



PICKETT EQUIPMENT

Operator's Manual



Double Master Plus Dry Edible Bean Combine

Central Flow -- Low Impact



Pickett Equipment

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PICKETT EQUIPMENT

*Manufacturers of
the Most Innovative
Bean Equipment*

Congratulations on the purchase of your new Pickett /MIAC Double Master Plus 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 farmers 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 Double Master Plus 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

Running the PTO over 540 rpm to combine

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



DOUBLE MASTER PLUS

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. Other items (without *asterisks) are a guide to routine annual maintenance that could be done on the farm or by any authorized Pickett dealer.

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| 1. | *Remove all uninstalled parts from the bin. |
| 2. | *Inventory drive system components (Walterscheid) |
| 3. | *Assemble pick up head gauge wheels, left and right. Mount to pick up head. |
| 4. | Inspect 3-speed chain drive system. Check grease lines to bearings. Check bearings, front and back. Check sprocket alignment. Check chain tension and placement of half or master link. NOTE: Make sure that the master is first in direction of travel with clip or cotter pin open end trailing. |
| 5. | Check cornhead grease level in 3-speed changer. Recommended level is to the bottom of the lower drive shaft. |
| 6. | Seal 3-speed drive system cover with silicone gasket material. Inspect shaft seals. |
| 7. | Replace 3-speed drive inspection plate. |
| 8. | *Check sprockets and bearings on main cylinder shaft to 90° gearbox. Ensure alignment, tighten and secure. Check chain tension. Inspect 90° gearbox oil level. |
| 9. | *Inspect connections of radial pin clutch to gearbox and drive shaft to transition auger. |
| 10. | Inspect 45mm bearing next to transition auger upper drive pulley. Grease if needed. |
| 11. | Check upper and lower transition pulleys for alignment. Check idler bearings. Check belt idler alignment. Check belt tension. |
| 12. | Inspect bearings on both ends of transition auger. Lubricate if necessary. |
| 13. | *Inspect belt and belt tension from star feeder drive pulleys to 4" roller on pickup head. Grease bearing location if necessary. |
| 14. | Lubricate pick up head drive chain and adjust chain tension. Check sprockets for alignment and tighten. |
| 15. | *Inspect pick up head assembly, cam bearings and cam track, rubber pick up teeth and finger rod connections. |
| 16. | *Inspect star feeder. Rotate by hand listening for misalignment of stripper bars. |
| 17. | Inspect bottom of star feeder housing for damage. Repair as needed. |
| 18. | Remove transition auger cover plate and inspect auger flighting for wear. Hard surfacing of auger flighting edge may be required from time to time. Hard surface from the center moving outward as needed. |

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| 19. | *Install star feeder motor and couple to star feeder shaft with chain provided coupler. Check for alignment and tighten setscrews on chain coupler. Grease bearing if necessary. |
| 20. | *Assemble ladders and handrails to platform. |
| 21. | *Check transition auger motion sensor for proper placement. Distance should be $\frac{1}{8}$" between magnet and sensor for correct sensing. |
| 22. | Check 4 inch and hex roller sprockets for alignment and chain tension (right side). Lubricate as needed. |
| 23. | Check pick up head pivot points for wear on both sides of the 4" roller. If necessary, replace pivot washer and reform pivot bracket and brace. |
| 24. | *Check gauge wheel tire pressure. Recommended psi is 20lbs. Inspect gauge wheel bearings. Lubricate and replace as needed. |
| 25. | *Check all hydraulic valves, lines, and fittings for leaks. |
| 26. | Check all hydraulic motor coupler connections as follows: 1) star feeder, 2) shaker motor, and 3) leveling auger motor. |
| 27. | Inspect all hydraulic cylinder and 2 stage dump pins. Lubricate as needed. |
| 28. | *Check all electrical lines and components to lights and Dickey-John monitor system. Ensure they are clean and securely fastened to framework. |
| 29. | *Inspect main tire pressure (40 psi max.) Ensure that all main rim lug nuts are tightened. Inspect main hubs. Inspect hub bearings by removing dust cover. Lubricate bearing as needed. Inspect hub bearing preload by tightening castle nut firmly and then by backing off tension by approximately $\frac{1}{4}$ turn or to next notch on castle nut. Replace dust cover repeat on other side. |
| 30. | Inspect shaker table leaf springs. Access through side cover. Replace any damaged leaf springs. Ensure table is level in relation to main frame (About 1" below frame). Tighten securely to mounts using grade 5 bolts and heavy-duty flat washers. Tighten with double nut provided or with whiz-type nut. |
| 31. | Check shaker table wishbone connection to shaker table. Ensure that fasteners are secure. Lubricate wishbone anchor points. Inspect eccentric bearing and grease as needed. Inspect eccentric drive shaft pillow bearings and lubricate as needed. |
| 32. | Remove shaker table and elevator leg sprocket shields. Inspect shaker table and straw walker belts, bearings, and pulleys for alignment and lubrication. |
| 33. | Remove left and right shaker table inspection shields. Check straw walker tines for even placement between shaker table dividers. |
| 34. | Check shaker table double bearings. Bearings are located in the bearing housing located behind the shaker table motor mount. The zerk on the housing will lube both bearings from the inside. Grease if needed. |
| 35. | Inspect sprocket and chain alignment from shaker table drive shaft to elevator leg. Lube chain and bearings on both sides of elevator leg. Check outside sprockets for alignment and lube chain. Replace all shields. |
| 36. | *Lift upper elevator leg into place and secure with provided fasteners. |
| 37. | *Connect bucket elevator chain and ensure proper alignment. Connection can be done through the leg cleanout cover at the bottom of the elevator leg. |
| 38. | *If DMP is equipped with cross conveyor belt, check position of belt clean-off scraper. Inspect belt lacing. Inspect tail roller shaft sensor for proper placement. |

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| 39. | If DMP is equipped with cross auger, inspect bearing on both ends. |
| 40. | *Inspect final shaker screen. Ensure proper screen operating position (approximately ¼” higher in rear). Ensure tilt-adjustment bolts are securely fastened. |
| 41. | If the use of the optional bumper bar is required, ensure proper placement and working order. |
| 42. | *Inspect vacuum setting. Recommended initial setting of vacuum adjustment plate is at level 4. |
| 43. | Inspect turbine blades and vacuum shroud. Open rear pulley shield to expose vacuum inspection plate located below the upper drive pulley. Loosen nuts and drop 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. |
| 44. | Inspect vacuum drive belt for alignment. Inspect belt tensioner (idler) bearings. For bearing replacement, use high speed sealed bearings. |
| 45. | *Inspect position of threshing cylinder speed sensor. Sensor is located behind lower vacuum pulley. Setting should be 1/8” to ¼” from pulley spokes. |
| 46. | *Adjust bucket chain tension. Tensioners are located on each side of upper elevator leg. Ensure that shaft placement is perpendicular to the bucket chain. (½” to ¾” play in chain needed). |
| 47. | *Install vacuum hose to upper elevator leg vent pipe. Clamp other end to vacuum fan housing vent pipe. |
| 48. | Inspect rubber belting from elevator leg transition to bin chute. |
| 49. | Inspect bin-leveling auger. Inspect the hydraulic motor coupler and both auger shaft bearings. |
| 50. | *Install dump bin extension shield. Clean bin of any foreign material. |
| 51. | *Install secondary driveline. (If needed, install radial pin clutch.) |
| 52. | *Install primary driveline. Remove cut out clutch guard and install cut out half of primary driveline to lower main drive shaft. Recommended keeper pin torque is 75 foot pounds. Grease bearing and replace cut out clutch guard. |
| 53. | *Install pick up head electrical speed control box. |
| 54. | *Install adjustable pull tongue. Ensure that pull tongue placement allows for level operation. Install jack. Remove shipping stand. |
| 55. | *Hook up tractor to combine. Recommended hitch pin is 1 1/8”x 7” grade 8 bolt. Two heavy-duty flat washers and 2 nuts are recommended. |
| 56. | *Hook up electrical system of combine to tractor. Pick up head speed control box and Dickey-John monitoring system should be installed and tested. |
| 57. | Hook up hydraulic lines to tractor for initial startup and testing. Raise 2-stage bin dump system. Lifting sequence: 1 st stage) lifts parallel arms, 2nd stage) lifts bin. IMPORTANT! Inspect distance from elevator leg to bin chute prior to lifting bin. Ensure that a safe margin is maintained while lifting. Adjust priority valve, as need, to ensure proper lift sequence and clearance while lifting bin. While raising, check for hydraulic leaks. |
| 58. | *Inspect threshing pin placement and tightness. Rotate threshing cylinder by hand to observe pin clearance to concave bars. Recommended margin is ¼ inch. |

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| 59. | *Inspect bin to concave seal. Adjust channel seals as needed. |
| 60. | *Test pick up head lift and drop. Adjust tractor hydraulic flow to regulate pick up head lift and drop speed. Set pick up head teeth ground clearance to 1 inch by adjusting gauge wheels. |
| 61. | *Test run all hydraulic motors. Motors operate in following series: 1) pick up head, 2) Leveling Auger, 3) Shaker Table. Optional 4th motor runs optional straw spreader. Check and remedy all hydraulic leaks. |
| 62. | *Test run all mechanical operations. Begin slowly to observe for misalignment or restrictions. Operate shaker table approximately at 280 Rpm. Using in-cab electric control switch, turn pick up head on and off to ensure it is operational. |
| 63. | *Install 540 PTO shaft (front, constant velocity half) from combine to tractor. Lubricate if necessary. Test run driveline and all drive train components by slowly engaging PTO. As PTO is engaged, threshing cylinder and vacuum fan can be tested. Listen, feel and inspect combine for any abnormal sounds or vibrations. Adjust and remedy as needed. |
| 64. | If DMP is equipped with optional straw chopper, test run straw chopper. Engage chopper slowly and regulate hydraulic flow. Chopper speed should be set at 1400-1600 Rpm. Listen, feel and inspect chopper for any abnormal sounds or vibrations. Lubricate chopper shaft bearings as needed. Ensure that chopper monitor sensing system is working properly. |

