Adjust the MTIS Tire Pressure Setting

1. Check that the control box shut-off valve is in the ON position and that available air pressure is at 120 psi.
2. Remove all of the hoses from the through-tees, which are mounted in the center of the hubcaps.
3. Test a tire: Select one tire for this test. Use the valve core located in the hub that you removed in Step 2 to reduce tire pressure approximately 5 to 10 psi below the fleet's specifications.
4. Reconnect the hose to the tire to be tested.
5. Allow sufficient time for the pressure to equalize. Disconnect the hose from the through-tee. Use a pressure gauge to check the tire pressure. Tire pressure should equal system pressure.
6. Reconnect the hose to the through-tee.
   - To increase tire pressure: Pull the system adjustment knob out, then turn the adjustment knob clockwise in small increments. Repeat Step 3.
   - To decrease tire pressure: Pull the system adjustment knob out, then turn the adjustment knob counterclockwise in small increments. Repeat Steps 3, 4 and 5.
7. When the tire pressure is correct, lock the adjustment knob by pushing inward and reconnect the remaining hoses to the through-tees.

Install a Hose

**WARNING**
To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

**CAUTION**
During installation, hand-tighten the tire inflation system hoses to the tire valve stems, then use a wrench to tighten the hoses to the correct specification. Do not overtighten the connection, which can damage the hose seal and cause a tire to deflate when the trailer is parked. Damage to components can result.

1. Hand-tighten the tire inflation system hoses to the tire valve stems.
2. Use a 7/16-inch wrench to tighten the connections an additional half turn.
3. Hand-tighten the tire inflation system hoses to the through-tee. Do not use pliers.
4. Use soapy water to test the connections for leaks.
5. Allow sufficient time for the pressure to equalize. Disconnect the hose from the through-tee. Use a pressure gauge to check the tire pressure. Tire pressure should equal system pressure.
6. Reconnect the hose to the through-tee.
7. When the tire pressure is correct, lock the adjustment knob by pushing inward and reconnect the remaining hoses to the through-tees.

Turn OFF the System Before Performing Maintenance

**WARNING**
This inflation system uses compressed air. Turn the system OFF and drain the system at the petcock before you perform maintenance or service to avoid serious personal injury and damage to components.

1. Turn the shut-off valve OFF to stop air delivery to the system. When the shut-off valve is OFF, the knob is perpendicular to the valve body.
2. Turn the petcock VALVE/COUNTERCLOCKWISE in small increments.
3. Turn the petcock CLOCKWISE to open it and drain air from the system.

If the Connection Leaks After Following the Previous Instructions

1. Remove the hose from the tire valve stem.
2. Follow Steps 1-4 to install and test the hose.
   - If the connection still leaks: Replace the hose seal or the entire hose.

For Complete Maintenance and Service Instructions for MTIS with ThermALERT™
Refer to Installation and Maintenance Manual 14P, Meritor Tire Inflation System (MTIS). Call the Meritor OnTrac™ Customer Call Center at 866-668-7221 to obtain this publication or visit Literature on Demand at meritor.com.

Meritor Tire Inflation System (MTIS) with ThermALERT™ Technical Guide

System Overview

**Meritor Tire Inflation System (MTIS)**
The Meritor Tire Inflation System (MTIS) uses compressed air from the trailer to inflate any tire that falls below the system air pressure setting during operation. Air from the existing trailer air supply is routed to a control box, then into each axle. The axles act as conduits to distribute air through rotary union assemblies at the spindle ends, which then distributes air to each tire as needed. If a tire is leaking, check valves in the tire delivery lines prevent loss of pressure in the remaining tires.

The MTIS indicator light on the front of the trailer will come ON to alert you if there is an excessive amount of air flow through the system, which can be caused by a leaking tire or a loose connection, or both. If the indicator light comes ON during operation, immediately find a safe place to bring the tractor and trailer to a complete stop. You must repair components that caused the air leak before returning the vehicle to service.

