



Troubleshooting

Submersible, AutoDRIVE,
& Jet Pumps

Troubleshooting

Pump Catalog - March 2022

MORE THAN A BRAND. WE'RE A FAMILY.

Troubleshooting Submersible Pumps

Fuse overload or circuit breaker trips when motor is started

Cause of Trouble	How to Check	How to Correct
1. Incorrect line voltage.	Check the line voltage terminals in the control box (or connection box in the case of the two wire models) with a voltmeter. Make sure that the voltage is within the minimum-maximum range prescribed by the manufacturer.	If the voltage is incorrect, contact the power company to have it corrected.
2. Defective Control Box		
(a) Defective wiring.	Check out all motor and power-line wiring in the control box, following the wiring diagram found inside the box. See that all connections are tight and that no short circuits exist because of worn insulation, crossed wires, etc.	Rewire any incorrect circuits. Tighten loose connections. Replace worn wires.
(b) Incorrect components.	Check all control box components to see that they are the type and size specified for the pump in the manufacturers' literature. In previous service work, the wrong components may have been installed.	Replace any incorrect component with the size and type recommended by the manufacturer.
(c) Defective starting capacitor (skip for two wire models).	Using an ohmmeter, X1000 scale, determine the resistance across the disconnected starting capacitor. When contact is made, the ohmmeter needle should jump toward 0, and then drift back slowly toward infinity. No movement indicates an open capacitor, low resistance means that the capacitor is shorted.	Replace defective starting capacitor.
(d) Defective relay (skip for two wire models).	Using an ohmmeter, check the relay coil and contacts. Their resistance should be as shown in the manufacturer's literature.	If coil resistance is incorrect or contacts defective, replace relay.
3. Incorrectly wired pressure switch.	Check the wiring at the pressure switch.	Make sure all line, load and ground connections in the switch match the diagram.
4. Defective motor winding or cable:		
(a) Shorted or open motor winding.	Check the resistance of the motor winding by using an ohmmeter on the proper terminals in the control box (see manufacturer's wiring diagram). The resistance should match the ohms specified in the manufacturer's data sheet. If it's too low, the motor winding may be shorted; if the ohmmeter needle doesn't move, indicating high or infinite resistance, there is an open circuit in the motor winding or cable.	If the motor winding is defective—shorted or open—the pump must be pulled and the motor repaired.
(b) Grounded cable or winding.	Ground one lead of the ohmmeter onto the drop pipe or well casing, then touch the other lead to each motor wire terminal. If the ohmmeter needle moves appreciably when this is done, there is a ground in either the cable or the motor winding.	Pull the pump and inspect the cable for damage. Replace damaged cable. If cable checks OK, the motor winding is grounded.
5. Pump locked.	Check the line amps before the trip. If amps are twice normal, or higher, pump is probably locked.	Pull pump, disassemble from motor and check which one is locked. Replace one, or both, if defective.

Troubleshooting Submersible Pumps

Pump operates but delivers little or no water

Cause of Trouble	How to Check	How to Correct
1. Pump may be air locked.	Stop and start the pump several times, waiting about one minute between cycles. If the pump then resumes its normal delivery, air lock was the trouble.	If this test fails to correct the trouble, proceed as below.
2. Water level in well too low.	Well production may be too low for pump capacity. Restrict the flow of pump output, then wait for well to recover, and start pump.	If partial restriction corrects trouble, leave valve at restricted setting. Otherwise, lower pump in well if depth is sufficient. Do not lower if sand clogging might occur.
3. Discharge line check valve installed backward.	Examine check valve on discharge line to make sure that the arrow indicating direction of flow points in the right direction.	Reverse the valve if necessary.
4. Leak in drop pipe	Raise the pipe and examine for leaks.	Replace the damaged section of drop pipe.
5. Pump check valve jammed by drop pipe	When pump is pulled after completing Step 4 above, examine connection of drop pipe to pump outlet. If threaded section of drop pipe has been screwed in too far, it may be jamming the pump's check valve in the closed position.	Unscrew the drop pipe and cut off the portion of threads.
6. Pump intake screen blocked	The intake screen on the pump may be blocked by sand or mud. Examine the screen.	Clean the screen and when reinstalling the pump, make sure that it is located several feet above the well bottom— preferably 10 feet or more.
7. Pump parts worn.	The presence of abrasives in the water may result in excessive wear on the impeller, casing and other close-clearance parts. Before pulling the pump, reduce setting on pressure switch to see if the pump shuts off. If it does, worn parts are probably at fault.	Pull the pump and replace worn components.
8. Motor shaft uncoupled.	Coupling between motor and pump shaft may have worn out or worked loose. Inspect for this after pulling the pump and looking for worn components, as in Step 7 above.	Tighten all connections, setscrews, etc. Replace parts if worn out.

