she is altering her course to right or two short toots if to left, which the boat that is holding her course should answer.
8. If for any valid reason you cannot comply with the rules or do not understand signals being given by another boat, give the danger signal, which is a number of short blasts, not less than four, and stop if necessary.
9. Never sound a whistle while underway unless necessary.

†Prepared by Outboard Boating Club of America.

EQUIPMENT REQUIRED ON FEDERAL WATERS

NOTE: No all-embracing definition of what constitutes Federal waters can be given. However, in general it may be said that craft operating on navigable waters in or opening into the Great Lakes, an ocean or gulf, and all navigable waters tributary to such waters upstream to the first lockless dam, are under Federal supervision and should carry the proper government equipment.

1. A bright white light aft to show all around the horizon. Visible at least 2 miles.*
2. Combination light in the fore part of boat showing green to starboard and red to port, from right ahead to two points abaft the beam on their respective sides. Visible at least 1 mile.*
3. A whistle or other sound-producing mechanical appliance capable of producing a blast of 2 seconds or more in duration. (On boats 16 feet or more in length.)
4. A life preserver or ring buoy (or approved cushion) for every person on board.
5. An approved fire extinguisher. Motor boats propelled by outboard motors and not carrying passengers for hire are not required to carry fire extinguishers.
6. Persons who operate any motor boat in a reckless or negligent manner so as to endanger life, limb or property of any person shall be termed guilty of a misdemeanor and, on conviction, shall be punished by a fine not to exceed $2,000 or by imprisonment for a term not exceeding one year or by both such fine and imprisonment.

*From Sunset to Sunrise.

BOAT NUMBERS REQUIRED BY THE UNITED STATES COAST GUARD

We quote from the Department Regulations:

1. Application for numbers will be made by the owner or master to the collector of customs of the district in which the owner resides. The owner will then receive full instructions as to the number awarded, how it is to be placed on the vessel, etc.
2. The following undocumented vessels are required to be numbered:
   1. All boats equipped with permanently fixed engines.
   2. All boats over 16 feet in length equipped with detachable engines.
   3. All boats not more than 16 feet in length equipped with detachable engines as the ordinary means of propulsion.
3. The following undocumented vessels are not required to be numbered:
   1. All boats not exceeding 16 feet in length equipped with detachable engines and falling within the following classes:
      (a) Rowboats and canoes designed and intended for the use of oars or paddles as the ordinary means of propulsion.
      (b) Sailboats.
      (c) Boats designed and used solely for the purpose of racing or operation incident to racing.

FLEETWIN MECHANICAL SPECIFICATIONS

MODEL 4447	For 15" boat transom (Standard length)
MODEL 4448	For 20" boat transom
HORSEPOWER	7.5 O.B.C. Certified B.H.P. at 4000 R.P.M.
NUMBER OF CYLINDERS	2
BORE AND STROKE	2⅛ x 1¾"
PISTON DISPLACEMENT	12.4 cubic inches
TYPE	2 cycle reed valve — alternate firing
GEAR RATIO	13:20
PROPELLER	8" diameter x 8" pitch, 2 blade
COOLING	Combination positive displacement and centrifugal
IGNITION	Evinrude high tension magneto
CARBURETOR	Horizontal float feed, throttle type, HIGH and LOW speed adjustments.
CONTROL	One lever synchronized spark and throttle
FUEL TANK CAPACITY	1.1 Gallons
STARTER	Simplex, self re-winding
REVERSE	360° Pivoting
CLUTCH (CONTROL)	Manually operated — Neutral and Forward
CLUTCH (PROPELLER SAFETY)	Automatic slipping and re-engaging
WEIGHT	47 pounds 5" longer model, 50 pounds

INDEX TO ILLUSTRATIONS

PARTS LIST

* * *

EVINRUDE FLEETWIN

MODEL 7512-7513

INSTRUCTIONS ON HOW TO ORDER

For their convenience, as well as ours, we ask our customers to carefully follow our instructions in ordering parts.

We also request that owners order their parts from our dealer or nearest service station or distributor.

ORDER BY PART NUMBER GIVING NAME OF PART ALSO.

ALWAYS GIVE THE SERIAL NUMBER OF THE MOTOR FOR WHICH PART OR PARTS ARE REQUIRED.

This is very important, and is necessary to intelligently fill your order. If you cannot give the number of the motor, state when and from whom the motor was purchased.

TELEGRAMS AND HOW TO USE "EVINRUDE CODE."

Telegram rates are based on fifteen words or less, for immediate delivery. Day letter or night letter rates are considerably cheaper. Detailed information may be found on rear of any telegram blank.

Use the following code only on messages of more than fifteen words. Each five code letters are charged for as a word. English words and code words may be used in the same message, but code letters cannot be combined with English words.

A - 1	G - 7	L - Air Parcel Post
B - 2	H - 8	M - Freight - Truck
C - 3	I - 9	V - Air Express
D - 4	J - 0	X - Express
E - 5	K - Each	Y - Parcel Post
F - 6	P - Number	Z - Freight - Railway

Following is an example of a telegram not coded and the same reduced to code:

(NOT CODED - 22 WORDS.)

Parcel Post Two Number One Three Naught Naught Four Four Propeller Nut Twelve Number One Three Naught Naught Five Three Shear Pins.

(CODED - 8 WORDS.)

YBPAC JJDD Propeller Nut ABPAC JJEC Shear Pins.

Do not use this code in cable messages.

ROUTING • TERMS • RETURNS

SHIPPING INSTRUCTIONS.

Unless specific instructions accompany the order, we will use our own judgement on how to ship.

TERMS: CASH WITH ORDER OR C.O.D.

In ordering parts, to avoid C.O.D. shipments and extra charges, all orders should be accompanied by cash. Save time and money by remitting sufficient cash to cover cost of parts and Transportation Charges. Stamps are accepted in payment of all orders not over $1.00. The right to hold all orders unaccompanied by cash is reserved by Evinrude Motors, Milwaukee.

A minimum charge of $0.50 net will be made on all orders amounting to less than this amount. We reserve the right to furnish additional parts to make up the difference.

INSTRUCTIONS ON RETURNING PARTS.

Parts can only be returned in accordance with terms outlined under the Service Policy laid down in the instruction manual.

