

# E-Cruise II Cruise Control



Installation instructions for:

- Land Rover Defender Td4 2.4 (2007 - 2011)
- Land Rover Defender Td4 2.2 (2012 >)



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## Before installation

To make the installation easier, the complete installation instruction should be read through, before the installation is started.

This installation instruction, contains information, how to install the E-Cruise, which is not a Do-It-Yourself job.

Modern cars are equipped with electronic, which can be costly damaged by inappropriate treatment.

Lindgaard · Pedersen A/S can not be held responsible, for any error caused by wrong installation.

### Check that all the parts are included in the kit.

1 pcs.	Unit.
1 pcs.	14-p connector.
1 pcs.	12-p connector.
5 pcs.	Cableties.
1 pcs.	Installation guide.
1 pcs.	Owners manual.

### Some good advice.

- Always disconnect the negativ cable from the battery, before installing.
- Always use the enclosed installation instruction for installing the E-Cruise.
- Be aware that eg. radio code might has to be typed in.
- Find a location to install the unit and control switch.
- If any wire(s) left, then cut off and insulate.
- Only use multimeter to measure.
- Always drive the car for a complete test, before assemble the car.
- Flying lead(s) must be soldered.

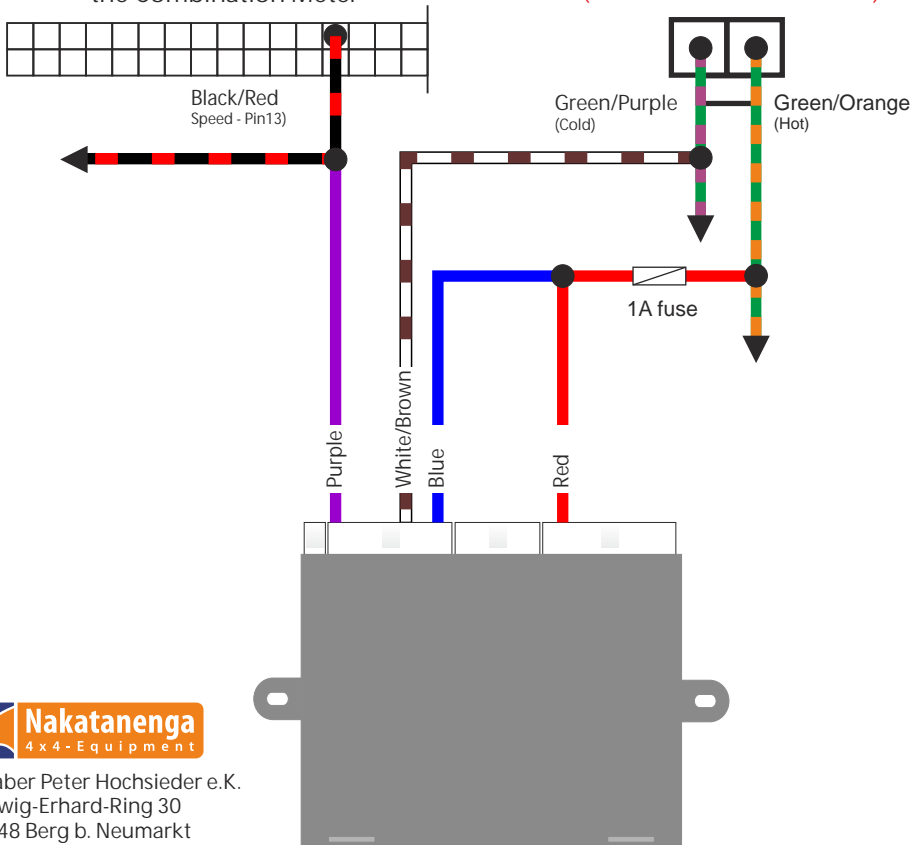


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Black connector behind the Combination Meter

Grey connector on the brake pedal  
(Von Kabelseite aus betrachtet)