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



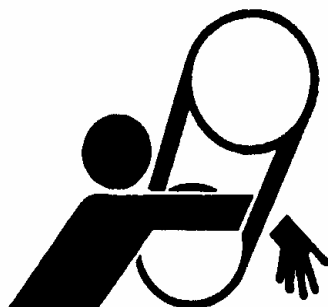


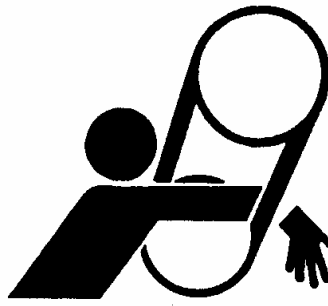




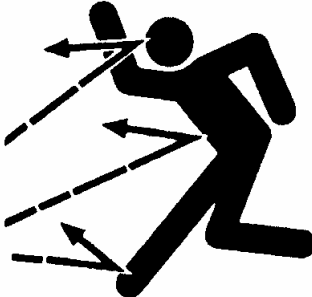
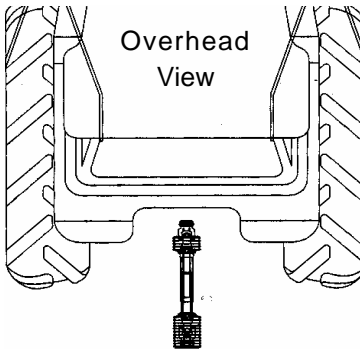
Warning

CRUSHING HAZARD

- To prevent serious injury or death
- Do not work beneath the bin while in the raised position, while tractor is running or hydraulic check valve is missing. See bottom of page 41.
- Tongue stand must be in place while connecting or dis-connecting from the tractor.

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|  |  <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, |
|  |  <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 |

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|  | <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> |

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|  | <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 also <u>do not</u> exceed 540 rpm PTO input speed • Vuetas extremas del tractor puede causar danos a el cardan y no debe de exceder 540 de la toma <p><u>Importante</u></p> |
| <ul style="list-style-type: none"> • <u>Refer to owners manual for all lubrication points</u> <p><u>Dese referencia a el manual de operacion para puntos de lubricacion</u></p> | |
| <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.

**Right hand
side of
combine**



**Left 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 Double Master Plus 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 tightness. Inspect the 3 speed housing chain and sprockets to make sure they are in line and idler is properly adjusted with each other and well lubricated.**
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 and secondary drivelines for lubrication and make sure they are securely fastened especially, the clamping cone on the Primary Driveline. (cut out clutch side, 75-ft. lbs. torque to keeper bolt). Make sure all setscrews and bolts are securely fastened.**
6. **Inspect pick up 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 $\frac{3}{4}$ " to $1\frac{1}{2}$ " 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 # 21).

9. The combine follows directly behind the tractor. Choosing the proper size draw bar pin is important. When using a bolt with nuts and flat washer (Minimum 1 1/8" x 8") use double nut to leave pin loose in hole, this allows lower slot on hook up to work properly in uneven terrain. The use of a smooth tin or plastic sheet mounted on the underneath side of the draw bar will aid in driving over higher windrows.
10. The double master requires 4 hydraulic outlets on the tractor. #1 remote should operate the pickup head, star feeder house, shaker table, bucket elevator, cross conveyor and leveling auger in the tank. 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 at the rear right side of the combine) to Full. Turn the hydraulic flow of your tractor down to a low flow rate. Using the combine monitor system RPM read out. Adjust the flow of hydraulics so the shaker pan shaft speed is 290 RPM, this will operate the bucket elevator speed at an optimum speed of 110 RPM. This should provide plenty of oil for the other operations without pushing more oil through the system than required. Turn the pickup head speed control knob up or down so the pickup head speed does not exceed that of 1/2 operational ground speed. The #2 remote controls the raising and lowering of the bin. Make sure the tractor hydraulic control levelers 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 divider valve located at the beginning of the hydraulic system will regulate the amount of oil going to each set of cylinders in the dump bin system, while maintaining a level lift. 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. #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, The check valve provided also can be adjusted to regulate the flow of oil for smooth up and down operation of the pickup head. #4 remote, controls the optional chopper attachment. Eight gal. minimum needed to operate chopper at optimum speed.

11. Check alignment of the conveyer belt. Make sure it is operating centered on the rollers. The monitor system will detect a decrease in motion.
12. The vacuum fan is located in the upper rear position of the combine and is 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 auger speed from 330 to 450 RMP. The larger pulley is used when operating at a higher range from 450 to 540 RPM. This change in pulleys are mandatory for best results in vacuum suction. A vacuum air port is provided for easy inspection of the fan and is directly below the pulley driving the vacuum fan. Inspect the fan daily, especially in high moisture situations. Build up on the fan at high speeds cause imbalance and fan failure. When caked on material is noticed on the fan blades it must be cleaned off for safe operation. A vacuum hose extending from the upper end of the vacuum assembly to the top of the elevator will remove small particles from the upper portion of the bucket elevator. Inspect bucket elevator for chain tightness and adjustment. 110-115 RPM is the optimum bucket elevator speed to help prevent damage to crop due to thrust from excessive chain speed.
13. Cylinder speed and threshing pin placement can vary, depending on field

conditions from wet to dry. Threshing starts at the transition auger, which feeds the main central flow cylinder. A sprocket change 20 to 24 or 24 to 20 is located on the front of the cylinder shaft and at the rear side of the secondary driveline to the gearbox. Utilize the 24 to 20 setting for faster feeding in high moisture or tougher conditions. Use the 20 to 24 setting for slower feeding in dryer, easier threshing.

The real threshing begins as the transition auger feeds the main cylinder. 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) There are 31 threshing pins spaced evenly on the auger fighting of the cylinder. It is important to keep the cylinder balanced, when adjusting the threshing pins. If extra dry conditions exist, threshing pins may need to be removed, systematically along the flighting. See Trouble shooting. Start up setting: (Refer to Combine Cylinder Startup Settings) By extending some pins out closer to the concave, will keep the concave clean from buildup of crop residue material. In most conditions having 3 to 4 threshing pins set at 12:00 to 1:00 towards the rear of the cylinder and still maintaining the ¼ to 1” clearance from pin to concave, will slow down the material and finalize the separation. Cylinder speed and threshing pin placement need to work together for efficient separation. Increased cylinder speeds can cause more crop seed damage, where slower cylinder speed will likely reduce damage.

IMPORTANT: As RPM on cylinder reduces so does the suction on the vacuum. It becomes a necessity to adjust the vacuum 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 to the rear of the combine where the vacuum system removes impurities through the vacuum duct.

Vacuum adjustment depends again on the cylinder speed, To adjust vacuum move cover plate above final screen. Using a $\frac{3}{4}$ " wrench loosen nuts on each side of the vacuum plate. A number system is provided for reference and to keep the plate level. Higher numbers mean less suction. Start up setting is at #4. To fine tune visual inspections are necessary. With combine in operation, watch in the area under the vacuum duct where the beans pass over the shaker table to the final screen. If beans are floating or bouncing up, the vacuum is too much. Raise each side of the plate equally in $\frac{1}{2}$ " 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 materials are not being separated from the beans.

There are 3 round 10, 12, and 14 mm screens, plus 2 oblong $\frac{1}{2}$, and $\frac{3}{8}$ size screens. Product size will determine final screen size selection to use. There are 2 fasteners on each side of the final screen to maintain proper tray tilt. (Refer to Combine Shaker and Separation) Operated screen $\frac{1}{4}$ to $\frac{1}{2}$ " higher in rear or level. If beans are going off the back, go to bigger screen size.

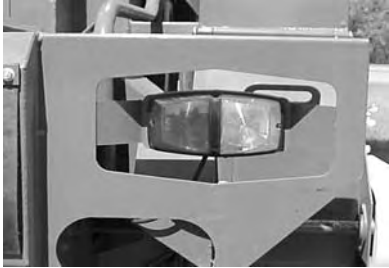
For making sure the tray is level (side to side), lift up rear inspection flap to observe. A bumper bar system provides a jolting action to shaker table and is located on rear of final screen to keep dirt clods and other materials from clogging up the screen.

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.



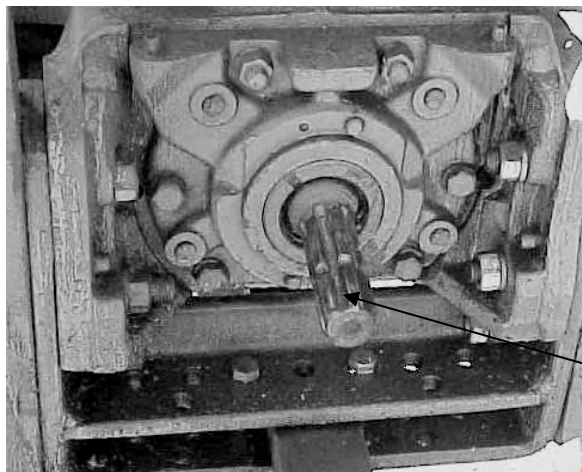
When transporting on a road, flashing lights give warning to other drivers. These lights are located on both sides at the rear of the combine.

Lights are positioned on the outer, left and right, rear corners of the combine.



This light inside the bin should give adequate lighting for night work.

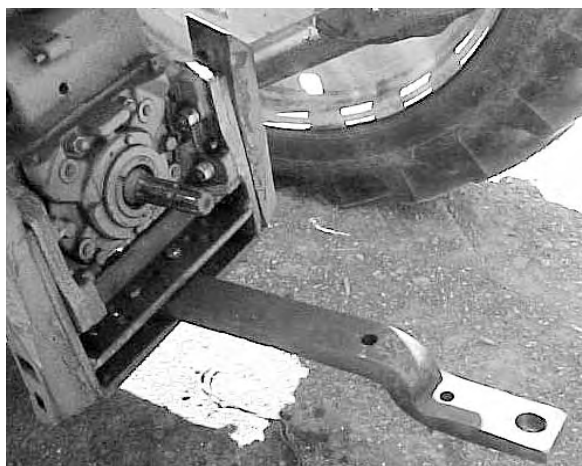
Setting Up The Tractor



Tractor PTO Speed

This combine is equipped with a 540 RPM, (Walterscheid) power takeoff.

