



Harlan Downing, Colby, Kansas



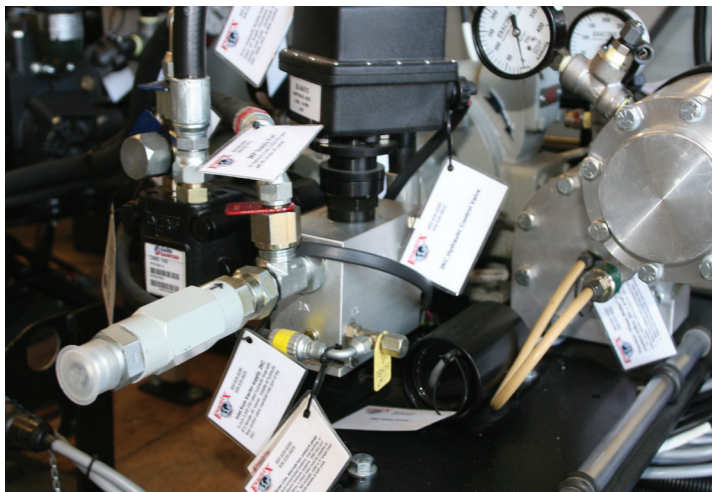
Side dressing corn June 20th, 2006

TAPPS Formulator, 258 bushel average, 120 lbs N/acre as  $\text{NH}_3$ , 15 gallons APP/ATS on winter wheat stubble.

Can you guess what the big surprise was? left over N with about 75 lbs N per acre after harvest...Exactrix uniformity and timing...with TAPPS and No-Till.



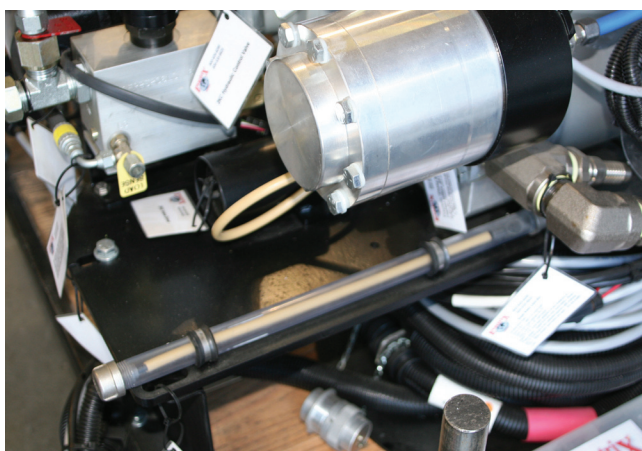
June 25, 08



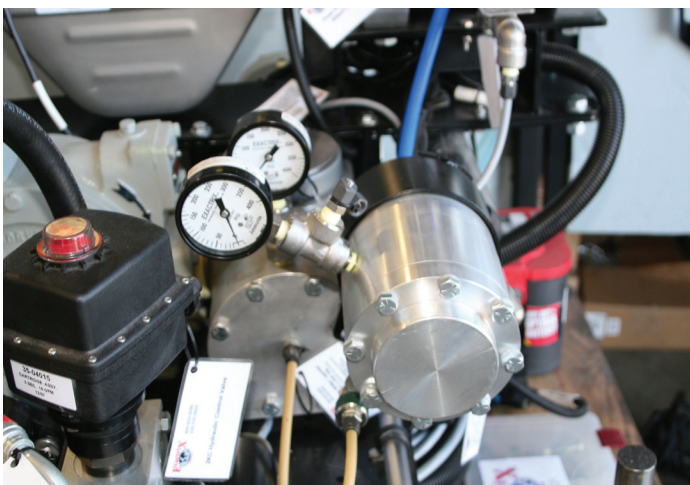
The 2KC/2KP Hydraulic Drive System has a  $\frac{3}{4}$  inch Check Valve. The check valve was added to the system in 2007. Operators were hooking up the hydraulic connectors backwards. The check valve assures proper pump rotation.



