ALEMITE®

Service Guide

3670 3670-A 3670-B
3670-BL 3671 3671-A
3671-B 3671-BL 3672
3672-A 3672-B 3672-BL
3673 3673-L 3674-B
3674-BL 3674-C 3674-CL

Electronic Metered Control Valve

Description

CAUTION

Do not operate this metered valve with an antifreeze and water mixture. Meter will not register properly.

The metered control valve models included in the 3670 series are designed to meter quantities of a variety of fluids. These valve assemblies dispense motor oils (SAE 5-50), gear oils (SAE 80-240), and automatic-transmission fluid. Each control valve contains a 40-mesh strainer. The meter's unit of measure can be programmed for pints, quarts, gallons or liters.

Operation

To begin, press the button in the center of the lever. This releases the safety. With the button held, squeeze the lever to open the valve.

To latch the valve in the full open position, release the lever (while pressing the button), then release the button. To shut the valve off, press the lever and release.

NOTE: The latch feature can be disabled with the removal of a roll pin. See **Figure 4**.

Refer to Service Guide **SER 3679** for meter description and operation.

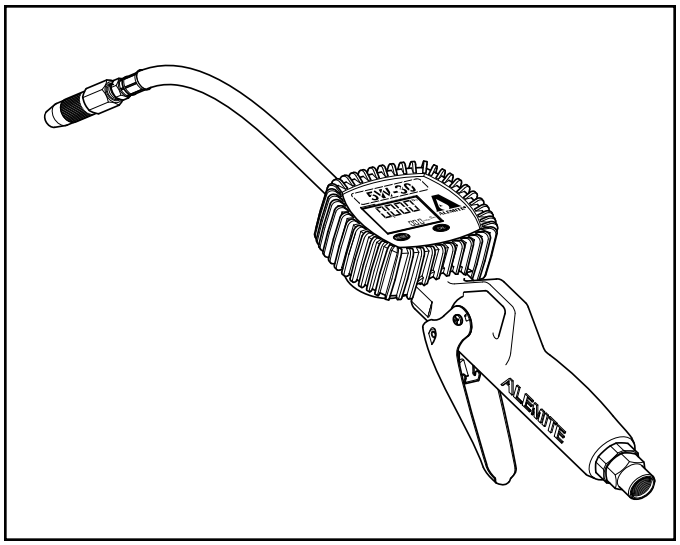

Figure 1 *Electronic Metered Control Valve Model 3670 Series - Model 3671-B Shown*

Fluid Inlet (Swivel)	1/2" NPTF (f)
Maximum Operating Pressure	1000 psi (70 bar)

Model	Fluid Metered	Extension	Nozzle Type	Units of Measure (preprogrammed)
3670	Oil	Rigid	Non-Drip Auto	Quart
3670-A (obsolete, use 3670)	Oil	Rigid	Non-Drip Auto	Liter
3670-B	Oil	Rigid	Non-Drip Manual	Quart
3670-BL (obsolete, use 3670-B)	Oil	Rigid	Non-Drip Manual	Liter
3671	Oil	Flexible	Non-Drip Auto	Quart
3671-A (obsolete, use 3671)	Oil	Flexible	Non-Drip Auto	Liter
3671-B	Oil	Flexible	Non-Drip Manual	Quart
3671-BL (obsolete, use 3671-B)	Oil	Flexible	Non-Drip Manual	Liter
3672 (obsolete, use 3671)	Transmission Fluid	Flexible	Non-Drip Auto	Quart
3672-A (obsolete, use 3671)	Transmission Fluid	Flexible	Non-Drip Auto	Liter
3672-B (obsolete, use 3671-B)	Transmission Fluid	Flexible	Non-Drip Manual	Quart
3672-BL (obsolete, use 3671-B)	Transmission Fluid	Flexible	Non-Drip Manual	Liter
3673	Gear Oil	Rigid	Non-Drip Auto. w/ Manual Lock	Pint
3673-L (obsolete, use 3673)	Gear Oil	Rigid	Non-Drip Auto. w/ Manual Lock	Liter
3674-C	Oil	Rigid	Non-Drip High-Voulme Manual	Gallon
3674-CL (obsolete, use 3674-C)	Oil	Rigid	Non-Drip High-Voulme Manual	Liter

Note: All meters are programable for Pints, Quarts, Gallons and Liters (see SER 3679)

