Locomotive Release from Shop Form
To be completed on every engine released from the Shop

I have reviewed the work packet for locomotive 21 on this date 1-12-11 and take no exception to applicable laws, rules and or MMA standards, policies and standards.

UNIT _____

Service Operations

DATE _____

THROTTLE 8 INBOUND LOAD TESTS

Eng RPM (900)	EMD	_____	Lube Oil Pres	_____
Eng RPM (1050)	GE	_____	Water Temp	_____
Horsepower		_____	Overspeed Setting	_____
Volts (5.3)	B-23	_____	RACK SETTING	_____
Volts (7)	C-30	_____		
Volts (720)	B-39	_____		

THROTTLE #1 STALL TEST

OP Mode	(PWR)	_____	
AMPS	(300)	_____	
MGA	(1220)	_____	NOT APPLICABLE TO B-23 AND C-30
Charging Rate	(70v)	_____	

Don't Load.

B-23, B-39, C-30, GP-7 MO3 INSPECTION

In-Bound Loadtest Electrical/Mechanical	WORKED BY:
ELECTRICAL	
VERIFY THE OPERATION OF THE GROUND RELAY	
CHECK FOR LOW VOLTAGE GROUNDS (7 watt bulb)	
WHILE IN THROTTLE 3 LOAD TEST, CHECK FOR AC GROUNDS	
CHECK OPERTION OF:	
A. HEATING	
COMPLETE THE IN-BOUND LOAD TEST SHEETS	
GROUND RELAY-(TEST THREE TIMES TO VERY LOCK-OUT)(DYNAMIC & POWER)	
CHECK THE FOLLOWING FOR PROPER OPERATION:	
A. CREW ALERT	
B. RADIO AND ANTENNA	
C. AXLE ALT. SPEEDO	
D. MU ENGINE SHUTDOWN	
E. FUEL CUT-OFF	
F. TEST WARNING DEVICES	
MECHANICAL	
CLEAN AND SERVICE TOILET AND RESTROOM	
DRAIN RETENTION TANK	
PROPER LUBRICATION? FUEL LEAKS? CAM ROLLER ROTATION? ETC.	
INSPECT FUEL SYSTEM HOSES AND PIPES FOR LEAKS	
INSPECT COOLING SYSTEM:	
A: CHECK HOSES AND PIPES FOR LEAKS	
CHECK OPERATION OF ENGINE PROTECTION DEVICES:	
A. CRANKCASE PRESSURE	
VISUALLY INSPECT AIR COMPRESSOR FOR WATER, AIR OR OIL LEAKS	
PERFORM MANUAL AIR BRAKE TEST	
Verify Flow Gauge 130 main reservoir is 64 + or - 3, reservoir is 60 + o — NOTE: 120-130-140 main	
PERFORM PENALTY BRAKE TEST	
CHECK FOR CORRECT AIR PRESSURE SETTINGS:	
A. MAIN RESERVOIR (130 - 140 PSI)	
B. BRAKE PIPE (90 PSI)	
C. EQUALIZING RESERVOIR (90 PSI)	
D. BRAKE CYLINDER (72 - 74 PSI)	
E. COMPRESSOR CONTROL (130 - 140 PSI +/-5 PSI)	
CHECK FLUID LEVELS BEFORE LOADING:	
A: ENGINE OIL	
B: COOLING WATER	
C: AIR COMPRESSOR OIL	
TEST OPERATION OF THE FOLLOWING DEVICES:	
A. BELL	
B. SANDERS (FORWARD, REVERSE, EMERGENCY)	
C. RADIATOR SHUTTERS	

