



92 Day

7-6-11

Locomotive Release from Shop Form

To be completed on every engine released from the Shop

I have reviewed the work packet for locomotive 8569 on this date 7-6-11 and take no exception to applicable laws, rules and or MMA standards, policies and standards.

Service Operations

THROTTLE 8 OUTBOUND LOAD TESTS

UNIT 8569

DATE 7/5/11

Eng RPM (700)	(MID)	_____	Life Oil Pres	_____
Eng RPM (1050)	(HI)	_____	Water Temp	<u>191°F</u>
Horsepower		<u>3730</u>	Overspeed Setting	<u>Yes</u>
Volts (5-3)	B-23	<u>703</u>	RACK SETTING	_____
Volts (7)	C-30	_____		
Volts (720)	B-39	_____		

THROTTLE #1 STALL TEST

OP Mode	(PWR)	_____	
AMPS	(300)	<u>3818</u>	NOT APPLICABLE TO B-23 AND C-30
MGA	(1220)	_____	
Charging Rate	(70v)	<u>72V</u>	

703 amps 3818 3730

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	<i>[Signature]</i>
CHECK FOR LOW VOLTAGE GROUNDS (7 watt bulb)	<i>[Signature]</i>
WHILE IN THROTTLE 3 LOAD TEST. CHECK FOR AC GROUNDS <i>OL @ 250V negged</i>	<i>[Signature]</i>
CHECK OPERATION OF:	
A. HEATING	<i>[Signature]</i>
COMPLETE THE IN-BOUND LOAD TEST SHEETS	<i>[Signature]</i>
GROUND RELAY-(TEST THREE TIMES TO VERY LOCK-OUT)(DYNAMIC & POWER)	<i>[Signature]</i>
CHECK THE FOLLOWING FOR PROPER OPERATION:	
A. CREW ALERT	<i>[Signature]</i>
B. RADIO AND ANTENNA	<i>[Signature]</i>
C. AXLE ALT. SPEEDO	<i>[Signature]</i>
D. MU ENGINE SHUTDOWN	<i>[Signature]</i>
E. FUEL CUT-OFF	<i>[Signature]</i>
F. TEST WARNING DEVICES	<i>[Signature]</i>
MECHANICAL	
CLEAN AND SERVICE TOILET AND RESTROOM	<i>D. Black</i>
DRAIN RETENTION TANK	<i>D. Black</i>
PROPER LUBRICATION? FUEL LEAKS? CAM ROLLER ROTATION? ETC.	<i>No Black</i>
INSPECT FUEL SYSTEM HOSES AND PIPES FOR LEAKS	<i>D. Black</i>
INSPECT COOLING SYSTEM:	<i>No Water D. Black</i>
A: CHECK HOSES AND PIPES FOR LEAKS	<i>D. Black</i>
CHECK OPERATION OF ENGINE PROTECTION DEVICES:	
A. CRANKCASE PRESSURE	<i>[Signature]</i>
VISUALLY INSPECT AIR COMPRESSOR FOR WATER, AIR OR OIL LEAKS	<i>D. Black</i>
PERFORM MANUAL AIR BRAKE TEST	
Verify Flow Gauge	NOTE: 120-130-140 main
130 main reservoir is 64 + or - 3,	
reservoir is 60 + o	
PERFORM PENALTY BRAKE TEST	
CHECK FOR CORRECT AIR PRESSURE SETTINGS:	<i>D. Stupakewicz</i>
A. MAIN RESERVOIR (130 - 140 PSI)	<i>D. Stup.</i>
B. BRAKE PIPE (90 PSI)	<i>D. Stup.</i>
C. EQUALIZING RESERVOIR (90 PSI)	<i>D. Stup.</i>
D. BRAKE CYLINDER (72 - 74 PSI)	<i>D. Stup.</i>
E. COMPRESSOR CONTROL (130 - 140 PSI +/-5 PSI)	<i>D. Stup.</i>
CHECK FLUID LEVELS BEFORE LOADING:	<i>D. Black</i>
A: ENGINE OIL	<i>Down 2" MT</i>
B: COOLING WATER	<i>D. Black</i>
C: AIR COMPRESSOR OIL	<i>OK. D. Black</i>
TEST OPERATION OF THE FOLLOWING DEVICES:	
A. BELL	<i>D. Stupakewicz</i>
B. SANDERS (FORWARD, REVERSE, EMERGENCY)	<i>D. Stup.</i>
C. RADIATOR SHUTTERS	

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

MECHANICAL IN HOUSE

WORKED BY:

REVIEW LAB CODE AND PERFORM A COMPLETE AIRBOX/CRANKCASE INSPECTION IF A LAB CODE EXISTS

M. Cooley

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

SOAK BACK FILTER, EMD ONLY

TURBO SPIN ON FILTER, EMD ONLY

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.

