

DIETRICH ROTARY INJECTOR OPERATING GUIDE

DSI, INC.

**417 STATE ROUTE 117
GOODFIELD, IL. 61742
Phone: (309) 965-5110**



CAUTION: Do not allow children or unqualified operators to operator equipment. In addition to design and configuration of equipment, safety and accident prevention are dependent upon the awareness, concern, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.

OPERATION SECTION

Your new **Dietrich Rotary Injectors** are designed to mount to a 6" x 4", 6" x 6", or 7" x 7" tool bar and be spaced from 30" - 18".

TOOL BAR HEIGHT: 28.75" from level surface to bottom of tool bar. See page 3.

SPACING: Injectors mounted less than 30" apart must be mounted offset fore and aft. Odd numbered injectors will be manufactured for the forward position. Even numbered injectors will be manufactured to sit in the aft position.

GROUND SPEED: Maximum of 10 MPH

TILLAGE DEPTH: The Coulter is designed to operate up to 7" in depth. This injector can be operated with Coulter Depth Ring or without if using gauge wheels.

OPERATING DOWN PRESSURE: When the unit is in operation, the large nut at the end of the Coulter Spring should be in the home position to approximately 1/2" from the plate. It will generally move between the nut touching the plate to a maximum of 1" away.

FRONT COMPRESSION SPRING SETTING: Correct spring compression is very important. Align 2 front compressions springs so that 5/8" of threads protrude beyond the double nut.



WARNINGS:

*Blades have extremely sharp edges. Care must be taken when handling to avoid injury.

*Compressed springs have potentially dangerous stored energy. Always assemble and disassemble properly.

DIETRICH ROTARY INJECTOR

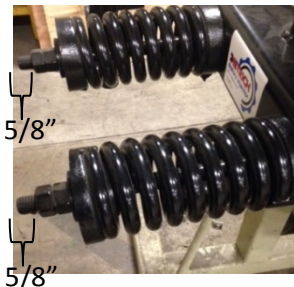
DIETRICH ROTARY INJECTOR ASSEMBLY INSTRUCTIONS

Injectors mounted less than 30" apart must be mounted offset fore and aft.
Odd numbered injectors will be manufactured for the forward position.
Even numbered injectors will be manufactured to be in the aft position.

1. Attach Mount with Coulter Arm Assembly to Tool Bar with 2 U-Bolts.
Torque nuts to 350 FT LBS
2. Attach Conical Coulter Blade with 1/2" x 1-1/4" Bolts to move soil to the **RIGHT**.
Attach optional Coulter Depth Ring, if supplied. Attach Dust Cap Retainer.
Torque nuts to 85 FT LBS. Blade should be replaced when it reaches approx. 19.5" in diameter or when a reduction in GPA is noticeable.
3. To attach Clozr Mount Assembly with 5/8" x 1-3/4" Carriage Bolts, first insert bolt into round hole. Next, insert bolt into slotted hole & allow assembly to fall to bottom of slotted hole. Washer is for slotted hole only. Torque stover lock nuts to 230 FT LBS.
4. Attach Clozr Arms with 1/2" x 1-1/2" Carriage Bolts, Heavy Washers, & Lock Nuts using inner slotted hole & center round hole only. Torque nuts to 55 FT LBS.
5. Bolt the 18" Flat Clozr Blades to the Clozr Arms with 1/2" x 1" Carriage Bolts.
IMPORTANT. Bolt heads should be on the blade side. Start with blades at steepest angle.
6. **IMPORTANT.** Attach Slurry Tube on front side of Clozr Mount with 1/2" x 1-3/4" Carriage Bolts & Heavy Washers. Bolt heads on Slurry Tube Bracket. Align the Slurry Tube offset **RIGHT** to align with the Conical Blade furrow. Slurry will exit the Tube rearward between the Clozr Blades when properly installed.
7. **Before use, grease all 3 hubs** until grease exits the protective collars.
To avoid bearing problems, grease all hubs prior to use. Then grease weekly and after end of season high pressure washing. This will create a barrier and prevent liquid from getting near the seal. This will virtually eliminate bearing failures.
8. **Correct spring compression is very important.**
Align 2 front compressions springs so that 5/8" of threads protrude beyond double nut.

