



M 12

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

I have reviewed the work packet for locomotive 5016 on this date 2-23-12 and take no exception to applicable laws, rules and or MMA standards, policies and standards.

Oil sample - *Placé*
Replaced Salem Filters - *Placé*
Greased - Equipment Housed
" - Comp shaft
" - Cooling fan



B-23, B-39, C-30, GP-7 M12 MAINTENANCE

In-Bound Or Running Electrical

WORKED BY:

ELECTRICAL

SWITCH ENGINES DO NOT GET LOAD BOXED ON THE INBOUND, THEY ONLY GET LOAD BOXED ON THE OUTBOUND INSPECTION

COMPLETE BATTERY MAINTENANCE

DOWNLOAD & TEST EVENT RECORDER SYSTEM,

VERIFY COOLING FAN OPERATION

CHECK INERTAL BLOWER OPERATION

PERFORM ALL LOCOMOTIVE SELF TEST FUNCTIONS

B. CHECK FOR AC GROUNDS IN COOLING FAN CIRCUIT WITH TEST LIGHT (30 watt bulb)

CHECK OPERATION OF 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/AIR CONDITIONING UNIT

[Handwritten signatures]

-NA-

[Handwritten signature]

[Handwritten signature]

In-Bound Or Running Mechanical

WORKED

CHECK FOR PROPER LUBRICATION AND CAM ROLLER ROTATION

VISUALLY INSPECT AIR COMPRESSOR FOR WATER, AIR OR OIL LEAKS

PERFORM MANUAL AIR BRAKE TEST AND PENALTY BRAKE TESTS

PERFORM AIR BRAKE SELF TEST

CHECK FOR WATER LEAKS

CHECK FOR OIL LEAKS

CHECK FOR FUEL LEAKS

CHECK FOR EXHAUST LEAKS

CHECK FOR VERIFY CLEAR STACK

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

- EVENT RECORDER NOT SHOWING SPEED - *[Handwritten]* Fixed 3/27/17 *[Signature]*

- Batterys at 66.5 V at the switch -

Forward Battery at 33.1V

Hydrometer →	1.14	- 0 -	1.28	1.18
	1.22	1.27	1.28	1.22
	1.28	1.28	1.28	1.28
	1.22	1.22	1.28	1.28

[Handwritten signature]

Rear battery at 33.4V

Hydrometer →	1.28	1.28	1.22	1.22
	1.22	1.28	1.22	1.28
	1.28	1.28	1.22	1.28
	1.22	1.28	1.28	1.28

[Handwritten signature]

Camfil Farr# 359487000 - Clark# CMAX-14K-38**EMD FILTER CHANGE OUT KIT**

Qty ea	CF#	Application
8	400616-1	FUEL LUBE FILTER
1	400616001	Primary Fuel Filter
2	114271-1	FUEL FILTER ELEMENT
1	12233-18	Air Compressor Intake Filter PAMIC FILTER P16
1	114272-1	Air Compressor lube Filter LUBE OIL FILTER
1	352214	Gasket Primary Fuel 8.03"OD
1	352215	Gasket Fuel Strainer 3.52" OD

