



# **USER AND MAINTENANCE MANUAL**

# MAN TGE BE-Combination

3500PLUS

B53DL & B54DL



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### 1 INTRODUCTION

This user and maintenance manual describes the operations required to couple a 3500PLUS trailer to its corresponding truck. Furthermore, this manual provides instructions to perform periodic maintenance on an entire 3500PLUS System, which is equipped with IBS (Intelligent Braking System). This manual is applicable for the following models:

- B53DL, wheelbase 3640 mm
- B54DL, wheelbase 4490 mm

Follow the instructions at all times, always adhere to general safety and environmental regulations. Please contact BE-Combi Systems if you have any questions and/or comments.



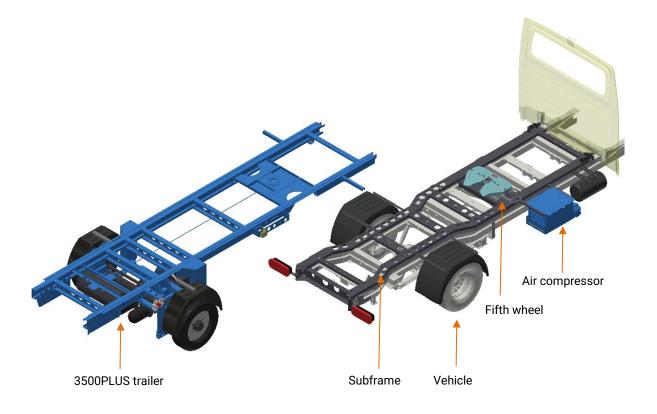


### 2 USER MANUAL

#### 2.1 General

Features of a 3500PLUS System:

- The towing vehicle is equipped with a subframe, on which a fifth wheel is mounted.
- The 3500PLUS trailer is coupled to this fifth wheel while the trailer rests entirely on the subframe.
- Through an air compressor on the vehicle, the trailer is supplied with air for brakes and air suspension.
- The vehicle and trailer are coupled and secured rigidly, so it is not a hinged structure like a regular trailer / truck combination.
- Driver must have a BE driver's licence, either from before 19-01-2013 or after 19-01-2013.
- The speed limit is 80 km/h (locally applicable laws and regulations apply).
- The maximum permissible vehicle / trailer combination is always 7000 kg.



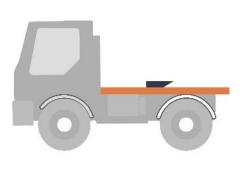
#### 2.2 Maximum permissible payload

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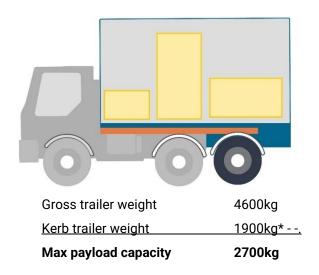
The maximum payload for a 3500PLUS System is different for each vehicle/trailer combination. The example below must be adhered in order to determine the maximum payload.

- Max. gross vehicle / trailer combination weight is always 7000 kg.
- The permissible fifth wheel load is the difference between gross and kerb vehicle weight, which pushes downwards on the fifth wheel on the vehicle.
- This fifth wheel load is included in the gross trailer weight.
- The kerb weight varies by type of vehicle and trailer. This affects the permissible fifth wheel load and so maximum payload.



Gross vehicle weight	3500kg
Kerb vehicle weight	2400kg*
Vehicle fifth wheel load	1100kg





\* Use the correct kerb vehicle and trailer weights as specified in the corresponding registration certificate.





#### 2.3 Tachograph

The vehicle combined with a 3500PLUS System is tachograph-compliant. Refer to the tachograph instruction book for its correct use in conjunction with local applicable laws and regulations. Make sure the following actions are carried out:

- On first use, insert the company card into the tachograph to link the company to the vehicle. When doing so, enter the correct registration number of the towed vehicle.
- Before starting each trip, insert the driver card into the tachograph.
- The tachograph and driver's card are legally required to be read out regularly to check driving and rest periods. In doing so, always follow the local applicable laws and regulations.

#### 2.4 Commissioning

After the new vehicle has been delivered with the 3500PLUS trailer, the entire combination requires a short running in period. If there are any problems, contact your dealer.

- The vehicle should run in according to the specifications of the manufacturer in the corresponding owner's manual.
- First 50 km Check trailer wheel nuts for correct tightening torque of 320Nm and even tyre wear.
- First 100 km It is important to brake the 3500PLUS trailer intensively to allow the brake drum and brake shoe to wear into each other. Keep general road safety in mind.





#### 2.5 Connecting and disconnecting vehicle and trailer

The correct connecting and disconnecting procedure of vehicle and trailer are shown in detail in an animation, accessible via the QR code or via the URL link below. The trailer is fit for purpose for the type of vehicle and not exchangeable with any other type of vehicles.



www.be-combi.com/technical-documentation/videos

CAUTION! Images and animations may vary by type of vehicle and trailer.



- Vehicle and trailer are coupled here
- After docking, always check the following procedures



• After coupling the vehicle and trailer, check the removal of the left and right trailer support







• After coupling, check whether the left and right guide pins behind the vehicle cab are correctly positioned in their guide rails



• Check that the fifth wheel lever on the passenger side is fully retracted and secured by the locking lever



• Check the left and right rear of the trailer for correct positioning of hook clamps



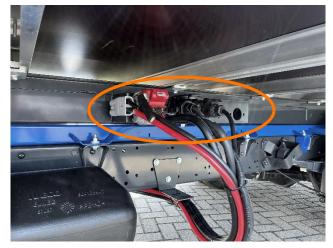




- Visually inspect the left and right trailer wheels and wheel nuts for any damage or incorrect mounting
- Visually check the left and right air bellows and shock absorbers for cracks or leaks



• Check if the trailer parking brake is released, operated by the spindle on the driver's side



- Check if all plugs are connected to the driver or passenger side terminal board (depending on model)
- ∘ Duomatic
- o13-pin plug
- o EBS plug
- Tailgate Harrisson plug (optional)
- Height control plug (optional)
- $\circ$  Rear view camera (optional)







- Check the cabin dashboard control panel whether IBS is fault free
- 3x LED indicator when ignition switched on
- Short trailer brake operation is audible
- 3x LED indicator should go out
- See also section 2.6.1

#### 2.6 System description and instructions

This section describes the various systems with their associated instructions, which are present on the 3500PLUS System.

#### 2.6.1 Intelligent Braking System (IBS) operation and display

The IBS ensures that the ESP, ABS, AEBS and ASR signals from the vehicle are transmitted to the trailer's braking system for optimum safety. The system complies with the GSR2 regulations, which are in force as of 07-07-2024.



