AMADAS 2100

Six Row, Pull Type Peanut Combine

Beginning Serial # 380000

Operators Manual 052

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INTRODUCTION

Congratulations on your purchase of an Amadas Peanut Combine. We, at AMADAS INDUSTRIES, are proud of our equipment and our more than thirty years of service to peanut farmers.

The AMADAS 2100 is the culmination of our years of development, field testing and continuous improvement. Responding to our customers needs and industry demands have evolved the Amadas peanut combine to the model 2100, the most technically advanced pull type peanut combine available. The combination of innovative technology, low yearly maintenance, and the industry's largest threshing and separation capacity make it the world leader in pull type peanut combines.

Safety in machine operation is of paramount importance to all of us. Please abide by our safety instructions and use caution when operating this machine.

We are confident you will experience many good years of service with your Amadas Combine. If any need should arise, we pledge the best efforts of our people and dealers to assist you.

1
SAFETY

Most accidents occur due to someone's failure to follow a simple safety rule or precaution. You can reduce the risk of accidents by following the safety procedures outlined in this manual and indicated by the safety decals on the machine. Three safety symbols identify potential hazards:

CAUTION warns of practices or procedures that could cause minor personal injury and / or damage to the machine.

WARNING alerts your attention to items or practices which could cause injury to you or others near the machine. These injuries could range from minor cuts to dismemberment. Safety decals are located at, or as near as possible to, these areas and the hazards are covered in this manual.

DANGER alerts your attention to practices which could lead to loss of life. These warnings are only used for the most dangerous areas of the machine. Extreme care should be taken whenever you are near these areas. Safety decals are located at, or as near as possible to, these areas and the hazards are covered in this manual.

1.1 SAFETY

Safety is a responsibility! Safety features are incorporated into the combine and dangerous areas marked, but ultimately a careful operator is the best assurance against an accident.

Read the following general safety guidelines and be alert for others throughout this manual.

NOTE: Throughout this manual, numbers in brackets refer to the section of the manual which contains a more in-depth description of a detail (for example, [6.3]).

WHEN OPERATING THIS COMBINE

-Make sure that everyone is clear of the machine before starting the tractor or operating the combine.
-Keep hands, feet, hair, and clothing away from moving parts.
-Stay clear of the header pick up and header auger at all times.
-Be alert for overhead electrical lines and other obstructions when towing the combine or dumping the bin. Combine height with the bin lowered ranges from 13'9" to 14'2". With the bin raised the height ranges from 23'6" to 27'0". Contact with an obstruction or overhead electrical line could cause electrocution, death or serious personal injury.
-Be sure that the combine is on solid level ground before dumping the bin.
-Install the safety strut before working under the raised bin. Failure to do so may result in serious injury or death.
-Stop tractor engine and disengage drive before adjusting, cleaning, lubricating or unclogging the machine.
-Do not make sharp turns on hillsides.
-Never allow anyone to ride on the machine.
-Maximum towing speed is 10 MPH loaded and 20 MPH empty.
-Do not tow the combine without attaching safety chains from the towing vehicle to the combine. These chains should have a minimum combined breaking strength of at least 40,000 pounds. If the combine were to separate from the towing vehicle, serious personal injury or death could result.

1.2 SAFETY DECALS

Safety decals identify specific hazards and general safety. Keep them in mind whenever you are operating the machine. Also, keep them clean and legible. When replacing a part that has a safety decal, also replace the decal. For replacement decals, see your AMADAS dealer.

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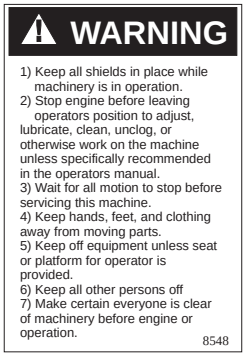

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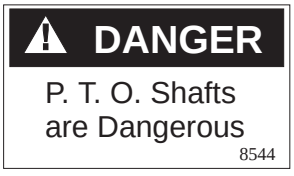

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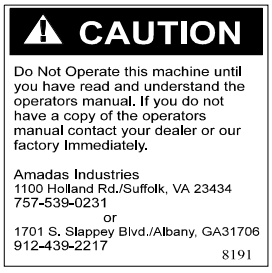

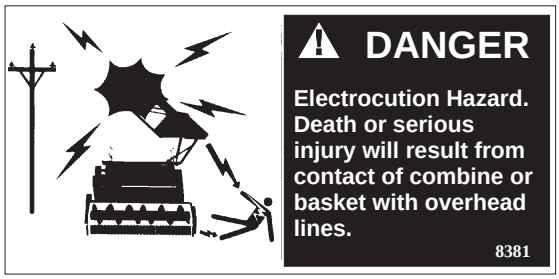

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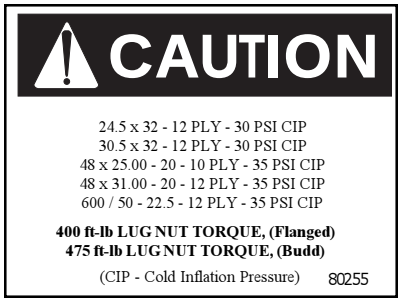

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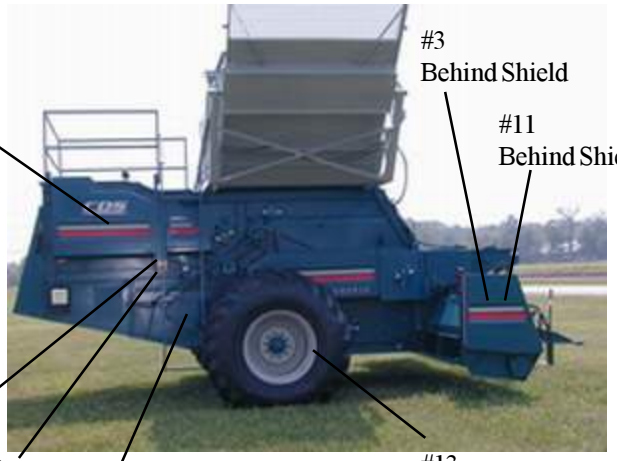
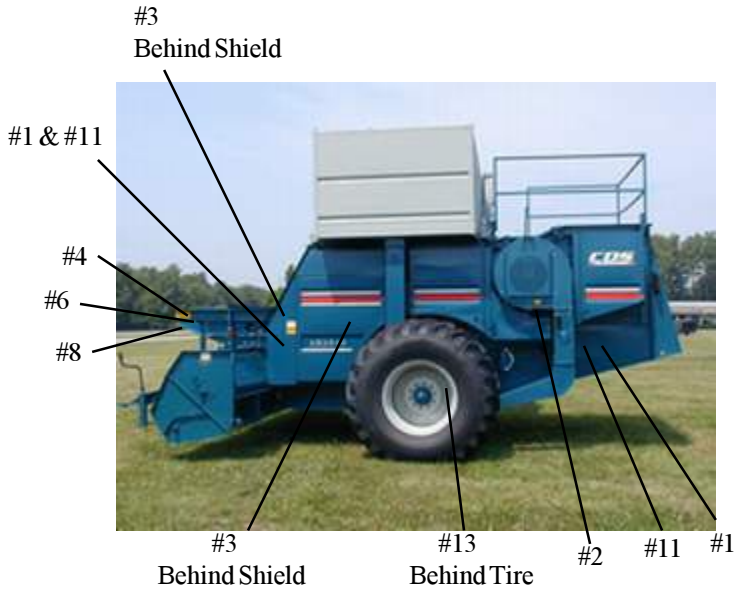




