



CP690 Cotton Picker Maintenance and Cleaning Guide

Introduction

At John Deere, we understand that every minute in the field is valuable during the harvest season. This guide is intended to provide a quick-reference overview of key adjustments, cleaning, maintenance, and operation of the cotton harvester.

IMPORTANT: Regular and thorough cleaning of machine combined with routine maintenance procedures listed in the Operator's Manual greatly decreases the risk of fire, reduces downtime, and improves productivity. Perform cleaning procedures listed in the Lubrication and Maintenance Section of the Operators Manual at the recommended 6 and 12 hour intervals or more often as required. **Always follow all safety procedures posted on the machine and in the Operator's Manual.**

Table of Contents

Introduction	2
Daily Cleaning	3
Wrap	8
Daily procedures	10
Row Unit Adjustments	12
Header Adjustments	13
Row Guidance	14
Maintenance Information	16
Helpful Resources	17



Recommended hour interval indicator

Quick Response Code



At the top of many pages is a Quick Response (QR) code that links to a short instructional video or other helpful resource. Access content from the QR code by downloading a QR scanner application to your smart phone. Open the app and aim your phone's camera at the code to connect to the media.

Videos corresponding to the QR codes and pages in this guide are available on the instructional DVD found in the operator's manual package. This DVD, part number KK11530, is also available from your John Deere dealer.



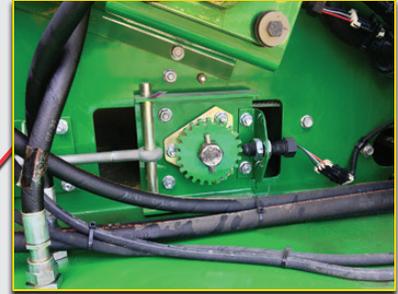
Harvest Configuration

Note: Clean machine from top to bottom

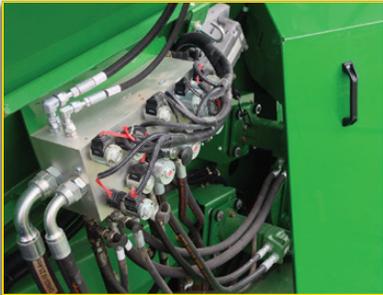
A. Clean top of baler, accumulator, screens, and finger grates.



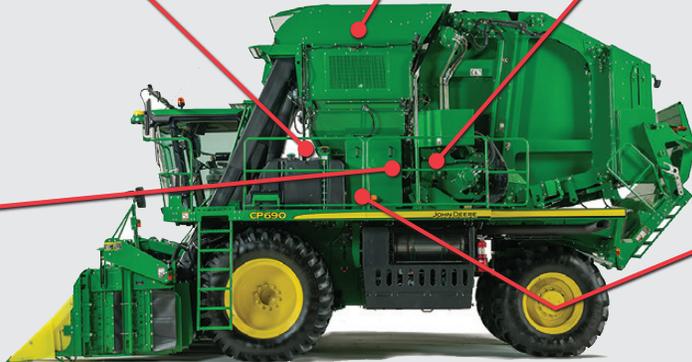
B. Clean behind cab, tanks, ducts, and front of accumulator.



D. Clean speed and position sensors and tone wheels (6 used).



C. Remove cover and clean hydraulic valves.



E. Clean under the accumulator and under feeder belt.



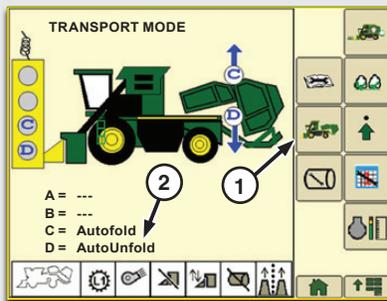
Transport Configuration Accumulator Raised

12

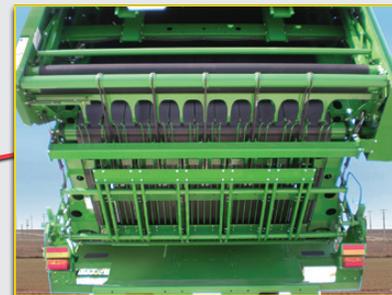
A. Clean front of RMB including brush and guides.



