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Fairbanks-Morse

Service Manual

**32B-12, 32B-14, 32C-12,
32C-14, 32D-12, & 32D-14
Diesel Engines**

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Service Manual

INSTRUCTIONS No. 3200B

To Be Read Carefully Before
ERECTING AND OPERATING

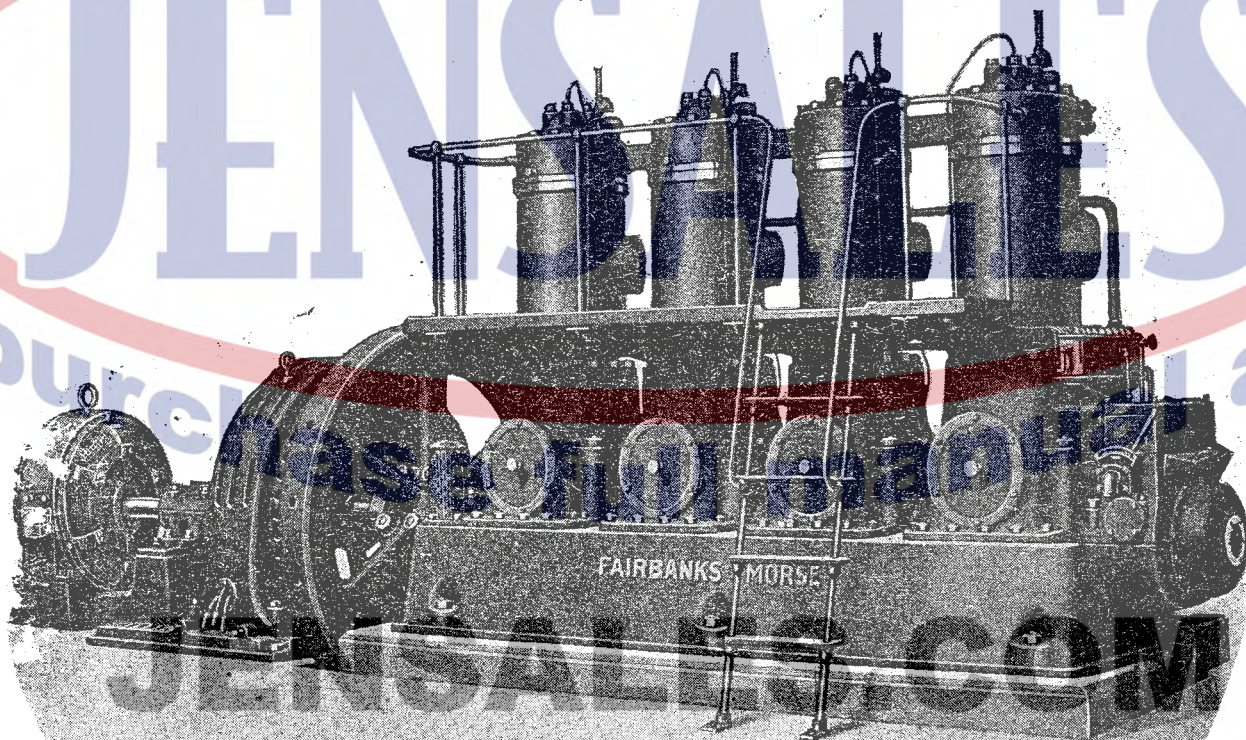
Fairbanks-Morse Stationary Diesel Engines

Models 32B-12 and 32B-14 — Pages 1 to 97

Models 32C-12 and 32C-14

Models 32D-12 and 32D-14

} Pages 99 to 107



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ENGINE DIRECT CONNECTED TO AN ALTERNATOR
WITH DIRECT CONNECTED EXCITER

FAIRBANKS, MORSE & CO.

