Model 2100 & 9997
Pull-Type Peanut
Combine

2nd Edition, Beg. S/N 420000

AMADAS

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MAN075

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Model 2100 and Four-Row 9997 Pull-Type Peanut Combines are manufactured by Amadas Industries:

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AMADAS

Welcome To Amadas Industries

With origins dating back to 1963, AMADAS Industries and its predecessors have a long history of providing high quality, reliable, and innovative equipment for the farming industry. AMADAS equipment is currently at work throughout the United States and in many other countries. This equipment ranges from the Magnum Fource Peanut Combine, Tree Bark Processing and Packaging Machinery, Hi-Speed Cotton Stalk Puller/Chopper, Reel Rain Traveler Irrigation Systems, to the 2100 and 9997 Pull-Type Peanut Combines.

Thank you for choosing AMADAS Industries. We are strongly committed to your satisfaction and safety. Our goal is for you to be satisfied with our machinery for many years and it is our hope that you will choose AMADAS again for your equipment needs.

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.

One of the most important factors to both safety and maximum performance is for every machine operator to understand thoroughly the safe operation of this equipment. Please invest the time to read this manual to ensure that injuries are prevented and to receive the maximum productivity from your AMADAS machine.

2100 Pull-Type Peanut Combine

NOTE! *This manual covers both the 2100 and Four-Row 9997 Pull-Type Peanut Combines. Generally, photos shown are of the 2100. Note that the function of both combines is the same, even if the photos vary somewhat from your machine.*

Congratulations on your purchase of an AMADAS 2100 or Four-Row 9997 Pull-Type Peanut Combine! We, at AMADAS Industries, are proud of our equipment and our more than thirty years of service to peanut farmers.

AMADAS pull-type peanut combines are 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 models 2100 and 9997, the most technically advanced pull-type peanut combines available. The combination of innovative technology, low yearly maintenance, and the industry's largest threshing and separation capacity make these machines the world leaders in pull-type combines.

Benefits

The proven performance of the advanced picking and separating technology of the AMADAS 2100 and 9997 provides the following benefits:

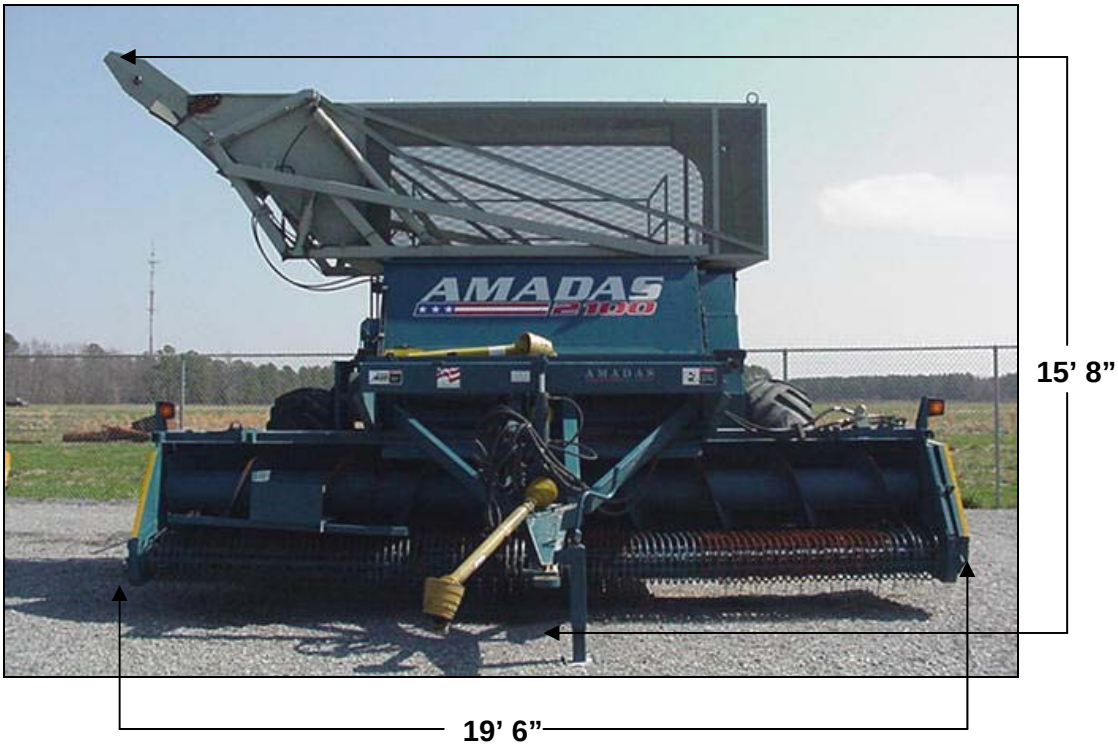
- Increased harvesting capacity
- Increased harvesting efficiency
- Reduced harvesting costs
- Improved performance in tough harvest conditions
- Reduced field loss, foreign material, LSKs.

Specifications

	2100	9997
Length overall:	25’ 6”	25’6”
Width:	16’ 6” (outside wheel base) 14’ 4” (centerline wheel base)	10’8” (outside wheel base) 12’2” (centerline wheel base)
Height (bin lip in):	13’ 10”	13’10”
Height (bin lip out):	15’ 8”	15’8”
Dump height:	11’ 8”	11’8”
Height (bin raised):	24’	23’9”
Weight (empty)	20,000 lbs	19,000 lbs
Header widths:	18’, 19’, 15’3”	12’2”
Inside working width:	96 ¼”	96 ¼”
Bin capacity:	7500 lbs (std)	6500 lbs (std)
Tire size (std):	24.5 x 32 12 ply R1 high flotation cleated	600/50-22.5 12 ply
Tire size (opt):	30.5 x 32 12 ply R1 high flotation cleated	N/A
Light kit: (to ASAE standard)	Standard	Standard
Remote auger reverse:	Standard	Standard
Vine spreader:	Optional	Optional
PTO input:	1000 PTO @ 780 RPM input (opt) 1000 PTO @ 800 RPM input (std)	1000 PTO @ 800 RPM (std)
Tongue:	Fixed (side shift for 8-30”)/ Hydraulic height adjustable with ball hitch	Side shift /Hydraulic height adjustable with ball hitch
Hitch type:	2 5/16” ball, ball & clevis opt.	2 5/16” ball, ball & clevis opt
Picking:	Four 36” dia. spring-tooth picking cylinders Dual speed cylinder drives Adjustable retention board Two sets adj. overhead teeth (std) Five sets adj. concave teeth (opt)	Four 36” dia. spring-tooth picking cylinders Dual speed cylinder drives Adjustable retention board Two sets adj. overhead teeth (std) Five sets adj. concave teeth (opt)
Separation system:	Five retractable spring tooth walker cylinders Two beater cylinders 15-roll disc separator 14” dia. 24-blade cross induction cleaning fan	Five retractable spring-tooth walker cylinders Two beat cylinders 15-roll disc separator 14” dia. 24-blade cross induction cleaning fan
Elevator system:	12” dia. collection auger to 9 ½” square duct 28” dia. 12-blade centrifugal fan	Jet tunnel to 9 ½” square duct supplied by 28” dia. 12-blade centrifugal fan

Dimensions (2100)

6-Row



1. Safety

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Overview

Safety is the responsibility of ***everyone***. Although safety features are incorporated into the machine and dangerous areas marked, ultimately, careful operation is the best prevention against accidents. To reduce the risk of accidents, please read thoroughly and follow the safety instructions and messages included in this manual and on the machine.

Safety Symbols Used

The three safety symbols used on the machine and in this manual are shown below. The following section explains each of these symbols in detail.

⚠DANGER!

⚠WARNING!

⚠CAUTION!

Please familiarize yourself with each symbol and its meaning. It is crucial to your safety and the safety of others that you follow the safety precautions indicated by these symbols.

Protective Devices

Protective guards and shields have been installed to protect the user from hazards.

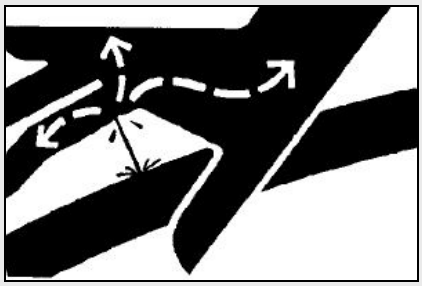
Never remove, tamper with, or modify guards or shields. To do so could result in serious personal injury or death.

If it is necessary to remove a shield to perform maintenance, it is essential that the shield be replaced prior to anyone operating the combine.

Careful Lifting

Please follow safe lifting procedures when installing or removing any component. Use a second person as a helper when indicated by the weight of an item.

⚠WARNING!



Hydraulics Warning: Whether working with tractor hydraulics or the optional combine hydraulics, remember the following:

Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

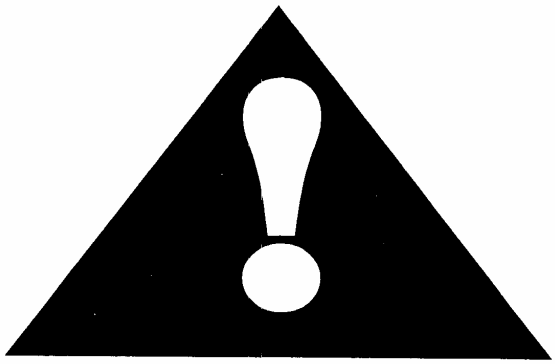
If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

Safety Symbols

Danger This symbol indicates an imminently hazardous situation, which if not avoided, will result in death or serious injury. The use of the word DANGER is limited to the most extreme situations. Extreme care should be taken when you are near these areas. DANGER decals are located at, or as near as possible to, these areas.	⚠DANGER!
Warning This symbol identifies areas or practices, which if not avoided, could result in serious personal injury. These injuries could range from minor cuts to dismemberment. Warning decals are located at, or as near as possible to, these areas.	⚠WARNING!
Caution This symbol identifies a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It can also be used to alert against unsafe practices that could cause damage to the machine. Caution decals are located at, or as near as possible, to these areas.	⚠CAUTION!

