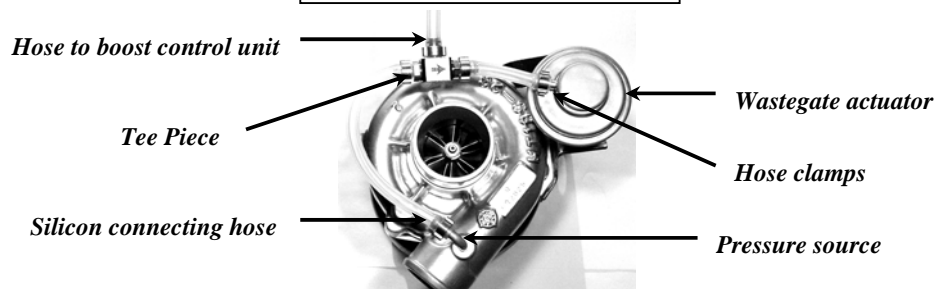


## DUAL STAGE GATED BOOST CONTROL VALVE (DS GBCV) INSTRUCTIONS

### IMPORTANT NOTES ON FITTING YOUR DS GBCV

- Turbosmart recommends that your DS GBCV is fitted by an appropriately qualified technician
- Use only Silicon hose when fitting the DS GBCV – other hoses will be effected by heat and will eventually crack or split, this will cause over-boosting and may cause serious engine damage
- Ensure that the hose is clean and free of debris
- Ensure that all hose connections are secured with hose clamps
- Mount the DS GBCV tee piece between the pressure source and the wastegate actuator – keep the joining hoses to a minimum length
- The DS GBCV should be adequately shielded from heat and positioned at least 100mm from the turbine housing or the exhaust manifold
- A Turbosmart Fuel Cut Defender may need to be used in conjunction with your DS GBCV – refer to [www.turbosmart.com.au](http://www.turbosmart.com.au) for more detail

Figure 1: Typical installation of a DS GBCV Tee Piece



### ELECTRICAL CONNECTION

- The Blue wire is positive and the Brown wire is negative
- Extend and connect the Blue wire through the switch to a fused 12 volt ignition supply – Important, failure to connect to an ignition supply may cause the battery to go flat and may result in damage to the product
- Check that the power source can accept an additional 1amp load
- Connect the brown wire, with crimp supplied, to a solid ground point on the chassis

### IMPORTANT NOTES ON SETTING BOOST PRESSURE

- Adjustment to the DS GBCV is made by turning the **Boost Dials** (see figure 2)
- Turn in a clockwise direction to increase boost and the reverse direction to decrease boost
- Before making any adjustment both the **Boost Dials** will need to be fully closed (anti-clockwise)
- The low boost setting must be adjusted before the high boost setting
- Consult your local specialist before setting your desired boost pressure. Setting boost beyond your engines capability may result in engine damage.
- Turbosmart recommends that your DS GBCV is adjusted by an appropriately qualified technician
- Turbosmart recommends that the Air Fuel ratio is checked once boost pressure is set
- Turbosmart recommends that boost pressure is set using a Dynamometer and not on the street
- Turbosmart recommends that a boost gauge be permanently fitted to the vehicle

Figure 2: Top View of DS GBCV



### SETTING BOOST PRESSURE

- Step 1: Apply full load to the engine (in a high gear at full throttle) and note the boost pressure
- Step 2: To increase boost turn the **Boost Dial** clockwise (maximum of 11 clicks or one turn at a time)
- Step 3: Apply full load to the engine and note the boost pressure
- Step 4: Compare the actual boost pressure with the desired boost pressure. If the actual pressure is below desired pressure return to step 2. If the actual is above the desired boost then decrease by turning the **Boost Dial** anti-clockwise and return to step 3.
- Step 5: Activate the Rocket Launcher Switch and repeat steps 1 to 4 for the high boost setting

### TROUBLE SHOOTING

The following points should be checked if you find that your engine is over-boosting, under-boosting or the boost pressure is fluctuating. Please note, the following checks will cure 99% of problems experienced when fitting a Turbosmart Gated Boost Control Valve.

- Check that the DS GBCV Tee Piece is installed so that the arrow points toward the wastegate actuator
- Check the joining hoses for splits, cracks or loose connection
- Check to see if the DS GBCV is blocked or contaminated with dirt or debris
- Ensure that there is nothing but the DS GBCV Tee Piece in the hose between the pressure source and the wastegate actuator, ie tee pieces for boost gauge or to factory boost solenoid.
- Check that the joining hoses are not blocked or kinked or restricted, particularly if the existing hose was reused
- Pressure test the wastegate actuator for leakage, the diaphragm or housing may be cracked or split

#### Warranty

Turbosmart warrants its products to be free from faults or defects for the life of the product. \*

\* Subject to Turbosmart trading terms and conditions

#### Warning!

Incorrect use of this product may result in damage to your vehicle. Failure to observe any notes or recommendations may result in incorrect use of this product. This product is intended for use in off-road racing only. Turbosmart will accept no responsibility for the incorrect use of this product.

#### Disclaimer!

Turbosmart will not be held responsible for any damage caused to property or person, directly or indirectly related to the use of a DS GBCV.