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NH3 FACTS

Nitrogen is an essential element for crop production, which makes anhydrous ammonia (NH3) one of the most important products available to farmers. At 82% nitrogen, it's the most highly concentrated fertilizer on the market and is generally available at the lowest cost.

WORKING SAFELY WITH NH3

Equipping yourself with a full-face respirator approved for anhydrous ammonia and using all your required personal protective equipment will help ensure you come home safely at the end of the day.

- Anhydrous ammonia is not corrosive to steel but reacts with brass, copper, zinc and most alloys. Therefore, all anhydrous ammonia vessels, fittings and transportation equipment must be steel or stainless steel.
- Connection gaskets (ACME) dry out and should be replaced every season.
- Be careful around ball valves as product may be trapped inside the ball when closed.
- Drain all hoses and lines, including the line at the ground opener, before working on any part of the NH3 system.
- Always put a cuff on your NH3 gloves to avoid having liquid ammonia run up your sleeve.
- NH3 is attracted to moisture (the word *anhydrous* means *no water*) so always protect your eyes when working with ammonia – don't take your mask off to get a "better look".
- If exposed to NH3, flooding the exposed skin with water is the only first aid needed until full medical attention is received. Keep the water flowing for a minimum of 15 minutes.

1 USWG = 5.14 lbs NH3 @ 60°F/15.6°C

1 USWG = 4.22 lbs Actual N @ 60°F/15.6°C

1 USWG Per Minute = 253 lbs N Per Hour

USWG Tank Size ÷ 500 = Approximate Tonnes of NH3

ANHYDROUS AMMONIA INFORMATION

USWG Tank Size	USWG at 85% Full	Litres at 85% Full	Tonnes of NH3	Actual lbs of N	Acres / Tank @ 100lbs of N per acre
1450	1232.5	4665	2.87	5201	52
1750	1487.5	5630	3.47	6277	63
2000	1700	6435	3.96	7174	72
2400	2040	7722	4.76	8609	86
3000	2550	9653	5.95	10,761	108
4725	4016.25	15203	9.36	16,949	169

NH3 VAPOUR PRESSURE APPROXIMATE TEMPERATURES

°F	°C	PRESSURE PSIG
-28	-33	0
20.0	-6.7	33
30.0	-1.1	45
40.0	4.4	58
50.0	10.0	74
60.0	15.6	92
70.0	21.1	114
90.0	32.2	165

SYSTEM CAPACITIES

TANK CAPACITY

Maximum withdrawal rate from an NH3 nurse tank is 2% of tank capacity per minute. For example, a 1000-gallon tank will be limited to 20 gpm maximum withdrawal rate. This will vary somewhat with temperatures of liquid and atmosphere as well as intake line restrictions.

RECOMMENDED PLUMBING NURSE TANK TO METER OR COOLER

PLUMBING SIZE	RATES
1"	up to 3600 lbs. N/Hour
1¼"	up to 6000 lbs. N/Hour
1½"	over 6000 lbs. N/Hour

FEED LINE PLUMBING CONSIDERATIONS

A properly designed feed line will minimize vapour formation by limiting line restrictions and preventing vapour pocket formations. Since NH3 will have a tendency to vapourize, the intake piping plays a critical role in the efficiency and longevity of every system.

Consider the following to ensure you have optimal flow rates:

- Inlet piping from tank to the metering system should be as short as possible.
- Meter should be at a lower level than the tank's lowest liquid level.
- Use low restriction type valves and fittings. Long sweep radius bends are preferred.
- Nearest fitting or strainer should be at least 10 pipe diameters from the pump inlet.
- Check and clean inlet strainers regularly.
- Avoid up-across and down pipe loops where vapours can accumulate.



NH3 APPLICATION

SYSTEM CAPACITIES

Implement Width (ft.) x Speed (MPH) x Rate per Acre (Actual N) x 0.1212 =
TOTAL POUNDS OF N PER HOUR (lbs. N/Hour)

APPROXIMATE METERING SYSTEM CAPACITIES @ 60 PSI TANK PRESSURE

DESCRIPTION	VALVE SIZE	Lbs. N/Hour
Raven ACCUFLOW™	1"	7500
Raven ACCUFLOW™	1½"	12,500
Raven ACCUFLOW™ HP PLUS PUMP	1½"	20,000
CONTINENTAL C4103-6572	1"	3200
CONTINENTAL B9500	1½"	5300
CONTINENTAL SUPER FLOW	1½"	8000

*Always use 1½" feedline to achieve rates over 6000 lbs. N Per Hour

TOTAL POUNDS OF N PER HOUR ÷ Number of Runs =
TOTAL POUNDS OF N PER MANIFOLD OUTLET PER HOUR

EVA HOSE CAPACITIES

	MAXIMUM CAPACITY AT VARIOUS MANIFOLD PRESSURES (lbs. N/Hour/Opener)		
	@50 PSI	@75 PSI	@100 PSI
Manifold with ½" or ¾" hose	105-145	120-165	140-190
Manifold with ¼"	88	100	116
Manifold with .170"	77	88	100

*Hose sizes are interior diameter (I.D.)





SPEED CONTROL

Raven Phoenix 10 GPS Speed Sensor	RV1-117-0171-165
Y Cable - Radar (Ford, Versatile).....	RV1-115-0159-709
Y Cable - Radar (Case MX, STX).....	RV1-115-0171-304
Y Cable - Radar (John Deere 8000/9000)	RV1-115-0159-700
Cable 15' Interface PHX 10 Speed.....	RV1-115-0171-817



SCS 450
RV1-063-0171-220

For more than three decades, Raven controllers have set the standard for outstanding performance and everyday reliability and operation in both liquid and dry applications. Raven's high performance receivers deliver highly accurate, reliable DGPS positioning using WAAS, EGNOS, Glonass, and Raven GS satellite-based DGPS corrections. You'll find a range of options to match your system needs, from sub-meter accuracy at one end of the spectrum to sub-inch accuracy at the other. Ideal for precision farming, GIS and other applications where a rugged, simple-to-operate receiver is required.



CR7 KIT
RV1-117-2295-001TN

The CR7 is a 7-inch lightweight field computer with customizable in-job layouts. A simple widget concept, easily accessible settings, and ISO Universal Terminal and Task Controller capabilities make this mighty unit an affordable plug-and-play system. The CR7 is compatible with Slingshot® file transfer and remote support, SmarTrax™ autosteering, AccuBoom™, Raven serial consoles, and more.



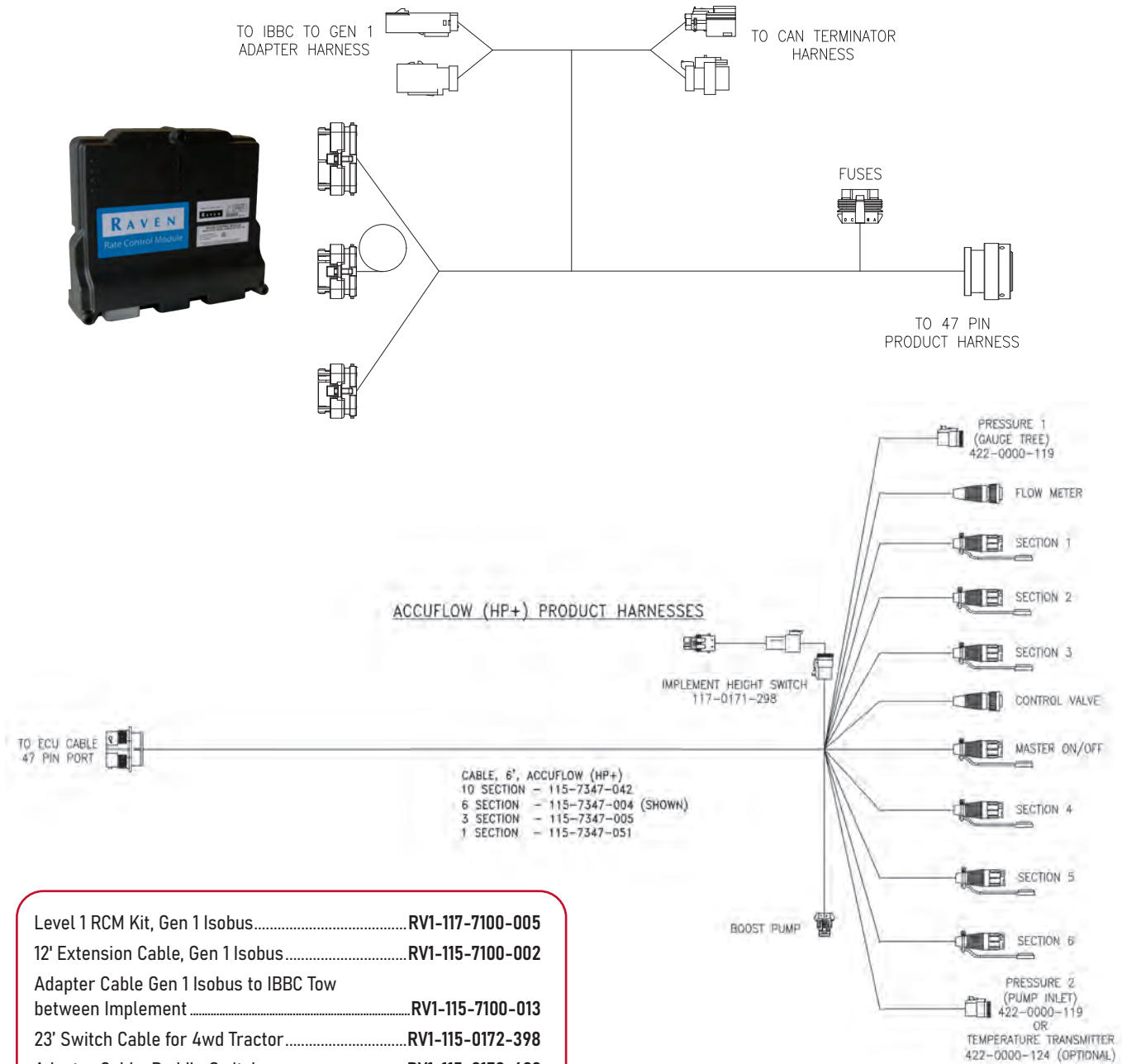
Did you know DyTerra has full-service shops in Manitoba and Saskatchewan? We engineer and perform remounts, modifications and complete rebuilds. Be sure to see us when moving a tank to a new unit!



NH3 APPLICATION

RAVEN RATE CONTROL MODULE

RAVEN



Level 1 RCM Kit, Gen 1 Isobus.....	RV1-117-7100-005
12' Extension Cable, Gen 1 Isobus.....	RV1-115-7100-002
Adapter Cable Gen 1 Isobus to IBBC Tow between Implement.....	RV1-115-7100-013
23' Switch Cable for 4wd Tractor.....	RV1-115-0172-398
Adapter Cable, Paddle Switch.....	RV1-115-0172-422
Temperature Transmitter Kit.....	RV1-422-0000-124
Pressure Transducer, 0-250psi.....	RV1-422-0000-119
Flow Cable, 1 section.....	RV1-115-7347-051
Flow Cable, 3 section.....	RV1-115-7347-005
Flow Cable, 6 section.....	RV1-115-7347-004
Flow Cable, 10 section.....	RV1-115-7347-042



RAVEN ISO CABLING IS COMPATIBLE WITH CASE PRO 700 SYSTEMS

RAVEN SCS 450



SINGLE / 3 SECTION RAVEN CABLES

- A** Console Cable.....RV1-115-0171-085
- B** Extension Cable 12ftRV1-115-0159-856
- B** Extension Cable 24ft.....RV1-115-0159-857
- C** Flow Cable, SingleRV1-115-0171-800
- C** Flow Cable, 3 SectionRV1-115-0171-836

6 SECTION RAVEN CABLES

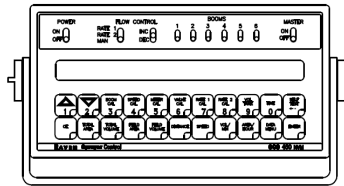
- A** Console Cable.....RV1-115-0171-085
- B** Extension Cable 12ft, 6 SectionRV1-115-0171-840
- B** Extension Cable 24ft, 6 Section.....RV1-115-0171-841
- B1** Power CableRV1-115-0171-844
(required for 4 or more Sections)
- C** Flow Cable, 6 SectionRV1-115-0171-838

RAVEN VALVES

See page 13 for a list of all Raven valve options.

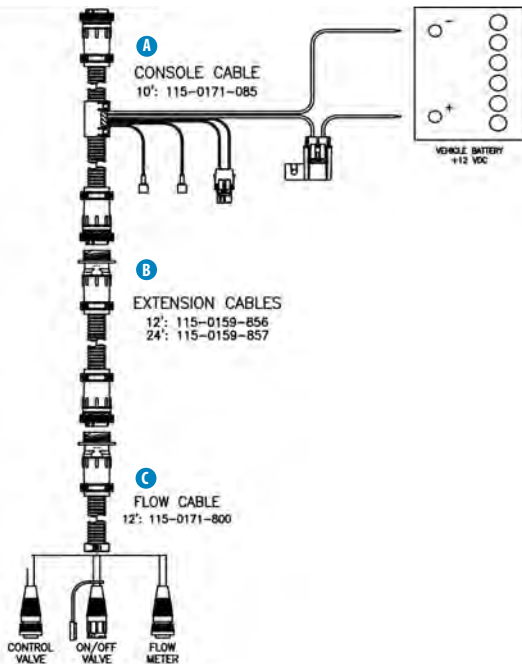
ON/OFF VALVE EXTENSION CABLES

- On/Off Valve Extension, 6ftRV1-115-0171-832
- On/Off Valve Extension, 12ftRV1-115-0171-833
- On/Off Valve Extension, 24ft.....RV1-115-0171-834

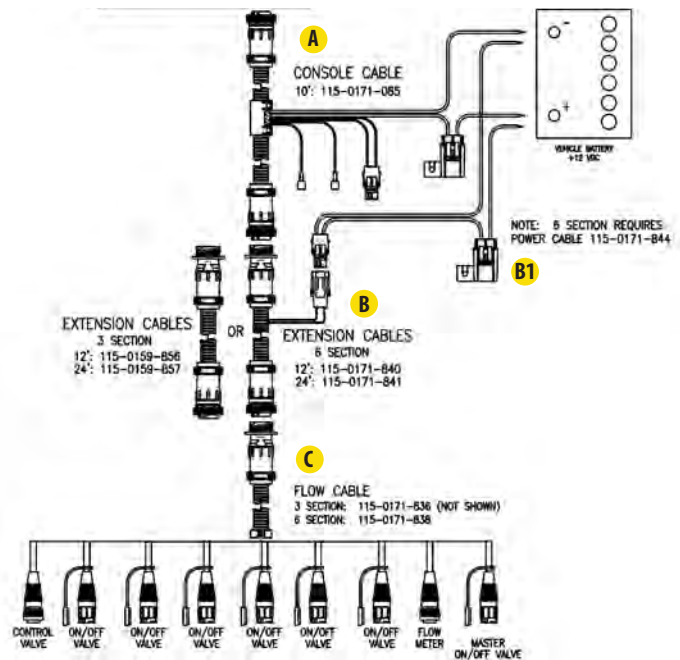


CONTROL CONSOLE
SCS 450: 063-0171-220

SINGLE SECTION



MULTI SECTION



RAVEN 4400



SINGLE / 3 SECTION RAVEN CABLES

- A** Console CableRV1-115-0171-300
- B** Extension Cable 12ftRV1-115-0171-319
- B** Extension Cable 24ft.....RV1-115-0171-320
- C** Flow Cable, SingleRV1-115-0171-809
- C** Flow Cable, 3 SectionRV1-115-0171-837

6 SECTION RAVEN CABLES

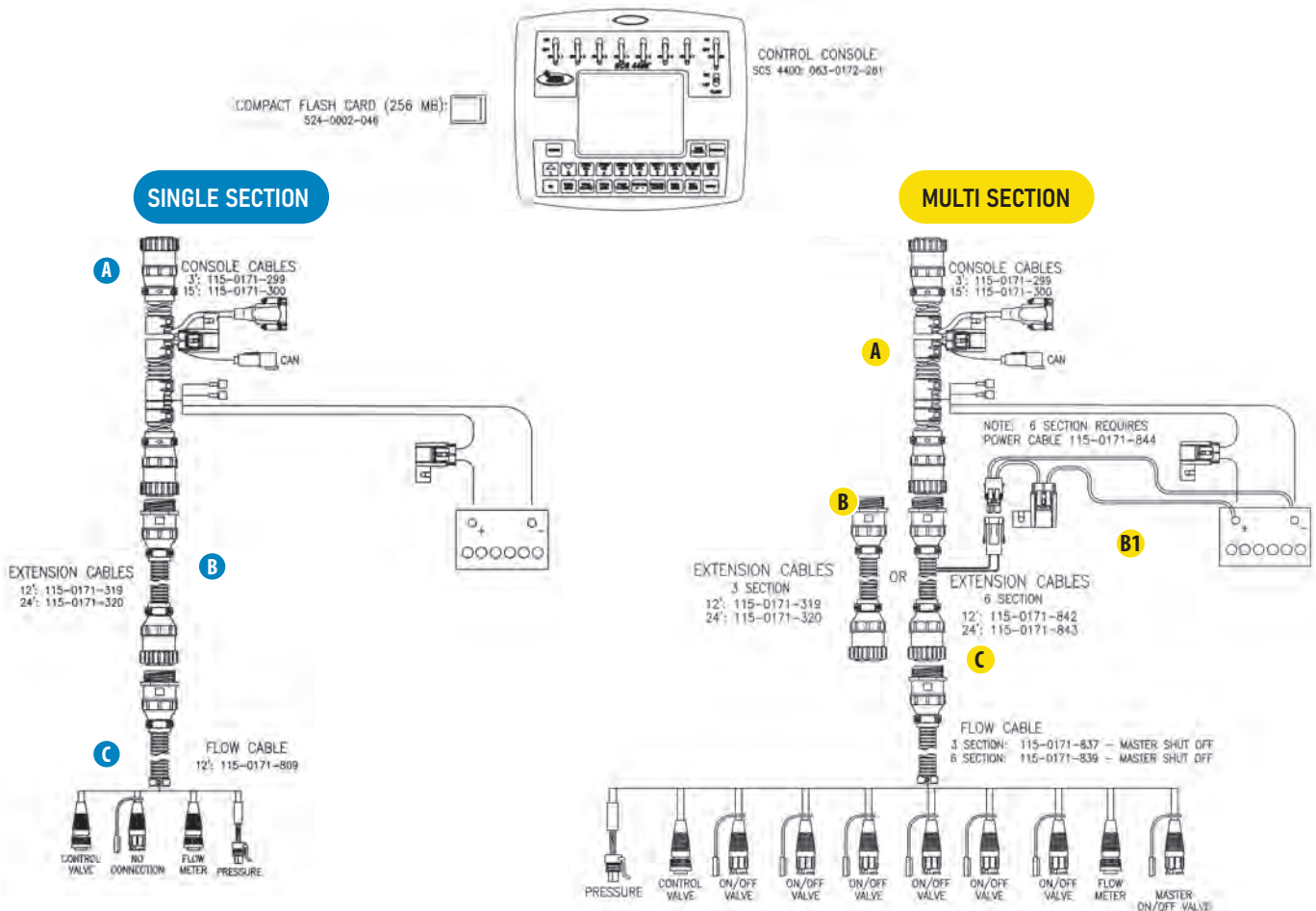
- A** Console Cable.....RV1-115-0171-300
- B** Extension Cable 12ft, 6 SectionRV1-115-0171-842
- B** Extension Cable 24ft, 6 Section.....RV1-115-0171-843
- B1** Power CableRV1-115-0171-844
(required for 4 or more Sections)
- C** Flow Cable, 6 SectionRV1-115-0171-839

RAVEN VALVES

See page 13 for a list of all Raven valve options.

ON/OFF VALVE EXTENSION CABLES

- On/Off Valve Extension, 6ftRV1-115-0171-832
- On/Off Valve Extension, 12ftRV1-115-0171-833
- On/Off Valve Extension, 24ft.....RV1-115-0171-834



RAVEN 400 CABLING IS COMPATIBLE WITH A JOHN DEERE GREENSTAR RATE CONTROLLER.

NH3 APPLICATION

RAVEN ACCUFLOW™ VORTEX

RAVEN



	ACCUFLOW™ VORTEX 1" VALVE	ACCUFLOW™ VORTEX 1½" VALVE	ACCUFLOW™ HP PLUS WITH VORTEX COOLER
Capacity Range*	1000 - 7500 lbs./hr 3-30+ GPM	1000 - 12,500 lbs./hr 3-50 GPM	1000 - 20,000 lbs./hr 3-80 GPM
Weight	190 lbs	196 lbs	280 lbs
Tractor Hydraulic Requirement	--	--	12 GPM @ 2,000 PSI

*Systems were tested at 40°F and tank pressure of 60 PSI (Fall conditions).



