

# PART KIT INSTALL INSTRUCTIONS

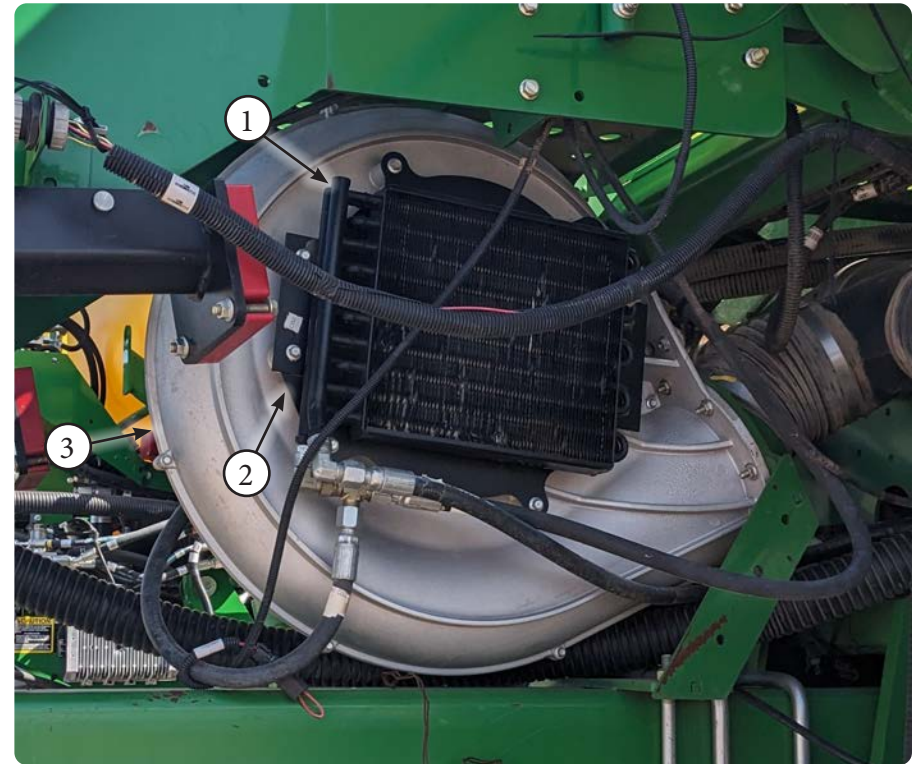
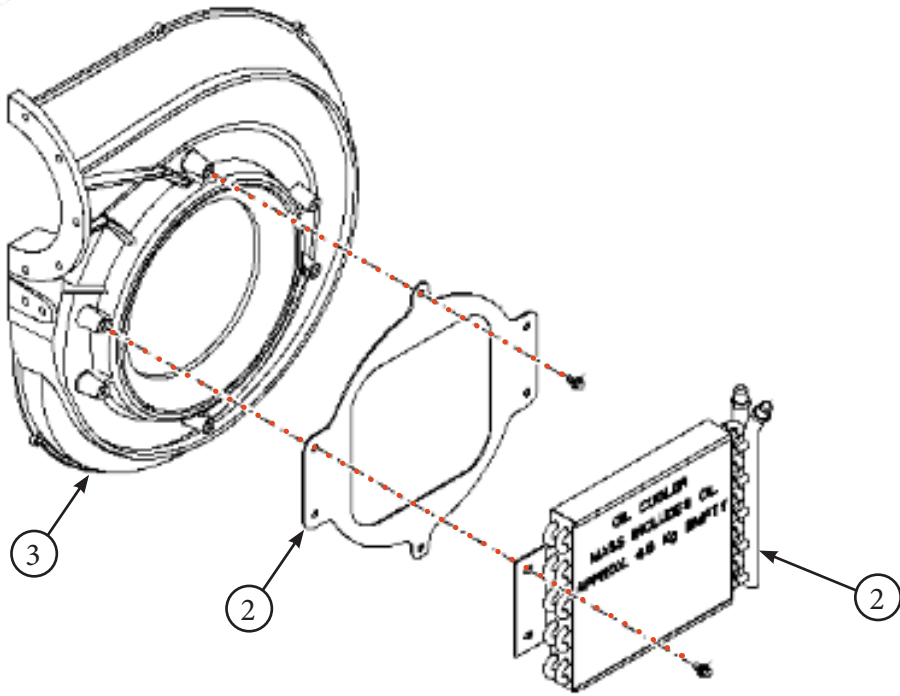
# John Deere Planters

