



Locomotive Release from Shop Form

To be completed on every engine released from the Shop

I have reviewed the work packet for locomotive 5026 on this date 7-9-10 and take no exception to applicable laws, rules and or MMA standards, policies and standards.



# Service Operations

## THROTTLE 8 INBOUND LOAD TESTS

UNIT \_\_\_\_\_

DATE \_\_\_\_\_

Eng RPM (900)	EMD	<u>          </u>	Lube Oil Pres	<u>40</u>
Eng RPM (1050)	GE	<u>yes</u>	Water Temp	<u>181</u>
Horsepower		<u>          </u>	Overspeed Setting	<u>          </u>
Volts (5.3)	B-23	<u>          </u>	RACK SETTING	<u>          </u>
Volts (7)	C-30	<u>624</u>		
Volts (720)	B-39	<u>          </u>		

### THROTTLE #1 STALL TEST

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

TL 24T

Throttle 1	(1V)	<u>          </u>
Throttle 2		<u>          </u>
Throttle 3		<u>          </u>
Throttle 4		<u>          </u>
Throttle 5		<u>          </u>
Throttle 6		<u>          </u>
Throttle 7		<u>          </u>
Throttle 8	(72V)	<u>          </u>

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

In-Bound Loadtest Electrical/Mechanical	WORKED BY:
<b>ELECTRICAL</b>	
VERIFY THE OPERATION OF THE GROUND RELAY	DR Swier / DBlack
CHECK FOR LOW VOLTAGE GROUNDS (7 watt bulb)	DR Swier / DBlack
WHILE IN THROTTLE 3 LOAD TEST, CHECK FOR AC GROUNDS	
CHECK OPERATION OF:	
A. HEATING	DR Swier / DBlack
COMPLETE THE OUTBOUND LOAD TEST SHEETS	
GROUND RELAY-(TEST THREE TIMES TO VERY LOCK-OUT)(DYNAMIC & POWER)	DR Swier / DBlack
IF EQUIPPED, VERIFY THE OPERATION OF THE LDVR CAMERA	
<b>MECHANICAL</b>	
PROPER LUBRICATION? FUEL LEAKS? CAM ROLLER ROTATION? ETC.	DR Saucier / DBlack
INSPECT FUEL SYSTEM HOSES AND PIPES FOR LEAKS	DR Saucier / DBlack
INSPECT COOLING SYSTEM:	DR Saucier / DBlack
A: CHECK HOSES AND PIPES FOR LEAKS	DR Saucier / see defect
CHECK OPERATION OF ENGINE PROTECTION DEVICES:	
A: CRANKCASE PRESSURE	DR Saucier / DBlack
VISUALLY INSPECT AIR COMPRESSOR FOR WATER, AIR OR OIL LEAKS	DR Swier / DBlack
PERFORM MANUAL AIR BRAKE TEST	DR Swier / DBlack
Verify Flow Gauge	NOTE: 120-130-140 main
130 main reservoir is 64 + or - 3, reservoir is 60 + 0	DR Swier / DBlack
PERFORM PENALTY BRAKE TEST	DR Saucier / DBlack
CHECK FOR CORRECT AIR PRESSURE SETTINGS:	OK
A. MAIN RESERVOIR (130 - 140 PSI)	DR Saucier / DBlack
B. BRAKE PIPE (90 PSI)	DR Saucier / DBlack
C. EQUALIZING RESERVOIR (90 PSI)	DR Saucier / DBlack
D. BRAKE CYLINDER (72 - 74 PSI)	DR Saucier / DBlack
E. COMPRESSOR CONTROL (130 - 140 PSI +/-5 PSI)	DR Saucier / DBlack
CHECK FLUID LEVELS BEFORE LOADING:	
A: ENGINE OIL	DR Saucier / DBlack
B: COOLING WATER	DR Saucier / DBlack
C: AIR COMPRESSOR OIL	DR Saucier / DBlack
TEST OPERATION OF THE FOLLOWING DEVICES:	
A. BELL	DR Saucier / DBlack
B. SANDERS (FORWARD, REVERSE, EMERGENCY)	DR Saucier / DBlack
C. RADIATOR SHUTTERS	

