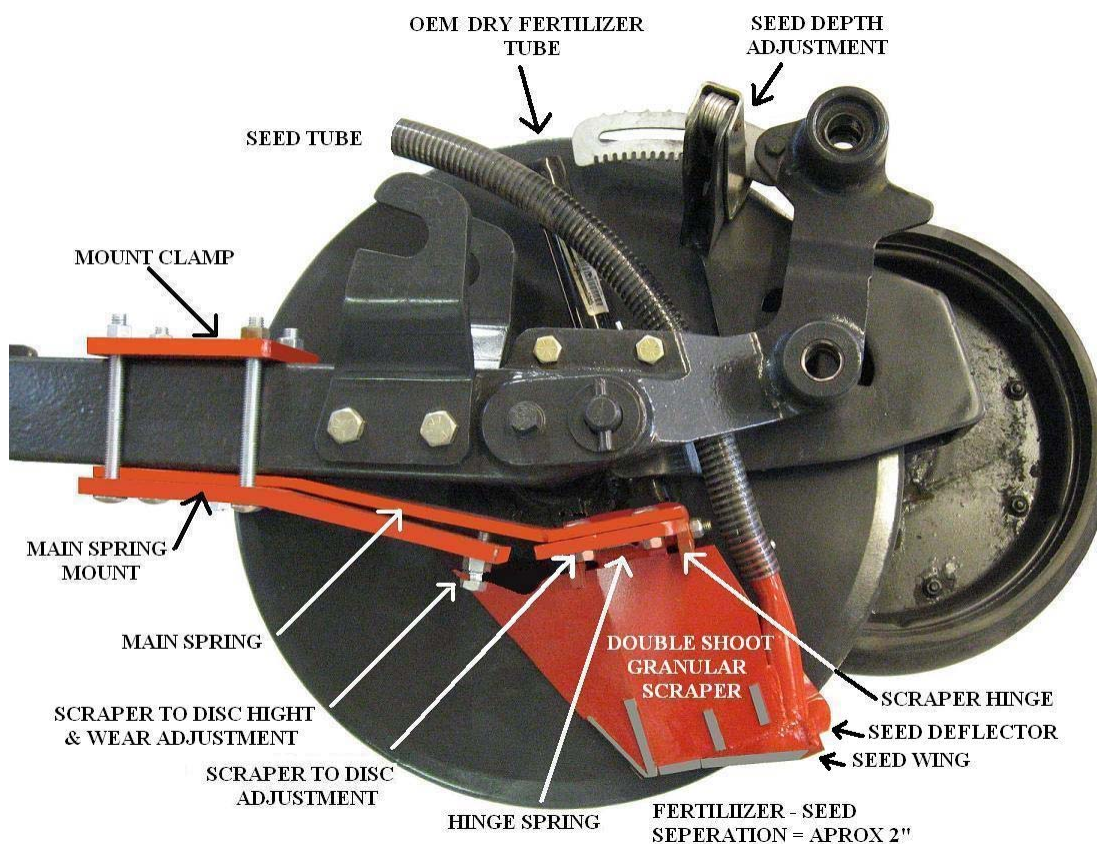




Atom Jet Industries Ltd.

SDX DOUBLE SHOOT PARTS LIST & INSTALLATION INSTRUCTIONS



SDX DOUBLE SHOOT PARTS LIST

2

FG-Z SDX SCRAPER DS GR L
(Left DS scraper)



FG-Z SDX SCRAPER DS GR R
(Right DS scraper)



OP-SDX HINGE SPRING



OP-SDX SCRAPER HINGE



OP-SDX MOUNT CLAMP



OP-SDX MAIN SPRING



OP-SDX MAIN SPRING MOUNT left
OP-SDX MAIN SPRING MOUNT right



Shipped
With
Liquid
Order
Only

**FG-Z SDX
Liq Tube
Left**

**FG-ZSDX
Liq Tube
Right**



(4) 1/2" x 6" Carriage c/w lock & nut



(1) 3/8" x 4 1/2" hex bolt c/w lock nut



(1) 1/2" x 2" hex bolt c/w nut



(2) 3/8" x 1 1/4" Carriage c/w flat & lock nut



(1) 3/8" x 1 1/4" Plow bolt c/w lock nut



2 x 5 x 1/8 GUIDE

(3) #6
Hex
head



14" x 1" ID Hose



6" x 1 1/4 ID Hose



TO EQUIP COMPLETE DRILL UNITS ORDER COMPLETE ASSEMBLIES IN EQUAL NUMBERS OF THE FOLLOWING

FG-ZT SDX DS GRAN LEFT & FG-ZT SDX DS GRAN RIGHT

If equipping with .250 liquid add equal numbers of

FG-Z SDX LIQ TUBE .25 L

&

FG-Z SDX LIQ TUBE .25 R

Installation

Note! (OEM = original equipment)

Note! Scrapers, Main Spring mounts and Liquid Tubes are built in Lefts and Rights. Lefts and Rights are determined by standing at the rear of drill facing direction of travel. A left assembly will be on the left side of the Drill.

