KMC
KELLEY

64-SERIES

6410 POULTRY LITTER WINDROWER

MEMBER
FEMA
FARM EQUIPMENT MANUFACTURERS ASSOCIATION
www.FarmEquip.org

OPERATOR'S MANUAL

THIS MANUAL TO ACCOMPANY MACHINE

PART NO. 64-OM-02
PRINTING DATE: DEC 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. For non-commercial users the warranty ends twelve (12) months thereafter. For commercial users the warranty period ends six (6) 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

6400 SERIES LITTER WINDROWER OWNERS MANUAL

Table of Contents:

FORWARD

INTRODUCTION:

The **KMC 6410 Series Litter Windrower** runs next to the wall and through the interior of the house. Material is moved along the blade and discharged by the auger system into windrows. Care should be taken when operating next to walls as the wall scraper attachment will not flex around posts and other obstacles and is only meant to funnel litter into the augers. For cleaning next to walls a KMC Wall Cleaner is recommended.

TO THE PURCHASER

This **KMC 6410 Series Litter Windrower** 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.

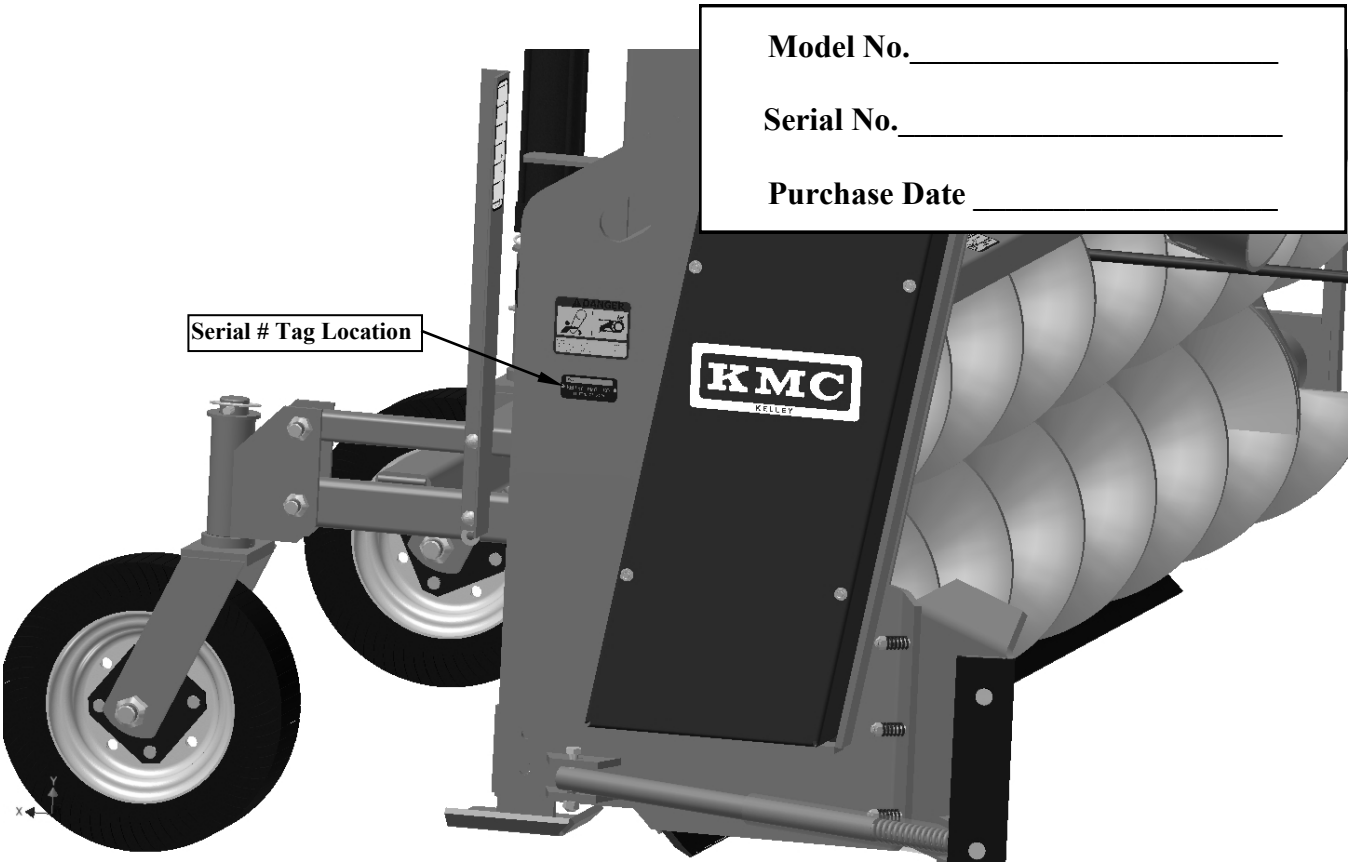
After reading this Operator's Manual, Please keep it for reference each season.

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._____

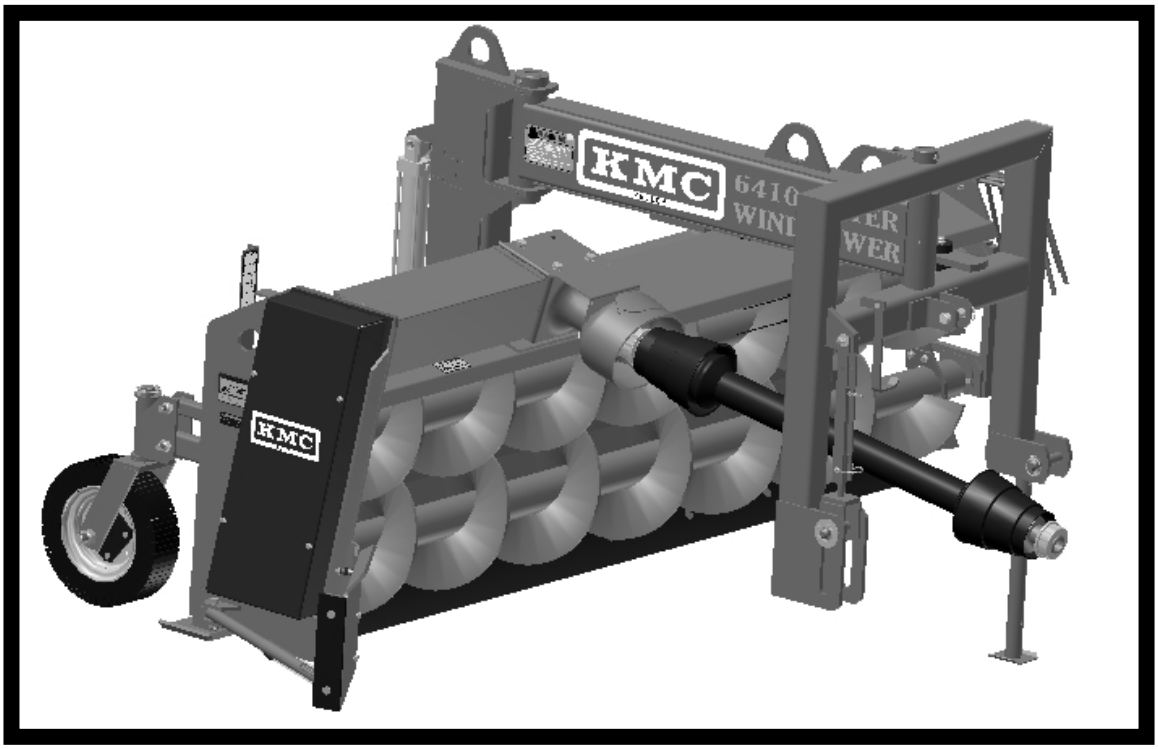
Serial No._____

Purchase Date _____



MODELS COVERED IN THIS OWNER'S MANUAL:

6410 Litter Windrower with Gauge Wheels



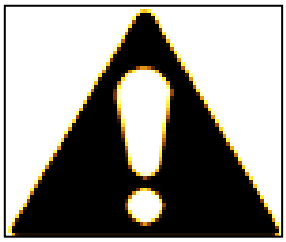
PRE-OPERATIONAL CHECKLIST:

- ☐ 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

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)

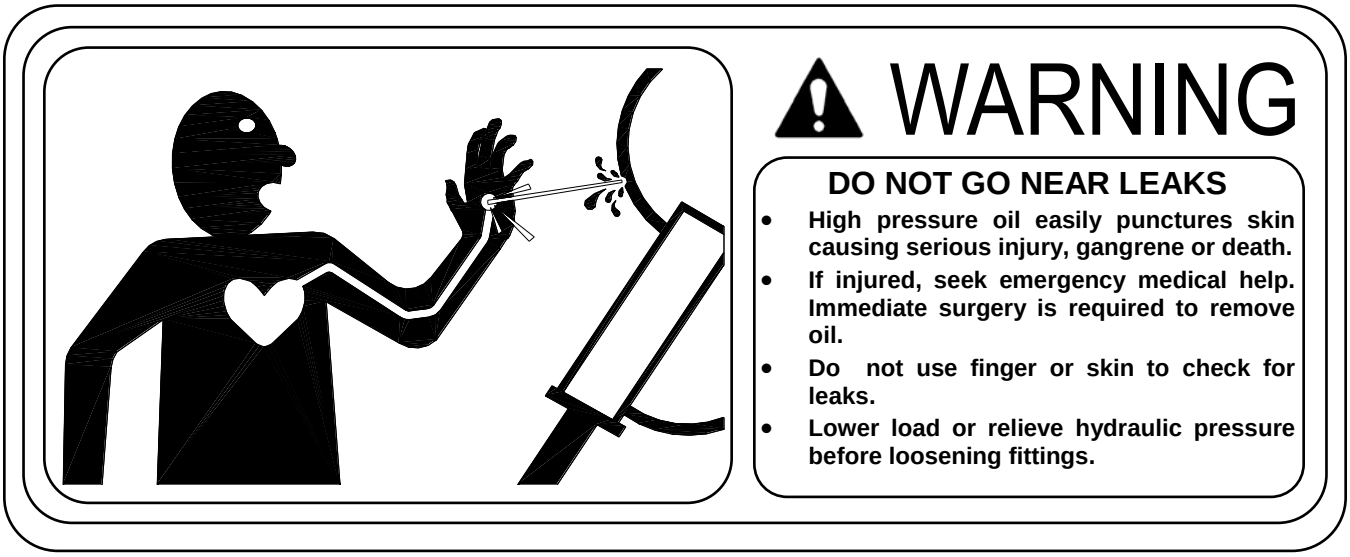
This symbol indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

(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 owner'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 Litter Windrower** in accordance with the instructions given in this manual.
2. To inspect the **KMC Litter Windrower** 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 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 Litter Windrower . Only experienced tractor operators should operate the tractor when the Litter Windrower is in use.**

6. Stay clear of hydraulic lines, as they maybe under extreme pressure or heat.

7. Drive safely during transport; excessive speed while turning or on rough ground could cause damage to the **Litter Windrower** 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. 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 machine. Replace them if they become damaged.

HIGH VOLTAGE SAFETY ACT

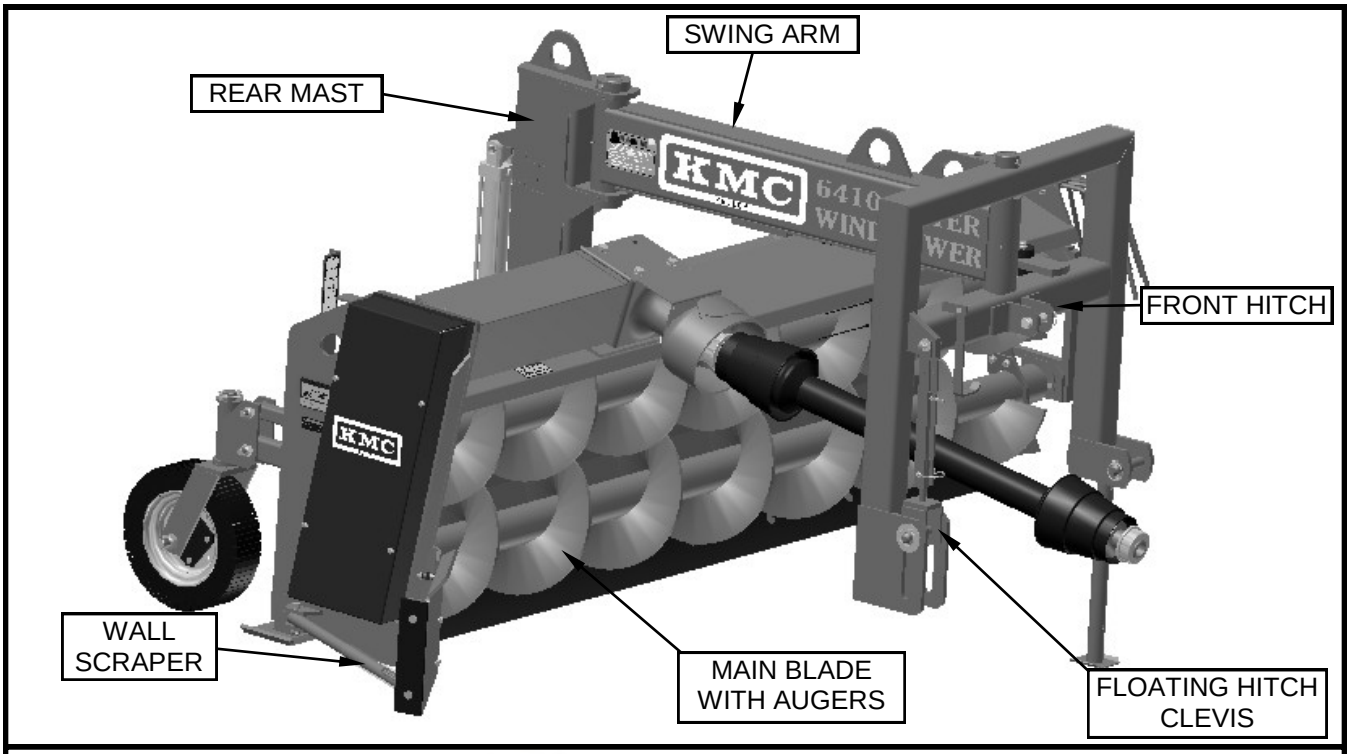
Georgia Law requires that anyone operating equipment within 10 feet of an overhead high voltage line of more than 750 volts, must contact the Utilities Protection Center (UPC) by telephone at least 72 hours before commencing the work. For more information call (811), toll free (1-800-282-7411) or visit on the web “www.gaupc.com. **Please** contact your local power company about laws before operating near high voltage lines.