MTIS does not eliminate the need to perform wheel-end maintenance at regularly-scheduled intervals.

ThermALERT™

ThermALERT™ detects when air is escaping from the axle’s thermal plug and out through the hubcap tee vent, which occurs if a wheel end is operating at an abnormally high temperature. The ThermALERT™ indicator light will come ON to alert you to immediately find a safe place to bring the tractor and trailer to a complete stop.

Air escaping from the tee vent produces an audible noise, which helps you to identify the wheel end that is overheated. Do not operate the trailer until the components are replaced.

ThermALERT™ does not eliminate the need to perform wheel-end maintenance at regularly-scheduled intervals.

If the MTIS Indicator Light Comes ON When the Air System is Charging

When you start a vehicle, the MTIS indicator light initially may come ON while the air system is charging. However, if the indicator light stays ON for more than 10 minutes, a tire may be damaged and losing air pressure. Inspect the tires for damage and air leaks. Repair damaged or leaking tires before returning the vehicle to service.

Information contained in this publication was in effect at the time the publication was approved for printing and is subject to change without notice or liability. Meritor Tires, Vehicle Systems, LLC, reserves the right to revise the information presented or to discontinue the production of parts described at any time.

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If the MTIS Indicator Light Comes ON During Operation

**WARNING**

If ThermALERT™ activates during vehicle operation, you must repair or replace components that caused the wheel end to overheat before returning the vehicle to service. You also must install a new thermal screw, which is not reusable. Otherwise, the indicator light will continue to remain ON during vehicle operation, even though the wheel end has been repaired. If you ignore the indicator light, and another wheel end overheats during operation, serious personal injury and damage to components can result.

MTIS with ThermALERT™ detects when air is escaping from the axle's thermal protection valve (PPV) and out through the hubcap tee vent, which occurs if a wheel end is operating at an abnormally high temperature. The MTIS indicator light will come ON to alert you that air flow through the system is excessive.

1. Immediately find a safe place to bring the tractor and trailer to a complete stop.
2. Inspet the trailer hubs for air leaks.
3. Listen for ThermALERT’s audible sound at the wheel end. If you hear the sound, the wheel end is overheated. Do not operate the trailer until the wheel end components are repaired. If a wheel end overheats during operation, it can separate from the vehicle. Serious personal injury and damage to components can result.
4. If you do not hear the audible sound at the wheel end, inspect the tires for damage. Replace damaged or leaking tires before returning the vehicle to service.

5. Refer to Meritor’s Maintenance Manual 14P for service instructions. Notify your dispatcher or service department, or contact the Meritor OnTrac™ Customer Call Center at 866-668-7221 for assistance.

**System Pressure Adjustment Knob**

The system pressure adjustment knob adjusts system air pressure. Adjust system air pressure according to the required tire pressure.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

System Pressure Adjustment Knob

The system pressure adjustment knob adjusts system air pressure. Adjust system air pressure according to the required tire pressure.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

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Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

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**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

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Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

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**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

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**Flow Sensing Switch**

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**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

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**Flow Sensing Switch**

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**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

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Refer to Adjust the MTIS Tire Pressure Setting in this guide.

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**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

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Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

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**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

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**Flow Sensing Switch**

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**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

**Hubs**

**Pre-Service Check**

perform vehicle maintenance or service.

If tire pressure is not correct:

Refer to Adjust the MTIS Tire Pressure Setting in this guide.
If the MTIS Indicator Light Comes ON During Operation

**Warning**
If ThermALERT™ activates during vehicle operation, you must repair or replace components that caused the wheel end to overheat before returning the vehicle to service. You also must install a new thermal screw, which is not reusable. Otherwise, the indicator light will continue to remain ON during vehicle operation, even though the wheel end has been repaired. If you ignore the indicator light, and another wheel end overheats during operation, serious personal injury and damage to components can result.

