

Installation Manual
PRO-GATE 38mm Wastegate System
P/N PG67-38MM-7510



GDP “PRO-GATE”
38mm Wastegate System

07.5-10 DODGE CUMMINS

Installation Instructions
PRO-GATE 38mm Wastegate Kit
p/n PG67-38MM-7510

PLEASE READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

WARNING!!!

Improper installation of the Wastegate can cause excessive EGT and cause extreme engine damage!!!

We do not recommend running this system without a turbo boost and EGT gauge. Improper regulator adjustment can cause excessive EGT due to low boost pressure.

Safety Guidelines!

WARNING! Always secure the vehicle from rolling.

WARNING! Always disconnect vehicle batteries before working on electrical components.

WARNING! Always wear safety glasses when operating power tools such as drills and grinders or using punches and chisels.

WARNING! Always properly secure lines and wiring to prevent chaffing.

WORK SAFELY!

PRO-GATE 38mm Wastegate Kit Contents



Tial MV-S 38mm Wastegate with V-band Clamps



Pro-Gate Piping Kit



Up-Pipe Gaskets



15' Coil 1/4" Air Line



Regulator Mount



DP Support Bracket



0-30 Regulator



6.7L Boost Bolt



8mm x 20mm Bolt



1/4-20 Nut & Bolt



Straight QC Fittings



90° QC Swivel



QC Splitter



Support Clamp

Please check your parts inventory against the above parts list before beginning your installation.

Preparation

Due to the numerous version of EGR cooler delete kits it is impossible to cover every variation for coolant line connection or block-off. Here are some guidelines for EGR cooler delete variations.

- A) For EGR cooler delete kits that block the coolant line at the stand pipe and the cylinder head, no changes will need to be made.
- B) For EGR cooler deletes that maintain a coolant line from the stand pipe to the cylinder head there are two options. You can delete the coolant line with plugs at the cylinder head and the standpipe or you can move the current connection at the cylinder head one port forward. Simply swap positions of the coolant fitting and the pipe plug that is one port forward of it. For better hose alignment you may want to add a 3/4" 90° fitting to the hose at the standpipe.

Tial MV-S Wastegate Preparation

- 1) Remove the wastegate from the box and inspect the unit.
- 2) Install two of the supplied 90° swivel air line fittings in the positions shown. Thread tape is recommended for these fittings. Do not over tighten the fittings. The Wastegate head is aluminum and thread damage may occur.
- 3) Install the supplied plugs in the remaining holes. No sealant is required for these plugs.



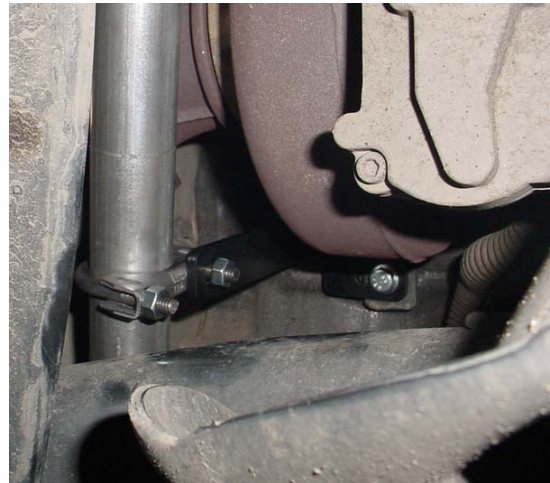
PRO-GATE Wastegate and Piping Installation

- 4) Begin by removing the front and rear EGR cooler delete plates.
- 5) Install the Pro-Gate dual entry piping using the supplied gaskets. Tighten the four mounting nuts to 35 ft. lbs. For auto equipped trucks we have included a mounting tab and hardware for your transmission dipstick. If auto equipped connect at this time using the supplied hardware.
- 6) Remove the tape from the bottom of the Tial MV-S wastegate. Make sure not to drop or damage the valve seat in the bottom of the gate.
- 7) Install the Tial MV-S wastegate using the supplied V-band clamp. Tighten the clamp just enough to still allow rotation of the gate for alignment.

8) Install the downpipe using the supplied V-band clamp. Tighten the clamp just enough to support the downpipe without touching the turbo. Clamp should be just tight enough to allow adjustments to the downpipe exit angle.

9) From under the vehicle remove the stock coolant line retaining bolt from the side of the block. (see photo for location)

10) Loosely install the downpipe support bracket using the longer bolt supplied.



11) Install the supplied exhaust clamp with one leg thru the slotted hole of the support bracket as shown. Bracket should be tight enough to maintain downpipe location only. Do not completely tighten at this time.

12) Make any final adjustments to the wastegate orientation. Tighten the V-band clamps on the Wastegate base and outlet connection. Be careful not to over tighten the V-band clamps. V-band ends **will not touch** or come all the way together when fully tightened.