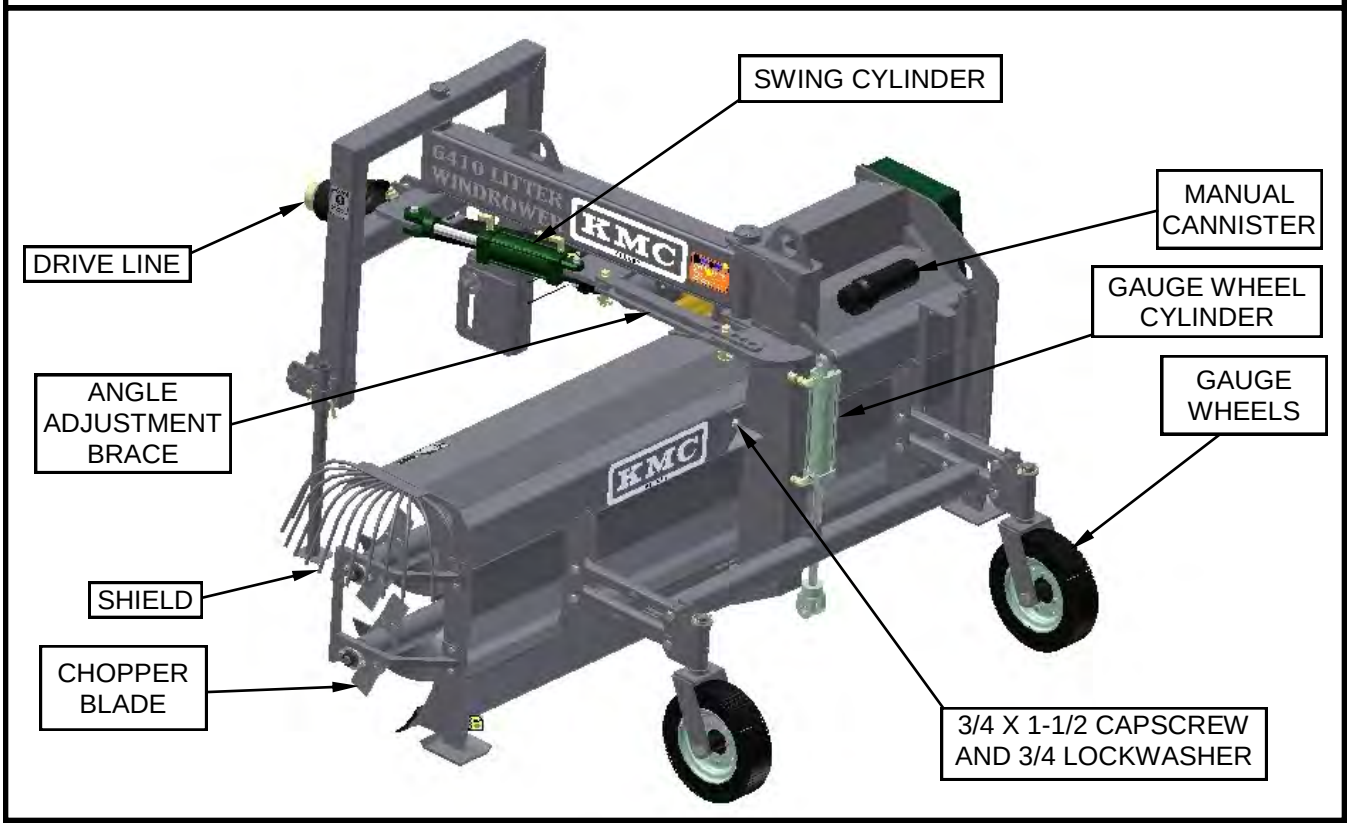
ASSEMBLY SET-UP

GENERAL:

Throughout this manual we will be discussing various features and components of the KMC Litter Windrower. References to various components for adjustments, settings, performance, and lubrication are made. The following diagram will help in identifying these components.

