03-SERIES

2, 4, 6, & 8-ROW PEANUT DIGGER-SHAKER-INVERTER

FOR CHAIN & BELT CONVEYOR MACHINES

(USED ON MACHINES FROM 2015 TO PRESENT)

OPERATOR'S MANUAL

THIS MANUAL TO ACCOMPANY MACHINE

PART NO. 03-OM-04
PRINTING DATE: MAY 2015

WARRANTY POLICY

KELLEY MANUFACTURING COMPANY (KMC) warrants that all goods sold to the original purchaser of any KMC product 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 twelve (12) 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.

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, etc. Items such as tires, tubes, and gearboxes 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 said items. 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 or 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 JUDGEMENT, 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

03 SERIES BELT & CHAIN INVERTER OWNERS MANUAL

Table of Contents:

FORWARD

INTRODUCTION:

The 03 Series Rigid Digger Shaker Inverter (DSI) is a tool used to dig, shake and invert peanuts to prepare them for harvest. This implement uses shanks with blades to dig the peanuts, then a conveyor to shake the dirt from roots and vines and finally drums and rods in the rear to invert the vines so they can dry out to aid in the combining of the peanuts. Shanks available are rigid shanks which are used in ground with no obstructions below the surface and trip shanks that have a shear bolt to trip when an obstruction is hit. The conveyor is available in a belt and rod or chain and rattler bar configuration depending on customer preference and dirt conditions.

TO THE PURCHASER

This **KMC 03 Series Rigid DSI** has been carefully designed and manufactured to give years of dependable service. In order to operate it efficiently and maintain 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.

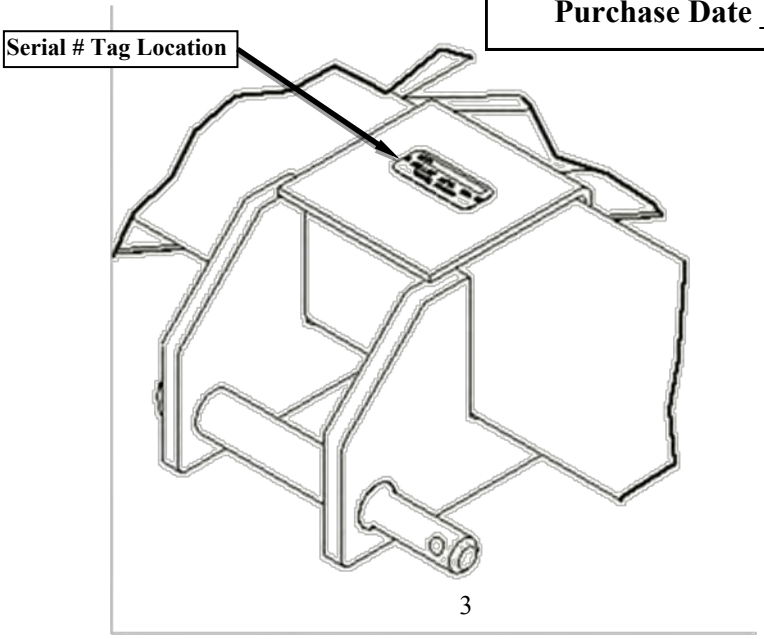
After reading this Operator's Manual, please keep it for reference each season. The Operator's Manual is to remain with the machine in the manual canister attached to the front of the machine near front hitch or on one of the support tubes that connects the front hitch to rear frame components.

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._____

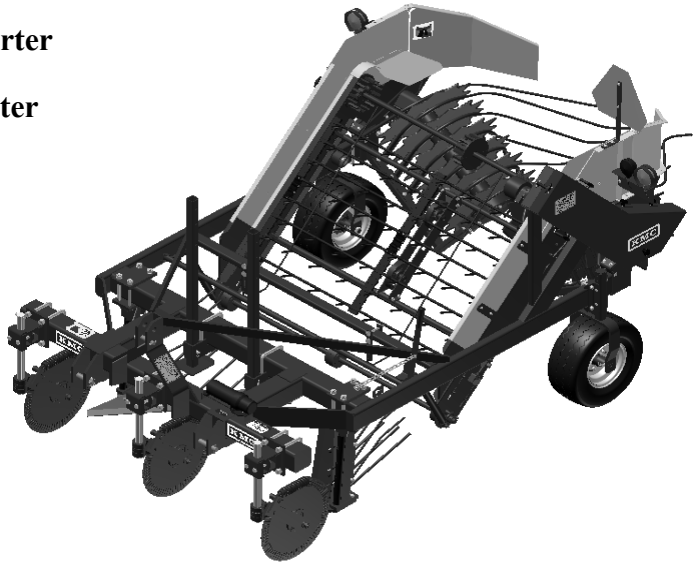
Serial No._____

Purchase Date _____

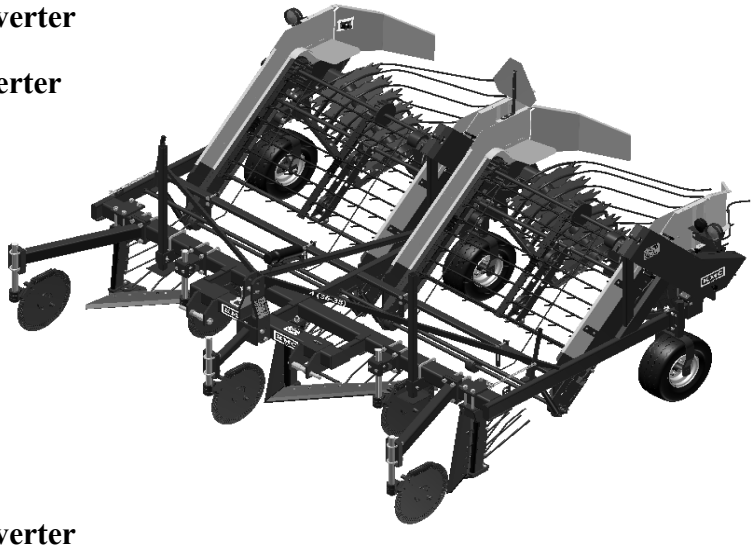


MODELS COVERED IN THIS OWNER'S MANUAL:

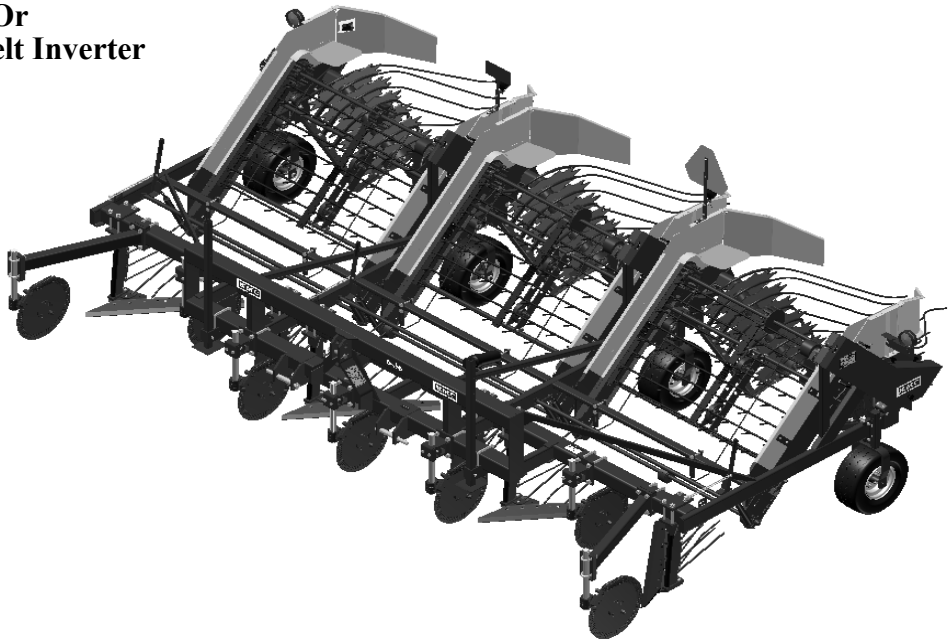
2-Row Chain Inverter
Or
2-Row Belt Inverter



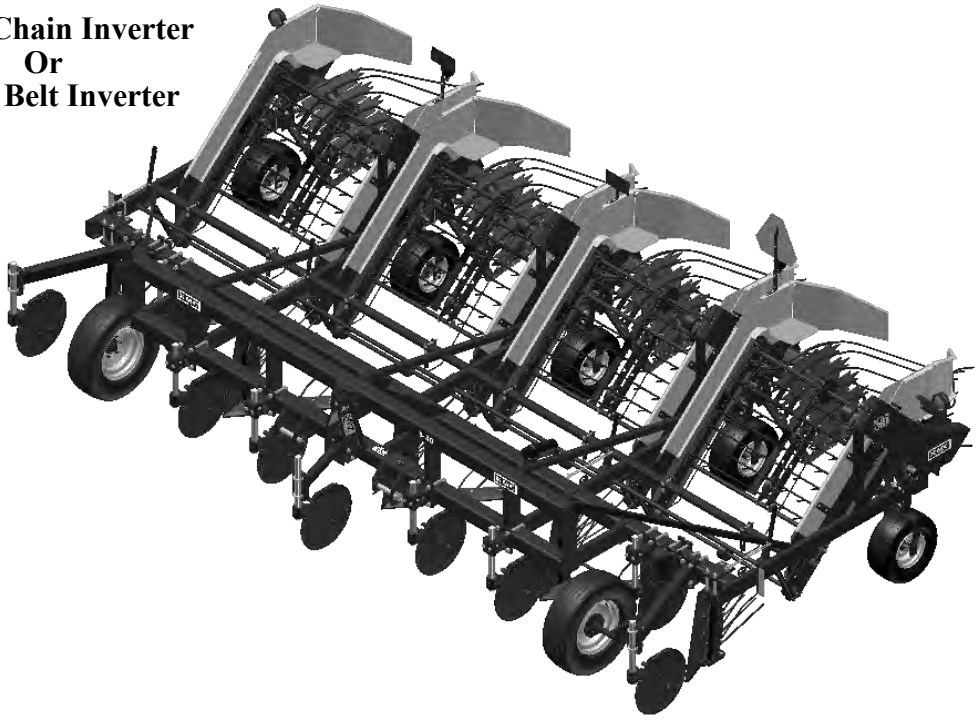
4-Row Chain Inverter
Or
4-Row Belt Inverter



6-Row Chain Inverter
Or
6-Row Belt Inverter



8-Row Chain Inverter
Or
8-Row Belt Inverter



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

Final Assembly Adjustments and Pre-Delivery Check-list

1. Check to make sure each shank is located on desired row spacing and that all mounting bolts are torqued properly, location of shanks shown on pages 14-23.
2. Check to make sure each cutting coulter and bracket is mounted in the desired location for the row spacing and that all mounting bolts are torqued properly, refer to pages 14-23 for cutting coulter location
3. Make certain inverter rods and rear hinge fender are set as shown on page 24.
4. Make sure the safety reflectors are mounted correctly and located as near the sides of the main frame of the machine in the front and rear
5. Check rear gauge wheel for proper inflation and grease all grease fittings
6. Double check all nuts and bolts for proper torque
7. Store your Operator's Manual in the manual canister attached to the machine at the front located near the hitch or main frame tubes

FEATURES, REQUIREMENTS & MACHINE DIMENSIONS

Standard Features

Hydraulic motor drive via chains from motor to shafts

Swivel style heavy duty cutting coulters

Digital conveyor to ground speed readout

Removable rattler section to replace bearings, shafts and other wear components

Light kit and reflectors for safe operation during transport on highways.

Optional Features

Available with either a belt and rod conveyor or chain and rattler bar conveyor

Additional cutting coulters for 6-36, 6-38, 6-40, 8-36, 8-38 & 8-40 machines where shanks behind rear tractor tires are located

Cut frogs & rods (28" & 30")

Firmer Roller

Requirements

2 Row: Cat II hitch/quick hitch or Cat IIIN quick hitch
4 Row: Cat II, IIIN or III hitch/quick hitch
6 Row: Cat IIIN or III hitch/quick hitch
8 Row: Cat IIIN or III hitch/quick hitch

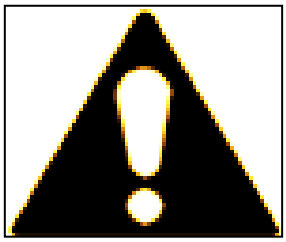
All models: 18 gallons per minute hydraulic capacity minimum, tractor must have a hydraulic connection that returns hydraulic fluid directly back to the tank

Machine Dimensions

Model	# of rows	Row Spacing	Weight (lbs.)	HP required	Conveyor Width	Overall Width	Overall Height	Overall Length
2R	2	30"-40"	2,300	80-90	63"	86 1/2"	86"	153 3/4"
4-30	4	30"-31"	4,480	130-140	52 ½"	138 3/4"	86"	160"
4R(36-38)	4	36"-38"	4,530	130-140	63"	159 3/4"	86"	160"
4-40	4	40"	4,600	130-140	63"	166 1/2"	86"	160"
6-30	6	30"-31"	6,520	165 up	52 ½"	200 3/4"	91"	160"
6-36	6	36"	6,560	165 up	63"	230 3/4"	91"	160"
6-38	6	38"	6,600	165 up	63"	238 3/4"	91"	160"
6-40	6	40"	6,650	165 up	63"	246 1/2"	91"	160"
8-30	8	30"-31"	8,200	180 up	52 ½"	262 3/4"	91"	170"
8-36	8	36"	8,380	180 up	63"	303 3/4"	91"	160"
8-38	8	38"	8,400	180 up	63"	314 1/2"	91"	160"
8-40	8	40"	8,450	180 up	63"	326 1/2"	91"	160"

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)

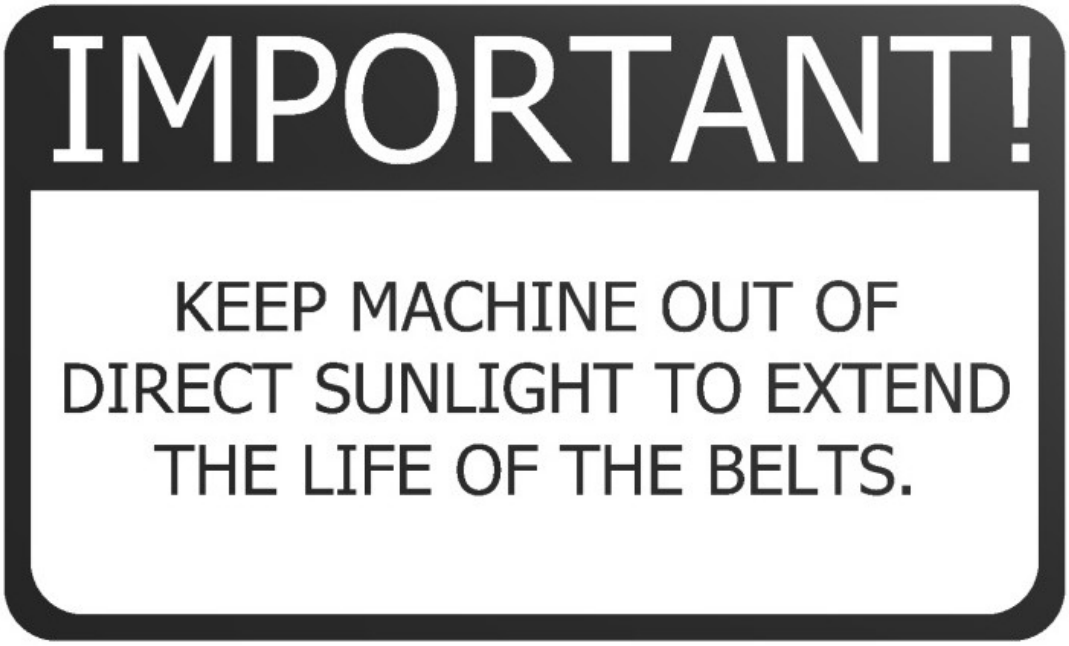
This symbol indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

(GREEN OR BLACK)

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

SAFETY DECALS

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



RETAIL CUSTOMERS RESPONSIBILITY UNDER THE KMC WARRANTY:

The retail customer's responsibilities are:

1. To read the Operator's Manual and operate the **KMC Rigid DSI** in accordance with the instructions given in this manual.
2. To inspect the **KMC Rigid DSI** 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 and keep in place 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 retail customer. Any arrangement whereby the dealer agrees to absorb all or 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 Operator'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 Rigid DSI. Only experienced tractor operators should operate the tractor when the Rigid DSI 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 Rigid DSI and/or cause the tractor to tip over. **(Maximum speed of 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 warning lights when on highways, except where prohibited by law.

10. Apply parking brake, and stop all hydraulic flow to implement 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**

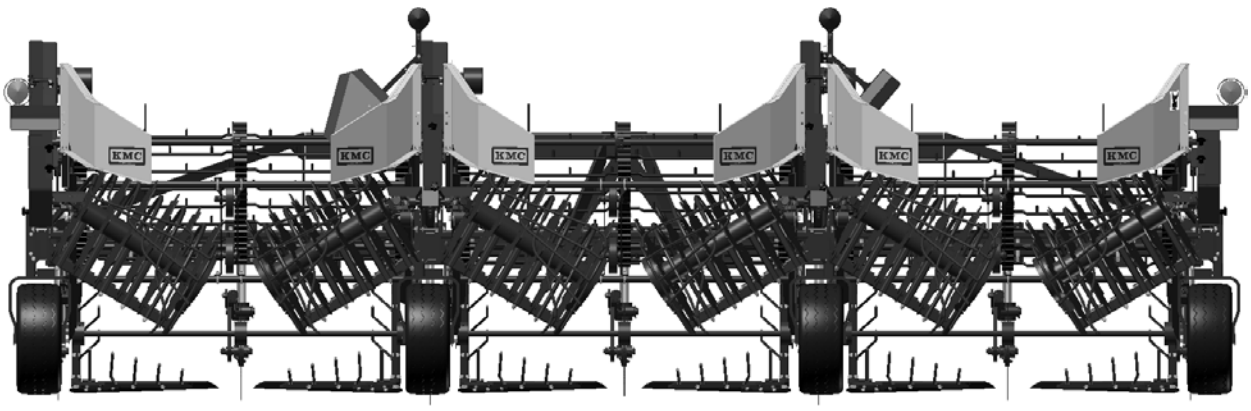
11. Keep hands, feet and clothing away from moving parts.
12. Make sure everyone is clear of machine before starting tractor or operating machine.
13. Observe all safety decals located on machine. Replace them if they become damaged.

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), toll free (1-800-282-7411) or visit on the web "www.gaupc.com. **Please** contact your local power company about laws before operating near high voltage lines.

TRANSPORT PROCEDURES

When transporting with an implement hauler or flatbed trailer, light kit components other than outside light brackets need to be removed or moved to shield from the wind. If the components are not removed or repositioned the high wind speed will break the mounting brackets or pull the SMV from the bracket during transport. Failure to do as instructed will cause damage to brackets or rear fender mounting locations. Shown below is what to do with each bracket to move it into a position to shield them from the high winds during highway transport without a tractor.



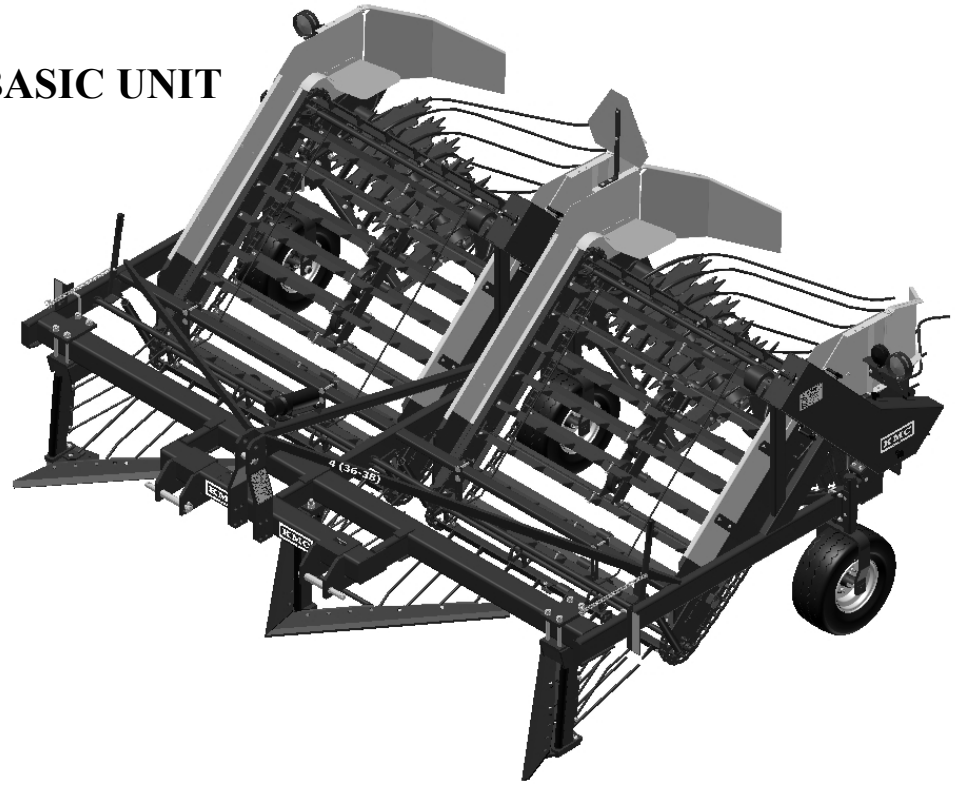
Position of SMV and reflector plate for transport on trailer or implement hauler

ASSEMBLY SET-UP

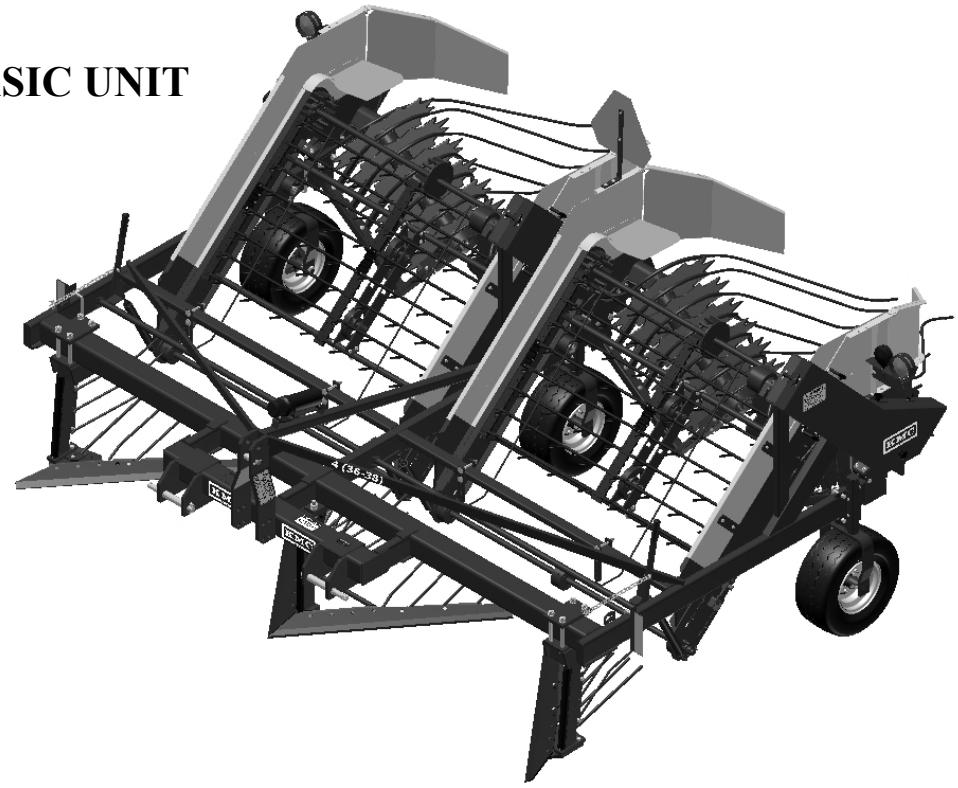
GENERAL:

Most of the general setup and assembly for your **KMC Rigid DSI** has been performed at the factory. Those items not installed at **KMC** will be reviewed later in this section on pages 26-27. For your convenience, please see the "Overhead Layouts" portion in this section on pages 14-23, to ensure proper positioning for the size and configuration of your **KMC Rigid DSI**.

4R(36-38) CHAIN BASIC UNIT

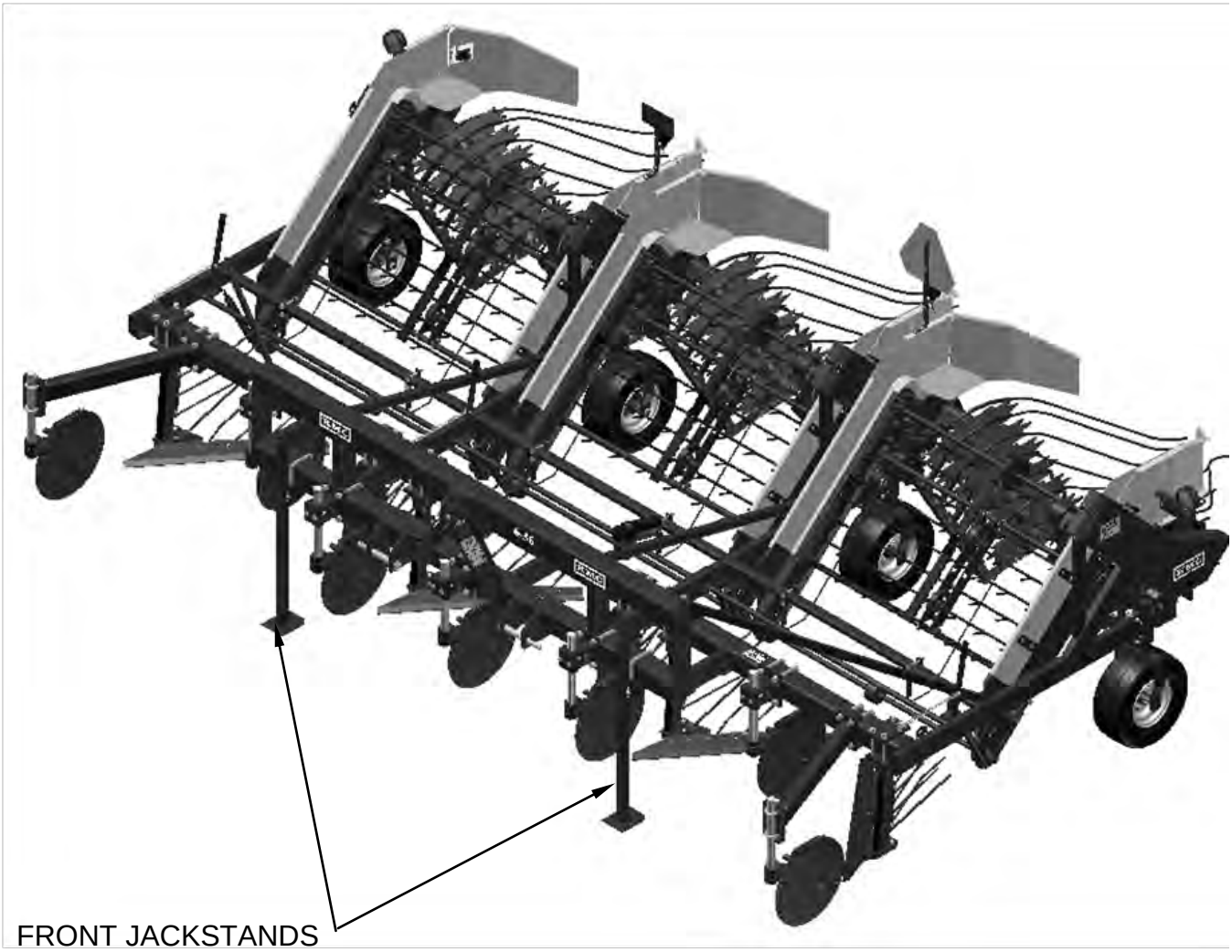


4R(36-38) BELT BASIC UNIT



WARNING

CARE SHOULD BE TAKEN DURING SET-UP AND ASSEMBLY OF THIS PRODUCT. <u>DEATH OR SERIOUS INJURY</u> 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

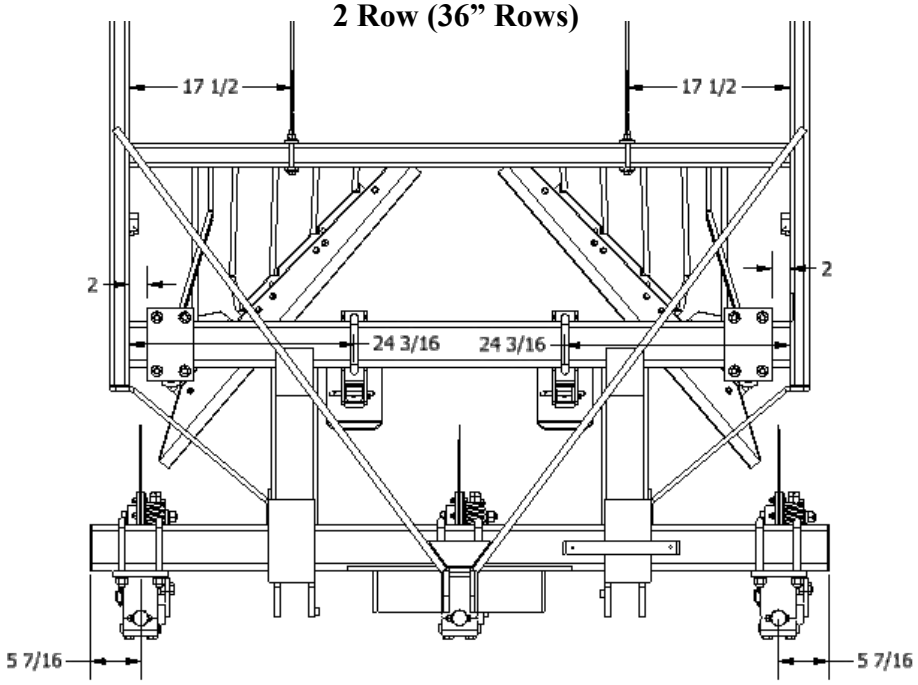
SAE GRADE 8

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

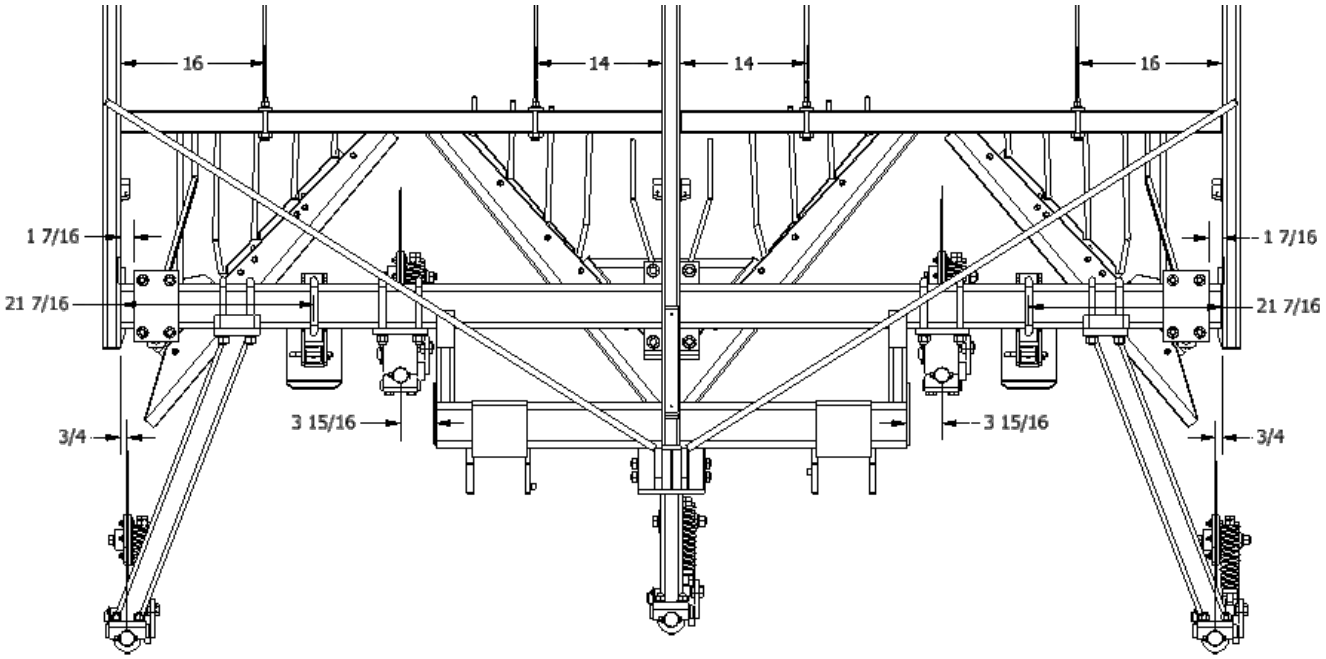
OVERHEAD LAYOUTS:

This section has diagrams showing the spacing for shanks, cutting coulters, vine hold down rods and safety jack stands for each row pattern and models made. Diagrams shown are to be used to initially setup your machine for the row pattern which the peanuts were planted. Adjustments to measurements may need to be made depending on the row pattern used to plant the peanuts.