MTIS with ThermALERT™ detects when air is escaping from the axle’s thermal protection system through the hubcap vent. When the system detects that a wheel end is operating at an abnormally high temperature, the MTIS indicator light will come ON to alert you that air flow through the system is excessive.

1. Immediately find a safe place to bring the tractor and trailer to a complete stop.
2. Inspect the trailer hubs for air leaks. If the wheel end is overheated, do not operate the trailer until the wheel-end components are repaired. If a wheel end overheats during operation, it can separate from the vehicle. Serious personal injury and damage to components can result.
3. If you do not hear the audible sound at the wheel end, inspect the tire for damage. Repairs or leaks must be fixed before the vehicle is returned to service.
4. Refer to Meritor’s Maintenance Manual 14P for service instructions. Notify your dispatcher or service department, or contact the Meritor OnTrac™ Customer Call Center at 866-668-7221 for assistance.

Other Components

- **Flow Sensing Switch**
- **Hubcaps**
- **System Pressure Adjustment Knob**
- **Stator**
- **Through-Tee**
- **Deflector Shield**

Pre-Service Check

**Warning**
To prevent serious eye injury, always wear safe eye protection when you perform vehicle operation or maintenance.

1. Check that the trailer has the correct air supply (120-130 psi [837.4-916.3 kPa]) and the system is connected to a 12-volt power source.
2. Check that the shut-off valve is ON. When the shut-off valve is OFF, the knob will align with the valve body. Check that the petcock is closed by turning it CLOCKWISE.
3. Check the indicator light by opening the petcock at the control box. The light will come ON to indicate that it is operating correctly.
4. Use an accurate air pressure gauge to check tire pressure at the system hose.
   - If tire pressure is not correct: Refer to Adjust the MTIS Tire Pressure Setting in this guide.
5. Use a soap-and-water solution to check the hose-to-valve stem connections, hose-to-through-tee connections and hubcap vents for leaks. Repair or replace parts as required. Refer to Maintenance Manual 14P.

6. Check the wheel ends to verify that hoses do not contact the wheels.
   - If a hose contacts a wheel: Use a wrench to slightly rotate the through-tee to reposition the hose. Ensure that the through-tee is still tightened to the hubcap at 45-50 lb-in (5.08-6.21 N·m).
System Pressure Adjustment Knob

The system pressure adjustment knob adjusts system air pressure. Adjust system air pressure according to the required tire pressure.

Flow Sensing Switch

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

Wheel-End Assembly

The stator is located inside the axle spindle and the through-tee is attached to the hubcap. Pressurized air passes from the through-tee into the stator. A dynamic seal, located in the through-tee, allows rotation without loss of air pressure.

Hoses

A hose is a flexible valve stem extension, which mechanically opens the tire valve stem and allows air to pass into a tire. There are three sizes of the tire inflation system hoses: short, for 17- and 19-inch wheels; long, for 22.5- and 24.5-inch wheels; and a 16-inch for 10-hole, 22.5-inch aluminum wheel applications.

Stator and Through-Tee

The stator is located inside the axle spindle and the through-tee is attached to the hubcap. Pressurized air passes from the stator into the through-tee to reposition the hose. Ensure that the through-tee is still tightened to the hubcap at 45-55 lb-in (5.08-6.21 N·m).

Deflector Shield

The deflector shield helps keep contaminants such as dirt and water from entering the wheel end.

Indicator Light

An indicator light mounted on the front of the trailer comes ON when the system delivers an excessive amount of air due to a leaking tire, tire inflation system component and a wheel end operating at an abnormally high temperature.

Hubs

Hubs for MTIS with ThermALERT™ use vents to prevent pressure buildup in the wheel end, as well as a deflector shield to help prevent contaminants from entering the wheel end.

Press Plug

The press plug is used in axles with hollow spindles to seal off the pressurized axle interior from the wheel end and provide a means of holding and securing the stator.