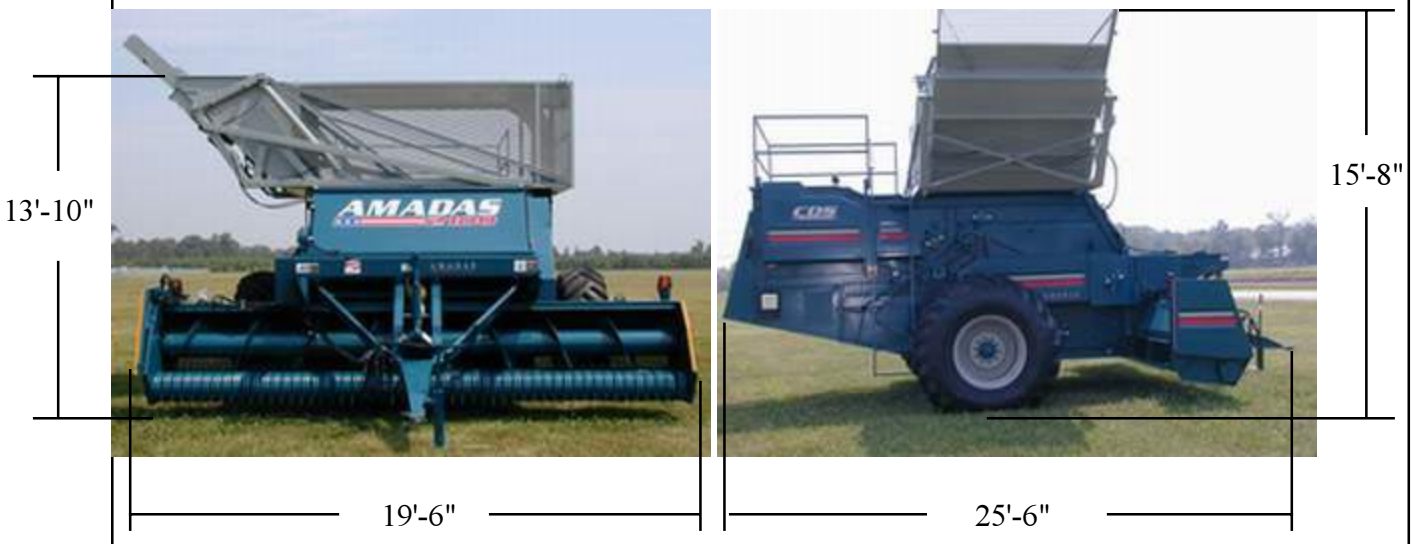
2

AMADAS 2100

SPECIFICATIONS

-Length overall	25'-6"
-Width	16'-6" (outside wheel base) 14'-4" (centerline wheel base)
-Height (Bin Lip In)	13'-10"
-Height (Bin Lip Out)	15'-8"
-Dump Height	11'-8"
-Height (bin raised)	23'-9"
-Weight (empty)	20,000 lbs
-Header Width	19'-6"
-Inside Working Width	96-1/4"
-Bin Capacity	7500 lbs (std.)
-Tire Size (std.)	24.5 x 32 12 ply R1 High Flotation Cleated
-Tire Size (opt.)	30.5 x 32 12 ply R1 High Flotation Cleated
-Operation/Warning Light Kit	Standard
- Remote Auger Reverse	Standard
- Vine Spreader	Optional
- PTO Input	1000 PTO @ 780 RPM input (std.) 1000 PTO @ 800 RPM input (opt.) 1000 PTO @ 1000 RPM input (opt.)
-Tongue	Hydraulic Height Adjust
-Hitch Type	2-5/16" Ball
-Picking System	(4) - 36" dia. Spring Tooth Picking Cylinders Dual Speed Cylinder Drives Adjustable Retention Board 2 sets adjustable Overhead Teeth (std.) 5 sets adjustable Concave Teeth (opt.)
-Separation System	5 retractable spring tooth Walker Cylinders 2 Beater Cylinders 15 Roll Disc Separator 14" dia., 24 blade Cross Induction Cleaning Fan
-Elevator System	12" dia. Collection Auger to 9-1/2" square duct 28" dia., 12 blade Elevator Fan

2100 SIX ROW



3

PRE-DELIVERY CHECKLIST

Prior to operating the machine for the first time, go over the following Pre-Delivery Check List with your dealer to verify that the combine is ready for operation. Every combine is test run at the Amadas plant, but a thourough pre-delivery inspection is important, as items may have loosened during shipment.

NOTE: Throughout this manual, numbers in brackets refer to the section of the manual which contains a more in-depth description of a detail (for example, [6.3]).

1. Open all shields and check chains and belts for proper tension [7.1-7.2].

2. Check bushing bolts, setscrews, and jam nuts on all sprockets, sheaves, shafts, etc. for tightness. Torque all lug nuts to proper spec., (400 ft-lb for flange type lug nuts, 475 ft-lb for Budd type lug nuts).

3. Check oil level in tongue gearbox by removing the level plug in the side of the gearbox. Add SAE 90 EP weight non-foaming oil if necessary.

4. If equipped with combine hydraulics, check hydraulic oil level in tank (capacity, approximately 18 gallons). Level should be above midway in sight gauge when cold. [5.6, 7.3]).

5. Check and lubricate all lubrication points [7.3].

6. Hitch combine to tractor [6.1]. Slowly raise and lower bin and header several times to work air out of the lines. Check hydraulic lines for leaks.

7. Lock bin in raised position with safety strut (Fig 3-1), and check for loose bolts or obstructions in the picking chamber.

DANGER

Check overhead clearance to ensure that no power lines, overhead limbs, or any other obstructions exist. Combine exceeds 13'-10" with basket lowered. When fully raised, the Amadas 2100 stretches over 24 feet tall. Contact with an obstruction, or high voltage power line could result in death, or serious personal injury.

Fig.3-1

DANGER

Install safety strut over hydraulic cylinder before working around or under raised bin. Death or serious personal injury could result if bin were to fall.

8. Remove safety strut. Lower bin *slowly* and check peanut elevator air duct for proper alignment at the bottom of the bin. If alignment is necessary, loosen the four bolts on the duct support braces and adjust as necessary. Carefully recheck alignment. Improper alignment can cause serious damage to the air duct system.

CAUTION

Misalignment between bin and elevator air duct will cause machine damage.

9. Position the Combine Speed Monitor in tractor. [5.7]

10. Open cleaning fan adjustment to maximum. Check to see that damper door opening on cleaning fan intake is at least 10-3/8 inches. [5.3]

11. Replace all shields.

DANGER

Replace all shields before starting combine operation. Death or serious injury may result from entanglement.

DANGER

Drive line shields and guards must be in place any time the combine will be in operation. Death or serious personal injury can result from entanglement.

12. Install PTO drive line [6.2] and grease [7.3]. Be sure to set tractor hitch ball at specified length from the PTO output shaft. PTO driveline should never bottom out or over extend while turning. Start tractor, engage PTO and increase slowly to operating speed (100% or 780 PTO rpm). Operate for twenty minutes prior to first field operation.

13. Stop combine and check for loose bolts, nuts, chains, belts, sprockets, etc. Check for heat in pulleys and belts, indicating looseness. Also check for overheated gearbox and hot bearings.

14. Check machine to ensure that all safety decals are in place [1.2].

15. Check tire pressure and inflate to recommended pressure.
Cold Inflation Pressure:

30 PSI -	24.5 x 32	12 ply
30 PSI -	30.5 x 32	12 ply

16. Check lug nut torque: **400 Ft.-Lb. for Flanged nuts**
475 Ft.-Lb. for Bud nuts

17. Operate combine in the field for twenty more minutes at approximately 100% combine speed (780 PTO rpm) and then recheck the items in steps 13 and 16. It is very important to re-torque lug nuts after initial combine run time.

4
OPERATION THEORY

The Amadas 2100 Combine removes peanut pods from peanut vines which have been dug and windrowed. Once separated and cleaned, the peanuts are conveyed into the Peanut Dump Bin and vine material is passed out of the machine. The combine is pulled and powered by a farm tractor of at least 150 HP. It is necessary that tractor transmission gearing be able provide ground speeds as low as one mile per hour at engine RPM's producing a reading of 100% on the combine speed readout. Optimum harvest conditions exist when windrows are harvested with peanut moisture content between 14% and 20%. Very dry or very wet conditions as well as excessive dirt or weeds in the windrow could reduce separation efficiency and cause an increase in loose shelled kernals (LSKs).

The steps of the picking, separating and cleaning processes are outlined below:

