9900 and 9910 Cotton Pickers

JOHN DEERE

TECHNICAL MANUAL

9900 and 9910
Cotton Pickers

TM1105 English

John Deere Des Moines Works
TM1105

LITHO IN U.S.A.
ENGLISH

9900 AND 9910 COTTON PICKERS

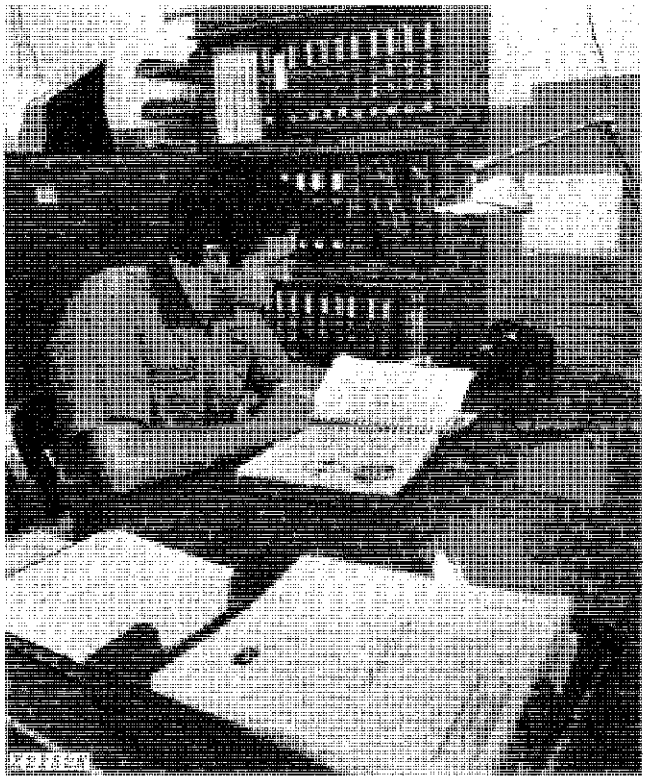
Technical Manual
TM-1105 (May-83)

CONTENTS

All information, illustrations and specifications contained in this technical manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

Litho in U.S.A.

INTRODUCTION



X2252N

Use FOS Manuals for Reference

X2253N

Use Technical Manuals for Actual Service

This technical manual is part of a twin concept of service:

- **FOS Manuals—for reference**
- **Technical Manuals—for actual service**

The two kinds of manuals work as a team to give you both the general background and technical details of shop service.

Fundamentals of Service (FOS) Manuals cover basic theory of operation, *fundamentals* of trouble shooting, *general* maintenance, and *basic* types of failures and their causes. FOS Manuals are for training new people and for reference by experienced technicians.

Technical Manuals are concise service guides for a *specific* machine. Technical Manuals are on-the-job guides containing only the vital information needed by an experienced technician.

NOTE: Whenever the service technician may need to refer to a FOS Manual for additional information, a specific manual number is given.

Some features of this technical manual:

- *Table of contents at front of manual*
- *Exploded views showing parts relationship*
- *Photos showing service techniques*
- *Specifications grouped for easy reference*

This technical manual was planned and written for you—an experienced technician. Keep it in a permanent binder in the shop where it is handy. Refer to it whenever in doubt about correct service procedures or specifications.

Using the technical manual as a guide will reduce error and costly delay. It will also assure you the best in finished service work.

This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

U.S. units of measure are shown with their respective Metric equivalents throughout this technical manual. These equivalents are the SI (International System) Units of Measure.

FOR YOUR CONVENIENCE

Vertical lines appear in the margins of many of the pages. These lines identify new material and revised information that affects specifications, procedures, and other important instructions.

RIGHT AND LEFT-HAND DETERMINATION

"Right-hand" or "left-hand" sides are determined by facing the direction the picker travels when in use.

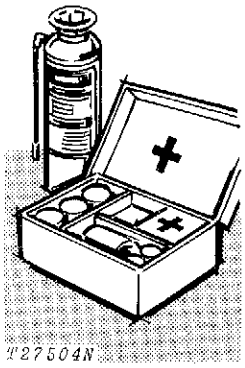
Litho in U.S.A.

SAFETY AND YOU

T27999N

INTRODUCTION

This safety alert symbol identifies important safety messages in this manual and on the picker. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.



T27504N

Be prepared if an accident or fire should occur. Know where the first aid kit and the fire extinguishers are located—know how to use them.

BLOCKING THE COTTON PICKER

CAUTION: Whenever the engine is to be removed for service, it is very important that the basket be securely blocked so it will not fall and cause serious personal injury, or damage to the cotton picker.

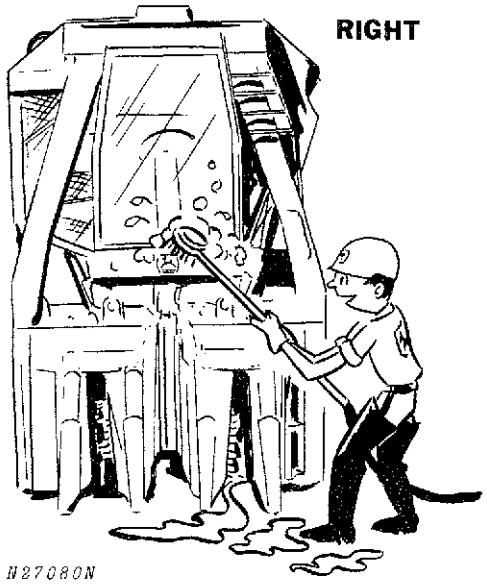
Whenever working under the picking units, securely block the picking units so they will not fall and cause personal injury or damage to the units.

Always service the cotton picker on level ground unless otherwise specified in this manual.

Block the wheels to keep the cotton picker from moving while it is being serviced.

Litho in U.S.A.

CLEANING THE COTTON PICKER



N27080N

N27080N

Always stop the engine before cleaning the cotton picker.

Keep the operator's platform clean. Do not use it as a storage area.

Keep the radiator and engine closure screens free of foreign matter. Avoid a possible fire hazard.

Keep all equipment free of dirt and oil. In freezing weather, beware of snow and ice on ladder steps and operator's platform.

SERVICE AREA

Keep the service area clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment.

Make sure the service area is adequately vented.

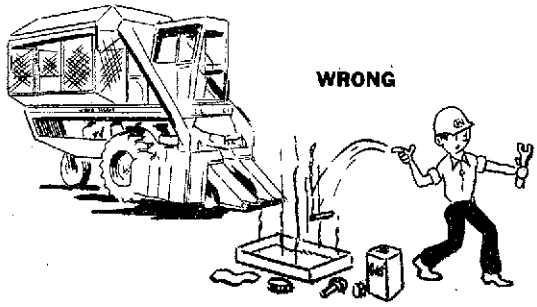
Periodically check the shop exhaust system for leakage. Engine exhaust gas is dangerous.

Be sure all electrical outlets and tools are properly grounded.

Use adequate light for the job at hand.

Use lifting equipment and safety stands with adequate capacity for the job being performed.

AVOIDING FIRE HAZARDS



N27081N

N27081N

Don't smoke while refueling or handling highly flammable material.

Shut off the engine when refueling.

Use care in refueling if the engine is hot.

Don't use open pans of gasoline or diesel fuel for cleaning parts. Good commercial, nonflammable solvents are preferred.

Provide adequate ventilation when charging batteries.

Don't check battery charge by placing metal objects across the posts.

Don't allow sparks or open flame near batteries.

Don't smoke near battery.

Never check fuel, battery electrolyte or coolant levels with an open flame.

Never use an open flame to look for leaks anywhere on the equipment.

Never use an open flame as a light anywhere on or around the equipment.

When preparing engine for storage, remember that inhibitor is volatile and therefore dangerous. Seal and tape openings after adding the inhibitor. Keep container tightly closed when not in use.

Litho in U.S.A.

FLUIDS UNDER PRESSURE

Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting lines, be sure to relieve all pressure. Before applying pressure to the system, be sure all connections are tight and that lines, pipes and hoses are not damaged. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

If injured by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

Don't forget the hydraulic system or diesel fuel injection system may be pressurized! To relieve pressure, follow the instructions in the applicable section of this technical manual.

When checking hydraulic pressure, be sure to use the correct test gauge for the pressure in the particular system.

PERSONAL SAFETY

H23440N

Always avoid loose clothing or any accessory—flopping cuffs, dangling neckties and scarves—that can catch in moving parts and put you out of work.

Always wear your safety glasses while on the job.

Keep transmission and brake control units properly adjusted at all times. Before making adjustments, stop engine.

Before removing any housing covers, stop engine. Take all objects from your pockets which could fall into the opened housings. Don't let adjusting wrenches fall into opened housings.

Don't attempt to check belt tension while the engine is running.

Don't adjust the fuel system while the machine is in motion.

Before repairing the electrical system, or performing a major overhaul, make sure the batteries are disconnected.

Avoid working on equipment with the engine running. If it is necessary to make checks with the engine running, ALWAYS USE TWO PEOPLE—with the operator, at the controls, able to see the person doing the checking. Also, put the transmission in neutral, set the brake, and apply any safety locks provided. KEEP HANDS AWAY FROM MOVING PARTS.

Use extreme caution in removing radiator caps, drain plugs, grease fittings, or hydraulic pressure caps.

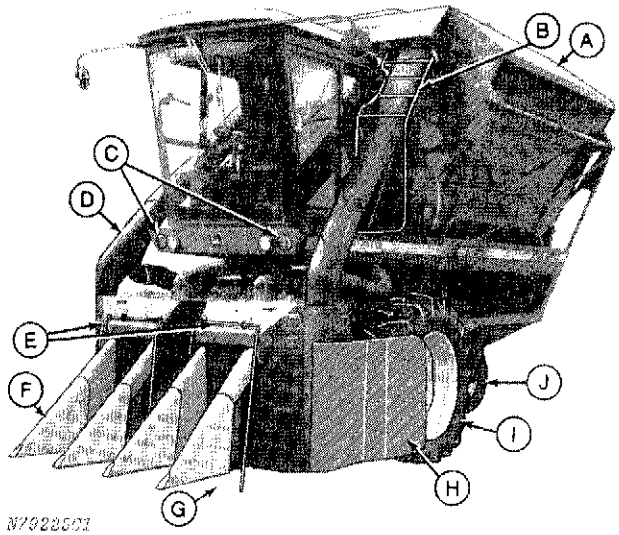
Litho in U.S.A.

Litho in U.S.A.

Section 10
GENERAL

CONTENTS OF THIS SECTION

DESCRIPTION



A—Basket
B—Ladder
C—Warning Lamps
D—Suction Duct
E—Picking Units
F—Stalk Lifters
G—Height Control Shoe
H—Wheel Shield
I —Drive Wheel
J —Guide Wheel

Fig. 1-9910 Cotton Picker

The 9900 and 9910 Cotton Pickers are two-row self-propelled cotton pickers having four basic components:

Group 5
GENERAL SPECIFICATIONS

1. Picking units.
2. Cotton conveying system and basket.
3. Operator's platform.
4. Engine and propelling mechanism.

The picking units are either high-or low-drum and in row widths from 40-inch (1.02 m) solid-plant to 32-inch (0.81 m) skip-rows. The high-drum picking units have 1120 individual barbed spindles and the low-drum units have 784 spindles.

The cotton conveying system consists of a fan located in the engine area to convey the cotton to the basket which holds 3,000 lbs (1 361 kg) of seed cotton or 3,600 lbs (1 633 kg) of seed cotton with basket compactor.

The 9900 Cotton Picker is propelled by a 6-cylinder, 329 cu. in. (5 391 cm^3) diesel engine; the 9910 by a 359 cu. in. (5 883 cm^3) diesel engine.

SERIAL NUMBERS

The cotton picker serial number is on a plate located on the left-hand platform support.

The engine serial number is on a plate located on the left-side of the engine block.

The hydrostatic pump serial number is on a plate located on top of the pump.

The hydrostatic motor serial number is on a plate located on the left-hand side of the motor.

The cab serial number is located to the left of the operator's seat, on the cab frame.

Litho in U.S.A.

SPECIFICATIONS

PICKING UNITS	
Number of units	2
Number of picking drums	4
Number of picker bars (per unit)	
Front drum	16
Rear drum	12
Number of doffers and moisteners	
Low drum units	28
High drum units	40
Number of spindles (per machine)	
Low drum units (14 per bar)	784
High drum units (20 per bar)	1120

	Standard Transmission (rpm)		Hydrostatic Transmission (rpm)	
	9900	9910	9900	9910
PICKING UNIT SPEEDS (at 2500 engine rpm)*				
Picking unit countershaft				
Low range*	784	862	0-784	0-862
High range*	1046	1150	0-1046	0-1150
Picking drum				
Front drum (16 bar)				
Low range*	78	86	0-78	0-86
High range*	105	115	0-105	0-115
Rear drum (12 bar)				
Low range*	99	109	0-99	0-109
High range*	132	145	0-132	0-145
Doffer shaft				
Front drum (16 bar)				
Low range*	1266	1393	0-1266	0-1300*
High range*	1689	1858	0-1689	0-1734*
Rear drum (12 bar)				
Low range*	1285	1413	0-1285	0-1318*
High range*	1714	1885	0-1714	0-1759*
Spindle				
Front drum (16 bar)				
Low range*	2738	3011	0-2738	0-3011
High range*	3654	4017	0-3654	0-4017
Rear drum (12 bar)				
Low range*	2746	3020	0-2746	0-3020
High range*	3664	4030	0-3664	0-4030

**Cotton Pickers with Standard Transmission have a high and low picking unit range as standard equipment. With Hydrostatic Transmissions high range is standard equipment, low range may be added, and the picking unit speeds vary with the setting of the speed control lever. If necessary, increase engine rpm to maintain picking unit speeds. (See page 10-10-21.) Doffer shaft speeds for 9910 with hydrostatic transmission are for 1980 or later models equipped with 14-tooth doffer drive sprocket.*

	Standard Transmission, mph (km/h)				Hydrostatic Transmission, mph (km/h)			
	9900		9910**		9900		9910**	
GROUND SPEEDS (FULL THROTTLE)								
Picking speeds								
1st Gear	2.26	(3.6)	2.48	(3.99)	0-2.90	(0-4.7)	0-3.19	(0-5.13)
2nd Gear	2.90	(4.7)	3.19	(5.13)	0-3.42	(0-5.5)	0-3.76	(0-6.05)
3rd Gear	3.42	(5.5)	3.76	(6.05)				

***With 16.9 x 34 tires*

Litho in U.S.A.