- The IBS control panel is mounted on the dashboard as shown.
- The IBS continuously performs a selfdiagnosis upon startup and while driving, any malfunctions are displayed immediately.



- When ignition is turned on, 3x lights light up briefly at the same time.
- The right ABS light is the diagnostic check for the trailer brakes.
- If there is no fault, this light turns off immediately or after reaching a speed of up to 10 km/h.







- The left red and centre orange lights light up briefly, during this check the air brakes are audibly operated briefly 1x.
- After this check, the lights go out.



• When operating correctly, all lights are off.

If a light stays on, there is a malfunction in the IBS, see also chapter 4:

- **Red light** IBS malfunction where electronic brake control is converted to mechanical emergency brake control. **CAUTION!** Semi-trailer remains braked at all times, however, with higher brake pedal resistance. Consult your dealer immediately.
- Orange light centre minor malfunction where IBS remains active. Consult dealer at first opportunity.
- **Orange light right** trailer brake failure. Semi-trailer brakes at maximum pressure using the backup system. Consult dealer at first opportunity.





#### 2.6.2 Fifth wheel



- The fifth wheel provides the mechanical coupling between the vehicle and trailer.
- The fifth wheel is positioned on the vehicle's subframe.
- The fifth wheel is equipped with two levers.

 Locking lever - push it down to operate the coupling lever.

 Coupling lever - pull out the coupling lever in order to couple the trailer, see also section 2.5.

#### 2.6.3 Park and brake valve

- The valve must be used to park the trailer braked or unbraked when uncoupled from the vehicle.
- The valve is positioned at the rear of the trailer on the passenger's side

 ○ Black button out Trailer brake fixed (happens automatically when uncoupling)
 ○ Black button in Semi-trailer brake released

• **CAUTION!** Never operate the black button if the trailer is uncoupled on a slope, always use the parking brake for this, see section**2.6.4**.

Older types of trailers are equipped with a different valve with an air-operated parking brake, (additional red button).

Semi-trailer brake released

- $\circ \quad \text{Black button out} \\$
- Black button in
- Red button out Parking brake fixed
- Red button in Parking brake released (must always be done manually with a coupled and uncoupled trailer)

Trailer brake fixed (happens automatically when uncoupling)



#### 2.6.4 Semi-trailer parking brake

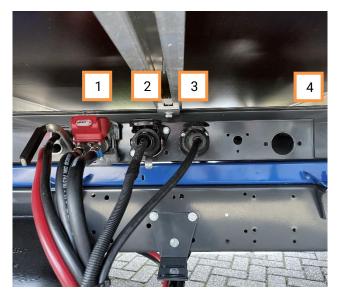


- Under normal operating conditions, the trailer parking brake must not be used. The vehicle's handbrake is powerful enough for a 7000 kg combination on a steep slope.
- Only use the parking brake with the trailer uncoupled on a steep slope
- The parking brake is positioned at the rear end of the trailer on the driver's side
- Turn the crank counterclockwise to activate the parking brake
- Turn the crank clockwise to deactivate the parking brake





#### 2.6.5 Plug connection terminal



• All plugs between the vehicle and trailer are connected on the connection terminal on the front of the trailer.

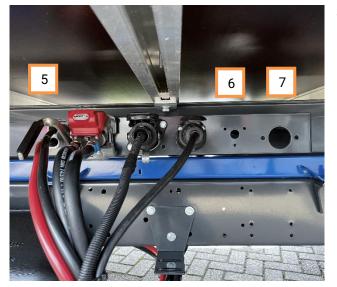
• Fixed connections:

**1. Duomatic** – provides supply pressure and power steering air pressure. Open the red cover and push the handle down. Then hook the connection into the connection terminal block. Check connection properly.

**2.EBS plug** – controls the anti-lock system. Open valve and push plug in. Lock by metal bracket.

**3. 13-pin plug** – controls the lights Open the valve and turn the bayonet socket clockwise until plug is pulled fully into the socket.

 4. Diagnostic EBS plug – is not connected.
 Dealer uses this for failure analysis of the EBS unit



Optional connections

**5. Harrisson plug** – high current for e.g. tail lift. Push plug straight into holder.

**6. 3-pin plug** – height control is controlled from the cab. Open cover and push plug into plug box, form-fitting (not shown in image).

**7.Camera plug** – power and signal for rear view camera. Open cover and push plug into power socket, form-fitting (not shown in image).

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#### 2.6.6 Tail lift controls (optional)



- The tail lift controls are located on the rear end and passenger side of the trailer
- Refer to the tail lift supplier's manual for the proper operation

#### 2.6.7 Trailer height controls (optional)



- With the height control, it is possible to vary the loading floor height
- The height control can also act as a traction control on slippery surfaces. Reducing the trailer axle load adds more pressure on the vehicle's driving axle
- Valve and instructions are positioned at the rear end of the trailer on the driver's side



- The vehicle is also equipped with a joystick for operating height control from the cab
- Position MAN TGE: right side of driver's seat
- $\circ$  Joystick up trailer axle up
- $_{\odot}$  Joystick down trailer axle down
- CAUTION! Height control only works while stationary and up to 10 km/h
- Above 10 km/h, the axle automatically returns to driving position



### **3 MAINTENANCE MANUAL**

**SYSTEMS** 

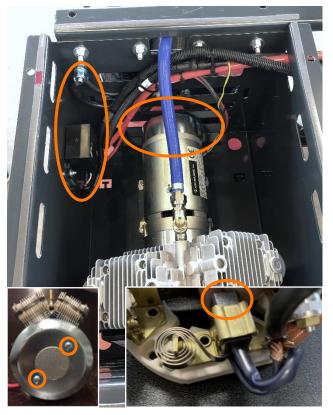
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The maintenance required on the 3500PLUS System is shown below.

- This manual only describes the 3500PLUS System. The vehicle should be serviced as specified by the manufacturer.
- Regular maintenance should be carried out at least every **six months**.
- In accordance with local laws and regulations, the vehicle and trailer should be legally inspected at regular intervals.
- Maintenance must be carried out by qualified personnel in accordance with the general applicable safety and environmental regulations.

