

SmarTire Next GEN TPMS Operator's Manual









This booklet contains important operational and safety information that benefits you and subsequent owners.



Sources of Additional Information about your SmarTire[®] System by Bendix[™] CVS

Consult the vehicle manufacturer's documentation.

Visit www.bendix.com for free downloads of these publications from the Literature Center at www.bendix.com.

BW2799 SmarTire Tire Pressure Monitoring System (TPMS) Operator's Manual

BW2809 SmarTire TPMS Hand Tool Manual

BW2820 SmarTire Low Frequency (LF) Tool Users Manual

BS2822 SmarTire TPMS Walk Around Card

or

Contact the Bendix Tech Team at

techteam@bendix.com or

1-800-AIR-BRAKE (1-800-247-2725, option 2).

Representatives are available

Mon. - Fri. 8:00 a.m. to 6:00 p.m. ET.

SMARTIRE[™] TIRE PRESSURE MONITORING SYSTEM BY BENDIX CVS

This vehicle is equipped with a SmarTire[™] TPMS (Tire Pressure Monitoring System) which constantly monitors the pressure and temperature of each tire on your vehicle in order to provide real-time, on-demand tire status information and to warn of a tire-related problem before they become dangerous.

KEY FEATURES OF SMARTIRE™:

- Alerts are temperature compensated allowing you to know when your tires are at risk no matter how long you have been driving or how hot your tires are.
- Real-time tire information displayed on the dash.
- Alerts provide immediate visual and optional audible notifications of a tire problem.
- Types of alerts and Icons:



First Level Low/High Pressure Alert

Second Level Critical Low Pressure Alert

High Temperature Alert

Importance of Tire Maintenance

Proper tire maintenance is critically important for keeping tires rolling smoothly. When properly maintained and inflated, tires will provide shorter stopping distances, better vehicle handling in emergency situations and better fuel economy.

Maintenance Tips for Long Tire Life:

- Keep tires properly inflated at all times.
- Visually inspect tires for injuries prior to each trip.
- Match dual tires for size and ensure tire pressures are within 5 PSI of one another.
- Re-tread tires before wear causes excessive belt damage or fatigue.



To prevent sensor damage, when mounting and dismounting tires that have SmarTire[®] TPMS tire sensors, be sure that the maintenance facility is aware that a tire pressure monitoring system is installed.

If any rims are relocated or replaced, be sure to follow the SmarTire by Bendix system guidelines to permit the system to re-learn the tire sensor positions.

To monitor your trailer tires with your existing SmarTire by Bendix tractor ECU, you must ensure that the SmarTire Trailer-Link[™] enable function is set to ON in the SmarTire TPMS system tractor-mounted ECU (part number 200.0216).

Additionally, for tractors equipped with ECU part number 200.0184, in order for the ECU to be able to communicate with the SmarTire Trailer-Link ECU, the ECU firmware MUST BE updated to new firmware. For instructions on performing this update, please contact your Bendix account manager or call 1-800 AIR-BRAKE (1-800-247-2725), option 2.

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GENERAL SAFETY GUIDELINES WARNING! PLEASE READ AND FOLLOW THESE INSTRUCTIONS TO AVOID PERSONAL INJURY OR DEATH:

When working on or around a vehicle, the following guidelines should be observed AT ALL TIMES:

