



# INFO CENTRE

V. G326

## OPERATOR'S GUIDE



000 700 270/06.05/Redditch

GB

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## Introduction

INFO CENTRE is a side of trailer mounted diagnostic unit used for readout of odometer and diagnostic codes, plus other information as available in the EB+ Electronic Control Unit (ECU).

The INFO CENTRE is connected permanently to the ECU's diagnostic 'DIAG' connection. While the ECU is powered from its normal source (ISO7638 permanent) information is transferred to the Info Centre's memory, which can be recalled. Power is supplied from the vehicle system via the ECU diagnostics connector.

INFO CENTRE comprises an LCD (Liquid Crystal Display) and two buttons marked up/down and right pointing arrows.

The left hand button (showing a right pointing arrow), means '**select**' or '**confirm**' whilst the right hand button (showing an up/down arrow) means '**change**' or '**next**' to allow the movement between menus and options.

INFO CENTRE also has an internal battery which allows readout of information (including fault indication) when the trailer is uncoupled and unpowered (N.B. INFO CENTRE ADR, this feature is not available see page 33). It is housed in a plastic enclosure provided with a cover boot for environmental protection.

## Functions available

- ⚡ Vehicle supply
- 🔋 EB+ Info Centre battery supply

### INFO MENU:

- ⚡ Read Diagnostic Trouble Code (DTC) Active
- ⚡🔋 Read Diagnostic Trouble Code (DTC MEM) Stored
- ⚡ Clear DTC
- ⚡🔋 Configuration
- ⚡🔋 ECU software version number
- ⚡🔋 ECU serial number
- ⚡🔋 Vehicle Ident Number (VIN)
- ⚡🔋 Manufacturer OEM
- ⚡🔋 Info Centre software version number

### DISTANCE MENU:









- ⚡🔋 Odometer - Total distance
- ⚡🔋 Trip distance
- ⚡🔋 Service distance
- ⚡🔋 Tyre size
- ⚡🔋 Clock (time and date)
- ⚡ Clear Trip



### CHANGES MENU:

- ⚡ Service Due
- ⚡ Service interval
- ⚡ Service interval Distance
- ⚡ Service interval Days
- ⚡🔋 Lining Wear Indication
- ⚡🔋 Clock (time and date)
- ⚡🔋 Options-on/off (parameter updating / backlight)
- ⚡🔋 Password (PIN number)
- ⚡🔋 Unlock Info Centre (PIN number Un-known)

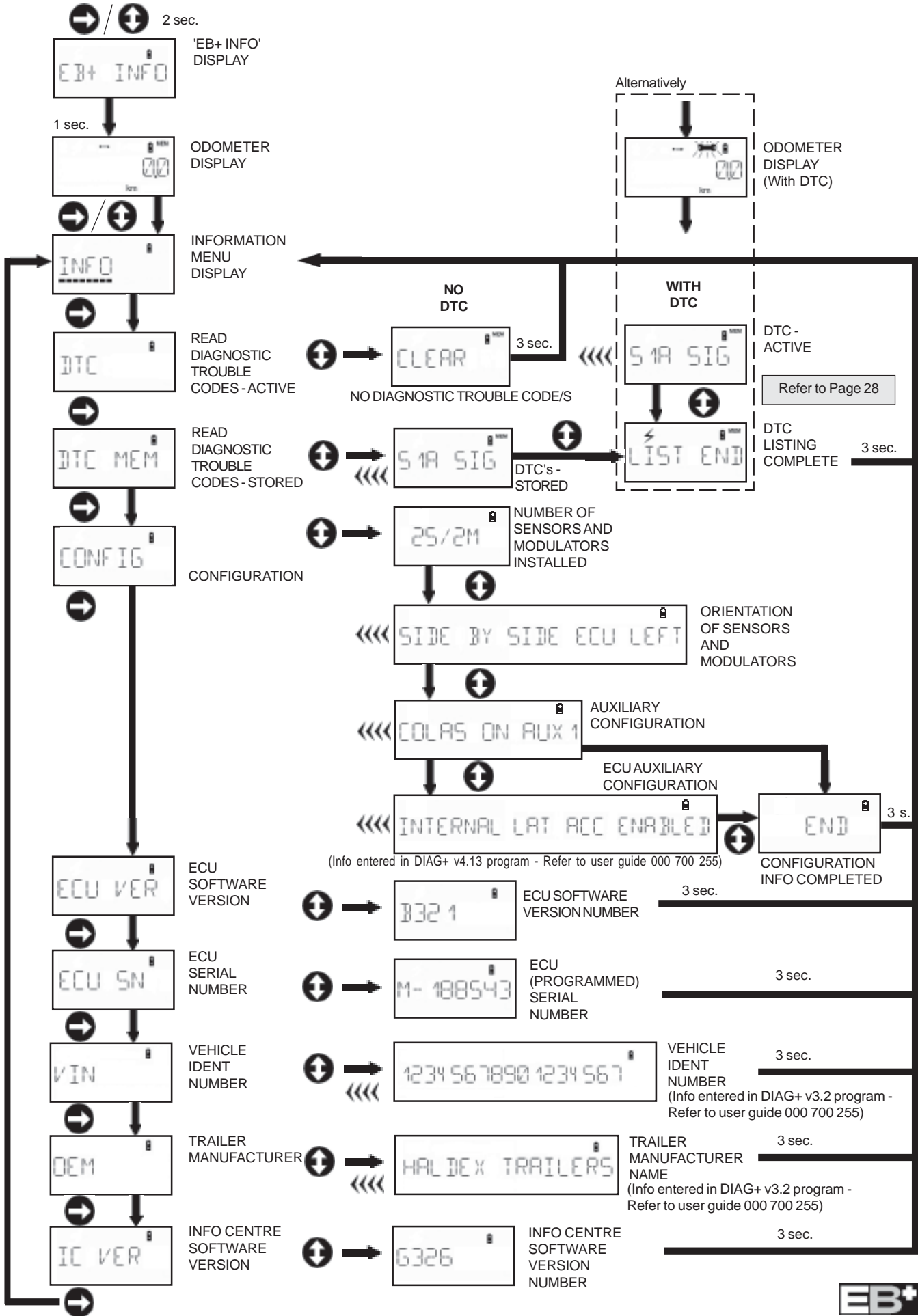
### TESTS MENU:

- ⚡ Load
- ⚡ Wheels (sensor / cabling check)
- ⚡ Pressure
- ⚡ Plate (Load plate data)
- ⚡ Auxiliaries
- ⚡ Brake test
- ⚡ Lining Wear Indication

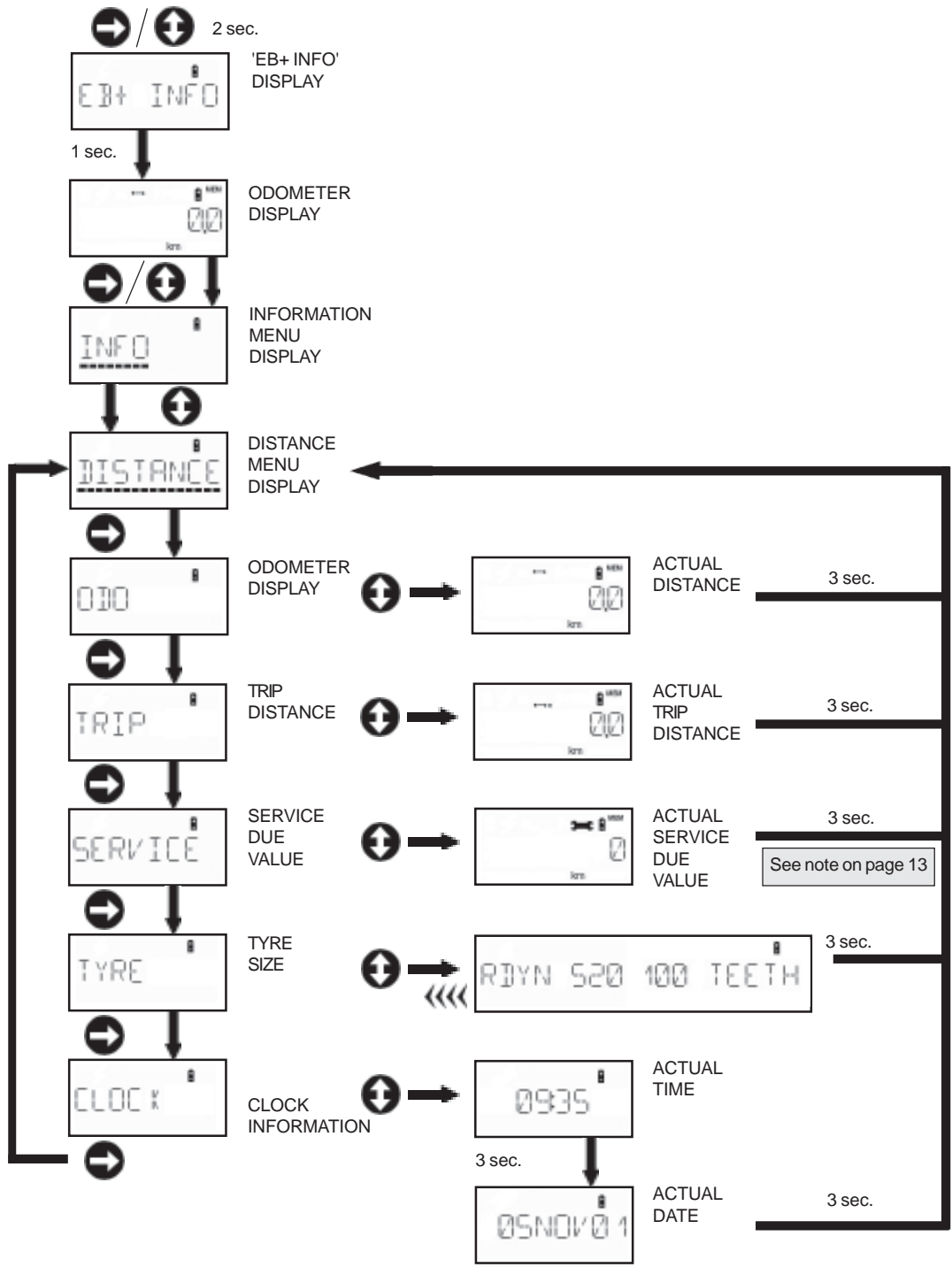
Meaning of LCD icons	
	<b>LOCK:</b> Not implemented
	<b>POWER:</b> - ON = Vehicle supply (ISO7638) - FLASHING = Back up power supply only ISO1185 (24N)
	- ON = Internal EB+ Info Centre Battery To save battery life, if neither button is pressed for a period of 10 seconds, the Info Centre switches off.
	<b>BELLOWS:</b> Used to indicate pressure readings
	<b>ODOMETER DISPLAY</b> - Total distance - Trip distance
	<b>KEY HOLE:</b> Used to indicate external diagnostic session in progress from other tester
	<b>SERVICE FUNCTION / SERVICE DUE</b> <b>Indicates service is due:</b> - ON = Whilst displaying the odometer value indicates service is due, - FLASHING = Current EB+ fault (initial ODO display only)
<b>MEM</b> <b>AM</b> <b>PM</b>	<b>MEMORY:</b> Stored information displayed or memory operation in progress <b>AM:</b> Real time clock function <b>PM:</b> Real time clock function
	<b>DASHED LINE:</b> General purpose indicator showing graphical representation of numeric readings
<b>% °F °C lb kg mile km psi bar</b>	<b>UNITS:</b> Unit used in conjunction with appropriate alphanumeric characters. Units are arranged in mutually exclusive pairs for temperature, pressure, distance and weight.