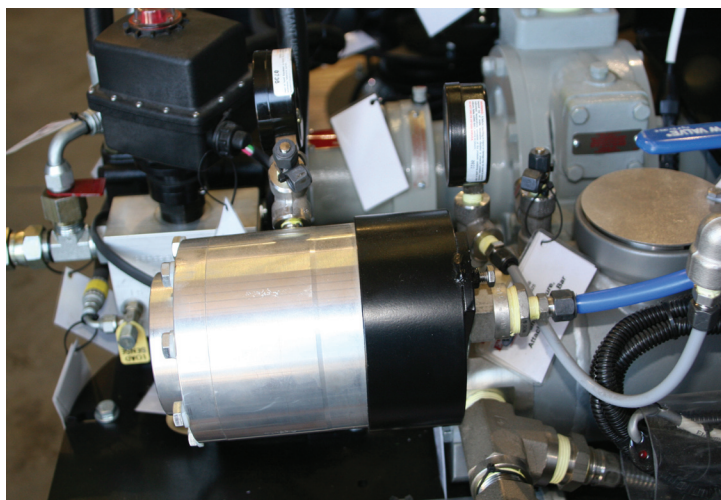
The Modulation Valve allows the system to perform from 10 pounds N/A to 250 pounds N/A...Allows a 24 times regulated flow margin. The valve overcomes high pressure NH<sub>3</sub> tanks. The valve requires the pump to turn to regulate the flow of NH<sub>3</sub>.



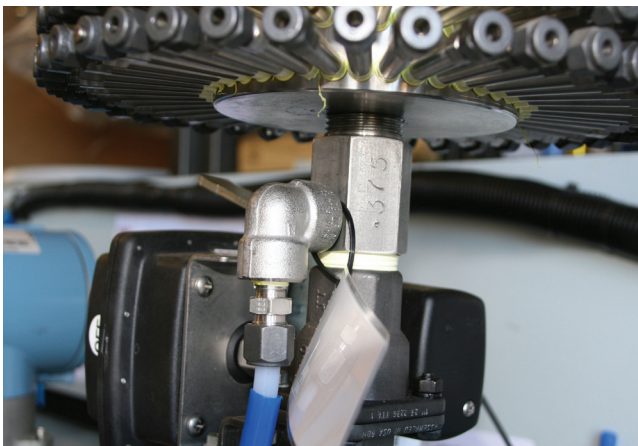
The spare vaporizer orifice line is stored in the shelter. The shelter is sealed. The orifice is .025.



The vaporizer filter housing stores 1 quart of vaporizer NH<sub>3</sub> fluid. The small 1 pint filter was dropped in 2008. The result is better system start-ups.

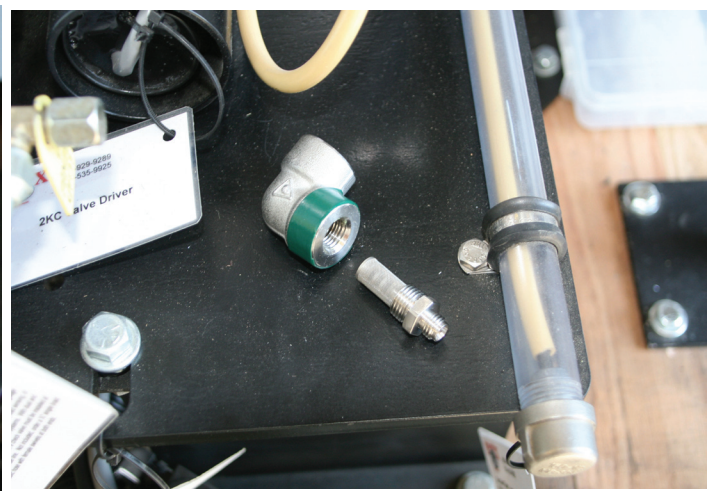
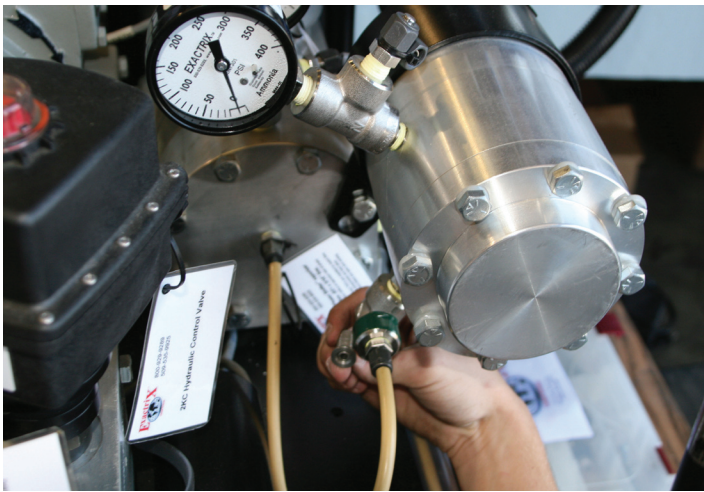


