

CyRide

Ames Transit Agency

Vehicle Maintenance Plan



Table of Contents

<u>Section</u>	<u>Page</u>
I. Organizational Structure.....	3
II. Vehicle Maintenance Plan Objective.....	3
III. Vehicle Inspection Procedures.....	4
IV. Reactive Vehicle Maintenance.....	6
V. Documentation and Evaluation of Vehicle Maintenance.....	6
VI. Maintenance Facility, Equipment, and Training.....	7
VII. Vehicle Accessibility Equipment.....	7
Appendix.....	8

I. Organizational Structure

CyRide operations and maintenance is governed by the Ames Transit Agency. The Transit Agency is an administrative agency of the City of Ames, Iowa established pursuant to Chapter 392, Code of Iowa, 1979. The purpose of the agency is the establishment, acquisition, operation, management, control and governance of transit services in and for the City of Ames.

II. Vehicle Maintenance Plan Objective

The objective of the CyRide Vehicle Maintenance Plan is to optimize the value of the funded dollar while protecting stakeholder investment. The primary goals of the plan are:

- Maintain vehicles in safe operating condition.
- Ensure each vehicle is operating at peak efficiency.
- Maximize vehicle life.
- Minimize vehicle service failures (road calls).
- Minimize loss of accessibility due to equipment failure.
- Meet or exceed manufacturers' maintenance requirements.
- Maintain vehicle exterior and interior appearance.
- Maintain a system of permanent vehicle maintenance records.
- Adhere to a strict preventive maintenance schedule.
- Administer an aggressive equipment warranty recovery program.

CyRide, along with the City of Ames, subscribes to a philosophy of continuous improvement. The Vehicle Maintenance Plan and the procedures detailed in it will be subject to constant review and improvement. The plan will also be updated as the mix of rolling stock equipment changes

III. Vehicle Inspection Procedures

The preventive maintenance program at CyRide consists of daily inspections and mileage based inspections.

Daily Inspections

A. Pre-Service Inspection (M-F)

The general operating condition of each vehicle is checked before being placed in service through the following two procedures on weekdays:

Morning Laneworker Inspection: While charging bus air systems with the building's air supply, the morning laneworker visually inspects the tires and exterior condition of the bus. The floor around the bus is checked for fluid leaks. Problems are reported immediately to the lead mechanic for evaluation.

Fleet Status Board: The lead mechanic verifies vehicles are ready for service by checking this board in the dispatch office before pullout.

B. Driver Pre-Trip Inspection

Every day of the week, drivers perform a pre-trip inspection prior to the start of their shift. The first driver to pull the bus out of the garage for the day performs the pre-service cycling of the wheelchair lift. Problems are reported immediately to the dispatcher. If a problem may affect safety, service, accessibility or cause further component damage, the vehicle is removed from service.

C. Maintenance Cards

The reporting of mechanical problems to the maintenance staff from drivers and operations supervisors is accomplished through a Maintenance Card. All mechanical problems identified during the pre-trip inspection or driving shifts are recorded by the driver or dispatcher on a Maintenance Card. The Maintenance Card specifically identifies the bus, the problem, and the time identified. The Maintenance Card is forwarded to the either the lead mechanic or the senior mechanic on duty for repair coordination. Upon completion of repairs, a copy of the card with the repairs performed is returned to the driver. The head of maintenance reviews a sampling of the cards on a monthly basis.

D. Service Lane Inspection

Vehicles are serviced at the end of each day. During the servicing process, the following maintenance procedures are followed:

Tires visually checked.

Fuel tank filled.

Interior swept and cleaned.

Exterior washed as needed.

Engine belts and general engine condition checked.

Motor oil, transmission fluid, coolant checked.

Exterior lights checked – bulbs replaced.

Interior checked – seats, windows, lights, etc.

Preventive Maintenance Inspections

CyRide has a diverse fleet of vehicles ranging from a 1968 model up to 2008 models. This diversity requires different approaches to maintenance scheduling. There are three main schedules.

1. Older vehicles that acquire less than 10,000 miles per year are scheduled by time based intervals. Some vehicles are based on 4 month with a yearly heavy inspection, and the remaining that are used very little are based on a 6 month interval with a yearly heavy inspection.

2. Large buses older than model year 1995 are scheduled on a 2,500 mile cycle. There are four levels of preventive maintenance, (A) 2,500 miles; (B) 5,000 miles; (C) 10,000 miles; and (D) 20,000 miles. The preventive maintenance schedule is A, B, A, C, A, B, A, D and then it repeats in that cycle.

3. Large buses newer than model year 1996 are scheduled on a 5,000 mile cycle. There are 3 levels of inspections, (A) 5,000 miles, (B) 10,000 miles, and (C) 20,000 miles.

The preventative maintenance schedule is A,B,A,C and continues repeating.

Additional Maintenance may be performed seasonally as needed such as; washing out radiators in fall, rinsing salt off W/C lifts and radiators in winter, and other seasonal factors.

For mini buses (Ford E series), the intervals are (A) 3,000 miles; (B) 6,000 miles; (C) 12,000 miles; and (D) 24,000 miles.

Preventive maintenance inspections are to be performed on time. CyRide defines an on-time inspection as being within (+/-)10 percent of schedule. A list of items inspected at the above intervals can be found on the inspection sheets in the appendix.

The mechanic assistant performing the inspection will repair minor defects at the end of the inspection. This includes minor Maintenance Card repairs deferred until inspection. Repairs that can't be completed in the allotted inspection time are reported to the lead mechanic or Maintenance Coordinator. Generally, any remaining repairs are assigned and completed by another mechanic. If parts are not available and the defect is not safety sensitive, the bus will be released for service and scheduled for repairs at a later date.

Brake and tire wear are recorded on a spreadsheet. Repairs are scheduled when wear reaches a predetermined level. CyRide's tire replacement policy follows DOT regulations. Steer tires are replaced at 4/32-tread depth and drive tires are replaced at 2/32-tread depth. Brake linings are replaced when linings reach a point between ¼ of their original usable thickness and the minimum thickness allowed by the lining manufacturer. Linings are also replaced when excessive noise is noted during brake application.

At least one inspection bus per day is reserved for an intense interior cleaning. Generally, the bus reserved for the special cleaning has been operating the greatest

length of time without the higher level of cleaning in relation to the other buses placed out of service for inspection.

IV. Reactive Vehicle Maintenance

All other vehicle maintenance is performed in response to detected problems. Reactive maintenance cannot be eliminated and is often a function of vehicle miles, fleet age, and preventive maintenance intervals. It is the intent of this maintenance program to minimize this type of maintenance – including road calls. Constantly reviewing and improving upon the existing Vehicle Maintenance Plan will accomplish this.

The reactive vehicle maintenance policy is as follows:

- All problems are to be reported, no matter how minor.
- The supervisor, dispatcher, lead mechanic or senior mechanic on duty / on call shall make an immediate determination whether the vehicle should be removed from service.
- Failures of accessibility equipment shall require prompt resolution. An alternate vehicle or immediate repair will be provided.
- The driver or dispatcher records all detected problems on a Maintenance Card.
- All repairs are documented on the Maintenance Card, mechanic's time card, and Collective Data maintenance software.