Camfil Farr PN 359488000 - Clark# CMAX-09K**GE FILTER CHANGE OUT KIT**

Qty ea	CF#	Application

B-23, B-39, C-30, GP-7 M12 MAINTENANCE		
CHECK THE FOLLOWING EQUIPMENT AND THEIR RELATED GUARDS AND LENSES FOR PROPER OPERATION:		
INSPECT BOTH STARTER SERIAL NUMBERS. IF ANY STARTER IS WITHIN 3 MONTHS OF BEING 3 YEARS OLD, PLEASE CHANGE THE STARTER. TOP STARTER SN _____ BOTTOM STARTER SN _____ DID EITHER STARTER GET REPLACED? YES NO		-NA-
APPLY A THIN COAT OF THE SAE NO. 10 OIL TO THE FOLLOWING STARTER COMPONENTS		-NA-
A. ARMATURE SHAFT SPLINES		-NA-
B. CLUTCH ASSEMBLY SPIRAL SPLINES AND MATING GEAR SPLINES		-NA-
FRONT AND REAR HEADLIGHTS, DITCH LIGHTS, CAB LIGHTS, GAUGE LIGHTS, NUMBER PLATES, PLATFORM LIGHTS, ENGINE ROOM LIGHTS, INDICATOR LIGHTS		[Signature]
CHECK CONTROLLER FOR PROPER OPERATION OF REVERSER AND THROTTLE HANDLE LOCKING DEVICES		[Signature]
CHECK EMERGENCY FUEL SHUT-OFF FROM ALL LOCATIONS		[Signature]
TRACTION MOTORS AND UNDERFRAME		
INSPECT AXLE GENERATOR AND ENSURE ALL COVER BOLTS ARE IN PLACE AND TIGHT		[Signature]
CLEAN AND CHECK THE TRACTION MOTOR LEADS, CLAMPS, VERIFY NO LEADS ARE RUBBING ON THE FRAME		[Signature]
CHANGE ANY TRACTION MOTOR BRUSH WITH LESS THAN 50% LIFE LEFT	20422161(D87) 20426671(D78)	16 12
INSPECT TRACTION MOTOR COVERS AND ENSURE BOLTS ARE IN PLACE AND TIGHT		[Signature]
ENSURE TRACTION GROUND WIRES ARE IN PLACE AND PROPERLY SECURED		[Signature]
CLEAN FACE PLATE ON RADAR TRANSCEIVER		-NA-
CHECK M.U. RECEPTACLE AND LIDS. MAKE NECESSARY REPAIRS		[Signature]
MAKE SURE M.U. CABLES DO NOT FOUL COUPLERS		-NA-

C/O All Brushes TM #3 - [Signature]
C/O Aux-cab filter - [Signature]

B-23, B-39, C-30, GP-7 M12 MAINTENANCE



In-House Or Dead Mechanical

Part #

Q
T
Y

WORKED BY

SECTION 1 (ANNUAL ITEMS)

WITH ENGINE WARM, COMPRESSION TEST THE ENGINE AND RECORD READINGS:

CYL#1 _____	CYL#9 _____
CYL#2 _____	CYL#10 _____
CYL#3 _____	CYL#11 _____
CYL#4 _____	CYL#12 _____
CYL#5 _____	CYL#13 _____
CYL#6 _____	CYL#14 _____
CYL#7 _____	CYL#15 _____
CYL#8 _____	CYL#16 _____

WITH ENGINE WARM, PRESSURE TEST COOLING SYSTEM AT 20 PSI AND INSPECT THE ENTIRE COOLING SYSTEM FOR LEAKS

PERFORM CRANKCASE INSPECTION WHILE BARRING THE ENGINE OVER, PAY CAREFUL ATTENTION FOR BROKEN RINGS AND/OR "JUMPING" RODS INDICATING THRUST WASHER WEAR
INSPECT PISTON COOLING TUBES (EMD ONLY)

TAKE THRUST WASHER SNAP RING READINGS. FILL OUT THRUST WASHER SHEET. (USE JSP-001 FOR GUIDANCE)

INSPECT WATER MANIFOLD SADDLE STRAPS BETWEEN 4&5 AND 12&13 PA'S FOR PROPER SECUREMENT (EMD ONLY)

INSPECT AIR BOX; CLEAN AS NECESSARY

INSPECT TOP DECK COVERS, SEALS AND LATCHES. REPLACE AS NECESSARY

INSPECT TURBOCHARGER EXHAUST SCREEN AND EXPANSION JOINT. IF ANY DEBRIS IS FOUND IN THE TRAP, INVESTIGATE FOR A DROPPED VALVE AND REMOVE TURBO SCREEN AND INSPECT THE TURBO FOR DAMAGES BLADES.

20402961 1

INSPECT ALL EXHAUST MANIFOLDS, EXPANSION JOINTS AND HEAT SHIELDS FOR DEFECTS AND SECUREMENT.

