

Installation Instructions and Information Intelligent Drop & Hook System



TRACTOR/TRAILER DROP & HOOK SYSTEM

Monitors and displays pressures for 16 wheel locations on the tractor and 16 wheel locations each on up to three trailers (64 tire positions total).



PressurePro Sensors screw onto the valve stem, read the tire's pressures and send an RF signal to the monitor transmitting current pressure readings.

PressurePro monitors pressure in tires via electronic Sensors that read pressures and transmit a Radio Frequency (RF) signal to a Monitor which can display those pressure readings. PressurePro Sensors read tire pressure 12,343 times each day (once each 7 seconds) and transmit these updated readings to the Monitor. Some of these transmissions will be interfered with. Because of the quirks of RF Transmissions and interference, no guarantee of signal reception can be made. PressurePro is not meant to function as a pressure gauge or a low pressure indicator. PressurePro is a tire pressure monitoring system that displays tire pressures and which, when a signal is received, will signal low pressures.

PRESSUREPRO DESCRIPTION

PressurePro is a wireless electronic tire pressure monitoring system (TPMS) designed to display tire pressures. PressurePro is capable of displaying current tire pressures on demand, whether moving or stationary. PressurePro is a monitoring system and will not prevent tires from losing pressure or failing. However, low pressure is the leading cause of premature tire failure and PressurePro can provide early notice of potential problems and assist in maintaining proper pressurization in vehicle tires. PressurePro can be used on all pneumatic tires.

The Drop & Hook PressurePro system consists of three basic components: Tire Sensors which screw onto the valve stems of the tires, the Intelligent Monitor to indicate and alarm on tire conditions, and an Intelligent Repeater to interface sensors on trailers to Monitor. (A Bridge can be used in place of the Monitor display if no driver interface is required.) The Sensors transmit a coded RF signal and can alert if pressure drops. The Monitor displays each tire's pressure and can send an audible alert if tire pressures drop. During an alert, the low tire location light flashes on the Monitor, the current pressure reading for that tire flashes, and an audible alert sounds. The system can alert at two (2) low pressure levels: The first alert occurs when tire pressures drop more than 12.5%. A second, more urgent alert occurs if tire pressures drop by more than 25%. A variable high pressure alert, (which can be set to your specifications - see Setting Upper Pressure Alert - pg. 7) alerts to high tire pressures. As with many RF products, signal interference is a common occurrence. There will be times when interference can and will prevent a reading.

PRE-INSTALLATION INSTRUCTIONS

When Sensors are installed, they recognize the tire's current pressure as their BASELINE pressure. Therefore, the tire pressure at the time of installation is IMPORTANT! All tires MUST be inflated to the manufacturer's recommended cold pressures while the tires are cold (best time is in the morning before vehicle movement). The PressurePro tire Sensors must then be installed on the tires while they are still cold. Failure to install at this "cold" temperature may cause false alerts. Installations made after the vehicle is driven can be done if Sensors are allowed to re-reference the following morning.

<u>Installation on trailers with No ABS power line.</u> Trailers or 5th wheels with no ABS systems need the Power Vehicle, when powered on, to provide a power line to the trailer that is "always hot" for the Intelligent Repeater to function properly.

Tires and valve stems should be carefully inspected prior to installation of the system to ensure that they are in good condition. Defective valve stems must be replaced. At times, it may be necessary to clean the threads of the valve stem with a wire brush or tapping tool before installing a sensor. The DILL VALVE (the small valve inside the valve stem) MUST DEPRESS FULLY AND RELEASE AIR FOR THE SENSOR TO ACTIVATE. The Sensor may not activate properly if the Dill Valve pin is not flush with the end of the valve stem allowing a good interface to the valve stem. It is not unusual to find dill valves installed too deep, which will cause the Sensor to not activate properly. The Dill Valve should be centered so it will not slip to one side when screwing on the Sensor. Check the Dill Valve by depressing the end of a thumbnail directly into the dill valve to make sure it releases air.

<u>Installing Sensors on aluminum valve stems:</u> Vehicles with factory installed TPMS use aluminum valve stems. PressurePro uses a brass thread. Brass and aluminum can chemically bond with exposure to salts and chemicals. When installing Sensors on aluminum stems, use Teflon tape on stem to help prevent bonding. PressurePro is not responsible for damage to aluminum stems.

If using valve stem extensions, it is important to tighten extensions securely to valve stem. Always check the Dill Valves in extensions for proper air release. After installing Sensors, check for leaks by coating the Sensor, extension and valve stem with a solution of 1 part liquid soap to 2 parts water – look for bubbles which indicate a leak.

