

A Handy Guide to



Courtesy of

THE CLINTON MACHINE COMPANY

Maquoketa, Iowa, U. S. A.

THE LIGHTWEIGHT SERIES

TOLERANCES AND SPECIFICATIONS

	100	V5-100	2100	A-2100	V5-2100	3100	V5-3100
Piston Displce. (Cu. Inches)	7.2	7.2	7.2	7.2	7.2	8.3	8.3
Piston Diameter	2.3695 2.3685	2.3695 2.3685	2.3695 2.3685	2.3695 2.3685	2.3695 2.3685	2.3695 2.3685	2.3695 2.3685
No. of Comp. Rings	2	2	2	2	2	2	2
No. of Oil Rings	1	1	1	1	1	1	1
Width Comp. Rings Groove	.096 .098	.096 .098	.096 .098	.096 .098	.096 .098	.096 .098	.096 .098
Width of Oil Rings Groove	.1890 .1825	.1890 .1825	.1890 .1825	.1890 .1825	.1890 .1875	.1890 .1825	.1890 .1825
Spec. k Plug Size	H-10	H-10	H-10	H-10	H-10	H-10	H-10
Head	L	L	L	L	L	L	L
Rated H. P.	1.45 2.5	1.45 2.5	1.1 1.75	1.1 1.75	1.1 1.75	2.42 3.0	2.42 3.0
R. P. M.	2200 to 3600	2200 to 3600	2200 to 3600	2200 to 3600	2200 to 3600	2600 to 3600	2600 to 3600
Comp. Pressure at Cranking Speed	85 95	85 95	85 95	85 95	85 95	85 95	85 95
Make of Magneto	Phelon	Phelon	Phelon	Phelon	Phelon	Phelon	Phelon
Make of Carburetor	Clinton or Carter	Clinton or Carter	Clinton or Carter	Clinton or Carter	Clinton or Carter	Clinton or Carter	Clinton or Carter
Type of Air Cleaner	Down Draft	Down Draft	Down Draft	Down Draft	Aluminum Mesh	Down Draft	Down Draft
Lubrication	Splash	Oil Pump	Splash	Splash	Oil Pump	Splash	Oil Pump
Starting Method	Recoil or Rope	Recoil or Rope	Recoil or Rope	Recoil or Rope	Recoil or Rope	Recoil or Rope	Recoil or Rope
Length & Width Height	10 $\frac{7}{16}$ x15 $\frac{1}{16}$ 13 $\frac{1}{4}$	12 $\frac{1}{2}$ x12 $\frac{1}{2}$ 13 $\frac{3}{8}$	10 $\frac{7}{16}$ x12 $\frac{1}{2}$ 13 $\frac{1}{4}$	10 $\frac{7}{16}$ x12 $\frac{1}{2}$ 13 $\frac{1}{4}$	12 $\frac{1}{2}$ x12 $\frac{1}{2}$ 13 $\frac{3}{8}$	10 $\frac{7}{16}$ x15 $\frac{1}{16}$ 13 $\frac{1}{4}$	12 $\frac{1}{2}$ x12 $\frac{1}{2}$ 13 $\frac{3}{8}$
Type of Bearing	Bronze	Bronze & Aluminum	Bronze & Aluminum	Bronze & Aluminum	Bronze & Aluminum	Bronze	Bronze
Shipping Weight	21 lb.	21 lb.	21 lb.	21 lb.	21 lb.	21 lb.	21 lb.
Wrist Pin Dia.	.5624 .5626	.5624 .5626	.5624 .5626	.5624 .5626	.5624 .5626	.5624 .5626	.5624 .5626
Conn. Rod Dia. (Bearing Surface)	.8145 to .8140	.8145 to .8140	.8145 to .8140	.8145 to .8140	.8145 to .8140	.8770 to .8765	.8770 to .8765
Fuel and Oil Recommended	Reg. Gas SAE 30	Reg. Gas SAE 30	Reg. Gas SAE 30	Reg. Gas SAE 30	Reg. Gas SAE 30	Reg. Gas SAE 30	Reg. Gas SAE 30
Governor, Type	Pneumatic Air Vane	Pneumatic Air Vane	Pneumatic Air Vane	Pneumatic Air Vane	Pneumatic Air Vane	Pneumatic Air Vane	Pneumatic Air Vane
Cooling Method	Air	Air	Air	Air	Air	Air	Air

SERVICE CLEARANCES

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TORQUE DATA

NOTE: All measurements given in inch pounds.

