

Product Name: **IWG75**
 Product Description: Internal Wastegate Actuator
 Product Number: TS-06XX-XXXX



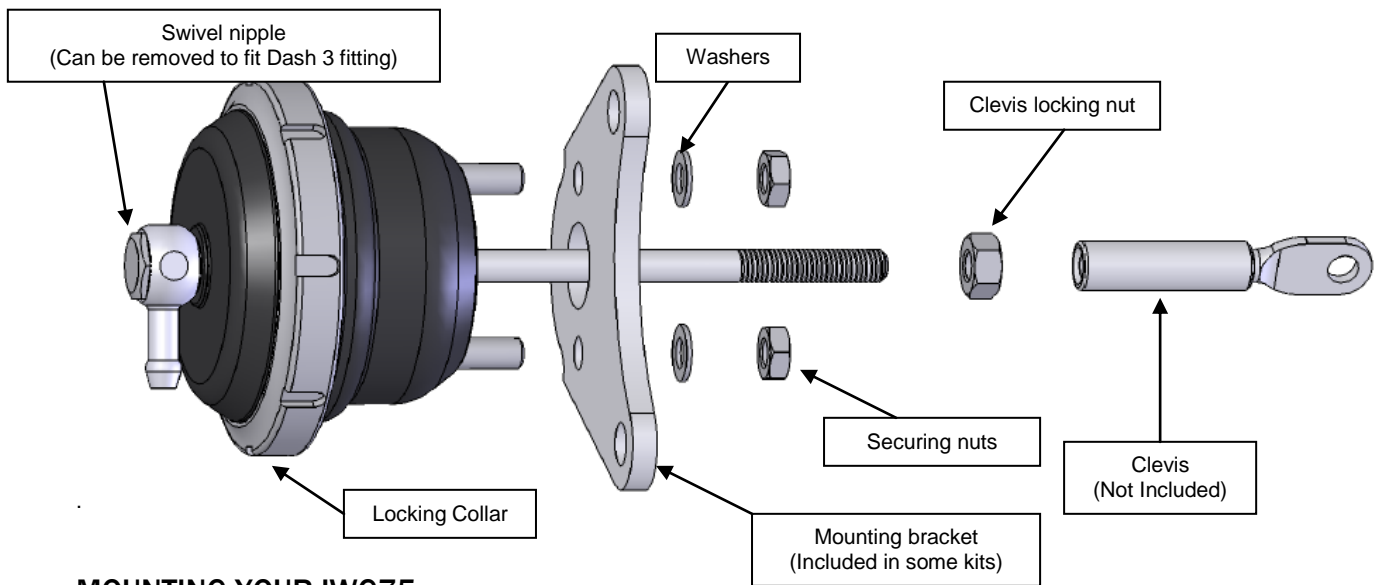
IMPORTANT NOTES ON YOUR IWG75 INTERNAL WASTEGATE ACTUATOR

- Consult your local specialist before setting your desired boost pressure, setting boost beyond your engines capability may result in engine damage.
- **Allow for adequate cool airflow around the top diaphragm housing**

RECOMMENDATIONS

- Turbosmart recommends that boost pressure is set using a Dynamometer and not on public roads.
- Turbosmart recommends that a boost gauge be permanently fitted to the vehicle.
- Turbosmart recommends that the engines Air/Fuel ratio is checked while setting the desired boost pressure, as any increase in boost pressure can cause the engine to run "LEAN", resulting in possible engine damage.

BASIC COMPONENTS OF YOUR IWG75 INTERNAL WASTEGATE ACTUATOR

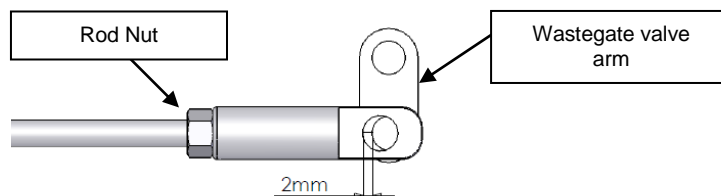


MOUNTING YOUR IWG75

Depending on the kit purchased, the IWG75 might not be provided with a bracket. You will need to either modify the existing bracket for the standard internal wastegate actuator or fabricate a bracket. The hole spacing between the mounting screws is 34mm. The fabricated bracket should be made from an appropriate material such as stainless steel that can handle high temperature and withstand high spring forces. Use the supplied nuts and spring washers to secure the IWG75 to the bracket.

