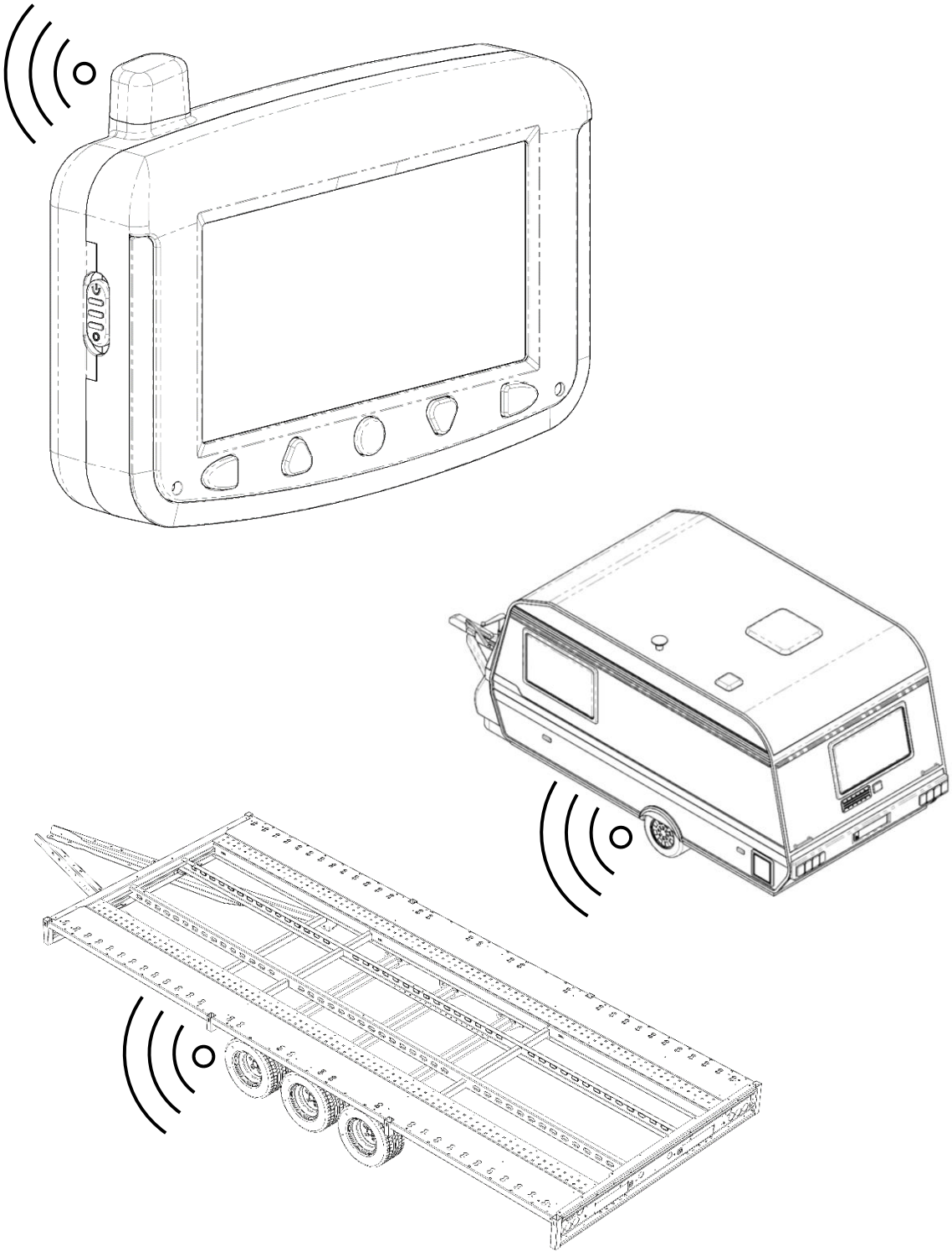
TC215 TPMS USER MANUAL

– INTERNAL & EXTERNAL SENSORS



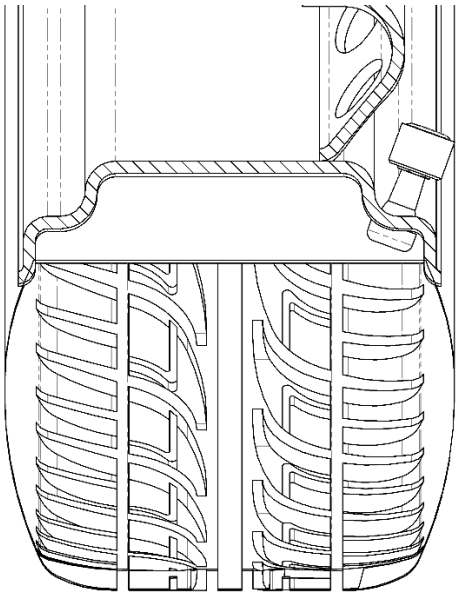
MAX= +80°C MIN= -20°C

MAX = 99psi / 6.8Bar

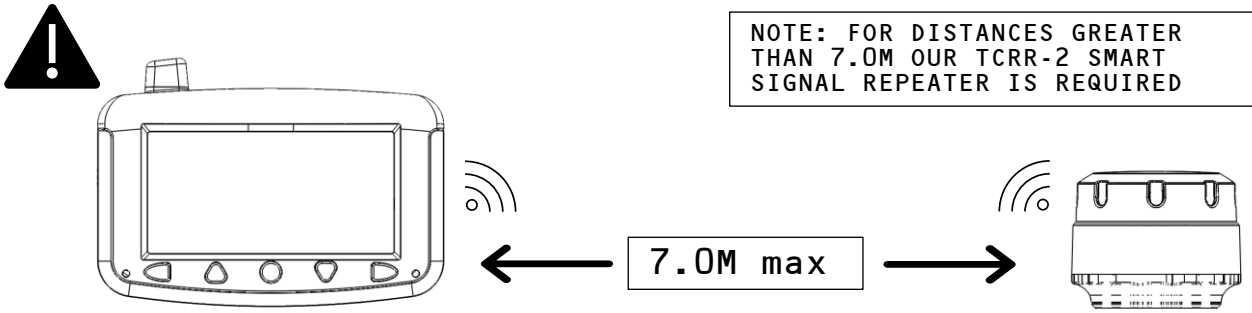
MAX = 120mph

MONITORS LEFT UNDER WINDSCREENS CAN EXPERIENCE EXTREME HEAT, CAN DAMAGE DEVICE

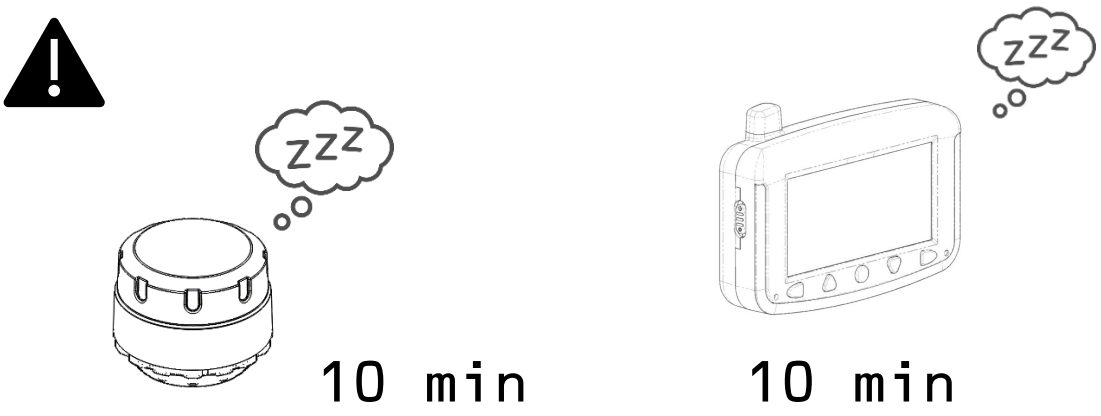
DO NOT USE WITH TYRE SEALANT

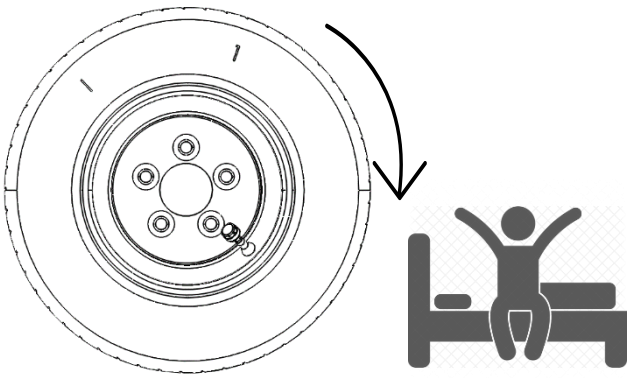


ENSURE SENSOR DOES NOT PROTRUDE BEYOND TYRE SIDEWALL



NOTE: FOR DISTANCES GREATER THAN 7.0M OUR TCRR-2 SMART SIGNAL REPEATER IS REQUIRED

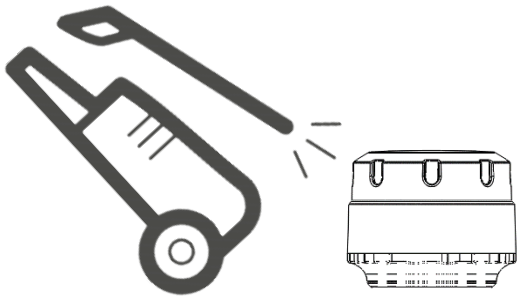




SENSORS GO TO SLEEP AFTER 10 MINUTES OF NO VEHICLE MOVEMENT.

MONITOR GOES TO SLEEP AFTER 10 MINUTES OF NO VEHICLE MOVEMENT.

SENSORS AND MONITOR WAKE UP WHEN MOTION OR VIBRATION ARE DETECTED.



DO NOT PRESSURE WASH SENSORS

READ INSTRUCTIONS BEFORE INSTALLING

THIS KIT DOES NOT REPLACE THE NEED TO CARRY OUT REGULAR CHECKS ON THE CONDITION AND WEAR OF THE TYRES

MONITOR SHOULD BE INSIDE VEHICLE WHERE IT DOES NOT INTERFERE WITH DRIVING

IT IS YOUR RESPONSIBILITY TO ENSURE THIS KIT IS SUITABLE FOR YOUR PARTICULAR VEHICLE, THAT IT IS WORKING CORRECTLY, AND PROPERLY MAINTAINED

CHECK THE SENSORS AND VALVE STEMS REGULARLY FOR DAMAGE OR CORROSION

KEEP SMALL PARTS AND BATTERIES OUT OF THE REACH OF CHILDREN. SEEK MEDICAL ASSISTANCE IF PARTS ARE SWALLOWED

DO NOT HOLD A BATTERY WITH METAL TWEEZERS OR PLIERS, WHICH MAY LEAD TO A SHORT CIRCUIT CAUSING A FIRE OR EXPLOSION OF BATTERY

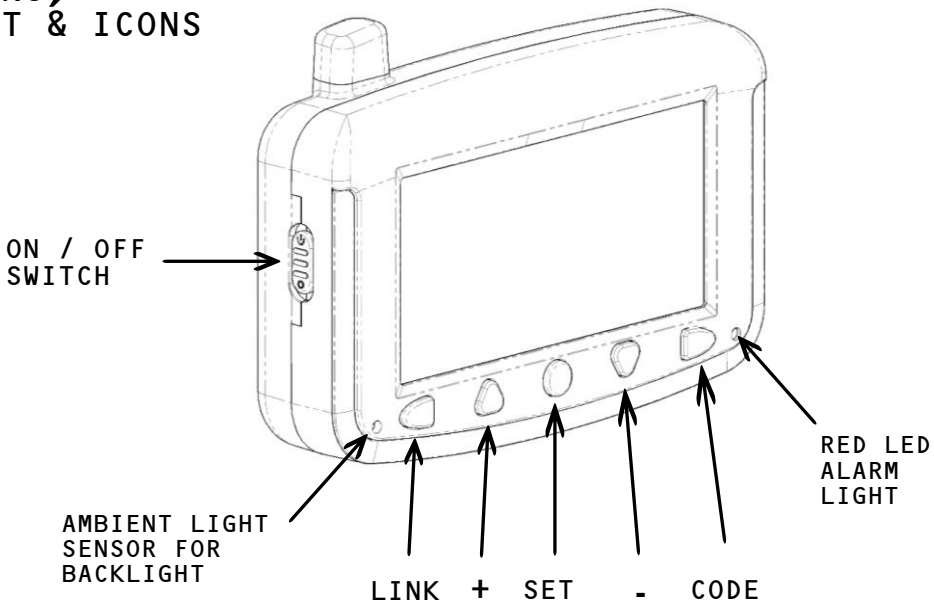
DO NOT ADJUST MONITOR SETTINGS WHILST DRIVING