FOR RAVEN TROUBLESHOOTING, SEE PAGES 18 & 19



CONTINENTAL SUPER FLOW

CONTINENTAL SUPER FLOW COOLER w/RAVEN VALVES



Kit with 2 Raven Valves.....	KTRVSF-2
Kit with Raven Fast Valve.....	KTRVSF

KIT INCLUDES:

- Continental Super Flow Cooler
- 1½" On/Off Valve
- 1½" Control Valve
- Raven Flow Meter
- All required Wiring Harnesses
- SCS 450 Console (if required)
- Strainer & Fittings
- Ball Valve
- Vapour Tube Kit

Approximately 8000 lbs/hr @ 60 psi

- Requires vapour lines
- Comes with 4 orifices to match typical application rates
- Only available in a vertical mounting configuration
- Configured with Raven flow meter & control valve
- Used with an auto rate controller to accurately adjust rates on the go



C4100 MANUAL METER KIT

Meter C4103 with Hydraulic Shutoff.....	CTC4103-6572
Stand Meter.....	MICMS24
REPAIR KIT C-4103 METER.....	CTA-4125-RS
REPAIR KIT R-6572 SHUTOFF.....	CTR-6572-RK



B9500 MANUAL METER KIT

Recommended for rates up to 5300 lbs. N PER HR

B9500 Meter Kit with Hydraulic Shutoff.....	KTB-9500-B
B9500 Meter Kit with Electric Shutoff.....	KTB-9500-ESO
Remote S/O Switch B9500 Electric Shutoff.....	CTA-RTS-16A
B9500 Meter Only 1½".....	CTB-9500-B
Meter Stand - Continental.....	MICMS24
REPAIR KIT.....	CTB-9500-RS

KIT INCLUDES:

1½" Coupling, 1½" x 1" Reducer, Meter Stand c/w U-Bolt



FOR RAVEN TROUBLESHOOTING, SEE PAGES 18 & 19



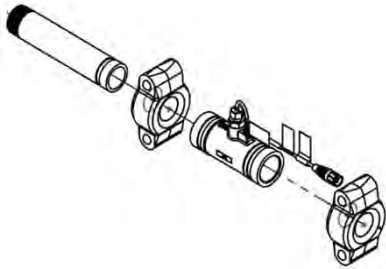
FLOW METER

Raven Flow Meter RV1-063-0173-869	.....	RV1-063-0173-869
Flow Sensor, RFM60S	.....	RV1-063-0171-669
Flow Sensor (high pulse)	.....	RV1-063-0172-004
Flow Meter Repair Kit	.....	RV1-117-0171-590
Modified Gruv-lok Pipe Nipple	.....	RV1-019-0159-591
2" x 1½" Gruv-lok Coupling w/EPDM Gasket	.....	RV1-333-0006-032
RFM60S Flow Meter 1½" Threads	.....	RV1-063-0173-867



RAVEN VORTEX

Vortex Cooler Only	.....	RV1-063-0173-663
AccuFlow™ to Vortex Plumbing Conversion Kit	.....	RV1-117-0171-713



REPAIR PARTS

Refrigerant Line Strainer Kit	.....	RVS08
AccuFlow™ Orifice Kit	.....	RV1-117-0171-501
½" Vapour Tube Kit	.....	RV1-117-0171-410
1¼" Back Check Valve Kit – Section Control	.....	RV1-063-0173-030K
AccuFlow™ Cooler Seal Kit	.....	RV1-117-0171-121
Teflon Gasket for 1¼" Union	.....	RV1-219-0000-027
Teflon Gasket for 1½" Strainer	.....	RV1-219-0000-154



RAVEN VALVES & ACTUATORS QUICK REFERENCE GUIDE



NEW STYLE VALVE



OLD STYLE VALVE

NEW STYLE

DESCRIPTION	COMPLETE ASSEMBLY	MOTOR ONLY	VALVE ONLY	SEAL KIT
1" VALVES - NEW STYLE				
1" CONTROL VALVE	RV1-063-0173-877	RV1-063-0173-664	RV1-334-0001-071	N/A
1" ON/OFF VALVE	RV1-117-0173-876 RV1-063-0173-665		RV1-334-0001-071	N/A
1" FAST VALVE	RV1-063-0173-878	RV1-063-0173-666	RV1-334-0001-071	N/A
1½" VALVES - NEW STYLE				
1½" CONTROL VALVE	RV1-063-0173-667	RV1-063-0173-664	RV1-334-0001-066	N/A
1½" ON/OFF VALVE	RV1-063-0173-668	RV1-063-0173-665	RV1-334-0001-066	N/A
1½" FAST VALVE	RV1-063-0173-626	RV1-063-0173-666	RV1-334-0001-066	N/A

OLD STYLE

1" VALVES - OLD STYLE Please see NEW STYLE (above) for Complete Assemblies				
1" CONTROL VALVE	N/A	RV1-063-0173-206	RV1-117-0171-686	RV1-117-0159-410
1" ON/OFF VALVE	N/A	RV1-063-0173-207	RV1-117-0171-686	RV1-117-0159-410
1" FAST VALVE	N/A	RV1-063-0172-982	RV1-117-0171-686	RV1-117-0159-410
1½" VALVES - OLD STYLE Please use Retrofit Kit w/Adaptors (below) for Complete Assemblies				
1½" CONTROL VALVE	N/A	RV1-063-0173-206	N/A	RV1-117-0171-355
1½" ON/OFF VALVE	N/A	RV1-063-0173-207	N/A	RV1-117-0171-355
1½" FAST VALVE	N/A	RV1-063-0173-982	N/A	RV1-117-0171-355

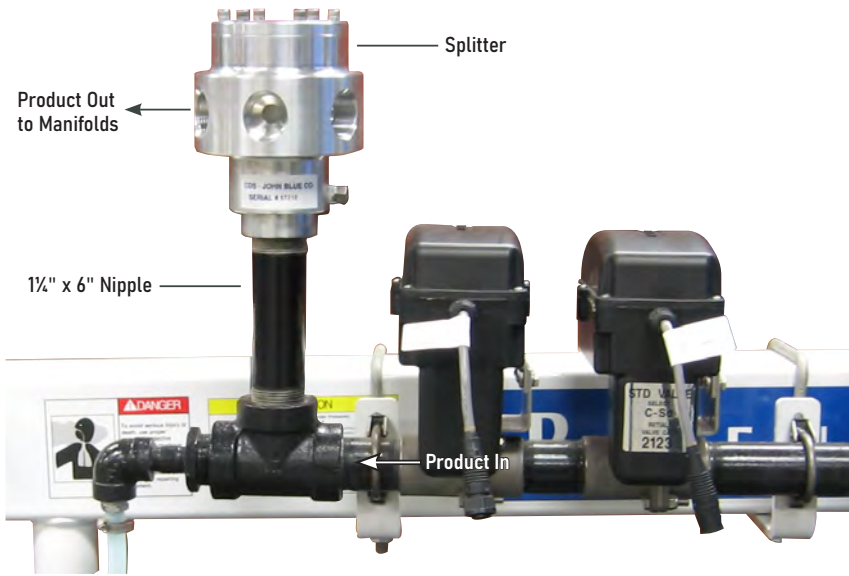
1" VALVES RETROFIT KIT w/1½" ADAPTORS	COMPLETE ASSEMBLY	←
1" CONTROL VALVE w/PIPE ADAPTORS	RV1-117-0171-706	
1" ON/OFF VALVE w/PIPE ADAPTORS	RV1-117-0171-705	
1" FAST VALVE w/PIPE ADAPTORS	RV1-117-0171-707	

NH3 APPLICATION

SPLITTERS

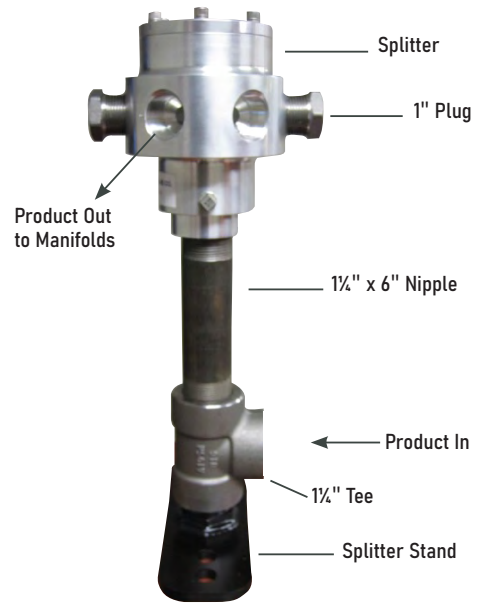
COOLER MOUNT

The splitter can be mounted directly on an NH3 cooler.



STAND MOUNT

A splitter stand kit is available if a cooler mount is not possible. PART: KTJBSSM



CDS-JOHN BLUE IMPELLICONE SPLITTER



- 4-Way Impellicone Splitter.....JBIPS2-4
- 6-Way Impellicone Splitter.....JBIPS2-6
- 8-Way Impellicone Splitter.....JBIPS2-8
- JB Splitter Needle.....JB116162-01
- JB Splitter O-Ring.....JB116163-01

1 1/2" Inlet x 1" Outlets
Outlets are pluggable

EVA TUBING

- 1/4" - 250' Roll.....HSEVA04250
- 3/8" - 250' Roll.....HSEVA06250
- 1/2" - 250' Roll.....HSEVA08250
- 3/4" - 50' Roll (Reinforced).....HSEVA12R50
- 1" - 50' Roll (Reinforced).....HSEVA16R50

PE TUBING

(for 1/4" compression fittings)

- 1/4"OD - 100' Roll.....HS1J-048-100
- 1/4"OD - 1000' Roll.....HS1J-048-1000

CONTINENTAL SPLITTER



- 6-Way Continental Splitter.....CTA-360SP-6
- 7-Way Impellicone Splitter.....CTA-360SP-7
- 9-Way Continental Splitter.....CTA-360SP-9
- 10-Way Continental Splitter.....CTA-360SP-10
- Splitter Stand.....MISS4
- Square U-Bolt 3/8" x 4" x 5".....MIUB4SQ
- 1 1/2" Inlet x 3/4" Outlets

KING NIPPLES



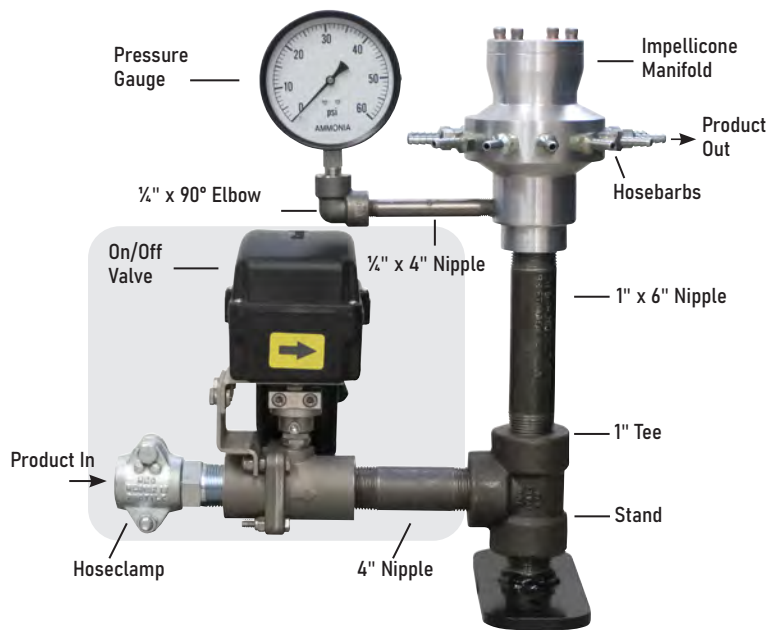
- 1" Hose x 1" Threads.....FT16K16S
- 3/4" Hose x 3/4" Threads.....FT12K12S
- 3/4" Hose x 1" Threads.....FT16K12S

NH3 APPLICATION

MANIFOLDS & COMPONENTS

IMPELLICONE MANIFOLD

Available in 13-port and 18-port models, the Impellicone is the recommended manifold when considering section shutoff and variable rate application. The Impellicone can be used for all NH3 applications at high or low rates, while also offering the flexibility to plug unused outlets without sacrificing accuracy. Its superior accuracy allows better control of targeted rates without compromising distribution accuracy which greatly reduces over-application of NH3.



*shown with Section Control component

CDS-JOHN BLUE IMPELLICONE MANIFOLD

13-Port Impellicone Manifold	JBIP1300
18-Port Impellicone Manifold	JBIP1800
Plug FS 1/4"	FT04PF
Nipple 1" x 6"	FT16N96XH
Tee 1"	FT16TF
Liquid Gauge 0-60 PSI	PGA604L
Dry Gauge 0-60 PSI	PGA604
Impellicone Stand	DYJBMS
U Bolt for Stand (2 Req.)	MIUB4SQ
O-Ring Kit 13-Port Manifold	JB115521-01
O-Ring Kit 18-Port Manifold	JB115530-01
Needle 13-Port Impellicone	JB115520-01
Needle 18-Port Impellicone	JB115531-01
Nipple 1/2" x 4"	FT04N64XM
Elbow 1/2" x 90°	FT04E90F

HOSE BARBS FOR IMPELLICONES

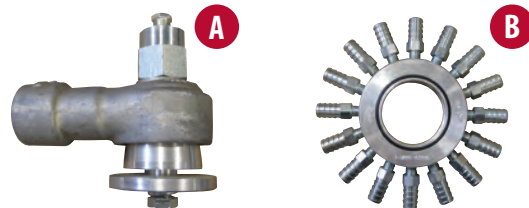
1/8" Hose x 1/4" NPT	MIS6768-4B
1/4" Hose x 1/4" NPT	CTA-1131
3/8" Hose x 1/4" NPT	CTA-1132
1/2" Hose x 1/4" NPT	CTA-1138

HOSE BARBS FOR MVD's

1/8" Hose x 1/8" NPT	MIS6768-4A
1/4" Hose x 1/8" NPT	CTA-6131-120
3/8" Hose x 1/8" NPT	CTA-6132
1/2" Hose x 1/8" NPT	CTA-6138

MVD REPAIR PARTS

Stud MVD Manifold	CTMVD-6
Gauge Adapter MVD Manifold	CTMVD-7
Repair Kit MVD Manifold	CTA-MVD-RK

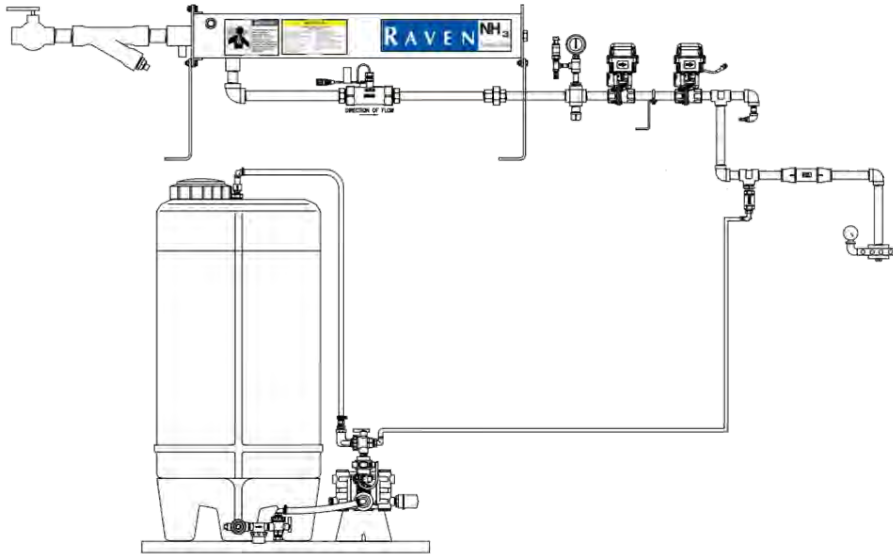


CONTINENTAL MVD MANIFOLD

A Body Only MVD Manifold	CTA-MVD-W
B 16-Port Ring Only	CTMVD-R-16B120
Manifold Stand	MIMS24
Manifold Stand, Section Control	MIMSMVD
U-Bolt for Stand (One Req)	MIUB4SQ
Plug 1/8"	CTA-6135

NH3 APPLICATION

N-SERVE APPLICATION



Parts needed to add direct injection to AccuFlow™ for N-Serve:

RAVEN CAN SYSTEM

Sidekick Pro Low Volume, Raven CAN	RV1-063-0173-200
Plumbing Kit.....	RV1-117-0159-760
Point of Injection Check Valve.....	RV1-333-0011-102
Inline Mixer for NH3 1½".....	RV1-063-0173-770

CHOOSE 1 BELOW:

Power Cable, CAN, w/Agitator and Rinse Assist (Gen I).....	RV1-115-0172-192
Power Cable, CAN, w/Agitator and Rinse Assist (Gen II).....	RV1-115-0172-191

RAVEN ICD SYSTEM

Sidekick Pro Low Volume, Raven ICD.....	RV1-063-0173-781
Plumbing Kit.....	RV1-117-0159-760
Point of Injection Check Valve.....	RV1-333-0011-102
Inline Mixer for NH3 1½".....	RV1-063-0173-770

SIDEKICK PARTS

Sidekick O-Ring Kit	RV1-117-0159-987
Intake Valve Assembly.....	RV1-063-0172-503
Discharge Valve Assembly.....	RV1-063-0172-504
Calibration Tube Only.....	RV1-106-0159-637

RAVEN ISO SYSTEM

Sidekick Pro Low Volume, Raven ISO.....	RV1-063-0173-420
Plumbing Kit.....	RV1-117-0159-760
Point of Injection Check Valve.....	RV1-333-0011-102
Inline Mixer for NH3 1½".....	RV1-063-0173-770
Power Cable, ISO w/out agitation.....	RV1-115-0172-107



NH3 APPLICATION

AIR DRILL KIT & OPTIONAL EQUIPMENT

An inline ball valve at the back of your applicator will allow you to change NH3 tanks in the field without having to bleed down your entire system.



BALL VALVES

Ball Valve 1½"	BVSS203
Nipple 1¼" x 2"	FT20N32XH
Ball Valve 1½"	BVSS243
Nipple 1½" x 2"	FT24N32XH



Gauges not included

GAUGE AND MANIFOLD KIT

Fits 4" or 6" Toolbar	
Accommodates 3 Gauges	KTGM
¼" X ½" Bulkhead Fitting	MIFRV1495-5



shown:
MIPAGET20-40

IN-LINE Y-STRAINERS

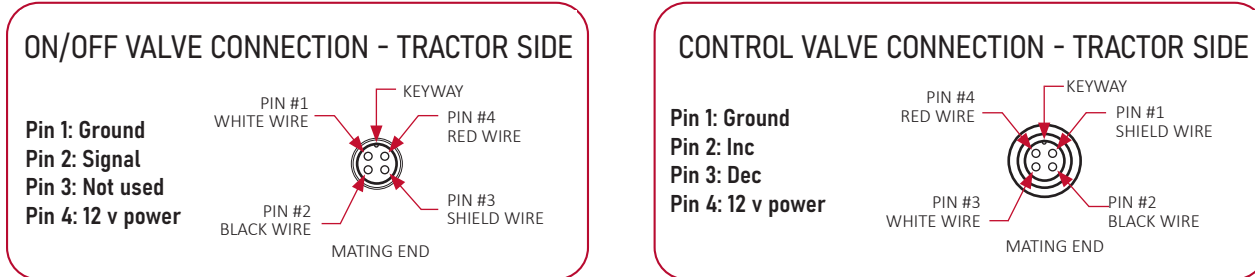
40 Mesh Strainer 1"	MIPAGET16-40
40 Mesh Strainer 1¼"	MIPAGET20-40
40 Mesh Strainer 1½"	MIPAGET24-40
40 Mesh Strainer 2"	MIPAGET32-40



HYDRAULIC SHUT-OFF

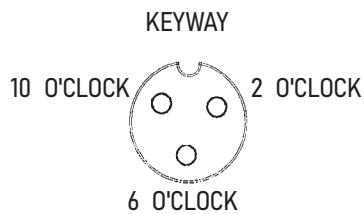
In-Line Hydraulic Shut-off 1"	CTR-9590
REPAIR KIT	CTR-9590RK

Fig. 1



PROCEDURE TO TEST FLOW METER CABLES:

1. Disconnect cable from flow sensor.
2. Hold flow sensor cable so that the keyway is pointing to the 12 o'clock position:



PIN DESIGNATIONS

- 2 o'clock socket location is ground.
- 10 o'clock socket location is power.
- 6 o'clock socket location is signal.