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

Revision Date: 06/26/2010  
 Issued By: Tim Scalia

ELECTRICAL IN HOUSE	WORKED BY:
SERVICE THE BATTERIES	DR Saucier
VERIFY EVENT RECORDER IS WORKING	
CHECK & RECORD THE DATE ON HEAD END DEVICE <u>7.9.10</u>	DR Saucier
CLOSELY INSPECT THE HEAD END DEVICE CONNECTOR. ENSURE IT IS TIGHTLY CONNECTED AND NOT CROSS THREADED	DR Saucier
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	
<b>TRACTION MOTORS AND UNDERFRAME</b>	
CHECK THE TRACTION MOTOR LEADS. VERIFY NO LEADS ARE RUBBING ON THE FRAME	DR Saucier, D Black
INSPECT TRACTION MOTOR COVERS AND ENSURE BOLTS ARE IN PLACE AND TIGHT	DR Saucier, D Black
CHECK M.U. RECEPTACLE PINS AND LIDS. MAKE NECESSARY REPAIRS	D Black
MAKE SURE M.U. CABLES DO NOT FOUL COUPLERS	DR Saucier

**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

N/A

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

DR Saucier

CHANGE THE FOLLOWING FILTERS AND ASSOCIATED GASKETS:

FUEL SPIN ON FILTERS. EMD ONLY

SOAK BACK FILTER. EMD ONLY

TURBO SPIN ON FILTER. EMD ONLY

X GE

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.

DR Saucier  
Not Perpetaline  
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

R. Black

CHECK SNOWPLOW (IF EQUIPPED) FOR HANDHOLDS AND PROPER DISTANCE

D. Black

CHECK AUTO BLOWDOWNS FOR PROPER OPERATIONS IN AUTOMATIC MODE

DR Saucier

ENSURE SUMP DRAINS ARE OPEN AND FREE OF DEBRIS

**TRUCKS**

INSPECT WICK BOLT SECUREMENT AND REPAIR IF NECESSARY

DR Saucier

CHECK SUSPENSION BEARING OIL LEVEL

D. Black

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

D. Black

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

D. Black

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

D. Black

# 1 TRACTION MOTOR: OIL USED

600 - 4 bags

D. Black

# 2 TRACTION MOTOR: OIL USED

600 4 bags

D. Black

# 3 TRACTION MOTOR: OIL USED

" "

D. Black

# 4 TRACTION MOTOR: OIL USED

" "

D. Black

# 5 TRACTION MOTOR: OIL USED

" "

D. Black

# 6 TRACTION MOTOR: OIL USED

" "

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.

DR Saucier See Defects

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

DR Saucier

CHECK HANDBRAKE AND INSPECT DATE. MAKE REPAIRS AS NECESSARY

DR Saucier

**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

DR Saucier See Defects

DRAIN RETENTION TANK

N/A

TOILET MAINTENANCE:

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

DR Saucier

INSPECT CAB SEATS. REPAIR AND LUBRICATE AS REQUIRED

DR Saucier

INSPECT AND REPAIR AS REQUIRED:

A. CAB / CARBODY/DOORS/HINGES/WINDOWS/LATCH SEALS/WEATHER STRIPPING AND SEALS/MIRRORS. ALSO LUBRICATE/CHANGE AS NEEDED

DR Saucier

A. CLEAN THE CAB, WINDOWS, AND EQUIPMENT

COMPLETE WINTERIZATION SHEET (SEPTEMBER-FEBRUARY)

