



EDITION 6
PUBLISHED 2019

PARTS & EQUIPMENT

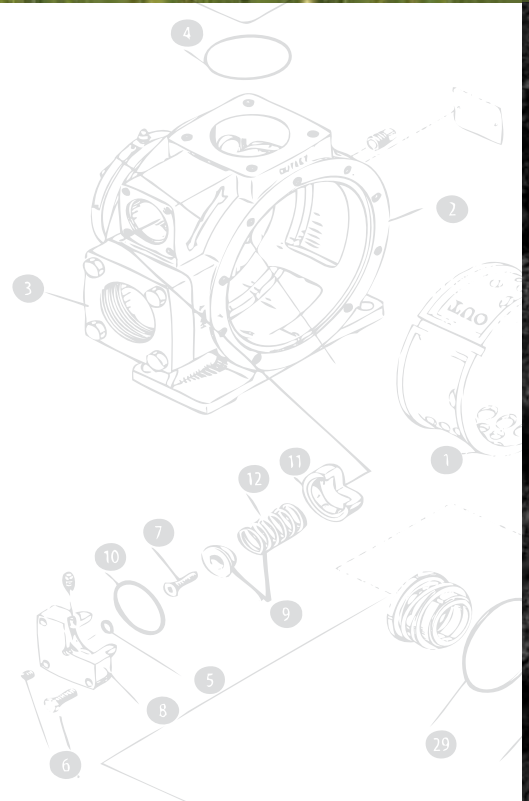


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OWNER'S GUIDE

**REFERENCE GUIDE FOR YOUR
TANKS, WAGONS & DELIVERY UNITS**

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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 per cent 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.

SOME SAFETY TIPS

- 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 – 15 minutes minimum.

Anhydrous Ammonia Information

Tank Size	% Full	Litres	Tonnes	lbs N	Acres / Tank		
					60 lbs N	80 lbs N	100 lbs N
1450g	85	4669	2.95	5336	88	66	53
1750g	85	5630	3.561	6435	107	80	64
2000g	85	6435	4.07	7355	122	91	73
2400g	85	7720	4.881	8824	146	110	88
3000g	85	9650	6.103	11030	183	137	110

2000 & 2400 GALLON TANK



PART: CTA-402-250
Relief Valve 3/4" 250 PSI
PART: CTA-402-265
Relief Valve 3/4" 265 PSI



PART: MIPH76411
Side Mount Water Container



PART: MIPH75649
Safety Container (No Gloves)



PART: MI6784R
NH3 Compatible
Neoprene Gloves



PART: MI2237R
Non-vented Goggles



Senior Float Gauges

TOP MOUNT

PART: RC6280-41 41" Tank Diameter
PART: RC6280-46 46" Tank Diameter

END MOUNT

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



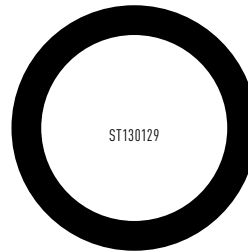
Junior Float Gauges

TOP MOUNT

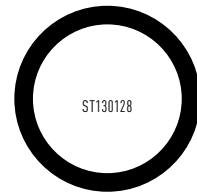
PART: RC6281-41 41" Tank Diameter
PART: RC6281-46 46" Tank Diameter

END MOUNT

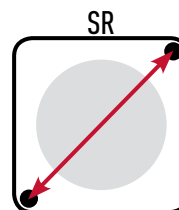
PART: RC6284-41 41" Tank Diameter
PART: MIFGBJR Junior Float Gauge Bolt
PART: RC6284-46 46" Tank Diameter



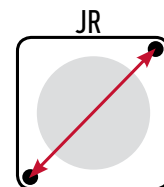
PART: ST130129
Senior Float Gauge Gasket



PART: ST130128
Junior Float Gauge Gasket

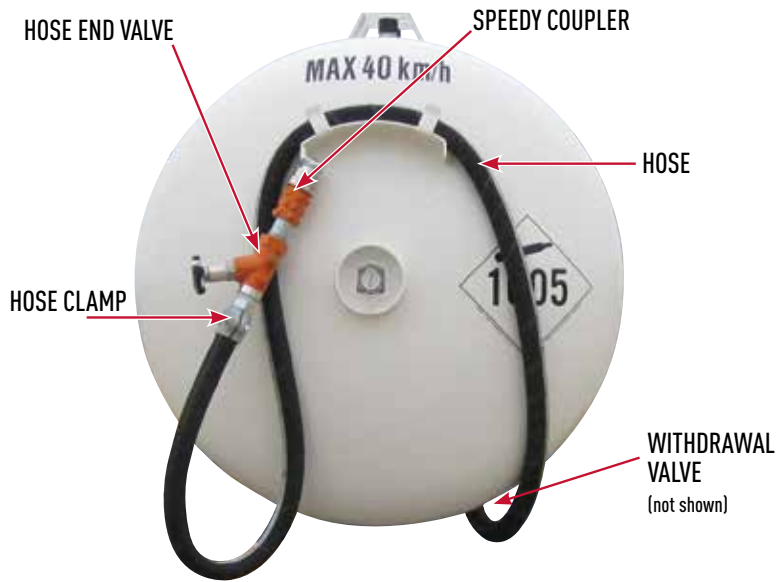


Measures 2 1/2" from centre bolt hole to centre bolt hole diagonally.



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

2000 & 2400 TANK FRONT



PART: CTA-1406-FBW
Withdrawal Valve 1 1/4"
PART: CTA-1507-GBW
Withdrawal Valve 1 1/2"



PART: STA484N-45
Withdrawal Valve 1 1/4"
PART: STA482N-60
Withdrawal Valve 1 1/2"



PART: STA521P
Withdrawal Valve 1 1/4" x 1"



PART: CTA-400-C
NH3 Hydrostat 1/4" 350 PSI



PART: KTVG16G0
Globe Valve Guard 1"
PART: STAL310P
Globe Valve 1"



PART: STA331
Globe Valve 1 1/4", Squibb-Taylor
PART: CTA-2525-H
Globe Valve 1 1/4", Continental



PART: STA334AL
Globe Valve 1 1/2", Squibb-Taylor



PART: KTVG24STO
Valve Guard
STA331, STA334AL, CTA-2525-H
c/w U-Bolt



PART: HSN259516
NH3 Hose 1" SS Braid (8 year)
PART: HSN259520
NH3 Hose 1 1/4" SS Braid (8 year)
PART: HSN259524
NH3 Hose 1 1/2" SS Braid (8 year)



PART: ME3162-16
Reusable Hose Clamp 1" x 1"
PART: ME3162-20
Reusable Hose Clamp 1 1/4" x 1 1/4"
PART: ME3162-24
Reusable Hose Clamp 1 1/2" x 1 1/2"

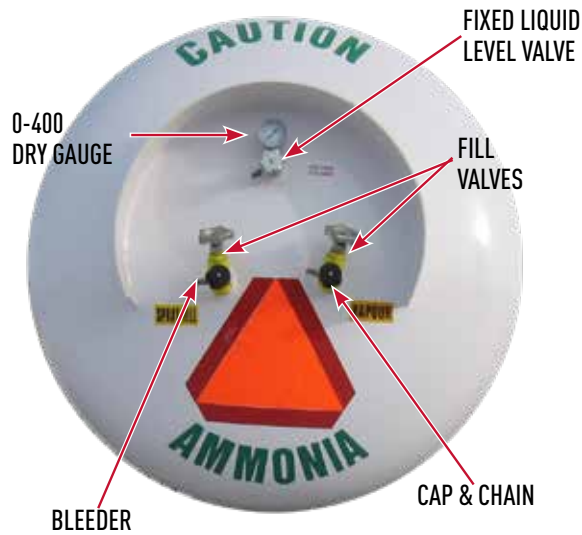


PART: ME3162-16S
Hose Clamp 1 3/4" F ACME x 1"
PART: ME3162-2020S
Hose Clamp 2 1/4" F ACME x 1 1/4"
PART: ME3162-24S
Hose Clamp 2 1/4" F ACME x 1 1/2"



PART: STA1131F
Speedy Coupler 1 3/4" F ACME x 1" MPT
PART: STA1132F
Speedy Coupler 2 1/4" F ACME x 1 1/4" MPT
PART: STA1133F
Speedy Coupler 2 1/4" F ACME x 1 1/2" MPT

2000 & 2400 TANK REAR



PART: STA525P
Fill/Vapour Valve 1/4"



PART: CTA-1201
Fill/Vapour Valve 1/4"



PART: STA1912
Bleeder Valve 1/4" T-Handle



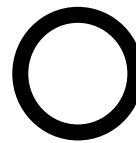
PART: STA1911
Bleeder Valve 1/4" Knurled



PART: PGA400
Dry Gauge 0-400 PSI



PART: MEJ415
Fixed Liquid Level Valve



PART: ST1102A16
ACME Gasket 1 3/4"



PART: CT22-63-FC
Cap & Chain 1 3/4"



PART: STA2002
Adapter 1" MPT x 1 3/4" M ACME



PART: STA2003S
Adapter 1 1/4" MPT x 1 3/4" M ACME

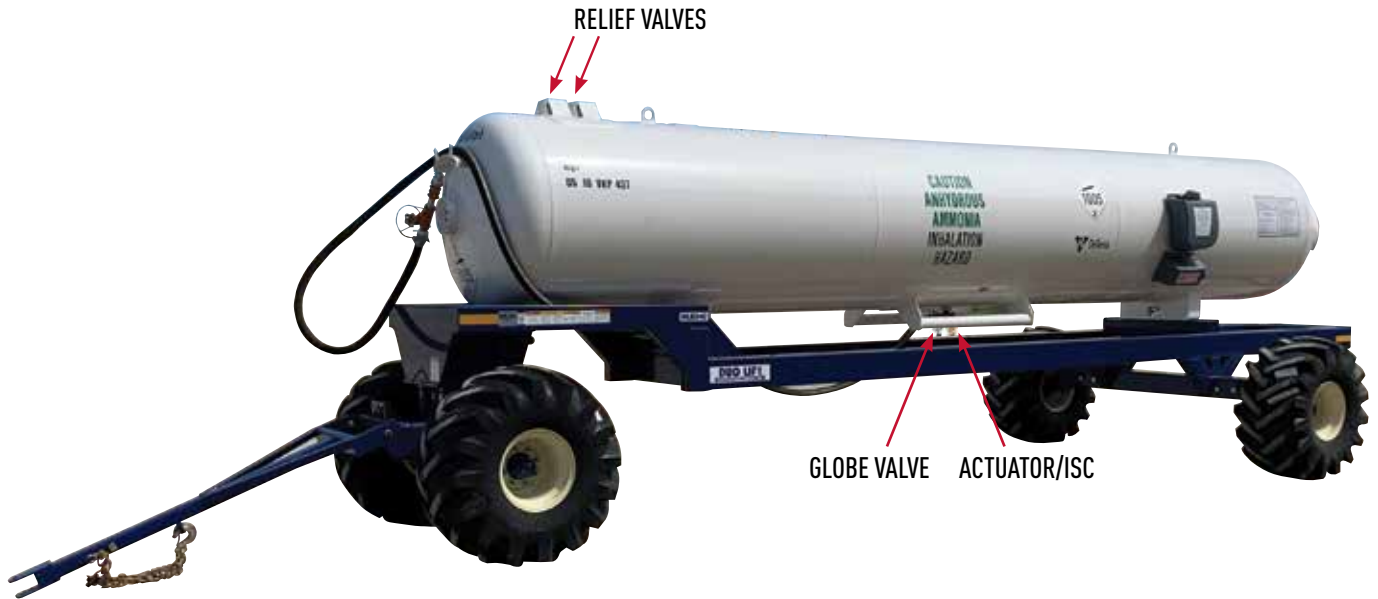


PART: STA2060S
Adapter 1 1/4" MPT x 2 1/4" M ACME



PART: STA2077
Adapter 1 1/2" MPT x 2 1/4" M ACME

2000 & 2400 TANK NEW STYLE



PART: ME992AR-12-85
ISC Valve - Rotary Actuator
Combo 1/2" Tee Body



PART: STA15-45A
Electric SQUIBB-TAYLOR
Actuator with 1/2" ISC



PART: ME992-12
ISC 90° Valve 1/2"



PART: STMSA
Main Switch Assembly
c/w Switch



PART: ST20JA
Wiring Harness, 20 ft.



PART: MIPH76411
Side Mount Water Container



PART: MIPH75649
Safety Container (No Gloves)



PART: STA334AL
Globe Valve 1/2"
Squibb-Taylor



PART: STA1133F
Speedy Coupler
2 1/4" F ACME x 1 1/2" MPT



PART: CTA-400-C
NH3 Hydrostat 1/4" 350 PSI



PART: KTVG24STO
Valve Guard STA334AL
c/w U-Bolt



PART: CTA-402-265
Relief Valve 3/4" 265 PSI



PART: HSN259524
NH3 Hose 1 1/2", SS Braid
(8 year)

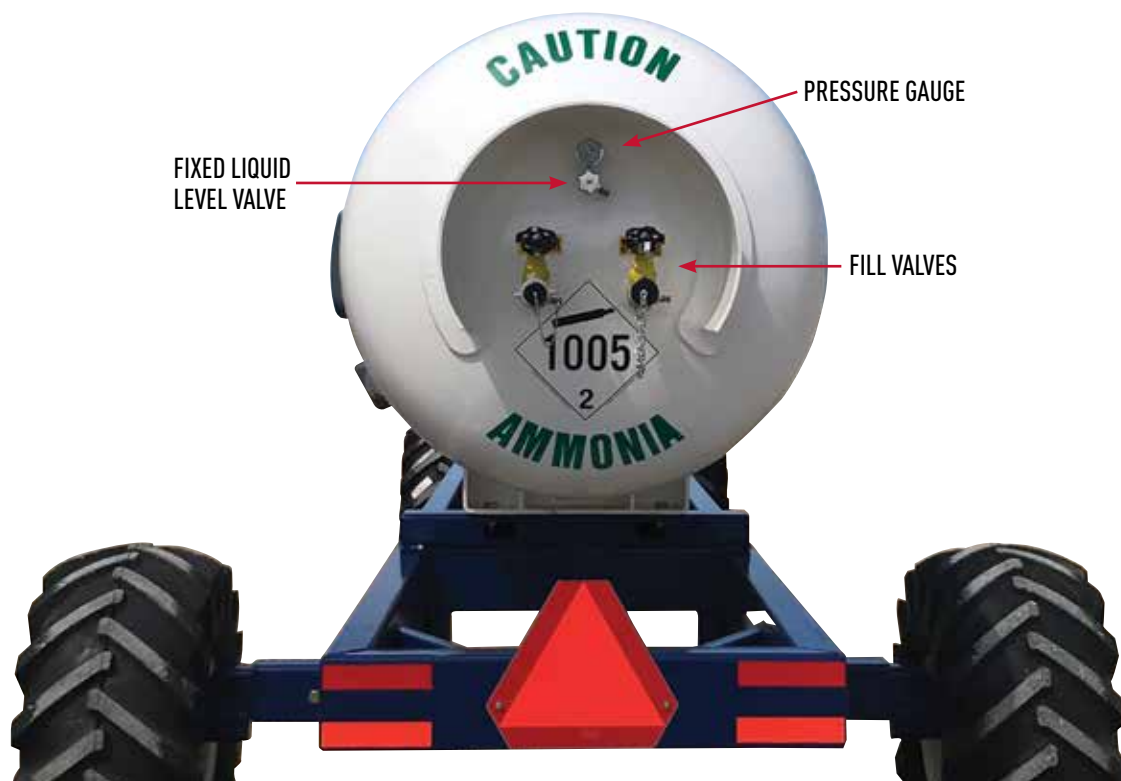


PART: ME3162-24
Reusable Hose Clamp
1 1/2" x 1 1/2"



PART: ME3162-24S
Hose Clamp 2 1/4" F ACME x 1 1/2"

2000 & 2400 TANK REAR NEW STYLE



PART: STA502N-60
Fill Valve 1½" x 1½"



PART: STA1911
Bleeder Valve ¼" Knurled



PART: STST-1177C
Cap & Chain 2¼" ACME



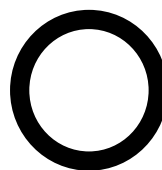
PART: STA2077
ACME Adapter, 1½" x 2¼" M ACME



PART: PGA400
Dry Gauge 0-400 PSI



PART: STA1912
Bleeder Valve ¼" T-Handle



PART: ST1102A16
Gasket 2¼" ACME



Adapter **ME611S**
1¾" M ACME x 2¼" F ACME

8100 DELIVERY UNIT



PART: MEV300FIR/265
Internal Relief 3" 265 PSI



PART: ME930-74
Float Gauge 74" ID



PART: ME930-905
Glow in the Dark
Replacement Dial 4"



PART: ME873SBN-24
Back Check Valve
3" MNPT x Flange



PART: ME226
Rotary Actuator 2" & 3"
Marshall, Fisher ISC



PART: ME206
Stroke Actuator
2" & 3" Marshall, Fisher ISC



PART: ME991AR-16-110
2" ISC VALVE x 300# Flange



PART: ME823-16
2" Angle Valve Flange x Flange



PART: ME819-16
2" Globe Valve x 4 Bolt Flange



PART: STAL310P
Globe Valve 1"



PART: PGA400L
0-400 Liquid Gauge



PART: MIN1572
Needle Valve 1/4"



PART: CTA-400-C
NH3 Hydrostat 1/4" 350 PSI



PART: BVSS323
Ball Valve 2"



PART: ME441FS-1C
Steel Cap 1 3/4" F ACME, w/Cable



PART: ME431FS-1C
Steel Cap 2 1/4" F ACME, w/Cable



PART: ME200
Wheel Chock



PART: STAL313P
Angle Valve 1 1/4"



PART: STAL311P
Angle Valve 1"



PART: HSN259520
NH3 Hose 1 1/4" Grey Stripe

PART: HSN259516
NH3 Hose 1" Grey Stripe



PART: STAL111
Hose Swivel 1 1/4"

PART: STAL109
Hose Swivel 1"



PART: STA1131F
Speedy Coupler 1 3/4" F ACME x 1" MPT

PART: STA1132F
Speedy Coupler 2 1/4" F ACME x 1 1/4" MPT



PART: MIMHCW/Y
Chemical Wash Kit

PUMP & ISC



PART: BKLGLD3F
Blackmer Pump 3"
REPAIR KIT: BK898981

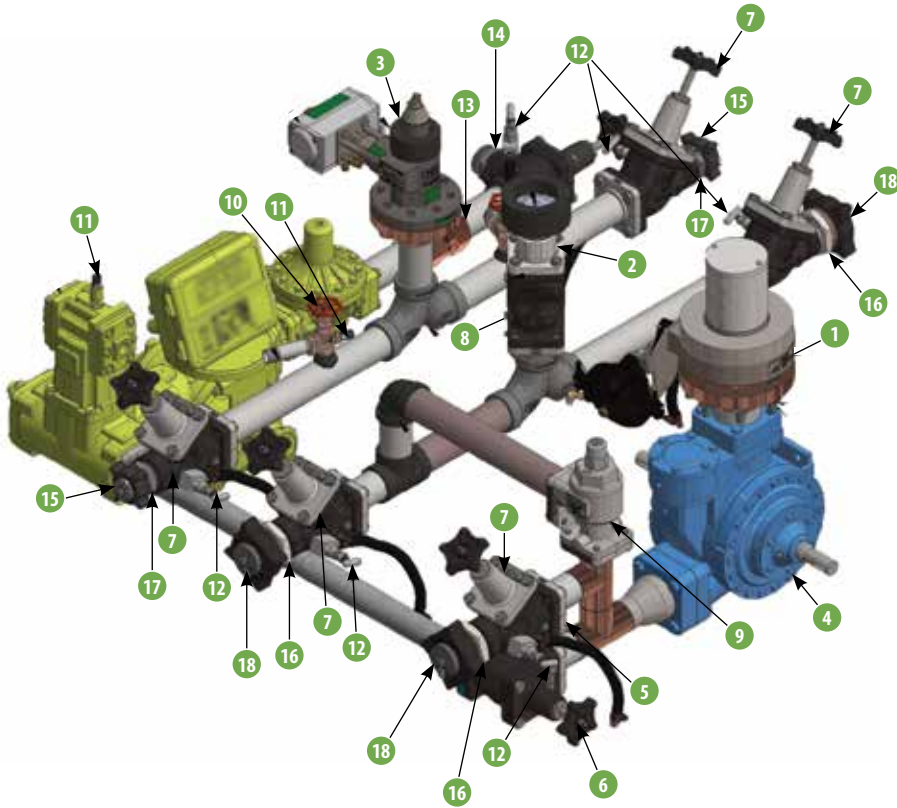


PART: ME990A-3F-400
3" ISC Valve w/Pneumatic Actuator



PART: ME990SAR-3DF-400
Double Flange ISC 3"
REPAIR KIT: ME990-24-VRK
ISC D.F. 3" w/ Rotary Actuator

8100 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	1/4" Hydro Relief Valve
12	M1N1572	1/4" Angle Needle Valve
13	RGA1519B4	2" Excess Flow Valve
14	STA2001	Adapter 3/4" MNPT X 1 1/4" ACME
15	ME431FS-1C	2 1/4" ACME Cap with Cable
16	ME503-16	Adapter 2" MNPT X 3 1/4" ACME
17	ME502S-16/10	Adapter 2 1/4" M ACME X 2" MPT
18	ME441FS-1C	3 1/4" ACME Cap with Cable



PART: BEASK300TX
BASE Shutdown Remote



PART: BEASK300AQRX
BASE Receiver



PART: MITMU295
Printer



PART: MITMU295PS
Printer Power Supply



PART: BEANT1000
BASE Antenna, no cable



PART: BECOAXT-15
BASE Antenna Cable 15ft



PART: MI261516A
Weatherproof Printer Box

SPINDLES, HUBS, 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	MIS611-32X224	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	1/4"	1/2"	1"	1 1/4"	1 1/2"	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 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

Sold in Sheets of 10
 Larger size numbers available upon request



LIQUID, Orange **DELO2**
 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**



1005 White **DE1005W**
 1005 Placard, White Plastic **DE1005WP**
 1005 Placard Holder, White **DE1005H**



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.

ALWAYS wear rubber gloves and protective goggles or full mask.
ALWAYS work upwind of all operations.
ALWAYS have ample supply of clean water.

Connecting Nurse Wagon to Applicator

1. Attach liquid line hose valve to break away coupler.
2. Hand tighten only.
3. Check for and remove any kinks in the hose.
4. Slowly open nurse wagon liquid valve. Check for leaks.
5. Slowly open hose and valve. Check for leaks.
6. Open meter valve on applicator. Check for discharge from all shanks.
7. Close meter valve until you are ready to begin application.

Disconnecting Nurse Wagon from Applicator

1. Turn liquid line valve off at nurse wagon.
2. Open meter valve and lift shanks to bleed all lines.
3. With pressure relieved, close hose end valve.
4. Disconnect hose from break away coupler.
5. Carefully secure hose on transport bracket.
6. Close meter valve on applicator.

Reconnecting Breakaway Couplers

1. Close liquid line valve on nurse wagon
2. Open bleed valve on hose end-directing it away from your body.
3. Lift shank and open meter valve to bleed lines.
4. Reconnect coupler.
5. Shink hose to check connection.
6. Close meter valve, hose end valve and hose end bleed valve.
7. Follow steps 4, 5, 6 and 7 under connecting procedure.

Nurse Tank Safety DENTSP

SAFETY PRECAUTIONS FOR HANDLING AMMONIA

Ammonia GLOVES and GOGGLES MUST be worn when transferring ammonia.
Call your dealer immediately in case of leaks, malfunctions or damage. Never attempt to make repairs yourself.
Do not tamper with relief or equipment.
Stay upwind when filling. SNEEZE, DON'T breathe deeply, when approaching area.
Use only approved ammonia equipment in that case correction.
Keep out of direct line of openings on all valves and fittings.
Before disconnecting hoses, BE POSITIVE all pressure is bleed out of the system.
Never stick up a hose by the valve handle/valve or allow valve to contact the ground.
When towing nurse tank trailer/applcator, observe safe towing speeds, secure hitch pins and fasten safety chains.

FIRST AID PROCEDURES
THE BASIC FIRST AID TREATMENT FOR AN AMMONIA BURN IS LARGE VOLUMES OF FRESH WATER!
NEVER USE SALVES OR OINTMENTS

SKIN CONTACT
A. Immediately flood affected area with water for at least 15 minutes.
B. Flush with water to avoid frostbite with water from the end of the storage tank.
C. Flush and remove clothing that came in contact with ammonia.
D. GET MEDICAL ATTENTION AT ONCE.

EYE CONTACT
Immediately flood eyes and under eyelids with abundance of fresh water for at least 15 minutes.
GET MEDICAL ATTENTION AT ONCE.
MOUTH/NOSE/INTERNAL CONTACT
Immediately rinse, gargle and drink large quantities of water.
GET MEDICAL ATTENTION AT ONCE.
SEE PHYSICIAN IN ALL SEVERE CASES OF AMMONIA BURNS, AND BE SURE TO TELL PHYSICIAN THAT IT IS AN AMMONIA BURN!

Ammonia Handling / First Aid DESPHA

WARNING

THIS VEHICLE STOPS AT
ALL UNCONTROLLED
RAILWAY CROSSINGS

WARNING Vehicle Stops DEWTVS

TRANSFER PROCEDURES DELIVERY TO STORAGE

SAFETY OUTLINES

1. Before starting check the liquid level gauge on the tank to ensure there is sufficient room in the tank for the liquid to expand in warming or you could be forced the safety valve or the end of the storage tank.
2. Always wear the correct safety equipment in the transfer vehicle. Check the pressure in the TDU or the TDU to the end of the hose and make sure the transfer procedure is complete.
3. Insure that emergency brakes are applied on the transport vehicle. Block the wheels with chock blocks. Block the wheels on the TDU or the end of the hose with chock blocks to ensure the transfer procedure is complete.
4. Take note of the general wind direction. Always work upwind from the liquid. This is of particular importance when opening storage tanks and lines.
5. The warning of potential ammonia exposure including Full Face Respirator and ammonia Ammonia approved gloves are essential when completing ammonia transfer and in ammonia storage transfer. Always have a water bottle in contact at all times. Contact with ammonia can cause severe burns and frostbite. Always have a water bottle in contact at all times. Contact with ammonia can cause severe burns and frostbite.
6. Always use ammonia that meets a through inspection of the site and suitable labeling marking with ammonia Ammonia on the site.
7. Close liquid line valve on the transport tank and on the storage tank after the transfer has been completed.

PRECAUTIONS

1. Before starting the transfer check the tank, make the valve in the system to ensure that they are fully closed.
2. Open the liquid valve to ensure that all pressure has been released.
3. WARNING: NEVER EXCEED OPERATING PRESSURE OR EXCESSIVE PRESSURE IN ANY PART OF THE SYSTEM.
4. When opening the tank, never use BLENDING.
5. If the pressure is not released, do NOT attempt to open the valves. OPEN THE PRESSURE RELEASE VALVE.
6. PRESSURE RELEASE VALVE - ATTEMPT TO REMOVE THE CAPS, WHICH MAY BE KEPT FOR EXCESSIVE PRESSURE BUILD-UP.
7. After releasing the pressure, check the liquid level in the transport vehicle.
8. NEVER DO NOT FORCE THE FITTING USE A RUBBER HAMMER OR WRENCH ONLY.
9. NEVER FORCE THE FITTING USE A RUBBER HAMMER OR WRENCH ONLY.
10. NEVER FORCE THE FITTING USE A RUBBER HAMMER OR WRENCH ONLY.
11. NEVER FORCE THE FITTING USE A RUBBER HAMMER OR WRENCH ONLY.
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19. NEVER FORCE THE FITTING USE A RUBBER HAMMER OR WRENCH ONLY.
20. NEVER FORCE THE FITTING USE A RUBBER HAMMER OR WRENCH ONLY.

Transfer TDU to Storage DETDFS

TRANSFER FROM A STORAGE TANK TO A DELIVERY UNIT

SAFETY OUTLINES

1. Before starting check the liquid level gauge on the tank to ensure there is sufficient room in the tank for the liquid to expand in warming or you could be forced the safety valve or the end of the storage tank.
2. Always wear the correct safety equipment in the transfer vehicle. Block the wheels with chock blocks. Block the wheels on the TDU or the end of the hose with chock blocks to ensure the transfer procedure is complete.
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4. Take note of the general wind direction. Always work upwind from the liquid. This is of particular importance when opening storage tanks and lines.
5. The warning of potential ammonia exposure including Full Face Respirator and ammonia Ammonia approved gloves are essential when completing ammonia transfer and in ammonia storage transfer. Always have a water bottle in contact at all times. Contact with ammonia can cause severe burns and frostbite. Always have a water bottle in contact at all times. Contact with ammonia can cause severe burns and frostbite.
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Transfer Storage to TDU DETFTS

Rh MFG., CO.
SAFETY SUGGESTIONS FOR AMMONIA HANDLING

Ammonia is a highly volatile liquid. It is extremely flammable and explosive. It is also highly corrosive and can cause severe burns and frostbite. It is important to handle ammonia with extreme care and to use proper safety equipment.

DO NOT FORCE THE FITTING USE A RUBBER HAMMER OR WRENCH ONLY.