V. Documentation and Evaluation of Vehicle Maintenance

Documentation and evaluation of vehicle maintenance activities is the primary means by which the maintenance program can attain its goals. CyRide utilizes the following documentation in its maintenance program:

1. *Collective Data Maintenance Software:* Vehicle repair information is transferred from employee timecards to work orders on the Collective Data system. A log of repairs segregated by unit number can be retrieved from the program.
2. *Maintenance Card:* As outlined previously, this form is used to report any mechanical problems to the maintenance staff.
3. *Oil Analysis Report:* Oil sampling is done every 5,000 miles on large buses and every 6,000 miles on minibuses. The lead mechanic and/or the Maintenance Coordinator review these reports to determine if there are any problems with the engine.
4. *Parts Log:* A log of the parts used in repairing buses is kept in the parts room.
5. *Daily Commodities Usage:* Petrovend software records daily mileages along with fuel and fluids consumption. This data is also exported to the Collective Data Maintenance software to track fuel and fluid use.
6. *Road Call Log:* The Dispatch office keeps track of all Road Calls, it is also kept track of in Collective Data.
7. *Inspection Schedule:* The Maintenance Coordinator monitors and schedules preventive maintenance inspections via spreadsheet and Collective Data.

VII. Vehicle Accessibility Equipment

In order to maintain service availability to persons with disabilities, the following procedures are followed:

1. Pre-trip cycling of wheelchair lifts and inspection of securement stations at bus pull out.
2. Vehicles experiencing equipment failures are removed from service and repaired as soon as possible.
3. Replacement of wheelchair lifts occurs when the unit cannot be repaired.
4. Equipment maintenance and inspection is incorporated into preventive maintenance inspection procedures.

Appendix

2,500 MILE INSPECTION

Bus No. _____ Odometer Miles: _____ Date _____
Previous Miles: _____
Actual Miles: _____

Symbol Definition:
/ O.K.
X ADJUSTED
O REPAIRS NEEDED

PICK UP ALL MAINTENANCE CARDS

INTERIOR INSPECTION

- ___ Check drivers' door, entrance & exit door & operation - when applicable
- ___ Check door sensitive edges & step treadles - when applicable
- ___ Inspect drivers' foot box area. Clean if necessary
- ___ Visually inspect interior for damage, loose or missing equipment, cleanliness & overall appearance
- ___ Inspect Heater/ A/C filter. Change if necessary
- ___ Check wheelchair lift operation

EXTERIOR INSPECTION

- ___ Check all exterior lamp operation
- ___ Check fluid levels. Add if necessary
- ___ Engine Oil
- ___ Transmission Fluid
- ___ Coolant
- ___ Washer Fluid
- ___ Power Steering/Hydraulic Fluid
- ___ Brake Fluid (Mini-Buses)
- ___ Hub Oil Level - When applicable
- ___ Visually inspect engine compartment
- ___ Check & adjust tire pressure. Visually inspect tires for damage.
- ___ Check lug nuts for signs of looseness & tighten if needed
- ___ Visually inspect under chassis for loose & or damaged parts
- ___ Check brake adjustment & visually inspect brake components
- ___ Drain wet air tank on buses with air systems
- ___ Drain blower box catch tank - When applicable
- ___ Wash radiator, A/C condenser, battery box, engine compartment & wheelchair lift platform
- ___ Torque all lug nuts (450 ft lbs - 500 ft lbs)
- ___ Torque all lug nuts on Service Vehicles to mfg specs.
- ___ Check 1st Aid Kit & Accident Pkt - Restock drivers' cabinet

FILL OUT & RETURN ALL MAINTENANCE CARDS W/INSPECTION SHEET

GILLIG & ORION INSPECTION
5,000 10,000 20,000 40,000

Bus No. _____ Odometer Miles: _____
 _____ Previous Miles: _____
 _____ Actual Miles: _____
 _____ Last Oil Change: _____
 _____ Miles on Sample: _____

Date _____
 Definition:
 / O.K.
 X ADJUSTED
 O REPAIRS NEEDED

___ **UPDATE COMPUTER AND DBS**

___ **PICKUP AND RETURN MAINTENANCE CARDS**

DRIVERS' AREA

- ___ FREE PLAY IN STEERING WHEEL
- ___ STEERING TILT MECHANISM
- ___ HORN OPERATION
- ___ DRIVERS' SEAT & SEAT BELT OPERATION
- ___ SERVICE BRAKE & ACCELERATOR PEDAL OPERATION
- ___ SPRING BRAKE OPERATION - CHECK CONTROL KNOB
CONDITION & FOR EXCESSIVE AIR LEAKAGE
- ___ DOOR MASTER CONTROL & INTERLOCK OPERATION
- ___ REAR DOOR OVERRIDE SWITCH OPERATION
- ___ REARVIEW MIRRORS & CHECK FOR MIRROR TOOLS
- ___ ALL INSTRUMENT PANEL GAUGES - OPERATION &
DIMMING
- ___ ILLUMINATOR LAMPS - OPERATION & DIMMING
- ___ AIR COMPRESSOR OPERATION : CUT-IN/OUT PRESSURES
- ___ INSTRUMENT PANEL INDICATOR & WARNING LAMP
OPERATION
- ___ TRANS SELECTOR PAD & BUTTON OPERATION
- ___ MASTER SWITCH OPERATION
- ___ EMERGENCY ENGINE SHUTDOWN - WHEN APPLICABLE
- ___ HEADLIGHT & DIMMER SWITCH OP - CHECK AIM
- ___ WINDSHIELD WIPER/WASHER OPERATION
- ___ FOOT MOUNTED TURN SIGNAL SWITCH OPERATION
- ___ HAZARD/4-WAY SWITCH OPERATION
- ___ RADIO OPERATION & MTG
- ___ PA SYSTEM OPERATION & MTG
- ___ DRIVERS' SIDE WINDOW OPERATION
- ___ FRONT DESTINATION SIGN & LIGHT OPERATION
- ___ DRIVERS' HEATER/ A/C CONTROLS & FAN OPERATION
- ___ DRIVERS' BOOSTER FAN OPERATION - WHEN APPLICABLE
- ___ PASSENGER HEATER/ A/C CONTROLS & FAN OPERATION
- ___ AUXILIARY COOLANT HEATER OPERATION -IF APP
- ___ RUN A/C
- ___ FAREBOX MTG OPERATION & LAMP
- ___ DRIVERS' LAMP OPERATION
- ___ PASSENGER DOME LAMP OPERATION
- ___ INSPECT DRIVERS' FOOT BOX - CLEAN IF NECESSARY
- ___ CHECK 1ST AID KIT , ACCIDENT PKT, AND FIRE EXT - RESTOCK IF NEEDED

PASSENGER AREA

- ___ SEAT FRAMES & COVERINGS FOR DEFECTS
- ___ GENERAL INTERIOR CONDITION - PAINT, PANELS, ETC
- ___ ENTRANCE & EXIT DOOR OPERATION
- ___ DOOR AIR MOTORS FOR LEAKS, ETC.
- ___ LIMIT SWITCHES MOUNTING & OPERATION
- ___ BODE DOOR SPRINGS - WHEN APPLICABLE
- ___ EXIT DOOR STEP TREADLES & SENSITIVE EDGES
- ___ ENTRANCE / EXIT STEP WELLS FOR LOOSE COVERINGS
& DEFECTS
- ___ LAMP OPERATION
- ___ "GREEN" LAMP OPERATION W/ EXIT DOORS AUTHORIZED
- ___ STANCHION & GRAB RAILS FOR DEFECTS
- ___ FLOOR COVERING FOR LOOSENESS & DEFECTS
- ___ PASSENGER CHIME & PULL CORDS
- ___ SIDE DESTINATION SIGN & LAMP OPERATION
- ___ WINDOWS, LATCHES & OPERATION
- ___ EMERGENCY EXIT OPERATION
- ___ REPLACE A/C EVAPORATOR FILTER
- ___ INSPECT HEATER FILTER -REPLACE IF NEEDED
- ___ CHECK HEATER CORES FOR LEAKAGE & MTG
- ___ CHECK A/C EVAPORATOR -CLEAN IF NECESSARY
- ___ CLEAN STEERING WHEEL AND DRIVERS DASH
- ___ MOP FLOOR DURING WINTER MONTHS
- ___ INSPECT SEATS FOR CLEANLINESS - CLEAN IF DIRTY
- ___ INSPECT INTERIOR FOR CLEANLINESS -CLEAN IF DIRTY

