Unit No. _____ **Date_____**

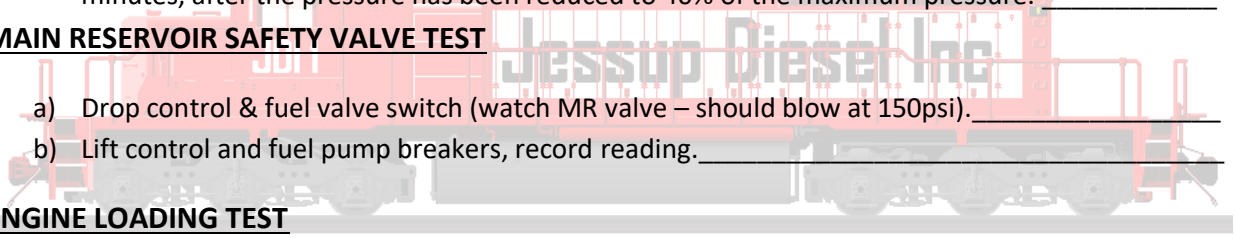
INBOUND – ANNUAL (368 DAY) INSPECTION – MECHANICAL

a) Check heater motors in cab._____
b) Check all wiper motors and lubricate wiper motors._____
c) Check horn and bell._____
d) Check sanders (forward & reverse), hoses, pipes, and traps._____
e) Check air compressor and governor (kick in @ 130psi and kick out @ 140psi)._____

INBOUND AIR BRAKE TEST

a) Independent leakage test._____
b) Automatic leakage test._____
c) Maintaining feature test._____
d) Automatic application ball-off test._____
e) Emergency application and PCS trip test._____
f) Crew alertness test, if applicable. _____
g) Leakage from the main air reservoir and related piping may not exceed an average of 3 PSI for 3 minutes, after the pressure has been reduced to 40% of the maximum pressure. _____

MAIN RESERVOIR SAFETY VALVE TEST



a) Drop control & fuel valve switch (watch MR valve – should blow at 150psi)._____
b) Lift control and fuel pump breakers, record reading._____

ENGINE LOADING TEST

a) Make sure it moves in each direction._____

b) Check operation of traction motor cut outs and that unit loads. _____

c) Check speed indicator and over speed calibrations. Adjust as necessary. _____

COOLING FAN TEST

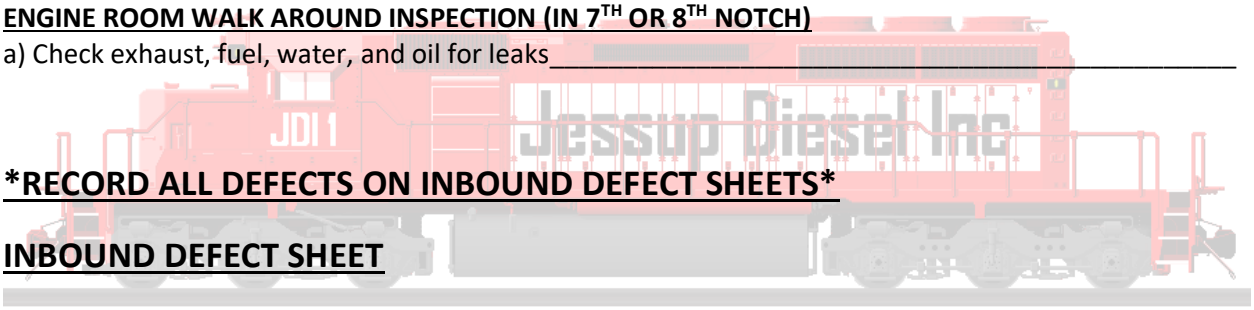
a) Operate each temperature switch and make sure all shutter cylinders open and according fans engage with proper rotation. Check hot engine light and alarm. _____

IDLE ENGINE WALK AROUND TEST

a) Inspect top deck, check cylinder heads and components, inspect for water and fuel leaks, valve bridges or excessive noise. Inspect cam shaft and rocker arm assemblies for any defects._____
b) Check operation of; low oil button and low water button. _____
c) Check for fuel, oil, water, and air leaks; add oil if needed.
_____
d) Check throttle speeds._____
e) Check all water, oil, and sand levels._____
f) Test engine protector and low oil button._____
g) Obtain engine oil sample. **Take oil sample for analysis before adding oil.**_____
h) Idle oil pressure._____
i) Idle engine temperature._____
j) Obtain A/C Oil Sample._____
k) Obtain coolant sample if required
l) Check operation of main reservoir automatic drains. _____