Part Kit #VARIES - Rev 1.0 - AIRGUARD - Blockage Prevention System

Release Date: 2023-09-01



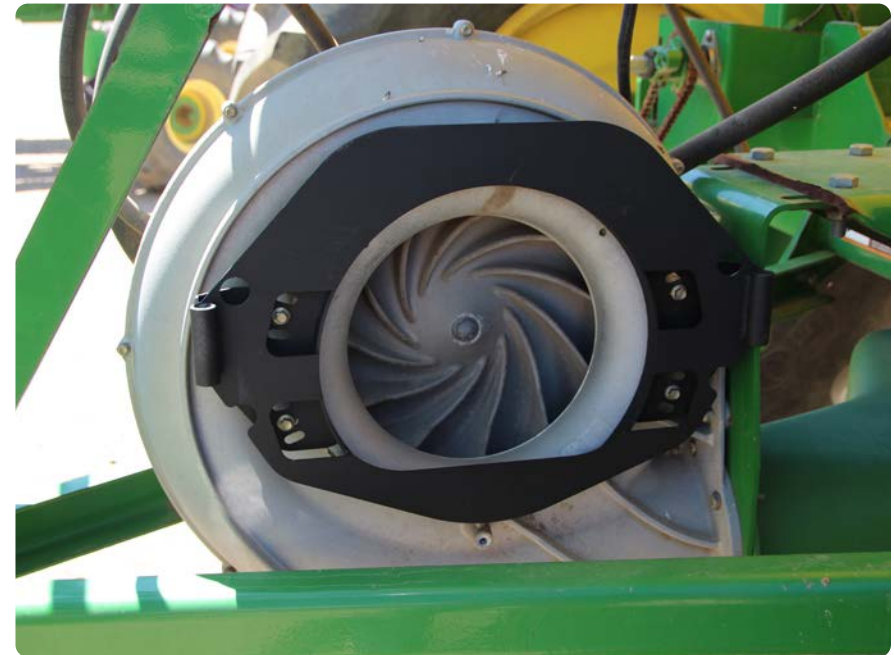
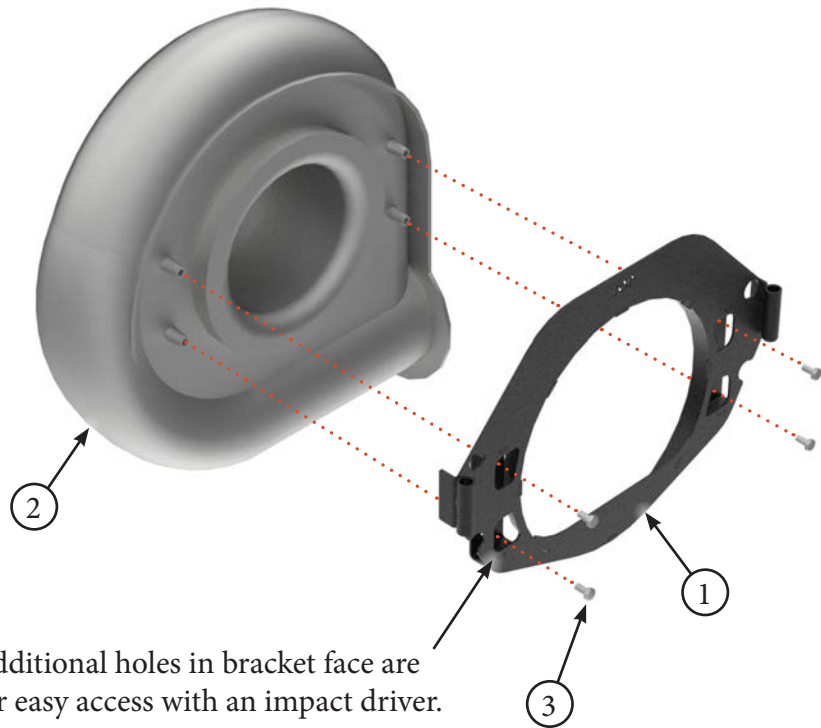
<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	1. Remove existing Fan Cooler and Mounting Plate (Item 1 & 2) from the fan housing (Item 3).	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies



PARTS LIST		
Item	Part #	Description
1	--	John Deere Oil Cooler
2	--	John Deere Mount Plate

PARTS LIST		
Item	Part #	Description
3	--	AA62864 Fan Housing

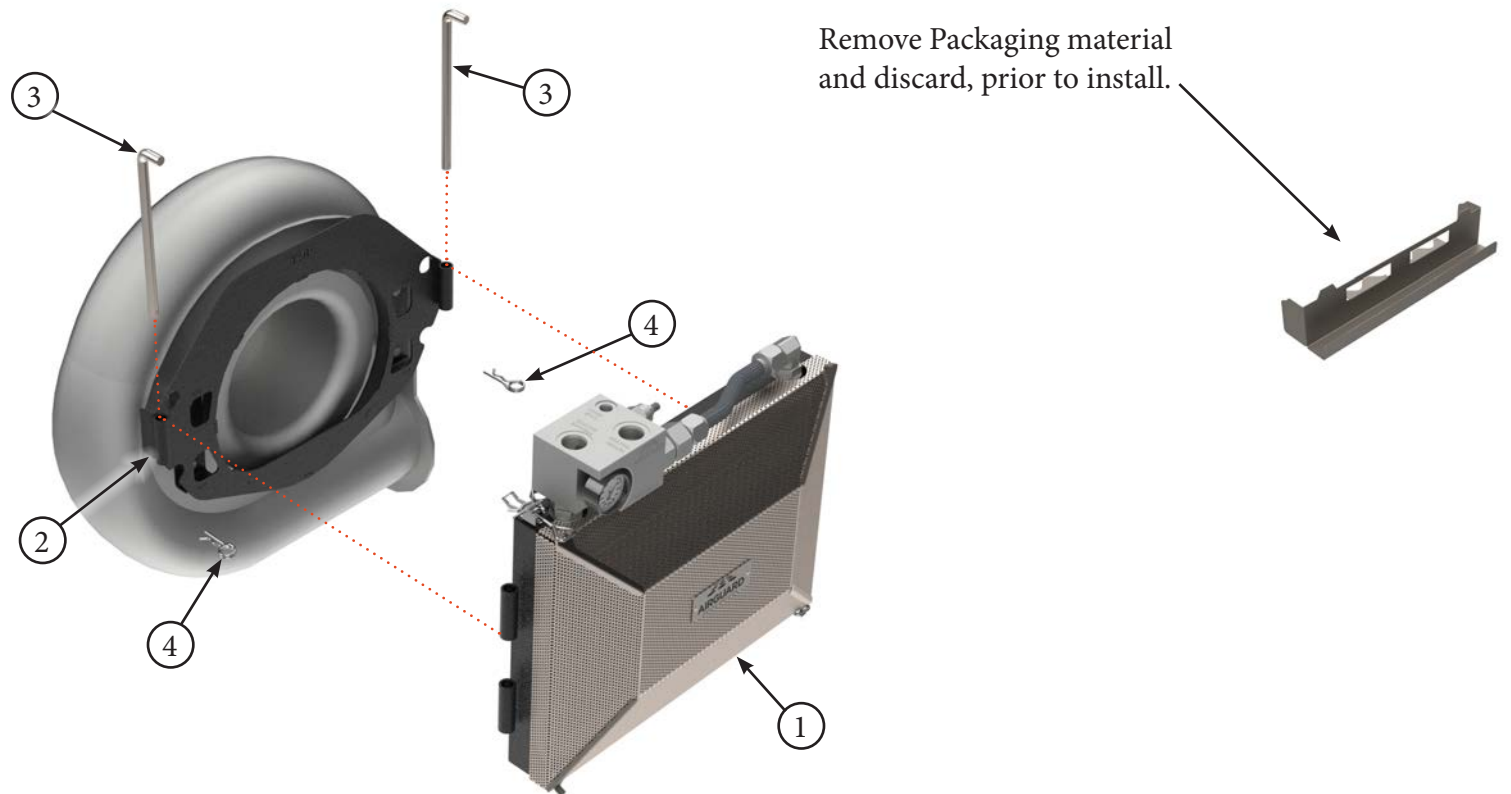
<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	2. Install supplied mounting bracket (Item 1) to fan housing (Item 2) using existing bolts and nuts (Item 3). Angle mount bracket in a position that ensures the supplied hydraulic hoses reach the fan motor. Additional holes in bracket face are for easy access with an impact driver. Bracket may look different than shown below.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies



