

Maintenance Performance – Full Reporter Requirements

This section applies to Full Reporters only. Demand Response – Taxi (DT) modes do not provide maintenance performance (e.g., mechanical system failure) data.

Full Reporters must provide data on mechanical system failures for revenue vehicles. Revenue vehicle system failures are mechanical problems that occur when

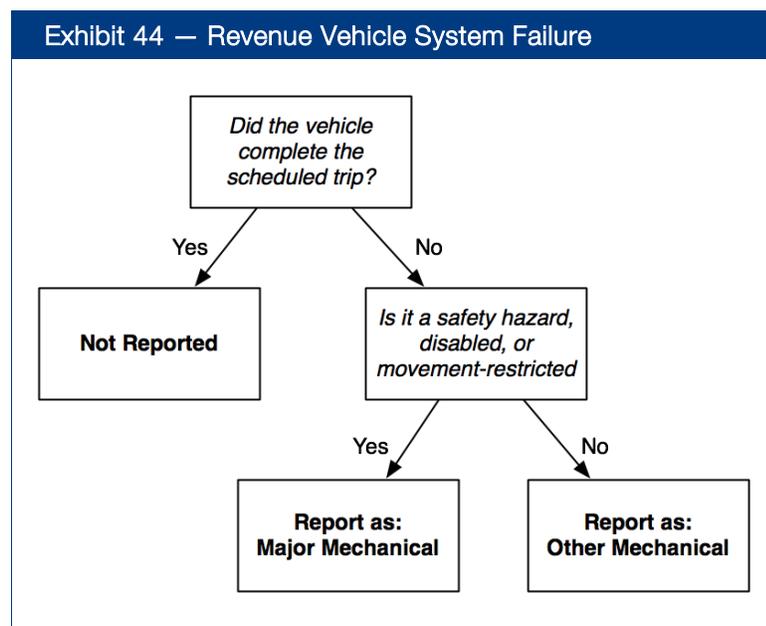
- A vehicle does not complete its scheduled revenue trip, or
- A vehicle does not start its next scheduled revenue trip

A transit agency must count each system failure as it occurs even if the agency immediately substitutes another vehicle and no revenue service is lost. Additionally, an agency must report a failure even if the agency later determines there is no actual problem with the vehicle.

The NTD separates system failures into the following categories:

- Major mechanical system failures are those that limit actual vehicle movement or create safety issues
- Other mechanical system failures

Major Mechanical System Failures



Major mechanical system failures prevent a vehicle from completing or starting a scheduled revenue trip because actual movement is limited or because of safety concerns. Examples of major bus failures include breakdowns of

- Brakes
- Doors
- Engine cooling systems
- Steering, axles, suspension

Agencies must classify a failure as major if it results in a safety hazard or if the vehicle is disabled. This means that a major mechanical system failure does not have to be expensive

or difficult to repair in order to meet the definition; it could be inexpensive or easy to repair, such as a flat tire.

A number of factors can affect the number of major mechanical system failures that an agency incurs, such as local operating conditions, vehicle type, and effectiveness of the maintenance program. However, transit agencies must uniformly report data on major mechanical failures to ensure consistency in the NTD database.

Other Mechanical System Failures

Other mechanical system failures prevent a vehicle from completing or starting a scheduled revenue trip even though the vehicle is physically able to continue in revenue service without creating a safety concern. Common examples include breakdowns of

- Fare boxes
- Wheelchair lifts
- Heating, ventilation, and air conditioning (HVAC) systems

Whether or not a transit agency would continue revenue service with the types of breakdowns listed above depends on local policies. Therefore, the NTD expects variation in the types and quantity of other mechanical system failures reported. For example, some agencies in a warm climate may continue to operate a bus with a heating system breakdown, while agencies in a cool climate (e.g., Maine) would immediately replace the bus.

Exhibit 45 — Revenue Vehicle System Failures

Example 1: The air conditioning on a Hamlet Transit Agency bus fails while carrying passengers in revenue service. The driver determines that he is unable to repair the problem and calls for a backup because it is a hot day.

Solution: Hamlet reports this event as an “other” mechanical system failure. The NTD does not consider faulty air conditioning a major mechanical system failure because the bus could physically continue in revenue service without working HVAC and would not pose a safety concern.

Example 2: During layover, a Hamlet Transit Agency bus experiences an engine cooling system failure. The agency tows the bus to the garage and dispatches a backup bus immediately. The next trip departs on time.

Solution: Hamlet reports this event as a major mechanical system failure because the bus could not physically operate to start its next scheduled trip.

Exhibit 45 — Revenue Vehicle System Failures

Example 3: The brakes stick on a Hamlet Transit Agency bus. The driver radios for help from the mobile repair unit. The unit adjusts the brakes during the scheduled layover for the bus in time for the bus to start and complete its next scheduled trip.

Solution: Hamlet does not report this event because the bus started and completed its next scheduled trip.

Example 4: The front axle breaks on a Hamlet Transit Agency bus on its scheduled pullout from the garage to the beginning of the bus route. A tow truck tows the bus to the garage and the Agency sends a replacement vehicle.

Solution: Hamlet reports this event as a major mechanical systems failure because the bus could not start its next scheduled trip.

Example 5: While deadheading back to the dispatching point at the end of the day, an electrical system problem activates the wheelchair lift on a Hamlet Transit Agency van. The lift is stuck in the extended position and the van has to be towed to the garage.

Solution: Hamlet does not report the event since the van completed all of its scheduled trips for the day.

Example 6: A substation that provides power to Hamlet Transit Agency light rail experiences a temporary failure. Rail service is delayed for ten minutes. Passengers stay on-board and service resumes.

Solution: Hamlet does not report this incident. There is no mechanical failure in this example.

Example 7: A vehicle mirror breaks making it unsafe to operate. Another vehicle is replaced.

Solution: Since the vehicle was unsafe to operate, Hamlet reports it as a major mechanical failure.

Example 8: On a 6-car heavy rail train, one of the doors fails, making one car unable to carry passengers, while the other 5 are still operable. The agency does not remove the train from service, but the one car with the faulty door no longer carries passengers.

Solution: Since one car is unable to provide service, this is a major mechanical failure of one vehicle.

Example 9: A driver complains that the brakes are not functioning properly. The agency removes the vehicle from revenue service. Later on, a mechanic checks the brakes and determines that there is no issue.

Solution: Since the agency removed the vehicle from service, this is a major mechanical failure.