Pump starts too frequently

Cause of Trouble	How to Check	How to Correct
1. Pressure switch defective or out of adjustment.	Check the setting on the pressure switch and examine for defects.	Adjust the pressure setting or replace switch.
2. Leak in pressure tank above water level.	For discharge or bladder captive air tanks, drain the tank and check the precharge pressure. It should be equal to or two psig below pump cut-in pressure. If lower, check welds, braze joints, mechanical joints and valve core with a soap solution. If defective, replace. DO NOT ATTEMPT TO REPAIR BY WELDING.	Replace tank.
3. Leak in plumbing system.	Examine the service line to the house and distribution branches for leaks.	Repair leaks.
4. Discharge line check valve leaking.	Remove and examine.	Replace if defective.
5. Air volume control plugged.	Remove and inspect the air volume control.	Clean or replace.
6. Snifter valve plugged.	Remove and inspect the snifter valve.	Clean or replace.
7. Captive air tank has lost charge.	Check tank.	Recharge or replace tank.

Troubleshooting Submersible Pumps

Fuse overload or circuit breaker trips when motor is running

Cause of Trouble	How to Check	How to Correct
1. Incorrect voltage.	Check the line voltage terminals in the control box (or connection box in the case of two wire models) with a voltmeter. Make sure that the voltage is within the minimum-maximum range prescribed by the manufacturer.	If voltage is incorrect, contact the power company for service.
2. Overheated control or starter	If sunlight or other sources of heat makes the box too hot, overload may trip or fuses may blow. If box is hot to the touch, this may be the problem.	Ventilate or shade the box, or remove it from the source of heat.
3. Defective control box components (skip this for two wire models).	<p>Using an ohmmeter, X1000 scale, determine the resistance across the disconnected running capacitor. When contact is made, the ohmmeter needle should jump toward 0, and then drift back slowly toward infinity. No movement indicates an open capacitor; low resistance means the capacitor is shorted.</p> <p>Using an ohmmeter, check the relay coil. Its resistance should be shown in the manufacturer's literature. Check amps in red motor lead with motor running. If amps are much higher than the manufacturer specifies, start relay contacts are failing to open. If amps are much lower, run capacitor is defective or motor is overloaded.</p>	Replace defective components.
4. Defective motor winding or cable:	Check the resistance of the motor winding by using an ohmmeter on the proper terminals in the control box (see manufacturer's wiring diagram). The resistance should match the ohms specified in the manufacturer's data sheet. If it's too low the motor winding may be shorted; if the ohmmeter needle doesn't move, indicating high or infinite resistance, there is an open circuit in the motor winding. Ground one lead of the ohmmeter onto the drop line or well casing, then touch the other lead to each motor wire terminal. If the ohmmeter needle moves appreciably when this is done, there is a ground in either the cable or the motor winding.	If neither cable or winding is defective—shorted, grounded, or open—the pump must be pulled and serviced.
5. Pump is overloading	If the fuses blow or overloads trip while the pump is operating, check the line amps. If it's more than five percent above the manufacturer's nameplate value, the pump is overloading, which indicates a defective pump and/or motor.	Pull pump, disassemble from motor and replace one or both, if defective.

Troubleshooting Submersible Pumps

Pump won't shut off




Cause of Trouble	How to Check	How to Correct
1. Defective pressure switch.	Check the pressure switch to insure contacts are open at the correct pressure.	Adjust or replace switch.
2. Water level in well too low.	Well production may be too low for the pump capacity. Restrict the flow of pump output, wait for the well to recover, and then start pump.	If partial restriction corrects trouble, leave the valve at restricted setting. Otherwise, lower pump into the well if depth is sufficient. Do not lower if sand clogging might occur.
3. Leak in drop line.	Raise the pipe and examine it for leaks.	Replace the damaged section of the drop pipe.
4. Pump parts worn.	The presence of abrasives in the water may result in excessive wear on the impeller, casing and other close-clearance parts. Before pulling pump, reduce setting on pressure switch to see if the pump shuts off. If it does, worn parts are probably at fault.	Pull pump and replace worn components.