D. Black
D. Black

INSPECT COUPLERS & DRAFT GEARS. MAKE REPAIRS AS NECESSARY

CHECK KNUCKLE CLEARANCE AND KNUCKLE THROWER, MAKE REPAIRS AS NEEDED AND APPLY SPARE KNUCKLES (E AND F TYPE) (2.5")

D. Black

INSPECT PIN LIFTERS CHECKING FOR PROPER HAND CLEARANCE AND ANTI-CREEP

D. Black

CHECK SNOWPLOW (IF EQUIPPED) FOR HANDHOLDS AND PROPER DISTANCE

D. Black

CHECK AUTO BLOWDOWNS FOR PROPER OPERATIONS IN AUTOMATIC MODE

ENSURE SUMP DRAINS ARE OPEN AND FREE OF DEBRIS

D. Black

TRUCKS

INSPECT WICK BOLT SECUREMENT AND REPAIR IF NECESSARY

D. Black 3-13A, 1-2

CHECK SUSPENSION BEARING OIL LEVEL

D. Black JA 1-2

CHECK JOURNAL BOX OIL LEVEL (FILL TO POINT OF OVERFLOW)

CHECK GEAR CASES AND INSPECT BULL GEAR (ADD 6lbs. OF GEARCASE GREASE)

Turken
D. Black 3-4

CHECK OIL FILLED GEAR CASES AND FILL (RECORD USAGE BELOW)

1 TRACTION MOTOR: OIL USED _____

2 TRACTION MOTOR: OIL USED _____

3 TRACTION MOTOR: OIL USED _____

4 TRACTION MOTOR: OIL USED _____

5 TRACTION MOTOR: OIL USED _____

6 TRACTION MOTOR: OIL USED _____

3 Bags

D. Black
J.A.

INSPECT ALL BRAKE HANGERS, HEADS, GUIDES AND STRAPS ENSURING BRAKE SHOES ARE IN LINE WITH WHEELS

D. Black

CAB

CHECK FIRE EXTINGUISHERS, DATE AND TAG. REPLACE IF USED OR OUT OF DATE.

CHECK CAB SEATS FOR PROPER OPERATION INSURING ALL BOLTS ARE IN PLACE AND TIGHT.

CHECK HANDBRAKE AND INSPECT DATE. MAKE REPAIRS AS NECESSARY

D. Black
D. Black
D. Black

MISC

IN ACCORDANCE WITH FRA 229.23. VERIFY AIR GAUGES (+/- 3PSI) (CALIBRATE AT +/- 1PSI, REQUIRES 130 PSI MR)

CHECK ALL FLUID LEVELS, ENGINE OIL, COOLING WATER, AIR COMPRESSOR OIL

DRAIN RETENTION TANK

TOILET MAINTENANCE:

A. INSPECT/REPAIR AS NEEDED TOILET DRAIN VALVE & FLOOR SEALS

D. Stupakewicz

D. Black
D. Black
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

D. Black
D. Black

D. Black
D. Black
D. Black
D. Black

B-23, B-39, C), 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.	<i>D. Black</i>
H. INSPECT SEAT RAILS AND REPLACE IF DAMAGED OR WORN BEYOND PROVIDING SECURE, STABLE MOUNTING OF SEAT.	<i>D. Black</i>
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.	<i>D. Black</i>
J. LUBRICATE THE SEAT RAILS WITH SILICONE LUBRICANT.	
K. INSPECT THE BACKREST RAKE ADJUSTMENT KNOB. VERIFY THAT THE KNOB ROTATES EASILY TO ADJUST BACKREST ANGLE.	<i>D. Black</i>
L. INSPECT KNOB FOR CRACKS OR SPLITS AND THAT IT IS SECURELY FASTENED.	
M. INSPECT GEAR MECHANISM FOR ANY WEAR OR DAMAGE.	<i>D. Black</i>
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.	<i>D. Black</i>
O. INSPECT THE LUMBAR SUPPORT ADJUSTMENT LEVER. VERIFY THAT THE ADJUSTMENT LEVER OPERATES EASILY TO ADJUST THE LUMBAR SUPPORT.	<i>-</i>
P. VERIFY ALL ARMREST FASTENERS ARE SECURE. REPLACE ANY MISSING OR STRIPPED OUT FASTENERS.	<i>D. Black</i>
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.	<i>D. Black</i>
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.	<i>D. Black</i>
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	<i>D. Black</i>
A. CLEAN THE CAB, WINDOWS, AND EQUIPMENT	<i>-</i>
COMPLETE WINTERIZATION SHEET (AUGUST - APRIL)	<i>-</i>
WASH LOCOMOTIVE ENGINE/ENGINE ROOM/AND AIR COMPRESSOR ROOM	
WASH THE LOCOMOTIVE	