	Standard Transmission, mph (km/h)		Hydrostatic Transmission, mph (km/h)	
	9900	**9910**	**9900**	**9910**
Transport speeds				
3rd Gear			0-11.49 (0-18.49)	0-12.61 (0-20.29)
4th Gear	8.94 (14.38)	9.80 (15.77)	0-13.52 (0-21.75)	0-14.85 (0-23.89)
5th Gear	11.49 (18.49)	12.61 (20.29)		
6th Gear	13.52 (21.75)	14.85 (23.89)		
Reverse	3.57 (5.74)	3.92 (6.30)	0-6.76 (0-10.88) (Four ranges)	0-7.43 (0-11.95) (Four ranges)

	9900	**9910**
CAPACITIES		
Cotton Basket		608 cu. ft. (17.2 m³)
Fuel tank		69 U.S. gal. (261 L)
Water tank	64 U.S. gal. (242 L)	100 U.S. gal. (379 L)
Cooling system		28 U.S. qt. (26.5 L)
Engine crankcase (including filter)	10 U.S. qt. (9.5 L)	12 U.S. qt. (11.4 L)
Hydraulic system (including filter)		22 U.S. qt. (20.8 L)
Hydraulic reservoir		12 U.S. qt. (11.4 L)
Transmission (including bevel gear housing)		24 U.S. qt. (22.7 L) 21 U.S. qt. (19.9 L)
Final drives (each)		2 U.S. qt. (1.9 L)
Hydrostatic drive system		27 U.S. qt. (25.6 L)
Hydrostatic drive reservoir		18.4 U.S. qt. (17.4 L)
TIRES		
Front drive wheels	18.4x26, 10 PR (R1, R2, and R3)	16.9x34, 10 PR (R1 or R3) or 18.4x30, 10 PR (R2)
Rear guide wheel		11.0x16, 8 PR
HYDROSTATIC DRIVE		
Manufacturer		
Pump		Sundstrand
Motor		Sundstrand
Type of oil filter		Full flow
Type of oil cooler		Air cooled
Type of oil		John Deere all-weather hydrostatic fluid or Texaco-Texamatic Type F-1876 Transmission Fluid
WEIGHT (approximate)		
High drum		12,600 lbs. (5 715 kg)*
Low drum		12,000 lbs. (5 443 kg)*

**With cab add 500 lbs. (227 kg)*

MACHINE SPECIFICATIONS—Continued

	9900		9910
DIMENSIONS (Approximate)			
Length			
High drum		266-1/2 in. (6.769 m)	
Low drum		266-15/16 in. (6.779 m)	
Height		162-1/2 in. (4.128 m)	
Width (With Wheel Shields)		103 in. (2.616)	
Tread			
(Center-to-center R1 or R2 Tires)	79-5/8 in. (2.022 m)		
(Outside R3 Tires)	102 in. (2.591 m)		
(Center-to-center R1 or R3 Tires)			80-5/8 in. (2.048 m)
(Outside R2 Tires)			99-3/4 in. (2.534 m)
Under axle clearance	33 in. (838 mm)		35-1/2 in. (902 mm) (with 16.9 x 34 tires)
BASKET DUMPING HEIGHT (Approximate)			
Lip		9 ft. 10-1/2 in. (3.010 m)	
Basket pivot		10 ft. 4 in. (3.149 m)	
FINAL DRIVE			
Type		Pinion and ring gear	
ELECTRICAL SYSTEM			
Battery voltage		12-volts	
Battery terminal grounded		Negative	
Alternator regulation		Electronic voltage regulator	
ENGINE			
Manufacturer		John Deere	
Type		Diesel	
Model	6329 DN-03		6359 DN-01
No. of cylinders		6	
Bore	4.02 in. (102 mm)		4.19 in. (106.5 mm)
Stroke		4.33 in. (110 mm)	
Displacement	329 cu. in. (5 391 cm^3)		359 cu. in. (5 883 cm^3)
Horsepower	105 hp (78 kW)		114 hp (85 kW)
Compression ratio		16.8 to 1	
Firing order		1-5-3-6-2-4	
Tapped clearance			
Intake		0.014 in. (0.36 mm)	
Exhaust		0.018 in. (0.56 mm)	
Injection pump timing		Pin system	
Engine speeds			
Fast idle (no load)		2650-2670 rpm	
Rated (under field load)		2500 rpm	
Slow idle		800 rpm ± 10 rpm	
Governor		Integral with fuel injection pump	
Air cleaner		Dry-type filter element with safety element and pre-screener	
Oil filter		Spin-on, full-flow type	
Cooling system			
Type		Liquid pressure	
Radiator Cap Pressure		7 psi (0.5 bar [0.5 kg/cm^2])	
Thermostat	195°F. (91°C.) (Replacement) 180°F (82°C) (Original)		Two, 180°F. (82°C.)

Litho in U.S.A.

Group 10
PREDELIVERY, DELIVERY, AND AFTER-SALE SERVICES (9910)

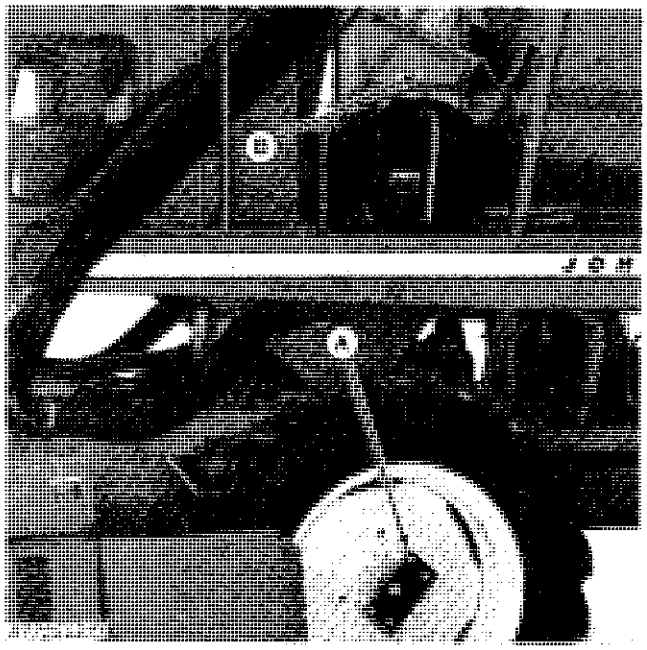
PREDELIVERY SERVICES

The John Deere Delivery Receipt, when properly filled out and signed by the dealer and customer verifies that the predelivery and delivery services were satisfactorily performed. When delivering this machine, give the customer his copy of the delivery receipt and the operator's manual. Explain their purpose to him.

PREPARING COTTON PICKER FOR UNLOADING

NOTE: See page 10-10-5 for special assembly procedures required for truck shipments.

1. Check the cotton picker for shortages, loss or damage. If any is noted, make the proper notations on the freight bill, and immediately notify the carrier.
2. Remove the blocking and wiring that holds the cotton picker to the flat car during shipment.
3. Remove wires holding height sensing shoes in shipping position, and from cab door (if equipped).
4. Remove banding and shipping board from battery and attach positive cable to battery terminal.



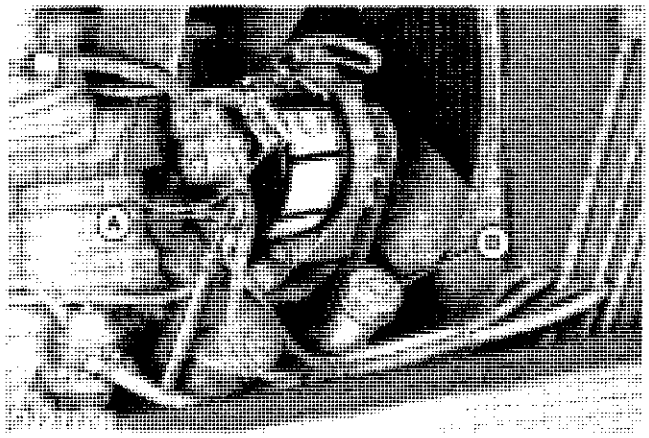
A—Tie Down Plate B—Shields

Fig. 1-Tie-Down Plate, Wheel Lug Bolts, and Shields

5. **⚠ CAUTION: Remove and DISCARD the tie-down plate (A, Fig. 1) from each drive wheel. Install the wheel lug bolts. Tighten ALL lug bolts to 160-200 ft-lbs (217-271 Nm [22-28 kgm]) torque.**

6. Remove the rear plant shields (B) from their shipping location above the water tank. Set the shields aside for later installation.

Checking Crankcase Oil Level



A—Dipstick B—Crankcase Filler Cap

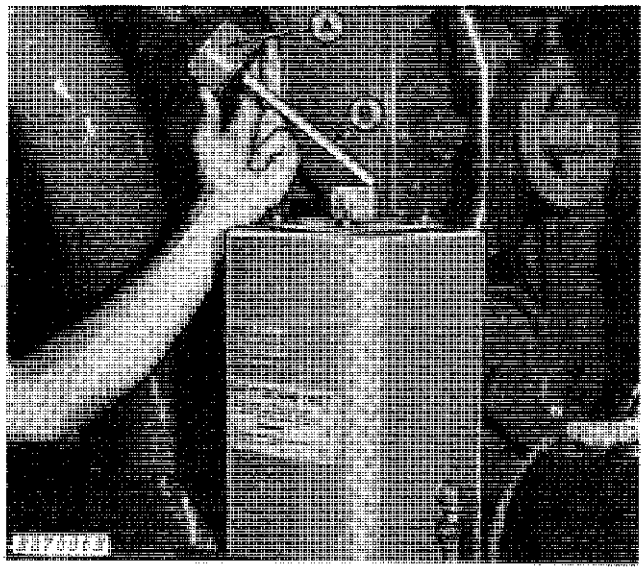
Fig. 2-Checking Crankcase Oil Level

Check the engine crankcase oil level with the dipstick. The picker is shipped with 12 qt. (11.4 L) of John Deere TORQ-GARD SUPREME® oil in the engine crankcase. If necessary, add TORQ-GARD SUPREME SAE 10W-20 engine oil until oil level is at "full" mark on the dipstick.

Litho in U.S.A.

PREPARING COTTON PICKER FOR UNLOADING—Continued

Checking Hydraulic Oil Level



A—Hydraulic System Filler Cap B—Dipstick

Fig. 3-Checking Hydraulic Oil Level

With the units lowered, remove the hydraulic system filler cap and check the oil level on the dipstick (B). If oil level is low, check for possible leaks or loose connections in the hydraulic system, then add HY-GARD® Transmission and Hydraulic Oil or its equivalent (See page 10-20-2), until the oil level is at the "full" mark on the dipstick.

Checking Transmission Oil Level

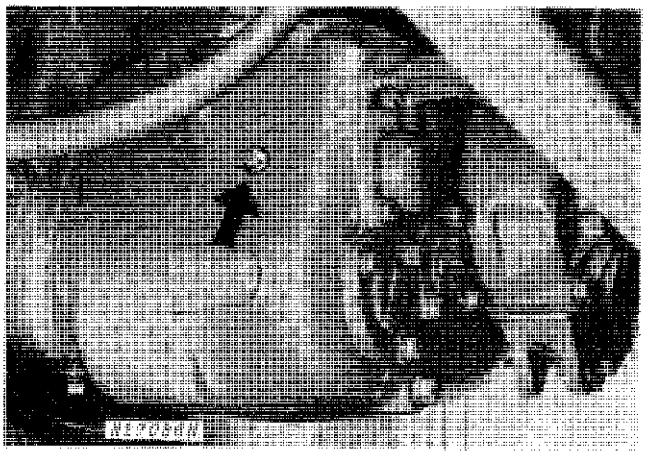


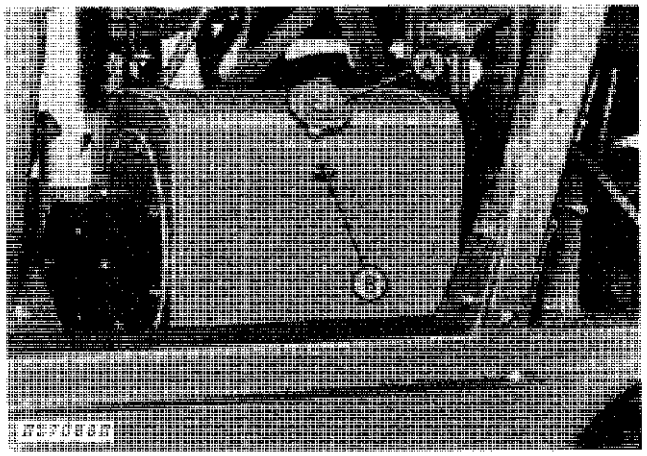
Fig. 4-Checking Transmission Oil Level

Check the oil level in the transmission using the level plug.

If oil level is low, add SAE 85W-140 gear lubricant until it reaches level plug. Replace the level plug.

IMPORTANT: Do not use SCL gear lubricant in this transmission. Do not overfill transmission.

Checking Hydrostatic Drive Reservoir Oil Level



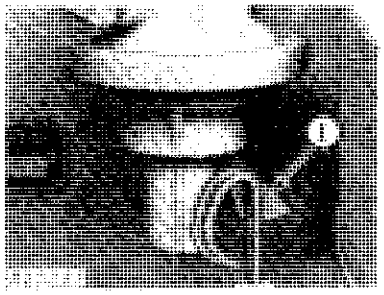
A—Filler Cap B—Sight Glass

Fig. 5-Checking Hydrostatic Oil Level

Check the oil level in the sight glass (B). If oil level is low, add John Deere All Weather Hydrostatic Fluid or Texaco Type F-1876 Transmission Fluid until oil level is visible in sight glass. Replace filler cap.

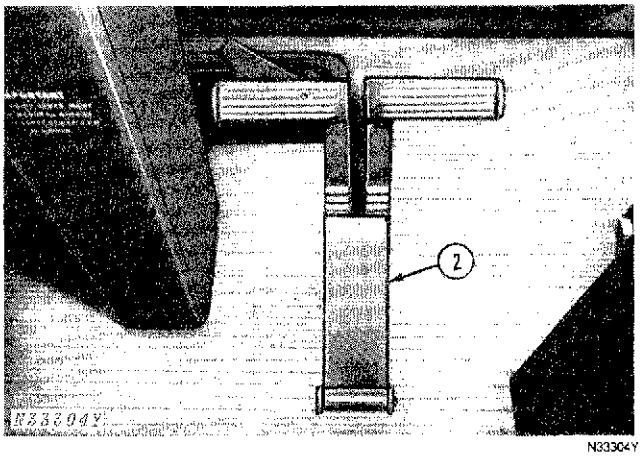
IMPORTANT: Keep system closed at all times except when adding oil or changing or cleaning filters.