Pre-SERVICE check

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

1. Check that the trailer has the correct air supply (120-130 psi [837.4-906.9 kPa] and the system is connected to a 12-volt power source.
2. Check that the shut-off valve is ON. When the shut-off valve is ON, the knob aligns with the valve body. Check that the petcock is closed by turning it Clockwise.
3. Check the indicator light by opening the petcock at the control box. The light will come ON to indicate that it is operating correctly.
4. Use an accurate air pressure gauge to check tire pressure at the system hose.
5. If tire pressure is not correct: Refer to Adjust the MTIS Tire Pressure Setting in this guide.
6. Check the wheel ends to verify that hoses do not contact the wheels.
7. If a hose contacts a wheel: Use a wrench to slightly rotate the through-tee to reposition the hose. Ensure that the through-tee is still tightened to the hubcap at 45-55 lb-in (5.08-6.21 N·m).

If the MTIS Indicator Light Comes ON During Operation

**WARNING**

If ThermALERT™ activates during vehicle operation, you must repair or replace components that caused the wheel end to overheat before returning the vehicle to service. You also must install a new thermal screw, which is not reusable. Otherwise, the indicator light will continue to remain ON during vehicle operation, even though the wheel end has been repaired. If you ignore the indicator light, and another wheel end overheats during operation, serious personal injury and damage to components can result.

MTIS with ThermALERT™ detects when air is escaping from the axle’s thermal plug and out through the hubcap tee vent, which occurs if a wheel end is operating at an abnormally high temperature. The MTIS indicator light will come ON to alert you that air flow through the system is excessive.

1. Immediately find a safe place to bring the tractor and trailer to a complete stop.
2. Inspect the trailer hubs for air leaks.
3. Listen for ThermALERT’s audible sound at the wheel end. If you hear the sound, the wheel end is overheated. Do not operate the trailer until the wheel-end components are repaired. If a wheel end overheats during operation, it can separate from the vehicle. Serious personal injury and damage to components can result.
4. If you do not hear the audible sound at the wheel end, inspect the tires for damage. Repeat damaged or leaking tires before returning the vehicle to service.

5. Refer to Meritor’s Maintenance Manual 14P for instructions. Notify your dispatcher or service department, or contact the Meritor OnTheRoad® Customer Call Center at 866-666-7221 for assistance.

Hose-to-through-tee connections and hubcap vents for leaks. Repair or replace parts as required. Refer to Maintenance Manual 14P.
If the MTIS Indicator Light Comes ON During Operation

**WARNING**

If ThermALERT™ activates during vehicle operation, you must repair or replace components that caused the wheel end to overheat before returning the vehicle to service. You also must install a new thermal screw, which is not reusable. Otherwise, the indicator light will continue to remain ON during vehicle operation, even though the wheel end has been repaired. If you ignore the indicator light, and another wheel end overheats during operation, serious personal injury and damage to components can result.

MTIS with ThermALERT™ detects when air is escaping from the axle’s thermal plug and out through the hubcap tee vent, which occurs if a wheel end is operating at an abnormally high temperature. The MTIS indicator light will come ON to alert you that air flow through the system is excessive.

1. Immediately find a safe place to bring the tractor and trailer to a complete stop.
2. Inspect the trailer hubs for air leaks.
3. If you do not hear the audible sound at the wheel end, inspect the tire for damage. Repair damaged or leaking tires before returning the vehicle to service.
4. Refer to Meritor’s Maintenance Manual 14P for service instructions. Notify your dispatcher or service department, or contact the Meritor OnTrac™ Customer Call Center at 866-668-7221 for assistance.