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Side Mount Water Jug DE55398

Rh MFG., CO.
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Top Mount Water Jug DE56487

AMMONIA ANHYDROUS UN 1005
AMMONIAC ANHYDRE

RISK

- Highly irritating to skin, eyes and respiratory tract
- May cause chemical burns and frostbite

PRECAUTIONARY MEASURES

- Use full face protection
- Use respiratory protection
- Avoid skin contact
- Do not add water

FIRST AID MEASURES

- Remove victims from area
- Flush affected areas with water
- Seek medical aid

PROPRIÉTÉS DANGEREUSES

- Irritation cutanée, irritation des yeux, des yeux et des voies respiratoires
- Peut causer des brûlures chimiques et des engelures

PRÉCAUTIONS


- Porter une tenue complète
- Porter une protection respiratoire
- Éviter tout contact avec la peau
- Ne pas ajouter d'eau

PREMIERS SOINS

- Transférer le malade dans un endroit bien aéré
- Laver à grande eau les parties de la peau affectées
- Appeler un médecin

REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER INFORMATION
POUR PLUS DE RENSEIGNEMENTS, CONSULTER LA FICHE TECHNIQUE SÛRTE SÛRTE

NH3 UN 1005 (WHMIS) DEUNAA



Green Cross 10" DEGC10

Red Cross 10" DERC10

SAFETY KIT

SAFETY KIT DESKR

TANK DECAL KITS ALSO AVAILABLE

2000 & 2400 GALLON TANKS



DESIGNED AND FABRICATED BY DYTERRA

- Meets new required TC51 Code with built-in valve protection and rear end protection
- Standard 21.5 Tires all around
- Tire Options: 600/55 Radials for added floatation
Rear Axle "flips" to accommodate 23.1 tires *on rear only*

STANDARD FEATURES

- 1 1/4", 1 1/2" or 2" center withdrawal (1 1/2" ISC valve standard)
- 1 1/2" spray fill with 2" standpipe for fast filling
- Required decal package
- Features NEW Duo-Lift MLB20C & MLB2YC Safety Wagon for low centre of gravity and complete turn-under to prevent roll overs
- Passive emergency discharge control system



5 YEAR LIMITED WARRANTY on all Duo-Lift Wagons

8100 GALLON DELIVERY UNIT



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

TECHNICAL SPECIFICATIONS

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

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" 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

MANUAL METERS

Use this calculation to determine which meter is best for your applicator:

$$\text{DESIRED \#N} \times \text{WIDTH IN FEET} \times \text{MPH} \times .1212 = \text{\# ACTUAL N PER HOUR}$$



Recommended for rates up to 4500#N/HR



B9500 Manual Meter Kit

B9500 Meter Kit with Hydraulic Shut-off.....	KTB-9500-B
B9500 Meter Kit with Electric Shut-off.....	KTB-9500-ESO
Remote S/O Switch B9500 Electric Shut-off.....	CTA-RTS-16A
B9500 Meter Only 1 1/4".....	CTB-9500-B
Meter Stand - Continental.....	MICMS24
REPAIR KIT.....	CTB-9500-RS

Kit includes:

1 1/4" Coupling, 1 1/4" x 1" Reducer, Meter Stand c/w U-Bolt

Hydraulic Shut-off

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



LANDING A 45,000 GALLON STORAGE TANK

VARIABLE RATE APPLICATION SYSTEMS

RAVEN ACCUFLOW™ VORTEX



RAVEN VORTEX COOLER

1" Valve Kits - up to 30 GPM

Vortex Dual Valve Kit	RV1-117-0171-711
Vortex Fast Valve Kit.....	RV1-117-0171-712

1½" Valve Kits - up to 50 GPM

Vortex Dual Valve Kit	RV1-117-0171-612
Vortex Fast Valve Kit.....	RV1-117-0171-613



Raven Consoles

A CR7 Kit with 500S UT/TC Unlocks.....	RV1-117-2295-001TN
B Raven SCS 450 Console 6 Boom.....	RV1-063-0171-220



FOR RAVEN TROUBLESHOOTING, TURN TO PAGE 30

VARIABLE RATE APPLICATION SYSTEMS



Continental Super Flow Cooler w/ Raven Valves Recommended for rates up to 6500#N/HR 30GPM

- Kit with 2 Raven Valves.....**KTRVSF-2**
- Kit with 2 Raven Valves (less cooler)**KTRVSF-2LSF**
- Kit with Raven Fast Valve **KTRVSF**
- Kit with Raven Fast Valve (less cooler) **KTRVSF-LSF**

Kit includes:

- Continental Super Flow Cooler
- 1 1/4" On/Off Valve
- 1 1/4" Control Valve
- Raven Flow Meter
- All required Wiring Harnesses
- SCS 440 Console (if required)
- Strainer & Fittings
- Ball Valve
- Vapour Tube Kit (if required)

NH3 FACTS

NH3 Vapour Pressure Approximate Temperature

°F	°C	PRESSURE PSIG
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

Total Pounds Actual Nitrogen Per Hour:

Desired Lbs x Implement Width (ft.) x Speed (MPH) x 0.1212

Total Pounds Per Minute: Lbs Per Hour / 60

Gallons Per Minute: Pounds Nitrogen Per Hour x 0.004

Total Pounds of N Per Manifold Outlet Per Hour: Lbs Actual Per Hour / Number of Runs



FOR RAVEN TROUBLESHOOTING, TURN TO PAGE 30

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 (1¼")	RV1-063-0173-770

Choose 1 below:

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

Raven ISO System

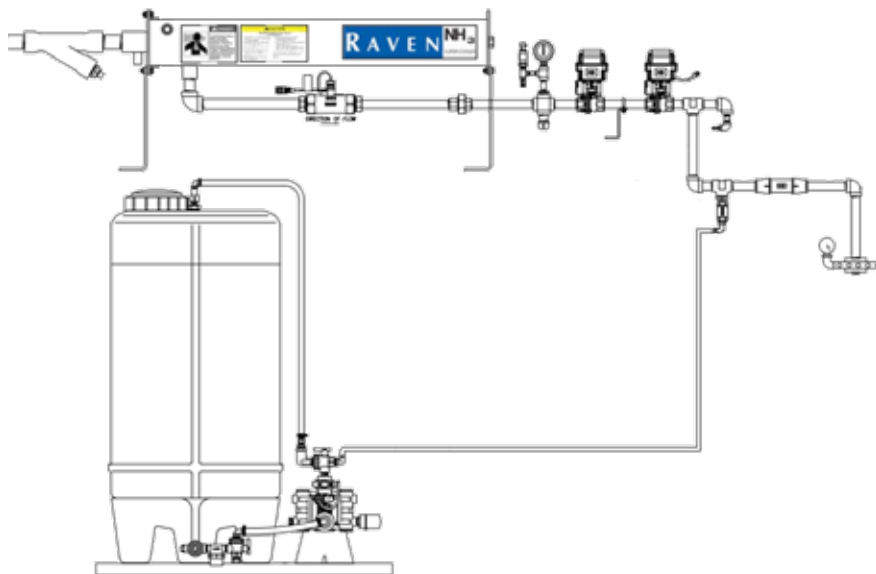
Sidekick Pro Low Volume, Raven ISO.....	RV1-063-0173-420
Plumbing Kit.....	RV1-117-0159-760
Point of Injection Check Valve.....	RV1-333-0011-102
Inline Mixer for NH3 (1¼")	RV1-063-0173-770
Power Cable, ISO w/out agitation	RV1-115-0172-107

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 (1¼").....	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 NH3

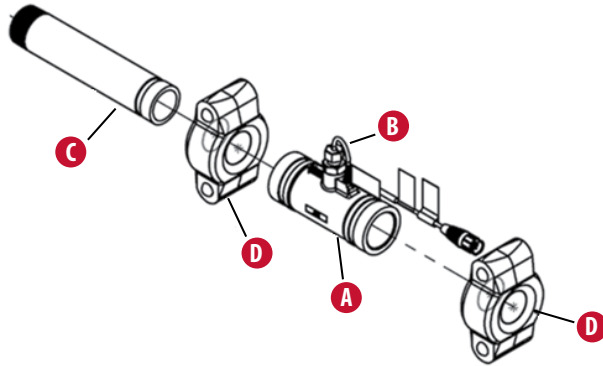
Speed Control

Raven Phoenix 10 GPS Speed Sensor.....	RV1-117-0171-165
Raven Radar Kit	RV1-117-0159-822
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



Flow Meter

A RFM60SG Flow Meter	RV1-063-0173-869
B Flow Sensor, RFM60S	RV1-063-0171-669
Flow Meter Repair Kit.....	RV1-117-0171-590
C Modified Gruv-lok Pipe Nipple	RV1-019-0159-591
D 2" x 1½" Gruv-lok Coupling w/EPDM Gasket.....	RV1-333-0006-032
RFM60S Flow Meter 1½" Threads	RV1-063-0173-867



Raven Vortex Cooler and Conversion Kit

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



Replacement Parts

Refrigerant Line Strainer Kit	RVS08
AccuFlow Oriface 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

QUICK REFERENCE GUIDE - RAVEN VALVES & ACTUATORS

1" Valves with 1 1/4" Adaptors (2019)

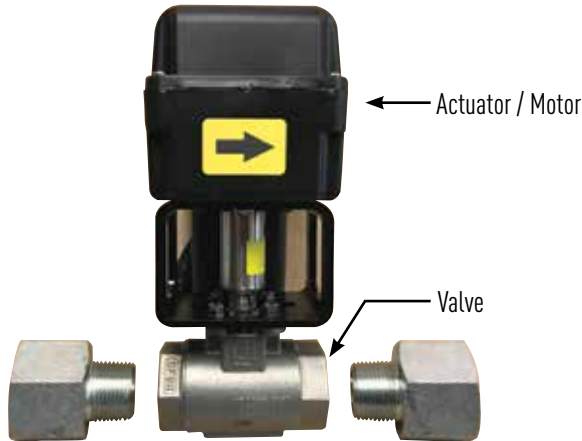
DESCRIPTION	COMPLETE ASSEMBLY	MOTOR ONLY	VALVE ONLY	SEAL KIT
1" Control Valve	RV1-117-0171-706	RV1-063-0173-664	RV1-063-0173-877	Not Available
1" On/Off Valve	RV1-117-0171-705	RV1-063-0173-665	RV1-063-0173-876	Not Available
1" Fast Valve	RV1-117-0171-707	RV1-063-0173-666	RV1-063-0173-878	Not Available

1" Valves (2017)

DESCRIPTION	COMPLETE ASSEMBLY	MOTOR ONLY	VALVE ONLY	SEAL KIT
1" Control Valve	RV1-063-0173-877	Not Available	RV1-334-0001-071	Not Available
1" On/Off Valve	RV1-063-0173-876	Not Available	RV1-334-0001-071	Not Available
1" Fast Valve	RV1-063-0173-878	Not Available	RV1-334-0001-071	Not Available

1 1/2" Valves

DESCRIPTION	COMPLETE ASSEMBLY	MOTOR ONLY	VALVE ONLY	SEAL KIT
1 1/2" Control Valve	RV1-063-0173-667	RV1-063-0173-664	RV1-334-0001-066	Not Available
1 1/2" On/Off Valve	RV1-063-0173-668	RV1-063-0173-665	RV1-334-0001-066	Not Available
1 1/2" Fast Valve	RV1-063-0173-626	RV1-063-0173-666	RV1-334-0001-066	Not Available



1" Valves (discontinued)

DESCRIPTION	COMPLETE ASSEMBLY	MOTOR ONLY	VALVE ONLY	SEAL KIT
1" Control Valve	RV1-063-0172-977	RV1-063-0172-980	RV1-117-0171-686	RV1-117-0159-410
1" On/Off Valve	RV1-063-0172-978	RV1-063-0173-207	RV1-117-0171-686	RV1-117-0159-410
1" Fast Valve	RV1-063-0172-979	RV1-063-0172-982	RV1-117-0171-686	RV1-117-0159-410

1 1/4" Valves (discontinued)

DESCRIPTION	COMPLETE ASSEMBLY	MOTOR ONLY	VALVE ONLY	SEAL KIT
1 1/4" Control Valve	RV1-063-0173-202	RV1-063-0173-206	RV1-063-0173-205	RV1-117-0171-355
1 1/4" On/Off Valve	RV1-063-0173-203	RV1-063-0173-207	RV1-063-0173-205	RV1-117-0171-355
1 1/4" Fast Valve	RV1-063-0173-204	RV1-063-0172-982	RV1-063-0173-205	RV1-117-0171-355

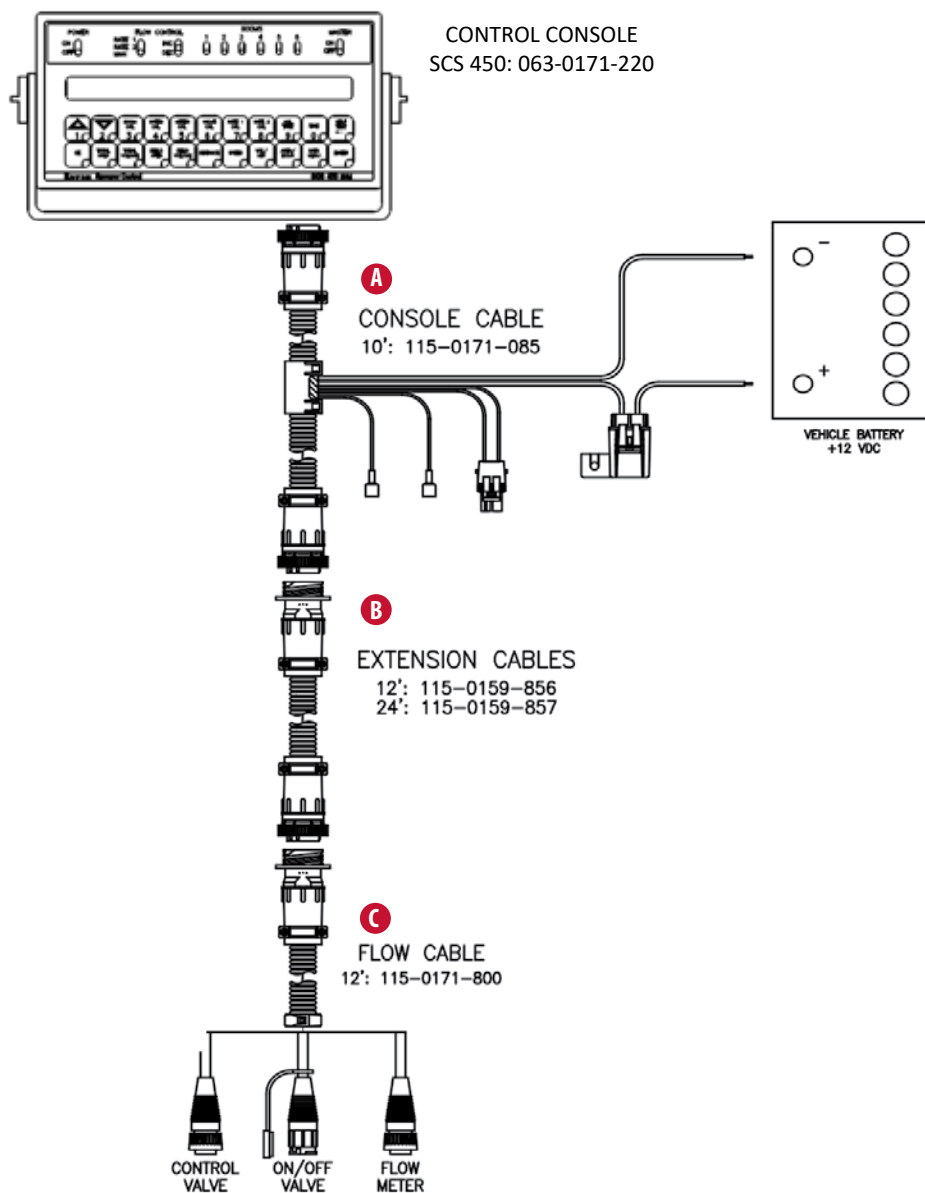
RAVEN SCS 450 SINGLE SECTION

Single 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.....RV1-115-0171-800

Raven Valves

- Control ValveRV1-117-0171-706
- On/Off ValveRV1-117-0171-705
- Fast Valve.....RV1-117-0171-707
- Section Valve.....RV1-063-0173-876



RAVEN SCS 450 MULTI SECTION

3 Section Raven Cables

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

On/Off Valve Extension Cables

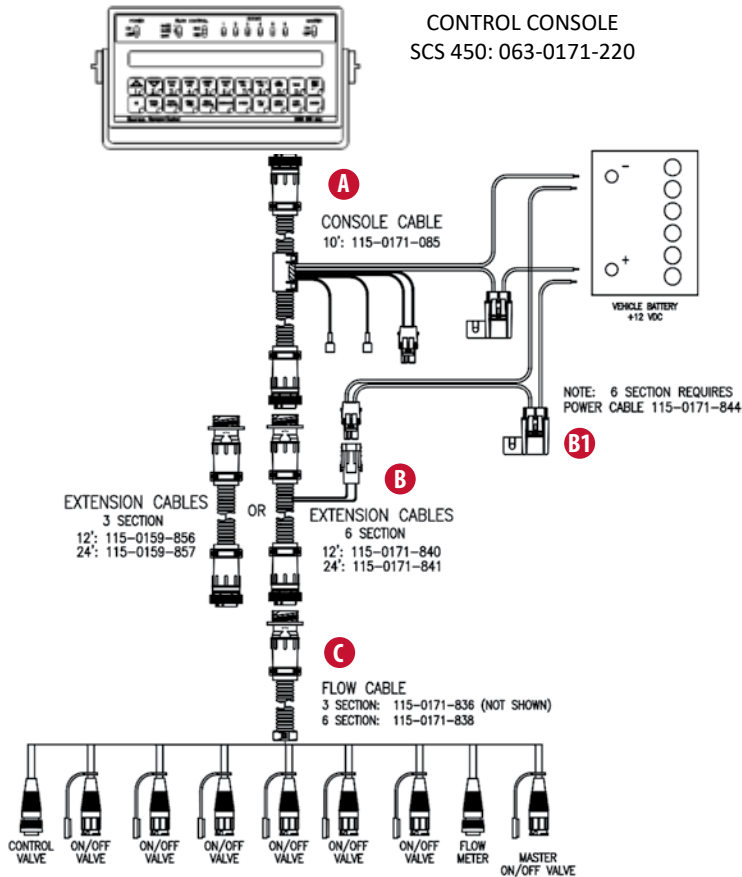
- On/Off Valve Extension, 6ft.....RV1-115-0171-832
- On/Off Valve Extension, 12ftRV1-115-0171-833
- On/Off Valve Extension, 24ft.....RV1-115-0171-834

6 Section Raven Cables

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

Raven Valves

- Control ValveRV1-117-0171-706
- On/Off ValveRV1-117-0171-705
- Fast Valve.....RV1-117-0171-707
- Section Valve.....RV1-063-0173-876



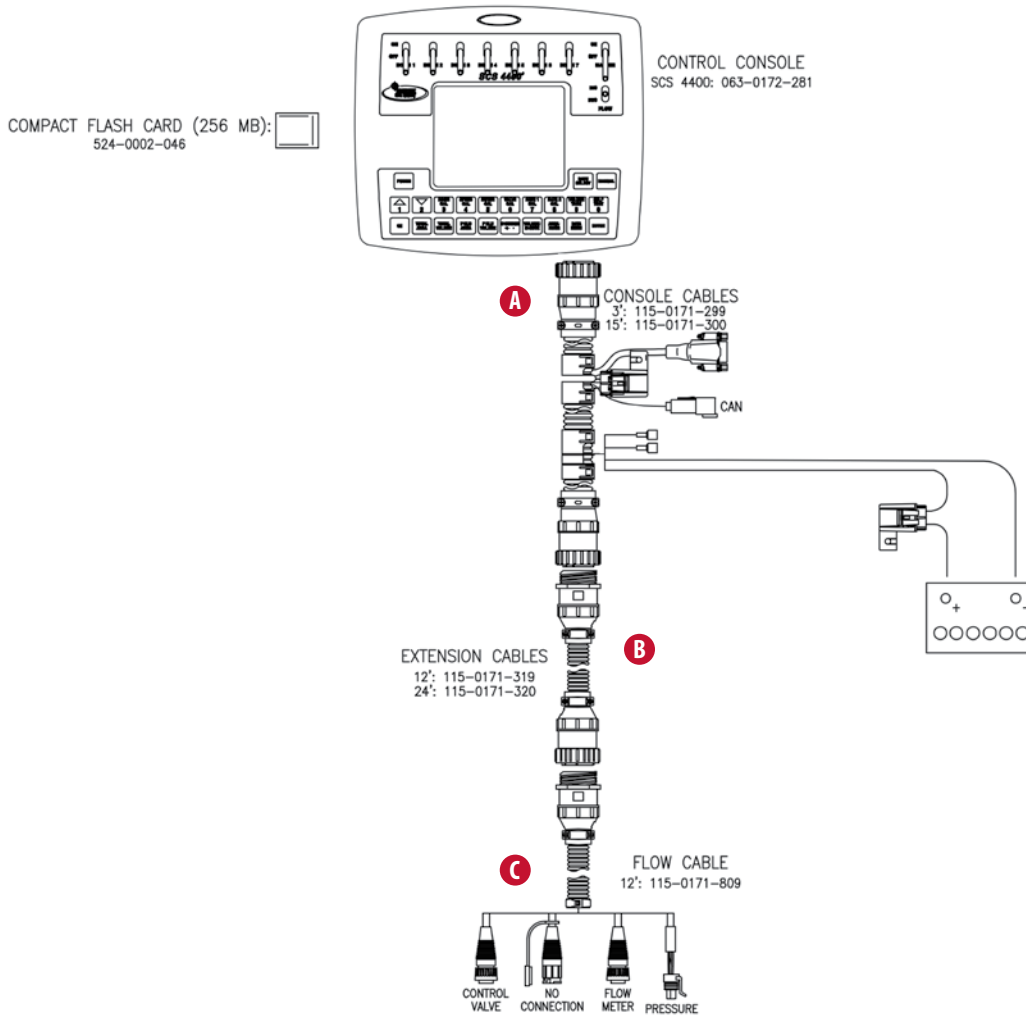
RAVEN 4400 SINGLE SECTION

Single Section Raven Cables

- A** Console Cable.....RV1-115-0171-300
- B** Extension Cable 12ftRV1-115-0159-319
- B** Extension Cable 24ft.....RV1-115-0159-320
- C** Flow Cable.....RV1-115-0171-809

Raven Valves

- Control ValveRV1-117-0171-706
- On/Off Valve.....RV1-117-0171-705
- Fast Valve.....RV1-117-0171-707
- Section Valve.....RV1-063-0173-876



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

RAVEN 4400 MULTI SECTION

3 Section Raven Cables

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

On/Off Valve Extension Cables

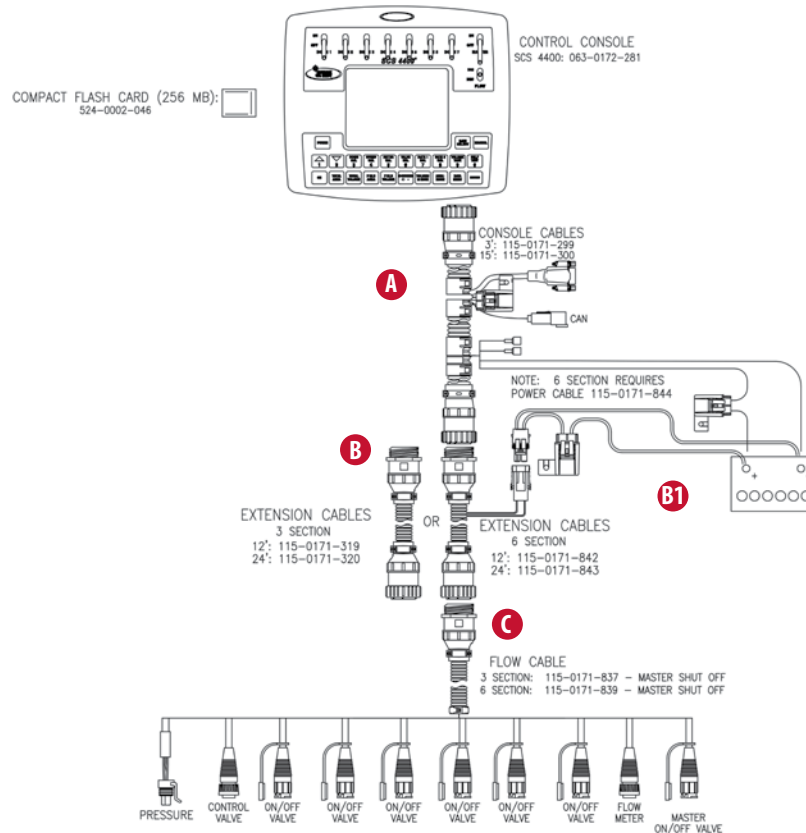
- On/Off Valve Extension, 6ft.....RV1-115-0171-832
- On/Off Valve Extension, 12ftRV1-115-0171-833
- On/Off Valve Extension, 24ft.....RV1-115-0171-834

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 SectionRV1-115-0171-843
- B1** Power Cable (Required for 4 or more Sections).....RV1-115-0171-844
- C** Flow Cable, 6 SectionRV1-115-0171-839

Raven Valves

- Control ValveRV1-117-0171-706
- On/Off ValveRV1-117-0171-705
- Fast Valve.....RV1-117-0171-707
- Section Valve.....RV1-063-0173-876

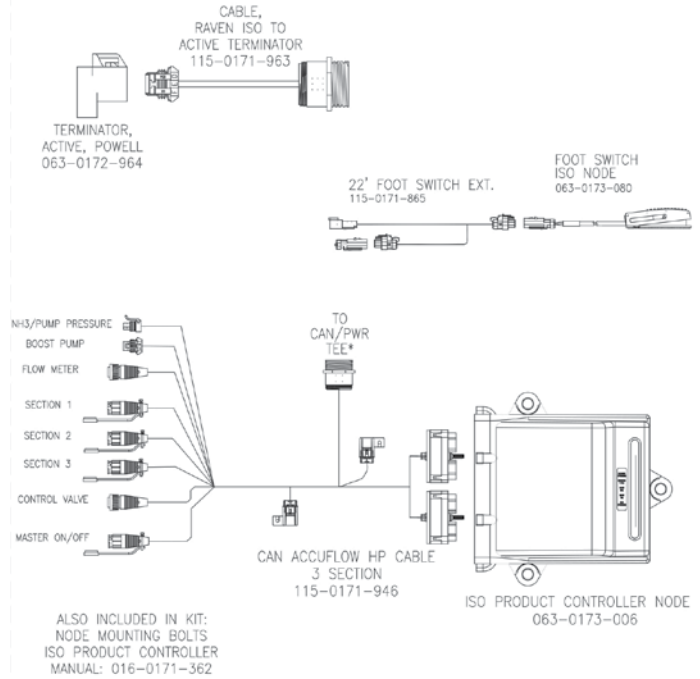


 RAVEN 400 CABLING IS COMPATIBLE WITH A JOHN DEERE GREENSTAR RATE CONTROLLER.

RAVEN ISO KIT 3 SECTION

3 Section

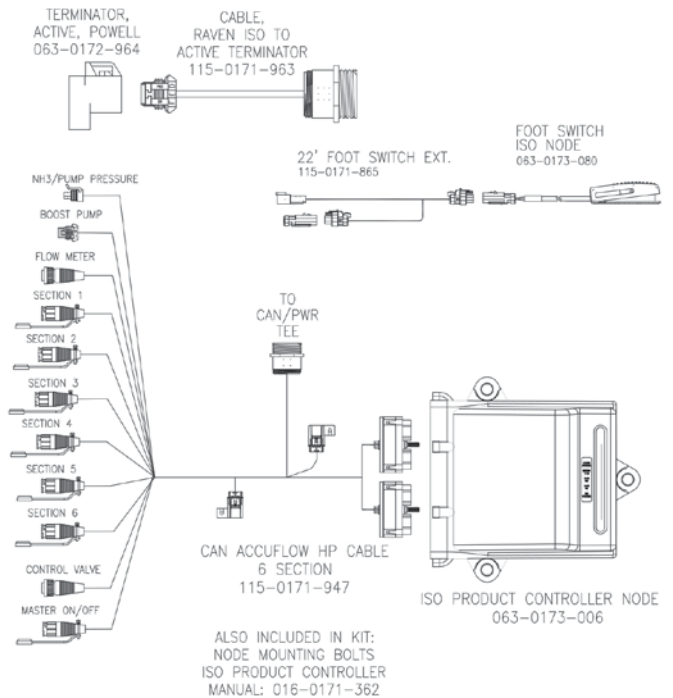
- Kit, ISOBUS AccuFlow™ 3 Section.....**RV1-117-6300-001**
- Cable, ISOBUS Hitch to Raven ECU 22'.....**RV1-115-0171-989**
- Cable, ISOBUS Hitch to Raven ECU 36'.....**RV1-115-0171-975**



RAVEN ISO KIT 6 SECTION

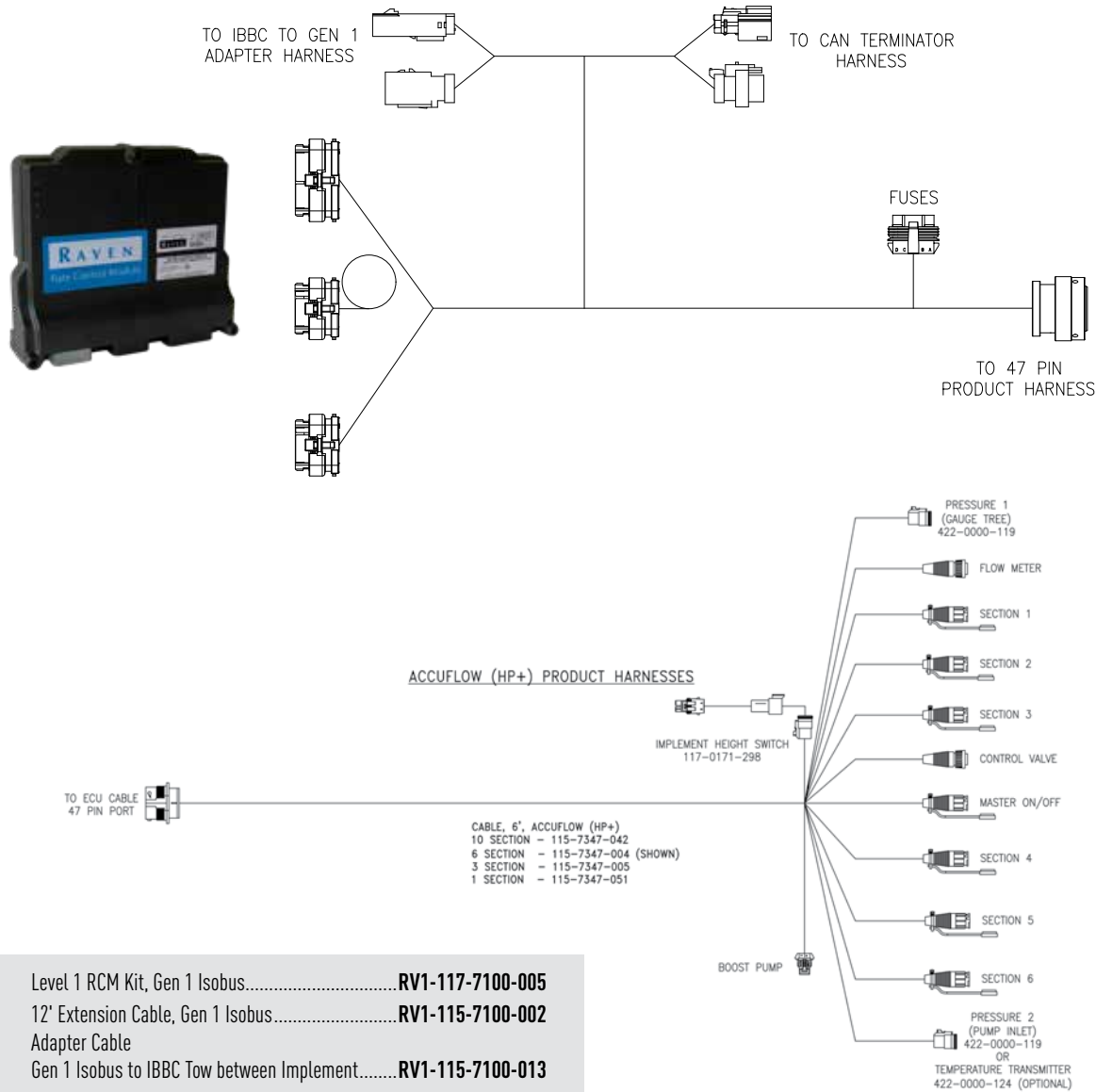
6 Section

- Kit, ISOBUS AccuFlow™ 3 Section.....**RV1-117-6300-002**
- Cable, ISOBUS Hitch to Raven ECU 22'.....**RV1-115-0171-989**
- Cable, ISOBUS Hitch to Raven ECU 36'.....**RV1-115-0171-975**



 RAVEN ISO CABLING IS COMPATIBLE WITH CASE PRO 700 SYSTEMS

RAVEN RATE CONTROL MODULE



- 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**
- Proximity Switch, Magnetic Mounting Kit..... **RV1-117-0171-298**
- 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 TROUBLESHOOTING GUIDE

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 next page) 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 23.
<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) 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.

