READ THIS

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This revised manual, ISS-1012-Y, "Serviceman's Field Reference for International Diesel Engines and Fuel Injection Systems" replaces ISS-1012-R which should be destroyed.

Future revisions to this manual will be made by individual loose-leaf pages.

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SERVICEMAN'S FIELD REFERENCE

FOR

DIESEL ENGINES AND FUEL INJECTION SYSTEMS

INTRODUCTION

This "SERVICEMAN'S FIELD REFERENCE" provides the Distributor's Serviceman in the field with a fast, convenient reference for checking the performance of IH diesel engines and diesel fuel systems.

The proper method for checking a diesel engine and its fuel injection system is to do so in a systematic way by starting with the most frequent causes of failure which, incidentally are the easiest to correct, and to eliminate them; then proceed to the causes more difficult to correct, eliminating one cause of failure at a time, until the entire system has been checked.

The information in this manual is arranged in step-by-step sequence. In order to save time, follow the order of the steps as recommended. Steps are illustrated, whenever possible, so the serviceman can see the correct procedure at a glance with the least amount of reading. Written instructions are kept to a minimum.

For detailed instructions for any of the steps, refer to the latest IH Diesel Injection Pump Service Manual, ISS-1003, or to the specific Engine Service Manual.

CONTENTS

TOOLS REQUIRED FOR CHECKING ENGINE IN FIELD AND REPLACING UNITS

Portable Nozzle Tester, Bacharach No. 65-905 D or Kiene KTP-50

Tester Fitting Adapter, 817 C (Kiene)

Compression Gauge, K-120 Kiene, or Motorite

Feeler Gauge, Standard

Scale for making field setting, 1 020 178 R1

Tachometer, PT-3 Sun, or Allen 27-03

0 to 100 lb. Fuel Pressure Gauge

Hi-Idle Gap Gauge Set, 1 020 121 R91 and 1 020 326 R91

Delivery Test Fixture, 1 020 080 R91 (2 required)

IH Tools, SE-1330-1, SE-1330-6, and SE-1330-17B

Injection Nozzle Puller, 1 020 284 R91

Pre-cup Puller, 1 020 310 R91

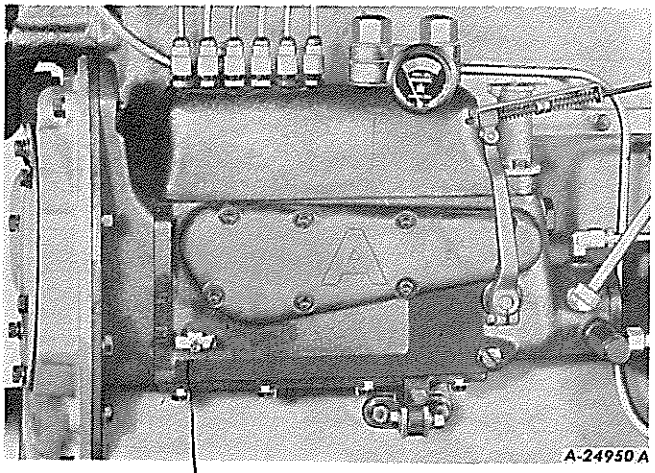
Mechanic's Hand Tools

Gaskets, Seals, and Line Ferrules

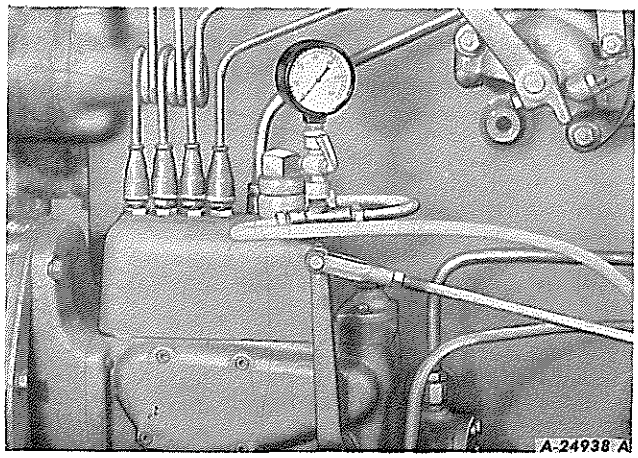
FUEL SYSTEM

STEP 1

Check the primary pump fuel pressure. This should be 58 to 66 pounds at engine speeds of 700 rpm and up.



Pumps Equipped with Fuel Pressure Gauge



On Pumps Not Equipped with Fuel Pressure Gauge - Use a 0 to 100 pound gauge with plastic tubing and fittings as shown.

