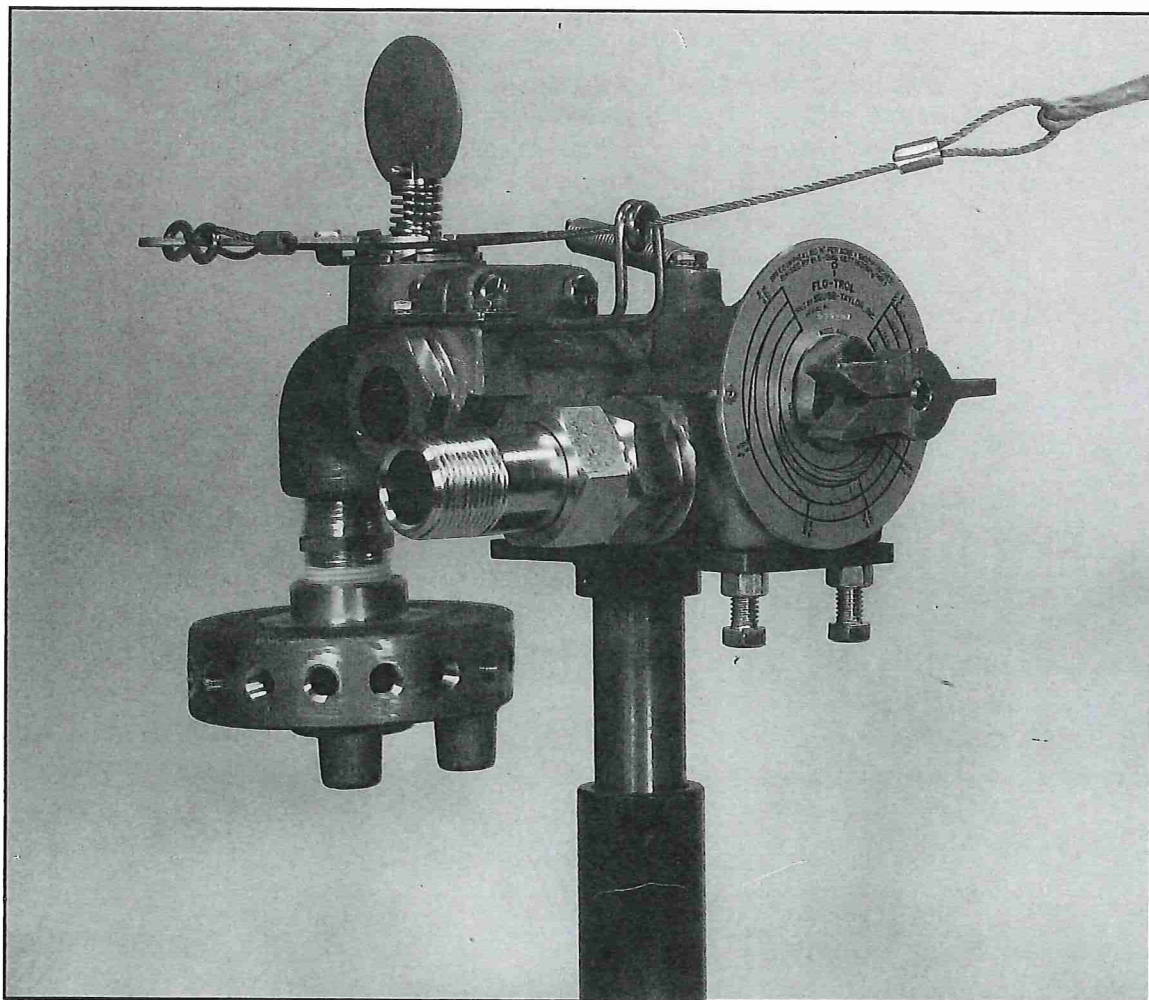


FLO-TROL OPERATING MANUAL

Model Number A1661



W A R N I N G

This equipment must be installed, operated, and maintained in accordance with Federal, State, and Local Codes and manufacturer's instructions. In addition, in most states, the installation must also comply with ANSI K61.1 standards. Only personnel trained in the proper procedures, codes, standards and regulations should install and inspect this equipment. Failure to follow these instructions or to properly install and maintain this equipment can result in property damage, personal injury or death.

CAUTION: Contact with or inhalation of liquid ammonia or its vapor can cause serious injury or death. Dispersment must be in an open area away from people, livestock, and in accordance with local regulations.

Use proper safety equipment at all times. An abundant supply of clean water must be readily available and easily accessible as a means of providing immediate FIRST AID treatment for exposure to ammonia. Purge the FLO-TROL of all product before attempting repairs.