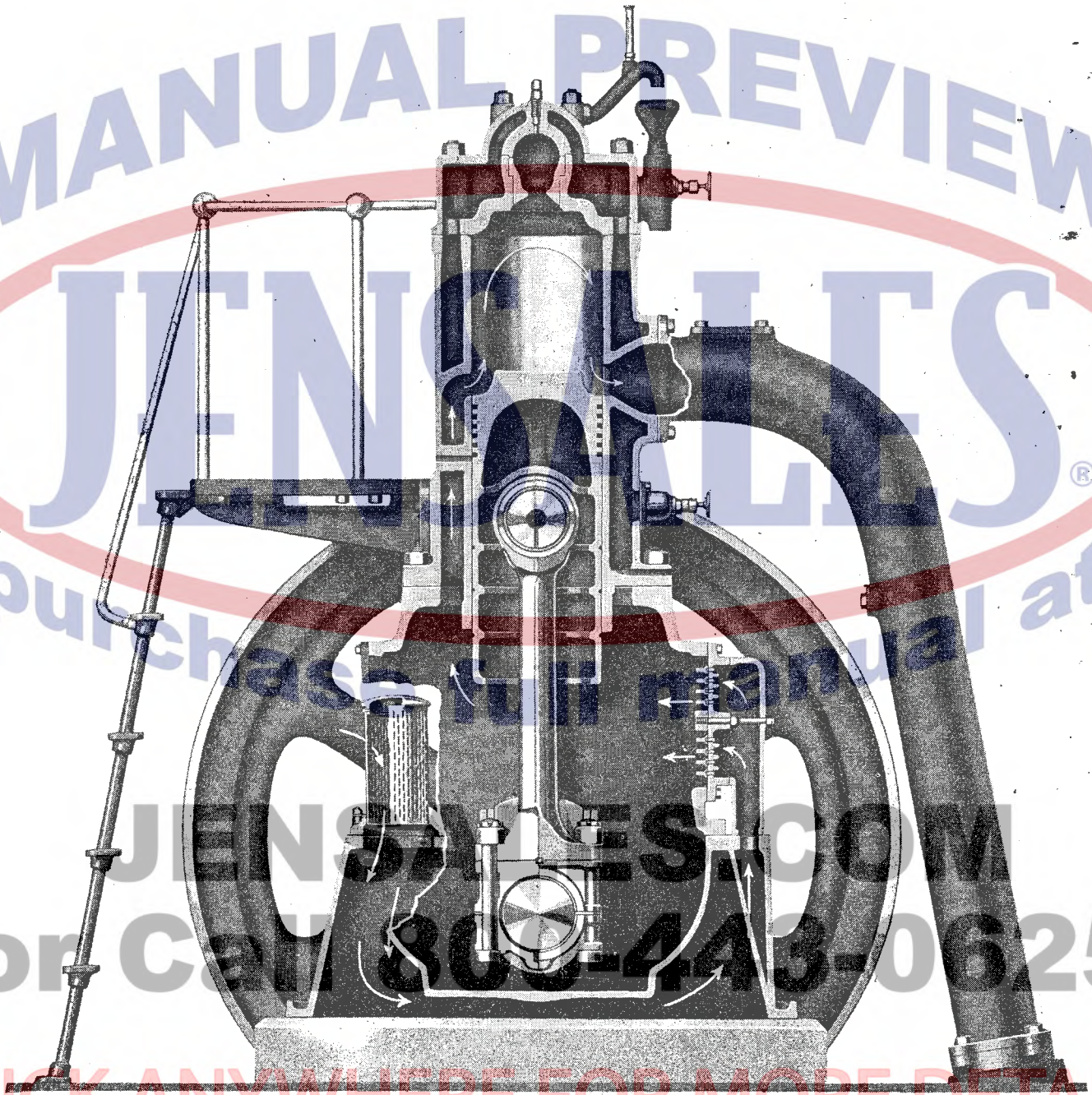
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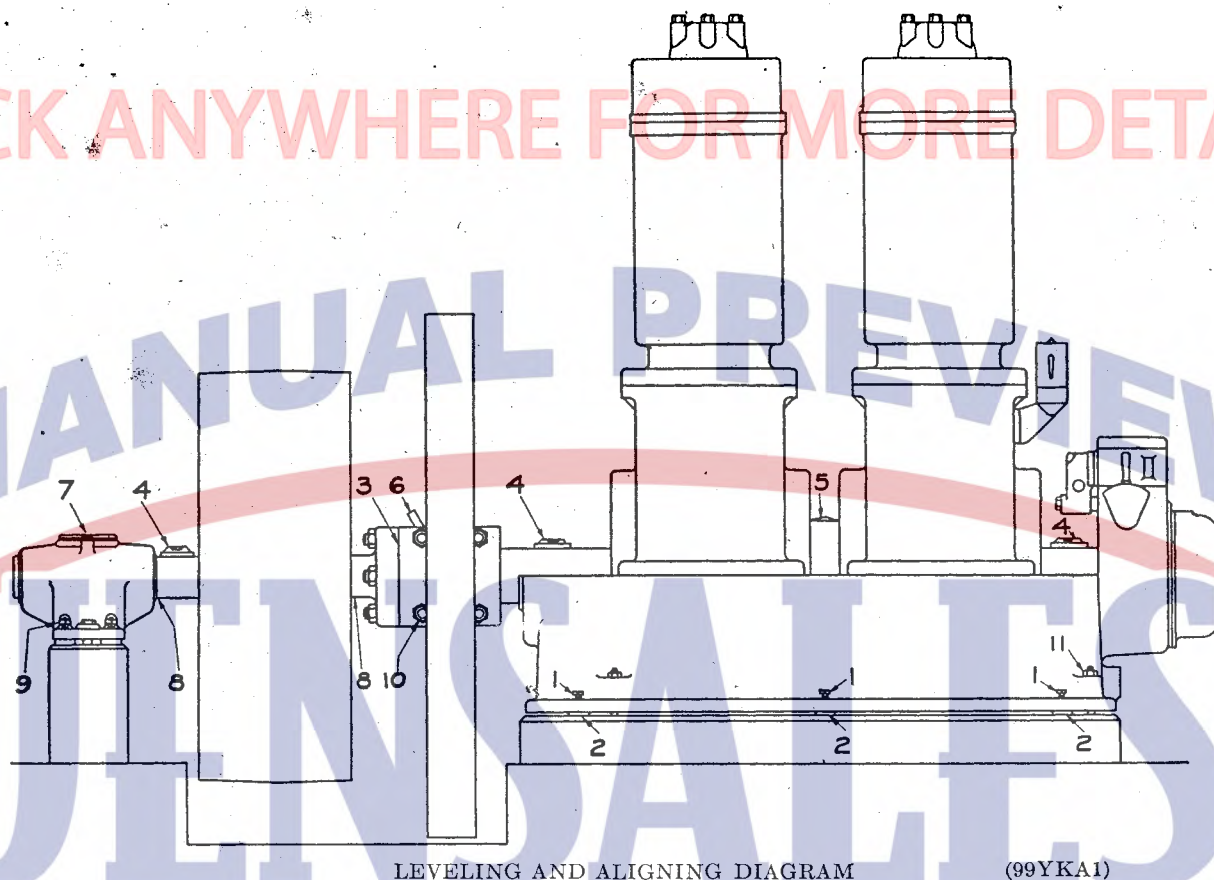
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CROSS SECTION THROUGH MODEL 32B ENGINE

