

gauge **GT** tuner



GAS

Owner's Manual

50 State Legal GT Gas
Part #40410



BULLY DOG

Doc. 40410-99 v1.4

ABOUT THE GT

Preview of Basic Installation Steps

1. Update the GT. **This step is very important!!!** See page 18 for more information.
2. Physically install the GT. See page 26 for more information.
3. Install the tune to your vehicle. See page 30 for more information.

IMPORTANT NOTE: You **MUST** uninstall your Bully Dog engine tune before taking your vehicle in for ANY type of service. There are also other important times to uninstall the tune. Please see page 35 for more information.

See pages 4-6 for a complete list and description of the items included with your GT.

Tuning Information

SETTING	PEAK HORSEPOWER	PEAK TORQUE	OCTANE
High Octane	up to 35	Up to 40	91+ octane
Regular	15-20	15-20	85+ octane
Stock	Stock	Stock	OEM Spec.



APPLICATIONS: D-512-6, D-512-7

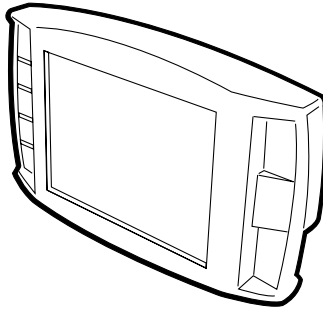
CADILLAC		FORD	
Cadillac Escalade 5.3L 2002-2005	D-512-6	Ford E-Series 4.6L 2005-2008	D-512-6
Cadillac Escalade 6.0L 2002-2010	D-512-6	Ford E-Series 5.4L 2005-2008	D-512-6
Cadillac Escalade 6.2L 2007-2011	D-512-6	Ford E-Series 6.8L 2005-2008	D-512-6
Cadillac Escalade 6.2L 2012-2013	D-512-7	Ford Excursion 5.4L 2005-2008	D-512-6
CHEVROLET/GMC		Ford Excursion 6.8L 2005-2008	D-512-6
Chevy Avalanche 5.3L 2002-2011	D-512-6	Ford Expedition 5.4L 2005-2010	D-512-7
Chevy Avalanche 5.3L 2012-2013	D-512-7	Ford F-Series 3.5L 2011-2013	D-512-7
Chevy Avalanche 6.0L 2007-2010	D-512-6	Ford F-Series 4.6L 2005-2010	D-512-6
Chevy Avalanche 8.1L 2002-2006	D-512-6	Ford F-Series 5.0L 2011-2013	D-512-7
Chevy Camaro 6.2L 2010-2010	D-512-6	Ford F-Series 5.4L 2005-2010	D-512-6
Chevy Camaro 6.2L 2012-2013	D-512-7	Ford F-Series 6.2L 2011-2013	D-512-7
Chevy Cruze 1.4L 2011-2013	D-512-7	Ford F-Series 6.8L 2005-2010	D-512-6
Chevy Sonic 1.4L 2012-2013	D-512-7	Ford Mustang 4.0L 2005-2010	D-512-6
Chevy/GMC Express/Savannah 4.8L 2003-2011	D-512-6	Ford Mustang 4.6L 2005-2010	D-512-6
Chevy/GMC Express/Savannah 4.8L 2012-2013	D-512-7	INFINITI	
Chevy/GMC Express/Savannah 5.3L 2003-2011	D-512-6	Infiniti EX 35 3.5L 2008-2012	D-512-7
Chevy/GMC Express/Savannah 5.3L 2012-2013	D-512-7	Infiniti EX 37 3.7L 2012-2013	D-512-7
Chevy/GMC Express/Savannah 6.0L 2003-2010	D-512-6	Infiniti FX 35 3.5L 2005-2012	D-512-7
Chevy/GMC Sierra/Silverado 4.8L 1999-2012	D-512-6	Infiniti FX 37 3.7L 2012-2013	D-512-7
Chevy/GMC Sierra/Silverado 4.8L 2013-2013	D-512-7	Infiniti FX 45 4.5L 2005-2008	D-512-7
Chevy/GMC Sierra/Silverado 5.3L 1999-2012	D-512-6	Infiniti G 35 3.5L 2007-2009	D-512-7
Chevy/GMC Sierra/Silverado 5.3L 2013-2014	D-512-7	Infiniti G 37 3.5L 2009-2013	D-512-7
Chevy/GMC Sierra/Silverado 6.0L 1999-2012	D-512-6	Infiniti JX 35 3.5L 2012-2013	D-512-7
Chevy/GMC Sierra/Silverado 6.0L 2013-2014	D-512-7	Infiniti M 35 3.5L 2006-2010	D-512-7
Chevy/GMC Sierra/Silverado 6.2L 2007-2012	D-512-6	Infiniti M 37 3.7L 2011-2013	D-512-7
Chevy/GMC Sierra/Silverado 6.2L 2013-2014	D-512-7	Infiniti M 45 4.5L 2005-2013	D-512-7
Chevy/GMC Sierra/Silverado 8.1L 2001-2007	D-512-6	Infiniti M 56 5.6L 2011-2013	D-512-7
Chevy/GMC Tahoe/Yukon/Suburban 4.8L 2000-2011	D-512-6	Infiniti QX 56 5.6L 2005-2013	D-512-7
Chevy/GMC Tahoe/Yukon/Suburban 4.8L 2012-2013	D-512-7	JEEP	
Chevy/GMC Tahoe/Yukon/Suburban 5.3L 2000-2011	D-512-6	Jeep Commander 4.7L 2008-2009	D-512-6
Chevy/GMC Tahoe/Yukon/Suburban 5.3L 2012-2013	D-512-6	Jeep Commander 5.7L 2006-2010	D-512-6
Chevy/GMC Tahoe/Yukon/Suburban 6.0L 2000-2011	D-512-6	Jeep Grand Cherokee 4.7L 2008-2009	D-512-6
Chevy/GMC Tahoe/Yukon/Suburban 6.0L 2012-2013	D-512-7	Jeep Grand Cherokee 5.7L 2006-2010	D-512-6
Chevy/GMC Tahoe/Yukon/Suburban 6.2L 2007-2011	D-512-6	Jeep Grand Cherokee 5.7L 2011-2013	D-512-7
Chevy/GMC Tahoe/Yukon/Suburban 6.2L 2012-2013	D-512-6	Jeep Grand Cherokee 6.1L 2006-2010	D-512-6
Chevy/GMC Tahoe/Yukon/Suburban 8.1L 2001-2006	D-512-6	Jeep Wrangler 3.6L 2012-2013	D-512-7
CHRYSLER		Jeep Wrangler 3.8L 2007-2010	D-512-6
Chrysler 300C 5.7L 2006-2010	D-512-6	Jeep Wrangler 3.8L 2011-2011	D-512-7
Chrysler 300C 5.7L 2011-2013	D-512-7	LINCOLN	
Chrysler 300C 6.1L 2006-2010	D-512-6	Lincoln Mark LT 2005-2010	D-512-6
Chrysler Aspen 4.7L 2008-2009	D-512-6	NISSAN	
Chrysler Aspen 5.7L 2007-2009	D-512-6	Nissan 350 Z 3.5L 2005-2009	D-512-7
DODGE		Nissan 370 Z 3.7L 2009-2013	D-512-7
Dodge Challenger 5.7L 2009-2010	D-512-6	Nissan Altima 2.5L 2005-2013	D-512-7
Dodge Challenger 5.7L 2011-2013	D-512-7	Nissan Altima 3.5L 2005-2013	D-512-7
Dodge Challenger 6.1L 2008-2010	D-512-6	Nissan Armada 5.6L 2005-2013	D-512-7
Dodge Charger 5.7L 2006-2010	D-512-6	Nissan Cube 1.6L 2009-2011	D-512-7
Dodge Charger 5.7L 2011-2013	D-512-7	Nissan Cube 1.8L 2009-2013	D-512-7
Dodge Charger 6.1L 2006-2010	D-512-6	Nissan Frontier 2.5L 2005-2013	D-512-7
Dodge Dakota 4.7L 2008-2010	D-512-6	Nissan Frontier 4.0L 2005-2013	D-512-7
Dodge Dakota 4.7L 2011-2011	D-512-7	Nissan Maxima 3.5L 2005-2013	D-512-7
Dodge Durango 4.7L 2008-2009	D-512-6	Nissan Murano 3.5L 2005-2013	D-512-7
Dodge Durango 5.7L 2004-2009	D-512-6	Nissan NV2500/NV3500 4.0L 2012-2013	D-512-7
Dodge Durango 5.7L 2011-2013	D-512-7	Nissan NV2500/NV3500 5.6L 2012-2013	D-512-7
Dodge Magnum 5.7L 2006-2008	D-512-6	Nissan Pathfinder 3.5L 2012-2013	D-512-7
Dodge Magnum 6.1L 2006-2008	D-512-6	Nissan Pathfinder 4.0L 2005-2013	D-512-7
Dodge Ram 4.7L 2008-2010	D-512-6	Nissan Pathfinder 5.6L 2008-2013	D-512-7
Dodge Ram 4.7L 2011-2013	D-512-6	Nissan Quest 3.5L 2005-2013	D-512-7
Dodge Ram 5.7L 2003-2010	D-512-6	Nissan Rogue 2.5L 2008-2013	D-512-7
Dodge Ram 5.7L 2011-2013	D-512-7	Nissan Sentra 2.0L 2007-2013	D-512-7
		Nissan Sentra 2.5L 2007-2013	D-512-7
		Nissan Titan 5.6L 2005-2013	D-512-7
		Nissan Versa 1.6L 2007-2013	D-512-7
		Nissan Versa 1.8L 2007-2013	D-512-7
		Nissan Xterra 4.0L 2005-2013	D-512-7

PARTS LIST

Your GT package should include the following items:

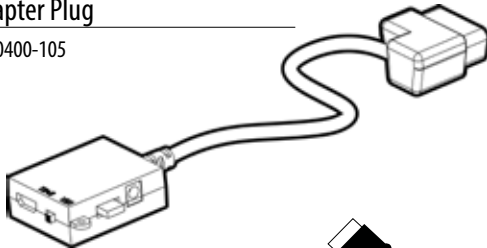
1. The GT Head Unit

Part Number: 40415-1



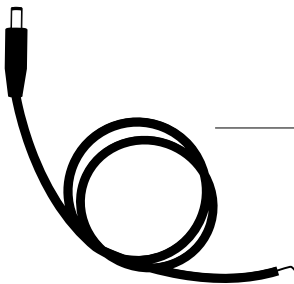
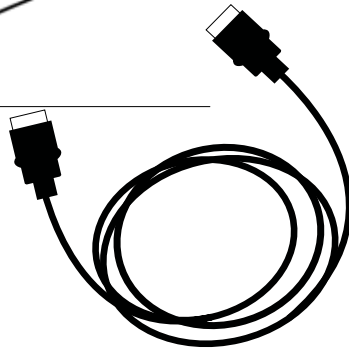
2. OBDII Adapter Plug

Part Number: 40400-105



3. HDMI Cable

Part Number: 40400-100

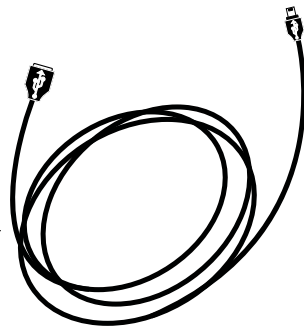


4. Mini USB

Part Number: 40400-103

4. Power Wire

Part Number: 40400-101



5. Fuse Tap



6. Fuse Spade



7. Micro SD Card

Part Number: 40410-10



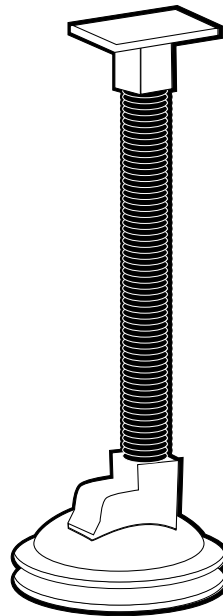
8. Micro SD Card Reader

Part Number: 40410-10



8. Windshield Mount

Part Number: 40400-102



You may also want to have the items listed below available when you are installing the GT:

Tools Needed

- Fuse Puller
- Voltage Meter (optional)

Extra Parts (Optional)

- Battery Charger
- Alternative Mounting Solution (See page 29 for more information.)

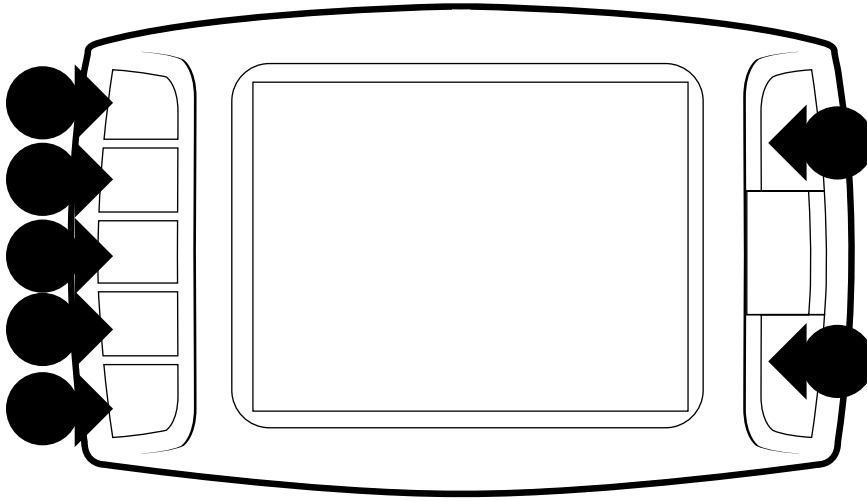


**BULLY
DOG**

PARTS DESCRIPTION

The GT Head Unit

The main component of the Gauge Tuner is the head unit. It has the screen and the buttons that allow you to access all of the functions and features of the tuner.