Fig. 1

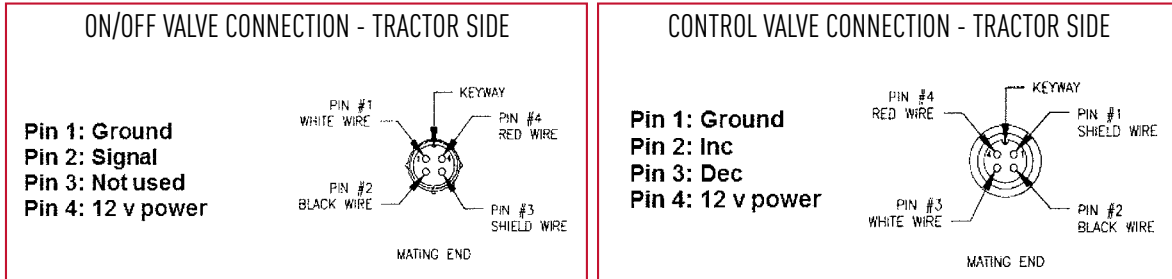
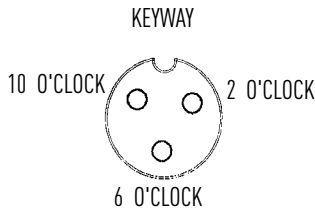


Fig. 2

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:



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.

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

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



AFTER TESTING IS COMPLETE, RE-ENTER CORRECT METER CAL NUMBERS BEFORE 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 **DJ467095060**
 Required when upgrading to a CTA-BVT Valve
HARDWARE KIT: DJ457904000
 required to connect to BVT Valve



Flow Sensor Module **DJ457901570AS1**



Continental BVT Valve 1 1/4" **CTA-BVT**
 REPAIR KIT: CTA-BVT-RK



Dickey-John Radar Kit..... **DJ467831000S9**



LM1 Module Switch **DJ466050030**



Flow Meter (Complete)..... **DJ457901610S1**



Raven Phoenix 10 GPS **RVI-117-0171-165**
 Cable, Raven Speed Sensor
 to DJ Harness **RVSSDJ**

DICKEY-JOHN CCS 100

The Dickey-John CCS 100 has been discontinued, but can be replaced with a Land Manager Upgrade Kit.

Common CCS 100 Replacement Parts

- CCS to LM1 Upgrade Kit **DJLM/CCS RETRO**
- Flush Switch, CCS **DJ457902320S1**
- Land Manager 1 Console **DJ466390025S1**

IF THIS FAILS



YOU NEED THIS



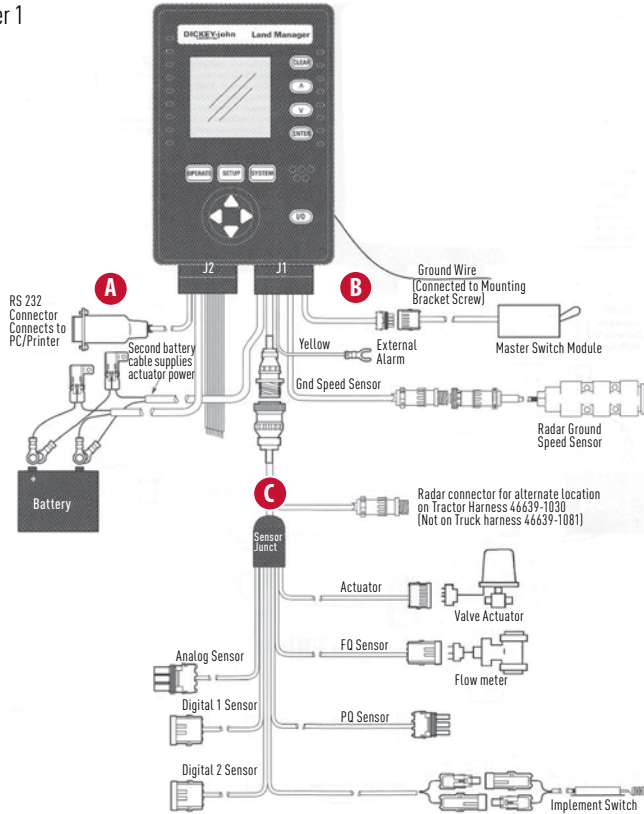
CCS 100



LM1

DICKEY-JOHN WIRING

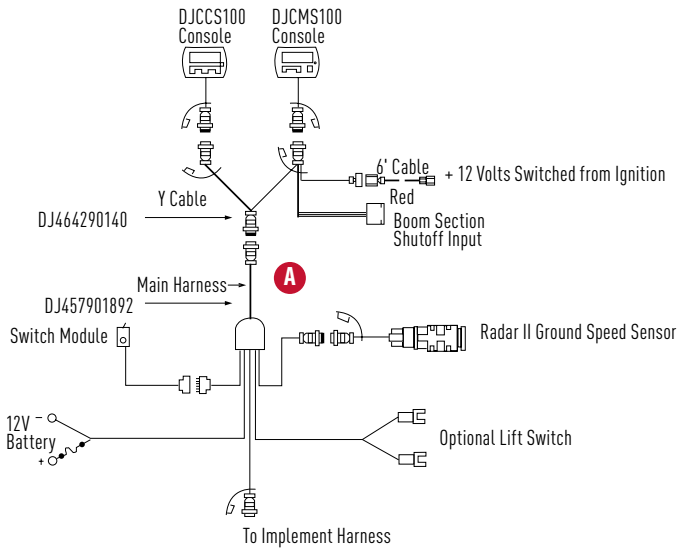
Land Manager 1



LM1 Harnesses

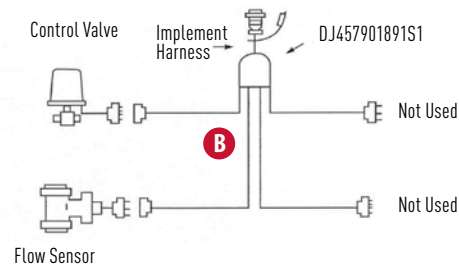
- A** Power Harness LM1, J2 **DJ466391090S1**
- B** Main Harness LM1, J1 (Long) **DJ466391003S1**
- C** Implement Harness LM1 **DJ466391030S1**

CCS100 and CMS100



CCS 100 Harnesses

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



FOR DICKEY-JOHN TROUBLESHOOTING, TURN TO PAGE 34

DICKEY-JOHN TROUBLESHOOTING GUIDE

PROBLEM	PROBABLE CAUSE & CORRECTIVE ACTION
<p>1. Rate display is inaccurate or unstable.</p>	<p>This is a Dickey-John flow sensor. (Fig. 1) Usually a faulty flow sensor 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" hose barb 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) <p>Power at flow sensor: Black + Red 12V Black + Green 9V</p> <ol style="list-style-type: none"> 6. If there is no voltage, you have a faulty cable or connection. Check or replace implement harness. 7. If there is voltage, remove the flow sensor and check to see that 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



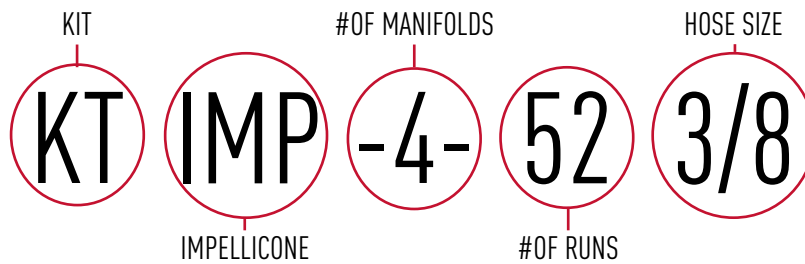
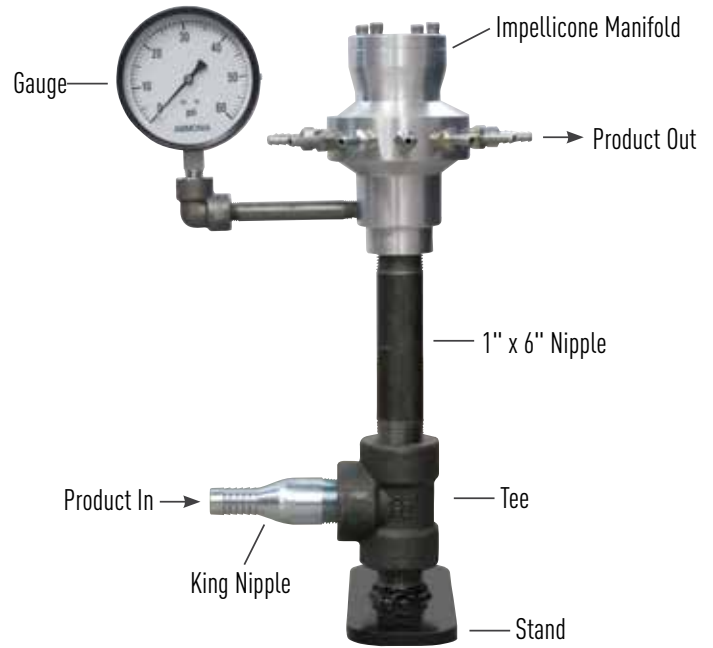
Fig. 5



IMPELLICONE MANIFOLD KITS - STANDARD

CDS-John Blue Impellicone NH3 Kits

2-Way Impellicone Kit	KTIMP-2-26
2-Way Impellicone Kit	KTIMP-2-36
3-Way Impellicone Kit	KTIMP-3-39
3-Way Impellicone Kit	KTIMP-3-54
4-Way Impellicone Kit	KTIMP-4-52
4-Way Impellicone Kit	KTIMP-4-72
5-Way Impellicone Kit	KTIMP-5-65
5-Way Impellicone Kit	KTIMP-5-90
6-Way Impellicone Kit	KTIMP-6-78
6-Way Impellicone Kit	KTIMP-6-108
7-Way Impellicone Kit	KTIMP-7-91
8-Way Impellicone Kit	KTIMP-8-104
10-Way Impellicone Kit	KTIMP-10-180



Impellicone Manifolds are available in 13-Port and 18-Port Models
 EVA Hose from Manifolds to Shanks is available in 1/8", 1/4", 3/8" & 1/2"

Kit Includes:

- Manifolds with Mounting Hardware
- Splitter
- Breakaway Coupler with Bracket
- 1 1/4" Nylon Braid NH3 Hose from Breakaway to Cooler
- EVA Hose from Cooler to Splitter / Splitter to Manifolds
- EVA Hose from Manifolds to Shanks
- Pressure Gauges
- Reusable Hose Clamps
- Thread Tape / Pipe Sealant
- All Required Pipe Fittings

Does Not Include:

Knives, Shanks, NH3 Tubes or Clips

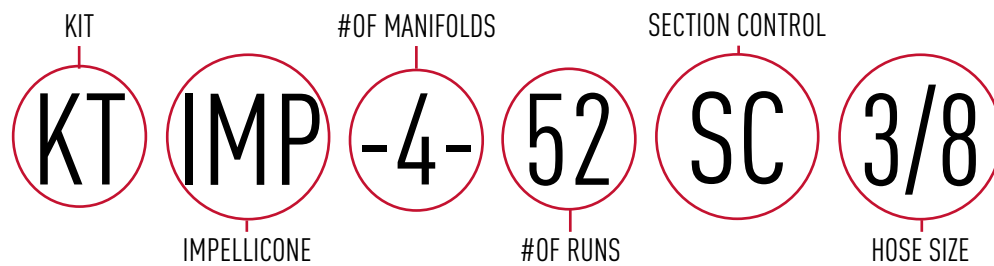
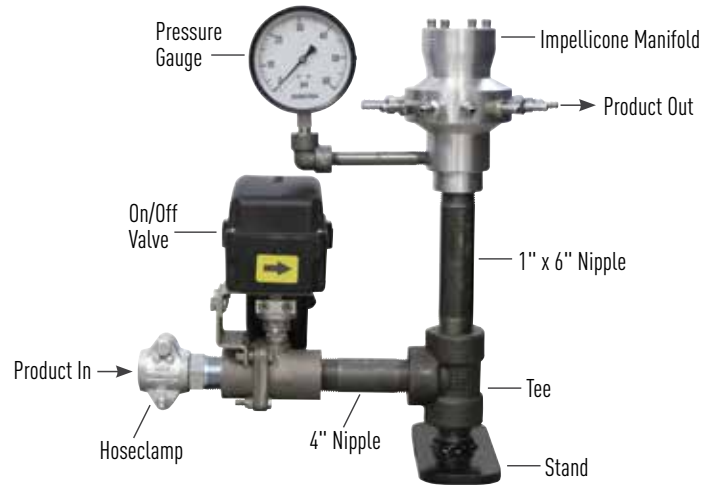
For Maximum Row to Row Accuracy:

Keep hoses between the SPLITTER and MANIFOLDS the same length.
 Keep hoses from the MANIFOLDS to the SHANKS the same length.

IMPELLICONE MANIFOLD KITS - SECTION CONTROL

CDS-John Blue Impellicone NH3 Kits

2-Way Impellicone Kit	KTIMP-2-26SC
2-Way Impellicone Kit	KTIMP-2-36SC
3-Way Impellicone Kit	KTIMP-3-39SC
3-Way Impellicone Kit	KTIMP-3-54SC
4-Way Impellicone Kit	KTIMP-4-52SC
4-Way Impellicone Kit	KTIMP-4-72SC
5-Way Impellicone Kit	KTIMP-5-65SC
5-Way Impellicone Kit	KTIMP-5-90SC
6-Way Impellicone Kit	KTIMP-6-78SC
6-Way Impellicone Kit	KTIMP-6-108SC
7-Way Impellicone Kit	KTIMP-7-91SC
8-Way Impellicone Kit	KTIMP-8-104SC
10-Way Impellicone Kit.....	KTIMP-10-180SC



Impellicone Manifolds are available in 13-Port and 18-Port Models
 EVA Hose from Manifolds to Shanks is available in 1/8", 1/4", 3/8" & 1/2"

Kit Includes:

- Manifolds with Mounting Hardware and Hosebarbs
- Splitter
- Breakaway Coupler with Bracket
- 1 1/4" Nylon Braid NH3 Hose from Breakaway to Cooler / Cooler to Splitter
- Pressure Gauges
- Reusable Hose Clamps
- Raven On/Off Valves
- Extension Harnesses for Raven On/Off Valves
- Thread Tape / Pipe Sealant
- All Required Pipe Fittings and Plugs

Does Not Include:

High Pressure 3/4" Nylon Braid NH3 Hose from Splitter to Manifolds (order exact lengths once kit is installed)
 Knives, Shanks, NH3 Tubes or Clips

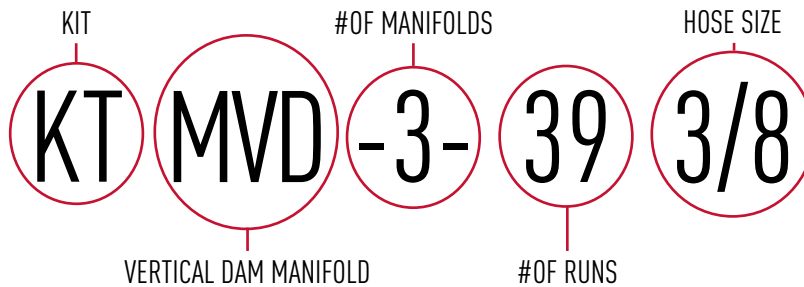
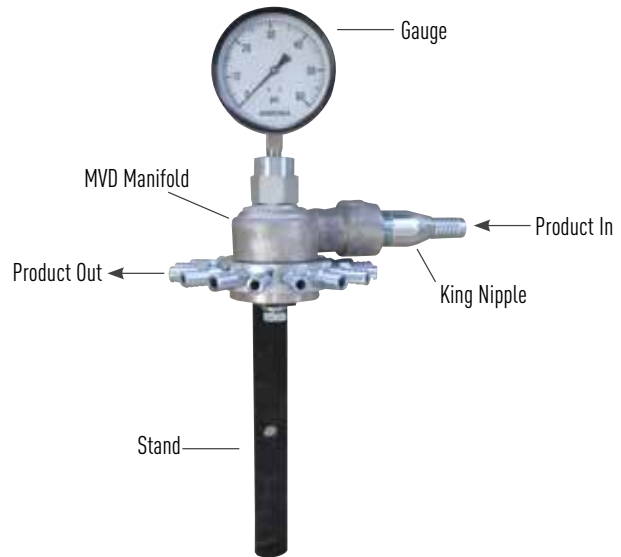
For Maximum Row to Row Accuracy:

Keep hoses between the SPLITTER and MANIFOLDS the same length.
 Keep hoses from the MANIFOLDS to the SHANKS the same length.

MVD MANIFOLD KITS - STANDARD

Continental MVD NH3 Kits

2-Way MVD Kit	KTMVD-2-32
3-Way MVD Kit	KTMVD-3-48
4-Way MVD Kit	KTMVD-4-64
5-Way MVD Kit	KTMVD-5-80
6-Way MVD Kit	KTMVD-6-96



Impellicone Manifolds are available in 16-Port Models
 EVA Hose from Manifolds to Shanks is available in 1/8", 1/4", 3/8" & 1/2"

Kit Includes:

- Manifolds with Mounting Hardware
- Splitter
- Breakaway Coupler with Bracket
- 1 1/4" Nylon Braid NH3 Hose from Breakaway to Cooler
- EVA Hose from Cooler to Splitter / Splitter to Manifolds
- EVA Hose from Manifolds to Shanks
- Pressure Gauges
- Reusable Hose Clamps
- Thread Tape / Pipe Sealant
- All Required Pipe Fittings

Does Not Include:

Knives, Shanks, NH3 Tubes or Clips

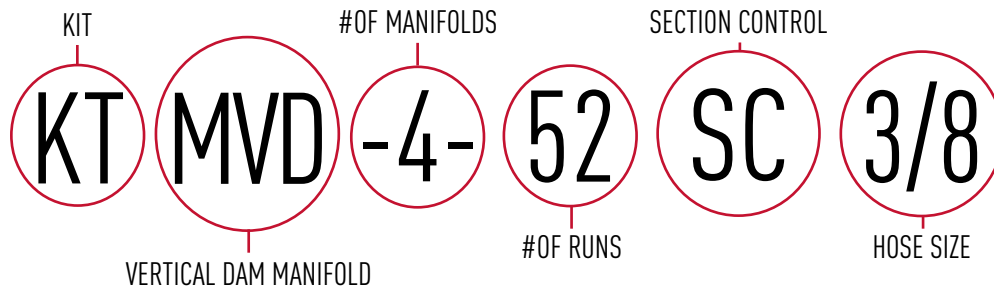
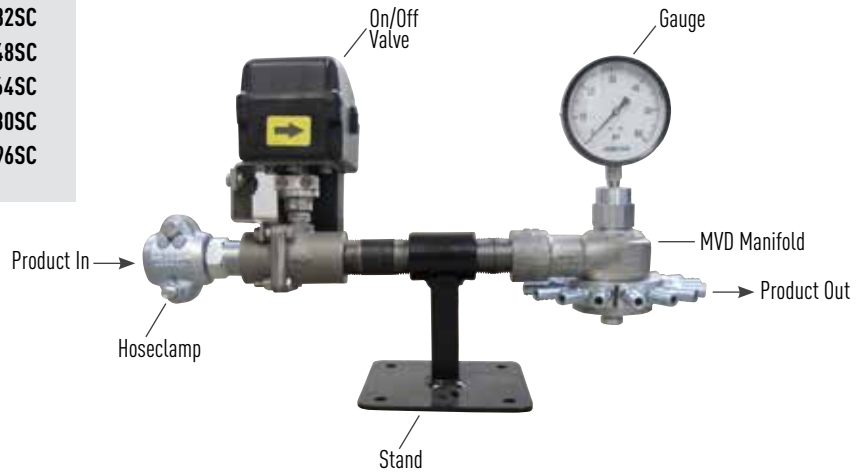
For Maximum Row to Row Accuracy:

Keep hoses between the SPLITTER and MANIFOLDS the same length.
 Keep hoses from the MANIFOLDS to the SHANKS the same length.

MVD MANIFOLD KITS - SECTION CONTROL

Continental MVD NH3 Kits

2-Way MVD Kit, Section Control.....	KTMVD-2-32SC
3-Way MVD Kit, Section Control.....	KTMVD-3-48SC
4-Way MVD Kit, Section Control.....	KTMVD-4-64SC
5-Way MVD Kit, Section Control.....	KTMVD-5-80SC
6-Way MVD Kit, Section Control.....	KTMVD-6-96SC



Impellicone Manifolds are available in 16-Port Models
 EVA Hose from Manifolds to Shanks is available in 1/8", 1/4", 3/8" & 1/2"

Kit Includes:

- Manifolds with Mounting Hardware and Hosebarbs
- Splitter
- Breakaway Coupler with Bracket
- 1 1/4" Nylon Braid NH3 Hose from Breakaway to Cooler / Cooler to Splitter
- Pressure Gauges
- Reusable Hose Clamps
- Raven On/Off Valves
- Extension Harnesses for Raven On/Off Valves
- Thread Tape / Pipe Sealant
- All Required Pipe Fittings and Plugs

Does Not Include:

High Pressure 3/4" Nylon Braid NH3 Hose from Splitter to Manifolds (order exact lengths once kit is installed)
 Knives, Shanks, NH3 Tubes or Clips

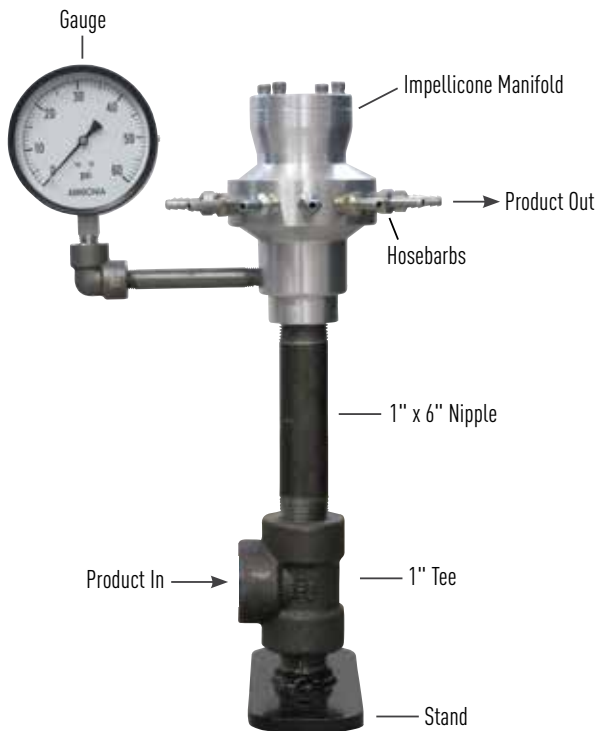
For Maximum Row to Row Accuracy:

Keep hoses between the SPLITTER and MANIFOLDS the same length.
 Keep hoses from the MANIFOLDS to the SHANKS the same length.

MANIFOLDS & COMPONENTS

IMPELLICONE MANIFOLD

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. The Impellicone's superior accuracy allows better control of targeted rates without compromising distribution accuracy which greatly reduces over application of NH3. Available in 13-port and 18-port models, the Impellicone is the recommended manifold when considering section shutoff and variable rate application.



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

Hosebarbs for Impellicones

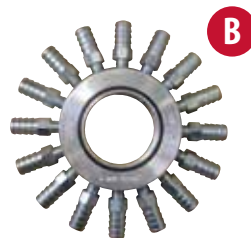
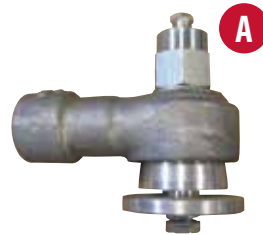
1/8" Hose x 1/4" NPT	MIS6768-4B
1/4" Hose x 1/4" NPT	CTA-1131
3/8" Hose x 1/4" NPT	CTA-1132
1/2" Hose x 1/4" NPT	CTA-1138

Continental MVD Manifold

A Body Only MVD Manifold	CTA-MVD
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
Repair Kit MVD Manifold	CTA-MVD-RK

Hosebarbs for MVDs

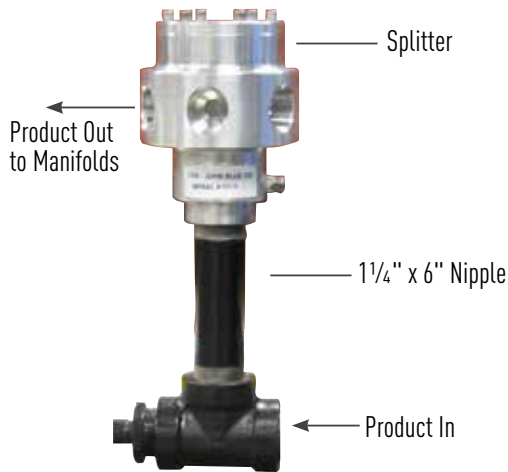
1/8" Hose x 1/8" NPT	MIS6768-4A
1/4" Hose x 1/8" NPT	CTA-6131-120
3/8" Hose x 1/8" NPT	CTA-6132
1/2" Hose x 1/8" NPT	CTA-6138



SPLITTERS

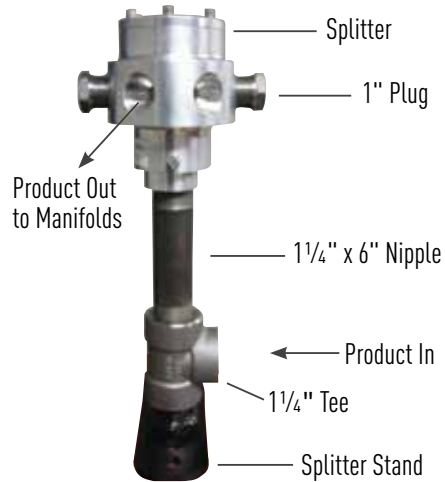
Cooler Mount

The splitter can be mounted directly on an NH3 cooler.
Included in NH3 Kit found on pages 35-38.



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 1/4" Inlet x 1" Outlets
Outlets are pluggable



Continental Splitter

6-Way Continental Splitter	CTA-360SP-7
7-Way Impellicone Splitter	CTA-360SP-6
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 1/4" Inlet x 3/4" Outlets



King Nipples

1" Hose x 1" Threads	FT16K16S
3/4" Hose x 3/4" Threads	FT12K16S
3/4" Hose x 1" Threads	FT16K16S



FLO-MAX BREAKAWAY & INLINE BREAKAWAY COUPLING

1 1/4" Flo-Max Kit

Flo-Max Breakaway Kit **STFM126K**
 1 1/4" (less bracket)

KIT INCLUDES:

Breakaway	1 x Reducer Bushing
2 x 1/4" Bleeders	1 x ACME Cap
1 x Hydrostat	1 x ACME Adapter



1 1/2" Flo-Max Kit

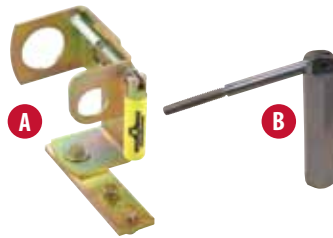
Flo-Max Breakaway Kit **STFM150K**
 1 1/2" c/w bracket

KIT INCLUDES:

Breakaway	1 x Hydrostat
1 1/2" E-Z Bracket	1 x ACME Adaptor
2 x 1/4" Bleeders	1 x ACME Cap

1 1/4" Flo-Max E-Z Bracket Only

- A** E-Z Bracket 1 1/4" **STFM126-1500**
- B** E-Z Bracket Handle Kit **STFM126-0026**



1 1/2" Flo-Max E-Z Bracket Only

- A** E-Z Bracket 1 1/2" **STFM150-1500**
- B** E-Z Bracket Handle Kit **STFM126-0026**

1 1/4" Flo-Max Female Half

Female Half **STSFM125/126-1100**



1 1/2" Flo-Max Female Half

Female Half **STFM150-1100**

1 1/4" Flo-Max Male Half

Male Half **STSFM125/126-1200**



1 1/2" Flo-Max Male Half

Male Half **STFM150-1200**

1 1/4" Flo-Max Male Insert

Flo-Max Male Insert **STFM125-5003**
 (less O-Rings)
 Male Tip Quad Ring 1 1/4" **STFMQR**
 Male Tip O-Ring 1 1/4" **STFM108-2003**



1 1/2" Flo-Max Male Insert

Flo-Max Male Insert **STFM150-5003**
 (less O-Rings)
 Male Tip Quad Ring 1 1/2" **STP5-304-RO**
 Male Tip O-Ring 1 1/2" **ST110-2003**

1 1/4" Flo-Max REPAIR KIT

Flo-Max c/w Tool Assembly **STFM125-0022**
 (O-Rings only) **STFM125-0024**
 1 1/4" Plunger Kit **STFM125-0023**



1 1/2" Flo-Max REPAIR KIT

Flo-Max c/w Tool Assembly **STFM150-0022**
 (O-Rings only) **STFM150-0024**
 1 1/2" Plunger Kit **STFM150-0023**

! REMINDER: CHANGE O-RINGS ANNUALLY

CONTINENTAL SVW BREAKAWAY

1 1/4" Continental Kit

Continental Breakaway Kit **CTA-SWV-125**

1 1/4" c/w bracket

KIT INCLUDES:

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



1 1/2" Continental Kit

Continental Breakaway Kit **CTA-SWV-150-G**

1 1/2" c/w bracket

KIT INCLUDES:

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

1 1/4" Continental Bracket Only

SWV Breakaway Bracket **CTA-SWV-BKT**



1 1/2" Continental Bracket Only

SWV Breakaway Bracket **CTA-SWV-BKT**

1 1/4" Continental Female Half

Female Half **CTA-SWV-1**

c/w SWV Bracket



1 1/2" Continental Female Half

Female Half **CTA-SWV-1-G**

c/w SWV Bracket

1 1/4" Continental Male Half

Male Half **CTA-SWV-2**



1 1/2" Continental Male Half

Male Half **CTA-SWV-2-G**

1 1/4" 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

SQUIBB-TAYLOR INLINE BREAKAWAY COUPLING

Inline Breakaway Coupling

Breakaway Coupling 1 1/4" x 1 1/4"	STIB125
Bracket Adapter 1 1/4" x 1 1/4"	STIB125-1



RB Breakaway Repair Kits

RB (OEM) Repair Kit 1"	STRB1-0024
RB Coupling O Ring Kit 1"	STRBOK-1
RB Coupling O-Ring Kit 1 1/4"	STRBOK-125
RB (OEM) Repair Kit 1 1/4"	STRB1.25-0024



RB Breakaway (Discontinued)

AIR DRILL KIT & OPTIONAL EQUIPMENT

The DyTerra air drill kit is designed to provide a producer with everything needed to get NH3 from the nurse tank to the toolbar when pulling a seed tank. It includes a breakaway, hose clamps and ACME hose couplers. A custom length of hose can be provided to span the seed tank.



