MODEL	JW	JWF	JH	JHL	JHF
WEIGHT	33 lbs.	35 lbs.	33-1/2 lbs.	34 lbs.	35-1/2 lbs
POWER HEAD			- 50	Philipped.	
. Engine type	Two cylin	der, two cy	cle alternate firing	, two port auto	omatic intake
. Certified horsepower*	3.0				
. Full throttle operating range	3500-4500	RPM			
. Piston displacement	5.28 cubic	inches			
. Bore and stroke	1-9/16" x	1-3/8"			
. Piston			d and .020" oversize	e. (See Parts	Catalog.)
. Piston rings			in standard and .02		
	Catalog				
. Diameter of ring	1.563" (st	andard)			
. Width of ring	.0935" -				
. Pressure required to compress ring	2 - 3-1/2				
. Crankshaft size					
top journal	.6854"	6849"			
center journal	.6854''				
bottom journal	.6854" -				
. Connecting rod crank pin	.6255'' -				
FUEL SYSTEM					
. Carburetion	Single bas	rrel, float i	eed, low speed adju	stment, manua	al choke
. Float level setting			casting carburetor		
. Carburetor orifice plug	.029 hole			,	
. Inlet needle seat	.065"0	62" use a	52 drill as gage		
. Fuel tank capacity			d tank mounted on th	ne power head	
. Fuel pump			ssory for use with t		
VIAILNOI	type tan		LLEINN		
IGNITION SYSTEM					
. Ignition	Flywheel	magneto			
Breaker point gap	.020''	magneto			
Condenser capacity	.1822	mfd			
. Spark plug			J4J, Auto-Lite A2	Y - 14mm	
. Spark plug gap	.030"	, onampioi	1010, Mato Dite ME.		
7					Market II.
SPEED CONTROL	Lever - s	ynchronize	d throttle and spark		
STEERING	Handle -	360° pivot			
COOLING SYSTEM	Combinat	ion positive	e displacement - cer	ntrifugal pump)
STARTER		ope, self re	wind, ratchet and pa	ıwl type. Em	ergency
	rope.			SE MORE EL	
LOWER UNIT					
. Drive	Direct -	constant for	ward engagement		
. Gear ratio	17:28		12:25		O MENSEL
. Propeller	2 blade,		3 blade 8" diamete	r x 5-1/2" pit	ch
	6-1/8" di	ameter x	- Manual Committee	Pic	
	6-1/4" pi		3 blade 8" x 4-1/2"	optional	
. Propeller drive pin		/16" stainl			
. Transom height	15''		15" and 20"		Section 1
			15" extension kit is	available ac	an
			10 extension kit is	available as	all

^{*}Brake horsepower certified by O.B.C.

MODEL	LD-12	LDL-12
WEIGHT (less fuel tank)	43 lbs.	43-1/2 lbs.
. Weight of fuel tank (empty)	11 lbs.	
POWER HEAD		
. Engine type		lternate firing, two port automatic intake
. Certified horsepower*	5.0	
. Full throttle operating range . Piston displacement	3500 - 4500 RPM 8.84 cubic inches	
. Bore and stroke	1-15/16" x 1-1/2"	
. Piston less rings	Available standard and .0	20" oversize. (See Parts Catalog.)
. Piston rings		dard and .020" oversize. (See Parts
. Diameter of ring	Catalog.) 1.9375" (standard)	
. Width of ring	.0935"0925"	
. Pressure required to compress ring	2 - 4 lbs.	
. Crankshaft size		
top journal	.8080''8075''	
center journal bottom journal	.8080"8075" .8080"8075"	
. Connecting rod crankpin	.6690''6685''	
FUEL SYSTEM		
. Carburetion	Single barrel, float feed,	low speed adjustment. Manual choke.
Float level setting Carburetor orifice plug	Parallel with rim of castin	g carburetor inverted, needle valve closed
. Inlet needle seat	.053''050'' Use a #55	drill as gage.
. Fuel tank capacity	6 U.S. gallons, suction typ	
. Fuel pump	Crankcase pressure oscil	llated diaphragm type with filter
IGNITION SYSTEM		
. Ignition	Flywheel magneto	
. Breaker point gap	.020"	
. Condenser capacity	.1822 mfd.	
. Spark plug	AC-M42K, Champion J4J,	Auto-Lite A21X - 14mm
. Spark plug gap		
SPEED CONTROL	Lever - synchronize thro	ttle and spark
STEERING	Handle - 360° pivot	
COOLING SYSTEM		placement centrifugal pump. Thermo-
	stat available as an acce	PSSOTV
		obboty.
STARTER	Manual rope, self re-wind	d, gear drive. Emergency rope.
	Manual rope, self re-wind	
STARTER LOWER UNIT . Drive		d, gear drive. Emergency rope.
LOWER UNIT . Drive . Gear ratio	Direct, forward gear only	d, gear drive. Emergency rope.
LOWER UNIT . Drive . Gear ratio . Propeller	Direct, forward gear only 12:25 3 blade, 8" diameter x 7-	d, gear drive. Emergency rope.
LOWER UNIT . Drive . Gear ratio	Direct, forward gear only 12:25	d, gear drive. Emergency rope.