ENGINE ROOM WALK AROUND INSPECTION (IN 7TH OR 8TH NOTCH)

a) Check exhaust, fuel, water, and oil for leaks_____



RECORD ALL DEFECTS ON INBOUND DEFECT SHEETS

INBOUND DEFECT SHEET

Engine running inspection

_____
_____
_____
_____

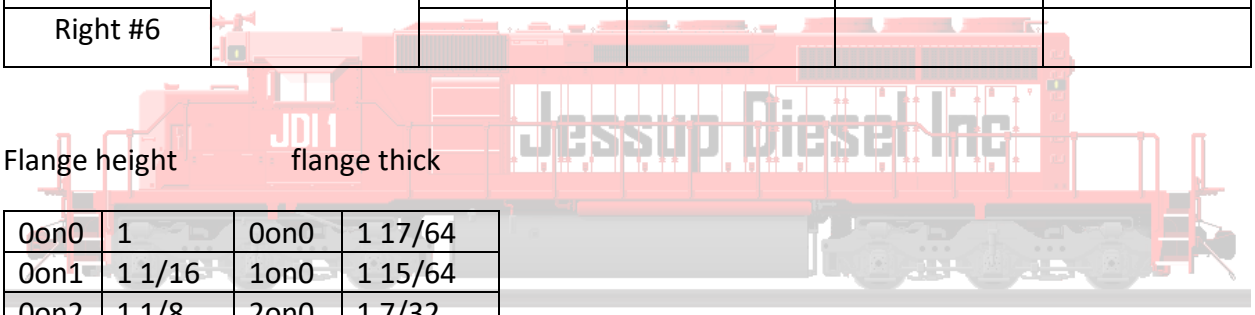
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Inbound Defects continued



WHEEL READINGS

	Nose pack	Wheel thick	Flange height	Flange thick	Tread wear
Left #1					
Right #1					
Left #2					
Right #2					
Left #3					
Right #3					
Left #4					
Right #4					
Left #5					
Right #5					
Left #6					
Right #6					



Flange height flange thick

0on0	1	0on0	1 17/64
0on1	1 1/16	1on0	1 15/64
0on2	1 1/8	2on0	1 7/32
0on3	1 3/16	3on0	1 5/32
0on4	1 ¼	4on0	1 7/64
0on5	1 5/16	5on0	1 3/64
0on6	1 3/8	6on0	1 1/32
4on6	1 7/16	7on0	63/64
5on6	1 31/64	8on0	15/16

#1 Side bearing clearances Lt: _____ Rt: _____

#2 Side bearing clearances Lt: _____ Rt: _____

Front draft gear total slack _____

Rear draft gear total slack _____

Front pilot plate height _____

Rear pilot plate height _____

Front coupler height _____

Rear coupler height _____

ANNUAL (368 DAY) LOCOMOTIVE F.R.A. INSPECTION

FRA INSPECTION - CAB

a.) Inspect all seats and seat bases for proper condition and operation. _____
b.) Inspect condition of cab floor, remove all trash from cab._____
c.) Inspect all cab windows and record any damages found. (FRA Part 223 Glazing)._____
d.) Check sun visors. _____
e.) Inspect cab and engine room fire extinguishers and record service date. _____
    a. Service Date: _____
f.) Inspect cab doors, latches, and hinges for proper alignment._____

FRA INSPECTION – CAR BODY

a.) Inspect condition of steps for cracks and defects, inspect for any loose bolts._____
b.) Inspect all walkways, cat walks, and safety chain; inspect cab hoods, frame, handrails for FRA compliance, cracking and other defects._____
c.) Check all safety guards for proper placement._____
d.) Inspect and test handbrake. Lubricate with chain oil._____
e.) Inspect frame for cracks and loose piping._____
f.) Ensure that frame has correct stenciling, "Emergency Fuel Cutoff," the letter "F" on each front corners of locomotive, AIE tags, and ensure the locomotive identification is legible._____

FRA INSPECTION-TRUCKS

a.) Inspect axle cap bolts, springs, swing hanger and pins._____
b.) Add support oil as needed. Also inspect cap bolts and lock wire. _____
c.) Inspect gear cases and replenish lubricant as needed. Inspect bolt tightness, report any leaks found._____
d.) Inspect Hyatt boxes for proper lubrication, add oil as needed._____
e.) Inspect and adjust brake cylinder travel, check for leaks and condition of flexible hoses. Inspect brake shoes for thickness and alignment, repair any overriding issues. _____
f.) Check brake rigging for proper movement and height. Inspect brake heads for wear and retaining keys are in place. NOTE: brake shoes must not contact the wheel when the brakes are released._____