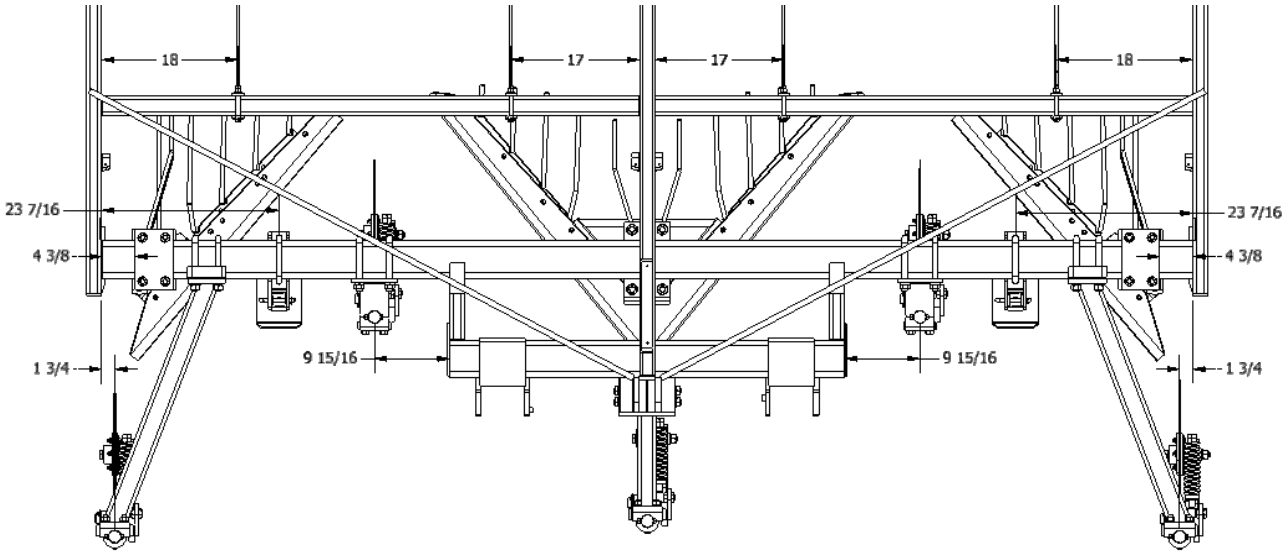
2 Row (36" Rows)



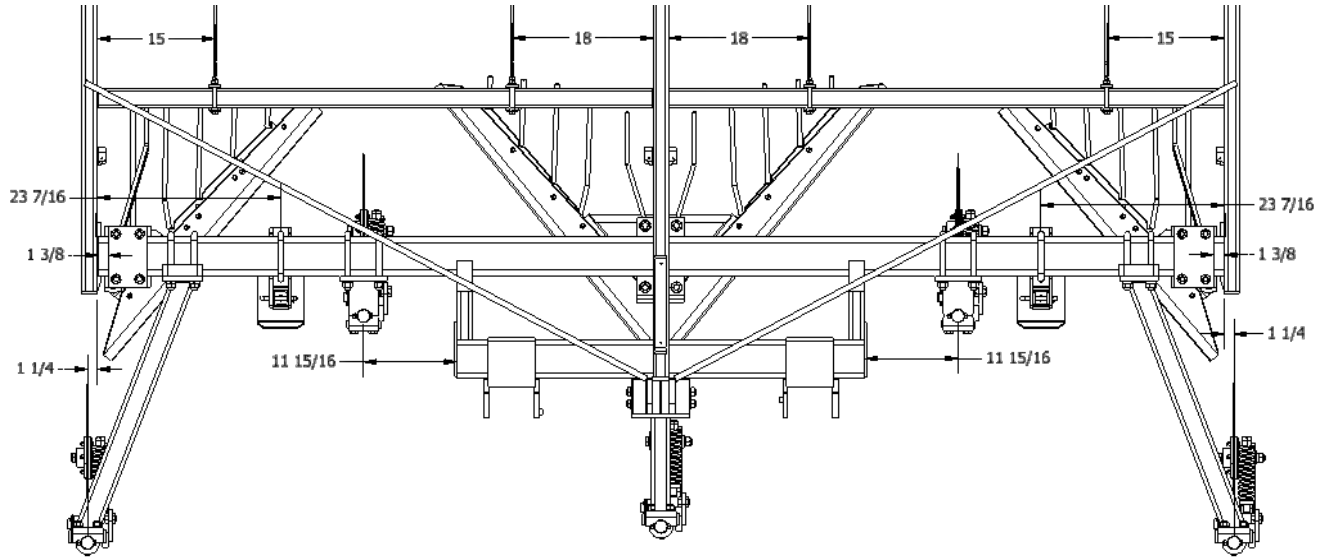
4R30



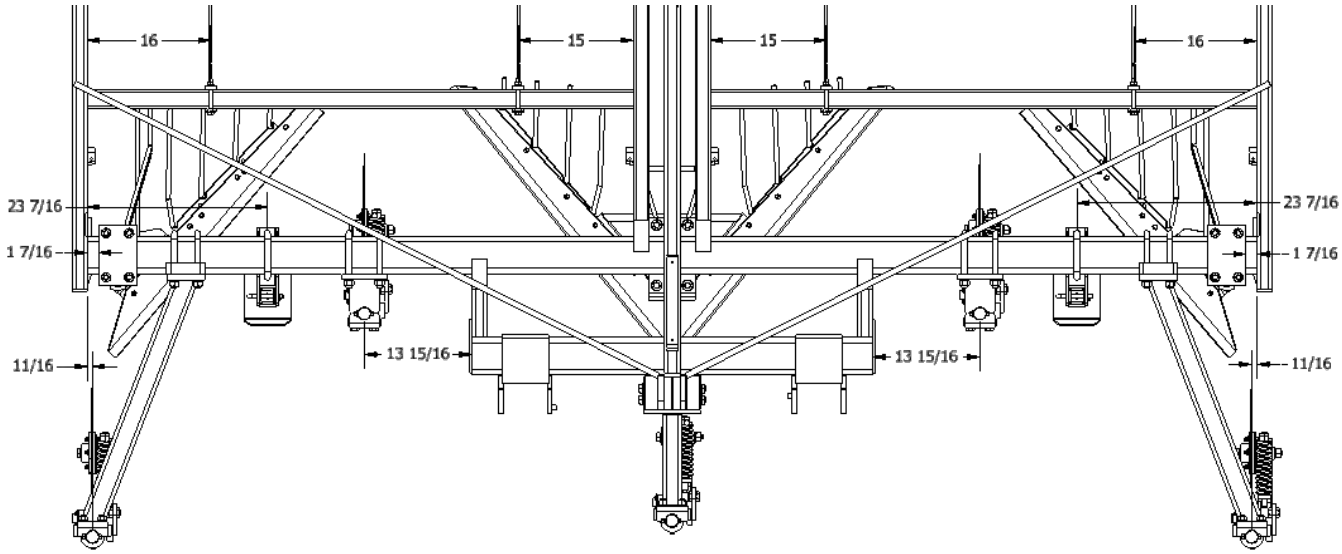
4R(36-38) [36” Rows]



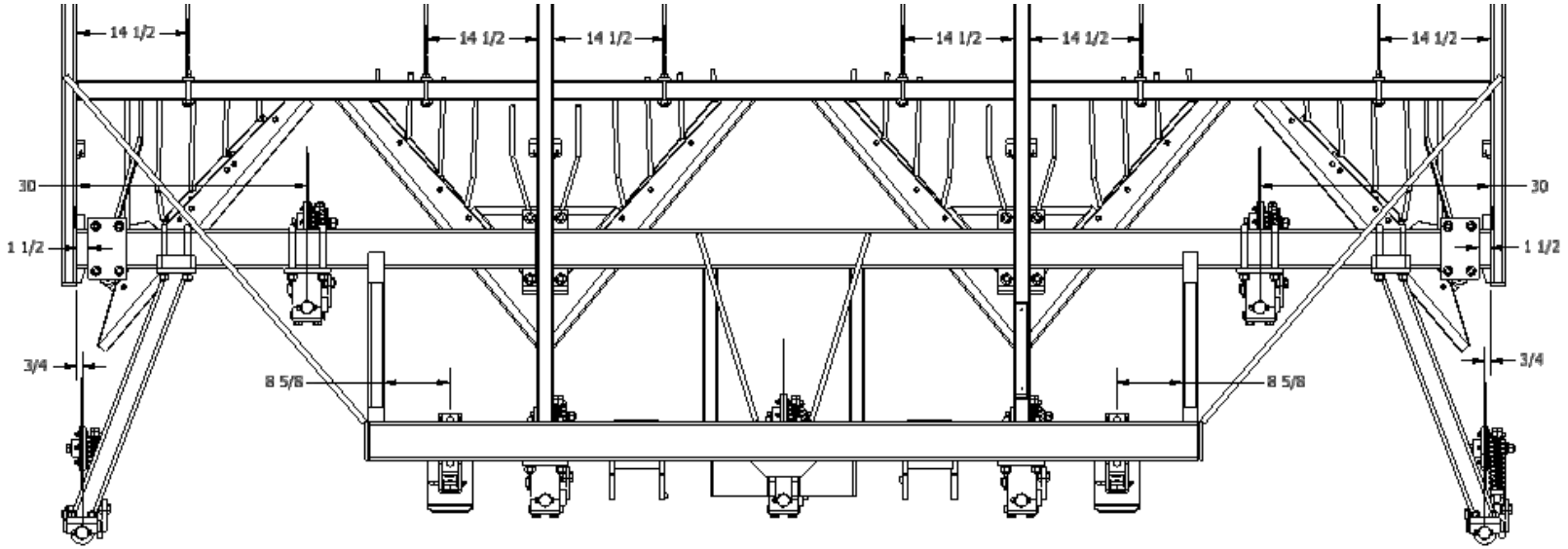
4R(36-38) [38” Rows]



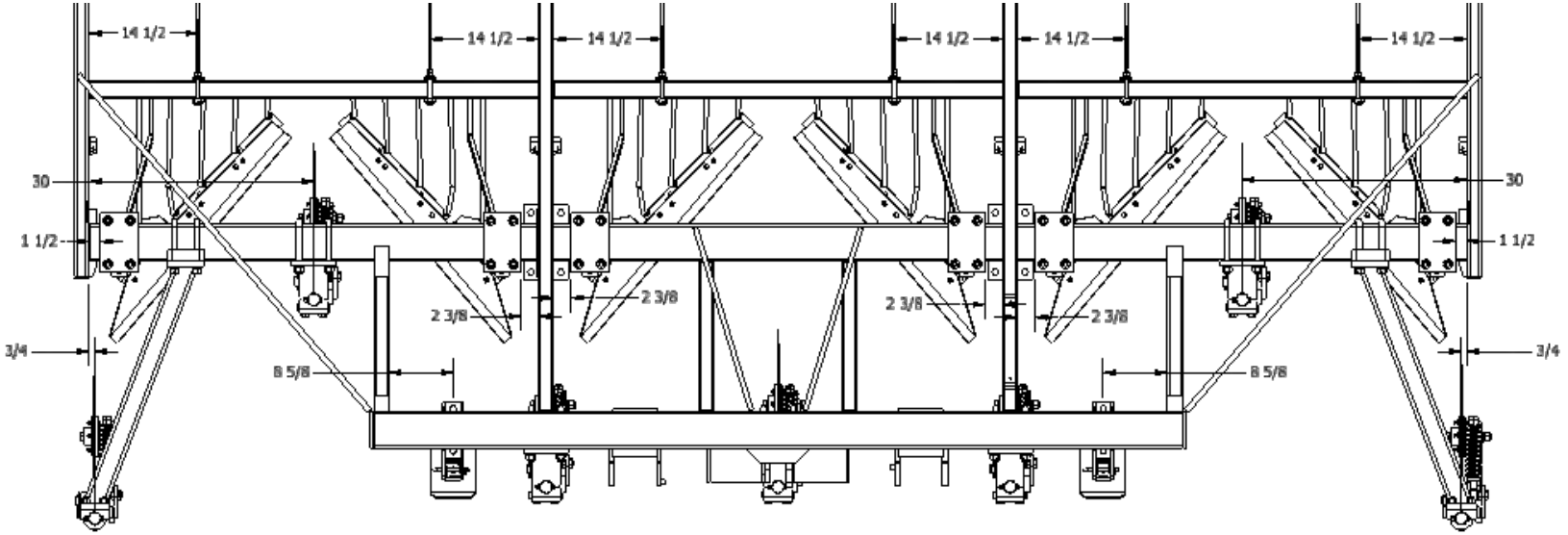
4R40



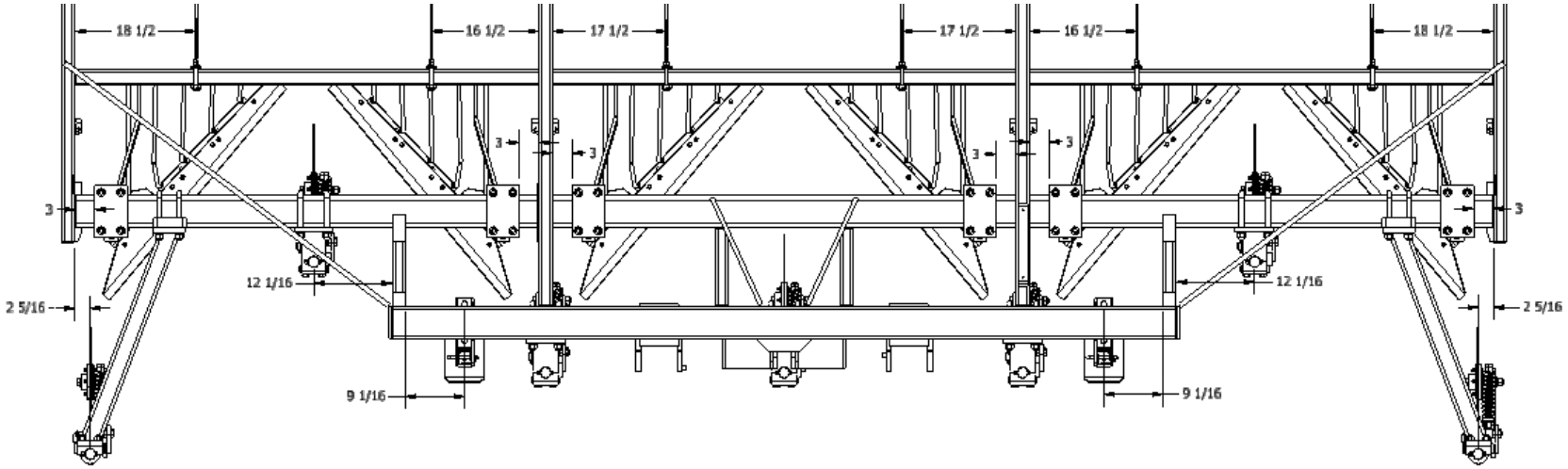
6R30 (Standard Shanks for Outside Rows, V-Plow Shank for Middle Rows)



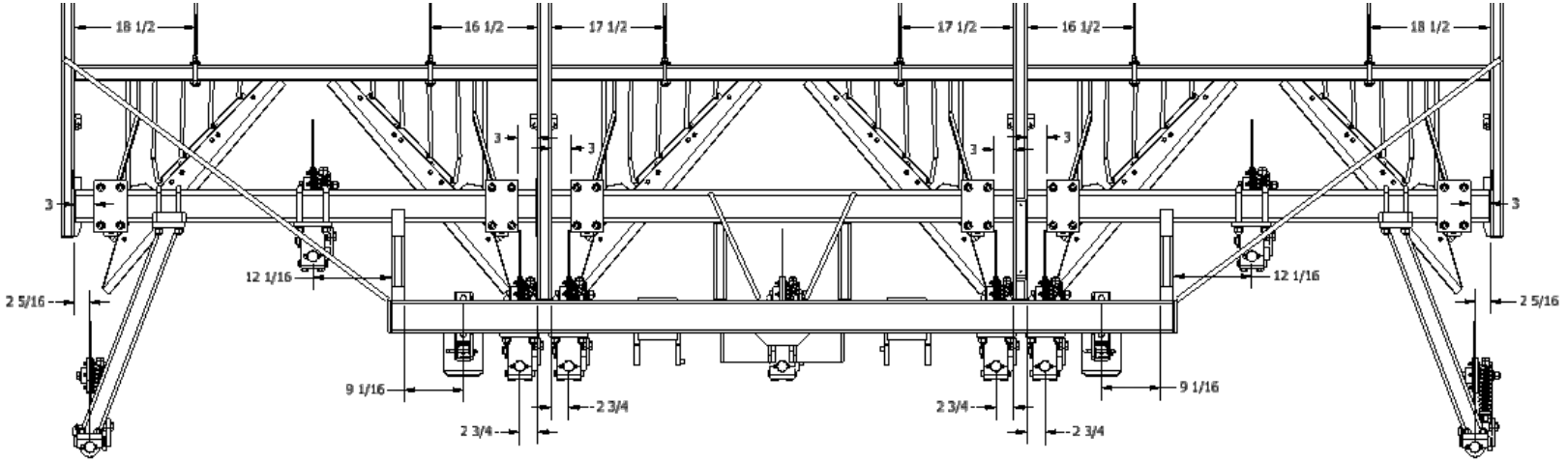
6R30 (Standard Shanks for all Rows)



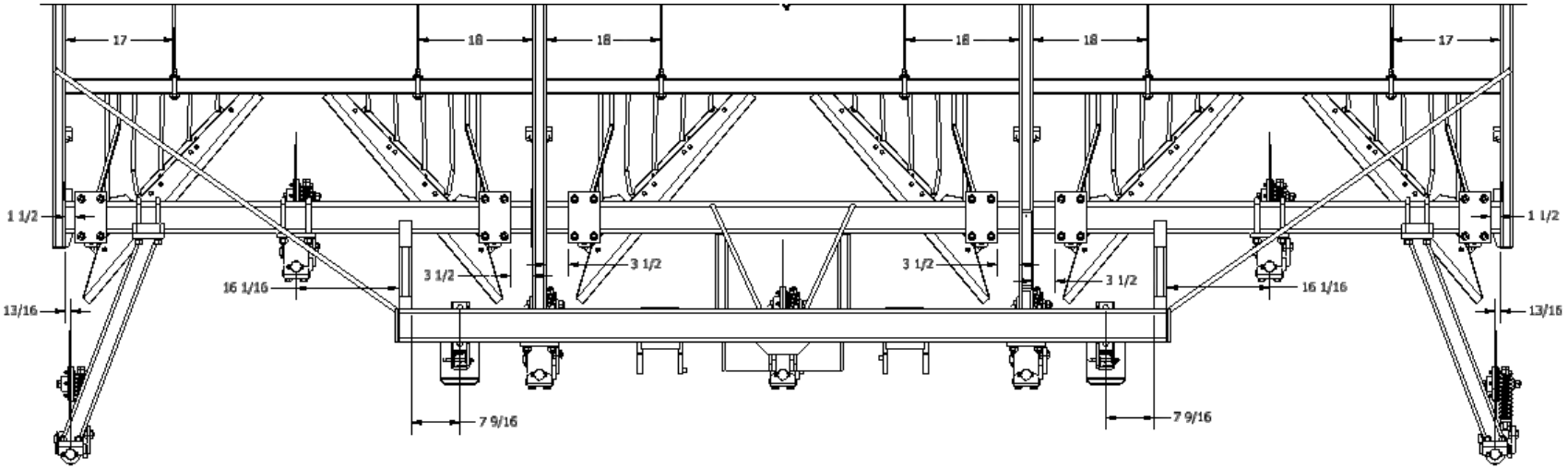
6R36 (Single Cutting Coulter behind Tractor Tires)



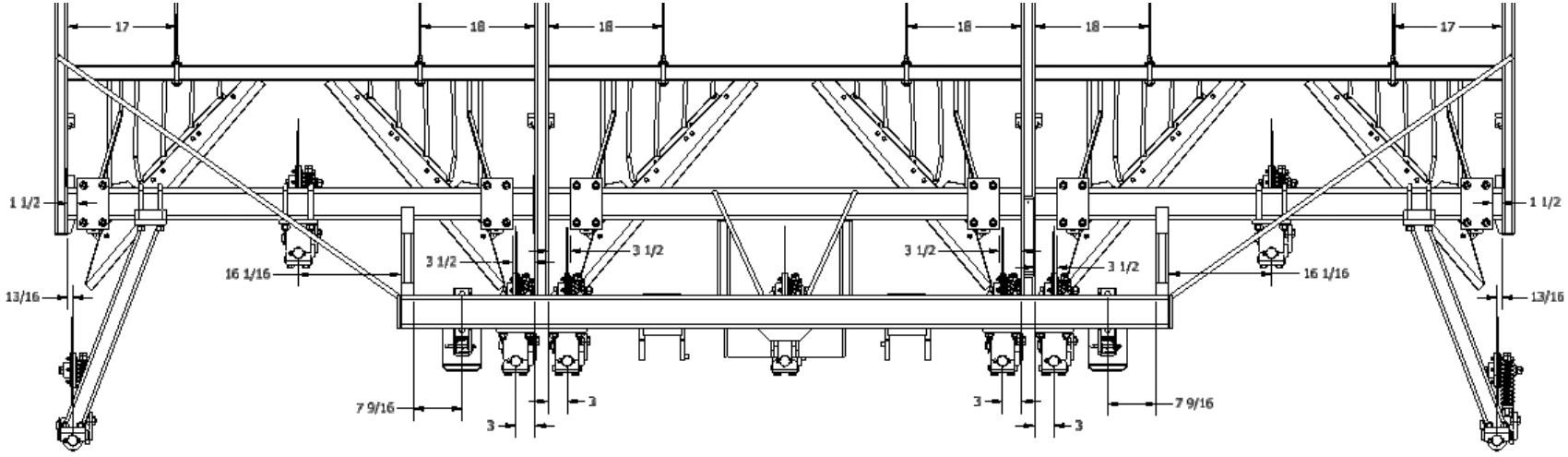
6R36 (Double Cutting Coulter behind Tractor Tires)



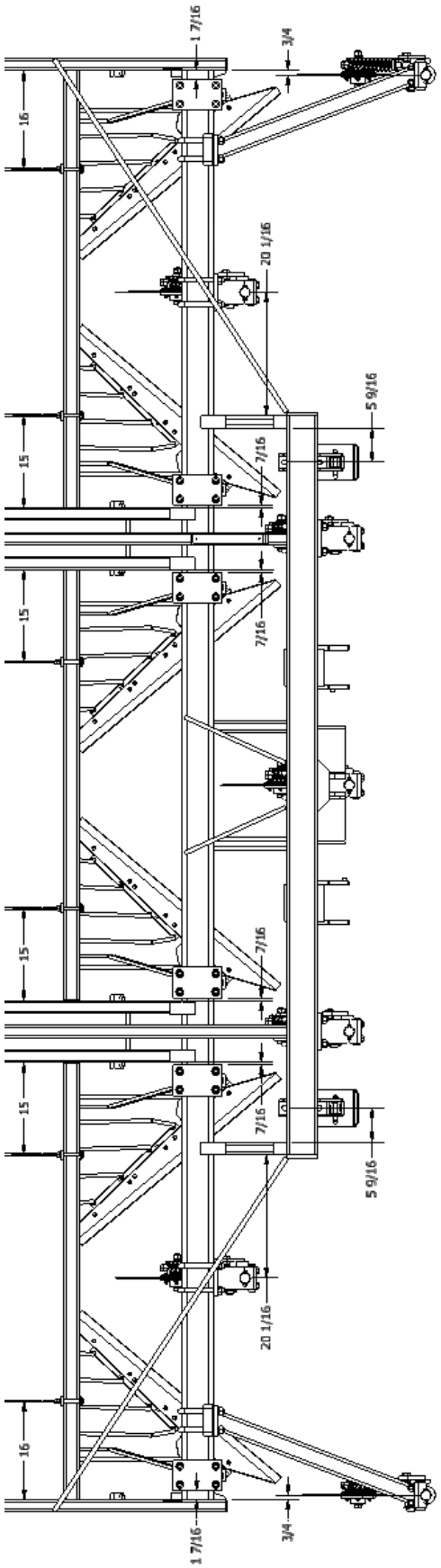
6R38 (Single Cutting Coulter behind Tractor Tires)



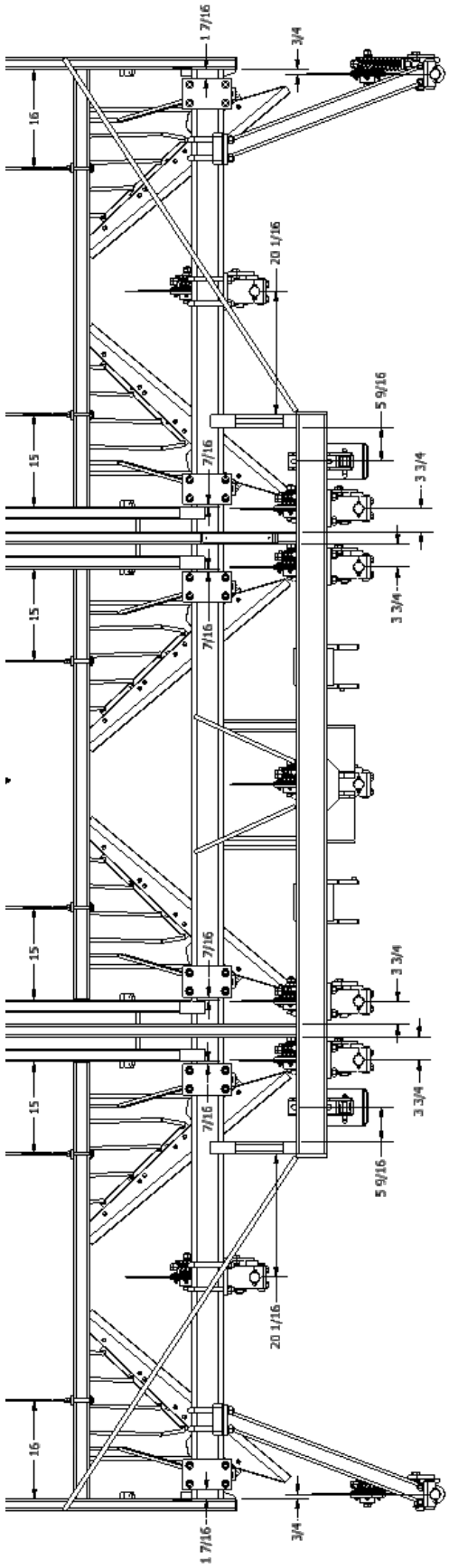
6R38 (Double Cutting Coulter behind Tractor Tires)



