



## BMW N54 Map Notes

### Supported Vehicles:

\*\*WM = World Market (ADM, EDM, and USDM vehicles)

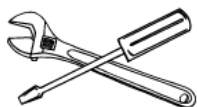
WM 2011 1M  
WM 2008-2010 135i  
WM 2007-2010 335i  
WM 2011-2013 335is  
WM 2009-2010 335i xDrive  
WM 2008-2010 535i  
WM 2009-2013 Z4i  
WM 2011-2013 Z4is

### Map Revision:

- Stg0 v400.ptm
- Valet v400.ptm
- Stg1 LT Aggressive v401.ptm
- Stg1 LT Drive v401.ptm
- Stg1 LT Sport v401.ptm
- Stg1 ST Aggressive v401.ptm
- Stg1 ST Drive v401.ptm
- Stg1 ST Sport v401.ptm
- Stg2 LT Aggressive IMC0S v401.ptm
- Stg2 LT Drive IMC0S v401.ptm
- Stg2 LT Sport IMC0S v401.ptm
- Stg2 ST Aggressive IMC0S v401.ptm
- Stg2 ST Drive IMC0S v401.ptm
- Stg2 ST Sport IMC0S v401.ptm
- Stg1+FMIC LT Aggressive v402.ptm
- Stg1+FMIC LT Drive v402.ptm
- Stg1+FMIC LT Sport v402.ptm
- Stg1+FMIC ST Aggressive v402.ptm
- Stg1+FMIC ST Drive v402.ptm
- Stg1+FMIC ST Sport v402.ptm
- Stg2+FMIC LT Aggressive IMC0S v402.ptm
- Stg2+FMIC LT Drive IMC0S v402.ptm
- Stg2+FMIC LT Sport IMC0S v402.ptm
- Stg2+FMIC ST Aggressive IMC0S v402.ptm
- Stg2+FMIC ST Drive IMC0S v402.ptm
- Stg2+FMIC ST Sport IMC0S v402.ptm

**Required Accessport Firmware:** 1.6.5.0-5668 or greater

**Map Availability:** Download from the [COBB Tuning BMW OTS Map Database](#)



### HARDWARE

#### Hardware Requirements:

**Stage1** - These maps are intended for stock or unmodified vehicles with any transmission type. Exhaust replacement behind the rearward catalytic converters (“catback exhaust”) has been tested and will not impact performance or drivability.

**Stage1 + COBB FMIC** – Intended for vehicles equipped for the following hardware \*:

- Requires COBB front-mount intercooler

**Stage2** – Intended for vehicles equipped for the following hardware \*:

- Requires upgraded downpipe.
- Upgraded cat-back exhaust system recommended
- Upgraded intake system (DCI, panel filter or otherwise) recommended

**Stage2 +FMIC** – Intended for vehicles equipped for the following hardware:

- Requires COBB front-mount intercooler.
- Requires COBB downpipes or equivalent
- Upgraded cat-back exhaust system recommended
- Requires Upgraded intake system (DCI, panel filter or otherwise)

*Notes:*

- The addition of any other hardware may cause undesired results and poor vehicle performance.
- During dyno testing of pre-owned stock 135i, 335i, and 535i vehicles, pre-existing heavily contaminated air filters of both OEM and cotton/oil construction were found to reduce power output at moderate to high engine speeds. Frequent air filter cleaning and/or replacement is recommended for best performance and engine protection.

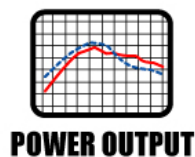


## FUEL REQUIREMENTS

### Fuel Requirements:

Each map lists the minimum required octane. A higher octane fuel can be used safely on a map designed for lower octane. **DO NOT** use maps designed for higher octane with lower octane fuels. [Top Tier](#) gasoline should be used where available.

- Sport maps are designated for use with **91 and 92 octane fuel (95 Ron)** or better. This mapping is less aggressive than our “Aggressive” mapping and has been developed to ensure safe operation on 91 Octane fuel.
- Aggressive maps are designated for use with **93 and 94 octane fuel (98 Ron)** or better.
- Drive maps can be used by those who have access to “premium” **91 octane** or greater in the states of **Arizona, California, and Nevada**. This mapping is less aggressive than our Sport mapping and has been developed to ensure safe operation on ACN91 Octane fuel. Retains stock rev limiters for added safety. Alternately, this mapping is recommended for those seeking our most conservative mapping.



