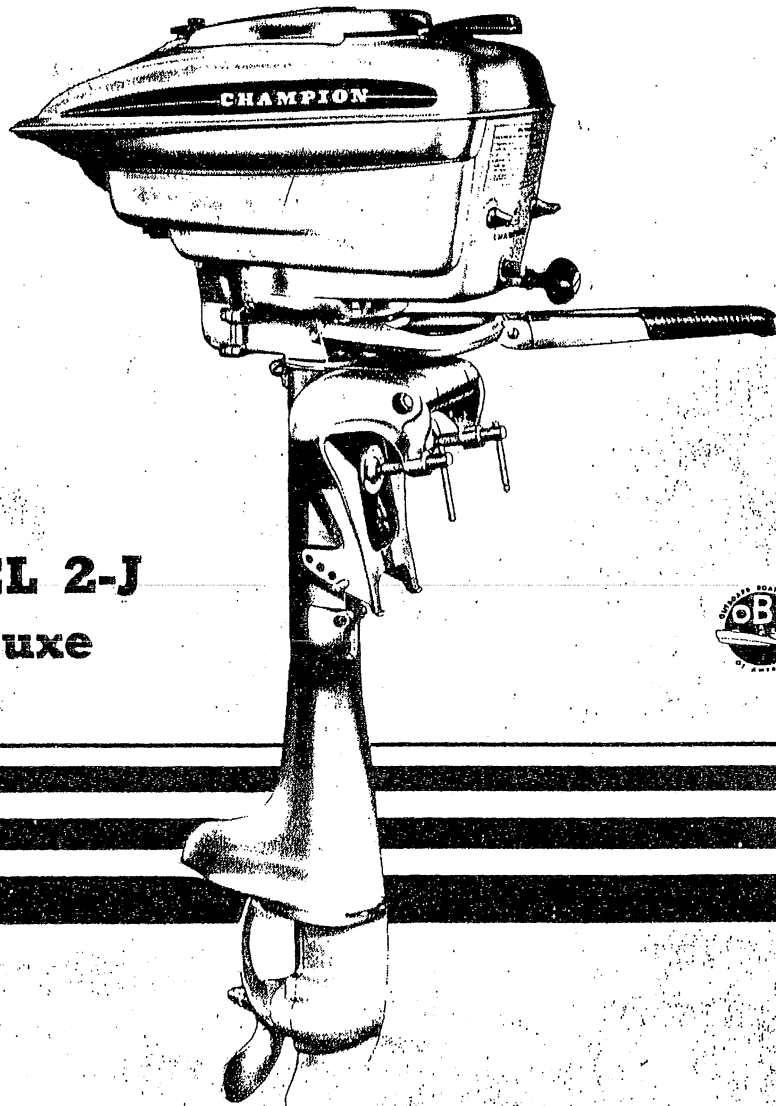


CHAMPION



MODEL 2-J
De Luxe



OPERATING INSTRUCTIONS
and
REPLACEMENT PARTS
SWANSON OUTBOARD SERVICE, CO., Inc.

PHONE 533-2488

5215 LAKELAND AVENUE NORTH
MINNEAPOLIS, MINNESOTA

CHAMPION OUTBOARD MOTOR

MODEL 2-J

OPERATING INSTRUCTIONS

1. Open gas tank shut-off. Open gas cap vent screw about three turns.
2. Open high speed adjustment valve $1\frac{1}{4}$ turns when motor is cold.
3. Set control arm to the START position marked on gas tank.
4. Push down on CHOKE lever and hold down while pulling starter cord.
5. After motor starts, move magneto lever to the right for high speed; close high speed adjustment valve until motor runs smoothly.
6. Should motor slow down after starting, choke quickly once or twice.
7. To stop motor, move magneto lever to the left or STOP position.

BREAK-IN INSTRUCTIONS

For the first 10 hours of operation the motor should be run not faster than $\frac{3}{4}$ throttle or at Start position. We recommend the use of 1 pint of S.A.E. 30 non-detergent oil to each gallon of gasoline during the break-in period.

LUBRICATION INSTRUCTIONS

The most important factor in the operation of any internal combustion engine is proper lubrication. Properly lubricate your motor and you will enjoy many years of highly satisfactory service. Improper lubrication can result in nothing but premature wear and unnecessary expense.

Your new Champion motor is a two cycle engine and lubrication of the piston, cylinder, connecting rod, and crank shaft bearings is supplied by oil mixed with gasoline. The proportions of this mixture are very important. Also, the grades of gasoline and oil are equally important.

Clear gasoline or oil should never be poured into the gas tank. Thorough mixing should be done in a separate clean container.

LUBRICANT RECOMMENDED

We recommend the use of any high grade S.A.E. 30 non-detergent oil which will mix readily with gasoline. Mix this oil with any regular grade of gasoline, using $\frac{3}{4}$ pint of oil to one gallon of gasoline for normal operation after break-in period.

AFTER STARTING MOTOR

Since you have set the main needle valve, you need pay no more attention to it. To regulate your speed, move the magneto lever to the right for increasing speed or to the left for decreasing speed. The magneto lever is synchronized with the carburetor throttle giving the motor single lever control.

GREASING LOWER UNIT

Outside of lubrication in the form of motor oil in the gasoline, there is one more important lubrication requirement which must be attended to, that is to keep the lower unit gear-housing filled with any high grade outboard gear lubricant. You should inspect the lower unit at least once every month, and more often in the event the motor is in constant use.

To fill the lower unit with grease, remove the aluminum grease plug, Part IJ2, located in the bottom of the lower unit cap, then remove the air vent screw located near the top of the cap. (Part IJ1700). Fill the gear housing with the lubricant to full capacity. Replace grease plug screw and air vent screw.

Outboard gear lubricant is usually supplied in handy tube form which fits the grease opening and allows quick filling with no waste.

For long gear life, be sure to follow the above directions.

PROPELLER SHEAR PIN

This soft "safety pin" shears off when you strike an obstruction at full speed, thus protecting the gears, shafts, and other mechanism of your motor from damage. When this happens shut your motor off immediately. To replace shear pin, remove the cotter-pin in the propeller nut and remove nut. Slip off the propeller and replace the broken pin with a new one. Make sure to replace nut and cotter pin. The nut should be drawn up until the propeller fits snug against the shear pin.

SALT WATER INSTRUCTIONS

You will extend the life and performance of your motor when used in salt water by flushing fresh water through the motor after use in salt water. This may be done by running the motor in a barrel of fresh water or by forcing water through the outlet water line with a hose.

COLD WEATHER MOTOR CARE

To prevent your motor from freezing in cold weather, the following precaution should be observed. When your motor is idle or before storing for the cold weather period, drain it by placing it in an upright position. Remove aluminum grease plug and vent screw in bottom of lower unit gear case and drain any water and old grease that has accumulated, then repack with fresh grease. If motor is to be stored, remove spark plug and pour 2 ounces of oil into the cylinder. Then revolve flywheel a few times to distribute the oil within the motor.

SERVICE INSTRUCTIONS

CARBURETOR ADJUSTMENTS:

1. Close idle adjustment screw all the way in until it is snug (do not force needle against seat). Then open idle screw $\frac{1}{2}$ turn.
2. Close high speed adjustment screw. The knob should register 0. Then open $1\frac{1}{4}$ turns.
3. Start motor and move stator plate control handle to position marked "Fast" on gas tank.
4. Close the high speed adjustment screw, until the motor begins to slow down from lack of gas. Then open high speed adjustment screw approximately one number on the dial or until motor picks up speed and runs smoothly.
5. Move stator plate control lever to position marked "Slow" on gas tank. The motor should now idle slowly. However, atmospheric changes and fuel mixtures may require opening or closing the idle adjustment screw slightly.

MAGNETO ADJUSTMENTS:

Ordinarily these magnetos will operate over extremely long periods of time without the need for adjustment or repair. However, if engine operating difficulties are experienced which appear to be caused by the ignition system, the magneto output can be checked to determine whether this unit is functioning properly.

Disengage the high-tension cables from the spark plugs. Hold the cable by its insulation in such a position that the metal terminal is about $\frac{3}{16}$ -inch from some grounded part of the engine. While holding the wire in this position, spin the engine over at normal cranking speed. If the magneto sparks this gap the trouble is not in the magneto.

Should the magneto fail to spark, inspect the contact breaker. If the contact points are dirty they can be cleaned with a little clear gasoline. Make sure no particles of lint are left between the point surfaces if a brush or cloth is used. If the points are severely burned install a complete new contact breaker assembly.

See that the contacts are properly adjusted. When fully open, there should be eighteen thousandths (.018") of an inch between the point surfaces. This can be checked with a feeler gage. If the contacts do not open the proper distance, loosen the screws which

hold the contact breaker, and shift the assembly slightly so as to obtain the correct clearance of .018" between the point surfaces. If there still is no spark the coil or condenser may be defective. Any service station will correct the situation.

After each 100 hours of operation apply four (4) drops of a good grade S.A.E. No. 60 oil to the cam oiler felt. Blot off any excess oil with a clean cloth.

SPARK PLUG ADJUSTMENTS:

The spark plug should be kept clean and the point gap set at .030 inch. If the points are too badly corroded or burned away from long use, the plug should be replaced.

CARBURETOR DRAIN

There is a carburetor drain screw at bottom of control panel for the purpose of draining any water or dirt which may have accumulated in the carburetor bowl.

If gas does not flow freely, check gas tank screen.

OUTSIDE REPAIR CHARGES

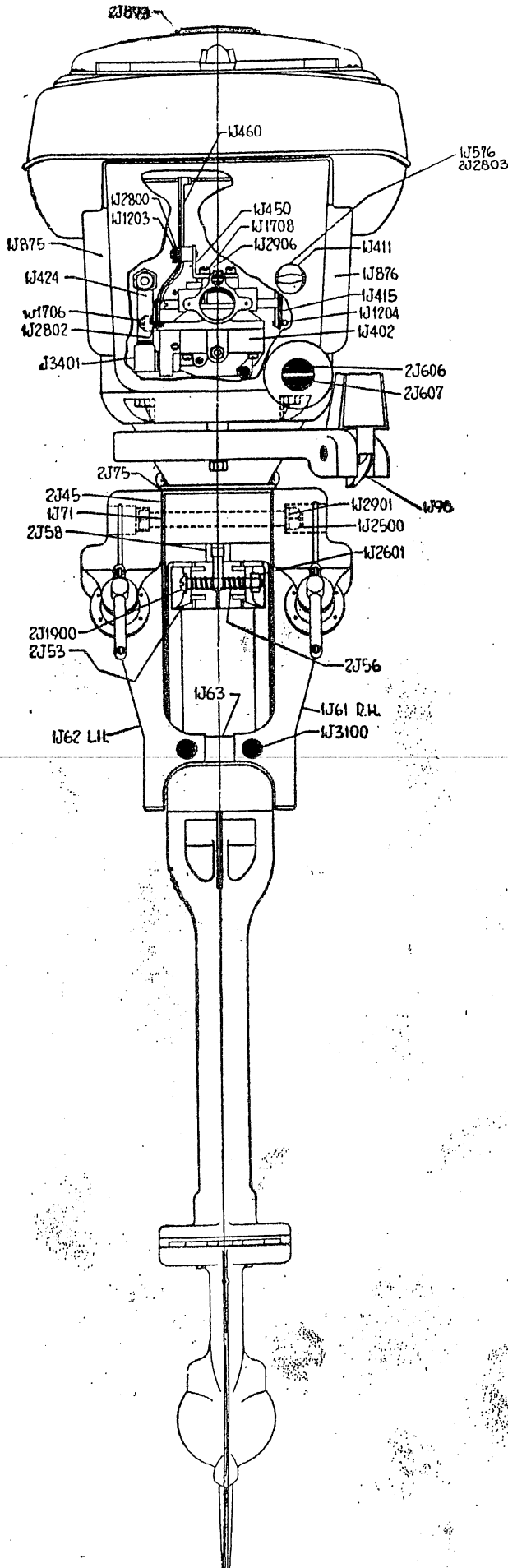
You have received with this motor a warranty covering workmanship and materials. We will not be responsible for work performed and time spent by other than the manufacturer of Champion Motors, unless such repairs are first authorized by us in writing.