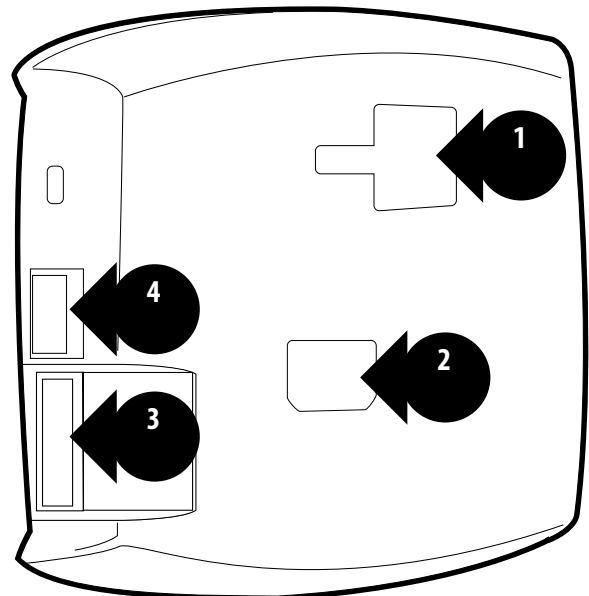


GT Front Side:

The GT has seven capacitive touch buttons. Capacitive touch is a button style that is sensitive to the presence of your finger. Capacitive buttons do not need to be pushed, only touched to activate. The front of the GT head unit features a 2.4" LCD screen.

GT Back Side:

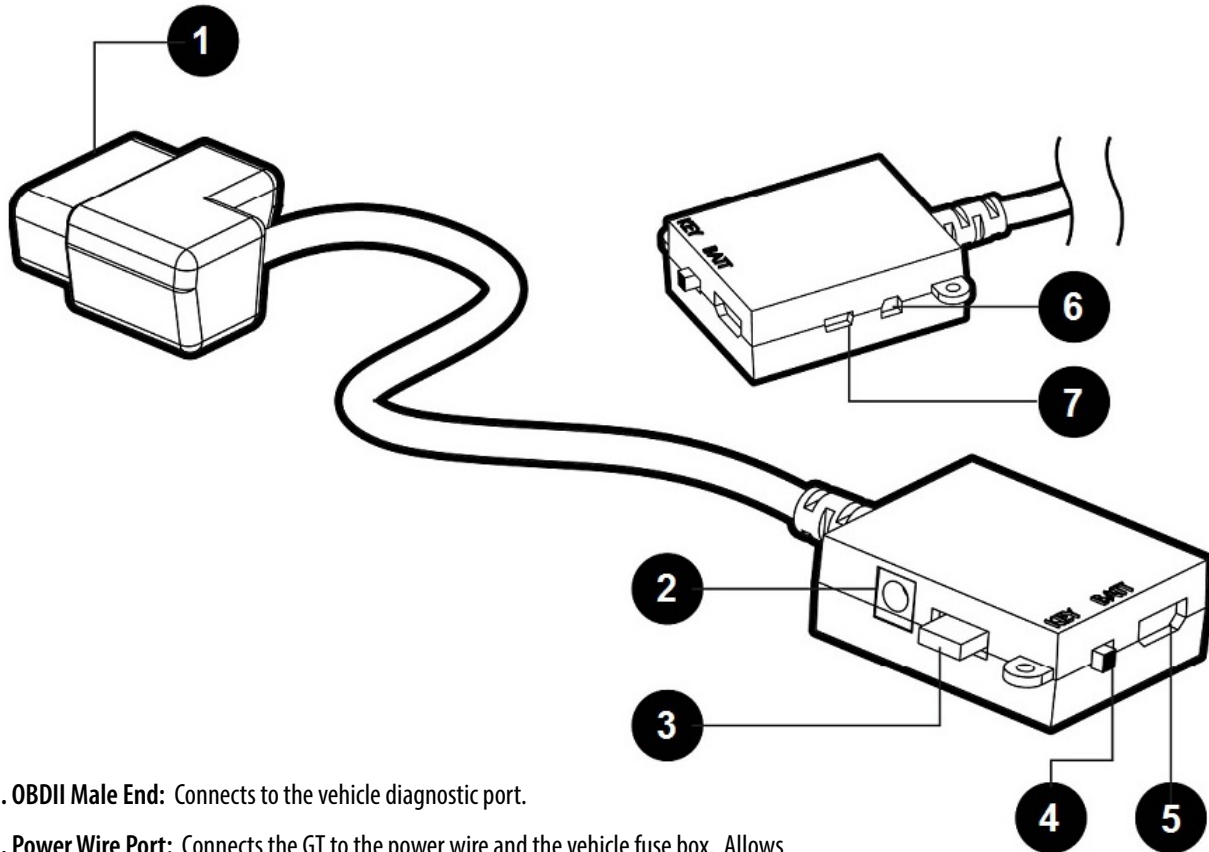
1. T-Slot Mount Socket, which allows you to use the GT with different mounting options.
2. HDMI port
3. Micro SD card port
4. Mini-USB port



PARTS DESCRIPTION

The OBDII Adapter Plug

The GT assembly connects to your vehicle through the diagnostic port, which is located under the dash on the driver's side. The OBDII Adapter Plug connects to the diagnostic port on your vehicle and has a connection for the HDMI cable that plugs into the back of the GT Head Unit. The illustration and numbered list below contain more information about the other parts of this important piece of the GT assembly.

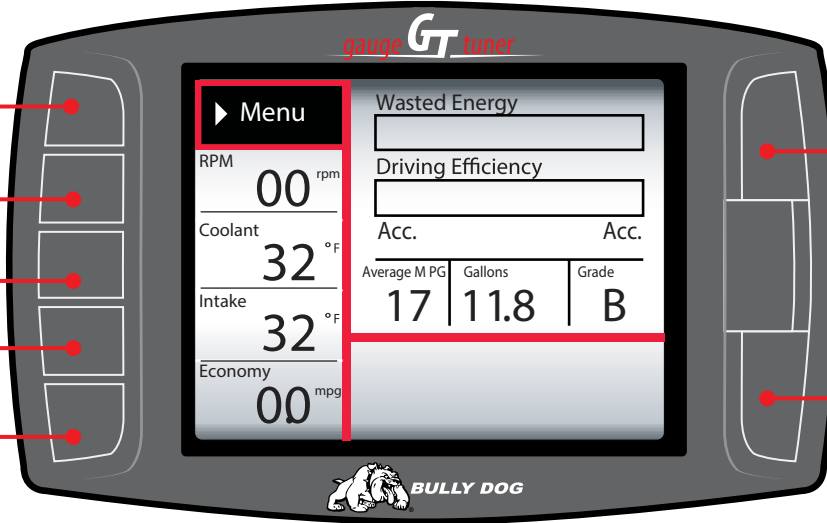


1. **OBDII Male End:** Connects to the vehicle diagnostic port.
2. **Power Wire Port:** Connects the GT to the power wire and the vehicle fuse box. Allows the GT to turn on and off with the key.
3. **Fuse:** The adapter plug fuse protects the GT from being damaged by unexpected power surges.
4. **Power Switch:** Changes the active power source of the GT.
The two options are: 1) KEY: this pulls energy from the fuse box through the power wire and allows the GT to automatically turn on and off based on the vehicle's ignition key position; and 2) BATT: This provides continuous battery power to the GT directly through the vehicle's diagnostic port.
5. **HDMI Port:** Connects the OBDII adapter plug to the GT Head Unit.
6. **Pyrometer/Sensor Docking Station Port:** Connects the GT to optional sensors including pyrometers or the Bully Dog Sensor Docking Station.
7. **Future Peripherals:** Not currently in use – may be used to connect additional devices in the future



BUTTON NAVIGATION

FUNCTION 1: Press the top left button to enter the Main Menu, also use this button to exit menus.



FUNCTION 2: Press any of the four buttons on the left side of the GT adjacent to one of the vehicle parameters on the screen will display that parameter in the large gauge area.

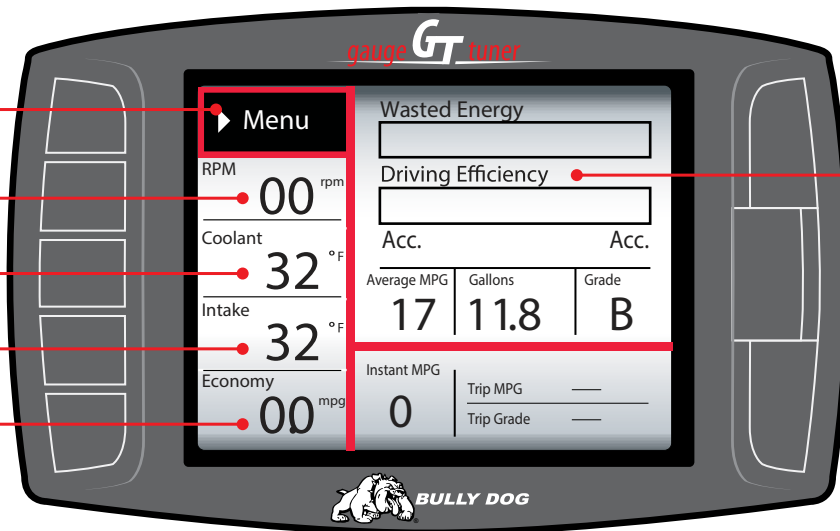
FUNCTION 3: Continuously hold any of the four buttons to change the Large Gauge style, there are four different styles that pop up.

FUNCTION 5: Use these buttons to scroll up and down when GT is in a menu screen.

THE MAIN SCREEN

This picture of the GT main screen has the Driving Coach selected for the Large Gauge option. You can change which gauge is featured in the upper right corner of the main screen by holding down one of the buttons on the left side of the GT until the gauge type that you want is shown.

Menu button: Press to enter the Main Menu.



Vehicle parameters: To change which vehicle parameter is displayed in the large gauge area, simply press one of the four buttons next the preferred vehicle parameter.

See page 8 for more information about changing the information shown on the Main Screen.

Large Gauge area

- 1. The Driving Coach**: A screen showing 'Instant Economy' (0-100), 'Dec.' (0), 'Acc.', and a 'Report Card' with a grade of 'B'.
- 2. Analog gauge with average and max peaks**: An analog MPH gauge (0-120) with 'AVG PEAK: 0 MPH' and 'MAX PEAK: 0 MPH'.
- 3. Analog gauge with mini graph**: An analog MPH gauge (0-120) with a 'PEAK: 0 MPH' and a small real-time graph.
- 4. Large real time graph**: A large real-time graph showing speed over time with a vertical axis from 0 to 140 MPH.



AVAILABLE OPTIONS – ALL MODELS

These options are presented in the order they appear on the Main Menu. If options are missing in your Main Menu, you should update your GT. See pages 18-25 for more information on updating your GT.

Change Vehicle

This option allows you to choose the type of vehicle that the GT will be used with. If the tune has already been installed, the Change Vehicle option cannot be used. Pages 37 and 35 have more information about checking to see if the tune is already installed and, if so, how to uninstall the tune.

Install Download

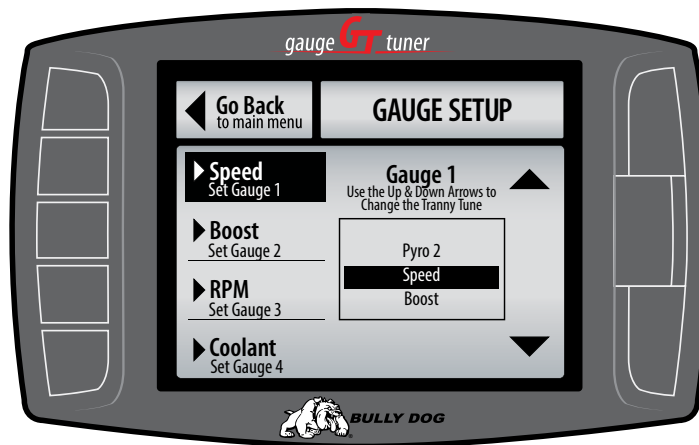
This option allows you to install the tune to the engine computer in your vehicle. If the tune is already installed, this option will allow you to return to stock (basically uninstall the tune) or change certain settings that can only be changed by writing a new tune to the ECM. Pages 16 and 35-37 have more information about the download options and returning to stock.

Gauge Setup

This option will allow you to change which gauges are being displayed on the main gauge screen. Definitions for each type of gauge option available are listed on the next page.

Changing the Information on the General Display

1. Choose Gauge Setup from the Main Menu.
2. Press the button on the left side of the GT to highlight the gauge slot you would like to change.



3. Use the buttons on the right side of the GT to scroll through the different functions and highlight the one you want shown on the General Display.
4. When you are done, use the top left button to go back to the Main Menu and General Display.

Gauge Setup (continued)

Pyro 1 & 2

Both pyro 1 and pyro 2 measure exhaust gas temperature. The only difference between them is the location of the temperature sensor. Used for defuel level settings, which protect the engine from heat damage.

Availability and location of factory installed pyrometers vary according to vehicle make and year. All '07.5 and newer diesel pickups that are equipped with OEM diesel particulate filters also include factory installed pyrometer sensors.

Speed

This option shows the current vehicle speed.

Monitoring this information can help you ensure that the speed displayed on the GT and the vehicle speedometer match the actual vehicle speed. Other important numbers, like the odometer and fuel efficiency, are based on this information.

RPM

This option shows the number of revolutions per minute of the engine.

This will help you protect your vehicle and improve performance by watching and ensuring that the RPMs stay within a certain range.

Coolant Temperature

This option shows the coolant temperature.

Used in defuel settings to prevent damage to the engine.