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INSTALLATION INSTRUCTIONS

- 1. **DO NOT INSTALL SENSORS ON TIRES!** First attach power cord to Monitor and plug the power cord into the cigarette lighter socket (or use optional hard-wired connections). When power is on, the green light by 'TRACTOR' next to the "SEL" button flashes once every 4 seconds. When a trailer with an Intelligent Repeater is powered to a tractor with an Intelligent Monitor, both vehicles will flash green on the display at the same rate (or RED for any groups with a fault). (If using the Optional Coax Antenna Kit, position the antenna temporarily at the desired mounting location.)
- 2. PLACE THE SYSTEM INTO "PROGRAM MODE" by pressing and holding the "PROG" button for 5 seconds. Release "PROG" when the TRACTOR (or selected TRAILER) LED shifts from 'solid' to an alternating on/off pattern and the front passenger tire location on the display begins flashing. (Trailers default to the inside front passenger side tire.) The words "NO SEN SOR" will scroll across the digital display on a new installation. You are now in Program Mode. (The system exits "Program Mode" if there is no activity for 10 minutes. If this happens, you can resume programming from stopping point by getting back in program mode and using your Up or Down arrows to get to your next location.)
- 3. SCREW A SENSOR ONTO THE VALVE STEM of the tire at the location denoted by the flashing location light. Tighten firmly by hand (or with the PressurePro sensor installation tool). Using any tools, (other than PressurePro tool) can damage the Sensor and voids the Warranty. IMPORTANT Listen for the "release" of air when screwing on the Sensor. (It is not unusual for the dill valve to be seated too deeply in the valve stem. Check dill level by testing with thumb nail placing nail straight onto the plunger to ensure it opens and a burst of air is released.)
- 4. WAIT FOR THE MONITOR TO DISPLAY A PRESSURE READING. This can take up to 60 seconds and is the only time a pressure reading will be displayed while the Monitor is in "Program Mode". This initial pressure reading from the Sensor is your BASELINE pressure.
- 5. ONCE A PRESSURE READING IS DISPLAYED the selected TRACTOR (or TRAILER) LED will change to a faster flash (twice as fast as before). Press and hold the "PROG" button until the flashing tire location light on the Monitor moves to the next tire location (normally about two seconds). This locks that Sensor's code to that wheel position in the Monitor and must be done to retain that sensors ID. The selected 'vehicles' LED will return to the slow flash. If you do not want to install a Sensor to the next wheel location, use the "UP" or "DOWN" arrow buttons to move the flashing light to the location desired and install (step 3).
- 6. After installing the last Sensor and receiving the pressure reading, YOU MUST PRESS THE "PROG" BUTTON UNTIL THE RED FLASHING LOCATION LIGHT MOVES TO THE NEXT TIRE LOCATION. This locks in the Sensor to that location. If the next location has a Sensor already installed display will simply show 3 dashes (---). To leave "Program Mode" and go into "Normal Mode" press the "SET" button.
- Complete a permanent installation of the Monitor with provided Velcro or purchased mounting accessories. If using the Optional Antenna Kit, complete the permanent installation of the antenna.

OPERATION OF "DROP & HOOK"

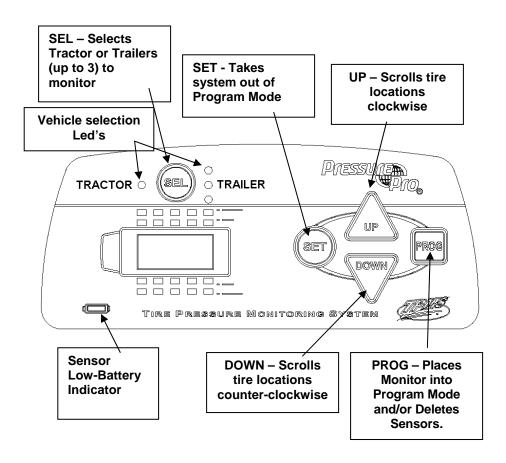
The PressurePro Drop & Hook system can display up to 64 wheel positions on up to four units; 1 tractor and up to 3 trailers. Each unit can be independently controlled and programmed. Pressing the "SEL" button rotates from one unit to the next (if a trailer has an Intelligent Repeater installed). If only the tractor is available, the "SEL" button will not allow a change to a trailer. The selected unit is indicated by a solid glow next to that selected unit. Installed trailers that are not selected will show a 'flash' every four seconds. Each unit will show GREEN if all tires associated with that group are OK, and RED if there is an alarm condition on at least one tire in that group.

Individual tire positions will display, corresponding to the tires on your vehicles. Each unit can program and monitor up to 16 tire locations. (Extra available wheel positions allow flexibility in matching different types of vehicles.)

The Intelligent Trailer Repeater is programmed through the Intelligent Truck Monitor and retains the location, Sensor ID and pressures of each tire on the trailer. Tire pressure information is displayed on the Monitor. When a Trailer (Repeater) is connected to a Tractor (Monitor), the units exchange information and the trailer tire positions display on the Monitor. When the Trailer Repeater is disconnected, the Truck Monitor will stop identifying it and delete the contact within 30 seconds.