- ▲ Park the vehicle on a level surface, apply the parking brakes and always block the wheels. Always wear personal protection equipment.
- ▲ Stop the engine and remove the ignition key when working under or around the vehicle. When working in the engine compartment, the engine should be shut off and the ignition key should be removed. Where circumstances require that the engine be in operation, EXTREME CAUTION should be used to prevent personal injury resulting from contact with moving, rotating, leaking, heated or electrically-charged components.
- Do not attempt to install, remove, disassemble or assemble a component until you have read, and thoroughly understand, the recommended procedures. Use only the proper tools and observe all precautions pertaining to use of those tools.
- ▲ If the work is being performed on the vehicle's air brake system, or any auxiliary pressurized air systems, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle. If the vehicle is equipped with a Bendix[®] AD-S[®] air dryer system, a Bendix[®] DRM[™] dryer reservoir module, or a Bendix[®] AD-9si[™] air dryer, be sure to drain the purge reservoir.
- Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.
- ▲ Never exceed manufacturer's recommended pressures.
- Never connect or disconnect a hose or line containing pressure; it may whip. Never remove a component or plug unless you are certain all system pressure has been depleted.
- ▲ Use only genuine Bendix[®] brand replacement parts, components and kits. Replacement hardware, tubing, hose, fittings, etc. must be of equivalent size, type and strength as original equipment and be designed specifically for such applications and systems.
- ▲ Components with stripped threads or damaged parts should be replaced rather than repaired. Do not attempt repairs requiring machining or welding unless specifically stated and approved by the vehicle and component manufacturer.
- Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
- For vehicles with Automatic Traction Control (ATC), the ATC function must be disabled (ATC indicator lamp should be ON) prior to performing any vehicle maintenance where one or more wheels on a drive axle are lifted off the ground and moving.
- ▲ The power MUST be temporarily disconnected from the radar sensor whenever any tests USING A DYNAMOMETER are conducted on a Bendix[®] Wingman[®] Advanced[™]-equipped vehicle.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.

SYSTEM OVERVIEW

SYSTEM LAYOUT AND COMPONENTS

Tire sensors mounted on each wheel measure tire pressure and temperature every 12 seconds and wirelessly transmit tire data every three to five minutes or if the sensor detects a pressure change of +/- 3 PSI, the sensor will transmit its data immediately. Real-time tire pressure and temperature information is displayed to the driver on demand via the SmarTire™ display or an OEM integrated display.

If the tractor is connected to a trailer equipped with a SmarTire Next GEN-Trailer TPMS system, the trailer tires can also be displayed to the driver.



Tractor Next GEN ECU

- A) Next GEN Wireless Receiver/ECU The Wireless Receiver/ECU forms the "brain" of the SmarTire[™] platform. The receiver captures data transmissions from tire sensors mounted on each wheel which is then analyzed against programmed user-defined settings and, if it determines that a tire is under-inflated or running over temperature, an alert is triggered.
- B) Next GEN for Trailer ECU The Trailer ECU captures data transmissions from tire sensors mounted on each trailer wheel. This data is then analyzed against programmed user-defined settings contained in the ECU and, if it determines that a tire is under-inflated or running over temperature, an alert is triggered and relayed to the Receiver/ECU mounted on the tractor and if equipped with the SmarTire Display or supported by the OEM dash, displays the alert in the cab of the tractor.
- C) **SmarTire Display -** Real-time tire pressure and temperature information is available to the driver on demand via the SmarTire[™] display. If the system detects a tire problem, the display will alert the driver to the condition so corrective action can be taken.
- D) Tire Sensor The tire sensor measures internal tire pressure and temperature every 12 seconds and transmits data every three to five minutes. If the system detects a pressure change of +/- 3 PSI or greater, it breaks its regular schedule and transmits data immediately. Each tire sensor is mounted in a break away cradle so that in the event of in-field damage, the sensor remains unbroken and the cradle can be replaced allowing the sensor to be reused.
- E) **Optional Trailer Lamp** When a tire problem occurs on a connected trailer, the trailer lamp will indicate it to the driver. The lamp illuminates at the first sign of trouble, as well as flashes to indicate the type of problem found during power up.

THE PRESSURE TEMPERATURE RELATIONSHIP

WHY IS IT IMPORTANT? Air naturally expands when heated and contracts when cooled. Inside a contained vessel such as a tire, this expansion and contraction causes a change in contained air pressure. As a tire **heats up**, **its pressure will naturally increase** and as it **cools down**, **its pressure will naturally decrease**.

Tire manufacturers specify that tire pressures should be checked and adjusted when a tire is "cold", but most people may not know why, or even what a "cold tire" is. The temperature of a tire has a significant impact on its inflation pressure.