The Rod in the Universal IWG75 uses a 1/4" UNF thread which can be used with a variety of different clevises to fix the end of the rod to the wastegate valve.

When installing the clevis of the IWG75 onto the wastegate valve arm, make sure that there is 2mm of preload. Then use compressed air (the amount of air pressure applied should be slightly higher than what the IWG75 spring is rated to) to pressurise the IWG75 so that the clevis can be hooked onto the wastegate valve arm easily. Remember to reinstall the standard R-Clip or circlip to secure the clevis to the wastegate valve arm. Then tighten the rod nut to secure the clevis onto the rod.



ACHIEVING YOUR TARGET BOOST PRESSURE

There are various factors involved in achieving your target boost pressure including.

- The size of the spring fitted in your wastegate actuator i.e. the boost pressure achieved by the wastegate actuator spring only.
- The desired level of boost pressure and the difference between this and your wastegate spring pressure.
- The size of your turbocharger and wastegate and the resulting exhaust manifold backpressure in your system.

Turbosmart recommends the ideal setup for achieving your target boost pressure is to use the wastegate actuator in conjunction with a Turbosmart e-Boost controller.

IMPORTANT NOTES ON SETTING THE WASTEGATE ACTUATOR SPRING PRESSURE

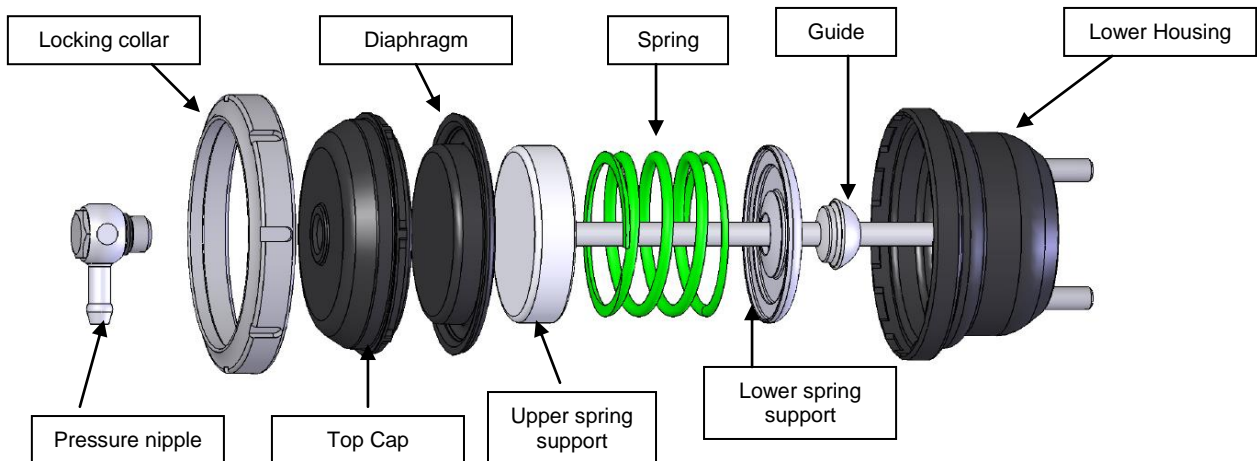
A stiffer spring should only be used when necessary. The wastegate actuator allows for different combinations of spring pressures. All springs that are adaptable with the wastegate actuator are shown in the table below. The tuner can use combinations of up to 3 springs to achieve the following base boost 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.