**Pre-Service Check**

**WARNING**

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

1. After receiving a trailer and before placing it in service, check the tire inflation system, or any tire, loses air pressure during operation.
2. Check that the shut-off valve is ON. When the shut-off valve is ON, the knob aligns with the valve body. Check that the petcock is closed by turning it clockwise.
3. Check the indicator light by opening the petcock at the control box. The light will come ON to indicate that it’s operating correctly.
4. Use an accurate air pressure gauge to check tire pressure at the system hose.
5. Use a soap-and-water solution to check the hose-to-valve stem connections, hose-to-through-tee connections and hubcap vents for leaks. Repair or replace parts as required. Refer to Maintenance Manual 14P.
6. Check the wheel ends to verify that hoses do not contact the wheels.

**If tire pressure is not correct:** Refer to Adjust the MTIS Tire Pressure Setting in this guide.

**System Pressure Adjustment Knob**

The system pressure adjustment knob adjusts system air pressure. Adjust system air pressure according to the required tire pressure.

**Flow Sensing Switch**

The flow sensing switch illuminates the indicator light when the system delivers an excessive amount of air to either a leaking tire, a leaking tire inflation system component, or with the ThermALERT™ system, a wheel end operating at an abnormally high temperature.

**Wheel-End Assembly**

The deflector shield helps keep contaminants such as dirt and water from entering the wheel end.

**Hoses**

A hose is a flexible valve stem extension, which mechanically opens the valve stem and allows air to pass into a tire. There are three sizes of the tire inflation system hoses: short, for 17- and 19-inch wheels; long, for 22.5- and 24.5-inch wheels; and a 16-inch for 10-hole, 22.5-inch aluminum wheel applications.

The self-draining filter automatically removes liquids and contaminants from the system.

The pressure protection valve (PPV) ensures that air is available for other trailer functions. Air will not be delivered to the tire inflation system until the trailer air system is charged to at least 60 psi (413 kPa). The PPV also maintains air tank pressure if a tire or a tire inflation system component is damaged.

If a hose contacts a wheel:

- Use a wrench to slightly rotate the through-tee to reposition the hose. Ensure that the through-tee is still tightened to the hubcap at 45-50 lb-in (5.08-6.21 N·m).

**MTIS Indicator Light**

An indicator light mounted on the front of the trailer comes ON when the system delivers an excessive amount of air due to a leaking tire, tire inflation system component and a wheel end operating at an abnormally high temperature. MTIS with ThermALERT™ will also have a decal installed at the indicator light on the trailer.

**Indicating Valve System (MTIS) with ThermALERT™ uses hubcaps with six vents. These hubcaps are not interchangeable with the three-vent hubcaps.**

**Stator and Through-Tee**

The stator is located inside the axle spindle and the through-tee is attached to the hubcap. Pressurized air passes from the axle interior to the rotating hub through a tubular conduit from the through-tee into the stator. A dynamic seal, located in the through-tee, allows rotation without loss of air pressure.

**Deflector Shield**

The deflector shield helps keep contaminants such as dirt and water from entering the wheel end.
Adjust the MTIS Tire Pressure Setting

1. Check that the control box shut-off valve is in the ON position and that available air pressure is at 120 psi.
2. Remove all of the hoses from the through-tees, which are mounted in the center of the hubcaps.
3. Test a tire: Select one tire for this test. Use the valve core located in the hose that you removed in Step 3 to reduce tire pressure approximately 5 to 10 psi below the fleet's specifications.
4. Reconnect the hose to the test tire to the through-tee fitting.
5. Allow sufficient time for the pressure to equalize. Disconnect the hose from the through-tee. Use a pressure gauge to check the tire pressure. Tire pressure should equal system pressure.
6. Reconnect the tire to the through-tee.
7. When the tire pressure is correct, lock the adjustment knob by pushing inward and reconnect the remaining hoses to the through-tees.

Install a Hose

**WARNING** To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service. 

**CAUTION** During installation, hand-tighten the tire inflation system hoses to the tire valve stems, then use a wrench to tighten the connections an additional half turn. Do not overtighten the connection, which can damage the hose seal and cause a tire to deflate when the trailer is parked. Damage to components can result.