Squibb-Taylor Air Drill Kit

Air Drill Kit 1 1/4"	KTASK20
Air Drill Kit 1 1/2"	KTASK24

Continental Air Drill Kit

Air Drill Kit 1 1/4"	KTASKC20
Air Drill Kit 1 1/2"	KTASKC24

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



Gauge Manifold Kit

Fits 4" or 6" Toolbar	KTGM
Accommodates 3 Gauges	



Gauges not included

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



shown:
MIPAGET20-40

Strainer Mesh

40 Mesh Strainer 1¼"	MIPAGETS20
100 Mesh Strainer 1¼"	MIPAGETS20-100
40 Mesh Strainer 1½"	MIPAGETS24
100 Mesh Strainer 1½"	MIPAGETS24-100
40 Mesh Strainer 2"	MIPAGETS32



shown:
MIPAGETS20

KNIVES, TUBES, CLIPS & HITCHES

Chisel Plow Knives

Chisel Plow Knife 3/8"	MICP7038
Chisel Plow Knife 1/2"	MICP7015

Side Mount Knives

Side Mount Knife c/w 3/8" Tube	MIA50UVX104X
Side Mount Knife c/w 1/2" Tube	MIA50UVX204X



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



MORE VW MANUFACTURING OPENERS AVAILABLE UPON REQUEST

CAPSTAN NJECT® 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
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Kit includes:

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

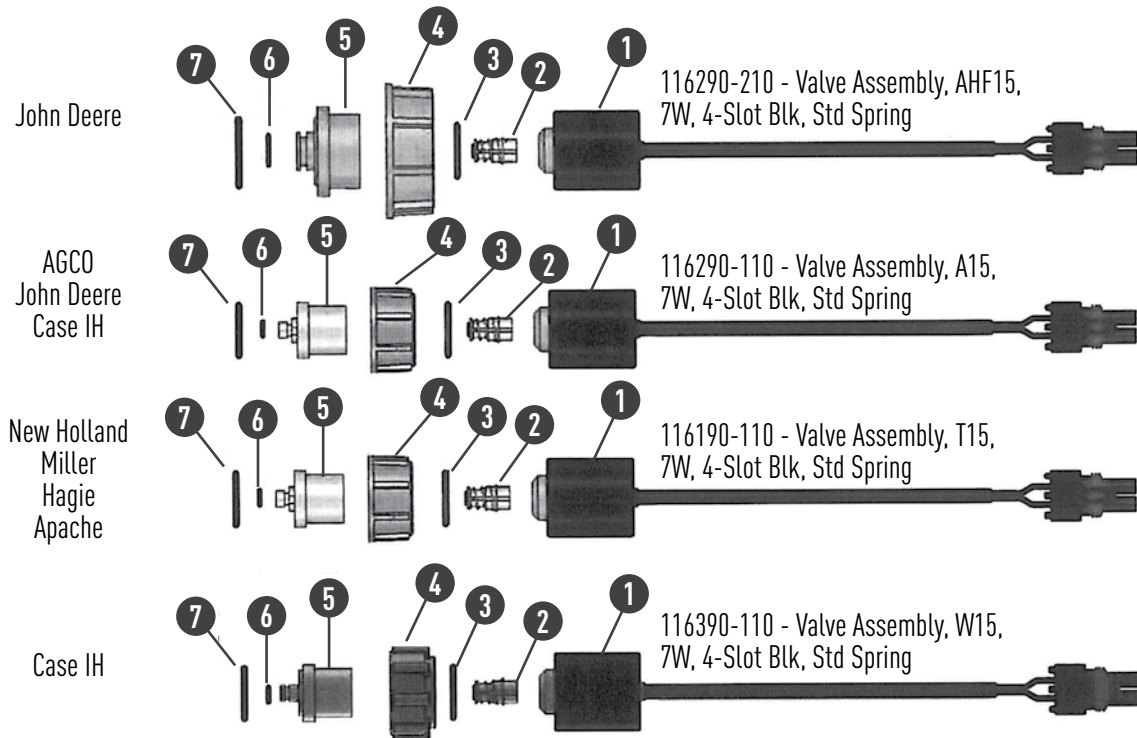
Nozzle Valve Parts List

Coil Assembly, 12-Watt.....	CA625147-011
Coil Assembly, 7-Watt.....	CA116189-111
Valve Body $\frac{5}{32}$ " Orifice.....	CA620108-001
Valve Body $\frac{3}{32}$ " 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



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	DESCRIPTION	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)	715022-204	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



HIGH FLOW UPGRADE OPTIONS



Valve/Speedy Coupler 1 1/4" x 2 1/4" **STA1527**
 Valve/Speedy Coupler 1 1/2" x 2 1/4" **STA1529**



Withdrawal Valve 1 1/4" **CTA-1406-FBW**
 Withdrawal Valve 1 1/2" **CTA-1507-GBW**
 REPAIR KIT: CTA-25H-RK



Withdrawal Valve 1 1/4" **STA484 N-45**
 Withdrawal Valve 1 1/2" **STA482 N-60**
 REPAIR KIT: ST480-22



8 YEAR
 NH3 Hose 1 1/4" Stainless Steel Braid **HSN259520**
 NH3 Hose 1 1/2" Stainless Steel Braid **HSN259524**
6 YEAR
 NH3 Hose 1 1/4" Nylon Braid **HSN200020**
 NH3 Hose 1 1/2" Stainless Steel Braid **HSN200024**



Reusable Hose Clamp 1 1/4" x 1 1/4" **ME3162-20**
 Reusable Hose Clamp 1 1/2" x 1 1/2" **ME3162-24**



Hose Clamp 2 1/4" F ACME x 1 1/4" **ME3162-2020S**
 Hose Clamp 2 1/4" F ACME x 1 1/2" **ME3162-24S**



Parking Plug 2 1/4" M ACME **STA2024-5000**



2 1/4" M ACME x 1 3/4" F ACME **CTA-586**



2 1/4" F ACME x 1 3/4" M ACME **ME611S**



Adapter 1 1/2" MNPT x 2 1/4" M ACME **STA2060S**
 Adapter 1 1/2" MNPT x 2 1/4" M ACME **STA2077**

HIGH FLOW VALVES



Globe Valve 2" **ME825P-16**
REPAIR KIT: ME815-16SRK



Angle Valve 1/4" **ME815-10**
REPAIR KIT: ME815-10SRK
Angle Valve 2" **ME815P-16**
REPAIR KIT: ME815-16SRK



SQUIBB TAYLOR
Globe Valve 1/4" **STA331**
REPAIR KIT: ST330-22



SQUIBB TAYLOR
Globe Valve 1/2" **STA334AL**
REPAIR KIT: ST480-22

CONTINENTAL
Globe Valve 1/4" **CTA-2525-H**
REPAIR KIT: CTA-25H-RK

VALVES



Globe Valve 1" **STAL310P**
REPAIR KIT: ST310-22



Angle Valve 1" **STAL311P**
REPAIR KIT: ST310-22



Globe Valve 1/4" **STAL312P**
REPAIR KIT: ST312-22



Angle Valve 1/4" **STAL313P**
REPAIR KIT: ST312-22



Globe Valve 2" **STAL316P**
REPAIR KIT: ST316-22



Angle Valve 2" **STAL317P**
REPAIR KIT: ST316-22



Snap Valve **STAL343A**
Minimum Bleed
1" FPT x 1/4" F ACME
REPAIR KIT: ST363-20



Snap Valve **STAL362A**
Minimum Bleed
1/4" FPT x 1/4" F ACME
REPAIR KIT: ST363-20

TANK VALVES



Withdrawal Valve 1 1/4" x 1" **STA521P**
REPAIR KIT: ST310-22



Fill/Vapour Valve 1 1/4" **STA525P**
REPAIR KIT: ST310-22



Fill/Vapour Valve 1 1/4" **CTA-1201**
REPAIR KIT: CTA-2212-RK



Fill Valve 1 1/2" x 1 1/2" MPT **STA502N-60**
REPAIR KIT: ST480-22



Fill Valve 1 1/2" x 2 1/4" M ACME **CTA-1708-GA**
REPAIR KIT: CTA-25H-RK



Fill/Vapour Valve
1 1/4" MPT Closed Yolk **CTB-1201-CY**



VALVE REPAIR KITS

SQUIBB-TAYLOR

STAL309P	3/4"	ST308-22
STAL310P, STAL311P, STAL477EP, STA521P, STA522P, STA525P	1"	ST310-22
STAL312P, STAL313P	1 1/4"	ST312-22
STAL315P	1 1/2"	ST314-22
STAL316P, STAL317P, STAL316FP	2"	ST316-22
STAL320P, STAL321P, STAL320FP, STAL321FP	3"	ST320-22
STA330, STA331, STA1525, STA1527	1 1/4" High Flow	ST330-22
STA329AL	1" Y Pattern	ST329-22
STAL343, STAL362 (old style)	1" Snap Valve	ST343-22
STAL361 (old style)	1 1/4" Snap Valve	ST344-22
STAL343A, STAL362A (new style)	1" & 1 1/4" Snap Valve	ST363-20

FISHER

FRN301-06, FRN301-08, FRN401-06, FRN401-08	3/4" & 1"	FRRN300-08
FRN310-10, FRN310-12, FRN410-10, FRN410-12,	1 1/4" & 1 1/2"	FRRN300-12
FRN310-16, FRN410-16	2"	FRRN300-16
FRN310-24	3"	FRRN300-24

REGO

RGA7505AP, RGA7506AP	3/4"	RGA7505-50
RGA7507AP, RGA7508AP	1"	RGA7507-50
RGA7509BP, RGA7510BP	1 1/4"	RGA7509-50
RGA7513AP, RGA7514AP, RGA7515AP, RGA7516AP	2"	RGA7513-50
RGA7517AP, RGA7518AP	3"	RGA7515-50
RGA8016DP, RGA8017DP, RGA8018DP	1 1/4" Fil/WD	RGA8016B-50

CONTINENTAL

CTB-1250, CTB-1350, CTB-1650	1"	CTA-2212-RK
CTA-1625, CTA-2525-H	1 1/4"	CTA-25H-RK
CTA-2425-H, CTA-2450-H, CTA-2550-H	1 1/4"	CTA-2550H-RK
CTA-1201	1 1/4"	CTA-2212-RK
CTA-1406-FBW, CTA-1406F, CTA1507-G, CTA-1507-GBW, CTA-1708-GA	1 1/4"	CTA-25H-RK
CTA-1809-BFV	1 1/2"	CTA-1809-RK
CTA-2600, CTA-2700	2"	CTA-26-RK

MARSHALL

ME825-10, ME825-12, ME815-10 ME815-12	1 1/4" & 1 1/2"	ME815-10SRK
ME825P-16, ME815P-16	2"	ME815-16SRK

WHAT WE CAN DO FOR YOU..

Turn to **page 105** to see all of the services we have to offer including mandatory annual and 5-year inspections on nurse wagons and delivery trucks.



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
- 1 1/4" hose has 56% more capacity than 1" hose
- Ensure inlet plumbing from the nurse tank is as short as possible
- Use minimum 1 1/4" hose in place of 1" hose
- 1 1/2" hose has two times the capacity of 1 1/4" hose

Stainless Steel Anhydrous Hose (Grey Stripe)

NH3 Hose 1/2", SS Braid, 10 Year.....	HSN144608
NH3 Hose 3/4", SS Braid, 8 Year	HSN259512
NH3 Hose 1", SS Braid, 8 Year	HSN259516
NH3 Hose 1 1/4", SS Braid, 8 Year.....	HSN259520
NH3 Hose 1 1/2", SS Braid, 8 Year.....	HSN259524
NH3 Hose 2", SS Braid, 8 Year	HSN259532
NH3 Hose 3", SS Braid, 10 Year.....	HSN144648



Nylon Braided Anhydrous Hose (Green Stripe)

NH3 Hose 1/2", Nylon Braid, 6 Year.....	HSN200008
NH3 Hose 3/4", Nylon Braid, 6 Year.....	HSN200012
NH3 Hose 1", Nylon Braid, 6 Year.....	HSN200016
NH3 Hose 1 1/4", Nylon Braid, 6 Year.....	HSN200020
NH3 Hose 1 1/2", Nylon Braid, 6 Year.....	HSN200024



EVA Tubing

1/8" - 1000' Roll.....	HS44P-BLK-NH3
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

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 HOSE CLAMPS & ACME HOSE CLAMPS

Threaded Reusable Hose Clamps

1/2" MNPT x 1/2" Hose	ME3162-08
3/4" MNPT x 3/4" Hose	ME3162-12
1" MNPT x 1" Hose	ME3162-16
1 1/4" MNPT x 1 1/4" Hose	ME3162-20
1 1/2" MNPT x 1 1/2" Hose	ME3162-24
2" MNPT x 2" Hose	ME3162-32
3" MNPT x 3" Hose	ME3162-48
1" MNPT x 3/4" Hose	ME3162-1216
1" MNPT x 1 1/4" Hose	ME3162-2016



shown:
ME3162-24

ACME Reusable Hose Clamps

3/4" Hose x 1 3/4" F ACME	ME3162-12S
1" Hose x 1 3/4" F ACME	ME3162-16S
1 1/4" Hose x 1 3/4" F ACME	ME3162-2018S
1 1/4" Hose x 2 1/4" F ACME	ME3162-2020S
1 1/2" Hose x 2 1/4" F ACME	ME3162-24S
2" Hose x 3 1/4" F ACME	ME3162-32S



shown:
ME3162-12S



shown:
ME3162-2020S



ACME FITTINGS AND COUPLERS



Adapter **STA2002**
1" MPT x 1 3/4" M ACME



Adapter **STA2003S**
1 1/4" MPT x 1 3/4" M ACME



Adapter **STA2060S**
1 1/4" MPT x 2 1/4" M ACME



Adapter..... **STA2077**
1 1/2" MPT x 2 1/4" M ACME



Adapter **STA2063S**
2" MPT x 3 1/4" M ACME
Adapter **ME503S-16**
2" MPT x 3 1/4" M ACME



Adapter **ME502S-16/10**
2" MPT x 2 1/4" M ACME
1 1/4" Female Threads



Adapter **CTA-586**
1 3/4" F ACME x 2 1/4" M ACME



Adapter..... **ME612S**
1 3/4" M ACME x 3 1/4" F ACME



Adapter **ME611S**
1 3/4" M ACME x 2 1/4" F ACME



Fill Coupling **STA1151F**
1 3/4" F ACME x 1" MPT



Fill Coupling **STA1156FS**
2 1/4" F ACME x 1 1/4" MPT



Fill Coupling **STA1157FS**
3 1/4" F ACME x 2" MPT



Speedy Coupler **STA1131F**
1 3/4" F ACME x 1" MPT



Speedy Coupler **STA1132F**
2 1/4" F ACME x 1 1/4" MPT

Speedy Coupler **STA1133F**
2 1/4" F ACME x 1 1/2" MPT



Adapter..... **STA2005S**
1 3/4" M ACME x 1 3/4" M ACME

Adapter..... **STM536-26**
3 1/4" M ACME x 3 1/4" M ACME



Adapter..... **STA2007S**
2 1/4" M ACME x 2 1/4" M ACME

ACME CAPS & GASKETS



Parking Plug 1 1/4" M ACME **STA2014B**
 Parking Plug 2 1/4" M ACME **STA2024-5000**



Hose Swivel 1" MPT **STAL109**
 REPAIR KIT: ST109-0022
 Hose Swivel 1 1/4" MPT **STAL111**
 REPAIR KIT: ST111-0022



Plastic Cap 1 1/4" F ACME **CT22-63-FC**
 Plastic Cap 2 1/4" F ACME **STST-1177C**



Steel Cap 1 3/4" F ACME **STA1152C**



Steel Cap 2 1/4" F ACME **STA1175CS**
 Steel Cap 3 1/4" F ACME **STA1176CS**

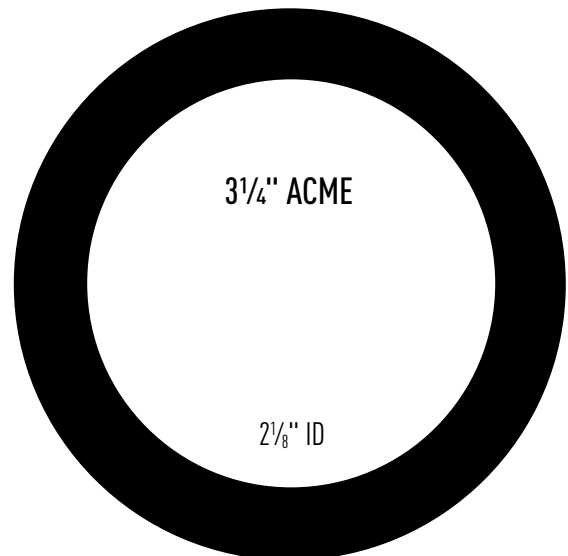
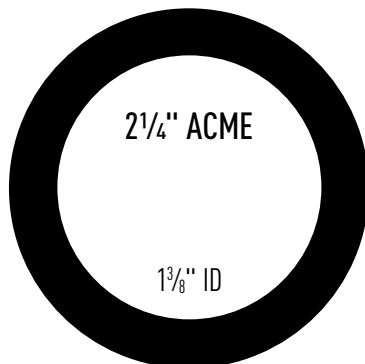
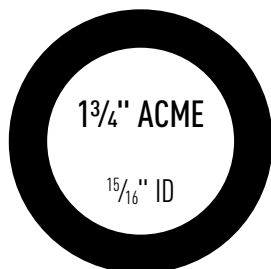


Steel Cap 2 1/4" F ACME, w/Cable **ME431FS-1C**
 Steel Cap 3 1/4" F ACME, w/Cable **ME441FS-1C**

ACME GASKETS

- Gasket 1 3/4" ACME **ST1102A16**
- Gasket 2 1/4" ACME **ST1E8126**
- Gasket 3 1/4" ACME **ST1E8128**

*All gaskets shown are actual size



BLEEDERS AND GAUGES



Bleeder Valve.....**STA1911**
1/4" Knurled



Bleeder Valve.....**STA1912**
1/4" T-Handle



Bleeder Valve.....**STA1910S**
with Tube 1/4"



Liquid Level Valve.....**MEJ415**
3/4"



Dry Gauge 0-400.....**PGA400**
2 1/2" Face



Liquid Gauge 0-400.....**PGA400L**
2 1/2" Face



Dry Gauge 0-60.....**PGA604**
4 1/2" Face



Liquid Gauge 0-60.....**PGA604L**
4 1/2" Face



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

RELIEF VALVES



1 1/4" Relief Valves
250 PSI.....**STA1310A**
265 PSI.....**STA1310B**



3/4" Relief Valves
250 PSI.....**CTA-402-250**
265 PSI.....**CTA-402-265**



NH3 Hydrostat
1/4" 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 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.

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.



NH3 FLOAT GAUGES - NURSE TANKS

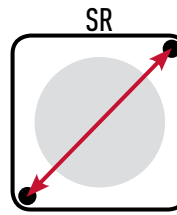


Senior Tank Float Gauges

Top Mounting, SR Head 41" Tank Diameter	RC6280-41
End Mounting, SR Head 41" Tank Diameter	RC6283-41
Top Mounting, SR Head 46" Tank Diameter	RC6280-46
End Mounting, SR Head 46" Tank Diameter	RC6283-46
End Mounting, SR Head 49" Tank Diameter	RC6283-49

REPLACEMENT BOLTS: MIFGBSR

* Call for storage tank gauge requirements



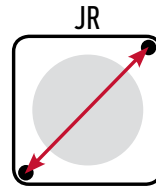
Measures 2 1/2" from centre bolt hole to centre bolt hole diagonally.

Junior Tank Float Gauges

Top Mounting, JR Head 41" Tank Diameter	RC6281-41
End Mounting, JR Head 41" Tank Diameter	RC6284-41
Top Mounting, JR Head 46" Tank Diameter	RC6281-46
End Mounting, JR Head 46" Tank Diameter	RC6284-46

REPLACEMENT BOLTS: MIFGBJR

* Call for storage tank gauge requirements



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

REPLACEMENT DIALS & FLOAT GAUGE GASKETS



STORAGE TANK DIAL
 New Style 10" **ST4607**
 Old Style 10" **ST130035**



NEW STYLE MOUNT

OLD STYLE MOUNT



Replacement Dial 4" 5-95%..... **ST553**



Replacement Dial 4" **ME930-905**
 Glow in the Dark



Junior Head Dial..... **RC5-40**



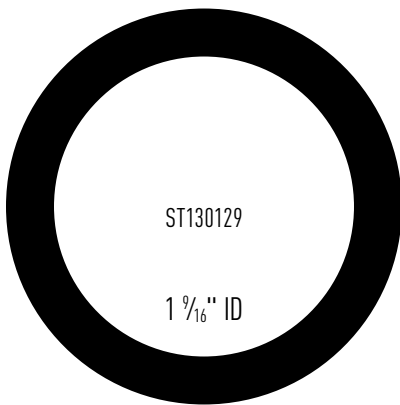
Senior Head Dial **RC5-2**



Drop-in Dial 2208CV..... **ST130018**

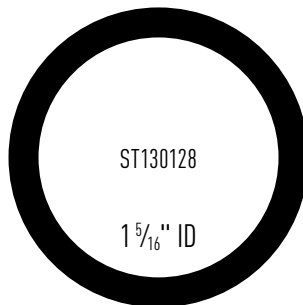


Junior Float Gauge Bolt..... **MIFGBJR**
 Senior Float Gauge Bolt **MIFGBSR**



ST130129

1 9/16" ID



ST130128

1 5/16" ID

Float Gauge Gasket

- Junior Gasket **ST130128**
- Senior Gasket **ST130129**

*All gaskets shown are actual size.

STORAGE TANK & SAFETY



Angle Valve Guard
1" **KTVGV16A0**



1 1/4" and 2" Globe Valve Guard
SQUIBB, REGO **DYVG20320**
MARSHALL **DYVG32ME0**



HF Globe Valve Guard
1 1/4" and 1 1/2" **KTVG24ST0**



Globe Valve Guard
1" **KTVG16G0**



Non-vented Goggles **M12237R**



Safety Container **M1PH75649**
(no gloves)



Side Mount
Water Container **M1PH76411**



Neoprene Gloves
NH3 Compatible **M16784R**



Top Mount
Water Container **M1PH76410**



Clear Vinyl Hose 5/8"
100ft Roll **HSCVT10**



Spanner Wrench **MEP120B**



New Style
Spanner Wrench **MEP120C**



2 Hose Lock Box **MILB2**
3 Hose Lock Box **MILB3**



CABLE SHUTOFF
2 Compartment **BIOP9112EY**
1 Compartment **BIOP9002EY**



Angle
Needle Valve 1/4" **MIN1572**
Hosebarbs:
3/8" Hose x 1/4" MPT **CTA-1132**
1/2" Hose x 1/4" MPT **CTA-1138**



Straight
Needle Valve 1/4" **MIN1532**
Hosebarbs:
3/8" Hose x 1/4" MPT **CTA-1132**
1/2" Hose x 1/4" MPT **CTA-1138**

STORAGE TANK & SAFETY

INCLUDES: Thermometer, Hydrometer, Graduated Cylinder and Instructions



Aqua Test Kit **MIAQUATESTKIT**



NH3 Hydrostat 1/4" 350 PSI **CTA-400-C**



Back Check 2" FNPT x 2" FNPT **ME875SN-16**



Chemical Wash Kit **MIMHCW/Y**



Aluminum Vent Stack 40" c/w Cap **MIVS32AL**



Pipeaway Adapter 1 1/4" **STA1310-20**



Relief Valve Manifold 1 1/4" **STA1416**
PACKING KIT: ST1415-7



Relief Valve 250 PSI 1 1/4" **STA1310A**



Flow Indicator Assembly 2" **ST5520-2**
Flapper Only 2" **ST5520-2F**



Flow Indicator Assembly 3" **ST5520-3**
Flapper Only 3" **ST5520-3F**



Master Float Gauge Assembly 108" Diameter **STME3650B**
GASKET: ST130040



Flow Indicator Dial Only **ST5520R**



New Style Storage Tank Dial 10" **ST4607**



NEW STYLE MOUNT



OLD STYLE MOUNT

Old Style Storage Tank Dial 10" **ST130035**

For DECALS, turn to pages 14 & 15

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:
STA1711



shown:
1519A4

SQUIBB-TAYLOR

1 1/4" F x 1 1/4" F	50 GPM	STA1705
1 1/4" M x 1 1/4" M	50 GPM	STA1706
2" M x 1 1/4" M	95 GPM	STA1708
2" M x 2" M x 1 1/4" M	95 GPM	STA1711
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
1 1/4" F x 1 1/4" F	50 GPM	RGA3282C
2" M x 2" F	110 GPM	RGA3292C

BACK CHECK VALVES



shown:
STA1727



shown:
FRG107

SQUIBB-TAYLOR

1 1/4" M x 1 1/4" F	STA1727
2" M x 2" F	STA1728
3" M x 3" F	STA1729

FISHER

3" M x 3" F	FRG104
2" M x 2" M x 1 1/4" F	FRG105
3" M x 2" M	FRG106
3" M x 3" M x 2" F	FRG107

MARSHALL

1 1/4" F x 1 1/4" M	ME870S-10
2" F x 2" M	ME870S-16
3" F x 3" M	ME870S-24

REGO

2" M x 2" M x 1 1/4" M	RGA3176
2" M x 2" F	RGA3186
3" M x 3" F	RGA3196

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

SQUIBB TAYLOR ELECTRIC

- Electric discharge control system for anhydrous ammonia nurse wagons
- Can be wired into Raven NH3 application kits



MAGNETIC ACTUATOR FOR ESV

Fisher ESV	STP810
REGO ESV	STP810-R
Marshall ESV	STP810-M



MAGNETIC ACTUATOR FOR ISC

1 1/2" Squibb ISC.....	STA15-45A
1 1/4" Squibb ISC.....	STA120-45A

AIRBOX

- Pneumatic discharge control system for anhydrous ammonia nurse wagons
- Can be paired with any pneumatic actuated ISC or ESV
- Air Actuators on **page 70**

Complete Airbox Kit.....**DYCS98C**
 INCLUDES: Airbox, Hose, Lighter Adapter, Fuses, Air Joiners, Quick Connect and Instructions.

