

Clinton

CLINTON ENGINES CORPORATION

SERIES
420
LONG LIFE CAST IRON
9.6 HP

Model	Starter	PTO Shaft	Net Wt.
420-1301	Rope	Roller Thrust Bearing	103 lbs.
420-1361	Rope	6 to 1 Speed Reducer	116 lbs.

GENERAL SPECIFICATIONS

Bore: 3 1/8 inches.

Stroke: 3 1/4 inches.

Piston Displacement: 25 cubic inches.

Type: Single cylinder, L-Head, air-cooled, 4-cycle.

Air Cooling: Large capacity, curved vane blower cast integral with flywheel. Air passes through deep fins to maintain correct operating temperature.

Ignition: Increased spark at starting speed. Breaker points, condenser, radio shielded stop switch and ground wire terminal mounted in box on outside of crankcase for easy servicing. Advanced design magneto elements using Alnico permanent magnets and waterproof molded coil. Spark advance mechanism assembled on cam gear automatically retards spark at starting speed and advances spark as engine speed increases.

Spark Plug: 14 mm.

Lubrication: Splash type — oil capacity 5 pints.

Carburetor: Concentric float type with idle and high power mixture adjustment.

Fuel Tank: Six quarts capacity, with visible gasoline strainer and shut-off valve.

Air Cleaner: Oil bath type.

Governor: Adjustable mechanical type, running in oil.

Governor Control: Fixed speed setting. Variable speed control optional.

Cylinder and Crankcase: Close-grained alloy iron cylinder block and crankcase with large amount of cooling area for efficient operation. Reversible oil base.

Crankcase Breather: Maintains a vacuum in crankcase and prevents oil leaks.

Cylinder Head: Aluminum alloy, with extra deep cooling fins. Removable.

Main Bearings: High load capacity tapered roller bearings with thrust as well as radial load ability. Adjustment provision for wear.

Crankshaft: Ductile iron. Counterweights and cam drive gear integral with shaft.

Connecting Rod: I-Beam, aluminum alloy with extra large bearings.

Piston: Aluminum alloy. Clinton-engineered for efficient combustion.

Piston Rings: Two compression and one oil control. Treated surfaces.

Valves: Forged steel. Exhaust valve provided with heat-resistant alloy head.

Exhaust Valve Seat: Alloy insert, replaceable.

Valve Stem Guides: Replaceable, inlet and exhaust.

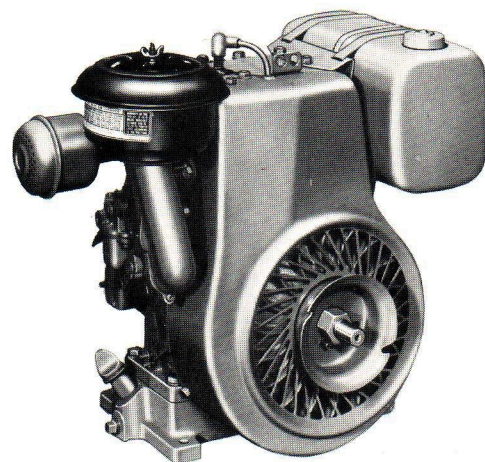
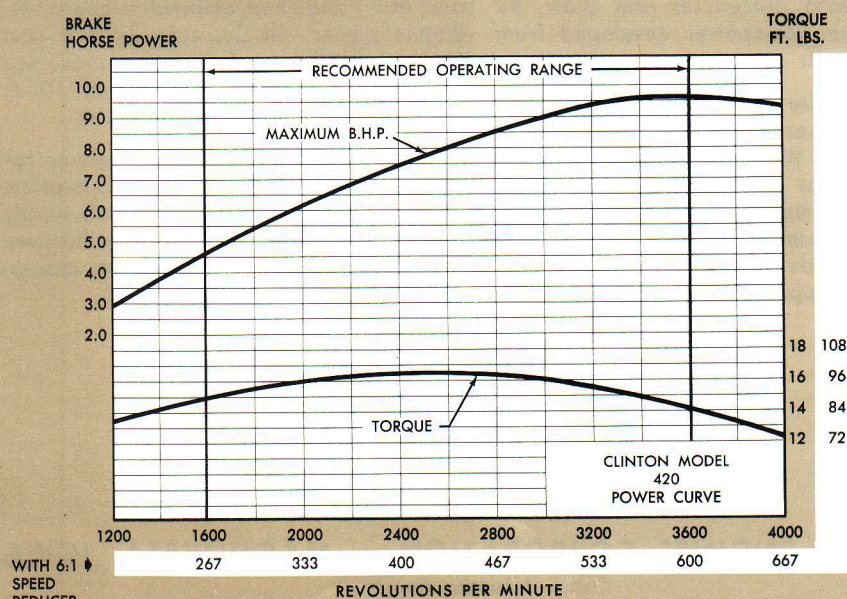
Valve Tappets: Hardened and ground.

Muffler: Efficient type, low back-pressure.

Direction of Rotation: Counterclockwise, viewed from power take-off side.