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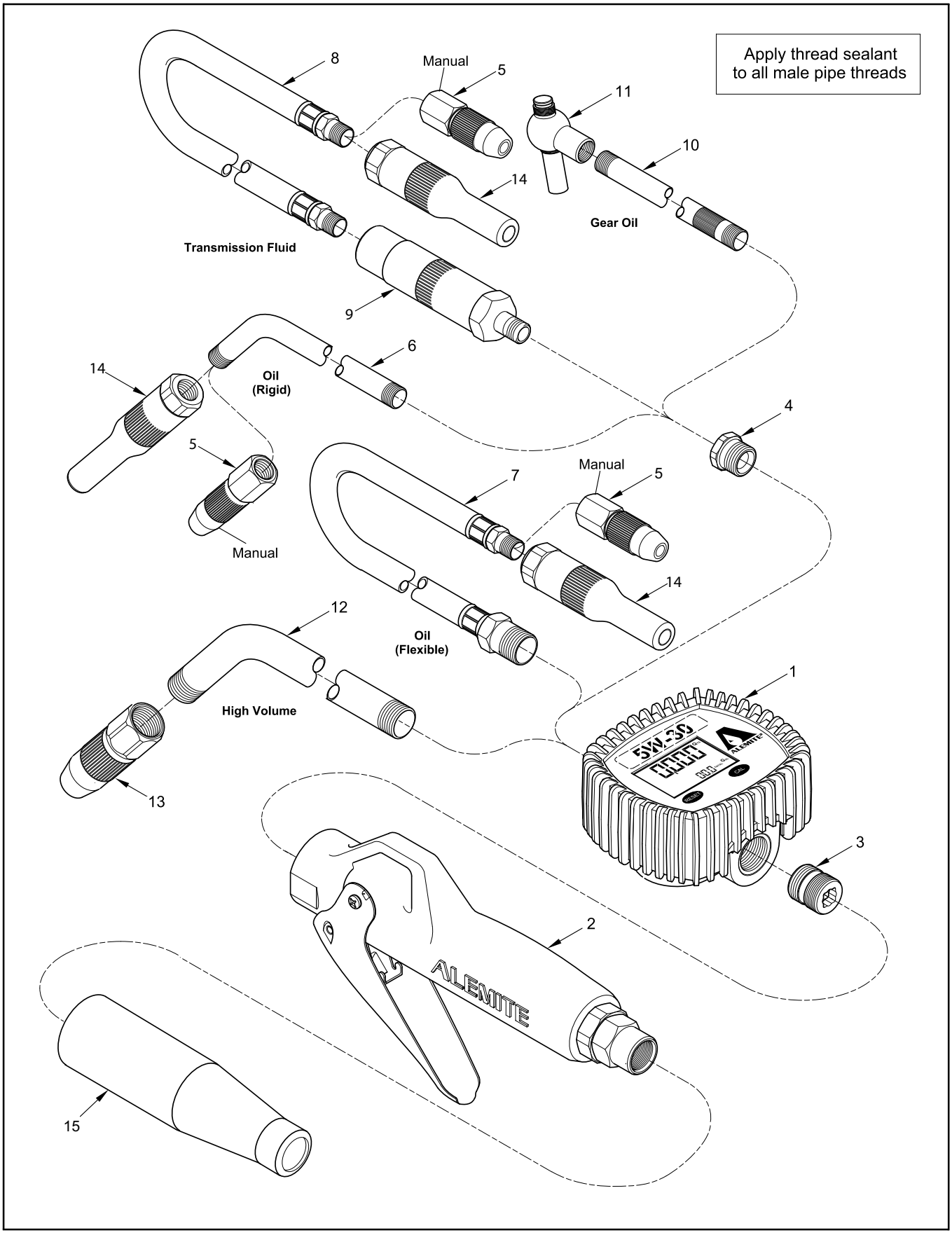