TOOLS REQUIRED –

- Small hammer,
- 1/2" Impact. 3/4" Socket
- 9/16" combination flat wrench
- 3/8 ratchet, 9/16 deep Socket, 7/16" Socket
- 1/4" Nut driver

- 1) Allow 20 minutes in man-hours for each Double Shoot Scraper installed. (example) Two people should be able to install 64 openers on a 40" drill in 11 hours = 22 total man-hours.
- 2) Raise drill to full height and lock in position
- 3) Remove OEM main down pressure spring from each disc unit.
- 4) Remove OEM scraper
- 5) Remove OEM Seed firming strip from dry tube. (No longer required)



- 6) If using liquid install **FG-Z SDX LIQ TUBE (L or R)** liquid 1/4" tube on bolts that held firming strip. Ensure liquid stream will not hit the disc.



- 7) Note a left **MAIN SPRING MOUNT** will be used on the left side of the drill a right **MAIN SPRING MOUNT** will be used on the right side of the drill determined by facing the direction of travel, When installed the mounts will be angled down and toward the disc. (see #22)
- 8) Thread $\frac{1}{2}$ " **JAM NUT** onto $\frac{1}{2}$ " x 2" standard **HEX BOLT**. Thread bolt with jam nut on into **MAIN SPRING MOUNT** (left or right) to the point where threads just start to extend out of the Main spring mount.



- 9) Install **MAIN SPRING** to Main Spring Mount positioning the round hole over the extended roll pin in the Main Spring Mount. Secure with $\frac{3}{8}$ x 1 $\frac{1}{4}$ plow bolt and locking nut.
- 10) To avoid plugging before installing spring **ENSURE THE SCRAPER MOVES FREELY ON THE HINGE.** (Same view as #13 without the spring)
- 11) Insert **HINGE SPRING** into **SCRAPER** (left or right) as shown below.



- 12) Install **SCRAPER HINGE** on the **SCRAPER** as shown (picture #13) by inserting 3/8" x 4 1/2" hex bolt through Hinge and Scraper with the lock nut to the rear. Tighten bolt so it is secured to the Hinge and does not restrain movement of the scraper.
- 13) (NOTE LEFT AND RIGHT SCRAPERS WILL ATTACH TO THE HINGE AS MIRROR IMAGES OF EACH OTHER)

