Using it properly.

WOWorks OBD Logger takes the live readings your Torque Pro app already collects, stores them per drive, and turns them into trends, health findings, email alerts and answers from Claude. This guide covers the whole thing, from the first drive to the questions worth asking about your engine.

How the pieces fit

1. **Your car** talks to a Bluetooth OBD adapter.
2. **Torque Pro** on the car phone reads it and uploads every reading to this site over HTTPS.
3. **WOWorks OBD Logger** stores each drive, works out per-drive statistics, and keeps them for as long as you want.
4. **You** read the Stats and Health pages, download CSVs, and get an email when something looks wrong.
5. **Claude** connects to the same data and answers questions in plain language.

01 First fifteen minutes

1. **Sign in** at `https://obd.woworks.co.za/login` with the account from your invitation.
2. **Turn on two-factor authentication** (Account > Two-factor authentication). Scan the QR code with an authenticator app, enter one code, and *save the ten recovery codes*. They are shown once and they are the only way back in if you lose the phone.
3. **Add your vehicle** (Account > Add a vehicle). Write a proper description: engine, gearbox, mileage, modifications, known faults. Claude reads it as context, so "2004 Subaru Forester 2.5XT, EJ25 turbo, 4-speed auto, 268 000 km, exhaust leak at the turbo actuator" beats "Subaru".
4. **Copy the upload token.** It is shown once. Open the account page on the car phone so you can paste it straight into Torque.
5. **Set Torque up** using the table in section 02, then drive for five minutes.
6. **Check it arrived:** the vehicle card on the account page shows drives, samples and the last upload time.

Up to 5 vehicles per account. Each one has its own token, so a second car is just another vehicle and another Torque profile.

02 Torque Pro settings that matter

In Torque: **Settings > Data Logging & Upload**.

Setting	Use	Why
Upload to webserver	**On**	Nothing arrives without it
Webserver URL	`https://obd.woworks.co.za/torque`	The upload endpoint for every vehicle
Send https: Bearer Token	**On**	How the server knows which vehicle is uploading

Set Bearer Token	Your vehicle token	Shown once when you add the vehicle; regenerate it if lost
Web Logging Interval	**1 to 5 seconds**	Peaks, fuel trim percentages and events need a short interval. At 60 s you get one reading a minute and short spikes are invisible
Select what to log	See below	Only the readings you tick are uploaded
CSV logging	Leave on	A local backup for places with no signal

Readings worth logging

These drive the Stats and Health pages. Anything else you tick is still stored and still chartable.

Reading	Used for
Speed (OBD)	Distance and moving time, fallback when Torque's trip counters are missing
Trip Distance, Trip average KPL, Trip time whilst moving	**Distance, fuel and moving time.** Torque works these out on the phone at full rate, so they stay correct at any upload interval
Mass Air Flow Rate	Fuel estimate fallback
Fuel Trim Bank 1 Long Term and Short Term	The rich or lean picture, and the trim-at-its-limit check
Engine Coolant Temperature	Overheating and thermostat checks
Intake Air Temperature	Heat soak and intercooler checks
Turbo Boost & Vacuum Gauge	Peak boost and boost trend
Voltage (OBD Adapter)	Charging system check
O2 Bank 1 Sensor 2 Voltage	Rear oxygen sensor and catalyst monitoring
Engine RPM, Engine Load, Timing Advance, Throttle Position	Context when reading any of the above

Units follow your Torque settings and are stored per vehicle, so the pages always show the units you chose. Check that Torque's boost gauge is set to the unit you think it is: a gauge labelled bar that actually reports psi will read that way everywhere.

03 Stats: trends over time

`https://obd.woworks.co.za/stats`. Pick a vehicle and a period, then read down the page. One point per drive, always.