----WHEELCHAIR LIFT----

- ___ PERFORM INSPECTION (ATTACH SHEET)
- ___ CHECK LIFT OPERATION
- ___ FOLDING SEAT OPERATION
- ___ CLEAN RELATED BELTS. CHECK RETRACTOR & LATCH
OPERATION

EXTERIOR INSPECTION

- ___ GENERAL BODY & PAINT CONDITION
- ___ EXTERIOR LIGHTS - CLEARANCE, SIDE, MARKER, STOP, ETC.
- ___ BACK-UP ALARM OPERATION
- ___ WHEEL & AXLE FLANGE NUTS
- ___ WIPER ARMS & BLADES, ETC
- ___ WASH RADIATOR, A/C CONDENSER, BATTERY BOX, ENGINE COMPARTMENT & W/C LIFT PLATFORM
- ___ FRONT HUB OIL LEVEL
- ___ DOOR & FENDER RUBBERS
- ___ CHECK & SERVICE BATTERIES
- ___ TORQUE ALL LUG NUTS (450 FT LBS - 500 FT LBS)

UNDER CHASSIS INSPECTION

- ___ VISUALLY INSPECT ALL UNDER CHASSIS COMPONENTS
- ___ CHECK FOR LEAKS - AIR, COOLANT, OIL, FUEL, ETC.
- ___ DRAGLINK & TIE RODS
- ___ KING PINS FOR LOOSENESS
- ___ SHOCK ABSORBERS - FRONT & REAR
- ___ RADIUS RODS & BUSHINGS - FRONT & REAR
- ___ STEERING SHAFT & U-JOINTS IF APPLICABLE
- ___ STEERING GEAR
- ___ CHECK & ADJ BRAKES - RECORD APPROX . BRAKE LINING THICKNESS
- ___ BRAKE HOSES
- ___ WHEEL SEALS FOR LEAKAGE
- ___ WHEEL BEARING ADJUSTMENT
- ___ VISUALLY CK. TIRES FOR WEAR & TREAD DEPTH
- ___ RECORD DEPTH
- ___ CHECK TIRE PRESSURE & ADJUST TO TIRE MFG. SPEC
- ___ COMPLETE CHASSIS LUBRICATION
- ___ EXHAUST SYSTEM - MUFFLER, EXHAUST PIPING & MTG
- ___ INTERCOOLER & PLUMBING -PIPING, HOSES, CLAMP & MTG
- ___ CHECK MUD FLAP MTG & CONDITION
- ___ FUEL TANK MTG, DAMAGE & FOR LEAKAGE
- ___ TRANS OUTPUT SHAFT SEAL FOR LEAKAGE
- ___ DRIVE SHAFT & U-JOINTS FOR LOOSENESS
- ___ DIFFERENTIAL LUBE LEVEL
- ___ DIFFERENTIAL/PINION SEAL & HOUSING FOR LEAKS
- ___ AIR COMPRESSOR INLET PIPING
- ___ DRAIN & INSPECT AIR TANK
- ___ TAKE ENGINE OIL SAMPLE

--IF APPLICABLE--

- ___ SERVICE AIR CLEANER (5,000) (94,95,96,97 ORION V)
- ___ CHANGE ALLISON TRANS SPIN-ON FILTERS
- ___ DRAIN BLOWER BOX CATCH TANK & INSPECT VENT TUBE

10,000 MILE INSPECTION

- ___ REPLACE VOITH SPIN-ON FILTER IF APP
- ___ REPLACE FUEL FILTER(S)
- ___ REPLACE COOLANT FILTER
- ___ SERVICE AIR CLEANER
- ___ CHECK & SHAKE FIRE EXTINGUISHER
- ___ CHANGE ENGINE OIL & FILTER* 6V71 & 6V92 - 40 W OIL
- ___ SERIES 50 & CUMMINS - 15 W 40 OIL
- ___ REAR AXLE PLANETARY HUBS - DRAIN & REFILL (LOW FLOORS)

20,000 MILE INSPECTION + 10K

- ___ SERVICE TRANSMISSION -DRAIN & REFILL
- ___ CHANGE TRANSMISSION FILTER
- ___ SERVICE HYD SYSTEM - DRAIN & REFILL
- ___ REPLACE SUCTION FILTERS (GILLIG)
- ___ STEAM CLEAN ENGINE/TRANS
- ___ HYDROMETER TEST BATTERIES

40,000 MILE INSPECTION + 10K & 20K

- ___ SERVICE DIFFERENTIAL - DRAIN & REFILL
- ___ SERVICE HYD SYSTEM - DRAIN & REFILL--
- ___ REPLACE SUCTION & PRESSURE FILTERS (ORION)

ENGINE COMPARTMENT INSPECTION

- ___ REAR RUN SWITCHES, GAUGES & COMPARTMENT LAMP OPERATION
- ___ VISUALLY INSPECT FOR LEAKS - WATER, OIL, FUEL & AIR LINES
- ___ AIR COMPRESSOR INLET & DISCHARGE LINES
- ___ STARTER OPERATION & MTG
- ___ HYDRAULIC FLUID PUMP FOR LEAKAGE
- ___ BELT CONDITION & TIGHTNESS
- ___ RADIATOR COOLING FAN, HUB, MOTOR & OPERATION
- ___ RADIATOR & SURGE TANK MTG & FOR LEAKAGE
- ___ RADIATOR FILL CAP & GASKET OPERATION & FOR LEAKAGE
- ___ COOLANT HOSE CONDITION & CLAMP TIGHTNESS
- ___ CHECK BELT TENSIONERS

-----CHECK FLUID LEVELS-----

- ___ ENGINE OIL
- ___ TRANSMISSION FLUID
- ___ HYDRAULIC FLUID
- ___ COOLANT

--IF APPLICABLE--

- ___ ENGINE GOVERNOR COVER LINKAGES
- ___ THROTTLE CYLINDER OPERATION WHEN APPLICABLE
- ___ SHUTTER OPERATION

FALL SERVICE INSPECTION

Bus No. _____ Odometer Miles: _____ Date _____
Previous Miles: _____
Actual Miles: _____

Symbol Definition:
/ O.K.
X ADJUSTED
O REPAIRS NEEDED

PICK UP ALL MAINTENANCE CARDS

INTERIOR INSPECTION

- ___ Check drivers' door, entrance & exit door & operation - when applicable
- ___ Check door sensitive edges & step treadles - when applicable
- ___ Inspect drivers' foot box area. Clean if necessary
- ___ Visually inspect interior for damage, loose or missing equipment, cleanliness & overall appearance
- ___ Dust seats, dash, floor. Mop floor if needed.
- ___ Check wheelchair lift operation

