

45 FARM LOADER FOR 530, 630, 730, 520, 620, 720, 50, 60, 70, A, B, AND G TRACTORS



JOHN DEERE

OPERATORS MANUAL

**45 FARM LOADER FOR 530, 630, 730, 520, 620,
720, 50, 60, 70, A, B, AND G TRACTORS**

OMC13982 I3 English

OMC13982 I3

LITHO IN THE U.S.A.
ENGLISH



TO THE PURCHASER

This manual covers the operation, service, and assembly instructions for the John Deere No. 45 Hydraulic Loader, "Series 1." This Loader has been designed to give many years of satisfactory service.

The successful operation and long life of the machine depends of course on proper operation and the care given it. The first recommendation is that you read this manual carefully and follow the instructions. By so doing you may save much time and expense in the field. If additional information is needed, see your John Deere dealer.

Lubrication is very important. Refer to Lubrication Charts.

When in need of parts see your John Deere dealer. He is equipped to provide genuine John Deere parts and service.

LOCATION REFERENCE

Right-hand and left-hand reference is determined by standing at the rear of the tractor-loader combination and facing the forward direction of travel.

Before you forget, fill in the information below.

IDENTIFICATION

Write Series Number of your Loader here.....

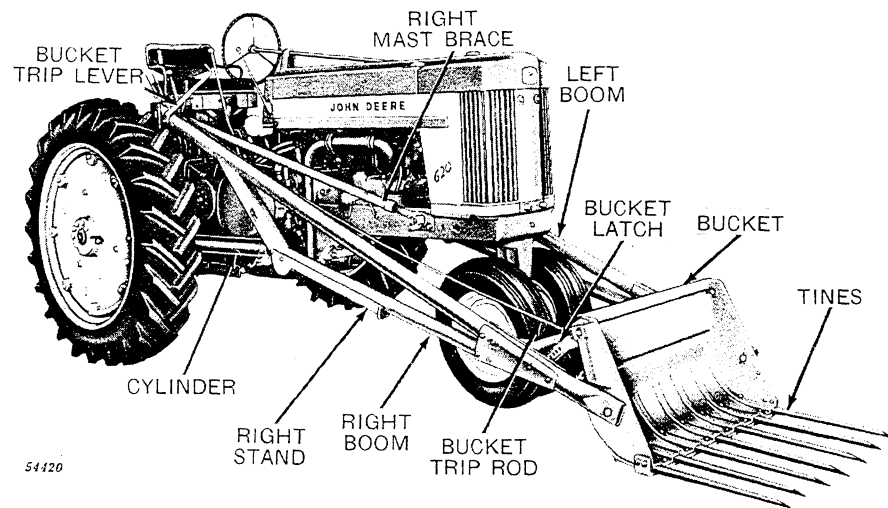
(The Series Number Plate is attached to the rear truss of the right boom member.)

Date Purchased.....

(It is John Deere policy to improve our machines at every opportunity. Consequently, it may be necessary to change design without notice.)

CONTENTS

	<i>Page</i>
SPECIFICATIONS.....	3
OPERATION.....	4-18
Attaching the Loader.....	12-16
Boom.....	8
Bottom Sheet Extension and Dirt Bucket.....	9
Bucket Trip and Suck Adjustment.....	5
Controls.....	4
Crane.....	8
Cylinders.....	8
Detaching the Loader.....	17-18
Loading.....	7
Operating Suggestions.....	6
Safety Suggestions.....	6
Scraper Blade.....	10-11
Utility Bucket.....	9
Wheel Weights and Tire Inflation.....	6
SERVICE.....	20



*Right-Hand View of John Deere No. 45 Loader on John Deere
620 Tractor*

SPECIFICATIONS

The John Deere No. 45 Hydraulic Loader has been designed to fit the following tractors:

John Deere 530, 630, 730, 520, 620, and 720 Series Row-Crop Tractors with remote cylinder function and with Dual or Single Front Wheels.

John Deere Models 50, 60, 70, A, B, and G Row-Crop Tractors with Powr-Trol or Powr-Trol conversion and with Dual or Single Front Wheels.

I.H.C. Farmall M, Super M, H, Super H, Super MTA, Nos. 300 and 400 Tractors.

The power for operating the loader is derived from the tractor hydraulic system. Raising and lowering the loader boom is accomplished by means of the tractor hydraulic control lever.

Weight (Gross).....	759 lbs.
Over-All Length (On John Deere 620 Tractor with 12:00 x 38 Tires).....	195 in.
Rated Breakaway Capacity.....	3200 lbs.
Rated Lift Capacity.....	2150 lbs.
Lift Height (To Heel of Bucket).....	10-1/2 ft.

The following optional equipment is available for use with the No. 45 Loader:

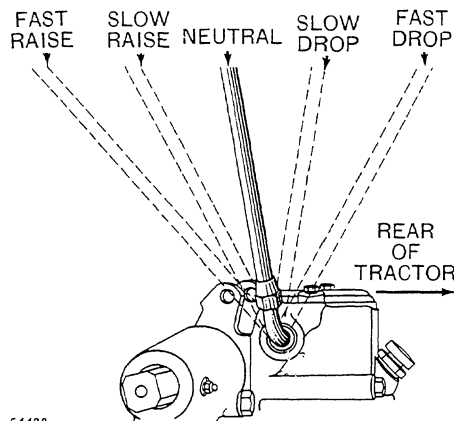
Bottom Sheet Extension
Utility Bucket
Dirt Bucket
Scraper Blade
Crane

(Specifications and design subject to change without notice.)