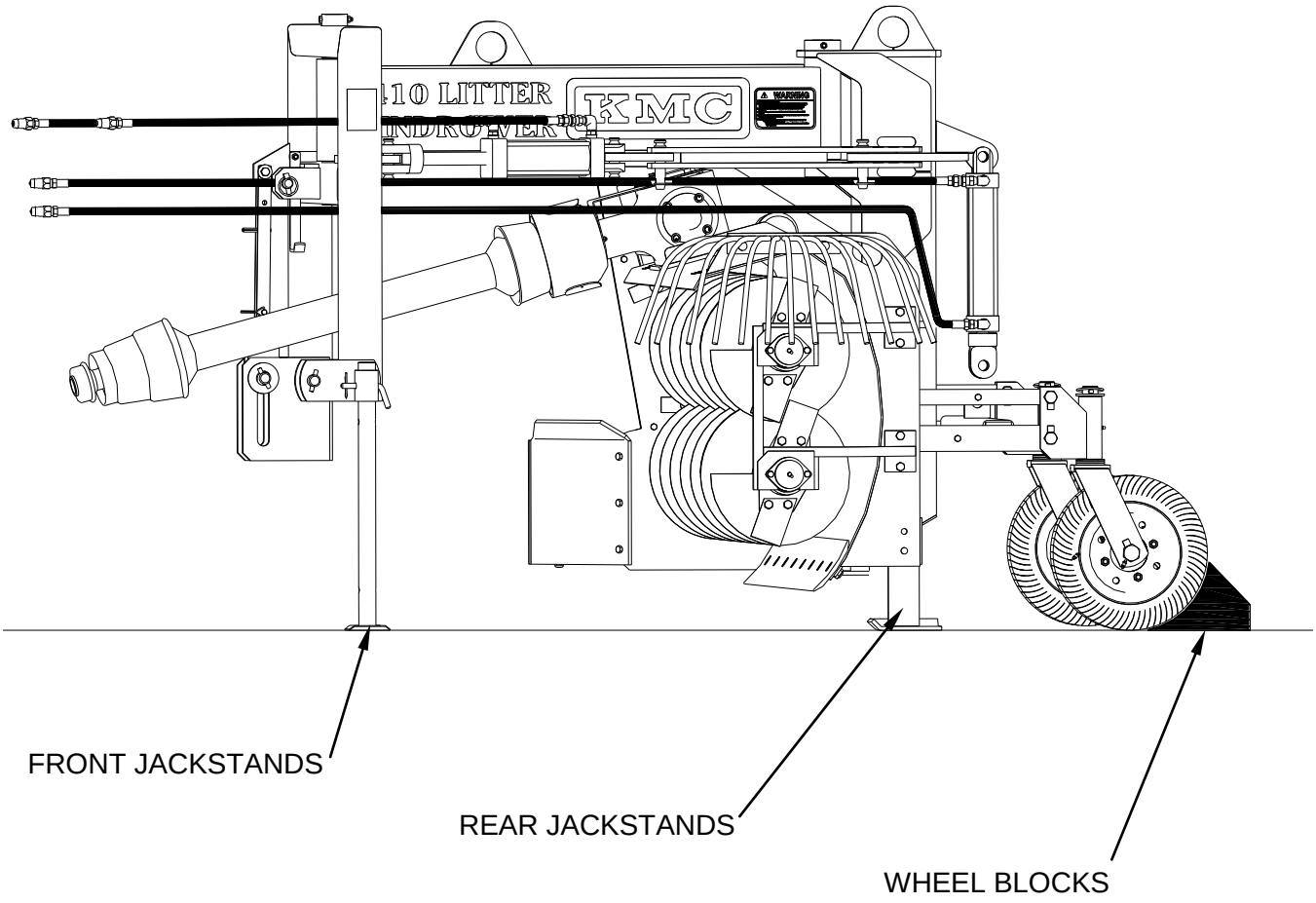
POULTRY LITTER WINDROWER BASIC FEATURES





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

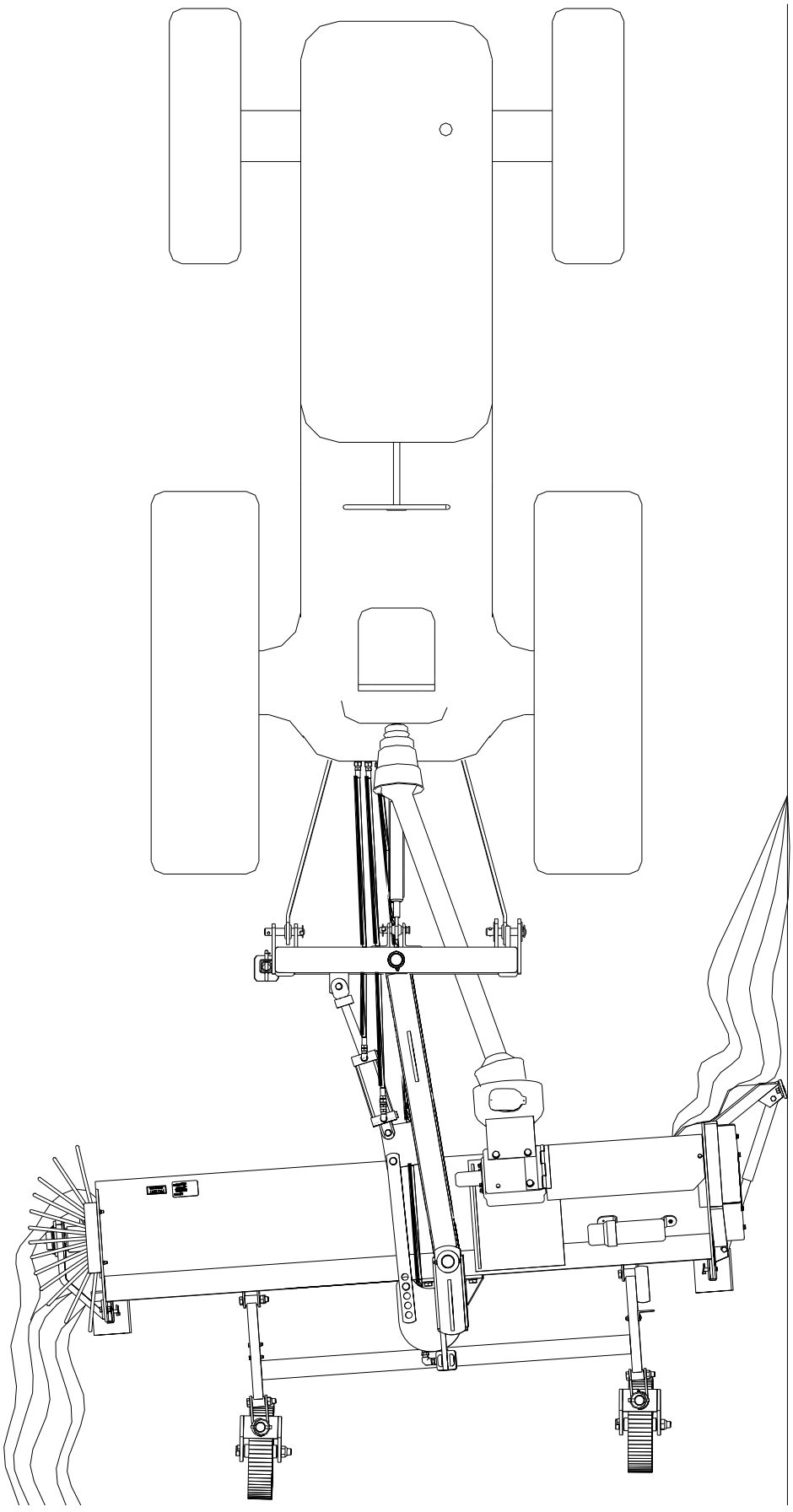
SAE GRADE 5

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

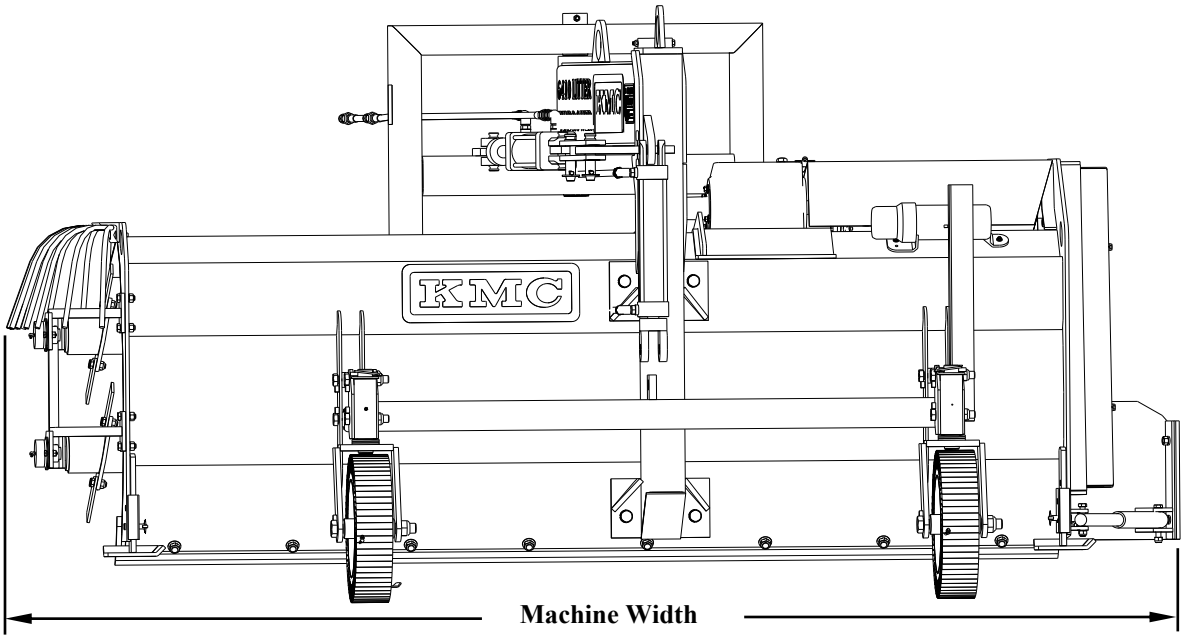
SAE GRADE 8

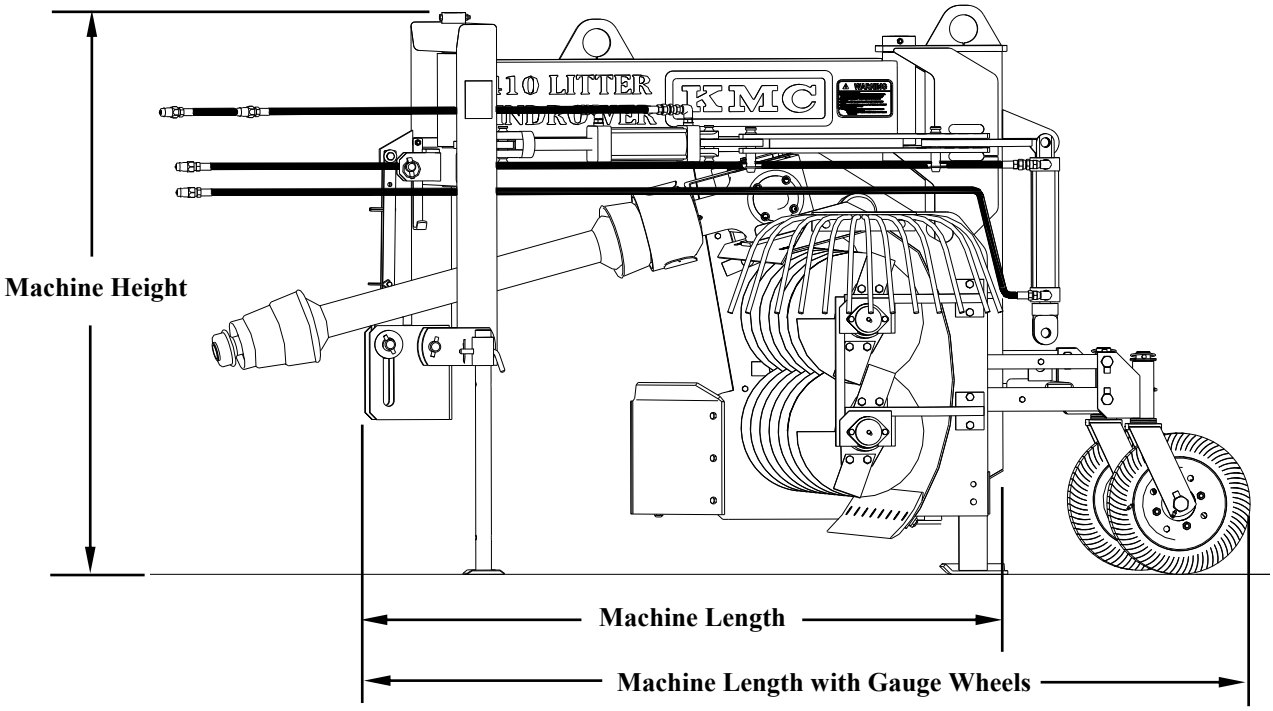
Diameter & Threads Per Inch	Tensile Strength Min. PSI	Proof Load LB	Clamp Load LB	Torque Dry FT LB	Lubricated FT LB
1/4-20	150,000	3,800	2,850	12	9
1/4-28	150,000	4,350	3,250	14	10
5/16-18	150,000	6,300	4,700	24	18
5/16-24	150,000	6,950	5,200	27	20
3/8-16	150,000	9,300	6,980	45	35
3/8-24	150,000	10,500	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:



POUTRY HOUSE WALL



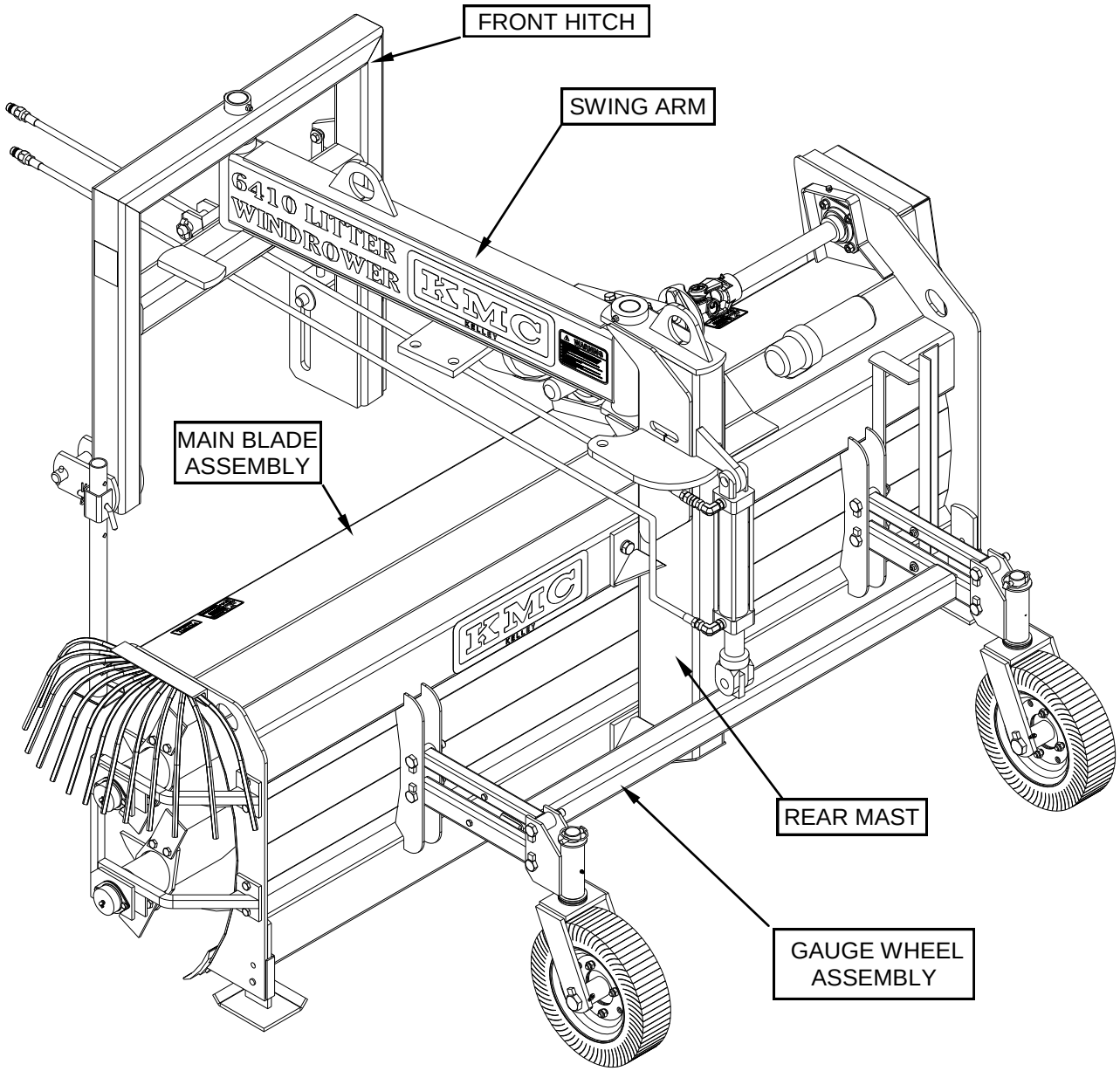


SPECIFICATIONS

Machine Height: 57 inches
Machine Width: 119 inches
Machine Length: 67 inches
Machine Length with Gauge Wheels: 91 inches
Weight: 1932 lbs.
Blade Size: 95-1/2 x 6 x 3/8 inches
Gearbox Input Rotation Speed: 540 RPM

The Poultry Litter Windrower is shipped in four pieces; First one the Windrower Main Frame (consist of the Front Hitch, Swing Arm, Rear Mast, Main Blade Assembly, & Gauge wheels). The second is the Swing Cylinder, the third is the Driveline, and fourth is the Angle Adjustment Brace.

