



MUSTANG GT INSTALLATION INSTRUCTIONS FOR DEALER TECHNICIAN v1.0

This document describes how to install TrackKey (Ford Racing part number **M-14204-MGTTKA**) on a 2014 Mustang GT equipped with a manual transmission and built on or after July 1st, 2013.

For the latest version of this document, please visit the "Dealer Links" section at www.trackkey.ford.com before starting the installation procedure. If this is your first Mustang GT TrackKey installation, please read this document in its entirety before beginning. If you have any questions or comments, contact the Ford Racing Techline at **1-800-FORD-788** between 8:30 am and 5 pm Eastern time, Monday through Friday. Before calling, please be prepared to provide the VIN of the vehicle and the customer supplied TrackKey voucher number for assistance.

The TrackKey installation procedure consists of four separate parts. The first is installing the Ford Racing flat panel air filter. The second is cutting the customer supplied Ford Racing TrackKey and programming PATS to recognize the new key. The third is programming the key to make it into a TrackKey, and the fourth is to reflash the PCM with the Ford Racing software and calibration. Once all four of these steps have been completed, the PCM will recognize when the TrackKey is in the ignition and will enable the unique TrackKey functionality. Installation of TrackKey will clear any MyKeys that have been programmed for the vehicle. The TrackKey can, however, be used as an administration key to program the regular key as a MyKey after the TrackKey installation is complete.

CAUTION: After the TrackKey PCM software is installed, no TSB's requiring PCM reflashing should be performed on the vehicle unless specifically instructed by the Ford Racing Techline.

Tools Required:

- Battery charger
- VCM or VCM-II
- Laptop running Windows XP or Windows 7 with IDS version **89.01 or higher**, Internet Explorer, and **reliable** internet connectivity (we strongly recommend using a wired connection and plugging the laptop into an AC power source)

Vehicle Requirements Before Starting Procedure:

- **Must** be a 2014 Mustang GT equipped with a manual transmission and a vehicle build date on or after **July 1st, 2013**. Must also not have any engine related aftermarket modifications (such as a cold-air kit, headers, etc) installed.
- **Must** have at least two and preferably three ignition keys (two regular keys and one Ford Racing TrackKey).

- **Must** have **customer's** mailing address and phone number.
- **Must** have a valid and unused voucher ID (included in the M-14204-MGTTKA package).
- **Must** have premium (91 or higher octane) fuel in the fuel tank.

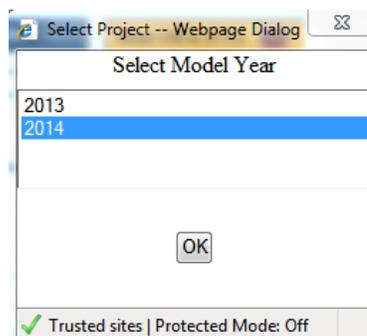
If any of the above requirements is not met, do not continue the installation procedure and advise the customer that the issue or issues must be rectified before TrackKey installation can commence.

Procedure for a vehicle that has never had TrackKey installed before:

- 1) Install the Ford Racing flat panel air filter and return take-out filter to customer. Refer to SLTS operation MBASIC2 (0.1 hr) and workshop section 303-12 for more information.
- 2) Cut the supplied Ford Racing key to match the ignition keys provided by customer and program PATS. Refer to SLTS operation 15607C (0.2 hr) and workshop section 419-01B for more information.
- 3) Write down the **rear** tire size (ie: 285/35-19) here _____
- 4) **Connect a battery charger to the battery and set to lowest current setting.**
- 5) Connect VCM to vehicle DLC and to laptop with internet access and IDS version 89.01 or higher.
- 6) **Turn off all vehicle accessories, including HVAC, radio, and lights. Close trunk and both doors. Remain in vehicle until procedure is complete. This is critical to avoid accidentally bumping the DLC connector and severing the VCM connection which can result in having to send the PCM back to Ford Racing at the expense of the installing dealership.**
- 7) Insert TrackKey (Ford Racing medallion) in ignition and turn to ON position.
- 8) Using Internet Explorer, go to www.proservicetech.com, or use FMC dealer to get to PTS, and click on the "Vehicle ID" tab.
- 9) Once the VCM has successfully made a connection to the PCM, click the green box labeled "Read VIN and DTCs", as shown below:



- 10) If a pop-up box appears, select "2014" and click "OK":



- 11) Write down the odometer mileage here _____

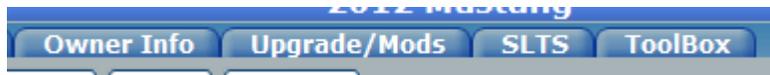
12) Write down any DTC's displayed. **Resolve root cause of all DTC's before continuing to the next step.**

13) Click the box labeled "GO", as shown below:



14) Click the "OASIS" tab and select "OASIS Home". Write down the number displayed next to "AXLE RATIO" here _____. It will be 3.31, 3.55, or 3.73.

15) Click the "ToolBox" tab, as shown below:



16) Under "IDS Tools" on the left side of the screen, click "Body" then "Service Functions" then "Track Key Configuration", as shown below:



17) An IDS window will launch and display "use track key to turn on ignition". Since the key should already be in the ON position, click the checkmark in the lower right corner of the screen.

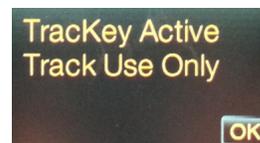
18) Click "Enable track key" once, then click the checkmark.

19) Turn ignition key to OFF position, then back to ON position.

20) Message center on instrument cluster should now display "TRACKKEY ACTIVE TRACK USE ONLY" as shown below. If so, click the checkmark, then follow the on-screen instructions. If not, click the return arrow and go back to step 17. Consult "Troubleshooting" section if the message isn't displayed after 2 attempts.

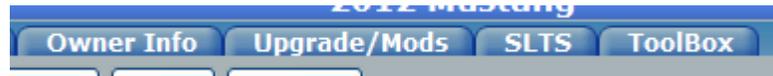


4-gauge cluster



4.2" display cluster

21) At this point, the programming of the key is complete, but the PCM needs to be reflashed before TrackKey functionality will be enabled. Turn the ignition key back to the ON position, then click on the "Upgrade/Mods" tab as shown below, to begin the PCM reflashing process:



22) Click "Ford Racing Calibration programming for a customer who has purchased an upgrade kit that requires PC reprogramming", as shown below:

- [GAP 1 to GAP 2 Radio Replacement](#)
- [Ford Racing Calibration programming for a customer who has purchased an upgrade kit that requires PCM reprogramming.](#)

23) Ensure ignition key is in the ON position, and click the box labeled "Read PCM":



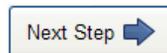
24) Enter the customer supplied voucher ID exactly as it appears on the voucher (ie: XXXX-XXXX-XXXX). Note that a voucher ID can only be used once. The illustrations below are examples only and may differ slightly from what is actually displayed:

This vehicle's current calibration is [CR3A-14C204-ABA].

To continue, please enter your voucher ID.

Voucher ID :

25) Click "Next Step" as shown below:



26) Pick "**M-14204-MGTTKA**" from the drop down box as shown below, then click "Next Step".

Please select the Ford Racing kit number being installed.

Kit Number :



27) Enter the customer information in the boxes provided along with the odometer reading that you wrote down in step 11. Do not use any commas when entering the mileage. Please be sure that the customer information is accurate since a CARB Executive Order (EO) label will be sent to the address provided. Click "Next Step" when complete.

So that we can mail an E.O. label to the customer, please provide the customer's mailing address.

VIN :	1ZVBP8CU	
First Name :	<input type="text"/>	(required)
Last Name :	<input type="text"/>	(required)
Address Line 1 :	<input type="text"/>	(required)
Address Line 2 :	<input type="text"/>	
Address Line 3 :	<input type="text"/>	
City :	<input type="text"/>	(required)
State/Province :	<input type="text" value="Please Select"/>	(required)
Postal Code :	<input type="text"/>	(required)
Country :	<input type="text" value="Please Select"/>	(required)
Phone Number :	<input type="text"/>	(required)
Current Mileage :	<input type="text"/>	(required)

28) If presented with the question "Do you wish to activate octane adjust?" select "No". Refer to "Frequently Asked Questions" section for more details. Click "Next Step" when complete.

