

Car Maintenance Basics — Workbook

This workbook turns the course into action on your own car. You will pull the real numbers from your owner's manual, run every fluid and tire check in your driveway, practice changing a tire before you ever need to, and build a maintenance log that protects your engine and your resale value. Work through one section per module, keep your filled-in worksheets, and use the templates to track services, costs, and the seasonal jobs that keep a car reliable.

Know Your Car: The Manual, the Schedule, and the Log

Capture your car's exact service intervals, assemble your kit, and stand up a maintenance log before anything comes due.

Worksheet: Pull Your Service Schedule

Open your owner's manual (or the manufacturer's PDF) to the maintenance schedule and record your car's actual intervals. Decide whether you fall under the Normal or Severe schedule based on how you really drive.
Year / Make / Model / Engine

Current odometer reading

Schedule used: Normal or Severe (and why)

Oil and filter interval (km/mi and months)

Tire rotation interval

Engine air filter / cabin air filter interval

Brake fluid interval (years)

Coolant interval

Spark plug interval

Timing belt or timing chain? (and replacement interval if belt)

Checklist: Assemble Your Driveway Kit

- Accurate digital or dial tire pressure gauge
- 12V tire inflator or foot pump
- Nitrile gloves and shop towels
- Funnel and clean rag for fluids
- Jack and matching lug wrench (confirmed present in car)
- Breaker bar or telescoping lug wrench for stuck nuts
- Wheel chocks and work gloves
- Flashlight/headlamp, safety vest, warning triangle
- Jumper cables or lithium jump-start pack (charged)
- Tread-depth gauge or coins for the tread test
- Correct oil, coolant, and washer fluid in the right specs

Exercise: Match Your Fluids to Spec

Using your manual, write down the exact specification for each fluid, then confirm the product you buy matches it. Wrong specs are a common and avoidable mistake.

- What engine oil viscosity does your car require (e.g., 0W-20, 5W-30)?

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- What coolant type and color does the manual specify, and is it sold pre-mixed?

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- What brake fluid grade is listed (DOT 3, DOT 4, etc.)?

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- Does your car use hydraulic or electric power steering — is there fluid to check at all?
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Fluids: The Lifeblood of Your Car

Run every fluid check on your own car, record the levels and condition, and learn to read a leak from a puddle.

Checklist: Monthly Fluid Check Routine

- Car parked on level ground, engine off and cooled where required
- Oil checked: level between marks, color noted
- Coolant read at the overflow tank (engine cold, cap never opened hot)
- Brake fluid level read against MIN/MAX, color noted
- Power-steering fluid checked (if hydraulic)
- Transmission fluid checked per your car's method (or noted as sealed)
- Washer fluid topped to full with correct seasonal formula
- Any low level recorded as a possible leak to watch, not just refilled

Worksheet: Fluid Condition Log

Check each fluid and record the level and what its color or smell tells you. Healthy reference: oil amber, coolant bright and clean, brake fluid clear-to-gold, ATF bright red.

Date and odometer

Engine oil — level (low/ok/full) and color

Coolant — level and color

Brake fluid — level and color (clear/gold = ok, dark = overdue)

Transmission fluid — checkable? red vs. brown/burnt

Power steering — level and any whine when turning

Washer fluid — topped? winter-rated? (yes/no)

Any warning sign found (milky oil, sweet smell, dropping level)

Exercise: Read a Leak with Cardboard

Slide a clean sheet of cardboard under the parked car overnight. The next morning, identify any drip by color and location to judge the cause and urgency.

- What color and consistency is the fluid (clear/water, amber-oily, green-orange-pink-sweet, reddish, brake-fluid-like)?

- Where under the car did it land, and which system sits above that spot?

- Is the matching reservoir also low, confirming an active leak?

- Based on color, is this harmless (A/C water) or does it need a diagnosis — and how urgently?

Tires and Brakes: Where Safety Lives

Set tire pressure to spec, judge tread, rehearse a full tire change, and learn to catch brake and battery problems by sound and feel.