Airline Quick Connect

INCLUDES:
 1/4" Blue Nylon Tubing.....**HS1J-223-07**
 Lighter Adaptor Plug.....**MIPWXM6FT**
 1/4" Air Fitting Union.....**MID6580-04-00**

SWITCH AND WIRING

Main Switch - Tractor Cab.....	STMSA
Wiring Harness, 20 ft.....	ST20JA
Y-Cable - Dual Tanks	STYA



ISC VALVES



MARSHALL ISC Straight Valve
1 1/4" **ME990-10-85**
REPAIR KIT: ME990-10-VRK



MARSHALL ISC 90° Valve
1 1/4" **ME992-10-85**
1 1/2" **ME992-12-85**
REPAIR KIT: ME990-10-VRK



REGO ISC Straight Valve
1 1/4" **RGA3209D050**
REPAIR KIT: RGA3209R-50



REGO ISC 90° Valve
1 1/4" **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 2"
2" **RGA3212RT250**
REPAIR KIT: RGA3212A-50



MARSHALL ISC Double Flange
3" 400GPM **MESAR-3DF-260**
REPAIR KIT: ME990-24-VRK



FISHER Valve
2" ISC Straight **FRC477-16-25**
REPAIR KIT: FRRC400-16



FISHER ISC 90° Valve
2" **FRC471-16-25**
REPAIR KIT: FRRC400-16



FISHER ISC Single Flange
3" x 300# **FRC484-24-40**
REPAIR KIT: FRRC40424T012

COMBINATION ROTARY ACTUATORS & ISC'S



ISC Valve - Rotary Actuator Combo
 1 1/4" 85 GPM..... **ME990AR-10-85**
 1 1/2" Tee Body..... **ME992AR-12-85**
 2" 260 GPM..... **ME990AR-16-160**



Electric SQUIBB-TAYLOR Actuator
 2" & 3" ISC..... **STC810-F**
 2" REGO ISC..... **STC810-R2**
 3" REGO ISC..... **STC810-R3**



Double Flange ISC / Rotary Actuator
 3" 400 GPM..... **ME990SAR-3DF-400**



ISC / Rotary Actuator
 4" 400 GPM..... **ME990AR-4F-400**

ISC ACCESSORIES



REGO Thermal Latch
 1 1/4" **RGA3209TL**
 MARSHALL Thermal Latch
 1 1/4" **ME990-10-902**



FISHER Gland Assembly
 2" **FRT20377-000B2**
 3" **FRT20430-000B2**



FISHER Fusible Link..... **FRP134T**



MARSHALL Gland Assembly
 1 1/4" **ME990-10-PGA**
 2" & 3" **ME990-PGA**

EMERGENCY SHUTOFF VALVES



REGO Cable Latch ESVs

1 1/4" Cable Latch ESV.....	RGA6010
REPAIR KIT, 1 1/4".....	RGAA6010-50
2" Cable Latch ESV.....	RGA6016
REPAIR KIT, 2".....	RGA6016-50

FISHER Cable Latch ESVs

1 1/4" Cable Latch ESV.....	FRN551-10
REPAIR KIT, 1 1/4".....	FRT13090-T0012
2" Cable Latch ESV.....	FRN551-16
REPAIR KIT, 2".....	FRT13090-T0012

MARSHALL Cable Latch ESVs

1 1/4" Cable Latch ESV.....	ME980C-10
REPAIR KIT, 1 1/4".....	ME980-10-SRK
1 1/2" Cable Latch ESV.....	ME980C-12
REPAIR KIT, 1 1/2".....	ME980-12-SRK
2" Cable Latch ESV.....	ME980C-16
REPAIR KIT, 2".....	ME980-16-SRK
3" Cable Latch ESV.....	ME980C-24
REPAIR KIT, 3".....	ME980-24-SRK

MARSHALL Pneumatic Latch ESVs

1 1/4" Pneumatic Latch ESV.....	ME980-10
REPAIR KIT, 1 1/4".....	ME980-10-SRK
1 1/2" Pneumatic Latch ESV.....	ME980-12
REPAIR KIT, 1 1/2".....	ME980-12-SRK
2" Pneumatic Latch ESV.....	ME980-16
REPAIR KIT, 2".....	ME980-16-SRK
3" Cable Latch ESV.....	ME980-24
REPAIR KIT, 3".....	ME980-24-SRK

COMBINATION ROTARY ACTUATORS & ESV'S



ESV / Rotary Actuator Combo

1 1/4"	ME980AR-10
1 1/2"	ME980AR-12
2"	ME980AR-16

ESV, Flanged w/Rotary Actuator

2"	ME980AR-16-2F
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SQUIBB-TAYLOR Electric Actuator

FISHER ESV	STP810
REGO ESV	STP810-R
MARSHALL ESV	STP810-M

ESV ACCESSORIES

Pneumatic Latch

REGO Fits 1 1/4", 2", 3" ESV	RG6016-60D
MARSHALL Fits 1", 1 1/2", 2", 3" ESV	ME980-904K
FISHER Fits 1 1/4", 2" ESV	FRP327D












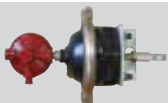






Thermal Latch

REGO Fits 1 1/4", 2", 3" ESV	RG6010TF
MARSHALL Fits 1 1/4", 1 1/2", 2", 3" ESV	ME980-903K
FISHER Fits 1 1/4", 2", 3" ESV	FRT12963T0012



AIR ACTUATORS FOR ISC'S & ESV'S

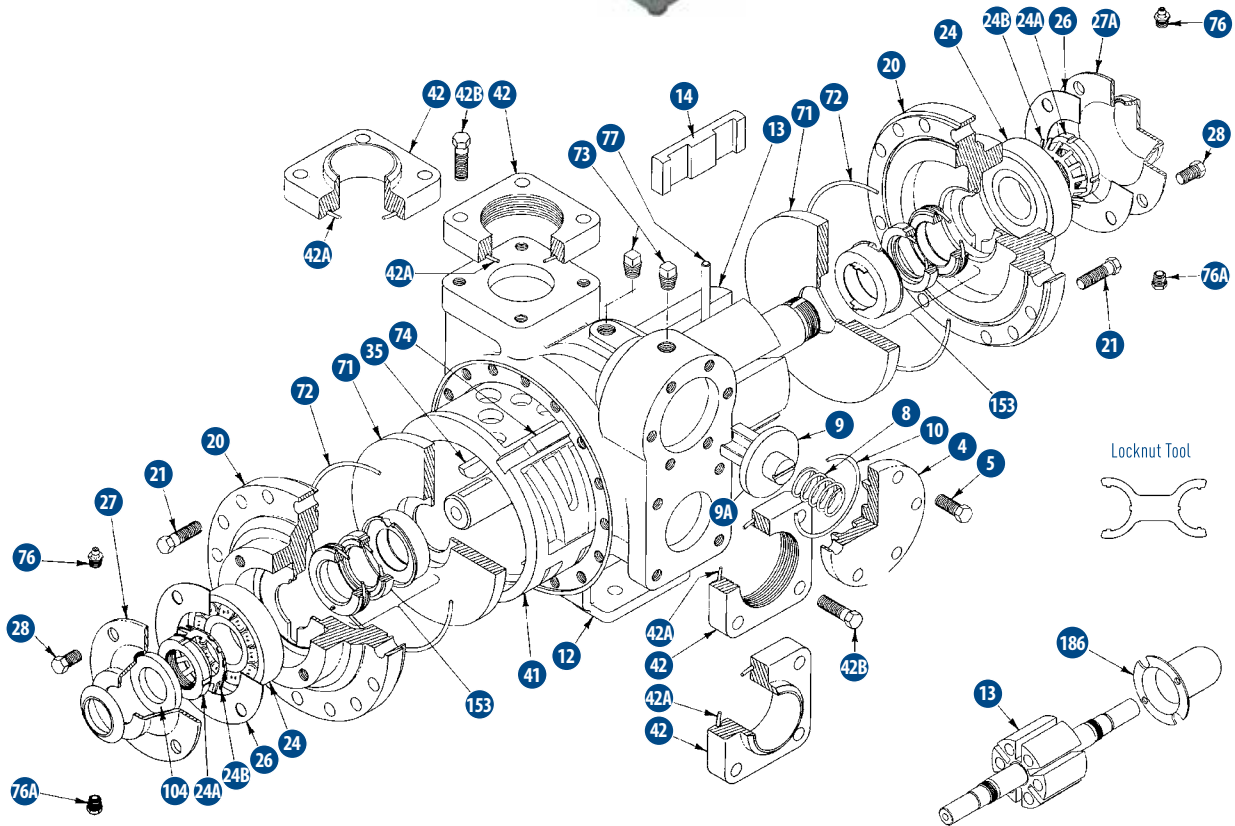
ISC VALVE	ROTARY ACTUATOR	STROKE ACTUATOR
REGO 1 1/4"	 RGA3209RA	 RGA3209PAF
MARSHALL & FISHER 1 1/4"	 ME225	 ME205
REGO 2"	 RGA3212RA	 RGA3213PA
MARSHALL & FISHER 2" & 3"	 ME226	 ME206

ESV	ROTARY ACTUATOR	STROKE ACTUATOR
REGO 1 1/4"	 RG6016RA	 RG6016-60C
MARSHALL & FISHER 1 1/4"	 ME552	 ME551
REGO 2"	 RG6016RA	 RG6016-60C
MARSHALL & FISHER 2" & 3"	 ME552	 ME551

BLACKMER LGLD3F & LGLD3E PUMP

Marshall Bypass

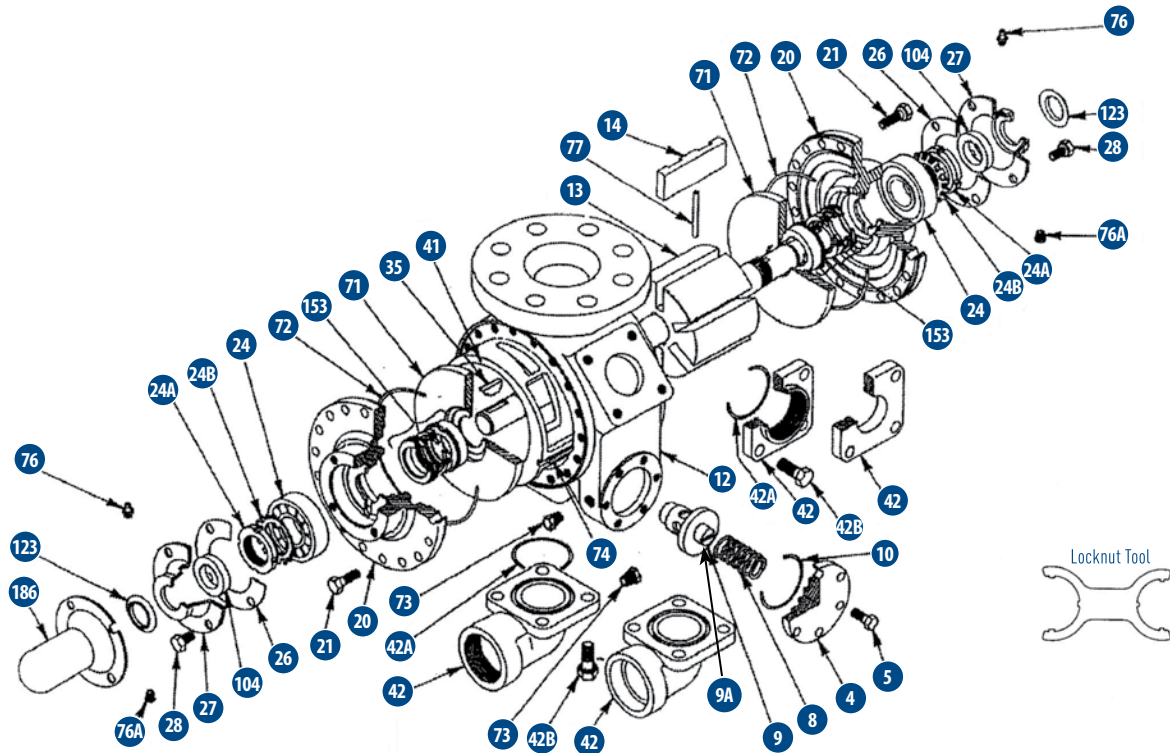
PART	DESCRIPTION
ME840-10-125	FNPT High Flow Bypass Valve 1 1/4" 90-125 PSI
ME840-16-125	FNPT High Flow Bypass Valve 2" 90-125 PSI
ME841-16-125	High Flow Socket Weld Flange Bypass Valve 2" 90-125 PSI



REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY	REF	PART	DESCRIPTION	QTY
4	BK415113	Cover - Relief Valve	1	26	BK385125*	Gasket Bearing Cover	2	74	BK185191	Key Liner	1
5	BK920331	Capscrews	6	27	BK041815	Bearing Cover (Inboard)	1	76	BK317815	Grease Fitting	2
8	BK475135	Spring	1	27A	BK041817	Bearing Cover (Outboard)	1	76A	BK701992	Grease Relief Fitting	2
9	BK455129	Relief Valve	1	28	BK920285	Capscrews	12	77	BK125105*	Push Rod	3
9A	BK455100	Relief Valve (Nickel Plated)	1	35	BK909130*	Key-Shaft	1	104	BK331908*	Seal Grease	1
10	BK701925*	O-Ring	1	41	BK185111	Liner	1	153	BK335225*	Seal Mechanical	2
12	BK015127	Casing	1	42	BK655112	Threaded Flange	2	186	BK341801	Shaft Protector	1
13	BK265148	Rotor and Shaft	1	42	BK655102	Welded Flange	2		BK898981	REPAIR KIT	
14	BK095131*	Duravane	6	42A	BK702002*	O-Ring Flange	2				
20	BK035128	Head	2	42B	BK920547	Capscrew Threaded Flange	8				
21	BK920369	Capscrews	40	42B	BK920510	Capscrew Welded Flange	8				
24	BK903172*	Ball Bearing	2	71	BK065112*	Disc	2				
24A	BK903523	Locknut	2	72	BK702041*	O-Ring Head	2				
24B	BK903524*	Lockwasher	2	73	BK908198	Gauge Plug	2				

* Items included in Repair Kit

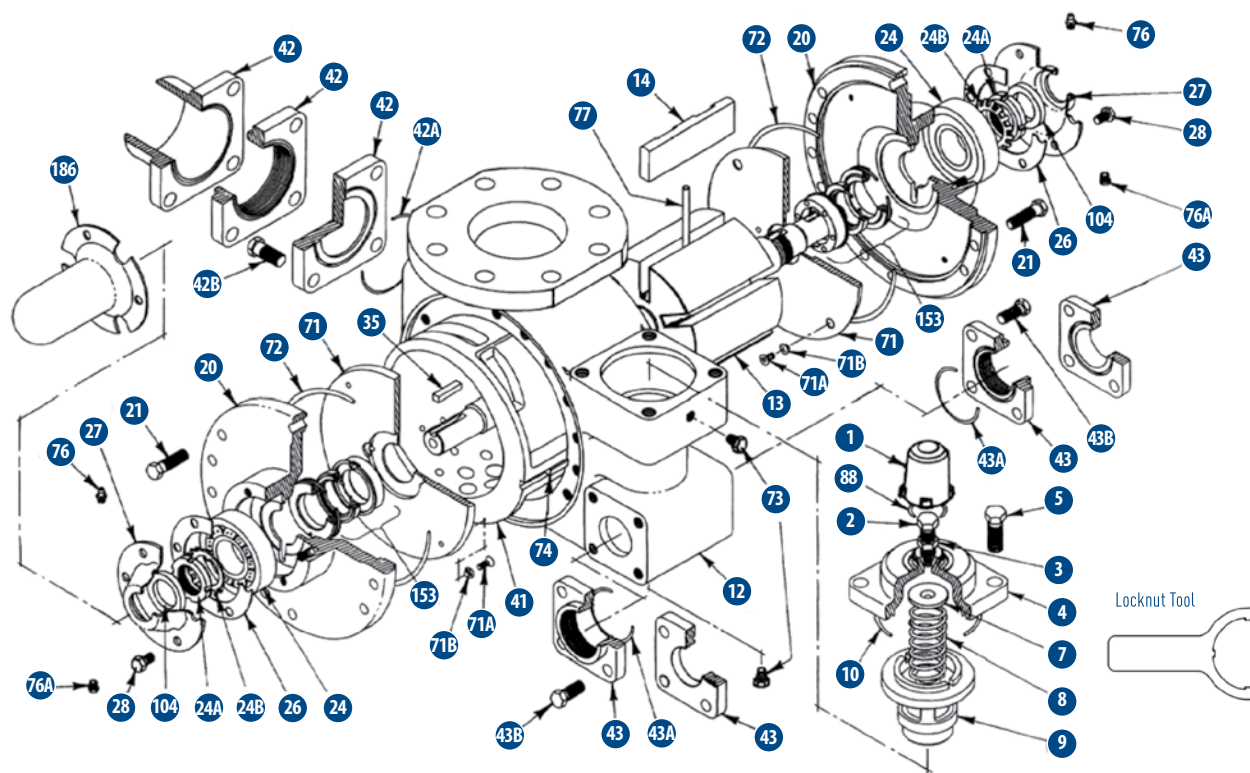
BLACKMER TLGLF3C PUMP



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	REPAIR KIT	
24A	BK903521	Locknut - Bearing	2	42B	BK920491	Capscrew Flanges	8				
24B	BK903522*	Lockwasher - Bearing	2	71	BK065121*	Disc	2				

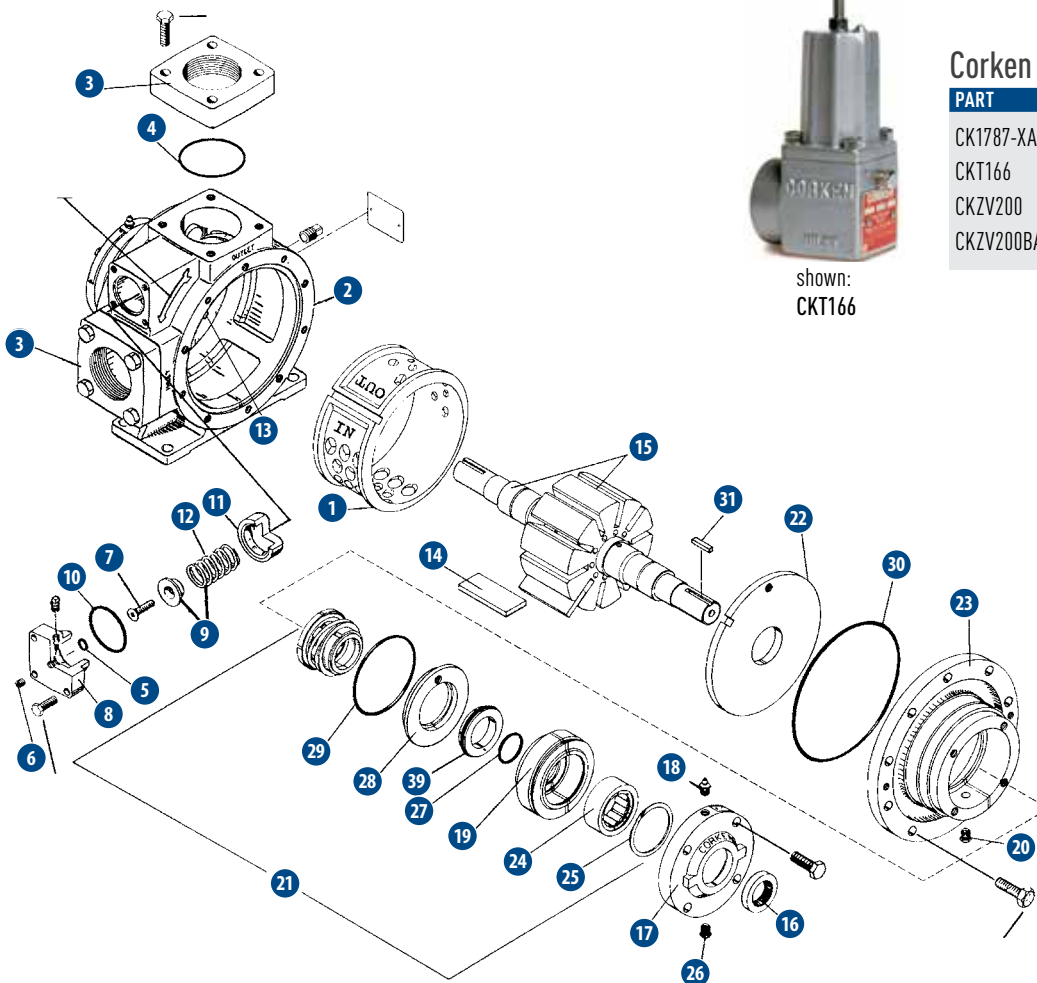
* Items included in Repair Kit

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"		186	BK341801	Shaft, Protector	1
10	¹ BK701946	O-Ring - R/V Cover	1			Weld Flange; Blank Flange			BK903092	Tool - Locknut	
12	BK012041	Casing	1	TWIN DISCHARGE PORT OPTIONS					BK898922	Kit - Maintenance	
13	² BK262041	Rotor & Shaft Assy. includes 24A & 24B	1	43	BK652010	Flange 2" NPT	2		BK899022	Kit - Rebuild	
14	¹ BK092019	Vane - Duravane (Std.)	6		BK652024	Flange 2" Weld		¹ Included in Maintenance Kit and Rebuild Kit			
20	BK032041	Head	2	43A	¹ BK702004	O-Ring 2" Discharge Flanges	2	² Included in Rebuild Kit			
21	BK920532	Capscrews - Head	28	43B	BK920491	Capscrew Discharge Flanges	8				
24	¹ BK903166	Ball Bearing	24	71	¹ BK062039	Disc	2				
24A	² BK903541	Locknut - Bearing	2	71A	² BK920015	Machine Screw - Disc	8				
24B	¹ BK903542	Lockwasher - Bearing	2	71B	² BK909634	Lockwasher - Machine Screw	8				
26	¹ BK385125	Gasket - Bearing Cover	2	72	¹ BK702039	O-RING - HEAD	2				
27	BK041815	Bearing Cover	2	73	BK908198	Gage Plug	2				
28	BK920286	Capscrews - Bearing Cover	12								
35	¹ BK909183	Key - Shaft	1								
41	² BK182000	Liner	1								

CORKEN 1021 & 1022 PUMPS



Corken Bypass

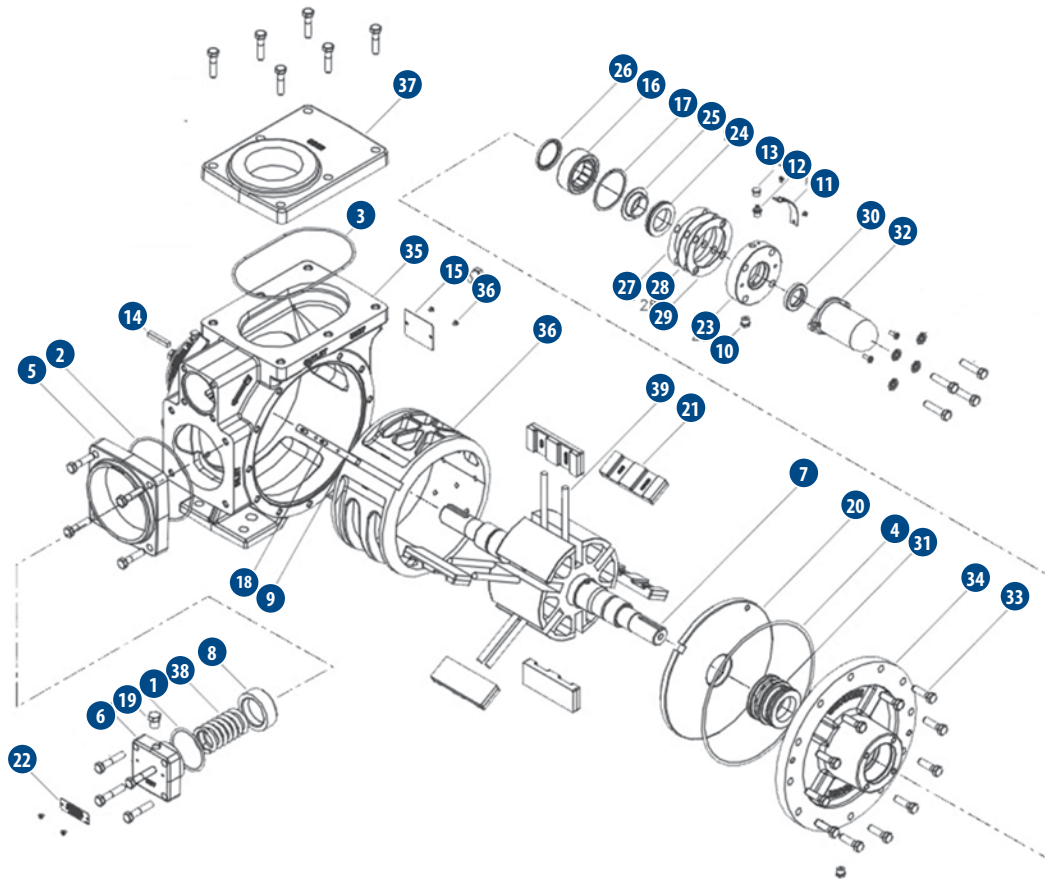
PART	DESCRIPTION
CK1787-XA	Valve, Bypass 1"
CKT166	Valve, Bypass 1 1/4"
CKZV200	Valve, Bypass 2" Threaded
CKZV200BAFF	Valve, Bypass 2" WN Flange

shown:
CKT166

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 1/4"	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				
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				

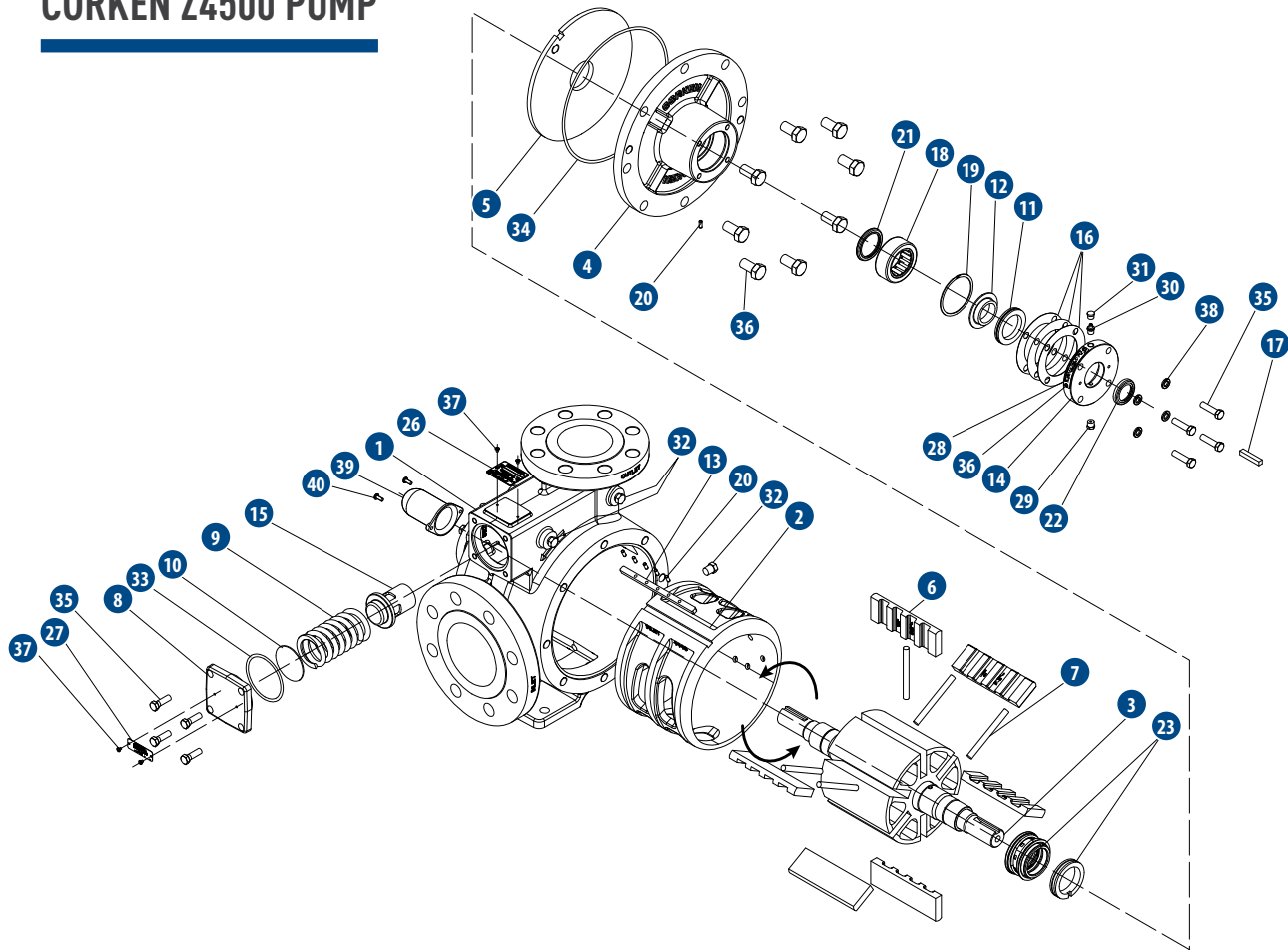
*Items included in Repair Kit

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 1/4" 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				

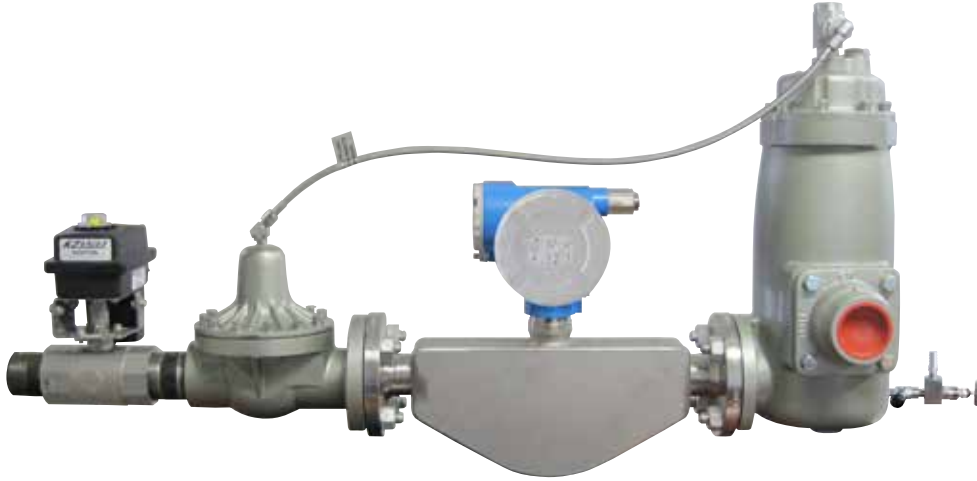
CORKEN Z4500 PUMP



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 3/4	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	23	CK4464-X_2 ^b	Mechanical Seal Assembly cast iron	2	39	CK4985	Shaft Cover	1
11	CK4453	Thrust Bearing Assembly	2	23	CK4464-X_6 ^b	Mechanical Seal Assembly silicon carbide	2	40	CK7012-010SF050E	Screw	2
12	CK4454	Bearing Race Mounting Ring	2	26	CK2649	Nameplate	1				
13	CK4455	Cam Key	1	27	CK4248	Relief Valve Nameplate	1				
14	CK4456	Bearing Cap	2	28	CK1359	Lubrication Instr. Plate	2				
15	CK4457	Relief Valve	1	29	CK1343	1/8 NPT Relief Fitting	2				

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 1 1/2" c/w 2" Flanges.....	MI8FE40-A999AANAB1WN
Hose, SS 1/4" x 29"	HSTF04-29
Vapour Eliminator 150# Flange, NH3	LT400076-707
Elbow 1/4" MPT x 1/4" M JIC (Qty. 2)	MI1596-04-04
Nut, 2h Heavy 5/8" (Qty. 8)	MI2H10
300# Gasket 2" (Qty. 2)	MIG32300
Street Tee 1/4"	MIC3759-4
Hydrostat 1/4"	CTA-400-C
Hosebarb 1/2"	CTA-1138
Needle Valve 1/4"	MIN1572

OPTIONAL EQUIPMENT

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

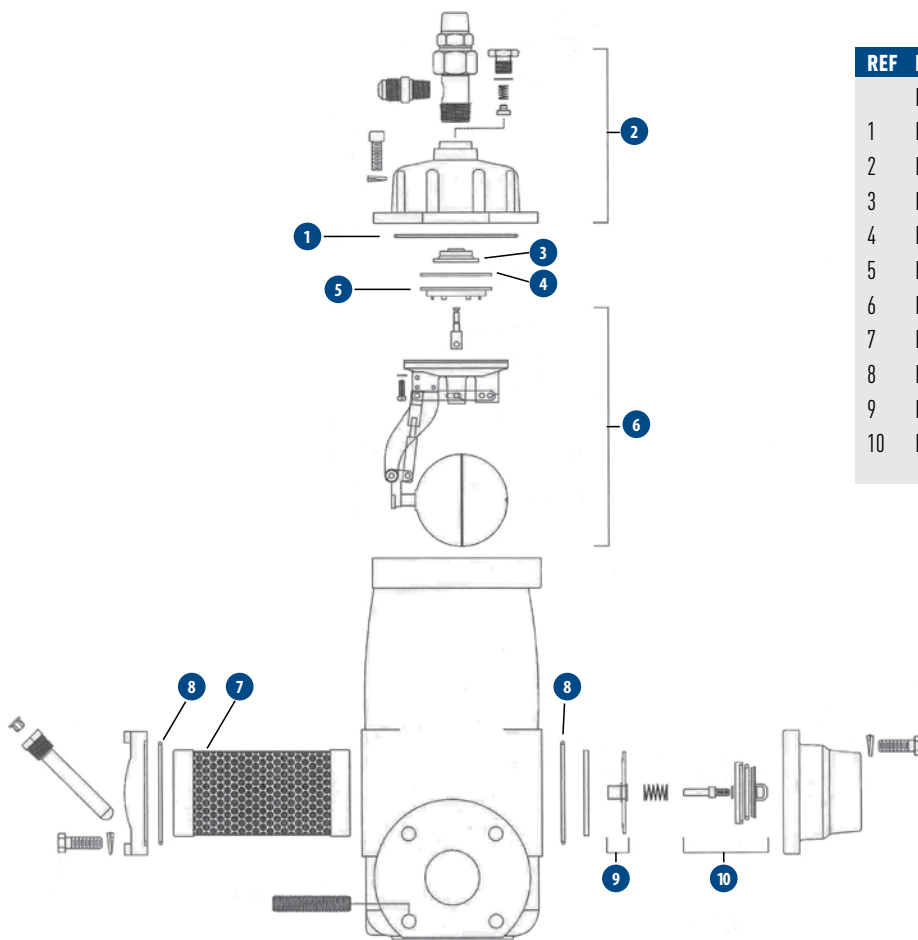
METER PROVING

DYTERRA IS AUTHORIZED BY MEASUREMENT CANADA TO PERFORM THE FOLLOWING INSPECTIONS PURSUANT TO THE WEIGHTS AND MEASURES ACT:

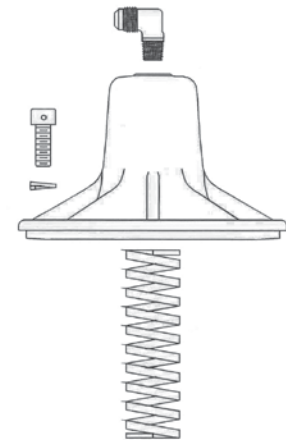
- NH3 PD & Mass Flow Meters
- Liquid Mass Flow Meters
- Propane Meters
- Measurement Canada Device Certifications
- Measurement Canada Broken Seal Reports



VAPOUR ELIMINATOR PARTS BREAKDOWN

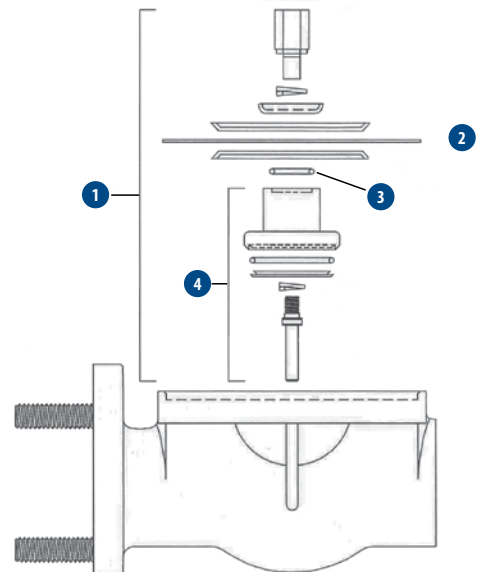


REF	PART	DESCRIPTION
	LT400076-707	Vapour Eliminator, Complete, 2" x 150lb Flange
1	LT100139-022	O-Ring - Vapour Release Cover
2	LT100148-001	Vapour Release Cover Assembly
3	LT089274-006	Main Valve
4	LT083179-000	Piston Seal
5	LT082446-005	Sleeve
6	LT086798-001	Lower Valve Housing Assembly
7	LT101462-004	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

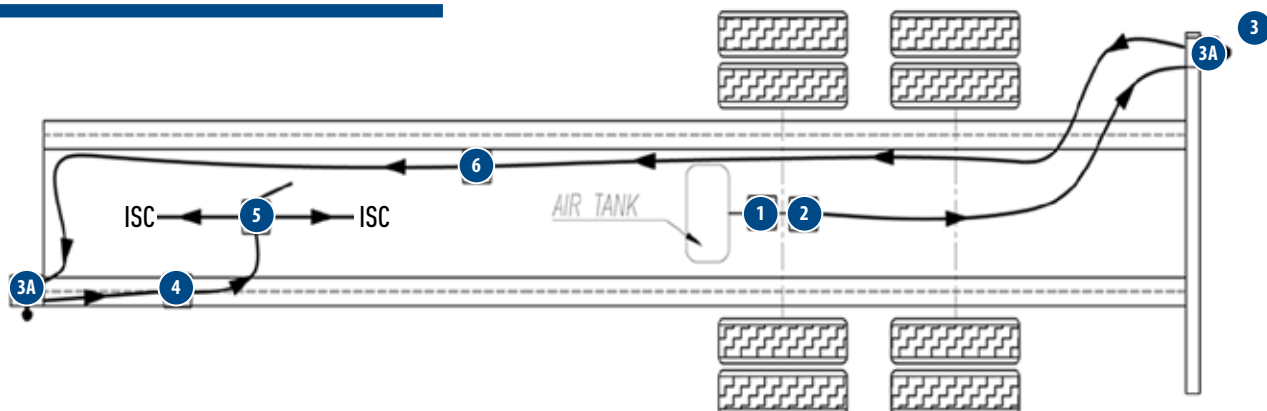


DIFFERENTIAL VALVE PARTS BREAKDOWN

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



TDU AIR SHUTDOWN SYSTEM



PART: HDKN9055397
Pressure Protection Valve
85 PSI



PART: MI111-3002-2P
Regulator Pre-Set 50 PSI
Primary Pressure 125 PSI



PART: HDKN20001
Shutoff/Dump Valve



PART: DYESOSB
Shutoff Valve Bracket



PART: BEAIR1000
Air Valve Protection 150 PSI



PART: HDKN32005
Quick Release Air Valve



PART: HS1J-223-07
Blue Nylon DOT Hose
1/4" 100 ft. Roll



PART: MID6520-04-02
Air Elbow 1/4" x 1/8" MPT DOT



PART: MID6520-04-04
Air Elbow 1/4" x 1/4" MPT DOT



PART: MID6520-04-06
Air Elbow 1/4" x 3/8" MPT DOT



PART: MID6580-04-00
Air Union 1/4" x 1/4" DOT



PART: MID6540-04-00
Air Tee 1/4" x 1/4" x 1/4" DOT



PART: MIPEM11421
Back Mount Air Gauge
0-160 PSI



PART: RGA3212RA
Air Actuator, fits REGO 2" ISC



PART: ME226
Air Actuator, fits 2" Marshall
and Fisher ISC

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.



BEASKWD200AQ



BEASK200Q-ECS

Remote Shutdown System with Query (for Air ISC)

Remote Shutdown System with Query (for Cable ISC)



Transmitters & Accessories

- A** 2 Function Transmitter
Query, Emergency Stop **BEASK200TX**
- B** 3 Function Transmitter
PTO, Query, Emergency Stop **BEASK300TX**
- 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**

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

Hose End Valve Holster	MEP801
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Universal Spring Loaded Utility Bracket

Universal Spring Loaded Utility Bracket	MEP082
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Back-up Alarm

Back-up Alarm (12V)	MIABU
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PROPANE REPLACEMENT PARTS

We perform certified inspections, meter repairs and complete rebuilds on propane delivery tankers and bobtails. Call today for more information.



Ball Valve



1075 Placard



Back-up Alarm



Brass Back Check



Brass Bleed Valve



Brass Relief Valve



Bypass Valve



Chock Block Holder



1" Delivery Hose



DOT Fittings



Double Back Check



Dump Valve



Fenders



Flanged ISC Valve



Globe Valve



Hannay Hose Reel



Hose End Valve



Hose Holder



Hose Swivel



Internal Relief



ISC Air Actuator



ISC Valve



LED Worklight



Mud Flaps



Pressure Gauge



RotoGauge



Safety Placard



Wheel Chock



Type 1 & 2 Hoses



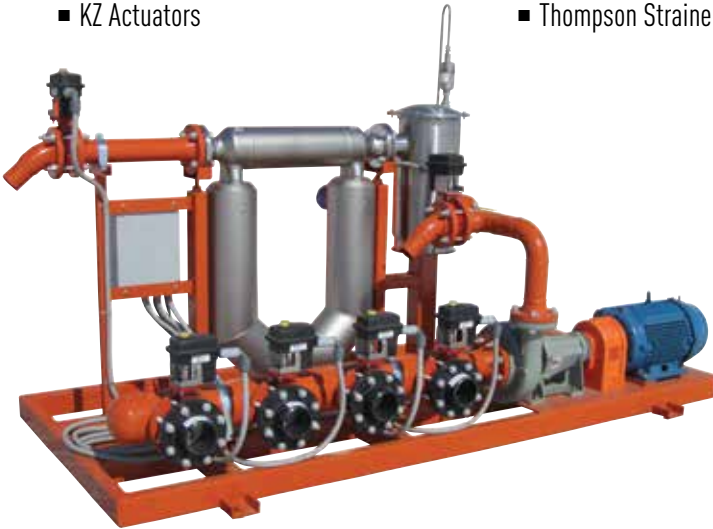
Utility Bracket

LIQUID FERTILIZER PUMP SKID

At DyTerra, we manufacture modular liquid fertilizer pumping skids, custom built with high-flow plumbing to match your specific requirements.

AVAILABLE OPTIONS:

- Vertiflo 1424 Pump
- CDS-John Blue 3320 and 3350 Pumps
- KZ Actuators
- Ultraflo Butterfly Valves
- 3" and 4" Micro Motion Mass Flow Meter
- Thompson Strainer
- Custom Control Panel, built by LV Control
- Complete Control Shed
- DyCrete Liquid Fertilizer Containment System



Shur Flex Hub 1 1/8"	MI7SX1-1/8
Shur Flex Hub 1 1/4"	MI7SX1-1/4
Shur Flex Hub 1 3/8"	MI7SX1-3/8
Shur Flex Hub 1 7/16"	MI7SX1-7/16
Shur Flex Hub 1 5/8"	MI7SX1-5/8

Insert Shur-Flex.....MI7JE

KZ Actuator 24V Butterfly Valve 3"	KZ24VDC EH2-3
Hardware Kit.....	KZE4HDW
Stem Coupler.....	KZ208-0016
Mounting Bracket, EH2	KZ100255

KZ Actuator 12/24V Butterfly Valve 4"	KZ24VDC EH5-4
Hardware Kit.....	KZE4HDW
Stem Coupler.....	KZ208-0007
Mounting Bracket, EH2	KZ105-0002



PUMP	SHAFT SIZE	HUB REQUIRED
Vertiflo 1424	1 1/4"	MI7SX1-1/4
John Blue 3320 & 3350	1 1/8"	MI7SX1-1/8

LIQUID FERTILIZER PUMP SKID



Flange Gasket

- 3" x 150# **MIG48150**
- 4" x 150# **MIG64150**
- 6" x 150# **MIG96150**

150LB FLANGE HARDWARE

FLANGE SIZE	STUDS	QTY.	NUTS	QTY.
3"	MIB710X56	4	MI2H10	8
4"	MIB710X56	8	MI2H10	16
6"	MIB712X56	8	MI2H12	16

150LB FLANGE HARDWARE WITH BUTTERFLY VALVES

VALVE SIZE	STUDS	QTY.	NUTS	QTY.
3"	MIB710X96	4	MI2H10	8
4"	MIB710X96	8	MI2H10	16
6"	MIB712X96	8	MI2H12	16



- 2H Nut 5/8" **MI2H10**
- 2H Nut 3/4" **MI2H12**



- B7 Stud
- 5/8" x 3 1/2" **MIB710X56**
- 5/8" x 6" **MIB710X96**
- 3/4" x 4 1/4" **MIB712X68**
- 3/4" x 6" **MIB712X96**



- Enforcer Hose
- 3" High PSI **HSEPDM48XH**
- 4" High PSI **HSEPDM64XH**



- Slip Ticket Printer **MITMU295**
- TMU 295 Printer
- Power Supply **MITMU295PS**
- Printer Ribbon **LCEPSERC-27B**



- 3" Butterfly Valve **UF400-3C**
- HANDLE KIT: UF400237-2310L
- 4" Butterfly Valve **UF400-4C**
- HANDLE KIT: UF400237-4610L
- 6" Wafer SS **UF400-6C**



- PVC Check Valve 3" **MI1002-30**



- T-Bolt Clamp 3" **MIHCTSS343**
- T-Bolt Clamp 4" **MIHCTSS456**



- Gauge 0-160 PSI
- 1/4" Liquid Filled **PG160L**



- Strainer, 4" Body with 3" Flanges
- MIMLI-048-MOD9-040**
- Head Gasket **MISTHG04**
- Bottom Gasket **MISTFG04**



- Shaft Guard **MI2924201**



- Air Release
- 3/4" x 1/2" SS **MI11AV**
- Air Release Kit **KTIAV**
- includes fittings and pipe



- Threaded Ball Valve 1 1/4" **BVSS203**



Shaft Size 1/4"

VERTIFLO 1424 PUMP 4X3

Typically 350 GPM at 1800 RPM with
3-phase 20 HP electric motor

Pump 4" Inlet x 3" Outlet, 10" Impeller **VL1424-4X3X10**

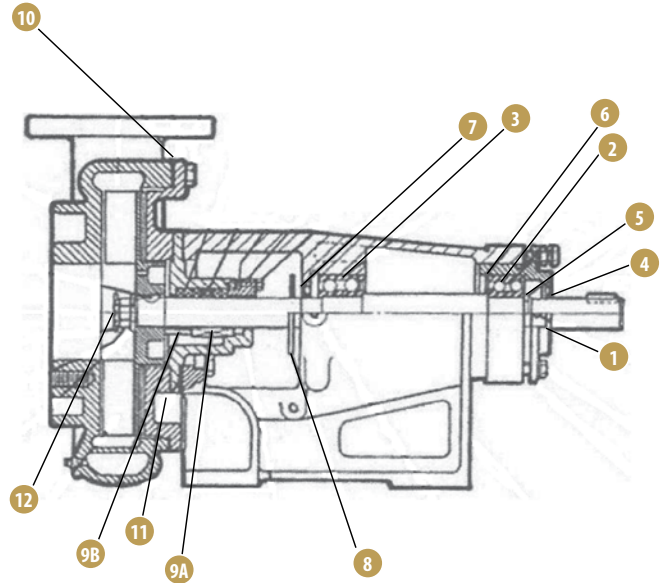
1424 REPLACEMENT PARTS

REF	PART	DESCRIPTION
1	VL22-2403-04-23	Shaft
2	VLBD-5122-22-00	Thrust Bearing
3	VLBD-5125-01-00	Radial Bearing
4	VLSL-3420-01-00	Lip Seal
5	VLRE-2220-01-00	Shaft Snap Ring
6	VLRE-5056-01-00	Cap Snap Ring
7	VLSL-3425-01-00	Lip Seal
8	VLSG-4200-01-62	Slinger
*9A	VL32-2824-09-20	Seal Spacer Sleeve
*9B	VLSJ-2124-S1-00	Mechanical Seal
*10	VL50-4441-01-60	Casing Gasket
*11	VL50-2217-01-60	Head Gasket
*12	VLPC-0507-01-20	Cotter Pin, SS

REPAIR KIT: VL1424RK

4" Inlet x 3" Outlet

*indicates recommended rebuild parts



VERTIFLO 1434 PUMP 6X4

Typically 500 GPM at 1800 RPM with
3-phase 30 HP electric motor

Pump 6" Inlet x 4" Outlet, 12" Impeller **VL1424-6X4X12**

1434 REPLACEMENT PARTS

PART	DESCRIPTION
*VL33-3428-01-20	Seal Spacer Sleeve 1434
*VLSJ-2134-S1-00	Mechanical Seal 1434
*VL50-5449-01-60	Casing Gasket 1434
*VL50-2217-01-60	Head Gasket
*VLPC-0507-01-20	Cotter Pin SS

REPAIR KIT: VL1434RK

6" Inlet x 4" Outlet

*indicates recommended rebuild parts



PIPING SIZE AND CONFIGURATION DETERMINES ACTUAL PUMP FLOW.

CDS-JOHN BLUE SP-3340-P PUMP

Typically 365 GPM at 3500 RPM with 3-phase 10 or 15 HP electric motor

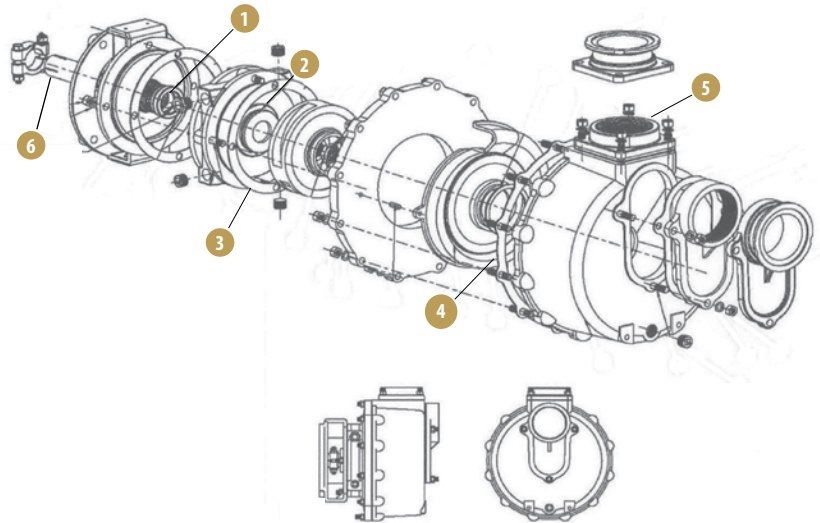
Self Priming Pump 3" Pedestal **JBS-3340-P**

SEAL KIT: JBS-3757

SP-3340-P REPLACEMENT PARTS

REF	PART	DESCRIPTION
1	JB43005	Mech. Double Seal
2	JB116226-01	Impeller
3	JBS-3638	Gasket Seal (2)
4	JB116218-01	Housing Cover O-Ring
5	JB116219-01	Suction Flange O-Ring
6	JBS-3646	Impeller Shaft

3" Inlet x 3" Outlet



Shaft Size 1 1/8"

CDS-JOHN BLUE SP-3350-P PUMP

Typically 365 GPM at 3500 RPM with 3-phase 15 HP electric motor

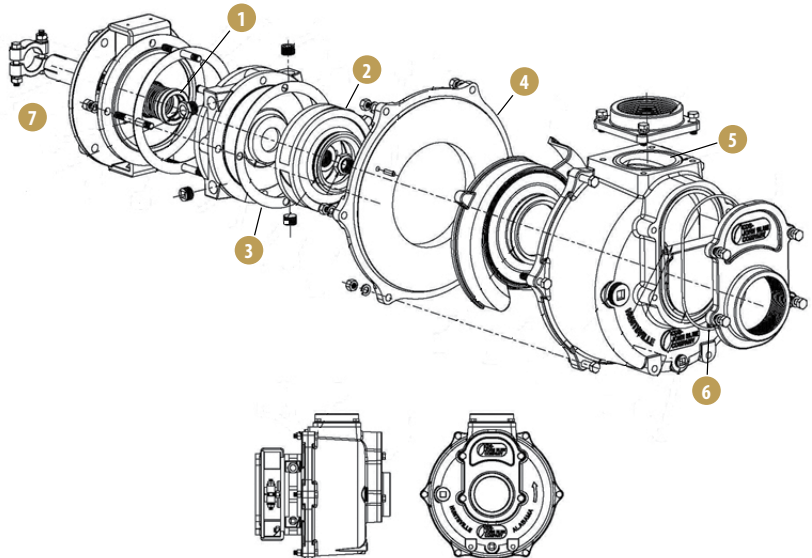
Self Priming Pump 3" Pedestal **JBSP-3350-P**

REPAIR KIT: JB116248

SP-3350-P REPLACEMENT PARTS

REF	PART	DESCRIPTION
	JBSP-3350-P	Self Priming Pump 3" Pedestal
1	JB43005	Mech. Double Seal
2	JB116227-01	Impeller
3	JBS-3638	Gasket Seal (2)
4	JB116218-01	Housing O-Ring
5	JB116219-01	Flange O-Ring, BUNA
6	JB116221-01	Suction Flange O-Ring, BUNA
7	JBS-3646	Impeller Shaft 1 1/8"

3" Inlet x 3" Outlet



Shaft Size 1 1/8"

SP-3320-P (discontinued) REPLACEMENT PARTS

REF	PART	DESCRIPTION
	JBSP-3320-P	Self Priming Pump 3" Pedestal
1	JB43005	Mech. Double Seal
2	JB102037-01	Impeller
3	JBS-3638	Gasket Seal (2)
4	JBS-3641	Housing Cover Gasket
5	JBS-3654	Suction Flange O-Ring, BUNA
6	JBS-3646	Impeller Shaft

3" Inlet x 3" Outlet

LIQUID VALVES

1 Piece Ball Valves

Threaded SS 1/4"	BVSS04
Threaded SS 3/4"	BVSS12
Springloaded SS 1"	BVSS16SL
Ball Valve SS 2"	BVSS32
Ball Valve SS 3"	BVSS48



3 Piece Ball Valves

Stainless Steel 1"	BVSS163
Stainless Steel 1 1/4"	BVSS203
Stainless Steel 1 1/2"	BVSS243
Stainless Steel 2"	BVSS323
Stainless Steel 3"	BVSS483
Stainless Steel 4"	BVSS643



Flanged Ball Valves

150#FLGSS 3"	BVSS48150
150#FLGSS 4"	BVSS64150



Butterfly Valves

Butterfly Valve 3"	UF400-3C
Butterfly Valve 4"	UF499-4C
Butterfly Valve 6"	UF40-6C
Cast, Lug, SS, Stem & Disc 3"	UF393-3CL
Cast, Lug, SS, Stem & Disc 4"	UF393-4CL



King Nipple

Stainless Steel 3"	FT48KSS
King Nipple, Victaulic 3"	FT48KBW40
Stainless Steel 4"	FT64KSS
King Nipple, Victaulic 4"	FT64KBW40

SIMONSEN SPREADERS & TENDERS



SMC2064S - 6-TON SPREADER SS

- Walking-Tandem Suspension for better weight distribution
- 409 Stainless Steel Hopper
- Heavy Gauge 7" wide Apron Chain
- Stainless Steel Input and Output Shafts in Fan Gearbox
- Simple Chain-and-Sprocket Ground Wheel Drive System
- Accurate Application Rate up to 640 lb./acre
- Fitted Tarp or Roll Tarp Available

SMC2584S - 8-TON SPREADER SS

- 409 Stainless Steel Hopper (standard)
- Heavy Gauge 7" wide Apron Chain
- Hydraulic or PTO Driven Fan Available
- Hydraulic Actuation of Ground Drive
- D.O.T. Light Package
- 50 ft. Spread Pattern
- Fitted Tarp or Roll Tarp Available

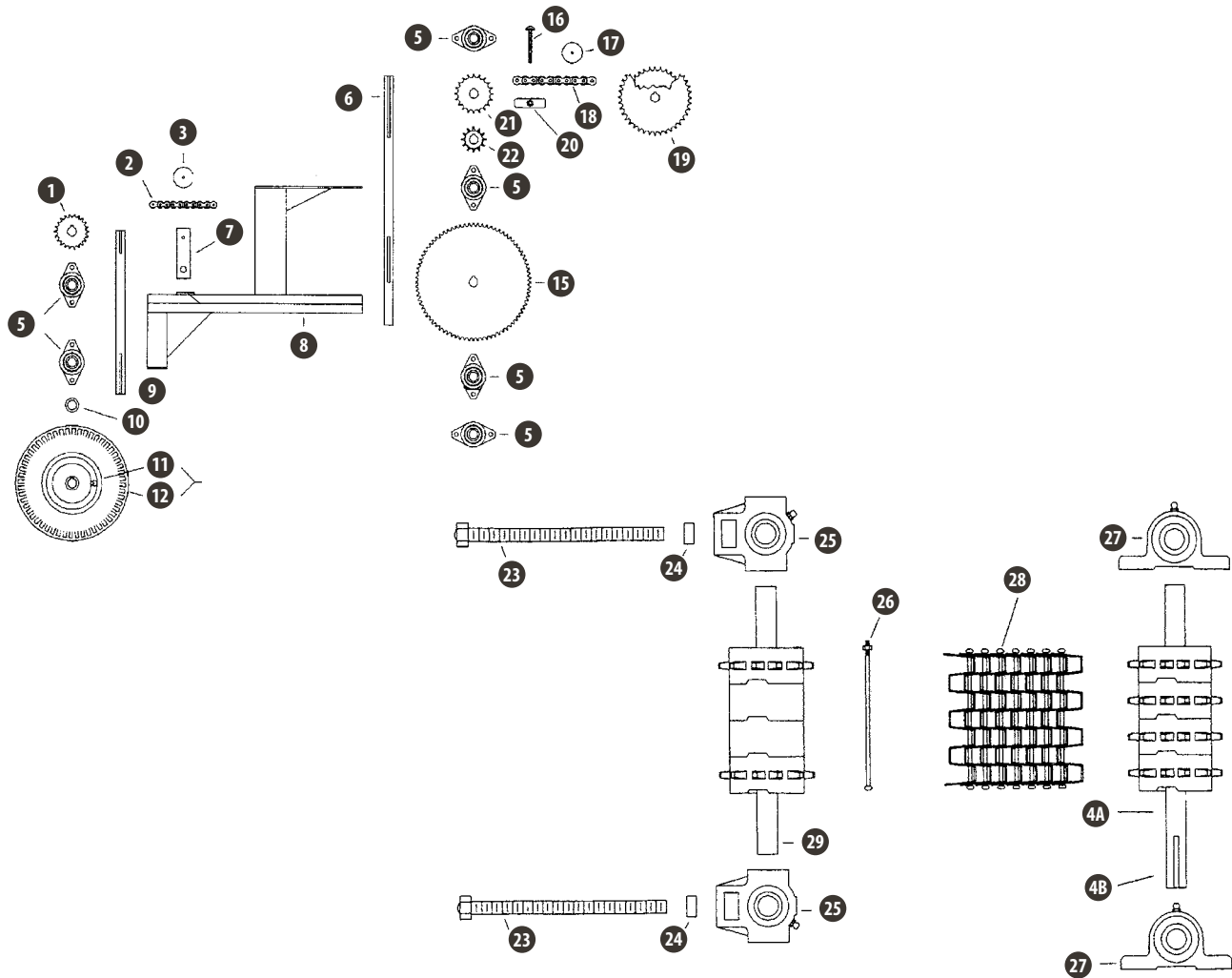


SMC4816 - 16-TON TENDER SS - REAR AUGER BFT5316 - 16-TON TENDER SS - SIDE AUGER

- Available Split Compartments
- Stainless Steel Construction at Key Areas
- Motor at Discharge End Isolated from Fertilizer
- Large Oil Reservoir
- Steep Side Slopes
- Manual or Electric Tarp Options
- Full Length Fenders

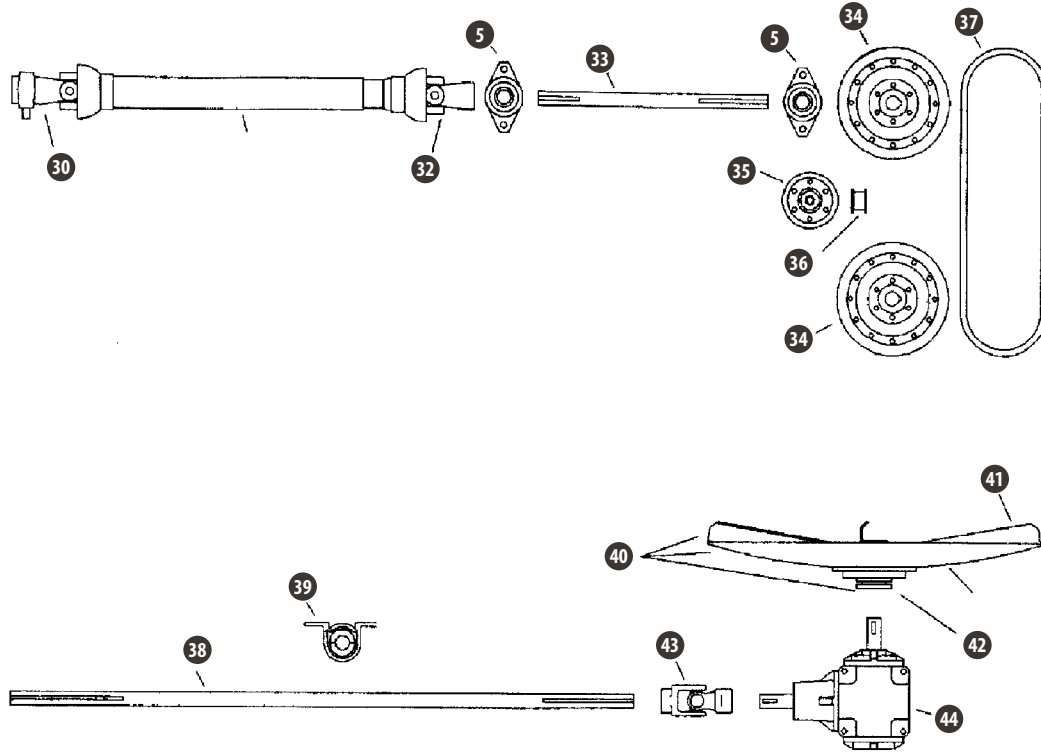


SIMONSEN SMC SPREADER



REF	SMC2064	SMC2584	DESCRIPTION	REF	SMC2064	SMC2584	DESCRIPTION
1	SI1700-20	SI1700-20	Sprocket	16	SI3907	SI3907	Carriage Bolt
2	SI1700-10	SI1700-12	Chain	17	SI1700-80	SI1700-80	Tightener Block Chain
3	SI1700-75	SI1700-75	Chain Tightener Block	18	SI1249-10	SI1249-10	Chain
4A	SI643-10	SI643-10	Long Shaft (Early Units With Two Separate Hubs)	19	SI1248-03	SI1248-03	Sprocket
4B	SI643-11	SI643-11	Short Shaft (Present Units With Welded Dual Sprockets)	20	SI1170-10	SI1170-10	Handle Nut 3/8"
5	SI973-20	SI973-20	1" Flange Bearing	21	SI240-00	SI240-00	Sprocket
6	SI1033-10	SI1033-11	Shaft	22	SI530-00	SI530-00	Sprocket
7	SI1700-70	SI1700-70	Arm	23	SI188-00	SI188-00	Screw Take-Up SS
8	SI1209-10	SI1209-11	Wheel Drive Yoke	24	SI189-00	SI189-00	Screw Take-Up Nut
9	SI1175-10	SI1175-11	Shaft	25	SI187-10	SI187-10	Bearing-Take Up 1"
10	SI9341-26	SI9341-26	Spacer	26	SI1700-01	SI1700-01	Splice Pin 7" Stainless Steel
11	SI1377-00	SI1377-00	Hub and Rim	27	SI705-00	SI705-00	Bearing 1" Pillow Block
12	SI1376-00	SI1376-00	Tire	28	SI1700-00	SI1700-00	Apron Chain 7"
13	SI1377-01	SI1377-01	Tire and Rim Assembly	29	SI591-10	SI591-10	Front Roller
15	SI1700-30	SI1700-30	Sprocket				

