

GFB WGA

Part #7310

Suits Cam Am X3 Turbo R & RR models



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TURBO MANAGEMENT SYSTEMS



PERFORMANCE WITHOUT COMPROMISE

GFB WGA Introduction

The GFB WGA is designed to help optimize boost response and control by using a larger diaphragm area for greater control authority over the wastegate flap, and by extending the range of “crack pressure” adjustment via the 3 supplied springs.

WARNING:

Adjustment and/or tuning is required when installing this product, as it has the potential to increase boost pressure which could damage your engine if the ECU is not tuned to suit.

GFB makes no recommendations regarding “safe” boost levels for your engine. This product is a tuning tool and maximum boost pressure should be determined by an expert, taking into account the capabilities and limitation of your specific engine and supporting modifications.

Spring Selection

“Crack Pressure” is basically the pressure you need to apply to the actuator to begin opening the wastegate.

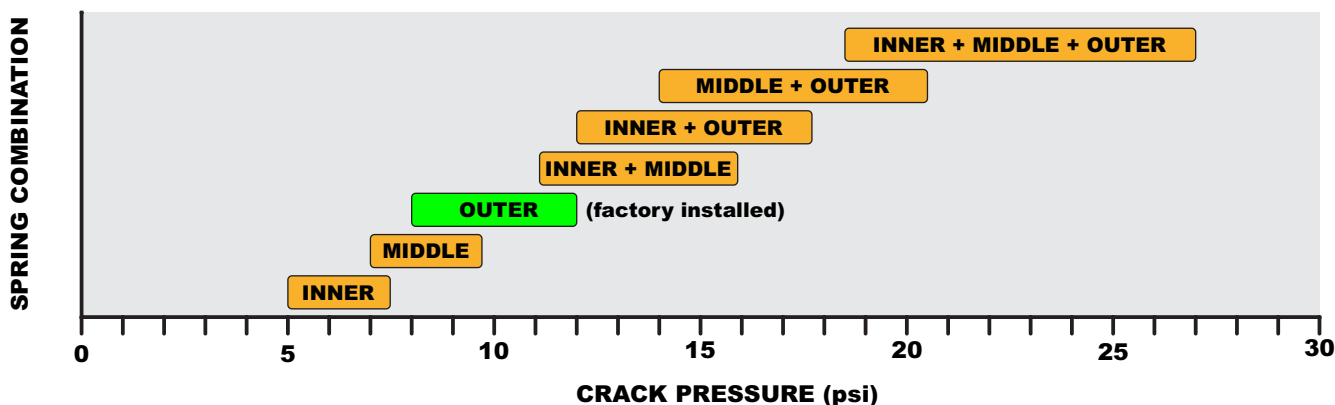
The WGA part #7310 comes with 3 springs (inner, middle, an outer) which can be used individually or combined together to achieve different crack pressures. Furthermore, each spring combination can be fine-tuned by adjusting the pre-load via the threaded rod.

Note that crack pressure is an “indirect” means of setting up a wastegate, as it does not directly relate to the actual boost pressure achieved.

