



APTA STANDARDS DEVELOPMENT PROGRAM  
**RECOMMENDED PRACTICE**

American Public Transportation Association  
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APTA Security Risk Management  
Working Group

# Conducting Revenue Vehicle Security Inspections

**Abstract:** This *Recommended Practice* establishes guidelines for implementation and oversight of a revenue vehicle inspection protocol.

**Keywords:** inspection, revenue, security, sweep, transit, vehicle

**Summary:** Revenue vehicle security inspections are recommended to ensure that vehicles are free from defects, tampering, sabotage or suspicious objects and/or reconfiguration in the electro-mechanical systems and other components and wiring that could endanger passengers, employees or others; disrupt or deny service; or cause damage to surrounding vehicles or facilities. These procedures are in addition to routine pre-use operational safety inspections (fluid levels, tire pressures, etc.). This *Recommended Practice* establishes guidelines for implementation and oversight. It includes criteria for basic searches by employees, law enforcement agents and security staff, including K9 teams scaled to transit agency size or transportation services provided.

**Scope and purpose:** This *Recommended Practice* is applicable to all transit agencies, regardless of size or mode. It is not intended to substitute for federal, state or local regulatory requirements. Instead, it offers a set of recommendations to assist transit agencies in their implementation of revenue vehicle screening. The purpose of this *Recommended Practice* is to provide transit systems with guidance for security sweeps of revenue vehicles or maritime vessels.

## Revenue Vehicle Security Inspection

- Conduct pre-revenue inspection in accordance with agencies policy and procedures
- Conduct periodic sweeps throughout the day
- Perform a post-revenue inspection
- Follow recommended techniques to improve sweeps and inspections

This Recommended Practice represents a common viewpoint of those parties concerned with its provisions, namely, transit operating/planning agencies, manufacturers, consultants, engineers and general interest groups. The application of any standards, practices or guidelines contained herein is voluntary. In some cases, federal and/or state regulations govern portions of a rail transit system's operations. In those cases, the government regulations take precedence over this standard. APTA recognizes that for certain applications, the standards or practices, as implemented by individual transit agencies, may be either more or less restrictive than those given in this document.

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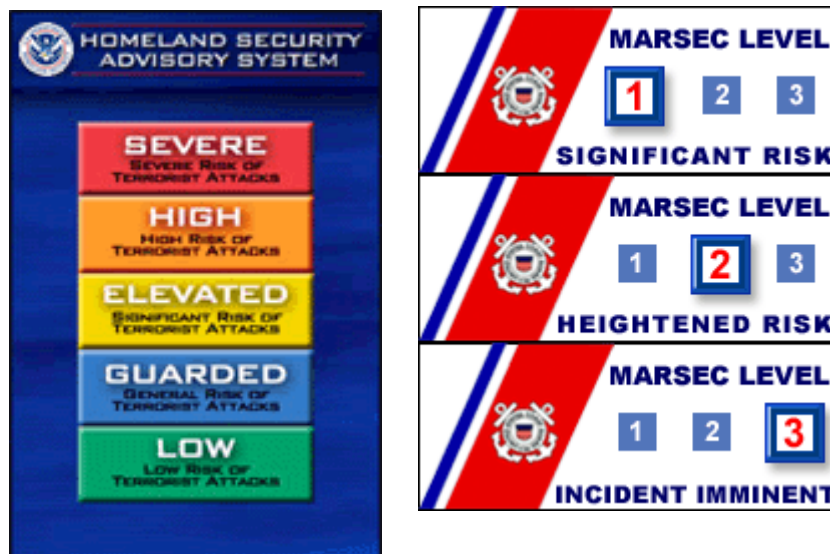
## 1. Threat level awareness

The Homeland Security Advisory System (HSAS) provides a comprehensive and effective means to disseminate information regarding the risk of terrorist acts to federal, state and local authorities and to the American people. This system provides warnings in the form of a set of graduated “threat conditions” that increase as the risk of the threat increases. At each threat condition, federal departments and agencies implement a corresponding set of protective measures to further reduce the risk of a successful attack by reducing the vulnerability or increasing response capability during a period of heightened alert.

