
**BRAZOS TRANSIT DISTRICT
(THE DISTRICT)**

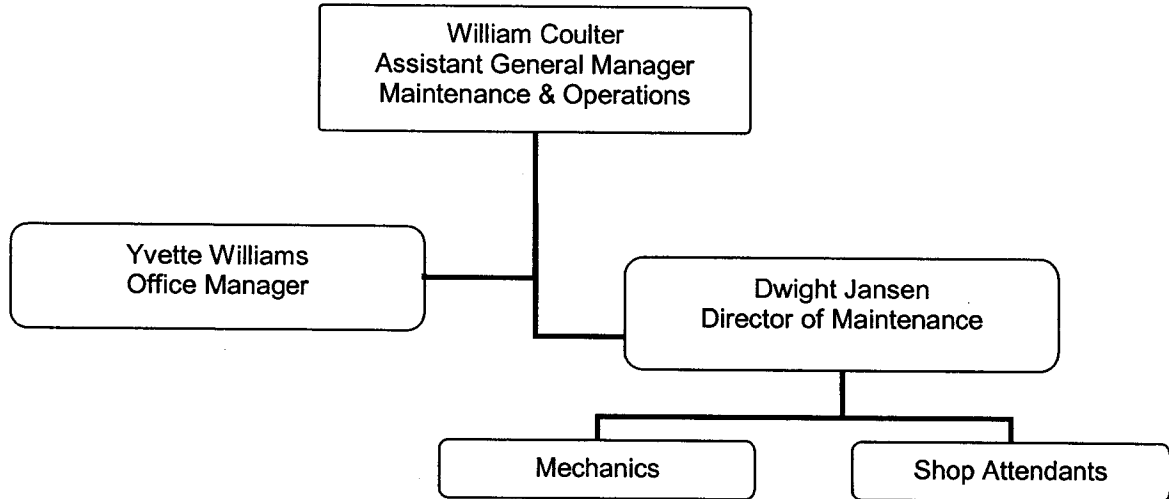
**MAINTENANCE PLAN
FOR
CAPITAL ASSETS**

May 2007

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Maintenance Organizational Chart



Background

This plan describes the maintenance practices of The District. The plan contains a description and brief analysis of the maintenance program. It also includes a sampling of the actual forms and procedures utilized by BTD maintenance personnel.

Purpose

The purpose of the BTD Maintenance Plan is to specify the goals and objectives of the Maintenance Program. The activities which are necessary for the achievement of these goals and objectives will be outlined and used as a guideline by which management can effectively monitor performance and maintain a high quality maintenance program.

Maintenance Policy

The policy of The District is and has always been "To provide clean, comfortable, and dependable transportation to the patrons of our service in the most efficient and cost-effective manner possible, while providing maximum life, value, and serviceability of all of our capital assets."

Goals and Objectives

The primary goal of The District maintenance program is to provide a cost-effective, systematic, interruption-free pattern of transit operation. Maintenance will be performed in-house if cost-effective. If not, maintenance services will be offered on a competitive basis to outside providers who may provide acceptable quality at the lowest possible cost. To accomplish this, BTD maintenance practices are centered around the following goals and objectives:

Goals:

- Provide consistently good service to meet public demand.
- Provide safe, reliable, comfortable and clean busses.
- Provide maximum operational reliability.
- Minimize road calls, equipment, downtime, and reduce costs.

Objectives:

- Maintain equipment and facilities.
- Maintain a high quality maintenance program.
- Replacement of certain parts and components at predetermined times.
- Adhere to strict preventative maintenance schedule of periodic inspections.

To meet these goals and objectives, BTD has implemented a systematic maintenance program designed primarily to, reduce costs, provide more effective scheduling of shop work, and maximize the number of operable vehicles at any time.

The key to accomplishing this is preventative maintenance. The preventative maintenance philosophy forms the core of the BTD Maintenance Program. Every maintenance employee at The District has this concept ingrained in his/her purpose of duties. It is the foundation by which the following procedures and practices, as outlined, are followed.

A.D.A. Policy for Equipment and Facilities

The District shall strive to keep all equipment related to accessibility in a state of good repair, whether or not that equipment is mandated by A.D.A. All new equipment purchased as A.D.A. accessible equipment shall be maintained to A.D.A. standards.

Any modification to any facility, even if not mandated by A.D.A. will be evaluated for inclusion of accessibility standards as part of the modification.

The District Capital Asset Maintenance Plan

In order to maintain the value of all capital assets of The District, all procedures and directives in this plan must be followed at all times. Any employee of The District who may not clearly understand any procedure should make an inquiry of his/her immediate supervisor.

The following are The District's primary maintenance activities:

- A preventative maintenance schedule which is closely followed.
- Close monitoring and recording of engine fuel and oil consumption daily.
- Component rebuild program.
- Continuous training plan for employees.
- Maintenance information system, in which individual bus histories, work orders, parts, and inventories are enclosed.

Preventative Maintenance

A well-planned program of periodic and scheduled maintenance which provides for lubrication, cleaning, inspection and adjustment has been implemented. The key to The District's preventative maintenance program is identifying and predicting critical component failure. This is accomplished through the careful and continuous tracking of the consumption of fluids (i.e. fuel, lubricating oil, transmission oil, and coolant). All routine maintenance is regularly scheduled according to fuel, oil consumption, and mileage.

In The District's operations, there are limited spare vehicles and the average annual mileage is around 52,000. Preventative Maintenance (P.M.) cannot be performed while the vehicle is in operation, so all work on the vehicle must be scheduled so as not to impact schedules. Maintenance is to make use of the time most of the vehicles are on property. Scheduling along these lines will enable The District to have the vehicles available for the routine maintenance that must be done.

Vehicle Scheduling

Success of fleet maintenance requires a well-balanced workload, predictable well into the future. "Too soon", "too late", "too little", and "too costly" are conditions to be continually discouraged. Once a well-balanced workload is established, even the worst of "unexpected transit mechanical disasters" can be weathered without loss of service or depletion of budgetary resources.

To perform P.M. too infrequently results in loss of dependability and therefore increased costs. To perform P.M. too frequently results in wasted effort and therefore increases operating costs. Success lies in the ability to do what is needed when it is needed, while using predicted and available manpower and resources. This ability can go far in negating the maintenance "surprises" so commonly encountered in a fleet.

Preventative Maintenance Vehicular Scheduling

All rolling stock is placed into a repetitive P.M. schedule based on mileage and calendar days.

All Revenue Vehicle Preventative Maintenance is performed every five to six thousand miles or every four months, whichever occurs first. All Support Vehicle Preventative Maintenance is performed every 3,000 to 4,000 miles or every three months. Note Plus or minus 10% is acceptable for the Revenue and Support Vehicle target mileage.