EXTERIOR INSPECTION

- ___ Check all exterior lamp operation
- ___ Check fluid levels. Add if necessary
- ___ Engine Oil
- ___ Transmission Fluid
- ___ Coolant
- ___ Washer Fluid
- ___ Power Steering/Hydraulic Fluid
- ___ Brake Fluid (Mini-Buses)
- ___ Hub Oil Level - When applicable
- ___ Visually inspect engine compartment
- ___ Check & adjust tire pressure. Visually inspect tires for damage.
- ___ Check lug nuts for signs of looseness & tighten if needed
- ___ **Torque all Lug Nuts (450 Ft Lbs - 500 Ft Lbs)**
- ___ Visually inspect under chassis for loose & or damaged parts
- ___ Check brake adjustment & visually inspect brake components
- ___ Drain wet air tank on buses with air systems
- ___ Drain blower box catch tank - When applicable
- ___ Check battery voltage - Charge/Service as needed.
- ___ Check 1st Aid Kit & Accident Pkt - Restock drivers' cabinet

FILL OUT & RETURN ALL MAINTENANCE CARDS W/INSPECTION SHEET

GM INSPECTION
5,000 10,000 20,000

Bus No. _____ Odometer Miles: _____
 _____ Previous Miles: _____
 _____ Actual Miles: _____
 _____ Last Oil Change: _____
 _____ Miles on this Oil Sample: _____

Date _____
 Symbol Definition:
 / O.K.
 X ADJUSTED
 O REPAIRS NEEDED

PICK UP ALL MAINTENANCE CARDS & TEST DRIVE

INTERIOR INSPECTION

DRIVERS' AREA

- ___FREE PLAY IN STEERING WHEEL
- ___HORN OPERATION
- ___DRIVERS' SEAT & SEAT BELT OPERATION
- ___SERVICE BRAKE & ACCELERATOR PEDAL OPERATION
- ___SPRING BRAKE OPERATION - CHECK CONTROL KNOB
CONDITION & FOR EXCESSIVE AIR LEAKAGE
- ___HAND BRAKE OPERATION & ADJUSTMENT
- ___DOOR MASTER CONTROL & INTERLOCK OPERATION
- ___REAR DOOR OVERRIDE SWITCH OPERATION
- ___REARVIEW MIRRORS & CHECK FOR MIRROR TOOLS
- ___ALL INSTRUMENT PANEL GAUGES - OPERATION & DIMMING
- ___ILLUMINATOR LAMPS - OPERATION & DIMMING
- ___AIR COMPRESSOR OPERATION : CUT-IN & CUT-OUT PRESSURES
- ___INSTRUMENT PANEL INDICATOR & WARNING LAMP OPERATION
- ___TRANS GEAR SELECTOR SWITCH OPERATION - WHEN APPLICABLE
- ___TRANS GEAR SHIFT LEVER - WHEN APPLICABLE
- ___MASTER SWITCH OPERATION
- ___EMERGENCY ENGINE SHUTDOWN - WHEN APPLICABLE
- ___HEADLIGHT & DIMMER SWITCH OPERATION - CHECK HEADLIGHT
AIM
- ___WINDSHIELD WIPER/WASHER OPERATION
- ___FOOT MOUNTED TURN SIGNAL SWITCH OPERATION
- ___HAZARD/4-WAY SWITCH OPERATION
- ___RADIO OPERATION & MTG
- ___PA SYSTEM OPERATION & MTG
- ___DRIVERS' SIDE WINDOW OPERATION
- ___FRONT DESTINATION SIGN & LIGHT OPERATION
- ___DRIVERS' HEATER CONTROLS & FAN OPERATION
- ___DRIVERS' BOOSTER FAN OPERATION - WHEN APPLICABLE
- ___PASSENGER HEATER CONTROLS & FAN OPERATION
- ___FAREBOX MTG OPERATION & LAMP
- ___DRIVERS' LAMP OPERATION
- ___PASSENGER DOME LAMP OPERATION
- ___INSPECT DRIVERS' FOOT BOX - CLEAN IF NECESSARY
- ___CHECK & SHAKE FIRE EXTINGUISHER (10,000)
- ___CHECK 1ST AID KIT & ACCIDENT PKT & RESTOCK DRIVER'S CABINET

PASSENGER AREA

- ___SEAT FRAMES & COVERINGS FOR DEFECTS
- ___GENERAL INTERIOR CONDITION - PAINT, PANELS, TRIM, ETC.
- ___ENTRANCE & EXIT DOOR OPERATION
- ___DOOR AIR MOTORS FOR LEAKS, ETC.
- ___LIMIT SWITCHES MOUNTING & OPERATION
- ___EXIT DOOR STEP TREADLES & SENSITIVE EDGES
- ___ENTRANCE / EXIT STEP WELLS FOR LOOSE COVERINGS &
DEFECTS
- ___STEP WELL LAMP OPERATION
- ___"GREEN" LAMP OPERATION W/EXIT DOORS AUTHORIZED
- ___STANCHION & GRAB RAILS FOR DEFECTS
- ___FLOOR COVERING FOR LOOSENESS & DEFECTS
- ___PASSENGER CHIME & PULL CORDS
- ___SIDE DESTINATION SIGN & LAMP OPERATION
- ___WINDOWS, LATCHES & OPERATION
- ___EMERGENCY EXIT OPERATION
- ___INSPECT SEATS FOR CLEANLINESS - CLEAN IF NECESSARY
CLEANILINESS - CLEAN IF NECESSARY
- ___INSPECT INTERIOR FOR CLEANLINESS -CLEAN IF NECESSARY
- ___CHECK CIRC PUMP OPERATION

FILL OUT & RETURN ALL MAINTENANCE CARDS W/INSPECTION FORM

EXTERIOR INSPECTION

- __GENERAL BODY & PAINT CONDITION
- __EXTERIOR LIGHTS - CLEARANCE, SIDE, MARKER, STOP, ETC.
- __BACK-UP ALARM OPERATION
- __WHEEL & AXLE FLANGE NUTS
- __TORQUE ALL LUG NUTS (450 FT LBS - 500 FT LBS.)
- __WASH RADIATOR, A/C CONDENSER, BATTERY BOX, ENGINE COMPARTMENT
- __WIPER ARMS & BLADES, ETC.
- __DOOR & FENDER RUBBERS
- __CHECK & SERVICE BATTERIES
- __HYDROMETER TEST BATTERIES (20,000)

