

# Preventive Maintenance Guidelines

---

## *TYPE I & TYPE II BUSES*



# Preventive Maintenance Guidelines

## Table of Contents

Introduction	3
Preventive Maintenance Arrangements	3
Daily Bus Maintenance	3
Fuel System Operation	4
Preventative Maintenance Forecast Report	5
Job Descriptions	6
Preventive Maintenance Inspections	14
Bus Type I PM Checklist	17
Bus Type II PM Checklist	19
Maintenance Guidelines	23
A/C Maintenance	27
A/C Preventative Maintenance Checklist	29
Daily Vehicle Inspections	33
Form – Daily Vehicle Inspection Checklist Bus Type I	34
Form – Daily Vehicle Inspection Checklist Bus Type II	35
General Notes about daily inspections	36
Comprehensive Maintenance Record	36
Warranty Recovery System	36

# Introduction

The City of Gainesville's Regional Transit System (RTS) currently has one (1) maintenance facility located at 34 SE 13<sup>th</sup> Road, Gainesville, FL 32601. This site includes fueling infrastructure and a bus wash. RTS has an established and effective Preventative Maintenance program. The elements of this program are formally described in the Preventative Maintenance Plan

## Preventive Maintenance Arrangements

RTS personnel schedule, perform and manage all the activities associated with the Preventative Maintenance program. The following describes the process that is currently in practice for PM scheduling:

Vehicle Service Attendants perform daily bus maintenance activities which are listed below.

### Daily Bus Maintenance

---

1. **Check for fluid leaks.** Inspect underneath the bus for sign of leakage. Visually inspect engine and compartment to include all lines, piping and hoses.
2. **Check exterior lights.** Make sure all exterior lights are illuminated.
3. **Inspect all drive belts.** Look for cracks, tears or burns. Check tension.
4. **Inspect tires.** Check air pressure (120 PSI). Visually inspect for damage and/or unusual wear.
5. **Inspect wheels.** Look for cracks, damage and loose lugs.
6. **Check coolant level.** Adjust as required. (Refer to lubrication chart)
7. **Check engine oil level.** Adjust as required. (Refer to lubrication chart)

8. **Check transmission level.** Adjust as required. (Refer to lubrication chart)
9. **Check hydraulic fluid level.** Adjust as needed. (Refer to lubrication chart)
10. **Fill DEF tank.** If applicable.
11. **Check air intake restriction indicator.** If restriction is indicated advise shift supervisor.
12. **Report any defects discovered during service line activities to the shift supervisor**

### **Fuel System Operation**

---

1. Pull bus into fueling bay. Follow Instructions found under the Fleetwatch Remote Island Head (RIH).
2. After swiping your badge. Fleetwatch will prompt you to verify vehicle # before uploading vehicle information (i.e. mileage). If vehicle # is correct hit “send” on RIH
3. Turn pump on and attach fuel nozzle to bus.
4. When fueling is complete turn pump off and hang up hose.
5. Check all fluid levels and make any necessary adjustments, (Fleetwatch turns required fluids on)

Lane #	Pump #	Product
1	1	Diesel Low Sulfur – On Road
2	2	Diesel Low Sulfur – On Road
3	3	Diesel Low Sulfur – On Road
4	4	Diesel Low Sulfur – On Road
4	5	Gasoline Unleaded

Any defects discovered during the daily bus maintenance are reported and corrected in conjunction any defects noted on the post trip inspection form.

The mileage and fluid usage from bus refueling is uploaded daily from the Fluid Management software, FleetWatch to the Fleet Maintenance Management software FleetNet. A Preventative Maintenance forecast report is generated daily and used to schedule inspections for the following day.

The following is an example of the PM forecast report:

Asset #	Insp Id	Insp #	Insp Type	Description	Warning Message	Last Inspection	Actual	Forecast	Remaining
2538	54	8	C	40000 MILE INSPECTION	Mile: Inspection Due	5250	6000	5250	750
	Fleet Id: 54			Date Last Inspected: 4/28/2015	Hours	0	0	0	0
				Assigned Work Order: 1V00016553	Days	0	0	0	0
506	55	7	A	6000 MILE INSPECTION	Mile: 5216.1	6000	5250	750.9	
	Fleet Id: 55			Date Last Inspected: 1/05/2016	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0
3651	50	16	C	40000 MILE INSPECTION	Mile: 2201	3000	2700	799	
	Fleet Id: 50			Date Last Inspected: 12/23/2015	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0
4050	70a	2	A	5000 MILE INSPECTION	Mile: 4185	5000	4500	515	
	Fleet Id: 70			Date Last Inspected: 3/3/2016	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0
1184	67a	25	A	6000 MILE INSPECTION	Mile: 5187.4	6000	5250	832.6	
	Fleet Id: 67			Date Last Inspected: 3/23/2016	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0
1203	60a	22	B	12000 MILE INSPECTION	Mile: 5125.2	6000	5250	874.8	
	Fleet Id: 60			Date Last Inspected: 3/21/2016	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0
549	59	4	B	24000 MILE INSPECTION	Mile: 5037.6	6000	5250	962.4	10000.0
	Fleet Id: 59			Date Last Inspected: 2/13/2016	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0
503	55	8	C	40000 MILE INSPECTION	Mile: 4997.1	6000	5250	1002.9	
	Fleet Id: 55			Date Last Inspected: 2/13/2016	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0
3682	80	16	C	40000 MILE INSPECTION	Mile: 1987	3000	2700	1013	
	Fleet Id: 80			Date Last Inspected: 12/23/2015	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0
322	05	4	A	MONTHLY TACAC 4000 MILE INSPECTION	Mile: 2975.2	4000	3500	1024.8	
	Fleet Id: 24			Date Last Inspected: 3/23/2016	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0
557	60	5	A	6000 MILE INSPECTION	Mile: 4992.4	6000	5250	1097.6	
	Fleet Id: 60			Date Last Inspected: 2/7/2016	Hours	0	0	0	0
				Assigned Work Order:	Days	0	0	0	0

04/19/2016 12:10:37 [mymag30RTS200] © 2016 FleetNet Corporation (Ver: 09.06 [10/09/2014]) Page 17 of 35

The selected vehicles are removed from service and Preventative Maintenance work order's are generated and assigned to appropriate personnel. During the inspection RTS personnel uses the PM checklist and notes any defects discovered during the inspection. Once the PM checklist is complete the assigned personnel signs and dates the checklist. If required a work order is then generated and assigned to the appropriate personnel to correct any defects noted on the checklist. The work orders are closed and a copy is printed for the vehicle file and the electronic version remains a part of the permanent vehicle records in the fleet management software.

RTS utilizes Fleet Mechanic II, Fleet Mechanic I and Vehicle Service Attendants to perform vehicle maintenance. All personnel that perform vehicle

maintenance have a minimum of one year of training and/or experience as a mechanic or inspector in a vehicle maintenance program and has sufficient general knowledge of the vehicles owned and operated by your agency in order to recognize deficiencies or mechanical defects. All RTS personnel performing maintenance, inspections or repair of buses are knowledgeable of the requirements set forth in Rules 14-90.007, 14-90.008, 14-90.009, Florida Administrative Code.

The following are the position descriptions that perform maintenance and repair vehicles. These positions are listed by experience requirements in a progression to the highest skilled vehicle maintenance personnel in the RTS organizational structure:

## **VEHICLE SERVICE ATTENDANT**

### **NATURE OF WORK**

Entry level work performing scheduled and unscheduled maintenance and minor repairs on vehicles including buses.

### **CLASSIFICATION STANDARDS**

Positions allocated to this classification report to a designated supervisor and work under direct supervision. Work in this class is distinguished from higher classes by its lack of technical skill and from lower classes by its emphasis on vehicle repair and maintenance.

### **EXAMPLES OF WORK\*\***

#### **ESSENTIAL JOB FUNCTIONS**

Performs daily bus maintenance and refueling, checking and replenishing fluid levels including engine oil, engine coolant, power steering and transmission fluids..

Repairs and maintains tires. Makes field tire service calls.

Repairs and replaces lights, turn signals, and parts including mirrors, fan belts, and water hoses.

Assists mechanics in performing general labor related tasks and repairs of greater complexity.

Washes, cleans, and vacuums automobiles, buses, trucks, and other automotive equipment.

Performs scheduled and unscheduled maintenance on automobiles, light trucks, buses and transit equipment in accordance with manufacturers' recommendations statutory requirements and departmental policy and procedures.

Attends work on continuous and regular basis.

### **NON-ESSENTIAL JOB FUNCTIONS**

Performs emergency road service to vehicles and buses, cleans up petroleum or coolant discharge on the roadway and completes required documentation.

Performs general maintenance duties in and around garage, including cleaning of fueling facility and bus parking areas.

Performs other related duties as assigned.

### **MINIMUM REQUIREMENTS**

Completion of high school or possession of an acceptable equivalency diploma, and one year experience in automotive vehicle or heavy equipment repair and servicing, preferably in a public works or utility fleet, or an equivalent combination of education and experience which provide the required knowledge, skills and abilities.

### **LICENSES/CERTIFICATES**

CDL class "B" license, with passenger transport endorsement is required within one (1) month of the date of employment.

### **NOTES**

For employment with RTS, pre-employment medical examination required, including satisfactory drug screening.

Must supply and maintain own tools as specified.

Work requires physical strength and agility to safely perform all essential functions.

Work requires bending, kneeling, crawling, and pushing/pulling up to a maximum of 100 lbs.

Work requires climbing/working at heights with the use of ladders, scaffolding and stairs.

Work may require performing tasks in and around heavy traffic.

Work may require exposure to hazardous conditions and noxious chemicals, including fiberglass materials and resins.

Work may require exposure to prolonged high noise levels.

Work may require performance of tasks in extreme heat and confined areas.

### **SELECTION FACTORS**

Knowledge of occupational hazards and accident prevention methods in assigned area of responsibility.