Motor does not start, but fuses don't blow

Cause of Trouble	How to Check	How to Correct
1. Overload protection tripped.	Check overloads and circuit breaker to see if they are operable.	Reset overloads or circuit breaker.
2. No power.	Check power supply to control box (or overload protection box) by placing a voltmeter across the incoming power lines. Voltage should approximate nominal line voltage.	If no power is reaching the box, contact power company for service.
3. Defective pressure switch.	Check whether contacts are closed and the same voltage is present between load terminals as line terminals.	If the line voltage is not on the line terminals, replace the switch.
4. Defective control box.	Examine the winding in the control box to make sure all of the contacts are tight. With a voltmeter, check voltage at line and motor terminals. If no voltage is shown at terminals, wiring is defective from pressure switch or in control box. With a voltmeter, check the voltage across the pressure switch while the switch is closed. If the voltage drop is equal to the line voltage, the switch is not making contact.	Correct faulty wiring or tighten loose contacts. Clean the contacts or replace the switch.

Troubleshooting AutoDRIVE

This section provides information on fault codes and troubleshooting tips for potential system problems.



-  **WARNING!** In some instances, the unit will shut down, then automatically restart when conditions allow. Always disconnect input power from the unit and wait for internal electrical charges to dissipate before performing service on the unit or its connected loads.
-  **WARNING:** Risk of electric shock. De-energize the unit by disconnecting all incoming sources of power, then wait 10 minutes for internal charges to dissipate before servicing the equipment.
-  **HIGH VOLTAGE:** This equipment is connected to line voltages that can create a potentially hazardous situation. Electric shock could result in serious injury or death. This device should be installed and serviced only by trained, licensed and qualified personnel. Follow instructions carefully and observe all warnings.

Always check the LCD display for fault codes if the drive or its load is not operating. Disconnecting the input power could potentially clear any fault code indication, possibly losing valuable information for troubleshooting.

Fault Codes

Fault codes are indicated on the graphic display.

The drive can be programmed to automatically restart after certain faults and a time delay can be programmed before the restart is allowed. To interrupt a time delay countdown and allow auto restart, press both arrow keys on the keypad and hold for one second. The load will start immediately. The Restart Log is a resettable fault log that can be used to monitor faults that allow auto restart. Use the Clear Memory function to reset the Restart Log and set all fault counters to zero. See **Section 4.4**, pg. 17, *Keypad Main Menu Items*, for more information on Restart Log and Clear Memory function.

-  **WARNING:** Certain faults do not allow an auto restart. These faults generally indicate the possibility of damage to the drive and/or the load, or indicate the possibility of a dangerous condition. When this type fault occurs, the display will read **NO AUTO RESTART**. Refer to **Table 16**, pg. 50, Fault Codes, to determine if the fault allows an auto restart. The number 1 in the notes column indicates that auto restart is not allowed. When this type of fault occurs, contact the factory for assistance before restarting or troubleshoot the system thoroughly. These faults can be cleared only by cycling input power OFF/ON.
-  **WARNING:** Unit may restart automatically without warning after a fault when operating conditions permit. Make certain input power is disconnected before servicing the unit or its connected loads.

Clearing a Fault

If the unit is programmed to automatically restart after a particular fault, the display indicates that the unit will restart and will count down the seconds remaining to restart on the display. The countdown can be interrupted by pressing and holding both arrow keys. The load will immediately restart.

For faults that allow an automatic restart, the default number of restarts after a fault is zero. If the end user desires the unit to automatically restart after a fault, the number of restarts allowed and the time between fault and restart must be programmed in the **CHANGE PARAMETER VALUES > AUTO RESTART PARAMETERS** for that fault.

If the drive has exceeded the programmed number of auto restarts, or if auto restarts have not been enabled, the display will indicate the fault on the top line and the second line will read **RESTART? ENTER**. Press ENTER to clear the fault and restart the load. The fault counters in the Restart Log will all be reset to zero.

The **ENABLE RESTART** parameter allows the drive to restart automatically after a fault. This parameter also enables the drive to initialize in AUTO mode when the input power has been cycled OFF/ON and the drive is energized. The factory default setting does not allow auto restarts. Navigate to this parameter via **CHANGE PARAMETER VALUES > AUTO RESTART PARAMETERS > ENABLE RESTART**.


