


460/560/660 Tractors

Operators Manual

1014255R6

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.

CONTENTS

Description	Page No.
INTRODUCTION	1
CRANKCASE BREATHER	1
OIL FILTER	2
GREASING THE FRONT WHEELS	3
LUBRICATION TABLE	4, 5
PERIODIC INSPECTIONS	6, 7
COOLING SYSTEM	7 to 10
FUEL STRAINER	10
CARBURETOR	10 to 12
GOVERNOR	12 to 16
AIR CLEANING SYSTEM	17, 18
SPARK PLUGS AND CABLES	18
IGNITION SYSTEM	19 to 21
STARTING AND LIGHTING EQUIPMENT	21, 22
STORAGE BATTERY	22 to 25
MINOR ENGINE SERVICE OPERATIONS	25
VALVE CLEARANCE ADJUSTMENT	26
TACHOMETER DRIVE UNIT	27, 28
BRAKES	28 to 30
CLUTCHES	30 to 41
HYDRA-TOUCH SYSTEM	42 to 45
POWER STEERING	46
INDEPENDENT POWER TAKE-OFF	47 to 55
BELT PULLEY DRIVE UNIT AND BREATHER	55
STORING AND HOUSING YOUR TRACTOR	56
STARTING ENGINES THAT HAVE BEEN IN STORAGE	56
TROUBLE SHOOTING	57 to 60
INDEX	61, 62

INTRODUCTION

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

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 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. The filter has a service life of 250 hours of operation under normal operating conditions. By following the simple, common sense pro-

Continued on next page.

OIL FILTER (Full Flow System)

cedure of keeping dirt and oil impurities away from precision-made engine parts, you will safeguard 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 that replacement can be made at the proper time.

CHANGING THE FILTER ELEMENT

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.

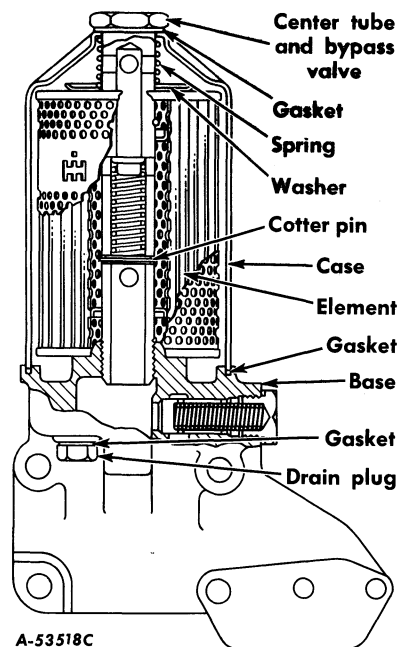
Note: If any equipment on the tractor prevents lifting the case over the element, remove the case and the element together.

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

8. Install the new filter element as follows:

- (a) Replace the drain plug in the filter base and install the new filter element.
- (b) Inspect the center tube and make sure it is clean. Do not allow dirt to go into the threaded center of the base as this passage leads to the bearings.
- (c) Make sure that the case, center tube, and drain plug gaskets are in good condition. Replace with new ones if necessary.

To replace the center tube gasket, reach up inside the filter case and remove the cotter pin, washer, and element hold down spring from the center tube. Then remove the center tube from the case and replace the gasket with a new one. Reassemble the center tube, filter case, hold down spring, washer, and cotter pin in the reverse order of removal. See *Illust. 2*. Be sure the cotter pin is bent around the center tube to prevent the washer and element hold down spring falling out when changing elements.

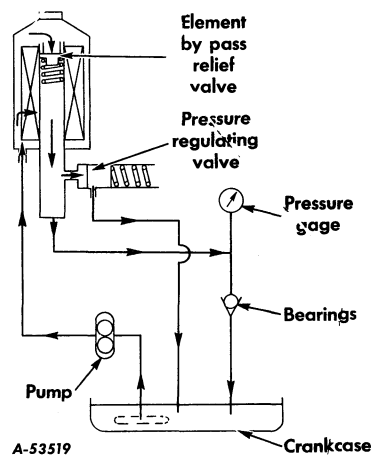


Illust. 2
Cutaway view of the oil filter.