B-23, B-39, C-30, GP-7 MO3 INSPECTION	Revision Date: 8/18/2010 Issued By: Tim Scalia
Electrical in House	WORKED BY:
SERVICE THE BATTERIES AND COMPLETE JSP-010	J. Martin
VERIFY EVENT RECORDER IS WORKING	J. Martin
CHECK & RECORD THE DATE ON HEAD END DEVICE Dec 9 - 2010	J. Martin
COMPLETE THE HEAD END DEVICE CONNECTOR SHEET R.	
CHECK THE FOLLOWING EQUIPMENT AND THEIR RELATED GUARDS AND LENSES FOR PROPER OPERATION:	J. Martin
CHECK ALL GROUND AND STEP LIGHTS, FRONT AND REAR HEADLIGHTS, DITCH LIGHTS, CAB LIGHTS, GAUGE LIGHTS, NUMBER PLATES, PLATFORM LIGHTS, ALL WARNING AND INDICATOR LIGHTS	J. Martin
TRACTION MOTORS AND UNDERFRAME	
CHECK THE TRACTION MOTOR LEADS, VERIFY NO LEADS ARE RUBBING ON THE FRAME	J. Martin
INSPECT TRACTION MOTOR COVERS AND ENSURE BOLTS ARE IN PLACE AND TIGHT	J. Martin
CHECK M.U. RECEPTACLE PINS AND LIDS. MAKE NECESSARY REPAIRS	J. Martin
MAKE SURE M.U. CABLES DO NOT FOUL COUPLERS	

B-23, B-39, 30, GP-7 MO3 INSPECTION

G. IF THE SEAT MOVEMENT IS IMPEDED, REMOVE SEAT CUSHION AND INSPECT SEAT PAN ROLLER TRACK FOR DEBRIS, MALFUNCTION, OR LACK OF LUBRICATION.	
H. INSPECT SEAT RAILS AND REPLACE IF DAMAGED OR WORN BEYOND PROVIDING SECURE, STABLE MOUNTING OF SEAT.	OK
I. INSPECT THE FORE/AFT SEAT POSITIONING TRACK. INSPECT THE SEAT RAILS AND REPLACE IF DAMAGED OR WORN BEYOND PROVIDING SECURE, STABLE MOUNTING OF SEAT.	
J. LUBRICATE THE SEAT RAILS WITH SILICONE LUBRICANT.	
K. INSPECT THE BACKREST RAKE ADJUSTMENT KNOW. VERIFY THAT THE KNOB ROTATES EASILY TO ADJUST BACKREST ANGLE.	
L. INSPECT KNOB FOR CRACKS OR SPLITS AND THAT IT IS SECURELY FASTENED.	
M. INSPECT GEAR MECHANISM FOR ANY WEAR OR DAMAGE.	
N. ENSURE THAT THE BACKREST MECHANICAL STOP IS INTACT AND FUNCTIONS AS INTENDED--PREVENTS THE SEAT BACKREST FROM RECLINING BEYOND APPROXIMATELY 45 DEGREES BACKWARDS FROM A VERTICAL POSITION.	
O: INSPECT THE LUMBAR SUPPORT ADJUSTMENT LEVER. VERIFY THAT THE ADJUSTMENT LEVER OPERATES EASILY TO ADJUST THE LUMBAR SUPPORT.	
P: VERIFY ALL ARMREST FASTENERS ARE SECURE. REPLACE ANY MISSING OR STRIPPED OUT FASTENERS.	
Q: INSPECT ARMREST SWIVEL FASTENERS. ENSURE SWIVEL FASTENER IS SECURE ON EACH ARMREST SUCH THAT THE ARMREST IS WITHOUT SIDE TO SIDE MOVEMENT. ARMREST SHOULD SWIVEL TO VERTICAL. ARMREST SHOULD NOT DROP DOWN PAST IT'S ORIGINAL STOP.	
R: INSPECT SEAT FABRIC ON SEAT PAN AND BACKREST. INSPECT FOR RIPS, TEARS, OR HOLES. SEAT PAN OR BACKREST COMPONENT MAY BE REPLACED IF THERE IS AN EXCESSIVE RIP, TEAR, OR HOLE.	
SEAT PART NUMBERS: Cab Seat, Freight with arms: 2043511 Cab Seat Mid Back: 20425731 Wall Mounted Pedestal: 20435541 Trunion Pedestal Assembly: 20425721 Seat Pedestal Rail Left Side 65": 20422211 Seat Pedestal Rail Right Side 46": 20422221	
INSPECT AND REPAIR AS REQUIRED:	
A. CAB / CARBODY/DOORS/HINGES/WINDOWS/LATCH SEALS/WEATHER STRIPPING AND SEALS/MIRRORS. ALSO LUBRICATE/CHANGE AS NEEDED	
A. CLEAN THE CAB, WINDOWS, AND EQUIPMENT	
COMPLETE WINTERIZATION SHEET (AUGUST - APRIL)	
WASH LOCOMOTIVE ENGINE/ENGINE ROOM/AND AIR COMPRESSOR ROOM	
WASH THE LOCOMOTIVE	