Knowledge of automotive and mechanical parts.

Skill in the routine servicing and repair of automotive and heavy equipment.

Ability to perform routine vehicle servicing.

Ability to operate work-related equipment.

Ability to keep records and prepare reports.

Ability to work effectively with co-workers and the general public.

Ability to use personal computers.

Ability to read and interpret written assignments and instruction.

Ability to communicate effectively, both orally and in writing.

Human Resources Department: \_\_\_\_\_ Signed original on file in Human Resources \_\_\_\_\_ / \_\_\_\_\_ 6/3/10

Date

\*\* This section of the job description is not intended to be a comprehensive list of duties and responsibilities of the position. The omission of a specific job function does not absolve an employee from being required to perform additional tasks incidental to or inherent in the job.

REVISION DATE: 12/1/94; 6/2/10

## **FLEET MECHANIC I**

### **NATURE OF WORK**

Skilled mechanical work repairing and maintaining vehicles and equipment.

### **CLASSIFICATION STANDARDS**

Positions allocated to this classification report to a designated supervisor and work under limited supervision. Work in this class is distinguished from higher classes by its lack of lead worker responsibility and from lower classes by its technical nature and emphasis on repair and maintenance of vehicles and equipment.

### **EXAMPLES OF WORK\*\***

### **ESSENTIAL JOB FUNCTIONS**

Performs scheduled and unscheduled maintenance on automobiles, light trucks, buses and transit equipment in accordance with manufacturers' recommendations statutory requirements and departmental policy and procedures.

Repairs diesel and gasoline powered engines.

Repairs diesel air intake and fuel systems.

Diagnoses and repairs bus transmission electronic control systems, removes and replaces transmissions.



Repairs wheel chair lift mechanical, hydraulic and electrical systems, repairs/replaces hydraulic cylinders.

Performs functional inspection and repairs wheelchair restraint systems.

Repairs or replaces pneumatic system motors, switches valves and interlock system components.

Performs repairs to internal and external vehicle and bus lighting systems.

Performs repairs to vehicle safety equipment, horn, windshield wipers, mirrors and lights.

Performs brake system performance tests and diagnostics, relines brakes, and replaces valves, switches, hardware, slack adjusters and other foundation brake parts and components.

Diagnoses and repairs automotive-type electrical systems.

Diagnoses and repairs engine starting and charging systems.

Performs on-board computer diagnostics.

Repairs engine cooling system and components. Removes and repairs or replaces radiators, cooling fan, hydraulic fan drive system components, thermostats, water pumps, belts, hoses and other related cooling system components.

Repairs hydraulic systems on automobiles, light trucks, buses, and transit equipment.

Diagnoses and repairs defects in steering and suspension systems.

Diagnoses irregular tire wear patterns and determines cause, repairs tires, including mounting new tires and the rotation of tire positions to maximize the service life of tires.

Performs minor body work replaces bumpers, panels, doors and hinges.

Repairs/replaces propeller shaft, yolks and universal joints.

Maintains fare collection equipment.

Attends work on continuous and regular basis.

### **NON-ESSENTIAL JOB FUNCTIONS**

Prepares detailed records and reports in a timely manner.

Performs emergency road service to equipment, cleans up petroleum or coolant discharge on the roadway and completes required documentation.

May advise or assist co-workers in more complex repair work.

Performs other related duties as assigned.

### **MINIMUM REQUIREMENTS**

Graduation from high school or possession of an acceptable equivalency diploma, supplemented by appropriate technical courses, preferably including training by vehicle manufacturers' or

accredited vocational-technical institution, and three (3) years experience as an diesel mechanic, preferably in a public works or fleet environment, or an equivalent combination of training and experience which provide the required knowledge, skills and abilities..

### **LICENSES/CERTIFICATES**

CDL class “B” license, with passenger transport endorsement, required within one month of date of employment.

Automotive Service Excellence (A.S.E.) certification in bus or heavy truck repair and maintenance highly desired.

### **NOTES**

For employment with RTS, pre-employment medical examination required, including satisfactory drug screening.

Must supply and maintain own tools as specified.

Work requires physical strength and agility to safely perform all essential functions.

Work requires bending, kneeling, crawling, and pushing/pulling up to a maximum of 100 lbs.

Work requires climbing/working at heights with the use of ladders, scaffolding and stairs.

Work may require performing tasks in and around heavy traffic.

Work may require exposure to prolonged high noise levels.

Work may require exposure to hazardous conditions and noxious chemicals, including fiberglass materials and resins.

Work may require performance of tasks in extreme heat and confined areas.

### **SELECTION FACTORS**

Knowledge of methods, materials, tools, and standard practices of automotive mechanic trade.

Knowledge of automotive electrical systems.

Knowledge of occupational hazards and accident prevention methods in assigned area of responsibility.

Knowledge of principles of operation and repair, of gasoline and diesel fueled internal combustion engines.

Knowledge of automotive electrical systems.

Knowledge of automotive on-board computer systems.

Skill in the use of tools, machines, and testing instruments.

Ability to work effectively with internal and external customers.

Ability to read and understand technical manuals.

Ability to use personal computers.

Ability to perform diagnostic evaluations on automotive and other transit equipment.

Ability to communicate effectively, both orally and in writing.

Human Resources Department: Signed original on file in Human Resource / 6/3/10  
Date

## **FLEET MECHANIC II RTS**

### **NATURE OF WORK**

Advanced skilled work repairing and maintaining various vehicles including buses.

### **CLASSIFICATION STANDARDS**

Positions allocated to this classification report to a designated supervisor and work under general supervision. Work in this class is distinguished from higher classes by a lack of supervisory responsibility and from lower classes by its technical nature and emphasis on advanced skilled mechanical repair work.

### **EXAMPLES OF WORK\*\***

#### **ESSENTIAL JOB FUNCTIONS**

Performs scheduled and unscheduled maintenance on automobiles, light trucks, buses and transit equipment in accordance with manufacturers' recommendations, statutory requirements and departmental policies and procedures.

Diagnoses and repairs diesel and gasoline powered engines including in-frame rebuilds and removal and replacement of engine assemblies.

Tunes diesel engines adjusts valve and injectors.

Diagnoses and repairs diesel air intake and fuel systems including but not limited to turbochargers, piping and couplers, charge air cooler and related parts and components.

Diagnoses and repairs bus transmission electronic control systems, removes and replaces transmissions.

Diagnoses and repairs wheel chair lift mechanical, hydraulic and electrical systems, repairs/replaces hydraulic cylinders.

Performs functional inspection and repairs wheelchair restraint systems.

Diagnoses pneumatic system defects and repairs or replaces pneumatic system motors, switches valves and interlock system components.

Performs repairs to internal and external vehicle and bus lighting systems.

Performs repairs to vehicle safety equipment, horn, windshield wipers, mirrors and lights.

Performs brake system performance tests and diagnostics, relines brakes, and replaces valves, switches, hardware, slack adjusters and other foundation brake parts and components.

Diagnoses and repairs automotive-type electrical systems including multiplex computer systems.

Diagnoses and repairs engine starting and charging systems.

Performs on-board computer diagnostics of major bus components including engines, transmissions, A/C and multiplex electrical Systems.

Diagnoses and repairs engine cooling system and components. Removes and repairs or replaces radiators, cooling fan, hydraulic fan drive system components, thermostats, water pumps, belts, hoses and other related cooling system components.

Repairs hydraulic systems on automobiles, light trucks, buses, and transit equipment.

Diagnoses and repairs defects in steering and suspension systems.

Diagnoses irregular tire wear patterns and determines cause, repairs tires, including mounting new tires and the rotation of tire positions to maximize the service life of tires.

Performs minor metal fabrication such as welding, cutting and mounting specialized equipment.

Performs minor body work replaces bumpers, panels, doors and hinges.

Diagnoses and repairs/replaces rear differentials and propeller shafts including yokes and universal joints.

Diagnoses and repairs mobile video surveillance systems and equipment.

Diagnoses and repairs Advanced Vehicle Location equipment.

Maintains and repairs fare collection equipment, farebox components and vaults.

Periodically serves as lead mechanic.

Attends work on continuous and regular basis.

### **NON-ESSENTIAL JOB FUNCTIONS**

If no Lead Mechanic is available, may periodically serve as Transit Fleet Supervisor.

Performs emergency road service to equipment, cleans up petroleum or coolant discharge on the roadway and completes required documentation.

Prepares detailed records and reports in a timely manner.

May advise or assist co-workers in more complex repair work, such as diagnosis, failure analysis and rebuild/repair of major vehicle components.

Performs other related duties as assigned.

### **MINIMUM REQUIREMENTS**

Graduation from high school or possession of an acceptable equivalency diploma, supplemented by appropriate technical courses preferably including training by vehicle manufacturers' and accredited vocational-technical institution, and five years experience as a diesel mechanic, preferably in a transit or coach fleet environment, or an equivalent combination of training and experience which provide the required knowledge, skills, and abilities.

### **LICENSES/CERTIFICATES**

CDL class "B" license, with passenger transport endorsement, required within one month of date of employment.

Automotive Service Excellence (A.S.E.) certification in bus or heavy truck repair and maintenance highly desired.

### **NOTES**

Work requires physical strength and agility sufficient to safely perform all essential functions.

Work requires bending, kneeling, crawling, and pushing/pulling up to a maximum of 100 lbs.

Work requires climbing/working at heights with the use of ladders, scaffolding and stairs.

Work may require exposure to hazardous conditions and noxious chemicals, including fiberglass materials and resins.

Work may require performing tasks in and around heavy traffic.

Work may require exposure to prolonged high noise levels.

Must supply and maintain own tools as specified.

Work may require performance of tasks in extreme heat and confined areas.

### **SELECTION FACTORS**

Thorough knowledge of methods, materials, tools, and standard practices of the automotive mechanic trade.

Knowledge of occupational hazards and accident prevention methods in assigned area of responsibility.