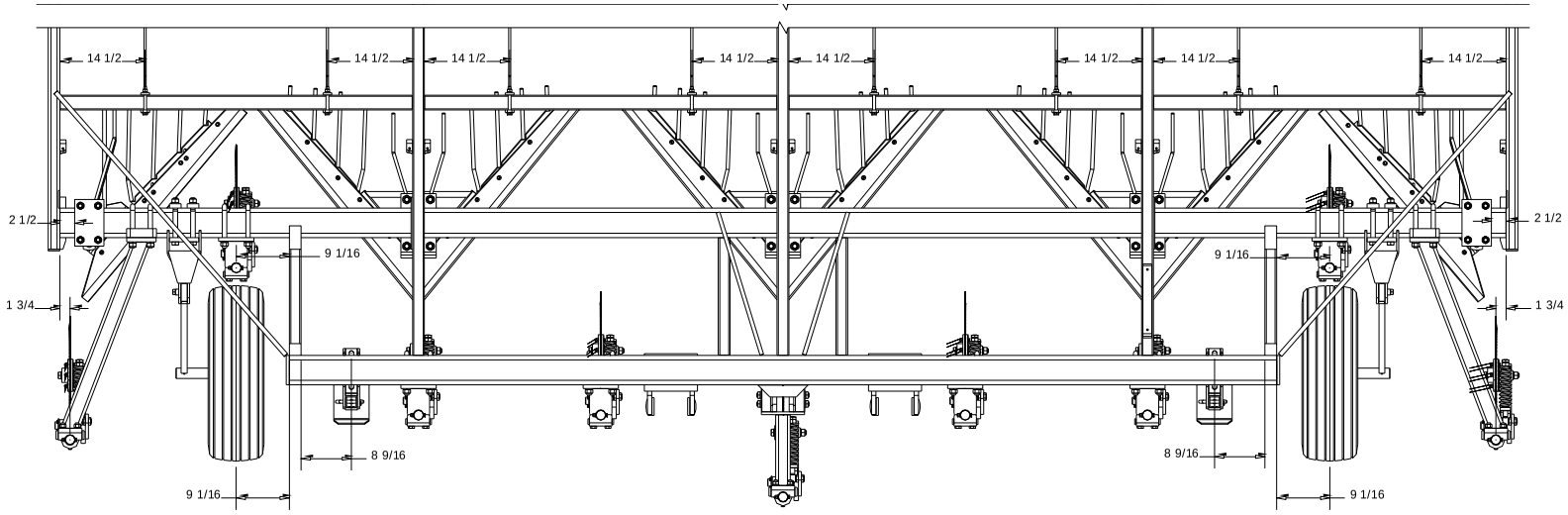
6R40 (Single Cutting Coulter behind Tractor Tires)



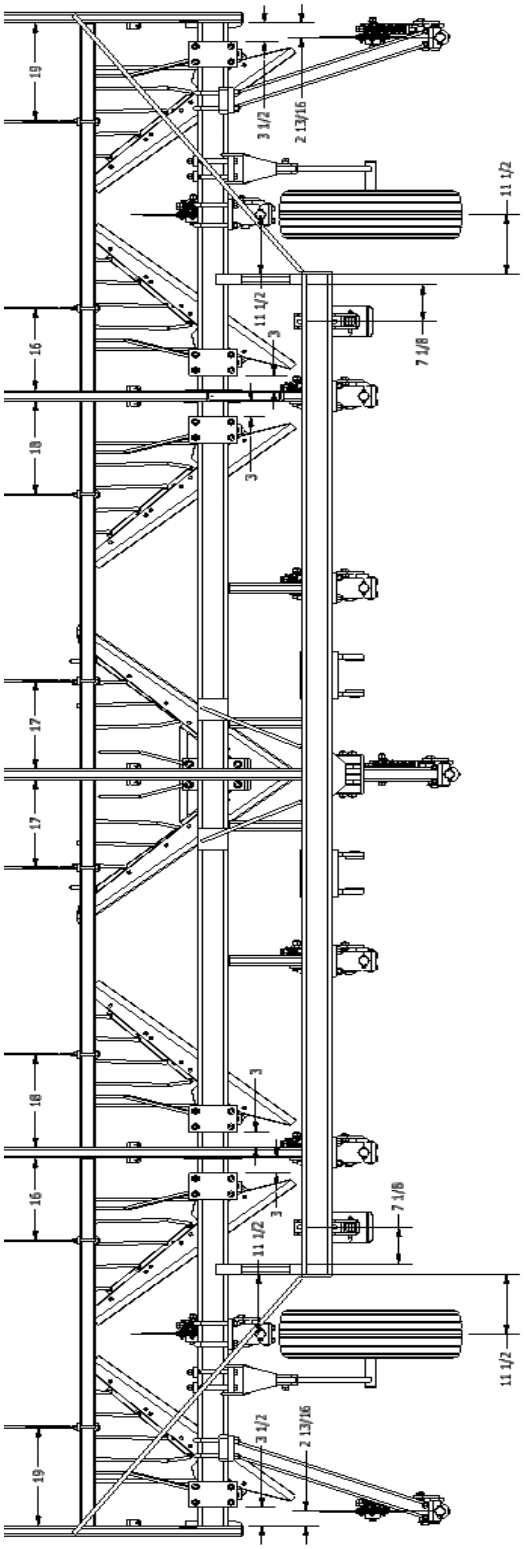
6R40 (Double Cutting Coulter behind Tractor Tires)



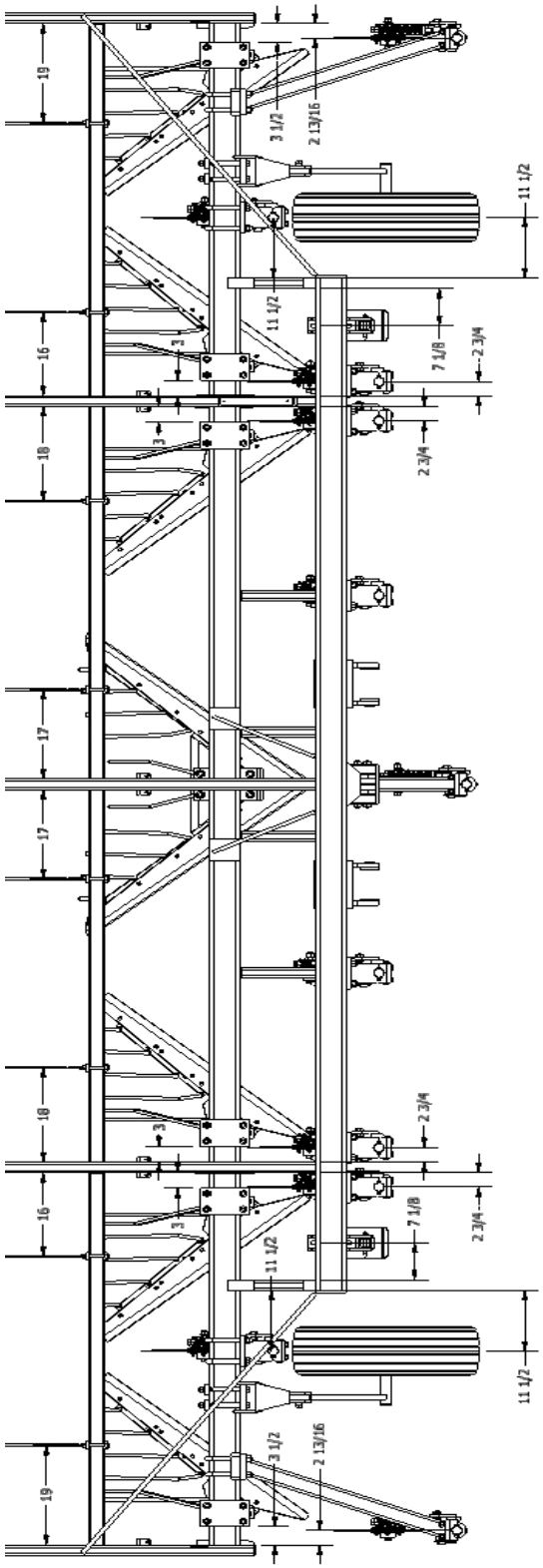
8R30 (Standard Shanks for Outside Rows, V-Plow Shank for Middle Rows)



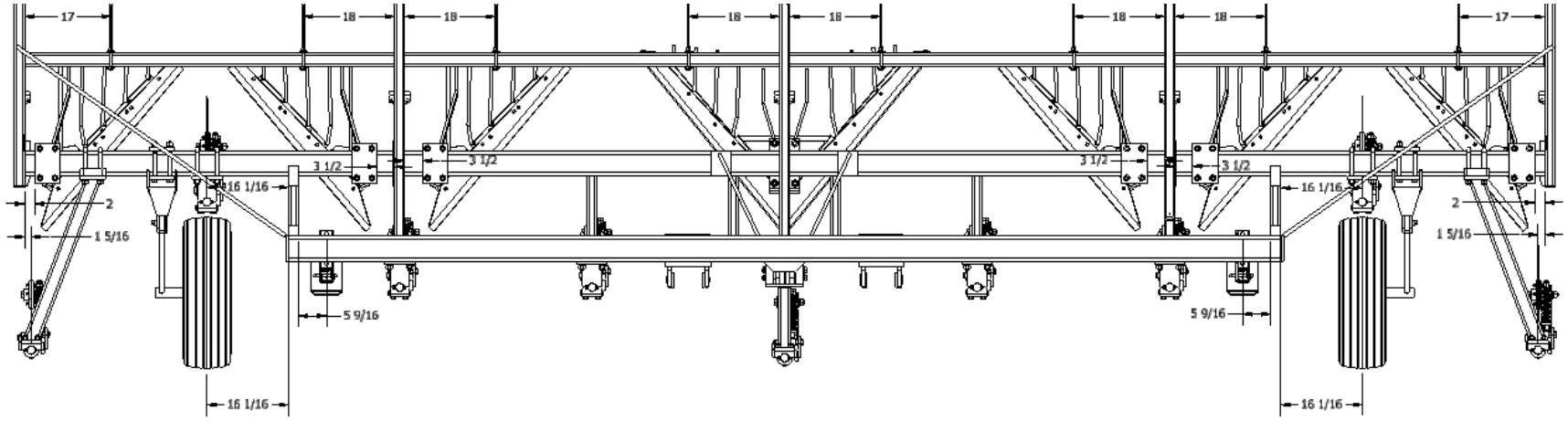
8R36 (Single Cutting Coulter behind Tractor Tires)



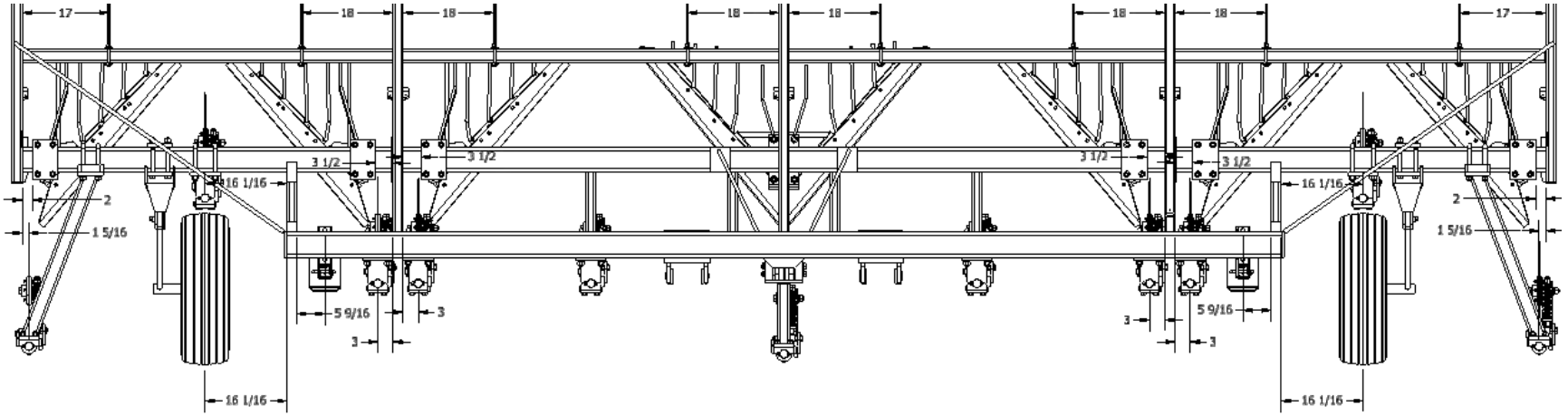
8R36 (Double Cutting Coulter behind Tractor Tires)



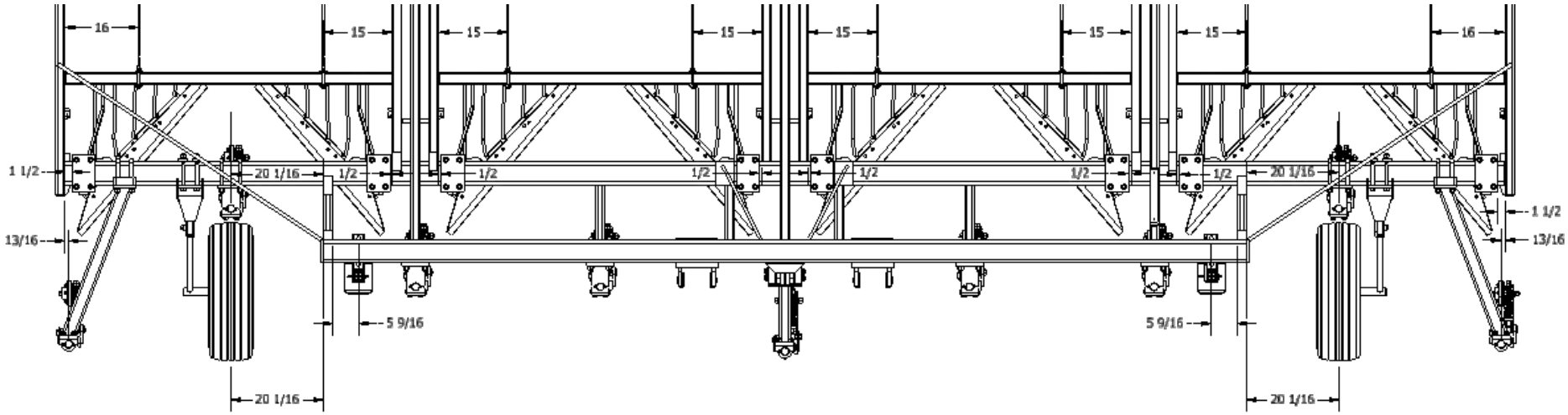
8R38 (Single Cutting Coulter behind Tractor Tires)



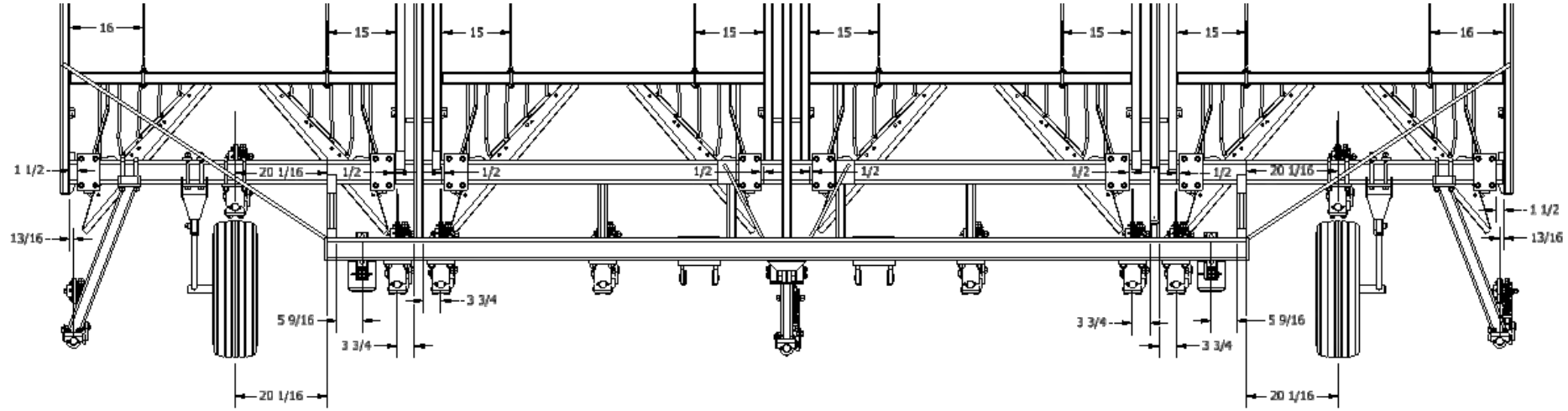
8R38 (Double Cutting Coulter behind Tractor Tires)



8R40 (Single Cutting Coulter behind Tractor Tires)

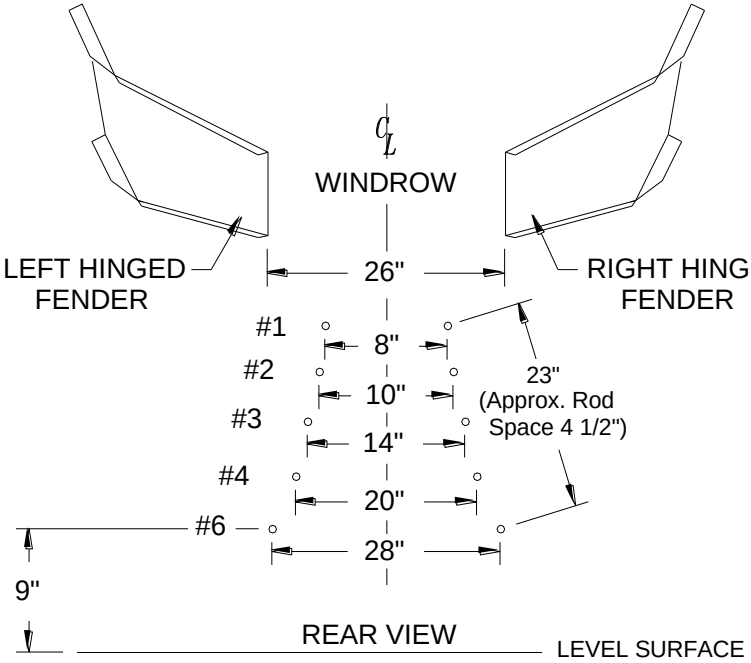


8R40 (Double Cutting Coulter behind Tractor Tires)

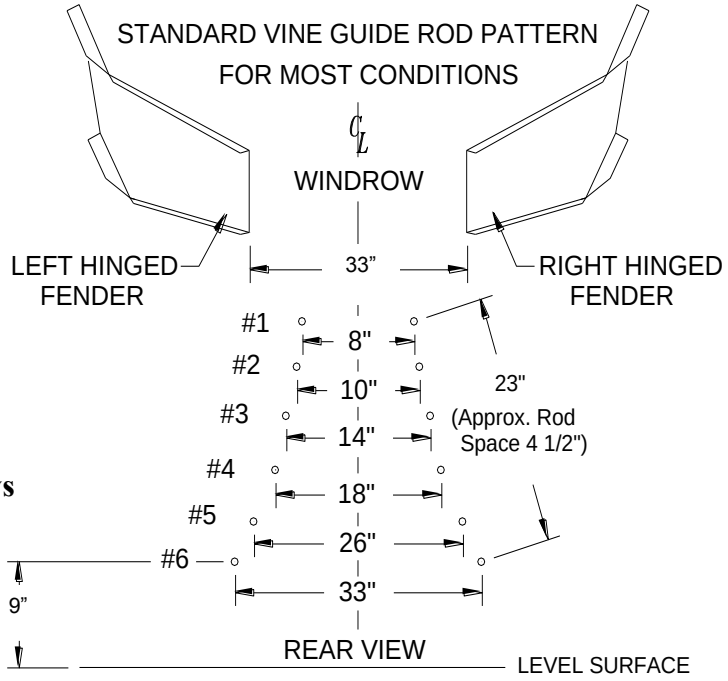


INVERTER HINGED FENDER & VINE GUIDE ROD PATTERN

While mounting the cylinder inverter to the main frame, vine guide rods can get bent out of shape. Reshape the rods to conform to the recommended vine guide rod pattern as shown. Ensure that the hinged fender is also located with the measurement shown below.



Rear hinged fender and inverter rod pattern for 30” Rows only



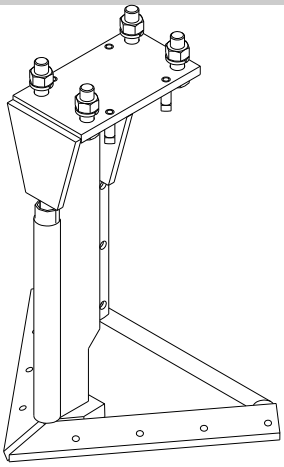
Rear hinged fender and inverter rod pattern for 36”, 38” & 40” Rows

Measurements shown above are for most conditions and are to be used to initially set the machine, adjustments need to be made depending of the conditions operating in. We have noticed that for twin row peanuts the #5 and #6 rods may need to be pulled out more and the #1 and #2 rods pulled in to create a uniform windrow. In conditions which the vines are very thick the rods will need to be moved to create a wider pattern, likewise for thin vines, the rods will need to be moved to create a narrow pattern. These adjustments are made to produce a uniform windrow with which the tap roots are standing straight up and not leaning to one side or the other.

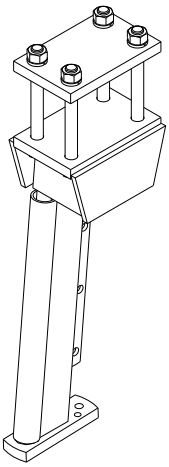
SHANK OPTION

Rigid Shanks

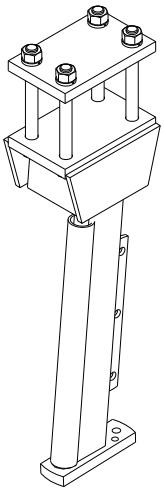
RIGID DSI WHERE SHANKS ARE USED
4R30, 4R40, 6-ROW & 8-ROW: (03-080-605)
4R(36-38): (03-080-664 & 03-080-665)
4-ROW, 6R30, 8R30, 8R36 & 8R38: (03-080-832)



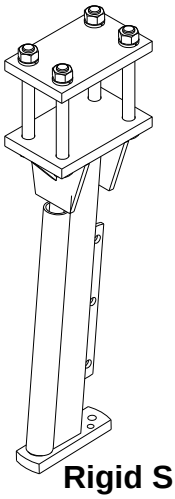
26" Rigid Shanks
(03-080-832)



5x5 Rt Rigid Shanks
(03-080-665)



5x5 Lt Rigid Shanks
(03-080-664)

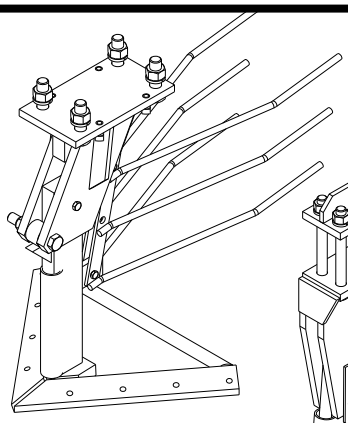


Rigid Shanks
(03-080-605)

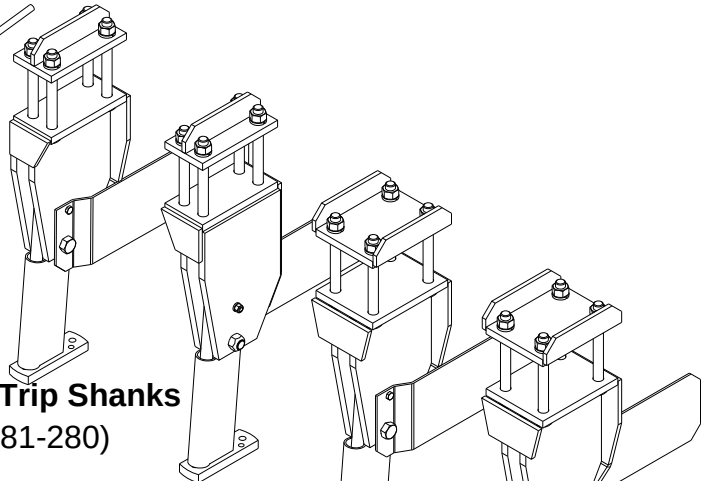
Rigid shanks are designed for conditions were the ground has very few obstructions below the surface that could cause damage to the shank or mounting hardware.

Trip Shanks

RIGID DSI WHERE SHANKS ARE USED
4R30, 4R40, 6-ROW & 8-ROW: (03-081-223 & 03-081-224)
4R(36-38): (03-081-279 & 03-081-280)
4-ROW, 6R30, 8R30, 8R36 & 8R38: (03-081-162)



26" Trip V-Shanks
(03-081-162)



Rt Offset Trip Shanks
(03-081-280)

Lt Offset Trip Shanks
(03-081-279)

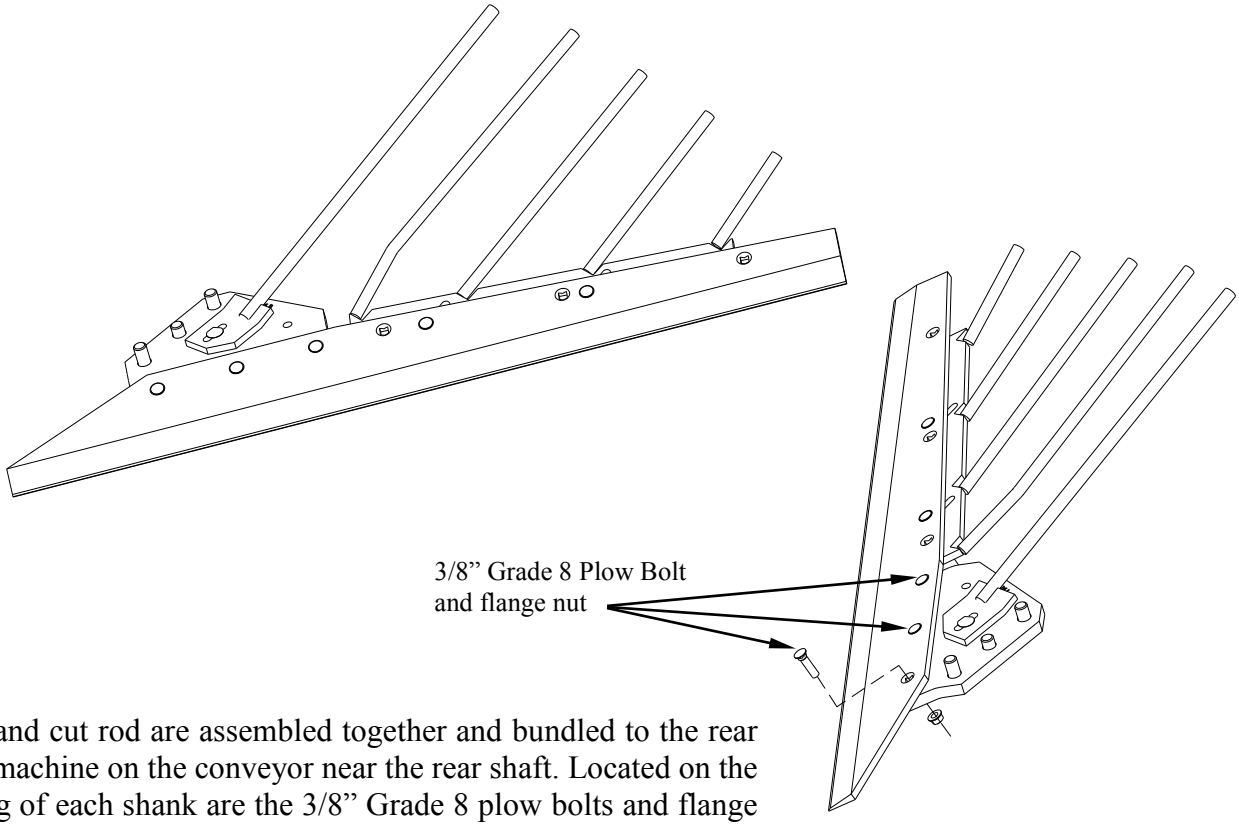
Rt Trip Shanks
(03-081-224)

Lt Trip Shanks
(03-081-223)

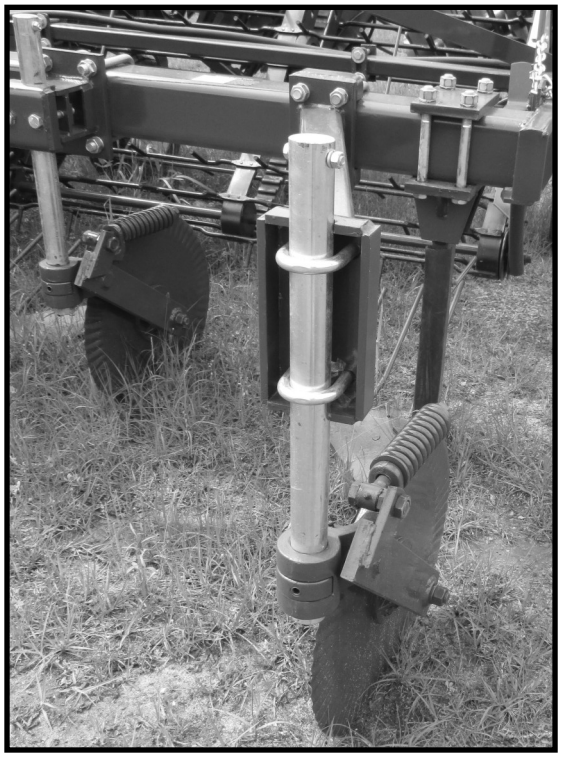
Optional trip shanks are designed to shear a bolt to allow for the lower section of the shank to rotate up when an obstruction is contacted in the ground.

INSTALLING COMPONENTS THAT ARE NOT FACTORY INSTALLED

Components that are not assembled complete from the factory to aid in the implement being shipped are the blade and cut rod, cutting coulters and brackets and inverter rods. These components can be installed on the implement by following the procedure and diagrams to follow.