B. Check guard rollers for freedom of movement.



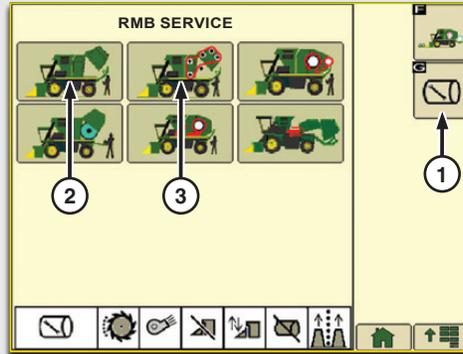
C. Clean platform and RMB latches.



D. Clean belts, pulleys, and wrap floor.



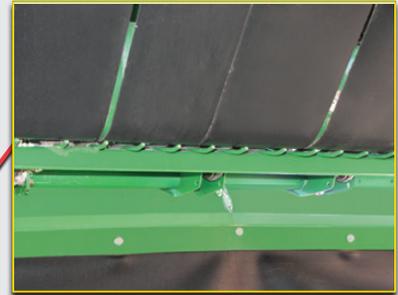
RMB Service Configuration: *Gate in Cradle*



A. With rockshaft raised, clean and check belts and rollers inside RMB.



B. Clean gate latch sensor area.



C. Clean and check wrap feed rods.



D. Lower rockshaft and operate belts to check tracking.



Rear Axle and Cooling Package



A. Clean and check handler position sensor.



B. Clean rear axle joints, motor, and hoses.



C. Clean diesel exhaust fluid (DEF) tank and pump (if equipped).



D. Clean cooling module. Open doors to access cooling cores.



Engine Compartment

IMPORTANT: Open panels under machine to allow debris to fall to ground.

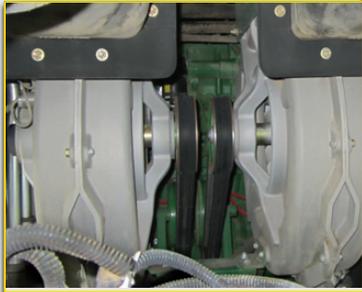
12



A. Clean transmission, hydraulic valve block, and front axle area.



E. Thoroughly clean around hydraulic pumps and exhaust components including turbochargers, bellows, and after-treatment devices.



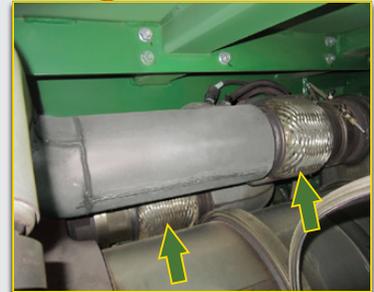
B. Clean front side of engine and cotton fans.



C. Clean alternators and check engine belts and pulleys.



D. Clean battery area, rear of engine, exhaust manifold, and turbo.



Exhaust Bellows

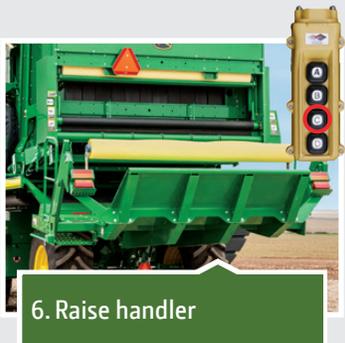
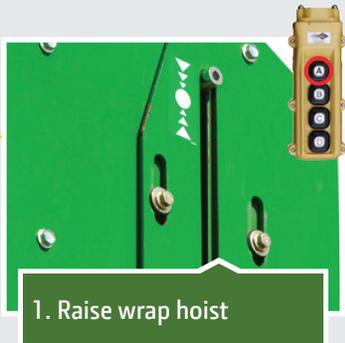


Wrap Load Procedure

Button Sequence



8. Repeat until magazine (four Rolls) is full; place wrap hoist in center position.





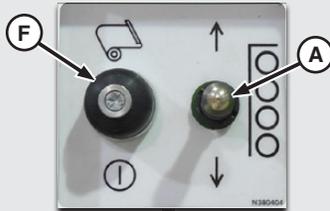
Empty Wrap Roll Replacement

Replacing empty wrap rolls Button Sequence

NOTE: Power Module Tether is disabled by interlock when ladder is down



1. Make sure that hoist is fully raised.
2. Place handler in horizontal position.
3. Release handler ladder from storage position and fold down.
4. Remove empty roll from rollers.
5. Press down on wrap hoist switch (A) to lower new wrap roll into position on rubberized wrap rollers.
6. Press up on wrap hoist switch to raise hoist until motion stops.
7. Remove tape retaining leading edge of wrap to roll.
8. Rotate wrap roll to feed out approximately 1–1.2 m (3–4 ft.) of wrap.



Feed Wrap

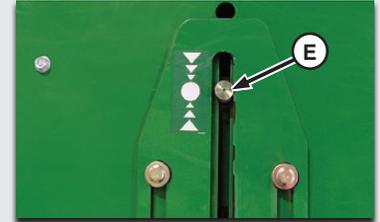


9. Feed the first portion of wrap (B) around feed rollers (C) as shown in wrap routing diagram.
10. Guide wrap into position between lower feed roller and wrap belts.
11. Wrap must be distributed evenly across wrap belts and roller.



Lower wrap hoist

12. Press down on wrap hoist switch (A) to lower hoist until cylinder pin (E) is aligned with location shown on decal.

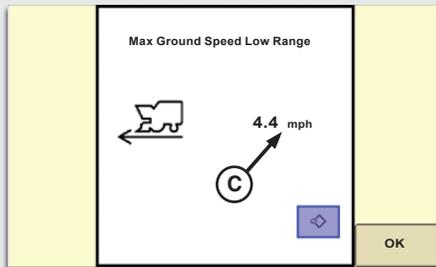


13. Press wrap feed switch (F) to feed wrap into position. Leading edge of wrap must be within area indicated on decal (D) above wrap floor.





Start of Day Procedure



1. Cleaning and Maintenance

- Clean machine as shown on pages 3-7.
- Complete maintenance items listed on page 16.
- Inspect machine for leaks or damage; repair as needed.

2. Start Engine

- Place multi-function lever in neutral and make sure fan and row units switches are in off position.
- Sound horn to alert others to stay clear of machine.
- Turn key to start position and release once engine starts. Do not operate starter for more than 30 seconds at a time. If engine does not start, wait at least 2 minutes before trying again.

3. Warm-up Machine

- Allow engine to warm up at low idle for 2–4 minutes.
- Warm up hydraulic oil and components by engaging the fan and row units. Increase engine speed to fast speed and press floor switch to operate cotton handling system for 5 minutes.

4. Driving Machine

- Be sure that all people and objects are safely away from the machine before driving.

- Select desired speed by using road-field button (B) and transmission range 1 or 2 button.

NOTE: *The maximum speed for field range 1 and 2 may be adjusted by pressing and holding the range 1 and 2 buttons on the armrest. Use the selection dial to program desired speed (C). Units are synchronized up to 4.4 mph.*

- Press park brake button (light will start flashing).
- Move multi-function lever forward for forward travel or rearward for reverse travel.

5. Harvesting

- With engine at low idle, engage fan switch followed by row units switch. Increase engine speed to high idle.
- Align machine with rows to be harvested and lower units to desired position.
- Slowly drive machine forward into crop and press auto button (A) to engage Auto Mode.
- Engage row guidance as shown on page 14.
- Once a module has been formed and wrapped, a “ready to eject” notification will be displayed. Verify that there are not any overhead power lines or obstructions before pressing and releasing the auto button to eject module.



In Case of Fire



1. Disengage fan.



2. Immediately point machine into wind.



3. STOP engine.



4. Extinguish all flames and hot spots using appropriate fire extinguisher or auxiliary water hose.



5. Restart engine.



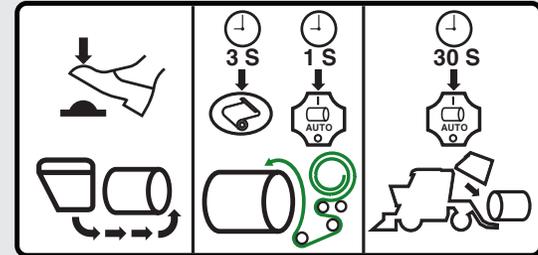
6. Unload cotton from machine.



End of Day Procedure

Unloading Cotton from Machine

Engine at high speed.

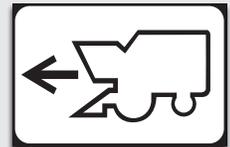


Step 1: Empty the accumulator by pressing floor switch.