Extra Chilling was added in 2008....A back-flow  $\frac{3}{4}$  inch check valve at the inlet to the 1 quart vaporizer housing allows NH<sub>3</sub> to be stored for up to 5 minutes after shut down. The back-flow check valve assures the system will be chilled and the Phase Shifter can provide a good NH<sub>3</sub> flow. All  $\frac{1}{4}$  inch fittings are 3,000 lb., SS 304.



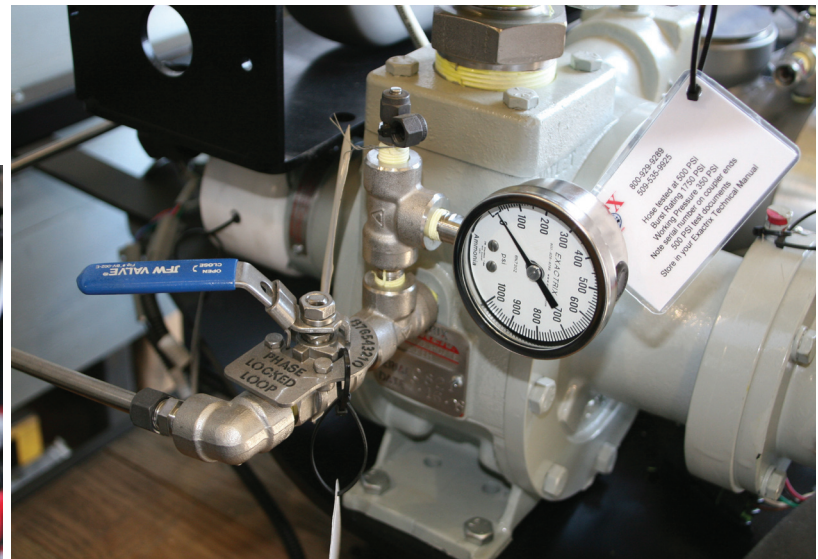
The source of the vaporizer flow for the Phase Shifter comes from the BPOR after the electronic on/off valve. The 2008 BPOR is extended about  $\frac{3}{4}$  inch for extra hex clearance above the BPOR and this allows the BPOR to be held with a wrench when the manifold is installed with the Exactrix manifold wrench provided.





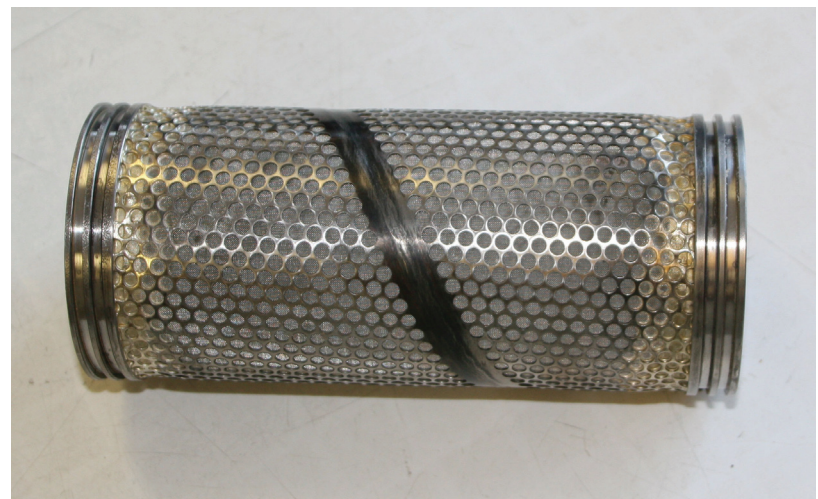
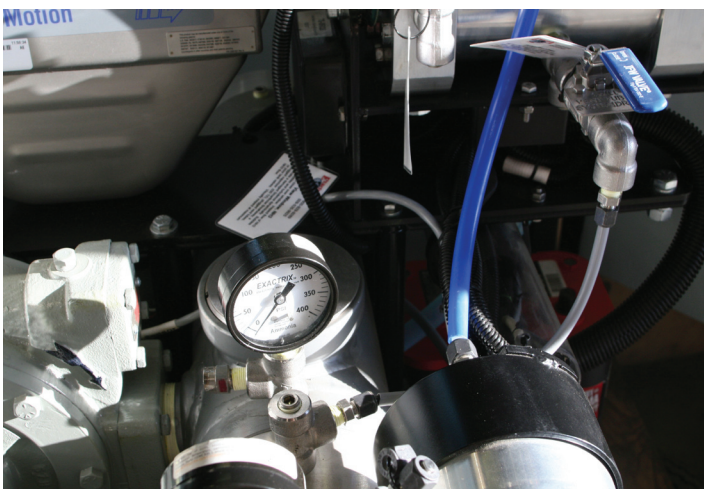
Line Strainer , 100 mesh, Vaporizer filter element....added March 2008.