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 16 in. from end of PTO shaft to center of hole in drawbar.
2. Adjust drawbar for 6-12 in. clearance between PTO and drawbar, and 18-20 in. clearance from 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.



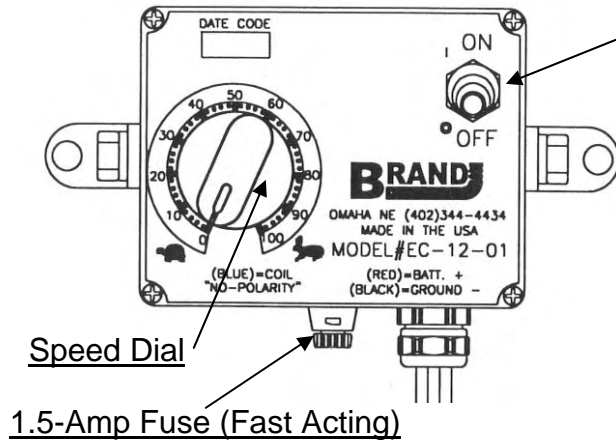
Adjusting Tire Spacing

Tractor tires should be set out wide enough to straddle the crop windrow to minimize crop damage.

Important!

Driveline maintenance instructions are included inside the Walterscheid information packet.

Dial-A Speed



Switch

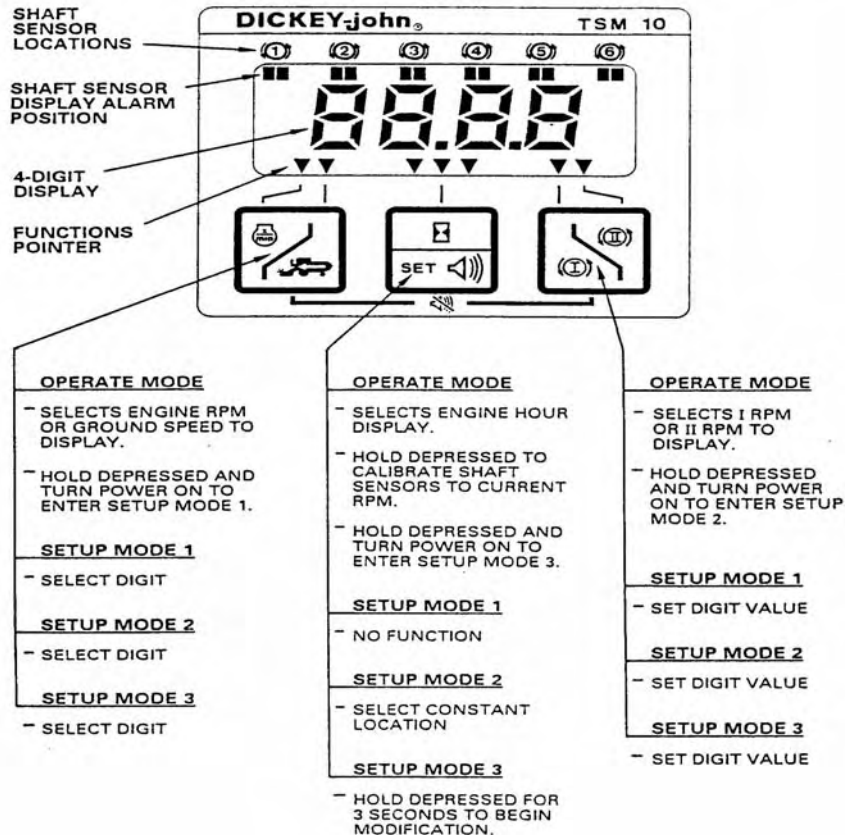
- The Dial-A-speed knob controls the ratio of the pick up head speed to the ground speed.
- To operate, start the machine, turn the switch to the ON position, watch the speed of the pick up head and adjust the Dial-a-Speed knob until you get the desired ratio to ground speed. Keep in mind lower RPM usually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

Shaft Monitor System

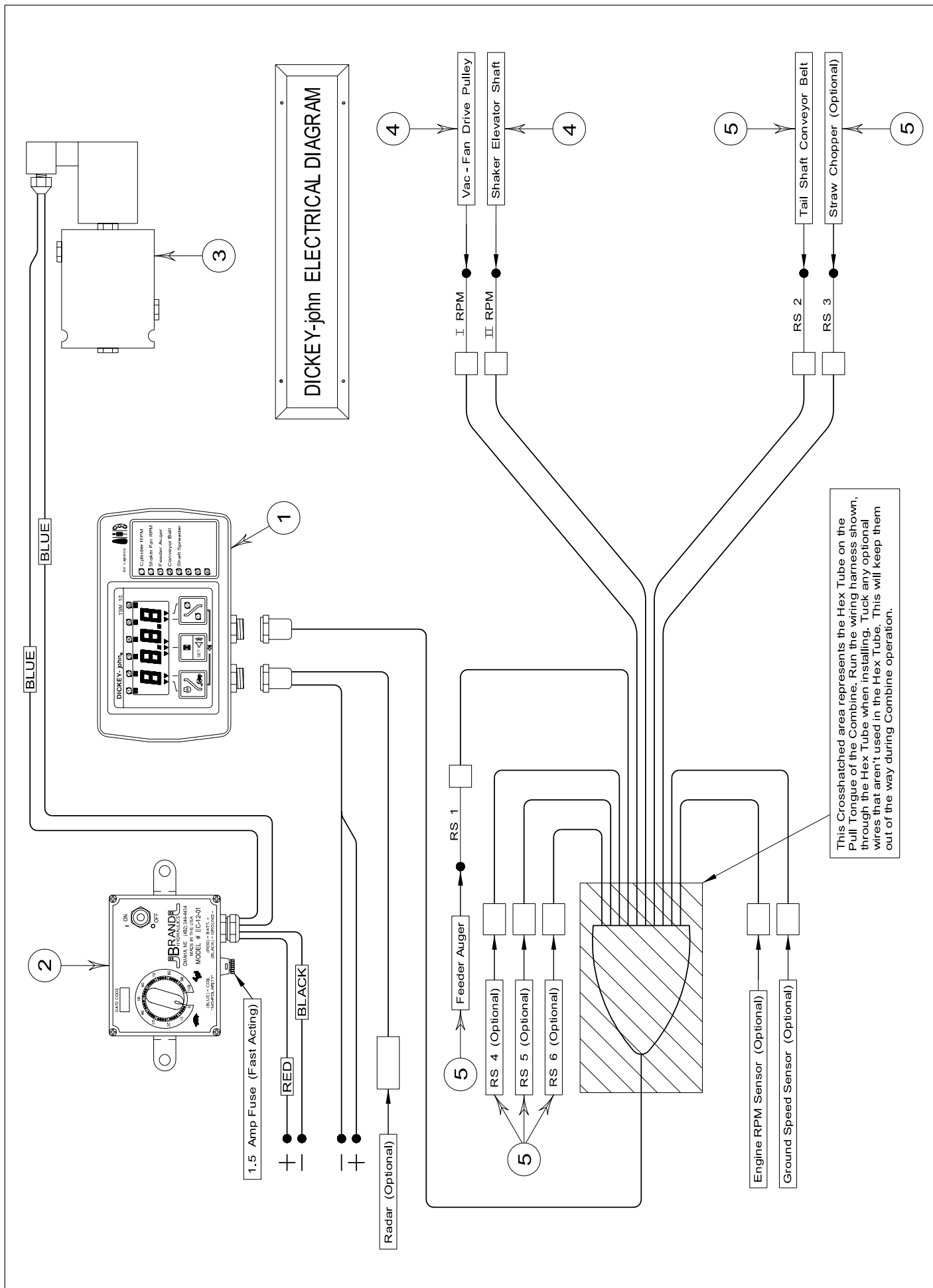
LEARNING TO USE THE CONSOLE

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



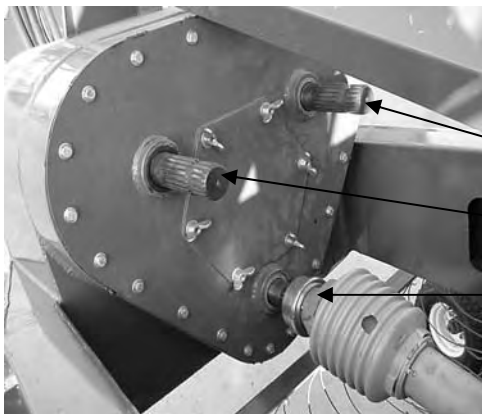
This Crosshatched area represents the Hex Tube on the Pull Tongue of the Combine. Run the wiring harness shown, through the Hex Tube when installing. Tuck any optional wires that aren't used in the Hex Tube. This will keep them out of the way during Combine operation.

Complete Drive Train



540 PTO Input Speed, & CV.

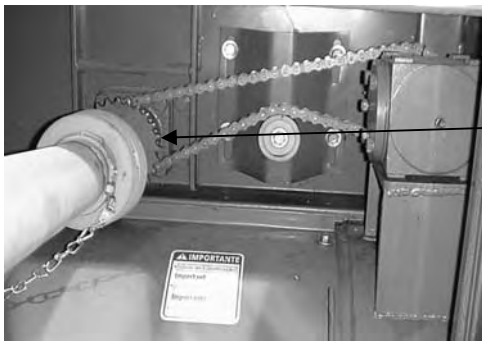
Quick coupler sleeve, for easy on and off



3 Speed RPM Gear Box

360 Cylinder shaft speed for main thrashing auger
432 In RPM's
540

Front View



Feeder Auger Drive

20-24 & 24-20 Double sprocket speed change. This allows the feeder auger to operate at the proper speed when a major RPM change is made to the cylinder, either faster or slower.