WASH LOCOMOTIVE ENGINE/ENGINE ROOM/AND AIR COMPRESSOR ROOM

WASH THE LOCOMOTIVE

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

<i>Out-Bound Loadtest Electrical/Mechanical</i>		WORKED BY:
<b>ELECTRICAL</b>		
VERIFY THE OPERATION OF THE GROUND RELAY		J. Martin
CHECK FOR LOW VOLTAGE GROUNDS (7 watt bulb)		J. Martin
WHILE IN THROTTLE 3 LOAD TEST, CHECK FOR AC GROUNDS		J. Martin
CHECK OPERATION OF:		J. Martin
A. HEATING		J. Martin
COMPLETE THE OUTBOUND LOAD TEST SHEETS		
GROUND RELAY-(TEST THREE TIMES TO VERY LOCK-OUT)(DYNAMIC & POWER)		J. Martin
IF EQUIPPED, VERIFY THE OPERATION OF THE LDVR CAMERA		
<b>MECHANICAL</b>		
PROPER LUBRICATION? FUEL LEAKS? CAM ROLLER ROTATION? ETC.		OK
INSPECT FUEL SYSTEM HOSES AND PIPES FOR LEAKS		K. Hasey
INSPECT COOLING SYSTEM:		K. Hasey
A: CHECK HOSES AND PIPES FOR LEAKS		K. Hasey
CHECK OPERATION OF ENGINE PROTECTION DEVICES:		
A. CRANKCASE PRESSURE		K. Hasey
VISUALLY INSPECT AIR COMPRESSOR FOR WATER, AIR OR OIL LEAKS		K. Hasey
PERFORM MANUAL AIR BRAKE TEST		K. Hasey
Verify Flow Gauge		
130 main reservoir is 64 + or - 3,	NOTE: 120-	
reservoir is 60 + o	130-140 main	
PERFORM PENALTY BRAKE TEST		
CHECK FOR CORRECT AIR PRESSURE SETTINGS:		
A. MAIN RESERVOIR (130 - 140 PSI)		K. Hasey
B. BRAKE PIPE (90 PSI)		K. Hasey
C. EQUALIZING RESERVOIR (90 PSI)		K. Hasey
D. BRAKE CYLINDER (72 - 74 PSI)		K. Hasey
E. COMPRESSOR CONTROL (130 - 140 PSI +/-5 PSI)		K. Hasey
CHECK FLUID LEVELS BEFORE LOADING:		
A: ENGINE OIL		OK - K. Hasey
B: COOLING WATER		
C: AIR COMPRESSOR OIL		Good - K. Hasey
TEST OPERATION OF THE FOLLOWING DEVICES:		
A. BELL		K. Hasey
B. SANDERS (FORWARD, REVERSE, EMERGENCY)		
C. RADIATOR SHUTTERS		



UNIT \_\_\_\_\_

DATE \_\_\_\_\_

## Service Operations

### THROTTLE 8 OUTBOUND LOAD TESTS

Eng RPM (900)	EMD	<u>          </u>	Lube Oil Pres	<u>70 LB</u>
Eng RPM (1050)	GE	<u>1050</u>	Water Temp	<u>170</u>
Horsepower		<u>2840</u>	Overspeed Setting	<u>1050</u>
Volts (5.3)	B-23	<u>          </u>	RACK SETTING	<u>19.5</u>
Volts (7)	C-30	<u>6.7</u>		
Volts (720)	B-39	<u>          </u>		

### THROTTLE #1 STALL TEST

OP Mode	(PWR)	<u>Notch 1</u>	
AMPS	(300)	<u>250</u>	
MGA	(1220)	<u>          </u>	NOT APPLICABLE TO B-23 AND C-30
Charging Rate	(70v)	<u>73.8</u>	

### TL 24T

Throttle 1	(1V)	<u>10.4</u>
Throttle 2		<u>20.8</u>
Throttle 3		<u>22.5</u>
Throttle 4		<u>36.4</u>
Throttle 5		<u>50.2</u>
Throttle 6		<u>61.1</u>
Throttle 7		<u>69.1</u>
Throttle 8	(72V)	