Period	Air system	Coupling connection	Semi-trailer axle	Brake system	Air suspension
First use			х		
Every 6 months	х	Х	х	Х	Х
Every 12 months	х				

#### 3.1 Air System



- Remove the cover of the compressor box, by means of 4 bolts
- Remove the cover of the compressor motor, by means of 2 screws
- Check the carbon brushes on the compressor motor. Replace the carbon brushes if the carbon brush length is the same as the holder
- •Check the wiring to the relay and the earth point
- •Check all air connections for leakages

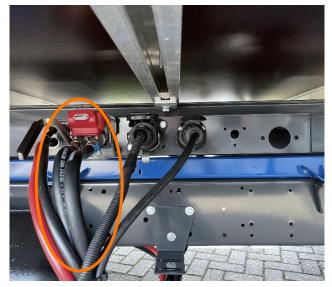




- Replace **annually** the air dryer filter on the outside of the compressor bin
- Disconnect the Duomatic to prevent deflation of the trailer air system
- CAUTION! Remove full air pressure from vehicle system, via air tank drain valve plug
- Remove the air filter
- Apply grease to the rubber O-ring
- Install new air filter hand-tight (15 Nm)



- Drain water at the 3x air tanks
- Pull ring to the left or right until no more water comes out
- Check air tanks and brackets for corrosion and replace if necessary
- o 2x air tank trailer
- o1x air tank vehicle



- Check all rubber air hoses for cracks and leaks
- Replace if necessary





#### **3.2** Coupling connection



- Check the bolt connection of the fifth wheel on the subframe. Tightening torque **260 Nm**
- Apply graphite grease on the entire top side of the fifth wheel



• Check the kingpin bolt connection. Tightening torque **130 Nm** 



• Lubricate the pin on the front left and right sides of the fifth wheel with ceramic grease



#### 3.3 Semi-trailer axle



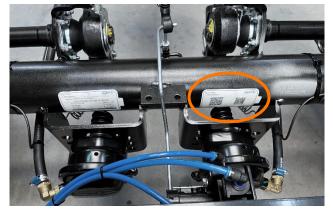
• Lubricate the axle with high pressure grease (EP)

• Pump grease into grease nipple 6x until grease is flowing out the axle

- Anchor plate, left and right sides (2x)
- $\,\circ\,$  Slack adjusters, left and right sides (4x)



• Position of grease nipple on anchor plate, left and right sides



• Scan the QR code on the Gigant axle for the correct maintenance manual







- Check and set tyre pressure to 7 bar
- Check wheel nuts, tightening torque 320 Nm
- Check tyres for even wear
- Align trailer if wear is uneven
- Check wheel bearing for play or noise, replace wheel bearing or hub if necessary



#### 3.4 Brake system and bleeding

• Check trailer brake lining for damage, replace as necessary.

• Remove the cap on the inside of the axle as shown. Check the thickness of the brake lining. Replace brake lining when the area of light grey is less than 2 mm.





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- Check if the distance between the automatic slack adjusters is parallel.
- Measure both slack adjusters to a fixed point; these measurements should be the same. Adjust the position as follows if they are not equal:
- Jack up the axle so that both wheels rotate freely.
- Tighten the adjustment bolt (indicated) until the brakes are tight. Then turn back 3/4 **turn** so that the wheels spin freely.
- Operate brake pedal briefly 3x.
- Repeat this procedure on other side.



- If work has been done on the vehicle's hydraulic brake system, the IBS brake system should be bled in addition to the regular bleed points on the brake calipers.
- Bleed the vehicle's brake system in the following order:

**1. Inverter valve** (2x nipple) - in front of the front wheel on the left side, accessible by removing the cover plate under the bumper (see image)

**2. Vehicle** - regular way as specified by the manufacturer



#### 3.5 Air suspension



- Check left and right air bellows for dryness and cracks, specifically around the lower and upper curves
- Replace as necessary
- Check shock absorbers for oil leakages
- Replace if necessary



• Check the nuts on the U-bolts. Tightening torque **550 Nm** 

#### 3.6 Fuses



- The main fuses are located in the vehicle's fuse box as shown
- Compressor fuse 125 amp
  IBS computer fuse, F1 60 amp





• The IBS fuses are located in the fuse box of the IBS computer in the vehicle as shown





### **4 MALFUNCTIONS**

#### 4.1 Causes and solutions

Possible malfunctions in the 3500PLUS System can be remedied using the instructions below.

Malfunction	Causes	Solutions
Brakes	ouuses	
Trailer brakes squeak	Insufficient lubrication of brake axles	Lubricate anchor plate and slack adjusters as shown in section 3.3
	Brakes not properly worn in	Brake trailer several times very intensively to allow brake drum and brake shoe to wear into each other. Keep in mind overall road safety, see also section2.4
	Glazed brake lining	Check brake lining for any glazing and replace if not remedied with intense braking.
Pneumatic malfund	tion	
Air pressure drops by more than 2.5 bar after 12 hrs	Air leakage in pneumatic system	Find the air leak and replace the affected parts.
Air pressure lower than 5.5 bar	Air leakage in pneumatic system	To prevent damage, put the brakes in the transport position.
IBS display warning lamp 'red' <b>CAUTION!</b> Brakes of trailer may lock		- Type spring brake booster large with 2x input hose: Disconnect the Duomatic from the trailer. Drain the rear large air tank under the trailer, using the dewatering valve. Unscrew the bolts on the underside of the brake booster. The screw thread should protrude at least <b>15 cm</b> before the brakes are in the transport position.
		- Type spring brake booster small with 1x inlet hose:
		Disconnect the Duomatic from the trailer. Drain the



		rear large air tank under the trailer, using the dewatering valve. The brakes are off. Fix the air leak and remove the brake boosters from the transport position.
No air pressure at all	Air leakage in pneumatic system	The brakes of the tailer are blocked. Put the brake boosters in the transport position as described above.
Air pressure not above 6.5 bar	Pressure regulator defective	Check the pressure regulator and replace as necessary.
Compressor does not turn on	No electrical power supply	Check compressor wiring and/or fuse. Replace as necessary, see section3.6.
	Carbon brushes worn	Check the compressor motor carbon brushes if this is difficult or slow to turn on, or if the fuse blows immediately. Replace as necessary.
	Compressor overheated	Allow to cool with ambient air. This process can be accelerated by removing the compressor box cover and reinstalling it after cooling.
Compressor does not turn off	Air leakage outside the compressor Air leakage inside the compressor	Find the air leak and replace the affected parts. System is not building up pressure. Check the piston rings for wear. Replace as necessary.
IBS malfunction (in	dicated on dashboard dis	play)
IBS light is red (left)	IBS computer malfunction	Read out trailer fault memory using IBS tool, see section 4.2
IBS light is orange (centre)	IBS computer malfunction	Read out trailer fault memory using IBS tool, see section 4.2
EBS lamp is orange (right)	Malfunction in ABS braking system on trailer	Fault must be read out using WABCO diagnostic equipment, available at the relevant truck dealer or trailer service point



The trailer brake diagrams can be accessed via the QR or the link underneath.



www.be-combi.com/technical-documentation/brakeplans



#### 4.2 IBS error code readout

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In the event of an IBS system malfunction, the error codes can be read out through an **IBS tool**, available at BE-Combi Systems.



