



Clinton

CLINTON ENGINES CORPORATION • MAQUOKETA, IOWA 52060

TWX 319-641-1104 • PHONE AREA 319 652-2411

February 20, 1969

Gentlemen:

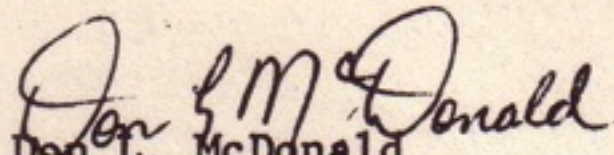
The time of year is rapidly approaching where sales are lost due to late engine delivery. Clinton can save these sales for you by offering prompt delivery of engines which are interchangeable with engines you may presently be using.

Many of our engines can be delivered from inventory which we maintain at all times or should you require special built engines, delivery would range between 30 and 60 days after receipt of a confirmed order. Enclosed please find specifications and prices covering some of the engines we manufacture. Should you require any additional information please contact the writer.

Let Clinton help you finalize that sales by meeting your delivery requirements with engines that will more than fulfill your required standards and specifications.

Sincerely,

CLINTON ENGINES CORPORATION


Don L. McDonald
Vice President

DLM/lo

Enclosure

**SO
why
worry?**




**SERVICE IS
EVERYWHERE**

around the clock

around the corner

around the world



Clinton has it . . . SERVICE

PARTS AVAILABILITY

Genuine Replacement Parts at 56 Strategically Located Central Warehouses.
*900 Authorized Servicing Distributors, *10,000 Authorized Servicing Dealers.

Pre-season Stocking Programs to Guarantee Parts When Needed.
Standardization of parts to insure availability regardless of engine age.
*U.S. and Canada

PRODUCT EDUCATION

Over 16,000 Registered Sales and Service Manual Holders.
Factory and Field Service Schools.
Brand New Audio-Visual Training Program.

PROMPT WARRANTY HANDLING


THE CLINTON AUTHORIZED SERVICE DEALER AGREEMENT RESPONSIBILITIES

The Clinton authorized Service outlet agrees to provide prompt service under the terms of Clinton's warranty policy. Such service is to be provided without prejudice or regard to make of equipment being powered.

The Clinton authorized Service outlet further agrees to extend warranty on an unbiased, fair, and efficient basis regardless of who the customer may be.

This will improve both Clinton's and the service agency's business. Failure to meet this service responsibility is in violation of Clinton's service center franchise and will be cause for a recommendation to cancel the agreement. Clinton's warranty policy is designed to be a fair and equitable arrangement between Clinton and its authorized service outlet. A profit on parts is accompanied by a liberal flat rate reimbursement.

