of the lower rear corner of the chrome-alloy Valion.

Installation of Exapta's stainless-steel tube holders & 1/4" plastic tubing for liquids:

Note: We prefer applying liquids via Keetons. We view Keetons (or in-furrow 'seed-lock' wheels) as crucial for consistent stand establishment in no-till, and keeping them clean can be more challenging when liquids are applied ahead of them—although this is entirely dependent on liquid rate & stickiness, and soil properties. However, many people get along just fine, year after year, applying liquids ahead of Keetons. If you choose to use the liquid feature of the Valion,

here are guidelines for using Exapta's stainless-steel tube holders. 1) Remove OEM curved shield that covers the upper front of the opener blades. It is held by two small carriage bolts.

2) Dislodge any slag particles from internal channel of the Valion using a long narrow-tip screwdriver, especially in the channel's bend. Do not use a drill bit. The slag will break your drill bit! If slag can not be removed with a screwdriver contact Exapta for a replacement.

Keeton is a registered trademark of Precision Planting. Valion@ is a trademark of Exapta Solutions. U.S. Patent 8,978,564 & 9.820,427. Instr. Revised 25 August 2020

INSTALLATION & ADJUSTMENT

Exapta's V150 Valion seed-tube guards for planters

Assembly for Valion for Deere pre-XP (7000, 7200, early 1700s w/ sheet-metal shanks) & Kinze 2000s

1) Remove both gauge wheels, opener blades, seed tube. Remove old seed-tube guard. If it's a Valion, the easiest way is grinding off both sides of the rivet or bolt/nut, and pushing the remnant out with a sickle rivet tool (when using an impact wrench on the rivet tool, the clamping sleeve tends to rotate away and needs to be held with a wrench or blue Loctite). Clean out dirt & rust from between the sheet-metal flanges of shank; if the roll pins have distorted the sheet metal on the inside (between flanges), use a die-grinder or file to remove this. Flanges that have bent may require straightening. Egged-out holes are usually still usable, if the front rivet is tight.

2) Install wings on Valion guard using the hex-head bolt (5/16 x 5/8") and locknut. Tighten.

3) Slide Valion guard into position with bushings (see photo). If flanges are tight at the back, use a pry bar to flare them slightly to accept the bushings. If the front is tight (especially JD 7200s), recheck that no burrs are between the flanges of shank; if it's still tight, grind a teeny bit on front edges of Valion where it is tight against the sheet metal. Don't hammer on Valion! Use a punch to align the holes; if much force is needed, then something needs a smidge more grinding. Valion should be able to float side-to-side slightly (bushings wider than Valion). Install the button-head allen capscrews (5/16 x 7/8") & dimple-lock jam-nuts (thin locknut) in mounting holes. Tighten bolts. Use a vice-grips to pinch the row unit flanges together as bolts are tightened down.

4) If installing liquid tube, see below & p 2. Otherwise, reinstall seed tube, opener blades & gauge wheel arms. Important: You may need to re-shim the blades. Do not mash the blades too tightly together, especially with the thicker 3.5mm blades—these should contact each other for a distance of 0.75 – 1.5" along the forward lower edges (definitely not the 3" used for thin 3mm blades). Blades may contact the wear block of the guard, but should still turn without much effort. If blades turn hard, double-check that the nut holding the rear of the guard isn't dragging on the blade.

Operation & Maintenance (all planters): The furrow shape created by the Valion will allow larger seeds to consistently reach the bottom of the furrow. You

may need to set the depth shallower than what you are accustomed to. ► Replace opener blades at 14.63 – 14.75" diameter. If you commonly wear the blades below 14.75" and plant in very rocky fields, you might want to grind off more







3) For Exapta's high-temp 1/4" tubing (semi-rigid, white),

use a 21" length if you want the connector alongside the shank; or a 28" length if you want the connector above the shank, i.e., just ahead of the seed meter (Note: on JD 7200s & early 1700s w/ sheet metal shanks, the tubing can be routed inside the shank for extra protection - see pics). Insert the beveled end of tubing into *front* of Valion (don't push the tubing up from the bottom, since it scratches the tubing which may then leak at connector); tubing will go easily for ~ 0.5 ". Then, bend the tube towards the base of the Valion while vigorously shoving on it (see pic). If it won't go, try scraping the channel further with a screwdriver. Don't use any





lubricants. Push it thru till ~5/8" is below lower edge of Valion (will be trimmed later).

Next, take the upper end of tubing hanging out of the Valion, and slide it thru stainless tube holder. For Kinze 2000s & JD 7000s (L.133 bracket), the tubing will be outside the shank on the LH side (when viewing shank from rear). Insert carriage bolt thru shank & shield, then push the tube holder up onto the bolt and secure with locknut (see photo at right). For Deere XP, tubing & connector may go on either side of shank; secure shield & stainless tube holder with carriage bolts. For Deere 7200s & early 1700s (sheet metal shanks, not cast), the plastic tubing can go thru the shank itself (see photo, below left). Connect tube into system.

4) If applicable, reinstall front screw in Keeton Universal bracket (the bracket's wedge gets discarded; the bracket is just fine without it). Install zip-tie around 1/4" line and hole in Valion. Use a double-wrap of the zip-tie.

5) Cut off tubing below the Valion. There should be ~1/8" of tubing extending below the Valion, and the front edge of

tubing should extend below the rear (see photo below).



L.433 stainless-steel tube holder (painted blue here) on early 1700-series sheet-metal shank. Oversize NH₃ tubing protects the 1/4" line, routed in from top of the shank (cannot do this on JD 7000 & Kinze—it's welded shut: Use our *L.133* tube holder instead.) Shield removed in photo.