- Remove the indicated panel
- Behind this is a 6-pin white plug marked '**X001**'
- Connect the IBS tool to the plug
- The IBS tool starts up immediately once connected, the first program takes 20 sec
- Every consecutive 1-2 seconds, the IBS tool displays information and shows the system pressures in Bar (starts at 4 sec)
- The subsequent step is represented by HS... or PS... as shown in the table
- The table below gives an overview of the time and description.

Time [sec]	Description	Display view
0-1	Software version number	S020
2-3	Configuration parameter number	P010
4-5	Supply pressure in port 11	8.88b
6		HS1
7-8	Hydraulic pressure on sensor #1	44.4b
9		HS2
10-11	Hydraulic pressure on sensor #2	44.4b
12		HS3
13-14	Hydraulic pressure on sensor #3	44.4b
15		HS3
16-17	Hydraulic pressure on sensor #4	44.4b
18		PS5
19-20	Air pressure backup sensor port 42	4.44b

After this sequence, the Diagnostic Trouble Codes (DTC) stored in the memory will be displayed.

CAUTION! The IBS tool will only display active and inactive codes stored in the last 24 working hours.

If no DTCs are known, the sequence stops. If DTCs are known, they will be displayed as follows.

Time	Description	Display view
[sec]		
22	Diagnostic Trouble Code #1	F001
23	Diagnostic Trouble Code #2	F050.
24	Diagnostic Trouble Code #3	F048
25	Diagnostic Trouble Code #4	F034.
26	Diagnostic Trouble Code #5	F022
27		
28	Diagnostic Trouble Code #1	F001
29	Diagnostic Trouble Code #2	F050.
	Etc*	

\* If DTCs are present, the IBS tool will keep repeating them.

--- Indicates restart of the DTC cycle.

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SYSTEMS

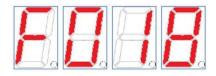
CAUTION! DTCs with a dot indicate an active fault.

If **no** dot appears behind the DTC, it indicates an inactive fault which was active for the last 24 working hours.

Example of an active DTC

$\square$	Ĺ	$\square$
$\square_{\circ}$	$\square_{0}$	Ц.

Example of an inactive DTC



The given error codes with possible solution can be looked up in appendix A, or using the link or QR code shown below.