OPERATION

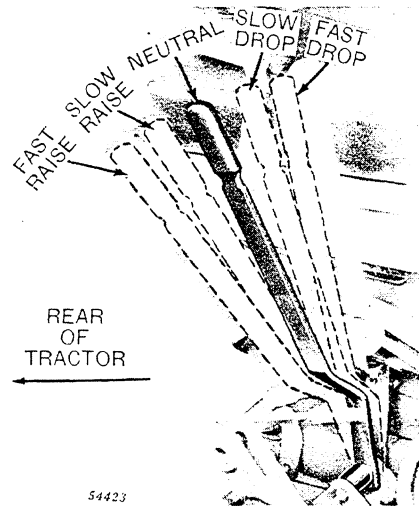
CONTROLS

Adjust the tractor hydraulic system for single action cylinder operation (if tractor is equipped with double action valve). Refer to tractor Operator's Manual.



54422

Powr-Trol Operating Lever



54423

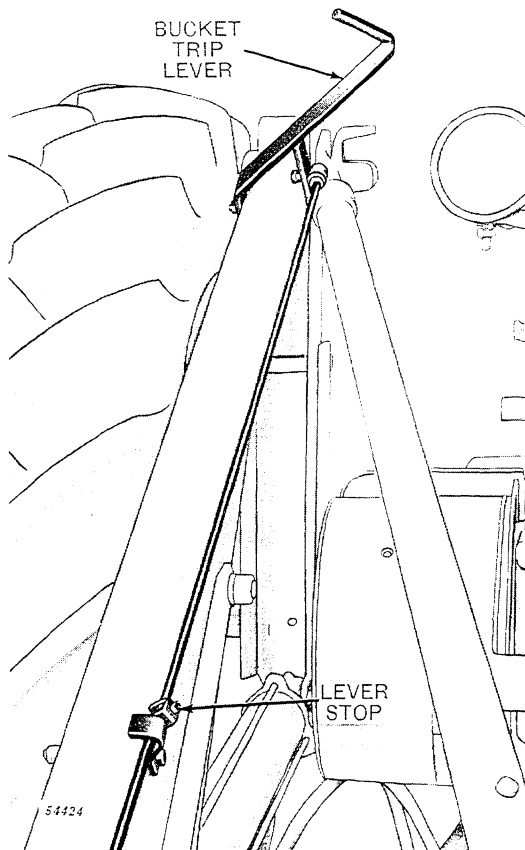
Remote Cylinder Operating Lever

When the No. 45 Loader is mounted on John Deere 50, 60, 70, A, B, and G Tractors with Powr-Trol, place the Powr-Trol lever in forward position to raise the boom. Place the lever in rear position to lower the boom.

When the loader is mounted on John Deere 530, 630, 730, 520, 620, and 720 Tractors, place the remote cylinder operating lever in rear position to raise the boom. Place the lever in forward position to lower the boom.

When the loader is mounted on Farmall Tractor, operate the control lever as instructed in the tractor operator's manual.

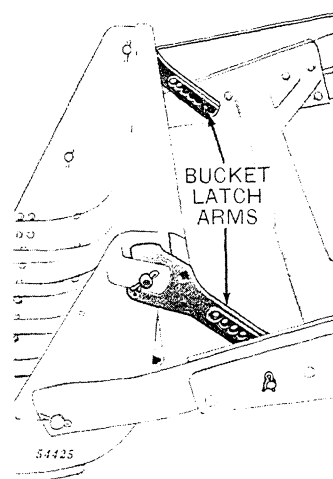
BUCKET TRIP AND SUCK ADJUSTMENT



The bucket trip lever can be located at the upper end of either the right- or left-hand boom.

The lever stop on bucket trip rod must be located on the rod at a point where the bucket latch arms are held in proper place to lock the bucket. This point is determined by raising the boom slightly off of the ground and latching the bucket securely. Push the bucket trip lever rearward until no slack remains in the trip rod but without tripping the bucket. Place the lever stop against the stop on the boom and tighten set screw.

Bucket suck adjustment is provided by the series of holes in the bucket latch arms. Pin the arms to boom using the holes which give the desired tine penetration. **Whenever the arms are relocated on the attaching pins for different bucket suck be sure to relocate the lever stop as instructed above.** This will insure proper latching of the bucket.



OPERATING SUGGESTIONS

Be sure that the tractor hydraulic control lever is in drop position when breaking the hydraulic couplers.

Clean hoses and fittings before assembling or disassembling hoses. Dirt in the hydraulic system is costly.

Check the oil level in the hydraulic system daily. Keep oil supply up to proper level.

When lowering a heavy load, ease it downward slowly. Stopping a heavy load suddenly after it has gained downward momentum, if done excessively, may result in damage to the loader or tractor.

SAFETY SUGGESTIONS

Loader should never be operated except from tractor seat.

Carry loads low.

Operate at slow ground speeds, especially on irregular ground.

Never operate a loader with frayed hoses or leaky fittings. A leak in the hydraulic system retards the efficient operation of the loader and may cause an accident.

Under no circumstances lift a person in the bucket.

Do not leave bucket in raised position.

Do not stand underneath a raised bucket.

Operate with the tractor wheels at widest tread spacing permissible for clearance.

WHEEL WEIGHTS AND TIRE INFLATION

The addition of rear wheel weights to tractor will improve performance of loader.