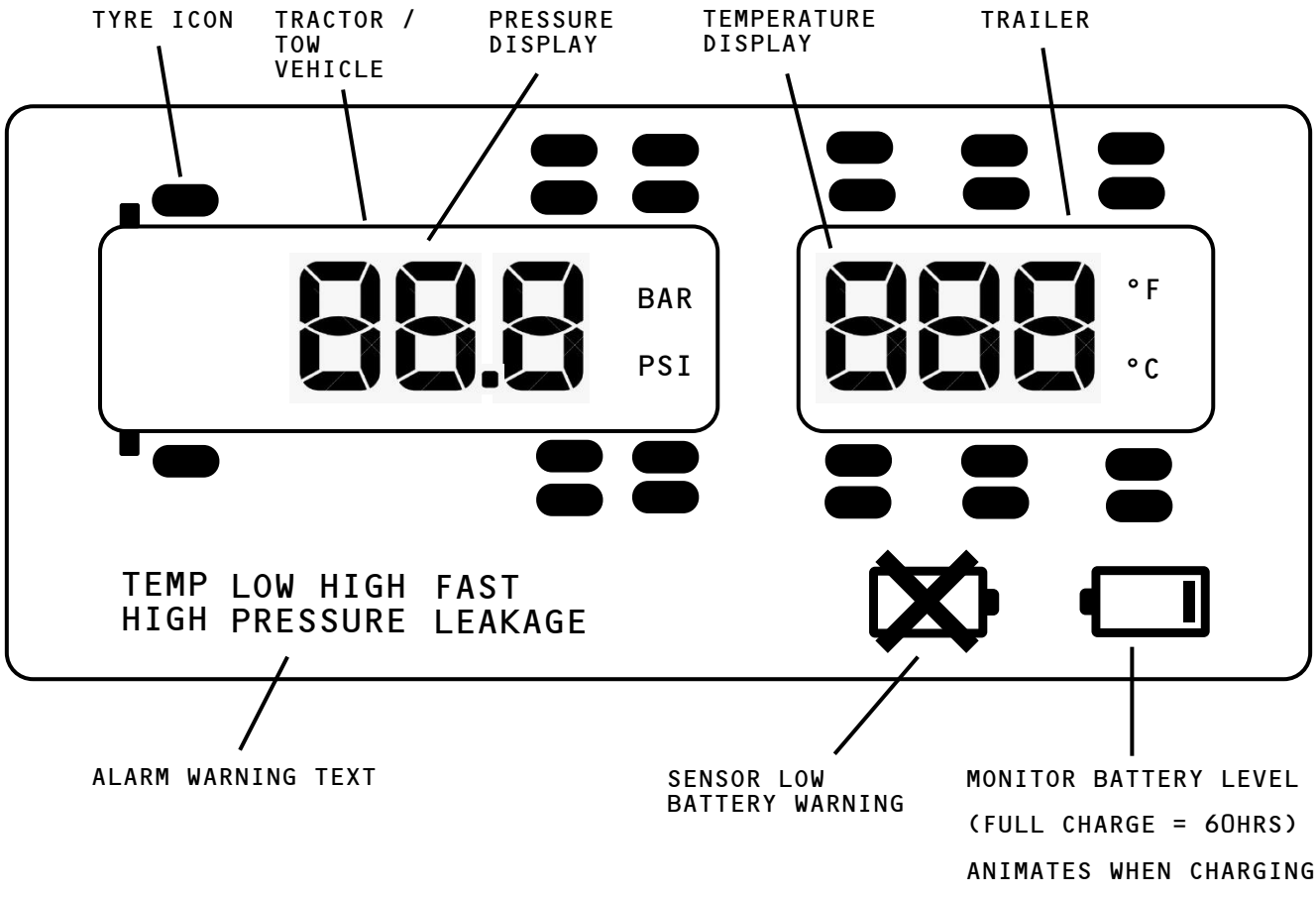
IF THE MONITOR ALARMS PULL OVER WHEN IT IS SAFE TO DO SO AND CHECK THE TYRES

WEIGHT OF SENSORS WITHIN TOLERANCE FOR WHEEL BALANCING. NO NEED TO REBALANCE WHEELS AFTER SENSOR INSTALLATION. IF VIBRATION IS FELT WHEN DRIVING AT SPEED, AFTER FITTING SYSTEM, THE WHEELS MUST BE REBALANCED

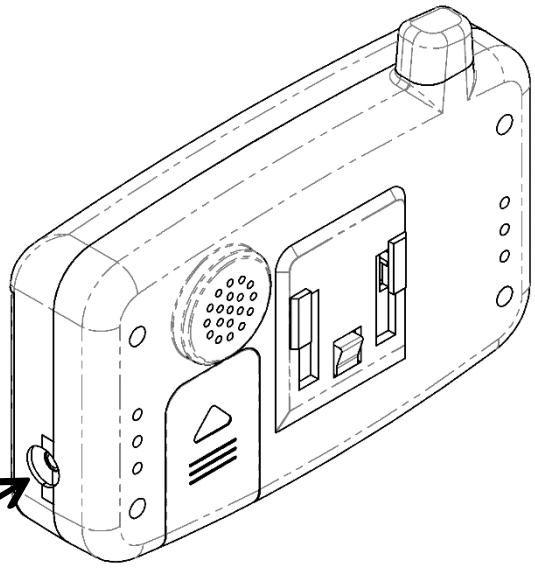
MONITOR OVERVIEW

MONITOR BUTTONS, DISPLAY LAYOUT & ICONS





CHARGING PORT

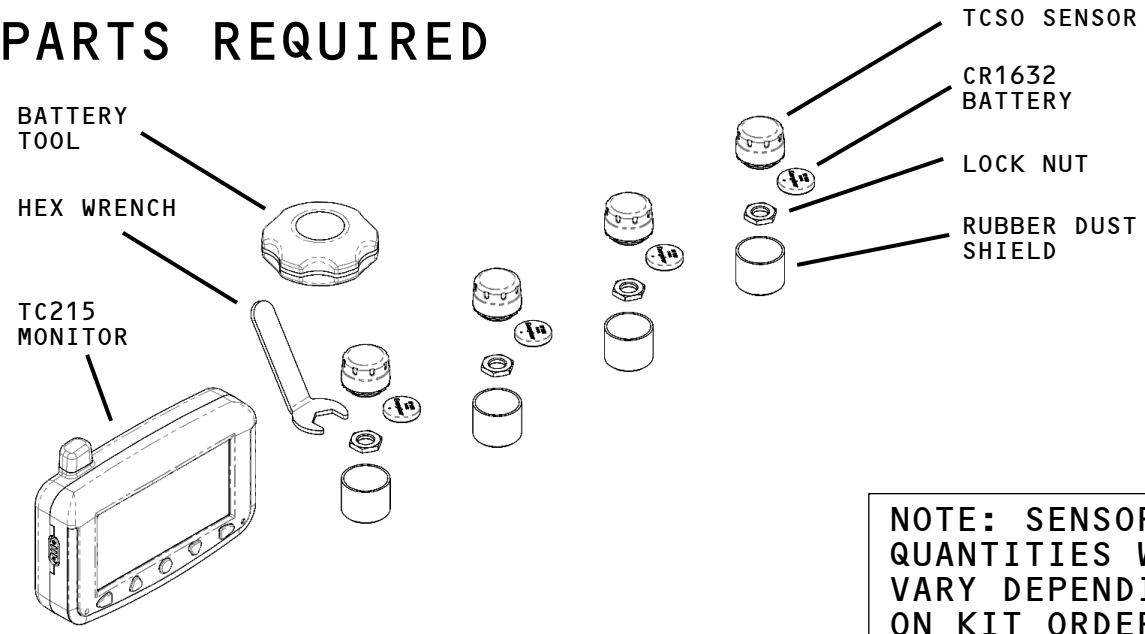


ONLY USE CHARGING LEAD PROVIDED IN KIT. JACK PLUG REQUIRES A FIRM "DOUBLE-PUSH" TO FULLY ENGAGE IN SOCKET

12V - 24V DC

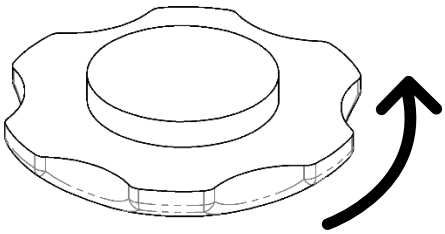
1 INSTALLATION & SET-UP PROCEDURE- EXTERNAL TCSO SENSORS

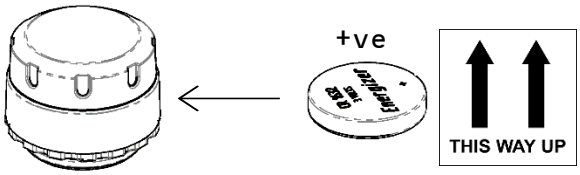
PARTS REQUIRED

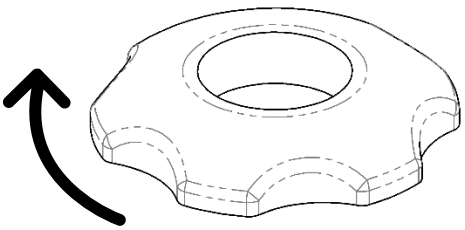


NOTE: SENSOR QUANTITIES WILL VARY DEPENDING ON KIT ORDER

2 BATTERY INSTALLATION - USE BATTERY TOOL TO OPEN AND CLOSE (TIGHTEN) THE SENSOR







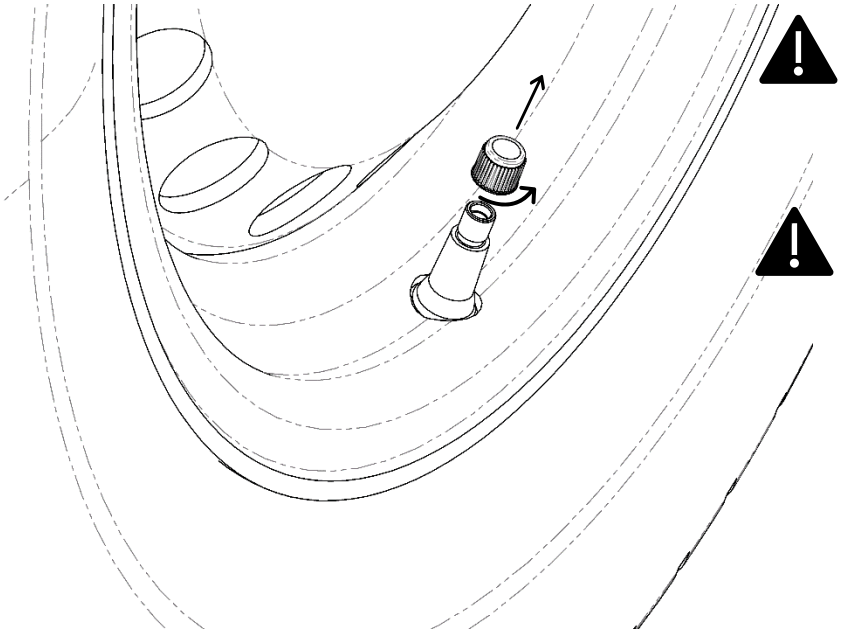
NOTES: SLIDE BATTERY INTO HOUSING

SENSOR IS PRE-FITTED WITH AN O-RING & VALVE SEAL. SPARES ARE INCUDED IN KIT FOR MAINTENANCE.

WHEN REPLACING THE CAP ENSURE THE O-RING SEAL IS IN GOOD CONDITION AND NOT PINCHED.

