



M 12

MO-12

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

I have reviewed the work packet for locomotive ~~8525~~ 8525 on this date 6-5-12 and take no exception to applicable laws, rules and or MMA standards, policies and standards.

[Unit NBBS TO BE FUELED] SUPS

oil SAMPLE TAKEN - J. P. Gaudin

[DRAINED 200 gal of lube oil
ADDED 200 gal of NBW lube oil (sweetend)
Jew Bleck

UNIT _____

DATE _____

Service Operations

THROTTLE & OUTBOUND LOAD TESTS

| | | | | |
|----------------|------|-------------|-------------------|-------|
| Eng RPM (900) | EMD | _____ | Lube Oil Pres | _____ |
| Eng RPM (1050) | GE | <u>1050</u> | Water Temp | _____ |
| Horsepower | | <u>3750</u> | Overspeed Setting | _____ |
| Volts (5.3) | B-23 | _____ | RACK SETTING | _____ |
| Volts (7) | C-30 | _____ | | |
| Volts (720) | B-39 | <u>700</u> | | |

THROTTLE #1 STALL TEST

| | | | |
|---------------|--------|-------------|---------------------------------|
| OP Mode | (PWR) | _____ | |
| AMPS | (300) | <u>3850</u> | |
| MGA | (1220) | _____ | NOT APPLICABLE TO B-23 AND C-30 |
| Charging Rate | (70v) | _____ | |

TL 24T

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



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

In-Bound Or Running Mechanical

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

James Quinn
J. Martin
J. Martin
J. Martin
J. Martin

J. Martin
J. Martin

J. Martin

WORKED

D. Blawie
D. Blawie

J. Black
J. Black
J. Black
J. Black
J. Black

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 | | | _____ |
| APPLY A THIN COAT OF THE SAE NO. 10 OIL TO THE FOLLOWING STARTER COMPONENTS | | | _____ |
| A. ARMATURE SHAFT SPLINES | | | _____ |
| B. CLUTCH ASSEMBLY SPIRAL SPLINES AND MATING GEAR SPLINES | | | _____ |
| FRONT AND REAR HEADLIGHTS, DITCH LIGHTS, CAB LIGHTS, GAUGE LIGHTS, NUMBER PLATES, PLATFORM LIGHTS, ENGINE ROOM LIGHTS, INDICATOR LIGHTS | | | <i>James Dumas</i> |
| CHECK CONTROLLER FOR PROPER OPERATION OF REVERSER AND THROTTLE HANDLE LOCKING DEVICES | | | <i>James Dumas</i> |
| CHECK EMERGENCY FUEL SHUT-OFF FROM ALL LOCATIONS | | | |
| TRACTION MOTORS AND UNDERFRAME | | | |
| INSPECT AXLE GENERATOR AND ENSURE ALL COVER BOLTS ARE IN PLACE AND TIGHT | | | <i>J. Hartman</i> |
| CLEAN AND CHECK THE TRACTION MOTOR LEADS, CLAMPS, VERIFY NO LEADS ARE RUBBING ON THE FRAME | | | <i>J. Hartman</i> |
| CHANGE ANY TRACTION MOTOR BRUSH WITH LESS THAN 50% LIFE LEFT | 20422161(D87) 20426671(D78) | 16 12 | <i>J. Hartman</i> |
| INSPECT TRACTION MOTOR COVERS AND ENSURE BOLTS ARE IN PLACE AND TIGHT | | | <i>J. Hartman</i> |
| ENSURE TRACTION GROUND WIRES ARE IN PLACE AND PROPERLY SECURED | | | <i>J. Hartman</i> |
| CLEAN FACE PLATE ON RADAR TRANSCEIVER | | | _____ |
| CHECK M.U. RECEPTACLE AND LIDS. MAKE NECESSARY REPAIRS | | | <i>J. Hartman</i> |
| MAKE SURE M.U. CABLES DO NOT FOUL COUPLERS | | | _____ |

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

In-House Or Dead Mechanical

SECTION 1 (ANNUAL ITEMS)

| | | Part # | QTY | WORKED BY |
|--|--------------|--------|-----|--|
| WITH ENGINE WARM, COMPRESSION TEST THE ENGINE AND RECORD READINGS: | | | | |
| CYL#1 _____ | CYL#9 _____ | | | <div style="border: 1px solid black; padding: 10px; display: inline-block;"> <p>DUE NEXT TEST PER D.M.</p> </div> |
| 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 INSPECTED - OK | | | | |
| 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. | | | | |
| INSPECT ALL EXHAUST MANIFOLDS, EXPANSION JOINTS AND HEAT SHIELDS FOR DEFECTS AND SECUREMENT. | | | | |
| REMOVE AND CLEAN EDUCTOR TUBE AND STACK OUTLET AND REPLACE GASKETS | | | | |
| REMOVE AND CLEAN ENGINE OIL SEPARATOR. REPLACE GASKET (EMD ONLY) | | | | |
| 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 | | | | |
| 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 | | | | |
| CLEAN LUBE OIL STRAINERS AND STRAINER BOX, REFRESH OIL | | | | |

DUE NEXT TEST
 PER D.M.