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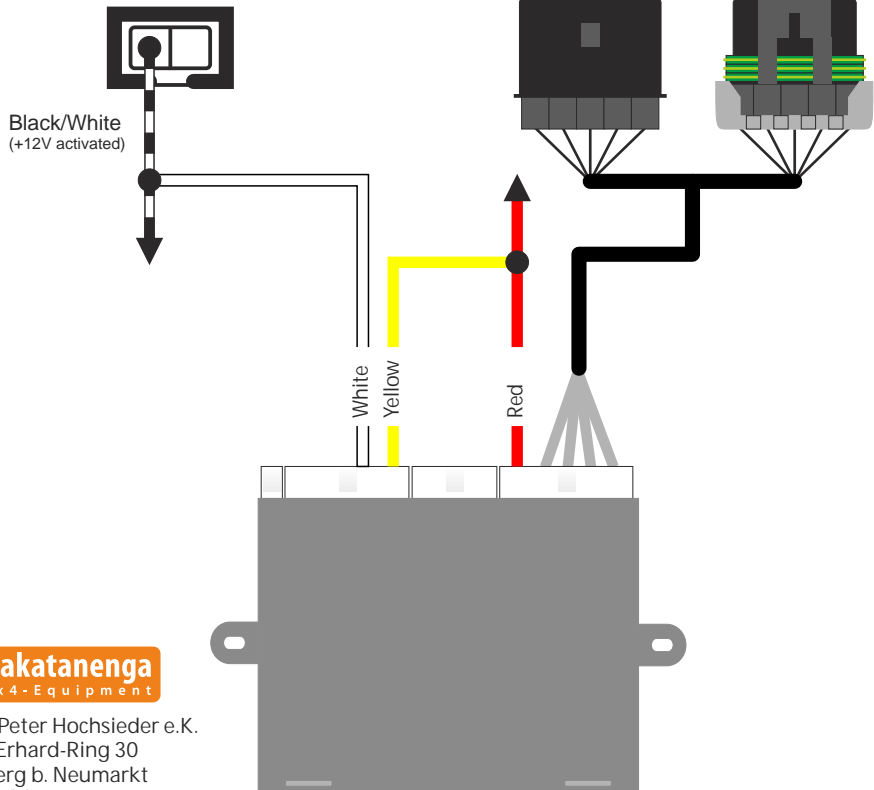
# Only for MY 2007-2011 Td4 2.4



Black connector on the clutch  
(In the engine compartment)



Throttlet Connector



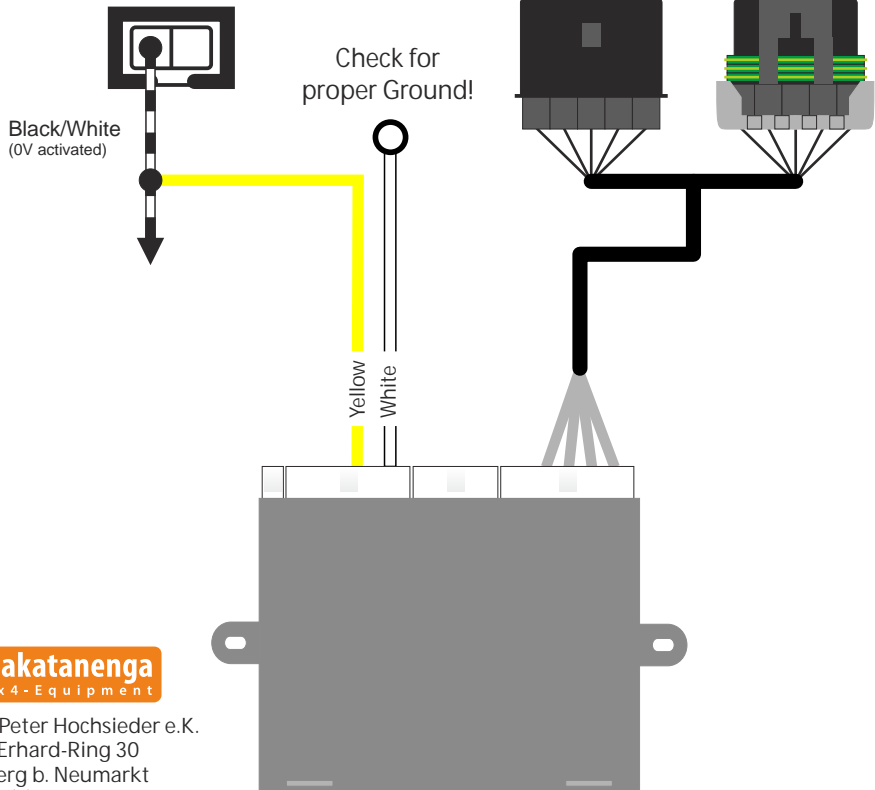
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# Only for MY 2012-> Td4 2.2