VOLTAGE READINGS

- 2 o'clock socket to 6 o'clock socket = +5 VDC
- 2 o'clock socket to 10 o'clock socket = +5 VDC

Fig. 2

PROCEDURE TO TEST FLOW CABLE:

1. Enter a meter cal number of 1 in the key labelled METER CAL.
2. Depress key labelled TOTAL VOLUME.
3. Place boom switches to ON.
4. With a small jumper wire, short between the 2 o'clock and 6 o'clock sockets with a "Short, No Short" motion. Each time a contact is made, the TOTAL VOLUME should increase by increments of 1 or more counts.
5. If TOTAL VOLUME does not increase, remove the section of cable and repeat test at the connector next closest to the console. Replace defective cables as required.
6. Perform the above voltage checks.
7. If all cables test properly, replace the flow sensor.



AFTER TESTING IS COMPLETE, RE-ENTER CORRECT METER CAL NUMBERS BEFORE APPLICATION.

PROBLEM	PROBABLE CAUSE & CORRECTIVE ACTION
<p>1. Rate display is inaccurate or unstable.</p>	<ol style="list-style-type: none"> 1. Check to see if your strainer is plugged. 2. Verify that there is product being discharged from each of the vapour tubes – If not, disassemble and clean out your supercooler with compressed air. 3. Unplug, check and reconnect all wiring harnesses – Just one corroded pin or loose connection could cause the system to malfunction. 4. Test Your Flow Cable – (See Fig. 2 on page 18) Ensure that power is actually getting to your flow meter by testing for the required voltages. If no power can be found, check connections or replace your flow cable. If there is power at your flow cable, replace your flow sensor. 5. Replace your flow sensor – The black wire connected to your flow meter is called the flow sensor. Remove the old sensor and thread in the new sensor, making sure to follow the installation instructions. No calibration changes are required. 6. Replace your flow meter – If you are still having issues after replacing the flow sensor, the turbine inside your flow meter may have burnt out. Flow meter replacement parts are on page 12.
<p>2. Rate does not change in either manual or automatic control modes.</p>	<ol style="list-style-type: none"> 1. Check the control valve cabling for wear or breaks. 2. Check and clean cable connections. 3. Check the voltage at the control valve. (See Fig. 1 on page 18) 4. Power on the console. 5. Set the master switch on the console to "On". 6. Set the console to "Manual" mode. 7. Hold the Increase/Decrease switch while testing voltage at the flow cable. 8. If voltage is found, plug the control valve back in. 9. If the valve will not turn while holding the Increase/Decrease switch, replace the valve.
<p>3. Are you still having issues?</p>	<p>The flow rate of NH3 through your metering system is solely controlled by tank pressure. When applying in colder temperatures, tank pressure will drop. If tank pressure drops too low, your cooler will be starved for product, which causes rates to fluctuate. Your options are to slow down or try the following:</p> <ol style="list-style-type: none"> 1. Increase plumbing size from tank. 2. Upgrade to a high flow breakaway. 3. Use a larger nurse tank with a high-flow withdrawal. 4. Upgrade to a higher capacity supercooler.

RAVEN 440/450 CONSOLE

When the console is powered up for the first time, it will flash **CAL** and **US VOLUME PER ACRE**. This means the console must be programmed before operation.

1. To begin programming, press **ENTER** to accept **US VOLUME**.
2. Display will now flash **SP1-WHEEL DRIVE**
 - Press the **CE** button, display will now show **SP2-RADAR SPEED SENSOR**. Press **ENTER** to accept SP2.
3. Display will now flash **C-CD-STANDARD VALVE**
 - If you have a 2-valve system (Tagged #2123 on the valve), press **ENTER** to accept standard valve.
 - If you have a single FAST VALVE (Tagged #743 on the valve), press **CE button** until you come to **C-FC-FAST CLOSE VALVE** and press **ENTER** to accept.
4. Display will now flash **CAL SELF TEST 0.0**. Leave this as is for now.

NOTE: For the following calibration settings you will need to depress the key in which you want to enter data, followed by **ENTER**, followed by the **number you wish to enter**, finally followed by **ENTER** again to save.

5. Next press **BOOM 1 CAL** button and then **ENTER** and then enter the width of your applicator in **INCHES** (e.g., 720" for 60ft.). Press **ENTER** to save.
6. Boom 2 and 3 width should both be zero. If they are not, **ENTER 0** for both.
7. Press the **SPEED CAL** button then press **ENTER**. Next, enter a speed calibration number, then press **ENTER**.

NOTE: For Raven Phoenix 10 GPS Sensor, use Cal #785 and for Raven Radar Gun use #586.

- If your Raven console speed does not match up with your actual tractor speed or you are using a third-party speed sensor, you can just increase or decrease the Cal number until they match.
8. Press the **METER CAL** button then **ENTER**. Next, enter the calibration number from the flow meter, then press **ENTER**.
 - a) The Meter Cal number is on a grey tag located on the flow meter under the Raven cooler. It will have a number (e.g., 169/lbsN) on it. This is the number you use.

NOTE: DO NOT USE LIQUID or LITRES number.

- b) This is also the number you can change if you find you are over applying or under applying. To do this, take your desired application rate divided by the rate you applied and multiply by the flow meter number (e.g., 100lbs / 90lbs x 169 = 187 as new number).
9. Press the **VALVE CAL** button then press **ENTER**. Next, enter your calibration number then press **ENTER**.
 - Your Valve Cal number is on the valve motor. For a standard two-valve system the number is 2123; for a single fast valve setup it's 743.
 10. Press the **RATE 1 CAL** button then press **ENTER**. Enter desired lbs. of N to be applied (should be a rate you typically, apply at, e.g., 100 lbs.) then press **ENTER**.

11. Press the **RATE 2 CAL** button then press **ENTER**. Next, enter Rate 2 desired lbs. of N to be applied, then press **ENTER**. This provides the ability to switch to a higher or lower application rate on the fly.
IMPORTANT NOTE: You must enter a number in **RATE 2** to complete calibration process.
12. It should now be displaying **RATE 00** and programing is complete. If not, go back to **STEP 5** and begin again.
13. If an error is made in steps 1 to 3 you can fix it one of two ways:
Option 1: Press and hold **SELF TEST** until it cycles through all the settings and stops. The screen will say "UNITS US" (takes about 15-20 seconds). Press **ENTER** to advance to the setting you want to change. Press **CE** to change the value. Press **ENTER** to finish. Repeat for any other changes needed. This method will save you from reprogramming all the calibration setting again.
Option 2: Factory Reset. (Caution: This will also erase all the calibration settings you just entered.) This is done by turning the power switch OFF then depress and hold the **CE button** while turning the power switch back ON. Program all settings again.
14. Self-Test Feature
 - Self-test allows speed simulation for testing the system while the machine is not moving. This is done by pressing **SELF TEST** then **ENTER** the desired speed (5.0mph), then press **ENTER**. The system will clear itself when the tractor begins to move.

Additional: To learn about other settings like the **SELF TEST** and **AUTOMATIC RATE +/-**, please see pages 18 and 19 in the 440 console manual. **NH3 Calibration** settings for the **Valve Cal**, **Meter Cal**, **Speed Cal** and **Boom Cal** are all found in the **Installation and Operation Manual** for the **AccuFlow™ System**.

CHANGING INITIAL CONSOLE PROGRAMMING

Occasionally it is necessary to make changes to the console programming after the initial programming is complete. To make changes to the initial setup:

1. Press **SELF TEST** and hold for 30 seconds. The console's display will flash the current program setting.
2. Press **ENTER** to advance to the setting that needs to be changed.
3. Press **CE** to change the variable to the desired setting.
4. Complete the data entry by pressing **ENTER**.
5. Repeat the steps above for each variable that needs to be changed.

PROBLEM	PROBABLE CAUSE & CORRECTIVE ACTION
<p>1. Rate display is inaccurate or unstable.</p>	<p>Usually a faulty flow sensor (Fig. 1) is responsible for this issue, but before replacing the flow sensor, try the following:</p> <ol style="list-style-type: none"> 1. Check to see if your strainer is plugged. (Fig. 2) 2. Check the opening on your Continental cooler. There is a small 3/8" hosebarb in the elbow after your control valve. Remove the barb and make sure it's not plugged. (Fig. 3) 3. Verify that there is product being discharged from each of the vapour tubes – If not, disassemble and clean out your supercooler with compressed air. 4. Unplug, check and reconnect all wiring harnesses – just one corroded pin or loose connection could cause the system to malfunction. 5. Check the voltage on the tractor side of the flow sensor connection. Voltage should read 12V across red and black and 9V across black and green. (Fig. 4) Power at flow sensor: Black + Red 12V Black + Green 9V 6. If there is no voltage, its a faulty cable or connection – check or replace implement harness. 7. If there is voltage, remove the flow sensor and check to see if the paddle wheel inside the flow meter is spinning freely. If the paddle wheel spins freely inside the flow meter, replace the flow sensor.
<p>2. Control Valve will not operate in auto.</p>	<p>Does the valve operate in flush? If it does, check your speed cable connections. If it doesn't, test the voltage on the tractor side of the control valve connection. (Fig. 5)</p> <p>Power at Actuator Connection: Red + Black 12V Always Black + White 12V Flush Switch Off Black + Brown 12V Flush Switch On</p>
<p>3. Are you still having issues?</p>	<p>The flow of NH3 through your metering system is solely controlled by tank pressure. When applying in colder temperatures, tank pressure will drop. If tank pressure drops too low, your cooler will be starved for product, which causes rates to fluctuate. Your options are to slow down or try the following:</p> <ol style="list-style-type: none"> 1. Increase plumbing size from tank. 2. Upgrade to a high flow breakaway. 3. Use a larger nurse tank with a high-flow withdrawal. 4. Upgrade to a higher capacity supercooler.

Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5

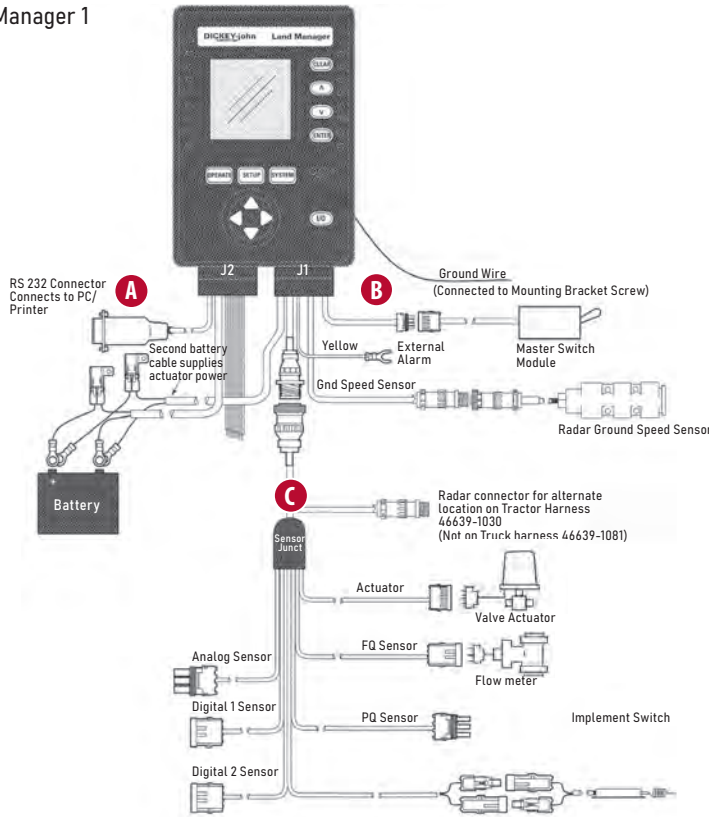


NH3 APPLICATION

DICKEY-JOHN WIRING



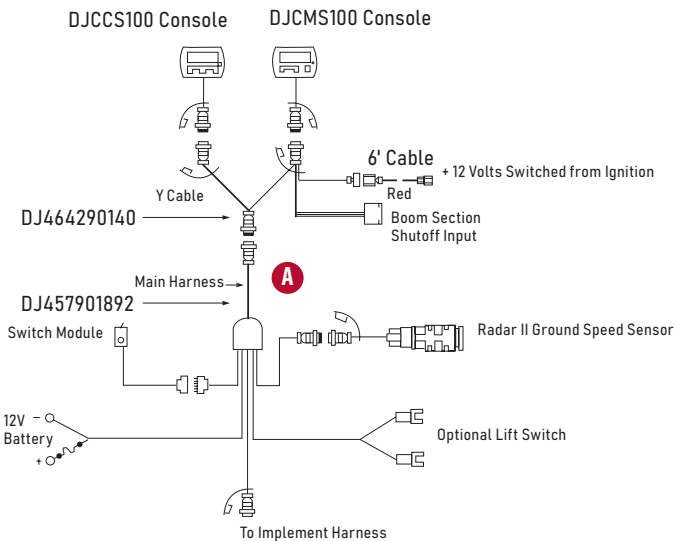
Land Manager 1



LM1 HARNESSES

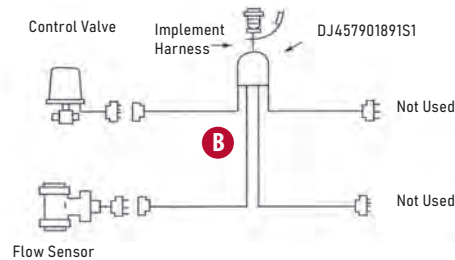
- A** Power Harness LM1, J2 DJ466391090S1
- B** Main Harness LM1, J1 (Long) DJ466391003S1
- C** Implement Harness LM1 DJ466391030S1

CCS100 & CMS100



CCS100 HARNESSES

- A** Main Harness for CCS & LMSE DJ457901892
- B** Implement Harness for CCS & LMSE .. DJ457901891S1
- Main Extension Harness DJ457902770S1



FOR DICKY-JOHN TROUBLESHOOTING, SEE PAGE 22

NH3 APPLICATION

DICKEY-JOHN NH3



CONTINENTAL SUPER FLOW COOLER
 CTA-SF-3000
 Recommended for rates up to
 6500#N/HR
 REPAIR KIT: CTA-SF-RK



DICKEY-JOHN ACTUATOR
 DJ467045060
 Required when upgrading to a
 CTA-BVT Valve

 HARDWARE KIT: DJ457904000
 Required to connect to BVT Valve



FLOW SENSOR MODULE
 DJ457901570AS1



BALL VALVE, THROTTLE
 1 1/4" CTA-BVT



Raven PHOENIX 10 GPS
 RVI-117-0171-165
 CABLE
 Raven Speed Sensor to DJ Harness...RVSSDJ



LM1 MODULE SWITCH.....DJ466050030
 CCS/LMSE..... DJ45790232051



FLOW METER (COMPLETE)
 DJ457901610S1

NH3 APPLICATION

CLIPS, TUBES & HITCHES



HOSE CLIPS

Hose Clip 3/8"	MICPB-2-4-06
Hose Clip 1/2"	MICPB-2-4-08



RAY MAC TUBES

Pipe Applicator Tube 3/8"	MICP06
Pipe Applicator Tube 1/2"	MICP08



SCHUCK CUSHION HITCHES

Receiver Cushion Hitch High-Rider 3 1/2" Drop	M1750RTR
Receiver Cushion Hitch Low-Rider 5 1/2" Drop.....	M1750RT
Spring Set SS Cushion Hitch (set of 2).....	MISK17006
REPAIR KIT, 700 Series Hitch.....	M1700REKIT



FLO-MAX BREAKAWAY & INLINE BREAKAWAY COUPLING

1½" Flo-Max Kit

Flo-Max Breakaway KitSTFM126K
1½" (less bracket)

KIT INCLUDES:

Breakaway	1 x Reducer Bushing
2 x ¼" Bleeders	1 x ACME Cap
1 x Hydrostat	1 x ACME Adapter



1½" Flo-Max Kit

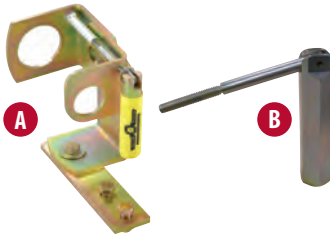
Flo-Max Breakaway KitSTFM150K
1½" c/w bracket

KIT INCLUDES:

Breakaway	1 x Hydrostat
1½" E-Z Bracket	1 x ACME Adaptor
2 x ¼" Bleeders	1 x ACME Cap

1½" Flo-Max E-Z Bracket Only

- A** E-Z Bracket 1½"STFM126-1500
- B** E-Z Bracket Handle Kit
STFM126/150-0026



1½" Flo-Max E-Z Bracket Only

- A** E-Z Bracket 1½"STFM150-1500
- B** E-Z Bracket Handle Kit
STFM126/150-0026

1½" Flo-Max Female Half

Female Half STSFM125/126-1100

1½" Flo-Max Female Half

Female Half STFM150-1100



1½" Flo-Max Male Half

Male Half STSFM125/126-1200

1½" Flo-Max Male Half

Male Half STFM150-1200



1½" Flo-Max Male Insert

Flo-Max Male Insert ...STFM125-5003
(less O-Rings)
Male Tip Quad Ring 1½"..... STFMQR
Male Tip O-Ring 1½"STFM108-2003



1½" Flo-Max Male Insert

Flo-Max Male Insert ...STFM150-5003
(less O-Rings)
Male Tip Quad Ring 1½" ..STP5-304-RO
Male Tip O-Ring 1½"ST110-2003

1½" Flo-Max REPAIR KIT

Flo-Max c/w Tool Assembly STFM125-0022DY
(O-Rings only)..... STFM125-0024
1½" Plunger KitSTFM125-0023



1½" Flo-Max REPAIR KIT

Flo-Max c/w Tool Assembly STFM150-0022
(O-Rings only)..... STFM150-0024
1½" Plunger KitSTFM150-0023



RB Breakaway (Discontinued)

RB (OEM) Repair Kit 1"STRB1-0024
RB Coupling O Ring Kit 1"STRBOK-1
RB Coupling O-Ring Kit 1½"STRBOK-125

! REMINDER: CHANGE O-RINGS ANNUALLY

CONTINENTAL SVW BREAKAWAY

1 1/2" Continental Kit

Continental Breakaway Kit CTB-SWV-125-D

1 1/2" c/w bracket

KIT INCLUDES:

- 2 x 1/4" Bleeders
- 1 x Hydrostat
- 1 x ACME Adapter
- 1 x Reducer Bushing
- 1 x Mounting Bracket



1 1/2" Continental Kit

Continental Breakaway Kit CTB-SWV-150-D

1 1/2" c/w bracket

KIT INCLUDES:

- 2 x 1/4" Bleeders
- 1 x Hydrostat
- 1 x ACME Adapter
- 1 x Reducer Bushing
- 1 x Mounting Bracket

1 1/2" Continental Bracket Only

SWV Breakaway Bracket CTA-SWV-BKT



1 1/2" Continental Bracket Only

SWV Breakaway Bracket CTA-SWV-BKT

1 1/2" Continental Female Half

Female HalfCTB-SWV-1
c/w SWV Bracket



1 1/2" Continental Female Half

Female HalfCTA-SWV-1-G
c/w SWV Bracket

1 1/2" Continental Male Half

Male HalfCTA-SWV-2



1 1/2" Continental Male Half

Male HalfCTA-SWV-2-G

1 1/2" Continental REPAIR KIT

Complete Rebuild Kit

CTA-SWV125150-RBK
REPAIR KIT: CTA-SWV125150-RK



1 1/2" Continental REPAIR KIT

Complete Rebuild Kit

CTA-SWV125150-RBK
REPAIR KIT: CTA-SWV125150-RK

! REMINDER: CHANGE O-RINGS ANNUALLY

NH3 APPLICATION

CAPSTAN N-JECT® NH3



As the most advanced and reliable NH3 application system available on the market, the N-Ject® NH3 system provides precise row-by-row uniformity with less than six percent distribution error.