SIMONSEN SMC SPREADER

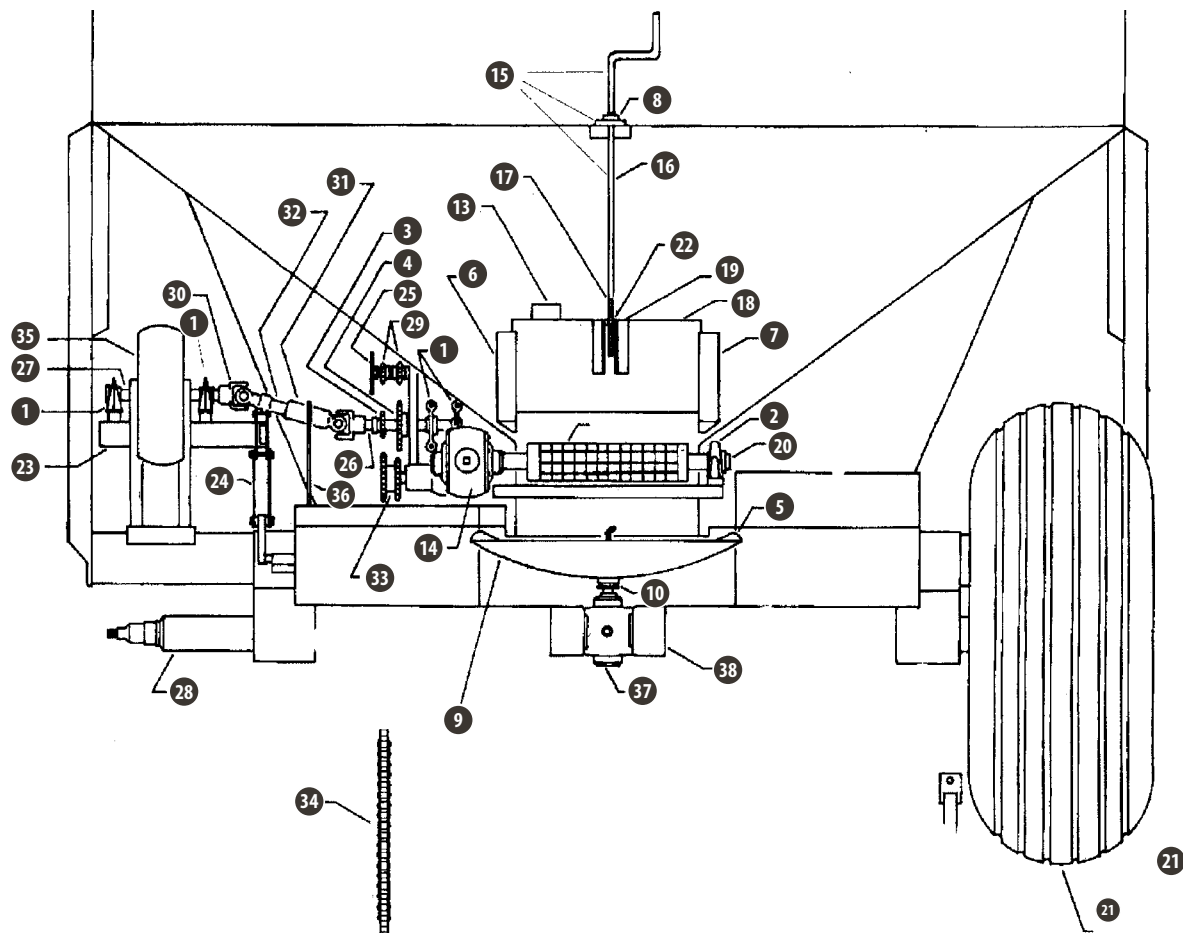


REF	SMC2064	SMC2584	DESCRIPTION
30	SI616-52	SI616-52	PTO Tractor Half
31	SI616-50	SI616-50	PTO Assembly 540 RPM
32	SI616-51	SI616-51	PTO Trailer Half 1" Bore
33	SI578-10	SI578-10	Shaft
34	SI780-10	SI780-10	Pulley
35	SI1400-10	SI1400-10	Pulley
36	SI1700-50	SI1700-50	Spacer
37	SI779-10	SI779-10	Belt
38	SI1589-10	SI1589-11	Shaft
39	SI1390-00	SI1390-00	Bearing Wooden Insert
40	SI575-01	SI575-01	Spinner Disc c/w Blades
41	SI556-02	SI556-02	Blade, Spinner Disc (4 per Disc)
42	SI580-02	SI580-02	Bushing
43	SI1042-00	SI1042-00	U-Joint Assembly
44A	SI1900-00	SI1900-00	Gearbox
44B	SI232-00	SI232-00	Hydraulic Gearbox



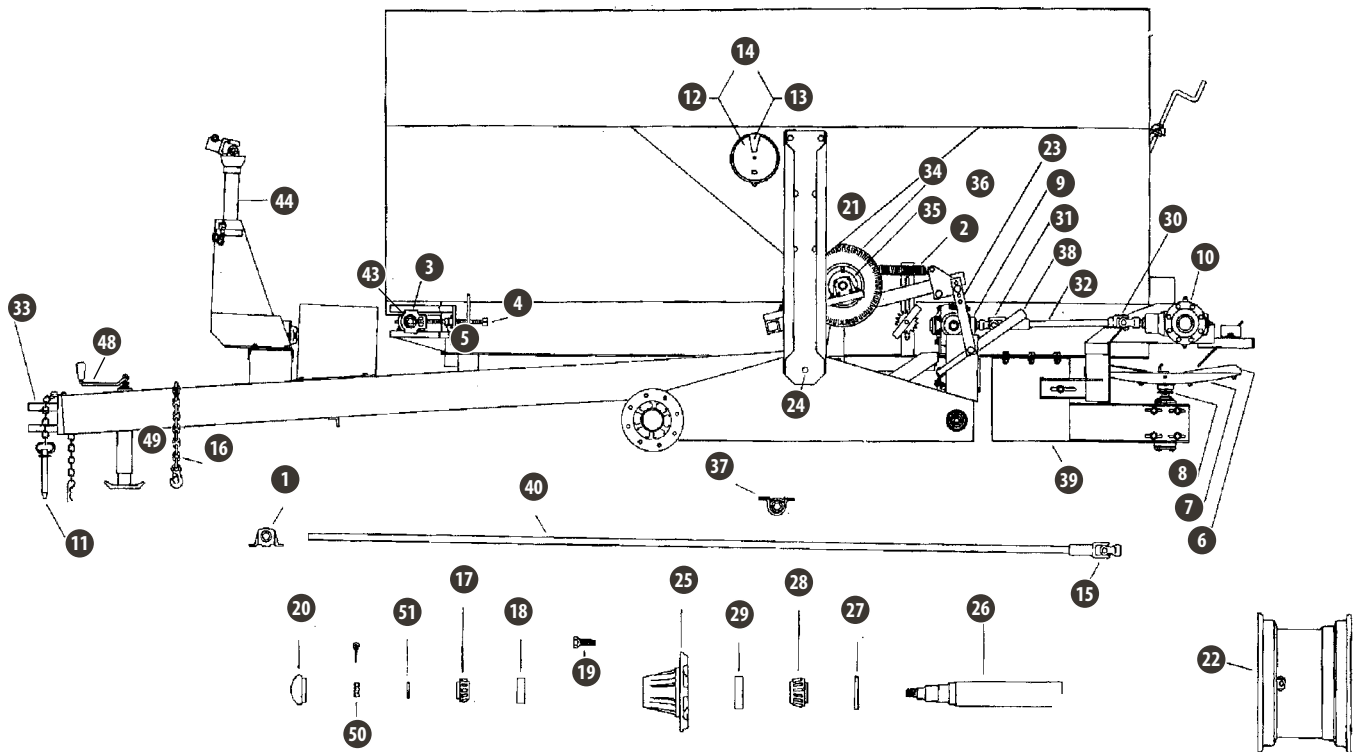
SIMONSEN

SIMONSEN "N" SERIES SPREADERS



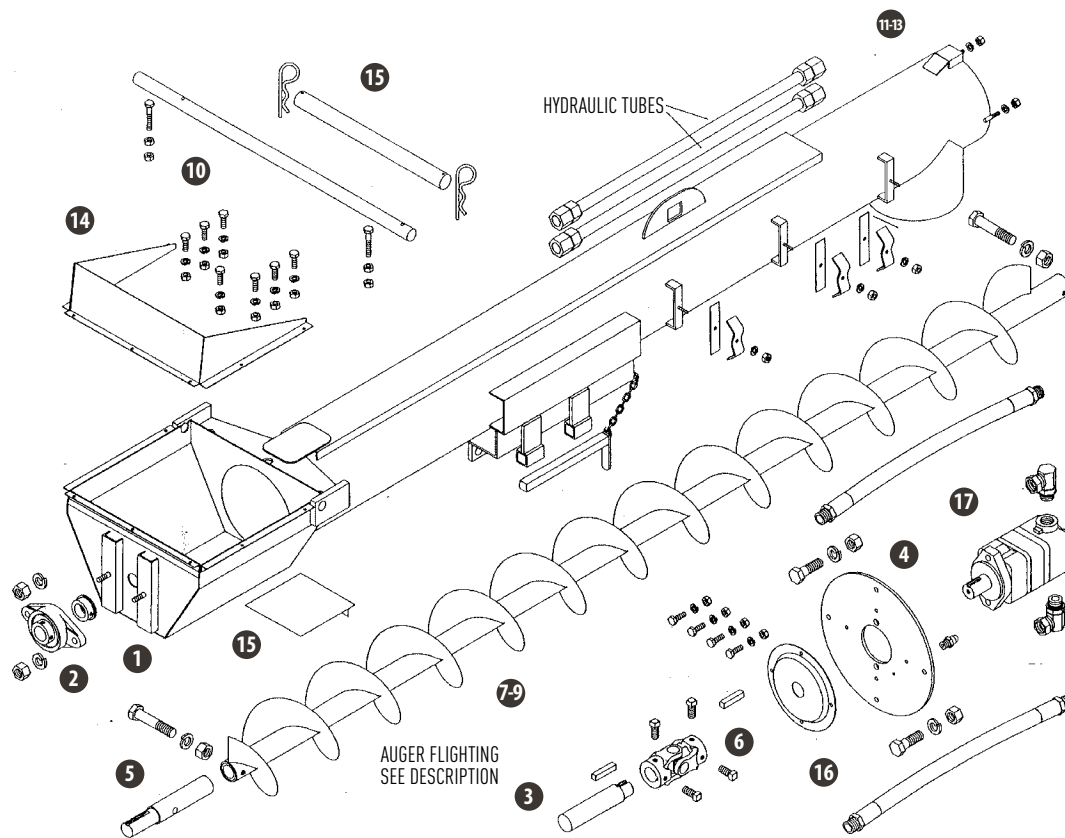
REF	N44J	N54J	N64J	DESCRIPTION	QTY	REF	N44J	N54J	N64J	DESCRIPTION	QTY
1	SI157-00	SI157-00	SI157-00	Bearing 1" Pillow Block	4	20	SI643-00	SI643-00	SI643-00	Rear Apron Drive Roller	1
2	SI170-00	SI170-00	SI170-00	Bearing 1 1/2" Pillow Block	2	21	SI1133-01	SI758-25	SI1023-00	Tire	4
3	SI532-00	SI532-00	SI530-00	Sprocket 1"	1	22	SI1050-00	SI1050-00	SI1050-00	ACME Nut	1
4	SI782-00	SI782-00	SI533-00	Sprocket 1"	1	23	N/A	N/A	SI1162-00	Wheel Drive Yoke	1
5	SI556-02	SI556-02	SI556-02	Spinner Blade	4	24	N/A	N/A	SI1167-00	Wheel Drive Linkage	1
6	SI568-00	SI568-00	SI568-00	Metering Door Slide LH	1	25	SI1170-00	SI1170-00	SI1170-00	Handle Nut	1
7	SI569-00	SI569-00	SI569-00	Metering Door Slide RH	1	26	SI1033-01	SI1033-01	SI1173-00	Shaft	1
8	SI571-00	SI571-00	SI571-00	Flange Bearing 5/8"	1	27	SI1175-00	SI1175-00	SI1175-00	Shaft 1" x 9 1/2"	1
9	SI575-01	SI575-01	SI575-01	Spinner Disc c/w Blades	1	28	SI1152-00	SI1152-00	SI1191-00	Spindle	4
10	SI580-02	SI580-02	SI580-02	Bushing	1	29	SI1200-00	SI1200-00	SI1200-00	Sprocket	2
11	SI586-00	SI586-00	SI586-00	Apron Chain 12" SS	1	30	SI1202-00	SI1202-00	SI1202-00	U-Joint 7/8" SQ x 1" Round	2
12	SI587-00	SI587-00	SI587-00	Splice Pin	1	31	SI1203-00	SI1203-00	SI1203-00	Slip Joint 7/8" SQ x 1" Round	1
13	SI614-00	SI614-00	SI614-00	Metering Gate Decal (Silver)	1	32	SI1212-01	SI1212-01	SI1212-00	Square Shaft	1
14	SI624-99	SI624-99	SI624-99	Conversion Kit, Round GBox to Square GBox	1	33	SI1248-02	SI1248-01	SI1248-00	Dual Sprocket	1
15	SI634-02	SI634-02	SI634-02	Screw, Crank and Brg Assembly	1	34	MIRC50SS	MIRC50SS	MIRC50SS	SS Chain #50	
16	SI634-00	SI634-00	SI634-00	Screw and Crank	1	35	SI1376-00	SI1376-00	SI1376-00	Wheel Drive Tire	1
17	SI634-01	SI634-01	SI634-01	Metering Gate Screw	1	36	N/A	N/A	SI1407-00	Wheel Drive Assembly	1
18	SI635-00	SI635-00	SI635-00	Metering Door	1	37	SI1900-00	SI1900-00	SI1900-00	Gearbox Spinner Disc	1
19	SI642-00	SI642-00	SI642-00	Metering Door Bracket	1	38	SI1585-00	SI1585-00	SI1585-00	Gearbox Bracket	1

SIMONSEN "N" SERIES SPREADERS - FRONT AND LEFT SIDE VIEW



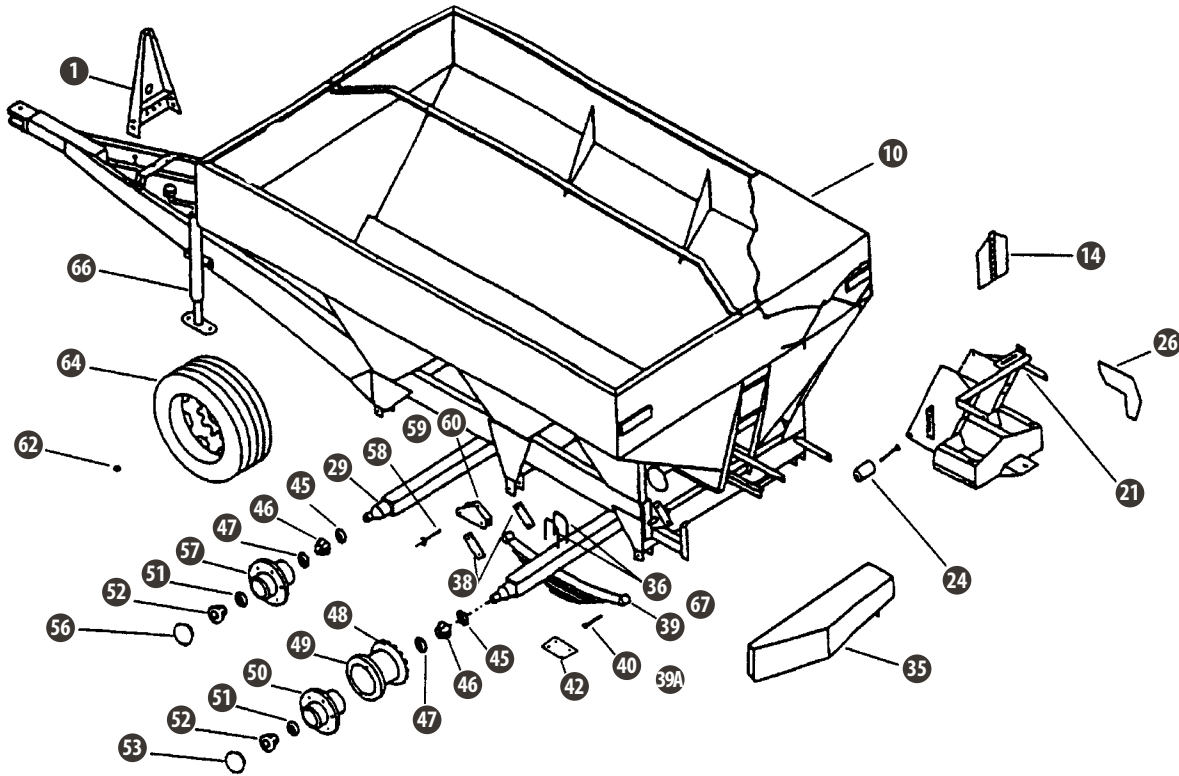
REF	N44J	N54J	N64J	DESCRIPTION	QTY	REF	N44J	N54J	N64J	DESCRIPTION	QTY
1	SI157-00	SI157-00	SI157-00	Bearing 1" Pillow Block	4	25	SI1150-00	SI1150-00	SI1190-00	Hub c/w Races	4
2	N/A	N/A	SI173-00	Spring Take-Up	1	26	SI1152-00	SI1152-10	SI1191-00	Spindle	4
3	SI187-00	SI187-00	SI187-00	Bearing Take-Up 1"	2	27	SI1151-01	SI1151-01	SI1192-01	Seal	4
4	SI188-00	SI188-00	SI188-00	Screw Take-Up SS	2	28	SI1151-02	SI1151-02	SI1192-02	Inner Race	4
5	SI189-00	SI189-00	SI189-00	Take Up Screw Nut	2	29	SI1151-03	SI1151-03	SI1192-03	Inner Cup	4
6	SI556-02	SI556-02	SI556-02	Spinner Blade	4	30	SI1202-00	SI1202-00	SI1202-00	U-Joint 7/8" SQ x 1" Round	1
7	SI575-01	SI575-01	SI575-01	Spinner Disc c/w Blades	1	31	SI1293-00	SI1293-00	SI1293-00	Slip Joint 7/8" SQ x 1" Round	1
8	SI580-00	SI580-00	SI580-02	Bushing	1	32	SI974-10	SI974-10	SI1213-00	SQ Shaft 7/8"	1
9	SI623-50	SI623-50	SI623-50	Front Apron Gear Box	1	33	SI1214-00	SI1214-00	SI1214-00	Cast Hitch	1
10	SI624-99	SI624-99	SI624-99	Conversion Kit, Round GBox to Square GBox	1	34	SI1376-00	SI1376-00	SI1376-00	Wheel Drive Tire	1
11	SI1013-00	SI1013-00	SI1013-00	Hitch Pin	1	35	SI1377-00	SI1377-00	SI1377-00	Wheel Drive Rim	1
12	SI1024-00	SI1024-00	SI1024-00	Setting Guide Top	1	36	SI1377-01	SI1377-01	SI1377-01	Tire and Rim Assembly	1
13	SI1026-00	SI1026-00	SI1026-00	Gate Setting Guide Bottom	1	37	SI1390-00	SI1390-00	SI1390-00	Bearing Wooden Insert	2
14	SI1027-02	SI1027-02	SI1027-02	Top and Bottom Assembly	1	38	N/A	N/A	SI1407-00	Wheel Drive Handle	1
15	SI1037-00	SI1037-00	SI1037-00	Slip Joint 1" x 1"	1	39	SI1585-00	SI1585-00	SI1585-00	Gear Box Bracket	1
16	SI1154-00	SI1154-00	SI11154-00	Safety Chain and Hook	2	40	SI552-10	SI1589-01	SI1589-00	Drive Shaft	1
17	SI610-03	SI610-03	SI1161-01	Outer Race	4	43	SI591-00	SI591-00	SI591-00	Idler Roller	1
18	SI610-06	SI610-06	SI1161-03	Outer Cup	4	44	SI616-00	SI616-00	SI616-00	Tumbling Rod	1
19	SI1151-05	SI1151-05	SI1161-06	Wheel Bolt	2	48	SI1394-03	SI1394-03	SI1394-03	Jack Handle	1
20	SI610-04	SI610-04	SI1161-07	Dustcap	4	49	SI1484-00	SI1484-00	SI1484-00	Tongue Jack c/w Bracket	1
21	SI1592-00	SI1592-00	SI1162-00	Wheel Drive Yoke	1	50	SI1152-02	SI1152-02	SI1191-02	Spindle Nut	4
22	SI1140-00	SI758-10	SI1165-00	Wheel	4	51	SI1152-01	SI1152-01	SI1191-01	Spindle Washer	4
23	N/A	N/A	SI1167-00	Wheel Drive Linkage	1						
24	SI1168-00	SI1168-00	SI1168-00	Tie Bolt	2						

SIMONSEN SMC4816 TENDER



REF	PART	DESCRIPTION
1	SI306-02	Set Collar with 2 ^{5/8} " O.D. Flat Washer 1 ^{1/2} "
2	SI410-01	Flange Bearing (two bolt mounting) 1 ^{1/4} "
3	SI496-01	Drive Shaft for Delivery Auger (used with grease chamber)
4	SI541-01	Round Bolt-on End for Delivery Auger (used with grease chamber)
5	SI1336-01	Tail Shaft for Delivery Auger - 8" Long
6	SI1373-01	U-Joint (1 ^{1/4} " Round x 1 ^{1/4} " Round)
7	SI1544-02	Flighting for Delivery Auger (9" Dia. Full Pitch) (Less Shafts)
8	SI1544-03	Stainless Steel 18'
9	SI1544-05	Stainless Steel 21'
10	SI1545-02	Tube and Hopper Assembly for delivery auger (less extension for hopper and all other bolt on parts) c/w clean out door
11	SI1545-30	Stainless Steel 16' - 5 ^{3/4} " Long (length of tube and hopper)
12	SI1545-35	Stainless Steel 18' - 5 ^{3/4} " Long (length of tube and hopper)
13	SI1545-37	Stainless Steel 20' - 5 ^{3/4} " Long (length of tube and hopper)
14	SI1545-31	Extension for Hopper (Bolt-on)
15	SI1545-41	Support Shaft for Delivery Auger (1 ^{1/4} " Dia. x 16" Long)
16	SI1548-32	Grease Chamber
17	SI4768-00	Hydraulic Motor for Delivery (two 1 ^{1/8} " O-Ring Ports)
18	SI9120-16	Clean Out Door

WILLMAR SPREADER

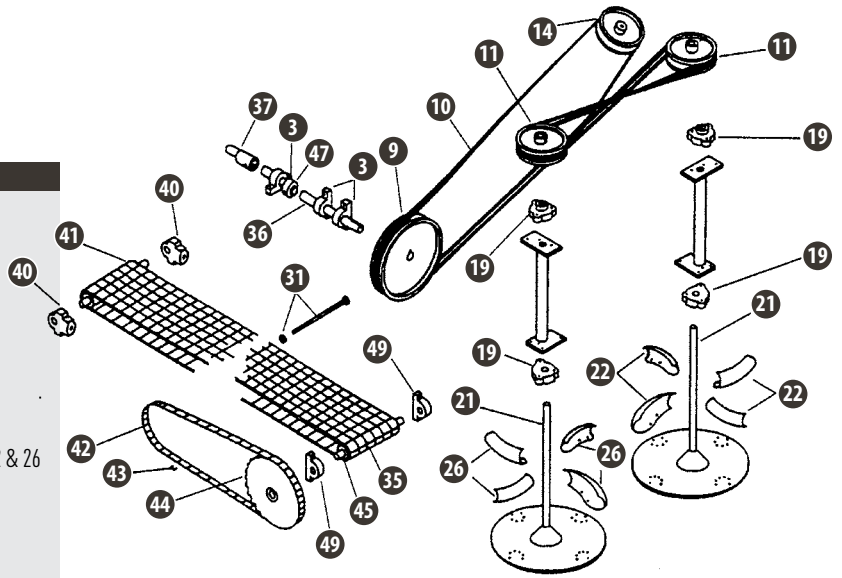


REF	S600-800	S500	DESCRIPTION	REF	S600-800	S500	DESCRIPTION
1	WI15152	WI15152	PTO Support	47	WI15442	WI15494	Inner Bearing Cone
10	WI17469	WI17471	Tarp with Shock Cord	48	WI10681	WI10680	Sprocket Ring-27 Tooth
14	WI21193	WI21193	Rear Gate	49	WI15265	WI14875	Ground Drive Hub and Sprocket
21	WI16080	WI16080	Rear End	50	WI15435	WI19123	Hub-Brake c/w Bearing Cups
24	WI16548	WI16548	Bushing-Hardwood	51	WI15441	WI15493	Outer Bearing Cup
26	WI16133	WI16133	Divider	52	WI15436	WI15490	Outer Bearing Cone
29	N/A	WI15066	Spindle	56	WI15348	WI15491	Hub Cap
35	WI15232	WI15232	Rear Belt Shield	57	WI15435	WI19122	Hub-Plain c/w Bearing Cups
36	WI16717	WI15058	U-Bolt	58	WI15130	WI15129	Equalizer Bolt
38	WI15162	WI15504	Shackle Arm	59	WI15154	WI15500	Equalizer Arm c/w Bushings
39	WI15445	WI20611	Main Leaf Spring c/w Bushings	60	WI14341	WI15503	Bushing c/w item 59
39A	WI16718	WI20538	Complete Leaf Spring	62	WI15443	WI19125	Wheel Nut
40	WI15129	WI15506	Spring Bolt	64	WI10828	WI10827	Wheel
42	WI16716	WI15059	Clip Plate	66	WI22432	WI22432	Jack Assembly
45	WI15433	WI15487	Grease Seal	67	WI15503	WI25415	Bushing
46	WI15434	WI15488	Inner Bearing Cone				

WILLMAR SPREADER

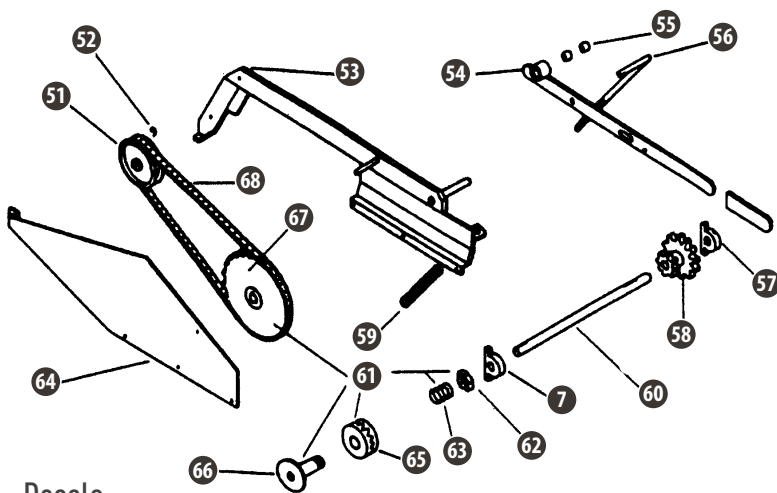
Spinner Drive and Conveyor

REF	S600-800	S500	DESCRIPTION
3	WI10636	WI10636	Bearing 1" PB
9	WI10454	WI10454	Sheave 8"
10	WI10487P	WI10487P	V-Belt
11	WI10460	WI10460	Sheave 6"
14	WI10464	WI10464	V-Idler Sheave 6 1/2"
19	WI10645	WI10645	Bearing 3 Hole Flange
21	WI16584	WI16584	Distributor Fan
	WI15226	WI15226	Fan Blade Kit includes items 22 & 26
22	WI16583	WI16583	Distributor Blade-Right
26	WI16595	WI16595	Distributor Blade-Left
31	WI10513	WI10513	Splice Pin
35	WI10511	WI10506	Conveyor Chain
36	WI21540	WI21539	Rear Line Shaft
37	WI21540	WI114805	Front Line Shaft
40	WI10652	WI10652	Take-Up Bearing
41	WI15195	WI15195	Front Roller
42	WI19129	WI10630	Conveyor Drive Chain
43	WI10633	WI10633	Connector Link
44	WI12363	WI12363	Rear End Sprocket
45	WI16597	WI16597	Rear Drive Roller and Shaft
47	WI21533	WI21533	Set Collar
49	WI10636	WI10636	Bearing 1" PB
	WI22001	WI22001	PTO Assembly (Not Shown)



Ground Drive

REF	S600-800	S500	DESCRIPTION
51	WI10461	WI10461	Sheave 4 1/2"
52	WI10575	WI10575	Connector Link
53	WI15246	WI104878	Ground Drive Engaging Arm
54	WI15251	WI15251	Engaging Lever
55	WI22547	WI22547	Nylon Bushing
56	WI15095	WI15095	Ground Drive Linkage
57	WI10636	WI10636	Bearing 1" PB
58	WI12368	WI12368	Drive Sprocket
59	WI16617	WI16617	Spring
60	WI15245	WI15093	Ground Drive Jack Shaft
61	WI10663	WI10663	Slip Clutch Assembly
62	WI10668	WI10668	Slip Clutch Nut
63	WI10669	WI10669	Slip Clutch Spring
64	WI15244	WI15244	Shield
65	WI10513	WI10513	Slip Clutch Floating Jaw
66	WI10664	WI10664	Slip Clutch Hub
67	WI10666	WI10666	Sprocket
68	WI19128	WI19130	Ground Drive Chain



Decals

S600-800	S500	DESCRIPTION
WI19503	WI19498	Application Rate Decal (11 L x 15 Tires)
WI19501	WI19501	Application Rate Decal (12.5 L x 15 Tires)
WI17395	WI17395	Dial Decal-Green

GRANULAR PARTS & ACCESSORIES



Bin Gate Air Cylinders

- A** Air Cylinder 6" Stroke (Less Clevis)..... **MIDW316-2**
- B** Clevis for DW316-2..... **MIMP-31**
- Air Cylinder 8" Stroke..... **MI318-DXP**



Stroke End Clevis

- Bimba Clevis, Female Threads **MID231-3**



Norgren Valves

- A** Single Solenoid Air Valve 120V... **MIK71DA00KS6KV2**
- Double Solenoid Air Valve 1 **MIK71DA00K32K32**
- Single Air Valve 1/4" Port **MIK71DA00KS124VDC**

1/4" Ports



Blender Air Cylinder

- Air Cylinder 12" Stroke **MI5012-DXP**



Galvanized Cable

- Galvanized Cable 1/8" **MI2701-0008**
- Galvanized Cable Clamp 1/8" **MI2901-0008**



Buckets

- Poly Bucket 9" x 6" CCHD **MIBKT9X6**
- Poly Bucket 10" x 6" CCHD..... **MIBKT10X6**



Airline Fittings

- Air Joiner Fitting 3/8" **MI12-020-0600**
- Air Elbow Joiner Fitting..... **MI12-040-0600**
- Air Tee Fitting 3/8" **MI12-060-0600**
- Air MPT Straight Fitting 1/4"..... **MI12-425-0628**
- Air MPT Straight Fitting 3/8" **MI12-425-0638**
- Air MPT Elbow Fitting 1/4"..... **MI12-447-0628**
- Air MPT Elbow Fitting 3/8" **MI12-447-0638**



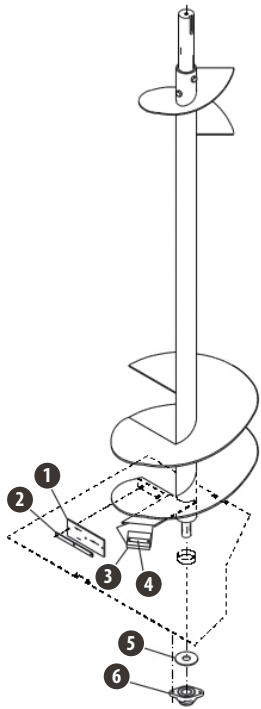
Belting

- PVC Low Temp Belt 12" **MIBCV12**
- PVC Low Temp Belt 16" **MIBCV16**
- PVC Low Temp Belt 24" **MIBCV24**



Airline

- Airline 3/8" **MI360-6**



Speed King Blender Parts

REF	PART	DESCRIPTION
1	SK13824800	PVC Belt 4 1/2" x 6 1/4"
2	SK13823000	Back-up Strap
3	SK18523100	PVC Belt 4 1/2" x 11 1/2"
4	SK18522300	Back-up Strap
5	SK18559500	Bottom Shaft Seal
6	SK03011400	Bearing 1 5/16" 2 Bolt Flange
	SK83909200	5 & 6-Ton Blender Flighting
	SK83941500	8-Ton Blender Flighting
	SK84260900	10-Ton Blender Flighting



Speed King Bearings

A	Bearing 1" Flange	SK03001500
	Bearing 1 5/16" Flange	SK03018900
B	Bearing 1 5/16" Pillow Block.....	SK03033800



Tri-Rollers

Tri-Roller Assembly 24"	YARPC024
Tri-Roller Assembly 30"	YARPC030



Return Rollers

PVC Roller Return 24"	YARR24PVC
PVC Roller Return 30"	YARR30PVC
PVC Roller Return 36"	YARR36PVC



Speed King Return Rollers

PVC Roller 2" x 6"	SK60190600
PVC Roller 2" x 10"	SK60191400
PVC Roller 2" x 18"	SK60192200
PVC Roller 2.375" x 12"	SK60193000
PVC Roller 2.375" x 13.6"	SK60196300
PVC Roller 2.375" x 16"	SK60194800
PVC Roller 2.375" x 24"	SK60195500

MICROCOTE LIQUID COATING SYSTEM

THE RIGHT EQUIPMENT FOR YOUR LIQUID COATING NEEDS

Crop producers across the country are becoming increasingly aware of the benefits of adding micronutrients to their dry and liquid fertilizers. DyTerra offers tried and tested solutions for all three of the primary types of liquid coatings being used on granular fertilizer today: micronutrients, nitrogen stabilizers and dust control oils. Whatever the product or combination you need for your site and your customers, DyTerra has you covered.