Knowledge of operating and repair characteristics.

Knowledge of principles of operation, repair, and overhaul of gasoline and diesel fueled internal combustion engines.

Knowledge of automotive electrical systems.

Knowledge of automotive on-board computer systems.

Skill in the use of tools, machines, and testing instruments.

Ability to perform complex diagnostic evaluations on automotive and other transit equipment.

Ability to train and instruct personnel.

Ability to perform systems and data analysis to determine cause of failure.

Ability to read and understand technical manuals and follow logic ladders to diagnose vehicle failures.

Ability to use personal computers.

Ability to work effectively with internal and external customers.

Ability to communicate effectively, both orally and in writing.

Human Resources Department: Signed original on file in Human Resources / 10/13/10  
Date

## **PREVENTIVE MAINTENANCE INSPECTION MILES / INTERVALS TYPE I & TYPE II BUSES**

The preventive maintenance inspection is a program of routine checks and procedures performed on a scheduled and recurring basis to avoid breakdowns and prolong equipment life. The Maintenance Division in

addition to daily service and inspections will require that all RTS vehicles have progressive preventative maintenance inspection schedules that are reoccurring throughout the useful life of the vehicle as follows:

#### TYPE I Bus PMI Type

3000 Mile	A
6000 Mile	A
9000 Mile	A
12000 Mile	B
15000 Mile	A
18000 Mile	A
21000 Mile	A
24000 Mile	C
27000 Mile	A
30000 Mile	A
33000 Mile	A
36000 Mile	B
39000 Mile	A
42000 Mile	A
45000 Mile	A
48000 Mile	D (annual)

#### TYPE II Bus PMI Type

6000 Mile	A
12000 Mile	B
18000 Mile	A
24000 Mile	C (annual)
30000 Mile	A
36000 Mile	B
42000 Mile	A
48000 Mile	D (annual)
54000 Mile	A
60000 Mile	B
66000 Mile	A
72000 Mile	C (annual)
78000 Mile	A
84000 Mile	B
90000 Mile	A
96000 Mile	E (annual)
102000 Mile	A
108000 Mile	B
114000 Mile	A
120000 Mile	C (annual)
126000 Mile	A
132000 Mile	B
138000 Mile	A
144000 Mile	D (annual)
150000 Mile	A
156000 Mile	B
162000 Mile	A
168000 Mile	C (annual)
174000 Mile	A
180000 Mile	B
186000 Mile	A
192000 Mile	F (annual)

All preventative maintenance must be completed within 10% of the prescribed mileage. The PM checklist must be consistent with the current operating fleet and in particular with the minimum requirements of the Original Equipment Manufacturer.



# Bus Type I Preventative Maintenance Inspection and Service Checklist:



## Preventive Maintenance Inspection and Service Checklist

Circle Service Type: **A B C D**

Date: \_\_\_\_\_ Vehicle #: \_\_\_\_\_ Mileage in: \_\_\_\_\_ Mileage out: \_\_\_\_\_

P	F	Item Inspected	P	F	Item Inspected
		<b>A) Vehicle drive in inspection (5 miles)</b>			2) Rear blower condition and operation
		1) Driver carpet			3) Defroster operation
		2) Driver seat condition and operation			4) Temp gets to 20 deg. F below ambient temp.
		3) Drivers door operation and condition			5) Evaporator intake air filter condition
		4) Drivers seat belt operation and condition			6) Front heater condition and operation
		5) Engine starting and ignition system			7) Rear heater condition and operation
		6) Instrument panel gauges & warning lights			8) A/C compressors and condenser fans
		7) Instrument panel lighting & condition			<b>E) Under hood inspection</b>
		8) Horn operation			1) Batteries & charging sys. (load alt B,C,D serv)
		9) Steering wheel tight, no excessive play			Batt 1 volts: load volts: load amps:
		10) Windshield wipers			Batt 2 volts: load volts: load amps:
		11) Windshield washer			Batt 3 volts: load volts: load amps:
		12) Sun visor condition and operation			(battery min. loaded volts 9.6v, 1/2 CCA for 15 sec)
		13) Parking brake operation & condition			Alt. 1 min volt: max volt: max amp:
		14) Parking and service brake pedal pads			Alt. 2 min volt: max volt: max amp:
		15) Passenger door operation			(reference factory service manual for alternator spec)
		16) No vibrations, pulsations or noises			2) Wire and hose routing and connections
		<b>B) Walk around inspection</b>			3) Cooling system, hoses, water pump condition
		1) Body damage (list on separate sheet)			5) Accessory drive belts condition
		2) Headlights, high & low beam operation			6) Pulleys and tensioned operation & condition
		3) Parking lights operation & condition			7) Brake master cylinder and power booster
		4) Marker lights operation & condition			8) Fan and fan clutch operation and condition
		5) Directional signals operation & condition			9) Engine oil fluid level and condition
		6) Hazard lights operation & condition			10) Transmission oil level and condition
		7) Clearance lights operation and condition			11) Power steering fluid level and condition
		8) Brake lights operation & condition			12) Brake fluid level and condition
		9) License plate lamp operation & condition			<b>F) Vehicle rack inspection</b>
		10) License plates and tags			1) Steering gear box mount, condition & leaks
		11) Backup lights and alarms			2) Steering shaft U joints
		12) Reflectors and reflective bumper tape			3) Steering shaft bearings
		13) Exterior decals and signage			4) Steering linkages
		14) Bumpers secure / in good condition			5) I beam or control arm movements and rivets
		15) Exterior mirrors secure / in good condition			6) Radius arm condition and bushings condition
		16) Exterior clean			7) Stabilizer bar condition and bushings condition
		<b>C) Interior inspection</b>			8) Ball joints or kingpins
		1) Passenger door and steps condition			9) Front coil spring & tower condition & mounting
		2) Handrails and stanchions condition			10) Front shock absorber operation & condition
		3) Interior and modesty panels condition			11) Trans oil cooler & lines routing and leaks
		4) Flooring condition			12) Engine oil cooler & lines routing and leaks
		5) Interior lighting operation and condition			13) Heater and A/C hose routing and leaks
		6) Windows operation and condition			14) No engine oil leaks and fluid condition
		7) Emergency Exits operation & condition			15) Engine mounts, brackets and bolts
		8) Accessory operation & condition (radio, GPS)			16) Transmission mounts, brackets and bolts
		9) Passenger seats operation & condition			17) No transmission oil leaks and fluid condition
		10) Passenger seat belts operation & condition			18) Drive shaft condition
		11) First aid & body fluid kits complete			19) Universal joints and carrier bearings condition
		12) Triangle reflectors complete/good condition			20) No rear differential leaks
		13) Stop request operation & condition			21) Rear differential condition and mounting
		14) Valid registration, insurance & accident pack			22) Frame and cross members
		15) Fire extinguisher in good condition & signed			23) Rear shock absorbers
		16) Interior decals and signage (incl. electrical)			24) Rear springs condition and mounting
		17) DVI's reviewed, addressed and signed off			25) No fuel leaks
		18) Interior clean			26) Fuel tank condition and mounting
		<b>D) HVAC system inspection</b>			27) No exhaust leaks
		1) Front blower condition and operation			28) Exhaust system condition and mounting

## Preventive Maintenance Inspection and Service Checklist

Circle Service Type: A B C D

Date: \_\_\_\_\_ Vehicle #: \_\_\_\_\_ Mileage in: \_\_\_\_\_ Mileage out: \_\_\_\_\_

P	F	Item Inspected
		30) Front brake condition and mounting
		31) Front brake lining condition & measurement Pads R/F: /32" L/F: /32"
		32) Rear brake condition and mounting
		33) Rear brake lining condition & measurement Pads R/R: /32" L/R: /32" Shoes R/R: /32" L/R: /32"
		34) Tire and wheel condition and measurements R/F: /32" L/F: /32" R/Rl: /32" L/Rl: /32" R/O: /32" L/O: /32"
		35) Lug nuts condition Air pressure adjustment FR. RR. Wheel torque specs used: ft. lbs.
		G) Lift inspection
		1) Lift operation (fully stowed to fully deployed)
		2) Lift control pendant condition and operation
		3) Lift restraint belt condition and operation
		4) Outer roll stop condition and operation
		5) Inner roll stop condition and operation
		6) Platform adjustments, condition and mounting
		7) Standee arm condition and operation
		8) Proper signage and decals
		9) Manual backup pump condition and operation
		10) Lift manual pump handle
		11) Hydraulic pump condition and operation
		12) Hydraulic lines and cylinders condition
		13) Hydraulic fluid level and condition
		14) Base plate and arms welds & pivot points
		15) Lift springs and pins condition and operation
		16) Lift safety switches and adjustments
		17) Hose and wire routing and connections
		18) Rollers and pivot point condition & operation
		19) Lift to vehicle mounting bolts and brackets
		20) Lift doors condition and operation
		21) Lift door lights condition and operation
		22) Lift interlock operation and condition (lift door open, e-brake down not able to shift) (e-brake off lift door closed no lift power)
		23) W/C tie downs condition and operation
		24) Tie down container secure and clean
		25) Tie down floor mounting brackets secure
		26) W/C shoulder belt condition and operation
		27) Lift clean and no sharp edges
		28) Lift shields secure and in good shape
		29) Lift moves steady without drifting, jerking, or unusual speeds
		30) No unusual lift noises
		Lube all lift pivot points, barriers, rollers, linkages and bearings cleaning off all excess lube
		Check, torque or adjust lift base mounting bolts
		31) Cycle meter reading

Yes	No	Lube Service	Tech's Initials
		Change oil and filter	
		Lube chassis and suspension	
		Lube drive shafts and universal joints	
		Lube doors and hood, locks and hinges	
		Adjust service and parking brakes	
		Drain water from separator	
		Rotate tires(as necessary, caps on rear)	
		Service Performed	
B,C,D		Change air filter	
B,C,D		Change fuel filter	
B,C,D		Clean or change PCV valve	
B,C,D		Clean or change crank case filter	
B,C,D		Install new wiper blades	
C,D		Change transmission fluid and filter	
C,D		Service front wheel bearings	
C,D		Drain water from fuel tank	
D		Replace accessory drive belts	
D		Test cooling system protection level	
D		Install new spark plugs & wires	
D		Install new dist. cap & rotor	
D		Change differential fluid	
D		Check Exhaust and EGR system	
D		Check and service fuel & evaporator System	
D		Evac and recharge A/C (add 1 oz. of oil)	
A,B,C,D		Post service test drive (5 miles)	
<i>Initial or "N/A" each service performed per PM type</i>			

All items have been inspected and the above indications are true and correct. All safety related defects have been repaired and this vehicle is safe for operational use. All non-safety related defects not repaired are diagnosed and scheduled for repair with all parts needed pulled from stock or ordered. Brake pad linings must be measured from the backing plate. Brake shoe linings must be measured from the rivets.