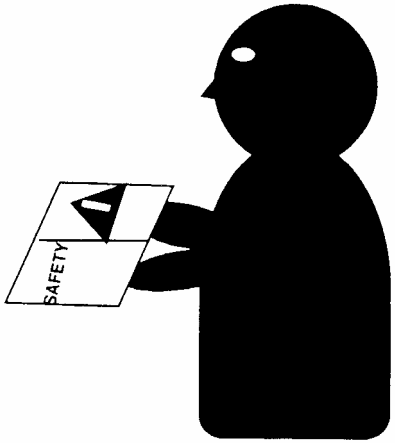
Safety Alert Symbol

This symbol alerts you to possible hazards. Always follow the recommended precautions and safe operating procedures accompanying this symbol. If you have any questions, please contact your dealer or the manufacturer.



Safety Instructions

Safety features have been designed into the machine with hazardous areas marked. Please read and follow the instructions in this manual prior to operating, maintaining, or servicing this machine.



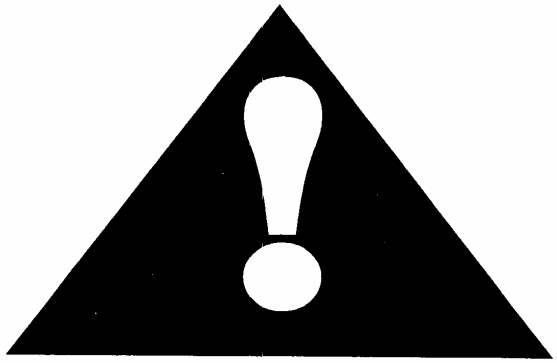
Notes

Throughout the manual, information that needs to be emphasized is set apart with either a “NOTE!” or “IMPORTANT!” heading. Please be sure to read this information carefully, as it generally indicates a situation that could cause machine damage.

Example:

NOTE! It is important to re-torque lug nuts after the initial combine run time.

Safety Guidelines



Many accidents can be prevented by the user knowing about safety. Prevent hazards by reading the safety warnings in this manual and on your machine. Alert others to potential hazards.

Remember all machinery can be dangerous if used incorrectly. Please operate carefully. Safety is only a word until it is put into practice.

This section provides you with a list of practices you need to follow to ensure your safety and the safety of others. It is essential that you read this section and follow the warnings.

Safety Signs

Carefully read all safety messages in this manual and safety signs on your machine. Keep safety signs in good condition; replace missing or damaged safety signs promptly. Be sure new equipment components and repair parts include the current safety signs.

Learn Your Machine

Learn how to operate your machine properly and how to use the controls correctly. Do NOT allow anyone to operate the machine without instruction. Anyone who uses this machine should be aware of the safety information contained in this manual.

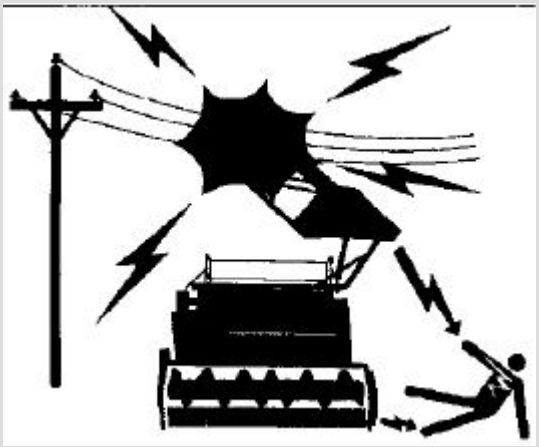
Machine Function

It is essential that you maintain your machine in proper working condition. Do NOT perform unauthorized modifications to the machine, as these could impair function and/or safety of the machine and affect machine life.

Safety Practices

Observe the following safety practices when operating or servicing your machine.

⚠DANGER!



The 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.

Operating the 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 all moving parts.
- Stay clear of the header pickup and header auger at all times.
- Be alert for overhead electrical lines and other obstructions when you tow the combine or dump the bin.
- Do NOT make sharp turns on hillsides.
- Never allow anyone to ride on the machine.
- Be sure that the combine is on solid, level ground before you dump the bin.

Towing the Combine

- The 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.

Servicing the Combine

- Install the safety strut before working under the raised bin. Failure to do so can result in serious injury or death.
- Stop the tractor engine and disengage the drive before adjusting, cleaning, lubricating, or unclogging the machine.

Safety Decals

Safety decals identify specific hazards as well as promote general safety. Please note the following about the decals:

- Keep decals clean and legible.
- Never remove a safety decal from the machine.
- When you replace a part with a safety decal, also replace that decal.
- For replacement decals, call your AMADAS parts representative.

The decals included on the combine, along with their locations, are shown below and on the following pages.

1 Decal #8182

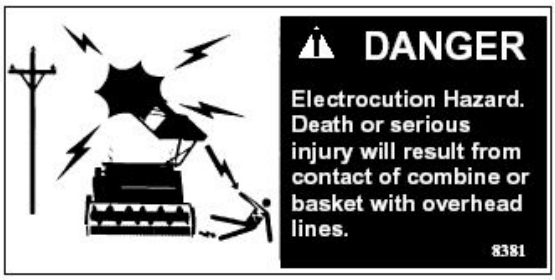
2 Decal #8545

3 Decal #8183

4 Decal #8548

5 Decal #8544

6 Decal #8191



7 Decal #8381

8 Decal #8382

12 Decal #8385

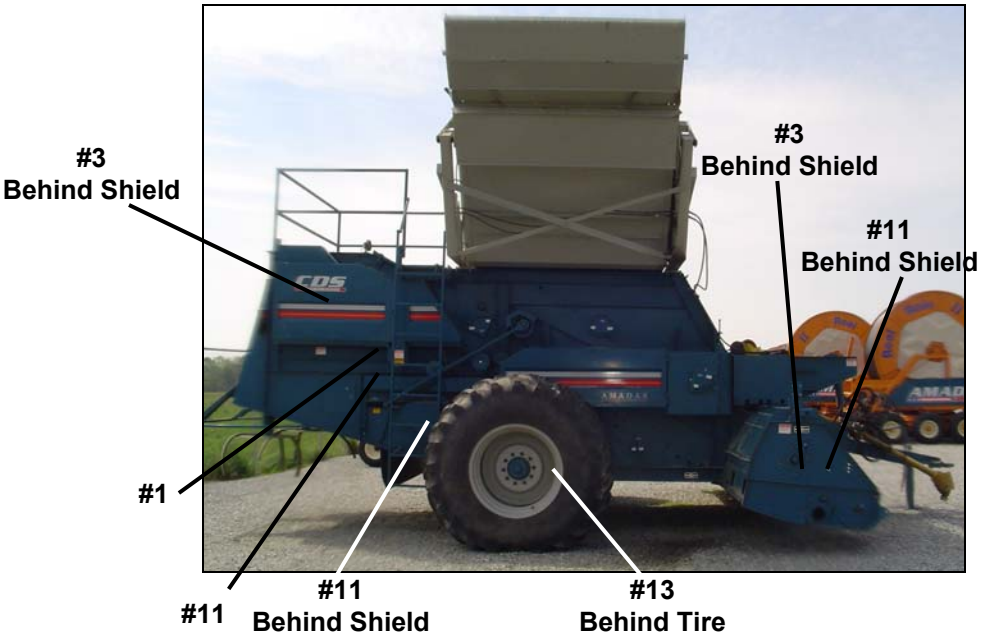
9 Decal #80563

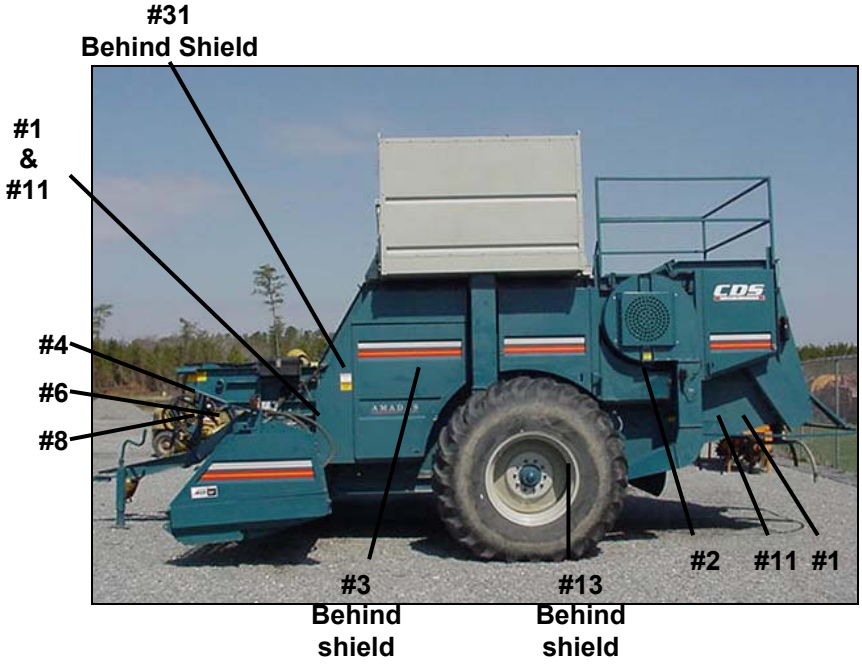
13 Decal #80255

10 Decal #80122

11 Decal #8547

Locations


#3
Behind Shield
#3
Behind Shield
#11
Behind Shield
#1
#11
#11
Behind Shield
#13
Behind Tire


#31
Behind Shield
#1
&
#11
#4
#6
#8
#2
#11
#1
#3
Behind
shield
#13
Behind
shield

AMADAS
2100
#8
#5
#9
or
#10
#7

2. Preparation

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Pre-Delivery Checks.....13

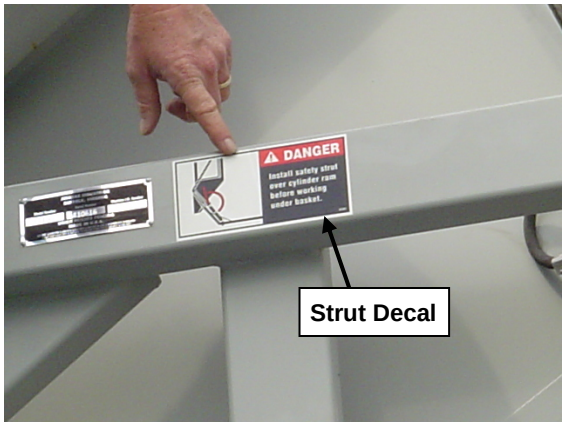
Overview

Before operating the machine for the first time, go over the section titled “Pre-Delivery Checks” with your dealer to verify the combine is ready for operation. Every combine is test run at the AMADAS plant, but a thorough pre-delivery inspection is important, as items may have loosened during shipping.