The outlet of the Vaporizer Element Housing has an in line 100 Mesh filter added as of March 2008....the in line filter is the last chance filter element... prior to the Vaporizer Orifice at the end of the tan line.... the Vaporizer Orifice is standard at .021. The Vaporizer Orifice needed extra protection at system start up....and following service of the 1 quart Vaporizer Housing Element.



Phase Lock Loop and 1,000 psi pressure gauge....identification plate and scale added in 2007. Setting 3 is about right for the start.

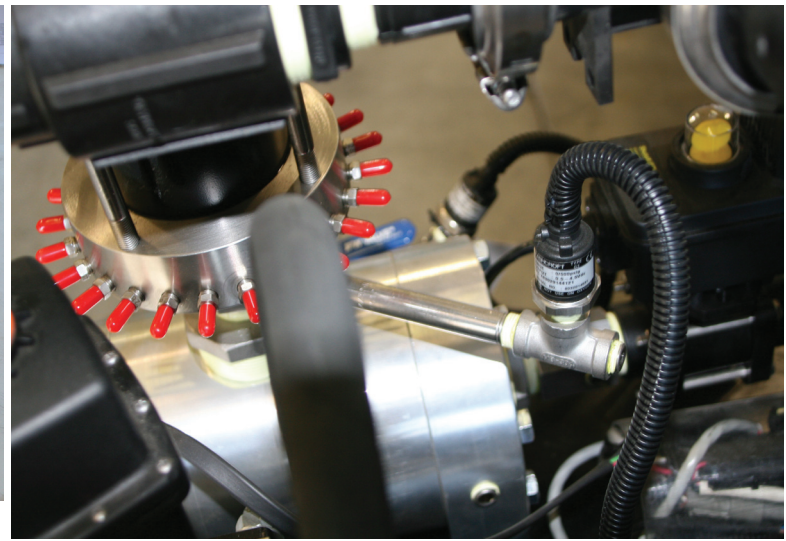
Pressure Gauge at the Vaporizer Filter Housing monitors NH<sub>3</sub> storage and chill. The NH<sub>3</sub> stores in the housing for about 5 minutes....as the housing empties into the Phase Shifter at about 1 pint every 2 minutes the pressure drops.....eventually to zero....The gauge is also located at the gauge bar. The pressure drop can be measured at shut down to assure the Phase Shifter Vaporizer orifice is properly working.



Final Filter.....Now available in double strength spiral wound backer, 100 mesh with silver solder....for wide airseeders... 2008 release....not available with 40 mesh.