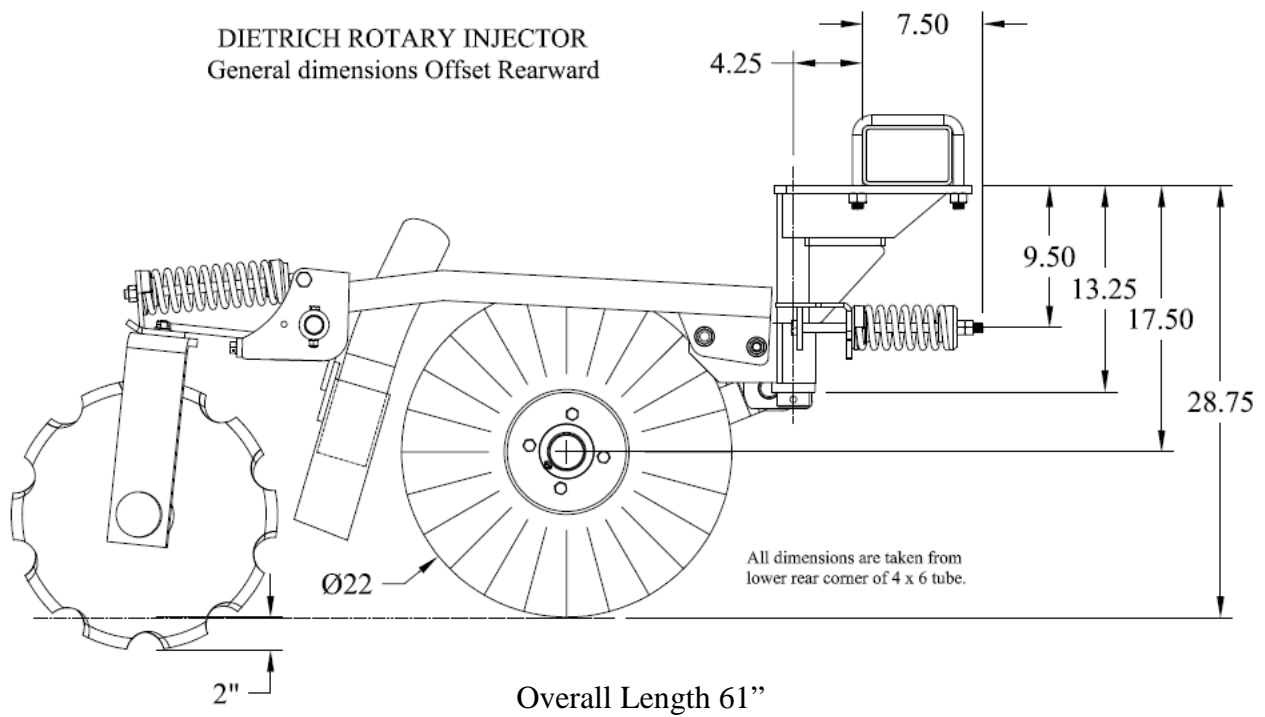
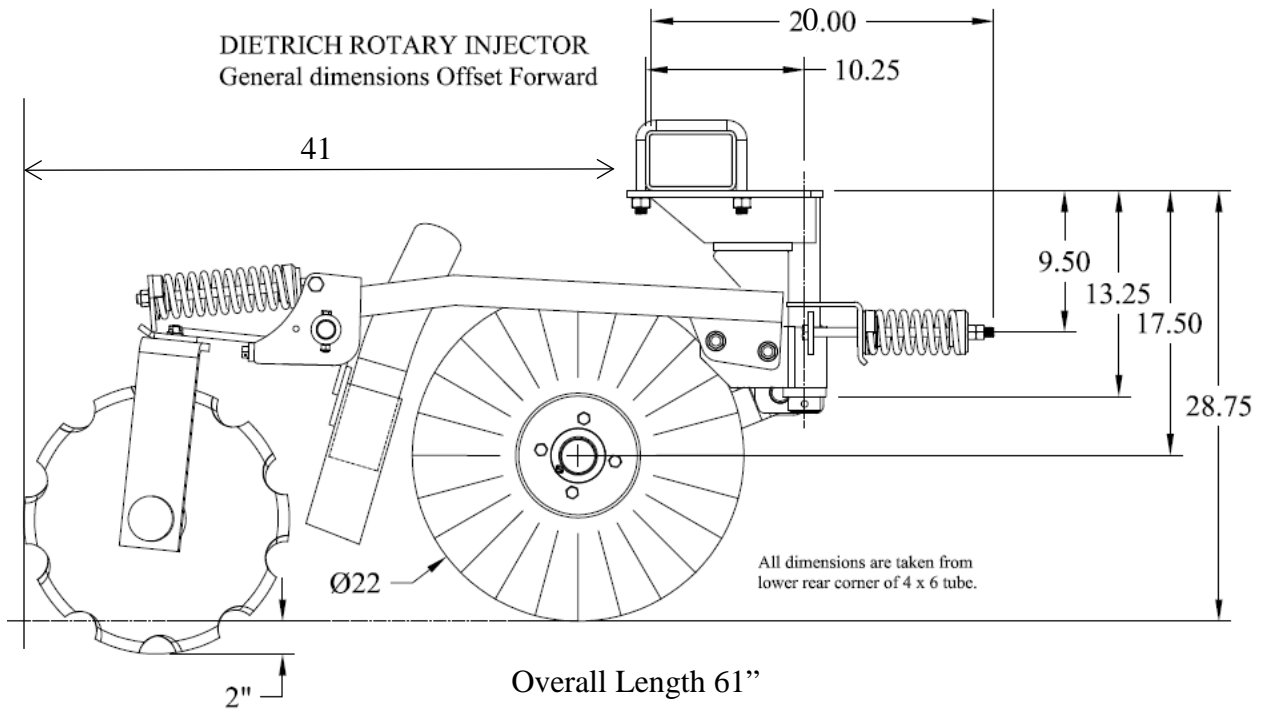