INSTALLATION OF INTELLIGENT REPEATER

- 1. Physically mount the "Intelligent Repeater" ("IR") on the underside of the trailer just forward of the trailer's rear axles (approximately 3' to 8') in a position where the attached 7" antenna does not touch metal and where the sensor line-of-sight signals will not be blocked by the trailer's underside structural members.
- 2. Connect the Molex IR power cord via the black -#4 wire to ground, and the yellow/white wire to +12 VDC of the trailer's respective wiring.
- 3. Hard wire the "Intelligent Monitor" via its hard wire power cord where the red is positive & the black wire is negative, to the tractor's respective +12 VDC & ground wires.
- 4. If using the "Extended Antenna Kit" run the coaxial wire via best pathway, to mounting position under the tractor's frame. Installing at the power junction near the rear trailer wheels, as far to the back of the truck as possible is best. Use the "L" mounting bracket to secure antenna. The antenna whip should be positioned with the antenna pointing down (or down and back) centering on the vehicle so sensors have a line-of-sight signal pathway to the antenna whip.
- 5. Install system per the "Installation Instructions" (steps 1 thru 7, listed on page 3 of Installation Manual).



MONITOR – FEATURES

Normal Mode – Monitor is in Normal Mode when first powered. At this time it will begin "listening" for Sensor updates and alerts. The Vehicle LED's next to the "Tractor Display" and the trailer LED(s), 'blink' every 4 seconds when in Normal Mode (either Green for OK or Red for 'alarm') and the LED display is blank. Tire pressures can be displayed by selecting the Vehicle Group with the SEL button and choosing a tire with "UP" or "DOWN" arrow presses. While the display is active, the selected Group LED is solid 'ON' to indicate that vehicle is active.

<u>Program Mode</u> – Used for programming Sensors to the Monitor. (See "Installation Instructions" step #2) When in Program Mode, the selected Vehicle LED flashes on/off every second, the tire location selected is flashing and the display shows 3 dashes ("- - -") for any wheel position with a sensor programmed already. Non-programmed locations will flash when selected and will scroll a "No Sen Sor" message. When a Sensor installed, a pressure value will display on Monitor.

MONITOR BUTTON FUNCTIONS

"SET" Button

- When in Normal Mode Pushing and holding "SET" button will light up all tire locations that have been programmed.
- When in Program Mode Pushing "SET" button exits Program Mode.

"PROG" Button

Hold "PROG" button (approx 5 seconds) until the LED for the selected group blinks 'off' as part of the on/off alternations denoting Program Mode.

Deleting a Single Sensor/Location: With a tire location selected, hold "PROG" button for approx. 10 seconds to delete a single sensor location. Note: If in 'Normal Mode' after approx. 5 seconds the selected Group LED will begin to flash; continue to hold "PROG" until the Group LED returns to solid and 'deL' appears on the display (approx. 10 seconds). That tire location will delete and the next wheel location will flash after the "PROG" key is released.

Deleting all Sensors Locations: Hold the "PROG" button for 30 seconds. (After 5 seconds, the Group LED will begin to flash; hold for another 5 seconds and "DEL" appears on Monitor.

"UP" & "DOWN" Buttons

In Both Normal and Program Mode – Push "UP" arrow to rotate tire locations clockwise. Push "DOWN" arrow to rotate selected tire location counterclockwise.

<u>"SEL" Button</u> - <u>allows selection of "active" vehicle for display.</u> "SEL" button rotates from tractor to trailers, displaying pressures on the unit that is lit 'solid' (remaining groups 'blink'). Monitor can read up to 64 tire locations total.

Associating vehicle LED's to Repeater units. With the "SEL" button is being held (after starting from Normal Mode), an ID string (of up to 8 characters) from that unit will scroll from right to left through the 3-digit display, the default ID being the unit serial number assigned at the factory. As an example of how this scroll works, an example serial number is 00022849. The display will initially show 849., with the rightmost decimal point on to emphasize that this is the rightmost group of digits. In a second, the display will shift one digit to 284, and another second later to 228, and so on through 022, 002, 000, and finally .00, where the left-decimal indicates the left-hand end of the string. Continued hold of the "SEL" button will restart the shift sequence from the beginning.

<u>IMPORTANT:</u> When an alert is given that one or more of your tires is underinflated, STOP and check your tires as soon as possible and inflate to the proper pressure. Driving on under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation reduces fuel efficiency, shortens tread life and can affect handling, stability and braking. Check pressures when tires are cold and fill to recommended pressure as specified on the vehicle or in the owner's manual.

