

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 9-19-13 and take no exception to applicable laws, rules and or MMA standards, policies and standards.

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)
 CHECK OPERATION OF:

A. HEATING

COMPLETE THE IN-BOUND LOAD TEST SHEETS

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

J. Harte
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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

OK
H. Carls
J. Harte

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 + 0

NOTE: 120-
130-140 main

PERFORM PENALTY BRAKE TEST
 CHECK FOR CORRECT AIR PRESSURE SETTINGS:

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- 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

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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

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.

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")

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

CHECK SNOWPLOW (IF EQUIPPED) FOR HANDHOLDS AND PROPER DISTANCE

CHECK AUTO BLOWDOWNS FOR PROPER OPERATIONS IN AUTOMATIC MODE

ENSURE SUMP DRAINS ARE OPEN AND FREE OF DEBRIS

TRUCKS

INSPECT WICK BOLT SECUREMENT AND REPAIR IF NECESSARY

CHECK SUSPENSION BEARING OIL LEVEL

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

CHECK GEAR CASES AND INSPECT BULL GEAR (ADD 8lbs. OF GEARCASE GREASE)

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

1 TRACTION MOTOR: OIL USED 6900

2 TRACTION MOTOR: OIL USED 6900

3 TRACTION MOTOR: OIL USED 6900

4 TRACTION MOTOR: OIL USED 6900

5 TRACTION MOTOR: OIL USED 6900

6 TRACTION MOTOR: OIL USED 6900

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

CAB

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 REPLACE IF USED OR OUT OF DATE.

CHECK HANDBRAKE AND INSPECT DATE. MAKE REPAIRS AS NECESSARY

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

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

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.

J. MS

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J. MS

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

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-M
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.	
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	O
WASH THE LOCOMOTIVE	

MONTREAL, MAINE, & ATLANTIC RAILWAY
BRUSH RECORD

UNIT # _____

DATE _____

MAIN ALTERNATOR

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

SIGNATURE _____

NO. 1 TRACTION MOTOR

POS	1	2	3	B	W
3					
6	OK				
9					
12					

SIGNATURE J. H. [Signature]

NO. 2 TRACTION MOTOR

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

SIGNATURE _____

NO. 3 TRACTION MOTOR

POS	1	2	3	B	W
3					
6	OK				
9					
12					

SIGNATURE _____

NO. 4 TRACTION MOTOR

POS	1	2	3	B	W
3					
6	OK				
9					
12					

SIGNATURE _____

AUXILIARY GENERATOR

POS	1	2	3	B	W
2	OK				
4					
8					
10					

SIGNATURE _____

Carb Heaters

NO. 5 TRACTION MOTOR

POS	1	2	3	B	W
3					
6	OK				
9					
12					

SIGNATURE _____

NO. 6 TRACTION MOTOR

POS	1	2	3	B	W
3					
6	OK				
9					
12					

SIGNATURE _____

EXCITER GENERATOR

POS	1	2	3	B	W
2	OK				
4					
8					
10					

SIGNATURE _____

DYNAMIC BRAKING BLOWER MOTORS

FRONT

POS	1	B	W
2			
4	OK		
8			
10			

SIGNATURE _____

REAR

POS	1	B	W
2			
4	OK		
8			
10			

SIGNATURE _____

FUEL PUMP MOTOR

POS	1	B	W
3	OK		
9			

SIGNATURE _____

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LOCOMOTIVE 8525 **DATE** 9-19-13

	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	0-18	0-0	46				L#1						0-on 0-1-17/64"
L#2	0-21	0-0	45				L#2						1-on 0-1-15/64"
L#3	0-20	0-0	46				L#3						2-on 0-1-7/32"
L#4	0-18	0-0	43				L#4						3-on 0-1-5/32"
L#5							L#5						4-on 0-1-7/64"
L#6							L#6						5-on 0-1-3/64"
													6-on 0-1-1/32"
													7-on 0-63/64"
													8-on 0-15/16"
R#1	0-18	0-0	46				R#1						0-on 0-1"
R#2	0-20	0-3	44				R#2						0-on 1-1-1/16"
R#3	0-20	0-0	46				R#3						0-on 2-1-1/8"
R#4	0-19	0-0	43				R#4						0-on 3-1-5/16"
R#5							R#5						0-on 4-1-1/4"
R#6							R#6						0-on 5-1-5/16"
													2-on 6-1-13/32"
													4-on 6-1-7/16"
													6-on 6-1-3/64"

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 1/2" Tread Wear

NEW GAUGE

- 0-on 17-1-1/16"
- 0-on 18-1-1/8"
- 0-on 19-1-3/16"
- 0-on 20-1-1/4"
- 0-on 21-1-5/16"
- 0-on 22-1-3/8"
- 2-on 22-1-13/32"
- 4-on 22-1-7/16"
- 6-on 22-1-15/32"
- 8-on 22-1-1/2"

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 1/4"	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 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"

NEW GAUGE

- 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"

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

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 FIGURES

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 TRUED. NOTE: ON END LOCOMOTIVES USE ONLY ONE 1/2" SHIM END PART NUMBER 8455981 SHELLED TREAD AND FLAT SPOTS MUST BE TRUED OR CHANGED WHEN FOUND ON PERIODIC OR UNSCHEDULED MAINTENANCE. KCS 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

John

SUPERVISORS SIGNATURE

Montreal, Maine, & Atlantic Railway
Locomotive

Unit 8525

Date 9-19-13

3 Month Federal Air Work

Signature

1. Inspect and repair air piping and valves for leaks JMT
2. Test all air gauges with gauge tester and set if required..... JMT
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..... JMT
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..... JMT
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..... JMT
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 is drained..... JMT
7. Check all MU valve handles to ensure the locking devices work properly. Lubricate or replace as necessary..... JMT
8. Check knuckle thrower to make sure it opens the knuckle. Lubricate or repair as necessary..... JMT

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



Quantum Desktop Playback
Data Scan Report

Report Date: 09-19-2013
Locomotive 8525

Data Removed on 09-19-13

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	OK
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



Quantum Desktop Playback

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

Data was removed on - 08:25:08 on 09/19/13
Last Downloaded on - 13:58:00 on 08/30/13
Battery was installed on - 11/12/04
Locomotive Number is - 8525

Downloaded by - jh
Location - derby
Train - 232
Wheel Size Entry - 40
Wheel Size used by program:
Circumference = 125.7 Diameter = 40.0
No memo present.

Wheel size used for printout is 125.66