

Mo-3

Locomotive Release from Shop Form

To be completed on every engine released from the Shop

I have reviewed the work packet for locomotive 8525 on this date 10/11/12 and take no exception to applicable laws, rules and or MMA standards, policies and standards.

Oil Sample — C. Ferguson

Service Operations

THROTTLE 8 INBOUND LOAD TESTS

UNIT _____

DATE _____

Eng RPM (900)	EMD	_____	Lube Oil Pres	<u>90</u>
Eng RPM (1050)	GE	_____	Water Temp	<u>185</u>
Horsepower		<u>3730</u>	Overspeed Setting	_____
Volts (5.3)	B-23	_____	RACK SETTING	<u>24.50</u>
Volts (7)	C-30	_____		
Volts (720)	B-39	<u>698</u>		
		<u>AMPS 3855</u>		

THROTTLE #1 STALL TEST

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

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

In-Bound Loadtest Electrical/Mechanical

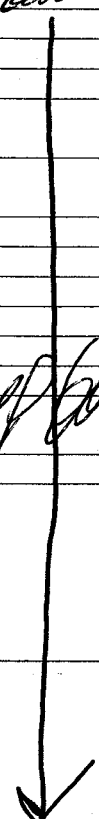
WORKED BY:

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 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

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 NOTE: 120-
- 130 main reservoir is 64 + or - 3, 130-140 main
- reservoir is 60 + 0
- 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

WINTERIZATION	
	Signature
Winterization - All MMA Locomotives. (August - April)	<i>[Signature]</i>
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.	

B-23, B-39, C-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.	JS
H. INSPECT SEAT RAILS AND REPLACE IF DAMAGED OR WORN BEYOND PROVIDING SECURE, STABLE MOUNTING OF SEAT.	JS
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.	JS
J. LUBRICATE THE SEAT RAILS WITH SILICONE LUBRICANT.	JS
K. INSPECT THE BACKREST RAKE ADJUSTMENT KNOB. VERIFY THAT THE KNOB ROTATES EASILY TO ADJUST BACKREST ANGLE.	JS
L. INSPECT KNOB FOR CRACKS OR SPLITS AND THAT IT IS SECURELY FASTENED.	JS
M. INSPECT GEAR MECHANISM FOR ANY WEAR OR DAMAGE.	JS
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.	JS
O. INSPECT THE LUMBAR SUPPORT ADJUSTMENT LEVER. VERIFY THAT THE ADJUSTMENT LEVER OPERATES EASILY TO ADJUST THE LUMBAR SUPPORT.	JS
P. VERIFY ALL ARMREST FASTENERS ARE SECURE. REPLACE ANY MISSING OR STRIPPED OUT FASTENERS.	JS
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.	JS
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.	JS
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:	<i>Abundant</i>
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	

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	→ James Sydsbory
VERIFY EVENT RECORDER IS WORKING	<i>[Signature]</i>
CHECK & RECORD THE DATE ON HEAD END DEVICE <u>-NA-</u>	D. STV
COMPLETE THE HEAD END DEVICE CONNECTOR SHEET	-NA-
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	<i>[Signature]</i>
TRACTION MOTORS AND UNDERFRAME	
CHECK THE TRACTION MOTOR LEADS, VERIFY NO LEADS ARE RUBBING ON THE FRAME	B. White
INSPECT TRACTION MOTOR COVERS AND ENSURE BOLTS ARE IN PLACE AND TIGHT	B. White
CHECK M.U. RECEPTACLE PINS AND LIDS. MAKE NECESSARY REPAIRS	<i>[Signature]</i>
MAKE SURE M.U. CABLES DO NOT FOUL COUPLERS	-NA-

[Signature]
K. Hassey

#1 Wick box inspection
 1 cracked box - repaired / Filled - wick - OK

2 OK - OK

3 OK - OK

4 OK - OK

[Signature]