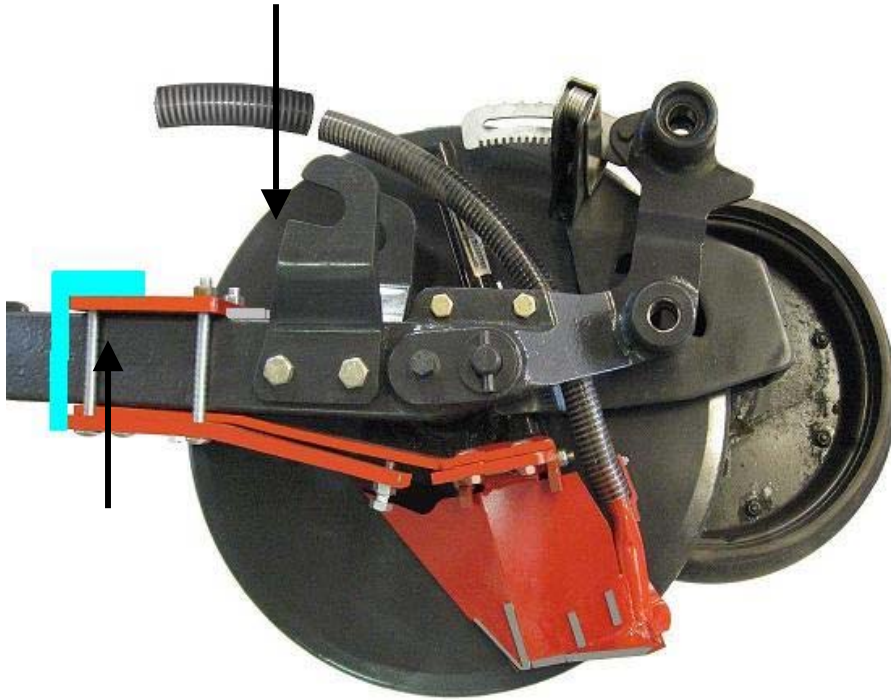


- 14) Install Scraper and hinge assembly onto Main Spring using (2) 3/8" x 1 1/4" carriage head bolts inserted down from the top. Loosely install flat washer, lock washer and nuts. Position such that the scraper will be as far away from disk as the slotted holes will allow. (See #15)
- 15) **INSTALL DRY SEED HOSE OVER TUBE ON SCRAPER.** Secure with a #6 hex screw through screw bracket and hose into the delivery tube **HAND TIGHTEN ONLY WITH DRIVER. DO NOT USE POWER TOOL.** If equipping a new SDX drill use OEM hose to connect to the scraper. If equipping a used drill with used hoses attach the included 14" x 1" ID extender hose to the scraper and secure with #6 hex screw provided



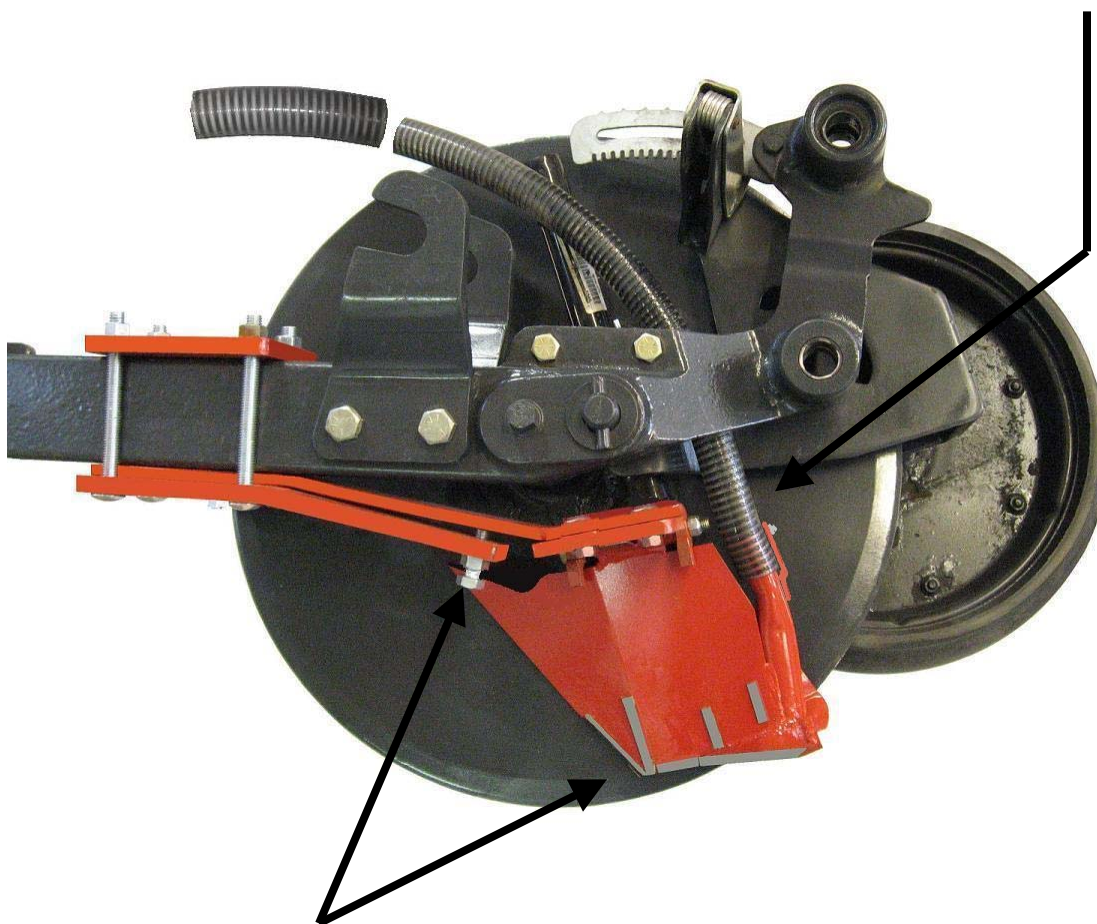
16) **NOTE READ 17 AND 18 BEFORE PROCEEDING WITH 17.**

17) With the supplied 2" x 5" x 1/8" flat bar installation **GUIDE** placed in front of the down pressure spring brackets position the **MOUNT CLAMP** on the top of the 2" x 3" main disc arm. (**Note on used discs this guide distance may need to be reduced up to approx 1 1/2" x 5" x 1/8"**.)



