MO-5

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

I have reviewed the work packet for locomotive 8553 on this date 8-2-13 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	R Stout
CHECK FOR LOW VOLTAGE GROUNDS (7 watt bulb)	R Stout
CHECK OPERTION OF:	
A. HEATING	R Stout
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	
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	R Stout
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	R Stout
PERFORM PENALTY BRAKE TEST	R Stout
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)	R Stout
CHECK FLUID LEVELS BEFORE LOADING:	
A: ENGINE OIL	N. Carlozzo
B: COOLING WATER	N. Carlozzo
C: AIR COMPRESSOR OIL	N. Carlozzo
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

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 6lbs. OF GEARCASE GREASE)	
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 _____	
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.	

I. INSP
IF

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_____	
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 ALL BRUSHES	
CHECK THE TRACTION MOTOR LEADS, VERIFY [illegible] ADS 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	

LOCOMOTIVE 8553

DATE 8-2-13

	Start Readings				Has Shims			END READING				Has Shims	
	Flange Height	Flange Thickness	Rim Thickness	Witness Grove	YES	NO		Flange Height	Flange Thickness	Rim Thickness	Witness Grove	YES	NO
L#1	0-21	0-0	29				L#1						
L#2	8-22	0-0	24				L#2	0-21	0-0	24			
L#3	6-22	0-0	24				L#3	2-22	0-0	24			
L#4	0-21	0-0	27				L#4						
L#5							L#5						
L#6							L#6						
R#1	4-22	0-0	28				R#1	0-21	0-0	28			
R#2	6-22	0-0	24				R#2	0-21	0-0	24			
R#3	0-22	0-0	26				R#3						
R#4	0-20	0-0	28				R#4						
R#5							R#5						
R#6							R#6						

OLD GAUGE

FLANGE THICKNESS MEASUREMENT

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 - /32"
7 – on 0 – 63/64"
8 – on 0 – 15/16"

OLD GAUGE

FLANGE HEIGHT MEASUREMENT

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---1-31/64"

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

NEW GAUGE

FLANGE HEIGHT MEASUREMENT

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

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"

WEAR LIMITS – PASSENGER LOCOS – MIN 92 DAY REQ

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

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 ½" MIN 31 ½"	32 1/2	FRA	MAX 6" MIN 3"	34 1/4	FRA MIN 30" MMA MIN 30" FRA MAX 50" MMA MAX 50"	FRA MIN 2 ½" MMA MIN 3"
MMA	MAX 34 ½" MIN 32 ½"	REAR 32 1/2	MMA	MAX 6" MIN 3 ½"	REAR 34 1/4		

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

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

¾" IS THE MAXIMUM VARIATION ALLOWED, IN WHEEL DIAMETER, BETWEEN ANY 2 WHEELS IN THE SAME TRUCK WITHOUT SHIMS
1 ¼" IS THE MAXIMUM VARIATION ALLOWED, IN WHEEL DIAMETER, BETWEEN ANY 2 WHEELS IN THE SAME TRUCK WITH SHIMS APPLIED.
1 ½" 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 EMD LOCOMOTIVES USE ONLY ONE ½" SHIM EMD 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 ¼" OR MORE.

EMPLOYEES SIGNATURE [signature] SUPERVISORS SIGNATURE

Montreal, Maine, & Atlantic Railway
Locomotive

Unit 8555 Date 8-2-2013

3 Month Federal Air Work

Signature

1. Inspect and repair air piping and valves for leaks ..... MA

2. Test all air gauges with gauge tester and set if required..... MA

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..... MA

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..... MA

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..... MA

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..... MA

7. Check all MU valve handles to ensure the locking devices work properly. Lubricate or replace as necessary..... MA

8. Check knuckle thrower to make sure it opens the knuckle. Lubricate or repair as necessary..... MA

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

Unit: _____ Date: _____

DEFECTS FOUND DURING INSPECTION

DEFECT (2) Loose Snow Plow Bolts on Front	INSPECTED BY: C. Carbajal
REPAIR Repaired	CORRECTED BY: [illegible]

DEFECT (2) cracked steps on front, 1 on left 1 on right	INSPECTED BY: C. Carbajal
REPAIR Repaired	CORRECTED BY: [illegible]

DEFECT #1 wheel, #2 wheel, #3 left wheel Tandem, High Flange	INSPECTED BY: C. Carbajal
REPAIR TRIMMED All High Flanges wrote down new measurement on w/sheet	CORRECTED BY: [illegible]

DEFECT Both Fire Extinguisher out of date.	INSPECTED BY: C. Carbajal
REPAIR Replaced both Fire Ext.	CORRECTED BY: [illegible] / D Black

DEFECT	INSPECTED BY:
REPAIR	CORRECTED BY: