



2963 CHALLENGER

UNIT MOUNTED FERTILIZER OPENER
(2009 or newer)

OPERATOR'S MANUAL
PART IDENTIFICATION

YETTER MANUFACTURING CO.
FOUNDED 1930

Colchester, IL 62326-0358
Toll free: 800/447-5777
309/776-3222 (Fax)
Website: www.yetterco.com
E-mail: info@yetterco.com

YETTER

FOREWORD

You've just joined an exclusive but rapidly growing club.

For our part, we want to welcome you to the group and thank you for buying a Yetter product.

We hope your new Yetter products will help you achieve both goals-increase your productivity and increase your efficiency so that you may generate more profit.

This operator's manual has been designed into four major sections: Foreword, Safety Precautions, Installation Instructions and Parts Breakdown.



This **SAFETY ALERT SYMBOL** indicates important safety messages in the manual. When you see this symbol, be alert to the possibility of **PERSONAL INJURY** and carefully read the message that follows.

The word **NOTE** is used to convey information that is out of context with the manual text. It contains special information such as specifications, techniques and reference information of a supplementary nature.

The word **IMPORTANT** is used in the text when immediate damage will occur to the machine due

to improper technique or operation. Important will apply to the same information as specified by note only of an immediate and urgent nature.

It is the responsibility of the user to read the operator's manual and comply with the safe and correct operating procedure and to lubricate and maintain the product according to the maintenance schedule in the operator's manual.

The user is responsible for inspecting his machine and for having parts repaired or replaced when continued use of the product would cause damage or excessive wear to the other parts.

It is the user's responsibility to deliver his machine to the Yetter dealer who sold him the product for service or replacement of defective parts, which are covered by the warranty policy.

If you are unable to understand or follow the instructions provided in this publication, consult your local Yetter dealer or contact:

YETTER MANUFACTURING CO.

309/776-4111

800/447-5777

309/776-3222 (FAX)

Website: www.yetterco.com

E-mail: info@yetterco.com

WARRANTY

Yetter Manufacturing warrants all products manufactured and sold by it against defects in material. This warranty being expressly limited to replacement at the factory of such parts or products as shall appear to be defective after inspection. This warranty does not obligate the Company to bear cost of labor in replacement of parts. It is the policy of the Company to make improvements without incurring obligations to add them to any unit already sold. No warranty is made or authorized to be made, other than herein set forth. This warranty is in effect for one year after purchase.

Yetter Manufacturing warrants its own products only and cannot be responsible for damages to equipment on which mounted.

TABLE OF CONTENTS

FOREWORD.....	2
SAFETY PRECAUTIONS.....	4
BOLT TORQUE.....	5
OPERATIONS PRECAUTIONS.....	6
PLANTER ADJUSTMENTS.....	7
INSTALLATION.....	8-10
ASSEMBLY.....	11-12
OPERATION.....	13
MAINTENANCE.....	14-20
PARTS IDENTIFICATION.....	21-25

SAFETY PRECAUTIONS

You can make your farm a safer place to live and work if you observe the safety precautions given. Study these precautions carefully and insist those working with you and for you follow the precautions.

Finally, remember this an accident is usually caused by someone's carelessness, neglect or oversight.

A brief description of signal words that may be used in this manual:

CAUTION: Used as a general reminder of good safety practices or to direct attention to unsafe practices.

WARNING: Denotes a specific potential hazard.

DANGER: Denotes the most serious specific potential hazard.



CAUTION

Consult your implement and tractor operator's manual for correct and safe operating practices. Be aware of towed implement width and allow safe clearance.



CAUTION: SAFETY SIGNS

Safety decals are placed on the implement to alert the operator and others to the risk of personal injury or unsafe operation during normal operations and servicing.

1. The safety decals must be kept clean and in good condition to ensure that they are legible.
2. Safety decals must be replaced if they are missing or illegible.
3. When components are replaced during repair or servicing, check that the new components include the necessary safety signs.
4. Replacement safety decals may be obtained from your local dealer.



WARNING

Read these instructions carefully to acquaint yourself with the attachments. Working with unfamiliar equipment can lead to accidents.

Never clean, lubricate or adjust a machine that is in motion.

If machine must be serviced in the raised position, jack or block it up to prevent it from accidentally falling and injuring someone.

Do not allow children to operate this equipment.

Use speeds and caution dictated by the terrain being traversed. Do not operate on any slope steep enough to cause tipping or loss of control.

Be sure all personnel are clear of the immediate area before operating.

Read and understand the operator's manual and require all other persons who will operate the equipment to do the same.

If operating on public roadways, where legal, be certain all lighting is operating properly and observe all traffic laws.

Attach a slow moving vehicle emblem to the rear of the trailing implement.

Beware of increased stopping distances and control effort when operating with implements attached.

Be familiar with all controls and be prepared to stop engine and equipment quickly in an emergency.

FAILURE TO HEED MAY RESULT IN PERSONAL INJURY OR DEATH.

BOLT TORQUE

Mounting bolts and hardware

Before operating the 2963 CHALLENGER for the first time, check to be sure that all hardware is tight. Check all hardware again after approximately 50 hours of operation and at the beginning of each planting season.

All hardware used on the 2963 CHALLENGER is Grade 5 unless otherwise noted. Grade 5 cap screws are marked with three radial lines on the head. If hardware must be replaced, be sure to replace it with hardware of equal size, strength and thread type. Refer to the torque values chart when tightening hardware.



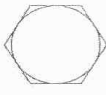
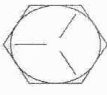

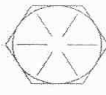
Important: Over tightening hardware can cause as much damage as when under tightening. Tightening hardware beyond the recommended range can reduce its shock load capacity.

The chart below is a guide for proper torque. Use it unless a specified torque is called out elsewhere in the manual.

Torque is the force you apply to the wrench handle or the cheater bar, times the length of the handle or bar.

Use a torque wrench whenever possible.

The following table shows torque in ft. lbs. for coarse thread hardware.

BOLT DIA. AND THREADS PER INCH	 GRADE 2	 GRADE 5	OR  A-325	 GRADE 8
1/4	6	10		14
5/16	12	20		30
3/8 - 16	25	35		50
7/16 - 14	35	55		80
1/2 - 13	55	85		125
9/16 - 12	75	125		175
5/8 - 11	105	170		235
3/4 - 10	185	305		425
7/8 - 9	170	445		690
1-8	260	670		1030
1 1/8 - 7	365	900		1460
1 1/4 - 7	515	1275		2060
1 3/8 - 6	675	1675		2700
1 1/2 - 6	900	2150		3500
1 3/4 - 5	1410	3500		5600

Lubricate all bearings and moving parts as assembled and make certain that they work freely.



WARNING: Never work around the toolbar/implement while in a raised position without using safety lockups.



CAUTION: The 2963 CHALLENGER is very heavy. Pay extra attention to lifting techniques while handling and or maneuvering the opener during assembly. Failure to do so may lead to personal injury.

OPERATION PRECAUTIONS

STOP

Read this before using the Yetter product.

- MACHINE OPERATION

IMPORTANT: failure to properly set the planter frame height and levelness can result in less than successful operation of the planter and the Yetter product and may result in damaged equipment. All operators should read and thoroughly understand the instructions given prior to using the Yetter product.

NOTE: **DO NOT** use this product if the planter is not adjusted properly!

Leveling the planter:

With the planter lowered to proper operating height (**Usually 20"-22"**).

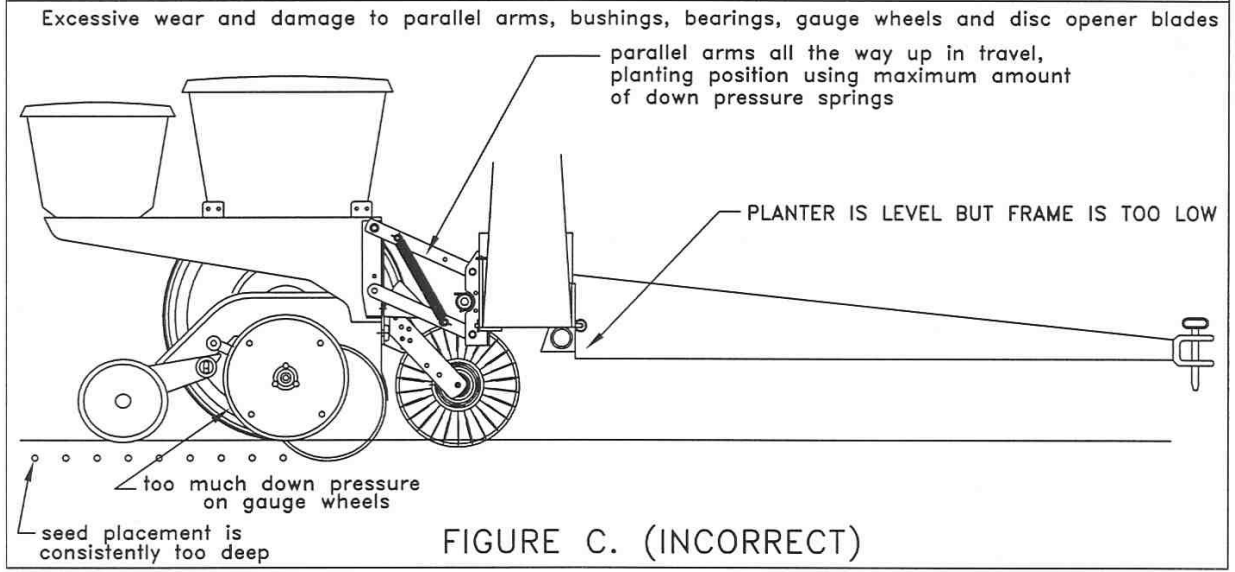
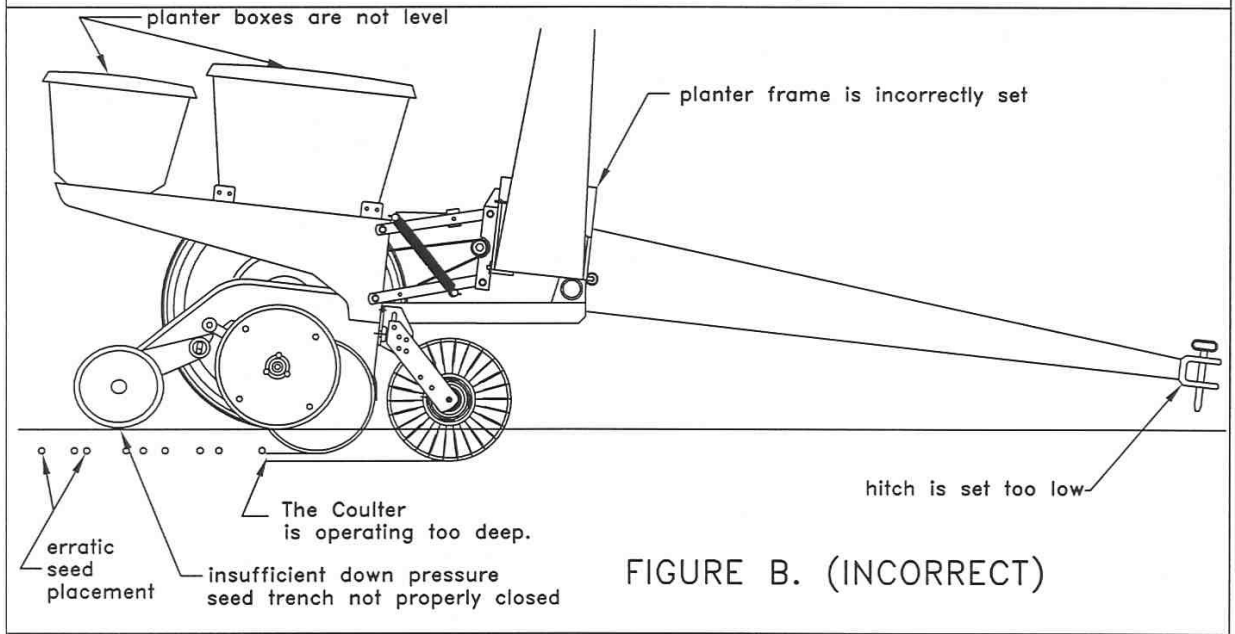
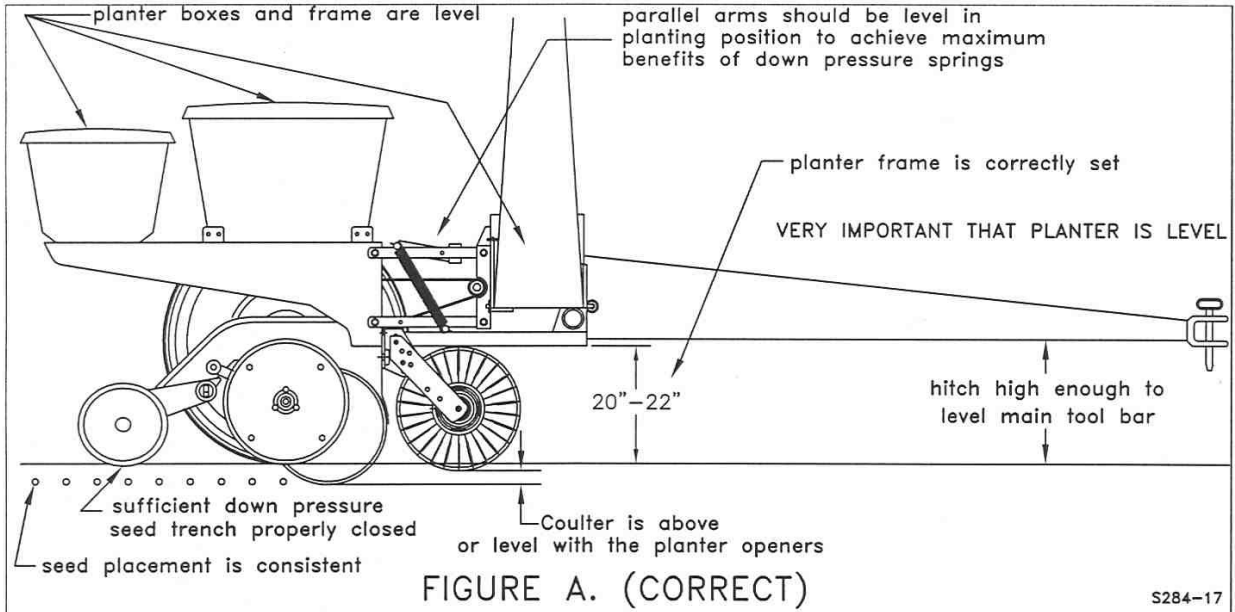
Read the planter operator's manual for recommended setting. Check to be sure the toolbar and row unit parallel arms are level fore and aft. **Re-check** when the planter is in the **field** and has been **fully loaded** with seed, fertilizer, granular chemicals, etc. Also, a field check with a bubble level on the frame should be made of the hitch height to ensure level operation front to back.

It is important for the planter to operate level laterally. Tire pressure must be maintained at pressures specified by the manufacturer.

Field and actual planting conditions change and will dictate planter frame heights. You must ensure that the row unit parallel arms are approximately parallel with the ground.

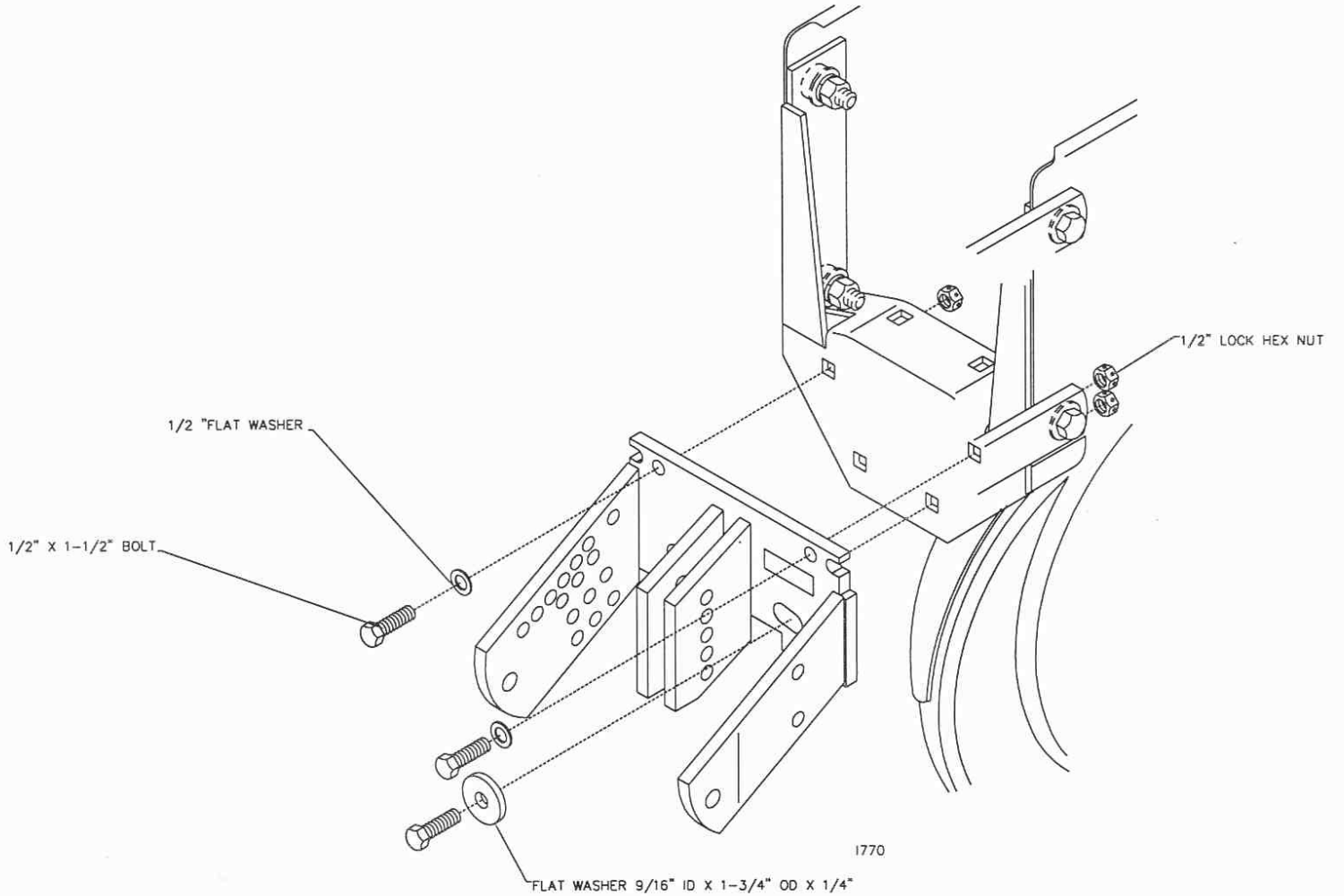
IMPORTANT: For proper operation of the planter attachments and row units, it is imperative that the planter toolbars and row unit parallel arms be level side-to-side and front-to-rear. The toolbar frame should operate at a 20"-22" height from the **planting surface**. Check the manufacturer's operator's manual for instructions on how to adjust the frame height and levelness.