Heavy washer & nut on Clozr Mount (rear view)

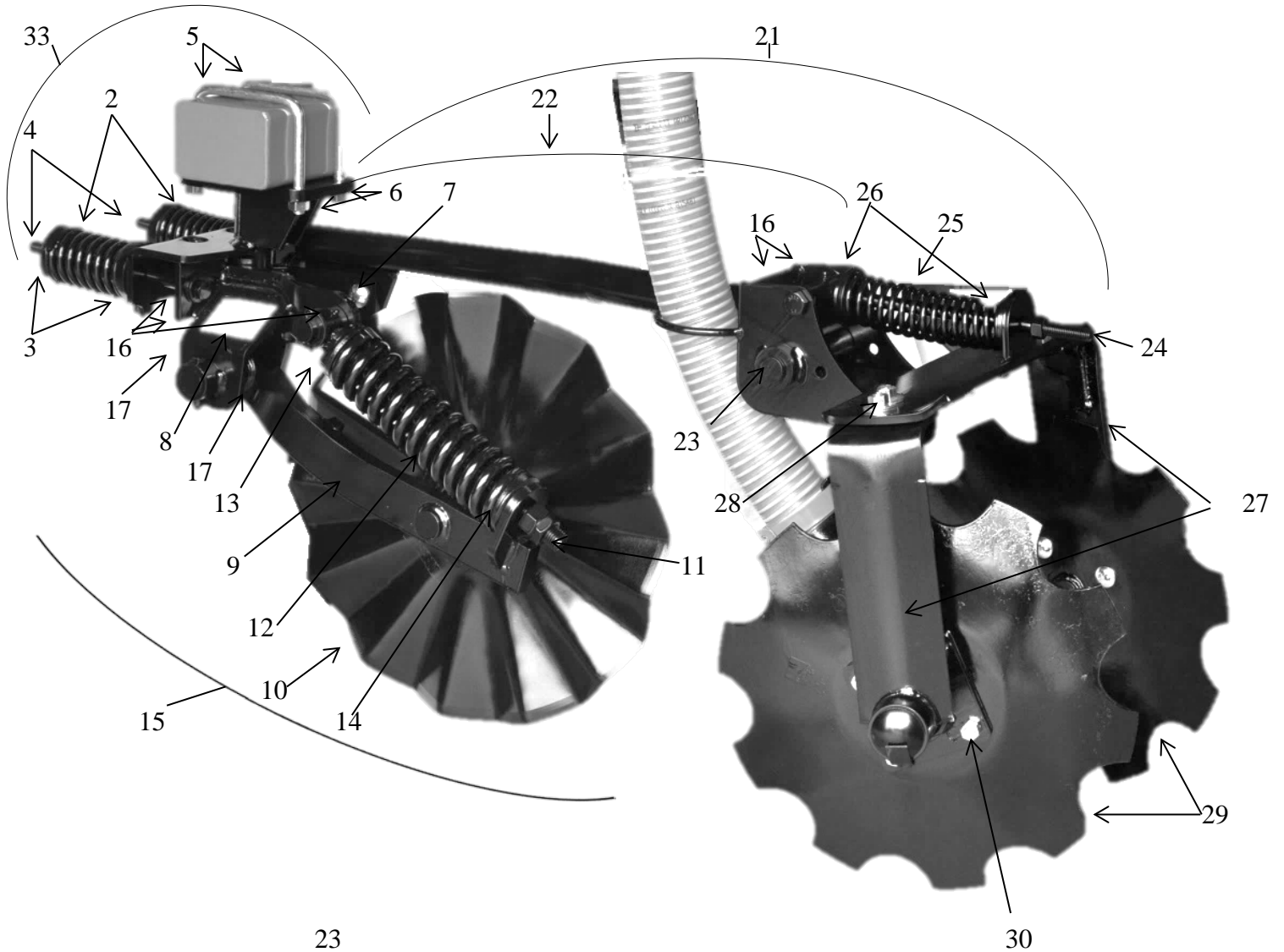


**All directions are given as if standing behind the injector.

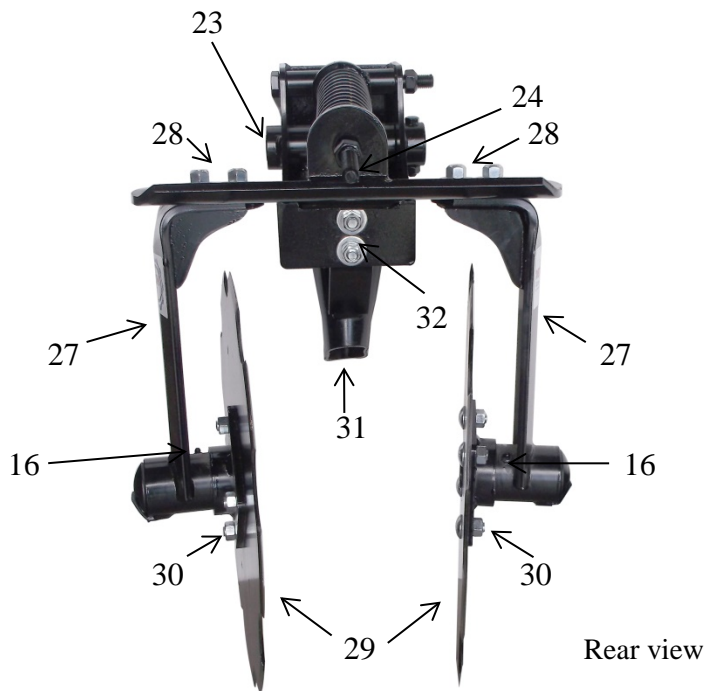
DIETRICH ROTARY INJECTOR



DIETRICH ROTARY INJECTOR



Left side view



Rear view

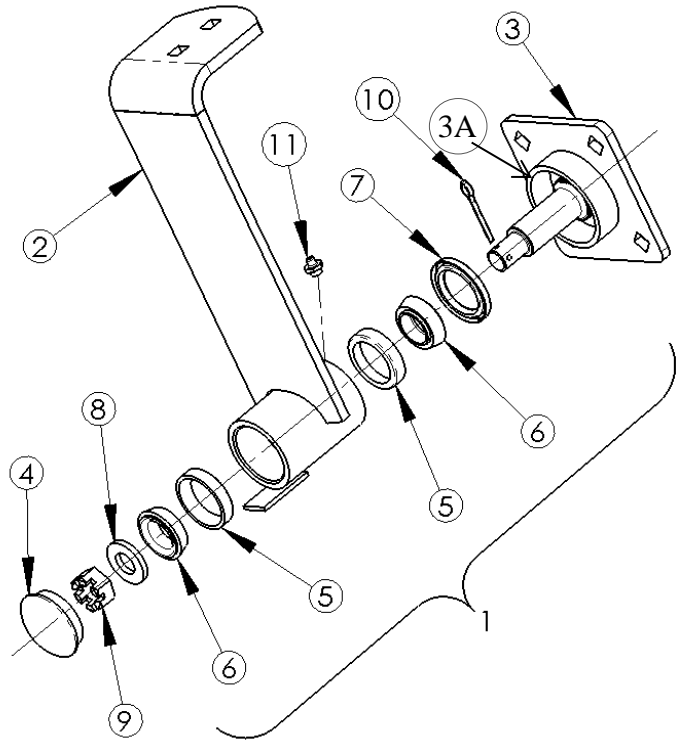
| REF NO. NO. | PART NO. | NO REQ. | DESCRIPTION |
|-------------------------------|-------------|------------|---|
| | | | For 6" x 4" Tool Bars |
| 1 | 57700 | 1 | Dietrich Conical Blade Rotary Injector w/Depth Band –Forward Unit |
| 1 | 57701 | 1 | Dietrich Conical Blade Rotary Injector w/Depth Band –Rearward Unit |
| 1 | 57702 | 1 | Dietrich Conical Blade Rotary Injector Less Depth Band –Forward Unit |
| 1 | 57703 | 1 | Dietrich Conical Blade Rotary Injector Less Depth Band –Rearward Unit |
| 2 | 577562 | 2 | Compression Spring |
| 3 | 5030015 | 4 | Spring Casting |
| 4 | 56628 | 2 | 5/8" x 12" Hex Bolt, Nut, & Jam Nut |
| 5 | 57646 | 2 | 3/4" U-Bolt (6" x 4" Tool Bar) |
