



# T2 3G

## GPS Tracker Installation Guide

V1:01/05/2016

## Legal Notice



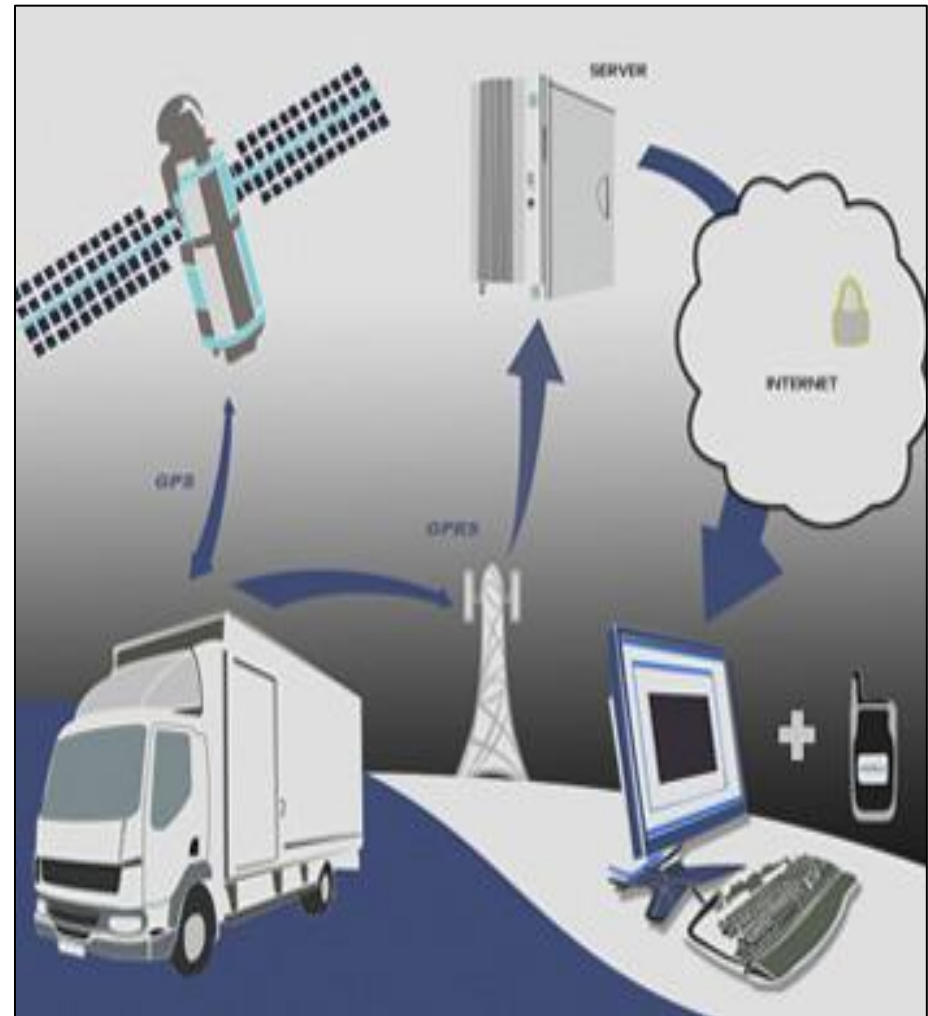
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# GPS Overview



- T2 3G is a space based radio positioning system which provides users with highly accurate position, velocity, and time data.
- A GPS position may be determined if the position of each satellite and the distance from the satellite to the user is known.
- **Four satellites are needed** to determine a three dimensional fix. (lat, long, and altitude)
- Optimum GPS antenna placement will provide a clear view of the sky. (360 degrees and the horizon)
- Metal and hard materials will block GPS reception and must be avoided when installing the T2 3G tracking devices.



## Caution



### **Vehicles equipped with air bags**

An air bag inflates with great force.

*Do not place objects, including this device, in the area over the air bag or in the air bag deployment area.*

Serious injury could result if in-vehicle wireless equipment is incorrectly installed and the air bag inflates.



