



## Fuel Flow Adjustment Basics

**For more detailed instructions refer to “Details for tuning your NordicStove to your fuel oil and chimney system.”(Owner’s Manual)**

**WARNING: Incorrect fuel flow adjustment can create a fire hazard! Use extreme caution! The manufacturer recommends hiring a qualified technician! Warranty coverage is void if the unit is over-fired!**

Though heating fuel oil is sold under various names such as #1 heating oil, #1 stove oil, #2 heating oil, #2 diesel, etc. there can be **significant differences in viscosity** even between specific deliveries of fuel that are sold having the same name.

**Viscosity significantly effects the amount of fuel flow** through drip pot oil controllers such as the TOBY DVR used on the NordicStove. Consequently, adjustment of the controller may be necessary in order to achieve a proper match between your specific fuel and the controller settings.

***Before adjusting your oil controller make sure your chimney system is drafting properly and your fuel tank, filter, and fuel line are allowing fuel to flow to the NordicStove and that the stove is level and all burner rings are properly installed.***

See back page of this document for a diagram of the Toby DVR controller.

**Situation #1: Stove appears to be burning with a weak flame at the LOW setting.**

1. **Light the stove.** Gradually increase flow to High. Operate at High for approximately 15-20 minutes. (To ensure the chimney is fully heated and drafting properly.)
2. **Evaluate your flame.** If you think it is too low, go to Situation #2 step #2; if too high, follow only steps #6-10 of Situation #2. If acceptable, proceed to step #3.
3. Turn **fuel control knob** counterclockwise to lowest position at which the flame can be seen covering the bottom of the burner and is not flaring up and down or going out and then “whoofing” back on again.
4. **Mark position** of LOW adjusting screw.
5. **Increase fuel flow** by turning Low adjusting screw counterclockwise 1/8th turn.
6. **WAIT five minutes.** Turn fuel control knob to a lower setting. If flame begins to die out or only burn on one side of the burner, stop. Repeat step #4.
7. **Repeat steps #4 and #5** until fuel control knob can be set at lowest ON position and flame is stable and visible throughout bottom of burner or burning from holes at lower ring.

## Situation #2: Stove appears to be burning with a weak flame at the HIGH setting.

Note: **TWO adjusting screws** effect the fuel flow rate at the HIGH setting. One is the high adjusting screw and the other is the high limit screw. Both of these must be adjusted properly in order to have appropriate fuel flow.

1. **Light stove** and gradually increase flow to High setting. Operate at High setting for approximately 15-20 minutes. (To ensure the chimney is fully heated and drafting properly.)
2. **Mark position** of HIGH adjusting screw and position of HIGH LIMIT screw.
3. Turn high limit screw counterclockwise one revolution.
4. Turn high adjusting screw counterclockwise 1/4<sup>th</sup> turn.
5. **WAIT five minutes.** Visually check to determine whether flame has increased.
6. If flame is **too high** (smoky exhaust, flame touching top plate, exhaust tube glowing red) turn High adjusting screw clockwise until flame is correct (clean exhaust, flame does not touch top, no red glow). Remember, be patient and work slowly. Allow flame to stabilize. Adjustments do not take effect immediately!
7. If flame is still **too low**, repeat steps #4 and #5.
8. **After flame has stabilized** and high adjusting screw is properly set, turn high limit screw clockwise until adjustment indicator tab starts to move downward.
9. Turn high limit screw **back counterclockwise** so it is slightly above the indicator tab.
10. **Adjust Low** setting using guidelines mentioned in Situation #1. Always check operation at Low after adjusting High settings!

## Situation #3 and #4: Stove appears to be burning too high at either Low or High.

1. To reduce fuel flow at the Low position using guidelines indicated in Situation #1. Just decrease (counterclockwise) rather than increase fuel flow.
2. Follow procedures and instructions given above in Situation #2 steps 1,2, and 6 through 10.

### Top View Of Toby DVR Oil Controller