STARTING THE ENGINE



N32391

Fig. 6-Fuel Pump



N33304Y

Fig. 7-Brake Latch

Refer to Figs. 6, 7, and 8; then perform the following steps:

1. If engine has not been operated for a long time, work priming lever up and down to force fuel into the system.

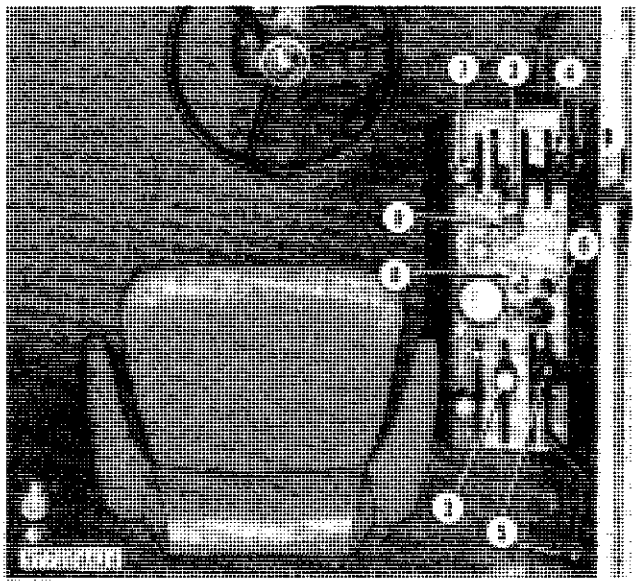
Leave lever down during operation.

2. Set the picker brakes.

3. Position transmission gearshift lever in neutral. If equipped with hydrostatic drive, position speed range lever in neutral.

4. Pull unit lift levers rearward and release.

5. Disengage picking unit and fan levers.



N77264A14

Fig. 8-Controls

6. IMPORTANT: Turn headlight and accessory switches off before attempting to start engine.

7. Advance throttle to full open; then bring it back about halfway.

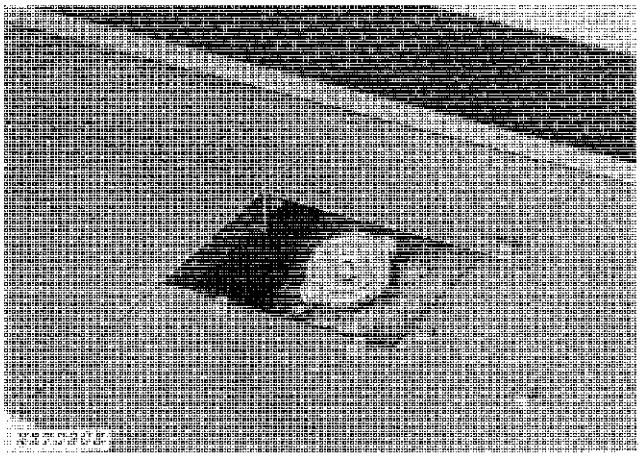
8. Turn key switch.

Release key switch when the engine starts. If engine does not begin firing after 15 to 30 seconds of cranking, wait 2 minutes before cranking again.

9. Check oil pressure light to see that it goes out after the engine starts. Also check voltmeter pointer to see that it registers higher than with engine stopped, indicating that alternator is charging. If not, stop engine and correct the malfunction. (See Section 40).

10. Do not place engine under load until coolant temperature gauge shows that the engine has started to warm up. If indicator reaches red band on gauge, stop engine and correct the malfunciton. (See Section 20, Group 30, or Section 40).

Checking Cooling System



N27090N

Fig. 9-Checking Cooling System

Check the readiator coolant level (Fig. 9). The cotton picker is shipped from the factory with a non-evaporating antifreeze protecting the cooling system to −34°F (−37°C). If necessary, add coolant to midway between core and cooler neck.

IMPORTANT: Do not use antifreezes with stop-leak additives.

Adjusting Tire Pressure

Adjust the tire pressure in the tires to the proper operating pressures as indicated below.

Wheel	Type of Tire	Tire Size	Inflation Pressure, kPa (psi)
Drive	R1 or R3	16.9-34 10 PR	200 (29)
Wheels	R2	18.4-30 10 PR	193 (28)
Guide	Rib	11.00-16 8 PR	276 (40)
Wheels			

Checking Miscellaneous Items

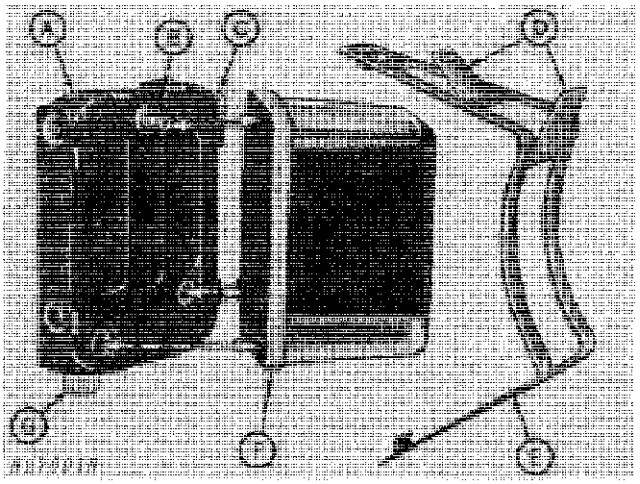
1. Check transmission and final drive housings for oil leaks.

2. Make sure the spindle wrench socket is wired to the platform.

3. Check battery to be sure it is charged.

4. With ignition switch ON, turn steering wheel to determine that guide wheel indicator lamp (green) is on ONLY when guide wheel is in a straight ahead positon.

Bleeding Diesel Fuel System



N27091N

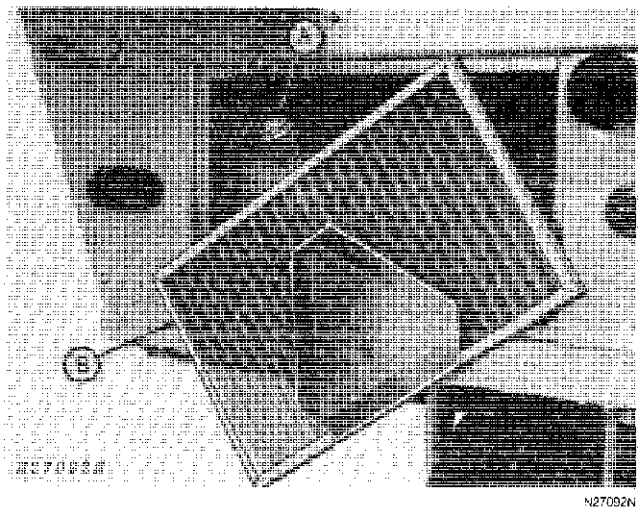
A—Filter Body
B—Spring Pin
C—Bleed Plug
D—Finger Tabs
E—Filter Retaining Spring
F—Filter Element
G—Drain Plug

Fig. 10-Diesel Fuel Filter

To bleed the diesel fuel system, loosen the filter bleed plug (C, Fig. 10). Pump the primer lever on the fuel pump until the air bubbles in the filter (F) disappear and fuel flows from the bleed plug. Tighten the bleed plug and leave the primer lever in the down position.

Checking the Fuel Level

Check the fuel gauge (R, Fig. 54, page 10-10-19) to be sure there is sufficient fuel.



N27092N

A—Fuel Tank Filler Cap
B—Screen

Fig. 11-Filling Fuel Tank

If fuel is required, position rear screen (B, Fig. 11) out of way and fill tank with diesel fuel. The fuel tank holds 69 U.S. Gallons (262 L).

UNLOADING COTTON PICKER FROM FLAT CAR

1. Raise picking units and remove all blocking from flat car.

2. Make sure the brakes are working before attempting to move picker.

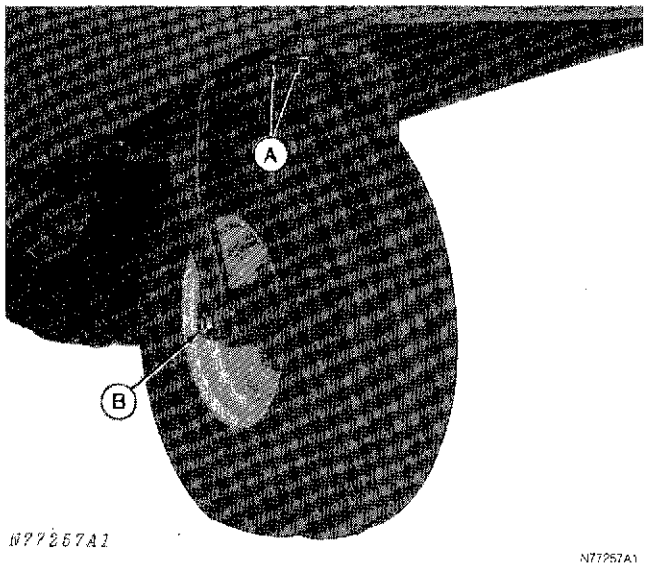
3. Back picker down the unloading dock or ramp onto level ground.

⚠ CAUTION: Be sure to back down rather than drive down forward. Avoid accidents and damage to the picker.

PREPARING COTTON PICKER FOR UNLOADING FROM TRUCK

On some step-bed trailers, the rear guide wheel and/or yoke may have been removed for shipping. Install as noted below.

⚠ CAUTION: Use jacks or hoist with at least 3000 lbs. (1362 kg) capacity. Lift or support picker with stands applied to main frame members only.



A —Cap Screws (Rear) **B —Hex Nut**

Fig. 11A-Installing Yoke and Wheel

Install two 2-1/2 in. (64 mm) cap screws in the REAR holes of the yoke and steering motor (A, Fig. 11A). Use flat washers between heads of screws and steering indicator switch bracket. Tighten screws to 300 ft-lbs (407 N·m). Tighten guide wheel shaft nuts (B) to 250 ft-lbs (339 N·m) minimum.

NOTE: Refer to rebuild instructions received with truck shipments for special assembly information.

TEMPORARY STORAGE

After receiving cotton picker from the factory and before putting the machine into temporary storage, perform the following checks:

NOTE: For long term storage (over 30 days) information, consult the Operator's Manual.

1. Clean battery surfaces and disconnect cables. Charge battery, if necessary, or remove and store in a location which is safe from freezing temperatures.

2. Check level of coolant in the radiator. The coolant should be maintained midway between the radiator core and filler neck.

3. Fill fuel tank.

4. Check crankcase oil level. Oil should be at full mark after machine has been shut off for 10 minutes.

5. Relieve hydraulic pressure.

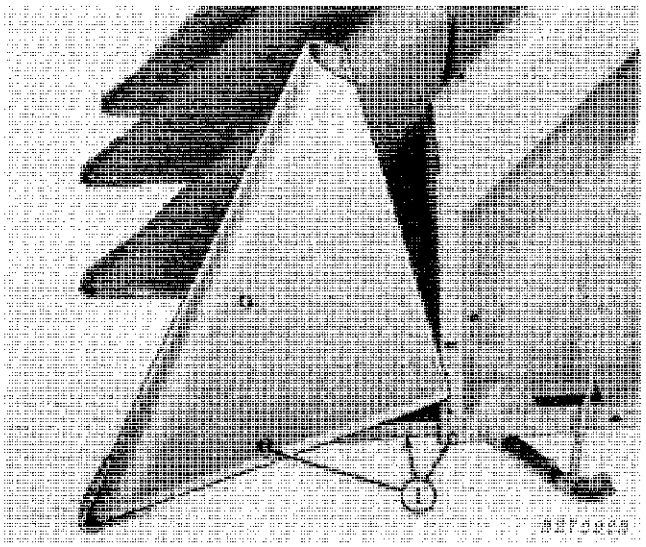
6. IMPORTANT: Check torque on ALL drive wheel hub bolts. Torque drive wheel bolts to 160-200 ft-lbs (220-270 N·m), guide wheel bolts to 110-140 ft-lbs (150-190 N·m).

7. Check tire pressure. See chart on page 10-10-4 for recommended pressures.

ASSEMBLY

NOTE: Refer to rebuild instructions received with truck shipments for special assembly information.

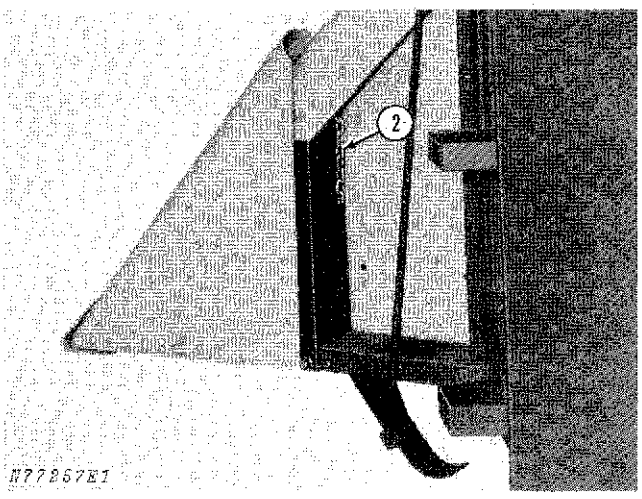
Stalk Lifters



N27096N

Fig. 12-Installing Stalk Lifter

1. Attach the stalk lifter bracket to the extension, using the long bolt and spacer. Install the bolt with the bolt head in the row. If necessary, invert long bolt at front end of bracket so that bolt head is also in the row.



N7725TE1

Fig. 13-Installing Chain

2. Install the chain in the slot on the unit extension. Drop enough links so the stalk lifter is level with the extension.

Installing Rear Plant Shields

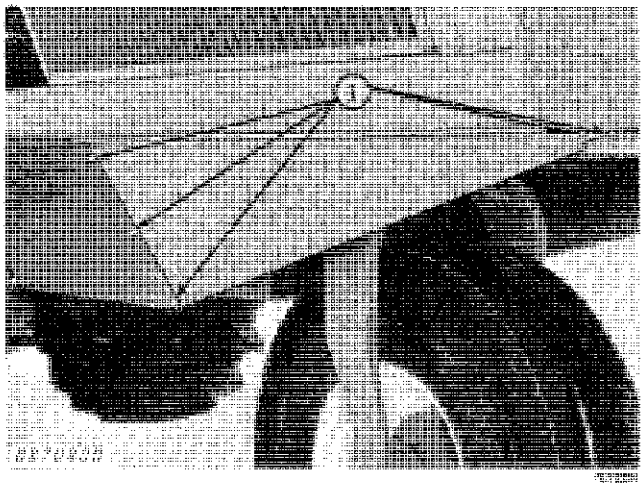
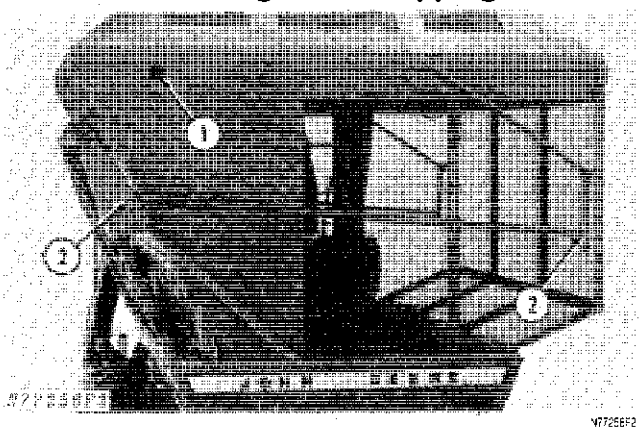


Fig. 14-Install Rear Plant Shields

1. Remove the two tie-down shipping straps from both sides at the rear of the main frame. Discard straps and bolts.

Install the right-hand and left-hand rear plant shields, using spin-lock screws furnished.