SENSOR ALERTS

- FIRST STAGE LOW PRESSURE ALERT Alerts at 12.5% pressure loss from initial pressure at installation. The first alert level has an audible beep, flashes the tire location and displays the low pressure once per second until low pressure is corrected or the "SET" button is pressed putting the Monitor into "reminder mode" or the Monitor is unplugged. Pull over, inspect tire and repair. If no button is pressed to mute system continues to alert.
- **SECOND STAGE LOW PRESSURE ALERT** Alerts at 25% pressure loss from initial pressure at installation sound an audible beep, displays the low pressure and flashes the tire location twice (2x) per second. If no button is pressed to mute system system will alert until pressure is corrected. <u>Pull over and repair.</u>
- **REMINDER MODE** To "mute" the audible alert, place into "reminder" mode by pressing the "SET" button briefly. Audible alert will sound periodically.
- "SIGNAL CHECK IN" FEATURE A Patented feature of the PressurePro system is the "check-in" feature. Sensors send short millisecond "check-in" signal bursts regularly. As with all RF devices, a signal may be lost or interrupted. If a signal is repeatedly lost or interrupted, the Monitor will light that wheel location with a solid light (no beeping alert except when that location is selected it will display dashes "___"). If this type alert continues, it may indicate a Sensor has been removed, lost or damaged or a signal is not being received check that Sensor and location for good signal strength.
- MULTIPLE LOW PRESSURE ALERTS In the unlikely event that multiple alerts occur, the Monitor will flash all low locations with low pressures. When selected, a tire location with an alert will flash its pressure and position while the alert sounds. (Non-selected low pressure tires will flash their wheel location every 2 seconds.)
- HIGH PRESSURE ALERTS (VARIABLE) Alerts at 25% high pressure (set at factory). The level of the alert can be set by end user from 10%, 15%, 19%, 24%, 28%, 33%, 40% and 45% over the set level. High alert can be turned OFF.

SETTING UPPER PRESSURE ALERT

- 1. Unplug the power cord from the Monitor (mini-USB connector).
- 2. While holding down the UP Arrow button, plug the power cord back into the Monitor and it will advance to the next alert level higher (new alert level percentage will display on the screen).
- 3. Release the UP button.
- 4. If the Monitor displays the upper alert pressure you desire, setting the upper alert is completed. If it is not the upper alert you desire, repeat steps #1 and #2 until you see the desired alert level.
- 5. The high alert function can be turned OFF by repeating steps #1 and #2 after the 45% level is reached the next step is OFF.
- 6. To turn the high alert function back ON, repeat steps #1 and #2 going to the 10% alert level which will display.

TESTING SIGNAL STRENGTH

- 1. **TO SEE SENSOR PACKET COUNTS** Press SET button until flashing green power light turns solid (5 sec.) then release. You are in program mode.
- 2. Use the UP or DOWN ARROWS to select a tire location with a Sensor. Monitor will display three dashes (---). Hold the 'ON' button down until a number appears on the display, then release the button. The display will go blank when you release the 'ON' button and the unit will change to diagnostic display mode.
- 3. Scroll to tire locations with UP & DOWN arrows. The number displayed for each tire location is the <u>current transmission packet count</u> for that selected tire (00. to 255 at which time it rolls over and begins again).
- 4. **Note** while in diagnostic mode, entry into programming mode and delete functions is disabled.
- 5. To get to Signal Strength Testing Press and hold the SET button to change the diagnostic display contents from packet counts to the background "signal" level. While holding the SET button, 3 digits will appear. The left two digits indicate the RF 'noise level' the monitor is experiencing at that time, and the right-hand digit display which shows as "A" (meaning Ambient). This tells you how much RF interference is present at that time and location. Levels over 5 can be considered 'noisy' and will make it more difficult to receive sensor packets. The lower the number, the less interference. Once the SET button is released, the signal-level status of the sensor selected is displayed.
- 6. Signal strength of 1 or 2 is marginal reception; some signals will not be received. Signal strength above 4 is good. Average signal strength is 5 to.
- 7. The monitor will pick up transmissions from both the sensor on the tire and from the Echo Repeater. If the transmission is from the Echo Repeater, the reading could come in with a decimal point between the signal strength reading and temperature reading. For example, a signal strength reading of 5, coming from an Echo Repeater, with a temperature reading of 4 would appear as 5.4. If the signal is a sensor strength signal, it would read as 54 (with no decimal).
- 8. The toggle sequence between packet counts and signal level can be repeated as desired with each press of SET. Toggle sequence is:
 - a. Packet count (decimal point).
 - b. Background noise level while SET held.
 - Sensor signal strength (no decimal point) or repeater signal strength (second decimal point) depending which was the last signal to be received for that programmed sensor.
 - d. Background noise level while SET held.
 - e. Cycle repeats.
- 9. Pressing "ON" at any time cancels diagnostic mode.