PLANTER ADJUSTMENT



INSTALLATION

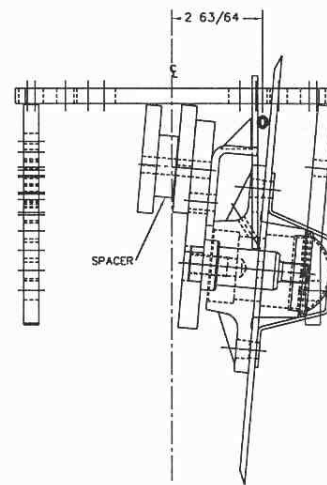
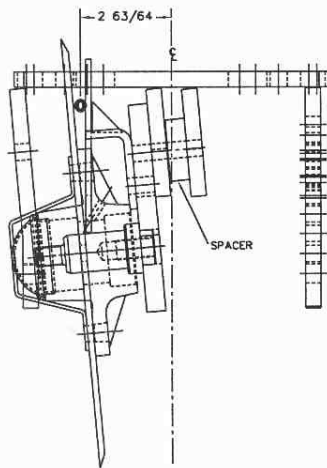
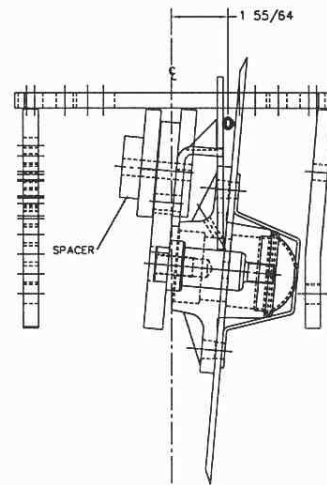
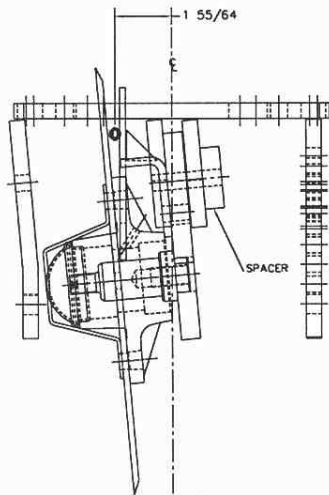
STEP 1. Attach the mount bracket to the planter row unit using 3) 1/2" x 1-1/2" bolts, flat washers and 1/2" hex lock nuts.



INSTALLATION / ADJUSTMENT

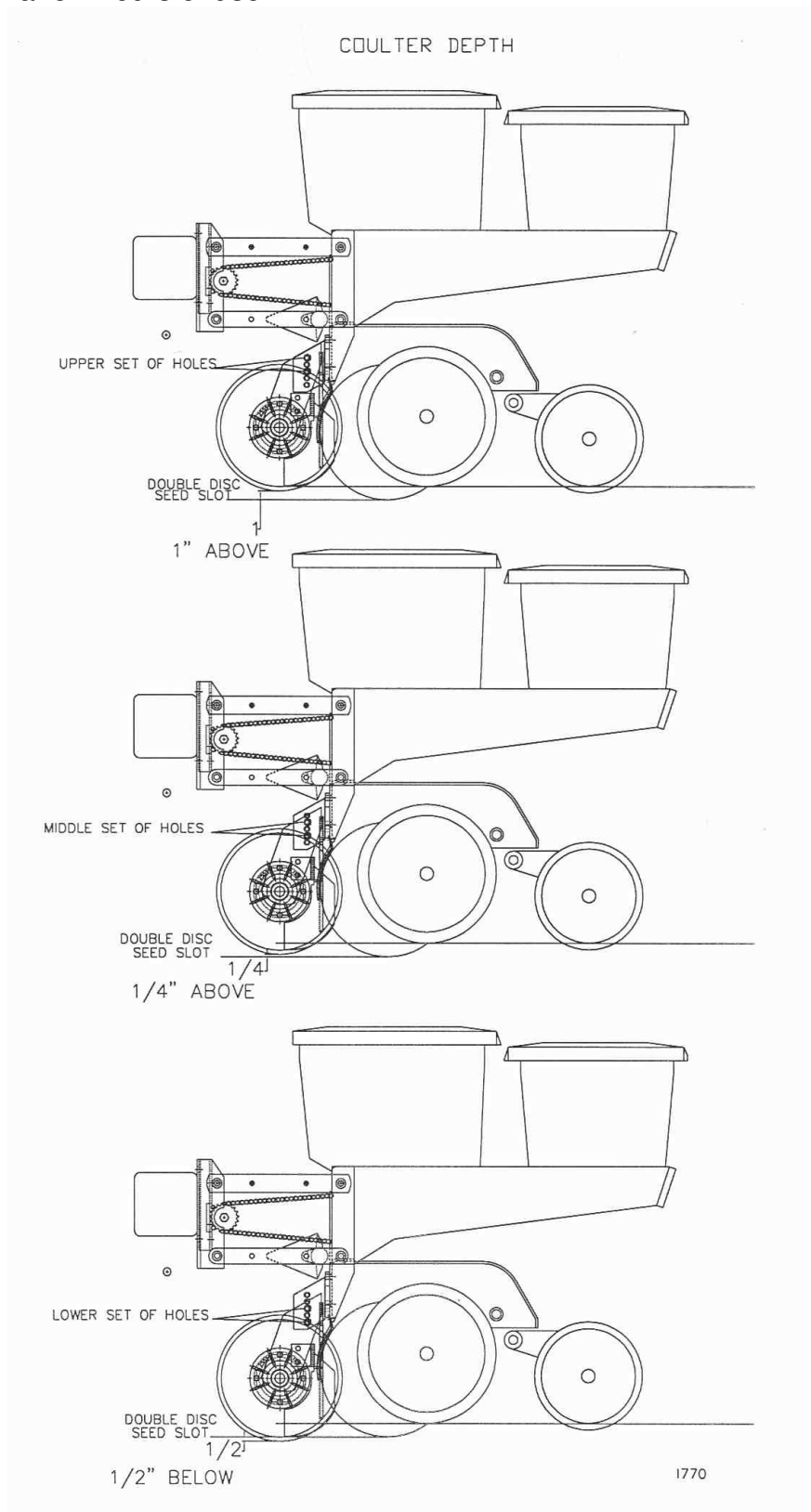
STEP 1. Assemble an equal number of right hand and left hand openers to the planter. Install the coulter arm and spacer using 2) $\frac{1}{2}$ " x 3" bolts and $\frac{1}{2}$ " hex lock nuts. Fertilizer placement is shown for a right hand opener. NOTE: spacer is to be in the center at the 1" and 3" settings.

FERTILIZER OFFSET OF ROW



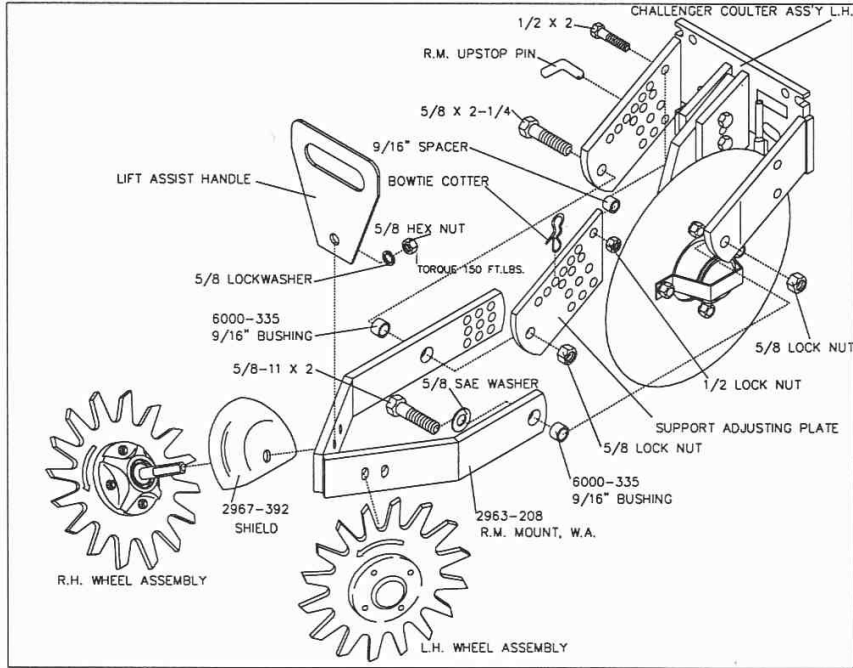
INSTALLATION / ADJUSTMENT

STEP 2. Install the coulters arm in the mount bracket in the opposite holes for the desired depth of the fertilizer placement, as illustrated below. Also, adjust the spacing for the spring for the wiper accordingly. **NOTE:** properly torque the $\frac{1}{2}$ " bolts and check for tightness after a few hours of use.