Black connector on the clutch  
(In the engine compartment)

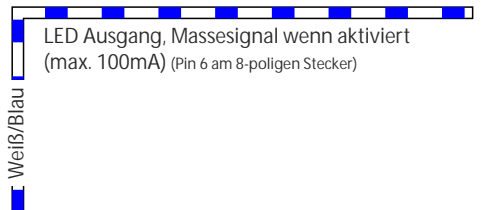
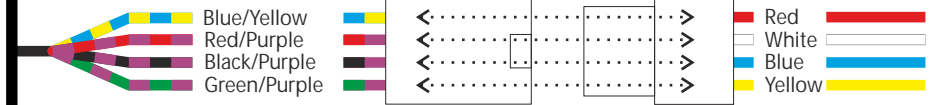
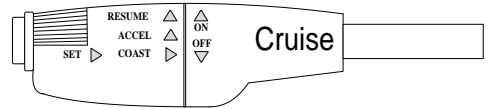
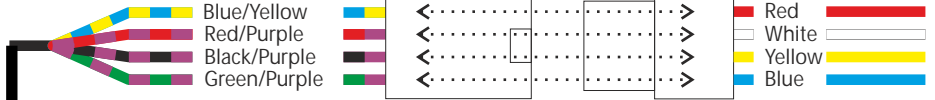
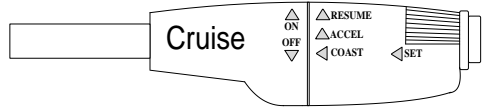
Throttle Connector



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Einbauanleitung Bedienelement Standard

Note: Blue/Yellow +12 Volt



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## Manual for E-Nakatanenga Cruise II with operating lever Standard

E-Cruise gently the selected speed within a range of Regulate options offered by the vehicle. It is not recommended that the E-cruise at a speed below 50 km / h to use.

### Operation of the E-Cruise:

**On/Off:** Activate ON-OFF to turn on and turn off the e-Cruise. the E-Cruise turns off automatically when the ignition is turned off.

**Set:** Drive at a constant speed and activate SET briefly. Take your foot off the accelerator when e-Cruise control of the throttle function accepts.

**Interruption:** To disable e-Cruise, you depress the brake or the Clutch pedal.

**Resume:** Activate RES and the vehicle is again taking the speed that has been selected to last. Unless the ignition has been detected OFF in the meantime, or CRUISE was deactivated.

**Chokes:** Activate and hold COAST for more than one second and E-Cruise will gradually slow down the speed to COAST is released again. Once this happens, the new speed selected. With a short touch on the COAST Speed reduced by approximately 1km / h per contact.

**Accelerate:** Activate and hold ACCEL for more than one second and E- Cruise will gradually increase the speed to ACCEL is achieved. Once this happens, the new speed selected. With a short touch on the ACCEL Speed increased approximately 1km / h per contact.