UNDER CHASSIS INSPECTION

- __VISUALLY INSPECT ALL UNDER CHASSIS COMPONENTS
- __CHECK FOR LEAKS - AIR, COOLANT, OIL, FUEL, ETC.
- __DRAGLINK & TIE RODS
- __KING PINS FOR LOOSENESS
- __SHOCK ABSORBERS - FRONT & REAR
- __RADIUS RODS & BUSHINGS - FRONT & REAR
- __STEERING SHAFT & U-JOINTS IF APPLICABLE
- __STEERING GEAR & LUBRICATE
- __CHECK & ADJ BRAKES - RECORD APPROX . BRAKE LINING THICKNESS
- __BRAKE HOSES
- __WHEEL SEALS FOR LEAKAGE
- __WHEEL BEARING ADJUSTMENT
- __VISUALLY CK. TIRES FOR WEAR & TREAD DEPTH - RECORD DEPTH
- __CHECK TIRE PRESSURE & ADJUST TO TIRE MFG. SPEC
- __COMPLETE CHASSIS LUBRICATION
- __INSPECT HEATER FILTER -CHANGE AS NEEDED
- __CHECK HEATER CORES FOR LEAKAGE & MTG
- __REPLACE COOLANT FILTER - WHEN APPLICABLE (10,000)
- __MOTOR MOUNTS - FRONT & REAR
- __EXHAUST SYSTEM - MUFFLER, EXHAUST PIPING & MTG
- __CHECK MUD FLAP MTG & CONDITION
- __FUEL TANK MTG, DAMAGE & FOR LEAKAGE
- __TRANS OUTPUT SHAFT SEAL FOR LEAKAGE
- __DRIVE SHAFT & U-JOINTS FOR LOOSENESS
- __DIFFERENTIAL LUBE LEVEL
- __DIFFERENTIAL/PINION SEAL & HOUSING FOR LEAKS
- __HAND BRAKE LINKAGE & ADJUSTMENT
- __AIR COMPRESSOR INLET PIPING
- __DRAIN & INSPECT AIR TANK
- __DRAIN BLOWER BOX CATCH TANK & INSPECT VENT TUBE
- __CHANGE TRANS SPIN-ON FILTERS
- __CHANGE ENGINE OIL & FILTER*
- __CHANGE BYPASS OIL FILTER*
- * 6V71 & 8V92 - 15,000 MILE INTERVAL - 40 W OIL
- __SAMPLE ENGINE OIL & FILTER
- __SERVICE TRANSMISSION -DRAIN & REFILL (20,000)
- __SERVICE POWER STEERING SYSTEM - DRAIN & REFILL
- REPLACE SUCTION FILTERS (20,000)
- __STEAM CLEAN ENGINE/TRANS (20,000)
- __SERVICE DIFFERENTIAL - DRAIN & REFILL (40,000)

ENGINE COMPARTMENT INSPECTION

- __REAR RUN SWITCHES, GAUGES & COMPARTMENT LAMP OPERATION
- __VISUALLY INSPECT FOR LEAKS - WATER, OIL, FUEL & AIR LINES
- __CHECK FLUID LEVELS
- __ENGINE OIL
- __TRANSMISSION FLUID
- __COOLANT
- __HYDRAULIC FLUID
- __AIR COMPRESSOR INLET & DISCHARGE LINES
- __STARTER OPERATION & MTG
- __ALCOHOL EVAPORATOR BOTTLE & PLUMBING - FILL AS REQUIRED
- __ALTERNATOR OPERATION & MTG
- __ENGINE GOVERNOR COVER LINKAGES
- __THROTTLE CYLINDER OPERATION WHEN APPLICABLE
- __RADIATOR COOLING FAN, HUB, MOTOR & OPERATION
- __RADIATOR & SURGE TANK MTG & FOR LEAKAGE
- __RADIATOR FILL CAP & GASKET OPERATION & FOR LEAKAGE
- __COOLANT HOSE CONDITION & CLAMP TIGHTNESS
- __SHUTTER OPERATION
- __HYDRAULIC FLUID PUMP FOR LEAKAGE
- __SERVICE AIR CLEANER (10,000)
- __REPLACE FUEL FILTER(S) (10,000)

Bus No. _____ Odometer Miles: _____ Date _____
Previous Miles: _____
Actual Miles: _____
Last Oil Change: _____
Miles on this Oil Sample: _____

5,000 10,000 20,000

Symbol Definition:

/ O.K.

X ADJUSTED

O REPAIRS NEEDED

PICK UP ALL MAINTENANCE CARDS & TEST DRIVE

INTERIOR INSPECTION

DRIVERS' AREA

___FREE PLAY IN STEERING WHEEL

___STEERING TILT MECHANISM

___HORN OPERATION

___DRIVERS' SEATBELT OPERATION

___BRAKE & ACCELERATOR OPERATION

___PARK BRAKE PEDAL OPERATION

___REAR VIEW MIRRORS & CHECK FOR MIRROR TOOLS

___ALL DASH GAUGES & ILLUMINATOR LAMPS - OPERATION & DIMMING

___INSTRUMENT PANEL INDICATOR LAMPS

___IGNITION SWITCH OPERATION

___SHIFT LEVER OPERATION

___OVERDRIVE BUTTON OPERATION

___HEADLAMP SWITCH - CHECK HEADLAMP AIM & DTRL OPERATION

___WINDSHIELD WIPER/WASHER OPERATION

___HAZARD/4-WAY SWITCH OPERATION

___RADIO OPERATION & MTG

___PA SYSTEM OPERATION & MTG

___DRIVERS' DOOR & WINDOW OPERATION

___FRONT DESTINATION SIGN & LIGHTS

___DRIVERS' HEATER/ A/C CONTROLS & FAN OPERATION

___PASSENGER HEATER/ A/C CONTROLS & FAN OPERATION

___RUN A/C

___CHECK FAREBOX MTG, OPERATION & LAMP

___DOME LAMP OPERATION - DRIVERS' & PASSENGER

___PASSENGER DOOR CONTROL SWITCH & OPERATION

___INSPECT DRIVERS' FOOT BOX - CLEAN IF NECESSARY

___CHECK & SHAKE FIRE EXTINGUISHER (10,000)

___CHECK 1ST AID KIT & ACCIDENT PKT - RESTOCK IF NECESSARY (10,000)

PASSENGER AREA

___CHECK SEAT FRAMES & COVERINGS FOR DEFECTS

___GENERAL INTERIOR CONDITION, PAINT, PANELS, TRIM, ETC.

___PASSENGER DOOR OPERATING MECHANISM & MOTOR

___STEP WELL FOR LOOSE COVERINGS & DEFECTS

___STANCHION & GRAB RAILS FOR DEFECTS

___PASSENGER CHIME & PULL CORDS

___SIDE DESTINATION SIGN & LIGHTS - WHEN APPLICABLE

___WINDOWS, LATCHES & OPERATION

___EMERGENCY EXITS

___FLOOR COVERINGS FOR LOOSENESS & DEFECTS

___DECALS

___INSPECT SEATS FOR CLEANLINESS - CLEAN IF NECESSARY

___CHECK FOR PASSENGER SEAT BELT EXTENSIONS: 3 - PASS/ 1 - W/C

___INSPECT INTERIOR FOR CLEANLINESS -CLEAN IF NECESSARY

WHEELCHAIR LIFT

___PERFORM INSPECTION (SEE ATTACHED INSPECTION FORM)

___CHECK OPERATION

___CHECK DOOR & LATCH OPERATION

___CHECK FLOOD LAMP OPERATION

___CLEAN SEATBELTS & CHECK SWITCH OPERATION

FILL OUT & RETURN ALL MAINTENANCE CARDS W/INSPECTION SHEET

EXTERIOR INSPECTION

- __GENERAL BODY & PAINT CONDITION
- __WHEEL & AXLE FLANGE NUTS
- __EXTERIOR LAMPS - MARKER, CLEARANCE, STOP/TAIL , ETC.
- __BACK-UP ALARM & LAMP OPERATION
- __**WASH RADIATOR, A/C CONDENSER & BATTERY BOX**
- __CHECK & SERVICE BATTERIES
- __CLEAN & LUBE BATTERY TRAY SLIDES
- __WIPER ARMS & BLADES
- __DOOR & FENDER RUBBERS
- __**HYDROMETER TEST BATTERIES (20,000)**

