



PICKETT EQUIPMENT

Operator's Manual



Twin Master Dry Edible Bean Combine

Central Flow -- Low Impact



Pickett Equipment

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*Manufacturers of
the Most Innovative
Bean Equipment*

Congratulations on the purchase of your new Pickett Twin Master Edible Bean Combine. We welcome you to an ever-growing family of farmers using the Pickett system to harvest their bean crops, as well as peas and lentils. Thanks to your patronage, and the patronage of others like you, Pickett Equipment has become recognized as the most progressive and innovative bean harvesting equipment manufacturer in the industry.

We credit the customer with our success. After all, it is the farmer's input and suggestions over the years that has molded and refined the Pickett Equipment designs. We will continue to value the knowledge that you contribute, and seek to be responsive to your needs.

We encourage you to read the Operators Manual thoroughly and carefully to ensure satisfactory and trouble-free operation. Failure to do so could result in equipment failure or personal injury. Again, we thank you for choosing Pickett Equipment.

Sincerely,

PICKETT EQUIPMENT

Dee L. Jones
President/General Manager

DLJ/lcc

PICKETT FARM EQUIPMENT WARRANTY

Pickett Equipment warrants to the original purchaser of each item of new Pickett Farm Equipment that the product be free from defects in material and workmanship under normal use and service. If such equipment is found to be defective within one season or 350 acres, whichever shall occur first, the obligation of **PICKETT EQUIPMENT** under this warranty is limited to the repairing or replacing of (exclusive of the cost of labor and transportation), any equipment or parts, in the judgment of **PICKETT EQUIPMENT** to be defective in material or workmanship.

All equipment or parts claimed to be defective in material or workmanship must be made available for inspection at the place of business of a dealer authorized to handle the equipment covered by this warranty, or, upon request by **PICKETT EQUIPMENT**, shipped to the **PICKETT EQUIPMENT** factory in Burley, Idaho. **PICKETT EQUIPMENT shall have no obligation to bear the cost of labor or transportation in connection with replacement or repair of any such defective parts.** **PICKETT EQUIPMENT** will pay internal shop rates on the modification or repair of defective parts in the setup procedure.

This warranty covers only defects in material and workmanship. It does not cover depreciation or damage caused by normal wear, accident, improper assembly, improper adjustments, improper maintenance including lack of proper lubrication, or improper use. Therefore, **PICKETT EQUIPMENT** liability under this warranty shall not be effective or actionable unless the equipment is assembled, maintained and operated in accordance with the Operating instructions accompanying the equipment. **PICKETT EQUIPMENT** shall have no liability if the equipment has been altered or reworked without the written authorization of **PICKETT EQUIPMENT**.

Damages resulting from rocky conditions are not covered by this warranty.

PICKETT EQUIPMENT does not warrant commercial components not manufactured by **PICKETT EQUIPMENT**. But, if new, these components may be warranted by the manufacturer thereof.

The only remedies any purchaser has in connection with the breach or performance of any warranty of Pickett Farm Equipment are those set forth in this warranty. In no event shall **PICKETT EQUIPMENT** be liable for incidental or consequential damages or injuries including, but not limited to, loss of crops, loss of profits, rental of substitute equipment or other commercial loss.

This warranty is expressly in lieu of any other express or implied warranties including any implied warranty of merchantability or fitness for particular purpose and of any other obligation on the part of **PICKETT EQUIPMENT**.

PICKETT EQUIPMENT makes no warranties, representations or promises, express or implied as to the quality or performance of Pickett Farm Equipment other than those set forth in this warranty. Neither the dealer nor any other person has any authority to make any representations, warranties or promises on behalf of **PICKETT EQUIPMENT** or to modify the item manufactured or sold by **PICKETT EQUIPMENT** or any other time unless he delivers to the purchaser a separate written warranty specifically warranting the same, in which case **PICKETT EQUIPMENT** shall have no obligation thereunder.

PICKETT EQUIPMENT parts, which are furnished under this warranty and properly installed, shall be warranted to the same extent as the original parts under this warranty if, and only if, such parts are found to be defective within the original warranty period covering the original equipment.

No warranty request will be considered, and **PICKETT EQUIPMENT** will have no liability under this warranty, unless the Pickett Equipment Delivery Checklist and Warranty Registration Forms have been properly filled out and returned to **PICKETT EQUIPMENT**, at Burley, ID. **PICKETT EQUIPMENT** warranty forms must be filled out with every claim. Claims must be submitted by the dealer to Pickett Equipment's home office. All warranty work must be completed within 30 days of failure. No claim will be accepted for warranties that exceed this 30 day period.

Warranty Disclaimers

The following conditions will void the warranty for the Twin Master Combine

Removing *safety* shields, guards or safety instructional stickers

Using tire sizes other than those standard to Pickett Equipment

Not maintaining or operating equipment according to Operator's Manual

Operating equipment in a malicious or reckless manner

Using replacement parts not of Pickett Equipment origin

Making modifications to the equipment other than those recommended by Pickett Equipment

Changing combine wheels around for a wider profile

Not signing and sending in the warranty registration to Pickett Equipment within 30 days of delivery

Pickett Equipment will strive to make product improvements every year, but we cannot be responsible for making updates or additions to equipment previously sold



TWIN MASTER

PREDELIVERY INSPECTION AND SET-UP And ANNUAL MAINTENANCE INSPECTION CHECKLIST

Note: Items highlighted with *asterisks represents new combine predelivery inspection and set-up. This service should be performed by either Pickett service personnel or authorized Pickett dealer service personnel. Items without *asterisks are a guide to routine annual maintenance that could be done on the farm or by any authorized Pickett dealer. Items with **asterisks apply to both.

1.	*Remove all uninstalled parts from the bin.
2.	*Install wheels and tires on axle.
3.	*Lift the main combine frame and lower onto the axle (long side of the axle on the right). Secure the axle to the combine frame.
4.	*Lift bin allow bin lift rams to rotate down along the combine side and lower the bin onto the combine main frame. Secure bin frame to the combine main frame.
5.	*Attach bin lift rams to the combine main frame. Attach hydraulic hoses to the lift rams. Counter balance valve goes on the lower ram port.
6.	*The remaining bin covers and the bin chutes can now be installed.
7.	*Attach the pickup head and platform to the front of the combine main frame.
8.	*Connect radial pin clutch driveline to gearbox and to transition auger stub shaft. Always attach driveline guard chain to a secure location.
9.	**Check sprockets and chain on left main cylinder shaft to 90° gearbox. Ensure alignment, tighten and secure. Check chain tension. Inspect 90° gearbox oil level.
10.	** Inspect 45mm bearings on the transition auger upper drive stub shaft. Grease if needed.
11.	**Install guard over transition auger driveline.
12.	*Install pickup head lift rams and hoses.
13.	Check upper and lower transition auger sprockets for alignment. Check idler bearings. Check chain idler alignment. Check chain tension.
14.	Inspect bearings on both ends of transition auger. Lubricate if necessary.
15.	**Inspect belt and belt tension from star feeder drive pulleys to round roller on pickup head. Grease bearing location if necessary.
16.	Lubricate pickup head drive chain and adjust chain tension. Check sprockets for alignment and tighten.
17.	**Inspect pickup head assembly, cam bearings and cam track, rubber pickup teeth and finger rod connections.
18.	**Inspect star feeder. Rotate by hand listening for misalignment of stripper bars.

19.	Inspect bottom of star feeder housing for damage. Repair as needed.
20.	**Install star feeder motor and couple to star feeder shaft with chain coupler. Check for alignment and tighten set screws on chain coupler. Grease bearing if necessary.
21.	*Assemble ladders and handrails to platform.
22.	**Check transition auger motion sensor for proper placement. Distance should be 1/8" between magnet and sensor for correct sensing.
23.	**Check pickup head gauge wheel tire pressure. Recommended pressure is 24 PSI. Inspect gauge wheel bearings. Lubricate and replace as needed.
24.	*Lift upper bucket elevator legs into place (use care to raise both legs at the same time to avoid damage to the driveline or remove the driveline) and secure with provided fasteners.
25.	*Connect bucket elevator chain and ensure proper alignment. Connection can be done through the leg cleanout covers at the bottom, front, and rear of each elevator leg.
26.	*Install bucket elevator drive motor.
27.	**Adjust bucket chain tension. Tensioners are located on each side of upper elevator leg. Ensure that shaft placement is perpendicular to the bucket chain. (1/2" to 3/4" deflection in the chain is needed).
28.	*Install leveling auger motor and secure all hoses.
29.	**Check all hydraulic valves, lines, and fittings for leaks.
30.	**Check all hydraulic motor coupler connections, star feeder, shaker motor, Bucket elevator motor, and leveling auger motor.
31.	Inspect all hydraulic cylinder pins. Lubricate as needed.
32.	**Check all electrical lines and components to lights and Dickey-john monitor system. Ensure they are clean and securely fastened to framework.
33.	**Inspect main tire pressure (26 PSI max). Ensure that all main wheel lug nuts are tightened. Inspect main hubs. Inspect hub bearings by removing dust cover. Lubricate bearing as needed. Inspect hub bearing preload (with weight off of tire) by tightening castle nut firmly and then by backing off tension by approximately 1/4 turn or to next notch on castle nut. Replace dust cover repeat on other side.
34.	*Install straw discharge chutes. Connect drive belts to the straw choppers and adjust tension. Place guards over straw chopper drive belts. Check oil level in the 90° gear box.
35.	*Install straw spreaders to the discharge chutes.
36.	Inspect shaker table leaf springs. Replace any damaged leaf springs. Ensure table is level in relation to main frame. Tighten securely to mounts using grade 5 bolts and heavy-duty flat washers. Tighten with double nut or with whiz-type nut.
37.	Check shaker table eccentric connection to shaker table. Ensure that fasteners are secure. Lubricate bearing anchor points. Inspect eccentric bearings and grease as needed. Inspect eccentric drive shaft flange bearings and lubricate as needed.

38.	Remove straw walker and elevator leg sprocket shield. Inspect elevator leg and straw walker chains, bearings, and sprockets for alignment and lubrication.
39.	Remove left and right shaker table inspection shields. Check straw walker tines for even placement between shaker table dividers.
40.	**Replace all shields.
41.	**Inspect final shaker screen. Ensure proper screen operating position (approximately 1/4" higher in rear). Ensure tilt-adjustment bolts are securely fastened.
42.	If the use of the optional bumper bar is required, ensure proper placement and working order.
43.	**Inspect vacuum setting. Recommended initial setting of vacuum adjustment plate is at its midpoint.
44.	Inspect turbine blades and vacuum shroud. Remove rear pulley shields to expose vacuum inspection plate located behind the upper drive pulleys. Loosen nuts and rotate plate. Use a flashlight for inspection of turbine blades and vacuum shroud. It is important to keep turbine fan blades free of buildup to ensure fan balance. Inspect shroud and turbine fan for normal wear. Replace as needed.
45.	Inspect vacuum drive belt for alignment. Inspect belt tensioner (idler) bearings. For bearing replacement, use high speed sealed bearings.
46.	Inspect bin leveling augers. Inspect the hydraulic motor drive sprocket and both auger shaft sprockets, chain, and idlers for alignment and tension. Check all auger shaft bearings and lubricate if needed.
47.	*Hook up tractor to combine according to instructions found later in this manual
48.	*Install primary driveline always connect shield chain to a secure location.
49.	**Remove cut-out clutch guard and inspect the cut-out clutch and connection to intermediate shaft. Recommended clamping cone bolt torque is 75 foot pounds. Grease bearing and replace cut-out clutch guard. Attach shield chain to a secure location.
50.	*Install the pickup head electrical speed control box, Ag-cam monitor, Dickey-john monitor, and the tongue tilt switch in the tractor's cab.
51.	*Hook up electrical system of combine to tractor. Pickup head speed control box, Ag-cam monitor, Dickey-john monitoring system, and tongue tilt switch can now be tested.
52.	**Hook up hydraulic lines to tractor for initial startup and testing. Raise bin dump system. <u>IMPORTANT!</u> Inspect distance from elevator leg to bin chute prior to lifting bin. Ensure that a safe margin is maintained while lifting. The bin is equipped with a pressure relief valve on the ram down stroke maintain this down pressure at 500 PSI or less. While raising bin, check for hydraulic leaks.
53.	**Inspect threshing pin placement and tightness. Rotate threshing cylinders by hand to observe pin clearance to concave bars. Recommended clearance is 1/2" to 3/4".