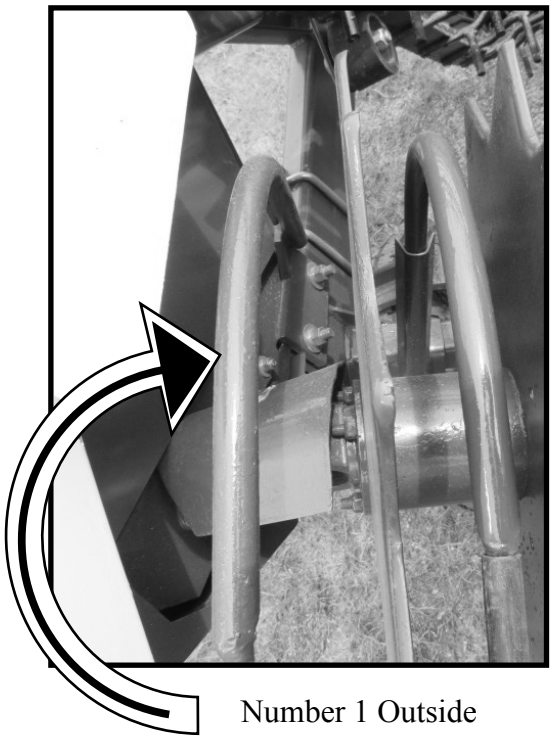


Blade and cut rod are assembled together and bundled to the rear of the machine on the conveyor near the rear shaft. Located on the cut frog of each shank are the 3/8” Grade 8 plow bolts and flange nuts needed to mount the blades to the machine. Blades can be removed from each conveyor section and installed to the shanks at the front of the machine for each conveyor section. Insure all hardware is torqued properly as shown in the bolt torque chart on page 13.

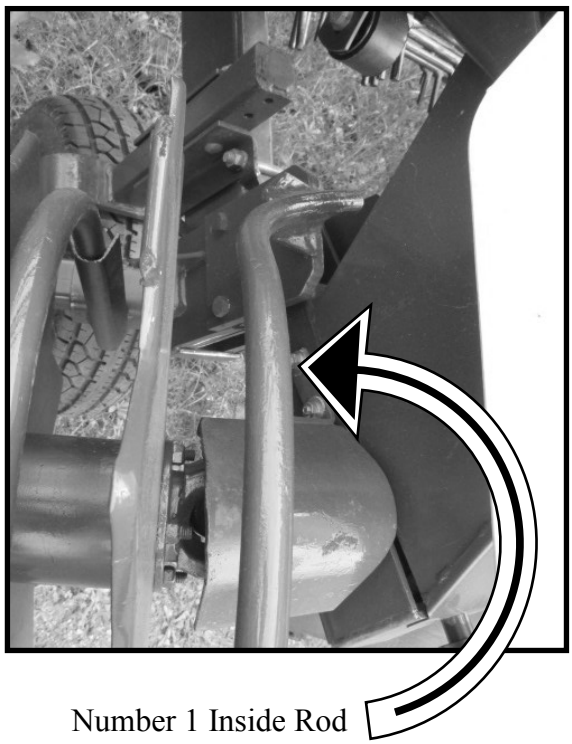


Cutting coulters and brackets are either shipped in a crate or loose when the machine is delivered. Brackets can be installed to the machine by using the overhead layouts on pages 14-23 by using the supplied ¾” U-bolts and hardware with each bracket. Once bracket has been installed in proper location the swivel style cutting coulters can then be installed into the bracket by using the 5/8” capscrews or 5/8” U-bolts provided in bracket and torqued properly.

Inverter rods are bundled to the rear of the implement in the same location as the blades. Remove each bundle and position it behind the implement from the conveyor section it was removed. The number one left and right rods need to be installed first by using the supplied hardware in the inverter cylinder supports. These rods are not labeled but can be easily identified by using the diagram below. Once number one rods have been installed on entire implement the other left and right rods which are wired together can now be mounted. These rods are labeled with a stamp on the mounting plate with an L or R for left and right as well as a number. Rods are installed in number order from top to bottom from 2 to 6. Hardware used to mount the rods is installed in the tube of inverter cylinders. Diagram below shows where each rod is positioned. When installing rods be sure to hold the rod firmly in the center of each disc while hardware is being tightened to proper torque. Once all rods have been installed, a roll of black plastic pipe supplied with implement can be slipped over each rod and trimmed at the end of each rod. Rod pattern can then be set according to diagram shown on page 24.

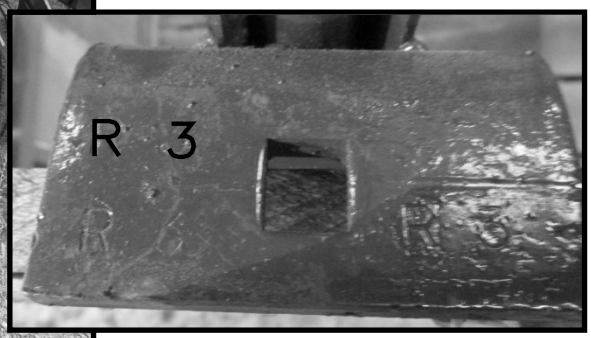


Number 1 Outside



Number 1 Inside Rod

All Inverter Rods (Left & Right)



Stamping on Rods

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.

NOTE: Warranty consideration will only be given on items manufactured by **Kelley Manufacturing Co.**

Sway Blocks

Sway blocks should be used and adjusted to limit movement in operating position. Your implement should be permitted to sway very little while operating and should be held rigid while transporting. Refer to your Tractor Operator's Manual for more information on sway blocks.

Wheel Spacing

Set tractor wheels so they are equally spaced from center of tractor, so they are located between the rows. If using duals for additional ballast, center all wheels between the rows. Duals can only be used on 6 and 8 row models for additional ballast and traction. Refer to your Tractor Operator's Manual for correct tire inflation pressure.

Drawbar Position

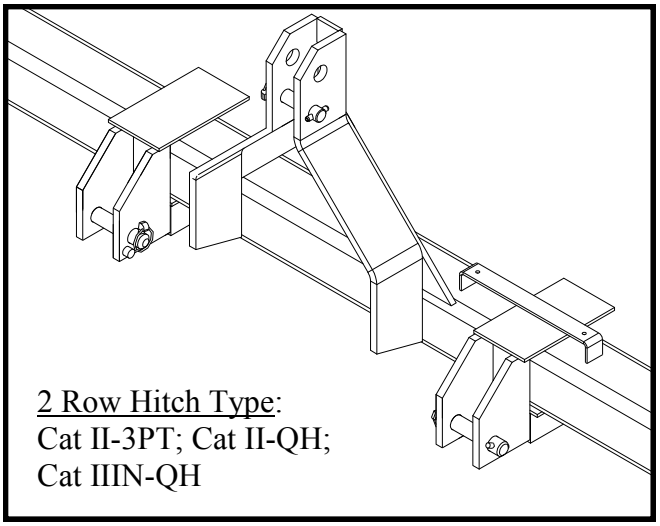
Place the drawbar in the short, center position to provide maximum clearance for cutting coulters to run freely without contacting drawbar. **The 4 & 8 row models require that the drawbar be removed from the tractor to prevent the center cutting coulter from contacting the drawbar due to the center v-plow shank used on these models.**

HITCHING TO THE IMPLEMENT

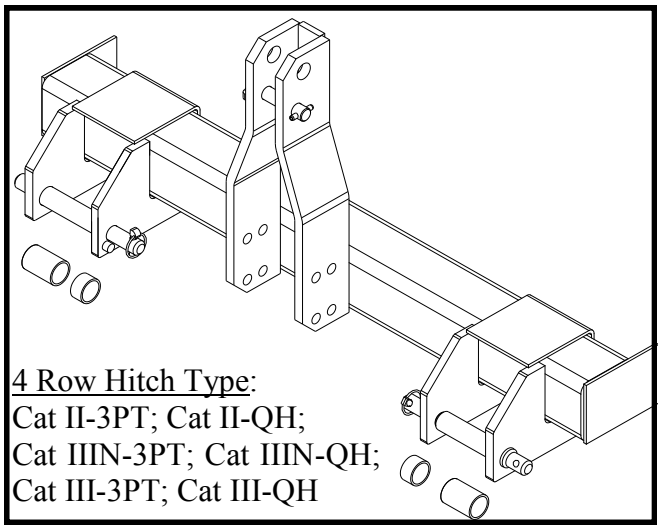
! IMPORTANT !

WARRANTY NOTE: Use of articulated four-wheel drive or track tractors with 3 point lift implements voids the warranty on the toolbar main frame. Sudden turns or steering corrections made by these types of tractors, when the implement is in the ground, can exert extreme forces through the implement's frame and/or shank components and cause unwarranted fatigue/failure.

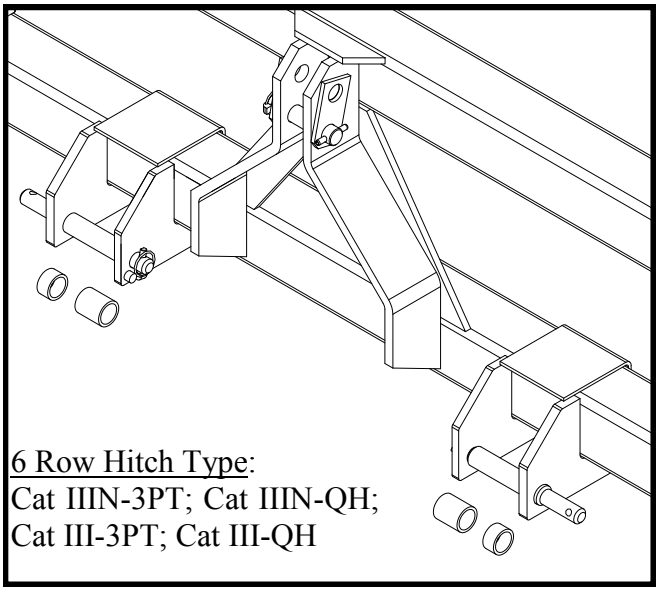
Mast and Hitch Configurations



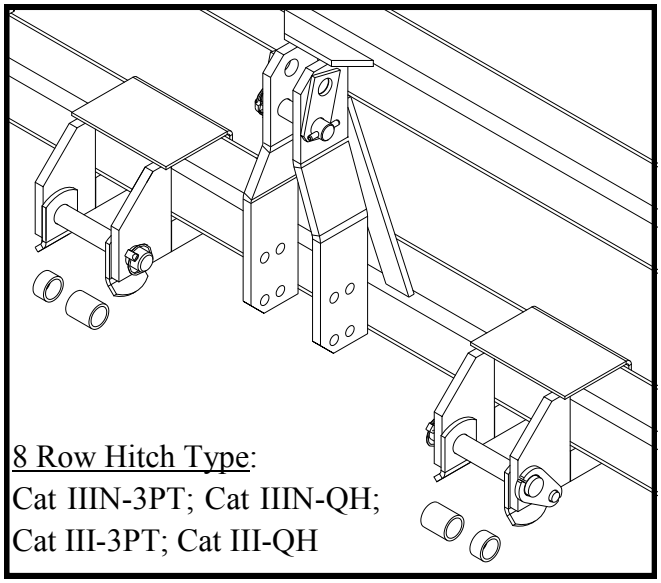
2 Row Hitch Type:
Cat II-3PT; Cat II-QH;
Cat IIIN-QH



4 Row Hitch Type:
Cat II-3PT; Cat II-QH;
Cat IIIN-3PT; Cat IIIN-QH;
Cat III-3PT; Cat III-QH



6 Row Hitch Type:
Cat IIIN-3PT; Cat IIIN-QH;
Cat III-3PT; Cat III-QH



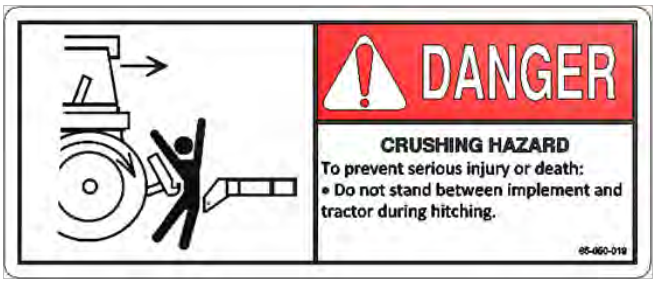
8 Row Hitch Type:
Cat IIIN-3PT; Cat IIIN-QH;
Cat III-3PT; Cat III-QH

Tractor Hook-Up

The KMC DSI is designed for attaching to different category hitch tractors by providing the proper pins, spacers and hitch plate spacing's for each hitch type. On the pages to follow you will see a detail of each hitch type used and what is required to attach the implement to your tractor. If you are unable to determine which hitch type you have contact your local tractor dealer or contact KMC directly. Failure to properly determine the type of hitch your tractor is equipped with could cause damage to the implement or tractor during use if they are not correctly attached.

DANGER

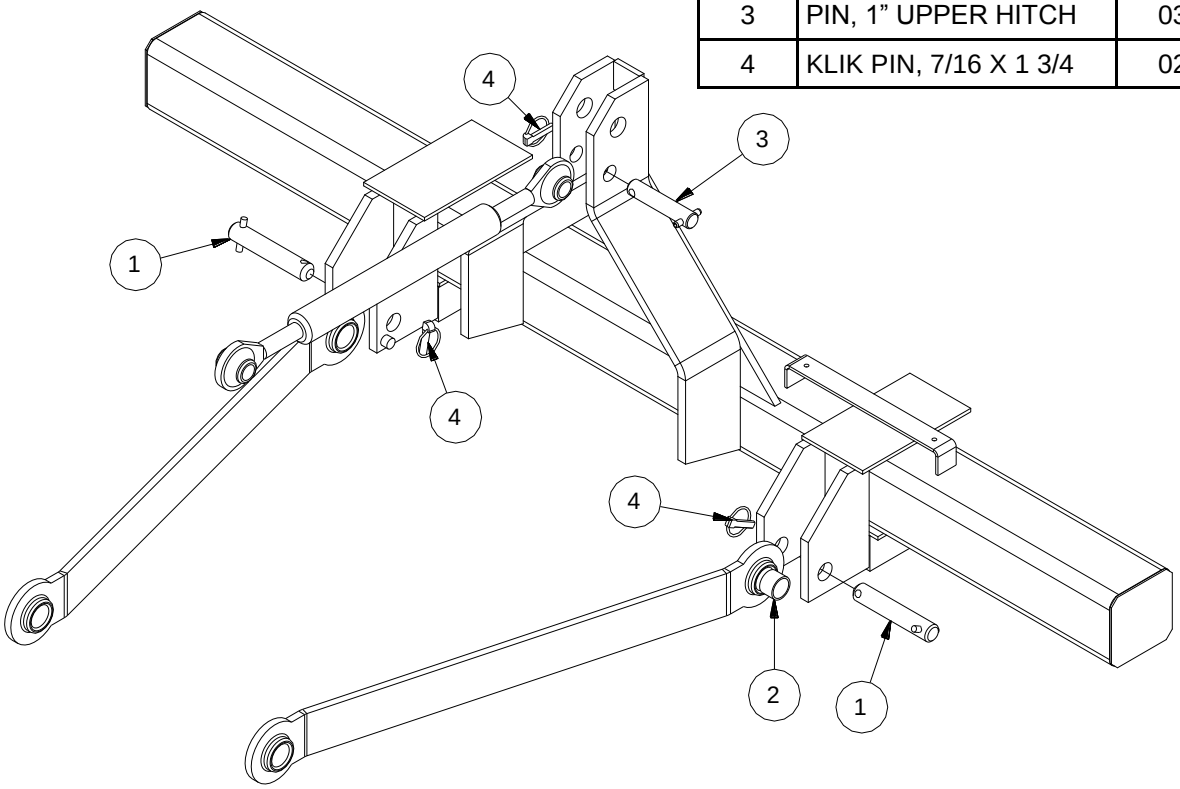
DO NOT STAND BETWEEN TRACTOR AND IMPLEMENT DURING HITCHING.



Two Row KMC DSI's are designed for Cat II tractors, but Cat III tractors can be used when hitch bushings are installed in the lower and middle link balls of the tractor hitch linkages. If a Cat III tractor is equipped with a quick hitch and will assemble to a Cat III Narrow (32" inside), it will attach to the 2 Row KMC DSI but a Cat III Standard quick hitch will not.

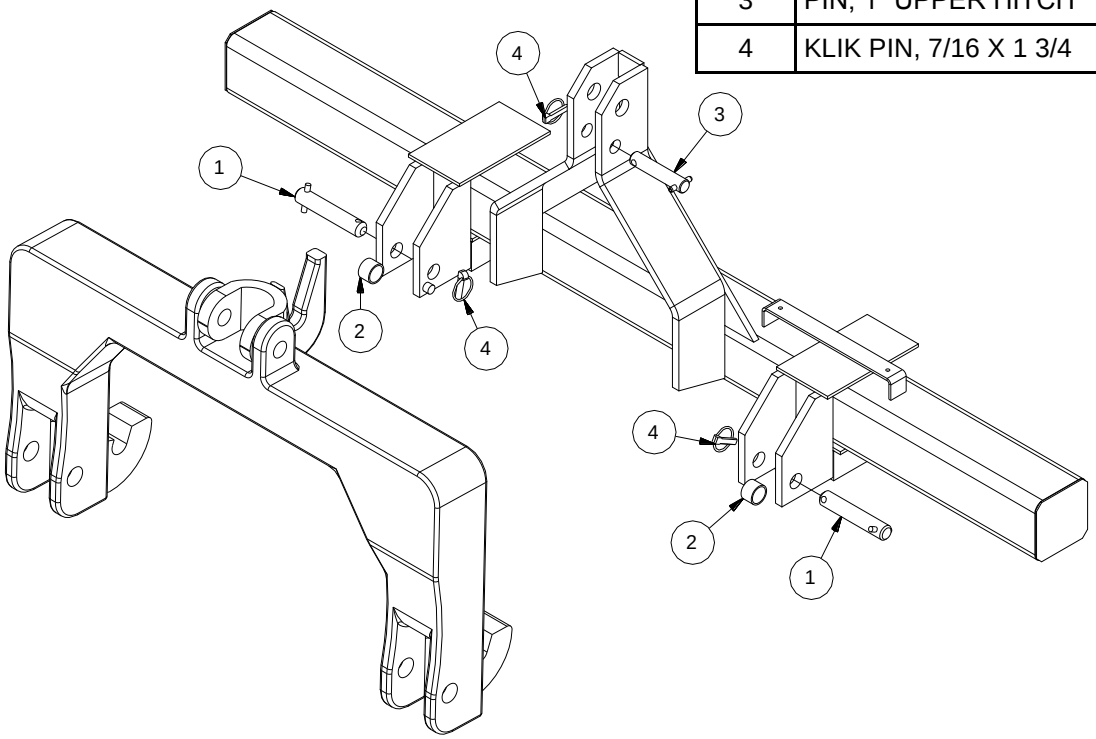
2 Row with Cat II 3 PT Hitch

ITEM	DESCRIPTION	PART NUMBER
1	PIN, 1 1/8" HITCH	03-050-088
2	SPACER, CAT III	06-024-021
3	PIN, 1" UPPER HITCH	03-081-301
4	KLIK PIN, 7/16 X 1 3/4	02-050-002



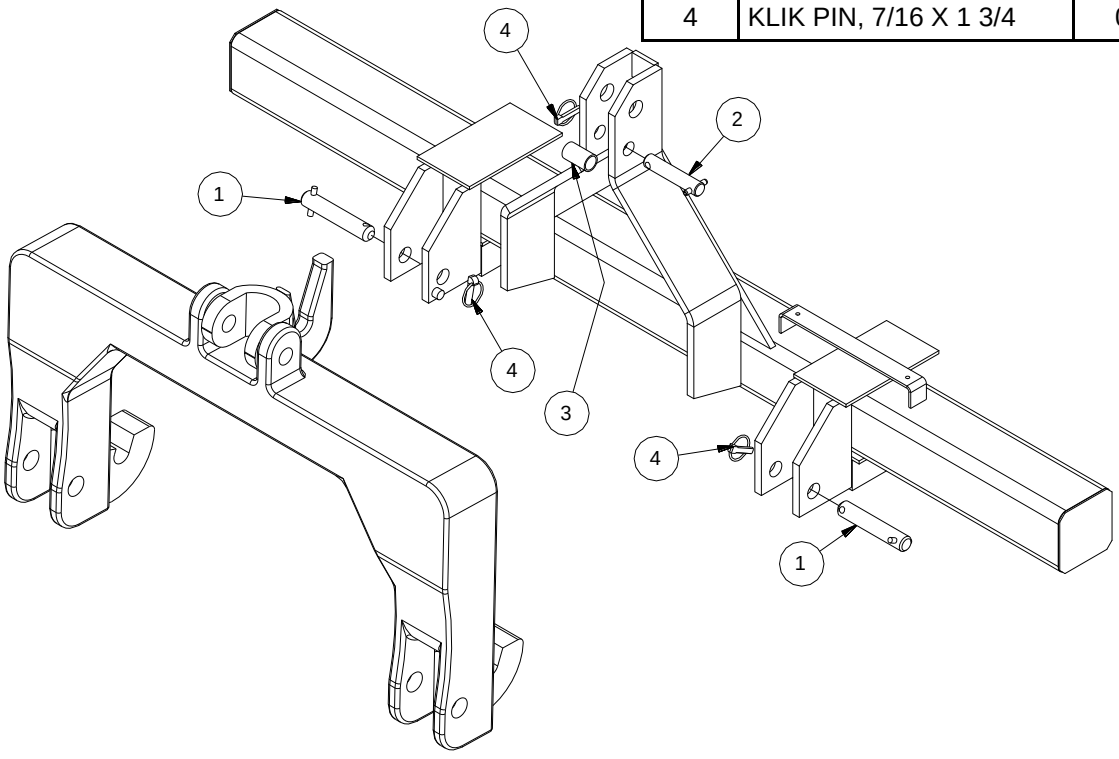
2 Row with Cat II Quick Hitch

ITEM	DESCRIPTION	PART NUMBER
1	PIN, 1 1/8” HITCH	03-050-088
2	SPACER, CAT III	06-024-021
3	PIN, 1” UPPER HITCH	03-081-301
4	KLIK PIN, 7/16 X 1 3/4	02-050-002



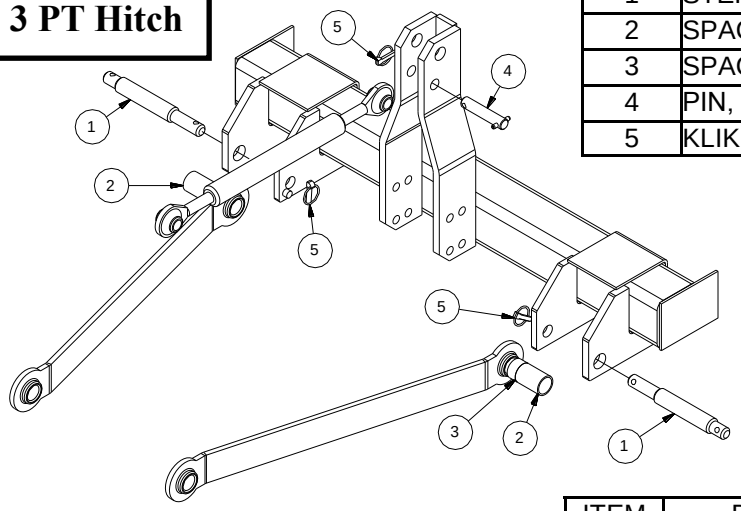
2 Row with Cat IIIN Quick Hitch

ITEM	DESCRIPTION	PART NUMBER
1	PIN, 1 1/8” HITCH	03-050-088
2	PIN, 1” UPPER HITCH	03-081-301
3	8 X 10 SPACER (SHORT)	02-024-004
4	KLIK PIN, 7/16 X 1 3/4	02-050-002



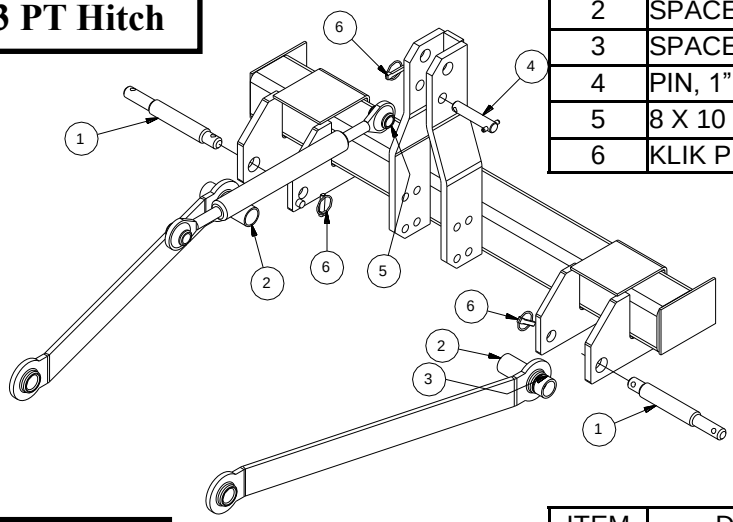
Four Row KMC DSI's are designed for Cat II, Cat IIIN and Cat III tractors equipped with a 3 point hitch or quick hitch. The lower link pins of the implement have a step pin design so they can be used for Cat II or III tractors. Refer to diagrams below for how to hook your tractor to the implement.

4 Row with Cat II 3 PT Hitch



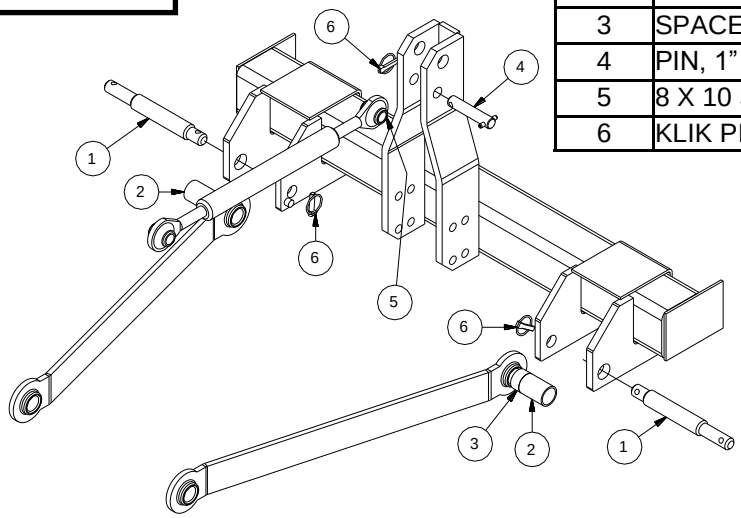
ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	SPACER, CAT III	06-024-022
4	PIN, 1" UPPER HITCH	03-081-301
5	KLIK PIN, 7/16 X 1 3/4	02-050-002

4 Row with Cat III 3 PT Hitch



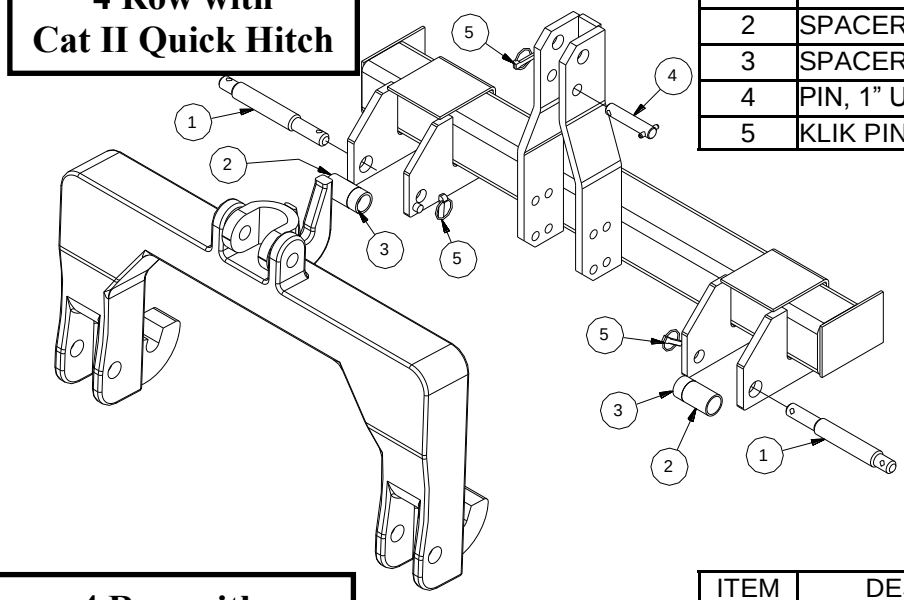
ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	SPACER, CAT III	06-024-022
4	PIN, 1" UPPER HITCH	03-081-301
5	8 X 10 SPACER (SHORT)	02-024-004
6	KLIK PIN, 7/16 X 1 3/4	02-050-002

4 Row with Cat IIIN 3 PT Hitch



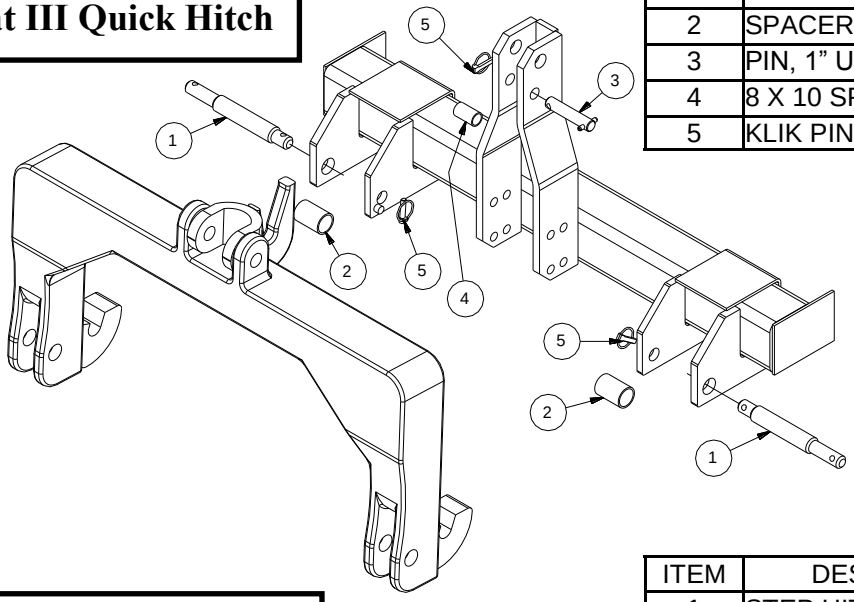
ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	SPACER, CAT III	06-024-022
4	PIN, 1" UPPER HITCH	03-081-301
5	8 X 10 SPACER (SHORT)	02-024-004
6	KLIK PIN, 7/16 X 1 3/4	02-050-002

4 Row with Cat II Quick Hitch



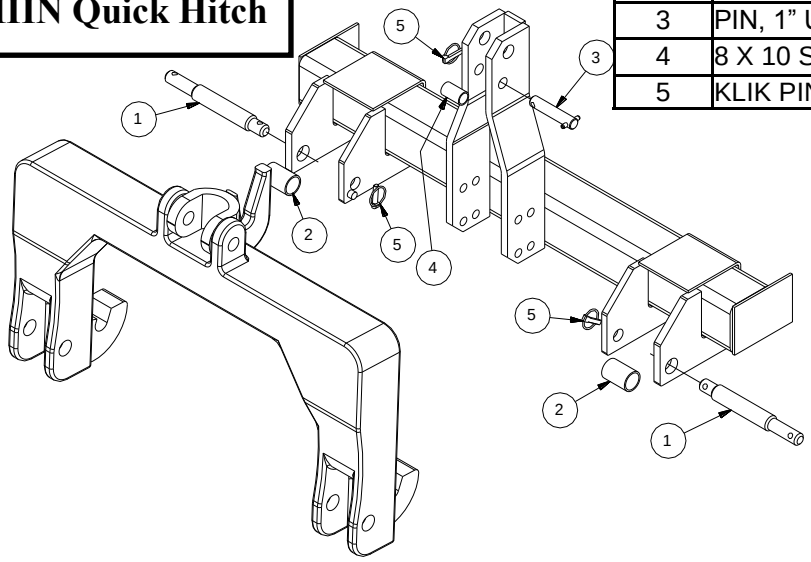
ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	SPACER, CAT III	06-024-022
4	PIN, 1” UPPER HITCH	03-081-301
5	KLIK PIN, 7/16 X 1 3/4	02-050-002

4 Row with Cat III Quick Hitch



ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	PIN, 1” UPPER HITCH	03-081-301
4	8 X 10 SPACER (SHORT)	02-024-004
5	KLIK PIN, 7/16 X 1 3/4	02-050-002

4 Row with Cat IIIN Quick Hitch

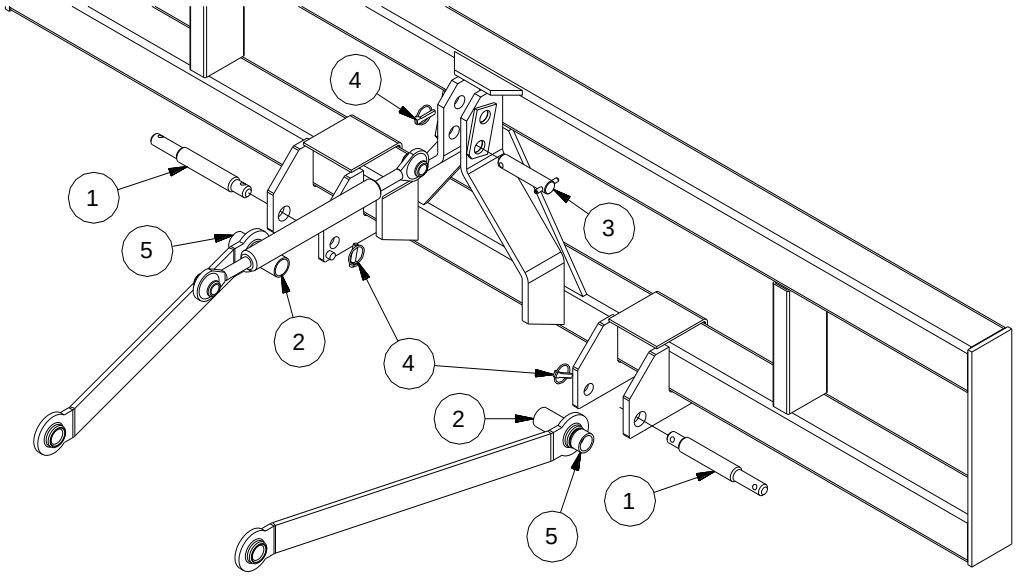


ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	PIN, 1” UPPER HITCH	03-081-301
4	8 X 10 SPACER (SHORT)	02-024-004
5	KLIK PIN, 7/16 X 1 3/4	02-050-002

Six Row KMC DSI's are designed for Cat IIIN and Cat III tractors equipped with a 3 point hitch or quick hitch. Refer to diagrams below for details on how to hook your tractor to the implement.