www.be-combi.com/technical-documentation/ibs





## **APPENDIX A**

Observation         Description         Instant         Proton barbon         Proton barbon <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>								
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	DTC EEPROM	Description #1	Description #2	Lamp	Remarks	Pin on IBS ECU:	Sensor / Actuator:	Possible Solution:
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Hudraulic Cancor #1	value ahove normal range	Red / Amher				
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	F002 DWORD00.82	Hydraulic Sensor #1	value below normal range	Red/Amber	1 sensor failed? -> Amber Lamp 21 sensors failed? -> Red Lamp	4	B001	<ul> <li>Check Wiring to Hydraulic Sensor</li> <li>Check/Replace Fuse to power supply of Sensors</li> </ul>
		Luxienii Concer#1	driver error	Pod/Amhor	1 sensor failed? -> Amber Lamp			- Replace Hydraulic Sensor
DUDDEDIDE         Homalit Sensor #2         Vota above round range         Red/Ambre round         Head         Ambre round         Head         Bead           DUDDEDIDE         Homalit Sensor #2         Vota above round range         Red/Ambre round         13000000000000000000000000000000000000					1 sensor failed? -> Amber Lamp			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	F004 DWORD00.B4	Hydraulic Sensor #2	value above normal range	Red/Amber	>1 sensors failed? -> Red Lamp			- Check Wiring to Hydraulic Sensor
DVCH00008         Induction         Control         Eq./Immedia         Statemation         Administry         Model           DVCH0000803         Inductricencer IS         Nut advise from Integ         Eq./Immedia         Statemation         Model	F005 DWORD00.B5	Hydraulic Sensor #2	value below normal range	Red/Amber	1 sensor failed? -> Amber Lamp >1 sensors failed? -> Red Lamp	H4	B002	- Check/Replace Fuse to power supply of Sensors
NONCODER         Interaction         Rest/Interaction	F006 DWORD00.B6	Hvdraulic Sensor #2	driver error	Red/Amber	1 sensor failed? -> Amber Lamp >1 sensors failed? -> Red Lamp			- Replace Hydraulic Sensor
OUTCODDDS         Mathematications         Mathmatications         Mathematications	F007 DWORD00.B7	, Hvdraulic Sensor #3	value above normal range					
Oncome         Interaction         Interaction <t< td=""><td>F008 DWORD00.88</td><td></td><td>value below normal range</td><td></td><td></td><td>A4</td><td>B003</td><td><ul> <li>Check Wiring to Hydraulic Sensor</li> <li>Check/Replace Fuse to power supply of Sensors</li> </ul></td></t<>	F008 DWORD00.88		value below normal range			A4	B003	<ul> <li>Check Wiring to Hydraulic Sensor</li> <li>Check/Replace Fuse to power supply of Sensors</li> </ul>
	F009 DWORD00.89	-	driver error					- Replace Hydraulic Sensor
WOUDDOD         Instance         Residence relation         Andre Lump         Andre Lump           WOUDDOD         Methalic Sencer at         Instance relation         15 encor faller5 - Ambeil Lump         4           WOUDDOD         Methalic Sencer at         Instance relation         15 encor faller5 - Ambeil Lump         4           WOUDDOD         Methalic Sencer at         Instance relation         15 encor faller5 - Ambeil Lump         4           WOUDDOD         Methalic Sencer at         Instance relation         15 encor faller5 - Ambeil Lump         6           WOUDDOD         Methalic Sencer at         Instance relation         15 encor faller5 - Ambeil Lump         6           WOUDDOD         Methalic Researce Sencer Port 1         Insta below formalinge         Red         Encor         6           WOUDDOD         Methalic Researce Sencer Port 2         Under Encor         Instance         6         4           WOUDDOD         Methalic Researce Sencer Port 2         Under Encor         Red         Encor         6         4           WOUDDOD         Methalic Researce Sencer Port 2         Under Encor         Red         Encor         6         4           WOUDDOD         Methalic Researce Sencer Port 2         Under Encor         Red         Encor         6	F010 DWORD00.B10	Hydraulic Sensor #4	value above normal range	Red/Amber	1 sensor failed? -> Amber Lamp >1 sensors failed? -> Red Lamp			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	F011 DWORD00.B11	Hydraulic Sensor #4	value below normal range	Red/Amber		A3	B004	- cneck wiring to Hydraulic Sensor - Check/Replace Fuse to power supply of Sensors 
DWORD00131         In Fressure Sensor Port 11         Under a fore         Red         Under a fore         Cid         B006           DWORD00131         All Fressure Sensor Port 11         Under enfort         Red         Pressure Sensor Port 11         B006           DWORD001315         All Fressure Sensor Port 12         Under enfort         Red         Port         Port         B006           DWORD001315         All Fressure Sensor Port 12         Under enfort         Red         Port	F012 DWORD00.B12	Hydraulic Sensor #4	driver error	Red/Amber	1 sensor failed? -> Amber Lamp >1 sensors failed? -> Red Lamp			- replace nyorauricoensor
NOMENDBLAX         In Pressure Sensor Port 11         Volte below normal range         Red         Cd         B006           NOMENDBLAX         In Pressure Sensor Port 12         Nue above normal range         Red         Pod	F013 DWORD00.B13	Air Pressure Sensor Port 11	value above normal range	Red				- Check Wiring to Pressure Sensor
DWORDODB3 In Pressure Sensor Port 11.         Offende error.         Number Sensor Port 12.         Other error.         Number Sensor Port 12.         Other error.         Number Sensor Port 12.         Number Sensor 12.         Number Sensor 12.         Number	F014 DWORD00.B14	Air Pressure Sensor Port 11	value below normal range	Red		4	B006	- Check/Replace Fuse to power supply of Sensors
DWORDODBIG Int Pressure Sensor Port22         Value Bolov montal range         Red         Dot           DWORDODBIG Int Pressure Sensor Port22         Value Bolov montal range         Red         Dot           DWORDODBI Int Pressure Sensor Port22         Value Bolov montal range         Red         Dot           DWORDODBI Int Pressure Sensor Port22         Value Bolov montal range         Red         Dot           DWORDODBI Int Pressure Sensor Port22         Value Bolov montal range         Red         Dot           DWORDODBI Int Pressure Sensor Port22         Value Bolov montal range         Red         Dot           DWORDODBI Int Pressure Sensor Port22         Value Bolov montal range         Red         Dot           DWORDODBI Int Pressure Sensor Port22         Value Bolov montal range         Red         Dot           DWORDODBI Int Pressure Sensor Port22         Value Bolov montal range         Red         Dot           DWORDODBI Int Pressure Fensor Failure         Plausibility check failed         Red         Dot         Jaor Ka           DWORDODBI Int Pressure Fensor Failure         Plausibility check failed         Red         Dot         F1 or G1 or H1         A003           DWORDODBI Int Pressure Fensor Failure         Plausibility check failed         Red         Plausibility check failed         Red         Plausibility check failed <td>F015 DWORD00.B15</td> <td>Air Pressure Sensor Port 11</td> <td>driver error</td> <td>Red</td> <td></td> <td></td> <td></td> <td>- Replace Pressure Sensor</td>	F015 DWORD00.B15	Air Pressure Sensor Port 11	driver error	Red				- Replace Pressure Sensor
MONDEDIDIE IN INFRESTIVE Service Prior 22         Under enclor diver enclor         Red         Point	F016 DWORD00.B16	Air Pressure Sensor Port 22	value above normal range	Red				- Check Wiring to Pressure Sensor
NUMBERING         End         E	F017 DWORD00.B17	Air Pressure Sensor Port 22	value below normal range	Red		14	A002	- Replace Pressure Sensor
