

**Vehicle Maintenance
Policies and Procedures**



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Introduction:

The bus fleet consists of four (4) wheelchair lift equipped vehicles:

- 2004 Ford E450 Diesel – Goshen (backup)
- 2006 Ford E450 Diesel – Goshen
- 2008 Ford E450 Diesel – Goshen
- 2009 Ford E450 Diesel – Supreme

The vehicles listed above are the current Federal assets used and maintained by Rock County Heartland Express. These vehicles are driver inspected daily. Approximately every two years one vehicle is replaced with a new vehicle and, generally, the oldest vehicle in the fleet is placed in ‘backup’ status.

All vehicles are garaged at the Heartland Express office building located at 1110 N Blue Mound Avenue, Luverne, MN 56156. This facility is a heated facility that has the capacity of storing eight (8) vehicles. It is only used for storing and not mechanical work. The administrative offices are contained in the same building but separated by a fire-rated wall. This building is a federally funded facility constructed in 2009.

All regular vehicle maintenance is performed by the Rock County Highway Department mechanics. This includes oil changes, light maintenance, brake servicing, and some electrical. A certified Ford Dealer located in Luverne, MN performs engine and transmission repair work. All steering work and front-end alignment is performed in Sioux Falls, SD.

Heartland Express bus drivers are the first line reporters of vehicle defects. Maintenance concerns are reported to either the Dispatcher or the Transit Director.

Goals and objectives:

Goals:

- Promote a safe and secure transit system
- To meet or exceed all manufacturers maintenance guidelines on equipment.
- To maintain all equipment to the highest standards
- To purchase and install all quality OEM or equivalent parts at the best price.

Objectives:

The Transit Director will insure that the maintenance performed will support efficient and effective transit service on a daily basis while seeking to maximize the following:

- Vehicle reliability
- Vehicle operating efficiency
- Optimum available number of vehicles daily- minimum number to meet service demands.

These objectives must be achieved with proper balance of vehicle care and fiscal constraints. It is recognized that preventative maintenance has significant cost implications and that both facility and equipment resources are a significant public investment and must be protected.

Preventative Maintenance:

Preventative maintenance is performed daily and at prescribed intervals. The following information is recorded and retained on each vehicle:

Vehicle - last 5 # of VIN	Date	Preventive Maintenance	Repair	Current Mileage	Next PM due at:	Cost
Examples:						
2007 Ford - 56666	8/2/2011	Oil change		50,000	55,000	\$42.00
2009 Ford - 65555	8/8/2011		A/C repair			\$569.42
2009 Ford - 65555	8/9/2011	Oil change		25,000	30,000	\$42.00

Daily

Daily functions include fuel, fluid level checks (engine oil, transmission oil, engine coolant and power steering fluid), tires are checked for flats, wheel nuts are observed for loose wheels, exterior and interior lights and checked, operator's trip report is checked for defects that may have been noted by the operator, money is removed from the fare-box vault and the interior of the vehicles are cleaned and checked for any damage. The vehicle exterior is washed as necessary.

Weekly

Buses that are out of service, including the backup bus will be looked at (walk around) once a week to detect any leaks (fluids), flat tires, or any other deterioration. The backup bus will be started and allowed to run long enough to warm the engine and transmission fluids once each week. Any defects detected will be reported to the Dispatcher or the Transit Director.

5,000-Mile Inspection

- Change engine oil and replace oil filter
- Perform multi-point inspection
- Inspect tires for wear and measure tread depth and inspect wheel ends for endplay and noise

- Inspect air filter restriction, replace filter as required

10,000-Mile Inspection

- Change engine oil and replace oil filter
- Replace engine fuel filter
- Perform multi-point inspection
- Inspect tires for wear and measure tread depth and inspect wheel ends for endplay and noise
- Inspect air filter restriction, replace filter as required
- Inspect and lubricate steering linkage, ball joints, suspension, driveshaft and U-joints
- Inspect engine cooling system and hoses
- Inspect brake pads, shoes, rotors, drums, brake lines and hoses and parking brake system
- Inspect exhaust system and heat shields

15,000-Mile Inspection

- Same as the 5,000-mile inspection

20,000-Mile Inspection

- Change engine oil and replace oil filter
- Replace engine fuel filter
- Inspect automatic transmission fluid level
- Perform multi-point inspection
- Inspect tires for wear and measure tread depth and inspect wheel ends for endplay and noise
- Inspect air filter restriction, replace filter as required
- Inspect and lubricate steering linkage, ball joints, suspension, driveshaft and U-joints

- Inspect engine cooling system and hoses
- Inspect brake pads, shoes, rotors, drums, brake lines and hoses and parking brake system
- Inspect exhaust system and heat shields

25,000-Mile Inspection

- Same as the 5,000-mile inspection

30,000-Mile Inspection

- Same as the 10,000-mile inspection

35,000-Mile Inspection

- Same as the 5,000-mile inspection

40,000-Mile Inspection

- Same as the 20,000-mile inspection

45,000-Mile Inspection

- Same as the 5,000-mile inspection

50,000-Mile Inspection

- Same as the 10,000-mile inspection

55,000-Mile Inspection

- Same as the 5,000-mile inspection

60,000-Mile Inspection

- Same as the 20,000-mile inspection
- Inspect accessory drive belts

65,000-Mile Inspection

- Same as the 5,000-mile inspection

70,000-Mile Inspection

- Same as the 10,000-mile inspection
- Change engine coolant

75,000-Mile Inspection

- Same as the 5,000-mile inspection

80,000-Mile Inspection

- Same as the 60,000-mile inspection

85,000-Mile Inspection

- Same as the 5,000-mile inspection

90,000-Mile Inspection

- Same as the 10,000-mile inspection

95,000-Mile Inspection

- Same as the 5,000-mile inspection

100,000-Mile Inspection

- Same as the 60,000-mile inspection
- Replace accessory drive belts
- Replace wheel bearing and wheel bearing grease seals
- Change coolant

105,000-150,000-Mile Inspection

Follow maintenance schedule for 5,000-50,000 miles.

Repair Procedures:

Major component rebuilds (engines and transmissions) are scheduled as necessary. Major repair work necessary on wheelchair lifts will be done as necessary.

The Dispatcher or the Transit Director schedules necessary repair work with the appropriate mechanic.

Emergency Procedures:

If there is an on-the-road emergency with a bus, the driver will radio the Dispatcher and request assistance. The Dispatcher will determine the required assistance and dispatch that help to the location requesting the help.

Record keeping:

All maintenance records are kept in the Heartland Express office. The Transit Director keeps financial records of repairs. The Dispatcher keeps all daily inspection reports.

The Dispatcher maintains the mileage of each vehicle as reported on the daily driver logs. The Dispatcher triggers the oil change notice.

Vehicle records are kept on each individual vehicle. Records contain all maintenance tasks performed, vehicle miles and vehicle maintenance cost. Currently, both manual and computer records are utilized.

Warranty Recovery

Heartland Express works with the mechanics from the Highway Department and the Authorized Ford Dealer to ensure that the cost of parts and repairs on warranty covered items are recovered.

Failed Components

Parts and components that have failed prematurely are sent in for repair or replacement.

Return to manufacturer/vendor

Authorization for warranty return and labor claims, are obtained from the manufacturer or vendor. The item is then returned to the vendor.