APTA STANDARDS DEVELOPMENT PROGRAM
RECOMMENDED PRACTICE
American Public Transportation Association
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APTA SS-SRM-RP-012-09, Rev. 1
First Published: Oct. 15, 2009
First Revision: July 29, 2022

APTA Transit Infrastructure and
Systems Security Working Group

Conducting Revenue and Nonrevenue Vehicle Security Inspections

Abstract: This recommended practice establishes guidelines for implementation and oversight of revenue and/or nonrevenue vehicle inspection protocol.

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

Summary: Revenue and/or nonrevenue vehicle security inspections are recommended to ensure that vehicles are free from defects, tampering, sabotage, suspicious objects and/or reconfiguration in the electromechanical systems and other components and wiring that could indicate potential security concerns or hazards, or otherwise elicit suspicion. 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 a vehicle security screening program. The purpose of this recommended practice is to provide transit systems with guidance for security sweeps of revenue vehicles, nonrevenue vehicles or maritime vessels.

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Introduction

This introduction is not part of APTA SS-SRM-RP-012-09, Rev. 1, "Conducting Revenue and Nonrevenue Vehicle Security Inspections."

APTA recommends the use of this document by:

- individuals or organizations that operate mass transit systems;
- individuals or organizations that contract with others for the operation of mass transit systems; and
- individuals or organizations that influence how mass transit systems are operated (including but not limited to consultants, designers and contractors).

Conducting Revenue and Nonrevenue Vehicle Security Inspections

1. Vehicle security inspections

Security inspections on revenue and/or nonrevenue vehicles are recommended to ensure that vehicles are free from defects, tampering, sabotage or suspicious objects. Vehicle security inspections should include both interior and exterior examinations and address electromechanical systems, wiring and other components to uncover potential security concerns or hazards. Vehicle security inspection procedures are in addition to routine pre-use operational safety inspections (fluid levels, tire pressures, etc.).

2. Threat level awareness

An effective revenue and/or nonrevenue vehicle security inspection program should be risk-based and flexible enough to adjust to the needs of the organization based upon the current threat level in the organization's operating environment. Transit agencies should determine the frequency and level of detail of screening operations based on the organization's current threat level and available capabilities and resources. When developing a revenue and/or nonrevenue vehicle security inspections program, it would be prudent to work from a baseline (used during normal operations) with the layering of additional screening measures, procedures and capabilities as the threat level (risk) increases.

To facilitate a risk-based program, maintaining threat level awareness throughout the course of operations becomes critical to the program's effectiveness. Monitoring threat levels affords organizations the opportunity to adjust capabilities and resources as needs arise during higher risk periods. A variety of resources, such as the Surface Transportation Information Sharing and Analysis Center (ST-ISAC), support transit agencies' ability to maintain awareness of threat levels.

In 2011, the Department of Homeland Security replaced the color-coded alerts of the Homeland Security Advisory System with the National Terrorism Advisory System (NTAS), designed to communicate information more effectively about terrorist threats by providing timely, detailed information to the American public. NTAS advisories—whether they be alerts or bulletins—encourage individuals to follow the guidance provided by state and local officials and to report suspicious activity. Where possible and applicable, NTAS advisories will include steps that individuals and communities can take to protect themselves from the threat, as well as help detect or prevent an attack before it happens. Individuals should review the information contained in the alert or bulletin and, based upon the circumstances, take the recommended precautionary or preparedness measures for themselves and their families.

In the maritime environment, the U.S. Coast Guard uses the Maritime Security (MARSEC) level, which is a three-tiered security level system aligned closely with NTAS. MARSEC levels are designed to easily communicate pre-planned, scalable responses to increased threat levels.

Particular attention should be paid to the NTAS advisories and MARSEC threat levels. These advisories are published on several websites, including www.dhs.gov and 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 and that maritime facilities meet all the regulatory requirements as defined by the Maritime Transportation Security Act of 2002 and sector-specific guidance regarding MARSEC implementation.

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.

2.1 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. Additionally, it is recommended practice that agencies 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 any current NTAS advisories or the MARSEC threat level. See the APTA recommended practice "Security and Emergency Management Aspects of Special Event Service" for further recommendations.

3. Vehicle security inspection 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 the APTA 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, damaged tamper-evident tags, etc.