54.	**Test pickup head lift and drop. Adjust tractor hydraulic flow to regulate pick up head lift and drop speed. Set pickup head teeth ground clearance to 1” by adjusting gauge wheels.
55.	**Test the hydraulic motor circuit. Motors operate in following series: 1) Pickup Head, 2) Shaker Table, 3) Bucket Elevator, and 4) Leveling Auger. Check and remedy all hydraulic leaks. Begin slowly to observe for misalignment or restrictions. Operate shaker table at approximately 340 RPM. Using in-cab electric control switch, turn pickup head on and off to ensure it is operational.
56.	**Inspect 2 speed transmissions, check oil level, drive belt alignment and tension, and coupling sprockets and chains.
57.	**Inspect swivel gear box mounts for loose bolts. Check oil level – top & bottom sections have separate oil levels.
58.	**Test run all drive train components by slowly engaging the PTO. As the PTO is engaged, threshing cylinders, vacuum fans, and straw choppers can be tested. Listen, feel and inspect combine for any abnormal sounds or vibrations. Adjust and remedy as needed.

Combine Serial #

Customer or Dealer

Service Department or Technician

DELIVERY CHECKLIST

Review the Operators Manual with the customer. Explain the following:

- Pickett Equipment Warranty.
- Warranty disclaimers.
- Safe and correct operation and service.
- Tractor wheel adjustment, to ensure that the tractor does not run on the windrow (See your tractor manual).
- Daily and periodic inspections.
- Correct machine servicing and maintenance.
- Explain wear items, including fan and shroud maintenance.
- Combine and tractor tire pressure.
- Correct machine transport procedure.
- Walterschied safety and service manual in addition to driveline operating instructions.
- Optional attachments that are available for special crop and operating conditions.
- Operator's manual and parts listings.
- Warranty registration including registration of unit serial number.
- Sending in Warranty Registration to Pickett Equipment.

Date Checked

Signature

AFTER SALE CHECKLIST

Dealer / Customer

It is suggested that the following items be completed and then checked sometime prior to operation.

- Inspect for loose or missing bolts.
- Run the machine to see if it is functioning properly.
- Ensure that all safety shields and all safety stickers are in place.
- Verify that all chains and belts are aligned and tightened correctly.
- Check to ensure that decals are intact and legible.
- Inspect for broken or damaged parts.
- Review the entire Operator's Manual with the customer and stress the importance of correct and regular lubrication as well as safety precautions.

Date Checked

Signature



SAFETY SIGN

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



DANGER

- **Observe overhead obstacles when raising dump bin**

Peligro

Antes de accionar la tolva de descara fijense que no haya obstaculos sobre esta



DANGER

- **ROTATING DRIVELINE KEEP AWAY**
- Contact can cause death
- **Do not operate without--**
- All driveline guards and equipment shields in place
- Drivelines securely attached at both ends
- Driveline guards that operate properly


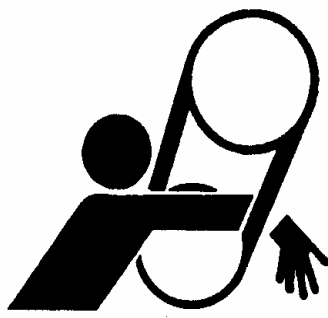









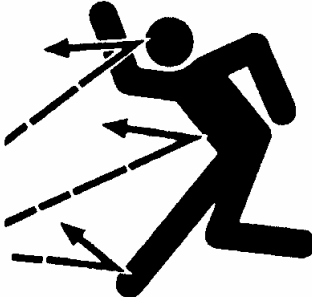

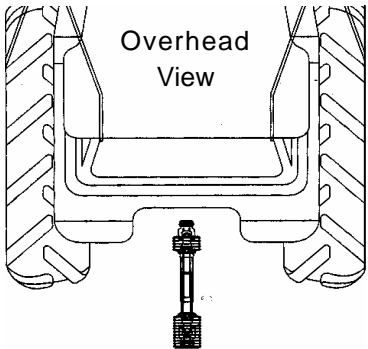

Warning

CRUSHING HAZARD

- To prevent serious injury or death
- Do not work beneath the bin while in the raised position, while tractor is running or counter balance valves are missing. See page 34.
- Always use mechanical safety locks.
- Tongue stand must be in place while connecting or disconnecting from the tractor.

	 <h2 style="text-align: right;">Caution</h2> <ul style="list-style-type: none"> • High pressure oil leaks can penetrate the skin causing serious injury & gangrene. If this injury occurs consult a physician immediately. • <u>Do not</u> use fingers or hands to check for hydraulic oil leaks. • Release pressure before loosening hose fittings, always work with cool hydraulic oil.
	 <h2 style="text-align: right;">Peligro</h2> <ul style="list-style-type: none"> • <u>Conserve alejado de el cardan en operacion</u> • <u>Alejese!</u> El contacto con este puede causar injuria o muerte. No opera sin! Que el cardan se proteccion del cardan y laminas de proteccion se deben de mantener en su lugar. Asegure que el cardan esta bien instalado a el tractor y combinada. Piezas de seguridad del cardan giran entre ellos mismos. Asegurarse que la proteccion de seguridad del cardan opera en su forma debida.
	 <h2 style="text-align: right;">ADVERTENCIA</h2> <ul style="list-style-type: none"> • <u>PELIGRO de Astamiento</u> • Para prevenir sérias lesiones o muerte. No trabaje bajo la tolva cuando este en posicion de descarga a menos que se cilindro en su posicion correcta. • El estante o soporte del jalon de la cosechadora se debe de ajustar a la altura requerida antes de conectarse o desconectarse al tractor.
	 <h2 style="text-align: right;">Precaucion</h2> <ul style="list-style-type: none"> • Fugas de aceite de alta presion al tocar la piel causa sérias lesiones o cangrena. • Sérias lesiones o cangrena. Si esta lesion ocurre, consulte a su medico inmediatamente. • No use dedos o manos para revisar por posibles fugas de aceite hidraulico. Elimine o reduzca presion en el sistema hidraulica antes de aflojar las conexiones de mangueras y cuando el aceite este frio.

	<p> Warning</p> <p><u>Crushing hazard</u></p> <p>Do not place hands, fingers, or arms inside separating area while combine is in operation. Hands and fingers may become subject to serious injury.</p>
	<p> DANGER</p> <p><u>Shield Missing Do Not Operate Combine</u></p> <p><u>No Opere la combinada sin sus laminas de proteccion.</u></p> <p><u>Keep all shields in place</u></p>
	<p> DANGER</p> <p><u>Combine must be shut off to make changes in cylinder</u></p> <p><u>Peligro</u></p> <p>La combinada debe de estar apagada al hacer cambios al cilindro de trilla</p>
	<p> DANGER</p> <p><u>Combine must be shut off to make belt adjustments</u></p> <p><u>Peligro</u></p> <p>La combinada debe de estar apagada al hacer ajustes a bandas o correas</p>

	<p> DANGER</p> <p><u>Riding equipment may result in serious injuries</u></p> <p><u>Peligro</u></p> <p>Subiendose a maquinaria en operacion puede causar sérias lesions</p>
	<p> Caution</p> <p><u>Beware of flying objects from the rear of combine</u></p> <p><u>Precaucion</u></p> <p>Tenga precaucion con los objetos saliendo de la parte trasera de la combinada</p>
 <p>Overhead View</p>	<p> Important</p> <ul style="list-style-type: none"> • Tight turns may cause driveline damage <p><u>Importante</u></p> <ul style="list-style-type: none"> • Vueitas extremas del tractor puede causar danos a el cardan
<ul style="list-style-type: none"> • <u>Refer to owners manual for all lubrication points</u> Dese referencia a el manual de operacion para puntos de <u>lubricacion</u> 	
<p><u>Important Lubrication site</u></p>	<p><u>Importante Sitio de Lubricacion</u></p>

Introduction

It is important, and informative, for the operator to take a few minutes to read and become familiar with this operators manual. It contains the necessary information to safely and effectively operate this combine, along with the adjustments and settings for varying conditions. This manual should become a permanent part of your machine and kept within reach, should question arise.

**Left hand
side of
combine**



**Right hand
side of
combine**

Rear view



Right front view

General Operation and Startup Instructions

The following information is provided to assist in the set-up of your Twin Master Combine. Also described are the proper functions and maintenance guidelines

1. Inspect all electrical lines and components. Make sure they are fastened securely and are free from any damage. Plug into tractor 12-Volt power source. Please refer to the DICKEY-john owner's manual for information on the monitoring system of the combine.
2. Check all hydraulic connections and fittings. Check for leaks and make sure all hoses are positioned correctly and free from damage.
3. Check all belts, chains, pulleys, and sprockets for alignment and for tightness.
4. Grease all bearings (do not over grease). Most bearings only require minimum grease. Lubrication locations and amounts are located in the Lubrication and Maintenance section of this manual.
5. Inspect primary, secondary and tertiary drivelines for lubrication and make sure they are securely fastened especially the clamping cone on the Secondary Driveline. Torque cut-out clutch side clamping cone bolt to 75-ft. lbs. Make sure all setscrews and bolts are securely fastened. Driveline plastic guards need to be well greased and have shield chains securely attached.
6. Inspect pickup head for any loose bolts or broken parts. Inspect gauge wheels to ensure pickup head height is operating level and the teeth are working approximately 3/4" to 1 1/2" above the soil surface.
7. Inspect feeder house star tines and scraper plates for alignment and tightness.
8. Inspect the combine from front to back while hooked to the tractor to make sure it will operate level. Use adjustable tongue height on combine tongue and the tractors draw bar adjustments to achieve this task. (Refer to setting up tractor page)
9. The swivel gear box allows the tractor to be operated to the side of the windrow. Care

must be used when setting up the gear box stabilizer assembly. It must keep the lower part of the swivel gear box aligned with the tractor without binding.