Step 2: Wrap module by pressing wrap request button on armrest for 3 seconds followed by auto button on multi-function lever.

Step 3: Eject the module by pressing and holding auto button.

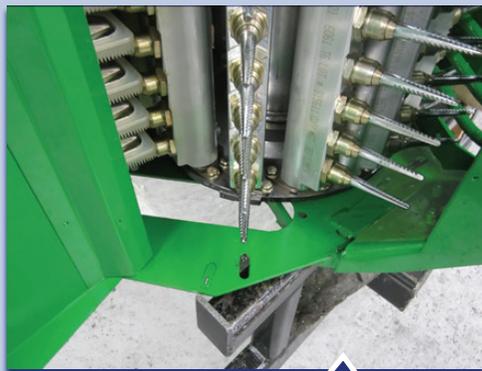
Remember to drive forward while dropping module and raising handler.





Doffer Height Adjustment

Doffer Height Adjustment

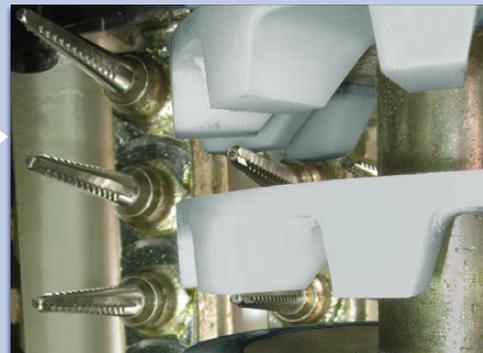


1. Align one row of spindles with slot on bottom of unit frame (A).
2. Turn adjuster screw counterclockwise to raise the doffer column until it rotates freely.

Note: 1 Click = 0.191mm (0.0075 in.)

3. While rotating doffer column back and forth, turn adjusting screw clockwise to lower doffer until a slight drag between spindles and pads is felt.

Do not allow doffers to bind against spindles. Operating with doffer column adjusted too low results in excessive doffer pad, spindle bushing, and barb wear.



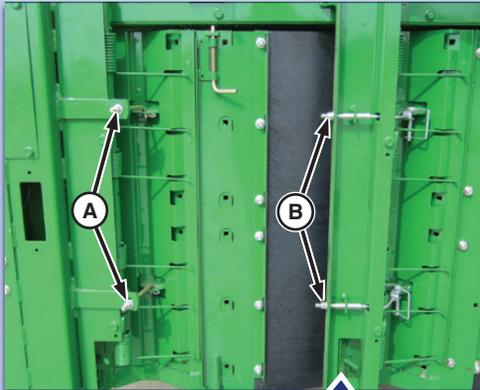
Pressure Plate Clearance Adjustment



1. Check pressure plate clearance by rotating units slowly using the remote tether switch.

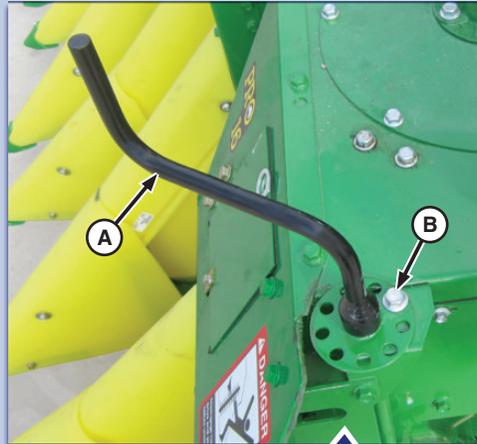
Pressure Plate Spring Tension Adjustment

Pressure Plate Clearance Adjustment (cont)

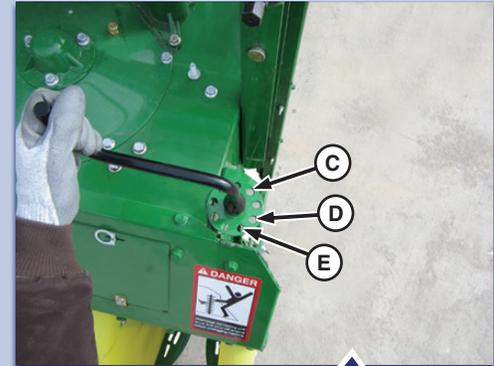


2. Loosen nuts (A or B) until spindle tips contact plate. Tighten nuts evenly until contact between spindles and plates is eliminated and clearance is 3-6mm (0.12-25 in.).