Chapter 3, *Operation*, contains a “Daily Checklist.” It is important that you perform these checks each day you intend to use your combine. These checks are intended to help you detect problems early, reduce downtime, and extend the life of your combine.

Safety Strut

Read Chapter 1, *Safety*, before performing any checks on your machine. In addition, be aware of the safety strut that locks the bin in the open position. *Always* use the safety strut as intended before checking or working around the open bin. The safety decal located below the strut provides instructions for using the strut.



Pre-Delivery Checks

1. Open all shields and check chains and belts for proper tension.

2. Check bushing bolts, set screws, and jam nuts on all sprockets, sheaves, shafts, etc., for tightness.

3. Torque all nuts to proper specifications (400 ft/lb for flange type lug nuts, 475 ft/lb for Budd type lug nuts).

4. Check oil level in tongue gearbox by removing the level plug in the side of the gearbox (top photo). Add SAE 90EP weight non-foaming oil if necessary.

5. If equipped with combine hydraulics, check the hydraulic oil level in tank (approximately 18 gallon capacity). Level should be above midway in sight gauge when cold.

6. Check and lubricate all lubrication points.

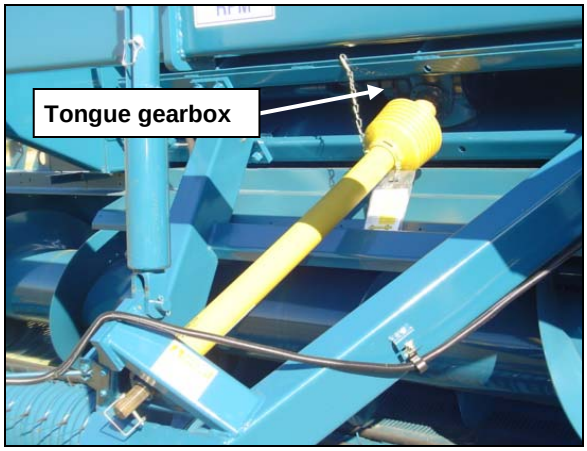
7. Hitch the combine to a tractor.

8. Check hydraulic lines for leaks. (First read “Hydraulics Warning” on page 2 in Chapter 1, *Safety*.)

9. Lock bin in raised position with safety strut (photo), and check for loose bolts or obstructions in the picking chamber.

⚠DANGER

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



Pre-Delivery Checks

10. After checking around the picking chamber, remove the safety strut. Lower the bin *slowly* and carefully check alignment with the duct work (top photo). If realignment is necessary, loosen the four bolts on the duct support braces and adjust as necessary (middle photo). Carefully recheck alignment, then retighten bolts.

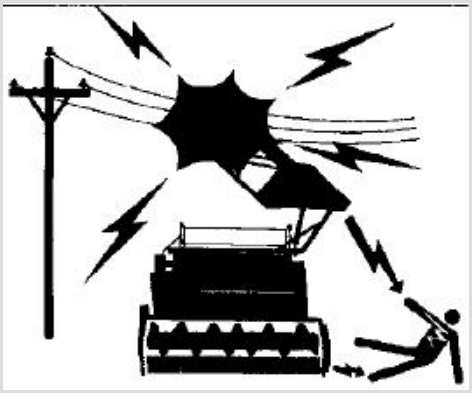
11. Check the peanut elevator air duct for proper alignment at the bottom of the bin. Improper alignment can cause serious damage to the air duct system.

⚠CAUTION

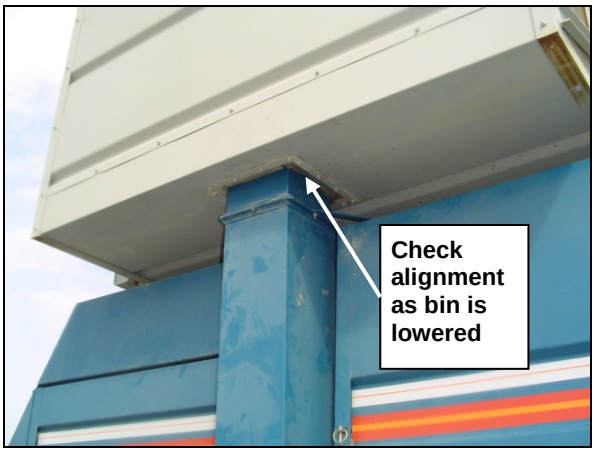
Misalignment between bin and elevator air duct will cause machine damage.

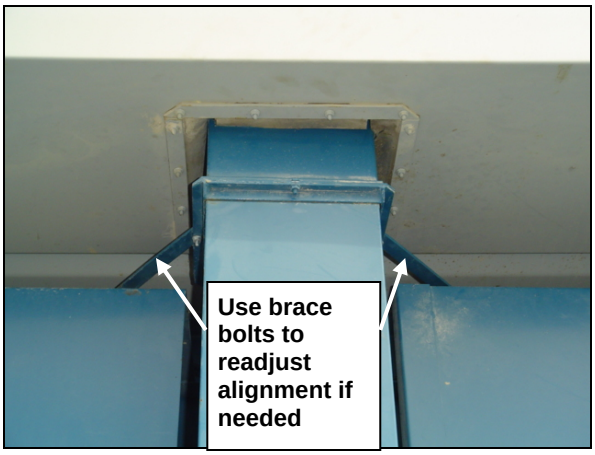
12. Slowly raise and lower the bin and header several times to work air out of the lines.

⚠CAUTION



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.





Pre-Delivery Checks

13. Position the combine speed monitor in tractor (top photo).

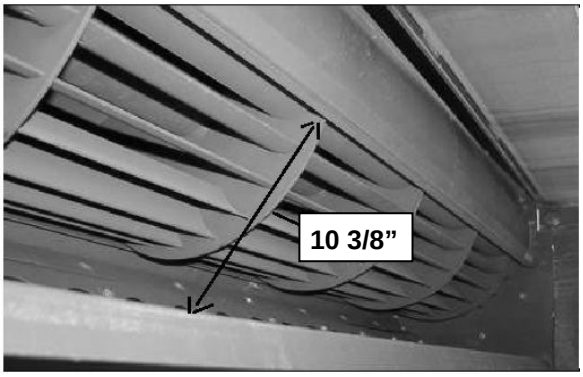
14. Open cleaning fan adjustment to maximum. Check to see that the damper door opening on cleaning fan intake is at least 10 3/8" inches (bottom photo).

15. Replace all shields.

⚠CAUTION

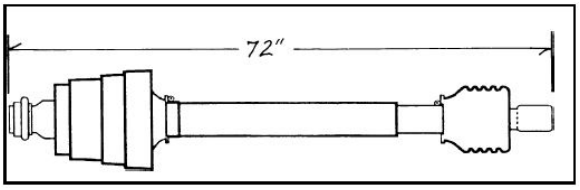
Replace all shields before starting combine operation. Driveline shields and guards must be in place anytime the combine will be in operation.

If shields and guards are not in place, death or serious injury may result from entanglement.



16. Install the PTO driveline and grease. Be sure to set the tractor hitch ball at the specified length from the PTO output shaft (sketch). The PTO driveline should never bottom out or overextend while turning.

17. Start the tractor, engage the PTO and increase slowly to operating speed (100% or 790 PTO RPM). Operate for twenty minutes prior to your first field operation.



NOTE! 790 PTO RPM is standard for most machines. Some combines are equipped with optional drives that require different input speeds. Refer to the PTO RPM on your machine.

Pre-Delivery Checks

18. Stop the 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.

19. Check machine to ensure that all safety decals are in place.

20. Check tire pressure and inflate tires to recommended pressure:

    Cold inflation pressure:
    30 PSI – 24.5 x 32 12 ply (6 row)
    30 PSI – 30.5 x 32 12 ply (6 row)
    35 PSI – 600/50 – 22.5 12 ply (4 row)

21. Check the lug nut torque to the following recommendations:

    400 ft/lb for flanged nuts
    475 ft/lb for bud nuts

22. Operate combine in the field for twenty more minutes at approximately 100% combine speed (790 PTO RPM) and then recheck the items in Steps 16 and 19.

NOTE! It is important to re-torque lug nuts after the initial combine run time.

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Combine Process

The AMADAS 2100 or 9997 Pull-Type Peanut Combine functions as follows:

- The combine removes peanut pods from peanut vines which have been dug and windrowed.