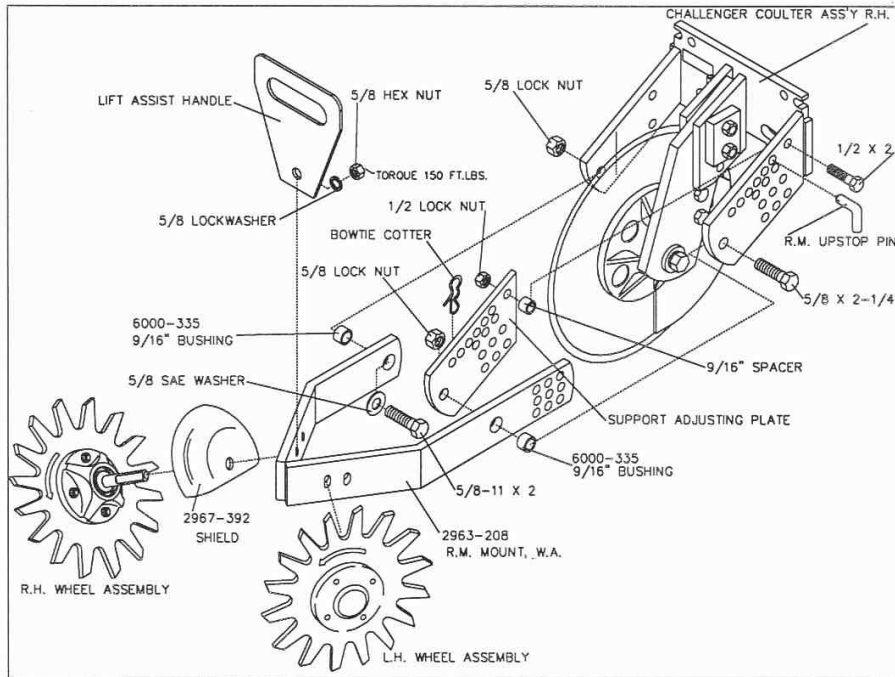


ASSEMBLY 2963-007 RESIDUE MANAGER

LEFT HAND RESIDUE MANAGER

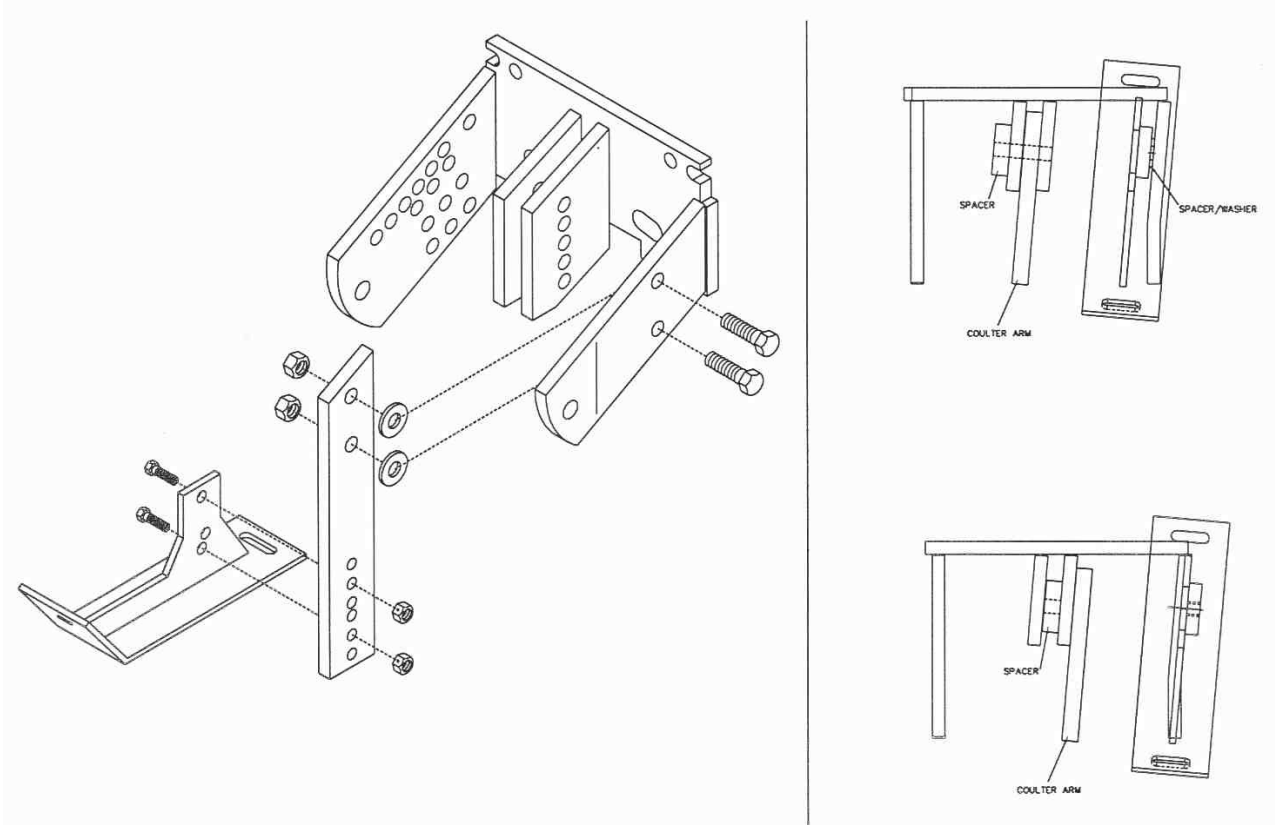


RIGHT HAND RESIDUE MANAGER



ASSEMBLY

2963-006 SKID SHOE KIT



OPERATION



CAUTION: Where rocks are present the residue manager should be set in the “float” position, not locked down.

Adjust the residue manager to move crop residue aside and not move any soil. Adjustments to the residue manager may have to be made when changing field conditions and type and amount of residue.

- Float setting – install the adjustment pin under the residue manager arm.
- Rigid setting – install the adjustment pin through the residue arm.

ROW CLEANER DO'S AND DON'TS

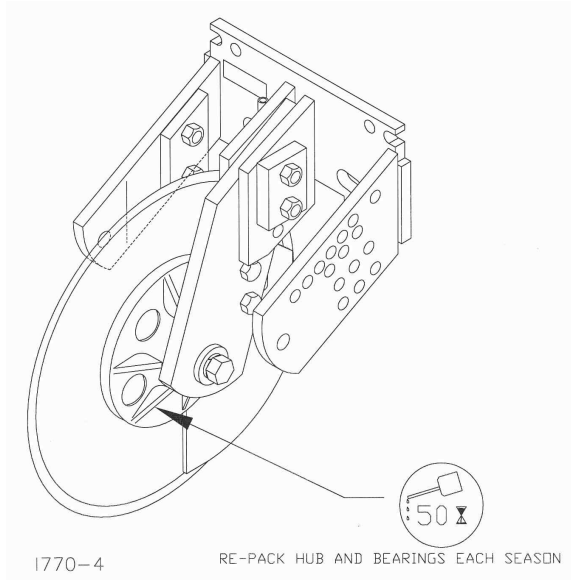
1. **DO NOT** move soil; Residue Managers are designed to move crop residue only.
2. **DO NOT** operate planter at slow speeds, ground speed affects how aggressive the spoke wheels are; operate at sufficient speed (4-6 mph) to maintain good residue flow.
3. **DO NOT** expect 100% of crop residue to be cleared, it is not necessary and would necessitate engaging the soil. The width of path cleared depends on ground conditions, depth setting and ground speed.
4. **DO** expect to see wheels occasionally quit turning, indicates ideal (shallow) setting which is not moving soil.

DO adjust toolbar frame height 20”-22” and drawbar correctly. Very important to ensure planter opener will follow ground contours properly.

MAINTENANCE

CHALLENGER OPENER

LUBRICATION: USE #2 MULTI-PURPOSE LITHIUM GREASE



To ensure longevity and reliability of the Challenger Opener, the recommended lubrication schedule should be followed using multi-purpose grease at hourly intervals as indicated.

BEARING ADJUSTMENT:

1. Raise the toolbar until the blade is clear of the ground. Place a safety stand under the toolbar. Remove the hubcap, cotter pin, slotted nut and washer from the hub assembly. Remove the blade from the hub assembly.
2. Remove bearing cones and seals from hub.
3. Wash the old grease from the hub, bearing cups, spindle spacers, seals and bearing cones. Inspect the condition of the bearing cups, cones and seals. Replace if necessary.
4. Apply #2 multi-purpose lithium grease on each bearing. Make sure the space around each roller is filled. Lubricate the bearing cups.
5. Position the bearing in the cup and install the seal. Lubricate the seal lips and proceed with re-assembly of the removed parts including the blade. Blade bolt torque is 90 to 96 ft. lbs.
6. Tighten the slotted nut to 15 ft. lbs. or until a definite drag is felt when the blade is turned by hand. Tighten the nut one slot position to line up the cotter pin hole with a slot. Secure the nut with a new cotter pin, replace hubcap.