| 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

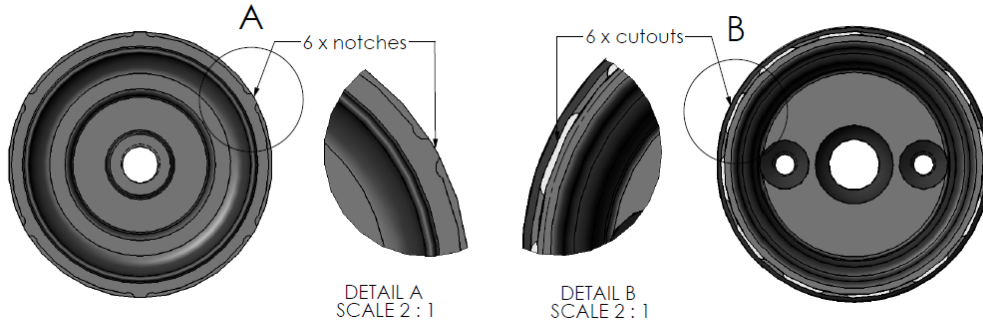
WARNING! Fitting a heavier wastegate actuator spring may cause a higher than expected increase in boost pressure.

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. Use a press or a vice to clamp down the cap to the body and remove collar.
3. Remove the actuator from the clamping device carefully as the cap is under spring load.
4. Remove cap, diaphragm and upper spring support with rod.
5. Change the springs making sure that they sit in the right grooves in the lower spring support
6. 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 cutouts in the lower housing. **When installing the clevis, make sure that there is 2mm worth of preload.**

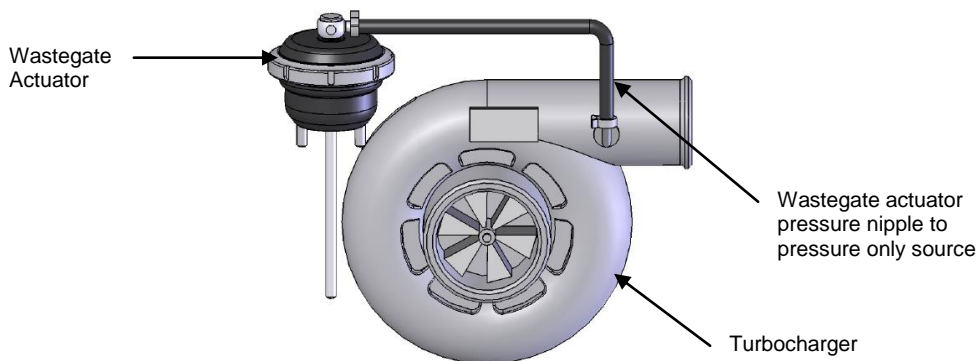


NOTES ON BOOST CONTROL HOOKUP

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

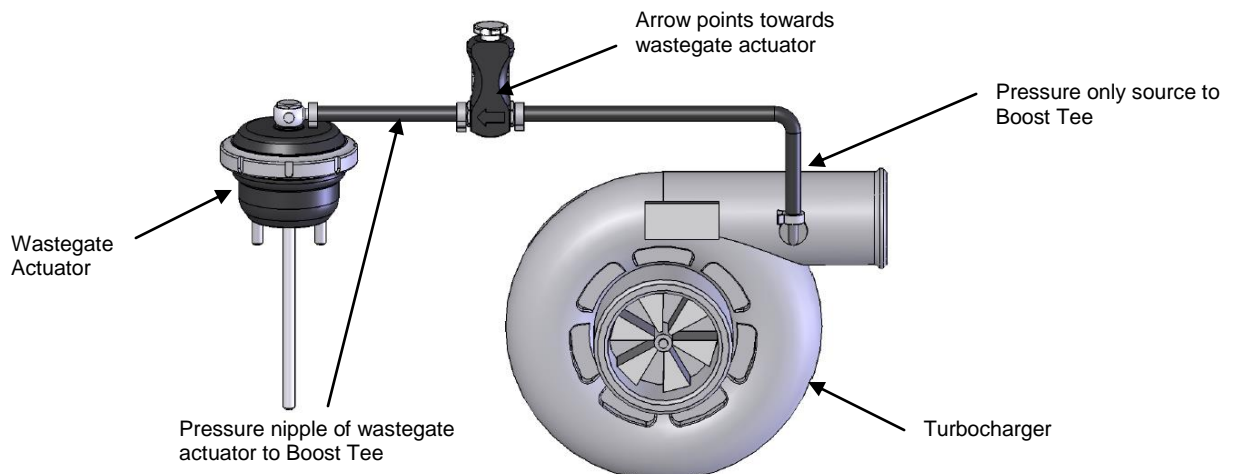
If no boost controller is being used connect the **BOOST PRESSURE ONLY SOURCE** to the wastegate actuator pressure nipple as shown.



