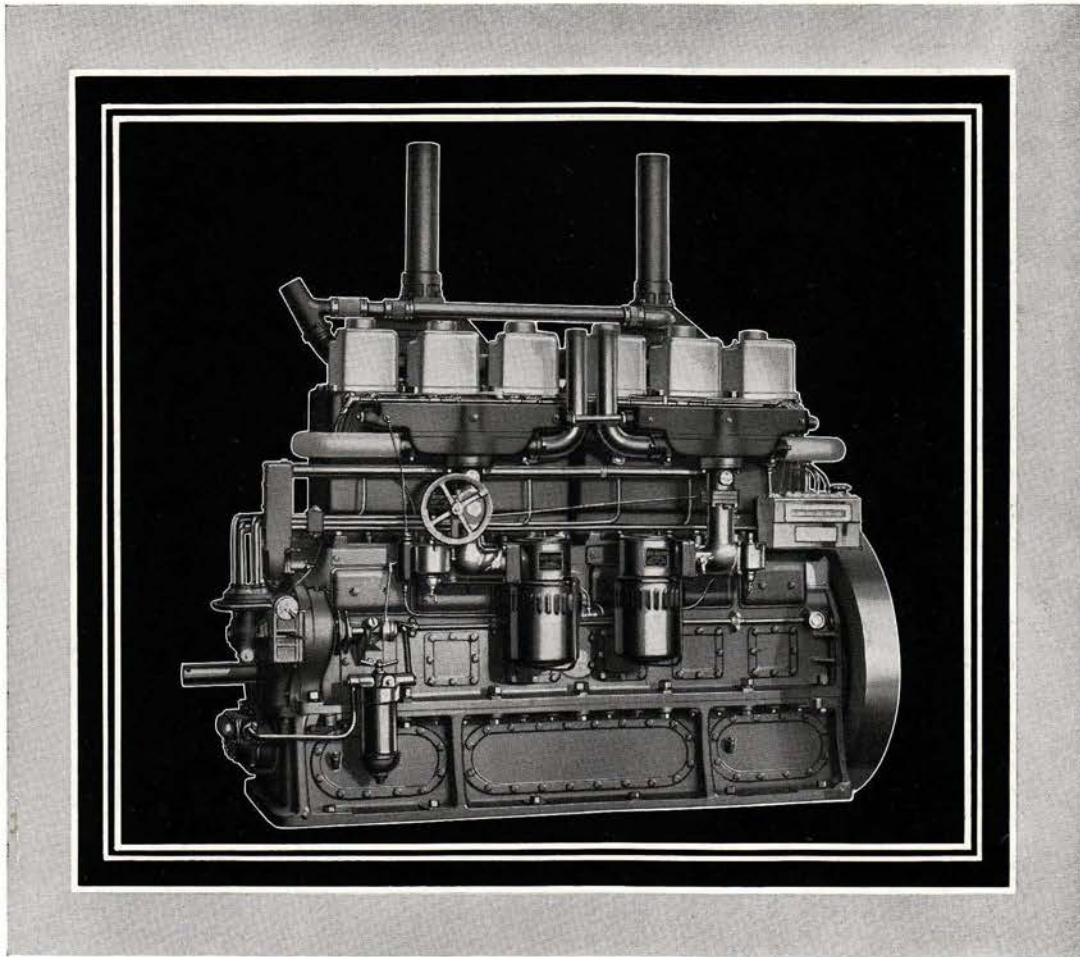


THE GIANT SIX



SIX-CYLINDER ... WAUKESHA ENGINES ...