^{*}Brake horsepower certified by O.B.C.

MODEL	CD-24	CDL-24	
WEIGHT (less fuel tank)	51 lbs.	52 lbs.	
. Weight of fuel tank (empty)	11 lbs.		
POWER HEAD			
. Engine type	Two cylinder, two cycle, al	ternate firing, two port automatic intake	
. Certified horsepower*	6.0		
. Full throttle operating range	4000 - 5000 RPM		
. Piston displacement	8.84 cubic inches		
. Bore and stroke	1-15/16" x 1-1/2"		
Piston less rings Piston rings	Available standard and .020" oversize. (See Parts Catalo 3 per set Available standard and .020" oversize. (See Parts Catalog.)		
. Diameter of ring	1.9375" (standard)		
. Width of ring	.0935"0925"		
. Pressure required to compress ring	2 - 4 lbs.		
. Crankshaft size			
top journal	.8080''8075''		
center journal	.8080''8075''		
bottom journal	.8080''8075''		
. Connecting rod crankpin	.6690''6685''		
FUEL SYSTEM		A LANGE OF THE STATE OF THE STA	
. Carburetion	Single barrel, float feed, lo	ow speed adjustment. Manual choke.	
. Float level setting		. Carburetor inverted, needle valve close	
. Carburetor orifice plug	.041 hole size		
. Inlet needle seat	.053''050'' Use a #55 o	drill as gage.	
. Fuel tank capacity	6 U.S. gallon suction type		
. Fuel pump	Crankcase pressure oscill	ated diaphragm type with filter	
IGNITION SYSTEM			
. Ignition	Flywheel magneto		
. Breaker point gap	.020"		
. Condenser capacity	.1822 mfd.		
. Spark plug	AC-MA2K, Champion J4J,	Auto-Lite A21X - 14mm	
. Spark plug gap	.030"		
SPEED CONTROL	Twist grip on steering han	dle, synchronized throttle and spark	
STEERING	Handle - adaptable to remote control		
COOLING SYSTEM	Combination positive displacement centrifugal pump with thermostat control in power head.		
STARTER	Manual rope, self re-wind, gear drive. Emergency rope.		
LOWER UNIT			
. Drive	Forward, neutral, reverse	, manual shift. Remote control avail-	
	able as an accessory.		
. Gear ratio	15:26		
. Propeller	2 blade, 8" diameter x 7-1	/4" pitch	
. Propeller drive pin	3/16" x 7/8" stainless stee	el [20"	
. Transom height			

^{*}Brake horsepower certified by O.B.C.

