



**74-SERIES**

# **7406 6-ROW PEANUT COMBINE**

**W/ 6X36 & 6X40/8X30 HEADERS**



## **OPERATOR'S MANUAL**

*THIS MANUAL TO ACCOMPANY MACHINE*

PART NO. 74-OM-03  
PRINTING DATE: AUGUST 2021

## 3-YEAR PEANUT COMBINE WARRANTY POLICY

KELLEY MANUFACTURING COMPANY (KMC) warrants that Peanut Combines sold to the original purchaser shall be free of any defects in material and workmanship if used under normal operating conditions. The warranty period begins on the date of purchase by the retail customer and ends thirty-six (36) months thereafter. KMC's sole responsibility is to repair and/or replace the defective part or parts at no cost to purchaser. This remedy is the **SOLE AND EXCLUSIVE REMEDY** of purchaser.

The purchaser must fill out and return the warranty registration form found in the front of the operator's manual. Failure to return the warranty registration form within 30 days shall result in the goods being sold "AS IS", and all warranties shall be excluded.

1. This warranty shall not apply to those items that are by nature worn in normal service, including but not limited to belts, springs, teeth, chains, liners, sprockets, and pulleys, etc.
2. Items such as tires, tubes, gearboxes, hydraulic cylinders, hydraulic motors, drivelines and all other items warranted by the original manufacturer are warranted only to the extent of their individual manufacturer warranty, and KMC is not warranting any of the said items.
3. Warranty shall not apply for any damage caused by foreign objects that enter the combine.
4. Warranty shall not apply for any damage caused by improper lubrication or lack of service.
5. Warranty shall not apply for any damage resulting from transport of the combine after delivery by the dealer.
6. All warranty claims must be made through a KMC licensed dealer, and a warranty form request must be submitted to KMC within 30 days of failure of the warranty provision shall be unenforceable against KMC.

No agent or person has authority to change or add to this warranty as written.

THE ABOVE IS THE ONLY WARRANTY MADE BY KMC AND IS MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. KMC MAKES NO WARRANTY OF MERCHANTABILITY AS TO ANY GOODS MANUFACTURED BY KMC AND FURTHER, KMC DOES NOT WARRANT ANY SUCH GOODS AS SUITABLE FOR ANY PARTICULAR PURPOSE TO THE RETAIL CUSTOMER. THE SUITABILITY OF GOODS FOR ANY PURPOSE PARTICULAR TO THE CUSTOMER IS FOR THE CUSTOMER, IN HIS SOLE JUDGMENT, TO DETERMINE. KMC FURTHER MAKES NO WARRANTIES WITH RESPECT TO ITS MANUFACTURED GOODS THAT WOULD NORMALLY BE DISCLOSED BY AN EXAMINATION. THIS IS THE FULL AND FINAL EXPRESSION OF ALL WARRANTY LIABILITY OF KMC. NO OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, SHALL BE ENFORCEABLE AGAINST KMC.

**Kelley Manufacturing Co.**

80 Vernon Drive / Zip 31794 P.O. Drawer 1467 / Zip 31793 Tifton, GA

# 7406 COMBINE OWNERS MANUAL

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# FORWARD

## INTRODUCTION

The KMC Peanut Combine is designed to be used for the removal of peanut pods from peanut vines which have been uprooted. It will then separate the peanut pods from the vines, placing the pods in a storage tank on top of the machine, and return the vines to the ground. The combine must be pulled and powered by a farm tractor.

\*Efficiency of the combine is not measured in tons or acres per hour, but in the cleanliness of the sample.

## TO THE PURCHASER

This **KMC PEANUT COMBINE** has been carefully designed and manufactured to give years of dependable service. In order to operate it efficiently and maintain it properly, please read the instructions within this manual thoroughly.

Some components of this machine are labeled left or right. The notations are determined by standing behind the implement and facing the direction of forward travel.

After reading this Operator's Manual, please keep it for reference each season.

To insure procurement of the proper repair parts, please record your machine's Model Number, Serial Number, and Purchase Date as shown below:

**Model No.** \_\_\_\_\_

**Serial No.** \_\_\_\_\_

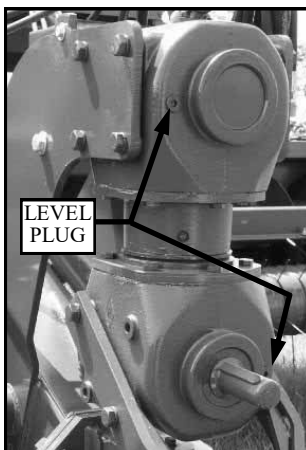
**Purchase Date** \_\_\_\_\_

## **PRE-OPERATIONAL CHECKLIST**

- ☐ All safety and operating procedures reviewed
- ☐ All hardware checked for tightness
- ☐ Hitch connection to implement information reviewed
- ☐ Field adjustment procedures reviewed
- ☐ Lubrication information reviewed
- ☐ Machine fully lubricated
- ☐ Warranty information reviewed

## **PRE-DELIVERY CHECKOUT**

1. Open all shields and check chains and belts for proper tension.
2. Check setscrews and jam nuts on all sprockets, sheaves, shafts, etc. for proper torque.
3. Check oil level in gear boxes. Remove the level plug (lower one on right angle gearbox) on front face of gear box. Oil should just reach bottom of hole. Add high grade SAE 90 weight GL5 oil if necessary.
4. Check hydraulic oil level in tractor. Add as necessary.
5. Check all lubrication points (see chart on page 44) and lubricate accordingly.
6. Connect two point hitch to tractor lift arms (see page 21 for instructions) then connect hydraulic lines for tank and header. Slowly raise and lower the tank and header to work all air out of lines. Check lines for leaks and correct as necessary.
7. Connect hydraulic lines for header rotation. Operate slowly until all air has escaped from the system.
8. Connect hydraulic lines for separator fan rotation. Tractor needs to have case drain port for drain line. **IMPORTANT:** Operating fan without case drain connection will void motor warranty.
9. Install tractor PTO driveline and secure shield chains. Operate combine at 1/2 speed for 5 minutes. Stop combine and check for loose bolts, nuts, chains, belts, sprockets, etc. and for hot bearings and gear box.
10. Make any necessary corrections and run again at full speed for 10 minutes and check all items again.
11. Check tire pressure and set 6-row tires at 20 PSI. Also check lug nuts for proper torque. (400 ft lbs)
12. Disengage all strippers before going to the field. Stripper handles should be rotated as decals indicate. The top (3) strippers are adjusted from the right side of the machine. The lower (4) strippers must be adjusted from left side of the machine.



# SAFETY

## SYMBOL INFORMATION



This safety alert symbol is used throughout this manual to identify safety messages. When you see this symbol, read the message which follows as it will advise you of possible injury.

**REMEMBER**



**THINK SAFETY!**



**(RED)**

This symbol indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



**(ORANGE)**

This symbol indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. It may also be used to alert against unsafe practices.



**(YELLOW)**

This symbol indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



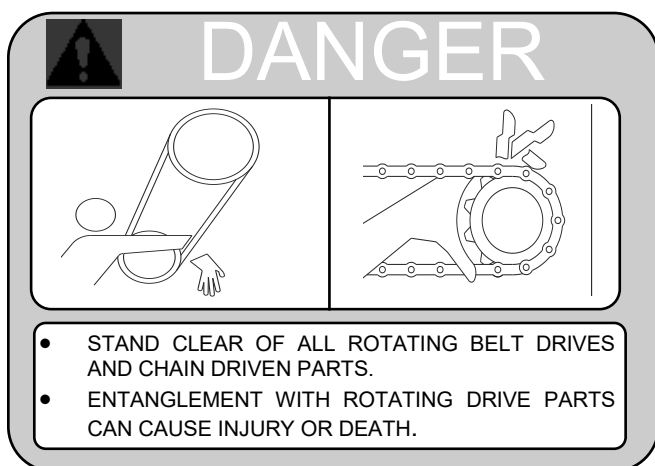
**(GREEN  
OR  
BLACK)**

Is used for instruction on operating, adjusting, or servicing a machine.

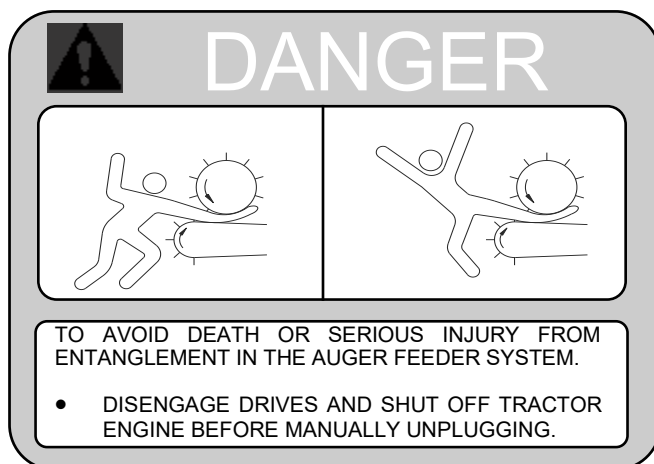
***BEING SAFETY CONSCIOUS IS GOOD BUSINESS!***

## SAFETY DECALS

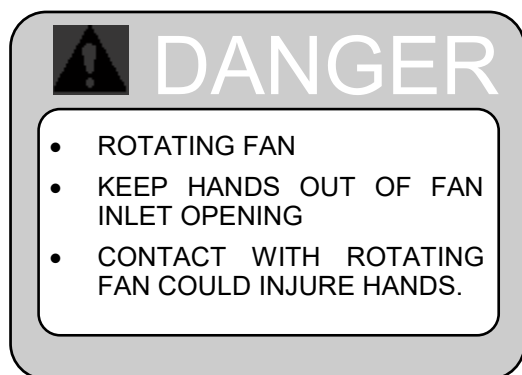
The Safety decals that follow are associated with the implement covered in this owner's manual. They should be reviewed and associated with where they are applicable on the implement being covered.



33-050-248



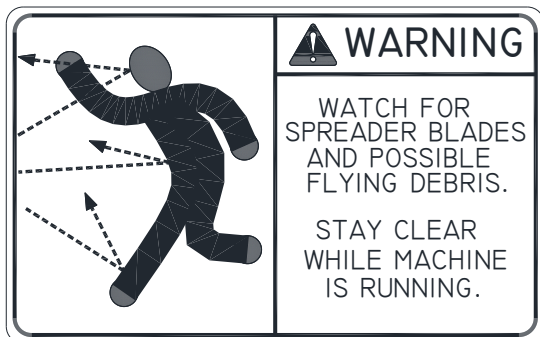
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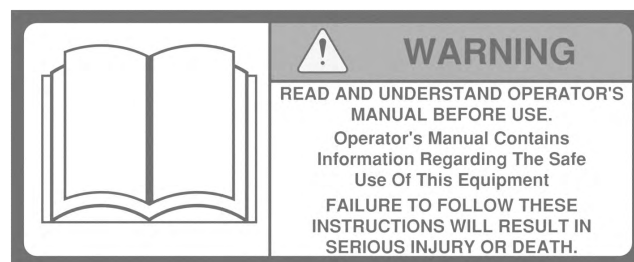
33-050-036



33-050-413



33-050-496



31-11148-00



# WARNING



## TO AVOID SERIOUS INJURY OR DEATH:

- AVOID BANKS AND DITCHES.
- REDUCE SPEED ON TURNS, SLOPES, AND ROUGH TERRAIN.
- AVOID IMPLEMENT CONTACT WITH ELECTRICAL POWER LINES
- NEVER RAISE TANK UNDER POWERLINES OR ALLOW IMPLEMENT TO COME IN CONTACT WITH ELECTRICAL POWERLINES.
- NEVER RAISE FULL TANK WHILE ON STEEP SLOPES, TERRACES, OR DITCHES. TIP OVER MAY RESULT.

33-050-146

# IMPORTANT!

BE SURE WHEN SWITCHING BETWEEN 1 3/4" AND 1 3/8" P.T.O. SIZES THAT THE COMPLETE TRACTOR HALF OF THE DRIVELINE IS SWITCHED (NOT JUST THE YOKE). THE TRACTOR HALVES ARE DIFFERENT LENGTHS FOR THE TWO P.T.O. SIZES.

33-050-415



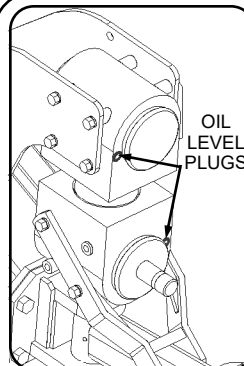
# CAUTION



WHEN TRANSPORTING ON PUBLIC ROADS BE SURE THAT TOWING VEHICLES WEIGHT IS EQUAL TO OR GREATER THAN THE LOADED WEIGHT OF IMPLEMENT AND SAFETY CHAINS ARE USED.

MAXIMUM TOWING SPEED  
20 M.P.H. EMPTY 10 M.P.H. LOADED

33-050-034



# IMPORTANT!

- Do not overfill the gearboxes
- With the gearboxes level, fill to bottom of front holes on both boxes.
- Use GL5 gear lube 80w-90 (KMC# 03-050-080)

33-050-420

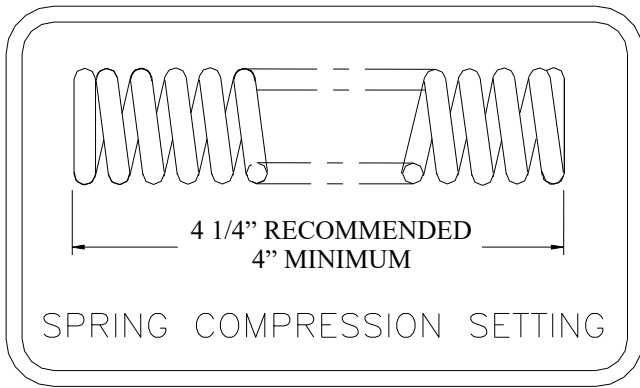


# CAUTION

## TO ENSURE CART WILL DUMP PROPERLY:

- FILL TANK AS EVENLY AS POSSIBLE.
- LIFT AND DUMP ON LEVEL GROUND ONLY.

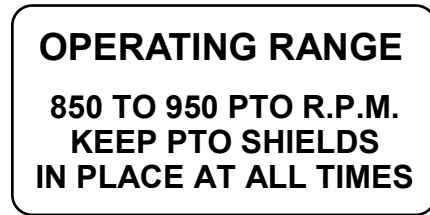
48-050-008



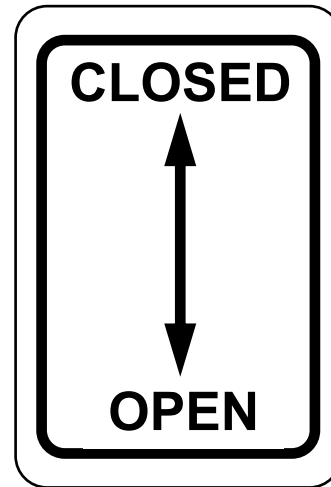
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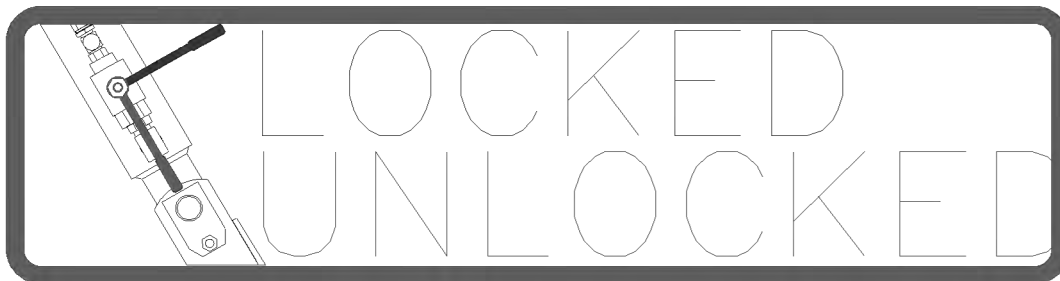
**33-050-133**



**74-150-00031**

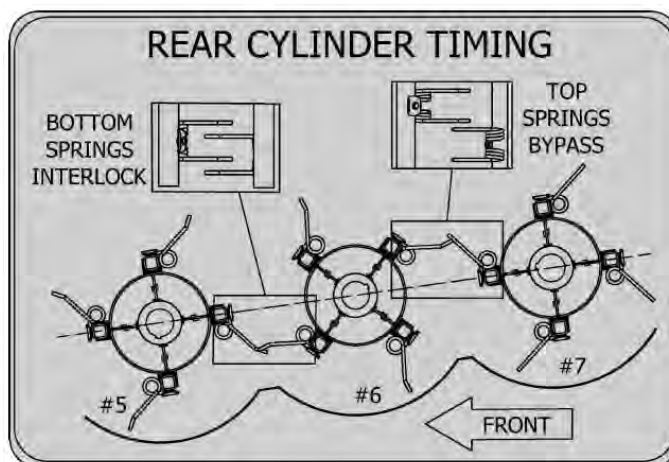



**33-050-233**



**33-050-414**

74-150-00032





## ⚠ WARNING

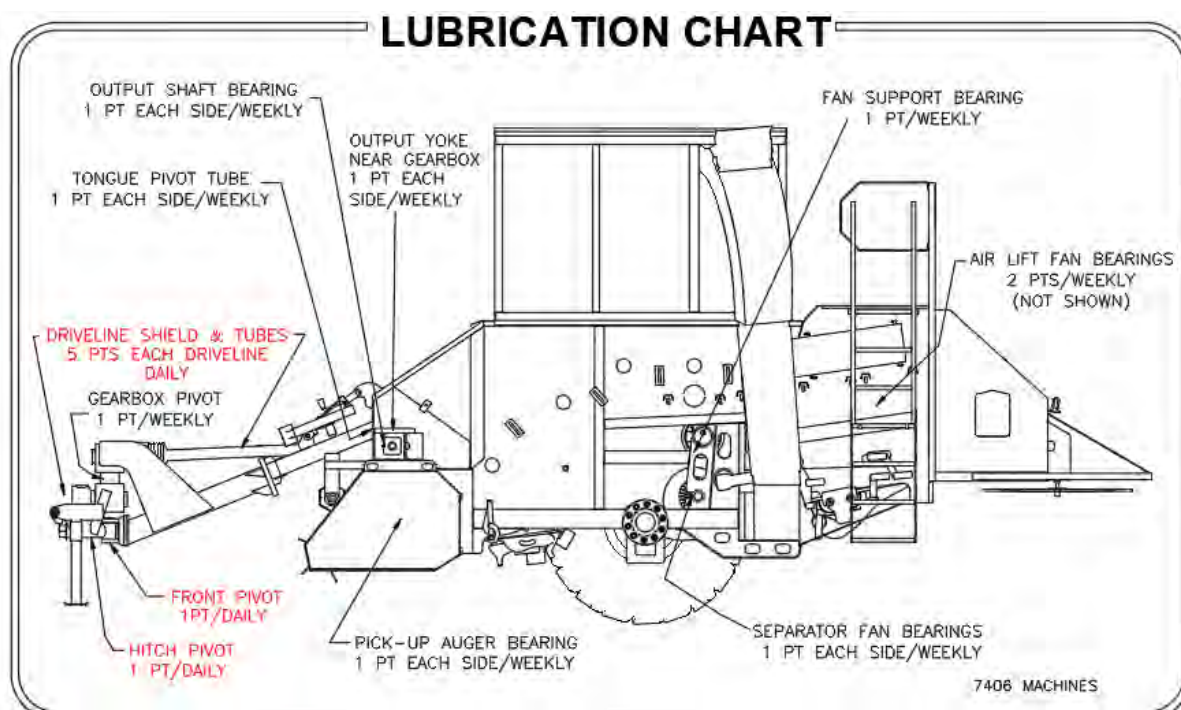
HIGH PRESSURE OIL EASILY PUNCTURES SKIN CAUSING SERIOUS INJURY OR DEATH.