There is an authorized **Clinton**

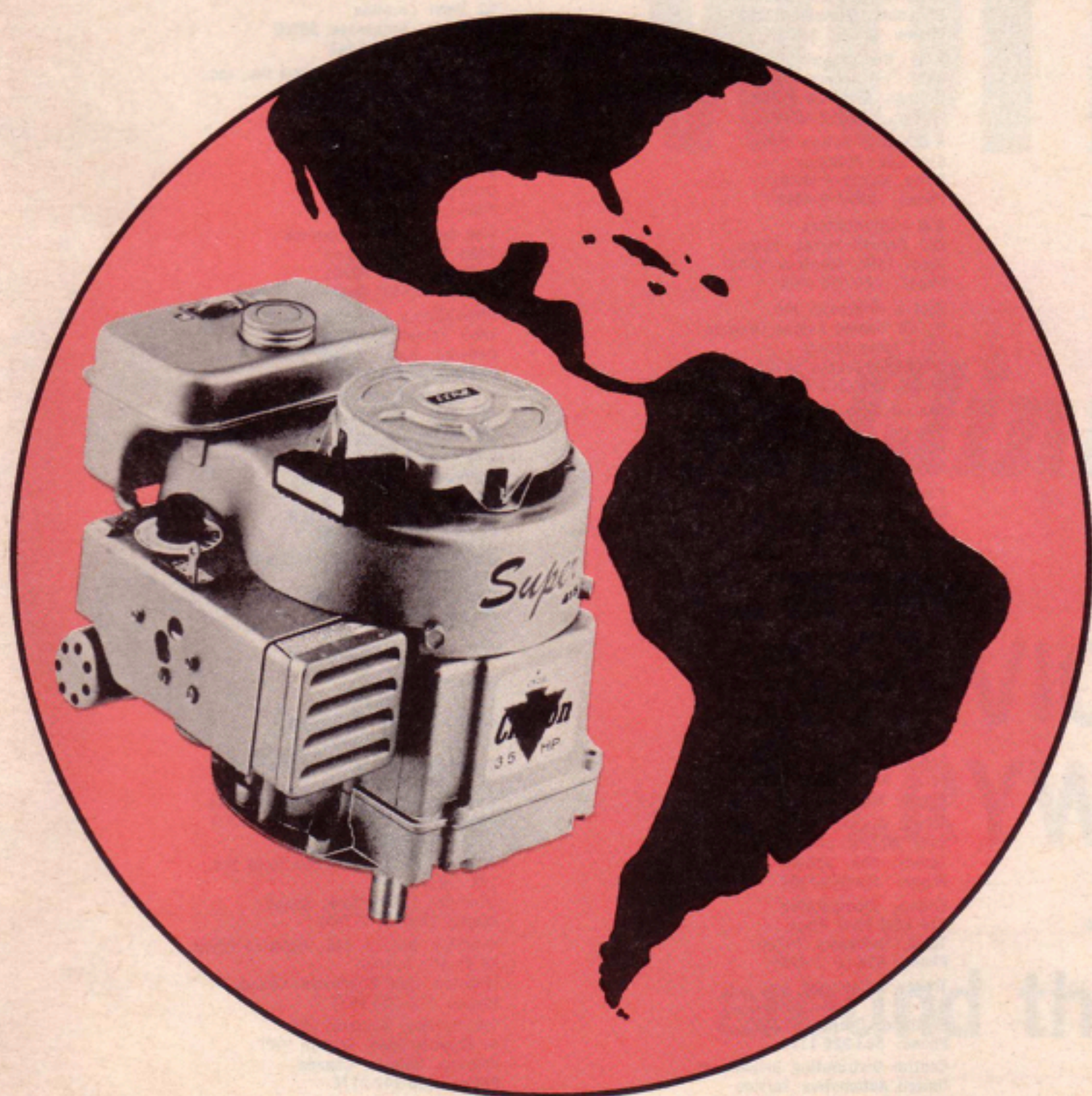


in the powerful world of **Clinton** engines



SERVICE IS EVERYWHERE

Clinton service is unsurpassed in all the world, with over 10,000 service centers in the United States and over 4,000 in 101 foreign countries. Clinton's franchised service centers are staffed with factory trained, competent personnel and carry complete stocks of replacement parts to effect repairs without delay. Clinton's broad coverage provides the most convenient small engine service in the world today for over 15 million Clinton engines.



IRON HEART—Cast iron cylinder sleeve gives Clinton twice the engine life of soft-bore engines.

REPLACEABLE BRONZE TOP BEARING—Factory installed for extra long engine life.

AUTOMOTIVE-TYPE FLOAT CARBURETION—Fast, sure starts. Uniform performance under all conditions.

FULL ONE-INCH CRANKSHAFT—Now 38% stronger. Made of ductile iron to resist shock.

E-Z PULL STARTING—50% less effort required with special contour cam. Up to 75% with compression release cam.

service dealer near you . . . see next page . . .



CENTRAL WAREHOUSE DISTRIBUTORS

(Alphabetically By States)

These franchised firms carry extensive stocks of genuine Clinton engine parts. Contact them for name and address of nearest Service Distributor for replacement parts you need.

Auto Electric & Carburetor Company
2625-4th Avenue, South
Birmingham, Alabama 35201
Phone: 205-323-7113

Charlie C. Jones Battery & Electric Co.
2440 West McDowell Road, P. O. Box
6654

Phoenix, Arizona 85005
Phone: 213-RI 9-4161

J. F. Dixon Company
1835 South Hope Street
Los Angeles, California 90015
Phone: 213-RI 9-4161

Bee Tee Engine Sales, Inc.
2424 Teagarden Street
San Leandro, California 94577
Phone: 415-483-4470

Central Auto Electric Company
1171 Lincoln Street
Denver, Colorado 80203
Phone: 303-292-6363

Roberts Brothers Company
6035 Blair Road, N. W.
Washington, D. C. 20011
Phone: 202-291-7800

Patten Sales Company
1021 Hogan Street
Jacksonville, Florida 32201
Phone: 904-354-6833

Patten Sales Company
1631 North Franklin
P. O. Box 2460
Tampa, Florida 33601
Phone: 405-235-5869

Auto Electric of Georgia, Inc.
460 Decatur Street, S. E.
Atlanta, Georgia 30312
Phone: 404-524-8811

Illinois Auto Electric Company
2001-37 Indiana Avenue
Chicago, Illinois 60616
Phone: 312-CA 5-4444

Midwest Engine Warehouse
1905 South Michigan Avenue
Chicago, Illinois 60616
Phone: 312-842-2828

Equipment Service Company
727 North Illinois Street
Indianapolis, Indiana 46204
Phone: 317-ME 5-4563

Lally's, Inc.
118-4th Street
Des Moines, Iowa 50309
Phone: 515-244-7118

Borbein, Young & Company
925 North Mosley Avenue
Wichita, Kansas 67214
Phone: 316-AM 5-1695

Parts Distributors, Inc.
Lisle Road, P. O. Box 29
Lexington, Kentucky 40501
Phone: 606-254-2323

Southern Specialty Sales Company, Inc.
617 North Broad Avenue, P.O. Box
19965

New Orleans, Louisiana 70119
Phone: 504-HU 6-6101

Yerxa's, Inc.
740 Broadway
South Portland, Maine 04106
Phone: 207-799-2241

Springfield Auto Electric Service, Inc.
50 Carew Street
Springfield, Massachusetts 01104
Phone: 413-788-9605

Auto Electric & Service Corporation
15550 Woodrow Wilson
Detroit, Michigan 48238
Phone: 313-883-4200

Engine Parts Supply Company
1220-1224 Harmon Place
Minneapolis, Minnesota 55403
Phone: 612-338-7086

Kerr Wholesale—Parts Division
3607 Livingston Road, P. O. Box 4207
Jackson, Mississippi 39216
Phone: 601-366-6421

Electrical & Magneto Service Company
1600 Campbell
Kansas City, Missouri 64108
Phone: 816-HA 1-3711

Borbein, Young & Company
3663 Forest Park Avenue
St. Louis, Missouri 63108
Phone: 314-JE 3-2013

A & I Distributors
3517 - 1st Avenue, South
Billings, Montana 59101
Phone: 406-252-4609

A & I Distributors
610 East Platinum
Butte, Montana 59701
Phone: 406-723-4389

A & I Distributors
807 Second Street, South
Great Falls, Montana 59401
Phone: 406-453-4314

Carl A. Anderson, Inc.
% Air Cooled Engine Division
1517 Jones Street
Omaha, Nebraska 68102
Phone: 402-345-9400

Central Auto Electric
808-2nd Street, N. W.
Albuquerque, New Mexico 87101
Phone: 505-Chapel 7-0185