Distributed World Wide by



INTRODUCTION TO THE A1661 FLO-TROL

WARNING

This equipment must be installed, operated and maintained in accordance with Federal, State, and Local Codes, as well as manufacturer's instructions. In addition, in most states, the installation must also comply with ANSI K61.1 standards.

CAUTION: Contact with or inhalation of liquid ammonia or its vapor can cause serious injury or death. An ABUNDANT SUPPLY of clean water must be readily available and easily accessible as a means of providing IMMEDIATE First Aid treatment for exposure to ammonia.

Only personnel trained in the proper procedures, codes, standards and regulations should install, inspect and/or operate this equipment. Failure to follow these instructions or improper installation and maintenance of this equipment could result in property damage and personal injury or death.

General Information

The A1661 FLO-TROL is a unique concept in the metering of anhydrous ammonia as a fertilizer. Only one setting is required after computing the desired amount of NH_3 per hour. The A1661 FLO-TROL functions by maintaining a constant differential pressure in a chamber between a manually adjustable orifice and an automatically variable orifice. The A1661 FLO-TROL is unique in that it does not use a diaphragm to accomplish metering; therefore, reducing maintenance and increasing accuracy of output of ammonia.

The A1661 FLO-TROL will apply ammonia successfully at 40 PSIG tank pressure and up, proportional to tank pressure, when the applicator distributor hose plumbing is properly sized. (See section on "Cold Weather Application.") Ammonia density change compensation is made by use of the curved line dial where necessary. The A1661 FLO-TROL can be calibrated in the field. (See section on "Maintenance.")

The "Row End" shutoff is a ball type valve. Lever ratchet indexing rotates the ball to open and close. Teflon seals capture the carbon steel hard chrome plated ball for effective sealing. The manually adjustable "Primary" orifice is a parabolic curve type of heat treated stainless steel and the companion sleeve is also heat treated stainless. The "Secondary" orificing consists of a spool sliding within a sleeve (each stainless and heat treated), the sleeve having radially spaced openings serving as orifices.

Cold Weather Application

Cold weather applications (low tank pressures) are the most difficult conditions for applying ammonia. Minimum 7/16" or 1/2" diameter applicator hose with appropriate hose barb must be used jointly to produce minimum friction loss in the hose plumbing distribution system. The applicator foot tube must also have sufficient outlet size to prevent ammonia vapor exit restriction. Applicator hoses must have (or be rated at) a 125 minimum PSIG working pressure. With a tank pressure of 175 PSIG and the FLO-TROL set wide open, a back pressure of 100 PSIG will be encountered. Proper hose must be used to protect the operator and the applicator system.

INSTALLATION OF THE A1661 FLO-TROL

WARNING

This equipment must be installed, operated and maintained in accordance with Federal, State, and Local Codes, as well as manufacturer's instructions. In addition, in most states, the installation must also comply with ANSI K61.1 standards.

CAUTION: Contact with or inhalation of liquid ammonia or its vapor can cause serious injury or death. An ABUNDANT SUPPLY of clean water must be readily available and easily accessible as a means of providing IMMEDIATE First Aid treatment for exposure to ammonia.

Only personnel trained in the proper procedures, codes, standards and regulations should install, inspect and/or operate this equipment. Failure to follow these instructions or improper installation and maintenance of this equipment could result in property damage and personal injury or death.

General Information

The A1661 FLO-TROL is designed to connect directly to the applicator tank liquid service valve or mount on the tool bar mounting plates. A minimum of one inch size quick disconnect coupling is required to satisfy the demand of the A1661 FLO-TROL. Dual manifold distributors can be mounted where "tee" plumbing is desired. Mounting bosses on the manifold provide for direct bolting to tool bar plates. When a nurse tank is towed for applicator supply, it is important to use a "quick disconnect" hose coupling one size larger than the hose itself, in order to reduce flow restriction. Example: 1" N.P.T. quick disconnect with 3/4" hose, 1-1/4" quick disconnect with 1" hose, etc. Be sure that the liquid service tank valve and its excess flow check has sufficient capacity to supply liquid flow demand. The Squibb-Taylor, Inc. liquid service valve no. A1597R or A1598, installed in a withdrawal dip tube with a minimum i.d. of 1-5/8" will insure satisfactory service. Orifice type hose bibs must not be used with the FLO-TROL. Distribution applicator hoses in a size of 3/8" are adequate when tank pressures range from 75 PSIG upward. When tank pressures fall below 75 PSIG, usually during late fall and early spring applications, hoses 7/16" in size are recommended. (See section on "Cold Weather Application.") When more than 16 hoses are required, the "Y" type two-opening adapter no. 1600-53 or the three-opening adapter no. 1600-58 may be used and still maintain even distribution of NH₃ to all hoses.