Changed Fuel Filter M. Cooley
Changed Michiana Filters M. Cooley

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

VERIFY EVENT RECORDER IS WORKING

CHECK & RECORD THE DATE ON HEAD END DEVICE January 14, 2011

COMPLETE THE HEAD END DEVICE CONNECTOR SHEET

CHECK THE FOLLOWING EQUIPMENT AND THEIR RELATED GUARDS AND LENSES FOR PROPER OPERATION:

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

TRACTION MOTORS AND UNDERFRAME

CHECK THE TRACTION MOTOR LEADS, VERIFY NO LEADS ARE RUBBING ON THE FRAME

INSPECT TRACTION MOTOR COVERS AND ENSURE BOLTS ARE IN PLACE AND TIGHT

CHECK M.U. RECEPTACLE PINS AND LIDS. MAKE NECESSARY REPAIRS

MAKE SURE M.U. CABLES DO NOT FOUL COUPLERS

M. Cooley
David Thompson
David Thompson
M. Cooley
David Thompson
David Thompson
David Thompson
David Thompson

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		M. Corley
CHECK FOR LOW VOLTAGE GROUNDS (7 watt bulb)		M. Corley
WHILE IN THROTTLE 3 LOAD TEST. CHECK FOR AC GROUNDS	<i>o/k @ 250V megged</i>	M. Corley
CHECK OPERATION OF:		
A. HEATING		M. Corley
COMPLETE THE IN-BOUND LOAD TEST SHEETS		M. Corley
GROUND RELAY-(TEST THREE TIMES TO VERY LOCK-OUT)(DYNAMIC & POWER)		M. Corley
CHECK THE FOLLOWING FOR PROPER OPERATION:		
A. CREW ALERT		M. Corley
B. RADIO AND ANTENNA		M. Corley
C. AXLE ALT. SPEEDO		M. Corley
D. MU ENGINE SHUTDOWN		M. Corley
E. FUEL CUT-OFF		M. Corley
F. TEST WARNING DEVICES		M. Corley
MECHANICAL		
CLEAN AND SERVICE TOILET AND RESTROOM		D. Black
DRAIN RETENTION TANK		-OK
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,		NOTE: 120-
reservoir is 60 + 0		130-140 main
PERFORM PENALTY BRAKE TEST		M. Corley
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)		M. Corley
E. COMPRESSOR CONTROL (130 - 140 PSI +/-5 PSI)		M. Corley
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

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
- CHECK FOR LOW VOLTAGE GROUNDS (7 watt bulb)
- WHILE IN THROTTLE 3 LOAD TEST. CHECK FOR AC GROUNDS
- CHECK OPERATION 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

all done

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
- 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

NOTE: 120-130-140 main

Service Operations

UNIT _____

DATE _____

THROTTLE 8 OUTBOUND LOAD TESTS

Eng RPM (900)	B-10	_____	Lube Oil Pres	<u>100</u>
Eng RPM (1050)	Q1	<u>1050</u>	Water Temp	<u>171</u>
Horsepower		<u>3751</u>	Overspeed Setting	<u>1125</u>
Volts (5.3)	B-23	_____	RACK SETTING	<u>21.5</u>
Volts (7)	C-30	_____		
Volts (720)	B-30	<u>7.15</u>		

THROTTLE #1 STALL TEST

OP (600v)	(1200)	<u>300</u>	NOT APPLICABLE TO B-23 AND C-30
AMPS	(300)	<u>1220</u>	
MGA	(1220)	<u>74.1</u>	
Charging Rate	(70v)		