	100	VS-100	2100	A-2100	VS-2100	3100	VS-3100
Head Bolts	110 to 125" lb.	110 125" lb.	110 125" lb.	110 125" lb.	110 125" lb.	110 125" lb.	110 125" lb.
Connecting Rod	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.
Bearing Plate (PTO)	75 85" lb.	75 85" lb.	75 85" lb.	75 85" lb.	75 85" lb.	75 85" lb.	75 85" lb.
Flywheel	300 350" lb.	300 350" lb.	300 350" lb.	300 350" lb.	300 350" lb.	300 350" lb.	300 350" lb.
Spark Plug	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.
Blower Housing	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.
Carburetor Mounting	65 75" lb.	65 75" lb.	65 75" lb.	65 75" lb.	65 75" lb.	65 75" lb.	65 75" lb.
Speed Reducer Mounting	110 150" lb.	-----	110 150" lb.	110 150" lb.	-----	110 150" lb.	-----

THE CAST-IRON SERIES

TOLERANCES AND SPECIFICATIONS

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SERVICE CLEARANCES

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TORQUE DATA

NOTE: All measurements are given in INCH POUNDS

	A-300	VS-300	C-700	D-700	VS-700	A-800	VS-800	900	1200
Head Bolts	200 220" lb.	200 220" lb.	200 200	200 220" lb.	200 220" lb.	200 220" lb.	200 220" lb.	200 220" lb.	200 220" lb.
Connecting Rod	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.	70 80" lb.
Bearing Plates	75 95" lb.	75 95" lb.	75 95" lb.	75 95" lb.	75 95" lb.	75 95" lb.	75 95" lb.	75 95" lb.	75 95" lb.
End Cover		80 90" lb.		80 90" lb.		80 90" lb.			
Base Bolts	150 160" lb.		150 160" lb.	150 160" lb.		150 160" lb.		150 160" lb.	150 160" lb.
Flywheel	175 200" lb.	175 200" lb.	175 200" lb.	175 200" lb.	175 200" lb.	175 200" lb.	175 200" lb.	175 200" lb.	175 200" lb.
Spark Plug	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.	275 300" lb.
Blower Housing	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.
Carburetor Mounting	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.	60 70" lb.
Power Take-off Housing		80 100" lb.		80 100" lb.		80 100" lb.			
Speed Reducer Mounting	110 150" lb.		110 150" lb.	110 150" lb.		110 150" lb.		110 150" lb.	110 150" lb.

TOLERANCES AND SPECIFICATIONS

	1600 4 Cycle	2500 4 Cycle
Piston Displace	16.3	25
Piston Diameter	2.8055 2.8065	3.118 3.117
No. of Comp. Rings	2	2
No. of Oil Rings	1	1
Width Comp. Rings Groove	.096 .098	.096 .098
Width of Oil Rings Groove	.1890 .1875	.1890 .1875
Spark Plug Size	H-10	H-10
Head	L	L
Rated H.P.	2.9 6.3	4.6 9.0
R.P.M.	1600 to 3200	1600 to 3200
Comp. Pressure at Cranking Speed	90	90
Make of Magneto	Phelon	Phelon

TORQUE DATA

	1600	2500
Head Bolts	200 220" lb.	200 220" lb.
Connecting Rod	130 140" lb.	130 140" lb.
Bearing Plates	140 180" lb.	140 180" lb.
Base Bolts	150 160" lb.	150 160" lb.
Flywheel	100 ft. 120 lb.	100 ft. 120 lb.
Spark Plug	275 300" lb.	275 300" lb.
Blower Housing	60 80" lb.	60 80" lb.
Carburetor Mounting	100 120" lb.	100 120" lb.
Stator Plate	80 100" lb.	80 100" lb.
Speed Reducer Mounting	110 150" lb.	110 150" lb.

