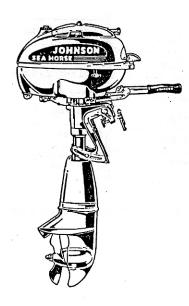
REPAIR PARTS CATALOG

For Model TD-20



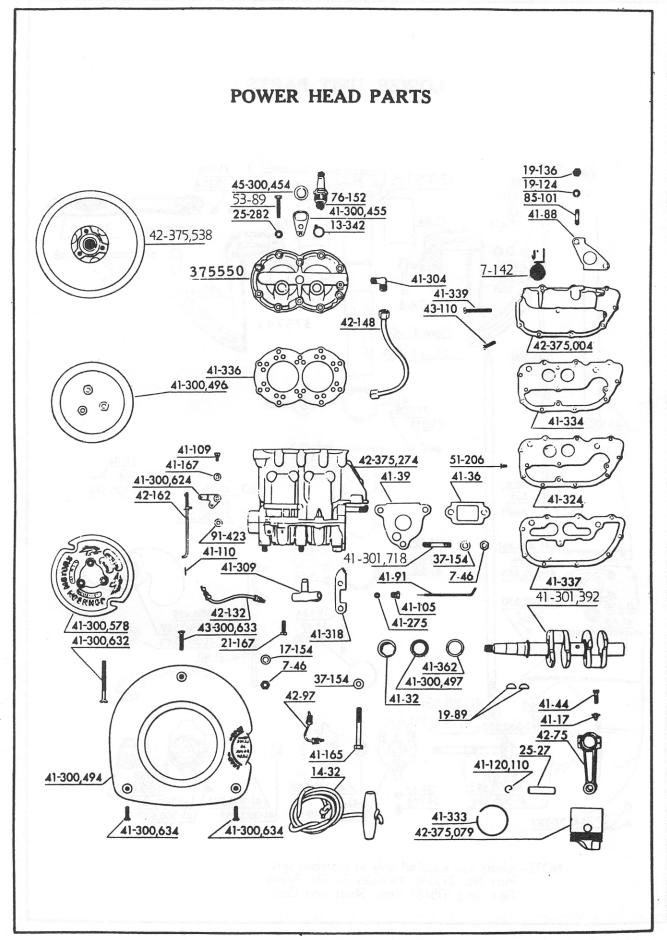
JOHNSON MOTORS

WAUKEGAN, ILLINOIS, U.S.A.

