Commercial Vehicle Safety Alliance

North American Standard Inspection Program

INSPECTION BULLETIN

**2011-04** **April 14, 2011**

# Antilock Brake System (ABS) Inspections

## Summary

This *Inspection Bulletin* provides guidance for inspecting the antilock brake system (ABS) on a bus, truck, tractor or trailer during a roadside inspection, and for identifying when a vehicle is in violation.

## Background

Antilock brakes are installed on vehicles to eliminate wheel lockup and prevent skidding, which helps drivers maintain control during stops on low traction surfaces and in emergency stopping situations. In addition to the direct benefit of greater directional control, the improved vehicle control offered by ABS reduces the potential for trailer swing-out and jack-knifing of combination vehicles, and reduces the potential for spin-out of single-unit vehicles.

ABS operates only in specific operating conditions and it is difficult for a driver to confirm ABS is working correctly. For this reason ABS includes an on-board fault detection system, which activates an indicator lamp to notify the driver of any ABS malfunction. ABS malfunction lamps are yellow-colored and located on the instrument panel of trucks, buses and truck tractors (dash-mounted), and located on the exterior of trailers near the red rear side marker lamp on the left side (trailer-mounted). Converter dollies must have the lamp located on their left side. ABS malfunction lamps must be clearly identified with the letters “ABS”.

A recent report entitled “*Warning Assessment of Antilock Brake System (ABS) Malfunction Indicator Lamp Status – A Snapshot of In-Service Vehicles”, DOT-FMCSA-MCP_PSV-05-003-ABS* provides the results of inspections of ABS malfunction indicator lamps of approximately 1000 vehicles. Despite obvious safety benefits, this study found that approximately one in six power units manufactured on or after March 1, 1997, and one in three trailers manufactured on or after March 1, 1998 was operating with a malfunction of the ABS. These results point out the need for more intensive inspection of vehicle ABS.

## Guidance

The functional status of a commercial vehicle required to be equipped with ABS, is indicated by the ABS malfunction lamp. When power is initially provided to the ABS system, either when the vehicle’s ignition switch is turned on, or when power is supplied to the brake lamp circuit on a trailer, the lamp momentarily turns on to confirm it is working and during this time a self-test of the ABS is automatically conducted. When any fault is detected during the system test, the lamp stays on, otherwise the lamp turns off. A vehicle malfunction and possible violation is present when the ABS malfunction lamp fails to turn on at all or when the lamp turns on and stays on.

## Applicability

The effective dates for ABS requirements in the U.S. and Canada vary depending on the vehicle’s date of manufacture, the type of brakes and on the vehicle type. Truck tractors having air brakes manufactured on or after March 1, 1997, and operating in the U.S. must have ABS. Trucks and buses having hydraulic brakes



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manufactured on or after March 1, 1999, and operating in the U.S. must have ABS. Trailers and single unit vehicles manufactured on or after March 1, 1998, and operating in the U.S. must have ABS. Truck tractors, single unit vehicles and trailers manufactured on or after April 1, 2000, having air or hydraulic brakes and operating in Canada must have ABS. Towing vehicles and trailers having air brakes manufactured on or after March 1, 2001, operating in Canada or the U.S. must be capable of communicating with one another so that a trailer ABS malfunction is indicated on a separate warning lamp on the instrument panel of the towing vehicle.

Older truck tractors, buses, trucks and trailers were not required to be equipped with ABS and malfunction lamps operate in a variety of ways depending on the vehicle manufacturer. In some cases the vehicle must travel up to 5 mph (7 km/h) in order to turn out the ABS malfunction lamp. Since this was not a regulated requirement at the time of manufacture, these vehicles are not subject to inspection for ABS system violations.

### Post-Crash Inspection of ABS

The proper functionality of a vehicle's ABS can be an important factor in many crash incidents. Persons conducting a vehicle inspection in such cases are advised to confirm the status of the ABS using the procedures outlined in this bulletin and further advised to fully identify the nature of any malfunction that may be present.