## Caution Continued



The T2 3G units must be mounted in a secure and hidden location to deter driver tampering.

**Note: please observe recommendations made on following pages for best places to fit.**

When mounting the T2 3G Unit, find a suitable location that will not interfere with the safe operation of the vehicle (e.g., braking, clutch operation, or other electronic equipment).

The T2 3G unit must be secured in the vehicle. Use cable tie and or double sided tape to secure the unit is recommended, T2 3G units needs to be firmly fixed.



The T2 3G Units must be mounted at least 20cm away from any transmitting antenna (E.g., Radio)

### **Do Not** Mount the T2 3G Units :

- To Air Lines or any vehicle Canbus cabling.
- In direct exposure to the elements
- In excessive heat areas (exhaust Manifolds, etc.)
- In excessive cold areas (refrigeration units)
- In high vibration areas (engine compartments, transmission)
- Near corrosive fluids and gases (acids, petroleum)
- In direct exposure to water
- In areas where excessive dust is present

# Key Features

## T2 3G



### T2 3G – GPS Tracker

- Internal 450mAh Back up / rechargeable battery
- Remote Engine disable
- Remote Microphone listening
- Self Contained antennas
- 12V -24V Operation



# Power Requirements T2 3G



The **T2 3G** unit requires 3 connections to the vehicle's electrical system + Relay for remote Engine Cut-off

- Constant +12/24VDC Power connects to the **RED wire** of the power harness, fused with a 2amp fuse.  
Refers to a power source wire that always supplies +12/24VDC
- Accessory Power connects to the **ORANGE** of the power harness.  
Refers to a Key controlled power source that has +12/24VDC in the Accessory position. Do not connect to Ignition.
- Ground (-12/24VDC) connects to the **BLACK wire** of the power harness.
- Relay (86) for Remote Engine Cutoff ( see following page) **YELLOW** wire

All power connections must be made “wire to wire” secured with solder.

All power connections must be insulated with 3M Super 33+ electrical tape (good quality).

Power Connections will meet aftermarket electronics industry installation practices.

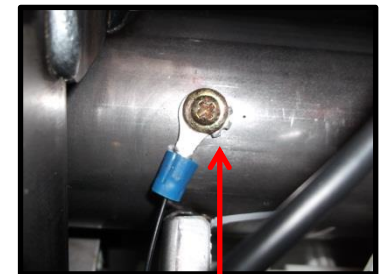
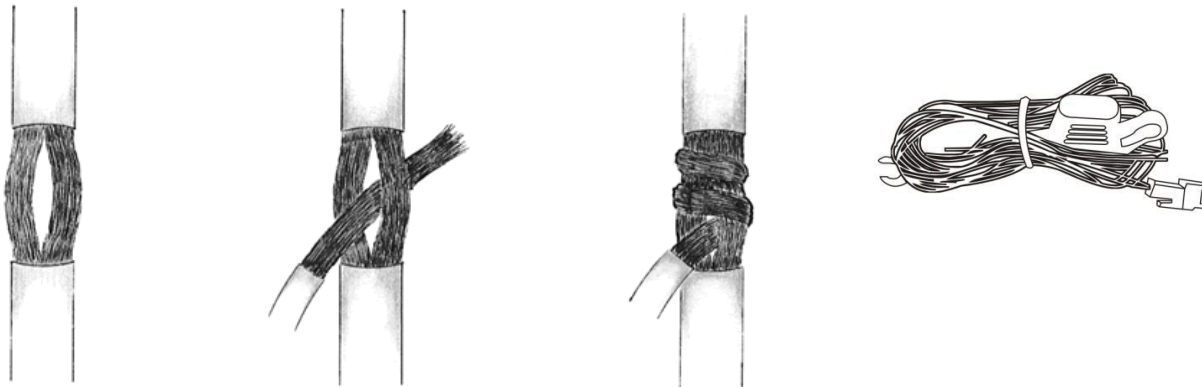


Do not power up device before Installing SIM card – doing so may result in product failure