Worksheet: Tire Pressure and Tread Record

Find your door-jamb recommended PSI, then check all five tires cold. Record pressure and the tread test result for each, and note any uneven-wear pattern.

Recommended PSI from driver's door-jamb sticker

Front-left: pressure / tread test result

Front-right: pressure / tread test result

Rear-left: pressure / tread test result

Rear-right: pressure / tread test result

Spare: pressure (and type — full-size or donut)

Any uneven wear (both edges / center / one edge / cupping) and likely cause

Next rotation due (odometer)

Exercise: Practice Tire Change (Driveway, Daylight)

Do a full practice tire change in a safe spot before you ever need one for real. Go slowly and note where everything is and how it feels.

- Where is the jack, lug wrench, and spare stored, and is the spare properly inflated?

- Did you loosen the lug nuts a quarter turn BEFORE jacking, with the tire still on the ground?

- Where is the manufacturer's marked jacking point nearest each wheel?

- Did you tighten the lug nuts in a star pattern, and what is your donut spare's speed/distance limit?

Checklist: Brake and Battery Warning Signs

- Listened for a high-pitched squeal when braking (wear indicator)
- No grinding/growling noise (which means pads are gone)
- Brake pedal feels firm, not soft, spongy, or sinking
- Car tracks straight under braking (no pull to one side)
- Pad thickness glimpsed through wheel spokes (above ~3 mm)
- Battery age noted (replace warning at 3-5 years)
- Engine cranks briskly, not slow and labored
- Battery terminals clean and tight (no white/green corrosion)

Warning Lights, Smart Repairs, and Staying Ahead

Decode your dashboard, plan jobs as DIY or pro, guard against upsells, and build a seasonal routine that lasts.

Worksheet: Dashboard Warning-Light Reference

Using your manual's warning-light chart, fill in what each light looks like on your car and what action it calls for. Keep this with your log for fast reference.

Oil pressure light — appearance and action (red = stop now)

Engine temperature light — action (stop, let cool, never open hot)

Battery/charging light — action

Brake system light — action

Check Engine Light — steady vs. flashing (and the difference in urgency)

Tire pressure (TPMS) light — appearance and action

Do you own or can you borrow an OBD-II scanner? (yes/no)

Exercise: Plan a Repair: DIY or Mechanic

List three jobs your car needs or will need. For each, decide if it is beginner-friendly, intermediate-with-care, or leave-to-a-pro, and prepare the questions you will ask a shop.

- Job 1 — which category, and do you have the tools and confidence?

- Job 2 — is it actually due per your schedule, or is a part failing?

• Job 3 — what could go wrong if done incorrectly (crash/fire/major damage)?

• What exact question will you ask the counter to test an upsell (e.g., 'Is this due per my schedule, or is something failing?')?

Checklist: Seasonal Readiness

- Battery tested before the first hard freeze
- Winter tires fitted or all-season tread confirmed healthy
- Tire pressures re-checked as temperature dropped
- Winter washer fluid in and wiper blades replaced
- Cold-weather emergency kit in the trunk (blanket, light, traction aid)
- Coolant mixed to protect against region's lowest temperature
- Belts and hoses inspected for cracks before summer trips
- Radiator fans confirmed running before hot-weather driving

Your Action Plan

1. Download or locate your owner's manual and copy the full service schedule into your log
2. Assemble the driveway kit and verify the jack, lug wrench, and spare are all present and the spare is inflated
3. Run the monthly fluid check on all six fluids and record levels and condition
4. Leave cardboard under the car overnight and identify any leak by color and location
5. Find your door-jamb PSI and set all five tires cold, then schedule your next rotation
6. Do one full practice tire change in your driveway in daylight before you ever need it
7. Learn your three most important warning lights and get an OBD-II scanner or know where to borrow one
8. List your next three repairs and decide DIY versus mechanic for each using the risk rule
9. Test the battery and complete the seasonal checklist for the upcoming season
10. Set recurring reminders: monthly checks, each-fuel-up odometer glance, and an annual log review