Increased tire inflation in front tires is recommended for loader operation. Refer to your tractor Operator's Manual for correct inflation pressures and wheel weighting. Reduce inflation pressures when loader is removed. 6:00-16 6-ply tires are recommended for loader operation.

LOADING

Never operate loader unless seated on tractor seat.

The bucket should raise or lower in a smooth unhesitant manner. If it hesitates, check the oil level in the tractor hydraulic unit, or for leaks in the loader hydraulic system. The oil level should be checked with bucket on the ground and tractor engine stopped. If oil level is low, add oil as instructed in tractor Operator's Manual.

In extremely cold weather the loader may not operate smoothly until the oil in the hydraulic system has been warmed up.

When operating the loader under average conditions, drive the tractor at reduced throttle in second gear. The loader may be used safely on any ground on which a tractor can be operated alone if the following recommendations are followed:

When manure is piled on a slope it is best to approach the pile uphill and back away downhill. Operating sideways on a slope has a tendency to tip the loading unit.

Drive tractor straight into pile for most effective digging. Manure is torn loose from a pile and bucket is filled easier by forcing the bucket into pile and raising the bucket about six inches. Drop bucket and drive forward. Repeat this procedure until bucket is filled. In deep manure, remove top levels first.

The bucket should be brought to proper dumping height, about one foot above spreader, just before spreader is reached. When the bucket is above spreader, trip the load. Drive tractor forward and raise bucket at same time to distribute load evenly into spreader. Dumping load from a low position provides better loading, less spillage of manure, and is easier on the spreader. **Carry the load low as this gives added stability to the loading unit.**

CYLINDERS

A breather is used in the front cylinder head of each cylinder when loader is operated with John Deere 530, 630, 730, 520, 620 or 720 Tractors.

When the loader is used after a period of idleness, a small amount of oil, which has accumulated at the forward end of the cylinder, will seep through the breather. This is to be expected but, if excessive and continuous, install new leathers in the cylinder.

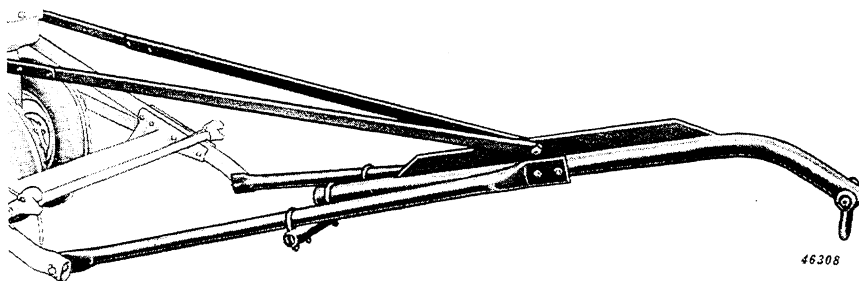
Do not tighten the tie rod nuts to overcome leaks at end of cylinder. Instead, replace "O" rings in cylinder. See instructions on page 20.

BOOM

High-strength bolts are used to attach the cross pipe to the boom and to attach the boom to the mast. These bolts should be kept tightened to a torque of 65 ft-lbs. This can be accomplished with a wrench having an 18-inch handle. Lock washers should not be used on these bolts.

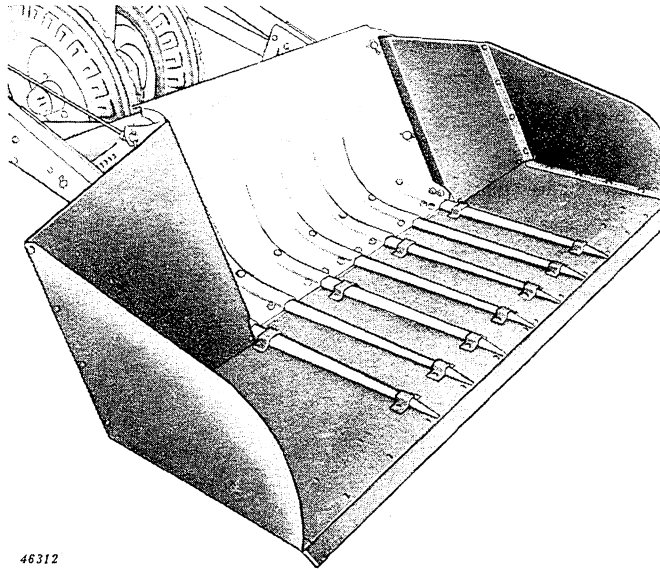
When replacing any of these bolts, always use high-strength bolts. The forward bolt on each side of the boom must have the nut on the outside to allow the bucket to open properly.

CRANE



A recommended maximum load of 1000 pounds under normal operating conditions should not be exceeded. **Do not overload.** Carry the load as low as possible.

UTILITY BUCKET

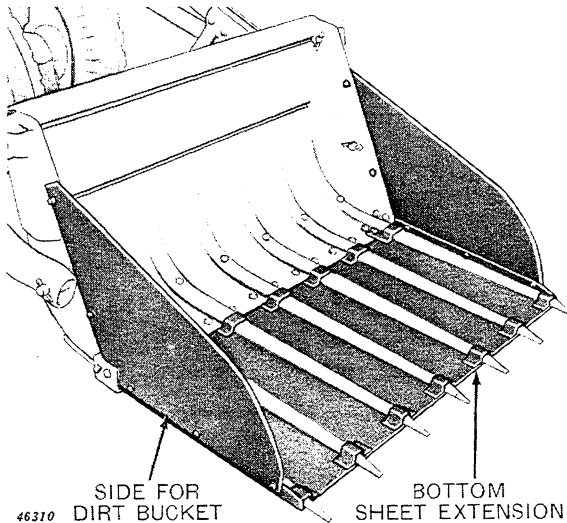


46312

The utility bucket (80 inches wide) can be used for scraping yards with dry manure, handling snow, cobs, and other miscellaneous farm jobs.