WARNING!

Never raise lower unit above level of power head without first allowing water to drain from under-water exhaust housing.

Always store motor in an upright position.

Do not use so-called outboard motor gasoline or stove gas. Best results are obtained with regular gasoline.



CHAMPION

MODEL 2J

SPECIFICATIONS

Model—2-J DeLuxe Single.

Horsepower—4.2 at 4300 R.P.M., O.B.C. Certified.

No. Cylinders—1.

Bore and Stroke— $2\frac{1}{16}'' \times 1\frac{3}{4}''$.

Piston Displacement—5.84 cu. in.

Valves—Dual rotary valve, 2 port.

Carburetor—Dual jet concentric bowl type.

Ignition—Scintilla Magneto Alnico Rotor

Controls—Synchronous.

Gear Ratio—14-24.

Propeller—2 blade $8 \times 5\frac{1}{2}$.

Cooling System—Centrifugal Pump.

Gas Tank Capacity—5 qts.

Speed Range (depending upon boats used)—
Approx. 1 to 10 m.p.h.

Automatic Co-skipper Steering—Yes.

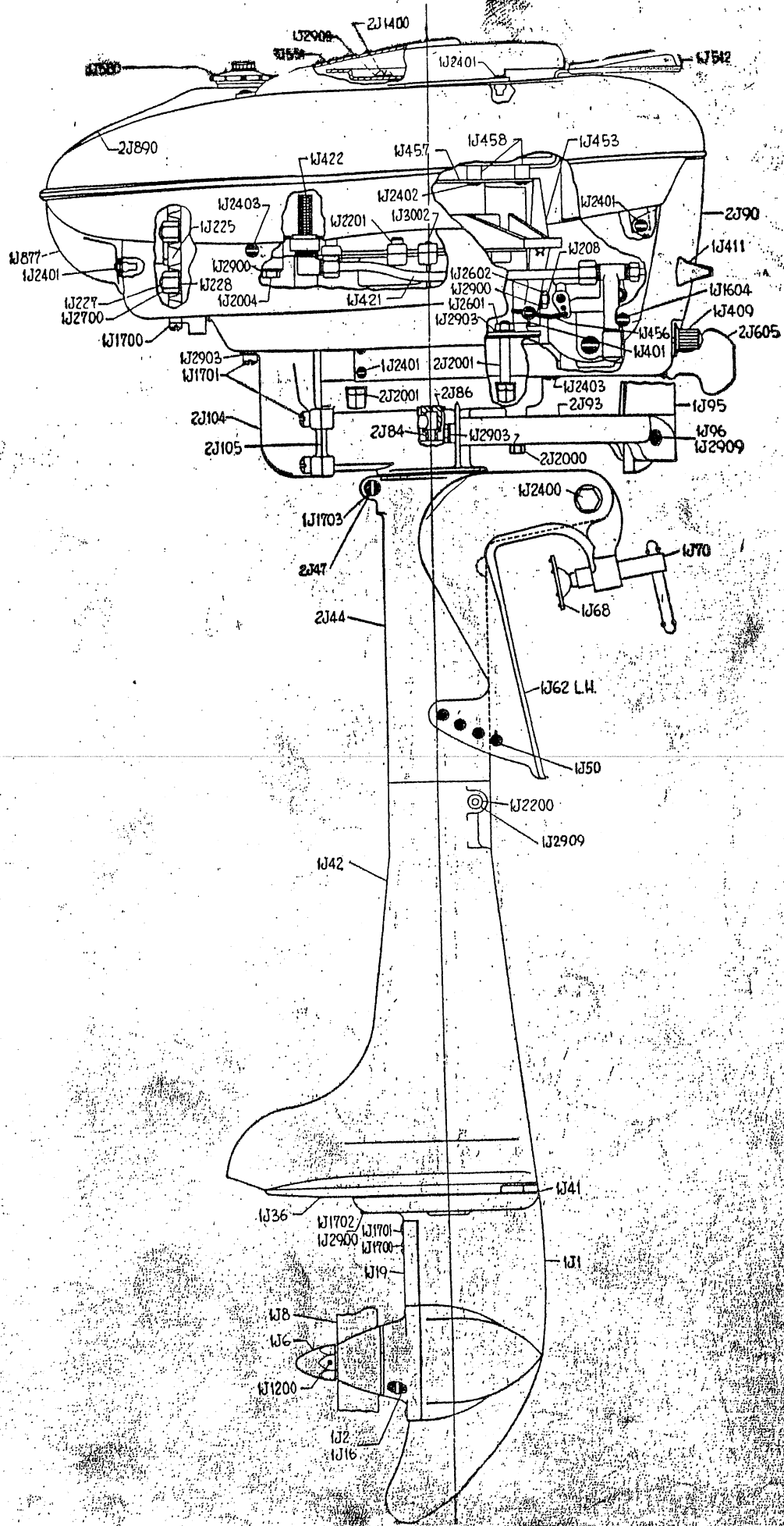
PLEASE NOTE!

The Champion Motors Company reserves the right to change motor specifications contained herein without notice. Any parts contained in your motor that are different from those listed in this parts book were changed either to improve your Champion or were necessary due to material substitutions.