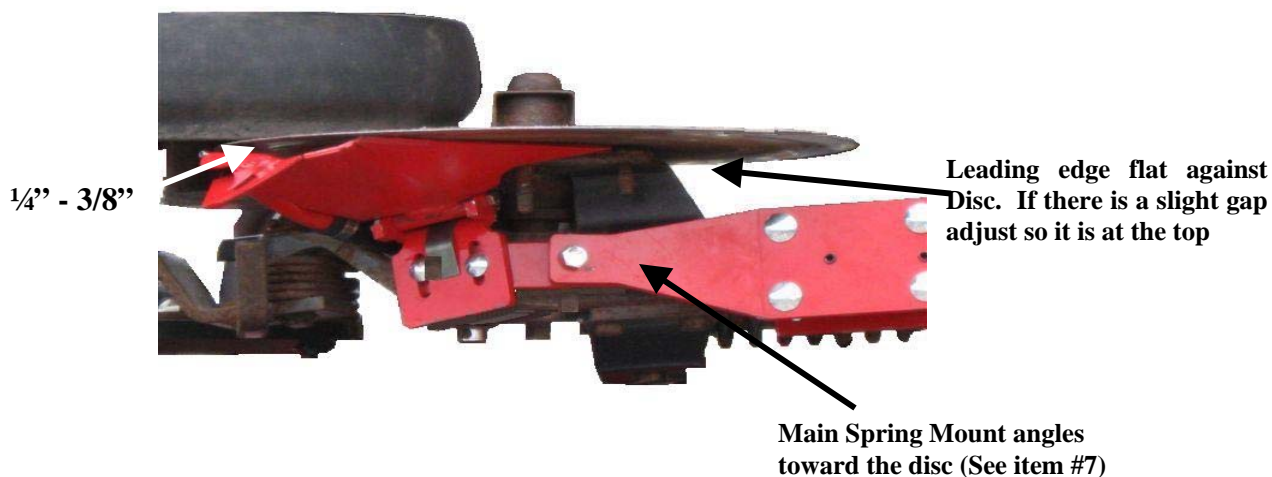
18) Using the (4) - 1/2" x 5 1/2" carriage bolts **INSERTED UP** from the bottom install **MAIN SPRING MOUNT** with **MAIN SPRING and SCRAPER ASSEMBLY** attached, to the main disc arm through the **MOUNT CLAMP**. Install lock washer and nuts and snug the bolts tight enough to just allow adjustment. With supplied 2" x 5" x 1/8" flat bar installation **GUIDE** positioning the Mount Clamp in place and using a small carpenters square tap the Main Spring Mount into position with the front edge directly below the front edge of the Mount Clamp. **TIGHTEN EVENLY CORNER TO CORNER WITH ALL BOLTS HAVING EQUAL THREADS ABOVE THE NUTS.**

- 19) For drills with used hoses it will be necessary to make a join. Use the included 1 1/4" by 6" hose to make the join by inserting each end to be joined into the joiner hose and secure with 2 - #6 screws provided.
- 20) To adjust the scraper to the disc, snug the bolts holding the scraper hinge to the main spring just tight enough so that the hinge and scraper can be tapped into position with a small hammer.



- 21) Adjust the scraper for depth in relation to the Disc using adjusting bolt and jam nut on the Main Spring Mount. Position so that the bottom edge is at the point where the sharpened "V" ends on the side of the disc. See assembled picture above. On new discs the bolt will nearly be backed out. On used discs adjust so that 1/4 to 3/8 in of blade extends below the scraper.

- 22) Adjust scraper to the disc with the front edge held against the disc by spring pressure. If there is a slight gap adjust so the gap is at the top. (**SEE BELOW**) At the same time adjust the rear seed delivery shoot to be away from the disc by approximately $\frac{1}{4}$ " to $\frac{3}{8}$ " (**SEE BELOW**). When adjustment both for depth and alignment is complete tighten jam nut on the Main Spring Mount and the Scraper Hinge adjustment bolts securely. **CHECK TO ENSURE CLEARANCES ARE CORRECT AFTER TIGHTENING THE BOLTS.**



- 23) Re install main down pressure OEM spring.

Operation adjustment for varying conditions:

Set the scrapers so there is over $\frac{1}{4}$ of an inch clearance but less than $\frac{7}{16}$ of an inch clearance between the deflector on the scraper and the disc blade. This setting works in lighter soils but when you get into sticky wet gumbo this gap needs to be increase to $\frac{1}{2}$ inch or mud curls under the scraper and into the opening where the fertilizer needs to discharge.

By opening the gap up the openers seem to run clean even in wet sticky heavy clay conditions.