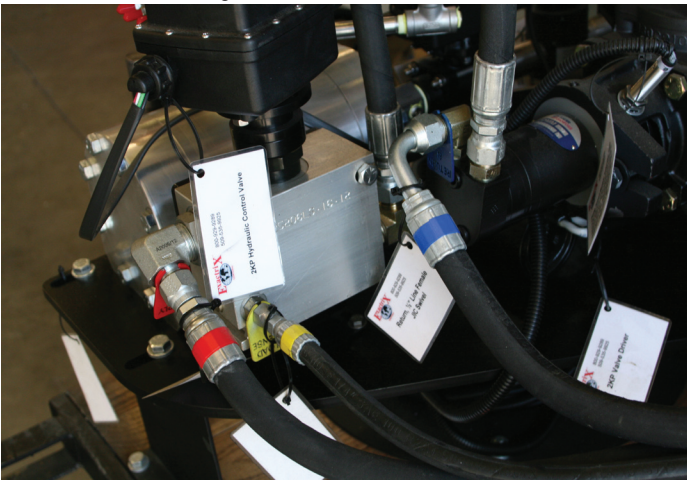
NH<sub>3</sub> tank pressure gauge to remain at the Phase Shifter tank outlet....2008...do not mount on the gauge bar...



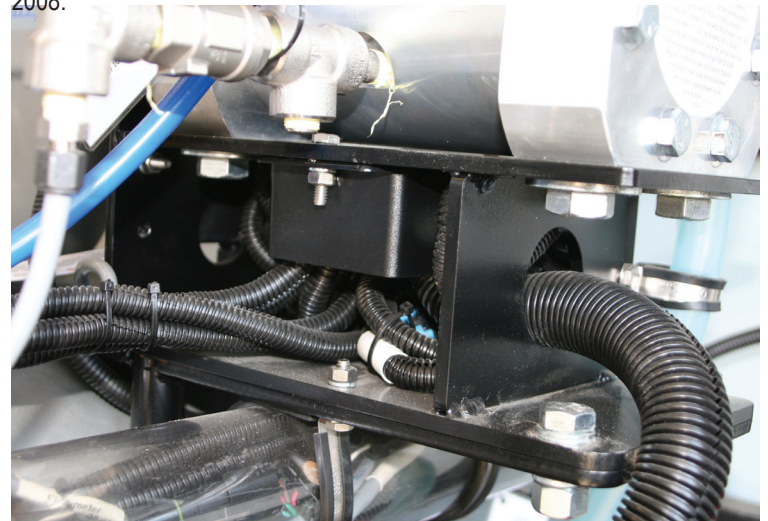


Dual manifold 2KC and 2KP systems. The 2KP EPDM hoses are prebuilt in 5 standard lengths with 1/2 inch male ends. This option was released in June 2008. The 2KC NH3 hoses are 1" male ends and are available in stainless steel in 5 standard lengths.

800.....2KP injection pressure includes a standoff for the Ashcroft sensor, 2008.



799.....2KP hydraulic flow lines are identified with stainless steel tags that confirm the Supply and Return Functions. Colored Tape is added by the producer to confirm the function of the hydraulic lines.



798.....The 2KC harness terminal box is mounted to the Mass Meter Mounting Stand.



797. ....Totalizer Readout...2008 standard on all 2KC systems...assuring level of accuracy of applied material in all pressure and temperatures ranges. A critical feature for expensive NH3.



801...Line Loom Harness arrangements added in 2007. Improved again in 2008 with the 5P series with .285 od line and locking line collars. Line Loom Harness are also available for the Gauge bar.





790....Gold Pin Couplers on all electronic gauges. All sensors for electronic gauges have gold pin couplers.



784 An improved harness 2KC and 2KP hitch point coupler from Mid-Tech was released in 2007. Exactrix set the standard for improving harness connections. All harness hitch point connections have gold pin couplers. The gold flashing assures low corrosion potential.



789.....Hitch Point mounting brackets were released in 2007. Wide air seeders up to 84 feet have a new 6 gauge wiring harness for low voltage drop and were released in 2007.



780.....The modulation valve safety grate was added to all 2KC R-050 flowmeters mid 2007.