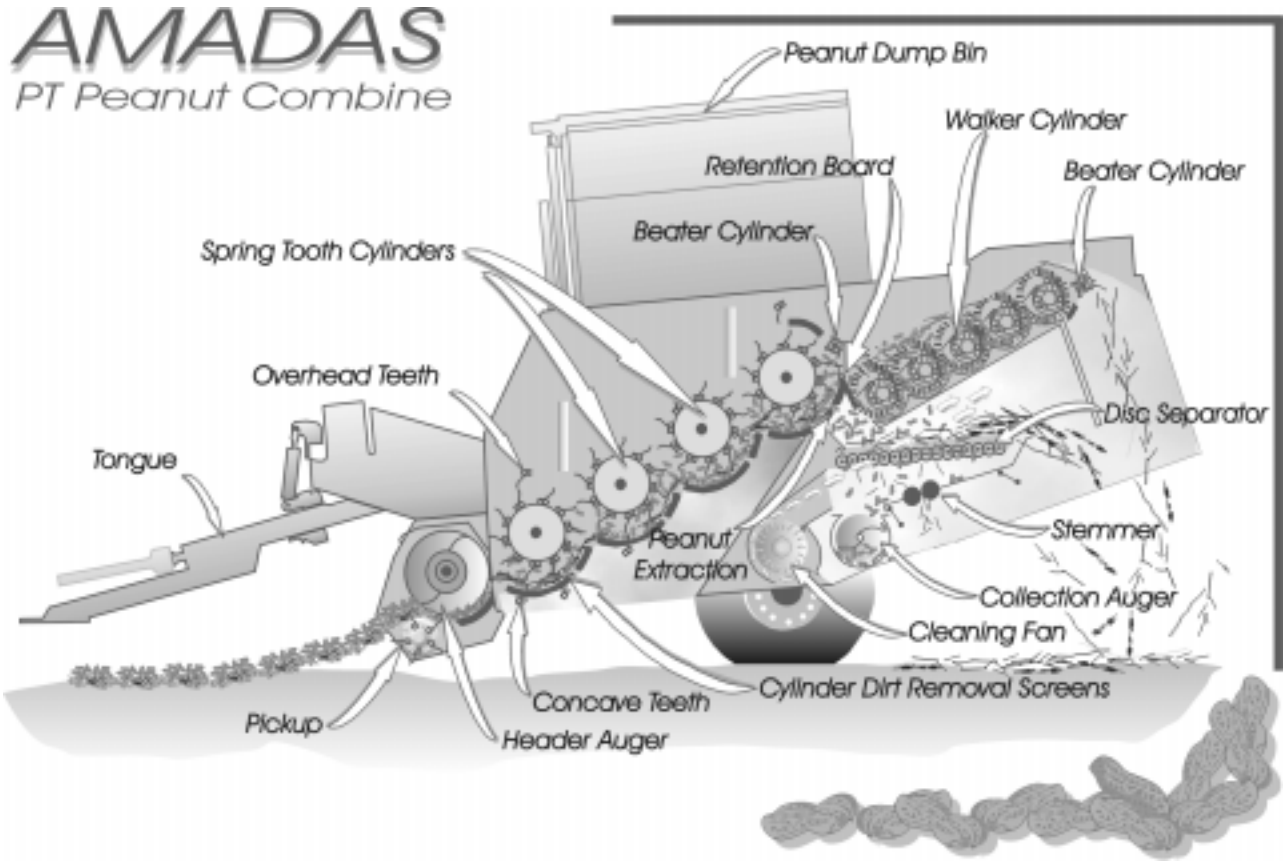
1. The Header Pickup lifts the peanuts and vines off of the ground and the Header Auger feeds them into the Spring Tooth Cylinders.

2. The Spring Tooth Cylinders strip the peanuts from the vines. Large amounts of dirt and small foreign material are removed by the tremendous cleaning area of the Cylinder Dirt Removal Screens under each Cylinder. The first and fourth Spring Tooth Cylinders have sets of adjustable Overhead Teeth which increase picking aggressiveness when engaged. An adjustable Retention Board controls the time that the vines remain in the 4th cylinder. Optional adjustable Concave Teeth are available for the first, second and third cylinders for increased harvesting agressiveness.

3. Peanuts and vine material fall through the extraction holes in the fourth Cylinder concave onto the Disc Separator, or travel back into the Walker Cylinders. The Walker Cylinders separate the good peanuts from the coarse vine material and carry the vine material out of the machine. Peanuts sift out of the cam actuated Walker Cylinders and are swept down to the Disc Separator for fine separation.

4. At the Disc Separator, the good peanuts are separated from vine material and other light trash. The Cleaning Fan agitates the material on the Disc Separator to aid in separation and blows light material such as leaves, pops (unacceptable immature or diseased peanuts), and other light trash over the tail board and out of the back of the combine. The higher density good peanuts fall through to the stemmer section, while vine material and sticks advance across the Disc Separator and out the back of the combine.

5. As the good peanuts fall into the Stemmer Saws, their stems are removed. Cleaned peanuts fall into the Collection Auger and are conveyed into the Elevator Air system, which sends them up to the Peanut Dump Bin.



5
CONTROLS AND ADJUSTMENTS

5.1 RETENTION BOARD ADJUSTMENT
5.2 ADJUSTABLE TEETH CONTROLS
5.3 CLEANING AIR CONTROL
5.5 ELEVATOR AIR CONTROL
5.6 PICKUP HEADER SPEED CONTROL
5.7 PTO SPEED ADJUSTMENT
5.8 PICKUP HEADER HEIGHT ADJUSTMENT
5.9 LOCATIONS OF CONTROLS
5.10 REMOTE AUGER REVERSE
5.11 HEADER AUGER ADJUSTMENT
5.12 DUAL SPEED CYLINDER DRIVES

The Amadas 2100 combine performs efficiently over a wide range of peanut varieties and windrow conditions with few changes in operating controls. Once the controls and adjustments are set for average conditions, adjusting the ground and PTO speed is usually adequate to ensure efficient performance (when harvesting peanuts of similar varieties under similar conditions).

Fine tuning the picking operation can be done by adjusting the Retention Board, Overhead Teeth, or the Concave Teeth. Fine tuning the cleaning operation can be done by adjusting the Cleaning Air and the Tail Board. Changing the PTO speed will also affect picking and cleaning operations, and can be used to further fine tune these operations.

IMPORTANT: Change only one adjustment at a time between perfomance checks.

5.1 RETENTION BOARD ADJUSTMENT

The Retention Board adjustment controls the time that the vines stay in the fourth picking cylinder.

Engage the Retention Board control handle (Fig. 5-1) in the 1/2 position, unless the vines are brittle.

If the vines are brittle, move the control handle toward disengage for less aggressive action. This will help avoid tearing the vines apart excessively, which makes separation more difficult.

In "tough" conditions, or to remove very small peanuts from bunch type vines clustered around the tap root, move the control handle toward engaged. Only engage the handle enough to ensure that good peanuts are not being left on the vine behind the combine.

If the control is engaged too far, shelling may occur, and the vines will tear apart excessively, possibly overloading the disc separator. Best performance is attained with the control handle engaged no further than necessary to remove the good peanuts from the vines.

Fig. 5-1

5.2 ADJUSTABLE OVERHEAD TEETH AND CONCAVE TEETH CONTROLS

The adjustable Overhead Teeth handle controls the degree of aggressiveness of the overhead spring tooth bar. If the vines are green, and/or tough, progressively engage the Overhead Teeth to allow more threshing of the vines.

Always start with the control handles (Fig 5-2, Fig. 5-2.1, Fig. 5-2.2) in the retracted or disengaged position. If you notice that an excessive number of peanuts are not being separated from the vines or a tough, wrapping condition develops, adjust the handle toward the engaged position in 1" increments between checks. We suggest adjusting the forward Overhead Teeth handle first, then adjust the rear handle. Engaging the Overhead Teeth will help clean wrapping vines from the corresponding Spring Tooth Cylinder, thus increasing that cylinder's effectiveness. Optional Concave Teeth (Fig 5-2.2) may be engaged to increase aggressiveness as needed.

Fig. 5-2

Fig. 5-2.1

Fig. 5-2.2

5.3 CLEANING AIR CONTROL

Set the Cleaning Air control handle (Fig. 5-3) at the 3/4 open position for operation under average conditions. It is often helpful to set the air higher than is needed and then adjust it back until no good peanuts are being blown out the back of the machine. Use the inspection doors (Fig. 5-3.2) at the rear of the combine to aid in setting the Cleaning Air. If the air is set too low, proper separartion will not occur and peanuts may ride out over the disc separator with the vines.

Opening the Cleaning Air control handle more will remove pods containing small shriveled peanuts. Adjustment **should not** be made while the combine is running because it is both dangerous and difficult. Maximum opening of the cleaning fan door should be at least 10-3/8" (Fig. 5-3.1).

Always operate with the Cleaning Air control set no lower than necessary to save all peanuts of value, while still providing a clean sample. Maximum open setting may be necessary.