DO NOT USE FINGER OR SKIN TO CHECK FOR LEAKS.

LOWER LOAD OR RELIEVE HYDRAULIC PRESSURE BEFORE LOOSENING FITTINGS.

IF INJURED, SEEK EMERGENCY MEDICAL HELP. IMMEDIATE SURGERY IS REQUIRED TO REMOVE OIL.

49-050-009

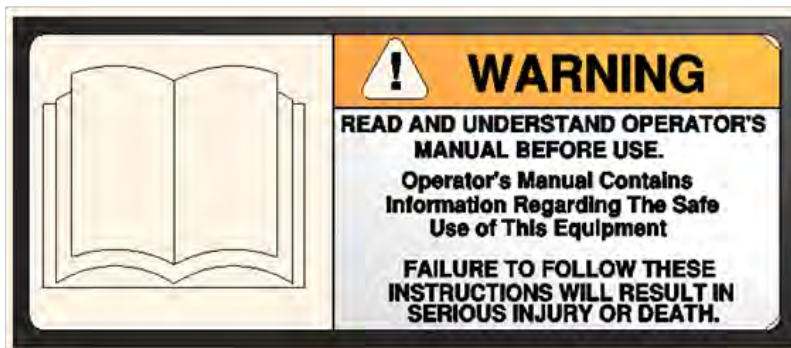


74-150-00033

## RETAIL CUSTOMER'S RESPONSIBILITY UNDER KMC WARRANTY

The retail customer's responsibilities are:

1. To read the Owner's Manual and operate the **KMC Combine** in accordance with the instructions given in this manual.
2. To inspect the **KMC Combine** daily, lubricate as specified and repair or replace parts as needed, especially when continued use would cause damage or excessive wear to other parts.
3. To maintain all safety shields, decals, and devices.
4. When warranty service is necessary, it is the customer's responsibility to deliver the machine to the KMC dealer from which it was purchased. Warranty repairs should be submitted to the dealer within **thirty (30)** days of failure.
5. Dealer travel to the machine or hauling the machine to his shop for the purpose of performing warranty service is not allowed under KMC warranty. It is a cost to be paid for by the customer. Any arrangement whereby the dealer agrees to absorb all or a part of this cost is strictly between the dealer and the retail customer.



## SAFETY PROCEDURES

Safety and performance are the primary objectives of the designers of KMC equipment. Safety features have been incorporated into this machine where possible and warnings given in other areas.

For your safety, **PLEASE** read and observe the following safety procedures.

1. All persons operating this piece of equipment should **READ** the Owner's Manual.
2. Do not permit anyone to ride on the machine at any time.
3. Before starting or operating the machine, make a walk-around inspection and check for obvious defects, such as loose mounting bolts and damaged components. Correct any deficiencies before starting. **The equipment must be properly maintained and guarded and must be suitable to performing its task.**
4. Keep all persons a safe distance away from all sides of the machine while it is in operation.
5. **Do not allow children to operate the KMC combine. Only experienced tractor operators should operate the tractor when the KMC Combine is in use.**
6. Stay clear of hydraulic lines, as they may be under extreme pressure or heat.
7. Drive safely during transport; excessive speed while turning or on rough ground could cause damage to the **KMC Combine** and/or cause the tractor to tip over. **Maximum speed of the implement should never exceed 20 MPH on highway and 10 MPH off-highway.**
8. Make sure hitch components are attached securely before operating or transporting.
9. Use flashing warnings lights when on highways, except where prohibited by law.



10. Disengage PTO, apply parking brake, and stop tractor engine before dismounting tractor. Allow mechanisms to stop completely before cleaning, working, or adjusting on machine. Even when the tractor is stationary, you should make sure it is properly secured and made safe by following the **Safe Stop Procedure**:
  1. **Handbrake/Footbrake On**
  2. **Controls in Neutral/Park**
  3. **Engine Off**
  4. **Key Out**
11. Keep hands, feet, and clothing away from moving parts.
12. Make sure everyone is clear of machine before starting tractor or operating machine.
13. Observe all safety decals located on the machine. Replace them if they become damaged.

## **HIGH VOLTAGE SAFETY ACT**

Georgia Law requires that anyone operating equipment within 10 feet of an overhead high voltage line of more than 750 volts, must contact the Utilities Protection Center (UPC) by telephone at least 72 hours before commencing the work. For more information, call (811) or toll-free at (1-800-282-7411), or visit their website at [www.gaupc.com](http://www.gaupc.com).

- Always use a spotter when operating large machinery near power lines
- Use care when raising augers or the bed of implements around power lines
- Keep equipment at least 10 feet in all directions from power lines at all times
- Inspect the height of your implement to determine clearance
- Lower equipment extensions to the lowest setting possible when moving
- Never attempt to raise or move a power line for clearance
- If a power line is low or sagging, call your local utility company immediately

# ASSEMBLY SET-UP

## GENERAL

Most of the general set-up and assembly for your KMC Combine has been performed at our factory. Those items not installed at KMC will be reviewed later in this section. There are several things which may need assembling before the peanut combine is ready for operation. The assembly order will depend on how the machine has been disassembled for shipping.

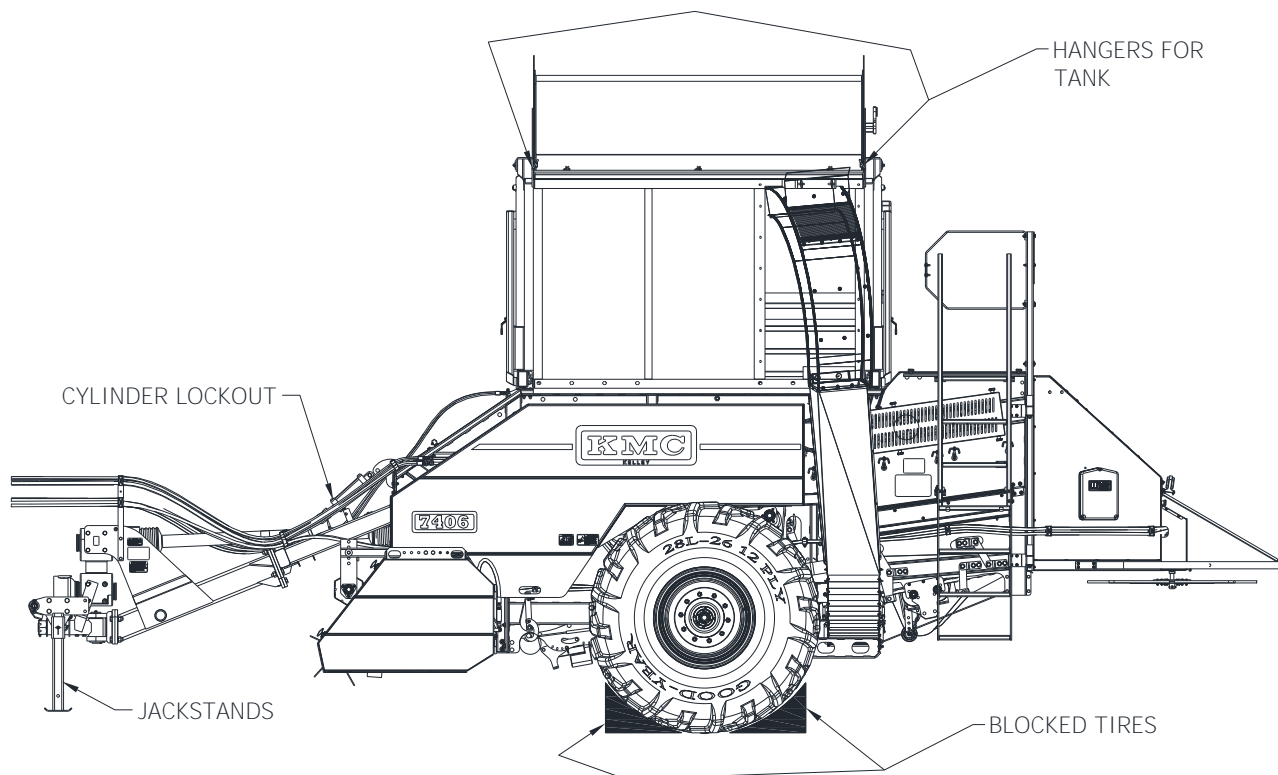


**6-ROW KMC PEANUT COMBINE (3 3/4-TON TANK)**



## WARNING

CARE SHOULD BE TAKEN DURING SET-UP AND ASSEMBLY OF THIS PRODUCT. DEATH OR SERIOUS INJURY COULD OCCUR IF PROPER STEPS ARE NOT TAKEN TO FULLY SECURE THE UNIT WHEN WORKING UNDERNEATH IT. FOR YOUR SAFETY, ENSURE THE UNIT IS PROPERLY SUPPORTED BY LOWERING THE JACKSTAND SUPPORTS THAT HAVE COME ASSEMBLED WITH IT, OR PROPERLY SECURE THE UNIT WITH ANY HOISTING DEVICES BEFORE ATTEMPTING ANY FURTHER SET-UP OF THIS PRODUCT. ANY HOISTING DEVICES SHOULD BE RATED TO FULLY SUPPORT THE LOAD OF THE UNIT BEING LIFTED.



# ! IMPORTANT !

Before set-up and assembly can be completed ensure that all hardware is in place and fully tightened. Refer to the **Bolt Torque Chart** below for proper torque values.

## BOLT TORQUE CHART

### SAE GRADE 5



DIAMETER & THREADS PER INCH	TENSILE STRENGTH MIN. PSI	PROOF LOAD LB	CLAMP LOAD LB	TORQUE DRY FT LB	LUBRICATED FT LB
1/4-20	120,000	2,700	2,020	8	6.3
1/4-28	120,000	3,100	2,320	10	7.2
5/16-18	120,000	4,450	3,340	17	13
5/16-24	120,000	4,900	3,700	19	14
3/8-16	120,000	6,600	4,950	30	23
3/8-24	120,000	7,450	5,600	35	25
7/16-14	120,000	9,050	6,780	50	35
7/16-20	120,000	10,100	7,570	55	40
1/2-13	120,000	12,100	9,050	75	55
1/2-20	120,000	13,600	10,200	85	65
9/16-12	120,000	15,500	11,600	110	80
9/16-18	120,000	17,300	12,950	120	90
5/8-11	120,000	19,200	14,400	150	110
5/8-18	120,000	21,800	16,350	170	130
3/4-10	120,000	28,400	21,300	260	200
3/4-16	120,000	31,700	23,780	300	220
7/8-9	120,000	39,300	29,450	430	320
7/8-14	120,000	43,300	32,450	470	350
1-8	120,000	51,500	38,600	640	480
1-14	120,000	57,700	43,300	720	540

### SAE GRADE



DIAMETER & THREADS PER INCH	TENSILE STRENGTH MIN. PSI	PROOF LOAD LB	CLAMP LOAD LB	TORQUE DRY FT LB	LUBRICATED FT LB
1/4-20	150,000	3,800	2,850	12	9
1/4-28	150,000	4,350	3,250	14	10
5/16-18	150,000	6,300	4,700	24	18
5/16-24	150,000	6,950	5,200	27	20
3/8-16	150,000	9,300	6,980	45	35
3/8-24	150,000	10,500	7,900	50	35
7/16-14	150,000	12,800	9,550	70	50
7/16-20	150,000	14,200	10,650	80	60
1/2-13	150,000	17,000	12,750	110	80
1/2-20	150,000	19,200	14,400	120	90
9/16-12	150,000	21,800	16,350	150	110
9/16-18	150,000	24,400	18,250	170	130
5/8-11	150,000	27,100	20,350	210	160
5/8-18	150,000	30,700	23,000	240	180
3/4-10	150,000	40,100	30,100	380	280
3/4-16	150,000	44,800	33,500	420	310
7/8-9	150,000	55,400	41,600	600	450
7/8-14	150,000	61,100	45,800	670	500
1-8	150,000	72,700	54,500	910	680
1-14	150,000	81,500	61,100	1,020	760

## SPECIFICATIONS:

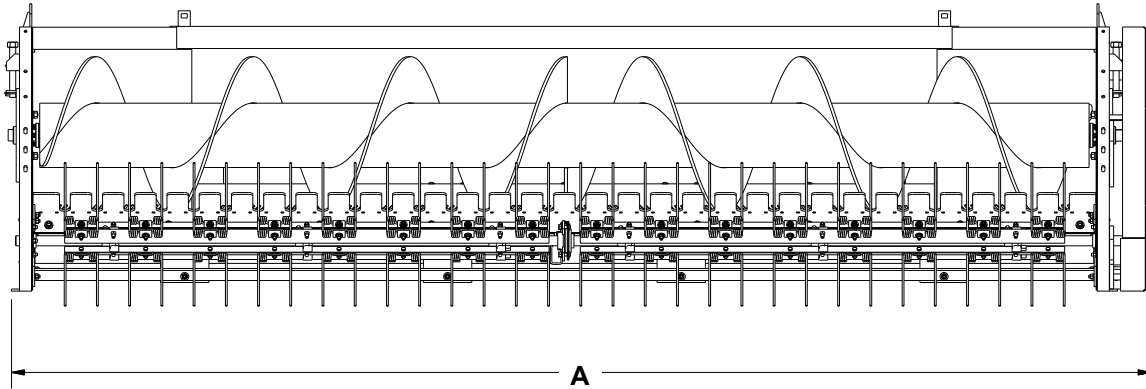
**HITCH:** Two Point Hitch

**PICKUP REEL:** Low profile, 6-bar, Camless,

**THRESHING SYSTEM:** 7 cylinders, 8 stripper bars (front 4 adjusted electronically),  
adjustable concaves under 4 rear cylinders.

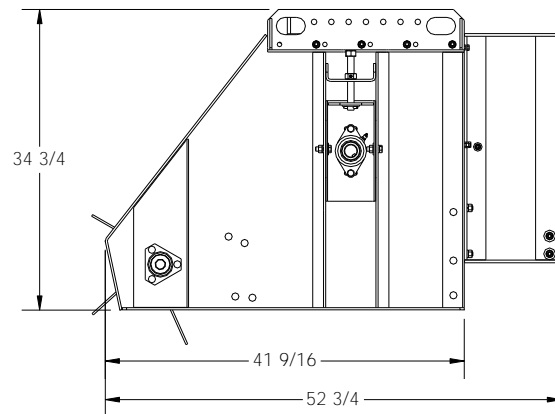
**DRIVELINE:** 1000 RPM driveline, safety shielded.

**HEADER WIDTH:**



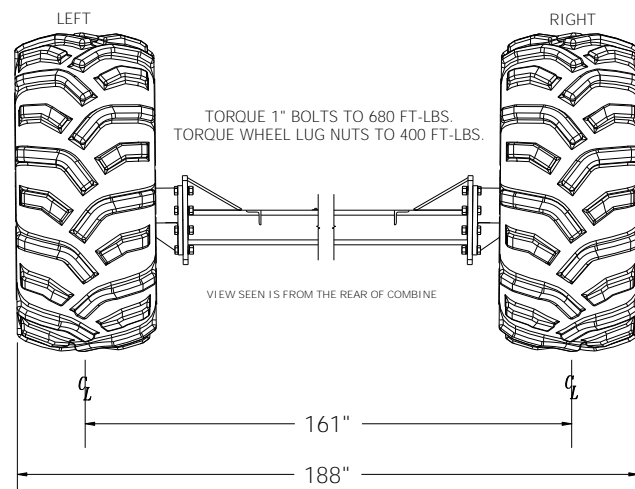
HEADER SIZE	"A" DIMENSION
6 X 36	222"
6 X 40/8 X 30	238"

**HEADER HEIGHT AND LENGTH:**



**WHEEL BASE:** (CL/Outside)

**Six Row Machine**

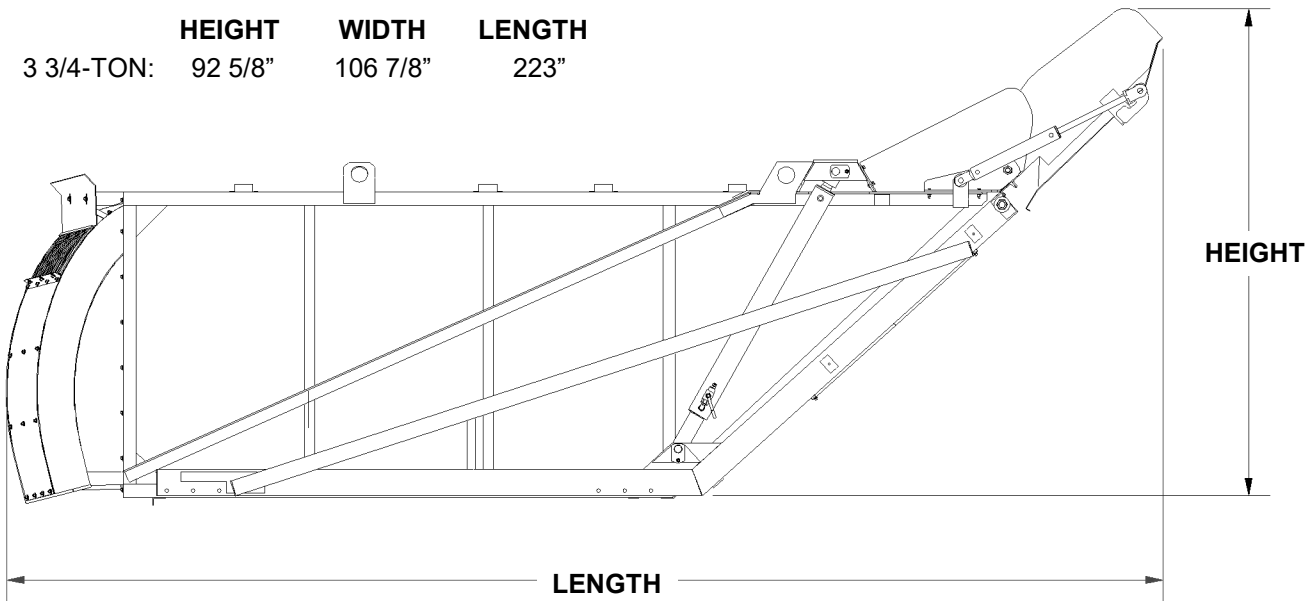


6R - 28L x 26 SAT 23° R1

6R - 20 P.S.I

**TANK DIMENSIONS:**

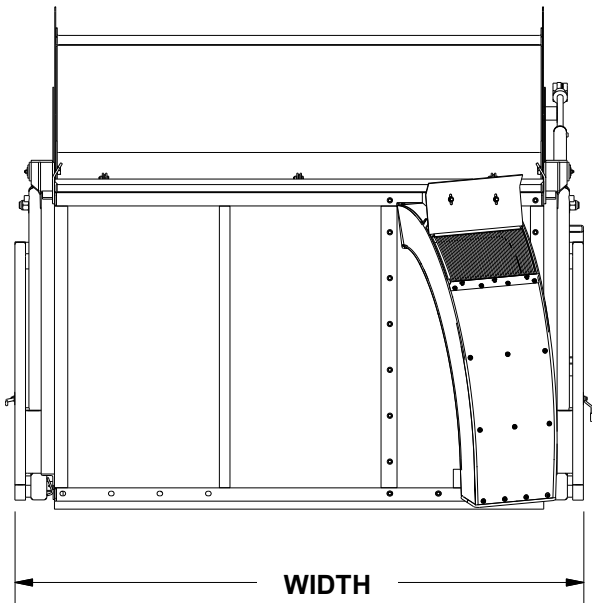
- |              | HEIGHT  | WIDTH    | LENGTH |
|--------------|---------|----------|--------|
| • 3 3/4-TON: | 92 5/8" | 106 7/8" | 223"   |