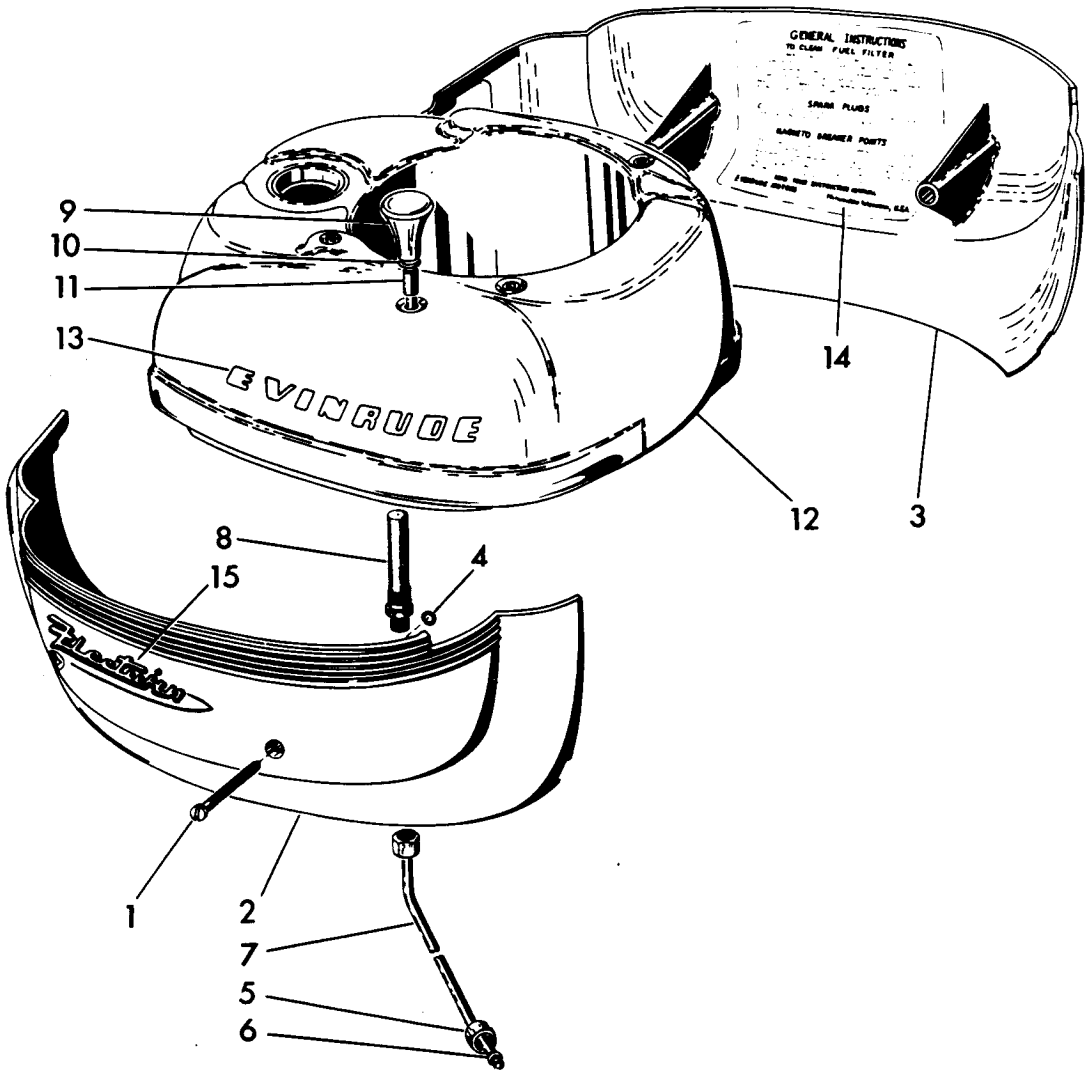
* * *

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

EVINRUDE MOTORS, Milwaukee, Wis., U.S.A.

CABLE ADDRESS "EVINRUDE"