PARTS LIST		
Item	Part #	Description
1	7555	9532 Bracket
2	--	Fan Housing

PARTS LIST		
Item	Part #	Description
3	--	M8 x 16 Screw

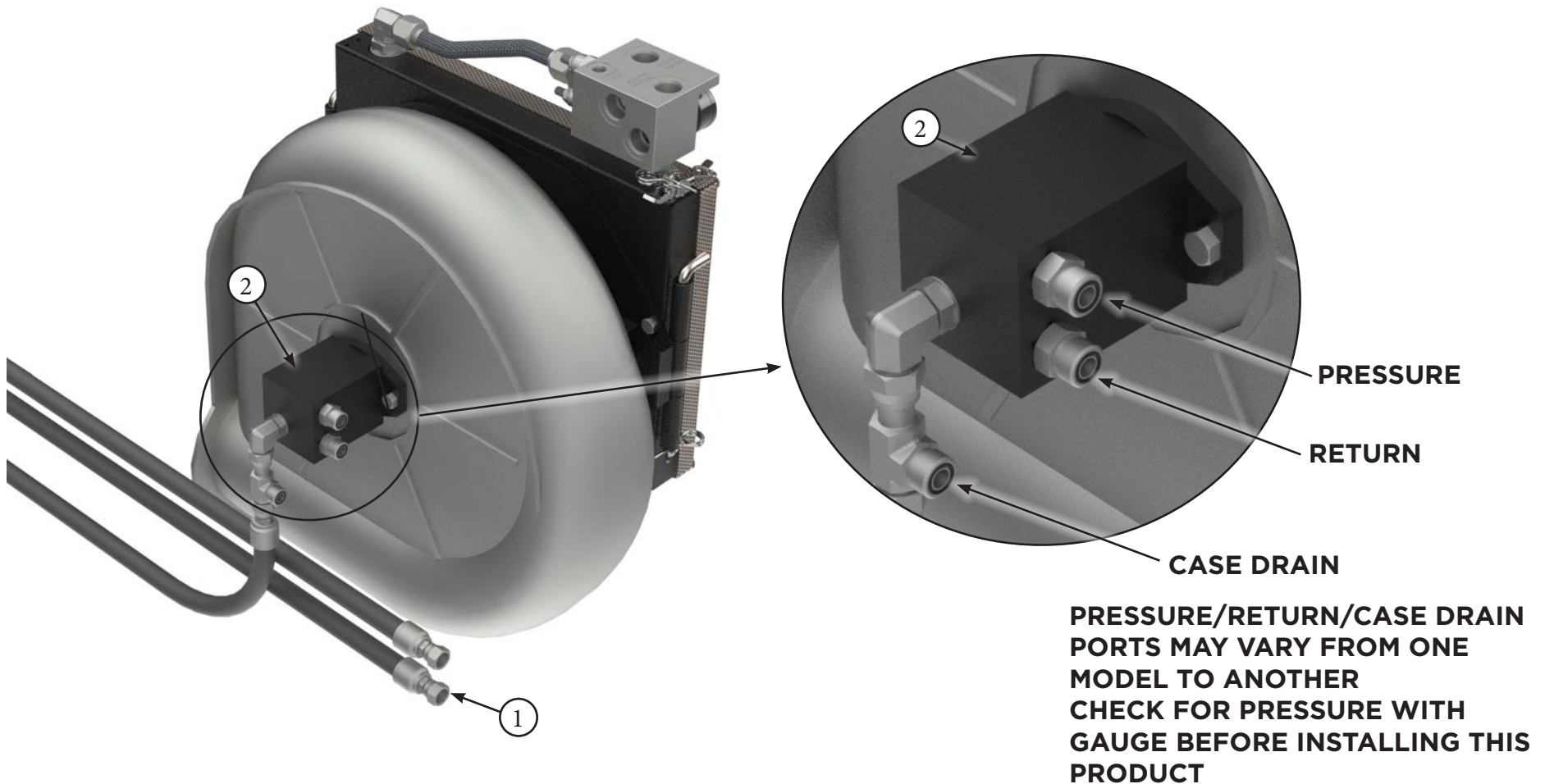
<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	3. Remove the packaging materials prior to the assembly of these brackets. Mount BP System Main Bracket with Oil Cooler (Item 1) to Fan bracket (Item 2) using supplied pivot pins (Item 3). Secure in place with 3.5mm cotter pins (Item 4).	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies



PARTS LIST		
Item	Part #	Description
1	--	BP System Main Bracket with Oil Cooler
2	--	Fan Bracket
3	--	Fan Bracket

PARTS LIST		
Item	Part #	Description
4	7502	Pivot Pin For BP Systems
5	7513	3.5mm Cotter Pin