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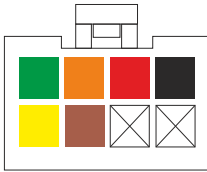
**WARNING: E-Cruise should be used only where the conditions allow and should not be used in adverse weather conditions.**

### Einbauanleitung Bedienelement Memory

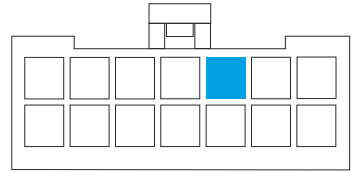


Control lever on the left side of the steering column cover secure it with the included mounting hardware. The lever should be in the same angle as the turn signal lever be mounted. The pins to pin as shown on the drawing.

Viewed from cable side.

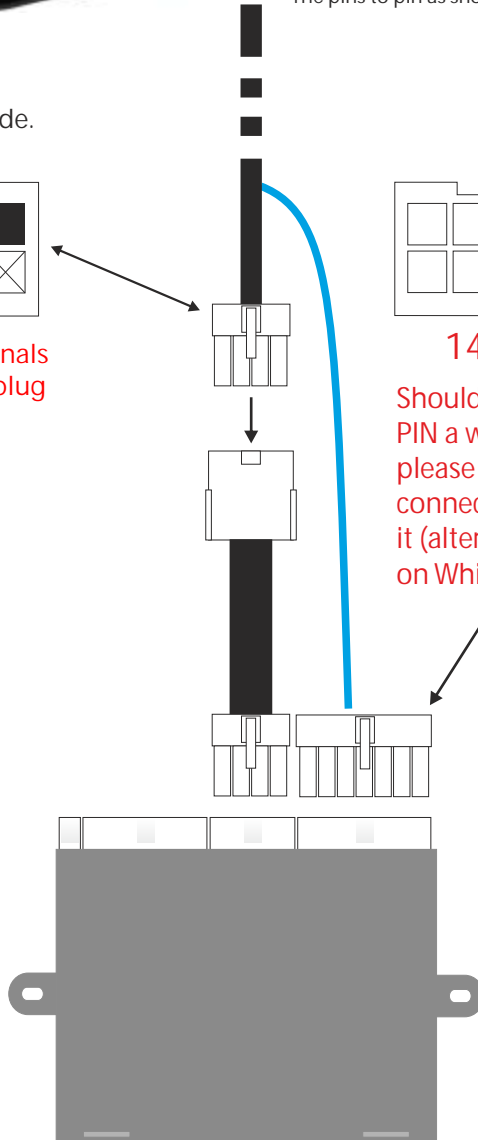


Do not observe originals color coding on the plug housing



### 14-Pin-Stecker

Should be located in the 14 PIN a white / purple cable, please unpin this and connect the blue cable for it (alternatively solder Blue on White / Purple).



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## Instructions for Nakatanenga E-Cruise II with Memory

E-Cruise will gently regulate the selected speed within the range of options offered by the vehicle. It is not recommended to use E-Cruise at speeds below 50 km/h. Memory can be programmed for 2 different speeds.

### Operating E-Cruise and Memory:

**On/Off:** Press (▲) button to turn E-Cruise and Memory ON and Off. The LED illuminates green. Always turn off when it is not in use. E-Cruise & Memory will automatically turn off when the engine is switched off.

**Set:** Drive at constant speed and briefly activate ▼. Remove your foot from the accelerator pedal as E-Cruise takes control of the accelerator function.

**Disconnection:** To de-activate E-Cruise, activate ▲ or press the brake or the clutch pedal.

**Resume:** Activate ▲ and the vehicle will return to the speed last selected, unless the ignition has been switched off or ▲ has been activated in the meantime.

**Decelerate:** Activate and hold ▼ for more than one second and E-Cruise will gradually decrease speed until ▼ is released. The speed when ▼ is released will then be the new speed selected. A quick tap on ▼ will decrease speed by approximately 1 km/h per touch.