Seats old. OK

B-23, B-39, C-30, GP-7 MO3 INSPECTION

MECHANICAL IN HOUSE	WORKED BY:
Change engine air filters	M. Corley
REVIEW LAB CODE AND PERFORM A COMPLETE AIRBOX/CRANKCASE INSPECTION IF A LAB CODE EXISTS	NA
WITH THE ENGINE WARM, PRESSURE TEST COOLING SYSTEM AT 20 PSI FOR 15 MINUTES AND IF THE PRESSURE ON THE GAUGE DOES NOT DROP, THEN NO FURTHER ACTION IS REQUIRED	
CHANGE THE FOLLOWING FILTERS AND ASSOCIATED GASKETS:	—
FUEL SPIN ON FILTERS. EMD ONLY	M. Corley
~~SOAK BACK~~ FILTER. EMD ONLY Michianee	~~M. Corley~~ M. Corley
TURBO SPIN ON FILTER. EMD ONLY	M. Corley
COMPLETE FRA INSPECTION (DAILY INSPECTION CHECKLIST)	
CARBODY	
INSURE SAND NOZZLES AND HOSES ARE IN PLACE AND SECURED. MAKE SURE THEY ARE ALIGNED WITH WHEEL AND TRACK. INSPECT SAND TRAPS AND REPAIR AS NEEDED.	M. Corley
INSPECT COUPLERS & DRAFT GEARS. MAKE REPAIRS AS NECESSARY	M. Corley
CHECK KNUCKLE CLEARANCE AND KNUCKLE THROWER, MAKE REPAIRS AS NEEDED AND APPLY SPARE KNUCKLES (E AND F TYPE) (2.5")	M. Corley
INSPECT PIN LIFTERS CHECKING FOR PROPER HAND CLEARANCE AND ANTI-CREEP	M. Corley
CHECK SNOWPLOW (IF EQUIPPED) FOR HANDHOLDS AND PROPER DISTANCE	M. Corley
CHECK AUTO BLOWDOWNS FOR PROPER OPERATIONS IN AUTOMATIC MODE	M. Corley
ENSURE SUMP DRAINS ARE OPEN AND FREE OF DEBRIS	M. Corley
TRUCKS	—
INSPECT WICK BOLT SECUREMENT AND REPAIR IF NECESSARY	M. Corley
CHECK SUSPENSION BEARING OIL LEVEL	M. Corley
CHECK JOURNAL BOX OIL LEVEL (FILL TO POINT OF OVERFLOW)	M. Corley
CHECK GEAR CASES AND INSPECT BULL GEAR (ADD 6lbs. OF GEARCASE GREASE)	M. Corley
CHECK OIL FILLED GEAR CASES AND FILL (RECORD USAGE BELOW)	
# 1 TRACTION MOTOR: OIL USED yes	M. Corley
# 2 TRACTION MOTOR: OIL USED yes	M. Corley
# 3 TRACTION MOTOR: OIL USED yes	M. Corley
# 4 TRACTION MOTOR: OIL USED yes	M. Corley
# 5 TRACTION MOTOR: OIL USED	—
# 6 TRACTION MOTOR: OIL USED	—
INSPECT ALL BRAKE HANGERS, HEADS, GUIDES AND STRAPS ENSURING BRAKE SHOES ARE IN LINE WITH WHEELS	M. Corley
CAB	
CHECK FIRE EXTINGUISHERS, DATE AND TAG. REPLACE IF USED OR OUT OF DATE.	M. Corley
CHECK CAB SEATS FOR PROPER OPERATION INSURING ALL BOLTS ARE IN PLACE AND TIGHT.	
CHECK HANDBRAKE AND INSPECT DATE. MAKE REPAIRS AS NECESSARY	M. Corley
MISC	
IN ACCORDANCE WITH FRA 229.23. VERIFY AIR GAUGES (+/- 3PSI) (CALIBRATE AT +/- 1PSI, REQUIRES 130 PSI MR)	M. Corley
CHECK ALL FLUID LEVELS, ENGINE OIL, COOLING WATER, AIR COMPRESSOR OIL	M. Corley
DRAIN RETENTION TANK	M. Corley
TOILET MAINTENANCE:	D Black
A. INSPECT/REPAIR AS NEEDED TOILET DRAIN VALVE & FLOOR SEALS	D Black
Cab Seat Inspection:	
A. INSPECT THE VERTICAL ADJUSTMENT LEVER. VERIFY THAT THE LEVER OPERATES AND THAT THE SEAT PAN ADJUSTS UP AND DOWN AND DOES NOT DROP SUDDENLY.	—
B. LUBRICATE PIVOT POINTS	—
C. INSPECT ROTATION ADJUSTMENT LOCKING PIN. VERIFY THAT THE LOCKING PIN OPERATES (PULL OUT TO RELEASE LOCK) AND THAT THE SEAT ROTATES WHEN UNLOCKED.	—
D. LUBRICATE THE PIN MECHANISM.	—
E. SEAT PAN COMPONENTS: INSPECT THE FORE-AFT FINE ADJUSTMENT LEVER.	—
F. VERIFY THAT THE LEVER SLIDES SIDEWAYS TO UNLOCK SEAT FOR/AFT ADJUSTMENT AND SEAT SLIDES FOR/AFT EASILY	—