**TANK CAPACITY:**

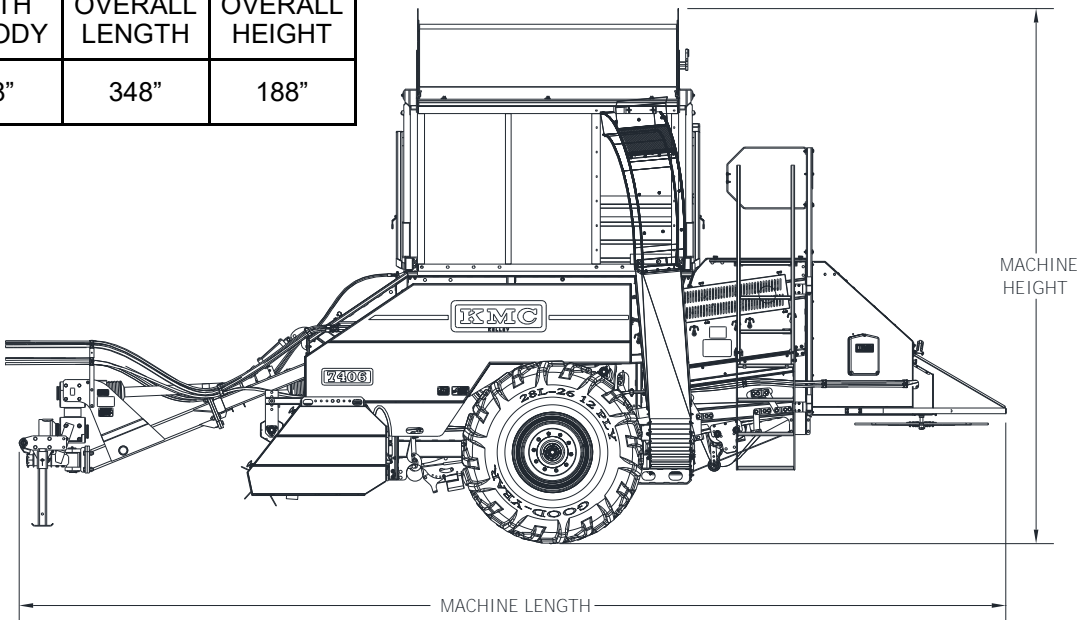
- 3 3/4-Ton: 405 cubic feet (6-36 & Wider Only)  
(325 bushels)

**NOTE:** When towing the combine on public roads be sure that the weight of the towing vehicle is equal to or greater than the weight of the combine which is 21,000 lbs., 6-row. **We do not recommend speeds of greater than 20 MPH empty or 10 MPH loaded.**



**MACHINE HEIGHT AND LENGTH:**

	WIDTH OF BODY	OVERALL LENGTH	OVERALL HEIGHT
6-ROW 3 3/4 TON	188"	348"	188"



## **ATTACH THE SIX ROW HEADER**

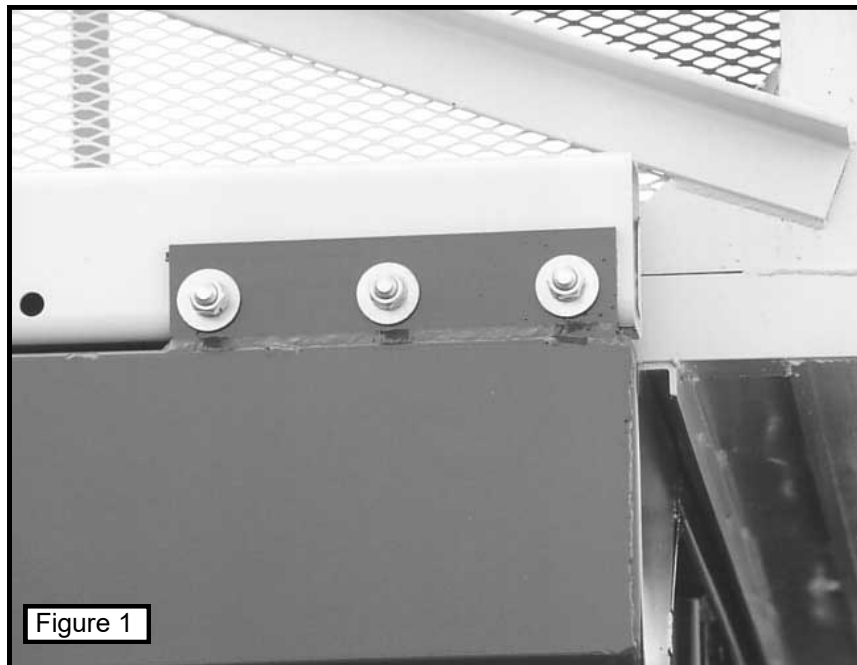
Support front and rear of machine with stands and chock tires to prevent any movement when attaching header. Use extreme caution when attaching the head to the combine. It is very heavy and should be handled in a secure manner at all times to avoid injury.

First position the header under the tongue of the combine. Raise and tilt the header so that it fits squarely against both combine side frame and the upper header. Install the 1/2 x 1 1/2 capscrews, flatwashers, lockwashers, and hex nuts (8 of each) that connect the rear of the header to the side frame. Do not fully tighten at this point. Next install the 1/2 x 1 1/2 carriage screws, flatwasher, lockwashers, and hex nuts (12 of each) that connect the top of the detached header to the under side of the tongue supports. Now tighten all bolts securely. Check the joint where the square tube of the drop floor meets the square tube of the #1 concave. The joint should be tight enough so that no peanuts can fall out. There should not be any raised corners or surfaces that could shell or damage peanuts. Adjust each tube position in the slotted holes if necessary.

Next attach quick disconnect couplers to the hydraulic hoses. The hoses for the tank lift, header lift, and tongue shift (if equipped) have 1/2-14 NPT threads.

Six-Row headers will require dealer assembly of the flashing lights on the ends of the header. Connect wires provided, making sure that the right and left sides operate properly.

## **MOUNT THE TANK TO THE COMBINE**



First lift the tank into position using the lift rings provided on the tank frame, this will help keep the tank near level while working it into position. Align bolt holes and air-lift duct and lower into position and install bolts into support arms. Make sure tank is sitting flat on combine top and square with sides and frame before disconnecting lift from tank. If tank does not sit flat on combine, adjust support arms to right or left as needed to allow tank to sit flat on frame. Secure tank to combine by tightening attachment bolts previously installed. Next connect hydraulic hoses between combine mainframe and tank using the hoses provided. See Figure 1.



## PRINCIPLES OF PEANUT HARVEST

The KMC Peanut Combine is designed to be used for the removal of peanut pods from peanut vines which have been uprooted. It will then separate the peanut pods from the vines, placing the pods in a storage tank on top of the machine, and return the vines to the ground.

The combine must be pulled and powered by a farm tractor.

\*Efficiency of the combine is not measured in tons or acres per hour, but in the cleanliness of the sample.

1. The peanuts are lifted off the ground and taken into the combine by the pickup attachment, which delivers them to the threshing cylinders for picking.
2. The threshing cylinders strip the vines pulling the pods off the vines. Additional stripping tines can be engaged into the number one, two, and three cylinders to increase the aggressiveness in tough conditions.
3. When the peanut pods are pulled off the vines they fall through separator concaves and onto a shaker pan which conveys them to a cleaning shoe located at the rear of the machine. The concaves prevent most of the vine material from falling onto the shaker pan and cleaning shoe.
4. The peanuts and small vine material which has fallen onto the pan moves on to a comb agitator which tosses the material into a stream of air. Any small vines, leaves or trash are blown out the rear of the machine by this air.
5. Any large material which falls through the agitator comb will fall onto the cleaning shoe. Here a blast of air will lift the lighter of these materials out the back and the hex rollers will work the heavier large items out the back. The cleaning shoe consists of 16 topside hex rollers and one middle screen called a chaffer. The bottom of the cleaning shoe has two rows of stemmer saws to cut the stems off the peanuts.
6. An air delivery chute then takes the peanuts to the storage tank on top of the combine.

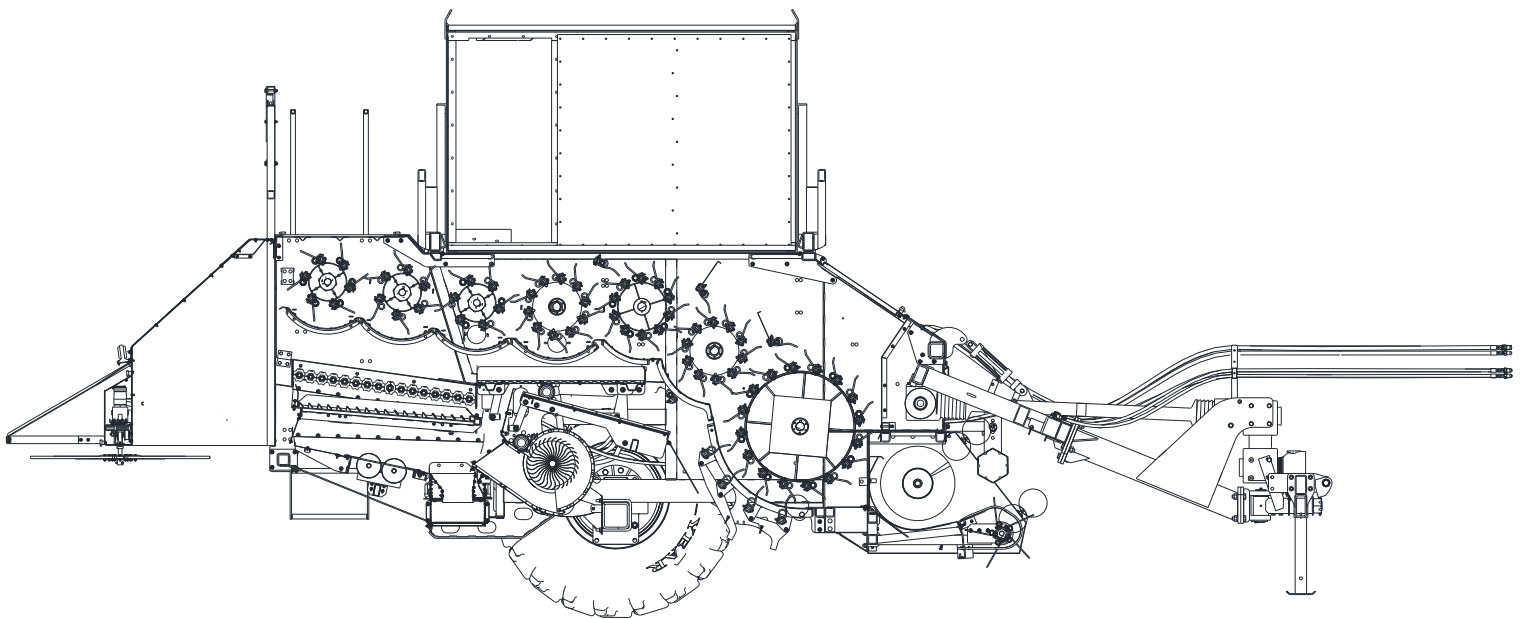


Figure 5 CROSS VIEW OF COMBINE



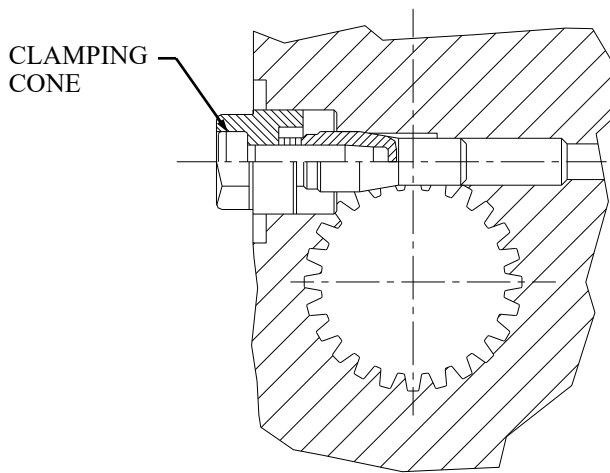
## **FUNDAMENTALS FOR GOOD PERFORMANCE**

1. The peanut vines must not be too green or good separation will be slow and difficult.
2. Moisture content of the peanut should not be too high or too low, otherwise increased damage or LSK's may result. 12-15% is best.
3. Keep the windrow centered entering the combine so that the combine does not get overloaded on either side.
4. Make sure the combine is properly adjusted for the peanut field conditions.
  - A. Use as much air as necessary to separate peanuts from trash without blowing peanuts out the rear of the combine.
  - B. Select a ground speed that will not overload the combine. Too much ground speed is one of the greatest causes of poor performance in separation.
5. Make sure the operator knows how to operate the combine properly and efficiently.
6. The efficiency of the combine is not measured in acres covered/hour, but in cleanliness of the sample.

## **CLAMPING CONE INSTRUCTIONS**

(Pertains to Secondary Driveline)

**NOTE: ATTACH 1 3/4 END OF DRIVELINE FIRST, THEN THE 1 3/8 END OF THE DRIVELINE.**



1. Clean and grease (Do **NOT** over-grease) the connecting spline shaft. Do not grease or oil the threads of the clamping cone.
2. Slide yoke or clutch onto the connecting shaft. Make sure that the hole for the clamping cone is positioned above the annular groove on the connecting shaft. Start threads of clamping cone by hand, then tighten it to 75 ft-lbs (100 N-m) of torque. While tightening, move the yoke or clutch back and forth in axial direction. Check tight and safe fit of yoke or clutch. A 17mm socket will be needed to tighten the clamping cone.
3. After the first 8-10 hours of operation after instal-

lation, the clamping cone must be rechecked for tight and safe fit. The Safe fit then needs to be checked at regular intervals during operation. Retighten clamping cone as necessary.

4. To disassemble, loosen clamping cone and remove it from the yoke or clutch. If the clamping cone cannot be removed by hand, it can be released from the opposite side by using a hammer and a pin punch.

**NOTES:** The clamping cone is serviced only as a complete assembly. Do **NOT** attempt to disassemble the clamping cone.

The blue thread locker applied to the clamping cone threads is good for at least 5 connect/disconnect cycles.

# OPERATIONAL SETUP

## **TRACTOR PREPARATION**

Before operating implement refer to tractor operator's manual for information concerning safe methods of operation, hydraulics, hitch adjustment, tire inflation, wheel adjustments and tractor weights.

Check tractor brakes and warning lights, make sure they are in proper working order.

Check tractor hydraulics oil reservoir and add oil if needed.



### **WARNING**

**TRANSPORTING THE IMPLEMENT WILL ADD SIGNIFICANT WEIGHT TO YOUR TRACTOR. MAKE SURE THE TRACTOR IS PROPERLY BALLASTED.**

### **Front-End Weights**

Use front-end weights as needed to provide effective steering control and front-end stability.

See your tractors Operator's Manual for recommendations on ballasting procedures.



### **WARNING**

**DO NOT EXCEED THE TRACTOR'S LIFT CAPACITY OR BALLAST RECOMMENDATIONS.**

### **Horse Power Requirements**

The minimum power requirement for the 6-Row is 165 HP, depending on soil type and tank size. (Combines are harder to pull in sandy conditions) Select a tractor with sufficient power to operate these machines.

### **Wheel Spacing**

Set tractor wheels so they are equally spaced from center of tractor and centered between the rows. See your Tractor Operator's Manual for correct tire inflation pressure.

### **Drawbar Position**

Place the drawbar in the center position to keep combine in the center of the rows.

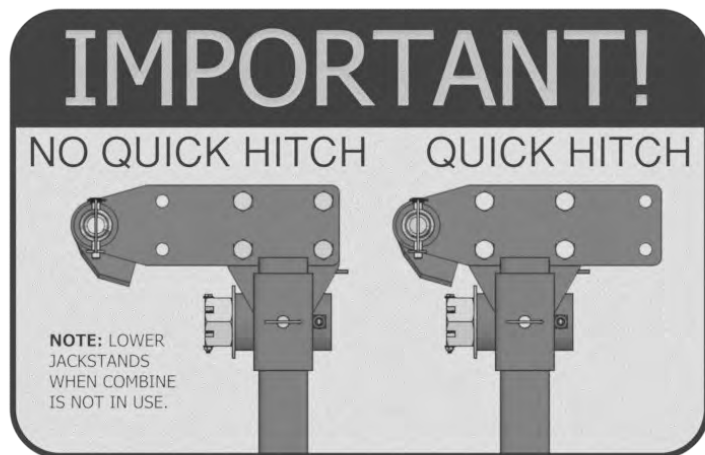
### **Sway Blocks**

Sway blocks need to be tight to limit sway while pulling the combine with the two point hitch.

## HITCHING TO THE IMPLEMENT

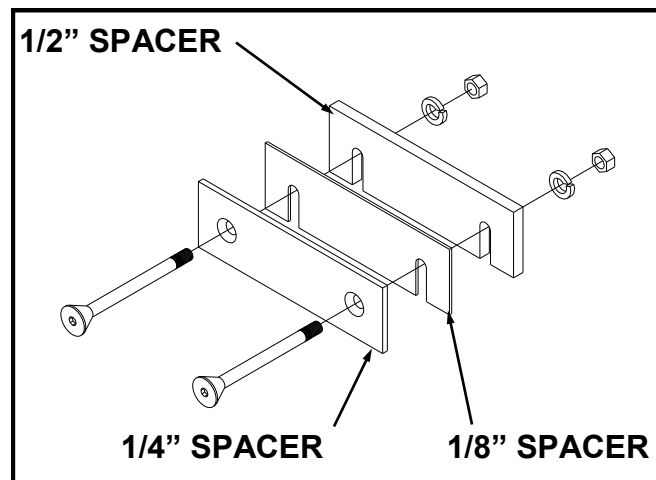
**NOTE: 74 SERIES KMC COMBINES SHOULD BE OPERATED AT A PTO SPEED RANGE OF 850 TO 950 RPM FOR OPTIMUM PERFORMANCE AND FUEL EFFICIENCY**

### Settings For Two Point Hitch



**NOTE:** Use 2" bushing for CAT 4 lower hitches.

### Settings For Drawbar Yokes



### 3" Drawbar Yoke Setting

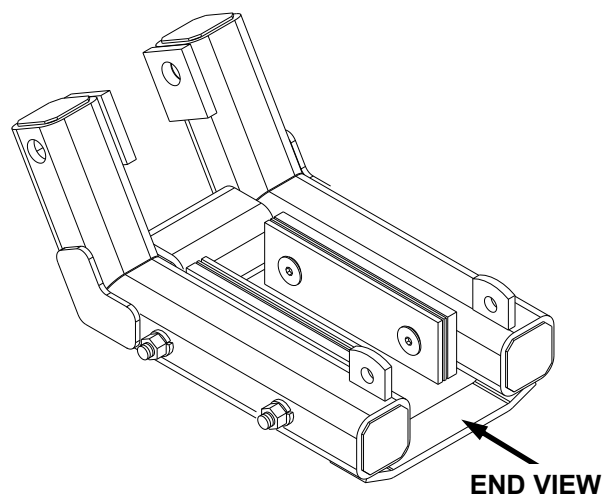
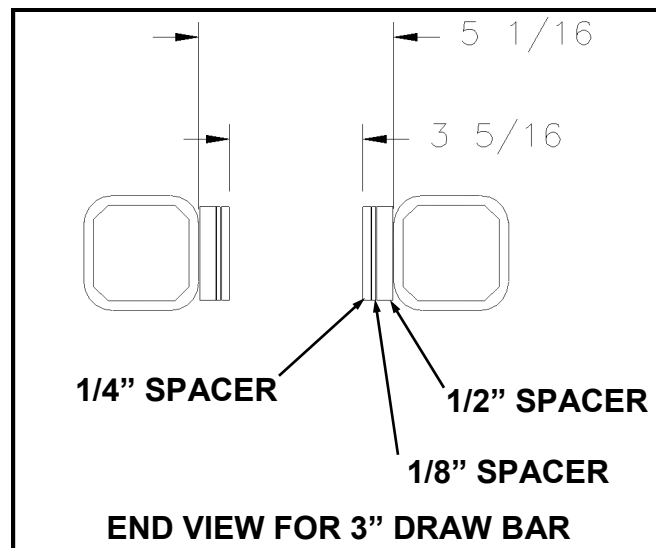
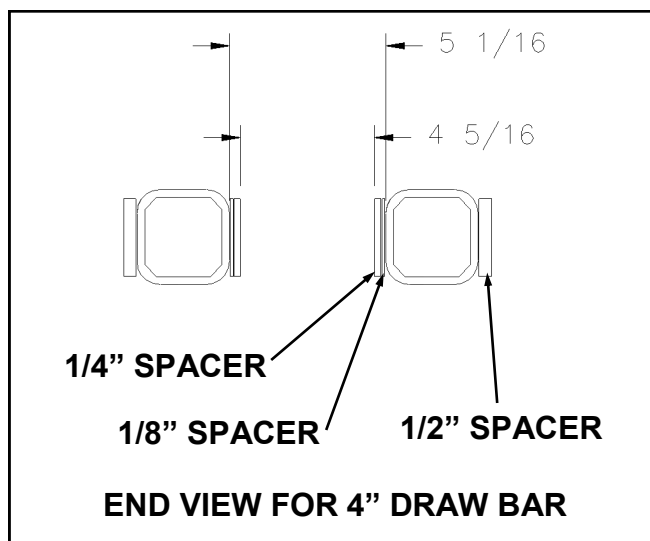
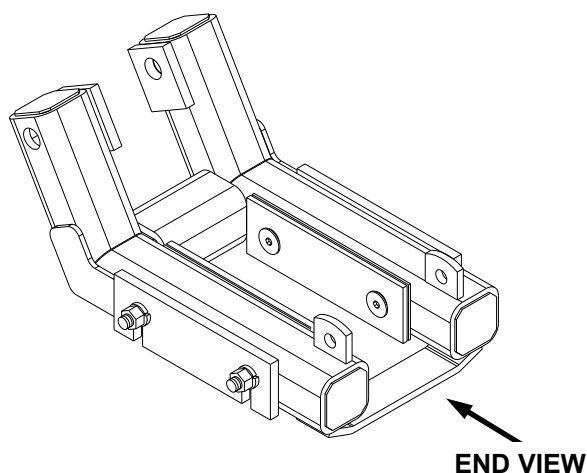