| | 57666 | 2 | 3/4" U-Bolt (6" x 6" Tool Bar) |
| | 57777 | 2 | 3/4" U-Bolt (7" x 7" Tool Bar) |
| 6 | NSI | 4 | 3/4" Hex Nut |
| 7 | NSI | 2 | 5/8" x 1-3/4" Carriage Bolt & Stover Lock Nut (Washer on slotted hole only) |
| 8 | 56740 | 1 | Coulter Pivot Weldment |
| 9 | 504110 | 1 | Coulter Arm with Hub |
| 10 | 5072213 | 1 | 13 Wave Conical Blade |
| 11 | 504120 | 1 | Coulter T-Bolt Weldment |
| 12 | 56718 | 1 | Compression Spring |
| 13 | 56719 | 1 | Spring Casting |
| 14 | 57720 | 1 | Spring Casting 6.2° wedge |
| 15 | 56707 | 1 | Complete Coulter Arm Assy (Less Blade) |
| 16 | 56780 | 2 | 1/8" NPT Spring Mount Base Grease Zerk – grease end of season |
| | | 1 | 1/8" NPT Coulter T-Bolt Zerk – grease weekly |
| After initial greasing | | 1 | 1/8" NPT Clozr Spring Pivot Grease Zerk - grease end of season |
| Grease all hubs weekly | | 1 | 1/8" NPT Clozr Pivot Grease Zerk - grease end of season |
| | | 2 | 1/8" NPT Clozr Hub Grease Zerk – grease weekly (see #11 page 6) |