Install the new filter element, then replace the case and center tube assembly. Carefully screw the center tube into the filter base and tighten securely.

9. Drain and refill the crankcase oil pan with new oil as instructed in the tractor Operator's Manual.

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

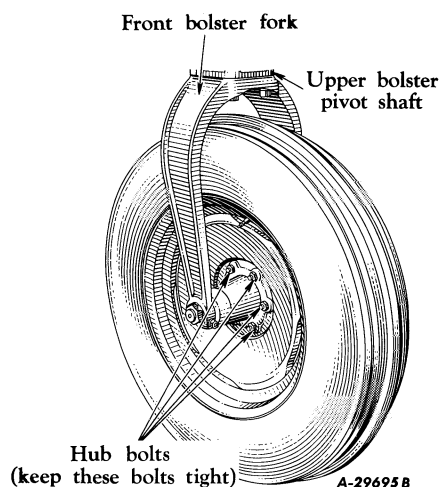


Illust. 2A
Diagram showing flow of oil from crankcase to oil filter.

GREASING THE FRONT WHEELS

The Farmall 460, International 460 Utility, International 460 Industrial, and the Farmall and International 560 Tractors are equipped with disc-type wheels with pneumatic tires. International 660 Tractors are equipped with cast spoke front wheels with pneumatic tires. The wheels revolve on two tapered roller bearings. These wheels are equipped with felt and leather seals. A dirt deflector is also provided on the axle to prevent dirt from entering at the inner bearing.

SINGLE FRONT WHEEL (Farmall 460 and 560 Tractors)



Illust. 3
Single front wheel.

If the tractor has a single front wheel, check the hub bolts every month or after every 250 hours of operation to make sure that they are kept tightened at 100 minimum to 125 maximum foot-pounds torque.

SINGLE FRONT WHEEL

7.50-16 Pneumatic Tire Wheel

The 7.50-16 pneumatic tire wheel should be removed, cleaned, and repacked with fibre grease every six months or after every 500 hours of operation. Follow the "Removing and Greasing" procedure for this operation.

9.00-10 Pneumatic Tire Wheel

The 9.00-10 pneumatic tire wheel should be lubricated daily or after every ten hours of operation.

Use chassis lubricant (pressure-gun grease) and apply two or three strokes of the lubricator, or a sufficient amount of grease to flush out the old grease and dirt. The lubrication fitting is located on the end of the front axle and is shielded by the front axle nut.

REMOVING AND GREASING

Be sure to keep all parts clean.

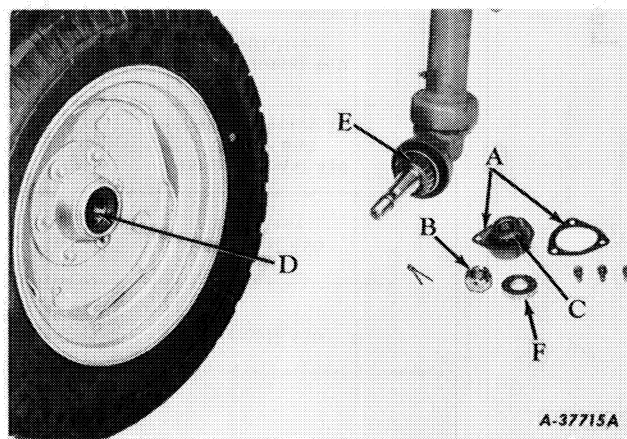
Every six months or after every 500 hours of operation, whichever occurs first, remove, clean and repack the front wheel bearings.

Raise the front end of the tractor until the wheels clear the ground. Remove hub cap and gasket "A", the cotter pin, nut "B", and washer "F". Remove bearing "C" and place it in hub cap "A" or in a clean container; then remove the wheel.

Clean the inside of hub "D", remove the old grease from the bearings, clean them with kerosene, and repack with fiber grease.