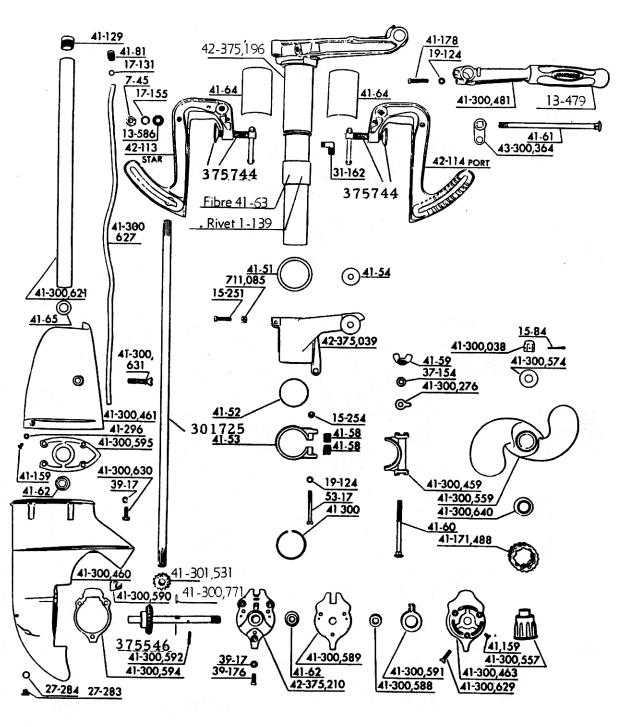
SPECIFICATION CHART

Mechanical	Sea-Horse	Horse Sea-Horse Mechanical		Sea-Horse	Sea-Horse
Specifications	TS(L)	TD(L)	Specifications	TS(L)	TD(L)
POWER-HEAD	Combination 3-Port Rotary Valve Alternate Firing	Combination 3-Port Rotary Valve Alternate Firing	POWER-HEAD	Combination 3-Port Rotary Valve Alternate Firing	Combination 3-Port Rotary Valve Alternate Firing
Bore and Stroke	1 15/16"xl½"	1 15/16"xl½"	Ignition	Magneto	Magneto
No. of Cylinders	2	2	Make Carburetor	Own	0 wn
0.B.C.	5.0	5.0	Gear Ratio.	14-25	14-25
Certified Brake H.P. at R.P.M.	4000	4000	Type of Exhaust	Underwater	Underwater
Piston Displacement	8.84 Cu. In.	8.84 Cu. In.	Cooling System	Positive Rubber Rotor Pump	Positive Rubber Rotor Pump
Weight	40 Lbs.	42 Lbs.		Full Pivot	Full Pivot
Propeller Dia.Pitch	8"x7½"	8"x7½"	Steering	Cushioned	Cushioned
Fuel Tank Capacity	7 Pints	· 7 Pints	Reverse	Yes	Yes
Starting	Rope	Ready Pull	Stern Height(Max.) Long Models	15" 20"	15" 20"

NOTE-The Letter "L" in parenthesis indicates models with extra long drive shaft casing.



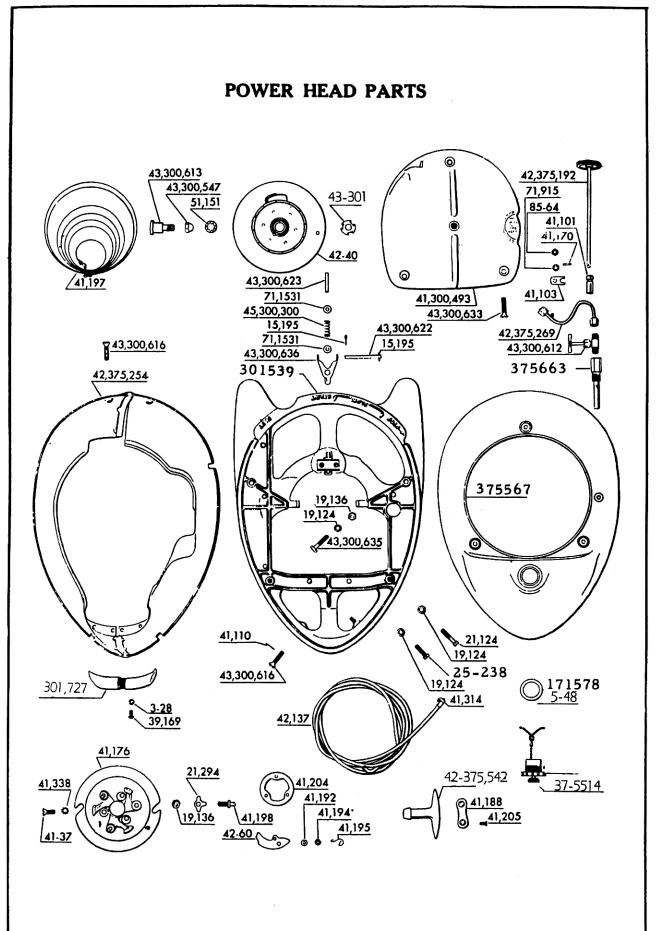
LOWER UNIT PARTS



NOTE—Gears are supplied only in matched sets. Part No. 375546. Includes 301531 Pinion Gear and 375187 Prop. Shaft and Gear.