B-23, B-39, C-30, GP-7 MO3 INSPECTION

Out Bound Loadtest Electrical/Mechanical	WORKED BY:
ELECTRICAL	
VERIFY THE OPERATION OF THE GROUND RELAY	J. Horton
CHECK FOR LOW VOLTAGE GROUNDS (7 watt bulb)	J. Horton
WHILE IN THROTTLE 3 LOAD TEST, CHECK FOR AC GROUNDS	
CHECK OPERTION OF:	
A. HEATING	M. Corley
COMPLETE THE IN-BOUND LOAD TEST SHEETS	
GROUND RELAY-(TEST THREE TIMES TO VERY LOCK-OUT)(DYNAMIC & POWER)	
CHECK THE FOLLOWING FOR PROPER OPERATION:	
A. CREW ALERT	N/A
B. RADIO AND ANTENNA	M. Corley
C. AXLE ALT. SPEEDO	M. Corley
D. MU ENGINE SHUTDOWN	
E. FUEL CUT-OFF	
F. TEST WARNING DEVICES	
MECHANICAL	
CLEAN AND SERVICE TOILET AND RESTROOM	J. Blank
DRAIN RETENTION TANK	M. Corley
PROPER LUBRICATION? FUEL LEAKS? CAM ROLLER ROTATION? ETC.	M. Corley
INSPECT FUEL SYSTEM HOSES AND PIPES FOR LEAKS	M. Corley
INSPECT COOLING SYSTEM:	
A: CHECK HOSES AND PIPES FOR LEAKS	M. Corley
CHECK OPERATION OF ENGINE PROTECTION DEVICES:	M. Corley
A. CRANKCASE PRESSURE	
VISUALLY INSPECT AIR COMPRESSOR FOR WATER, AIR OR OIL LEAKS	M. Corley
PERFORM MANUAL AIR BRAKE TEST	M. Corley
Verify Flow Gauge 130 main reservoir is 64 + or - 3, reservoir is 60 + o — NOTE: 120-130-140 main	
PERFORM PENALTY BRAKE TEST	
CHECK FOR CORRECT AIR PRESSURE SETTINGS:	
A. MAIN RESERVOIR (130 - 140 PSI)	M. Corley
B. BRAKE PIPE (90 PSI)	M. Corley
C. EQUALIZING RESERVOIR (90 PSI)	M. Corley
D. BRAKE CYLINDER (72 - 74 PSI) 45	M. Corley
E. COMPRESSOR CONTROL (130 - 140 PSI +/-5 PSI)	
CHECK FLUID LEVELS BEFORE LOADING:	
A: ENGINE OIL	M. Corley
B: COOLING WATER	M. Corley
C: AIR COMPRESSOR OIL	M. Corley
TEST OPERATION OF THE FOLLOWING DEVICES:	
A. BELL	M. Corley
B. SANDERS (FORWARD, REVERSE, EMERGENCY)	M. Corley
C. RADIATOR SHUTTERS	M. Corley

JSP-010 (BATTERY MAINTENANCE AND QUALIFICATION)
JOB SPECIFIC PROCESS
Locomotive Type: ALL MODELS
Valid for Road Numbers: (All Models)

Overview: This job process sheet will assist with the maintenance and qualification of batteries.