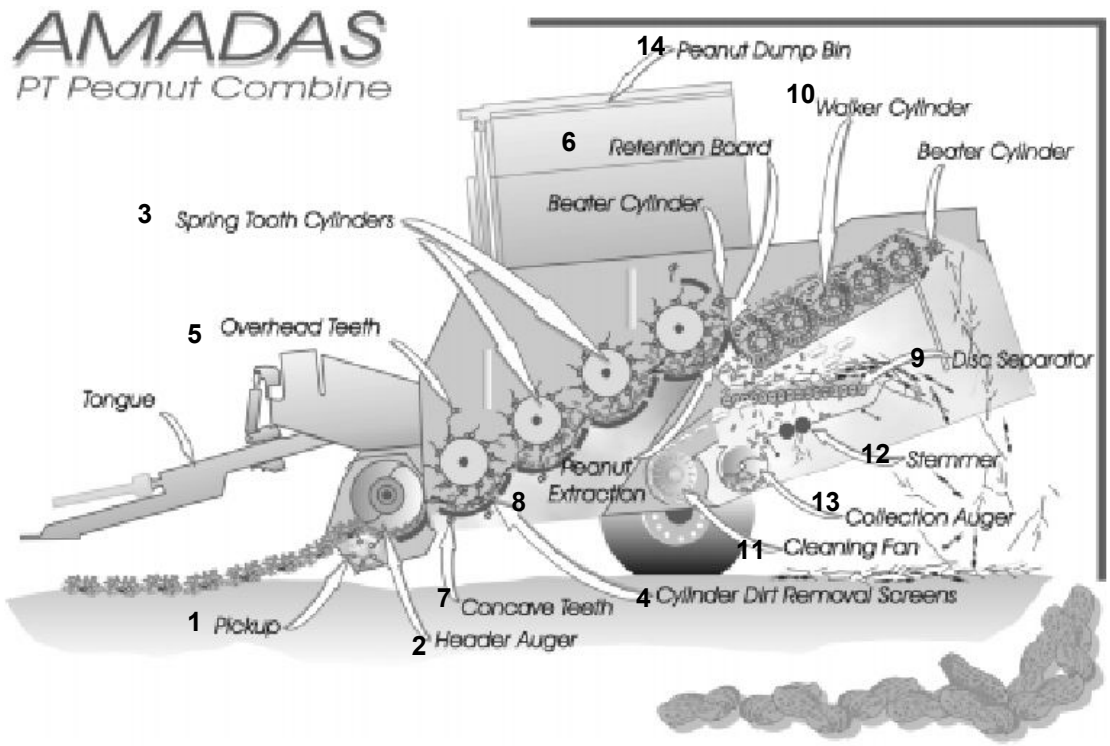
- Once separated and cleaned, the peanuts are conveyed into the Peanut Dump Bin and vine material is passed out of the machine.

- The combine is pulled and powered by a farm tractor of at least ground speeds as low as one mile per hour at engine RPMs 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 kernels (LSKs).

The steps of the picking, separating and cleaning processes are outlined on the next page.



1. The header pickup (1) lifts the peanuts and vines off of the ground. The header auger (2) feeds them into the spring tooth cylinders (3).

2. The spring tooth cylinders strip the peanuts from the vines. Large amounts of dirt and foreign material are removed by the tremendous cleaning area of the cylinder dirt removal screens (4) under each cylinder.

   The first and fourth spring tooth cylinders have sets of adjustable overhead teeth (5) which increase picking aggressiveness when engaged. An adjustable retention board (6) controls the time that the vines remain in the fourth cylinder.

   Optional adjustable concave teeth (7) are available for the first, second, and third cylinders for increased harvesting aggressiveness.

3. Peanuts and vine material fall through the extraction holes (8) in the fourth cylinder concave onto the disc separator (9), or travel back into the walker cylinders (10).

   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 (11) 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 (12), 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 (13) or air funnel and are conveyed into the elevator air system, which sends them up to the peanut dump bin (14).

Hitching Combine to Tractor

1. Set the tractor drawbar in the center fixed position with the hitch point centered behind the end of the PTO shaft.

   - 20” for 1 3/8” 21 spline CV shafts
   - 20” for 1 ¾” 20 spline CV shafts

   An optional drawbar extension (AMADAS part #61359) will be necessary to reach the 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.

IMPORTANT! If the tractor is equipped with a lift locking feature to prevent it from inadvertently lowering, engage the lock. If the tractor is equipped with a quick hitch, we highly recommend that you remove it. Failure to do so can cause damage to the PTO shaft and driveline.

3. Install a 2 5/16” hitch ball on the tractor stationary drawbar. A 1 ¼” hole size and 2 5/16” high strength hitch ball are required. Tighten the nut securely.

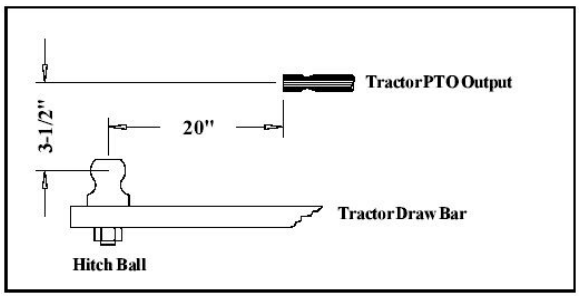
   A hitch ball for a 1 1/8” size hole is also available.

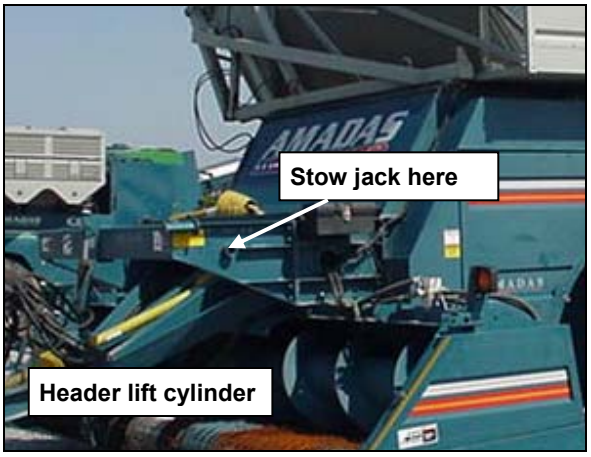
4. Position tractor so the hitch ball will slip into the tongue-mounted ball socket when lowered. Lubricate the ball socket with grease.

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

6. Remove the jack and place on holding bracket (middle photo).

7. Attach 3/8” or ½” x 84” or longer hydraulic hoses from the header lift cylinder to one of the tractor remote hydraulic valves.





Hitching Combine to Tractor

⚠DANGER!

Always use the safety chains when towing the combine. If the combine separates from the towing vehicle, death or serious injury can result.

8. Install 3/8” or ½” x 84” or longer peanut dump bin operating hydraulic hoses to the combine. Attach the hoses to a second remote hydraulic valve.

Attaching and Checking Driveline

IMPORTANT! Your AMADAS 2100 Six-Row or 9997 Four-Row Combines 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 vibration even in a tight turning radius. Please read the section on lubrication thoroughly as the PTO drive shaft has special requirements.

⚠DANGER!

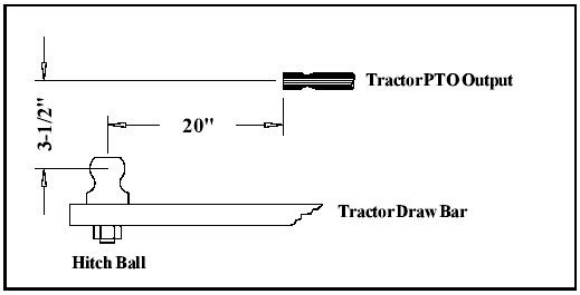
All drive shields and guards must be in place when the combine is in operation. Death or serious personal injury will result from entanglement.

⚠CAUTION!

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

1. Ensure that the tractor draw bar is set such that the center of the hitch ball is approximately 3 ½" 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 (sketch).

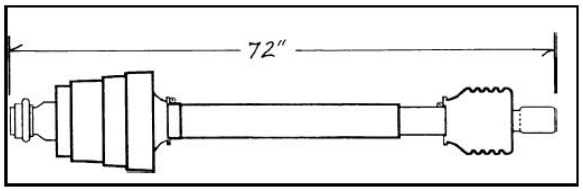
2. Shift the tongue to the operating position (left side). Attach the driveline to the combine and tractor PTO. 1 3/8" 21 spline and 1 ¾" 20 spline ends are available.



Attaching and Checking Driveline

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

3. Be certain that the driveline length does not exceed 72 inches when fully extended (sketch).



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

4. Start the tractor engine and raise the pickup header to its highest position.

5. After proper safety measures are taken (see Chapter 1, *Safety*), slowly turn the tractor. Observe when the telescoping driveline 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 the combine and tractor will occur, whether the PTO is engaged or disengaged.

Attaching and Checking Driveline

CAUTION!

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

6. Repeat in the opposite direction.

CAUTION!

Do NOT allow the tractor tire to touch the tongue, or the universal driveline to reach its closed (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.

Daily Pre-Start Check

Perform these daily pre-start checks 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.

1. Service the tractor and attach the combine.

2. Grease the PTO driveline as shown in the lubrication chart (see Chapter 5, *Maintenance*).

3. Check all hydraulic lines for proper connection.

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

⚠DANGER!

Check overhead clearance to ensure that no power lines, overhead limbs, or any other obstructions exist. The combine exceeds 13'9" with the 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.

5. Put the tractor in park and shut off the engine.

6. Lock the bin in the fully raised position with the safety strut (top photo).

⚠CAUTION!

Always install the safety strut over the hydraulic cylinder before working under the basket. Death or serious personal injury can result if the bin falls.

Daily Pre-Start Checks

7. Inspect the combine for broken parts and wear.

8. Inspect the cylinders and adjustable bars for damaged or broken spring teeth. Also inspect for metal, wood, or other foreign material lodged within the picking chamber.

9. Remove vines wrapped around the spring tooth cylinder and beater cylinder shafts.

10. Remove any foreign material found; 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.

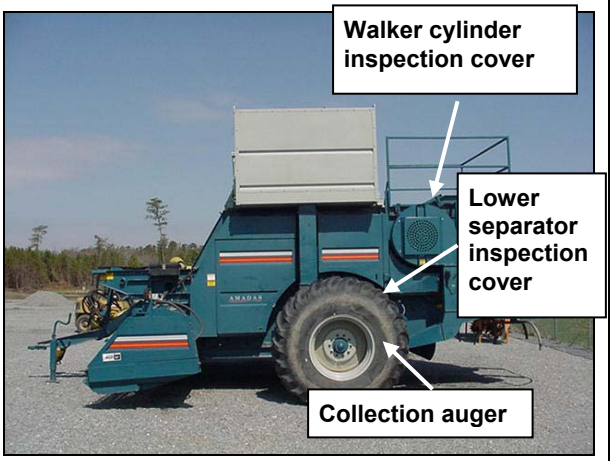
11. Remove walker cylinder inspection cover (top photo) and inspect for damage or foreign material. Pay particular attention for excessive wear or damage to the walker cylinder bar bushings, cam mechanisms, and cam follower bearings.

