191500 DynaJet® Valve Maintenance Guide

The DynaJet® valve is a solenoid-actuated shutoff valve compatible with a wide range of TeeJet® nozzle bodies equipped with a diaphragm check valve port. It can be used for end-of-boom nozzles, individual tip shutoff, and pulse width modulation applications. It is available in a 12V and 24V version.

The valve is normally closed and opens when the solenoid is energized. It has a 2-pin AMP SuperSeal 1.5 connector molded into the body for a clean, weather-tight electrical connection.

DynaJet® Valve – 191500

Required accessories on the spray boom:
Any sprayer that is fitted with a DynaJet valve should also incorporate system line strainers. It is recommended to use a 100-mesh filter element with the DynaJet valves, although an 80 mesh is acceptable. The strainer must be installed as close as possible to the DynaJet valve. The utilization of a boom section strainer is ideal to keep the valve protected from small particles and debris. Small particles or debris can detrimentally affect the operation of the valves by clogging the inlets and outlets of the valve.

Safety information:
The DynaJet valve, strainers, and spray boom are components that are in direct contact with chemicals. These chemicals can be corrosive and dangerous for the health of the operator. Before any intervention of the system, we recommend you wear appropriate safety equipment. This safety equipment should be composed of:

- Long-sleeved chemical resistant glove

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- Full protective suit.

- Full protection screen for your eyes.

During the washing, rinsing, and inspection of the sprayer, the sprayer should be parked on a level surface. The sprayer should also be in an area where the water and chemical residue can be collected and treated appropriately. It is not recommended to do this procedure in the field.

Please note that before disassembly of any sprayer components, you must make sure the spray boom is completely shut off to avoid any projection of chemical onto yourself.

Daily Maintenance

Frequency: After each use of the sprayer

DynaJet® Valve washing and rinsing:
It is recommended to rinse the system with clean water after each application.
You can use the normal rinsing and washing program on your sprayer to achieve this task. If your sprayer doesn't have a rinsing or washing program, you can follow our rinsing procedure. See section "TeeJet Rinsing Procedure" for further insutructions.
It is important to have clean water going through the DynaJet valve to evacuate any remaining chemical or debris from the valves. We recommend spraying clean water through the valves for a minimum of 30 seconds to ensure that the valve is clean.

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DynaJet® Valve washing and rinsing when using liquid fertilizer:
In the case of liquid fertilizer application, follow the same process described in section "DynaJet Valve Washing and Rinsing".
In addition to this, spray the valves with water to remove any potential residue of liquid fertilizer remaining on the valves. The valves do not need to be sprayed at a high pressure. Rinsing the outside of the valves will ensure that any remaining chemical on the outside surface will be removed to avoid any chemical attack.

DynaJet Valve Inspection After Washing and Rinsing:
After rinsing, pressurize the spray boom to see if any of the valves are leaking or dripping. If a valve appears to have either of these issues, there may be some debris lodged in the sealing area that does not allow the valve to properly close.
If you detect a DynaJet valve leaking after the washing and rinsing, repeat the washing and rinsing procedure mentioned above.
In the case that you can't remove the particles or debris from the valve, disassemble the clogged valve. Please follow the disassembly procedure described in section "General Disassembly and Reassembly".

TeeJet Rinsing Procedure:

The following section will give you a step-by-step procedure of how to clean your spray line and DynaJet Valve.

1. Before starting the rinsing procedure, ensure that you have removed all remaining mixture in the main tank. The spray pump should also be cleaned with fresh water.
2. Fill the main tank with a minimum of 132 gallons (500 liters) of clean water.
3. Park the sprayer in a safe location where you can unfold the spray boom.
4. Unfold the spray boom.
5. Set the rate controller to automatic regulation. In the controller menu, set the working speed to 5mph (8 km/h).
6. Enter a target rate between 10GPA (100L/Ha) and 20GPA (180 L/Ha).
7. Set the pressure to around 40PSI (3 bar).
8. Turn on the sprayer pump.
9. Turn on all section switches including the master switch.
   Note: In case you have automatic section control, you may have to deactivate that function to be able to open and close sections.
10. Spray water until all chemicals are flushed from the spray boom. Spray for a minimum of 30 seconds.
11. Turn off the master switch.

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Weekly Maintenance

Note: It is recommended to remove the strainers only after having washed and rinsed the sprayer. Do not remove a strainer directly after spraying chemicals.
Please read the safety instructions before starting any maintenance procedures.