Symbol Key	
	Flashing display
	Scrolling display

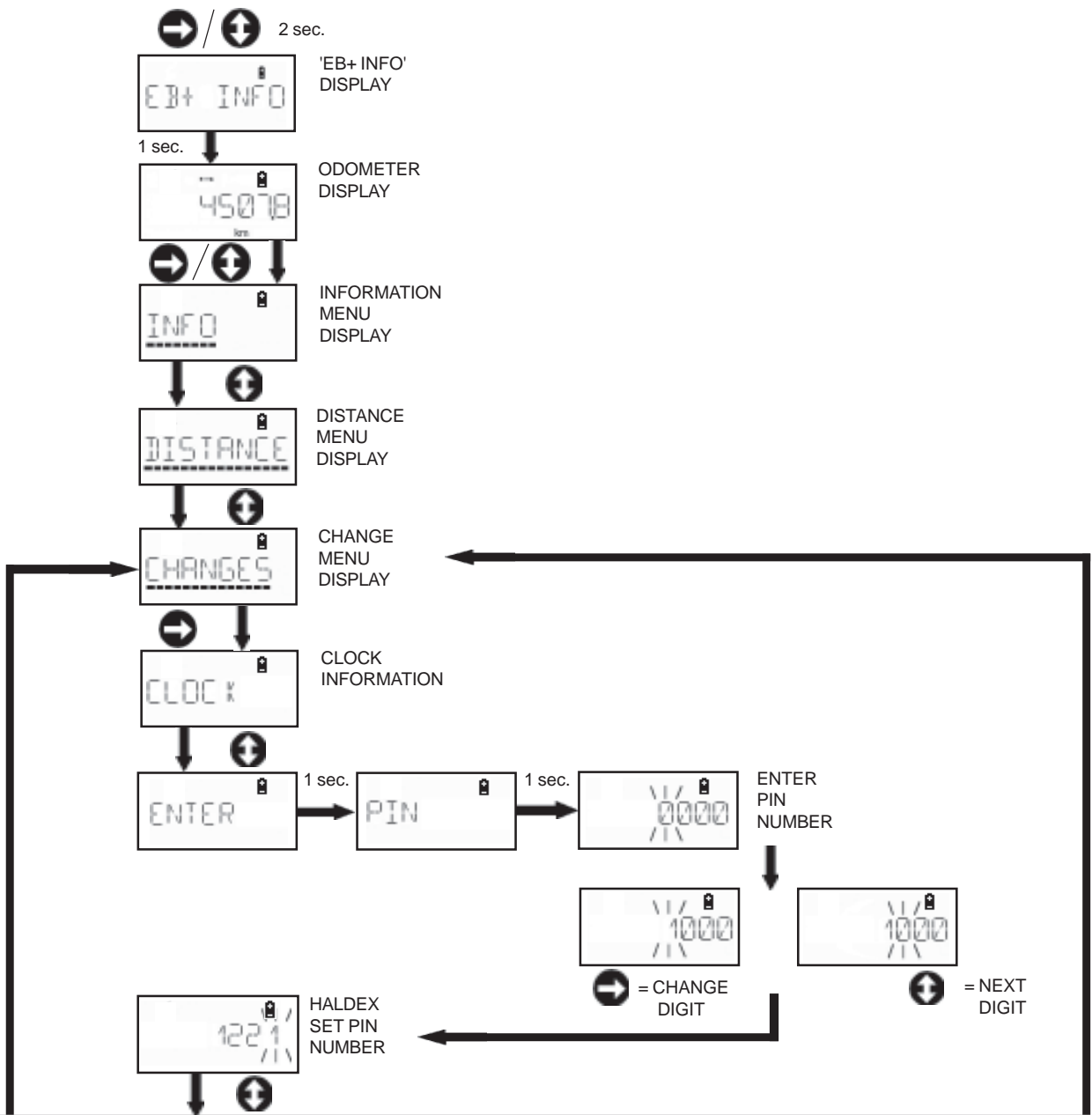
# INFO MENU with EB+ Info Centre battery supply



# DISTANCE MENU with EB+ Info Centre battery supply



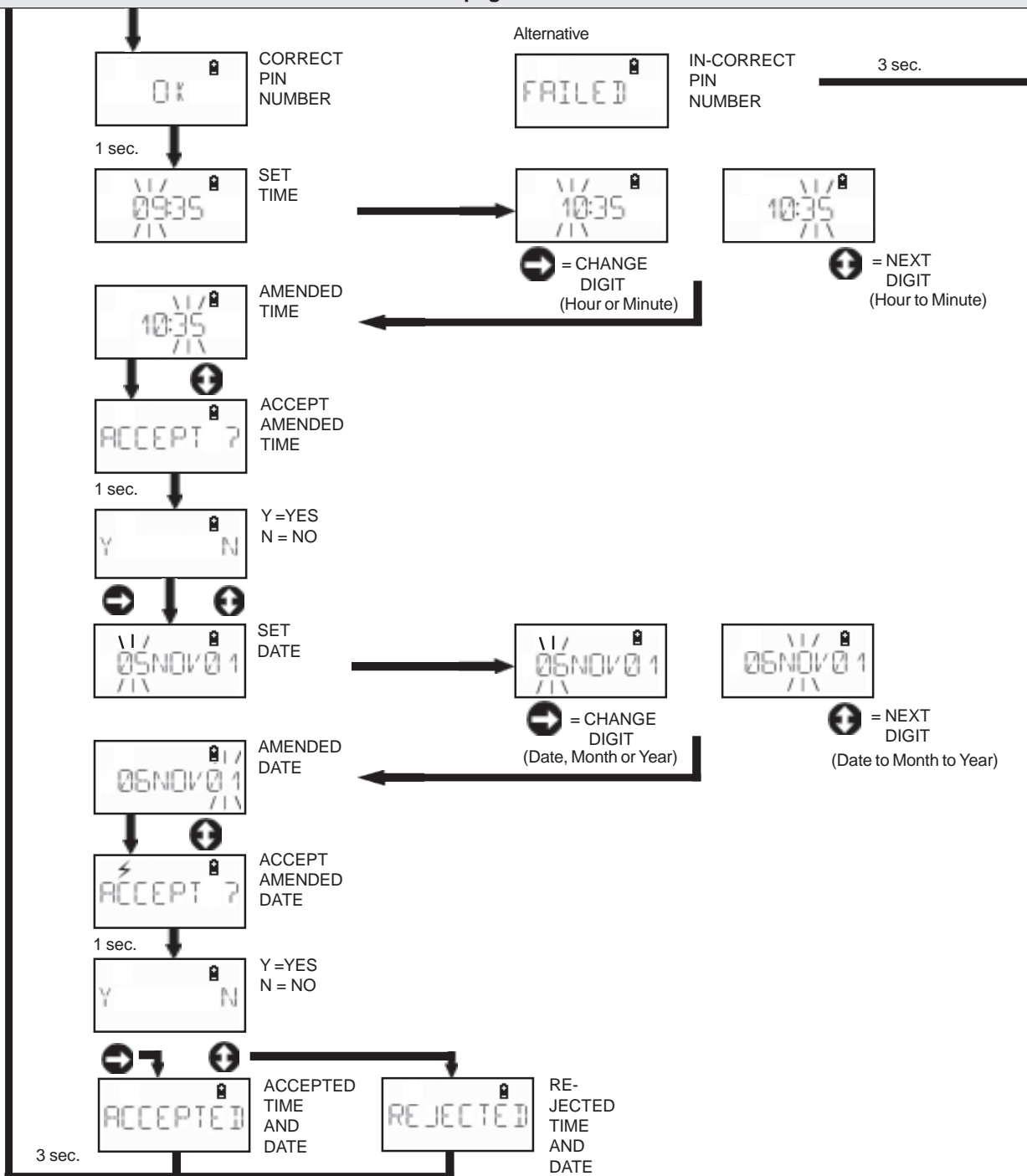
**CHANGE CLOCK (Time and Date) with EB+ Info Centre battery supply**



