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MANUAL PREVIEW

Hercules

Service Manual

RXB, RXC, RXLC, RXLD,

OOA, OOB, OOC, OX, OXC,

QXA, QXB, QXC, QXD,

WXC, WXC-2, WXC-3

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WXLC, WXLC-3

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Service Manual

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HERCULES

Operator's Handbook

FOR

WX, YX, RX, and RXL Series

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WXA2	— $3\frac{1}{2}"$ x $4\frac{1}{2}"$	WXC2	— $4\frac{1}{8}"$ x $4\frac{1}{2}"$
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YXA	— $3\frac{3}{4}"$ x $4\frac{3}{4}"$	YXC	— $4\frac{3}{8}"$ x $4\frac{3}{4}"$
YXB	— $4"$ x $4\frac{3}{4}"$	YXC2	— $4\frac{1}{2}"$ x $4\frac{3}{4}"$
	YXC3	— $4\frac{5}{8}"$ x $4\frac{3}{4}"$	
RXB	— $4\frac{1}{2}"$ x $5\frac{1}{4}"$	RXC	— $4\frac{5}{8}"$ x $5\frac{1}{4}"$
RXLC	— $4\frac{5}{8}"$ x $5\frac{1}{4}"$	RXLD	— $4\frac{3}{4}"$ x $5\frac{1}{4}"$

February 1, 1945

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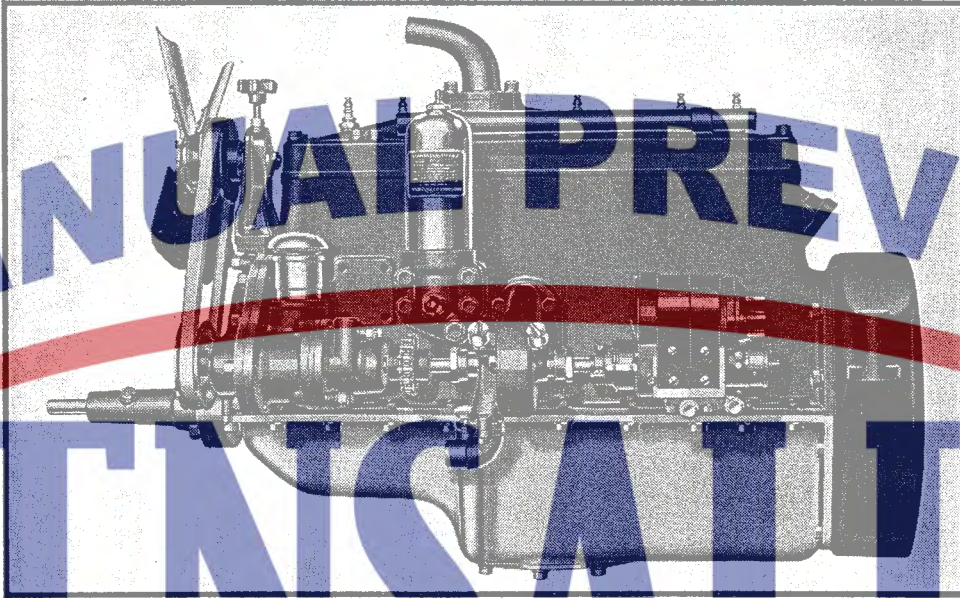
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WX Series Water Pump Side

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YX — RX Series Water Pump Side

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GENERAL DESCRIPTION AND FEATURES OF DESIGN

Generator Drive and Governor Drive. These engines all have a provision for a gear driven generator on the camshaft side. The generator is sleeve mounted and the generator gear meshes with the camshaft gear. When no generator is used the sleeve opening is closed with a suitable cover.

When these engines are equipped with a governor it may be either one of two types. Either type operates on the centrifugal weight principle and the mounting is on the gear cover. One type is mounted in a vertical position and the alternate type is in a horizontal position on the front of the cover. In the vertical type, the governor is driven from a helical gear which is bolted to the front face of the generator gear. This gear then meshes with and drives a gear on the governor. In case no generator is used, a suitable shaft is mounted in its place to drive the governor. In this type the rod which connects to the arm on the throttle valve shaft is enclosed. In the horizontal type the governor is driven by a gear on the governor shaft which meshes with the camshaft gear. When this type of governor is used and a generator is also used, the generator gear must be of a special narrow type to allow space for the governor gear as each of these gears are meshed with the wider faced camshaft gear.

Oiling System. WX, YX and RX. The oil pump is located in the crankcase and is driven by a spiral gear at the center of the camshaft. The oil pump driving gear on the camshaft is an integral part of the shaft. The oil pump is below the level of the oil in the crankcase and needs no priming. The oil is delivered

Illustration No. 3

Illustration No. 4

Illustration No. 5

Bellhousing. If a new bellhousing is being installed or if a new rear main bearing is being used the clearance between the oil throw flange on the crankshaft and the chamfer in the bellhousing may have changed. This clearance which is shown at "A" in Illustration No. 12 must be checked carefully and controlled within the limits of .012" to .025" to prevent oil leaks. Illustration No. 13 shows how to measure this clearance with a feeler before the flywheel is installed. The clearance must be uniform all the way around. The crankshaft should be crowded back to the limit of its end float before checking the clearance. To prevent oil leaks all possible chance of interference or rubbing at this point should be eliminated. If necessary to increase the clearance the bellhousing chamfer can be scraped slightly or an additional gasket can be used between the bellhousing and the case.



Illustration No. 13



Illustration No. 14

Bellhousing Oil Seal. The type of bellhousing as shown in illustration No. 14 is equipped with a special new type seal and in order to have an ideal installation it is necessary to have seal eccentric with crankshaft and to polish the external pilot of the hub of the flywheel which is in contact with this seal, otherwise, the seal will wear rapidly.

To polish use very fine emery or Crocus cloth. Be sure all "nicks" and rough spots are removed. Flywheels on engines originally equipped with this seal have the pilot polished.

Oil Pump. The oil pump is readily removed for inspection or repairs after the oil pan is off. The oil pump is easily disassembled as follows: Remove pin through hub of spiral driving gear. This is a straight pin and can be driven out either way. Pull or drive spiral gear off of shaft. Do not attempt to drive or press shaft down through as Woodruff key will damage bushing. After driving gear is removed the Woodruff key should be removed and then after removing the bottom cover the shaft with its lower pumping gear can be withdrawn from the pump. To remove the pumping gear from either the main shaft or the idler shaft the gear must be pressed in to the shaft about $\frac{3}{8}$ "