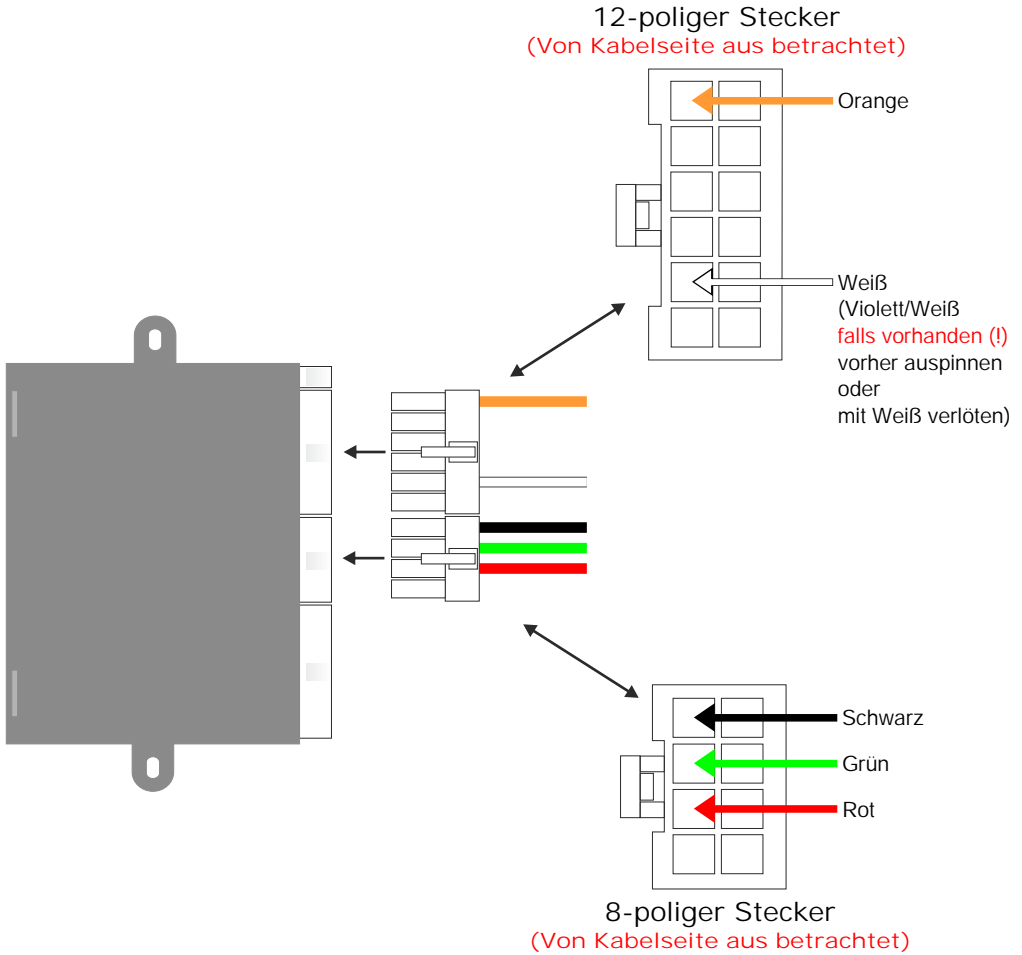
**Accelerate:** Activate and hold ▲ for more than one second and E-Cruise will gradually increase speed until ▲ is released. The speed ▲ when is released will then be the new speed selected. A quick tap on ▲ will increase speed by approximately 1 km/h per touch.

**MEM:** Drive at a constant speed, activate one of the 2 MEM buttons, (I or II) that you wish to program, for about 3 sec. Move the foot from the accelerator pedal as E-Cruise takes over the control of the accelerator. The speed is programmed into memory. Use the same procedure for both MEM buttons. The speed will be stored regardless ignition are turned off, or power being removed. To change the speed, use same procedure.

MEM can not be programmed when E-Cruise is activated.

