

IMPORTANT NOTES ON SETTING THE WASTEGATE ACTUATOR SPRING PRESSURE

A stiffer spring should only be used when necessary. The wastegate actuator allows for different combinations of spring pressures. All springs that are adaptable with the wastegate actuator are shown in the table below. The tuner can use combinations of up to 3 springs to achieve the following base boost pressures. To aid in the identification of these springs they are supplied colour coded. If this colour coding is not clear please use the dimensions in the following table to identify the spring. Please see the following detailed instructions on setting your wastegate actuator spring pressure. The springs chosen should be rated to the lowest boost level desired.

Notes:

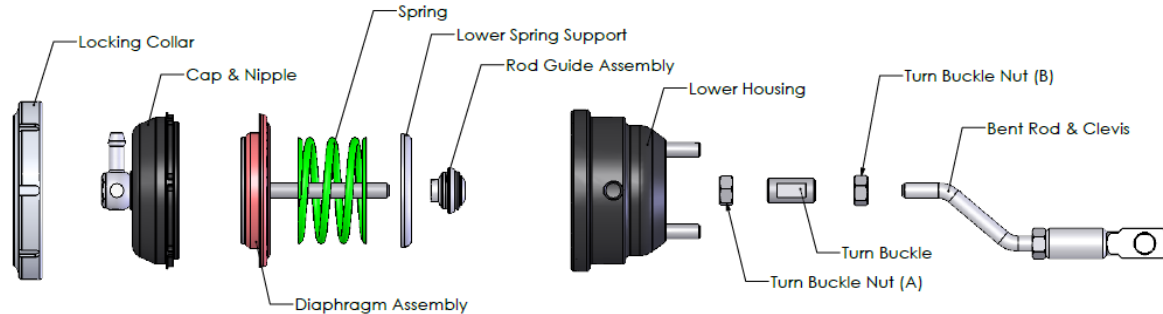
1. As a rough guide it is possible to double the base pressure when accompanying a Turbosmart IWG75 with a Turbosmart boost controller if the system is adequately sized. Results will vary depending on every application.
2. Check the spring combination in your IWG75. If more springs are required, they can be purchased from your Turbosmart dealer by using the TS-xxx-xxxx part numbers shown below each spring.

Pressure rating			3 PSI Inner	5 PSI Inner	7 PSI Middle	11 PSI Middle	10 PSI Outer	7 PSI Outer
Part number			TS-0505-2001	TS-0505-2002	TS-0505-2003	TS-0505-2004	TS-0505-2005	TS-0505-2006
Colour			BRN/BLK	BRN/GRY	BRN/PUR	BRN/RED	BRN/BLU	BRN/PNK
Dimensions			29mm OD, 32mm Length	29mm OD, 36mm Length	36.5 OD, 43mm Length	36.5 OD, 52mm Length	44mm OD, 68mm Length	44mm OD, 57mm Length
Desired Boost Pressure								
PSI	BAR	KPa						
3	0.207	20.68	▲					
5	0.345	34.47		▲				
7	0.483	48.26			▲			
10	0.69	68.95					▲	
11	0.76	75.84				▲		
12	0.827	82.74		▲	▲			
13	0.89	89.6	▲				▲	
14	0.965	96.53			▲			▲
15	1.03	103.4		▲			▲	
16	1.1	110		▲		▲		
17	1.172	117.2			▲		▲	
19	1.31	131		▲	▲			▲
20	1.38	138	▲		▲		▲	
21	1.45	145				▲	▲	
22	1.517	151.7		▲	▲		▲	
23	1.59	159		▲		▲		▲
24	1.655	165.5	▲			▲	▲	
26	1.793	179.3		▲		▲	▲	

CHANGING THE SPRINGS – BENT ROD ACTUATORS

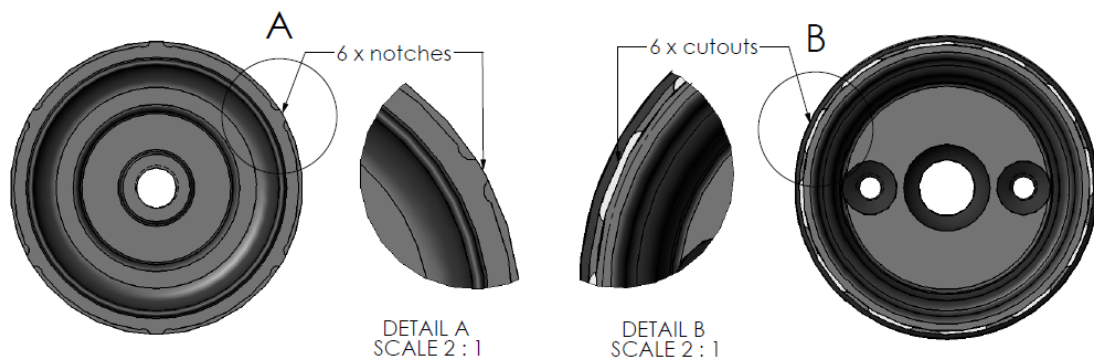
WARNING! Fitting a wastegate actuator with a higher spring pressure may cause a higher than expected increase in boost pressure.