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

MECHANICAL IN HOUSE	WORKED BY:
REVIEW LAB CODE AND PERFORM A COMPLETE AIRBOX/CRANKCASE INSPECTION IF A LAB CODE EXISTS	
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	NA
SOAK BACK FILTER. EMD ONLY	NA
TURBO SPIN ON FILTER. EMD ONLY	NA
COMPLETE FRA INSPECTION (DAILY INSPECTION CHECKLIST)	NA
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.	J. P. Boosli
INSPECT COUPLERS & DRAFT GEARS. MAKE REPAIRS AS NECESSARY	J. P. Boosli
CHECK KNUCKLE CLEARANCE AND KNUCKLE THROWER, MAKE REPAIRS AS NEEDED AND APPLY SPARE KNUCKLES (E AND F TYPE) (2.5")	J. P. Boosli
INSPECT PIN LIFTERS CHECKING FOR PROPER HAND CLEARANCE AND ANTI-CREEP	J. P. Boosli
CHECK SNOWPLOW (IF EQUIPPED) FOR HANDHOLDS AND PROPER DISTANCE	J. P. Boosli
CHECK AUTO BLOWDOWNS FOR PROPER OPERATIONS IN AUTOMATIC MODE	J. P. Boosli
ENSURE SUMP DRAINS ARE OPEN AND FREE OF DEBRIS	J. P. Boosli
TRUCKS	
INSPECT WICK BOLT SECUREMENT AND REPAIR IF NECESSARY	J. P. Boosli
CHECK SUSPENSION BEARING OIL LEVEL	J. P. Boosli
CHECK JOURNAL BOX OIL LEVEL (FILL TO POINT OF OVERFLOW)	Timken - OK
CHECK GEAR CASES AND INSPECT BULL GEAR (ADD 6lbs. OF GEARCASE GREASE)	J. P. Boosli
CHECK OIL FILLED GEAR CASES AND FILL (RECORD USAGE BELOW)	J. P. Boosli
# 1 TRACTION MOTOR: OIL USED <u>4 pKgs</u>	J. P. Boosli
# 2 TRACTION MOTOR: OIL USED <u>6 pKgs</u>	
# 3 TRACTION MOTOR: OIL USED <u>4 pKgs</u>	
# 4 TRACTION MOTOR: OIL USED <u>4 pKgs</u>	↓
# 5 TRACTION MOTOR: OIL USED <u>NA</u>	
# 6 TRACTION MOTOR: OIL USED <u>NA</u>	
INSPECT ALL BRAKE HANGERS, HEADS, GUIDES AND STRAPS ENSURING BRAKE SHOES ARE IN LINE WITH WHEELS	J. P. Boosli
CAB	
CHECK FIRE EXTINGUISHERS, DATE AND TAG. REPLACE IF USED OR OUT OF DATE.	J. P. Boosli
CHECK CAB SEATS FOR PROPER OPERATION INSURING ALL BOLTS ARE IN PLACE AND TIGHT.	J. P. Boosli
CHECK HANDBRAKE AND INSPECT DATE. MAKE REPAIRS AS NECESSARY	J. P. Boosli
MISC	
IN ACCORDANCE WITH FRA 229.23. VERIFY AIR GAUGES (+/- 3PSI) (CALIBRATE AT +/- 1PSI, REQUIRES 130 PSI MR)	J. B. White
CHECK ALL FLUID LEVELS, ENGINE OIL, COOLING WATER, AIR COMPRESSOR OIL	J. Boosli
DRAIN RETENTION TANK	J. Boosli
TOILET MAINTENANCE:	
A. INSPECT/REPAIR AS NEEDED TOILET DRAIN VALVE & FLOOR SEALS	D. Stymca w/ 2
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.	J. Boosli
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