Perspex Corporation
980 Alabama Avenue
Brooklyn, New York 11207
Phone: 212-NI 9-8181

Harmon Automotive Corporation
16-18 Charlotte Street
Rochester, New York 14607
Phone: 716-232-2360

E. J. Smith & Sons Company
1041 Hawthorne Lane
Charlotte, North Carolina 28201
Phone: 704-333-4141

Rott-Keller Supply Company
1443 Main Avenue
Fargo, North Dakota 58103
Phone: 701-AD 5-0563

Toledo Auto Electric, Inc.
1717 Monroe Street, Box 737
Toledo, Ohio 43624
Phone: 419-243-7104

Empco, Incorporated
814 East First Place
Tulsa, Oklahoma 74120
Phone: 918-LU 5-8269

Tracey & Company, Inc.
937 N. W. Glisan Street
Portland, Oregon 97209
Phone: 503-226-1111

Central Distributing Division of
United Automotive Service
1831 North Cameron St., P. O. Box
2629

Harrisburg, Pennsylvania 17105
Phone: 717-238-8995

McCullough Distributing Company, Inc.
1110 Germantown Avenue
Philadelphia, Pennsylvania 19123
Phone: 215-WA 5-4511

Wilcox Brothers Company
5157 Liberty Avenue
Pittsburgh, Pennsylvania 15224
Phone: 412-682-6747

Locke Auto Electric Service
525 North Dakota Avenue, P. O. Box
1165

Sioux Falls, South Dakota 57101
Phone: 605-336-2780

Harris Rim & Wheel, Inc.
415 St. Paul Street
Knoxville, Tennessee 37901
Phone: 615-525-9575

RCH Distributors, Inc.
92 West Carolina
Memphis, Tennessee 38102
Phone: 901-525-6447

Automobile Electric Service Co., Inc.
1008 Charlotte Avenue
Nashville, Tennessee 37203
Phone: 615-255-7515

The Motor Mart
2116 Cockrell Avenue
Dallas, Texas 75215
Phone: 214-HA 8-8331

Wes Kern's Repair Service
1533 Bassett Avenue
El Paso, Texas 79901
Phone: 915-532-2455

Distributor's Center
1409 Telephone Road
Houston, Texas 77023
Phone: 713-WA 3-5979

A-1 Engine & Mower Parts
437 East 9th South
Salt Lake City, Utah 84111
Phone: 801-364-3653

Fremont Electric Company
744 North 34th Street
Seattle, Washington 98103
Phone: 206-ME 3-2323

Baker Equipment Engineering Co., Inc.
404 Morris Street
Charleston, West Virginia 25327
Phone: 304-344-3441

CANADIAN

Loveseth, Ltd.
10180-105th Street
Edmonton, Alberta, Canada
Phone: 403-GA 4-5171

Auto Electric Service (Pacific) Ltd.
1025 Howe Street
Vancouver, British Columbia, Canada
Phone: 604-MU 2-5241 or MU 5-8111

Air Cooled Engine Division
Auto Electric Service (Western) Ltd.
193 Fort Street
Winnipeg 1, Manitoba, Canada
Phone: 204-WH 2-7331

Robert K. Buzzell, Ltd., Powered Equip.
65 Pacific Avenue
Moncton, New Brunswick, Canada
Phone: 506-389-9617

Jos. St. Mars Eastern, Ltd.
67 Colville Road, Station "W"
Toronto, Ontario, Canada
Phone: 416-247-2174

Autolec Services (Quebec) Ltd.
200 Bates Road, 1st. Floor
Montreal 26, Quebec, Canada
Phone: 514-739-5539

CLINTON ENGINES CORPORATION • MAQUOKETA, IOWA
PHONE: Area Code 319 652-2411

Clinton

CLINTON ENGINES CORPORATION

SERIES
400
ALUMINUM
3 HP

| Model | Starter | PTO Shaft | Net Wt. |
|----------|-----------------|----------------------|---------|
| 400-0105 | E-Z Pull Recoil | Bronze Bearing | 24 lbs. |
| 400-0305 | E-Z Pull Recoil | Ball Thrust Bearing | 24 lbs. |
| 400-0165 | E-Z Pull Recoil | 6 to 1 Speed Reducer | 30 lbs. |

GENERAL SPECIFICATIONS

Bore: 2½ inches.

Stroke: 1½ inches.

Piston Displacement: 7.2 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. Rotating blower screen.

Ignition: Very high voltage at low speed. Built-in flywheel magneto for faster starting. Moisture and dust proof with fully enclosed ignition points.

Spark Plug: 14 mm.

Lubrication: Splash type — oil capacity 1¼ pints. Oil drainage permitted from either side of base.

Carburetor: Full float feed with idle and high power mixture adjustment.

Fuel Tank: One-quart capacity, with gasoline strainer.

Air Cleaner: Washable high efficiency oiled non-spill MICRO-SEAL® element.

Governor: Adjustable pneumatic type.

Governor Control: Adjustable, combined with choke. Provision for mounting remote control cable.

Cylinder and Crankcase: Die-cast aluminum alloy with large amount of cooling area. A close-grained iron cylinder sleeve is cast in block.

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

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

Main Bearings: Models 400-0105 and 400-0165 have replaceable bronze sleeve bearings at power take-off and flywheel ends. Model 400-0305 has ball thrust bearing on power take-off end. Bronze bearing on flywheel end, all models.

Crankshaft: High strength 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.

Valve Seats: Alloy inserts.

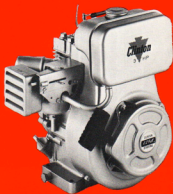
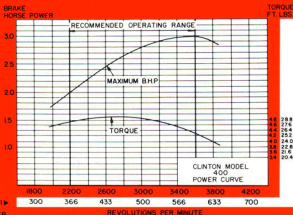
Valve Tappets: Hardened and ground.