Not available on all vehicles.

Throttle Position

This option shows the throttle position measurement – it is displayed as the percent open.

Used by the Driving Coach to indicate where changes can be made to driving habits to maximize fuel efficiency.

Intake Temperature

This option shows the intake air temperature.

Air temperature affects combustion temperature and engine performance. Adding a Bully Dog Rapid Flow Intake (RFI) closed air system will lower this temperature, improve performance, and increase horse power. The Gauge Tuner (GT) is designed to work with the RFI to get the most out of your engine.

Transmission Temp

This option shows the transmission temperature.

Used in defuel settings to prevent damage to the transmission. Not available on all vehicles.

Load

This option shows a real-time measurement of the work that the truck is doing.

Timing

This option shows a real-time reading of the timing position as the truck is running.

MAF

This option displays information from the Mass Airflow Sensor. Used by the Engine Control Module (ECM) to determine how much air is going into the engine. The ECM then sends the correct amount of fuel for optimum engine performance.

Fuel Econ.

This option displays a real-time measurement of the vehicle's fuel economy, shown in miles per gallon.

Determine when your fuel efficiency peaks or dies to improve your driving habits and your bottom line when visiting the pump.

Fuel Flow

This option displays the amount of fuel being used at any given time; it is shown as a percentage.

Not available on all vehicles.

Boost

Current turbo boost pressure.

Barometer

Current atmospheric pressure.

Injection Pulse Width (IPW)

The time the injector stays open for each injection event; usually displayed in milliseconds (ms).

Battery Voltage

This option shows the current vehicle speed.

Monitoring this information can help you ensure that the speed displayed on the GT and the vehicle speedometer match the actual vehicle speed. Other important numbers, like the odometer and fuel efficiency, are based on this information.

Additional features listed on the next page.



Gauge Setup (continued)

The following gauge options are provided to allow the GT to monitor additional sensors that are only available with the Bully Dog Sensor Docking Station.

A/F Ratio 1 & 2

This gauge option shows the ratio of air to fuel. The GT will use this information to ensure that your engine is using the correct ratio to completely burn all of the fuel being used and maximize performance and efficiency.

Only available on Bully Dog Sensor Docking Station part number 40385.

AUX 1, 2 & 3

This gauge option shows the information from sensors connected to the **0-5V** auxiliary inputs on the Bully Dog Sensor Docking Station.

AUX Temp

This gauge option shows the information returned to the Sensor Docking Station by an optional temperature sensor. The port for this sensor is marked as **5V out**.

Frequency

This gauge option shows the information from a pulsing type of sensor, like an on-board speed sensor or another optional sensor that operates on the 0-5kHz 5V pulse range. The port on the Bully Dog Sensor Docking Station for this gauge option is marked as **FN**.

User Options

Set Background Theme

Change the display colors on your GT.

Adjust Backlight

Change the brightness for both the day and the night operating modes of the GT.

To change between night and day mode, hold both the right buttons (the up and down buttons) while you are in the general gauge display.

Set Animation Preferences

Turn the Wave Effect on or off. This effect creates a ripple on the screen whenever you press a button.

English/Metric Units

Switch between miles/kilometers and gallons/liters.

Reset to Default

Change the user preferences back to the original Bully Dog default settings. This option does not change other GT features to default settings.

Reset Average Economy

This option resets the saved values on the GT for average fuel economy, the number of gallons used, and the fuel efficiency grade displayed by the Driving Coach.

SPECIAL NOTE: Street racing is illegal and extremely unsafe. The performance testing feature should only be used on a sanctioned 1/4 mile drag racing track.

There are two different styles available for both tests. The GT will show different test screens based on the style of test that is currently selected in the Performance Testing Setup Menu.

Speed Sensitive Performance Test

Once this test is begun, the GT will show instructions to the user to first bring the vehicle to a stop. Once the vehicle is at zero miles per hour, the test is ready. The test will automatically start once the vehicle begins to move.

Race Tree Performance Test

Before initiating the Race Tree style performance test it is important that the vehicle should already be at a complete stop. Once the test is begun, the GT will display a classic race tree on the screen. As soon as the lights on the tree turn green, the GT will begin to record the vehicle's time. In this style of test, the GT will not wait for the vehicle to start moving before it starts recording performance data.

1/4 Mile Performance Test

This option will test the vehicle's performance until the vehicle has traveled 1/4 mile.

- View Test Results

View the results for the last performance test that was run.

0-100 KPH Test.

This option will test the vehicle's performance until the vehicle has reached a speed of 100 kilometers per hour, which is about the same speed as 62 miles per hour.



Driving Coach Setup

The Driving Coach is a special feature designed to be your fuel economy dashboard and information center. It provides real-time visual and audio feedback about driving efficiency and where energy is being lost. The driving coach will help you understand the optimal conditions for your particular vehicle through real-time observation, giving you the power to maximize your vehicle's fuel economy.

Two hidden bonuses of driving more efficiently are: saving money on fuel and helping the environment!

Before the Driving Coach can give you accurate information, it is important to make sure that the GT is showing the correct speed. In the sections below, you will find specific instructions for using the Driving Coach to become the best driver you can be.

Set Economy Goal

This option will allow you to select a fuel economy goal. The Driving Coach will use the economy goal to calculate your driving grade.

It is very important to select an economy goal that is realistic for both your vehicle and the kind of driving you will be doing. If you will be driving mainly in the city or on the highway, choose a goal that is very close to the advertised fuel efficiency for your vehicle in that type of environment. If you will be doing a mixture, choose an economy goal between the advertised city and highway mileage for your car.

Reset Average Economy

This option will clear the values stored in the GT for the average fuel economy, the number of gallons used, and the grade in the Driving Coach.

Adjust Acceleration

This option will allow you to select the GT sensitivity for the acceleration and deceleration in the Driving Coach; this affects the driving grade assigned by the Driving Coach.

Coach Sound Setup

This option will allow you to turn the Driving Coach sounds on or off.

Showing/Hiding the Driving Coach

The driving coach is always running, even if you choose not to have the information displayed. You can show or hide the driving coach on the Main Display by holding one of the four bottom left buttons until the display cycles through to the gauge style that you want.

Driving Coach Setup *(continued)*

Checking Speedometer Accuracy

First: Change the Gauge Setup to have the Speed displayed on the main display screen. See page 8 for more information about changing the information displayed on the main display screen.

Next: Go to a safe place with little to no traffic where you can perform a speed test. Make sure the speed limit is at least 60 mph. Here are two different ways to find out your vehicle's actual speed:

Method 1: GPS

1. Use a GPS device to compare your actual speed and the speed displayed on the Bully Dog.
2. Calculate the Percent Difference by using this formula:

$$\text{Percent difference} = \frac{\text{GT speed} - \text{GPS Speed}}{\text{GPS Speed}}$$

Example 1: A GPS device reads 65 mph and the GT reads 62 mph for one single moment.

$$\text{Step 1. Percent difference} = \frac{62 - 65}{65}$$

$$\text{Step 2. Percent difference} = \frac{-3}{65}$$

$$\text{Step 3. Percent difference} = .046 \text{ or } 4.6\% \text{ then round up } 5\%$$

Method 2: Stopwatch

1. Use a Stop Watch to measure how long it takes to travel one mile while traveling at 60 mph according to the GT.
Accelerate up to a speed of 60 mph (as shown on the GT)
While traveling at that constant speed, record the amount of time in seconds that it takes to travel exactly one mile.
*Use highway mile markers to ensure that your one mile measurement is correct.

2. Record the time.

3. Calculate the Percent Difference.

If it takes 60 seconds to travel one mile at 60 mph, then the GT is accurately reading your vehicle speed.

If it takes 2 seconds more or less than 60 seconds to travel one mile, then use the formula to the right to calculate the Percent Difference.

Once you have calculated the Percent Difference, you can use that information to adjust the speed display as described below

To calculate the percent difference use this formula:

$$\text{Percent difference} = \frac{\text{Recorded Time} - 60 \text{ seconds}}{60 \text{ seconds}}$$

Example 1: Using a stop watch the actual time it took to drive one mile while traveling at 60 mph according to the GT was 63 seconds.

$$\text{Step 1. Percent difference} = \frac{63 - 60}{60}$$

$$\text{Step 2. Percent difference} = \frac{3}{60}$$

$$\text{Step 3. Percent difference} = .05 \text{ or } 5.0\%$$

Adjusting the Speed Display

1. Use one of the methods described in the previous section to determine the exact percentage difference between the GT and your actual speed.
2. Choose the opposite percentage in the Adjust Speed Display menu.

For example, if the difference between your actual speed and the speed displayed on the GT was 5%, you should choose -5% (negative five percent).



Driving Coach Setup (continued)

Checking Average Fuel Economy

It is important to check the accuracy of the average economy readout on the GT at least once every changing season. There are many reasons to check and adjust the average fuel economy, here is one example: The fuel delivered to gas stations during the winter contains an average of 1.3% less energy than the fuel delivered in warmer seasons. That means that the same amount of liquid is going into the tank, but it is 1.3% less effective, on average. There are many similar factors that affect your fuel efficiency that you cannot control and the GT cannot sense or adjust for. That is why it is important to adjust the fuel economy of the GT every once in a while.

To adjust the Average Fuel Economy displayed by the GT, follow these steps:

1. Go to the gas station and get a full tank of gas.
2. Reset both of the following gauges before driving away from the gas station:
 - The Average Economy on your GT.
 - The trip odometer on your vehicle.
4. Drive the vehicle for an entire tank (or two)
5. Calculate your vehicle's average fuel economy by hand using the following equation:

• NOTE: If the speedometer on the vehicle is not accurate, then the odometer will also be incorrect. You will need to be able to calculate the exact number of miles driven before your next refill.

$$\text{Calculated Average Economy} = \frac{\text{miles driven}}{\text{gallons used to fill the tank back up}}$$

$$\text{Percent difference} = \frac{\text{GT Average Economy} - \text{Calculated Average Economy}}{\text{Calculated Average Economy}}$$

Example 1: Assume the GT Average Economy is 24 mpg and the Calculated Economy is 21

$$\text{Step 1. Percent difference} = \frac{24 - 21}{21}$$

$$\text{Step 2. Percent difference} = \frac{3}{21}$$

$$\text{Step 3. Percent difference} = .142 \text{ or } 14.2\% \text{ round down to } 14\%$$

6. Use the equation below to calculate the Percent Difference between the average fuel economy that you have calculated and the average fuel economy that is displayed by your GT.

Adjust the Average Fuel Economy

Follow the steps listed below to change the average fuel economy that is displayed by the GT:

1. Go to the Main Menu
2. Choose Vehicle Setup
3. Choose Adjust Economy Display
4. Use the buttons on the right to move up and down the percentages
5. Choose a percent value that is the opposite sign of the Percent Difference that you calculated using the equation above.
 - For example, if you determine that the Percent Difference is 14%, you should choose -14%.

Vehicle Settings

Set Engine Size

This is automatically determined when you choose your vehicle make and year during installation of the tune. You would only need to access this option if you do not have a stock engine displacement size.

Set Vehicle Weight

This is automatically determined when you choose your vehicle make and year during installation of the tune. You would only need to access this option if you do not have a stock gross vehicle weight.

Select Pyro Source

Choose either factory installed or Bully Dog pyrometers.
(Only available on 07.5 and newer vehicles that come equipped with a factory pyrometer)

Set Warning Levels

Set the temperature level at which the GT will provide a warning to help you protect your engine from heat damage.

It is also possible to turn each of these settings completely off. This is appropriate if the sensor for that setting is not available or if you do not wish to have that setting monitored by the GT.

See the Pyrometer Calibration section on page 48 for help in determining warning temperatures.

Pyro 1 Temperature Level

Pyro 2 Temperature Level

Engine Coolant Temp Level

Boost Level

Turn this setting off or add a Bully Dog boost sensor if your vehicle does not have a factory turbo boost.

Transmission Temperature

Turn this setting off or add a Bully Dog boost sensor if your vehicle does not have a factory transmission temperature sensor.

Startup Coolant Temp Level

This option was included to ensure that the vehicle is warmed up properly before the GT tuning options that provide additional power are available to be used.

Adjust Economy Display

Change the miles per gallon shown by the GT.

This setting should be changed if the GT is showing incorrect fuel mileage. See page 15 for more information about how to do this.

Adjust Speed Display

Change the vehicle speed shown by the GT.

This setting should be changed if the GT is showing an incorrect vehicle speed. See page 14 for more information on how to do this.

Special Functions

The same special functions are not available for all vehicles. You can check out which features are available for your model car by visiting the Bully Dog website and downloading the [GT Gas Vehicle Feature Matrix](#). For definitions, check out the [Glossary](#).

These options cannot be adjusted On the Fly (OTF). This means that they are set when you install the tune. The only way to change these settings is to start the **Install Download** process and choose **Change Settings** when you are prompted by the GT.



IMPORTANT NOTE: Most DTCs indicate a problem with the engine, not with the tune or the tuner itself. If you want to know if a DTC is being caused by the GT or not, uninstall the tune and drive your vehicle for about one week. If the DTC comes back, there is a problem with the vehicle and you should take it to a trusted mechanic. If the DTC doesn't come back, reinstall the tune and test drive for another week – if the DTC comes back while the tune is reinstalled, contact technical support. Be sure to have your tuner, vehicle, and a computer with internet access available when contacting technical support. See page 65 for more information about contacting technical support.

Show Settings

The Show Settings screen will show you information about your vehicle, the GT, and your current vehicle settings. This screen will also indicate if the GT tune is currently installed or not installed on a vehicle.

Uninstall GT

This option will allow you to uninstall the tune from your vehicle. This process is very similar to installing the tune, so be sure to take the same precautions listed on pages 30-32.

You can find more information about uninstalling the download on pages 35-37.