N-JECT® MANIFOLD PARTS

Pressure Sensor, 50 PSI Non-vented.....	CA620162-050
Pressure Sensor, 250 PSI Non-vented	CA620120-250
Pressure Gauge, 0-400 PSI.....	PGA4004L
Pressure Gauge, 0-60 PSI	CA620124-001
Harness, 8N x 25', 12GA	CA620134-001

N-JECT® INSTALLATION PARTS

N-Ject® Installation Parts Package.....	KTNJPP
---	--------

KIT INCLUDES:

- Hoseclamps
- Ball Valves
- Mounting Hardware
- Breakaway w/Bracket
- Required Fittings



NOZZLE VALVE PARTS LIST

Coil Assembly, 12-Watt.....	CA625147-011
Coil Assembly, 7-Watt	CA116189-111
Valve Body ⁵ / ₃₂ " Orifice.....	CA620108-001
Valve Body ³ / ₃₂ " Orifice.....	CA620208-001
Plunger Assembly, Teflon	CA716190-001
O-Ring 015.....	CA621022-204
O-Ring 017 x 2 mm	CA620116-011
O-Ring 019.....	CA620115-001

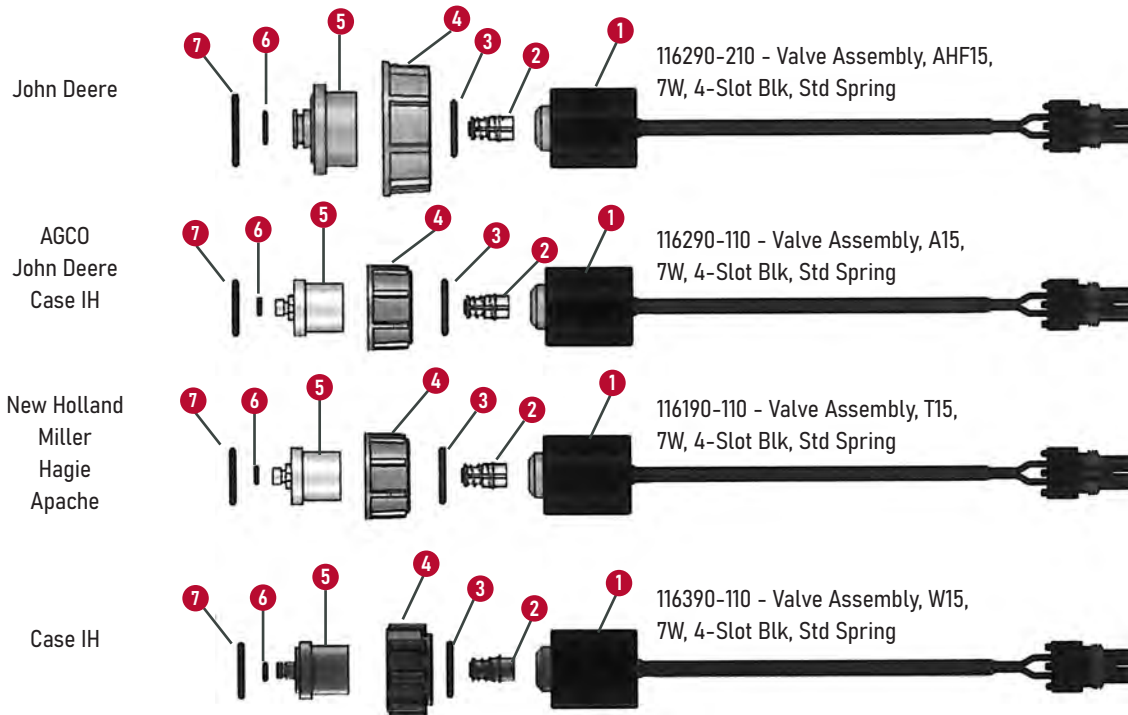


NH3 APPLICATION

CAPSTAN SOLENOID VALVE ASSEMBLIES



DyTerra is an authorized distributor for CapstanAG™ spray system parts. We have in-stock sprayer parts for Sharpshooter™, PinPoint™ II Blended Pulse™ systems.



ITEM		AHF15-ARAG HIGH FLOW	A15 - ARAG	T15 - TEEJET	W15 - WILGER
	VALVE ASSEMBLY	116290-210	116290-110	116190-110	116390-110
1	COIL, 7 WATT	116189-111	116189-111	116189-111	116189-111
2	PLUNGER, 4-SLOT	716009-114	716009-114	716009-114	716009-114
3	O-RING (BROWN)	7150222-204	715022-204	715022-204	715022-204
4	FLYNUIT	717101-306	717101-006	717101-105	717101-007
5	VALVE BODY	116182-211	116182-111	116186-111	116188-111
6	O-RING (SMALL)	715022-211	715022-201	715022-200	715022-201
7	O-RING (LARGE)	715022-215	715022-205	715022-202	715022-206





4725 TANK NH3 TANK&WAGON

TANK FEATURES

- Single 4725 USWG NH3 tank, 9 ton capacity
- 2" ISC withdrawal valve, air or electric actuated

WAGON FEATURES

- 10 x 6 x .250 steel frame with fully triangulated gooseneck style hitch
- 5" ball and coupler pivot point
- 30.5 x 32 front tires
- 30.5 x 32 rear dual tires
- 15000lb front hubs
- 25000lb rear hubs





2000 & 2400 NH3 TANKS & WAGONS

TANK FEATURES *All tanks meet required TC51 Code with built-in valve protection and rear end protection*

SINGLE

- Single 2000 or 2400 USWG NH3 Tank
- 1¼", 1½" or 2" center withdrawal (1½" ISC valve standard)
- 1½" spray fill with 2" standpipe for fast filling
- Required decal package

TWIN

- Two 2000 or 2400 USWG NH3 Tanks
- 1½" ISC withdrawal valves, air or electric actuated
- 1½" rear fill system
- Stainless Steel Flex Hoses on withdrawal and fill

WAGON FEATURES

SINGLE

- Duo-Lift MLB20C & MLB24C Safety Wagon for low centre of gravity and complete turn-under to prevent roll overs
- Tire Options: 600/55 Radials for added floatation. Rear Axle "flips" to accommodate 23.1 tires *on rear only*
- Standard 21.5 Tires all around
- Passive emergency discharge control system

TWIN

- BFC 4000 or 4800 Wagon, steel frame with fully triangulated gooseneck style hitch
- 5" ball and coupler pivot point



5-YEAR LIMITED WARRANTY on all Duo-Lift Wagons

TANK PARTS



SENIOR FLOAT GAUGES

TOP MOUNT

41" Tank Diameter RC6280-41
 46" Tank Diameter RC6280-46

END MOUNT

41" Tank Diameter RC6283-41
 46" Tank Diameter RC6283-46
 49" Tank Diameter RC6283-49
 Senior Float Gauge Bolt MIFGBSR

JUNIOR FLOAT GAUGES

TOP MOUNT

41" Tank Diameter RC6281-41
 46" Tank Diameter RC6281-46

END MOUNT

41" Tank Diameter RC6284-41
 46" Tank Diameter RC6284-46
 Junior Float Gauge Bolt MIFGBJR



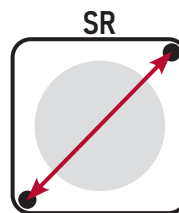
ST130129

SENIOR FLOAT GAUGE GASKET
ST130129



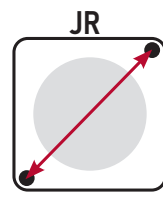
ST130128

JUNIOR FLOAT GAUGE GASKET
ST130128



SR

Measures 2½" from centre bolt hole to centre bolt hole diagonally.



JR

Measures 2" from centre bolt hole to centre bolt hole diagonally.



RELIEF VALVE

3/4" 250 PSI.....CTA-402-250
 3/4" 265 PSI.....CTA-402-265



WATER CONTAINER

Side Mount.....MIPH76411
 Top Mount.....MIPH76410



SAFETY CONTAINER

(No Gloves)
 MIPH75649



NH3 COMPATIBLE NEOPRENE GLOVES

MI6784R



NON-VENTED GOGGLES

MI2237R

NH3 APPLICATION

TANK PARTS



FILL/VAPOUR VALVE

1/4" STA525P



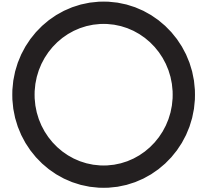
FILL/VAPOUR VALVE

1/4" CTB-1201



FIXED LIQUID LEVEL VALVE

Marshall MEJ415
Rego RGA2805C



ACME GASKET

1/4" ST1102A16



WITHDRAWAL VALVE

1/4" CTA-1406-GBW
1/2" CTA-1507-GBW



WITHDRAWAL VALVE

1/4" STA484N-45
1/2" STA482N-60



WITHDRAWAL VALVE

1/4" x 1" STA521P



NH3 HYDROSTAT

1/4" 350 PSI CTA-400-C



GLOBE VALVE GUARD

1" KTVG16G0
Globe Valve 1" STAL310P



1/4" GLOBE VALVE, Angle

Squibb Taylor STA331
Continental CTA-2525-H



1/4" GLOBE VALVE, Y-Pattern

Squibb Taylor STA334AL



VALVE GUARD, c/w U-BOLT

fits STA331, STA334AL, CTA-2525-H*
KTVG24STO



NH3 HOSE

1" SS Braid (8 year) HSN259516
1/4" SS Braid (8 year) ... HSN259520
1/2" SS Braid (8 year) ... HSN259524



REUSABLE HOSE CLAMP

1" x 1" ME3162-16
1/4" x 1/4" ME3162-20
1/2" x 1/2" ME3162-24



HOSE CLAMP

1/4" F ACME x 1" ME3162-16S
1/4" F ACME x 1/4" ME3162-2018S
2/4" F ACME x 1/4" ME3162-2020S
2/4" F ACME x 1/2" ME3162-24S



SPEEDY COUPLER

1/4" F ACME x 1" MPT STA1131F
2/4" F ACME x 1/4" MP STA1132F
2/4" F ACME x 1/2" MPT STA1133F

NH3 APPLICATION

TANK PARTS



ADAPTER
1" MPT x 1½" M ACME.....STA2002



ADAPTER
1½" MPT x 1½" M ACME ...STA2003S



ADAPTER
1½" MPT x 2½" M ACME...STA2060S



CAP & CHAIN
1½"CT22-63-FC



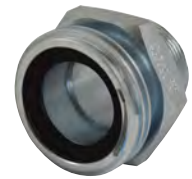
FILL VALVE
1½" x 1½"STA502N-60



BLEEDER VALVE
1¼" Knurled.....STA1911



CAP & CHAIN
2½" ACME.....STST-1177C



ACME ADAPTOR
1½" x 2½" M ACME..... STA2077



DRY GAUGE
0-400 PSI.....PGA400



BLEEDER VALVE
¾" T-Handle.....STA1912



ADAPTOR
1½" M ACME x 2½" F ACME ..ME611S



**ISC VALVE
ROTARY ACTUATOR COMBO**
1½" Tee Body...ME992AR-12-85



**SQUIBB-TAYLOR
ELECTRIC ACTUATOR**
1½" ISC.....STA15-45A



ISC 90° VALVE, 1½"
ME992-12



MAIN SWITCH ASSEMBLY
c/w SWITCH
ST113860



EXTENSION CABLE
10' ST113862
15' ST113865
20' ST113868
50' ST113869

NH3 APPLICATION

HUBS, SPINDLES, TIRES & RIMS

WAGON	HUB	SPINDLE	TIRES & RIMS	LEAF SPRING ASSEMBLY	LEAF SPRING U-BOLT
DUOLIFT M1450	MIH611WP Hub, 6 bolt comes with bearings and seals, 3600# rating		Call for available options	DLE5115	DLE245
DUOLIFT M1750	MIH614WP Hub, 6 bolt comes with bearings and seals, 5000# rating	MIS614-32X224	Call for available options	DLE5115	DLE245
DUOLIFT M2000	MIH821WP Hub, 8 bolt comes with bearings and seals, 5790# rating	MIS821-40X288	TW215161SGT Tire, 21.5 x 16.1 lug style on 8-bolt rim	N/A	DLE245
DUOLIFT M2100	MIH821WP Hub, 8 bolt comes with bearings and seals, 5790# rating	MIS821-40X288	TW215161SGT Tire, 21.5 x 16.1 lug style on 8-bolt rim	N/A	N/A
DUOLIFT M2400	MIH886WP Hub, 8 bolt comes with bearings and seals, 8000# rating	MIS886-50X256	TW215161SGT Tire, 21.5 x 16.1 lug style on 8-bolt rim	N/A	N/A
DUOLIFT LB2900 (front)	MIH821WP Hub, 8 bolt comes with bearings and seals, 5790# rating	MIS821-40X288	TW215161SGT Tire, 21.5 x 16.1 lug style on 8-bolt rim	N/A	N/A
DUOLIFT LB2900 (rear)	MIH886WP Hub, 8 bolt comes with bearings and seals, 8000# rating	MIS886-50X256	TW231268TL Tire, 23.1 x 26 lug style on 8-bolt rim	N/A	N/A
DUOLIFT LB1 (front)	MIH821WP Hub, 8 bolt comes with bearings and seals, 5790# rating	MIS821-40X288	TW215161SGT Tire, 21.5 x 16.1 lug style on 8-bolt rim	N/A	N/A
DUOLIFT LB1 (rear)	MIH886WP Hub, 8 bolt comes with bearings and seals, 8000# rating	MIS886-50X256	TW231268TL Tire, 23.1 x 26 lug style on 8-bolt rim	N/A	N/A
DUOLIFT LB4400 (front)	MIH886WP Hub, 8 bolt comes with bearings and seals, 8000# rating	MIS881-72X288	TW231268TL Tire, 23.1 x 26 lug style on 8-bolt rim	N/A	N/A
DUOLIFT LB4400 (rear)	MIH881WP Hub, 10 bolt comes with bearings and seals, 20,000# rating	MIS885-72X288	TW30532DT Tire, 30.5 x 32 lug style on 10-bolt rim	N/A	N/A
JOHNSON WELDING 2000	MIH5500WP Hub, 8 bolt comes with bearings and seals, 5000# rating	MIS5500-40X256	TW215161SGT Tire, 21.5 x 16.1 lug style on 8-bolt rim	N/A	N/A

STEEL FITTINGS

Schedule 80 NH3 Forged Steel - Threaded

FITTING	¼"	½"	1"	1½"	1½"	2"	3"
Coupling	FT04C04F	FT08C08F	FT16C16F	FT20C20F	FT24C24F	FT32C32F	FT48C48F
Elbow (90°)	FT04E90F	FT08E90F	FT16E90F	FT20E90F	FT24E90F	FT32E90F	FT48E90F
Elbow (45°)	N/A	N/A	FT16E45F	FT20E45F	FT24E45F	FT32E45F	FT48E45F
Street Elbow (90°)	FT04L90F	FT08L90F	FT16L90F	FT20L90F	FT24L90F	FT32L90F	N/A
Tee	FT04TF	FT08TF	FT16TF	FT20TF	FT24TF	FT32TF	FT48TF
Nipple - Short	FT04NSPXH	FT08NSPXH	FT16N32XH	FT20N32XH	FT24N32XH	FT32NSPXH	N/A
Nipple - 3"	FT04N48XH	FT08N48XH	FT16N48XH	FT20N48XH	FT24N48XH	FT32N48XH	FT48N48XH
Nipple - 6"	FT04N96XH	FT08N96XH	FT16N96XH	FT20N96XH	FT24N96XH	FT32N96XH	FT48N96XH
Plug	FT04PF	N/A	FT16PF	FT20PF	FT24PF	FT32PF	FT48PF

NH3 APPLICATION

EMERGENCY DISCHARGE CONTROL

PNEUCUBE




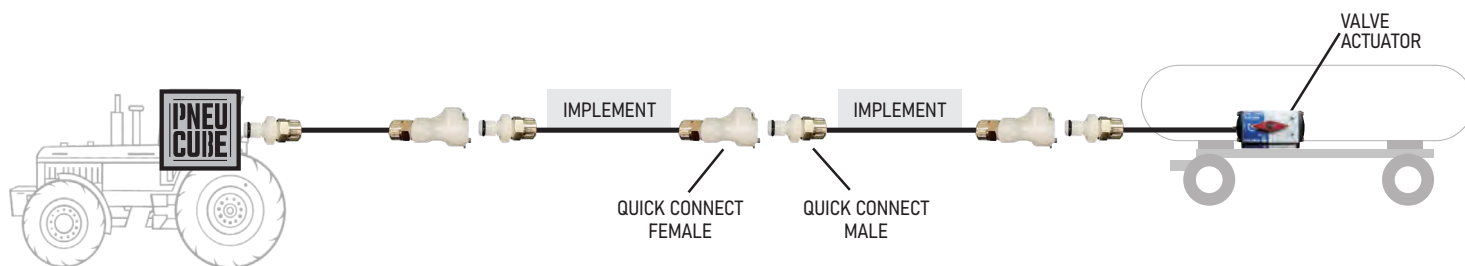
The PneuCube is the air supply control device for an NH3 Nurse Wagon Emergency Discharge Control and is composed of the following items:

- PneuCube
- ISC valve(s) or ESV, valve actuator(s)
- Airline and Air Fittings

The system provides passive emergency discharge control protection in the event of equipment failure as well as a remote means of closure and offers two modes of shutdown; active or passive.

INCLUDED IN THE PNEUCUBE KIT (DYPNEUCUBEKT):

<p>PneuCube</p>  <p>DYPNEUCUBE</p>	<p>100ft Hose</p>  <p>D102683</p>	<p>Lighter Plug</p>  <p>D105627</p>	<p>Replacement O-Rings</p>  <p>D108949</p>	<p>15 Amp Replacement Fuse</p>  <p>D101055</p>	<p>Quick Connect Male</p>  <p>D105410</p>	<p>Quick Connect Female</p>  <p>D105388</p>
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NH3 APPLICATION

EMERGENCY DISCHARGE CONTROL

ELECTRIC

AIR

ESV




BRAND	ACTUATOR	1/4" VALVE	2" VALVE
REGO	STP810-R	RGA6010	RGA6016
FISHER	STP810	FRN551-10	FRN551-16
MARSHALL	STP810	ME980C-10	ME980C-16

BRAND	ACTUATOR	1/4" VALVE	2" VALVE
REGO	RG6016RA	RGA6010	RGA6016
FISHER	ME552	FRN551-10	FRN551-16
MARSHALL	ME552	ME980C-10	ME980C-16

ACCESSORIES


DESCRIPTION	PART NUMBER
Main Switch - Tractor Cab	ST113860
Electric Actuator Pigtail	STAPT
Wiring Harness Ext 15ft	ST113865
Wiring Harness Ext 20ft	ST113868
Wiring Harness Ext 50ft	ST113869

AIR BOX	PART NUMBER
 PNEUCUBE	DYPNEUCUBEKT

ISC

TANK CONNECTION	VALVE OUTLET	BODY	EXCESS FLOW RATE	PART NUMBER
1 1/2" MNPT	1 1/2" FNPT	ANGLE	45 GPM	STA120-45A
1 1/2" MNPT	1 1/2" FNPT	ANGLE	45 GPM	STA15-45A
1 1/2" MNPT	1 1/2" FNPT	ANGLE	60 GPM	STA15-60A

SIZE	ISC ONLY	ISC/ACTUATOR
1 1/4" x 1 1/4" STRAIGHT	ME990-10-85	ME990AR-10-85
1 1/4" x 1 1/4" TEE BODY	ME992-10-85	ME992AR-10-85
1 1/2" x 1 1/2" TEE BODY	ME992-12-85	ME992AR-12-85
ACTUATOR ONLY		
1 1/2" x 1 1/2" MARSHALL & FISHER		ME225

 As of January 1, 2022, all interconnected nurse tanks or nurse tanks with a capacity of 10,000 L or greater, must be equipped with an appropriate emergency discharge control as specified in CSA B620-20.

NH3 HOSE

All hose measured by inner diameter

One of the most important considerations for a proper installation is the withdrawal line plumbing from the nurse tank to the cooler or pump.

Consider the following to ensure you are achieving optimal flow rates:

- Use ISC valves or high flow withdrawal valves in nurse tank outlet
- Use minimum 1¼" hose in place of 1" hose
- 1¼" hose has 56% more capacity than 1" hose
- 1½" hose has two times the capacity of 1¼" hose
- Ensure inlet plumbing from the nurse tank is as short as possible

Stainless Steel Anhydrous Hose (Grey Stripe)

NH3 Hose ½", SS Braid, 10 Year	HSN144608
NH3 Hose ¾", SS Braid, 8 Year	HSN259512
NH3 Hose 1", SS Braid, 8 Year	HSN259516
NH3 Hose 1¼", SS Braid, 8 Year	HSN259520
NH3 Hose 1½", SS Braid, 8 Year	HSN259524
NH3 Hose 2", SS Braid, 8 Year	HSN259532



Nylon Braided Anhydrous Hose (Green Stripe)

NH3 Hose ½", Nylon Braid, 6 Year	HSN200008
NH3 Hose ¾", Nylon Braid, 6 Year	HSN200012
NH3 Hose 1", Nylon Braid, 6 Year	HSN200016
NH3 Hose 1¼", Nylon Braid, 6 Year	HSN200020
NH3 Hose 1½", Nylon Braid, 6 Year	HSN200024



EVA Tubing

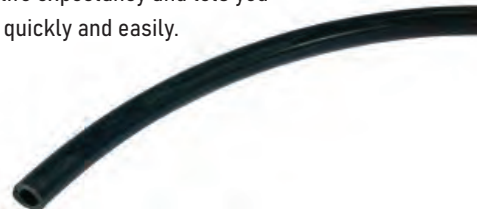
¼" - 250' Roll	HSEVA04250
⅜" - 250' Roll	HSEVA06250
½" - 250' Roll	HSEVA08250
¾" - 50' Roll (Reinforced)	HSEVA12R50
1" - 50' Roll (Reinforced)	HSEVA16R50

PE Tubing (for ¼" compression fittings)

¼" OD - 100' Roll	HS1J-048-100	} .170 ID x ¼" OD
¼" OD - 1000' Roll	HS1J-048-1000	

A flexible ethyl vinyl tubing is used for applying NH3, aqua ammonia, herbicides and all liquid fertilizers.

