

1938

Antique Boat Museum

JOHNSON *Sea Horse* OUTBOARD MOTORS

☆ Johnson invites you to check the new 1938 Sea-Horses point by point, feature by feature, dollar for dollar against any other outboard motors in the field. Further — ask ANY outboard owner you know for his opinion on Sea-Horse DEPENDability. Finally, accept Johnson's sixteen year old invitation — "Get into a boat and SEE FOR YOURSELF."

For more than sixteen years Johnson has devoted its great engineering talent, its unsurpassed development and manufacturing facilities, its experience and resources to the end that Johnson Sea-Horses may be the LEADERS in the field of outboard motoring. The 1938 series, pictured with complete specifications inside, are obviously leaders — surpassing even Johnson's previous achievements in Performance, Comfort, Value and DEPENDability.

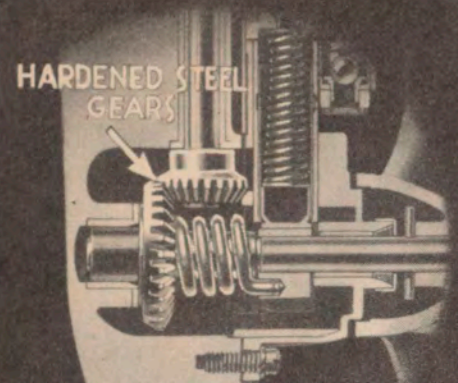
JOHNSON MOTORS . . . WAUKEGAN, ILL., U. S. A.

Performance



Dependability





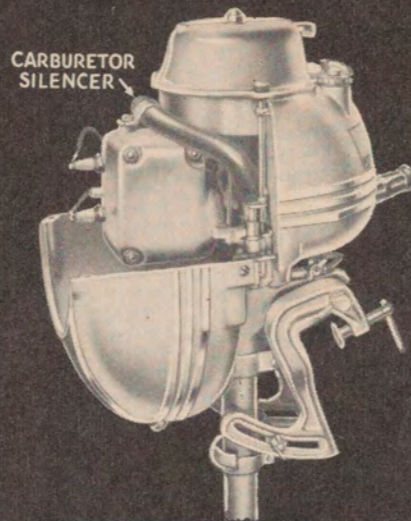
HARDENED STEEL GEARS

LONG LIFE GEARS

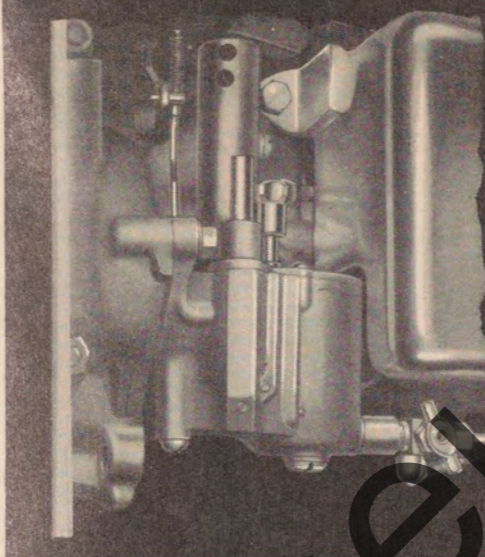
« « « alloy-steel, heat-treated, hardened in electric furnaces, precision cut in the Johnson factory, for long years of dependable service, are used in all Sea Horses of higher power. All Johnson gears are quiet, efficient and are designed for long life.

SPARK PLUG PROTECTION

« « « with quick accessibility gives added value. (Model DT illustrated). Plugs are shielded from rain, salt spray, yet no "sweating." A DEPENDABILITY feature that owners appreciate. In Models LS, DS, LT, DT, and KA it is standard equipment.



CARBURETOR SILENCER

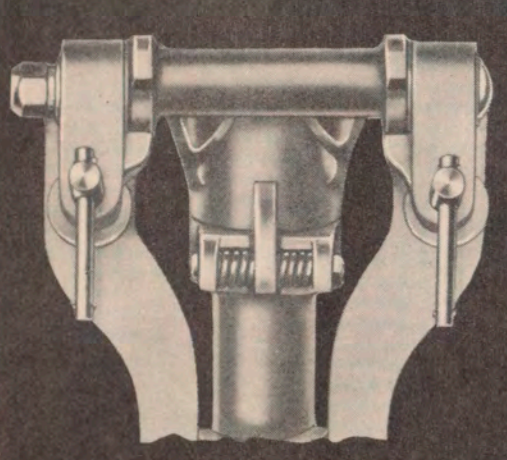
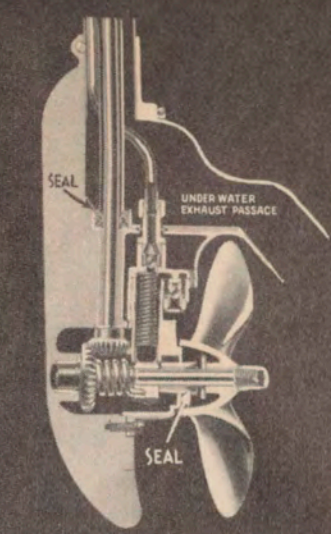


POSITIVE PRIMER

« « « for quick, easy starting, is a new carburetor device. Instead of "choking" the carburetor, simply press the primer three or four strokes, forcing a positive gasoline charge into the motor. A quick, easy pull on the starter cord starts it. Models LS, DS, LT and DT.

SEALED GEARCASE

« « « with patented anti-cavitation plate contributes to efficiency. Complete enclosure of underwater parts and ample grease capacity. Corrosion-resisting aluminum alloy, protected by new coating. Pinion and propeller shafts sealed to keep grease in and water out.