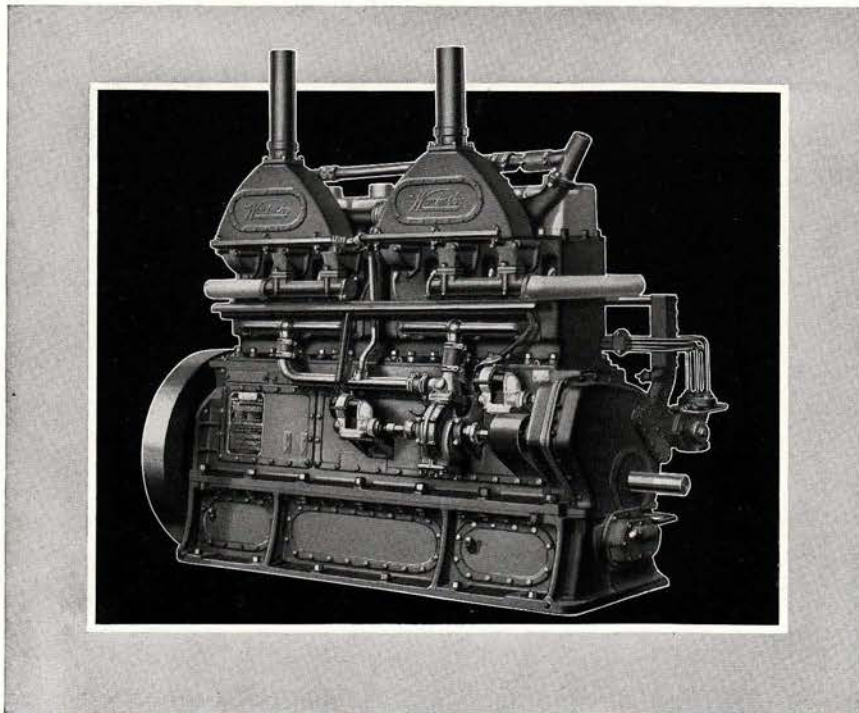
FOR ELECTRICAL, LOGGING, OIL FIELD,
RAILWAY, STATIONARY AND HEAVY
▲ ▲ ▲ INDUSTRIAL MACHINERY ▲ ▲ ▲

"6-LRO"



WAUKESHA MOTOR COMPANY
WAUKESHA « « « « « « « WISCONSIN
Eastern Sales Office: Eight W. 40th Street, New York City

ENGINE BULLETIN No. 839-A



Ignition Side of Engine Showing Water Pump, Magneto, Large Inspection Doors, and Special Water Cooled Exhaust Manifolds.

THE GIANT SIX

Over 300 Horsepower The demand for "something more powerful"—a six that would fit in the same space as the "Utility Power" and "Great Sixes," but good for more than 300 horsepower is now answered. The "Giant Six" with $8\frac{1}{2} \times 8\frac{1}{2}$ cylinders and 2900 cubic inches displacement meets these requirements with something to spare. For continuous duty its built-in air starter and its enclosed governor to control load variations—makes its operation virtually automatic. For municipal, industrial and oil field power plants, for railcars, switchers, dredgers, logging machinery, cotton gins and all stationary or semi-portable uses, the "Giant Six" is ideal. It operates on either gas or gasoline with great economy.

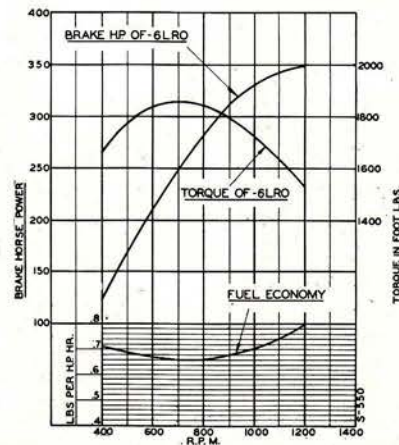
Sleeve Cylinders Owing to their convenience and accessibility, fully machined, removable, sleeve type cylinders are used, affording the advantages of uniform cylinder-wall thickness, complete water-jacketing and sturdy construction. The method of sealing is thoroughly reliable, and yet so simple that renewal is easily effected.

Overhead Valves With the sleeve cylinders, separate cylinder heads are used in which the spark plugs and large valves are assembled. Each valve seat and spark plug has a large volume of water forced in positive channels around it by the dual water pump which feeds the cylinder block. The valve operating mechanism is fully enclosed and bathed in an oil mist.

Three Way Oiling Lubrication by a positive-drive dual pump forces oil under pressure through a filter first, and then to every shaft and bearing in the engine as well as to the valve rocker arms and the gears. In addition, splash troughs for the connecting rods provide a crankcase mist to lubricate the pistons and cylinders as soon as the engine starts. A balanced vacuum operated top oiler introduces fresh, cool oil in measured quantities to each combustion chamber at regular intervals. Operation at severe fore and aft, as well as side angles does not interfere with the lubrication.