Figure 2 *Electronic-Metered Control Valve Model 3670 Series - Exploded View*

Item No.	Part No.	Description	Control Valve Model								Qty	Notes
			3670-B 3670-BL	3671-B 3671-BL	3672-B 3672-BL	3673 3673-L	3674-C 3674-CL	3670,3670-A	3671,3671-A	3672,3672-A		
1	3679	Meter Assembly, Electronic	All Models								1	See **SER 3679**
2	339100	Handle Assembly, Control Valve									1	See **Figure 4**
3	338706	Nipple, 1/2 " NPTF (m)									1	
4	51891	Bushing, 1/2 " NPTF (m) x 1/4 " NPTF (f)	●		●	●		●		●	1	
5	339084	Non-Drip Nozzle, Manual	●	●	●						1	
6	338702	Extension, Curved, 1/4 " NPTF (m)	●					●			1	
7	338709	Hose, 1/2 " NPTF (m) x 1/4 " NPTF (m)		●					●		1	
8	317860-1	Hose, 1/4 " NPTF (m) x 1/4 " NPTF (m)			●					●	1	
9	332970	Filter Assembly (40-Micron)			●					●	1	See **Figure 3**
10	320421	Extension, Straight, 1/4 " NPTF (m)				●					1	
11	318400-2	Non-Drip Nozzle, Automatic (w/ Manual Lock)				●					1	
12	339149	Extension, Curved, 1/2 " NPTF (m)					●				1	
13	340084	Non-Drip Nozzle, High Volume Manual					●				1	
14	B339800	Non-Drop Nozzle, Automatic						●	●	●	1	
15	340626	Swivel Protector	All Models								1	
	340626-1	Swivel Protector, Black	All Models								1	
	340626-2	Swivel Protector, Yellow	All Models								1	
	340626-3	Swivel Protector, Green	All Models								1	
	340626-4	Swivel Protector, Red	All Models								1	
	340626-5	Swivel Protector, Blue	All Models								1	

Maintenance

NOTE: Refer to **Figure 4** for identification on the valve assembly components.

Prior to performing any maintenance procedure, the following safety precautions must be observed. Personal injury can occur.

WARNING

Release all pressure within the system prior to performing any overhaul procedure.

- **Disconnect the air supply line from the pump motor.**
- **Into an appropriate container, operate the control valve to discharge remaining pressure within the system.**

Never point a control valve at any portion of your body or another person. Accidental discharge of pressure and/or material can result in personal injury.

Read each step of the instructions carefully. Make sure a proper understanding is achieved before proceeding.

Disassembly

Control Valve Handle

NOTE: Swivel Assembly (**2j**) is under spring pressure.

1. Unscrew Swivel Assembly (**2j**) from Body (**2a**).
2. Remove and disassemble all the remaining components from within the Body.
3. Remove Screws (**2m**) that secure Lever Assembly (**2k**) to Cam (**2p**).
   - Remove the Lever Assembly from the Cam.
4. Remove the Cam from the Body.
   - Remove O-Rings (**2n**) from the Cam.
5. Remove Roll Pin (**2b**) from the Body only as required.

Assembly

NOTE: Prior to assembly, certain components require lubrication. Refer to **Table 2** for details.

Control Valve Handle

1. Install Roll Pin (**2b**) into Body (**2a**) as required.

   *IMPORTANT: Lubricate O-Rings (**2m**) with grease prior to installation.*

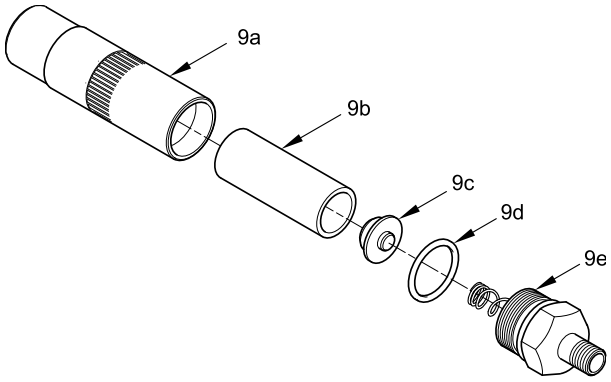
2. Install O-Rings (**2n**) onto Cam (**2p**).
3. Install the Cam assembly into the Body.
   - Make sure to orient the Cam as shown in **Figure 5**.
4. Position Lever Assembly (**2k**) onto the tabs of the Cam.
   - Make sure the safety does not interfere with the Body.
5. Install Screws (**2m**) that secure the Lever Assembly to the Cam.
   - Tighten the Screws securely.
6. Install Seal (**2d**) [blunt end first] onto Push Rod (**2c**).
7. Install Spring Support (**2f**) into the small end of Compression Spring (**2g**).
8. Install Small Compression Spring (**2e**) onto the Spring Support.
9. Install the Push Rod and Seal assembly onto the Spring Support.
10. Install the Compression Spring (with assembled components) into the Body.
    - Make sure the Push Rod seats properly on the Cam.
11. Install Strainer (**2h**) into the Compression Spring.
12. Install O-Ring (**2i**) onto Swivel Assembly (**2j**).