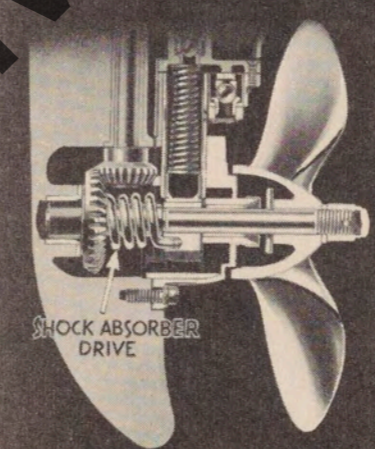
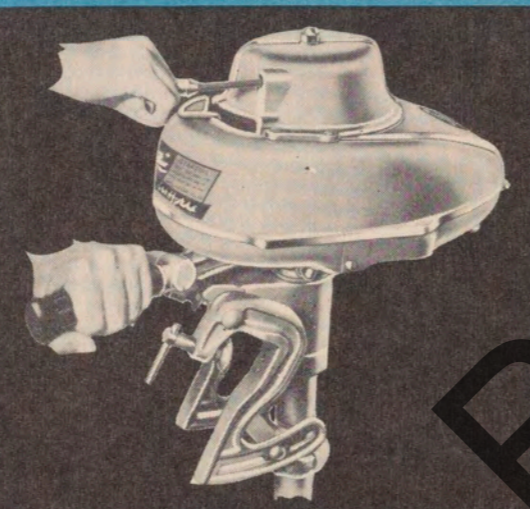


PATENTED CO-PILOT

« « « is called "The unseen hand that takes hold of the motor when you let go." Automatically holds motor in position. Fix your tackle, light your pipe, relax while under way at full speed or when trolling. Standard equipment on all motors except model PO.

READY PULL

« « « eliminates the separate starting cord. Built-in, not just added on. A convenient pull handle, an instant automatic re-wind. Always ready. Completely enclosed. No moving parts after motor is started. Standard equipment on deluxe Models at no extra cost.

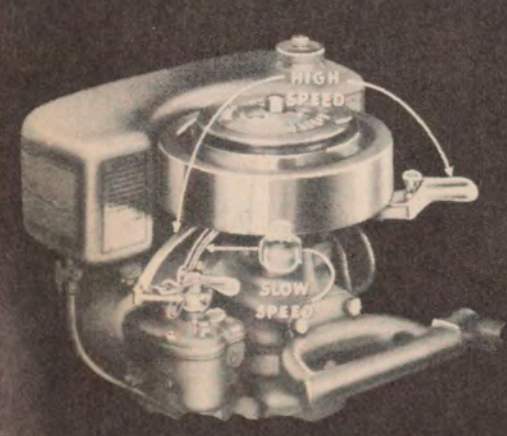
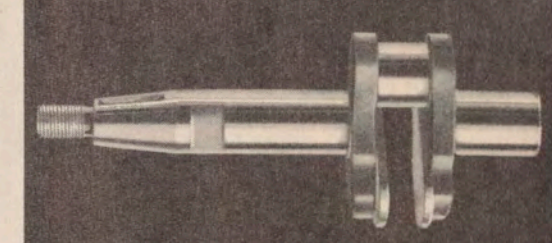


SHOCK ABSORBER

« « « is a spring device built into the gearcase, absorbs the shock when the propeller hits solid objects, rocks, logs, stumps. Protects gears, drive shaft, and other parts of the motor. Carefree operation in good fishing waters. Models LS, DS, LT, DT, have it.

BALANCED CRANKSHAFT

« « « in both single and twin cylinder motors decreases vibration, lessens bearing loads. All Johnson crankshafts are forged from special alloy steel, heat-treated, hardened and ground. Illustrate fineness of workmanship. Bearings, hard phosphor-bronze.

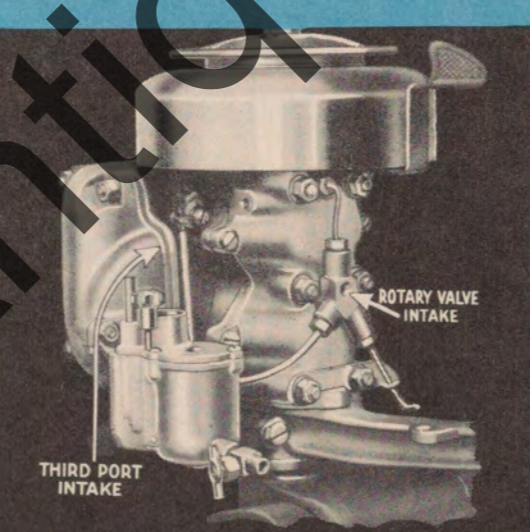


SYNCHRO CONTROL

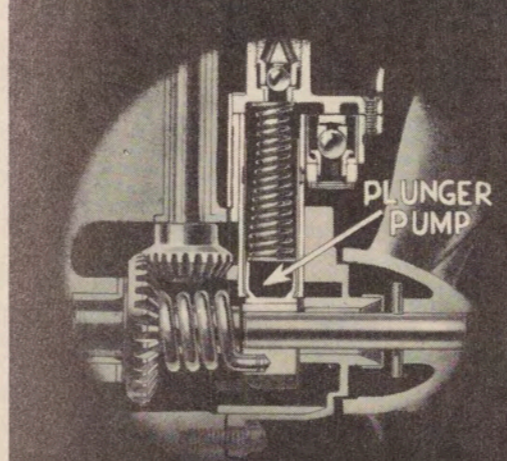
« « « concentrates the full speed range, slowest to fastest, in one lever. Spark timing interconnected with throttle in proper relation. No groping or fumbling. Operation simplified. A big feature found in Models LS, DS, LT, DT, and KA. (Model KA illustrated).

DUAL INTAKE

« « « construction provides a rotary valve high velocity opening correctly timed for starting and slow speed running, and another passage through the third port for full power and high speed. Result: The slowest trolling speeds ever attained by Johnson motors.