## Typical Stage1 vs Stock Power:

### Stage1 Aggressive :

- +30% HP / +38% lb-ft over stock

### Stage1 Sport

- +26% HP / +33% lb-ft over stock

### Stage1 AT – Aggressive:

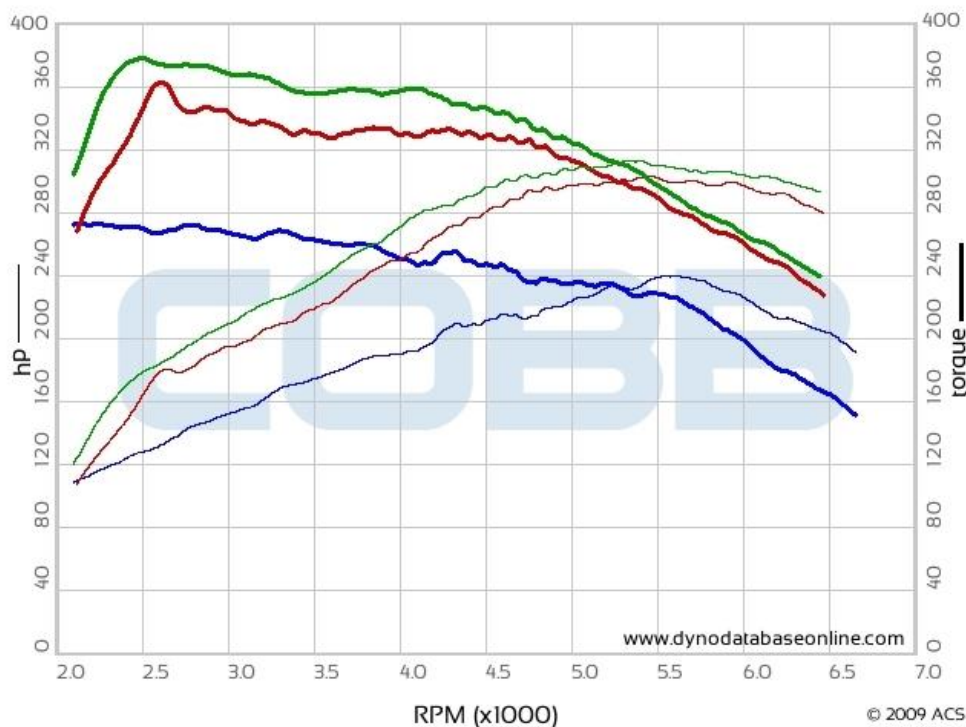
- +24% HP / +35% lb-ft over stock.

### Stage1 AT – Sport:

- +20% HP / +30% lb-ft over stock.

### Stage1 +COBB FMIC – Aggressive Coming Soon!

### Stage1 +COBB FMIC – Sport Coming Soon!



Above are the dyno results for a stock 2009 BMW 335i MT on our in-house Mustang AWD Dynamometer. Results may vary based on conditions such as particular model of vehicle, fuel quality, etc.

## Typical Stage2 vs Stock Power:

### Stage2 +COBB FMIC - Aggressive MT:

- +51% HP / +55% lb-ft over stock

### Stage2 +COBB FMIC - Sport MT:

- +44% HP / +45% lb-ft over stock

### Stage2 +COBB FMIC – Aggressive AT:

- +49% HP / +53% lb-ft over stock

### Stage2 +COBB FMIC – Sport AT:

- +40% HP / +41% lb-ft over stock.



Above are the dyno results for a 2009 BMW 335i MT on our in-house Mustang AWD Dynamometer. Results may vary based on conditions such as particular model of vehicle, fuel quality, etc.

## Map Version Notes

- **Non-Performance Maps:**
  - **Stage0** - Simulated Stock Calibration. For use when stock-like behavior is desired. Note that Accessport is still installed to the ECU.
  - **Valet** - This is a reduced power mode. Boost control system has been disabled. Torque and load targets greatly reduced to lower power output. Rev limiter lowered to 4000 RPM.
- **Stage1:**
  - **Stage1 Aggressive**
    - Fuel Requirements: 93 or 94 OCT (98 RON) fuel
    - Exhaust Requirements: Stock or upgraded cat-back exhaust
    - Intake Requirements: Stock Airbox with Stock Air Filter, or aftermarket panel filter \*
    - Boost Targets: 14.5psi peak tapering down to 11.5psi by redline +/- 1.5psi
  - **Stage1+ COBB FMIC Aggressive**
    - Fuel Requirements: 93 or 94 OCT (98 RON) fuel
    - Intercooler: Requires COBB front-mount intercooler core REQUIRED.
    - Exhaust Requirements: Stock or upgraded cat-back exhaust
    - Intake Requirements: Stock Airbox with Stock Air Filter, or aftermarket panel filter \*
    - Boost Targets: 16psi peak tapering down to 11psi by redline +/- 1.5psi
  - **Stage1 Sport**