Figure 6



## 4" Drawbar Yoke Setting



## Tractor Setup and Attaching To The Combine

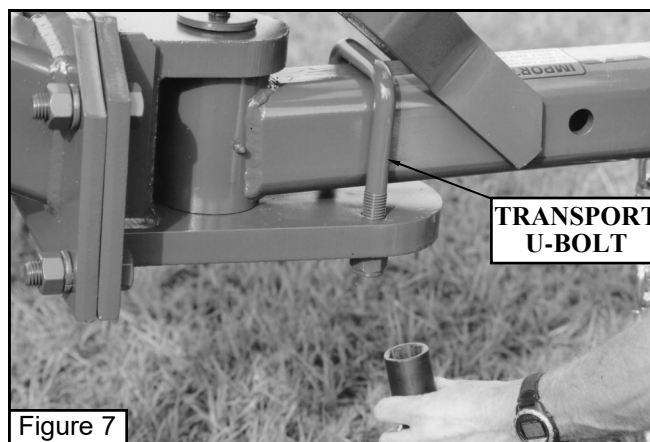
The distance from the end of the tractor PTO to the center of the hitch pin should be 16" for 1 3/8-21 PTO, and 20" for 1 3/4-20 PTO. Adjust tractor drawbar if necessary to achieve this dimension. Install ball hitch onto drawbar. Make sure to use correct shank size ball to match hole in drawbar.



### CAUTION

Check drawbar to PTO relationship before installing driveline. Too short of a length could damage tractor or combine.

HITCH BALL SHANK SIZE	RECOMMENDED TORQUE
1 1/4"	415 FT LBS
1 3/8"	555 FT LBS
1 1/2"	760 FT LBS



Use enough flatwashers under drawbar to allow cotter pin to lock castle nut when tightened to correct torque.

When connecting or disconnecting from tractor make sure machine is on level ground and tires are chocked securely. Align tractor ball with tongue extension. Transport U-bolt should be on tongue extension as shown in Figure 7. Once tractor ball is directly under the coupler on tongue extension, lower the coupler on to the ball using the jack. Install the drawbar guide onto tongue extension with 1" bolt and washers. Tighten nut until it is tight on guide without clamping guide onto tongue extension. Lock nut into place with jam nut. See Figure 8. Swing drawbar guide up onto drawbar and install 5/8" bolt with spacer and locknut over drawbar. Once the drawbar is installed, you can remove the



transport U-bolt and store it on the upper tongue, as shown in figure 9. Attach the driveline to the tractor and lower gearbox, making sure driveline and combine gearbox match. Secure driveline shields upper and lower halves with safety chains provided. See Figure 10. This will insure longer life of the shields which is very important for safe operation.



Figure 9

### **Special Attachment**

A special 1 1/2 I.D. x 2 O.D. Bushing Spacer (33-024-502) is required for a drawbar with a 2" pull hole when using a 1 1/2" shank ball.

**NOTE: Be sure when switching between 1 3/4" and 1 3/8" P.T.O. sizes that the complete tractor half of the driveline is switched (not just the yoke). The tractor halves are different lengths for the two P.T.O. sizes.**

Attach the hydraulic hoses for the tank and header. Raise and lower both tank and header to insure proper operation.



Figure 10



### **CAUTION**

Always install safety latch on tongue when transporting.



### **CAUTION**

Always put safety jackstands under header when working on header

## **PICK-UP AND HEADER**

### **Header Operation**

**The KMC combine is equipped with a hydraulic cylinder to raise and lower the pickup attachment.**

In operation the pickup height should be set with the springs approximately one inch above ground. This will minimize spring wear and nut losses.

The pickup speed is variable and should be set to match ground speed. Proper adjustment of the pickup speed will reduce losses. If the pickup is running too fast it will tend to pull the vines apart as they are rising to the header and nuts will be pulled off the vines. If the pickup is running too slow it will push the vines along the ground before picking them up which will also result in excess losses.

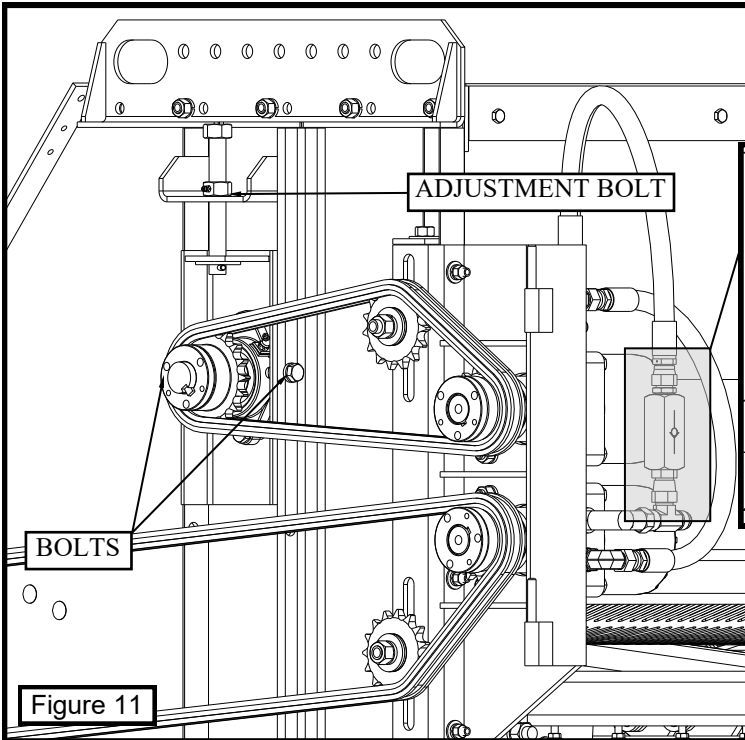
If the tractor has a multi-turn precision flow control, connect the motor hoses directly to the tractor. If the tractor has no flow control or one with only a 1/4 turn adjustment, then KMC flow control kit #33-081-229 is required to be able to set the header speed accurately.

For proper header operation, the tractor hydraulic system must be capable of supplying up to 15 GPM at pressure near 3000 PSI. If tractor hydraulic flow is too low, then ground speed will be reduced. Also, if tractor hydraulic pressure is too low, then the header will plug more easily.

The pickup speed should be adjusted to match field conditions as they change. Peanuts should feed smoothly from the pickup band to the number one cylinder. This will give a uniform flow of material for threshing and separating.

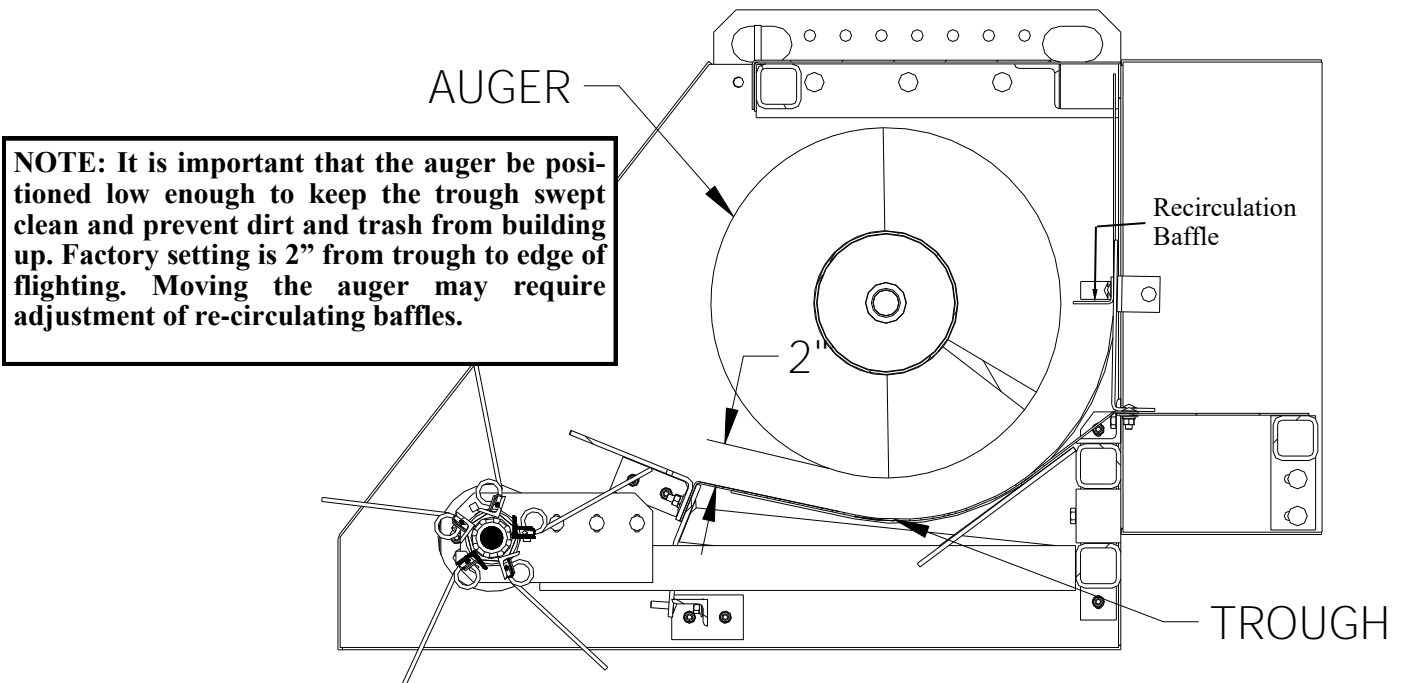
## Pick-Up Auger Adjustment and Operation

The purpose of the auger is to transfer vines to the center of the machine after they have been lifted by the pickup reel. **PROPER VINE FLOW IS IMPORTANT AND ALLOWS THE PICKING AND SEPARATION SYSTEMS TO PERFORM EFFICIENTLY AND SAVE MORE PEANUTS.** Ideally, vines should flow to THE REAR of the auger and then be transported to the throat of the machine. If they tend to flow in front of the auger instead of being fed underneath it, they will enter the center of the throat, causing the middle of the picking and separation systems to be overloaded, causing peanut loss.



To raise or lower the auger, loosen the drive chain and the two bolts on the sides of the frame members as shown in Figure 11. Then screw the adjustment bolt out to raise the auger or in to lower it. To move auger forward or backward, loosen the four bolts in the auger bearing mount plate. Re-tighten chain and all bolts securely when either of the above adjustments are made.

**NOTE:** In most cases, raising the auger will allow vines to feed in the desired manner (underneath the auger). If vines still do not feed appropriately after auger is raised, it may be necessary to move the auger forward.



## CAUTION

**MOVING AUGER FORWARD INCREASES THE POTENTIAL FOR VINES TO WRAP OR RECIRCULATE AROUND THE AUGER.**

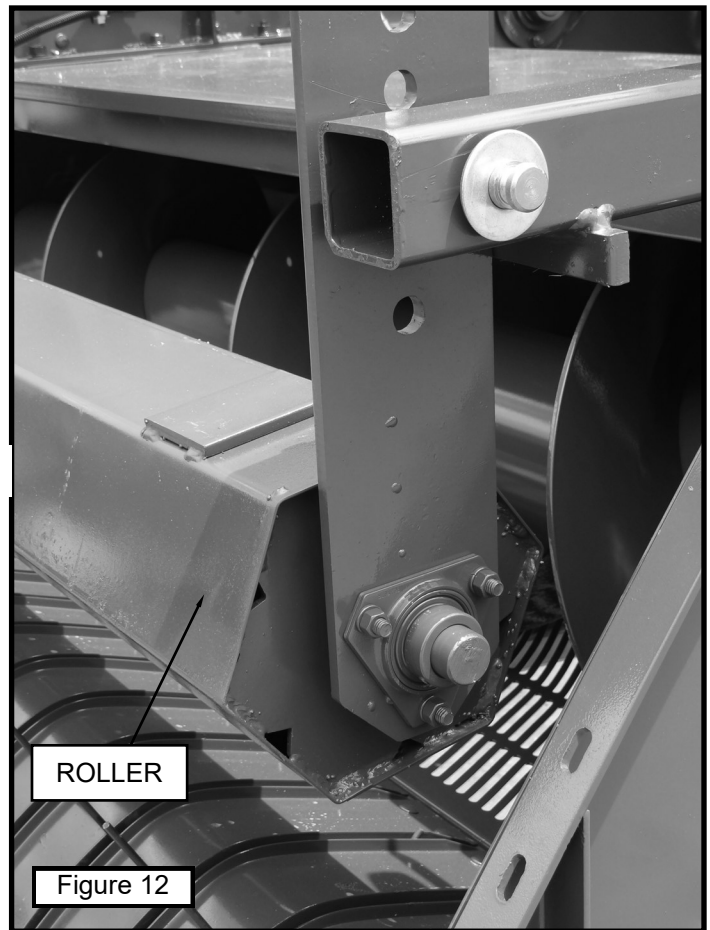


In small vines which feed well under the auger, it may be necessary to move the auger to the rear and/or lower it to prevent vines from wrapping or building in the trough.

**IT IS VERY IMPORTANT THAT VINES FEED FROM THE BACK OF THE AUGER!**

### Header Feed Roller

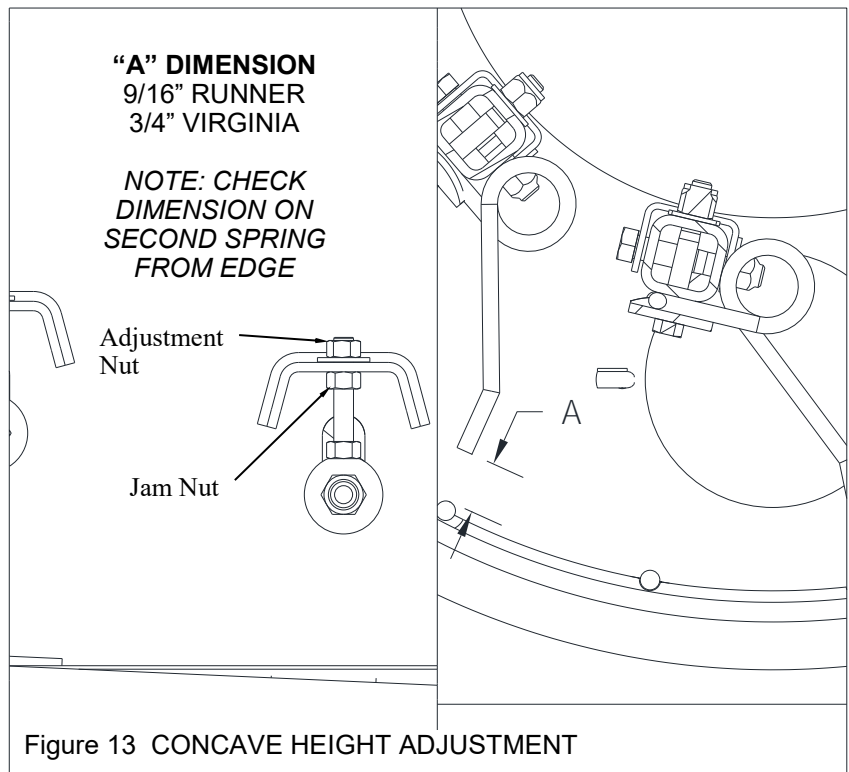
The hexagon roller comes standard on all machines. It works in all vine conditions, but is mainly suited for large vines. It helps roll the large vines under the auger for better material flow and performance. There are vertical and horizontal adjustments for the “Hex Roller” to be set for your particular vine conditions.



## **PICKING CYLINDERS**

### Concave Height Adjustment

Underneath each cylinder is a cylinder concave, the rear four are adjustable concaves. They may need adjusting to achieve the proper clearance between the cylinder spring and the concave. To make this adjustment back off the jam nut and turn the adjustment nut on the setscrew until the springs miss the concave by 9/16 inch for runner peanuts and 3/4 inch for Virginia type nuts. See Figure 13. Closer settings may be necessary for rank vines if they build up on the concaves closing up the holes. Follow this procedure on all cylinder concaves starting with the #4 cylinder continuing through #7 cylinder.



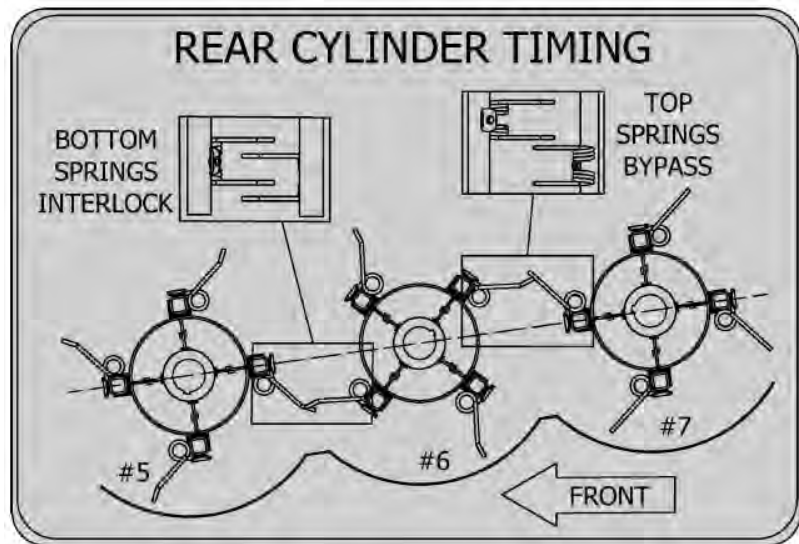
## Cylinder Speed Adjustment

After the windrow has been picked up it moves into a series of cylinders which are equipped with spring tines that pull the peanuts off the vines. The cylinders are rotating at a high rate of speed, therefore it is important to keep a constant and adequate supply of material flowing into the combine to minimize damage and shelling of peanuts. Proper speed of the cylinders is also important, therefore tractor RPM should be maintained at PTO speed of 850-950 RPM. A quick check can be made by counting the speed of the number one cylinder. THE SPEED OF THE NUMBER ONE CYLINDER IS 120 R.P.M. AT 900 PTO R.P.M.