1. Hand-tighten the tire inflation system hoses to the tire valve stems.
2. Use a 7/16-inch wrench to tighten the connections an additional half turn. Do not overtighten the connection, which can damage the hose seal and cause a tire to deflate when the trailer is parked.
3. Hand-tighten the tire inflation system hoses to the through-tee. Do not use pliers.
4. Use soapy water to test the connections for leaks.
5. Allow sufficient time for the pressure to equalize. Disconnect the hose from the through-tee to reduce tire pressure approximately 5 to 10 psi below the fleet's specifications.

**WARNING** Damage to components can result. Do not overtighten the connection, which can damage the hose seal and cause a tire to deflate when the trailer is parked. Do not use pliers.

**CAUTION** Air escaping from the tee vent produces an audible noise, which helps you to identify the wheel end that is overheated. Do not operate the trailer until the components are replaced.

If the Connection Leaks After Following the Previous Instructions

1. Remove the hose from the tire valve stem.
2. Follow Steps 1-4 to install and test the hose.
3. If the connection still leaks: Replace the hose seal or the entire hose.

**WARNING** Do not change the tire pressure setting while the system is charging. 

**CAUTION** Meritor Tire Inflation System (MTIS) with ThermALERT™ does not eliminate the need to perform wheel-end maintenance at regularly-scheduled intervals. ThermALERT™ detects when air is escaping from the axle's thermal plug and out through the hub cap tee vent, which occurs if a wheel end is operating at an abnormally high temperature. The MTIS indicator light will come ON to alert you to immediately find a safe place to bring the tractor and trailer to a complete stop. If the indicator light comes ON during operation, immediately find a safe place to bring the tractor and trailer to a complete stop. You must repair components that caused the air leak before returning the vehicle to service. 

**WARNING** Before performing maintenance or service on the system, follow the current procedure:

1. Turn OFF the System Before Performing Maintenance

   **WARNING** If the connection still leaks: Replace the hose seal or the entire hose.

   **CAUTION** Meritor Tire Inflation System (MTIS) uses compressed air from the trailer to inflate any tire that falls below the system air pressure setting during operation. Air from the existing trailer air supply is routed to a control box, then into each axle. The axles act as conduits to distribute air through rotary union assemblies at the spindle ends, which then distributes air to each tire as needed. If a tire is leaking, check valves in the tire delivery lines prevent loss of pressure in the remaining tires.

   ThermALERT™ detects when air is escaping from the axle's thermal plug and out through the hub cap tee vent, which occurs if a wheel end is operating at an abnormally high temperature. The MTIS indicator light will come ON to alert you to immediately find a safe place to bring the tractor and trailer to a complete stop. If the indicator light comes ON during operation, immediately find a safe place to bring the tractor and trailer to a complete stop. You must repair components that caused the air leak before returning the vehicle to service. 

   **CAUTION** The tire inflation system uses compressed air. Turn the system OFF and drain the system at the petcock before you perform maintenance or service to avoid serious personal injury and damage to components. 

   1. Remove the hose from the tire valve stem.
   2. Follow Steps 1-4 to install and test the hose.
   3. If the connection still leaks: Replace the hose seal or the entire hose.

For Complete Maintenance and Service Instructions for MTIS with ThermALERT™

Refer to Installation and Maintenance Manual 14P, Meritor Tire Inflation System (MTIS). Call the Meritor OnTrac™ Customer Call Center at 866-668-7221 to obtain this publication or visit Literature on Demand at meritor.com.
Adjust the MTIS Tire Pressure Setting

1. Check that the control box shut off valve is in the ON position and that available air pressure is at 120 psi.
2. Install all of the hoses from the through-tees, which are mounted in the center of the hubcaps.
3. Test a tire: Select one tire for this test. Use the valve core located in the hose that you removed in Step 3 to reduce tire pressure approximately 5 to 10 psi below the fluid specifications.
4. Reconnect the hose to the test tire to the through tee fitting.
5. Allow sufficient time for the pressure to equilibrate. Disconnect the hose from the through tee. Use a pressure gauge to check the tire pressure. Tire pressure should equal system pressure.
6. Reconnect the hose to the through tee.
7. When the tire pressure is correct, lock the adjustment knob by pushing inward and reconnect the remaining hoses to the through-tees.