Update GT Software

This option will update the software on the GT itself from the files on the Micro SD card. This is an important final step to the update process. See pages 18-25 for more information about updating your GT.

UPDATING THE GT

OVERVIEW

FAQs about Updating

Why do I have to update my GT?

Because it's very important! These are just some of the reasons:

1. Vehicle manufacturers regularly change the part numbers and other information that the GT needs to know in order to communicate effectively with your engine computer. If the GT doesn't have updated information, it may not work correctly with your vehicle. Bully Dog releases updates when necessary to keep up with any changes that vehicle manufacturers make and give our customers the best support possible.
2. Our technical support team gathers information about any problems experienced by customers and works with the engineers to fix them as soon as possible. If these fixes can help other people avoid similar problems, our engineers include them in the updates that we release for everybody. One of the most important troubleshooting steps we take when someone encounters a problem is to make sure they have the most recently released software version. This often immediately fixes the problem!
3. Bully Dog engineers are constantly working to expand the features and vehicles that the GT is able to support. Once a new vehicle or option is unlocked, they make sure it is available to everyone by including it in the updated software version.

Do I have to update my brand new GT?

Yes! There is no way to know how long your particular GT may have been waiting on the shelf for you.

How often should I update?

Updates are released regularly, so you should check for them at least four times a year. A good rule of thumb is to check once every three months.

It is also a good idea to update the GT if you have uninstalled the tune for any reason, like taking your vehicle in for service. This will help you avoid any problems during the reinstall if the engine computer has been flashed and has new part numbers (this is very common, even for a routine vehicle service).

What is included in updates?

Updated part numbers and other information from vehicle manufacturers, tested fixes for problems customers may encounter, and any additional features or vehicles that our engineers have unlocked.

How can I tell which software version I currently have?

1. Go to the Main Menu.
2. Choose the Show Settings option.

The software version is listed under System Info, next to Version. It is labeled SW.

How can I use the Update Agent to check for updates?

Start the Update Agent application and connect the Micro SD card to your computer using the card reader that came with your GT. There are also many local retailers who carry card readers that are capable of supporting the Micro SD card format.

The Update Agent should automatically recognize the Bully Dog device, check the current software, and let you know if an update is available.

See page 24 if your SD card is not automatically recognized by the Update Agent.



UPDATING THE GT

Basic Steps to Update (Short Version)

You can find a more detailed description of this process on page 20.

1. Run the Update Agent.
2. Connect the Micro SD card to your computer.
3. Choose the vehicle application and let the Agent search.
4. Click the Update button.
5. When the Update is finished, put the Micro SD card in the GT.
6. Update the GT from the SD card by choosing Update GT Software on the Main Menu.



What You Need to Update the GT

1. A computer with internet access.

- Currently, it is most convenient to update if you have a Microsoft Windows computer.
- If the only computer that you have access to is an Apple, you can find information for how to use this type of computer to update on page 25.

2. A way to connect the Micro SD card to the computer.

There are two different options:

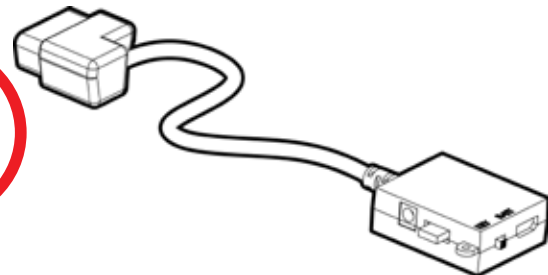
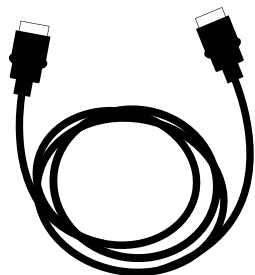


- A Micro SD card reader to connect it directly to the computer.



- A USB cable to connect the GT to the computer (with the Micro SD card installed in the GT).

Note: Do not try to connect use the HDMI cable or the OBDII adapter plug to update the GT.



UPDATING THE GT

(DETAILED STEPS FOR WINDOWS)

The following instructions are intended for Microsoft Windows computers.
Please see page 25 for Apple computer instructions.

Uninstall the tune from your vehicle

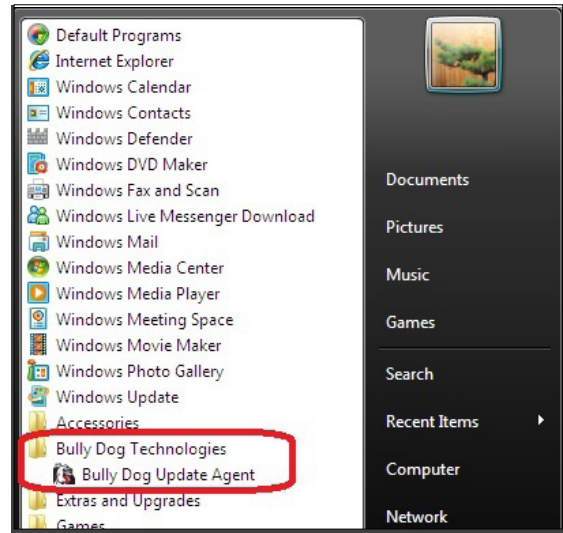
1. If the tune is not yet installed, skip to step 2.
2. For information about uninstalling the tune, see pages 35-37.
3. For information about checking to see if the tune is installed, see page 37.

Connect your Micro SD card to a computer with internet access

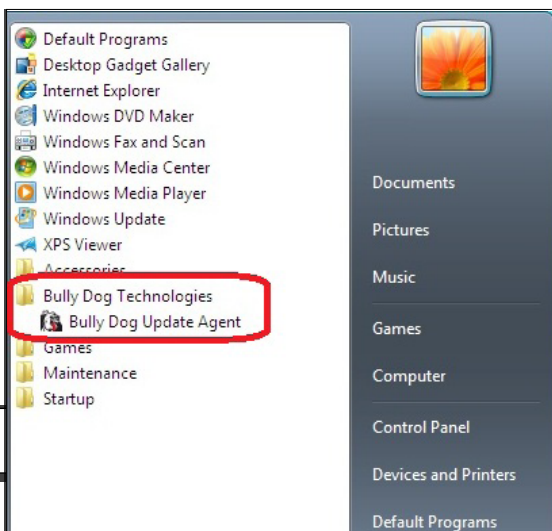
1. Connect the Micro SD card using a card reader.
- OR
2. Connect the GT with the Micro SD card installed by using a USB cable. Do not use the HDMI cable or the OBDII adapter plug to update the GT.
 3. Download and install the Update Agent application.
 - If it is already installed, skip to step 5. You can see if it is already installed by checking your Start Menu under All Programs. The Update Agent will be listed under the Bully Dog Technologies folder:



Windows XP



Windows Vista



Windows 7

Note: If you don't have the Update Agent installed see the next page for details on how to download and install it from the internet.



UPDATING THE GT

(DETAILED STEPS FOR WINDOWS)

The following instructions are intended for Microsoft Windows computers.

HOW TO INSTALL THE UPDATE AGENT:

1. [Click here](#) to download the Update Agent.
2. Save file to a known location on your computer.
3. Run program and let agent install.
4. To find agent, click Start Menu > All Programs > Bully Dog Technologies
5. Plug unit in and go through new hardware wizard.

- Save the file first, then run it. (If you try to run the file without saving, your computer will generate an error message).



- If you get pop-up messages asking for permission to install, click the buttons to let your computer finish installing the Update Agent.



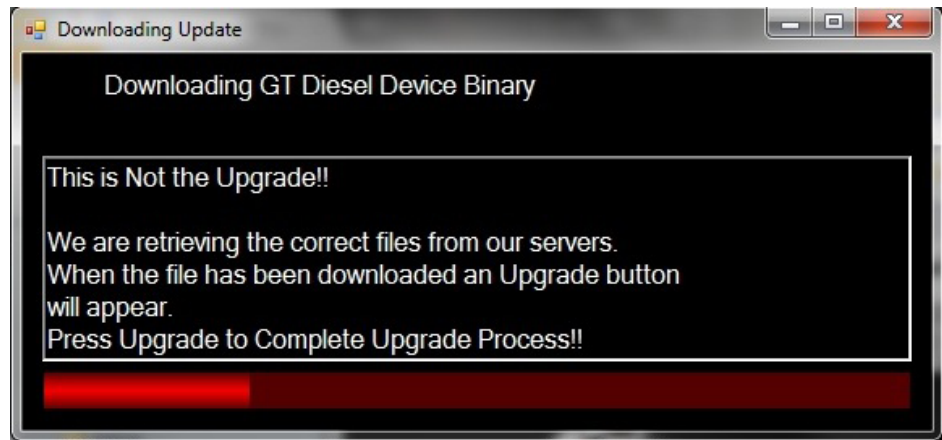
UPDATING THE GT

(DETAILED STEPS FOR WINDOWS)

5. Run the application.

- If you have just installed it, the Agent may already be running.
 - You can show the Update Agent by right-clicking the icon in the system tray at the bottom right corner of your screen, and then clicking **Show Agent**.
 - Or you can stop the previous instance of the Update Agent and open a new one – either option is a winner.
- If you have already installed the application in the past, it should be listed under Bully Dog Technologies in your computer's list of All Programs. Just double-click the Update Agent icon in that folder to let it start.

6. Let the Update Agent search and download available update files.



7. Click the Update Button and let it write the update to the SD card.



UPDATING THE GT

(DETAILED STEPS FOR WINDOWS)

8. NOTE: This step varies depending on how you have connected the Bully Dog to your computer.

- If you have the Micro SD card connected to the computer:



- Disconnect it from the computer and put it in the GT.
- Then turn the GT on by connecting it to a computer or to a vehicle and turning the key to the Run position.

- If you have the GT connected to the computer:

- Press the second key from the top on the left side to get out of USB mode.
- OR
- Disconnect the GT from the computer, plug it in to your vehicle, and turn the key to the Run position.



9. Go to the Main Menu on your GT.

10. Go to the bottom of the menu and choose Update GT Software.

- If the Update GT Software option is not available on the Main Menu:

- Choose Update GT Firmware.

OR

- Scroll to the top and choose Change Vehicle, then select your vehicle from the list.

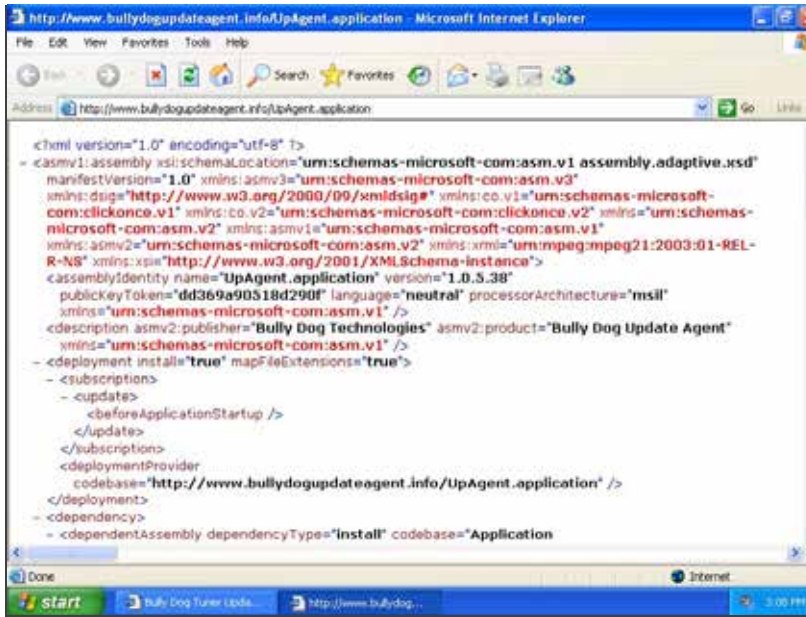
11. Confirm that you want to load the file.

12. Let the GT load the file and reboot. Do not disconnect it or turn it off during this part of the process.

The GT has now been updated!

TROUBLESHOOTING UPDATING PROBLEMS

The Update Agent Won't Install



Q. Why does my computer open a window full of weird symbols when I try to install the Update Agent?

A. Your computer is not up to date and you need to run Windows Update first. See pages 40-46 for more information about running Windows Update.

The Update Agent Won't Recognize my Micro SD card

Q. Why isn't the Update Agent recognizing that the Micro SD card is connected to my computer?

A. The SD card is missing an important file. You can get the file and fix the problem by following these steps:

1. Go to the Bully Dog website.
2. Click on the link for the Update Agent page.
3. Click on the GT Gas card file link.
4. Find the downloaded file on your computer and copy it to your SD card.
 - Your computer will most likely not be able to open this file. This is not a problem; all you need to do is copy the file to the SD card.
 - The name of the file is GTGIDF.bin
5. Restart the Update Agent application and it should recognize the SD card.



UPDATING YOUR GT

(DETAILED STEPS FOR APPLE)

1. Return your vehicle to stock. See pages 35-37 for detailed instructions on this process.
2. Connect your Micro SD card to your computer.
 - Connect the Micro SD card using a card reader.
 - OR
 - Connect the GT with the Micro SD card installed by using a USB cable. Do not use the HDMI cable to update the GT.
4. Go to the Bully Dog website and click on the link for Update Agent.
 - There are two locations for this link:
 - Under Quick Links, on the lower right side of the home page
 - Under Download, in the black toolbar on the upper right side of the home page.
5. At the bottom of the page, under the heading for MACINTOSH USERS ONLY, click the link for GT Gas. This will allow you to download the zipped file labeled GTGFiles.zip.
6. Find where your computer saved the file (it will most likely be in your Downloads folder).
7. Extract all the files in the GTGFiles.zip file.
8. Copy the contents of the extracted file directly onto your SD card.
9. Install the Micro SD card in your GT unit.
10. Connect your GT unit to your vehicle.
11. Choose the Update GT Software option from the Main Menu.
 - If the Update GT Software option is not available:
 - Choose Update GT Firmware.
 - OR
 - Scroll to the top of the Main Menu and choose Change Vehicle, then choose your vehicle from the list.
12. Confirm that you want the GT to load the file.
13. Let the GT finish loading the file and rebooting – be sure not to disconnect it or interrupt power in any other way during this part of the process.