12. Remove the lower separator inspection covers below the disc separator and check the stemmer and collection auger for obstructions.

13. Check to make sure the 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.

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

15. Check the hydraulic system for leaks and adequate fluid.



Daily Pre-Start Checks

16. Check the cleaning fan for obstruction in intake or damaged blades.

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

⚠CAUTION!

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

18. Start the tractor and leave it in PARK.

19. With the engine at idle, engage the PTO. Listen for any noise which could indicate a problem, such as a damaged or defective bearing.

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

21. Check tire pressures and lug nut torques according to specifications in the CAUTION decal at right.

⚠CAUTION!

Make sure the lug nut torque and cold inflation tire pressure are at the required specifications. Improperly tightened lug nuts or incorrectly inflated tires can result in serious personal injury.

22. Continue with the operating procedure when:

    - The combine is attached to a tractor.
    - All of the daily pre-start checks have been performed.
    - Operating procedures are clearly understood by all operators.

Daily Pre-Start Checks

DANGER!

- Replace all shields before starting combine operation. If shields are missing, death or serious personal injury can result.
- Always use safety chains when towing the combine. If the combine separates from the towing vehicle, death or serious injury can result.
- Beware of overhead obstructions. Combine height ranges from 13’9” to 14’2”.

Operating Procedure

Make sure you have performed all of the daily pre-start checks before you operate the combine.

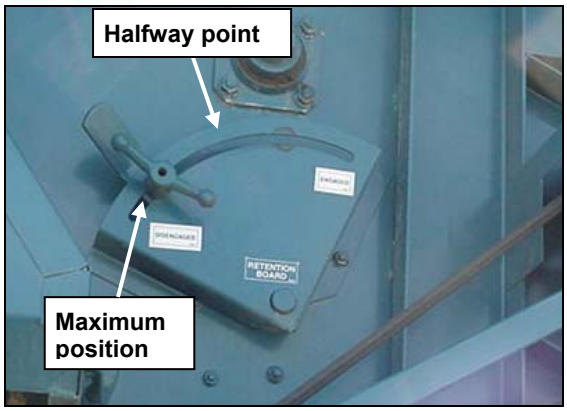
1. Set the retention board adjustment handle at the halfway position (top photo). Tighten the handle securely.

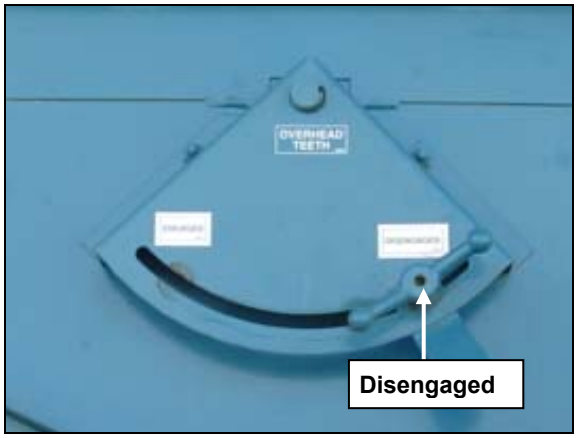
2. Set the adjustable overhead teeth and concave teeth controls in the disengaged position (middle photo). Tighten the T-handles securely.

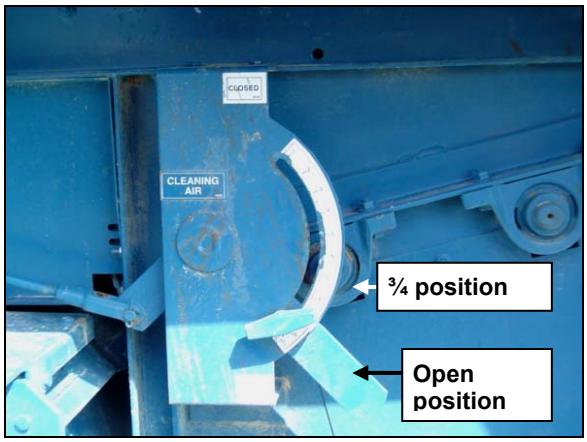
⚠CAUTION!

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

3. Set the cleaning air control handle three-fourths open and tighten the T-handle securely (bottom photo).







Operating Procedure

4. Set the elevator air control handle in two-thirds open position (top photo).

5. Make sure that the bin lip extension is in the operating position (middle photo). Leaving the lip folded obstructs the discharge of air from the bin.

6. Set the header height so that the pickup springs 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 the PTO and set combine speed at 100% (790 RPM tractor PTO output) (see “PTO Speed Adjustment” in Chapter 4, *Controls and Adjustments* for more information).

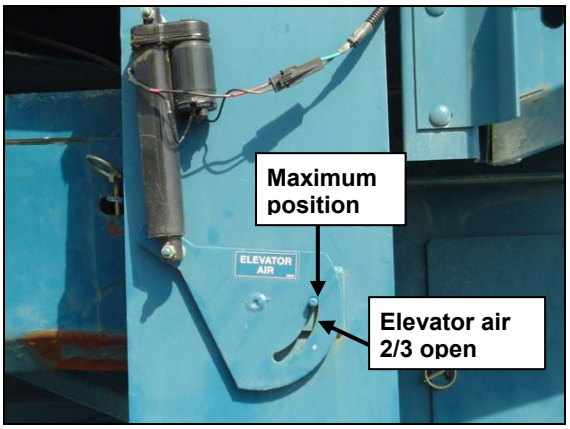
NOTE! 790 PTO RPM is standard for most machines. Some combines are equipped with optional drives that require different input speeds. Refer to the PTO RPM on your machine.

8. Under normal conditions, operate the tractor at 1 to 2 ½ miles per hour. Travel down the windrow about 50 yards.

9. Stop and check for proper operation. See “Proper Operation” on page 34.

⚠DANGER!

ALWAYS stop the combine, set the parking brake, and shut the tractor motor off before you leave the tractor for any reason.



Operating Procedure

⚠CAUTION!

It is important to perform the checks for proper operation. To skip this step puts the combine at risk for machine damage and you at risk for personal injury.

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

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

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

13. 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 at approximately 790 RPM PTO when the combine is equipped with standard drives. If the combine speed cannot be maintained +/- 1% by the tractor engine, installation of the optional RPM PTO kit should be considered.

790 PTO RPM is standard for most machines. Some combines are equipped with optional drives that require different input speeds. Refer to the PTO RPM on your machine.

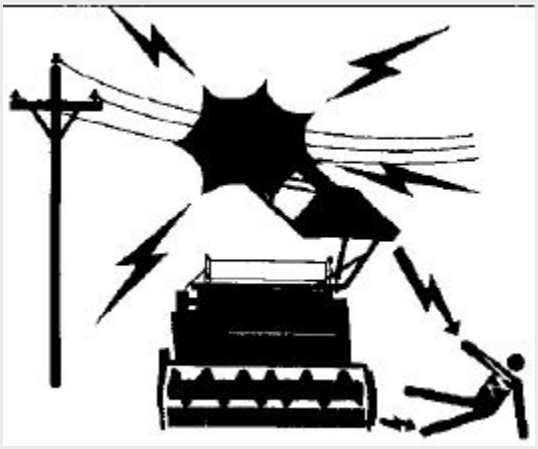
Operating Procedure

⚠WARNING!

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

⚠DANGER!

Check overhead clearance to ensure that no power lines, overhead limbs, or other obstructions exist. Combine exceeds 13’10” with the 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.



Proper Operation

Once your combine has been put into operation, it is important that you make the following checks for proper operation:

⚠DANGER!

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

NOTE! Make only ONE operational adjustment at a time between performance checks. This will allow you to determine which adjustment is working, rather than guessing at which adjustment made the change.

If…	Then…
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.
More than an occasional good peanut is left on the vines	Increase tractor RPM or begin to close the retention board adjustment handle in ½“ increments, up to ¾ of the engaged position.
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.
“Tails” are being left on the peanuts	Engage the concave teeth (if equipped) in 1” increments beginning with the front set.
There are NO leaves or other light foreign material present in the basket or peanuts blowing over the tailboard	Make no changes to the cleaning air setting at this time.
Only a few hulls and LSKs are in the bin during the first few acres of operation	Make no changes to the elevator air setting at this time (unless the peanut hulls are very fragile or too little air is available to blow the peanuts to the bin).
Picking aggressiveness and available cleaning and pneumatic conveyor air needs to be increased or decreased	Adjust the combine speed from 90% to 110% as needed.

Road Towing Combine with Side Shift Tongue

(9997 Four-Row Combine Only)

With Side Shift Cylinder

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

1. Raise the header off of the ground.
2. Engage the hydraulic tongue shift cylinder to move the tongue to the center position.
3. Install the 1" x 4 ¼" hitch pin and safety clip.

⚠DANGER!

Always use safety chains when towing the combine. If the combine separates from the towing vehicle, death, or serious injury can result.

Side Shift Cylinder Specifications

Retracted Length:	20 ¼"
Extended Length:	30 ¼"
Stroke:	10"
Inside diameter:	3"
Outside diameter:	3 ½"

3000 PSI Rating

Cylinder ear hole sized for 1" diameter hitch pin.

(9997 Four-Row Combine only)

Without Hydraulic Side Shift Cylinders

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 the tractor from the combine.

3. Remove 1" x 4 ¼" 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 the blocks from beneath it.

⚠DANGER!

Always use safety chains when towing the combine. If the combine separates from the towing vehicle, death, or serious injury can result.

4. Controls and Adjustments

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Overview

The AMADAS 2100 or 9997 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).

To improve your combine's performance, fine tune:

- The picking operation by adjusting the retention board, overhead teeth, or the concave teeth.
- The cleaning operation by adjusting the cleaning air and tail board.

Changing the PTO speed will also affect picking and cleaning operations, and can be used to further fine tune these operations.

IMPORTANT! Make only one adjustment at a time between performance checks. This will allow you to determine which adjustment is actually improving the combine's performance.

⚠CAUTION!

NEVER make adjustments to the harvesting controls while the combine is running. Serious personal injury could result.