FLEETWIN FUEL TANK AND MOTOR COVERS

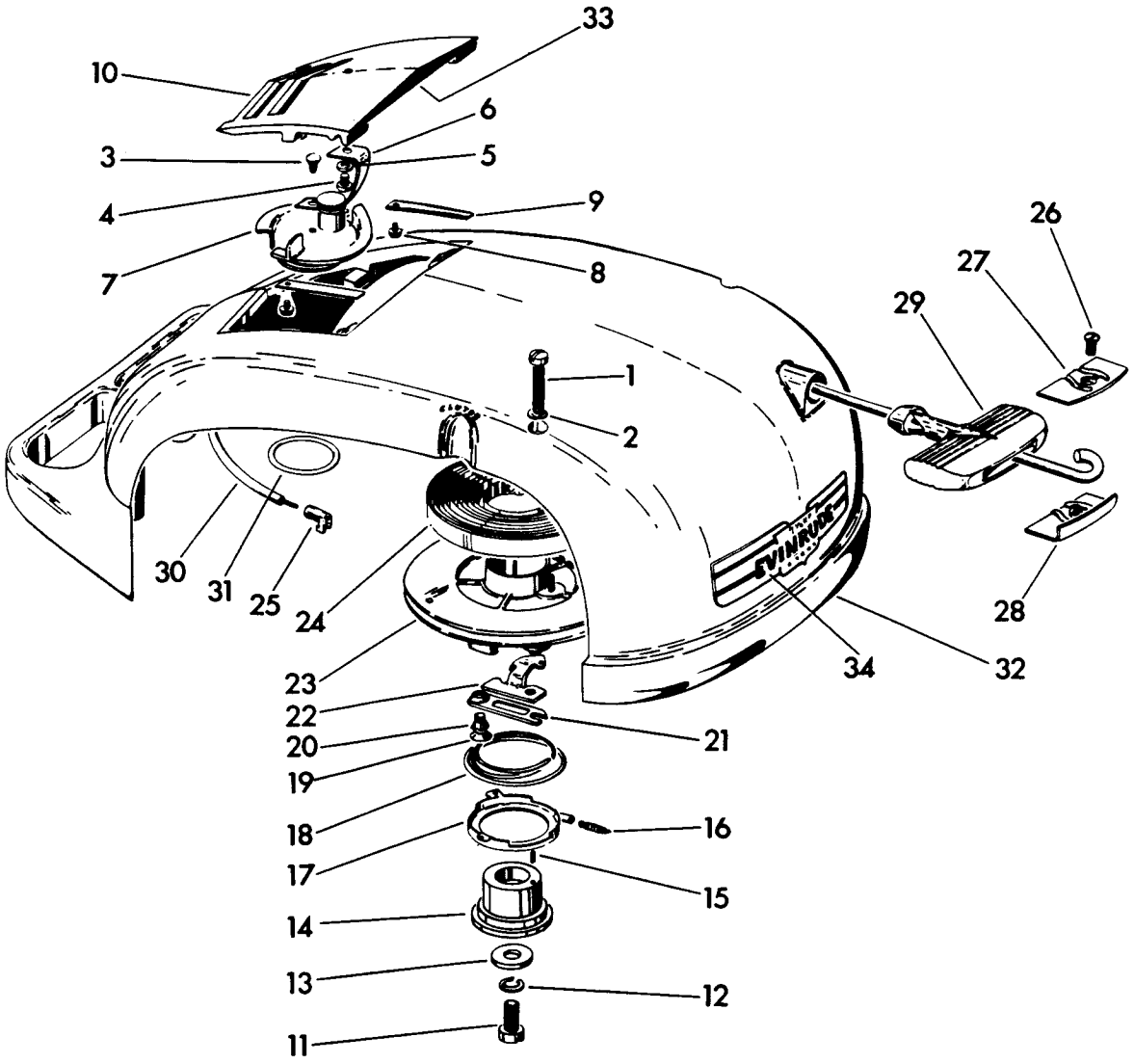


REF. NO.	PART NO.	NAME OF PART	QTY.	REF. NO.	PART NO.	NAME OF PART	QTY.
1	202583	Motor cover screw	4	10	202941	Clutch control rod "O" ring . . .	1
2	276826	Motor cover assembly - starboard	1	11	302343	Control lever guide bushing . . .	1
3	276825	Motor cover assembly - port . . .	1	12	277096	Fuel tank assembly	1
4	121019	Motor cover screw lock ring . .	4	13	203305	Fuel tank transfer	2
5	13X305	Compression nut	2	14	202584	Instruction transfer	1
6	13X304	Compression sleeve	2	15	203312	Model identification transfer, starboard	1
7	276977	Fuel pipe assembly	1				
8	276883	Tank connector and filter	1	*	203313	Model identification transfer, port	1
9	276842	Clutch control knob assembly . .	1				

* Not shown

ORDER YOUR PARTS FROM YOUR DISTRICT SERVICE STATION.