Basket Lid Linkage and Shipping Bolts



N7725BF2

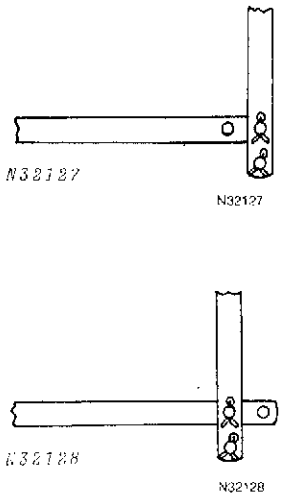
Fig. 15-Removing Lid Shipping Bolts

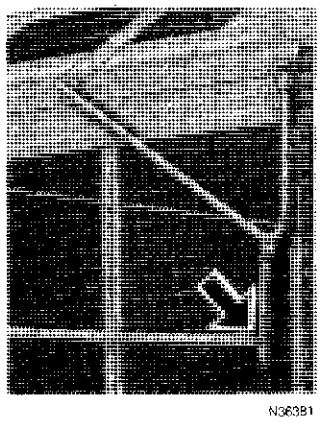
1. IMPORTANT: Remove the two red bolts which hold the basket lid to the basket frame. These bolts are reached from inside the basket and are flagged by the red metal tag at the front and rear of the basket. Extensive damage will result if the basket is raised with the red shipping bolts in place and lid linkage connected.

2. Remove wire holding lid linkage in shipping position. Install pivot bolts, from INSIDE basket support frames, through link, with a nut on each side of support, to allow link to pivot freely. Use outer hole in long link when attaching to short link, for standard lid opening. Use inner hole for larger lid opening.

IMPORTANT: Make sure front and rear linkages are pinned in the corresponding holes to prevent twisting of lid.

ASSEMBLY—Continued





IMPORTANT: Pin front and rear linkage in same holes to prevent twisting of lid.

IMPORTANT: Both pins MUST BE installed in short linkage arm. Damage can occur to linkage and basket if BOTH pins are not used.

Basket Lift Lever

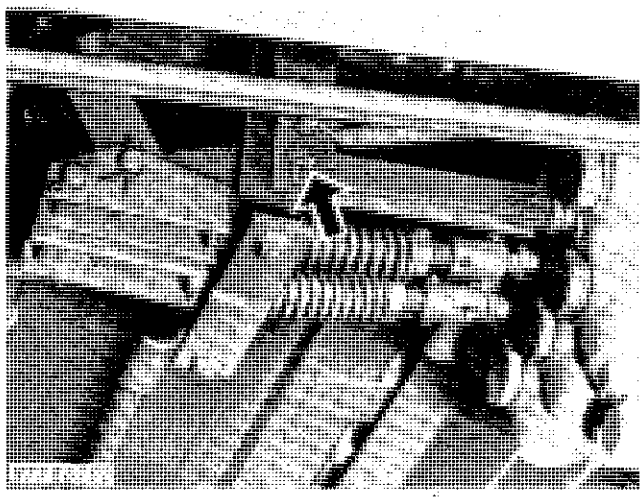
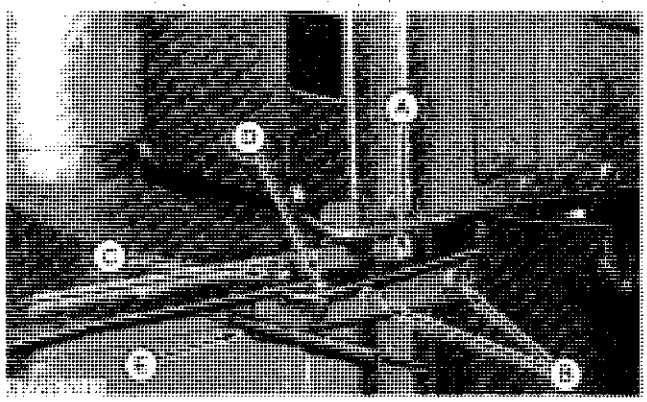


Fig. 16-Connecting Basket Lift Lever

1. The basket lift lever was disconnected for shipping. Connect the two straps at the valve to the lift lever with a pin (Fig. 16).

Drive Wheel Shields



A—Brackets
B—Bolt
C—Pivot Bolt
D—Stop Bolt
E—Spring

Fig. 17-Installing Wheel Shields (Left Hand Shown)

1. Remove wheel shields from shipping position.

2. Attach top and bottom wheel shield brackets (A, Fig. 17) to each unit with two bolts (B) each.

3. Locate top and bottom pivot bolt (C) and install with wheel shield.

4. Install top and bottom stop bolt (D) and adjust so the wheel shield does not rub the tire.

5. Install top and bottom springs (E).

Picking Unit Lift (Without Automatic Height Control)

If the picking units are to operate individually, they do not require any change. If the units are to operate simultaneously, proceed as follows:

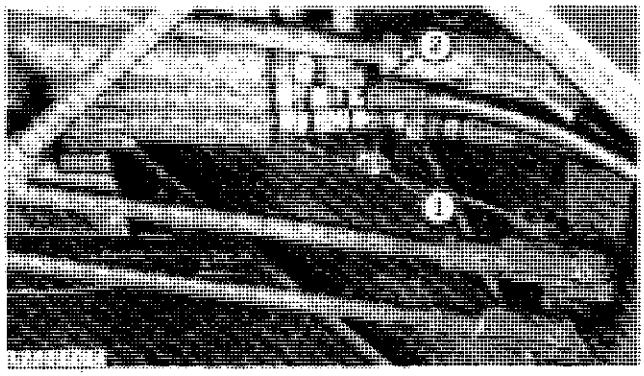


Fig. 18-Changing Valve Connections

CAUTION: Relieve hydraulic pressure before removing outlet cap or hose.

1. Remove cap from right-hand outlet (Fig. 18) of main control valve.

2. Remove hose from center outlet.

ASSEMBLY—Continued

Picking Unit Lift (Without Automatic Height Control)—Continued

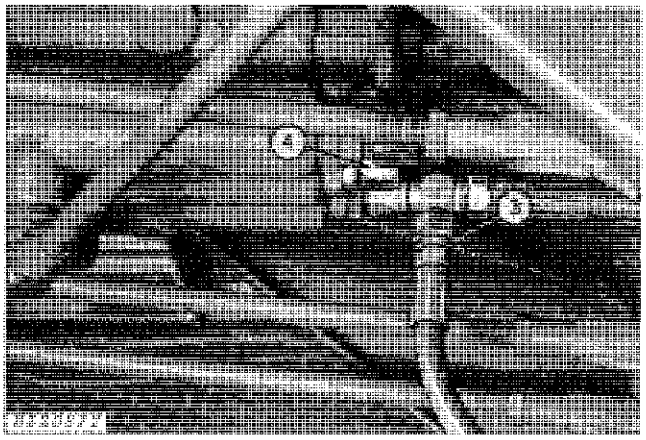


Fig. 19-Changing Valve Connections

3. Install hose on right-hand outlet (Fig. 19).
4. Install cap on center outlets.

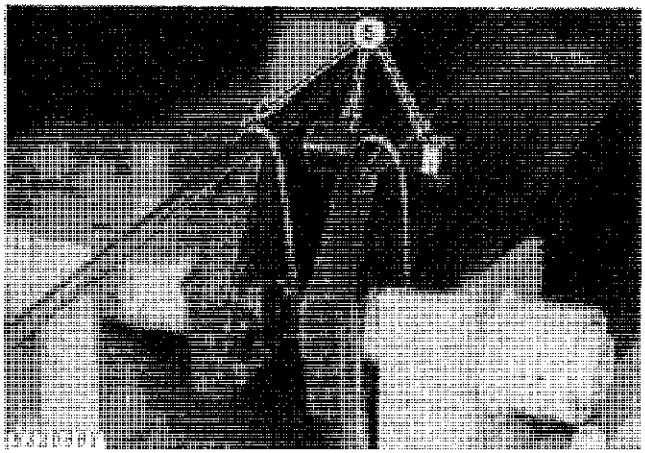


Fig. 20-Installing Spacer

5. Connect inner lift arms together with tie bolt, spacer, and nut (Fig. 30).

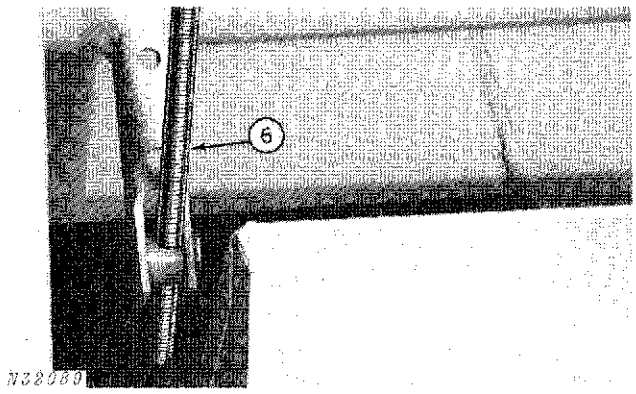


Fig. 21-Removing Stop Rod

6. Remove the right-hand stop rod from the rockshaft arm trunnion.

To change from simultaneous lift back to individual lift, proceed as follows:

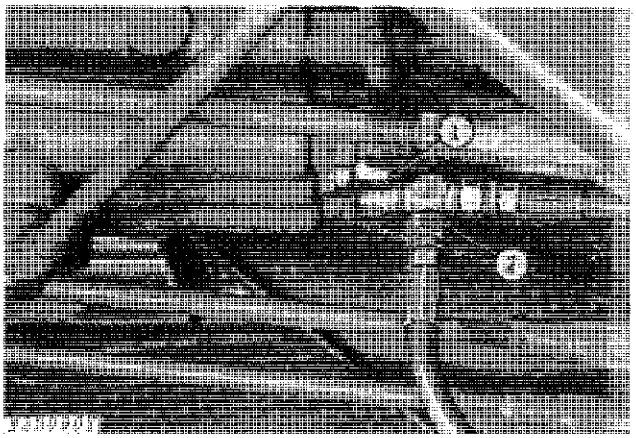


Fig. 22-Changing Valve Connections

CAUTION: Relieve hydraulic pressure before removing outlet cap or hose.

1. Remove cap from center outlet (Fig. 22) of main control valve.

2. Remove hose from right-hand outlet.

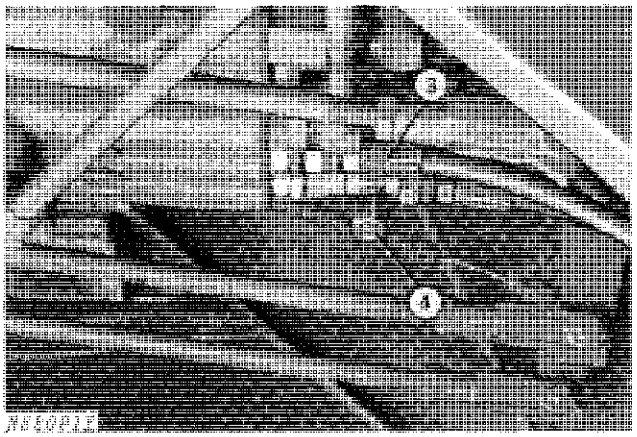


Fig. 23-Changing Valve Connections

3. Install hose on center outlet (Fig. 23).

4. Install cap on right-hand outlet.

5. Remove tie bolt and spacer (Fig. 20).

6. Install right-hand stop rod (Fig. 21).

Litho in U.S.A.

CHECKS AND ADJUSTMENTS

After receiving the Cotton Picker from the factory and before delivering it to the customer, perform the following checks and adjustments.

Brakes

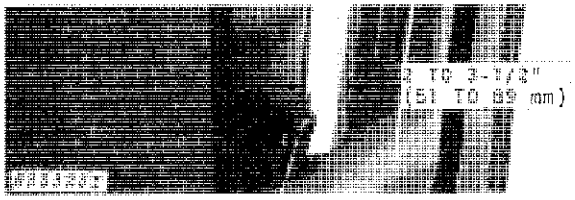
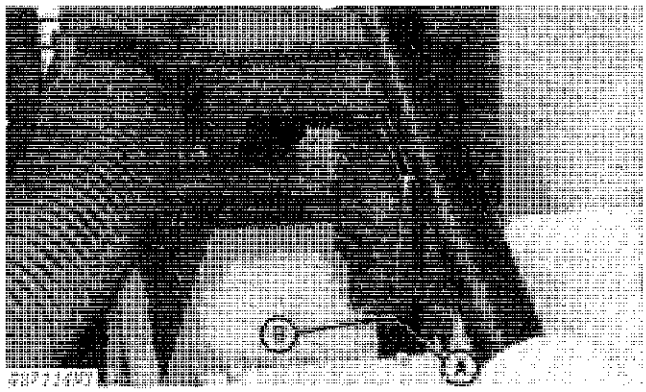


Fig. 26-Brake Pedals Free Travel

Check the brake pedals free travel. If the free travel is not 2 to 3-1/2 inches (51 to 89 mm) measured at the brake pedals (Fig. 26), adjust as follows:

NOTE: Make sure the picker rolls freely and the brakes do not heat.



A—Lock Nut **B—Adjusting Nut**

Fig. 27-Adjusting Brake Pedals Free Travel

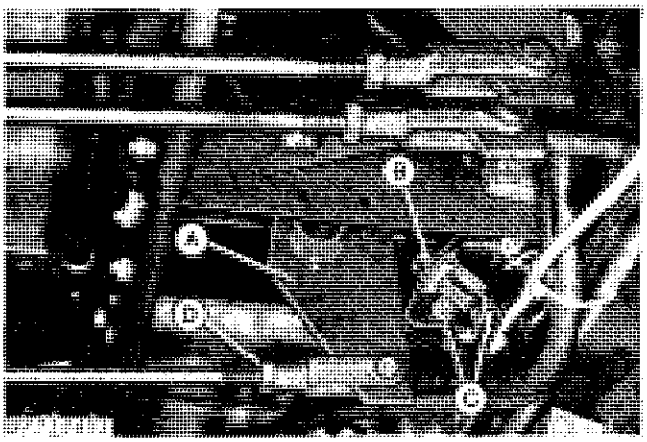
To adjust first remove all slack from the brake linkage by adjusting the yoke at the bottom of brake pedals or the lock nut on bottom end of the brake rod between operator's platform and axle housing. Then loosen the lock nut (A, Fig. 27) on the brake actuating arm (one for each drive wheel) until 2 to 3-1/2 inches (51 to 89 mm) free travel is obtained at the foot pedal.

