

# ONAIR HANDBOOK

Complete game & economy reference

Volume

I

Chapters

11

Time-base

UTC

Currency

Cr



# CONTENTS

— PRE-FLIGHT BRIEFING —

SIDE INDEX · 11 COLOR BANDS

CH 01 · AIRPORTS
CH 02 · GROUND OPS
CH 03 · FUEL
CH 04 · MAINTENANCE
CH 05 · SKILLS
CH 06 · FLIGHT OPS
CH 07 · MISSIONS
CH 08 · ECONOMY
CH 09 · FLEET
CH 10 · INDUSTRY
CH 11 · SCHEDULES

CH 01 / AIRPORTS

## Airports

- › 1.1 Airport Size (0–5) — how it is calculated
- › 1.2 Where your airports are synchronized from
- › 1.3 Runway surface types
- › 1.4 Parking & ramp types
- › 1.5 Military airports
- › 1.6 The airport data version
- › 1.7 Basecamp airports
- › 1.8 TL;DR

CH 02 / GROUND OPS

## FBO & Hangar

- › 2.1 Two types of FBO: system and player-owned
- › 2.2 The golden rule — everything scales with airport Size
- › 2.3 What an FBO costs to build
- › 2.4 Construction timers
- › 2.5 What the system FBO already has
- › 2.6 Cargo storage fees
- › 2.7 Aircraft parking fees
- › 2.8 The weekly ownership fee (Monday 04:45 UTC)
- › 2.9 What an FBO owner actually earns
- › 2.10 Logistic queries — the mission generator
- › 2.11 Skills that gate FBO features
- › 2.12 Auto-stop, auto-pause, deletion
- › 2.13 TL;DR

## Fuel

- › 3.1 Only two fuel types exist
- › 3.2 Two prices that matter
- › 3.3 Dealer price — one number per world
- › 3.4 Sell price — rules and caps
- › 3.5 Ordering fuel for your FBO
- › 3.6 Weekly resupply of system FBOs
- › 3.7 Refueling an aircraft at an FBO
- › 3.8 Fuel weight (for Weight & Balance)
- › 3.9 Fuel containers — portable fuel storage
- › 3.10 Industrial fuel supply (background system)
- › 3.11 Skills that affect fuel
- › 3.12 Edge cases
- › 3.13 TL;DR

## Maintenance & Workshop

- › 4.1 The 8 maintenance operations
- › 4.2 How maintenance is priced
- › 4.3 Price breakdown
- › 4.4 How long does maintenance take?
- › 4.5 Mechanics — the workforce
- › 4.6 The full maintenance flow
- › 4.7 The scheduled inspection
- › 4.8 The annual checkup
- › 4.9 Damage model — how condition drops
- › 4.10 No workshop at the FBO — the truck call
- › 4.11 Condition thresholds — when your aircraft is blocked
- › 4.12 What does NOT exist
- › 4.13 TL;DR

## Company Skills

- › 5.1 How you earn skill points
- › 5.2 The cost model
- › 5.3 Respec — resetting the skill tree
- › 5.4 All 23 skills
- › 5.5 The fine print — skills with hidden behaviour
- › 5.6 Branch diagrams
- › 5.7 Hidden rules worth knowing
- › 5.8 Recommended starter builds
- › 5.9 TL;DR

## Flight Scoring

- › 6.1 The overall formula
- › 6.2 Flight phases — how the server tracks where you are
- › 6.3 How scoring works
- › 6.4 General trackers (active throughout the entire flight)
- › 6.5 Per-phase trackers
- › 6.6 Landing ratings — the A/B/C/D/E scale
- › 6.7 Key thresholds — quick lookup
- › 6.8 What your score actually changes in the economy
- › 6.9 The "no bonus" situation
- › 6.10 Top 5 score killers
- › 6.11 TL;DR

## Freelance & Missions

- › 7.1 The 21 mission types
- › 7.2 Two completely different pay engines
- › 7.3 The grind pay formula — block by block
- › 7.4 How freelance charters are priced
- › 7.5 Logistic-center missions (FBO queries)
- › 7.6 Regular routes — weekly recurring
- › 7.7 Expiration, decline, and penalties
- › 7.8 Skill requirements for missions
- › 7.9 Cargo categories (14 types)
- › 7.10 Concurrent mission caps
- › 7.11 TL;DR

