STRETCHLEARN · WORKBOOK

Motorcycle Maintenance Basics — Workbook

This workbook turns the course into garage time on your own bike. Each section pairs with a course module and gives you the exact measurements, torque values, and checks to record as you work, so your numbers come from the manual and the gauge instead of guesswork. Keep your service manual open beside it, fill in your bike's real specs in the templates first, and use the logs every time you service so the whole bike stays on schedule.

Setup, Safety, and the Engine Oil Service

Capture your bike's service specs, then run a complete oil and filter change recording every check.

Worksheet: My Bike's Oil-Service Spec Card

Open the factory service manual (not the owner's handbook) and copy your bike's exact numbers here. Tape a copy inside your toolbox lid so you never guess.

Make / model / year

Oil viscosity grade (e.g. 10W-40)

Oil standard required (JASO MA / MA2)

Fill capacity, oil + filter change (litres)

Fill capacity, oil only (litres)

Drain bolt torque (Nm)

Crush washer required? (yes/no, part no.)

Filter type (spin-on / cartridge) and part no.

Oil-change interval (km/mi and time)

Exercise: Perform a Full Oil and Filter Change

Warm the engine 3 to 5 minutes, put the bike vertical on a stand, and run the complete drain, filter, and refill procedure from the course. Work slowly and write your answers as you go.

• What did the magnetic drain bolt look like — fine grey paste (normal) or bright flakes (investigate)?

• How did you confirm the new spin-on filter was tight (hand turns past gasket contact) or the cartridge cover

torque?

• How did you check final oil level — sight glass between marks, or dipstick resting on threads — and what did it read after the engine ran and settled?

• Did the oil pressure light go out within a second or two on first start?

Checklist: Oil-Change Close-Out

[ ] Drain bolt torqued to spec with new crush washer if required
[ ] New filter gasket lightly oiled and seated; spin-on hand-tight 3/4 to 1 turn past contact
[ ] Refilled to correct level and re-checked after running and settling
[ ] Oil pressure light went out promptly on first start
[ ] Engine and pan wiped dry; checked for weeping after a 60-second idle
[ ] Date and odometer logged; next interval noted
[ ] Old oil and filter set aside for proper recycling

Drive Chain and Final Drive

Record chain specs, set slack and alignment to the manual, and build a clean-and-lube habit.

Worksheet: Chain and Sprocket Spec Sheet

Copy your bike's drivetrain specs from the manual and record current condition. Use this before adjusting so you know the target.

Chain size (520 / 525 / 530 etc.)

Chain type (O-ring / X-ring / standard)

Slack spec range (mm) and measurement condition

Measurement point (midpoint of lower run)

Rear axle nut torque (Nm)

Front / rear sprocket tooth counts

Current measured slack (mm)

Sprocket teeth condition (square / hooked)

Exercise: Set Chain Slack and Check Alignment

With the bike on a stand, measure slack at the midpoint, adjust both sides equally, verify alignment with a string line (not just the stamped marks), and torque the axle. Then re-check slack.

• How many flats did you turn each adjuster, and did both swingarm marks read the same notch?

• What did the string-line gap to the front tyre tell you versus the stamped alignment marks?

• What slack did you measure after torquing the axle, and was it within spec?

• Did you fit a fresh cotter pin / R-clip if your axle uses one?

Checklist: Clean-and-Lube Routine

[ ] Chain cleaned with chain cleaner or kerosene and a grunge brush (no petrol, brake cleaner, or wire wheel)
[ ] Solvent fully evaporated before lubing
[ ] Lube applied to the inner edge of the chain, two full wheel rotations
[ ] Excess wiped off; any overspray cleaned off the disc and tyre
[ ] Lube given at least 10 minutes (ideally hours) to set before riding
[ ] Axle re-torqued and slack re-checked one final time

Tyres, Wheels, and Brakes

Set cold pressures by the bike's sticker, inspect tread and tyre age, and check brakes before they bite.

Worksheet: Tyre and Brake Spec Card

Record the bike's recommended pressures (from the chain-guard sticker, not the sidewall max) and your current readings and wear figures.

