

Quick Programming Guide for the VMAP-D-40421 with optional programming cable.

With the 40421 firmware and the optional active programming cable (a Blaser/van der Laan concept) - your VMAP supports wireless programming. There aren't any transmitters and/or receivers but all the connections are imbedded in the ECU. The VMAP can now be programmed via your accelerator and an ignition key sequence. The maximum it can be adjusted is +0.1bar (limited to 4.0 bar max) to -0.3 bar (limited to 2.5 bar min) of the internal jumper settings prior to engine start. If your VMAP was set to 3.0 bar it can now be adjusted from 3.1 to 2.7 bar in -0.1 bar increments. All settings can also be blinked out through the check engine light ("CEL").

Notes

- 1) When switching the VMAP without an ECU reset – **drive the car lightly for 10 minutes** and then turn the engine off for at least 45 seconds before driving aggressively – ideally wait for 50 miles before implementing full throttle. If you increment the bar setting the car will run lean until the ECU adapts and visa versa if you decrement the VMAP it will run rich until the ECU adapts.
- 2) Push down on the accelerator means apply enough pressure to move it – the equivalent movement of 1100 rpm (free revving rpm) is all that is needed.
- 3) Wait for the VMAP to finish blinking codes before any resets or restarts – unless you want to restart the entire sequence.
- 4) The programming request must be followed exactly – this prevents any inadvertent access to any of the modes.

Programming request

There are three programming request modes

Mode 1 - Blink VMAP setting on next engine start.

Mode 2 - Program VMAP on next engine start and Blink new VMAP setting.

Mode 3 - Reset VMAP and Blink VMAP jumper settings on next engine start.

Please note – very experienced users may be able to program the VMAP without starting the engine. The VMAP increases the Voltage to the CEL by 5%. The only reason to start the engine is to view the settings via the CEL. (The ECU keeps the CEL on till the engine is started).

CEL blink code examples

3.0 bar = Long Long Long

3.1 bar = Long Long Long Pause Short

2.5 bar = Long Long Pause Short Short Short Short Short

Reset program request

Reset the programming request if you are unsure if the program request has reset itself (new installation).

- 1) Push down on the accelerator and hold it there.
- 2) Turn ignition key to the on position.
- 3) Wait approximately 0.5 seconds and release the accelerator.
- 4) Wait another 0.5 seconds and turn the ignition key off.

Other methods.

- 1) Pushing the throttle down and keeping it down and turning the ignition key on for more than 3 seconds also will reset the program request.
- 2) Programming request resets are also done after accessing Mode 1, 2 and 3.
- 3) Once reset the programming request remains reset unless the increment program request is exercised.

Increment program request ("PR")

- 1) Push down on the accelerator and hold it there.
- 2) Turn the ignition key from off to on and leave it on for at least a 1/4 second but no more than 3 seconds.

- 3) Turn the ignition key off. The program request has incremented once.
- 4) Release the accelerator. (unless you want to repeat the cycle)
- 5) Repeat the cycle until desired mode is reached.
- 6) Mode 1 - Blink VMAP setting next Engine start.
Mode 2 - Program VMAP next Engine start.
Mode 3 - Reset VMAP to internal jumpers on next engine start.
Mode 4, 5, ... – no action.
- 7) If you have lost track of the mode you are in you can always do a Reset Program request.

Mode 1 and 3

- 1) Set the desired mode via the programming request (PR) sequence.
- 2) Keep your foot off the accelerator.
- 3) Turn the ignition key on and immediately start the engine. If it takes longer than 4.5 seconds to start the engine you will miss the blinking of the codes.
- 4) In mode 1 the CEL will blink out the current setting of the VMAP.
- 5) In mode 3 the VMAP will be reset to the internal jumper settings and the CEL will blink out this setting.
- 6) The program request will reset itself.

Programming the VMAP (Mode 2)

- 1) Quickly study the examples. Set the desired mode to Mode 2 via the PR sequence.
- 2) Keep your foot off the accelerator.
- 3) Turn the ignition key on and immediately start the engine. If it takes longer than 4.5 seconds to start the engine you will miss the blinking of the codes and the unit will reset itself.
- 4) If no input is received via the accelerator the unit will reset itself and blink out the setting = internal jumpers after 4.5 seconds. Once programming has commenced you have 3 seconds till your next input.
- 5) Press the accelerator within 4.5 seconds and the CEL will illuminate indicating your input – release the throttle the CEL will go out within 0.1 seconds the unit has been incremented 0.1 bar.
- 6) Press the accelerator again within 3 seconds and release it – The VMAP will decrement -0.1 bar.
- 7) After the desired setting is achieved keep your foot off the accelerator for 3 seconds and the new code will be displayed via the CEL and the VMAP will be adjusted to the new setting.
- 8) The program request will reset itself.

Mode 2 examples

Accelerator Press (completion time)	Internal = 3.0	Internal = X (X = 2.8 to 3.9)	Internal = 2.7 (exception 1)	Internal = 4.0 (exception 2)
0 (4.5 seconds)	3.0	X	2.7	4.0 (absolute max)
1 (3.0 seconds)	3.1 (+0.1 bar max)	X+0.1	2.8	3.9
2 (3.0 seconds)	3.0	X	2.7	3.8
3 (3.0 seconds)	2.9	X-0.1	2.6	3.7
4 (3.0 seconds)	2.8	X-0.2	2.5	3.7
5 (3.0 seconds)	2.7	X-0.3	2.5 (absolute min)	3.7
6 (3.0 seconds)	2.7 (-0.3 bar min)	X-0.3	2.5	3.7

Changing the Internal jumpers

If the VMAP has been programmed and the internal jumpers are changed it is advisable to reprogram the VMAP to confirm the desired setting. If the unit is not reprogrammed the value will be the new jumper settings +/- the programmed adjustment (+0.1 to - 0.3 bar) limited to 2.5 bar minimum and 4.0 bar maximum.

Example:

Assuming the old internal jumper setting was 2.9 bar programmed to 3.0 bar (+0.1 bar). If the new jumper setting is set to 3.1 bar and the VMAP is not reprogrammed then the output of the VMAP will 3.2 bar.