

Tachomaster DOT Installation Guide v2.7

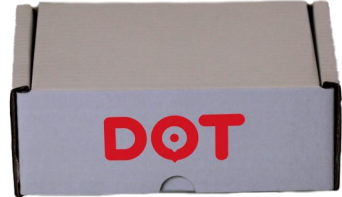
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The equipment required for DOT installation

The Tachomaster DOT device is relatively simple to install and you do not require many tools.

Road Tech will supply you with the boxed DOT kit.



You will also require some additional tools (not supplied).



1) A pair of tachograph removal tools, these are similar to car radio removal tools.

2) You will require a small flat head screwdriver for connecting some of the wires to the plugs.



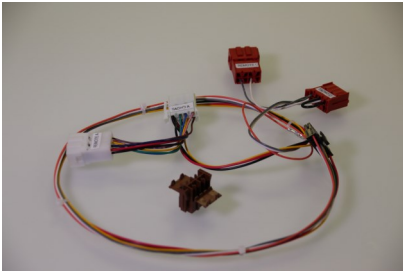
3) You may also require a small set of wire cutters.

4) You may need a cable tie or Velcro to fix the DOT unit and prevent noise/rattles.

Items in the DOT kit

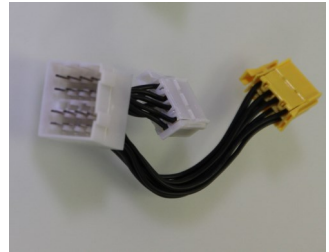
Open your DOT kit box, inside there should be the following.

1) The DOT device



2) The DOT wiring loom which includes a separate brown plug which may be required

3) Possible additional cable for Mercedes or Volvo vehicles. (not included in all sets)



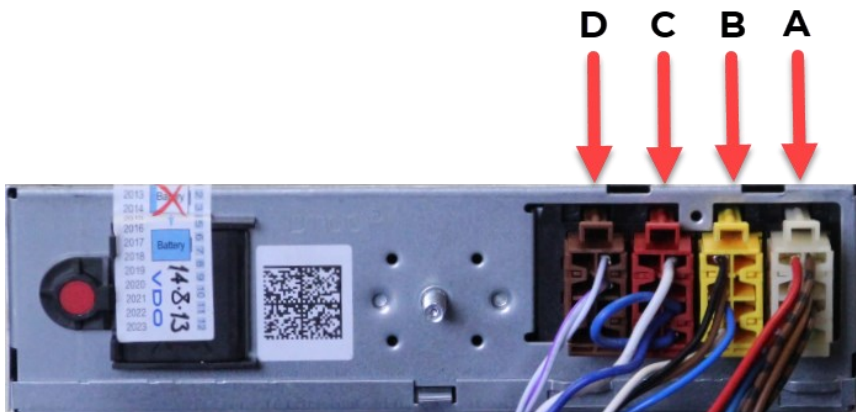
4) A GPS/GNSS antenna

5) The GSM antenna.

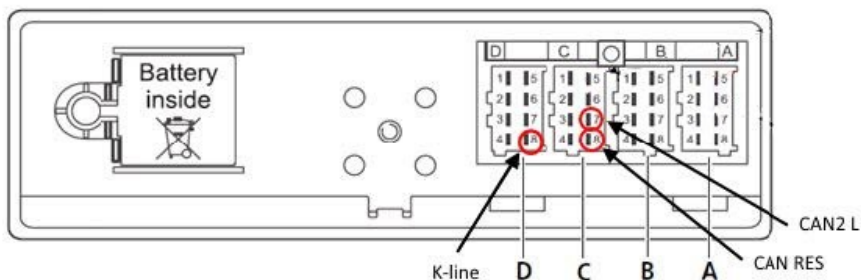


Tacho sockets – diagram

At this point it is worth identifying the sockets at the back of your tachograph unit so you are familiar with them.