### ABS Malfunction Lamp Location and Identification

There is considerable variation in the location and style of dash-mounted ABS malfunction lamps between manufacturers, and even among vehicles produced by any given manufacturer. It is not uncommon for the parking brake lamp, ABS malfunction lamps, and automatic traction control (ATC) lamp to be located near each other on the dashboard and often they are the same color. The symbol or characters in the middle of the circle may be the only difference, so it can be hard to distinguish between them. Due to the lack of uniformity of the location and style of these types of lamps, identifying the proper lamp can be challenging, particularly when the lamp is inoperative. In some cases, the lamp may turn on and off very quickly and may require several cycles to correctly identify the ABS malfunction lamp. If both the towing vehicle and trailer were manufactured after March 1, 2001, failure of the dash-mounted trailer ABS malfunction lamp to illuminate could be due to an ABS malfunction in the towing vehicle, the trailer or both units.

### Special Case - Combination Vehicles with Full-Time Electrical Power on Trailers

A very limited number of combination vehicles, particularly fuel tankers, provide full-time electrical power to the trailer in order to maintain safety-related equipment on the trailer in an operational status, even when the towing vehicle's engine is shut down and the ignition switch is off. Cycling the ignition switch on these vehicles will check the towing vehicle ABS malfunction light just as is done normally, however, it will not cycle the trailer ABS malfunction lamps mounted on either the towing vehicle dash or the trailer. In this special case, it will be necessary to ask the driver to first disconnect and then reconnect the electrical cable between the towing vehicle and trailer while observing the operation of the trailer ABS malfunction lamps mounted on the towing vehicle dash (all towing vehicles manufactured after March 1, 2001) and on the trailer.



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## CVSA Standard ABS Inspection Procedures for U.S. Operations

Determine each vehicle's manufacture date and then select the correct procedure in the chart below:

| Manufacture Date | | |
|---|---|---|
| **Truck or Bus with Hydraulic Brakes** | | |
| Before March 1, 1999 | ABS is not required. | |
| On or after March 1, 1999 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| **Truck or Bus with Air Brakes** | | |
| Before March 1, 1998 | ABS is not required. | |
| On or after March 1, 1998 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| **Truck or Bus with Air Brakes Equipped to Tow Another Vehicle with Air Brakes** | | |
| Before March 1, 1998 | ABS is not required. | |
| On or after March 1, 1998 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| On or after March 1, 2001 | Not connected to any trailer or connected to a trailer manufactured before March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. The trailer ABS malfunction lamp will not illuminate in this case.* |
| | Connected to a trailer manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both the truck or bus, and trailer ABS dash lamps turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS.** |

* The trailer ABS lamp in the dash only operates when the tractor is connected to a trailer manufactured after March 1, 2001.

** When the external ABS lamp on a trailer indicates a malfunction, and the ABS light on the dash of the tractor indicates the malfunction for the trailer, the indicator lamp on the tractor is functioning as designed. As a result, the tractor light on the dash **WILL NOT** be documented as a violation. The tractor ABS light for the trailer will never result in a violation for the tractor because it cannot be determined at roadside if the problem is with the tractor or the trailer.



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| Manufacture Date | Truck Tractor with Air Brakes | |
|---|---|---|
| Before March 1, 1997 | ABS is not required. | |
| On or after March 1, 1997 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the tractor ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| On or after March 1, 2001 | Not connected to any trailer or connected to a trailer manufactured before March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the tractor ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. The trailer ABS malfunction lamp will not illuminate in this case.* |
| | Connected to a trailer manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both tractor and trailer dash-mounted ABS malfunction lamps turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS. |
| **Trailer with Air Brakes (Including a Trailer Converter Dolly)** | | |
| Before March 1, 1998 | ABS is not required. | |
| On or after March 1, 1998 | Towed by a truck or truck tractor manufactured before March 1, 1997. | Apply the brake pedal and confirm that the trailer-mounted ABS malfunction lamp turns on and after a few seconds goes out before the brake is released. Any other response indicates a malfunction of the ABS. |
| | Towed by a truck or truck tractor manufactured on or after March 1, 1997.** | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the trailer-mounted ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. |
| On or after March 1, 2001 | Towed by a truck or truck tractor manufactured before March 1, 2001. | Test in the same manner as trailers manufactured on or after March 1, 1998. |
| | Towed by a truck or truck tractor manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both the trailer dash-mounted ABS malfunction lamp and the trailer-mounted ABS malfunction lamp turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS. |

* The trailer ABS lamp in the dash only operates when the tractor is connected to a trailer manufactured after March 1, 2001.