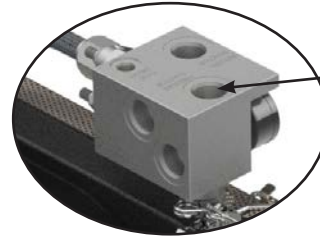
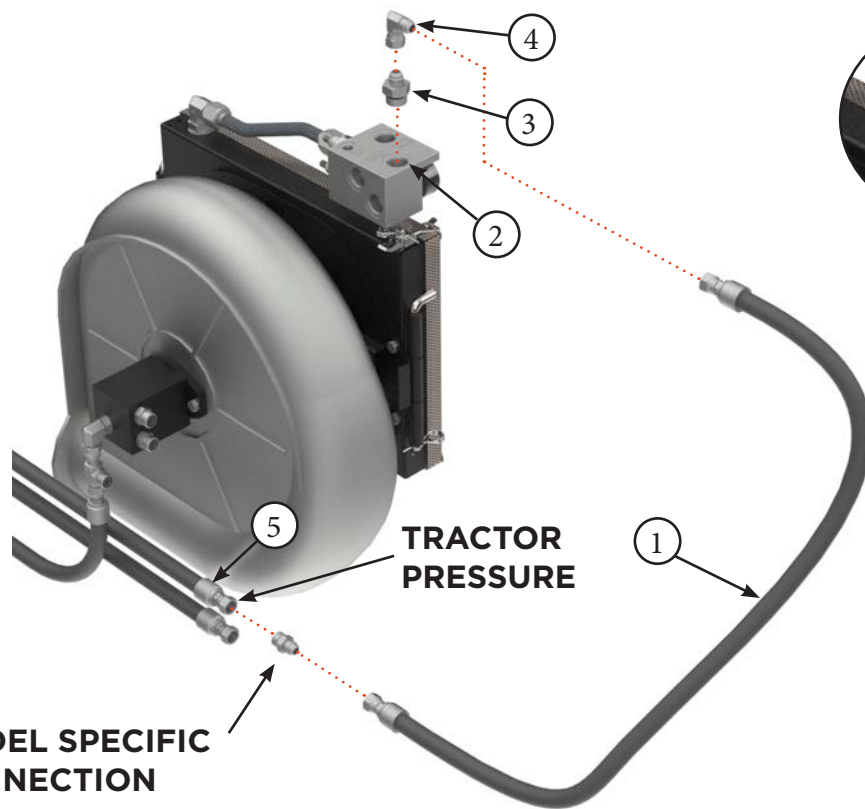
<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	4. Remove factory hoses (Item 1) from side of fan motor (Item 2). Identify which hose is the pressure side of the circuit. The hose connections may be in different locations than the images shown in this manual. Various models use different hydraulic motors and pressure/return/case drain ports may vary from one model to another.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies



PARTS LIST		
Item	Part #	Description
1	--	Existing Hose from Tractor to Fan Motor

PARTS LIST		
Item	Part #	Description
2	--	Hydraulic Motor

<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	5. Hoses may be routed to suit your specific aircart installation. Install supplied 1/2" hydraulic hose (Item 1) to the "TRACTOR PRESSURE" port of the radiator block (Item 2), using adapters (Item 3 & 4) to make the connection. Use model specific connection as per instructions below to attach the other end of the hose to the factory pressure line (Item 5) that was removed from the fan motor.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies



**TRACTOR PRESSURE PORT**

Remove Plastic Plugs prior to installation



All of the hydraulic connections in Step 5 to 9 should only be hand tightened until all hoses and fittings are installed. Some connections may need to be rotated in order to install other components.

### MODEL SPECIFIC CONNECTION

Planter Models:  
with 1/2" JIC Pressure Hose  
Connections



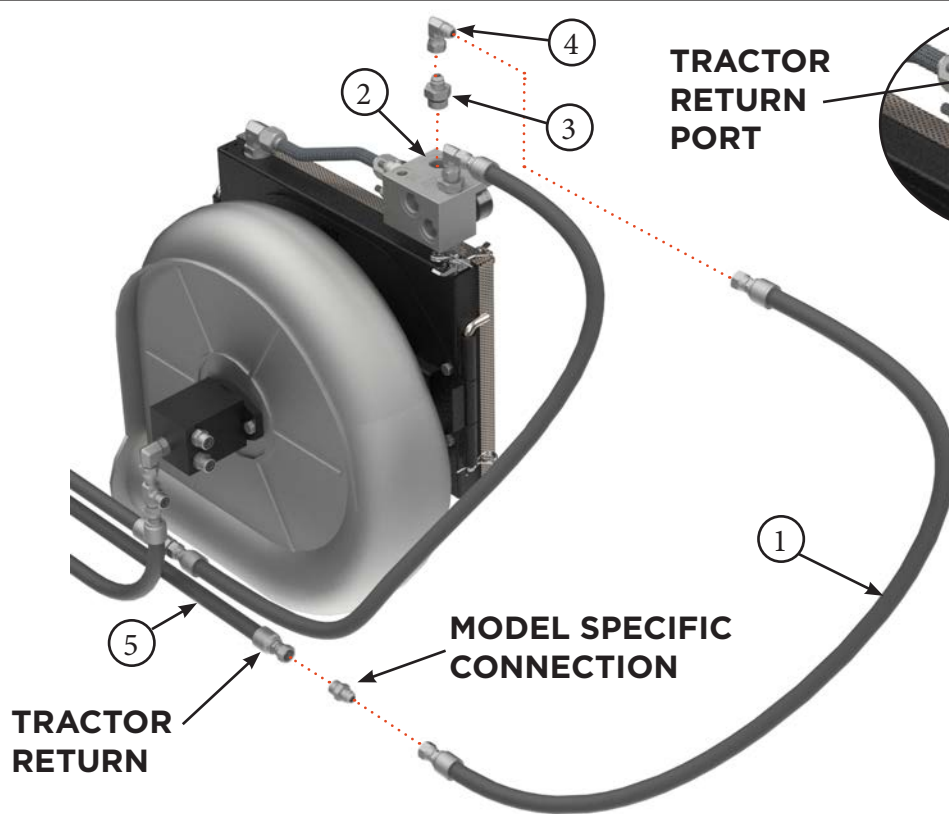
Planter Models:  
with 1/2" ORFS Pressure Hose  
Connections



PARTS LIST		
Item	Part #	Description
1	7267	BPS 1/2" Hydraulic Hose - 60"
2	--	"TRACTOR PRESSURE" Port - BP System Manifold
3	9096	Fiting - Straight - 1/2" JIC Male - 3/4" ORB Male
4	7686	Fitting - Elbow - 1/2" JIC Male - 1/2" JIC Female

PARTS LIST		
Item	Part #	Description
5	--	Tractor Supply (Pressure) Hydraulic Hose
6	9098	Fitting - Straight - 1/2" JIC Male - 1/2" JIC Male
7	9097	Fitting - Straight - 1/2" ORFS Male - 1/2" JIC Male

<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	6. Hoses may be routed to suit your specific aircart installation. Install supplied 1/2” hydraulic hose (Item 1) to the “TRACTOR RETURN” port of the radiator block (Item 2), using adapters (Item 3 & 4) to make the connection. Use model specific connection as per instructions below to attach the other end of the hose to the factory return line (Item 5) that was removed from the fan motor.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies



**TRACTOR RETURN PORT**

Remove Plastic Plugs prior to installation



All of the hydraulic connections in Step 5 to 9 should only be hand tightened until all hoses and fittings are installed. Some connections may need to be rotated in order to install other components.