**WARNING:** E-Cruise should only be used where conditions allow and should not be used in adverse weather conditions.

# Bedienhebel 3 Farb LED, Memory & Limiter Funktion



## Einbauanleitung für Bedienhebel mit integrierter 3 Farb LED, 2 Memory Tasten und Limiter Funktion

1. Finden Sie eine geeignete Position an der linken Seite der Lenksäulenverkleidung
2. Markieren Sie die Position und bohren ein 10mm Loch. Beachten Sie den Bauraum dahinter (Kabel usw.)
3. Nutzen Sie die beiliegenden Halter und positionieren den Hebel analog der originalen Hebel.
4. Der Kopf des Hebels ist drehbar und kann mit dem Verriegelungs-Clip festgestellt werden.
5. Pinnen Sie die Kabel in die Steckergehäuse wie gezeigt.



Bedienungsanleitung für Nakatanenga E-Cruise II mit Memory & Limiter-Bedienhebel

**Aktivieren Sie E-Cruise nicht bei Geschwindigkeiten unter 50km/h.**

Mit den Memory-Tasten können zwei Geschwindigkeiten gespeichert werden.

Der Limiter ist ein optionaler Geschwindigkeitsbegrenzer.

Erklärung der Bedienungselemente:

- On/Off:** Taste ON kurz drücken. E-Cruise und Memory wird EIN oder AUS geschaltet. Die LED leuchtet Grün wenn eingeschaltet. E-Cruise wird mit Zündung „AUS“ automatisch ausgeschaltet.
- Set:** Fahren Sie mit konstanter Geschwindigkeit und Drücken kurz SET . Nehmen Sie den Fuß vom Gas - E-Cruise übernimmt jetzt die Geschwindigkeit. Die LED leuchtet ORANGE.
- Disconnection:** Um E-Cruise abzuschalten betätigen Sie das Brems- oder Kupplungspedal oder sie betätigen die Taste auf der Rückseite.
- Resume:** Kurz drücken und es wird die zuvor eingestellte Geschwindigkeit wieder aufgenommen.
- Decelerate:** Gedrückt halten für länger als eine Sekunde - E-Cruise wird kontinuierlich die Geschwindigkeit verringern bis der Hebel losgelassen wird. Die neue Geschwindigkeit wird dann gehalten. Ein kurzes Antippen verringert die Geschwindigkeit um ca. 1 Km/h.
- Accelerate:** Gedrückt halten für länger als eine Sekunde - E-Cruise wird kontinuierlich die Geschwindigkeit erhöhen bis der Hebel losgelassen wird. Die neue Geschwindigkeit wird dann gehalten. Ein kurzes Antippen erhöht die Geschwindigkeit um ca. 1 Km/h.
- MEM:** Fahren Sie eine konstante Geschwindigkeit, drücken Sie eine der beiden MEM-Tasten, (I oder II) für ca. 3 Sekunden. Nehmen Sie den Fuß vom Gaspedal, wenn E-Cruise die Kontrolle über das Gas übernimmt. Diese Geschwindigkeit ist nun gespeichert. Um die Geschwindigkeiten zu ändern gehen Sie gleichermaßen vor .

**Achtung:** MEM kann nicht programmiert werden wenn der E-Cruise aktiv ist.

**LIMITER:** Konstante Geschwindigkeit fahren und LIMITER-Taste drücken. Die LED leuchtet ROT. Die gesetzte Geschwindigkeit kann nicht überschritten werden. Um den Limiter abzuschalten die Limiter-Taste erneut betätigen oder das Gaspedal für min. 2 Sekunden betätigen.



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# Problemlösung/Diagnose

## Diagnostic mode for E-Cruise II

The E-cruise II module contains a diagnostic mode, which enables the dealer/installer to verify all connections and signals.

The signals can be tested and can be viewed via a 3-color LED, located on the back of the E-Cruise II unit, beside a small white connector.

To enter the Diagnostic mode, follow this procedure carefully:

NB. You only have approx. 2 seconds between activation of the different functions, to enter Diagnostic mode.!