# Connecting T2 3G



- Strip the insulation back and connect the **Red** from the T2 3G Power harness to Constant Power and wire using the Poke and wrap technique (See below). Solder the connection.
- Do same for the **ORANGE** wire from the T2 3G power harness to Accessory.
- Strip the wire that you will connect the T2 3G + wire to and spread the wire apart and insert the T2 3G + wire. Wrap the wire and solder the connection. Be sure to use electrical tape to cover the soldered wire. You should also use a Cable tie around the electrical tape to ensure that the connection is secure.
- Crimp a ring terminal at the end of the **black** wire coming from the T2 3G power harness. Connect it directly to the vehicle's chassis via an existing bolt or self tapping screw. A common grounding area would be at the driver's kick panel. Scrape off any paint at the point of grounding to ensure a good connection if required.



Ground Screw and star washer.

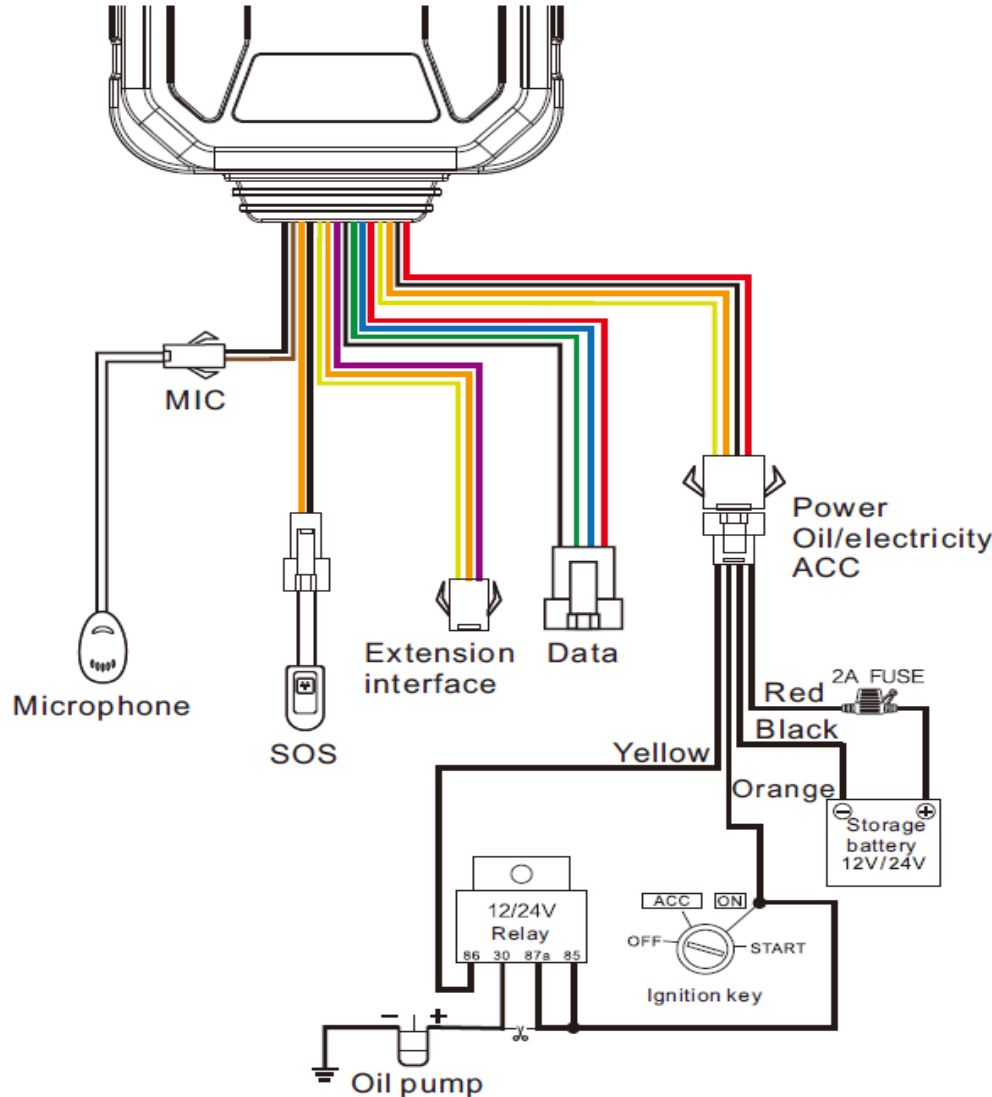
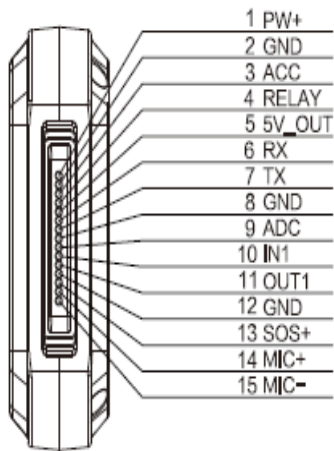