Mileage is calculated for each vehicle every Monday and Wednesday. If at that time a vehicle is 1,000 miles from target mileage, it is scheduled for a P.M. This scheduling procedure is performed on Form 1157-A and Form 5017. On Form 1157-A, vehicles are listed by how close each is to its target mileage. P.M. inspection will be performed on the vehicle in the #1 position first, and so on, until the list is completed.

At the time that the P.M. is to be performed, the Inspector is issued an Inspection Guide to fit the specific vehicle to be inspected with the vehicle's identification number and the type of inspection circled to be performed. The Inspector performs all functions on the Inspection Guide. As each function is performed, the Inspector checks off the appropriate box. If the Inspector finds a defect or malfunction, it is written on the Service Worksheet. The Service Worksheet is either (1) completed by the mechanic who performed the inspection or (2) given to another mechanic to complete the noted defects. Once the Service Worksheet is completed, it is then turned into the Office Manager of Maintenance, who will record all repairs onto the vehicles history file.

Running Repair

Running Repair system-failure reporting is generated for facility-based and home-parked vehicles utilizing Pre- and Post-Trip Inspection Sheets. Operator Daily Vehicle Inspection Reports (Form #54) are reviewed by the Director of Maintenance, the Lead Mechanic, and Satellite Facility Mechanics at the end of each service day. Work orders are then generated with the assignment of bus numbers and identified problems from the inspections. The Work Order is then assigned to an appropriate mechanic and completed. These Operator Daily Vehicle Inspection Reports, at the end of each service day, are also reviewed to determine the vehicular status for the following day. The vehicles that are unable to perform service the following day are either left inside of the garage, or left in an area outside that has been predetermined for dead or unusable vehicles.

Pre and Post Trip Inspection and Trip Report Procedure

The operating condition of rolling stock is also reviewed daily. Both Facility-Based and Home-Parked Vehicles must follow a specific set of duties in order to complete these Pre-and Post-Trip Inspections.

Facility-Based Vehicles

The District Vehicle Operators that operate Facility-Based Vehicles are required to inspect their assigned vehicle and complete a Pre-Trip Inspection (Form #54) daily for each vehicle that they are assigned to drive prior to moving any vehicle from its berth. Such inspections are expected to

uncover problems that could lead to road calls. This report must be maintained by the operator while the vehicle is in service. Once the Vehicle Operator has completed their assigned manifests and parked their assigned vehicle, he/she is required to perform a Post-Trip Inspection utilizing the same inspection form.

Once the Post-Trip Inspection is completed, the Vehicle Operator is required to turn in the Inspection Report to the Route Supervisor on duty. The Route Supervisor will insure that they have received a Pre- and Post-Trip Inspection Report from each Vehicle Operator upon completion of their service day. The Route Supervisor will review all Pre-and Post-Trip Inspection Reports for completeness and make copies if necessary. The Route Supervisor will immediately turn over all original Pre-and Post-Trip Inspection Reports to maintenance.

When the Route Supervisor is not available, Operation Directors or individual Vehicle Operators will turn these reports over to maintenance.

Home-Parked Vehicles

Home-Parked Vehicles are also required to follow the same procedure, with several exceptions. These exceptions are due to the Home-Parked Vehicle Operators not returning to the garage on a daily basis.

Home-Parked Vehicle Operators are required to fax their Pre-and Post-Trip Inspection Reports (Form #54) into the Central Dispatch located in Bryan for the Brazos Valley counties and into the Livingston office for all East Texas counties. Route Supervisors at these locations will collect these Pre-and Post-Trip Inspection Report faxes and immediately, after reviewing and copying them, turn them over to maintenance.

All safety-related or wheelchair lift/tie-down related defects will immediately be phoned into the Vehicle Operator's Route Supervisor or to Maintenance. Maintenance will review all Pre-and Post-Trip Inspection Reports to determine immediate status of the vehicle and inform Operations of the determination.

A Maintenance Supervisor or mechanic reviews all daily Pre-and Post- Trip inspection operator forms for defects. If defects have been noted, they are transferred to a Work Order, which is then assigned for repair.

Vehicle Servicing Procedure

(Central Facility Only)

- The buses are refueled.
- The engine coolant level is checked.
- The engine oil level is checked.
- Transmission fluid levels are checked.

- Front and rear tires are checked for low pressure.
- The interior is cleaned and inspected for graffiti. Seats, glazing, lights, fire extinguisher, mirrors, and body are checked for damage or defects.
- Observations are made of functions, such as air pressure, transmission, brake operation, and lights.
- The exterior of the busses are cleaned as scheduled.
- Wheelchair lifts are inspected for functionality.
- Horns and turn signals are checked.
- Securement devices are checked.

Service Attendants are also required to inspect all Rolling Stock, which is in need of cleaning and fueling. If a Service Attendant notices a defect or damage, they are required to report it on Form #5000-50M and turn it in immediately to the Maintenance Supervisor or mechanic on duty.

Service Attendants at the Central Facility record the amount of fuel and oil onto a Hostler Card (Form #5001). Mileage is also recorded for each vehicle. Vehicles serviced by operators, mechanics or staff shall use Form #138.

Vehicle Cleaning

The shop and service attendants perform vehicle cleaning on a daily basis. This daily cleaning consists of sweeping or mopping interior floors, dusting seats, and picking up trash. In the Brazos Valley, exteriors are cleaned by driving the vehicle through an automated washer every Tuesday and Thursday. Exteriors are not cleaned during inclement weather. In our satellite facilities, the exterior cleaning is done by contract labor and is performed weekly.

Special cleanings are scheduled every 8,000 miles in the Brazos Valley. This is indicated on Form #5017 by the letter (C). Checklist Form #5017B is given to the shop attendant, indicating all areas which need to be specially cleaned.

Special cleaning consists of hand-washing the interior and exterior of the vehicle.

Interior cleaning consists of:

Ceilings, walls, modesty panels, dashboards, floors, step wells, wheelchair lifts, entrance and exit doors, interior glass, and removing graffiti and gum from floors and seats.

Exterior cleaning consists of:

Hand-wash, roofline, exterior glass, belt line, skirt panels, front and back ends, wheels, and tires.

Machinery and Equipment

Machinery and equipment is scheduled to be inspected weekly, monthly, and semi-annually. Employees who utilize machinery and equipment are required to report, on Form #79, any

malfunctions or defects immediately to their supervisor. Service station equipment and machinery is monitored daily.

