

Trick Flow[®]
Serious Horsepower

Instructions for Trick Flow Valve Spring Upgrade Kit for Small Block Ford TFS-2500100

Thank you for purchasing a Trick Flow Valve Spring Upgrade Kit. This kit contains higher rate valve springs and special retainers that will allow you to use a performance cam up to .542" lift on OEM cast iron heads without machining. The installation is quite simple and can be done without removing your cylinder heads.

To perform this operation with the heads on the engine, you will need a valve spring compressor, an air compressor, and an adapter fitting to put compressed air into the cylinder. Don't forget the safety glasses!

Installation

1. Disconnect the negative battery cable
2. Remove the valve cover from the head you will be working on. On EFI engines, it will be necessary to remove the upper plenum and throttle body before you can remove the valve cover.
3. Carefully remove the ignition wire boots from the spark plugs. If the wires are not marked with their cylinder number, label the wires as you remove them. Use an air gun to blow any debris away from the base of the spark plug (wear your safety glasses for this!). Remove the spark plugs, being careful not to get any contaminants into the cylinders.
4. Remove all of the rocker arms, pedestals, and pushrods. Be sure to keep all parts in order so they can be put back into their original positions.
5. Screw the adapter fitting into the first cylinder. Apply 85-100 psi of air pressure and manually turn over the engine until it stops. **Keep hands clear of the fan, and anything else that turns, for this step! Manual transmission cars must be in neutral with the parking brake on; automatics should be in park.**
6. Starting with either intake or exhaust valve, tap the valve spring retainer with a brass hammer to loosen the retainer from the keepers. Be careful not to hit the valve stem!
7. Attach the valve spring compressor and compress the valve spring far enough to remove the keepers and the old spring. Use caution when compressing the valve spring since it will have a great deal of stored energy when it is compressed. Next pry the old valve stem seal off of the valve guide.
8. Get the appropriate retainer from the kit for the valve you are working on. There are two types of retainers, so make sure not to mix them up. The different retainers give the intake and exhaust valves different installed heights.
9. Install the proper retainer and keepers on the valve without a valve spring, then pull up tight on the retainer. Insert the supplied height gauge between the outer edge of the retainer and the spring seat. The supplied gauge is 1.800" tall; correct installed height should be 1.800" \pm .015". Use the appropriate shim to adjust the installed height if needed.

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10. After checking installed height, remove the retainer and keepers but leave any shims in place. Slip the valve stem seal protector over the valve tip and lubricate the length of the valve stem with clean motor oil. Install the new seal on the valve stem, sliding it down evenly until you can push it onto the valve guide.
11. Remove the seal protector, then install the new spring with the correct retainer. Repeat this process with the rest of the valves, making sure to follow the above directions exactly.
12. Reinstall the pushrods, rocker arms, and pedestals back into their original positions, then torque the pedestal bolts to 22 ft.-lbs. Reinstall the valve cover, spark plugs, and plug wires.
13. Repeat Steps 2 through 11 on the other cylinder head.
14. When the spring installation on both heads is complete, reinstall the EFI upper plenum and throttle body (if applicable). Check all vacuum lines, reconnect the negative battery cable and start the engine. Drive the vehicle easy for about one hour, then change the oil and filter.