

# Clinton

CLINTON ENGINES CORPORATION

SERIES  
**422**  
LONG LIFE CAST IRON  
**10.3 HP**

Model	Starter	PTO Shaft	Net Wt.
422-1301	Rope	Roller Thrust Bearing	103 lbs.
422-1361	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:** Vanacil piston with lower coefficient of expansion reduces friction at higher speed and higher temperature.

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

**Valves:** Forged steel. Exhaust valve provided with Stellite alloy head.

**Exhaust Valve Seat:** Stellite insert, replaceable.

**Valve Stem Guides:** Replaceable, inlet and exhaust.

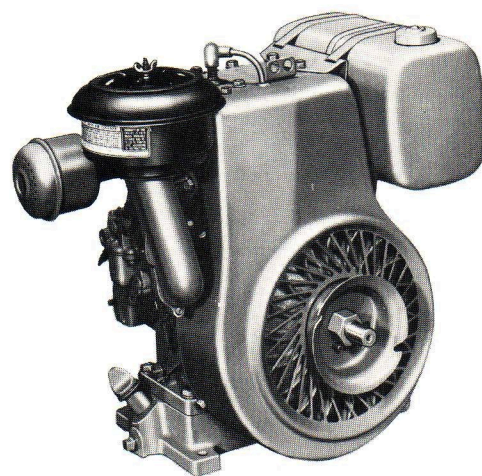
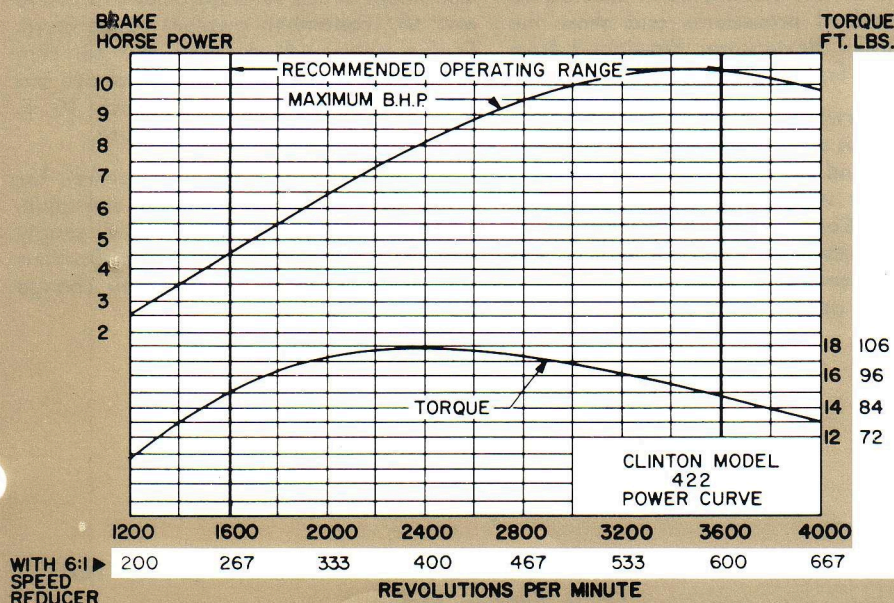
**Valve Tappets:** Hardened and ground.

**Muffler:** Efficient, low back-pressure type.

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

**Gear Reduction:** Model 422-1360 only has internal reduction gear, 6 to 1 ratio. Rotation, counterclockwise.

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



**422-1361**

Technical drawing of the Honda 1.5 HP engine, showing front and side views with dimensions in inches and fractions.

**Front View Dimensions:**

- Top mounting bracket width:  $4 \frac{15}{16}$  DIA.
- Left side mounting bracket height:  $6 \frac{11}{32}$
- Left side mounting bracket width:  $4 \frac{17}{32}$
- Bottom mounting bracket width:  $9 \frac{9}{16}$
- Bottom mounting bracket height:  $11 \frac{13}{16}$

**Side View Dimensions:**

- Right side mounting bracket height:  $7 \frac{3}{8}$
- Right side mounting bracket width:  $4 \frac{7}{32}$
- Right side mounting bracket height (lower):  $1 \frac{7}{8}$

Technical drawing of the Honda 1.5 CV engine, showing front and side views with dimensions in inches and fractions.