Facilities and Facility Maintenance

The District operates its maintenance facilities that are designed and equipped to support the highest level of capability to repair or overhaul nearly any part of a bus, or the entire vehicle.

Facility preventative maintenance is performed on a weekly, monthly, and semi-monthly schedule. The following duties are performed:

Weekly Inspection Guide

(Central Facility & Transfer Point)

Inspect- lighting (interior and exterior), plumbing, H.V.A.C., doors, windows, security system, gates, fencing, and structural deterioration

Monthly Inspection Guide

(Central Facility, Transfer Point, Woodlands & Research P/R, Livingston, Lufkin)

Replace all fillers in H.V.A.C. System

Semi-Annually Inspection Guide

(Central Facility, Transfer Point, Woodlands & Research P/R, Livingston, Lufkin)

Clean and lubricate all H.V.A.C. Condensing and Evaporating Units, all gates and guide rollers

Vehicle Lift Inspection

(Central, Lufkin, Livingston Facilities)

Operate and inspect the vehicle lift for malfunction, leaks, structural cracks, excessive cylinder pin wear, safety locks. Replace hydraulic filter, service hydraulic oil level and lubricate the lift. Repair all defects as needed.

Lubrication Reels, Hoses, Dispensers, and Pumps

(Central, Lufkin, Livingston Facilities)

Operate and inspect for malfunction and leaks. Repair all defects as needed.

Bus Washer

(Central Facility Only)

Operate and inspect for malfunctions, leaks, spinner spray bar operation, pumps, entrance light operation, electronic control panel operation, vehicle guide rail damage. Repair all defects as needed.

Gantry Cranes

(Central Facility Only)

Operate and inspect for malfunction, pulley, and cable condition. Lubricate. Repair all defects as needed.

Service Station

(Central Facility Only)

Operate and inspect all fuel, water and oil dispenser lighting. Inspect gasoline, diesel pumps and tanks for leaks. Report all defects to the Director of Maintenance so warranty can be pursued.

Restrooms/Plumbing

(Central Facility, Transfer Point, Woodlands & Research P/R, Livingston, Lufkin)

Operate and inspect restrooms and all plumbing for leaks and defects. Repair as needed.

Office and Shop Lighting

(Central Facility, Transfer Point, Woodlands & Research P/R, Livingston, Lufkin)

Operate and inspect all office lighting for defective parts. Repair as needed.

Office and Shop H.V.A.C.

(Central Facility, Transfer Point, Woodlands & Research P/R, Livingston, Lufkin)

Operate and inspect all office and shop H.V.A.C. systems. Clean and inspect systems. Repair as needed.

Facility maintenance that is to be conducted on a regular basis will include the efforts of public providers of inspection services, including but not limited to:

- Fire Marshall
- Utility Provider(s)
- State Department of Public Health
- Municipal and County Providers
- Insurance Providers

All employees are required to report any malfunctions or defects concerning facilities immediately to the Director of Maintenance for resolution. These reports are to be reported on Form BTD-79.

Parts and Inventory Control

The primary objective of BTD parts and inventory department is to reduce costs and control the number of non-moveable or slow-moving parts (those parts that are in stock 2 years or more). The following activities are performed in an effort to achieve those objectives:

Regular Review of Inventory

A regular review of inventory is conducted to monitor the flow of parts. This information is used to get a minimum and maximum estimate of the total parts needed. A physical count of inventory is also counted once a year.

The District discourages the practice of excessive bin balances due to return restocking charges from the vendor. Therefore, bin balances are monitored closely so that overstocking is kept at a minimum.

In order to acquire parts for repairs, a mechanic must first check to see if the required part is in stock. If not, he or she will have the Lead Mechanic on duty, Director of Maintenance, or Office Manager of Maintenance order the part from an outside vendor. If these people are not available, as happens in our East Texas Operations, the part will be ordered by the mechanic who needs the part. Those parts purchased by PM Mechanics or mechanics at satellite facilities are closely monitored by the Director of Maintenance and the Office Manager of Maintenance. Outside vendors are chosen by Original Equipment Manufacturers (OEM's) or a part supplier whose parts are equivalent in quality (i.e. NAPA Auto Parts, O'Reilly Auto Parts). Invoices for parts ordered from OEM or part suppliers are coded with bus number part was ordered for. License plate numbers are used for support vehicles.

If the part needed is in stock, the mechanic takes the needed part from the store room. The part number and the quantity of the part needed are recorded on the Service Worksheet. The mechanic is required to count the remaining stock and write the quantity to the left of the Parts Used Quantity column. The Service Worksheet, when completed, is given to the Office Manager of Maintenance, who reconciles the Work Order and the parts are subtracted from the parts inventory kept in the computer. The Office Manager of Maintenance will also check the parts remaining number given to him or her by the mechanic against the actual number remaining in the computer.

Use of Manufacturer's Maintenance Manuals and Recommendations

The use of manufacturer's manuals, bulletins, and recommendations plays a vital role in The District's maintenance program. Information concerning repairs, replacement of components, unit removal, trouble-shooting, preventative maintenance, and safety problems are critical to the maintenance function. Also, supervisors are alerted to the importance of bulletins and the need to disseminate the information immediately at the point of needed or critical use. All maintenance manuals and bulletins are available in mechanics office.

Quality Assurance

Quality assurance efforts are concentrated on employee performance, productivity, and training. This is achieved through the close supervision and monitoring of all work orders. All work orders are reviewed daily by the Maintenance Supervisor to insure that the required work is performed in a timely, efficient manner, and to monitor repeat repairs. Reviews are also conducted to monitor proportion of engine overhauls, transmission replacements, and other major component overhauls or replacements in relation to management's productivity goals.

Vehicle Information System

The District's maintenance information system is an interactive work order based system which provides data on individual bus histories, repairs, parts, and labor. The system does include unit repair instructions and the capability to trace the units back to specific buses. This system provides sufficient detail to management to pinpoint particular problem areas and to monitor longer term trends and patterns in various maintenance areas.

Pre-and Post-Trip Inspection & Trip Report Procedure

The District bus operators are required to inspect their assigned vehicle and complete a Pre/Post Trip Report (BTD Form 54) prior to moving any vehicle from its berth. This report, Form 54, must be maintained by the operator while the vehicle is in service. Once the operator has completed their assigned manifests and parked their assigned vehicle, the operator is required to perform a Post Inspection on their vehicle utilizing the same inspection Form 54.

Once the Post Inspection is complete, the operator is required to turn in the Pre/Post Trip Inspection report, Form 54, to their Route Supervisor. The Route Supervisor will insure that they have received a Pre/Post Trip Inspection report from each operator upon completion of their tour of duty. The Route Supervisor will review all Pre/Post Trip Inspection Reports for completeness and make copies if necessary. The Route Supervisor will immediately turn over all original Pre/Post Trip Inspection Reports to maintenance.