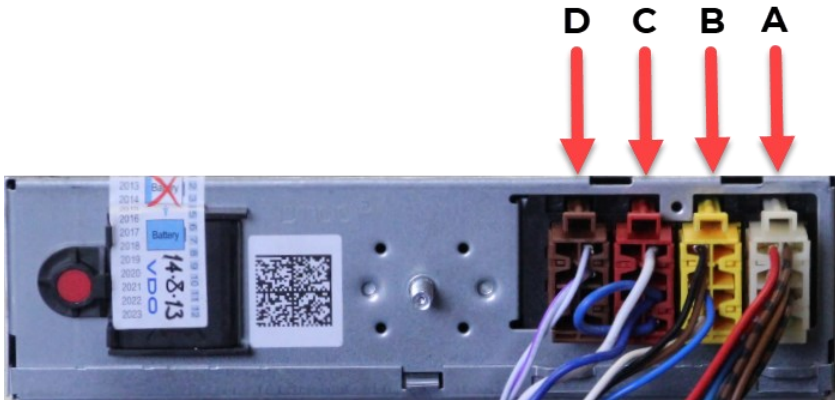
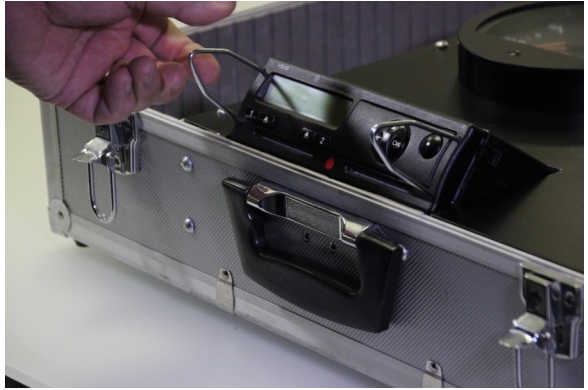
This diagram shows the four ports at the back of the tachograph which are from right to left A, B, C and D.



Also important are the pins 7 and 8 on the C port and pin 8 on the D port.

Step 1—Remove The Tachograph Vehicle Unit

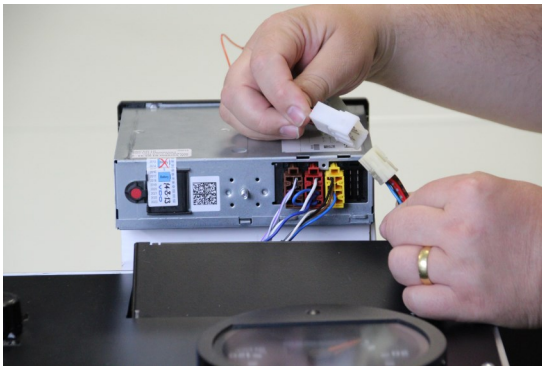
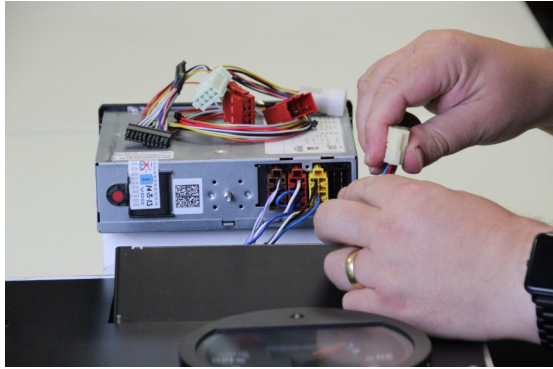
Step one of the process is to remove your tachograph unit using the two tachograph removal tools. Carefully place the removal tools into the holes and then pull.



You require access to the back of the tachograph to where the A-D sockets are situated.

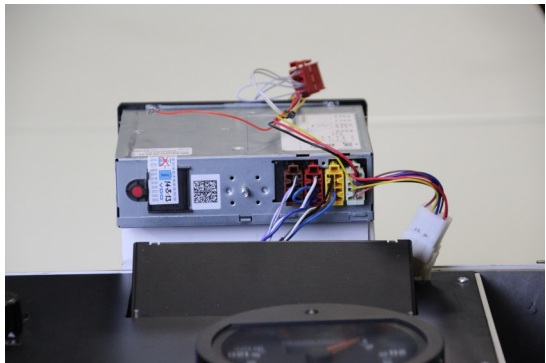
Step 2—removing and connecting power

Remove the white A connector from the tachograph A socket.