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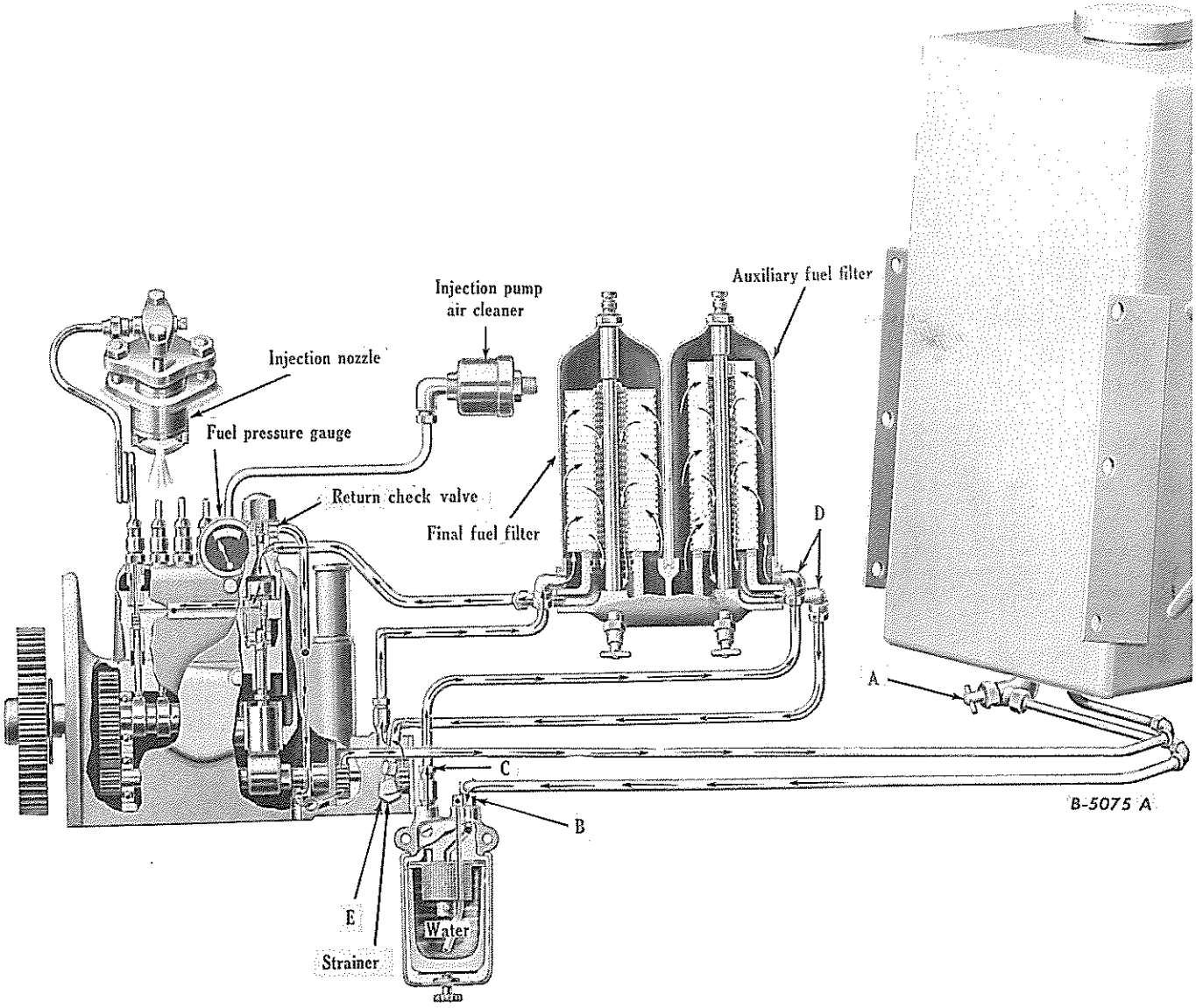
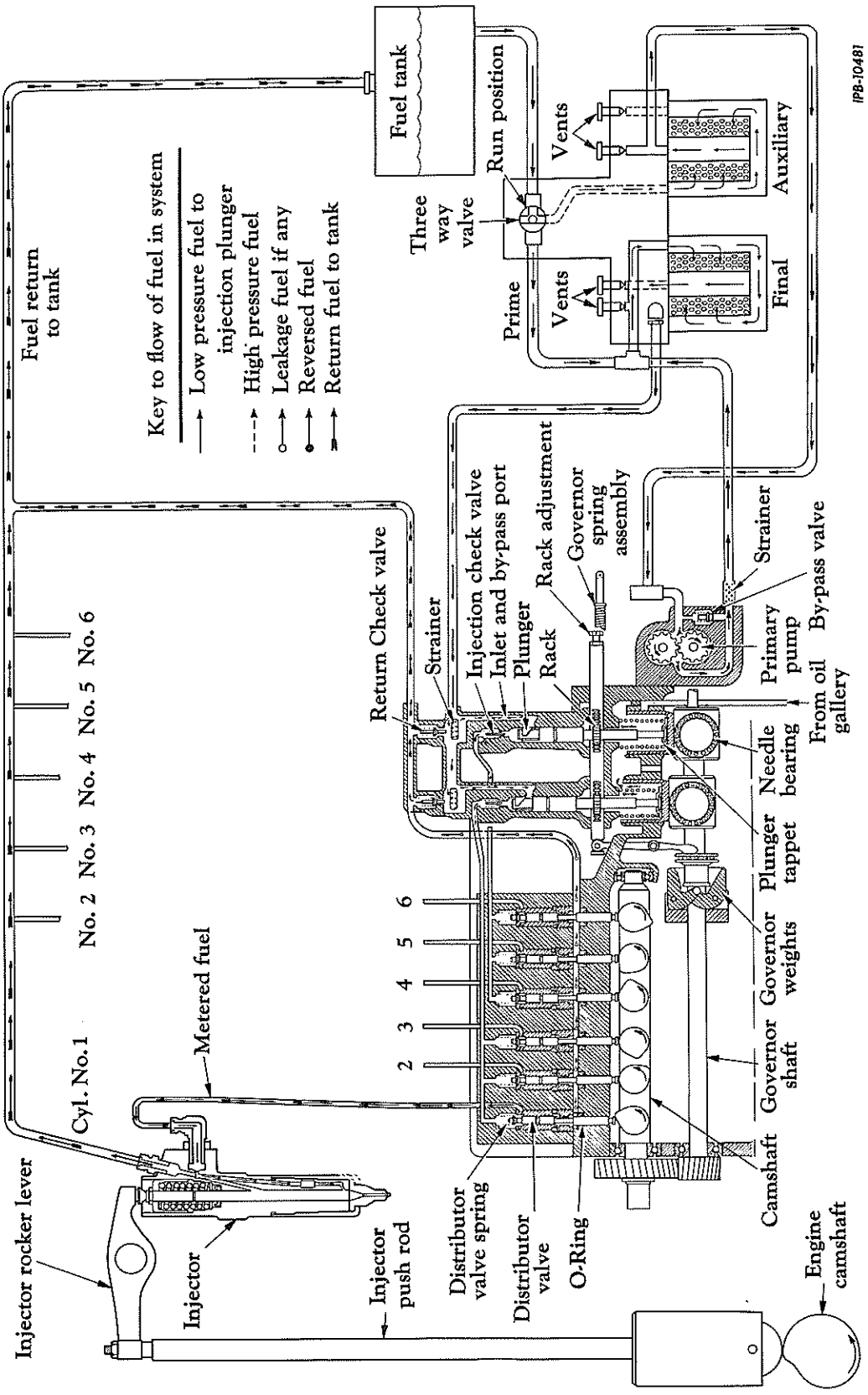
STEP 2