Radial Pin Clutch & Drive Shaft

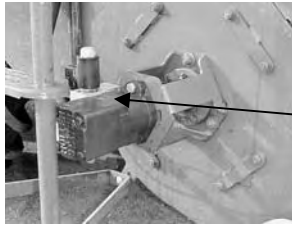
The radial pin clutch is on the other side of the 90 degree gear box pictured on top. The shaft drives the feeder auger pulley.

Feeder House

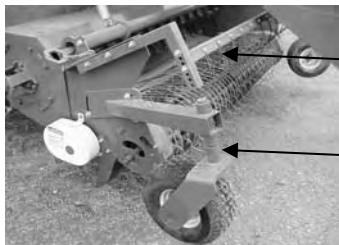
Transition (Feeder) Auger

Intermediate Star Feeder

8 Bar Pickup Head



Variable speed, 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.



Transition auger inspection lid.

Intermediate star feeder, with star feeder scrapers under the shield.

Perforated bottom screen for dirt elimination. A cover plate can be installed on top of perforations for reducing crop damage.



Transition auger drive, mechanically driven from PTO driveline. Speed changes possible by changing drive chain to other sprockets.

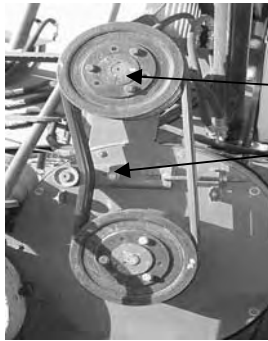
Intermediate star feeder and pickup head drive, both variable speed hydraulic drive, with belt tensioner. Hydraulic drive motor on opposite end of the shaft.

Feeder House

Drives for the feeder house



- Transition (feeder) auger drive.
- Star feeder to pick up drive
- 8 bar pick up head drive
- Hydraulic cylinder for raising and lowering pick up head

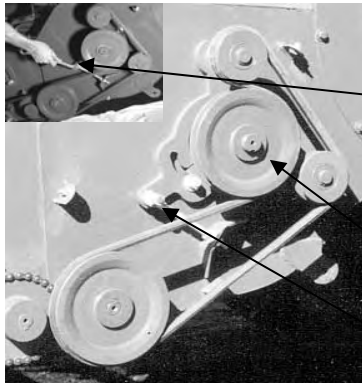


Transition Auger Drive

- PTO driven, from gearbox & radial pin shaft.
- Belt tensioner

1 to 1 speed ratio on belt drive. The auger speed can be increased or decreased by changing the chain on the 20-24 or 24-20 sprocket from the driveline to the gearbox.

Pick Up Head Drive Belt & Chains

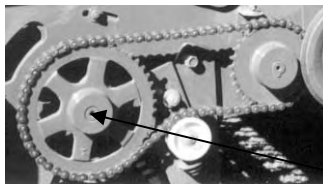


Belt is tightened, with this bolt, after loosening the two hold down nuts on slotted tensioner bracket.

Belt is driven from the star feeder shaft

Belt tensioner for the pickup head drive.

Floatation spring adjustment for pick up head



Pick up drive chain, right hand side

Pick up head drive chain and tensioner, left hand side.

Adjustable Pull Tongue

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



Concave Separator & Shaker Pan



Concave Separator Sieve

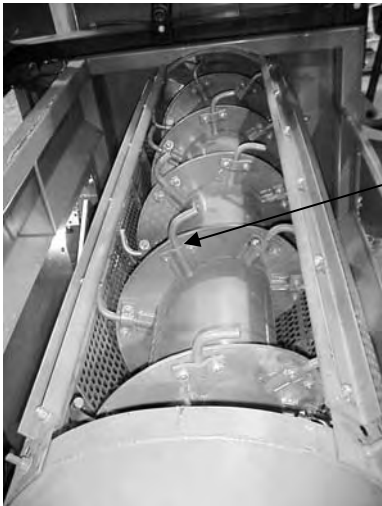
Sizes 18, 20, 22, & 24 MM.

The size to be used is determined by the size of bean seed that is being harvested. Concave bars are on the inside of concave.



The cylinder and concave are easily accessible by raising the parallel stage of the bin. When combine is threshing the bin needs to be completely lowered, so cylinder top is closed.

The threshing cylinder is directly underneath the bin. The bottom of bin serves as a lid for the top of the threshing cylinder.



Low Impact Threshing Cylinder

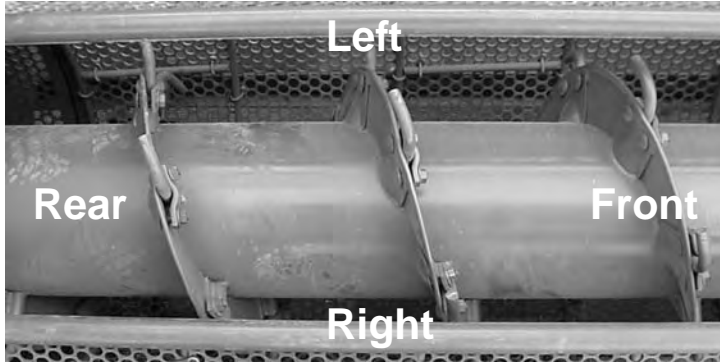
Cylinder threshing pin. These pins can be adjusted by loosening the carriage bolts that hold the clamp. With the clamp loose, pins are able to rotate, also move in & out.

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 more in the. Direction of material flow reduces threshing. Extending the pin out, closer to the concave, causes a more aggressive thresh and helps keep concave holes open in wet conditions. As the pins are moved in, away from the concave, this eases aggressiveness.



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

Combine Cylinder Adjustment



Combine main threshing cylinder with 31 threshing pins.

Threshing pin retracted
Least aggressive



Threshing pin extended
Most aggressive



The following views are all taken from the right side of the cylinder, looking towards the left side.

The pin setting determines the amount and type of threshing to the material.



Threshing pins in neutral position
Quick movement of material
Neutral setting for gentle thresh



Threshing pins at the 2:00 position
Slower material travel
Hard thresh setting



Threshing pins at the 1:00 position
Medium material travel
Medium thresh setting



Threshing pins at the 12:00 position
Increased material travel
Gentle thresh setting

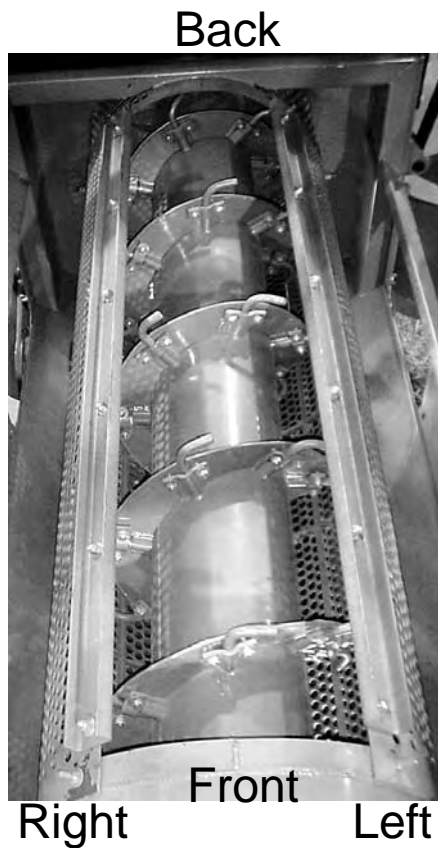


Extreme settings

| | |
|--|---|
| Pins at <u>3:00</u> hardest thresh setting | Pins at <u>10:00</u> most gentle thresh setting |
|--|---|



Combine Cylinder Startup Settings



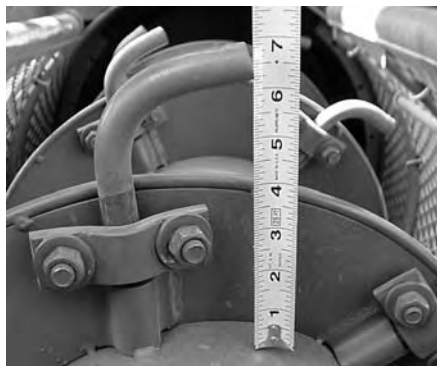
To begin, determine threshing conditions present, see page # 28 for guide to pin settings and terminology.

Recommended beginning pin setting:

- Pins 1-6: set in gentle to hard threshing position, depending on conditions.
- Pins 7-29: set 2 consecutive pins in neutral position then the following pin either gentle or aggressive (gentle if easy threshing and aggressive if tough threshing). Then repeat this pattern (2 neutral / 1 gentle or aggressive) rearward.
- Pins 30-31: set at 10 o'clock or towards rear of cylinder to push material out of cylinder.
- Pin height: generally, pins are set to the bottom, touching the cylinder tube.

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. Notice measurement on ruler.



Threshing pins should not be adjusted any closer to concave bars than 3/4 of an inch.

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 off from the pan, the shaker speed is being operated at too fast a rotational speed. 290 RPM on shaker shaft is good for startup.



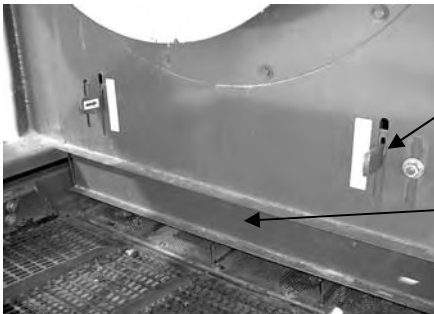
Straw Walker Shaft

The straw walker aids in the movement of the straw and stems underneath the vacuum suction port. Without this shaft in motion there can be a buildup of straw and stems causing plugging in this area, to take place.



Shaker Pan Springs

The shaker pan should be centered in it's operating area. It is designed to fit this area so it does not come in contact with other parts during operation. There should be 4 springs in both rear area positions and 6 springs in both the front positions. This allows for proper shake of the pan and crop movement.