Technicians Signature _____	Date _____
Supervisor Signature _____	Date _____
Notes:  _____  _____	

## Bus Type II Preventative Maintenance Inspection and Service

### Checklist: Gillig Low Floor

**14-90.009 BUS SAFETY ITEMS INSPECTED ARE IN “( )”WITH CORRESPONDING NUMBER.** Example (3a)

0000	NOTE WHEN PROMPTED FOR A “YES” OR “NO” ANSWER ENTER Y OR N IN CHECK BOX
00aa	Pull in steam bay, put vehicle in neutral, set spring brakes. Dump air to doors and shut vehicle down
00ad	remove rear settee fasteners, but leave settee in place
00af	Remove and clean HVAC return filter (replace if needed)
00ah	Inspect evaporator compartment for cleanliness, loose and damaged parts. Any signs of leaks?
00aj	Clean A/C control panel & sensor using canned air (unit not running)
00an	Raise vehicle, completely steam clean under body.
00at	lower vehicle
00ba	Open all exterior compartment doors, pull battery trays out, all engine compartment doors (note any fluid leaks)
00ca	Steam clean all exterior door hinges, top of batteries, and engine compartment
00cd	Inspect all rims condition (cracks, rust) and security <b>(30)</b>
00cg	remove settee and from inside bus steam clean rear of engine area
00da	Using garden hose clean radiator and hydraulic cooler till water runs clear
00ea	Check specific gravity in batteries before filling cells with water record below. Use g=good, f= fair, rc =recharge
00fa	Battery 1 - Start at positive post cell1 _____ cell 2 _____ cell3 _____ cell4 _____ cell5 _____ cell6 _____
00ga	Battery 2 - Start at positive post cell1 _____ cell 2 _____ cell3 _____ cell4 _____ cell5 _____ cell6 _____
00ha	Fill each battery cell to proper level using distilled water
00ia	Check general battery condition, terminals for corrosion (clean if necessary) apply anti-corrosion protection <b>(3D)</b>
00ja	Lube battery tray slides and secure batteries.
00ka	Inspect battery equalizer condition, corrosion, damage
00la	Check battery shut off switch for corrosion, damage and dirt build up
00ma	Fill windshield washer fluid
00na	Lubricate all exterior door hinges, locks, bike rack, windshield wiper pivot post, w/c step edge closeout and outer hinge
00ng	check electric radiator fans protective caps and retain rings
00nn	inspect radiator fan blades for cleanliness and damage
00nt	check radiator fan power cable ends for corrosion
00oa	Close all exterior compartment doors and secure
05aa	Start vehicle, supply air to doors, stow lift and raise bus to proper ride height
05ba	Mount brake test equipment and enter bus number
05ca	Perform three brake test - pull reading from machine and attach to inspection sheet, after returning to garage <b>(3E)</b>
05da	Drive test route for "talking bus" system, is it operating correct?
05dg	Check condition and security of radio and handset.
05dm	Prior to leaving for road test perform radio check. Is it operating correctly?
05ea	Drive vehicle on predetermined road test route
05fa	Speedometer, dash gauges all operating correctly? <b>(3V)</b>
05ga	Note any warning lights <b>(3F)</b>
05ha	Note any unusual operating condition, engine performance, transmission shift, vibration, steering play, noises, etc.
05ia	Operate HVAC system along with defroster working normally?



- 05ja Before pulling in garage, at slow speed open entrance and exit door. Did interlock activate and throttle deactivate? **(3L)**
- 05ka Bring vehicle in garage, set parking brake, activate fast idle, and operate both doors through all door control positions, ok?
- 10aa Check for proper operation of exit door sensitive edge
- 10ba Check driver's seat & seat belt condition and assure all functions operate correctly **(3S)**
- 10ca Inspect condition of all driver's console, dash and saw tooth panels
- 10da Inspect condition and operation of all driver's controls (switches)
- 10ea Release parking brake, perform brake pump down. Did low air alarm activate and parking brake "pop" up @ 60 psi?**(3E)**
- 10fa check condition and covers of both brake and throttle pedals
- 10ga Check proper windshield wiper and washer operation. **(3B)**
- 10ha Check driver's shades for condition & operation
- 10ja Check steering wheel condition and blow horn **(3A)**
- 10ka Check steering column for condition and operation of up/down and back /forth positions
- 10la Check condition and security of fire extinguisher, safety triangles **(3T)**
- 10ma Push "push to test" on AMEREX display, did audio alarm sound & all LEDs light up? Push "Relay Reset" to return to normal operation
- 10mb Assure Amerex display "System Ok" led is illuminated **(3T)**
- 10mf Check that all Amerex dash components are present & in their original location, and are in good working order. Check that all Amerex manual actuation switches/remote actuators are unobstructed by vehicle modifications or clutter
- 10mh check that Amerex tamper indicators, lock wire seal, pull pins and "In Case Of Fire" instruction label are intact
- 10mj Check that Amerex maintenance tag/certificate is in place. Record date of inspections and initial of inspector
- 10na Lubricate driver's seat track, brake & throttle pedals
- 10nn inspect all i/o panels (four) for chaffing wires, loose connection
- 15aa Check condition and security of interior mirrors to include exit door mirror **(3C)**
- 15ba With entrance door open check "stop request" signal and sign for proper operation **(3I)**
- 15ca Check condition & operation of (3) w/c jump seats (release handle, locking in both the up/down positions) **(3U)**
- 15da Check condition & operation of the (8) tie down straps **(3U)**
- 15ea Check condition & operation passenger restraints (2) **(3S)(3U)**
- 15fa Check condition & operation of the Advance Restraint Module (A.R.M.), lubricate slide lightly
- 15ga Check condition and security of all passenger seats
- 15ha Check condition and security of all stanchions **(3J)**
- 15ia Check wall panel, roof, flooring and standee line condition **(3K)**
- 15im Check egress windows for proper operation. lube release bolts and cable **(3N)**
- 15ja Check condition, operation of roof hatches **(3N)**
- 15ka Check interior dome lights for proper operation **(3I)**
- 20ca Activate destination signs and exterior lights test modes
- 20da Inspect exterior lights, destination signs for proper operations **(3G)(3H)(3I)**
- 20fa Inspect all exterior panels and glass for any damage
- 20ga Check windshield wiper arms and exterior mirrors for security **(3C)**
- 20ha Drain air tanks, drain wet tank completely first, then the rest. Check for pressure and moisture.
- 20ia Check all engine, transmission, surge tank, hydraulic system for proper fluid levels
- 20ja Pull in bay, set parking brake and deploy w/c ramp **(3U)**

25aa	Dump air to entrance door, shut engine down
25ba	Open w/c rising floor asm. and vacuum drive platform
25ca	Using penetrating oil clean and then lubricate lightly (using 30w motor oil) drive chain and counter balance asm.
25da	Re-install rising floor, start engine, supply air to entrance door and stow w/c ramp. Shut engine down
25ea	Prepare lift(s) to raise bus
25fa	Release parking brake, raise vehicle. Assure that safety locks are engaged on vehicle lift(s)
25ga	Replace primary fuel filter. Pre-fill before installing.
25gg	replace air dryer cartridge
25gn	check air dryer security
25ha	Supply vehicle air system with shop air
25hn	Replace hydraulic filter
25hn	Change hydraulic fluid (refill with 15w-40 motor oil)
25ia	Change engine oil and filter, take oil sample, prefill filter. <b>DO NOT LEAVE ENGINE WITHOUT OIL</b>
25in	Change transmission fluid, take sample. <b>DO NOT LEAVE TRANSMISSION WITHOUT OIL</b>
25ja	Visually inspect entire undercarriage front to back for any damage, leaks of any kind, all hose and wire condition
25jg	Replace secondary fuel filter DO NOT PRE-FILL
25jj	Replace DEF filter
25jn	Change coolant filter
25jt	Change Skinner II kit #73642
25jw	Change main & lube filters
25ka	Check Spinner II oil filter, for leaks, damage
25la	Check engine, all fluid lines for leaks, chaffing, bad clamps
25ma	Check radiator and all coolant lines for leaks, chaffing, bad clamps
25na	Inspect condition of engine intake system
25nm	Check charge air cooler and piping, for security, damage
30aa	Check general condition of bottom half of engine compartment
30am	Check all Amerex nozzle blow-off caps are intact, nozzles outlets must be unobstructed to hazard its protecting
30ap	check all Amerex control heads, actuators, hoses, wiring and detectors secure and in good working order
30at	Check all Amerex wiring connections are sealed from weather and good condition
30ba	Check all steering components. tie rod ends, u-joints, box, and pitman arm <b>(3Q)</b>
30ca	Check general condition of front axle, fasteners, mud flaps, leveling valves
30cg	Check front shocks and bushings for wear and leaks <b>(3P)</b>
30cn	Check front axle, external bump stops and rings for wear or damage <b>(3P)</b>
30ct	Check front axle for proper ride height s/b 9" (+/- 1/4")
30cw	Check front axle for loose or damaged mounting parts
30da	Clean and grease fittings, driveshaft (3), camshaft bushings (4), slack adjusters (4), tie rod ends (2), kingpins* (4)
30ea	Clean and grease fittings continue: intermediate shaft (2) drag link (2)
30en	Grease output shaft(1) (use hand gun only) use #2 grease
30fa	Inspect all brake lining condition, wear <b>(3E)</b>
30ga	Check all inner wheel seals, outer gaskets for signs of leakage
30gm	Replace front wheel bearing oil