DWORDOD.8.12         Inf Pressure Sensor Port 42         value below normal range         Red         Bods         Bods           DWORDOD.8.21         Inf Pressure Sensor Port 42         dirver error         Red         Red         Bods         Bods           DWORDOD.8.21         Inf Pressure Sensor Port 42         dirver error         Amber         Red         Mods         Bods           DWORDOD.8.21         IBS CAN - CAN Signal "AGR Active"         timeout or signal error         Amber         Jaor K3         A003 / R001 / R002           DWORDOD.8.21         IBS CAN - CAN Signal "Engine Speed"         timeout or signal error         Amber         Jaor K3         A003 / R001 / R002           DWORDOD.8.23         IBS CAN - CAN Signal "Engine Speed"         timeout or signal error         -         Jaor K3         A003 / R001 / R002           DWORDOD.8.25         IPS CAN - CAN Signal "Engine Speed"         timeout or signal error         -         Jaor K3         A003 / R001 / R002           DWORDOD.8.25         IPS CAN - CAN Signal "Engine Speed"         timeout or signal error         -         Jaor K3         A003 / R001 / R002           DWORDOD.8.25         IPS CAN - CAN Signal "Engine Speed"         timeout or signal error         -         Jaor K3         A003 / R001 / R002           DWORDOD.8.26         IPS Signal Pressure Erreas	F019 DWORD00.B19	Air Pressure Sensor Port 42	value above normal range	Red				- Check Wiring to Pressure Sensor
DWORD000.B21         Arr Pressure Sensor Port 42         driver error         Red         No         A003         K001         K002           DWORD000.B21         IBS CAN - CAN Signal "Engine Speed"         timeout or signal error         Amber         J3 or K3         A003         K001         K002           DWORD00.B23         IBS CAN - CAN Signal "Engine Speed"         timeout or signal error         Amber         J3 or K3         A003         K001         K002           DWORD00.B23         IBS CAN - CAN Signal "Engine Speed"         timeout or signal error         -         J3 or K3         A003         K001         K002           DWORD00.B23         IBS CAN - CAN Signal "Engine Speed"         timeout or signal error         -         J3 or K3         A003         K001         K002           DWORD00.B25         FEST INTER         Plausibility check failed         Red         Red         F1 or G1 or H1         A002           DWORD00.B26         GON Failure         DWORD00.B26         EVC INTERVENCE         Red         H1         A002           DWORD00.B26         GON Failure         DWORD00.B26         EVC Intervence         H1         A002           DWORD00.B26         GON Failure         DWORD00.B26         EVC Intervence         IE         IE         A002 </td <td>F020 DWORD00.B20</td> <td>Air Pressure Sensor Port 42</td> <td>value below normal range</td> <td>Red</td> <td></td> <td>E4</td> <td>B005</td> <td>- Check/Replace Fuse to power supply of Sensors</td>	F020 DWORD00.B20	Air Pressure Sensor Port 42	value below normal range	Red		E4	B005	- Check/Replace Fuse to power supply of Sensors
DWORD00.82         BS CAN - CAN Signal "ASR Active"         Imeout or signal error         Amber         J3 or K3         A003 / R001 / R002           DWORD00.82         BS CAN - CAN Signal "Engine Speed"         Imeout or signal error         -         J3 or K3         A003 / R001 / R002           DWORD00.82         BS CAN - CAN Signal "Engine Speed"         Imeout or signal error         -         J3 or K3         A003 / R001 / R002           DWORD00.82         Pressure Increase Failure         Plausibility check failed         Red         F1 or G1 or H1         A002           DWORD00.82         Pressure Decrease Failure         Plausibility check failed         Red         F1 or G1 or H1         A002           DWORD00.82         Fressure Decrease Failure         Denotification         Red         Pausibility check failed         Red         P1 or G1 or H1         A002           DWORD00.82         Fressure Decrease Failure         Denotification         Red         P1 or G1 or H1         A002           DWORD00.82         Fressure Decrease Failure         DWORD00.82         Fressure Decrease Failure         P1 or G1 or H1         A002           DWORD00.83         Fressure Decrease Failure         DWORD00.83         Fressure Decrease Failure         P1 or G1 or H1         A002           DWORD00.83         Frestor Intert valve	F021 DWORD00.B21	Air Pressure Sensor Port 42	driver error	Red				- Replace Pressure Sensor
DWORDOUG22         BS. CAN - CAN signal "Engine Speed"         timeout or signal error         Anneer         J. S or K3         A003 / R001 / R002           DWORDOUG23         BS. CAN - CAN signal "Engine Speed"         timeout or signal error         -         J3 or K3         A003 / R001 / R002           DWORDOUG23         Pressure Increase Failure         Plausibility check failed         Red         J3 or K3         A003 / R001 / R002           DWORDOUG23         Pressure Increase Failure         Plausibility check failed         Red         J1 or G1 or H1         A002           DWORDOUG23         Pressure Decrease Failure         Plausibility check failed         Red         P1 or G1 or H1         A002           DWORDOUG23         FCV Intel Valve         DWORDOUG23         FCV Intel Valve         P1 or G1 or H1         A002           DWORDOUG23         FCV Intel Valve         DWORDOUG33         FCV Intel Valve         P1 or G1 or H1         A002           DWORDOUG33         FCV Intel Valve         DWORDOUG33         FCV Intel Valve         P1 or G1 or H1         A002           DWORDOUG33         FCV Intel Valve         DWORDOUG33         FCV Intel Valve         P1 ar A002         P1 ar A002           DWORDOUG33         FCV Intel Valve         DWORDOUG33         FCV Intel Valve         P1 ar A002         P1 ar A0		=	-	-		5		- Check Wiring to CAN-Crocodile/Termination resistor - Check/Replace Fuse to power supply of CAN-Crocodile
DWORDOD.0221         BIS CAN - CAN Signal "Engine Speed"         timeout or signal error         - <th< td=""><td></td><td>IBS CAN - CAN Signal "ASK ACTIVE"</td><td>timeout or signal error</td><td>Amber</td><td></td><td>J3 OF K3</td><td>AUU3 / KUU1 / KUU2</td><td>- Replace CAN-Crocodile</td></th<>		IBS CAN - CAN Signal "ASK ACTIVE"	timeout or signal error	Amber		J3 OF K3	AUU3 / KUU1 / KUU2	- Replace CAN-Crocodile
OWCRD00.024         Pressure Increase Failure         Plausibility check failed         Red         F1 or G1 or H1         A002         T1           OWCRD00.025         Pressure Increase Failure         Plausibility check failed         Red         F1 or G1 or H1         A002         1           OWCRD00.025         Pressure Decrease Failure         Plausibility check failed         Red         F1 or G1 or H1         A002         1           OWCRD00.025         FCV Inlet Valve         DWCRD00.025         FCV Inlet Valve         Pausibility check failed         Red         P11         A002         1           OWCRD00.025         FCV Inlet Valve         DWCRD00.025         FCV Inlet Valve         P11         A002         1           OWCRD00.026         FCV Inlet Valve         DWCRD00.025         FCV Inlet Valve         P11         A002         1           DWCRD00.026         FCV Inlet Valve         DWCRD00.026         FCV Inlet Valve         P11         A002         1           DWCRD00.026         FCV Inlet Valve         DWCRD00.026         FCV Inlet Valve         P11         A002         1           DWCRD00.026         FCV Inlet Valve         DWCRD00.026         FCV Inlet Valve         P11         A002         1           DWCRD00.026         FCV Inlet Valve<		IRS CAN . CAN Sirnal "Enrina Snaad"				13 or K3	Anna / Pnna / Pnna	<ul> <li>Check Wiring to CAN-Crocodile/Termination resistor</li> <li>Check/Replace Fuse to power supply of CAN-Crocodile</li> <li>Replace CAN-Crocodile</li> </ul>