Muffler: Efficient, low back-pressure type.

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

Gear Reduction: Model 400-0165 only has internal reduction gear, 6 to 1 ratio. Rotation, counterclockwise.

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



Clinton

CLINTON ENGINES CORPORATION

SERIES
404
ALUMINUM
3.5 HP

| Model | Starter | PTO Shaft | Net Wt. |
|----------|-----------------|----------------------|----------|
| 404-0104 | E-Z Pull Recoil | Bronze Bearing | 24½ lbs. |
| 404-0304 | E-Z Pull Recoil | Ball Thrust Bearing | 24½ lbs. |
| 404-0164 | E-Z Pull Recoil | 6 to 1 Speed Reducer | 31 lbs. |

GENERAL SPECIFICATIONS

Bore: 2½ inches.

Stroke: 1½ inches.

Piston Displacement: 8.3 cubic inches.

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

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

Ignition: Very high voltage at low speed. Built-in flywheel magneto for faster starting. Moisture and dust proof with fully enclosed ignition points.

Spark Plug: 14 mm.

Lubrication: Splash type — oil capacity 1½ pints. Oil drainage permitted from either side of base.

Carburetor: Full float feed with idle and high power mixture adjustment.

Fuel Tank: Two-quart capacity with fuel shut-off valve.

Air Cleaner: High efficiency oiled non-spill MICRO-SEAL element.

Governor: Adjustable pneumatic type.

Governor Control: Shipped fixed speed. Provision for variable speed with use of remote control cable.

Cylinder and Crankcase: Die-cast aluminum alloy with large amount of cooling area. A close-grained iron cylinder sleeve is cast in block.

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

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

Main Bearings: Models 404-0104 and 404-0164 have replaceable bronze sleeve bearings of power take-off end. Model 404-0304 has ball thrust bearing on power take-off end. Bronze bearings on flywheel end, all models.

Crankshafts: High strength 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.

Valve Tappets: Hardened and ground.

Valve Seats: Alloy inserts.

Muffler: Efficient, low back-pressure type.

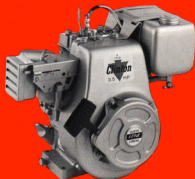
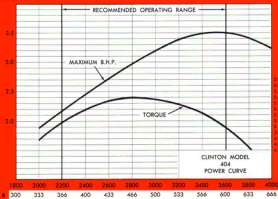
Direction of Rotation: Counterclockwise, viewed from power take-off side.

Gear Reduction: Model 404-0164 only has internal reduction gear, 6 to 1 ratio. Rotation, counterclockwise.

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

BRAKE
HORSE POWER

TORQUE
FT. LBS.

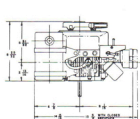


WITH 6:1
SPEED
REDUCER

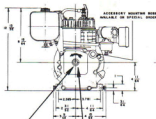
REVOLUTIONS PER MINUTE

404-0104
404-0304
404-0164

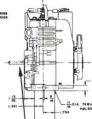
Dimensional Specifications



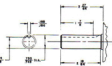
404-0104



404-0104



404-0104



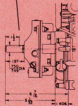
Extension "B" (Std.)
 404-0104



Variation for
 404-0304



Variation for
 404-0164



Variation for
 404-0164

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

Rotation — counterclockwise.



404-0164

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 3600 RPM plus or minus 200 RPM and the engine idle speed at no load is set at 1400 RPM plus or minus 200 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.

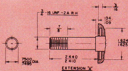


CLINTON ENGINES CORPORATION • MAQUOKETA, IOWA

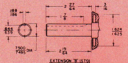
Cable Address: Engines

Reliable service at 12,000 Clinton Service Centers

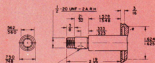
Form No. OEM-1149 • Straus P. Co. March 1968 • Printed in U.S.A.



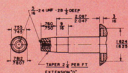
EXTENSION "X"



EXTENSION "Y"



EXTENSION "Z"



Crankshaft variations
 for 404-0304

Clinton

®
CLINTON ENGINES CORPORATION

SERIES
410
ALUMINUM
4 HP

| Model | Starter | PTO Shaft | Net Wt. |
|----------|-----------------|----------------------|----------|
| 410-0105 | E-Z Pull Recoil | Bronze Bearing | 24½ lbs. |
| 410-0305 | E-Z Pull Recoil | Ball Thrust Bearing | 24½ lbs. |
| 410-0165 | E-Z Pull Recoil | 6 to 1 Speed Reducer | 31 lbs. |

GENERAL SPECIFICATIONS

Bore: 2½ inches.

Stroke: 1½ inches.

Piston Displacement: 9.2 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. Rotating blower screen.

Ignition: Very high voltage at low speed. Built-in flywheel magnets for faster starting. Moisture and dust proof with fully enclosed ignition points.

Spark Plug: 14 mm.

Lubrication: Splash type — oil capacity 1½ pints. Oil drainage permitted from either side of base.

Carburetor: Full float feed with idle and high power mixture adjustment.

Fuel Tank: Two-quart capacity with fuel shut-off valve.

Air Cleaner: High efficiency oiled non-spill MICRO-SEAL® element.

Governor: Adjustable pneumatic type.

Governor Control: Shipped fixed speed. Provision for variable speed with use of remote control cable.

Cylinder and Crankcase: Die-cast aluminum alloy with large amount of cooling area. A close-grained iron cylinder sleeve is cast in block.