Check the fuel filtering system. Be sure that the fuel flows freely to the primary pump inlet and that there are no air leaks. Check at points A, B, C, etc., consecutively.



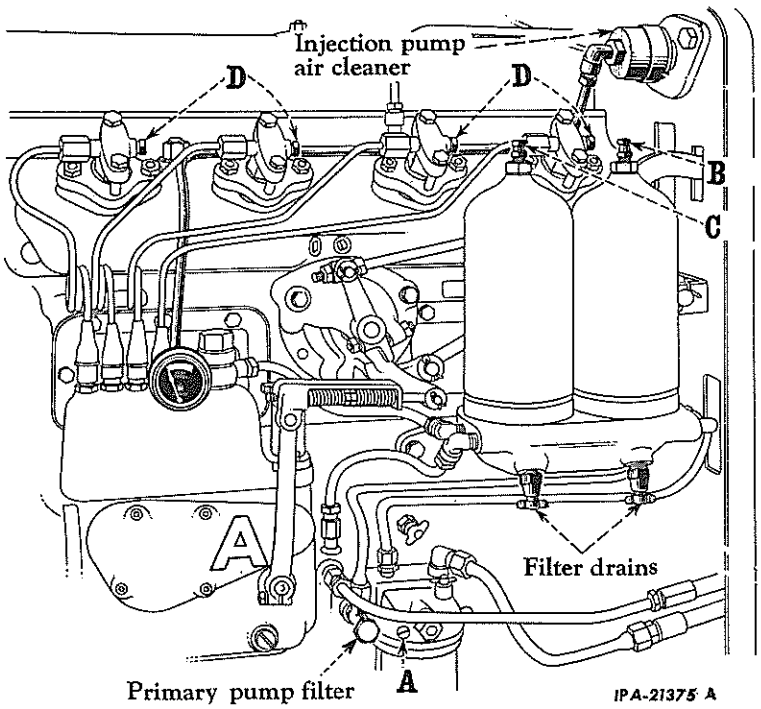
Diesel Fuel System of "9" Series ("A" Pump).
(Others are similar.)