10. The Twin Master requires 4 hydraulic outlets on the tractor. The #1 remote should operate the pickup head, feeder house, shaker table, bucket elevator and leveling auger in the bin. To adjust hydraulic flow to this series of hydraulics, turn on/off switch on the pickup head control box to ON, turn the speed control to midway. Turn the flow control knob counter clockwise (Located on the shaker table hydraulic motor on the left side of the combine) to Full (counter clockwise). Turn the hydraulic flow of your tractor down to a low flow rate. Using the combine monitor system RPM read out adjust the tractors flow control until the shaker pan shaft speed is 350 RPM. Then using the flow control located on the shaker motor to adjust the speed to 340 RPM. Then using the flow control on the bucket elevator motor set this speed to 110 RPM. This should provide plenty of oil for the other operations without having more oil flow through the system than required (excessive flow causes excessive heat). Turn the pickup head speed control knob up or down so the pickup head speed does not exceed 1/2 operational ground speed. The #2 remote controls the raising and lowering of the bin. Make sure the tractor hydraulic control levers are working properly and in a direction the operator is familiar with. Changing positions of the hydraulic hoses in the tractor remote will change direction. A pressure relief valve is located on the down stroke to regulate the pressure and not damage the bin or combine frame. This relief valve should be set to 500 PSI or less. **Do not transport or operate combine, unless bin is in retract or down position.** To determine the distance between the truck to the combine for unloading, position outer edge of dump bin straight up from side of truck box. Having an indicator rope will help. Regulate the flow of oil, so bin raises and lowers safely and slowly. The #3 remote controls the raising and lowering of the pickup head. Regulate the flow of oil from the tractor so pickup head raises smoothly and slowly. For added transport height the front

of the combine can be tilted up (this feature should be blocked by the electric on/off switch during field operation). With the electrical switch in the on position the pickup head will rise first then the machine will tilt. The #4 remote controls the pull tongue swing movement, keep tractor flow turned low to have slow steady movement. **Always have combine directly behind tractor before backing or transporting.**

11. The vacuum fans are located in the upper rear position of the combine and are powered by a belt system, driven by the main PTO drive. Two sizes of pulleys are used on the upper shaft. The small pulley is used when operating the threshing cylinder from 300 to 450 RPM. The larger pulley is used when operating at a higher range from 450 to 540 RPM. This change in pulleys necessary for best results in vacuum suction. Vacuum air ports are provided for easy inspection of the fan and are directly below the pulley driving each vacuum fan. Inspect the fans daily, especially in high moisture situations. Build up on the fan at high speeds can cause imbalance and fan failure. When material is noticed on the fan blades it must be cleaned off for safe operation.
12. Inspect bucket elevator chains for tightness and adjustment. 110-115 RPM is the optimum bucket elevator speed to help prevent damage to crop.
13. Threshing starts at the transition auger, which feeds the main central flow cylinders. A sprocket change 30 to 36 or 36 to 30 is located on the left hand side of the transition auger. Use the 30 to 36 setting (smaller sprocket on the top) for cylinder speeds 450 to 540 RPM. Use the 36 to 30 setting (larger sprocket on top) when cylinder speed is 300 to 450 RPM. By making this change you will allow smooth even feeding while not damaging the seed by excessive speed.
14. Cylinder speed and threshing pin placement can vary, depending on field conditions from wet to dry. The concept of the cylinder using centrifugal force and higher speeds give the cylinder its low impact capabilities. As the product moves through the cylinder the threshing pins can be turned and positioned to change the amount of threshing time

necessary for separating the crop. (Refer to Combine Cylinder Adjustment page # 28.) There are 42 threshing pins spaced evenly on the auger fighting of each cylinder. It is important to keep the cylinder balanced, when adjusting the threshing pins. (See Trouble Shooting page # 45.) Start up setting: (Refer to Combine Cylinder Startup Settings page # 29). Extending some pins out closer to the concave will help keep the concave clean from buildup of crop residue material. Cylinder speed and threshing pin placement need to work together for efficient separation. Increased cylinder speeds can cause more crop seed damage, while a slower cylinder speed will likely reduce damage. The Twin Master is equipped with two heavy duty 2 speed transmissions that reduce the tractors 1000 RPM PTO to 540 or 390 RPM. By changing the tractors RPM you will be able to obtain threshing cylinder speeds between 300 and 540 RPM. The two transmissions shift with one shift lever located on the right side of the machine.

IMPORTANT: As RPM on cylinder reduces so does the suction on the vacuum. It becomes a necessity to adjust the vacuum cover plate with a change in cylinder RPM.

The crop and chaff pass through the concave onto the shaker pan. The crop moves over the shaker pan toward the rear of the combine where the vacuum system removes impurities through the vacuum fan. Adjust vacuum by moving the cover plate above final screen. Using a 15 mm wrench loosen nuts on each side of the vacuum plate. There is one plate on each side. Keep the plate level. Moving the plate higher above the final screen reduces the suction. Start by setting the plate midway. To fine tune visual inspections are necessary. With combine in operation, watch in the area under the vacuum duct (by use of the Ag Cam) where the beans pass over the shaker table to the final screen. If beans are floating or bouncing up, the vacuum is too high. Raise each side of the plate equally in 1/2" increments until the beans start to settle and you can just see the crop barely raise off the table. Lower the plate if chaff and other foreign material is not being separated from the crop.

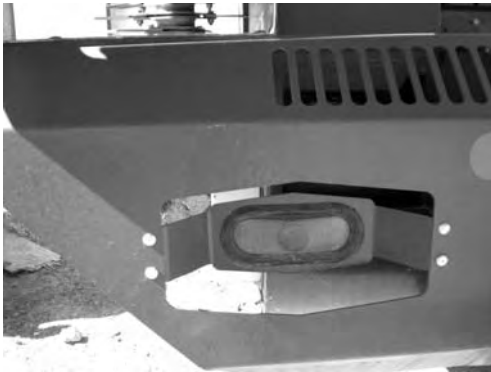
Two final screens are standard with each combine 9/16" round and 1/2" x 1". Check with your dealer to see what special order sizes may be available. Product size will determine final screen size selection to use. There are 2 fasteners on each side and 2 in the middle of the final screen to maintain proper screen tilt. (Refer to Combine Shaker-Separator page # 30.) Operate screen level or 1/4" to 1/2" higher in rear. If crop is going over the back of the screen, use a larger screen size. Lift the rear inspection flap to make sure the final screen is level (side to side). A bumper bar system provides a jolting action to shaker table and is located on rear of final screen to keep dirt clods and other materials from clogging up the screen.

Lights and Signals



Combine lights are wired to come on when tractor light switch is turned on.

Lights must be turned on when transporting



Combine signal lights operate with the Tractor turn signal lever.

When transporting on a road, flashing lights give warning to other drivers. These lights are located on both sides at the rear of the combine.



A work light inside the bin will give adequate lighting for night work.



A work light is positioned on the outer right front corner of the dump bin to aid in dumping the bin after dark.

Setting Up The Tractor



Tractor PTO Speed

The Twin Master is equipped with a 1000 RPM, 1 3/4" 20 spline (Walterscheid) driveline.

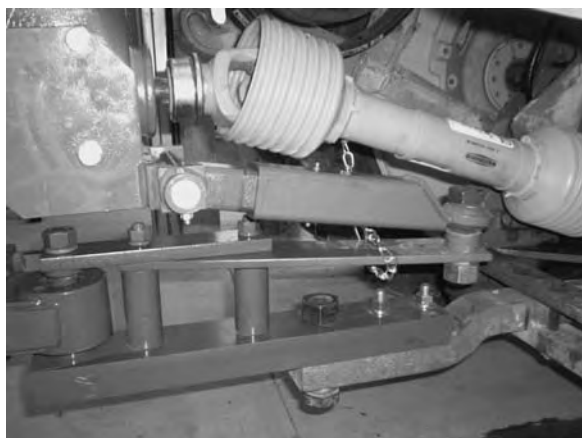
Clean and lubricate PTO shaft with high temperature EP grease before attaching PTO driveline.



Shield removed for illustration

Adjusting Drawbar

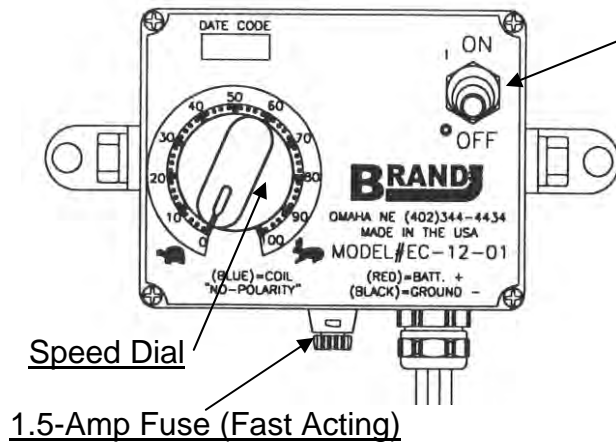
1. Adjust tractor drawbar to measure 20 in. from end of PTO shaft to center of the drawbar hole.
2. Adjust drawbar to 18-20 in. clearance from the top of the drawbar to the ground.
3. Position drawbar to align hitch pin hole with centerline of tractor PTO shaft. Do not pull combine in a offset position.



Swivel Gearbox Stabilizer

Assemble drawbar extension and swivel gearbox stabilizer as shown. Use care to determine that it will move in all desired positions without binding. Check daily for loose bolts and proper movement. Lube daily.

Dial-A Speed



Switch

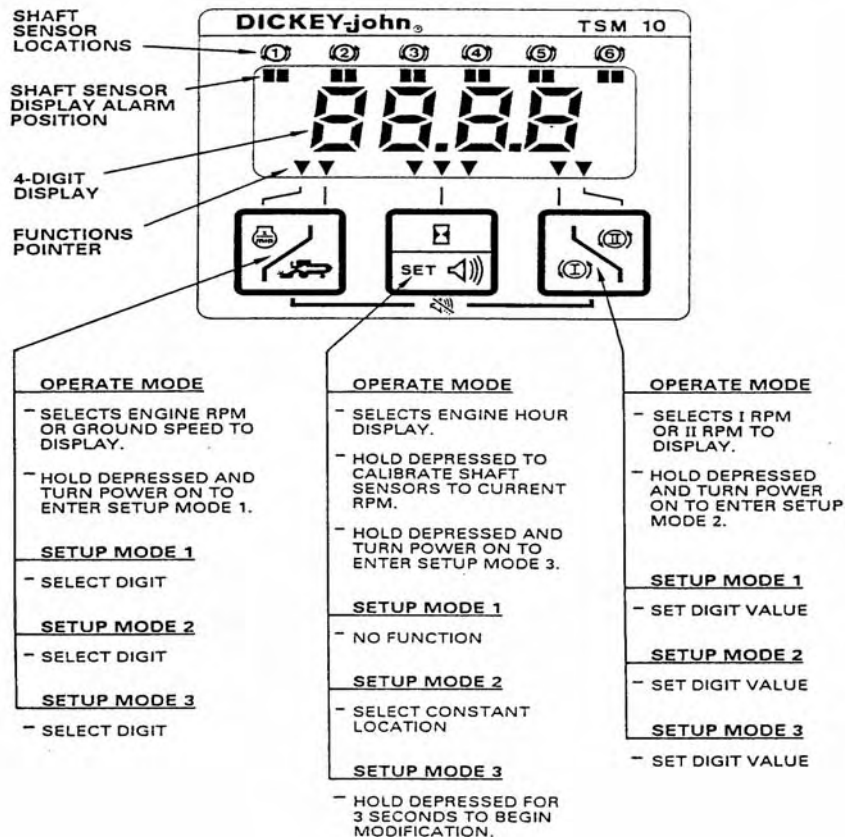
- The Dial-A-speed knob controls the ratio of the pick up head speed to the ground speed.
- To operate, start the machine, turn the switch to the ON position, watch the speed of the pick up head and adjust the Dial-a-Speed knob until you get the desired ratio to ground speed. Keep in mind lower RPM usually minimizes crop losses at the pick up head.