CAUTION: Hoses attached directly into the control cannot be used in combination with the "y" adapters and maintain even distribution. All hoses must be as short as possible and of equal length with a minimum of "quick" bends.

MAINTENANCE OF THE A1661 FLO-TROL

Proper maintenance is important to efficient operation. Periodic inspection, cleaning, and repair of the FLO-TROL is essential. Refer to assembly drawing for part numbers and their location.

CAUTION: Contact with or inhalation of liquid ammonia or its vapor can cause serious injury or death. Use proper safety equipment at all times. An ABUNDANT SUPPLY of clean water must be readily available and easily accessible as a means of providing IMMEDIATE First Aid treatment for exposure to ammonia. Be sure to purge the FLO-TROL of all product before attempting any maintenance or repair.

During the "in" season or continuous daily use of the FLO-TROL, it is recommended that the strainer be removed and cleaned daily before starting application. Be sure that all tank valves are closed AND that

MAINTENANCE OF THE A1661 FLO-TROL (cont'd)

the FLO-TROL has been purged completely of product BEFORE removing the strainer. AFTER the FLO-TROL has been purged, clamp on hex of Strainer Plug No. 1661-5008 and turn it slightly to the left (counter-clockwise) to break the seal. Pause for a moment and then ONLY when it is certain that no product (ammonia) is escaping, remove the strainer plug completely. Strainer No. 1660C-2078 should come out at the same time as the plug, as it is normally attached to the boss of the strainer plug. If not, carefully remove the strainer with a pair of pliers. Clean the strainer and the strainer plug thoroughly.

Inspect the Gasket No. 1660-2025 to make sure that it is still in one piece and in good condition. It is recommended that a small supply of these gaskets be kept on hand in the event the old gasket is damaged beyond use. Place the small end of the cleaned strainer over the boss of the strainer plug. Strainer should stay on by itself. Place the gasket over the strainer onto the gasket surface of plug OR place the gasket into the gasket recess of the body. Push the strainer through the opening of the body until the strainer engages the union adapter counterbore. Start the threads of strainer plug into the body, making sure that the gasket enters or stays in the recess of the body. Tighten the strainer plug. DO NOT use any type of sealant on the threads. The plug will seal when it is tightened against the gasket. If not, then replace the gasket.

An "off" season maintenance program of cleaning and seal replacement is highly recommended. Repair kits are available with instructions to assist in servicing your unit or units. Contact your local serviceman or dealer for more information. Be sure to make note of the model number which is found on the name plate of each unit.

Field Recalibration

Tighten POINTER on stem (in any position). Rotate POINTER & STEM counter-clockwise until it stops. Repeat rotating to a firm positive stop several times. Loosen POINTER BINDER SCREW, rotate pointer on stem "zeroing-in" to the "0," sighting down the left (or straight) side of pointer double checking to be sure pointer "zeros-in" on "0." Tighten POINTER BINDER SCREW. If necessary, repeat calibrating procedure for proper adjustment.

Operational Checkpoints

OUTPUT TOO LOW:

- Strainer may be dirty and restricting flow. Remove and clean it.
- Be sure the tank liquid service valve is fully open.
- Inlet hose or valve may be too small if high flows are being used.
- Recheck tractor speed.
- Check for too high back pressure. A 0-60 lb. pressure gauge installed in the back body will indicate if the back pressure is too great. The normal back pressure will vary with the dial setting, soil condition (loose or tight), etc. However, a drop in back pressure after an established pressure has been observed, indicates a reduction in NH₃ output caused by a clogged strainer or dirty control. An increase in back pressure indicates a plugged hose or knife.

MAINTENANCE OF THE A1661 FLO-TROL (cont'd)

Operational Checkpoints (cont'd)

OUTPUT TOO LOW:

NOTE: Back pressures exceeding 30-35 lbs. are not desirable and are generally due to inadequate size of distributor hoses and knife tubes. Also, openings in the bottom of knife tubes must be large enough to reduce pressures at high rates of application. All hoses should be as short as possible and of equal length with a minimum of "quick" bends.

- Be sure that "ball shut-off" valve is fully open.
- Do not use orifices in hose bibs to knives.
- Check calibration of dial pointer. Extreme care should be exercised when tightening pointer on stem while recalibrating to guard against slippage.

OUTPUT TOO HIGH:

- Dial setting may have been incorrectly selected. Recheck.
- Recheck tractor speed.
- Check calibration of the dial pointer.