Pressure Plate Spring Tension Adjustment



1. Use wrench (A) to turn shaft counter-clockwise to overcome spring tension and remove cap screw (B).



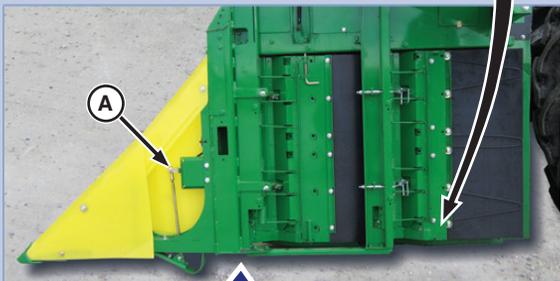
2. Relieve spring tension. Rotate shaft counter-clockwise until springs touch pressure plate and one hole (C) is aligned with bracket. Continue rotating shaft until the second hole (D) is aligned with the bracket, then install cap screw. Install screw in third hole (E) on rear plate.

NOTE: If too much cotton is left on plant, tighten rear pressure plate first. Tighten front pressure plate only if necessary.



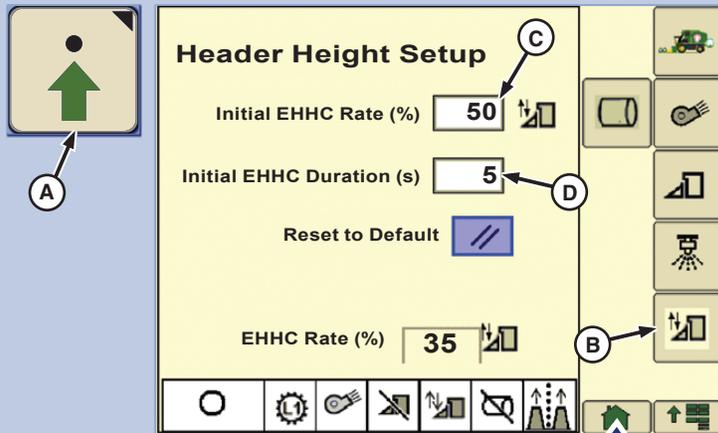
Unit Height Adjustments

Unit Height Adjustments



1. Always raise row units (A) before going into reverse to avoid damage to height sensors.
2. Adjust lift frame turnbuckles so front drum is 19 mm (3/4 in.) (B) lower than rear (C) in actual field conditions.

Header Height Setup



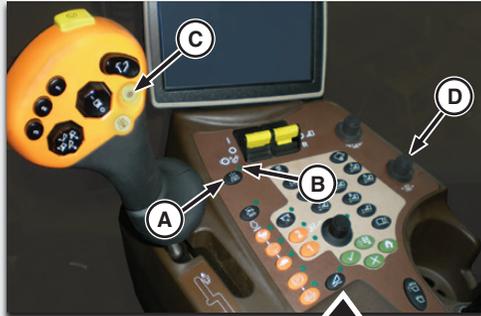
Electronic Header Height Control (EHC) controls how quickly row units raise or lower in response to ground conditions. The initial EHC rate adjustment allows a different rate for a preset time after row units are first lowered to begin picking.

1. Select button (A) to access setup screen.
2. Select header height setup icon (B) from menu.
3. Set initial EHC Rate (C). A higher value will result in faster response rate.
4. Set initial EHC duration (D) in seconds.



Row Guidance Operation

Operating Row Guidance System

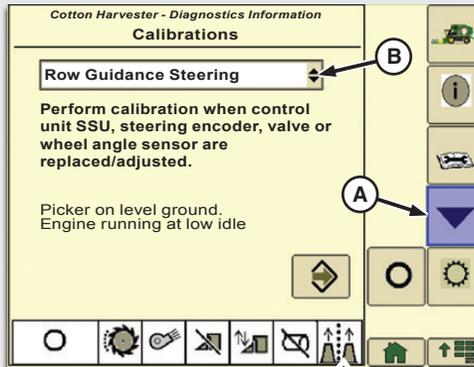


1. Press guidance system enable button (A) on control console. Indicator light (B) illuminates to indicate that system is enabled.
2. Engage guidance system by pressing engage button (C) on multi-function lever while machine is harvesting. Audible alarm sounds once to confirm that system is engaged.
3. Offset adjustment dial (D) is used when necessary to make minor adjustments to keep the machine centered in the rows.