It is assembled to the regular bucket.

BOTTOM SHEET EXTENSION AND DIRT BUCKET

46310 SIDE FOR
DIRT BUCKETBOTTOM
SHEET EXTENSION

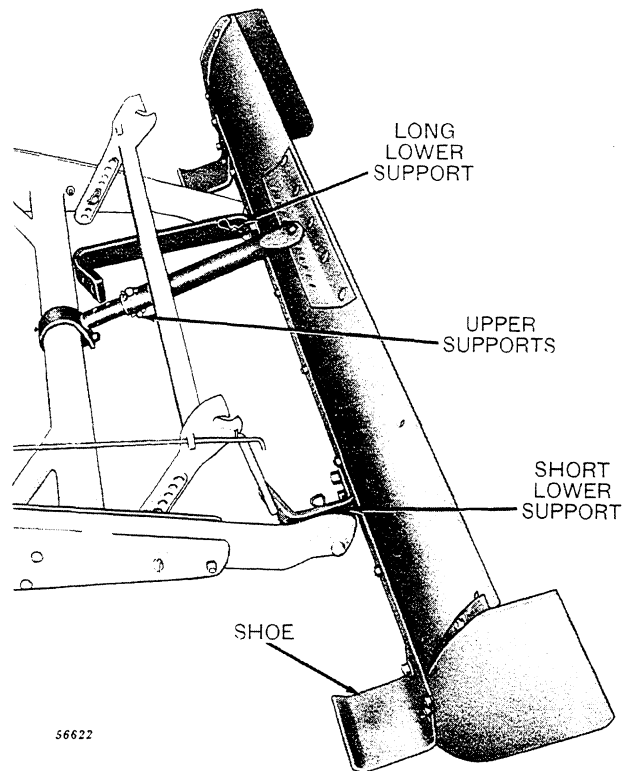
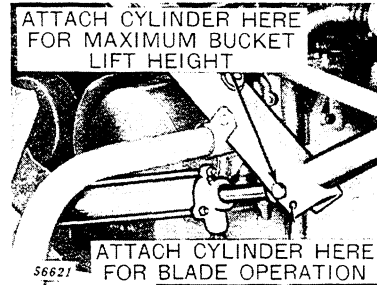
The bottom sheet extension provides an extension to the regular bucket for handling loose material which would normally fall through the tines.

If a bucket for handling dirt, or similar loose material, is required, the combination of bottom sheet extension and a bundle of sides makes a dirt bucket.

SCRAPER BLADE

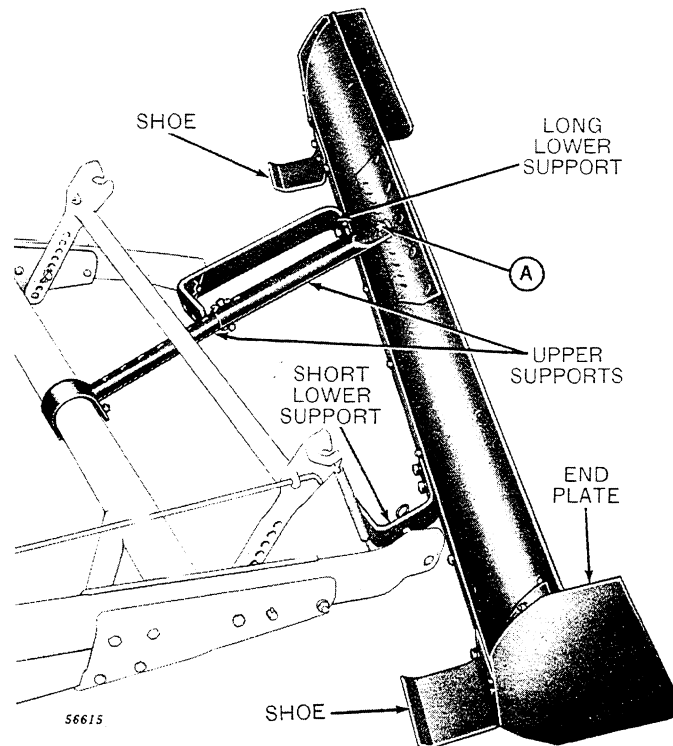
It is not necessary to remove the bucket latch assembly when attaching the scraper blade.

When using the loader for blade operation, the cylinders must be attached to the boom at the two lower holes in the boom trusses.



The blade can be operated as a straight blade or angled 20 degrees to the right or left. The above illustration shows how the long and short lower supports are pinned to the boom when blade is to be operated in straight position.

The upper supports must be set in the length shown for straight operation.

SCRAPER BLADE—Continued

To insure level operation of the blade in the various settings, the upper supports should be bolted to the blade in the hole (A) which is in alignment with the upper supports. When aligning the upper supports with the correct hole in blade, the blade must be setting on a level surface.

To operate the blade at a 20 degree angle to the right, assemble the lower supports to blade and boom as illustrated above. The upper supports are set in the length as shown.