Vacuum Fan Adjustment Plate

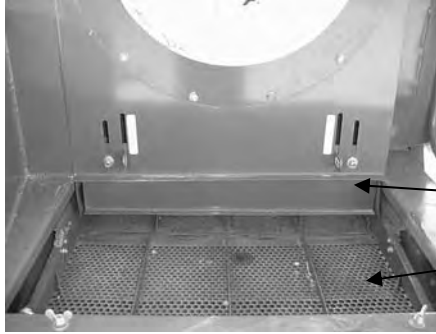
The vacuum fan is positioned directly over the shaker pan for cleaning the foreign particles out of the crop, as the shaker pan moves the crop material directly underneath the vacuum at an even flow.



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.

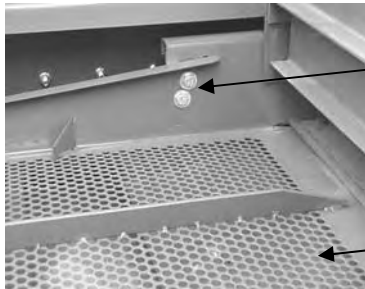
Final Sieve



This is the final shaker sieve, where the last of the cleaning takes place before the crop is lowered to a auger or draper system.

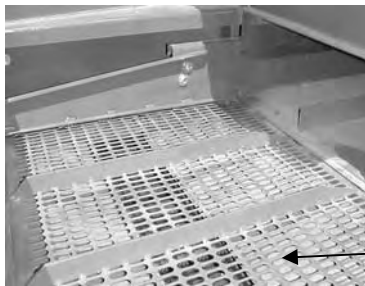
Vacuum adjustment over sieve area.

Final sieve



Bolts inside the slotted area is where sieve is adjusted for proper elevation & screening. Lower the sieve can operate without spilling crop over the back, is ideal.

Round hole style sieve



Two types of holes on the sieves are standard. **Round hole** sizes 10mm,12mm, and 14mm **Oblong hole** sizes 1/2", and 3/8"

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

Oblong hole style sieve



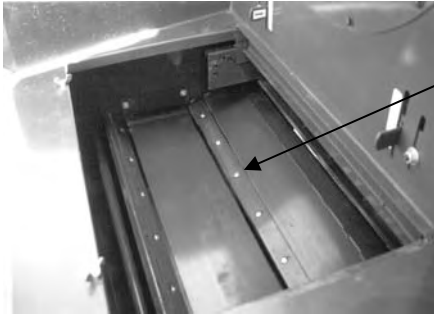
To remove sieves, take off the two adjustment bolts on each side, lift up rubber flap and pull sieve straight out.

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.



Adjusting Conveyor Belt

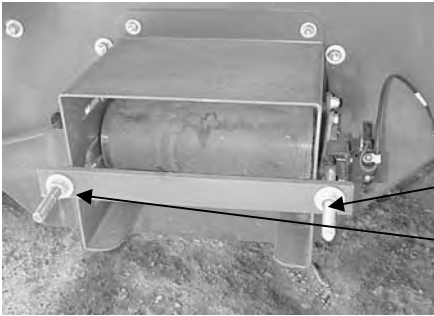
Conveyor Belt



Belt side seal

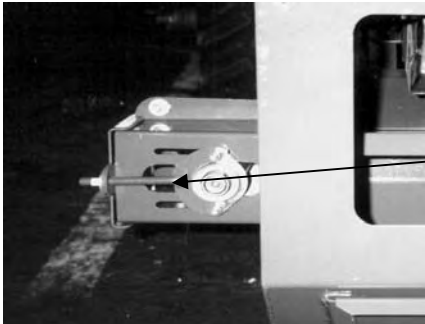
Seal should be a snug fit to keep particles from getting under the belt. The conveyor belt will have to much drag if the seal is too tight against the belt.

Conveyor Belt-Bucket elevator Chamber

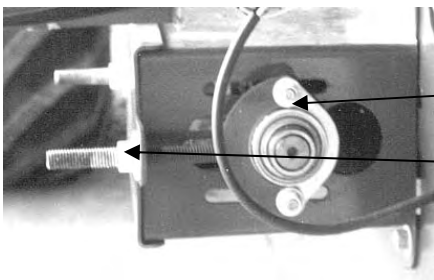


Conveyor belt adjustment support bar

Conveyor belt should be kept firmly tight, enough so there is no belt slipping on either shaft roller. When adjusting the tension or changing out a conveyor belt, it is important to tighten each side of the tail shaft evenly, to keep the belt centered for preserving belt life.

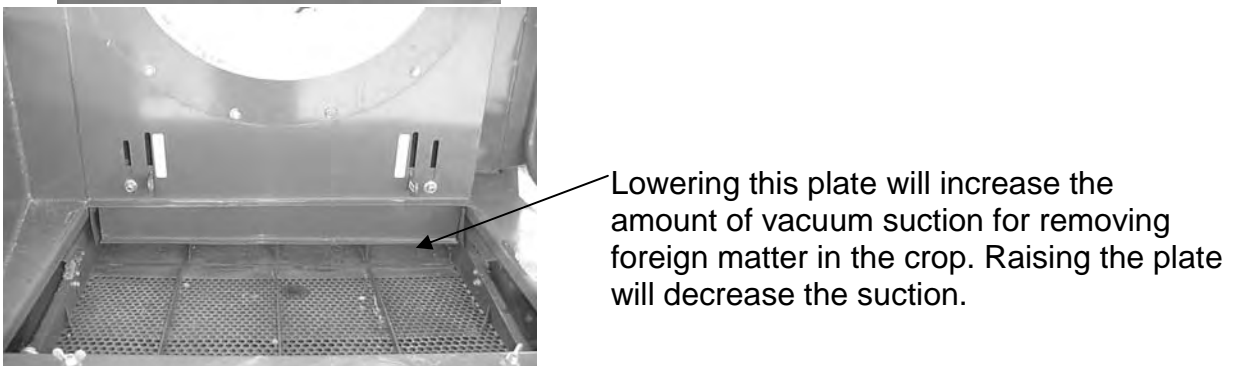
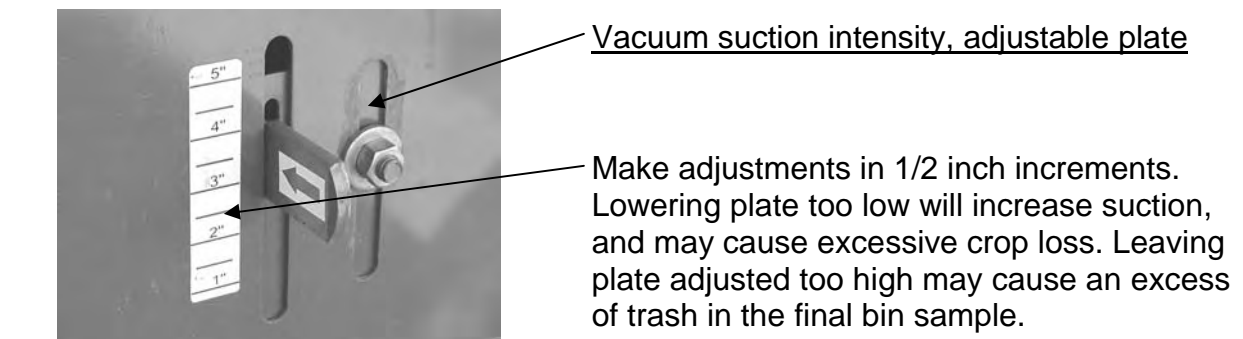
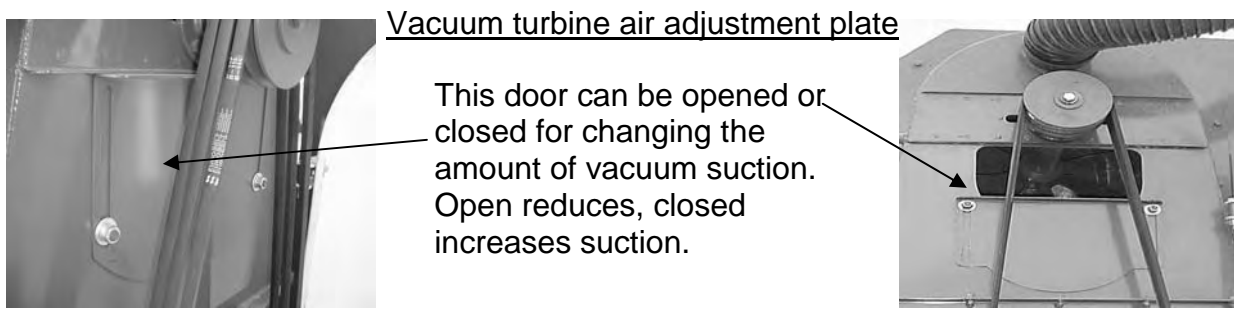
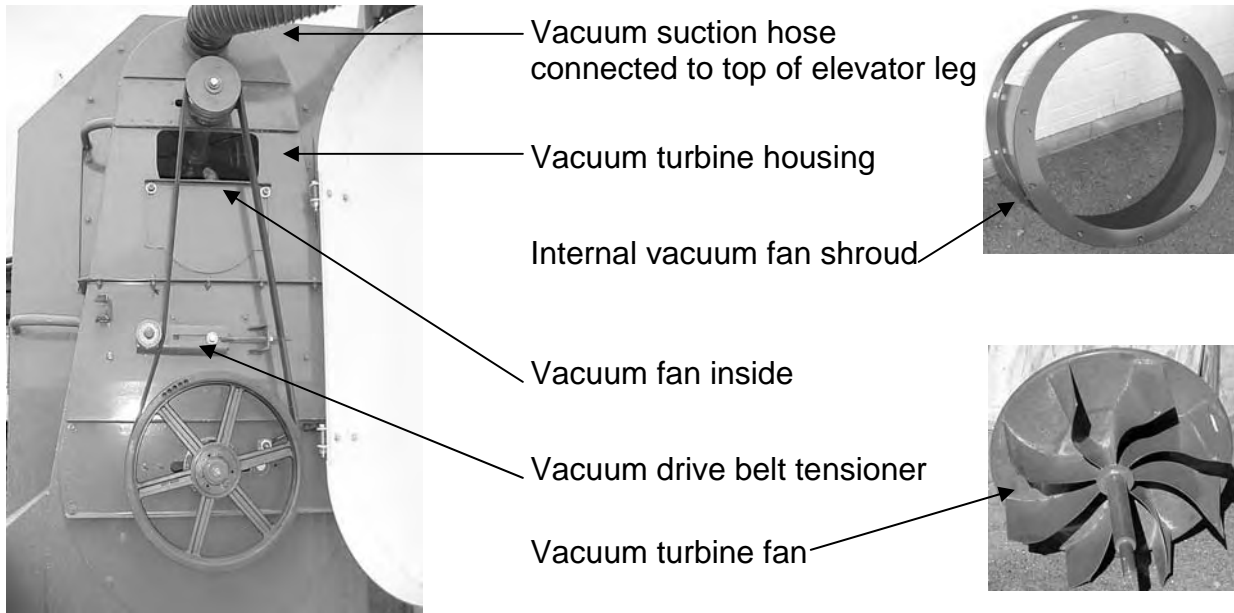


Conveyor belt needs to run centered on the rollers and conveyor track. If centering is needed it can be done with adjuster bolts as shown, by tightening one side at a time until it is centered in the track and rollers.