Part of the page	What it tells you
Summary tiles	Drives, distance, driving time and estimated economy for the period
Distance per drive	How your driving is actually distributed. A row of short bars explains a lot of bad economy
Estimated fuel economy	km/l per drive over 1 km. MAF based, so use it for the shape of the trend and check absolutes against full-to-full fill-ups
Long-term fuel trim	Negative means the ECU is removing fuel. A steady offset is a real fault, not a quirk
Fuel trim pegged at its limit	The percentage of each drive where the trim sat at its lowest value. Anything sustained here means the ECU has run out of correction
Peak boost	Per-drive maximum. Useful for spotting a wastegate or boost leak developing

Peak coolant and peak intake air	Per-drive maxima against a 100 °C reference line
Chart any reading	Any logged reading, as average, maximum, minimum, 95th percentile, or percentage of the drive at its minimum or maximum
Per-drive table	The same numbers as a table, for when you want to copy them out

Getting more out of it

- **Compare like with like.** Before and after a repair, use the same period length and similar driving, not a week of school runs against a week of highway.
- **Use the 95th percentile** rather than the maximum when a single spike is distorting the picture. One bad sample can lift a maximum; it cannot lift a p95.
- **Percentage at minimum** is the honest way to read fuel trim. An average of -7% hides whether the ECU spent half the drive pinned at its floor.
- **Hover a point** to see its date and value. On a phone, the chart scrolls sideways and starts at the most recent drive.

04 Health: what looks wrong

`https://obd.woworks.co.za/health`. The same data, read against a set of rules, and ranked.

Rank	Meaning
Needs attention	Outside normal by a margin. This is what triggers an email alert
Keep an eye on	Worth knowing, not urgent. Watch it over the next few drives
Good to know	Context, or something about the data itself rather than the car

The rules

Check	Fires when
Long-term fuel trim	Average more than 8% away from zero; 15% is an alert
Fuel trim runs out of range	Trim sits at its lowest value for more than 10% of a drive; 25% is an alert
Short-term fuel trim is offset	Average more than 8% from zero
Coolant temperature runs high	A drive peaks above 105 °C; 110 °C is an alert
Engine not reaching operating temperature	Two or more drives of 15 minutes or longer stay below 75 °C
Intake air temperature runs high	95th percentile above 60 °C; 70 °C is an alert
Charging voltage is low	Average below 13.0 V; 12.6 V is an alert
Charging voltage spikes high	Above 15.2 V at any point
Rear oxygen sensor is not switching	Under 0.05 V of movement across whole drives, in 60% or more of drives
Fuel economy is getting worse	Later half of the period 15% below the earlier half
Peak boost has dropped	Later half 20% below the earlier half
Mostly short trips, upload interval, readings not logged	Context and data quality, never an alert

Every finding lists the numbers it fired on and what to check. Take those numbers to the mechanic rather than the verdict: "the trim sat at its floor for 43% of the drive" is a conversation, "the app says it is rich" is not.

Thresholds live in one array at the top of `lib/health.php` and apply to any petrol car. Temperature limits convert automatically for a vehicle logging °F.

05 Email alerts

An email when a finding reaches **Needs attention**. Nothing else is ever emailed.

Question	Answer
When does it check?	When a drive ends. The first upload after a gap of 10 minutes means the previous drive is over, and the check runs then. No cron job needed
What is in the email?	Each new severe finding, the numbers behind it, what to check, and a link to the Health page
How often?	The same finding at most once every 24 hours, so a known fault does not mail you after every drive
When it is fixed?	One "no longer flagged" note, then silence
How far back does it look?	30 days of drives
Switching it off	Account > Health alerts. Per user, and it does not affect anyone else

Check my vehicles now on the same card forces a run without waiting for a drive to end. The card also lists your open findings and when each was last emailed.

06 Asking Claude

Connect once: in Claude, **Settings > Connectors > Add custom connector**, URL `https://obd.woworks.co.za/mcp`, then **Connect** and sign in with this account. Claude gets read-only access to your own vehicles, nobody else's.