CHECKS AND ADJUSTMENTS—Continued

Brakes—Continued

Set lock nut up against adjusting nut (B). If the brake pedals are not in alignment when the brakes are applied, equalize them by increasing the free travel on the one having the least free travel.

Safety Start Switch—Standard Transmission

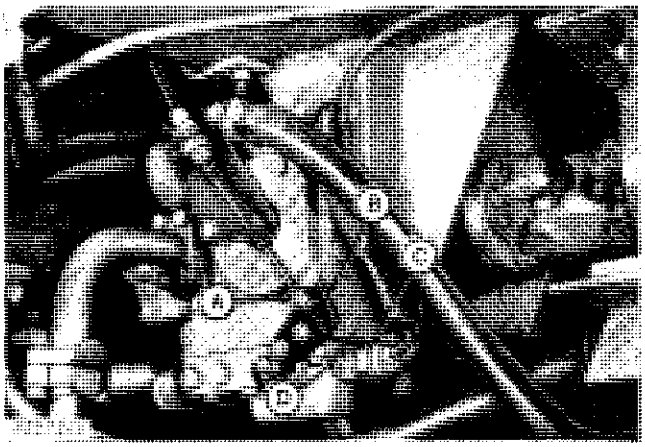


A—Clutch Bracket **C—Attaching Bolts**
B—Button **D—Turnbuckle**

Fig. 28-Safety Start Switch Adjustment

Pressing clutch pedal activates the safety start switch. If starter does not operate when clutch is fully depressed, loosen bolts (C, Fig. 28) and adjust safety switch until it closes when clutch pedal is almost fully depressed. Tighten bolts.

Safety Start Switch—Hydrostatic Drive



A—Trunnion **C—Switch**
B—Arm **D—Set Screw**

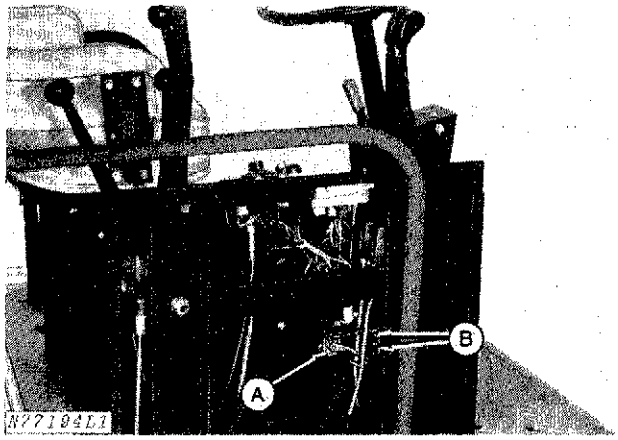
Fig. 29-Safety Start Switch Adjustment

Placing the hydrostatic drive speed range lever in neutral activates the safety start switch.

If starter does not operate when the lever is in neutral, adjust the safety start switch.

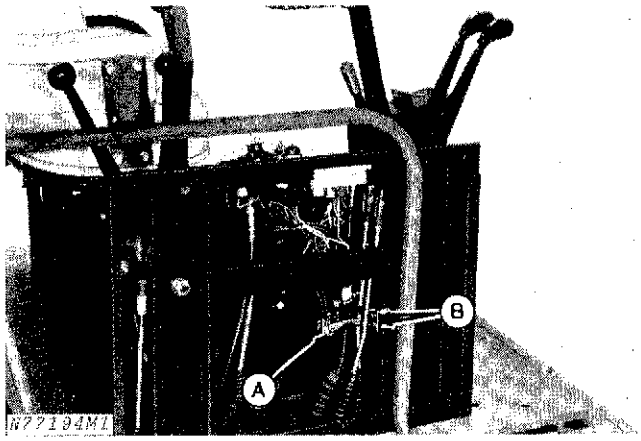
1. Separate trunnion (A, Fig. 29) from arm extension (B).
2. Disconnect one of the two wires from the safety start switch (C).
3. Loosen set screw (D).
4. Position speed range lever in neutral and turn key switch "ON".
5. Connect a 12 volt D.C. test lamp or an ohm meter to the two terminals on switch. Turn switch until the lamp lights, or "O" resistance is indicated. Additional check: the lamp is not lit, or an "open" line is indicated, when lever is moved out of neutral. Tighten set screw.
6. Move trunnion on control rod by tightening or loosening jam nuts, so it slides easily into hole in extension, WITH SPEED RANGE LEVER IN NEUTRAL.

Safety-Start Switch—Automatic Height Sensing



A—Arm **B—Attaching Bolts**

Fig. 30-Levers in Raised or Neutral Position



A—Arm **B—Attaching Bolts**

Fig. 31-Levers in Height Sensing or Down Position

A safety start switch is located under the control panel. With the unit lift levers in the height sensing position (Fig. 31), the engine will not start. With the lift levers in the neutral or raised position (Fig. 30), the engine will start. Loosen bracket attaching bolts (B) and adjust switch to make sure the engine does not start with levers in the height sensing or down position.

Hydraulic Pump Drive Belt

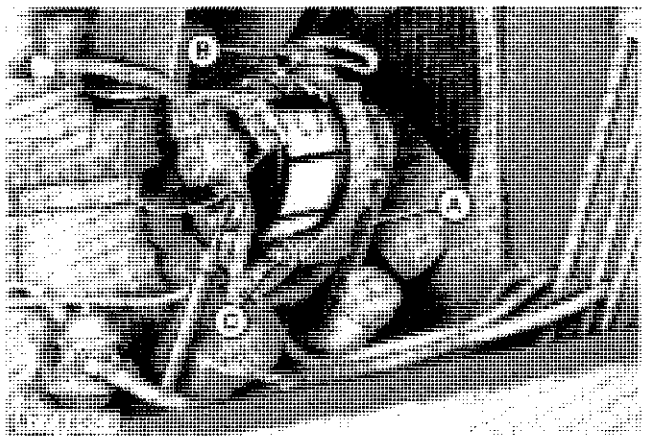
A—Lower Jam Nut **C—Pivot Bolt**
B—Upper Jam Nut

Fig. 32-Adjusting Hydraulic Pump Drive Belt

The drive belt is adjusted properly if the belt does not slip when the pump is in relief.

To adjust, loosen the pivot bolt (C, Fig. 32). To increase tension, loosen upper jam nut (B) and tighten lower jam nut (A). To decrease tension, loosen lower jam nut and tighten upper jam nut.

Alternator and Engine Fan Drive Belt

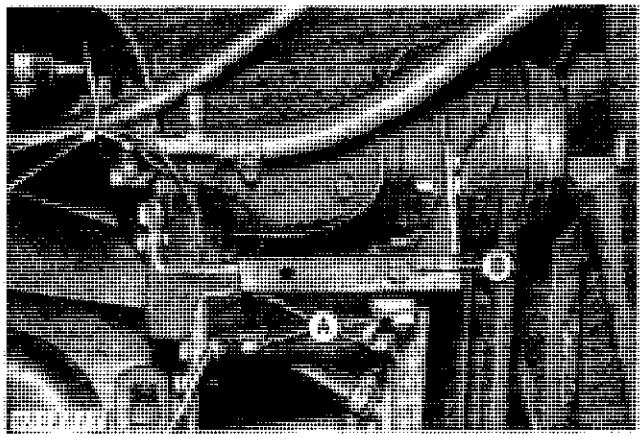


A—Belts **B—Adjusting Screw** **C—Pivot Bolt**

Fig. 33-Adjusting Alternator and Fan Drive Belts

Check the tension of the alternator drive belts (A, Fig. 33). To adjust tension, loosen the nut on the pivot bolt (C). Loosen the adjusting screw (B) and pull or push alternator until desired tension is achieved. Tighten adjusting screw and nut on pivot bolt.

Air Conditioner Compressor Drive Belt



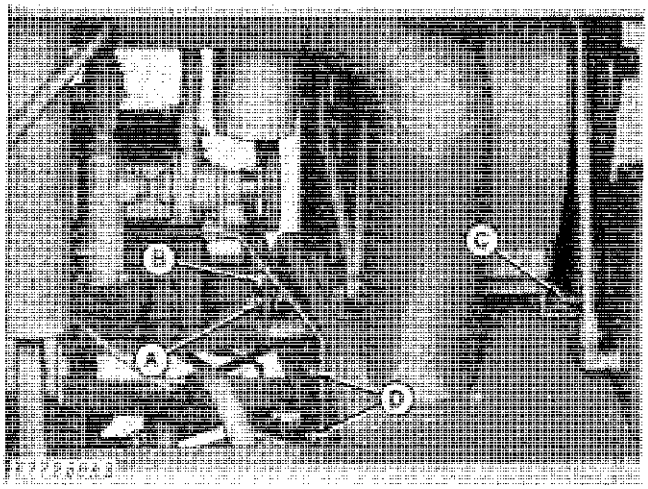
A—Mounting Bolts **B—Adjusting Bolt**

Fig. 34-Adjusting Air Compressor Drive Belt

To adjust tension on air conditioner compressor drive belt, loosen four mounting bolts (A, Fig. 34). Turn adjusting bolt (B) clockwise to increase belt tension and counterclockwise to decrease belt tension. Adjust until proper tension is achieved. Tighten mounting bolts.

CHECKS AND ADJUSTMENTS—Continued

Air System Fan and Water Pump Drive Belt

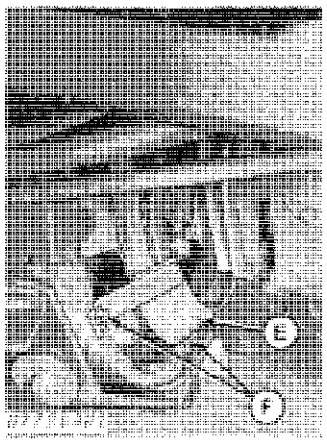


A—Pivot Bolt **C—Throwout Stop**
B—Adjusting Nut **D—Adjusting Bolts**

Fig. 35-Adjusting Fan Drive Belt

To adjust fan drive belt tension, remove pivot bolt (A, Fig. 35), turn adjusting nut (B) clockwise to increase tension and counterclockwise to decrease tension. Replace pivot bolt when desired belt tension is achieved.

To adjust water pump drive belt tension, loosen nuts on bracket bolts (D). Adjust tension and tighten nuts.



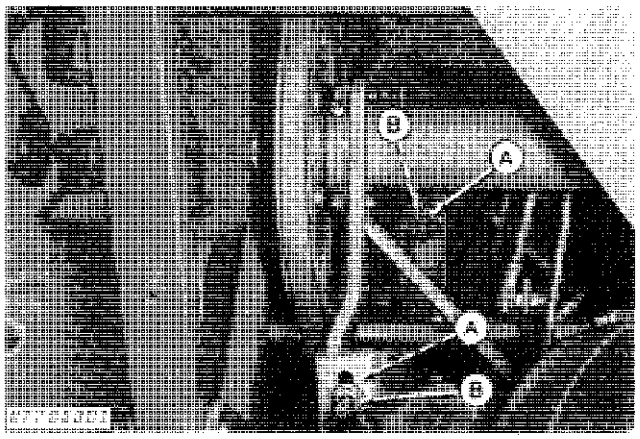
E—Bottom **F—Adjusting Bolts**

Fig. 36-Fan Belt Keepers for Hydrostatic Drive

On hydrostatic drive cotton pickers, adjust the fan belt keeper (A, Fig. 36) 1/8 to 1/4-inch (3 to 6 mm) from fan belt.

NOTE: Be sure fan belt is tight when making this adjustment. If necessary, adjust top keeper to the same clearance.

Picking Unit Drive Belts



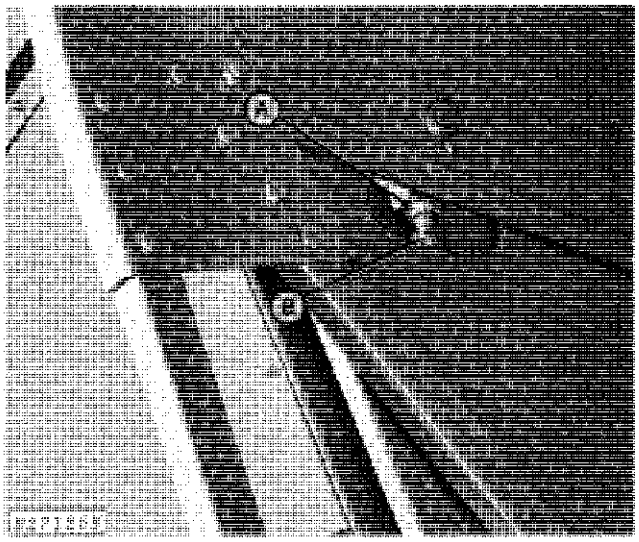
A—Lock Nut **B—Adjusting Nut**

Fig. 37-Adjusting Picking Unit Drive Belts

Check the picking unit drive belts for proper tension. To adjust the tension, loosen or tighten nuts on the adjusting bolts (B, Fig. 37) on the right- or left-hand countershaft bracket. This will loosen or tighten the belts to the desired tension.

NOTE: Keep the belts tight enough so they do not slip on sheaves.

Basket Lift Cylinders



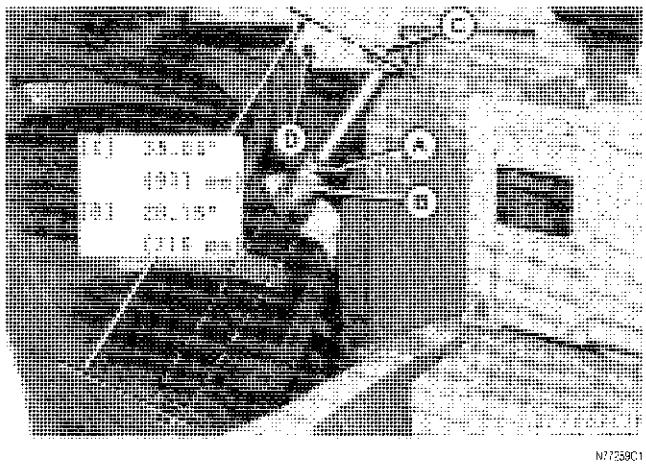
A—Jam Nut **B—Cylinder Rod**

Fig. 38-Adjusting Basket Lift Cylinders

Litho in U.S.A.

