

# Technical Data Sheet

## Replacement Of The Tucson Bottom Casting

**Date:** 11/7/2012

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### **TOOLS REQUIRED:**

Phillips Screwdriver  
Slotted Screwdriver  
7/16" Wrench and Socket  
Socket Extension  
5/8" Wrench  
11/32" Wrench  
10mm Wrench  
Rubber Mallet  
Vise-Grips  
Bungee Cord

**BEFORE YOU BEGIN:** If the stove has been installed the gas must be shut off and disconnected from the unit. The thermostat wire and venting must be removed. If the unit is equipped with an optional blower, it must be unplugged and removed.

### **PROCEDURE:**

1. Remove the stones. Remove the top stones by reaching under the back of the top casting and pushing them upward with one hand and removing them with the other. Using a 7/16" socket and extension (or a 7/16" wrench), loosen the two 1/4" nuts which attach the top of the stove to the side panels and bottom. Lift the side stone retention clip/heat shield upwards. Once the stone clip moves up, pull it toward the back of the stove. The stone clip will slide out between the casting and the back shroud. Carefully remove the stones through the side of the stove. Lift the top stone up so that the bottom stone can be removed first. Lift the top grill out of the top and set it aside.

2. Using a phillips screwdriver, open the front door and remove the ember strip, log set and burner tube. Locate the two phillips head screws that hold the air intake flap to the back of the firebox. Remove the screws and the flap. Remove the two phillips screws that hold the pilot assembly to the bottom of the firebox. Leave the pilot loose in the stove for now.
3. Remove the four nuts (two in each side) that hold the side panels to the bottom. You will need to reach in through the each side panel to hold the hex head of the bolt with a 7/16" wrench while turning the lock nut underneath with a 7/16" socket or wrench. Leave the bolts in place for now.
4. Using a 7/16" socket with an extension, remove the rods that run from the top to the bottom by turning the 1/4" lock nuts on the rods on the top. The rods will turn out of the threaded holes in the bottom as you do this. When the rods are out of the bottom, pull the up and out of the stove. You can now lift the top casting off the stove.
5. Lift the front grill out of the stove.
6. Remove the four bolts that hold the panel to the bottom (The nuts were removed from them in step 3).
7. Lift the firebox up slightly and pull out the right or left side panel. Allow the firebox to rest on the valve compartment while you repeat the procedure on the opposite side.
8. Rotate the firebox so that it is standing on its top with the valve compartment facing up.
9. With a 5/8" wrench, remove the main gas line from the firebox and valve.
10. Using a 7/16" wrench and socket, remove the four nuts and bolts that hold the firebox, bottom cast, and valve compartment together.
11. Remove the pilot line from the valve with a 7/16" wrench; remove the pilot line from the pilot assembly with a 10mm wrench. **Important:** make sure the pilot orifice does not fall out of the pilot assembly or pilot line while you do this procedure. If it falls out of the pilot, place it in the pilot line for safekeeping.
12. With an 11/32" wrench, remove the thermocouple from the valve. Pull the wire off from the igniter with your hand.
13. Using a slotted screwdriver, loosen the screw heads on the valve terminal that hold the thermopile leads to the valve operating head. Remove the thermopile leads. The metal valve compartment can now be separated from the firebox and the base.

14. Place the new bottom on the firebox, place the valve compartment on top of it and line up the holes. Place the two longer bolts (1-3/4") in the holes in the back of the bottom/valve compartment assembly and the two shorter bolts (1-1/4") in the front of the assembly. Turn the nuts onto the bolts without tightening them. Pull the bottom/valve compartment assembly forward until it is flush with the back of the firebox and tighten the four bolts.
15. If the rectangular gasket between the firebox and the pilot assembly has been damaged, it will require replacement. Peel the paper backing off of the gasket and stick it to the firebox before repositioning the pilot. If the gasket you use does not have adhesive Backing, use Spray >n Glue to hold it in place.
16. With the pilot positioned in the firebox, but not screwed into place, loose fit the pilot line into the valve and pilot assembly. **Important:** make sure the pilot orifice is in place before attaching the pilot line. Tighten the screws that hold the pilot assembly into the firebox.
17. Push the igniter wire back onto the base of the igniter. Check for arc by pushing in the red igniter button. (If spark is not present at the pilot, check both ends of the connection for a loose fit and tighten as necessary. If the spark is still not present check the ceramic base of the ignition rod for cracks and replace if needed.)
18. Place the thermopile wires back onto the valve in the TP, TP TH positions and snug with a slotted screwdriver.
19. Bend the thermocouple line so that you can line it up with the valve and reattach it. Turn the thermocouple until it is finger tight and then turn it 1/4 turn with the 11/32" wrench. Make sure the blue wire is still connected into the white block connector behind the thermopile in the valve.
20. Snug the pilot line into the valve with the 7/16" wrench. Snug the pilot line into the pilot assembly using the 10mm wrench. Tighten the main gas line to the valve and orifice elbow with a 5/8" wrench. Make sure the ferrules are on the line before tightening the nuts.
21. Turn the firebox so that it is positioned on one of it=s sides. Place the appropriate panel onto the firebox and replace the two nuts and bolts that hold it to the bottom - do not tighten these bolts yet.
22. Stand the stove upright, allowing the weight of the stove to rest on the valve compartment. Lift the stove up so that you can place the second panel into position. Replace the bolts and nuts as you did on the previous side, again - do not tighten them down yet.

23. Place the front grill into the stove, making sure the tabs on each side of the grill seat into the slots on the side panels. Push the top of the panels in by tapping them with your palms or a rubber mallet. Wrap a bungee cord tightly around the stove to hold the panels in this position.
24. Replace the air intake flap, burner tube, log set, and ember strip. Place the door back on the stove front. Make sure the shim washers are in place between the door hinges and stove hinges. Close the door and secure it with the phillips screw.
25. Place the top casting back onto the stove. Make sure the side panels lock into the recessed lip in the top casting. Drop the threaded rods through the top (with the nuts on the top) and turn them into the threaded holes in the bottom casting. Turn them until the bottom of the rods are flush with the bottom edge of the cast. Do not tighten the nuts down to the top yet. At this point you can tighten the four nuts and bolts that hold the side panels to the bottom casting.
26. Replace the side stones by inserting the top stone through the side of the stove. Hold the top stone up so that the bottom stone can be positioned. Lower the top stone onto the bottom stone. Slide the stone clip in place between the stones and the threaded rods. The stone clip should be centered on the top and bottom. Tighten the 1/4" nuts on the top casting. You will need to hold the threaded rods in place with a set of vise-grips while the nuts are tightened. **Important:** these are lock nuts, do not over-tighten as this will cause the tab in the bottom casting to break. Just turn them down flush to the top.
27. Place the top stones and the top grill carefully back into the top casting.

**Important:** The gas lines must be leak tested before the stove is used/returned to use. If a leak is detected, the affected fitting(s) or gas line must be tightened or replaced until no leak is detected!