Daily **7:00 AM - 6:00 PM** **LOCOMOTIVE 8869** **DATE 7-6-11**

Start Readings				Has Shims		END READING				Has Shims		OLD GAUGE
Flange Height	Flange Thickness	Rim Thickness	Witness Groove	YES	NO	Flange Height	Flange Thickness	Rim Thickness	Witness Groove	YES	NO	FLANGE THICKNESS MEASUREMENT
L#1	0-17	0-0	49			L#1						0-on-0--1.1764"
L#2	0-17		49			L#2						1-on-0--1.1764"
L#3	0-20		44			L#3						2-on-0--1.1764"
L#4	0-18		49			L#4						3-on-0--1.1764"
L#5						L#5						4-on-0--1.1764"
L#6						L#6						5-on-0--1.1764"
R#1	0-17	0-0	49			R#1						6-on-0--1.1764"
R#2	0-17		49			R#2						7-on-0--1.1764"
R#3	0-20		44			R#3						8-on-0--1.1764"
R#4	0-18		49			R#4						9-on-0--1.1764"
R#5						R#5						2-on-6--1.13/32"
R#6						R#6						4-on-5--1.1715"

WEAR LIMITS FOR ROAD & SWITCH LOCOMOTIVES - MINIMUM DAILY REQUIREMENTS

FRA 1 1/2" 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 1/4" Tread Wear

NEW GAUGE

0-on-17--1.1715"
 0-on-18--1.1715"
 0-on-19--1.1715"
 0-on-20--1.1715"
 0-on-21--1.1715"
 0-on-22--1.1715"
 2-on-22--1.13/32"
 4-on-22--1.1715"
 6-on-22--1.1532"
 8-on-22--1.1715"

WEAR LIMITS - ROAD & SWITCH LOCOS - MIN. 92 DAY REQ

WEAR LIMITS - PASSENGER LOCOS - MIN 92 DAY REQ

FLANGE HEIGHT	FLANGE THICKNESS	RIM THICKNESS	TREAD WEAR	FLANGE HEIGHT	FLANGE THICKNESS	RIM THICKNESS	TREAD WEAR
FRA 1 1/2"	FRA 7/8"	FRA 1"	FRA 5/16"	FRA 1 1/2"	FRA 7/8"	FRA 1"	FRA 5/16"
MMA 1 7/16"	MMA 1 1/32"	MMA 1 1/8"	MMA 1/4"	MMA 1 7/16"	MMA 1"	MMA 1 1/4"	MMA 1/4"

CONVERSION CHART FOR WHEEL DIAMETER

8=	37"	15=	37 7/8"	22=	38 3/4"	29=	39 5/8"	36=	40 1/2"
9=	37 1/8"	16=	38"	23=	38 7/8"	30=	39 3/4"	37=	40 5/8"
10=	37 1/2"	17=	38 1/8"	24=	39"	31=	39 7/8"	38=	40 3/4"
11=	37 3/8"	18=	38 1/4"	25=	39 1/8"	32=	40"	39=	40 7/8"
12=	37 1/2"	19=	38 3/8"	26=	39 1/4"	33=	40 1/8"	40=	41"
13=	37 5/8"	20=	38 1/2"	27=	39 3/8"	34=	40 1/4"	41=	41 1/8"
14=	37 3/4"	21=	38 5/8"	28=	39 1/2"	35=	40 3/8"	42=	41 1/2"

NEW GAUGE

0-on-0--1.1764"
 1-on-0--1.1564"
 2-on-0--1.1732"
 3-on-0--1.1732"
 4-on-0--1.1764"
 5-on-0--1.1664"
 6-on-0--1.1732"
 7-on-0--1.1764"
 8-on-0--1.1564"

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 1/2" MIN 31 1/2"	33	FRA MAX 6" MIN 3"	5	FRA MIN 30" MMA MIN 30" FRA MAX 50" MMA MAX 50"	FRA MIN 2 1/2" MMA MIN 3"
MMA MAX 34 1/2" MIN 32 1/2"	33	MMA MAX 6" MIN 3 1/2"	5		

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

WHEEL MATCHING STANDARDS FOR 6 AXLE LOCOMOTIVES (FRA & MMA STANDARDS ARE THE SAME)

1/2" IS THE MAXIMUM VARIATION ALLOWED, IN WHEEL DIAMETER, BETWEEN ANY 2 WHEELS IN THE SAME TRUCK WITHOUT SHIMS
 1/4" IS THE MAXIMUM VARIATION ALLOWED, IN WHEEL DIAMETER, BETWEEN ANY 2 WHEELS IN THE SAME TRUCK WITH SHIMS APPLIED
 1/8" IS THE MAXIMUM VARIATION ALLOWED, IN WHEEL DIAMETER, BETWEEN ANY 2 WHEELS ON DIFFERENT TRUCKS

NOTE: WHEN FIGURING THE DIFFERENCE IN WHEEL DIAMETER, TO DETERMINE IF SHIMS ARE REQUIRED, YOU MUST USE THE AVERAGE WHEEL DIAMETER PROFILES.