## Timing for #5, #6 & #7 Cylinders

In certain tough conditions, the vines may not break up easily and may tend to wrap around the last few cylinders in the combine. If this becomes a problem, it can be improved by timing the last 3 cylinders. Cylinders 5, 6, & 7 turn the same speed. The springs on each bar should interlace and pull on the vines as they pass each other. Figure 14 shows the correct setting. Remove the drive chains and rotate the cylinders into the shown position. Reattach the drive chains.

Figure 14 REAR CYLINDER TIMING



## Stripper Adjustments



Figure 15 UPPER STRIPPER ADJUST [RT SIDE]

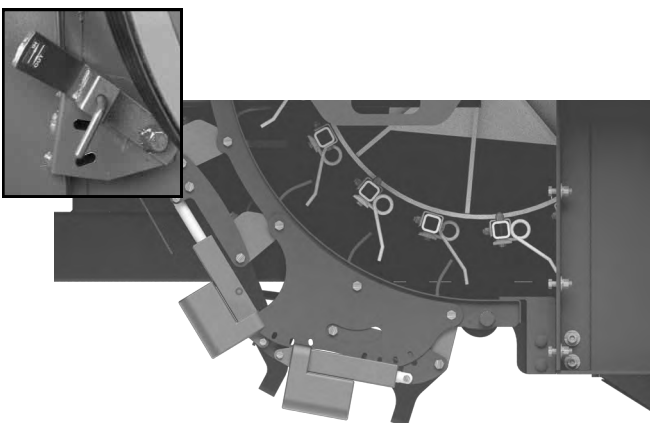


Figure 16 RIGHT SIDE LOWER STRIPPERS

The aggressiveness of the picking cylinders can be adjusted by increasing or decreasing the number of strippers engaged in the picking cylinders. When first beginning a new field or new conditions **START WITH ALL STRIPPERS DISENGAGED**. If you find peanuts still attached to the vines which have gone through the machine, engage the front stripper set to the 50%. If this is not enough then engage the rear stripper set to the 50%. If additional aggressiveness is needed engage the stripper sets more. Running stripper sets over 100% will cause premature damage to springs. See Figures 15 - 17. **NOTE:** front and rear lower stripper sets are adjusted in cab from the control system. The backup manual setting is located on the left side.

If still more aggressiveness is needed, begin to engage #2 cylinder stripper. Use upper strippers last, engaging them progressively until you reach a point where there are no longer any peanuts being left on the vine. In extremely dry peanuts where LSK's sometimes occur reverse the order of stripper engagement, start at the rear bottom and work forward. The rear bottom strippers are not as aggressive as the front bottom strippers.



**DO NOT USE UPPER STRIPPERS IN DRY PEANUTS.**

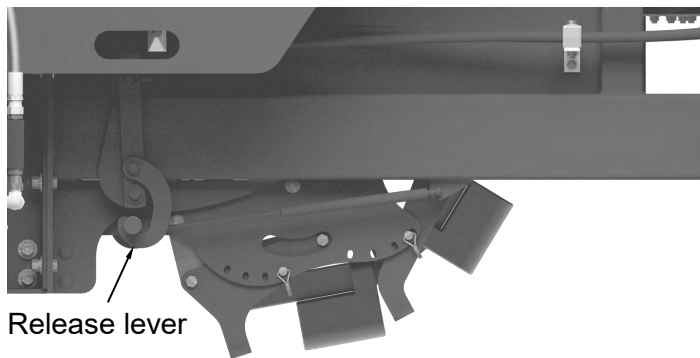


Figure 17 LEFT SIDE LOWER STRIPPERS

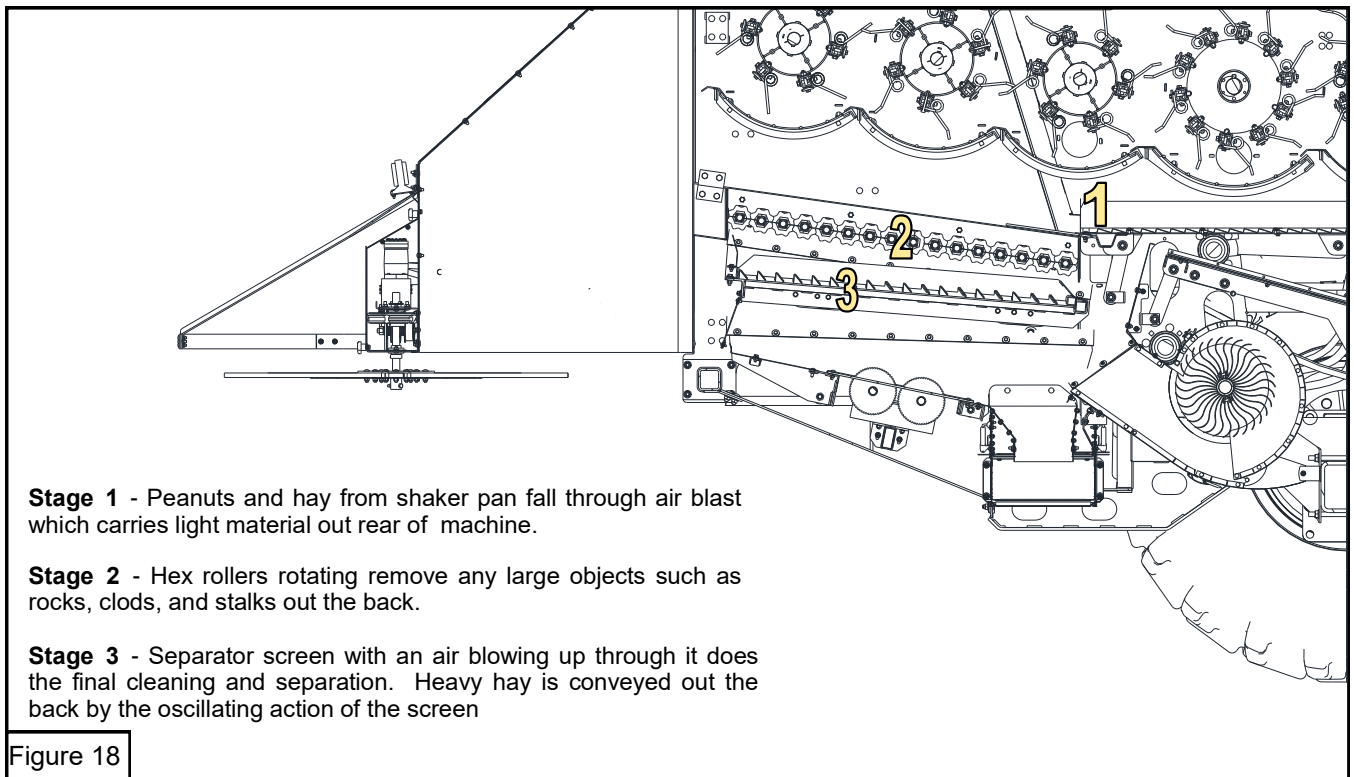
This usually results in fewer LSK's. It is important to balance ground speed and stripper engagement to minimize LSK's and damage.

**NOTE:** As conditions change from morning to afternoon strippers may need to be removed to minimize damage.

**NOTE:** Use a 15/16" wrench to make hand adjustments easier.

**IMPORTANT:** DO NOT INSERT SNAPPER PINS WITH ACTUATORS HOOKED UP.  
**To lower swinging concave:** Release lever on both side of combine, then push down.

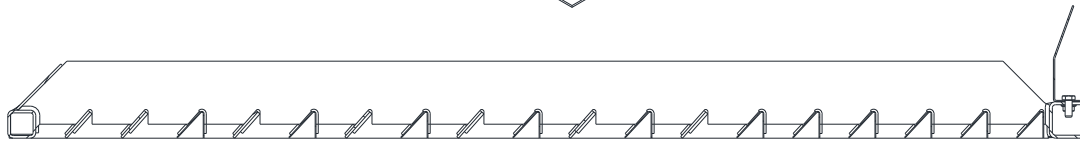
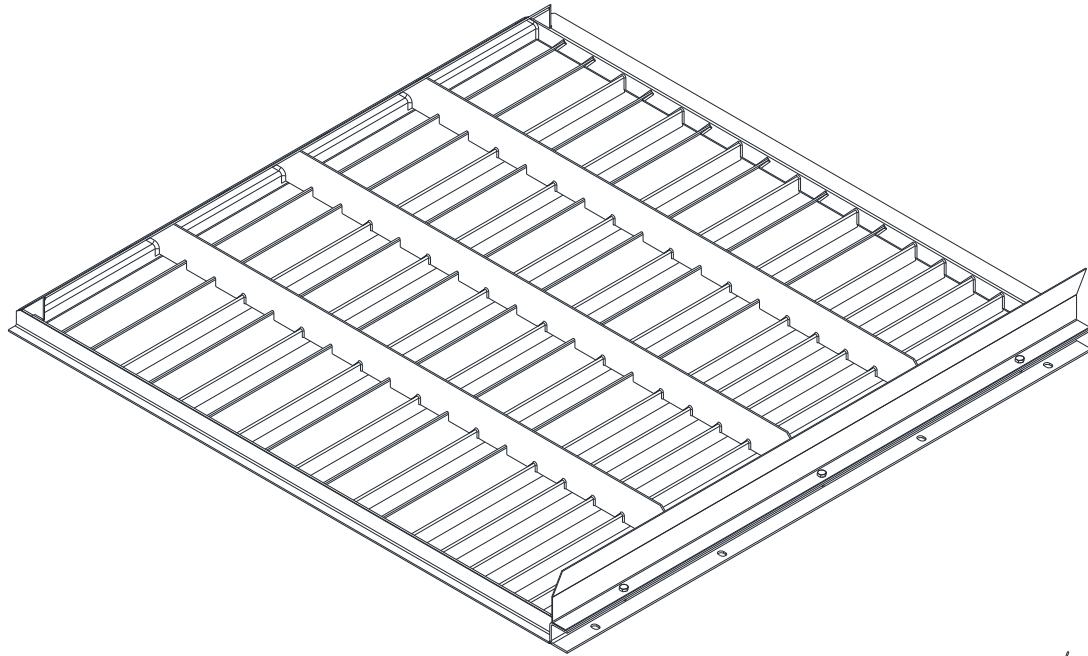
**Separation System**



The most important area of the combine is the separation system. More peanuts are lost and more poor grades are received due to improper adjustments of the cleaning shoe and separator fan than any other area. The KMC peanut combine has a unique separation system which gives improved performance in grades and capacity. There are three stages to the KMC system, first the peanuts and foreign material coming off the shaker are tossed into an air stream which blows most of the lighter hay material out the back of the combine. This pre-cleans and lessens the amount of material which the cleaning shoe has to work with. It is easier for the peanuts to fall through the screen under these conditions. The second is the hex rollers that roll large material out the back. The third stage of cleaning is by an oscillating cleaning shoe. A fixed separator welded screen is now standard on the 6-row machines (See Figure 19).

## **SCREEN**

WELDED SCREEN



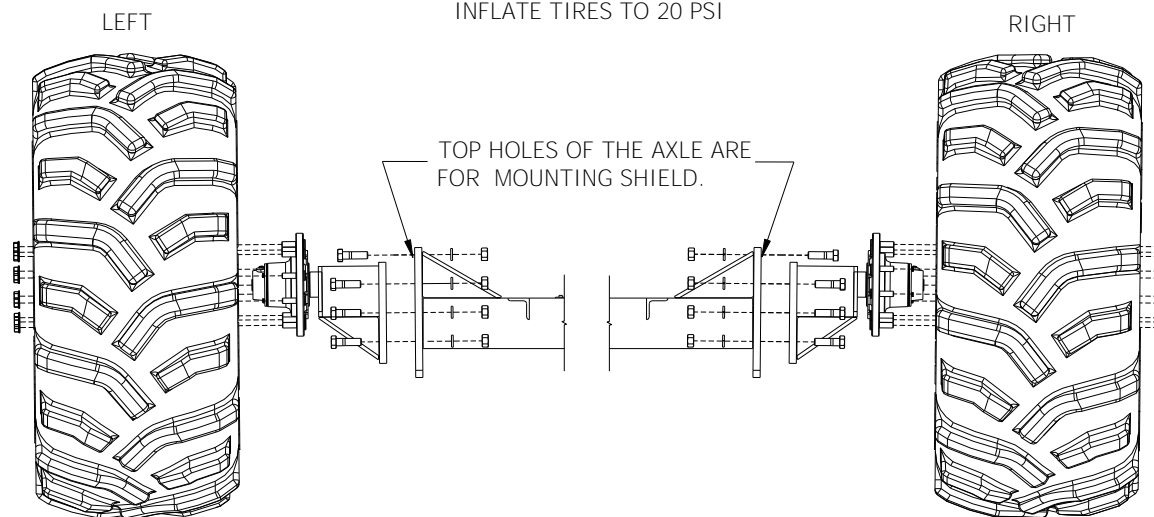
SIDE VIEW

Figure 19

## **AXLE HEIGHT ADJUSTMENT**

### **6-ROW & 8(30) WHEEL AND TIRE INFORMATION**

TORQUE 1" BOLTS TO 680 FT-LBS. TORQUE WHEEL LUG NUTS TO 400 FT-LBS.  
INFLATE TIRES TO 20 PSI



SPINDLES ARE MADE SO THE COMBINE CAN BE RAISED AND LOWERED IN 2" INCREMENTS. 6 BOLTS ARE SUFFICIENT TO BOLT THE SPINDLE TO THE AXLE. THIS POSITION IS FACTORY RECOMMENDED.

VIEW SEEN IS FROM THE REAR OF COMBINE

In certain rocky or heavy clod conditions or areas, it may be more difficult for rocks and clods to exit the combine. If this occurs, and if the problem cannot be resolved by increasing PTO speed, and/or increasing separator fan speed, an adjustment is provided on the axle to lower the combine angle. In order to do this, the shields must first be raised to allow for the adjustment on the tires.



## **DANGER**

**Be very careful when lifting and lowering combine. Only do this on a concrete or similar hard and level surface. Use jack or crane with a minimum 8-ton capacity to lift each side, and use solid blocks to support combine after lifting. Stay clear of combine while lifting and lowering, and only perform work on combine when it is fully resting on solid blocks.**

**Failure to follow these precautions may result in serious injury or death.**

- 1) Lift combine and set on blocks which will keep tires clear of ground.
- 2) Remove wheels from hubs and hub assemblies from axle end plates.
- 3) Mount hub assemblies on axle end plates in upper holes so that two holes are exposed at bottom instead of top. On 6-row combines, install lower shields on top two bolts holding hub assemblies on axle end plates. The four extra bolts may be stored in exposed holes.
- 4) Torque all 1" bolts to 680 ft-lbs.
- 5) Install wheels and torque lug nuts to 400 ft-lbs.
- 6) Lower combine to ground. It will be 4" lower at the axle than the factory setting.

**Note: If more height is needed rather than less, the hub assemblies may be turned upside down and installed in the top or bottom position, which would increase axle height by 4" or 8", respectively, from the factory setting.**

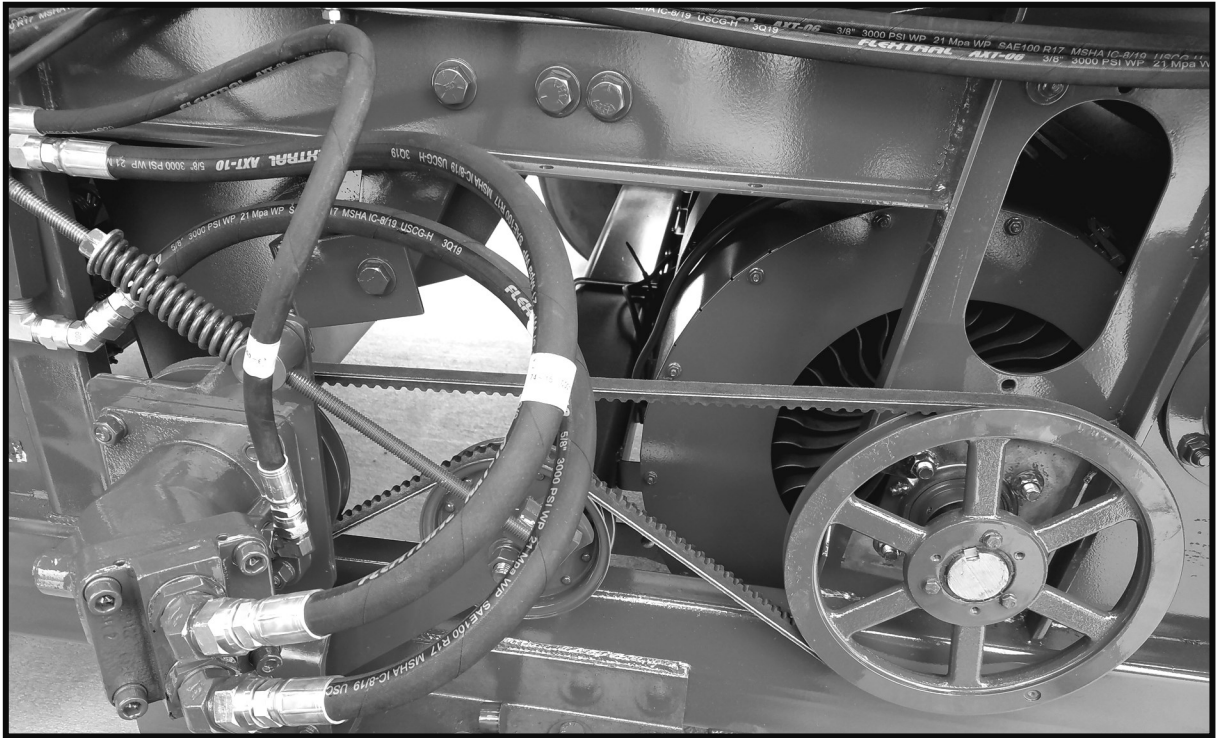
## **SEPARTION FAN ADJUSTMENT**

### **Separation Fan Drive:**

The MAIN FAN is an essential part of the separation process. The principle of separation is air and gravity. As the peanuts and foreign material fall from the agitator rods onto the cleaning shoe, gravity begins to pull the peanuts downward, and air then blows the hay and foreign material out the back. Therefore, the right combination of air for conditions must be determined.

First START WITH 1500 RPM on the fan tachometer. Check behind the combine to see if peanuts are being blown out, this can best be determined by someone other than the operator observing the materials flowing off the rear of the screen.

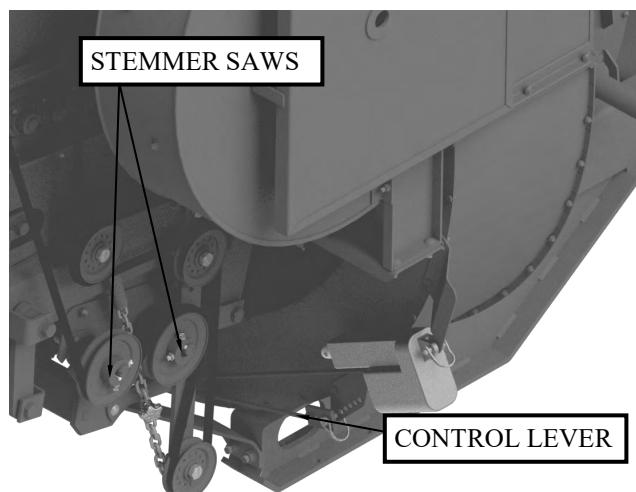
If excessive peanut loss is occurring from too much air, reduce the fan speed by changing the hydraulic remote.



**NOTE:** It is important to make sure the case drain line is connected to the hydraulic reservoir free flow port. Any backpressure on that line will damage seals in the hydraulic motor.

Each fan housing has an access door that may be opened to remove rocks or to service the fan.

## STEMMER SAWS



As the peanuts fall from the chaffer they fall onto a set of stemmer saws. These saws remove the stems from the peanuts and dispose of the vine fragments. The saws turn in opposite direction which rotates most all peanuts into position for stem removal. As shown in figure 24.