TEMPERATURE

In Signal-Level status display mode, the left two digits give an indication of the RF signal strength level **above** the background 'noise' level - measured during the latest packet. The right-most digit is the temperature code received from the sensor. 0 indicates -40C. 1 = -20C; 2 = 0C; 3 = 20C; 4 = 40C; 5 = 60C; 6 = 80C & 7 = 100C (sensor melting range).

HOW TO GUIDE

CHECKING TIRE PRESSURES – Sensors check tire pressure once every 7 seconds and send an updated pressure reading every 5 minutes. Pressing the "UP" or "DOWN" button, (Normal Mode), selects a tire location to display. To reset a Sensors baseline pressure, remove Sensor for 60 seconds, then reinstall. REMOVING AND REPLACING A SENSOR ON THE VALVE STEM AFTER DRIVING CAN RESULT IN "FALSE" ALERTS. Allow tires to cool to Ambient Temperature before installing Sensors. If not possible to wait for tire to cool, simply remove when tire is cool, wait 60 seconds and screw back on.

MANUALLY CHECK TIRE PRESSURES AND INFLATE TIRES – It is recommended that tire pressures be checked regularly with a quality pressure gauge while tires are at ambient temperatures. Remove Sensor, (Monitor shows "00" for that Sensor and sounds an audible alert), check pressure, and inflate if necessary. Leaving a Sensor off for approx. 60 seconds allows a new pressure/alert level to be set.

INSTALLATION INTERRUPTION – If, during installation, an interruption occurs and the installer is delayed (no button pushed for 10 minutes) the system exits Program Mode. To restart installation, go to step #2 in "Installation Instructions".

MUTING THE AUDIBLE "ALERT" – Press the "SET" button after the alert sounds. This puts the Monitor alert in 'reminder' mode. An "alert" beep will continue periodically as a reminder of a low-pressure situation.

REMOVING SENSORS TO ROTATE OR REPLACE TIRES: When Sensors are installed, they are programmed to a specific tire position. If rotating tires or installing new tires or if you have to remove the Sensors – do one of the following:

 MARK EACH SENSOR to identify its wheel location. When putting the Sensors back onto the valve stem, screw the Sensors back onto the Sensor's original wheel location. By doing this, you eliminate the need to reprogram the Sensor to the Monitor. System will now be ready to operate.

OR

• IF YOU CHOOSE NOT TO IDENTIFY EACH SENSOR TO A LOCATION delete each Sensor from the Monitor. When reinstalling Sensors, they must be reprogrammed. To Delete a Sensor (or all sensors in a group), see "Deleting a Location" in the "Monitor Button Functions" section.

IMPORTANT: Products using RF signals are subject to signal interference causing a loss of signal. Reception depends on the conditions present at the time of use. PressurePro has been designed to be as reliable as possible with the use of RF transmissions. There is no guarantee of signal reception. This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTES

Once the Monitor is programmed, it retains all programmed settings. <u>Turning off</u> the vehicle or removing power from the Monitor will NOT delete settings.

When a Sensor is installed, it records the tire pressure at the time of installation as its BASELINE pressure setting. If you remove and reinstall a Sensor while the tires are warm, the Sensor will record the elevated WARM pressure when reinstalled, as it's new BASELINE pressure from which to trigger an alert. When the tires cool, the pressure could fall enough to cause a false alert. If possible, wait to reinstall the Sensor until the tire is cold and at the manufacturer specified cold pressure.

Cooler and cold temperatures reduce tire pressures. If a tire is close to its low pressure, an alert can be sounded when the pressure drops overnight due to the cooler temperatures. To correct this problem, remove Sensor and inflate the tire to its manufacturer specified pressure, in the morning while the tires are still cold. Screw Sensor back on, making sure the Sensor was off of the stem for at least 60 seconds so it "resets" to new pressure.

A visual inspection of tires on a regular basis is recommended. PressurePro does not PREVENT low tire pressure. It can alert to low tire pressure allowing corrective action to be taken. A damaged Sensor or valve stem can cause pressure loss. Inspect regularly. If repeated faults are observed, discontinue use of the system, have the tire checked and contact your PressurePro dealer/distributor.

PressurePro cannot prevent tire/wheel overload. Overloading any tire is EXTREMELY dangerous and can cause failure of suspension components, not just tires! The ONLY way to detect overloading is to weigh the vehicle! A vehicle should NEVER be operated if the weight on ANY wheel is greater than the design specifications!

Tires can fail for other reasons besides low pressure or overloading. Always be on the alert for OTHER tire problems as indicated by unusual noises, vibration, uneven tread wear or bulges on the tire! If any symptoms occur, check tires IMMEDIATELY!

VALVE STEM RECOMMENDATIONS

- PressurePro recommends the use of metal valve stems in conjunction with PressurePro Sensors.
- PressurePro recommends the use of fastener brackets to anchor valve stem extensions. Extensions add length and weight, adding greater centrifugal forces and putting added stress on the stem. When using PressurePro Sensors with an extension on the valve stem, securing the stem to prevent vibration and movement is important for safety.
- PressurePro recommends regular maintenance and upkeep on all valve stems, and replacement of older stems.