| | | 1 | 1/8" NPT Coulter Hub Grease Zerk – grease weekly |
| 17 | 56781 | 1 | 1/8" NPT 90° Coulter Trip Grease Zerk – grease weekly |
| 18 | 57763 | 1 | Dust Cap Retainer, yellow zinc (not visible) |
| 19 | NSI | 1 | 1/4" x 2" Cotter Pin (not visible) |
| 20 | 57760 | 1 | Coulter Depth Band (not visible, see #2 page 2) |
| 21 | 57770 | 1 | Clozr Mount Assembly |
| 22 | 57774 | 1 | Clozr Mount Weldment |
| 23 | 508119 | 1 | Pivot Pin, 1-1/4" x 7-1/4" |
| 24 | 508246 | 1 | Clozr T-Bolt Weldment |
| 25 | 508313 | 1 | Compression Spring |
| 26 | 508310 | 2 | Cup Washer |
| 27 | 508200 | 2 | Clozr Arm with Hub, Less Blade |
| 28 | NSI | 4 | 1/2" x 1-1/2" Clozr Arm Carriage Bolt, Lock Nut, & Heavy Washer |
| 29 | 508184 | 2 | 18" Notched Blade, Flat |
| 30 | 508181 | 8 | 1/2" x 1" Carriage Bolt & Nut |
| 31 | 57744 | 1 | Bracket & 4" Slurry Tube |
| 32 | NSI | 2 | 1/2" x 1-3/4" Carriage Bolt, Heavy Washer, & Nut |
| 33 | 77116 | 1 | Mount Weldment, 6" |
| | 77117 | 1 | Mount Weldment, 7" |