According to tire manufacturers, a tire is considered to be "cold" when its temperature is 65°F (18°C). The recommended inflation values provided by vehicle manufacturers, fleet maintenance personnel or published load inflation tables are called 'Cold Inflation Pressures' (CIP) because they represent the correct amount of pressure a tire should be inflated to when it is "cold". The reason that tires have cold inflation pressures set at specific temperatures is because a tire's pressure will change relative to its temperature.

Tire manufacturers never recommend inflating a tire to less than the specified cold inflation pressure. In extreme cases, the beads of a commercial tire can unseat if its pressure gets too low resulting in a catastrophic tire failure.

COLD INFLATION PRESSURE (CIP)

The chart below illustrates the equivalent inflation values for a series of cold inflation pressures at various temperatures. The temperature values represent the temperature of the air contained inside the tire. This temperature can be estimated for a cold tire using the outside, ambient temperature.

Note: The Figure 1 is to be used as a guide only. Always refer to the tire or vehicle manufacturer's recommendations for minimum cold inflation pressures.

Pre Hig	Pressure / Temperature Correlation Chart: High Pressure Range													
	RECOMMENDED COLD INFLATION PRESSURE (PSI)													
	°C	°F	85	90	95	100	105	110	115	120	125	130	135	140
1	7	45	81	86	91	96	100	105	110	115	120	125	129	134
щ	13	55	83	88	93	98	103	108	113	118	123	127	132	137
UR	18	65	85	90	95	100	105	110	115	120	125	130	135	140
RAT	24	75	87	92	97	102	107	113	118	123	128	133	138	143
IPE	30	85	89	94	100	105	110	115	120	126	131	136	141	146
TEN	35	95	91	96	101	107	112	117	123	128	133	138	144	149
SE	40	105	93	98	103	109	114	119	125	130	136	141	147	152
11	46	115	95	100	106	111	117	122	127	133	138	144	149	155
11/	52	125	97	102	108	113	119	125	130	136	141	147	152	158
3IEI	57	135	98	104	110	115	121	127	132	138	144	149	155	161
AME	62	145	100	106	112	117	123	129	135	140	146	152	158	164
`	68	155	102	108	114	120	126	131	137	143	149	155	161	167
	74	165	104	110	116	122	128	134	140	146	152	158	164	170
_	\sim	\sim	_											

Figure 1

SMARTIRE[™] TPMS TEMPERATURE COMPENSATION

Since a tire's contained air pressure naturally increases as a vehicle moves, it can be difficult to tell if a hot tire is under-inflated. Without some form of temperature compensation, a hot tire that is under- inflated might appear to be fine because it's contained air pressure is at or above its cold inflation pressure (CIP).

When checked using a handheld gauge or a tire monitoring system that does not measure operating temperature, an under-inflated tire can appear to be normal. When equipped with SmarTireTM TPMS tire sensors mounted inside the tire measure both tire pressure and temperature in order to provide "Temperature Compensated" pressure deviation values and alerts. The <u>Deviation Value</u> represents the amount of over or under inflation based on the tire's current temperature. This value can be used to warn the driver of an under-inflated tire even if that tire's actual contained air pressure is at or above its CIP. This value is also useful when maintaining the tire as it respresents how much air should be added or removed from the tire to bring it to the desired pressure, which the system calculates based on the programmed CIP value and the tire's current temperature.

The advantages of temperature compensation are even more dramatic when a tire has a slow leak. Since the leak is slow, the tire may appear over an extended period of time to be properly inflated when it is actually dangerously under-inflated and operating well above its temperature capacity. Eventually, the tire will become so hot that its structure will degrade and then fail in the form of a blow-out and / or tire fire.

To further illustrate this concept, on the SmarTire display you may see that the pressure is above the CIP, but due to the temperature of the tire, the pressure is actually low or high depending on the Deviation value. The image below shows a tire with a CIP value of 110 PSI at ambient temperature. This is a properly aired tire and therefore the deviation value displayed is zero.

Pressure Deviation (Temperature Compensated)	● 1=1 → 0 psi	65°F Tire Air Temperature 110 Tire Air Pressure
Compensated)	psi	pai

As the vehicle is driven and the tires warm up, the pressure measured will change due to this natural increase in the temperature. The Pressure Deviation value compensates for this change in temperature and displays a zero value for a properly air tired.

