Your detailed flight report

Every flight you fly with CAVacars 2 gets a **detailed flight report**: your takeoff, approach and landing measured against the actual runway, stage by stage, with notes on what went well and one tip for next time.

It goes with your flight report card, the image with your score. The card gives you the score. The detailed report shows where it came from.

Where to find it

Open your PIREP on the website and click **Detailed flight report**, just under your flight report card. The panel shows your score, and the report opens on its own page.

In CAVacars 2 1.8.18 or later, the summary you see after filing your PIREP also has a **View full report** button.

Which flights get one

Flights filed with **CAVacars 2 version 1.8.0 or later**. While you fly, the app records your flight once a second, and ten times a second near the ground. It sends that recording with your PIREP, and the website builds the report from it.

Flights filed with smartCARS 3, FsACARS or an older CAVacars 2, and manual PIREPs, don't get a detailed report.

What's in it

The scores

Score	What it is
Overall	The same number as your flight report card, so the two always match.

Score	What it is
Departure	Your takeoff, from the start of the roll to 1,000 ft.
Approach	Your final approach: stable at 1,000 ft and 500 ft, and no diving for the runway.
Landing	Your touchdown and what happened on the runway.

All scores are out of 100: **Excellent** from 90, **Good** from 75, **Fair** from 60, **Needs work** from 40.

Your flight

- **At a glance:** block time, air time, the distance you actually flew, your highest altitude and the fuel you used.
- **A short write-up** of the flight: where you took off, how high you climbed, how the approach went, and where and how you touched down, with the wind at the time.
- **The stages:** taxi out, takeoff, climb, cruise, descent, approach, landing and taxi in, each with its time. Takeoff, approach and landing show their score; click one to jump to it. The other stages show a ✓, or a ⚠ with the number of procedure lapses in that stage (lights, 250 kt below 10,000 ft, bank, fast taxi and so on).

What went well, what held you back, next time

- **What went well:** things like a takeoff roll on the centreline, being stable at both gates, crossing the threshold at a good height, or touching down in the touchdown zone.
- **What held you back:** everything that cost points, worst first, each with its stage and the points it cost. Procedure lapses are listed too, with a ⚠: the ones that cost points on your flight report card. A short slip that the card lets go (landing lights a few seconds late, for example) isn't listed. Lapses count toward your flight report card, not toward the detailed report's scores.
- **Next time:** one tip for the thing that cost you the most.

Takeoff

Charts of your roll and climb-out, from the side and from above (sideways distances are stretched so small offsets show), with:

Check	Fine up to	Costs up to
Centreline on the roll (the furthest you were off it above 30 kt)	5 m on a 45 m wide runway, scaled for other widths	20 points at 15 m

Check	Fine up to	Costs up to
Runway used (start of the roll to liftoff)	80% of the runway ahead of you	20 points at 100%
Still below 35 ft at the end of the runway	—	15 points
Pitch at liftoff	12°	15 points at 15°
Bank below 500 ft	10°	10 points at 20°
Sinking after liftoff (before 400 ft)	10 ft	15 points at 50 ft
Settling back onto the runway after liftoff	—	15 points

The report also shows where your roll started (from a stop or rolling, and whether it was an intersection departure), your liftoff speed and how fast you climbed to 1,000 ft.

Approach

A side view of your final approach against a 3° path to the aiming point 300 m past the threshold, with two **gates** marked: **1,000 ft** and **500 ft** above the touchdown point. At each gate you're **stable** when:

- the **gear is down** (aircraft with fixed gear aren't judged on this),
- you're sinking **no faster than 1,000 fpm** (averaged over 3 seconds),
- you're **between 2° and 4°** on the glidepath,
- you're **lined up** with the runway (within 2.5° of the extended centreline, or 30 m),
- you're **on speed**: no more than 20 kt or 20% above the reference speed (10 kt more is allowed at 1,000 ft, where you may still be slowing down), and no more than 10 kt below it.