THIRD PORT INTAKE
ROTARY VALVE INTAKE

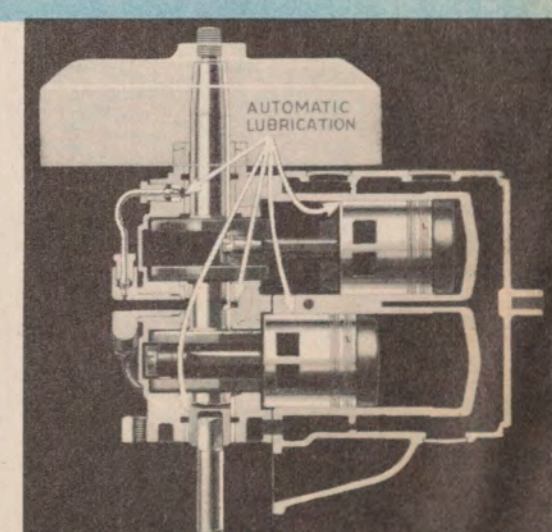


POSITIVE PLUNGER PUMP

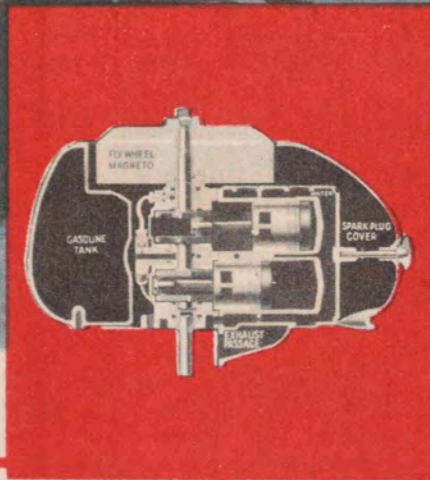
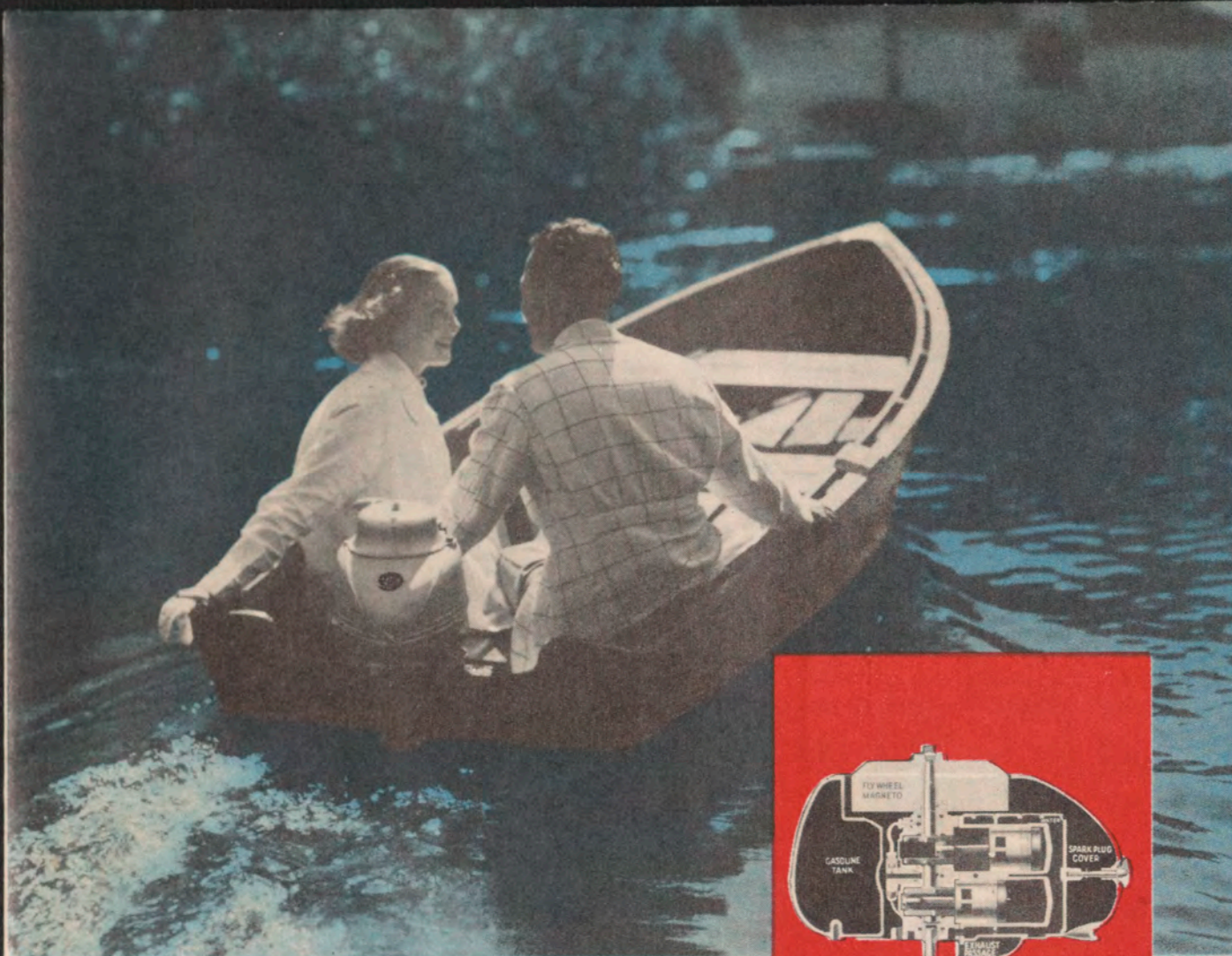
« « « is operated from slow speed propeller shaft, fully enclosed, lubricated. Large oversize capacity for ample cooling water at any speeds. Stainless steel ball check valves and replaceable stainless steel seats. Bronze barrel and plunger. Screened intake.

AUTOMATIC LUBRICATION

« « « contributes to long life. Oil mixed with the gasoline lubricates all parts of the powerhead and automatic oil circulation carries oil to main and connecting rod bearings and to pistons and cylinders. Grease in gearcase lubricates all other mechanical parts.