The addition of carbon black as a UV stabilizer greatly increases life expectancy and lets you check for frosting quickly and easily.



! NOTE: CUT HOSE IS NOT RETURNABLE

THREADED & ACME HOSE CLAMPS



shown:
ME3162-24

Threaded Reusable Hose Clamps

½" MNPT x ½" Hose.....	ME3162-08
¾" MNPT x ¾" Hose.....	ME3162-12
1" MNPT x 1" Hose.....	ME3162-16
1¼" MNPT x 1¼" Hose.....	ME3162-20
1½" MNPT x 1½" Hose.....	ME3162-24
2" MNPT x 2" Hose.....	ME3162-32
3" MNPT x 3" Hose.....	ME3162-48
1" MNPT x ¾" Hose.....	ME3162-1216
1" MNPT x 1¼" Hose.....	ME3162-2016



shown:
ME3162-12S



shown:
ME3162-2020S

ACME Reusable Hose Clamps

¾" Hose x 1¼" F ACME.....	ME3162-12S
1" Hose x 1¼" F ACME.....	ME3162-16S
1¼" Hose x 1¼" F ACME.....	ME3162-2018S
1¼" Hose x 2¼" F ACME.....	ME3162-2020S
1½" Hose x 2¼" F ACME.....	ME3162-24S
2" Hose x 3¼" F ACME.....	ME3162-32S



NH3 PARTS & ACCESSORIES

NH3 DECALS

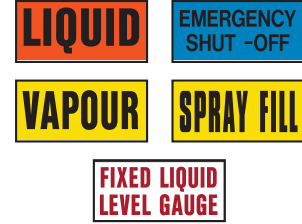
**CAUTION
ANHYDROUS
AMMONIA
INHALATION
HAZARD**

CAUTION, Green 4".....DECAU
ANHYDROUS, Green 4".....DEANH
AMMONIA, Green 4".....DEAMM
INHALATION, Black 4".....DEINH
HAZARD, Black 4".....DEHAZ

0	DE0	NUMBER 0 DECAL FOR NH3
1	DE1	NUMBER 1 DECAL FOR NH3
2	DE2	NUMBER 2 DECAL FOR NH3
3	DE3	NUMBER 3 DECAL FOR NH3
4	DE4	NUMBER 4 DECAL FOR NH3
5	DE5	NUMBER 5 DECAL FOR NH3
6	DE6	NUMBER 6 DECAL FOR NH3
7	DE7	NUMBER 7 DECAL FOR NH3
8	DE8	NUMBER 8 DECAL FOR NH3
9	DE9	NUMBER 9 DECAL FOR NH3

DECAL PART # DESCRIPTION

2" Number Decals 0 through 9
Sold in Sheets of 10
Larger size numbers available upon request



LIQUID, Orange.....DEL02
VAPOUR, Yellow.....DEVY2
EMERGENCY SHUT-OFF, Blue.....DEESO
SPRAY FILL.....DESF2Y
FIXED LIQUID LEVEL GAUGE.....DEFLLG

CAUTION

CAUTION, Curved Down.....DECAUCD

AMMONIA

AMMONIA, Curved Down.....DEAMMCD

AMMONIA

AMMONIA, Curved Up.....DEAMMCU

**MAX. SPEED
40 KM-HR.**

MAX. SPEED 40km/hr
Decal.....DEMAX3X14
MAX. SPEED 33km/hr
Decal.....DEMAX3X1433KM



1005 White.....DE1005W
1005 Placard, White Plastic....DE1005WP
1005 Placard Holder.....DE1005H
1005 White 4".....DE1005-4



Slow Moving Vehicle - Decal.....DESMV
Slow Moving Vehicle - Placard, Metal.....DESMVM



DON'T SEE WHAT YOU NEED? We can supply custom decals. Call 1-866-885-8260 for details.

COMBINATION ROTARY ACTUATORS & ISC'S



ISC VALVE - ROTARY ACTUATOR COMBO

1½" 85 GPM.....	ME990AR-10-85
1½" Tee Body.....	ME992AR-12-85
2" 260 GPM.....	ME990AR-16-160



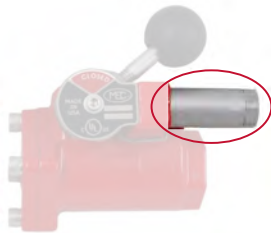
ESV / ROTARY ACTUATOR COMBO

1½".....	ME980AR-10
1½".....	ME980AR-12
2".....	ME980AR-16

ESV, FLANGED w/ROTARY ACTUATOR

2".....	ME980AR-16-2F
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ESV ACCESSORIES



PNEUMATIC LATCH

REGO Fits 1½", 2", 3" ESV.....	RG6016-60D
MARSHALL Fits 1", 1½", 2", 3" ESV.....	ME980-904K
FISHER Fits 1½", 2" ESV.....	FRP327D



THERMAL LATCH

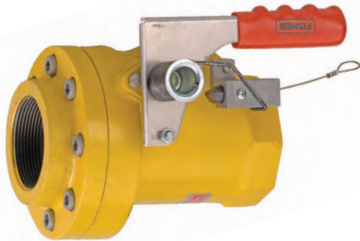
REGO Fits 1½", 2", 3" ESV.....	RG6010TF
MARSHALL Fits 1½", 1½", 2", 3" ESV.....	ME980-903K
FISHER Fits 1½", 2", 3" ESV.....	FRT12963T0012

EMERGENCY SHUTOFF VALVES - ELECTRIC/AIR



REGO CABLE LATCH ESV'S

1½" Cable Latch ESV.....	RGA6010
REPAIR KIT, 1½"	RGAA6010-50
2" Cable Latch ESV.....	RGA6016
REPAIR KIT, 2"	RGA6016-50
1½" & 2" Rotary Actuator.....	RG6016RA
Electric Actuator.....	STP810-R



FISHER CABLE LATCH ESV'S

1½" Cable Latch ESV.....	FRN551-10
REPAIR KIT, 1½"	FRT13090-T0012
2" Cable Latch ESV.....	FRN551-16
REPAIR KIT, 2"	FRT13090-T0012
1½" & 2" Rotary Actuator.....	ME552
Electric Actuator.....	STP810



MARSHALL CABLE LATCH ESV'S















1½" Cable Latch ESV.....	ME980C-10
REPAIR KIT, 1½"	ME980-10-SRK
2" Cable Latch ESV.....	ME980C-16
REPAIR KIT, 2"	ME980-16-SRK
1½" & 2" Rotary Actuator.....	ME552
Electric Actuator.....	STP810



MARSHALL PNEUMATIC LATCH ESV'S

1½" Pneumatic Latch ESV.....	ME980-10
REPAIR KIT, 1½"	ME980-10-SRK
1½" Pneumatic Latch ESV.....	ME980-12
REPAIR KIT, 2"	ME980-16-SRK
2" Pneumatic Latch ESV.....	ME980-16
REPAIR KIT, 2"	ME980-16-SRK
3" Pneumatic Latch ESV.....	ME980-24
REPAIR KIT, 3"	ME980-24-SRK

AIR ACTUATOR FOR ISC'S & ESV'S

ISC VALVE	ROTARY ACTUATOR	STROKE ACTUATOR
REGO 1½"		 <p>RGA3209PAF</p>
MARSHALL & FISHER 1½"	 <p>ME225</p>	 <p>ME205</p>
REGO 2"	 <p>RGA3212RA</p>	 <p>RGA3213PA</p>
MARSHALL & FISHER 2" & 3"	 <p>ME226</p>	 <p>ME206</p>
ESV	ROTARY ACTUATOR	STROKE ACTUATOR
REGO 1½"	 <p>RG6016RA</p>	 <p>RG6016-60C</p>
MARSHALL & FISHER 1½"	 <p>ME552</p>	 <p>ME551</p>
REGO 2"	 <p>RG6016RA</p>	 <p>RG6016-60C</p>
MARSHALL & FISHER 2" & 3"	 <p>ME552</p>	 <p>ME551</p>

NH3 PARTS & ACCESSORIES

ISC VALVES



MARSHALL ISC STRAIGHT VALVE
1"ME990-10-85

REPAIR KIT: ME990-10-VRK



MARSHALL ISC 90° VALVE
1"ME992-10-85
1½"ME992-12-85

REPAIR KIT: ME990-10-VRK



REGO ISC STRAIGHT VALVE
1½"RGA3209D050

REPAIR KIT: RGA3209R-50



REGO ISC 90° VALVE
1½"RGA3209DT050

REPAIR KIT: RGA3209R-50



MARSHALL ISC STRAIGHT VALVE
2"ME990-16-160

REPAIR KIT: ME990-16-VRK



MARSHALL ISC 90° VALVE
2"ME992-16-160

REPAIR KIT: ME990-16-VRK



REGO ISC STRAIGHT VALVE
2"RGA3212R250

REPAIR KIT: RGA3212A-50



REGO ISC 90° VALVE
1½"RGA3212RT250

REPAIR KIT: RGA3212A-50



MARSHALL ISC DOUBLE FLANGE
3" 400GPMMESAR-3DF-260

REPAIR KIT: ME990-24-VRK



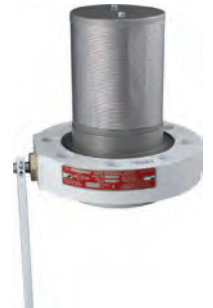
FISHER VALVE
2" ISC Straight..... FRC477-16-25

REPAIR KIT: FRR400-16



FISHER ISC 90° VALVE
2"FRC471-16-25

REPAIR KIT: FRR400-16



FISHER ISC SINGLE FLANGE
3" x 300#FRC484-24-40

REPAIR KIT: FRR40424T012

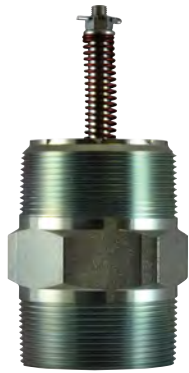
NH3 PARTS & ACCESSORIES

EXCESS FLOW VALVES

These valves are designed to close when liquid flow exceeds the valve's setting. They are intended to prevent large discharges of NH3 to the atmosphere due to a break in the hose or piping system.



shown:
1519A4



shown:
STA1711

SQUIBB TAYLOR

1½" F x 1½" F	50 GPM	STA1705
1½" M x 1½" M	50 GPM	STA1706
2" M x 1½" M	95 GPM	STA1708
2" M x 2" M x 1½" M	95 GPM	STAL1711
3" M x 3" M x 2" F	165 GPM	STA1713
3" M x 2" M	165 GPM	STA1715

REGO

2" F x 2" F	100 GPM	RGA1519A4
2" F x 2" F	133 GPM	RGA1519B4
1½" F x 1½" F	50 GPM	RGA3282C
2" M x 2" F	110 GPM	RGA3292C

BACK CHECK VALVES

SQUIBB TAYLOR

1½" M x 1½" F	STA1727
2" M x 2" F	STA1728
3" M x 3" F	STA1729

MARSHALL

1½" F x 1½" M	ME870S-10
2" F x 2" M	ME870S-16
3" F x 3" M	ME870S-24



shown:
STA1727



shown:
FRG107

REGO

1½" M x 1½" F	RGA3176
2" M x 2" F	RGA3186
3" M x 3" F	RGA3196

FISHER

3" M x 3" F	FRG104
2" M x 2" M x 1½" F	FRG105
3" M x 2" M	FRG106
3" M x 3" M x 2" F	FRG107a



CAUTION: EXCESS FLOW VALVES CLOSE ONLY WHEN RESTRICTIONS DOWNSTREAM OF THE VALVE DO NOT EXCEED THE FLOW RATING OF THE VALVE.

NH3 PARTS & ACCESSORIES

VALVES



GLOBE VALVE

1"STA310P

REPAIR KIT: ST310-22



ANGLE VALVE

1"STA311P
1 1/4" STAL313P
2"STA317P

1" REPAIR KIT: ST310-22
1 1/4" REPAIR KIT: ST312-22
2" REPAIR KIT: ST316-22



GLOBE VALVE

1 1/4" STAL312P
1 1/2" STAL314P
2"STA316P

1 1/4" REPAIR KIT: ST312-22
1 1/2" REPAIR KIT: ST314-22
2" REPAIR KIT: ST316-22



SNAP VALVE - MINIMUM BLEED

1" FPT x 1 1/4" F ACME STAL343A
1 1/4" FPT x 1 1/4" F ACME STAL362A

1" REPAIR KIT: ST363-20
1 1/4" REPAIR KIT: ST363-20



GLOBE VALVE

2"ME825-16-4

REPAIR KIT: ME815-16SRK



ANGLE VALVE

1 1/4"ME815-10
2"ME815P-16

1 1/4" REPAIR KIT: ME815-10SRK
2" REPAIR KIT: ME815-16SRK

HOSE END VALVES



GLOBE VALVE

Squibb Taylor 1 1/4"STA331
Continental 1 1/4" CTA-2525-H

SQUIBB REPAIR KIT: ST330-22
CONTINENTAL REPAIR KIT: CTA-25HRK



GLOBE VALVE - SQUIBB TAYLOR

1 1/2" STA334AL

REPAIR KIT: ST480-22



VALVE/SPEEDY COUPLER

1 1/4" x 2 1/4" STA1527
1 1/2" x 2 1/4" STA1529

TANK VALVES



WITHDRAWAL VALVE

1/4" x 1"STA521P

REPAIR KIT: ST310-22



FILL/VAPOUR VALVE

1/4"STA525P

REPAIR KIT: ST310-22



FILL/VAPOUR VALVE

1/4" CTB-1201

REPAIR KIT: CTA-2212-RK



FILL VALVE

1/2" x 1/2" MPTSTA502N-60

REPAIR KIT: ST480-22



FILL VALVE

1/2" x 2/4" M ACME CTA-1708-GA

REPAIR KIT: CTA-25H-RK



FILL/VAPOUR VALVE

1/4" MPT closed yolkCTB-1201-CY

REPAIR KIT: CTA-2212-RK



CONTINENTAL WITHDRAWAL VALVE

1/4"CTA-1406-FBW

1/2"CTA-1507-GBW

REPAIR KIT: CTA-25H-RK



SQUIBB TAYLOR WITHDRAWAL VALVE

1/4"STA484 N-45

1/2"STA482 N-60

REPAIR KIT: ST480-22



HOSE SWIVEL, MPT

1"STAL109

1/4"STAL111

1" REPAIR KIT: ST109-0022

1/4" REPAIR KIT: ST111-0022

VALVE REPAIR KITS

	SIZE	PART #
SQUIBB TAYLOR		
STAL309P	¾"	ST308-22
STAL310P, STAL311P, STAL477EP, STA521P, STA522P, STA525P	1"	ST310-22
STAL312P, STAL313P	1½"	ST312-22
STAL315P	1½"	ST314-22
STAL316P, STAL317P, STAL316FP	2"	ST316-22
STAL320P, STAL321P, STAL320FP, STAL321FP	3"	ST320-22
STA330, STA331, STA1525, STA1527 - High Flow	1½"	ST330-22
STA329AL - Y Pattern	1"	ST329-22
STAL343, STAL362 (old style) - Snap Valve	1"	ST343-22
STAL361 (old style) - Snap Valve	1½"	ST344-22
STAL343A, STAL362A (new style) - Snap Valve	1" & 1½"	ST363-20

CONTINENTAL

CTB-1250, CTB-1350, CTB-1650	1"	CTA-2212-RK
CTA-1625, CTA-2525-H	1½"	CTA-25H-RK
CTA-2425-H, CTA-2450-H, CTA-2550-H	1½"	CTA-2550H-RK
CTA-1201	1½"	CTA-2212-RK
CTA-1406-FBW, CTA-1406F, CTA1507-G,		
CTA-1507-GBW, CTA-1708-GA	1½"	CTA-25H-RK
CTA-1809-BFV	1½"	CTA-1809-RK
CTA-2600, CTA-2700	2"	CTA-26-RK

FISHER

FRN301-06, FRN301-08, FRN401-06, FRN401-08	¾" & 1"	FRRN300-08
FRN310-10, FRN310-12, FRN410-10, FRN410-12,	1½" & 1"	FRRN300-12
FRN310-16, FRN410-16	2"	FRRN300-16
FRN310-24	3"	FRRN300-24

MARSHALL

ME825-10, ME825-12,		
ME815-10 ME815-12	1½" & 1"	ME815-10SRK
ME825P-16, ME815P-16	2"	ME815-16SRK

REGO

RGA7505AP, RGA7506AP	¾"	RGA7505-50
RGA7507AP, RGA7508AP	1"	RGA7507-50
RGA7509BP, RGA7510BP	1½"	RGA7509-50
RGA7513AP, RGA7514AP, RGA7515AP, RGA7516AP	2"	RGA7513-50
RGA7517AP, RGA7518AP	3"	RGA7515-50
RGA8016DP, RGA8017DP, RGA8018DP - Fill/WD	1½"	RGA8016B-50



WE'RE CERTIFIED!

- Transport Canada
- National Board of Pressure Vessel Inspectors
- Measurement Canada



ACME FITTINGS & COUPLERS



ADAPTER

1" MNPT x 1 1/4" M ACMESTA2002
 1 1/2" MNPT x 1 1/4" M ACMESTA2003S



1 1/2" MNPT x 2 1/4" M ACMESTA2060S
 1 1/2" MNPT x 2 1/4" M ACMESTA2077

ADAPTER - 2" MNPT x 3 1/4" M ACME
 SquibbSTA2063S
 MarshallME503S-16

ADAPTER - 2" MPT x 2 1/4" M ACME
 1 1/4" Female Threads.....ME502S-16/10



ADAPTER

1 1/4" M ACME x 3 1/4" F ACME.....ME612S
 1 1/4" M ACME x 2 1/4" F ACME.....ME611S



ADAPTER

1 1/4" F ACME x 2 1/4" M ACME.....CTA-586



FILL COUPLING

1 1/4" F ACME x 1" MPT..... STA1151F



FILL COUPLING

2 1/4" F ACME x 1 1/4" MPT..... STA1156FS
 3 1/4" F ACME x 2" MPTSTA1157FS



SPEEDY COUPLER

1 1/4" F ACME x 1" MPT..... STA1131F
 2 1/4" F ACME x 1 1/4" MPT STA1132F
 2 1/4" F ACME x 1 1/2" MPT STA1133F



ADAPTER

1 1/4" M ACME x 1 1/4" M ACME.... STA2005S
 3 1/4" M ACME x 3 1/4" M ACME . STM536-26
 2 1/4" M ACME x 2 1/4" M ACME . STA2007S

NH3 PARTS & ACCESSORIES

ACME CAPS & GASKETS



PARKING PLUG, M ACME

1 1/4"STA2014B
2 1/4" STA2024-5000



PLASTIC CAP, F ACME

1 1/4" CT22-63-FC
2 1/4" STST-1177C



STEEL CAP, F ACME w/CABLE

2 1/4" ME431FS-1C
3 1/4" ME441FS-1C



STEEL CAP, F ACME

1 1/4"STA1152C



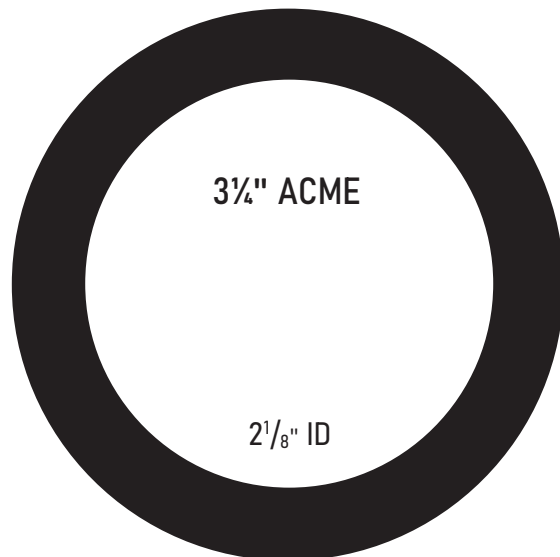
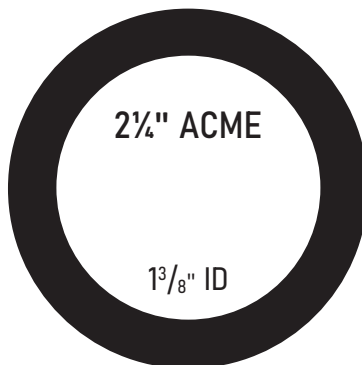
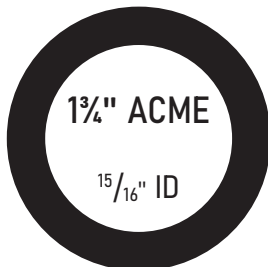
STEEL CAP, F ACME

2 1/4"STA1175CS
3 1/4"STA1176CS

ACME GASKETS

Gasket 1 1/4" ACME..... ST1102A16
Gasket 2 1/4" ACME..... ST1E8126
Gasket 3 1/4" ACME..... ST1E8128

*All gaskets shown are actual size



NH3 PARTS & ACCESSORIES

BLEEDERS & GAUGES



BLEEDER VALVE

1/4" Knurled.....STA1911



BLEEDER VALVE

1/4" T-Handle.....STA1912



BLEEDER VALVE

with Tube 1/4"..... STA1910S



LIQUID LEVEL VALVE

3/4".....MEJ415



DRY GAUGE 0-400

2 1/2" Face.....PGA400



LIQUID GAUGE 0-400

2 1/2" Face.....PGA400L



DRY GAUGE 0-60

4 1/2" Face.....PGA604



LIQUID GAUGE 0-60

4 1/2" Face.....PGA604L



CERTIFIED TEST GAUGES ARE AVAILABLE ON REQUEST. CONTACT US TO PLACE AN ORDER.