When the Route Supervisor is not available, Operation Directors or individual operators will turn over these reports to maintenance. Home-parked vehicle operators are also required to follow this same procedure, with several exceptions. These exceptions are due to the home-parked vehicles and operators are not returning to the garage on a daily basis.

Home-parked vehicle operators are required to fax their Pre/Post Trip Inspection Report, Form 54, into dispatch for the Brazos Valley Counties (Bryan) and Livingston for East Texas counties. Dispatch (Bryan) Brazos Valley fax # 979-778-0192 and Livingston facility/East Texas fax # 936-327-0194. Route Supervisors at these locations will collect these Pre/Post Trip Report faxes and immediately, after reviewing them, turn them over to maintenance.

Home-parked vehicle operators shall immediately report, by telephone, any safety related or wheelchair lift tie-down related defect to their Route Supervisor or maintenance. Maintenance will review all Pre/Post Trip Inspection Reports to determine immediate status of the vehicle and inform operations of the determination.

Home-Parked Vehicle Policy

Vehicles, while home-parked, must be parked at the operators official residence which The District has on record. The vehicle must be parked in a location which is safe, secure and not a hazard to the residence or traffic. The vehicle, when parked, shall remain locked at all times.

The assigned operator shall be the only person permitted to move or drive the vehicle. The District officials must have access to the vehicle at all times.

The vehicle must be parked a minimum of 50 feet away from home-parked residence or any other structure.

When parked, the master battery disconnect switch must be placed in the off position. When the assigned operator is off duty for three (3) or more days, the home-parked vehicle must be returned to its assigned BTM facility. An operator will never utilize a home-parked vehicle for personal business.

Home-parked vehicles in operation must be manifested or obtain the approval of an AGM or Operations Director to be in operation.

Newly assigned or change of address home-parked vehicle sites shall be inspected by Operation Directors for safety, security, traffic and other hazards.

These sites must meet the minimum requirements outlined. Anyone not adhering to this policy shall be subject to disciplinary action up to and including termination.

Maintenance Training

A Train the Trainer Program is in effect for on the job training. The Director of Maintenance and Lead Mechanic attend workshops put on by bus and vehicle manufactures, parts suppliers and component suppliers. (i.e. Air Conditioning: Carrier, Thermo-King; Electircal: Pentex, Leece Neville Alternators; Wheelchairs: Ricon and Braun)

The knowledge that is obtained at these workshops is passed along to mechanics and shop/service attendants.

Safety training for all maintenance personnel is conducted semi-annually by Lancer Insurance, our vehicle insurance provider. Lancer also conducts a visual walk thru safety inspection of our maintenance facilities.

Policy of Capital Asset Warranty

It is the policy of The District to vigorously pursue warranty on all procured goods and services.

Warranty work is normally done by BTM maintenance personnel. The bus manufacturer provides the necessary materials to accomplish the required work. On a labor-time standard scale, invoices are created and sent to the manufacturer for either payment or parts credit.

If a major modification or repair is required, the vendor will arrange for the work to be done on-site at a local distributorship (i.e. Detroit Diesel Allison) or at a site selected by the vendor and approved by The District.

Rolling Stock

Rolling Stock warranties generally expire after some number of months or miles, whichever first occurs. For this reason, new vehicles are to be placed into the most vigorous Brazos service possible.

Structures

All warranties on all structural assets are to be vigorously pursued on warranties, whether craftsmanship or material in nature.

Other Equipment

All warranties will be vigorously pursued on all other equipment experiencing failure within the period of warranty.

Any failure of a supplier to provide contractual warranty will be documented for possible legal action and/or the determination not to procure that product at time of next procurement. All vendors and suppliers are to be made aware of this policy.

Warranty and Rebuild Part Procedure

Maintenance Employees shall Red Tag all parts removed from vehicles with the following information:

- a. Vehicle Number or License Tag Number
- b. Date that the part was removed
- c. Odometer reading

Once this information is entered onto the Red Tag, it will be affixed to the removed part by a tie wire and placed onto the grey cart marked "Vehicle Parts".

Exception: The only exception to the above will be if failure is of such minor nature that the repair can be performed most cost-effectively outside the warranty.

Example: A vehicle repair can be completed at less cost than the cost of transporting the vehicle to the nearest warranty station.

Methods to Improve the Vehicle Maintenance Plan

Today, transit agencies are under political and financial pressure to reduce operating costs and improve system productivity. Shrinking federal support for operating subsidies, and the growing expense and complexity of modern rolling stock and maintenance equipment are forcing managers to implement more efficient fleet practices as a means to increase productivity, performance, and accountability. The following recommendations are made for both the continuation of existing program elements, as well as new suggestions or ideas all aimed at improving the existing program's efficiency and accountability.

Continue Efficient Preventative Maintenance

Accurate Record Keeping

Preventative Maintenance cannot be overemphasized. The problems that are encountered when a bus breaks down during revenue service are costly (i.e. delayed or missed trips, lost revenue, maintenance costs, or poor customer relations). Preventative maintenance helps minimize mechanical failure, thereby reducing costs, improving reliability, and extending equipment life. Good preventative maintenance assists marketing and public relations efforts by assuring safe, reliable, attractive, and comfortable vehicles.

The preventative maintenance plans, goals, and activities should continue to be focused on minimizing road failures, equipment downtime, accidents, and increasing reliability.

The key to a sound preventative maintenance plan is inspections. Procedures should be taken to insure that inspections are performed efficiently at three levels:

- a. Bus Operators
- b. Service Mechanics
- c. Mechanics

One of the most important areas of inspection are those inspections performed by the Bus Operators. Pre-trip inspections are critical to the prevention of road calls and possible mechanical failure of a bus. Currently, BTD Bus Operators perform pre-trip inspections. An effective way of monitoring pre-trip inspections is to provide the bus operators with a pre-trip inspection form. These forms include a checklist of items to cover and are carefully monitored by supervisory personnel. Thorough monitoring of pre-trip inspection and the immediate reporting of defects uncovers items that lead to costly road calls.

Vehicle Attendants also play an important role in the preventative maintenance function. To insure accuracy in reporting and recording fluid levels and mileage readings, an inspection and reporting form is used by vehicle Service Attendants.

Checklists and appropriate forms all contribute to efficiency and effective communication.

