ONTARIO · 313D · CERTIFICATE OF QUALIFICATION

THE 313D RESIDENTIAL AIR CONDITIONING EXAM BLUEPRINT.

Residential Air Conditioning Systems Mechanic (313D) is a compulsory trade in Ontario: to do the work you need a registered training agreement, a provisional Certificate of Qualification or a Certificate of Qualification. Skilled Trades Ontario (STO) sets and delivers the certifying exam. 313D is an Ontario trade, not a Red Seal trade.

STO's counselling sheet sets the pass mark at 70% and weights six skill sets. It publishes no question count for 313D: its exams have between 90 and 150 multiple-choice questions and run up to four hours.

70%	90–150	4 h	6
PASS MARK	STO'S RANGE, NO 313D COUNT	UP TO FOUR HOURS	WEIGHTED SKILL SETS

HOW YOU WRITE IT (STO PAGES, READ NOVEMBER 2026)

Booking and the sitting

The exam fee is $150 + HST. Since February 1, 2026 STO delivers its exams itself, at its exam centres and partner training sites, on paper or on screen; there is no online option. Four options per question.

Results and the licence

Results come within 15 business days. The Certificate of Qualification is renewed every year ($60 + HST). Refrigerant work also needs the ODP card under O. Reg. 463/10.

IF IT DOESN'T GO YOUR WAY

You wait 30 days before you can write again. Use the month: your weakest skill sets are the plan.

TURN THE PAGE

The six skill sets and their weights, what the licence covers, how to study the readings, and an eight-week study plan.

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THE BLUEPRINT · 313D

SIX SKILL SETS, WEIGHTED.

The percentages are STO's, from the 313D exam counselling sheet. Its body says it was updated on December 5, 2016, and it follows the older training standard; the standard in force since December 4, 2023 regroups the work, so treat the weights as a guide. The summaries, the 130-question mock split and the bank counts are ours.

SKILL SET · WHAT IT COVERS	SHEET	MOCK*	BANK*	HARDER	TOTAL
A · Plan and Prepare Drawings and the maker's literature; design conditions and load inputs; choosing the system and controls; site safety and instruments.	**7%**	**9**	28	10	**38**
B · Assemble and Install Setting units; line sets and brazing; leak testing, evacuation and charging; air distribution and accessories; power and control wiring.	**21%**	**27**	84	25	**109**
C · Commission Start-up checks; control set-up; airflow and charge by superheat or subcooling; proving the whole system.	**10%**	**13**	40	20	**60**
D · Service Diagnosis from readings and symptoms; recovery and decommissioning; refrigerant-circuit, air-side and mechanical repairs.	**21%**	**28**	84	40	**124**
E · Maintain Planned maintenance and records; filters, coils, blowers and ducts; condensate, humidifiers, ventilation; refrigerant-side checks.	**21%**	**27**	84	15	**99**
F · Service or Maintain Electrical Components Safe testing; motors and capacitors; contactors, relays and transformers; thermostats and control circuits; electronic and inverter boards.	**20%**	**26**	80	40	**120**

83% is hands-on. Service, Maintain and Assemble and Install are 21% each and the electrical components 20%: most of the exam asks you to work a system from readings, not to name its parts. *Mock is how many of TicketPrep's 130 mock-exam questions come from each set (the sheet's percentages scaled to 130; STO publishes no count). Bank, Harder and Total are our practice bank (400 Standard plus 150 harder), not the exam's breakdown.

WHERE THE MARKS GO WRONG

- **Reading the gauges without the airflow.** Low airflow and a low charge both pull suction pressure down. Check the filter, the coil and the blower before you touch the charge.
- **Superheat for one device, subcooling for the other.** A fixed metering device is charged by superheat, a TXV or EEV system by subcooling. Know which test answers which question.
- **The electrical 20%.** Capacitors, contactors, motors, control circuits and inverter boards carry a fifth of the weight. Practise safe meter readings and what each reading means.
- **The rules around the refrigerant.** Recovery, leak testing and records come from O. Reg. 463/10 and CSA B52, and they show up in service and install questions alike.

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THE LICENCE AND THE SITTING

WHAT A 313D LICENCE COVERS.