Seven Bearings The deep cast iron crankcase is braced by the seven-bearing cross walls, and is provided with very large inspection doors through which practically any adjustment or bearing replacements can be made. The seven main bearings—4¼ inches in diameter—are held by heavy, well ribbed caps, attached by big heat-treated studs with castle nuts on each end.

A Full Line The Waukesha line now comprises both fours and sixes in sizes from 173 cubic inches to this largest engine. Write us, outlining your needs, and engineering recommendations will be gladly made.



Performance Characteristics Model "6-LRO"

DIMENSIONS

	6-LRO
Bore.....	8 1/2
Stroke.....	8 1/2
Displacement, cu. in.....	2894
Valve diameter, clear (exhaust).....	2 3/4
Valve diameter, clear (intake).....	3 1/4
Connecting rod bearings, dia. x lgth.....	4 x 3 3/4
Number of main bearings.....	7
Front main bearing, dia. x lgth.....	4 1/4 x 4 13/16
Intermediate main bearings, (four) dia. x lgth.....	4 1/4 x 3 5/8
Center main bearing, dia. x lgth.....	4 1/4 x 4 7/8
Rear main bearing, dia. x lgth.....	4 1/4 x 5 1/2
Piston pin bearing, dia. x lgth.....	2 1/4 x 4 3/8
Connecting rod, c. to c.....	18 3/8
Timing gear, face.....	2 1/4
Piston rings, width.....	3/4
Spark plugs, S.A.E.....	7/8-18
Carburetor flange, S.A.E., (two).....	2 1/2
Exhaust manifold, bore.....	4
Flywheel diameter.....	33
Water inlet, dia.....	3
Water outlet, dia.....	3
Weight, approximate, pounds.....	7800

NOTE—All dimensions are given in inches.

CONTINUOUS SERVICE—For continuous full load service use a load factor of not more than 85 per cent of the power shown on this curve.

Horsepower shown was obtained with following equipment: Carburetors—Two Stromberg M9. Ignition—Single spark Magneto. Fan—None. Electric Generator—None. Air Compressor—None. Muffler—None.

Recommended Speeds—For continuous operation: 850 rpm Maximum. For intermittent service during acceleration and similar duty: 1100 rpm Maximum.

Consult the Waukesha Motor Company regarding maximum speed for your service.

SPECIFICATIONS

Crankshaft—Seven 4¼-inch main bearings. S.A.E. 1045 heat-treated steel.

Crankcase—Cast iron, very deep and rigid. Crankshaft carried in upper half.

Connecting Rods—S.A.E. 1045 heat-treated steel. Large end ground to fit the replaceable bearings—caps held by four 5/8-inch heat-treated bolts.

Pistons—Cast iron, well ribbed with bronze bushed bearing bosses.

Main and Rod Bearings—Replaceable bushings, Waukesha alloy 402 lining.

Valves—"Waukesha" steel alloy 601 intake and exhaust—threaded ends for screw and nut retainer.

Push Rods—Roller type; screw and lock nut adjustment.

Cylinders—Removable sleeve type, cast of Waukesha alloy iron No. 210.

Cylinder Heads—Individual, with controlled turbulence combustion chambers; valves and spark plugs fully surrounded by water.

Timing Gears—Helical cut of mild steel and Waukesha alloy 218. Idler and auxiliary drives carried on ball bearings.

Governor—Patented Waukesha design: built-in, self-lubricating, and non-hunting. Not an accessory.

Cooling—Dual water pump. Large clean-out plates on each cylinder.

Lubrication—Full pressure to all main, connecting rod, camshaft, auxiliary shaft and timing gear bearings through series filter. Automatic top cylinder

oilings by balanced, vacuum operated lubricator. Auxiliary splash troughs beneath connecting rods insure prompt response when engine first starts.

Air Starter—Distributor type air starter built into engine.