NOTE: All measurements given in INCH POUNDS unless otherwise specified.

SERVICE CLEARANCES

		1600	2500
Crankshaft Endplay		.003	.003
		.029	.029
Valve Clearance In		.012	.012
(Cold Set)	Ex	.012	.012
Valve Set Angle	44° to 45°	44° to 45°	
Valve Set Width		.045	.045
		.055	.055
Ring End Gap		.007	.010
		.017	.025
Top Land Clearance		.009	.009
		.011	.011
Skirt Clearance		.006	.006
		.008	.008
Points Setting		.028	.028
		.030	.030
Spark Plug Gap		.025	.025
		.028	.028
Air Gap		.012	.012
		.020	.020

THE TWO-CYCLE SERIES

TORQUE DATA

NOTE: All measurements given in INCH POUNDS

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SERVICE CLEARANCES

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CLINTON ENGINE PRODUCTION RECORD

ARRANGED BY DATE IN ORDER OF PRODUCTION

Model	HP	First Produced	Production Discontinued	Type of Magneto	Type of Carburetor	Kind of Governor	Replaced with Model
700-A	2	1946	Yes	Bendix	Tillotson Zenith	Flyball	B-700
A & B-1100	3	1947	Yes	Bendix	Tillotson Zenith	Flyball	C-1100
500	1 1/2	1948	Yes	Scintilla	Carter	Flyball	B-700
B-700	2	1949	Yes	Scintilla	Carter	Flyball	C-700
C-1100	3	1949	Yes	Phelon	Carter	Flyball	D-1100
VS-700	2	1949	Yes	Phelon	Carter	Air Vane	VS-900
A-300	1.6	1949	Yes	Phelon	Carter	Air Vane	.....
VS-300	1.6	1949	Yes	Phelon	Carter	Air Vane	.....
650	1 1/2	1950	Yes	Phelon	Clinton Built Suction Type	Air Vane	B-700
VS-750	1 3/4	1950	Yes	Phelon	Clinton Built Suction Type	Air Vane	VS-700
350	1	1950	Yes	Phelon	Clinton Built Suction Type	Air Vane	A-300
D-1100	3	1951	Yes	Phelon	Carter	Flyball	1200
800	2 1/2	1951	Yes	Phelon	Carter	Air Vane	900
VS-800	3	1951	Yes	Phelon	Carter	Air Vane	VS-1100
VS-200	1.75	1952	No	Phelon	Carter	Air Vane	.....
VS-400	2.5	1953	No	Phelon	Carter	Air Vane	.....
1600	6.3	1953	No	Phelon	Carter	Flyball	.....
2500	9	1953	No	Phelon	Carter	Flyball	.....
VS-100	2.5	1954	No	Phelon	Clinton or Carter	Air Vane	.....
VS-2100	1.75	1954	No	Phelon	Clinton or Carter	Air Vane	.....
C-700	2	1954	Yes	Phelon	Clinton or Carter	Flyball	D-700
900	3	1954	No	Phelon	Clinton or Carter	Flyball	.....
1200	3.6	1954	No	Phelon	Clinton or Carter	Flyball	.....
200	1.75	1955	Yes	Phelon	Clinton or Carter	Air Vane	A-200
A-200	1.75	1955	No	Phelon	Clinton or Carter	Air Vane	.....
A-400	2.5	1955	No	Phelon	Clinton or Carter	Air Vane	.....
AVS-200	1.75	1955	No	Phelon	Clinton or Carter	Air Vane	.....
AVS-400	2.5	1955	No	Phelon	Clinton or Carter	Air Vane	.....
100	2.5	1955	No	Phelon	Clinton or Carter	Air Vane	.....
A-2100	1.75	1955	No	Phelon	Clinton or Carter	Air Vane	.....
3100	3	1955	No	Phelon	Clinton or Carter	Air Vane	.....
VS-3100	3	1955	No	Phelon	Clinton or Carter	Air Vane	.....
D-700	2	1955	No	Phelon	Clinton or Carter	Flyball	.....
VS-900	2.75	1956	No	Clinton	Clinton	Air Vane	
VS-1100	3.5	1956	No	Clinton	Clinton	Air Vane	



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