

1103



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

I have reviewed the work packet for locomotive 5018 on this date 9-9-12 and take no exception to applicable laws, rules and or MMA standards, policies and standards.

6.9 hp.

Oil sample ~~Handwritten signature~~

Grease: Equipment blower -
Cooling fan -
Comp shatt-
Grease
Handwritten signature

~~Handwritten signature~~
Handwritten signature

Service Operations

DATE _____

THROTTLE & OUTBOUND LOAD TESTS

Time	_____	_____	_____
Throttle Position	_____	_____	Water Temp _____
Throttle	_____	_____	Overhead Temp _____
Throttle	_____	_____	Water Temp _____
Throttle	_____	_____	
Throttle	_____	_____	
THROTTLE & OUTBOUND LOAD TESTS			
AMPS	_____	_____	
MPH	_____	_____	NOT APPLICABLE TO B-03 AND C-03
Charging Rate	(75%)	_____	

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	<i>J. Bondi</i>
B. RADIO AND ANTENNA	<i>J. Bondi</i>
C. AXLE ALT. SPEEDO	<i>J. Bondi</i>
D. MU ENGINE SHUTDOWN	
E. FUEL CUT-OFF	<i>J. Bondi</i>
F. TEST WARNING DEVICES	<i>J. Bondi</i>
MECHANICAL	
CLEAN AND SERVICE TOILET AND RESTROOM	<i>J. Bondi</i>
DRAIN RETENTION TANK	<i>J. Bondi</i>
PROPER LUBRICATION? FUEL LEAKS? CAM ROLLER ROTATION? ETC.	
INSPECT FUEL SYSTEM HOSES AND PIPES FOR LEAKS	<i>J. Bondi</i>
INSPECT COOLING SYSTEM:	<i>J. Bondi / S. Suddsbury</i>
A: CHECK HOSES AND PIPES FOR LEAKS	<i>J. Bondi / S. Suddsbury</i>
CHECK OPERATION OF ENGINE PROTECTION DEVICES:	
A. CRANKCASE PRESSURE	
VISUALLY INSPECT AIR COMPRESSOR FOR WATER, AIR OR OIL LEAKS	<i>J. Bondi / J. Suddsbury</i>
PERFORM MANUAL AIR BRAKE TEST	<i>J. Bondi</i>
Verify Flow Gauge	NOTE: 120-
130 main reservoir is 64 + or - 3,	130-140 main
reservoir is 60 + 0	<i>J. Bondi</i>
PERFORM PENALTY BRAKE TEST	<i>J. Bondi</i>
CHECK FOR CORRECT AIR PRESSURE SETTINGS:	<i>J. Bondi</i>
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	

B-23, B-39, C-20, 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~~

~~SOAK BACK FILTER - EMD ONLY~~

~~TURBO SPIN ON FILTER - EMD ONLY~~

~~COMPLETE FRA INSPECTION - DAILY INSPECTION CHECKLIST~~

oil filters
Fuel filters
K. Hoang
H.C.

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

K. Hoang
K. Hoang
K. Hoang
K. Hoang
K. Hoang

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)

ADDED oil
oil
H.C.
K. Hoang
H.C.

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

101 LB

H.C.

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

CHECK HANDBRAKE AND INSPECT DATE. MAKE REPAIRS AS NECESSARY

K. Hoang
K. Hoang

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

K. Hoang
K. Hoang
K. Hoang
K. Hoang
H.C.

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

Revision Date: 8/18/2010
 Issued By: Tim Scalia

WORKED BY:

Electrical in House

SERVICE THE BATTERIES AND COMPLETE JSP-010

VERIFY EVENT RECORDER IS WORKING

CHECK & RECORD THE DATE ON HEAD END DEVICE _____

COMPLETE THE HEAD END DEVICE CONNECTOR SHEET

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 THE TRACTION MOTOR LEADS. VERIFY NO LEADS 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

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.	
H. INSPECT SEAT RAILS AND REPLACE IF DAMAGED OR WORN BEYOND PROVIDING SECURE STABLE MOUNTING OF SEAT.	/
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. 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.	<i>A.C.</i>
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	
WASH THE LOCOMOTIVE	

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

Out 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

H.C.
R. Harty
K. Harty
R. Harty

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
130 main reservoir is 64 + or - 3.
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

T.G.
H.C.
K. Harty
R. Harty
K. Harty
R. Harty
K. Harty
R. Harty
K. Harty
R. Harty

NOTE: 120-130-140 main

Service Operations

DATE _____

THROTTLE 8 OUTBOUND LOAD TESTS

Eng RPM	_____	_____	_____	_____
Eng RPM (1/8 in)	_____	_____	Water Temp	_____
Eng Temp	_____	_____	Engine Oil Temp	_____
Volts (5 A)	112V	_____	230V AC (1/8 in)	_____
Volts (7.5 A)	113V	_____		
Volts (10 A)	114V	_____		

THROTTLE 8 STALL TIME

Eng RPM	_____	_____	
AMPS	130A	_____	NOT APPLICABLE TO B-23 AND C-30
MMA	112V	_____	
Charging Rate	170v	_____	