Fig. 5-3

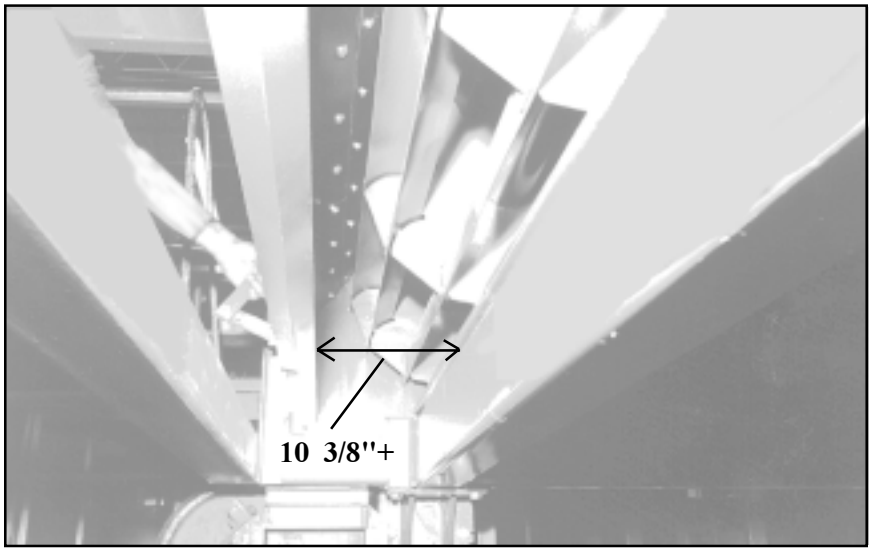


Fig. 5-3.1

Fig. 5-3.2

5.4 TAIL BOARD ADJUSTMENT

The Tail Board affects the flow of material from the stemmer bottom out the back of the combine. Raising the Tail Board makes it harder to blow material out of the stemmer bottom, lowering the Tail Board makes it easier. Under normal conditions, the Tail Board is set in the half raised position (middle of adjustments slots). Normally, the Tail Board is only adjusted if Cleaning Air or other adjustments do not produce the desired response. It is adjusted by loosening the (7) 1/4" fastners and evenly raising or lowering the Tail Board (Fig. 5-4) across the width of the machine. Raising the Tail Board allows the use of more Cleaning Air by making it more difficult to blow good peanuts out of the stemmer bottom. This may be necessary in wet or heavy vines where more cleaning air is desired for increased agitation of the material load on the Disc Separator to aid in separation. Note that raising the Tail Board in fields where heavy foreign material exists (stones, melons, wood, etc.) increases the chances for it to get into the bin. Lowering the Tail Board is somtimes desired in very dry conditions. If dry, brittle vines are getting shredded up into small sticks which can penetrate the disc separator openings, lowering the Tail Board makes it easier to blow this light, small trash out of the stemmer bottom.

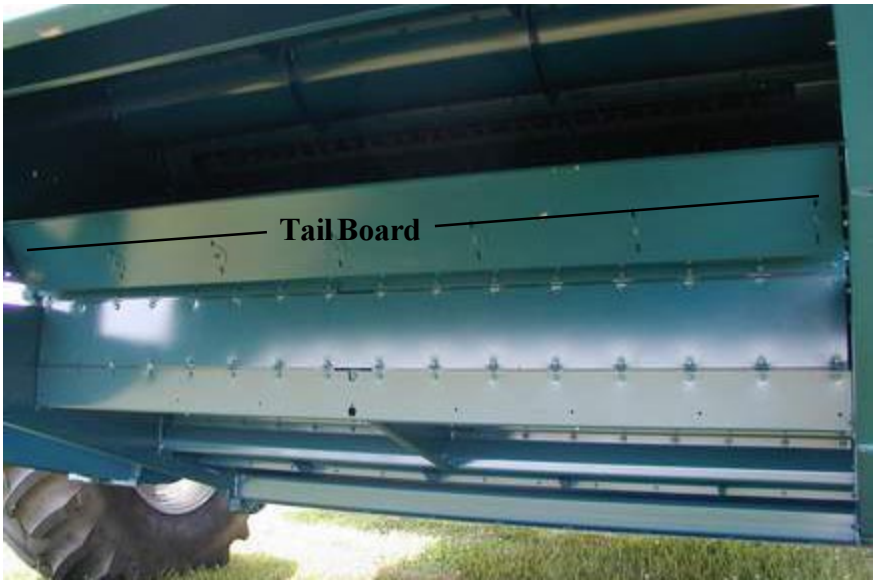


Fig. 5-4

5.5 ELEVATOR AIR CONTROL

The Elevator Air (Fig.5-5) is normally set so that peanuts are conveyed about 3/4 of the way across the bin, unless harvesting very light, fragile peanuts (lower air), or very dirty or high yield peanuts (raise air). Lower the setting if LSK's or empty hulls in the bin show excessive shelling within the conveyor system, but be aware that too low a setting can quickly stop up the Elevator Air System.

NOTE: On a new machine, or one that has been setting idle, some LSKs may be seen in the bin due to roughness in the air ducts. Once the air ducts smooth out, the number of LSKs should decrease.

Fig. 5-5

5.6 PICK-UP HEADER SPEED CONTROL (COMBINE HYD.)

Combines come standard set up for tractor hydraulics, which are adjusted from the cab using the tractor's hydraulic system. For machines equipped with optional combine hydraulics, speed can also be adjusted remotely from the cab (Fig. 5-6).

DANGER

Adjustment of the header speed with combine hydraulics can be done manually while the machine is not running. Never adjust the header speed while the combine is running. Never get between the tractor and the combine when the combine is running.

The speed of the header spring fingers is infinitely adjustable within its range. To maually adjust the speed of the header, turn the knob on the control valve, to reach the desired speed.

Fig. 5-6

Turning the knob clockwise speeds the header up, counter clockwise slows it down. Note that turning the knob clockwise reduces the range of adjustment available to the remote header speed controller.

Set the header speed so the header picks up the windrow completely as the combine travels down the field. If the header is too slow, it will push the vines along before picking them up, causing peanuts to fall off the vines. If operated too fast, the vines will pull apart before entering the combine, and peanut loss will occur. Dry vines typically require higher Pick Up speeds than green vines.

NOTE: If windrows have excessive dirt, increase the header speed slightly, to help shake out the dirt before it enters the machine.

Regularly check around the breather cap on the hydraulic tank for dirt buildup. If it is not clean, the breather can clog, which may result in damage to the system. Replace the oil filter yearly.

Check the fluid level in the hydraulic tank daily (Fig. 5-6) (capacity is approximately 32 gallons). Level should be at or above the center of this sightgage.

WARNING

Hot oil can cause severe burns. Do not work on hydraulic system if oil tempurture exceeds 100°F.

5.7 PTO SPEED ADJUSTMENT

Proper PTO speed is essential to efficient operation. A Combine Speed Monitor, which monitors combine speed from the tractor cab is included and should be mounted in the tractor. The Combine Speed Monitor measures combine speed as a percentage of machine design speed. The Amadas 2100 is designed to operate with 780 PTO rpm input, so the tractor will not be required to run at its full "PTO speed". At machine design speed, tractor PTO output should be 780 rpm and the combine speed monitor should read 100%. Consistent combine speed is important for best harvesting performance. If combine speed fluctuates, check combine drive belts and tractor PTO system for source of problem.

Fig. 5-7

A magnetic pickup assembly senses combine speed. This pickup reads off of one of the disc separator drive sprockets, and should be adjusted to have a clearance of approximately 1/16" between sprocket tooth and pickup (Fig.5-7). Ensure that the spocket never actually contacts the pick up, as the pick up may be damaged and rendered inoperable. An electrical cable runs from the magnetic pickup to a connector located above the left side of the header. After the combine is hooked to the tractor, plug the 6 foot cable from the control box into the connector. The Combine Speed Monitor is composed of a digital speed indicator which resides in a control box and attaches to the tractor fender using a velcro strip.

Note: When routing the cable to the tractor, stay clear of the PTO shaft and header. Do not connect Combine Speed Monitor while the machine or tractor is running.

The normal operational range of the combine is 90% to 110% of design speed as shown on the digital speed indicator. **Never exceed 110% of the design speed - serious machine damage may result!** Tractor PTO should operate from 700 rpm (90%) to 860 rpm (110%) unless the combine is optionally equipped for full 1000 RPM operation.

The combine design speed is 100% on the Combine Speed Monitor, or 780 PTO rpm. When combining very dry peanuts, or when the vines are very brittle, reducing the combine speed below 100% will normally aid in performance. In tough or wet conditions, raising the combine speed over 100% will increase aggressiveness and normally aid in performance.

Maintenance of the Combine Speed Monitor is minimal. The only item that may need replacing is the battery. The battery is in the back of the digital speed indicator, and should be replaced at the beginning of each season.

5.8 PICKUP HEADER HEIGHT ADJUSTMENT

The Pickup Header height is controlled with a tractor powered remote hydraulic cylinder (Fig. 5-8). Operate the header low enough to pick up all the vines in the windrow, but high enough to allow dirt clods, soil and other debris to fall out. This reduces the amount of foreign material entering the combine. To reduce excessive wear avoid dragging pickup spring teeth in the soil.

Fig. 5-8

5.9 LOCATIONS OF CONTROLS

5.10
REMOTE AUGER REVERSE

Fig. 5-9

Remote reversing auger and header speed control are standard features built in to the hydraulics package on the Amadas 9997.

The Remote Auger Reverse system consists of a hydraulic reversing valve, a second hydraulic motor and control switch. The valve is installed between the hydraulic pump system and the hydraulic motors which drive the auger and pickup. When the Remote Auger Reverse is engaged, the Pickup *stops* and the Header Auger *reverses,* allowing material jamming the auger to be discharged over the pickup and onto the ground. There is a hydraulic pressure guage at the valve block to indicate system pressure (Fig. 5-9). Normally, the system operates in the 1100 PSI range while harvesting. As the header begins to stall (jam), the pressure should jump to the 2700 PSI range. If the header is stalling and the pressure guage isn't reaching 2700 PSI, there could be a problem with the tractor's hydraulic system (or the system relief valve on the optional combine hydraulics system).