**MODEL SPECIFIC CONNECTION**

Planter Models:  
with 1/2” JIC Pressure Hose Connections



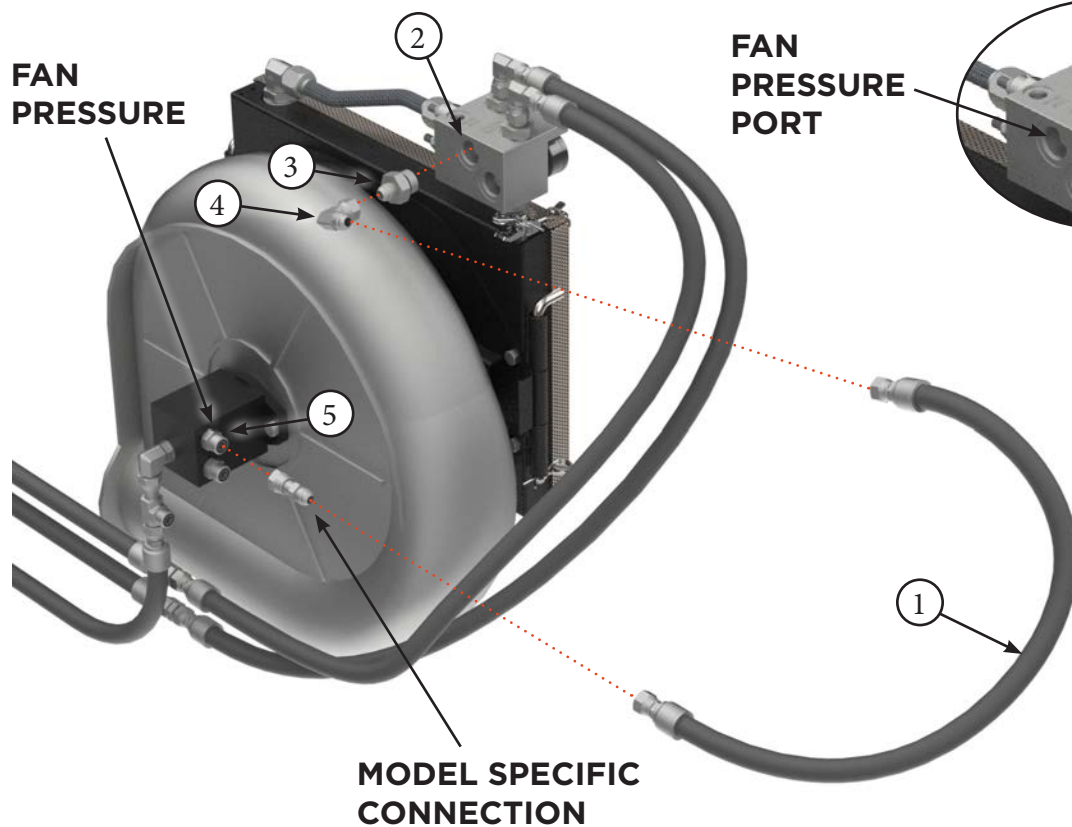
Planter Models:  
with 1/2” ORFS Pressure Hose Connections




PARTS LIST		
Item	Part #	Description
1	7267	BPS 1/2” Hydraulic Hose - 60”
2	--	“TRACTOR RETURN” Port - BP System Manifold
3	9096	Fiting - Straight - 1/2” JIC Male - 3/4” ORB Male
4	7686	Fitting - Elbow - 1/2” JIC Male - 1/2” JIC Female

PARTS LIST		
Item	Part #	Description
5	--	Tractor Return Hydraulic Hose
6	9098	Fitting - Straight - 1/2” JIC Male - 1/2” JIC Male
7	9097	Fitting - Straight - 1/2” ORFS Male - 1/2” JIC Male

<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	7. Hoses may be routed to suit your specific aircart installation. Install supplied 1/2" hydraulic hose (Item 1) to the "FAN PRESSURE" port of the radiator block (Item 2), using adapters (Item 3 & 4) to make the connection. Use model specific connection as per instructions below to attach the other end of the hose to the factory return line (Item 5) that was removed from the fan motor.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies

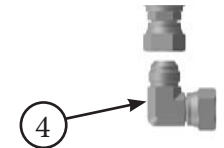


Remove Plastic Plugs prior to installation 

All of the hydraulic connections in Step 5 to 9 should only be hand tightened until all hoses and fittings are installed. Some connections may need to be rotated in order to install other components.

### MODEL SPECIFIC CONNECTION

Sometimes an elbow fitting will be required to make routing of hoses easier on some models