<i>Out Bound Loadtest Electrical/Mechanical</i>	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	<i>J. Woods</i>
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	<i>J. Woods</i>
B. RADIO AND ANTENNA	<i>J. Woods</i>
C. AXLE ALT. SPEEDO	<i>J. Woods</i>
D. MU ENGINE SHUTDOWN	<i>J. Woods</i>
E. FUEL CUT-OFF	<i>J. Woods</i>
F. TEST WARNING DEVICES	<i>J. Woods</i>
MECHANICAL	
CLEAN AND SERVICE TOILET AND RESTROOM	<i>D. Stupacowitz</i>
DRAIN RETENTION TANK	<i>J. Woods</i>
PROPER LUBRICATION? FUEL LEAKS? CAM ROLLER ROTATION? ETC.	<i>J. Woods</i>
INSPECT FUEL SYSTEM HOSES AND PIPES FOR LEAKS	<i>J. Black / J. Woods</i>
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	<i>J. Black</i>
PERFORM MANUAL AIR BRAKE TEST	<i>J. Woods</i>
Verify Flow Gauge	NOTE: 120- 130-140 main
130 main reservoir is 64 + or - 3, reservoir is 60 + 0	<i>129-139 PSI</i> <i>J. Woods</i>
PERFORM PENALTY BRAKE TEST	<i>J. Woods</i>
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	↓

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.	JS
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.	JS
3. Insert hose stem into battery cell and squeeze bulb.	JS
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.	JS
5. The float reading at the water line is the uncorrected charge level of the battery.	JS
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.	JS
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	JS
8. Return acid to cell from which it was drawn.	JS
9. Be sure all vent plugs are replaced and tight.	JS
10. With Unit shut down measure the voltage reading across each battery at the terminals, record readings on the chart below.	JS
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	JS
12. Apply approved protective coating to connections after terminals are cleaned and dried	JS
13. Add water as required (Add water to bottom of filler neck).	JS
Battery Cranking Voltage Test	
14. Close battery knife switch, and circuit breakers.	JS
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	1256	1275	1250	1275		✓		
Section B	↓	1256	↓	1236		✓		
Section C	↓	1275	↓	1275		✓		
Section D	↓	↓	↓	1250		✓		

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	1250	1250	1200	1250		✓		
Section B	1275	1275	1250	↓		✓		
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	33.5	33.5						
Battery Voltage								
Cranking Battery Voltage	70.1							
Battery Voltage								
Cranking Battery Voltage								

Unit: 8525

Date: 12-11-12

DEFECTS FOUND DURING INSPECTION

DEFECT <u>X 3 Traction motor F lead burned off meged out Traction motor - 2 O.K.</u>	INSPECTED BY: <u>B White</u>
REPAIR <u>Upper crimp to lead put on by Night Shift - motor crimp to lead put on -</u>	CORRECTED BY: <u>D Stupak - Byram</u>

DEFECT <u>7 lights out</u>	INSPECTED BY: <u>D. Stv.</u>
REPAIR <u>9/0 7 light bulbs</u>	CORRECTED BY: <u>[Signature]</u>

DEFECT <u>L1 wick box cracked was 1/3 full of oil - Axle/bcass/wick - OK</u>	INSPECTED BY: <u>[Signature]</u>
REPAIR <u>Welded / installed / Filled with R/o 100</u>	CORRECTED BY: <u>[Signature] / [Signature]</u>

DEFECT <u>L1 Rear G-Case bolt missing</u>	INSPECTED BY: <u>[Signature]</u>
REPAIR <u>Replaced bolt & Torqued</u>	CORRECTED BY: <u>[Signature]</u>

DEFECT <u>Toilet leaks at base shut off / drain valve - cracked toilet tub - (plastic)</u>	INSPECTED BY: <u>D. Stv.</u>
REPAIR <u>RTO from 3614 w/new top cover seal, slider valve slider valve seal - handle boot - filled with low top</u>	CORRECTED BY: <u>D. Stv. J. Black T. Goodine</u>

AUX Cab Filters

JS

new filters

JS

R1, R2, R4 sharp Flanges
Trimmed R1, R2, R4

[Signature] / [Signature]