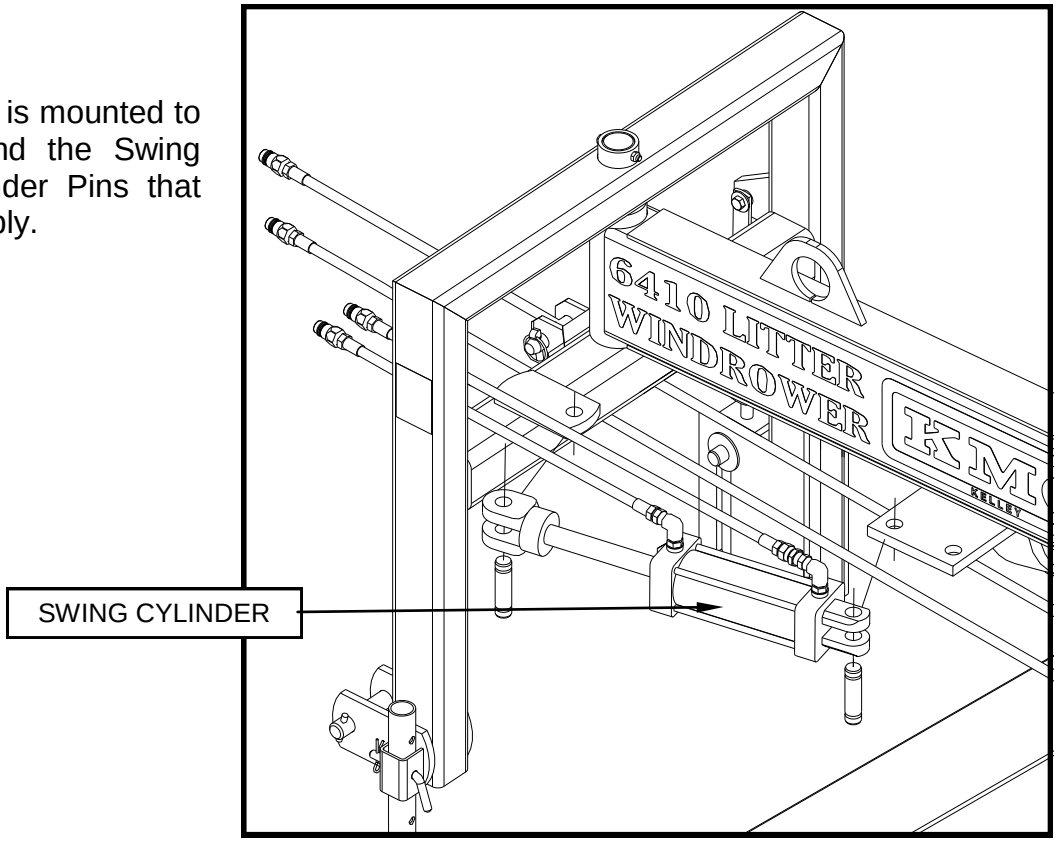
Windrower Main Frame



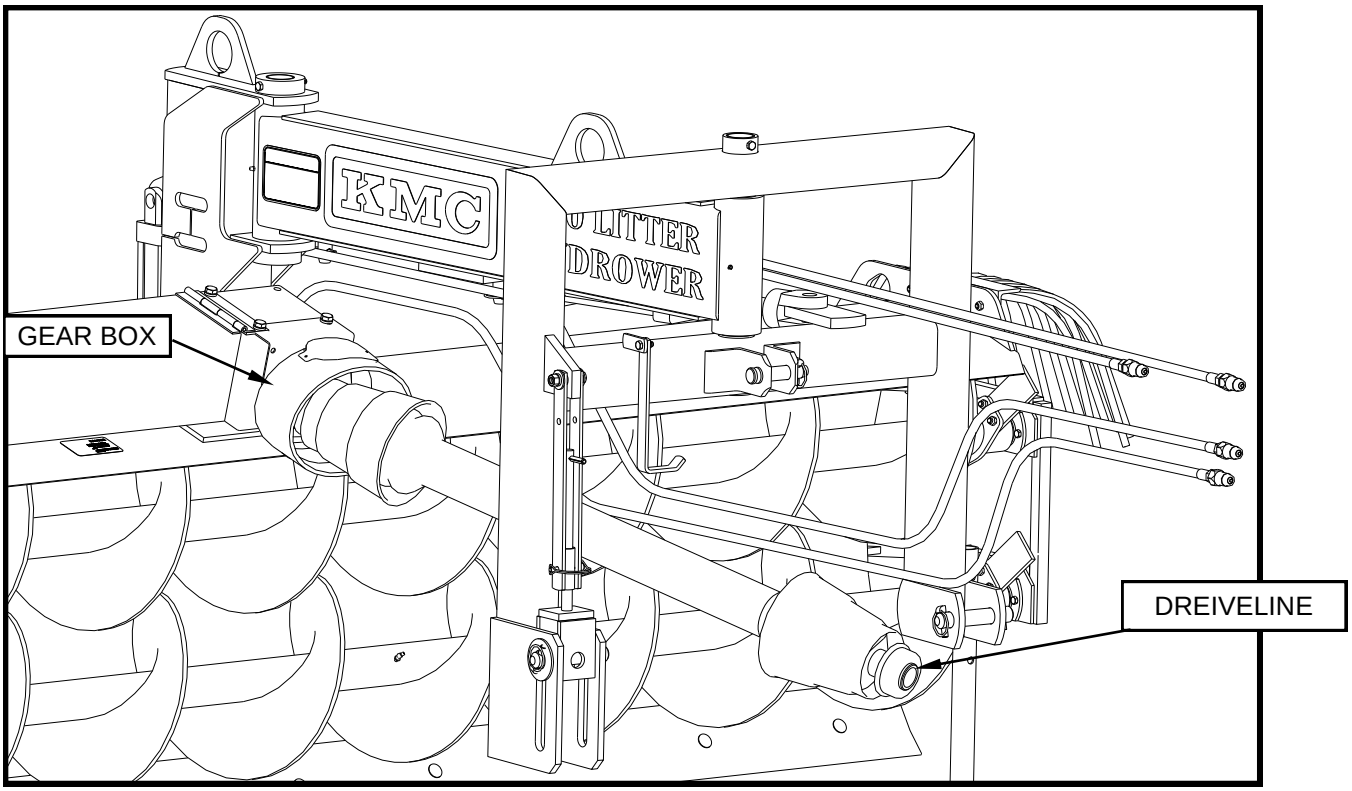
This part of the Poultry House Litter Windrower comes fully assembled as soon in the drawing above.

Swing Cylinder

The Swing Cylinder is mounted to the Front Hitch and the Swing Arm with the Cylinder Pins that come in the Assembly.

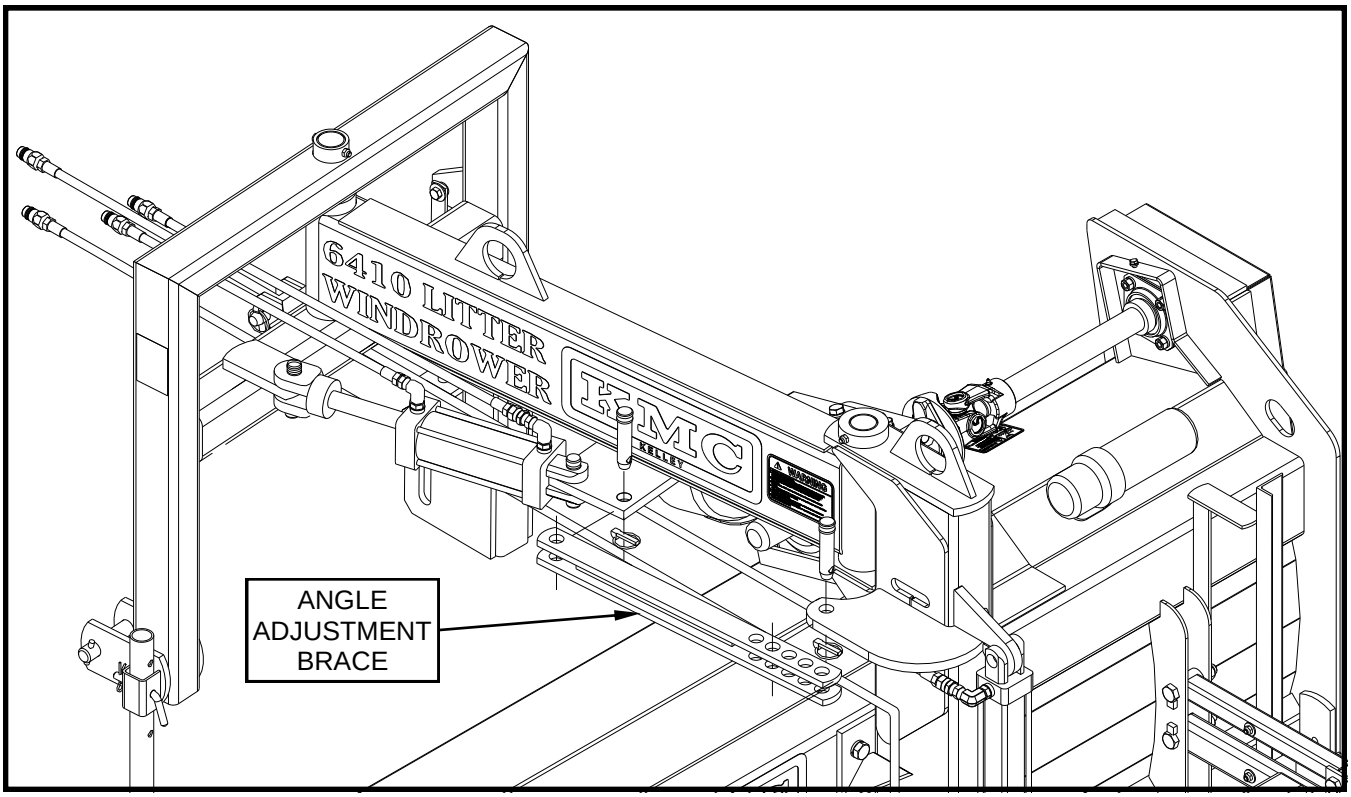


Driveline

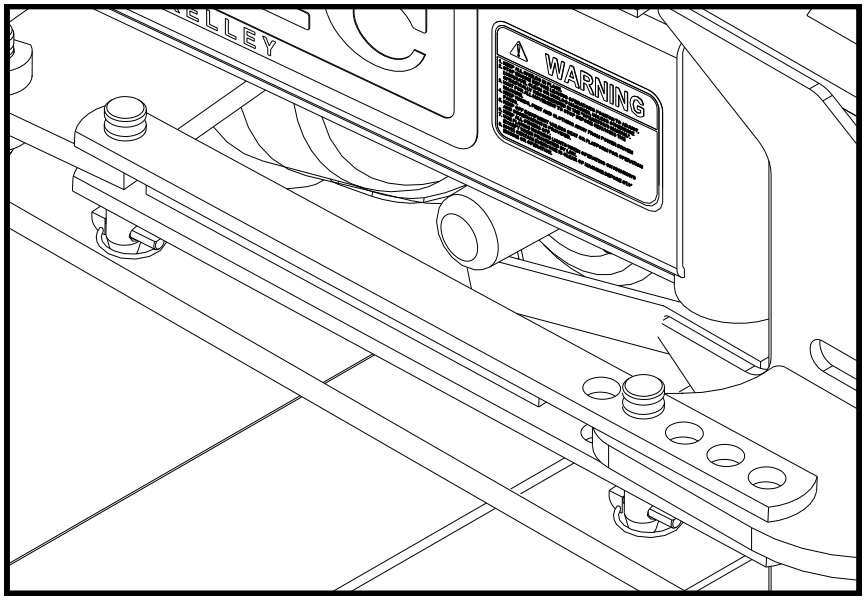


The Driveline is mounted to the Front of the Gear Box Shaft which is located on top of the Main Blade Assemble as shown in the drawing above.

Angle Adjustment Brace



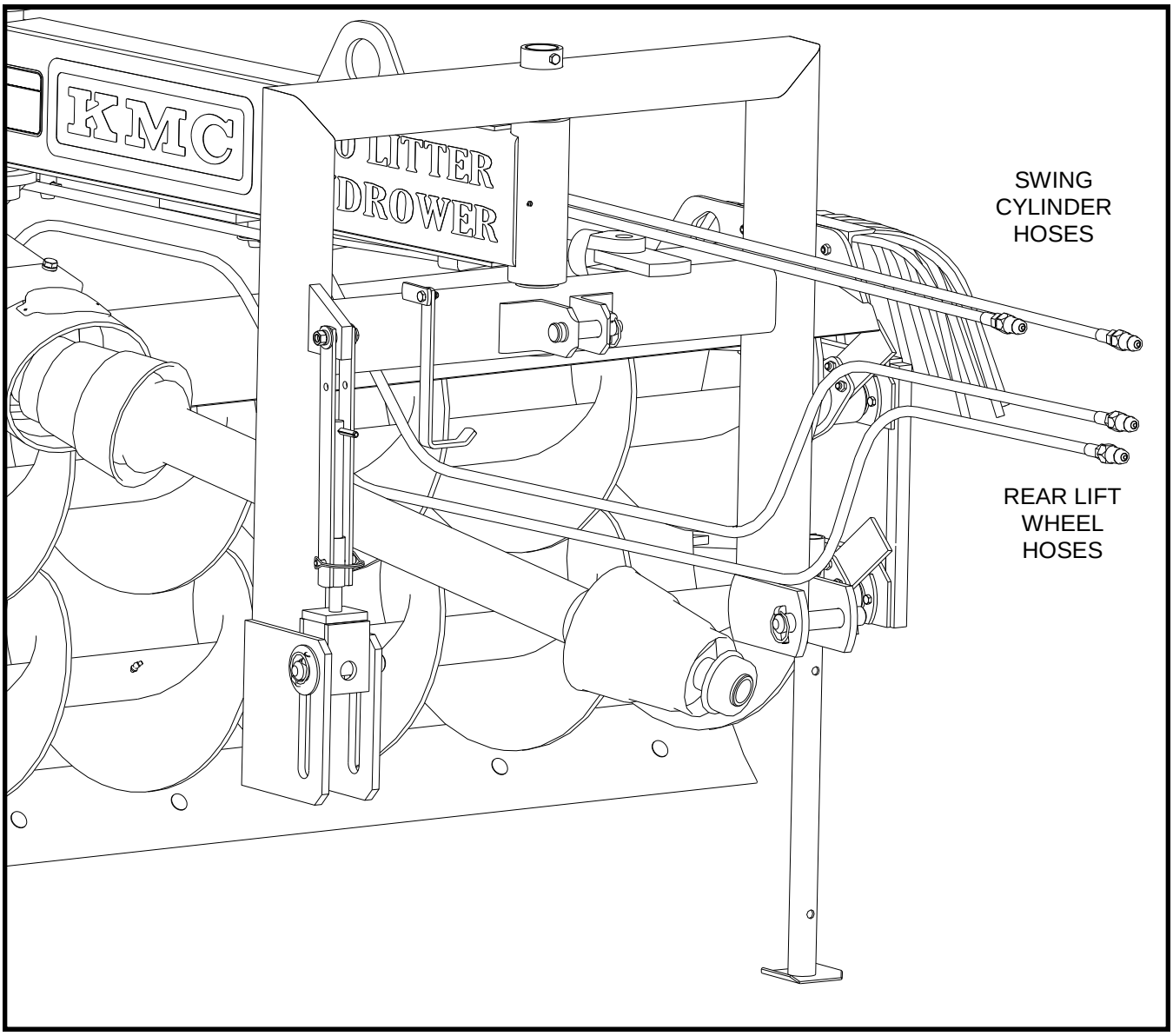
The Angle Adjustment Brace is mounted on the left side of the Swing Arm. It is attached by using the Pins and Snap Pins which come with the brace. This arm allows you to adjust the angle of the Main Blade Assembly.