Check operation of the basket to see if the basket raises and lowers evenly. If NECESSARY, adjust by loosening the jam nuts (A, Fig. 38) and turning the cylinder rod (B). After adjustment is made recheck by raising and lowering again. When basket cylinders are adjusted properly, tighten jam nuts.

Picking Unit Lift Cylinders



A—Jam Nut
B—Cylinder Rod
C—High-Drum
D—Low-Drum

Fig. 39-Adjusting Picking Unit Lift Cylinders

IMPORTANT: Raise units and check clearance. Make sure units do not come into contact with transmission bracket or operator's platform. If necessary, adjust as follows:

Raise the units to highest position and measure one cylinder from center-to-center of pins (Fig. 39). On High-Drum machines they should measure 35-27/32 in. (911 mm) to obtain maximum height of picking units. On Low-Drum machines they should measure 28-5/32 in. (715 mm) to obtain maximum height of picking units.

To adjust the cylinders, lower the picking units onto blocks to take the weight off the cylinders. Loosen jam nuts (A) and thread cylinder rod (B) out or in—to the desired length. Tighten jam nut.

NOTE: Make sure tops of units are even with each other after making adjustments.

Check Lights

Check operation of headlights, tail lights and warning light. These are controlled by the following light switch positions.

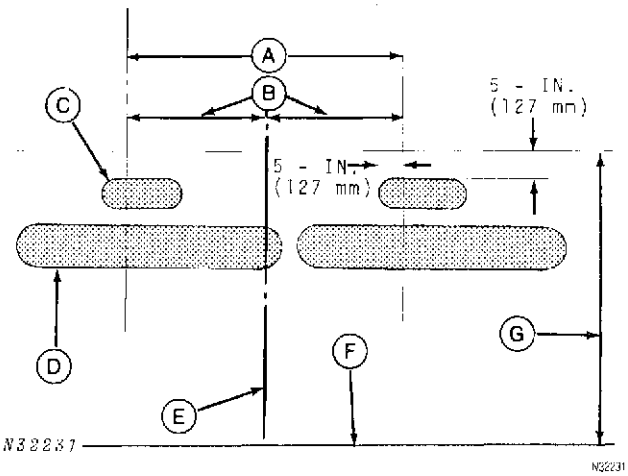
W—Warning lights
H—Headlights, tail lights, warning lights
F—Tail lights, headlights, and field lights (See Note)

With the ignition switch on and the light switch on "H" or "F" press the dimmer switch on the operator's platform to check the dim and bright positions and light pattern.

NOTE: Both high and low beams of headlights should function on "HI" position of dimmer switch, low beams only should function in the other position. If the picker is equipped with optional field lighting; when the light switch is in the "F" position, the unit lights or basket lights should also function on the "HI" or "LO" dimmer switch positions.

Replace bulbs and other components, tighten wiring connections, or adjust headlights as necessary to assure proper functioning of lights.

Headlight Adjustment



A—Distance Between Lamp Centers
B—Equal Distances
C—Upper Light Zone at 25 ft. (7.6 m)
D—Lower Light Zone
E—Center of Machine
F—Ground Level
G—Lamp Height Above Ground

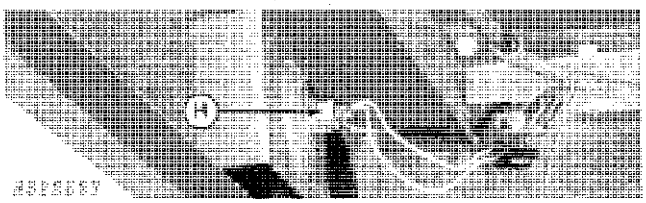
Fig. 40-Headlight Pattern

Turn the lights on low beam with the dimmer switch and adjust the upper zone (C) as shown in Fig. 40.

CAUTION: Adjust lights so they will not cause a glare in the eyes of an oncoming driver.

CHECKS AND ADJUSTMENTS—Continued

Headlight Adjustment—Continued



H—Adjusting Nut

Fig. 41-Aiming Headlights

Loosen the adjusting nut (H, Fig. 41) under the platform, aim light, then tighten nut.

Turn Signals

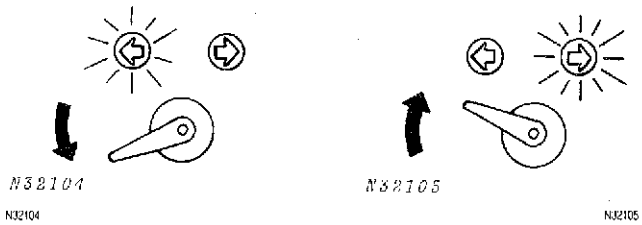


Fig. 42-Turn Signals

Check operation of turn signals as shown in Fig. 42. Make repairs if needed.

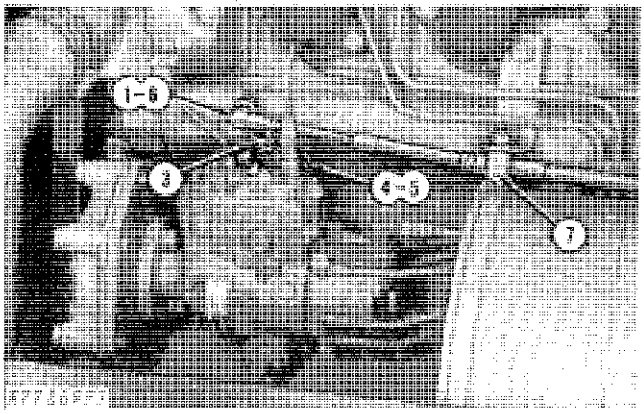


Fig. 44-Pump Adjustments (Fast Idle)

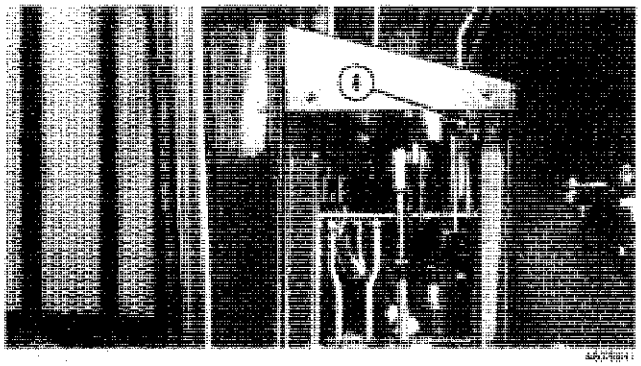


Fig. 44A-Stop Adjustment (Fast Idle)

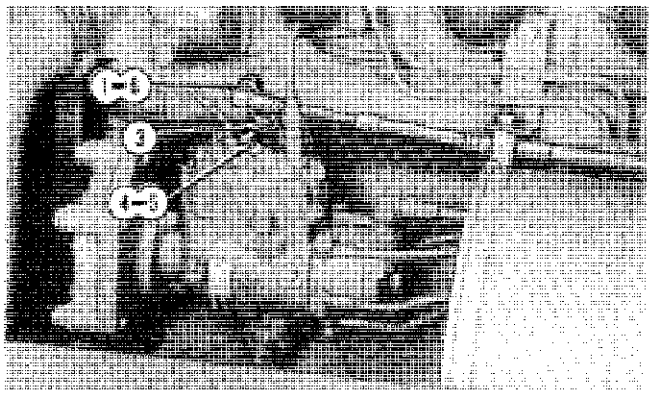


Fig. 45-Pump Adjustments (Slow Idle)

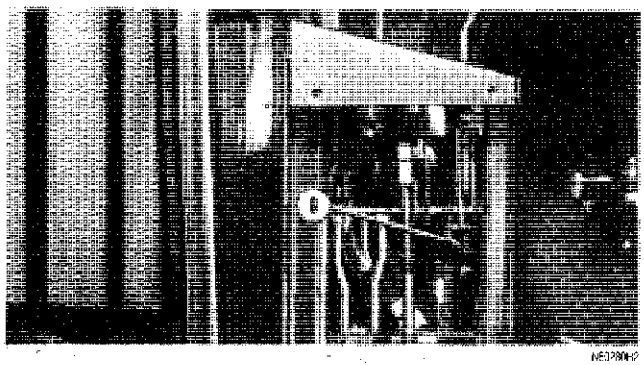


Fig. 45A-Stop Adjustment (Slow Idle)

Fast Idle

1. Disconnect speed control cable from injection pump throttle lever.

2. Start engine.

3. Have a second person move pump throttle lever toward flywheel as far as it will go. Tachometer should read 2660 ± 10 rpm.

4. To adjust: Cut safety wire securing fast idle cap, then unscrew cap. Turn the fast idle screw with a hex. socket wrench to set recommended rpm.

5. Replace cap and install new safety wire.

6. Adjust ball joint so it slips easily into throttle hole, then install lock nut.

7. Additional adjustment can be made, if needed, with cable clamp.

8. If necessary, remove console cover to adjust fast idle stop bolt so tachometer will read 2660 ± 10 rpm when the throttle is pushed forward against stop.

Slow Idle

1. Disconnect speed control cable from injection pump throttle lever.

2. Start engine.

3. Have a second person move pump throttle lever toward radiator as far as it will go. Tachometer should read 800 ± 10 rpm.

4. To adjust: Loosen lock nut and turn slow idle screw to set recommended rpm.

5. Tighten lock nut.

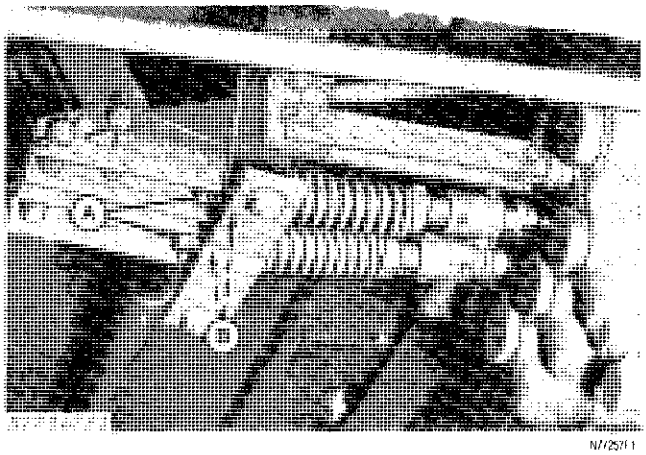
6. Adjust ball joint so it slips easily into throttle hole, then install lock nut.

7. Additional adjustment can be made, if needed, with cable clamp.

8. If necessary, remove console cover to adjust slow idle stop bolt so tachometer will read 800 ± 10 rpm when the throttle is pulled back against stop.

CHECKS AND ADJUSTMENTS—Continued

Checking Automatic Height Control



A—Rod B—Swivel

Fig. 46-Main Valve and Linkage

IMPORTANT: Before checking height control - start engine and let the hydraulic oil warm up to normal operating temperature (160°F [71°C]). Check all linkages to make sure they are not binding. Lubricate valve rods and swivels (A, B, Fig. 46) at front of main valve.

Checking The System

1. Operate engine at 2500 rpm. Raise and lower the units several times using the console picking unit lift levers. Raise the units and release the lift levers.

THE VALVE SPOOLS MUST CENTER IN THE VALVE AT THIS TIME.

2. Move lift levers fully forward.

3. Raise each shoe until the height sensing cylinders are fully extended and unit lift cylinders have fully raised the units. Release shoes. Unit lift cylinders should lower the units to their ORIGINAL POSITION above the ground (reset).

NOTE: A slight hesitation before the unit resets to the lowered position is acceptable.

4. Repeat step 3 several times. The units should react in the same way each time the shoe is actuated.

NOTE: If the height control system reacts in the above manner - DO NOT ADJUST.

5. If the system does not react as described, adjust as necessary (See Section 70, Group 30).

Doffers

Incorrect doffer plane or positioning will cause spindle wrapping and/or doffers striking spindle nuts in some cases. Several factors which may contribute to the condition are:

1. Incorrect doffer position (angle).

2. Incorrect doffer spacing.

3. Lower doffer seals installed incorrectly with too heavy or too much lubricant used.

4. Incorrect spindle plane (level).

Check position (angle) of doffer columns.

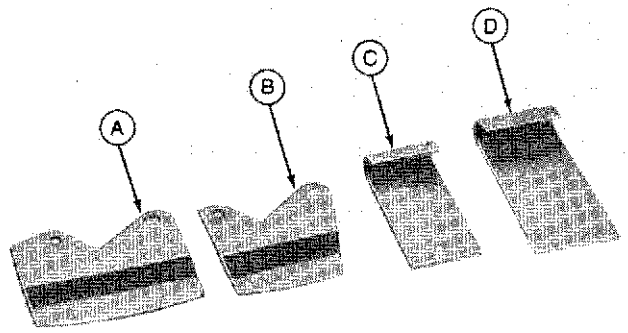
NOTE: The doffer assembly must operate at the correct angle with respect to the spindles. An incorrect angle can result in poor cotton doffing, premature wear on doffer pads, and excessive spindle tip pressure; resulting in increased spindle bushing wear and possible gouging at spindle nuts and collars. A properly positioned doffer assembly will have the following features:

A. Doffer pads are parallel to top of spindles when spindles are fully under doffer pads.

B. Spindles touching doffer pads when they enter doffer assembly will clear doffer assembly when leaving.

IMPORTANT: The doffer assembly must be repositioned whenever any components of the doffer have been serviced.

Position the doffer assembly using Doffer Positioning Tools (Fig. 47) as follows:



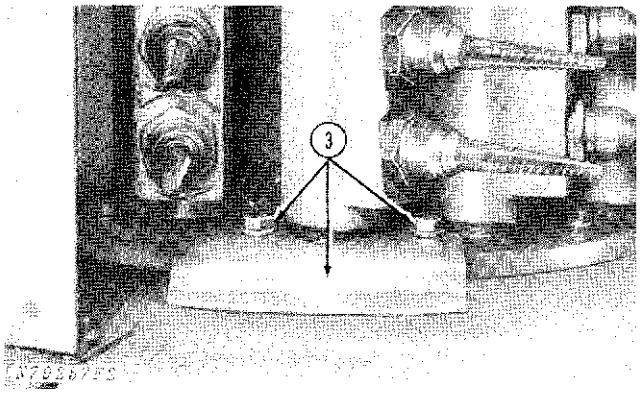
N79256B1

A —16-Bar Radius Gauge
B —12-Bar Radius Gauge
C —0.187 in. (2.210 mm) Gauge Plate
D —0.06 in. (1.524 mm) Gauge Plate

Fig. 47-Doffer Alignment Gauges

1. Loosen the bolts in the stub shaft flange at the top of the unit (Fig. 52). Move the stub shaft bearing housing toward the drum to the end of the slots. Tighten bolts down and back off 1/2 turn.