Service Operations

UNIT _____

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)	_____	

LOCOMOTIVE											DATE			
8525											12-12-12			
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	0-21.5	0-0	2.25				L#1							0-on 0-1-17/64 1-on 0-1-15/64 2-on 0-1-7/32 3-on 0-1-5/32 4-on 0-1-7/64 5-on 0-1-3/64 6-on 0-1-1/32 7-on 0-63/64 8-on 0-15/16
L#2	0-21	0-0	2.26				L#2							
L#3	0-21	0-0	2.26				L#3							
L#4	0-21	0-0	2.25				L#4							
L#5							L#5							
L#6							L#6							
														OLD GAUGE
R#1	0-22	2-0	2.24				R#1							FLANGE THICKNESS MEASUREMENT
R#2	0-21.5	2-0	2.28				R#2							0-on 0-1 0-on 1-1-1/16 0-on 2-1-1/8 0-on 3-1-3/16 0-on 4-1-1/4 0-on 5-1-5/16 0-on 6-1-3/8 2-on 6-1-13/32 4-on 6-1-7/16 6-on 6-1-3/16
R#3	0-22	0-0	2.29				R#3							
R#4	0-22	4-0	2.24				R#4							
R#5							R#5							
R#6							R#6							

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

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"

Side bearing
RF 1/8
LF 3/16
RR 1/16
CR 1/8

CONVERSION CHART FOR WHEEL DIAMETER

8= 37"	15= 37 7/8"	22= 38 1/4"	29= 39 5/8"	36= 40 1/2"
9= 37 1/8"	16= 38"	23= 38 7/8"	30= 39 1/4"	37= 40 5/8"
10= 37 1/4"	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 1/4"

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"	FRA MAX 6" MIN 3"	43/4	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"	MMA MAX 6" MIN 3 1/2"	4 1/2		

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 1/2" IS THE MAXIMUM VARIATION ALLOWED, IN WHEEL DIAMETER, BETWEEN ANY 2 WHEELS IN THE SAME TRUCK WITH SHIMS APPLIED

1 1/2" 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 FIGURES

REMEMBER THIS RULE

9 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 TRUED NOTE: ON EMD LOCOMOTIVES USE ONLY ONE 1/2" SHIM EMD PART NUMBER 8455901 SHELLED TREAD AND FLAT SPOTS MUST BE TRUED OR CHANGED WHEN FOUND ON PERIODIC OR UNSCHEDULED MAINTENANCE. NO CONDEMNING LIMITS FOR SHELLED TREAD ON A SERVICE TRACK. ONE SHELLED SPOT 1" OR GREATER IN LENGTH. ONE SHELLED SPOT WITH A DEPTH OF 1/4" OR MORE

EMPLOYEES SIGNATURE

[Signature]

SUPERVISORS SIGNATURE

[Signature]

Montreal, Maine & Atlantic Railroad
Locomotive

8525

Date 12-12-72

5 Month/Leak Air Work

1. Inspect and repair air piping and valves for leaks.....
2. Test all air gauges with gauge tester and set if required.....
3. With full brake pipe pressure, make a 20lb. reduction, move the cutoff valve to "OUT" position and move the lead - dead valve to "DEAD" position. Brakes must remain applied for 5 minutes.....
4. Cover each trainline hose coupling with hand and test for leakage through valve, then apply blank dummy couplings to the trainline hoses on each end of the unit and open trainline valves. Make a 20lb. reduction with the Automatic, move the cutoff valve to "OUT" position and check for brake pipe leakage. Leakage shall not exceed 5 lb. per minute.....
5. Reduce main reservoir pressure to 85 lbs. by draining #2 main reservoir. Check cab gauge for leakage from main reservoirs and piping for 3 minutes. Leakage must not exceed an average of 3 lb. per minute during the test.....
6. Drain #1 main reservoir (*) completely and test check valve between reservoirs. Pressure should remain on the main reservoir gauge in the cab as #1 main reservoir drained.....
7. Check all MF valve handles to ensure the locking devices work properly. Lubricate or replace as necessary.....
8. Check handle throw on rod - open the lead valve. Lubricate or replace as necessary.....