Continuous Training Program

A Condition that has been identified as pervasive throughout the industry is maintenance error. It has been estimated that 35 percent of all repairs that have been performed on busses are done in error. Often a malfunction was incorrectly diagnosed or improperly repaired. Such an incidence of error in transit maintenance translates operationally into additional road calls, service disruptions, and higher costs.

The principal underlying factor to the high incidence of error in transit maintenance is the general decline in experience and skill level of maintenance workforce. It is essential that

training efforts to upgrade employee skills occur on a daily basis. The District will, therefore, continue on the job training, cross training, and formal training. Such training will cover the following areas:

- In-house training will include steps to insure a proficiency of all maintenance personnel in the goals and objectives of our maintenance program. BTD's preventative maintenance philosophy will be emphasized.
- In-house training of senior mechanics will continue on a daily basis.
- One-on-one training provided by supervisors and journeymen will also continue.
- Trouble-shooting in the form of formal training and workshops on particular areas of malfunctioning will continue on a regular basis.
- Training provided by the manufacturers of equipment will also continue on a regular basis and efforts to have all mechanics participate will be emphasized.

Good Shop Leadership

Currently The District has a very effective Preventative Maintenance program. This is due in large part to an excellent rapport between management, supervisors, and mechanics. Good management and shop leadership provides a vital role in the preventative maintenance function. Good rapport can motivate personnel to check additional items when performing each level of inspection. Checking for loose wires and hoses, will in addition to the prescribed procedures, help decrease breakdown. Participative management practices should be implemented to foster excellent communication and good morale among all employees in the decision-making process, thereby involving them in the total maintenance effort. The results are:

- Better communication
- Better employee morale and commitment
- Better decisions
- Better rapport between management and employees

Complete Computerization of the Vehicle Information System

As previously mentioned, The District has a vehicle information system which provides data on individual bus histories, parts, costs, and labor. The system has the ability to interface information, show trends, or predict major component failure. In management decision-making, the need for more information than the day-to-day record keeping or daily workflow is essential. Research done on bus fleet management has found that the availability of maintenance information is the key to efficient management decisions. Data for management decisions is important. At a minimum, the maintenance system should include information on fleet status, such as the average miles between road calls, average miles between component failure, average duration of open work orders, current spare levels, and direct labor hours devoted to various

types of repairs per component failure by vehicle type and by fleet and inventory control information.

Maintenance Hours of Duty

Bryan

Morning Shift Mechanics

4:00 a.m. - 1:00 p.m.

7:00 a.m. - 4:00 p.m.

8:00 a.m. - 5:00 p.m.

Morning Shift Shop Attendants

8:00 a.m. - 5:00 p.m.

Evening Shift Mechanics

2:00 p.m. -11:00 p.m.

Evening Shift Shop Attendants

2:00p.m. -11:00 p.m.

Livingston

Mechanics

5:00 a.m. -2:00 p.m.

8:00 a.m. -5:00 p.m.

11:00 a.m. -8:00 p.m.

Lufkin

Mechanics

5:00 a.m. - 2:00 P.M

8:00 a.m. - 5:00 p.m.

11:00 a.m. - 8:00 p.m.

8:00 a.m. - 12:00 p.m.

12:00 p.m. - 4:00 p.m.

Contingency Fleet Plan

Brazos Transit District recognizes that vehicle failures can cause “spikes” in workloads, an increase in operating costs, and potentially interrupt transit service. BTD has established a contingency fleet of vehicles and is able to continue transit service while vehicles are in the maintenance cycle. The vehicles held in our contingency fleet listed below are properly stored,

maintained in accordance to our maintenance plan, and documented in our contingency plan and updated as necessary.

The contingency fleet is used to replace a vehicle that is brought in for preventative maintenance, replace a vehicle that breaks down on route, or during the event of an emergency (when called upon by FEMA).

Contingency fleet vehicles are assigned to a specific location and type of service.

Bryan Central Facility

9722 - Paratransit & Demand and Response

9704 - Paratransit & Demand and Response

9701, 9711, 9719, 9723 – Paratransit & Demand & Response/Fixed Routes

Livingston Satellite Facility

9725 Demand and Response- Cleveland/Liberty, Dayton

9707 Demand and Response – Huntsville

9709, 9716 – Demand and Response – Livingston, Trinity, Houston, Galveston

Lufkin Satellite Facility

9705 - Paratransit Lufkin

9717 - Paratransit Lufkin

9708 - Paratransit Nacogdoches

Spare Fleet Plan

The vehicles held in our spare fleet listed below are properly stored, maintained in accordance to our maintenance plan, and documented in our contingency plan and updated as necessary.

The spare fleet is used to replace a vehicle that is brought in for preventative maintenance, replace a vehicle that breaks down on route, or during the event of an emergency (when called upon by FEMA).

Spare fleet vehicles are assigned to a specific location and type of service.

Bryan Central Facility

3009 - Fixed Routes

Livingston Satellite Facility

2004 - Demand and Response – Livingston, Trinity, Houston, Galveston

Lufkin Satellite Facility

3016 - Fixed Route Lufkin

Sample Forms

Note: Forms are a sample only. Some forms have been reduced in size to fit.

Equipment Scheduled for Preventative Maintenance Inspection

Date _____

BTD/180

	AUTOMOTIVE			BUSES				
	3,000	6,000	18,000	4,000	8,000	16,000	24,000	48,000
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
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37								
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39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

List overdue buses under a drawn red line, showing original date scheduled.

Preventative Maintenance Schedule

Form 5017 BTD/12

Bus # _____

Due	Due	Due	Due	Due	Due	Due	Due	Due	Due	Due	Due
4 -	8 C -	4 -	16 C -	4 -	24 C B -	4 -	8 C -	4 -	16 C -	4 -	48 C B -
4 -	8 C -	4 -	16 C -	4 -	24 C B -	4 -	8 C -	4 -	16 C -	4 -	48 C B -
4 -	8 C -	4 -	16 C -	4 -	24 C B -	4 -	8 C -	4 -	16 C -	4 -	48 C B -
4 -	8 C -	4 -	16 C -	4 -	24 C B -	4 -	8 C -	4 -	16 C -	4 -	48 C B -
4 -	8 C -	4 -	16 C -	4 -	24 C B -	4 -	8 C -	4 -	16 C -	4 -	48 C B -

Inspection Guide: Cutaway

Bus # _____ Due On _____

Symbols: A - Adjust; C - Clean; Ch - Change; I - Inspect; O - Operating Test; S - Service; T - Tighten; L - Lube. Check off each item as completed. Record on 1157-B. Defects likely to cause problems before the next inspection.