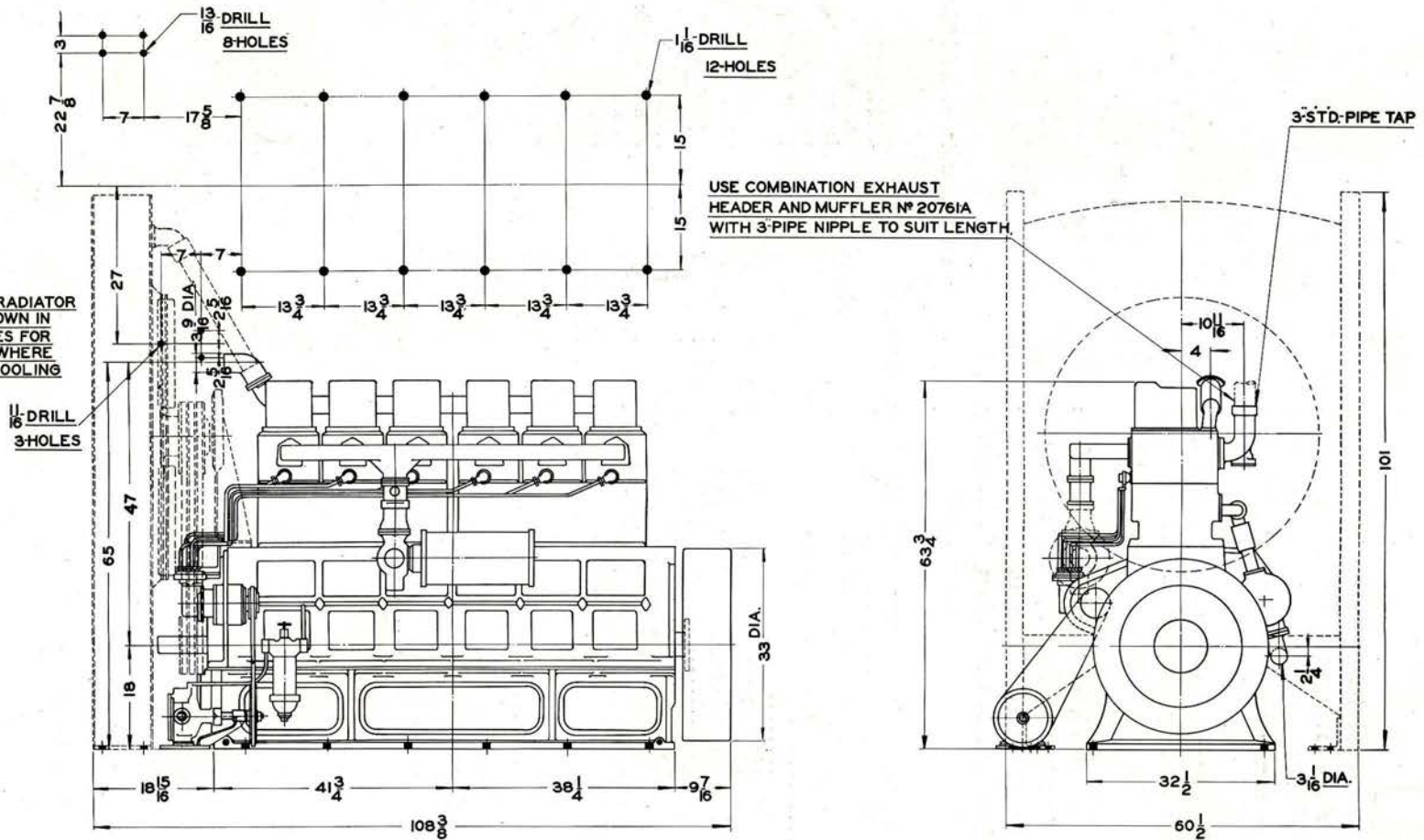
Oil Filter—Series oil filter with simple cleaning control. Can be cleared of sludge while engine is running.

Fuel System—Manifolds for either gasoline or natural or artificial gas optional.

Fuel Pump—(Extra)—Can be supplied for gasoline system.

Magneto—(Extra)—Single or twin magnetos with wiring and plugs. Customers magneto will be installed and timed during assembly without charge.

RADIATOR AND RADIATOR FOUNDATION SHOWN IN DOTTED LINES FOR INSTALLATION WHERE THIS TYPE OF COOLING IS USED.



INSTALLATION DIAGRAM OF MODEL 6LRO ENGINE.

Installation Diagram Model "6-LRO" Engine