When making any adjustments to the conveyor belt, always loosen the bolts on the tail shaft bearings first, then tighten or loosen the longer adjuster bolts.

Vacuum Cleaning System



Bucket Elevator

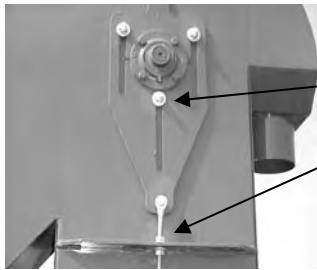


Vacuum suction hose for removing small particles of dust at the top of elevator, as the crop enters bin.

Vacuum fan drive behind shield

Bucket chamber inspection lid

Drive chain for the conveyor belt



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 approx. 3/4" deflection, in or out, from straight.



Elevator Drive belt tensioner

Hydraulic, variable speed drive, (with control knob at the motor area) for conveyor belt, shaker pan, and bucket elevator.

Elevator shaft speed should run between 110 to 115 RPM.



Elevator discharge into holding bin. Crop is moved along with the hydraulic driven, leveling auger which aids in filling the bin to capacity.



Bottom latch door for easy cleanout.



⚠ WARNING

Elevator Erected Height Is 13'8"

During transport, the elevator leg should be folded down at the hinge point.

Unloading System



Synchronizing Valve

The synchronizing valve regulates the timing between the first stage (lifting of parallel lift arms and bin), and second stage (full lift of bin and dumping).

Needle valve, controls oil flow to pickup head lift cylinder.

Flow divider valve, divides the hydraulic oil evenly between the four parallel lift cylinders, which causes the bin to lift evenly up and down. Valve is factory set no adjustment is needed.



First Stage

When unloading the bin, the 6 parallel lifting bars should be activated and fully extended in a vertical position.

The bin needs to be lifted in this position, when work is to be done inside the cylinder area.



Second Stage

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

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

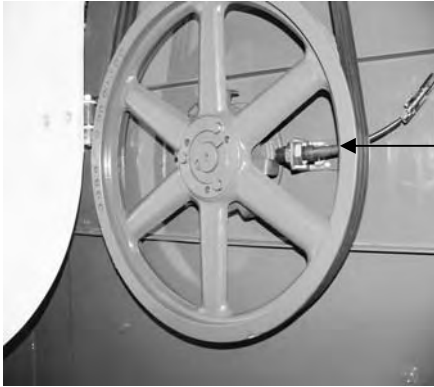


The dump bin parallel lift system aids in unloading the bin into tall trucks, and allows for greater reach to the middle of the truck, by moving up 18" and over to the side 18".

Safety feature The check valve (one in front and one in the rear of the bin) is a hydraulic safety lock, to keep the bin from falling down while working under the bin, as long as the tractor is not running.



Shaft Monitoring System



Threshing cylinder sensor

This sensor reads the RPM of the main threshing cylinder. It is located on turbine pulley in rear of combine.

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

Threshing cylinder RPM range 540 to 340.



Shaker pan drive-shaft sensor

This sensor reads the RPM of the shaker drive shaft. It is located under shaker pan behind right tire of combine.

The setting of this shaft should be approx. 290 RPM.



Transition auger sensor

This sensor detects motion on the shaft. If the motion stops the alarm will sound.



Conveyor belt or auger sensor

This sensor detects the motion of the conveyor shaft or auger shaft. If the motion stops alarm sounds at the control box.

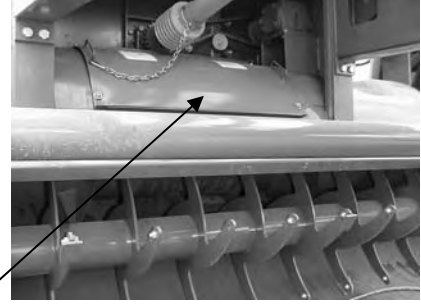


Auger Shaft sensor

Cleaning Out the Combine



Cleaning the combine can be done with ease, in a short time frame



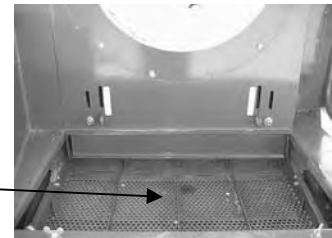
Inspect feeder house for crop residue, use air pressure or a broom to clean.

Remove the lid on top of transition auger for inspection and use air pressure for cleaning.



Rear Discharge

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.



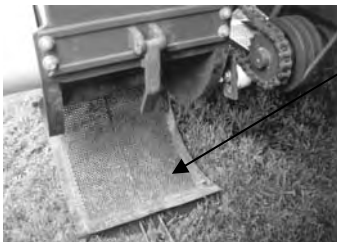
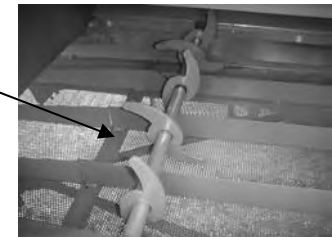
Rear Sieve

Clean out the final inspection holding area behind the rubber flap.

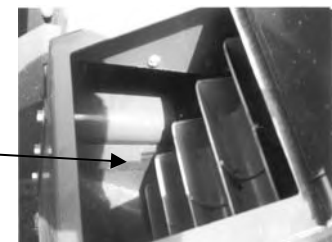


Raise dump bin to make sure it is clean, using a broom or air pressure. With dump bin in the raised position, a visual inspection can be made to the shaker pan area as well as the cylinder for final cleaning.

This area should self clean by running a stand still operation of the combine.



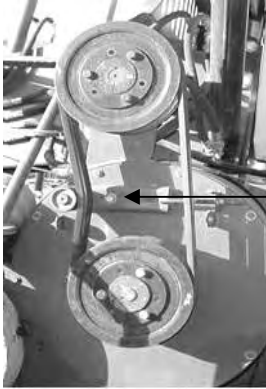
Unlatch the trap door on bottom of the elevator leg for cleaning. Operate machine long enough to make sure all buckets are cleaned out.



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

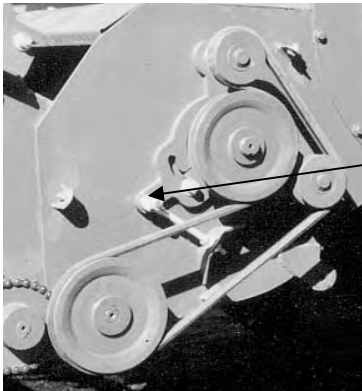
Keep All Shields In Place



Transition auger drive

Belt tensioner

Belt size C-77

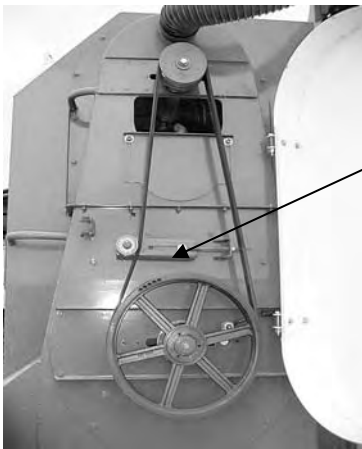


Pickup head drive belt

Belt tensioner

Belt size BB-75

Keep all belts tight

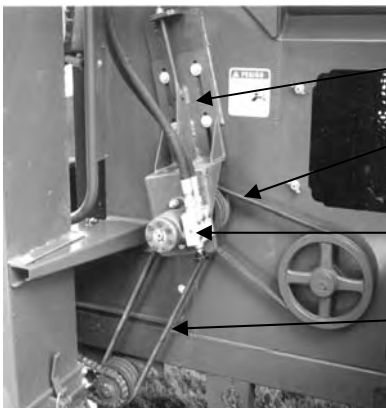


Vacuum fan drive

Belt tensioner

Belt size B-113 with small top pulley

Belt size B-115 with large top pulley



Belt tensioner

Straw walker drive

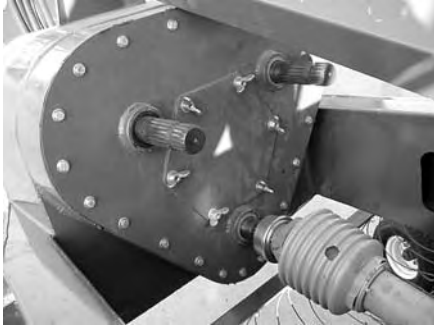
Belt size B-52

Hydraulic motor drive with variable speed control

Elevator leg drive

Belt size B-65

Chain sizes and Configurations



Keep All Shields In Place

3 Speed main drive

Chain size—(60x2)

