

Changing The Door Springs On The “John Willett” Oven

Note: Before you start identify the position of each type of spring on your oven. Different springs are used on the left and right sides of some ovens to achieve the correct spring tension.

- Step 1 Lubricate the grub screws and door hinge pins, using only (Tri-flow) teflon based oil. Remove small grub screws holding door hinge pins, from door hinges (item A – Refer to Attached diagram), by inserting allen key and then gripping the head of the screw with small vise grip pliers to undo. This prevents both the allen key breaking the head off the screw and the vise grips from crushing screw.
- Step 2 EARLY MODEL OVENS ONLY Remove the circlips (item B) from both ends of centre hinge pin (where fitted) and from outside of outer hinge pins.
- Step 3 Using a piece of 3/8 rod – remove the centre hinge pin away from door that has the broken spring. When hinge pin is clear of the door – door will drop slightly – hinge pin should still remain through the other door and to the edge of hinge bracket on the side from which door is being removed. Repeat procedure on the hinge pin on the outer side of the door – door will drop when pin is clear.
- Step 4 Remove the door by pulling it directly away from the oven, then lay the door on a table flat down on the door seals – remove hinge pin and broken spring.
- Step 5 Insert the new spring in the door – the square bend in the spring goes into the hole on the bottom of the door (fig 1). Oil the hinge bushes of the door – insert hinge pin through right hand door bush, with the circlip groove to the outer edge of the door and through centre of the spring to ¼ way through. Using 3/8 rod with hole drilled up its centre – insert the other end of the spring in this hole. Pretension (wind-up) spring through half a turn and push hinge pin through spring whilst holding spring in tensioned position, until located in the other door bush – spring should then rest firmly against the bottom of the door, when tensioning rod is released. If the spring to be replaced is at the centre of the oven a temporary pin will need to be fitted through the smaller door bush and halfway through the pre-tensioned spring, to hold the spring in position temporarily. This will then be replaced by the larger centre pin pushing through spring and keeping the spring tensioned whilst also displacing the temporary hinge pin. **Important** - make sure you replace the grub screws and circlips, if these are not replaced, the hinge pins will rotate with the door and cause the door hinge brackets to wear excessively. Repairing hinge brackets is a major job.
- Step 6 Spring retaining bolts in the front of the oven, should have the screw threads lubricated with Tri-flow oil and then screwed back into the oven front as far as possible.
- Step 7 Refit the Doors
The centre hinge pin of the door to be refitted should be tapped through the centre hinge bracket about 10mm. Located the door bush of the door to be refitted onto the protruding hinge pin, align door with other hinge bracket, and gently tap pin into position. Be sure to align dimple in the hinge pin with the grub screw hole in the hinge bracket, check position of dimple in the centre hinge pin and locate back to original position.
- Step 8 With the door fully open – use a screwdriver blade to lift the tip of the spring resting on bottom of the door – insert spring end into the slot end of the tool made from the square bar, with the round handle facing down ---- turn the bar tool towards the oven and align spring end with the hole in the retaining screw --- using pliers or vise grips --- screw retaining screw out over the spring end --- retaining screw should finish about 10mm from the spring diameter. Use the same procedure on the other springs --- removal of grates and tiles where fitted will allow better access to the retaining screws.