Johnson OUTBORRD MOTORS-

9-1/2 HP SPECIFICATIONS

MODEL	MQ-13	MQL-13	
WEIGHT (less fuel tank)	60 lbs.	61 lbs.	
. Weight of fuel tank (empty)	11 lbs.		
POWER HEAD			
. Engine type	Two cylinder, two cycle, altern	nate firing, two port automatic intake	
. Certified horsepower*	9.5		
. Full throttle operating range	4000 - 5000 RPM		
. Piston displacement	15.2 cubic inches		
. Bore and stroke	2-5/16" x 1-13/16"		
. Piston less rings	Available standard, .020" and Catalog.)		
. Piston rings	Parts Catalog.)	, .020" and .040" oversize. (See	
. Diameter of ring	2.3125" (standard)		
. Width of ring	.0935"0925"		
Pressure required to compress rings	3 - 5 lbs.		
. Crankshaft size	3 200.		
top journal	.8125"8120"		
center journal	.8118''8113''		
bottom journal	.8125''8120''		
. Connecting rod crank pin	.8118''8113''		
FUEL SYSTEM			
. Carburetion	Float feed, low speed adjustm	ent, manual choke	
. Float level setting	Parallel with rim of casting.	Carburetor inverted, needle	
MALANTERATION	valve closed.		
. Carburetor orifice plug	.048 hole size. Use a #56 dri		
. Inlet needle seat	.065"062" Use a #52 drill		
. Fuel tank capacity	6 U.S. gallon suction type tank		
. Fuel pump	Crankcase pressure oscillated	d diaphragm type with filter	
IGNITION SYSTEM			
. Ignition	Flywheel magneto		
. Breaker point gap	.020''		
. Condenser capacity	.1822 mfd.		
. Spark plug	AC-M42K, Champion J4J, Aut	o-Lite A21X - 14mm	
. Spark plug gap	.030"		
SPEED CONTROL	Twist grip on steering handle Adaptable to remote control.	, synchronize throttle and spark.	
STEERING	Handle adoptable to semete	control	
	Handle - adaptable to remote		
COOLING SYSTEM	Combination positive displacement centrifugal pump with therm stat control in power head.		
STARTER	Manual rope, self rewind, gear drive. Emergency rope.		
LOWER UNIT			
. Drive	Forward, neutral, reverse, m	anual shift. Remote control avail-	
	able as an accessory.		
. Gear ratio	13:23		
. Propeller	3 blade 8-1/4" diameter x 8-		
. Propeller drive pin	3/16" x 1-25/64" stainless st		
. Transom height	15"	20"	

^{*}Brake horsepower certified by O.B.C.

MODEL	FD-20	FDL-20	
WEIGHT (less fuel tank)	79 lbs.	81 lbs.	
. Weight of fuel tank (empty)	11 lbs.		
POWER HEAD			
. Engine type . Certified horsepower*	1 wo cylinder, two cycle, a 20.0	lternate firing, two port automatic intake	
Full throttle operating range	See Propeller Selection C	hart	
. Piston displacement	22 cubic inches	lait	
. Bore and stroke	2-1/2" x 2-1/4"		
. Piston less rings		and .040" oversize. (See Parts Catalog.)	
. Piston rings	3 per set Available stand Parts Catalog.)	ard, .020" and .040" oversize. (See	
. Diameter of ring	2.500" (standard)		
. Width of ring	.0935''0925''		
. Pressure required to compress ring	3 - 5 lbs.		
. Crankshaft size			
top journal	1.0000''9995''		
center journal	1.0000''9995''		
bottom journal	1.0000"9995"		
. Connecting rod crank pin	1.0005'' - 1.0000''		
FUEL SYSTEM			
. Carburetion	Single barrel, float feed,	low speed adjustment, manual choke	
. Float level setting		g. Carburetor inverted, needle valve close	
. Carburetor orifice plug	.064 hole size		
. Inlet needle seat	.053"050" Use a #55 (drill as gage.	
. Fuel tank capacity	6 U.S. gallon suction type		
. Fuel pump	Crankcase pressure oscil	lated diaphragm type with filter	
IGNITION SYSTEM		The second secon	
. Ignition . Breaker point gap	Flywheel magneto		
. Condenser capacity	.2529 mfd.		
. Spark plug	AC-M42K, Champion J4J,	Auto-Lite A21X - 14mm	
. Spark plug gap	.030"	210 210 1211	
SPEED CONTROL	Twist grip on steering handle, synchronized throttle and spark. Adaptable to remote control.		
STEERING	Handle - adaptable to rem	ote control	
COOLING SYSTEM	Combination positive displacement centrifugal pump with therm stat control in power head		
STARTER	Manual rope, self rewind, ratchet and pawl. Emergency rope. Electric starter available as an accessory.		
LOWER UNIT			
. Drive		e, manual shift. Remote control avail-	
. Gear ratio	able as an accessory.		
	Blade Diameter Pitch		
. Propeller supplied with motor	3 9" x 10-1/2	"	
	3 9'' x 9''		
optional		Car Carlotte	
optional optional		eedless)	
	3 9" x 10" (w 9-1/4" x 11" (or 3-3/16" x 1-3/8" stainles	otional)	

