



### System Troubleshooting

#### Motor Does Not Start

POSSIBLE CAUSE	CHECKING PROCEDURES	CORRECTIVE ACTION
<b>A.</b> No power or incorrect voltage	Check voltage at line terminals. The voltage must be $\pm 10\%$ of rated voltage.	Contact power company if voltage is incorrect.
<b>B.</b> Fuses blown or circuit breakers tripped	Check fuses for recommended size and check for loose, dirty or corroded connections in fuse receptacle. Check for tripped circuit breakers.	Replace with proper fuse or reset circuit breakers.
<b>C.</b> Defective pressure switch	Check voltage at contact points. Improper contact of switch points can cause voltage less than line voltage.	Replace pressure switch or clean points.
<b>D.</b> Control box malfunction	For detailed procedure, see pages 48-57.	Repair or replace.
<b>E.</b> Defective wiring	Check for loose or corroded connections or defective wiring.	Correct faulty wiring or connections.
<b>F.</b> Bound pump	Check for misalignment between pump and motor or a sand bound pump. Amp readings will be 3 to 6 times higher than normal until the overload trips.	Pull pump and correct problem. Run new installation until the water clears.
<b>G.</b> Defective cable or motor	For detailed procedure, see pages 46 & 47.	Repair or replace.

#### Motor Starts Too Often

<b>A.</b> Pressure switch	Check setting on pressure switch and examine for defects.	Reset limit or replace switch.
<b>B.</b> Check valve - stuck open	Damaged or defective check valve will not hold pressure.	Replace if defective.
<b>C.</b> Waterlogged tank	Check air charge.	Clean or replace.
<b>D.</b> Leak in system	Check system for leaks.	Replace damaged pipes or repair leaks.



### System Troubleshooting

#### Motor Runs Continuously

POSSIBLE CAUSE	CHECKING PROCEDURES	CORRECTIVE ACTION
<b>A.</b> Pressure switch	Check switch for welded contacts. Check switch adjustments.	Clean contacts, replace switch, or adjust setting.
<b>B.</b> Low water level in well	Pump may exceed well capacity. Shut off pump, wait for well to recover. Check static and drawdown level from well head.	Throttle pump output or reset pump to lower level. Do not lower if sand may clog pump.
<b>C.</b> Leak in system	Check system for leaks.	Replace damaged pipes or repair leaks.
<b>D.</b> Worn pump	Symptoms of worn pump are similar to those of drop pipe leak or low water level in well. Reduce pressure switch setting, if pump shuts off worn parts may be the fault.	Pull pump and replace worn parts.
<b>E.</b> Loose coupling or broken motor shaft	Check for loose coupling or damaged shaft.	Replace worn or damaged parts.
<b>F.</b> Pump screen blocked	Check for clogged intake screen.	Clean screen and reset pump depth.
<b>G.</b> Check valve stuck closed	Check operation of check valve.	Replace if defective.
<b>H.</b> Control box malfunction	See pages 48-57 for single-phase.	Repair or replace.

#### Motor Runs But Overload Protector Trips

<b>A.</b> Incorrect voltage	Using voltmeter, check the line terminals. Voltage must be within $\pm 10\%$ of rated voltage.	Contact power company if voltage is incorrect.
<b>B.</b> Overheated protectors	Direct sunlight or other heat source can raise control box temperature causing protectors to trip. The box must not be hot to touch.	Shade box, provide ventilation or move box away from source.
<b>C.</b> Defective control box	For detailed procedures, see pages 48-57.	Repair or replace.
<b>D.</b> Defective motor or cable	For detailed procedures, see pages 45 & 46.	Repair or replace.
<b>E.</b> Worn pump or motor	Check running current, see tables 13, 22, 24, 25, & 27.	Replace pump and/or motor.