48	24	16	8	4	Item
					Instrument, Dash: O & I indicator lights, warning buzzer, 12vt. Meter; I _ Speedo, 2-way radio, horn & mirrors
					Park Brake: O - Effectiveness; O - Release-Trailing Unit Has No Park Brake-Must Be Blocked
					Brakes: Interlock & Foot; O & I; Door Brake; I - Stopping Distance
					Cleaning: (air and water gun): Radiator, A/C condenser, evaporator and evaporator filter
					Lights & Switches: O & I all Interior and Exterior lights; T - Control knobs; CH - Defective Bulbs
					W/S Wipers: O & A - Speed & Sweep; I & A - Blades; S - Water Reservoir
					Fire Extinguisher: I - Hose, Seal; I - Gauge Readings (must be in the green area)
					Body interior: I - Accident Hazards, Floor Plates, all Glass, Mirrors, Hand Rails, Seats & Backs, Stanchions, Step, Signal Switches; O - Exit Door Locks; T - Screws, Bolts, Nuts; O & A - Door Operations; I - Operation of all blower motors. I & O - Chime, Chime Button, Pull Cords, Stop Request & Destination Signs (front and side)
					Heating: C - Filter Panels, operate heaters
					Brakes: I - Lining Wear, Master Cylinder, Leaks
					Steering: O & I - Free Play; I & A - Joints, Stops, Toe-In; I - Bracket, Knuckles, Power Steering Hoses and Front Cooler Lines.
					Transmission: I & A - Gear Shifter Cable for full engagement; T - Clamps
					Belts: Check all belts for wear. Change or Tighten
					Engine Crankcase: Ch - Oil Quarts put in
					Oil Filter: CH - By-Pass and Full Flow Elements
					Rear Axle: L - I - Leaks; S - Oil Level; C - Breather
	X	X	X		Rear Axle: Ch- Oil; I - Wheel Bearing Adj; A - Park Brake Quarts put in
					Differential Carrier: T - Mounting Nuts; I - Park Brake Mounting
					Lubrication: L - Chassis (see chart); I - Front Wheel Bearing Adj.
					Drive Shafts: L - Bearing; I - Lock Wires; T - Flange Bolts
					A/C Evaporator Drain: C - Drain Tube & Nipple
					Suspension: I - Stabilizer Bars, Shock Absorbers, Links, Bushings, Mounts, Control Arms, Mud Flaps
					Emergency Engine Stop Control: I
					Wheelchair Lift: I - Operation of lift; L - Lift (see chart), I - Securement belts
					Transmission & Power Steering: I & S - Fluid Level; I - Hoses, Rear
					A/C Compressor: T - Mounting; A - Belt; I - Compressor Operation
	X	X	X		Accelerator: I - Linkage full opening (pedal depressed)
				X	Air Cleaner: Ch - Air Cleaner Element
					Door Closure: I & O - All Door Closures, Locks, and Hatches. Lube & Adjust
	X	X	X		Transmission: Ch - Fluid, Filter Element Quarts put in
X	X	X	X		Power Steering: Ch - Element & Fluid at reservoir
					Cooling System: I - Clutch, Fan Drive, Water Hoses; T - Clamps; I & S - Antifreeze per instruction; O - Pressure test cooling system. Antifreeze Reading: Between neg. 10 - neg. 20 _____
				X	Fuel Filters: Ch - Primary.
					A/C Unit: I - Condenser, Leaks; O & I - Compressor, front & rear
					Batteries: I - Corrosion, Battery Cases for leaks & distortion; C - Cables, Battery & Battery Box
					Body Exterior: I - Accident Hazards, Lamp mounting, Mirrors, Loose Panels; Ch - Defective bulbs, Lenses, Closure of Doors
					Tires: I - Damage, Matched Duals, Wear, Valve Stem accessibility: 5/32" front & 3/32" rear
					LF LFI LRO RF RRI RRO PSI PSI PSI PSI PSI PSI
					Wheels: I - Grease Leaks; T - Axle Flange Nuts & Wheel Nuts
	X	X	X		Wheel Bearings: Repack Front Wheel Bearings and turn Rotors
					Leaks: O & I - Engine; I - Oil Lines, Cooling, Exhaust, Fuel Systems
					Yard Test: I - Performance; O - Transmission Shift Points
X	X	X	X		Tune-Up: Ch - Plugs, Wires, Cap, and Rotor. I - For Codes and drive ability problems.
					State Inspection Sticker: I - Record month and date of expiration

Completed By: (Inspector/Mechanic): _____ Approved By: _____

Inspector/Mechanic shall refer to EL Dorado Maintenance Manual for items that need explanation or consult with your immediate Supervisor.

Inspection Guide: Navistar

Bus # _____ Due On _____

Symbols: A - Adjust; C - Clean; Ch - Change; I - Inspect; O - Operating Test; S - Service; T - Tighten; L - Lube. Check off each item as completed. Record on 1157-B. Defects likely to cause problems before the next inspection.