REMOVE AND CLEAN EDUCTOR TUBE AND STACK OUTLET AND REPLACE GASKETS

20434861 1

REMOVE AND CLEAN ENGINE OIL SEPARATOR. REPLACE GASKET (EMD ONLY)

VARIES

VERIFY SOAKBACK PUMP OPERATION AT #16 OIL PAN COVER (EMD ONLY)

PULL MICHIANA TANK AND SUCTION BOX DRAIN (IF CRANKCASE AND AIRBOX PASS INSPECTION) (EMD ONLY)

INSPECT AFTERCOOLER DUCTS FOR LOOSE/MISSING BOLTS (60 FT LBS)

REPLACE FLEXIBLE COUPLING SEALS IN COOLING AND LUBE OIL SYSTEM

LUBRICATE RADIATOR SHUTTER LINKAGES AND CYLINDERS

REPLACE THE BELL VALVE

20423521 1

INSPECT AIR COMPRESSOR SHAFT COUPLINGS (FOR THOSE UNITS WITH SHAFT DRIVEN AIR COMPRESSORS)

CLEAN AIR COMPRESSOR UNLOADER VALVES AND REPLACE UNLOADER VALVE "O" RINGS

Inspect rocker arms, rocker arm bushings and cam followers

SECTION 2

CHANGE / INSPECT / CLEAN:

CHANGE HVAC FILTERS IF APPLICABLE

INTAKE FILTER(ONLY AFTER HVAC IS WASHED)

REPLACE "BAGGIE" AIR FILTERS AND VISUALLY INSPECT TURBO IMPELLER AND EXAMINE CHAMBER FOR DEBRIS AND CRACKS

PRIMARY, SECONDARY FUEL FILTERS & O RING SEALS

FUEL STRAINERS & O RING SEALS

FUEL BY-PASS GAUGE (INSPECT ONLY)

CHANGE SOAKBACK FILTER AND RENEW O RING SEALS

CHANGE TURBO FILTER AND RENEW O RING SEALS

REMOVE PRIMARY LUBE OIL FILTER BYPASS VALVE AND CLEAN

CHANGE ENGINE LUBE OIL FILTERS

RENEW MICHIANA O RING SEAL AND CLEAN MICHIANA FILTER HOUSING

20409081 1

20410471(sw)

