

Agricultural Equipment Technician

On-the-Job Checklist



	Level 1	Page 1/3
Red Seal Tasks	On-The-Job Duties	Completed
Performs safety-related functions	Perform lock-out & tag-out, keep area hazard free	<input type="checkbox"/>
	Select & use PPE according to company policies & task	<input type="checkbox"/>
Performs routine work practices	Verify equipment & attachments are operational, interpret test results to identify faults or repairs	<input type="checkbox"/>
	Verify fluid levels & tests, select types & grades of fluids & lubricants, perform inspections	<input type="checkbox"/>
	Locate, inspect, clean, or replace filters	<input type="checkbox"/>
	Repair or replace assemblies for hoses, tubing & fittings	<input type="checkbox"/>
	Lubricate bearings, bushings & seals	<input type="checkbox"/>
	Select & replace gasket or sealing material & construct gaskets	<input type="checkbox"/>
	Select cleaning method & solution/solvent, cleaning of debris	<input type="checkbox"/>
	Perform tests & inspections, verify dimensions & pressure, advise on required follow up	<input type="checkbox"/>
	Find failures, recommend repairs, consult customers	<input type="checkbox"/>
Organizes work	Record information & complete as per policy & procedure	<input type="checkbox"/>
	Determine priority, time, materials & tools for tasks	<input type="checkbox"/>
Uses & maintains tools & equipment	Inspect, identify & repair or replace worn, damaged or faulty tools & equipment	<input type="checkbox"/>
	Identify safe lifting locations or tag line points, & weight	<input type="checkbox"/>
Uses communication & mentoring techniques	Interprets instructions & attend meetings	<input type="checkbox"/>
	Explain objective & point of lesson	<input type="checkbox"/>
Diagnoses hydraulic, hydrostatic & pneumatic systems	Perform sensory inspections to identify leaks, noises, heat, or broken hoses	<input type="checkbox"/>
Repairs hydraulic, hydrostatic & pneumatic systems	Adjust valves for pressure & operating height for suspension	<input type="checkbox"/>

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	Level 1	Page 2/3
Red Seal Tasks	On-The-Job Duties	Completed
Diagnoses electrical/electronic power & control monitoring systems	Interpret test results for Controller Area Network (CAN) bus systems	<input type="checkbox"/>
Repairs electrical/electronic power & control monitoring systems	Repair starters, solenoids, alternators, batteries & actuators	<input type="checkbox"/>
Diagnoses steering & brake systems	Interpret schematics to isolate leaks, binding or deformities	<input type="checkbox"/>
	Disassemble brake system	<input type="checkbox"/>
Repairs steering & brake systems	Lubricate or adjust steering motors, hoses, lines, & control valves	<input type="checkbox"/>
	Recondition calipers, controls, drums, discs & accumulators	<input type="checkbox"/>
Diagnoses track, wheel & suspension systems	Inspect support wheels & tensioning systems for wear	<input type="checkbox"/>
	Perform air pressure check on bias tires & radial tires	<input type="checkbox"/>
	Inspect shocks, accumulators, & compressors for leaks & cracks	<input type="checkbox"/>
Repairs track, wheel & suspension systems	Remove tracks & disassemble track system components	<input type="checkbox"/>
	Remove hubs, wedges, rims & tires	<input type="checkbox"/>
	Recharge accumulator with nitrogen	<input type="checkbox"/>
Diagnoses structural components	Inspect glass, frame, cab mounts, doors for cracks or damage	<input type="checkbox"/>
	Verify dimensions from technical drawings or factory assistance	<input type="checkbox"/>
	Perform sensory inspections to identify cab noises	<input type="checkbox"/>
Repairs structural components	Remove & disassemble pivot points, frame rails, gussets & flanges	<input type="checkbox"/>
	Remove cab roof, doors, glass, electronics to access ROPS&FOPS	<input type="checkbox"/>
	Clean, grind, sand & prime area for painting	<input type="checkbox"/>

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	Level 1	Page 3/3
Red Seal Tasks	On-The-Job Duties	Completed
Diagnoses climate control systems	Check actuators, thermostats & water pumps	<input type="checkbox"/>
	Identify inconsistent cooling & airflow	<input type="checkbox"/>
Repairs climate control systems	Replace, calibrate or reprogram resistors, motors, valves, heater cores & electronics	<input type="checkbox"/>
	Replace condensers & evaporators	<input type="checkbox"/>