Shaft Monitor System

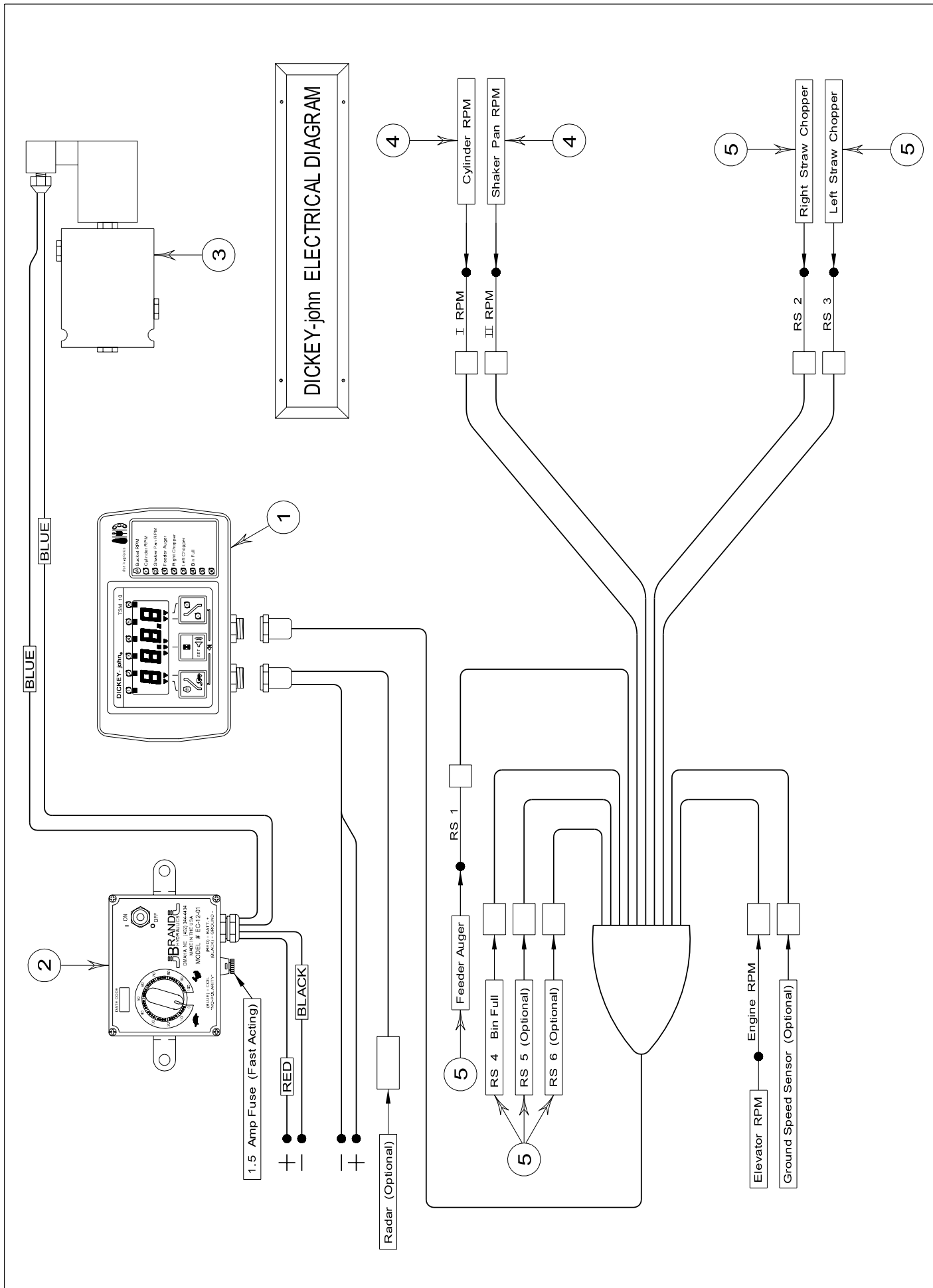
LEARNING TO USE THE CONSOLE

After the Console, Sensors and Harness have been installed, the Monitoring System can be powered up.

A. MONITORING SYSTEM DISPLAY AND SWITCH DESCRIPTIONS



Dial-a-Speed and Dickey-john Wiring Diagram



Complete Drive Train

Primary Driveline

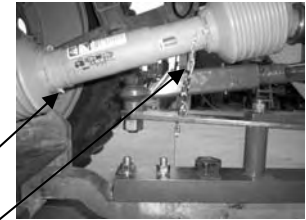


Lubricate crosses every 8 hours

Telescoping members must be lubricated either through zerk in telescoping member or by taking apart every 8 hours

Lubricate guard through molded nipples every 8 hours

Attach guard safety chain to a secure location



Secondary Driveline & Swivel Gearbox

All driveline crosses, telescoping members and plastic guards must be lubricated every 8 hours

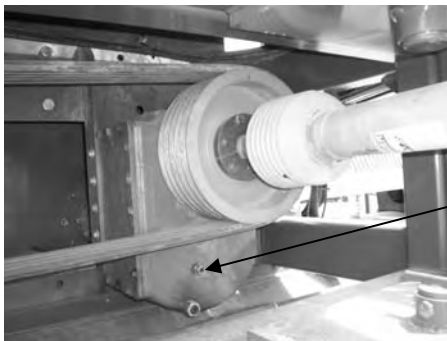
Swivel gearbox use SAE 80-90 (2 places) check 25-30 hours

Cut-out clutch clamping cone bolt torque to 75 ft lbs.

Cut-out clutch requires no service

If overload occurs disengage tractor PTO after it completely stops reengage slowly

Attach guard safety chain to a secure location



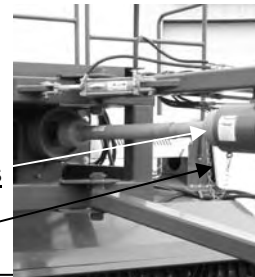
Tertiary Driveline & 2 Speed Transmission

All driveline crosses, telescoping members and plastic guards must be lubricated every 8 hours

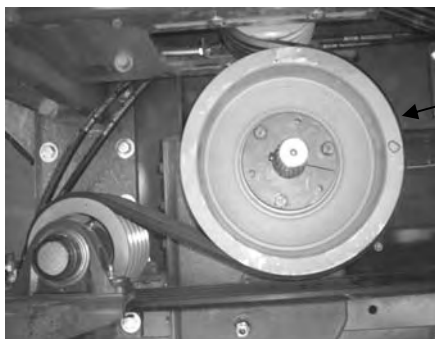
2 Speed Transmission use SAE 80-90 check daily oil level center of sight glass

Starting with the 2007 model overrunning clutch has been moved to the forward end of the Tertiary driveline. Lube every 8 hours

Attach guard safety chain to a secure location

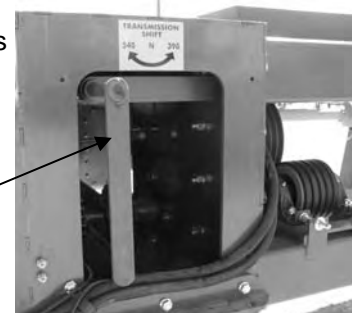


2 Speed Transmission & Shifter



The right hand transmission is belt driven from the left hand transmission

Both transmissions are shifted by one shift lever. Use nut and wrench on transition auger to aid in shifting.

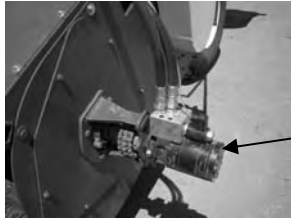
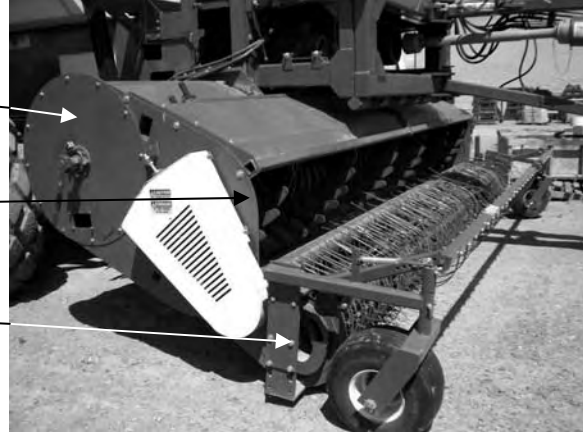


Feeder House

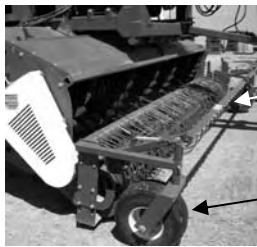
Transition (Feeder) Auger

Intermediate Star Feeder

8 Bar Pickup Head

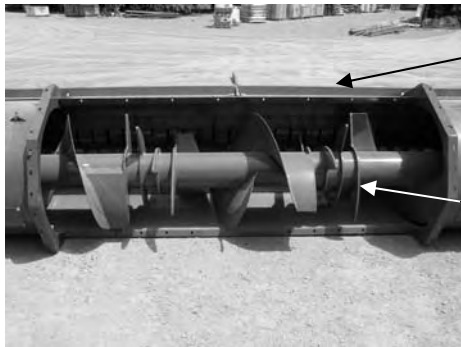


Variable speed with in cab control hydraulic drive for varying conditions, gentle handling and positive feeding of crop.



Adjustable hold down rods for smooth feeding.

Adjustable gauge wheel, allowing the pickup head to follow terrain.



Complete feeder house shown removed from the combine.

Transition auger with deep flighting and heavy duty stars to move the crop gently into the threshing cylinder.

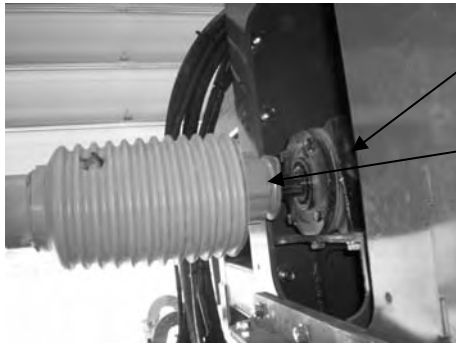


Transition auger drive, mechanically driven from PTO driveline. Speed change possible by exchanging the top and bottom sprockets.

Intermediate star feeder and pickup head hydraulic drive motor, variable from the tractor cab.

Feeder House

Transition Auger Drive

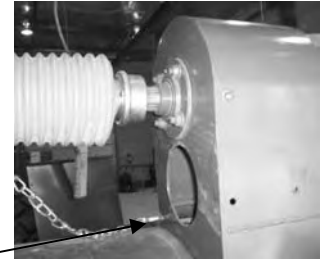


90° gearbox use SAE 80-90 check 25-30 hours

The radial pin clutch needs to be lubricated each time it is activated

All driveline crosses, telescoping members and plastic guards must be lubricated every 8 hours

Attach guard safety chain to a secure location



Transition Auger Drive



Speed can be changed by exchanging top and bottom sprockets. Threshing cylinder speeds above 450 RPM small sprocket on top. Threshing cylinder speeds below 450 RPM large sprocket on top. (Shown)

Pick Up Head Drive



The pickup head is belt driven from the star feeder to the round roller.

The pickup head is chain driven from the round roller.

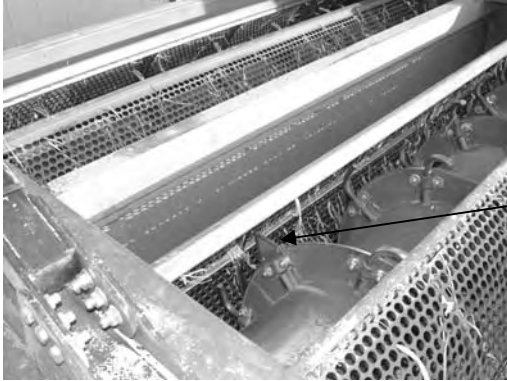


Adjustable Pull Tongue

The pull tongue can be adjusted to keep combine level for operation, regardless of the tractor drawbar height.