Do you wish to activate octane adjust?

Please choose one...

- No
- Yes (only pick this option if vehicle exhibits spark knock)

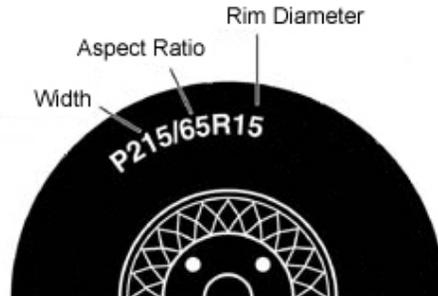
29) Using the information you wrote down in step 3, select the appropriate tire width, aspect ratio, and rim diameter from the 3 drop down boxes as shown below. Click "Next Step" when complete.

What is the size of this vehicle's **driven** tires?

Width :

Aspect Ratio :

Rim Diameter :



30) Using the drop down box, select the axle ratio currently installed on the vehicle. If the customer has not changed the axle ratio, use the number from step 14. Make sure to enter the correct axle ratio or the speedometer and odometer will be inaccurate. Click "Next Step" when complete.

What is the axle ratio on this vehicle?

 If you are going to change the axle ratio, please select the ratio you will have after you install the parts and **not the ratio currently installed** on this vehicle.

Axle Ratio :

- :: Please Choose One ::
- 3.08
- 3.27
- 3.31
- 3.41
- 3.55
- 3.73**
- 3.83

31) Verify the battery charger is connected and then click "Start Module Programming" as shown below (The PCM File Name shown is an example only). **DO NOT under ANY circumstances interrupt the programming process once it has started!! DO NOT switch the key off or disconnect the VCM from either the DLC or the laptop until the programming process has completed!!**

PCM File Name: CR3A-SEMABM-5BC

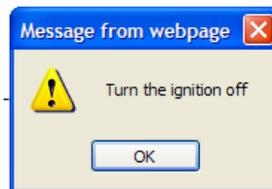
The module is now ready to be programmed. Please be sure to do the following...

Attach Battery Charger to the Battery

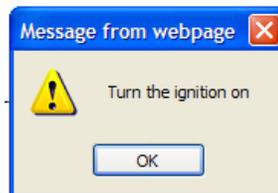
Turn the ignition on



32) When prompted, turn the ignition key to the OFF position and click "OK"



33) Wait at least 3 seconds, and then when prompted, turn the ignition key to the ON position and click "OK".



- 34) The programming process will start, and display a progress bar while the PCM is being reflashed. **DO NOT DISCONNECT THE VCM OR LAPTOP OR TOUCH THE IGNITION KEY UNTIL IT IS COMPLETE!!!!**

PCM File Name: CR3A-SEMABM-5BC 

Programming Module - Please do not interrupt



Your calibration files are being installed. There are 3 files that need to be installed. Please Wait...

- 35) When the programming process has completed, a message will be displayed saying "You're all done". At this point, turn the ignition key off, wait at least 3 seconds, and then turn it back on.

Ford Racing Performance Dealer Download - Complete

Thanks! You're all done.

Be sure to visit us at FordRacingParts.com.



- 36) Reprogramming of the PCM is now complete, however during the programming process the PCM will generate CMDTCs in the other networked modules. To clear the codes in these modules, go back to the "ToolBox" tab and under "IDS Tools" on the left side of the screen, click "Self Test", as shown below:



37) An IDS window will launch. Click "All CMDTCs", then click the checkmark:



38) Click on the eraser on the right side of the screen, then click the checkmark to clear all CMDTCs". All modules should now indicate a PASS. Close IDS window.



39) Close all IDS and PTS windows.

40) Start the engine and wait at least 30 seconds. Hit the "RSM" button twice within 1 second. The green speed control indicator on the cluster should blink continuously twice per second. Press "RSM" again and green light should go out. If this does not happen, consult the Troubleshooting section.