For 6" x 6" Tool Bars
57704 Forward Unit w/Depth Ring
57705 Rearward Unit w/Depth Ring
57706 Forward Unit No Depth Ring
57707 Rearward Unit No Depth Ring

For 7" x 7" Tool Bars
57708 Forward Unit w/Depth Ring
57709 Rearward Unit w/Depth Ring
57710 Forward Unit No Depth Ring
57711 Rearward Unit No Depth Ring

Clozr Arm Assembly

| REF. NO. | PART NO. | NO. REQ. | DESCRIPTION |
|----------|----------|----------|-------------------------|
| 1 | 508200 | 2 | Clozr Arm Complete |
| 2 | 508220 | 1 | Clozr Arm |
| 3 | 508215 | 1 | Spindle Weld |
| 3A | NSI | 1 | Protective Collar |
| 4 | 508211 | 1 | Hub Cap |
| 5 | 508208 | 2 | Cup (L44610) |
| 6 | 508207 | 2 | Cone (L44649) |
| 7 | 508206 | 1 | Seal (CR 14960) |
| 8 | 508209 | 1 | 3/4" Hardened Washer |
| 9 | 508210 | 1 | 3/4" NF Slotted Nut |
| 10 | NSI | 1 | 1/8" x 1" ZP Cotter Pin |
| 11 | NSI | 1 | 1/8" NPT Zerk |

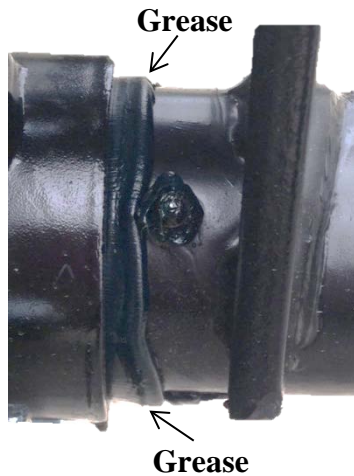


NOTE: Since the Clozr is subject to liquid splash, greasing weekly until grease emerges around the protective collar as per instructions will provide a moisture barrier to protect the seal.

VERY IMPORTANT

Before use, grease both hubs until grease appears around protective collar. After initial greasing, grease hubs weekly. This will prevent any liquid near the seal. See #11 Grease Zerk