The control lever can be disconnected from the actuator and used manually to control the flow in the case the actuator fails.

Figure 24 AIRLIFT ADJUSTMENT

## AIR LIFT FAN

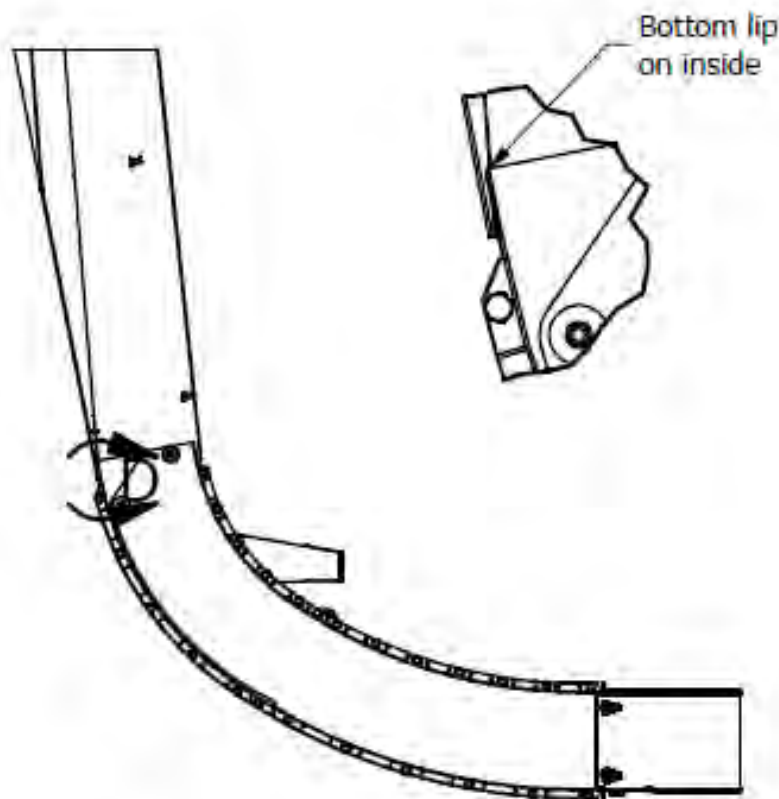


Figure 25

The airlift fan supplies the energy to lift the peanuts into the storage tank on top of the combine. The amount of air can be varied to meet field conditions by means of a damper in the lower end of the fan housing. The control lever can be set from high to low. See Figure 24. The recommended settings are high for heavy yield peanuts, medium for dry light peanuts and low for small low yield peanuts. Inadequate air flow will result in the delivery duct plugging. Too much air will result in increased LSK's. Always inspect peanuts in tank when first starting up, this will help determine the proper air flow. Proper air adjustment is for the peanuts to just reach the far side of the tank when its empty.

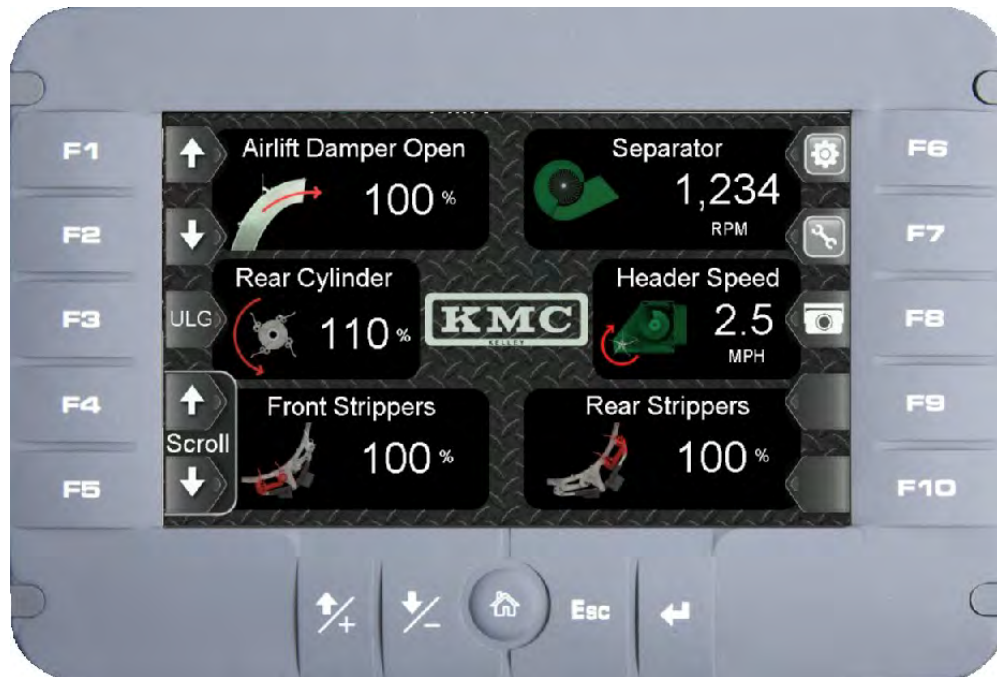
In the event of duct plugging, 3 clean-out doors are provided. **Make sure these doors are installed properly; if not, they can create increased LSK's** (Refer to Figure 25).

Ducts are made of wear resistant material and no longer require plastic liners. However, there are still liners in the airlift fan.

## **ELECTRONIC CONTROL SYSTEM**

Your new Peanut Harvester is equipped with a state-of-the-art control system. The control system was designed to improve combine performance by bringing controls and sensing inside the cab. This allows rapid and effortless adjustments to be made on the go, resulting in more run time. The control system will automatically activate once power is applied. The power at the back of the 7 way plug is only on when the key is on.

### **Home Screen:**



#### Home Screen Buttons:

- F1: Increases air flow delivering peanuts to the tank (Actuator 1)
- F2: Decreases air flow delivering peanuts to the tank (Actuator 1)
- F3: Opens unload on the go tank screen
- F4: Scroll up or select between actuator to adjust
- F5: Scroll down or select between actuator to adjust
- F6: Opens settings screen
- F7: Opens calibration screen for all linear actuators
- F8: Opens camera screens
- ↑/+: Moves the actuator up after selected by using scroll ↑↓
- ↓/-: Moves the actuator down after selected by using scroll ↑↓

Note: Selection needs to be highlighted in green before trying to move

#### Home Screen Display:

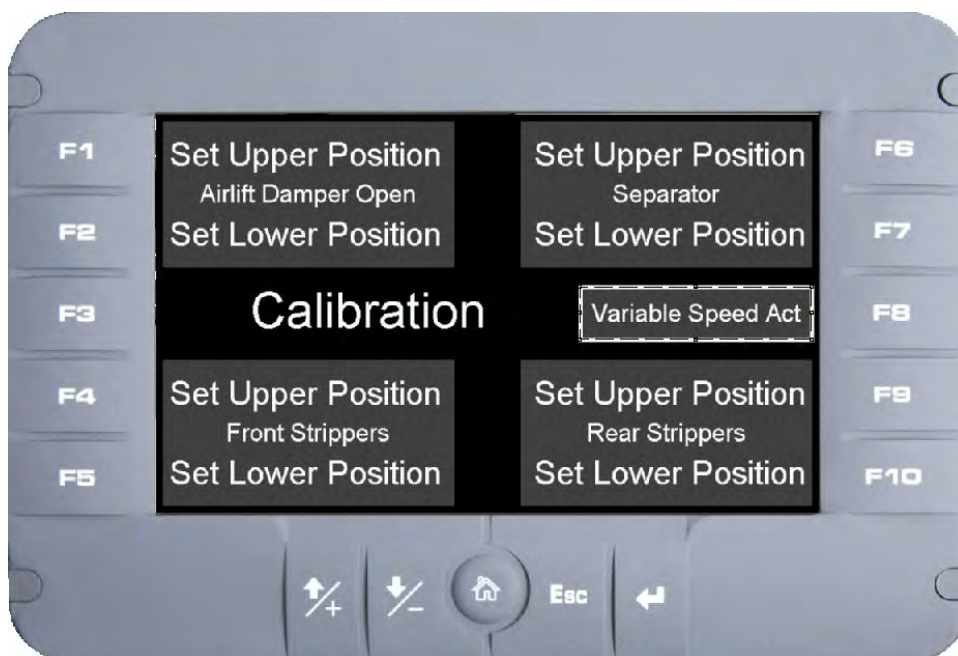
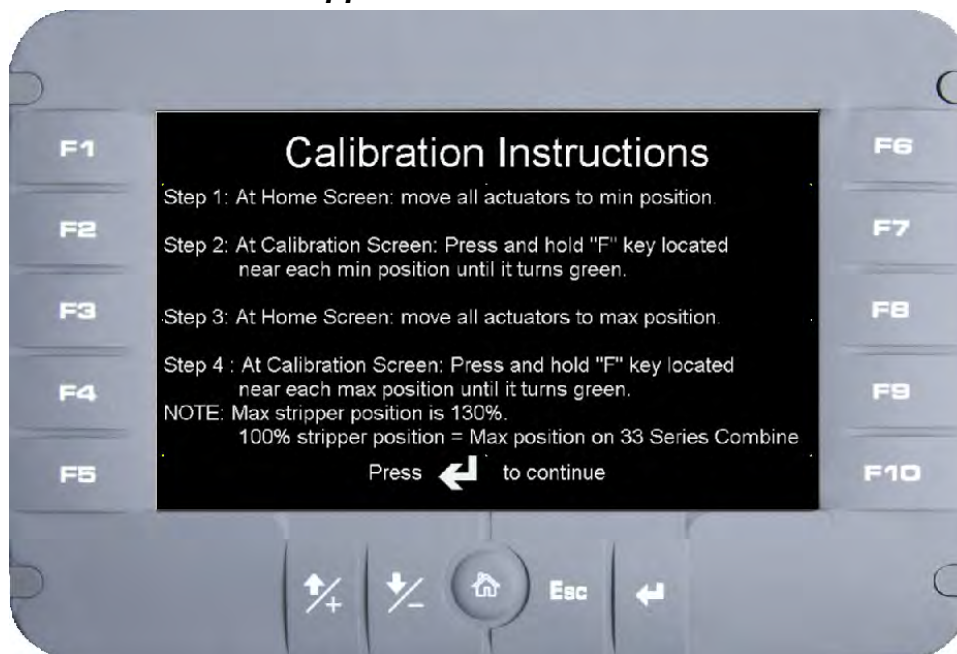
- Airlift Damper Open: Displays percentage that the airlift damper is open
- Rear Cylinder: Displays percentage of ideal combine pto speed
- Front Strippers: Displays percentage of front stripper engagement
- Separator: Displays the RPM of the separator fans
- Header Speed: Displays the pickup header speed in MPH
- Rear Strippers: Displays percentage of rear stripper engagement



## ELECTRONIC CONTROL SYSTEM (CONTINUED)

### Calibration:

Calibration is performed at the factory and is only necessary when actuators are not displaying the correct min and max percentage. To calibrate all linear actuators, first move all actuators to minimum position while on the home screen. Then press F7 to enter the calibration instruction page. After reading the instructions, press the enter key to continue to the calibration screen. Once on the calibration page press and hold F2 until the text turns green. Repeat using F5 then F10 key. This will calibrate the lower limits of the linear actuators. Next return to home screen and move all actuators to maximum position. Press F7 to return to Calibration screen. Once there press and hold F1 until the text turns green. Repeat using F4 then F9 keys. The actuators are now successfully calibrated. **Note: Operating strippers over 100% for extended periods will cause premature failure of stripper teeth.**





## **ELECTRONIC CONTROL SYSTEM (CONTINUED)**

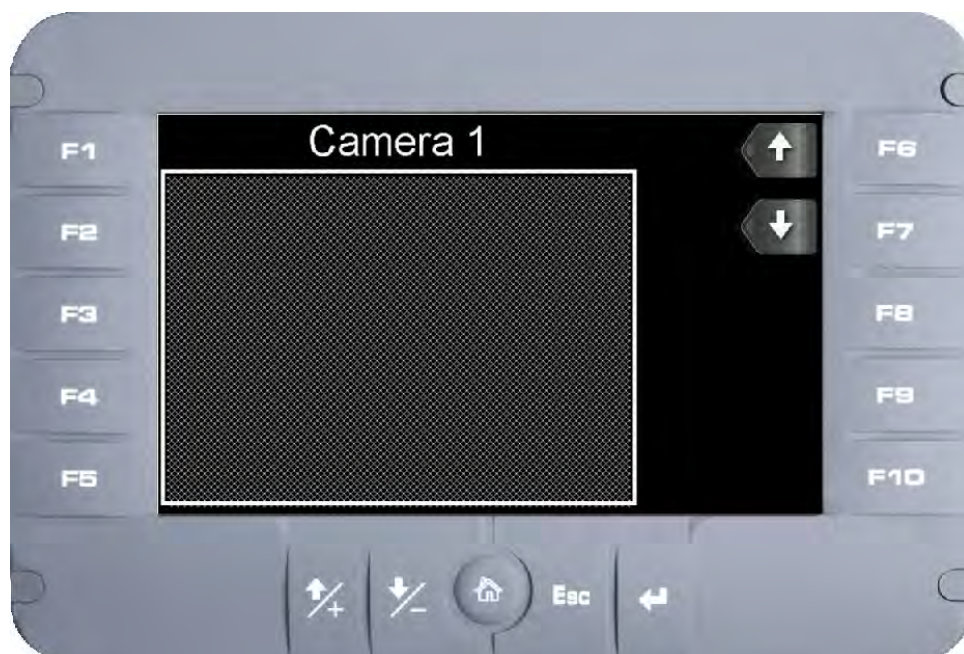
### **Settings:**

The setting page can be accessed by pressing F6 on the home page. The buzzer can be toggled “on” and off by pressing F1. The screen brightness can be adjusted by enabling F2, then pressing + or -. The operator’s manual can also be accessed from the settings page. The amount of cameras plugged in can be set by pressing F7 to toggle between 1-2 cameras



### **Camera Screen:**

The optional cameras can be accessed by pressing F8 on the home screen. The cameras then can be toggled by pressing F6, F7, ↑, or ↓.



## **ELECTRONIC CONTROL SYSTEM (CONTINUED)**

### **Unload On the Go Tank Screen:**

The Unload On The Go Tank (ULG) page can be accessed by pressing F3 on the home page. The ULG page controls the hydraulic manifold on the tank. To fold the conveyor arm, toggle the Fold option “on” by pressing F2. Then, use the hydraulic tractor remote to move the arm. To unload the tank, toggle the Unload option “on” and check that Both Belts toggle is “on.” Then, use the hydraulic tractor remote to unload the tank. To unload the side belt only, toggle the Side Belt option “on” while the Unload toggle is “on”. Then, use the hydraulic tractor remote to unload the side belt only. It is recommended to turn valves off “F3” while not using, to extend the life of the solenoids. To tilt the tank of press F7 to toggle on.



## **ELECTRONIC CONTROL SYSTEM (CONTINUED)**

### **Warnings:**

There are warnings built into the controller to help notify the operator that something is wrong.

**Separator Fan Warning:** Notifies the operator that the hydraulic separator fan is not engaged while the rear cylinder is turning. This warning will disappear once the problem is fixed. The warning can also be ignored for 30 seconds by pressing the enter key.



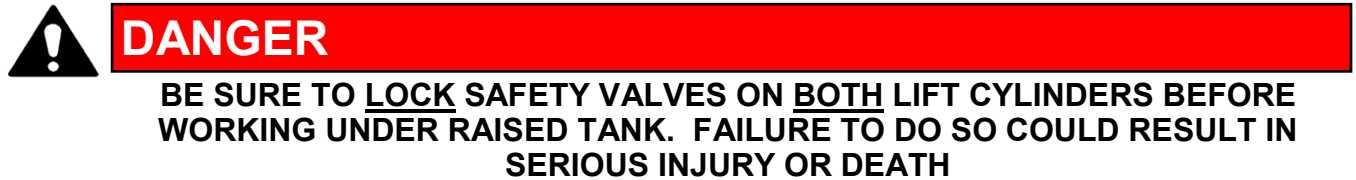
**Rear Cylinder Warning:** Notifies the operator that the PTO is not engaged or a drive is broken while the header is on. This warning will disappear once the problem is fixed. The warning can also be ignored for 30 seconds by pressing the enter key.



## COMBINE TANK



The tank is located on top of the combine. Care should be taken not to over fill the tank as excess peanuts will plug the delivery system and eventually spill on to the ground. The tank is emptied by two hydraulic cylinders which lift the bottom of the tank until it reaches a vertical position. The peanuts exit through a door on the top right side of the tank. See Figure 31.



Be sure to **lock** safety valves on both cylinders before attempting to work under the tank. Make sure valves are **unlocked** before lowering the tank. See Figure 32

Periodic cleaning of the air release grid on the top of the tank delivery duct may be necessary. A heavy buildup of vines and roots in the grid can cause shelling of peanuts. See Figure 33.



## **COMBINE TRANSPORT**



### **WARNING**

**WARNING: THE FOLLOWING PROCEDURE MUST BE CAREFULLY FOLLOWED FOR SAFE TRANSPORT BEHIND A VEHICLE WITHOUT A DRAWBAR**

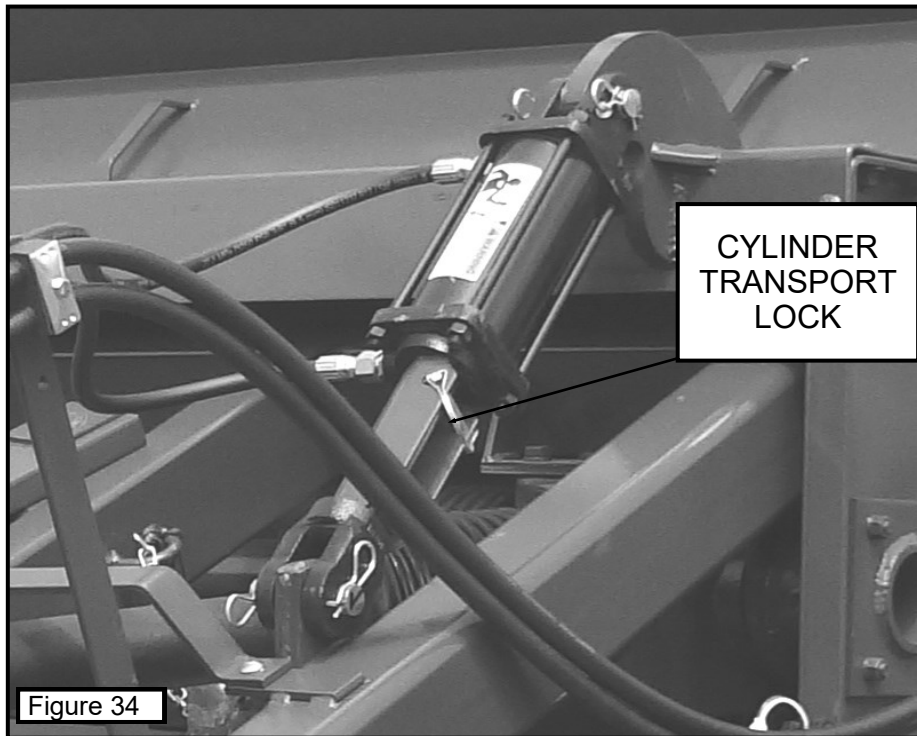
1. Raise head and install cylinder transport locks.
2. Remove hydraulic lines from tractor. Disconnect short driveline from tractor and lower end of double gearbox.
3. Place jackstand on tongue in vertical position and raise coupler off ball hitch.
4. Remove 5/8" and 1" nuts and bolts from drawbar yoke and remove yoke from drawbar and tongue extension.
5. Install u-bolt (from storage location on upper tongue) over tongue extension through holes in lower pivot plate and snug down with locknuts.

The combine is now ready to be transported.

When towing the combine on public roads be sure that the weight of the towing vehicle is equal to or greater than the weight of the combine which is 21,000 lbs 6-row.