Dial Setting Instructions

Calculate Dial Setting (NH_3 / HR) by three known factors: Tractor Speed, Pounds of "N" per acre, Swath Width. Formula to be used is also located at top of Dial Plate. Note Swath is in inches, and 81.5 is a constant.

$$\frac{\text{Speed (MPH)} \times \text{lbs. "N" per acre} \times \text{Swath (in.)}}{81.5} = \text{NH}_3 / \text{HR}$$

EXAMPLE: Speed = 5.5; Lbs. "N" per acre = 100; Swath = 30 ft. \times 12 = 360 in.

$$\frac{5.5 \times 100 \times 360}{81.5} = 2,429. \text{ NH}_3 / \text{HR}$$

Set Pointer on 2,400 when tank pressure is higher than 125. When tank pressure is below 125 psig follow curved lines on dial to proper setting.

REPAIR INSTRUCTIONS FOR THE A1661 FLO-TROL

WARNING

Use proper safety equipment at all times. An abundant supply of clean water must be readily available and easily accessible as a means of providing IMMEDIATE First Aid treatment for exposure to ammonia. Purge the FLO-TROL of all product (ammonia) before attempting repair.

CAUTION: Contact with or inhalation of liquid ammonia or its vapor can cause serious injury or death. Dispersement must be in an open area away from people, livestock, and in accordance with Local regulations.

Two types of Repair Kits are available for servicing your unit. Kit No. 1660C-1011 is a Seal Kit with Strainer. Kit No. 1660-1011 is a Major Overhaul Kit. These kits may be obtained from your local dealer or distributor.

Replace Stem Assembly

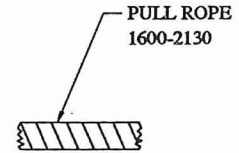
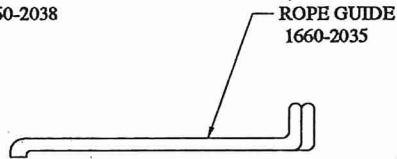
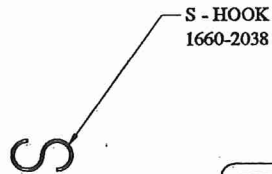
TO REPLACE THE STEM ASSEMBLY IN THE ELBOW OF THE FLO-TROL:

- Step 1:** Be sure that all Tank Valves are closed before starting maintenance.
- Step 2:** Purge FLO-TROL completely of all product.
- Step 3:** Remove FLO-TROL from the Mounting Plate or Service Valve.
- Step 4:** Remove the Return Spring No. 1660-2070 from handle.
- Step 5:** Hold Retainer No. 1660-5067 down while removing Cotter Pin No. 1700-2027 and Flag No. 1600-2114. Remove the Retainer and Spring No. 1660-2066.
- Step 6:** Remove Handle No. 1660-2065 and Ratchet No. 1660-5064.
- Step 7:** Note tab position (location) of Return Stop No. 1660-2063. Remove two (2) Screws No. 1660-2074, then remove Return Stop.
- Step 8:** Remove Stem Guide No. 1660C-5063 counter-clockwise with Special Wrench No. 1660C-7000 provided with kit. The Wiper Seal No. 1660C-2052 and O-Ring No. 1593-2001 will come out with the Stem Guide.
- Step 9:** Remove Stem No. 1660C-5060. The Nylon Washer (bearing) No. 1660-2077 will come out with the stem. Note the slot position of Ball No. 1660-5053 in the bottom of the elbow. Take care not to disturb this position, as you will need to re-engage the stem to the slot in the same position as when removed. Remove the old Nylon Washer from the stem. Remove the old Gasket No. 1660-2076 from the elbow. Clean unit thoroughly.

Install Stem Assembly

TO INSTALL NEW STEM ASSEMBLY:

- Step 1:** Place new Gasket No. 1660-2076 in counterbore of the elbow. Slide the new Nylon Washer No. 1660-2077 over the stem until the washer rests on the shoulder of the stem. Lubricate the rounded area of the stem just above the washer with a good pump and packing / sealing type lubricant (John Crane Style 279A or equivalent is recommended). Place the stem into the elbow, making sure that the milled flat on the bottom of the stem engages the slot of the ball. The stem should stand erect for the next step.