# Connecting T2 3G- Extras



## T2 3G- Extras

- Engine cut-off
- SOS Panic button
- Microphone



### ! CAUTION

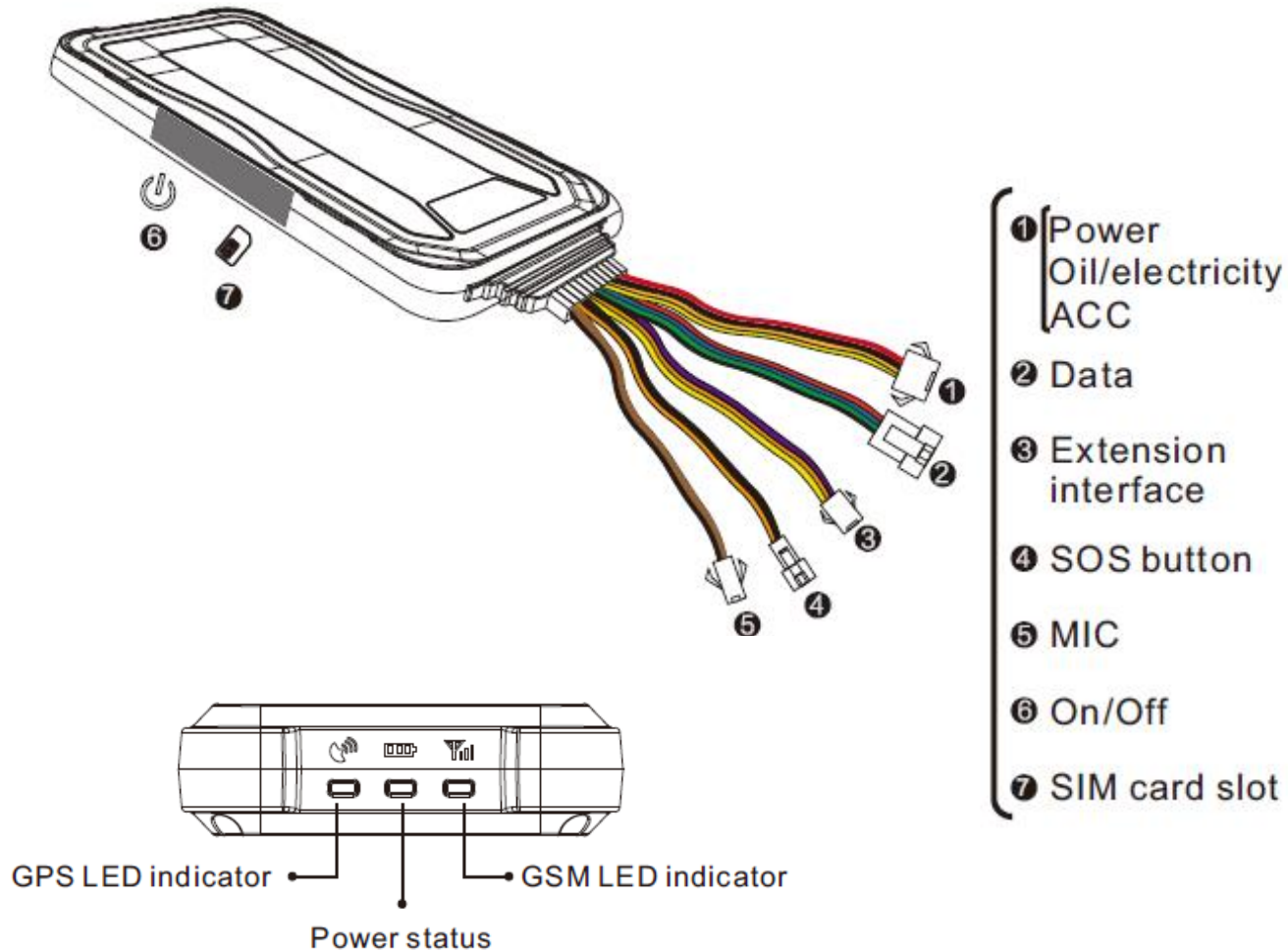
- Engine cut-off  
Wire between fuel pump / Ignition or Starter motor.
- Recommended Ignition or Start motor cut off
- Engine disable can only be activated remotely below 20kms or stationary.