The U.S. Coast Guard Maritime Security Level (MARSEC) is a three-tiered security level system aligned closely with the DHS Homeland Security Advisory System. MARSEC levels are designed to easily communicate pre-planned, scalable responses to increased threat levels.

Particular attention should be paid to the HSAS and MARSEC threat levels. These advisories are published on several websites, including [www.dhs.gov](http://www.dhs.gov) and [www.uscg.mil](http://www.uscg.mil). There are multiple levels of predetermined risk. It is recommended that transit agencies have pre-established security inspection protocols dependent on the threat level affecting the agency. These levels are described in [Figure 1](#).

**FIGURE 1**  
Threat Level Warning Systems



Additional information on threat levels and protective measures can be found in “Transit Agency Security and Emergency Management Protective Measures,” published by TSA and FTA.

### 1.1 Response to change in threat levels

The extent and frequency of an agency’s sweep inspections/procedures should reflect the threat level. A higher threat level should result in increased inspections and more meticulous procedures. It is recommended practice to contact local law enforcement or the U.S. Coast Guard for additional guidelines and to monitor intelligence sharing at the transit level. Various techniques can be employed to improve sweeps and inspections during higher threat levels.

Special events such as large gatherings or community events can increase the risk of criminal activity at a particular location. This heightens the need for increased system security regardless of the HSAS or

MARSEC threat level. See APTA *Recommended Practice* “Security and Emergency Management Aspects of Special Event Service” for further recommendations.

## 2. Vehicle sweep procedures

There are a variety of sweeps and inspections that should be conducted, depending on the vehicle’s status (before first run of the day, during service, during layovers, etc). When conducting any sweep procedure, special attention should be made to unattended items in the vehicle. For further recommendations, refer to APTA’s *Recommended Practice* “Recognizing and Responding to Suspicious Unattended Packages, Devices and Baggage.” Personnel conducting sweeps and inspections should look for signs of forced entry, such as scratches on door locks and jambs, open or disturbed compartments, etc.

### 2.1 Pre-revenue inspection

The pre-revenue inspection should be conducted by the operator or assigned staff. This should include the federally required safety check as well as a prescribed inspection for suspicious objects that may have been left or placed on, under or inside the vehicle. Because not all transit vehicles are configured the same, each agency will need to define the particular areas of the vehicles to be checked.

For road vehicles, the operator or staff should examine exterior areas, including but not limited to the following:

- wheel wells, tires and lugs
- engine compartment
- fueling compartment
- any unlocked panel

For rail vehicles, exterior inspection for functionality and foreign objects should include, but not be limited to, the following:

- brakes (including pneumatics and piping), cables and trucks (bogies)
- coupling equipment
- high-voltage equipment
- fuel tanks
- communications equipment
- parking brakes
- pantograph controls
- liquid filled transformers
- other undercar systems

For maritime vessels, the inspection should include the following:

- areas behind equipment
- gallery areas
- overhead areas such as I-beams and piping wire ways
- curtain plating
- rub rails
- topside areas
- elevators

On the interior of any type vehicle, the operator or staff should also check the following:

- the passenger compartment
- under seats and tables
- luggage racks
- any unlocked areas or access panels
- trash containers
- restrooms
- operator's area

Consideration should be made for inspecting the roof of a vehicle, especially where the vehicle could be parked or left unattended in an area of increased accessibility to the roof.

## 2.2 In-service sweeps

Once in service, additional security sweeps should be conducted periodically throughout the day, as conditions warrant. Security sweeps should be done either by the vehicle operating crew, by transit security personnel or by law enforcement. Individual transit agencies can set the frequency and randomness of these sweeps, with particular attention to varying timing and location to avoid scheduled sweep patterns. TOMS can also be employed to increase effectiveness and to act as a visual deterrent.