FREQUENTLY ASKED QUESTIONS

<u>CAN I STORE MY VEHICLE WITH THE MONITOR ON?</u> The Monitor (and each repeater) draws 100mA to 150mA of power. It's possible the Monitor could drain the vehicle's battery over an extended period of time. If storing for more than 1 week, it's advised to unplug Monitor. If storing for an extended period, remove Sensors (see "Tips" section).

<u>ACCESSORY?</u> No. Hardwiring is a preferred option as it reduces back feed interference. Connect the red wire to a 12-volt DC positive power source (direct wire to the battery is not required). The black wire should be connected to a ground or chassis.

WHAT HAPPENS WHEN I REMOVE A SENSOR TO INFLATE A TIRE? Monitor will display "00" reading. Removing Sensors for 60 seconds allows a new "BASELINE" reading to be accepted by the Sensor and Monitor (or repeater).

<u>WHAT IS THE "REMINDER" ALERT?</u> After an "Alert" has been acknowledged with a button press and the display has turned off, the audible alert will periodically "sound" for a short duration to remind you of the alert.

HOW DO I DELETE A SENSOR? CAN I DELETE ALL SENSORS AT ONCE? Refer to page 6, PROG Button, Deleting a single or all Sensors.

<u>WHAT DO I DO ABOUT A LOW SENSOR BATTERY ALERT?</u> When you receive a low Sensor Battery alert, the Sensor should be replaced. The cost of a replacement "Sensor" is normally less than the cost of a new Sensor. Contact your dealer/distributor or PressurePro for information.

CAN I USE A SEALANT OR EQUALIZER POWDER IN THE TIRE WITH PRESSUREPRO? If using sealants or equalizing substances, it's recommended to use a filtered Dill Valve. Sealant can plug up the valve core and shut off pressures in the stem.

WHAT SHOULD BE DONE IF A LOW PRESSURE ALERT IS SOUNDED? Immediately pull over and check low tire. Physically check tire and repair. Be sure to check valve stem for damage. Soap the entire area to check for any leaks.

TIRE PRESSURES WHILE DRIVING GO UP - DO I NEED TO DO ANYTHING? No. While driving, tires become hot, increasing pressure. A pressure increase of 10% to 20% is common, especially in hot weather at high speeds.

DO I NEED TO REBALANCE MY TIRES WHEN USING A SENSOR? The 2/3 oz. Sensors, on large tires (RV/Truck), seldom necessitates a tire be balanced. Smaller tires may require a ½ ounce stick-on balancing weight opposite the Sensor.

WHAT SHOULD I DO IF A SENSOR IS LOST OR DAMAGED? Contact your Dealer/Distributor to order a new Sensor. For a complete listing of PressurePro Dealers/Distributors visit www.advantagepressurepro.com.

WHEN DO MY SENSORS TRANSMIT?

- 1. Within 60 seconds of screwing Sensor onto the valve stem.
- 2. Every 5 minutes while updating, under normal conditions.
- 3. At a 12.5% drop from baseline pressure.
- 4. At a 25% drop from baseline pressure.
- 5. At the Upper Pressure alert level
- 6. When a Sensor is removed from its valve stem.

IF I UNPLUG OR LOSE POWER, MUST I REPROGRAM MONITOR? No. Settings are always retained unless physically deleted. The Monitor will display 3 dashes (- - -) until Sensors send an updated reading (new) within the normal 5 minute reporting period.

POWER CORD & FUSE. If the Tractor LED on Monitor does not come on, make sure the cord is properly plugged into the Monitor. Make sure the red light on the cord is on (if present) and the cord is plugged into the lighter receptacle. Check the fuse located in the cigarette lighter end of the cord by unscrewing the black ring (at the silver tip) of the plug. Replace only with a 2 Amp fast-blow fuse.

DURING INSTALLATION, NO SIGNAL WAS RECEIVED FROM THE SENSOR. Higher radio frequency (RF) transmissions propagate mostly via straight lines and along line-of-sight pathways. PressurePro Sensors are required to accomplish a daunting task – transmitting from vehicle's tires to the Monitor. If a Sensor fails to give a pressure reading, move the Monitor slightly, wait 5 minutes for new signals to report.

AFTER INSTALLATION, PRESSURE READINGS DROP ON DISPLAY – ACTUAL TIRE PRESSURE REMAINS CORRECT: The probable cause is poor interaction between the Sensor and dill valve. Try the following procedures separately, in order, until the problem is resolved: 1) Unscrew the Sensor and again, hand-tighten and listen for the release of air to the Sensor. (Be sure the Sensor and valve stem are not cross-threaded.) 2) Make sure the proper dill valve is installed in your valve stem and that the dill pin is flush with the valve stem lips. Replace the dill valve if necessary, as it can be worn or defective. 3) If condition still persists, contact your Distributor/Dealer or PressurePro.