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.

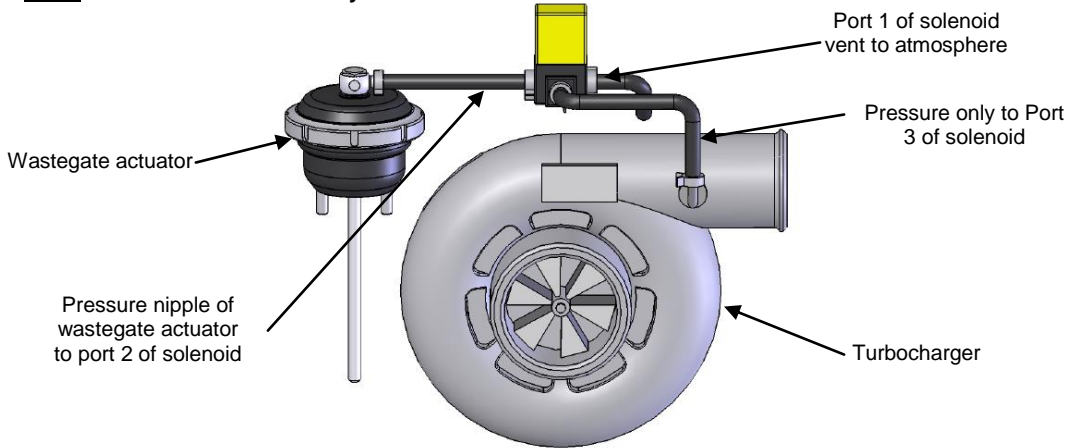


E-Boost connection methods

Turbosmart recommends using the wastegate actuator in conjunction with the Turbosmart E-Boost.

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**



The Turbosmart Pledge

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We sometimes make mistakes, as do our dealers, distributors and suppliers. Even customers can sometimes order the wrong parts. Do not use, modify, install, trial assemble, nick, drop, scratch or adjust any part until you first check for any damage. Damage must be reported immediately. NO EXCEPTIONS. If there are any components missing please contact your authorized reseller immediately upon receipt of your shipment. Missing components must be reported within five (5) business days of receipt. Parts returned for any reason MUST BE IN RESALABLE CONDITION. It is YOUR responsibility, "THE CUSTOMER" to carefully package any returns to avoid shipping damage. Insurance is highly recommended. Credit cannot be issued for damaged goods.

Turbosmart warrants the quality of the products it designs and manufactures to be free of defects in material and workmanship. This limited warranty is extended only to the original purchaser and may not be transferred or assigned. This limited warranty applies to any product, which after careful inspection by Turbosmart, after receipt of the product from our authorized reseller, is found to have a defect in either material or workmanship. Any modifications to the product will void any and all warranties and will not be exchanged. Before installation, check new car warranty. Turbosmart is not responsible for voiding any original manufactures warranty.

All warranty claims must be returned to the nearest Turbosmart Office, you must return the product and sales receipt, at your own expense, accompanied by the Customer Warranty Form stating the reason for the claim. Proof of purchase must be provided with any warranty claim and will be verified with the authorized reseller from which the product was purchased.