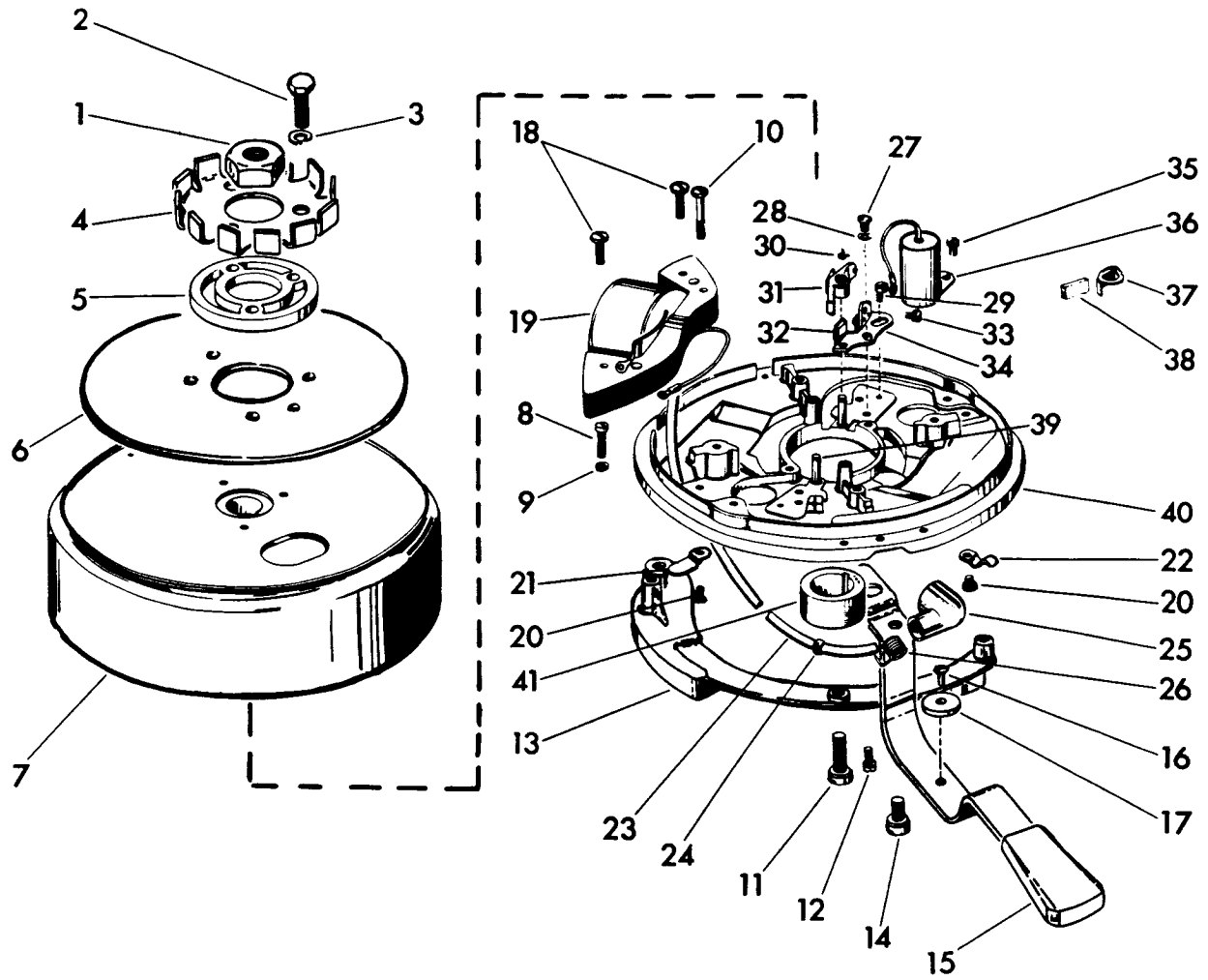
FLEETWIN STARTER



REF. NO.	PART NO.	NAME OF PART	QTY.	REF. NO.	PART NO.	NAME OF PART	QTY.
*	276830	Starter housing assembly	1	18	302222	Starter friction spring	1
1	132679	Housing to tank screw (front)	2	19	302104	Starter pawl retaining screw	3
2	19X124	Housing screw lock washer	2	20	71X1026	Retaining screw lock washer	3
3	202689	Filler plug drive screw	1	21	202317	Starter pawl retainer	3
4	202377	Filler cover strap screw	1	22	202470	Starter pawl	3
5	202208	Filler plug strap washer	1	23	276589	Starter pulley assembly	1
6	276852	Filler plug strap	1	24	276510	Starter spring assembly	1
7	277153	Filler plug	1	25	43A144	Starter rope anchor	1
8	202589	Filler cover spring screw	1	26	551206	Starter rope clamp screw	1
9	202588	Filler plug cover spring	1	27	551205	Starter rope clamp (CTSK)	1
10	202587	Filler plug cover	1	28	591214	Starter rope clamp, flanged	1
11	131991	Starter retaining screw	1	29	202479	Starter handle	1
12	13X51	Retaining screw lock washer	1	30	44A19	Starter rope and anchor	1
13	202356	Starter spindle washer	1	31	202591	Filler plug seal	1
14	276643	Starter spindle and pin	1	32	277022	Starter housing and anchor	1
15	202156	Starter hub pin	1	33	203107	Fuel and lubrication transfer	1
16	202155	Equalizer spring	3	34	203314	Medallion transfer	1
17	202114	Equalizer cup	1				