To operate the blade at a 20 degree angle to the left, interchange the long and short lower supports.

Adjust the shoes to meet operating conditions. The blade can be operated with or without the end plates.

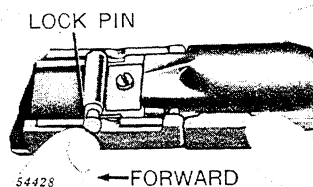
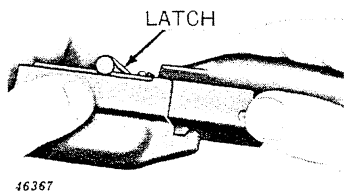
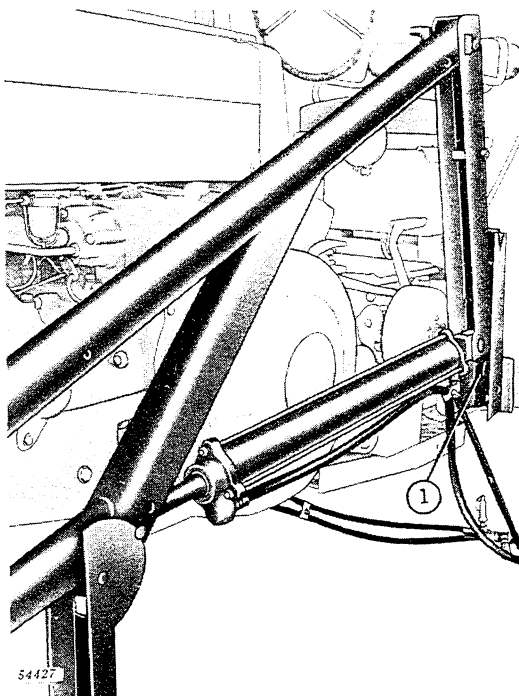
ATTACHING THE LOADER

1. Drive tractor into loader.

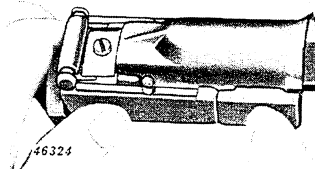
Arrange hydraulic hoses so as not to run over hose couplings with tractor wheels.

Drive tractor straight into loader until lower ends of masts enter rear mounting brackets. Do not force loader forward as this will cause stands to fold backwards.

2. Place hydraulic control lever in drop position and connect hydraulic couplers as illustrated on pages 13 and 14.



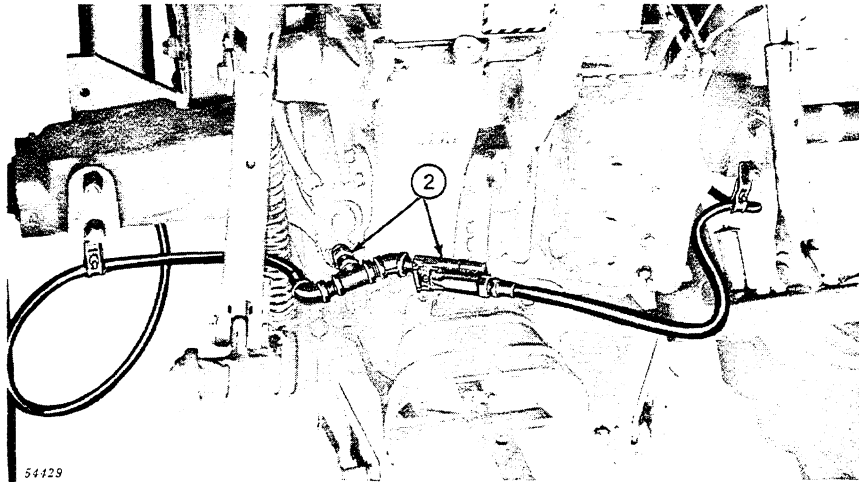
To connect the couplers, align the plain coupler, and coupler with latch, so that the bosses seat in the slots. Note that the latch slide is at the rear of the coupler with the lock pin to one side.



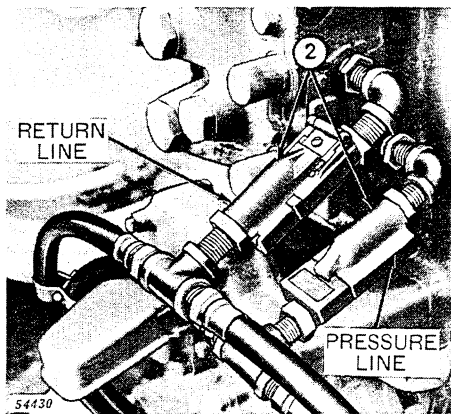
Force the plain coupler into the coupler with latch using a swift forward motion to prevent oil spillage.

Center the lock pin to lock the two couplers together.