3.1 Pre-revenue and/or pre-use inspections

The pre-revenue and/or pre-use inspection should be conducted by the operator or assigned staff. People conducting inspections should be trained on proper inspection procedures and what to look for. 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. Since some agencies may not have restricted parking space to store agency vehicles in a locked, secure area that is inaccessible to the public, it is also important to note conditions in the immediate vicinity where the vehicle has been parked. Because not all transit vehicles are configured the same, each agency will need to define the particular areas of the vehicles to be checked. The vehicle areas and equipment readily accessible to the public should be included in the items to be inspected. Consideration should be given to inspecting the roof of a vehicle, especially when the vehicle could be parked in an area of increased accessibility to the roof.

It is recommended practice to implement vehicle screening in accordance with the practices identified in the U.S. Department of Homeland Security Technical Support Working Group's Vehicle Screening Guide. A copy of this manual can be purchased via the Government Publications Office (https://bookstore.gpo.gov/products/vehicle-inspection-guide-vig-update-tswg-controlled-item).

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

- vehicle exterior
- vehicle interior
- 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 wireways
- curtain plating
- rub rails
- topside areas
- elevators
- life jacket compartments
- stowage areas
- emergency equipment compartments

On the interior of any type of 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

3.2 In-service sweeps

Once in service, additional security sweeps should be conducted periodically throughout the day, as conditions warrant. Security sweeps should be done 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. Train order maintenance sweeps (TOMS) can also be employed to increase effectiveness and to act as a visual deterrent.

Personnel tasked with security sweeps should establish a baseline of the appearance of the vehicle, components, equipment, etc. during initial training and sweeps. While conducting security sweeps, personnel should look for items that differ from the baseline they established during this initial period. 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 personnel should follow applicable agency procedures for unattended items. 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.

3.3 End-of-line or layover sweeps

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.

3.4 Post-revenue and/or post-use inspections

The post-revenue and/or post-use 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
- other compartments holding sensitive documents, uniforms, radios or other communication equipment, etc.

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

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. If the vehicle is large, the operator may have to board the vehicle to complete the exterior security sweep.

3.5 K9 sweeps

K9 sweeps are highly effective in detecting explosives and other contraband. Transportation agencies should work with assigned K9 units to provide environmental familiarization for teams, which include both handlers and canines. This familiarization should include the transit agency's facilities and revenue and nonrevenue vehicles. Inspections of vehicles should be conducted under varying conditions and at various locations to provide both realistic training scenarios for K9 teams and public visibility to training efforts and partnerships, which may increase the psychological deterrence attributed to deployment of K9 units. Given the current threat environment in transit, K9 teams should be imprinted with the odors of homemade explosives, including triacetone triperoxide (TATP) and hexamethylene triperoxide diamine (HMTD), where practical.

Agencies may consider pooling resources to share K9 teams in order to fully leverage 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.

4. Techniques to improve sweeps and inspections

- Create agency-specific checklists of locations to inspect, executed randomly and unpredictably.
- Use tamper-evident seals 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.
- 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 inspections to enhance randomness and unpredictability for the greatest deterrent effect.
- Develop and implement training programs for employees.
- Conduct training and exercises to assess 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.

Related APTA standards

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"

References

Federal Transit Administration, "Transit Agency Security and Emergency Management Protective Measures," November 2006. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/ProtectiveMeasures.pdf

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 a line.

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.

National Terrorism Advisory System (NTAS): Alerts or bulletins that encourage individuals to follow the guidance provided by state and local officials and to report suspicious activity.

nonrevenue vehicle: A vehicle that assists in maintenance, construction, inspection or other functions that support the operation of the transit system. Nonrevenue vehicles include maritime nonrevenue vessels. They are not intended to transport passengers but may do so in certain special circumstances such as emergencies and abnormal operating conditions.

post-revenue and/or post-use 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 and/or pre-use 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 operators, 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

DHS U.S. Department of Homeland Security
FTA Federal Transit Administration
K9 canine
MARSEC Maritime Security
NTAS National Terrorism Advisory System
ST-ISAC Surface Transportation Information Sharing and Analysis Center
TOMS train order maintenance sweep
TSA Transportation Security Administration

Summary of document changes

- Combines the following two previously independent recommended practices: “Conducting Nonrevenue Vehicle Security Inspections” (APTA-SS-SRM-RP-003-09) and “Conducting Revenue Vehicle Security Inspections” (APTA-SS- SS-SRM-RP-012-09).

Document history

Document Version	Working Group Vote	Public Comment/ Technical Oversight	CEO Approval	Policy & Planning Approval	Publish Date
First published	—	—	—	—	Oct. 15, 2009
First revision	Jan. 7, 2022	Mar. 4, 2022	April 4, 2022	June 22, 2022	July 29, 2022