AUTOMATIC LUBRICATION



Smoothness

1 • ALTERNATE FIRING

Besides ultimate twin-cylinder smoothness, Perfected Alternate Firing provides easier starting, slower trolling, quieter running, and an all-around "sweetness" of performance. The difference is immediately apparent.

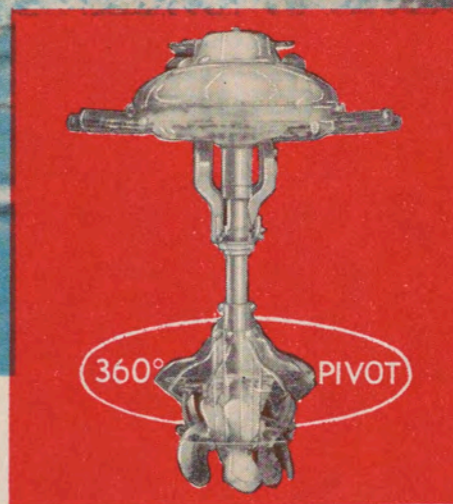
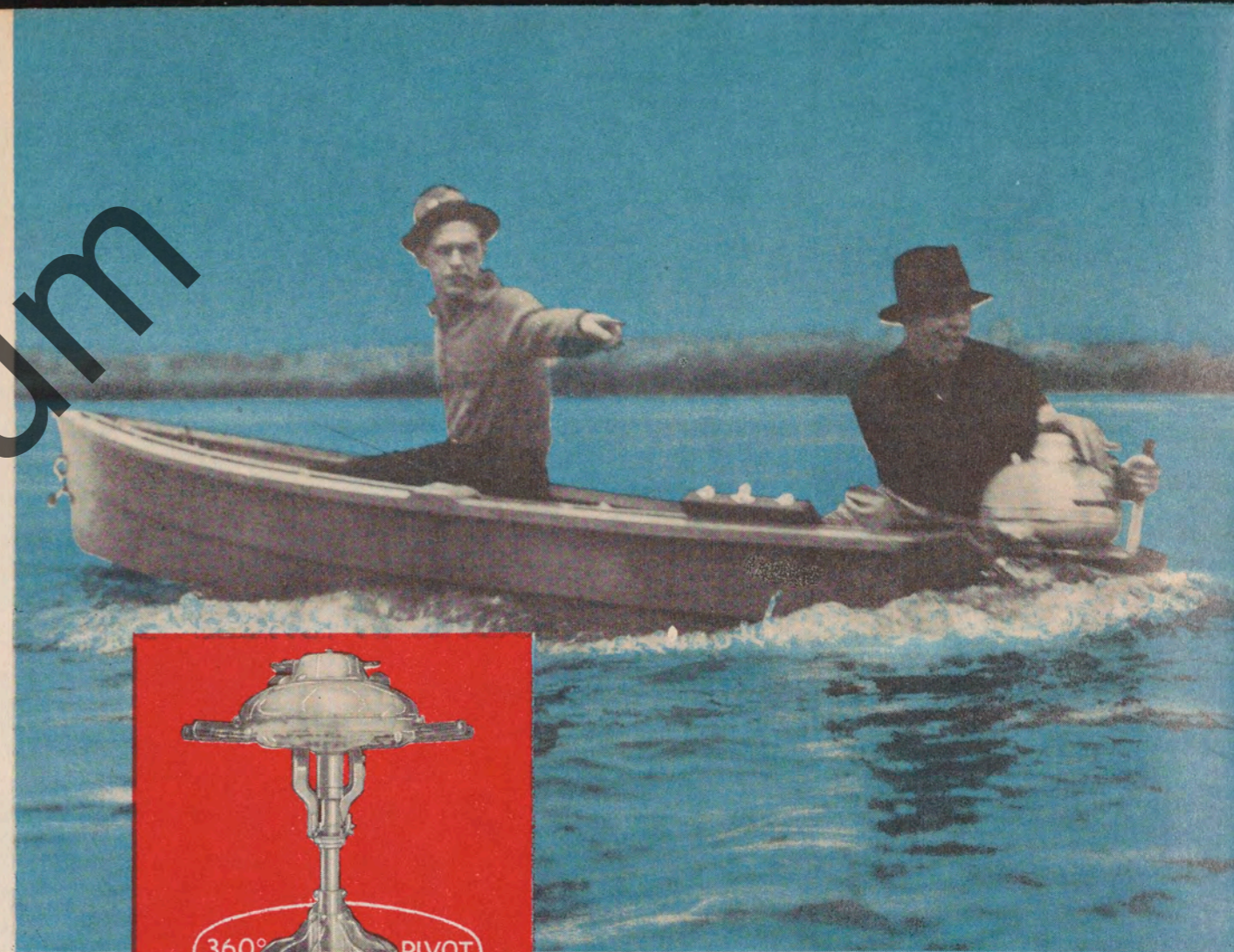
Eight years of building alternate firing Sea Horses has proven the superiority of this type to more than forty-five thousand enthusiastic owners, proving that "If you'll try it, you'll buy it."

Quietness

2 • UNDERWATER EXHAUST

Every Johnson Sea Horse has underwater exhaust for *your* comfort. Whether you are ashore or afloat, Johnson motors to not annoy. And the exhaust fumes are "drowned" beneath the waves.

The *combination* of underwater exhaust with Full Pivot Reverse (exclusive in Johnson Sea Horses) is just one of those many advanced features that make thousands exclaim every year "How can Johnson give so *much* at so low a price?"