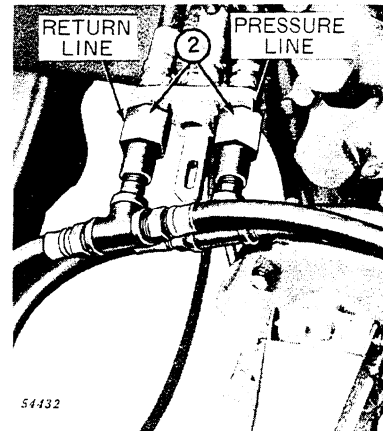
ATTACHING THE LOADER—Continued



Hydraulic Hose Attaching Point for John Deere 530, 630, 730, 520, 620, or 720 Tractors

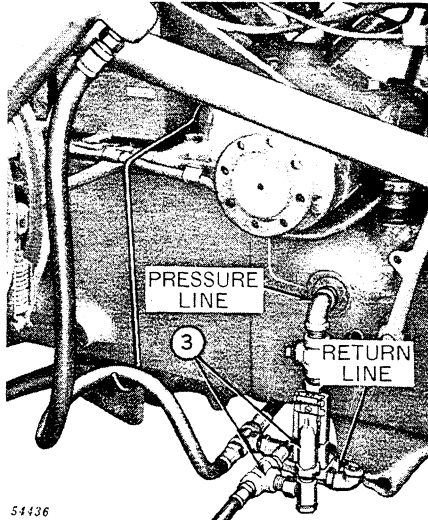


Hydraulic Hose Attaching Points for John Deere 50, 60, 70, A, B, or G Tractors with Power-Trol and Not Equipped with Breakaway Couplings



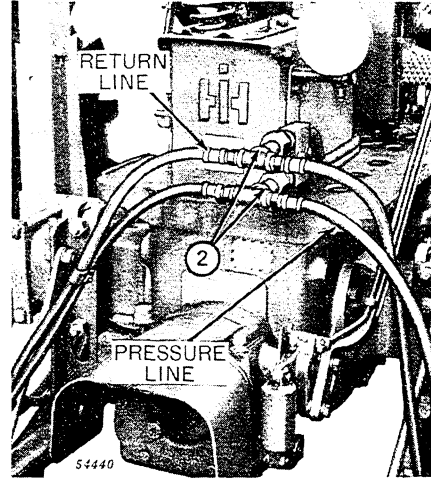
Hydraulic Hose Attaching Points for John Deere 50, 60, 70, A, B, or G Tractors with Power-Trol and Equipped with Aero-Quip Couplings

ATTACHING THE LOADER—Continued



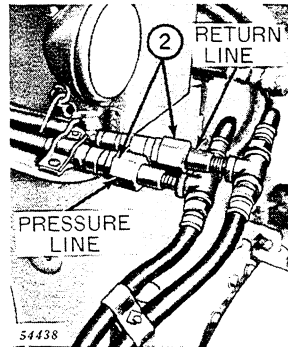
54436

*Hydraulic Hose Attaching Points for
I.H.C. Farmall H, Super H, M, and
Super M less Constant Hydraulic
Power*



54440

*Hydraulic Hose Attaching Points for
I.H.C. Farmall 300 or 400 Tractors*



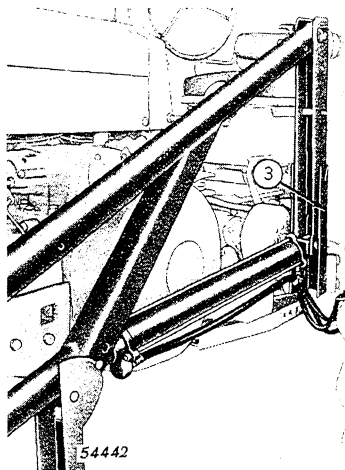
54438

*Hydraulic Hose Attaching Points for
I.H.C. Farmall Super H, Super M,
and Super MTA Tractors with
Constant Hydraulic Power*

ATTACHING THE LOADER—Continued

3. Drive tractor forward to fully engage loader masts with rear mounting brackets.

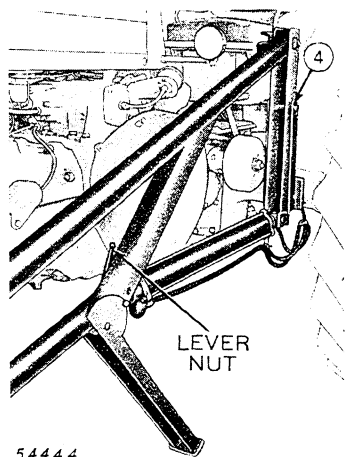
With the hydraulic control lever in drop position, the oil in the cylinders is not under pressure. Driving the tractor forward against the loader will compress the cylinders and position the masts for positive entry into the mounting brackets.



4. Loosen stands and drive tractor forward to seat masts.

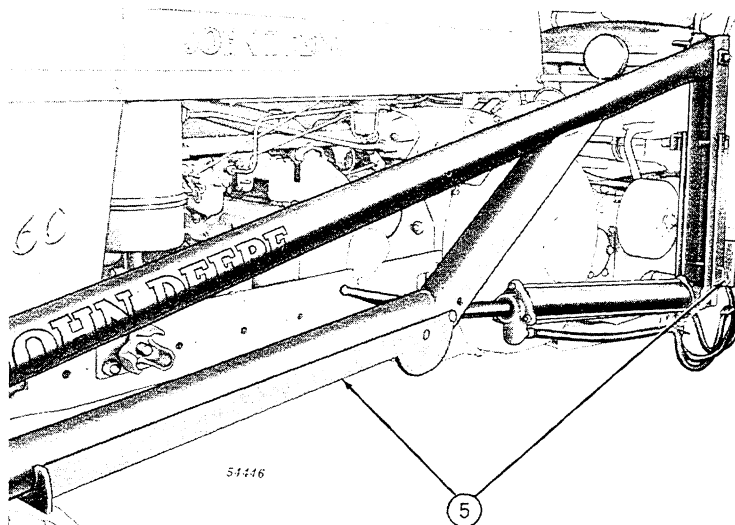
The two lever nuts must be loosened just enough to allow stands to pivot. If loader is resting on a hard, smooth surface, such as a concrete floor, the lever nuts should be left tight enough to brake the forward movement of the loader as the stands pivot backwards.