WHY DOESN'T MY MONITOR TURN ON? Make sure the lighter receptacle has power. Some vehicles only have power when the vehicle is running. Check that the power cord is plugged in securely to the receptacle on the Monitor. If the cigarette receptacle is always "hot", be sure all connections are secure. A red LED light on the plug is lit when cord is powered (if present). Check fuse located in the lighter plug-in end of the cord by unscrewing the black ring (at the silver tip) of the plug. Replace only with a 2 Amp fast-blow fuse. Check the vehicle fuse controlling the power source.

WHY DOES THE MONITOR DISPLAY UNUSUAL PRESSURES FOR SOME TIRES? The PressurePro Monitor can display pressure values in PSI, KPA and BAR. The observation of wrong pressure values for <u>all</u> locations can sometimes be the first indication that the Monitor has been placed into an alternate reading other than PSI. The reading can be changed by unplugging the Monitor, then while simultaneously holding down the "SET" button, plug in the power cord to the Monitor. The pressure unit abbreviations will briefly show on the Monitor's display <u>each time you plug in the Monitor</u>. For American PressurePro users, if the Monitor is not reading in "PSI", change the Metric readout per the above procedure, cycling through KPA and BAR until you observe a "PSI" read-out. Wait 5 minutes for all of the Sensors to send updated readings.

TIPS

VEHICLE STORAGE: If storing your vehicle for extended periods, remove the Sensors. Mark each Sensor's location so it can be replaced on the same tire location from where it was removed (eliminating the need for reprogramming). When putting the system back on, power up Monitor first, next screw Sensors onto their original wheel locations. Pressure readings will display on Monitor (can take up to 1 minute for new readings to report). PressurePro system is now active.

<u>CAUTIONS</u>: (1) Know the general condition of all tires before moving the vehicle. Running on deflated tires can quickly ruin the tire. (2) The 2/3 oz. Sensor, on a typical RV or large truck, <u>normally</u> will not require the tire be rebalanced. Smaller tires may require attention. (3) It is important to make sure valve stems are a quality stem in good condition.

ROTATING OR REPLACING TIRES: Remove each Sensor until the tire work is completed, then return each Sensor to its original wheel location. Mark the Sensors to their wheel location so you do not have to "Delete" the Sensor positions on the Monitor to reinstall the Sensors. See "Removing Sensors to Rotate or Replace Tires" section.

REMOTE ANTENNA FOR UNIQUE APPLICATIONS: Due to the unique features of RF signals and the construction and interference from electronics on some vehicles, an Optional Antenna Kit or Repeater may be needed. Contact your dealer/distributor.

RF (Radio Frequency) PRODUCTS: PressurePro utilizes RF technology to transmit a signal between the Sensor and the Monitor. RF signals are subject to interference from many types of signals and products which can interfere with the operation of the product. As with cell phones and other types of electronics using RF signals, signal interruption can occur, causing a lost signal transmission. PressurePro Monitors are continually searching for signals from the Sensors. RF signals can be interrupted in many ways and PressurePro has been designed to overcome interruptions in most cases.

CHANGING TIRE PRESSURES: PressurePro Sensors adjust automatically to the pressure in a tire when the Sensor is screwed onto the valve stem. Removing the Sensor from the valve stem for 60 seconds will "blank" the old reading and allow the Sensor to accept a new pressure reading when screwed back onto the valve stem. The Sensor uses the new pressure as its "Baseline" point from which to trigger a low-pressure alert.

<u>3 DASHES (---)</u>: If unplugged or when powering off the Monitor, the Monitor retains all settings and displays 3 dashes (---) until Sensors send an updated reading within the normal 5 minute reporting period.

NOTE: AFTER A VEHICLE HAS BEEN MOVING, TIRE PRESSURE BUILDS DUE TO HEAT IN THE TIRE. IF A SENSOR IS REMOVED, THEN REPLACED, IT USES THE CURRENT (HIGHER) PRESSURE AS THE "BASELINE" POINT FROM WHICH TO ALERT. THIS COULD LEAD TO UNNECESSARY ALERTS WHEN TIRES COOL AND PRESSURES DROP (USUALLY IN THE MIDDLE OF THE NIGHT). ALWAYS FILL TIRES AT AMBIENT TEMPERATURE, EARLY IN THE DAY. REMOVE SENSORS, (CHECK AND FILL PRESSURE IF NEEDED).