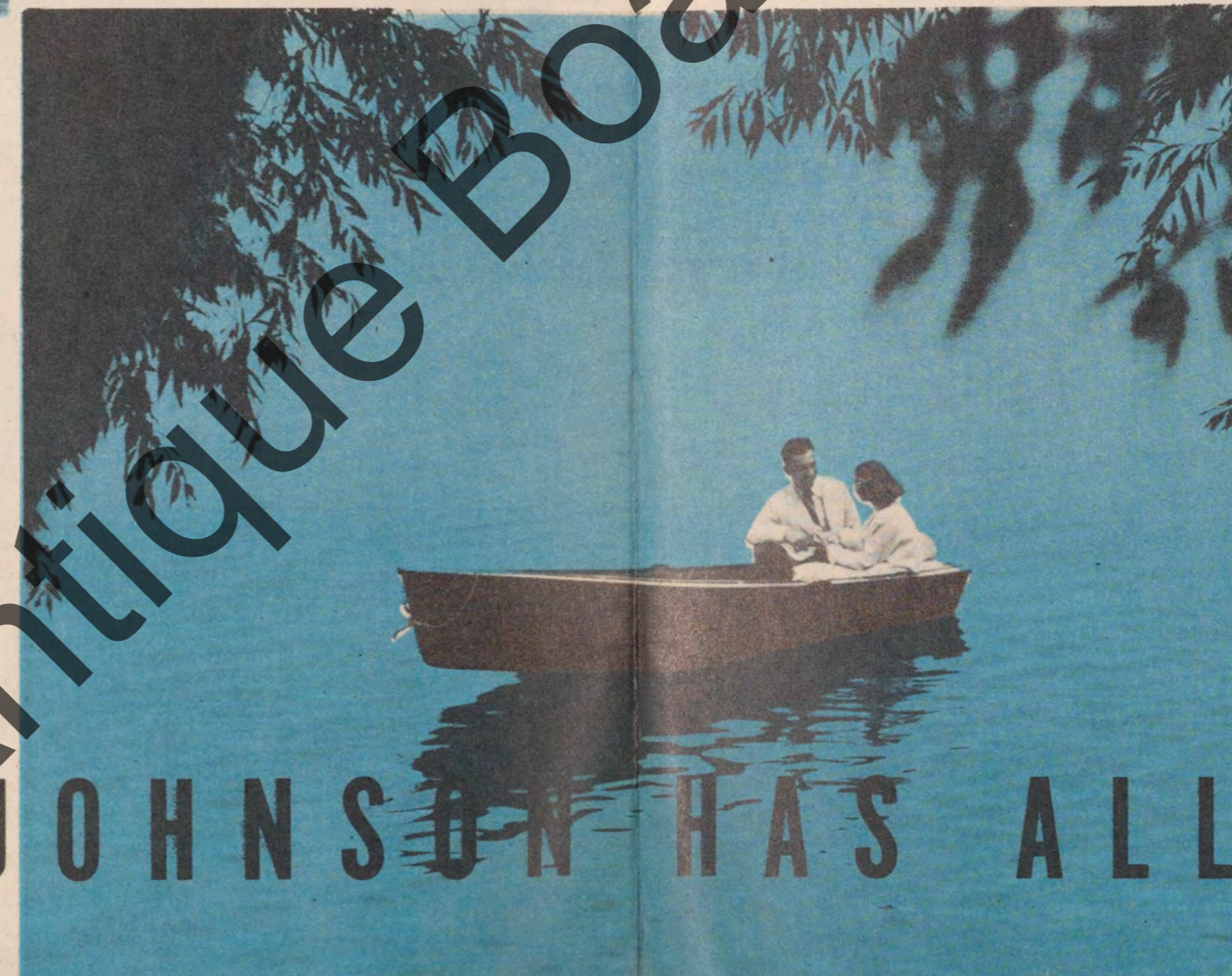
Flexibility

3 • FULL PIVOT REVERSE

You wouldn't own a "one way" motor car; why, then, look beyond the Johnson outboard motor with its full 360 degrees directional propeller steering AND REVERSE?

With it you can power-drive your boat forward, sideways, back — in any direction at any time. It's as essential to full performance as four-wheel brakes. It *completes* performance. Try it and judge for yourself.

ONLY JOHNSON HAS ALL THREE!



LOOK!

ONLY in Johnson Sea Horses can you find this matchless combination

Alternate FIRING
FULL PIVOT Reverse
Underwater EXHAUST

For fullest value and most complete satisfaction insist on ALL THREE.

ALTERNATE FIRING means smoothness that you've only dreamed of; and flashy speed combined with slow speed "sweetness" at the touch of a finger; and freedom from noise and annoyance.

FULL PIVOT REVERSE means you can *drive* your boat in *any* direction; forward, around, backward. It gives you complete control. It's *exclusively* Johnson.

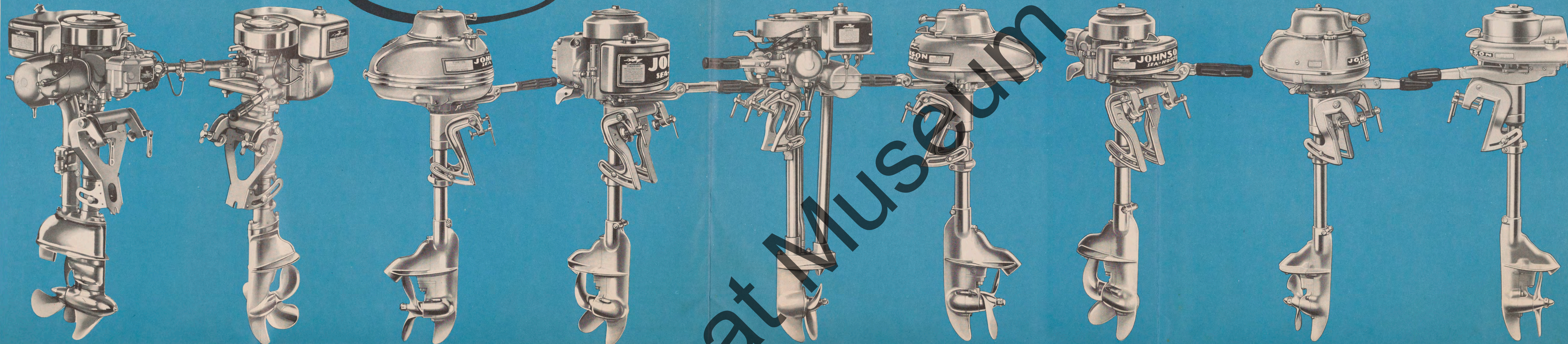
UNDERWATER EXHAUST means that outboards no longer "putt" but purr; and exhaust fumes are carried away under water.