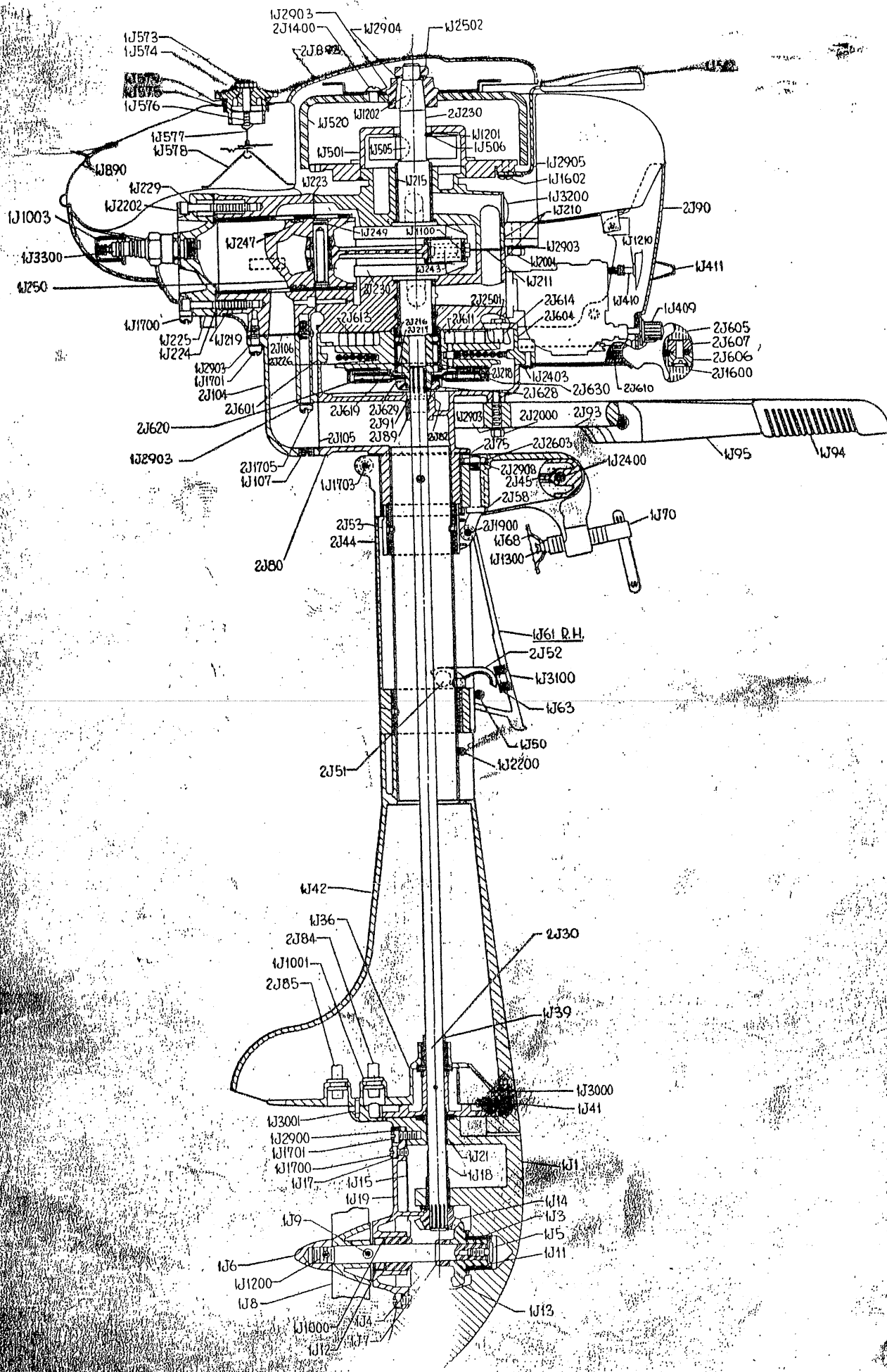
2-J PARTS LIST

Part No.	Part Name	No. Req'd	Part No.	Part Name	No. Req'd
1J2	Grease Plug	1	2J85	Discharge Water Line	1
1J3	Front Propeller Shaft Bearing	1	2J86	Water Line Fitting	2
1J4	Rear Propeller Shaft Bearing	1	2J89	Driveshaft Seal	1
1J5	Gear Lock Screw	1	2J90	Control Panel	1
1J6	Propeller Nut	1	2J91	Driveshaft Seal Washer	1
1J7	Propeller Shaft Thrust Collar	1	2J93	Carrying Handle	1
1J8	Propeller	1	1J94	Steering Handle Grip	1
1J9	Shear Pin	1	1J95	Steering Handle	1
1J11	Gear Lock Screw Washer	1	1J96	Steering Handle Bolt	1
1J12	Propeller Shaft	1	1J98	Steering Handle Friction Washer	2
1J13	Drive Gear	1	2J104	Expansion Chamber	1
1J14	Pinion Gear	1	2J105	Pivot Base Gasket	1
1J15	Lower Unit Cap Gasket	1	2J106	Expansion Chamber Flange	1
1J16	Grease Plug Gasket	1		Gasket	1
1J17	Vent Screw Gasket	1	1J107	Expansion Chamber Plug	1
1J18	Pinion Gear Bearing	1	1J208	Carburetor Studs	2
1J21	Driveshaft Center Bearing	1	2J210	Crankcase	1
2J30	Driveshaft Assembly	1	1J211	Crankcase Gasket	1
1J39	Upper Pump Housing Bearing	1	2J216NS	Crankshaft Seal	1
2J40	Tilting Bracket Assembly	1	2J217	Flat Spacer Washer	1
1K40	Water Pump Housing Assembly	1	2J218	Seal Retainer Ring	1
1K41	Pump Seal Plate	1	1J219	Water Passage Baffle	1
1J42	Driveshaft Housing	1	1J220	Cylinder Block and Sleeve	1
2J44	Tilting Bracket	1	1J223	Cylinder Base Gasket	1
2J45	Tilting Bracket Spacer	1	1J224	Cylinder Head Gasket	1
2J47	Tilting Bracket Spring	1	1J225	Cylinder Head	1
1J50	Boat Bracket Tilting Pin	1	2J226	Crankshaft Seal Washer	2
2J51	Reverse Lock Catch Rivet	2	1J227	Cylinder Head Stud	4
2J52	Reverse Lock Catch	1	1J228	Cylinder Head Stud Washer	4
2J53	Co-Pilot Clamp Casting	1	1J229	Cylinder Head Support Screw	2
2J56	Co-Pilot Spring	2		Washer	2
2J58	Co-Pilot Anchor	1	2J230	Crankshaft	1
1J60	Boat Bracket Sub-Assembly (Includes 1J61, 1J62, 1J63, 1J3100)	1	1J243	Connecting Rod Cap Screw	2
1J61	Boat Bracket—Right Hand	1	1J247	Piston Ring	2
1J62	Boat Bracket—Left Hand	1	1J249	Wrist Pin Lock	2
2J63	Boat Bracket Spacer Strap	1	1J250	Piston and Wrist Pin	1
1J68	Boat Bracket Clamp Screw Pad	2	1J401	Carburetor Gasket	1
1J70	Boat Bracket Clamp Screw	2	1J402	Carburetor	1
1J71	Tilting Bracket Friction Washer	2	1J409	High Speedd Ajustment Knob With Clip	1
2J75	Pivot Base Washer	1		Choke Lever	1
2J80	Pivot Base	1	1J410	Choke & Shut-Off Knob with Clip	2
2J82	Driveshaft Seal Snap Ring	1	1J415	Choke Lever Link	2
2J84	Intake Water Line	1	1J421	Gas Line	1
			1J422	Gas Line Elbow and Screen	1

BE SURE TO GIVE SERIAL NUMBER OF MOTOR WHEN ORDERING PARTS



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Part No.	Part Name	No. Req'd
1J424	Gas Line Shut-Off Valve	1
1J450	Synchronous Control Bracket	1
1J456	Synchronous Control Adjustment Lever	1
1J457	Synchronous Control Cam	1
1J458	Synchronous Control Cam Spacer	2
1J460	Synchronous Control Arm	1
1J501	Magneto	1
1J505	Magneto Key	1
1J506	Magneto Washer	1
1J512	Stator Plate Control Handle	1
1J520	Flywheel	1
2J551	Starting Plate	1
1J573	Gas Cap Vent Screw	1
1J574	Gas Cap Vent Screw Washer	1
1J575	Gas Cap Baffle Washer	1
1J576	Gas Cap Baffle Spring	1
	Choke Lever Spring	1
1J577	Gas Cap Swivel	1
1J578	Gas Cap Safety Spring Hook	1
1J579	Gas Cap Gasket	1
1J580	Gas Cap Assembly	1
2J600	STARTER ASSEMBLY COMPLETE	
2J601	REAR STARTER SPACER	1
2J604	FRONT STARTER SPACER	1
2J605	READY PULL HANDLE	1
2J606	HANDLE ROPE LOCK (RH)	1
2J607	HANDLE ROPE LOCK (LH)	1
2J610N	STARTER CABLE	1
2K611	STARTER RECOIL SPRING SCREW	1
2J612	READY PULL CABLE ANCHOR STRAP	1
2J613	STARTER RECOIL SPRING	1
2J614	CABLE AND SPRING ANCHOR SCREW	1
2J619	STARTER SPOOL LOCK RING	1
2J620	STARTER SPOOL	1
2J626	STARTER RATCHET ENGAGE SPRING	1
2J628	STARTER ANCHOR LOCK NUT	1
2J629	STARTER ANCHOR LOCK WASHER	1
2J630	STARTER RATCHET ASSEMBLY	1
2J652	READY PULL HANDLE	1
1J875	Left Shroud	1
1J876	Right Shroud	1
1J877	Spark Plug Cover Plate	1
2J890	Gas Tank	1
2J893	Gas Tank Cover	1
1J901	"Champion" Transfer	2
1J911	Blue Ribbon Seal of Quality Transfer	1
1J1000	Propeller Shaft Grease Seal	1
1J1001	Water Line Grommet	2

Part No.	Part Name	No. Req'd
1J1003	Spark Plug Nipple	1
1J1100	Connecting Rod Needle Bearing	32
1J1200	Propeller Nut Cotter Pin	1
1J1201	Magneto Rotor Retaining Ring	1
1J1202	Flywheel Key	1
1J1203	Synchronous Control Arm Spring Cotter	1
1J1204	Choke Lever Cotter Pin	2
2J1209	COVER PLATE RIV-NUT	
1J1210	Choke Lever Hinge Pin Clip	4
1J1300	Boat Bracket Clamp Pad Screw	2
2J1400	Starting Plate Screw	3
2J1600	Handle Rope Lock Screw	1
1J1602	Stator Plate Control Screw	2
1J1604	Front Shroud Screw	2
1J1700	Lower Unit Vent Screw	1
	Cylinder Head Seal Screw	2
1J1701	Lower Unit Cap Screw	4
	Expansion Chamber Screw	7
1J1702	Upper Lower Unit Screw	4
1J1703	Tilting Bracket Clamp Screw	1
2J1705	Expansion Chamber Screw (Long)	1
1J1706	Synchronous Control Swivel Screw	1
1J1708	Synchronous Control Bracket Screw	2
2J1900	Co-Pilot Clamp Lock Screw	1
2J2000	Carrying Handle Bolt	3
2J2001	Starter Spacer Bolt	4
1J2004	Gas Tank Screw	4
1J2200	Driveshaft Housing Clamp Screw	1
1J2201	Crankcase Screw USE AK2007	8
1J2202	Cylinder Head Support Screw	2
1J2400	Tilting Bracket Friction Bolt	1
1J2401	Spark Plug Cover Plate Screw	2
	Control Panel Anchor Screw	2
	Gas Tank Cover Plate Screw	4
	Control Panel—Motor Base Spacer Screw	4
1J2402	Synchronous Control Cam Screw	2
1J2403	Top Shroud Screw	4
	Control Panel Screw	2
1J2500	Tilting Bracket Friction Bolt Nut	1
2J2501	Starter Recoil Spring Anchor Nut	1

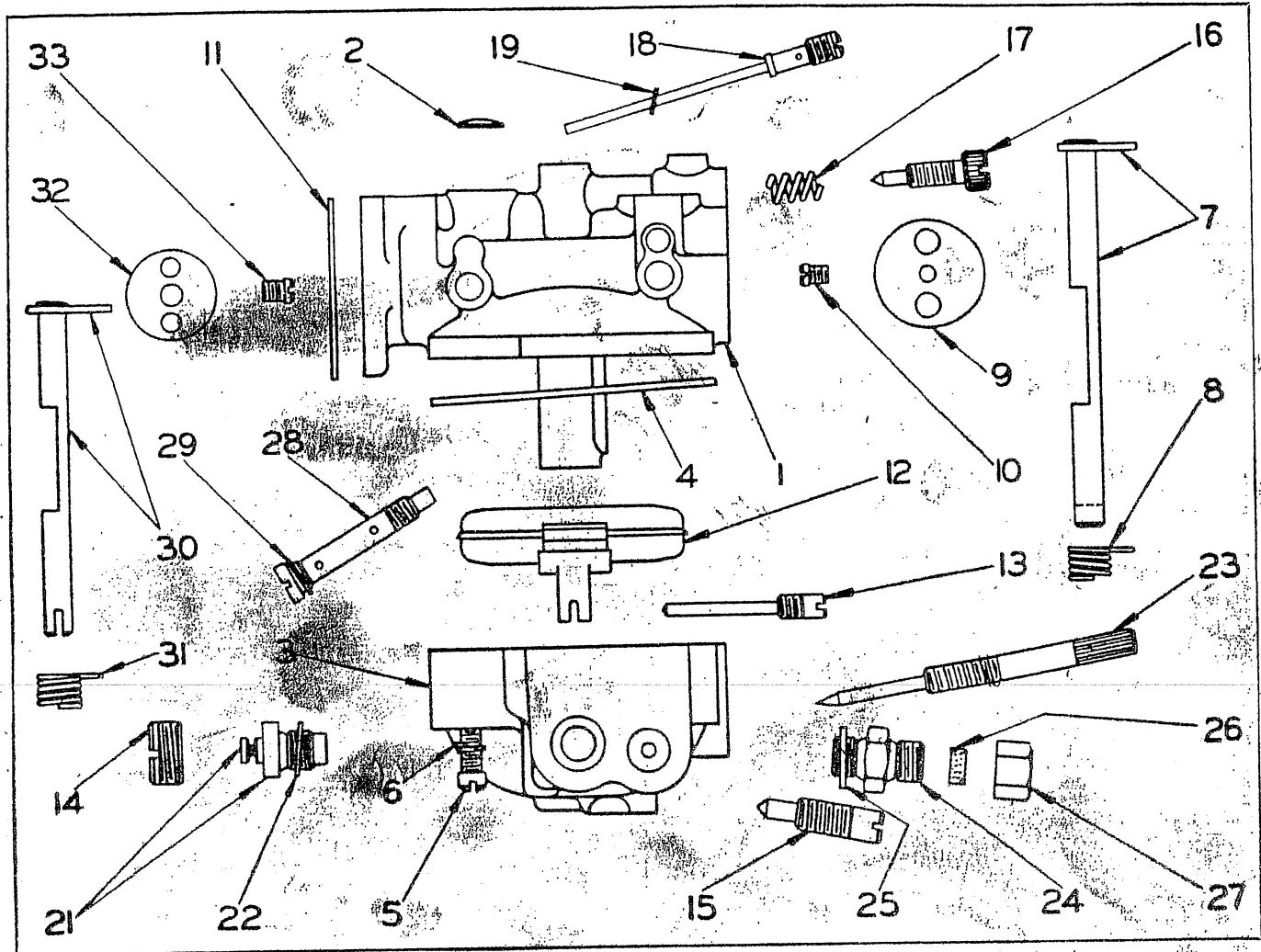
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Part No.	Part Name	
1J2502	Flywheel Nut	1
1J2601	Pivot Base & Spacer Bolt Nut	4
	Co-Pilot Clamp Screw Nut	1
1J2602	Carburetor Nut	2
2J2603	Co-Pilot Anchor Nut	1
1J2700	Cylinder Head Nut	4
1J2800	Synchronous Control Arm	
	Washer	1
1J2802	Synchronous Control Swivel	
	Washer	1
2J2803	Choke Lever Spring Washer	1
1J2900	Lower Unit Cap Screw Lock Washer	4
	Upper Lower Unit Cap Screw Lock Washer	4
	Carburetor Lock Washer	2
	Gas Tank Screw Lock Washer	4
1J2901	Tilting Bracket Friction Bolt Lock Washer	1
1J2903	Pivot Base Bolt Lock Washer	4
	Expansion Chamber Screw Lock Washer	8
	Starter Plate Screw Lock Washer	3
1J2905	Stator Plate Control Screw Lock Washer	2
1J2906	Synchronous Control Bracket Screw Lock Washer	2
2J2908	Co-Pilot Anchor Lock Washer	1
1J2909	Steering Handle Bolt Lock Washer	1
	Driveshaft Housing Clamp Screw Lock Washer	1
1K2911	Flywheel Nut Lock Washer	1
1J3000	Lower Unit Dowel Pin—Long	1
1J3001	Lower Unit Dowel Pin—Short	2
1J3002	Crankcase Dowel	2
1J3100	Boat Bracket Rivet	2
1J3200	Crankcase Expansion Plug	1
1J3300	Spark Plug	1
1J3401	Carburetor Inlet Elbow	1
2J3103	REVERSE LOCK CAM RIVET	
ASSEMBLIES		
1J990-1	Lower Unit Body Sub-Assembly	(Includes 1J1, 1J3, 1J18, 1J21, 1J3000, 1J3001)
1J990-2	Lower Unit Cap Sub-Assembly	(Includes 1J2, 1J4, 1J15, 1J16, 1J17, 1J19, 1J1000, 1J1700)