STRAINER
1660C-2078



ORIFICE SLEEVE
1660-5015

STEM
1660-5018

BONNET GASKET
1660-2019

POINTER
1660-5014

PACKING
1660-2023

POP RIVET (2)
1660-2017

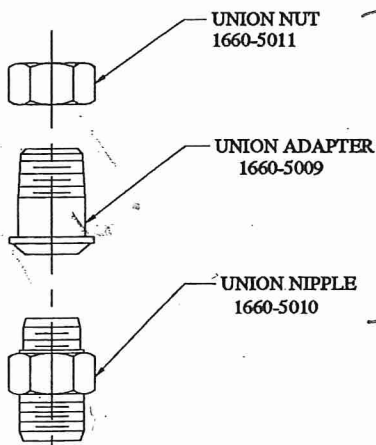
ORIFICE
1660-5016

BONNET
1660-5021

WASHER
1660-5022

PACKING NUT
1660-5024

SCREW
1600-2016



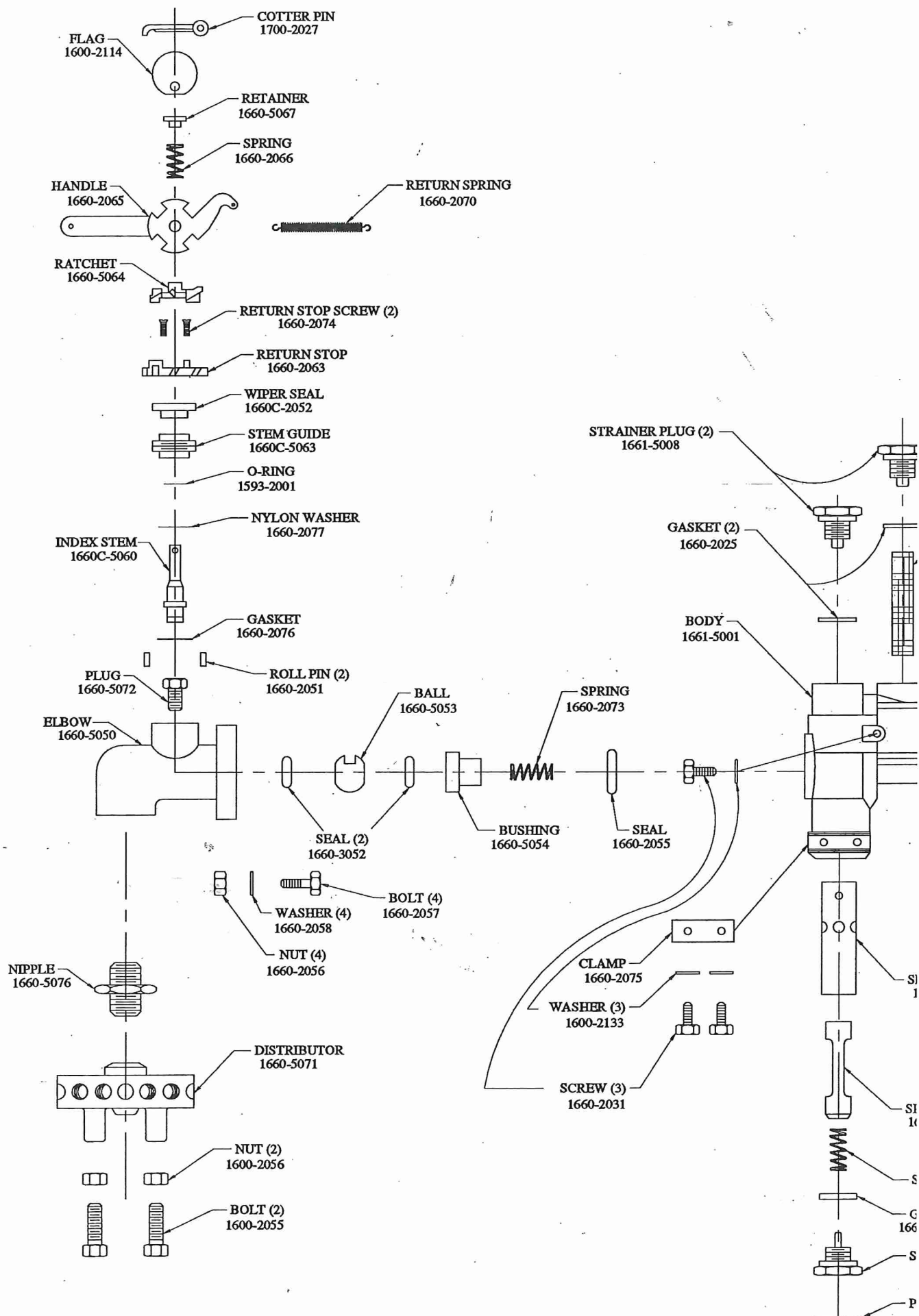
REVERSE
ORDER

A1661 FLO-TROL ASSEMBLY

PRING
14

LUG
16

CAL (3)
2



REPAIR INSTRUCTIONS FOR THE A1661 FLO-TROL

Install Stem Assembly (cont'd)