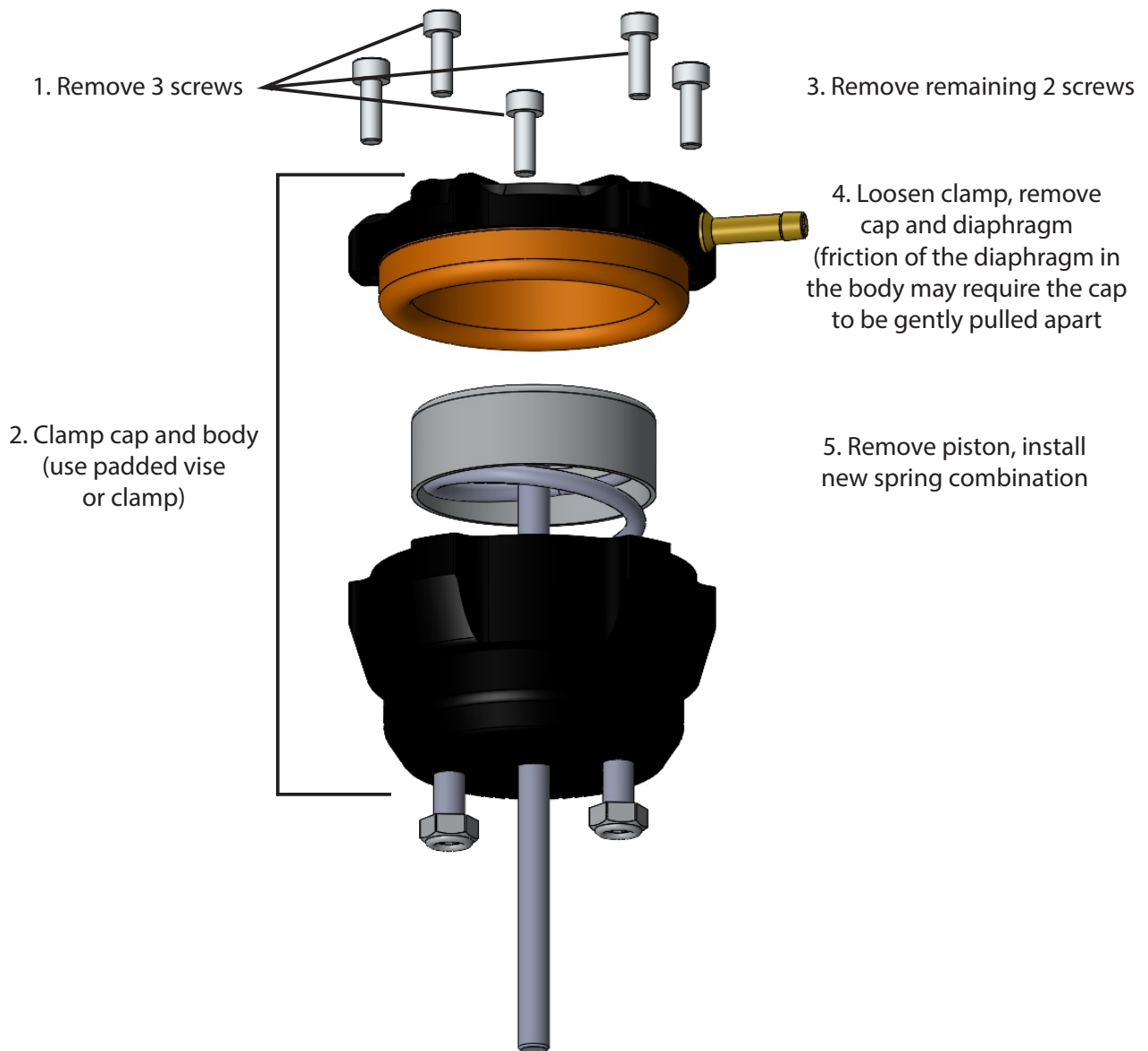
Therefore, when using a GFB WGA you may need to deviate from the crack pressure recommended for your tune. This is because the WGA has a larger diaphragm area and different spring rate to the OEM actuator for better control.

The outer spring is installed in the 7310 from the factory, which gives a crack pressure range of 7-12psi, and is most suitable for stock or mildly tuned engines.

If your tune or other modifications require a crack pressure outside this range, use the table below to determine the most appropriate spring combination:



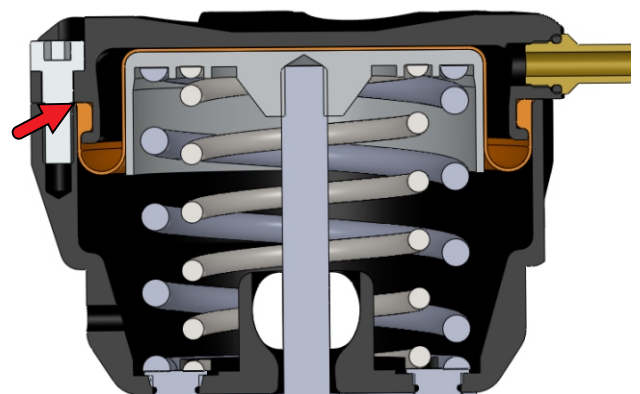
Changing the Springs



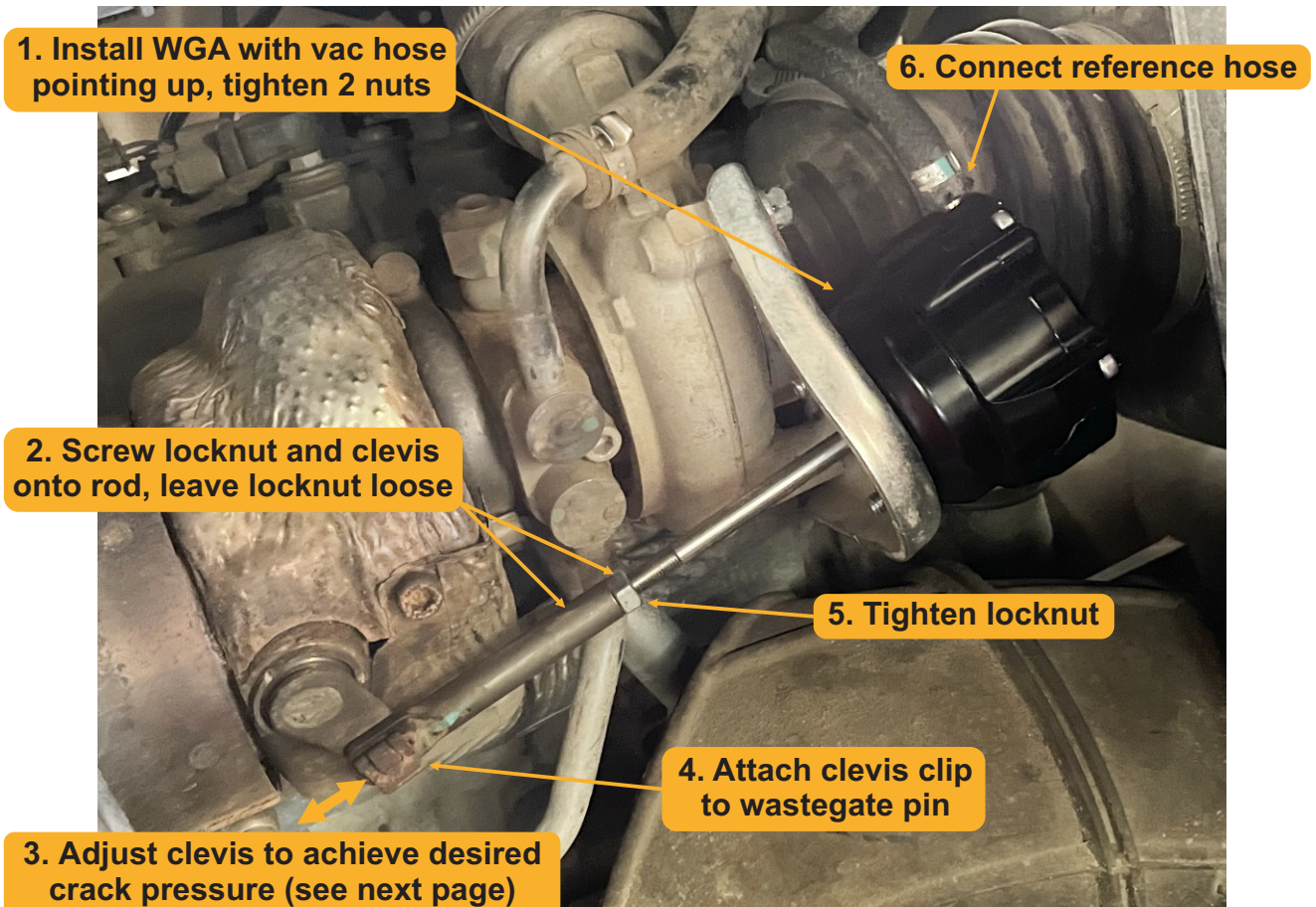
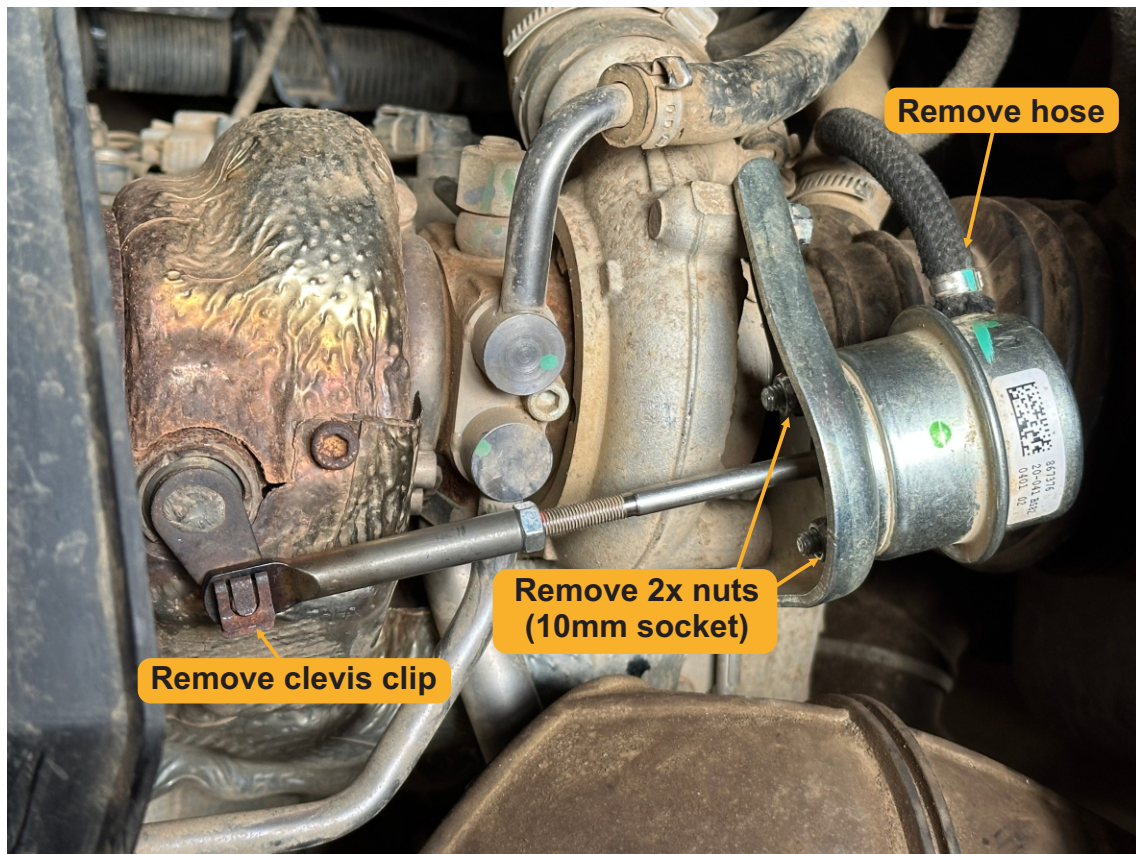
6. CAUTION: during re-assembly, take care not to pinch the diaphragm as it compresses into the body (→). It can be helpful to apply a thin smear of oil or spray lubricant to the outside of the diaphragm to help it slip into the body easily