30ha	Check proper wheel bearing oil level
30hn	Clean rear axle breather
30ht	Change rear axle fluid
30ia	Check rear axle for signs of leaks and check for proper gear oil level & twist vent cap
30in	Check driveline fastener torque s/b 115-135 ft. lb.
30ja	Check general condition of tires (side walls/tread) <b>(30)</b>
30ka	Check tire depth and record: lf ____/32, rf ____/32, lri ____/32, lro ____/32, rri ____/32, rro ____/32 <b>(30)</b>
30la	Check tire pressure and correct to proper air pressure 110lbs all way around
30ma	Check slack adjuster condition and operation
30na	Remove rear brake chamber end cap, inspect spring for alignment. If misaligned replace piggy back
30oa	Check slack adjuster strokes record: rf ____, lf ____, lr ____, rr ____ fr (max strokes, front 2" rear 2.5") <b>(3E)</b>
35aa	While checking brake stroke listen for any air leaks
35ba	Check general condition of rear axle, fasteners, mud flaps, leveling valves
35bd	Check rear shocks and bushings for wear and leaks <b>(3P)</b>
35bg	Check rear axle for loose or damaged mounting parts <b>(3P)</b>
35bn	Check rear axle ride height s/b 11 1/2" (+/- 1/8")
35ca	Lower vehicle, set parking brake.
35da	Visually inspect engine compartment for damaged items (i.e. clamps, loose bolts chaffed line/wires)
35ea	Check condition and security of alt, a/c & air compressor, radiator fans, starter and hydraulic pump
35en	Check hydraulic pump mounting bolts
35fa	Check engine and transmission mounts
35ga	Check condition of all engine drive belts
35gg	Check belt tensioners for wear and security
35gj	inspect engine vibration damper
35hn	replace engine air filter
35ia	Check coolant DCA level and record _____. Add DCA if needed
35id	Replaced DPF filter
35ig	Check exhaust bellows for leaks and alignment <b>(3R)</b>
35in	Check exhaust system for leaks, loose fasteners and straps <b>(3R)</b>
35iq	Set overhead
35it	Replace secondary fuel filter DO NOT PRE-FILL
35it	replace crankcase breather element
35iv	inspect rear engine area for leaks, lines chaffing, any damaged parts
35iw	re-install settee and fasteners
35jd	Replace air compressor
35je	Replace air compressor discharge line
35jn	Start engine and run for a few minutes, shut down. Check engine and hydraulic fluid levels make necessary adjustments
35ka	Check a/c compressor oil for color and proper level (proper level of oil 1/4 to 1/2 of site glass)
35la	Visually inspect clutch armature for wear & overheating caused by slippage
35lg	check and adjust clutch air gap and check for warp pulley
35lm	Check jump start plug and cables for cracks, chafing, damage and security. Verify boot is in place

- 35ma Check Amerex agent cylinder gauge, is it in "green pie zone"? Assure all labels are intact, clean and legible and are secure
- 35mm Check all Amerex cylinder, wiring, hose, actuators are secure and good working order
- 35na check a/c refrigerant charge (ball floating in receiver tank sight glass)
- 35oa Check a/c dry eye in receiver tank & liquid line site glass. Record color here \_\_\_\_\_
- 35on Check heat detector wires for chaffing, kinks, or cuts. Perform cable test (3T)**
- 35pa Inspect a/c condenser for damage and cleanliness
- 35pn check wheel stud torque s/b 450 to 500 ft. lbs. (30)**
- 40aa Park bus clean area

6000 mile A inspection items - no fill

12000 mile B inspection items - yellow fill

24000 mile C inspection items - green fill (annual)

48000 mile D inspection - blue fill

96000 mile E inspection - orange fill

e 192000 mile F inspection - purple fill

## Maintenance Guidelines

Six (6) thousand mile A-inspection (typical) to include:

- 00aa Pull in steam bay, put vehicle in neutral, set spring brakes. Dump air to doors and shut vehicle down
- 00af Remove and clean HVAC return filter (replace if needed)
- 00ah Inspect evaporator compartment for cleanliness, loose and damaged parts. Any signs of leaks?
- 00ba Open all exterior compartment doors, pull battery trays out, all engine compartment doors (note any fluid leaks)
- 00ca Steam clean all exterior door hinges, top of batteries, and engine compartment
- 00cd Inspect all rims condition (cracks, rust) and security
- 00da Using garden hose clean radiator and hydraulic cooler till water runs clear
- 00ea Check specific gravity in batteries before filling cells with water record below. Use g=good, f= fair, rc =recharge
- 00fa Battery 1 - Start at positive post cell1 \_\_\_\_ cell 2 \_\_\_\_ cell3 \_\_\_\_ cell4 \_\_\_\_ cell5 \_\_\_\_ cell6 \_\_\_\_
- 00ga Battery 2 - Start at positive post cell1 \_\_\_\_ cell 2 \_\_\_\_ cell3 \_\_\_\_ cell4 \_\_\_\_ cell5 \_\_\_\_ cell6 \_\_\_\_
- 00ha Fill each battery cell to proper level using distilled water
- 00ia Check general battery condition, battery terminals for corrosion (clean if necessary) apply anti-corrosion protection
- 00ja Lube battery tray slides and secure batteries.
- 00ka Inspect battery equalizer condition, corrosion, damage
- 00la Check battery shut off switch for corrosion, damage and dirt build up
- 00ma Fill windshield washer fluid
- 00na Lubricate all exterior door hinges, locks, bike rack, windshield wiper pivot post, w/c step edge closeout and outer hinge
- 00oa Close all exterior compartment doors and secure
- 05aa Start vehicle, supply air to doors, stow lift and raise bus to proper ride height

- 05ba Mount brake test equipment and enter bus number
- 05ca Perform three brake test - pull reading from machine and attach to inspection sheet, after returning to garage
- 05da Drive test route for "talking bus" system, is it operating correct?
- 05dg Check condition and security of radio and handset.
- 05dm Prior to leaving for road test perform radio check. Is it operating correctly?
- 05ea Drive vehicle on predetermined road test route
- 05fa Speedometer, dash gauges all operating correctly?
- 05ga Note any warning lights
- 05ha Note any unusual operating condition, engine performance, transmission shift, vibration, steering play, noises, etc.
- 05ia Operate HVAC system along with defroster working normally?
- 05ja Before pulling in garage bay, at slow speed open entrance and exit door. Did interlock activate and throttle deactivate?
- 05ka Bring vehicle in garage, set parking brake, activate fast idle, and operate both doors through all door control positions, ok?
- 10aa Check for proper operation of exit door sensitive edge
- 10ba Check driver's seat & seat belt condition and assure all functions operate correctly
- 10ca Inspect condition of all driver's console, dash and saw tooth panels
- 10da Inspect condition and operation of all driver's controls (switches)
- 10ea Release parking brake, perform brake pump down. Did low air alarm activate and parking brake "pop" up @ 60 psi?
- 10fa check condition and covers of both brake and throttle pedals
- 10ga Check proper windshield wiper and washer operation.
- 10ha Check driver's shades for condition & operation
- 10ja Check steering wheel condition and blow horn
- 10ka Check steering column for condition and operation of up/down and back /forth positions
- 10la Check condition and security of fire extinguisher, safety triangles
- 10ma Push "push to test" on AMEREX display, did audio alarm sound & all LEDs light up? Push "Relay Reset" to return to normal operation
- 10mb Assure Amerex display "System Ok" led is illuminated
- 10md check that all Amerex dash components are present & in their original location, and are in good working order
- 10mf Check that all Amerex manual actuation switches/remote actuators are unobstructed by vehicle modifications or clutter
- 10mh check that Amerex tamper indicators, lock wire seal, pull pins and "In Case Of Fire" instruction label are intact
- 10mj Check that Amerex maintenance tag/certificate is in place. Record date of inspections and initial of inspector
- 10na Lubricate driver's seat track, brake & throttle pedals
- 15aa Check condition and security of interior mirrors to include exit door mirror
- 15ba With entrance door open check "stop request" signal and sign for proper operation
- 15ca Check condition & operation of (3) w/c jump seats (release handle, locking in both the up/down positions)
- 15da Check condition & operation of the (8) tie down straps
- 15ea Check condition & operation passenger restraints (2)
- 15fa Check condition & operation of the Advance Restraint Module (A.R.M.), lubricate slide lightly
- 15ga Check condition and security of all passenger seats
- 15ha Check condition and security of all stanchions
- 15ia Check wall panel, roof, flooring and standee line condition