**We do not recommend speeds of greater than 20 MPH empty or 10 MPH loaded.**

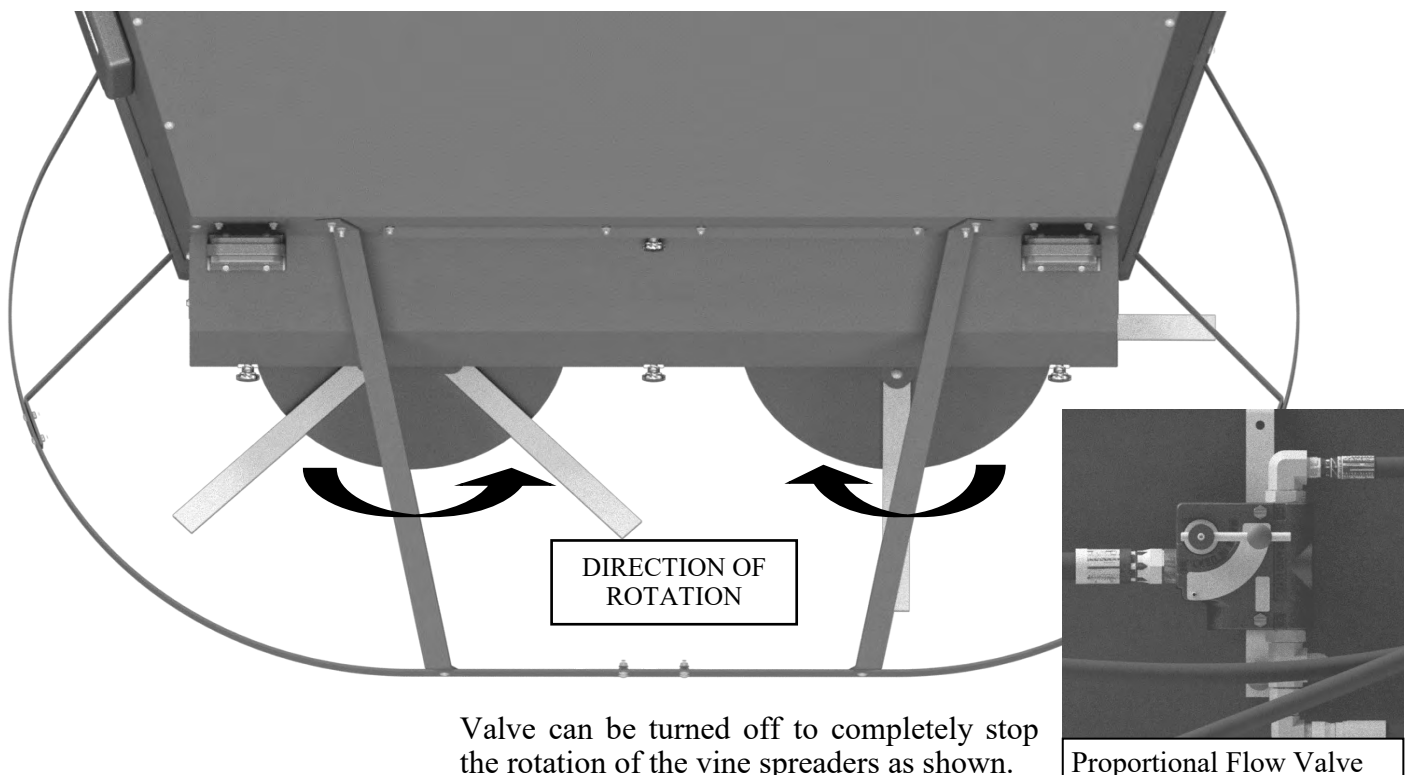




When towing machine make sure cylinder transport lock is properly engaged for safe transport. See Figure 34.

## **VINE SPREADER**

The vine spreaders are tied into the hydraulic flow from the header and controlled with a proportional flow valve mounted on the back left side of the head. The speed of the spreaders can easily be adjusted on the valve. The higher the number the faster the spreaders turn. Thus controlling the distance of the spread. The spreaders are also equipped with a pan to help spread fine material that would normally pass through the spreader blades.



Valve can be turned off to completely stop the rotation of the vine spreaders as shown.

# TROUBLE SHOOTING OTHER PARTS OF THE COMBINE

## PROBLEM

## POSSIBLE CAUSE AND SOLUTION

- |   |  |
|---|--|
| 1. Vines rolling in front of pickup, not being picked up by header. | <ol style="list-style-type: none"> <li>1. Small vines or high winds will not allow springs to penetrate vines. Install vine hold down attachment and for extreme conditions bend pickup spring up slightly 1" from end.</li> <li>2. Make sure pickup speed is matched to ground speed.</li> </ol>  |
| 2. Peanuts bunching in front of pickup before entering combine.     | <ol style="list-style-type: none"> <li>1. Pickup speed is too slow. Increase speed of pickup by adjusting hydraulic valve.</li> </ol>  |
| 3. Pickup pulling vines apart and losing peanuts on the ground.     | <ol style="list-style-type: none"> <li>1. Pickup speed is too fast. Reduce speed of pickup by adjusting hydraulic valve.</li> </ol>  |
| 4. Peanuts left on vines after going through combine.               | <ol style="list-style-type: none"> <li>1. Combine not running up to speed. Be sure tractor is running at proper PTO speed. For extremely tough vines, it is OK to increase PTO speed to 950 RPM.</li> <li>2. Strippers not set aggressively enough. Engage stripper springs starting with first bar until all peanuts are remove from vines. Do not engage more strippers than are absolutely necessary.</li> <li>3. If No. 2 does not solve the problem then: (a) check for broken or loose stripper springs or (b) reduce ground speed to meet tough field conditions.</li> <li>4. Use only KMC brand stripper springs. Alternative brands are weaker, will break easier and are not as aggressive.</li> </ol> |

**Note: The spring coils may still be attached to the bar and just the tine broken off. Look closely when checking stripper springs.**

### 5. Excessive LSK's

First, determine where LSK's are originating. If you find only kernels in the tank and hulls on the ground, it usually means that the shelling is taking place inside the machine (Use solutions 1-3).

If you find kernels and hulls in the tank it usually means that the shelling is taking place in the delivery system (Use solutions 4-8).

1. Too many strippers engaged. Back out strippers if possible without creating peanut loss.
2. Reduce PTO speed for less aggressive action in picking cylinders. Down to 850 RPM is ok.
3. Check picking cylinder and concave setting, (Page 13) and for obstructions in concaves. **Remove if necessary.**
4. Too much air to delivery duct. Reduce air by closing damper in fan duct.
5. Foreign material in airlift duct. Clean out duct and check for misalignment between duct and hopper.
6. Stemmer saws plugged. Clean out stemmer saws.
7. Damaged delivery ducts. Repair or replace damaged parts.
8. Clean out doors not installed properly.



## PROBLEM

## POSSIBLE CAUSE AND SOLUTION

- 
- |   |  |
|---|--|
| 6. Excessive foreign material in sample.                | <ol style="list-style-type: none"><li>1. Too little air through separator. Turn up hydraulic flow to separator fan.</li><li>2. If material is small and dry, reduce aggressiveness of stripper springs.</li><li>3. If material is small clods of soil, re-shaking of vines may be necessary.</li><li>4. Check fan housing for material buildup. Clean out if necessary.</li></ol>  |
| <hr/>   |  |
| 7. Excessive peanuts found in loose hay behind combine. | <ol style="list-style-type: none"><li>1. Peanuts being blown out back. Reduce air velocity of fan by decreasing hydraulic flow to separator fans.</li><li>2. Insufficient breakup of hay. Engage more strippers.</li><li>3. Check screen for buildup of hay, sticks or mud.</li><li>4. Insufficient air to lift hay off of rollers. Increase air speed by increasing hydraulic flow to separator fans.</li><li>5. Combine running too fast for conditions. Slow ground speed down.</li></ol> |
| <hr/>   |  |
| 8. Airlift duct plugging                                | <ol style="list-style-type: none"><li>1. Too little air. Increase damper openings for more air flow.</li><li>2. Check for damaged duct or fan. Repair or replace as necessary.</li><li>3. Check tension on airlift drive belt. Adjust or replace if necessary.</li><li>4. Make sure combine is running at proper PTO speed.</li></ol>  |
| <hr/>   |  |
| 9. Tank will not dump                                   | <ol style="list-style-type: none"><li>1. Check hydraulic coupling engagement to tractor.</li><li>2. Improper hose coupling for tractor model.</li><li>3. Faulty cylinder. Replace as necessary.</li><li>4. Insufficient hydraulic pressure.</li></ol>  |
-

## PROBLEM

## POSSIBLE CAUSE AND SOLUTION

10. Excessive machine vibration.

1. Check cam drive belt to be sure it is tight.
2. If rubber bushings and/or hanger arms have been replaced, make sure the cams were rotated to mid-stroke before tightening capscrews. If not, loosen and tighten with cams in correct position.
3. Check the setscrews in the picking cylinder ends. Re-tighten if they have loosened.
4. Check the cam bearings. Loose and excessive play in worn out bearings will create shock loads and vibrations. Replace as necessary.
5. Over tightening chain drives will cause vibration. There should be a little slack the chain drives.

11. Vines wrapping around rear cylinders.

1. Vine conditions tough. Adjust the rear cylinder timing as shown in Figure 14, Page 26.

# MAINTENANCE

## LUBRICATION POINTS

There are certain things which need daily or regular attention to keep your combine in good operating condition. Lubrication is the most important of these. KMC recommends all bearings use good lithium #2 grease. Do NOT use moly grease in bearings.

The following chart shows points that require lubrication and the intervals at which they require it. The cylinder bearings on the combine are non-re-lubricatable. They come pre-lubed from the factory. This is because most often these bearings are over greased. This attracts dust and dirt to the seals of the bearings which eats them away and allows the dirt to penetrate the bearing and cause it to fail. Also improper cleaning of the grease fitting allows dirt to be pumped directly into the bearing which causes premature failure.

**NOTE:** Hex roller drive is pre-lubed with moly grease in a sealed cover.

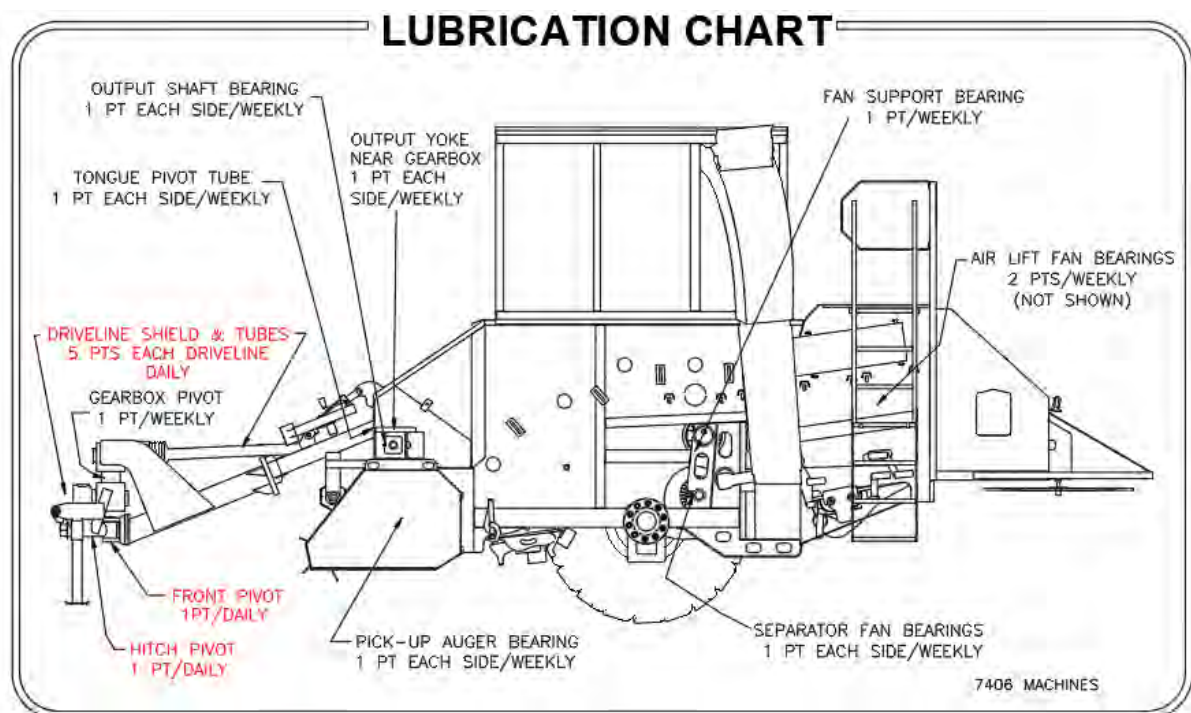


Figure 35 LUBRICATION CHART

## Drivelines

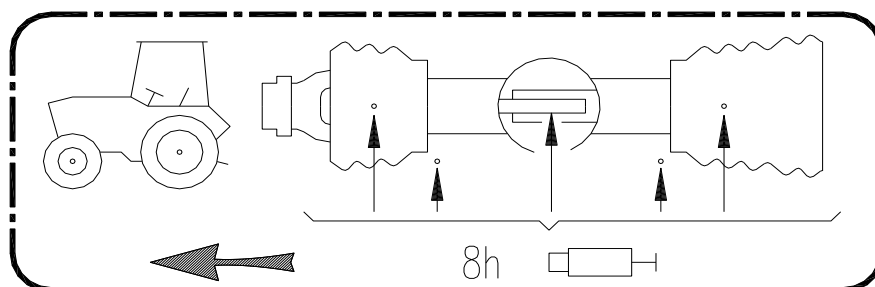
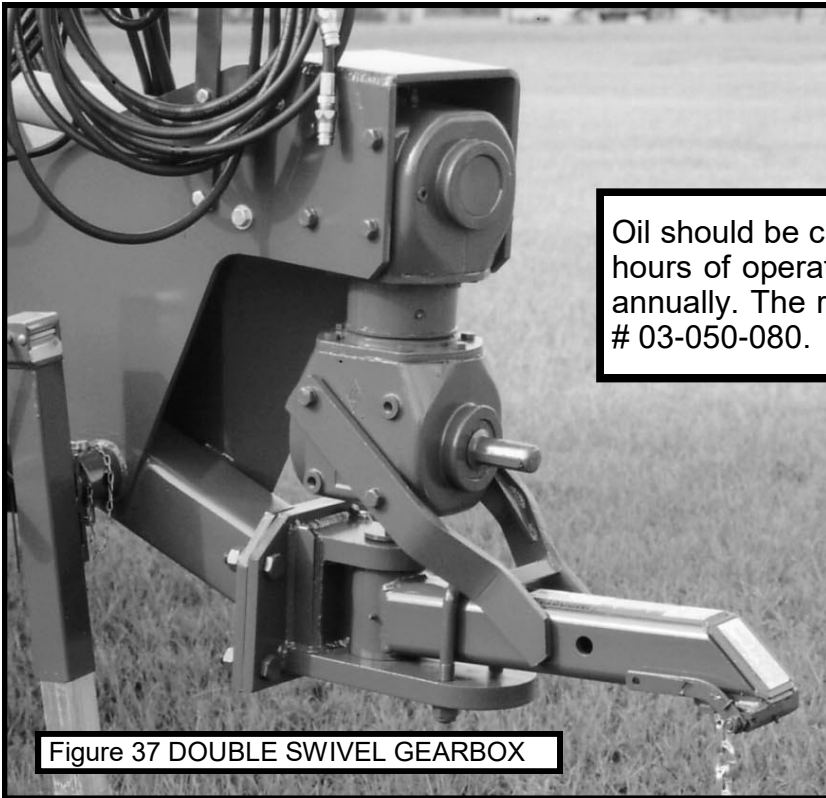


Figure 36 DRIVELINES

## Double Swivel Gearbox



Oil should be changed after the first 30 to 50 hours of operation, then every 500 hours or annually. The recommended oil is KMC part # 03-050-080.

Figure 37 DOUBLE SWIVEL GEARBOX

## Upper Header Gearbox

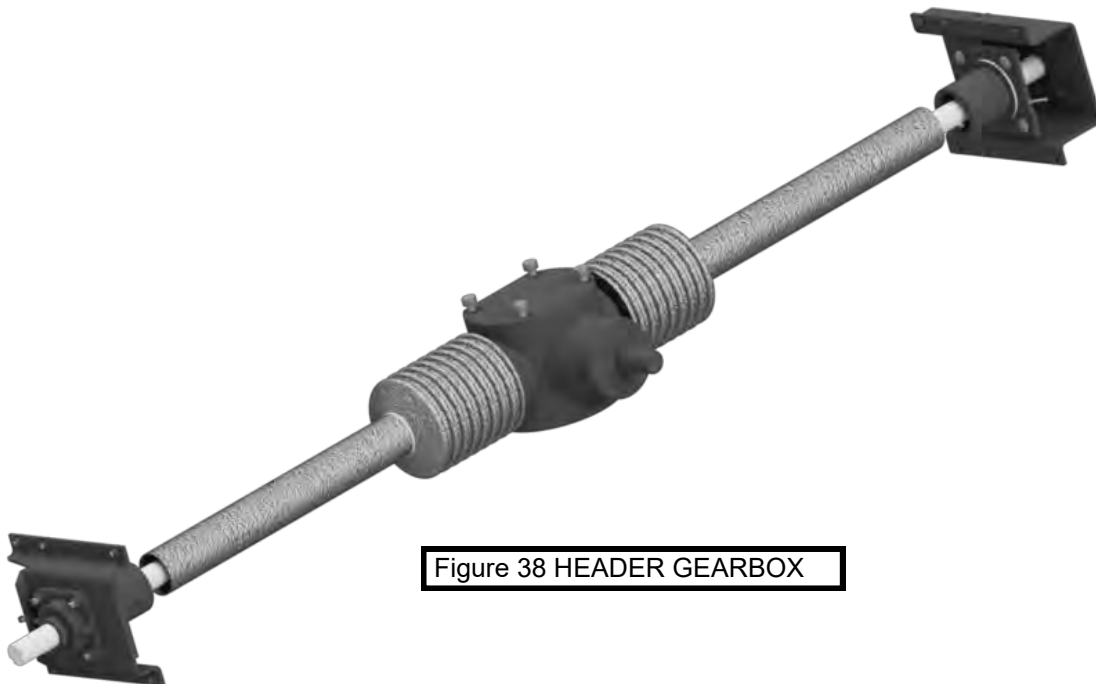


Figure 38 HEADER GEARBOX

## Pick-Up, Cylinder, and Stripper Springs

**SPRING MAINTENANCE** should be performed daily to insure peak performance of the combine.

1. Pickup springs should be checked for broken or bent tines and for excessive rubbing on the pickup bands. Broken or bent springs can be replaced through the access opening underneath and at the rear of the pickup. Pickup should have some pivotal action to allow for misalignment of bands and springs.
2. Cylinder springs should be checked for broken or bent tines. Replacement of springs on the number one and two cylinders can be made by access through the front top cover. Replacement of the number three and four cylinders can be made by raising the storage tank. Replacement of the numbers five, six, and seven cylinders can be made by removing the top rear cover.



### **DANGER**

**BE SURE TO LOCK SAFETY VALVES ON BOTH LIFT CYLINDERS BEFORE WORKING UNDER RAISED TANK. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.**

3. Stripper springs should also be checked for broken or bent tines. Replacement of these springs can be done individually.



### **CAUTION**

**CAUTION: ENGAGING STRIPPER HANDLES PAST 100% WILL CAUSE PREMATURE SPRING BREAKAGE.**

## Separation System

If the rubber torsional bushings in the pan or stemmer hangers ever need replacing, be sure that the bushing is pressed in properly. **Do NOT use petroleum oil or grease to install bushing.** Instead use a vegetable oil to aid in installation. When reinstalling on combine place the eccentric in the middle of a stroke before tightening the bushing. **NEVER** lubricate these bushings.