Attaching To Tractor

The KMC Poultry Litter Windrower is designed to be operated with tractors having Category II three-point hitches. Two sets of tractor hydraulic remotes are also required to operate the cleaner.

Once the tractor has been set, attach the Poultry Litter Windrower to the tractor's lower lift arms using the provided hitch pins. Attach the tractor top link to the Windrower using an appropriate hitch pin. Install tractor stabilizing bars to minimize lateral movement of the Litter Windrower. Attach both sets of hydraulic hoses to the tractor's hydraulic remotes.



<u>CAUTION:</u> BEFORE DISCONNECTING FROM TRACTOR, LOWER JACKSTAND AND RAISE GAUGE WHEELS TO THEIR HIGHEST POSITION UNTIL THE BLADE OR SKID SHOES ARE RESTING FIRMLY ON THE GROUND. THIS WILL PREVENT MACHINE FROM BECOMING UNSTABLE AND TIPPING OVER.

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.

IMPORTANT: It is recommended that the tractor's Draft Control Feature be disengaged for optimal performance of this tool.

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 power requirement for this implement is a minimum of 55 HP PTO. Select a tractor with sufficient power to operate this machine.

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.

See your Tractor Operator's Manual.

Wheel Spacing

Set tractor wheels so they are equally spaced from center of tractor. If using the tool to penetrate in fields for row crops, set tractor wheels so they are centered between the rows.
See your Tractor Operator's Manual for correct tire inflation pressure.

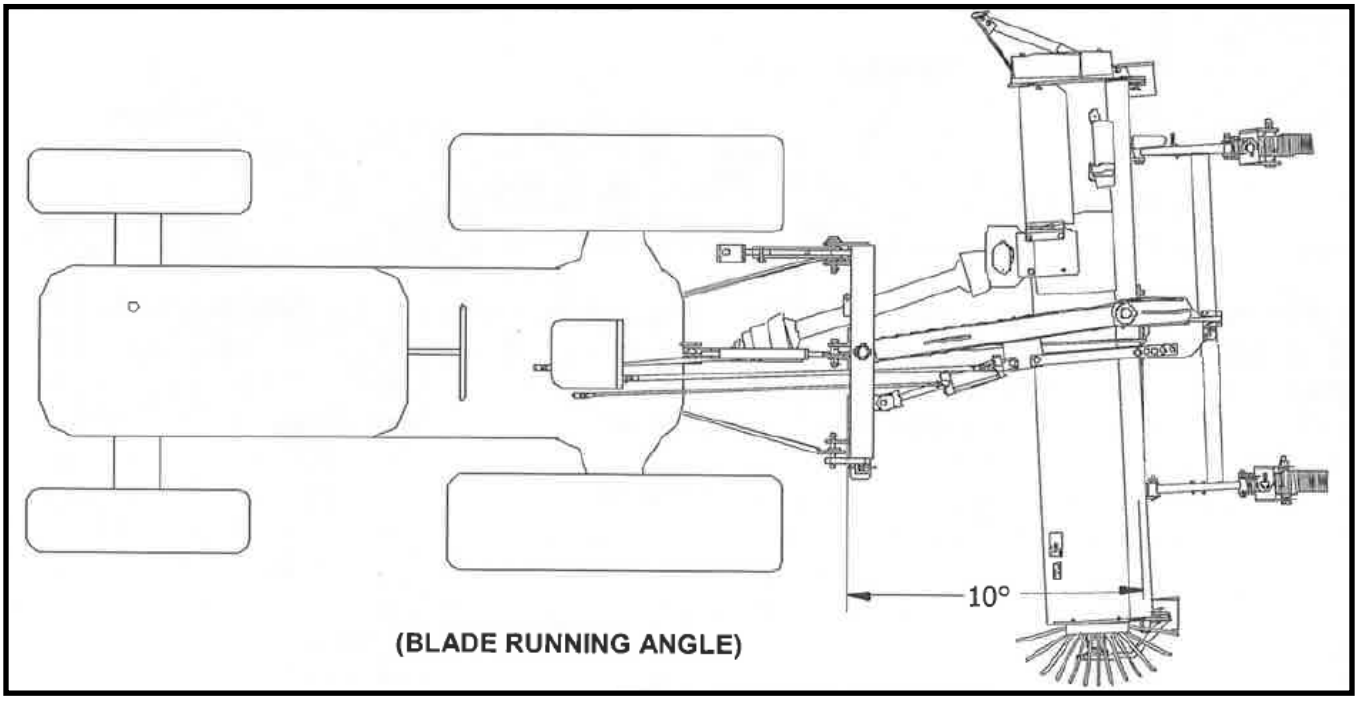
Drawbar Position

Place the drawbar in the short, center position to provide maximum clearance between drawbar and tool.

Machine Setup

The KMC Poultry Litter Windrower is made up of 4 main components: a main frame, a swing cylinder, driveline and angle adjustment brace. The Poultry Litter Windrower runs next to the wall and through the interior of the house. Material is moved along the blade and discharged by the auger system into windrows. Care should be taken when operating next to walls as the wall scraper attachment will not flex around posts and other obstacles and is only meant to funnel litter into the augers. For cleaning next to walls a KMC Wall Cleaner is recommended.

The Litter Windrower has three main adjustments, two on the swing arm and one on the front hitch. Depending on the windrowing method used and the width of the house it may be necessary to have the left set of tractor tires running on a pile of litter. In this case the floating hitch clevis should allow the windrower to self level or an optional front hitch cylinder can be used to level the Litter Windrower with the floor. The swing cylinder and angle adjustment brace are used to set the running angle. A 10° to 30° running angle is recommended. Beyond 30°, the driveline joint angle exceeds manufacturer recommendations and can damage the C.V. joint. The cylinder on the swing arm can also be used to help navigate around obstacles near the wall.



(BLADE RUNNING ANGLE)

Operating Speed

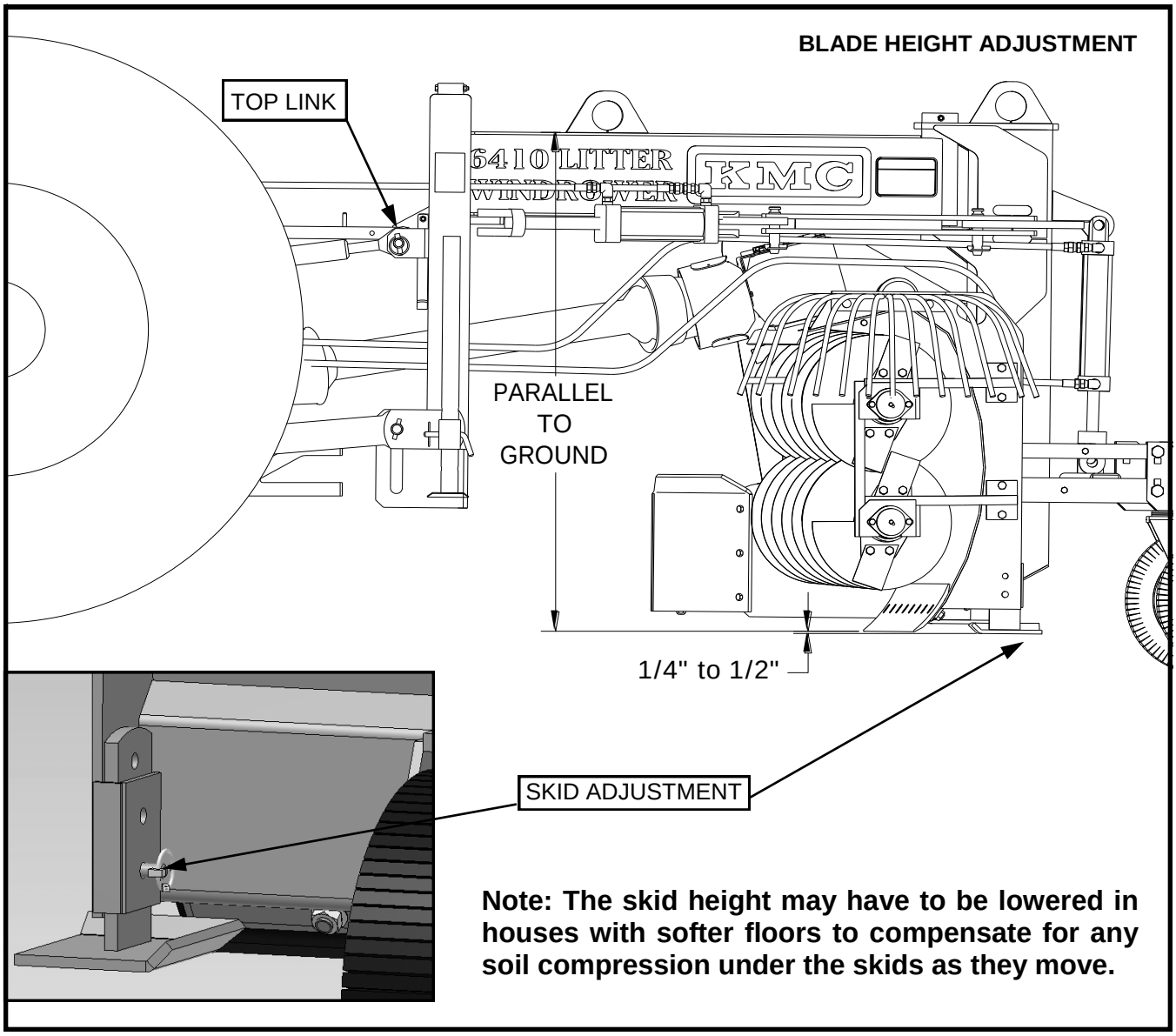
The auger rotational speed should be set to keep material sufficiently cleaned out from in front of the blade. The auger speed is adjusted by varying the tractor engine RPM. Recommended PTO RPM is 540.

The Litter Windrower should be operated at a ground speed of 3/4 miles per hour or slower. Ground speed will be dependent on the amount of material being removed and the auger speed.

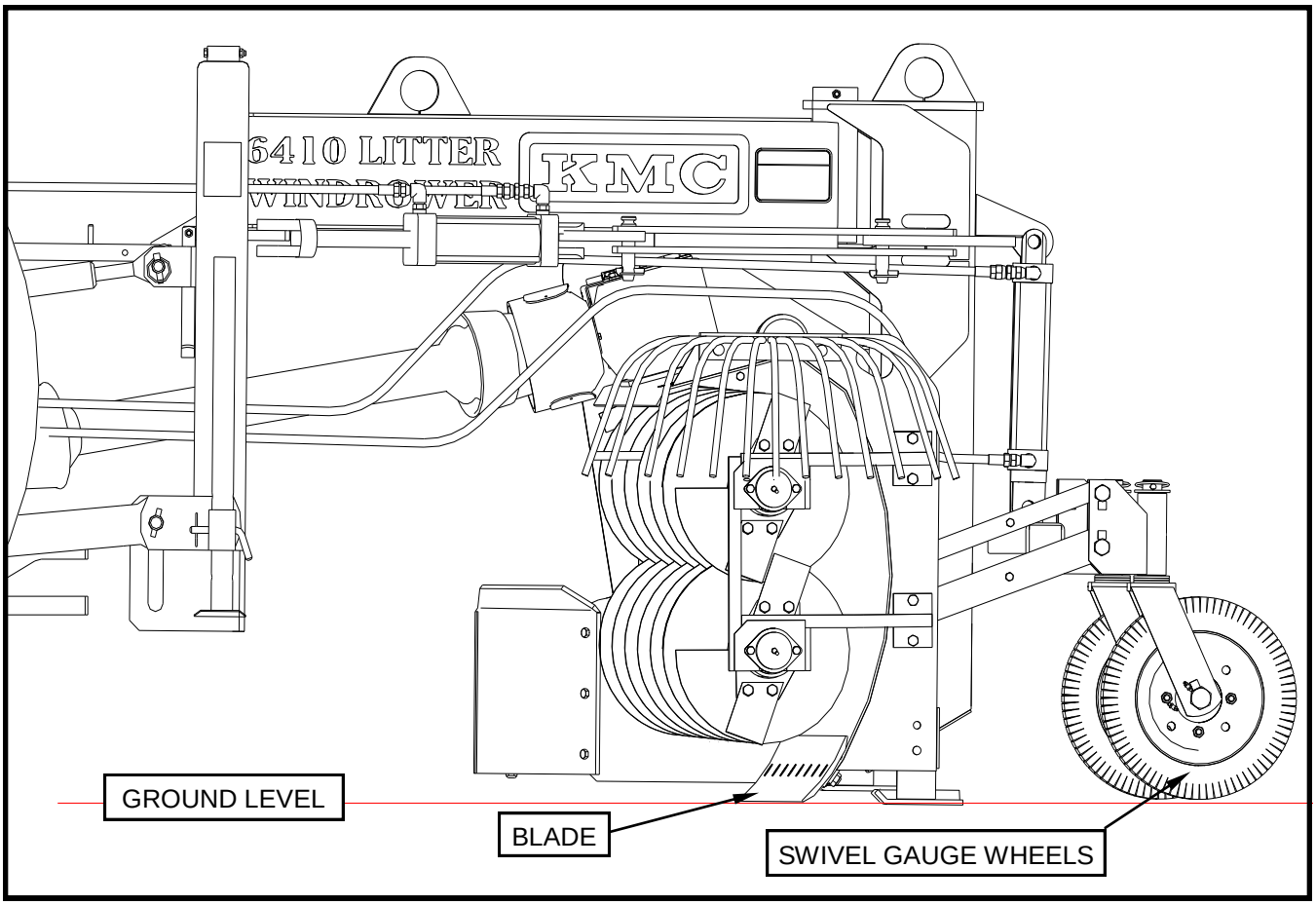
Blade Height

The blade height is set by adjusting the tractor lift arm height, the length of the top link, and the position of the blade skids. Once the blade height is set, the desired amount of material can be removed quickly. The following steps can be used as a guide to set the blade height once the Litter windrower is attached to the tractor.