Left side of steering wheel

- 41) Shut off engine, remove TrackKey and start engine with regular key. Verify message center does **NOT** display "TRACKKEY ACTIVE TRACK USE ONLY". If it does, call the Ford Racing Techline at 1-800-FORD-788.
- 42) Turn off engine and disconnect battery charger.
- 43) Advise customer that a self-adhesive EO label will be shipped to their address. Once it arrives they are to install it under-hood on the driver's side shock tower. Failure to display this label in a prominent place can result in state vehicle emissions test issues, depending on the state of residence of the customer. Also remind customer that use of the TrackKey requires premium (91 or higher octane) fuel. Finally, **return this document to the customer**. The installation is now complete.

Troubleshooting:

"Track Key configuration" does not appear in Service Functions Menu:

- Verify vehicle is a 2014 Mustang GT equipped with a manual transmission and built on or after July 1st, 2013.
- Verify IDS version **89.01 or higher** is installed on the computer connected to the VCM
- If issue is still unresolved, call Ford Racing Techline at 1-800-FORD-788, with vehicle VIN and customer voucher ID

For resolution of all other issues, call the Ford Racing Techline at 1-800-FORD-788, with vehicle VIN and customer voucher ID.

Frequently Asked Questions:

Can more than one TrackKey be programmed for a vehicle?

- No. Only one TrackKey can exist for a given vehicle at a time.

What if a customer loses the TrackKey after programming?

- A new blank Ford Racing TrackKey can be ordered from parts and service (164-R8104) at the customer's expense. It will then need to be cut, have PATS re-synched, and programmed as a TrackKey by performing steps 2 through 20, also at the customer's expense. The PCM does not need to be reflashed again, and the customer does not need to purchase another M-14204-MGTTKA kit from Ford Racing. If the old TrackKey is found, it will no longer work as a valid TrackKey after the new key is programmed.

If I have a custom calibration in the PCM already, will TrackKey erase it?

- Yes. In addition, there may be warranty concerns if the custom calibration has caused engine damage that later results in a failure.

Why can I not perform TSB's that require PCM recalibration?

- TrackKey is a Ford Racing Performance Parts product and as such is not distributed through the normal IDS production calibration download system. If a TSB requiring a PCM recalibration is performed, the TrackKey software will be overwritten and the unique functionality will be lost. The "TRACKKEY ACTIVE TRACK USE ONLY" message would still appear on the message center, but no action would be taken by the PCM because the unique TrackKey software has been overwritten by the reflash for the TSB. If there is any doubt whether or not a certain TSB should be performed, call the Ford Racing Techline at 1-800-FORD-788, with vehicle VIN, customer voucher ID, and TSB number.

How do I tell if the installation has been successful?

- If the TrackKey itself has been successfully programmed, the message "TRACKKEY ACTIVE TRACK USE ONLY" will appear on the message center when the ignition is turned to the ON position with the TrackKey. If **both** the PCM **and** the TrackKey have been successfully programmed, the green speed control light on the dash will blink continuously twice per second when the engine is

running and Pit Lane Speed Control has been activated. To activate Pit Lane Speed Control, make sure the speed control indicator light is off (not orange or green) then press the "RSM" button twice within 1 second. To deactivate Pit Lane Speed Control, press the "RESUME" or "RSM" button once. **Note that if the PCM is not programmed correctly, the "TRACKKEY ACTIVE TRACK USE ONLY" message can still be displayed on the message cluster but no action will be taken by the PCM so none of the TrackKey functionality will work.**

What if I need to replace a PCM after TrackKey has been installed?

- Order a new PCM, perform Programmable Module Installation normally, then call the Ford Racing Techline at 1-800-FORD-788 for further instruction. Customer will not need to purchase another M-14204-MGTTKA kit from Ford Racing.

What if a customer changes tire size or axle ratio after TrackKey has been installed?

- Perform steps 3 through 13, then steps 21 through 23. Instead of asking for a voucher ID, the system will recognize that the PCM has already been programmed with Ford Racing software and will present the following choices:

Ford Racing Performance Dealer Download

This vehicle already has an FRPP calibration [CR3A-SEMABM-5BB] installed on it. Do you want install a new FRPP kit or change tire size and/or axle ratio?

Please choose one...

- Install a new FRPP kit
- Change octane adjust, tire size and/or axle ratio

- Select "Change octane adjust, tire size and/or axle ratio", click "Next Step", and then complete steps 27 through 42. Customer will not need to purchase another M-14204-MGTTKA kit from Ford Racing.