FRA INSPECTION – ENGINE

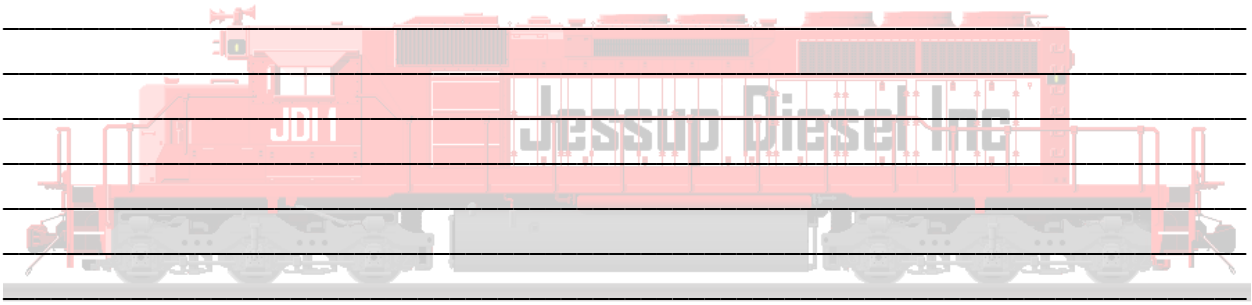
a.) Inspect fan assembly, idler radiator, drive shaft pillow block, belt tension, lubricate pillow block bearings with high temperature grease only, on switchers. _____
b.) Inspect accessory rack, front and back of engine. _____
c.) Inspect engine "V" for oil and water; check for proper exhaust bolts torque and condition of stacks 130 ft-lbs._____
d.) Clean spark arrestor traps and engine exhaust V. Clean external spark arrestors if unit is equipped._____
e.) Inspect engine base bolts and dowels for proper torque. 375 ft-lbs._____
f.) Inspect front and rear traction motor blowers. Clean intake screens if needed. Ensure that drive belts are in good condition and have proper tension. Ensure that blower mounting is secure, on switchers. _____
g.) Lubricate blower bearings. Inspect drive shaft and couplings, on switchers. _____
h.) Inspect condition of fuel tank, check bolt tightness, and for leaks, clean sight glass if needed._____
i.) Inspect condition of air box drains. Check for water, ensure that drain valves are working properly, and overflow vent is not plugged._____

j.) Inspect air compressor mounting bolts and dowels, change all filters and check couplings._____

k.) Inspect lube oil separator for any vacuum leaks and service the strainer._____

ANNUAL (368 DAY) LOCOMOTIVE F.R.A. INSPECTION

DEFECTS **SIGN OFF ON REPAIRS**



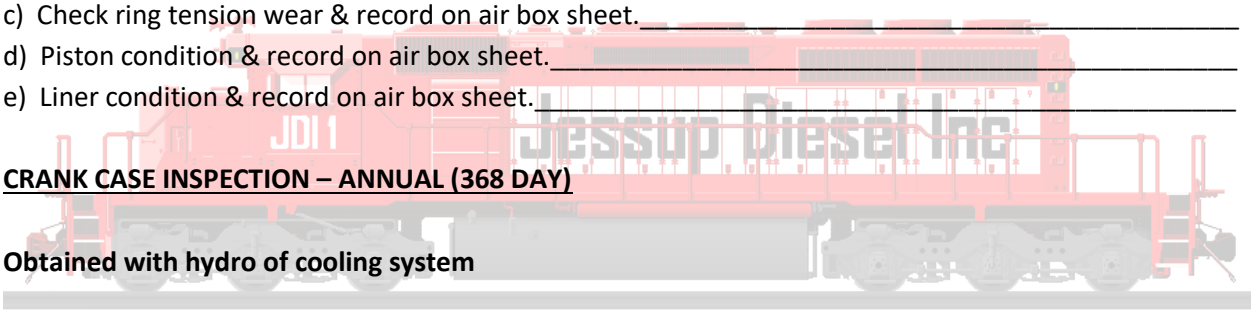
ENGINE TOP DECK INSPECTION (DEAD)

a.) Check engine rack reading (dead)._____
b.) Engine under hydro of cooling system._____
c.) Check for dropped valves._____
d.) Rotate engine manually and check rocker – roller & cam shaft lobes._____
e.) Purge fuel system, check for leaks with black light & record._____
f.) Check water level, add water treatment if needed._____
g.) Clean internal and external spark arrestors._____