TO INSTALL NEW STEM ASSEMBLY (cont'd):

- Step 2:** Lightly grease the threads of the Stem Guide. **NOTE:** *Seal No. 1660C-2052 and O-Ring No. 1593-2001 should come already assembled to the stem guide by the factory.* Push the Stem Guide over the stem, taking care not to cut the seals, and then engage the threads of the elbow. Tighten the Stem Guide with the special wrench. Restake in two (2) places between the threads of the elbow and the Stem Guide.
- Step 3:** Place the Return Stop No. 1660-2063 over pins of the elbow. The tab must be up (toward the top) and to the left of the elbow looking from the front of the FLO-TROL. Install two (2) Screws No. 1660-2074 and tighten them.
- Step 4:** Place Ratchet No. 1660-5064 over the stem with boss or rounded part facing upward. The ears will settle in or line up to four (4) notches of the Return Stop. Place Lever No. 1660-2065 over stem and onto Ratchet, engaging notches with the ears of the Ratchet. **DO NOT** index the Ratchet.

NOTE: *The long side of the handle must be to the left of the tab on the return stop and positioned by the tab. Do not index it yet.*

Place Spring No. 1660-2066 over the stem. Place Retainer No. 1660-5067 (boss inside of spring) on top of the spring. Position Flag No. 1600-2114 into the slot of the stem, line up holes, compress spring and install Cotter Pin No. 1700-2027. Bend the legs of the Cotter Pin to secure it. Connect the Return Spring No. 1660-2070 to the handle. Index the lever and Ratchet several times in order to "lock" them in. Indexing action should be smooth with no restrictions. If restriction occurs, repeat the above procedure - making sure that the ball position or ball seals have not been disturbed.

Replace Ball Seals & Elbow

TO REPLACE BALL SEALS AND ELBOW TO BODY SEAL:

NOTE: *Shut-Off should be in the open position.*

- Step 1:** Disconnect Return Spring No. 1660-2070 from lever. Front body of FLO-TROL should be secured in a bench vise with the Rear Elbow Assembly protruding out or clear for disassembly from the front body itself.
- Step 2:** Loosen four (4) Nuts No. 1660-2056. While holding the Elbow Assembly in place, remove the four (4) Nuts completely. Remove the four (4) Lock Washers No. 1660-2058 from Bolt No. 1660-2057. Carefully remove Elbow Assembly from the front body, taking care not to disturb or drop inner components of the Elbow Assembly.

NOTE: *Four (4) Bolts No. 1660-2057 should remain in front body for reassembly.*

REPAIR INSTRUCTIONS FOR THE A1661 FLO-TROL

Replace Ball Seals & Elbow (cont'd)

TO REPLACE BALL SEALS AND ELBOW TO BODY SEAL:

Step 3: Remove the O-Ring Seal No. 1660-2055 from the groove of the elbow. Remove Spring No. 1660-2073 and Bushing No. 1660-5054 from the elbow.

NOTE: *One Ball Seal No. 1660-3052 should come out with the bushing. Remove the Ball Seal from the bushing.*

Step 4: Remove the ball from the elbow; this can be done easily by carefully indexing the shut-off to the closed position. This allows the ball to fall out. Remove the ball seal in the bottom of the elbow.

Step 5: Clean the ball, bushing and the spring with solvent. Lubricate one ball seal and place it in the bushing, then lubricate the other ball seal and place it in the bottom of the elbow.

NOTE: *Lubrication will help keep the ball seals in place during the next assembly steps.*

Step 6: Index the stem back to the open position. The flat side of the stem inside the elbow will be visible. Place the ball over the middle finger of your hand and then inside the elbow at a slight angle until the slot of the ball engages the stem. Then push the ball upward slightly to achieve proper alignment. During this step, take care to insure that the ball stays in place inside the elbow. Place the bushing with the ball seal into the elbow against the ball, taking care that the ball seal stays in place. Next, place Spring No. 1660-2073 over the bushing. Lubricate the O-Ring Seal No. 1660-2055 and place it in the groove of the elbow. Again, lubrication will help keep the O-Ring in place during the final assembly step.

Step 7: Line up four (4) holes of the elbow to the bolts which stayed in the holes of the front body during disassembly. Carefully push the elbow assembly over the bolts and against the front body. Install the lock washers over the ends of the bolts. While holding the elbow assembly in place, start two (2) of the nuts onto two bolts and snug them up finger tight. Install the other two nuts in the same manner. Tighten the nuts in a criss-cross pattern to effect a proper seal and to avoid cocking the elbow flange.

Step 8: Connect the return spring to the handle and index it several times to "lock" in the seals. The indexing action should be smooth with no restrictions.