13) From under the vehicle loosen the support bracket and the exhaust clamp on the downpipe. This will allow the downpipe to assume a natural position.

14) Tighten the support bracket bolt on the block.

15) Verify clearance between the clamp and the vehicles frame before tightening.

Regulator Valve & Air Line installation

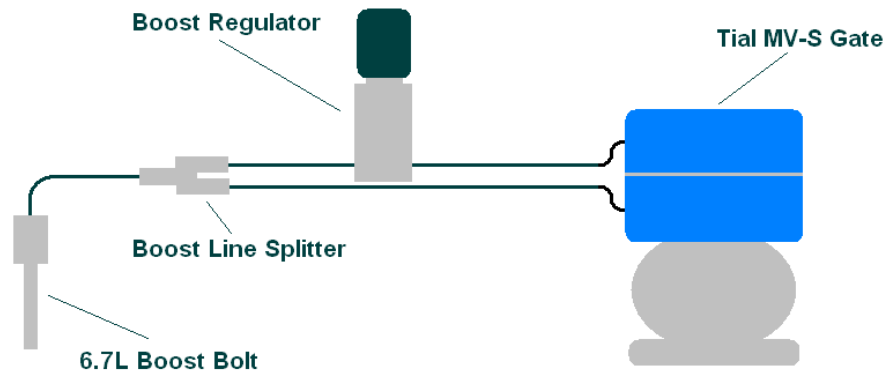
16) Install one of the straight air line fittings in the boost bolt using thread tape.

17) Replace intake manifold bolt with Boost Bolt as shown. Do not over tighten the boost bolt. Due to the hollow design Boost Bolts are not as strong as standard mounting bolts.

18) Install straight air line fittings in the regulator inlet and outlet ports and tighten. Thread tape is recommended.



GDP Pro-Gate Air Line Schematic



- 19) Install the regulator mounting bracket on the valve cover as shown below.
- 20) Install the regulator on the bracket. The bottom of the regulator has an arrow (below the inlet) designating air flow direction. If in doubt the decal should face out when installed.

*** NOTE: Air line cuts must be clean and round. Use a razor knife to cut air line ensuring that the line is not crushed during cutting.

*** NOTE: To properly connect air line, insert into fitting until the line stops. Pull back on the line lightly to make sure the retainer inside of the fitting has engaged the air line.



- 21) The “Y” air line fitting (splitter) goes between the boost bolt and the regulator inlet.
- 22) Using the supplied air line connect the boost bolt to the single leg inlet of the “Y”.
- 23) Using the supplied air line, connect one leg of the “Y” fitting to the regulator inlet as shown above.
- 24) Using the supplied air line, connect the remaining leg of the “Y” fitting to the bottom fitting on the wastegate.
- 25) Using the supplied air line, connect the regulator outlet to the top fitting on the wastegate.

Regulator Tuning & Operation

WARNING: The regulator supplied in this kit is a precision instrument. Do not max out the air pressure knob adjustment in either direction. Bottoming out or topping out the valve may cause damage to the knob or the valve itself.

Due to the numerous different fueling and air flow modification now available for the 6.7L Cummins exact max boost setting out of the box cannot be expected. All Pro-Gate regulator come set for 14 psi output pressure. This should equate to approximately 30 psi maximum boost as the gate operates. Again, this can vary greatly from truck to truck depending on fueling modifications. This setting is provided as a baseline only.

Final regulator and maximum boost adjustments are the responsibility of the end user!!!

To make adjust regulator settings gently lift up on the adjustment knob, rotate to the desired setting, and push down on the knob to lock the setting.

Each full turn of the knob equal to 4 psi of output pressure to the top of the wastegate. The regulator is marked with a + (plus) and – (minus) sign. To have the wastegate open at a lower boost level turn the knob counterclockwise (- negative). To raise the wastegate opening point turn the adjustment knob clockwise (+ positive).

If a boost gauge is available make a full power run prior to wastegate installation and note maximum sustained boost (not spikes).

After installing the Pro-Gate wastegate kit we recommend backing the regulator adjustment out one turn from the preset. Make another run and note max sustained boost levels. If maximum boost is the same, lower the regulator setting again. If maximum boost is lower than the baseline run begin increasing (+ positive) the regulator output until maximum boost as noted prior to install is obtained.

Once maximum boost levels are obtained you have found the minimum drive pressure needed to obtain maximum boost.

Installation and tuning complete!

Enjoy the increased performance provided by the “PRO-GATE” system! If you have any questions please contact Glacier Diesel Power at 509-993-4923. Thank you for your business and we look forward to helping you with your future accessory needs.

Sincerely,

Richard Martin
Glacier Diesel Power

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