LOCOMOTIVE								DATE				
5018								9-10-12				
Start Readings				END READING				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	3.1			L#1						
L#2	0-21	0-0	2.6			L#2						
L#3	0-18	0-0	2.1			L#3						
L#4	0-18	0-4	2.15			L#4						
L#5	0-17	0-0	3.2			L#5						
L#6	0-18	0-0	3.1			L#6						
OLD GAUGE												
R#1	0-12	0-0	3.1			R#1						
R#2	0-21	0-0	2.7			R#2						
R#3	0-18	0-0	2.1			R#3						
R#4	0-18	0-4	2.5			R#4						
R#5	0-18	0-0	3.2			R#5						
R#6	0-19	0-0	3.1			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

NEW GAUGE

2-on-12--1-1/2"
 1-on-18--1-1/2"
 2-on-19--1-1/2"
 2-on-20--1-1/2"
 2-on-21--1-1/2"
 2-on-22--1-1/2"

FLANGE HEIGHT MEASUREMENT

WEAR LIMITS - ROAD & SWITCH LOCOMOTIVES - MIN 90 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 1/2"	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 1/2"	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 3/4"

FLANGE THICKNESS MEASUREMENT

NEW GAUGE

0-on-0-1-1/2"
 1-on-1-1-1/2"
 2-on-1-1-1/2"
 2-on-1-1-1/2"
 4-on-2-1-1/2"
 4-on-2-1-1/2"
 6-on-0-1-1-1/2"

LOCOMOTIVE RAIL CLEARANCE

COUPLER HEIGHT	PILOT HEIGHT	HEIGHT OF HORIZONTAL END HANDHOLD	UNCOUPLING LEVER IF USED AS HORIZONTAL HANDHOLD	LOCO RAIL CLEARANCE
FRA MAY 24 1" MIN 3 1/2"	REAR 4 1/4"	REAR 33 1/2"	FRA MIN 30"	FRA MIN 2 1/2"
MMA MAY 24 1" MIN 3 1/2"	FRONT 6"	FRONT 33 1/2"	MMA MIN 30"	MMA MIN 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"

NOTE: MAXIMUM VARIATION ALLOWED IN WHEEL DIAMETER BETWEEN ADJACENT WHEELS IN THE SAME TRUCK WITHOUT WEAR IS 1/8". THE MAXIMUM VARIATION ALLOWED IN WHEEL DIAMETER BETWEEN ADJACENT WHEELS IN DIFFERENT TRUCKS IS 1/4".

REMEMBER THIS RULE

EMPLOYEES SIGNATURE

[Handwritten Signature]

SUPERVISORS SIGNATURE

[Empty Signature Box]

5018

9-10-12

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

[Signature]

[Signature]

[Signature]

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

[Signature] *[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 5 minutes. Leakage must not exceed an average of 3 lb. per minute during the test

[Signature]

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

[Signature]

7. Check all M² valve handles to ensure the locking device work properly. Repairs or replace as necessary

[Signature]

8. Check brake for air to make sure it opens the handle. Repairs or replace as necessary

[Signature]

Note: #1 reservoir is without the check valve #2 with the check valve
 Luba 9/11 brake pistons - for [unclear]

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

2 Battery Units	Specific Gravity				Water Added			Battery Replaced-Reason
	Cell 1	Cell 2	Cell 3	Cell 4	Yes	No	Yes	
Battery 2								
Section A								
Section B								
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								

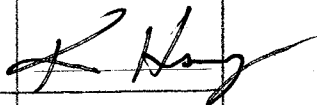
BATTERY CRANKING VOLTAGE CHART


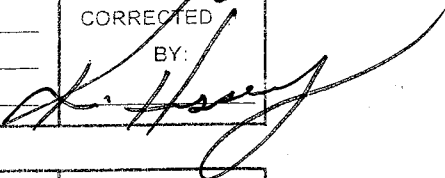
	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Battery Voltage								
Battery Voltage	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Battery Voltage								
Battery Voltage	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Cranking Battery Voltage								
Battery Voltage								
Battery Voltage	Battery 1	Battery 2	Battery 3	Battery 4	Battery 5	Battery 6	Battery 7	Battery 8
Cranking Battery Voltage								

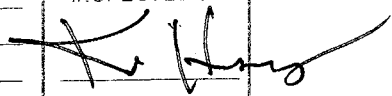
Unit: 5018

Date: 9-10-12

DEFECTS FOUND DURING INSPECTION

DEFECT <u>unit has been derail -</u> <u># 1 GEAR CASE has been hit</u> <u>bottom</u>	INSPECTED BY: 
REPAIR <u>OK - full of Grease</u>	CORRECTED BY: <u>H.C.</u>

DEFECT <u>3 bad brake shoes</u>	INSPECTED BY: 
REPAIR <u>changed</u>	CORRECTED BY: 

DEFECT <u>Pilot CRACKED Front</u>	INSPECTED BY: 
REPAIR <u>FIXED</u>	CORRECTED BY: <u>H.C.</u>

DEFECT _____	INSPECTED BY: _____
REPAIR _____	CORRECTED BY: _____

DEFECT _____	INSPECTED BY: _____
REPAIR _____	CORRECTED BY: _____

Unit: _____

Date: _____

DEFECTS FOUND DURING INSPECTION

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

DEFECT _____ _____ _____	INSPECTED BY: _____ _____
REPAIR _____ _____ _____	CORRECTED BY: _____ _____

Description of Work Performed

Locomotive ID _____

Time Started _____

Time Finished _____

Lined area for recording work details.