

**340/460/560/660  
Diesel Tractor**

**Operators Manual**

1014230R7

Reprinted

**CASE III**



***This symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED. The message that follows the symbol contains important information about your safety. Carefully read the message. Make sure you fully understand the causes of possible injury or death.***

SB001

IF THIS MACHINE IS USED BY AN EMPLOYEE, IS LOANED, OR IS RENTED, MAKE SURE THAT THE OPERATOR UNDERSTANDS THE TWO INSTRUCTIONS BELOW.

BEFORE THE OPERATOR STARTS THE ENGINE:

1. GIVE INSTRUCTIONS TO THE OPERATOR ON SAFE AND CORRECT USE OF THE MACHINE.
2. MAKE SURE THE OPERATOR READS AND UNDERSTANDS THE OPERATOR'S MANUAL FOR THIS MACHINE.



**IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH.**

BEFORE STARTING THE ENGINE, DO THE FOLLOWING:

1. READ THE OPERATOR'S MANUAL.
2. READ ALL SAFETY DECALS ON THE MACHINE.
3. CLEAR THE AREA OF OTHER PERSONS.

LEARN AND PRACTICE SAFE USE OF MACHINE CONTROLS IN A SAFE, CLEAR AREA BEFORE YOU OPERATE THIS MACHINE ON A JOB SITE.

It is your responsibility to observe pertinent laws and regulations and to follow manufacturer's instructions on machine operation and maintenance.

See your Authorized Case dealer for additional operator's manuals, parts catalogs, and service manuals.

## TO THE OWNER

We are glad to welcome you as an owner of a product of International Harvester Company. You have a fine product, designed and built to give you many years of efficient operation. The way you operate and the care you give this product will have much to do with its successful performance.

To help you operate your equipment with utmost efficiency we have provided this operator's manual. It has been carefully prepared to give you the benefit of many years of experience gained in field testing and normal usage of this and similar products.

We urge you to study this manual so you will understand your new equipment thoroughly before operating it. We also urge you to take care of your manual so you will have it available for reference when you need it.

If your manual is lost or destroyed, a new copy may be ordered from the International Harvester dealer at a nominal price. Your International Harvester dealer will also be glad to answer any questions you may have on the operation or care of this product.

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It is the policy of International Harvester Company to improve its products whenever it is possible and practical to do so. We reserve the right to make changes or add improvements at any time without incurring any obligation to make such changes on products sold previously.

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All illustrations and descriptive matter in this publication apply to International Harvester products sold under the International, McCormick, or McCormick-International trade name.

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As a member of the National Safety Council, we are privileged to use the Green Cross for Safety to designate not only our interest in Safety, but to point out more clearly the safety precautions in this manual.

# CONTENTS

Description	Page No.
INTRODUCTION . . . . .	1
CRANKCASE BREATHER . . . . .	4
OIL FILTER . . . . .	4
GREASING THE FRONT WHEELS . . . . .	7
LUBRICATION TABLE . . . . .	2, 3
PERIODIC INSPECTIONS . . . . .	8, 9
COOLING SYSTEM . . . . .	10 to 13
FUEL SYSTEM . . . . .	14 to 21
AIR CLEANING SYSTEM . . . . .	22, 23
GLOW PLUGS . . . . .	23
STARTING AND LIGHTING EQUIPMENT . . . . .	24
STORAGE BATTERY . . . . .	25 to 28
VALVE CLEARANCE ADJUSTMENT . . . . .	29
MINOR ENGINE SERVICE OPERATIONS . . . . .	28
TACHOMETER DRIVE UNIT . . . . .	30, 31
BRAKES . . . . .	31, 33
CLUTCHES (ENGINE AND TORQUE AMPLIFIER) . . . . .	34 to 44
HYDRA-TOUCH SYSTEM . . . . .	45 to 48
POWER STEERING . . . . .	49
INDEPENDENT POWER TAKE-OFF . . . . .	50 to 58
BELT PULLEY DRIVE UNIT AND BREATHER . . . . .	58
STORING AND HOUSING YOUR TRACTOR . . . . .	59
STARTING ENGINES THAT HAVE BEEN IN STORAGE . . . . .	59
TROUBLE SHOOTING . . . . .	60 to 63
INDEX . . . . .	64, 65

## INTRODUCTION

Preventive Maintenance for the Farmall 340 Diesel, Farmall 460 Diesel Series, Farmall 560 Diesel Series, International 340 Diesel Utility and Industrial Series, International 460 Diesel Utility and Industrial Series, International 560 Diesel, and International 660 Diesel Tractors is presented in this manual.