DO NOT REMOVE THE WHITE PLASTIC DISC UNDER THE BATTERY TERMINALS

3 VALVE DUST CAP REMOVAL

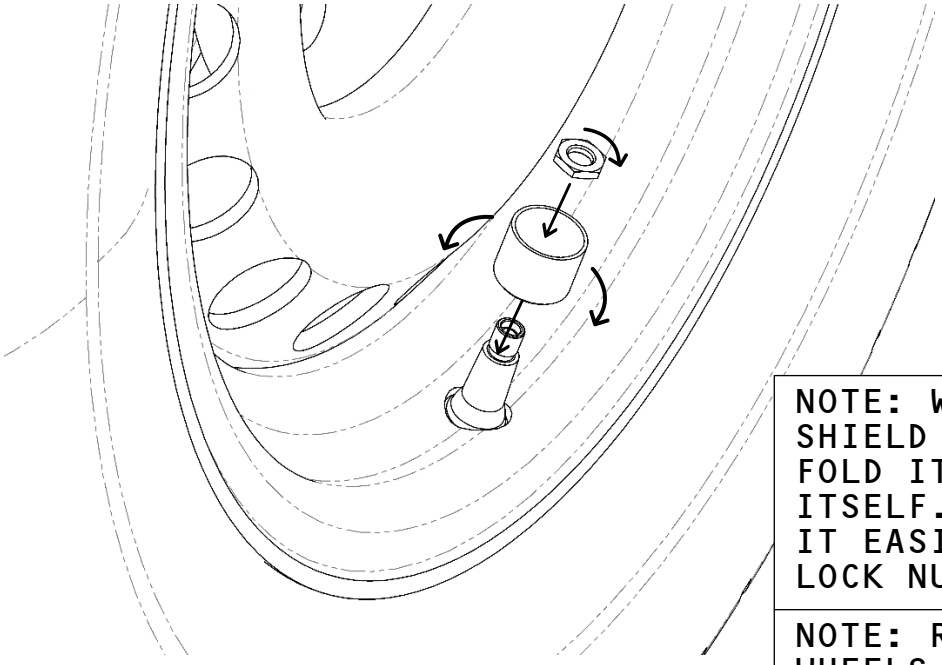


CHECK TYRE PRESSURES BEFORE SENSORS ARE INSTALLED

MIN. VALVE THREAD LENGTH = 9.0mm

NOTE: REPEAT FOR ALL WHEELS REQUIRING SENSORS

4 INSTALL DUST SHIELD & LOCK NUT

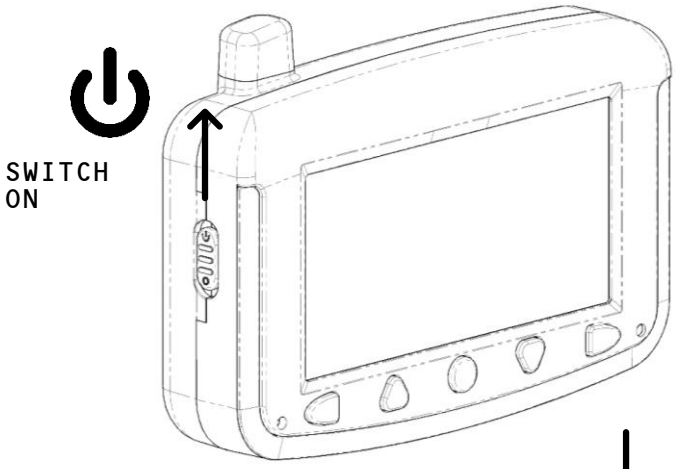


NOTE: WHEN THE DUST SHIELD IS FITTED FOLD IT BACK ON ITSELF. THIS MAKES IT EASIER TO FIT LOCK NUT AND SENSOR.

NOTE: REPEAT FOR ALL WHEELS REQUIRING SENSORS

DO NOT INSTALL SENSORS YET!

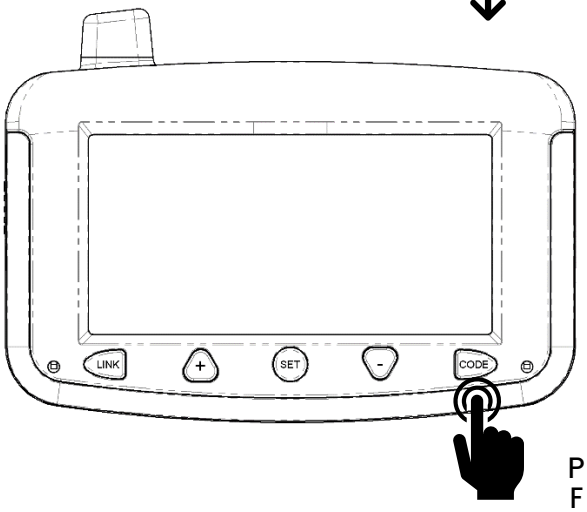
5 PREPARE MONITOR FOR SENSOR REGISTRATION



SWITCH ON

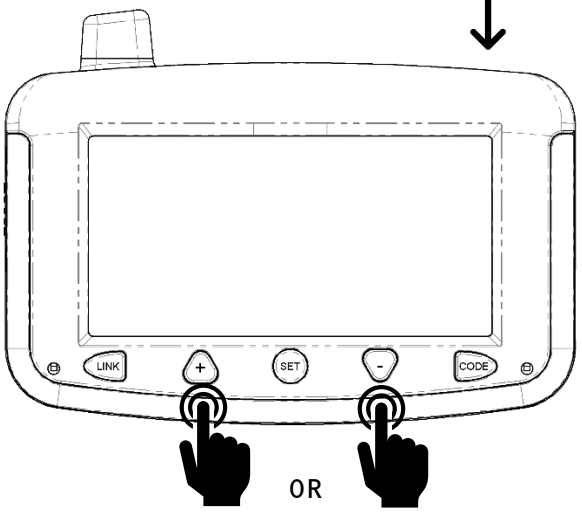
SCREEN WILL SHOW 'TRACTOR + TRAILER' ICONS; PSI & degC.

NB. ONCE SENSORS ARE REGISTERED TYRE ICONS WILL ALSO SHOW WHEN FIRST TURNED ON, BUT NO TYRE DATA SHOWN UNTIL TRAVELLING. TURN MONITOR ON A FEW MINS BEFORE SETTING OFF.



BEEP

PRESS AND *HOLD* THE "CODE" BUTTON FOR 4-5 SECS



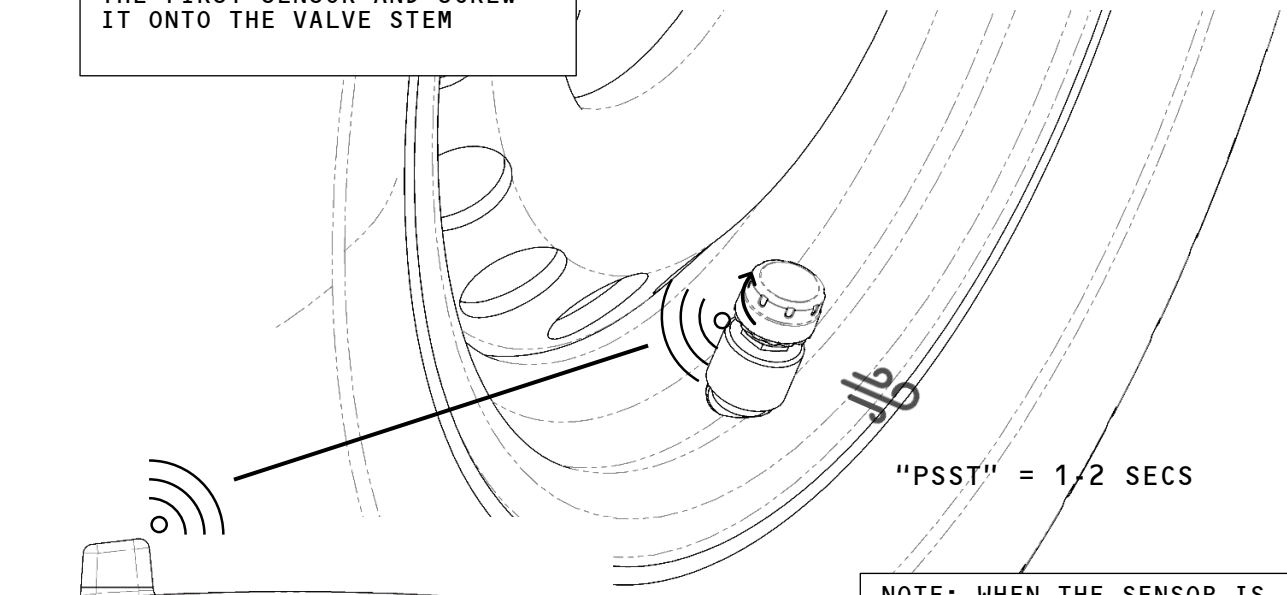
OR

PRESS "+" OR "-" BUTTON TO SELECT WHEEL TO BE MONITORED.

"FFF FFF" WILL APPEAR ON SCREEN. THIS MEANS NO SENSOR IS REGISTERED TO THIS POSITION

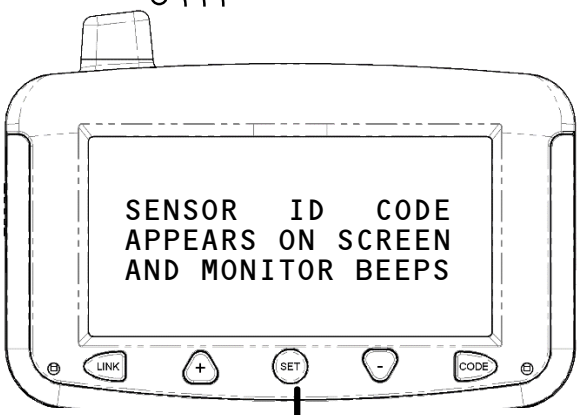
6 INSTALL & REGISTER SENSOR

HOLDING THE MONITOR AWAY (1.5M) FROM THE TYRE, TAKE THE FIRST SENSOR AND SCREW IT ONTO THE VALVE STEM



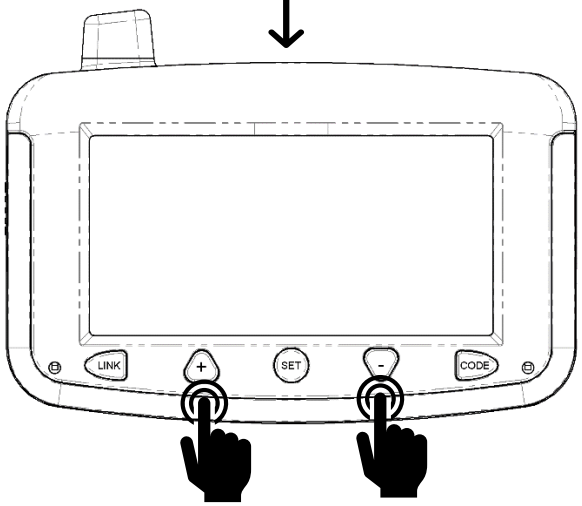
"PSST" = 1-2 SECS

NOTE: WHEN THE SENSOR IS SCREWED ON TO THE TYRE VALVE IT DETECTS PRESSURE AND SENDS IT'S UNIQUE ID CODE TO THE MONITOR. USEFUL TIP - ATTACH A POSITION LABEL TO THE SENSOR CAP