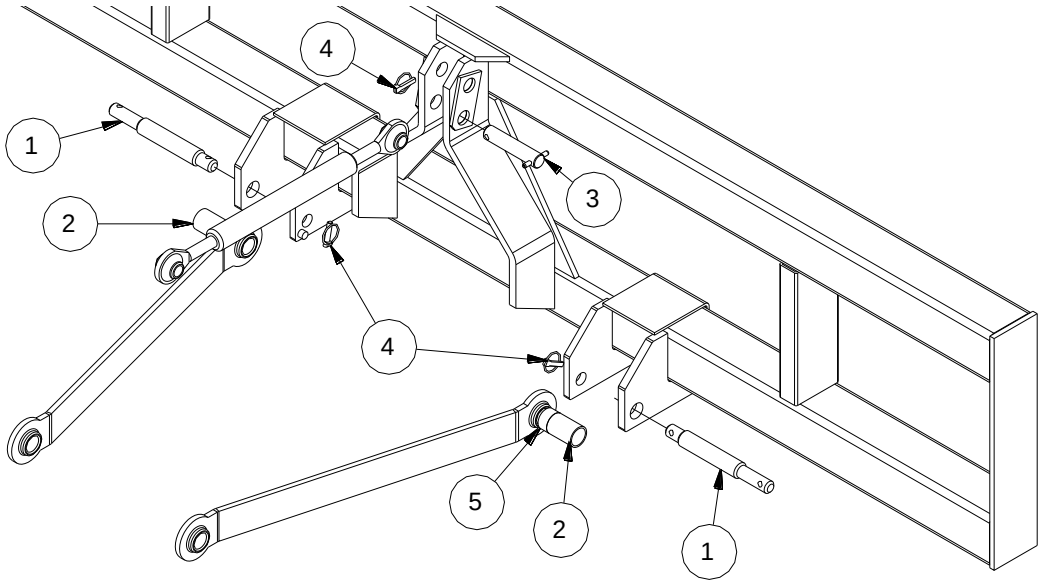
6 Row with Cat III 3 PT Hitch

ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	PIN, 1 1/4" UPPER HITCH	02-081-057
4	KLIK PIN, 7/16 X 1 3/4	02-050-002
5	SPACER, CAT III	06-024-022



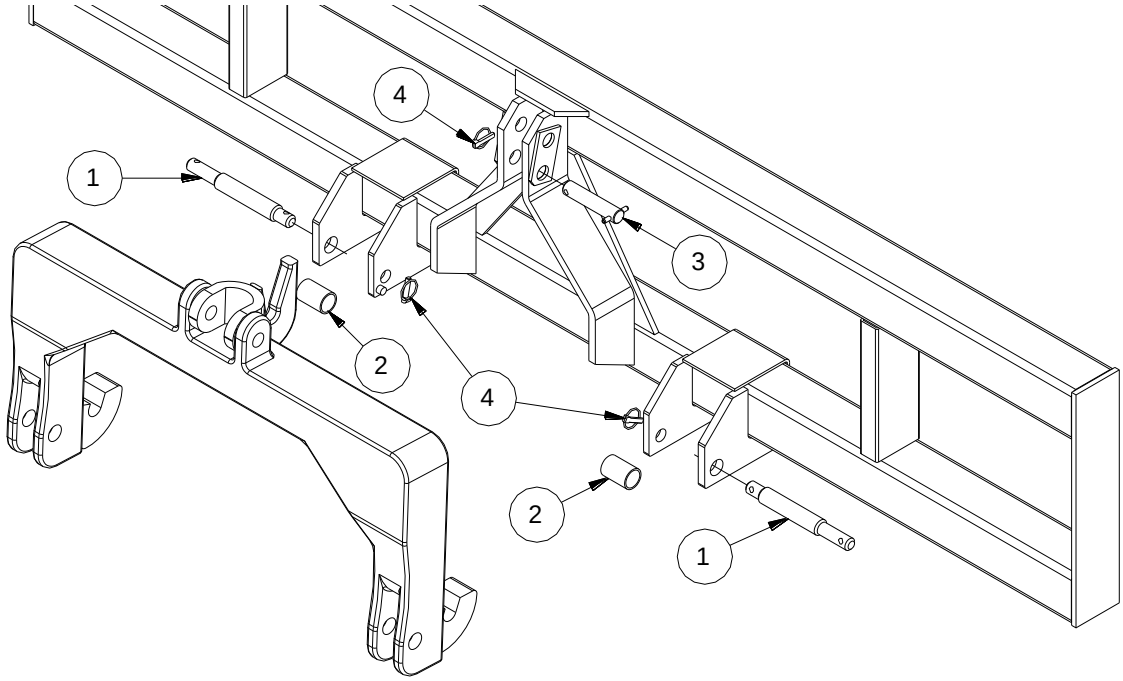
6 Row with Cat IIIN 3 PT Hitch

ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	PIN, 1 1/4" UPPER HITCH	02-081-057
4	KLIK PIN, 7/16 X 1 3/4	02-050-002
5	SPACER, CAT III	06-024-022



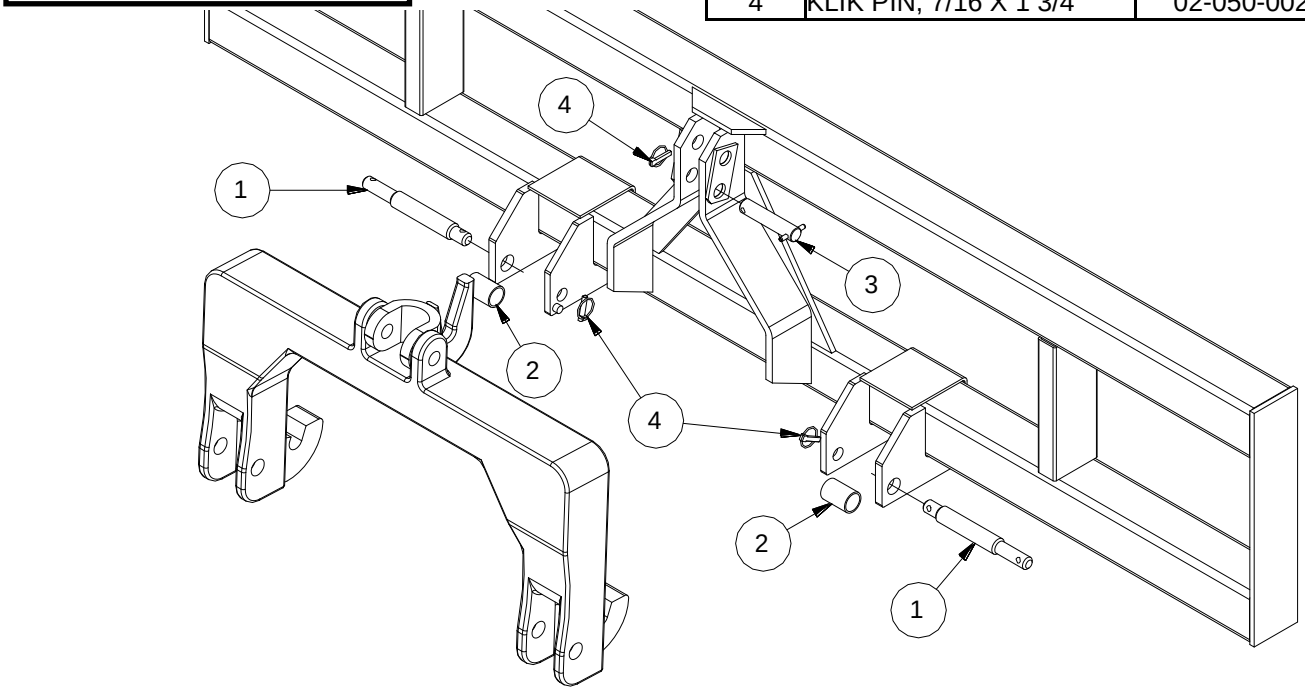
6 Row with Cat III Quick Hitch

ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	PIN, 1 1/4" UPPER HITCH	02-081-057
4	KLIK PIN, 7/16 X 1 3/4	02-050-002



6 Row with Cat IIIN Quick Hitch

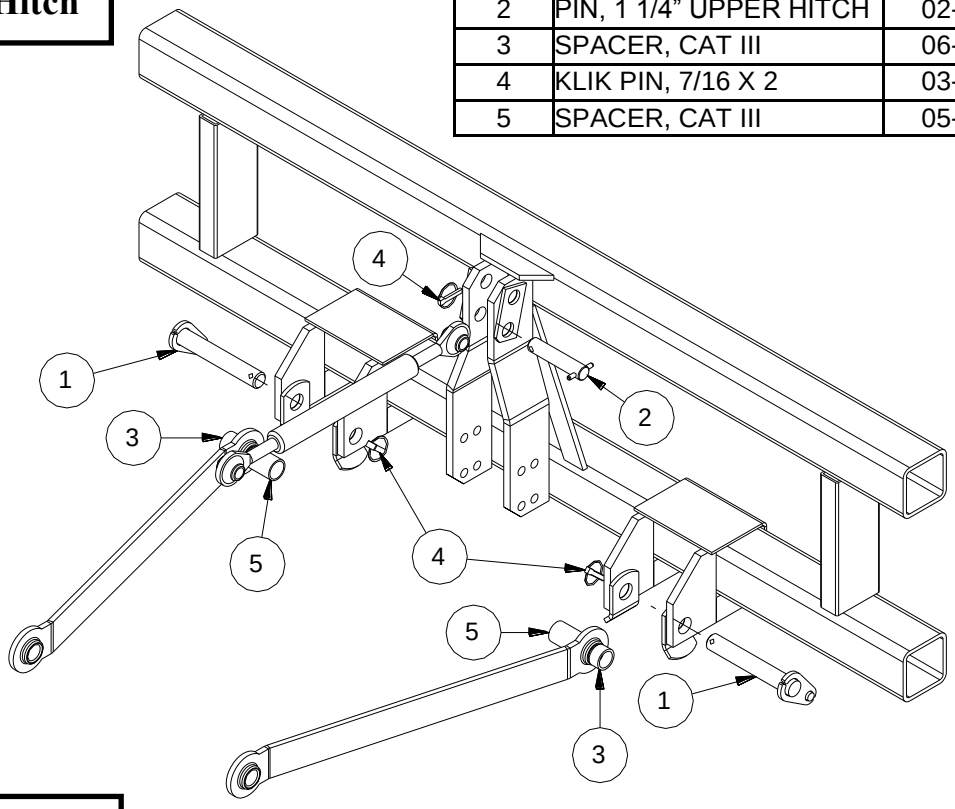
ITEM	DESCRIPTION	PART NUMBER
1	STEP HITCH PIN, PLT	03-026-126
2	SPACER, CAT III	05-024-010
3	PIN, 1 1/4" UPPER HITCH	02-081-057
4	KLIK PIN, 7/16 X 1 3/4	02-050-002



Eight Row KMC DSI's are designed for Cat IIIN and Cat III 3-point hitch and quick hitch tractors. Refer to diagrams below for how to attach your tractor to the implement.

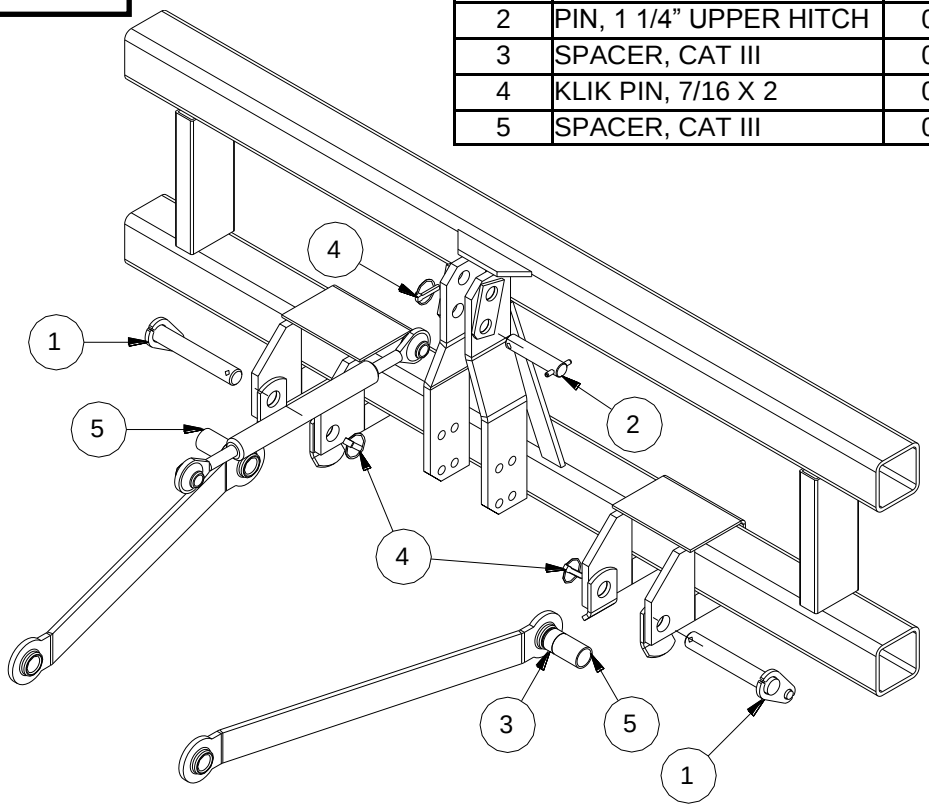
8 Row with Cat III 3 PT Hitch

ITEM	DESCRIPTION	PART NUMBER
1	PIN, CAT III-IIIN HITCH	16-080-316
2	PIN, 1 1/4" UPPER HITCH	02-081-057
3	SPACER, CAT III	06-024-022
4	KLIK PIN, 7/16 X 2	03-050-094
5	SPACER, CAT III	05-024-010



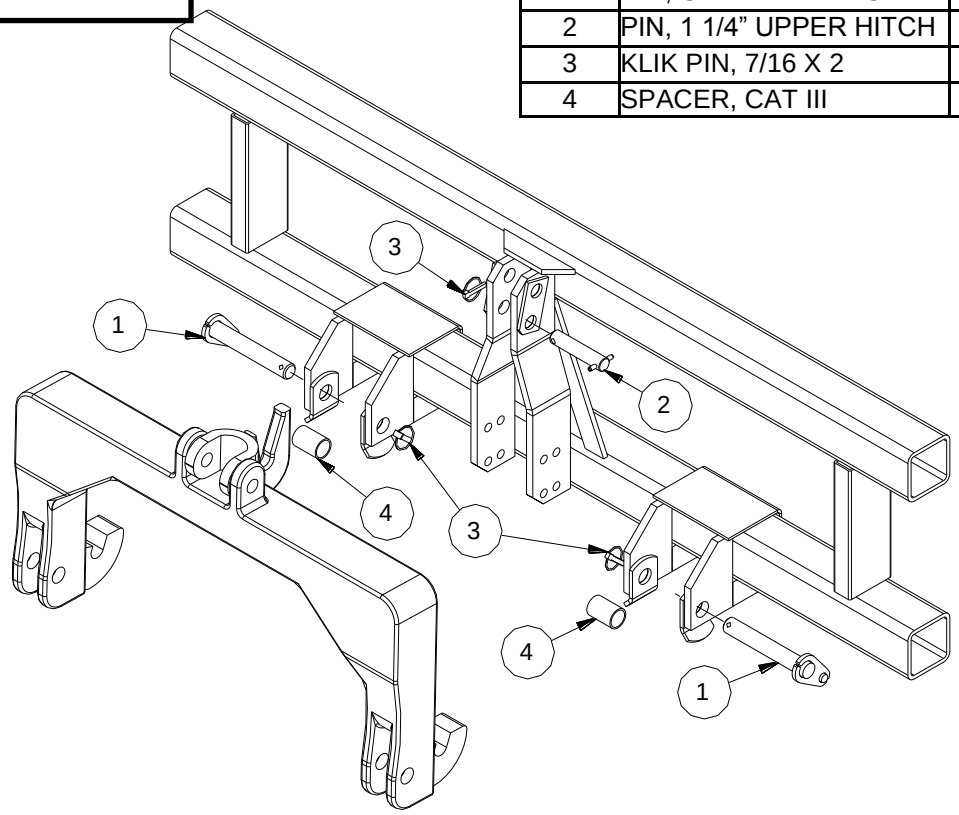
8 Row with Cat IIIN 3 PT Hitch

ITEM	DESCRIPTION	PART NUMBER
1	PIN, CAT III-IIIN HITCH	16-080-316
2	PIN, 1 1/4" UPPER HITCH	02-081-057
3	SPACER, CAT III	06-024-022
4	KLIK PIN, 7/16 X 2	03-050-094
5	SPACER, CAT III	05-024-010



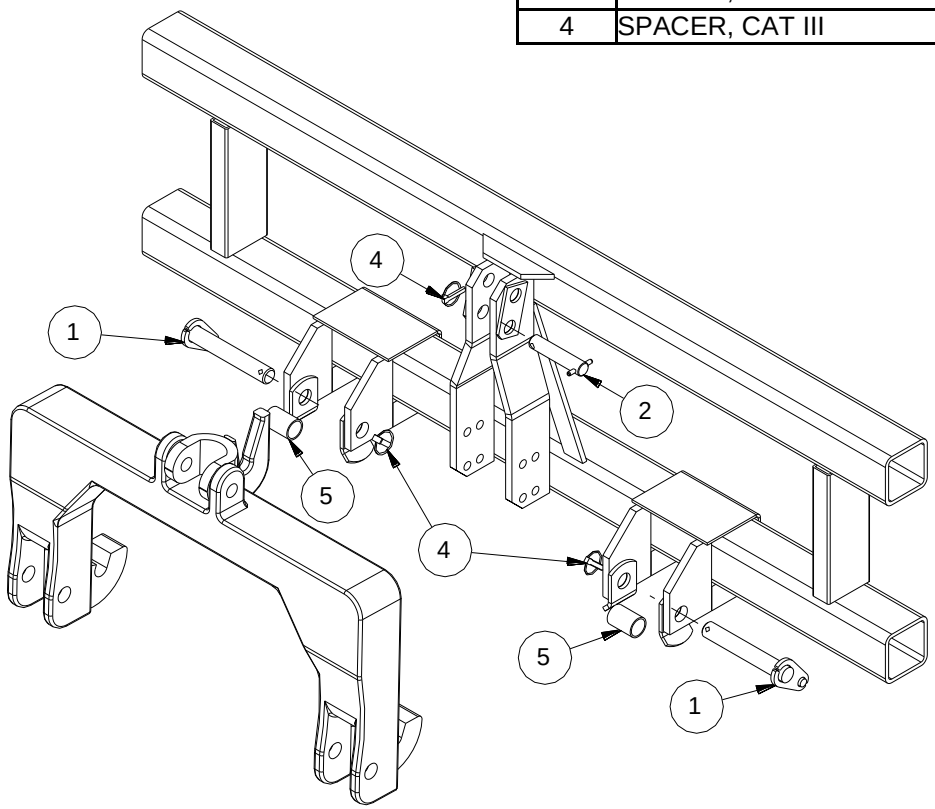
8 Row with Cat III Quick Hitch

ITEM	DESCRIPTION	PART NUMBER
1	PIN, CAT III-IIIN HITCH	16-080-316
2	PIN, 1 1/4” UPPER HITCH	02-081-057
3	KLIK PIN, 7/16 X 2	03-050-094
4	SPACER, CAT III	05-024-010



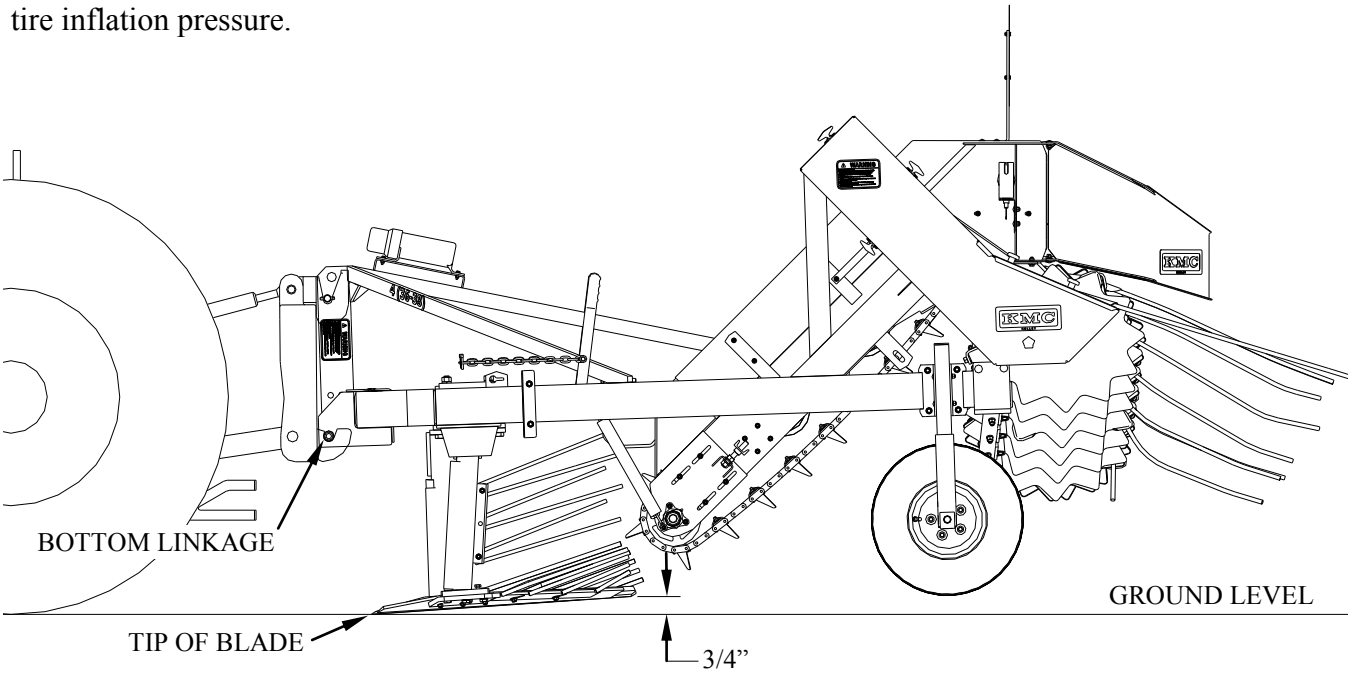
8 Row with Cat IIIN Quick Hitch

ITEM	DESCRIPTION	PART NUMBER
1	PIN, CAT III-IIIN HITCH	16-080-316
2	PIN, 1 1/4” UPPER HITCH	02-081-057
3	KLIK PIN, 7/16 X 2	03-050-094
4	SPACER, CAT III	05-024-010



LEVELING IMPLEMENT TOOL BAR

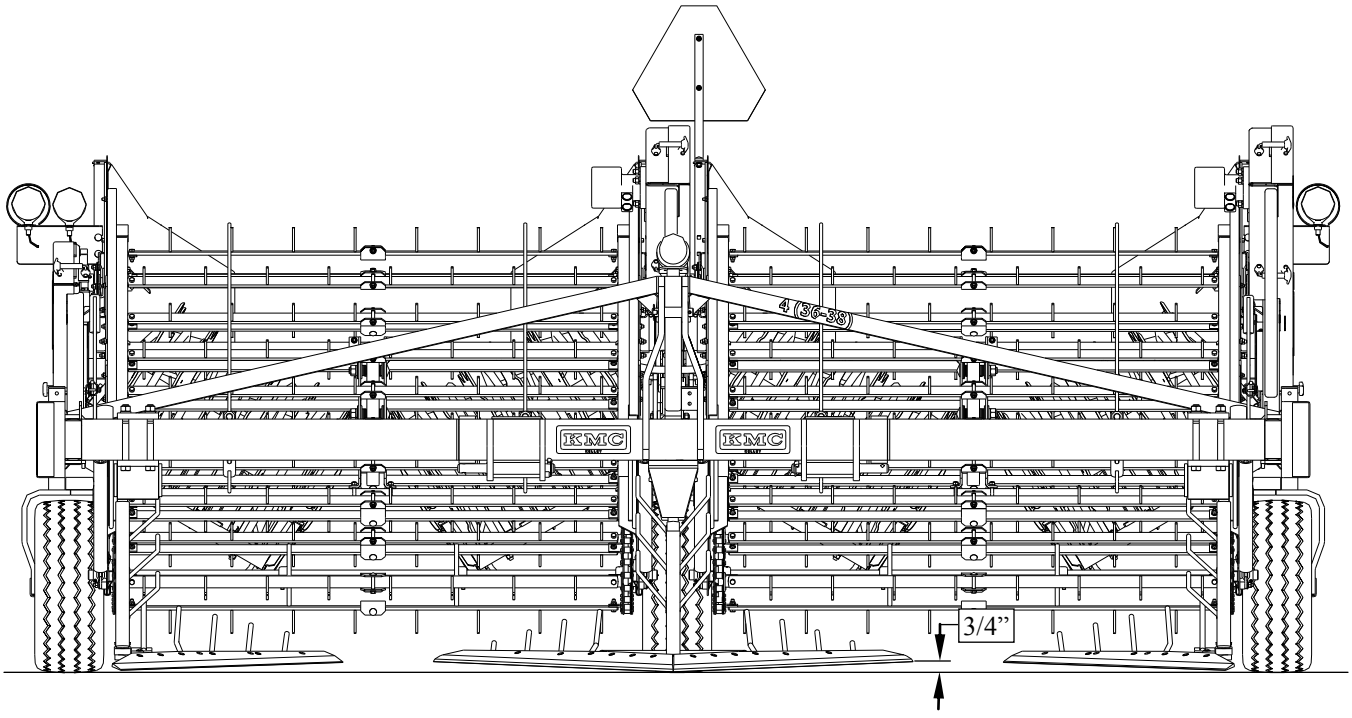
For best results, when leveling machine, position the tractor with machine on a level floor. Check tractor tire pressure and inflate equally from side to side. See your Tractor Operator's Manual for correct tire inflation pressure.