SPECIAL TOOLS OR EQUIPMENT:

SEQUENCE OF JOB STEPS	Please print your name, NO signatures
1. Ensure the locomotive is shutdown, discharged, all of the circuit breakers are open and the battery knife switch is open.	J. Hart
Battery Qualification/Maintenance	
2. NOTE: If batteries are dead, connect the charger until the charge rate falls below 10 amps to determine state of charge. Readings under 20 V are suspect for units with just 2 batteries.	
3. Insert hose stem into battery cell and squeeze bulb.	J. Hart
4. Release pressure until enough acid solution is drawn into the tube allowing the float to float freely. Be sure float does not touch rubber stopper at the top of the tube.	J. Hart
5. The float reading at the water line is the uncorrected charge level of the battery.	J. Hart
6. Read and record the specific gravity of all 16 pilot cells. "record readings below": acceptable range is 1.225 – 1.300 (if out of this range notify tech support) **Note 1**: the sheet below is set up for 2 or 8 batteries as some units have 8 batteries. **Note 2:** accurate readings cannot be obtained if water has recently been added to cells. Differences of 50 points or more between readings in battery cells may indicate pending battery failure.	J. Hart
7. Based on the above specific gravity readings, do any batteries need replaced? Remember, if the unit came in with already dead batteries, an attempt to charge the batteries must be made before taking the specific gravity readings. YES NO	J. Hart
8. Return acid to cell from which it was drawn.	J. Hart
9. Be sure all vent plugs are replaced and tight.	J. Hart
10. With Unit shut down measure the voltage reading across each battery at the terminals, record readings on the chart below.	J. Hart
11. Make a general check of the battery as to proper blocking, clean and tight connections at all points, and any unusual appearance or condition. If any unusual appearance or conditions exit, like corrosion, clean with scotch-brite buffer or wire br	J. Hart
12. Apply approved protective coating to connections after terminals are cleaned and dried	J. Hart
13. Add water as required (Add water to bottom of filler neck).	J. Hart
Battery Cranking Voltage Test	
14. Close battery knife switch, and circuit breakers.	J. Hart
15. Open the injector toggle switch, on EUI units to prevent unit from starting. **NOTE: Battery cranking voltage readings do not need to be taken on Air Start Locomotives.**	

16. On MUI engines, pull the Governor button and hold back the Lay-shaft while cranking the engine over to prevent unit from starting.

18. Based on the cranking voltages, is any battery suspect of needing replaced? YES (NO)

J. Hall

2 Battery Units	Specific Gravity				Water Added			Battery Replaced-Reason
Battery 1	Cell 1	Cell 2	Cell 3	Cell 4	Yes	No	Yes	o
Section A	1275	1275	1275	1275	✓			
Section B	1275	1275	1275	1275	✓			
Section C	1275	1275	1275	1275	✓			
Section D	1275	1275	1275	1275	✓			

2 Battery Units	Specific Gravity				Water Added			Battery Replaced-Reason
Battery 2	Cell 1	Cell 2	Cell 3	Cell 4	Yes	No	Yes	o
Section A	1275	1275	1250	1275	✓			
Section B	1250	1275	1250	1275	✓			
Section C	1275	1275	1275	1250	✓			
Section D	1275	1250	1250	1275	✓			

8 Battery Units	Specific Gravity				Water Added			Battery Replaced-Reason
	Cell 1	Cell 2	Cell 3	Cell 4	Yes	No	Yes	o
Battery 1								
Battery 2								
Battery 3								
Battery 4								
Battery 5								
Battery 6								
Battery 7								
Battery 8								

BATTERY CRANKING VOLTAGE CHART

	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Battery Voltage	13.8	13.9						

	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Battery Voltage								

	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
CrankingBattery Voltage	25.6	25.7						
Battery Voltage								