CLEAN LUBE OIL STRAINERS AND STRAINER BOX. REFRESH OIL

REFERENCE ATTACHED
FILTER KIT LIST

J. Hays

K. Hays
D. Hays

Change fuel filter - K. Hays
" out Comp filter - K. Hays

B-23, B-39, C-30, GP-7 M12 MAINTENANCE

SECTION 3

COMPLETE FRA INSPECTION		J.P. Woodie
INSPECT ALL TRAINLINE BRAKE VALVES		J.P. Woodie / K. Hussey
COMPLETE WHEEL REPORT SHEET		J.P. Woodie
CHECK FOR BROKEN COIL SPRINGS & LATERAL PADS		J.P. Woodie
INSPECT VERTICAL AND YAW DAMPERS FOR LEAKS AND SIGNS OF BUSHING DETERIORATION.		J.P. Woodie
CHECK AND LUBRICATE COUPLER CARRIER		J.P. Woodie
INSPECT AND REPLACE BRAKE SHOES AS NECESSARY (40012998)		J.P. Woodie
CHECK BRAKE CYLINDER TRAVEL		J.P. Woodie / K. Hussey
MAKE PIT INSPECTION OF LOCOMOTIVE UNDERCARRIAGE		J.P. Woodie / K. Hussey
INSPECT WICK BOLT SECUREMENT AND REPAIR IF NECESSARY		J.P. Woodie / K. Hussey
CHECK SUSPENSION BEARING OIL LEVEL		J.P. Woodie
CHECK JOURNAL BOX OIL LEVEL		J.P. Woodie
CHECK OIL FILLED GEAR CASES AND FILL		J.P. Woodie / K. Hussey
CHECK GEAR CASES AND INSPECT BULL GEAR (ADD 3lbs. OF GEARCASE GREASE		J.P. Woodie / K. Hussey
SUSPENSION BEARING BOXES		J.P. Woodie / K. Hussey
TRACTION MOTOR AIR DUCTS		J.P. Woodie / K. Hussey
NOSEPADS, BINDERS, PEDESTAL JAWS AND LINERS, ROLLER BEARING BOXES AND BOLTS		J.P. Woodie
BRAKE CYLINDERS		J.P. Woodie
INITIAL BY APPROPRIATE TYPE (SWITCHER: 6 In ROAD: 8 In		J.P. Woodie
ELLIPTIC SPRINGS, HANGERS AND SAFETY STRAPS, BOLSTER WEAR PLATES, BOLSTER		J.P. Woodie / K. Hussey
SUPPORT PADS AND TIE PADS		J.P. Woodie / K. Hussey
INSPECT ALL BRAKE HANGERS, HEADS, GUIDES AND STRAPS INSURING BRAKE SHOES ARE IN		J.P. Woodie / K. Hussey
LINE WITH WHEELS		J.P. Woodie
INSPECT SIDE BEARINGS AND REPAIR AS NEEDED		J.P. Woodie
CHECK KNUCKLE CLEARANCE AND KNUCKLE THROWER, MAKE REPAIRS AS NEEDED AND APPLY		J.P. Woodie
SPARE KNUCKLES (E AND F TYPE)		J.P. Woodie
INSPECT, TEST, LUBRICATE HAND BRAKE, NOTE SERVICE DATE ON BLUE CARD		J.P. Woodie
SECTION 4		
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		J.P. Woodie
DRAIN RETENTION TANK		J.P. Woodie
TOILET MAINTENANCE:		J.P. Woodie
INSPECT/REPAIR AS NEEDED TOILET DRAIN VALVE & FLOOR SEALS		J.P. Woodie
INSPECT CAB SEATS. REPAIR AND LUBRICATE AS REQUIRED		J.P. Woodie
INSPECT AND REPAIR AS REQUIRED:		J.P. Woodie
CAB / CARBODY/DOORS/HINGES/WINDOWS/LATCH SEALS/WEATHER STRIPPING AND		J.P. Woodie
SEALS/MIRRORS. ALSO LUBRICATE AS NEEDED		J.P. Woodie
A. CLEAN THE CAB, WINDOWS, AND EQUIPMENT		J.P. Woodie
COMPLETE WINTERIZATION SHEET (AUGUST - APRIL)		
WASH LOCOMOTIVE ENGINE/ENGINE ROOM/AND AIR COMPRESSOR ROOM		
WASH THE LOCOMOTIVE		
TOTAL TASK TIME		minutes
		hours

Filled fr. of rear sand boxes.



B-23, B-39, C-30, GP-7 M12 MAINTENANCE

LOCOMOTIVE INSPECTION REPORT AIR99		SIGNATURE
	RECORDED DATE	(STENCIL DATE)
26 INDEPENDENT BRAKE VALVE		
26 C AUTOMATIC BRAKE VALVE		
HB5D RELAY AIR VALVE (NOTE IF		
26 F CONTROL VALVE		
A-1 CHARGING VALVE		
P-2-A PENALTY BRAKE APPLICATION		
F-1 SELECTOR VALVE (NOTE IF NOT		
MU2A VALVE		
J-1 RELAY AIR VALVE		
J-1.6-16 RELAY AIR VALVE		
QUICK RELEASE PORTION		
#8 VENT ENGINEER'S SIDE (NOTE IF		
#8 VENT FIREMAN'S SIDE (NOTE IF		
MAIN RESERVOIR POP VALVE Check		
CHANGE ALL MAIN RESERVOIR AND DIRT COLLECTOR ELEMENTS		

The equipment above is to be changed out every 24 months. If the date dictates it needs changed, please change it.