# LUBRICATION TABLE

Lubrication Table

Point of Lubrication	Capacity										Anticipated Air Temperature and Lubricant Required			
	Farmall 340 Diesel	International 340 Diesel Utility and 340 Diesel Industrial	Farmall 460 Diesel	Farmall 460 Diesel Hi-Clear	International 460 Diesel Utility and 460 Diesel Industrial	International 460 Diesel Hi-Utility	Farmall 560 Diesel	Farmall 560 Diesel Hi-Clear	International 560 Diesel	International 660 Diesel	Above +45°F.	+45°F. to +10°F.	+10°F. to -10°F.	Below -10°F.
Engine crankcase	7 qt.	7 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.
Air cleaner oil cup	1-1/2 pt.	1-1/2 pt.	2-1/4 pt.	2-1/4 pt.	2 pt.	2 pt.	2 pt.	2 pt.	2 pt.	2 pt.	2 pt.	2 pt.	2 pt.	2 pt.
Oil pump shaft support	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Generator	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx
Steering gear housing														
Manual steering	--	2-1/2 pt.	2-1/2 pt.	2-1/2 pt.	--	2-1/2 pt.	2-1/2 pt.	2-1/2 pt.	--	--	--	--	--	--
Power steering	--	3-1/2 pt.	--	--	--	--	--	--	--	--	--	--	--	--
Manual steering	1-1/2 pt.	--	--	--	2-1/2 pt.	2-1/2 pt.	--	--	3-1/2 pt.	3-1/2 pt.	3-1/2 pt.	3-1/2 pt.	3-1/2 pt.	3-1/2 pt.
Power steering	1-1/2 pt.	--	--	--	3-1/2 pt.	3-1/2 pt.	--	--	3-1/2 pt.	3-1/2 pt.	3-1/2 pt.	3-1/2 pt.	3-1/2 pt.	3-1/2 pt.
Lubrication fittings														

Use chassis lubricant (pressure gun grease), for all fittings on which the hand lubricator is applied, for all temperatures.

# LUBRICATION TABLE

## Lubrication Table—Continued

Point of Lubrication	Capacity									Anticipated Air Temperature and Lubricant Required		
Transmission and differential case - Tractors with Hydra-Touch and/or Torque Amplifier	Farmall 340 Diesel 10 gal.	International 340 Diesel Utility and 340 Diesel Industrial	Farmall 460 Diesel	Farmall 460 Diesel Hi-Clear	International 460 Diesel Utility and 460 Diesel Industrial	International 460 Diesel Hi-Utility	Farmall 560 Diesel	Farmall 560 Diesel Hi-Clear	International 560 Diesel	International 660 Diesel		
	Approx. 10 gal.	Approx. 10 gal.	Approx. 10 gal.	Approx. 10 gal.	Approx. 10 gal.	Approx. 10 gal.	Approx. 16 gal.	Approx. 16 gal.	Approx. 16 gal.	Approx. 16 gal.		
	Tractors without Hydra-Touch Torque Amplifier or independent power take-off drive	Approx. 6 gal.	Approx. 6 gal.	Approx. 6 gal.	Approx. 6 gal.	Approx. 6 gal.	Approx. 6 gal.	Approx. 14 gal.	Approx. 14 gal.	Approx. 14 gal.	Approx. 14 gal.	IH Hy-Tran Fluid.
		--	--	--	3 qt.	--	--	3 qt.	--	3 qt.		
	Rear axle housing or carriers	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.		
	Belt pulley housing (Rear mounted)**	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.		
	Independent power take-off rear unit housing Planetary-type	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	SAE-10W engine oil
		1 pt.	1 pt.	1 pt.	1 pt.	1 pt.	1 pt.	1 pt.	1 pt.	1 pt.	--	IH Hy-Tran Fluid.

\*\* Proper level of oil in the belt pulley housing, for the side mounted belt pulley, is maintained by the oil in the transmission case.

# CRANKCASE BREATHER

The crankcase breather pipe is on the left side of the engine. If the breather pipe has a crimped aluminum element in it, the element must be cleaned after every 150 hours. To clean it, remove the breather pipe and remove the element from the pipe. Wash it in kerosene or other solvent and reinstall it.

If there is no element in the breather pipe, the element is inside the push rod cover in the breather baffle at the breather pipe opening. Replace the element with a new one at the time of a major overhaul.

## OIL FILTER (Full Flow System)

The life of your engine depends upon clean engine oil being circulated to all bearings. Every good tractor operator knows that dirt and other injurious materials eventually get into the crankcase of the engine and that in the normal course of engine operation the lubricating oil undergoes changes which produce sludge, acids, gums, varnish, and other harmful by-products.

The purpose of the oil filter is to separate and remove the dirt and other foreign substances from the oil to prevent these injurious materials from being circulated to the engine. Under normal operating conditions the service life of the filter is 200 hours. By following the simple, common sense procedure for keeping dirt and oil impurities away from precision-made engine parts, you will safe-guard your tractor engine against undue wear and the operating troubles and upkeep expense which are a natural result of that condition.