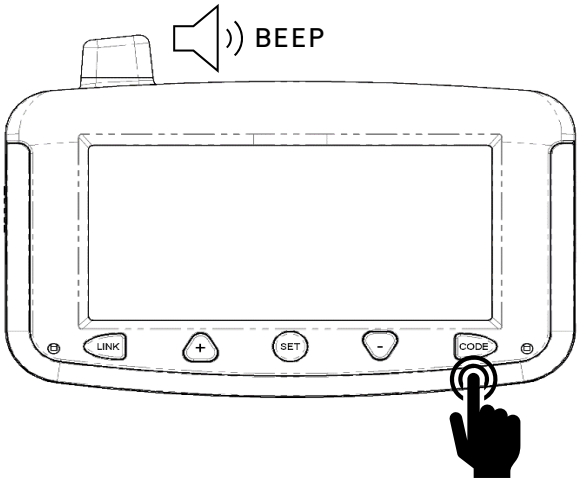
BEEP

SENSOR ID CODE APPEARS ON SCREEN AND MONITOR BEEPS



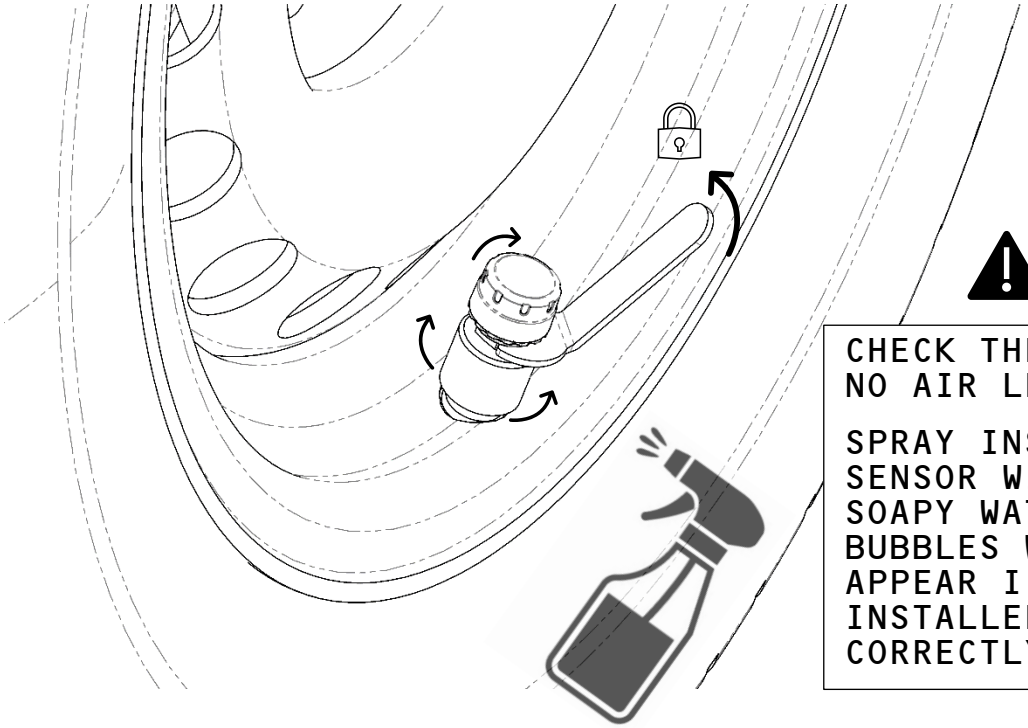
PRESS "+" OR "-" TO SELECT NEXT TYRE AND REPEAT SENSOR INSTALLATION

BEEP



TO FINISH PRESS AND *HOLD* "CODE" BUTTON FOR 4-5 SECS. TYRE PRESSURES & TEMP WILL APPEAR ON THE SCREEN. ALARMS MAY SOUND, PRESS ANY BUTTON TO CANCEL. PARAMETERS CAN BE ADJUSTED DURING THE NEXT STEPS

7 FINISH SENSOR INSTALLATION

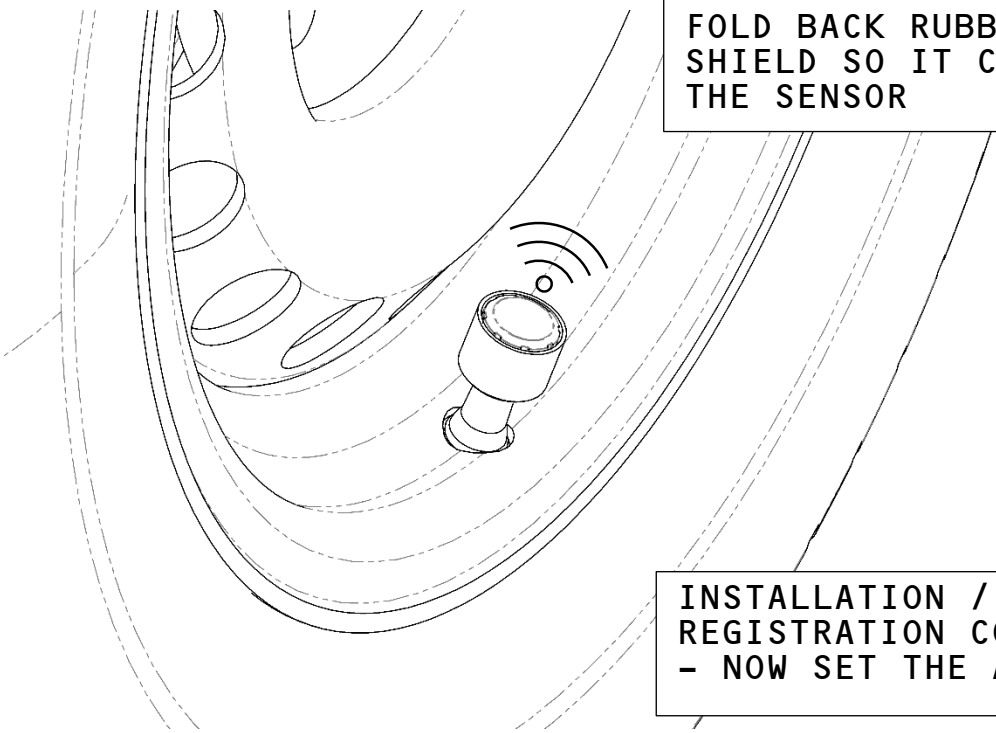


CHECK THERE ARE NO AIR LEAKS

SPRAY INSTALLED SENSOR WITH SOAPY WATER. NO BUBBLES WILL APPEAR IF INSTALLED CORRECTLY

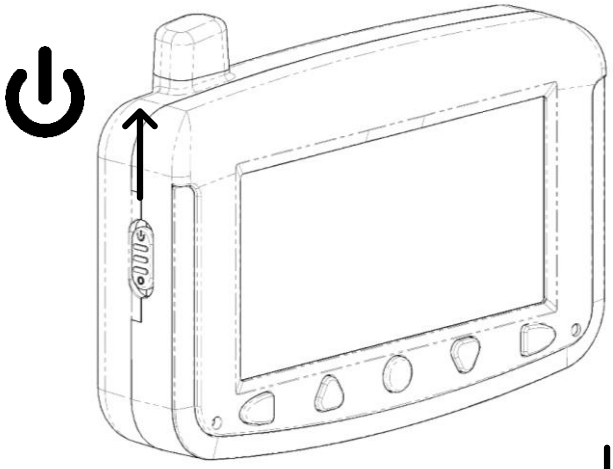
LOCK SENSOR USING HEX WRENCH SUPPLIED IN KIT

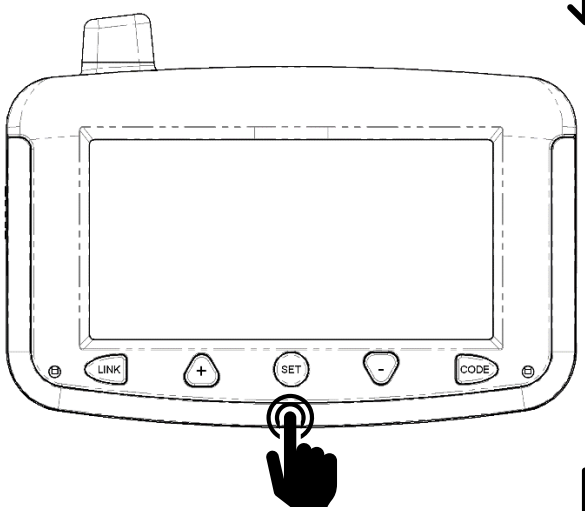
FOLD BACK RUBBER DUST SHIELD SO IT COVERS THE SENSOR



INSTALLATION / REGISTRATION COMPLETED - NOW SET THE ALARMS.

8 SET DATA UNITS eg.PSI/Bar; degrees C/F

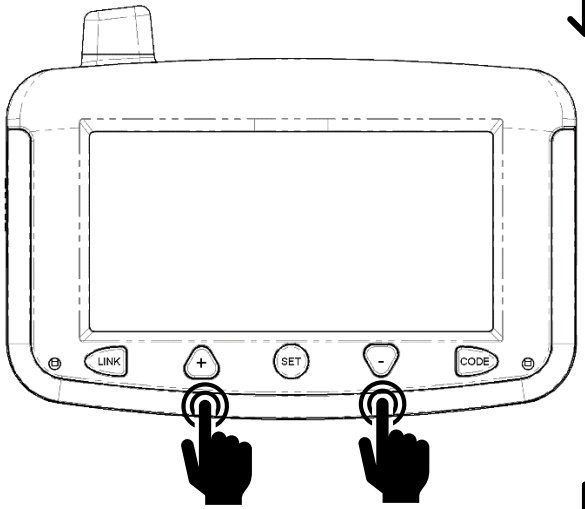




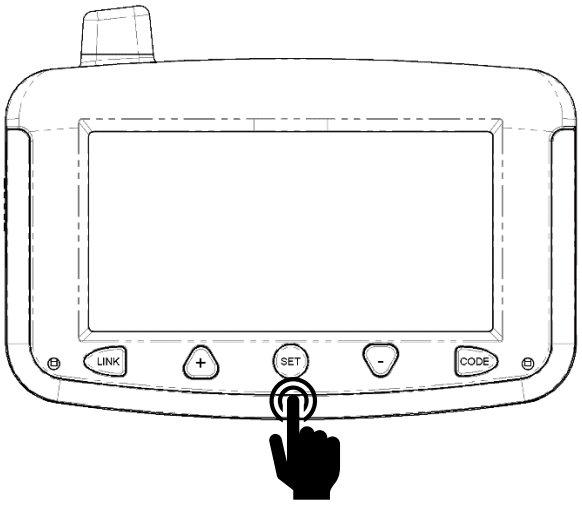
BEEP

PRESS AND *HOLD* "SET" BUTTON FOR 4-5 SECS

PRESSURE UNITS BEGIN TO FLASH



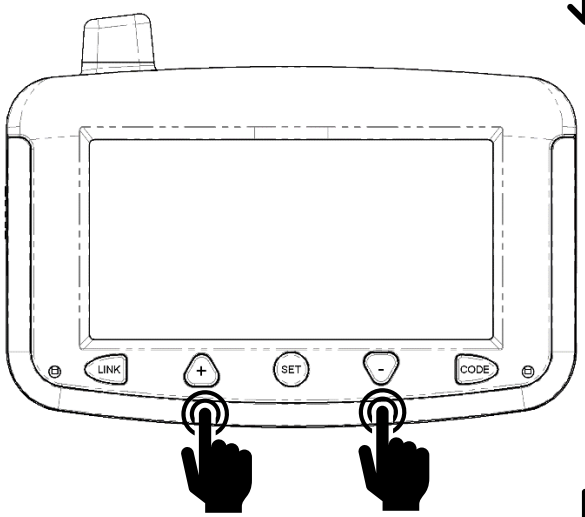
PRESS "+" OR "-" BUTTON TO SELECT "PSI" OR "BAR"



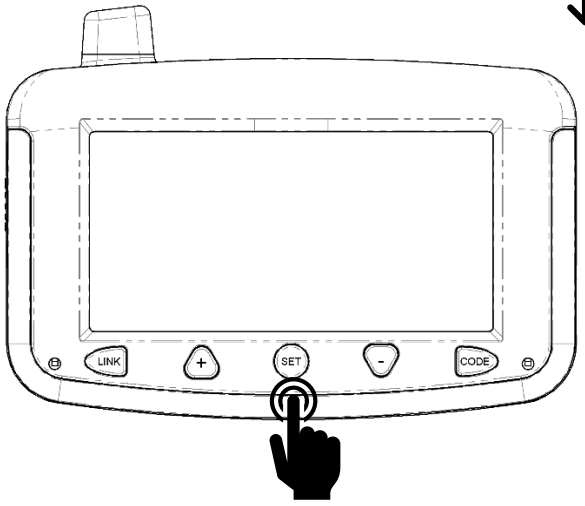
BEEP

PRESS "SET" BUTTON FOR 1 SEC TO SELECT PREFERRED PRESSURE UNITS

TEMPERATURE UNITS BEGIN TO FLASH



PRESS "+" OR "–" BUTTON TO SELECT "°C" OR "°F"