Install a Hose

**WARNING** To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

**CAUTION** During installation, hand-tighten the tire inflation system hoses to the tire valve stems, then use a wrench to tighten the hoses to the correct specification. Do not overtighten the connection, which can damage the hose seal and cause a tire to deflate when the trailer is parked. Damage to components can result.

1. Hand-tighten the tire inflation system hoses to the tire valve stems.
2. Use a 7/16-inch wrench to tighten the connections an additional half turn. Do not overtighten the connection, which can damage the hose seal and cause a tire to deflate when the trailer is parked.
3. Hand-tighten the tire inflation system hoses to the through-tee. Do not use pliers.
4. Use soapy water to test the connections for leaks.
5. If the connection still leaks, check valves in the delivery lines prevent loss of pressure in the remaining tires.
6. Turn OFF the System Before Performing Maintenance

**WARNING** The tire inflation system uses compressed air. Turn the system OFF and drain the system at the petcock before you perform maintenance or service to avoid serious personal injury and damage to components.

1. Remove the hose from the tire valve stem.
2. Follow Steps 1-4 to install and test the hose.
3. If the connection still leaks, replace the hose seal or the entire hose.

Meritor Tire Inflation System (MTIS) with ThermALERT™ Technical Guide

System Overview

Meritor Tire Inflation System (MTIS) is a compressed air from the trailer to inflate any tire that falls below the system air pressure setting during operation. Air from the existing trailer air supply is routed to a control box, then into each axle. The axles act as conduits to distribute air through rotary union assemblies at the spindle ends, which then distribute air to each tire as needed. If a tire is leaking, check values in the tire delivery lines prevent loss of pressure in the remaining tires.

WARNING ThermALERT™ detects when air is escaping from the axle’s thermal plug and out through the hubcap tee vent, which occurs if a wheel end is operating at an abnormally high temperature. The MTIS indicator light will come ON to alert you if there is an excessive amount of air flow through the system, which can be caused by a leaking tire or a loose connection, or both. The indicator light comes ON during operation, immediately find a safe place to bring the tractor and trailer to a complete stop. You must repair components that caused the air leak before returning the vehicle to service.

MTIS does not eliminate the need to perform wheel-end maintenance at regularly scheduled intervals.

ThermALERT™

ThermALERT™ detects when air is escaping from the axle’s thermal plug and out through the hubcap tee vent, which occurs if a wheel end is operating at an abnormally high temperature. The MTIS indicator light will come ON to alert you if there is an excessive amount of air flow through the system, which can be caused by a leaking tire or a loose connection, or both. The indicator light comes ON during operation, immediately find a safe place to bring the tractor and trailer to a complete stop. You must repair components that caused the air leak before returning the vehicle to service.

For Complete Maintenance and Service Instructions for MTIS with ThermALERT™

Refer to Installation and Maintenance Manual 1-4, Meritor Tire Inflation System (MTIS). Call the Meritor OnTrac™ Customer Call Center at 866-668-7221 to obtain this publication or visit Literature on Demand at meritor.com.
Adjust the MTIS Tire Pressure Setting