The GT has now been updated!

PHYSICAL INSTALLATION

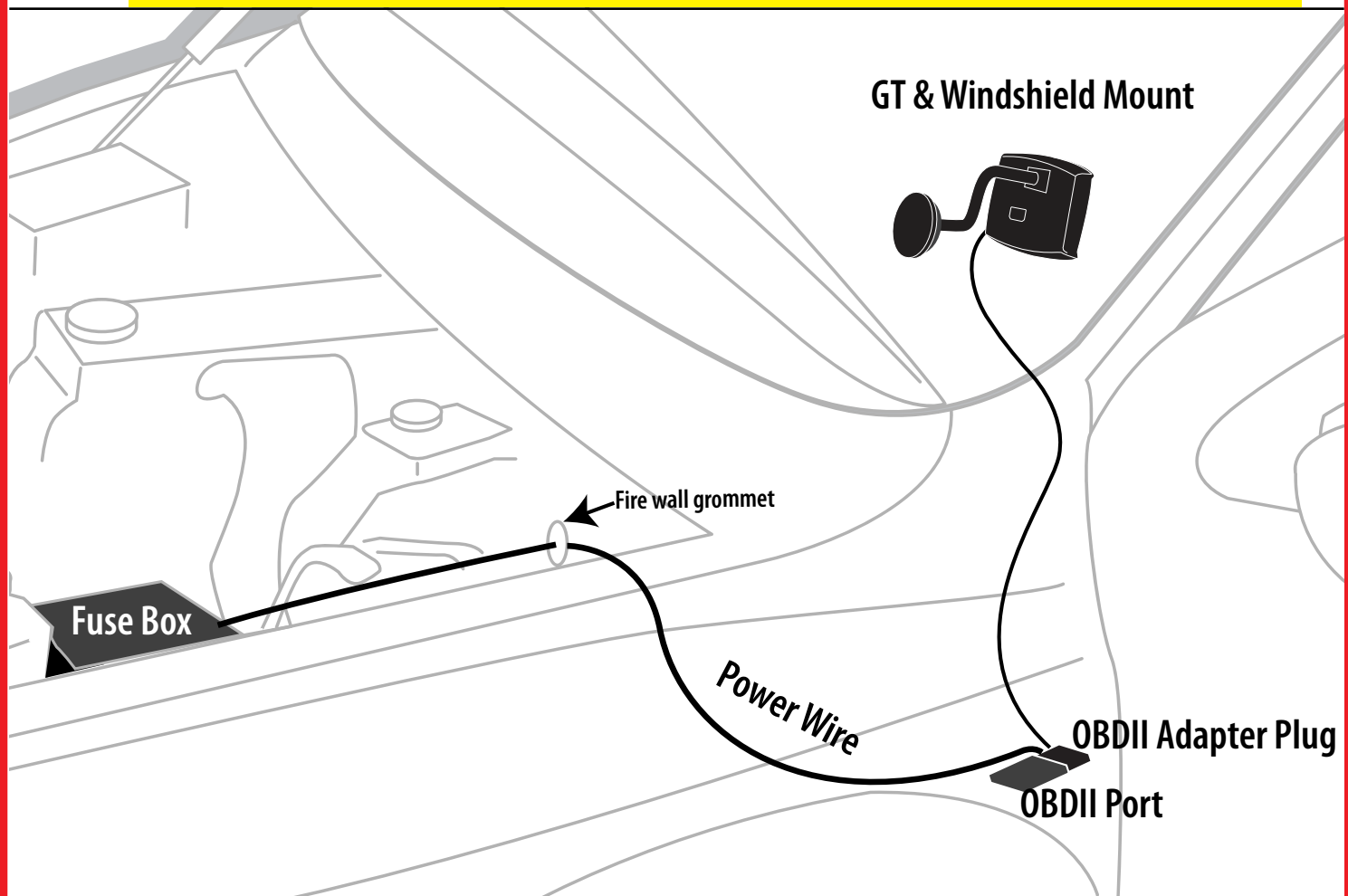
Be sure to check the list and description of included parts on pages 4-6.

Brief Preview

This is a quick list of the basic installation steps. You can find more specific information about each step in the next section.

1. Connect the OBDII adapter plug to the port under the dash.
2. Plug in the power cable to the fuse box and connect it to the adapter plug.
3. Run the HDMI cable under the dash.
4. Mount and connect the GT.

The illustration below shows how to install the power wire if there is no fuse box available inside the cab of the vehicle. If a fuse box is available inside the cab, there is no need to run the power wire through the firewall into the engine bay.

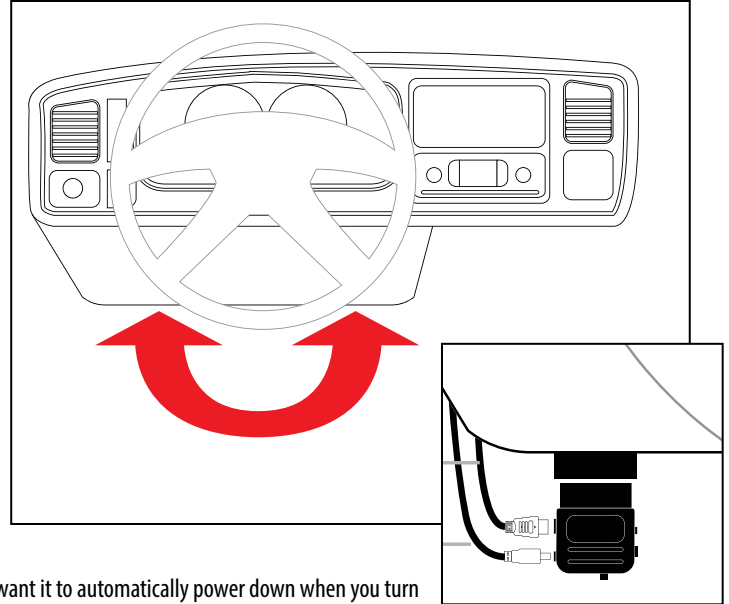


PHYSICAL INSTALLATION

Detailed Instructions

1. Connect The OBDII Adapter Plug to the OBDII Port. See page 6 for a detailed description of the different parts of the OBDII adapter plug.

- Find the OBDII port in your vehicle. As shown in the illustration, the specific location of the port can vary between different vehicles, but it is always somewhere under the driver's side dash. The OBDII port will have the same shape as the end of the adapter plug.
- Once you have found the port, simply connect the adapter plug to it.



2. Connect The Power Cable. The power cable is not really optional if you want to enjoy the originally designed functions of the GT. It is only optional under one of the following circumstances:

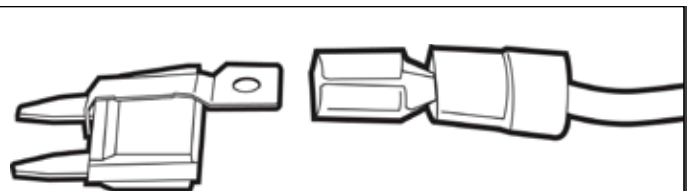
You do **not** want to keep the GT permanently installed and plan on disconnecting it when you are not actively using the unit.

You **want** the GT to remain on at all times, regardless of the effect that this could have on your car battery

You prefer physically switching the GT on and off and do not want it to automatically power down when you turn the key to the off position.

Otherwise, in order for the GT to work as originally designed, it is very important for the power cable to be installed as described below:

1. Locate an ignition fuse.
 - An ignition fuse is one that is controlled by the position of the key.
 - Sometimes we call this a "key-on" or "key-off" fuse.
 - The fuse that controls the front windshield wiper is usually perfect, but any fuse that turns off when the key is turned off will work just fine.
 - Every vehicle is different. There is no way to provide wiring diagrams for all vehicles. You will be able to find the information for your vehicle in the owner's manual or online.
 - Some vehicles have a fuse box inside the cab. If your vehicle does not have a fuse box inside the cab, you will need to locate the fire wall and connect the power cable to the fuse box under the hood.
2. Connect the power cable to the fuse.
 - You may have received a fuse tap with your GT. See below for an illustration and instructions on using the fuse tap to install the power cable.
 - You can also simply put the power cable into the fuse box along with the fuse that is normally installed in that location. See the diagram and picture for more information.
 - If you did not receive a fuse tap, but prefer to use one to install your power cable, you can purchase one at your local auto parts store. Be sure to ask for installation instructions if none are included with the fuse tap.



Using the Fuse Tap and Spade

1. Find and pull the fuse that you are going to use to insert the GT Power Cable.
2. Slip the fuse tap over the prong on the fuse.
3. Fit the spade over the fuse tap and crimp them together with pliers.
4. Put the tapped fuse back into the fuse box.

PHYSICAL INSTALLATION

Detailed Instructions (Continued)

3. Run the HDMI cable under the dash.

This step helps you install the HDMI cable in a way that is discreet, stylish, and that helps to protect the GT

1. Plug one end of the HDMI cable into the port on the OBDII adapter plug.
2. Run the middle of the cable up through the dash on the driver's side so that the end of the cable comes out near the A-pillar.
 - It may be necessary to temporarily remove the weather stripping and dash panel to successfully hide the HDMI cable under the dash.
3. Make sure that there is enough slack in the cable to connect the GT when it is in the mount.

4. Connect and Mount the GT

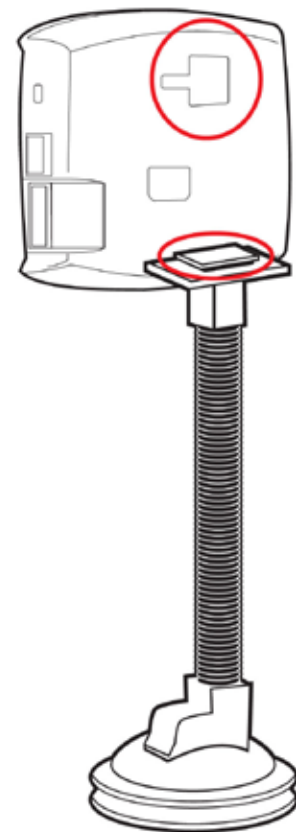
1. Install the mount that you have chosen. If you are using the Universal Windshield Mount included with the GT, see the installation instructions in the next section.
2. Connect the HDMI cable to the GT.
3. Secure the GT to the mount.

Using the Universal Windshield Mount

IMPORTANT NOTE: Safety is your first and most important responsibility as a driver. Safety is also your first and most important concern when placing your GT. Make sure the GT does not create blind spots or distract the driver.

1. Locate the T-shaped socket on the back of the GT.
2. Place the square top of the Universal Windshield Mount into the square part of the T-shaped socket on the GT.
3. Slide to the left to secure the GT to the mount.
4. Place the suction cup against the windshield and use the lever to secure the mount to the windshield.

You will find information about alternative mounting options on the following pages.



ADDITIONAL MOUNTING OPTIONS

Bully Dog has created alternative mounting solutions which will allow you to mount your GT in even more convenient locations.

RAM Mirror-Mate

Part Numbers: 31600 and 33600

The RAM Mirror-Mate mounting kit will allow you to mount your GT directly beneath your rearview mirror. This heavy-duty mounting solution provides easy and intuitive access to your GT without blocking the driver's view.



RAM Suction Cup Mounting Kit

Part Number: 30600

This kit is the best suction cup mount on the market. The amazing holding power will allow you to mount your GT to multiple surface materials in any vehicle – which means that you can try different places and find the best place for your GT to be at any time.

Pillar Mount Gauge Pods

Bully Dog also offers gauge pods, which will allow you to mount the GT on the pillar of your vehicle.

The gauge pods are vehicle specific, so you will need to get the part number that matches your vehicle make and year.



**BULLY
DOG**

INSTALLING THE TUNE

In order to enjoy additional horsepower and other advantages of tuning your vehicle, you need to use the Install Download feature.

The process is basically the same when you are installing, changing settings, or returning to stock.

CAUTION! This option actively reprograms the engine computer in your vehicle – if the process is interrupted because of poor preparation you will have problems which could prevent you from using the GT or even being able to drive your vehicle for a few days. In order to have the best installation experience possible, it is important to review the instructions and pay close attention to the preparation steps listed below:

Important Preparation Steps

Choosing an Appropriate Time and Place to Install

Do NOT install if you will need to use the vehicle to get somewhere soon.

DO set aside at least an hour for this part of installation.

Under optimal circumstances the installation can be completed in less than 30 minutes.

If you encounter any problems, you will need at least an hour to resolve the problem.

Do NOT install if the vehicle is in a remote location.

DO make sure that you have access to a phone and a computer with internet access.

DO update the GT online by using the Update Agent before you try to install.

You might need to connect to a computer to get special files from technical support if you encounter problems during the install.

Do NOT install if you do not have a way to contact technical support.

DO make sure that you can contact Bully Dog technical support.

Technical support is open Monday-Friday, 8 a.m. – 5 p.m., Mountain Standard Time.

If you decide to install on Friday evening and encounter problems, you might not be able to use your vehicle until you are able to contact technical support on Monday.

See page 47 for more information about contacting technical support.

Managing Other Electronics

DO turn off all factory installed electronics inside the vehicle. This includes:

Headlights, heater, air conditioning, stereo, DVD players, etc.

Failing to turn off all electronics can prevent a successful download.