Drive tractor forward carefully and the masts will drop into position in the mounting brackets.

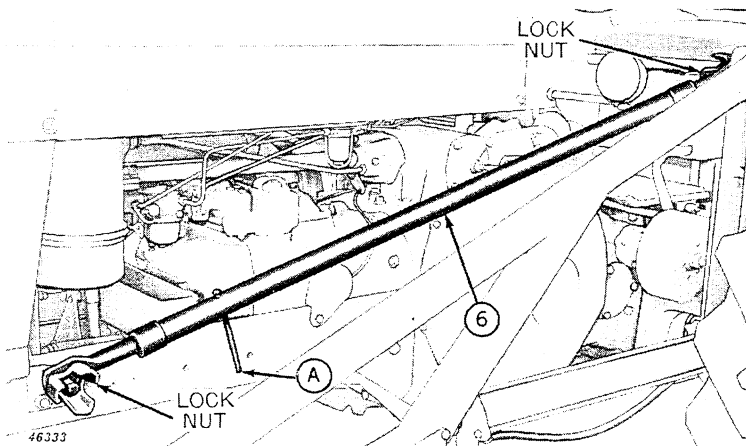


ATTACHING THE LOADER—Continued

5. Raise loader boom; lock up the stands and insert lower mast pins.



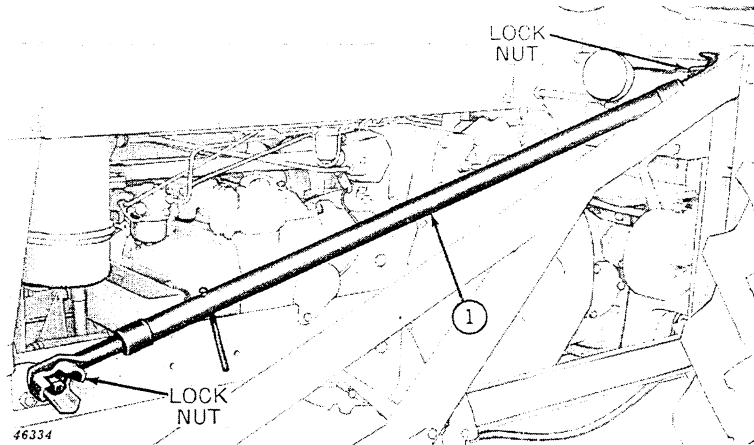
6. Lower loader boom and install mast braces.



Install upper end of mast brace first. Install lock nut and tighten. Adjust brace and place lower end of brace on front mounting bracket. Lengthen mast brace by turning handle (A) about one-half turn. Be sure the lock nuts are centered in the brace ends. Tighten lock nuts securely with bar or wrench.

DETACHING THE LOADER

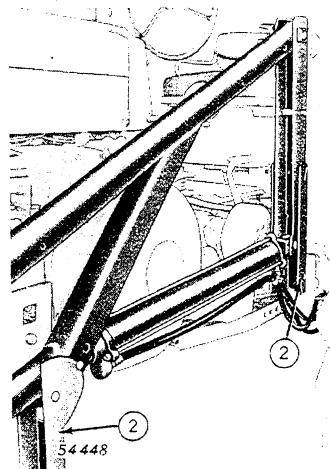
1. Remove mast braces.



With empty bucket on the ground, loosen four lock nuts and remove the right- and left-hand mast braces.

2. Raise loader boom; lower stands and lock and remove rear mast pins.

After stands are lowered, tighten the lever nuts securely.



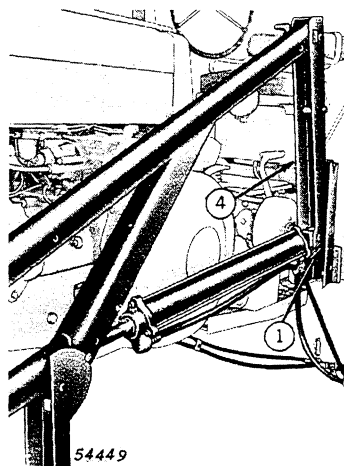
DETACHING LOADER—Continued

3. Lower boom and disconnect hydraulic couplers.

The hydraulic hoses should be parted by disconnecting the hydraulic couplers or at the points where the lines connect to the remote cylinder coupling. The portions of the hydraulic lines assembled into the tractor hydraulic system may be left intact on the tractor for other field operations unless they interfere with other implement mounting.

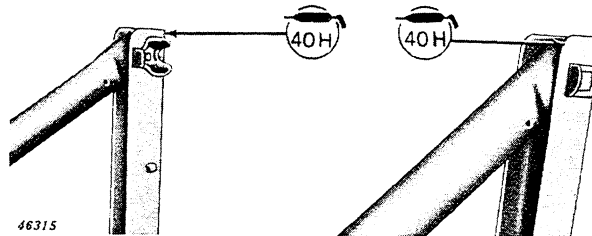
4. Back tractor out of loader.

Arrange hydraulic hoses so as not to run over hose couplings with tractor wheels. Keep the hoses and fittings clean.