DANGER

Never remove material from the header/auger while the tractor engine and combine are running. Shut off the tractor before unclogging any part of the combine. An optional header/auger hydraulic drive kit is available which is powered solely by the combine.

5.11 HEADER AUGER ADJUSTMENT

Fig. 5-10

The Header Auger is manually height adjustable. It can be raised or lowered to help feeding in varied crop conditions. If the header stalls often, (but the hydraulic system is operating properly) the Header Auger may need to be raised for additional crop clearance. When the machine is new, it may be desirable to raise the auger until the finish of the auger has become polished for less resistance moving the crop. Under normal conditions, the header auger is run at the half way setting or lower for more efficient conveyance of crop and less rolling of vine material. The Header Auger Adjustment is accomplished using the adjustable bearing mount plates on each end of the header. The auger height is adjusted by loosening the four outer bolts holding the bearing mount plate and then turning the top mounted adjuster screw to raise or lower the auger. It is important to keep the Header Auger level, so both ends should be adjusted to the same relative position.

5.12 DUAL SPEED CYLINDER DRIVES

The Dual Speed Cylinder Drives allow efficient operation in a wider range of conditions, by allowing the operator to greatly vary the combine's cylinder speeds. By switching the main drive chain from the larger High Speed drive sprocket (Fig. 5-11) to the smaller Low Speed sprocket, cylinder speed can be significantly reduced for gentler threshing action. Typically, the High Speed cylinder drive setting is used in normal to tough conditions for more aggressive threshing action. The Low Speed cylinder drive setting is used in very dry or brittle conditions to handle the crop more gently, threshing with less damage and leaving the vine material in larger pieces for better separation. The Low Speed cylinder drive setting results in around a 23% reduction in cylinder speed. This is a substantial speed reduction which can increase possible torque loads, so the low speed setting should never be used in green or tough conditions. Shut the tractor off before changing the Dual Speed Cylinder Drive settings, and always remember to thouroughly tighten all of the accomanying idlers.

Fig. 5-11

CAUTION

Do not allow the combine to run in green or tough conditions with the Dual Speed Cylinder Drives in the Low Speed setting. Severe damage to the combine, driveline, or tractor will occur.

6
OPERATION

6.1 HITCHING COMBINE TO TRACTOR
6.2 ATTACHING AND CHECKING DRIVELINE
6.3 DAILY PRE-START CHECK
6.4 OPERATING PROCEDURE
6.5 FINE TUNING OPERATION
6.6 ROAD TOWING WITH SIDE SHIFT TONGUE

WARNING

Do not operate this machine without reading and fully understanding this operator's manual. Failure to do this could result in injury or death to the operator or damage to the tractor or combine.

6.1 HITCHING COMBINE TO TRACTOR

1. Set tractor drawbar in the center fixed position with the hitch point centered behind the end of the PTO shaft. (20" for side shift tongue equal angle shafts, 20" for 1-3/8"-21 spline CV shafts, and 20" for 1-3/4"-20 spline CV shafts). An optional drawbar extension (Amadas part # 61359) will be necessary to reach proper hitch point dimension on most tractors with 1-3/8"-21 spline PTO output shafts.

2. Position the three point hitch lower lift links in the raised position. Install a 2-5/16" hitch ball on the tractor stationary drawbar. A 1-1/4" hole size and a 2-5/16" high strength hitch ball are required. Tighten nut securely. (A hitch ball for a 1-1/8" size hole is also available).

3. Position tractor so the hitch ball will slip into the tongue mounted ball socket when lowered. Lubricate the ball socket with grease.

4. Using the jack, slowly lower tongue until ball release handle snaps into place.

5. Remove jack and place on holding bracket.(See Fig. 5-8)

6. Attach 3/8" or 1/2" x 84" or longer hydraulic hoses from the header lift cylinder to one of the tractor remote hydraulic valves.

DANGER

Always use safety chains when towing the combine . If the combine were to separate from the towing vehicle, death or serious injury could result.

7. Install 3/8" or 1/2" X 84" or longer Peanut Dump Bin operating hydraulic hoses to combine. Attach to a second remote hydraulic valve.

6.2 ATTACHING AND CHECKING DRIVELINE

DANGER

All drive shields and guards must be in place when operating the combine. Death or serious personal injury will result from entanglement.

CAUTION

Failure to check driveline length and clearance can cause damage to combine and tractor.

*The **Amadas 2100 Six Row Combine** has been equipped with a constant velocity PTO driveline. Because of the double Cardan Joint incorporated into this shaft, you can expect a constant output shaft speed with minimal vibration. The shaft speed will remain constant with minimum virbration even in a tight turning radius. Please read the section on lubrication thoroughly as the PTO drive shaft has special requirements.*

1. Ensure that the tractor draw bar is set such that the center of the hitch ball is approximately 3-1/2" below the centerline of the tractor PTO output shaft. Extend the tractor draw bar such that the center of the hitch ball is approximately 20" from the end of the tractor PTO output shaft (Fig. 6-1).

2. Shift tongue to operating position (left side). Attach the driveline to the combine and tractor PTO. 1-3/8" 21 spline and 1-3/4" 20 spline ends are available.

Note: A tractor draw bar extension (Amadas part # 61359) may be required to attain a distance of 20" between tractor PTO output and the hitch ball on tractors with 1-3/8" 21 spline PTO.

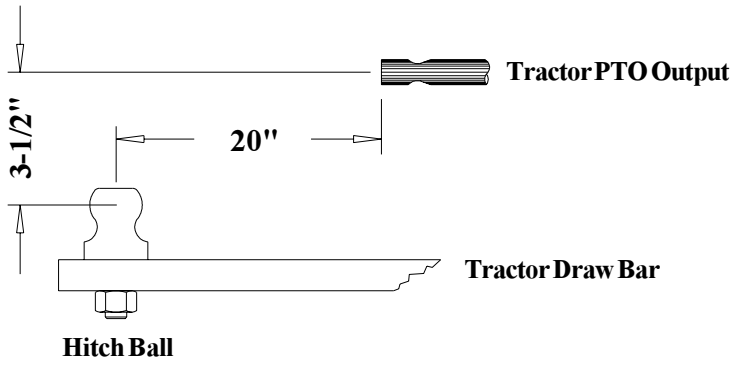


Fig. 6-1

3. Be certain that driveline length does not exceed 72 inches when fully extended. (Fig. 6-1.2)

NOTE: If driveline length is more than 72 inches, check the drawbar setting and move the drawbar out.

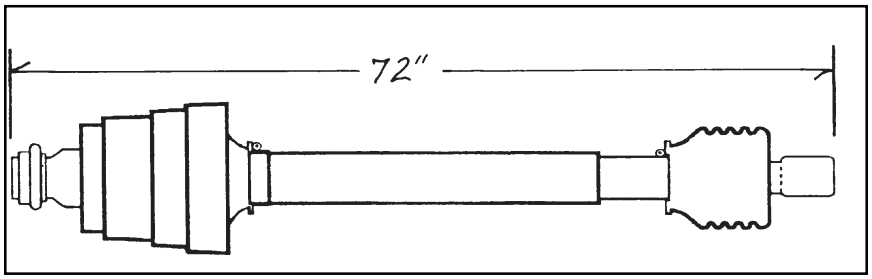


Fig. 6-1.2

4. Start the tractor engine and raise the Pickup Header to its highest position.

5. After proper safety measures are taken [1.1], slowly turn the tractor. Observe when the telescoping drive line is close to its closed position or when the tractor tire is close to the combine tongue. This is the minimum turning radius in that direction.

NOTE: In most cases the tractor will turn until the tire is very close to the combine tongue, without the telescoping shaft bottoming out. If this is not possible with your tractor, do not exceed the observed limits or severe damage to combine and tractor will occur, (whether the PTO is engaged or disengaged).

CAUTION

Never exceed the observed limits of turning or severe damage to combine and/or tractor will occur, whether the PTO is engaged or disengaged.

6. Repeat in the opposite direction.

CAUTION

Do not allow tractor tire to touch the tongue, or the universal driveline to reach its closed (or bottomed out) position during operation. Do not allow the constant velocity joint to exceed 80 degrees. Severe damage to the driveline, tractor or combine will occur.

6.3 DAILY PRE-START CHECK

Perform the daily pre-start check each day before taking the machine to the field. The pre-start check will help detect problems early, reduce down time, and extend the life of your combine.

The basic steps of this procedure are:

1. Service tractor and attach combine.

2. Grease PTO drive line as shown in lubrication chart [7.3].

3. Check all hydraulic lines for proper connection.

4. With adequate overhead clearance, lift bin to a fully raised position.

5. Put tractor in park and shut off the engine. Lock bin in fully raised position with safety strut (Fig.6-2).

DANGER

Check overhead clearance to ensure that no power lines, overhead limbs, or any other obstructions exist. Combine exceeds 13'-9" with basket lowered. When fully raised, the Amadas 2100 stretches over 24 feet tall. Contact with an obstruction or high voltage power line could result in death, or serious personal injury.