\***Check** fan air-ducts daily to make certain that they are clear of obstructions.

\***Check** chaffer assembly daily to make sure it is secure and adjusted properly and clean of sticks and stems.

## Left Side Chain Drives

The drives for the combine should be inspected daily. The drives for all the cylinders and header are chain drives. These chains should be set where all the slack is taken out but not so that they are preloaded which can cause premature wear and failure. Usually 1" of movement in the tight side of the chain will be obtainable.

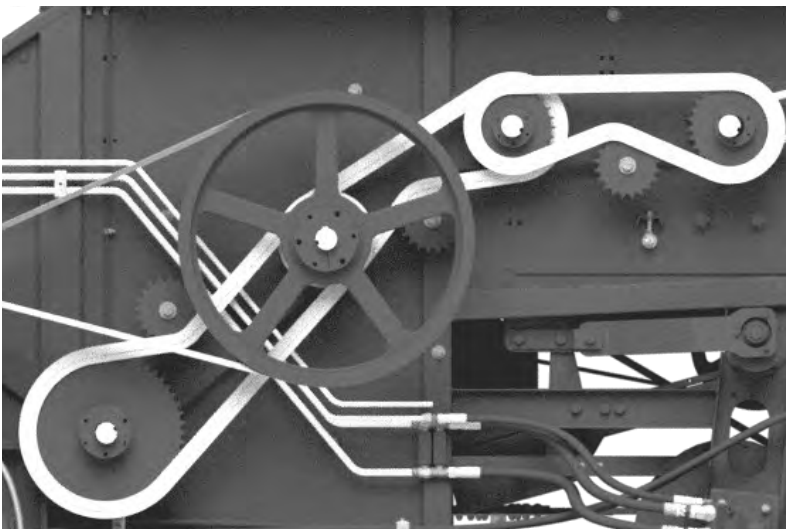


Figure 39  
CHAIN DRIVES CYLINDERS #1-4

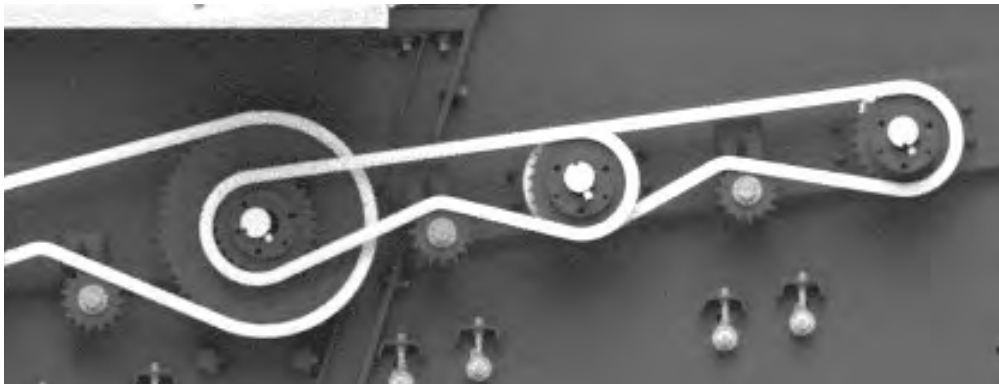


Figure 40 NO. 5, 6, & 7 CYLINDER DRIVE

## Main Drives on Lower Header

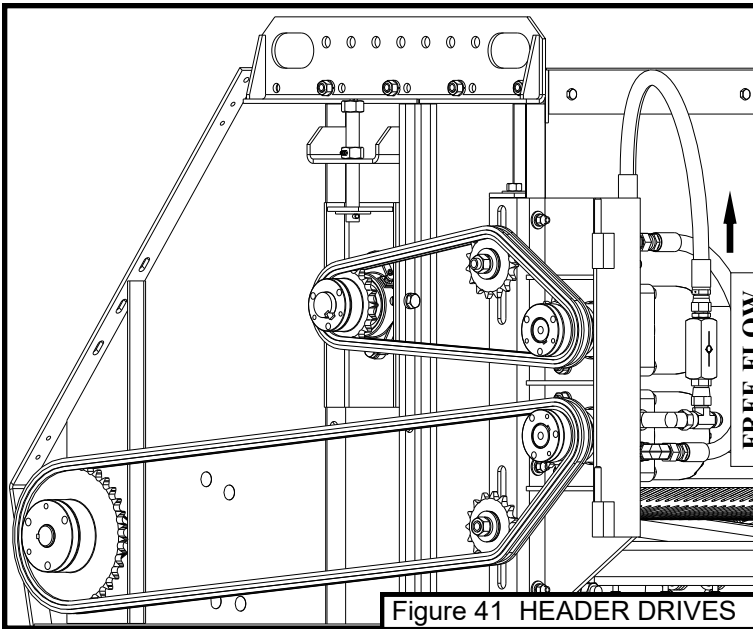


Figure 41 HEADER DRIVES

The main drive, airlift fan, cam shafts, and stemmer saws are all driven by V-belts. Proper installation and tension of the belts is necessary for optimum performance. There are no twisted belts on the combine, however, the cam shaft and stemmer saw have a back wrap belt arrangements to achieve proper rotation and contact area. **All belts should be adjusted after two hours of operation to take-up looseness caused by initial stretch of belt.** Check regularly and tighten as needed; loose belts contribute to poor performance of the combine. The following pictures and illustrations show proper installation of drive belts.

## Main Drive on Left Side

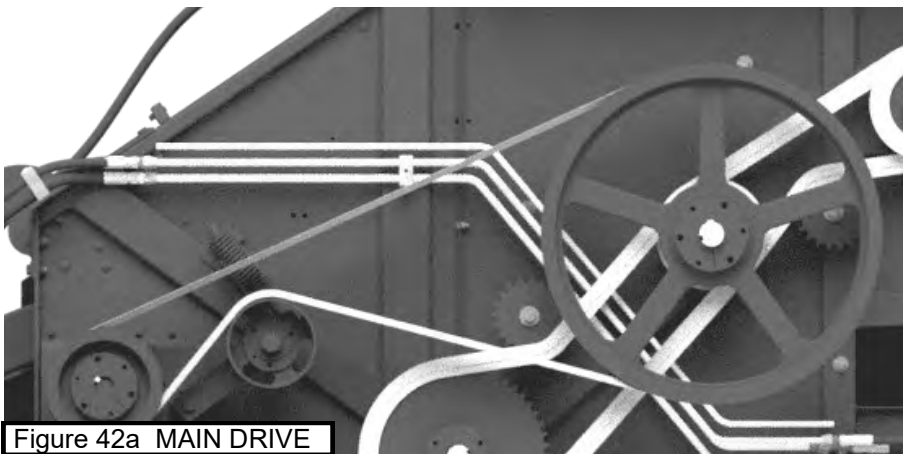


Figure 42a MAIN DRIVE

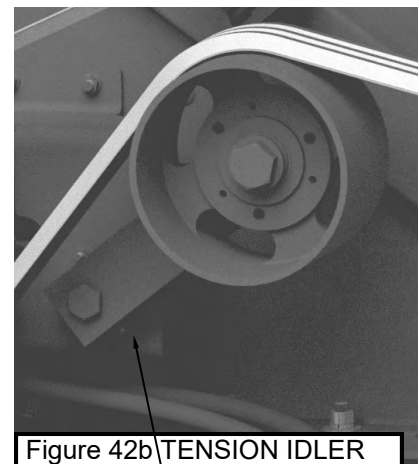


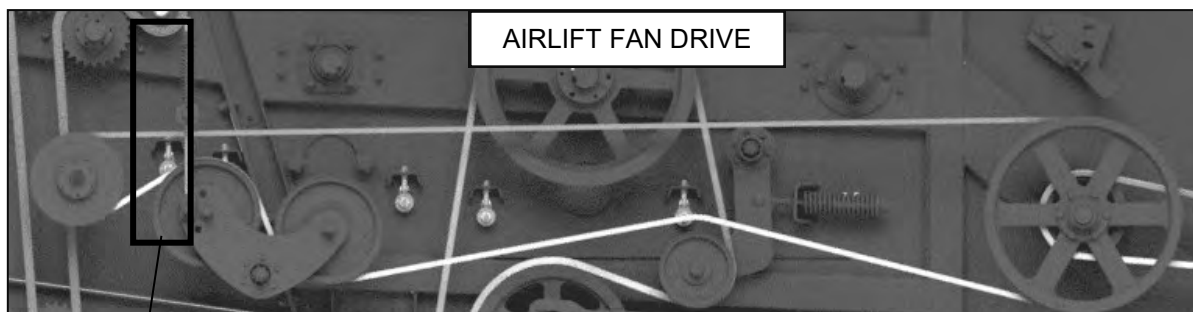
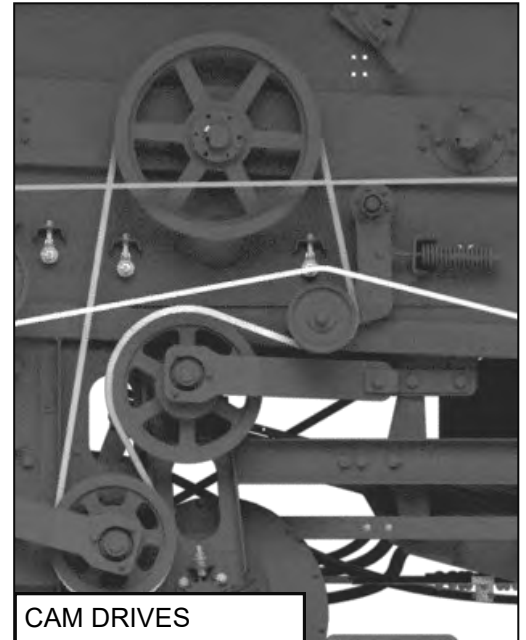
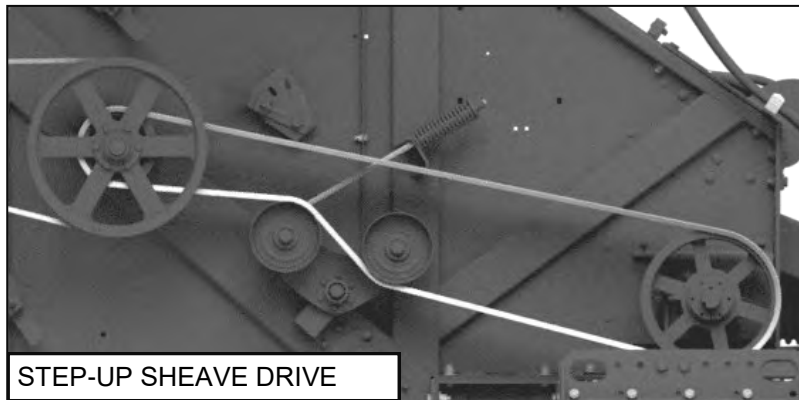
Figure 42b TENSION IDLER

Pivot Bearing

**NOTE:** Idler pivot bearings may need to be shimmed with flat washers if idler is not straight inline with the belt.

## Right Side Drives

**NOTE:** All compression springs on belt drives should be set to 4-1/4" (4" minimum), except airlift fan drive. Airlift fan drive spring should be set to 3-3/4".



Airlift fan drive spring set to 3 3/4" (This spring only)

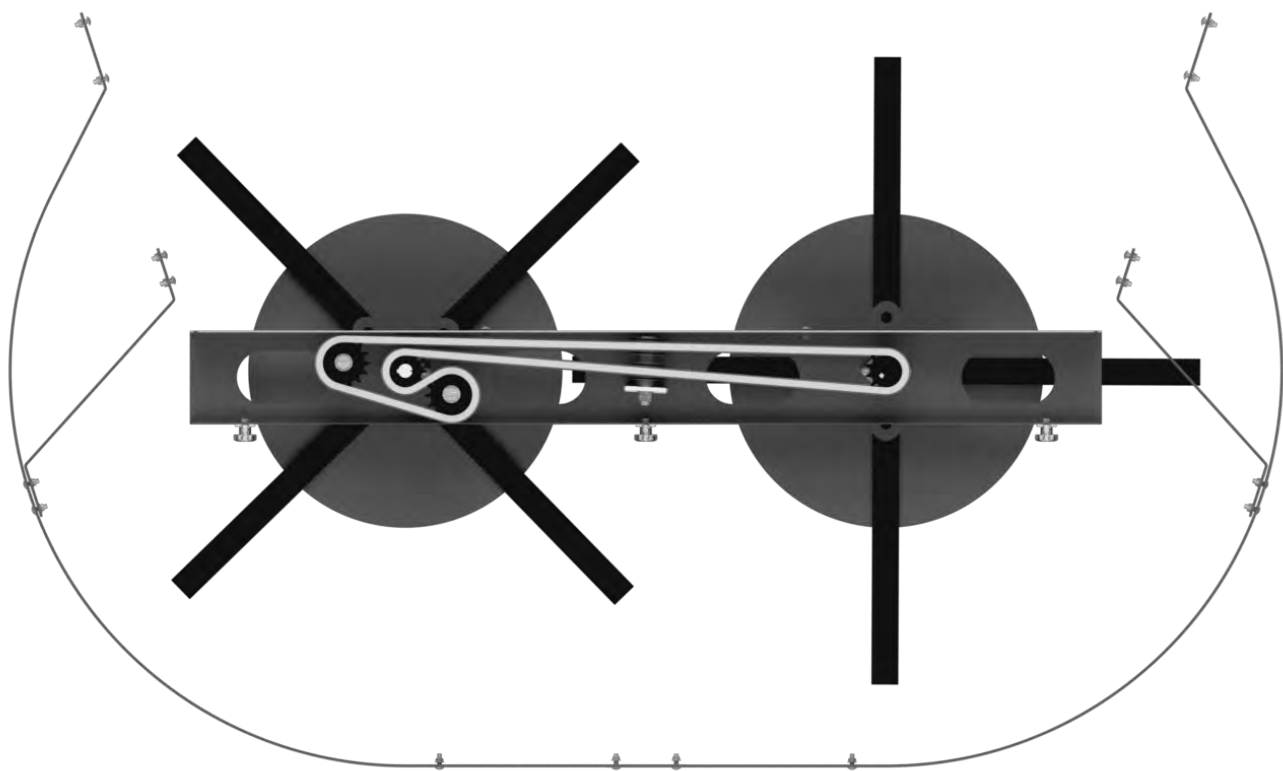


HEX ROLLER CHAIN DRIVE





**VINE SPREADER CHAIN DRIVE**



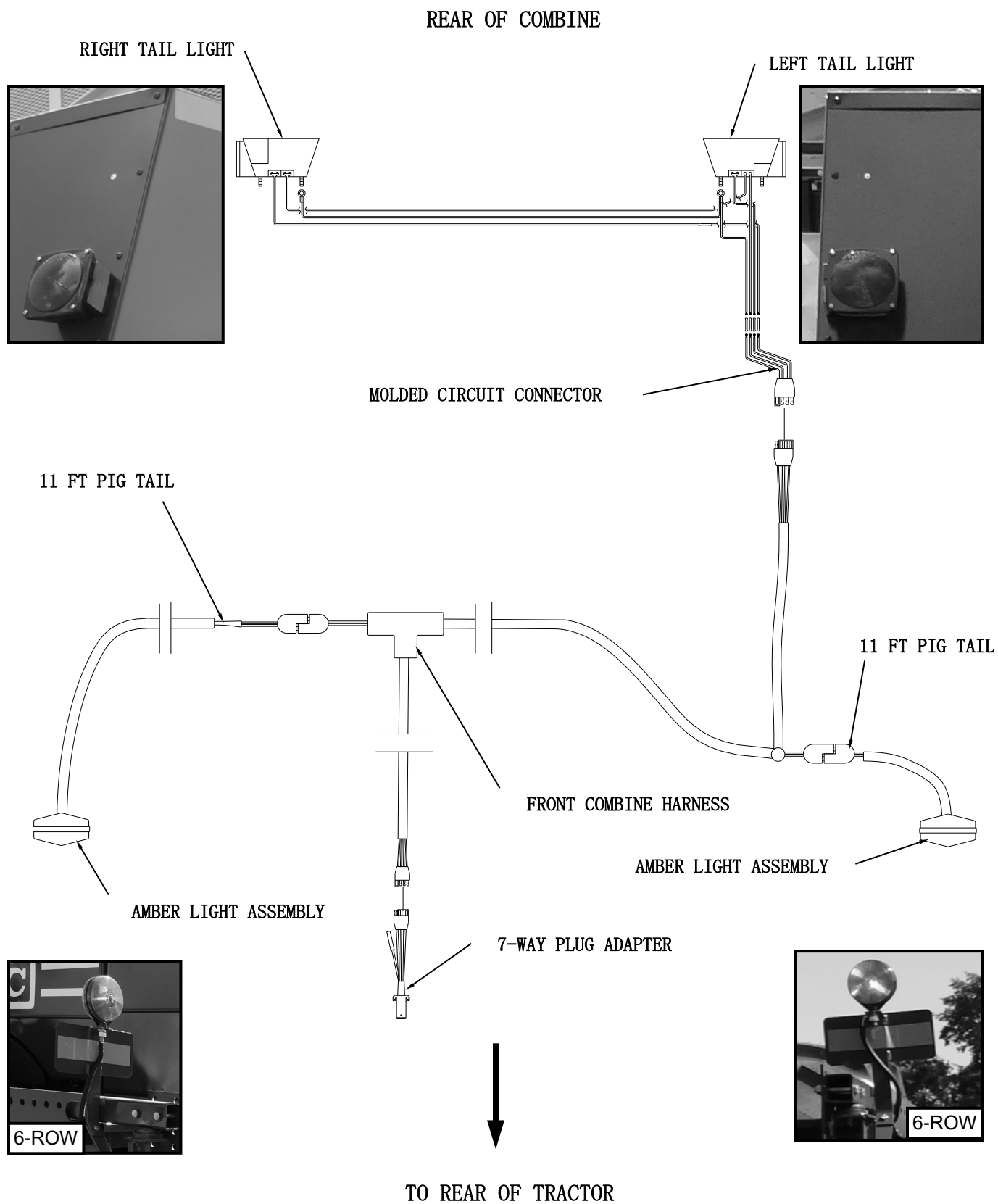
**TIRE INFLATION CHART**

It is important that the inflation of all tires be set properly for maximum safety and performance. Use the following guide to adjust the inflation pressure in the tires to match the application of the machine.

**COLD INFLATION PRESSURE VALUES IN PSI**

TIRE SIZE	COLD INFLATION PRESSURE
28L-26 X DW25A (12 PLY (6-Row Machines)	20 psi (Cold)

# WIRING HARNESS FOR LIGHTS



## REAR HOOD



The rear hood is equipped with hinges on the left side of the machine and a latch on the right side. The hood swings open to conveniently access the rear area of the machine for daily inspection.

**NOTE:** Machine should be on level ground before opening rear hood.

## STORAGE

1. Clean the combine thoroughly to remove all dirt and moisture holding materials.
2. Repaint worn and scratched parts if possible or coat machine with light oil or other rust inhibitor.
3. Loosen all belts to take tension off bearings and shafts.
4. Remove and clean all chains, store in oil if possible during off season. If not saturate and reinstall, leave loose.
5. Grease all fittings, driveline, bearings, bushings, and pivot joints. **NOTE: MAKE SURE ALL WATER IS PURGED FROM BEARINGS TO PREVENT RUSTING AND PITTING.**
6. Store under shelter if possible. Collapse all hydraulic cylinders to prevent rods from rusting and pitting.

## NOTES

[illegible]

The following is a list of serial numbers issued to our implements at the beginning of each year. To determine when a unit was made, find the range in which the particular serial number falls. The implement would have been produced between January 1<sup>st</sup> to December 31<sup>st</sup> of that year.

<b>YEAR</b>	<b>SERIAL NUMBERS</b>
2010	80945-81775
2011	81776-83453
2012	83454-85092
2013	85093-86418
2014	86419-87790
2015	87791-89096
2016	89097-89924
2017	89925-91270
2018	91271-92260
2019	92261-



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