* Not shown

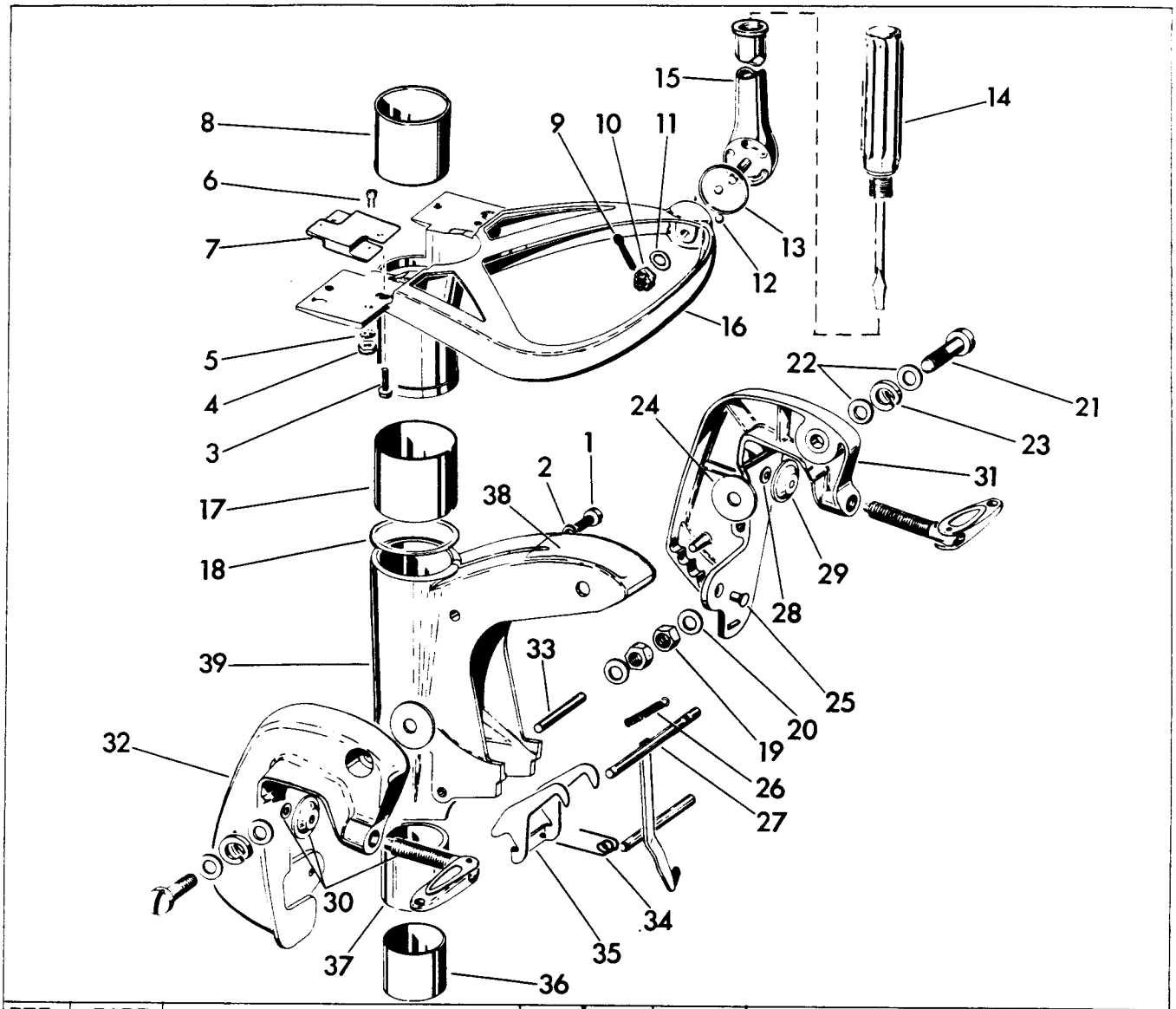
FLEETWIN ARMATURE PLATE - FLYWHEEL



REF. NO.	PART NO.	NAME OF PART	QTY.	REF. NO.	PART NO.	NAME OF PART	QTY.
1	301988	Flywheel nut	1	20	510193	High tension lead clamp screw	4
2	51X135	Starter ratchet base screw	3	21	510190	High tension lead clamp	1
3	19X124	Starter ratchet base lock washer	3	22	510218	High tension lead clamp	1
4	202111	Starter ratchet	1	23	580134	High tension lead assembly, upper	1
5	202971	Starter ratchet spacer	1	*	580135	High tension lead assembly, lower	1
6	303249	Inspection hole cover	1	24	120783	Marker	1
7	580107	Flywheel	1	25	510232	Spark plug rubber cover	2
8	510192	Armature plate mounting screw	2	26	510231	Spark plug lead spring terminal	2
9	3X28	Armature plate mounting screw lock washer	2	27	130255	Breaker mounting screw	2
10	510191	Armature mounting screw	2	28	510208	Bow washer	2
11	202728	Cam to arm plate screw, long	2	29	510185	Breaker eccentric screw	2
12	202992	Armature plate handle and cam screw, short	2	*	580148	Breaker assembly	2
13	202968	Armature plate cam	1	30	71A1052	Spring clip	2
14	202924	Armature plate handle screw	1	31	580123	Rocker arm assembly	2
15	277024	Armature plate handle with friction washer	1	32	510204	Breaker spring clip	2
16	202717	Armature plate handle rivet	1	33	510194	Breaker terminal screw	2
17	202713	Armature handle friction washer	1	34	580122	Breaker base assembly	2
*	580120	Armature plate less handle and cam assembly	1	35	510193	Condenser mounting screw	4
18	510195	Lamination mounting screw	4	36	510173	Condenser	2
19	580118	Coil and lamination assembly	2	37	510188	Oiler clip	1
				38	510189	Oiler wick	1
				39	510178	Rocker arm post	2
				40	580121	Armature plate and post assembly	1
				41	510168	Magneto cam	1