ATT Billy  
R#6 Wick Box Cracked

LOCOMOTIVE										DATE				
5024										7-9-10				
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	1.11	1.09	3.16			✓	L#1							0-on 0-1-17/64"
L#2	1.10	1.10	3.14			✓	L#2							1-on 0-1-15/64"
L#3	1.07	1.08	3.16			✓	L#3							2-on 0-1-7/32"
L#4	1.08	1.08	2.26			✓	L#4							3-on 0-1-5/32"
L#5	1.10	1.09	3.16			✓	L#5							4-on 0-1-7/64"
L#6	1.09	1.08	3.22			✓	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	1.10	1.09	3.16			✓	R#1							
R#2	1.10	1.09	3.14			✓	R#2							
R#3	1.06	1.07	3.16			✓	R#3							
R#4	1.06	1.07	2.26			✓	R#4							
R#5	1.10	1.10	3.16			✓	R#5							
R#6	1.09	1.08	3.22			✓	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 1/2"	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 1/2"	MMA 1 7/16"	MMA 1"	MMA 1 1/4"	MMA 1/2"

CONVERSION CHART FOR WHEEL DIAMETER

8= 37"	15= 37 7/8"	22= 38 1/2"	29= 39 5/8"	36= 40 1/2"
9= 37 1/8"	16= 38"	23= 38 7/8"	30= 39 3/8"	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"	5	FRA MIN 2 1/2"
MMA	MAX 34 1/2" MIN 32 1/2"	MMA	MAX 6" MIN 3 1/2"	5	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)

3/4" 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 1/4" 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 1/2" SHIM EMD PART NUMBER 9455961 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

*D. Black*

SUPERVISORS SIGNATURE



David Black

Unit: 5026

Date: 7-9-10

DEFECTS FOUND DURING INSPECTION

DEFECT	Carbody Fire extinguisher expired	INSPECTED BY:
		DR Saucier
REPAIR	Replaced	CORRECTED BY:
		DR Saucier

DEFECT	Engine coolant low	INSPECTED BY:
		DR Saucier
REPAIR	filled system	CORRECTED BY:
		DR Saucier

DEFECT	No rust inhibitor in engine coolant	INSPECTED BY:
		DR Saucier
REPAIR	Added 1 box	CORRECTED BY:
		DR Saucier

DEFECT	Gov. Water diaphragm leaking coolant	INSPECTED BY:
		DR Saucier
REPAIR	1/0 Diaphragm	CORRECTED BY:
		DR Saucier

DEFECT	Toilet is not too good	INSPECTED BY:
		DR Saucier
REPAIR	Dumped cleaned & Refilled	CORRECTED BY:
		DR Saucier

Unit: 5024

Date: 7-9-10

DEFECTS FOUND DURING INSPECTION

DEFECT <u>#2 TM Ground lead Books</u> <u>Fixed lug</u>	INSPECTED BY: <u>DRH</u> <u>DRH</u>
REPAIR <del>#6 R-side wick box cracked</del>	CORRECTED BY:

DEFECT <u>Front draft gear Bushing dropped</u> <u>Repaired</u>	INSPECTED BY: <u>D. Black</u>
REPAIR <u>Rear draft gear Bushing dropped</u> <u>Repaired</u>	CORRECTED BY: <u>D. Black</u>

DEFECT <u>Left + Right Sander Rear need alignment</u> <u>+ New Nozzles</u>	INSPECTED BY: <u>D. Black</u>
REPAIR <u>Repaired New Nozzles</u>	CORRECTED BY: <u>D. Black</u>

DEFECT <u>R-20ly Brake line loose cly</u>	INSPECTED BY: <u>D. Swier</u>
REPAIR <u>reighted</u>	CORRECTED BY: <u>D. Black</u>

DEFECT <u>Low Horsepower</u>	INSPECTED BY: <u>DR Swier</u>
REPAIR <del>#6 R-side wick box cracked</del>	CORRECTED BY:

# Description of Work Performed

Locomotive ID

5026

Time Started

\_\_\_\_\_

Time Finished

\_\_\_\_\_

repaired - welded both front and rear lushing. D. Black  
repaired ground strap #2 TM Dave Sancier now emb replace  
water and treatment Dave Sancier

#6 wick box cracked in to places  
Took wick box off from T-Motor - washed  
then weld both cracks - ~~repaired~~ in salt  
added new oil - put wick back in -  
repaired plug. H. Hasey