Turbosmart recommends adjusting your boost controller back to its minimum setting and measuring the new minimum boost pressure achieved by the new spring, before increasing your boost pressure again.



IMPORTANT: A press or clamping device must be used when removing or installing the collar as clamping the cap down removes the load off the collar from the diaphragm and allows the collar to be removed.

1. If the engine has been running, allow it to cool down before removing the actuator from its bracket.
2. Once the actuator is separated from the turbocharger assembly, loosen turn buckle nut (B) and remove the bent rod and clevis assembly.
3. Remove the turn buckle and turn buckle nut (A).
4. Use a press or a vice to clamp down the cap to the body and remove collar.
5. Remove the actuator from the clamping device carefully as the cap is under spring load.
6. Remove cap and lower housing.
7. Remove the rod guide assembly and the lower spring support.
8. Change the springs making sure that they sit in the right grooves.
9. Reassemble in reverse order. Ensure that the diaphragm is installed in the centre of the upper spring support and when installing the cap, make sure that the cap and diaphragm are centred and that the locating notches on the cap match the cut-outs in the lower housing. **When installing the clevis, make sure that there is 2mm worth of preload.**

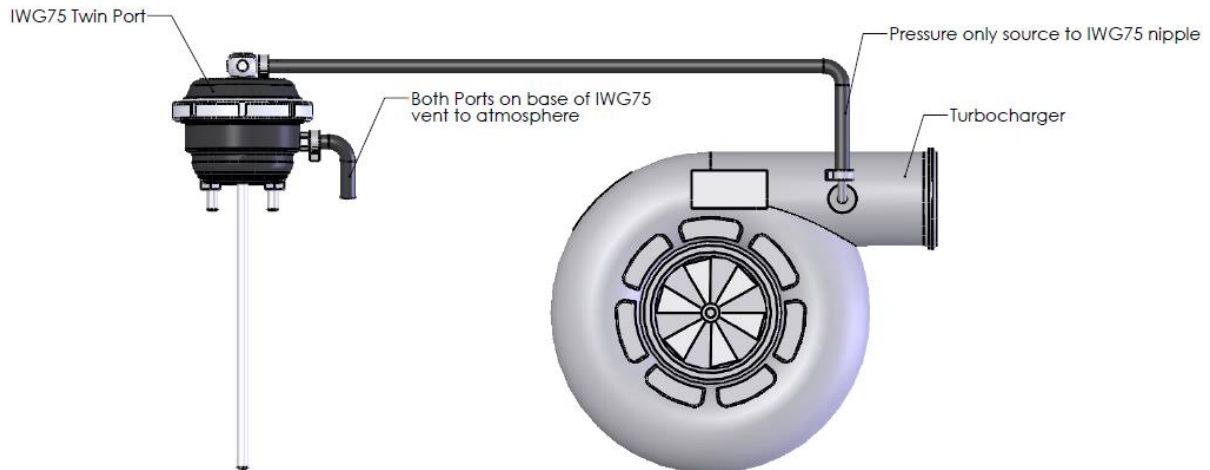


NOTES ON BOOST CONTROL HOOKUP

WARNING! Changing your connection method can cause a higher than expected increase in boost pressure. Turbosmart recommends adjusting your boost controller back to its minimum setting and measuring the new minimum boost pressure achieved by the new setup before increasing your boost again.

Basic setup

If no boost controller is being used connect the **BOOST PRESSURE ONLY SOURCE** to the wastegate actuator pressure nipple as shown.