What Claude can pull

Tool	Use it for
list_vehicles	What exists, how much data, last upload
get_live_snapshot	The most recent sample, every reading, and how long ago it arrived
list_sessions	Drives, newest first, with duration and sample counts
list_pids	Which readings exist, with names and units
session_summary	Per-reading statistics for one drive, including percentage at minimum and maximum
get_timeseries	A trace of up to 12 readings through one drive
pid_trend	One reading across many drives, for before-and-after comparisons
health_report	The same findings as the Health page
find_events	Every moment a reading crossed a threshold, over a date range

Questions that work well

- "Run a health check on the Forester and tell me what changed since last month."
- "Compare fuel trim and economy for the two weeks before and after the cooling system repair."
- "Find every time coolant went over 100 °C in the last 30 days, and tell me what the car was doing at the time."
- "Plot boost against RPM for this morning's drive and tell me where it tapers."
- "Was the engine ever in open loop for long on the last drive, and what was the AFR doing there?"

- "Write a summary of the last month I can hand to my mechanic, with the numbers behind each claim."

Claude reads the vehicle description you wrote, so keep it current after repairs. It is a good idea to ask for the numbers behind any conclusion, and to say when something is a guess.

07 Raw data

Account > **Download raw data**. One vehicle at a time, by date range, everything, or any of the last 25 drives with one click.

- One row per sample, one column per reading, named `Full name (unit) [pid]`.
- Times are local, and the layout matches Torque's own CSV logs, so existing spreadsheets and scripts keep working.
- In pandas, run `pd.to_numeric(errors="coerce")` over the non-timestamp columns: Torque writes "-" for gaps.

08 Account, access and privacy

Thing	Where	Notes
Password	Account > Password	Changing it signs out your Claude connections
Forgot password	Sign-in page	Emails a link, valid one hour, single use
Two-factor	Account > Two-factor authentication	Required on the website and when connecting Claude
Recovery codes	Same card	Ten, single use, shown once. Generate a fresh set any time
GPS	Vehicle > Edit	Off by default. On stores latitude and longitude with every sample
Upload token	Vehicle > Edit	Regenerate if it leaks. The old one stops working at once
Lock to a Torque ID	Vehicle > Edit	Rejects uploads from any other phone
Delete a vehicle	Vehicle > Edit	Removes the vehicle and every sample it logged
Delete the account	Account > Delete account	Everything, permanently

Who can see what. Every page and every Claude tool is scoped to your own vehicles. Administrators manage invitations and accounts but cannot read another user's vehicle data in the app. Anyone with direct database access can, which is worth knowing before you switch GPS on.

09 When something looks wrong

Symptom	Likely cause and fix
No data arriving	Check the account page for the last upload time. Then Torque: upload switch on, correct URL, bearer token set, and the phone actually connected to the adapter
Uploads stop mid-drive	Phone signal, or the phone sleeping. Keep Torque running in the background and the screen unlocked or the app whitelisted from battery optimisation
401 from Torque	Wrong or regenerated token. Paste the current one, or generate a new one and update Torque

Distance and economy are empty	Torque is not logging Trip Distance and Trip average KPL, and the upload interval is too long for the speed-based fallback
Peaks look too low	The upload interval is long. At 60 s the page only sees one reading a minute
Health page is quiet but the car feels wrong	The rules only see what is uploaded, and they cannot read fault codes. Use the Stats page and Claude for the questions the rules do not ask
Locked out after failed sign-ins	Five wrong passwords locks that IP for 15 minutes. A successful sign-in or a completed password reset clears it immediately
No alert emails	Account > Health alerts switched on, email configured on the server, and something actually at Needs attention

10 What this cannot do

- **No fault codes.** Nothing here reads or clears DTCs. Use Torque itself or a scan tool for that.
- **Fuel figures are estimates.** They come from MAF or from Torque's own trip calculation, both of which read high under boost. Trends are trustworthy, absolutes are not. Full-to-full fill-ups are the truth.
- **Rules are generic.** The thresholds suit a petrol engine in general, not your engine specifically. A finding is a prompt to look, not a diagnosis.
- **Data quality caps everything.** A short upload interval and a consistent set of logged readings are worth more than any feature on this site.

Take it with you

The same guide as a PDF, for the workshop or the glovebox.

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