Control Locations

The following photographs show the locations of some of the controls on the 2100 and 9997 Peanut combines (2100 model shown).

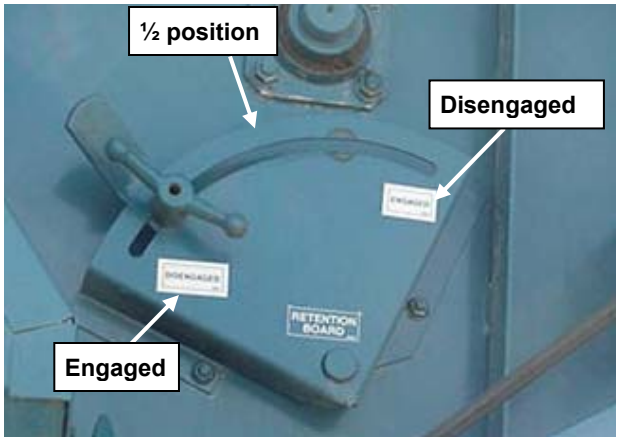
Controls and Adjustments

Retention Board Adjustment

The retention board adjustment controls the time that the vines stay in the fourth picking cylinder.

Start with the retention control handle in the ½ position for normal conditions. Make adjustments as follows:

- 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, possible overloading the disc separator. The best performance is with the control handle engaged no further than necessary to remove the good peanuts from the vines.

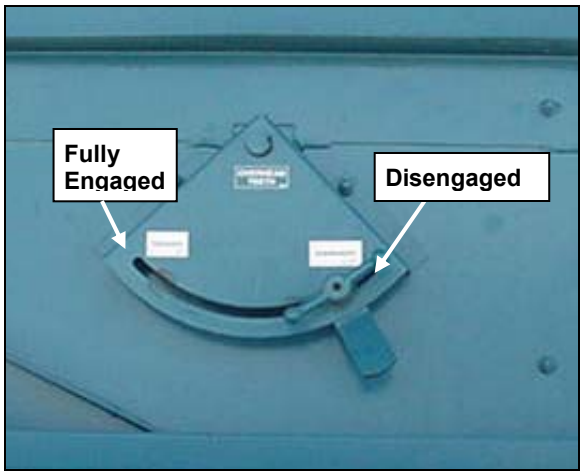


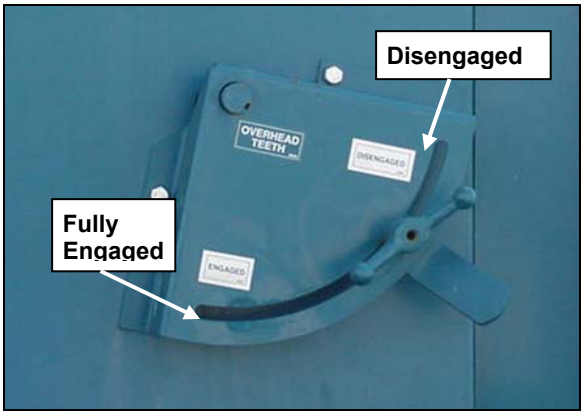
Adjustable Overhead Teeth and Concave Teeth Controls

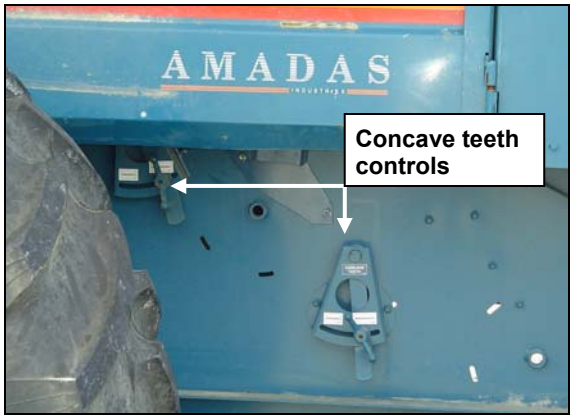
The adjustable overhead teeth handle controls the degree of aggressiveness of the overhead spring tooth bar.

Always start with the control handles (all three photos) in the retracted or disengaged position. Make adjustments as follows:

- If the vines are green and/or tough, progressively engage the overhead teeth to allow more threshing of the vines.
- 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 recommend adjusting the forward overhead teeth handle first, and 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.
- The optional concave teeth (bottom photo) may be engaged to increase aggressiveness as needed.







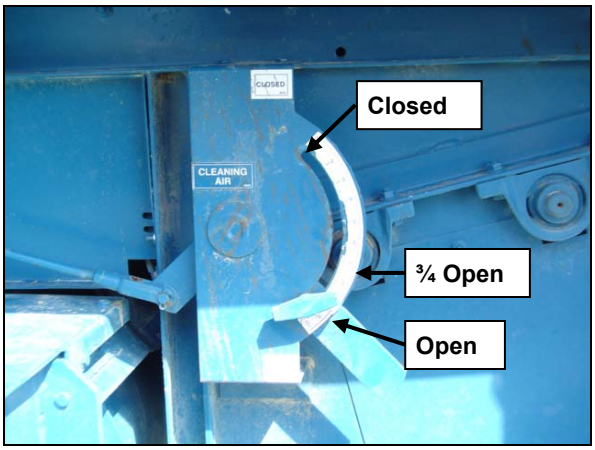
Cleaning Air Control

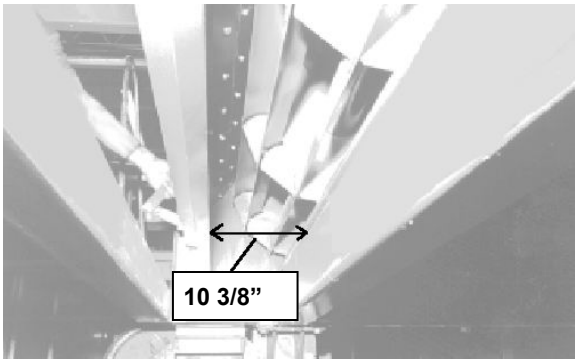
Set the cleaning air control as follows:

- For average conditions, set the cleaning air control handle (top photo) at the ¾ open position for operation.
- 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 (middle photo) at the rear of the combine to aid in setting the cleaning air.
- If the air is set too low, proper separation will not occur and peanuts may ride over the disc separator with the vines.
- Opening the cleaning air control handle more will remove pods containing small shriveled peanuts.
- The maximum opening of the cleaning air fan door should be at least 10 3/8" (middle photo).
- Always operate with the cleaning air control set no lower than necessary to save all peanuts of value, while still providing a clean sample. The maximum open setting may be necessary in some conditions.

⚠CAUTION!

NEVER make adjustments to cleaning air control while the combine is running. Serious personal injury could result.



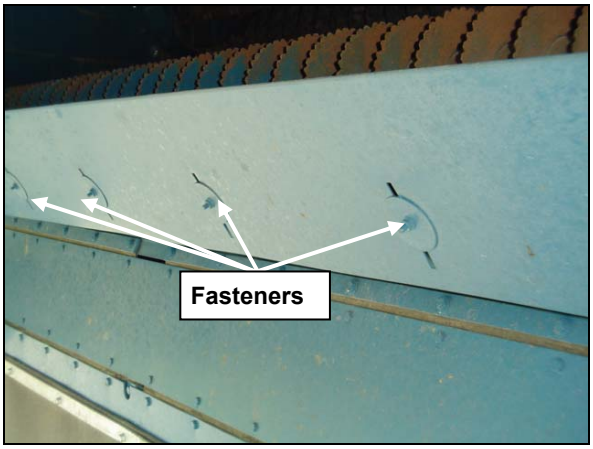


Tailboard Adjustment

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, while lowering the tail board makes it easier.

Under normal conditions, set the tail board in the half-raised position (middle of the adjustment slots). Usually, the tail board is adjusted only if the cleaning air or other adjustments do not produce the desired response. If adjustments are needed, make them as follows:

- Loosen the seven ¼" fasteners and evenly raise or lower the tail board across the width of the machine (see photo).
- Raise the tail board in wet or heavy vines where more cleaning air is needed. This allows the use of more cleaning air by making it more difficult to blow good peanuts out of the stemmer bottom. Raising the tail board increases 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.
- Lower the tail board in very dry conditions. If dry, brittle vines are getting shredded up into small sticks that can penetrate the disc separator openings, lower the tail board to make it easier to blow this light, small trash out of the stemmer bottom.



Elevator Air Control

The elevator air control is normally set so that peanuts are conveyed about ¾ of the way across the bin. Make adjustments as follows:

- If peanuts are very light or fragile, lower the air.
- If the peanuts are very dirty or high yield, raise the air.
- Lower the setting if the LSKs or empty hulls in the bin show excessive shelling within the conveyor system.
- 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 sitting 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.

Pickup Header Speed Control with Combine Hydraulics (Optional)

Combines are factory set for tractor hydraulics. Hydraulics are adjusted from the cab using the tractor's hydraulics system. For machines equipped with optional hydraulics, speed can also be adjusted remotely from the cab (refer to photo).

The speed of the header spring fingers is infinitely adjustable within its range. Make changes as follows:

⚠DANGER!

NEVER adjust the header speed while the combine is running. Adjust the header speed manually when the machine is NOT running. NEVER GET BETWEEN THE TRACTOR AND THE COMBINE WHEN THE COMBINE IS RUNNING!

- 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 fall apart before entering the combine, and peanut loss will occur. Dry vines typically require higher pick up speeds than green vines.

Pick-Up Header Speed Control with Combine Hydraulics

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 (capacity is approximately 32 gallons). Level should be at or above the center of this sight gage.

⚠WARNING!

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

Before working with hydraulics, read hydraulics warning in Chapter 1, *Safety*.

Standard Pickup Header Speed Control

Pickup header speed is controlled by your tractor's hydraulic remote setting.

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, possibly causing beans to fall off of the vines. If operated too fast, the windrow will pull apart before entering the combine and loss could occur.

Dry vines typically require lower pickup speeds than green vines.

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

Remote Auger Reverse

Remote reversing auger and header speed control are standard features built into the hydraulics package on the AMADAS 2100 and 9997. They function as follows:

IMPORTANT! Read all hydraulics safety information in Chapter 1, *Safety*, before using hydraulics.