^{*}Brake horsepower certified by O.B.C.

MODEL	RX-15	RXL-15	RXE-15	RXEL-15
WEIGHT (less fuel tank) Weight of fuel tank (empty)	127 lbs. 11 lbs.	131 lbs.	140 lbs.	144 lbs.
POWER HEAD Engine type . Certified horsepower* . Full throttle range . Piston displacement . Bore and stroke . Piston less rings . Piston rings . Diameter of ring . Width of ring . Pressure required to compress ring . Crankshaft size . top journal . center journal . bottom journal . Connecting rod crankpin	33.0 See Propeller 40.5 cubic inch 3-1/16" x 2-3/ Available stand	Selection Chart nes 4" dard, .020" and .0 ilable standard, .(g.) ard) " 95" 5"	40 oversize. (Se	automatic intake e Parts Catalog.) ersize. (See
FUEL SYSTEM . Carburetion . Float level setting . Inlet needle seat . Fuel tank capacity . Fuel pump	Manual choke Parallel with r .065"062" 6 U.S. gallon s	float feed, low spe im of casting. Carl uction type tank ssure oscillated of	Electric choke ouretor inverted, r	e needle valve closed
IGNITION SYSTEM . Ignition . Breaker point gap . Condenser capacity . Spark plug . Spark plug gap	Flywheel magr .020'' .2529 mfd. AC-M42K, Cha .030''	neto umpion J4J, Auto-	Lite A21X - 14mr	n
ELECTRICAL SYSTEM			10 amp DC ger able as an a	nerator is avail- ccessory
SPEED CONTROL		ottle, synchronize able as an access		ark. Remote
STEERING	Remote contro	l or steering hand	lle available as ac	ccessories
COOLING SYSTEM	Combination p	ositive displacem	ent centrifugal pu	mp
STARTER	Manual rope, s	self rewind, ratch	et and pawl type.	
LOWER UNIT Drive Gear ratio Propeller supplied with motor optional optional optional	able as an ac 12:21 Blade Diamet 3 10-1/2' 3 10-3/8' 3 10-3/8' 3 10-3/8'	er Pitch ' x 12" ' x 11-1/2" ' x 13-1/4" ' x 14"	ual shift. Remot	e control avail-
. Propeller drive pin . Transom height	1/4" x 1-15/32 15"	2" stainless steel	20"	

^{*}Brake horsepower certified by O.B.C.