What if the " TRACKKEY IDLE ENABLED" message is displayed but the idle is not very lopey?

- First, verify that the engine oil level is correct. Make sure to use only 5W20 oil, as cam control can vary dependent on oil viscosity. Secondly, turn off all accessories such as air conditioning, rear window defrost, etc. If the idle still isn't lopey, the PCM may need to relearn the zero (or "home") position of the cams. To facilitate this learning process, shut the engine off, restart the engine using the black (non-Track) key and let the engine idle for 5 minutes with the vehicle stationary. Do not touch the accelerator pedal during this time. Once the zero position is learned, it should not need to be relearned unless the battery is disconnected or the PCM is reflashed.

What if the " TRACKKEY IDLE ENABLED" message is never displayed but all other TrackKey features work?

- For lopey idle to be enabled, four conditions must first be satisfied. The first condition is that lopey idle was not switched off during engine start (by holding the OFF button during crank and for 5 seconds after the engine has started).

The second condition is that 130 seconds must have elapsed since the engine coolant temperature reached 170 °F (77 °C) while the engine is running. The third condition is that the engine must not currently be idling (Note that it is sufficient just to rev it up in neutral or drive away once the other conditions have been met and lopey idle mode will be enabled). The fourth condition is that there must be no detected failures of any PCM sensors. Specifically, this means lopey idle will be disabled if any of the following are true:

- Misfire detected
- Air charge temperature sensor failure detected
- Cylinder head temperature sensor failure detected
- Ignition coil failure detected
- Crank sensor failure detected
- Throttle body control failure detected
- Cam position sensor failure detected
- Vehicle speed sensor failure detected
- Accelerator pedal sensor failure detected
- Mass Air Flow sensor failure detected

If lopey idle is not being enabled because the PCM is detecting misfires, it may be necessary to perform the neutral profile learn procedure. If the neutral profile learn procedure does not resolve the misfire codes, then the root cause of the misfires must be determined and repaired before lopey idle will be enabled.

I hear slight "pinging" on engine acceleration from low speed. Should I be alarmed?

- TrackKey alters the ignition timing and knock sensor calibrations taking full advantage of premium fuel to deliver the maximum torque and throttle response available from the engine. Some slight "pinging" on acceleration from low engine speed may be audible initially but should rapidly subside.

What if a customer complains about excessive pinging?

- Verify that **only** 91 or higher octane fuel is in the fuel tank.
- Verify coolant mixture is at least 50% water.
- Verify that oil consumption is not excessive. If it is, there may be oil in the intake manifold which is causing the pinging. This is **by far** the most common cause of reported pinging concerns. Suggest the use of an oil separator in the PCV line between the passenger side valve cover and the air inlet tube.
- If pinging persists, perform steps 3 through 13, then steps 21 through 23. Instead of asking for a voucher ID, the system will recognize that the PCM has already been programmed with Ford Racing software and will present the following choices:

Ford Racing Performance Dealer Download

This vehicle already has an FRPP calibration [CR3A-SEMABM-5BB] installed on it. Do you want install a new FRPP kit or change tire size and/or axle ratio?

Please choose one...

- Install a new FRPP kit
- Change octane adjust, tire size and/or axle ratio

- Select "Change octane adjust, tire size and/or axle ratio", click "Next Step", and then complete steps 27 through 35 but select "Yes" in step 28 when asked "Do you wish to activate octane adjust?". Finally, complete steps 36 through 42.
- If customer complaint is still present, call the Ford Racing Techline at 1-800-FORD-788.

Note: If you have any comments or suggestions on how to improve this document, please call the Ford Racing Techline. We welcome your feedback and strive to make the installation process as painless as possible.

**** CAUTION: Do not reflash the PCM back to a production calibration unless specifically directed to do so by the Ford Racing Techline (not FCSD). Once the PCM has been flashed back to a production calibration you will not be able to re-install TracKey without a new voucher number.**

NOTE: The TracKey software and calibration are copyrighted works of Ford Motor Company and are protected under US copyright law. They may not be uploaded or copied for any purpose including, but not limited to, calibration modification and/or distribution.