Part No.	Part Name
1J990-3	Propeller Shaft Assembly (Includes 1J5, 1J7, 1J11, 1J12, 1J13)
2J990-6	Lower Unit Assembly (Includes 1J990-1, 1J990-2, 1J990-3, 1J14, 2J30, 1J36, 1J41, 1J1701, 1J2900)
2J990-10	Boat Bracket Assembly (Includes 2J40, 2J45, 2J47, 1J50, 2J58, 1J60, 1J68, 1J70, 1J71, 1J1300, 1J1703, 1J2400, 1J2500, 2J2603, 1J2901, 2J2908)
2J990-12	Pivot Base & Boat Bracket Assembly Includes 2J990-10, 2J53, 2J75, 2J80, 2J1900, 1J2601)
2J990-14	Control Panel & Choke Lever Assembly (Includes 2J90, 1J410, 1J411, 1J576, 2J2803)
2J990-16	Crankcase Assembly (Includes 1J208, 2J210, 1J211, 1J227, 1J2201, 1J3002, 1J3200)
1J990-18	Connecting Rod Assembly (Includes 1J240, 1J1100)
1J990-19	Piston Assembly (Includes 1J247, 1J249, 1J250)
2J990-20	Power Head Assembly (Includes 1J990-16, 1J990-18, 1J990-19, 2J216, 2J217, 2J218, 1J219, 1J220, 1J223, 1J224, 1J225, 2J226, 1J228, 1J229, 2J230, 1J1700, 1J2700)
1J990-23	Carburetor Assembly (Includes 1J402, 1J424, 1J450, 1J456, 1J460, 1J1708, 1J2906, 1J3401)
1J990-24	Magneto Assembly (Includes 1J457, 1J458, 1J501, 1J512, 1J520, 1J1602, 1J2402, 1J2905)
2J990-26	Gas Tank Assembly (Includes 1J422, 1J580, 2J890, 1J901, 1J911)
1J990-27	Steering Handle and Grip (Includes 1J94, 1J95)
2J990-28	Complete Set of Gaskets (Includes 1J15, 1J16, 1J17, 2J105, 2J106, 1J211, 1J223, 1J224, 1J401, 1J579, 1J1000)
2J990-30	Pivot Base Sub-Assembly (Includes 2J53, 2J75, 2J80, 2J1900, 1J2601)
2J990-32	Starter Handle Assembly (Includes 2J605, 2J606, 2J607, 2J1600)

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CARBURETOR MODEL ME-1A—STANDARD ON MODEL 2-J



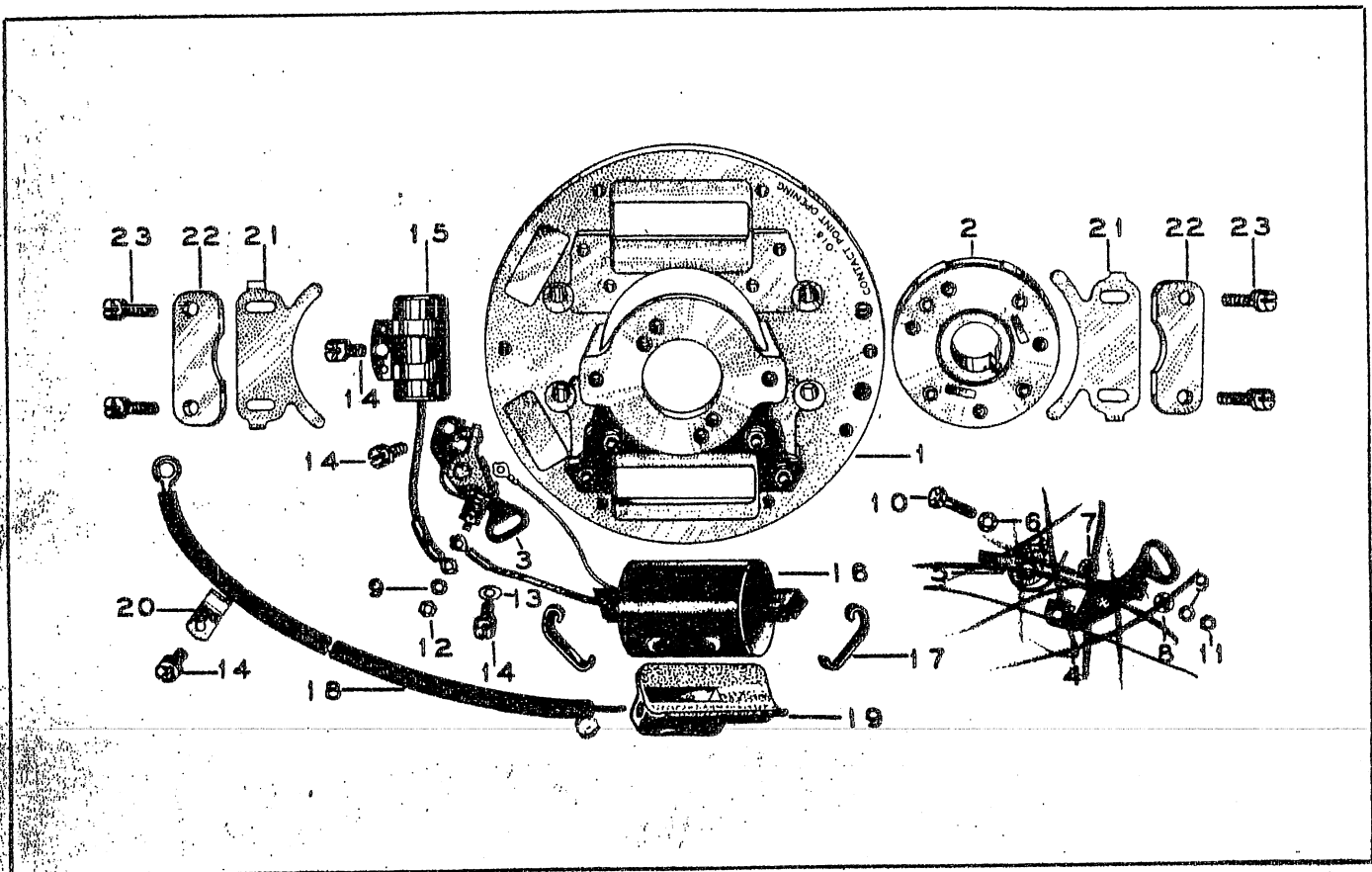
Ref. No.	Part No.	No. Req.	Description
1	07955	1	Body, Upper Half
2	*02531	1	Body Channel Welch Plug
3	07953	1	Fuel Bowl
4	07951	1	Body Gasket
5	06062	4	Body Retaining Screw
6	0992	4	Body Retaining Screw Lockwasher
7	07946	1	Choke Shaft and Lever
8	*07910	1	Choke Return Spring
9	03739	1	Choke Shutter
10	05430	1	Choke Shutter Screw
11	05591	1	Flange Gasket
12	07804	1	Float
13	*07901	1	Float Lever Pinion Screw
14	07896	1	Fuel Bowl Plug Screw (Large)
15	*07952	1	Fuel Bowl Drain Valve
16	*06910	1	Idle Adjustment Screw
17	*05725	1	Idle Adjustment Screw Spring

Ref. No.	Part No.	No. Req.	Description
18	*07938	1	Idle Tube
19	07900	1	Idle Tube Gasket
20	*07895	1	Inlet Needle, Seat and Gasket
21	02510	1	Inlet Seat Gasket
22	*08156	1	Main Adjustment Screw
23	0702	1	Main Adjustment Screw Gland
24	0676	1	Main Adjustment Screw Gland Gasket
25	*0709	1	Main Adjustment Screw Packing
26	*0703	1	Main Adjustment Screw Packing Nut
27	*07959	1	Main Nozzle
28	02658	1	Main Nozzle Gasket
29	07943	1	Throttle Shaft and Lever
30	*07944	1	Throttle Return Spring
31	*07944	1	Throttle Shutter
32	*07980	1	Throttle Shutter Screw
33	*05430	1	Throttle Shutter Screw
	*08175		Gasket and Packing Set
	08178		Repair Parts Kit
	1J402		Carburetor

(* Identifies Parts Included in Part No. 08176 Repair Parts Kit)