(AORQ202.3



LEVELING AND ALIGNING DIAGRAM

(99YKA1)

31. Wedge the flywheel hub apart slightly and place it on the crankshaft in the position shown on the foundation plan, being careful to align the keyway in the flywheel with the keyway in the shaft. Place the flywheel on the shaft **before** setting the engine on the foundation, unless the flywheel pit is wide enough to permit placing the flywheel after the engine is in position. When the flywheel is in its proper location, the crankshaft will extend through the hub about $\frac{3}{4}$ inch. Remove the wedges 6, but be sure that the outer ends of the hub, on both sides of the split, are even, so that one side does not extend beyond the other. Tighten the clamp bolts evenly and firmly by going over them several times, then drive the key into place.

Flywheel

32. With a direct connected unit, on account of the generator foundation, the flywheel must be put in place before the engine is lowered on the foundation.

Direct
Connected
Outfit

33. Next remove every other main bearing cap and upper shell, beginning at the governor end. Then remove the shims from between the shells still in place and tighten the caps; so that the crankshaft is held firmly in the base. Try the level 4 on each of the journals then exposed, being sure that it is parallel with the shaft and not crosswise or rocking in the slightest degree. Adjust the leveling screws 1 by consecutive progression around the base, to bring the shaft to a true level throughout its entire length.