O. Reg. 875/21, s. 119 gives 313D the same scope as 313A, limited to systems installed as an independent unit in a residential family dwelling:

- **No more than 240 volts single phase**, with a branch circuit of at most 60 amps.
- **No more than 60,000 Btu/h of cooling.**
- **A saturated suction temperature above 2 °C (35 °F).** Portable precharged plug-in units are not covered.
- **Not gas work.** A Certificate of Qualification does not authorize work that needs a certificate under the Technical Standards and Safety Act, so a furnace or gas line needs a TSSA gas ticket (our reading, not legal advice).

TWO WAYS TO THE EXAM

Apprenticeship: 4,500 hours, 4,020 on the job and 480 in school over two levels; entry is Grade 10. **Experience:** a Trade Equivalency Assessment ($235 + HST) of your work history, then the same exam. The first school level is shared with 313A, the full Refrigeration and Air Conditioning Systems Mechanic trade.

STUDY THE READINGS, NOT JUST THE WORDS.

STO does not say whether the exam is open book and states no formula sheet, so plan to work without notes. Up to 150 questions in four hours is about a minute and a half each: enough to work one reading through, not to hunt for a method.

KNOW YOUR CHARTS

Read a pressure-temperature chart both ways: saturation from pressure, then superheat and subcooling from line temperatures, for R-410A, R-22 and the A2L refrigerants R-32 and R-454B.

AIRFLOW FIRST

Static pressure, temperature split, filter pressure drop and CFM per ton. Many service questions start with whether the air side is right.

ELECTRICAL BY THE METER

Volts, amps, ohms and microfarads: what a good reading is on a capacitor, a winding or a contactor, and how to take it safely.

THE JOB IN ORDER

Plan, install, leak test, evacuate, charge, commission, then maintain and service. Many questions ask what you do next.

Study the trade, not "real questions". STO's exam integrity policy treats capturing or sharing exam content as misconduct, with fines and the loss of a certificate at stake. Anything sold as recalled or actual 313D questions did not come from STO; the work and the readings are what to learn.

YOUR PLAN

AN EIGHT-WEEK PLAN FOR THE 313D EXAM.

The heavy sets first, in the order you do the work, then the electrical side, then full mocks. Answer every practice question by working the reading, not by memory. Short on time? Shorten the weeks, keep the order and the final mocks.

01 **Week 1: Plan and Prepare.** Drawings and the maker's literature, design conditions, load inputs, choosing the equipment, and the safety and instruments the job needs.

02 **Week 2: Assemble and Install, part 1.** Setting units, line sets, brazing with a nitrogen purge, and the clearances and pipe sizes the manual gives.

03 **Week 3: Assemble and Install, part 2.** Leak testing, evacuation to microns, charging a new system, duct and accessory work, power and control wiring.

04 **Week 4: Commission.** Start-up checks, control set-up, airflow and charge by superheat or subcooling, and proving the whole system.

05 **Week 5: Service.** Diagnosis from pressures and temperatures, recovery and decommissioning, repairs to the refrigerant circuit and the air side.

06 **Week 6: Maintain.** Filters, coils, blowers, condensate, humidifiers, ventilation, and the refrigerant-side checks, with the records to keep.

07 **Week 7: Electrical components.** Motors and capacitors, contactors and relays, transformers, thermostats, control circuits and inverter boards. Take every reading by the meter.

08 **Week 8: Full mocks.** 130 questions in four hours, no notes. Score each skill set on its own: the weakest heavy set is your next drill.

PRACTICE BY SKILL SET

TicketPrep's 313D bank is 550 original questions on all six skill sets, 400 Standard and 150 harder, with every option explained. Mocks are 130 questions in four hours, drawn 9, 27, 13, 28, 27 and 26 from the six sets (our split of the sheet's weights), with your score in each set.

Try five free, no card, no sign-up:
ticketprep.ca/quiz.html?trade=residential-ac-313d

More free, printable: ticketprep.ca/free-313d-residential-ac-questions.html
$69 313D Exam Pass, 120 days · $119 All-Access adds 313A and every other exam on TicketPrep · 7-day refund · not a subscription

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