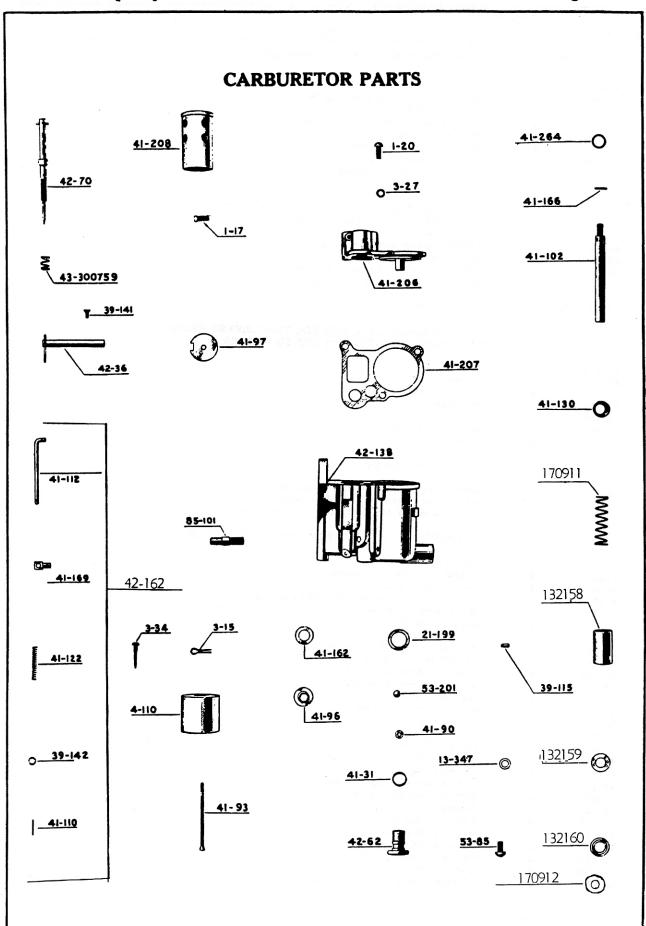
	No. Req'd	
Part No.	Per Motor	Name of Part
		REPAIR PARTS FOR MODELS TS AND TD MOTORS
1-139	2	Rivet - thrust fibre on driveshaft casing
3-28	4	Lockwasher - carrying handle to side cover screw
5-48	1	Gasket - filler cap - cast tank
7-45	1	Nut - tilting shaft
7-46	3	Nut - crankcase to flange and steering bracket
7-142	1 2	Core plug - muffler Gland - gasoline line
11-61 13-306	3	Gland - slow speed gas line and high speed gas line
13-307	2	Nut - high speed gas line
13-479	ì	Grip - steering handle
13-586	1	Washer - tilting shaft nut
15-84	1	Cotter pin - propeller nut
15-195 15-251	2 1	Cotter pin - hinge pin Screw - swivel bracket
15-254	i	Nut - pilot screw
17-131	3	Gland - water pipe
17-132	2	Nut - water pipe
17-155	1	Lockwasher - tilting shaft nut
19-89	2	Key - crankshaft Lockwasher - carburetor studs and tank mounting, steering
19-124	16	handle screw, mounting plate to crankcase, cylinder
		screw and gas tank to mounting plate and pilot screw
19-136	3	Nut - carburetor stud and mounting plate to crankcase
21-124	4	Screw - gas tank to mounting plate
21-167	5	Screw-carburetor flange to muffler and cylinder to crankcase
21-295	1	Dowel pin - plug oil hole
21-358	4 2	Screw - gas tank to bracket Wrist pin
25-27 25-238	2	Screw - mounting plate to cylinder
25-282	10	Lockwasher - cylinder head screws
27-88	1	Elbow - carburetor gas line
27-283	1	Screw - grease plug
27-284	1	Washer - grease plug
27-308	1	Nut - slow speed gas line Elbow - water pipe
31-162 37-154	1 10	Washer - cylinder to crankcase studs - thrust socket bolt nut
31-131		end and flange to crankcase
39-17	7	Lockwasher - gearcase head screw and upper and lower gear
	_	case screw
39-115	3 4	Plug - oil holes Screw - carrying handle to side covers
39-169 39-176	3	Screw - gearcase head
41-17	4	Lockplate - connecting rod screws
41-32	1	Nut - crankshaft
41-36	1	Gasket - cylinder to flange
41-39	1	Gasket - power head to lower unit
41-44	4 1	Screw - connecting rod Sprjing - steering handle
41-45 41-51	i	Thrust washer - swivel bracket
41-52	i	Lining - pilot band
41-53	1	Pilot band
41-54	2	Thrust washer
41-58	2	Spring - pilot band
41-59	1	Wing nut - thrust socket bolt
41-60 41-61	1	Thrust socket bolt Bolt - tilting shaft
41-62	2	Grease retainer - pinion shaft
41-63	ī	Fibre thrust collar
41-64	2	Lining - swivel bracket
41-65	1	Washer - driveshaft tubing
41-81	1	Nut - water pipe - upper
41-88	1	Gasket - carburetor flange
41-91 41-105	1 3	Needle valve - slow speed Nut - gas line packing
41-109	1	Screw - bell crank
41-110	6	Pin - bell crank to control rod and side cover screw
41-129	1	Nut - inner driveshaft casing