* Not shown

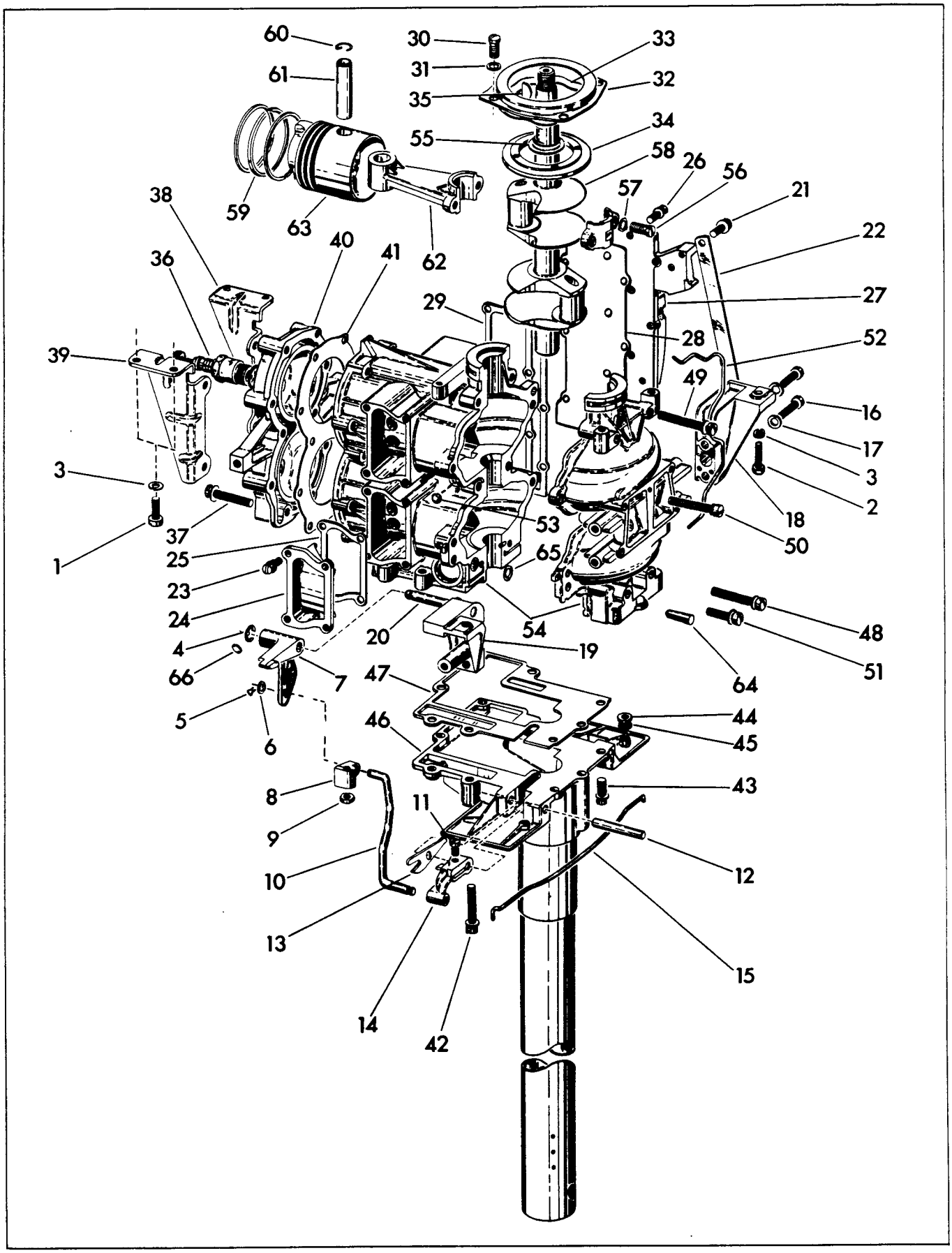
FLEETWIN CARRYING HANDLE - PIVOT BEARING - STERN BRACKET



REF. NO.	PART NO.	NAME OF PART	QTY.	REF. NO.	PART NO.	NAME OF PART	QTY.
1	37X121	Pivot bearing clamp screw	1	21	202024	Tilting bolt	2
2	202387	Pivot bearing clamp screw lock washer	1	22	202026	Tilting bolt washer	3
				23	202027	Tilting bolt spring	2
3	203023	Shock mount screw	4	24	202036	Pivot bearing friction washer	2
4	130728	Shock mount screw nut	4	25	202008	Stern bracket rivet	1
5	51X137	Lock washer	4	26	202021	Tilting lever spring	1
6	203036	Shock mount screw	4	27	276417	Tilting lever assembly	1
7	277080	Shock mount assembly	2	28	302420	Button retainer	2
8	203037	Carrying handle thrust absorber	1	29	41A48	Clamp screw button	2
9	17X186	Steering lever cotter pin	1	30	375744	Clamp screw assembly with button and retainer	2
10	7X25	Steering lever nut	1				
11	202000	Steering lever friction washer	1	31	276614	Bracket with screw and button (port)	1
12	160084	Steering lever ball	3	32	276615	Bracket with screw and button (starboard)	1
13	202617	Steering lever shim	1				
14	276420	Steering handle grip assembly	1	33	202424	Reverse lock pin	1
15	276899	Steering handle and screw	1	34	202447	Reverse lock spring	1
16	202767	Carrying handle	1	35	202458	Reverse lock	1
17	202439	Pivot bearing shim	1	36	202443	Pivot bearing bushing liner	1
18	301892	Thrust washer (when needed)	1	37	202691	Pivot bearing bushing	1
*	276595	Stern bracket assembly	1	38	202815	Operating instruction transfer	1
19	202025	Tilting bolt lock nut	2	39	276896	Pivot bearing assembly	1
20	202026	Tilting bolt washer	3				