RELIEF VALVES



1/4" RELIEF VALVES

250 PSI.....STA1310A
265 PSI.....STA1310B



3/4" RELIEF VALVES

250 PSI.....CTA-402-250
265 PSI.....CTA-402-265



1/4" HYDROSTAT

350 PSI.....CTA-400-C



shown:
MEV200FIR/265

INTERNAL RELIEF VALVES
For use with: NH3, LPG

2" 265 PSI.....MEV200FIR/265
3" 265 PSI.....MEV300FIR/265
2" 250 PSI.....RGA8434G
2" 265 PSI.....RGA8434N
3" 250 PSI.....RGA8436G
3" 265 PSI.....RGA8436N



RELIEF VALVES ARE NOT RETURNABLE

NH3 PARTS & ACCESSORIES

MISCELLANEOUS PARTS



ANGLE VALVE GUARD
1" KTVGV16A0



1½" AND 2" GLOBE VALVE GUARD
SQUIBB, REGO DYVG20320
MARSHALL DYVG32ME0



HF GLOBE VALVE GUARD
1½" and 1½" KTVG24ST0



GLOBE VALVE GUARD
1" KTVG16G0



TOP MOUNT WATER CONTAINER
MIPH76410



SIDE MOUNT WATER CONTAINER
MIPH76411



SAFETY CONTAINER, no gloves
MIPH75649



NEOPRENE GLOVES
NH3 Compatible MI6784R



NON-VENTED GOGGLES
M12237R



CLEAR VINYL HOSE 5/8"
100ft Roll HSCVT10



SPANNER WRENCH
MEP120B



NEW STYLE SPANNER WRENCH
MEP120C



LOCK BOX
2 Hose MILB2
3 Hose MILB3



Angle Needle Valve ¼" ...MIN1572
Hosebarbs:
3/8" Hose x ¼" MPT CTA-1132
½" Hose x ¼" MPT CTA-1138



Straight Needle Valve ¼" ..MIN1532
Hosebarbs:
3/8" Hose x ¼" MPT CTA-1132
½" Hose x ¼" MPT CTA-1138



CABLE SHUTOFF
2 Compartment BIOP9112EY
1 Compartment BIOP9002EY

MISCELLANEOUS PARTS



FLOW INDICATOR ASSEMBLY

- 2"ST5520-2
- Flapper Only 2"ST5520-2F
- 2½"ST5520-2 112
- Flapper Only 3"ST5520-3F
- 3"ST5520-3



MASTER FLOAT GAUGE ASSEMBLY

- Call with tank diameter to determine Part #
- GasketsST130040



FLOW INDICATOR DIAL ONLY
ST5520R



NEW STYLE MOUNT



OLD STYLE MOUNT

STORAGE TANK DIAL

New Style

- Storage Tank Dial 10"ST4607

Old Style

- Storage Tank Dial 10"ST130035

For DECALS, turn to pages 40 & 41





8100 NH3 DELIVERY UNIT

DELIVERY

- 1½" S.S. Braid NH3 delivery hose
- 22HP Honda Gas Engine for self-contained power
- Pulley and belt drive system with electric clutch
- 3" 300# flanged ISC valve outlet to pump
- All steel piping with welded flanged connections where possible
- 3" High Flow Meter w/Register, rated to 200GPM

- 3" Blackmer TLGLD3F high flow pump
- Portable fuel tank
- BASE Emergency shut-off
- 3" High Flow Meter w/Register, rated to 200GPM (757 L/min.) (Mass Flow meter option also available)

TANK

NH3 NQT Tank with a capacity of 8100 USWG

MAWP: 265 PSI **X-ray:** per ASME Code

PWHT: Yes **Heads:** 2:1 Elliptical

Material: Shells: SA-516-70/Heads: SA-516-70
Stainless Steel ribs

Dimensions: 74" inside diameter tank for low centre of gravity
39' length for maximum capacity, yet practical
for field delivery

STANDARD FEATURES

- Made in Canada to Transport Canada Specifications
- 3" Base Mount Pump with Delivery Rates at well over 100 GPM
- Completely Self-Contained Gas Engine & Electric Clutch Drive
- 3" Meter for High Speed Delivery
- 2" Mass Flow Meter also available
- 74" Diameter for Low Centre of Gravity



8100 NH3 DELIVERY UNIT PARTS



3" INTERNAL RELIEF, 265 PSI
MEV300FIR/265 (MARSHALL)
RGA8436N (REGO)



74" ID, FLOAT GAUGE
ME930-74



4" REPLACEMENT DIAL
GLOW IN THE DARK
ME930-905



3" MNPT X FLANGE
BACK CHECK VALVE
ME873SBN-24



ROTARY ACTUATOR 2" & 3"
MARSHALL, FISHER ISC
ME226



PNEUMATIC ISC ACTUATOR
ME206



2" ISC VALVE X 300# FLANGE
ME991AR-16-110



2" ANGLE VALVE FLANGE X FLANGE
ME823-16



2" GLOBE VALVE X 4 BOLT FLANGE
ME819-16



1" GLOBE VALVE
STAL310P



0-400 LIQUID GAUGE
PGA400L



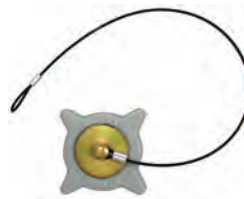
1/4" NEEDLE VALVE
MIN1572



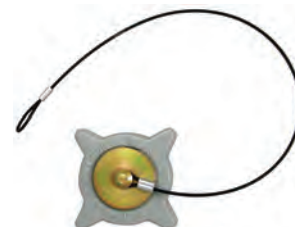
1/4" NH3 HYDROSTAT, 350 PSI
CTA-400-C



2" BALL VALVE
BVSS323



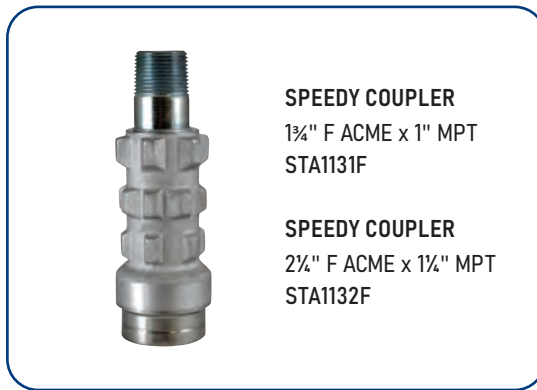
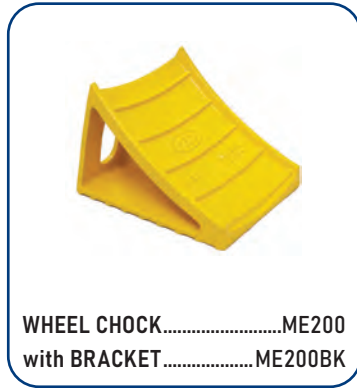
3/2" STEEL CAP, F ACME, W/CABLE
ME441FS-1C



2 1/2" STEEL CAP, F ACME, W/CABLE
ME431FS-1C

NH3 DELIVERY

8100 NH3 DELIVERY UNIT PARTS



8100 NH3 DELIVERY UNIT PUMP & ISC

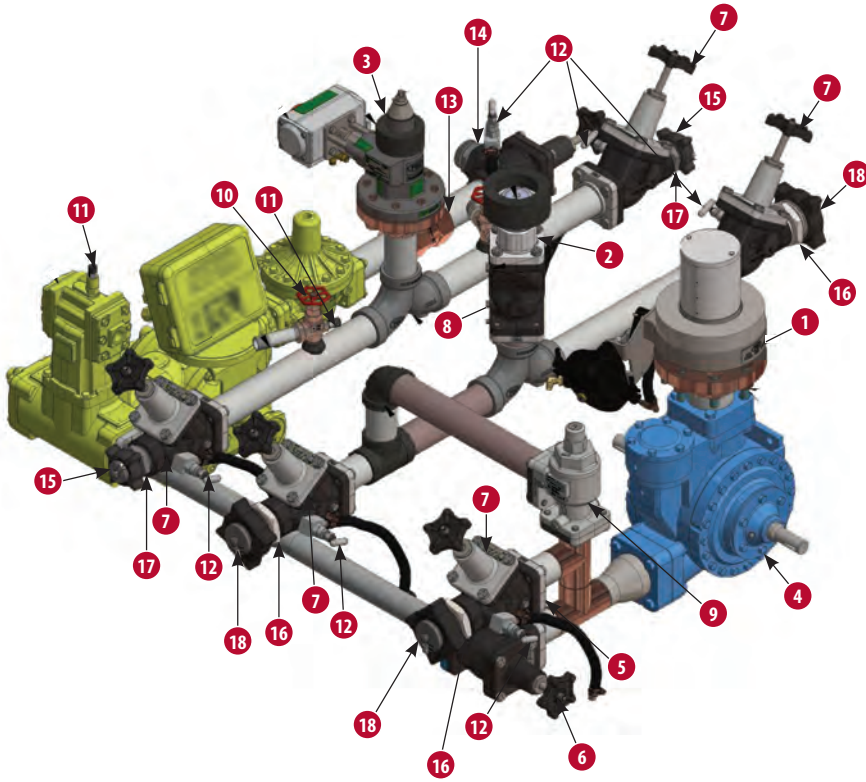


MAINTENANCE KIT: BK898981
LINER: BK185111



REPAIR KIT: ME990-24-VRK
ISC D.F. 3" w/Rotary Actuator

8100 NH3 DELIVERY UNIT PIPING SYSTEM



REF	PART	DESCRIPTION
1	ME990A-3F-400	3" ISC Valve-Flanged
2	ME873SBN-24	Back Check Valve, 3" FPT X 3" MPT
3	ME991AR-16	Valve ISC, 2" NPT X 2" Flange with pneumatic actuator
4	BKLGLD3F	3" Pump
5	ME841-16F	2" Socket Weld BYP Valve Flanged
6	ME813-16	2" Angle Valve
7	ME819-16	Globe Valve, 2" Flange X FPT
8	ME823-16	Globe Valve, 2" with 1/4" FPT
9	ME841-16-125	2" Bypass Valve
10	STAL409EP	Angle Valve, 3/4" FNPT X 3/4" MNPT
11	CTA-400-C	3/4" Hydro Relief Valve
12	M1N1572	3/4" Angle Needle Valve
13	RGA1519B4	2" Excess Flow Valve
14	STA2001	Adapter 3/4" MNPT X 1 1/2" ACME
15	ME431FS-1C	2 1/4" ACME Cap with Cable
16	ME503-16	Adapter 2" MNPT X 3 1/2" ACME
17	ME502S-16/10	Adapter 2 1/2" M ACME X 2" MPT
18	ME441FS-1C	3 1/4" ACME Cap with Cable



BASE SHUTDOWN REMOTE
BEASK300TX



BASE RECEIVER
BEASK300AQRX



PRINTER
MITMU295



PRINTER POWER SUPPLY
MITMU295PS



ANTENNA
BEANT1200



15' CABLE ANTENNA
BECOAXT-15



ALUMINUM PRINTER BOX
MI261516A

NH3 FLOAT GAUGES - DELIVERY UNITS

Marshall Trans-Max Float Gauge

Designed to replace rotary style gauges in tanks with fluid capacities greater than 2300 gallons. Suitable for use in bobtail, transport and bulk storage applications. Mounts to all standard 1" NPT tank coupling adapters and is suitable for NH3 or LPG. Custom lengths available upon request.



Installation Tool

With Glow Dial.....ME930WG
Installation Tool*.....MEP930WG

*Tool is required for installation.
Available in a variety of different lengths. Must specify tank diameter.

Accu-Max Float Gauge

Measure liquid levels within horizontal DOT and Stationary ASME Tanks with fluid capacities above 2300 gallons. Suitable for use in bobtail, transport, railcar and bulk storage applications.



With Glow Dial.....ME930

Available in a variety of different lengths. Must specify tank diameter.

REPLACEMENT DIALS & FLOAT GAUGE GASKETS



JUNIOR HEAD DIAL
RC5-40



SENIOR HEAD DIAL
RC5-2



DROP-IN DIAL 2208CV
ST130018



JUNIOR FLOAT GAUGE BOLT
MIFGBJR
SENIOR FLOAT GAUGE BOLT
MIFGBSR



ST130128

1⁵/₁₆" ID

FLOAT GAUGE GASKET

Junior Gasket
ST130128

Shown actual size.



ST130129

1⁹/₁₆" ID

FLOAT GAUGE GASKET

Senior Gasket
ST130129

Shown actual size.



When it comes to ammonia, we've got everything you need!
From small parts to large equipment to full plants, we sell,
inspect and service it all.

OFF TRUCK EMERGENCY SHUTDOWNS

BASE ASKW Series Remote Shutdown

Developed specifically for delivery truck applications requiring intrinsically safe, explosion-proof handhelds. Systems can be specified for all internal valves and any type of truck engine.

Remote Shutdown System with Query (for Air ISC)



BEASKWD200AQ

Remote Shutdown System with Query (for Cable ISC)



BEASK200Q-ECS



TRANSMITTERS & ACCESSORIES

- A** 2 Function Transmitter
Query, Emergency Stop..... BEASK200TX
- B** 3 Function Transmitter
PTO, Query, Emergency StopBEASK300TX
- C** 4 Function Transmitter
PTO, Throttle, Query, Emergency Stop.....BEASK400TX
- D** Leather Case for ASK/RVC Style Transmitter..... BECAS1000
- E** Base Receiver..... BEASK300AQRX



shown:
BEANT1000

ANTENNAS & COAX CABLES

- Replacement Antenna for ASK/RVC Systems BEANT1000
- Coaxial Cable 15 ft.BECOAXT-15
- Coaxial Cable 30 ft.BECOAXT-30

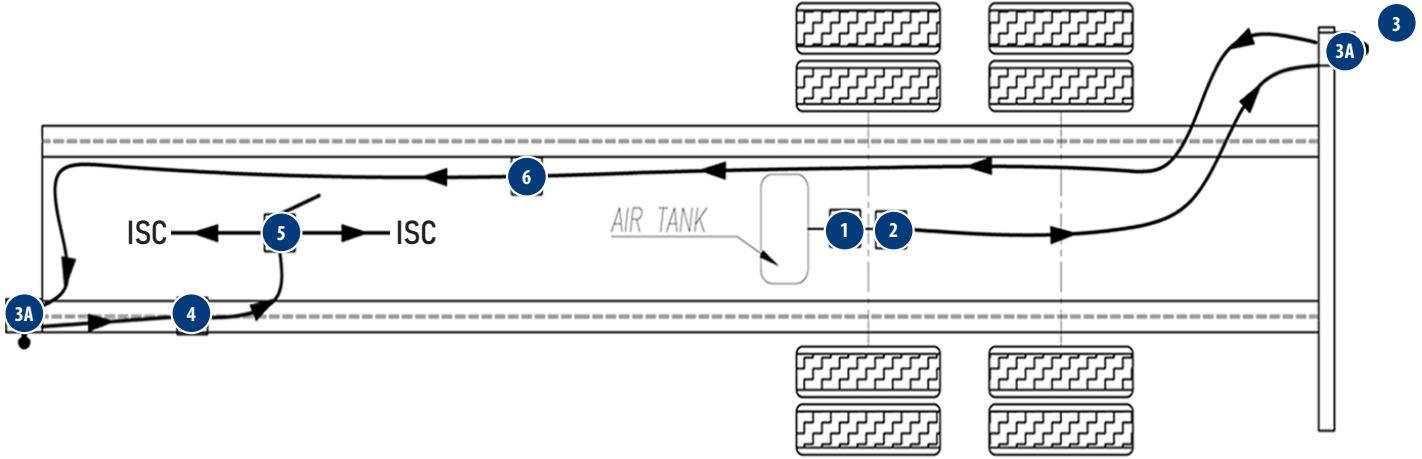


SQUIBB RSD REMOTE

- Handheld RSD Transmitter - 2 Function STRSD-T2
- Receiver Module RSD Shutdown..... STRSD-R2H

NH3 DELIVERY

TDU AIR SHUTDOWN SYSTEM



1
PRESSURE PROTECTION
VALVE, 85 PSI
HDKN90555397



2
REGULATOR PRE-SET 50 PSI
PRIMARY PRESSURE 125 PSI
MI111-3002-2P



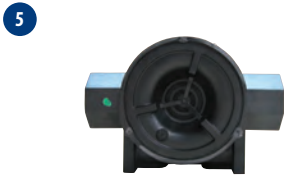
3
SHUTOFF/DUMP VALVE
HDKN20001



3A
SHUTOFF VALVE BRACKET
DYESOSB



4
AIR VALVE PROTECTION 150 PSI
BEAIR1000



5
QUICK RELEASE AIR VALVE
HDKN32005



6
BLUE NYLON DOT HOSE
1/4" 100 FT. ROLL
HS1J-223-07



AIR ELBOW

- 1/4" x 1/8" MPT DOTMID6520-04-02
- 1/4" x 1/4" MPT DOT MID6520-04-04
- 1/4" x 3/8" MPT DOTMID6520-04-06



AIR UNION
1/4" x 1/4" DOT
MID6580-04-00



AIR TEE
1/4" x 1/4" x 1/4" DOT
MID6540-04-00



BACK MOUNT AIR GAUGE
0-160 PSI
MIPEM11421



AIR ACTUATOR
fits REGO 2" ISC
RGA3212RA



AIR ACTUATOR
fits 2" Marshall & Fisher ISC
ME226

TRUCK ACCESSORIES



WHEEL CHOCK BRACKET

Wheel Chock Bracket c/w chocks.....	ME200BK
Replacement Wheel Chock.....	ME200
Wheel Chock Bracket only.....	ME200B