DWORDO0.B34         Pressure Increase Falure         Plausibility check failed         Red         F1 or G1 or H1         A002           DWORDO0.B35         Pressure Decrease Failure         Plausibility check failed         Red         F1 or G1 or H1         A002         -           DWORDO0.B35         FreSture Decrease Failure         Plausibility check failed         Red         F1 or G1 or H1         A002         -           DWORDO0.B35         FCV Inlet Valve         Dom Current         Red         L3 and L4 and M3 and M4         GND Point connection         -           DWORDO0.B35         FCV Inlet Valve         Dom Current for Low         Red         H1         A002         -           DWORDO0.B35         FCV Inlet Valve         Dom Current for Low         Red         H1         A002         -           DWORDO0.B35         FCV Inlet Valve         Current for Low         Red         H1         A002         -           DWORDO0.B31         FCV Discharge Valve         Current for Low         Red         H1         A002         -           DWORDO0.B31         FCV Discharge Valve         Current for Low         Red         H1         A002         -           DWORDO0.B31         FCV Discharge Valve         Current for Low         Red         H1		וחס כאות כאות סופותו בוופוור סלרכת				2		- Check Wiring to eTCV Valve
DWORD00.035         Pressure Decrease Failure         Plausibility check failed         Red         F1 or G1 or H1         A002         I           DWORD00.035         GNO Failure         DWORD00.035         GNO Failure         L3 and L4 and M3 and M4         GND Point connection         I           DWORD00.032         FCV Inlet Valve         open circuit         Red         Net         L3 and L4 and M3 and M4         GND Point connection         I           DWORD00.032         FCV Inlet Valve         open circuit         Red         Red         H1         A002         I           DWORD00.033         FCV Inlet Valve         open circuit         Red         Red         H1         A002         I           DWORD00.033         FCV Inlet Valve         open circuit         Red         Red         H1         A002         I           DWORD00.033         FCV Inlet Valve         open circuit         Red         Red         M1         A002         I           DWORD00.031         FCV Inlet Valve         open circuit         Red         Red         M0         M0         I           DWORD0.033         FCV Inlet Valve         open circuit         Red         Red         M1         A002         I         I         I         M0	F024 DWORD00.B24	Pressure Increase Failure	Plausibility check failed	Red		F1 or G1 or H1	A002	e Alt transformer
DWORDO0.023         ECV Inter Value         GND Point connection           DWORDO0.023         ETCV Inter Value         0 pen circuit         Red         L3 and L4 and M3 and M4         GND Point connection           DWORDO0.023         ETCV Inter Value         0 pen circuit         Red         H1         A002           DWORD00.023         ETCV Inter Value         Inter Value         Inter Value         A002           DWORD00.023         ETCV Inter Value         Inter Value         A002         Inter Value           DWORD00.031         ETCV Inter Value         Inter Value         Red         H1         A002           DWORD00.031         ETCV Discharge Value         Inter Atol Inter Value         Red         H1         A002         Inter Anol           DWORD00.031         ETCV Discharge Value         Inter Atol Inter Anol         Red         G1         A002         Inter Anol           DWORD0.031         ETCV Discharge Value         Inter Atol Inter Anol         Red         F1         A002         Inter Anol           DWORD0.031         ETCV Discharge Value         Inter Atol Inter Anol         Red         F1         A002         Inter Anol           DWORD0.0401         ETCV Discharge Value         Inter Anol         Red         Inter Anol         Inter Anol	F025 DWORD00.B25	Pressure Decrease Failure	Plausibility check failed	Red		F1 or G1 or H1	A002	- Check Wiring to eTCV Valve -
DWORD00.0023         FCV Inlet Value         open circuit         Red         H1         A002         -           DWORD00.028         FCV Inlet Value         short circuit (Protection Active)         Red         H1         A002         -           DWORD00.028         FCV Inlet Value         short circuit (Protection Active)         Red         H1         A002         -           DWORD00.028         FCV Discharge Value         open circuit         Red         P         -         -         -         -           DWORD00.030         FCV Discharge Value         open circuit         Red         P         -	F026 DWORD00.B26	GND Failure	,	Red	1	3 and L4 and M3 and M4	GND Point connection	- Check GND Connection to IBS ECU
DWORDO0.B28         eTCV Indet Value         Ind         M02	F027 DWORD00.B27	eTCV Inlet Valve	open circuit	Red				- Check Wiring to eTCV Valve
DWORD00.000         Eit Witter vare DWORD00.000         Eit Witter vare DWORD00.000         Red Eit CVD Ischarge Value         Open Eit Unit DWORD00.000         Eit Value         G1         A002         -           DWORD00.000         ETCV Discharge Value         Short circuit (Protection Active)         Red         G1         A002         -           DWORD00.000         ETCV Discharge Value         Short circuit (Protection Active)         Red         G1         A002         -           DWORD01.000         ETCV Discharge Value         current too low         Red         F1         A002         -           DWORD01.000         ETCV Discharge Value         open circuit         Red         F1         A002         -           DWORD01.000         ETCV Backup Value         open circuit         Red         F1         A002         -           DWORD01.001         ETCV Backup Value         circuit (Protection Active)         Red         F1         A002         -           DWORD01.002         ETCV Backup Value         circuit (Protection Active)         Red         F1         A002         -           DWORD01.004         Configuration Fallel         F2         F2         A002         -         -	F028 DWORD00.B28	eTCV Inlet Valve	short circuit (Protection Active)	Red		H	A002	- Check GND Connection to eTCV Valve
DWORD00.0831         ETCV Discharge Valve         short circuit (Protection Active)         Red         G1         A002           DWORD01.B00         ETCV Discharge Valve         current too low         Red         Red         A002         I           DWORD01.B01         ETCV Backup Valve         open circuit         Red         Red         A002         I         A002           DWORD01.B02         ETCV Backup Valve         open circuit         Red         Red         A002         I         A002           DWORD01.B02         ETCV Backup Valve         Internation (Protection Active)         Red         F1         A002         I         A002         I         I         A002         I         I         A002         I	F030 DWORD00.B30	eTCV Discharge Valve	open circuit	Red				- Check Wiring to eTCV Valve
DWORD01.B00         ETCV Discharge Value         current too low         Red         Med	F031 DWORD00.B31	eTCV Discharge Valve	short circuit (Protection Active)	Red		61	A002	- Check GND Connection to eTCV Valve
DWCRD01.B0L         ETCK Backup Valve         open circuit         Red         F1         A002           DWCRD01.B02         ETCK Backup Valve         short circuit (Protection Active)         Red         F1         A002           DWCRD01.B02         ETCK Backup Valve         current too low         Red         F1         A002           DWCRD01.B03         ETCK Backup Valve         current too low         Red         MCM01.B04         F1           DWCRD01.B04         Configuration (Active)         Red         Software         Wrong Configuration FileII	F032 DWORD01.B00	eTCV Discharge Valve	current too low	Red				- Replace eTCV Valve
DWORD01.B02 [eTCV Backup Valve [short circuit (Protection Active) Red F1 A002 UNOND01.B03 [eTCV Backup Valve current too low Red Software Virong Configuration F1 Sof	F033 DWORD01.B01	eTCV Backup Valve	open circuit	Red				- Check Wiring to eTCV Valve
DWORDOLLADS ELLCY BACKUP VAIVE CUTTENT TOO TOW RED DWORDOLLADS ELLCY BACKUP VAIVE Software Software Red Software Software Red Software Software Red Software Softwa	F034 DWORD01.802	eTCV Backup Valve	short circuit (Protection Active)	Red		E	A002	- Check GND Connection to eTCV Valve
	F035 DWOKD01.803	eICV Backup Valve	current too low	Red Pod		Coffwara	Wrong Configuration Filall	- Replace eTCV Valve Chack Software and Configuration Eile
DM/ODDM DDC Configuration incommontials units Cofficiency Analization		Configuration incompatible with Cofficers Application		Pod		Coffmarc	Wrong Comigation Files	Check Software and Configuration File