	No. Req'o	
Part No.	Per Moto	
	_	
41-159	2 2	Screw - vent plug Screw - flange to cylinder
41-165 41-167	1	Bow washer - bell crank
41-178	1	Screw - steering handle
41-187	1	Oil line - return
41-219	1	Wrench
41-275	3 1	Packing - slow speed needle valve Washer - vent screw
41-296 41-300	1	Snap ring - flange and steering bracket
41-304	î	Elbow - water tube
41-309	1	Slow speed intake
41-318	1	Support - slow speed needle
41-324	1 6	Plate - muffler to cylinder
41-328 41-332	1	Stud - cylinder to crankcase Plug - cylinder
41-333	6	Piston rings
41-334	1	Gasket - plate to muffler
41-336	1	Gasket - cylinder head
41-337	1	Gasket - plate to cylinder
41-339 41-340	1 1	Screw - muffler - long Socket wrench
41-362	1	Oil slinger
41-120, 11		Lockring - wrist pin
41-171,48		Propeller ring
41-300,03		Nut - propeller
41-300, 27 41-300, 45		Lockplate - port, stern bracket Anchor - ignition leads
41-300, 45		Thrust socket
41-300,46		Gearcase - lower
41-300, 46		Gearcase - upper
41-300, 46 41-300, 48		Pump housing Steering handle
41-300, 49	-	Cover for gas tank
41-300, 49		Starter pulley - lower half
41-300,49		Lockwasher - crankshaft nut
41-300,55		Propeller hub
41-300,55 41-300,57		Propeller Washer - outer - propeller
41-300, 57	-	Starter pulley - upper half
41-300,58		Eccentric - pump
41-300,58		Pump plate
41-300,59 41-300,59		Seal - water tube Rotor - pump
41-300, 59		Propeller drive pin
41-300,59		Gasket - gearcase head
41-300,59		Gasket - upper and lower gearcase
41-300, 62		Inner driveshaft casing Bell crank - carburetor
41-300, 62 41-300, 62		Water tube - inlet
41-300,62		Screw - pump housing to gear case head
41-300,63	1 1	Clamp screw - gear case
41-300,63		Screw - starter pulley
41-300,63 41-300,64		Screw - cover to gas tank Bushing for propeller
41-300,66		Nut - slow speed gas line
41-300,77		Lock pin - pump eccentric
41-301,39	2 1	Crankshaft
41-301,71		Stud - crankcase to drive shaft casing
41-301,72 43-110	5 1 9	Drive shaft Screw - muffler - short
43-110	1	Feeler gauge
43-252	ì	Handle - socket wrench
43-300, 36		Link - safety chain
43-300,61		Dowel pin - gear case head
43-300,61		Shut-off valve
43-300,61 43-300,62		Screw - side cover to mounting plate Ratchet pin
43-300,62		Spring pin
43-300,63	0 4	Screw - upper and lower gear case
43-300,63	3 1	Screw - housing and cover to gas tank