HOSE END VALVE HOLSTER
MEP801



UNIVERSAL SPRING LOADED
UTILITY BRACKET
MEP082

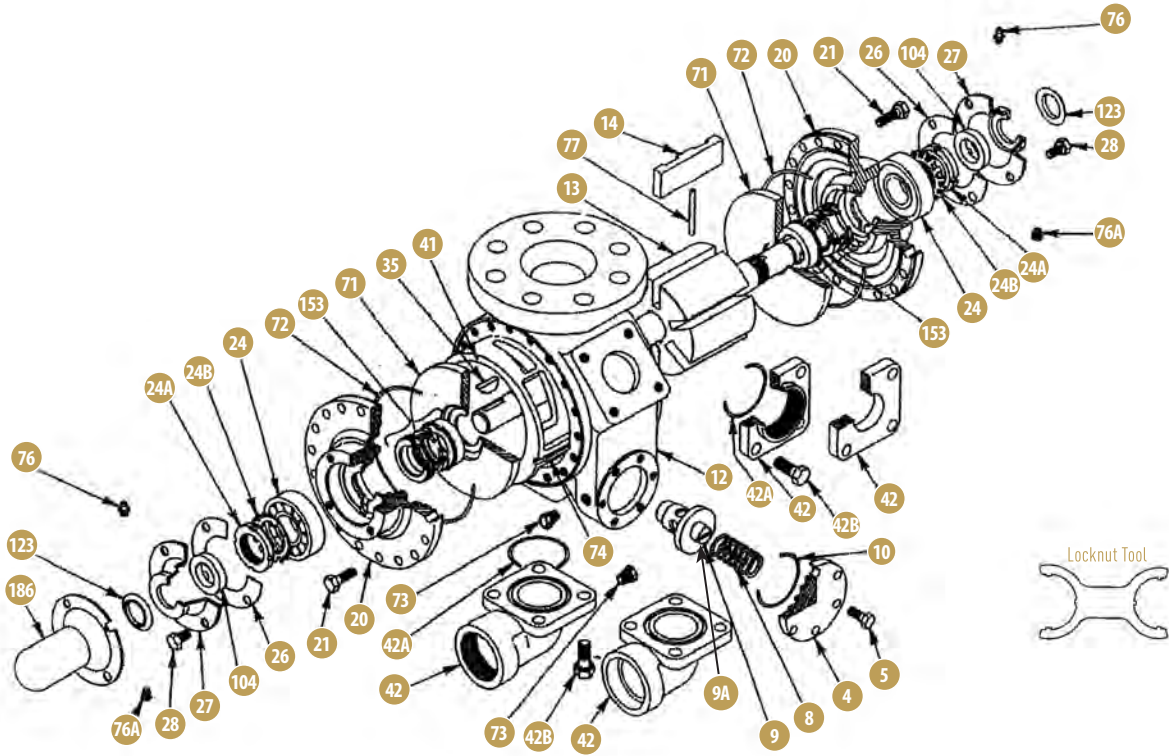


BACK-UP ALARM (12V)
MI73030EA



NH3 PUMPS & METERS

BLACKMER TLGLF3C PUMP

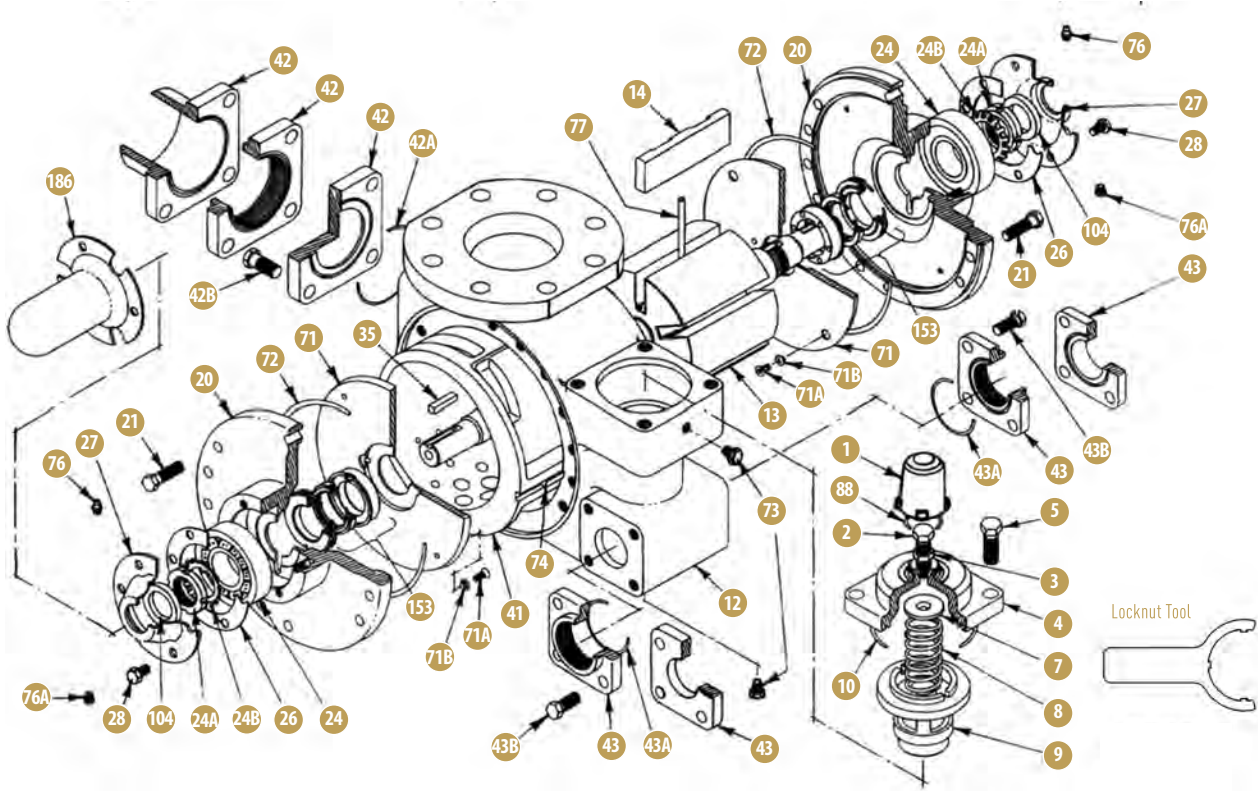


REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY
4	BK415108	Cover-Relief Valve - R/V	1	26	BK383940*	Gasket Bearing Cover	2	72	BK711923*	O-Ring - Head	2
5	BK920331	Capscrew - R/V Cover	6	27	BK041431	Bearing Cover	2	73	BK908198	Gauge Plug	2
8	BK471428	Spring - R/V	1	28	BK920285	Capscrews Bearing Cover	8	74	BK185193	Key - Liner	1
9	BK451417	Valve - R/V	1	35	BK909130*	Key-Shaft	1	76	BK317815	Grease Fitting	2
9A	BK455100	Relief Valve (Nickel Plated)	1	41	BK185101	Liner	1	76A	BK701992	Grease Relief Fitting	2
10	BK701919	O-Ring R/V Cover	1	42	BK652010	Flange 2" NPT	1-2	77	BK121607*	Push Rod	3
12	BK015128	Casing	1	42	BK652024	Flange Welded	1-2	104	BK331918*	Seal Grease	2
13	BK265147	Rotor and Shaft	1	42	BK655100	Flanged Elbow - 2" NPT	1-2	123	BK701480*	Dirt Shield	2
14	BK095132*	Vane - Duravane	6	42	BK655109	Flanged Elbow - 2" Weld	1-2	186	BK341601	Shaft Protector	1
20	BK035132	Head	2	42	BK652036	Blank Flange - Aux Inlet	1-2	---	BK903091	Tool - Locknut	--
21	BK920351	Capscrews - Head	36	42A	BK702004*	O-Ring Flange (Current)	2	153	BK334439*	Mechanical Seal	2
24	BK903156*	Ball Bearing	2	42A	BK701919*	O-Ring Flange (Older Pumps)	2		BK898980	MAINTENANCE KIT	
24A	BK903521	Locknut - Bearing	2	42B	BK920491	Capscrew Flanges	8				
24B	BK903522*	Lockwasher - Bearing	2	71	BK065121*	Disc	2				

* Items included in Maintenance Kit

NH3 PUMPS & METERS

BLACKMER TLGF4B PUMP

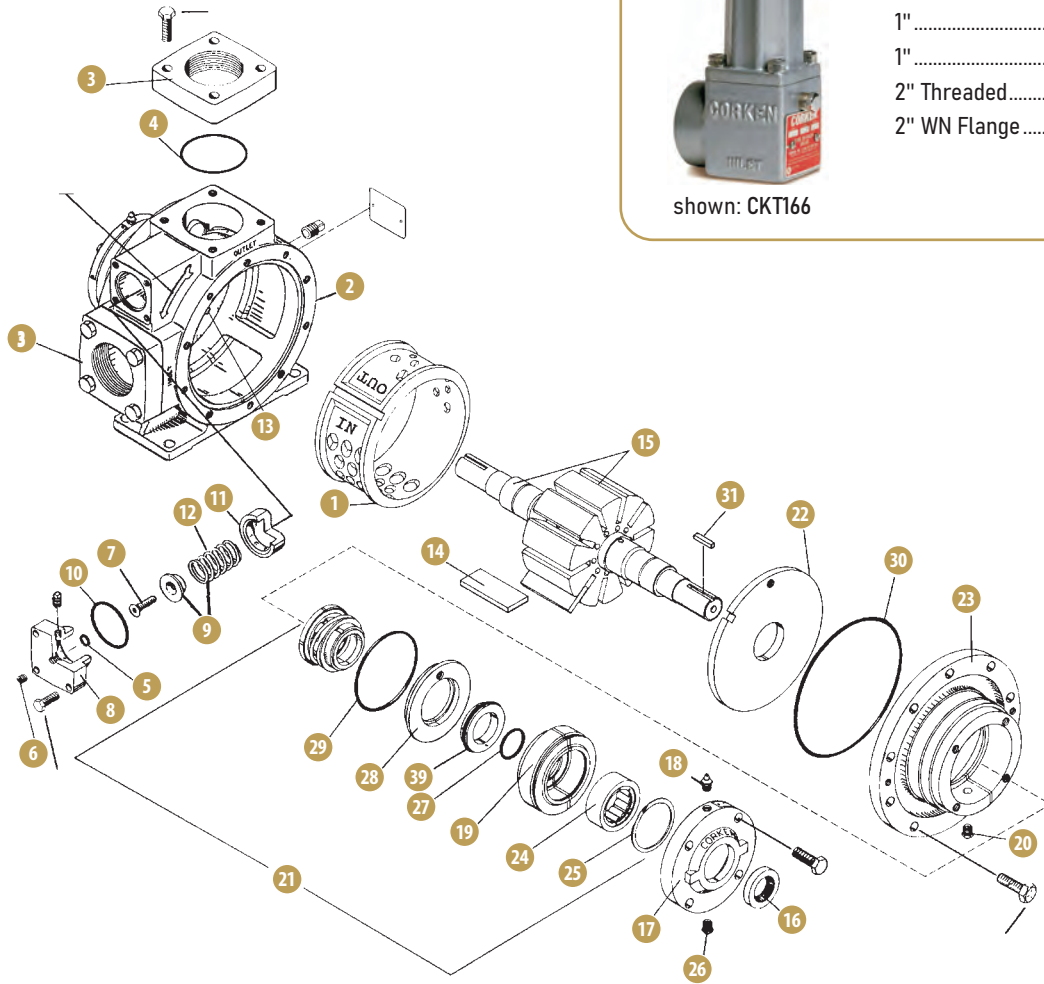


REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY
1	BK413957	Cap-Relief Valve - R/V	1	AUXILIARY INLET OPTIONS				74	² BK182040	Key - Liner	1
2	BK436310	Adjusting Screw - R/V	1	42	BK652012	Flange 3" NPT	1	76	BK317815	Grease Fitting	2
3	BK432039	Locknut/Adjusting Screw	1		BK652005	Flange 4" Weld		76A	BK701992	Grease Relief Valve	2
4	BK412001	Cover - R/V	1		BK652007	Flange 3" Weld		77	¹ BK122009	Push Rod - Composite	3
5	BK920663	Capscrews - R/V Cover	4		BK652000	Flange Blank		88	¹ BK701926	O-Ring - R/V Cap	1
7	BK426355	Spring Guide - R/V	1	42A	BK701937	O-Ring Aux. Inlet Flanges	1	104	¹ BK331908	Grease Seal	2
8	BK472039	Spring - R/V	1	42B	BK920663	Capscrew 3" NPT Flange	4	153	BK332050	Mechanical Seal Assembly	2
9	BK452001	Valve - R/V	1		BK920640	Capscrew 3", 4" Weld Flange; Blank Flange		186	BK341801	Shaft, Protector	1
10	¹ BK701946	O-Ring - R/V Cover	1	TWIN DISCHARGE PORT OPTIONS					BK903092	Tool - Locknut	
12	BK012041	Casing	1	43	BK652010	Flange 2" NPT	2		BK898922	Kit - Maintenance	
13	² BK262041	Rotor & Shaft Assy. includes 24A & 24B	1		BK652024	Flange 2" Weld			BK899022	Kit - Rebuild	
14	¹ BK092019	Vane - Duravane (Std.)	6	43A	¹ BK702004	O-Ring 2" Discharge Flanges	2	¹ Included in Maintenance Kit and Rebuild Kit			
20	BK032041	Head	2	43B	BK920491	Capscrew Discharge Flanges	8	² Included in Rebuild Kit			
21	BK920532	Capscrews - Head	28	71	¹ BK062039	Disc	2				
24	¹ BK903166	Ball Bearing	24	71A	² BK920015	Machine Screw - Disc	8				
24A	² BK903541	Locknut - Bearing	2	71B	² BK909634	Lockwasher - Machine Screw	8				
24B	¹ BK903542	Lockwasher - Bearing	2	72	¹ BK702039	O-RING - HEAD	2				
26	¹ BK385125	Gasket - Bearing Cover	2	73	BK908198	Gage Plug	2				
27	BK041815	Bearing Cover	2								
28	BK920286	Capscrews - Bearing Cover	12								
35	¹ BK909183	Key - Shaft	1								
41	² BK182000	Liner	1								



NH3 PUMPS & METERS

CORKEN 1021 & 1022 PUMPS



shown: CKT166

CORKEN BYPASS VALVES

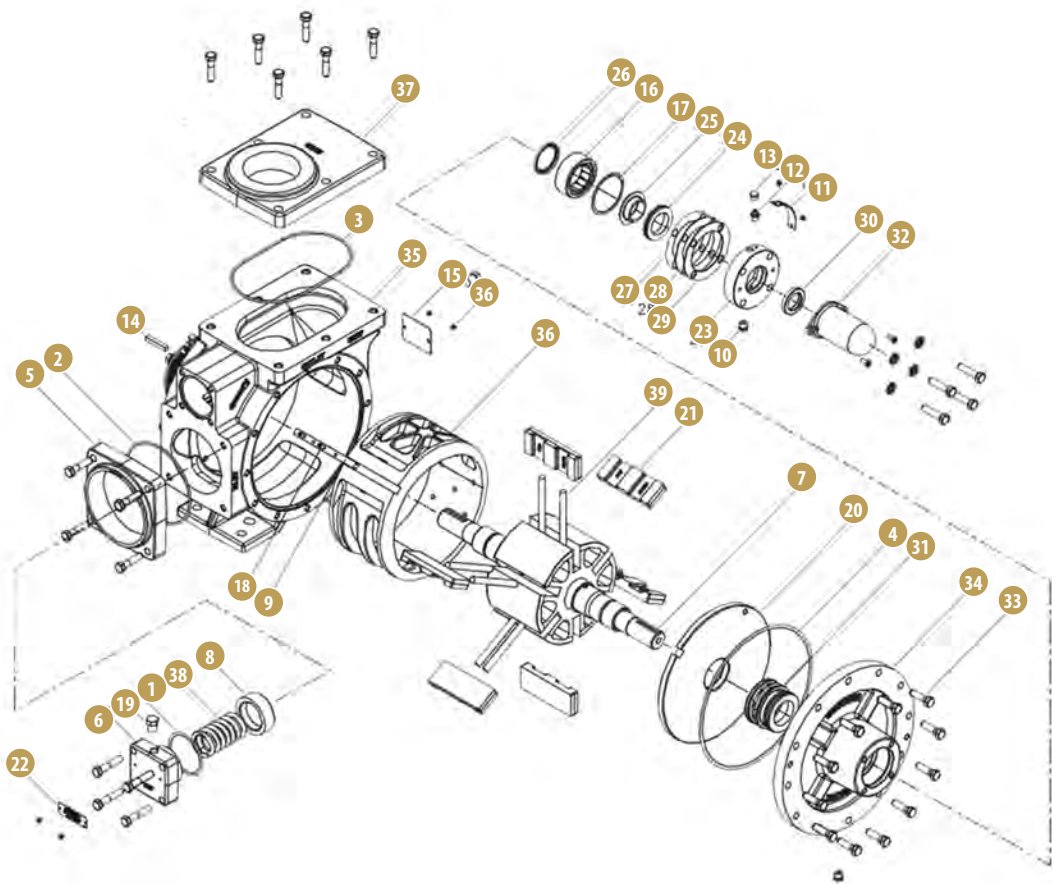
CORKEN BYPASS VALVES

1"	CK1787-XA
1"	CKT166
2" Threaded	CKZV200
2" WN Flange	CKZV200BAFF

REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY
1	CK1201-2	Cam	1	14	CK1308-9*	Vane	10	27	CK2-128A	Shaft O-Ring	2
2	CK2841	Case	1	15	CK1208-1X1R	Rotor and Shaft	1	28	CK1882	Seat Adapter Plate	2
3	CK1206-3	Flange	2	16	CK1358*	Seal - Grease	2	29	CK2-240A	Adapter Plate O-Ring	2
4	CK2-245A*	O-Ring Flange	2	17	CK1164-1	Bearing Cap	2	30	CK2-268A*	O-Ring Casing	2
5	CK2-112A*	Adjusting Screw O-Ring	1	18	CK2158	Grease Zerk 1/8"	2	31	CK2270	Key 1/8"	2
6	CK2590	Flush Seal Plug 1/8"	1	19	CK1769	Housing Bearing	2	39	CK2-227A	Seal Seat O-Ring	2
7	C2252	Relief Valve Adjusting Screw	1	20	CK1343	Fitting Relief	2		CK2906-X2	REPAIR KIT	
8	CK1207	Valve Cap	1	21	CK1769-XRA*	Seal Mechanical	2	*Items included in Repair Kit			
9	CK1227	Relief Valve Spring and Guide	1	22	CK1209-1*	Sideplate	2				
10	CK2-228A*	Relief Valve Cap O-Ring	1	23	CK1205-4	Head	2				
11	CK1224	Relief Valve	1	24	CK2754-X*	Bearing Assy - Complete	2				
12	CK1226	Relief Valve	1	25	CK2760-244	Retainer Ring	2				
13	CK1309	Cam Key	1	26	CK1343	Fitting Relief	2				

NH3 PUMPS & METERS

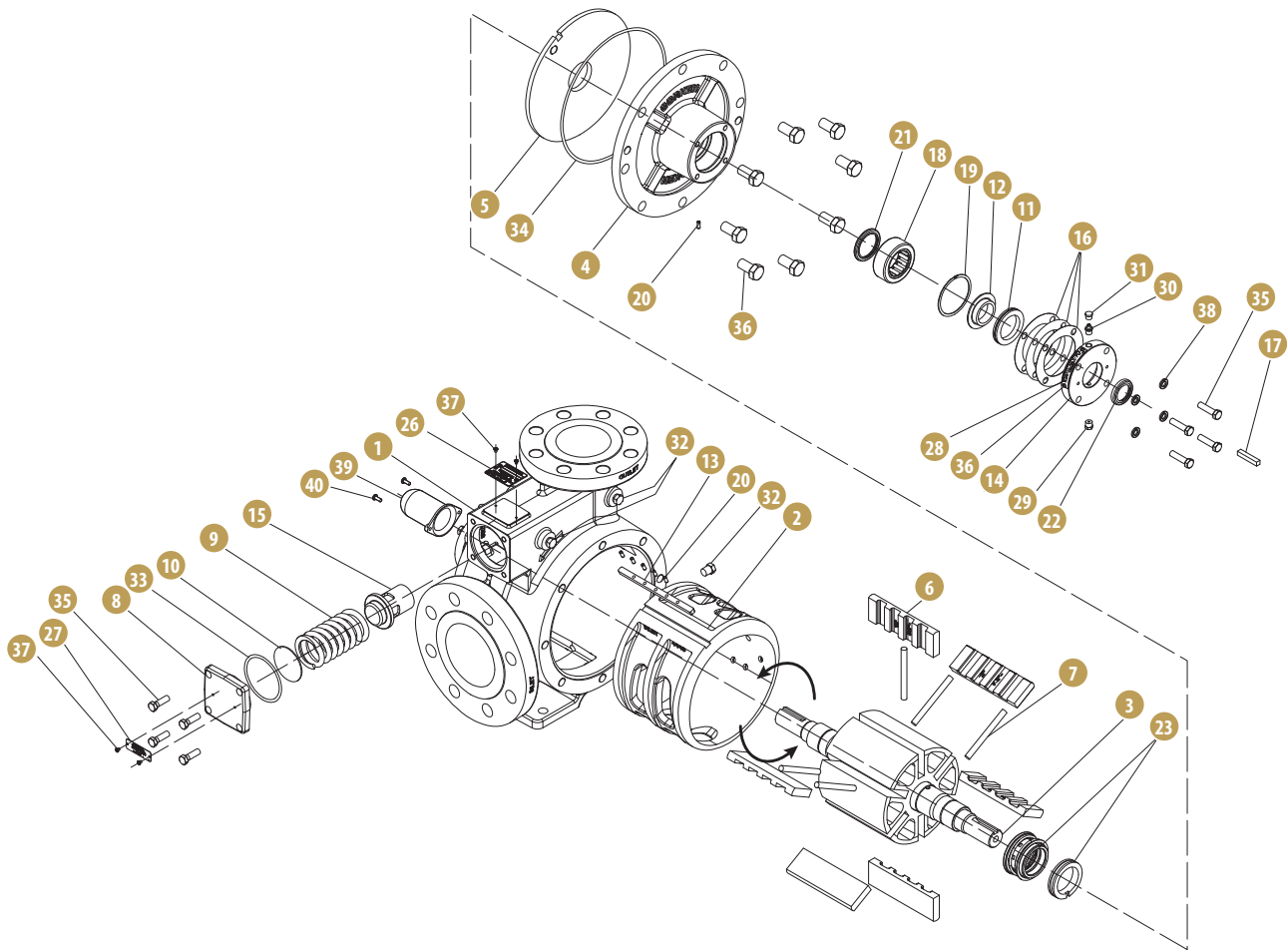
CORKEN Z3500 PUMP



REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY
1	CK2-228*	O-Ring	1	17	CK2760-244	Retainer Ring	2	33	CK7001	Hex Head Bolt	24
2	CK2-245	O-Ring	1	18	CK3253	Cam Key Pin	2	34	CK5534	Head	2
3	CK2-259	O-Ring	1	19	CK3442	Pipe Plug 1/2" NPT	2	35	CK5537	Case	1
4	CK2-268	O-Ring	2	20	CK3935	Sideplate	2	36	CK5539	Cam	1
5	CK1206-4	Inlet Flange - 3" MNPT	1	21	CK3936*	Vane	6	37	CK5538	Outlet Flange	1
6	CK1207-2	Relief Valve Cap	1	22	CK4248	Relief Warning Tag	1	38	CK5548	Spring	1
7	CK1208-1X6R	Rotor Shaft Assembly	1	23	CK4417	Bearing Cap	2	39	CK5554-X*	Vane Driver	6
8	CK1224	Relief Valve	1	24	CK4432*	Thrust Bearing Assembly	2		CK3195-X2	REPAIR KIT	
9	CK1309	Cam Key	1	25	CK4435*	Thrust Bearing Mount Ring	2	*Items included in repair kit			
10	CK1343	Grease Relief Fitting	4	26	CK4438	Grease Seal	2				
11	CK1359	Lubrication Plate	2	27	CK4439*	Bearing Cap Shim .002"	2				
12	CK2158	Grease Zerk	2	28	CK4439-1*	Bearing Cap Shim .010"	2				
13	CK2159	Lubricap	2	29	CK4439-2*	Bearing Cap Shim .020"	2				
14	CK2270*	Shaft Key 1/4"	1	30	CK4441*	Grease Seal	2				
15	CK2649	Name Plate	1	31	CK4431-X2	Mechanical Seal	2				
16	CK2754*	Outer Bearing	2	32	CK4985	Coro-Vane Shaft Cover	1				