AIR BOX INSPECTION

With hydro of cooling

a) Obtain lead readings and record on air box sheet._____
B) Check top ring land readings & record on air box sheet._____
c) Check ring tension wear & record on air box sheet._____
d) Piston condition & record on air box sheet._____
e) Liner condition & record on air box sheet._____



CRANK CASE INSPECTION – ANNUAL (368 DAY)

Obtained with hydro of cooling system

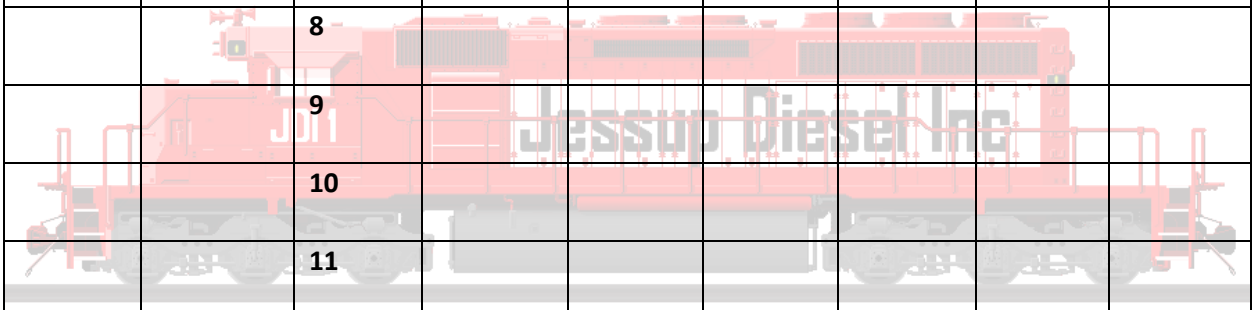
a) Record crankshaft lateral._____
b) Check for rod lateral on all 8 rod throws._____
c) Hammer test all main bearing nuts._____
d) Hammer test all rod nuts and bolts._____
e) Hammer test all piston cooling pipes._____
f) Check all rods for over- heating._____
g) Check for internal water leak._____
h) Verify timing pointer, set injector racks, time injectors and valves. Torque lock nuts and adjustment screws. _____
i)Ensure the air box drains are clean and open. _____
j) Visually inspect governor right angle drive and bearings in governor arm linkage._____

Liner conditions

Good= like new cross hatch
Ok= cross hatch with little wear
Fair= Cross hatch with some bare spots
Poor= Bare with some cross hatch spots
Worn= no cross hatch visible

AIR BOX INSPECTION REPORT UNIT# : **DATE:**

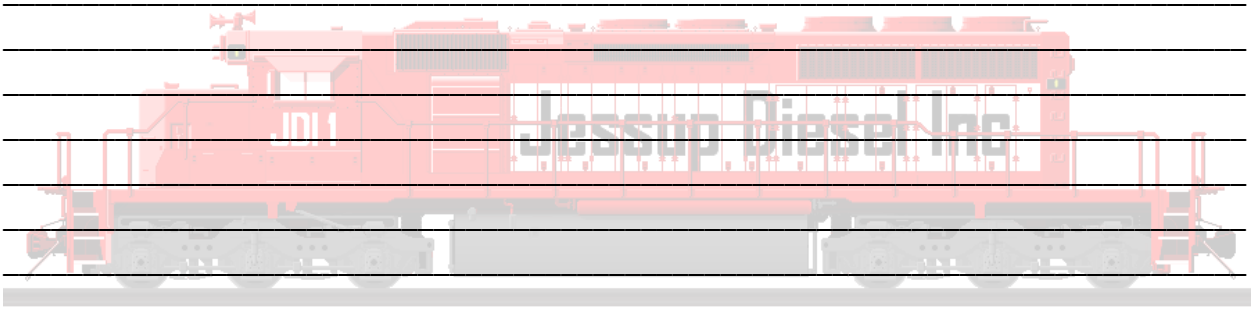
STATUS	PREVIOUS READING	POS	READING	LINER COND.	RING COND.	PISTON COND.	RING LAND WEAR	NEW LEAD READING
		1						
		2						
		3						
		4						
		5						
		6						
		7						
		8						
		9						
		10						
		11						
		12						
		13						
		14						
		15						
		16						
		17						
		18						
		19						
		20						