- The remote auger reverse system consists of a hydraulic reversing valve and a second hydraulic motor.
- The valve is installed between the hydraulic pump system and hydraulic motors that 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 gauge at the valve block to indicate system pressure. Normally, the system operates in the 1100 PSI range while harvesting.
- As the header begins to stall (jam), the pressure should reach 2700 PSI. If the header is stalling and the pressure gauge 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).

⚠WARNING!

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 that is powered solely by the combine.

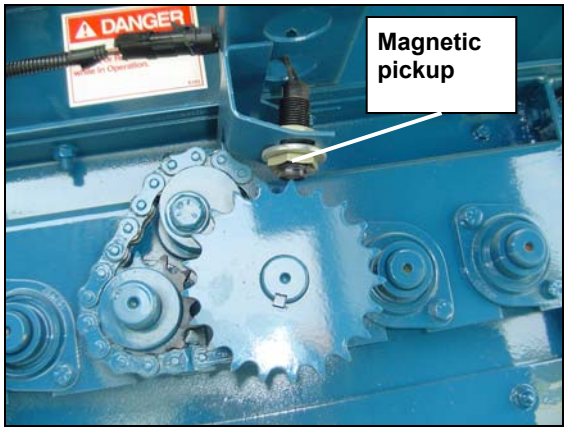
PTO Speed Adjustment

Proper PTO speed is essential to efficient operation. PTO speed functions as follows:

- 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 790 PTO RPM input, so the tractor will not be required to run at its full "PTO speed." At machine design speed, the tractor PTO output should be 790 RPM and the combine speed monitor should read 100%.

NOTE! 790 PTO RPM is standard for most machines. Some combines are equipped with optional drives that require different input speeds. Refer to the PTO RPM on your machine.

- Consistent combine speed is important for the best harvesting performance. If the combine speed fluctuates, check the combine drive belts and tractor PTO system for the source of problem.
- 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. Ensure that the sprocket never actually contacts the pickup, as the pickup 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 up to the tractor, plug the six-foot cable from the control box into the connector.



PTO Speed Adjustment

- 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 you route the cable to the tractor, stay clear of the PTO shaft and header. Do NOT connect the combine speed monitor while the machine or tractor is running.

- The normal operational range of the combine is 90% to 110% of the design speed as shown on the digital speed indicator. The tractor PTO should operate from 711 RPM (90%) to 869 RPM (110%) unless the combine is optionally equipped for 850 RPM operation.

IMPORTANT! *Never exceed110% of the design speed – serious machine damage may result!*

711-869 PTO RPM range is standard for most machines. Some combines are equipped with optional drives that require different input speeds. Refer to the PTO RPM on your machine.

- The combine design speed is 100% on the combine speed monitor or 790 PTO RPM.
- For very dry peanuts, reduce the combine speed to below 100% to aid in performance.
- For tough or wet conditions, raise the combine speed over 100% to increase aggressiveness and aid in performance.
- Maintenance of the combine speed monitor is minimal. The only item that may need replacing is the battery. The battery is located in the back of the digital speed indicator, and should be replaced at the beginning of each season.

Pickup Header Height Adjustment

The pickup header height is controlled with a tractor-powered remote hydraulic cylinder.

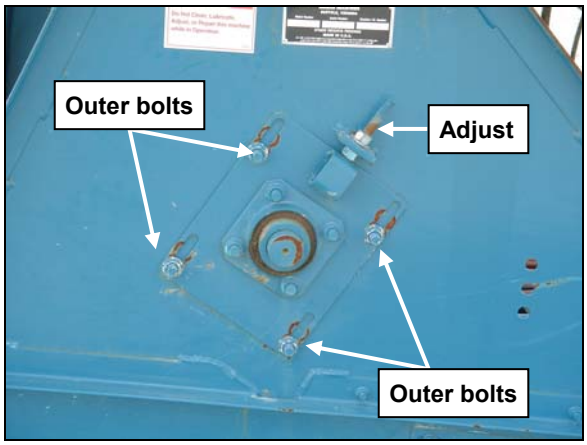
Operate the header low enough to pick up all the vines in the windrow, but high enough to allow dirt clods, soil, and other debris to fall out. This reduces the amount of foreign material entering the combine.

To reduce excessive wear, avoid dragging pickup spring teeth in the soil.

Header Auger Adjustment

The header auger is manually height adjustable. It can be raised or lowered to help feeding in varied crop conditions. The header auger adjustment functions as follows:

- 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 halfway 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.



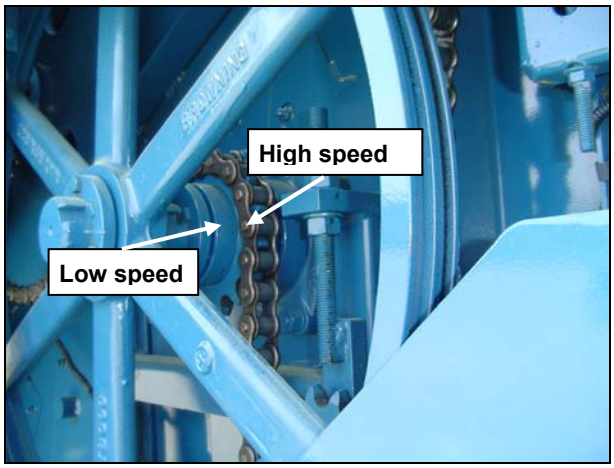
Optional Dual Speed Cylinder Drives (2100 only)

The dual speed cylinder drives allow efficient operation in a wider range of conditions by allowing the operator to vary greatly the combine's cylinder speeds as follows.

- By switching the main drive chain from the larger high speed drive sprocket 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 that 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 tighten thoroughly all of the accompanying idlers.

⚠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.



NOTE! 2100 combines equipped with two speed drives have a designated PTO input speed of 780 RPM unless equipped with an optional 13" sheave. In this case, the design PTO input speed is 840 RPM.

NOTES

5. Performance

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Fine Tuning Operation

This chapter describes ways you can fine tune your combine's performance. Also refer to Chapter 4, *Controls and Adjustments*, for more information on fine tuning your combine using the combine's standard controls.

Be sure to follow all safety guidelines when working on the combine.

⚠CAUTION!

Do NOT adjust, clean, or repair the combine while it is in operation. Always use extreme care around moving parts.

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 the 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!

The jet tunnel or auger may be subject to clogging at higher ground speed. Be sure the 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.

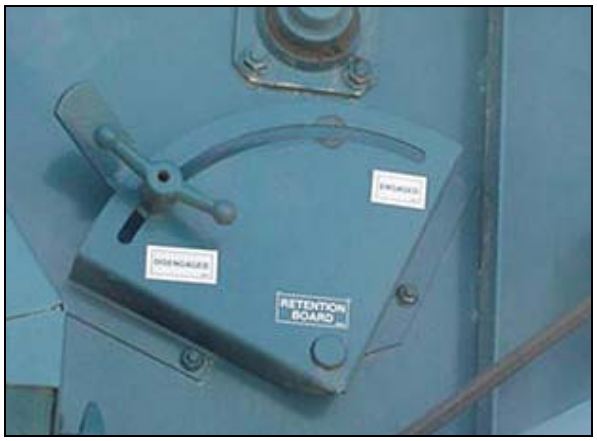
NOTE! Normally the cleaning air system is unaffected by the other components of the machine. If you experience peanut loss, determine whether the loss is resulting from the cleaning air systems or the walker cylinder section before adjusting the cleaning air controls.

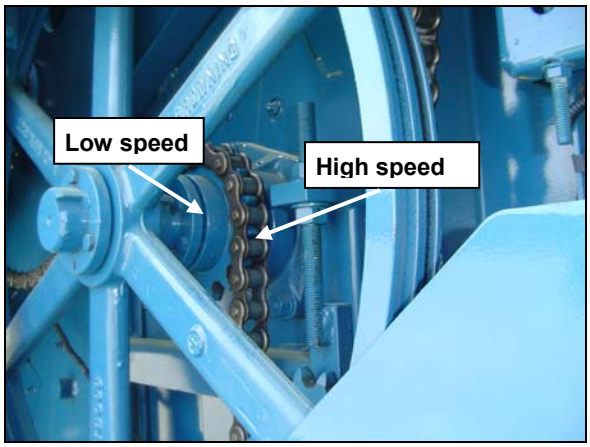
Increasing Separating Capacity

The separating capacity can sometimes be increased by more aggressively engaging the retention teeth (top photo), overhead teeth (middle photo), or concave teeth. If the combine is operating with the dual speed cylinder drives in the low range, capacity can be increased by switching to high range (bottom photo).

Each of these adjustments increases aggressiveness and may cause some shelling. You must decide if higher capacity is worth a possible increase in shelling.

The best separating efficiency can typically be achieved when peanut kernel moisture is 14% to 20%.





Harvesting Under Wet Conditions

Always run the dual speed cylinder drives on high in wet conditions. More aggressive combine settings are typically needed 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 lower than normal and check frequently for buildup of residue on the stemmer saws, elevator air ducts and other surfaces subject to buildup.

⚠CAUTION!

Do NOT perform the following items with the combine or tractor running.

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

1. Clean the stemmer saw with a wire brush and scrape out the stemmer bottom.
2. Remove the elevator duct work and clean thoroughly to remove buildup.
3. Clean the walker cylinder concaves.
4. Remove inspection cove located under the first few disc separator shafts.
5. Using a flashlight, visibly inspect the area in front of and around the first disc separator shaft (front shaft). If any debris is present, thoroughly clean this area. A long stick with a hook or compressed air is helpful in this cleaning.
6. When finished, replace inspection cover. Failure to keep this area clean will adversely affect peanut separation.

NOTES

6. Maintenance

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Belt Adjustment

V-belt drives power the fans, hydraulic power unit (optional), 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.

Check and adjust the belts as follows:

1. Be certain the tractor engine is shut off.
2. Open shields covering drive belts. Latch shields open.
3. Check belts and sheaves for wear. Replace if necessary.
4. The main drive belt should have approximately 2 inches of play when checked in the middle. Adjust the belt tension as necessary.
5. Make sure that idlers are aligned and fasteners are tight. Replace shields before operating the machine.