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

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

Main Bearings: Models 410-0105 and 410-0165 have replaceable bronze sleeve bearings at power take-off end. Model 410-0305 has ball thrust bearing on power take-off end. Bronze bearings on flywheel end, all models.

Crankshaft: High strength 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.

Valve Tappets: Hardened and ground.

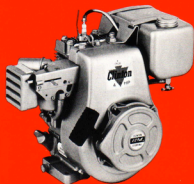
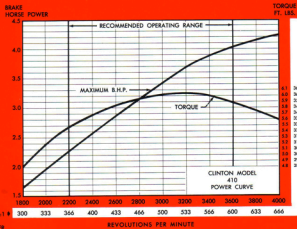
Valve Seats: Alloy inserts.

Muffler: Efficient, low back-pressure type.

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

Gear Reduction: Model 410-0165 only has internal reduction gear, 6 to 1 ratio. Rotation, counterclockwise.

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



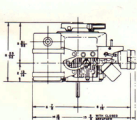
WITH 6-1
SPEED
REDUCER

REVOLUTIONS PER MINUTE

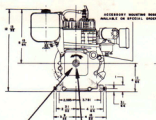
Clinton Engines

410-0105
410-0305
410-0165

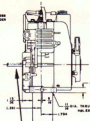
Dimensional Specifications



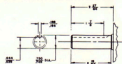
410-0105



410-0105



410-0105



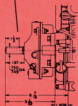
Extension "2" (Std.)
 410-0105



Variation for
 410-0305



Variation for
 410-0165



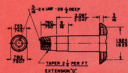
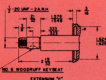
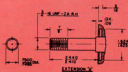
Variation for
 410-0165

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

Rotation — counterclockwise.



410-0165



Crankshaft variations
 for 410-0305

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 3600 RPM plus or minus 200 RPM and the engine idle speed at no load is set at 1400 RPM plus or minus 200 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-1764 • Straus P. Co. June 1968 • Printed in U.S.A.

Clinton

CLINTON ENGINES CORPORATION

SERIES
412
LONG LIFE CAST IRON
6 HP

| Model | Starter | PTO Shaft | Net Wt. |
|----------|---------|----------------------|---------|
| 412-1004 | Rope | Bronze Bearing | 65 lbs. |
| 412-1304 | Rope | Roller Bearing | 65 lbs. |
| 412-1364 | Rope | 6 to 1 Speed Reducer | 78 lbs. |

GENERAL SPECIFICATIONS

Bore: 2 $\frac{1}{8}$ inches.

Stroke: 2 $\frac{1}{2}$ inches.

Piston Displacement: 15.5 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. Rotating blower screen.

Ignition: Very high voltage at low speed. Built-in flywheel magnets for faster starting. Moisture and dust proof with fully enclosed ignition points.

Spark Plug: 14 mm.

Lubrication: Splash type — oil capacity 2 $\frac{1}{2}$ pints. Automotive type dipstick.

Carburetor: Full float feed with idle and high power mixture adjustment.

Fuel Tank: Five-quart capacity, with gasoline strainer and shut-off valve.

Air Cleaner: Oil bath type.

Governor: Adjustable mechanical type, running in oil.

Governor Control: Adjustable, combined with choke. Provisions for mounting remote control cable.

Cylinder and Crankcase: Shell-molded alloy iron cylinder block and crankcase with large amount of cooling area for efficient operation.

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

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

Main Bearings: Model 412-1000 has replaceable bronze bearings on power take-off and on flywheel end. Models 412-1300 and 412-1360 have high load capacity tapered roller bearings on both power take-off and flywheel ends, with thrust as well as radial load ability. Adjustment provisions for wear.

Crankshaft: High strength ductile iron. Counterweights and cam drive gear integral with shaft.

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

Piston: Aluminum alloy, extended skirt for longer ring life. Treated surface.

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

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

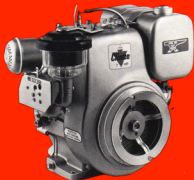
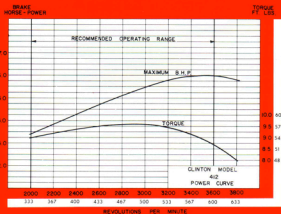
Valve Tappets: Hardened and ground.

Muffler: Efficient, low back-pressure type.

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

Gear Reduction: Model 412-1360 only has internal reduction gear, 6 to 1 ratio. Retention counter-clockwise.

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

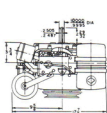


WITH 6-1
SPEED
REDUCER

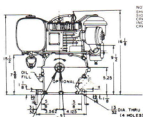
REVOLUTIONS PER MINUTE

**412-1004
412-1304
412-1364**

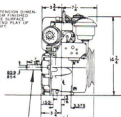
Dimensional Specifications



412-1004



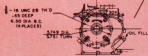
412-1004



412-1004



**Extension "2" (Std.)
412-1004**



**Variation for
412-1304**



**Variation for
412-1364**

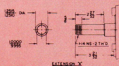


**Variation for
412-1364**

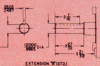
Possible mounting positions of power take off shaft in relation to the engine crankshaft as viewed from the power take off end.
Rotation—counter clockwise.



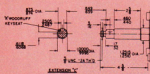
412-1364



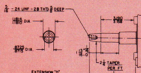
EXTENSION 'X'



EXTENSION 'W' (Std.)



EXTENSION 'Y'



**Crankshaft variations
for 412-1304**

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.



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Form No. OEM-1126 • Straus P. Co. March 1968 • Printed in U.S.A.