[∎=1=]	85°F
0	115
psi	psi

Now consider an example where the tire is low. Again, due to this natural increase in pressure due to temperature as the tire warms up, the actual air

pressure of the tire may appear to be correct because it is at 110 PSI which is the correct CIP, but in reality due to the increased temperature of the tire, the pressure is actually 5 PSI low. The image to the right shows what would be shown on the display. The pressure deviation value would indicate the

[∎=1=]	85°F
- 5	110
psi	psi

amount of under inflation based on the temperature compensated value as described above. In this case, the Deviation Value is shown as - 5, meaning the tire is 5 psi low and should inflated to 115 PSI. If this value were +5, the tire would be 5 PSI high for this temperature.

The Pressure Deviation value is a useful tool in maintaining tire pressures as it takes the guess work out of inflating tires, simply add the amount of air indicated until this value is 0 and your tires will be properly inflated!

SMARTIRE TPMS DISPLAY



Note: The following directions apply if vehicle is equipped with SmarTire display. For OEM please refer to the vehicle manual for further instructions.

SCREEN OVERVIEW

SmarTire displays tire status information by axle using various axle screens. Each axle programed in the display has a

corresponding axle screen.

The image below outlines the different screen elements.





Axle Designator – This number represents the location of the axle you are viewing. The first axle on your vehicle starting at the front of the vehicle is "Axle 1", the next axle is "Axle 2" and so forth. If you are towing a trailer equipped with SmarTire Trailer-Link TPMS, the trailer axles will be shown after the last axle on the tractor and will be displayed with a "T" in front of the number. For example the first axle on a trailer will be shown as "T1". Just as with the tractor axles, the axles are numbered from the front of the trailer to

the back so the second axle is displayed as "T2".

Tire Icon – This Icon indicates the axle's tire configuration. One box on each side indicate single tires, two boxes on each side indicate dual tires.



Selected Tire Icon – This

indicates which tire is selected and which tire data is actively displayed on the screen (Pressure, Temperature and Deviation Value).

Pressure Deviation Value - The pressure deviation value indicates the amount of under or over inflation. When the indicator has a + 5, it means 5 PSI of air should be removed and when it's - 5, it means 5 PSI of air should be added.

Tire Air Temperature – This value indicates the current internal air temperature for the selected tire. Temperature may be shown in degrees F or C.

Tire Air Pressure – This value indicates the current pressure value for the selected tire. This is the actual pressure value and is not temperature compensated.

Units of Measure – Indicates the units the pressure value is displayed in. This may be set to PSI, BAR, or kPa.

SCREEN ICONS

READY SCREEN ICONS

Ready Screen Icons						
۲	TPMS Ready					
\triangle	Active Alert Present					
	Trailer Connected					
H	Active Dual Tire Imbalance Present					

Wheel Icon – This icon appears on the TPMS Ready Screen and indicates the system is ready and active.

Triangle – When shown on the TPMS Ready Screen, this icon indicates an active alert is present.

Trailer – This icon indicates a Trailer-Link[™] TPMS system is wirelessly connected to the tractor ECU and indicates trailer data is available.

Dual Tire – This icon appears on the TPMS ready screen and indicates an active dual tire imbalance is present. This icon is also shown on the individual axle screen and indicates the wheel end where the imbalance is present.



Triangle – When displayed on the individual axle screen, this icon indicates a First Level Alert (FAL) is active.

Tire with Exclamation Point - This icon is shown on the individual axle screen and indicates a Second Level Alert (SAL)/Critical Low Pressure Alert is active.

Thermometer – This icon is shown on the individual axle screen and indicates a High Temperature Alert is active.

Low Battery – This icon is shown on the individual axle screen and indicates a sensor with a low battery.