Planter Models:  
with 1/2" ORFS Pressure Hose Connections

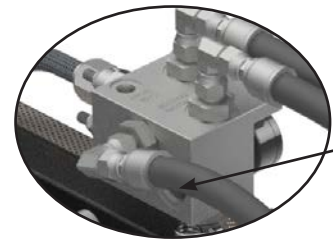
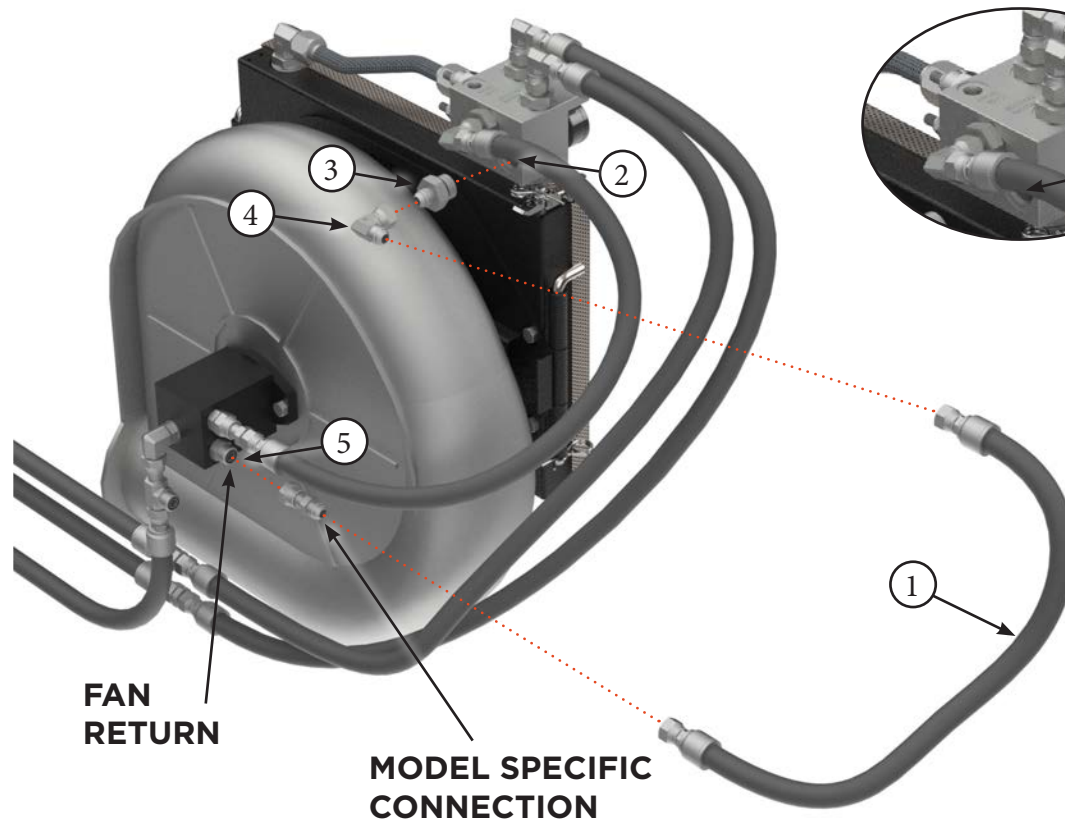


PARTS LIST		
Item	Part #	Description
1	7267	BPS 1/2" Hydraulic Hose - 60"
2	--	"FAN PRESSURE" Port - BP System Manifold
3	9096	Fiting - Straight - 1/2" JIC Male - 3/4" ORB Male

PARTS LIST		
Item	Part #	Description
4	7686	Fitting - Elbow - 1/2" JIC Male - 1/2" JIC Female
5	--	Fan Supply (Pressure) Hydraulic Hose
6	9097	Fitting - Straight - 1/2" ORFS Male - 1/2" JIC Male



<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	8. Hoses may be routed to suit your specific aircart installation. Install supplied 1/2" hydraulic hose (Item 1) to the "FAN RETURN" port of the radiator block (Item 2), using adapters (Item 3 & 4) to make the connection. Use model specific connection as per instructions below to attach the other end of the hose to the factory return line (Item 5) that was removed from the fan motor.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies



**FAN RETURN PORT**

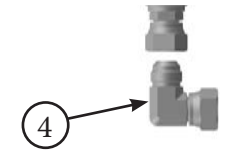
Remove Plastic Plugs prior to installation



All of the hydraulic connections in Step 5 to 9 should only be hand tightened until all hoses and fittings are installed. Some connections may need to be rotated in order to install other components.

**MODEL SPECIFIC CONNECTION**

Sometimes an elbow fitting will be required to make routing of hoses easier on some models



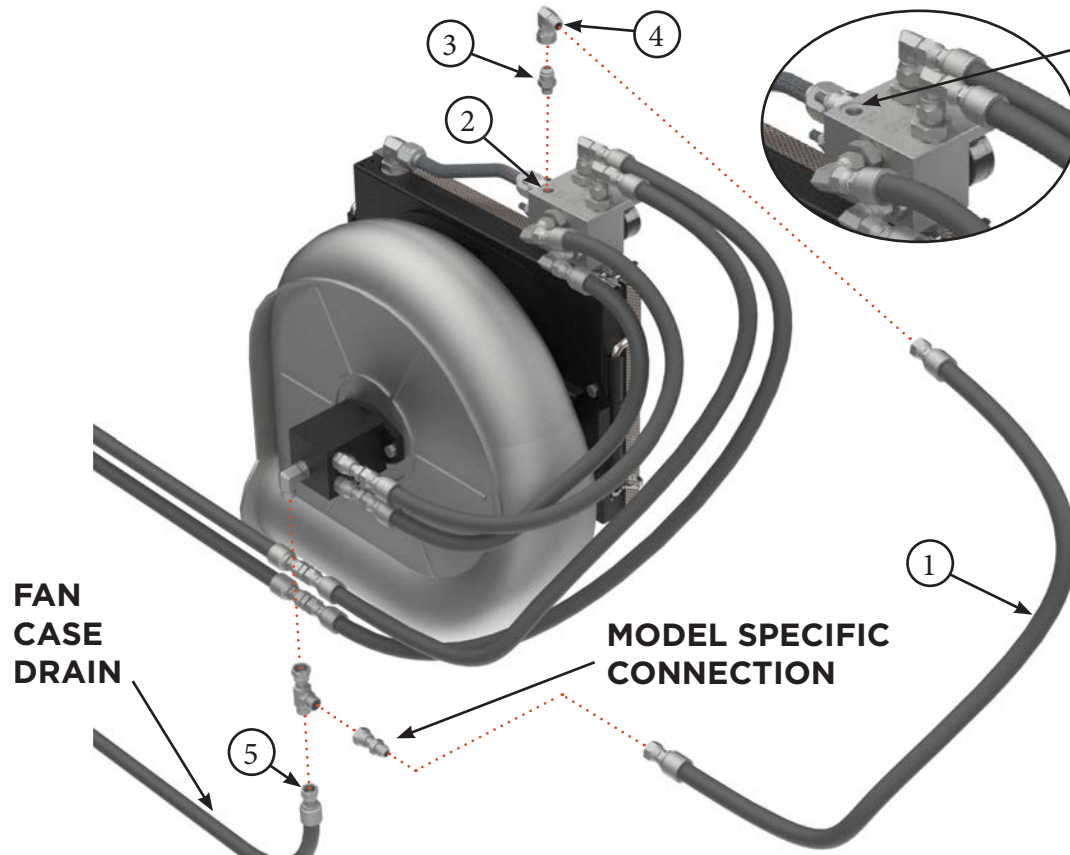
Planter Models: with 1/2" ORFS Pressure Hose Connections