Pull tongue equipped with a heavy duty Dura-ball

Concave Separator & Shaker Pan



Concave Separator Sieve

The perforated concave allows the seed to fall to the shaker pan as soon as it is threshed out of the pod. Concave bars are on the inside of concave. Knives can be added to the cylinder in hard threshing conditions to cut the vines. Use two knives 180° apart replacing the 3rd and 6th pins. Place knife between pin clamp and flighting using the same bolts.

The cylinder and concave are easily accessible by raising the bin.



The threshing cylinder is directly underneath the bin. The bottom of bin serves as a lid for the top of the threshing cylinder. When combine is operating the bin needs to be completely lowered enclosing the cylinder.

Before making any adjustments to the combine cylinder

TURN OFF TRACTOR!!!

REMOVE KEY FROM TRACTOR IGNITION!!!

ALWAYS EMPTY BIN BEFORE MAKING ADJUSTMENTS!!!

ALWAYS ENGAGE MANUAL BIN SAFETY LOCKS!!!



Low Impact Threshing Cylinder

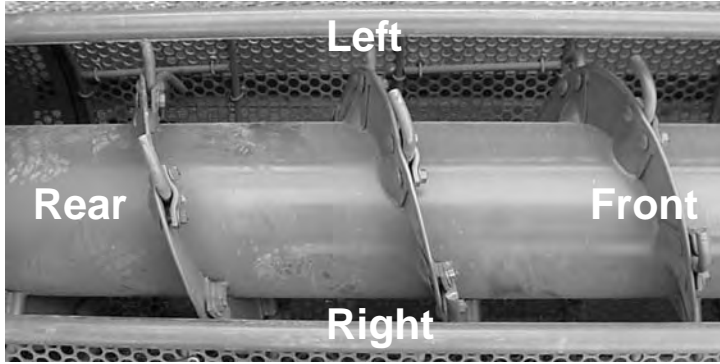
Cylinder threshing pin. These pins can be adjusted by loosening the carriage bolts that hold the clamp. With the clamp loose, pins are able to rotate, also move in & out.

Rotating the pins forward, against the flow of the material, causes a slowing of material travel, thus increasing the amount of threshing in the cylinder. Rotating the pins towards the direction of material flow reduces threshing. Extending the pins out, closer to the concave, causes a more aggressive thresh and helps keep concave holes open. Moving the pins in away from the concave eases aggressiveness.



Shaker Pan area is below the cylinder. Crop should travel at a steady, even flow on the shaker pan, bouncing of crop means shaker is being operated at too fast of an RPM.

Combine Cylinder Adjustment



Combine main threshing cylinder with 42 threshing pins.

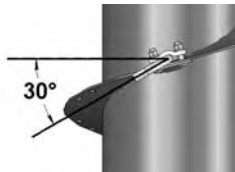
Threshing pin retracted
Least aggressive



Threshing pin extended
Most aggressive



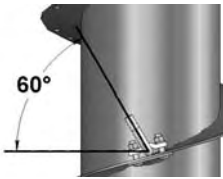
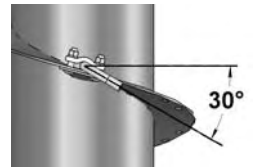
All Photos on these two pages are of the left hand cylinder. The drawings on the left are of the left hand cylinder and drawings on the right are of the right hand cylinder. Direction of flow would be from the top of the page to the bottom of the page. **Degrees are referenced from a line perpendicular to the threshing cylinder tube.**



Threshing pins at the 30° rearward position

Quick movement of material

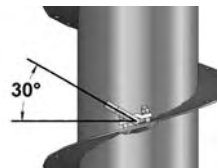
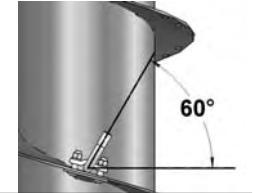
Neutral setting for gentle thresh



Threshing pins at the 60° forward position

Slower material travel

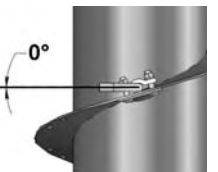
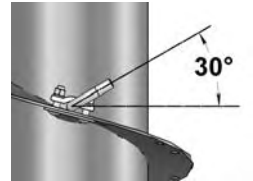
Hard thresh setting



Threshing pins at the 30° forward position

Medium material travel

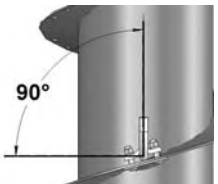
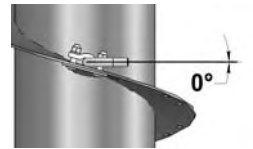
Medium thresh setting



Threshing pins at the 0° or base line position

Increased material travel

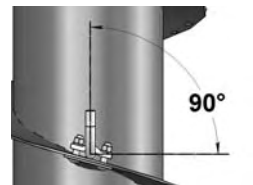
Gentle thresh setting



Threshing pins at the 90° forward position

Slower material travel

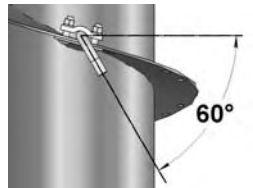
Extreme hard thresh setting



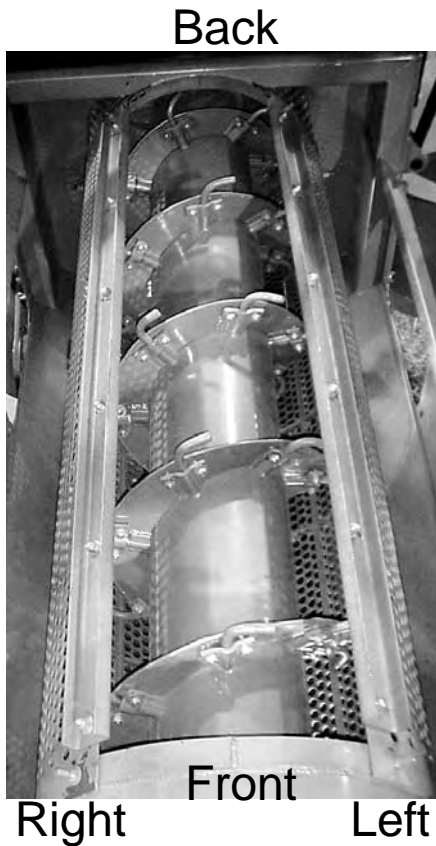
Threshing pins at the 60° rearward position

Fast material travel

Extreme easy thresh setting



Combine Cylinder Startup Settings



To begin, determine threshing conditions present, see page # 28 for guide to pin settings and terminology. Recommended beginning pin setting:

- Pins 1-3: set in neutral or 30° rearward threshing position to allow material into cylinder.
- Pins 4-10: set in gentle or 30° forward to hard or 60° forward threshing position, depending on conditions.
- Pins 11-27: set in neutral or 30° rearward threshing position.
- Pins 28-31: set 28 in hard or 60° forward threshing position then 29 in extreme easy or 60° rearward threshing position. Repeat this pattern with pins 30 and 31.
- Pin 40: set in hard or 60° forward threshing position and closer to the concave to help separate already threshed beans from the straw.
- Pins 41-42: set in extreme easy or 60° rearward threshing position to move the material out of cylinder.
- Pin height: generally, pins are set to the bottom, touching the cylinder tube.
- If conditions require the use of knives, replace pins 3 and 6 with knives.

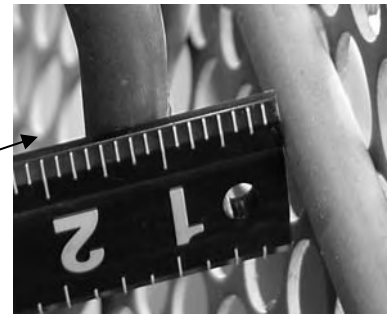
Generally— Dry conditions allow most threshing to be done quickly in the front of the cylinder while tougher conditions will require longer threshing from front to back.

Damage to the crop, from the cylinder, usually occurs when the cylinder is turning to fast. The objective in threshing is to move the material through the cylinder as rapidly as possible without damaging the crop. If damage is excessive, slow the cylinder speed down by gradual steps until damage is minimal.



This view shows threshing pin fully extended.

In normal conditions threshing pins should not be adjusted any closer to concave bars than 1/2" to 3/4". (In extreme conditions leave clearance the width of the bean seed).



Warning

Before making any adjustments to the combine cylinder

TURN OFF TRACTOR!!!

REMOVE KEY FROM TRACTOR IGNITION!!!

ALWAYS EMPTY BIN BEFORE MAKING ADJUSTMENTS!!!

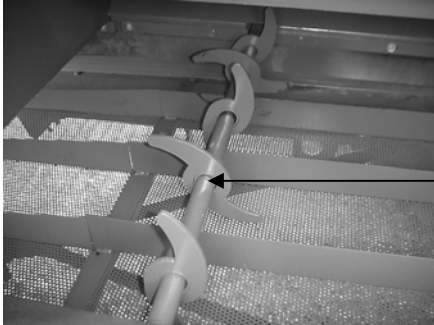
ALWAYS ENGAGE MANUAL BIN SAFETY LOCKS!!!

Combine Shaker-Separator



Shaker Pan Area

The shaker pan should be operated at a speed that allows the crop to move at a steady even flow. If the crop bounces up from the pan, the shaker speed is too fast. 340 RPM on shaker shaft is a good startup speed.



Straw Walker Shaft

The straw walker aids in the movement of the straw and stems underneath the vacuum suction port. Also stirs the material allowing the heavier crop to fall below the lighter straw and chaff, allowing the vacuum to clean the crop more efficiently.



Shaker Pan Springs

The shaker pan should be centered in it's operating area so it does not come in contact with other parts during operation. There are 4 sets of 6 springs on each side of the shaker pan. This allows for proper shake of the pan and crop movement.



Vacuum Fan Adjustment Plate

The vacuum fan adjustment plate (1 per side) can be raised or lowered to change the amount of suction. The vacuum fan is positioned directly over the shaker pan for cleaning the foreign particles out of the crop, as the shaker pan moves the crop material directly underneath the vacuum at an even flow.



Final Shaker Sieve Adjustment

This sieve should operate on as low of an incline as possible, without the crop spilling over the back and still allow the large foreign materials to ride over the back of the sieve. This concept will work best for maximum cleaning and capacity.

Final Sieve



This is the final shaker sieve, where the last of the cleaning takes place before the crop is lowered to the elevator auger.

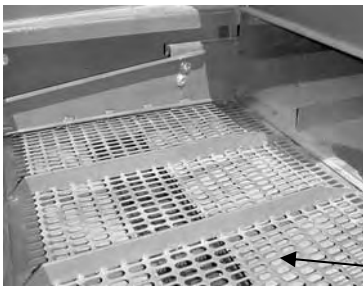
Vacuum adjustment over sieve area.

Final sieve.



Bolts on the sides and middle of the sieve are slotted to allow the sieve angle to be adjusted. A slight incline in the rear will allow the crop time to fall through the sieve and larger material to shake off the end of the sieve.

Round hole style sieve.



Two types and sizes of holes on the sieves are standard.

Round hole 9/16".

Oblong hole 1/2" x 1".

Round hole type sieve will work better in conditions where small dirt clods might be present.