MODEL	RD-29	RDL-29	RDS-29	RDSL-29	RK-29	RKL-29
WEIGHT (less fuel tank)	132 lbs.	138 lbs.	143 lbs.	149 lbs.	154 lbs.	159 lbs.
. Weight of fuel tank (empty)	11 lbs.					
POWER HEAD Engine type Certified horsepower* Full throttle operating range Piston displacement Bore and stroke Piston less rings Piston rings Diameter of ring Width of ring Pressure required to compress ring Crankshaft size top journal center journal bottom journal Connecting rod crankpin	40.0 See Prope 43.9 cubic 3-3/16" x Available	eller Selection inches 2-3/4" standard an Available solution of the standard o	on Chart	e firing, two	arts Catalo	og.)
FUEL SYSTEM Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity	Parallel v .064 hole .065"0 6 U.S. gal	vith rim of ca size 062" Use a llon suction	Automati assist asting, carbu #52 drill as type tank	c and manual	ed, needle va	lve closed
. Fuel pump IGNITION SYSTEM . Ignition . Breaker point gap . Condenser capacity . Spark plug . Spark plug gap	Flywheel .020" .2529	magneto		ite A21X - 1		
ELECTRICAL SYSTEM				C gener- ailable as ssory	ator fu	OC gener- rnished as d equip-
SPEED CONTROL		cy throttle s ontrol avail		with spark ccessory	Remote	nized e and spark shift and e control ed with
STEERING	Remote - Steering	not supplie handle avail	d with engin able as an a	e ccessory	Steering availab	handle not le
COOLING SYSTEM		ion positive		nt - centrifu	gal pump w	ith ther-

^{*}Brake horsepower certified by O.B.C.

MODEL	VX-12	VXL-12	VXH-12	VXHL-12
WEIGHT (less fuel tank) . Weight of fuel tank (empty)	225 lbs. 11 lbs.	230-1/2 lbs.	230 lbs.	236 lbs.
POWER HEAD Engine type Certified horsepower* Full throttle operating range Piston displacement Bore and stroke Piston less rings Piston rings Diameter of ring Width of ring Pressure required to compress ring Crankshaft size top journal center journal bottom journal Connecting rod crankpin	order 1, 2, 3 60.0 See Propeller 70.7 cubic inc 3" x 2-1/2" Available star Catalog.)	Selection Chart hes ndard, .020" oversit ailable standard, .0 og.) ard) 5" 653" 748" 310"	ze and .040 overs	size. (See Parts
FUEL SYSTEM Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity Fuel pump	Two barrel, down draft, float feed, low speed adjustment. Manual and electric choke. Parallel to and 1/4" from face of body - carburetor inverted, needle valve closed .072 hole size .081"084" Use a #45 drill as gage. 6 U.S. gallon suction type tank Crankcase pressure oscillated diaphragm type with filter			or inverted,
IGNITION SYSTEM Ignition Breaker point gap Condenser capacity Spark plug Spark plug gap	Automotive type distributor .020" .3741 mfd. AC-M42K, Champion J4J, Auto-Lite A21X - 14mm .030"			
ELECTRICAL SYSTEM	6 ampere alte	ernator		
SPEED CONTROL	Synchronized throttle and spark			
STEERING	Remote contr	ol only. Not suppli	ed.	
COOLING SYSTEM	Combination positive displacement - centrifugal pump with ther- mostat control in power head			pump with ther-
STARTER	12 volt electric. Emergency starting rope.			
LOWER UNIT Drive Gear ratio Propeller supplied with motor optional optional	able as an a 20:23 Blade Diame 3 10'' 3 9-1/2' 3 10'' 3 10''	ter Pitch	No propeller to be purcha per dealer's	supplied - extra sed by customer selection for op
optional . Propeller drive pin . Transom height	3 10-1/4 9/32" x 2-5/3 15"	'' x 10'' 2'' 20''	timum perfo 5/16" x 1-7/8 15"	

^{*}Brake horsepower certified by O.B.C.