**Front View Dimensions:**

- Top width:  $8 \frac{5}{8}$
- Left height:  $19 \frac{5}{8}$
- Right height:  $16 \frac{5}{8}$
- Bottom left height:  $2 \frac{5}{8}$
- Bottom center height:  $4 \frac{7}{16}$
- Bottom right height:  $7 \frac{1}{2}$
- Bottom width (left):  $10 \frac{5}{8}$
- Bottom width (right):  $7 \frac{1}{2}$
- Bottom width (total):  $17 \frac{1}{2}$
- Bottom width (center):  $8 \frac{3}{8}$
- Bottom width (left side):  $2 \frac{1}{32}$
- Bottom width (right side):  $2 \frac{1}{32}$

**Side View Dimensions:**

- Top width:  $8 \frac{5}{8}$
- Left height:  $19 \frac{5}{8}$
- Right height:  $16 \frac{5}{8}$
- Bottom left height:  $2 \frac{5}{8}$
- Bottom center height:  $4 \frac{7}{16}$
- Bottom right height:  $7 \frac{1}{2}$
- Bottom width (left):  $10 \frac{5}{8}$
- Bottom width (right):  $7 \frac{1}{2}$
- Bottom width (total):  $17 \frac{1}{2}$
- Bottom width (center):  $8 \frac{3}{8}$
- Bottom width (left side):  $2 \frac{1}{32}$
- Bottom width (right side):  $2 \frac{1}{32}$

Technical drawing of a 100cc engine. Dimensions are provided in inches and fractions of an inch. Key dimensions include: 6 131/16, 6 127, 3/8, 17/32, 11/16, 2 13/32, 6, 39, 7 1/2, and 6. A 100cc label is visible on the cylinder head.

Technical drawing of a pump assembly, showing front and side views with dimensions.

**Front View Dimensions:**

- Top mounting holes:  $\frac{5}{16}$  - 18 NC-2, 4 CAP SCREWS
- Top flange holes: 30° (two angles)
- Top flange diameter: 7  $\frac{1}{2}$  DIA. B.C.
- Vertical distance between flanges: 2  $\frac{3}{8}$  DIA.
- Bottom mounting holes: 7  $\frac{16}{32}$  - 14 NC-2 THD DEEP (R.H.) 4 HOLES
- Bottom flange diameter: 5  $\frac{5}{8}$  - DIA. B.C.
- Bottom flange holes: 45° (two angles)
- Bottom flange diameter: 8  $\frac{13}{32}$  DIA.
- Bottom flange holes: 13  $\frac{32}{32}$  DIA THRU 4 HOLES

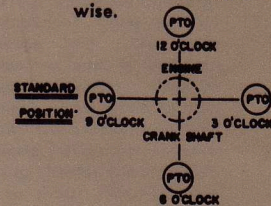
**Side View Dimensions:**

- Top flange thickness: 2  $\frac{1}{32}$
- Top flange hole diameter: 7  $\frac{32}{32}$
- Bottom flange thickness: 3  $\frac{13}{32}$

[illegible]

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

Rotation — counterclockwise.



1.375  
1.370

1.458  
1.432

1/8

1.000  
.989

1-14 NF-27H'D R.H.

EXTENSION 5A

Technical drawing of a bolt and nut assembly. The drawing includes two views: a front view on the left and a side view on the right. The front view shows a bolt with a hexagonal head and a nut. Dimensions include: 4800 (top left), 1899 (top left), 2508 (top center), 2497 (top center), 1182 (bottom left), and 1181 (bottom left). The side view shows the bolt and nut with dimensions: 4 9/32 (top right), 2 7/32 (top right), 1489 (top right), 1492 (top right), 7 8 (top right), 1000 (bottom left), 999 (bottom left), 13765 (bottom right), and 13760 (bottom right). The text "EXTENSION 'b' STANDARD" is centered below the drawing.

### EXTENSION "B" STANDARD

[illegible]

**EXTENSION "C"**

4.32

3.200  
± 0.008

1.804

0.6  
± 0.008

3.870

24 TAPER PER FT

EXTENSION "D"

EXTENSION "D"

## CLINTON POWER DATA

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**

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