1. Check that the control box shut-off valve is in the OFF position and that available air pressure is at 120 psi.
2. Remove all of the hoses from the through-tees, which are mounted in the center of the hubcaps.
3. Test a tire: Select one tire for this test. Use the valve core located in the hole that you removed in Step 3 to reduce tire pressure approximately 5 to 10 psi below the test’s specifications.
4. Reconnect the hose to the test tire in the through-tee fitting.
5. Allow sufficient time for the pressure to equalize. Disconnect the hose from the through-tee. Use a pressure gauge to check the tire pressure. Tire pressure should equal system pressure.
6. Reconnect the hose to the through-tee.
   - To increase tire pressure: Pull the system adjustment knob out, then turn the adjustment knob in the control box COUNTERCLOCKWISE in small increments. Repeat Step 5.
   - To decrease tire pressure: Pull the system adjustment knob out, then turn the adjustment knob in the control box CLOCKWISE in small increments. Repeat Step 5.

   When the tire pressure is correct, lock the adjustment knob by pushing inward and reconnect the remaining hoses to the through-tee.

   For Complete Maintenance and Service Instructions for MTIS with ThermALERT™
   Refer to Installation and Maintenance Manual 14P, Meritor Tire Inflation System (MTIS). Call the Meritor OnTrac™ Customer Call Center at 866-668-7221 to obtain this publication or visit Literature on Demand at meritor.com.

Install a Hose

1. Hand-tighten the tire inflation system hoses to the tire valve stems.
2. Use a 7/16-inch wrench to tighten the connections an additional half turn.
3. Hand-tighten the tire inflation system hoses to the through-tee. Do not use pliers.
4. Use soapy water to test the connections for leaks.
5. Reconnect the hose on the test tire to the through-tee fitting.
6. Allow sufficient time for the pressure to equalize. Disconnect the hose from the through-tee. Use a pressure gauge to check the tire pressure. Tire pressure should equal system pressure.

If the Connection Leaks After Following the Previous Instructions

1. Remove the hose from the tire valve stem.
2. Follow Steps 1-4 to install and test the hose.
   - If the connection still leaks: Replace the hose seal or the entire hose.

For Complete Maintenance and Service Instructions for MTIS with ThermALERT™

Refer to Installation and Maintenance Manual 14P, Meritor Tire Inflation System (MTIS). Call the Meritor OnTrac™ Customer Call Center at 866-668-7221 to obtain this publication or visit Literature on Demand at meritor.com.

System Overview

The Meritor Tire Inflation System (MTIS) uses compressed air from the trailer to inflate any tire that falls below the system air pressure setting during operation. Air from the existing trailer air supply is routed to a control box, then into each axle. The axles act as conduits to distribute air through rotary union assemblies at the spindle ends, which then distribute air to each tire as needed. If a tire is leaking, check values in the tire delivery lines prevent loss of pressure in the remaining tires.

The MTIS indicator light on the front of the trailer will come ON to alert you if there is an excessive amount of air flow through the system, which can be caused by a leaking tire or a loose connection, or both. If the indicator light comes ON during operation, immediately find a safe place to bring the tractor and trailer to a complete stop. You must repair components that caused the air leak before returning the vehicle to service.

MTIS does not eliminate the need to perform wheel-end maintenance at regularly-scheduled intervals.

ThermALERT™

ThermALERT™ detects when air is escaping from the axle’s thermal plug and out through the hubcap tee vent, which occurs if a wheel end is operating at an abnormally high temperature. The MTIS indicator light will come ON to alert you to immediately find a safe place to bring the tractor and trailer to a complete stop.

Air escaping from the tee vent produces an audible noise, which helps you to identify the wheel end that is overheated. Do not operate the trailer until the components are replaced.

ThermALERT™ does not eliminate the need to perform wheel-end maintenance at regularly-scheduled intervals.

If the MTIS Indicator Light Comes On When the Air System is Charging

When you start a vehicle, the MTIS indicator light initially may come ON while the air system is charging. However, if the indicator light stays ON for more than 50 minutes, a tire may be damaged and losing air pressure. Inspect the tires for damage and air leaks. Repair damaged or leaking tires before returning the vehicle to service.

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