Calibrating Guidance System

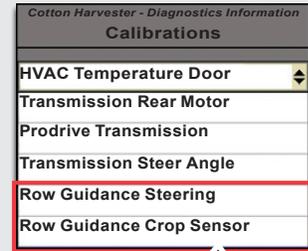
1. Position machine on a level concrete surface.
2. Select diagnostics and calibration tab on home screen.



3. From Active Alarms screen, select calibration icon (A).

CommandCenter Screen Colors

Row Guidance Icon Color	
Yellow	System Enabled
Green	Manual Row Sense™
Orange	AutoTrac™ RowSense™ (if equipped)
Gray	System Not Enabled



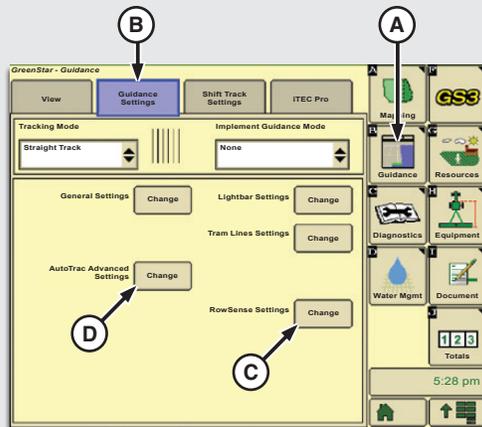
4. Select drop-down box (B).
5. Use down arrow to scroll through listed items until Row Guidance Steering is visible.
6. Select Row Guidance Steering.
7. Follow on screen directions.
8. Repeat steps for Row Guidance Crop Sensor calibration.

AutoTrac™ RowSense™ Settings

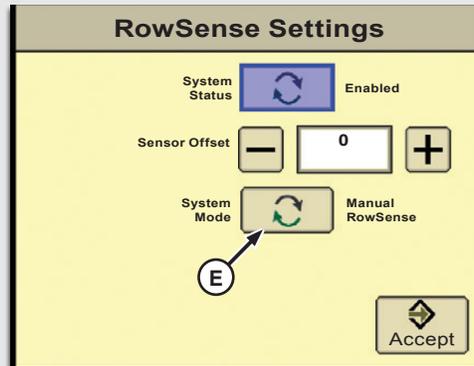
AutoTrac™ RowSense™ Requirements

1. StarFire™ Receiver with SF1, SF2, or RTK Activation.
2. Greenstar™ 3 Display (GS) with AutoTrac™ SF1 or SF2 activation and AutoTrac™ RowSense™ activation.

Setting Guidance Mode



1. To access RowSense™ settings: Menu>GS3>Guidance(A)>Guidance Settings(B)>RowSense™ Settings(C).
2. Use button (E) to toggle between manual and AutoTrac™ RowSense™.



AutoTrac™ RowSense™ Operation

1. Prior to engaging AutoTrac™ RowSense™, select a tracking mode appropriate for the field configuration.
2. Set a guidance Line.
3. Toggle between Manual and AutoTrac™ RowSense™ by pressing engage button on multi-function lever.

Advanced AutoTrac™ Settings

1. Access advanced AutoTrac™ (D) settings through the Guidance Settings tab (B).
2. Fine-tune system by making small adjustments to one value at a time.
3. See Row Guidance System section of the Operator's Manual for additional details regarding settings.



Maintenance Chart

12

Every 12 Hours

- Check solution level.
- Check auxiliary water system operation.
- Check fire extinguishers.
- Inspect tire and check pressures.
- Lubricate guide axle king pins.
- Check engine oil level.
- Check coolant level.
- Check hydraulic oil level.
- Check pump drive gearbox oil level.
- Check transmission oil level.
- Lubricate unit lift rockshaft bearings.
- Lubricate unit drive shaft covers.
- Check grease tank level.
- Check row unit gearbox oil level.
- Check solution strainer and nozzles.