UNDER CHASSIS

- __VISUALLY CHECK ALL UNDER CHASSIS COMPONENTS
- __CHECK FOR LEAKS - COOLANT, OIL, ETC.
- __DRAGLINK & TIE ROD ENDS
- __SHOCKS - FRONT & REAR
- __RADIUS RODS & BUSHINGS
- __BALL JOINTS
- __CHECK & ADJUST BRAKES - RECORD PAD THICKNESS
- __BRAKE HOSES & LINES
- __COMPLETE CHASSIS LUBRICATION
- __CHECK WHEEL SEALS FOR LEAKS - FRONT & REAR
- __CHECK WHEEL BEARING ADJUSTMENT - FRONT & REAR
- __VISUALLY CHECK TIRES FOR WEAR & DAMAGE
- __MEASURE & RECORD TIRE TREAD DEPTH
- __TORQUE ALL LUG NUTS (126 FT LBS - 170 FT LBS - MINI BUSES)
- __TORQUE ALL LUG NUTS (100 FT LBS - MINI VANS)
- __TORQUE ALL LUG NUTS ON SERVICE VEHICLES TO MFG SPECS.
- __PULL REAR BRAKE DRUMS (10,000)-
- __**INSPECT & RECORD LINING THICKNESS (10,000)**
- __**CHANGE IN-LINE TRANSMISSION FILTER (10,000)**
- __CHECK & ADJUST TIRE PRESSURE TO TIRE MFG. SPECS.
- __MOTOR & TRANSMISSION MOUNTS
- __CHECK EXHAUST SYSTEM: HANGERS, PIPES & MUFFLER
- __MUD FLAP MTG
- __FUEL TANK MOUNTING - LEAKAGE OR DAMAGE
- __TRANS OUTPUT SHAFT SEAL FOR LEAKAGE
- __DRIVE SHAFT & U-JOINTS FOR LOOSENESS
- __DIFFERENTIAL LUBE LEVEL
- __DIFFERENTIAL/ PINION SEAL & HOUSING FOR LEAKS
- __**SAMPLE ENGINE OIL**
- __**CHANGE ENGINE OIL & FILTER**
- __SERVICE DIFFERENTIAL - DRAIN & REFILL (20,000)
- __SERVICE TRANS - DRAIN, CHANGE FILTER & REFILL (20,000)

ENGINE COMPARTMENT

- __CHECK FOR LEAKS - COOLANT, OIL, FUEL, ETC.
- __CHECK ACCESSORY DRIVE BELT
- __CHECK ACCESSORY DRIVE BELT TENSIONER & IDLER PULLEYS
- FOR ALIGNMENT & OPERATION
- __CHECK ALT. MTG & OPERATION
- __CHECK & SERVICE ENGINE AIR FILTER (10,000)
- __CHANGE FUEL FILTER (10,000)
- __CHECK FLUID LEVELS
- __ENGINE OIL
- __TRANSMISSION FLUID
- __BRAKE FLUID
- __COOLANT
- __POWER STEERING FLUID
- __WASHER SOLVENT
- __**SERVICE FUEL FILTERS (#938 & #939 & #949) (20,000)**

BRAUN LIFT INSPECTION - #938 & #939

BUS # : _____

MILEAGE#: _____

DATE: _____

2,500 MILE INSPECTION

- ___ Outboard roll stop hinge - light oil
- ___ Roll stop latch (pivot point) - light oil
- ___ Fold actuator points (red quick release pin & actuator whale mounting pin) - light oil
- ___ Bridge(striker) plate & clevis pins - light oil
- ___ Platform fold axles - light oil
- ___ Horseshoe pivots points (shoulder bolts) - light oil
- ___ Handrail pivot points (3 points per handrail) - light oil
- ___ Inspect lift for rattles - Adjust as needed
- ___ Bridge(striker) plate & pivots points - Anti-seize
- ___ Bridge(striker) plate & slots & bearings - Light grease
- ___ Inspect wahte for proper alignment with platform bearings - Adjust as necessary
- ___ Inspect whale slots for excessive wear or damage - Replace if needed
- ___ Inspect bridge(striker) plate slots for excessive wear or damage - replace if needed d& relubricate
- ___ Inspect cotter pins on: Whale pins (2), Bridge plate end, Clevis pins (2), Platform fold axles (2) & Roll stop latch (2) - Resecure, replace or correct as needed
- ___ Inspect hairpin cotters (2) on fold actuator - Replace if needed
- ___ Inspect roll stop for proper operation - Correct or replace defective parts &/or relubricate
- ___ Inspect roll stop latch for proper operation, positive securement & detachment or missing springs - Correct or replace defective parts &/ or relubricate
- ___ Inspect gas spring & mtg hardware - Tighten, replace or correct as needed
- ___ Inspect handrail(s) for proper operation - Replace defective parts & relubricate

___ Hydraulic Fluid(Pump) - check level

Note: Fluid should be changed if there is visible contamination or discoloration. Inspect the hydraulic system (cylinder, hoses, fittings, seals, etc.) For leaks if fluid level is low. - Use Type A transmission fluid. **Check level with platform lowered & roll stop unfolded fully.** Fill to within 1/2" of the bottom of the 1 1/2" fill tube.

20,000 MILE INSPECTION

(INCLUDE 2,500 MILE INSPECTION WHEN DOING 20,000 MILE INSPECTION)

- ___ **Remove pump module cover(s) & inspect: Hydraulic hoses, fittings & connections for wear or leaks, Harness cables, wire, terminals & connections for securement or damage, Microswitch for securement & proper adjustment, Relay blocks/relays, circuit breaker & solenoid for securement or damage - Resecure, replace or correct as needed**
- ___ **Remove side chain & inspect chains, chain bolts, cylinder, clevis idler & hydraulic connections for wear, damage, leaks & misalignment - Realign, resecure, replace or correct as needed**
- ___ **Inspect cylinder mtg hardware & clevis lock nut - Tighten or replace if needed. NOTE: lock nut MUST be replaced if loosened or removed**
- ___ **Inspect chain bolt Nylock nuts, hex jam nuts & jam nut retainer plate for securement, wear, damage or misalignment - Tighten, correct or replace if needed**
- ___ **Remove top chain guard & inspect UHMW rollers, axles, mtg hardware & chains for wear, damage or misalignment - Realign or replace if needed**
- ___ **Inspect platform for: Roll stop chain securement, wear, damage or misalignment, Slide tube base UHMW idler securement, wear, damage or misalignment, Mounting/Securement (1/2" - 13 flanged lock nuts) - Realign, tighten replace &/or lubricate as need. NOTE: 1/2" - 13 flanged lock nuts MUST BE REPLACED IF LOOSENED OR REMOVED**
- ___ **Inspect power cable - Resecure, repair or replace**
- ___ **Make sure lift operates smoothly - Realign uprights, apply light grease to slide tubes or correct as needed**
- ___ **Mounting - Check to see that the lift is securely anchored to the vehicle & there are no loose bolts, broken welds or stress fractures**
- ___ **Decals - Replace if worn, missing or illegible**
- ___ **Padding - Replace if damaged, worn or missing**
- ___ **Whale pins - Horseshoe bushings - Anti-Seize - Note: Disassembly required for proper lubrication**

BRAUN LIFT INSPECTION
(#949, #978, #979, #960, #961)

DATE:

BUS #: _____ **MILEAGE :**

General Appearance

- __ _ Check general appearance of lift

Lift Mountings & Support Points

- __ _ Ensure that all lift mountings & support points are in proper order & free from damage
- __ _ Ensure that all mounting bolts are of appropriate grade & sufficiently tight

