

DACUM Research Chart for Electric Vehicle Technician



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DACUM Research Chart for Green River College's EV Technician

DUTIES

TASKS

Gather vehicle information

A

A.01 Review repair order	A.02 Review service history	A.03 Research recalls	A.04 Research technical service bulletins	A.05	A.06	A.07	A.08	A.09	A.10
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Diagnose vehicle problem

B

B.01 Inspect for damage	B.02 Scan vehicle	B.03 Research trouble code	B.04 Research manufacturer service bulletins	B.05 Research manufacturer recalls	B.06 Research code logic	B.07 Research symptoms diagnosis	B.08 Request additional expertise	B.09 Identify after-market add-ons	B.10 Determine root cause of failure
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Check vehicle safety

C

C.01 Identify low voltage vs. high voltage	C.02 Secure work area	C.03 Test personal protective equipment (PPE)	C.04 Put on PPE	C.05 Disable high voltage system	C.06 Verify high voltage disconnection	C.07	C.08	C.09	C.10
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Order vehicle parts

D

D.01 Identify needed parts	D.02 Identify whole assemble or module	D.03 Identify single-use parts	D.04 List required parts	D.05 Identify restricted parts	D.06 Order necessary parts	D.07	D.08	D.09	D.10
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Repair vehicle

E

E.01 Research repair procedure	E.02 Identify special tools	E.03 Identify additional PPE	E.04 Review vehicle warranty	E.05 Verify interlock circuit	E.06 Repair vehicle fault	E.07 Configure replaced component	E.08	E.09	E.10
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Verify repaired vehicle

F

F.01 Clear active codes	F.02 Perform test drive	F.03 Confirm freeze frame drive data	F.04 Return required parts	F.05 Ensure vehicle condition for return	F.06 Return vehicle to customer	F.07	F.08	F.09	F.10
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Document diagnosis & repair

G

G.01 Record diagnosis & completed repairs	G.02 Record component information	G.03 Report safety concerns	G.04 Print description of operation system	G.05 Provide documentation to service advisor	G.06	G.07	G.08	G.09	G.10
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Knowledge & Skills

writing/reading
finesse
mechanical aptitude
certificates: ASE, factory, hybrid
communication
comprehension
computer databases/programs
situational awareness

Behaviors

integrity
strong work ethic
teachable
patience
attn to detail
teamwork
positive attitude (on display in front of customers)
professionalism (polite)
tidy, organized
healthy respect for HV
anger management
common sense
problem solver
process-oriented

Tools/Equipment/Supplies

laptop & apps
HV multimeter - cat. 3
isometers
insulated tools
PPE; rubber gloves
lift table for batteries
shepherd's hook
forklift
cones
anti-static mat
charge balancers
common hand tools
cutting tools

PPE

gloves: inner liner, HV rubber, & leather
arc flash equipment
polycarbonate/electrically rated gloves
face shield
helmet
balaclava
safety glasses

Future Trends

less wires, less strands
replaced w/ comms, software
fast-charging protocols - swapping electrolytes
more inductive charging stations
battery composition
in-car apps
autonomous functions
CASE: connected, autonomous, shared, electrified
shared vehicles (autonomous)
2035 EV goals
alt fuels
input from cameras, sensors
recycling tech
infrastructure

Acronyms

DTC = diagnostic trouble code
P&A = price and availability
TSB = technical service bulletin
ADAS = advanced driver assisted systems
FTS = field tech specialist
ICE = internal combustion engine
HV = hybrid vehicle
BEV = battery electric vehicle

Thank you to DACUM panelists from Bill Korum's Puyallup Nissan, Doxon Toyota of Auburn, King County Metro Transit, Nissan North America, Tesla and Valley Buick GMC