Replaced Both Salem Air Filters - T. Bloodie

MMA 5016

2-23-12

Main Alternator

Pos	Brush
3	
2	OK
1	
12	OK
11	
10	OK

#1 TM

Pos	1	2	3
3			
6		OK	
9			
12		OK	

#2 TM

Pos	1	2	3
3			
6		OK	
9			
12		OK	

#3 TM

Pos	1	2	3
3	X	X	X
6	X	X	X
9	X	X	X
12	X	X	X

#4 TM

Pos	1	2	3
3			
6		OK	
9			
12			OK

Fuel Pump

3		
9		OK

Aux Gen

Pos	1	2	3
2		OK	OK
4	X	X	X
8			
10		OK	OK

#5 TM

Pos	1	2	3
3			
6		OK	
9			
12		OK	

#6 TM

	1	2	3
3			
6		OK	
9			
12		OK	

Exciter Gen

Pos	1	2	3
2			
4		OK	
8			
10		OK	

Montreal, Maine, & Atlantic Railway
Mechanical Department

5016

Unit Number. Budd

Date 2-23-12
1-17-10

1. Inspect traction motor wicks and report action

#1.	Good	Good	... TP Goodie
#2.	Good	Good	... TP Goodie
#3.	Good	Good	... TP Goodie
#4.	GOOD	GOOD	... K. Hazy
#5.	DRAINED wick in		... wheel coming out
#6.	GOOD	GOOD	... K. Hazy

5. Crack box, possible brass broke
(Support ARM BOX)

wicks / DRAINED & rewired & filled
up with 100 LB oil

Todd Goodina

K. Hazy

5016

Unit: 5016

Date: 2-23-12

DEFECTS FOUND DURING INSPECTION

DEFECT	Engineer seat missing swivel bolt on seat post	INSPECTED BY:	J. P. Goodie
REPAIR	Replaced bolt	CORRECTED BY:	J. P. Goodie

DEFECT	Engineers Fr. wiper blade/Adj rod bad	INSPECTED BY:	J. P. Goodie
REPAIR	Replaced rod with good used one - put on new swivel joint ends to	CORRECTED BY:	J. P. Goodie

DEFECT	Handbrake wheel loose - missing lock washer Event Recorder not showing speed - B-O connector @ Axel Alt - OK	INSPECTED BY:	J. P. Goodie
REPAIR	Replaced lock washer - Tight now No B-O connector at Axel Alt - OK	CORRECTED BY:	J. P. Goodie

DEFECT	Aux cab filter unchanged in 18 months - Excessive rust deposits in Aux-CAB filter cabinet missing bolts on filter plate -	INSPECTED BY:	J. P. Goodie
REPAIR	Cleared rust deposits w/ shop vac - replaced missing filter plate bolts - Knocked loose rust scale off floor cover -	CORRECTED BY:	J. P. Goodie

DEFECT	L-Bank Diode Row 7 far Left red sleeve diode B-O far Right contactor point on WSR arc - pitted & slagged -	INSPECTED BY:	J. P. Goodie
REPAIR	Modified Modified 1 1/4" socket to remove old B-O diode - installed new red sleeve diode - tested OK Cleared slag + wear with small file	CORRECTED BY:	J. P. Goodie



Service Operations

THROTTLE & OUTBOUND LOAD TESTS

UNIT 5016

DATE 2-23-12

Eng RPM (900)	EMD	_____	Lube Oil Pres	<u>125 lbs</u>
Eng RPM (1050)	GE	_____	Water Temp	<u>170°F</u>
Horsepower		<u>2728</u>	Overspeed Setting	_____
Volts (5.3)	B-23	_____	RACK SETTING	_____
Volts (7)	C-30	<u>6.45</u>		
Volts (720)	B-39	_____		

THROTTLE #1 STALL TEST

OP Mode	(PWR)	_____	NOT APPLICABLE TO B-23 AND C-30
AMPS	(300)	_____	
MGA	(1220)	_____	
Charging Rate	(70v)	<u>93.7</u>	