Individuals conducting security sweeps should look for items out of the ordinary. Close attention should be paid to unattended items, particularly those that seem to be hidden or located near sensitive areas. If such an object is identified, the individual conducting the sweep should ask nearby passengers if the item belongs to them. If no one can claim responsibility for the item, then the applicable agency procedures should be followed. Individuals conducting random security sweeps should also be cognizant of how nearby passengers and system customers react in response to these sweeps. If an individual's behavior raises suspicions, then applicable agency procedures should be followed.

## 2.3 End-of-line or layover sweep

A layover sweep should be conducted whenever the operator of the vehicle leaves it unattended for any length of time, or at the end of line. When parking a road vehicle, the operator should always ensure that all doors are locked and secured. On the interior of any vehicle, the operator or staff should also check the passenger compartment, any unlocked storage areas or access panels, and the driver's area.

For road vehicles, the exterior security sweeps should include, at a minimum, a visual observation of the following:

- wheel wells, tires and lugs
- engine compartment
- fueling compartment
- other undercar areas
- any unlocked panel

Exterior sweeps of rail and waterborne vehicles should be conducted when feasible at the end of line or at layover locations.

## 2.4 Post-revenue inspection

The post-revenue inspection should be conducted when the vehicle returns to the garage, storage area, maintenance facility, parking area or yard, and should be the last task the operator performs before leaving the vehicle. This should include those checks as required by law, as well as an agency-prescribed inspection for suspicious objects that may have been left or placed on, under or inside the vehicle. Because not all transit vehicles are configured in the same manner, each agency should define which areas should be checked. This

check is designed to ensure that no suspicious objects are left behind that could pose a threat to or otherwise endanger the facility, surrounding vehicles or personnel accessing the vehicle and working in the storage area, maintenance facility, parking area or yard.

On the interior of any type of vehicle, the following should be checked:

- the passenger compartment
- any unlocked areas or access panels
- restrooms
- operator's area

Consideration should be made for inspecting the roof of the vehicle, especially where the vehicle could be parked in an area of increased accessibility to the roof. For the exterior of road vehicles, the operator or staff should do a visual examination of the following areas:

- wheel wells, tires and lugs
- engine compartment
- fueling compartment
- any unlocked panel
- bike racks

For rail vehicles, exterior inspection for functionality and foreign objects should include the following:

- brakes, (including pneumatics and piping), cables and trucks (bogies)
- coupling equipment
- high-voltage equipment
- fuel tanks
- communications equipment
- parking brakes
- pantograph controls
- liquid filled transformers

## 2.5 K9 sweeps

K9 sweeps are highly effective in detecting explosives. K9 units should have environment-specific training to be familiar with the transit agency's vehicles and facilities. Agencies should consider pooling resources to share K9 teams in order to fully leverage the existing K9 team resources. K9 teams from multiple sources and with varying capabilities, deployed randomly and unpredictably throughout a system, provide an effective visible deterrent.

## 3. Techniques to improve sweeps and inspections

- Tamper-evident seals can be used to detect whether a critical compartment has been compromised. These seals can be installed on critical compartments before the vehicle starts its first service of the day.
- The agency can employ TOMS on an as-needed basis, during times of high and severe threat levels. It is recommended that law enforcement personnel conducting TOMS be trained in suspicious behavior identification and look for suspicious behavior.
- Implement a program of random dispatch and public service announcements to perform sweeps and inspections, and encourage reporting of suspicious behavior.
- Coordinate with local law enforcement and TSA to expand or augment the resources available to conduct security sweeps and to inspections and enhance randomness and unpredictability.

- Develop and implement training and certification programs for employees.
- Conduct training drills to test the effectiveness of the sweep plans and procedures.
- Develop and implement an audit program to ensure that the developed plans and procedures are properly implemented.