There are several conditions where the drive will indicate a fault but the fault will not be recorded in the fault log. These faults occur only when the drive is energized from utility mains and is initializing. If any of three conditions including ground fault, high input voltage or low input voltage is detected, the display will indicate the fault and wait for the condition to resolve before entering normal operating mode. If these conditions occur after the drive has initialized, a fault will be logged and can be cleared in the normal manner.

Troubleshooting AutoDRIVE

Text Message	Description / Comments	Notes
OUTPUT FAULT	Check for short circuit on output lines and load. Contact factory	1
OVER TEMPERATURE	Internal temperature of the switching modules exceeded safe limits. Check fans and ventilation openings for obstruction. Reduce ambient temperature.	2
BUS OVERVOLTAGE	Sudden and severe regenerative power under high line voltage conditions may result in bus overvoltage. Check line voltage or consider increasing ramp up and ramp down times.	2
PRECHARGE FAIL	DC bus voltage did not reach normal level. Possible failure of input modules or pre-charge circuit.	2
HIGH INPUT VOLTAGE	Input voltage has exceeded a level for safe operation. Reduce input voltage. General purpose buck/boost transformers are compatible with AutoDRIVE VFDs.	2
MOTOR OVERLOAD	Output current has exceeded the value set for SERVICE FACTOR AMPS in OPERATING PARAMETERS menu. Check status of motor load. If output current limit is increased, make sure it is within the limit of the motor nameplate. Automatic restarts are set by RESTART DELAY 1 in the AUTO RESTART PARAMETERS menu.	P, 2
DRY WELL CURRENT	Motor current fell below the value set in DRY WELL CURRENT under OPERATING PARAMETERS menu. Used to detect dry well condition.	P, 2
OUTPUT OVERLOAD	Indicates a large and sudden overcurrent event on the output module. Check the motor circuit for faults. Sudden changes in the load may also have occurred such as the closing of a relay that results in an across-the-line start of a motor. Never install relays in the motor circuit.	
LOW INPUT VOLTAGE	Input voltage has fallen below a level for safe operation of the drive.	2
GROUND FAULT	A fault between an output line and earth has been detected. Immediately disconnect input power and check output lines with a megger to verify a fault. Nuisance trip is a possibility. Sensitivity of fault detection can be adjusted by the Operating Parameter GND FAULT DETECT . See Table 12, pg. 26 for details.	1
SENSOR CONNECTION FAIL	Indicates open circuit. 4-20mA analog signal is not present on Control Terminals I+ and I-. This could indicate failure of the 4-20mA sensor or that the cables from the sensors have been disconnected. Only in Analog CP.	2
15V DC POWER OVERLOAD	Indicates closed circuit. Check for short circuit between lines. Check the polarity of the wires on I+ and I-. Only in Analog CP. System may also say OVERPRESSURE . Check the 4-20 mA reading under Read Measured Values. If the reading is considerably above 20 mA, the transducer terminals are shorted.	1
BROKEN PIPE FAULT	Pressure has fallen below the limits set for BROKEN PIPE psi for a length of time exceeding BROKEN PIPE TIME . Check for leaks or broken pipe.	1

P = Fault may be related to an adjustable parameter. Always check the value of the parameter to eliminate nuisance tripping.

1 = Drive has shut down due to a potentially dangerous condition. Drive will remain OFF until input power is cycled OFF/ON. Use caution if the drive is restarted.

2 =  **WARNING:** Auto restart allowed for this fault. Motor may restart automatically without warning after a fault when operating conditions permit. Make certain input power is disconnected before servicing the unit or its connected loads.

Troubleshooting AutoDRIVE

Problem	Potential Cause	Solution
Motor not running	Is a fault code indicated?	Resolve any factors likely causing the fault. Clear the fault by pressing both arrow keys on the keypad or by cycling input power OFF/ON.
	Are the remote switches AUX1 and AUX2 closed?	Check status of AUX1 SELECT and AUX2 SELECT. AUX terminals must match AUX inputs and system config settings. The LCD display indicates the status of AUX terminals in the default display mode.
	Are the signals to the Control Terminals corrupted?	Shielded cable is required for AUX terminal switch leads longer than 20 ft. Regular wire will induce capacitance in the line and corrupt control signals. Shielded cable is recommended for all Control signal cables.
	Is the keypad in MAN or OFF mode?	The keypad will override signals on the Control Terminals when OFF or MAN is selected. Keypad must be in AUTO mode for external control signals to control the motor.
	Is the maximum frequency set at 0 Hz?	Check the maximum frequency by using the keypad to navigate MAIN MENU>CHANGE PARAMETER VALUES>OPERATING PARAMETERS>MAX FREQUENCY.
	Are the input terminals energized?	Check that terminals have voltage. If not, check the main input fuses or breaker.
Poor pressure regulation	Turbulence due to sensor location	Move pressure switch or transducer at least 6 inches away from pressure tanks, check valves, and pipe elbows.
	RESPONSE TIME not optimized	Adjust RESPONSE TIME to tune system to site-specific configurations.