J. Black
N/A

J. Black
AP 1000/10

J. Black
N/A

NA

J. Black
✓ OK - *J. Black*
D. Black
D. Black
NA

J. Black
J. Black

REFERENCE ATTACHED FILTER KIT LIST

20409081
20410471(sw)

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.

LOCOMOTIVE

8525

DATE 6-5-12

Start Readings

Has Shims

END READING

Has Shims

OLD GAUGE

Main inspection table with columns for Flange Height, Flange Thickness, Rim Thickness, Witness Groove, YES/NO, and Flange Height/Thickness/Thickness/Groove. Rows include L#1-L#6 and R#1-R#6.

OLD GAUGE table with rows 0-on 0 to 8-on 0 and measurements like 1-17/64, 1-15/64, etc.

OLD GAUGE

FLANGE HEIGHT MEASUREMENT table with rows 0-on 0 to 6-on 6 and measurements like 1, 1-1/16, 1-1/8, etc.

NEW GAUGE

NEW GAUGE table with rows 0-on 17 to 8-on 22 and measurements like 1-1/16, 1-1/8, 1-3/16, etc.

WEAR LIMITS FOR ROAD & SWITCH LOCOMOTIVES - MINIMUM DAILY REQUIREMENTS

Table with columns for RA (1 1/2", 7/8", 1", 5/16") and MMA (1 7/16", 15/16", 1 1/16", 1/4") and corresponding Flange Height, Thickness, Rim Thickness, Tread Wear.

FLANGE HEIGHT MEASUREMENT

WEAR LIMITS - ROAD & SWITCH LOCOS - MIN. 92 DAY REQ

WEAR LIMITS - PASSENGER LOCOS - MIN 92 DAY REQ

Table with columns for Flange THICKNESS, Rim THICKNESS, Tread WEAR, Flange HEIGHT, Flange THICKNESS, Rim THICKNESS, Tread WEAR for RA and MA.

CONVERSION CHART FOR WHEEL DIAMETER

Conversion chart table with columns for wheel diameter measurements (e.g., 37", 37 1/8", 37 1/4", etc.) and corresponding values.

NEW GAUGE

NEW GAUGE table with rows 0-on 0 to 8-on 0 and measurements like 1-17/64, 1-15/64, 1-7/32, etc.

FLANGE THICKNESS MEASUREMENT

LOCOMOTIVE RAIL CLEARANCE

Table with columns for COUPLER HEIGHT, FRONT, PILOT HEIGHT, FRONT, REAR, HEIGHT OF HORIZONTAL END HANDHOLD, LOCO RAIL CLEARANCE.

HEEL DIAMETER MEASUREMENTS ARE TAKEN FROM THE TOP OF THE WITNESS GROOVE 40" DIAMETER WHEELS WITNESS GROOVE = 36"

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

- IS THE MAXIMUM VARIATION ALLOWED, IN WHEEL DIAMETER, BETWEEN ANY 2 WHEELS IN THE SAME TRUCK WITHOUT SHIMS.
• IS THE MAXIMUM VARIATION ALLOWED, IN WHEEL DIAMETER, BETWEEN ANY 2 WHEELS IN THE SAME TRUCK WITH SHIMS APPLIED.
• 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

MEMBER THIS RULE 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 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 HELLED SPOT 1" OR GREATER IN LENGTH • ONE SHELLED SPOT WITH A DEPTH OF 1/4" OR MORE.

EMPLOYEES SIGNATURE

JW Black

SUPERVISORS SIGNATURE

[Signature box]

SEE DEFECT SHEET!

WINTERIZATION

| WINTERIZATION | |
|--|-----------|
| Winterization - All MMA Locomotives (August - April) | Signature |
| Inspect front and rear cab door seals replace, as needed (NO TAPE) | |
| Inspect left and right side window seals replace as needed. | |
| Inspect Electric cabinet door seals replace as needed. | |
| Operate Cab Heaters-Check condition of Heater Assembly @ 45o F above Ambient temperature. | |
| Operate Window Defrosters-Check condition of Defroster @ 45o F above Ambient temperature. | |
| If equipped, test the Auto Dump valve for proper operation. | |
| Test Manual Water Dump Valves, Proper Handle, Location, Orifice is Open. | |
| Close Winter/ Summer doors if equipped. | |
| Check Traction Motor cover gaskets, install as needed. | |
| Check condition of Cab Door Hinges (Lubricate all Hinges) | |
| Check condition of Cab Door Locks (Lubricate all Locks) | |
| Inspect Cab Windows Slider Rail, Adjust Top Rail as needed, Lubricate with Silicone grease. | |
| Renew all Wiper Blades. | |
| Criteria for Door seal Replacement: <ul style="list-style-type: none"> . Seal shows signs of Deterioration and or Medium to Heavy Cracking. . Door seal is Torn or Loose from Door. . With Door in the fully closed position has noticeable crack between door jam and cab carbody. | |
| Criteria for Window seal Replacement: <ul style="list-style-type: none"> . Seals shows signs of Deterioration and or Medium to Heavy Cracking. . Seal is Torn or Loose from window seal. . With windows fully in the closed position there is a gap between window frame and carbody. | |