# Connecting T2 3G – Extras Continued



Line	Color		Description	Definition
1	Red	PW+	12V/24V car battery positive	
2	Black	GND	12V/24V car battery negative	
3	Orange	ACC	ACC ignition	
4	Yellow	RELAY	Relay	
5	Red	5V-OUT	External power supply	
6	Blue	RX	Data receiving / backup interface	
7	Green	TX	Data sending/ backup interface	
8	Black	GND	Ground(Negative eletrode)	
9	Purple	ADC	Extended Interface	
10	Orange	In1		
11	Yellow	OUT1		
12	Black	GND	SOS button	
13	Orange	SOS+		
14	Brown	MIC+	Microphone	
15	Black	MIC-		

# T2 3G LED's



# T2 LED's

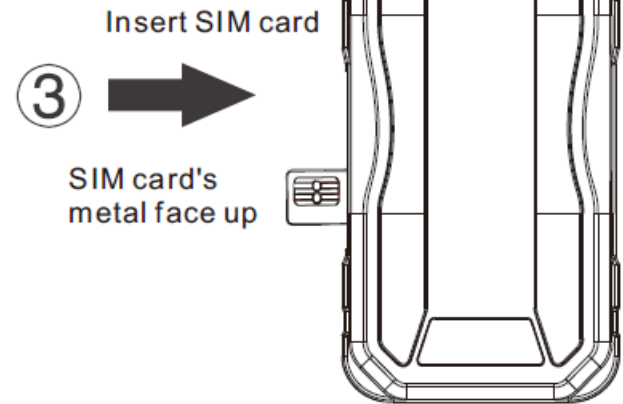
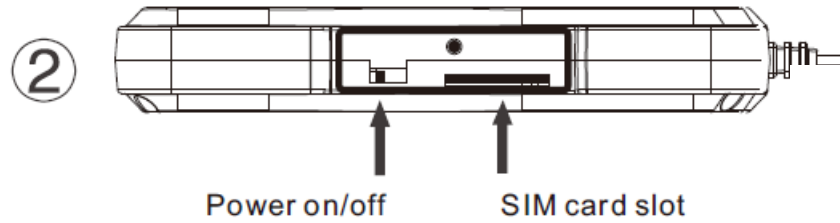
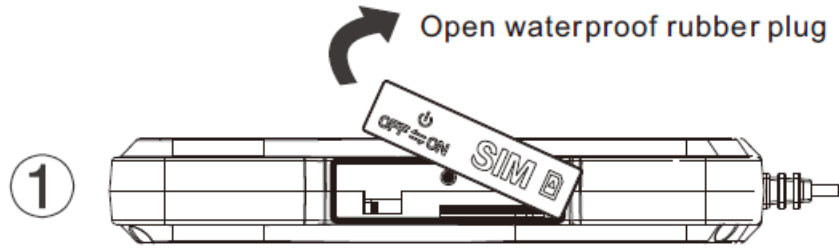