Oblong hole style sieve

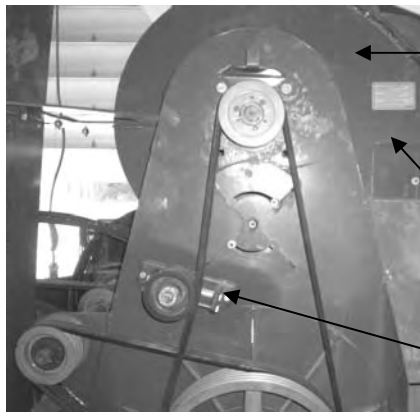


To remove sieves, remove the two adjustment bolts on each side, the two in the center and loosen the back row of bolts in the shaker pan, lift up rubber flap and pull sieve straight out.

An adjustable bumper bar is installed to add more vibration and shake to the final sieve. This extra action will help keep the small dirt clods from sticking in the sieve holes.



Vacuum Cleaning System



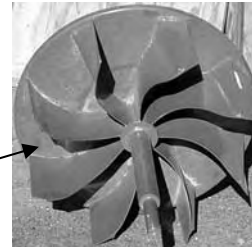
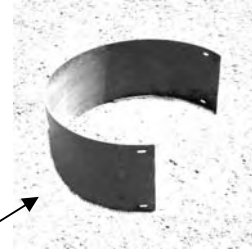
Vacuum turbine housing

Internal vacuum fan shroud

Vacuum fan inside

Vacuum drive belt tensioner

Vacuum turbine fan



Vacuum turbine air adjustment plate

This door can be opened or closed to change the amount of vacuum suction. Open reduces and closed increases suction. This door also allows visual inspection of the fan and shroud for build up and wear.



Vacuum suction intensity adjustable plate. One per side.

Make adjustments in 1/2 inch increments. Lowering plate too low will increase suction, and may cause excessive crop loss. Leaving plate adjusted too high may cause excessive trash in the final bin sample.

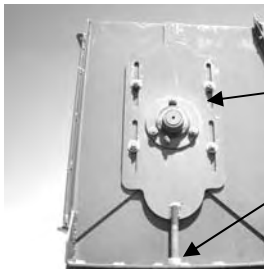


Lowering this plate will increase the amount of vacuum suction for removing foreign matter in the crop. Raising the plate will decrease the suction.

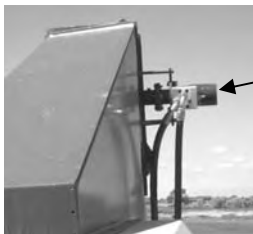
Bucket Elevator



The bucket elevators are driven by a hydraulic motor on the top of the left hand elevator. The two elevators are connected together by a driveline.



Elevator bucket chain tensioner & adjusting bracket. When tightening the bucket chain, both sides need to be adjusted evenly to keep the buckets centered. Do not over tighten the bucket chain. The chain should have approximately 3/4" deflection in or out from straight.



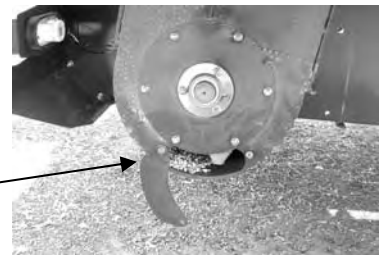
Hydraulic variable speed drive (with control at the motor) for bucket elevators, elevator cross augers and straw walker. Elevator shaft speed should be between 110 and 115 RPM.



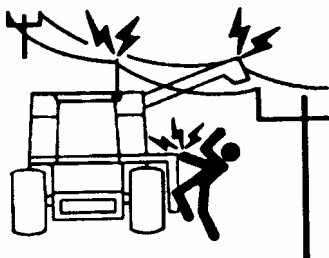
Rear access door to the bucket elevator.



Front access door to the bucket elevator.



Bottom door for easy cleanout.



⚠ WARNING

Elevator Erected Height Is 14'10"

During transport, the elevator leg can be folded down at the hinge point to reduce overall height.

OBSERVE OVERHEAD OBSTACLES

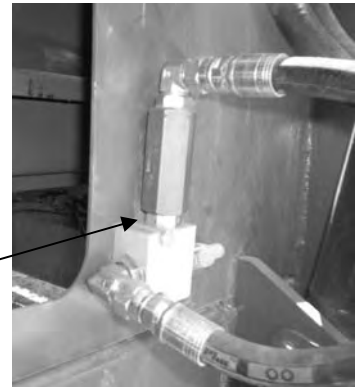
Unloading System



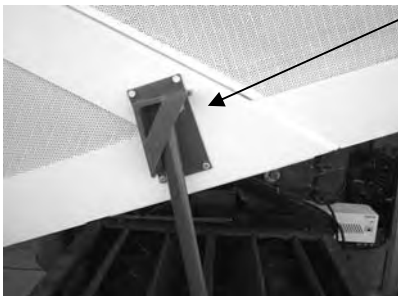
Note! To prevent damage to the bin lifting system, the combine must be completely stopped before raising or lowering the bin.



The two bin cylinders lift bin to start unloading the bean crop into awaiting truck.

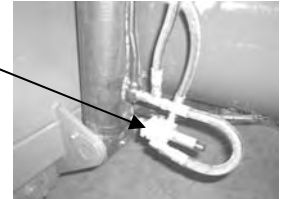


A pressure relief valve is located on the down stroke of the bin rams. Keep this set to a minimum, 500 PSI or less.



Always secure bin with mechanical locks.

Safety feature The counter balance valves (one on the front ram and one rear ram) are hydraulic safety locks, to keep the bin from being lowered, as long as the tractor is not running.

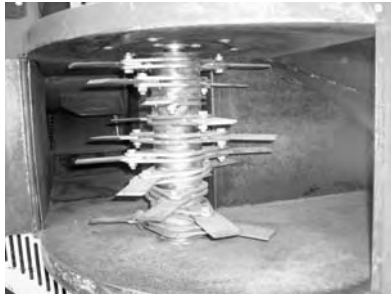


⚠ WARNING

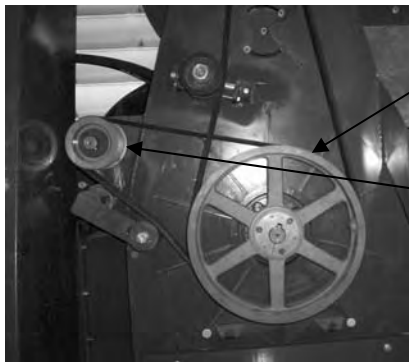
With Dump Bin Raised Height Is 30'6"

OBSERVE OVERHEAD OBSTACLES

Straw Chopper



Each discharge on the Twin Master is equipped with a straw chopper. This helps to brake the straw into smaller pieces and move the material evenly out of the discharge.

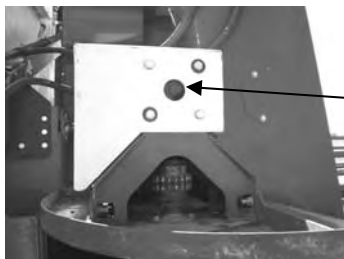


The straw choppers are belt driven from the end of the threshing cylinders.

Then to a intermediate jack shaft.



And finally to a 90° gear box.

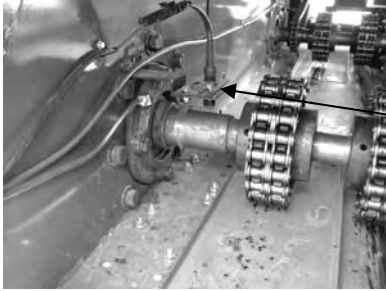


Oil level in the straw chopper gear box can be checked through this sight gage. Use SAE 80-90. Check daily



A spreader with adjustable vanes helps evenly distribute the material.

Shaft Monitoring System

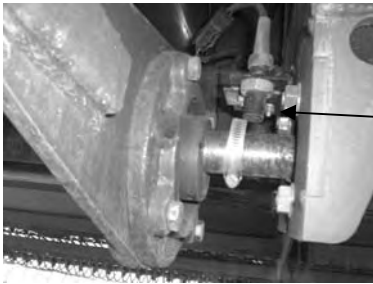


Threshing cylinder sensor

This sensor reads the RPM of the main threshing cylinder. It is located on the front shaft of the right hand cylinder.

All sensors should be no farther than 1/8" away from the object it detects.

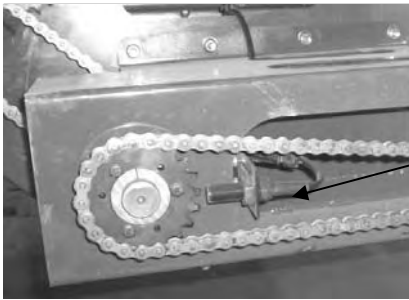
Threshing cylinder RPM range 540 to 300.



Shaker pan drive-shaft sensor

This sensor reads the RPM of the shaker drive shaft. It is located under shaker pan on the right side of the main shaker shaft.

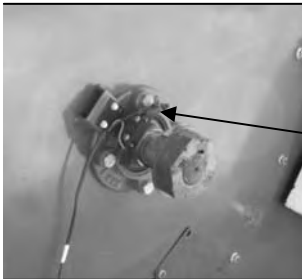
The setting of this shaft should be approximately 340 RPM.



Bucket elevator speed

This sensor reads the RPM of the bucket elevator. It is located on the intermediate shaft between the bucket elevator and the straw speeder.

The setting of this shaft should be approximately 115 RPM.



Transition auger sensor

This sensor located on the right hand end of the transition auger detects motion of the shaft. If the motion stops the alarm will sound.



Straw chopper sensor

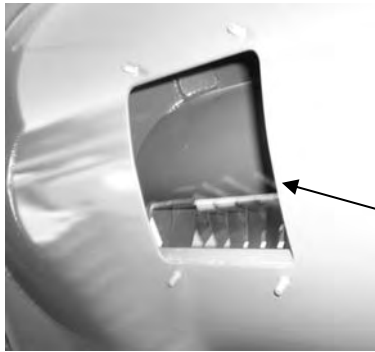
This sensor located on the bottom of each of the straw choppers and detects motion of the shaft. If the motion stops the alarm will sound.



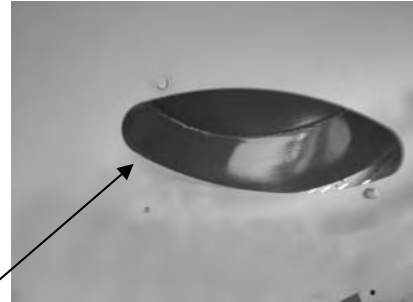
Bin full sensor

A bin level sensor is located on the front inside near the top of the bin. When the bin is full the switch is activated and the alarm will sound.

Cleaning Out the Combine



Cleaning the combine can be done with ease, in a short period of time.



Remove the covers from the ends and rear of the transition auger and use air pressure for cleaning.



Operate combine shaker pan & bucket elevator long enough to visually see the area is clean. This final sieve area should mostly self clean by allowing the machine to run.

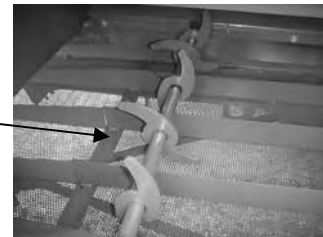


Inspect feeder house for crop residue, use air pressure or a broom to clean.

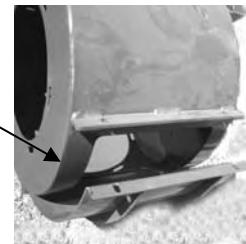


Raise dump bin to make sure it is clean, using a broom or air pressure. With dump bin in the raised position, a visual inspection can be made to the shaker pan area as well as the cylinder for final cleaning.

The shaker pan area should self clean by allowing the combine to run.