Fig. 6-2

DANGER

Install safety strut over hydraulic cylinder before working under basket. Death or serious personal injury could result if the bin were to fall.

6. Inspect for broken parts and wear. Inspect cylinders and adjustable bars for damaged or broken spring teeth. Also inspect for metal, wood or other foreign material lodged within the picking chamber. Remove vines wrapped around the Spring Tooth Cylinder and Beater Cylinder shafts.

Fig. 6-3

7. Remove any foreign material found and replace any missing or damaged spring teeth.

NOTE: Continued operation with missing or damaged spring teeth may reduce picking efficiency and reduce service life of adjacent spring teeth.

8. Remove Walker Cylinder inspection cover (Fig. 6-3). and inspect for damage or foreign material. Pay particular attention for excessive wear or damage to the Walker Cylinder bar bushings, cam mechanisms and cam follower bearings.

Fig. 6-4

9. Remove Lower Separator Inspection Covers (Fig. 6-3, 6-4) below disc separator and check stemmer and collection auger for obstructions. Check to make sure area between the collection auger housing and stemmer support hinge is clear of dirt and debris. Also, check to make sure no buildup has accumulated under the first disc separator shaft or behind the side panels and disc separator bearings.

10. Check all belts and chain drives for proper alignment, tension and wear.

11. Check hydraulic system for leaks and adequate fluid.

12. Check cleaning fan for obstruction in intake or damaged blades.

13. Replace all covers and shields, and remove bin safety strut. Lower bin.

14. Start tractor (leave in PARK). With engine at idle, engage PTO. Listen for any noise which could indicate a problem, such as a damaged or defective bearing.

CAUTION

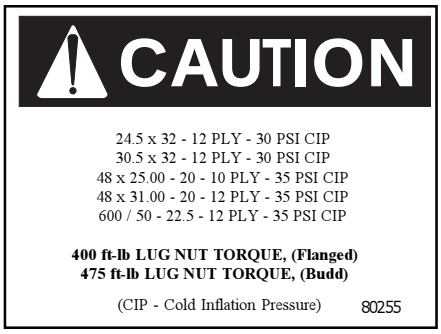
Failure to remove the bin safety strut before lowering the bin can severly damage the bin.

DANGER

Always use safety chains when towing the combine . If the combine were to separate from the towing vehicle, death or serious injury could result. Beware of overhead obstructions. Combine height ranges from 13'-9" to 14'-2".

15. Increase tractor engine to combine operating speed and inspect again for damaged bearings, etc.

16. Check tire pressure and lug nut torque:



CAUTION

Check lug nut torque and cold inflation tire pressure to specifications printed on combine decal, or in this manual.

Once the combine is attached to a tractor, the daily pre-operation check performed, and operating precautions clearly understood by combine operators, continue with the operating procedure.

DANGER

Replace all shields before starting combine operation. Death or serious personal injury could result.

6.4 OPERATING PROCEDURE

1. Set Retention Board adjustment handle at the halfway position [5.1]. Tighten T-handle securely.

2. Set the adjustable Overhead Teeth and Concave Teeth controls in the disengaged position [5.2]. Tighten the T-handles securely.

CAUTION

Never make adjustments to harvesting controls while the combine is running.

3. Set Cleaning Air control handle three-fourths open and tighten T -handle securely. [5.3]

4. Set Elevator Air control handle in two-thirds open position [5.5].

5. Make sure that bin lip extension is in operating position (Fig 6-4). Leaving the lip folded obstructs the discharge of air from the bin.

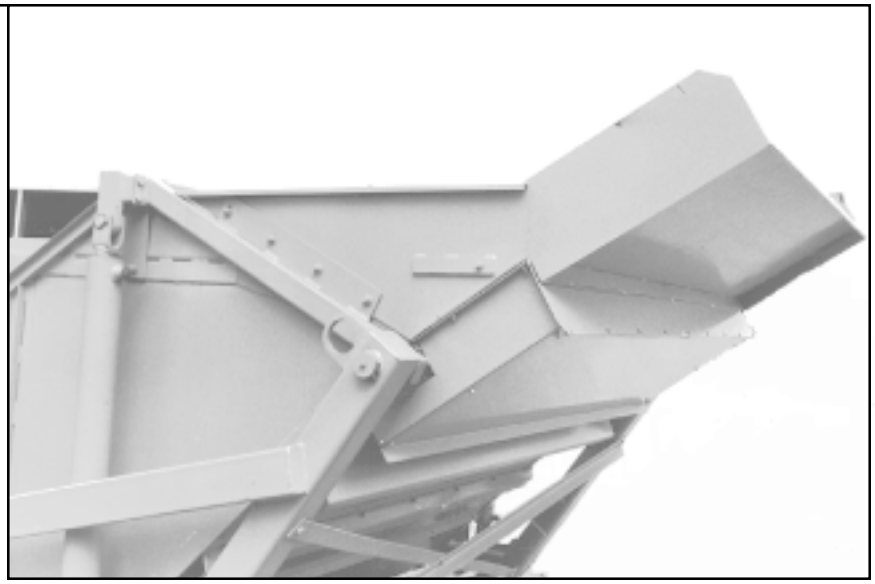


Fig. 6-4

6. Set the header height so that the pickup spring fingers will be one to two inches above the soil (with the combine wheels in the row centers as it moves over the windrow).

7. Engage PTO and set combine speed at 100% (780 rpm tractor PTO output) [5.7]. Under normal conditions operate the tractor at 1 to 2-1/2 miles per hour, and travel down the windrow for about fifty yards.

Stop and check for proper operation:

DANGER

Always stop combine, set parking brake, and shut tractor motor off before leaving tractor for any reason.

-If all peanuts are removed from the vines and no more shelling occurs than might be expected in a new machine, leave the combine controls where they are set.
-If more than an occasional good peanut is left on the vines, increase tractor RPM or begin to close the Retention Board [5.1] adjustment handle in one-half inch increments, up to the three-fourths engaged position.
-If an excessive number of peanuts are not removed from the vine and the Retention Board is properly set, begin to move the adjustable Overhead Teeth toward the engaged position in 1" increments, starting with the forward Overhead Teeth Control [5.2].
-If "tails" are being left on the peanuts, engage the Concave Teeth (if equipped) [5.2] in 1" increments beginning with the front set.
-Unless leaves or other light foreign material are present in the basket, or peanuts are blowing over the tail board, make no changes to the Cleaning Air [5.3] setting at this time.

NOTE: Make only ONE operational adjustment at a time between performance checks so that any performance change can be attributed to that particular change, rather than guessing which of a combination of adjustments caused a change.

-A few hulls and LSK's in the bin are expected during the first few acres of operation. No changes should be made to the Elevator Air [5.5] setting at this time (unless the peanut hulls are very fragile or too little air is available to blow the peanuts to the bin).
-Combine speed can be adjusted from 90% to 110% to increase or decrease picking aggressiveness and available cleaning and pneumatic conveyor air.

8. After making any necessary adjustment, run the combine down the windrow the same distance and check performance again.

9. Set the controls as desired and continue to the end of the row.

10. Harvest the first few bins of peanuts at moderate speed to become accustomed to the machine.

11. Before dumping the bin, always check for overhead obstructions or power lines. In very dirty conditions, dumping the bin slowly will help produce a cleaner sample by allowing the strainer at the bin lip to remove more dirt and small foreign material.

NOTE: When combine speed monitor reads 100%, tractor PTO should run approximately 780 RPM PTO when combine is equipped with standard drives. If combine speed can not be maintained +/- 1% by the tractor engine, installation of the optional 800 RPM PTO Kit should be considered.

WARNING

Be certain that bin lip extension is folded out before dumping the bin. Combine can tip if the bin is dumped with bin lip extension in the stored position.

DANGER

Check overhead clearance to ensure that no power lines, overhead limbs, or any other obstructions exist. Combine exceeds 13'-10" with bin lowered. When fully raised, the Amadas 2100 stretches over 24 feet tall. Contact with an obstruction or high voltage power line could result in death, or serious personal injury.

6.5 FINE TUNING OPERATION

6.5-1 ACHIEVING MAXIMUM GROUND SPEED
6.5-2 INCREASING SEPARATING CAPACITY
6.5-3 HARVESTING UNDER WET CONDITIONS
6.5-4 HANDLING FOREIGN MATERIAL

6.5-1 ACHIEVING MAXIMUM GROUND SPEED

Moisture, dirt clods, grass, weeds, peanut maturity, yield, stem characteristics, vine type and many other variables determine the most efficient ground speed.

If maximum ground speed is desired:

1. Shift tractor into the next higher gear.

2. Operate machine for 70 yards and check for harvesting loss.

3. Continue to increase tractor ground speed by shifting to the next higher gear speed if the performance check shows the machine performed satisfactorily at the last speed tried.