SPECIFICATIONS

SENSOR

Sensor Transmit Range Approx. 150 feet (Line-of-Sight)

Operating Frequency
Operating Temperature Range
Sensor Weight
Sensor Dimensions

433.92 MHz FM
-30°C to +85°C
2/3 oz. or 18.9 grams
1.01" H x 1.11" Dia.

Sensor Batteries Internal, non-rechargeable

Sensor Pressure Range 10 to 199 psi 68 to 999 kPa 1 to 13.7 BAR (+/- 5% range)

Sensor Low Voltage Shutdown 2.2 Volts

MONITOR

Monitor Power Requirements 12VDC; typically draws 125 mA in

standby. Less than 250mA with Led's on.

Monitor Dimensions 6.5" W x 3.0" H x 0.5" D

Monitor Weight 4 oz.

Monitor Power Cord Plug Type USB Mini B – 10 ft. Monitor Tire Positions USB Mini B – 10 ft. 1 to 64 wheel positions

Sensor Alarm Trigger Settings 12.5% and 25% below the original tire

inflation level; upper (variable) level

determined by user

J1708 Capabilities PressurePro Intelligent Truck

RS232 Capabilities Monitors communication capabilities.

PressurePro systems comply with Part 15, Class B of the FCC Rules.

US Letter Patent # 6,453,737

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. PressurePro is a device meant for displaying tire pressures. As with all devices that use RF signals, the signal can be interrupted. PressurePro has been designed to work optimally to overcome the interference that can block signals. As with most RF products, no guarantee of signals can be made.

LIMITED WARRANTY

ONE YEAR LIMITED WARRANTY: Subject to the limitations and exclusions set forth in this Limited Warranty, PressurePro is warranted by Advantage PressurePro, LLC (hereinafter "APP") against defects in material or workmanship that result in a product failure during the one-year period following the date of purchase. This Limited Warranty applies only to claims made by the original end user (hereinafter "you") and cannot be assigned, transferred or conveyed to any subsequent users

EXCLUSIONS FROM COVERAGE: This Warranty does not apply to any claims arising from misuse, abuse, unauthorized repair or alteration, circumstances where PressurePro is improperly installed or improperly wired contrary to PressurePro product instructions; or damage or defect attributable to fire or other casualty, including, without limitation, acts of God or exposure to abrasive or corrosive materials or pollutants, or attributable to collision or other accidents involving vehicles upon which the PressurePro is installed. Removal or alteration of labels voids product Warranty. Only PressurePro accessories may be used with PressurePro products. The use of other accessories with PressurePro product is prohibited and can damage the PressurePro product. Warranty problems caused by use of accessories not supplied by APP will not be covered under the warranty.

LIMITATIONS: APP expressly limits the applicability of the implied warranty of merchantability and the implied warranty of fitness for a particular purpose to the one-year warranty period as provided herein. Some states don't allow limitations on how long an implied warranty lasts, so the above limitation may not apply.

To the extent permitted by state law, the remedy of repair or replacement discussed below is the sole remedy available to the end user under this Limited Warranty. THIS LIMITED WARRANTY SPECIFICALLY EXCLUDES ALL INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. To the extent permitted by state law, APP's liability for PressurePro will not exceed the purchase price paid for the product.

NOTICE: This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

EXCLUSIVE AGREEMENT: To the extent permitted by state law, this One Year Limited Warranty is a complete and exclusive statement of the warranties, which apply to the PressurePro; there are no express or implied warranties beyond those expressly stated above. No employee, agent, dealer or other person is authorized to give any warranties on behalf of the APP, except as authorized in writing.

STATUTE OF LIMITATIONS: To the extent permitted by state law, in purchasing the PressurePro you agree that any action for breach of contract or warranty must be commenced within one year after the cause of action has accrued.

PROCEDURE: In the event that a product failure covered by this warranty occurs while this warranty is in effect, APP will, at its option, either: (a) repair the defective unit; (b) replace the defective unit with a new unit; or (c) replace the defective unit with a refurbished unit. APP will ship your repaired, new, or refurbished unit to you without charge for parts, service, or any other cost (except shipping and handling) incurred by APP or its representatives in connection with the performance of this warranty. Failed units covered under this warranty must be sent by you to APP with shipping prepaid by you. You are responsible for all costs incurred in the removal, reinstallation, and shipping of the unit. A copy of the sales slip received by you at the point of purchase of the unit must accompany the returned unit. Call APP for Warranty Return Authorization.

TIRE PRESSURE MONITORING SYSTEM



CORPORATE OFFICES:

ADVANTAGE PRESSUREPRO, LLC 205 W. WALL STREET HARRISONVILLE, MO 64701

ONLINE:

www.advantagepressurepro.com

WARRANTY AUTHORIZATION:

FOR RETURN AUTHORIZATION ON WARRANTY ISSUES CALL TOLL FREE: 800-959-3505

FOR ORDERING OR TECHNICAL ASSISTANCE, PLEASE CONTACT YOUR LOCAL PRESSUREPRO DEALER.



Developed and Manufactured in the USA

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