48	24	16	8	4	Item
					Instrument, Dash: O & I indicator lights, warning buzzer, 12vt. Meter; I _ Speedo, 2-way radio, horn & mirrors
					Park Brake: O - Effectiveness; O - Release
					Brakes: Interlock & Foot; O & I; Door Brake; I - Stopping Distance
					Cleaning: (air and water gun): Radiator, A/C condenser, evaporator and evaporator filter
					Lights & Switches: O & I all Interior and Exterior lights; T - Control knobs; CH - Defective Bulbs
					W/S Wipers: O & A - Speed & Sweep; I & A - Blades; S - Water Reservoir
					Fire Extinguisher: I - Hose, Seal; I - Gauge Readings (must be in the green area)
					Body interior: I - Accident Hazards, Floor Plates, all Glass, Mirrors, Hand Rails, Seats & Backs, Stanchions, Step, Signal Switches; O - Exit Door Locks; T - Screws, Bolts, Nuts; O & A - Door Operations; I - Operation of all blower motors. I & O - Chime, Chime Button, Pull Cords, Stop Request & Destination Signs (front and side)
					Heating: C - Filter Panels, operate heaters
					Brakes: I - Lining Wear, Master Cylinder, Leaks
					Steering: O & I - Free Play; I & A - Joints, Stops, Toe-In; I - Bracket, Knuckles, Power Steering Hoses and Front Lines.
					Transmission: I & A - Gear Shifter Cable for full engagement; T - Clamps
					Belts: Check all belts for wear. Change or Tighten
					Engine Crankcase: Ch - Oil Quarts put in
					Oil Filter: CH - By-Pass and Full Flow Elements
					Rear Axle: L - I - Leaks; S - Oil Level; C - Breather
	X	X	X	X	Coolant Filter: Change
		X	X	X	Rear Axle: Ch - Oil; I - Wheel Bearing Adj; A - Park Brake Quarts put in
					Differential Carrier: T - Mounting Nuts; I - Park Brake Mounting
					Lubrication: L - Chassis (see chart); I - Front Wheel Bearing Adj.
					Drive Shafts: L - Bearing; I - Lock Wires; T - Flange Bolts
					A/C Evaporator Drain: C - Drain Tube & Nipple
					Suspension: I - Stabilizer Bars, Shock Absorbers, Links, Bushings, Mounts, Control Arms, Mud Flaps
					Emergency Engine Stop Control: I
					Wheelchair Lift: I - Operation of lift; L - Lift (see chart), I - Securement belts
					Transmission & Power Steering: I & S - Fluid Level; I - Hoses, Rear
					A/C Compressor: T - Mounting; A - Belt; I - Compressor Operation
		X	X	X	Accelerator: I - Linkage full opening (pedal depressed)
				X	Air Cleaner: Ch - Air Cleaner Element
					Door Closure: I & O - All Door Closures, Locks, and Hatches. Lube & Adjust
		X	X	X	Transmission: Ch - Fluid, Filter Element Quarts put in
	X	X	X	X	Power Steering: Ch - Element & Fluid at reservoir
					Cooling System: I - Clutch, Fan Drive, Water Hoses; T - Clamps; I & S - Antifreeze per instruction; O - Pressure test cooling system. Antifreeze Reading
				X	Fuel Filters: Ch - Primary
					A/C Unit: I - Condenser, Leaks; O & I - Compressor, front & rear
					Batteries: I - Corrosion, Battery Cases for leaks & distortion; C - Cables, Battery & Battery Box
					Body Exterior: I - Accident Hazards, Lamp mounting, Mirrors, Loose Panels; Ch - Defective bulbs, Lenses, Closure of Doors
					Tires: I - Damage, Matched Duals, Wear, Valve Stem accessibility: 5/32" front & 3/32" rear
					LF LFI LRO RF RRI RRO
					PSI PSI PSI PSI PSI PSI
					Wheels: I - Grease Leaks; T - Axle Flange Nuts & Wheel Nuts
		X	X	X	Wheel Bearings: Repack Front Wheel Bearings and turn Rotors
					Leaks: O & I - Engine; I - Oil Lines, Cooling, Exhaust, Fuel Systems
					Yard Test: I - Performance; O - Transmission Shift Points
	X	X	X	X	Engine Turbo Cleaner Air Charge Cooler; I - Hoses, Clamps, Intake & Exhaust Leaks
					State Inspection Sticker: I - Record month and date of expiration

Completed By: (Inspector/Mechanic): _____ Approved By: _____

Inspector/Mechanic shall refer to EL Dorado Maintenance Manual for items that need explanation or consult with your immediate Supervisor.

Inspection Guide: Kodiak

Bus # _____ Due On _____

Symbols: A - Adjust; C - Clean; Ch - Change; I - Inspect; O - Operating Test; S - Service; T - Tighten; L - Lube. Check off each item as completed. Record on 1157-B. Defects likely to cause problems before the next inspection.

48	24	16	8	4	Inspection Item
					Instrument, Dash: O & I indicator lights, warning buzzer, 12vt. Meter; I - Speedo, 2-way radio, horn & mirrors
					Park Brake: O - Effectiveness; O - Release-Trailing Unit Has No Park Brake-Must Be Blocked
					Brakes: Interlock & Foot; O & I; Door Brake; I - Stopping Distance
					Cleaning: (air and water gun): Radiator, A/C condenser, evaporator and evaporator filter
					Lights & Switches: O & I all Interior and Exterior lights; T - Control knobs; CH - Defective Bulbs
					W/S Wipers: O & A - Speed & Sweep; I & A - Blades; S - Water Reservoir
					Fire Extinguisher: I - Hose, Seal; I - Gauge Readings (must be in the green area)
					Body interior: I - Accident Hazards, Floor Plates, all Glass, Mirrors, Hand Rails, Seats & Backs, Stanchions, Step, Signal Switches; O - Exit Door Locks; T - Screws, Bolts, Nuts; O & A - Door Operations; I - Operation of all blower motors. I & O - Chime, Chime Button, Pull Cords, Stop Request & Destination Signs (front and side)
					Heating: C - Filter Panels, operate heaters
					Brakes: I - Lining Wear, Master Cylinder, Leaks
					Steering: O & I - Free Play; I & A - Joints, Stops, Toe-In; I - Bracket, Knuckles, Power Steering Hoses and Front Cooler Lines.
					Transmission: I & A - Gear Shifter Cable for full engagement; T - Clamps
					Belts: Check all belts for wear. Change or Tighten
					Engine Crankcase: Ch - Oil Quarts put in
					Oil Filter: CH - By-Pass and Full Flow Elements
					Rear Axle: L - I - Leaks; S - Oil Level; C - Breather
	X	X	X		Rear Axle: Ch - Oil; I - Wheel Bearing Adj; A - Park Brake Quarts put in
					Differential Carrier: T - Mounting Nuts; I - Park Brake Mounting
					Lubrication: L - Chassis (see chart); I - Front Wheel Bearing Adj.
					Drive Shafts: L - Bearing; I - Lock Wires; T - Flange Bolts
					A/C Evaporator Drain: C - Drain Tube & Nipple
					Suspension: I - Stabilizer Bars, Shock Absorbers, Links, Bushings, Mounts, Control Arms, Mud Flaps
					Emergency Engine Stop Control: I
					Wheelchair Lift: I - Operation of lift; L - Lift (see chart), I - Securement belts
					Transmission & Power Steering: I & S - Fluid Level; I - Hoses, Rear
					A/C Compressor: T - Mounting; A - Belt; I - Compressor Operation
	X	X	X		Accelerator: I - Linkage full opening (pedal depressed)
				X	Air Cleaner: Ch - Air Cleaner Element
					Door Closure: I & O - All Door Closures, Locks, and Hatches. Lube & Adjust
	X	X	X	X	Transmission: Ch - Fluid, Filter Element Quarts put in
	X	X	X	X	Power Steering: Ch - Element & Fluid at reservoir
					Cooling System: I - Clutch, Fan Drive, Water Hoses; T - Clamps; I & S - Antifreeze per instruction; O - Pressure test cooling system. Antifreeze Reading: Between neg. 10 - neg. 20 _____
				X	Fuel Filters: Ch - Primary.
					A/C Unit: I - Condenser, Leaks; O & I - Compressor, front & rear
					Batteries: I - Corrosion, Battery Cases for leaks & distortion; C - Cables, Battery & Battery Box
					Body Exterior: I - Accident Hazards, Lamp mounting, Mirrors, Loose Panels; Ch - Defective bulbs, Lenses, Closure of Doors
					Tires: I - Damage, Matched Duals, Wear, Valve Stem accessibility: 5/32" front & 3/32" rear
					LF LFI LRO RF RRI RRO PSI PSI PSI PSI PSI PSI
					Wheels: I - Grease Leaks; T - Axle Flange Nuts & Wheel Nuts
	X	X	X		Wheel Bearings: Repack Front Wheel Bearings and turn Rotors
					Leaks: O & I - Engine; I - Oil Lines, Cooling, Exhaust, Fuel Systems
					Yard Test: I - Performance; O - Transmission Shift Points
X	X	X	X	X	Tune-Up: Ch - Plugs, Wires, Cap, and Rotor. I - For Codes and drive ability problems.
					State Inspection Sticker: I - Record month and date of expiration