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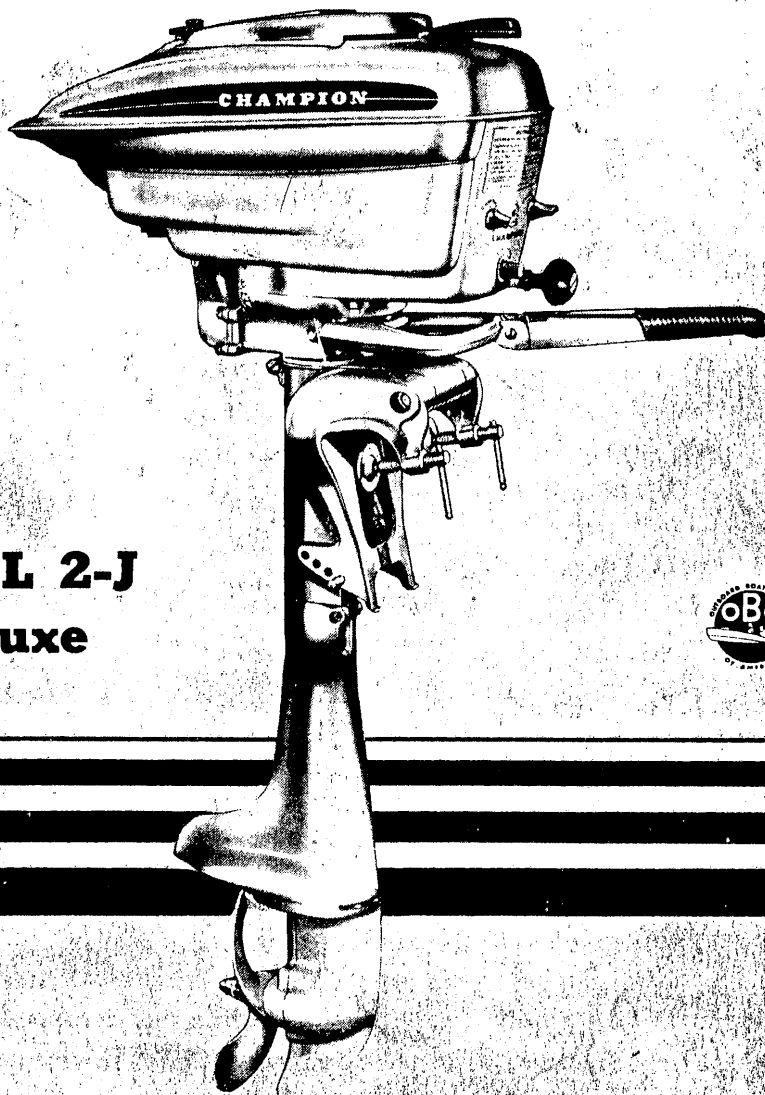
K1-203 MAGNETO SPECIFICATION NO. 10-55270



Ref. No.	Part No.	No. Req.	Description
1	10-53177	1	Flange - Mounting
2	10-38334	1	Magnet - Rotating
3	10-54940	1	CONTACT ASSEMBLY BREAKER (BE 2)

Ref. No.	Part No.	No. Req.	Description
12	10-38682	1	Nut (Primary Connector to Contact Assembly)
13	10-14268	1	Washer - Plain (Contact Assembly Screw, Adjustable End)
14	10-51662	5	Screw and Lock Washer (2, Contact Assembly) (2, H. T. Lead Clamp) (1, Condenser)
15	10-82104	1	Condenser -
16	10-38222Y	1	Coil
17	10-37804	2	Clamp - Coil Core
18	10-38944	1	Lead - H. T.
19	10-37806	1	Insulator - H. T. Connection
20	10-37807	2	Clamp - H. T. Lead
21	10-37879	2	Spring - Flange Tension
22	10-37878	2	Plate - Flange Tension Spring
23	10-51667	4	Screw and Lock Washer Magneto
	1J-501		

CHAMPION



MODEL 2-J
De Luxe



OPERATING INSTRUCTIONS

and

REPLACEMENT PARTS

SWANSON OUTBOARD SERVICE, CO., Inc.

PHONE 533-2488

5215 LAKELAND AVENUE NORTH
MINNEAPOLIS, MINNESOTA

CHAMPION OUTBOARD MOTOR

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7. To stop motor, move magneto lever to the left or STOP position.

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For the first 10 hours of operation the motor should be run not faster than $\frac{3}{4}$ throttle or at Start position. We recommend the use of 1 pint of S.A.E. 30 non-detergent oil to each gallon of gasoline during the break-in period.

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The most important factor in the operation of any internal combustion engine is proper lubrication. Properly lubricate your motor and you will enjoy many years of highly satisfactory service. Improper lubrication can result in nothing but premature wear and unnecessary expense.

Your new Champion motor is a two cycle engine and lubrication of the piston, cylinder, connecting rod, and crank shaft bearings is supplied by oil mixed with gasoline. The proportions of this mixture are very important. Also, the grades of gasoline and oil are equally important.

Clear gasoline or oil should never be poured into the gas tank. Thorough mixing should be done in a separate clean container.

LUBRICANT RECOMMENDED

We recommend the use of any high grade S.A.E. 30 non-detergent oil which will mix readily with gasoline. Mix this oil with any regular grade of gasoline, using $\frac{3}{4}$ pint of oil to one gallon of gasoline for normal operation after break-in period.

AFTER STARTING MOTOR

Since you have set the main needle valve, you need pay no more attention to it. To regulate your speed, move the magneto lever to the right for increasing speed or to the left for decreasing speed. The magneto lever is synchronized with the carburetor throttle giving the motor single lever control.

GREASING LOWER UNIT

Outside of lubrication in the form of motor oil in the gasoline, there is one more important lubrication requirement which must be attended to, that is to keep the lower unit gear-housing filled with any high grade outboard gear lubricant. You should inspect the lower unit at least once every month, and more often in the event the motor is in constant use.

To fill the lower unit with grease, remove the aluminum grease plug, Part IJ2, located in the bottom of the lower unit cap, then remove the air vent screw located near the top of the cap. (Part IJ1700). Fill the gear housing with the lubricant to full capacity. Replace grease plug screw and air vent screw.

Outboard gear lubricant is usually supplied in handy tube form which fits the grease opening and allows quick filling with no waste.

For long gear life, be sure to follow the above directions.

PROPELLER SHEAR PIN

This soft "safety pin" shears off when you strike an obstruction at full speed, thus protecting the gears, shafts, and other mechanism of your motor from damage. When this happens shut your motor off immediately. To replace shear pin, remove the cotter-pin in the propeller nut and remove nut. Slip off the propeller and replace the broken pin with a new one. Make sure to replace nut and cotter pin. The nut should be drawn up until the propeller fits snug against the shear pin.

SALT WATER INSTRUCTIONS

You will extend the life and performance of your motor when used in salt water by flushing fresh water through the motor after use in salt water. This may be done by running the motor in a barrel of fresh water or by forcing water through the outlet water line with a hose.

COLD WEATHER MOTOR CARE

To prevent your motor from freezing in cold weather, the following precaution should be observed. When your motor is idle or before storing for the cold weather period, drain it by placing it in an upright position. Remove aluminum grease plug and vent screw in bottom of lower unit gear case and drain any water and old grease that has accumulated, then repack with fresh grease. If motor is to be stored, remove spark plug and pour 2 ounces of oil into the cylinder. Then revolve flywheel a few times to distribute the oil within the motor.

SERVICE INSTRUCTIONS

CARBURETOR ADJUSTMENTS:

1. Close idle adjustment screw all the way in until it is snug (do not force needle against seat). Then open idle screw $\frac{1}{2}$ turn.
2. Close high speed adjustment screw. The knob should register 0. Then open $1\frac{1}{4}$ turns.
3. Start motor and move stator plate control handle to position marked "Fast" on gas tank.
4. Close the high speed adjustment screw, until the motor begins to slow down from lack of gas. Then open high speed adjustment screw approximately one number on the dial or until motor picks up speed and runs smoothly.
5. Move stator plate control lever to position marked "Slow" on gas tank. The motor should now idle slowly. However, atmospheric changes and fuel mixtures may require opening or closing the idle adjustment screw slightly.

MAGNETO ADJUSTMENTS:

Ordinarily these magnetos will operate over extremely long periods of time without the need for adjustment or repair. However, if engine operating difficulties are experienced which appear to be caused by the ignition system, the magneto output can be checked to determine whether this unit is functioning properly.

Disengage the high-tension cables from the spark plugs. Hold the cable by its insulation in such a position that the metal terminal is about $\frac{3}{16}$ -inch from some grounded part of the engine. While holding the wire in this position, spin the engine over at normal cranking speed. If the magneto sparks this gap the trouble is not in the magneto.

Should the magneto fail to spark, inspect the contact breaker. If the contact points are dirty they can be cleaned with a little clear gasoline. Make sure no particles of lint are left between the point surfaces if a brush or cloth is used. If the points are severely burned install a complete new contact breaker assembly.

See that the contacts are properly adjusted. When fully open, there should be eighteen thousandths (.018") of an inch between the point surfaces. This can be checked with a feeler gage. If the contacts do not open the proper distance, loosen the screws which

hold the contact breaker, and shift the assembly slightly so as to obtain the correct clearance of .018" between the point surfaces. If there still is no spark the coil or condenser may be defective. Any service station will correct the situation.

After each 100 hours of operation apply four (4) drops of a good grade S.A.E. No. 60 oil to the cam oiler felt. Blot off any excess oil with a clean cloth.

SPARK PLUG ADJUSTMENTS:

The spark plug should be kept clean and the point gap set at .030 inch. If the points are too badly corroded or burned away from long use, the plug should be replaced.

CARBURETOR DRAIN

There is a carburetor drain screw at bottom of control panel for the purpose of draining any water or dirt which may have accumulated in the carburetor bowl.

If gas does not flow freely, check gas tank screen.

OUTSIDE REPAIR CHARGES

You have received with this motor a warranty covering workmanship and materials. We will not be responsible for work performed and time spent by other than the manufacturer of Champion Motors, unless such repairs are first authorized by us in writing.

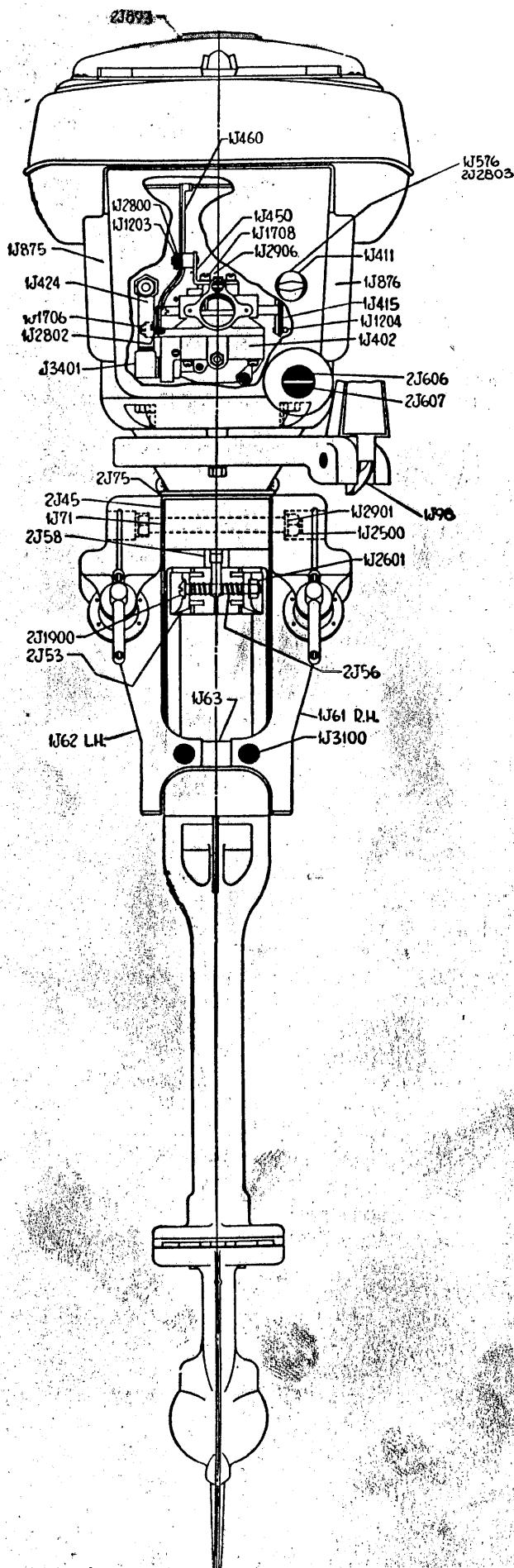
WARNING!

