

 <p>PO Box 299 Oberon NSW 2787 ABN 98 107 506 208</p>	Version	Author	Reviewed	Reference
	A - 2	SMS Work party	Committee	F-049
	30/01/2019			
	Schedule of Monthly Diesel Locomotive Inspection and Maintenance			

Document Status

Version	Date	Revision	Prepared	Reviewed	Approved
A	01/07/2018	Draft	SMS Working Party	Committee	
A - 1	29/08/2018	1	SMS Working Party	Committee	29/08/2018
A - 2	30/01/2019	2	SMS Working Party	Committee	30/01/2019

Revision Record

Revision	Date issued	Description of Changes
1	29/08/2018	Additions from SRA 73 Class Manual/Inspection Schedule
2	30/01/2019	Additional information

Schedule of Monthly Diesel Locomotive Inspection and Maintenance

F-049

Document Distribution List

Position	Organisation	Copy Issued to (Yes/No)	Copy No.
Master Copy	OTHR		1
Operations Manager	OTHR	Yes	2
Rollingstock Manager	OTHR	Yes	3
Rail Safety Regulators	ONRSR	Yes	4

Engine N°	Class	Date		
COMPONENT	SCOPE OF WORK	P	F	Itl.
DRIVER'S LOG BOOK	Check all bookings have received attention. Repair all outstanding items.			
ENGINE				
Gauges	Check that all gauges indicate within the normal operating range.			
Engine Oil	Maintain oil level between ADD and FULL marks on dipstick. ¹ Check with engine running at idle. ⁴			
Engine Oil Filter	Check filter indicator. If indicator is at or above half height with the engine running, then change the oil filter. ¹			
Fuel Oil Filters	Drain water from fuel oil filters ⁴			
Turbocharger Air Filters	Remove and clean ⁴			
Turbocharger Indicators and Dirt Collector Cups	Check gauge, remove and clean cups ⁴			
Control Lever Bearings	<i>Lubricate – 2 strokes¹</i>			
Main Shaft Bearing	Lubricate 1 fitting – 2 strokes ¹			
Flexible Couplings	Lubricate ⁴			
Battery	Maintain electrolyte level to base of each vent well ¹			
Fan & Alternator Belts	Check wear and belt tension ¹			
Oil/Water/Fuel/ Exhaust Leaks	Check for any leaks, check condition and security of fuel injector pipes.			
Hold Down Bolts	Check security			
COOLING UNIT	Inspect item to check and drain any tundish.			
Unit	Check for water leaks ⁴			
Radiator	Check for accumulation of debris around radiator core – clean if necessary. ⁴ Use water spray to remove dirt out of radiator air passages. ⁴			
Coolant Water	Maintain level between baffle plate & ½" below fill pipe. ¹			
Hydraulic Coupling	Check oil level in sight glass with engine stationary ³			
Vee Belts	Check wear and belt tension ³			
TRANSMISSION				
Oil	Check oil level with engine running at idle speed ³ Investigate cause of any excessive usage - oil consumption in excess of 8 litres per month should be investigated. ²			
Variable Speed Fan	Lube oil check ⁴			
Filter	Clean core and body ² and rotate. ⁴			
Secondary Lube Pump	Open pressure test connection next to oil filter. Move loco in either direction. Oil should issue from test connection ²			