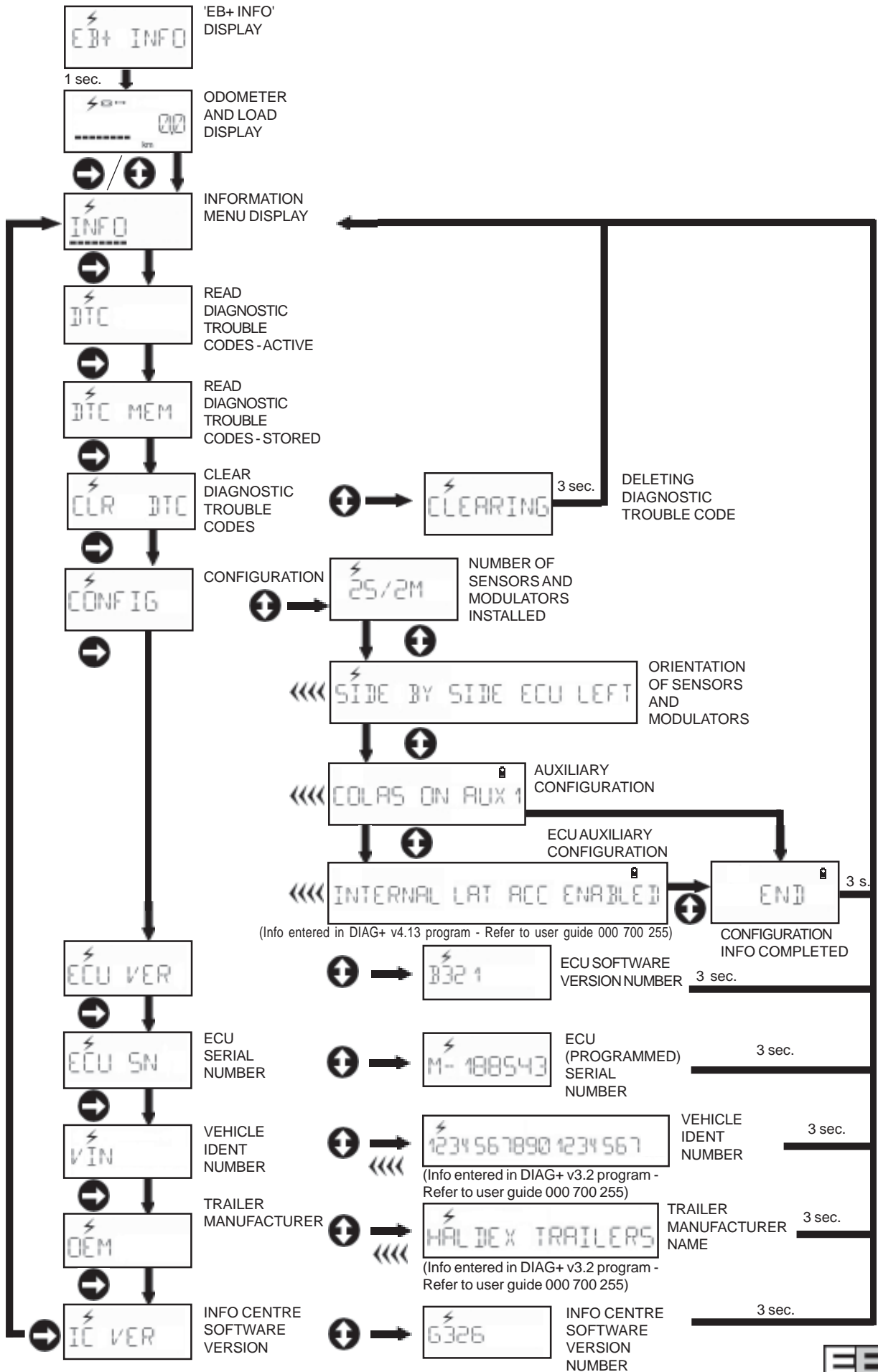
See page 7

# CHANGE CLOCK (Time and Date) with EB+ Info Centre battery supply

See page 6



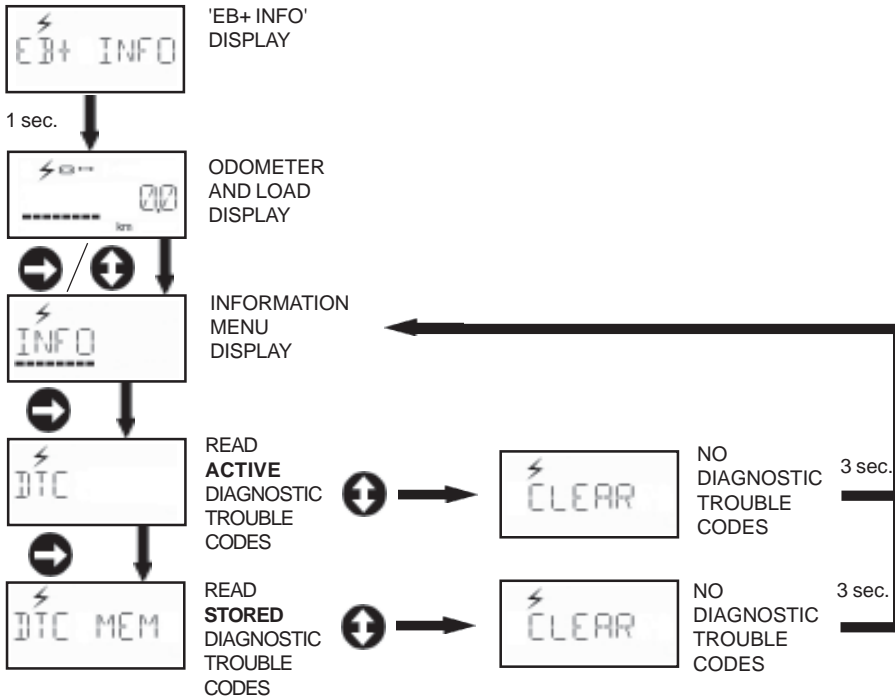
# INFO MENU with Vehicle supply





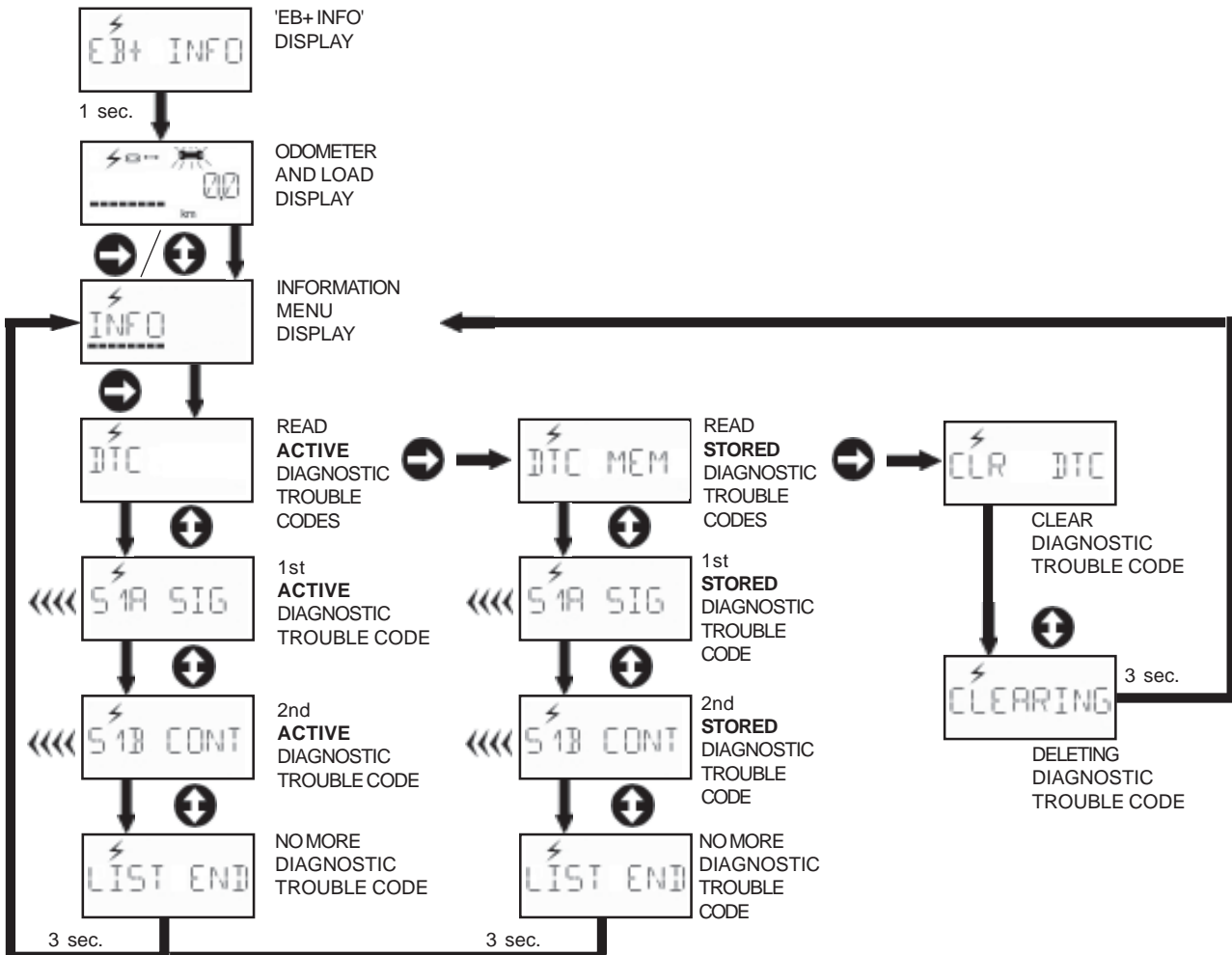
# Reading and Deleting DTC with Vehicle supply

## NO DTC

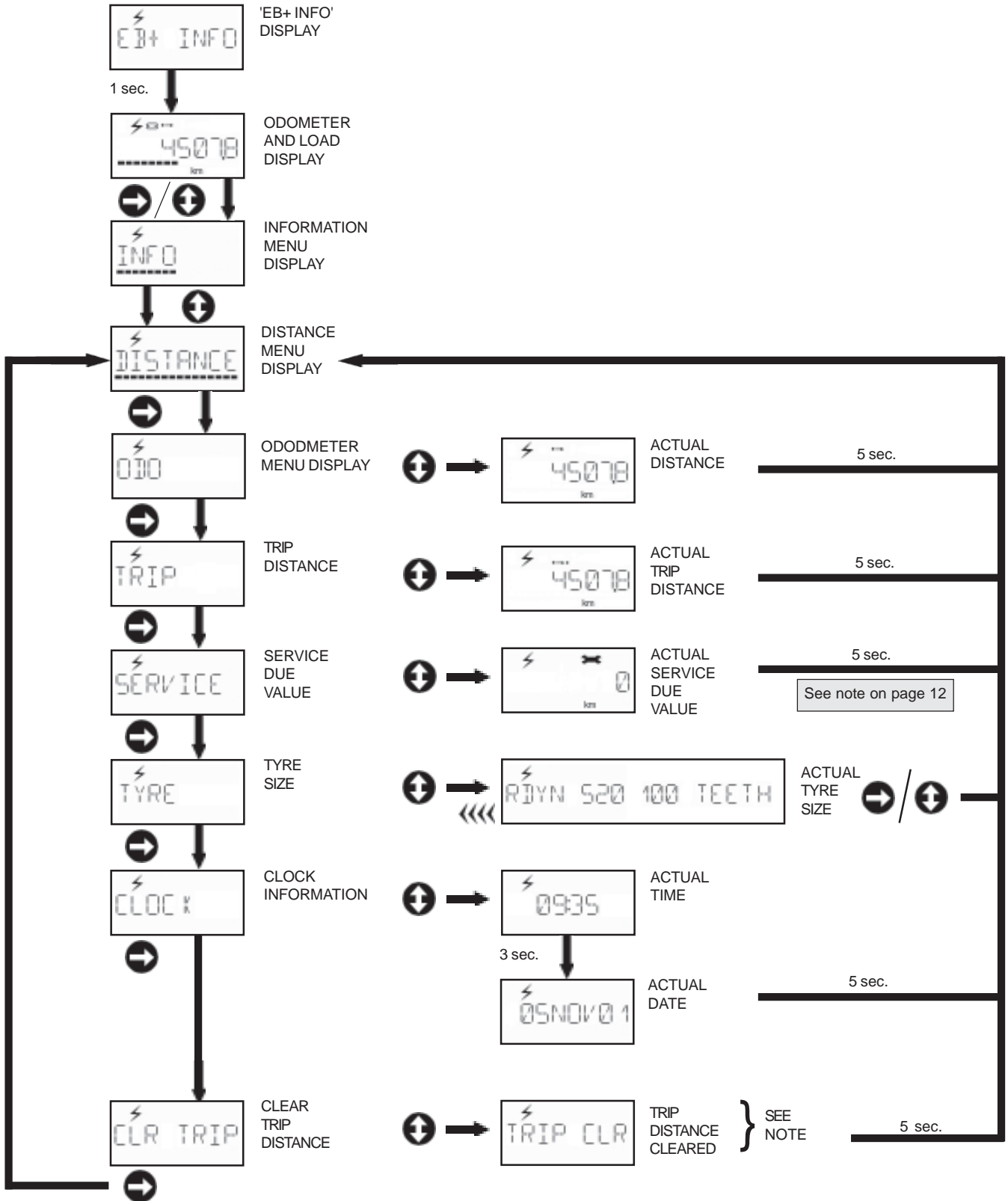


## WITH ACTIVE AND STORED DTC

Refer to Page 28

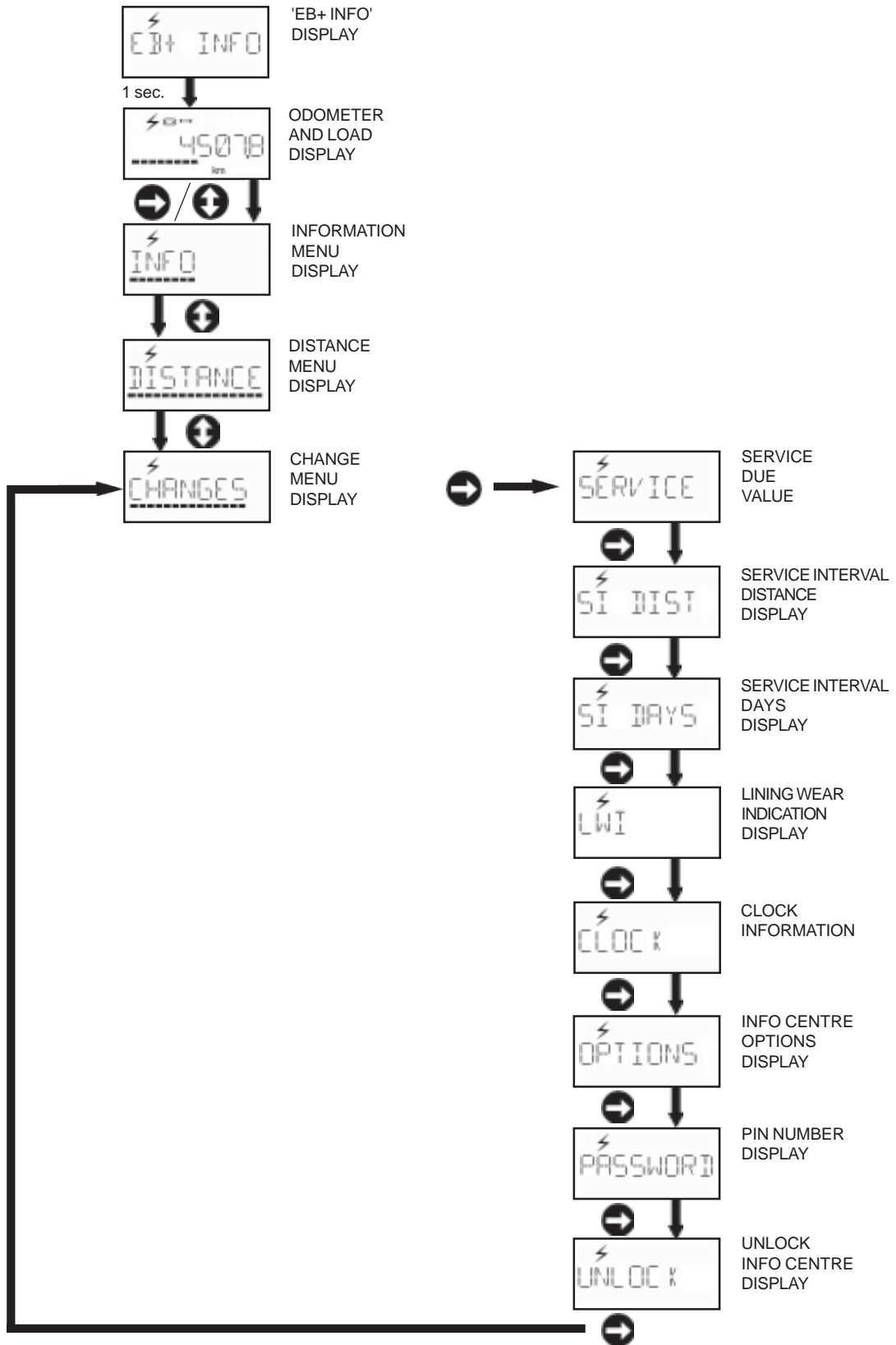


# DISTANCE MENU with Vehicle supply



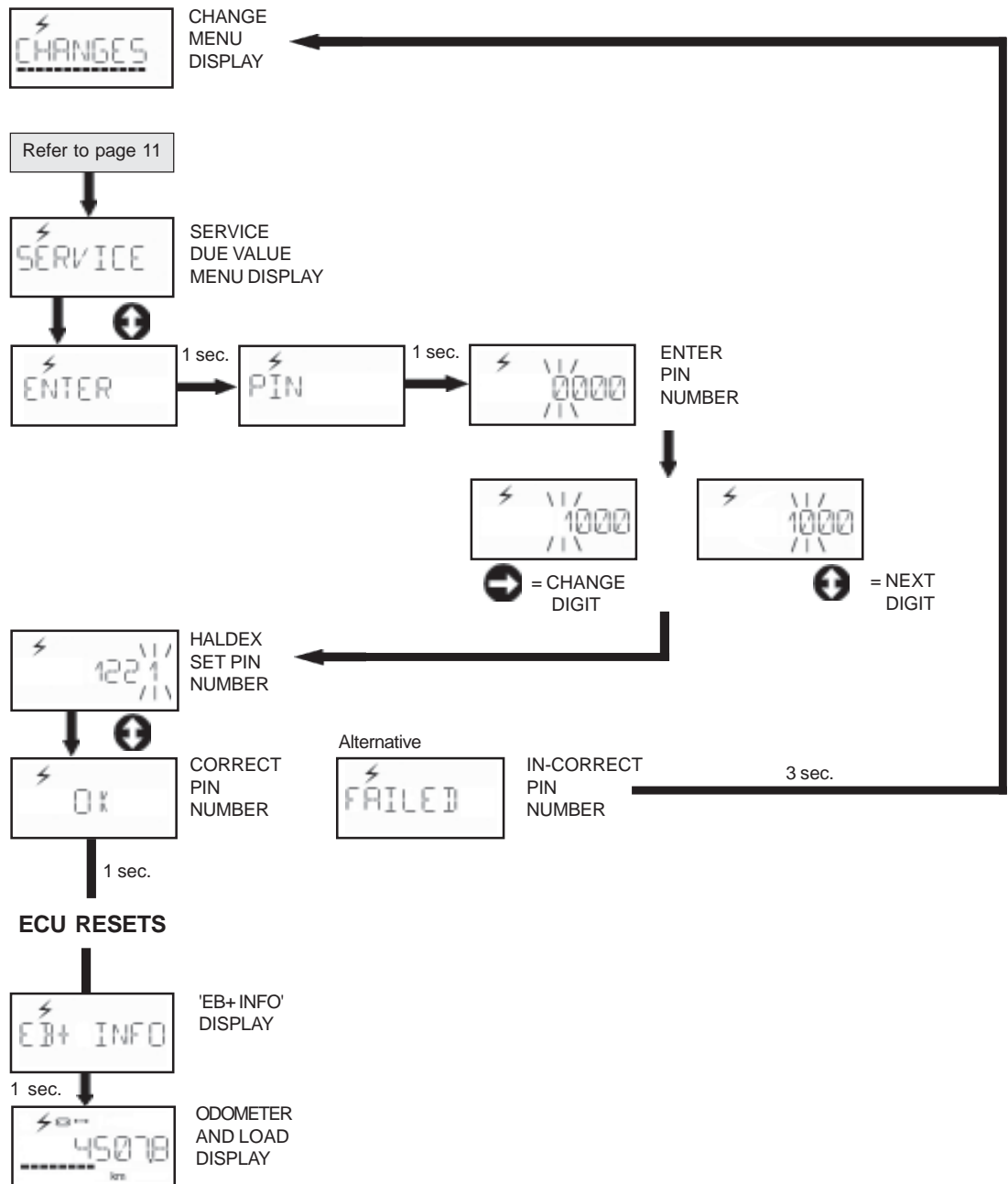
N.B. Initial Trip distance is factory set to zero in order to start the Trip distance