	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
CrankingBattery Voltage								

	LOCOMOTIVE 21		DATE 1-12-11
Start Readings		END READING	OLD GAUGE

	L#1	0-19	0-0	1½			L#1	0-19	0-0	1½	
	L#2	0-20	|	1 7/16			L#2	0-20	0-0	1 7/16	
	L#3	0-21	|	2 9/16			L#3	0-21	0-0	2 9/16	
*	L#4	4-22	|	1 11/16			L#4	0-20	0-0	1 11/16	
	L#5						L#5				
	L#6						L#6				
	R#1	0-19	0-0	1 9/16			R#1	0-19	0-0	1 9/16	
	R#2	0-20	|	1 7/16			R#2	0-20	0-0	1 7/16	
	R#3	0-22	|	2½			R#3	0-22	0-0	2½	
*	R#4	5-22	|	1 11/16			R#4	0-20	0-0	1 11/16	
	R#5						R#5				
	R#6						R#6				

OLD GAUGE
FLANGE HEIGHT MEASUREMENT
2-on-6---1-13/32"

NEW GAUGE
FLANGE HEIGHT MEASUREMENT
2-on-22---1-13/32"

WEAR LIMITS FOR ROAD & SWITCH LOCOMOTIVES - MINIMUM DAILY REQUIREMENTS

FRA 1 ½"	MMA 1 7/16"	Flange Height
FRA 7/8"	MMA 15/16"	Flange Thickness
FRA 1"	MMA 1 1/16"	Rim Thickness
FRA 5/16"	MMA ¼"	Tread Wear

WEAR LIMITS - ROAD & SWITCH LOCOS - MIN 92 DAY REQ				WEAR LIMITS - PASSENGER LOCOS - MIN 92 DAY REQ				
FLANGE Height FRA 1 ½" MMA 1 7/16"	Flange THICKNESS FRA 7/8" MMA 1 1/32"	Rim THICKNESS FRA 1" MMA 1 1/8"	Tread WEAR FRA 5/16" MMA ¼"	Flange HEIGHT FRA 1 ½" MMA 1 7/16"	Flange THICKNESS FRA 7/8" MMA 1"	Rim THICKNESS FRA 1" MMA 1 ¼"	Tread WEAR FRA 5/16" MMA ¼"

CONVERSION CHART FOR WHEEL DIAMETER

8=	37"	15=	37 7/8"	22=	38 ¾"	29=	39 5/8"	36=	40 ½"
9=	37 1/8"	16=	38"	23=	38 7/8"	30=	39 ¾"	37=	40 5/8"
10=	37 ¼"	17=	38 1/8"	24=	39"	31=	39 7/8"	38=	40 ¾"
11=	37 3/8"	18=	38 ¼"	25=	39 1/8"	32=	40"	39=	40 7/8"
12=	37 ½"	19=	38 3/8"	26=	39 ¼"	33=	40 1/8"	40=	41"
13=	37 5/8"	20=	38 ½"	27=	39 3/8"	34=	40 ¼"	41=	41 1/8"
14=	37 ¾"	21=	38 5/8"	28=	39 ½"	35=	40 3/8"	42=	41 ¼"

NEW GAUGE
FLANGE THICKNESS MEASUREMENT
6 - on 0 - 1 - 1/32"

LOCOMOTIVE RAIL CLEARANCE

COUPLER HEIGHT	FRONT	PILOT HEIGHT	FRONT	HEIGHT OF HORIZONTAL END HANDHOLD OR UNCOUPLING LEVER IF USED AS HORIZONTAL HANDHOLD	LOCO RAIL CLEARANCE
FRA MAX 34" MIN 31"	32	FRA MAX 26" MIN 5"	5 1/8	FRA MAX 39" MIN 34"	FRA MIN 2"
MMA MAX 34" MIN 32"	REAR 33	MMA MAX 26" MIN 5"	REAR 4 3/4	MMA MAX 39" MIN 34"	MMA MIN 2"

WHEEL DIAMETER MEASUREMENTS ARE TAKEN FROM THE TOP OF THE RAIL TO THE TOP OF THE WITNESS GROOVE. 40" DIAMETER WHEELS WITNESS GROOVE = 36"
42" DIAMETER WHEEL WITNESS GROOVE = 38"

REMEMBER THIS RULE

NOTE

EMPLOYEES SIGNATURE Michael Cirby SUPERVISORS SIGNATURE

Description of Work Performed

Locomotive ID 21 Time Started _____ Time Finished _____

Cleaned load regulator. brushes all new.
Changed 15 brushes in main Gen.
Installed MU cradels.
Replaced brushes in cond. heater

Description of Work Performed

Locomotive ID	Time Started	Time Finished

Employee Signature _____ Form to fill out completely and Signature must be legible.