Gear Reduction: Model 420-1361 only has internal reduction gear, 6 to 1 ratio. Rotation, counterclockwise.

Finish: Painted in gray heat-resistant enamel. Prime coat finish if desired.



420-1361

[illegible][illegible]

Technical drawing of a 1/2 HP motor. The drawing includes the following dimensions and labels:

- $\frac{5}{16}$ - 18 NC-2 4 CAP SCREWS
- 30° and 30° angles at the top.
- $7\frac{3}{4}$ DIA. B.C. (Bottom Center)
- $2\frac{3}{8}$ DIA. (Internal vertical dimension)
- $5\frac{1}{2}$ - DIA. B.C. (Internal horizontal dimension)
- $7\frac{1}{16}$ - 14 NC - 2 TMD DEEP (R.H.) 4 HOLES
- $8\frac{43}{32}$ DIA. (Horizontal dimension across the base)
- 45° and 45° angles at the bottom.
- $13\frac{3}{32}$ DIA THRU 4 HOLES
- Side view dimensions: $8\frac{1}{32}$, $7\frac{3}{32}$, $3\frac{1}{32}$, and $3\frac{1}{32}$.

[illegible]

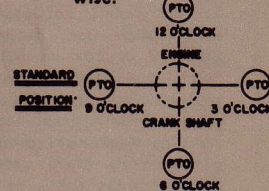
Technical drawing of a mechanical assembly with dimensions:

- Top horizontal dimension: $3 \frac{3}{16}$
- Left vertical dimension: $2 \frac{5}{8}$
- Bottom left vertical dimension: 100000 and 9999
- Bottom left vertical dimension: 6.151 and 6.127
- Bottom horizontal dimension: 11 and 3.7

Possible mounting positions of power take-off shaft in relation to the engine crankshaft as viewed from the power take-off end.

Rotation — counterclockwise.

Rotation — counterclockwise.



EXTENSION "A"

Technical drawing of a standard extension "B". The drawing includes a front view on the left and a side view on the right. Dimensions are provided in inches.

Front View Dimensions:

- Overall width: 4.800
- Inner width: 3.935
- Top flange width: 2.505
- Top flange thickness: .8457
- Bottom flange width: 1.182
- Bottom flange thickness: 1.101

Side View Dimensions:

- Overall length: 4.9
- Top flange thickness: .27
- Top flange width: .32
- Bottom flange thickness: .27
- Bottom flange width: .18
- Inner diameter: 1.438
- Outer diameter: 1.432
- Bottom flange thickness: .7
- Bottom flange width: .8
- Overall length: 10.000
- Inner diameter: .998
- Bottom flange thickness: 1.3765
- Bottom flange width: 1.3760

EXTENSION "B" STANDARD

EXTENSION "B" STANDARD

[illegible]

EXTENSION "C"

Technical drawing of a tapered shaft. The drawing shows a side view of the shaft with a taper of 24 TAPER PER FT. The shaft has a diameter of 1.814 inches at the left end and tapers to a diameter of 1.870 inches at the right end. The total length of the shaft is 4.32 inches. The drawing also shows a cross-section of the shaft at the right end, indicating a hole with a diameter of 0.870 inches. The shaft is labeled with the following dimensions:

- 4.32 (Total length)
- 3.800 (Length of the tapered section)
- 1.804 (Diameter at the start of the tapered section)
- 0.870 (Diameter at the end of the tapered section)
- 0.875 (Diameter of the hole at the end of the tapered section)
- 1.875 (Diameter at the end of the tapered section)
- 1.3785 (Diameter at the end of the tapered section)
- 1.3780 (Diameter at the end of the tapered section)
- 0.83 (Length of the tapered section)
- 1.814 (Diameter at the left end)
- 1.804 (Diameter at the start of the tapered section)
- 5/16 - 24 NF-8TH'D BH (Thread specification)
- 24 TAPER PER FT (Taper specification)
- EXTENSION "D" (Extension dimension)

EXTENSION "D"

The performance and horsepower ratings shown herein are established in accordance with standard procedures and show the rated Brake Horsepower developed from laboratory test engines.

Unless otherwise specified, the engine speed at no load is set at 2900 RPM plus or minus 100 RPM and the engine idle speed at no load is set at 1200 RPM plus or minus 100 RPM. Complete details of installations requiring operation at other than recommended speeds should be referred to the factory for approval.

The ratings are corrected to Standard Conditions of sea level barometric pressure and 60° Fahrenheit ambient temperature. Engine power will decrease 3.5 per cent for each 1000 feet of elevation above sea level and 1.0 per cent for each 10° F. above 60° F. ambient temperature.

Allow at least 20% of horsepower for safety factor under continuous operation. Clinton Engines Corporation will supply detailed prints upon request. Specifications and Dimensions are subject to change without notice.

CLINTON ENGINES CORPORATION • MAQUOKETA, IOWA

Cable Address: Engines

Reliable service at 12,000 Clinton Service Centers

Form No. OEM-1129 • Straus P. Co. - March 1968 • Printed in U.S.A.