TL 24T

Throttle 1	(1V)	_____
Throttle 2		_____
Throttle 3		_____
Throttle 4		_____
Throttle 5		_____
Throttle 6		_____
Throttle 7		_____
Throttle 8	(72V)	_____

- Fuel leak @ L7 injector - *[Signature]* - - Replaced inj. K. Hassey

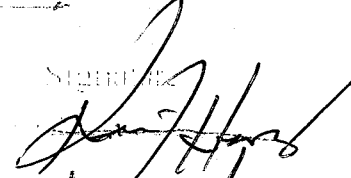
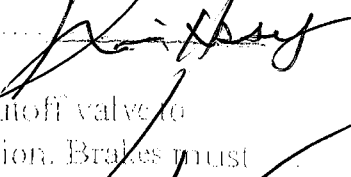

- Exhaust leak @ L3-L4 - *[Signature]* - Replaced bolt, tightened the rest - K. Hassey

Unit 5016

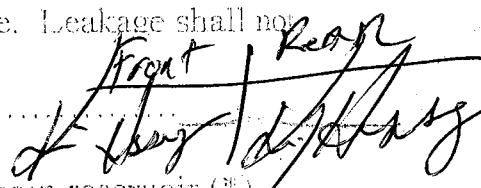
Date 2-27-12

3 Month Federal Air Work

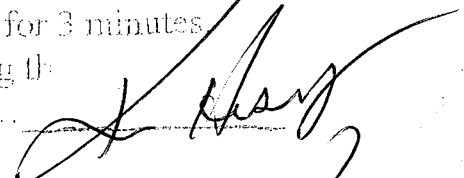
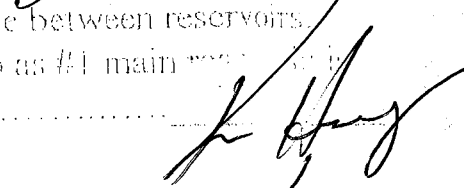
- 1. Inspect and repair all piping and valves for leaks.
- 2. Test all air gauges with gauge tester and set if required.
- 3. With full brake pipe pressure, make a 20lb. reduction, move the cutoff valve to "OUT" position and move the lead - dead valve to "DEAD" position. Brakes must remain applied for 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 cut off valve to "OUT" position and check for brake pipe leakage. Leakage shall not exceed 5 lb. per minute.

Signature




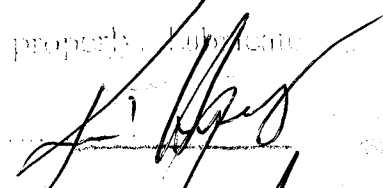
5. Reduce main reservoir pressure to 85 lbs. by draining #2 main reservoir. (*) Check cab gauge for leakage from main reservoirs and piping for 3 minutes. Leakage must not exceed an average of 3 lb. per minute during the test.

Front / Rear


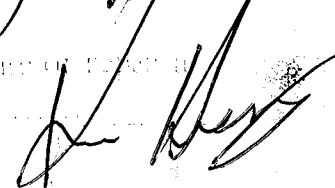
6. Drain #1 main reservoir (*) completely and test check valve between reservoirs. Pressure should remain on the main reservoir gauge in the cab as #1 main reservoir is drained.

7. Check all M/V valve handles to ensure the locking device work properly. Lubricate or replace as necessary.



8. Check handbrake thrower to make sure it is in the hand held position or travel as necessary.



Note: (*) Main reservoir drain without the check valves 2 is with the check valve.

