

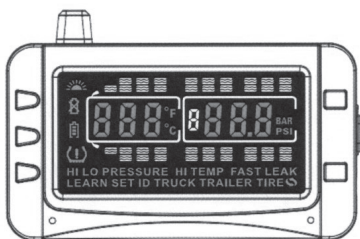


Wireless Tire Pressure and Temperature Monitoring System Monochrome Display Manual

Wide Screen Monochrome Display

Model #: TST-507-D-M

Thank you for purchasing the TST Tire Pressure Monitoring System. With minimal care, your new TPMS will provide reliable service for many years. Please read and understand the information contained within this manual. Keep this manual for future reference.



Telephone: 770.889.9102

Website: www.tsttruck.com

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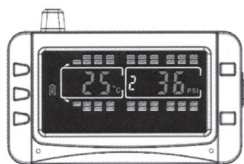
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DISPLAY FEATURES

- 1) Large, wide screen LCD display of pressure and temperature.
- 2) Options for Color or Monochrome screen.
- 3) Suction cup and cradle mount included.
- 4) Integrated lithium battery that is rechargeable.
- 5) Wake-up activation of monitor when in motion.
- 6) Automatic monitor illumination in dark conditions.
- 7) Programmable high and low pressure alarm thresholds.
- 8) Programmable high temperature alarm.
- 9) Visual and audible warning alarms when temperature or pressure exceeds thresholds.
- 10) Multiple pressure units: PSI, BAR.
- 11) Selectable temperature unit: °C or °F.
- 12) Program up to 110 tires.
- 13) Tire pressure and temperature is displayed simultaneously for quick viewing of each tire.
- 14) The trailer tires can be electronically removed from the screen when not towing.
- 15) The towing vehicle tires can be electronically removed from the screen when parked.
- 16) Push button programming.
- 17) A fully charged display will continuously operate 5-7 days on battery power.
- 18) Temperature and pressure settings are configured “per axle.”

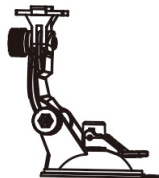
DISPLAY COMPONENTS IN KIT



Monochrome Display



Power Adapter

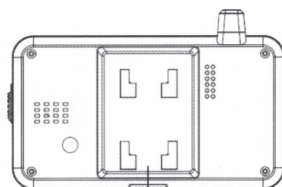
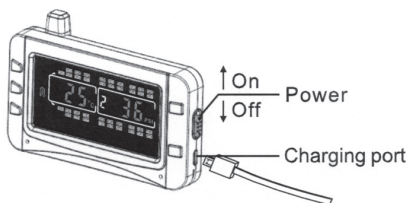


Suction Cup Mount

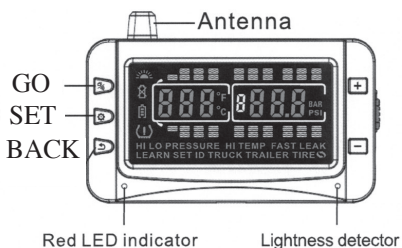


Cradle Mount

DISPLAY CONTROLS



Display Holder



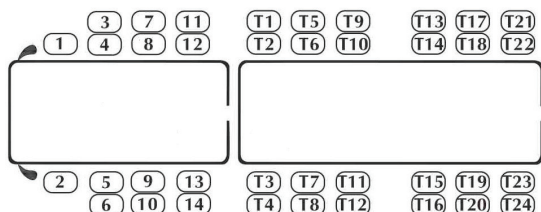
Icon	Description
	Tire
	Warning
$^{\circ}\text{F} / ^{\circ}\text{C}$	Temperature unit (Selectable)
BAR/PSI	Pressure unit (Selectable)
	Solar charging
	Sensor low battery
	Monitor battery indicator

Pressure Unit: BAR or PSI, user-selectable temperature unit: C° or F°, user-selectable.

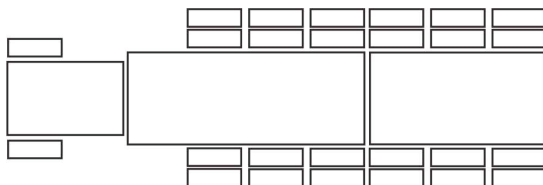
PROGRAMMING SENSOR CODES INTO THE DISPLAY

Note: Your sensors will begin reading as soon as they are coded into the display. Once you go back to the main screen by pushing the “BACK” button twice, you may hear an alarm and see a pressure reading of “0”. Simply press the (+) button quickly to silence the alarm.