REPAIR INSTRUCTIONS FOR THE A1661 FLO-TROL

Replace Dial Packing

TO REPLACE DIAL PACKING:

Step 1: Loosen the Pointer Screw No. 1600-2016. Remove the Pointer No. 1660-5014 from the Valve Stem. Clean the exposed end of the Valve Stem before removing the Packing Nut. Remove Packing Nut No. 1660-5024 by turning it counter-clockwise.

NOTE: *It is advisable to spray the Packing Nut with a thread-loosening agent such as WD-40 before attempting removal.*

Step 2: Treatment of the Packing Nut in this manner will help prevent stripping of the threads of the front body during Packing Nut removal. Using a screw driver or other sharp pointed object, remove the old packing from the front body. Take care not to damage the threads of the front body. The packing retainer should stay in the front body.

Step 3: Clean the stem and packing area thoroughly. Install the new Packing No. 1660-2023 over the stem and onto the front body. Tap the edges down if necessary to allow thread engagement of the Packing Nut. Lightly grease the threads of the Packing Nut and install it over the stem into the front body. Snug up the nut using a wrench - then back off 1/2 turn to allow the stem to turn easily for calibration.

Calibration

CALIBRATE AS FOLLOWS:

Tighten the pointer on the stem (in any position), rotate the pointer and the stem counter-clockwise until it stops (do not force it). Operate the pointer several times with a right and left rotation to create free movement of the stem and to get a feel for the full open position. Place the pointer in the full open position and loosen the pointer screw. Then turn the pointer to the zero position of the dial, making sure that the stem does not move. Line up the left side of the pointer with the zero position of the dial, then tighten the screw securely. Operate the pointer with the left and right hand movement several times to the full open position. Recheck the pointer alignment to the zero position of the dial. Loosen the screw and reset the pointer if necessary. After the unit is calibrated, turn the pointer clockwise to move the orifice away from the bonnet. Snug up the packing nut to prevent further movement of the stem until the unit is placed back into service.

Replace Strainer & Plug Gaskets

Loosen and remove Strainer Plug No. 1661-5008. Remove the old strainer and the gasket. Clean the strainer plug thoroughly. Place new Strainer No. 1660C-2078 over boss of the strainer plug. Place one (1) Gasket No. 1660-2025 into the counterbore of the front body. Lightly grease the threads of the Strainer Plug. Install the strainer and the strainer plug into the body and tighten it.

NOTE: You have been supplied with three (3) additional gaskets (No.'s 1660-2005, 1660-2009 & 1660-2025) which may or may not be required depending on the model or style you are repairing. Follow similar procedures to those in Strainer Plug Removal should you need to replace the spring plug or the stop plug gaskets. All of these plugs are removed counter-clockwise and are tightened clockwise.

USEFUL INFORMATION

Determine Lbs. of "N" per Hour Capacity

Formula for Determining Pounds of Nitrogen per Hour Capacity Requirement for any Metering Device:

$$C = \frac{SVN}{99}$$

S = Swath Width in Inches

V = Tractor Speed in MPH

N = Pounds of Nitrogen per Acre

C = Metering Device Capacity Requirement

Time Required to Cover One Acre

SWATH WIDTH IN INCHES	TRACTOR SPEED IN MILES PER HOUR															
	2-1/2	3	3-1/2	4	4-1/2	5	5-1/2	6	6-1/2	7	7-1/2	8	8-1/2	9	9-1/2	10
	APPROXIMATE TIME TO COVER ONE ACRE, IN MINUTES:															
80	30	25	21	19	17	15	14	12	11	11	10	9	9	8	8	7
90	26	22	19	17	15	13	12	11	10	9	9	8	8	7	7	6
96	25	21	18	16	14	12	11	10	9	9	8	8	7	7	6	6
108	22	18	16	14	12	11	10	9	9	8	8	7	7	6	6	5
112	21	18	15	13	12	11	10	9	8	8	7	7	6	6	6	5
114	21	17	15	13	12	10	9	9	8	8	7	7	6	6	6	5
120	20	17	14	12	11	10	9	8	8	7	7	6	6	6	5	5
126	19	16	14	12	11	9	9	8	7	7	6	6	6	5	5	5
128	19	15	13	12	10	9	8	8	7	7	6	6	5	5	5	5
144	17	14	12	11	9	8	8	7	6	6	6	5	5	5	4	4
152	16	13	11	10	9	8	7	7	6	6	5	5	5	4	4	4
160	15	12	11	9	8	7	7	6	6	5	5	5	4	4	4	4
168	14	12	10	9	8	7	6	6	5	5	5	4	4	4	4	3
180	13	11	9	8	7	7	6	5	5	5	4	4	4	4	3	3
190	13	10	9	8	7	6	6	5	5	5	4	4	4	3	3	3
200	12	10	9	8	7	6	6	5	5	4	4	4	4	3	3	3
210	11	9	8	7	6	6	5	5	4	4	4	4	3	3	3	3
216	11	9	8	7	6	5	5	5	4	4	4	3	3	3	3	3
228	10	9	7	7	6	5	5	4	4	4	4	3	3	3	3	3
240	10	8	7	6	6	5	4	4	4	4	3	3	3	3	3	2
252	9	8	7	6	5	5	4	4	4	3	3	3	3	3	2	2
280	8	7	6	5	5	4	4	4	3	3	3	3	2	2	2	2