**Note:** To avoid delays, we recommend that you carry extra filter elements on hand so replacement can be made at the proper time.

### CHANGING THE FILTER ELEMENT

#### Four Cylinder Diesel Engines

1. Do not change the element while the engine is running. Stop the engine; remove the crankcase oil pan drain plug and drain all oil from the crankcase while it is still warm.

2. Clean the filter case to prevent dirt from dropping into the base.

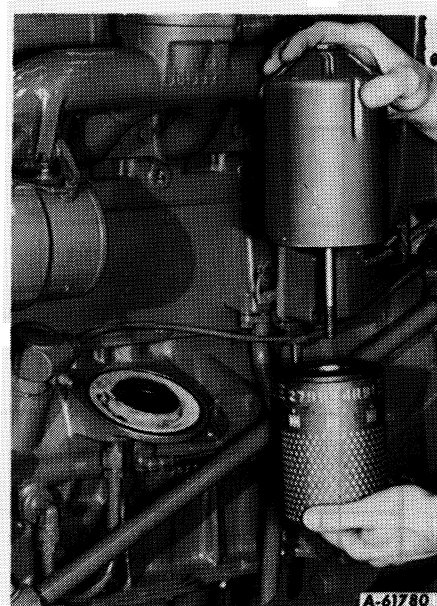
3. Remove the 1/8-inch square head pipe plug under the filter base and allow the oil filter to drain completely.

4. Unscrew the filter case bolt.  
5. Lift up and remove the bolt and case, **Illusts. 4 and 5.**

6. Remove the old element.

**Note:** If any equipment on the tractor interferes with lifting the case over the element, remove the case and element together.

7. Wipe out the base, filter case, and bypass valve assembly using a cloth dampened with a solvent. Then replace the filter base drain plug.



**Illust. 4**  
Installing the new oil filter element.

## OIL FILTER (Full Flow System)

8. Install the new filter element as follows:

Make sure that the case gasket and the bolt gasket are in good condition. Replace them with new ones, if necessary.

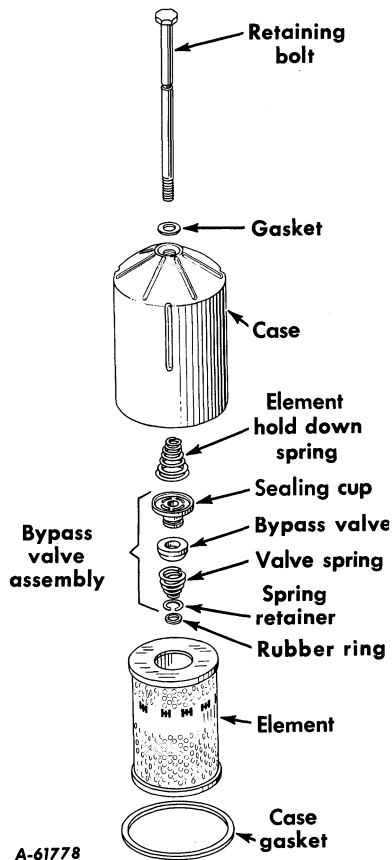
To replace the bolt gasket, reach up inside the filter case and remove the rubber ring, bypass valve assembly, and element hold down spring from the filter case bolt. Then remove the bolt from the case and replace the gasket with a new one. Reassemble the bolt, filter

case, hold down spring, bypass valve assembly, and rubber ring in the reverse order of removal. See **Illust. 5**. Make sure the rubber ring is seated in the groove in the filter case bolt to prevent the valve assembly and spring falling out when changing elements.

Install the new filter element, then install the case, retaining bolt, and bypass valve assembly. Carefully lower the retaining bolt into the filter base and tighten it securely.

9. Reinstall the crankcase oil pan drain plug and refill the crankcase oil pan with new oil, as instructed in the tractor Operator's Manual.

10. Start the engine; check the oil pressure gauge to see whether lubricating oil is circulating through the engine; then inspect the filter for oil leaks.



**Illust. 5**  
Filter disassembled.

### CHANGING THE FILTER ELEMENT Six Cylinder Diesel Engines

1. Do not change the element while the engine is running. Stop the engine.
2. Remove the oil filter base drain plug and allow the oil filter to drain completely.
3. Clean the filter case to prevent dirt from dropping into the base.
4. Unscrew the center tube.
5. Lift up and remove the center tube and case.
6. Remove the old element.

**Note:** If any equipment on the tractor prevents lifting the case over the element, remove the case and the element together.

7. Wipe out the base and the case with a cloth dampened with kerosene.

Continued on next page.



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