9 test AND CALABRO'S Air Flow Meter

2-23-12
5016

ELECTRICAL DEFECTS FOUND DURING INSPECTION

DEFECT <u>RR snubber shocks missing on Rear track (2)</u>	INSPECTED BY: <u>TP Goodie</u>
REPAIR <u>Not made for that type of rubber boot</u>	CORRECTED BY: <u>[Signature]</u>

DEFECT <u>Several Exc. piston travels</u>	INSPECTED BY: <u>TP Goodie</u>
REPAIR <u>Adj. All piston travel (2")</u>	CORRECTED BY: <u>TP Goodie</u>

DEFECT <u>Rear Draft pin bushing Dropped down</u>	INSPECTED BY: <u>TP Goodie</u>
REPAIR <u>WELDED</u>	CORRECTED BY: <u>David Black</u>

DEFECT <u>Engine Room very oily - needs to be washed</u>	INSPECTED BY: <u>TP Goodie</u>
REPAIR	CORRECTED BY:

DEFECT <u>Injector/pump leaking fuel</u>	INSPECTED BY: <u>TP Goodie</u>
REPAIR <u>change nozzle & blew out AIR way</u>	CORRECTED BY: <u>[Signature]</u>

DEFECT <u>Several loose bolts on Exhaust sections</u>	INSPECTED BY: <u>TP Goodie</u>
REPAIR <u>Tighten all</u>	CORRECTED BY: <u>[Signature]</u>

2-23-12
5016

ELECTRICAL DEFECTS FOUND DURING INSPECTION

DEFECT	#1 Gear Case bolt loose	INSPECTED BY:	K. Hays
REPAIR	Tighten bolt	CORRECTED BY:	K. Hays

DEFECT	#5 crack wick box & Condensing Flanges Cracked brass	INSPECTED BY:	K. Hays
REPAIR	LF/RR SAND PIPE LOOSE IN CLAMP	CORRECTED BY:	

DEFECT	LF/RR SAND PIPE LOOSE IN CLAMP	INSPECTED BY:	T. P. Goodrich
REPAIR	LF/RR SAND PIPE LOOSE IN CLAMP repair	CORRECTED BY:	K. Hays

DEFECT	L1 TOP G-CASE BOLT LOOSE	INSPECTED BY:	T. P. Goodrich
REPAIR	Tighten bolt	CORRECTED BY:	K. Hays

DEFECT	R1 / L1 BRAKE cyl. INSIDE BOLT WORN THROUGH BUSHING	INSPECTED BY:	T. P. Goodrich
REPAIR	OK	CORRECTED BY:	P. Duffy

DEFECT	R3 G-Case half bolt is loose	INSPECTED BY:	T. P. Goodrich
REPAIR	Tighten bolt	CORRECTED BY:	K. Hays

LOCOMOTIVE											DATE			
5016											2-23-12			
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	0-19	0-0	1.10				L#1							0-on 0--1-17/64"
L#2	0-18	0-0	1.12				L#2							1-on 0--1-15/64"
L#3	0-18	0-0	2.10				L#3							2-on 0--1-7/32"
L#4	0-18	0-0	1.7				L#4							3-on 0--1-5/32"
L#5	1 1/2	0-0	1.6				L#5							4-on 0--1-7/64"
L#6	0-21	0-0	1.12				L#6							5-on 0--1-3/64"
														6-on 0--1-1/32"
														7-on 0--3/64"
														8-on 0--15/16"
														OLD GAUGE
R#1	0-19	0-0	1.10				R#1							FLANGE HEIGHT MEASUREMENT
R#2	0-18	0-0	1.12				R#2							0-on 0--1"
R#3	0-18	0-0	2.12				R#3							0-on 1--1-1/16"
R#4	0-18	0-0	1.8				R#4							0-on 2--1-1/8"
R#5	2-23	0-0	1.8				R#5							0-on 3--1-3/16"
R#6	0-21	0-0	1.13				R#6							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 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

See defect sheet

NEW GAUGE

0-on 17--1-11/16"
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"
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 1/2"	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 1/2"

side bearing clearance
 RF 1/4 LF 3/16
 RR 1/8 LR 1/8
 T. Hoodie

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--3/64"
8-on 0--15/16"

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 3/4"	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"	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"	3	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 1/4" 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 FIGURE'S

REMEMBER THIS RULE

5 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 REQUIRE'S WHEEL CHANGE OR TRUED NOTE: ON EMD LOCOMOTIVES USE ONLY ONE 'X' SHIM EMD PART NUMBER 3455981 SHELLED TREAD AND FLAT SPOTS MUST BE TRUED OR CHANGED WHEN FOUND ON PERIODIC, OR UNSCHEDULED MAINTENANCE. YES 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]