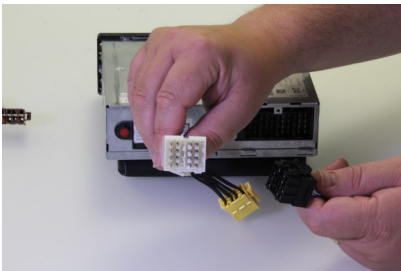
Connect the same A connector to the DOT loom white socket

Then plug the DOT loom 'A' Connector into the tachograph



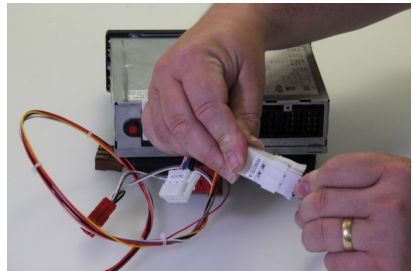
Step 2b—removing and connecting power using the additional cable assembly (Volvo and Mercedes)

For certain vehicles (mainly Volvo and Mercedes) there may be a single connector in ports A and B. If this is the case you require the additional cable. This is only supplied if the vehicle requires it and would be specified when ordered.



Disconnect the A/B connector and attached to the dual connector port on the additional cable.

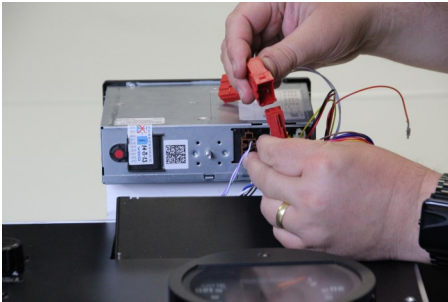
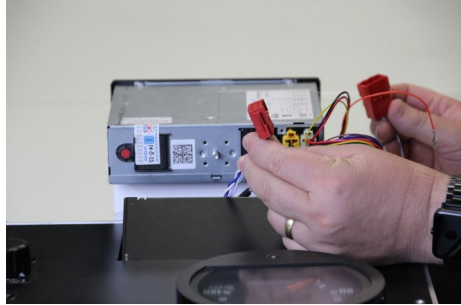
Connect the white connector from the additional cable to the white socket on the standard DOT wiring loom.



Then plug the DOT loom 'A' Connector into the tachometer.

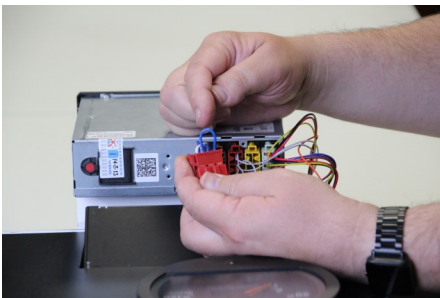
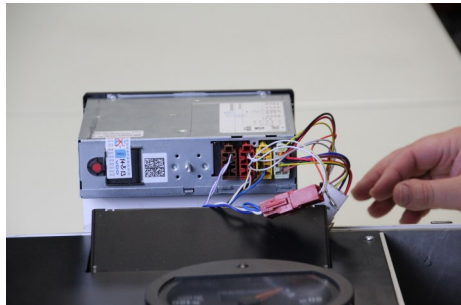
Step 3—CAN Connection

If it is already fitted, remove the Red 'C' connector from the back of the tachograph