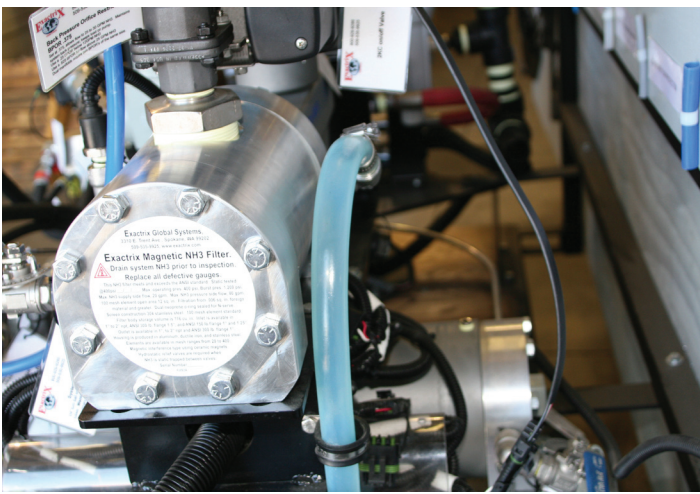


781.....Rocking wrench adapter added to all systems shipping after mid 2007.....to assure the pump can turn freely the adapter is added to the non drive side of the pump....to confirm the pump is free to turn.

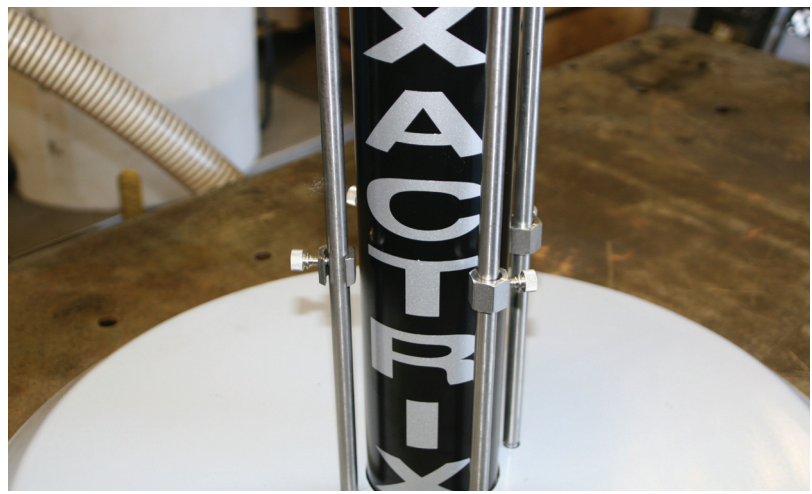


782.....Ground Speed Simulator.....added to all systems shipping in 2008.....allow the operator to independently confirm system pressures based on ground speed using water. Always test with water before starting each season.

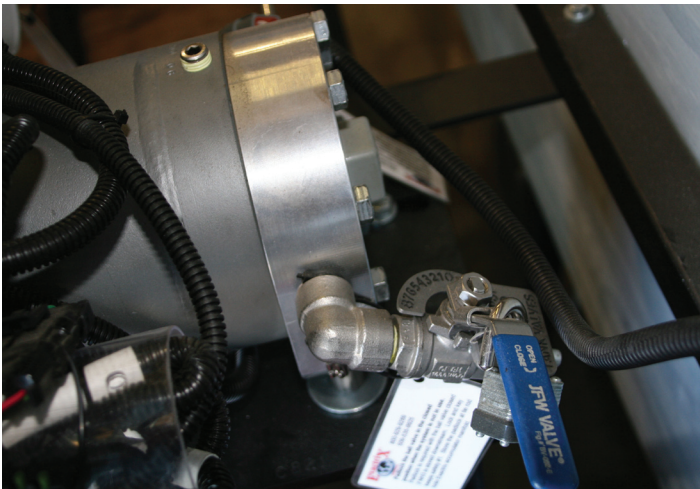




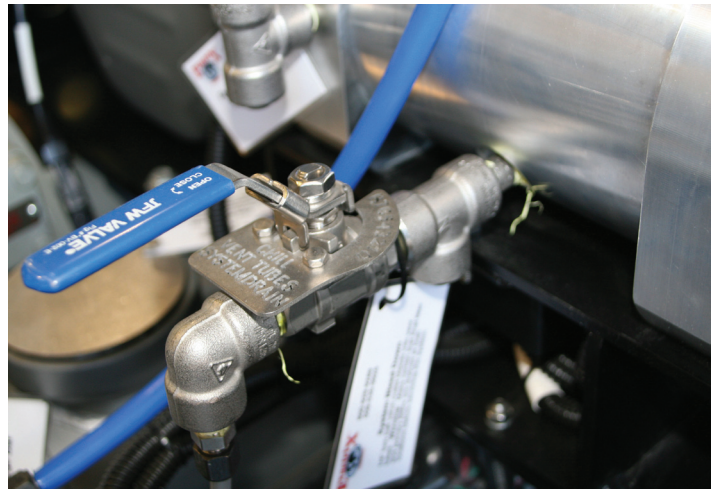
785.....High pressure hydrostatic relief valve....vents to the ground line....at 450 psi the vent will release if the pressure is too high at the field lands or in the corners.