1. Position the tractor and Litter Windrower on level ground.
2. Position skids so they are level or just below the bottom of the blade
3. Lower the lift arms of the tractor.
4. Adjust top link so the swing arm on the Litter Windrower is parallel to the ground.
5. Pull the tractor forward one to two feet and observe how the blade moves in relation to the ground. If the blade tries digging into the ground the top link needs to be let out. If adjusting the top link causes the swing arm to not be parallel to the ground the skids may need to be lowered. Repeat step 5 until the blade skims along the top of the ground at the desired height, usually 1/4in to 1/2in.



WINDROWER OPERATION WITH GAUGE WHEELS & CENTER TOP LINK INSTALLED



Operating the KMC Litter Windrower equipped with rear, swivel gauge wheels is similar to operation with skids but a few key differences. Once the Windrower is connected to the tractor lift arms and top link, the operator should sit in the tractor seat and raise the gauge wheels until the windrower blade is sitting on the ground. Adjust the lift arms up and down until the main swing arm, running from the hitch to the blade, is level. Ease the tractor forward to account for any slop in the linkages. It may be necessary to re-level the machine at this point. Once the Windrower is level, ease the gauge wheels down until the blade is barely off the ground. This will be the initial starting position when entering the house. Once inside the house the gauge wheels can be adjusted to raise or lower the blade as needed. When making sharp turns or backing up, it is recommended that the Windrower is picked up using the lift arms to avoid overstressing the gauge wheels.

While running the KMC Litter Windrower with a top link will place more down pressure on the blade in heavy in heavy cake situations, running without the top link has its advantages. Running semi-mount makes the Windrower easier to pick up with smaller tractors and helps the operator make straighter passes inside the houses by returning weight to the front tires of the tractor. To run semi-mount, without the top link, simply attach the lower lift arms of the tractor to the windrower. Raise the gauge wheels until the blade is on the ground and adjust the lift arms until the windrower swing arm is level. Lower the gauge wheels until the blade is barely off the ground. This is no need to ease forward because there is no top link to adjust. This will be the starting position when entering the house. A key difference in operating semi-mount is that the gauge wheels can be used to pick up the blade while making turns and backing up. Caution should be exercised when backing up because the front of the windrower may tilt up since the top link in not connected.

Floating Hitch Operation

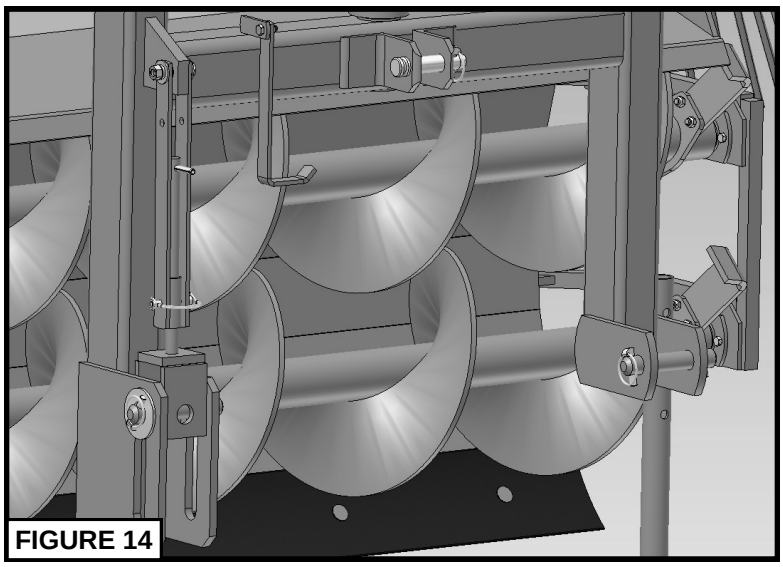


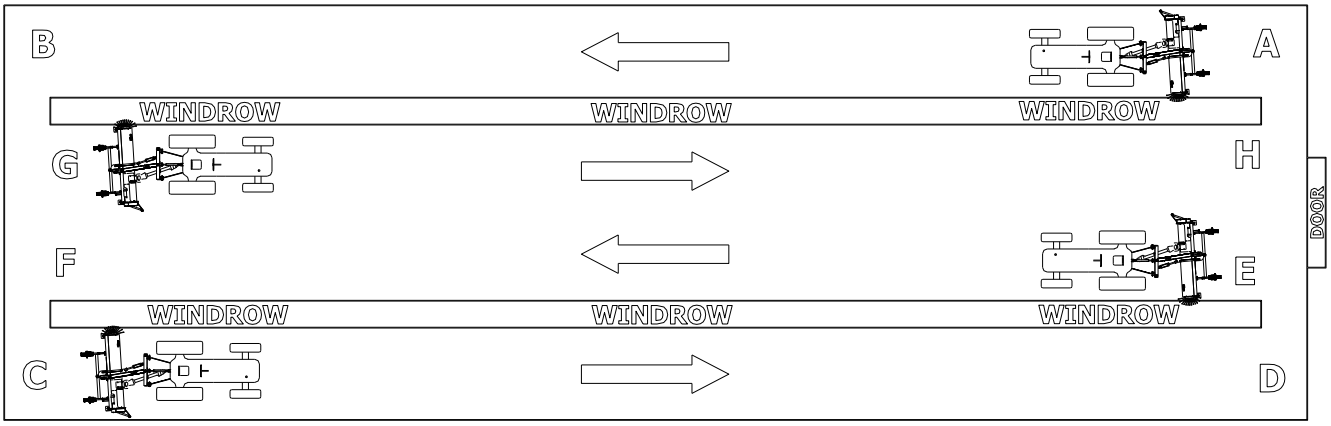
FIGURE 14

The standard model Litter Windrower comes equipped with a floating hitch point for the right lift arm. The floating hitch is designed to allow the windrower to self level should the left side of the tractor need to ride on top of the windrow. The floating hitch is held stationary in the level position by a 5/16 safety hitch pin for easy hook up. Once the lift arm is attached, place the pin in the pin retaining holes at the top of the floating link. Continue to set the blade height as described in the Blade Height section. Once in the poultry house, the hitch will work independently and requires no further adjustment. An optional hydraulic link, KMC part number 64-082-005, can be ordered to take the place of the floating link if desired. Note: The floating hitch works best in correlation with the skids, so it is important to set the skid height even when using the gauge wheels.

Windrowing Procedures

The following procedures are a recommendation for windrowing a poultry house and can be modified to suit individual needs.

1. Set the blade height
2. Back the windrower into Corner A and set tractor PTO to 540rpms
3. In low gear, ease forward and scrape the litter off the wall of the house
4. After reaching Corner B, turn off the PTO and move the windrower to Corner C
5. Once in Corner C, set the PTO to 540rpms and ease forward scraping litter of the second wall
6. After reaching Corner D, turn off the PTO and move to Position E
7. Once in Position E, set the PTO to 540rpms and proceed down the middle, right of the house
8. After reaching Position F, turn off the PTO and move the windrower to Position G
9. Once in Position G, set the PTO to 540rpm and proceed down the middle, left of the house
10. After reaching position H the house should be windrowed



<u>Note</u>: Because house widths vary it may be necessary to make two passes down the edge of the wall to cover the full width of the house. The tractor should remain as level as possible to get the best results but the floating hitch link will allow the windrower to self level should the left side of the tractor need to ride on an existing windrow. The windrow can also be turned off and used as a scrape blade to drag litter out of Corners B and D.

Turning Windrows

Several methods may be used to turn the windrows depending on tractor size and preferred practice. If desired the entire windrow can be straddled and moved in one pass. This method puts a lot of load on the tractor and may break the shear bolt if the tractor rpm is reduced to far. A second method is to swing the Litter Windrower all the way to the left and run the tractor down the edge of the windrow. Since the Litter Windrower over hangs the edge of the tractor it should be turning the outer half of the litter back over the top of the windrow pile. This method will place the outer litter on the inside of the pile for the second heat and expose the inner litter that has already been through a heat. The second method allows the tractor to remain level and reduce the load on the PTO.

Spreading Windrows

A general method for spreading windrows is to straddle the windrows and adjust the gauge wheels so that the Litter Windrower will move a third of a pile per pass. The first pass should move the top third of the litter towards the walls. The second pass should move the middle third of the pile towards the center of the house. As the windrow moves a pile there will be a smaller pile each time on the discharge end. Continue making circular passes through the house until the litter is evenly spread. It is important to remember that the Litter Windrower can be turned off and used as a scrap blade to drag litter around and spread the litter evenly next to walls.

START-UP

Before initial operation of this piece of equipment, review the "**Pre-Operational Checklist**" at the front of this manual. Make sure all fields of the checklist have been checked and performed and make any notes necessary for future operators. Your piece of equipment should now be ready for field operation.

NOTES:

MAINTENANCE

SERVICE SCHEDULE

The **KMC 6410 Series Litter Windrower** has been carefully designed and manufactured to provide years of dependable service. To maximize use and reduce downtime and repair costs, regular maintenance should be performed on the Litter Windrower. Below is a guide for minimum recommended services and the time intervals for their completion. However, since these machines are used in many different conditions and applications, the operator should customize the maintenance schedule to best fit their individual needs.

	SERVICE	EVERY 10 HOURS	EVERY 50 HOURS	EVERY 250 HOURS
1	LUBRICATE ALL GREASE POINTS (see Lubrication Points in the Maintenance section of this manual)	X		
2	CHECK TORQUE ON ALL BOLTS (See Bolt Torque Chart in Section on General Assembly Set-up)	X		
3	INSPECT HITCH PINS FOR WEAR		X	
4	INSPECT BEARINGS		X	
5	INSPECT TIRE PRESSURE IN ALL GAUGE AND PRESS WHEELS	X		
6				
7				
8				
9				
10				

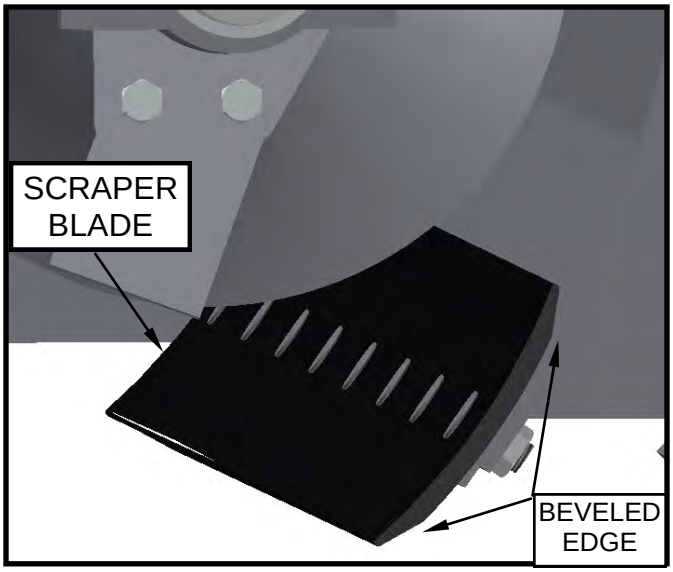
WEAR ITEM REPLACEMENT

Cleaning Machine

The environment that the Litter Windrower is used in can be highly corrosive to steel components. Therefore, the Litter Windrower should be washed off after each use. When washing the Litter Windrower with a high pressure washer, do not get water stream too close to the bearings on the Litter Windrower . Although the bearings are sealed, a stream of high pressure water placed too close to the bearings may penetrate the bearing seals allowing water to enter, and ultimately damage, the bearings. It is recommended that the Litter Windrower be sheltered when not in use.