MicroCote systems use declining weight scale technology to measure and batch deliver liquid coatings.



MC1000



MC1055

OUR SYSTEMS ARE HIGHLY CUSTOMIZABLE!

WE OFFER:

- Tested reliable components
- Heavy-duty welded tube-frame construction
- Compatible with many liquids
- Automated batch blending
- Automation interfaces
- Various flow rate ranges available
- Available in all voltages
- Custom designs
- Meets Measurement Canada Regulations



8 SKID SET-UP IN A HEATED SHED

DUAL TOTE HEATED BUILDING

If you're planning to pump liquid coatings like Yara ProCote® in colder weather, you'll need to keep the liquid warm. The viscosity of these oil-based products substantially increases as the temperatures drop. In temperatures below 0°C, heating blankets may not be enough to keep liquids warm. Along with heat tracing and insulating all exposed plumbing, the best way to keep your totes of liquid coating warm is with a heated building.

DyTerra is pleased to offer a dual tote heated building specifically designed for our MicroCote systems.

FEATURES:

- 9' wide insulated garage door for swapping out totes
- Side man-door for easy access to system connections
- Interior plywood walls to support panel installation
- Insulated 2x4 construction
- Insulated floor
- Steel frame base with forklift pockets
- Durable exterior steel siding
- Optional heater and light



MICROCOTE FEATURES AND OPTIONS:

Three levels of pump control available:

- A** - Manual on/off switch
- B** - Independent Automated Batch Delivery
- C** - Third Party Automation

Optional Add-ons:

- Spray Bar
- Mixing Tools
- Tote Heater



DyTerra MicroCote Liquid Coating Systems offer the latest pumping and application technology on the market today!

SACKETT-WACONIA EQUIPMENT



H.I.M. MIXER

3 - 5 Ton Capacity

H.I.M. MIXER

The H.I.M. is the most efficient way to batch blend and/or coat the wide variety of materials on the market today. It's unique design allows for complete dispersion of materials, allows for short blend cycles, and creates a mixing action that is gentle on materials. The H.I.M. is well suited for powdered coatings and all types of liquids, including polymers.



TIME-LAPSE MIXING

3 - 5 Ton Capacity



VERTICAL SINGLE-UNIT BLENDER

6 - 18 Ton Capacity



ROTARY-BLENDER-OBLIQUE

6 - 16 Ton Capacity



SACKETT-WACONIA, DECLINING WEIGHT BLENDING SYSTEM

AGI-YARGUS EQUIPMENT

DECLINING WEIGHT BLEND SYSTEM

The Layco Declining Weight Blend System is another in a long line of innovative Layco blend systems designed for reliability and ease of maintenance, built for quality and durability, and backed by a reputation for excellent service and parts.



DECLINING WEIGHT BLEND SYSTEM

2 to 10 Hopper Design. 120 to 300 Tons per Hour Capacity



SUPER FLOW ROTARY BLEND SYSTEM

5 - 16 Ton Batch Availability



VERTICAL SINGLE-UNIT BLENDER

6 - 16 Ton Batch Availability

TOWER BLEND SYSTEM

150 to 200 Ton Storage



AGI-YARGUS, DECLINING WEIGHT BLENDING SYSTEM

SPEED KING BLENDING EQUIPMENT

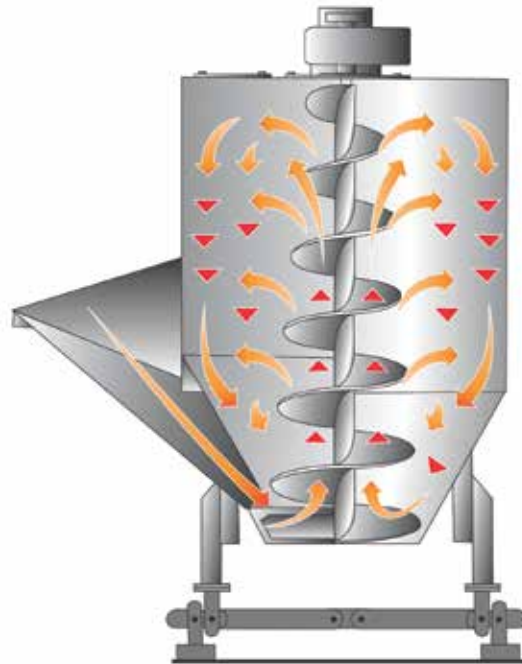


For nearly fifty years Speed King has been serving the dry chemical fertilizer industry with quality fertilizer handling products. Their leading components are the environmentally friendly vertical screw blending system, bucket elevators, the original tube conveyor as well as various trough-roller conveyors for in-plant use.

Speed King's components are the trusted line for blending chemical fertilizer and other bulk materials throughout North America.



CrustBuster/Speed King was the first tapered screw blender which is now the standard of the industry.



PARTS AND COMPONENTS

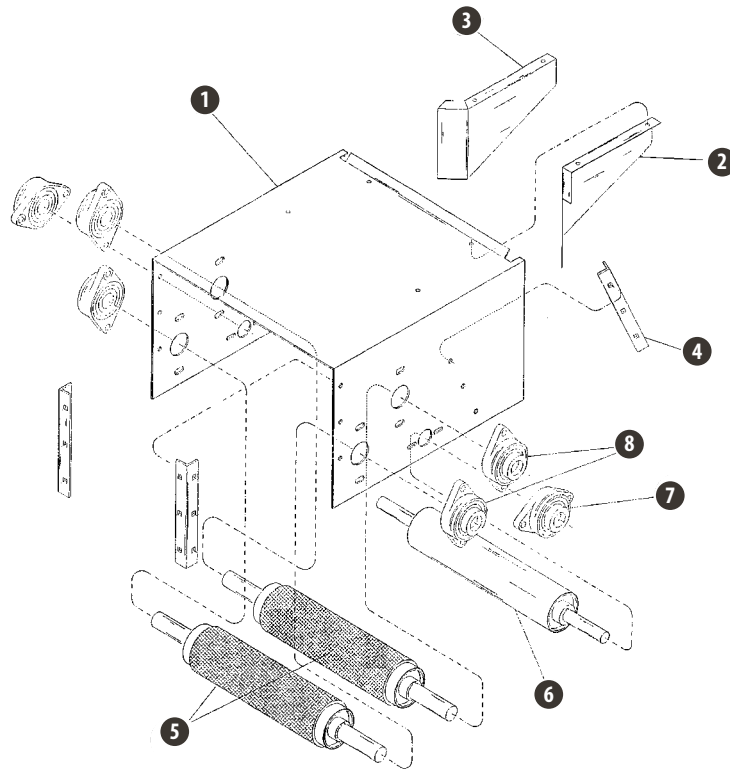
- Rollers
- Bearings
- Shafts
- Belts
- Lacing
- Sheaves
- Solenoids
- Air Fittings
- Air Line
- Flighting



SPEED KING TROUGH ROLLER S-WRAP

12" Trough Roller

REF	PART	DESCRIPTION	QTY
	SK60305000	S-Wrap Assembly 12"	1
1	SK19536200	S-Wrap Frame	1
2	SK19533900	Material Guide RH	1
3	SK19532100	Material Guide LH	1
4	SK19673300	Mounting Angle	4
5	SK60392800	Lagged Roller 3.5" x 12.5"	2
6	SK80011000	Roller 3.5" x 12.5"	1
	SK19603000	Shaft 1"	1
7	SK03018900	Bearing 1.313" 2B Flange	4
8	SK03001500	Bearing 1" 2B Flange	2



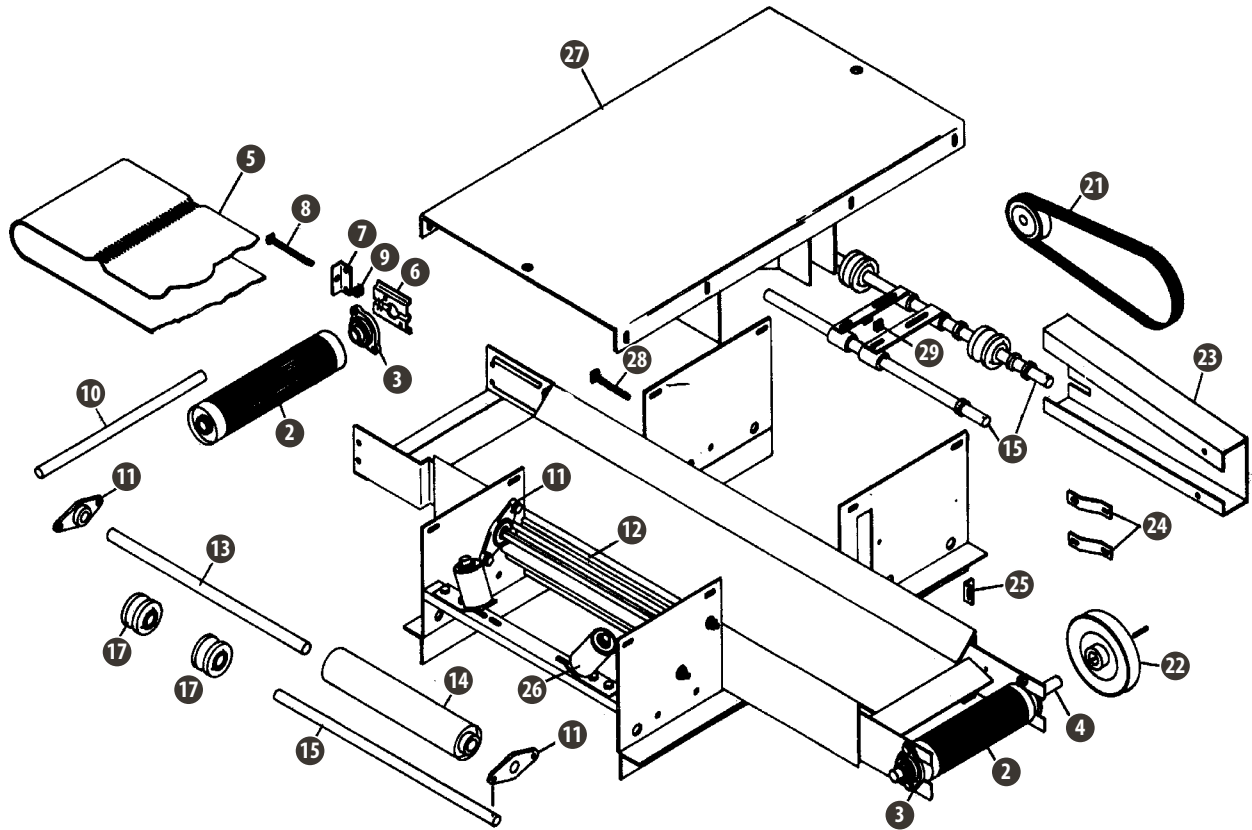
16" Trough Roller

REF	PART	DESCRIPTION	QTY
	SK60393600	S-Wrap Assembly 16"	1
1	SK19531300	S-Wrap Frame	1
2	SK19533900	Material Guide RH	1
3	SK19532100	Material Guide LH	1
4	SK19673300	Mounting Angle	4
5	SK60560000	Lagged Roller 3.5" x 12.5"	2
6	SK80682800	Roller 3.5" x 16" c/w 1.313" Shaft	1
7	SK03018900	Bearing 1.313" 2B Flange	4
8	SK03018900	Bearing 1.313" 2B Flange	2

24" Trough Roller

REF	PART	DESCRIPTION	QTY
	SK60305000	S-Wrap Assembly 24"	1
1	SK19537000	S-Wrap Frame	1
2	SK19533900	Material Guide RH	1
3	SK19532100	Material Guide LH	1
4	SK19673300	Mounting Angle	4
5	SK60355500	Lagged Roller 3.5" x 24" w/ 1.313" Shaft	2
6	SK81574600	Roller 3.5" x 24" w/ 1.313 Shaft 1	1
7	SK03018900	Bearing 1.313" 2B Flange	4
8	SK03001500	Bearing 1" 2B Flange	2

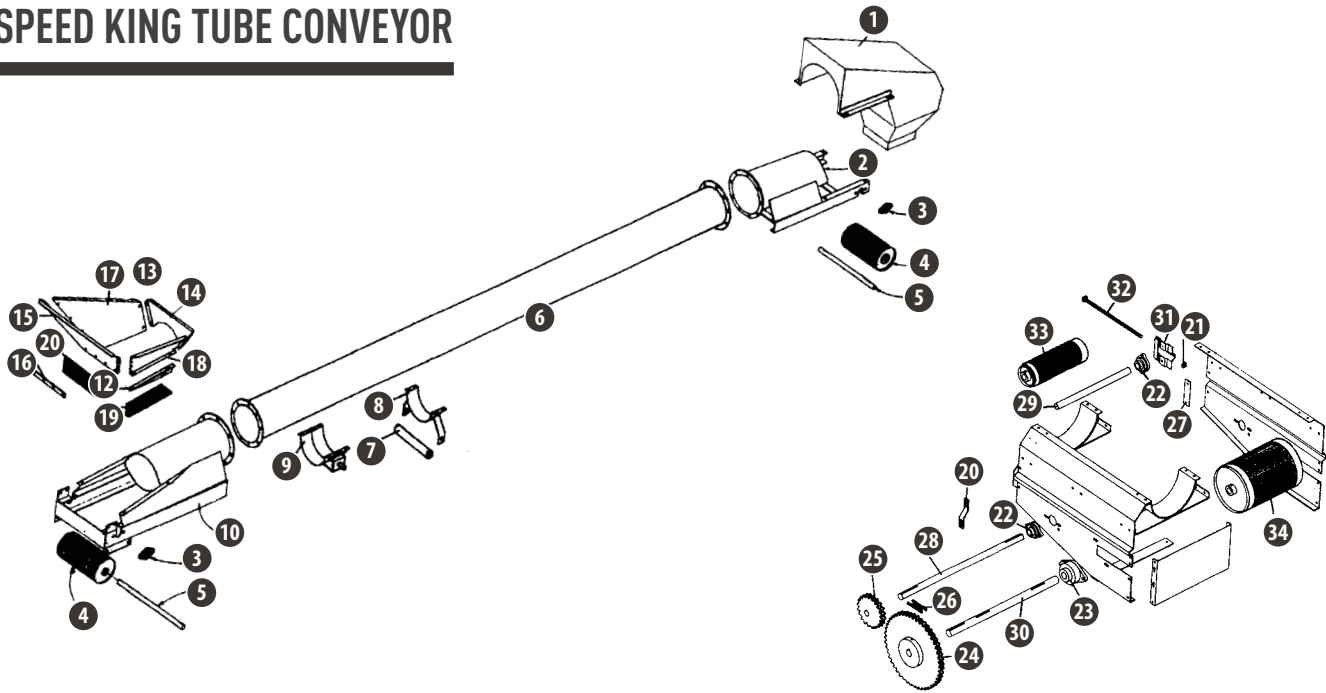
SPEED KING TRIPPER



Speed King 6' Tripper

REF	16"	24"	DESCRIPTION	REF	16"	24"	DESCRIPTION
2	SK88558200	SK88558200	Lagged Roller	14	SK81181000	SK81181000	Roller
3	SK03001500	SK03001500	Flange Bearing 1"	15	SK16187700	SK16187700	Shaft 1" x 27"
4	SK10001600	SK10001600	Shaft 1" x 23"	17	SK65080400	SK65080400	V-Groove Wheel
5	7' 10"	11' 10"	Belt Spliced Both Ends	21	MIB60	MIB83	V-Belt
6	SK13379300	SK13379300	Bearing Mount	22	SK04255600	SK04255600	Sheave
7	SK16186900	SK16186900	Take Up Bracket	23	SK16203200	SK16204000	Belt Guard
8	SK83103200	SK83103200	Take Up Bolt 3/8"	24	SK16801300	SK16801300	Belt Guard Bracket (front)
9	SK01560200	SK01560200	Nut 3/8" Square	25	SK15745300	SK15745300	Belt Guard Bracket
10	SK19603000	SK19603000	Shaft 1" x 21"	26	SK72035900	SK72035900	Roller Assembly
11	SK03018900	SK03018900	Flange Bearing	27	SK83211300	SK83211300	Cover
12	SK88186200	SK88186200	Lagged Roller 3 1/2" x 16"	28	SK83106500	SK83106500	Take Up Bolt 1/2"
13	SK14230700	SK14230700	Shaft 5/8" x 25"	29	SK01561000	SK01561000	Nut 1/2" Square

SPEED KING TUBE CONVEYOR



Tube Conveyor with 1" Shaft and Roller in Head Section

REF	PART	DESCRIPTION	QTY
1	SK82269200	MS Discharge Spout	1
	SK82796400	SS Discharge Spout	1
2	SK61686200	MS Headframe Assembly	1
	SK61687000	SS Headframe Assembly	1
3	SK03001500	Bearing 1"	4
4	SK88107800	Lagged Roller 6" x 12"	2
5	SK10409100	Shaft 1" x 21 1/2"	2
6	Varies	MS or SS Tube 12"	Varies
7	SK60196300	PVC Return Idler	Varies
8	SK82264300	Return Idler Bracket	Varies
9	SK10319210	Half Band 10"	Varies
10	SK62153200	MS Tail Frame Assembly	1
	SK89763700	SS Tail Frame Assembly	1
12	SK14969000	Guide Stiffener L SS	1
13	SK14970800	Guide Stiffener R SS	1
14	SK14971600	Front Panel SS	1
15	SK14972400	Strap SS	1
16	SK14973200	Back Panel SS	1
17	SK17678400	Right Hopper Side	1
18	SK17679200	Left Hopper Side	1
19	SK13816400	Material Guide	2
20	SK10317600	Back Wiper	1

8" and 10" Electrical Drive

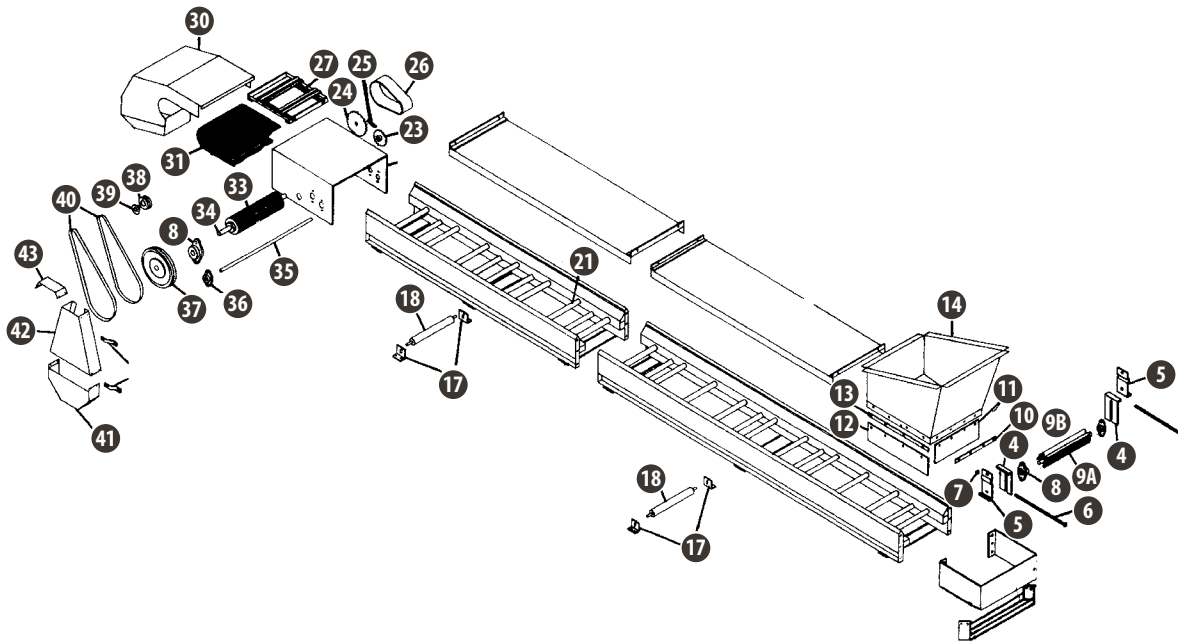
REF	8" ELECTRIC	10" ELECTRIC	DESCRIPTION	QTY
20	N/A	SK16801300	Belt Guard Bracket SS	3
21	SK01561000	SK01561000	Square Nut SS	2
22	SK03001500	SK03001500	Bearing 1"	4
23	N/A	SK03018900	Bearing 1 5/16"	2
24	N/A	SK04513800	Sprocket D48T x 1 5/16"	1
25	N/A	SK04514600	Sprocket D20T x 1"	1
26	N/A	SK05222500	#50 - 2 x 76 Pitch Chain	1
27	SK10330900	SK10330900	Take Up Bracket SS	2
28	N/A	SK11697000	Shaft 1" x 28 1/2"	1
29	SK11888500	SK11888500	Shaft 1" x 16"	1
30	SK10001600	N/A	Shaft 1" x 23 1/2"	1
	N/A	SK11891900	Shaft 1 5/16" x 23 3/4"	1
31	SK81610800	SK81610800	Bearing Slide SS	2
32	SK83106500	SK83106500	Take Up Bolt	2
33	SK88001300	SK88001300	Lagged Roller 3 1/2"	1
34	SK88040100	SK88011200	Lagged Roller	1

Tube Conveyor with 1 5/16" Shaft and Roller in Head Section

The difference is only in the head section.

REF	PART	DESCRIPTION	QTY
3	SK03018900	Bearing 1 5/16"	2
4	SK61685400	Lagged Roller 6"	1
5	SK14979900	Shaft 1 5/16" x 21"	1

SPEED KING TROUGH ROLLER & OUTBOARD CONVEYOR



Trough Roller Outload Conveyor

REF	16"	24"	DESCRIPTION	REF	16"	24"	DESCRIPTION
4	SK16076200	SK16076200	Bearing Slide, Top	26	SK89215800	N/A	Chain Guard
5	SK16075400	SK16075400	Bearing Slide, Bottom	27	SK83104000	SK83104000	Take Up Bolt
6	SK83106500	SK83106500	Take Up 1/2" x 14"	30	SK83166900	SK83911800	Discharge Spout
7	SK01561000	SK01561000	SS Square Nut 1/2"	31	MGBCV16	MGBCV24	Belt PVC Low Temp
8	SK03018900	SK03033800	Bearing	33	SK88826300	SK60197100	Lagged Roller
9A	SK88186200	SK60355500	Roller	34	SK16088700	SK18636100	Shaft
9B	SK16088700	N/A	Shaft	35	SK12217600	N/A	Shaft
10	SK16053100	SK18640300	Back Strap	36	SK03001500	N/A	Bearing
11	SK16068900	SK18639500	Back Skirt	37	SK04259800	SK04285300	Sheave
12	SK16069700	SK18656900	Side Skirt	38	SK04293700	SK04406500	Sheave
13	SK16070500	SK18622100	Side Strap	39	SK04388500	N/A	Hub
14	SK83163600	SK83934000	Load Hopper	40	MIB51	MIB73	V-Belt
17	SK13019500	SK13019500	Return Roller BRKT	41	SK83081000	SK8318000	Tail Cap
18	SK60194800	SK60195500	Return Roller	42	SK15911100	SK18624700	Guard Body
21	SK60191400	SK60192200	Carrier Roller	43	SK15910300	N/A	Guard End Plate
23	SK04502100	N/A	Sprocket				
24	SK04501300	N/A	Sprocket				
25	MIRC60MS	N/A	Chain				

WHAT WE CAN DO FOR YOU

DyTerra is a full-service supplier to fertilizer and propane industries across Western Canada. We specialize in all aspects of providing and supporting fertilizer and propane handling equipment.

We provide whole goods and small parts, design and build fertilizer plants, inspect and service tanks, handle repairs, rebuilds and remounts - and do it all with a number of quality industry and safety certifications.



NH3 SERVICE

- Annual and 5-year Transport Canada Inspections
- Meter Installations, Inspections & Calibrations
- Hose Testing
- Pump Skids
- Custom Design and Fabrication
- Storage Tank Inspections
- ASME R-Stamp Repair
- Supply and Installation of Custom Storage Tanks
- Repair, Installations and Modifications of Pressure Piping, Valves and Fittings
- General Repairs and Maintenance



GRANULAR SERVICE & CONSTRUCTION

- Turn-key Fertilizer Plants
- New Plant Design and Installation
- Plant Upgrades and Renovations
- Facility Maintenance and Repair
- Equipment Service and Repair
- MicroCote Liquid Coating Systems
- Engineering
- Equipment Installations
- Equipment Sales
- Manufacturing



LIQUID SERVICE & CONSTRUCTION

- Turn-key Fertilizer Plants
- Plant Upgrades and Relocates
- Liquid Load-out Skids
- Pump Rebuilds, Replacement & Repair
- Plumbing Upgrades
- General Repairs and Maintenance
- Custom Design and Fabrication



PROPANE SERVICE

- Annual and 5-year Transport Canada Inspections
- Meter Installations, Inspections and Calibrations
- Hose Testing
- Custom Design and Fabrication
- Storage Tank Inspections
- ASME R-Stamp Repair
- Repair, Installations and Modifications of Pressure Piping, Valves and Fittings
- Tank, Pump and Meter Repair
- General Repairs and Maintenance

HOW WE'RE CERTIFIED

Whether it's installation, fabrication or service work, we're fully certified with local, national and international certifications.



AGENCY	BRANCH	CERTIFICATION	DESCRIPTION OF THE CERTIFICATION
Transport Canada	MB, SK	Transport Canada Certificate of Registration	Modification, assembly, repair, test, retest, or inspection and manufacturing of related pressure piping systems of highway tanks and portable tanks in accordance with CSA Standard B620. (Shop and Field). In-house design engineering.
National Board of Pressure Vessel Inspectors (USA)	MB, SK	R-Stamp Certificate of Authorization	Metallic repairs and/or alterations. (Shop and Field)
CWB (Canadian Welding Bureau)	MB	CWB, Certification to CSA Standard W47.1 - Division 2	Certification of companies for fusion welding of steel. Manufacture, repair, welding and fabrication of fertilizer distribution facilities.
COR	MB	Certificate of Recognition	Approved Safety Program
ISNetworld	MB, SK	Members of ISN	Approved Safety Program
S2 Safety	MB	SAFE Work Certified	SAFE Work Certified is built around the safety essentials of leadership commitment, hazard identification and risk control, and worker participation.
Measurement Canada	MB, SK	Certificate of Designation	Recognized ASP technicians for certification of LPG, NH3, & Liquid Fertilizer Bulk Meters. (Registration Certificate R-414)
Department of Transport	MB, SK	Ministerial Authorization Authorization to apply the NSM (National Safety Mark)	Authorization to apply the NSM (National Safety Mark)
Provincial Certificate of Authorization	MB	Quality Control Program Certificate of Authorization	ASME Section VIII Div. 1 Pressure Vessels - Installation and Repair/Alteration (Shop and Field). ASME B31.3 Process Piping - Installation and Repair/Alteration (Shop and Field).
	SK	Quality Control Program Certificate of Registration	ASME Section VIII Div. 1 Pressure Vessels - Repair and Alteration (Shop and Field). ASME B31.3 Process Piping - Construct, Repair and Alteration (Shop and Field).
Engineering	SK	Certificate of Authorization	Authorized to engage in the practice of professional engineering in the Province of Manitoba in accordance with the provisions of the Engineering and Geoscientific Professions Act.