MODEL	V4S-18	V4SL-18	V4A-18	V4AL-18
WEIGHT (less fuel tank)	226-1/2 lbs.	232 lbs.	240-1/2 lbs.	246 lbs.
. Weight of fuel tank (empty)	11 lbs.			
POWER HEAD				
. Engine type	Four cylinder	V block, two cycle	, two port automat	ic intake. Firin
	order - 1, 2,	3, 4		
. Certified Horsepower*	80.0			
. Full throttle operating range		Selection Chart		
. Piston displacement . Bore and stroke	89.5 cubic inch 3-3/8" x 2-1/2			
. Piston less rings			40" oversize. (See	Posts Cotalos
Piston rings	3 per set Ava	ailable standard,	.020" and .040" over	
Di	Parts Catalog			
. Diameter of ring	3.375" (standar			
. Width of ring . Pressure required to compress ring	.0935''0925' 9.7 - 13.7 lbs.			
. Crankshaft size	9.1 - 15.1 108.			
top journal	1.2658" - 1.265	53"		
center journal	1.3752" - 1.374			
bottom journal	1.1815" - 1.18			
. Connecting rod crank pin	1.1828'' - 1.182	23''		
TWO WORDS				
FUEL SYSTEM				
	Two barrel do	wn draft float fo	ed low speed adjus	stment Manua
. Carburetion			ed, low speed adjusteric assist.	stment. Manua
. Carburetion	and automatic	c hot air with elec	etric assist.	
. Carburetion . Float level setting	and automatic	c hot air with elect 1/4" from face of		
. Carburetion . Float level setting . Carburetor orifice plug	Parallel to and needle valve .064" hole size	c hot air with elect 1/4" from face of closed.	etric assist. of body. Carburete	
. Carburetion . Float level setting . Carburetor orifice plug . Inlet needle seat	and automatic Parallel to and needle valve .064" hole size .081"084"	c hot air with elect 1/4" from face of closed. Use a #44 drill a	etric assist. of body. Carburete	
Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank	etric assist. of body. Carbureto s gage	or inverted,
Carburetion Float level setting Carburetor orifice plug Inlet needle seat	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank	etric assist. of body. Carburete	or inverted,
Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity Fuel pump IGNITION SYSTEM	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of	etric assist. of body. Carbureto s gage	or inverted,
Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity Fuel pump IGNITION SYSTEM Ignition	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of	etric assist. of body. Carbureto s gage tiaphragm type wit	or inverted,
Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity Fuel pump IGNITION SYSTEM Ignition Breaker point gap	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of	etric assist. of body. Carbureto s gage diaphragm type wit	or inverted,
Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity Fuel pump IGNITION SYSTEM Ignition Breaker point gap Condenser capacity	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre Distributor typ .020" .3741 mfd,	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of the magneto	etric assist. of body. Carbureto s gage diaphragm type wit Battery with di	or inverted, h filter
Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity Fuel pump IGNITION SYSTEM Ignition Breaker point gap Condenser capacity Spark plug	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre Distributor typ .020" .3741 mfd. AC-M42K, Cha	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of the magneto	etric assist. of body. Carbureto s gage diaphragm type wit	or inverted, h filter
Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity Fuel pump IGNITION SYSTEM Ignition Breaker point gap Condenser capacity	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre Distributor typ .020" .3741 mfd,	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of the magneto	etric assist. of body. Carbureto s gage diaphragm type wit Battery with di	or inverted, h filter
Carburetion Float level setting Carburetor orifice plug Inlet needle seat Fuel tank capacity Fuel pump IGNITION SYSTEM Ignition Breaker point gap Condenser capacity Spark plug Spark plug gap	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre Distributor typ .020" .3741 mfd. AC-M42K, Cha	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of the magneto mpion J4J, Auto-	etric assist. of body. Carbureto s gage diaphragm type wit Battery with di	h filter
. Carburetion . Float level setting . Carburetor orifice plug . Inlet needle seat . Fuel tank capacity . Fuel pump IGNITION SYSTEM . Ignition . Breaker point gap . Condenser capacity . Spark plug . Spark plug gap ELECTRICAL SYSTEM	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre Distributor typ .020" .3741 mfd, AC-M42K, Cha .030" 6 amp alternat	c hot air with elect 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of the magneto ampion J4J, Auto-	etric assist. of body. Carbureto s gage diaphragm type wit Battery with di Lite A21X - 14mm	h filter istributor
. Carburetion . Float level setting . Carburetor orifice plug . Inlet needle seat . Fuel tank capacity . Fuel pump IGNITION SYSTEM . Ignition . Breaker point gap . Condenser capacity . Spark plug	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre Distributor typ .020" .3741 mfd, AC-M42K, Cha .030"	c hot air with elect 1/4" from face of 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of the magneto ampion J4J, Auto-	etric assist. of body. Carbureto s gage diaphragm type wit Battery with di Lite A21X - 14mm	h filter istributor ator
. Carburetion . Float level setting . Carburetor orifice plug . Inlet needle seat . Fuel tank capacity . Fuel pump IGNITION SYSTEM . Ignition . Breaker point gap . Condenser capacity . Spark plug . Spark plug gap ELECTRICAL SYSTEM	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre Distributor typ .020" .3741 mfd, AC-M42K, Cha .030" 6 amp alternat Remote contro an accessory	c hot air with elect 1/4" from face of 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of the magneto ampion J4J, Auto-	etric assist. of body. Carbureto s gage liaphragm type wit Battery with di Lite A21X - 14mm 15 amp alterna Remote contro standard equi	h filter istributor ator
. Carburetion . Float level setting . Carburetor orifice plug . Inlet needle seat . Fuel tank capacity . Fuel pump IGNITION SYSTEM . Ignition . Breaker point gap . Condenser capacity . Spark plug . Spark plug gap ELECTRICAL SYSTEM	and automatic Parallel to and needle valve .064" hole size .081"084" 6 U.S. gallons Crankcase pre Distributor typ .020" .3741 mfd, AC-M42K, Cha .030" 6 amp alternat Remote contro an accessory Synchronized t	c hot air with elect 1/4" from face of 1/4" from face of closed. Use a #44 drill a suction type tank ssure oscillated of the magneto ampion J4J, Auto-	etric assist. of body. Carbureto s gage liaphragm type wit Battery with di Lite A21X - 14mm 15 amp alterna Remote contro standard equi	h filter istributor ator