Clinton

CLINTON ENGINES CORPORATION

SERIES
414
LONG LIFE CAST IRON
7.5 HP

| Model | Starter | PTO Shaft | Net Wt. |
|----------|---------|-----------------------|---------|
| 414-1301 | Rope | Roller Thrust Bearing | 87 lbs. |
| 414-1361 | Rope | 6 to 1 Speed Reducer | 93 lbs. |

GENERAL SPECIFICATIONS

Bore: $2\frac{1}{8}$ inches.

Stroke: 2 $\frac{1}{2}$ inches.

Piston Displacement: 16.3 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 magnets 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 3 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: Cast-iron 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.

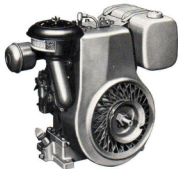
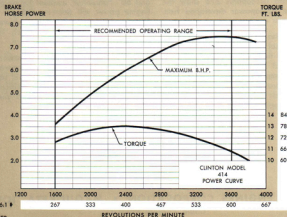
Valve Tappets: Hardened and ground.

Muffler: Efficient type, low back-pressure.

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

Gear Reduction: Model 414-1361 only has internal reduction gear, 6 to 1 ratio. Rotation, counterclockwise.

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

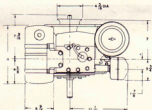


WITH 5:1
SPEED
REDUCER

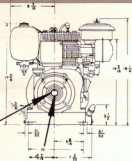
Clinton Engines

414-1301 414-1361

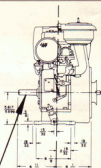
Dimensional Specifications



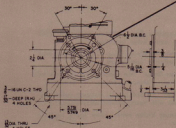
414-1301



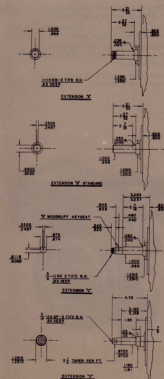
414-1301



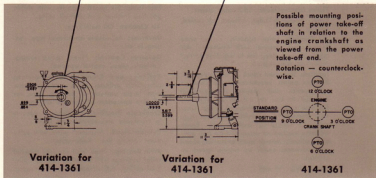
414-1301



Flange mounting detail for 414-1301



Crankshaft variations for 414-1301



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.

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Form No. OEM-1127 • Straus P. Co. • March 1968 • Printed in U.S.A.

Clinton

CLINTON ENGINES CORPORATION

SERIES
418
LONG LIFE CAST IRON
8 HP

| Model | Starter | PTO Shaft | Net Wt. |
|----------|---------|-----------------------|----------|
| 418-1301 | Rope | Roller Thrust Bearing | 89 lbs. |
| 418-1361 | Rope | 6 to 1 Speed Reducer | 102 lbs. |

GENERAL SPECIFICATIONS

Bore: 3 inches.

Stroke: 2½ inches.

Piston Displacement: 18.6 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 magnets 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 3 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.

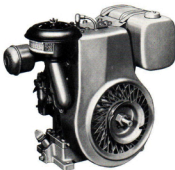
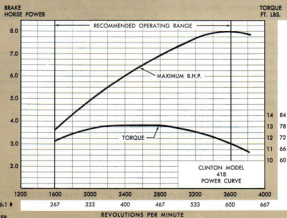
Valve Tappets: Hardened and ground.

Muffler: Efficient type, low back-pressure.

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

Gear Reduction: Model 418-1361 only has internal reduction gear, 6 to 1 ratio. Rotation, counterclockwise.

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

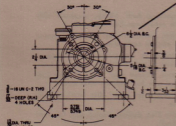
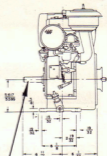
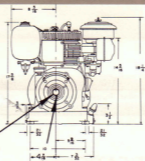
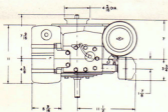


WITH 6:1
SPEED
REDUCER

Clinton Engines

418-1301 418-1361

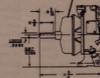
Dimensional Specifications



Flange mounting detail for 418-1301



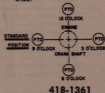
Variation for 418-1361



Variation for 418-1361

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

Rotation — counterclockwise.



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.

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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.

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Form No. OEM-1128 • Straus P. Co. - March 1968 • Printed in U.S.A.

Crankshaft variations for 418-1301

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 magnets 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.

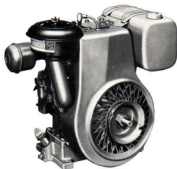
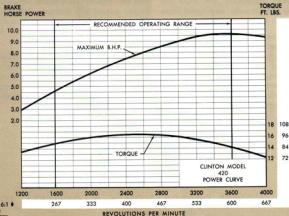
Valve Stem Guides: Replaceable, inlet and exhaust.

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.



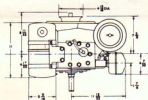
WITH 6:1 *
SPEED
REDUCER

REVOLUTIONS PER MINUTE

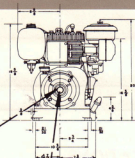
Clinton Engines

420-1301 420-1361

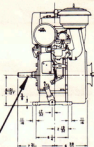
Dimensional Specifications



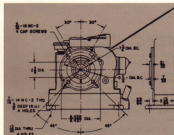
420-1301



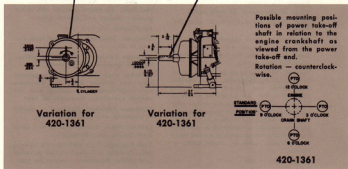
420-1301



420-1301



Flange mounting detail for 420-1301



Variation for 420-1361

Variation for 420-1361

420-1361

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.

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

Crankshaft variations for 420-1301

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 magnets 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: Vanocil 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.

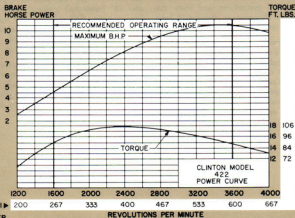
Valve Tappets: Hardened and ground.