⚠DANGER!

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

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. Make sure the tractor engine is shut off.
2. Open or remove the shields which cover the chains.
3. Check chains and sprockets for wear. Replace if necessary.

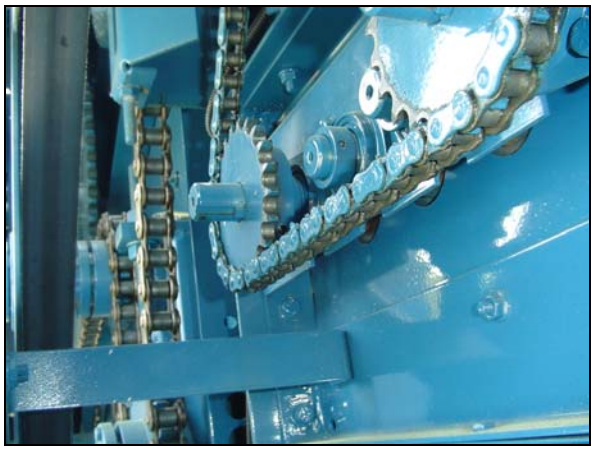
⚠CAUTION!

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.

4. The chains should have approximately one inch of play when checked in the middle. Adjust using the chain idlers. Note that chains linking the disc separator shafts together should have no more than ½" play.
5. Lubricate chains if needed.
6. Ensure all idlers are tight and aligned, and replace all shields before operating the machine.

⚠DANGER!

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



Lubrication

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.

⚠DANGER!

Do NOT lubricate the combine while it is operating. Doing so may result in death or serious personal injury.

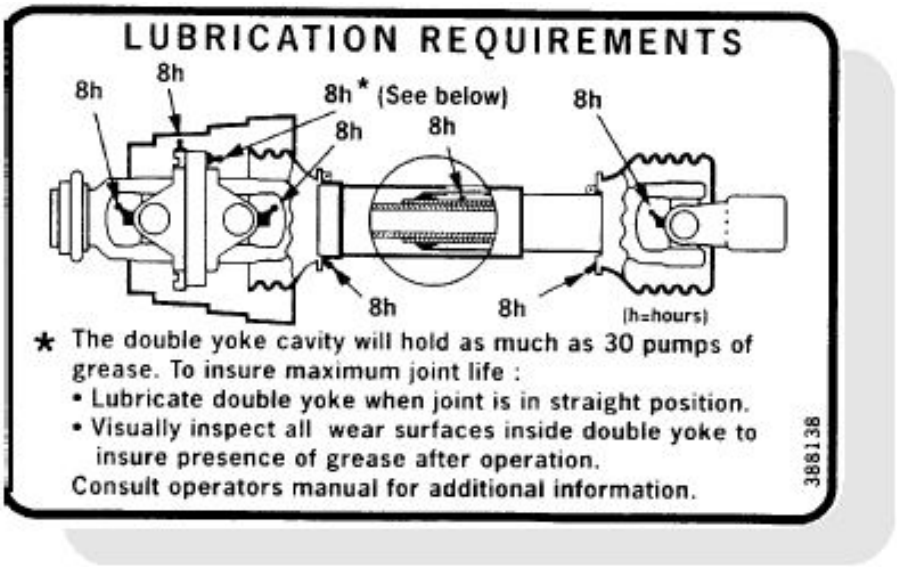
NOTE! To avoid damaging bearing seals, do NOT use a power grease gun and do NOT exceed the specified lubrication intervals.

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

PTO

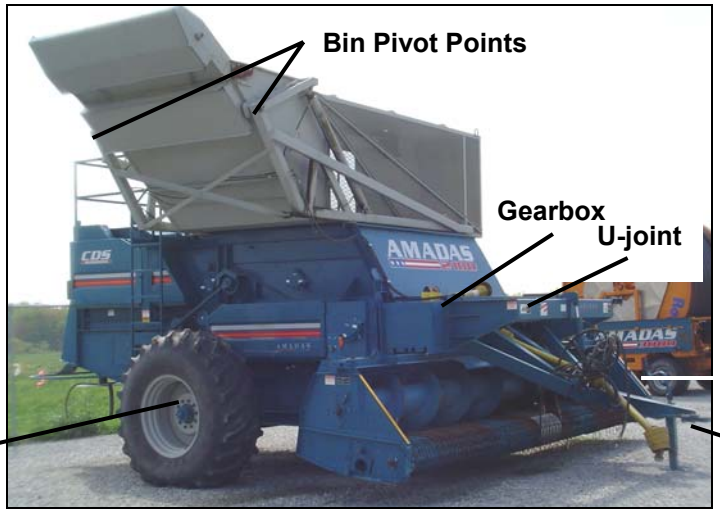
Daily greasing of the PTO is essential for proper operation. There are two grease fittings located 180 degrees apart on the telescoping shaft.

IMPORTANT! Daily lubrication of the CV driveline is essential to driveline longevity – it will fail if not correctly lubricated on a periodic basis.



Schedule

LUBRICATION SCHEDULE							
Action / Component	Type of Lube	Frequency					
		Before Each Use	4-8 Hours	25 Hours	50 Hours	100 Hours	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 (optional)	B	X	X				
Change Hyd. Tank Fluid and Filter (optional)	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			



Post Season Maintenance

To extend the life of your combine, take the time to prepare it properly 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.

2. Flush out the slots below the disc separator shafts (photos) with an air hose or blower to remove all trash and dirt. If dirt is packed tightly, it can be loosened with prodding.

NOTE! Use protective eye gear. Do NOT use high-pressure water or air directly on the bearing seals, as contaminant or moisture penetration may occur, which can dramatically shorten part life.

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

4. Release tension on all belts.

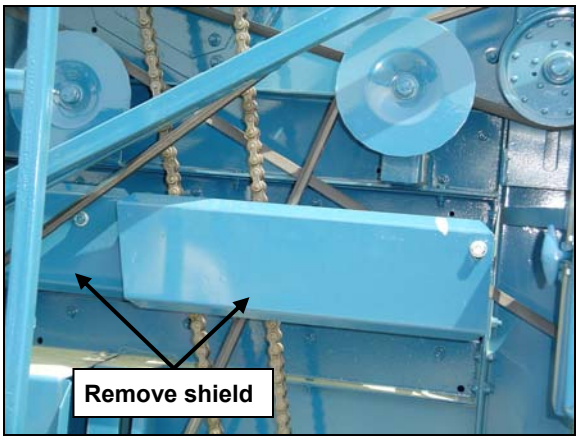
5. Remove and clean all chains. Store in a container of oil or oil/diesel mix, if possible. If not, reinstall but do not tension.

6. Grease all fittings and the driveline.

7. Store the combine under shelter.

8. Collapse all hydraulic cylinders to prevent them from rusting or pitting.

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



Troubleshooting

Problem	Cause	Correction
Good peanuts attached to vines being discharged from combine.	Retention board open too much.	Close in 1” increments between checks.
	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).
Loose peanuts being discharged over back of walker cylinders.	Combine PTO not at or near design speed.	Adjust and observe combine speed monitor.
	Ground speed too high for conditions.	Shift tractor to lower gear.
Good peanuts being discharged over disc separator.	Ground Speed too high for conditions.	Shift tractor to 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” increments).
Lightweight foreign material in bin.	Main drive belt slips under surge loads.	Tighten belt and reduce ground speed.
	Combine PTO not at or near design speed	Adjust and observe combine speed monitor.
	Cleaning air control set too low.	Adjust to a higher setting
	Separator section drive or cleaning air control air drive belts are slipping.	Tighten belts.

Problem	Cause	Correction
Lightweight foreign material in bin.	Moisture level in windrows too high.	Lift windrows and/or wait for moisture to dissipate.
Excessive amounts of LSKs in bin.	Retention board engaged too far in the closed position.	Open in 1” increments between checks.
	Adjustable overhead/concave teeth are too aggressively.	Disengage in 1” increments between checks.
	Main drive belt slips under surge.	Tighten belts.
	Combine PTO over design speed.	Adjust and observe combine speed monitor.
	Moisture content in peanuts too low.	Minimize aggressive settings, reduce combine RPM. Increase to a higher tractor gear and ground speed if needed.
	Moisture level in windrows too high.	Lift windrows or wait for moisture to dissipate.
	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.
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.
	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.

Problem	Cause	Correction
Excessive amounts of dirt clods in bin.	Ground speed too fast for conditions.	Increase setting.
	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.
	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.
Tractor PTO load excessive.	Tractor PTO not at or near design speed.	Adjust and observe combine speed monitor.
	Ground speed too fast for conditions.	Shift tractor into a lower gear.
	Picking chamber jammed.	Stop, shut off tractor, and remove excess material.
Hay is torn up excessively under dry conditions.	Adjustable overhead/concave teeth set too aggressively.	Disengage overhead/concave teeth in 1” increments between checks.
	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.
	Very dry harvest conditions.	Shut off tractor, change dual speed cylinder drives to low speed setting.

Tachometer Programming

The tachometer for your machine has been fully programmed at the factory. However, *if you have a replacement tachometer*, program the new tachometer using the instructions included with it in the packaging. Instructions can also be found on the AMADAS website as follows:

1. Go to www.amadas.com

2. From the AMADAS home page, select **Product Catalogs and Manuals**

3. From the Product Catalogs and Manuals page, select **Technical Bulletins**

4. Select **Tach Programming for Combines (Form 0367; Part #16441)**

IMPORTANT! Do NOT program your tachometer UNLESS you have received a replacement from AMADAS Industries. Tachometers on new machines are fully programmed at the factory and attempting to re-program them may cause errors.

NOTES

ONE-YEAR LIMITED WARRANTY
For AMADAS INDUSTRIES Pull-Type 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 pull-type 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.

B. What is Warranted?

All parts of any new AMADAS pull-type 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 to 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.
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 peanut combine, nor shall AMADAS be liable for defects, damage, or failures caused by improper storage, unreasonable use, or 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.

AMADAS

Revised 7/00