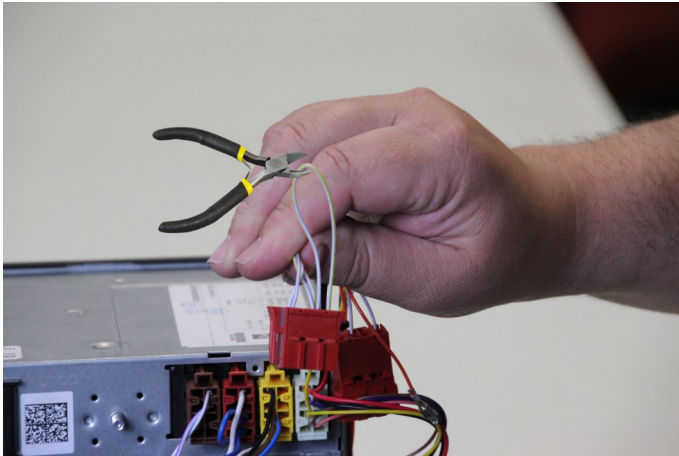
Connect the same red C connector into to the DOT loom red socket

Plug the DOT 'C' Connector into the tachograph, even if the red C connector was not previously attached.



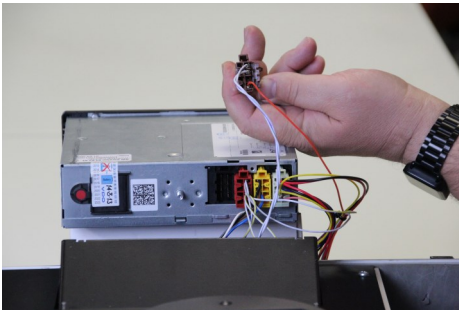
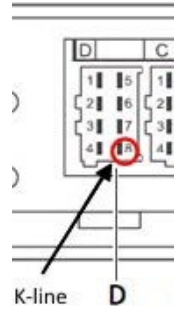
If you removed a Red 'C' Connector, check to see if there is a link wire fitted pin 7 to 8.

If there was not a link wire on the removed red 'C' connector please cut the link wire on the DOT 'C' connector, otherwise please leave it intact.



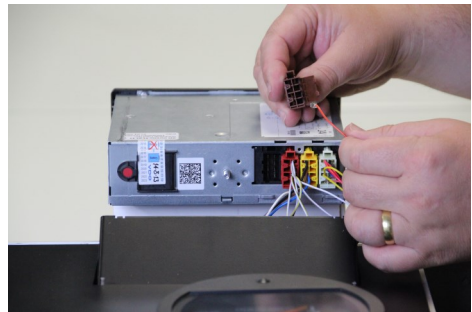
Step 4—K-Line connection

If a brown connector is fitted in the 'D' socket, the orange wire needs to be inserted into pin 8



If there is already a wire fitted to the D plug pin 8 then the DOT Orange needs to be joined to that wire. This can be done by splicing and soldering or replacing the in.

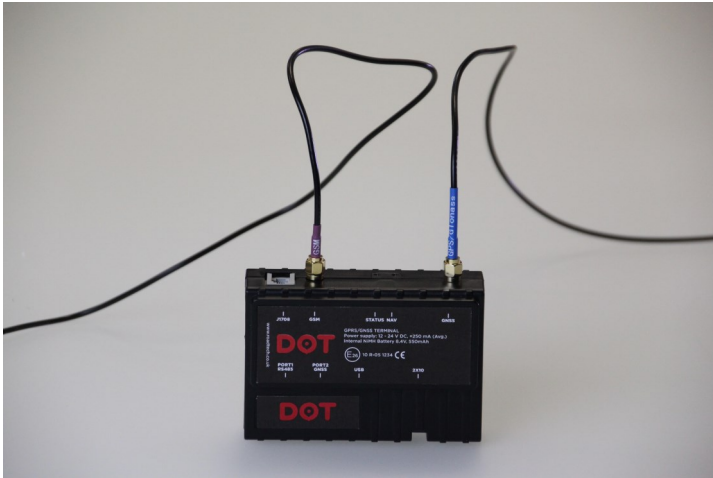
If there is no brown 'D' Connector, fit the plug supplied with the Orange cable inserted into pin 8



and then plug into the 'D' connector socket

Step 5—GSM and GNSS/GPS DOT connection

Site the GSM and GPS antennas and route the cables to the DOT and fix securely.