Muffler: Efficient, low back-pressure type.

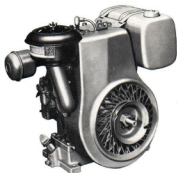
Direction of Rotation: Counterclockwise, viewed from power take-off side.

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.



WITH 6:1
SPEED
REDUCER

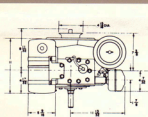


Clinton Engines

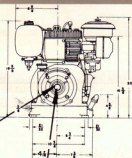
422-1301

422-1361

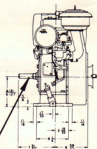
Dimensional Specifications



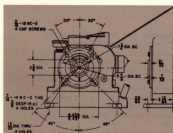
422-1301



422-1301



422-1301



Flange mounting detail for 422-1301



Variation for
422-1361



Variation for
422-1361

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

Rotation — counterclockwise.



422-1361

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.

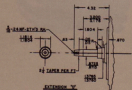
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Cable Address: Engines

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Form No. OEM-1130 • Straus P. Co. - March 1968 • Printed in U.S.A.

Crankshaft variations for 422-1301



Clinton

CLINTON ENGINES CORPORATION

SERIES
494
LONG LIFE CAST IRON
3.5 HP

| Model | Starter | PTO Shaft | Net Wt. |
|----------|-----------------|----------------------|---------|
| 494-0101 | E-Z Pull Recoil | Bronze Bearing | 43 lbs. |
| 494-0301 | E-Z Pull Recoil | Ball Thrust Bearing | 43 lbs. |
| 494-0161 | E-Z Pull Recoil | 6 to 1 Speed Reducer | 49 lbs. |

GENERAL SPECIFICATIONS

Bore: 2 1/8 inches

Stroke: 1 3/4 inches

Piston Displacement: 8.3 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. Rotating blower screen.

Ignition: Very high voltage at low speed. Built-in flywheel magneto for faster starting. Moisture and dust proof with fully enclosed ignition points.

Spark Plug: 14 mm

Lubrication: Splash type—oil capacity 1 1/4 pints. Oil drainage permitted from either side of base.

Carburetor: Full float feed with idle and high power mixture adjustment.

Fuel Tank: Three-quart capacity, with 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 with provisions for mounting control cable.

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

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

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

Main Bearings: Models 494-0101 and 494-0161 have bronze bearings on power take-off end. Model 494-0301 has ball thrust bearing at power take-off end. Bronze bearings on flywheel end, all models.

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.

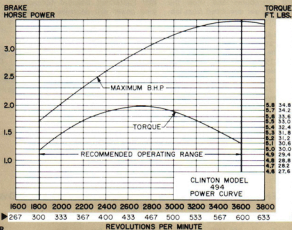
Valve Tappets: Hardened and ground.

Muffler: Efficient, low back-pressure type.

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

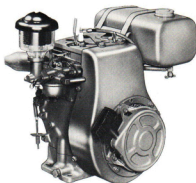
Gear Reduction: Model 494-0161 only has an internal reduction gear, 6 to 1 ratio. Rotation counter-clockwise.

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



WITH 6:1 SPEED REDUCER

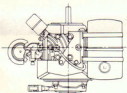
| RPM | Brake Horse Power (BHP) | Torque (FT. LBS.) |
|-----|-------------------------|-------------------|
| 267 | 1.7 | 12.5 |
| 300 | 2.0 | 15.0 |
| 333 | 2.3 | 17.5 |
| 367 | 2.6 | 19.0 |
| 400 | 2.9 | 19.5 |
| 433 | 3.1 | 19.5 |
| 467 | 3.3 | 20.0 |
| 500 | 3.5 | 19.5 |
| 533 | 3.4 | 18.5 |
| 567 | 3.3 | 17.5 |
| 600 | 3.2 | 16.5 |
| 633 | 3.1 | 15.5 |



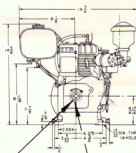
Clinton Engines

494-0101
494-0301
494-0161

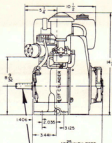
Dimensional Specifications



494-0101



494-0101



494-0101



494-0101



1/8" (0.125") TYP.
 DEEPER 4 HOLES
 EQUALLY SPACED ON 1/2" P.C.

Variation for
494-0301

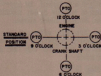


Variation for
494-0161



Variation for
494-0161

Possible mounting positions
of power take off shaft in
relation to the engine crank-
shaft as viewed from the
power take off end.
Rotation—counter clockwise.



494-0161

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 3300 RPM plus or minus 100 RPM and the engine idle speed at no load is set at 1500 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

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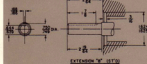
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Form No. OEM-1124 • Straus P. Co. - March 1968 • Printed in U.S.A.

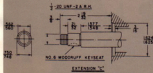
Crankshaft variations
for 494-0301



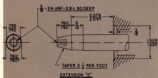
EXTENSION X



EXTENSION Y (STD)



EXTENSION Z



EXTENSION W

Clinton

®
CLINTON ENGINES CORPORATION

SERIES
498
LONG LIFE CAST IRON
4.5 HP

| Model | Starter | PTO Shaft | Net Wt. |
|----------|-----------------|-----------------------|---------|
| 498-0301 | E-Z Pull Recoil | Roller Thrust Bearing | 47 lbs. |
| 498-0361 | E-Z Pull Recoil | 6 to 1 Speed Reducer | 52 lbs. |

GENERAL SPECIFICATIONS

Bore: 2-15/32 inches

Stroke: 2 1/4 inches

Piston Displacement: 10.2 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. Rotating blower screens.