USING THE SMARTIRE TPMS SYSTEM



NOTE: It is normal for the TPMS system to take up to 5 minutes for all tire sensor data to be received and displayed to the driver as the sensors transmit data every 3-5 minutes. In some instances the tire could be in a position where the sensor signal could be blocked and not seen by the receiver. In this case, after 35 minutes of not seeing a sensor, the system will issue a Sensor Fault Alert for that

location. If a Sensor Fault Alert occurs and does not clear after the vehicle is driven, please report this condition to your maintenance personnel as it may indicate a problem with the system.

GETTING STARTED

When the vehicle's ignition switch is turned on, the SmarTireTM system will power up and the display will indicate that the system is initializing. After a short period, the display will show the "TPMS Ready" screen indicating that the system is ready to receive tire data from the sensors.



If an Alert icon (triangle with an exclamation mark) is displayed and the LED light is illuminated when the TPMS Ready screen is shown, this is an indication that an active alert has been detected and should be investigated / corrected before the vehicle is



driven. Bendix recommends that tire pressure and temperature conditions always be corrected before a vehicle is driven to ensure the safety of the driver, vehicle and cargo.

How to Check Tire Pressure, Temperature and Pressure Deviation

You can navigate through the SmarTire display by following the steps below.

1. Starting from the TPMS Ready Screen, press the right button once and the display will show the first axle screen starting at the front of the vehicle with left tire position highlighted. The pressure, and temperature pressure deviation values then are displayed for the selected tire.



- To move to the next wheel on the axle, press the right button once. Each time the right button is pushed, the next tire in sequence will be selected and its information displayed. Pressing the right button when the last tire on the axle is selected will re-select the first tire on that axle.
- 3. To move to the next axle on the vehicle, press the left button once. Once again, pressing the right button will scroll the display to the next tire on that axle. Each time the left button is pressed the display will show the next axle on the vehicle. When the left button is pressed from the last axle screen, the first axle will once again be shown. To exit back to the "TPMS Ready" screen, press the center button once.

ALERTS & WARNINGS

REACTING TO ALERTS & WARNINGS



IMPORTANT: It is important to always react to the alerts and warnings provided by the SmarTire TPMS Monitoring (Tire Pressure System). lt is recommended that tire conditions always be corrected as soon as possible and before the vehicle is driven. Once the pressure is restored or temperature reduced. the the is alert will automatically turn off.

PRESSURE AND TEMPERATURE ALERTS

FIRST ALERT LEVEL (FAL): PRESSURE DEVIATION ALERT

Indicated By: Flashing LED Light, Alert Triangle, + or - Deviation Value.



This alert is intended to give you an early indication that the tire is low/high. This alert is typically based on the temperature compensated value (if temperature compensation is selected for the alert). If so, you may see that the pressure is above the CIP, but due to the temperature of the tire, the pressure is actually low or high depending on the deviation value showed.

The axle designator and the highlighted wheel position indicate the position of the tire that is

under- or over-inflated. The pressure deviation value indicates the amount of under (-), or over (+) inflation that should be corrected.

To acknowledge this alert and return to the TPMS ready screen, press any button. The LED will stop flashing but remain illuminated until the problem is corrected. To correct the problem, add or remove air to the affected tire as indicated by the deviation value. When the deviation value is 0 the tire is properly inflated.

SECOND ALERT LEVEL (SAL): CRITICAL LOW PRESSURE ALERT

Indicated By: Flashing LED Light, Alert Tire Icon, Deviation Value.



This alert is intended to give you an indication that the tire is critically low and needs immediate attention to prevent a critical failure.

The axle designator and the highlighted wheel position indicates the tire that is under inflated. The pressure deviation value indicates the amount of under- or over-inflation.

IMPORTANT: This alert indicates that the tire is critically underinflated and should be addressed immediately.

To acknowledge this alert and return to the TPMS ready screen, press any button. The LED will stop flashing but remain illuminated until the problem is corrected. To correct the problem add air to the affected tire as indicated by the deviation value. When the deviation value is 0 the tire is properly inflated.

HIGH TEMPERATURE ALERT

Indicated by: Flashing LED Light, Alert Thermometer, Temperature Value.



This alert is intended to give you an indication that the temperature of the air in the tire has reached a critical point and should be investigated.