Spray boom strainer cleaning

Your spray line strainers will protect the DynaJet® valves from any debris. Disassemble the strainers every week (when using the sprayer) to check the cleanliness of the strainers. If your strainers are dirty, clean them and remove all debris.

In the case of heavily clogged strainers, remove the spray line strainers from the sprayer, place them into a solution of water and cleaning solution. Keep the strainers in the cleaning solution for one to two hours.
Brush the strainers with a soft brush to eliminate the remaining particles.
Once the strainers are clean, re-install the strainers on the spray boom.

Cleaning of the strainers with a TeeJet brush

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Annual Maintenance

Winterizing the Sprayer
It is recommended that you winterize your sprayer and spray boom components for the off-season.
Winterizing the DynaJet® valves is also recommended. The winterizing solution will protect the seal inside the DynaJet valve and maintain the performance of the valve.

Before you winterize the sprayer, we recommend washing and rinsing the spray boom as explained in the “Daily Maintenance” section.

DynaJet® valve rinsing

If you see a valve leaking during the inspection process, you should remove it from the spray boom and isolate it to follow the full procedure of disassembly and cleaning.

Once the spray boom is fully clean, remove all DynaJet valves from the spray boom. You should disassemble the valves from the coil. Put the coils into a box to be reassembled after cleaning the valves.

Valve disassembly

The valves should be placed in a bucket filled with water and cleaning solution.
Let the valves remain in the bucket for 2-3 days and mix the valves to ensure dirt is fully removed. Let the components continue sitting in the solution for another 2 days.

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After those two days, rinse the valve in clean water until the cleaning solution is removed. Reassemble the valves and the coil together.
Reinstall the DynaJet® valve on the sprayer and start your winterization procedure.

If your sprayer is typically in freezing conditions, you MUST remove all of the DynaJet Valves from your sprayer and keep them out of the freezing temperature.

General Disassembly and Reassembly

Tools required:

- CP116231-NYB: DynaJet® Valve installation and removal tool is recommended.

Note: O-rings (1, 2, 5, 11) should be handled with care as they can be damaged/deformed.

1) Loosen and remove the Acorn Nut (12)

2) Remove O-Ring (11) from the rest of the Coil Assembly (10)

3) Separate the Coil Assembly (10) from the rest of the Tube/Plunger Assembly (1-9)

4) Remove the Locking Ring (4)

5) Using pliers to grip the Interface Cap (3), loosen the Tube Sub-Assembly (8) using a 9/16" (14 mm) or adjustable wrench

   All repairable parts should be accessible at this point. The Plunger Sub-Assembly (6), stainless steel Spring (7), and O-rings (1, 2, 5, 11) can be cleaned or replaced without further disassembly

6) During reassembly, place the Plunger Sub-Assembly (6) and Spring (7) in the Tube Sub-Assembly (8)

   Note: The Plunger Sub-Assembly (4) should be oriented with the black insert facing outward (visible) when placed in the Tube Sub-Assembly (3)

7) While compressing the Spring (7), thread the Tube/Plunger Assembly (1-9) to the Interface Cap (3) and tighten using a wrench and pliers

   Optional: Apply 1 drop of Loctite Blue 243 to the threads of the Interface Cap (3) and Tube Sub-Assembly (8)

   Torque Specifications: Tighten Interface Cap (4) & Tube Sub-Assembly (8) to 12 in-lbs (1.36 N-m)

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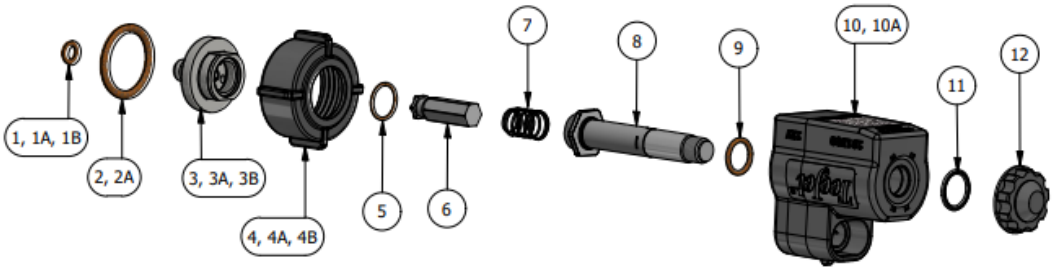
8) Return the Locking Ring (4) to its original position and slide the Tube/Plunger Assembly (1-9) through the Coil Assembly (10)

   Note: The Coil Assembly (10) should be oriented with the SuperSeal 1.5 connector facing away from the Interface Cap (3)

9) Slide O-Ring (11) to the Tube/Plunger Assembly (1-9)

10) Tighten the Acorn Nut (12) to the Tube/Plunger Assembly (1-9)

11) **Recommended:** At the time of installation, spray CorrosionX®, CorrosionX® Heavy Duty, or CorrosionX® Aviation corrosion prevention compound into the connector to wet the terminals prior to plugging in the connector.