## Enable Diagnostic mode:

- Put ignition on the vehicle.
- Within 2 seconds, press and hold the ON function.
- Wait until test LED lights up in RED color, and then release ON function.
- Press and hold SET function. The test LED lights up in YELLOW color.
- Release SET function, and press ACC/RES function. The test LED will flash in all 3 colors, provided that all inputs are not activated. Otherwise the test LED will light up red.
- Diagnostic mode has now been entered.

## Test procedures:

Enter test 1 - Brake function.

1. Activate RES briefly. Test LED will flash yellow 1 time.
2. If brake is on CAN network, test LED lights up Red, and changes to green when pedal is depressed.
3. If both brake wires are installed correctly, the test LED will light up green.
4. Hot side of brake is defective = test LED lights up red.
5. Cold side of brake is defective = test LED lights up Yellow.
6. Both sides of brake defective = test LED flashes all 3 colors.
7. When brake pedal is depressed, the test LED lights up yellow.

Enter test 2 - Clutch function.

1. Activate RES briefly. Test LED will flash yellow 2 times.
2. If clutch is on CAN network, test LED lights up Red, and changes to green when pedal is depressed..
3. If clutch wires are installed correctly, the test LED lights up green.
4. If clutch is defective, the test LED lights up red.
5. When clutch pedal is depressed, the test LED lights up red.



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Enter test 3 - Accelerator pedal function (the engine must not run).

1. Activate RES briefly. Test LED will flash yellow 3 times.
2. The test LED will slowly flash red/green.
3. Depressing the accelerator pedal will increase the freq. of the flashing.

Enter test 4 - VSS function (the engine must be running).

1. Activate RES briefly. Test LED will flash yellow 4 times.
2. If VSS is on CAN network, the test LED will flash green if correct ID is received.
3. If VSS is analog, the test LED will flash green when vehicle is moved.

Enter test 5 - TACHO function (the engine must be running).

1. Activate RES briefly. Test LED will flash yellow 5 times.
2. If TACHO is on CAN network, the test LED will flash green if correct ID is received.
3. If TACHO is analog, the test LED will flash green when RPM is raised.

Enter test 6 - Setup to Automatic gear.

1. Activate RES briefly. Test LED will flash yellow 6 times. (Skip test, if car is manual gear).
2. Activate and hold down the brake pedal.
3. Activate SET briefly = test LED lights up red.
4. Activate SET briefly again = test LED lights up yellow. E-Cruise II is set for automat gear. If this function is activated by mistake. The test procedure must be entered from start.
1. Activate and hold down the brake pedal.
2. Activate SET briefly = test LED lights up green.
3. Activate SET briefly again = test LED lights up yellow. E-Cruise II is set for manual gear.

Enter test 7 - Control lever functions. (Only for RF Switch, otherwise go to next "test 7.1").

1. Activate RES briefly. Test LED will flash yellow 7 times.
2. Press ON function = test LED lights up green.
3. Press SET function = test LED lights up yellow.
4. Press RES function = test LED lights up green.
5. Press CANCEL function = test LED lights up green.
6. Press OFF function = test LED lights up red.

Enter test 7.1 - Control lever functions. (Only for LP Switch, otherwise go to next "test 7.2").

1. Activate RES briefly. Test LED will flash yellow 7 times.
2. Press ON function = test LED lights up green.
3. Press SET function = test LED lights up yellow.
4. Press RESUME function = test LED lights up green.
5. Press OFF function = test LED lights up red.

Enter test 7.2 - Control lever functions. (Only for OE Switch).

1. Activate RES briefly. Test LED will flash yellow 7 times.
2. Press ON function = test LED lights up red.
3. Press SET- function = test LED lights up yellow.
4. Press RES+ function = test LED lights up green.
5. Press CANCEL function = test LED lights up green.
6. Press OFF function = test LED lights up red.



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