GPS LED Indicator - Blue	
Flashing (interval 0.1s)	Searching GPS signal
Solid blue	GPS positioned
OFF	GPS sleep or off

GSM LED Indicator - Green	
Quick flashing (interval 0.1s)	GSM initializing
Slow flashing (flash 0.1s every 2s)	Receive GSM signal normally
Solid green	Connected to GPRS network
OFF	No GSM signal or SIM card

Power Status - Red	
Flashing (interval 0.1s)	Low battery
Slow flashing (interval 2s)	Full charge
Slow flashing (flash 0.1s off 2s)	Normal operating
Solid Red	Charging
OFF	Low battery/Power off

# T2 3G Sim Card Installing



# Powering Up & Testing



- **Powering Up**

- Once inserted a valid SIM card and all wires connected, T2 3G has power switch on side near SIM card slot.
- Power LED Status will flash first, During signal searching process, GSM and GPS LED will flash. Once GPS & GSM LED's turns solid, the device has been located and will start to work.
- Device will automatically upload data to server every 10 seconds, if GPRS has been enabled.

- **Testing**

In Order to test device, the Vehicle must be parked outside in an open area so that it can receive a GPS lock – 4 or more Satellites .

Examine the 3 LED's

**POWER** LED will Flashing **Red** or solid if T2 3G backup battery is charging.

**GPS** LED will become **Solid BLUE** when the device receives a GPS lock, could take a few Minutes.

**GSM / Cellular** LED will become **Solid Green** within a few minutes of powering up the device. This indicates that the device is receiving a Cellular signal.

## T2 3G Positioning



### Do's and Don'ts

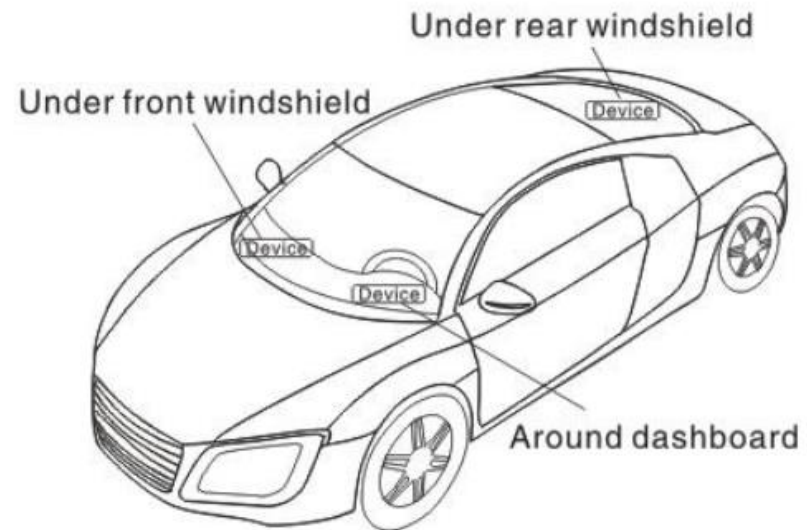
T2 3G devices have built-in GSM & GPS antennas. During installation, make sure the receiving side face is up (T2 3G label down), with no metal object above the device to interfere with GPS reception. The following places are suggested for installation.

- Under the dash board below the front windshield
- in the parcel shelf in the rear;
- in the front bumper( non-material face), please ensure the device cannot get wet;
- Under the wiper version (non-metal), please ensure the device cannot get wet;
- Under a seat / Centre Console– may work.

**Notice: if the windshield is pasted with metal thermal-protective coating,**  
it may affect the performance of the device.

NOTE: Any high power devices such as reversing radar, anti-theft device or communication equipment would affect the signal of the device, likewise do not connect or position to Canbus wiring,.

T2 3G will see Through – Plastic, Glass, Wood, but not through solid Metal or Concrete.