Troubleshooting

AutoDRIVE

The unit should be inspected and cleaned at least annually or more frequently if it is in an excessively warm or dusty environment.

Overall: Perform a visual inspection checking for things such as discolored wires or terminals, evidence of arcing, loose mounting screws, physical damage to the enclosure, etc.

Power terminals: Inspect for loose connections and tighten to specifications.

Capacitors: Check for leakage or deformation.

Fans and heatsinks: Excessive dust buildup on the heatsink and cooling fan impellers may lead to overheating. Lightly brush and vacuum clean.

Instructions for fan replacement: Contact Customer Service for assistance in replacing the cooling fan in the event it should fail. Use only fans approved by A.Y. McDonald . Unapproved fans may not be able to move enough air to properly cool the unit, leading to component damage.

Troubleshooting Jet Pumps

Pump won't start or run

Cause of Trouble	How to Check	How to Correct
1. Blown fuse.	Check to see if the fuse is OK.	If blown, replace with a fuse of proper size.
2. Low line voltage.	Use voltmeter to check pressure switch or the terminals nearest pump.	If voltage is under the recommended minimum, check the size of wiring from the main switch on the property. If OK, contact the power company.
3. Loose, broken or incorrect wiring.	Check the wiring circuit against diagram. See that all of the connections are tight and that no short circuits exist because of worn insulation, crossed wires, etc.	Rewire any incorrect circuits and tighten connections, replace defective wires.
4. Defective motor.	Check to see that the pressure switch is closed.	Replace motor.
5. Defective pressure switch.	Check the switch setting. Examine the switch contacts for dirt or excessive wear.	Adjust the switch settings. Clean contacts with an emery cloth if it's dirty.
6. Tubing to pressure switch plugged.	Remove the tubing and blow through it.	Clean or replace if it's plugged.
7. Impeller or seal jammed.	Turn off the power, then use a screwdriver to try to turn the impeller or motor.	If the impeller won't turn, remove housing and locate the source of binding.
8. Defective start capacitor.	Use an multi meter to check the capacitance across a capacitor.	Replace the capacitor or take the motor to the service station.
9. Motor shorted out.	If the fuse blows when the pump is started (and external wiring is OK), the motor is shorted.	Replace the motor.

Motor overheats and overload trips out

Cause of Trouble	How to Check	How to Correct
1. Incorrect line voltage.	Use a voltmeter to check at pressure switch or terminals nearest pump.	If voltage is under the recommended minimum, check size of wiring from main switch on property. If OK, contact power the company.
2. Motor wired incorrectly.	Check the motor wiring diagram.	Reconnect for proper voltage as per wiring diagram.
3. Inadequate ventilation.	Check the air temperature where the pump is located. If over 100° F, overload may be tripping on external heat.	Provide adequate ventilation or move the pump.
4. Prolonged low pressure delivery.	Continuous operation at very low pressure places heavy overload on pump. This can cause overload protection to trip.	Install the globe valve on the discharge line and throttle it to reduce flow and to increase the pressure.