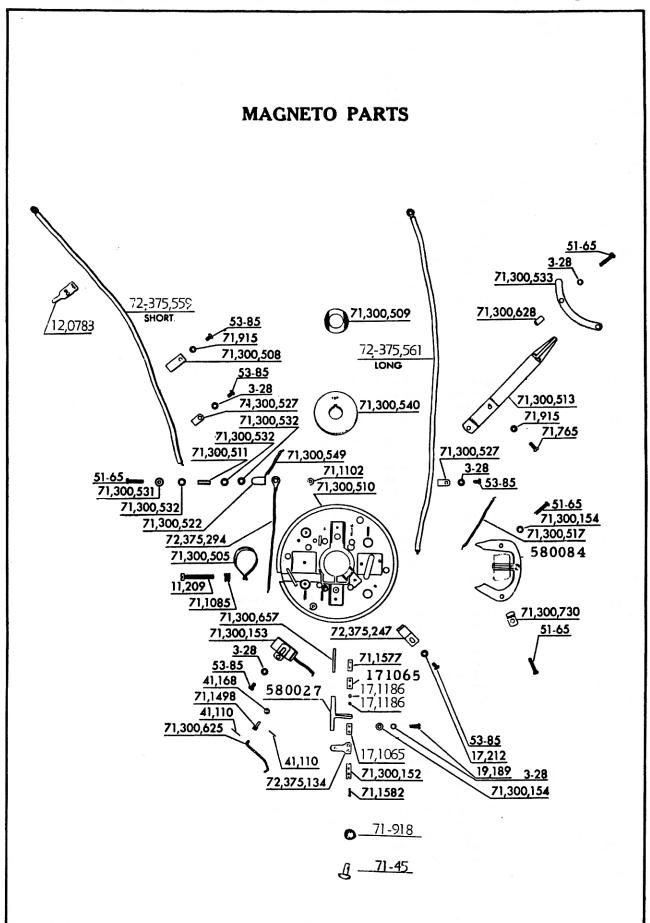


```
No. Regid
             Per Motor
Part No.
                                                 Name of Part
                            Screw - mounting plate to crankcase
                 2
     43-300,635
                            Pawl - armature plate ratchet
     43-300,636
                           Screw - carrying handle halves
     43-300, 637
                  1
                           Spring - ratchet lever
     45-300,300
                           Pin - adjusting rod to sleeve
     45-300, 346
                  1
                            Grommet - ignition leads
     45-300, 454
                  1
                           Screw - muffler to plate
     51-206
                  4
                          Screw - pilot band
     53-17
                  1
                           Screw - cylinder head to cylinder
     53-89
                 10
                           Spring - swivel bracket
     71-1085
                  1
                           Washer - ratchet spring
                 2
     71-1531
                           Stud - carburetor to cylinder and muffler to crankcase
     85-101
                           Ring - carrying handle screw
     121019
                  1
                            Gasket - filler cap - pressed tank
     171578
                   1
                           Mounting plate
     301539
                  1
     301727
                  1
                           Carrying handle - port
                           Carrying handle - star
                  1
     301727
                           Cylinder head
     375550
                  1
                            Swivel plate - clamp screw
     375744
                  2
                            Transfer - star
     401482
                  1
                  1
                            Transfer - port
     401483
                            Oiling and starting instructions
     401733
                  - 1
                               ASSEMBLIES FOR MODELS TS AND TD MCTGRS
                  1
                            Starting cord
     14-32
                            Filler cap assembly for gas tank - pressed tank
     42-23
                            Connecting rod and lockplate assembly
     42-75
                  2
                            Oil line assembly - return
     42-97
     42-113
                            Stern bracket and clamp screw assembly - star
                  1
                            Stern bracket and clamp screw assembly - port
     42-114
     42-132
                  1
                            Gasoline line assembly - slow speed
                           Muffler
     42-142
                  1
     42-147
                           Piston and connecting rod assembly
                           Water line assembly - outlet
     42-148
                 1
     42-162
                  1
                            Control rod - spring and swivel assembly
     42-375,039
                 1
                           Swivel bracket and screw
                           Piston
     42-375,079
     42-375, 196
                 1
                           Drive shaft casing less water tube
                           Gear case head and dowel pin assembly
     42-375, 210
                  1
                          Shroud, carrying handle and strip assembly
     42-375, 254
                  1
                           Tool kit assembly
     42-375, 266
                 1
                           Stern bracket and thrust socket assembly
     42-375, 267
                  1
                           Gasoline line - high speed
     42-375, 269
                  1
                 1
                           Lower unit - complete - less propeller
     42-375, 270
     42-375, 272
                           Gearcase assembly with gears and shafts
                           Cylinder and crankcase assembly
     42-375, 274
                  1
                           Drive shaft casing and water tube assembly
     42-375, 276
                  1
                          Steering handle and grip assembly
     42-375, 297
                 1
                           Filler cap - die cast tank
     42-375,514
                 1
     42-375,538
                  1
                           Flywheel
     42-375, 546
                  1
                           Gear set
                           Propeller shaft and gear
     375546
                  1
                           Gas tank with transfer
     375567
                  1
                           Connector and screen assembly - gas tank
     375663
                  1
                           Clamp screw and handle assembly
     375744
                  2
     PARTS FOR MODEL TO THAT DIFFER FROM THOSE USED ON MCDEL TS MOTOR
                           Nut - pawl to starter pulley
     19-136
                  3
                 3
                           Lockplate - pawl to dome pin
     21-294
                 3
                          Screw - starter pulley
     41 - 37
     41-176
                  1
                           Starter pulley
                 1
                           Plate - rope handle
     41-188
                           Washer - equalizer
     41-192
                 3
                 3
                           Snap ring - pawl pin
     41-194
     41-195
                  3
                           Spring
                  1
                           Main starter spring
     41-197
                 3
                           Pin - pawl to dome
```