With the implement attached to tractor, lower the machine so that the front tips of all the blades touch a level surface and the other end of blade is approximately ¾" from the level surface. If the front tips of all blades are not touching the level surface adjust the middle link of the tractors 3-point hitch.

Measure each bottom link of tractor lift arms to ensure that they are the same length so that the toolbar of the main frame is level with the level surface. If the link arms are not the same, adjust them so that the toolbar is level according to the procedure in your Tractor Operator's Manual.

Before adjusting 3-point links refer to your Tractor Operator's Manual for correct adjustment procedures and safety requirements.

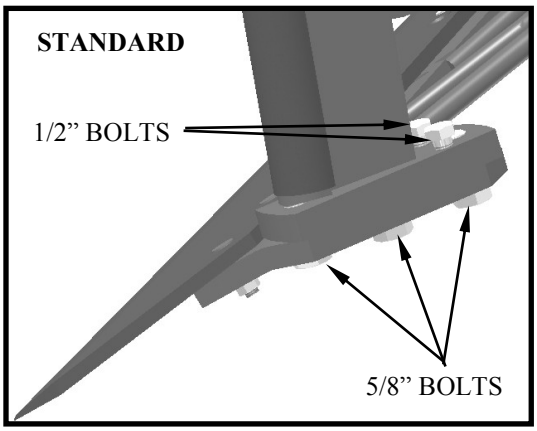


IMPLEMENT PREPARATION

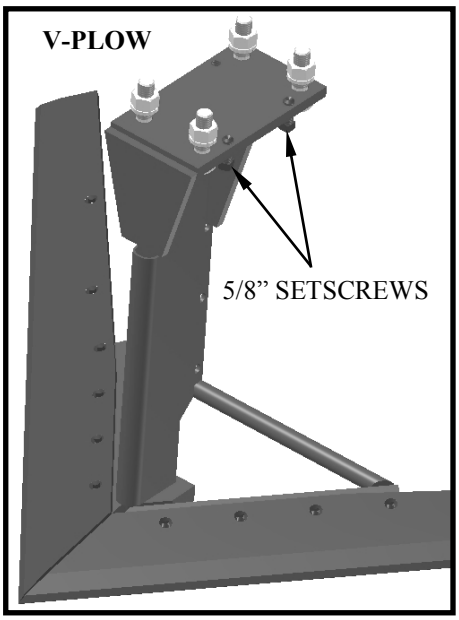
Shank, Blade, Frog & Cut Rod Adjustments

Check location of all shanks to be sure they are located as shown in the "Overhead Layouts" section pages 14-23. Center of shanks should normally be placed 9" from center of row for Spanish type peanuts and 13" from center of row for Runner type peanuts.

Check all bolts to ensure they are tightened to proper torque. The standard 26" cut frog and rod setup pushes less than the 28" and 30" optional setups. In some conditions for twin row peanuts the 28" cut setup is needed to properly dig the peanuts due to the spacing of the twin rows. A detail of each cut option available for implement is shown on pages 58-59 with part numbers of components.



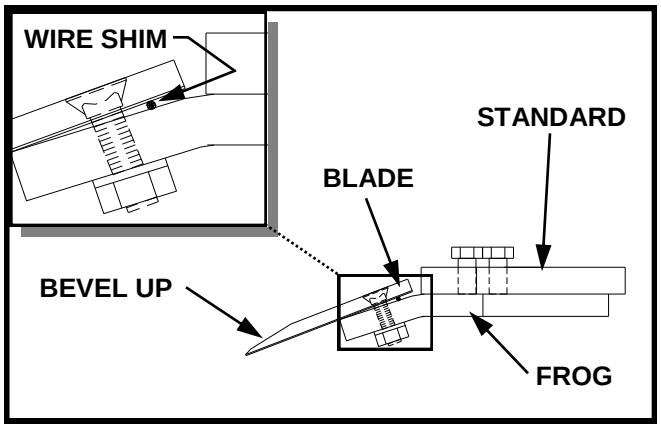
Pitch of blade can be adjusted by loosening the 3 (5/8") bolts at the bottom of the frog, then tighten the 2 (1/2") bolts at the rear of the shank until the proper pitch of ¾" from rear end of blade to level surface is achieved. Once the pitch is set, tighten the 3 (5/8") bolts on bottom of frog and then repeat to remaining shanks and blades.



For the v-plow (4) 5/8" x 1 1/2" setscrews located on the shank cap can be used to achieve the proper pitch of the blades.

PLOW ADJUSTMENT IN HARD DRY SOIL:

When digging in hard soil conditions, some KMC customers have reported that increasing the pitch of the blade will significantly increase peanut blade life. Follow the steps below to increase side pitch of blades

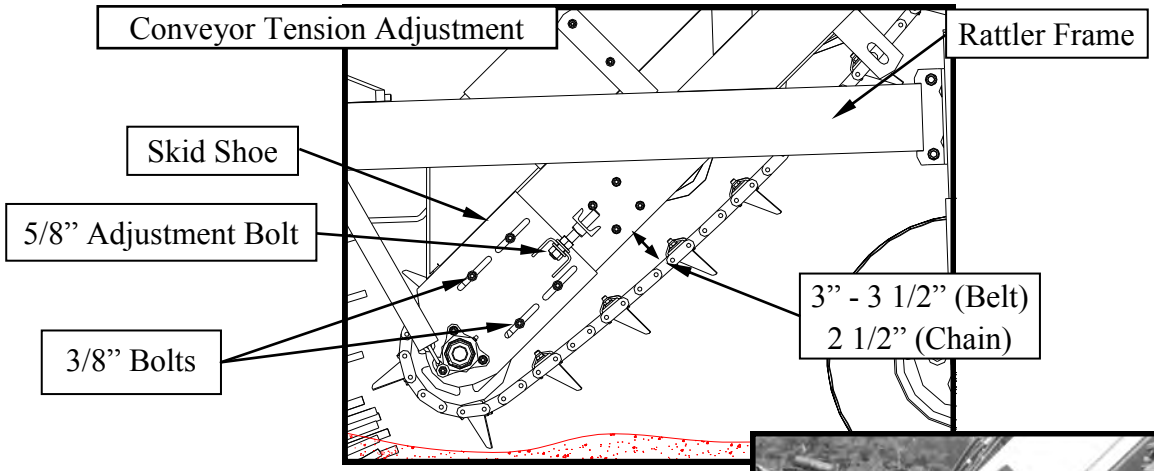


1. For dry hard soil the peanut blade should be installed with the beveled side of blade up. This gives the cutting edge of the blade a better attack angle on entry into the ground.
2. If after placing the blades on as recommended above and machine still will not take the ground, we recommend placing more attack angle on the blade. This can be accomplished by placing a piece of 1/8" wire between the frog and the blade. The wire should be placed above the bolts that attach the blade to the frog. Refer to diagram above for placement of wire.

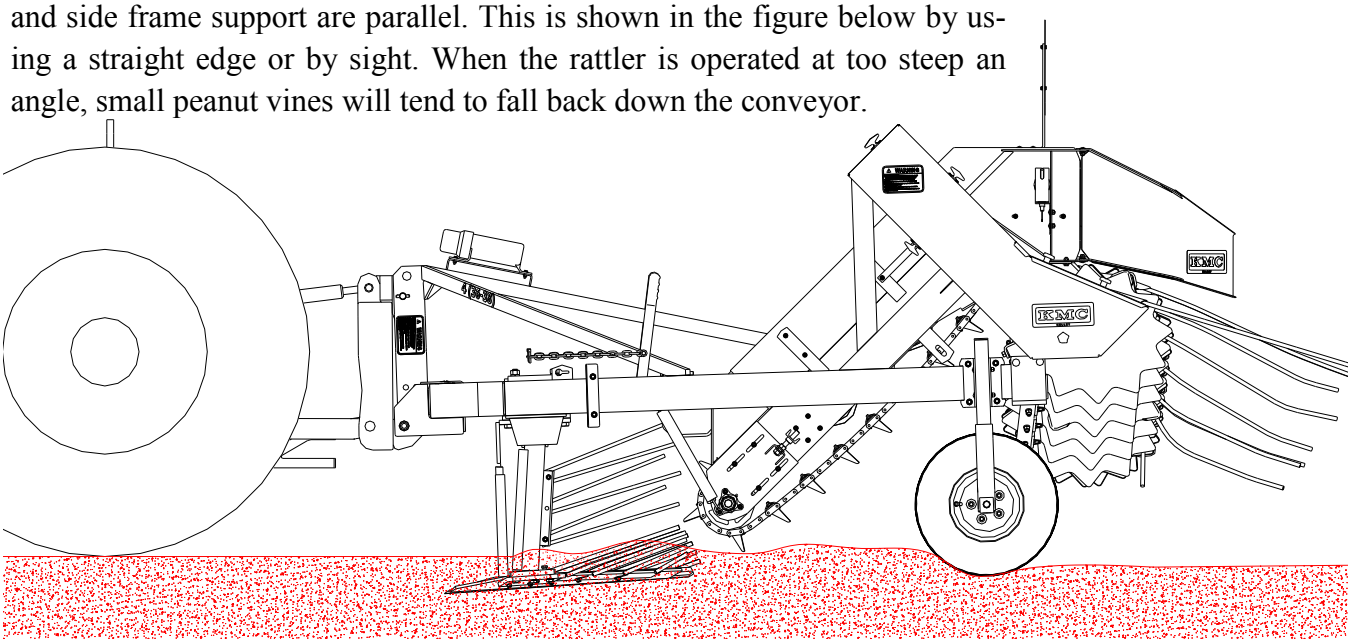
<u>CAUTION!</u> WHEN THE SOIL CONDITIONS IMPROVE DUE TO A RAIN OR THE MACHINE IS PLACED IN A SOFTER SOIL CONDITION, REMOVE THE WIRE SHIMS. IF THE WIRE SHIMS ARE NOT REMOVED WHILE IN NORMAL SOIL CONDITIONS, THE MACHINE WILL TEND TO PLOW TOO DEEP AND THE BLADES WILL TRY TO CARRY TOO MUCH SOIL CAUSING PEANUT LOSS AND MORE SOIL LEFT IN THE PLOWED-UP WINDROW.

Conveyor Adjustments

Tension of conveyor belt or chain is important to the components providing a long service life. To adjust the tension of the conveyor, loosen the 4 (3/8") bolts on the skid shoe of the rattler frame on each side and loosen or tighten the (5/8") adjustment bolt to obtain the proper tension. Be sure to adjust each side of rattler frame at the same time, and then tighten the 4 (3/8") bolts on the skid shoe back to proper torque. The measurement used to determine the proper tension of the conveyor is shown below with location of all components needed to adjust the tension.

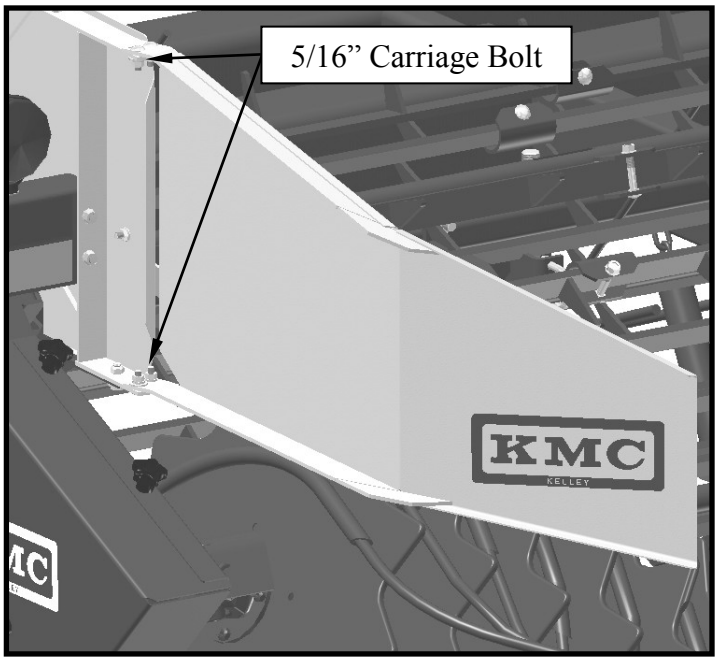


The angle at which the conveyor is positioned is also critical to implement performance in the field. Conveyor should be adjusted low enough to pick up the vines with an even flow but not low enough to push the soil. The teeth of the conveyor belt rods or rattler bar should just clear the soil. The conveyor angle can be adjusted by grabbing the rattler adjusting handle and pulling forward so the chain attached to the handle can be moved through the plate at the front of the main frame to raise and lower the conveyor. A recommended angle to start from is when the conveyor is at 43° to the main frame or when rattler frame and side frame support are parallel. This is shown in the figure below by using a straight edge or by sight. When the rattler is operated at too steep an angle, small peanut vines will tend to fall back down the conveyor.

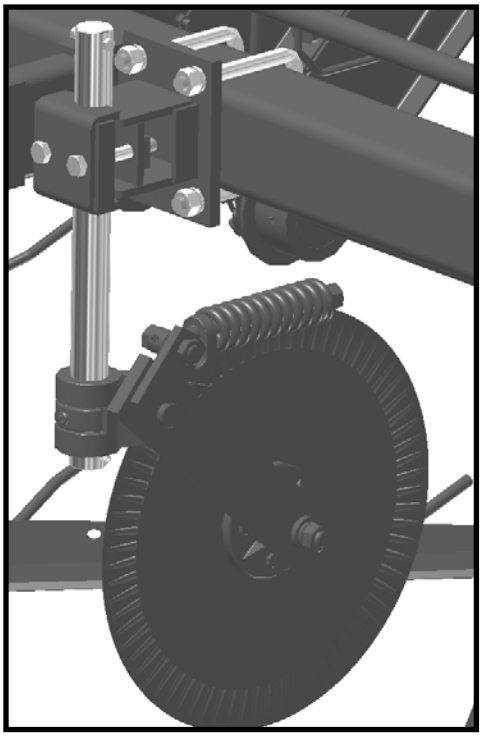


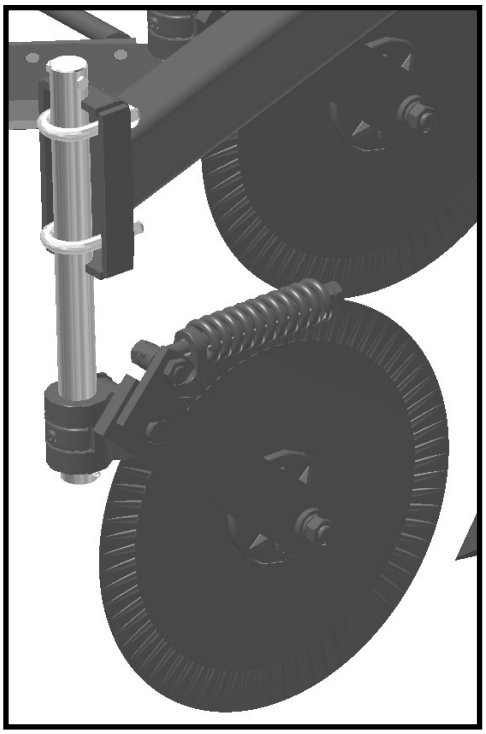
Rear Hinge Fender Adjustments

The rear hinge fender of the digger is used to form the width of the windrow created during inverting. Adjustment of the fender is performed by loosening the two (5/16") carriage bolts at the top and bottom of the fender and then moving the fender to the position shown in the Inverter Fender and Rod Setup section on page 24. Once the fender has been adjusted to this measurement tighten the (5/16") carriage bolts back to proper torque.



Height Adjustment of Cutting Coulters



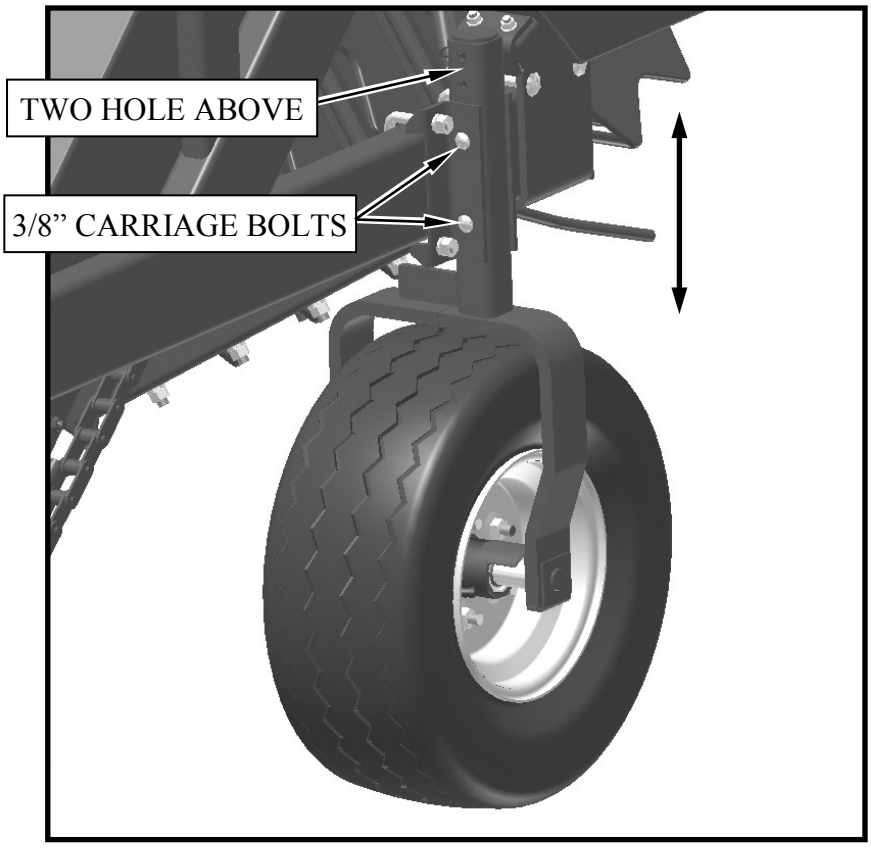


Stem of cutting coulter can be adjusted up or down by either loosening the 5/8" capscrews of the coulter bracket or 5/8" u-bolt nuts to adjust the stem up or down. Stem should be adjusted so that cutting coulter is deep enough to cut the vines but not too deep so that the fork or cutting coulter drags in the dirt. Once coulter is at desired height tighten all 5/8" hardware to proper torque to ensure coulter stem will not move during operation.

FAILURE TO CUT PEANUT VINES IS THE MOST COMMON CAUSE OF INVERTER COMPLAINTS.

Gauge Wheel Height

Gauge wheels are mounted to the rear of the Rigid DSI just in front of the inverter drums. They are assembled from the factory with two holes showing in the stem above the mounting bracket. This position usually places the machine at approximately the correct depth for most field conditions. If height of gauge wheel needs to be adjusted it can be done by loosening the 3/8" carriage bolts that are in the mounting bracket that go through the gauge wheel stem. The stem can then be adjusted up or down to desired digging depth and the carriage bolts retightened to proper torque.



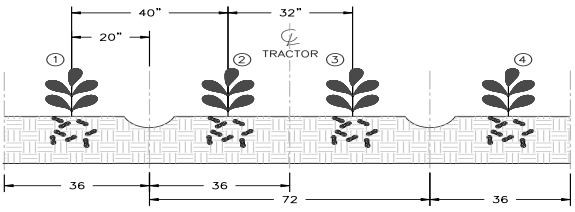
Vine Hold Down Rod Adjustments

Vine hold down rods were designed to reduce the amount of roll back due to small vines or hilly land causing vines to roll down the conveyor. They are adjustable horizontally to position the rod above the tap root as well as vertically for the thickness of the vine mass. Rods are to be positioned so that they are directly above the tap root for single or twin row peanuts. We have found that a single rod will work for twin rows but recommend 2 rods for better performance in twin row peanuts. Machines are

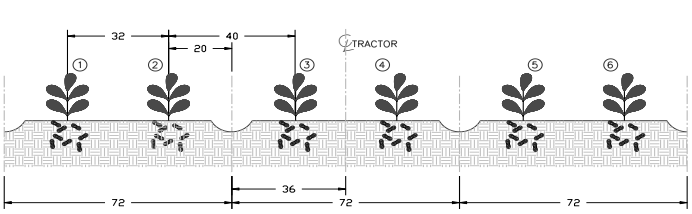
shipped with rods installed approximately where the tap root should be but may need some additional movement to position them directly over the tap root of each row depending on what spacing was used when planting the peanuts. To install the rods in the correct position, determine the row spacing used for the location of the tap root based on the spacing used for planting as shown in the figures below.

SINGLE ROWS ON 72" BEDS

4 Row Machine

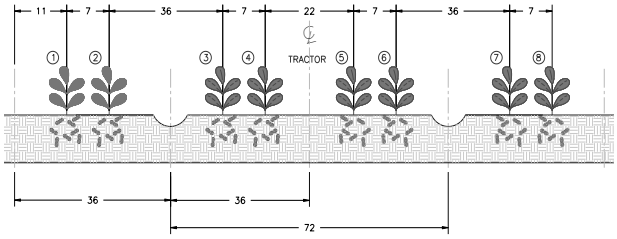


6 Row Machine

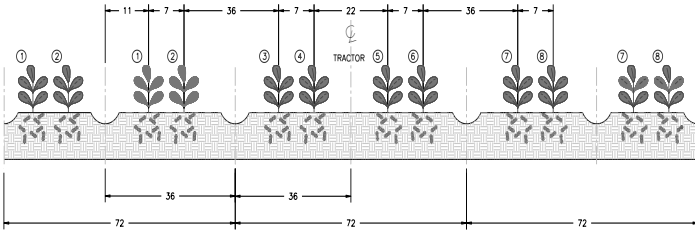


TWIN ROWS ON 72" BEDS

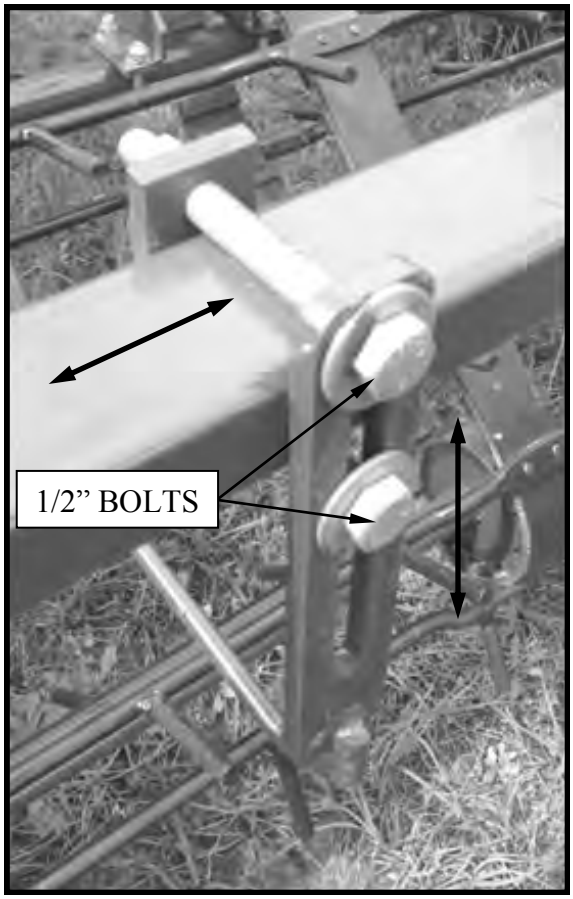
4 Row Machine



6 Row Machine

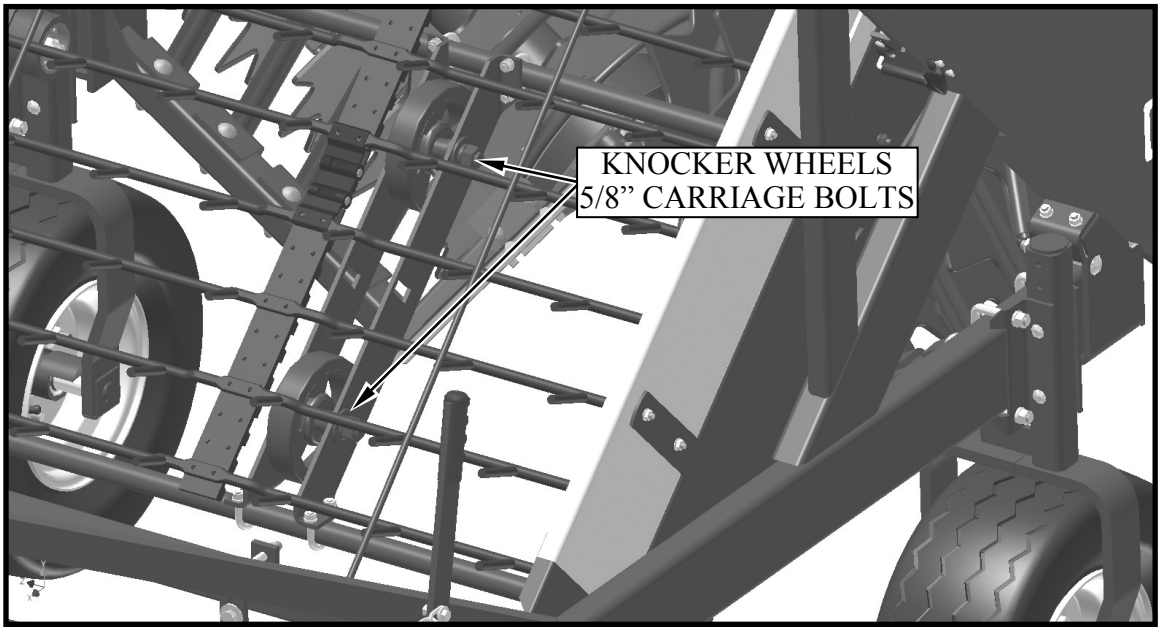


Starting from the center of the machine, layout the row spacing on the 2 ½ x 1 ½ tube used to mount the rod. Once the position of each rod has been marked install the rods to the tube as shown below. The rods can be easily adjusted once digging in a field has been started to insure they are located above the tap root and at a height that allows the vines to flow freely up the conveyor without hanging on the rod. Dimensions used to get a starting point to mount the rods are shown in the Overhead Layouts section on pages 14-23.



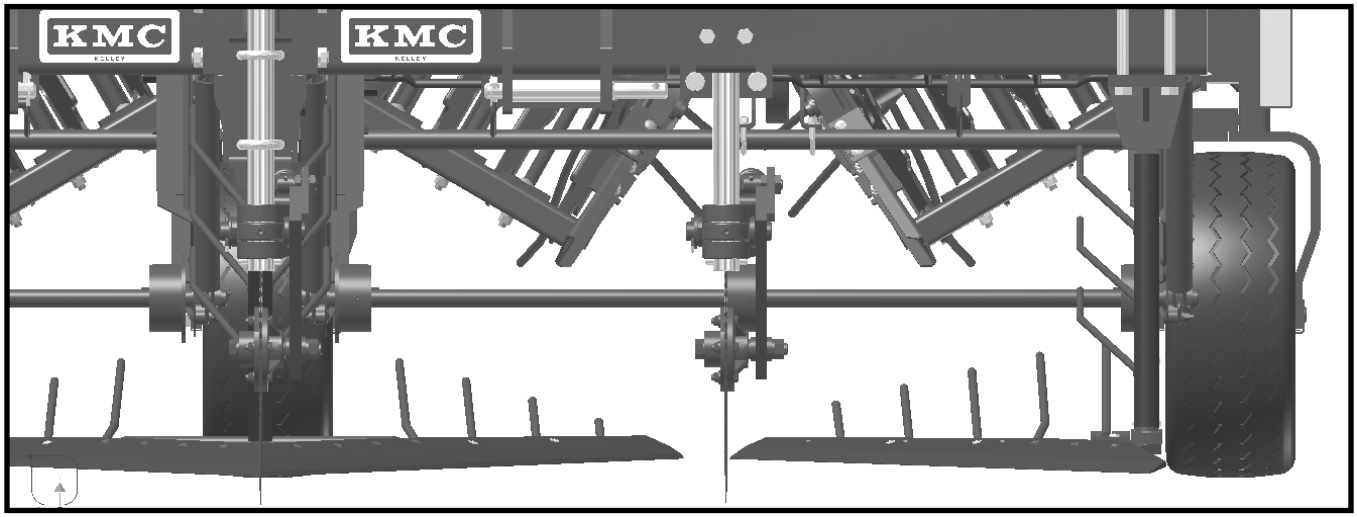
Hardware used to attach the rod is 2 (1/2") bolts and flatwashers on slotted plate side which is mounted on front side of tube. Cap, lockwasher and nut are to be installed on back side of tube. When installing the rod leave the lower bolt, flatwasher, lockwasher, nut and cap loose to make it easier to place around tube and then install upper hardware.

Dirt Knocker Wheels



Degree of conveyor bar or rattler bar agitation can be varied by adjusting the knocker wheels up or down. Adjust the knocker wheels to strike with sufficient force to shake soil from the peanuts. This adjustment will vary with soil and moisture conditions. The knocker wheels are adjusted up or down by loosening the 5/8 carriage bolts on the bracket and sliding the wheel up or down to desired height and then tighten the 5/8 carriage bolts back to proper torque

Plow Depth



To insure peanuts are inverted properly the vines must flow up the rattler frame, generally in the same width pattern that they are grown in the ground and land as high on the inverting cylinders as the row width allows. To assure that the plows do not move peanut vines to the center of the rattler frame, always be sure you are plowing deep enough and with a sharp plow blade. **WHEN RIGID DSI IS PUT INTO OPERATION, PLOWING TOO SHALLOW OR WITH A DULL BLADE CAUSES EXCESSIVE PEANUT LOSS.** Plow depth is adjusted by using the middle link of the tractor hitch. Let lift all the way down so that blades can reach maximum depth. The top link can then be shortened to put unit deeper or lengthened to put unit shallower so that tap root of peanut vine is cut and peanuts are not lost below the surface due to digging shallow.