    NOTE: Swivel Assembly is under Spring pressure during installation.

13. Screw the Swivel Assembly into the Body.
    - Tighten the Swivel Assembly securely.

Item #	Description	Item Location
Clean Oil		
9d	O-Ring, 3/4 " ID x 15/16 " OD	**Figure 3**
2i	O-Ring, 13/16 " ID x 1 " OD	**Figure 4**
Multi-Purpose Grease		
2n	O-Ring, 1/2 " ID x 11/16 " OD	**Figure 4**

Table 2 *Lubricated Components*



Item #	Part No.	Description	Qty
9a		Body	1
9b	332964	Filter Element	1
9c		Stud	1
9d	X171001-14	O-Ring, 3/4 " ID x 15/16 " OD	1
9e		Spring and Adapter Assembly	1

Legend:
Part numbers left blank are not available separately
Part number with an X prefix indicates a quantity of ten (10)

Figure 3 *Filter Assembly 332970 - Exploded View*

Prime and Test

NOTE: Perform the following procedures at an air pressure that allows the pump to begin to cycle. Regulate the amount of air to the pump with a pressure regulator.

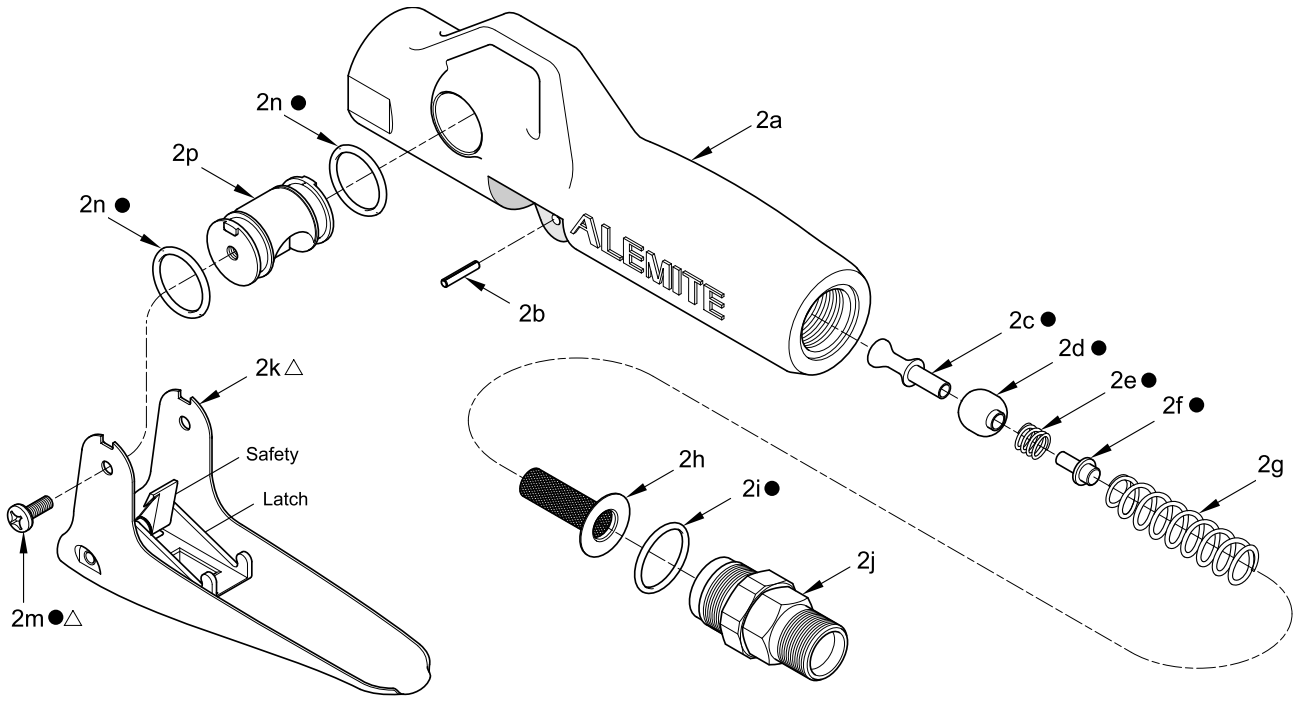
Should valve leakage occur at anytime, refer to the **Troubleshooting Chart.**