Manufacturer is QEI Version # S45E
Serial Number is 0204090088
Customer is MMR

Data was removed on - 07:53:22 on 02/23/12
Last Downloaded on - 10:21:00 on 11/15/11
Battery was installed on - 09/08/04
Locomotive Number is - 5016

Downloaded by - *Stupakowicz*
Location - DERBY,MAINE,us
Train - MMA#1
Wheel Size Entry - 39
Wheel Size used by program:
Circumference = 122.5 Diameter = 39.0
No memo present.

Wheel size used for printout is 122.52

QDP Version V



Quantum Desktop Playback
Data Scan Report

Report Date: 02-23-2012
Locomotive 5016

Data Removed on 02-23-12

SPEED (MPH)	Never above 20.
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	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



UNIT _____

DATE _____

Service Operations

THROTTLE 8 OUTBOUND-LOAD TESTS

Eng RPM (900)	EMD	_____	Lube Oil Pres	<u>125 lbs</u>
Eng RPM (1050)	GE	_____	Water Temp	<u>171 °F</u>
Horsepower		<u>2720</u>	Overspeed Setting	_____
Volts (5.3)	B-23	<u>6.4</u>	RACK SETTING	<u>21.5</u>
Volts (7)	C-30	<u>6.4</u>		
Volts (720)	B-39	_____		

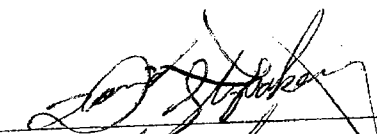
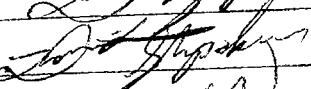
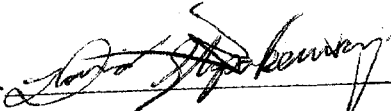
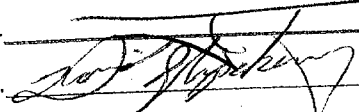
THROTTLE #1 STALL TEST

OP Mode	(PWR)	_____	
AMPS	(300)	_____	
MGA	(1220)	_____	NOT APPLICABLE TO B-23 AND C-30
Charging Rate	(70v)	<u>73.1</u>	

Montreal, Maine and Atlantic Railway
12 Month Airwork

Unit Number 5018

Date 2-25-12

1. Test resistance of Electrical Equipment to Ground:
 - a. Hi Voltage System..... 250K Ω @ 500V 
 - b. Low Voltage System..... 
 - c. A/C System..... -NA-
 2. Check Fire Extinguisher..... TPloodie
 3. Lubricate Brake Pistons..... K. Hussel
 4. Measure slack in draft gears & record: Front 3/8 Rear 1/2 TPloodie
 5. Change Main Reservoir Relief Valve.....
 6. Remove and clean Salem Filters..... TPloodie
 7. Remove and clean Dirt Filter.....
 8. Check Compressor on/off pressures..... 132-142 TP6
 9. Check Brake Pipe pressures (90lbs.)..... TPloodie
 10. Check Brake Cylinder Pressure with Auto Application..... 72 psi
 11. Check Independent Brake Pressure..... TPloodie
 12. Cut out Compressor Unloader and test Main Reservoir Relief Valve.
(Should pop @ 155psi)..... TPloodie
 13. Inspect and test Hand Brake..... J. Harts
 14. Change Air Compressor oil and Filter (wipe out base)..... J. Harts
 15. Inspect Air Compressor Rod Bolts, Brgs., and Oil Pump... J. Harts
 16. Check Oil pressure @ idle and record.....
 17. Change Oil in Dash 7:
 - a. Alternator..... 
 - b. Fan Drive.....
 18. Check Engine Adjustments.....
 19. Clean Air Boxes.....
 20. Clean Diode Bank in Dash 8's + 7's..... 
- Comments: