

ENGINE SPECIFICATIONS AND COMPARISONS

MODELS	"F" SERIES	"D-600" SERIES	"D-400" SERIES
Horse Power	3-1/2+ H.P.	3-1/2 H.P.	3-1/2 H.P.
Bore	2.3810-2.3800	2.3750	2.3750
Stroke	1.7502-1.7497	1.500	1.500
Displacement Cu. In.	7.78	6.65	6.65
Displacement CC's	127.51	108.99	108.99
CRANKSHAFT			
Top Journal Both	.8778-.8773	.8742-.8737	.8742-.8737
Lower Push	.8778-.8773	.8742-.8737	.8742-.8737
Lower Self-Propelled	1.1270-1.1265	---	---
Crank Pin	.7430-.7425	.7430-.7425	.7430-.7425
Wrist Pin Diameter	.5000-.4998	.5000-.4998	.5000-.4998
End Play (Crankshaft)	.006-.016	.007-.017	.007-.017
Side Play (Crankshaft) Next to Seals	.0065 max.	.0065 max.	.0065 max.
PISTON			
Diameter (Right Angle Wrist Pin Hole) (Bottom of Skirt)	2.377-2.376	2.3759-2.3749	2.3759-2.3749
Diameter (Parallel Wrist Pin Hole) (Bottom of Skirt)	2.369-2.3725	2.3714-2.3679	2.3714-2.3679
Diameter Wrist Pin Hole	.5005-5001	.5005-.5000	.5005-.5000
Compression Ratio	5.89:1	5.5:1	4.5:1
Compression Min. (Cold)	80 PSI	70 PSI	65 PSI
Compression (Normal) Cold	100-115 PSI	90-105 PSI	70-85 PSI
Compression (Normal) Hot	90-105 PSI	80-95 PSI	60-80 PSI
PISTON RINGS			
Thickness Top	.0690-.0700	.0615-.0625	.0615-.0625
Thickness Bottom	.0615-.0625	.0615-.0625	.0615-.0625
End Gap (In Cylinder) Top	.007-.017	.015-.025	.015-.025
End Gap (In Cylinder) Bottom	.015-.025	.015-.025	.015-.025
CYLINDER			
Diameter (Inside)	2.3810-2.3800	2.3800-2.3810	2.3800-2.3810
BREAKER POINT GAP			
Coil Air Gap	---	---	.020
C.D. Module Air Gap	---	---	.010
Alternator Air Gap	.010	.010	---
SPARK PLUG GAP	.035	.035	.025
Type Spark Plug Champion	CJ-14	CJ-14	CJ-14
Type Spark Plug A-C	CS-49	CS-49	CS-49
Type Spark Plug Autolite	A-11X	A-11X	A-11X
Governor Speed High	3100-3300 RPM	3100-3300 RPM	3100-3300 RPM
Governor Speed Low	2400-2600 RPM	2400-2600 RPM	2400-2600 RPM

ENGINE

1954-77
MODELS

MODELS	A-10, A-11, A-13	C-10, C-12, C-20, C-21, C-22, C-70, C-71, C-72, C-73, C-75	C-13 thru C-17, C-40 thru C-42, C-50, C-51, C-60, C-61, C-80, C-81, C-74, C-76 thru C-78	C-18, C-19, C-19B, C-43, C-44, D-400 thru D-408, D-405E thru D-408E, D-430, D-431, D-440 thru D-448, D-445E thru D-448E, D-450 thru D-452, D-460 thru D-462, D-475, D-480, D-600	D-409, D-433, D-449, D-463, D-476, D-481, D-601, D-601E, D-640, D-641, D-641AE
Horsepower			2.5 (3 H.P.)	3-1/2	3-1/2
Bore	1-3/4 in.	1-15/16 in.	2-1/8 in.	2-3/8 in.	2-3/8 in.
Stroke	1-1/2 in.	1-1/2 in.	1-1/2 in.	1-1/2 in.	1-1/2 in.
Displacement	3.603 cu. in.	4.43 cu. in.	5.22 cu. in.	6.65 cu. in.	6.65 cu. in.
Piston Diameter	1.7470-1.7465	1.9360-1.9355	2.1205-2.1200	2.3720-2.3715	-
Breaker Point Setting	.020	.020	.020	.020	.020
Coil Air Gap	.010	.010†	.010	678103 Flywheel .016	-
C/D Air Gap				.010	.010
Spark Plug	Champion CJ-14 or equivalent. Gap-.025	Champion CJ-14 or equivalent. Gap-.025	Champion CJ-14 or equivalent. Gap-.025	Champion CJ-14 or equivalent. D-400 Series-.025 D-600 Series-.035	Champion CJ-14 or equivalent. D-400 Series-.025 D-600 Series-.035
GOVERNED SPEED — Fuel Mixture	REFER TO SECTION 16 (ENGINE QUICK REFERENCE CHART) FOR RECOMMENDED SPEEDS				
	1 can Lawn-Boy Lubricant per 1 gal. regular gasoline	1 can Lawn-Boy Lubricant per 1 gal. regular gasoline	1 can Lawn-Boy Lubricant per 1 gal. regular gasoline	1972 & Later; 1 can Lawn-Boy Lubricant per 2 gal. regular gasoline	1 can Lawn-Boy Lubricant per 2 gal. regular gasoline
	See Owner-Operator Manual for complete instructions	See Owner-Operator Manual for complete instructions	See Owner-Operator Manual for complete instructions	1971 & Earlier; 1 can Lawn-Boy Lubricant per 1 gal. regular gasoline See Owner-Operator Manual for complete instructions	

CLEARANCES

CRANKSHAFT					
Top Journal	.6692-.6689	.8742-.8737	.8742-.8737	.8742-.8737	.8742-.8737
Crank Pin	.6865-.6860	.7500-.7495 **.7430-.7425	.7500-.7495 *.7430-.7425	.7430-.7425	.7430-.7425
Bottom Journal	.6692-.6689	.8742-.8737	.8742-.8737	.8742-.8737	.8742-.8737
Bottom Journal					#1.1250-1.1245
CONNECTING ROD					
Wrist Pin Hole	.3659-.3654	.4275-.4280	.4908-.4903	.4908-.4903	
Crank Pin Hole	.6880-.6875	.7530-.7525 **.9427-.9422	.7531-.7525 *.9427-.9422	.9427-.9422	.9427-.9422
WRIST PIN					
Diameter (skirt)	.3650-.3642	.4272-.4270	.4900-.4898	.4900-.4898	.5000-.4998
PISTON					
Diameter	1.7470-1.7465	1.9360-1.9355	x2.1205-2.1200	2.3720-2.3715	2.3759-2.3749
Wrist Pin Hole	.3655-.3650	.4275-.4272	x.4900-.4905	.4900-.4905	.5005-.5000
PISTON RINGS					
Diameter	1.740 ± .000	1.9375 ± .000	2.125 ± .000	2.378-2.377	2.378-2.377
End Gap (In Cyl.)	.020 ± .005	.020 ± .005	.020 ± .005	.005-.015	.005-.015
Thickness	.0935-.0930	.093 ± .0005	.098-.088	.0615-.0625	.0615-.0625
CYLINDER					
Inside Diameter	1.751-1.750	1.940-1.941	xx2.126-2.125	xx2.378-2.377	2.3800-2.3810
Sub-Base Bushing	.683-.680	-	-	-	-
SUB-BASE HOUSING					
Sub-Base Bushing	.683-.680	-	-	-	-
CRANKCASE					
Top Bearing	-	.8770-.8762	.8770-.8762	††.8770-.8762	
Bottom Bearing	-	.8805-.8780	.8805-.8780	.8805-.8780	.8805-.8780
ARMATURE PLATE					
Bearing	-	.8770-.8762	.8770-.8762	.8762-.8746	-

*C-16, C-17, and C-42, C-51, C-61, C-81 engines
 **C-73 engine
 †C-71 engine
 ††C-18, C-19, C-19B, C-43, C-44, D-400, D-401 engines

xModel C-77 2.188 piston diameter
 .4900-.4905 wrist pin hole.
 Model C-78 2.438 piston diameter
 .4900-.4905 wrist pin hole.
 xx1967 "D" series and model C-78
 2.380-2.381 cylinder diameter.

#Models D-481,
 D-640 and
 D-641 only