MAINTENANCE

BEARING ASSEMBLY AND LUBRICATION

Practice Safety

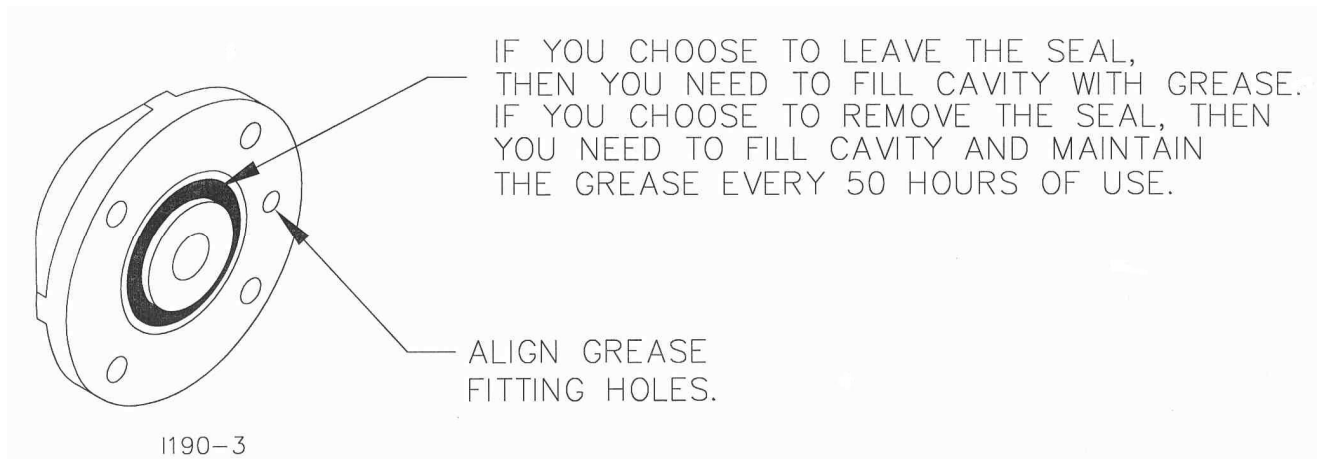
Understand and practice safe service procedures before doing work. Follow ALL the operating, maintenance and safety information in the equipment operator manual. Clear the area of bystanders, especially small children, when performing any maintenance or adjustments. Keep work area clean and dry. Use adequate lighting for the job. Use only tools, jacks and hoists of sufficient capacity for the job.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven moving and rotating parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground and stop the engine. Remove the key. Wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.

Securely support any machine elements with blocks or safety stands that must be raised for service work.

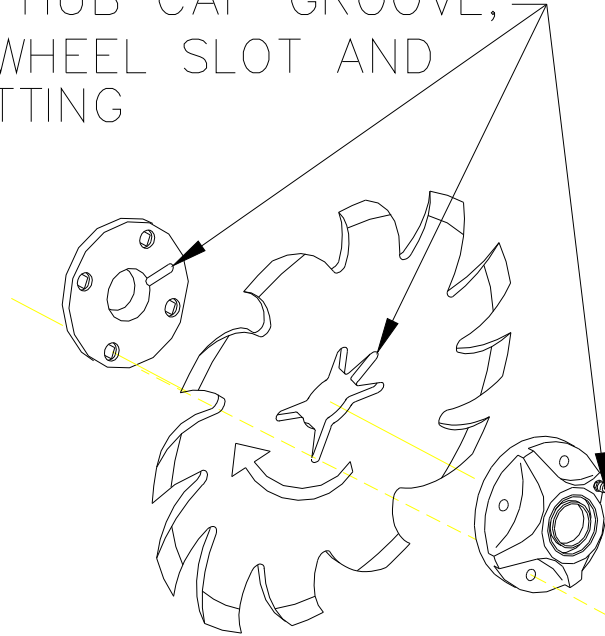
Keep all parts in good condition and properly installed. Fix damaged equipment immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris. Make sure all guards are in place and properly secured when maintenance work is completed.

Assembly

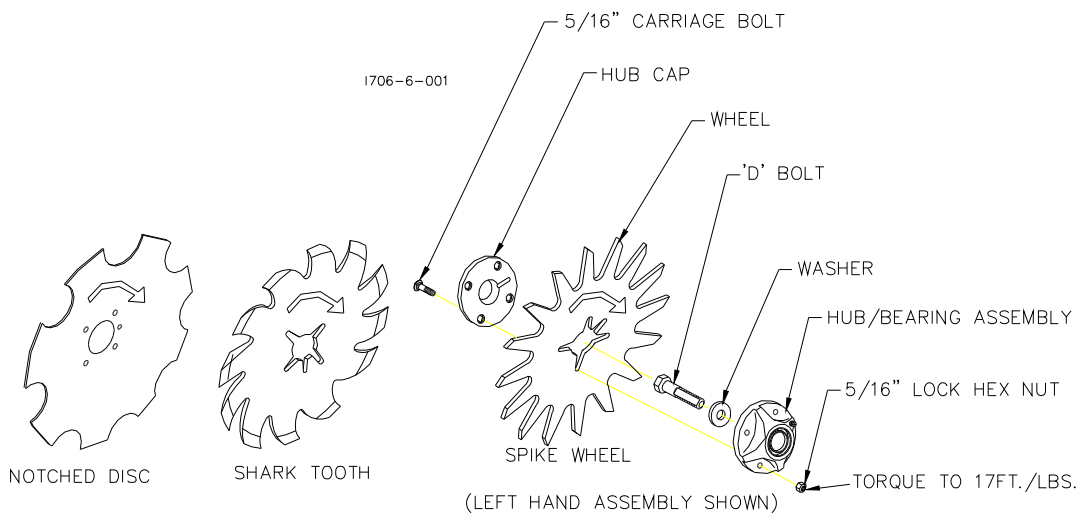


MAINTENANCE

ALIGN THE HUB CAP GROOVE,
WITH THE WHEEL SLOT AND
GREASE FITTING

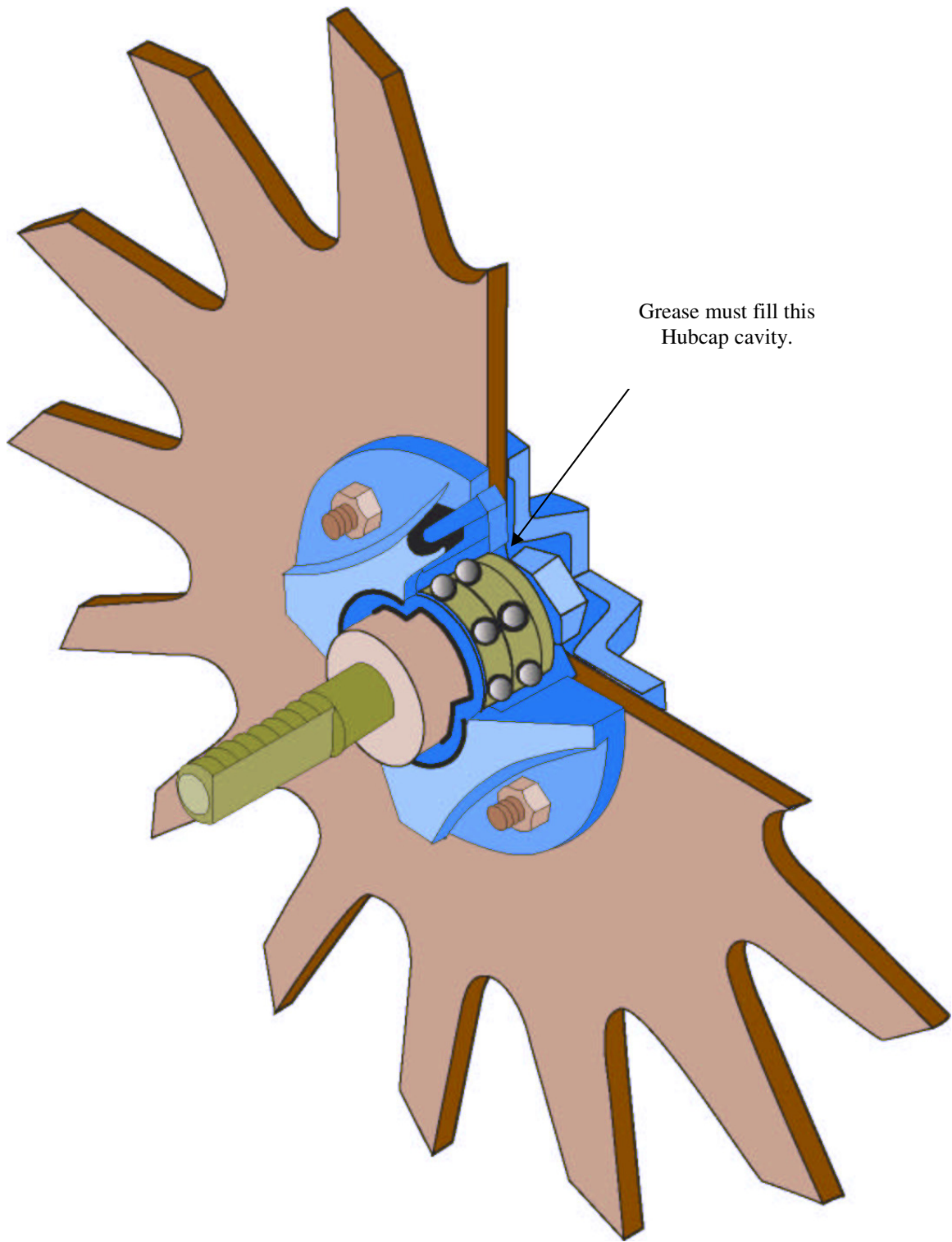


NOTE: Be certain to align the grease fitting with the slot in the wheel and the hubcap so that the grease can flow freely.