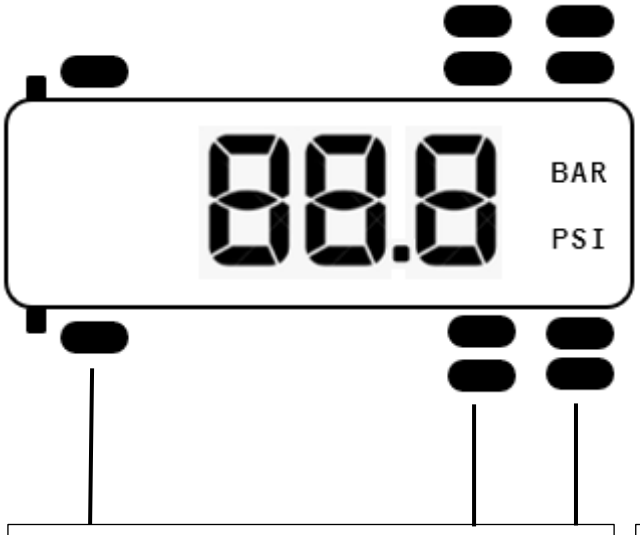
BEEP

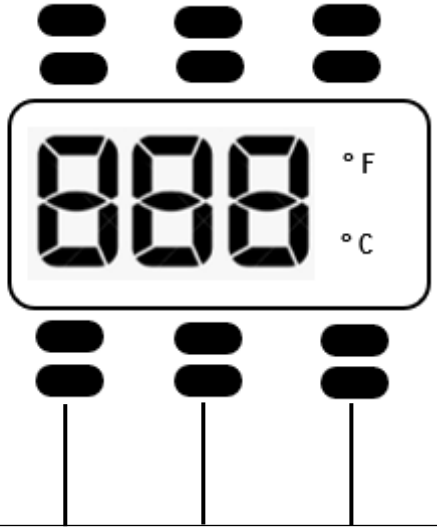
PRESS AND *HOLD* THE "SET" BUTTON FOR 4-5 SECS TO REGISTER THE SELECTED UNITS

9 SET ALARMS (for each axle)

eg.IF VEHICLE'S RECOMMENDED COLD TYRE PRESSURE IS 35psi THEN HIGH=44psi & LOW=30psi

ie. +25% & LOW -15% YOUR VEHICLE'S COLD TYRE PRESSURE



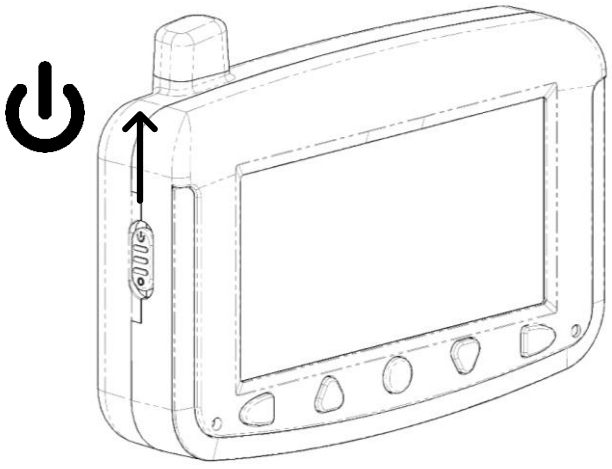


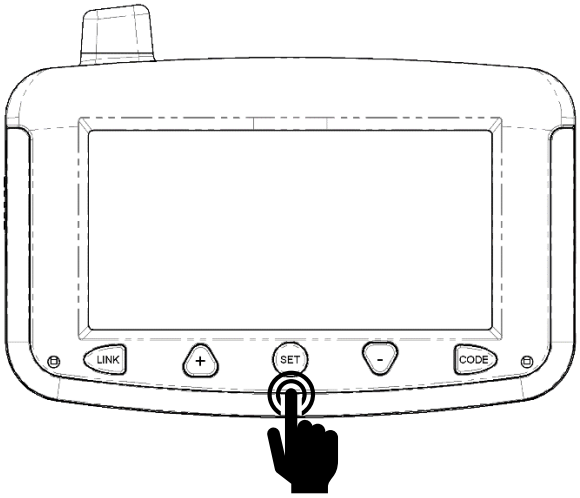
NOTE: "TRACTOR" UNIT ALARMS

HIGH AND LOW PRESSURE ALARM LEVELS TO BE SET FOR EACH AXLE OF THE TRACTOR UNIT

NOTE: "TRAILER" UNIT ALARMS

HIGH AND LOW PRESSURE ALARM LEVELS APPLY TO **ALL** AXLES ON THE TRAILER

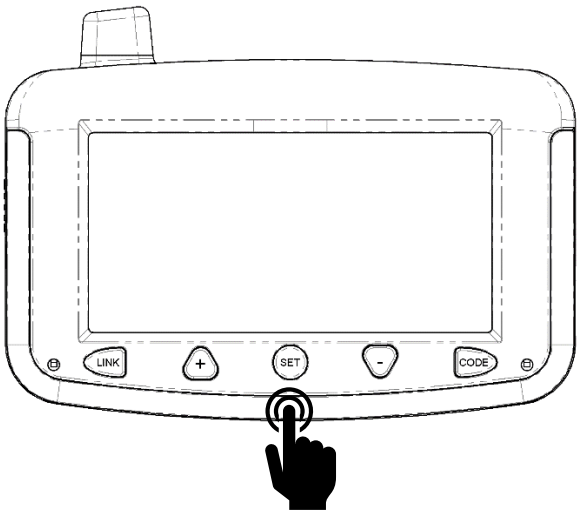




BEEP

PRESS AND HOLD "SET" BUTTON FOR 4-5 SECS

PRESSURE UNITS BEGIN TO FLASH

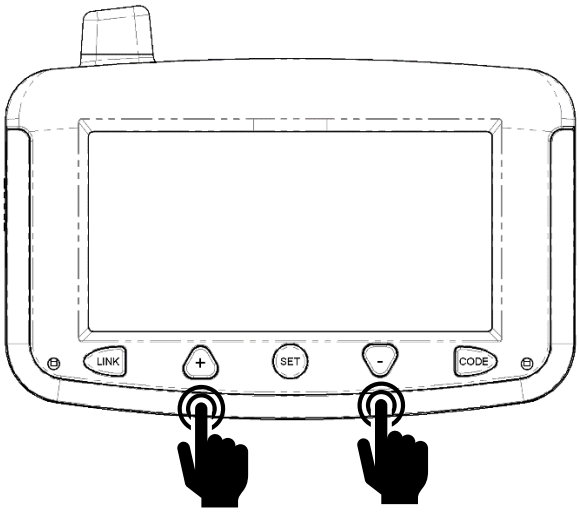


BEEP - BEEP

QUICKLY PRESS "SET" BUTTON TWICE (1 SEC EACH TIME)

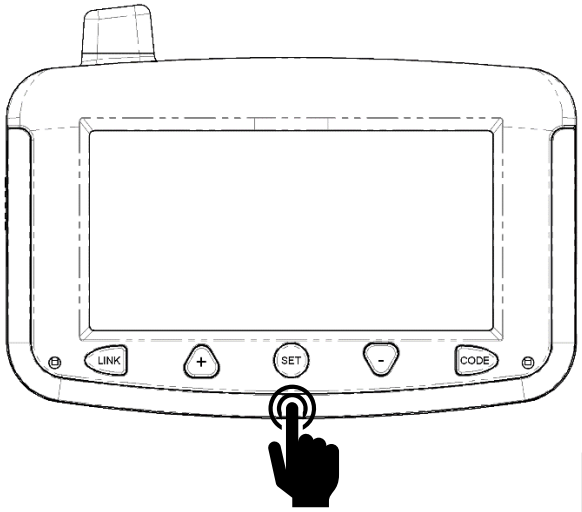
"HIGH PRESSURE" FLASHES AND FRONT AXLE FLASHES

IF YOU WANT TO ADJUST THE FRONT AXLE HIGH PRESSURE ALARM PRESS THE + OR - BUTTONS TO RAISE OR LOWER IT. IF NOT KEEP QUICKLY PRESSING THE SET BUTTON FOR 1 SEC UNTIL THE AXLE YOU WANT IS FLASHING.



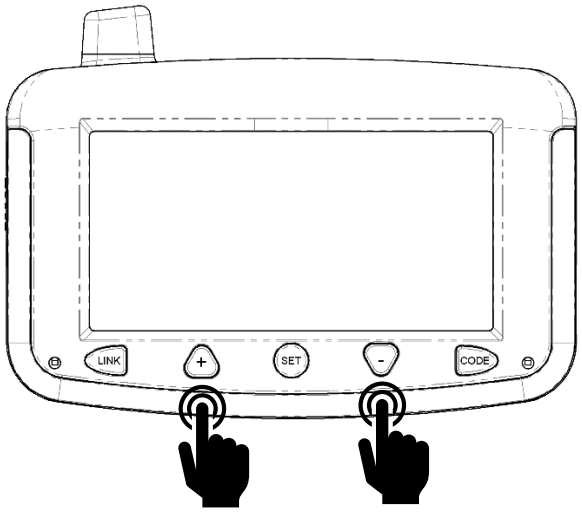
SET HIGH PRESSURE ALARM LEVEL 25% ABOVE VEHICLES RECOMMENDED TYRE PRESSURE FOR AXLE SELECTED

NOTE: THE MONITOR WILL NOT ALLOW THE HIGH PRESSURE ALARM LEVEL TO BE LESS THAN THE LOW PRESSURE ALARM LEVEL. THE FACTORY SET LOW PRESSURE ALARM LEVEL IS 30 PSI. IF YOU WANT THE HIGH PRESSURE ALARM BELOW 30PSI ADJUST THE LOW PRESSURE ALARM FIRST.



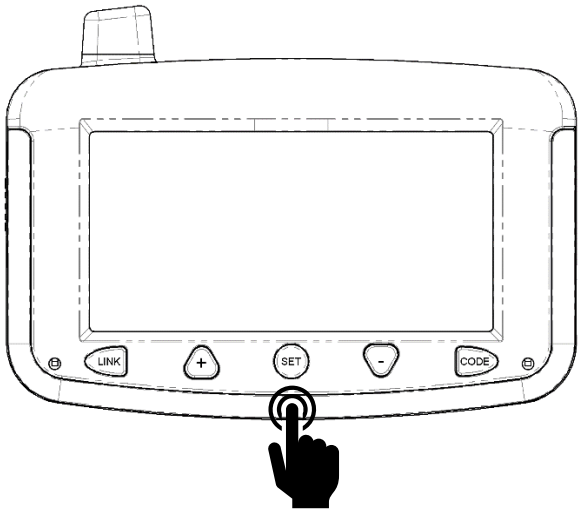
BEEP

ONCE THE FRONT AXLE HIGH PRESSURE ALARM IS SET PRESS THE SET BUTTON FOR 1 SEC. "LOW PRESSURE" FLASHES AND THE FRONT AXLE FLASHES



SET LOW PRESSURE ALARM LEVEL 15% BELOW VEHICLES RECOMMENDED TYRE PRESSURE FOR AXLE SELECTED

IF YOU WANT TO ADJUST THE FRONT AXLE LOW PRESSURE ALARM LEVEL PRESS THE "+" OR "–" BUTTONS TO RAISE OR LOWER IT.



BEEP

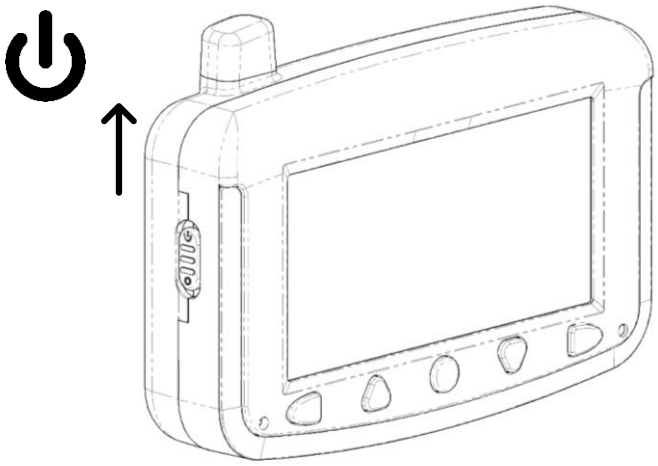
RECOMMENDED UPPER TEMPERATURE ALARM IS 70°C / 158°F

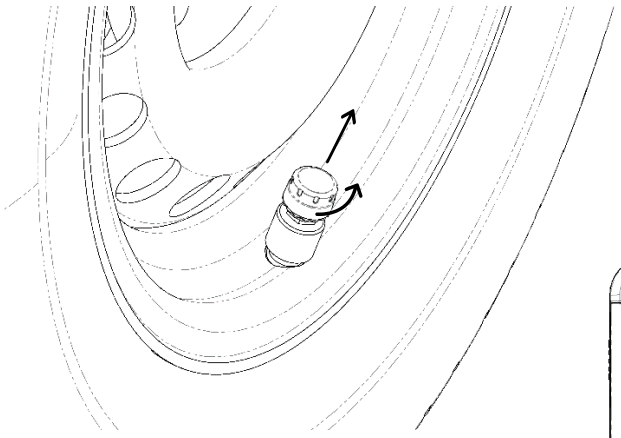
FINAL OPERATION IS TO SET UPPER TEMPERATURE ALARM

ONCE ALL OF THE ALARMS HAVE BEEN ADJUSTED PRESS AND *HOLD* THE "SET" BUTTON FOR 4-5 SECS TO REGISTER THE ALARMS

10 PROCEDURE TO TEST SET-UP

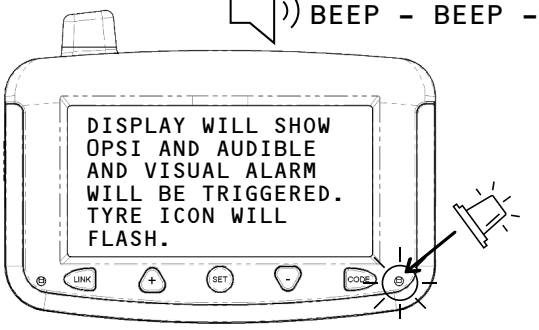
(WHILST VEHICLE IS STATIONARY)





REMOVE SENSOR FROM TYRE VALVE. MONITOR WILL ALARM. REPLACE SENSOR TO CANCEL ALARM. MONITOR WILL THEN SHOW TYRE PRESSURE READING.