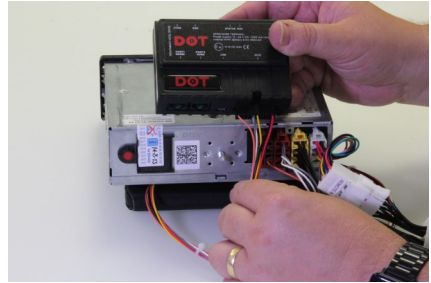
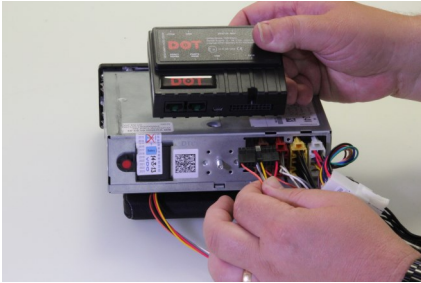
Please ensure that the GPS antenna has a clear sky view and has the black plastic side facing the sky. The GSM antenna must not be attached to metal to ensure a better signal.

As usual with fitting GSM equipment, it is advised that you test your vehicle radio system to ensure that the GSM signal does not cause any interference. If it does reposition the GSM aerial until any interference ceases.

Please refer to the vehicle manufacturers guide if you require to remove any dashboard equipment to route the cables.

Step 6—Connect the 20 way connector

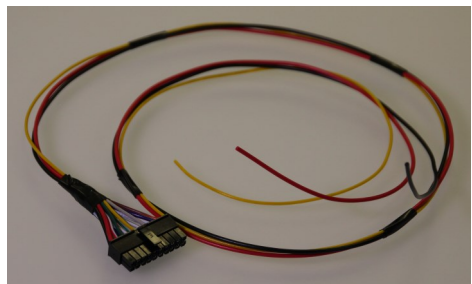
Insert the 20 way connector from the DOT wiring loom into the DOT device.



Alternative Step—Tracking only device

If you are fitting the DOT device for just tracking you only require the 3 wire loom, as in this image.

- Black—Earth/0v (KL31)
- Red—12/24v (KL30)
- Yellow—ignition stage 2 (KL15)



Step 7—Secure the DOT device

Secure the DOT device, you may want to use Velcro or cable ties and then replace the tacho head.

Step 8—Manual Download before using DOT

Before you setup your DOT in Tachomaster, it is strongly advised that a manual VU download is done for each new vehicle you receive in order to create the vehicle in Tachomaster with all the correct settings.

Make sure you use a copy of the Company Card that you send to Road Tech for remote downloads. This will also confirm that your manual download backup is working should it be required in the future.

When you eject the company card after the download say No to locking out.

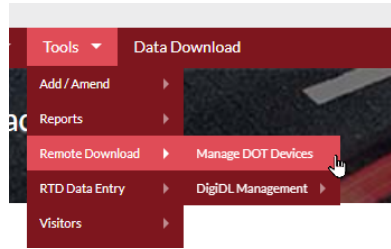
If the vehicle already exists in Tachomaster and you have downloaded previously, this will suffice. Please ensure the VU is locked in with the correct company card

Step 9—Tachomaster Setup

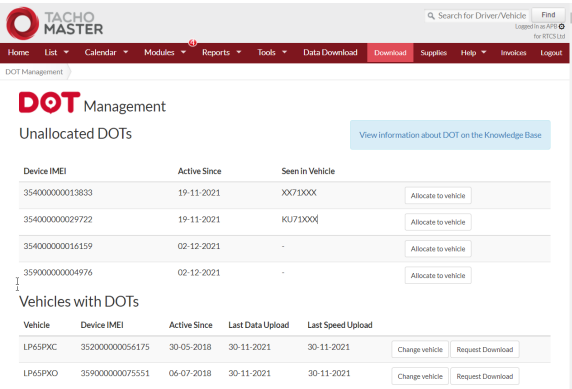
In most cases you will find that the DOT device will automatically assign your existing vehicle registration to the DOT device once the DOT SIM has contacted the Tachomaster Servers after installation and the ignition turned on. You can check this has happened.