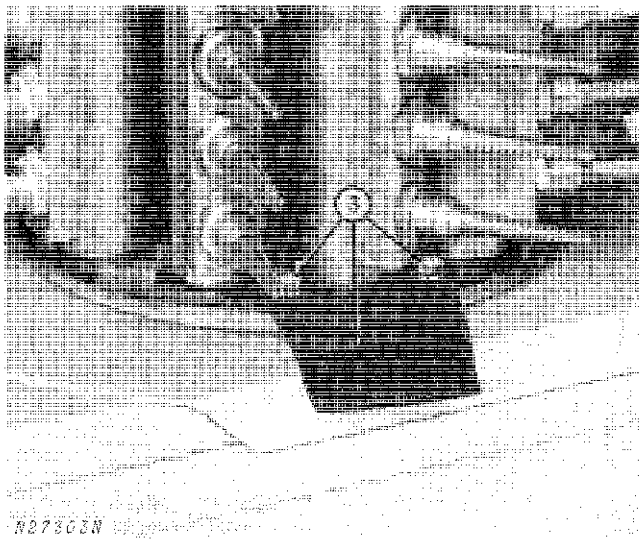
2. Loosen the bolts in the lower doffer flangettes.



N79257F2

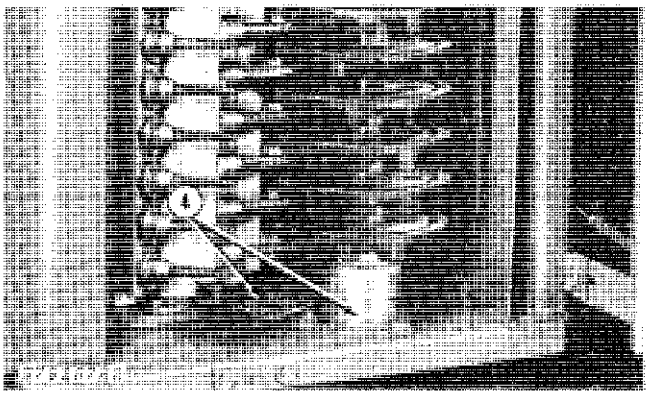
Fig. 48-Installing 16-Bar Radius Gauge

3. Remove the two picker bar pivot stud bolts and install the 16-bar radius gauge (Fig. 48) or 12-bar radius gauge (Fig. 49) with the offset portion of the gauge down. Tighten bolts.



N27303N

Fig. 49-Installing 12-Bar Radius Gauge



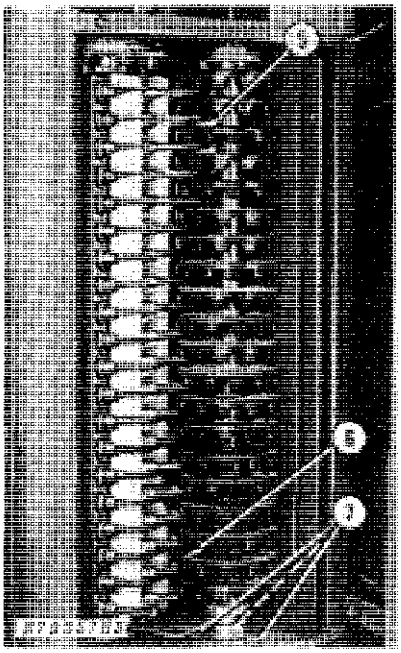
N79257H2

Fig. 50-Positioning Radius Gauge (12-Bar Side Shown)

4. Rotate the drum until the radius gauge is at the bearing housing.

CHECKS AND ADJUSTMENTS—Continued

Doffers—Continued



N79257H3

Fig. 51-Positioning Doffer Assembly (Angle) (12-Bar Side Shown)

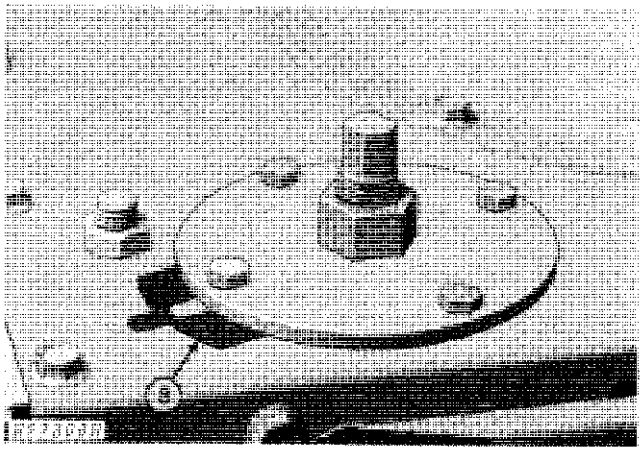
5. Hang the 0.06 in. (1.5 mm) gauge plate over the top spindle.

6. Hang the 0.187 in. (2.21 mm) gauge plate over the bottom three spindles.

7. Rotate picker bar with gauge plates against doffer and hold doffer bearing housing against radius gauge.

NOTE: Doffer must be simultaneously held tightly against picker bar with gauge plates and against radius gauge and doffer stud. This will give the doffer assembly the proper angle for good doffing. Tighten doffer stud flangette bolts.

IMPORTANT: Doffer should rotate as freely after tightening bolts as before. Stud can be misaligned and cause premature failure of lower bushing. Check for heating during first 5 minutes of running. If bushing heats, realign doffer stud to eliminate drag.

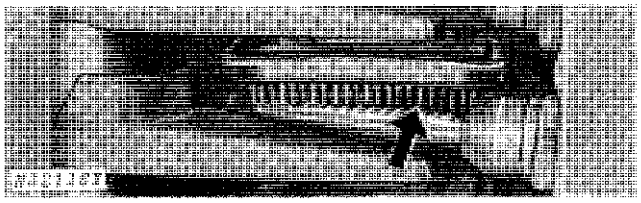


N27306N

Fig. 52-Shimming Stub Shaft Housing Flange

8. Shim any gap between upper bearing housing flange and top of unit (Fig. 52), or lower bearing housing flange and bottom of unit, using N34164 Shim (0.010 inch [0.25 mm]). Tighten bolts.

Moistening System



N32116Y

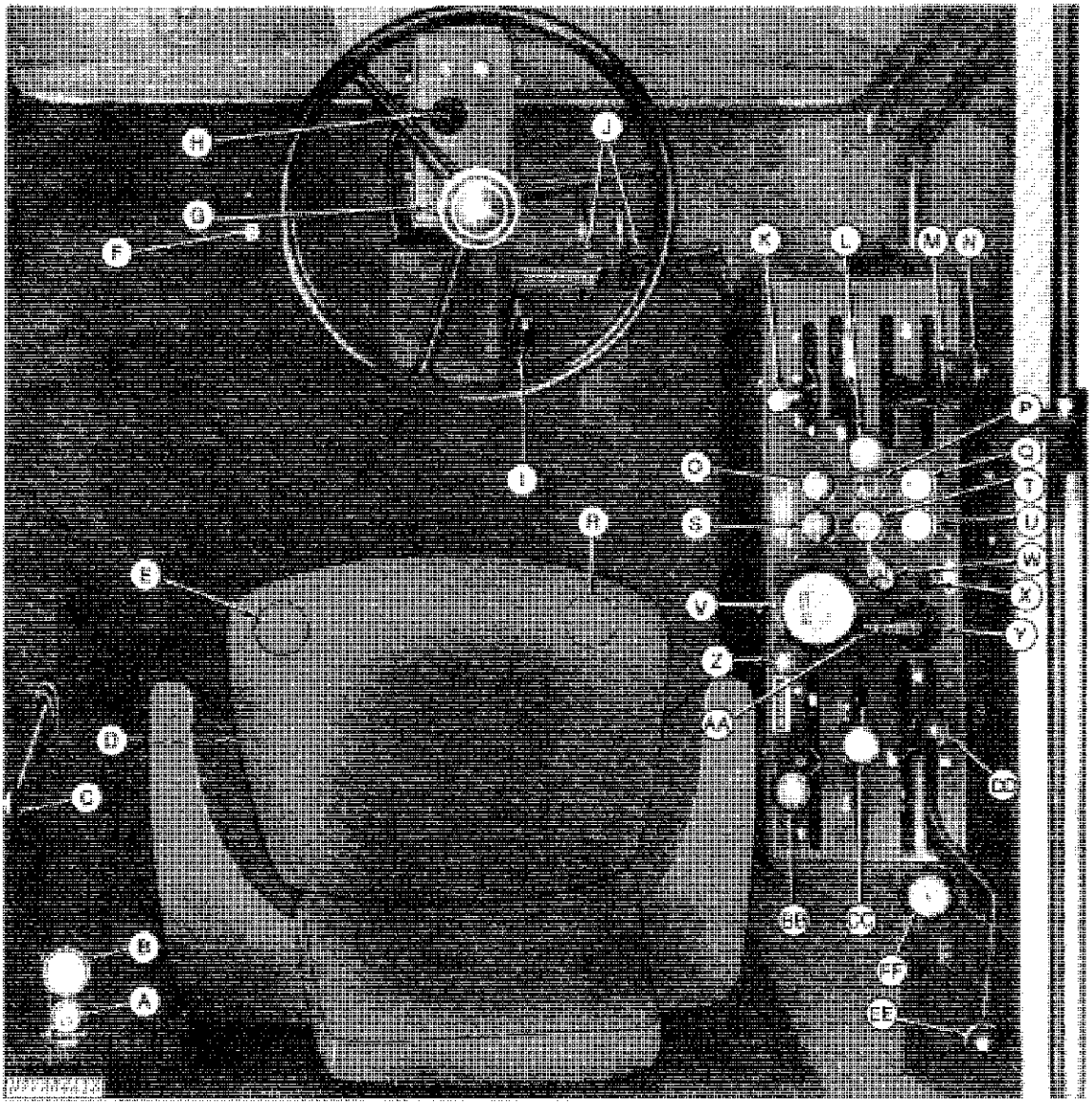
Fig. 53-Moistener Pad Spacing

Check the moistener column to be sure the pad fins just wipe the spindles. If set too high, the moistener pads will not wipe the spindles properly. If too low, the rubber moistener pads will wear prematurely. If necessary, adjust as noted in Section 80, Group 35.

Check whether moistener pads are receiving water. Put a few gallons of water in the solution tank, turn on the shut-off valve (Section 100, Group 10), and start the engine. Engage the fan lever, (EE, Fig. 54) and depress the flush system push button. If water does not emerge at all moistener pads, stop engine and correct the problem (Section 100, Group 10).

If freezing temperatures can occur before the cotton picker is operated again, remove filter (B, Fig. 1, Section 100, Group 10) and drain entire water system.

Checking Controls and Instruments



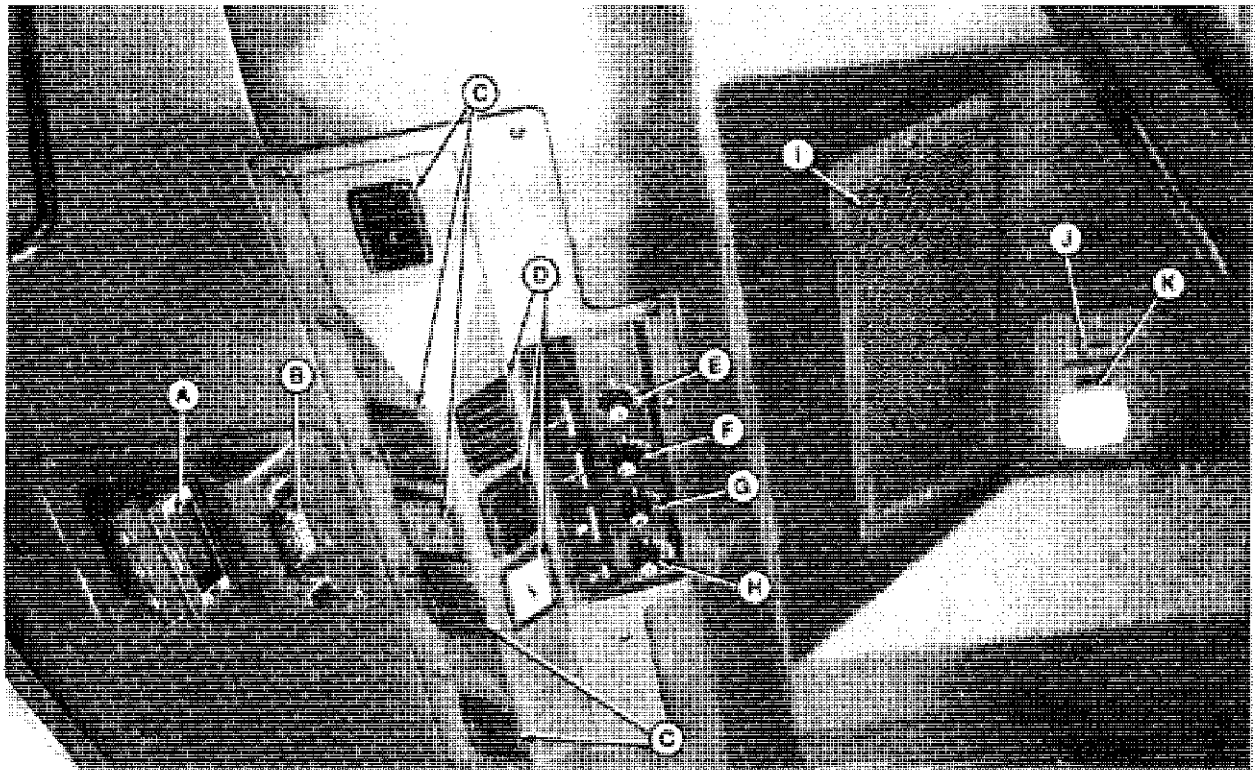
N77204A13

A —Water Pressure Regulator Handle
B —Water Pressure Gauge
C —Basket Dump and Compactor Control Lever
D —Seat Control Lever
E —(Regular Unit Lift) L.H. Stop Control Knob
F —Dimmer Switch
G —Guide Wheel Indicator Lamp
H —Turn Signal Controller
I —Pedestal Tilt Control Pedal
J —Brake Pedals
K —Throttle Lever
L —Hydrostatic Transmission Speed Range Lever
M —L.H. Unit Lift Lever
N —R.H. Unit Lift Lever
O —Hydraulic Oil Temperature
P —Engine Oil Pressure
Q —Fuel Gauge
R —(Regular Unit Lift) R.H. Unit Stop Control Knob
S —Air Filter Tel-Light
T —Battery Charge/Discharge
U —Engine Water Temperature
V —Tachometer/Hour Meter
W —Key Switch
X —Flush Water System Control Knob
Y —Light Switch
Z —(Attachment) Push Button, Ether Starting Aid
AA —Hi-Beam Tel-Light
BB —Hi-Lo Range Lever
CC —Main Gearshift Lever
DD —Picking Unit Gearshift Lever
EE —Fan Lever
FF —Air Gauge

Fig. 54-Controls and Instruments

Check all controls and instruments shown above. Be certain all controls and tel-lights are functioning properly.