BEEP - BEEP - BEEP…



RED ALARM LIGHT FLASHES

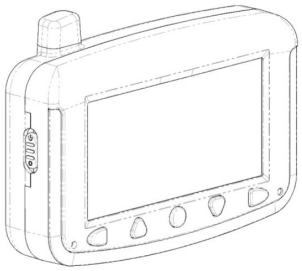
REPEAT FOR ALL SENSORS.

INSTALLATION & SET-UP PROCEDURE- INTERNAL TCSI SENSORS

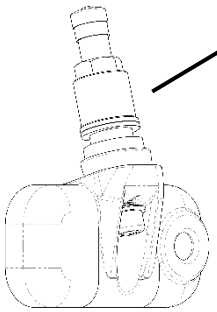
NOTE: THE MANUAL DESCRIBES THE INSTALLATION AND SET-UP OF THE INTERNAL SENSORS. IF YOU HAVE A VEHICLE WITH OUR INTERNAL SENSORS PRE-FITTED PLEASE SKIP TO STEP 3

1 PARTS REQUIRED

TC215 MONITOR



TCSI SENSOR



NOTE: SENSOR QUANTITIES WILL VARY DEPENDING ON KIT ORDER

2 INSTALL INTERNAL SENSOR

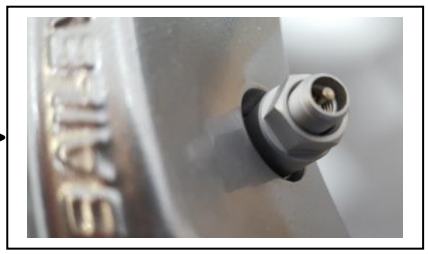
PREPARE SENSOR AS SHOWN

REMOVE OLD VALVE STEM AND CLEAN VALVE STEM HOLE AND MOUNTING FACES

INSTALL SENSOR THROUGH VALVE STEM HOLE FROM INSIDE THE RIM

ENSURE THE SENSOR RUBBER SEAL AND VALVE STEM ARE SEATED SQUARE

CAREFULLY INSTALL THE WASHER AND ENSURE IT IS SEATED CORRECTLY



ATTACH THE THREADED COLLAR WITH HEXAGON UPPERMOST, AS SHOWN

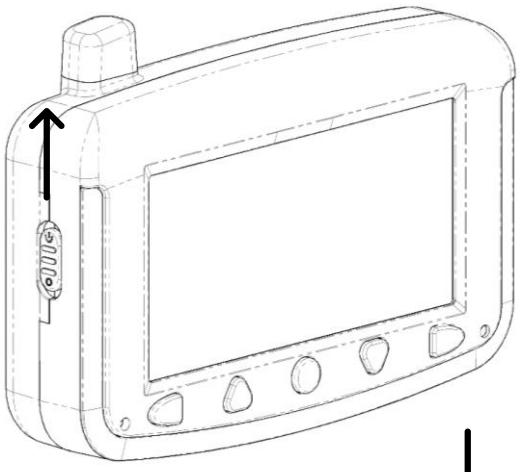
TORQUE THE THREADED COLLAR TO 6.8Nm. REFIT THE TYRE & INFLATE

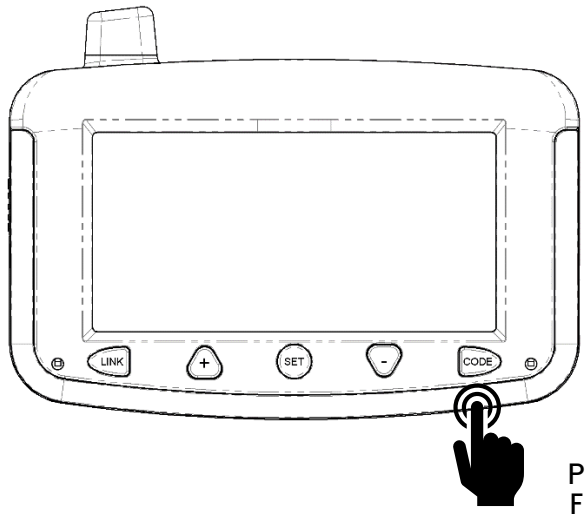
TEST THE VALVE WITH SOAPY WATER TO ENSURE THERE ARE NO AIR LEAKS

NOTE: WE RECOMMEND THE ABOVE PROCEDURE IS COMPLETED BY A PROFESSIONAL TYRE FITTER

3 PREPARE MONITOR

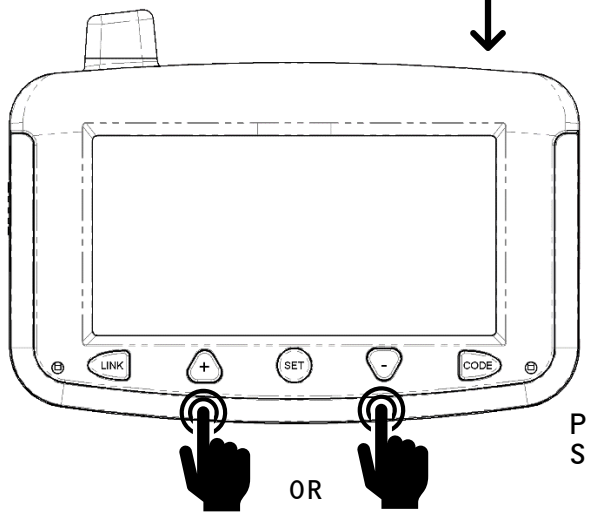
SWITCH ON





BEEP

PRESS AND *HOLD* THE "CODE" BUTTON FOR 4-5 SECS

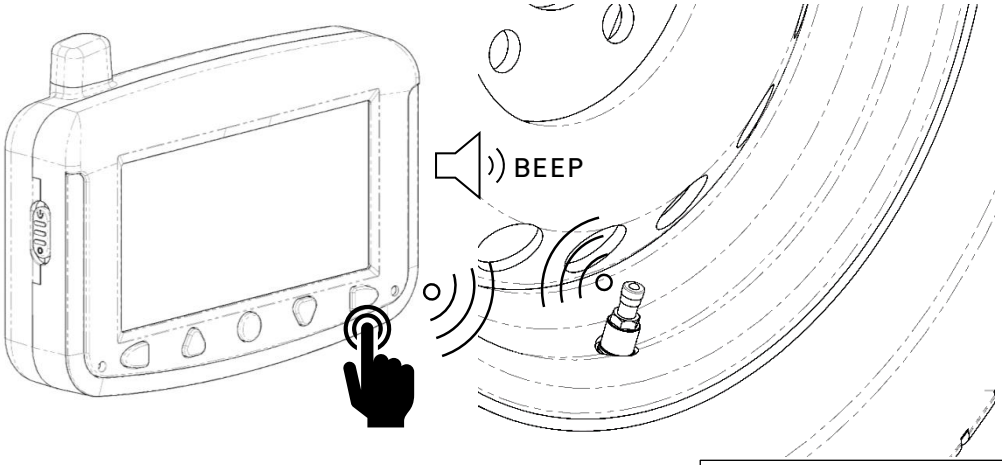


OR

PRESS "+" OR "-" BUTTON TO SELECT WHEEL TO BE MONITORED.

"FFF FFF" WILL APPEAR ON SCREEN. THIS MEANS NO SENSOR IS REGISTERED TO THIS POSITION

4 REGISTER SENSORS

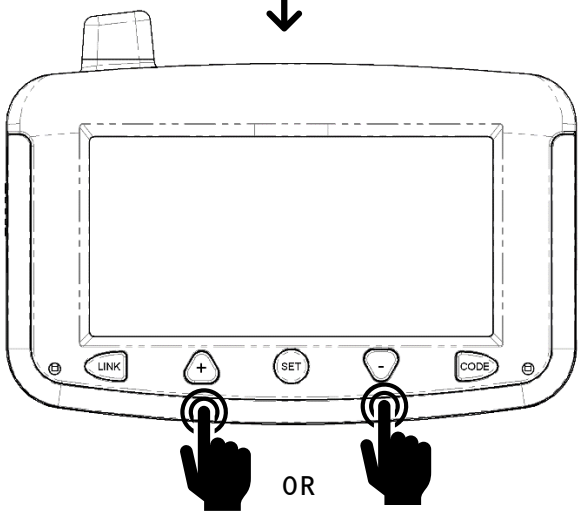


WITH THE MONITOR PREPPED AND THE DISPLAY SHOWING "FFF FFF" POSITION THE MONITOR WITHIN 50cm OR LESS OF THE SENSOR

PRESS THE CODE BUTTON FOR 1 SEC

"ID LF" WILL APPEAR ON THE SCREEN SHORTLY FOLLOWED BY A BEEP AND THE SENSOR'S SIX DIGIT ID NUMBER

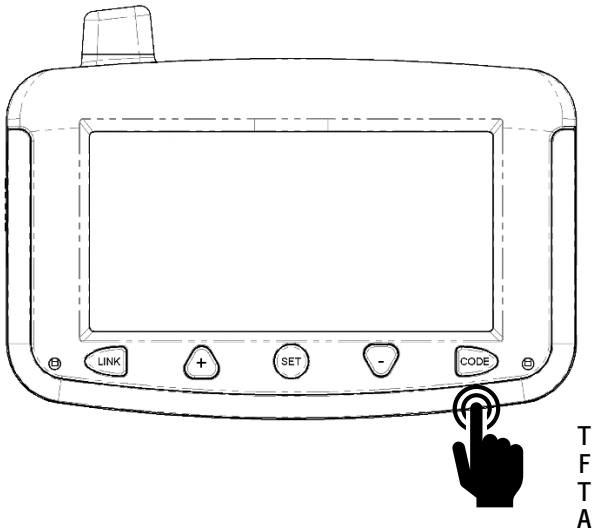
NOTE: IF TWO WHEELS ARE CLOSE TO EACH OTHER ENSURE THE SENSORS ARE NOT ADJACENT. ROTATE ONE WHEEL SO THE SENSORS ARE AS FAR APART AS POSSIBLE TO EASE SENSOR REGISTRATION



PRESS THE "+" OR "-" BUTTON TO SELECT THE NEXT WHEEL AND REPEAT PROCESS

WHEN YOU REPEAT THE PROCESS MAKE SURE YOU PRESS THE "CODE" BUTTON FOR 1 SEC AND ENSURE "ID LF" APPEARS ON THE SCREEN

NOTE: WHEN YOU PRESS THE "CODE" BUTTON FOR 1 SEC THE "ID LF" TEXT ONLY STAYS ON THE SCREEN FOR 4-5 SECS. IF NO SENSOR IS DETECTED THE SCREEEN DISPLAYS "LF ERR". MAKE SURE THE MONITOR IS NEAR THE SENSOR WHEN THE "CODE" BUTTON IS PRESSED



BEEP

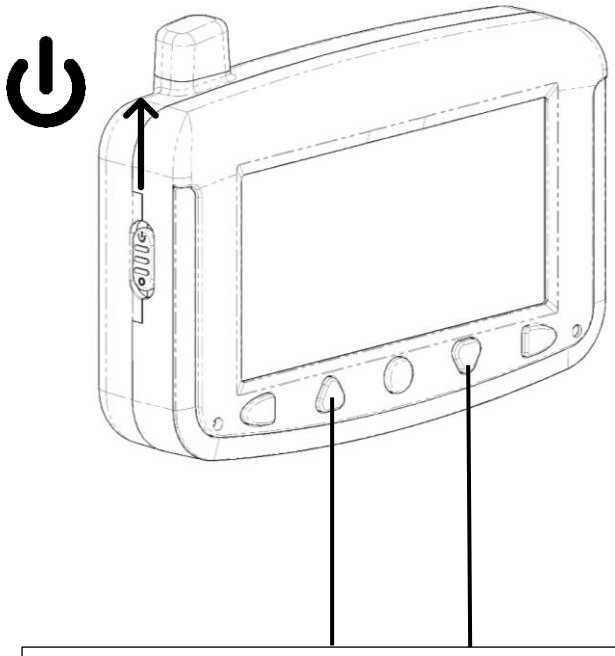
TO FINISH PRESS AND *HOLD* "CODE" BUTTON FOR 4-5 SECS. TYRE PRESSURES AND TEMPERATURES WILL APPEAR ON THE SCREEN. ALARMS MAY SOUND. THESE CAN BE ADJUSTED DURING THE NEXT STEPS

5 SETTING UNITS AND ALARMS

FOLLOW STEPS 8 AND 9 ON PAGES 12 AND 14 RESPECTIVELY TO SET THE UNITS AND ALARMS

DAILY OPERATION

SWITCHING ON AND SLEEP MODE



USE "+" OR "-" BUTTON TO SCROLL THROUGH TYRE ICONS TO CHECK PRESSURES AND TEMPERATURES

OR, MONITOR SCROLLS THROUGH AUTOMATICALLY

THE MONITOR DOES NOT NEED A PERMANENT POWER SUPPLY FROM THE VEHICLE TO FUNCTION. THE INTERNAL BATTERY PROVIDES APPROX. 60 HOURS OF CHARGE.