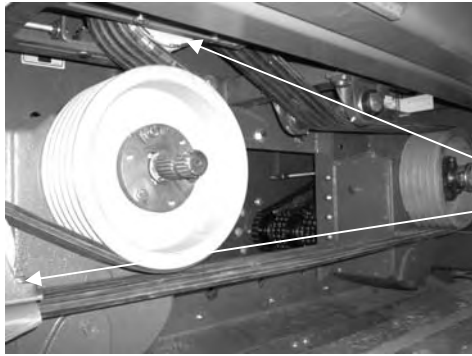


Depending on your model remove either the side or bottom elevator leg clean out access. Operate machine long enough to make sure all buckets are cleaned out.



Once the combine is clean, replace all the lids and shields, lower the bin and you are ready for the next field.

Belt sizes and Configurations



Keep All Shields In Place

2 speed transmission drive belt

Belt tensioners

Belt size CC-180 (5 required)

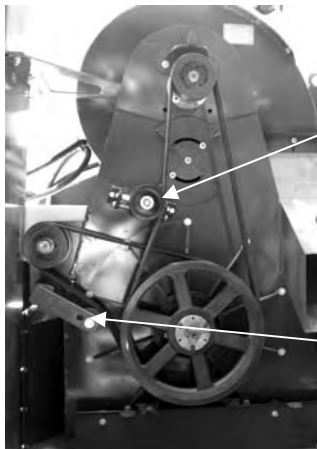


Pickup head drive belt

Belt tensioner

Belt size BB-85 (3 required)

Keep all belts tight



Vacuum fan drive (2 per combine)

Belt tensioner

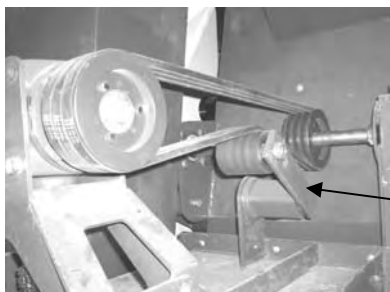
Belt size B-102 with small top pulley

Belt size B-103 with large top pulley

Straw chopper drive (2 per combine)

Belt tensioner

Belt size B-82 (6 required)

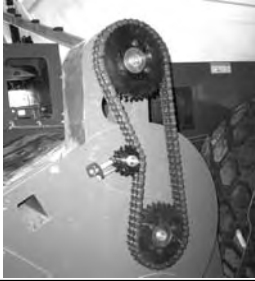


Straw chopper drive (2 per combine)

Belt size B-64 (6 required)

Belt tensioner

Chain sizes and Configurations



Keep All Shields In Place

Transition auger drive

Chain size—(RS 80-2)

Chain length—88 pins or 88 inches



Transition auger gearbox drive chain

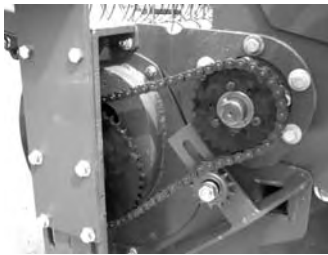
Chain size—(RS 80)

Chain length—58 pins or 58 inches

Threshing cylinder coupling chain (4 Required)

Chain size—(RS 80-2)

Chain length—21 pins or 21 inches



Pick up head drive chain

Chain size—(RS 50)

Chain length—74 pins or 46 1/4 inches



Bucket elevator to straw walker jack shaft drive chain

Chain size—(RS 50)

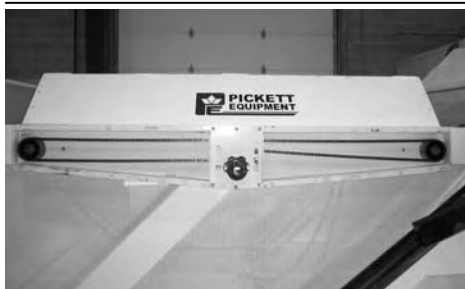
Chain length—111 pins or 69 3/8 inches



Straw walker drive chain

Chain size—(RS 50)

Chain length—82 pins or 51 1/4 inches

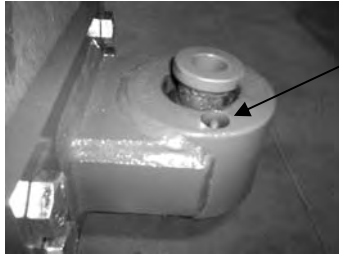


Leveling auger drive chain

Chain size—(RS 50)

Chain length—286 pins or 178 3/4 inches

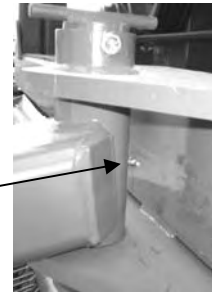
Lubrication and Maintenance



Dura-ball located on swing tongue.

8-10 hrs.

Swing tongue pivot pins
(2 places).

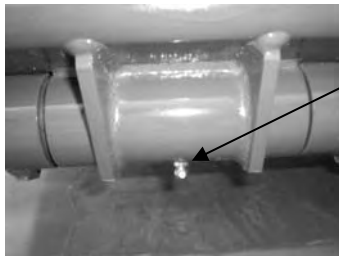
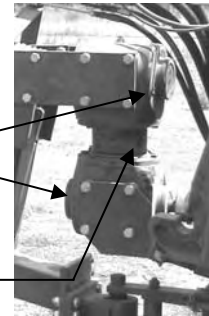


Transition auger gear box level plug.

SAE 80-90 check every 25-30hrs.

Top and bottom halves of the swivel gear box have separate oil level plugs.

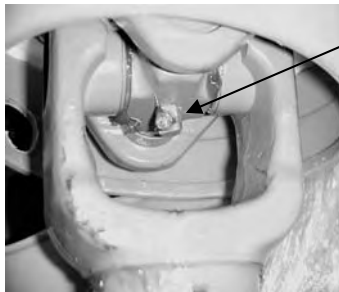
Lube center zerk 8-10 hrs.



Hitch tilt pivot
(5 places).

8-10 hrs.

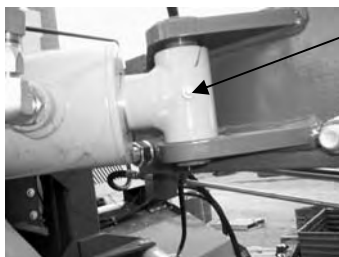
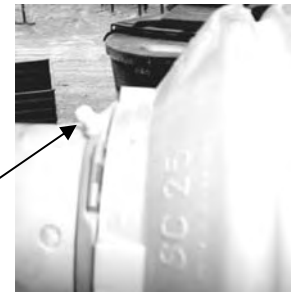
Driveline telescoping members.
Drivelines without zerk need to be taken apart and lubed.



Lube all driveline cross joints.

8-10 hrs.

Driveline shields need to be lubed through plastic nipple.

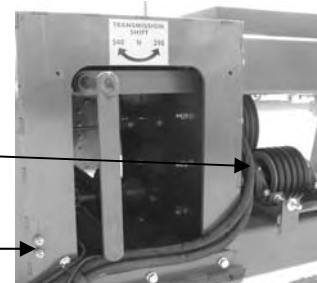


Swing tongue ram
(4 places).

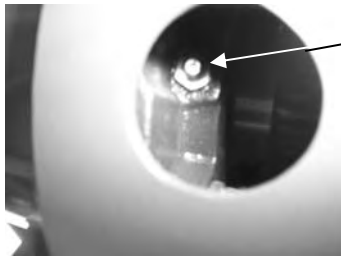
8-10 hrs.

Transmission drive belt idlers
(6 places).

Front threshing cylinder bearings.



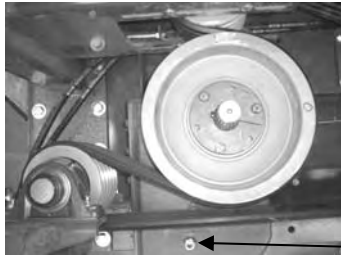
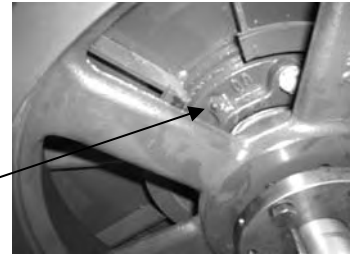
Lubrication and Maintenance



Stationary driveline bearing
(2 places).

8-10 hrs.

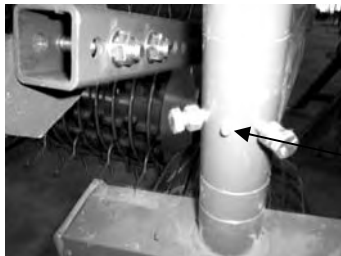
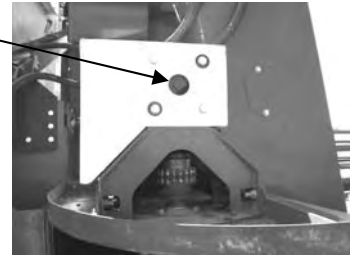
Threshing cylinder rear bearing
(2 places).



Straw chopper gear box sight
level gauge (2 places).

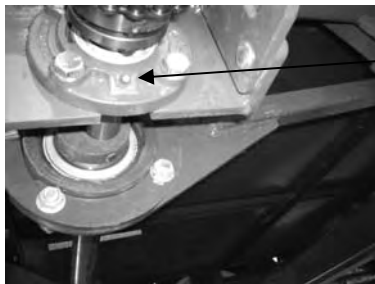
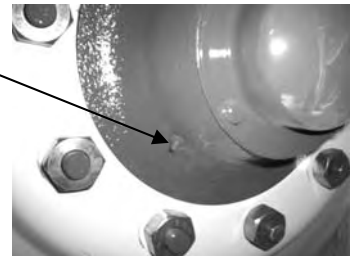
Check daily
SAE 80-90

2 speed transmission sight
level gauge (2 places).



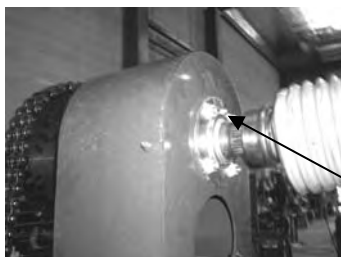
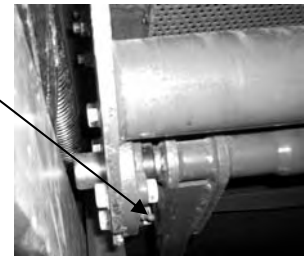
Main wheel hub & bearings. One
lube site for each wheel. Lube
every 40-50 hrs.

Front gauge wheels lube each
wheel every 8-10 hrs.



Shaker pan shaft and eccentric
shaker frame bearings (7 places).

8-10 hrs.



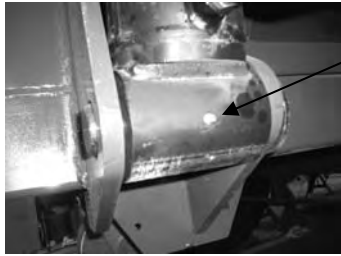
Transition auger bearing one on
each side.

8-10 hrs.

Transition auger drive jack shaft
one on each side.



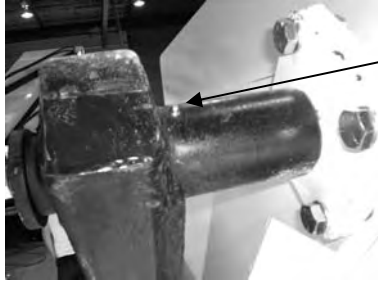
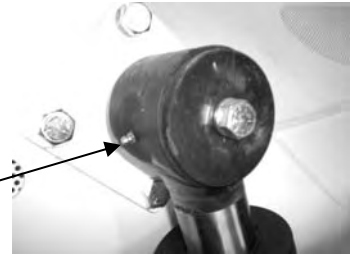
Lubrication and Maintenance



Dump bin ram lower pivot
(2 places).