DO disconnect additional electrical appliances. Remove any chargers or electrical devices connected to:

Cigarette lighters, USB ports, or other types of electrical outlets in the vehicle

DO disconnect any other aftermarket electronic device. This includes:

Trailer brakes, stereo, alarm, CB, remote start, DPF delete, Sirius/XM satellite radio, etc.

Any electrical device that was installed after the vehicle was released from the factory.

Disconnect these items from the fuse box, or other power connection. You do not have to completely physically uninstall them; just make sure they are not getting power.

Note: It is important to make sure that electrical devices are turned off or disconnected as described above during you are installing the GT tune to your vehicle. Once the download is installed, you can reconnect and turn on all of the electronics that you normally use.

IMPORTANT NOTE: It is not recommended to use the GT with any other electronic tuner designed to increase horsepower.



INSTALLING THE TUNE

Important Preparation Steps (Continued)

Make SURE that the Battery is Charged

DO make sure that your batteries are fully charged before beginning any download.

It is a good idea to have a battery charger ready to connect to your vehicle if the batteries begin to lose their charge while you are installing the download.

IMPORTANT NOTE: It is very important that the tuner is not interrupted while it is writing to your engine computer – if the batteries die and the tune is interrupted, it could prevent you from being able to start your vehicle.

Make SURE the Tuner is Ready

DO complete an online update with the Bully Dog Update Agent.

This is a free application available on the Bully Dog website.

This requires a computer with internet access.

See pages 18-25 for instructions on updating the GT.

DO make sure that the tune has not already been installed.

1. Go to the Main Menu on the GT.
2. Choose the Show Settings option.
3. Check what is showing next to Download

If the GT shows Installed

- Connect the GT to the original vehicle and uninstall the tune.

- If this cannot be done, contact technical support for a reset – there is a mandatory fee for this service. See page 39 for more information.

If the GT shows Not Installed you can continue with your preparations to install the download to your vehicle.

If the GT shows Recovery, contact technical support for further assistance. See page 47 for more information about contacting technical support.

INSTALLING THE TUNE

Removing Fuses

This step is vital for successful installation on some vehicles, but not required on others. The following pages include information about which fuses need to be pulled to allow the GT to install the tune to the engine computer on specific vehicles. If the fuses are not pulled, the tune will most likely freeze during the install process. Fuses can be replaced after the tune installation has been completed.

GMC/Chevrolet '99-'02 4.8/5.3/6.0/8.1 Liter Engines

Fuse Box Located Inside the Cab:

- #1 – SEO IGN (Special Eq. Options/Ignition)
- #16 – SEO ACCY (Special Eq. Options/Accessories)
- #29 – RD01 (Radio)
- #30 – RAP2 (Relay Power)

Fuse Box Located Under Hood:

- #60 – TBC (Body Computer)

GMC/Chevrolet '03-'06 4.8/5.3/6.0/8.1 Liter Engines

Fuse Box Located inside Cab:

- #16 – SEO ACCY (Special Eq. Options/Accessories)
- #17 – TBC 2B (Body Computer)
- #18 – TBC 2C (Body Computer)
- #20 – TBC ACCY (Body Computer)
- #23 – TBC 2A (Body Computer)

Fuse Box Located Under Hood:

- #16 – TBC BATT (Body Computer)
- #38 – TBC IGN1 (Body Computer)
- #50 – Radio
- #58 – INFO

GMC/Chevrolet '11-'13 6.0 Liter Trucks

- #15 – Body Control Module (BCM)
- #16 – Accessory Power Outlets
- #19 – Rear Seat Entertainment
- #20 – Ultrasonic Rear Parking Assist, Power Liftgate
- #22 – Driver Information Center (DIC)

Replace all fuses after the download is complete!



INSTALLING THE TUNE

1. Complete the Pre-install steps

- Update GT using Update Agent -pages 18-25.
- Physical Installation -pages 26-29.
- Install tune preparations -pages 30-32.

2. Turn your key to the Run position. (DO NOT start the engine)

3. Go to the Main Menu

4. Choose Install Download

5. Follow the instructions on your GT screen, which will include the following steps:

- You will need to turn your key to different positions and then press Continue.
Do NOT start the engine when turning the key to the Run position, or at any other time when you are installing the tune.
- You may be prompted with choices for certain settings like the speed limiter. Many of these are vehicle specific.
See page 16 for more information on these settings.
- If there is a problem or the GT displays an error message, do not change anything and contact technical support immediately.
See page 47 for more information about contacting technical support.

IMPORTANT NOTE: There are certain times when disconnecting or interrupting power to the GT can interfere with the engine computer programming process. If the engine write is interrupted, the programming on your engine computer can be corrupted. This can cause your vehicle not to start and possibly even require the ECM to be replaced. The illustration below is an example of one of the times during the installation when it is vital that the power is not disturbed.



Note: There may be times when our technical support team will instruct you to disconnect the tuner even though the screen tells you not to unplug.

6. The GT will indicate when it is finished & then reboot to the Main Gauge Display

- Once the tuner has rebooted to the Main Gauge Display, you can start and use your vehicle like normal.

Troubleshooting Installation Problems

Error During Installation

1. Make note of the code number and all information displayed on the screen.
 2. Disconnect and update your GT. See page pages 18-25 for instructions.
 3. Make sure that you have disconnected all aftermarket electronics and completed all of the important preparation steps. See pages 30-32 for more information.
 4. Try to install the download again.
 5. If the error occurs again, contact technical support. See page 47 for more information about contacting technical support.
- This troubleshooting procedure applies to all errors, including the following code numbers: 0, 141, 325 (on a 2011 Duramax), 358, 393

Gets Stuck on "Turn Key to Run"

1. Make sure that the key is turned as far as possible without turning the engine on.
2. Turn the key to the Off position, then turn it back to the On position.
3. Jiggle the key.
4. Disconnect the GT.
5. Update if this has not already been done. See pages 18-25 for more information.
6. Reconnect the GT.
7. Make sure that all aftermarket electronics are disconnected from the vehicle.
8. Pull fuses if necessary for your vehicle. See page 32 for more information.
9. Try installing a battery charger to maintain voltage. (This step can solve many problems, even if your battery is new and fully charged). See page 31 for more information.
10. Try to install the download again.
11. If the error occurs again, contact technical support. See page 47 for more information about contacting technical support.

GT Freezes in the Middle of the Download.

Try installing a battery charger to maintain voltage. (This step can solve many problems, even if your battery is new and fully charged). See page 31 for more information.



UNINSTALLING - RETURNING TO STOCK

What does this mean?

“Uninstalling the tune” and “returning to stock” are different ways to describe the same thing: writing the original (stock) information to the engine computer so it uses the settings that it used before you installed your GT. Doing this also sends a signal to the GT to let it know that it is no longer installed on a vehicle, which will allow you to install the tune at a later time. The GT will not allow you to install if the tune has already been installed on a vehicle.

When to Return to Stock

You should return to stock in ALL of the following situations:

- EVERY TIME you take your vehicle in for any type of service. It is a very common practice for the engine computer to be “flashed” (re-programmed) during all types of service, even routine maintenance. If the tune from the GT is still installed when the engine computer is flashed, it can cause problems when you want to use your GT in the future. See page 37 for more information.
- If you want to install the GT on a different vehicle. For instance
 - If you have a second vehicle and want to try the GT on it. The GT can only be used on one vehicle at a time.
 - If you want to let a friend try the GT.
 - If you have decided to sell the GT to someone else.
- If the battery is having problems and could possibly go dead. Make sure to connect a battery charger while returning to stock to prevent any complications that can be caused by interrupting the GT while it is returning your vehicle to stock. See page 31 for more information.
- If you need to disconnect the battery for any reason.

IMPORTANT NOTE: If you do not return your vehicle to stock, you may have to call in to technical support to have your GT reset. There is a mandatory fee for this service. See pages 39 and 47 for more information about the reset fee and contacting technical support.

How to Return to Stock

There are two ways to return your vehicle to stock.

IMPORTANT NOTE: Both methods are very similar to installing the tune to your vehicle, so you should make the same preparations and take the same precautions. This means choosing a good time and place, making sure the battery is charged, pulling fuses (if necessary), disconnecting aftermarket electronics, etc. See pages 30-32 for more information.

IMPORTANT NOTE: There are certain times when disconnecting or interrupting power to the GT can interfere with the engine computer programming process. If the engine write is interrupted, the programming on your engine computer can be corrupted. This can cause your vehicle not to start and possibly even require the ECM to be replaced.

This illustration is an example of one of the times during the uninstallation when it is vital that the power is not interrupted and the tuner is not disconnected from the vehicle.



Note: There may be times when our technical support team will instruct you to disconnect the tuner even though the screen tells you not to unplug.

Uninstall Download

1. Choose the Uninstall Download option from the Main Menu.
2. Follow the instructions shown on the GT screen.
3. When the GT gives you a message that the tune has been removed, disconnect the GT from your vehicle.
4. Check to make sure the tune has been removed from your vehicle. See page 35 for instructions on how to do this.
5. Test your vehicle to make sure that it starts. If not, see the troubleshooting FAQ on page 49.

If this option is not listed on the Main Menu, use the option described on the next page.

Install Download > Return to Stock

1. Choose the Install Download option from the Main Menu.
2. Follow the instructions shown on the GT screen.
3. Choose "Return to Stock" when the GT gives you the option between "Change Settings" or "Return to Stock".
4. Follow the instructions shown on the GT screen.
5. Check to make sure the tune has been removed from your vehicle. See page 37 for instructions on how to do this.
6. Test your vehicle to make sure that it starts. If not, see the troubleshooting FAQ on page 49.



UNINSTALLING - RETURNING TO STOCK

What if I Don't Return to Stock?

Here are some common examples:

- If you take your vehicle in for service, they will “flash” the engine computer. Even if you ask them not to, any dealer or shop will do this automatically – it is standard procedure for any vehicle they see and they really can't help themselves from following this ingrained habit. What they are doing is actually writing an updated file over any information that is currently saved in your engine computer. This includes the tune from your GT, so basically the tune is no longer installed and you will not be able to use the power level settings or any other options – but the GT doesn't know that, it still thinks that the tune is saved to your engine computer. Unless you go through the uninstall process with your GT, it will still show as installed and will not allow you reload the tune on your vehicle or on any other vehicle. The only way to resolve this problem is to contact technical support and have the GT reset – there is a mandatory fee for this service. See page 39 for more information about the reset and fee.
- If you sell or trade-in your vehicle you will not be able to install your GT on another one without calling technical support to have the GT reset. See page 39 for more information about the required fee for the reset service.
- If you sell the GT to another person without uninstalling the tune from your vehicle first, they will not be able to use it. You will probably have negative consequences like an upset buyer, having to refund the purchase price or cover the cost of a reset, a negative review, and bad karma. See page 39 for more information about resetting the GT and the mandatory fee.

By now, you may have noticed a pattern: if you do not return your vehicle to stock and something happens to your engine computer, you will need to call and pay the fee in order to have the GT reset. Page 39 has more information about the reset process and the required fee.

How Do I Know if the GT is (Still) Installed?

There are two ways to check if the tune is currently installed:

Main Screen

1. Look at the lower right corner of the main display screen.
2. If there is a box that reads “Power level setting not available until download is installed” the tune is not installed.
 - If there is anything else in this part of the main screen, the tune is probably installed. You can double check by using the method described below.

Show Settings Screen

1. Go to the Main Menu.
2. Scroll down.
3. Choose Show Settings.
4. Check to see what the GT shows next to “Download”.
5. If it shows:
 - Installed – the tune is still loaded on the engine computer.
 - Not Installed – the tune has been uninstalled and the vehicle is returned to stock.
 - Recovery – there is a problem and you should contact technical support. See page 47 for more information.

MORE INFORMATION

ARB EO Sticker Placement

CALIFORNIA EMISSIONS INFORMATION

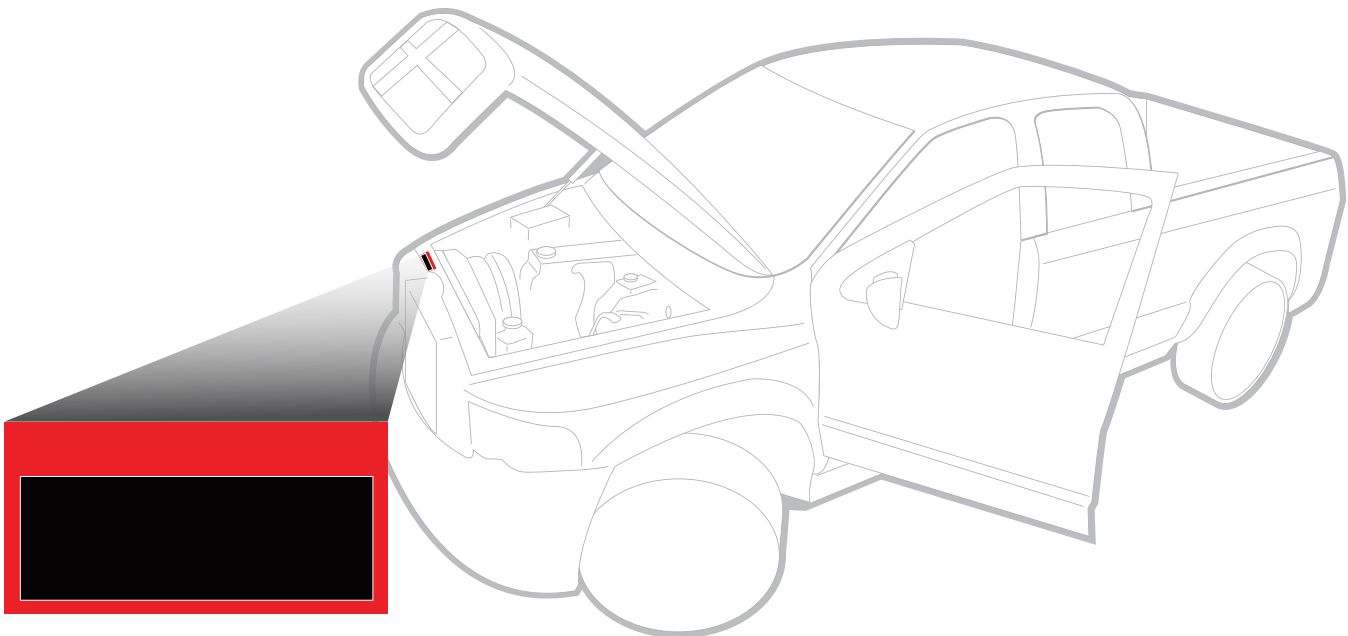
Vehicles registered in California that have this product installed are required to have an ARB E.O. sticker in place to pass California smog checks. The ARB E.O. sticker is included in the package with new 50 State Legal GT Gas units and should be installed under the hood in an easily visible location.

