# EXHIBIT H PREVENTIVE / CORRECTIVE MAINTENANCE PROGRAM



## Washington Metropolitan Area Transit Authority

### DEPARTMENT OF BUS SERVICE

### Standard Operating Procedure

CATEGORY Preventive / Corrective Maintenance		TOPIC Preventive / Corrective Maintenance (Revenue Fleet)		
PROCEDURE NO. 1.1	Preventive / Corrective Maintenance Program			
LATEST REVISION NO. Revision 14	LATEST REVISION DATE March 30, 2017	LATEST REVIEW DATE March 30, 2017	EXPIRATION DATE None	
OFFICE/INDIVIDUAL OF PRIMAR	Y RESPONSIBILITY	BMNT		
BUS: Potts BMNT: Michels Golden Silvani Directors Superintendents Managers Supervisors BTRA: Baker SAFE: Gilbert		Set Coordinator - BMNT  Efficiency Engineer - BMN  Chief Engineer - BENG		
DISTRIBUTION ALL	BMNT OFFICES	COORDINATION WITH OTHER SOP 1.17	PUBLICATIONS	
APPROVAL: MANAGING DIRECT	OR-BMNT ISMUL	Robert Potts		

- D. All required corrective maintenance shall be completed as soon as possible, unless postponed or delayed to a later time due to non-availability of materials, insufficient labor or operational needs as governed by SOP 1.17. The management of all deferred maintenance is the responsibility of the Division Superintendent, and requires appropriate follow-up to ensure timely scheduling of all work.
- E. Safety related discrepancies found during any inspection must be corrected prior to releasing the bus for revenue service.
- F. On-site Service Contract staff shall inform WMATA Supervision of all abnormal situations that may impact operations and/or create and unsafe conditions.

#### PROCEDURES

- A. All preventive and corrective maintenance procedures shall be performed by the appropriately trained Bus Maintenance/Contract personnel at each of the operating Divisions/Shops.
- B. The following PM Programs shall be conducted to ensure optimum fleet performance:

Note: PMs are generated based on the complete asset vehicle listing on Maximo. Maximo is continually updated to track new buses and disposal of buses.

Program Title	Procedure	Interval	Grace Period	Target	Description
A-Inspection	SOP 1.2	6,000 miles	600 miles	98%	Comprehensive vehicle preventive maintenance inspection and maintenance activities.
B-Operational Inspection	SOP 1.3	14 days	3 days	95%	Mini inspection to perform safety checks and review interior and exterior condition of the bus.
Bus Pressure Washing	SOP 1.4	6,000 miles	600 miles	98%	Scheduling and performance of bus pressure washing
HVAC Inspection	SOP 1.5	90 days	10 days	95%	Inspection requirements for bus heating, air conditioning and ventilation systems.
GFI Fare Box Maintenance	SOP 1.6	6 months	5 days	95%	Corrective and preventive maintenance procedures for the GFI Electronic Registering fare boxes.

Program Title	Procedure	Interval	Grace Period	Target	Description
Accessibility Equipment PM Service	SOP 1.7	42/90 day annual	3 days	95%	Service requirements for all wheel chair lifts, ramps and ancillary equipment.
Auxiliary Heater Service (Proheat)	Maximo Job Plan	Annual	n/a	n/a	Inspection and testing of auxiliary heater system and replace proheat burner head.
Fire Suppression and Gas Detection System Maintenance Program	SOP 1.20	180 days	Per contract	n/a	Inspection and maintenance requirements for fire suppression equipment and methane detection systems at CNG certified facilities. (Service Contract)
Destination Sign Maintenance Program	SOP 1.18	Annual	10 days	95%	Inspection and maintenance requirements for destination sign hardware and software. (Service Contract)
Air Drier Service	Maximo Job Plan	3 year	n/a	n/a	Inspection and maintenance of the air drier system.
Belt Replacement Program	Maximo Job Plan	38,000 miles	n/a	n/a	Inspection and Maintenance of the engine drive belts.
Bus Rehabilitation Program	SOP 1.28	7 ½ years	n/a	100 /yr	Mid-life overhaul program to replace major wear components, install equipment upgrades and repaint entire bus to maintain fleet appearance and extend bus life.
Fluid Analysis Program	SOP 1.15	6,000 miles	600 miles	n/a	Requirements for the scheduling and conduct of fluid sampling and analysis program for the revenue fleet.
Power Train Tune- up Program	Maximo Job Plan	Various	600 miles	95%	Requirements for periodic engine tune-up and transmission checks.
Diesel Particulate Filter Maintenance	SOP 1.22	6 months /Annual	10 days	95%	Requirements for diesel exhaust system particulate filter inspection and cleaning.
Safety Related Mechanical Defects	SOP 1.16	Ongoing	n/a	n/a	Provides clear definition of safety defects that require the bus to be removed from service until necessary corrective action is performed.
Drive Cam Maintenance	SOP 1.25	Annual	Per contract	n/a	Inspection and maintenance requirements for Drive Cam system. (Service Contract)
Video Camera System Maintenance	SOP 1.27	Annual	Per contract	n/a	Inspection and maintenance requirements for bus video camera systems. (Service Contract)

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Program Title	Procedure	Interval	Grace Period	Target	Description
Bi-Weekly Bus Interior Cleaning	SOP 1.8	16 day	Per Contract	95%	Bus interior cleaning requirements and procedures
Front Axle Bearing Service	Maximo Job Plan	30,000 mile	n/a	n/a	Inspection and Servicing of the front wheel bearings and components.
Rear Axle Service	Maximo Job Plan	36,000 Mile	n/a	95%	Inspection and Maintenance of rear axle and components
Service Lane Activities	SOP 1.13	Daily	n/a	n/a	Requirements for service lane inspection, cleaning and fueling activities.
Management of Deferred Maintenance	SOP 1.17	Ongoing	n/a	n/a	Procedure for management of deferred maintenance on the revenue bus fleet.
Bus Battery Maintenance Program	SOP 1.21	Ongoing	n/a	n/a	Procedure for the effective management of batteries used in revenue bus fleet.
Wheel and Tire Maintenance Program	SOP 1.14	Ongoing	n/a	n/a	Procedure for the scheduling, performance, and recording of all wheel and tire maintenance on the revenue bus fleet.
Torque Wrench Calibration	SOP 5.6	90 Day	n/a	n/a	Procedure for the inspection and testing of torque wrenches.
Torque Wrench System Service	Maximo Job Plan	Annual	n/a	n/a	Procedure for the scheduling and management of the torque gun and cart.

- C. The scheduled preventive maintenance functions outlined above, as well as, corrective maintenance shall be set forth in a detailed step-by-step procedure found in the bus manufacturer's "Maintenance Manual", Standard Practice Bulletins, SOPs or maintenance directives located at each Division and Shop.
- D. Maintenance personnel responsible for performing the particular preventive maintenance and corrective maintenance activity shall do so in accordance with the approved procedures established in the documents in Section B, following all steps in the order specified, using the appropriate test equipment and/or tools, with the upmost emphasis placed on safe and quality practices.