8-10 hrs.

Dump bin ram upper pivot
(2 places).



Dump bin pivot
(2 places).

8-10 hrs.

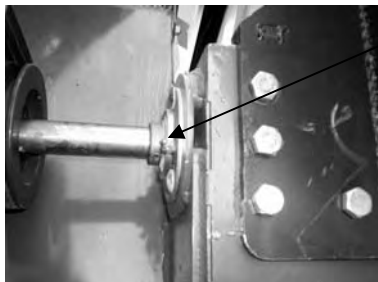
Star roller shaft (2 places).



Straw chopper upper bearing
(2 places).

8-10 hrs.

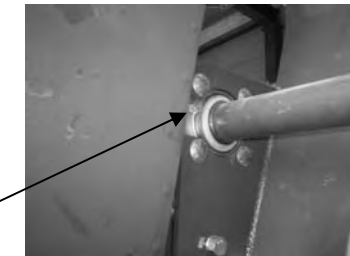
Straw chopper lower bearing
(2 places).



Straw chopper jack shaft front
bearing (2 places).

8-10 hrs.

Straw chopper jack shaft rear
bearing (2 places).



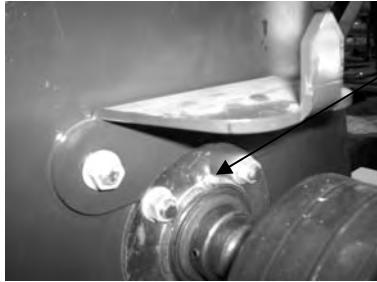
Pickup head bearing one on
each end.

8-10 hrs.

Round roller one on each end.



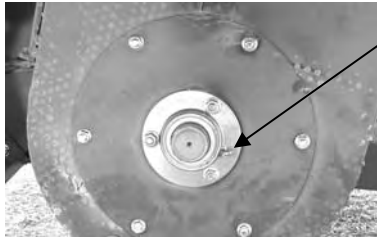
Lubrication and Maintenance



Vacuum fan bearings
(4 places).

8-10 hrs.

Vacuum fan idler pulley
(2 places).



Bucket elevator lower bearings
(4 places).

8-10 hrs.

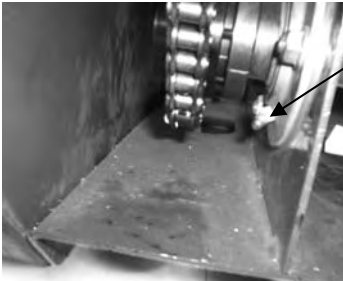
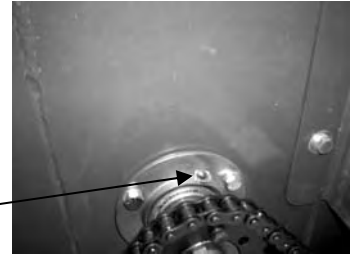
Bucket elevator upper bearings
(4 places).



Transition auger drive idler.

8-10 hrs.

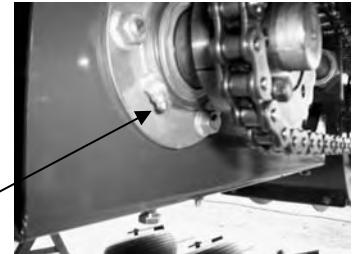
Straw walker bearing
(2 places).



Straw walker jack shaft inner
bearing.

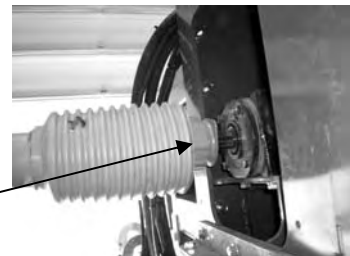
8-10 hrs.

Straw walker jack shaft outer
bearing.



Overrunning clutch on the
tertiary driveline 8-10 hrs.

Radial pin clutch
lube after clutch releases.



Tire Specifications



Tire size-30.5L—32
Maintain 26 lbs. pressure



Pickup head tire
Tire size-18 x 9.5—8
Maintain 24 lbs. pressure

Storage & Winterizing

- Clean combine of all crop residue.
- Empty all crop from bin.
- Lubricate all grease fittings.
- Pull all drivelines apart and clean and lube telescoping members. Lube all cross bearings and plastic guard tubes.
- Check tires for proper inflation.
- Fold elevator leg over, if necessary for storage.



TROUBLE SHOOTING - Problems (P) / Solutions (S)

P. Hydraulic oil is overheating.

S. Excessive oil flow. The oil to pickup head, feeder house, shaker table, bucket elevator, cross conveyor, and leveling augers in bin are operated in series by one remote. Do not use more oil than required. Open shaker table flow control on the motor to full ON (counter clockwise). Regulate the flow of hydraulic oil from the tractor until shaft speed on shaker is approximately 350 RPM then set the speed to 340 RPM using the flow control on the shaker motor. There will be plenty of oil to operate rest of machine.

S. Check hydraulic oil level in tractor. Check hydraulic filters on tractor. Check for blocked oil cooler on tractor.

P. Pickup head stops and will not turn.

S. Check all chains and sprockets for tightness and alignment.

S. Check speed control knob and make sure it is turned up or on.

S. Check belts from star feeder to pickup head for tightness, if worn replace.

S. Check cam arms on pickup head for proper tracking in the cam.

S. Check the cam bearings for wear.

S. Check Fuses.

S. Check that 12 Volt power supply is properly connected and has a good ground.

S. Check to see electrical receptacle for the solenoid on aluminum valve block is connected properly, clean and reconnect.

S. Check for any obstruction in star feeder or pickup head.

P. Shaker table not working properly.

S. Check all fasteners for tightness on eccentric shaker arm and bearing assembly.

S. Check shaker pan springs that support shaker table. Make sure they are not bent or broken and replace when necessary.

P. Picking up rock with pickup head.

S. Slow pickup head down to 1/2 of ground speed.

S. Operate pickup head teeth 1/2" to 2" above soil surface. Use adjustable gauge wheels to maintain proper height.

P. Pickup head not picking up windrow.

S. Check for broken chain/hydraulic motor.

S. Replace broken teeth.

S. Lower pickup head until pickup head teeth are 1/2" to 1" above ground surface.

S. Check cam bearings and finger tube bolts.

P. Broken Teeth.

S. Running pickup head too low.

S. Check for damaged rotor rods rubbing fingers.

P. Transition auger plugging.

S. Slow down and reduce crop feeding into machine.

S. Check that transition auger speed is correct. (Refer to page # 26.)

S. Check for bent auger flighting or worn paddles.

P. Splits or cracks in beans.

S. Slow down cylinder by reducing RPM on tractor or change speed at transmission to low gear. Remember when slowing down cylinder, vacuum will require adjustment accordingly.

S. Inspect threshing pins and location make sure the pin is not too close to the concave (1/2" to 3/4" is normal).

S. Stop the combine abruptly while threshing. Remove inspection plates on the sides of the combine and inspect product on the shaker table for splits and damage and location of damage. This may not be the only place to look for damage. Bucket elevators, bucket elevator augers or shaker table may not be operating at the correct speed and causing the damage. Once the problem area

has been found make proper adjustments accordingly to eliminate damage.

P. Production capacity loss.

S. Threshing pins may be set to aggressively slowing the threshing process. Go back to start up setting.

S. Check for bent auger flighting on main cylinder. Straighten if needed.

P. Pickup head stalling.

S. Tighten belts between the star feeder housing and the pickup head. Belt dressing may be used to reduce slipping.

S. Check all fasteners throughout pickup head and make sure they are tight and positioned correctly.

S. Check drive chain and sprockets for proper tension and alignment.

P. Dirt in beans.

S. Slow pickup head down, if the pickup head speed is too fast dirt is not allowed time to fall to the ground.

S. Pickup head operating too low, with teeth digging in the dirt. Lower gauge wheels to bring teeth up.

S. Adjust cutting & windrowing system to eliminate dirt before it gets to the combine.

S. Inspect vacuum fan. Listen, and feel combine for unusual vibration. Clean fan blade when buildup occurs.

S. If dirt is from small dirt clods use a smaller final screen.

P. Monitor not functioning properly.

S. Refer to Dickey-john monitor owner's manual.

S. Check all electrical connections and wiring. Check 12-Volt power source. Check entire system for damage.

S. Check Fuses.

S. Make sure indicators located on shafts are the proper distance from the

sensors.

P. Transition auger plugged.

S. The right side of the auger will accept a tool that is provided with the combine to reverse the auger, aiding in the unplugging process.

S. Check for mechanical failures such as a seized bearing, misaligned sprockets and chain or faulty radial pin clutch.

P. Trash in bin with beans.

S. Adjust vacuum.

S. Check condition of fan and shroud.

S. Check belt tension on the vacuum fan.

S. Check cylinder pin setting.

S. Check final screen size.

P. Plugged elevator.

S. Too wet of conditions.

S. Bearing seized or worn out.

S. Bucket elevator chain loose and lodged or caught.

P. Leaving beans on ground from windrow.

S. Pickup head operating too high off the ground. (If leaving whole plants).

S. Pickup head operating at too fast of RPM.

S. Pickup head operating too low, finger is bending in the dirt then hitting the crop with enough force to thresh the plant on the ground.

S. Tractor tires running over the windrow.

P. Leaving beans on ground behind the combine mostly cracked.

S. Too much vacuum suction, adjust suction.

S. Shaker pan speed too fast causing crop to bounce.

P. Leaving beans on ground from final screen.

S. Final screen out of adjustment.

- S. Final screen too small for seed size.**
 - S. Holes in final screen plugged with debris.**
 - S. Damage to shaker pan or belting seal around the shaker pan.**
 - S. Rate of travel too fast for combine capacity.**
- P. Leaving beans on ground behind the combine unthreshed and mixed with straw.**
- S. Cylinder pin setting may need to be more aggressive.**
 - S. Cylinder RPM may need to be changed to a faster speed.**
- P. Leaving beans on ground behind the combine threshed but mixed with straw.**
- S. Cylinder pin setting may need to be more aggressive.**
 - S. Set a pin near the rear of the cylinder to an extreme hard thresh or 90° forward setting, then the next pin to the extreme easy thresh or 60° rearward setting. Repeat this pattern two to four times. This will tear the foliage apart and let the crop find the holes in the concave.**
 - S. If holes in concave are covered with a mat of grass or foliage set a pin near the rear of the concave close to the concave to help sweep the material away.**
 - S. Cylinder RPM may need to be changed to a faster speed.**
 - S. Replacing two pins with knives (usually pins # 3 and # 6) will help break the foliage into smaller pieces and allow the crop to more easily find the concave holes. Remove the pin and place the knife under the pin clamp and secure with the same nuts and bolts.**

Specifications

Total working width	20' 8"
Total height	14' 10"
Total length	26' 11"
Weight	24,500 lbs.
Bin capacity	18,500 lbs. approximately
Usable pickup head width	174"
Dump height	13'
Tire size	30.5L – 32 16 ply
Tractor requirements	200 PTO horse power 4 hydraulic remotes – 18 GPM 1 3/4" 20 spline 1000 RPM PTO

Machine Identification

For parts and service please have the following information:

- Model Year
- Serial Number

Refer to machine ID tag



Pickett Equipment

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Burley, Idaho 83318 * Fax: 208-678-1404 * pickett@rvmi.com