# CHANGE MENU with Vehicle supply

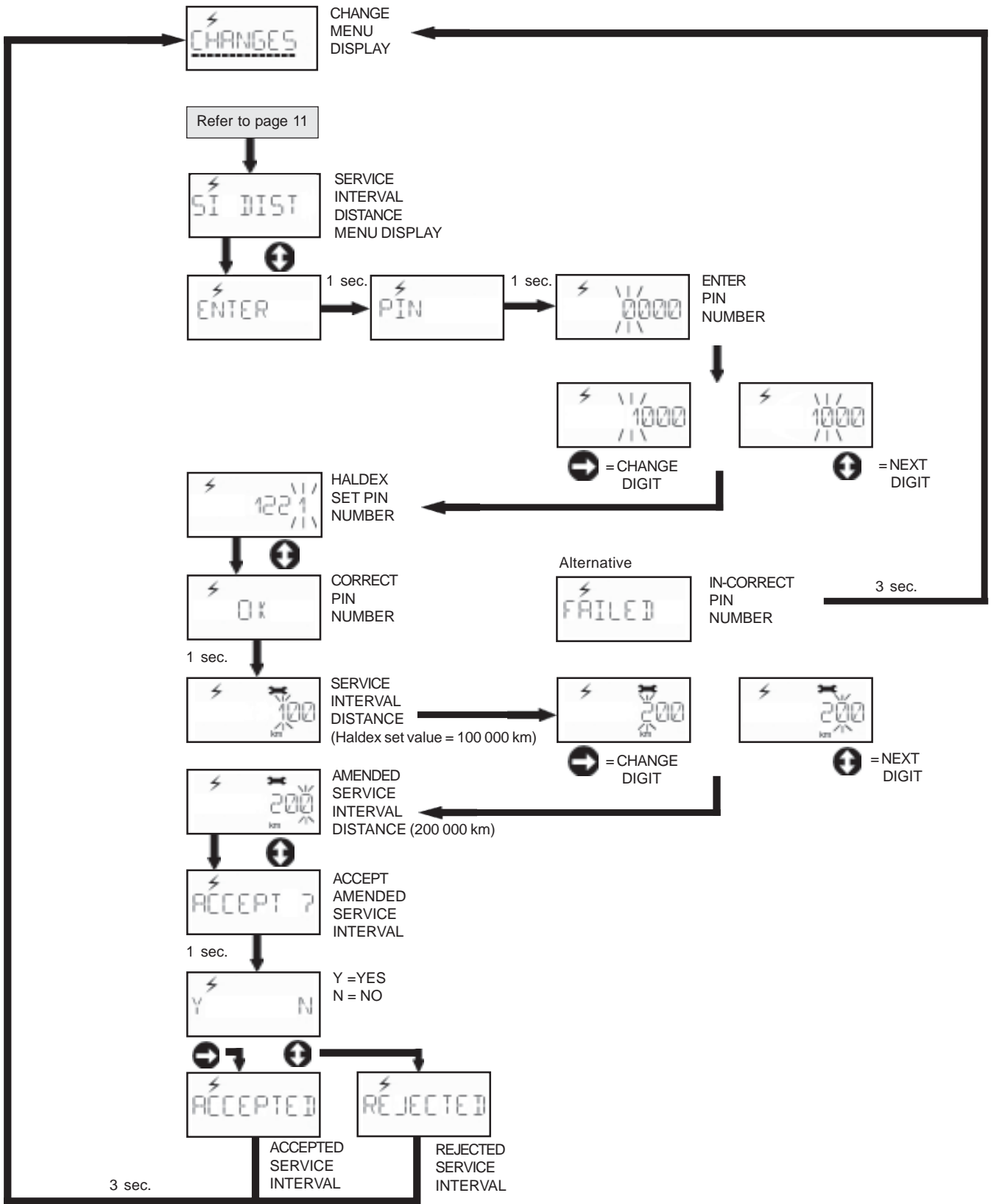


## CHANGE SERVICE DUE VALUE with Vehicle supply

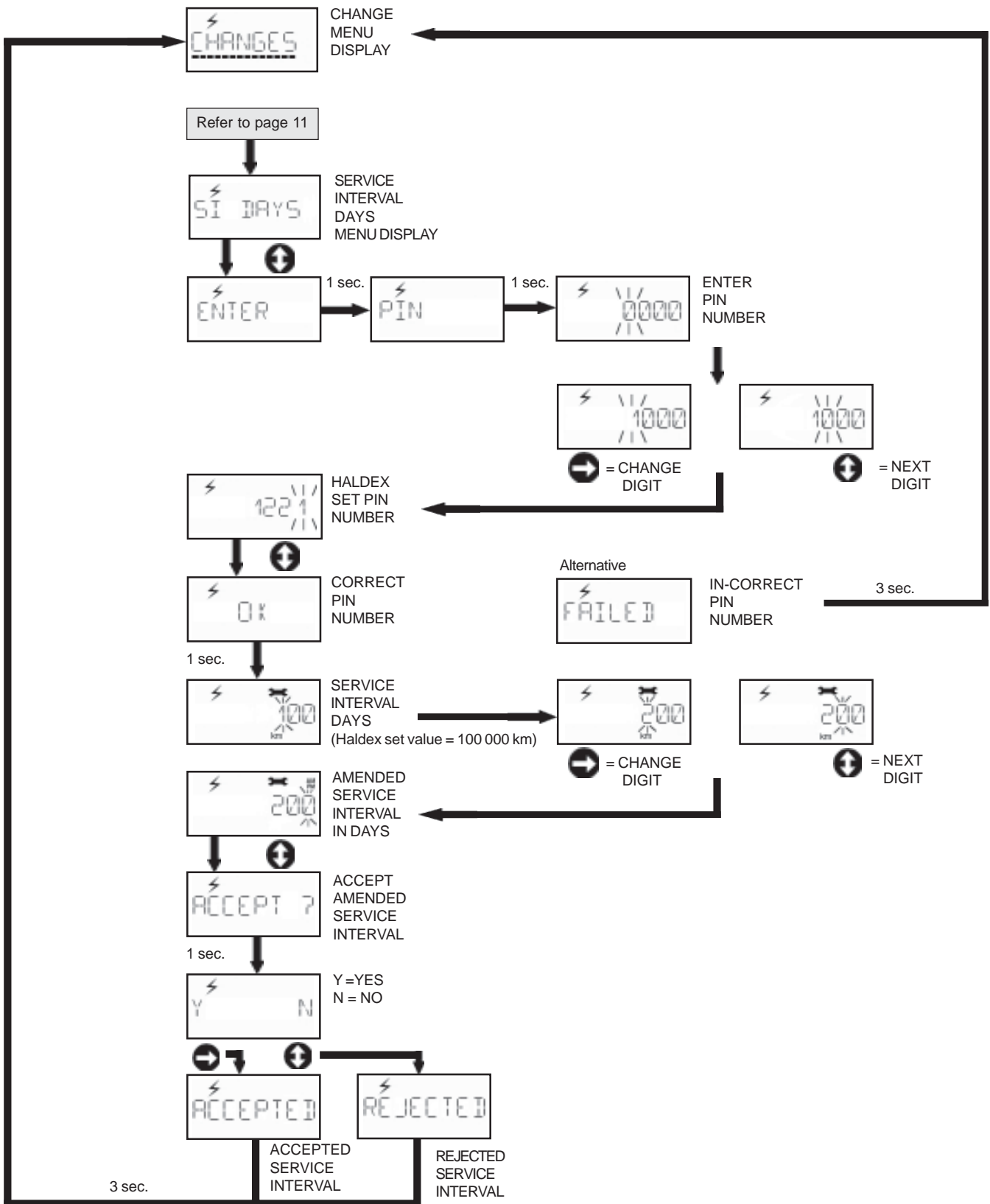
N.B. On initial entry this activates the SERVICE due value which is the distance set in the SERVICE INTERVAL functions (see page 13 and 14).



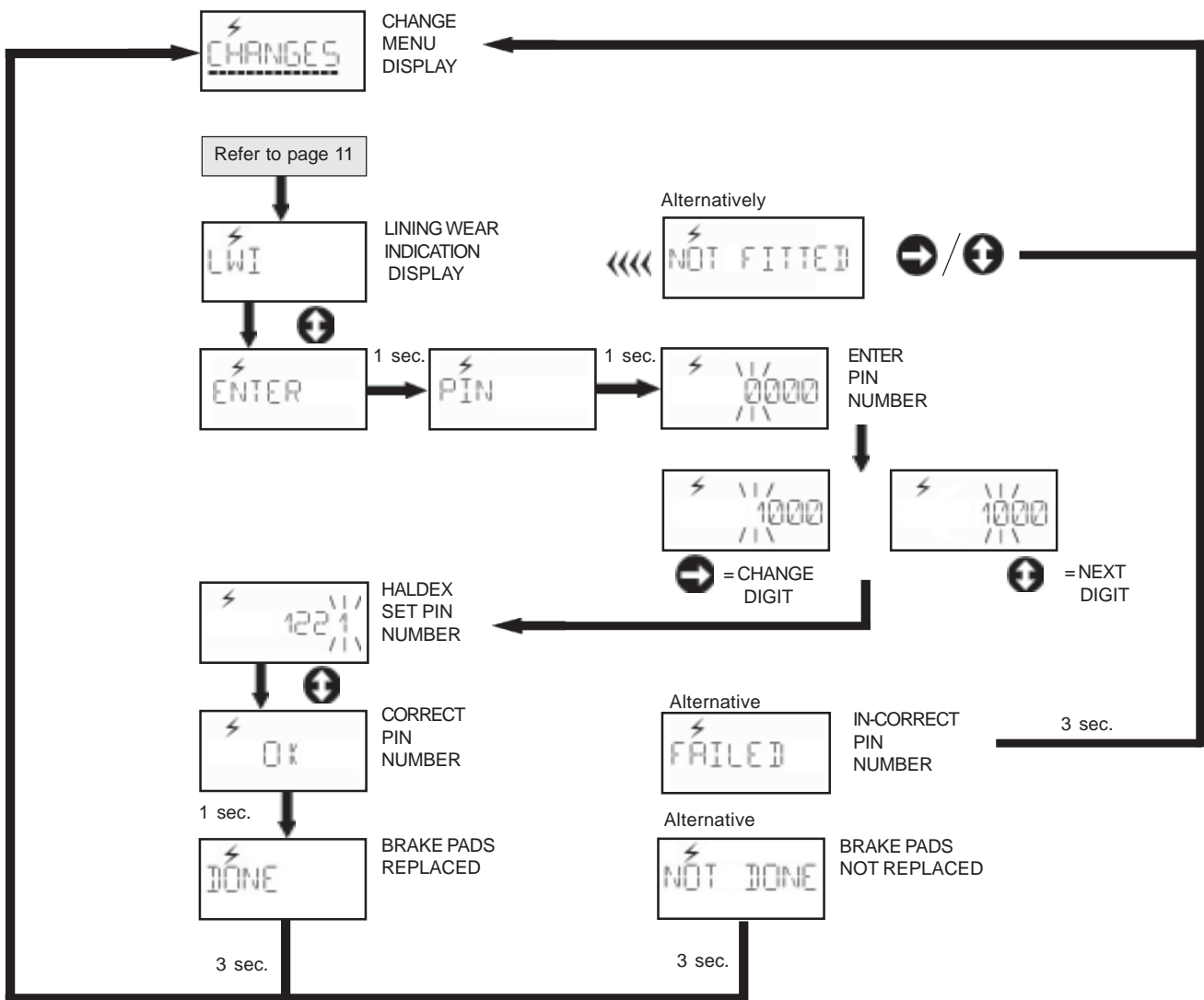
# CHANGE SERVICE INTERVAL - DISTANCE with Vehicle supply