INSPECTED BY: **FOREMAN:**

TOP DECK/AIR BOX/CRANK CASE INSPECTION DEFECTS

DEFECTS **SIGN OFF**



Annual (368 DAY) STANDARD INSPECTION ITEMS

FUEL SYSTEM

a) C/O primary filters._____
b) C/O secondary filters._____
c) Clean fuel sight glasses._____
d) Prime for leaks._____

COOLING SYSTEM

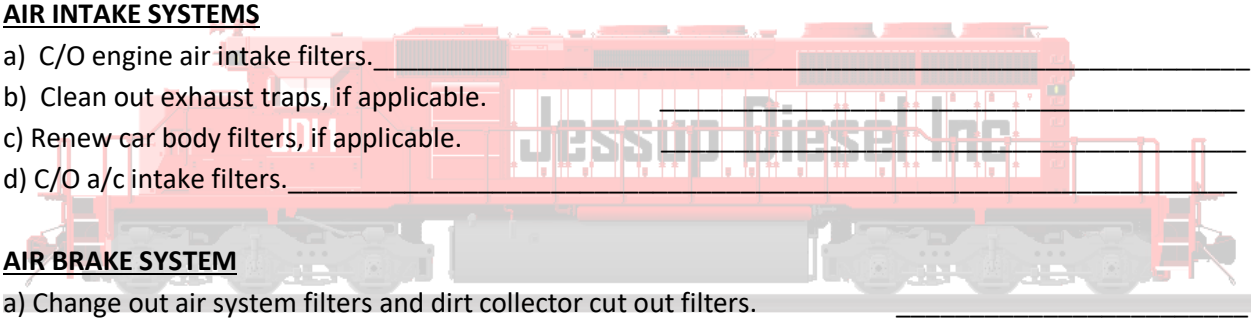
a) Check water for treatment._____

LUBRICATION SYSTEM

a) C/O main lube oil filters._____
b) C/O air compressor oil filter (if applicable)._____
c) C/O Turbo supply and soak back filters, if applicable. _____

AIR INTAKE SYSTEMS

a) C/O engine air intake filters._____
b) Clean out exhaust traps, if applicable. _____
c) Renew car body filters, if applicable. _____
d) C/O a/c intake filters._____



AIR BRAKE SYSTEM

a) Change out air system filters and dirt collector cut out filters. _____
b) Lubricate Hand Brake and Test Operation._____

TRUCK AND WHEEL ITEMS

a) Check and fill all journal boxes, if applicable. _____
b) Check and fill all support bearing oil levels._____
c) Make sure all wicks are tight._____
d) Check and fill all gear cases._____
e) Lube #1 and #2 truck center castings._____

Drain retention tank _____

Air Compressor

Inspect and clean air compressor unloader pistons. Install with new gaskets if the old gaskets are cracked or damaged. _____

OUTBOUND – ANNUAL (368 DAY) RUN CHECKS – MECHANICAL

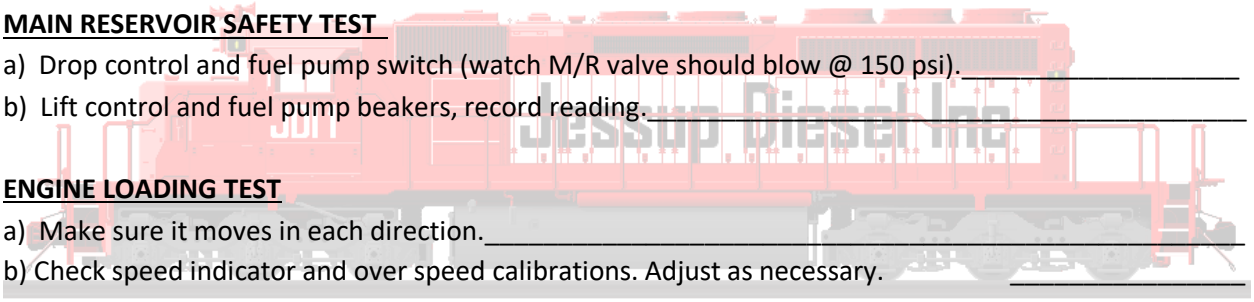
a) Check heater motors in cab._____
b) Check all wiper motors._____
c) Check horn and bell._____
d) Check sanders (forward and reverse)._____
e) Check A/C & A/C Governor for proper function._____
f) Insure all the auto drain valves are functioning properly. _____