Main Lifting Pivots

- __ _ Ensure all traveling frame pins are installed properly, free from damage & locked in position with proper fasteners

Platform and Platform Attachment Points

- __ _ Ensure platform operates properly during lift "up/down" functions without obstructions
- __ _ Ensure that all welds on traveling frame are in proper order

Inner Rollstop and Inner Rollstop Operation

- __ _ Ensure that inner rollstop functions properly during "up/down" operations without obstructions
- __ _ Ensure that inner rollstop deploys fully as the platform stops at the proper vehicle floor level

Platform Rollstop and Rollstop Operation

- __ _ Ensure that rollstop operates properly on contact with the ground
- __ _ Ensure that rollstop opens, closes and locks properly without obstruction

Handrail and Handrail Attachment

- __ _ Ensure that all fasteners are present and properly tightened

Hydraulic Fluid Level

- __ _ Ensure that the hydraulic fluid level is maintained at the required **"Full Level"**

Hydraulic Cylinders, Flow Control Valves and Hoses

- __ _ Inspect the hydraulic hoses, valves and seals for leaks
- __ _ Ensure that hydraulic hoses and lines are not damaged

Clean and Lubricate

- __ _ Lubricate as per Manufactures' recommendations

Occupant Restraining Belt &

- __ _ Check occupant restraining belt for proper operation & check condition of restraint belt -
Replace belt if needed

GILLIG LOW FLOOR - LIFT-U RAMP INSPECTION

DATE:

BUS#: _____

MILEAGE:

General Appearance

- ☐ ☐ Inspect ramp platform surface, stow guides & wear strip for wear, damage &/ overload characteristics
- ☐ ☐ Inspect ramp pivoting lever arms, bearings & cam bolt heads for wear, damage &/ overload characteristics
- ☐ ☐ Inspect stow/deploy belt for wear, damage &/ overload characteristics
- ☐ ☐ Inspect manual release wire rope(s) for wear, damage &/ overload characteristics

General Cleaning

- ☐ ☐ Ramp platform surface
- ☐ ☐ Ramp enclosure interior & closeout hinge

NOTE: Avoid direct pressure washing of the limit switch, interlock switch, relay junction box & cable connections. Once water is forced into these components, corrosion or electrical short-circuiting may damage them. This damage may cause the ramp to malfunction.

General Rust Prevention

- ☐ ☐ Grind or brush affected area to remove existing rust
- ☐ ☐ Prime area with primer paint
- ☐ ☐ Finish paint area with high quality gloss black paint

NOTE: Proper preventative maintenance requires that visible surface rust be addressed & corrected in a timely & appropriate manner. Failure to do so may cause irreversible damage to the ramp mechanism.

STEP LIFT PREVENTATIVE MAINTENANCE

DATE :

5,000 MILE INSPECTION

BUS # : _____

20,000 MILE INSPECTION

MILEAGE: _____

- ☐ PASSENGER SENSOR
- ☐ TOP OF STEP TREAD - 14"

INSPECT HANDRAILS

- ☐ STRUCTURAL INTEGRITY
- ☐ CRACKS IN TUBING

INSPECT RAMP/BARRIER LINKAGE & CYLINDER

- ☐ STRUCTURAL INTEGRITY OF BARRIER
- ☐ BARRIER ANGLE
- ☐ PIVOT POINTS FOR DAMAGE OR WEAR
- ☐ STRUCTURAL INTEGRITY OF LINKAGE
- ☐ CYLINDER ATTACHMENT BOLTS
- ☐ HYDRAULIC HOSES/FITTINGS FOR LEAKS
- ☐ BARRIER LATCH PIN FOR DAMAGE
- ☐ SPRAY LUBE

INSPECT SUPPORT ARM

- ☐ STRUCTURAL INTEGRITY OF SUPPORT ARM
- ☐ MOUNTING BOLTS
- ☐ DOWEL PINS

INSPECT HINGES

- ☐ RUST/CORROSION
- ☐ BINDING
- ☐ DAMAGE
- ☐ STEP HEATER & WIRING

INSPECT HYDRAULIC HOSE/ELECTRICAL CABLE BUNDLE

- ☐ PROPER ROUTING
- ☐ LEAKS
- ☐ CHAFING

INSPECT STEP ACTUATION CYLINDER

- ☐ CYLINDER PINS FOR FREE MOVEMENT
- ☐ HYDRAULIC HOSES/FITTINGS FOR LEAKS
- ☐ SET SCREW IN PIVOT PINS

INSPECT BARRIER LATCH LIMIT SWITCH

- ☐ LOOSE LIMIT SWITCH ARM

INSPECT ULTRASONIC SENSING DEVICE(PASSENGER SENSOR)

- ☐ SENSING FACE

INSPECT PROXIMITY SWITCHES

- ☐ DAMAGE TO THE SENSOR END
- ☐ GAP BETWEEN SENSING END AND TARGETS (GAP .30 - .060)

INSPECT HYDRAULIC POWER SOURCE

- ☐ FLUID LEVEL AT FLOOR LEVEL

MANUAL OPERATION OF HYDRAULIC SYSTEM

- ☐ STOW & DEPLOY
- ☐ RAISE & LOWER
- ☐ RAMP/BARRIER UP & RAMP BARRIER DOWN

INSPECT MAIN LIFT CYLINDER

- ☐ CYL SWIVEL BEARINGS MUST BE FREE OF RUST & CORROSION
- ☐ CYL SWIVEL BEARINGS MUST MOVE FREELY
- ☐ CYL PIN KEEPERS
- ☐ JAM NUT MUST BE TIGHT AGAINST THE CLEVIS

INSPECT EMERGENCY CYLINDER

- ☐ CYL SWIVEL BEARINGS MUST BE FREE OF RUST & CORROSION
- ☐ CYL SWIVEL BEARINGS MUST MOVE FREELY
- ☐ CYLINDER PIN KEEPERS
- ☐ JAM NUT MUST BE TIGHT AGAINST THE CLEVIS
- ☐ CHECK FLUID LEVEL WITH LIFT AT FLOOR LEVEL

(INCLUDE 5,000 MILE INSPECTION WHEN
DOING 20,000 MILE INSPECTION)

INSPECT RAMP/BARRIER LINKAGE & CYLINDER

- ☐ LUBRICATION (LUBE WITH ANTI-SEIZE COMPOUND)
- ☐ LINKAGE AND LINKAGE PINS

INSPECT LEAF CHAIN

- ☐ RUST & CORROSION
- ☐ ABSENCE OF COTTER PIN/KEEPERS
- ☐ PROPER ADJUSTMENT
- ☐ LUBRICATION (LUBE WITH P/N P515-0012)
- ☐ ADJUSTMENT NUTS SECURED

INSPECT ROLLER CHAIN

- ☐ RUST & CORROSION
- ☐ ABSENCE OF COTTER PINS/KEEPERS
- ☐ LUBRICATION (LUBE WITH P/N P515-0012)
- ☐ ADJUSTMENT NUTS SECURED