M. Nelson

M. Nelson

M. Nelson

M. Nelson

M. Nelson

M. Nelson

M. Nelson

Note (*) #1 reservoir without the check valve #2 is with the check valve

9 test AND CALABRIA Air Flow Meter

P. Plumb
60 CFM

MONTREAL, MAINE, & ATLANTIC RAILWAY
BRUSH RECORD

UNIT # 8525

DATE 12-12-12

MAIN ALTERNATOR

POS	1	2	3	4	B	W
9		OK				
10		OK				
11		OK				
12		OK				
1						
2		OK				

SIGNATURE [Signature]

NO. 1 TRACTION MOTOR

POS	1	2	3	B	W
3		OK			
6		OK			
9		OK			
12					

SIGNATURE B White

NO. 2 TRACTION MOTOR

POS	1	2	3	B	W
3		OK			
6		OK			
9		OK			
12					

SIGNATURE B White

NO. 3 TRACTION MOTOR

POS	1	2	3	B	W
3		OK			
6		OK			
9		OK			
12					

SIGNATURE [Signature]

NO. 4 TRACTION MOTOR

POS	1	2	3	B	W
3		OK			
6		OK			
9		OK			
12					

SIGNATURE B White

SLEWING
AUXILIARY GENERATOR

POS	1	2	3	B	W
2					
4		OK			
8		OK			
10					

SIGNATURE [Signature]

NO. 5 TRACTION MOTOR

POS	1	2	3	B	W
3					
6					
9					
12					

SIGNATURE _____

NO. 6 TRACTION MOTOR

POS	1	2	3	B	W
3					
6					
9					
12					

SIGNATURE _____

EXCITER GENERATOR

POS	1	2	3	B	W
2					
4					
8					
10					

SIGNATURE -NA

CAB HEATER BRUSHES ENG. COND.

DYNAMIC BRAKING BLOWER MOTORS

FRONT

POS	1	B	W
2			
4		OK	
8		OK	
10		OK	

SIGNATURE [Signature]

REAR

POS	1	B	W
2			
4		OK	
8		OK	
10		OK	

SIGNATURE [Signature]

FUEL PUMP MOTOR

POS	1	B	W
3			
9		OK	

SIGNATURE [Signature]

Manufacturer is QEI Version # S45E
Serial Number is 0204110402
Customer is MMAR

Data was removed on - 08:38:08 on 12/12/12
Last Downloaded on - 09:11:00 on 09/11/12
Battery was installed on - 11/12/04
Locomotive Number is - 8525

Downloaded by - Dave Stupak...
Location - Derby, Maine, US
Train - MMA#1
Wheel Size Entry - 42.6
Wheel Size used by program:
Circumference = 133.8 Diameter = 42.6
No memo present.

Wheel size used for printout is 133.83

QDP Version V



Quantum Desktop Playback
Data Scan Report

Report Date: 12-12-2012
Locomotive 8525

Data Removed on 12-12-12

SPEED (MPH)	OK
TRACTION MOTOR CURRENT	OK
BRAKE PIPE PRESSURE	OK
INDEPENDENT BRAKE	OK
END-OF-TRAIN PSI	Never above 20.
EP BRAKE REQUESTED	Never ON/ACTIVE
THROTTLE	Dynamic Brake never reported. Stop never reported. Low Idle never reported.
REVERSE	OK
EIE	Never ON/ACTIVE
PCS	OK
HORN	OK
EOT MOVING	Never ON/ACTIVE
EOT MSG. JUST RX	Never ON/ACTIVE
EOT LIGHT	Never ON/ACTIVE
EP OPERATING MODE	Never ON/ACTIVE
EP PENALTY BRAKE	Never ON/ACTIVE
EP ENGINEER EMERGENCY	Never ON/ACTIVE