USEFUL INFORMATION

Acreage Covered by 85% Capacity Tanks

Approximate Acreage Covered by Standard Sized Tanks Filled to 85% Capacity:

POUNDS OF NITROGEN PER ACRE REQUIRED	STANDARD TANK SIZES IN GALLONS							
	1000	560	500	400	335	250	200	122
	(850)	(476)	(425)	(340)	(285)	(213)	(170)	(104)
60	59	33	30	24	20	15	12	7.0
80	44	25	22	18	15	11	9	5.5
100	35	20	18	14	12	9	7	4.5
120	29	16	15	12	10	7	6	3.5
140	25	14	13	10	8	6.5	5	3.0
160	22	12	11	9	7	5.5	4.5	2.7
180	20	11	10	8	6.5	5	4.0	2.4
200	18	10	9	7	6	4.5	3.5	2.2
220	16	9	8	6.5	5.5	4	3.2	2.0
240	15	8	7	6	5	3.5	2.9	1.8
260	14	7.5	6.9	5.5	4.5	3.4	2.9	1.7
280	13	7	6.4	5	4	3.1	2.5	1.5
300	12	6.5	6	4.5	3.8	3	2.4	1.4
NOTE: Numbers in () represent 85% tank capacity.								

USEFUL INFORMATION

Float Gauge % to Cover One Acre

Float Gauge % to Cover One Acre for Standard Pounds of Nitrogen per Acre and Standard Tank Sizes:

POUNDS OF NITROGEN PER ACRE	TANK SIZE IN GALLONS								GALLONS OF NH ₃ PER ACRE
	1000	560	500	400	335	250	200	122	
60	1.4%	2.6%	2.8%	3.6%	4.3%	5.8%	7.2%	11.8%	14.4
80	1.9%	3.4%	3.8%	4.8%	5.7%	7.7%	9.6%	15.8%	19.2
100	2.4%	4.3%	4.7%	6.0%	7.2%	9.6%	12.0%	19.7%	24.1
120	2.9%	5.2%	5.7%	7.2%	8.6%	11.5%	14.4%	23.7%	28.9
140	3.4%	6.0%	6.6%	8.4%	10.1%	13.5%	16.8%	27.6%	33.7
160	3.8%	6.9%	7.5%	9.6%	11.5%	15.4%	19.2%	31.5%	38.5
180	4.3%	7.7%	8.5%	10.8%	12.9%	17.3%	21.6%	35.5%	43.3
200	4.8%	8.6%	9.5%	12.0%	14.4%	19.2%	24.0%	39.4%	48.1
220	5.3%	9.4%	10.4%	13.2%	15.8%	21.2%	26.5%	43.4%	52.9
240	5.8%	10.3%	11.3%	14.4%	17.2%	23.1%	28.9%	47.3%	57.7
260	6.3%	11.2%	12.3%	15.6%	18.7%	25.0%	31.3%	51.2%	62.5
280	6.7%	12.0%	13.3%	16.9%	20.1%	26.9%	33.7%	55.2%	67.3
300	7.2%	12.9%	14.1%	18.0%	21.5%	28.9%	36.1%	59.1%	72.1

NOTE: The above table is based on NH₃ at 75° F and a tank pressure of 125 PSI.

Distance Required to Cover One Acre

Distance Required to Cover ONE ACRE for Standard Swath Widths:

SWATH WIDTH (Inches)	DISTANCE IN FEET	DISTANCE IN MILES
80	6534	1.24
90	5808	1.10
96	5445	1.03
108	4840	.92
112	4667	.88
114	4585	.87
120	4356	.83
126	4149	.79
128	4084	.77
144	3630	.69
152	3439	.65
160	3267	.62
168	3111	.59
180	2904	.55
190	2751	.52
200	2614	.49
216	2420	.46
228	2293	.43
240	2178	.41
252	2074	.39
280	1867	.35