The axle designator and the highlighted wheel position indicates the tire that is critically hot. High tire temperatures are typically caused by under-inflation and the system will usually provide a pressure alert in advance of a temperature alert. If triggered on its own, this alert can be an indication of an alternative

problem, such as a dragging brake or a bearing failure.

To acknowledge this alert and return to the TPMS ready screen, press any button. The LED will stop flashing but remain illuminated until the problem is corrected. To correct the problem investigate what is causing the elevated temperature.

OTHER ALERTS AND WARNINGS

SENSOR FAULT ALERT

Indicated by: Flashing LED Light, Sensor Fault Alert Message



A Sensor Fault Alert will be issued for any programmed sensor for which the Receiver/ECU has not received data for a predetermined time. Typically, this time is set to 35 minutes. Sensor Fault Alerts are self-clearing as soon as data is received from the given sensor. Prolonged Sensor Fault Alerts can be an indicator of damaged or missing sensors and should be addressed to ensure the system is functioning properly. <u>Tires with active Sensor Faults cannot provide</u>

pressure and temperature alerts. Sensor Fault Alerts may also appear when the vehicle is stopped and idling for an extended period of time. Due to the nature of RF signals, the reception from a tire sensor may be blocked when the vehicle is stationary. If the fault occurs and does not clear after the vehicle is driven, please report this condition to maintenance personnel as it may indicate there is a damaged or missing sensor.

LOW SENSOR BATTERY ALERT

Indicated by: Flashing LED Light, Battery Alert Icon



Typically, a low sensor battery alert will be triggered when the battery reaches 2.1 Volts and below. This alert indicates that the sensor should be replaced as soon as possible before the battery dies and the sensor stops transmitting. If not replaced, once a sensor stops transmitting, after 35 minutes a Sensor Fault will be activated for that tire location and prevent pressure and temperature alerts from being issued for the tire location.

NO TIRES PROGRAMMED ALERT

Indicated by: Flashing LED Light, No Tires Programed Alert Message



This message will be displayed after the startup sequence if the Receiver/ECU has not been programmed with any axle and wheel configurations. In this case the system is not functioning and no pressure or temperature alerts will be displayed. This should be reported to maintenance to be corrected as soon as possible.

QUICK SMARTIRE SYSTEM TROUBLESHOOTING

TROUBLESHOOTING TABLE

Pr Actions to be taken	oblem Gauge not initializ	is Dashes displayed ing on gauge	Gauge shows a Pressure or Temperatur e Alert	Tire pressure is not being updated after pressure correction (greater than 3PSI)	Tire pressure value is decreasing over time	Gauge shows Sensor Fault Alert	Several tires are reporting sensor Diagnostic Trouble Codes
Turn ignition of	f&on X						
Wait 5 minutes key on for data received	s after i to be	x				х	х
Signal may no received, mov vehicle to repo the senso	ot be /e the psition pr	x		x		x	х
Go to the sec "Pressure a Temperature / & Warning: (Page 7) and the indications specific ale	ction and Alerts s". follow for the ert.		x				x
The tire is exh a slow leak. appropriate ste have the ti inspected for damage or le	ibiting Fake eps to re any eaks.				х		
Follow the indications Sensor Fa Troubleshoo (Page 12	e on ult ting					х	
Report to maintenan	ce X	X		x	х	х	х

Note: If problem continues report to maintenance.

SENSOR FAULT TROUBLESHOOTING FLOW CHART



Federal Communications Commission (FCC) Notice

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. This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna,
- Increase the separation between the equipment and receiver,
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected,
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to this device without the express approval of Bendix may void the user's authority to use this device. *This device complies with Industry Canada's license-exempt RSSs. Operation is subject `to the following two conditions:*

(1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux RSS exempts de licence d'Industrie Canada. L'opération est soumise aux deux conditions suivantes:

(1) Cet appareil ne doit pas causer d'interférences; et

(2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

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On-line training that's available when you are -24/7/365. Visit www.brake-school.com.

> SEE PAGE 2 FOR A LIST OF FURTHER SOURCES OF INFORMATION.