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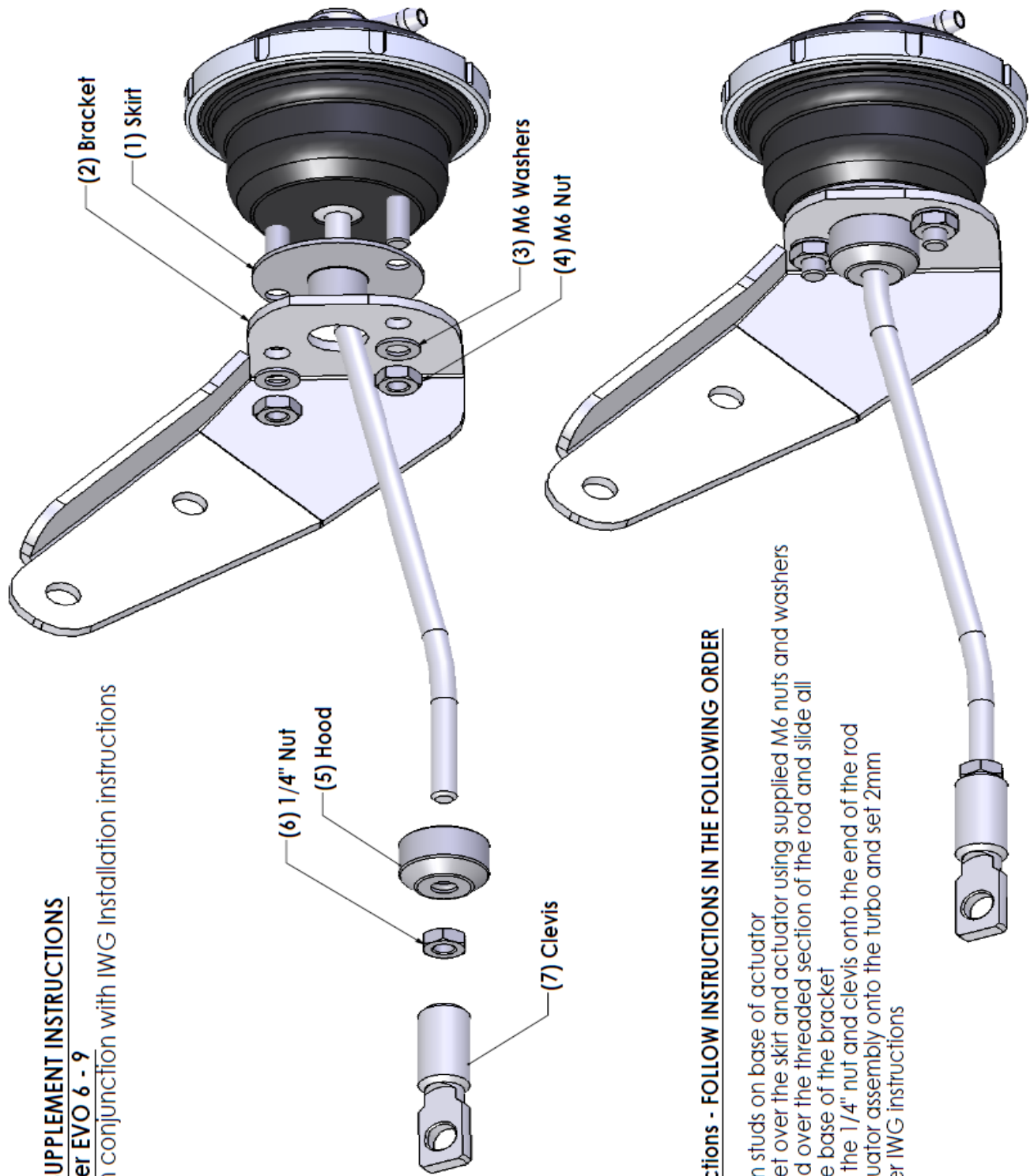
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Happy motoring!
The Turbosmart Team.

INSTALLATION SUPPLEMENT INSTRUCTIONS

Mitsubishi Lancer EVO 6 - 9

Must be used in conjunction with IWG Installation instructions



Installation instructions - FOLLOW INSTRUCTIONS IN THE FOLLOWING ORDER

- Locate skirt on studs on base of actuator
- Secure bracket over the skirt and actuator using supplied M6 nuts and washers
- Wind the hood over the threaded section of the rod and slide all the way to the base of the bracket
- Loosely install the 1/4" nut and clevis onto the end of the rod
- Install the actuator assembly onto the turbo and set 2mm preload as per IWG instructions