- 15ja Check condition, operation of roof hatches
- 15ka Check interior dome lights for proper operation
- 20ca Activate destination signs and exterior lights test modes
- 20da Inspect exterior lights, destination signs for proper operations
- 20fa Inspect all exterior panels and glass for any damage
- 20ga Check windshield wiper arms and exterior mirrors for security
- 20ha Drain air tanks, drain wet tank completely first, then the rest. Check for pressure and moisture.
- 20ia Check all engine, transmission, surge tank, hydraulic system for proper fluid levels
- 20ja Pull in bay, set parking brake and deploy w/c ramp
- 25aa Dump air to entrance door, shut engine down
- 25ba Open w/c rising floor asm. and vacuum drive platform
- 25ca Using penetrating oil clean and then lubricate lightly (using 30w motor oil) drive chain and counter balance asm.
- 25da Re-install rising floor, start engine, supply air to entrance door and stow w/c ramp. Shut engine down
- 25ea Prepare lift(s) to raise bus
- 25fa Release parking brake, raise vehicle. Assure that safety locks are engaged on vehicle lift(s)
- 25ga Replace primary fuel filter. Pre-fill before installing.
- 25ha Supply vehicle air system with shop air
- 25hn Replace hydraulic filter
- 25ja Visually inspect entire undercarriage front to back for any damage, leaks of any kind, all hose and wire condition
- 25ka Check Spinner II oil filter, for leaks, damage
- 25la Check engine, all fluid lines for leaks, chaffing, bad clamps
- 25ma Check radiator and all coolant lines for leaks, chaffing, bad clamps
- 25na Inspect condition of engine intake system
- 30aa Check general condition of bottom half of engine compartment
- 30am Check all Amerex nozzle blow-off caps are intact, nozzles outlets must be unobstructed to hazard its protecting
- 30ap check all Amerex control heads, actuators, hoses, wiring and detectors secure and in good working order
- 30at Check all Amerex wiring connections are sealed from weather and good condition
- 30ba Check all steering components. tie rod ends, u-joints, box, and pitman arm
- 30ca Check general condition of front axle, fasteners, mud flaps, leveling valves
- 30da Clean and grease fittings, driveshaft (3), camshaft bushings (4), slack adjusters (4), tie rod ends (2), kingpins\* (4)
- 30ea Clean and grease fittings continue: intermediate shaft (2) drag link (2)
- 30fa Inspect all brake lining condition, wear
- 30ga Check all inner wheel seals, outer gaskets for signs of leakage
- 35ia Check coolant DCA level and record \_\_\_\_\_ Add DCA if needed  
Start engine and run for a few minutes, shut down. Check engine and hydraulic fluid levels make necessary adjustments
- 35jn
- 35ka Check a/c compressor oil for color and proper level (proper level of oil 1/4 to 1/2 of site glass)
- 35la Visually inspect clutch armature for wear & overheating caused by slippage  
Check Amerex agent cylinder gauge, is it in "green pie zone"? Assure all labels are intact, clean and legible and are secure
- 35ma
- 35mm Check all Amerex cylinder, wiring, hose, actuators are secure and good working order
- 35na check a/c refrigerant charge (ball floating in receiver tank sight glass)

- 35oa Check a/c dry eye in receiver tank & liquid line site glass. Record color here \_\_\_\_\_
- 35pa Inspect a/c condenser for damage and cleanliness
- 40aa Park bus clean area

#### Twelve (12) thousand mile B-inspection

This inspection will incorporate a complete A-inspection plus the following:

- 25hn Change hydraulic fluid (refill with 15w-40 motor oil)
- 25jg Replace secondary fuel filter DO NOT PRE-FILL
- 25jn Change coolant filter
- 25nm Check charge air cooler and piping, for security, damage
- 30hn Clean rear axle breather
- 35bn Check rear axle ride height s/b 11 1/2" (+/- 1/8")
- 35ig Check exhaust bellows for leaks and alignment
- 35in Check exhaust system for leaks, loose fasteners and straps
- 35it Replace secondary fuel filter DO NOT PRE-FILL
- 35lm Check jump start plug and cables for cracks, chafing, damage and security. Verify boot is in place
- 35on Check heat detector wires for chaffing, kinks, or cuts. Perform cable test
- 35qm replace trim unit in fare box

#### Twenty-four (24) thousand mile annual C-inspection

This inspection will incorporate a complete A & B inspection plus the following:

- 00ai Clean A/C control panel & sensor using canned air (unit not running)
- 00ng check electric radiator fans protective caps and retain rings
- 00nn inspect radiator fan blades for cleanliness and damage
- 00nt check radiator fan power cable ends for corrosion
- 10nn inspect all i/o panels (four) for chaffing wires, loose connection
- 15im Check egress windows for proper operation. lube release bolts and cable
- 25gn check air dryer security
- 30cg Check front shocks and bushings for wear and leaks
- 30cn Check front axle, external bump stops and rings for wear or damage
- 30ct Check front axle for proper ride height s/b 9" (+/- 1/4")
- 30cw Check front axle for loose or damaged mounting parts
- 30en Grease output shaft(1) (use hand gun only) use #2 grease
- 30in Check driveline fastener torque s/b 115-135 ft. lb.
- 35bd Check rear shocks and bushings for wear and leaks
- 35bg Check rear axle for loose or damaged mounting parts
- 35en Check hydraulic pump mounting bolts
- 35gg Check belt tensioners for wear and security
- 35lg check and adjust clutch air gap and check for warp pulley
- 35pn check wheel stud torque s/b 450 to 500 ft. lbs.

#### Forty-Eight (48) thousand mile D-inspection

This inspection will incorporate a complete A, B & C inspection plus the following:

- 00ad remove rear settee fasteners, but leave settee in place
- 00an raise vehicle, completely steam clean under body.
- 00at lower vehicle
- 00cg remove settee and from inside bus steam clean rear of engine area
- 25gg replace air dryer cartridge
- 25jt Change Skinner II kit #73642
- 25jw Change transmission main & lube filters
- 35gj inspect engine vibration damper
- 35hn replace engine air filter
- 35it replace crankcase breather element
- 35iv inspect rear engine area for leaks, lines chaffing, any damaged parts
- 35iw re-install settee and fasteners

#### Ninety-Six (96) thousand mile E-inspection

This inspection will incorporate a complete A, B, C & D inspection plus the following:

- 25je Change transmission fluid, take sample. **DO NOT LEAVE TRANSMISSION WITHOUT OIL**
- 25jj Replace DEF filter
- 30gm Replace front wheel bearing oil
- 30ht Change rear axle fluid
- 35id Replaced DPF filter
- 35iq Set overhead

#### One Hundred and Ninety-Two (192) thousand mile F-inspection

This inspection will incorporate a complete A, B, C, D & E inspection plus the following:

- 35jd Replace air compressor
- 35je Replace air compressor discharge line

## **A/C Maintenance**

The A/C preventive maintenance inspection is a program of routine checks and procedures performed on a scheduled and recurring basis to avoid breakdowns and prolong equipment life. The Maintenance Division performs required OEM A/C preventative maintenance inspection schedules that are reoccurring throughout the useful life of the vehicle as follows:

## TYPE I A/C PMI Type

---

OEM's Visual inspection requirements are performed on the vehicle's "A" PM inspection every 6000 miles.

### Yearly Inspection

The scheduling of the A/C inspection is done through the daily generation of a forecast report from the fleet management system. The selected vehicles are removed from service and A/C Preventative Maintenance workorder's are generated and assigned to appropriate personnel. During the inspection RTS personnel uses the PM checklist and notes any defects discovered during the inspection. Once the PM checklist is complete the assigned personnel signs and dates the checklist. If required a work order is then generated and assigned to the appropriate personnel to correct any defects noted on the checklist. The work orders are closed and a copy is printed for the vehicle file and the electronic version remains a part of the permanent vehicle records in the fleet management software.

All RTS personnel performing A/C maintenance, repair and inspections are experienced in servicing and repair of HVAC systems, and possesses 608 certification. The following are the PM inspection forms currently in use:



**THERMO KING**

**ANNUAL**

**BUS AIR CONDITIONING**

**PREVENTATIVE MAINTENANCE**

BUS NO.: \_\_\_\_\_ DATE: \_\_\_\_\_  
BUS MFG. & MODEL: \_\_\_\_\_ AC UNIT MFG & MODEL: \_\_\_\_\_  
HUB MILEAGE: \_\_\_\_\_ AC UNIT SERIAL NO.: \_\_\_\_\_  
GARAGE LOCATION: \_\_\_\_\_ COMPRESSOR SERIAL NO. \_\_\_\_\_  
TECHNICIAN: \_\_\_\_\_ MAINT. SUPERVISOR: \_\_\_\_\_

Note: The maintainer is to fill in the blank at the left upon completion of each PM Inspection Item using one of the "symbols" listed below. Record information or readings where requested for future reference.

Symbols: a. "PM": PM Performed b. "RN": Repair Needed c. "RC": Repair Completed

(Refer to Bus Manufacturer and/or A/C Manufacturer's Service Manual for all specifications)

**I. Before Running Inspection**

1. \_\_\_\_\_ Inspect and wash condenser, evaporator and heater coils with warm, soapy water. Steam clean compressor area. Clean evaporator and/or condenser drain lines and insure that drain outlet check valves are in place.
2. \_\_\_\_\_ Clean electrical control panel of lint, dirt and corrosion. Inspect all wire connections to be tight & clean. Clean with nylon brush & spray with contact cleaner as needed. Replace return air filters.
3. \_\_\_\_\_ Inspect evaporator motor and condenser motor brushes. Replace brushes if worn down to 1/2 inch in length (if top of brush is at top of brush holder). Check condition of commutator and bearings. Lubricate evaporator motor fan shaft bearings (if equipped). Check motor mounting hardware & fans to be tight & in good condition.
4. \_\_\_\_\_ Inspect driver's booster blower motor brushes. Replace if worn down  
Record voltage and amp readings of the motor.  
\_\_\_\_\_volts \_\_\_\_\_amps

TK 40812-1 (6/95)

THERMO KING CORPORATION • 314 WEST 90TH ST. • MINNEAPOLIS, MN 55420 USA • (612) 887-2200 • TELEX 29-0450 • FAX 612-887-2615