REMEMBER THIS RULE

0 TO 5 DIAMETER DIFFERENCE NO SHIMS REQUIRED 6 TO 10 DIAMETER DIFFERENCE ADD APPROPRIATE SHIMS TO BOTH BOXES ON BOTH SIDES OVER 10 IN DIAMETER DIFFERENCE REQUIRES WHEEL CHANGE OR TRUCK NOTE: ON END LOCOMOTIVES, USE ONLY ONE W/SHIM END PART NUMBER 9451981 SHELLED TREAD AND FLAT SPOTS MUST BE TRUED OR CHANGED WHEN TRAINS ON PERIODIC OR UNUSUAL MAINTENANCE. SEE CONDEMNATION LIMITS FOR SHELLED TREAD ON A SEPARATE TRAIN.
 * ONE SHELLED SPOT 1" OR GREATER IN LENGTH * ONE SHELLED SPOT WITH A DEPTH OF 1/2" OR MORE

EMPLOYEES SIGNATURE

[Signature Box]

SUPERVISORS SIGNATURE

[Signature Box]

WINTERIZATION	
Winterization - All MMA Locomotives. (August - April)	Signature
Inspect front and rear cab door seals replace, as needed (NO TAPE)	
Inspect left and right side window seals replace as needed.	
Inspect Electric cabinet door seals replace as needed.	
Operate Cab Heaters-Check condition of Heater Assembly @ 45o F above Ambient Temperature.	
Operate Window Defrosters-Check condition of Defroster @ 45o F above Ambient Temperature.	
If equipped, test the Auto Dump valve for proper operation.	
Test Manual Water Dump Valves. Proper Handle, Location, Orifice is Open.	
Close Winter/ Summer doors if equipped.	
Check Traction Motor cover gaskets, install as needed.	
Check condition of Cab Door Hinges (Lubricate all Hinges)	
Check condition of Cab Door Locks (Lubricate all Locks)	
Inspect Cab Windows Slider Rail, Adjust Top Rail as needed, Lubricate with Silicone Grease.	
Renew all Wiper Blades.	
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.	

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.

M. Corley

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.

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.

5. The float reading at the water line is the uncorrected charge level of the battery.

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.

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

8. Return acid to cell from which it was drawn.

9. Be sure all vent plugs are replaced and tight.

10. With Unit shut down measure the voltage reading across each battery at the terminals, record readings on the chart below.

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

12. Apply approved protective coating to connections after terminals are cleaned and dried

13. Add water as required (Add water to bottom of filler neck).

Battery Cranking Voltage Test

14. Close battery knife switch, and circuit breakers.

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

2 Battery Units	Specific Gravity				Water Added			Battery Replaced-Reason
	Cell 1	Cell 2	Cell 3	Cell 4	Yes	No	Yes	
Battery 1								o
Section A	1275	1275	1300	1275				
Section B								
Section C								
Section D								

2 Battery Units	Specific Gravity				Water Added			Battery Replaced-Reason
	Cell 1	Cell 2	Cell 3	Cell 4	Yes	No	Yes	
Battery 2								o
Section A	1300	1300	1300	1300				
Section B								
Section C								
Section D								

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


BATTERY CRANKING VOLTAGE CHART


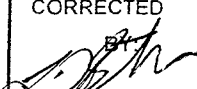
	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Battery Voltage	34.2	34.8						
	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Battery Voltage								
	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Cranking Battery Voltage								
Battery Voltage								
	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Cranking Battery Voltage								

Unit: 8569

Date: 6/5/2011

DEFECTS FOUND DURING INSPECTION

DEFECT <u>Cond- cab heater missing</u>	INSPECTED BY: 
REPAIR _____	CORRECTED BY: _____

DEFECT <u>TM#2 - 3 o'clock brush holder - outside clip-up -</u> <u>TM#3 - top cover gasket falling off</u>	INSPECTED BY: 
REPAIR <u>Turned down brush brush clip TM#2</u> <u>TM#3 - re-attached top cover w/ Super77</u>	CORRECTED BY: 

DEFECT _____	INSPECTED BY: _____
REPAIR _____	CORRECTED BY: _____

DEFECT _____	INSPECTED BY: _____
REPAIR _____	CORRECTED BY: _____

DEFECT _____	INSPECTED BY: _____
REPAIR _____	CORRECTED BY: _____

Unit: _____

Date: _____

DEFECTS FOUND DURING INSPECTION

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