Never raise lower unit above level of power head without first allowing water to drain from under-water exhaust housing.

Always store motor in an upright position.

Do not use so-called outboard motor gasoline or stove gas. Best results are obtained with regular gasoline.

BE SURE TO GIVE SERIAL NUMBER OF MOTOR WHEN ORDERING PARTS



CHAMPION

MODEL 2J

SPECIFICATIONS

Model—2-J DeLuxe Single.

Horsepower—4.2 at 4300 R.P.M., O.B.C. Certified.

No. Cylinders—1.

Bore and Stroke— $2\frac{1}{16}'' \times 1\frac{3}{4}''$.

Piston Displacement—5.84 cu. in.

Valves—Dual rotary valve, 2 port.

Carburetor—Dual jet concentric bowl type.

Ignition—Scintilla Magneto Alnico Rotor

Controls—Synchronous.

Gear Ratio—14-24.

Propeller—2 blade $8 \times 5\frac{1}{2}$.

Cooling System—Centrifugal Pump.

Gas Tank Capacity—5 qts.

Speed Range (depending upon boats used)—
Approx. 1 to 10 m.p.h.

Automatic Co-skipper Steering—Yes.

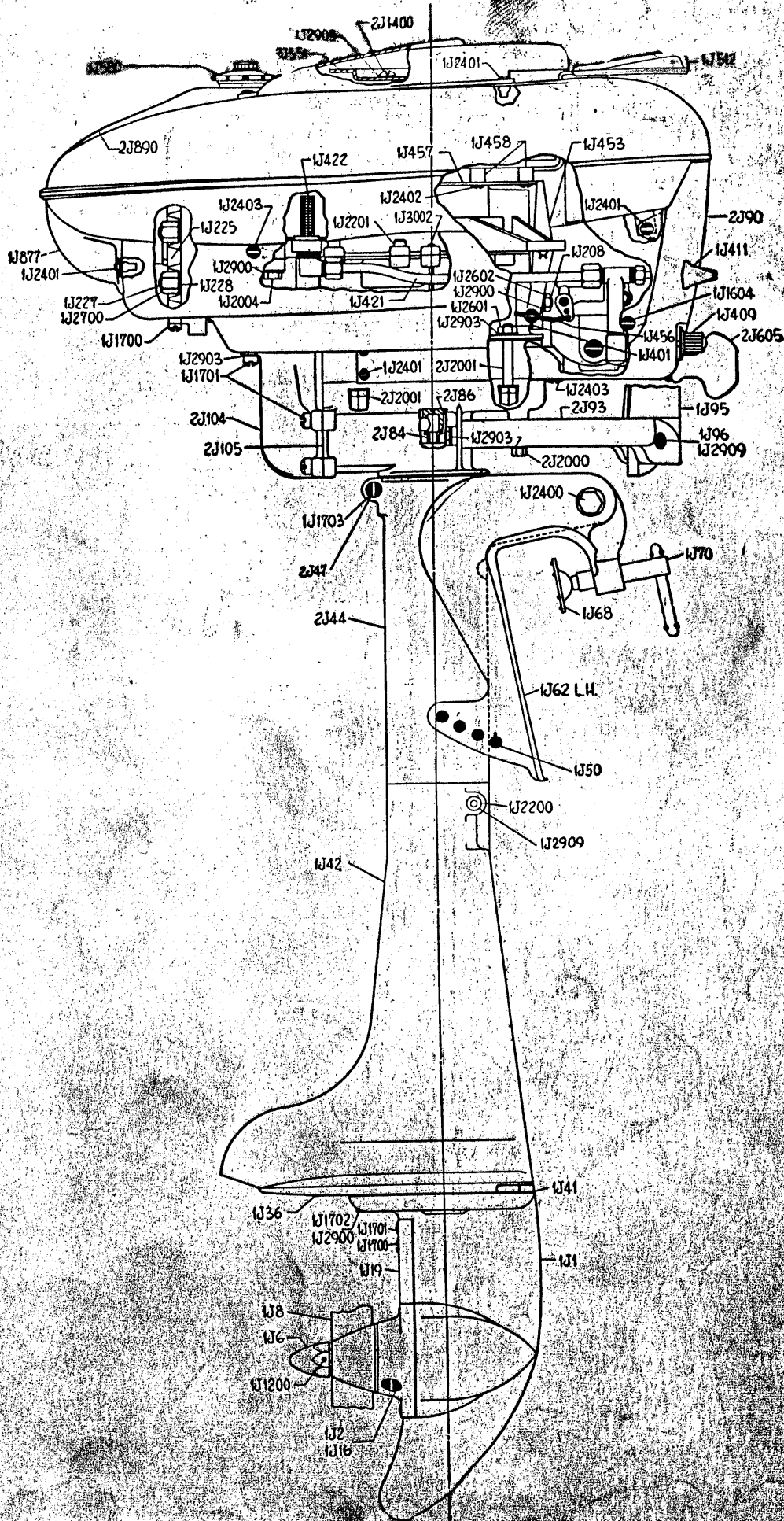
PLEASE NOTE!

The Champion Motors Company reserves the right to change motor specifications contained herein without notice. Any parts contained in your motor that are different from those listed in this parts book were changed either to improve your Champion or were necessary due to material substitutions.