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On-the-Job Checklist



	Level 2	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Uses & maintains tools & equipment	Download & document reports from equipment controller	<input type="checkbox"/>
Diagnoses engine & engine support systems	Replace crankshaft bearings, pistons & liners, head gaskets, camshafts & cylinder heads	<input type="checkbox"/>
	Test oil pressure & interpret results	<input type="checkbox"/>
	Use test trips to determine coolant condition	<input type="checkbox"/>
	Perform tests for boost pressure & intake air temp.	<input type="checkbox"/>
	Test injectors, injection pump timing & transfer pump pressure	<input type="checkbox"/>
	Monitor & interpret abnormal temperature or speed readings	<input type="checkbox"/>
	Inspect emission systems & storage components	<input type="checkbox"/>
Repairs engine & engine support systems	Adjust valves & liners for clearance & suitable liner protrusion	<input type="checkbox"/>
	Flush lubrication system & clean oil coolers & inlet strainers	<input type="checkbox"/>
	Clean & blow out blockages in air-cooled systems	<input type="checkbox"/>
	Clean & flush charge air coolers, piping & after-treatment systems	<input type="checkbox"/>
	Adjust injectors & injection pump for static timing	<input type="checkbox"/>
	Replace worn & damaged connector pins, wires & controllers	<input type="checkbox"/>
	Perform parked regenerative cycle for DPF & DOC	<input type="checkbox"/>
Diagnoses drive trains	Identify sluggish operation, clutch slippage & failure to release	<input type="checkbox"/>
	Select & use stethoscope, dial indicators & spring scale	<input type="checkbox"/>
	Test wet clutches, transmissions & gear cases for wear	<input type="checkbox"/>
	Identify differential action failure & overheating differentials	<input type="checkbox"/>

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On-the-Job Checklist



	Level 2	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Repairs drive trains	Remove & inspect release & pilot bearings, pressure plates, clutch discs, pedals & levers	<input type="checkbox"/>
	Remove & inspect torque plates, drive shafts, universal joints, & sliding couplers	<input type="checkbox"/>
	Remove & inspect gears, shafts, housings, shims & bushings	<input type="checkbox"/>
	Replace failed differential & final drive components	<input type="checkbox"/>
Diagnoses electrical/electronic power & control monitoring systems	Interpret 2-wire CAN & 4-wire CAN test results	<input type="checkbox"/>
Repairs electrical/electronic power & control monitoring systems	Recalibrate controllers, displays & sensors & reinstall circuit boards	<input type="checkbox"/>
Prepares agricultural equipment	Locate power sources on equipment & determine harness route	<input type="checkbox"/>
Diagnoses precision farming equipment	Perform inspection of communication devices, sensors & power modules for damage	<input type="checkbox"/>
	Advise customer or operator to perform sensory inspection of components for signs of faults	<input type="checkbox"/>

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On-the-Job Checklist



	Level 3	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Diagnoses engine & engine support systems	Perform compression, oil pressure & cylinder leakage tests	<input type="checkbox"/>
	Check for failed, worn, damaged & faulty oil pumps, oil coolers & pressure regulator valves	<input type="checkbox"/>
	Use leak testing equipment & fluid analysis sampling devices	<input type="checkbox"/>
	Test EGR coolers, cold weather starting aids, grid heaters for leakage & wear	<input type="checkbox"/>
	Determine static injection pump timing adjustment	<input type="checkbox"/>
	Determine actuator & controller replacement or adjustment	<input type="checkbox"/>
	Inspect EGR system, DPF, DOC, SCR & perform diagnostic tests	<input type="checkbox"/>
Repairs engine & engine support systems	Replace camshafts, valve train, connecting rods, timing gears	<input type="checkbox"/>
	Replace oil pumps, oil coolers, pressure regulator valves, bypass valves & oil filters	<input type="checkbox"/>
	Reinstall fan drives, coolant heaters, water pumps & controllers	<input type="checkbox"/>
	Replace mufflers, turbochargers, grid heaters, manifolds, catalysts & air filters	<input type="checkbox"/>
	Replace injection pump, lines, injectors, filters, transfer pump, & fuel tanks	<input type="checkbox"/>
	Recalibrate sensors, switches & actuators	<input type="checkbox"/>
	Verify emission system has appropriate controller software	<input type="checkbox"/>
Diagnoses drive trains	Operate equipment to test for clutch wear, odour & clutch dust	<input type="checkbox"/>
	Inspect for misaligned driveline components, improper driveline angles & excessive play	<input type="checkbox"/>
	Perform synchronizer tests, flow tests, pressure checks, & electrical tests	<input type="checkbox"/>
	Test differentials & final drives for mechanical failures (bearings, seals, gears, shafts, housings)	<input type="checkbox"/>
Diagnoses climate control systems	Inspect climate control system for plugged heater cores, air/coolant leaks & noisy fans	<input type="checkbox"/>
	Check condenser, receiver-dryer & valves for failure	<input type="checkbox"/>

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On-the-Job Checklist



	Level 3	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Repairs drive trains	Replace clutch discs, primary & secondary cylinders & linkages	<input type="checkbox"/>
	Align & phase driveline, align chain, gears, & drive shaft safety restraints	<input type="checkbox"/>
	Repair, recondition & replace wet clutch, transmission & gear case components	<input type="checkbox"/>
	Assemble & install final drive components	<input type="checkbox"/>
Repairs climate control systems	Repair or recalibrate fans, resistors, motors, heater cores & electronics	<input type="checkbox"/>
	Assemble & installs condenser, evaporator, compressor, receiver-dryer & valves	<input type="checkbox"/>