Troubleshooting Jet Pumps

Pump starts and stops too often

Cause of Trouble	How to Check	How to Correct
1. Leak in pressure tank.	For discharge or bladder captive air tanks, drain the tank and check the precharge pressure. It should be or two psig below pump cut-in pressure. If it's lower, check welds, braze joints, mechanical joints, and valve core with a soap solution. If it's defective, replace. DO NOT ATTEMPT TO REPAIR BY WELDING.	Replace the tank.
2. Defective air volume control.	This will lead to a water-logged tank. Make sure the control is operating properly. If it's not, remove and examine for plugging.	Adjust the switch settings. Clean the contacts with an emery cloth if dirty.
3. Faulty pressure switch.	Check the switch setting. Examine the switch contacts for dirt or excessive wear.	Adjust the switch settings. Clean the contacts with an emery cloth if dirty.
4. Leak on discharge side of system.	Make sure all of the fixtures in the plumbing system are shut off. Then check all of the units (especially ballcocks) for leaks. Listen for the noise of water running.	Repair leaks as necessary.
5. Leak on suction side of system.	On shallow well units install the pressure gauge on suction side. On the deep well systems, attach a pressure gauge to the pump. Close the discharge line valve. Then, using a bicycle pump or air compressor, apply about 30 psi pressure to the system. If the system will not hold this pressure when the compressor is shut off, there is a leak on the suction side.	Make sure above ground connections are tight. Then repeat the test. If necessary, pull the piping and repair the leak.
6. Leak in foot valve.	Pull the piping and then examine foot valve.	Repair or replace the defective valve.

Pump won't shut off

Cause of Trouble	How to Check	How to Correct
1. Wrong pressure switch setting or setting "drift".	Lower the switch setting. If the pump shuts off, this was the trouble.	Adjust the switch to the proper setting.
2. Defective pressure switch.	Arcing may have caused the switch contacts to "weld" together in a closed position. Examine the points and other parts of the switch for defects.	Replace the switch if it's defective.
3. Tubing of pressure switch plugged.	Remove the tubing and blow through it.	Clean or replace the tubing if it's plugged.
4. Loss of prime.	When no water is being delivered, check the prime of the pump and well piping.	Reprime if necessary.
5. Low well level.	Check the well depth against the pump performance table to make sure the pump and the ejector are properly sized.	If undersized, replace pump or ejector.
6. Plugged ejector.	Remove the ejector and inspect it.	Clean and reinstall if dirty.

Troubleshooting Jet Pumps

Pump operates but delivers little or no water

Cause of Trouble	How to Check	How to Correct
1. Low line voltage.	Use a voltmeter to check at the pressure switch or the terminals nearest pump.	If the voltage is under the recommended minimum, check the size of wiring from the main switch on the property. If OK, contact the power company.
2. System incompletely primed.	When no water is being delivered, check prime of pump and the well piping.	Reprime if necessary.
3. Air lock in suction line.	Check the horizontal piping between the well and pump. If it does not pitch upward from the well to the pump, an air lock may form.	Rearrange the piping to eliminate an air lock.
4. Undersized piping.	If the system delivery is low, the discharge piping and/or plumbing lines may be undersized. Refigure the friction loss.	Replace the undersized piping or install a pump with higher capacity.
5. Leak in air volume control or tubing.	Disconnect the air volume control tubing at the pump and plug hole. If the capacity increases, a leak exists in the tubing of control.	Tighten all the fittings and replace control if necessary.
6. Pressure regulating valve stuck or incorrectly set; (deep well only).	Check the valve setting. Inspect the valve for defects.	Reset, clean, or replace the valve as needed.
7. Leak on suction side of system.	On shallow well units, install a pressure gauge on suction side. On deep well systems, attach a pressure gauge to the pump. Close the discharge line valve. Then, using a bicycle pump or air compressor, apply about 30 psi pressure to the system. If the system will not hold this pressure when the compressor is shut off, there is a leak on the suction side.	Make sure above ground connections are tight. Then repeat the test. If necessary, pull the piping and repair the leak.
8. Low well level.	Check well depth against pump performance table to make sure the pump and ejector are properly sized.	If undersized, replace the pump or ejector.
9. Wrong pump-ejector combination.	Check the pump and ejector models against the manufacturer's performance tables.	Replace ejector if wrong model is being used.
10. Low water level in well.	Shut off the pump and allow the well to recover. Restart the pump and note whether delivery drops after continuous operation.	If well is "weak," lower the ejector (deep well pumps), use a tail pipe (deep well pumps), or switch from shallow well to deep well equipment.
11. Plugged ejector.	Remove the ejector and inspect.	Clean and reinstall if it's dirty.
12. Defective or plugged foot valve and / or strainer.	Pull the foot valve and inspect. Partial clogging will reduce delivery. Complete clogging will result in no water flow. A defective foot valve may cause pump to lose prime, resulting in no delivery.	Clean, repair or replace as needed.
13. Worn or defective pump parts or plugged impeller.	Low delivery may result from wear on the impeller or other pump parts. Disassemble and inspect.	Replace worn parts or the entire pump. Clean parts if required.