It is advisable to leave bearing "E" on the axle and clean it with a brush and kerosene. Repack the rollers with new grease before reassembling the bearings.

Inspect the oil seal felt washer and gasket and if they are not in satisfactory condition, replace them with new ones. A dirt deflector is also provided on the axle to prevent dirt from entering at the inner bearing.



Illust. 3A
Wheel removed for cleaning and greasing.

REPLACING AND ADJUSTING

Reassemble the wheel and tighten nut "B" until the wheel binds slightly, rotating the wheel at the same time. Back the nut off one castellation from the cotter pin hole; replace the cotter pin and hub cap.

LUBRICATION TABLE

Lubrication Table

Point of Lubrication	Capacity							Anticipated Air Temperature and Lubricant Required					
	Farmall 460	Farmall 460 Hi-Clear	International 460 Utility and 460 Industrial	International 460 Hi-Utility	Farmall 560	Farmall 560 Hi-Clear	International 560	International 660	Above +90° F.	+90° F. to +32° F.	+32° F. to +10° F.	+10° F. to -10° F.	Below -10° F.
Engine Crankcase	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	9 qt.	SAE-30 or 20W-40	* SAE-20 or 10W-30	SAE-10W or 5W-20	SAE-5W-20 or 8 qts. SAE-10W with 1 qt. Kerosene	7 qts. SAE-10W with 2 qts. Kerosene
Air Cleaner Oil Cup	2-1/4 pt.	2-1/4 pt.	2 pt.	2 pt.	2 pt.	2 pt.	2 pt.	2 pt.					
Distributor	xx	xx	xx	xx	xx	xx	xx	xx	Chassis lubricant				
Distributor.....	xx	xx	xx	xx	xx	xx	xx	xx	Light engine oil				
Cam Hole Felt (in distributor)....	xx	xx	xx	xx	xx	xx	xx	xx	SAE-20 engine oil				
Generator	xx	xx	xx	xx	xx	xx	xx	xx	SAE-10W or SAE-5W-20				
Steering Gear Housing	2-1/2 pt.	2-1/2 pt.	--	--	2-1/2 pt.	2-1/2 pt.	--	--	IH Hy-Tran Fluid or SAE-80 gear lubricant.				
Manual Steering.....	--	--	2-1/2 pt.	2-1/2 pt.	--	--	3-1/2 pt.	3-1/2 pt.	IH Hy-Tran Fluid; or IH Torque Amplifier Transmission Lubricant additive; or worm gear lubricant.				
Power Steering	--	--	3-1/2 pt.	3-1/2 pt.	--	--	3-1/2 pt.	3-1/2 pt.	Use chassis lubricant (pressure gun grease), for all fittings on which the hand lubricator is applied, for all temperatures.				
Lubrication Fittings	Use chassis lubricant (pressure gun grease), for all fittings on which the hand lubricator is applied, for all temperatures.												

* SAE-5W-20 engine oil may be used if temperatures are not consistently above 65° F.

Lubrication Table—Continued

LUBRICATION TABLE

Point of Lubrication	Capacity								Anticipated Air Temperature and Lubricant Required
Transmission and Differential Case. (Tractors with Hydra-Touch and/or Torque Amplifier)	Farmall 460	Farmall 460 Hi-Clear	International 460 Utility and 460 Industrial	International 460 Hi-Utility	Farmall 560	Farmall 560 Hi-Clear	International 560	International 660	
	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. 14 gal.	Approx. 6 gal.	Approx. 14 gal.	Approx. 14 gal.	Approx. 14 gal.	IH Hy-Tran Fluid.
Rear Axle Housing or Carrier	--	3 qt.	--	--	--	3 qt.	--	3 qt.	
Belt pulley Housing (Rear mounted)**	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	
Independent power take-off housing rear unit Planetary-type	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	2 qt.	SAE-10W engine oil
	Clutch-type	1 pt.	1 pt.	1 pt.	1 pt.	1 pt.	1 pt.	1 pt.	--

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

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