IMPORTANT: THE 2527-530 WASHER MUST BE INSTALLED OR THE WHEEL AND HUB ASSEMBLY WILL FALL OFF DURING USE.

MAINTENANCE



MAINTENANCE

Lubrication



CAUTION: To help prevent serious injury or death to you or others caused by unexpected movement, service machine on a level surface. Lower machine to ground or sufficiently lock or block raised machine before servicing. If machine is connected to tractor, engage parking brake and place transmission in “PARK”, shut off engine and remove key. If machine is detached from tractor, block wheels and use shop stands to prevent movement.



CAUTION: Do not clean, lubricate, or adjust machine while in motion.

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

Use a **multi-purpose lithium, water resistant, moderate speed, and NLGI grade #2** grease.

Other greases may be used if they meet the following **NLGI Performance Classification: GC-LB**

IMPORTANT: Some types of grease thickener are not compatible with others. Consult your grease supplier before mixing different types of grease.

Alternative Lubricants

Conditions in certain geographical areas may require special lubricants and lubrication practices which do not appear in the operator’s manual. If there are any questions, consult Yetter Manufacturing Co. to obtain latest information and recommendation.

PART #	DESCRIPTION	OUNCES OF GREASE
2967-404	13” TAPER TOOTH R.M. WHEEL	1.12 OZ
2967-602	13” SHARK TOOTH R.M. WHEEL	1.12 OZ
2967-186	FLOATER WHEEL KIT W/R.M. WHEEL	2.08 OZ
2967-596	HEAVY DUTY OR BEVEL R.M. WHEEL W/ FLOATER WHEEL KIT	2.40 OZ

Storing Lubricants

Your machine can operate at top efficiency only if clean lubricants are used.

Use clean containers to handle all lubricants.

Store them in an area protected from dust, moisture and other contaminants.

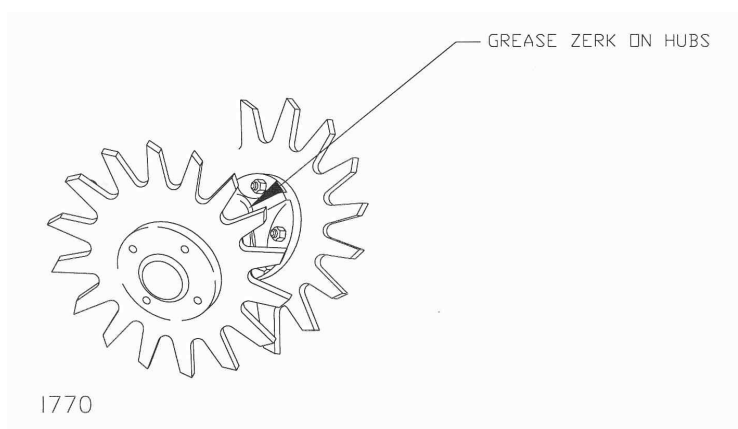
MAINTENANCE

Lubrication Symbols



Lubricate with grease at hourly interval indicated on symbol.

Lubrication Intervals



IMPORTANT: The recommended service intervals are based on normal conditions; severe or unusual conditions may require more frequent lubrication.

Perform each lubrication and service procedure at the beginning and end of each season.

Clean grease fittings before using grease gun, to avoid injecting dirt and grit into the bearing. Replace any lost or broken fittings immediately. If a fitting fails to take grease, remove and clean thoroughly, replace fitting if necessary. Also check for failure of adjoining parts.

BEARING REPLACEMENT INSTALLATION

1. If you wish to be able to grease the bearings in the hubs, remove the seal from one side of the bearings as illustrated before assembly. Otherwise the bearings may be left “sealed for life”.
2. When assembling the spoke wheels, bearing assembly and hubcap, be sure to align the grease transfer hole in the spoke wheel with the groove in the hubcap and hole in the hub to allow grease passage.
3. Install/assemble the wheels, hubs and caps. **IMPORTANT: THE 2527-530 WASHER MUST BE INSTALLED OR THE WHEEL AND HUB ASSEMBLY WILL FALL OFF DURING USE.**
4. Grease the wheel/hub/bearing assembly.

Storing the Equipment

Store the machine in an area away from human activity

Store machine in RAISED position.

Install service locks on all wheel cylinders.

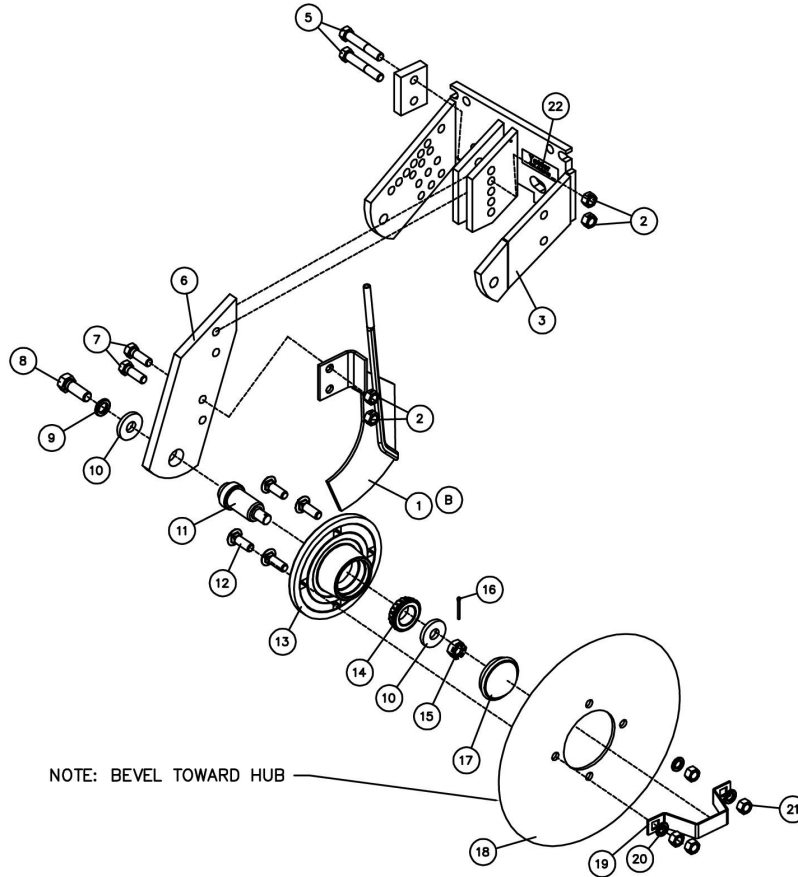
At the end of the season, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent down time at the start of the next season. Store machine under cover with all parts in operating condition.

- Clean machine thoroughly to remove all dirt, debris and crop residue, which would hold moisture and cause rusting.
- Inspect machine for worn or broken parts. See your Yetter Farm Equipment dealer during the off-season so that parts or service can be acquired when machine is not needed in the field.
- Lubricate bearings as outlined in the Lubrication section
- Paint all parts which are chipped or worn and require repainting.
- Store machine in a clean, dry place with the planting unit out of the sun.
- If the machine cannot be stored inside, cover with a waterproof tarpaulin and tie securely in place.