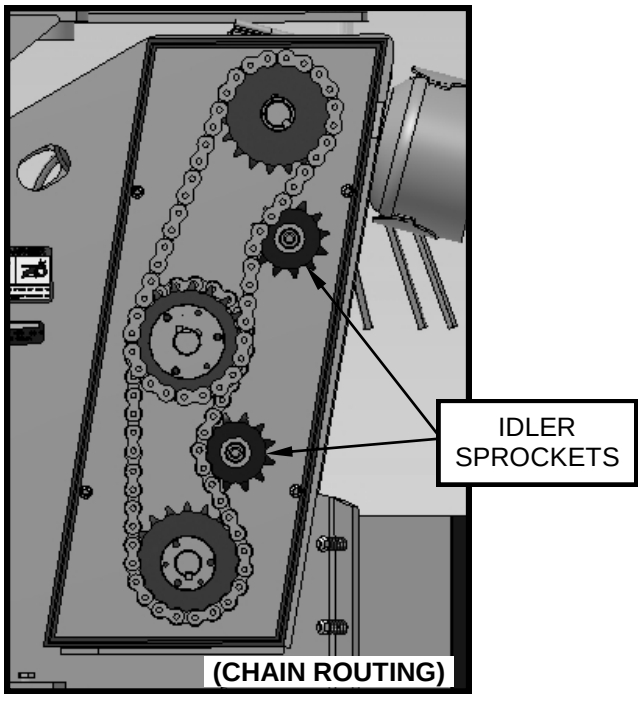
Scraper Blade Replacement

The scraper blade mounts onto the bottom of the main blade with 5/8" x 1 1/2" #3 Reg. plow bolts, lockwashers, and nuts. Mount the blade with the beveled edge down and to the rear. The scraper blade is double sided for increased life and should be flipped after the edge has worn down 3/4in or sooner.



Chain Maintenance

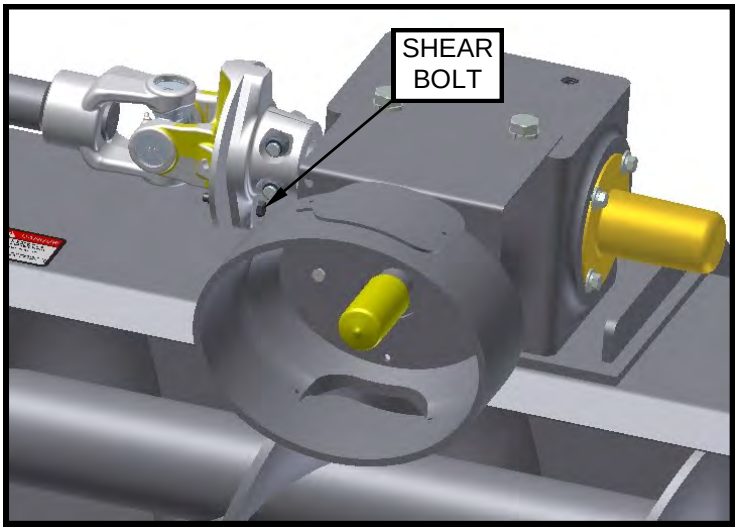
The Litter Windrower uses a #80 heavy chain to transmit power from the gearbox to the augers. Before each use, the chain should be inspected for wear. The chain tension sprockets should also be checked to ensure proper chain tightness and to prevent chain slippage. Proper slack in tension side of chain should be 1/2" - 1". To adjust the tension sprocket loosen the 5/8in nut with a 15/16 inch wrench and slide tension sprocket to tighten chain. Retighten nut and check chain tightness. The chain cover is packed with moly grease, KMC part number 02-050-138, to lubricate the chain. Before use, remove cover and ensure chains are running through moly grease to minimize overheating. Add moly grease as needed.



Gearbox Maintenance

The gearbox on the Litter Windrower uses 80w90 gear oil, KMC part # 03-050-080. The oil level should be checked before the machine is used for the first time. The oil should then be changed after the first 30 to 50 hours of operation and then every 500 hours or annually. Gearbox Oil Capacity: ~85 Ounces

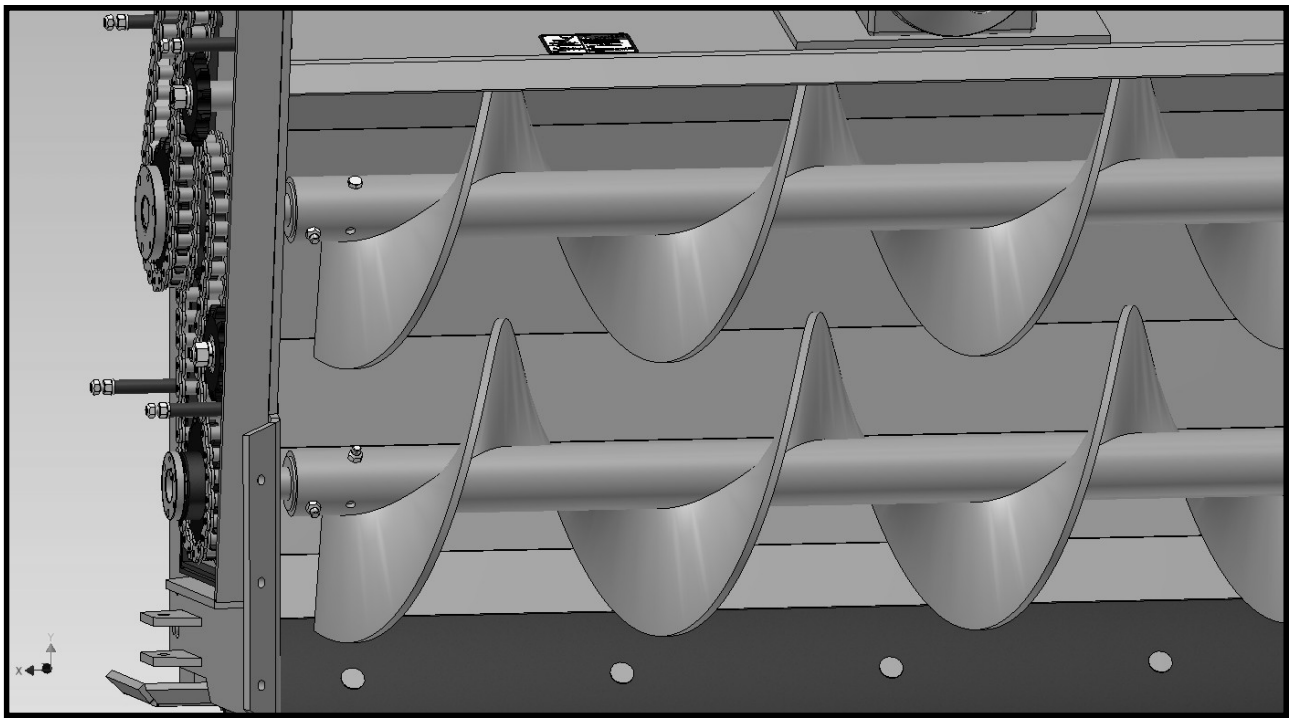
Shear Bolt Replacement



To replace the shearbolt on the litter windrower, turn off the tractor and clear the augers of any obstructions that may have caused the shearbolt to shear. Remove the 5/16 capscrew holding down the jackshaft shield. The shield can then be flipped up out of the way exposing the shear plates. Spin the augers until the bolt hole in the first shear plate on the chain side of the shaft aligns with the bolt hole in the second shear plate on the gearbox side of the shaft. Place a 5/16" x 2" grade 8 capscrew into the aligned bolt holes and through both plates. Secure in place with a 5/16 locknut. Note: A replacement shearbolt is placed in the owner's manual canister at the factory.

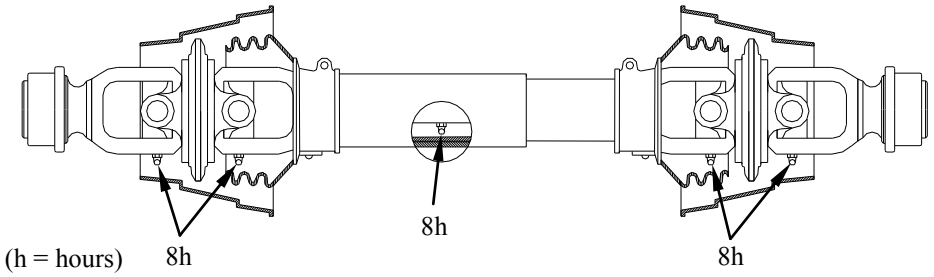
Timing of the Augers

The augers on the Litter Windrower have been timed at the factory. Should the augers get out of time there will be interference resulting in bent flighting and other damage to the machine. If the augers jump time, shut off the tractor immediately. Remove the chain cover and inspect the bottom chain and lower sprockets for wear and damage. To re-time the augers to their original positions, with the bottom chain removed, spin the top auger until the end of the flighting closest to the chains points towards the ground. Hold in place and spin the bottom auger until the end of the flighting closest to the chains also points towards the ground. Reinstall bottom chain while keeping the tension side tight. Once the chain is installed and tightened, check the direction of the flighting ends to make sure they still point in the same direction.



LUBRICATION POINTS

LUBRICATION REQUIREMENTS

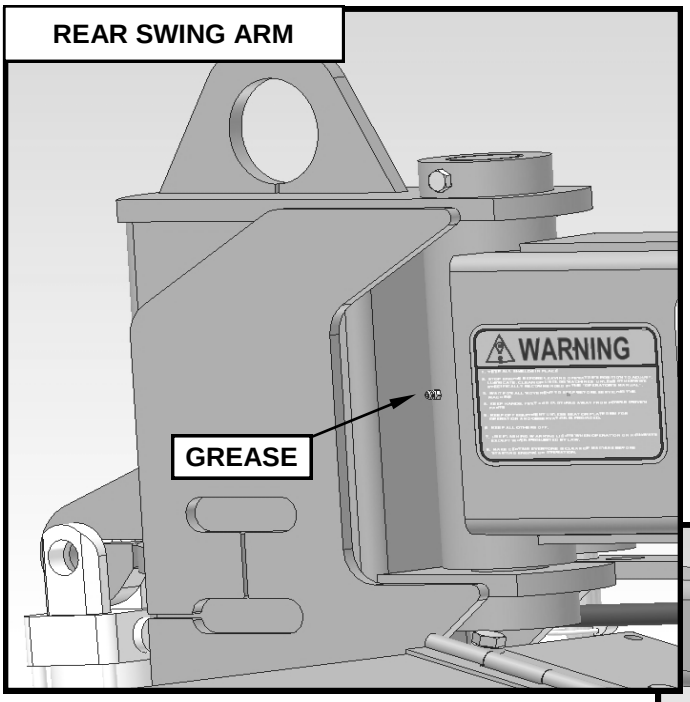


* The double yoke cavity will hold as much as 30 pumps of grease. To insure maximum joint life:

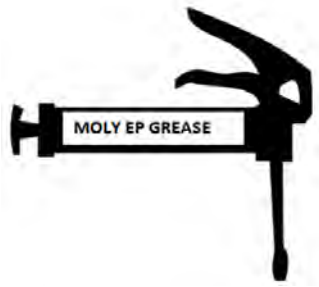
- Lubricate double yoke when joint is in straight position.
- Visually inspect all wear surfaces inside double yoke to insure presence of grease after operation.

Consult operators manual for additional information.