★
BE SURE YOU GET ALL THREE

JOHNSON

Sea Horse

OUTBOARD MOTORS



MODEL PO ★ Super power for thrilling speeds, heavy loads. A 30 cubic inch opposed twin built for punishment. Featuring a double jet carburetor with automatic full range, Integral rotary valve "on the top side" for more power, greater efficiency, better distribution. Composite stainless steel and alloy-steel propeller shaft. Release charger for easy starting, pressure-vacuum cooling, underwater exhaust, propeller shaft grease seal, automatic circulating oiling system, automatic exhaust relief, roller bearing connecting rods, twist grip control—a complete and brilliant power plant for larger boats, heavy-duty service.

MODEL KA ★ A large ALTERNATE FIRING Twin combining UNDERWATER EXHAUST and FULL PIVOT REVERSE. This model provides the extra power necessary for flashy performance on bigger hulls. Has all the features for smooth running and easy operation. A new construction, dual jet carburetor in combination with dual manifold for improved slow speed operation and trolling. Coincidental exhaust cutout, synchro-control, rotary valve, vacuum-pressure cooling, stainless steel propeller shaft with grease seal, patented co-pilot and streamlined gearcase. For sheer smoothness, nothing surpasses an ALTERNATE FIRING Twin.

MODEL DT ★ Consider all the features that have been built into the Light Twin Model LT and then *add* such standard equipment features as the Ready-Pull starter which eliminates the separate starting cord, complete streamlined powerhead enclosure with spark plugs readily accessible, special carburetor silencer, and polished protected lower unit, and you can appreciate that this is the finest DeLuxe twin motor Johnson has ever built. It has every performance and comfort feature and in addition is built to "take it" in the hardest service, for years and years. Featuring Alternate Firing—Underwater Exhaust and Full Pivot Reverse.

MODEL LT ★ All combined in this light-weight, medium priced model, ALTERNATE FIRING—UNDERWATER EXHAUST and FULL PIVOT REVERSE. There are host of other features too, such as spark plug enclosure, starting primer, synchro-control, grease seals, shock absorber drive, reverse-flux magneto, combined rotary valve and third port intake, slowest speed for trolling, positive plunger pump cooling, throttle control, float feed carburetor, patented co-pilot, counter-balanced crankshaft, hardened steel gears. Every part built for long life. Designed to perform and to give the ultimate in DEPENDability.

MODEL 210 ★ Johnson's famous opposed light twin with fundamentally the same powerhead that has created a world-wide reputation for stamina, dependability and long life during the past 16 years. With such features as underwater exhaust combined with pre-expansion muffer, streamlined gear case, pressure-vacuum cooling, grease seal, directional propeller steering, full capacity gasoline tank, float-feed carburetor with *throttle control*, protective steering rail, hardened alloy-steel gears, slow speed operation (for trolling), long life proven by the years, dependable, and priced to fit the needs of fishermen.

MODEL DS ★ A modern De Luxe single model, similar in size and power to Model LS but with such exceptional added features as complete streamlined powerhead enclosure, Ready-Pull starter which eliminates the separate starting cord, quick accessibility to spark plug, solid, cast aluminum gasoline tank. The Full Pivot Reverse combined with Underwater Exhaust and the provisions for consistent slow speed running make this model the "Little Aristocrat" of the fisherman; the finest fishing motor Johnson has ever built. Rugged, DEPENDable, simple and easy to handle. Designed for those of discrimination.

MODEL LS ★ A light single model with combined FULL PIVOT REVERSE and UNDERWATER EXHAUST. Protected spark plug, improved starting with primer, positive plunger pump, and combined third port and rotary valve intake. Designed for extremely slow speed operation, for trolling, yet ample power for surprising speed. Has carburetor throttle, synchro-control, patented oiling system, counter-balanced crankshaft, hardened steel gears, patented co-pilot, grease seals, shock-absorber drive, reverse flux magneto, and numerous other features. Its rugged construction will give years of DEPENDable service.

MODEL MD ★ Another modern DeLuxe single, similar in size and power to the Model MS but with such added features as complete streamlined powerhead enclosure, quick accessibility to spark plug, ready-pull starter, which eliminates the separate starting cord, cast aluminum, full capacity, gasoline tank. Every comfort feature necessary in a small motor is "built-in" and standard equipment. Designed for those of discrimination, yet priced low to give high value. The most suitable motor for women and children. Easy starting, rugged, DEPENDable, simple and easy to handle. Develops 1.1 N.O.A. Certified Brake Horse Power at 4000 r.p.m.

MODEL MS ★ A brand NEW motor. Lightest weight single in Johnson history, combining such famous Johnson features as UNDERWATER EXHAUST—FULL PIVOT REVERSE—PATENTED CO-PILOT. Also a specially designed Johnson float-feed carburetor with throttle control, and choke, positive plunger pump, reverse flux magneto, synchro-control, extremely slow trolling speed. Quiet performance, enhanced by the reverse, makes this the ideal fishing motor. Johnson gives you all these features and true Johnson DEPENDability in a lower priced, flyweight motor. Develops 1.1 N.O.A. Certified Brake Horse Power at 4000 r.p.m.