** Power to the trailer's ABS circuit is delivered by a dedicated circuit from the truck tractor.



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## Antilock Brake System (ABS) Inspections

**In the U.S. the following vehicles are exempt from the requirements to have ABS:**

- Any trailer that has a width of more than 102.36 inches with extendable equipment in the fully retracted position and is equipped with two short track axles in a line across the width of the trailer
- Any vehicle equipped with an axle that has a gross axle weight rating (GAWR) of 29,000 pounds or more
- Any truck or bus that has a speed attainable in 2 miles of not more than 33 mph
- Any truck that has a speed attainable in 2 miles of not more than 45 mph, an unloaded vehicle weight that is not less than 95 percent of its gross vehicle weight rating (GVWR), and no capacity to carry occupants other than the driver and operating crew
- Any trailer that has a GVWR of more than 120,000 pounds and whose body conforms to that described in the definition of heavy hauler trailer set forth in S4; *Heavy hauler trailer* means a trailer which has one or more of the following characteristics, but which is not a container chassis trailer
    - Its brake lines are designed to adapt to separation or extension of the vehicle frame, or
    - Its body consists only of a platform whose primary cargo-carrying surface is not more than 40 inches above the ground in an unloaded condition, except that it may include sides that are designed to be easily removable and a permanent "front end structure" as that term is used in §393.106 of this title
- Any trailer that has an unloaded vehicle weight which is not less than 95 percent of its GVWR
- Any load divider dolly



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## Antilock Brake System (ABS) Inspections

## CVSA Standard ABS Inspection Procedures for Canadian Operations

Determine each vehicle's manufacture date and then select the correct procedure in the chart below:

| Manufacture Date | | |
|---|---|---|
| **Truck or Bus with Hydraulic Brakes** | | |
| Before April 1, 2000 | ABS is not required. | |
| On or after April 1, 2000 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| **Truck or Bus with Air Brakes** | | |
| Before April 1, 2000 | ABS is not required. | |
| On or after April 1, 2000 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| **Truck or Bus with Air Brakes Equipped to Tow Another Vehicle with Air Brakes** | | |
| Before April 1, 2000 | ABS is not required. | |
| On or after April 1, 2000 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| On or after March 1, 2001 | Not connected to any trailer or connected to a trailer manufactured before March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. The trailer ABS malfunction lamp will not illuminate in this case.* |
| | Connected to a trailer manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both the truck or bus, and trailer ABS dash lamps turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS.** |

* The trailer ABS lamp in the dash only operates when the tractor is connected to a trailer manufactured after March 1, 2001.

** When the external ABS lamp on a trailer indicates a malfunction, and the ABS light on the dash of the tractor indicates the malfunction for the trailer, the indicator lamp on the tractor is functioning as designed. As a result, the tractor light on the dash **WILL NOT** be documented as a violation. The tractor ABS light for the trailer will never result in a violation for the tractor because it cannot be determined at roadside if the problem is with the tractor or the trailer.