Pneumatic Filling Pin Actuator	Screw piston and curled nut upwards, grease sparingly. Screw piston downwards into extreme lower position and lock wire. Check piston action by turning air pressure on and off ²			
Cardan Shafts	Check condition of 2 primary & 2 secondary shafts Grease splines and Universal joints. Check tightness of flange bolts. ⁴			
Throttle Cams and Bearings	Check and lubricate if required ⁴			
Operating Cylinder	Check and lubricate if required ⁴			
Governor and Throttle Control Linkage	Check and lubricate if required ⁴			
Final Drive Gear Boxes	Check oil levels in gear boxes on each axle ³			
MAIN FRAME	Check for obvious damage for defects			
BOGIE				
Frame & Suspension	Check for obvious damage or defects			
Axles	Check all axles for any physical signs of damage			
Axleboxes	Check for physical signs of damage or lubrication problems.			
Axlebox Keeps	Check that axle box keeps are in good condition and correctly fastened			
Wheels	Inspect wheels for defects including flange and tread wear. Use gauge to check if wheel is close to condemning limit.			
UNDERNEATH LOCO				
Sandboxes	Check sandboxes, maintain adequate supply. ⁴			
Fuel Tanks	Check condition of fuel tanks and fuel oil level. ⁴			
Fuel Tank Condensate and Sight Glass	Drain condensate from fuel tanks. Clean fuel tank sight glasses if necessary. ⁴			
Hasler Transmitter	Check security of Hasler transmitter on axle box cover. ⁴			
HANDBRAKE	Check Linkage and lubricate moving parts			
AIR SYSTEM				
Air Intake Filters	Check compressor compartment air intake filters. ⁴			
Compressor	Check oil level with engine stationary ³			
Main Reservoir	Drain ⁵			
Auxiliary Reservoir	Drain ⁵			
Air Cocks at Headstock	Check movement – grease if necessary. ⁴			
Air Leaks	Listen for any air leaks in brake pipes, branch pipes, cylinder pipe, triple valve, reservoirs with air brakes applied. Repair any air leaks found ⁵			
Brake Pipe Cocks	Check for damage and correct mounting ⁵			
Dummy Couplings	Check and replace if necessary ⁵			
Hoses	Check condition of brake hoses, coupling heads rubbers ⁵			

Brake Valve Test	Test operation of automatic and independent/straight air brake valves in accordance to test procedures ⁵			
BRAKES				
Brake Valves	Lubricate. ⁴			
Brake Blocks	Check condition and renew to at or near condemning mark ⁵			
Brake Rigging	Check condition and oil adjusting screws ⁵			
Brake Piston Travel	Adjust to minimum.			
Brake Slack Adjuster	Clean and inspect. ⁴			
Handbrake and Handbrake Pulley Pins	Check and lubricate if required. ⁴			
Knorr Gear	Drain condensate from air cleaner and control air reservoir ⁴			
Knorr Pressure Reducing Valve	Check control air pressure (600 kpa, 85 psi) and adjust if necessary. ⁴			
Compressor Lube Pressure	Check air compressor – indicator to project 12mm (1/2 ") or gauge shows 35 kpa (5 psi) or higher with engine idling. ⁴			
Safety Valves	Check all safety valves for tightness. Check operation of distributing valve (400 kpa, 55 psi) and main reservoir safety valves (900 kpa, 130 psi). ⁴			
Throttle Valve	Set throttle lever in FULL setting – pressure to 35 psi, then build up to 85 psi in approx. 10 seconds. ⁴			
Throttle Fine Regulating Valve	Set throttle lever in NEUTRAL, check outlet pressure is ZERO. Throttle lever FULL, check outlet pressure is 85 psi. ⁴			
AUTO COUPLERS	A: Auto coupler height 865mm +/- 25 rnm measure from rail level to centre line of coupler face. ⁴ B: Gauge auto couplers both ends. ⁴ C: Examine transition links and ensure split pin applied and links not stretched, both ends. ⁴			
CAB	Check condition and security of floor, panels, windows, seats, arm rests, doors, locks and hinges. Repair or lubricate if necessary. ⁴			
Instrument Panel	Check all instruments are registering correctly			
Windscreen Wipers	Check operation & condition of blades			
Whistles	Test, both sides of cab. ⁴			
LIGHTS	Check that Cab, Instrument, Hood & Engine Room, Coupling, Steps, Head and Marker Lights are working			
SANDING EQUIPMENT	Check pipe alignment and discharge rate. Check reverse sander operation (refer SRA Inspection Manual). ⁴			
EXHAUST SYSTEM	Check exhaust systems for emission of sparks or carbon particles when powering the Loco. If found remove and clean mufflers.			
	Check exhaust emissions for unusual operation such as excessive black or white smoke which could be indicative of a engine fault.			

References

- 1 Caterpillar Service Manual
- 2 Voith Turbo Transmission Manual
- 3 Walkers Ltd – 73 Class Manual
- 4 SRA 73 Class Manual / Inspection
- 5 Westinghouse Brake Manual
- 6 **TRS INSERT NUMBER**

Checked By _____

Signature _____

Date _____