^{*}Brake horsepower certified by O.B.C.

MODEL	V4TL-13
WEIGHT (less fuel tank)	272-1/2 lbs.
. Weight of fuel tank (empty)	11 lbs.
POWER HEAD	
. Engine type	Four cylinder V block, two cycle, two port automatic intake. Firing order - 1, 2, 3, 4
. Certified horsepower*	100.0
. Full throttle operating range	See Propeller Selection Chart
. Piston displacement	89.5 cubic inches
. Bore and stroke	3-3/8" x 2-1/2" Available standard, .020" and .040" oversize. (See Parts Catalog.)
. Piston less rings . Piston rings	3 per set Available standard, .020" and .040" oversize. (See Parts Catalog.) Parts Catalog.)
. Diameter of ring	3.375" (standard)
. Width of ring	.0935"0925"
. Pressure required to compress ring	9.7 - 13.7 lbs.
. Crankshaft size	
top journal	1.2658'' - 1.2653''
center journal	1.3752'' - 1.3748''
bottom journal	1.1815" - 1.1810"
. Connecting rod crankpin	1.1828'' - 1.1823''
FUEL SYSTEM	
. Carburetion	Four barrel, float feed, low speed adjustment. Automatic hot air
. Float level setting	and manual choke. Electric assist. 9/16" between float and point on each chamber bottom 5/16" in from front inside surface of chamber with casting inverted, float needle valves closed. Float gage available as special service tool. (See Special Tool Catalog.)
. Carburetor orifice plug	.065 hole size
. Inlet needle seat	.050"053" Use a #55 drill as gage.
. Fuel tank capacity	6 U.S. gallon suction type tank
. Fuel pump	Crankcase pressure oscillated diaphragm type with filter
IGNITION SYSTEM	
. Ignition . Spark plug	Transistorized capacitor discharge with distributor Champion L-19V
ELECTRICAL SYSTEM	15 ampere alternator
SPEED CONTROL	Remote control, synchronized throttle and spark
STEERING	Remote control only. Not supplied.
COOLING SYSTEM	Combination positive displacement - centrifugal pump with ther- mostat control.

^{*}Brake horsepower certified by O.B.C.