PARTS LIST		
Item	Part #	Description
1	7267	BPS 1/2" Hydraulic Hose - 60"
2	--	"FAN RETURN" Port - BP System Manifold
3	9096	Fiting - Straight - 1/2" JIC Male - 3/4" ORB Male

PARTS LIST		
Item	Part #	Description
4	7686	Fitting - Elbow - 1/2" JIC Male - 1/2" JIC Female
5	--	Fan Return Hydraulic Hose
6	9097	Fitting - Straight - 1/2" ORFS Male - 1/2" JIC Male

<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	9. Install supplied 1/2" hydraulic hose (Item 1) to the "CASE DRAIN" port of the radiator block (Item 2) using adapters (Item 3 & 4). and to the fan motor case drain line (Item 5). Use model specific connection as per instructions below to attach the other end of the hose to the factory fan case drain line/port (Item 5) coming from the fan motor.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies



**FAN CASE DRAIN PORT**

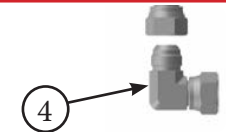
Remove Plastic Plugs prior to installation



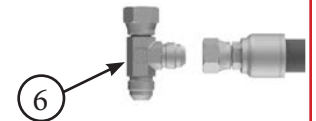
All of the hydraulic connections in Step 5 to 9 should only be hand tightened until all hoses and fittings are installed. Some connections may need to be rotated in order to install other components.

**MODEL SPECIFIC CONNECTION**

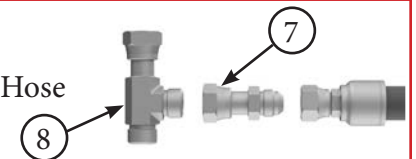
Sometimes an elbow fitting will be required to make routing of hoses easier on some models



Planter Models: with 1/2" JIC Case Drain Hose Connections



Planter Models: with 1/2" ORFS Case Drain Hose Connections

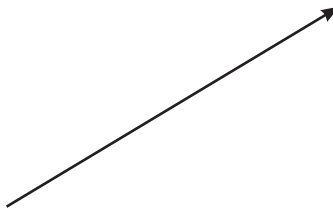


PARTS LIST		
Item	Part #	Description
1	7267	BPS 1/2" Hydraulic Hose - 60"
2	--	"FAN CASE DRAIN" Port - BP System Manifold
3	7264	Fiting - Straight - 1/2" JIC Male - 3/8" ORB Male
4	7686	Fitting - Elbow - 1/2" JIC Male - 1/2" JIC Female

PARTS LIST		
Item	Part #	Description
5	--	Fan Case Drain Hydraulic Hose
6	7263	Fitting - Tee - 1/2" JIC M - M - F
7	9097	Fitting - Straight - 1/2" ORFS Male - 1/2" JIC Male
8	7266	Fitting - Tee - 1/2" ORFS M - M - F

<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	10. If you have purchased a bypass kit for your BP System, please refer to the bypass kit owners manual for connection instructions.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies

**BYPASS KIT  
INSTRUCTION  
MANUAL**



**PART KIT INSTALL INSTRUCTIONS** **Bypass Valve**

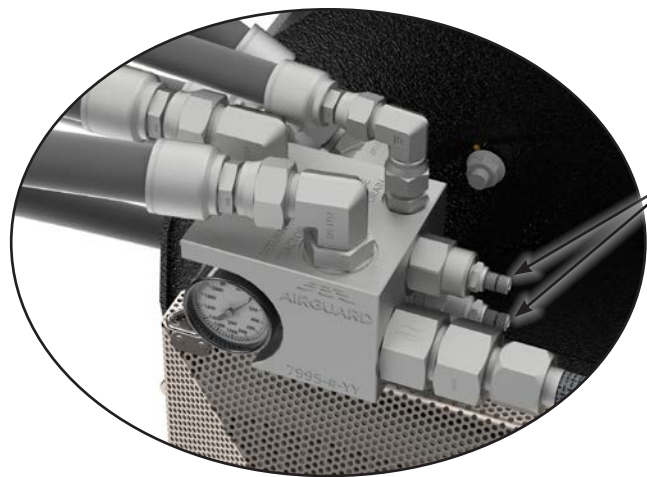
Part Kit #VARIES - Rev 1.0 - AIRGUARD - Bypass Kit for Blockage Prevention System Release Date: 2023-03-01



PARTS LIST		
Item	Part #	Description
1	--	--

PARTS LIST		
Item	Part #	Description
2	--	--

<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	11. Complete the hydraulic installation by ensuring that all connections made in Step 5 to 9 are tightened. Position/Routing of hydraulic hoses may vary to suit each specific machine installation. Zip tie hoses to reduce wear and ensure tidy installation.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies



**DO NOT  
ADJUST  
VALVES**

**WARNING:**

- Check for contaminants in oil. Dirty oil makes for plugged valves and can cause issues with over pressurizing the radiator core.
- Start tractor and warm oil prior to starting up fan. This should be done anytime the fan circuit is started up.
- Engage fan hydraulics at low flow rate and low fan RPM and slowly increase.
- Bleed hydraulic lines of air for stable oil flow.
- Check pressures at radiator gauge. If pressure is higher than normal, steps must be taken to reduce return line pressure.
- Call Airguard if you have any questions. 1-604-744-0070

Title	Airguard Blockage Prevention System Upgrade Instructions	RELEASE DATE	2023-03-01
STEP	12. Start up operating procedure.	REV #	1.0
		PART KIT #	Varies

## ----- WARNING -----

**Start up procedure is critical to reduce pressure spikes.**

### START UP PROCEDURE:

After you have installed the Airguard Blockage Prevention System it's critical that you start the Planter fans very slowly. You're introducing an air pocket that must be moved slowly to the tractor while you prime the hydraulic lines with oil. This process is a good way to make sure your fittings are sealed and secure.