- Fuel Requirements: 91 or 92 OCT (95 RON) fuel
- Exhaust Requirements: Stock or upgraded cat-back exhaust
- Intake Requirements: Stock Airbox with Stock Air Filter, or aftermarket panel filter \*
- Boost Targets: 11psi peak tapering down to 9.5psi by redline +/- 1.5psi
- **Stage1+ COBB FMIC Sport**
  - Fuel Requirements: 91 or 92 OCT (95 RON) fuel
  - Intercooler: Requires COBB front-mount intercooler core REQUIRED.
  - Exhaust Requirements: Stock or upgraded cat-back exhaust
  - Intake Requirements: Stock Airbox with Stock Air Filter, or aftermarket panel filter \*
  - Boost Targets: 14psi peak tapering down to 10 psi by redline +/- 1.5psi
- **Stage2:**
  - **Stage2 Aggressive**
    - Fuel Requirements: 93 or 94 OCT (98 RON) fuel
    - Exhaust Requirements: Upgraded Down Pipe REQUIRED.
    - Intake Requirements: Stock Airbox with Stock Air Filter, or aftermarket panel filter \*
    - Boost Targets: 14.5psi peak tapering down to 11.5psi by redline +/- 1.5psi
  - **Stage2+ COBB FMIC Aggressive**
    - Fuel Requirements: 93 or 94 OCT (98 RON) fuel
    - Intercooler: Requires COBB front-mount intercooler core REQUIRED.
    - Exhaust Requirements:
      - Stock or upgraded cat-back exhaust
      - Upgraded Down Pipe REQUIRED.
    - Intake Requirements: Stock Airbox with Stock Air Filter, or aftermarket panel filter \*
  - **Stage2 Sport**
    - Fuel Requirements: 91 or 92 OCT (95 RON) fuel
    - Exhaust Requirements:
      - Stock or upgraded cat-back exhaust.
      - COBB Down Pipe REQUIRED.
    - Intake Requirements: Stock Airbox with Stock Air Filter, or aftermarket panel filter \*
    - Boost Targets: 11psi peak tapering down to 9.5psi by redline +/- 1.5psi
  - **Stage2+ COBB FMIC Sport**
    - Fuel Requirements: 91 or 92 OCT (95 RON) fuel
    - Intercooler: Requires COBB front-mount intercooler core REQUIRED.
    - Exhaust Requirements:
      - Stock or upgraded cat-back exhaust
      - Upgraded Down Pipe REQUIRED.
    - Intake Requirements: Stock Airbox with Stock Air Filter, or aftermarket panel filter \*

### Closing Warnings and Precautions:

- ***Use of inappropriate calibration/modification combinations will promote engine damage.***
- Seek the help of a professional [COBB Accesstuner professional](#) should your BMW N54 fall outside of OTS configurations.

- [Top Tier](#) gasoline should be used where available. Use of lower quality fuels can result in catastrophic engine damage.

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#### Revision Notes:

- **4.02** – Minor Update for “**Stage1 +FMIC**” & “**Stage2 +FMIC**” mapping. Improved logic addresses boost and WGDC oscillations some users have experienced, allowing smoother power delivery and throttle response.
- **4.01** – Minor Update for all maps. This update corrects DME logic causing possible DTC P2D59. This update also addresses an under boost issue experienced by some vehicles.
- **4.00 – Major update.** Introduces new “**Stage1 +FMIC**” mapping. Logic and tuning parameters have been adjusted in order to capitalize on Stage1+ hardware. “**Stage1 +FMIC**” mapping requires an aftermarket front mount intercooler. Minor update for Stage1 Maps; this update incorporates multiple DME logic corrections as well as tuning logic alterations allowing smoother power delivery and throttle response.
- **3.01** – Minor update for Stage1 Maps. This update corrects the DME's torque logic which could cause a limp mode under hard acceleration at higher rates of speed. This update includes corrected logic to repair an issue with slight surging felt at part throttle when the engine is not at full operating temperature. This update introduces an additional "Linear Throttle map". This map is more Linear than previous maps and may be preferable for 6MT-equipped cars, though all versions are safe for all transmission types. Also included in this update are new mapping nomenclatures. Here is a brief description of the new naming conventions.
  - "Drive" is a nice daily driver map for those that want a bump in performance with stock rev limits. (Premium fuels recommend)
  - "Sport" is a sporty map with a healthy performance increase and raised rev limits. (Premium fuels recommend)
  - "Aggressive" is a map that geared towards those looking to achieve peak performance (Recommended 93 Octane).
- **2.03** – Minor update for Stage1 maps. This update reverts the rev limiters to stock settings for AT vehicles. Revised torque reduction logic for improved shifting on AT-equipped vehicles.
- **2.02** – Minor update for Stage1 maps. Introduces additional “ACN91” mapping, which is more conservative than our 91 octane mapping (intended for 91 octane fuel in the states of Arizona, California and Nevada) and also retains the stock rev limiters. Adds two alternate throttle mapping versions designed to suit multiple driver preferences and transmission types. Both versions add linearity to accelerator pedal; v2 is more aggressive than v1 at low RPM and may be preferable for 6MT-equipped cars, though both versions are safe for all transmission types. All maps receive slight revisions to ignition timing. Includes speed limiter fixes for certain 335xi vehicles.
- **2.01** – Minor update for Stage1 maps. Includes improvements to performance for AT vehicles.
- **2.00 – Major Update.** These maps require the use of firmware version 1.6.3.2-1259 or greater. To update from v1.01 or earlier, please uninstall Accessport from vehicle, perform firmware update using Accessport Manager 2.0, then reinstall Accessport to vehicle with v2.00 or greater mapping. This revision now supports both MT and AT vehicles using the same mapping version. Also incorporates improved fueling strategies during turbo spool-up period as well as additional logic for torque limiter defeats.