7. Ensure the diaphragm is correctly convoluted and the piston is centred in the diaphragm, then press the cap/diaphragm onto the piston using the same method of compressing the spring as used during disassembly

8. Re-install cap screws and torque to 4Nm



Assembly/Installation



Crack Pressure Setup

The easiest way to set crack pressure is with a Mityvac or other adjustable pressure supply with a suitable gauge.

With the WGA mounted to the turbo bracket and the clevis/locknut loose on the rod, apply your desired crack pressure to the WGA's reference port.

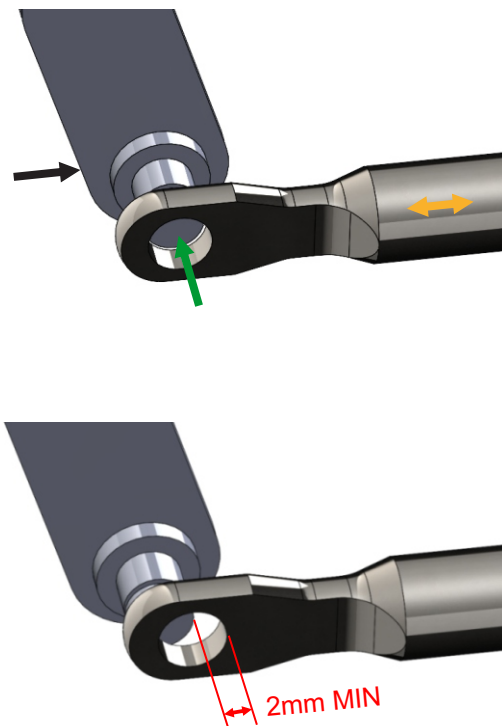
Hold the wastegate arm in the closed position (→), then adjust the clevis (← →) until the hole lines up with and slips over the wastegate pin (→).

NOTE: there should be a minimum of 2mm pre-load when the clevis is attached to the wastegate pin. This prevents the diaphragm from rubbing on the cap, which could lead to premature failure. It also ensures the wastegate is firmly held closed against the seat during spool up.

To check this, remove the clevis from the wastegate pin and then de-pressurise the WGA. The rod will retract completely, you can then check that there is at least 2mm or more of pre-load.

If you need less than 2mm of pre-load to achieve your desired crack pressure, it is advisable to change the spring combination to a lower range.

Once you have achieved your target crack pressure, put the retaining clip onto the wastegate pin, tighten the clevis locknut, and connect the boost reference hose.



Warranty

WARNING:

GFB recommends that only qualified motor engineers fit this product. GFB products are engineered for best performance, however incorrect use or modification may cause damage to or reduce the longevity of the engine/drive-train components.

GFB LIFETIME WARRANTY:

Our commitment to quality means that when we put our name to something, we are also staking our reputation on it. That's why we back our products with the best warranty in the business!

You should expect a lifetime of use from a well-engineered product, so if your GFB product fails as a result of defective materials or faulty workmanship whilst you remain the original owner, we will repair or replace it (limited only to the repair or replacement of GFB products provided they are used as intended and in accordance with all appropriate warnings and limitations. No other warranty is expressed or implied).

If a fault occurs as a result of usage outside of the terms of the warranty, or you are not the original owner, fear not, we can still help you. You should never need to throw a GFB product away, as spare parts are available and won't cost the earth.

TECH SUPPORT:

We want you to get the best advice, first time. That's why our engineers are available to answer any technical questions you may have. Head to www.gfb.com.au/contact-us to get in touch.