1. Get your oil warmed to 80-100 deg F. If your oil is cold, the viscosity is very high and it will not move through the internal components easily. By warming the oil first, everything will operate as it should.
2. Initiate your fans with 500 Fan RPM at 25% oil flow (or 10% of your max fan speed). If everything looks good, the pressure is just starting to register on the Airguard pressure gauge. If all your fittings are holding their seal, continue to the next step. If your fan is NOT moving, that's okay. The oil is circulating.  
**Operate this way for 5 minutes.**

**NOTE:** If there is a pressure spike at this low oil flow rate, there is potential for an air lock. Disconnect the end fitting on the Return Line at the SCV and drain off some oil to release the pressure. Reconnect the end fitting and repeat Step 2.

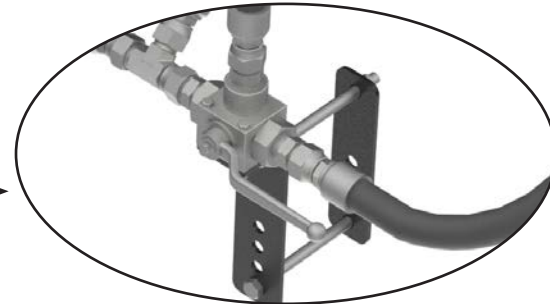
3. Run 1000 Fan RPM at 45% oil flow (or 35% of your max fan speed). Operate for 5 seconds.
4. Run 2000 Fan RPM at 65% oil flow (or 75% of your max fan speed). Operate for 5 seconds.
5. Run 3500 Fan RPM at 85% oil flow (or 100% of your max fan speed). Operate for 3-5 minutes.
6. Take time to ensure that your conveyor or auger is working properly in conjunction with your Airguard kit. Turn your fan RPM down to 50% oil flow and engage the conveyor/auger. If everything is operating as it should, you have successfully installed your Airguard Blockage Prevention System kit. If there are any questions or concerns about the operations, call your AIRGUARD Sales Representative using contact information found at [www.airguardproducts.com/contact](http://www.airguardproducts.com/contact) or visit us at [www.airguardproducts.com/productsupport](http://www.airguardproducts.com/productsupport).

Now you're ready to operate! Follow the same warm up procedure you do every day and go seed. This is a procedure that we highly recommend at the beginning of each future season, to ensure the continuation of successful operations. It is a critical step in the introduction of new machinery to your farm operation. After the freeze and thaw of seasons we want to eliminate any air pockets or leaks that could slow preparations.

<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	Troubleshooting and preventative maintenance.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies

### PREVENTATIVE MAINTENANCE

1. Ensure that the startup procedure on page 13 is performed every morning before seeding begins.
2. Take extra precautions when seeding in cold weather.
3. It is recommended that a bypass valve is purchased to allow for quicker startup.



### TROUBLESHOOTING

Trouble	Probable Cause	Remedy
Fluctuating pressures on pressure gauges and strange noises coming from fan motor.	High return line pressure	The logic cartridge on the BP System is set to 750psi. Any value close to or above that will cause fluctuations and issues with fan speed. Reduce return line pressure to fix this problem.
	Faulty quick disconnect couplers	Replace quick disconnect couplers, inspect ball valve to ensure proper working order
	Restriction in return line due to small fitting	Replace fitting with a larger one
	Logic cartridge is contaminated	Clean or replace the logic cartridge as needed
Fan won't run	High return line pressure	The logic cartridge on the BP System is set to 750psi. Any value close to or above that will cause fluctuations and issues with fan speed. Reduce return line pressure to fix this problem.
	Quick couplers are disconnected	Ensure that quick couplers are connected properly
	Logic cartridge is contaminated	Clean or replace the logic cartridge as needed
	Logic cartridge is faulty	Replace the logic cartridge
	Hoses are hooked up incorrectly	Consult owner's manual to see proper installation of hoses
Cannot get fan speed up to normal levels	Pressure/flow is too low at tractor	Increase pressure/flow

<b>Title</b>	Airguard Blockage Prevention System Upgrade Instructions	<b>RELEASE DATE</b>	2023-03-01
<b>STEP</b>	Frequently asked questions.	<b>REV #</b>	1.0
		<b>PART KIT #</b>	Varies

## FREQUENTLY ASKED QUESTIONS

**Q:** Why can't I operate my Blockage Prevention System without warming up my tractor first?

**A:** Tractor motors and seeding equipment are built to withstand fast startups; an aluminum radiator is not. On a cold day at 10% oil flow, your return pressure could be at 500psi on our Blockage Prevention System. If you were to do a fast startup in cold conditions, you could have a radiator fail. Pressures could dramatically spike beyond the capacity of our 2400psi rated aluminum core.

**Q:** Will the Blockage Prevention System cause dramatic pressure drops in my oil flow?

**A:** While the BPS will cause a slight pressure drop (approximately 400 RPM or less), the drop in oil flow is negated because of the warm air being transferred from the oil into the airstream. This allows the internal product to flow more efficiently. The reason for the slight pressure drop is that the oil has to pass through the orifices of the radiator, which are smaller than the hoses used prior to the installation of the Blockage Prevention System.

**Q:** Does the Blockage Prevention System actually work?

**A:** We can honestly say that it does. The hotter the oil is in the hydraulic lines, the more heat the Blockage Prevention System can extract out of that oil. Since the mechanism is mounted on the face of the fan housing, the fan is pulling air through the fins of the radiator while the air cart is pressurizing up to operate. The hot oil, running through the radiator, acts like a furnace and changes the air temperature on the inside face of the radiator. That air is then pulled into the air cart stream and is pushed out towards the openers, where the seed is placed into the furrow. Warmer air holds more moisture. Humidity will stay in a vapor state when it is drawn in and will be less likely to turn into a liquid while the air and all the hoses and internal components are physically warmer. This allows the product to flow through with less resistance and minimizes buildup of dusty fertilizer internally. Seed and fertilizer will be delivered to the discharge outlets without problems.

**Q:** What is the purpose of the new bypass valve?

**A:** The new bypass valve upgrade kit allows you to heat up your oil before engaging your Blockage Prevention System. You can also choose whether or not to use your BPS in the heat of the day.

**Q:** What pressure should the pressure gauge read on the Blockage Prevention System?

**A:** 300-600psi is an acceptable pressure range when operating. The gauge reads the pressure of the oil going through the radiator, on the return side of the fan motor.

**Q:** Do I need to reset the relief valves on the V2 Blockage Prevention System?

**A:** No you do not. The valves are preset to 750psi and 850psi. If they do get changed or altered, please contact Airguard in order to have them reset.