Completed By: (Inspector/Mechanic): _____ Approved By: _____

Inspector/Mechanic shall refer to EL Dorado Maintenance Manual for items that need explanation or consult with your immediate Supervisor.

Inspection Guide: Woodlands Waterway Trolley Power & Trailing Unit

Trolley # _____ Due On _____

Symbols: A - Adjust; C - Clean; Ch - Change; I - Inspect; O - Operating Test; S - Service; T - Tighten; L - Lube. Check off each item as completed. Record on 1157-B. Defects likely to cause problems before the next inspection.

48	24	16	8	4	Inspection Item
					Instrument, Dash: O & I indicator lights, warning buzzer, 12vt. Meter; I - Speedo, 2-way radio, horn & mirrors
					Park Brake: O - Effectiveness; O - Release-Trailing Unit Has No Park Brake-Must Be Blocked
					Brakes: Interlock & Foot; O & I; Door Brake; I - Stopping Distance
					Cleaning: (air and water gun): Radiator, A/C condenser, evaporator and evaporator filter
					Lights & Switches: O & I all Interior and Exterior lights; T - Control knobs; CH - Defective Bulbs
					W/S Wipers: O & A - Speed & Sweep; I & A - Blades; S - Water Reservoir
					Fire Extinguisher: I - Hose, Seal; I - Gauge Readings (must be in the green area)
					Body interior: I - Accident Hazards, Floor Plates, all Glass, Mirrors, Hand Rails, Seats & Backs, Stanchions, Step, Signal Switches; O - Exit Door Locks; T - Screws, Bolts, Nuts; O & A - Door Operations; I - Operation of all blower motors. I & O - Chime, Chime Button, Pull Cords, Stop Request & Destination Signs (front and side), I & O - Audio & Video Camera Equipment
					Heating: C - Filter Panels, operate heaters
					Brakes: I - Lining Wear, Master Cylinder, Leaks
					Steering: O & I - Free Play; I & A - Joints, Stops, Toe-In; I - Bracket, Knuckles, Power Steering Hoses and Front Cooler Lines. I & O - Trailing Unit, Tongue-Steering & Hydraulic Brake, Master Cylinder, Electrical Connectors for Video, Audio & Lighting. I - Hitch Ball Assembly on Power Unit. I - Trailer for Proper Tracking. Trailer must track in footprint of Power Unit.
					Transmission: I & A - Gear Shifter Cable for full engagement; T - Clamps
					Belts: Check all belts for wear. Change or Tighten
					Engine Crankcase: Ch - Oil Quarts put in
					Oil Filter: CH - By-Pass and Full Flow Elements
					Rear Axle: L - I - Leaks; S - Oil Level; C - Breather
		X	X	X	Rear Axle: Ch - Oil; I - Wheel Bearing Adj; A - Park Brake Quarts put in
					Differential Carrier: T - Mounting Nuts; I - Park Brake Mounting
					Lubrication: L - Chassis (see chart); I - Front Wheel Bearing Adj.
					Drive Shafts: L - Bearing; I - Lock Wires; T - Flange Bolts
					A/C Evaporator Drain: C - Drain Tube & Nipple
					Suspension: I - Stabilizer Bars, Shock Absorbers, Links, Bushings, Mounts, Control Arms, Mud Flaps
					Emergency Engine Stop Control: I
					Wheelchair Lift: I - Operation of lift; L - Lift (see chart), I - Securement belts
					Transmission & Power Steering: I & S - Fluid Level; I - Hoses, Rear
					A/C Compressor: T - Mounting; A - Belt; I - Compressor Operation
		X	X	X	Accelerator: I - Linkage full opening (pedal depressed)
				X	Air Cleaner: Ch - Air Cleaner Element
					Door Closure: I & O - All Door Closures, Locks, and Hatches. Lube & Adjust
		X	X	X	Transmission: Ch - Fluid, Filter Element Quarts put in
	X	X	X	X	Power Steering: Ch - Element & Fluid at reservoir
					Cooling System: I - Clutch, Fan Drive, Water Hoses; T - Clamps; I & S - Antifreeze per instruction; O - Pressure test cooling system.
					Antifreeze Reading: Between neg. 10 - neg. 20 _____
				X	Fuel Filters: Ch - I Fuel Filters. I - Fuel Cylinders & LPG Filler Receptacle and Brackets
					A/C Unit: I - Condenser, Leaks; O & I - Compressor, front & rear
					Batteries: I - Corrosion, Battery Cases for leaks & distortion; C - Cables, Battery & Battery Box
					Body Exterior: I - Accident Hazards, Lamp mounting, Mirrors, Loose Panels; Ch - Defective bulbs, Lenses, Closure of Doors
					Tires: I - Damage, Matched Duals, Wear, Valve Stem accessibility: 5/32" front & 3/32" rear
					LF LFI LRO RF RRI RRO PSI PSI PSI PSI PSI PSI Trailing Unit: RF PSI LF PSI RR PSI LR PSI
					Wheels: I - Grease Leaks; T - Axle Flange Nuts & Wheel Nuts
		X	X	X	Wheel Bearings: Repack Front Wheel Bearings and turn Rotors
					Leaks: O & I - Engine; I - Oil Lines, Cooling, Exhaust, Fuel Systems
					Yard Test: I - Performance; O - Transmission Shift Points
	X	X	X	X	Tune-Up: Ch - Plugs, Wires, Cap, and Rotor. I - For Codes and drive ability problems.
					State Inspection Sticker: I - Record month and date of expiration

Completed By: (Inspector/Mechanic): _____ Approved By: _____

Inspector/Mechanic shall refer to the Maintenance Manual for items that need explanation or consult with your immediate Supervisor.

Lift Lubrication Points