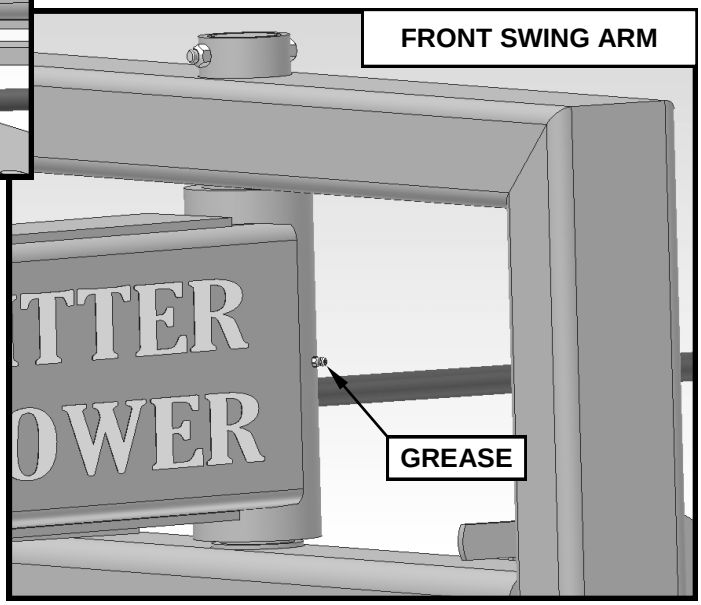
REAR SWING ARM

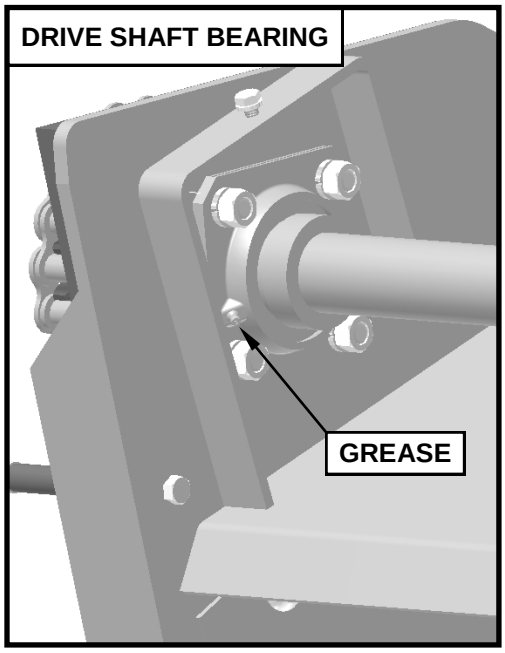


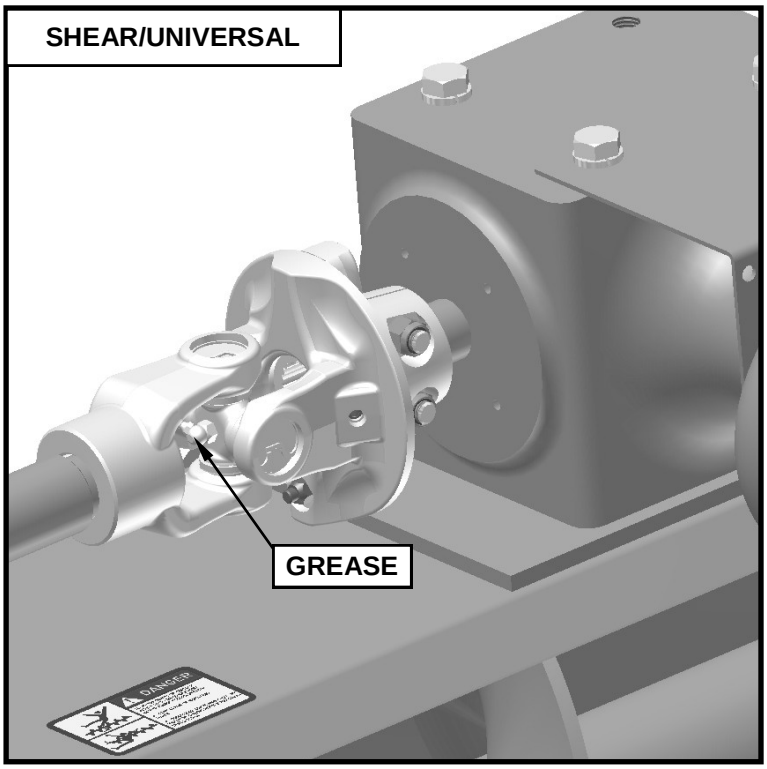
The Litter Windrower uses re-lubable and non-relubable bearings. Please note locations of relubable bearings in the following pictures. Other grease points include each pivot end of the swing arm, caster wheel pivots and wheel hubs, and the CV driveline. Due to the corrosive nature of chicken litter all grease points should be lubricated before each use and every 8 operating hours, whichever is shorter.

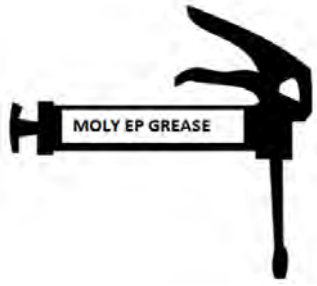


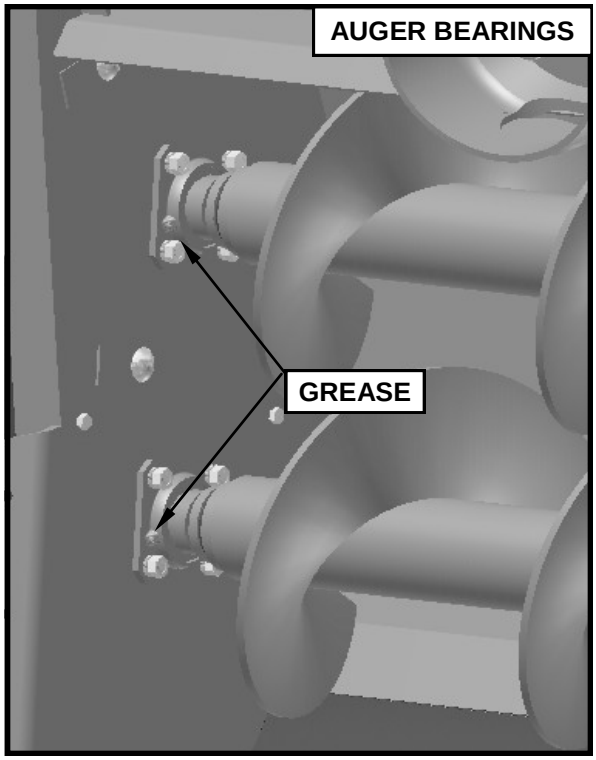
FRONT SWING ARM

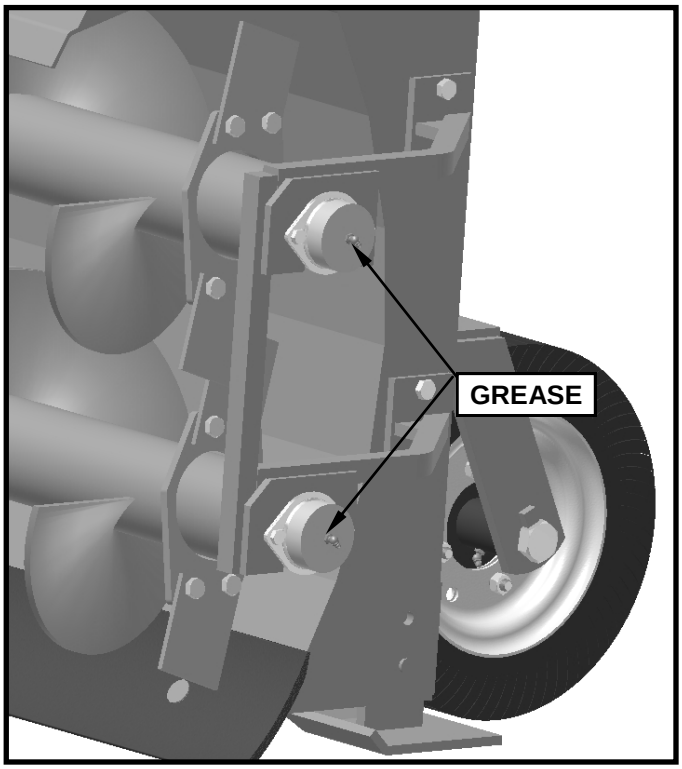


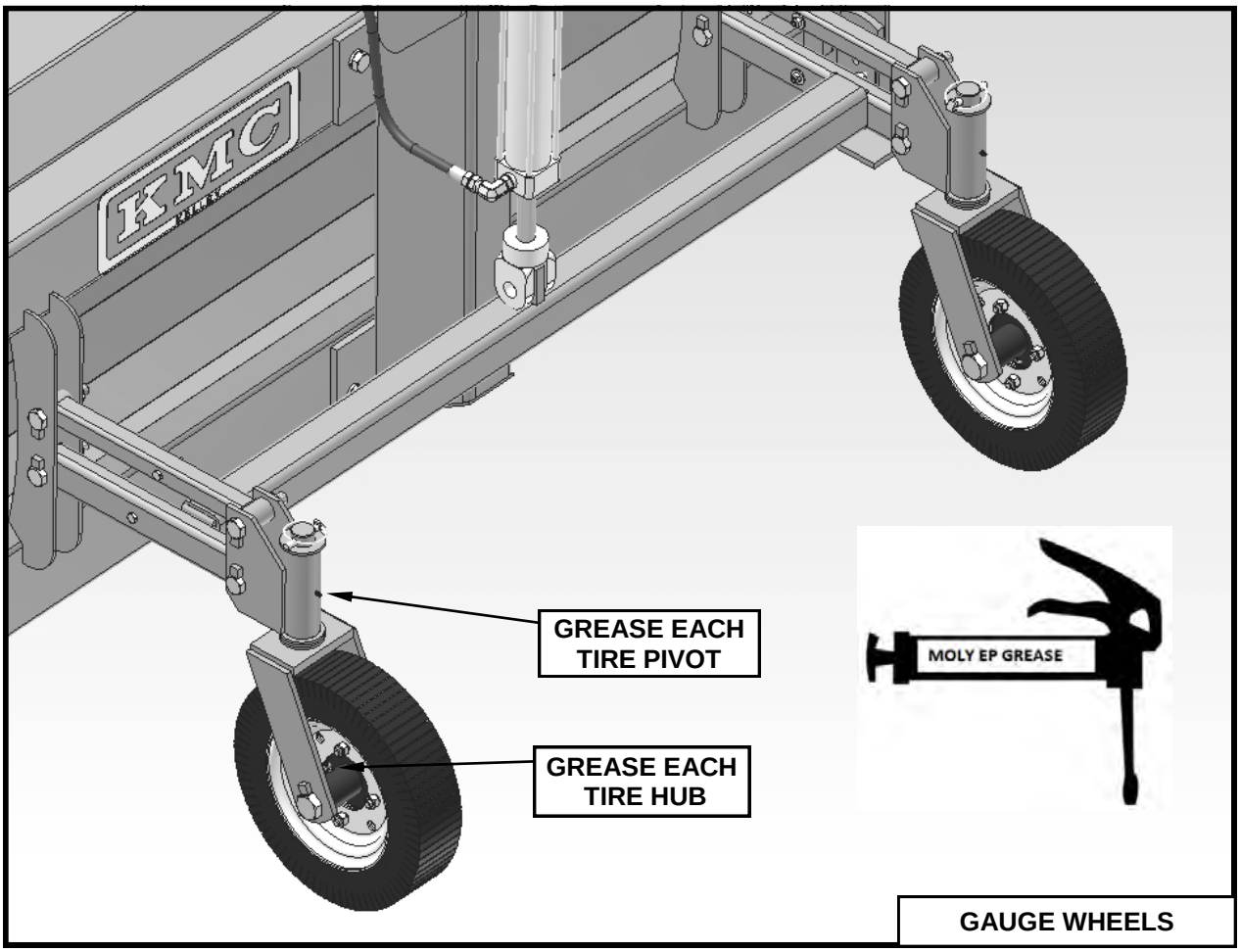

DRIVE SHAFT BEARING
GREASE


SHEAR/UNIVERSAL
GREASE
DANGER


MOLY EP GREASE


AUGER BEARINGS
GREASE


GREASE



GAUGE WHEELS

TRANSPORTATION

When transporting the Litter Windrower, be aware that the Litter Windrower blade extends beyond the tractor tires. **Be careful when entering and exiting the poultry house**. Care should be taken not to hang the blade on any objects. DO NOT EXCEED 20 MPH WHEN TRANSPORTING WITH GAUGE WHEELS IN DOWN POSITION.

STORAGE

The Poultry Litter Windrower should be washed thoroughly. After washing, treating with a disinfectant is recommended to kill any remaining bacteria. Treat the metal components of the machine with a soluble oil to protect from rust and corrosion. One product which meets these requirements is called “Film Fluid” manufactured by Eureka Chemical Co., San Francisco, CA. It is sold in some tractor dealerships and farm supply dealers.

OPERATIONAL DANGERS

NOTE: Operation of the POULTRY LITTER WINDROWER places substantial lateral (sideways) force on the windrower. Make sure tractor hitch stabilizing bars are properly installed to minimize lateral movement of the Litter Windrower.

DANGER ROTATING AUGER: ALL PERSONS SHOULD STAY CLEAR OF ROTATING AUGER. BEFORE DISMOUNTING TRACTOR TO MAKE ADJUSTMENTS, DISENGAGE AUGER DRIVE.

Checking Poultry House for Obstructions

The KMC Poultry Litter Windrower is not designed to clean out around interior posts and other obstacles. The poultry house should be checked for obstacles that may hang on the windrower’s blade. These obstacles may include exposed bolts, nails, wiring conduit, and water lines

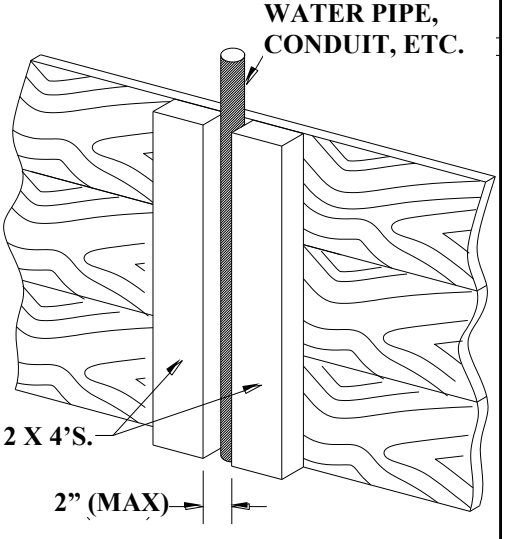


FIGURE 27

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
2011	81776-83453
2012	83454-85092
2013	85093-86418
2014	86419-87790
2015	87791-89096
2016	89097-

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