MECHANICAL SPECIFICATIONS

	SEA-HORSE PO	SEA-HORSE KA	SEA-HORSE DT	SEA-HORSE LT	SEA-HORSE 210	SEA-HORSE DS	SEA-HORSE LS	SEA-HORSE MD	SEA-HORSE MS
MODELS	Model PO: Standard. Model POL: 6" longer drive-shaft.	Model KA: Standard. Model KAL: 6" longer drive-shaft.	Model DT: for square stern boats. Model DTL: 5" longer drive-shaft.	Model LT: for square stern boats. Model LTL: 5" longer drive-shaft.	Model 210: for square stern boats. Model 210-L: 5" longer drive-shaft.	Model DS: for square stern boats. Model DSL: 5" longer drive-shaft.	Model LS: for square stern boats. Model LSL: 5" longer drive-shaft.	Model MD-38: for square stern boats.	Model MS-38: for square stern boats.
N. O. A. CERTIFIED BRAKE H. P.	22 N.O.A. Certified Brake Horse Power at 4000 R.P.M.	9.3 N.O.A. Certified Brake Horse Power at 4000 R.P.M.	4.5 N.O.A. Certified Brake Horse Power at 4000 R.P.M.	5.5 N.O.A. Certified Brake Horse Power at 4000 R.P.M.	3.5 N.O.A. Certified Brake Horse Power at 3000 R.P.M.	2.3 N.O.A. Certified Brake Horse Power at 4000 R.P.M.	2.3 N.O.A. Certified Brake Horse Power at 4000 R.P.M.	1.1 N.O.A. Certified Brake Horse Power at 4000 R.P.M.	1.1 N.O.A. Certified Brake Horse Power at 4000 R.P.M.
BORE, STROKE, DISPLACEMENT	Bore, 2 3/4"; Stroke, 2.52"; Piston displacement, 29.92 cubic inches.	Bore, 2 1/4"; Stroke, 1 1/2"; Piston displacement, 13.96 cubic inches.	Bore, 1 3/4"; Stroke, 1 1/2"; Piston displacement, 8.28 cubic inches.	Bore, 1 3/4"; Stroke, 1 1/2"; Piston displacement, 8.28 cubic inches.	Bore, 1 3/4"; Stroke, 1 1/2"; Piston displacement, 9.4 cubic inches.	Bore, 1 3/4"; Stroke, 1 1/2"; Piston displacement, 4.14 cubic inches.	Bore, 1 3/4"; Stroke, 1 1/2"; Piston displacement, 4.14 cubic inches.	Bore, 1 3/4"; Stroke, 1 1/2"; Piston displacement, 2.04 cubic inches.	Bore, 1 3/4"; Stroke, 1 1/2"; Piston displacement, 2.04 cubic inches.
DIMENSIONS	Model PO: Length, 45 1/2"; Width, 17 1/2"; Stern height, 16 1/2"; Model POL: Length, 51 1/2"; Width, 17 1/2"; Stern height, 22 1/2".	Model KA: Length, 42 3/4"; Width, 14 1/2"; Stern height, 15 3/4"; Model KAL: Length, 48 3/4"; Width, 14 1/2"; Stern height, 21 3/4".	Model DT: Length, 39 1/2"; Width, 10"; Stern height, 15"; Model DTL: Length, 44 1/2"; Width, 10"; Stern height, 20".	Model LT: Length, 37 1/2"; Width, 10"; Stern height, 15"; Model LTL: Length, 42 1/2"; Width, 10"; Stern height, 20".	Model 210: Length, 36 3/4"; Width, 12 1/2"; Stern height, 15"; Model 210-L: Length, 41 3/4"; Width, 12 1/2"; Stern height, 20".	Model DS: Length, 37"; Width, 10"; Stern height, 15"; Model DSL: Length, 42"; Width, 10"; Stern height, 20".	Model LS: Length, 35 1/2"; Width, 7 1/2"; Stern height, 15"; Model LSL: Length, 40 1/2"; Width, 7 1/2"; Stern height, 20".	Model MD: Length, 33 3/4"; Width, 8 3/4"; Stern height, 15".	Model MS: Length, 32"; Width, 8 3/4"; Stern height, 15".
WEIGHT	Standard Model PO, 109 pounds. Model POL, 112 pounds.	Standard Model KA, 64 pounds. Model KAL, 65 1/2 pounds.	Standard Model DT, 46 1/2 pounds. Model DTL, 47 1/2 pounds.	Standard Model LT, 38 pounds. Model LTL, 39 pounds.	Standard Model 210, 39 pounds. Model 210-L, 40 pounds.	Standard Model DS, 48 pounds. Model DSL, 49 pounds.	Standard Model LS, 30 1/2 pounds. Model LSL, 31 1/2 pounds.	21 pounds.	17 pounds.
POWERHEAD	Rotary valve, 2 port, with cylinder offset.	Rotary valve, 2 port type. Perfected alternate firing.	3 port and rotary valve type combination.	3 port rotary valve type combination.	Valveless, 3 port type.	3 port and rotary valve type combination.	3 port and rotary valve type combination.	Valveless, 3 port.	Valveless, 3 port.
CYLINDERS	Twin, cast of nickel-iron, with detachable aluminum heads.	Twin, cast in block of nickel-iron arranged for alternate firing.	Twin, cast in block of nickel-iron, arranged for alternate firing.	Twin, cast in block of nickel-iron. Arranged for alternate firing.	Twin cylinders, cast of nickel-iron with integral head.	Single cylinder, cast of nickel-iron with integral head.	Single cylinder, cast of nickel-iron with integral head.	Aluminum alloy with iron sleeve. Detachable cylinder head. Removable water jacket covers.	Aluminum alloy with iron sleeve. Detachable cylinder head. Removable water jacket covers.
PISTONS	Aluminum Alloy—3 rings.	Aluminum Alloy—3 rings.	Aluminum Alloy with hard bronze bearing surfaces.	Aluminum Alloy—2 rings.	Cast iron—3 rings.	Aluminum Alloy—2 rings.	Aluminum Alloy—2 rings.	Light Aluminum Alloy—2 rings.	Light Aluminum Alloy—2 rings.
CONNECTING RODS	Steel, no offset, with roller bearings at crankpin end.	High-grade hard bronze, straight.	Aluminum Alloy with hard bronze bearing surfaces.	Aluminum Alloy with hard bronze bearing surfaces.	High-grade bronze, offset.	Aluminum Alloy with hard bronze bearing surfaces.	Aluminum Alloy with hard bronze bearing surfaces.	Aluminum Alloy with hard bronze bearing surfaces.	Aluminum Alloy with hard bronze bearing surfaces.