CAUTION

Jet tunnel may be subject clog at higher ground speed. Be sure Elevator Air is sufficient to elevate increased peanut volume.

4. When performance deteriorates, drop back to the next lower gear selection that offered satisfactory performance. This is the maximum efficient ground speed for existing conditions.

NOTE: Normally the Cleaning Air System is unaffected by the other components of the machine. If you experience peanut loss, determine whether the loss is resulting from the Cleaning Air systems or the Walker Cylinder section before adjusting the Cleaning Air controls.

6.5-2 INCREASING SEPARATING CAPACITY

Separating capacity can sometimes be increased by engaging the Retention Board, Overhead Teeth, or Concave Teeth more aggressively. If the combine is operating with the Dual Speed Cylinder Drives in the low range, capacity can be increased by switching to high range. Each of these adjustments increases aggressiveness and may cause some shelling. You must decide if higher capacity is worth a possible increase in shelling. Best separating efficiency can typically be achieved when peanut kernal moisture is 14% to 20%.

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6.5-3 HARVESTING UNDER WET CONDITIONS

Always run the Dual Speed Cylinder Drives on High in wet conditions. If water droplets are present on or under peanut vines when harvested, the surfaces of all components in the combine can become coated in a layer of material composed of soil and vine fiber. If it is not possible to lift the windrows or wait until they dry before harvesting, proceed at a ground speed slower than normal and check frequently for buildup of residue on the stemmer saws, elevator air ducts and other surfaces subject to buildup. More aggressive combine settings are typically needed in wet conditions.

After harvesting peanuts where buildup occurs, it is important to:

1. Clean Stemmer Saws with a wire brush and scrape out Stemmer Bottom.

2. Remove Elevator Air duct work and clean thoroughly to remove buildup.

3. Clean the Walker Cylinder concaves.

6.6 ROAD TOWING COMBINE WITH SIDE SHIFT TONGUE

Combines with side shift tongues are designed to shift the tongue to the center of the machine for safer and easier transport.

Towing a Combine equipped with a side shift cylinder:

1. Raise the header off the ground.

2. Engage the hydraulic tongue shift cylinder to move the tongue to the center position.

3. Install the 1" X 4-1/4" hitch pin and safety clip.

DANGER

Always use safety chains when towing the combine. If the combine were to separate from the towing vehicle, death or serious injury could result.

Combine not equipped with a hydraulic side shift cylinder:

1. Raise the header and place blocks securely under each end of the header at the side frames. DO NOT put the blocks under the header bands, as the bands will be damaged by the weight of the combine.

2. Lower the header onto the blocks and unhitch tractor from combine.

3. Remove 1" X 4-1/4" hitch pin and manually push the tongue to the center position.

4. Reinstall the hitch pin and safety clip.

5. Hitch the combine to the tractor.

6. Raise the header and remove blocks from beneath.

DANGER

Always use safety chains when towing the combine . If the combine were to separate from the towing vehicle, death or serious injury could result.

SPECIFICATIONS: SIDE SHIFT CYLINDER

Retracted length:	20-1/4"
Extended length:	30-1/4"
Stroke:	10"
Inside diameter:	3"
Outside diameter:	3-1/2"
3000 psi rating	
Cylinder ear hole sized for 1" diameter hitch pin.	

7
MAINTENANCE

7.1 BELT ADJUSTMENT
7.2 CHAIN ADJUSTMENT
7.3 LUBRICATION
7.4 POST-SEASON MAINTENANCE

DANGER

Do not perform any service or maintenance to the combine while the combine or tractor is running.

7.1 BELT ADJUSTMENT

V-belt drives power the fans, hydraulic power unit (opt.), separating section and stemmer saws. They also transmit power from the PTO input gearbox to the main jackshaft. Properly maintaining the belts is essential to ensure efficient machine operation.

To check and adjust the belts, be certain tractor engine is shut down:

1. Open shields covering drive belts. Latch shields open.

2. Check belts and sheaves for wear. Replace if necessary.

3. The main drive belt should have approximately 2 inches of play when checked in the middle. Adjust belt tension as necessary.

4. Make sure that idlers are aligned and fasteners are tight. Replace shields before operating machine.

DANGER

Replace all shields before starting combining operation. Death or serious personal injury may result if shields are not in place.

7.2 CHAIN ADJUSTMENT

The chain drives must be properly maintained for the combine to function correctly. Proper chain alignment and tension are very important.

To check and adjust the chains:

1. Open or remove shields which cover the chains.

2. Check chains and sprockets for wear. Replace if necessary.

CAUTION

Never replace a chain only without checking for sprocket wear, too. New chains must run on sprockets with no visible wear to prevent premature wear of chains and/or sprockets.

3. The chains should have approximately one inch of play when checked in the middle. Adjust using the chain idlers. (Chains linking the Disc Separator shafts together should have no more than 1/2" play).

4. Lubricate chains if needed [7.4].

5. Ensure all idlers are tight and aligned, and replace all shields before operating machine.

DANGER

Replace all shields before starting operation of combine. Death or serious personal injury may result.

7.3 LUBRICATION

DANGER

Do not lubricate the combine while in operation. Doing so may result in death or serious personal injury.

There are some components on the combine that require regular lubrication in order to continue functioning correctly. These items and their lubrication intervals are shown on the lubrication table and chart.

NOTE: Daily greasing of the PTO is essential for proper operation. Refer to illustration for guidelines.

NOTE: To avoid damaging bearing seals, do not use a power grease gun and do not exceed the specified lubrication intervals.

NOTE: Some sealed bearings contain no grease fitting, as they are lubricated for life and require no further lubrication.

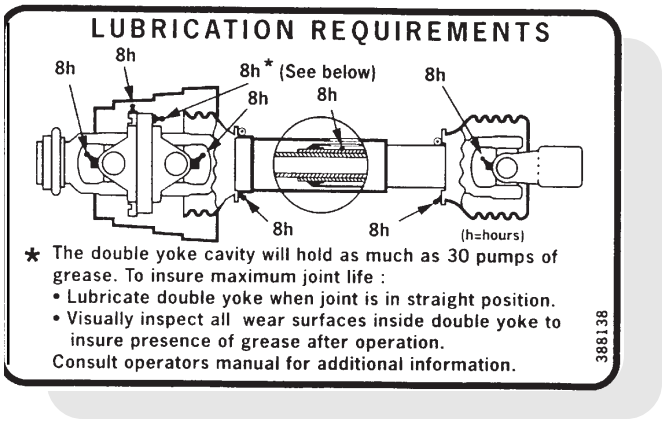
LUBRICATION CHART

Check	Type of Lube	Before Each Use	4-8 hrs.	25 hrs.	50 hrs.	100 hrs.	Yearly
Lubricate Ball Hitch Assembly	A				X		
Lubricate PTO Shaft	A	X	X				
Lubricate U-Joint (On gearbox output)	A				X		
Lubricate Bin Pivot Points	A					X	
Lubricate Bearings	A			X			
Check Hyd. Tank Fluid Level (opt.)	B	X	X				
Change Hyd. Tank Fluid & Filter (opt.)	B						X
Check Gearbox Oil Level	D					X	
Oil Chains	C			X			
Lubricate Wheel Bearings	A						X

A.....MULTI-PURPOSE GREASE (EP2 Rated)
B.....SAE 10 WT. HYDRAULIC FLUID
C.....CHAIN LUBE
D.....SAE 90 WT. GEAR OIL

LUBRICATION
Continued

NOTE: Daily lubrication of the CV Driveline is essential to driveline longevity - it will fail if not correctly lubricated on a periodic basis.



PTO Lubrication Guide - CV Driveline

NOTE: There are two grease fittings located 180 degrees apart on the telescoping shaft.

7.4 POST-SEASON MAINTENANCE

To extend the life of your combine, take the time to properly prepare it for the long non-use period. Follow these storage suggestions at the end of each season.

1. Clean the combine thoroughly to remove all dirt, and moisture - holding materials. Flush out the slots (below the disc separator shafts (Fig. 7-1), with an air hose or blower to remove all trash and dirt. Use protective eye gear. (If dirt is packed tightly, it can be loosened by prodding). Do not use high pressure water or air directly on bearing seals, as contaminant or moisture penetration may occur, which can dramatically shorten part life.

Fig. 7-1

2. If possible, repaint worn and scratched parts, and coat the internal parts of the combine with light oil or other rust inhibitor.

3. Release tension on all belts.

4. Remove and clean all chains. Store in a container of oil or oil / diesel mix if possible. If not, reinstall, but do not tension.

5. Grease all fittings and the driveline.

6. Store under shelter. Collapse all hydraulic cylinders to prevent them from rusting and pitting.

NOTE: If machine must be stored outside, cover optional hydraulic tank and breather cap to prevent water from entering tank.