Note: It is recommended to label each sensor first with the provided numbering code stickers, similar to the following pattern, before you code the sensors. This allows you to know which sensor is programmed to which tire position. You can also write in your sensor number pattern.



Or use your own numbering pattern:



AUTOMATIC CODE LEARNING (option #1)

Note: Code all the sensors to the display BEFORE screwing them onto the tire valve stem unless otherwise noted.

1. Push and hold the “SET” button until it beeps. You are now in the programming mode. The “HI PRESSURE SET” parameter will blink at the bottom of the screen. Push the (+) button and scroll through the parameters until “LEARN ID” appears.
2. Quickly press and release the “SET” button. The first tire on the display will blink. If you want to program a different tire, press the (+) button to move to the correct tire. Push the “SET” button again and “FFF FFF” will flash. Put the sensor for that tire position next to the display and press the “GO” button. The display will capture the sensor code and show it on the screen. Again, push and release the “SET” button to save the code to that position. When coded correctly, a single beep will be heard and a six (6) digit code will be shown.
3. Use the (+) button to move to the next tire position you want to program. Again, press the “SET” button and “FFF FFF” will blink. Put the sensor for that tire position next to the display and press the “GO” button to capture the sensor code. Press “SET” again to save.
4. When you are finished programming all of your sensors, press the “BACK” button to return to the parameter at the bottom of the screen. Use the (+) or (-) buttons to scroll to another parameter, if necessary. If finished programming, press the “BACK” button again to go to the Main Screen. (Your sensors will begin reading “0” pressure and will alarm. Press the (+) button to silence the alarm while you continue your set-up).

Note: To delete a single sensor code:

Press the “SET” button until it beeps (approx. 3 seconds). Push the (+) button and scroll through the parameters until “LEARN ID” appears. Press and release the “SET” button. Use the (+) or (-) buttons to scroll to the tire you wish to remove. Press the “Set” button to select that tire. It will start flashing. Press the “Back” button for 3 seconds. You will hear 3 beeps. The code will change to “FFF FFF” which will be flashing. Press “SET” once. The flashing will stop and the ID code will be deleted.

Note: To delete all of the tire codes:

Press the “BACK” button for 6 seconds. You will hear 6 beeps. “DEL ALL” will appear on the screen. Press “SET” once. You will hear one beep. “FFF FFF” will appear. All ID codes are deleted.

Note: When in the coding mode, the display will time-out within approximately one (1) minute if no buttons are pushed. At that point, you will have to start the coding process again.

Note: Be sure the sensor being coded is at least two feet away from the other sensors.

PRESSURE CODING (option #2)

1. Be sure your sensors are numbered. Screw the sensors partly onto each valve stem in the order you numbered them. Do NOT screw them down far enough to hear air hissing out.
2. Push the “SET” button until it beeps. You are now in the programming mode. The “HI PRESSURE SET” parameter will blink at the bottom of the screen. Push the (+) button and scroll through the parameters until “LEARN ID” appears.
3. Quickly press and release the “SET” button. The first tire on the display will blink. If you want to program a

different tire, press the (+) button to move to the correct tire. Push the “SET” button again and “FFF FFF” will flash.

4. Tighten the sensor down on the corresponding tire valve stem. The ID code will display and flash.
5. To save the ID code setting. Press “SET” once. It will beep and sensor code is saved.
6. To remove the ID code setting, Press “BACK” once. “FFF FFF” will re-appear. The setting will not be saved.
7. Press “BACK” twice to return to the main screen.

MANUAL CODING (option #3)

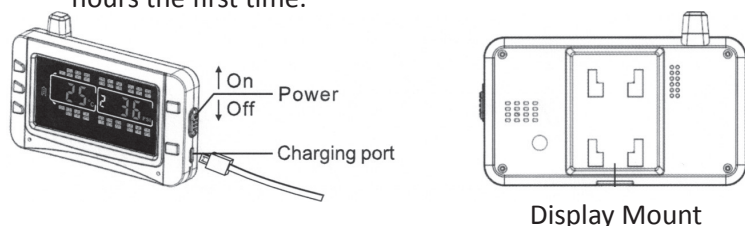
Note: This method is mainly used to program sensor codes from an old monitor to a new monitor if you do not have the sensors available.