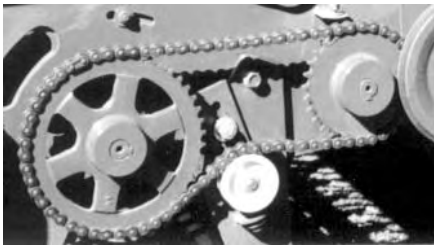
Chain length—1500mm or 59 inches



20-24, 24-20 Transition drive chain

Chain size—(60)

Chain length—1550mm or 61 inches



Pick up head drive chain, left side

Chain size—(50)

Chain length—1240mm or 49 inches



Pick up head drive chain, right side

Chain size—(50)

Chain length—640mm or 25 inches



Bucket elevator drive chain

Chain size—(60)

Chain length—1210mm or 48 inches



Conveyor belt drive chain

Chain size—(50)

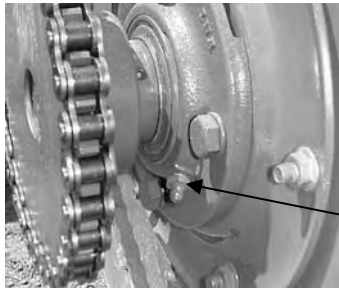
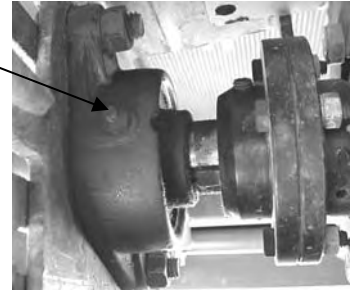
Chain length—1450mm or 57 inches

Lubrication and Maintenance



Drive shaft bearings for elevator, shaker, & conveyor. (Other side of hydraulic drive motor).

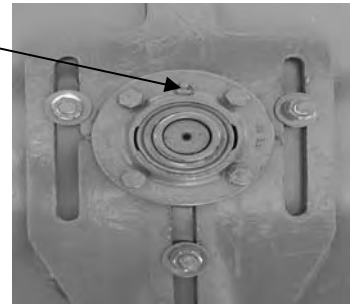
8-10 hrs.



Bucket elevator top shaft. Lube sites on both sides

8-10 hrs.

Bucket elevator bottom shaft. Lube sites on both sides



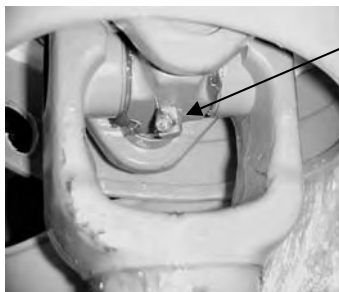
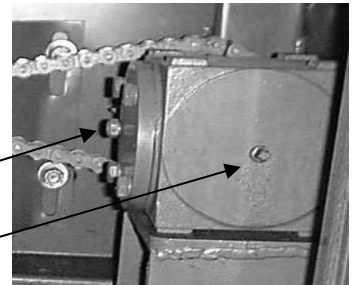
Threshing cylinder internal thrust bearing.

Threshing cylinder shaft bearing.

8-10 hrs

Gear box fill level plug & vent. 80-90 wt. lube, inspect weekly.

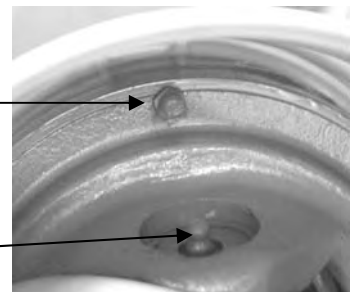
Gear box lube fill plug



Lube all driveline cross joints every 8-10 hrs.

The every site is part of the CV joint. Lube 8-10 hrs.

Main lube site for CV joint located in the end of one cross cap. This should be lubed every 4-5 hrs.



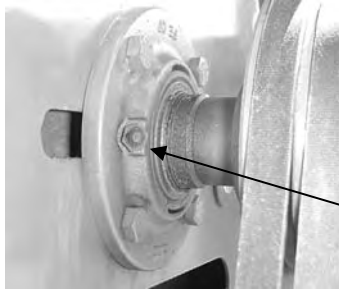
Rear hitch swivel shaft on pull tongue.

8-10 hrs.

Front hitch swivel shaft on pull tongue



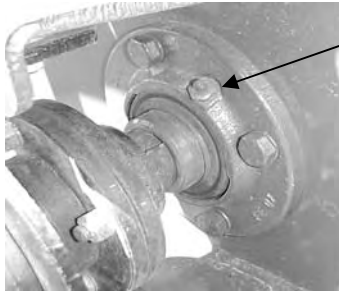
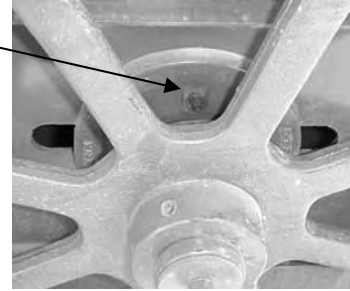
Lubrication and Maintenance



Threshing cylinder, rear shaft bearing. Vacuum fan pulley.

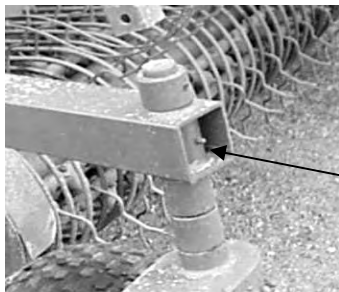
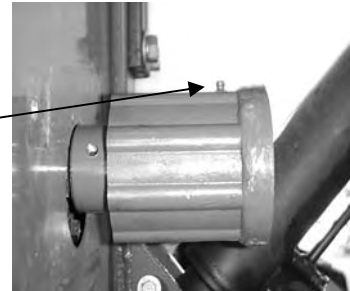
8-10 hrs.

Vacuum fan shaft bearing. Bearing is on each end of shaft.



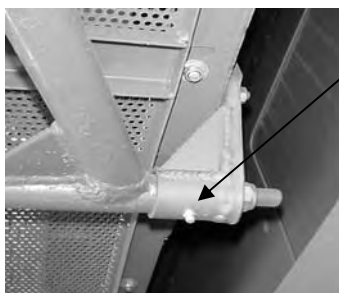
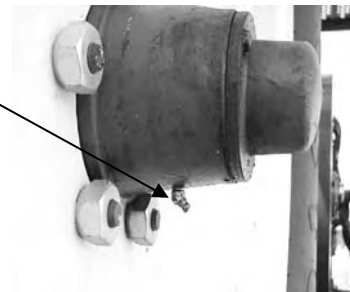
Star feeder shaft, bearing on each end of shaft. 8-10 hrs.

Radial pin clutch, lube only when clutch has been releasing during normal operation. If clutch seldom releases, only minimum lube is required



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

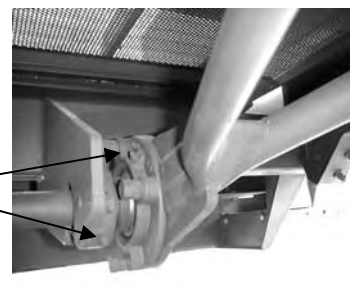
Front gauge wheels. Lube each wheel daily.



Shaker pan, a-frame, pivot connection. One on each side.

8-10 hrs.

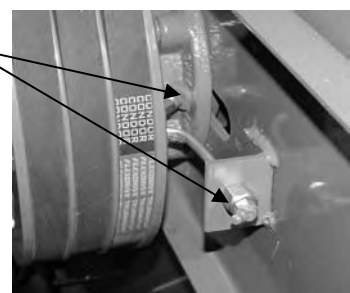
Shaker eccentric bearing and drive shaft bearing.



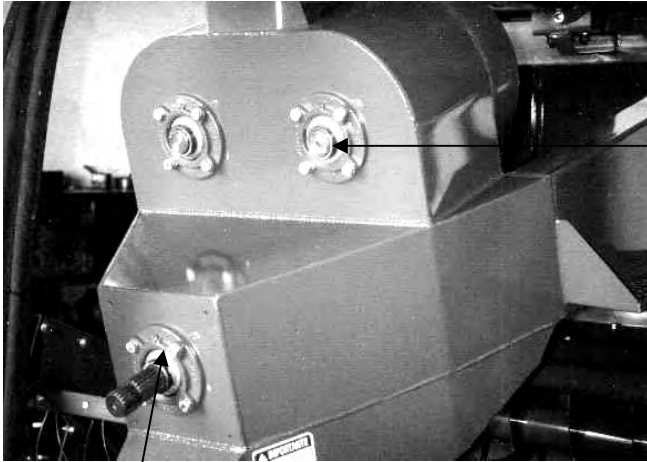
Transition auger bearing. One on each side

8-10 hrs.

Transition drive shaft next to triple belt pulley.

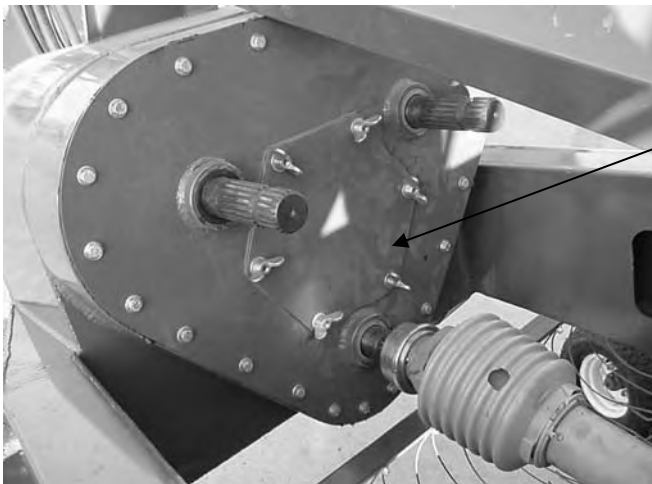


Lubrication and Maintenance



Lube bearings on primary drive side every 8-10 hrs.

Lube primary drive shaft bearing every 8-10 hrs. thru safety shield.



Inspect drive chain by taking off inspection cover. Lube with corn head type grease (not gear oil) **Daily.** At least 10 pumps.