5. \_\_\_\_\_ Install service gauge manifold set at the compressor service valves and record static pressures to verify that there is refrigerant in the A/C system.  
Suction: \_\_\_\_\_ PSIG Discharge: \_\_\_\_\_ PSIG
6. \_\_\_\_\_ Check for proper engine coolant level and record anti-freeze protection to \_\_\_\_\_ °F. It should be 50/50 mixture of ethylene glycol/water = -34°F).  
Visually inspect the entire A/C unit heater coil compartment and connecting lines for evidence of engine coolant leaks. Replace hoses or clamps as needed.
7. \_\_\_\_\_ Visually inspect entire A/C unit for evidence of leaks of refrigerant and oil. If leaks are detected, leak check A/C system with electronic leak detector. Repair as needed. Pay special attention to service valve packing glands, service access ports and schrader valves. Insure protective caps are installed.
8. \_\_\_\_\_ Check moisture indicator in liquid line or receiver tank sightglass for moisture content. (If equipped)  
Green (Dry) \_\_\_\_\_ Yellow (wet) \_\_\_\_\_
9. \_\_\_\_\_ Inspect circulating pump brushes for wear and seal for evidence of leaks. Replace brushes if worn down.
10. \_\_\_\_\_ Check condenser air inlet and air outlet seals to be in good condition and in place. Check rear mud flaps to be in good condition.
11. \_\_\_\_\_ Visually inspect compressor clutch for evidence of wear or overheating. Inspect viscous dampener if equipped.  
Inspect compressor drive belt for wear or deterioration. (Refer to bus manufacturer's service manual for specification).
12. \_\_\_\_\_ a. Condition: OK \_\_\_\_\_ Replaced \_\_\_\_\_  
b. Tension: New Belt \_\_\_\_\_ lbs. Existing Belt \_\_\_\_\_ lbs.  
c. Alignment: OK \_\_\_\_\_ Adjusted \_\_\_\_\_
13. \_\_\_\_\_ Check compressor sightglass for presence of oil and record oil color:  
Clear/Amber \_\_\_\_\_ Brown \_\_\_\_\_ Gray \_\_\_\_\_ Black \_\_\_\_\_  
Take sample of compressor oil and check for acidity using acid test kit.  
Safe \_\_\_\_\_ Marginal \_\_\_\_\_ Acidic \_\_\_\_\_  
Note: Replace oil if acidic or color is black or gray. Perform A/C system cleanup if required.

## II. Running Inspection

14. \_\_\_\_\_ Start the bus engine and turn the A/C system ON. Check and record the engine idle speed to be correct:
15. \_\_\_\_\_ Operate A/C system for 15 minutes at engine fast idle and record pressures and temperatures:

	<u>Engine Idle</u>	<u>Engine Fast Idle</u>	<u>Engine Full Throttle</u>
Suction:	_____ PSIG	_____ PSIG	_____ PSIG
Discharge:	_____ PSIG	_____ PSIG	_____ PSIG
Ambient:	_____ °F	_____ °F	_____ °F
Return Air:	_____ °F	_____ °F	_____ °F

16. \_\_\_\_\_ Check refrigerant charge level at fast idle. Make sure discharge pressure is 250 PSIG (min.) for R22 or discharge pressure is 150 PSIG (min.) for R134a systems. (Cover condenser air inlet to build head pressure if needed).  
Charge Level OK \_\_\_\_\_ Added Refrigerant \_\_\_\_\_ lbs.

17. \_\_\_\_\_ Record compressor oil level (1/4 to 1/2 sightglass). \_\_\_\_\_ Level \_\_\_\_\_ Added \_\_\_\_\_ Removed
18. \_\_\_\_\_ Record compressor oil pressure at engine idle. \_\_\_\_\_ PSIG
19. \_\_\_\_\_ Visually and audibly inspect operation of condenser and evaporator motors, compressor and clutch for abnormal noise or vibration.
20. \_\_\_\_\_ Check compressor unloader settings of #1 & #4 cylinders. (4GB Compressor)  
Cylinder #4 (54 PSIG) \_\_\_\_\_ Cylinder #1 (52 PSIG) \_\_\_\_\_
21. \_\_\_\_\_ Perform compressor operating efficiency tests. (Record pressures in Step 21a while performing Step 21).
- Compressor high pressure to \_\_\_\_\_ PSIG.
  - Compressor pump down to \_\_\_\_\_ inches of vacuum.
  - Lowside pump down to \_\_\_\_\_ inches of vacuum.

- 21a \_\_\_\_\_ Check operation of low pressure (LPCO) and high pressure (HPCO) cutout switches and condenser pressure switch (CPS). (Record pressures while doing Step 21).

LPCO

CPS

HPCO

Opens: \_\_\_\_\_ PSIG      \_\_\_\_\_ PSIG      \_\_\_\_\_ PSIG  
Closes: \_\_\_\_\_ PSIG      \_\_\_\_\_ PSIG      \_\_\_\_\_ PSIG

22. \_\_\_\_\_ Replace dehydrator annually. (Write date on dehydrator with felt pen).  
OK \_\_\_\_\_ Replaced \_\_\_\_\_
23. \_\_\_\_\_ Check evaporator pressure regulator (EPR) valve setting (If equipped)  
R22 (50 - 52 PSIG) \_\_\_\_\_ PSIG. Adjust if needed. R134a (30 - 32 PSI) \_\_\_\_\_ PSIG
24. \_\_\_\_\_ Check main heater unit coolant valve and sidewall coolant valve to be opening and closing when interior thermostat cycles on/off. If so equipped, check coolant circulating pump to be operating.
25. \_\_\_\_\_ Inspect under seat heater blower motors to be operating properly. Clean blower inlet screens of lint and dirt. (If so equipped).
26. \_\_\_\_\_ Check return air thermostat function by raising and lowering bus interior temperature to cycle unit in all modes of operation. (Heat, cool and reheat).
27. \_\_\_\_\_ Record voltage and amperage readings of motors in high and low speed operation using voltmeter and amp clamp.

Evap. Motors

Cond. Motors

Roadside

Curbside

Roadside

Curbside

High speed: \_\_\_\_\_ Amps      \_\_\_\_\_ Amps      \_\_\_\_\_ Amps      \_\_\_\_\_ Amps  
Low speed: \_\_\_\_\_ Amps      \_\_\_\_\_ Amps      \_\_\_\_\_ Amps      \_\_\_\_\_ Amps  
Voltage: \_\_\_\_\_ Volts      \_\_\_\_\_ Volts      \_\_\_\_\_ Volts      \_\_\_\_\_ Volts

28. \_\_\_\_\_ Lubricate clutch bearing and check air gap to be .045 inch (TK X426 compressor)  
\_\_\_\_\_ Air Gap \_\_\_\_\_ Adjusted? \_\_\_\_\_ Lubricated?
29. \_\_\_\_\_ Inspect driver's heater/defroster unit:
- \_\_\_\_\_ Replace return air filter.
  - \_\_\_\_\_ Inspect and wash heater coil with warm soapy water.
  - \_\_\_\_\_ Inspect motor brushes and replace if worn down.
  - \_\_\_\_\_ Lubricate control cable for defroster coolant valve.
  - \_\_\_\_\_ Clean and inspect drain outlet check valve.
  - \_\_\_\_\_ Check motor to operate on high and low speed.

Return bus to service

A. **Remarks:** Note any observations, suggestions and/or explain repairs made during the PM of the A/C system on this bus.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

B. **Parts Used:** List all parts, fluids or refrigerant used during the PM and/or repair of the A/C system on this bus.

	<u>Qty</u>	<u>Part No.</u>	<u>Description</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____



# DAILY VEHICLE INSPECTION

Daily vehicle inspections are crucial to the success of the Preventive Maintenance Program. Investing a short time on a daily basis to inspect each vehicle will help detect problems early, thereby improving safety and decreasing vehicle repair cost.

Each driver is required inspect his or her vehicle before departure by completing the Daily Vehicle Inspection Checklist. The completed checklist is submitted to the transportation manager at the end of the drivers shift so that necessary maintenance can be noted and scheduled accordingly.

# Bus Type I Daily Inspection Checklist:

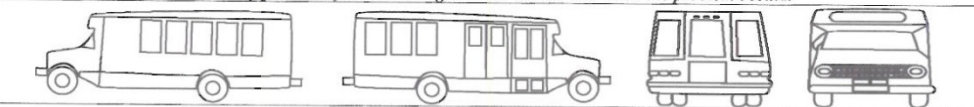


## DAILY VEHICLE INSPECTION Report

Vehicle No.	Date	Drivers Name	Start Miles	Start Time	End Miles	End Time

= Satisfactory			= Unsatisfactory		
1	2	3	1	2	3
Inspection Item			Inspection item		
<b>Tires and Wheels</b>			<b>Seats and cushions are secure</b>		
		<b>TIRE CONDITION, TREAD DEPTH AND AIR PRESSURE</b>			<b>Seat belts are complete, operational and secure</b>
		<b>Wheels and rims for cracks, rips, welds or protruding objects</b>			<b>2 way radio is complete and operational -RADIO CHECK</b>
		<b>LUG NUTS TIGHT, NO EXCESSIVE RUST OR DAMAGE</b>			<b>WINDSHIELD WIPERS OPERATIONAL</b>
<b>Engine Compartment</b>					<b>Windshield washer operational</b>
		<b>ENGINE OIL</b>			<b>HORN OPERATIONAL</b>
		<b>AUTOMATIC TRANSMISSION FLUID</b>			<b>PASSENGER DOOR COMPLETE AND OPERATIONAL</b>
		<b>COOLING SYSTEM LEVEL</b>			<b>Valid Registration present and visible</b>
		<b>Windshield washer solution</b>			<b>Valid proof of insurance</b>
		<b>BRAKE FLUID LEVEL</b>			<b>OTHER:</b>
		<b>Power steering fluid level</b>			
		<b>Battery terminals clean, no corrosion</b>			<b>Brakes</b>
		<b>Under vehicle leaks</b>			<b>BRAKE PEDAL FEELS GOOD AND STOPPING PROPERLY</b>
<b>Vehicle Glass</b>					<b>PARKING BRAKE COMPLETE AND OPERATING PROPERLY</b>
		<b>Windshield has no chips or cracks</b>			<b>Steering and Suspension System</b>
		<b>MIRRORS ARE COMPLETE AND IN GOOD CONDITION</b>			<b>STEERING WHEEL SECURE, NO EXCESSIVE PLAY</b>
		<b>Windows complete</b>			<b>Gearshift mechanism tight and working properly</b>
		<b>Emergency windows complete and operable</b>			<b>Safety Items</b>
<b>Vehicle Lighting</b>					<b>First aid kit, fully stocked and present</b>
		<b>HEADLIGHTS OPERATIONAL - HIGH AND LOW BEAM</b>			<b>Triangle reflectors present and complete</b>
		<b>All Clearance lights operational &amp; reflectors present</b>			<b>FIRE EXTINGUISHER PRESENT, FULLY CHARGED</b>
		<b>BRAKE LIGHTS COMPLETE AND OPERATIONAL</b>			<b>Vehicle accident packet present and accessible</b>
		<b>TURN SIGNALS COMPLETE AND OPERATIONAL</b>			<b>Body fluid kit present and accessible</b>
		<b>Backup lights complete and operational</b>			<b>Seat Belt web cutter present</b>
		<b>Backup alarm complete and audible</b>			<b>Wheelchair Lift</b>
		<b>EMERGENCY 4 WAY FLASHERS OPERATIONAL</b>			<b>Lift free from leakage</b>
<b>Vehicle Interior Environment</b>					<b>Lift operating properly electronically</b>
		<b>Front &amp; rear air conditioner complete and operational</b>			<b>Lift operating properly manually</b>
		<b>Front &amp; Rear heater complete and operational</b>			<b>LIFT INTERLOCK OPERATING PROPERLY</b>
		<b>DEFROSTER COMPLETE AND OPERATIONAL</b>			<b># of Lap Belts:      # of Tie Downs:</b>
<b>Interior</b>					
		<b>Clean</b>			
Next PMIS due to:			Quarts of oil added:		
			Gallons of fuel added:		