1. Push the “SET” button until it beeps. You are now in the programming mode. The “HI PRESSURE SET” parameter will blink at the bottom of the screen. Push the (+) button and scroll through the parameters until “SET ID” appears.
2. Quickly press and release the “SET” button. The first tire on the display will blink. If you want to program a different tire, press the (+) button to move to the correct tire. Push the “SET” button again and the first digit of “FFF FFF” will flash. Press the (+) button to select the correct number or letter. Press “GO” to move to the next position. Press the (+) button to change to the correct number or letter. Continue this procedure until all six digits are changed.
3. Press “SET” once to save the new codes. You will hear a beep and the code will stop flashing.

4. To stop the coding for any position, Press “BACK” once. “FFF FFF” will reappear. No settings will be saved.
5. Press “BACK” twice to return to the main screen.

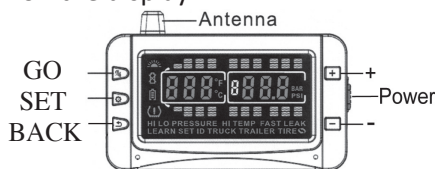
DISPLAY INSTALLATION

1. The provided suction cup mount can be used on the windshield, side window or directly on a smooth dash. Snap the mount into the back tabs on the display to use.
2. Plug the power cord into the vehicle's cigarette lighter/power port and then into the side of the monitor to charge the internal lithium battery. Charge display for four (4) hours the first time.



DISPLAY BUTTONS

- There are five (5) programming buttons on the display. They are: “GO”, “SET”, “BACK” on the left side of the display and (+) and (-) on the right side of the display.
- The power slide switch is located on the right side of the monitor. Slide it up to turn on the display. Slide it down to turn off the display.



NOTE: The side power switch will not turn off the monitor when constant power is applied to the unit.

PARAMETER SETTINGS (Setting the sensor alarms)

NOTE: The factory default settings are:

Pressure Unit: PSI

Temperature units: °C

High Pressure: 175 lbs.

High Temperature: 158°F (70°C)

Low Pressure: 100 Lbs.

NOTE: Be sure your monitor is ON and it is showing the main screen.

PRESSURE PARAMETERS

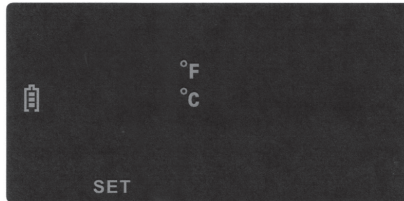
To choose the Pressure Parameter, press the “SET” button until it beeps. Press the (+) button three (3) times and “SET” will appear at the bottom of the screen and BAR/PSI will be blinking on the screen. Press the “SET” button again and then use the (+) button to select “PSI” (or “BAR”). Press “SET” again to select it. Press “BACK” to go back to the Main Screen.



TEMPERATURE PARAMETERS

To set the Temperature Parameters (°F or °C), press the “SET” button until it beeps. Press the (+) button four (4) times and “SET” will appear at the bottom of the screen and °F/°C will appear on

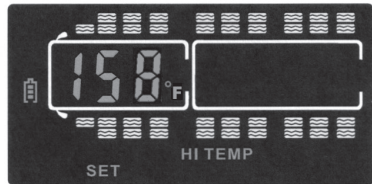
the screen, blinking. Press the “SET” button again and then use the (+) button to select °F or °C. Press “SET” again to select it. Press “BACK” to go back to the Main Screen.



HIGH TEMPERATURE ALARM SETTINGS

To set the High Temperature Alarm, press the “SET” button until it beeps. Press the (+) button twice and “HI TEMP SET” will appear. Again, press the “SET” button to enter that mode. Use the (+) or (-) buttons to adjust the High Temperature parameter, if desired. Press “SET” to save. When done Press the “BACK” button.

NOTE: We recommend leaving this temperature setting at the default 158° for all types of tires.