This sticker is meant to aid in passing a California smog check; failure to install the sticker may result in failing the smog check.

If your ARB E.O. sticker has been lost another sticker can be purchased by contacting our customer service department.

STICKER PLACEMENT

The sticker must be placed, or your vehicle risks failing its smog check. Please refer to this diagram for proper placement of your ARB E.O. sticker.



MORE INFORMATION

Changing the Power Level

The power level tunes on the GT gas are based on the octane of the fuel being run in the vehicle. Unlike the GT diesel, this option cannot be changed On The Fly (OTF), because it is impossible to change the type of fuel being used while you are driving.

There are some times when this setting does need to be changed, like when filling the tank with a different octane than previously used before. Complete the following steps to change the power level tune setting:

1. Make the same preparations and take the same precautions as when you initially installed the tune. See pages 34-36 for more information.
2. Choose Install Download from the Main Menu.
3. Follow the onscreen instructions.
4. Choose Change Vehicle Settings when you are prompted to choose between that option and "Return to Stock".
5. Continue following the onscreen instructions until the GT indicates that the process is complete.

IMPORTANT NOTE: This option actively reprograms the tune on your vehicle's engine computer. There are certain times when disconnecting or interrupting power to the GT can interfere with the engine computer programming process. If the engine write is interrupted, the programming on your engine computer can be corrupted. This can cause your vehicle not to start and possibly even require the ECM to be replaced.

The illustration below is an example of one of the times during the installation when it is vital that the power is not interrupted and the tuner is not disconnected from the vehicle:

Reset Fee

Why is This Policy in Place?

In the past, our technical support department has been flooded with people needing to reset their tuners. Because of this, we were not able to support the other people who needed help. The extra calls were coming for two different reasons:

1. Despite our best attempts to educate customers about the importance of uninstalling the tune before selling their vehicle or having it serviced, people did not remember or did not take seriously the requirement of returning their vehicle to stock and were calling in repeatedly.
2. Some dishonest people were installing the tune on multiple vehicles and calling in to have the unit reset in between each tune. The tuners are designed to only be installed on one vehicle at a time.

Once the policy for the reset fee was created, the number of calls to request tuner resets was significantly reduced and we were able to improve our support to everybody.

The reset process is relatively simple and a technician can help you complete the reset over the phone. See page 47 for more information about contacting technical support.



Performance Testing Software

This software allows you to download saved Performance Testing data from your GT (see page 12 for more information) to your computer and display the information as a graph for easy analysis.

You will be able to get graphs and raw Excel data for: speed, RPM, horsepower, and torque. You can print drag racing time slips, save and rename tests, and download up to 20 tests from your GT at one time.

MORE INFORMATION

50 State GT GAS

40410

Windows Update

Windows XP

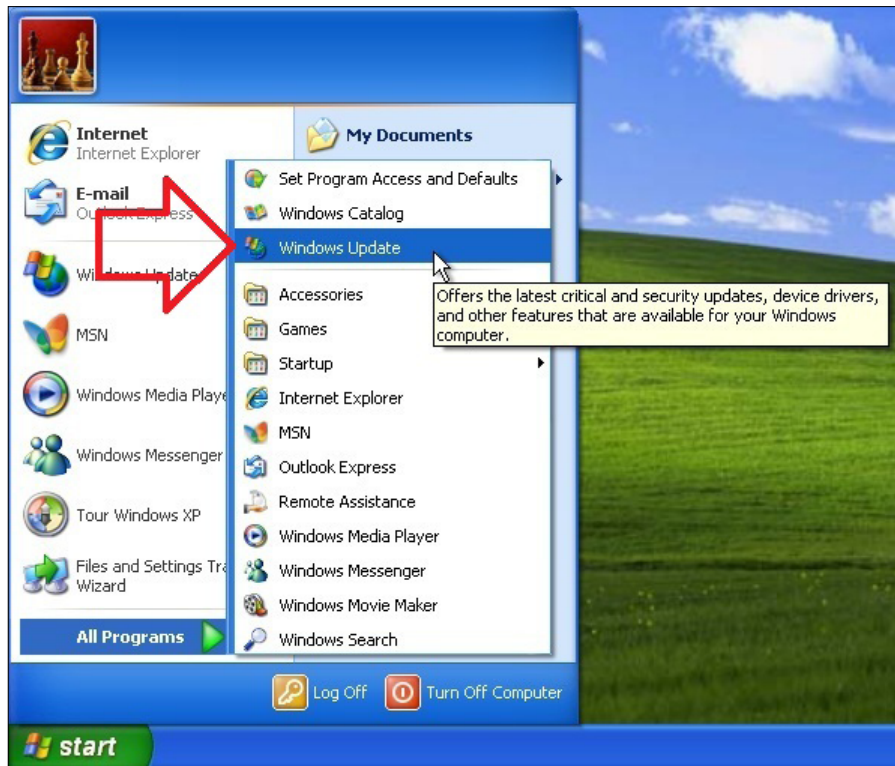
1. Click the **Start** button.



2. Click **All Programs**



3. Click **Windows Update**



4. Windows Update will check to see if you have the current version of the updating software:



MORE INFORMATION

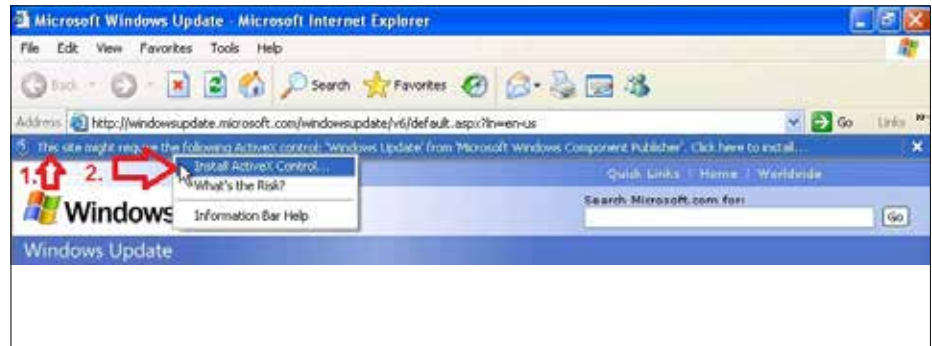
Windows Update (continued)

Windows XP

5. If your computer doesn't have the most recent update software, your browser will display a pop-up bar like the one shown below:

If your computer shows that message, click on the bar and then click **Install ActiveX Control**:

If your computer doesn't show that message, skip to step 9.



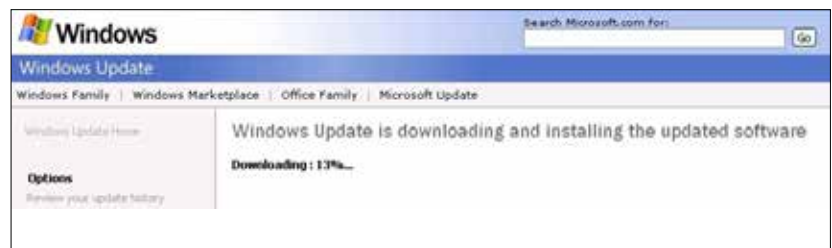
6. When the Internet Explorer Security Warning pops up, click **Install**:



7. Click the **Install Now** button.



8. Windows will then automatically download and install the latest Update Software.



MORE INFORMATION

Windows Update (continued)

Windows XP

9. At this point, you have two choices:

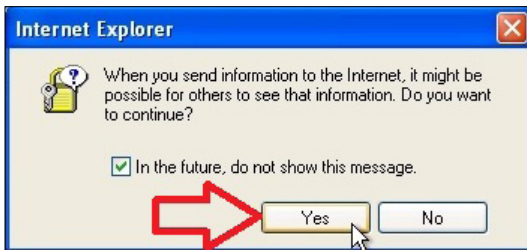
- **Express:** Choose this option if you prefer an automatic update and have the time to wait for all of the updates to finish downloading and installing. Depending on how many updates are required, this could take several hours. It is also likely that you will have to restart your computer in the middle of the process and may even have to run the Express Update more than once before your computer is completely up to date.
- **Custom:** Choose this option if you prefer to manually locate and install the update that your computer needs to be able to install and run the Bully Dog Update Agent.

NOTE: Because the Express update is relatively automated and quite time consuming, these instructions will only show you how to update using the Custom option. Either option will work; however, some of the updates completed during the Express update cannot be uninstalled, so you should be sure before choosing that option.

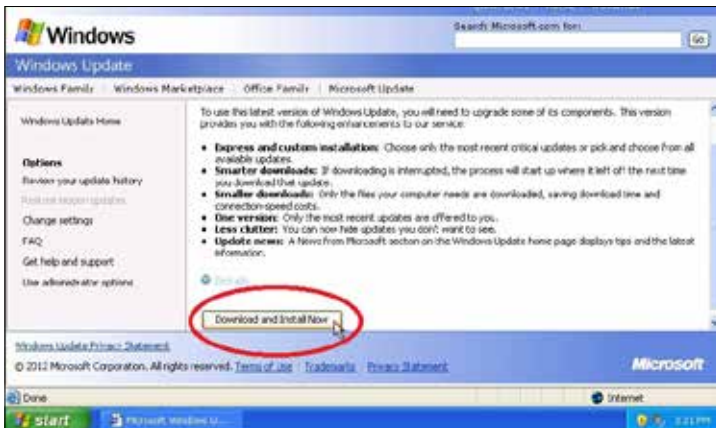
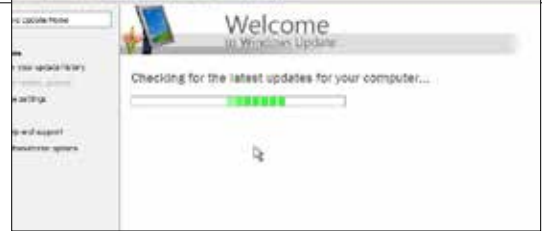


10. Windows will check your computer for updates:

NOTE that this could take several seconds or several minutes



Your computer might generate an Internet Explorer pop up message about information and privacy. Click **Yes**. (You might also want to check the box as shown in the picture to prevent your computer from showing the pop up again.)



11. Your computer might prompt you to upgrade some components of Windows Update. If you see the screen below, click **Download and Install Now**, as shown below. If your computer does not display this screen, skip to step 14.

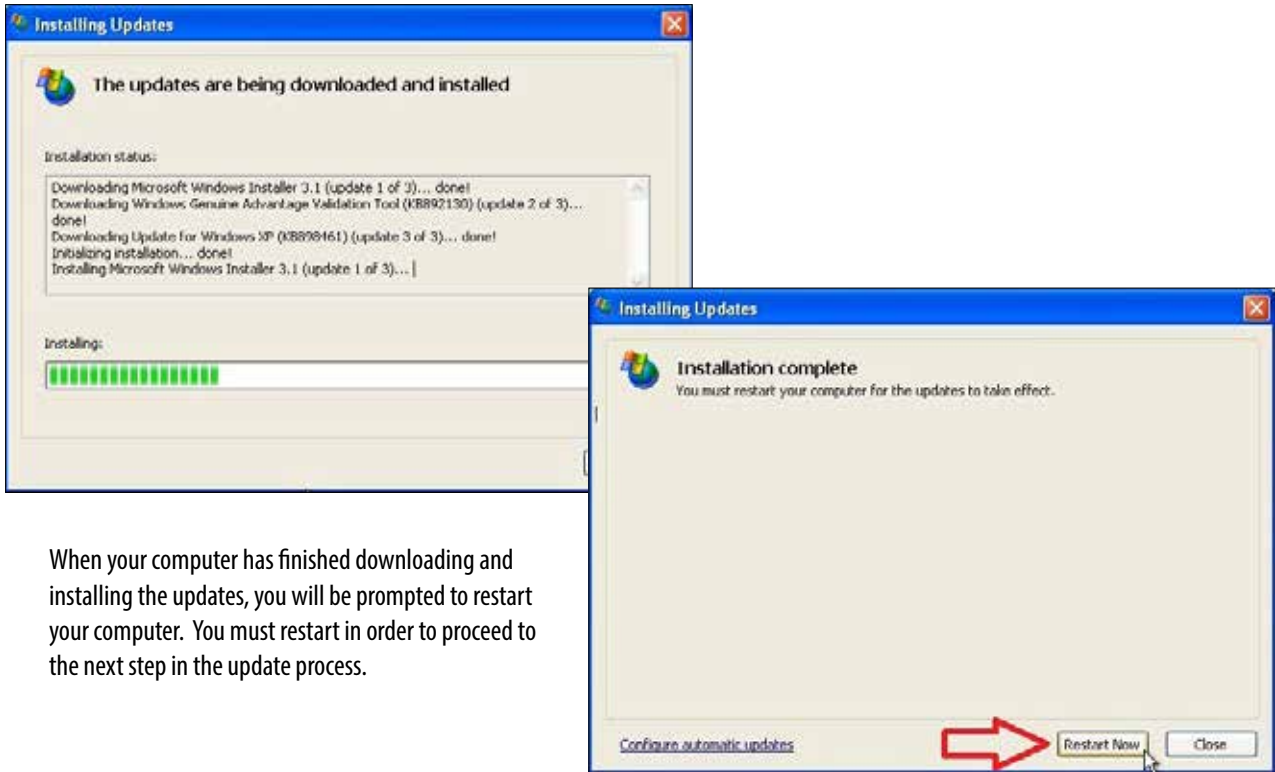


MORE INFORMATION

Windows Update (continued)

Windows XP

12. Your computer will then download and install the updates for the Windows Update software.



When your computer has finished downloading and installing the updates, you will be prompted to restart your computer. You must restart in order to proceed to the next step in the update process.