* Not shown

FLEETWIN POWER HEAD

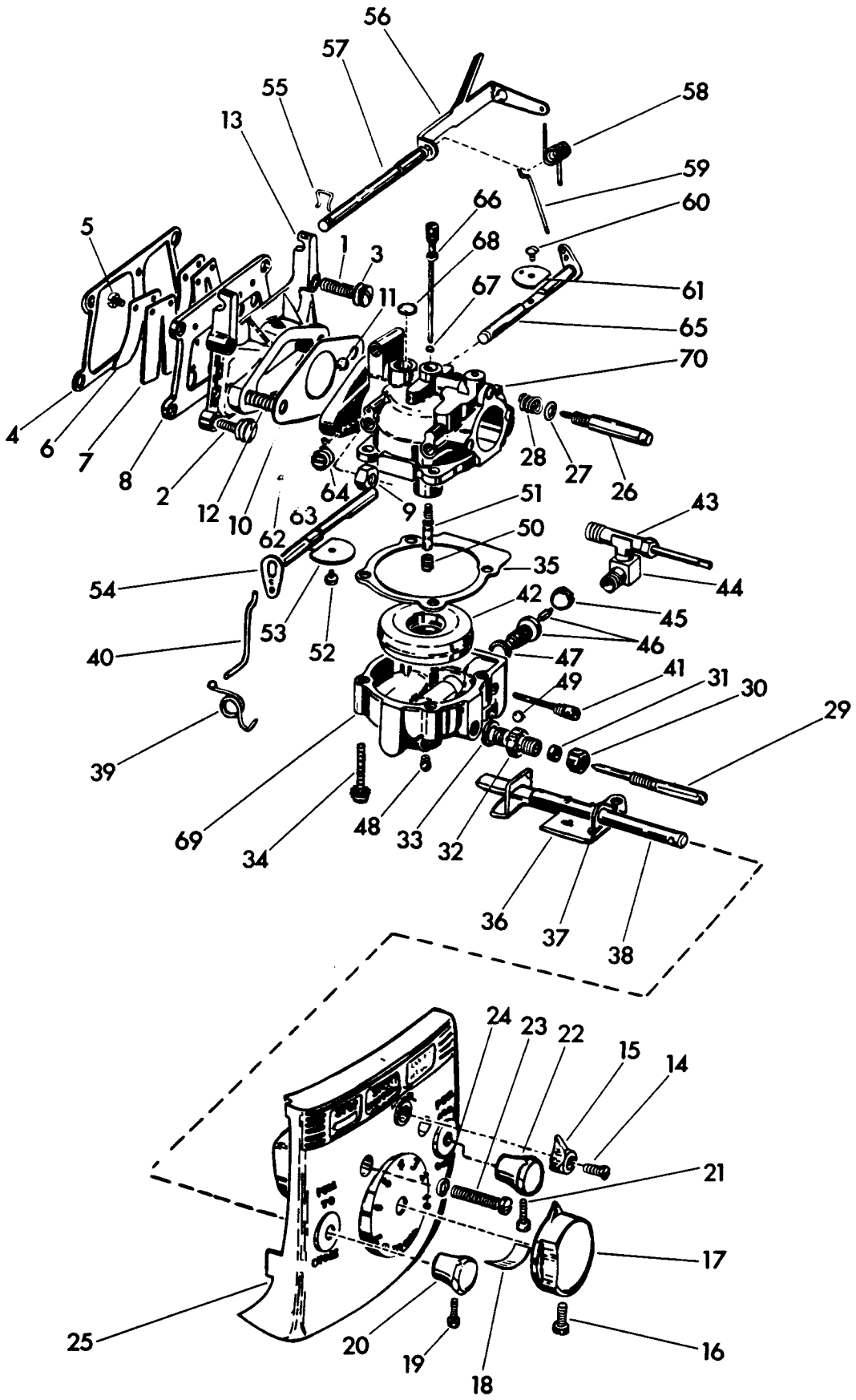


FLEETWIN POWER HEAD

REF. NO.	PART NO.	NAME OF PART	QTY.
1	51X47	Starter housing and tank mounting screw	4
2	21X167	Fuel tank mounting screw	2
3	19X124	Starter housing and tank mounting screw lock washer	2
4	202139	Cam lever retaining ring	1
5	71A1052	Cam lever rod retaining clip	1
6	71X1531	Cam lever rod washer	1
7	202731	Clutch operating cam lever	1
8	202723	Clutch control adjusting sleeve	1
9	21X274	Clutch control knob lock nut	1
10	202649	Cam shift operating rod	1
11	43X259	Secondary shift lever screw	1
12	202664	Lever pivot shaft	1
13	203038	Primary shift lever	1
14	202676	Secondary shift lever (upper)	1
15	202745	Secondary shift lever spring rod	1
16	21X167	Mounting bracket screw	4
17	19X124	Bracket screw lock washer	4
18	202576	Mounting bracket (port)	1
19	276879	Mounting bracket (starboard)	1
20	202734	Cam lever shaft	1
21	202927	Shift lever spring screw	1
22	202675	Secondary Shift Lever Spring	1
23	202724	By pass cover plate screw	8
24	202527	By pass cover	2
25	202528	By pass cover gasket	2
26	202916	Exhaust cover plate screw	10
27	203019	Exhaust cover plate	1
28	203020	Exhaust cover plate water baffle	1
29	202580	Exhaust cover plate gasket	1
30	133091	Armature plate support screw	4
31	551069	Armature plate support screw lock washer	4
32	302441	Armature plate support	1
33	301855	Armature plate wave washer	1
34	302442	Armature plate retaining ring	1
35	120395	Flywheel key	1
36	200322	Spark plugs	2
37	202727	Cylinder head cap screw	10
38	202530	Starter housing bracket (port)	1
39	202531	Starter housing bracket (starboard)	1
40	277140	Cylinder head	1
41	203034	Cylinder head gasket	1
42	202864	Exhaust collector screw	1
43	202927	Exhaust collector screw	6
44	15X254	Shock mount screw nut	4
45	51X137	Lock washer	4
46	277091	Exhaust collector and drive shaft tube assembly	1
46	277092	Exhaust collector and drive shaft tube assembly (5 in. longer)	1
47	202581	Exhaust collector housing gasket	1
48	202824	Crank case to cylinder screw	2
49	202823	Crank case to cylinder screw	2
50	202564	Crank case screw	2
51	202825	Crank case to cylinder screw	4
52	202594	Oil transfer tube	1
53	27X309	Water passage welch plug	3
54	277093	Cylinder and crank case assembly	1
55	41A362	Oil slinger	1
56	43A44	Connecting rod screw	4
57	41A17	Connecting rod screw lock plate	4
58	203221	Crank shaft	1
59	202524	Piston ring	6
59	203232	Piston ring .020 O.S.	6
60	120325	Piston pin spring ring	4
61	202522	Piston pin	2
61	202523	Piston pin .005 O.S.	2
62	277195	Connecting rod assembly	2
63	276790	Piston, less rings	2
63	277200	Piston, less rings, .020 O.S.	2
64	300402	Taper pin	2
65	202893	Water port seal "O" ring	1
66	7X178	Welch plug, oil reservoir	1
*	277090	Tool kit	1
*	551250	Spark plug wrench	1
*	43A128	Breaker and spark plug feeler	1