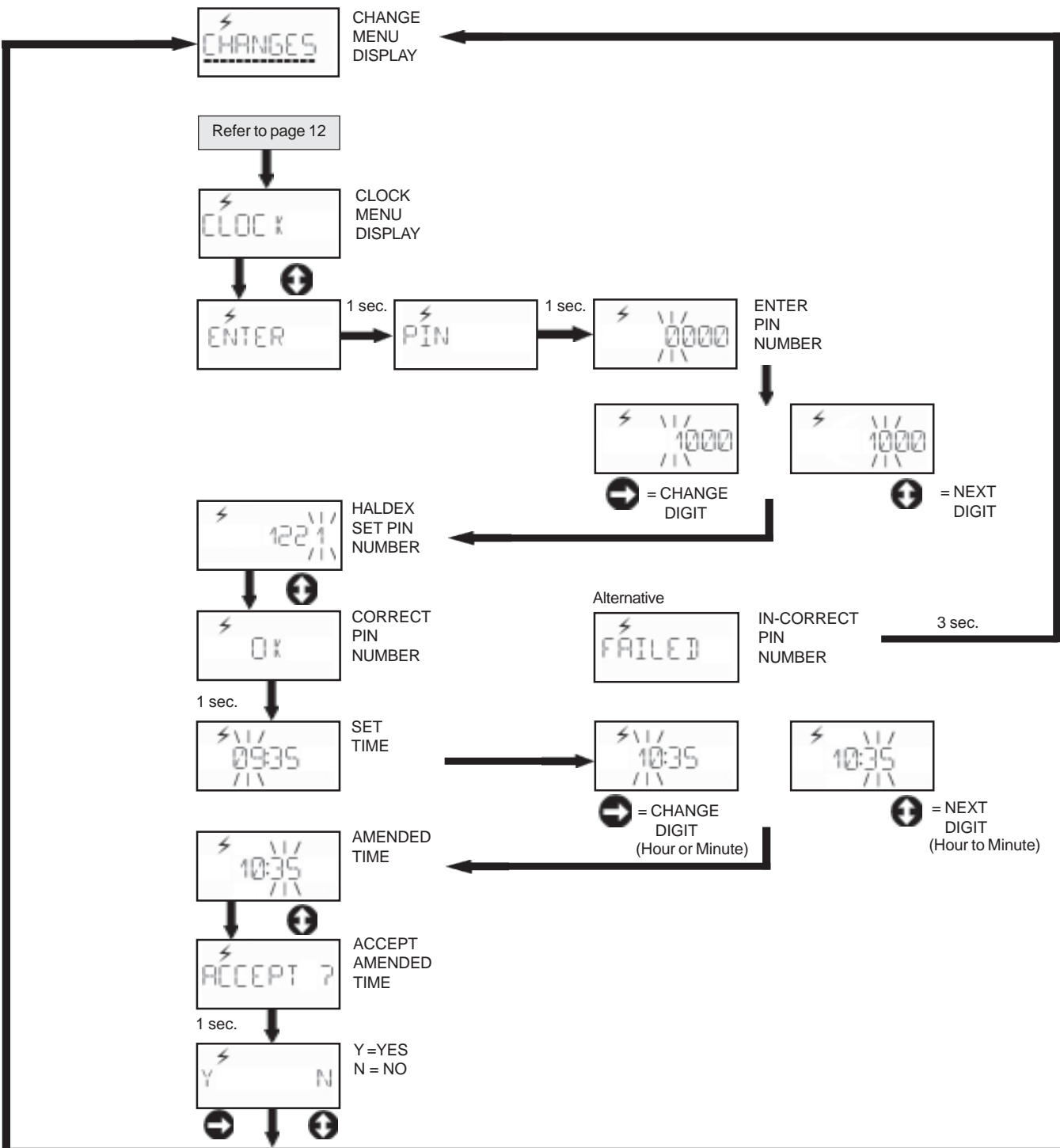
# CHANGE SERVICE INTERVAL - DAYS with Vehicle supply