BEARINGS	Journals, hard bronze, reamed, hand-fitted. Rollers in connecting rods.	Hard bronze, reamed, hand-fitted. Low friction.	Hard bronze, reamed, hand-fitted. Low friction.	Hard bronze, reamed, hand-fitted. Low friction.	Hard bronze, reamed, hand-fitted. Low friction.	Hard bronze, reamed, hand-fitted. Low friction.	Hard bronze, reamed, hand-fitted. Low friction.	Hard bronze, low friction.	Hard bronze, low friction.
CARBURETION	Float-feed, full range control. Low and high speed adjustments.	Float-feed, full range control. Low and high speed adjustments.	Float feed, full range control. Low and high speed adjustments.	Float feed, full range control. Low and high speed adjustments.	Float feed, one lever control. Accessible screen and settling basin. Silenced intake.	Float-feed, full range control. Low and high speed adjustments.	Float-feed, full range control. Low and high speed adjustments.	Float feed, full range control.	Float feed, full range control.
GAS TANK CAPACITY	2 1/2 gallons.	13 pints.	6 pints.	5 pints.	7 pints.	4 pints.	2 1/2 pints.	2.3 pints.	1.8 pints.
IGNITION	High-tension flywheel magneto. Water-proof.	High-tension flywheel magneto. Water-proof.	High-tension flywheel magneto. Water-proof.	High-tension flywheel magneto. Water-proof.	High-tension flywheel magneto. Water-proof.	High-tension flywheel magneto. Water-proof.	High-tension flywheel magneto. Water-proof.	High tension flywheel magneto. Water-proof.	High tension flywheel magneto. Water-proof.
TYPE OF EXHAUST	Water jacketed expansion chamber with under-water exhaust.	Water jacketed expansion chamber with under-water exhaust.	Water jacketed expansion chamber with under-water exhaust.	Water jacketed expansion chamber with under-water exhaust.	Under-water, combined with expansion chamber.	Under-water exhaust.	Under-water exhaust.	Under-water exhaust.	Under-water exhaust.
COOLING SYSTEM	Pressure-vacuum.	Pressure-vacuum.	Water cooled with positive acting plunger pump.	Water cooled with positive acting plunger pump.	Pressure—vacuum.	Water cooled with positive acting plunger pump.	Water cooled with positive acting plunger pump.	Positive acting plunger pump.	Positive acting plunger pump.
TYPE OF PROPELLER	Three blade, 12" diameter, of different pitches to suit boats of different speeds. Grease seal on propeller shaft.	3 blade—9 1/2" diameter, 9" pitch. Grease seal on propeller shaft.	Woolless, two blade, 8" diameter, 7 1/2" pitch. Grease seal on propeller shaft.	Woolless, two blade, 8" diameter, 7 1/2" pitch. Grease seal on propeller shaft.	Woolless, three blade, 7 1/2" diameter, 5 1/2" pitch. Grease seal on propeller shaft.	Woolless, two blade, 8" diameter, 4 1/2" pitch. Grease seal on propeller shaft.	Woolless, two blade, 8" diameter, 4 1/2" pitch. Grease seal on propeller shaft.	Two blade—6 1/2" diameter, 3 1/4" pitch.	Two blade—6 1/2" diameter, 3 1/4" pitch.
GEAR RATIO	12 to 21, motor to propeller.	14 to 24, motor to propeller.	14 to 25, motor to propeller.	14 to 25, motor to propeller.	13 to 19, motor to propeller.	14 to 25, motor to propeller.	14 to 25, motor to propeller.	13 to 20, motor to propeller.	13 to 20, motor to propeller.
SHOCK-ABSORBER	No.	No.	Yes.	Yes.	No.	Yes.	Yes.	No.	No.
STEERING AND REVERSE	Pivot.	Full pivot and instant reverse. Rubber mounted steering handle.	Full pivot and instant reverse. Cushioned steering handle.	Full pivot and instant reverse. Cushioned steering handle.	Phot.	Full pivot and instant reverse. Cushioned steering handle.	Full pivot and instant reverse. Cushioned steering handle.	Full pivot and instant reverse.	Full pivot and instant reverse.
PATENTED CO-PILOT	No. Wheel steering usual.	Yes.	Yes.	Yes.	No.	Yes.	Yes.	Yes.	Yes.
STARTING	Rope starting.	Rope starting.	Ready-pull starter.	Rope starting.	Rope starting.	Ready-pull starter.	Rope starting.	Ready Pull Starter.	Rope.
THROTTLE CONTROL	Steering handle.	Synchro-control of throttle, spark and exhaust cutout.	Synchro-control of throttle and spark.	Synchro-control of throttle and spark.	On carburetor.	Synchro-control of throttle and spark.	Synchro-control of throttle and spark.	Synchro-control of throttle and spark.	Synchro-control of throttle and spark.
BOAT SUITABLE	Large heavy rowboats. Fast runabouts and cruisers and as auxiliary power.	Large rowboats of all models and light weight boats that plane.	Large canoes and all kinds of rowboats, family boats and dinghies.	Large canoes and all kinds of rowboats, family boats and dinghies.	Any ordinary rowboats, family boats and dinghies.	Any canoe and all kinds of rowboats, family boats and dinghies.	Any canoe and all kinds of rowboats, family boats and dinghies.	Any canoe and all kinds of rowboats, family boats and dinghies.	Any canoe and all kinds of rowboats, family boats and dinghies.

Johnson reserves the right to change construction or specifications without obligation.