41-198



		Νo	. Req'd	
D4	NI.		r Motor	Name of Part
Part	No.	Pe	r Motor	Name of Part
Р	ARTS F	OR	MODEL T	D THAT DIFFER FROM TS - continued
4	11-204		1	Equalizer - starter
	1-205		2	Screw - clamp plate to handle
	11-314		ī	Anchor - starter cord
	11-338		3	Lockwasher - starter pulley screw
	11-300.4	103	1	Starter housing
	13-300, 13-301	.,5	ī	Washer - shoulder screw
	13-301 13-300, !	47	î	Nut - starter - acorn
	13-300, (i	Shoulder screw - starter
	51-151	,,,	i	Washer - shoulder screw
-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			ASSEMBLIES FOR MCDEL TD THAT DIFFER FROM THOSE USED ON MCDEL TS MOTOR
,	12-40		1	Starter pulley and ratchet assembly
			3	Pawl and post assembly
	42-60 43-87		1	Starter pulley and pawl pin assembly
	42-87		1	Starting cord and anchor assembly
	42-137		1	Starter housing assembly
	12-375,		_	Handle - starter
4	12-375,	946	1	Mandle - Starter
				ARTS FOR MODELS TSL AND TDL THAT DIFFER FROM THOSE USED ON MODELS TS AND TD MOTORS
,	19-124		1	Washer
	27-17		i	Screw
	1-16		î	Thrust socket
			î	Reverse lock
	11-55	40	1	Inner drive shaft casing
	1-300,6		-	Water tube - inlet
	11-300,6		1	Drive shaft
4	1-301,	726	1	Drive snatt
				ASSEMBLIES
4	12-375,2	271	1	Lower unit complete less propeller
4	12-375, 2	273	1	Gear case assembly complete with gears and shafts
4	12-375, 2	277	1	Drive shaft casing and water tube assembly
				CARBURETOR PARTS FOR MODELS TS AND TD
1	l - 17		1	Set screw
	-20		3	Screw - carburetor cover
3	3-15		1	Cotter pin - float
	3-27		3	Lock washer - carburetor cover screw
	3-34		1	Wood screw - float
	3-100		1	Screw - carburetor drain
	3-306		4	Gland - gasoline lines
	3-347		1	Washer - jet and drain screw
2	1-199		1	Gasket for check valve
	9-115		4	Plug - carburetor body
	9-141		1	Screw - stem to throttle
	9-142		1	Washer - control rod
	1-31		1	Screen - check valve
	1-92		1	Throttle arm
	1-93		1	Float pin
	1-94		ī	Stem - throttle arm
	1-96		i	Screw - plug for float valve
	1-97		î	Throttle valve
	1-99		i	Needle valve - high speed
	1-101		î	Sleeve - needle valve
	1-101		î	Plunger
	1-102		1	Fork - plunger
	1-103 1-110		3	Pin - control rod
	1-112		1	Control rod - vertical
			1	Spring - control rod
	1-122		1	Cup - plunger
	11-130		1	Washer - plug for float valve
4	1-162		•	"