**CHANGE LINING WEAR INDICATION with Vehicle supply**



# CHANGE CLOCK (TIME) with Vehicle supply

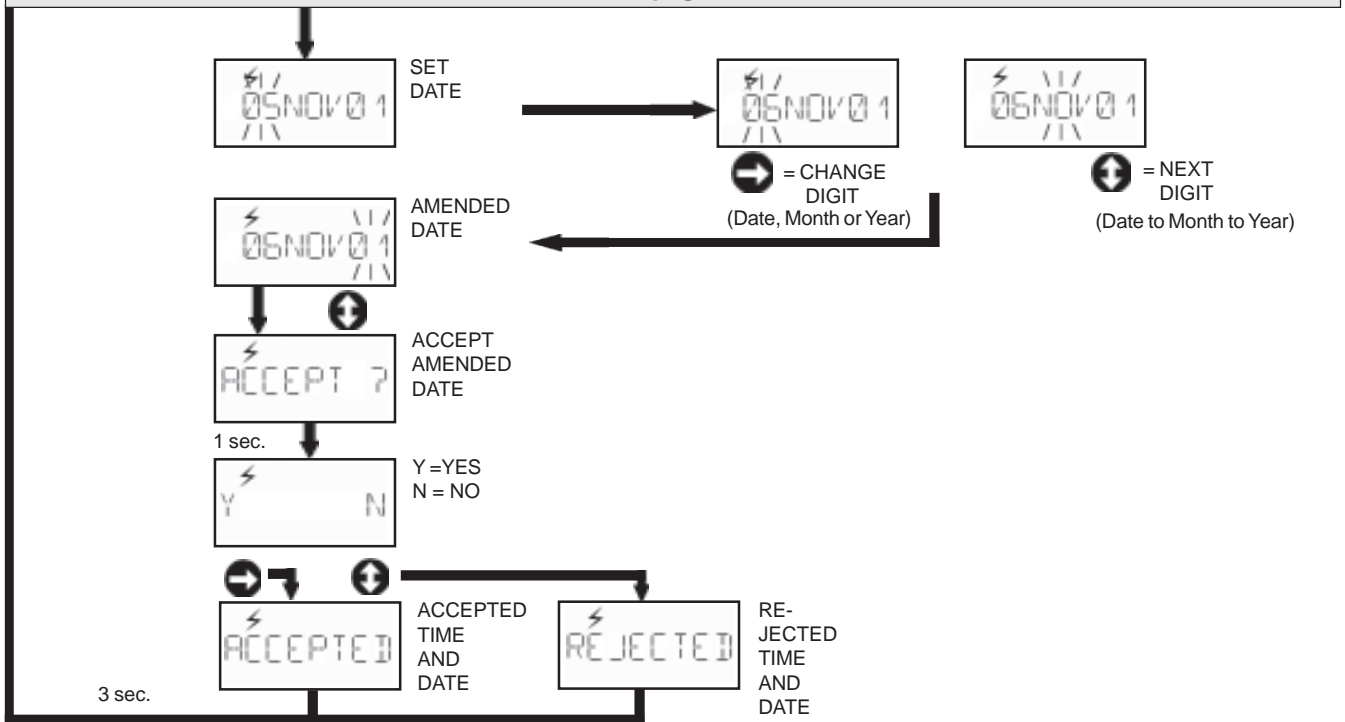


See page 17

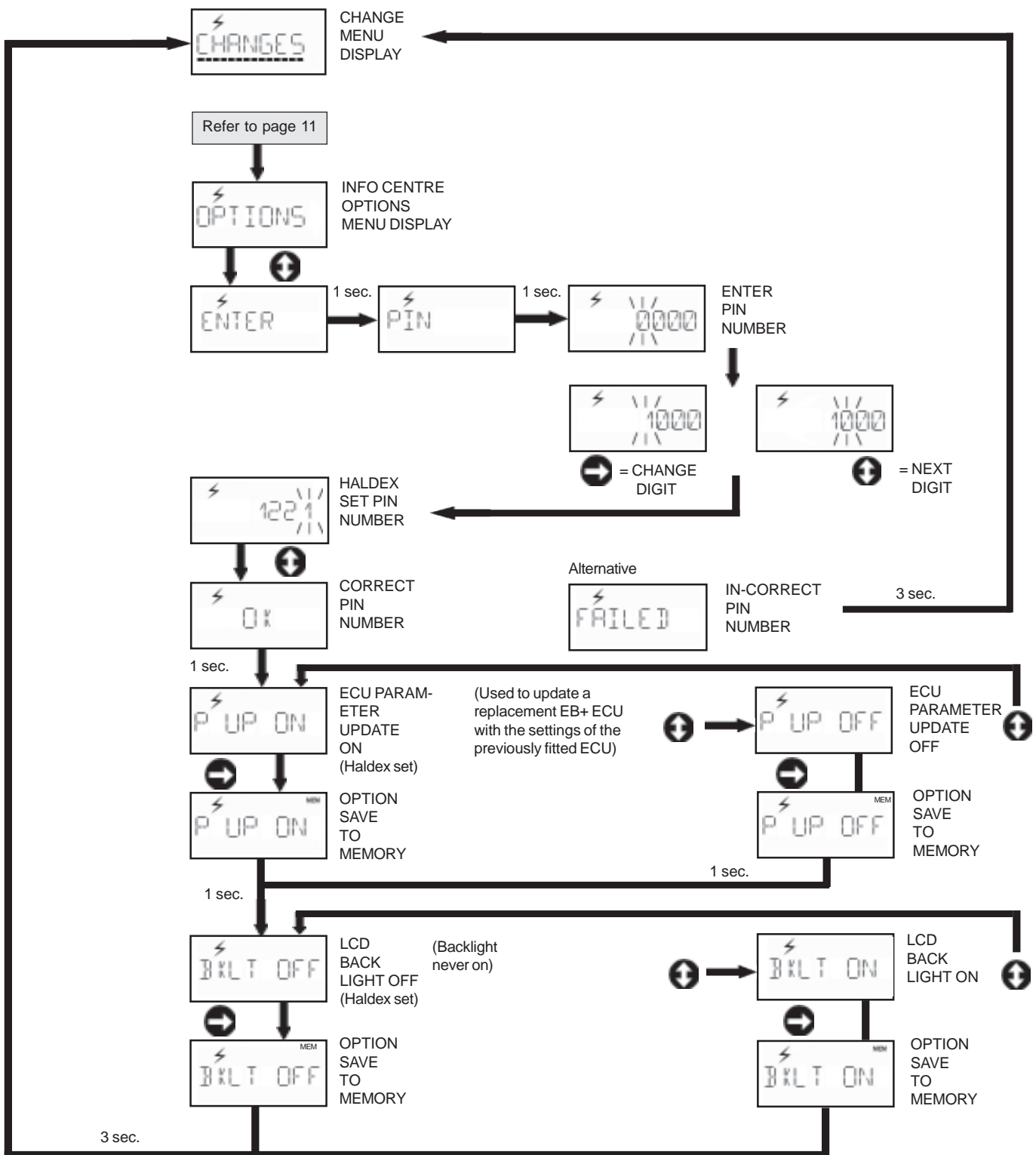


# CHANGE CLOCK (DATE) with Vehicle supply

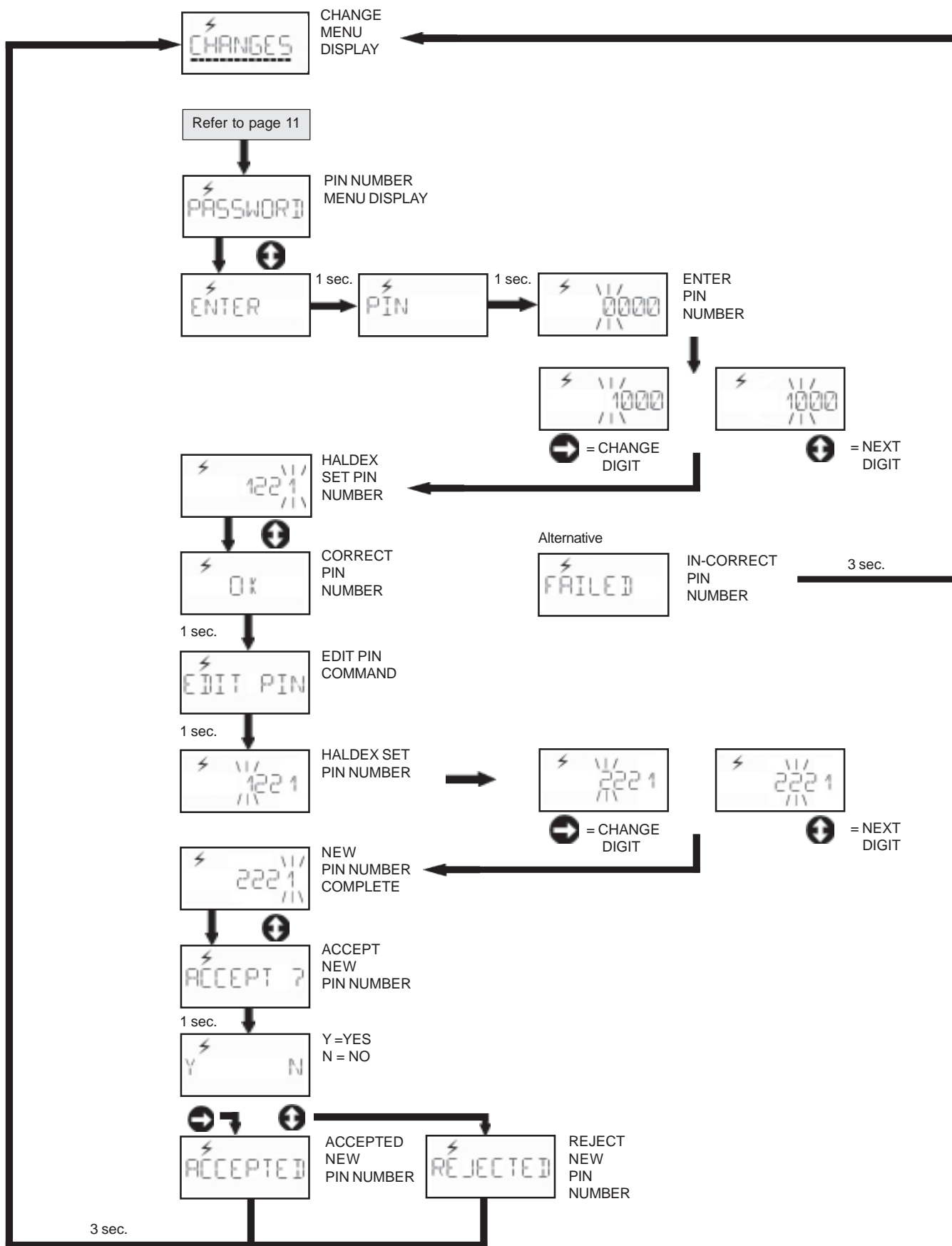
See page 16



# CHANGE OPTIONS with Vehicle supply

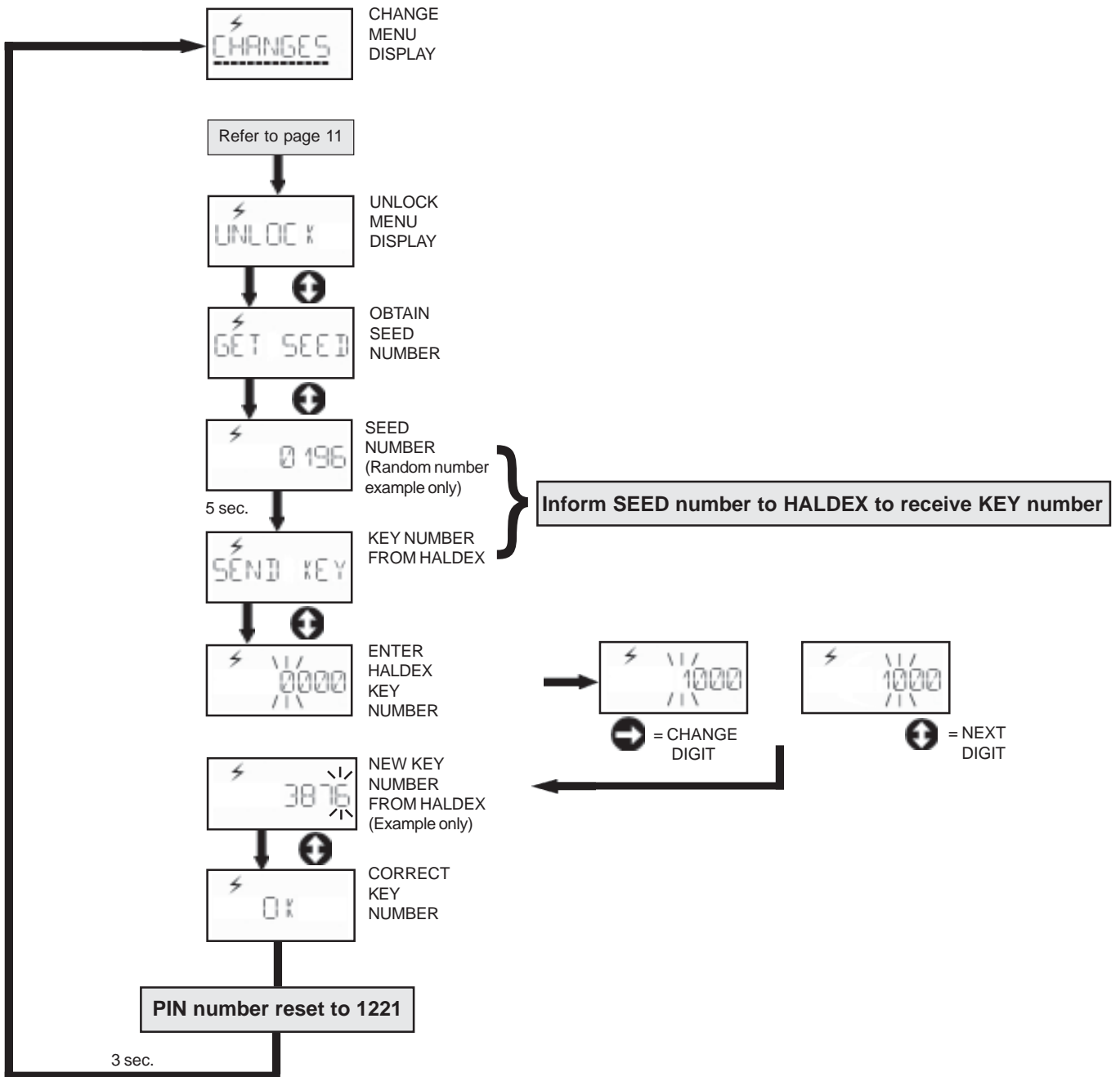


# CHANGE PASSWORD with Vehicle supply

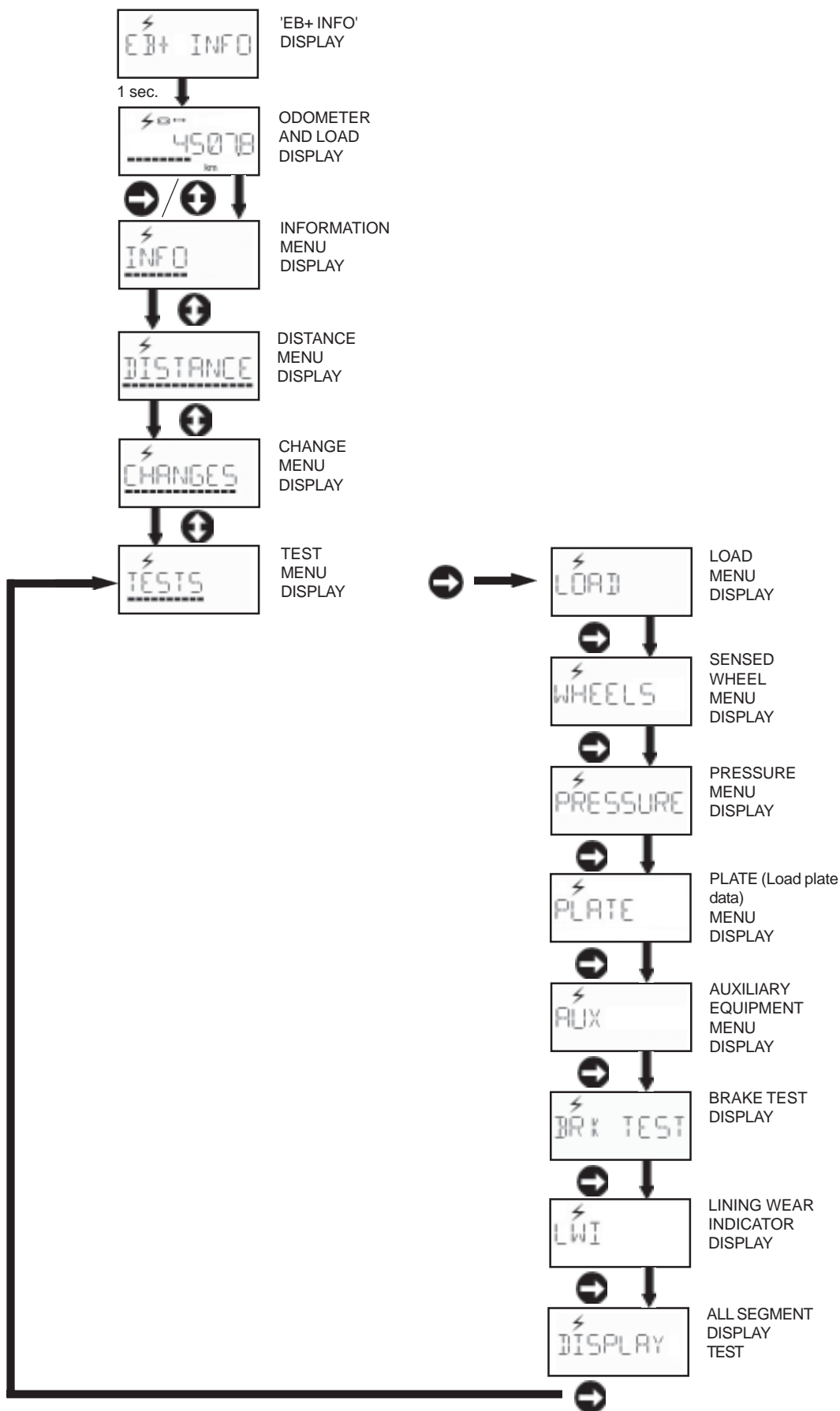


# UNLOCK INFO CENTRE (PIN number un-known) with Vehicle supply

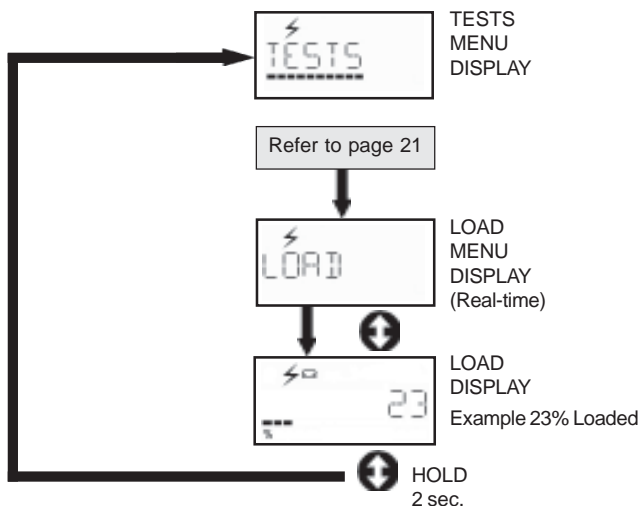
**THIS FUNCTION REQUIRES TO BE EXECUTED FULLY WHILE ON LINE TO HALDEX**



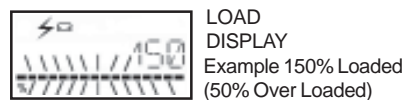
# TEST MENU with Vehicle supply



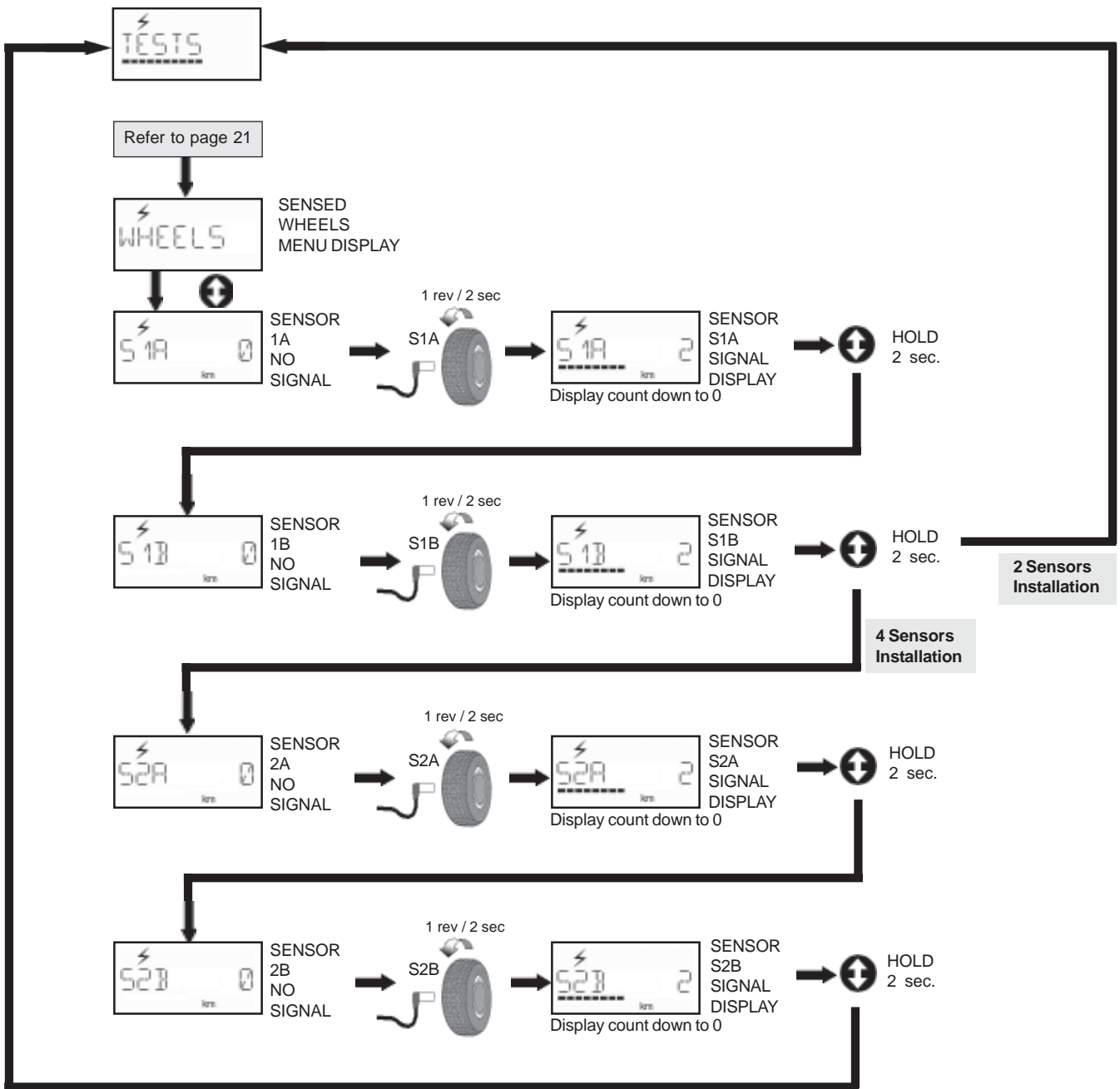
# TESTING LOAD with Vehicle supply



Alternatively



# TESTING SENSED WHEELS with Vehicle supply



## Other sensed wheel displays



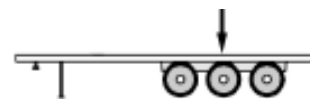
@ 1 rev / 2 sec Sensor signal low (check sensor gap)



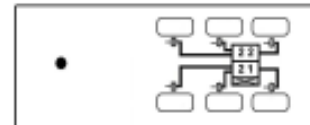
Wheel rotation more than 1 rev / 2 sec Sensor signal high