INSPECT CONTROL ENCLOSURE

- ☐ FITTINGS FOR LEAKS
- ☐ HARD LINES FOR LEAKS

INSPECT STEP ACTUATION CYLINDER

- ☐ RUST & CORROSION

INSPECT BARRIER LATCH LIMIT SWITCH

- ☐ SWITCH MUST ACTIVATE WHEN THE BARRIER
IS IN THE BARRIER POSITION

INSPECT HYDRAULIC FLUID

- ☐ CONTAMINATION

INSPECT HYDRAULIC POWER SOURCE

- ☐ RELIEF VALVE PRESSURE (1250 PSI)
- ☐ CHANGE FILTER ELEMENT

INSPECT LIFT MOUNTING BOLTS

- ☐ REFER TO BUS MFG TORQUE SPECS

INSPECT TOWER ASSEMBLY

- ☐ TOWERS ARE VERTICAL
- ☐ TOWERS ARE PERPENDICULAR TO THE ROADSIDE CLOSEOUT

INSPECT SLIDE BEARING ON SLIDING PLATFORM ASSEMBLY

- ☐ WEAR & DAMAGE

INSPECT BEARING STRIP ON VERTICAL FRAME ASSEMBLY

- ☐ WEAR & DAMAGE

- ☐ INSPECT FOR MANUAL OPERATING PROCEDURE DECAL
- ☐ CHECK BOTTOM CLOSE-OUT HINGE FOR FREE OPERATION
- ☐ INSPECT ALL FASTENERS FOR TORQUE

PLATFORM LIFT PREVENTATIVE MAINTENANCE

DATE :

5,000 MILE INSPECTION

BUS # : _____

20,000 MILE

INSPECTION

MILEAGE: _____

(INCLUDE 5,000 MILE INSPECTION WHEN
DOING 20,000 MILE INSPECTION)

TEST SAFETY FEATURES

- PRESSURE SENSITIVE MATS
- PRESSURE SENSITIVE EDGES

INSPECT CURBSIDE BARRIER/LINKAGE & BARRIER

- STRUCTURAL INTEGRITY OF BARRIER
- BARRIER ANGLE
- PIVOT POINTS FOR DAMAGE OR WEAR

- LINKAGE SET SCREWS/JAM NUTS (20,000)
- HYDRAULIC HOSES/FITTINGS FOR LEAKS
- LUBRICATION (LUBE WITH ANTI-SEIZE COMPOUND):
- SLIDE LINK & ROD GUIDE - LUBE
- SHOULDER BOLT & LINKAGE PINS - LUBE (20,000)

INSPECT ROADSIDE BARRIER/LINKAGE/CYLINDER

- STRUCTURAL INTEGRITY OF BARRIER
- BARRIER ANGLE
- PIVOT POINTS FOR DAMAGE OR WEAR
- LINKAGE/CYLINDER JAM NUTS
- HYDRAULIC HOSES/FITTINGS FOR LEAKS
- CYL CLEVIS PINS - REMOVE, INSPECT & LUBE

INSPECT LIFT MASTER CHAINS & CONN LINKS

- RUST & CORROSION
- ABSENCE OF COTTER PIN/KEEPERS
- PROPER ADJUSTMENT
- LUBRICATION (LUBE WITH P/N P515-0005)

INSPECT SLAVE CHAINS AND CONN LINKS

- RUST & CORROSION
- ABSENCE OF COTTER PIN/KEEPERS
- PROPER ADJUSTMENT
- LUBRICATION (LUBE WITH P/N P515-0005)
- JAM NUTS SECURED

INSPECT STOW & DEPLOY CHAINS & CONN LINKS

- RUST & CORROSION
- ABSENCE OF COTTER PIN/KEEPERS
- PROPER ADJUSTMENT
- LUBRICATION (LUBE WITH P/N P515-0005)
- JAM NUTS SECURED

INSPECT STOW MOTOR CHAIN & CONN LINK

- RUST & CORROSION
- ABSENCE OF COTTER PIN/KEEPERS
- PROPER ADJUSTMENT
- LUBRICATION (LUBE WITH P/N P515-0005)
- JAM NUTS SECURED

INSPECT HYDRAULIC HOSE/ELECTRICAL CABLE BUNDLE

- PROPER ROUTING
- LEAKS (HOSES)
- CHAFING

INSPECT STOW MOTOR & STOW SHAFT

- SPROCKET ALIGNMENT (20,000)
- SET SCREW IN SPROCKETS (20,000)
- HYDRAULIC HOSES/FITTINGS FOR LEAKS
- SET SCREW IN BEARINGS (20,000)
- SPROCKETS FOR WEAR & DAMAGE (20,000)

INSPECT PROXIMITY SWITCHES

- DAMAGE TO THE SENSING END
- GAP BETWEEN SENSING END & TARGETS (GAP .030 TO .060)

INSPECT STOW/DEPLOY LIMIT SWITCH

- STOW SWITCH MUST ACTIVATE 1/2" BEFORE FULLY STOWED
- DEPLOY SWITCH MUST ACTIVATE 1/2" BEFORE FULLY STOWED
- LOOSE LIMIT SWITCH

INSPECT CHAIN LIMIT SWITCH (SLACK CHAIN)

- ADJUSTMENT BETWEEN LIMIT SWITCH ARM & TRIP (20,000)
- LOOSE LIMIT SWITCH ARM
- FORWARD LIFT CYL MUST OPERATE FREELY UP & DOWN WHICH
ALLOWS THE CHAIN SWITCH TO OPERATE PROPERLY
- LIFT CYL CHAIN MUST BE FLEXIBLE WHICH ALLOWS THE
CHAIN SWITCH TO OPERATE PROPERLY

INSPECT HYDRAULIC POWER SOURCE

- FLUID LEVEL
- FLUID PRESSURE (1150 - 1200 PSI) (20,000)
- CHANGE FILTER ELEMENT (20,000)

INSPECT LIFT MOUNTING BOLTS

- REFER TO BUS MFG TORQUE SPECS (20,000)

INSPECT CLUTCH BEARING

- PROPER ADJUSTMENT
- GALLING - TRANSFERRING OF BRASS CLUTCH BEARING
PARTICLES TO TORQUE SHAFT COUPLING
- LUBRICATION (MULTI-PURPOSE GREASE)

INSPECT TORQUE SHAFT COUPLING SET SCREWS (20,000)

- INSPECT SLIDE CHANNEL BEARING BLOCKS (20,000)

MANUAL OPERATION OF HYDRAULIC SYSTEM

- STOW & DEPLOY
- RAISE & LOWER
- ROADSIDE BARRIER UP & DOWN
- CURBSIDE BARRIER UP & DOWN

INSPECT FOR MANUAL OPERATING PROCEDURE DECAL

INSPECT MAIN LIFT CYLINDERS, FORWARD/REAR

- CYL CLEVIS PINS MUST BE FREE OF RUST & CORROSION
& MUST MOVE FREELY
- CYL CLEVIS PINS - REMOVE, INSPECT & LUBE (20,000)
- CYL CLEVIS PIN KEEPERS
- JAM NUTS MUST BE TIGHT AGAINST CYL ROD
- MIN THREAD ENGAGEMENT OF 1" ON TURNBUCKLE BOLTS
- SPEED OF LIFT IN CUSHION AREA
- APPLY LUBRICANT TO CUSHION ADJUSTMENT SCREW CAVITIES

INSPECT STOW LATCH/CYLINDER

- PROPER STOW LATCH ENGAGEMENT (20,000)
- HYDRAULIC HOSE/FITTINGS FOR LEAKS
- LUBRICATION ON STOW LATCH FACE (LUBE W/DOOR-EASE)

INSPECT ALL FASTENERS FOR TORQUE (20,000)

INSPECT PUSH-OFF SPRINGS

(REPLACE SPRINGS EVERY 6 YEARS OR 8,000 CYCLES)