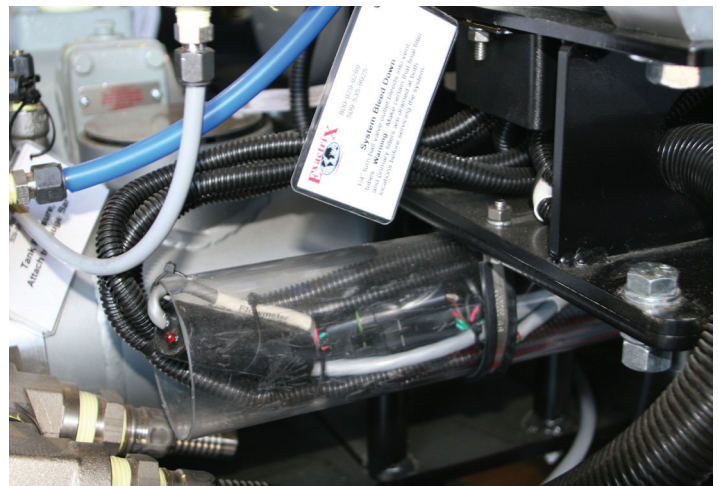
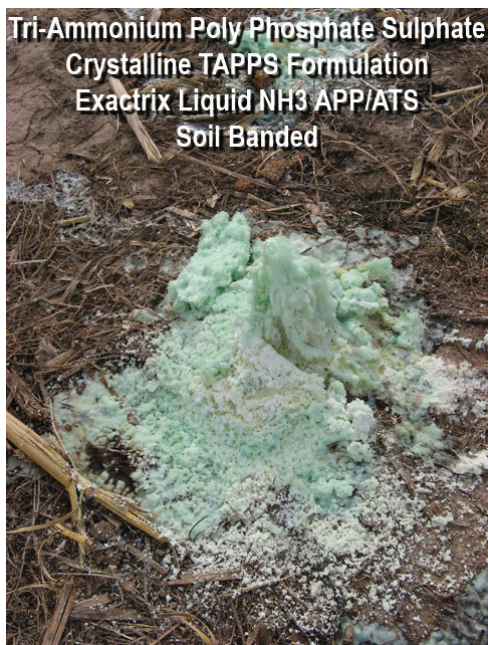
783.....C-clamp holders added to the manifold shield....high winds in the Great Plains allow the shield to be properly tied down to handle the strong winds.



764.....The tank valve reset feature was added....complete with instruction plate and padlock. The ball valve and air coupler allow the tank valves to be quickly reset.



763. The Vent, Bleed and Chill identification plate was added in 2007. The identification plates help producers identify functions and settings.



762.....The 2KC Harness Shelter was added in 2008 to protect and improve the wiring harness connection points. Also the divide by 2 feature was enclosed in the shelter to allow the LED to be observed when flow is occurring.....The Housing Shelter is self draining in wet weather.... and allows the connections to be protected from mud and water directly hitting the harness connections.







June 15, 2008 Irrigated soft white winter wheat, side dressed with 120 lbs. N/A as NH<sub>3</sub> and 15 G/A of APP/ATS formulating TAPPS. An even uniform application with Exactrix TAPPS formulation in mid April. Single disc openers applied nutrients into growing wheat. About half the fertilizer is required.



April 20, 2007 Dryland Spring Wheat Production



Seeding high quality DNSW... Deere 1885, Yielder 1520, Exactrix TAPPS formulation.

Clyde Cook, Ririe, Idaho, Exactrix, TAPPS, Side dress winter wheat, June 15, 2008  
Deere 1895 15 inch mid row banders.



June 15, 2008

Video Available



July 7, 2008



July 7, 2008



July 7, 2008