CHECKS AND ADJUSTMENTS—Continued



A—Tape Player
B—Radio
C—Defogging Louver
D—Louver
E—Air Conditioning Control
F—Heater Control
G—Blower Control
H—Wiper Control
I—Air Filter
J—Console Light
K—Dome Light Switch

Fig. 54A-Cab Ceiling Controls

Check following controls for proper operation. Correct any problems which are found.

Pressurizer

The blower control knob (G, Fig. 54A) controls a three-position switch for low, medium, and high speed fan operation.

Air Louvers

The louvers (C, D) can be adjusted to obtain the desired air flow. The front louvers (C) are designed for window defogging.

Air Filter

The air filter (I) is a secondary filter, which can be serviced from inside the cab. The primary filter is reached by raising the cab roof.

Cab Lights

Move the toggle switch (K) forward to turn the dome light on, and rearward to turn it off.

The console light (J) should be on whenever the headlamps are lit.

The heater control knob (F) controls the amount of engine coolant circulating through the heater core in the roof of the cab.

NOTE: If warm air is NOT produced, make sure the two heater shut-off valves at the engine are open.

Windshield Wiper

The windshield wiper two-speed switch (H) includes a 6-Amp circuit breaker. When the switch is turned off, the wiper should return to its "park" position before stopping.

Air Conditioner

The air conditioning control knob (E) regulates the cooling function.

Radio and Tape Player

To adjust radio (B) push buttons, pull button out, tune to station, and push button in.

To start tape player (A), insert cartridge, label side up.

Litho in U.S.A.

CHECKS AND ADJUSTMENTS—Continued

RUNNING-IN COTTON STRIPPER ENGINE AND UNITS

It is recommended that the cotton stripper engine and units be run-in prior to delivery to the customer.

1. Lubricate the stripper as necessary according to lubrication instructions. (Page 10-10-15).

2. Start the engine and operate at part throttle at least 5 minutes to warm up engine before engaging units and fan, or driving the stripper. Monitor oil pressure and water temperature and check for oil or water leaks. Correct any problems before proceeding.

3. With the engine running at 1000-1200 rpm, engage stripping units and fan levers. Run stripper at this speed for 5 to 10 minutes, listening for any unusual noises. If any are detected, stop the engine and correct difficulty before proceeding.

4. If the engine and units run smoothly, increase the throttle setting to maximum and repeat the above procedure.

5. Continue to monitor oil pressure and water temperature, and listen for any unusual noises in the engine, fan, or stripping units. If any occur, stop the engine and correct any difficulty before proceeding.

6. Drive the stripper for a short distance in each gear.

7. Stop the engine and set the brakes. Walk around the stripper and look for any signs of faulty operation.

8. Inspect the stripper thoroughly for loose belts, missing hardware, or parts that may have worked loose while the stripper was being run in. Replace or tighten hardware and adjust belts as needed.

9. Check the stripper to be sure that your customer will receive a neat, clean stripper. If necessary, clean the machine thoroughly and touch up the paint.

10. Remove all instruction tags placed on the stripper, which are intended for dealer information.

11. If engine is not running smoothly, perform engine testing and tune-up as described on page 10-15-1.

Picking Unit Speeds

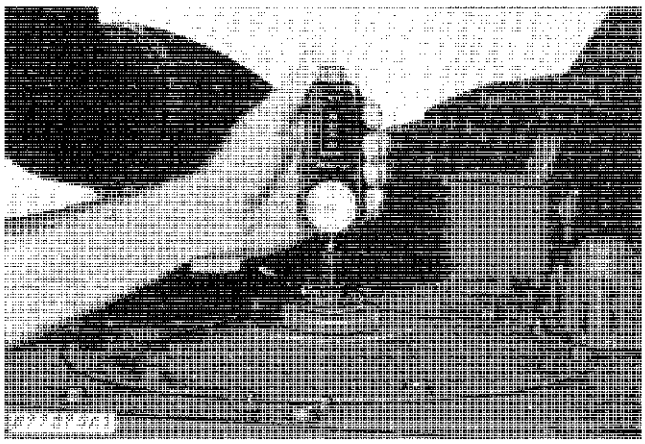


Fig. 55-Checking Picking Unit Speeds

12. Check picking unit speed on either 16 bar drum. Adjust throttle to maintain the correct drum speed (See page 10-5-2).

IMPORTANT: Do not operate units faster than recommended.

NOTE: Observe tachometer reading and advise operator to maintain that rpm when picking cotton.

TEMPORARY STORAGE

Before putting the machine into temporary storage, perform the following checks.

NOTE: For long term storage (over 30 days) information, consult the Operator's Manual.

1. Check the battery and charge if necessary, or remove and store in a location which is safe from freezing temperature.
2. Check the level of coolant in the radiator. The coolant should be maintained midway between the radiator core and filler neck.
3. Fill the fuel tank.
4. Check crankcase oil level. Oil should be at full mark after machine has been shut down for 10 minutes.
5. Relieve hydraulic pressure.
6. Check torque on wheel lug nuts. Tighten nuts to 160-200 ft-lbs (217-271 Nm [22-28 kgm]) torque.
7. Check tire pressure to make sure inflation pressure is the same as in the chart on page 10-10-2.

PREDELIVERY LUBRICATION

Check and lubricate, as necessary, the following points on the Cotton Picker before delivery of machine to the customer.

Component	Service	Measurement	Material	Page Ref.
Engine crankcase	Check oil level	To "Full" mark	John Deere TORQ-GARD SUPREME oil	10-20-2
Hydraulic reservoir	Check oil level	To "Full" mark	John Deere HY-GARD or TORQ-GARD SUPREME oil	10-20-2
Transmission and bevel gear housing	Check oil level	To level of plug	*SAE 85W-140 gear lubricant	10-20-2
Hydrostatic drive reservoir	Check oil level	Half way on sight glass	John Deere All Weather Hydrostatic fluid or Texaco Texamatic type F-1876 transmission fluid	10-20-2
Final drive housings	Check oil level	To level of check plug	*SAE 85W-140 gear lubricant	10-20-2
Unit drive gear cases	Check grease level	Covers lower bevel gear	John Deere Multi-Purpose type lubricant	See Operator's Manual
Picking unit rock-shaft bearings	Lubricate 3 fittings	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Picking unit universal joints	Lubricate 8 fittings	2 shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Brake lower pivot shafts	Lubricate 4 fittings	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Brake and clutch pivot shafts (Std. trans.)	Lubricate 6 fittings	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Brake pivot shaft and unit cross shaft (Hydro. trans.)	Lubricate 5 fittings	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Brake pedals	Lubricate 2 fittings	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Clutch pedal	Lubricate 1 fitting	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Fan cross shaft	Lubricate 1 fitting	.....	John Deere Multi-Purpose type lubricant	See Operator's Manual

**Must meet API Service GL-5 or MIL-L2105B requirements.*
IMPORTANT: Do not use gear lubricant with SCL additives in this transmission or final drives.

Litho in U.S.A.

Component	Service	Measurement	Material	Page Ref.
Fan bearings	Lubricate 2 fittings	One shot of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Unit drive countershafts	Lubricate 4 fittings	One shot of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Picker bar cams cam follower rollers, sun gears and spindle drive gears	Lubricate 14 fittings	2 or 3 shots of grease NOTE: Grease cams until grease drops onto cam arms.	John Deere AH80490 or AN102562 (J13E6) lubricant	See Operator's Manual
Sun gear needle bearings	Lubricate 4 fittings	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Picker bars	Lubricate 4 fittings	Until grease appears at bearing caps	John Deere Spindle Lube AN31360, AN31361, or AN113719	See Operator's Manual
Picker drum bearing caps	Lubricate 56 fittings	2 shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Upper unit housing gears	Lubricate teeth with units running 3 fittings	2 or 3 shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Drum slip clutches	Lubricate 2 fittings	3 or 4 shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Lower doffer bearings	Lubricate 4 fittings	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Ground drive shaft couplings	Lubricate 4 fittings	. . . . .	John Deere Multi-Purpose type lubricant	See Operator's Manual
Main drive universal joints (Std. trans.)	Lubricate 2 fittings	2 shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Clutch throw-out bearing carrier (Std. trans.)	Lubricate 1 fitting	About 2 shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Hydrostatic pump drive universal joint	Lubricate 3 fittings	2 shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Hydrostatic motor coupling	Lubricate 1 fitting	2 shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Guide wheel bearings	Lubricate 1 fitting	Lubricate only if necessary	John Deere Multi-Purpose type lubricant	See Operator's Manual
Basket lift cylinder and rockshaft	Lubricate 4 fittings	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Stabilizer shaft center bearing	Lubricate 1 fitting	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Dual adjustable guide wheels frame and tie rods	Lubricate 10 fittings	Several shots of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual
Gear shift linkage	Lubricate 1 fitting	1 shot of grease	John Deere Multi-Purpose type lubricant	See Operator's Manual

DELIVERY SERVICE

A thorough discussion of the operation and service of a new machine at the time of delivery helps to assure complete customer satisfaction. Proper delivery service is an important phase of a dealer's program. The John Deere Delivery Receipt emphasizes the importance of proper delivery service.

Many complaints occur simply because the owner is not shown how to operate and service a new machine properly. Devote enough time to introducing the owner to his new cotton picker, and explaining how to operate and service it, that such complaints will not occur.

Accompany the owner to the field for the initial operation of the cotton picker. Make any necessary adjustments to allow the cotton picker to work most efficiently, and to the owner's satisfaction.

The following procedure is recommended before the serviceman and owner complete the delivery acknowledgments portion of the Delivery Receipt.

Using the Operator's Manual as a guide, be sure that the owner understands these points thoroughly:

1. The importance of safety.
2. The importance of lubrication and periodic services.
3. The importance of the break-in period.
4. Controls and instruments.
5. How to start and stop the engine.
6. All functions of the hydraulic system.
7. All operating adjustments of picking units.

After explaining and demonstrating the above features, have the owner sign the Delivery Receipt.

AFTER-SALE INSPECTION

The purchaser of a new John Deere machine is entitled to a free inspection by the dealer at some mutually agreeable time within the warranty period. This inspection should be after the equipment has been "run in," usually after 100 hours of machine operation. The terms of this after-sale inspection are outlined on the customer's John Deere Delivery Receipt.

The purpose of this inspection is to make sure that the customer is receiving satisfactory performance from his machine. At the same time, the inspection should reveal whether or not the machine is being operated, lubricated, and serviced properly.

With the recommended after-sale service inspection, you can eliminate a needless volume of service work by preventing minor irregularities from developing into serious problems later on. This will promote strong dealer-customer relations and present you with an opportunity to answer questions that may have arisen during the first days of operation.

During the inspection service, you have the further opportunity of promoting the possible sale of other equipment.

Inspection Procedure

Service	Specification	Reference
Cooling System		
Check radiator coolant level	Midway between core and filler neck	Page 10-10-4
Clean external surface of radiator core and oil cooler core (hydrostatic)		Section 20, Group 30
Check hoses and connections for leaks		
Fuel System		
Remove water and foreign matter from fuel pump and filter sediment bowls		Section 30, Group 10
Bleed fuel system		Section 30, Group 10
Tighten loose connections and check entire system for leaks. Correct if necessary		
Check air cleaner element and precleaner. Clean if necessary		Section 30, Group 10
Electrical System		
Check battery condition	9.6 volts after 15 second load	Section 40, Group 10

Service	Specification	Reference
Engine		
Check valve clearance (static)	As noted	Page 10-15-1
Check engine speed	As noted	Page 10-10-15
Check engine operation	As noted	Page 10-15-1
Operation		
Check tension of belts	As noted	Pages 10-10-11, 12
Start engine and check operation of starter, lights, and indicator lamps		Pages 10-10-13, 14, 19, 20
Check crankcase oil level	To "full" mark on dipstick	Page 10-20-2
Check hydraulic oil level	To "full" mark on dipstick	Page 10-20-4
Check hydrostatic oil level	To sight glass	Page 10-20-6
Check picking unit speeds	As noted	Pages 10-5-2, 10-10-21
Shift transmission through all speeds		
Check steering wheel operation	Smooth, without excessive freeplay	Section 70, Group 25
Check brake pedal free travel	Approximately 2 to 3-1/2 in. (51 to 89 mm)	Page 10-10-11
Check tire inflation pressures	As noted	Page 10-10-4
Nuts and Cap Screws		
Tighten accessible nuts and cap screws that appear loose		

Group 15
TUNE-UP AND ADJUSTMENT

GENERAL INFORMATION

NOTE: Before tuning up an engine, determine if it is in condition whereby performance can be restored by tune-up. Perform the following preliminary tests:

PRELIMINARY ENGINE TESTING

Operation	Specifications	Reference
Check radiator for air bubbles and indication of oil	None should be present	See FOS-30 "Engine" Manual
Test cylinder compression	300 psi (2069 kPa) at 250 rpm	See FOS-30 "Engine" Manual
Test vacuum (at manifold)	25 in. (635 mm) maximum of water at rated speed	See FOS-30 "Engine" Manual

ENGINE TUNE-UP

Operation	Specifications	Reference
Air Intake System		
Air cleaner - prescreener and dust cup	Clean as necessary	Operator's manual
Check crankcase and hydraulic breather caps	Clean as necessary	Operator's manual
Check valve clearance	Exhaust - 0.022 in. (0.56 mm) Intake - 0.018 in. (0.46 mm)	Page 20-10-2
Retorque cylinder head cap screws	95 ft-lbs (130 N·m)	Page 20-10-8

ENGINE TUNE-UP—Continued

Operation	Specifications	Reference
Check tension of belts		Pages 10-10-11,12
Replace alternator brushes		Page 40-10-9
Battery		
Check condition		Page 40-10-1
Clean cables and terminals		Page 40-5-9
Tighten cable clamps		
Fuel System		
Check fuel tank, lines, and connections for leaks or restrictions		Page 30-10-5
Replace fuel filter		Page 30-10-2
Time injection pump		Page 30-10-6
Check injection pump advance		Page 30-10-7
Bleed fuel system		Page 30-10-2
Adjust throttle control linkage and check engine speed		Page 10-10-15
Cooling System		
Check water pump for leaks		Page 20-30-1
Clean and flush cooling system		Operator's manual
Clean trash from radiator		Operator's manual
Test thermostat and pressure cap		Page 20-30-4
Engine Lubricating System		
Minimum engine oil pressure at 800 rpm and 80°C (176°F) operating temperature	(100 kPa) 14 psi	Page 20-25-4