START-UP PROCEDURE

Insure that all hydraulic lines are connected properly to tractor hydraulic remotes and no leaks in the hydraulic system are noticeable. Lift implement in air so that all moving components are visible from the seat in the tractor. Turn flow to hydraulic down and engage hydraulic remote, increase flow so that conveyor and drum are turning at proper speed. Proper speed of conveyor can be adjusted by using the provided rear shaft tachometer readout and adjusting the hydraulic flow so that the readout shows 2.9 for a 3.0 mph tractor speed. Tachometer is programmed from the factory to give the correct readout for the speed relationship of 3.0 mph tractor speed, which is the normal operating speed of a Rigid DSI. If tractor needs to be operated at a higher rate of speed refer to shaft speed readout programming section on page 54. Once the digger speed has been set and all components are in operation with no noticeable issues with moving components, the digger can be positioned on the peanut rows.

Tractor can then be positioned to dig the rows of peanuts, with hydraulic engaged and implement lowered to the ground, pull forward to allow the digger to go into the ground. If depth of digger is too deep or shallow refer to section above on plow depth. Once depth is set and the peanuts are going smoothly up the conveyor and over the back keep a check on mph of tractor and readout showing on shaft tachometer. Adjust hydraulic speed to match with mph of tractor or as needed to allow for even and smooth flow of peanut vines up the conveyor.

Make a partial pass in the field then turn off machine and tractor or have someone following from behind to monitor machine performance. Check to be sure minimal peanut loss is found on the surface or down in the ground. Look at inverted windrow to insure that the tap roots are standing straight up in the air and not leaning to one side after inverting. If peanut vines are not inverting with the tap root up, adjust the vine rods to make a tighter windrow and be sure that the cutting coulters are deep enough to fully cut the peanut vines.

TOO MUCH LEAN TO THE LEFT

TOO MUCH LEAN TO THE RIGHT

If the vines are still leaning to one side it may become necessary to drive the tractor to the opposites side of the lean in order to get them centered. Vines that lean too much to the left of the row, drive the tractor more to the right and if the vines lean too much to the right, drive the tractor more to the left. This should help center your tap roots in the up positions as shown below.

CENTERED CORRECTLY

Continue to monitor machine performance and adjust components as necessary to achieve better performance or call KMC directly for assistance if issues cannot be determined as to how to solve the performance issues.

MAINTENANCE

SERVICE SCHEDULE

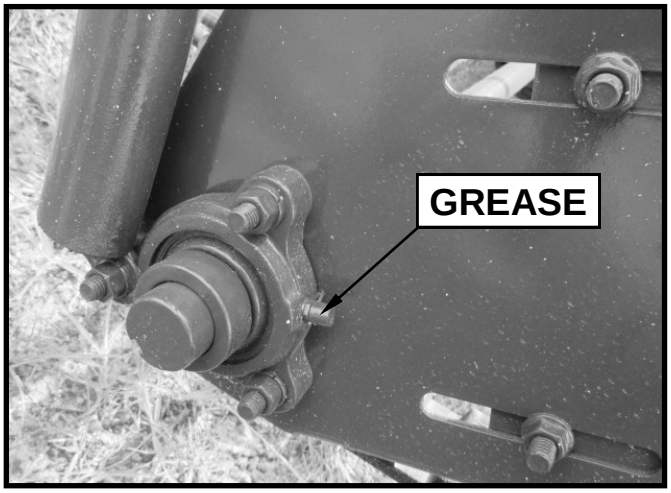
This implement is designed for long service life but must be well maintained for components to give a long service life. Below is a table for wear components, bearings or lubrication points on implement or components that must be inspected, replaced or lubricated to insure that the implement will perform for many seasons of use.

Service Item	Every 10 hours or Daily	Every 50 hours or Weekly	Annually
Inverter U-Joint (Lubricate)	X		X
Peanut Blades (Inspect/Replace)	X		X
Coulter Blades (Inspect/Replace)	X		X
Cut Rods & Fingers (Inspect/Replace)	X		X
Rattler Frame Lower Bearing (Lubricate)		X	X
Gauge Wheel Bearing (Lubricate)		X	Pack if necessary
Cutting Coulter (Lubricate)		X	X

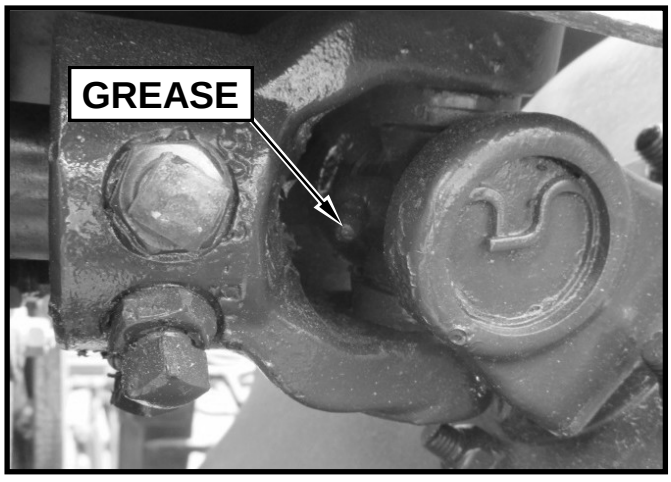
LUBRICATION POINTS

To insure bearings with grease points provide long life, refer to service schedule on previous page as to when to grease them. If the bearings are greased more than recommended it can be just as bad as not greasing them enough. Shown below is the location of the components that have grease fittings so that these components can be greased as recommended. When greasing bearings, be sure not to push more grease than needed causing grease to blow through seal. If grease comes through seal around shaft due to over greasing, premature bearing failure can occur due to dirt and trash becoming trapped in the grease and being pulled into the bearing as it is used.

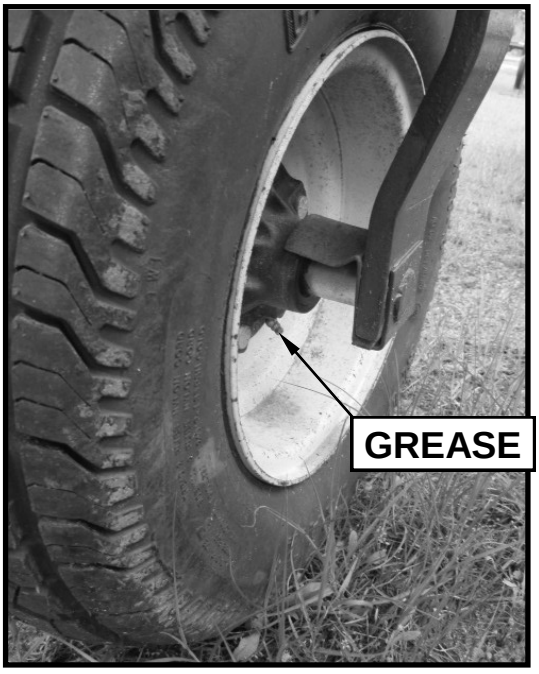
Swivel Coulter Grease Fittings



Rattler Bearing Grease Fitting



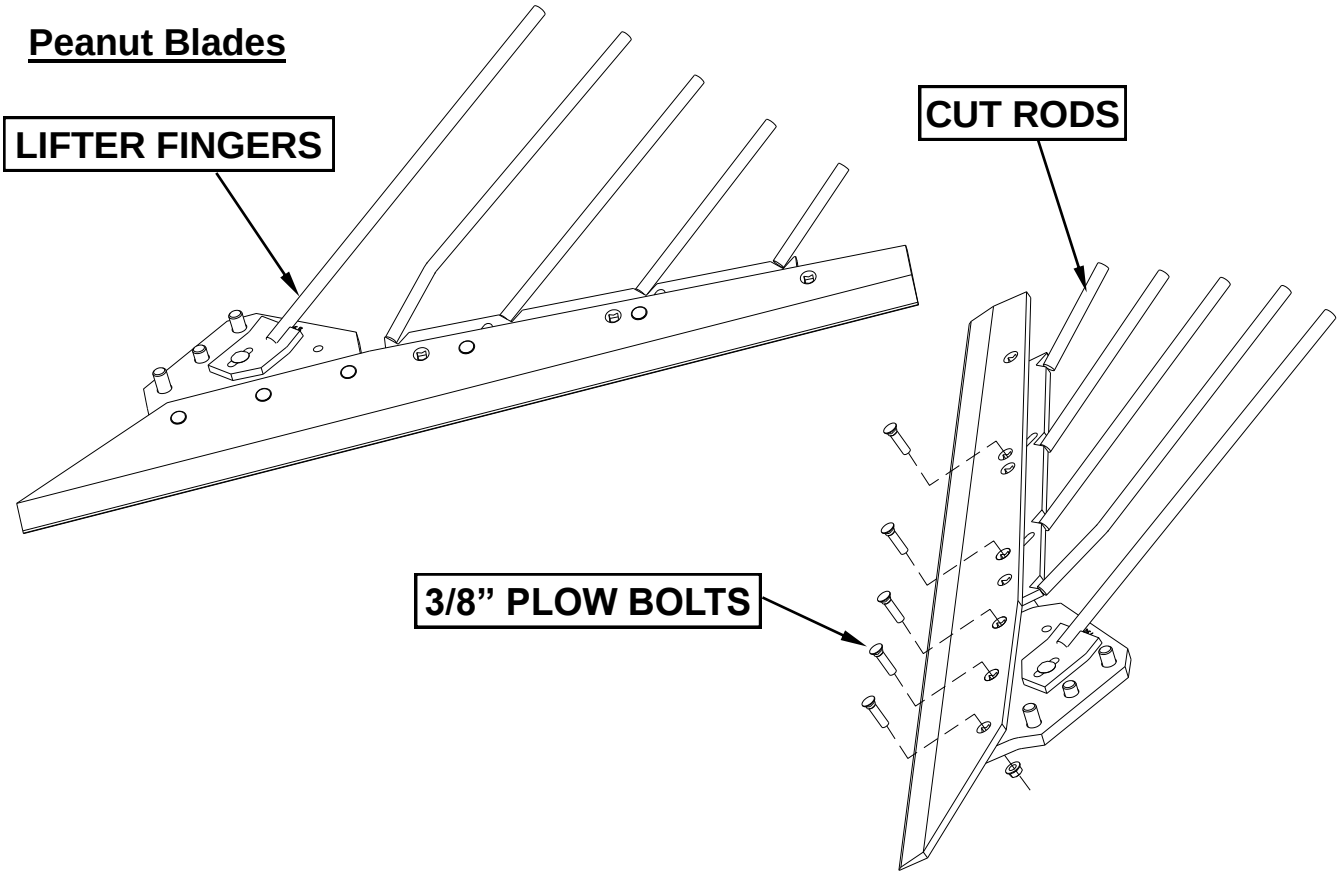
Drum U-Joint Grease Fitting



Gauge Wheel Hub Grease Fitting

WEAR ITEM REPLACEMENT

Peanut Blades



Sharpness of the peanut blades is critical in the proper digging of the peanuts, as the blades begin to dull due to continued use or hard soil conditions they need to be replaced with new blades. Blades can be replaced by removing the 3/8” Grade 8 plow bolts and flange nuts that attach the blade to the frog of the shanks. Once the worn blades are removed the cut rod can also be removed from the old blade to be reattached to the new blade or replace if worn out, refer to section below to determine when cut rod needs to be replaced. With cut rod attached to new blade, blade and cut rod can then be reattached to the frog of the shank with new 3/8” Grade 8 plow bolts and flange nuts.

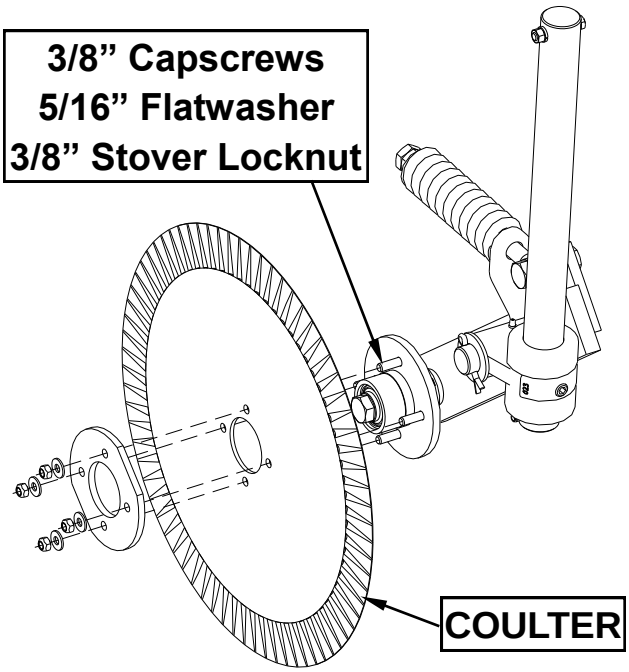
Cut Rods and Lifter Fingers

Cut rods are designed to carry the peanut vines from the blades to the conveyor and become worn due to continued use or hard soil conditions. The rods themselves will begin to have a flat spot along the top of the rod and must be monitored to determine when they need to be replaced. When the rods begin to become thin due to this flat spot they need to be replaced to prevent decreased machine performance. They are replaced by removing the 3/8” Grade 5 plow bolt, flatwasher and flange nut from the bottom of blade where the cut rod is attached. New cut rods can then be replaced by mounting them to the back side of the blade in the same location that the old ones were removed. The plow bolts, flatwashers and flange nuts can then be tightened to secure the cut rod to the blade.

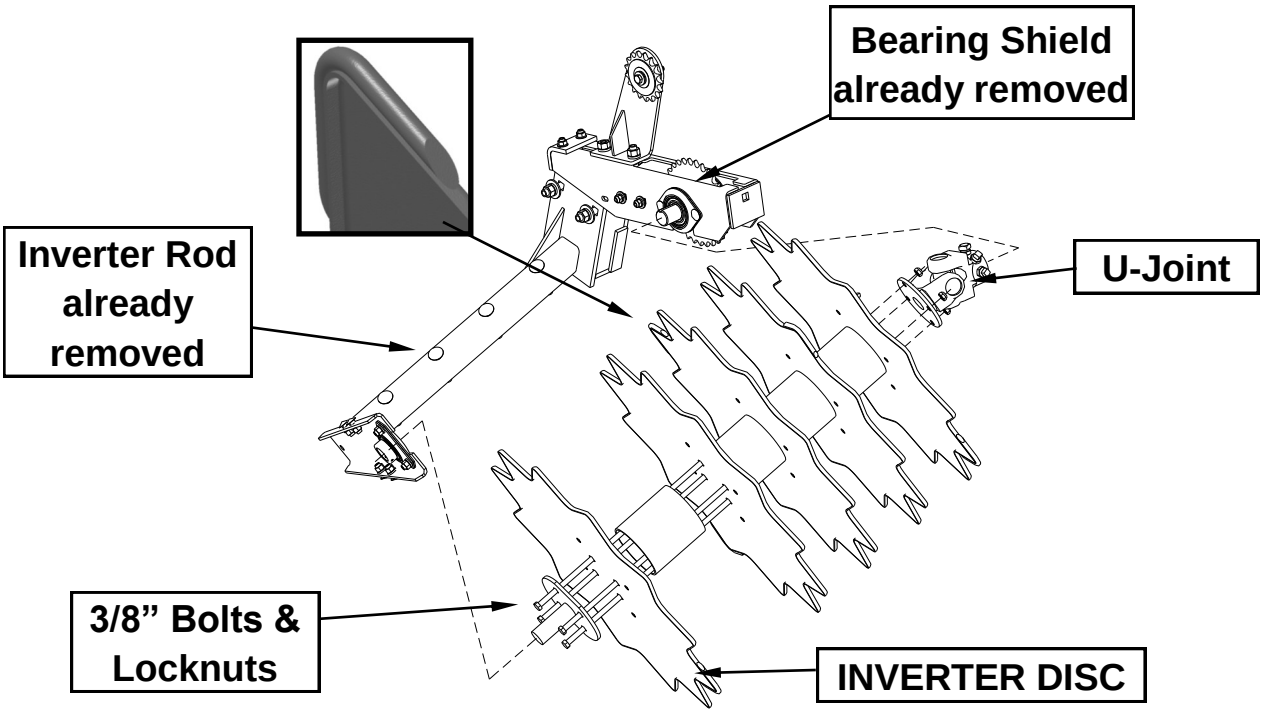
Lifter fingers are designed to work the same as the cut rod but are attached to the cut frog instead of the blade and need to be replaced once they begin to have a flat spot in the same manner as the cut rod. Lifter fingers can be replaced by removing the 3/8” carriage bolt and flange nut attaching the lifter finger to the frog. A new lifter finger can then be attached in the same location as the old one and the 3/8” carriage bolt and flange nut can be tightened to proper torque.

Cutting Coulter Blades

Cutting coulters at the front of the machine become dull due to running in the dirt and cutting through the peanut vines. They must be replaced once the cutting edge of the coulter is nearly gone and the overall diameter of the coulter has been reduced. The coulter blade is replaced by removing the 3/8" capscrew and lock nuts that secure it to the hub at the end of the coulter fork. A new coulter can then be mounted to the hub and the hardware replaced with new 3/8" capscrews and lock nuts and tightened to the proper torque.



Inverter Cylinder Discs



The inverter cylinder on the rear of the machine is critical in removing additional dirt and aiding in the inverting of the peanut vines. Discs of the cylinders can become covered with dirt causing wear to the tips of the discs. Each disc has a piece of round rod welded to one tooth and needs to be monitored for wear. Once this rod becomes worn it needs to be replaced. If disc wear is not monitored due to excessive dirt, excessive wear can take place causing holes in the teeth that vines can hang in causing them to wrap around discs. To replace inverter discs, all inverting rods must be removed by removing the 5/8" carriage bolts and removing each rod and placing to the side. Bearing shield on lower end of cylinder must then be removed by taking out the 3/8" carriage bolts that hold it in place. Once the shield is removed the lower bearing can then be removed so the inverter cylinder can be removed easily from the lower support. Shield around u-joint is to be removed by removing

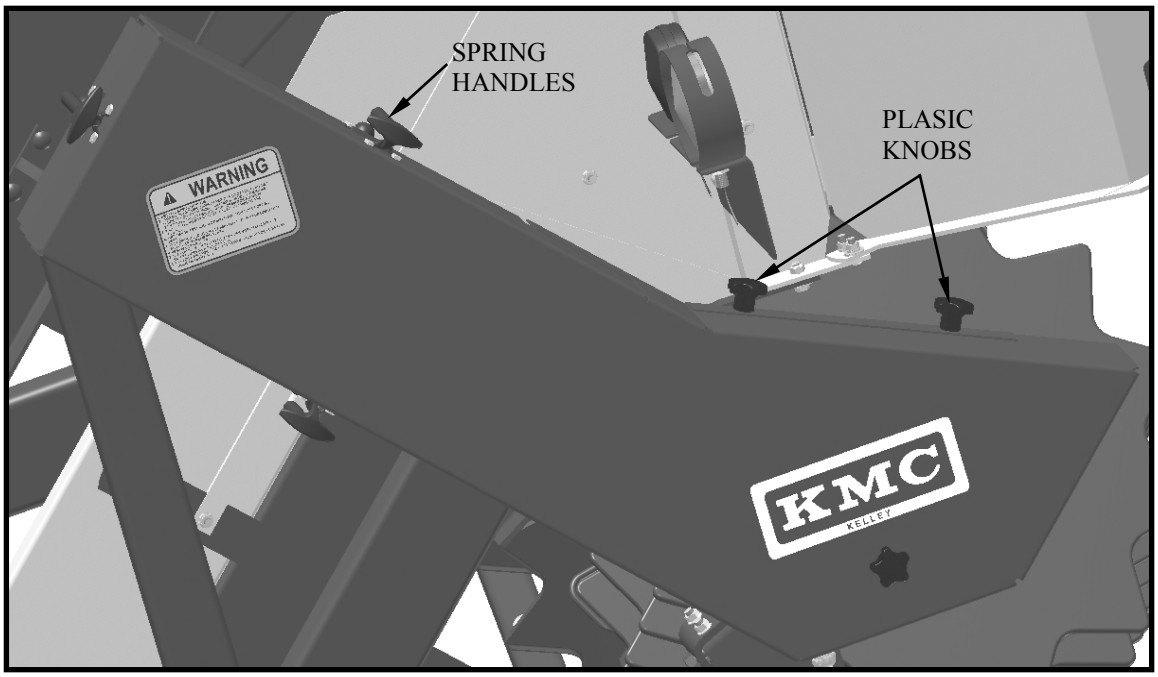
the 5/16” carriage bolts that attach it to the cylinder support. U-joint setscrews can then be loosened so the u-joint can be slipped off the shaft. Place drum assembly on flat surface and remove the 3/8” bolt and lock nut that attach the discs to the u-joint. Replace all worn discs and reassemble the cylinder in opposite order removed.

RATTLER FRAME REMOVAL, COMPONENT REPAIR AND REINSTALLATION

Removal Procedure

Rattler frame is designed to be removed to aid in maintenance of bearings, shafts and sprockets to ensure long service life of implement. Each step is shown below with diagrams to show where all components to remove are located.

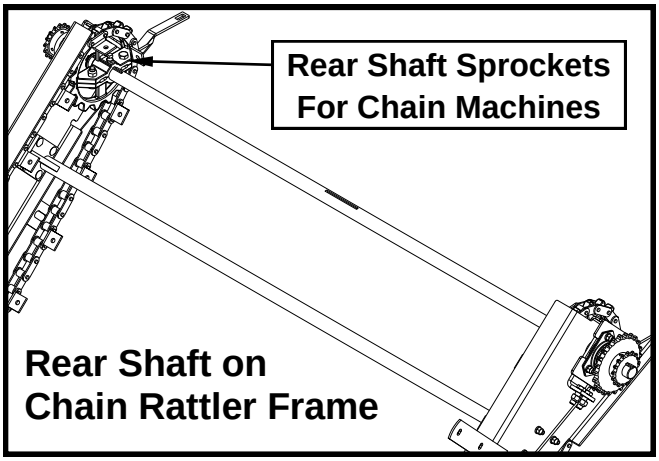
1. Remove all drive shields for rattler frame to be repaired by pulling on the spring handle on sides of shield and removing plastic knobs that hold remaining shield in place.

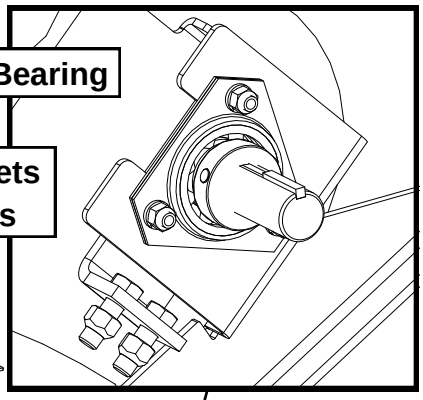


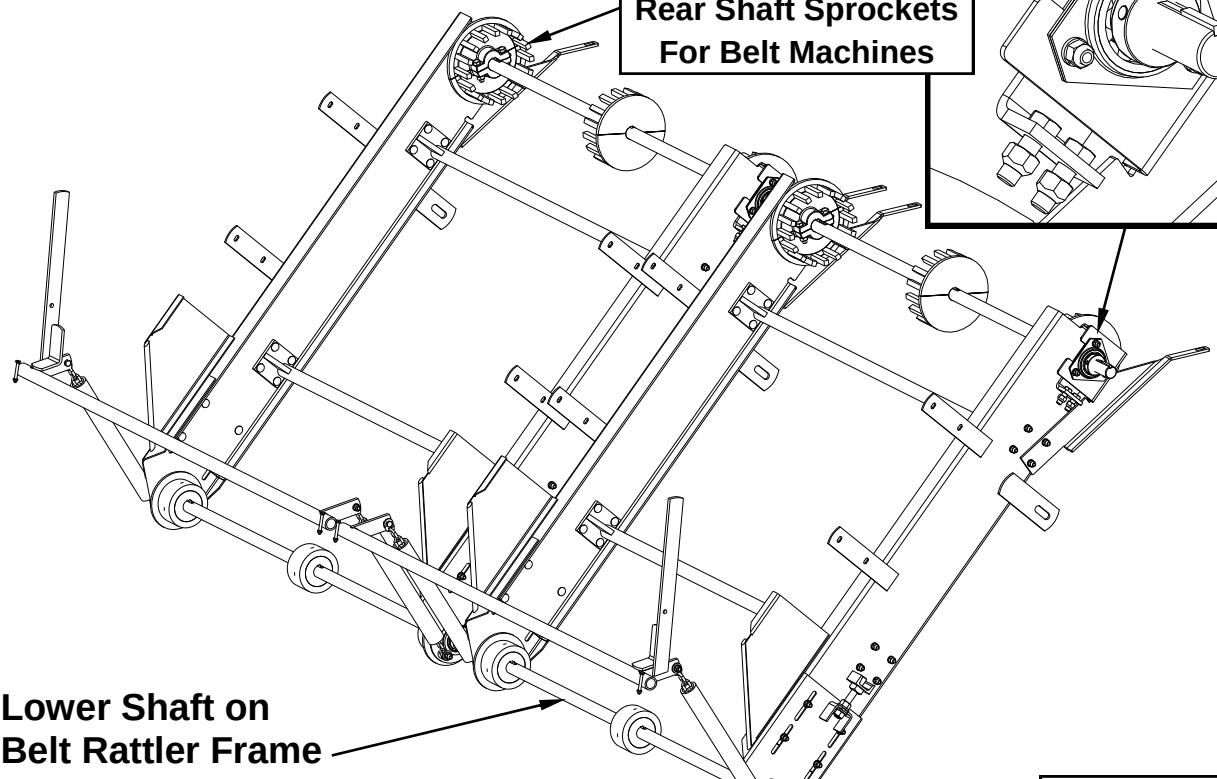
2. Remove all drive chains for rear shaft and inverter drum by loosening idlers that hold tension on chain and place chains to side. Chains used are 60H for motor drive, 50 for outside inverter drum drive and 60 for center inverter drum drive.
3. Remove 3/8” hardware at front of rattler frame that attaches adjusting chain to adjusting bar in main frame.
4. Unplug all warning lights but do not remove lights or brackets.
5. Using 2 lifting chains, wrap 1 chain around ends of lower brace pipe on each end as close to rattler sides as possible. Repeat with other chain for top brace pipe.
6. Using boom on tractor or loader fork, attach chain and lift rattler frame up slightly to relieve pressure on rear pivot points. Remove ½” capscrews and locknuts from pivot carefully as rattler frame can easily move as hardware is removed.
7. Lift rattler frame out of machine and place on saw horses or table to prevent rear fender and adjusting hinge fender from being damaged.

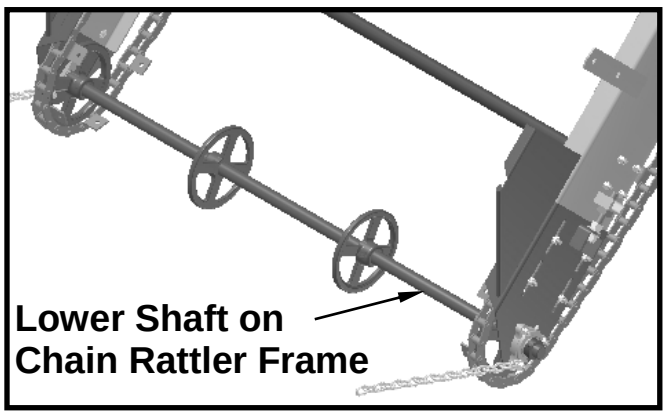
Component Replacement

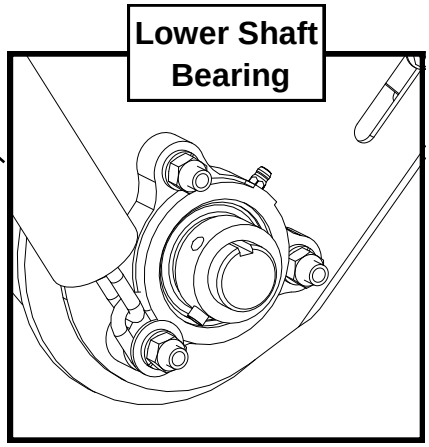
4-Row Belt Rattler Frame Shown











Now that rattler frame is safely removed from the main frame all bearings, sprockets and shafts can easily be replaced. Rear shaft bearings are installed with a flange and 3/8" hardware to the rattler frame sides. Carriage bolts used to secure flange and bearing in place are installed in slots to make them easier to remove if thread becomes damaged. Lower shaft bearings are in a cast housing that can be removed by loosening the 3/8" hardware and carefully pulling the bearing from the shaft. Chain drive sprockets on rear shaft are held on shaft by using setscrews with a socket head so they can be below the surface of sprocket. Sprockets used to drive the belt or chain of the conveyor use capscrews and setscrews which can be removed and replaced if they are worn due to extended use. Pivots are held in place using snap rings and should be replaced if the ring is no longer in the groove of pivot due to rear sprockets moving or excessive dirt.

Reinstall Procedure

Rattler frame is reinstalled into main frame by doing the removal procedure in reverse and is also shown in steps below.

1. Lift rattler frame from table or saw horses using chains on each end of brace pipes by using boom or loader fork.
2. Carefully insert rattler frame into main frame, make sure to line up holes in mounting plate and rattler frame pivot so that **new** ½" capscrews and locknuts can be installed.
3. Once rattler frame is secured in the rear and ½" hardware is tightened to proper torque pull rattler frame up so that 3/8" hardware to mount lower chain to adjusting pipe can be reinstalled and tightened to proper torque.
4. All chains used to remove and reinstall rattler frame can be removed from brace pipes and pipes inspected to be sure they were not damaged which could cause rattler frame to be unleveled when installed in main frame.
5. Drive chains can be reinstalled to inverter drums and rear shaft drive from hydraulic motor. Chain from hydraulic motor to rear shaft is a 60H chain, drive chain for outside inverter drums are 50 chain and center inverter drive chains are 60 chain. All chains are labeled with a stamp that contains the numbers to identify each type so they can be installed in correct location. Tighten chain idlers in place so that chain is tight but can be moved by hand up or down freely so that chain and sprocket excessive wear will be reduced due to the tightness of the chains.
6. Drive shields are to be reinstalled once all components are verified that they are properly secured. Shields are secured using the spring handles at top of shield and plastic knobs at lower end and check to be sure shield is tightly held against all stops.