Ignition: Very high voltage at low speed. Built-in flywheel magneto for faster starting. Moisture and dust proof with fully enclosed ignition points.

Spark Plug: 14 mm

Lubrication: Splash type—oil capacity 1 1/4 pints. Oil drainage permitted from either side of base.

Carburetor: Full float feed with idle and high power mixture adjustment.

Fuel Tank: Three-quart capacity, with 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 with provisions for mounting control cable.

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

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 Timken 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.

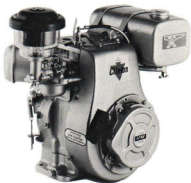
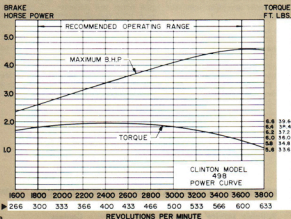
Valve Tappets: Hardened and ground.

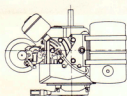
Muffler: Efficient, low back-pressure type.

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

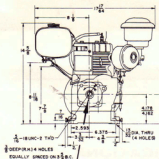
Gear Reduction: Model 498-0361 only has internal reduction gear, 6 to 1 ratio. Rotation counter-clockwise.

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

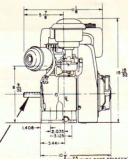




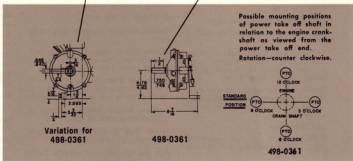
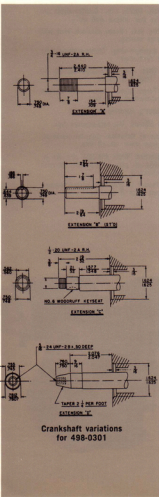
498-0301



498-0301



498-0301



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.



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SERIES
500
ALUMINUM
2.75 HP

| Model | Starter | PTD Shaft | Net Wt. |
|----------|---------|----------------------|----------|
| 500-0100 | Recoil | Bronze Bearing | 21½ lbs. |
| 500-0300 | Recoil | Ball Thrust Bearing | 21½ lbs. |
| 500-0160 | Recoil | 6 to 1 Speed Reducer | 27½ lbs. |

GENERAL SPECIFICATIONS

Bore: 2¼ inches

Stroke: 1½ inches

Piston Displacement: 5.76 cubic inches

Type: Single cylinder, horizontal crankshaft, air-cooled, 2-cycle.

Air Cooling: Powerful flywheel blower forces strong air blast through deep cooling fins on cylinder and cylinder head to maintain correct operating temperature. Rotating blower screen.

Ignition: Very high voltage at low speed. Built-in flywheel magneto for faster starting. Moisture and dust proof with fully enclosed ignition points.

Spark Plug: 14mm

Lubrication: Lubricating oil carried in fuel to all moving parts.

Carburetor: Full float feed carburetor with idle and high power mixture adjustment.

Fuel Tank: 1½ quarts capacity.

Air Cleaner: Washable high efficiency oiled non-spill polyurethane foam element.

Governor: Adjustable pneumatic type.

Governor Control: Combination fixed and variable speed.

Cylinder and Crankcase: Die-cast aluminum alloy with large amount of cooling area. A close-grained iron cylinder sleeve is cast in block.

Cylinder Head: Integral with cylinder casting.

Main Bearings: 500-0100 and 500-0160 have replaceable bronze sleeve bearings on power take-off end. Model 500-0300 has ball thrust bear-

ing on power take-off end. Bronze bearings on flywheel end, all models.

Crankshaft: Ductile iron. Counterweights integral with shaft. Bearing surfaces super finished.

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

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

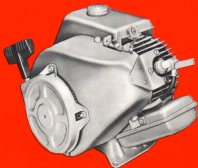
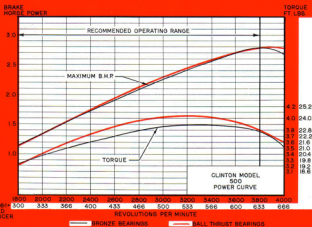
Piston Rings: Two compression rings.

Muffler: Efficient, low back-pressure type.

Direction of Rotation: Counter-clockwise, viewed from power take-off side. (Also available in clockwise rotation without governor.)

Gear Reduction: Model 500-0160 only has 6 to 1 ratio. Rotation counter-clockwise.

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



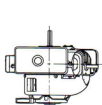
WITH 6:1 SPEED REDUCER

— BRONZE BEARINGS - - - BALL THRUST BEARINGS

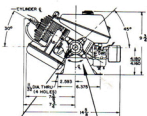
Clinton Engines

500-0100
500-0300
500-0160

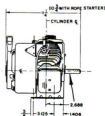
Dimensional Specifications



500-0100



500-0100



500-0100



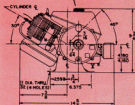
Extension "2" (std.)

500-0100

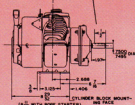
MINIMUM 28 TPI
 6 DEEP
 6 HOLES EQUALLY
 SPACED ON 3.00



Variation for
 500-0300



Variation for
 500-0160



Variation for
 500-0160

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

Rotation—counter clockwise



500-0160

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 3600 RPM plus or minus 200 RPM and the engine idle speed at no load is set at 1400 RPM plus or minus 200 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.



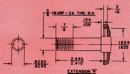
CLINTON ENGINES CORPORATION • MAQUOKETA, IOWA

Cable Address: Engines

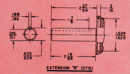
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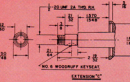
Crankshaft variations
 for 500-0300



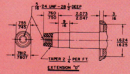
EXTENSION "1"



EXTENSION "2" (STD)



EXTENSION "3"



EXTENSION "4"