ITEM	PART NUMBER	DESCRIPTION
1	CP7717-2-007-VI-10X	10 PACK O-RING, FKM (191500-1-12 & 191500-4-12)
1A	CP7717-M4.2X1.9-VI-10X	10 PACK O-RING, FKM (191500-2-12, 191500-6-12)
1B	CP7717-M4X2-VI-10X	10 PACK O-RING, FKM (191500-7-12)
2	CP7717-2/116-VI	O-RING, FKM (191500-1-12, 191500-2-12, 191500-6-12, 191500-7-12)
2A	CP58589-VI	GASKET, FKM (191500-4-12)
3	N/A	INTERFACE CAP, 303 STAINLESS STEEL (191500-1-12, 191500-4-12, 191500-7-12), SEE FIELD REPAIR KITS BELOW
3A	N/A	INTERFACE CAP, 303 STAINLESS STEEL (191500-2-12)
3B	N/A	INTERFACE CAP, 303 STAINLESS STEEL (191500-6-12)
4	CP55288-NYB	LOCKING RING, NYLON BLACK (191500-1-12, 191500-2-12, 191500-4-14)
4A	CP55288-6-NYB	LOCKING RING, NYLON BLACK (191500-6-12)
4B	CP55288-7-NYB	LOCKING RING, NYLON BLACK (191500-7-12)
5	N/A	O-RING, FKM, SEE REPLACEMENT PARTS KITS BELOW
6	N/A	PLUNGER SUB-ASSEMBLY, SEE REPLACEMENT PARTS KITS BELOW
7	N/A	SPRING, 302 STAINLESS STEE, SEE REPLACEMENT PARTS KITS BELOW
8	N/A	TUBE SUB-ASSEMBLY, SEE FIELD REPAIR KITS BELOW
9	N/A	O-RING, FKM, SEE REPLACEMENT PARTS KITS BELOW
10	N/A	12V COIL ASSEMBLY, SEE COIL REPLACEMENT KIT BELOW
10A	N/A	24V COIL ASSEMBLY, SEE COIL REPLACEMENT KIT BELOW
11	CP7717-M10X1.3-VI	O-RING, FKM
12	CP55289-1-NYB	ACORN NUT, NYLON BLACK

REPLACMENT PARTS KIT
SPARE PARTS KIT, AB191500-1-KIT, (INCLUDES ITEMS 1, 2, 5, 6, 7, 9)
SPARE PARTS KIT, AB191500-2-KIT, (INCLUDES ITEMS 1A, 2, 5, 6, 7, 9)
SPARE PARTS KIT AB191500-4-KIT, (INCLUDES ITEMS 1, 2A, 5, 6, 7, 9)
SPARE PARTS KIT, AB191500-6-KIT, (INCLUDES ITEMS 1A, 2, 5, 6, 7, 9)
SPARE PARTS KIT, AB191500-7-KIT, (INCLUDES ITEMS 1B, 2, 5, 6, 7, 9)
FIELD REPAIR KIT, AB191500-1-FR-KIT, (INCLUDES ITEMS 1, 2, 3, 5, 6, 7, 8, 9, 11, 12)
FIELD REPAIR KIT, AB191500-2-FR-KIT, (INCLUDES ITEMS 1A, 2, 3A, 5, 6, 7, 8, 9, 11, 12)
FIELD REPAIR KIT, AB191500-7-FR-KIT, (INCLUDES ITEMS 1B, 2, 3, 5, 6, 7, 8, 9, 11, 12)
12V COIL REPLACEMENT KIT, AB191500-12-UKIT (INCLUDES ITEMS 9, 10, 11, 12)
24V COIL REPLACEMENT KIT, AB191500-24-UKIT (INCLUDES ITEMS 9, 10A, 11, 12)

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