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On-the-Job Checklist



	Level 4	Page 1/2
Red Seal Tasks	On-The-Job Duties	Completed
Uses communication & mentoring techniques	Give supportive & corrective feedback	<input type="checkbox"/>
Diagnoses hydraulic, hydrostatic & pneumatic systems	Perform pressure/temperature tests at operating temperature & at rated RPM	<input type="checkbox"/>
Repairs hydraulic, hydrostatic & pneumatic systems	Repair or replace hydraulic components	<input type="checkbox"/>
Diagnoses steering & brake systems	Verify steering system function	<input type="checkbox"/>
Repairs steering & brake systems	Re-install steering motors, steering linkages, priority valves & control valves	<input type="checkbox"/>
Diagnoses track, wheel & suspension systems	Perform tension checks on rubber tracks & tensioning systems	<input type="checkbox"/>
	Perform ballasting checks & for tire bulges	<input type="checkbox"/>
	Check for accumulator charge or failure & air pressure on air compressor & accumulators	<input type="checkbox"/>
Repairs track, wheel & suspension systems	Replace worn or damaged idlers, rubber tracks, support wheels, drive wheels & perform track alignment	<input type="checkbox"/>
	Replace worn or damaged fasteners, rims & tires	<input type="checkbox"/>
	Assemble & install air bags, shocks, accumulators, hoses & controllers	<input type="checkbox"/>
Diagnoses structural components	Perform inspections on glass, cab mounts & doors for cracks, fatigue or damage	<input type="checkbox"/>
	Inspect ROPS & FOPS for loose components & damage	<input type="checkbox"/>
	Perform sensory inspection to identify loose or missing fasteners, air leaks & fatigue	<input type="checkbox"/>
Repairs structural components	Assemble & install pivot points, frame rails, gussets & connecting members on frames	<input type="checkbox"/>
	Install ROPS & FOPS	<input type="checkbox"/>
	Replace or recondition worn roofs, fenders, panels, & hinges	<input type="checkbox"/>

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Agricultural Equipment Technician

On-the-Job Checklist



	Level 4	Page 2/2
Red Seal Tasks	On-The-Job Duties	Completed
Prepares agricultural equipment	Complete pre-delivery inspection (PDI) checklist	<input type="checkbox"/>
	Assemble balers, headers, mowers, loaders & crop dividers	<input type="checkbox"/>
	Install receivers, control units, wiring harnesses & verify	<input type="checkbox"/>
Diagnoses precision farming equipment	Read test results to determine repairs & reconfiguring on-site	<input type="checkbox"/>
	Perform diagnostics remotely by retrieving codes	<input type="checkbox"/>
Repairs precision farming equipment	Replace failed batteries, fuses, relays, telematics communications, terminators, controllers & antennas	<input type="checkbox"/>
	Direct customer to reinstall controllers & power modules	<input type="checkbox"/>
Diagnoses & preparation, tillage & seeding/planting equipment	Check draft by measuring equipment offset	<input type="checkbox"/>
	Measure seed depth uniformity	<input type="checkbox"/>
Repairs & preparation, tillage & seeding/planting equipment	Perform basic welding repairs	<input type="checkbox"/>
	Adjust air plenums & dampers	<input type="checkbox"/>
Diagnoses harvesting, hay & forage equipment	Verify monitor & equipment settings to match crop type	<input type="checkbox"/>
	Inspect rollers, belts, drivelines, bearings, chains for wear, misalignment or damage	<input type="checkbox"/>
Repairs harvesting, hay & forage equipment	Recondition gear cases, rollers, knives, threshing elements, guards & clutches	<input type="checkbox"/>
	Realign, adjust, or replace belts, chains, auger flightings, load cells, monitor & drive sheaves	<input type="checkbox"/>
Diagnoses application & irrigation equipment	Compare calculated delivery rate to the actual delivery rate	<input type="checkbox"/>
	Calculate delivery rate inputs of water	<input type="checkbox"/>
Repairs application & irrigation equipment	Replace & calibrate flow meters, pressure sensors & switches	<input type="checkbox"/>
	Adjust rate controller for volume, speed, pressure & rate	<input type="checkbox"/>

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Information Regarding the Checklist

Saskatchewan Apprenticeship and Trade Certification Commission's (SATCCs) On-The-Job Checklist provides a complete list of trade-specific Red Seal tasks for apprentices to complete under the supervision of a journeyperson. This work should be completed prior to attending the technical training level under which the duties are listed (e.g. Level 1 completed prior to attending Level 1 technical training).

Completing this checklist will ensure that apprentices are exposed to the full scope of a particular Red Seal trade throughout their apprenticeship program. It will also help prepare apprentices for each level of technical training by performing work on-the-job relating specifically to topics covered later on. The trade-specific tasks listed have been reviewed by certified journeypersons in Saskatchewan for their accuracy and have been set to an appropriate skill level.

An apprentice spends approximately 85% of their apprenticeship term training on-the-job. It is both the apprentice's and the employer's or journeyperson's responsibility to supervise an apprentice's practical skills development during their program.

To promote transparency and consistency, this document aligns with the 2021 Agricultural Equipment Technician Seal Occupational Standard (Employment and Social Development Canada).

A complete version of the Occupational Standard can be found at www.red-seal.ca

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