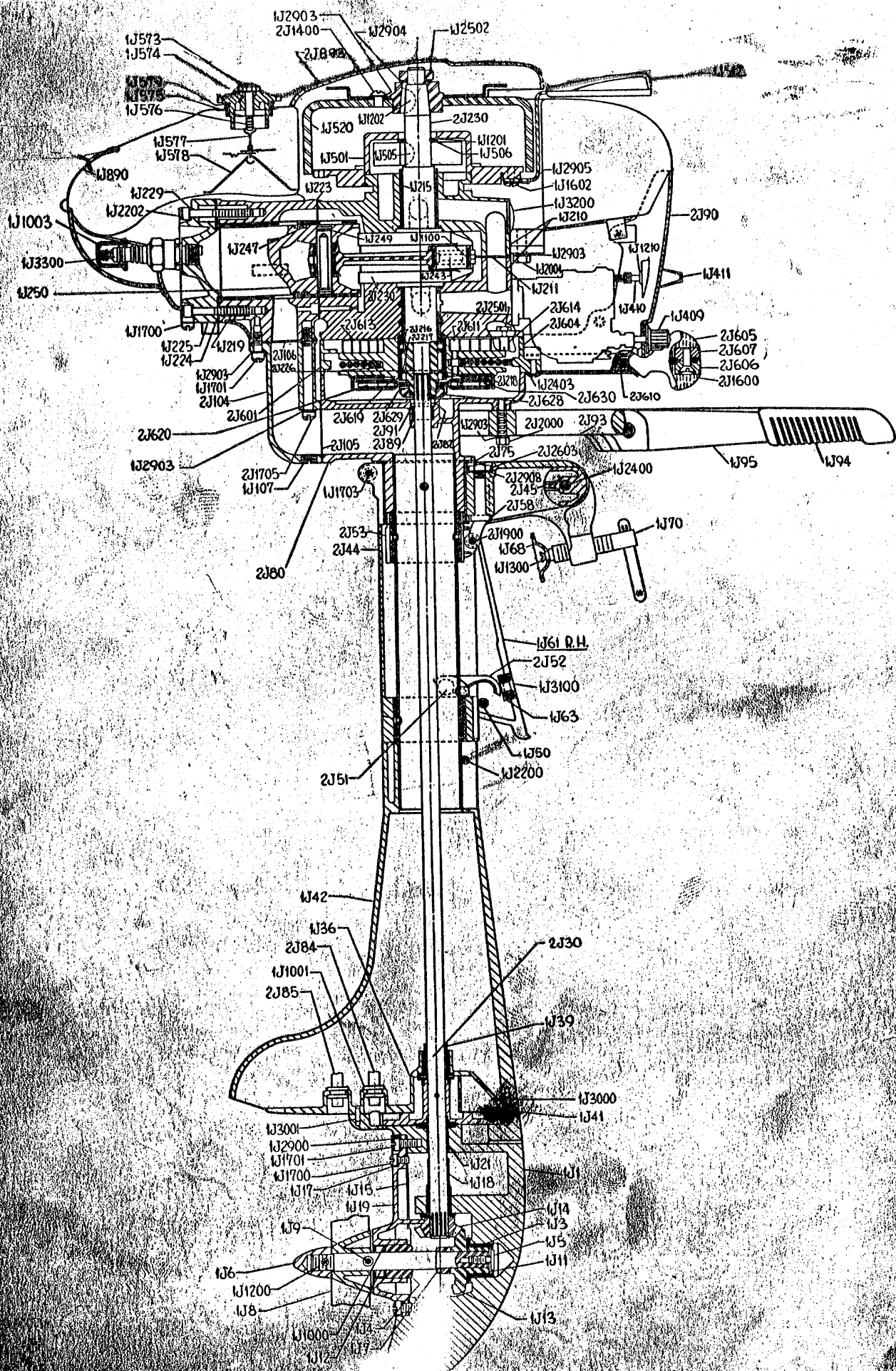
2-J PARTS LIST

Part No.	Part Name	No. Req'd	Part No.	Part Name	No. Req'd
1J2	Grease Plug	1	2J85	Discharge Water Line	1
1J3	Front Propeller Shaft Bearing	1	2J86	Water Line Fitting	2
1J4	Rear Propeller Shaft Bearing	1	2J89	Driveshaft Seal	1
1J5	Gear Lock Screw	1	2J90	Control Panel	1
1J6	Propeller Nut	1	2J91	Driveshaft Seal Washer	1
1J7	Propeller Shaft Thrust Collar	1	2J93	Carrying Handle	1
1J8	Propeller	1	1J94	Steering Handle Grip	1
1J9	Shear Pin	1	1J95	Steering Handle	1
1J11	Gear Lock Screw Washer	1	1J96	Steering Handle Bolt	1
1J12	Propeller Shaft	1	1J98	Steering Handle Friction Washer	2
1J13	Drive Gear	1	2J104	Expansion Chamber	1
1J14	Pinion Gear	1	2J105	Pivot Base Gasket	1
1J15	Lower Unit Cap Gasket	1	2J106	Expansion Chamber Flange	1
1J16	Grease Plug Gasket	1		Gasket	1
1J17	Vent Screw Gasket	1	1J107	Expansion Chamber Plug	1
1J18	Pinion Gear Bearing	1	1J208	Carburetor Studs	2
1J21	Driveshaft Center Bearing	1	2J210	Crankcase	1
2J30	Driveshaft Assembly	1	1J211	Crankcase Gasket	1
1J39	Upper Pump Housing Bearing	1	2J216NS	Crankshaft Seal	1
2J40	Tilting Bracket Assembly	1	2J217	Flat Spacer Washer	1
1K40	Water Pump Housing Assembly	1	2J218	Seal Retainer Ring	1
1K41	Pump Seal Plate	1	1J219	Water Passage Baffle	1
1J42	Driveshaft Housing	1	1J220	Cylinder Block and Sleeve	1
2J44	Tilting Bracket	1	1J223	Cylinder Base Gasket	1
2J45	Tilting Bracket Spacer	1	1J224	Cylinder Head Gasket	1
2J47	Tilting Bracket Spring	1	1J225	Cylinder Head	1
1J50	Boat Bracket Tilting Pin	1	2J226	Crankshaft Seal Washer	2
2J51	Reverse Lock Catch Rivet	2	1J227	Cylinder Head Stud	4
2J52	Reverse Lock Catch	1	1J228	Cylinder Head Stud Washer	4
2J53	Co-Pilot Clamp Casting	1	1J229	Cylinder Head Support Screw Washer	2
2J56	Co-Pilot Spring	2	2J230	Crankshaft	1
2J58	Co-Pilot Anchor	1	1J243	Connecting Rod Cap Screw	2
1J60	Boat Bracket Sub-Assembly (Includes 1J61, 1J62, 1J63, 1J3100)	1	1J247	Piston Ring	2
1J61	Boat Bracket—Right Hand	1	1J249	Wrist Pin Lock	2
1J62	Boat Bracket—Left Hand	1	1J250	Piston and Wrist Pin	1
1J63	Boat Bracket Spacer Strap	1	1J401	Carburetor Gasket	1
1J68	Boat Bracket Clamp Screw Pad	2	1J402	Carburetor	1
1J70	Boat Bracket Clamp Screw	2	1J409	High Speed Adjustment Knob With Clip	1
1J71	Tilting Bracket Friction Washer	2	1J410	Choke Lever	1
2J75	Pivot Base Washer	1	1J411	Choke & Shut-Off Knob with Clip	2
2J80	Pivot Base	1	1J415	Choke Lever Link	2
2J82	Driveshaft Seal Snap Ring	1	1J421	Gas Line	1
2J84	Intake Water Line	1	1J422	Gas Line Elbow and Screen	1

BE SURE TO GIVE SERIAL NUMBER OF MOTOR WHEN ORDERING PARTS



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Part No.	Part Name	No. Req'd
1J424	Gas Line Shut-Off Valve	1
1J450	Synchronous Control Bracket	1
1J456	Synchronous Control Adjustment Lever	1
1J457	Synchronous Control Cam	1
1J458	Synchronous Control Cam Spacer	2
1J460	Synchronous Control Arm	1
1J501	Magneto	1
1J505	Magneto Key	1
1J506	Magneto Washer	1
1J512	Stator Plate Control Handle	1
1J520	Flywheel	1
2J551	Starting Plate	1
1J573	Gas Cap Vent Screw	1
1J574	Gas Cap Vent Screw Washer	1
1J575	Gas Cap Baffle Washer	1
1J576	Gas Cap Baffle Spring	1
	Choke Lever Spring	1
1J577	Gas Cap Swivel	1
1J578	Gas Cap Safety Spring Hook	1
1J579	Gas Cap Gasket	1
1J580	Gas Cap Assembly	1
2J600	STARTER ASSEMBLY COMPLETE	
2J601	REAR STARTER SPACER	1
2J604	FRONT STARTER SPACER	1
2J605	READY PULL HANDLE	1
2J606	HANDLE ROPE LOCK (RH)	1
2J607	HANDLE ROPE LOCK (LH)	1
2J610N	STARTER CABLE	1
2K611	STARTER RECOIL SPRING SCREW	1
2J612	READY PULL CABLE ANCHOR STRAP	1
2J613	STARTER RECOIL SPRING	1
2J614	CABLE AND SPRING ANCHOR SCREW	1
2J619	STARTER SPOOL LOCK RING	1
2J620	STARTER SPOOL	1
2J626	STARTER RATCHET ENGAGE SPRING	1
2J628	STARTER ANCHOR LOCK NUT	1
2J629	STARTER ANCHOR LOCK WASHER	1
2J630	STARTER RATCHET ASSEMBLY	1
2J652	READY PULL HANDLE	1
1J875	Left Shroud	1
1J876	Right Shroud	1
1J877	Spark Plug Cover Plate	1
2J890	Gas Tank	1
2J893	Gas Tank Cover	1
1J901	"Champion" Transfer	2
1J911	Blue Ribbon Seal of Quality Transfer	1
1J1000	Propeller Shaft Grease Seal	1
1J1001	Water Line Grommet	2

Part No.	Part Name	No. Req'd
1J1003	Spark Plug Nipple	1
1J1100	Connecting Rod Needle Bearing	32
1J1200	Propeller Nut Cotter Pin	1
1J1201	Magneto Rotor Retaining Ring	1
1J1202	Flywheel Key	1
1J1203	Synchronous Control Arm Spring Cotter	1
1J1204	Choke Lever Cotter Pin	2
2J1209	COVER PLATE RIV-NUT	
1J1210	Choke Lever Hinge Pin Clip	4
1J1300	Boat Bracket Clamp Pad Screw	2
2J1400	Starting Plate Screw	3
2J1600	Handle Rope Lock Screw	1
1J1602	Stator Plate Control Screw	2
1J1604	Front Shroud Screw	2
1J1700	Lower Unit Vent Screw	1
	Cylinder Head Seal Screw	2
1J1701	Lower Unit Cap Screw	4
	Expansion Chamber Screw	7
1J1702	Upper Lower Unit Screw	4
1J1703	Tilting Bracket Clamp Screw	1
2J1705	Expansion Chamber Screw (Long)	1
1J1706	Synchronous Control Swivel Screw	1
1J1708	Synchronous Control Bracket Screw	2
2J1900	Co-Pilot Clamp Lock Screw	1
2J2000	Carrying Handle Bolt	3
2J2001	Starter Spacer Bolt	4
1J2004	Gas Tank Screw	4
1J2200	Driveshaft Housing Clamp Screw	1
1J2201	Crankcase Screw USE 4K2007	8
1J2202	Cylinder Head Support Screw	2
1J2400	Tilting Bracket Friction Bolt	1
1J2401	Spark Plug Cover Plate Screw	2
	Control Panel Anchor Screw	2
	Gas Tank Cover Plate Screw	4
	Control Panel—Motor Base Spacer Screw	4
1J2402	Synchronous Control Cam Screw	2
1J2403	Top Shroud Screw	4
	Control Panel Screw	2
1J2500	Tilting Bracket Friction Bolt Nut	1
2J2501	Starter Recoil Spring Anchor Nut	1

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Part No.	Part Name	
1J2502	Flywheel Nut	1
1J2601	Pivot Base & Spacer Bolt Nut	4
	Co-Pilot Clamp Screw Nut	1
1J2602	Carburetor Nut	2
2J2603	Co-Pilot Anchor Nut	1
1J2700	Cylinder Head Nut	4
1J2800	Synchronous Control Arm	
	Washer	1
1J2802	Synchronous Control Swivel	
	Washer	1
2J2803	Choke Lever Spring Washer	1
1J2900	Lower Unit Cap Screw Lock	
	Washer	4
	Upper Lower Unit Cap Screw	
	Lock Washer	4
	Carburetor Lock Washer	2
	Gas Tank Screw Lock Washer	4
1J2901	Tilting Bracket Friction Bolt	
	Lock Washer	1
1J2903	Pivot Base Bolt Lock Washer	4
	Expansion Chamber Screw	
	Lock Washer	8
	Starter Plate Screw Lock Washer	3
1J2905	Stator Plate Control Screw	
	Lock Washer	2
1J2906	Synchronous Control Bracket	
	Screw Lock Washer	2
2J2908	Co-Pilot Anchor Lock Washer	1
1J2909	Steering Handle Bolt Lock	
	Washer	1
	Driveshaft Housing Clamp	
	Screw Lock Washer	1
1K2911	Flywheel Nut Lock Washer	1
1J3000	Lower Unit Dowel Pin—Long	1
1J3001	Lower Unit Dowel Pin—Short	2
1J3002	Crankcase Dowel	2
1J3100	Boat Bracket Rivet	2
1J3200	Crankcase Expansion Plug	1
1J3300	Spark Plug	1
1J3401	Carburetor Inlet Elbow	1
2J3103	REVERSE LOCK CAM RIVET	