Recommended cold pressure — front (psi)

Recommended cold pressure — rear, solo (psi)

Recommended cold pressure — rear, two-up/loaded (psi)

Current cold pressure front / rear (psi)

Front tyre DOT date code (week/year)

Rear tyre DOT date code (week/year)

Pad material remaining — front / rear (mm)

Disc minimum thickness stamped (mm) and measured (mm)

Brake fluid type (DOT 4) and last change year

Exercise: Full Tyre, Wheel, and Brake Inspection

Check cold pressures with an accurate gauge, then slowly rotate each wheel through a full turn inspecting tread, age, and damage, and inspect brake pads, disc, and fluid.

• Were the cold pressures within spec, and how far off were they?

• How old are the tyres by the DOT code, and is either past the 5 to 6 year replacement point?

• What pad material is left, and is the disc above its stamped minimum thickness?

• What colour is the brake fluid (clear/gold = good, dark/murky = overdue) and when was it last changed?

Checklist: Tyre and Brake Red-Flags (Stop and Fix)

[ ] Sidewall bulge, blister, cut, or embedded object
[ ] Tread level with the wear bars or a squared-off centre profile
[ ] Tyre older than 6 years by DOT code
[ ] Pads at the wear groove or near the metal backing plate
[ ] Disc below minimum thickness, deeply scored, or pulsing the lever
[ ] Brake fluid dark/murky, spongy lever, or a wet caliper

Electrical, Fluids, and the Pre-Ride Routine

Keep the battery healthy, run the fast fluid/cable/light checks, and lock in a T-CLOCS pre-ride habit.

Worksheet: Battery and Charging Health Log

Measure with a multimeter. Record resting voltage after the bike has sat a few hours, then charging voltage at the battery with the engine at a fast idle.

Battery type (AGM lead-acid / lithium)

Resting voltage (V)

State of charge (full ~12.7-12.8 / half ~12.4 / low <12.0)

Charging voltage at fast idle (V)

Charging verdict (healthy 13.5-14.5 / undercharging / overcharging >15)

Terminals cleaned and greased? (yes/no)

On a smart tender when parked? (yes/no)

Exercise: Run the Controls, Cable, and Light Check

Work through the fast under-five-minute checks: throttle snap-shut, lever free-play, cable condition, every light, the horn, kill switch, and sidestand cut-out.

• Does the throttle snap fully closed by itself with the bars turned both ways?

• Which lights or controls failed (headlight hi/lo, brake light from both controls, indicators, horn)?

• Did the kill switch and sidestand cut-out both work as intended?

• Did you find any kinked, frayed, or seized cable that needs attention?

Checklist: T-CLOCS Pre-Ride Walk-Around

[ ] Tyres and wheels: pressure and damage glance
[ ] Controls: levers firm, throttle snaps shut
[ ] Lights and electrics: headlight, brake light (both controls), indicators, horn
[ ] Oil and fluids: no fresh drips on the floor, sight-glass glance
[ ] Chassis: chain slack and lube, fork-seal legs dry, nothing loose
[ ] Stands: sidestand springs up fully, cut-out works

Your Action Plan

1. Buy or download the factory service manual for your exact make, model, and year, and fill in all four spec cards in this workbook.
2. Assemble the starter tool kit, including a click torque wrench (5 to 60 Nm), a stand that lets the rear wheel spin, and an accurate tyre gauge.
3. Perform a full oil and filter change to the manual's torque and capacity, and log the date and odometer.
4. Set drive-chain slack to spec, verify rear-wheel alignment with a string line, torque the axle, then clean and lube the chain.
5. Set all tyre pressures cold to the bike's sticker, and inspect tread, DOT date, and damage on both tyres.
6. Inspect brake fluid colour and level, pad material, and disc thickness, and note whether a two-year fluid flush is due.
7. Measure battery resting and charging voltage, clean and grease the terminals, and put the bike on a smart tender when parked.
8. Run the controls, cable, and light check, confirming the throttle snaps shut and every light and the horn work.
9. Memorise T-CLOCS and do the 90-second walk-around before the first ride of every day.
10. Set calendar reminders for the next oil interval, the two-year brake-fluid date, and an annual tyre-age check, and log every service as you go.