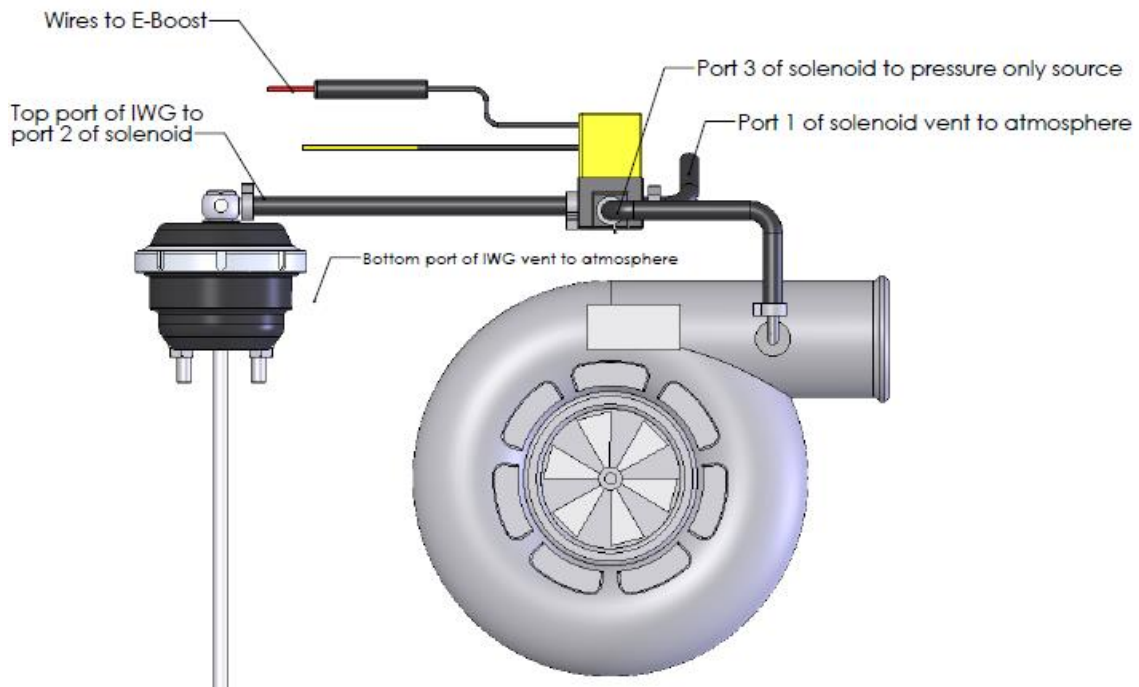
Boost Tee setup

When using your wastegate actuator in conjunction with a Turbosmart Boost Tee, fit the controller between the boost pressure source and pressure nipple as shown. Ensure the arrow on the Boost Tee is pointing in the direction illustrated. Refer to the instructions supplied with your Boost Tee for further detail if necessary.



E-Boost connection Method

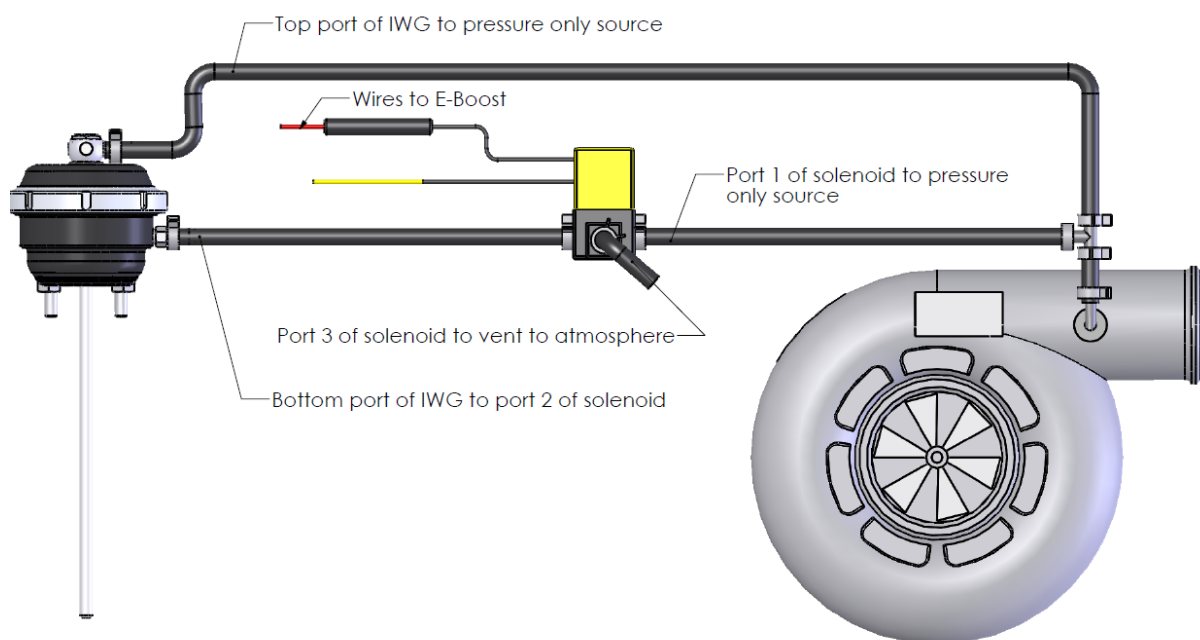
- Port 1 of solenoid vent to atmosphere
- Port 2 of solenoid to pressure nipple of wastegate actuator
- Port 3 of solenoid to **pressure only source**



Two port connection (For controlling boost on a turbo system with high back pressure)

Disclaimer: Please note that base boost pressure will increase when using this method. Reset your Turbosmart electronic boost controller to factory settings prior to further configuration.

- Connect the Top port of the wastegate and port 1 of the solenoid to a pressure only source (by teeing into source)
- Port 2 of the solenoid to the bottom port of the wastegate
- Port 3 of solenoid vent to atmosphere





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The Turbosmart Team.**