T2 3G must be at least 20cm distance apart from any another antennas or transmitting devices



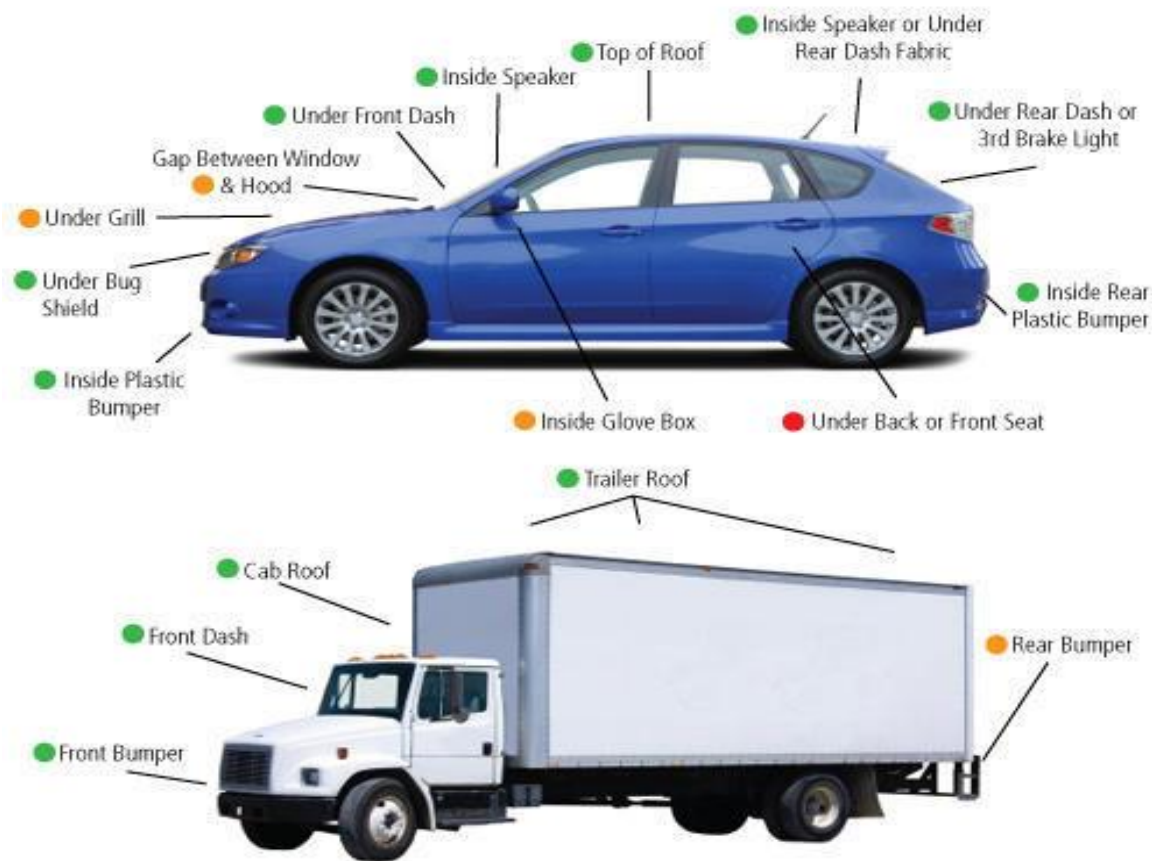
# T2 3G Positioning Continued



## CAUTION

T2 3G must face up

T2 3G IMEI label facing down



- Recommended locations
- May not be as accurate as green locations
- Only for cases when other locations are not feasible

## CAUTION

Locations – Internal / Roof / Bumper  
Only if non metal .  
Locations – External / Roof / Bumper  
Only if protected from getting wet &  
Enclosed within a non metal housing.



## Documentation



Please note the following:

- Rego of Vehicle
- Vin Number / ID of Vehicle or Plant / Machinery
- Position of T2 3G– under dash etc
- IMEI Number of T2 3G – label underside of device.
- Point of Cut off of Engine – Fuel Pump/Starter motor etc



Check Operation / Support and additional information.

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