## Sensor location

Example: 2M, Side by Side, ECU LH

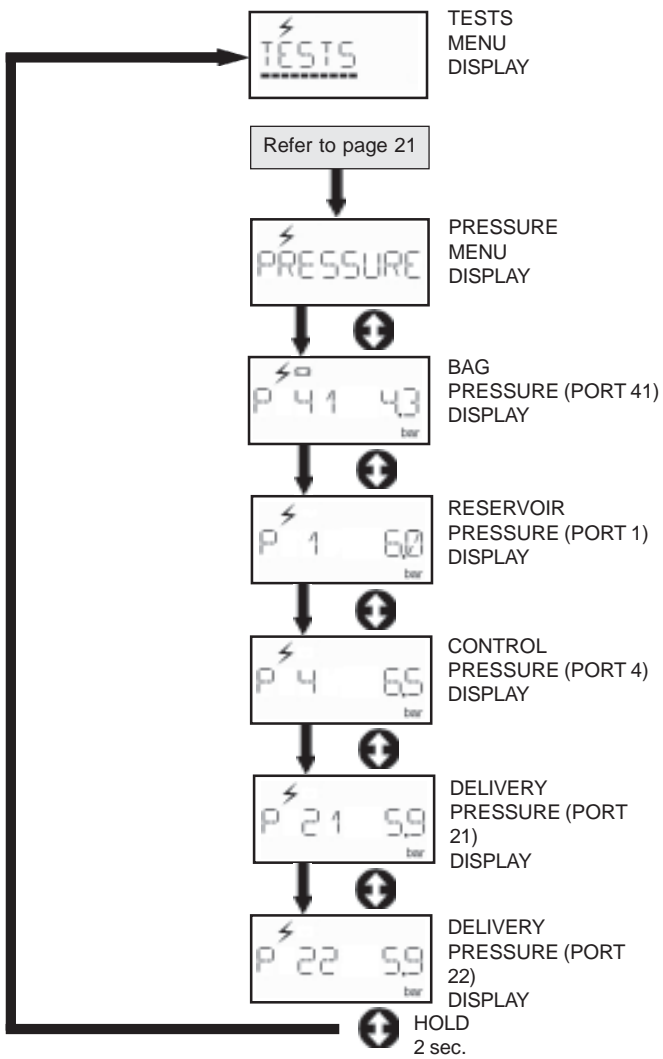


**B Sensors**



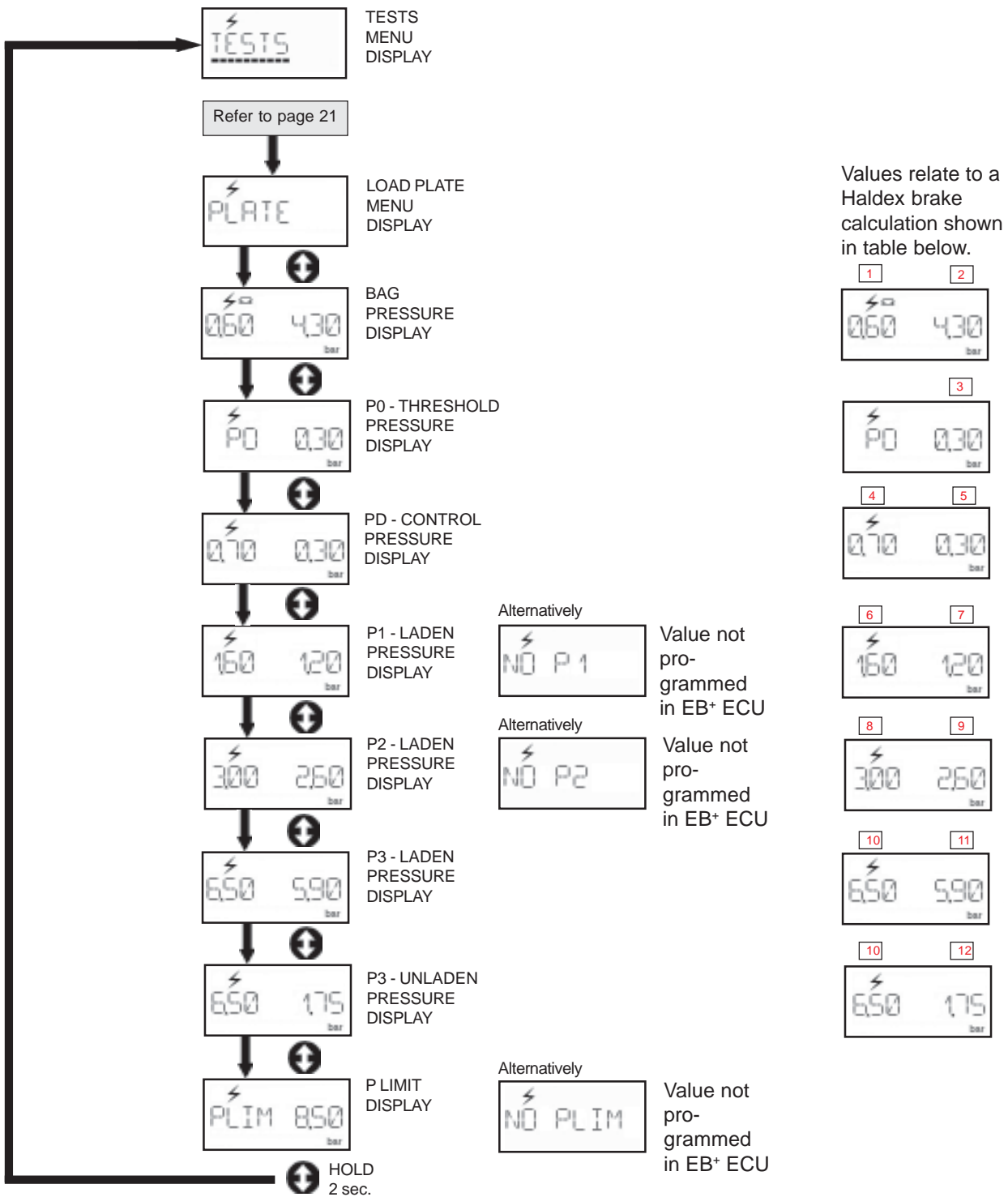
**A Sensors**

# TESTING PRESSURE with Vehicle supply





# TESTING PLATE (Load plate data) with Vehicle supply



## Haldex brake calculation

Input datas for the EBS-Modulator EB+:						
	control pr.	pm	6.50 bar	control pr.	pm	
Axle	Axle load unladen (Kg)	Bag press. unladen (bar)	Brake press. unladen (bar)	Axle load laden (Kg)	Bag press. laden (bar)	Brake press. laden (bar)
1	1150	0.60	1.75	8000	4.30	0.00
2	1150	0.60	1.75	8000	4.30	0.00
3	1150	0.60	1.75	8000	4.30	0.00

	3	4	6	8	10
	P0	PD			
	0.30	0.70	1.60	3.00	6.50 bar

	5	7	9	11
	0.30	1.20	2.60	5.90 bar

N.B. Indicated positions are as in the DIAG+ program

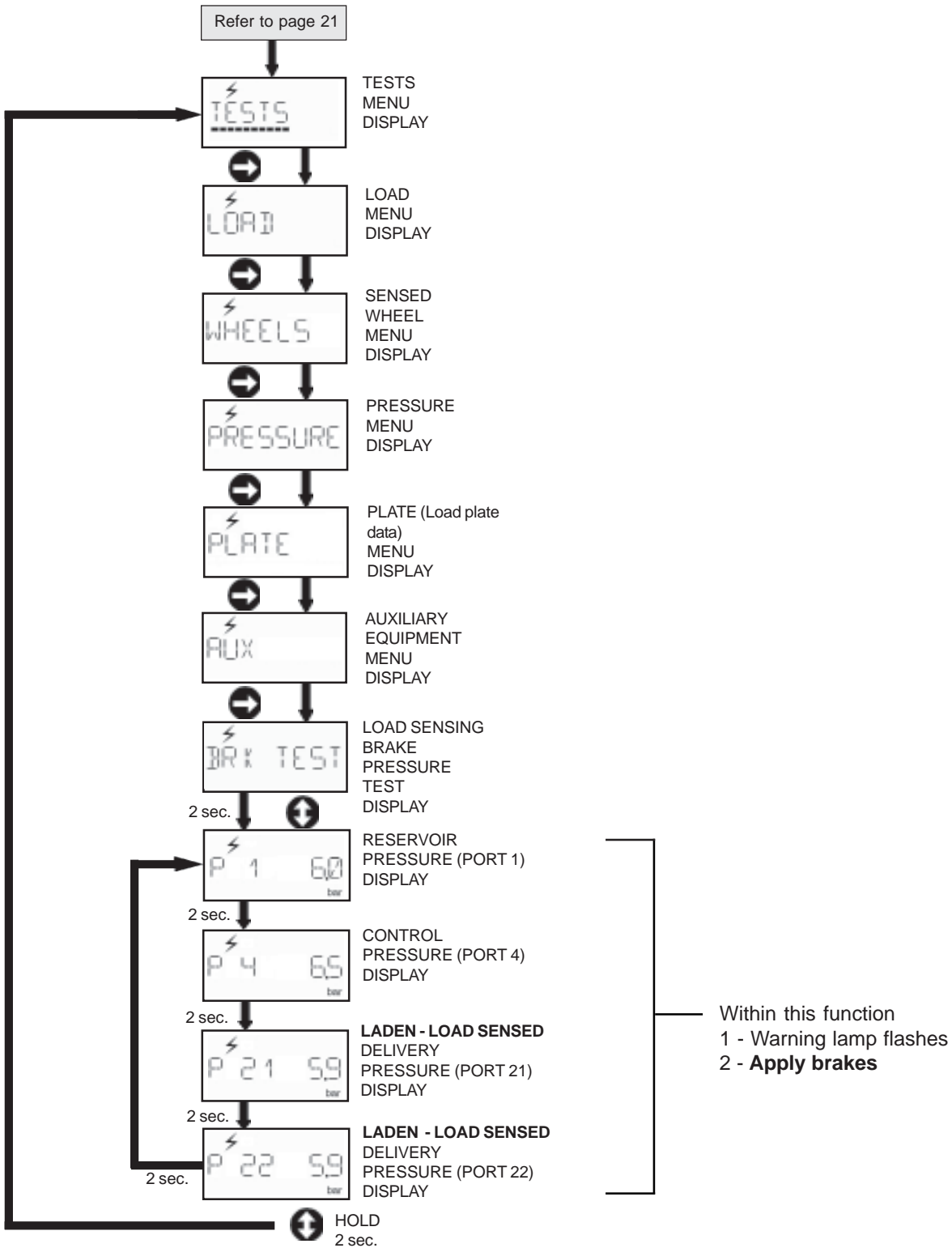


## BRAKE TEST with Vehicle supply

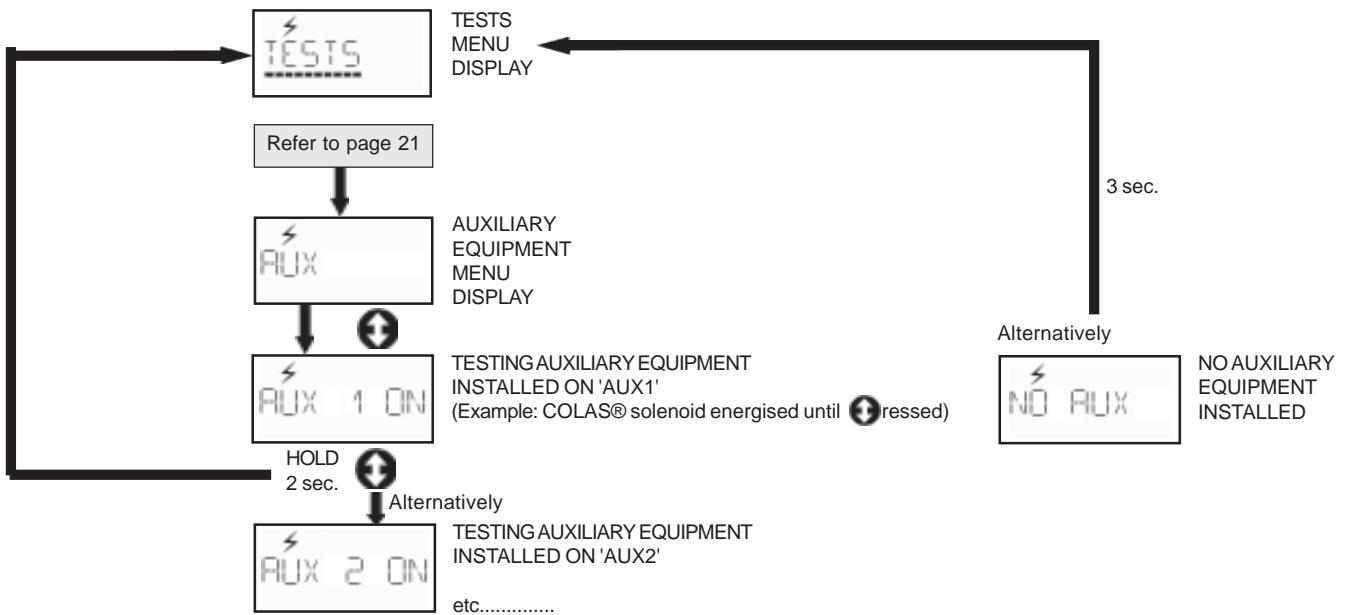
In this test mode the ECU assumes LADEN suspension bag pressure and lowers any lift axles that are operated by ILAS®-E

### Procedure

- 1 - Vehicle in a stationary condition with power off
- 2 - Switch power on
- 3 - Observe lamp check out sequence
- 4 - Operate Info Centre enter the following Menu:-