Make sure you know the IMEI/Terminal ID for your installed DOT (a 15 character number located on the device).

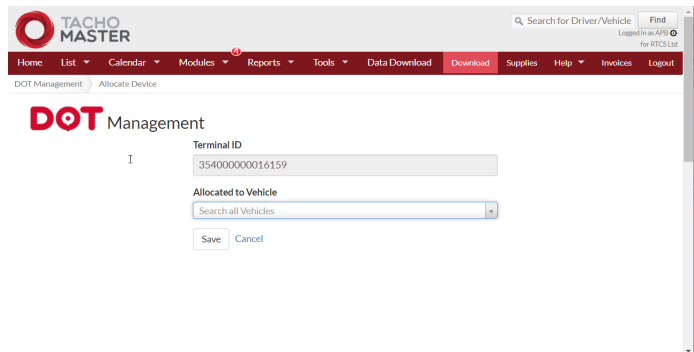
Login to Tachomaster and choose
Tools> Remote Download>
Manage DOT Devices



From the list of Unallocated DOTs available to you, choose
“Allocate to vehicle” for the correct IMEI.



From the Allocated to Vehicle click on Search all Vehicles and
choose the correct registration number that the DOT device (IMEI)
was installed into.



If you are moving an existing DOT to a new vehicle. You can change the vehicle from the same DOT management screen from the Vehicles with DOT and “Change Vehicle”.

The screenshot shows the Tachometer DOT Management interface. At the top, there is a navigation bar with the Tachometer logo and a search bar. Below the navigation bar, there is a breadcrumb trail: DOT Management > Unallocated DOTs. The main content area is titled "DOT Management" and "Unallocated DOTs". There is a button to "View information about DOT on the Knowledge Base". Below this, there is a table of unallocated DOTs with columns for Device IMEI, Active Since, and Seen in Vehicle. Each row has an "Allocate to vehicle" button. Below the table, there is a section titled "Vehicles with DOTs" with a table showing columns for Vehicle, Device IMEI, Active Since, Last Data Upload, and Last Speed Upload. Each row has "Change vehicle" and "Request Download" buttons.

Device IMEI	Active Since	Seen in Vehicle	
35400000013833	19-11-2021	XX71XXX	<input type="button" value="Allocate to vehicle"/>
35400000029722	19-11-2021	KU71XXX	<input type="button" value="Allocate to vehicle"/>
35400000016159	02-12-2021	-	<input type="button" value="Allocate to vehicle"/>
35900000004976	02-12-2021	-	<input type="button" value="Allocate to vehicle"/>

Vehicle	Device IMEI	Active Since	Last Data Upload	Last Speed Upload	
LP65PXC	35200000056175	30-05-2018	30-11-2021	30-11-2021	<input type="button" value="Change vehicle"/> <input type="button" value="Request Download"/>
LP65PXO	35900000075551	06-07-2018	30-11-2021	30-11-2021	<input type="button" value="Change vehicle"/> <input type="button" value="Request Download"/>

Tachometer will then automatically create a daily download schedule for both Driver and VU data.

Step 10—Tracking Only (DOT Tracking) Setup

This step is only used if you are not setting DOT up in Tachomaster for remote downloads.

To check and assign (if necessary) a tracking only DOT device, login to DOT Tracking, choose Settings> Unassigned Devices and click “Assign to Vehicle”

Settings > Unassigned Devices

IMEI / Terminal ID	Device Type	Description	Fitted Date	
35200000088555	Falcon DOT	-	-	Assign to Vehicle
35200000099179	Falcon DOT	-	-	Assign to Vehicle
35700000080628	Falcon DOT	-	-	Assign to Vehicle
35900000027198	Falcon DOT	-	-	Assign to Vehicle
35900000054828	Falcon DOT	-	-	Assign to Vehicle

* DOT units are automatically assigned to the vehicle they are connected to.