1. Point the control valve into an appropriate collection container.
2. Allow the pump to deliver fluid to the control valve.
   - The control valve should show no leakage nor dispense the fluid.
3. Cycle the control valve Lever Assembly several times.
   - Fluid should flow once air is eliminated from the control valve (and system).

If the control valve does not dispense the fluid, refer to the **Troubleshooting Chart.**

With the Lever in the released position, no fluid should appear at the Nozzle. If product does appear, refer to the **Troubleshooting Chart.**

Should the electronic meter not function properly, refer to Service Guide **SER 3679** for details.



Item #	Part No.	Description	Qty	Notes	Item #	Part No.	Description	Qty	Notes
2a		Body	1		2h	339064	Strainer (40-Mesh)	1	
2b		Pin, Roll, 1/8 " x 5/8 " Long	1		2i	X171009-17	O-Ring, 13/16 " ID x 1 " OD	1	●
2c		Rod, Push	1	●	2j	339656	Swivel Assembly	1	
2d		Seal	1	●	2k		Lever Assembly	1	△
2e		Spring, Compression, Small	1	●	2m		Screw, 10 -24 x 3/8 "	2	● △
2f		Support, Spring	1	●	2n	X171000-10	O-Ring, 1/2 " ID x 11/16 " OD	2	●
2g	339063	Spring, Compression	1		2p	339055	Cam	1	

Legend:
Part numbers left blank are not serviced separately
Part numbers with an X prefix indicate a quantity of ten (10)
●△ designates a repair kit item

Repair Kits

Part No.	Kit Symbol	Description	Part No.	Kit Symbol	Description
393676	●	Kit, Major Repair	**393677**	△	Kit, Lever Replacement

Figure 4 *Control Valve Handle 339100 - Exploded View*

Troubleshooting Chart

Control Valve Indications	Possible Problems	Solutions
Continuous product flow	1. Foreign material on Seal (**2d**) 2. Seal (**2d**) worn or damaged	1. Disassemble, clean, and inspect seat area. Check mating surfaces and replace Seal (**2d**) as necessary. Locate and eliminate source of foreign material. Clean Strainer (**2h**) 2. Use Kit **393676**
Reduced or zero product flow	1. Clogged system strainer or control valve strainer 2. Metering gears jammed 3. Manual Nozzle (**5**, **11**, or **13**) not open	1. Clean strainer 2. Overhaul gears in meter 3. Open Nozzle (**5**, **11**, or **13**)
Leakage at Swivel Assembly (**2j**)	1. Initial tightening of Swivel Assembly (**2j**) not sufficient 2. O-Ring (**2i**) worn or damaged	1. Tighten Swivel Assembly (**2j**) 2. Replace O-Ring (**2i**)
Leakage at Cam (**2p**)	O-Rings (**2n**) worn or damaged	Replace O-Rings (**2n**)
Leakage at front end of Nozzle	Nozzle damaged	Replace Nozzle
Leakage at Extension Assembly	1. Initial tightening not sufficient 2. Thread sealant missing or inadequate	1. Tighten leaking connection 2. Apply thread sealant* to male pipe threads
Safety on Lever Assembly (**2k**) does not engage	1. Broken spring in Lever Assembly (**2k**) 2. Foreign material in Lever Assembly (**2k**) 3. Worn or damaged Compression Spring (**2g**)	1. Use Kit **393677** 2. Clean Lever Assembly (**2k**) 3. Replace Compression Spring (**2g**)
Latch on Lever Assembly (**2k**) does not release	1. Broken spring in Lever Assembly (**2k**) 2. Foreign material in Lever Assembly (**2k**) 3. Worn or damaged Compression Spring (**2g**)	1. Use Kit **393677** 2. Clean Lever Assembly (**2k**) 3. Replace Compression Spring (**2g**)
* Do not apply thread sealant to the first two (2) threads. Contamination can occur.		

Changes Since Last Printing

Obsoleted ATF and liter models