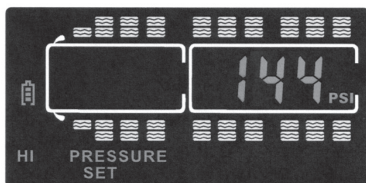


HIGH PRESSURE ALARM SETTING

To set up the High-pressure Alarm, press the “SET” button until it beeps. “HI PRESSURE SET” will appear at the bottom of the screen. Again, press the “SET” button to enter that mode. Press the “GO” button to select the appropriate axle. Use the (+) or (-) buttons to adjust the high-pressure alarm 20-25% over your

normal tire pressure for that axle. Press the “GO” button to move to the next axle. When done setting each axle that you have sensors on, press the “SET” button to leave that parameter and go back to the menu. When done, press the “BACK” button to go to the Main Screen.

When you get to the Trailer Section of the display, all the tires will flash. You can now set all the trailer axle high pressures as one group.



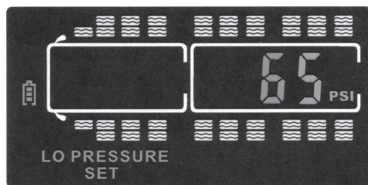
LOW PRESSURE ALARM SETTING

To set up the Low-pressure Alarm, press the “SET” button until it beeps. Press the (+) button once and “LOW PRESSURE SET” will appear. Again, press the “SET” button to enter that mode. Press the “GO” Button to select the appropriate axle. Use the (+) or (-) buttons to adjust the low-pressure alarm 10% below your normal tire pressure for that axle. Press the “GO” button to move to the next axle. When done setting each axle that you have sensors on, press the “SET” button to leave that parameter and go back to the menu. When done, press the “BACK” button to go to the Main Screen.

When you get to the Trailer Section of the display, all the tires will flash. You can now set all the trailer axle low pressures as one group.

NOTE: If your tire pressure is below 100 lbs., you must set the

low-pressure alarms first and then, when done, set the high-pressure alarms. The high pressure cannot go below the default low pressure of 100 psi until the low pressure is reduced.



RESTORE PARAMETERS TO FACTORY DEFAULT SETTINGS

First, turn off the display. Hold the “BACK” and “SET” buttons at the same time and turn the display back on. You will hear one beep. The display will power back on and original factory parameters will be restored. Tire codes will not be erased or changed.

DISPLAY ALERTS

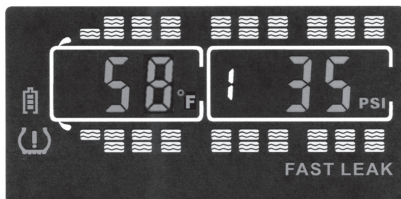
Out of Parameter Alert

The 507 sensors send the tire pressure and temperature readings to the display every two (2) minutes. If a tire is outside of the parameters that were set, the audible alarm will sound and the red LED light will immediately flash. The tire in question, pressure or temperature for that tire, and warning type will also flash. The audible alarm can be silenced for a short while by pushing any of the buttons on the front of the display. The red warning light will continue to flash until the pressure or temperature issue is resolved and brought back into your preset levels.

Fast Leak Alert

When a fast tire leak is detected, the sensor will send that data immediately to the display. The audible alarm will sound and the red LED light will immediately flash. The tire in question, pressure for that tire, and FAST LEAK will also flash. The audible alarm can

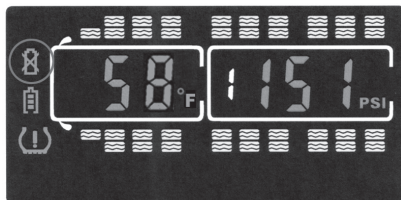
be silenced for a short while by pushing any of the buttons on the front of the display. The red warning light will continue to flash until the pressure or temperature issue is resolved and brought back into your preset levels.



Sensor Low Battery Alert

The sensor low battery indicator will display when the CR1632 sensor battery is at the end of its life. The tire affected will flash along with the pressure and temperature read-out and the low battery symbol and (!) on the left side of the display. Replace with a new battery as soon as possible.

NOTE: This low battery alert will display for only a short time until the battery is exhausted. If you do not have the display on often, the indicator signal will be sent but not shown on the display, since it was off. If your sensor is not reporting to the display, check the battery voltage. If it is below 2.75 volts (normally 3+ volts), you may have to change the sensor battery.



OTHER FUNCTIONS

Normal Display Scrolling

The tire icons on the display will automatically scroll/cycle through, one by one. Each tire will be displayed for approximately 5-6 seconds. You can manually cycle through the displayed tires by pushing the (+) or (-) buttons on the display. The display will show the tire you choose for approximately 10 seconds before continuing to cycle.