[Include SDI Devices](#)

Devices attached to old vehicles (marked as left)

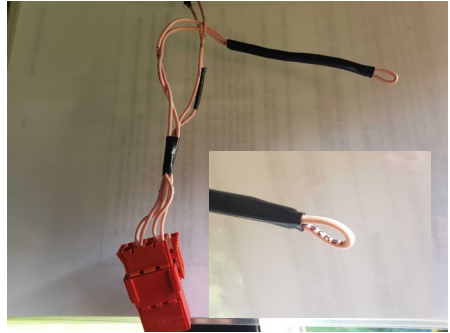
IMEI / Terminal ID	Vehicle	Left Date	Device Type	Description	Fitted Date	
19999999	t:028	01-11-2021	Tagged Trailer falcon-tag	-	-	Change Vehicle

Enter the correct Device Details to create the correct record. Please be aware that PTO is only available on DOT Advanced Telematics.

Device Details	
IMEI	35200000099179
Vehicle Reg. / Trailer No.	<input type="text"/>
	<input type="checkbox"/> Device is on a trailer
Site	-- Select a site --
Fleet Type	-- Select a fleet type --
Fleet No.	<input type="text"/>
Description	<input type="text"/>
Vehicle has PTO	<input type="checkbox"/>
Frequencies (where applicable)	
Ignition Off	<input type="text" value="Device default"/> minutes
Ignition On / General	<input type="text" value="Device default"/> minutes
Battery Backup	<input type="text" value="Device default"/> minutes
Frequency can only be changed on supported devices. Supported devices: Cablink Falcon	
Save Cancel	

Troubleshooting

In some vehicles you may find issues with additional wiring loops—this image was taken from a MAN vehicle. The vehicle was reporting a low resistance reading and wasn't downloading correctly.



There was no link wire on the original red plug so the black loop was cut on the DOT red plug for consistency. However the impedance was still low, indicating an additional resistance loop.

The loop fitted on the MAN vehicle was then also cut returning the resistance reading to normal (ideally around 60 ohms).

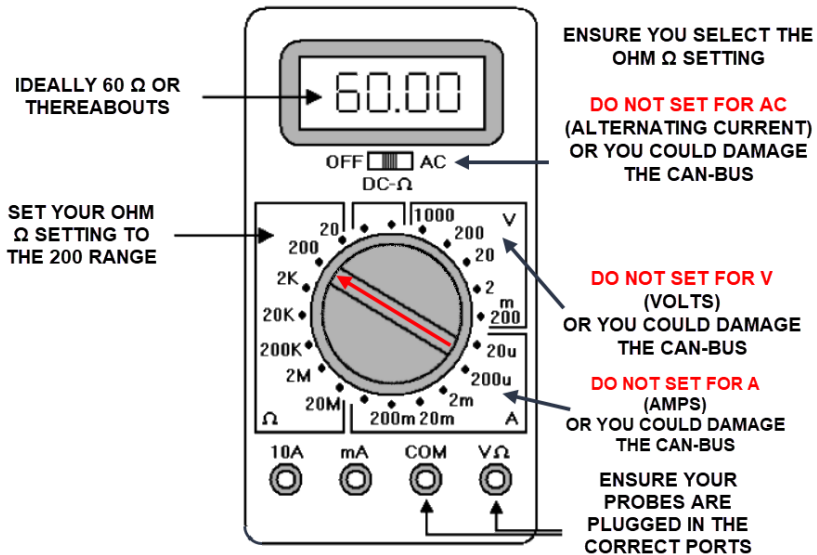


Troubleshooting

If you are experienced in using a multi-meter or ohm-meter you may be able to test the resistance on the CAN network after installation of a DOT unit. This is especially relevant if you are not getting the vehicle to download correctly.

If you know how to test for resistance—test between pins 5 & 7 on the red plug with ignition off and the tacho head in standby (nothing on the screen) the reading should be in the region of 60 ohms.

If you have a multi-meter do not use it on voltage, amps or current settings - set to ohms and the 200 ohm range—failure to set your meter correctly could damage the vehicle.



The above diagram is shown as a guide but your meter may be different, in which case please refer to your meter user guide for how to test within the 200 ohm range.



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