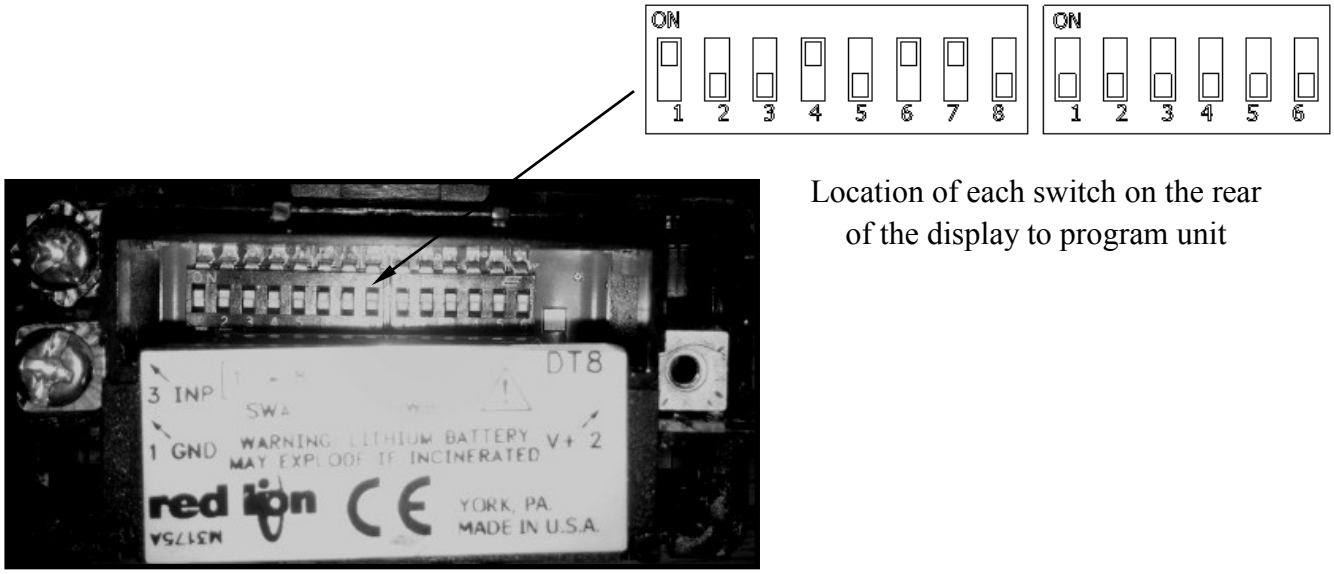
STORAGE

To maintain a machine that will continue to give years of service some storage tips as provided below to be performed at end of each seasons use.

1. Wash machine clean by removing all dirt and vines from all components and main frame
2. Pour a light coat of used motor oil on rattler chains, drive chains, cutting coulters, plow blades and inverter rods to protect from rust during storage
3. Store machine under a shed where it will be kept dry and protected from direct contact with the elements
4. If machine cannot be stored under a shed and is equipped with a belted conveyor, remove the conveyor belts and store them inside and away from direct sunlight

SHAFT SPEED READOUT PROGRAMMING

Readout has been fully programmed for each Rigid DSI from the factory. However, if the readout has to be replaced due to the original being damaged or battery is damaged or no longer charged, follow procedure below to program it. If readout needs to be programmed refer to diagram below for switches needed to be positioned so that display will show correct conveyor speed for tractor ground speed.

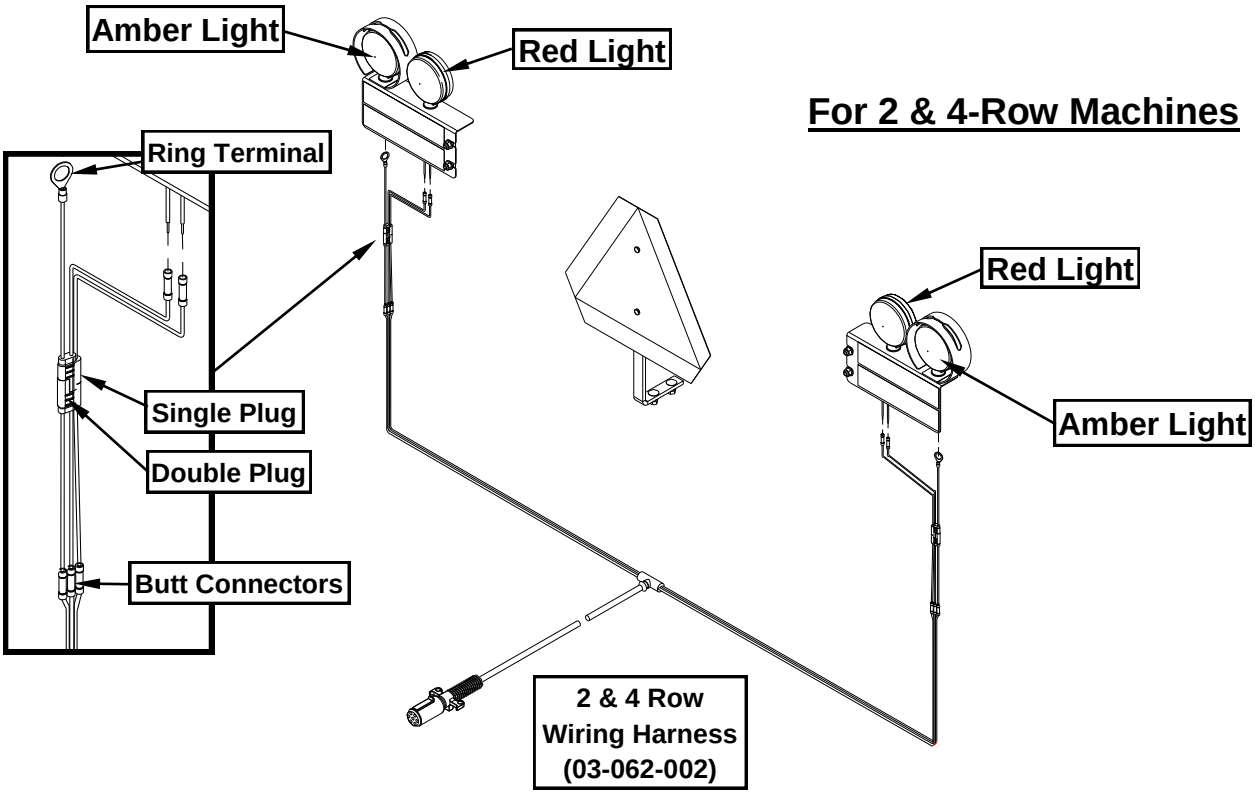


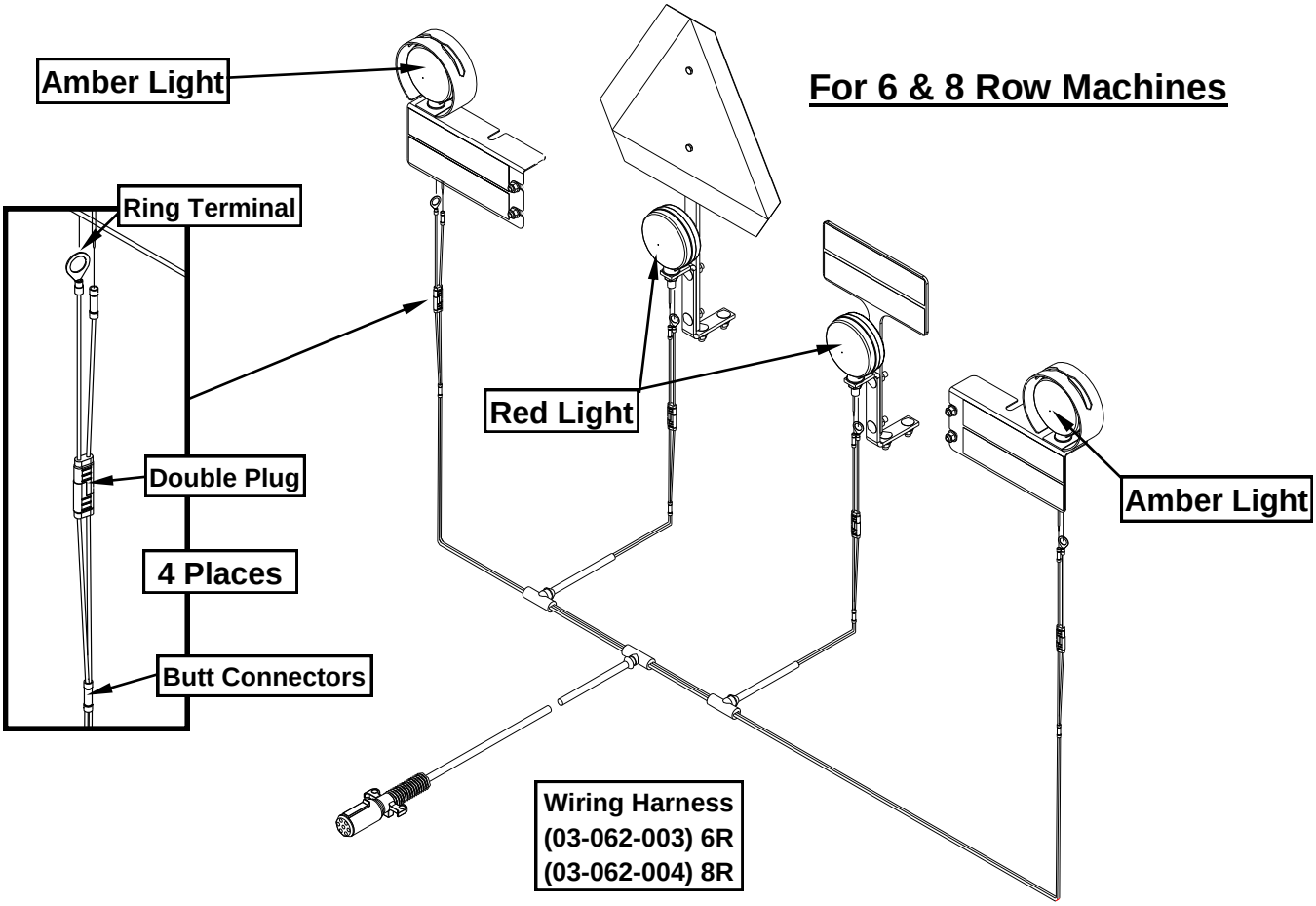
Location of each switch on the rear of the display to program unit

Rear view of readout for location of switches to move

IMPORTANT! Do Not program your readout unless you have received a replacement from KMC. Readouts on new machines are fully programmed from the factory and attempting to program them could cause errors in the display.

WIRING SCHEMATIC





TROUBLESHOOTING

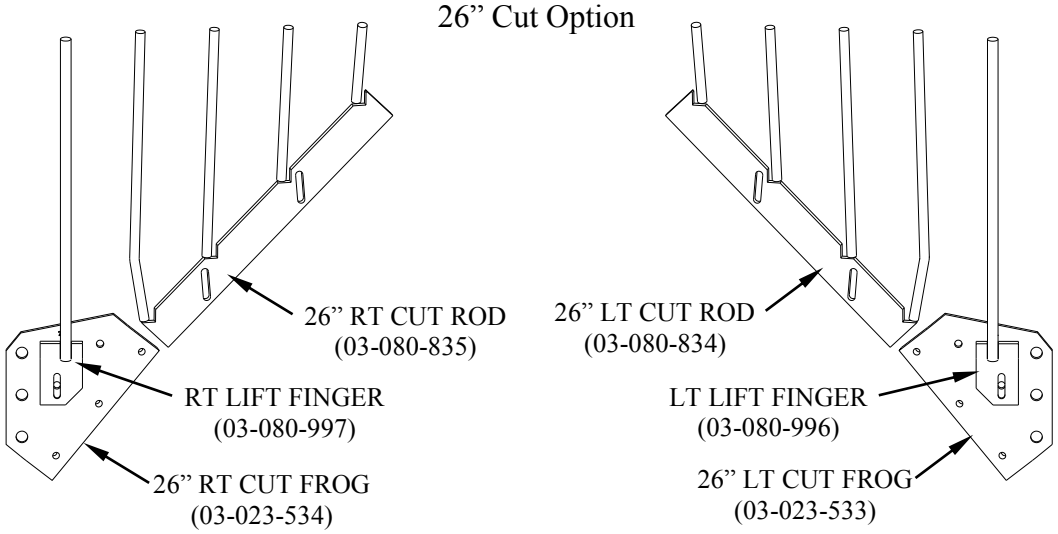
Problem	Cause	Solution
Shaft speed readout display shows 0.0	Display is not receiving information from sensor	Inspect clearance between sensor and sprocket. If clearance is greater than 1/8" adjust to 1/32" – 1/16". If display still does not work, inspect all wires for frays and connections for damage. Repair or replace any damage. If display still does not work, sensor needs to be replaced.
Shaft speed readout has a blank display	Readout is not functioning	Readout may be damaged and needs to be replaced.
Shaft speed readout displays an incorrect speed	Readout needs to be programmed correctly	Reprogram readout by using directions shown on page 54.
Peanuts left in ground behind digger	Rigid DSI is not deep enough in ground	Shorten top link of tractor hitch to allow implement to go deeper in the ground.
	Blades are worn or dull	If blades are dull, remove and sharpen edge. If blades are worn beyond repair, replace with new blades.
Excessive dirt in inverted windrow	Rigid DSI is too deep in ground	Lengthen top link of tractor hitch to allow implement to go shallower in the ground.
	Conveyor speed too slow compared to ground speed	Adjust conveyor speed by increasing hydraulic flow from tractor so conveyor speed matches tractor ground speed.
	Not enough agitation from knocker wheels	Knocker wheels need to be raised up if not in upper part of slot. Additional set of knocker wheels may need to be installed beside current set. Refer to parts book or call KMC parts department to order additional set.
Conveyor stalls during operation	Conveyor speed too slow for tractor ground speed	Adjust conveyor speed by increasing hydraulic flow to match tractor ground speed.
	Soil condition is too wet	Wait until soil becomes dryer.
	Conveyor is carrying too much dirt from blades	Adjust top link of tractor hitch so blades are shallower in the ground.
Peanut loss is noticed behind shank	Conveyor speed too fast for tractor ground speed	Either adjust conveyor speed by decreasing hydraulic flow or decrease tractor speed so each matches for an even flow up conveyor.
	Conveyor is adjusted at incorrect angle	Refer to conveyor adjustment section page 40.
	Blades are dull or dragging vines in the soil	Lift up Rigid DSI to check to see if shanks or coulters are dragging, if so clean off. If no dragging is seen, replace or adjust blades or coulters.
	Vine guide rods need to be adjusted	If vine guide rods are not adjusted so an even flow of vines are coming out the back, they will bunch up or be carried under conveyor. Adjust rods according to page 24.

Problem	Cause	Solution
Inverted windrow leans or tap roots are not standing straight up	Conveyor speed and tractor ground speed are not matching	Adjust either conveyor speed by hydraulic flow or tractor ground speed.
	Vine guide rods are not adjusted properly	Adjust rods by beginning with standard setup on page 24. Adjust lower rods out and upper rods in if problem continues.
	Vine flow from blades to conveyor is not flowing freely or blades pushing	Adjust plow depth using top link of tractor hitch, conveyor height referring to page 40 or vine guide rods to allow for even flow.
	Vines not transferring to inverter drum smoothly	Adjust conveyor and/or tractor ground speed so vines land near or behind the center of inverting drum.
	Vines are not cut completely before going up conveyor	Adjust depth of cutting coulters so that vine is cut to allow for vines to be properly inverted.
Vines or trash wrapping around shanks	Coulters not cutting	Inspect coulter for wear and replace if coulter worn. Lower coulters in ground to cut deeper and cut vines cleaner.
	Coulters not positioned with shanks correctly	Reposition coulters as shown in overhead layouts on pages 14-23.

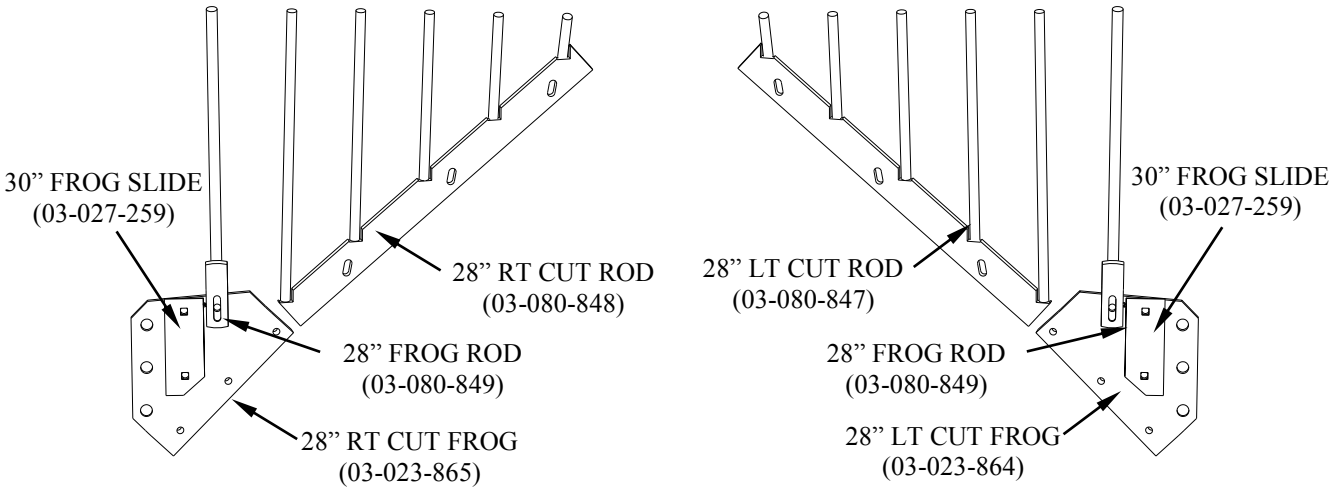
Shank, Cut Frog, Lifter Finger and Cut Rod Configurations

We offer different cut length options for the cut frogs to mount the blades and cut rods used to transfer the peanut vines to the conveyor. Shown below are all the different options we offer with a detailed description and visual of each one to better understand the repair parts needed when replacement is necessary. The cut frogs and rods used for the standard shanks are shown first for each different cut length that is available.

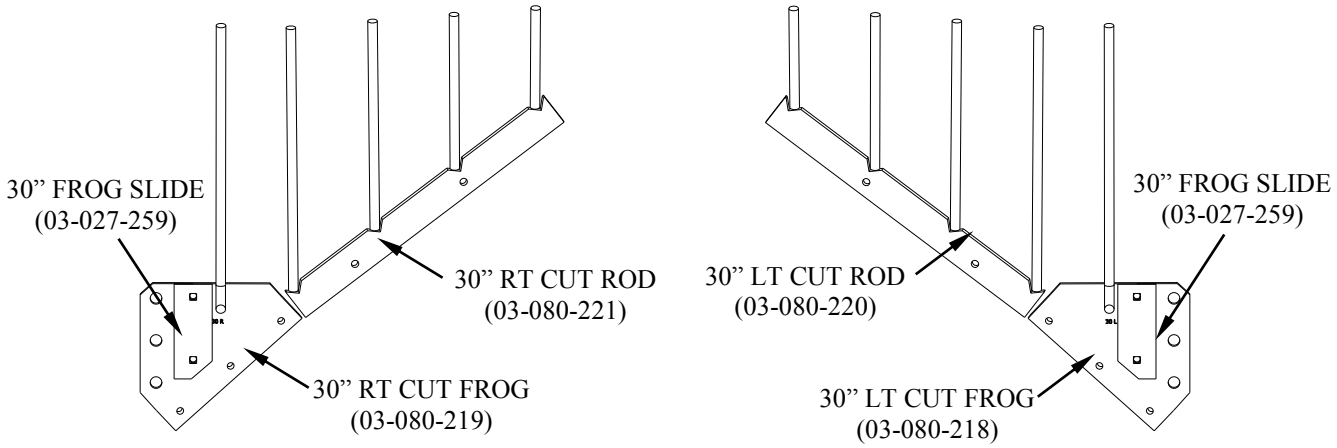
26” Cut Option



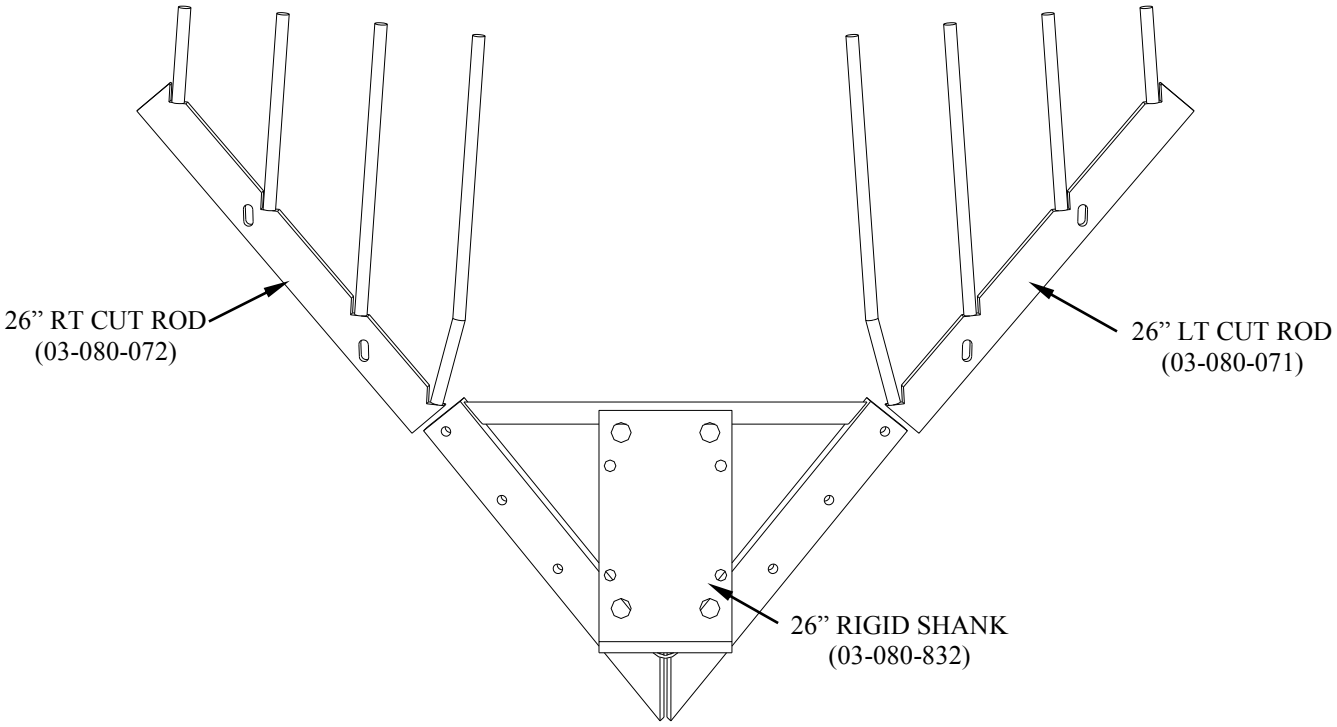
28” Cut Option



30” Cut Option

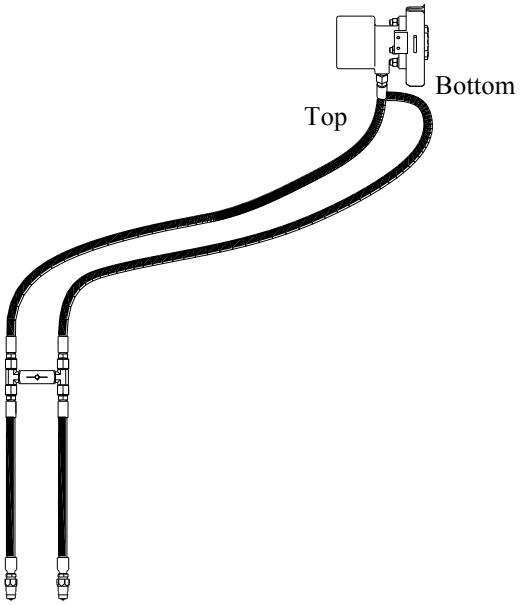


Machines that use a rigid v-shank instead of the standard shank with cut frogs use a different cut rod that is mounted to the blade. It is shown below to show the differences between it and the other cut rods that are available.

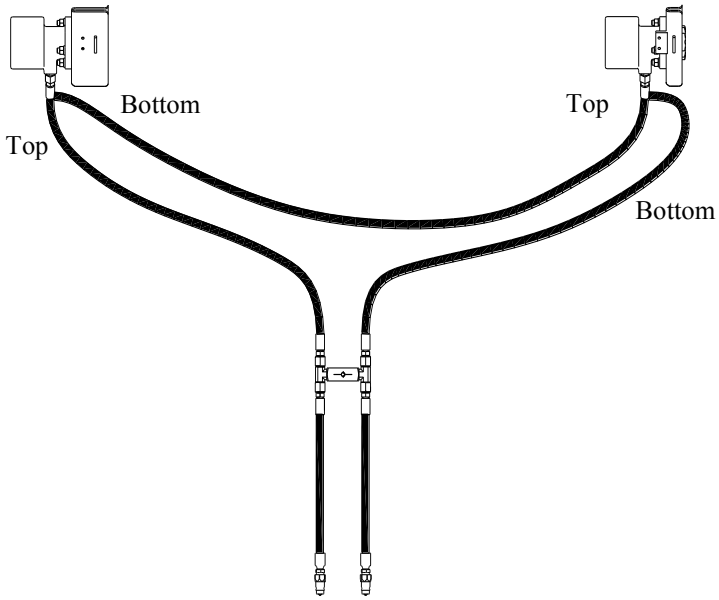


Hydraulic Configurations

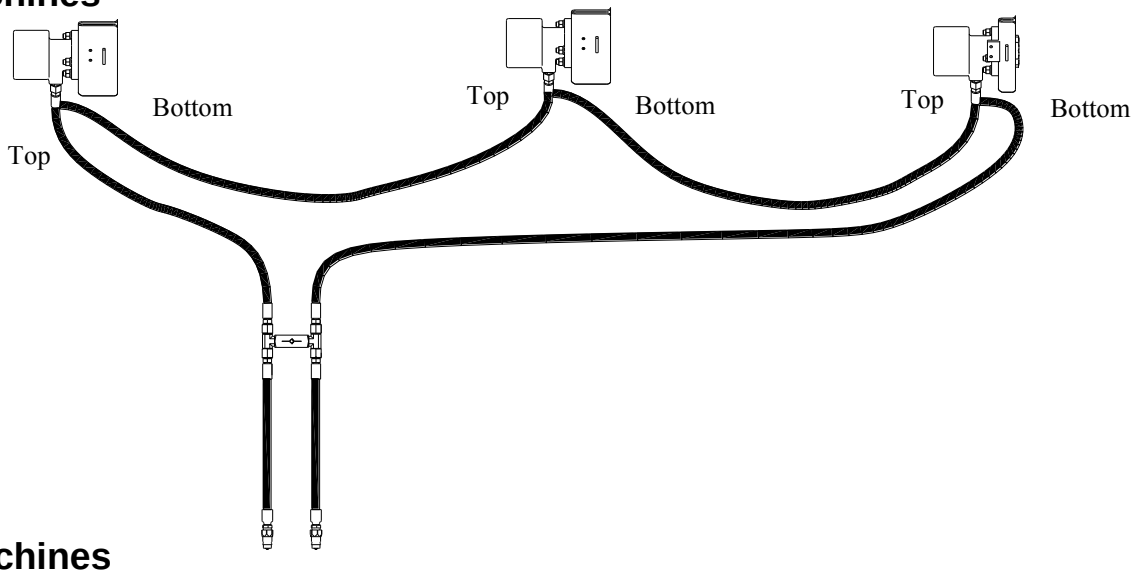
2-Row Machines



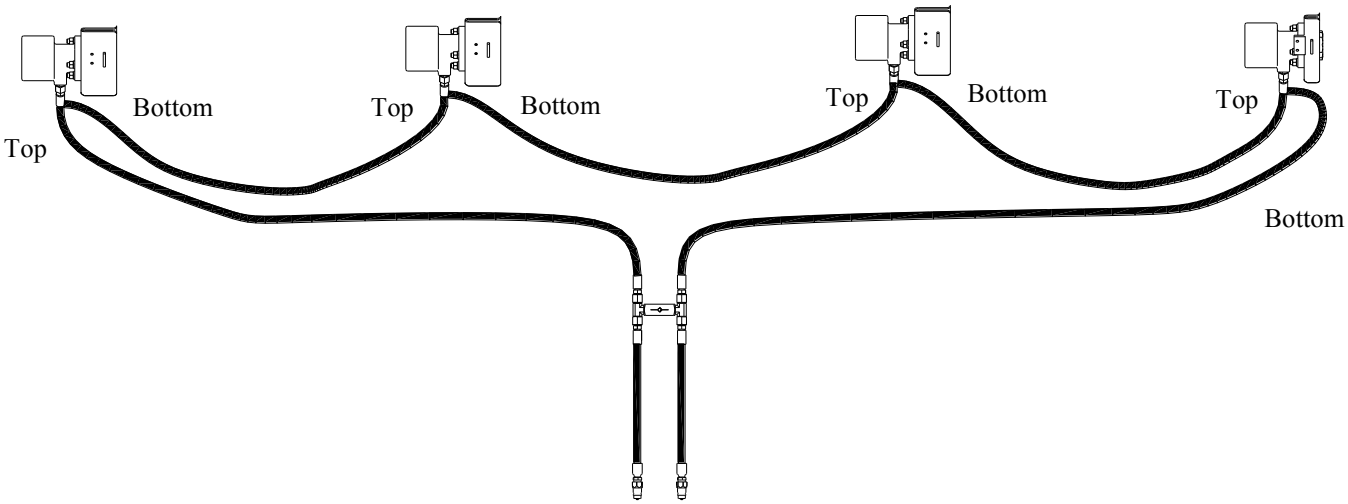
4-Row Machines



6-Row Machines



8- Row Machines



The following is a list of serial numbers issued to our machines at the beginning of each year. To determine when a unit was made, find the range within which the particular serial number falls. It would have been produced between January 1 to December 31 of that year.

YEAR	SERIAL NUMBERS
2014	86419-87790
2015	87791-

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