Backlighting and Motion Detection

The display is equipped with a light sensor and a motion sensor. The backlight will turn on when the vehicle is in motion and there is little ambient light. If the vehicle has stopped for a while and the display is on the internal battery, the display will “go to sleep” until the vehicle resumes motion. To shut the light sensor off, press the (+) button for approximately 4 seconds.

Disconnecting and Reconnecting a Vehicle

When a towed vehicle is displayed on the screen and you want to temporarily remove it (example: leaving a trailer at a campground), press and hold the “GO” and (-) buttons until the trailer section of the display disappears. The sensors on the trailer will not be read. To add the trailer section back on to the display, again, push the “GO” and (-) buttons at the same time until the towed vehicle reappears.

When a towing vehicle is displayed on the screen and you want to temporarily remove it (example: leaving a truck or car at a campground and using another vehicle to move the RV), press and hold the “GO” and (+) buttons until the truck (towing) section of the display disappears. The sensors on the towing vehicle will not be read. To add the truck (towing) section back on to the display, again, push the “GO” and (+) buttons at the same time until the towing vehicle reappears.

Charging the Display

The display is powered by a non-replaceable, lithium-ion battery. A battery level indicator is located on the left side of the display. When the indicator shows one bar, it is recommended you charge the display as soon as possible to avoid disruption when in use. It will take approximately four (4) hours to fully charge. Display run time is 5-7 days on a full charge.

ADDITIONAL FUNCTIONS

Swap Tire Sensor Positions

- Press “SET” button until the display beeps and then release.
- Press and release the (+) button 7 times until Tire  appears. Press “SET”.
- Use the (+) or (-) buttons to select the tire sensor code you want to swap.
- Press “SET” and then select the tire you want to swap the code to using the (+) or (-) buttons.
- Push “SET” to move the sensor code to the new tire.
- Push the back button twice to get into the Main Screen.

Set ID Truck (Three Digit ID Identifier)

- Press the “SET” button until the display beeps and then release.
- Press the (+) button 8 times until “SET ID-TRUCK” appears.
- Press the “SET” button to enter that mode.
- Press “SET” again, the first digit will blink.
- Use the (+) to (-) buttons to set the first digit. Press “GO” to move to the next digit.

- Again, press the (+) or (-) buttons to select the next digit. Continue for the final (3rd) digit.
- When done, push the “SET” button to save.
- Push the “BACK” button twice to get back to the Main Screen.

Set ID Trailer (Three Digit ID Identifier)

- Press the “SET” button until the display beeps and then release.
- Press the (+) button 9 times until “SET ID-TRUCK” appears.
- Press the “SET” button to enter that mode.
- Press the “GO” button to select the trailer (1-4) to set the ID.
- Press “SET” again, the first digit will blink.
- Press “GO” to go to the first digit on the trailer section on the screen.
- Use the (+) or (-) button to set the 1st digit. Press “GO” to select the next digit. Continue for the final (3rd) digit.
- Press “SET” to save the 3 digit code. To select the next trailer, press the “GO” button.
- When done, push the “SET” button to save.
- Push the “BACK” button twice for the Main Screen.

Trailer Selection

Four different trailers with sensors can be programmed into the display and each can be selected to be viewed on the screen. When selecting different trailers on the display, remember to adjust your high and low pressure alarms for each trailer you are using that has sensors coded to it.

TROUBLESHOOTING TIPS

- It may take up to 15 minutes for the sensor data to appear on the display the first time you set up the system. Leave the display on until all sensor data appears. After the sensor data is received the first time, subsequent system use should only take minutes to acquire the sensor information.
- When done programming the Parameters into the display, remember to quickly push the “SET” button to save the Parameters. Push the “BACK” button twice to go back to the main screen.
- If your tire pressure is under 100 lbs., you will have to program the Low-Pressure alarm first and then program the High-Pressure alarm. The high pressure cannot go lower than the low-pressure setting, which defaults to 100 lbs.
- When the display is on and reading, you can press the (+) or (-) buttons to quickly scroll through the tires on your display. The automatic scrolling function will resume after 10 seconds when no buttons are pushed.
- If your display is plugged into a constant power source, the sliding power switch on the side will not function. To turn the display off, unplug the power supply and the switch will now operate.