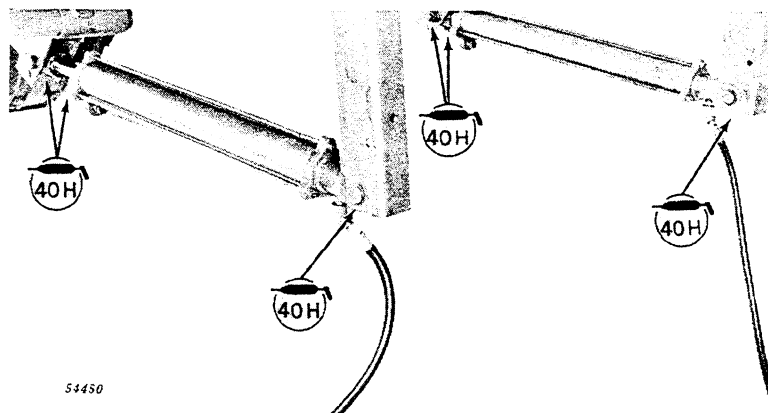


54449

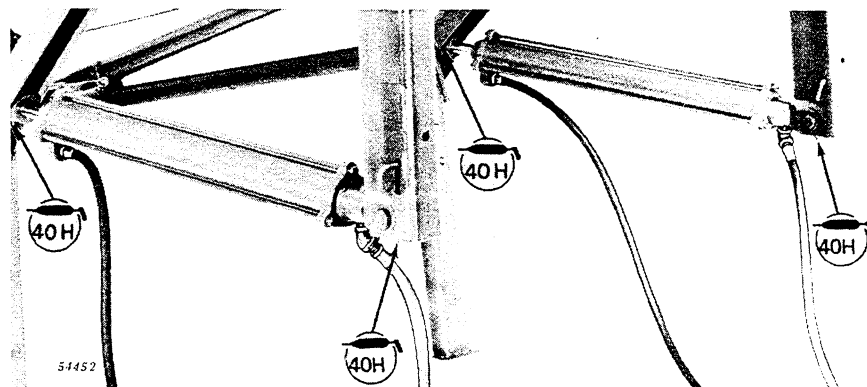
LUBRICATION



All Loaders



Loaders on 530, 630, 730, 520, 620, and 720 Series Tractors



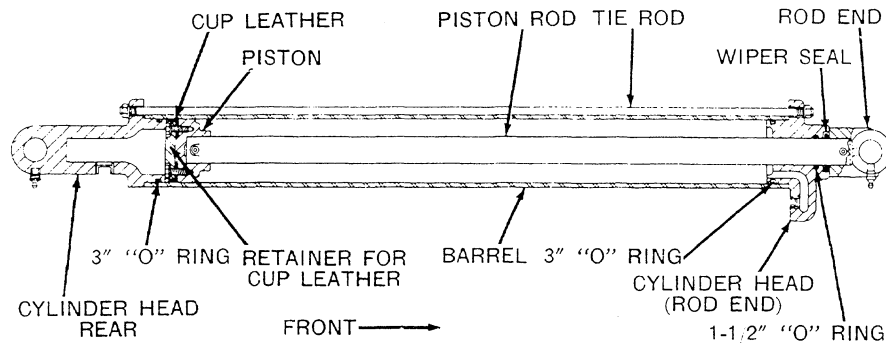
Loaders on All Tractors Except John Deere 530, 630, 730, 520, 620, and 720 Series

SYMBOL



Grease every 40 hours of operation

SERVICE CYLINDERS



46339

The above illustration is a cross-sectional view of the cylinder. Both cylinders on the John Deere No. 45 Hydraulic Loader are identical.

Wash cylinder thoroughly before taking it apart. The internal parts in this cylinder have been machined to a high finish and should be handled carefully.

To replace a cup leather in cylinder, remove the nuts on tie rods at the rear, or cylinder head support end. Remove the rear cylinder head and push the piston rod rearward as far as it will go. Remove the four 5/16 x 3/4-inch hex. head machine bolts from piston. Push the piston rod forward about one inch and remove the retainer for cup leather and the leather from within the barrel. Oil the new leather and insert it in the barrel. Line up the holes in the leather with those in the piston by turning the piston rod at the front of the cylinder. Replace the retainer for cup leather and bolts. Replace the rear cylinder head and tie rods.

If the cylinder has been completely disassembled, check for damaged "O" rings and oil wiper seal. Replace if necessary.

If the piston rod has been removed from the barrel and a new cup leather installed, tighten the four 5/16 x 3/4-inch bolts finger tight only. This will prevent expansion of the leather and permit easier entry of leather into the barrel. Oil the walls of the barrel and insert the piston rod into the barrel from the rear of the barrel so as not to damage the lip of the leather. Replace the front cylinder head and tighten the four 5/16 x 3/4-inch bolts securely. Replace the rear cylinder head and tie rods.

Be sure that all the parts are perfectly free from dust or foreign material before reassembling the cylinder.



nobody can fill them like you can!

That's what the owner of this pair of work shoes is finding out—the hard way. Through a careless action, he has become the victim of an accident. It's a mighty tough way to find out that nobody else can wear your shoes or practice safety for you. And a needless, costly lesson to learn that safety is an everyday need.

Put safety into each of your workdays; read the operator's manual thoroughly; know how to operate each machine properly and safely; take the safety precautions specified; think before you act.

Make sure you wear your "shoes" everyday. Outfit yourself with a safety program now.

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 emphasize and call attention to the safety precautions in this manual.