NH3 PUMPS & METERS

CORKEN Z4500 PUMP

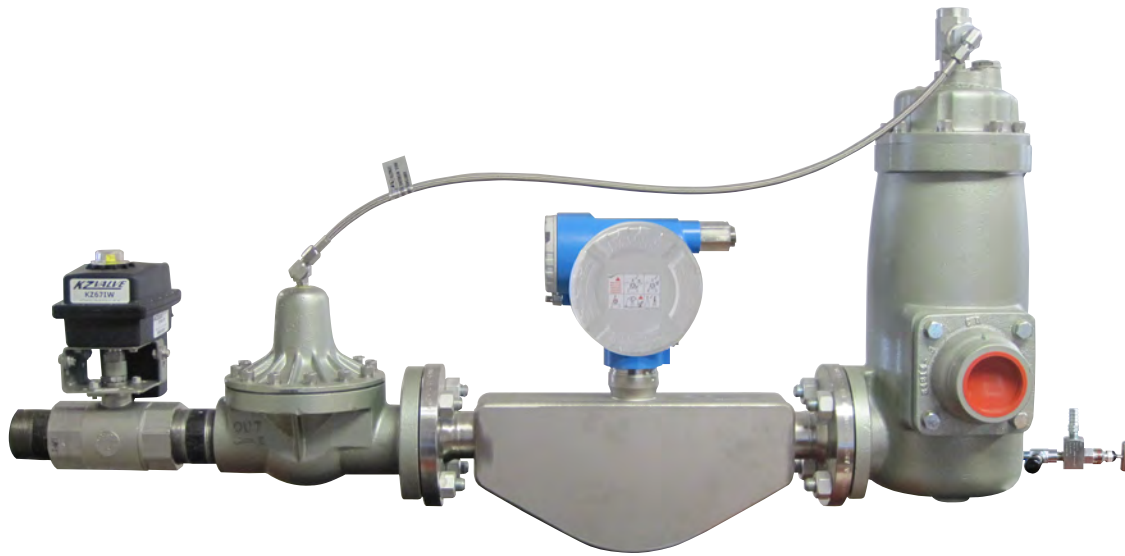


REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY
1	CK5522	Case	1	16	CK4458	Bearing Cap Shim (.002) red		30	CK2158	1/8" MPT Grease Zerk	2
2	CK4443	Cam	1	16	CK4458-1	Bearing Cap Shim (.010) brown		31	CK2159	Lubricap	2
3	CK4444-X2R	Rotor-shaft assembly	1	16	CK4458-2	Bearing Cap Shim (.020) yellow		32	CK3442	1/4 NPT Pipe Plug	2
4	CK4445	Head	2	17	CK4459	Shaft Key - 5/16" x 1 1/4"	1	33	CK2-234_b	O-Ring - Relief Valve	1
5	CK4446	Sideplate	2	18	CK4460-X	Roller Bearing	2	34	CK2-270_b	O-Ring - Case	2
6	CK4448 ^c	Vane	6	19	CK2760-283	Retainer Ring	2	35	CK7001-037NC150A	Bolt - Hexagon Head	16
7	CK4449-X	Vane Driver	5	20	CK3253	Cam Key Pin	5	36	CK7001-062NC125A	Bolt - Hexagon Head	16
8	CK4450	Relief Valve Cap	1	21	CK4462	Grease Seal	2	37	CK7012-006SF109E	Screw	8
9	CK4451	Relief Valve Spring	1	22	CK4463	Grease Seal	2	38	CK7206-037A	Lockwasher	8
10	CK4452	Shim	1			Mechanical Seal Assembly		39	CK4985	Shaft Cover	1
11	CK4453	Thrust Bearing Assembly	2	23	CK4464-X_2 ^b	Cast Iron	2	40	CK7012-010SF050E	Screw	2
12	CK4454	Bearing Race Mounting Ring	2			Mechanical Seal Assembly					
13	CK4455	Cam Key	1	23	CK4464-X_6 ^b	Silicon Carbide	2				
14	CK4456	Bearing Cap	2	26	CK2649	Nameplate	1				
15	CK4457	Relief Valve	1	27	CK4248	Relief Valve Nameplate	1				
				28	CK1359	Lubrication Instr. Plate	2				
				29	CK1343	1/8 NPT Relief Fitting	2				

NH3 PUMPS & METERS

DYTERRA NH3 MASS FLOW PACKAGE

Our NH3 Mass Flow Package is approved for flows up to 680 litres per minute. The meter has no moving parts to wear out, ensuring long life and maintenance-free service. This system also has the advantage of delivering and registering kilograms.



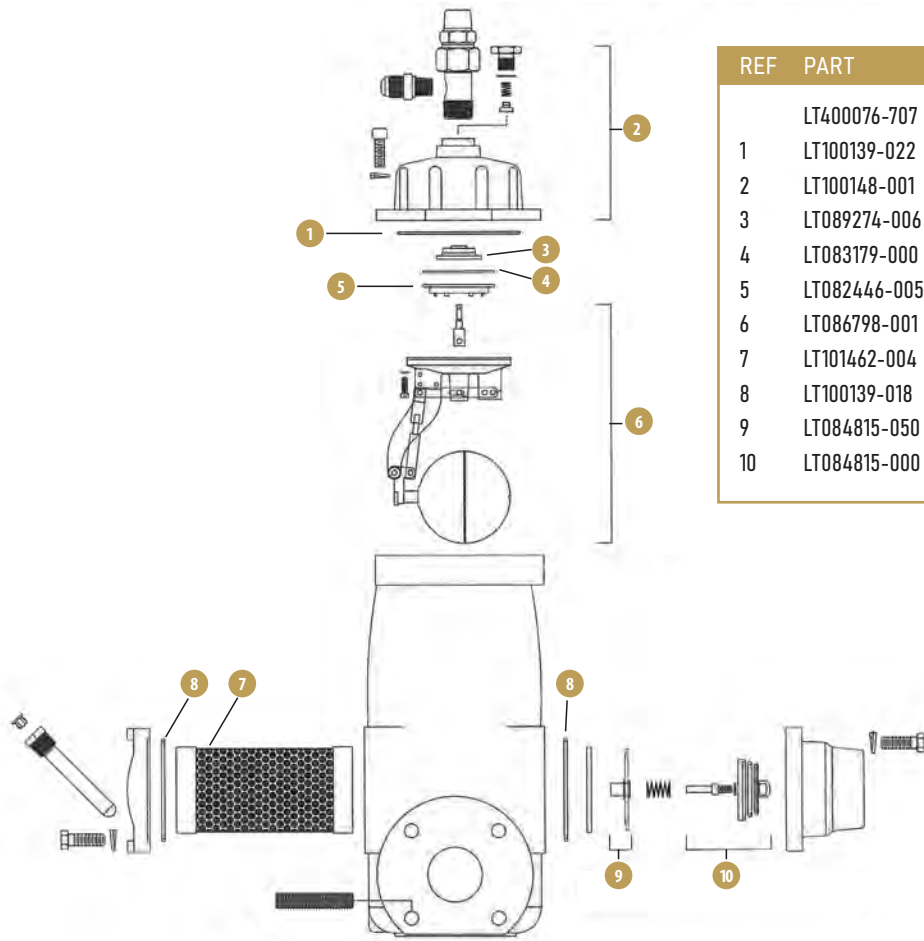
MA7 METER PARTS

Actuated Valve 2" SS VE	KZ671W
Differential Valve 2" 150# Flange, NH3	LT400070-705
Mass Flow Meter 1½" c/w 2" Flanges....	MI8FE40-A999AANAB1WN
Hose, SS ¼" x 29"	HSTF04-29
Vapour Eliminator 150# Flange, NH3	LT400076-707
Elbow ¼" MPT x ¼" M JIC (Qty. 2)	MI1596-04-04
Nut, 2h Heavy 5/8" (Qty. 8)	MI2H10
300# Gasket 2" (Qty. 2).....	MIG32300
Street Tee ¼"	MIC3759-4
Hydrostat ¼"	CTA-400-C
Hosebarb ½"	CTA-1138
Needle Valve ¼"	MIN1572

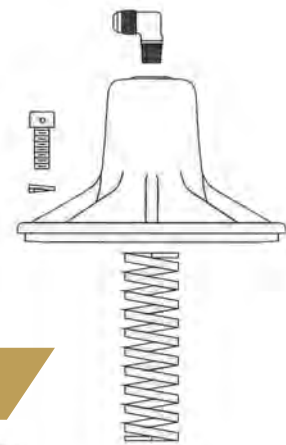
OPTIONAL EQUIPMENT

Slip-Ticket Printer	MITMU295
Power Supply Printer.....	MITMU295PS
Foam Insert for TMU295 Printer	MI525501FM
Weatherproof Aluminum Printer Box	MI261516A

VAPOUR ELIMINATOR PARTS BREAKDOWN

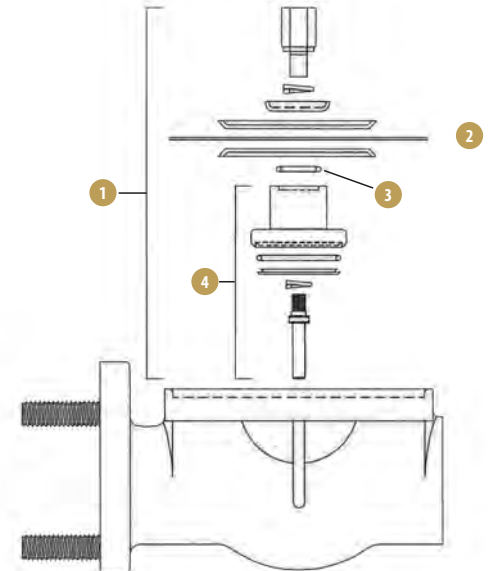


REF	PART	DESCRIPTION
	LT400076-707	Vapour Eliminator, Complete, 2" x 150lb Flange
1	LT100139-022	O-Ring - Vapour Release Cover
2	LT100148-001	Vapour Release Cover Assembly
3	LT089274-006	Main Valve
4	LT083179-000	Piston Seal
5	LT082446-005	Sleeve
6	LT086798-001	Lower Valve Housing Assembly
7	LT101462-004	84 Mesh Strainer (Standard)
8	LT100139-018	Gasket, O-Ring, Strainer Cover
9	LT084815-050	Inlet Check Valve Bearing Support Assembly
10	LT084815-000	Inlet Check Valve Disk Assembly



DIFFERENTIAL VALVE PARTS BREAKDOWN

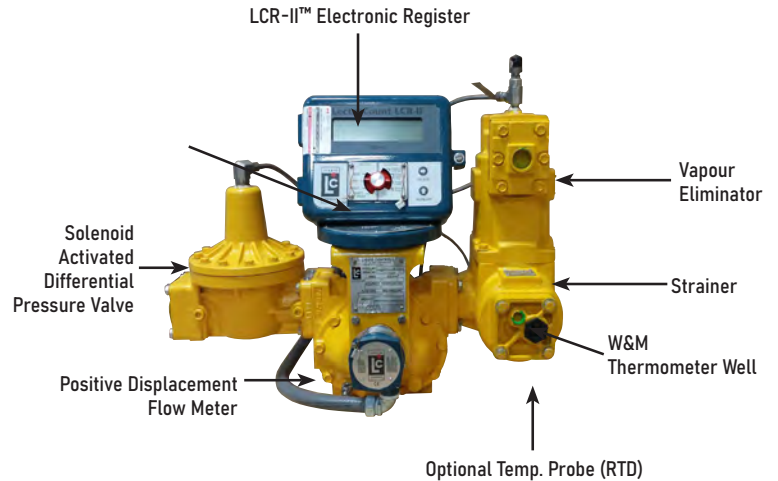
REF	PART	DESCRIPTION
	LT400070-705	Differential Valve, Complete, 2" 150lb Flange
1	LT083947-010	Diaphragm Assembly, Complete, Soft-seat
2	LT083771-003	Molded Diaphragm
3	LT100139-001	Differential Valve O-Ring
4	LT083927-010	Valve Stem Assembly, Soft-seat



NH3 PUMPS & METERS

LC METERS

Liquid Controls meters are positive displacement meters, designed for liquid measurement in both custody transfer and process control applications. They can be installed in pump or gravity flow systems. Because of their simple design, they are easy to maintain and easy to adapt to a variety of systems. LC Meters are available for order with or without temperature compensation.



CERTIFIED MA7 METERS

NH3 Meter 2", LCR II No Temp. Compensation	LCMA7NH3-NTC
NH3 Meter 2", LCR II with Temp. Compensation	LCMA7NH3-WTC
LPG Meter 2", LCR II with Temp. Compensation w/LCR2	LCMA7CLI0

CERTIFIED MA15 METERS

NH3 Meter 3", LCR II No Temp. Compensation	LCMA15NH3-NTC
NH3 Meter 3", LCR II with Temp. Compensation	LCMA15NH3-WTC

LC PACKING GLANDS

NH3	
Fork Style (New)	LC49588
Blade Style (Pre-'91)	LC49541
LPG	
Fork Style (New)	LC49561
Blade Style (Pre-'91)	LC49567

MA7 METER PARTS

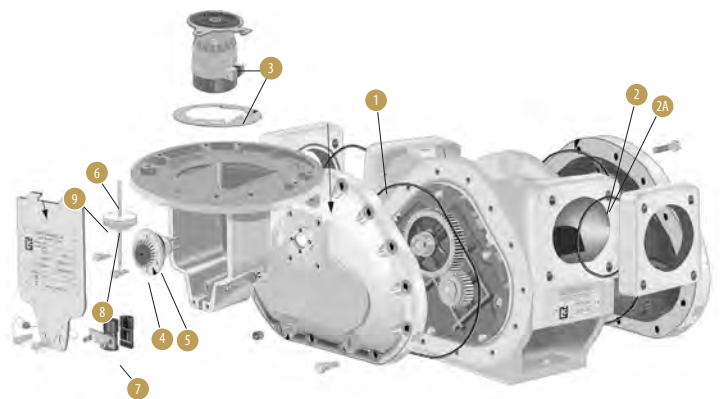
Front/Rear Cover MA7 Meter O-Ring	1.....	LC06850
Round MA7 Meter O-Ring	2.....	LC06854
Square MA7 Meter O-Ring Flanges	2A.....	LC40430
Adjuster Assembly	3.....	LC49403
See LC Packing Glands (above)	4.....	
Packing Gland O-Ring	5.....	LC06856
Old Style Shaft Adjuster	6.....	LC48287-1
Drive Shaft Bushing, set of 2	7.....	LC41786
Drive Shaft Retaining Ring	8.....	LC02188
Gear	9.....	LC40122

DYTERRA LC METER PACKAGE

1 x NH3 MA15 NTC Meter 3"	LCMA15NH3-WTC
1 x NH3 MA7 NTC Meter 2"	LCMA7NH3-WTC
3 x Hose SS 1/4" X 16"	HSTF04-16
1 x Hydrostat 1/4"	CTA-400-C
1 x T-Handle Bleeder 1/4"	STA1912
1 x 3-Way Solenoid	LC84041

OPTIONAL EQUIPMENT

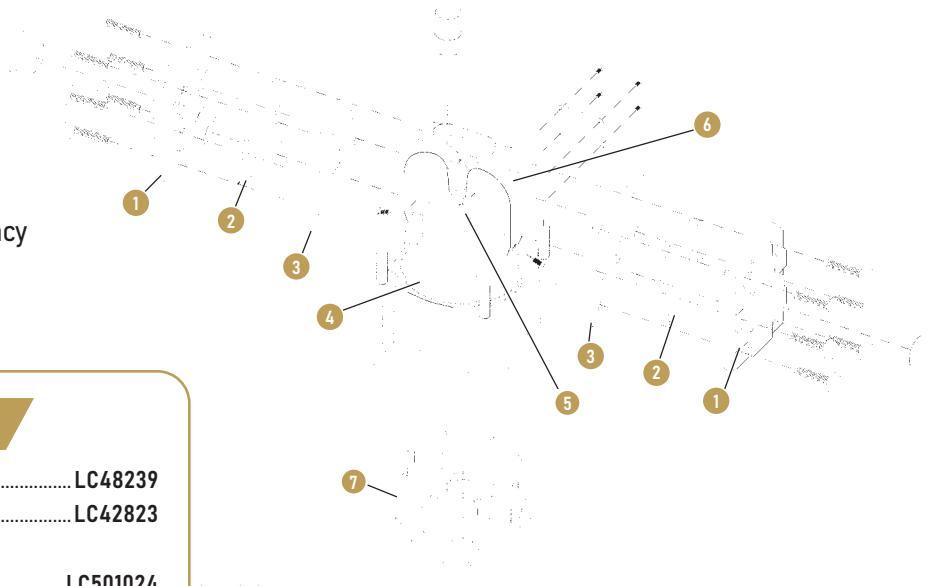
LCR2 Register	
c/w 30FT Harness, 30FT	LCSCKGEA0000B000
Slip-Ticket Printer	MITMU295
Foam Insert for TMU295 Printer	MI525501FM
Weather Proof Aluminum Printer Box	MI261516A
LCR2 Printer Cable	LC81513040
12-24 Volt Cable Power Printer	LC825001



LC METERS

MECHANICAL VAPOUR ELIMINATOR

Liquid Controls mechanical air and vapour eliminators remove air and vapour from metering systems. This increases the accuracy of the meter by allowing only liquid to pass through the meter for measurement.



MECHANICAL VAPOUR ELIMINATOR

Vapour Eliminator Outlet Cover	1.....	LC48239
Vapour Eliminator Gasket Cover	2.....	LC42823
See LC Vapour Plates (below)	3	
Float Assembly	4.....	LC501024
Float & Reed Assembly	5.....	LC501040
Reed Valve	6.....	LC48571
Vapour Eliminator Base Seal	7.....	LC09335

NOTE: Parts for the Vapour Eliminator and the Differential Valve are interchangeable between MA7 and MA15 configurations.

LC VAPOUR PLATES

NH3

No Weep Hole.....	LC501103
With Weep Hole.....	LC45823

LPG

No Weep Hole.....	LC42822
With Weep Hole.....	LC45824

DIFFERENTIAL VALVE

Differential valves are spring-loaded valves on the outlet side of the meter. Most liquid controls meter systems with a vapour eliminator also have a differential valve. Vapour eliminators and differential valves work in conjunction to stop the flow of product through the meter until the vapour is eliminated from the system. In order to do this, the vapour eliminator and the differential valve are piped together at installation.

DIFFERENTIAL VALVE - NH3 PARTS

Plate Valve NH3 O-Ring	1.....	LC9425
Molded Diaphragm	2.....	LT083771-003
Valve Piston NH3 O-Ring	3.....	LC9423
Valve NH3 Piston	4.....	LC501554
Flange Valve NH3 O-Ring	5.....	LC9425
Square Gasket Valve	5A.....	LC40430

DIFFERENTIAL VALVE - LPG PARTS

Differential Valve LPG O-Ring	1.....	LC07900
Molded Diaphragm	2.....	LTL083771-003
Valve Piston LPG O-Ring	3.....	LC06856
Valve LPG Piston	4.....	LC49947
Flange Valve LPG O-Ring	5.....	LC07838
Square Gasket Valve	5A.....	LC40430