THE MONITOR CAN BE SAFELY LEFT SWITCHED ON IF THE VEHICLE IS USED REGULARLY. EVENTUALLY THE MONITOR WILL NEED RECHARGING. PLEASE USE THE RECHARGING LEAD PROVIDED.

FOR EXTENDED PERIODS OF INACTIVITY WE RECOMMEND SWITCHING THE MONITOR OFF.

NOTE: THE SENSORS SUPPLIED WITH THIS KIT ENTER A SLEEP MODE AFTER 10 MINUTES OF INACTIVITY.

DURING SLEEP MODE THE DISPLAY WILL SCROLL THROUGH THE MONITORED TYRES AND BEEP AT EACH POSITION, BUT PRESSURES AND TEMPERATURES WILL NOT BE SHOWN ON THE MONITOR.

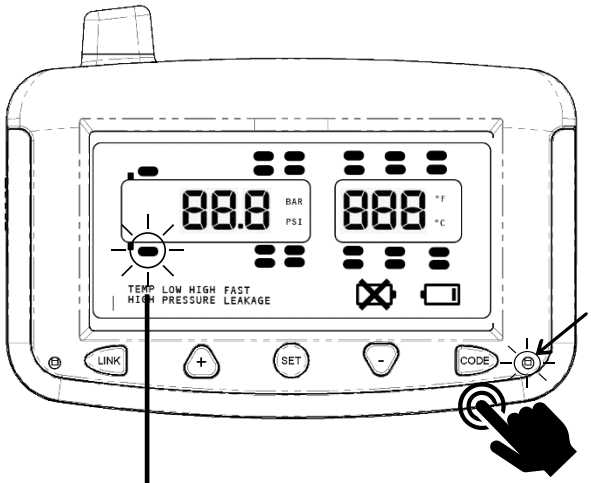
ONCE DRIVING COMMENCES THE SENSORS WILL WAKE UP AND THE MONITOR DISPLAY WILL CONTINUE TO DISPLAY PRESSURES AND TEMPERATURES.

HANDY HINT: TO OPTIMISE THE MONITOR 'WAKE-UP' TIME WE RECOMMEND THE FOLLOWING OPERATION.

WHEN YOU STOP DRIVING TURN THE MONITOR OFF, RATHER THAN LETTING IT GO INTO 'SLEEP' MODE

BEFORE YOU COMMENCE DRIVING TURN THE MONITOR BACK ON. THERE WILL BE NO DATA SHOWING -THIS IS NORMAL. WHEN VEHICLE MOTION IS DETECTED THE SENSORS WILL WAKE UP AND QUICKLY SEND OUT A SIGNAL. WITHIN A MAXIMUM OF 6 SECS OF DRIVING THE MONITOR WILL DISPLAY THE TYRE PRESSURES AND TEMPERATURES. THIS METHOD OF OPERATION PROVIDES THE DRIVER WITH A FAST AND ACCURATE INDICATION OF THE TYRE STATUS.

ALARMS



BEEP - BEEP - BEEP…

RED ALARM LIGHT FLASHES

TYRE ICON FLASHES CORRESPONDING TO SENSOR THAT HAS DETECTED AN ALARM

MONITOR WILL DISPLAY:

"TEMP HIGH"

"HIGH PRESSURE"

"LOW PRESSURE"

"FAST LEAKAGE"

DEACTIVATE THE AUDIBLE ALARM BY PRESSING ANY BUTTON.

SCREEN WILL STILL FLASH UNTIL PRESSURE OR TEMPERATURE IS WITHIN UPPER AND LOWER LIMITS.

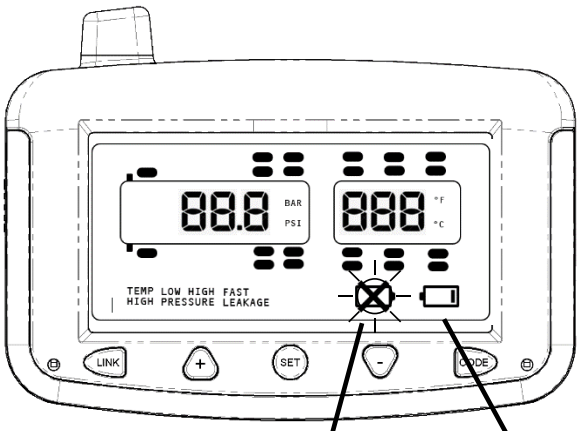
WHEN ALARM SOUNDS PULL OVER WHEN SAFE TO DO SO AND INSPECT WHEEL AND TYRE

THE **FAST LEAKAGE** ALERT IS A SERIOUS SITUATION THAT COULD RAPIDLY AFFECT THE STABILITY OF THE VEHICLE. IF THIS ALERT APPEARS, PULL OVER WHEN SAFE TO DO SO AND INVESTIGATE

NOTE: FAST LEAKAGE ALARM IS TRIGGERED IF SYSTEM DETECTS A LOSS EXCEEDING 3 PSI (0.14 BAR) WITHIN ONE MINUTE

THE **HIGH TEMPERATURE** ALERT SHOWS THAT THE TYRE IS OVERHEATING. IF NOT CORRECTED, THIS CAN CAUSE PERMANENT DAMAGE TO THE SIDEWALL OF THE TYRE AND WILL POTENTIALLY LEAD TO A BLOWOUT OR A FIRE. PULL OVER WHEN SAFE TO DO SO AND INVESTIGATE

BATTERY LEVELS



THIS ICON FLASHES WHEN THE SENSOR BATTERY VOLTAGE IS LOW.

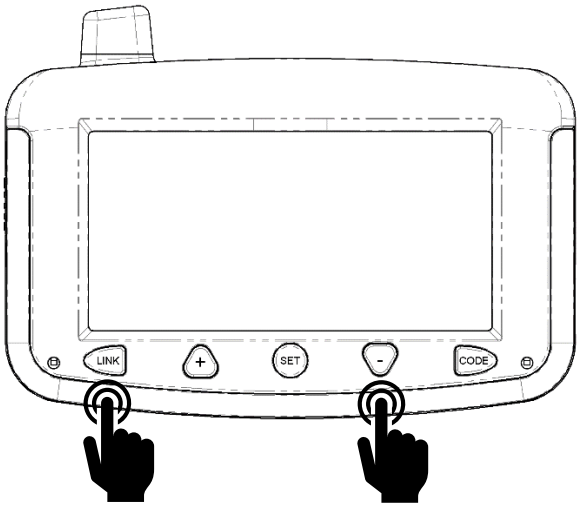
THE CORRESPONDING TYRE ICON WILL FLASH TO INDICATE WHICH SENSOR REQUIRES A NEW BATTERY.

THIS ICON INDICATES THE MONITOR'S INTERNAL BATTERY STATE OF CHARGE.

THIS ICON BECOMES ANIMATED DURING CHARGING.

THE INTERNAL BATTERY IS NOT HARMED BY PARTIAL CHARGING AND DOES NOT HAVE TO BE FULLY DISCHARGED BEFORE RECHARGING.