Level the
Crankshaft

34. On each side of every main bearing, scrape sufficient paint from the top of the lower base to provide a smooth bearing for the level. Place the level on each of the surfaces, and adjust the leveling screws until an accurate cross-level is obtained. Next check the lengthwise level of the lower base to insure the uniform support of the main bearings and the correct alignment of the crankshaft and the lower base. In some cases, when leveling a base, it may be necessary to draw down on one or two of the foundation bolts.

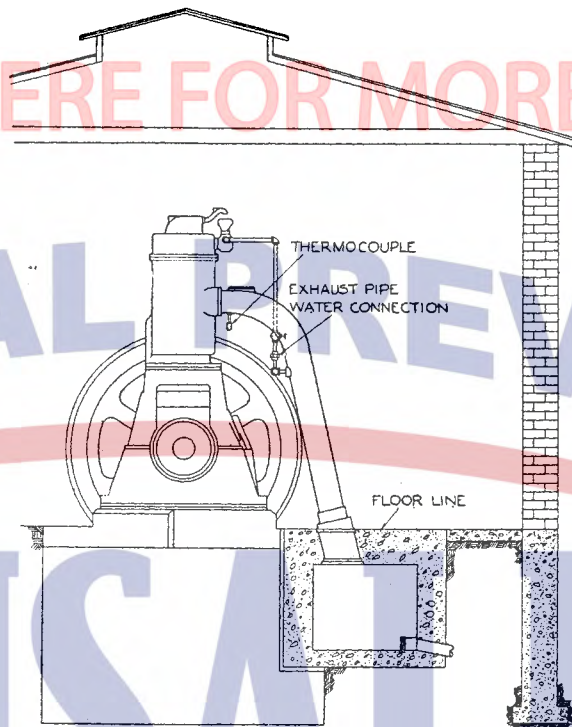
Level the
Base

35. The alignment and level of the engine are satisfactory when the bubble of the level does not vary more than one-half of one graduation from the center.

Level

36. Place the sole plate, for the outboard bearing 7 (see diagram 99YKA1) over the foundation bolts on the outboard bearing foundation. With the cap and upper half of the shell removed, set the outboard bearing on the sole plate.

Outboard
Bearing
Sole Plate

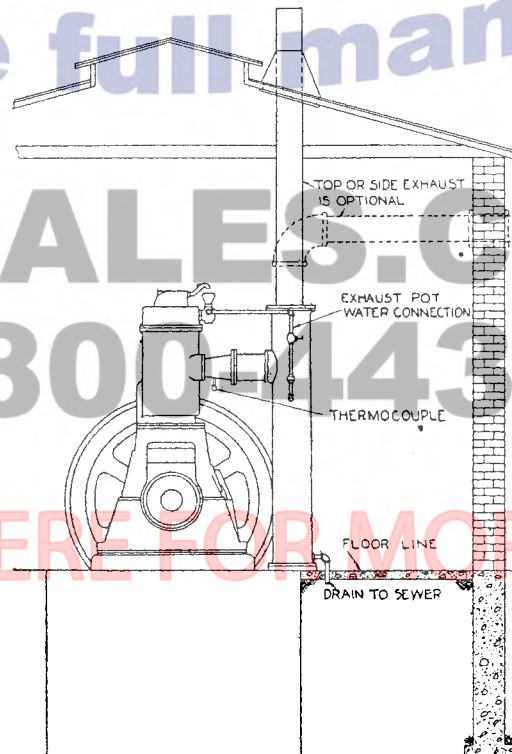


INDIVIDUAL EXHAUST PIPE AND
UNDERGROUND CONDUIT ARRANGEMENT

(99YKA62)

Description

50. A reinforced concrete conduit extending along the exhaust side of the foundation and adjacent to it is required. Individual pipes from each cylinder lead through expansion joints into this conduit which in turn is vented to the atmosphere through a stack. The individual pipes may be covered with magnesia lagging if desired to prevent heat from radiating into the engine room.



EXHAUST POT ARRANGEMENT

(99YKA63)