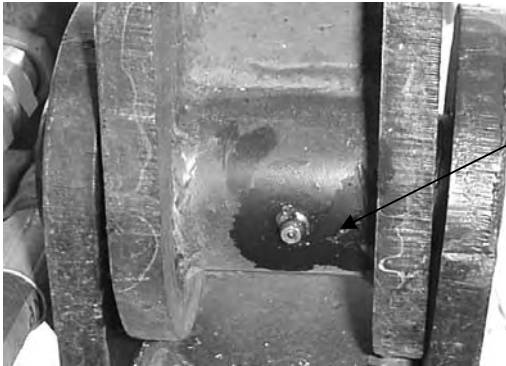
The three zerks have a copper feed line to the three main shaft bearings inside the cover. Lube every 8-10 hrs.



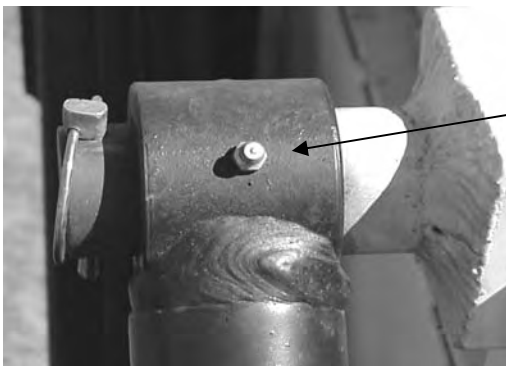
Lubrication and Maintenance



Complete dump bin lift system. All parallel hinge points must be lubricated every 8-10 hrs

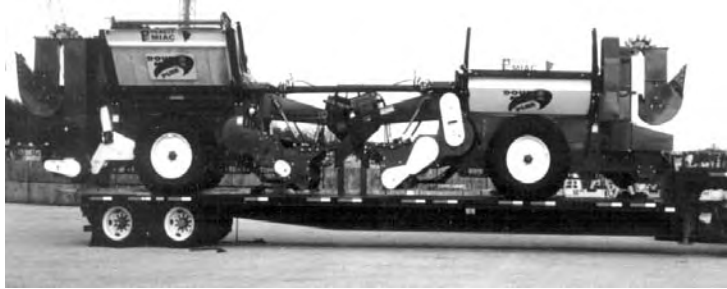


All parallel lifting arms have a grease zerk located inside the hinge point, top and bottom. Lubricate each point every 8-10 hrs. **Note** High dollar amount of damage can result in improper maintenance.



Every hydraulic lift cylinder hinge point must be lubricated every 8-10 hrs.

Transporting



Two combines per 48 ft. single drop trailer

Important: When towing the combine, travel at a reasonable speed for road or field conditions. Never transport on the road with crop in the tank. Always use warning lights.

When towing make sure the hitch pin and jack stand are secure on the pull tongue.

Level the combine with the pull tongue adjustment plates, and check tire pressure, 40 psi. in each tire.

Transporting combine on a trailer

Caution: When transporting the machine on a road or highway at night or during the day, use accessory light and devices for adequate warning to other vehicles. Check local governmental regulations. Keep safety items in good condition. Replace missing or damaged items.

Empty the holding tank and make sure it is in the lowered position.

To reduce the overall height, loosen the bucket elevator chain and disconnect chain at the connecting link. Remove the bolts at the splice in the elevator leg and fold the top part down in a rearward direction.

Lower tire pressure or remove the tires to achieve the proper height limitation. Rest the pull tongue on the trailer floor, and put adequate blocks under the chassis frame of the combine for stability. Chain and secure the combine tightly to the trailer. The outer shute or lip of the bin can be removed to reduce over width. Make sure all loose items are securely fastened to the trailer.

Tire Specifications



Tire size-18.4 x 30
Maintain 40 lbs. pressure



Pickup head tire
Tire size-18 x 9.0-8
Maintain 10 lbs. pressure

Storage & Winterizing

- Clean combine of all crop residue.
- Empty all crop from bin.
- Lubricate all grease fittings.
- Service and lube the primary & secondary drivelines as per Walterscheid specs.
- Check tires for proper inflation.
- Fold elevator leg over, if necessary for storage.



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

HYDRAULICS

P. Hydraulic oil is overheating.

S. Too much oil flow. The oil to PUH, feeder house, shaker table, bucket elevator, cross conveyor, and level augers in bin are operated by one remote while hooked in series. Do not push more oil through the system than required. Open rear shaker table flow control knob to full ON. Regulate the flow of hydraulic oil from the Tractor so shaft speed on shaker is approximately 290 RPM. There will be plenty of oil to operate rest of machine.

S. Check hydraulic oil level in tractor. Check hydraulic filters on tractor.

P. Pick up 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 off star feeder to pick up head for tightness, if worn, replace.

S. Check cam arms pin pick up head for tracking properly and cam bearings are in good condition.

S. Check Fuses.

S. 12 Volt power supply not properly connected or have a good ground.

S. See if electrical receptacle or solenoid on aluminum valve block is connected properly, clean and reconnect.

S. Check for any obstruction in star feeder or pick up head.

P. Bin not raising and lowering level.

S. Grease all points of parallel system making sure they are well lubricated.

S. Check all hydraulic connections for proper oil flow.

P. Shaker table not working properly

S. Check all fasteners for tightness on shaker A-frame 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. Chaff from combine not spreading out

S. Use side discharge port instead of using rear discharge port.

P. Straw is holding up in rear discharge system.

S. Open side discharge port and release materials out of the side.

P. Picking up rocks with pick up head

S. Slow pick up head down to $\frac{1}{2}$ that of ground speed.

S. Operate pick up head teeth $\frac{1}{2}$ to 2" above soil surface. Use adjustable gauge wheels to maintain proper height. Also adjust float spring tension so gauge wheels have a tendency to float with little weight on them.

P. Pick up head not picking up windrow.

S. Check for broken chain/hydraulic motor.

S. Replace broken teeth.

S. Lower pick up head to $\frac{1}{2}$ to 1" above ground surface.

P. Broken Teeth

S. Running pick up head too low.

S. Object

P. Star feeder tines not feeding properly because of dry brittle conditions.

S. A hole has been provided in the end of star feeder tines. Place $\frac{3}{8}$ x $\frac{3}{4}$ bolt with nylock or stover nut to every other tooth. Add additional bolts if needed, This will add more surface area to the tines for better feeding.

P. Transition auger plugging

S. Slow down and reduce crop feeding into machine.

S. Use 24-20 sprocket change to speed up transition auger. (See Complete Drivetrain Page)

P. Splits and crack in beans

S. Slow down cylinder by reducing RPM on tractor or use RPM changer at

secondary driveline for slower speed shaft. Remember when slowing down cylinder, vacuum does require adjustment accordingly.

S. Inspect threshing pins and location make sure the pin is not too close to concave ($\frac{3}{4}$ " to 1" is normal).

S. Stop combine abruptly while threshing with the combine full. Remove inspection plates on the side of the combine to the shaker table (front to rear) and inspect product on table for splits and damage and location of damage. This may not be the only place to look for damage. Bucket elevator or shaker table may not be operating at the correct speed or chain on bucket elevator too loose. Once the problem area has been found make proper adjustments accordingly to eliminate damage.

P. Production capacity loss

S. Threshing pins may be set too aggressively slowing the threshing tines in the cylinder more than need be. Go back to start up setting. Check for bent auger flighting on main cylinder. Straighten if needed.

P. Cross conveyor belt stops

S. Check pinion gears for proper alignment

S. Conveyor belt loose, adjust to proper tension.

S. Check for crop and debris underneath belt and remove. Make sure conveyor belt rubber seals on upper side of belt are in good condition and working properly to keep crop from working underneath the belt.

P. Pick up head stalling

S. Tighten belt on end of star feeder housing. Belt dressing may be used to reduce slipping.

S. Check all fasteners throughout pick up head and make sure they are tight and position correctly.

P. Dirt in beans

S. Slow pick up head down possibly turning to fast and not allowing dirt separation. Pick up head operating too low, with teeth digging in too deep. Lower gauge wheels to bring teeth up.

S. Adjust cutting & windrowing system better 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.

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. Remove inspections plate in center of transition auger and remove as much material by hand as possible. The shaft on the right side of the auger will accept a tool that is provided with the combine to reverse the auger, aiding in the unplugging.

P. Trash in bin with beans

S. Adjust vacuum

S. Check conditions of fan and shroud

S. Check belt tension on the vacuum fan

S. Check cylinder setting

S. Check final screen size

P. Plugged elevator

S. Too wet of conditions

S. Bearing seized or worn out

P. Problem with a drive component, chain off or belt loose

S. Bucket elevator chain too loose and lodged or caught

P. Leaving beans on ground

S. Final screen out of adjustment

S. Pickup head operating too high off the ground. Too fast RPM.

S. Pull tongue on hitch pin catching beans

S. Tractor tires running over the windrow

S. Too much vacuum suction, adjust suction

S. Rate of travel too fast for combine capacity

S. Cylinder pin setting may need adjusting

S. Cylinder RPM may need to be changed

SPECIFICATIONS

Pull Type Combine

125 min. Hp requirement on tractor

The Combine has a 540 rpm PTO driveline

| | |
|-------------------------|-----------------------------|
| Driveline | Series 2580 Walterscheid |
| Tires | 18.4 x 30 |
| Total Width | 98.74"=8' 3" |
| Haul Width | 78.74"=6' 5" |
| Shipping Height | 124" = 10' 4" |
| Height (Short Elevator) | 13' 6" |
| (Tall Elevator) | 14' 6" |
| Length | 293" = 24'5" |
| Weight | 10,604 lbs. |
| Bin Capacity | 8,800 lbs. |
| 3 Speed Cylinder | 540 rpm / 432 rpm / 360 rpm |

Variable speed pickup head (hydraulic drive)

2 Stage dump bin – 12' at hinge pin

Separate hydraulic rear drive – For constant rpm control on shaker pan, bucket elevator and cross conveyor belt.

Vacuum cleaning system – To remove fine material and chaff.

Constant velocity drive – option for driveline input shaft

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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