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## Antilock Brake System (ABS) Inspections

| Manufacture Date | Truck Tractor with Air Brakes | |
|---|---|---|
| Before April 1, 2000 | ABS is not required. | |
| On or after April 1, 2000 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the tractor ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| On or after March 1, 2001 | Not connected to any trailer or connected to a trailer manufactured before March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the tractor ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. The trailer ABS malfunction lamp will not illuminate in this case.* |
| | Connected to a trailer manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both tractor and trailer dash-mounted ABS malfunction lamps turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS. |
| | **Trailer with Air Brakes (Including a Trailer Converter Dolly)** | |
| Before April 1, 2000 | ABS is not required. | |
| On or after April 1, 2000 | Connected to a truck or truck tractor manufactured before April 1, 2000. | Apply the brake pedal and confirm that the trailer-mounted ABS malfunction lamp turns on and after a few seconds goes out before the brake is released. Any other response indicates a malfunction of the ABS. |
| | Connected to a truck or truck tractor manufactured on or after April 1, 2000. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the trailer-mounted ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. |
| On or after March 1, 2001 | Connected to a truck or truck tractor manufactured before March 1, 2001. | Test in the same manner as trailers manufactured on or after April 1, 2000. |
| | Connected to a truck or truck tractor manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both the trailer dash-mounted ABS malfunction lamp and the trailer-mounted ABS malfunction lamp turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS. |

* The trailer ABS lamp in the dash only operates when the tractor is connected to a trailer manufactured after March 1, 2001.



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## Antilock Brake System (ABS) Inspections

**In Canada the following vehicles are exempt from the requirements to have ABS:**

- Any trailer that has a width of more than 2.6 m (102.36 in.) with extendable equipment in the fully retracted position and is equipped with two short track axles in a line across the width of the trailer
- Any vehicle equipped with an axle that has a gross axle weight rating (GAWR) of 13,154 kg (29,000 lb.) or more
- Any truck or bus that has a speed attainable in 3.2 km (2 mi.) of not more than 53.1 km/h (33 mph)
- Any truck that has a speed attainable in 3.2 km (2 mi.) of not more than 72.3 km/h (45 mph), an unloaded vehicle weight that is not less than 95 percent of its gross vehicle weight rating (GVWR), and no capacity to carry occupants other than the driver and operating crew
- Any trailer that has a GVWR of more than 54 432 kg (120,000 lb.) and has
    - brake lines designed to adapt to separation or extension of the vehicle frame, or
    - a body that consists of only a platform the primary cargo-carrying surface of which is not more than 101.6 cm (40 inches) above the ground in an unloaded condition, but may include sides that are designed for easy removal and a permanent front end structure
- Any trailer that has an unloaded vehicle weight which is not less than 95 percent of its GVWR
- Any load divider dolly



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# ABS Inspection Procedure U.S. Field Reference Version

| Manufacture Date | | |
|---|---|---|
| **Truck or Bus with Hydraulic Brakes** | | |
| Before March 1, 1999 | ABS is not required. | |
| On or after March 1, 1999 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| **Truck or Bus with Air Brakes** | | |
| Before March 1, 1998 | ABS is not required. | |
| On or after March 1, 1998 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| **Truck or Bus with Air Brakes Equipped to Tow Another Vehicle with Air Brakes** | | |
| Before March 1, 1998 | ABS is not required. | |
| On or after March 1, 1998 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| On or after March 1, 2001 | Not connected to any trailer or connected to a trailer manufactured before March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. The trailer ABS malfunction lamp will not illuminate in this case.* |
| | Connected to a trailer manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both the truck or bus, and trailer ABS dash lamps turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS.*** |
| **Truck Tractor with Air Brakes** | | |
| Before March 1, 1997 | ABS is not required. | |
| On or after March 1, 1997 | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. | |
| On or after March 1, 2001 | Not connected to any trailer or connected to a trailer manufactured before March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the tractor ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. The trailer ABS malfunction lamp will not illuminate in this case.* |
| | Connected to a trailer manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both tractor and trailer dash-mounted ABS malfunction lamps turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS. |
| **Trailer with Air Brakes (Including a Trailer Converter Dolly)** | | |
| Before March 1, 1998 | ABS is not required. | |
| On or after March 1, 1998 | Connected to a truck or truck tractor manufactured before March 1, 1997. | Apply the brake pedal and confirm that the trailer-mounted ABS malfunction lamp turns on and after a few seconds goes out before the brake is released. Any other response indicates a malfunction of the ABS. |
| | Connected to a truck or truck tractor manufactured on or after March 1, 1997.** | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the trailer-mounted ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. |
| On or after March 1, 2001 | Connected to a truck or truck tractor manufactured before March 1, 2001. | Test in the same manner as trailers manufactured on or after March 1, 1998. |
| | Connected to a truck or truck tractor manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both the trailer dash-mounted ABS malfunction lamp and the trailer-mounted ABS malfunction lamp turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS. |