The **reference speed** is the typical speed over the threshold for your aircraft type at CAV, worked out from everyone's flights once there are at least five. Until then it's your own speed over the threshold.

Check	Costs
Each thing missed at 1,000 ft	5 points (15 at most)
Each thing missed at 500 ft	10 points (30 at most)
Steepest descent between 1,000 ft and 50 ft	from 1,200 fpm, up to 25 points at 2,500 fpm

A gate you reached before you were lined up on final (a visual circuit or a circling approach) shows as **not assessed**. If neither gate could be assessed, the approach isn't scored.

Landing

A view from above of your touchdown and rollout, and three charts of the last 20 seconds before touchdown: height, vertical speed and pitch.

The landing score is the average of two parts:

- **Touchdown:** the same touchdown score as on your flight report card: rate, G-force, bounces, bank, crab and pitch. A bounce counts when the aircraft climbs at least 2 ft back off the runway; just skimming it doesn't.
- **On the runway:**

Check	Fine	Costs up to
Touchdown point	60 m past the threshold to the end of the touchdown zone (the first 900 m, or a third of the runway on shorter ones)	35 points if you're 600 m past the zone; 25 before the threshold; 50 before the runway
Centreline at touchdown	4 m on a 45 m wide runway, scaled for other widths	25 points at 12 m
Height over the threshold	20 to 80 ft	10 points at 0 ft, 15 points at 150 ft
Centreline on the rollout (while still pointing down the runway, so a high-speed exit doesn't count)	6 m	15 points at 15 m
Runway left when you're down to 30 kt	150 m	20 points at none left
Turning off the runway	50 kt	15 points at 70 kt
Running off the end	—	40 points
Leaving the side of the runway above 40 kt	—	30 points

If you landed more than once on a flight, for example after a touch-and-go, the last landing is scored and the earlier ones are listed.

Achievements

Eight achievements are earned from your detailed reports. Flights from before they arrived count too.

Achievement	What it takes
In the Zone	Touch down in the touchdown zone, cleanly.

Achievement	What it takes
Dead Centre	Touch down within 2 m of the centreline, cleanly.
The Full Package	Stable at both gates, 35–70 ft over the threshold, down in the touchdown zone within 3 m of the centreline, and a touchdown score of 90 or more.
Postage Stamp	A hidden one.
On Rails	Keep the whole takeoff roll within 2 m of the centreline.
Stabilised	Stable at both 1,000 ft and 500 ft.
Rock Steady	Stable approaches in a row. Visual circuits and circling approaches don't break the run.
Straight A's	90 or more on the departure, the approach and the landing of the same flight.

Takeoffs and landings flown at time acceleration don't count, and centreline achievements need your sim's own runway.

Where the runway comes from

The report measures your flight against the runways **your sim** actually had loaded:

- **MSFS 2020 and 2024:** the runways in your scenery, add-on airports included.
- **X-Plane:** X-Plane's own airport data.
- **FSX and Prepar3D:** Little Navmap's database of your sim's scenery, if you use Little Navmap.

When the sim's runway isn't available, the report falls back to OurAirports. That data can sit a few metres away from your scenery's runway, so centreline checks against it are shown but not scored. The report says which source it used.

What isn't scored

- **Time acceleration:** a takeoff or landing flown faster than real time isn't scored.
- **Pauses** are taken out of the recording.
- **Moving the aircraft:** if the sim repositions or slews the aircraft onto the ground, that isn't treated as a landing.
- **No runway found:** if your touchdown can't be matched to a runway, only the touchdown itself is scored, and the approach can't be measured.

Questions

Why is my Overall score different from my Departure, Approach and Landing scores? Overall is your flight report card score: the landing plus the ten procedure checks. The other three come from the detailed analysis, so they look at different things.

Can my report change? While we fine-tune the scoring, reports from the last 30 days can be recalculated with the latest rules. After that the report stays as it is.

Who can see my report? Anyone who can see your PIREP.

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