UNIT#					
DATE	DESCRIPTION	PART #	QUANITY	INSTALLED	AWP

Unit: 21 Date: 1-12-11

DEFECTS FOUND DURING INSPECTION

DEFECT TM #3 missing Top cover	INSPECTED BY: J.H
REPAIR Replaced Cover	CORRECTED BY: J.H
DEFECT 3 Bad Brake Shoes	INSPECTED BY: MC
REPAIR Replaced Bad Shoes	CORRECTED BY: MC
DEFECT # 4 TM High Flanges Both Wheels Needs to be trimmed 4-22- 5-22 1 11/16 wheel	INSPECTED BY: MC
REPAIR Trimmed Flanges 0-20 8-20	CORRECTED BY: MC
DEFECT NO MU Cradels	INSPECTED BY: MC
REPAIR Installed Cradels	CORRECTED BY: MC
DEFECT 16 Brushes in main gen short / Broken leads	INSPECTED BY: J.H
REPAIR Replaced Brushes	CORRECTED BY: J.H

Unit: _____ Date: _____

DEFECTS FOUND DURING INSPECTION

DEFECT Conductors cab heater brushes short	INSPECTED BY: J.H.
REPAIR Replaced brushes	CORRECTED BY: J.H.

DEFECT	INSPECTED BY:
REPAIR	CORRECTED BY:

DEFECT	INSPECTED BY:
REPAIR	CORRECTED BY:

DEFECT	INSPECTED BY:
REPAIR	CORRECTED BY:

DEFECT	INSPECTED BY:
REPAIR	CORRECTED BY:

WINTERIZATION	
Winterization – All MMA Locomotives: (August - April)	Signature
Inspect front and rear cab door seals replace, as needed (NO TAPE)	Corley
Inspect left and right side window seals replace as needed.	Corley
Inspect Electric cabinet door seals replace as needed.	Corley
Operate Cab Heaters-Check condition of Heater Assembly @ 45o F above Ambient Temperature.	Corley
Operate Window Defrosters-Check condition of Defroster @ 45o F above Ambient Temperature.	Corley
If equipped, test the Auto Dump valve for proper operation.	
Test Manual Water Dump Valves, Proper Handle, Location, Orifice is Open.	Corley
Close Winter/ Summer doors if equipped.	
Check Traction Motor cover gaskets, install as needed.	Hartin
Check condition of Cab Door Hinges (Lubricate all Hinges)	Corley
Check condition of Cab Door Locks (Lubricate all Locks)	Corley
Inspect Cab Windows Slider Rail, Adjust Top Rail as needed, Lubricate with Silicone Grease.	Corley
Renew all Wiper Blades.	Corley
Criteria for Door seal Replacement: A. Seal shows signs of Deterioration and or Medium to Heavy Cracking. B. Door seal is Torn or Loose from Door. C. With Door in the fully closed position has noticeable crack between door jam and cab carbody.	
Criteria for Window seal Replacement: A. Seals shows signs of Deterioration and or Medium to Heavy Cracking. B. Seal is Torn or Loose from window seal. C. With windows fully in the closed position there is a gap between window frame and carbody.	

UNIT _____

Service Operations

DATE _____

THROTTLE 8 OUTBOUND LOAD TESTS

Eng RPM (900)	EMD	_____	Lube Oil Pres	_____
Eng RPM (1050)	GE	_____	Water Temp	_____
Horsepower		_____	Overspeed Setting	_____
Volts (5.3)	B-23	_____	RACK SETTING	_____
Volts (7)	C-30	_____		
Volts (720)	B-39	_____		

THROTTLE #1 STALL TEST

OP Mode	(PWR)	_____	
AMPS	(300)	_____	
MGA	(1220)	_____	NOT APPLICABLE TO B-23 AND C-30
Charging Rate	(70v)	_____	