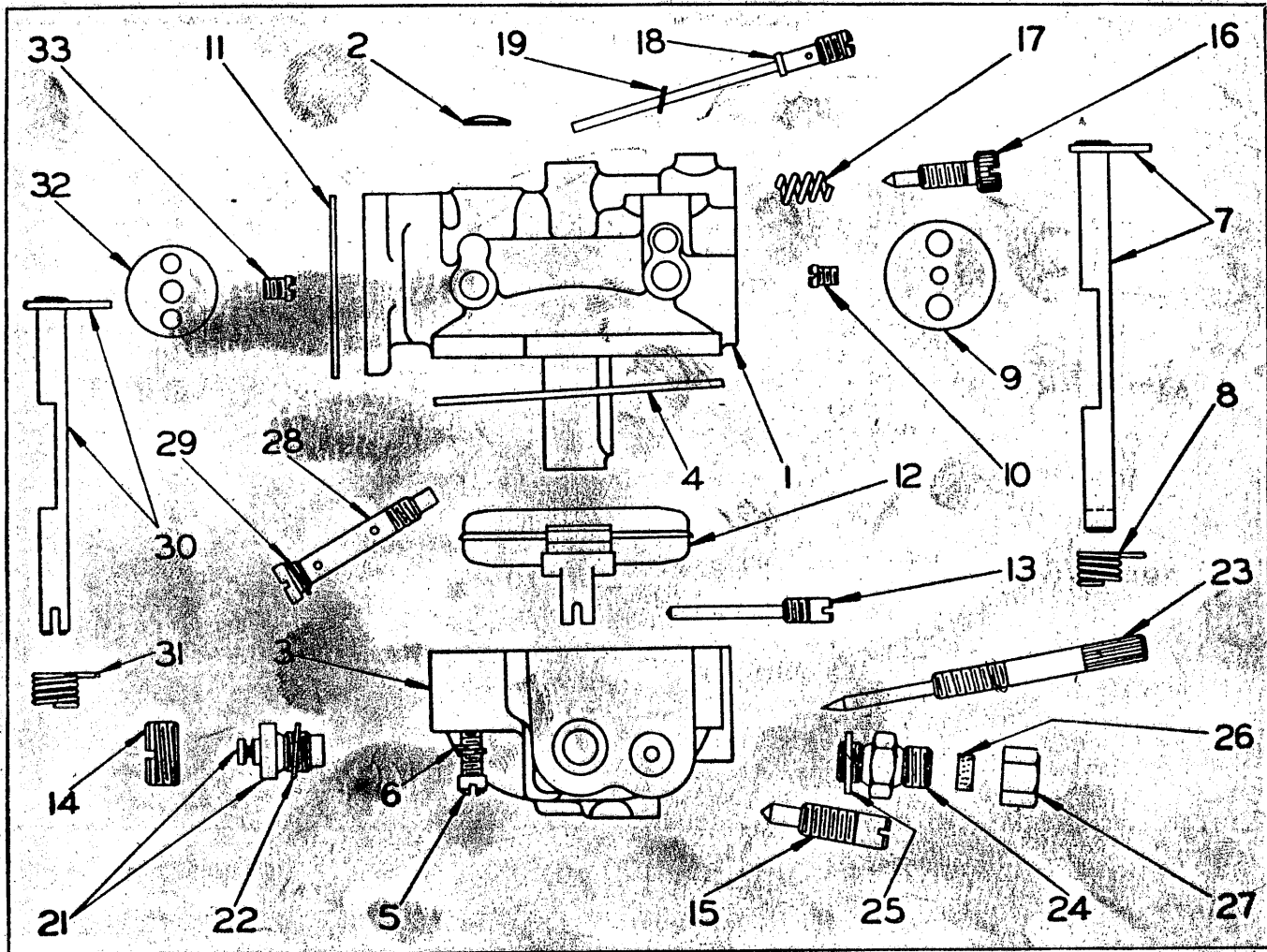
ASSEMBLIES

1J990-1	Lower Unit Body Sub-Assembly	
	(Includes 1J1, 1J3, 1J18, 1J21, 1J3000, 1J3001)	
1J990-2	Lower Unit Cap Sub-Assembly	
	(Includes 1J2, 1J4, 1J15, 1J16, 1J17, 1J19, 1J1000, 1J1700)	

Part No.	Part Name
1J990-3	Propeller Shaft Assembly
	(Includes 1J5, 1J7, 1J11, 1J12, 1J13)
2J990-6	Lower Unit Assembly
	(Includes 1J990-1, 1J990-2, 1J990-3, 1J14, 2J30, 1J36, 1J41, 1J1701, 1J2900)
2J990-10	Boat Bracket Assembly
	(Includes 2J40, 2J45, 2J47, 1J50, 2J58, 1J60, 1J68, 1J70, 1J71, 1J1300, 1J1703, 1J2400, 1J2500, 2J2603, 1J2901, 2J2908)
2J990-12	Pivot Base & Boat Bracket Assembly
	Includes 2J990-10, 2J53, 2J75, 2J80, 2J1900, 1J2601)
2J990-14	Control Panel & Choke Lever Assembly
	(Includes 2J90, 1J410, 1J411, 1J576, 2J2803)
2J990-16	Crankcase Assembly
	(Includes 1J208, 2J210, 1J211, 1J227, 1J2201, 1J3002, 1J3200)
1J990-18	Connecting Rod Assembly
	(Includes 1J240, 1J1100)
1J990-19	Piston Assembly
	(Includes 1J247, 1J249, 1J250)
2J990-20	Power Head Assembly
	(Includes 1J990-16, 1J990-18, 1J990-19, 2J216, 2J217, 2J218, 1J219, 1J220, 1J223, 1J224, 1J225, 2J226, 1J228, 1J229, 2J230, 1J1700, 1J2700)
1J990-23	Carburetor Assembly
	(Includes 1J402, 1J424, 1J450, 1J456, 1J460, 1J1708, 1J2906, 1J3401)
1J990-24	Magneto Assembly
	(Includes 1J457, 1J458, 1J501, 1J512, 1J520, 1J1602, 1J2402, 1J2905)
2J990-26	Gas Tank Assembly
	(Includes 1J422, 1J580, 2J890, 1J901, 1J911)
1J990-27	Steering Handle and Grip
	(Includes 1J94, 1J95)
2J990-28	Complete Set of Gaskets
	(Includes 1J15, 1J16, 1J17, 2J105, 2J106, 1J211, 1J223, 1J224, 1J401, 1J579, 1J1000)
2J990-30	Pivot Base Sub-Assembly
	(Includes 2J53, 2J75, 2J80, 2J1900, 1J2601)
2J990-32	Starter Handle Assembly
	(Includes 2J605, 2J606, 2J607, 2J1600)

BE SURE TO GIVE SERIAL NUMBER OF MOTOR WHEN ORDERING PARTS

CARBURETOR MODEL ME-1A—STANDARD ON MODEL 2-J



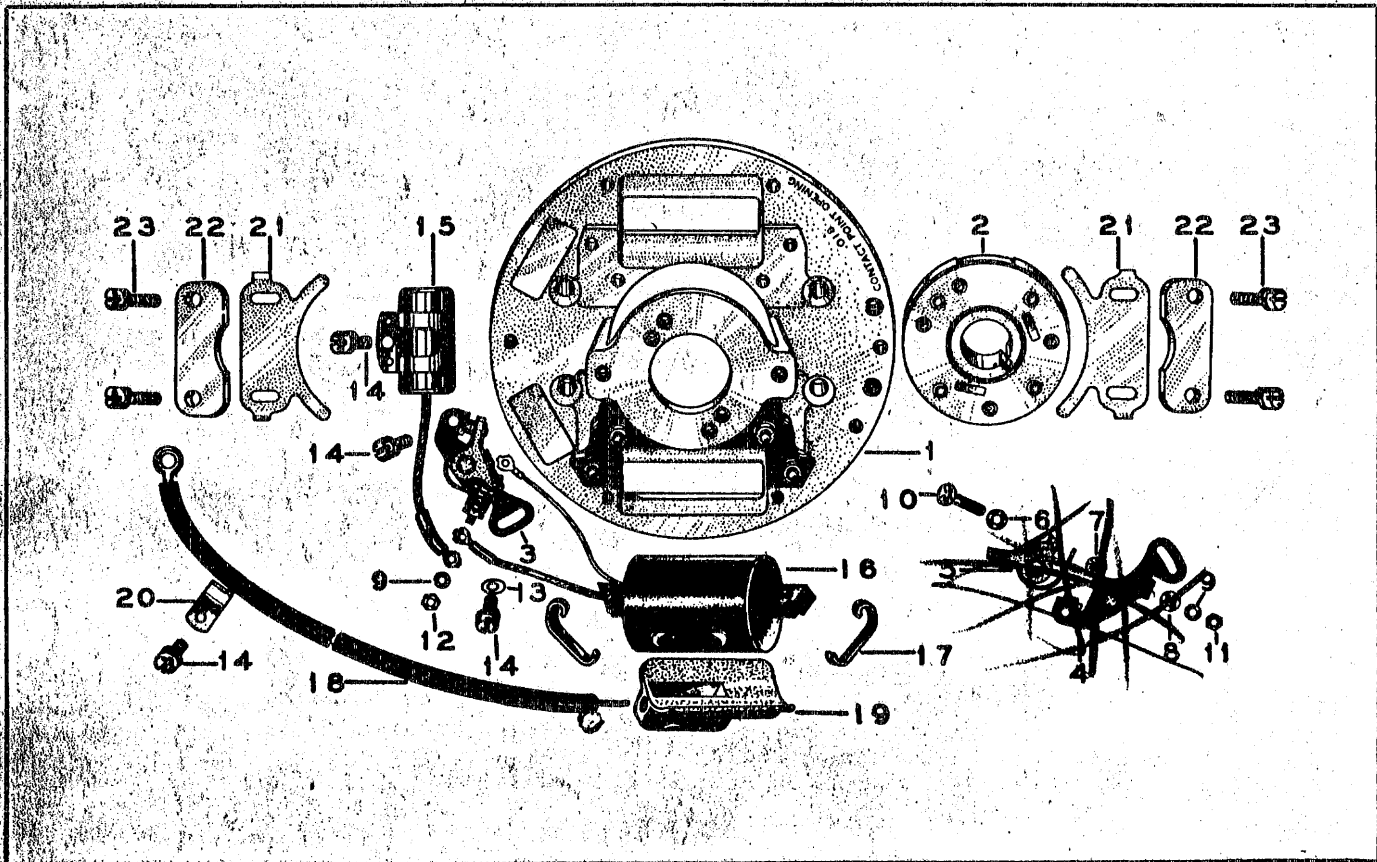
Ref. No.	Part No.	No. Req.	Description
1	07955	1	Body, Upper Half
2	*02531	1	Body Channel Welch Plug
3	07953	1	Fuel Bowl
4	07951	1	Body Gasket
5	06062	4	Body Retaining Screw
6	0992	4	Body Retaining Screw Lockwasher
7	07946	1	Choke Shaft and Lever
8	*07910	1	Choke Return Spring
9	03739	1	Choke Shutter
10	05430	1	Choke Shutter Screw
11	05591	1	Flange Gasket
12	07804	1	Float
13	*07901	1	Float Lever Pinion Screw
14	07896	1	Fuel Bowl Plug Screw (Large)
15	*07952	1	Fuel Bowl Drain Valve
16	*06910	1	Idle Adjustment Screw
17	*05725	1	Idle Adjustment Screw Spring

Ref. No.	Part No.	No. Req.	Description
18	*07938	1	Idle Tube
19	07900	1	Idle Tube Gasket
21	*07895	1	Inlet Needle, Seat and Gasket
22	02510	1	Inlet Seat Gasket
23	*08156	1	Main Adjustment Screw
24	0702	1	Main Adjustment Screw Gland
25	0676	1	Main Adjustment Screw Gland Gasket
26	0705	1	Main Adjustment Screw Packing
27	*0703	1	Main Adjustment Screw Packing Nut
28	*07959	1	Main Nozzle
29	02653	1	Main Nozzle Gasket
30	07943	1	Throttle Shaft and Lever
31	*07944	1	Throttle Return Spring
32	07960	1	Throttle Shutter
33	*05430	1	Throttle Shutter Screw
	*08175		Gasket and Packing Set
	08176		Repair Parts Kit
	1J402		Carburetor

(*) Identifies Parts Included in Part No. 08176 Repair Parts Kit

BE SURE TO GIVE SERIAL NUMBER OF MOTOR WHEN ORDERING PARTS

K1-203 MAGNETO SPECIFICATION NO. 10-55270



Ref. No.	Part No.	No. Req.	Description
1	10-53177	1	Flange - Mounting
2	10-38334	1	Magnet - Rotating
5	10-54940	1	CONTACT ASSEMBLY BREAKER (BE 2)

Ref. No.	Part No.	No. Req.	Description
12	10-38682	1	Nut (Primary Connector to Contact Assembly)
13	10-14268	1	Washer - Plain (Contact Assembly Screw, Adjustable End)
14	10-51662	5	Screw and Lock Washer (2, Contact Assembly) (2, H. T. Lead Clamp) (1, Condenser)
15	10-82104	1	Condenser -
16	10-38222Y	1	Coil
17	10-37804	2	Clamp - Coil Core
18	10-38944	1	Lead - H. T.
19	10-37806	1	Insulator - H. T. Connection
20	10-37807	2	Clamp - H. T. Lead
21	10-37879	2	Spring - Flange Tension
22	10-37878	2	Plate - Flange Tension Spring
23	10-51667	4	Screw and Lock Washer Magneto
	1J-501		