## References

American Public Transportation Association *Recommended Practices*.

APTA SS-SRM-RP-009-09: “Identifying Suspicious Behavior in Mass Transit”

APTA SS-SEM-RP-004-08: “Security and Emergency Management Aspects of Special Event Service”

APTA SS-SRM-RP-003-09: “Random Counterterrorism Measures on Transit Systems”

APTA SS-SRM-RP-011-09: “Recognizing and Responding to Suspicious Unattended Packages, Devices and Baggage”

Federal Transit Administration, “Transit Agency Security and Emergency Management Protective Measures,” November 2006. <http://transit-safety.fta.dot.gov/publications/security/ProtectiveMeasures/PDF/ProtectiveMeasures.pdf>

National Transit Institute, Employee Guides to System Security (<http://www.ntionline.com/products.asp>):

Bus Maintenance

Bus Operations

Commuter Bus

Commuter Rail

Heavy Rail

Light Rail

Passenger Vessel

## Definitions

**end-of-the-line/layover sweep:** A sweep conducted whenever the operator of the vehicle leaves it unattended for any length of time, between runs, or at the end of line.

**Homeland Security Advisory System (HSAS) threat level:** A threat-based, color-coded system used by the U.S. Department of Homeland Security to communicate its determination of risk so that protective measures can be implemented to reduce the likelihood or impact of an attack. The color-coded threat level system is used to communicate with both public safety officials and the public at large.

**in-service sweep:** An onboard security sweep of the interior of a vehicle while the vehicle is in revenue service. Attention is paid to unattended packages, equipment tampering and other suspicious occurrences and behavior.

**K9 team:** K9 is the acronym for “canine” and refers to a dog that is accompanied by a human handler who directs the dog and interprets its signals. For purposes of this document, K9 refers to a dog that has been specially trained to detect explosives or accelerants through scent.

**post-revenue inspection:** An inspection conducted to ensure that the vehicle is free of defects, tampering, sabotage or suspicious objects upon return to the garage, storage area, maintenance facility, parking area or yard.

**pre-revenue inspection:** An inspection conducted to ensure that the vehicle is operational and free from defects, tampering, sabotage or suspicious objects. This inspection normally occurs before the vehicle leaves the garage, storage area, maintenance facility, parking area or yard.

**security inspection:** A systematic, thorough process conducted to ensure that the vehicle is free from any suspicious objects that may contain a device, weapon or substance meant to harm passengers or employees, or to disrupt or deny service.



**security sweep:** An abbreviated inspection of a vehicle.

**suspicious package:** Any package, parcel, container or other object that is out of place or unusual for that location and cannot be accounted for, or one that becomes suspicious because a threat has been received.

**train order maintenance sweep (TOMS):** A tactic involving placing a team of uniformed law enforcement and/or security officers along a train platform, where they spread out and simultaneously board each train car to conduct a visual inspection. During such activity, train crews are directed to make a public address announcement that the train will be momentarily delayed for a security inspection (which further enhances the awareness of riders of the TOMS team presence).

**vehicle sweep:** A broad term for the inspection of a mass transit vehicle. Depending on the type of inspection, a vehicle sweep can be conducted by law enforcement or security staff, including K9 teams. The purpose of the sweep is to inspect the vehicle at pre-determined points to ensure that the vehicle is free from defects, tampering, sabotage or suspicious objects that may be used to injure passengers and employees or disrupt or deny service, or cause damage to surrounding vehicles or facilities.

## Abbreviations and acronyms

<b>DHS</b>	Department of Homeland Security
<b>FTA</b>	Federal Transit Administration
<b>HSAS</b>	Homeland Security Advisory System
<b>K9</b>	canine
<b>MARSEC</b>	Maritime Security (U.S. Coast Guard Maritime Security Level)
<b>TOMS</b>	train order maintenance sweep
<b>TSA</b>	Transportation Security Administration