8

TROUBLESHOOTING

PROBLEMS

1. Good peanuts attached to vines being discharged from combine.
2. Loose peanuts being discharged over back of Walker Cylinders.
3. Good peanuts being discharged over Disc Separator.
4. Lightweight foreign material in bin.
5. Excessive amounts of LSK's in bin.
6. Excessive amounts of dirt clods in bin.
7. Pneumatic conveyor does not deliver peanuts to bin fast enough to allow high speed operation.
8. Tractor PTO load excessive.
9. Hay is torn up excessively under dry conditions.

Problem	Cause	Correction
1. Good peanuts attached to vines being discharged from combine.	Retention Board open to much.	Close in 1" increments between checks. [5.2]
	Main drive belt slips under surge loads.	Tighten belt and slow down ground speed.
	Combine not at or near design speed.	Adjust RPMs and observe Combine Speed Monitor.
	Ground speed too fast for conditions.	Shift tractor into a lower gear.
	Moisture level in windrows is too high.	Lift windrows and/or wait for moisture to dissipate.
	Adjustable Overhead Teeth or Concave Teeth not engaged enough.	Engage Overhead or Concave teeth slightly (in 1" increments) [5.2]

Problem	Cause	Correction
2. Loose peanuts being discharged over back of Walker Cylinders.	Combine PTO not at or near design speed.	Adjust and observe Combine Speed Monitor. [5.7]
	Ground speed too high for conditions.	Shift tractor to lower gear.
3. Good peanuts being discharged over Disc Separator.	Ground speed too high for conditions.	Shift tractor into a lower gear.
	Cleaning air control improperly set.	Lower air setting if peanuts are being blown out. Raise air setting if peanuts are riding out in the vine hay.
	Aggressive setting too low	Engage Overhead Teeth and then Concave Teeth (1/8" incr.).
4. Lightweight foreign material in bin.	Main drive belt slips under surge loads.	Tighten belt and reduce ground speed.[5.7]
	Combine PTO not at or near design speed.	Adjust and observe Combine Speed Monitor. [5.7]
	Cleaning air control set too low.	Adjust to a higher setting.
	Separator section drive, or Cleaning Air drive belts are slipping.	Tighten belts.
	Moisture level in windrows too high.	Lift windrows and/or wait for moisture to dissipate.
5. Excessive amounts of LSK's in bin.	Retention Board engaged too far in the closed position.	Open in 1 in. increments between checks.[5.1]
	Adjustable Overhead / Concave teeth are set too aggressively.	Disengage in 1 in. increments between checks. [5.2]
	Main drive belt slips under surge.	Tighten belts.
	Combine PTO over design speed.	Adjust and observe Combine Speed Monitor. [5.7]
	Moisture content in peanuts too low.	Minimize aggressive settings, reduce combine RPM. Increase to a higher tractor gear & ground speed if needed.
	Moisture level in windrows too high.	Lift windrows or wait for moisture to dissipate.

Problem	Cause	Correction
5. Excessive amounts of LSK's in bin.(cont.)	Obstruction in elevator air duct.	Shut off tractor, disassemble duct and remove obstruction.
	Very dry harvest conditions.	Shut off tractor, change Dual Speed Cylinder Drives to low speed setting.
	Windrows have been run over and the peanuts shell easily.	None.
	Elevator Air set too high.	Lower Elevator Air setting.
6. Excessive amounts of dirt clods in bin.	Excessive dirt in windrow	Reshake windrow
	Pickup header is being operated too low.	Raise header so that spring tips run just above the ground.
	Combine PTO not at or near design speed.	Adjust and observe Combine Speed Monitor. [5.7]
	Main drive or cleaning air belts are slipping.	Tighten belts and check elevator fan belt and V sheave for wear.
	Concave Teeth not engaged.	Engage Concave Teeth.
	Ground speed too fast for conditions.	Shift tractor into a lower gear.
7. Elevator Air has difficulty delivering peanuts to the bin.	Elevator Air set too low.	Increase setting. [5.5]
	Ground speed too fast for conditions.	Shift tractor into a lower gear.
	Obstruction in elevator air duct.	Disassemble duct and remove obstruction.
	Elevator Fan or main drive belts are slipping.	Tighten belts and check the elevator fan belt and V sheave for wear.
	Combine PTO not at or near design speed.	Adjust and observe Combine Speed Monitor. [5.7]
	Stones or dirt clods in air duct.	Shut off tractor, open cleaning door and remove stones or clods.
	Animals have built nests in high pressure section of elevator system.	Remove inspection door in jet tunnel and remove nest.
	Dirt buildup on inside of duct.	Inspect and clean.

Problem	Cause	Correction
8. Tractor PTO load excessive	Tractor PTO not at or near design speed	Adjust and observe Combine Speed Monitor. [5.7]
	Ground speed too fast for conditions.	Shift tractor into a lower gear.
	Picking chamber jammed.	Stop, shut off tractor, and remove excess material.
9. Hay is torn up excessively under dry conditions.	Adjustable Overhead / Concave Teeth set too aggressively.	Disengage Overhead / Concave Teeth in 1" increments between checks. [5.2]
	Retention Board engaged too far in the closed position.	Open in 1" increments between checks.
	Combine is being operated above suitable PTO speed level.	Reduce combine speed to lower speed level. [5.7]
	Very dry harvest conditions.	Shut off tractor, change Dual Speed Cylinder Drives to low speed setting.

ONE-YEAR LIMITED WARRANTY
For AMADAS INDUSTRIES 2100 Peanut Combine

A. General Provisions

The Warranties described below are provided by AMADAS INDUSTRIES ("AMADAS") through its authorized dealers to the original purchaser of each new AMADAS 2100 Peanut Combine. AMADAS will repair or replace, at its option, any part covered under warranty which is found to be defective in material or workmanship during the applicable period of warranty. This warranty is applicable only to the cost of the part replaced or repaired and does not cover labor costs involved in installing the replaced or repaired defective part.

B. What is Warranted?

All parts of any new AMADAS 2100 peanut combine, except tires, tubes, belts, chains, picking and header springs, and PTO drivelines are warranted for 12 months. The warranty period will begin when the combine is delivered to the purchaser. AMADAS will repair or replace, at its option, any new part or component under the above warranty, if a defect in material or workmanship appears in such part or component and is reported to AMADAS before the expiration of the applicable equipment warranty. Tires, tubes, belts, chains, picking and header springs, and PTO drivelines are not warranted by AMADAS beyond that offered by the items original manufacturer.

Used equipment is not warranted by AMADAS unless it is specifically covered by a separate warranty document. The above warranties cover only defective material and workmanship. The warranties do not cover any depreciation or failure caused by normal wear, lack of proper maintenance or use, misuse, lack of proper protection during storage, or accident. The purchaser shall pay all costs of routine maintenance and/or replacement of maintenance and wear items.

C. Unapproved Service or Modification

All Obligations of AMADAS under this warranty are terminated if the combine is modified or altered in ways not approved by AMADAS.

D. Securing Warranty Service

To secure warranty service, the purchaser must (1) report the product defect and request repair within the applicable warranty period, (2) present evidence of the date of delivery of the peanut combine, and (3) make the combine available at an AMADAS authorized dealer within a reasonable period of time.

E. No Dealer Warranty

The selling dealer makes no warranty of his own on any item warranted by AMADAS, and makes no warranty on other items. The dealer has no authority to make any representation or promise on behalf of AMADAS, or to modify the terms or limitations of this warranty in any way.

F. What are your Responsibilities?

a. Read the operator's manual before operating the equipment.
b. Perform all necessary maintenance as described in the operator's manual.
c. Deliver the machine to an AMADAS authorized dealer at your expense during normal working hours for any needed warranty services, or if unable to do so, cover the costs associated with any field service call which must be made.
d. Contact an AMADAS authorized dealer promptly on any claim for warranty service.
e. Sign the AMADAS machinery delivery form, which will be given to you by the dealer.

G. Disclaimer

There are no warranties that extend beyond the description here. **ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE ARE SPECIFICALLY DISCLAIMED AS ARE ALL OTHER REPRESENTATIONS TO THE PURCHASER.** AMADAS specifically excludes any liability on behalf of the company for any incidental or consequential damages including, but not limited to, crop loss, loss of profits, rental of substitute equipment, or other commercial losses. AMADAS shall not be responsible for expenses or inconveniences that you might incur or experience with respect to the AMADAS 2100 peanut combine, nor shall AMADAS be liable for defects, damage, or failures caused by improper storage, unreasonable use, abuse, or accident, including the failure to provide reasonable and specified maintenance. This warranty applies only to the original purchaser of the equipment. Because some states do not allow the exclusion of limitations of incidental or consequential damages, the above limitation may not apply to you. This warranty gives you specific legal rights. You may also have other rights, which vary from state to state. Where there is a conflict between a provision of this warranty and the provision of any state, the state legislation prevails.