Be Sure to Specify Model and Serial Number of Motor When Ordering Parts

	No. Req'd	
Part No.	Per Motor	Name of Part
		CARBURETOR PARTS FOR MODELS TS AND TD-continued
41-166	3	Groove pin - needle valve bushing
41-169	1	Swivel - control rod
41-170	1	Pin - needle valve to sleeve Bushing - high speed needle valve
41-172 41-206	1	Cover - carburetor
41-207	1	Gasket - carburetor cover
41-208	1	Air silencer
41-264	1 .	Washer - pump plunger
41-268	1	Washer - needle valve spring
42-138	1	Carburetor body
43-300, 7	59 1 1	Spring - high speed needle Screw - jet
53-85 71-915	1	Lockwasher - plunger nut
85-64	1	Nut - plunger to fork
132158	1	Sleeve - plunger
132159	1	Packing washer - top
132160	1	Packing washer - bottom
170911	1 2	Spring - plunger Packing washer - leather
170912	2	
		CARBURETOR ASSEMBLIES
4-110	1	Float
42-3Ġ	1	Throttle arm and shaft
42-62	1	Check valve
42-70	1	Needle valve - high speed Carburetor complete
42-136 42-138	1	Carburetor body and plug
42-375, 19		Adjusting rod and knob assembly
		MAGNETO PARTS FOR MODELS TS AND TD
3-28	9	Lockwasher - breaker and ratchet assembly, ignition lead clamp screw, condenser mounting and oiler assembly screw
11-209	1	Screw - clamp
17-212	2	Lockwasher - oiler mounting screw
19-189	2	Screw - breaker mounting
39-169	1	Screw - timing lever
41-110	1	Pin - swivel control
41-168	1 7	Washer - swivel Screw - lamination and stop switch mounting and ratchet
51-65	-	mounting
53-85	6	Screw - condenser, oiler and lead clamp mounting
71-45	4 2	Lead to breaker bar nut Screw - coil lead to ground
71-78 71-765	1	Screw - timing lever
71-915	4	Lockwasher-timing lever screws and ignition lead clamp
71-918	4	Lockwasher - lead to breaker bar nut screw
71-1063	2	Terminal - condenser and coil lead
71-1068	2	Insulation tube - condenser and coil lead
71-1074	2	Screw - suppressor
71-1085	1	Spring - clamp screw
71-1102	1	Nut - stop switch
71-1498	1	swivel control Bar nut - breaker
71-1577 71-1582	2 4	Screw - terminal bar
71-1562		Terminal bar
71-300, 15	_	Condenser
71-300, 15		Washer - breaker and lamination screw
71-300, 50		Bearing shim - armature plate
71-300, 50		Clamp - high tension lead
71-300,50		Washer - rotor holding Armature plate casting
71-300, 5		Tubing - insulation stop switch
71-300, 51		Timing lever
	1	Timing feact