Do not allow children to play on or around the machine

PARTS IDENTIFICATION

2963-105-L

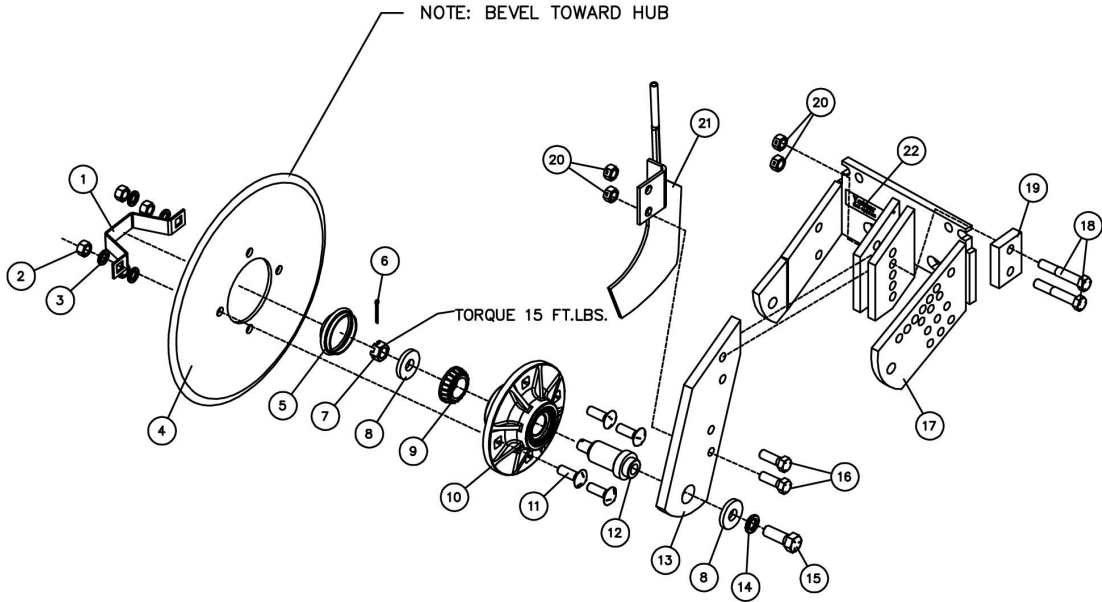


1770
UPDATED 10/9/09

DET	QTY	PART NO.	DESCRIPTION
1	1	2963-206-L	CHALLENGER LH FERT. KNIFE, W.A.
2	4	2520-357	1/2-13 LOCK HEX NUT ZP
3	1	2963-205-L	FACE PLATE COULTER MOUNT, LH WA
4	1	2963-301	SPACER
5	2	2502-313	1/2-13 X 3 HHCS GR 5 ZP
6	1	2963-325	COULTER ARM
7	2	2502-294	1/2-13 X 1-1/2 HHCS GR 5 ZP
8	1	2502-340	5/8-18 X 1-3/4 HHCS GR 5 ZP
9	1	2525-451	5/8 MED LOCKWASHER ZP
10	2	2526-449	5/8 FLATWASHER, 1/4 +- .010
11	1	2570-760	COULTER SPINDLE, 2995/2996
12	4	2505-339	1/2-13 X 1-1/2 CAR BLT GR 5 ZP
13	1	2900-102	HUB SUB-ASSEMBLY
14	1	2550-027	CONE, LM67048
15	1	2520-469	5/8-18 SLOTTED HEX NUT, BLACK
16	1	2531-102	1/8 X 1-1/4 COTTER PIN BLACK
17	1	2570-375	HUB CAP, WILTON #909902
18	1	2571-276	.197"X14" SINGLE BEVEL SMTH BLADE
19	1	2987-301	HUB CAP RETAINER
20	4	2525-352	1/2 MED LOCKWASHER ZP
21	4	2520-352	1/2-13 HEX NUT ZP
22	1	2565-179	YETTER DECAL 1" X 3"

PARTS IDENTIFICATION

2963-105-R



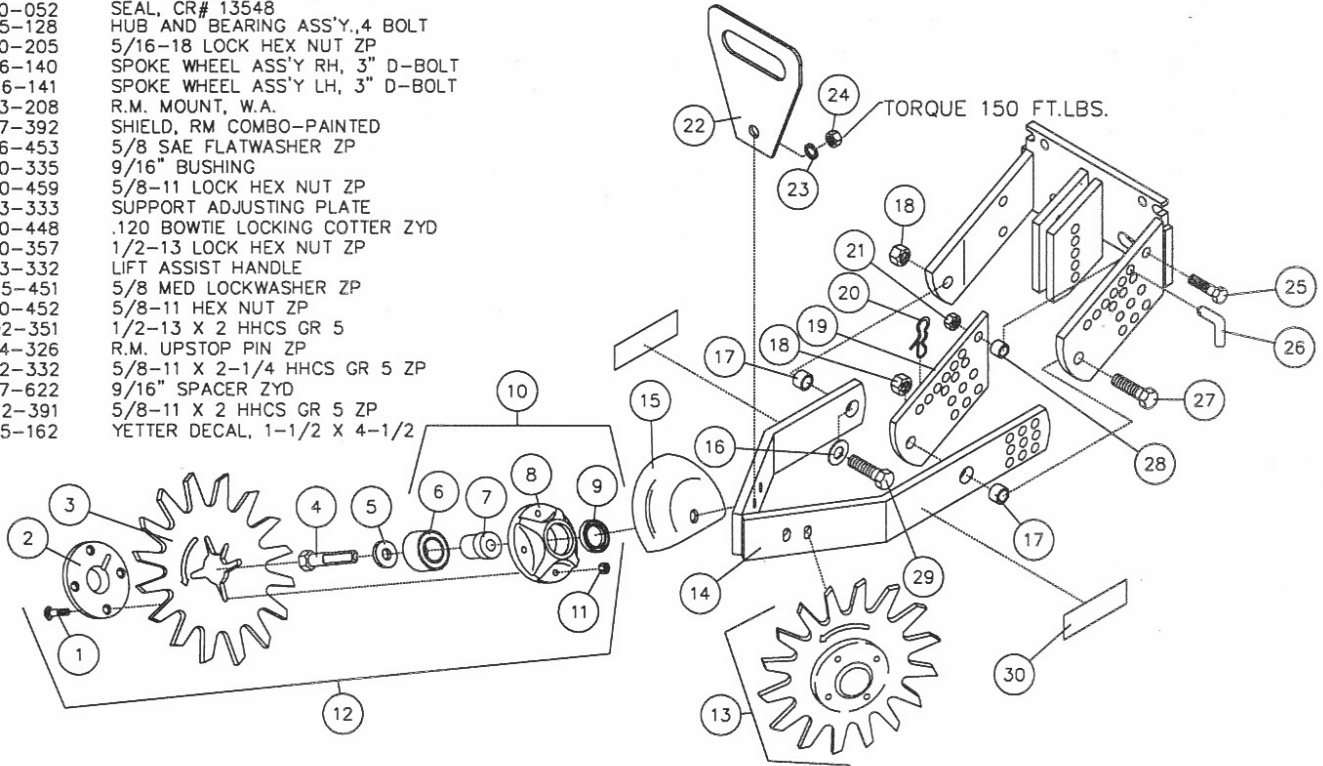
1770
 UPDATED 10/9/09

DET	QTY	PART NO.	DESCRIPTION
1	1	2987-301	HUB CAP RETAINER
2	4	2520-352	1/2-13 HEX NUT ZP
3	4	2525-352	1/2 MED LOCKWASHER ZP
4	1	2571-276	.197"X14" SINGLE BEVEL SMTH BLADE
5	1	2570-375	HUB CAP, WILTON #909902
6	1	2531-102	1/8 X 1-1/4 COTTER PIN BLACK
7	1	2520-469	5/8-18 SLOTTED HEX NUT, BLACK
8	2	2526-449	5/8 FLATWASHER, 1/4 +- .010
9	1	2550-027	CONE, LM67048
10	1	2900-102	HUB SUB-ASSEMBLY
11	4	2505-339	1/2-13 X 1-1/2 CAR BLT GR 5 ZP
12	1	2570-760	COULTER SPINDLE, 2995/2996
13	1	2963-325	COULTER ARM
14	1	2525-451	5/8 MED LOCKWASHER ZP
15	1	2502-340	5/8-18 X 1-3/4 HHCS GR 5 ZP
16	2	2502-294	1/2-13 X 1-1/2 HHCS GR 5 ZP
17	1	2963-205-R	FACE PLATE COULTER MOUNT, RH W.A.
18	2	2502-313	1/2-13 X 3 HHCS GR 5 ZP
19	1	2963-301	SPACER
20	4	2520-357	1/2-13 LOCK HEX NUT ZP
21	1	2963-206-R	CHALLENGER RH FERT. KNIFE, W.A.
22	1	2565-179	YETTER DECAL 1" X 3"