* The trailer ABS lamp in the dash only operates when the tractor is connected to a trailer manufactured after March 1, 2001.

** Power to the trailer's ABS circuit is delivered by a dedicated circuit from the truck tractor.

*** When the external ABS lamp on a trailer indicates a malfunction, and the ABS light on the dash of the tractor indicates the malfunction for the trailer, the indicator lamp on the tractor is functioning as designed. As a result, the tractor light on the dash WILL NOT be documented as a violation. The tractor ABS light for the trailer will never result in a violation for the tractor because it cannot be determined at roadside if the problem is with the tractor or the trailer.

# ABS Inspection Procedure Canadian Field Reference Version

| Manufacture Date | | Truck or Bus with Air or Hydraulic Brakes |
|---|---|---|
| Before April 1, 2000 | | ABS is not required. |
| On or after April 1, 2000 | | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. |
| **Truck or Bus with Air Brakes Equipped to Tow Another Vehicle with Air Brakes** | | |
| Before April 1, 2000 | | ABS is not required. |
| On or after April 1, 2000 | | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. |
| On or after March 1, 2001 | Not connected to any trailer or connected to a trailer manufactured before March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that truck or bus ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. The trailer ABS malfunction lamp will illuminate in this case.* |
| | Connected to a trailer manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both the truck or bus, and trailer ABS dash lamps turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS.** |
| **Truck Tractor with Air Brakes** | | |
| Before April 1, 2000 | | ABS is not required. |
| On or after April 1, 2000 | | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the tractor ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. |
| On or after March 1, 2001 | Not connected to any trailer or connected to a trailer manufactured before March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the tractor ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. The trailer ABS malfunction lamp will not illuminate in this case.* |
| | Connected to a trailer manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both tractor and trailer dash-mounted ABS malfunction lamps turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS. |
| **Trailer with Air Brakes (Including a Trailer Converter Dolly)** | | |
| Before April 1, 2000 | | ABS is not required. |
| On or after April 1, 2000 | Connected to a truck or truck tractor manufactured before April 1, 2000. | Apply the brake pedal and confirm that the trailer-mounted ABS malfunction lamp turns on and after a few seconds goes out before the brake is released. Any other response indicates a malfunction of the ABS. |
| | Connected to a truck or truck tractor manufactured on or after April 1, 2000. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that the trailer-mounted ABS malfunction lamp turns on and after a few seconds the lamp goes out. Any other response indicates a malfunction of the ABS. |
| On or after March 1, 2001 | Connected to a truck or truck tractor manufactured before April 1, 2001. | Test in the same manner as trailers manufactured on or after April 1, 2000. |
| | Connected to a truck or truck tractor manufactured on or after March 1, 2001. | Begin with the ignition key in the "off" position. Turn the ignition key "on". Confirm that both the trailer dash-mounted ABS malfunction lamp and the trailer-mounted ABS malfunction lamp turn on and after a few seconds the lamps go out. Any other response indicates a malfunction of the ABS. |

* The trailer ABS lamp in the dash only operates when the tractor is connected to a trailer manufactured after March 1, 2001.

** When the external ABS lamp on a trailer indicates a malfunction, and the ABS light on the dash of the tractor indicates the malfunction for the trailer, the indicator lamp on the tractor is functioning as designed. As a result, the tractor light on the dash WILL NOT be documented as a violation. The tractor ABS light for the trailer will never result in a violation for the tractor because it cannot be determined at roadside if the problem is with the tractor or the trailer.