COMMON QUESTIONS

- **Why does my display sometimes “drop” sensor data from a tire position?**
 1. If you have a vehicle(s) that exceeds 34’ in length, you may need a repeater to amplify the sensor signals from the tires to the monitor. This issue is

not limited to the rear tires on a vehicle. Also, a repeater is recommended for vehicles with a lot of metal, as the metal may cause interference.

2. Be aware that an indoor/outdoor thermometer with an external temperature sensor may interfere with the TST TPMS. Temporarily remove all the batteries in the display AND exterior sensor and see if the problem is corrected. A thermometer with a higher frequency (915 Mhz) may be required. Atomic clocks can also cause interference with the sensors.
- **Why does my display sometimes alarm while I am sitting still in the evening?**

As night approaches and outdoor temperatures decrease, your tire pressures may drop below the parameters you have set, thus causing an out of spec alarm. When temperatures drop, turn your display off overnight. As the air temperature rises the next day or as you start driving, the tires will also heat up and come back into your parameters. You can also add air to your tires to bring them back into the parameters you set up.

- **Why can't I set a lower pressure than 100 lbs. for the high- or low-pressure alarms?**

The high-pressure alarm cannot go lower than the low-pressure alarm setting. If your tire pressure settings are below 100 lbs., you must first set the low-pressure alarm settings and then set the axles' high-pressure settings. When done, be sure to press and release the "SET" button to save all the parameter settings.

- **What conditions cause the display to alarm?**

The display will alarm for the following reasons:

1. A rapid leak.

2. A low sensor battery.
3. An overheating tire, increasing the temperature.
4. A high or Low-pressure reading (be sure your parameters are set correctly).

In every instance, the tire Pressure and Temperature numbers will also flash when the tire with the problem blinks.

- **How do I remove my trailer from the display screen when I am not using it?**

To electronically disconnect the trailer tire icons from the screen:

1. Momentarily press the “GO” and (-) buttons.
2. When the trailer section on the display disappears, release the buttons.
3. To electronically reconnect the trailer section, momentarily press the “GO” and (-) buttons.

- **How do I remove my towing vehicle from the display screen when it is parked?**

To electronically disconnect the towing vehicle tire icons from the screen:

1. Press and hold the “GO” and (+) buttons.
2. The towing vehicle section on the display will disappear.
3. To electronically reconnect the towing vehicle section, momentarily press the “GO” and (+) buttons again.

- **How do I remove an unwanted tire icon from the monitor?**

1. To delete a single sensor code:
2. Press the “SET” button until it beeps (approx. 3 seconds). Push the (+) button and scroll through the parameters until “LEARN ID” appears. Press and release the “SET” button. Use the (+) or (-) buttons to scroll to the tire you wish to remove. Press the “Set” button to select that tire. It will start flashing. Press the “Back” button for 3 seconds. You will hear 3 beeps. The code will change to “FFF FFF” which will be flashing. Press “SET” once. The flashing will stop and the ID code will be deleted.

Note: To delete all of the tire codes: Press the “BACK” button for 6 seconds. You will hear 6 beeps. “DEL ALL” will appear on the screen. Press “SET” once. You will hear one beep. “FFF FFF” will appear. All ID codes are deleted.

DISPLAY SPECIFICATIONS

Temperature Operating Range	-4° F – 176° F / -20° C – 80° C
Storage Temperature Range	-22° F – 185° F / -30° C – 85° C
Charger Input Voltage	5v – 30v DC
Frequency	433.92 MHz
Size	4.6” Length x 2.99” Width x 1.06” Depth 117mm Length x 76mm Width x 27mm Depth
Weight	4.4 oz / 125 grams

This system is designed to monitor air pressure and temperature within the tire. It is only for added safety and not meant to replace regular tire maintenance and exercise of reasonable care when operating a motor vehicle. The system cannot prevent accidents nor will TST be responsible for damage or injury due to (a) improper use, (b) failure to follow the product instructions or to perform any preventative maintenance, (c) unauthorized repair or modifications, (d) use of products beyond their useful life, or (e) external causes such as accidents, abuse, or other actions or events beyond TST's reasonable control.

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Ver. 11.17

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TST-Doc-507 WSD-M Manual-(C)

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