F038 DWORD01.B0	F038 DWORD01.B06 Compressor Relay	open circuit	Amber	ĩ		- Check Wiring to Compressor Relay
F039 DWORD01.B0	DWOKD01.B0/ Compressor Relay	short circuit	Amber	E	K004	- Check GND Connection Compressor Relay
F040 DWORD01.B0	F040 DWORD01.B08 Compressor Relay	current too low	Amber			- Replace Compressor Relay
F041 DWORD01.B0	F041 DWORD01.B09 ECAD Governor Valve	open circuit	Amber			- Check Wiring to ECAD Valve
F042 DWORD01.B10	0 ECAD Governor Valve	short circuit	Amber	D1	Y001	- Check GND ECAD Valve
F043 DWORD01.B1	F043 DWORD01.B11 ECAD Governor Valve	current too low	Amber			- Replace ECAD Valve
F044 DWORD01.B1	F044 DWORD01.B12 ECAD Regeneration Valve	open circuit	Amber			- Check Wiring to ECAD Valve
F045 DWORD01.B13	3 ECAD Regeneration Valve	short circuit	Amber	5	Y001	- Check GND ECAD Valve
F046 DWORD01.B1	F046 DWORD01.B14 ECAD Regeneration Valve	current too low	Amber			- Replace ECAD Valve
F047 DWORD01.B1	F047 DWORD01.B15 Red Stop Lamp Relav	open circuit	Amber	:		- Check Wiring to Red Stop Lamp Relay
ED10 DW/OBD01 B1	EMAG INWODDM1 B16 Bod 64mm Doland	chort circuit	Amhor	K1	K002	- Check GND Red Stop Lamp Relay - Replace Red Stop Lamp Relay
						- Check Wiring to Amber Warning Lama Relav
F049 DWORD01.B1	F049 DWORD01.B17 Amber Warning Lamp Relay	open circuit	Amber	11	K003	- Check GND Amber Warning Lamp Relay
F050 DWORD01.B1	F050 DWORD01.B18 Amber Warning Lamp Relay	short circuit	Amber			- Replace Amber Warning Lamp Relay
F051 DWORD01.B1	F051 DWORD01.B19 Compressor Overtemperature		Amber	81	S001	- Check Wiring to Compressor Temperature Sensor - Replace Compressor Temperature Sensor
F052 DWORD01.B20 eTCV Inlet Valve	0 eTCV Inlet Valve	short circuit (User Overload)				
F053 DWORD01.B21 eTCV Inlet Valve	1 eTCV Inlet Valve	short circuit (Temporary Overload)	_	-		- Check Wiring to elicy valve
F054 DWORD01.B2	F054 DWORD01.B22 eTCV Inlet Valve	short circuit (Protection Fatal)	Red		7004	- Check GND Collification to ency valve - Renface aTCV Vialve
F055 DWORD01.B2	F055 DWORD01.B23 eTCV Inlet Valve	short circuit (Protection Reenable)				
F056 DWORD01.B2	F056 DWORD01.B24 eTCV Discharge Valve	short circuit (User Overload)	-			Chock Miring to oTCV Value
F057 DWORD01.B2	F057 DWORD01.B25 eTCV Discharge Valve	short circuit (Temporary Overload)		Ū	000	
F058 DWORD01.B2	F058 DWORD01.B26 eTCV Discharge Valve	short circuit (Protection Fatal)	Red	TD I	7004	- Check GND Collification to ency valve - Renface ATCV Valve
F059 DWORD01.B2	F059 DWORD01.B27 eTCV Discharge Valve	short circuit (Protection Reenable)				
F060 DWORD01.B2	F060 DWORD01.B28 eTCV Backup Valve	short circuit (User Overload)				- Check Wiring to eTCV Valve
F061 DWORD01.B2	F061 DWORD01.B29 eTCV Backup Valve	short circuit (Temporary Overload)		11	A002	- Check GND Connection to eTCV Valve
F062 DWORD01.B3	F062 DWORD01.B30 eTCV Backup Valve	short circuit (Protection Fatal)	Red			- Replace eTCV Valve
F063 DWORD01.B3	F063 DWORD01.B31 eTCV Backup Valve	short circuit (Protection Reenable)				
F064 DWORD02.B0	F064 DWORD02.B00 Compressor Relay	short circuit (User Overload)				
F065 DWORD02.B0	F065 DWORD02.B01 Compressor Relay	short circuit (Temporary Overload)				<ul> <li>Check Wiring to Compressor Relay</li> </ul>
F066 DWORD02.B0	F066 DWORD02.B02 Compressor Relay	short circuit (Protection Active)	Amber	E1	K004	- Check GND Connection Compressor Relay
F067 DWORD02.B0	F067 DWORD02.B03 Compressor Relay	short circuit (Protection Fatal)	Amber			- Replace Compressor Relay
F068 DWORD02.B0	F068 DWORD02.B04 Compressor Relay	short circuit (Protection Reenable)				
F069 DWORD02.B0	F069 DWORD02.B05 ECAD Governor Valve	short circuit (User Overload)				
FU/U DWORDUZ.BU		snort circuit (Temporary Overload)	-	č	LOON	- CHECK WITING TO ECAD VAIVE
			Alliber	10	TOOL	
F072 DWORD02.BU	FUZE DWORDNOZ.BUS ECAU GOVERNOF VAIVE EN23 DWORDND RAG ECAD Governor Valve	short circuit (Protection Fatal) short circuit (Protection Reenable)	Amber -		-	- Replace ECAD Valve
F074 DWORD02.B1	F074 DWORD02.B10 FCAD Rependation Valve	short circuit (User Overload)				
F075 DWORD02.B1	F075 DWORD02.B11 ECAD Regeneration Valve	short circuit (Temporary Overload)				- Check Wiring to ECAD Valve
F076 DWORD02.B12	2 ECAD Regeneration Valve	short circuit (Protection Active)	Amber	C1	Y001	- Check GND ECAD Valve
F077 DWORD02.B1	F077 DWORD02.B13 ECAD Regeneration Valve	short circuit (Protection Fatal)	Amber			- Replace ECAD Valve
F078 DWORD02.B1	F078 DWORD02.B14 ECAD Regeneration Valve	short circuit (Protection Reenable)				
F079 DWORD02.B1	F079 DWORD02.B15 Red Stop Lamp Relay	short circuit (User Overload)				
F080 DWORD02.B1	F080 DWORD02.B16 Red Stop Lamp Relay	short circuit (Temporary Overload)				- Check Wiring to Red Stop Lamp Relay
F081 DWORD02.B1	F081 DWORD02.B17 Red Stop Lamp Relay	short circuit (Protection Active)	Amber	K1	K002	- Check GND Red Stop Lamp Relay
F082 DWORD02.B1	DWORD02.B18 Red Stop Lamp Relay	short circuit (Protection Fatal)	Amber			- Replace Red Stop Lamp Relay
F083 DWORD02.B1	F083 DWORD02.B19 Red Stop Lamp Relay	short circuit (Protection Reenable)				
F084 DWORD02.B2	F084 DWORD02.B20 Amber Warning Lamp Relay	short circuit (User Overload)				
F085 DWORD02.B2	F085 DWORD02.B21 Amber Warning Lamp Relay	short circuit (Temporary Overload)				<ul> <li>Check Wiring to Amber Warning Lamp Relay</li> </ul>
F086 DWORD02.B2	F086 DWORD02.B22 Amber Warning Lamp Relay	short circuit (Protection Active)	Amber	Τſ	K003	- Check GND Amber Warning Lamp Relay
F087 DWORD02.B2	F087 DWORD02.B23 Amber Warning Lamp Relay	short circuit (Protection Fatal)	Amber			- Replace Amber Warning Lamp Relay
F088 DWORD02.B2	F088  DWORD02.B24  Amber Warning Lamp Relay	short circuit (Protection Reenable)				