* Not shown

FLEETWIN CARBURETOR ASSEMBLY



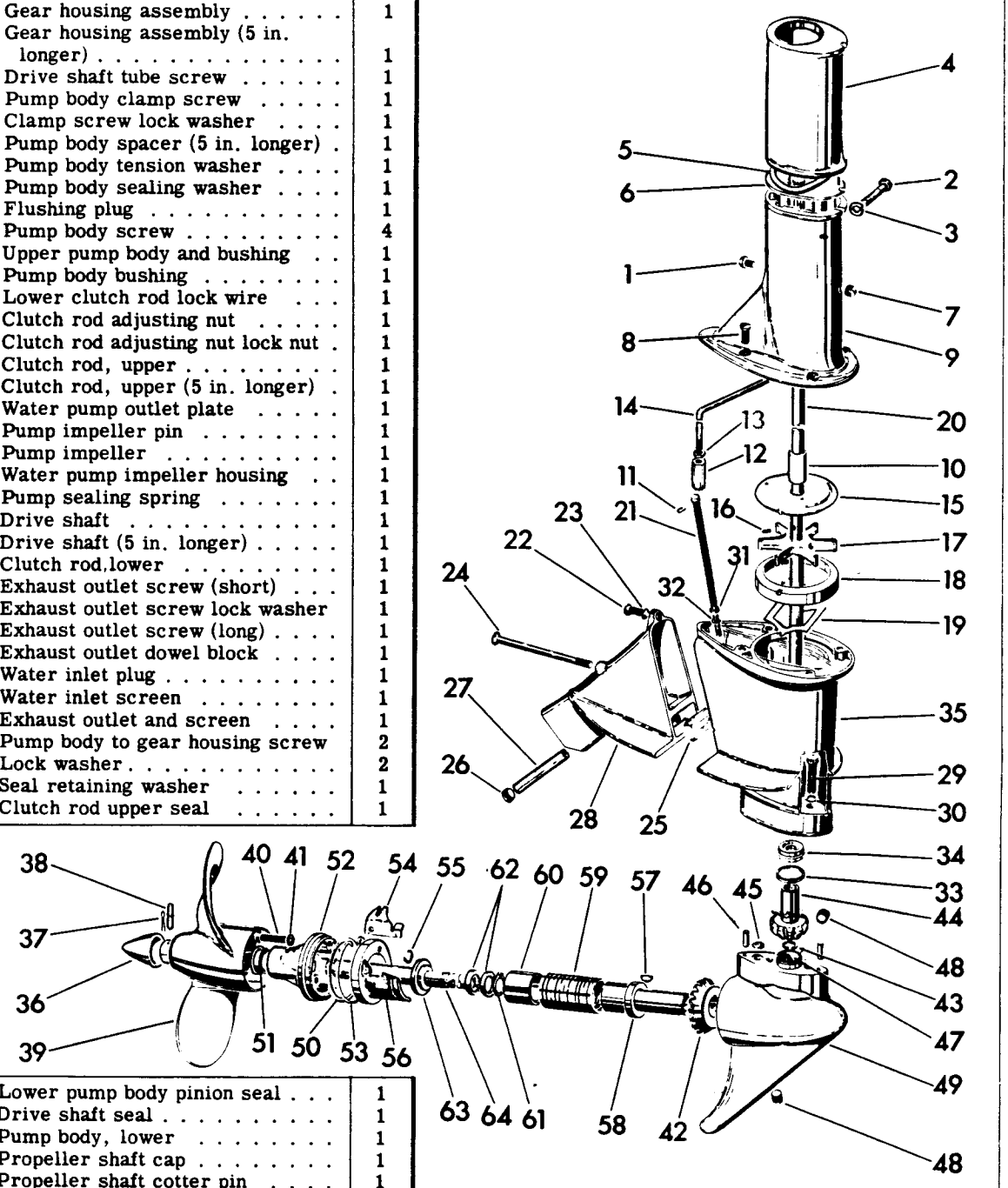
FLEETWIN CARBURETOR ASSEMBLY

REF. NO.	PART NO.	NAME OF PART	QTY.	REF. NO.	PART NO.	NAME OF PART	QTY.
*	276978	Carburetor and control panel assembly	1	35	551142	Float bowl gasket	1
				36	202630	Choke rod bracket	1
*	276981	Carburetor assembly less panel	1	37	202868	Choke shaft friction clip	1
1	203064	Carburetor manifold screw (upper)	2	38	202632	Choke rod	1
2	203065	Carburetor manifold screw (lower)	2	39	202657	Choke rod spring	1
3	300154	Carburetor manifold screw washer	4	40	202658	Choke rod to lever link	1
4	202602	Carburetor manifold gasket	1	41	551202	Float pinion pin	1
5	202607	Reed valve screw	4	42	590627	Float assembly	1
6	202688	Reed back-up plate	2	43	276985	Fuel valve assembly	1
7	202667	Reed	2	44	202900	Fuel valve elbow	1
8	276853	Carburetor reed plate assembly	1	45	551139	Inlet needle plug screw	1
9	19X136	Carburetor manifold stud nut	2	46	276914	Inlet needle and seat assembly - matched	1
10	551081	Carburetor gasket	1				
11	202785	Channel plug	3	47	551203	Inlet seat gasket	1
12	550494	Carburetor manifold stud	2	48	551132	Float bowl drain screw	1
13	276987	Carburetor manifold and stud assembly	1	49	160088	Float bowl channel plug	2
				50	202911	Body plug screw	1
14	302412	Low speed knob screw	1	51	202778	Nozzle	1
15	276891	Low speed knob and screw	1	52	551133	Choke shutter screw	1
16	43X147	High speed knob screw	1	53	202783	Choke shutter	1
17	276906	High speed knob assembly	1	54	276911	Choke shaft and lever assembly	1
18	202656	Knob retainer spring	1	55	71A1052	Cam follower clip	2
19	71X1304	Choke knob screw	1	56	202663	Cam follower lever	1
20	276905	Choke knob assembly	1	57	202619	Cam follower shaft	1
21	53X196	Fuel knob screw	1	58	202616	Cam follower spring	1
22	276989	Fuel valve knob	1	59	202621	Throttle link	1
23	302411	Control panel screw	2	60	551133	Throttle shutter screw	1
24	3X28	Control panel screw lock washer	2	61	202779	Throttle shutter	1
25	202674	Control panel	1	62	202777	Anchor pin	1
26	202782	Idle adjusting screw	1	63	202781	Spring clip	1
27	202772	Idle adjusting screw washer	1	64	551145	Return spring	1
28	202949	Idle adjusting screw spring	1	65	276910	Throttle shaft and lever assembly	1
29	276915	Needle valve adjusting screw assembly	1	66	276912	By pass tube assembly	1
				67	551141	By pass tube gasket	1
30	130587	Stuffing box nut	1	68	120773	Welch plug	1
31	171089	Stuffing box packing	2	69	276998	Float bowl assembly (lower)	1
32	130586	Stuffing box gland	1	70	276997	Carburetor body assembly (upper only)	1
33	170182	Stuffing box gasket	1				
34	551136	Carburetor body screw	4				

* Not shown

FLEETWIN PUMP BODY - GEAR HOUSING

REF. NO.	PART NO.	NAME OF PART	QTY.
*	276889	Gear housing assembly	1
*	276890	Gear housing assembly (5 in. longer)	1
1	133091	Drive shaft tube screw	1
2	7X31	Pump body clamp screw	1
3	202387	Clamp screw lock washer	1
4	276895	Pump body spacer (5 in. longer)	1
5	202433	Pump body tension washer	1
6	202618	Pump body sealing washer	1
7	130314	Flushing plug	1
8	202699	Pump body screw	4
9	276897	Upper pump body and bushing	1
10	202431	Pump body bushing	1
11	203040	Lower clutch rod lock wire	1
12	203039	Clutch rod adjusting nut	1
13	202780	Clutch rod adjusting nut lock nut	1
14	203041	Clutch rod, upper	1
14	203042	Clutch rod, upper (5 in. longer)	1
15	202444	Water pump outlet plate	1
16	300771	Pump impeller pin	1
17	276983	Pump impeller	1
18	202411	Water pump impeller housing	1
19	202623	Pump sealing spring	1
20	202908	Drive shaft	1
20	202909	Drive shaft (5 in. longer)	1
21	203118	Clutch rod,lower	1
22	202699	Exhaust outlet screw (short)	1
23	302466	Exhaust outlet screw lock washer	1
24	202610	Exhaust outlet screw (long)	1
25	202862	Exhaust outlet dowel block	1
26	13A542	Water inlet plug	1
27	202661	Water inlet screen	1
28	276898	Exhaust outlet and screen	1
29	202624	Pump body to gear housing screw	2
30	202349	Lock washer	2
31	202902	Seal retaining washer	1
32	202612	Clutch rod upper seal	1



33	202642	Lower pump body pinion seal	1
34	202274	Drive shaft seal	1
35	277049	Pump body, lower	1
36	201880	Propeller shaft cap	1
37	302417	Propeller shaft cotter pin	1
38	202775	Propeller drive pin	1
39	276866	Propeller assembly	1
40	33X78	Gear housing cap screw	3
41	202613	Gear housing cap screw washer	3
42	202654	Propeller shaft gear	1
43	301883	Drive shaft retaining ring	1
44	276903	Pinion and retaining ring assembly	1
45	202590	Clutch rod lower seal	1
46	202700	Gear housing dowel pin	2
47	202652	Pinion bushing	1
48	130314	Gear housing plug	2
49	276894	Gear housing and pinion bushing	1
50	202641	Gear housing cap seal	1
51	202686	Propeller shaft seal	1
52	276840	Gear housing cap and bushing assembly	1
53	202640	Gear housing cap retaining ring	1
54	203116	Clutch lever	1
55	203117	Clutch lever spring	1
56	203115	Clutch lever support collar	1
*	277128	Propeller shaft and clutch drum assembly	1
57	203077	Propeller shaft key	1
58	276904	Clutch drum, front, and gear drive hub assembly	1
59	202659	Clutch drive spring	1
60	202660	Clutch drum, rear	1
61	202716	Thrust washer retaining ring	1
62	202684	Clutch slip ring	9
63	202682	Propeller shaft thrust washer	1
64	202639	Propeller shaft only	1

* Not shown

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