50

Every 50 Hours

- Lubricate RMB gate link pivot bushings.
- Lubricate RMB rockshaft pivots.
- Check feeder belt tracking.
- Clean cab air filter and inlet screens.
- Lubricate doffer bearings.
- Lubricate unit lift pivot pins and cylinders.
- Check fuel strainer.

100

Every 100 Hours

- Lubricate final drive axle couplers.
- Lubricate final drive axle bearings.
- Lubricate guide axle pivot and guide axle tie rod ends.
- Check torque of drive and guide wheel bolts.
- Check wrap floor belt tension.
- Check laydown roller chain tension and lubricate.
- Lubricate unit drive shafts and joints.

Break-In Service

Break in Service

1

After 1 Hour

- Torque Wheel Hardware

5

After 5 Hours Check Belts for Alignment and Tension

- Feeder Belt
- Cotton Fan Drive Belt
- Wrap Floor Belts
- Rotary Screen Drive Belts

10

After 10 Hours

- Torque Wheel Hardware
- Check Feeder Belt Tracking

20

After 20 Hours

- Check laydown roller drive chain tension
- Check Fan Belt Tension

50

After 50 Hours

- Change row unit gear case oil

Reacting to a Plugged Row Unit



Reacting to a Plugged Row Unit

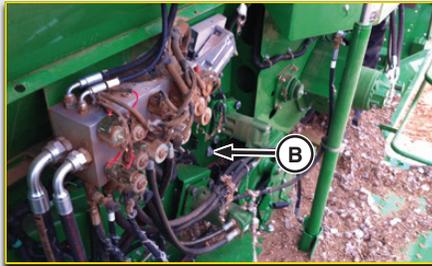
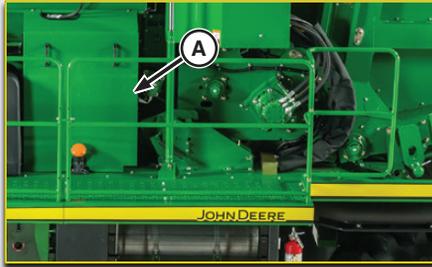
Use the following procedure to clear a plugged row unit, which is usually indicated by the sound of a drum clutch slipping or a message on the display. To avoid damage to row unit, do not attempt to resolve a plug by reversing the row units without first inspecting and clearing the unit.

1. Stop machine by moving multi-function lever to neutral position.
2. Raise row units and turn off fan and row unit switches.
3. Make sure path is clear of modules and obstructions and back machine up approximately 2 meters.
4. Shut off engine and remove key.
5. Lower unit lift cylinder safety stops.
6. Inspect units and remove obstruction. If necessary, relieve tension on pressure plate. Reinstall and adjust any parts removed during this process.
7. Restart engine and turn on fan and row unit switches. Slowly operate units with park brake engaged to verify plug is resolved. If clutch continues to slip, check for obstruction, bent picker bars, or misaligned doffer.



Clearing a Cotton Handling System Plug

A cotton handling system plug can occur when the meter rollers, beater rollers, or feeder belt speed is too low or if hydraulic motor stalls. If this condition exists, a low speed alarm is typically shown on the display. Use the following procedure to verify and resolve a plug in the cotton handling system:



1. Stop machine and disengage auto mode.
2. Disengage fan and row unit switches.
3. Set park brake and inspect machine for plug. Remove shield (A) and check for cotton on top of feeder belt through inspection window (B).
4. Place machine in Feeder Cleanout Service Mode accessed through the RMB Service Modes Icon in the CommandCenter™ Display. Engine must be at high speed.
5. Press “B” button on the tether to operate the metering rollers while pulling outward on meter roller reversing valve (C) located on the platform hydraulic valve block. Operate meter rollers in reverse for 15 seconds and release tether button and valve.
6. Press “D” button on tether to operate cotton handling system. Watch meter rolls, beater rolls, and feeder belt for rotation. If components operate normally and cotton is feeding into RMB, continue to press “D” until accumulator is empty.
7. If system is still plugged, repeat steps 5 and 6.
8. If plug cannot be cleared by reversing meter rollers, it can be necessary to place machine in transport configuration and manually clear cotton plug from feeding system. Shut off engine and remove key before manually unplugging machine.



Reference Information



Module Staging Guide



CommandCenter™
Videos



Cotton Harvesting
Website



Parts Catalog



Operator's Manual



Tama RMW™

Access links and content at www.JohnDeere.com

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