Please explain in detail below any problems you are having with the vehicle and when the problem occurs.



Any items in bold marked unsatisfactory must be brought to the attention of the Supervisor immediately. The bold typeface indicates items that place a vehicle out of service.

I declare that I have properly performed a vehicle inspection on the vehicle indicated above and have inspected and marked the inspection items, listed above, accordingly.

Driver's signature Pre Trip inspection : \_\_\_\_\_  
There have been no incidents or accidents with this vehicle since the above signed inspection.

Driver's signature mid trip inspection : \_\_\_\_\_

Driver's post trip inspection : \_\_\_\_\_

Reviewed	Technicians Signature: _____
Noted for repair	Shop Managers Signature: _____
Could not duplicate problem	
Repaired	

Driver number 2, mid trip, only has to perform a walk around inspection. Only inspect items where a mark can be placed  
Paratransit DVI 3part

# Bus Type II Daily Inspection Checklist:



## CITY OF GAINESVILLE REGIONAL TRANSIT SYSTEM Vehicle Condition Report



### PRETRIP AND IN-SERVICE BUS INSPECTION

Start Hub Reading: \_\_\_\_\_ End Hub Reading: \_\_\_\_\_

Date: \_\_\_\_\_ #1 Driver's Name: \_\_\_\_\_ Driver #: \_\_\_\_\_ ☐ Bus Okay Route: \_\_\_\_\_ Run: \_\_\_\_\_  
 #2 Driver's Name: \_\_\_\_\_ Driver #: \_\_\_\_\_ ☐ Bus Okay Route: \_\_\_\_\_ Run: \_\_\_\_\_  
 Bus #: \_\_\_\_\_ #3 Driver's Name: \_\_\_\_\_ Driver #: \_\_\_\_\_ ☐ Bus Okay Route: \_\_\_\_\_ Run: \_\_\_\_\_

**NOTE: Law requires legible signature (no initials).**

**PRETRIP INSPECTION:** Before departing garage, review previous drivers' maintenance copy found on bus. Cycle wheelchair lift/kneeler. Contact radio dispatch if any noted defects from previous driver have not been repaired. Upon relieving another driver, contact radio dispatch to resolve any outstanding or newly found DOT or "shaded block" defects.

**BUS RETURN INSPECTION:** Upon returning to garage, park bus in fuel lane and turn in defect report to dispatch.

Driver	#1	#2	#3	Check Defect
				<b>DOT DEFECTS</b>
				Air Brake Operation
				Air System Leaks
				Driver Seat/Belt
				Exhaust System
				Fluid Leaks
				Fire Extinguisher
				Horn
				Lights-Exterior
				Mirrors-In/Outside
				Rims/Lugs-Wheel Crack
				Suspension System
				Tires
				Triangles
				Windsh/Wipers/Washers
				<b>WHEEL CHAIR</b>
				Lift Operable? Yes No
				No Power
				Lower/Raise/Stow
				Barriers
				Securement Device (straps)
				<b>BRAKES</b>
				Slack
				Pulls Left and/or Right
				Grabs/Squeals/Spongy
				Unequal Front/Rear
				Won't Release
				Warning Signal
				<b>LIGHTS</b>
				Ceiling
				Steps - Front/Rear
				Tell/Tale Dash
				Stop Request
				Destin. Sign - Front/Rear

**Further Define Problem/Comments:**

---



---



---



---



---

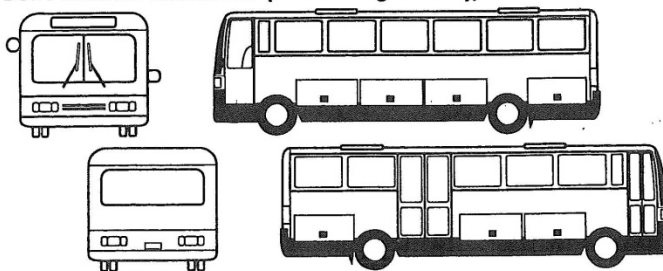


---

Driver	#1	#2	#3	Check Defect
				<b>TIRES</b>
				Low Air
				Cut/Damaged
				Cap Loose
				Worn
				<b>SUSPENSION</b>
				Bellows
				Shock
				Leans/Sways
				<b>MISCELLANEOUS</b>
				Registration Card
				License Card
				Safety Pouch
				Bio Kit
				First Aid Kit
				<b>ENGINE</b>
				Lacks Power
				Hot
				No Start/No Stop
				Races/Stalls
				Oil/Water Leak
				Exhaust Smoke
				Noisy
				No Fast Idle
				<b>TRANSMISSION</b>
				Slips/Jumps Out of Gear
				Rough Shift
				No Shift/Reverse
				Fluid Leak

Driver	#1	#2	#3	Check Defect
				<b>STEERING</b>
				Hard/Loose/Pulls
				Shimmies
				Tilt Wheel
				<b>A/C AND HEATING</b>
				No A/C or Heat
				Too Warm/Cool
				No Defroster
				A/C On and Off
				Noisy
				<b>BODY</b>
				Damage (circle below)
				Steps
				Windows
				Bumpers
				Compartment Doors
				Roof Hatch - Front/Rear
				Passenger Seats
				Bike Rack
				Advertising - In/Outside
				<b>DOORS</b>
				Fast/Slow - Front/Rear
				Damaged - Front/Rear
				Sensitive Edge
				<b>ELECTRONIC</b>
				Radio Receiver/Transmit
				Farebox Power/Jam/Date
				Destin. Sign-Front/Slide
				Passenger Chime

**BODY DAMAGE COMMENTS (mark damage to body):**



## **GENERAL NOTES ABOUT THE DAILY VEHICLE INSPECTION CHECKLIST**

*An important part of preventive maintenance is the establishment of strong communication ties between drivers, mechanics / repair garages, and management. An easy way to ensure and document this communication link is by way of the drivers Vehicle Condition Report Inspection (VCR) Checklist.*

*The Vehicle Service Attendant (VSA) shall take possession of bus and remove the VCR, found on driver's seat and drop it in the "black box" designated for completed reports in Service Lanes one (1), two (2) and three (3) located on the south side of the RIH. The 2<sup>nd</sup> and 3<sup>rd</sup> shift supervisors are responsible for collecting all VCRs. When a VCR indicates a defect maintenance supervisor on duty shall create a work order and assign the proper maintenance personnel to make necessary repair(s) of any driver noted defects.*

*RTS maintenance staff routinely complete daily inspection check list on approximately 5% of buses in service any defect discovered are corrected and are reported to Operations Management so they can follow up the appropriate bus driver*

*The sample checklist provided on page 35 meets or exceeds the minimum requirements in Rule 14.90.006 (7) (a) Florida Administrative Code. All collected VCR must be kept on file for a period of fourteen (14) days. When a VCR has a reported defect a copy of the work order created to make the repairs shall be attached and filed along with the other VCRs for a period of 14 days.*

## **COMPREHENSIVE MAINTENANCE RECORDS**

RTS utilizes fleet management software (FleetNet) for electronic Maintenance Records as well as a keeping a hard copy on file for each vehicle. A work order is generated each time any maintenance is performed on any vehicle. All records are maintained in storage for a period of four (4) years.

The supervisory and management staff of RTS are trained in and utilize the reporting tools within FleetNet to constantly review data and trending to adjust our methods to ensure the efficiency and effectiveness of our maintenance programs.

## **Warranty Recovery System**

### **Failed Components**

Parts and components that may have failed prematurely are checked to determine if the part or component is covered under warranty. If the part or component is covered by a warranty, it is returned to the vendor.

### **Return to manufacturer/vendor**

Authorization for warranty return and labor claims, if applicable, are obtained from the manufacturer or vendor. Information is supplied to the vendor on the circumstances of the failure, if known. The item is then returned to the vendor warranty department for repair or replacement. Transit Agency retains copy of the warranty claim form for tracking purposes.

### **Receipt from manufacturer/vendor**

When a unit is received, it is entered into the inventory system coded as a warranty replacement. This is forwarded to the Accounting Department to make the necessary accounting adjustments. Labor credit if received is applied to the appropriate cost center via a credit entry applied to the work order used when the defective part was removed.