	No. Req'd	
Part No.	Per Motor	Name of Part
		MAGNETO PARTS FOR MODELS TS AND TD-continued
71-300,517	1	Lead - coil to breaker
71-300,522	1	Contact - stop switch
71-300,527	1	Clamp - high tension leads
71-300,531	1	Cup washer - stop switch
71-300,532	3	Washer - insulation - stop switch
71-300,533	1	Ratchet - armature plate
71-300,536	1	Terminal lug - lamination screw
71-300,540	1	Rotor
71-300,549	1	Lead, breaker to switch - short
71-300,625	1	Control rod - horizontal
71-300,628	2	Spacer - ratchet mounting
71-300,657	2	Push rod - breaker
71-300,730	2	Clip - safety gap
71-301,394	2	Spring - breaker point tension spring
171065	4	Insulation strip - breaker
171186	4	Insulation bushing - breaker - center
375553	2	Lead - coil to ground
		MAGNETO ASSEMBLIES FOR MODELS TS AND TD
72-375, 134	2	Spring and point assembly
72-375, 247	1	Oiler assembly
72-375, 248	1	Lead - coil to ground
72-375, 29 4	1	Lead - breaker to switch - long
72-375, 556	1	Armature plate complete
72-375,559	1	High tension lead assembly
72-375, 561	1	High tension lead assembly
120783	1	Marker - high tension lead
171065	4	Insulation strip - breaker
171186	4	Insulation bushing - breaker - center
375077	2	Terminal - assembly - ignition leads
580016	2	Breaker assembly - complete
580027	2	Bracket and point assembly - breaker
580084	2	Coil and core assembly

Contact Your Johnson Sea Horse Dealer for Replacement Parts, Information On Part Prices and Johnson Service.

Care of Motors When Used in Salt Water

Regardless of the material used in the construction of an outboard motor, it will corrode and tarnish to a certain extent when used in salt water. It is of importance, therefore, to adhere closely to the following instructions if you want to receive the most from your motor.

- 1. Remove the motor from the boat when it is not in service.
- 2. Flush out the cooling system as soon as possible.
- 3. Rinse off thoroughly with fresh water.
- 4. Wipe dry with a cloth.
- 5. Go over all the bright parts with an oily cloth, especially if the motor is to be stored for any length of time.

Warranty

All Johnson Motors (racing models excepted) are warranted 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 our factory in Waukegan, Illinois, any part or parts thereof which shall, within three months after date of delivery to owner, 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, express or implied, and of all other liabilities in connection with the sale or use of our outboard Motors.

This Warranty shall not apply to any outboard motor which shall have been repaired or altered outside of the factory in any way so as in our judgement, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident.

CLAIMS MUST BE ENTERED ON ALL RETURNED GOODS

Regular claim forms are provided all our dealers, service stations and distributors. All claims must be entered on this form, No. SE-16, before parts are returned to factory. No part will be replaced unless this form is used. See your dealers for claim form.

All material—motors or parts—be returned to your nearest service station or dealer—TRANS-PORTATION CHARGES PREPAID.

REMEMBER—ALWAYS request a claim form and properly fill it in before returning any material to our service station or distributor.

WARRANTY DOES NOT APPLY TO RACING MOTORS

Due to the excessive strains and stresses placed upon motors when used for racing, all Johnson motors of racing model or all other models when used for racing are sold with the distinct understanding that they are not guaranteed in any manner, and that Johnson Motors does not assume any responsibility for injury or damage sustained from their use thereof.