

NELSON MODEL 300 WATERER MAINTENANCE GUIDE

Use this guide to assist in maintaining the superior performance of your Nelson 300 Series Waterer. Note: Always shut-off electric power before performing maintenance on waterer.

INSPECT WATERER DAILY

1. Insure clean, fresh water is available. To clean drinking bowl:
 - A. Open upper bowl by pressing pointed object into hole above nameplate and simultaneously lifting upper bowl.
 - B. Clean upper bowl.
 - C. Clean stainless steel float pan.
 - D. Lift and clean plastic lower bowl, use caution not to damage heater.
 - E. Replace plastic bowl and allow to partially fill with water. Replace float pan and close top bowl. Insure bowl is latched.
 - F. Make certain bowl properly fills with water in normal operation.

HEATER INFORMATION

The 280-2W heater is a 120V-AC 200 Watt heater controlled by an internal thermostat. Thermostat is pre-set at factory to keep temperature of water at optimal drinking range of 40-50 degrees F. Heater has a three year warranty; however, life of heater is usually about ten years.

HEATER REMOVAL AND REPLACEMENT

To remove heater:

1. Turn off electricity and water.
2. Disconnect heater wires.
3. Remove brass nut securing heater to plastic lower bowl. Leave rubber washer on heater.

To replace heater:

1. Place heater horizontally on inside bottom of plastic lower bowl. Route wire through rubber gasket then through hole in side of bowl.
2. Slide nut over wires and CAREFULLY thread onto heater, tighten hand tight (tighten additional 1/4 turn maximum, if necessary).
3. Make electrical connections. Connect black wire to hot service lead, white wire to neutral and green wire to ground. ALWAYS CONSULT A QUALIFIED ELECTRICIAN CONCERNING INSTALLATION AND ELECTRICAL CODES.
4. Turn on electric power.

VALVE INFORMATION

Nelson Model 300 Waterers are shipped with a standard valve part #360-B, unless otherwise specified. The 360 valve is available in the range of pressures indicated below.

<u>Part #</u>	<u>Color</u>	<u>Pressure Range</u>
360-L	Blue	5-20 psi
360-S	White	20-40 psi
360-B	Black	40-60 psi (STANDARD)
360-G	Green	60-80 psi
360-R	Red	70-100 psi

VALVE REMOVAL AND REPLACEMENT

To remove valve:

1. Turn off electricity and water.
2. Disconnect flexline hose from fitting below plastic lower bowl.
3. Remove fitting from bottom of valve.
4. Unscrew valve from plastic lower bowl to remove.

To replace valve:

1. Screw valve into bottom of plastic lower bowl HAND TIGHT then an additional 1/4 to 1/2 turn maximum.
2. Reattach fittings and flexline hose then turn on water and observe proper filling of waterer.
3. Turn on electricity.

IF WATER FREEZES IN DRINKING BOWL, CHECK THE FOLLOWING:

1. Full power is properly connected to heater. If not, reconnect and/or restore power. (See Heater Removal and Replacement.)
2. Plastic lower bowl is filled with water (water transfers heat throughout waterer.) If not, determine where water is leaking and correct.
3. To test heater for failure:
 - A: Turn off electricity, disconnect wires, remove heater from plastic lower bowl (See heater removal and replacement).
 - B: Place heater in freezer for 15 to 20 minutes.
 - C: Test for continuity with an ohm meter. Meter reading should be approximately 70 ohms.

IF WATERER OVERFLOWS, CHECK THE FOLLOWING:

1. Float pan is located in plastic lower bowl above valve.
2. Interference of float pan movement. To check, remove water from plastic lower bowl and immediately place float pan on top of valve. Float pan should spin freely. If not, determine whether float pan is out of round, plastic lower bowl is improperly installed or housing is bent or damaged squeezing plastic lower bowl.
3. Valve seat wear. Turn off water supply and remove valve cap by unscrewing from top of valve. Remove valve stem and observe yellow rubber valve seat positioned in recess in end of valve stem. Seat should be clean and have a slight circular indentation on the face. To replace valve seat, remove old seat with a knife or tweezers and press new seat firmly and flatly into recess.
4. Water pressure may be too high for rated pressure of valve. Determine water pressure at waterer. Refer to chart and replace valve if necessary. (Note: Partially closing shut-off valve serving waterer will not reduce water pressure. If water pressure serving waterer is below the rated pressure range of the valve, the waterer will still fill.
5. If valve is screwed too far into lower bowl, float pan may hang up on sides of plastic lower bowl before valve is completely shut off. Bottom of valve should be flush with or 1/16" below boss on underside of plastic lower bowl.
6. Valve orifice may be eroded by sand in water or damaged by probing in orifice area. To correct, replace valve.
7. Valve plunger may be sticking due to deposits build up on stem. Clean off deposits or replace plunger.

IF WATERER WON'T REFILL, CHECK THE FOLLOWING:

1. Tight bend in flexline restricting water flow.
2. Obstruction in plumbing coming to the waterer.
3. Crack in plastic lower bowl or leak around heater allows lower bowl to lose water below level sufficient to float float pan when animals drink.
4. Not allowing bowl to fill prior to installing float pan.

Parts may be purchased directly from Nelson Manufacturing Company. If you have any questions or comments, contact:

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