PARTS IDENTIFICATION

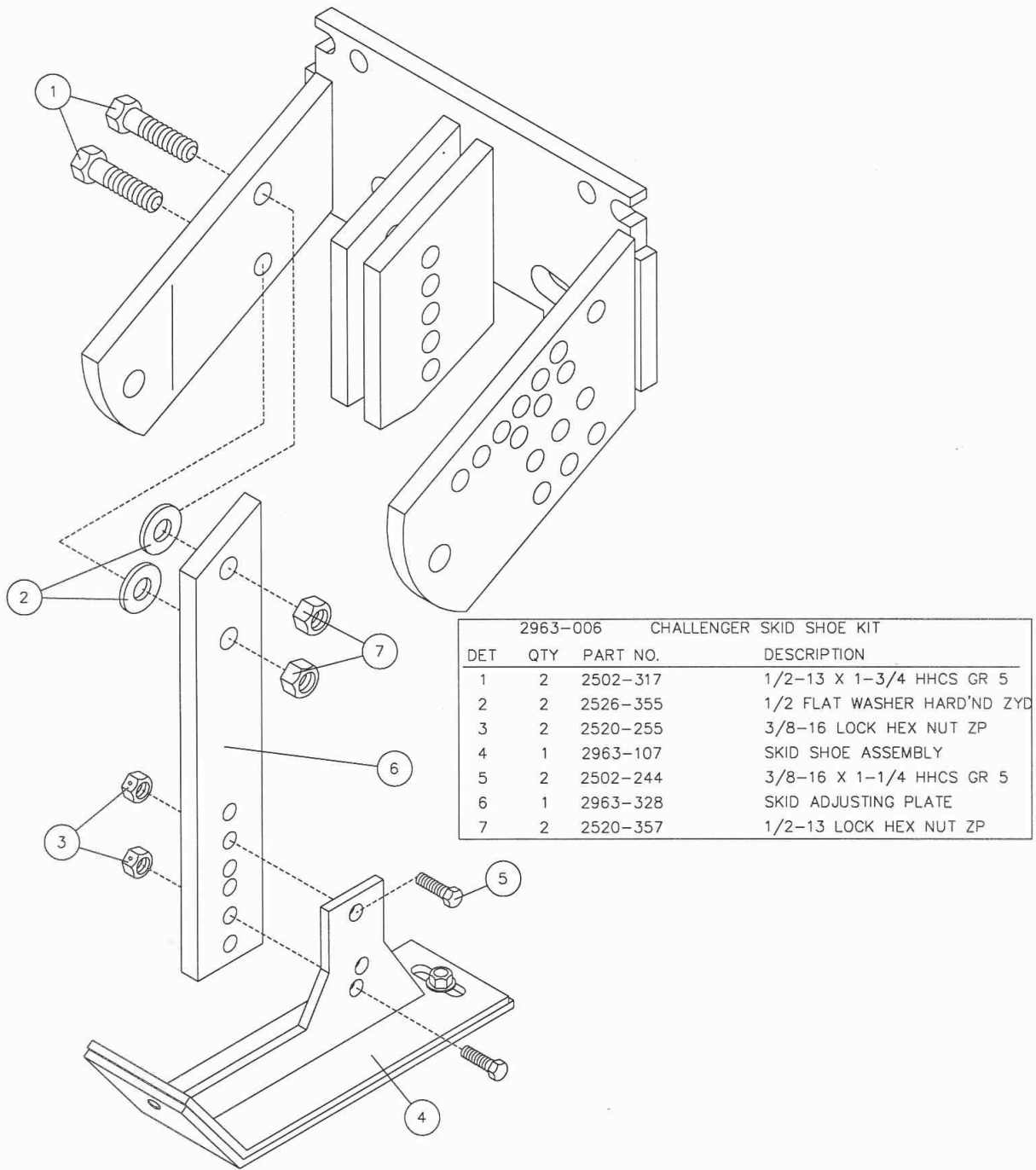
2963-007, CHALLENGER RM KIT

DET	QTY	PART NO.	DESCRIPTION
1	8	2505-208	5/16-18 X 1 1/2 CAR BLT GR5
2	2	2965-352	HUB CAP CASTING, 4 BOLT, BLACK
3	2	2967-404	13" TAPER TOOTH SPOKE WHEEL
	2	2967-596	3/8" TAPER TOOTH SPOKE WHEEL
	2	2967-602	13" SHARK TOOTH WHEEL
4	2	2570-740	5/8-11 X 3" 'D' BOLT GR.5 Z
5	2	2527-530	1.50D X 21/32ID 3/16TK MA B
6	2	2570-594	BEARING, 2 ROW NTN# DF0654L
7	2	2570-715	BEARING INSERT, TRASHMASTER
8	2	2965-351	HUB CAST, MACHINED, 4 BOLT
9	2	2550-052	SEAL, CR# 13548
10	2	2965-128	HUB AND BEARING ASS'Y., 4 BOLT
11	8	2520-205	5/16-18 LOCK HEX NUT ZP
12	1	2966-140	SPOKE WHEEL ASS'Y RH, 3" D-BOLT
13	1	2966-141	SPOKE WHEEL ASS'Y LH, 3" D-BOLT
14	1	2963-208	R.M. MOUNT, W.A.
15	2	2967-392	SHIELD, RM COMBO-PAINTED
16	1	2526-453	5/8 SAE FLATWASHER ZP
17	2	6000-335	9/16" BUSHING
18	2	2520-459	5/8-11 LOCK HEX NUT ZP
19	1	2963-333	SUPPORT ADJUSTING PLATE
20	1	2570-448	.120 BOWTIE LOCKING COTTER ZYD
21	1	2520-357	1/2-13 LOCK HEX NUT ZP
22	1	2963-332	LIFT ASSIST HANDLE
23	2	2525-451	5/8 MED LOCKWASHER ZP
24	2	2520-452	5/8-11 HEX NUT ZP
25	1	2502-351	1/2-13 X 2 HHCS GR 5
26	1	2984-326	R.M. UPSTOP PIN ZP
27	1	2502-332	5/8-11 X 2-1/4 HHCS GR 5 ZP
28	1	2967-622	9/16" SPACER ZYD
29	1	2502-391	5/8-11 X 2 HHCS GR 5 ZP
30	2	2565-162	YETTER DECAL, 1-1/2 X 4-1/2



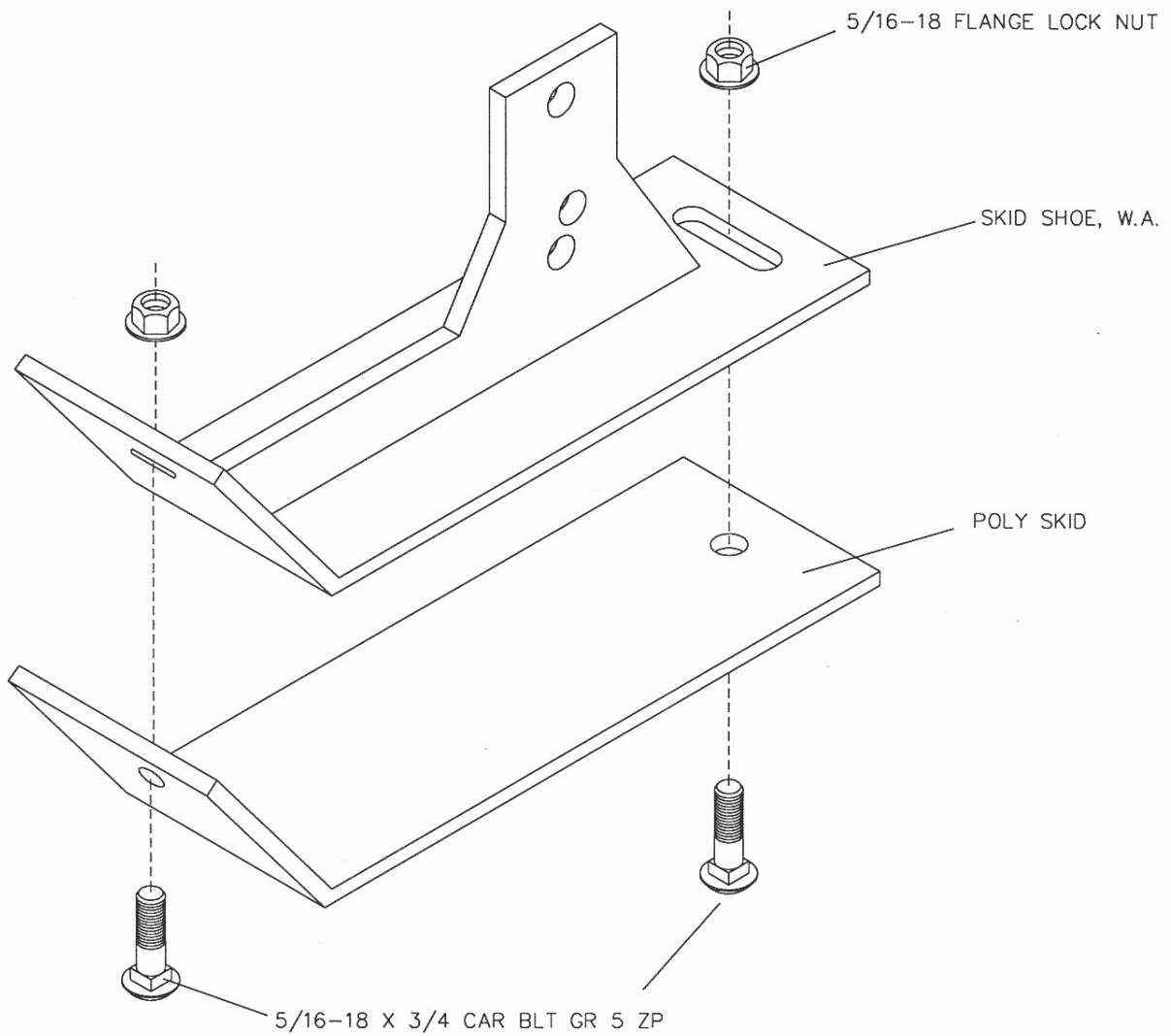
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PARTS IDENTIFICATION



1770

PARTS IDENTIFICATION



PART #	DESCRIPTION	QTY
2505-205	WU/ 5/16-18 X 3/4 CARBOLT G5	2
2520-206	5/16-18 FLANGE LOCK NUT	2
2963-207	SKID SHOE W.A.	1
2963-331	POLY SKID	1

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NOTES

NOTES

Our name Is getting known

Just a few years ago, Yetter products were sold primarily to the Midwest only. Then we embarked on a program of expansion and moved into the East, the South, the West and now north into Canada. We're even getting orders from as far away as Australia and Africa.

So, when you buy Yetter products . . .you're buying a name that's recognized. A name that's known and respected. A name that's become a part of American agriculture and has become synonymous with quality and satisfaction in the field of conservation tillage.

Thank you.

YETTER MANUFACTURING CO.
Colchester, IL 62326-0358 • 309/776-4111
Toll Free 800/447-5777
Fax 309/776-3222
Website: WWW.YETTERCO.COM
E-MAIL: INFO@YETTERCO.COM

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