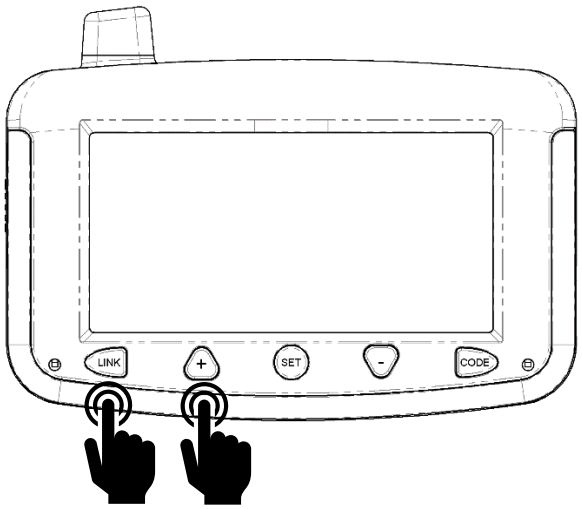
DE-LINKING TRAILER



PRESS THE "LINK" AND "-" BUTTON SIMULTANEOUSLY

THE CARAVAN / TRAILER ICON IS REMOVED FROM THE SCREEN

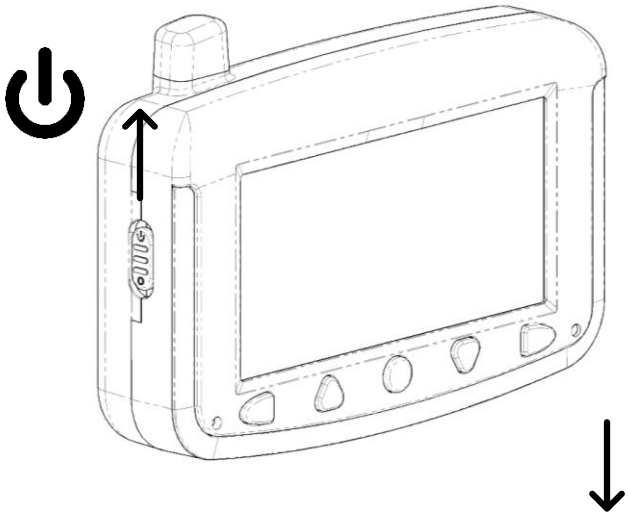
LINKING TRAILER

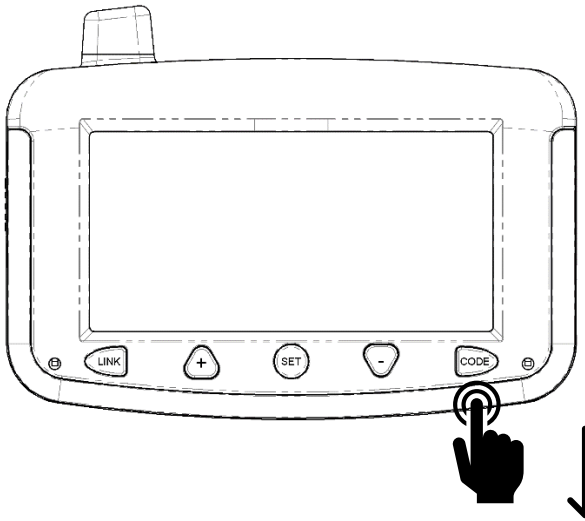


PRESS THE "LINK" AND "+" BUTTON SIMULTANEOUSLY

THE CARAVAN / TRAILER ICON APPEARS ON THE SCREEN

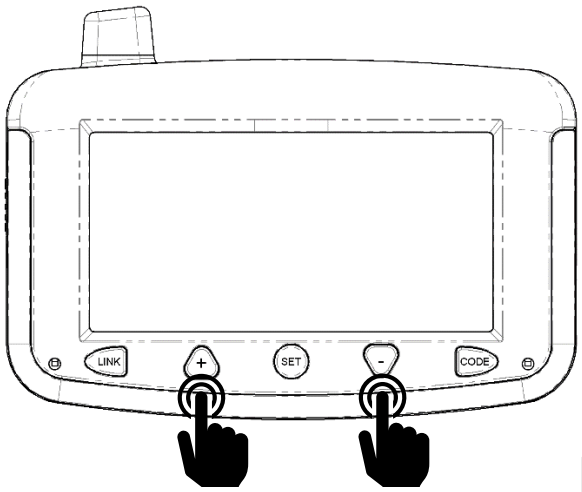
REMOVING SENSORS FROM MONITOR



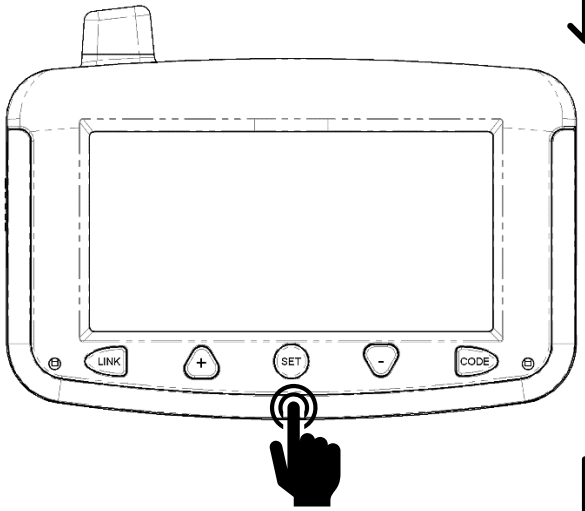


BEEP

PRESS AND *HOLD* THE "CODE" BUTTON FOR 4-5 SECS

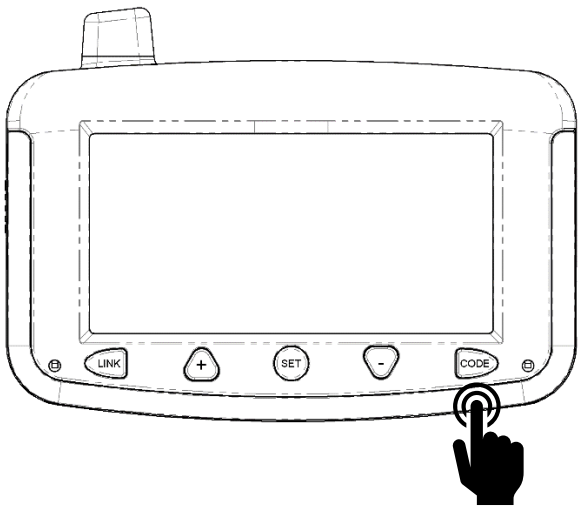


PRESS "+" OR "-" TO SELECT THE WHEEL REQUIRING THE SENSOR TO BE REMOVED. THE SENSOR SIX DIGIT ID CODE WILL BE DISPLAYED ON THE SCREEN.



BIP - BIP

TO DE-REGISTER THE SENSOR PRESS AND *HOLD* THE "SET" BUTTON FOR 4-5 SECS. TWO SHORT BEEPS SHOULD BE HEARD AND THE DISPLAY WILL READ "FFF FFF" INDICATING A SENSOR IS NO LONGER REGISTERED



BEEP

PRESS AND *HOLD* THE "CODE" BUTTON TO EXIT. IF A NEW SENSOR NEEDS TO BE INSTALLED FOLLOW THE INSTALLATION & SET-UP PROCEDURE

TECHNICAL SPECIFICATION

MONITOR

DIMENSIONS	115mm X 73mm X 27mm Weight 132g
POWER	Powered by internal lithium battery recharged from vehicle power supply. Automatically shuts down when not in use and reactivates as vehicle is used. Charger input 12V to 24V dc. Battery life is approximately 60 hours per charge.
DISPLAY	Clear LCD screen with automatic backlight. Screen size 80mm x 40mm. Continuously cycles through all wheel positions and displays pressure and temperature for each tyre.
ALARMS	Bright red flashing LED, plus audible alarm. Audible alarm can be silenced by pressing any button. User can adjust threshold for alarms Distinct alarms are given for the following conditions: Fast Leakage (Puncture) Low Pressure below user threshold High Pressure above user threshold Temperature above user threshold Preset alarm levels: High Pressure 70psi / Low pressure 30psi / High Temperature 70°C Warnings are also given if the sensor signal is lost, if a sensor battery is low, or when the monitor battery needs recharging
UNITS	Pressure: PSI or Bar Temperature: °C or °F

TCSO SENSOR MAINTENANCE

PERIODICALLY, IT IS IMPORTANT TO CHECK THE 'HEALTH' OF EACH TCSO EXTERNAL SENSOR, DUE TO THE ENVIRONMENT IN WHICH THEY OPERATE -

1) WHEN CHANGING CR1632 BATTERY, USE ROUND TOOL TO OPEN SENSOR, REPLACE O RING IF NECESSARY
2) IF SENSOR BEGINS TO LEAK AIR, REPLACE THE CENTRE RUBBER VALVE SEAL - THESE CAN WEAR OUT WITH TIME
3) ENSURE BATTERY TERMINALS ARE CLEAN AND CONTACTING PROPERLY, REMOVE ANY DIRT PARTICLES
4) IF YOU SEE A GREENISH RESIDUE INSIDE THE SENSOR, IT MEANS THAT THERE'S BEEN WATER INGRESS AND CORROSION HAS OCCURRED - POSSIBLE REASON IF A SENSOR STOPS WORKING - A REPLACEMENT SENSOR WILL BE NEEDED.

TCSO SENSORS

WORKING TEMPERATURE	Max 80 °C / Min -20°C
STORAGE TEMPERATURE	Max 85 °C / Min -20°C
PRESSURE RANGE	0 - 99 PSI / 0 - 6.8 Bar
PRESSURE ACCURACY	±1.5 PSI (±0.1 Bar)
TEMPERATURE ACCURACY	± 3°C
TRANSMISSION POWER	<10dBm
TRANSMISSION FREQUENCY	433.92MHz
BATTERY LIFE	18 Months
DIMENSIONS + WEIGHT	DIA 21mm X 17.5mm / 12g
TRANSMISSION INTERVAL	5 Minutes
MEASUREMENT INTERVAL	6 Seconds
SLEEP FUNCTION	Yes. After 10 minutes of inactivity
FAST LEAKAGE THRESHOLD	If pressure falls 3 psi continuously within one minute
LOW PRESSURE LEAKAGE	Pressure falls 1.5psi within one minute

TCSI SENSORS

WORKING TEMPERATURE	Max +80 °C / Min -30°C
STORAGE TEMPERATURE	Max 85 °C / Min -20°C
PRESSURE RANGE	0 - 116 PSI / 0 - 8 Bar
PRESSURE ACCURACY	±1.5 PSI (±0.1 Bar)
TEMPERATURE ACCURACY	± 3°C
TRANSMISSION POWER	<10dBm
TRANSMISSION FREQUENCY	433.92MHz
BATTERY LIFE	3 - 5 Years (Non Replaceable)
DIMENSIONS + WEIGHT	60mm x 31mm x 20mm / 48g
TRANSMISSION INTERVAL	5 Minutes
MEASUREMENT INTERVAL	6 Seconds
SLEEP FUNCTION	Yes. After 10 minutes of inactivity
FAST LEAKAGE THRESHOLD	If pressure falls 3 psi continuously within one minute
LOW PRESSURE LEAKAGE	Pressure falls 1.5psi within one minute

FAQ

Q: My tyre pressures and temperatures increase when I'm driving?

A: It is completely normal for tyre pressures and temperatures to increase during driving. The vehicle and tyre manufacturers takes this in to account. Our recommended alarm levels allow for this normal pressure and temperature change.

Q: How do I calculate my tyre pressure alarm levels?

A: Check your vehicle owners handbook for the recommended tyre pressures. Using these values set the upper alarm level 25% higher, and the lower level 15% below for each axle, eg: For a recommended tyre pressure of 40 psi set the upper alarm level to 50 psi, and the lower alarm level to 34 psi.

Q: I have set my tyre pressures exactly the same using a gauge, but the monitor shows different pressure?

A: Both the gauge used to check the tyre pressures, and our sensors, will have a tolerance on their measurement. Our pressure sensors have a tolerance of +/- 1.5 psi. Worse case this means there can be a normal 3 psi maximum variation between tyre pressures. Variations in pressure can also occur due to the suns location on the vehicle, and road surface conditions.

Q: The display is showing the tyre icons, but not the pressures and temperatures for all wheels. The display also 'beeps' at each monitored position?

A: The wheel sensors have gone to sleep. The wheel sensors will go to sleep after 10 minutes, and they will stop displaying on the monitor. Drive the vehicle and the display should display pressure and temperatures, and the beeping will stop.

Q: One sensor has stopped displaying on the monitor?

A: If left for a period of time the sensor battery can go flat before a low-battery level warning appears on the monitor. Remove the sensor, and then remove the cap using the battery tool supplied in the kit. Replace the battery, and cap. Check the o-ring seal is OK. Reinstall the sensor. Drive the vehicle to ensure the sensor is awake.

Sometimes debris or tyre sealant can clog the sensor pressure aperture. Check there is no debris on the inside of the sensor threads

Q: I get "Id LF" followed by "Id Err" on the screen during sensor registration?

A: The "Code" button was not held down for long enough. If the code button is pressed for 1 sec it will enter a coding mode used to detect and register internal sensors using LF sensor ID detection. The external sensors supplied with this kit do not work with LF sensor ID detection. After the "Id Err" message has appeared the display should return to "FFF FFF". Make sure you press and *hold* the "Code" button for 4-5 secs next time. The monitor will flash "FFF FFF", and as soon as the sensor is screwed on to the tyre valve the detection of pressure will send the sensor's ID to the monitor display. The sensor is now registered on the monitor.

MANAGING TYRE PRESSURES

The recommended tyre pressures are given in the vehicle handbook and are designed to provide the best balance between comfort and fuel economy for your vehicle. The handbook will recommend different tyre pressures depending on how the vehicle is loaded.

The tyre sidewall is embossed with a tyre pressure. This is NOT the recommended service pressure. Always refer to your vehicle handbook for the recommended tyre pressures

Under-inflated tyres have a greater rolling resistance, so they waste fuel and wear faster. Driving on under-inflated tyres can cause excess heat leading to a blow-out.

Over-inflated tyres reduce grip and cause uneven tyre wear.

EFFECT OF TEMPERATURE

Tyre pressure is determined by two factors. The volume of air in the tyre, and the temperature of the air. If the air is heated it wants to take up more volume. The air trapped inside the tyre cannot increase its volume, so instead the tyre pressure increases. The opposite occurs when the air in the tyre is cooled.

Tyre and vehicle manufacturers allow for the normal heating and cooling of the tyres when specifying the recommended tyre pressures.

Vehicle handbook tyre pressures are specified for cold tyres. The tyres warm up during driving, and the extra heat causes the tyre pressure to increase by about 10% in normal service. Tyre pressures should, therefore, be checked before they are heated by driving.

In winter, tyre pressures fall due to low temperatures. Additional air will be required to bring them back up to manufacturers recommended pressure. Re-setting cold tyre pressures may need to occur more regularly on inter-continental road trips, where variations in ambient air temperatures can vary significantly in a short time period during the course of the trip.

SPARE PARTS & ACCESORIES

AVAILABLE ON-LINE AT www.tyrepal.co.uk

DESCRIPTION	PART NUMBER
TCSO SENSOR WITH CR1632	505-915-107-0
TC215 MONITOR ONLY	505-916-100-0
TCSO BATTERY TOOL	505-918-102-0
CR1632 BATTERY	505-918-105-0
TCSO CAP O-RING SEAL	505-918-107-0
TC215 CHARGING LEAD	505-918-110-0
TC215 MONITOR HOLDER	505-918-111-0
TCSO VALVE SEAL	505-918-112-0
TCSO HEX WRENCH (FOR LOCK NUT)	505-918-114-0
TCSO LOCK NUT	505-918-115-0
TCSO DUST SHIELD	505-918-116-0
TCRR-2 SMART SIGNAL REPEATER	505-920-100-0

WARRANTY

Please register your warranty by completing details on our website.

The system is warranted to be free from manufacturing defects and is guaranteed for a period of 12 months from date of purchase.

There are no user-serviceable parts inside the monitor or sensor. If internal parts (other than battery, etc) have been tampered with the warranty will be void.

This warranty does not affect your statutory rights.

JUNE 2023