

The twelve systems a mechanic breaks a car into

YES Electric • a plain-language course for shop helpers and car buyers

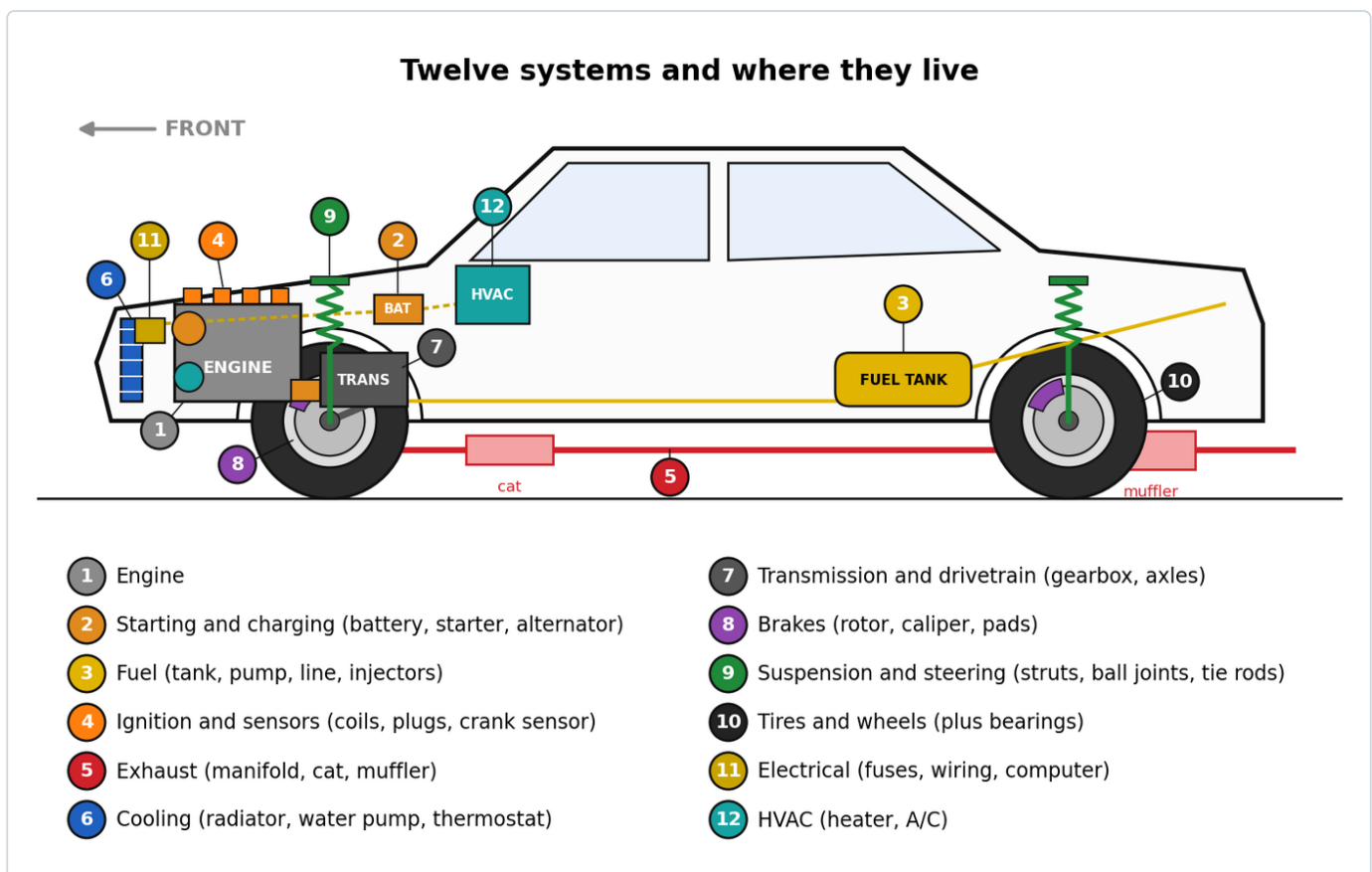
First edition (October 2026). Prices and hours in this course are rough numbers for a 2008–2016 sedan and will change by car and by year. Treat them as a guide for deciding, not a quote.

The shop plan is organized around buying non-runners, so this is the list of systems a mechanic breaks a car into, with the specific repairs the plan already names on the right.

#	System	What gets repaired or replaced	Where it shows up in the plan
1	Engine (mechanical)	Head gasket, timing belt or chain, oil consumption, seized or cracked block, used engine swap	Mazda3, Corolla, Accord K24 and Sonata used-engine plays; compression test before buying; walk away at 0 psi on an interference engine
2	Starting and charging	Battery, starter, alternator, ignition cylinder, key and immobilizer	The "cheap no-start" on the Accord, Camry, Malibu and Fusion, the top-ranked buys
3	Fuel system	Fuel pump, injectors, fuel pressure regulator, filter	Fuel pump listed under cheap no-starts; fuel pressure tester in Tier 2
4	Ignition and engine sensors	Spark plugs, coils, crank and cam sensors, O2 sensors, MAF	Crank/cam sensor no-start; P0171 lean-code screen question for applicants
5	Exhaust and emissions	Catalytic converter, O2 sensors, EVAP leaks, mufflers	Kia Soul clogged cat (\$137–411); missing cat = \$500–750 off the bid; smoke machine and Hackzall in Tier 2
6	Cooling	Radiator, water pump, thermostat, hoses, fans	Pressure tester and vacuum refill in Tier 2
7	Transmission and drivetrain	Automatic/CVT replacement, clutch, axles and CV joints, driveshaft U-joints	CVT and PowerShift cars are walk-aways; trans jack and U-joint press in Tier 2
8	Brakes	Pads, rotors, calipers, lines, master cylinder, ABS	Front brake job is station B of the skills test; caliper tools in Tier 1, bleeder in Tier 2
9	Suspension and steering	Struts, shocks, ball joints, control arms, tie rods, wheel bearings, power steering	Ball joint press and wheel puller in Tier 2; "recon (tires, brakes, fluids)" line
10	Tires and wheels	Tires, balance, alignment, TPMS sensors	Tires sent out (no changer or balancer); TPMS relearn on the skills test

#	System	What gets repaired or replaced	Where it shows up in the plan
11	Electrical and body electronics	Wiring, fuses, parasitic draws, modules, window and lock motors, lights	Intermittent-electrical interview question; DC amp clamp gap on the meter; FORScan and GM module programming gaps
12	HVAC / A/C	Compressor, condenser, evaporator, blend doors, recharge and leak repair	Section 609 cert, R-134a recovery setup (\$1,615-1,635), R-1234yf add-on

Two more a shop would add once it sells to the public. Body and glass work (dents, bumpers, windshields) is usually sent out and is not priced in the plan. Fluids and routine maintenance (oil, coolant, trans fluid, filters, belts) is the baseline recon on every car, covered by the drain pan and transfer pump in Tier 1.



A side view of a sedan with its twelve systems drawn roughly where they sit: engine, radiator, battery and alternator up front, fuel tank ahead of the rear wheel, exhaust running underneath, brakes and struts at each wheel. Match each numbered circle to the legend.

Drawing made for this course.