Protective Collar →

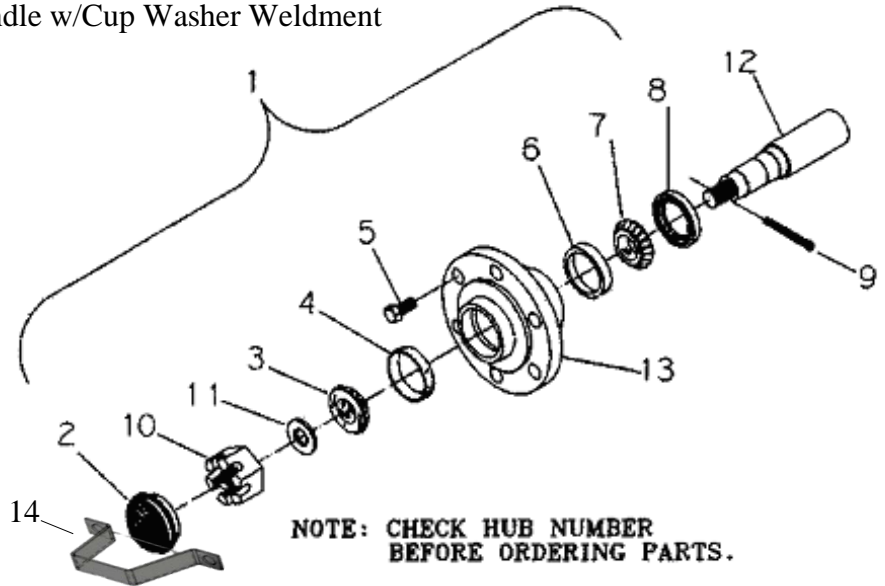


VERY IMPORTANT

At the end of each season, grease all 3 hubs until grease appears around protective collar and rotate blade.

633 HUB ASSEMBLY

| REF. NO. | PART NO. | NO. REQ. | DESCRIPTION |
|----------|----------|----------|---------------------------------------|
| 1 | 28063331 | 1 | 633 Hub and Spindle Assembly |
| 2 | 28463300 | 1 | Dust Cap |
| 3 | 0750 | 1 | .75" Bore Cone- Timken #LM11949 |
| 4 | 1780 | 1 | 1.78" OD Cup- Timken #LM11910 |
| 5 | NSI | 4 | 1/2" x 1-1/4" NC Hex Bolt Gd. 5 ZP |
| 6 | 2330 | 1 | 2.33" OD Cup Timken #LM67010 |
| 7 | 1250 | 1 | 1.25" Bore Cone- Timken #LM67048 |
| 8 | 1501 | 1 | 1.50" ID x 2.33" OD Seal- CR# 14975 |
| 9 | NSI | 1 | 5/32" x 1-1/2" Cotter Pin |
| 10 | NSI | 1 | 3/4" NF Slotted Hex Nut |
| 11 | 17413001 | 1 | 3/4" Special Washer |
| 12 | 28363331 | 1 | 633 Spindle |
| 13 | 28263340 | 1 | Hub w/ Cups (grease zerk not visible) |
| 14 | 57763 | 1 | Dust Cap Retainer, yellow zinc |
| 15 | 504300 | 1 | 633 Spindle w/Cup Washer Weldment |



For 2016 and newer models

NSI- NOT A SERVICE ITEM

TROUBLE SHOOTING FIELD PROBLEM REMEDIES

TO THE DIETRICH INJECTOR OWNER: DSI, INC. equipment is designed for tough conditions. Our products have innovative features that greatly improve performance and reduce operating costs if the product is used properly.

Improper use of these same features can result in excessive costs, premature failure, and poor field performance. The key to proper use is knowledge and awareness on your part. This section is designed to give you that awareness.

Engaging injectors into the soil before the tank & tractor are aligned causes tremendous side loading, especially on the outermost injectors. Unnecessary damage due to excessive side pressure is not covered under warranty.

| POTENTIAL PROBLEM | PROBABLE CAUSES | REMEDIES |
|--|---|---|
| BENT OR BROKEN COULTER BLADES | Excessive speed | Slow down |
| BEARING FAILURE | Hubs not greased sufficiently | To virtually eliminate bearing failure, prior to use grease hubs until grease appears around protective collar then grease weekly to maintain a protective barrier around seal. After end of season high pressure washing, grease hubs until grease appears around protective collar. |
| BENT SLURRY TUBES | This is a built in warning signal. Too much down pressure on the tool bar. Coulters spring nearly compressed. | Bend slurry tubes back into place. Apply less down pressure on the tool bar. Minimal rock clearance and substantial damage could occur. |
| CONICAL BLADE COULTER SPRINGS ARE COMPRESSED RESULTING IN MINIMAL ROCK CLEARANCE | Excessive down pressure. | Apply less down pressure. During operation large nut at the end of the Coulters Spring should be in the home position to approximately 1/2" from the plate |
| INSUFFICIENT SOIL BERM | Insufficient angle of Clozr Blades | Adjust the Clozr Blades with more angle. |



20° - 30° is the ideal angle for Clozr Blades during operation.

**If tool bar is not level,
Clozr Blades will not be at the ideal angle.**