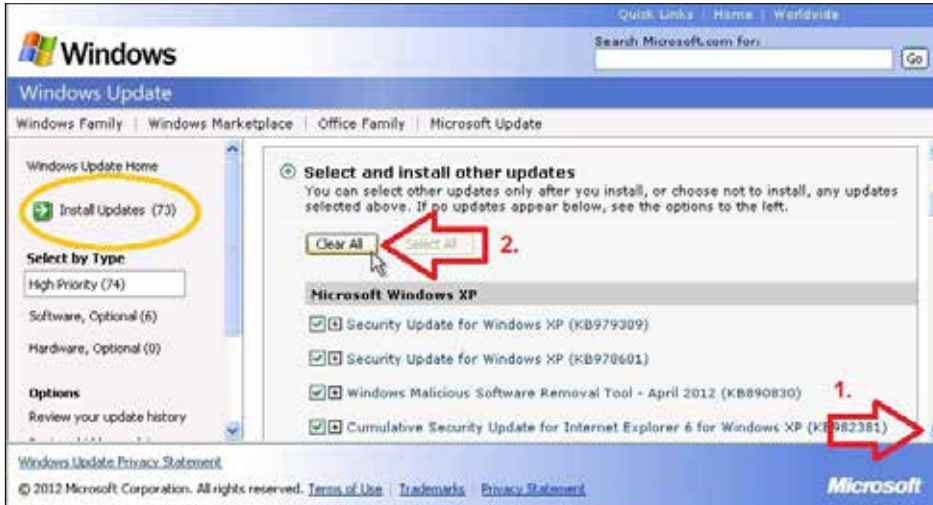
13. Once your computer has restarted, repeat steps 1,2,3, and 9 (open Windows Update and click Custom).



MORE INFORMATION

Windows Update (continued)

Windows XP



14. After checking for the latest updates for your computer, Windows Update will display a list of updates that are available. First, scroll down and clear any of the High Priority updates that may already be selected.



15. Once you have cleared the other updates, click on **Software, Optional**.



16. Click the box to select the **Microsoft .NET Framework 3.5 Service Pack 1 and .NET Framework 3.5 Family Update (KB951847) x86**.

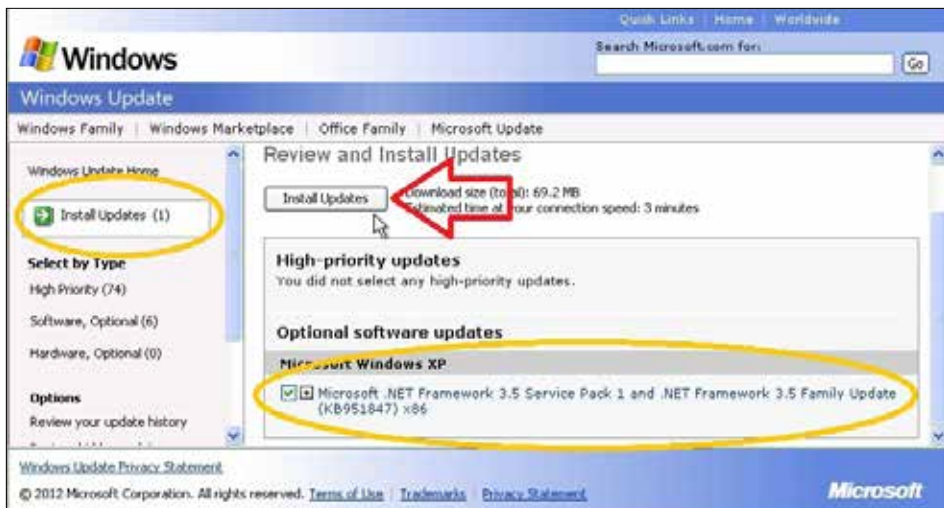
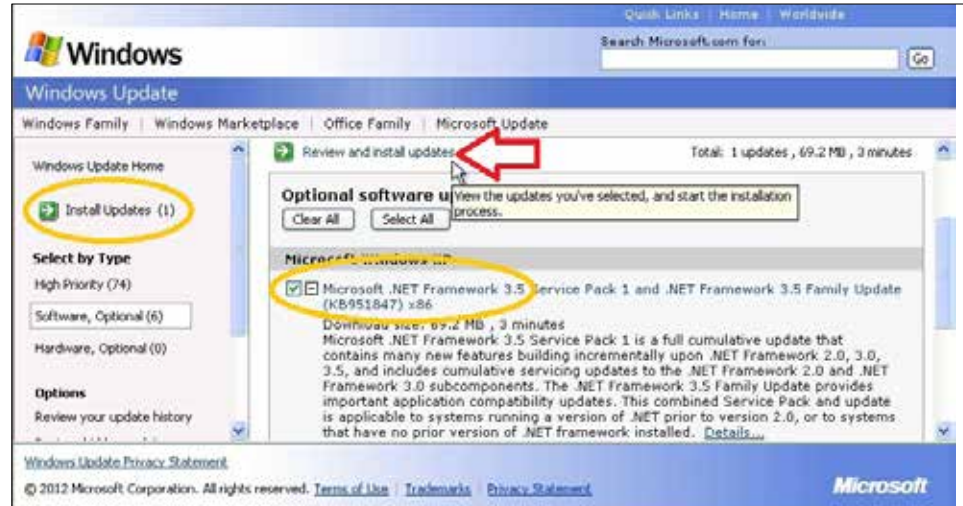


MORE INFORMATION

Windows Update (continued)

Windows XP

17. Once the .NET Framework 3.5 Service Pack is selected, click on **Review and Install Updates**.

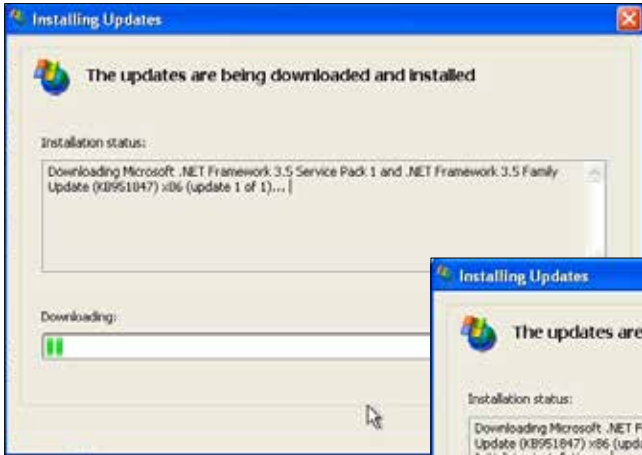


18. Make sure that the .NET Framework is the only update selected, then click **Install Updates**.

MORE INFORMATION

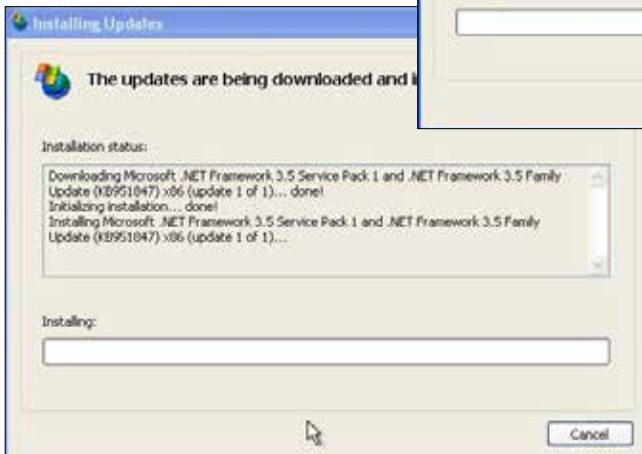
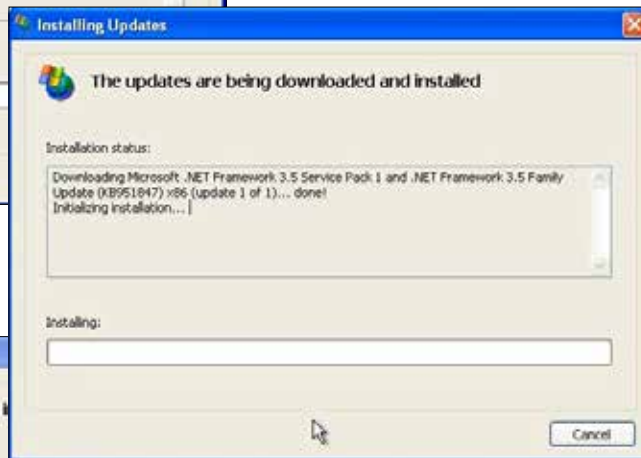
Windows Update (continued)

Windows XP



19. Windows will download the .NET Framework 3.5 Service Pack update.

Windows will also automatically initialize the installation of the update. This step could take a few minutes and it might seem like your computer is stuck, but this is normal and your computer will continue the process automatically when it is ready.



Then, your computer will begin installing the update. Again, this process can take several minutes to get started.

Eventually, your computer will move forward with installing the .NET Framework update.

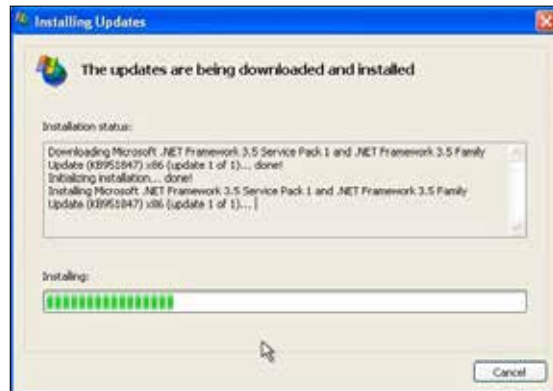
20. Once the .NET installation is complete, click **Restart Now**.



21. Once your computer has restarted, the update process is Complete!

You can now install and run the Bully Dog Update Agent and update your GT.

For more information about updating your GT, see pages 18-24.



CONTACTING TECHNICAL SUPPORT

Technical Support is open Monday-Friday, 8 a.m. – 5 p.m., Mountain Standard Time.

The phone number to contact technical support is (940)783-9915.

You should have all of the following items available when contacting technical support:

- Your GT tuner
- Your vehicle
- A computer with internet access

USB MODE

When you connect your GT to your computer via a USB cable, it enters USB Mode.

In order to use the Update Agent, keep the GT in USB Mode.

If you want to use your computer to power the GT and allow you to access some of the GT's functions when it is not connected to your vehicle, you can Abort USB Mode. In order to Abort USB Mode, press the second key from the top on the left side, as shown in the picture below:



MORE INFORMATION

Pyrometer Calibration

What is Pyrometer Calibration?

Pyro calibration is a way to find the best temperature to use for the GT temperature warning setting for your vehicle. This will help you prevent heat damage to your engine.

How to Calibrate Your Pyrometer

1. Return your truck to stock by uninstalling the tune. See pages 39-41 for more information.
2. Find a steep hill with a long road and a high speed limit.
3. Wait for a hot day.
4. Set up a heavy load on your vehicle.
5. Haul the load to the top of the hill.
6. Check the pyrometer temperature.
7. Add 150°F.
8. Change the temperature warning setting under Main Menu > Vehicle Setup > Set Warning Levels.



FAQS/TROUBLESHOOTING

My GT Won't Turn Off

Q. I have turned my vehicle off and removed the key – everything else has turned off. Why won't my GT turn off?

A. The power switch on the OBDII adapter plug is in the "wrong" position. If you want the GT to turn on and off along with the rest of your vehicle, you will need to make sure that the power switch is in the "correct" position and that the power cable is installed correctly. See page 27 for more information about installing the power cable.

My Vehicle Won't Start after I installed the Download

Q. My vehicle won't start after I installed the download, what happened and how do I fix this?

A. The GT encountered a problem when it was writing to the engine computer. Follow these steps to resolve the problem:

1. Return the vehicle to stock. See page pages 35-37 for more information about this step. Test to see if the engine starts.
2. Update the GT. See pages 18-25. for more information about this step.
3. Install the download again. Test to see if the engine starts.
4. Contact technical support if the problem persists. See page 47 for more information about contacting technical support.

My Vehicle Won't Start after Returning to Stock

Q. My vehicle won't start after I uninstalled the tune. How do I fix this?

A. Follow these steps to get your truck running with the tune uninstalled:

1. Make sure that you have completed all of the preparation steps on pages 30 .
2. Go to the Main Menu on the GT.
3. Scroll down and choose the Show Settings Option.
4. Check what the GT is showing next to Download.
 - Recovery: go to the next step.
 - Installed or Not Installed: Contact technical support – see page 47 for more information about contacting technical support.
5. Go back to the Main Menu
6. Choose the Install Download option
7. Confirm that you want to complete the Recovery.
8. Follow the onscreen instructions.
9. Once the recovery is complete, try to start your vehicle.
10. If your vehicle still will not start, contact technical support – see page 47 for more information about contacting technical support.