Schematic Diagram of Fuel System (817 Series Diesel Engine - Payhaulers Shown).

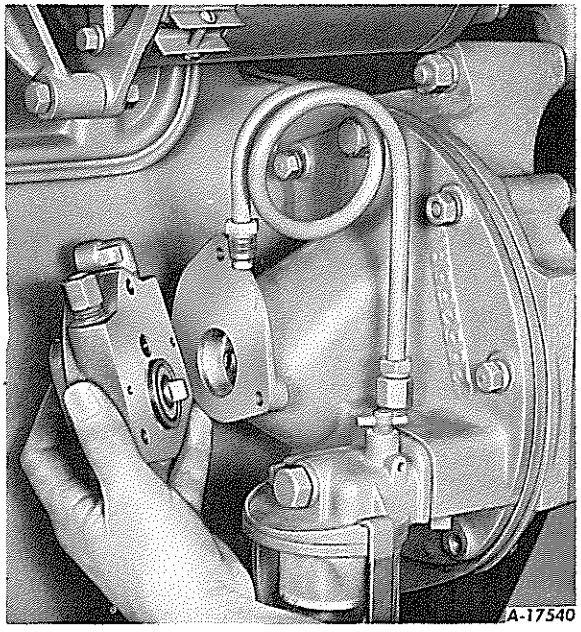
STEP 3

Vent the diesel fuel system. Vent the points A, B, C and D consecutively. Points C and D should be vented with the engine running on the gasoline cycle. At point D, air generally can be vented by sudden acceleration of the engine. If the engine still runs erratically, loosen the screw slightly until the air is expelled.



STEP 4 (Power Units Only)

Check the fuel transfer pump.



STEP 5

Check the air cleaner, and the connections between the manifold and air cleaner, for possible leaks. Clean the oil cup on the air cleaner and the screen on the air intake cap. (Refer to Operator's Manual.)

COMPRESSION RELEASE MECHANISM AND VALVE ADJUSTMENT

ADJUSTMENT

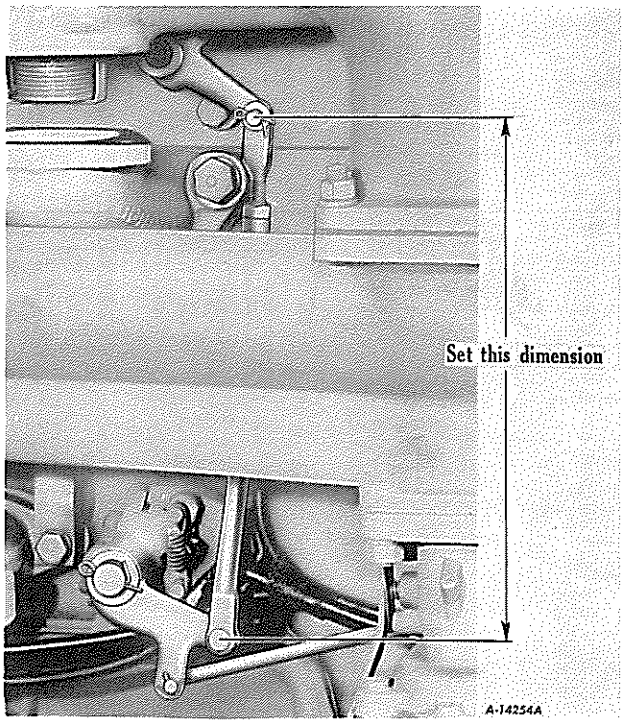
Before the following adjustments are made, the engine must be completely assembled, except for the intake and exhaust manifolds. All rods and linkage should be lubricated.

WITH MECHANISM IN DIESEL POSITION

STEP 6 (All Series)

Adjust the length of the operating rod.

Engine Series	Dimensions
6 and 6A	6-7/16"
264 and 281	6-5/16"
9, 9A, 350 and 370	6-29/32"
14, 14A, 18A and 691	9-7/16"
18	9-9/32"
16, 525 and 554	6-25/32"
24	8-1/2"



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