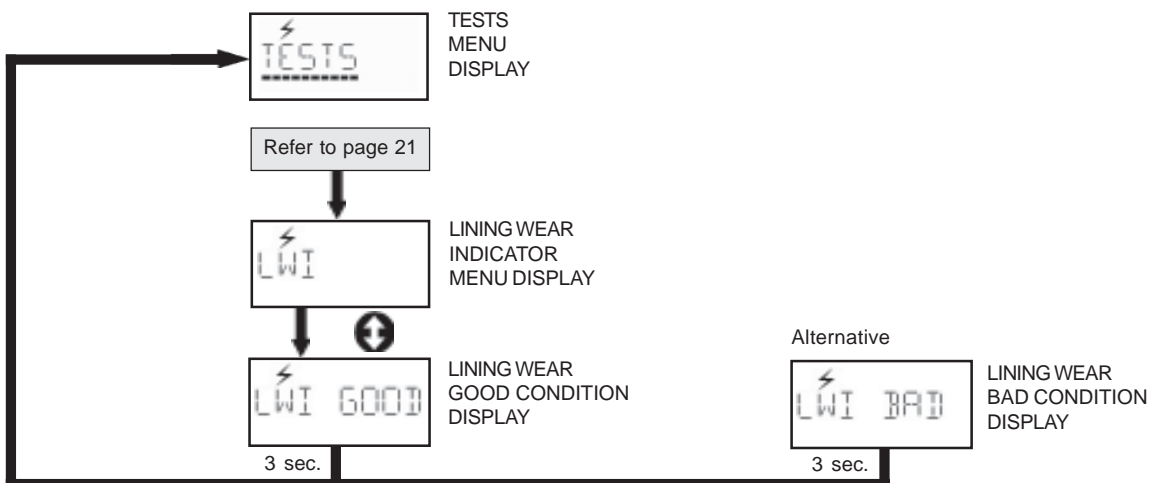
## TESTING AUXILIARY EQUIPMENT with Vehicle supply



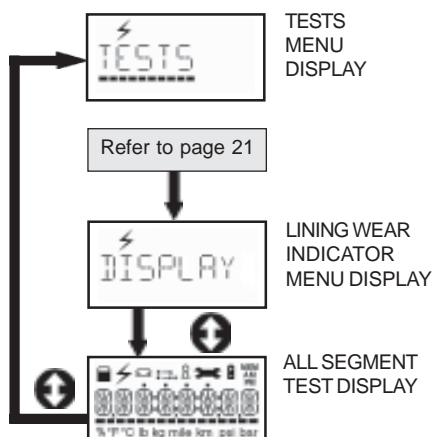
### Auxiliary equipment testing state

COLAS® =	Solenoid energised
ILAS®-E =	Solenoid energised
Retarder =	Relay/solenoid energised
Trailer Lamp =	Stops flashing remains ON

## TESTING LINING WEAR with Vehicle supply



## TESTING DISPLAY with Vehicle supply



## DIAGNOSTIC TROUBLE CODES (DTC) :

◀◀◀ All displayed DTC's are scrolling text.

<b>ECU TIME OUT</b> or <b>NO LINK</b>	No supply on ignition switch line. <b>Possible causes:</b> Fuse blown. <b>EB+</b> INFO CENTRE or cable fault. Open circuit B -
<b>SENSOR GROUP</b>	
<b>S1A CONT</b>	1A Sensor/wiring open or short circuit
<b>S1B CONT</b>	1B Sensor/wiring open or short circuit
<b>S2A CONT</b>	2A Sensor/wiring open or short circuit
<b>S2B CONT</b>	2B Sensor/wiring open or short circuit
<b>INTERMITTENT LOW SENSOR OUTPUT GROUP</b>	
<b>S1A SIGNAL</b>	1A Sensor signal fault
<b>S1B SIGNAL</b>	1B Sensor signal fault
<b>S2A SIGNAL</b>	2A Sensor signal fault
<b>S2B SIGNAL</b>	2B Sensor signal fault
	<b>Possible causes:</b> Loose sensor, connection, bracket or exciter. Damage exciter maladjusted sensor or worn sensor cable insulation.
<b>LOW SENSOR OUTPUT GROUP</b>	
<b>S1A OUTPUT</b>	1A Sensor system fault
<b>S1B OUTPUT</b>	1B Sensor system fault
<b>S2A OUTPUT</b>	2A Sensor system fault
<b>S2B OUTPUT</b>	2B Sensor system fault
	<b>Possible causes:</b> Sensor worn, maladjusted sensor, wiring open or short circuit.
<b>BRAKE APPLY SOLENOID GROUP</b>	
<b>BRK APPLY SC</b>	Brake apply solenoid short circuit
<b>BRK APPLY OC</b>	Brake apply solenoid open circuit
<b>BRK APPLY SC DRIVE</b>	Brake apply solenoid short circuit permanently energised
<b>BRK APPLY UNSPEC</b>	Brake apply solenoid control circuit fault

**DIAGNOSTIC TROUBLE CODES (DTC) :**

	<b>EPRV 21 HOLD AND DUMP SOLENOID GROUP</b>
<b>EPRV 2 1 HOLD SC</b>	Modulator 21 hold solenoid short circuit
<b>EPRV 2 1 DUMP SC</b>	Modulator 21 dump solenoid short circuit
<b>EPRV 2 1 HOLD OC</b>	Modulator 21 hold solenoid open circuit
<b>EPRV 2 1 DUMP OC</b>	Modulator 21 dump solenoid open circuit
<b>EPRV 2 1 HOLD SC DRIVE</b>	Modulator 21 hold solenoid short circuit permanently energised
<b>EPRV 2 1 DUMP SC DRIVE</b>	Modulator 21 dump solenoid short circuit permanently energised
<b>EPRV 2 1 HOLD UNSPEC</b>	Modulator 21 hold solenoid control circuit fault
<b>EPRV 2 1 DUMP UNSPEC</b>	Modulator 21 dump solenoid control circuit fault
	<b>EPRV 22 HOLD AND DUMP SOLENOID GROUP</b>
<b>EPRV 2 2 HOLD SC</b>	Modulator 22 hold solenoid short circuit
<b>EPRV 2 2 DUMP SC</b>	Modulator 22 dump solenoid short circuit
<b>EPRV 2 2 HOLD OC</b>	Modulator 22 hold solenoid open circuit
<b>EPRV 2 2 DUMP OC</b>	Modulator 22 dump solenoid open circuit
<b>EPRV 2 2 HOLD SC DRIVE</b>	Modulator 22 hold solenoid short circuit permanently energised
<b>EPRV 2 2 DUMP SC DRIVE</b>	Modulator 22 dump solenoid short circuit permanently energised
<b>EPRV 2 2 HOLD UNSPEC</b>	Modulator 22 hold solenoid control circuit fault
<b>EPRV 2 2 DUMP UNSPEC</b>	Modulator 22 dump solenoid control circuit fault
	<b>DEMAND PRESSURE TRANSDUCER GROUP</b>
<b>DEMAND SC</b>	Service line pressure transducer short circuit
<b>DEMAND OC</b>	Service line pressure transducer open circuit
	<b>DELIVERY PRESSURE TRANSDUCER GROUP</b>
<b>EPRV 2 1 DEL SC</b>	Modulator 21 delivery pressure transducer short circuit
<b>EPRV 2 1 DEL OC</b>	Modulator 21 delivery pressure transducer open circuit
<b>EPRV 2 2 DEL SC</b>	Modulator 22 delivery pressure transducer short circuit
<b>EPRV 2 2 DEL OC</b>	Modulator 22 delivery pressure transducer open circuit

## DIAGNOSTIC TROUBLE CODES (DTC) :

<b>ONE WHEEL WITH SLOW RECOVERY GROUP</b>	
<b>EPRV 2 1 SLOW REC</b>	Slow recovery of one wheel of Modulator 21
<b>EPRV 2 2 SLOW REC</b>	Slow recovery of one wheel of Modulator 22
	<b>Possible causes:</b> Slow brake release, foundation brake mechanical faults, dry bearings, broken spring, restricted piping. Modulator fault check for kinks and blockages etc. Incorrect piping, wiring. Modulator fault. Sensor wiring crossed across an axle.
<b>RESERVOIR PRESSURE TRANSDUCER GROUP</b>	
<b>RESR SC</b>	Reservoir pressure transducer short circuit
<b>RESR OC</b>	Reservoir pressure transducer open circuit
<b>HIGH RES PRESSURE</b>	Reservoir pressure above 9.5bar
<b>SUSPENSION PRESSURE TRANSDUCER GROUP</b>	
<b>SUSP SC</b>	Suspension pressure transducer short circuit
<b>SUSP OC</b>	Suspension pressure transducer open circuit
<b>SUSP LOW</b>	Suspension pressure values outside operating range
<b>PRESSURE SWITCH GROUP</b>	
<b>REV SWITCH SC</b>	Relay Emergency Valve pressure switch short circuit
<b>REV SWITCH OC</b>	Relay Emergency Valve pressure switch open circuit
<b>REV SWITCH PNEUMATIC</b>	Relay Emergency Valve pressure switch pneumatic fault
<b>REV SWITCH SIGNAL</b>	Relay Emergency Valve pressure switch failed to activate
<b>ISO11992 (CAN) ELECTRICAL SIGNAL GROUP</b>	
<b>PNEUMATIC DEMAND LOSS</b>	No corresponding pneumatic demand pressure
<b>TOWED CAN DEMAND LOSS</b>	CAN line (pin 6 and 7 on ISO7638) fault
<b>TOWED CAN CONTROL LOSS</b>	CAN line (pin 6 and 7 on ISO7638) data fault
<b>SUPPLY VOLTAGE GROUP</b>	
<b>PWR ISO7 6 3 8 FAIL</b>	Power loss on pin 1 or 2 (ISO7638)
<b>PWR LO VOLT</b>	Supply voltage at ECU less than 19v when brake apply solenoid is energised.
<b>PWR HI VOLT</b>	Supply voltage at the ECU greater than 32v.
<b>PWR UNSPEC</b>	Internal ABS ECU fault.

## DIAGNOSTIC TROUBLE CODES (DTC) :

	ECU GROUP
<b>ECU EE ERR</b>	Internal ECU fault or ECU not programmed.
<b>ECU PARAM ERR</b>	Internal ECU fault or ECU not programmed.
<b>ECU EE UNSPEC</b>	Internal ECU fault or ECU not programmed.
AUXILIARY COMPONENTS GROUP	
<b>AUX 1</b>	Auxiliary 1 system/wiring open or short circuit
<b>AUX 2</b>	Auxiliary 2 system/wiring open or short circuit
<b>AUX 3</b>	Auxiliary 3 system/wiring open or short circuit
<b>AUX 4</b>	Auxiliary 4 system/wiring open or short circuit
<b>AUX 5</b>	Auxiliary 5 system/wiring open or short circuit
LINING WEAR GROUP	
<b>BRAKE PADS</b>	Lining wear wiring open circuit
LATERAL ACCELEROMETER	
<b>LAT ACC OC</b>	Lateral accelerometer wiring open circuit
<b>LAT ACC SC</b>	Lateral accelerometer wiring short circuit
<b>LAT ACC SIGNAL</b>	Lateral accelerometer signal fault
SLAVE VALVE GROUP	
<b>SLAVE VALVE SENSOR</b>	Pressure transducers open or short circuit
<b>SLAVE VALVE MODULATOR</b>	Hold, Dump or Brake Apply solenoid open or short circuit
<b>SLAVE VALVE CABLE</b>	Link cable open or short circuit
<b>SLAVE VALVE SLOW REC</b>	Slow recovery of one wheel of slave valve
<b>SLAVE SUSP LOW</b>	Suspension pressure values outside operating range

## OTHER DISPLAYS

- If there is no load plate data in either Info Centre or EB+ ECU, the display shows 'EOLT REQ', This means that the EB+ ECU needs to be programed using the DIAG+ software (Kit No. 815 001 001).



- If display reads 'ACCESS' or 'BUSY' there has been an error in entering the relevant diagnostic mode.  
Users should wait 5 seconds and try again.



## INFO CENTRE ADR Version

The ADR version of the INFO CENTRE has no battery fitted and therefore cannot operate in battery mode. Other functions which relate to the battery, (eg. CLOCK) are not available when the INFO CENTRE is powered from the **EB+**.









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**Haldex Garphyttan Wire** supplies specially steel-alloyed wire products mainly for applications in combustion engines.

**Haldex Traction Systems** supplies 4WD systems for cars and trucks.

Sales companies are established in Europe, North and South America and Asia. Production takes place in 9 factories in USA, 9 factories in Europe and 1 joint venture in India.

The Haldex Group is listed on the Stockholm Stock Exchange.

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## Company Vision

We use our demonstrated competence to provide innovative components, systems and service for trucks, trailers and buses, that lower life cycle costs and improve vehicle safety. Haldex wants to become the first choice business partner of commercial vehicle manufacturers world wide in the areas of braking and suspension control systems with special emphasis on heavy commercial vehicles.

## Total Support

A uniquely wide range of services is available from Haldex. These include expert consultancy for braking and suspension development, brake calculations, type approvals and application engineering.

The aim is accurate specification for manufactures and low cost of owner ship for the operator.

Full aftermarket support includes a Worldwide parts distribution and service network, on-line technical advice, field visits and installation/ maintenance training held on-site or at Haldex facilities.

## Research and Development

Continual, heavy investment in Research and Development is carried out in response to ever increasing commercial, legislative, environmental, performance and technological demands.

## Quality and Production Standards

The very latest production technology ensures the very highest quality standards. All production sites are ISO 9001 approved.



[www.brake-eu.haldex.com](http://www.brake-eu.haldex.com)