OUTBOUND AIR BRAKE TEST

a) Independent leakage test._____
b) Automatic brake leakage test._____
c) Maintaining feature test._____
d) Automatic application ball-off test._____
e) Emergency application and PCS trip test._____
f) Crew alertness test. _____

MAIN RESERVOIR SAFETY TEST

a) Drop control and fuel pump switch (watch M/R valve should blow @ 150 psi)._____
b) Lift control and fuel pump beakers, record reading._____



ENGINE LOADING TEST

a) Make sure it moves in each direction._____
b) Check speed indicator and over speed calibrations. Adjust as necessary. _____

COOLING FAN TEST

a) Operate each temperature switch and make sure all shutter cylinders open and according fans engage with proper rotation. Check operation of hot engine light and alarm. _____

IDLE ENGINE – WALK AROUND TEST

a) Top deck running inspection._____
b) Check for fuel, water and oil leaks._____
c) Check throttle speeds._____
d) Check water, oil and sand levels._____
e) Test engine protector and low oil button._____
f) Check all inbound defects for repairs._____
g) Idle oil pressure._____
h) Idle engine temperature._____

ENGINE ROOM – WALK AROUND INSPECTION (IN 7TH OR 8TH NOTCH)

a) Check exhaust, fuel, water, and oil for leaks and repair._____

ANNUAL (368 DAY) ELECTRICAL INSPECTION

UNIT # _____ **DATE** _____

1.) Meg. Sys. /Ground relay trip **Ohms** **Amps**

2.) Check for low voltage grounds._____

3.) Main Generator

a) Check brushes and holders._____

b) Check for flashover & paint bare spots._____

c) Clean inside of generator if necessary._____

d) Check Slip Ring Brushes._____

e) Clean and paint main generator. _____

f) Smooth stone and polish main generator, aux-gen and fuel pump._____

4.) Load Regulator._____

5.) Check auxiliary generator

a) Check brushes & holders._____

b) Clean if necessary._____

6.) Voltage Regulator **VDC**_____

7.) Traction Motors

a) Check brushes, holders and cables._____

b) Check for flashover & paint bare spots._____

c) Check motor leads & securement._____

8.) Fuel pump and turbo prelube pump

a) Check brushes and armatures._____

9.) Electrical Cabinets

a) Check for loose wires & connections._____

b) Test operation of event recorder. _____

10.) Control stand._____

11.) A C cabinet

a) Check for loose wires & connections._____

12.) Lighting Equipment

a) Check front & rear headlights and ditch lights._____

b) Check cab, car body & control stand lights._____

13.) MU receptacles

a) Check & Clean._____

14.) Batteries

a) Check & fill cells with water._____

b) Check battery connection._____

c) Check battery box connection._____

15.) Cab Heaters

a) Check motor brushes._____

b) Clean interior if necessary._____

c) Check Aux Heater connections. _____

16.) Dynamic Brakes

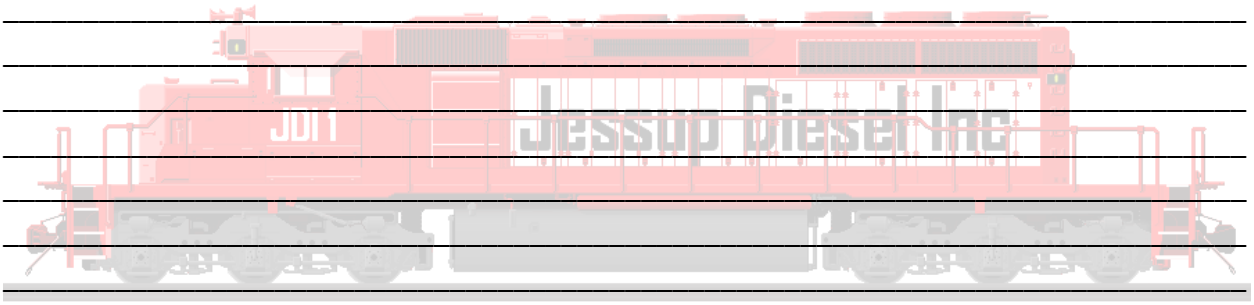
a) Check grids for warpage or over heating. Check grid blower brushes.
Check grid blower operation. _____

17.) Verify operation of the fuse tester. _____

18.) Test and calibrate all load indicators and ammeter. Only 5% variance allowed. _____

ELECTRICAL INSPECTION DEFECTS

DEFECTS **SIGN OFF**



JDI 1
Jessup Diesel Inc