## Economy & Global Constants

- › 8.1 Landing & parking fees
- › 8.2 Bank loans
- › 8.3 Weekly management fee — Challenge Mode only
- › 8.4 Company auto-pause
- › 8.5 Employee salaries
- › 8.6 Account codes — your financial statements
- › 8.7 Company level
- › 8.8 Passenger class economics
- › 8.9 Rescue mission ranges
- › 8.10 Starting bonus — Advanced Management unlock
- › 8.11 Aircraft wear constants
- › 8.12 Flight duty caps
- › 8.13 Leasing vs. owning
- › 8.14 Industry fuel supply
- › 8.15 Airport ownership
- › 8.16 Internal balance constants (for reference)
- › 8.17 TL;DR

## Fleet & Aircraft

- › 9.1 Three ways to have an aircraft
- › 9.2 How aircraft are priced
- › 9.3 Market value and how it depreciates
- › 9.4 Used aircraft from the market
- › 9.5 Rental mechanics
- › 9.6 Lease mechanics
- › 9.7 Test-flight onboarding (player addon certification)
- › 9.8 Aircraft cargo capacity
- › 9.9 Parking — no condition impact
- › 9.10 Reference constants
- › 9.11 TL;DR

## Industries

- › 10.1 What industries are
- › 10.2 Building a factory
- › 10.3 Five factory categories
- › 10.4 The 28 machine types
- › 10.5 Six ways production can leave your factory
- › 10.6 The production cycle
- › 10.7 Work teams and food rations
- › 10.8 Industry Points — the soft currency
- › 10.9 Trading Hall — market, supply, and contracts
- › 10.10 Geography — where location matters
- › 10.11 Truck transport — moving goods between airports
- › 10.12 Fees and factory lifecycle
- › 10.13 How industries connect to the rest of the game
- › 10.14 The merchandise catalog
- › 10.15 Strategic patterns
- › 10.16 What industries are NOT
- › 10.17 TL;DR

## Server Clock & Schedules

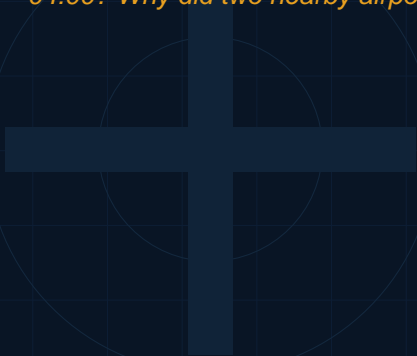
- › 11.1 How the scheduler works
- › 11.2 The 5 questions players ask most
- › 11.3 Short-interval tasks (minutes)
- › 11.4 Daily tasks (UTC)
- › 11.5 Weekly tasks (UTC)
- › 11.6 Network ports — technical reference
- › 11.7 TL;DR — the dates to remember

# 01

CHAPTER 01 · AIRPORTS

## Airports

*Why is this airport Size 3 and that one Size 5? Why does one airport open at 06:30 and another at 04:00? Why did two nearby airports merge into one in OnAir?*



CH 01  
AIRPORTS  
Airports

- 1.1 Airport Size (0–5) — how it is calculated
- 1.2 Where your airports are synchronized from
- 1.3 Runway surface types
- 1.4 Parking & ramp types
- 1.5 Military airports
- 1.6 The airport data version
- 1.7 Basecamp airports
- 1.8 TL;DR

## 1.1 Airport Size (0–5) — how it is calculated



FIG 1.01 — Airport Size derivation, 4 sequential passes

Size is determined by the **longest runway**, with two possible caps on top.

### Step 1 — Longest runway decides the base size

LONGEST RUNWAY	BASE SIZE
≥ 10 000 ft	5
≥ 7 500 ft	4
≥ 6 000 ft	3
≥ 4 500 ft	2
≥ 2 300 ft	1
< 2 300 ft, or no runway	0

### Step 2 — All-grass cap (max Size 2)

If **every single runway** at the airport is a soft surface (grass, dirt, gravel, sand, etc.), the size is capped at 2 — no matter how long the runway is.

**Example:** a 12 000 ft grass strip would be Size 5 by length, but is capped to **Size 2**.

### Step 3 — All-water cap (max Size 1)

If **every single runway** is a water surface, the size is capped at 1. Pure seaplane bases ultimately land at **Size 0**.

## CH 01

## AIRPORTS

## Airports

- 1.1 Airport Size (0–5) — how it is calculated
- 1.2 Where your airports are synchronized from
- 1.3 Runway surface types
- 1.4 Parking & ramp types
- 1.5 Military airports
- 1.6 The airport data version
- 1.7 Basecamp airports
- 1.8 TL;DR

## Step 4 — Manual overrides

A handful of iconic airports are force-set to a specific size by the development team, overriding the formula.

### Heliports

An airport with only helipads and no runway gets **Size 0** and is treated separately from regular airports (it is excluded from merge rules).

## 1.2 Where your airports are synchronized from

OnAir supports four flight simulators. When multiple simulators have data for the same airport, MSFS 2020 always wins.

SOURCE	PRIORITY
MSFS 2020	Highest
Prepar3D v4	2nd
FSX	3rd
X-Plane 11	4th

### "Addon required" flags

Every airport carries four independent flags, one per simulator, indicating whether it exists in that simulator's standard install:

FLAG	WHAT IT MEANS
Not in standard MSFS 2020	You need a scenery addon to see this airport in MSFS
Not in standard P3D	Missing from Prepar3D v4 stock
Not in standard FSX	Missing from FSX stock
Not in standard X-Plane	Missing from X-Plane 11 stock

If you fly MSFS and your destination is marked "not in standard MSFS", you will need the matching scenery addon to land there.

## 1.3 Runway surface types

Surfaces that trigger the **all-soft cap (max Size 2)**: coral, dirt, grass, gravel, planks, bumpy grass, short grass, long grass, hard turf, forest, sand, shale, and any unknown/undefined surface.

## CH 01

## AIRPORTS

## Airports

- 1.1 Airport Size (0–5) — how it is calculated
- 1.2 Where your airports are synchronized from
- 1.3 Runway surface types
- 1.4 Parking & ramp types
- 1.5 Military airports
- 1.6 The airport data version
- 1.7 Basecamp airports
- 1.8 TL:DR

Surfaces that trigger the **all-water cap (max Size 1)**: ocean, lake, pond, river, waste water, and water variants.

Standard hard surfaces (concrete, asphalt, tarmac, macadam, etc.) have no cap.

## 1.4 Parking & ramp types

TYPE	CATEGORY
General Aviation ramps (small / medium / large / extra)	GA
Cargo ramp	Cargo / commercial
Military cargo / combat ramp	Military
Airline gates (small / medium / heavy / extra)	Airline
Seaplane dock	Seaplane
Fuel point	Fuel

The "extra" GA and airline gate types only appear at airports imported from MSFS 2020.

## 1.5 Military airports

An airport is flagged as military if:

- Its name ends in "AB", "MIL", "AIR BASE", or contains "AFB", **or**
- Its ICAO code is on a hardcoded list of ~80+ bases (NATO fields, US Army/USAF, several Dutch, Japanese, and Italian military fields).

## 1.6 The airport data version

The game client caches airport data locally. Every time airport data is updated on the server, the version number increments by 1. When the client detects a new version, it downloads the updated data. You do not need to manage this manually.

## 1.7 Basecamp airports

Airports flagged as **basecamps** are permanent community fixtures:

- Never modified by any import cycle.

## CH 01

## AIRPORTS

## Airports

- 1.1 Airport Size (0–5) — how it is calculated
- 1.2 Where your airports are synchronized from
- 1.3 Runway surface types
- 1.4 Parking & ramp types
- 1.5 Military airports
- 1.6 The airport data version
- 1.7 Basecamp airports
- 1.8 TL;DR

- Not subject to the proximity merge rules.
- Cannot be overridden by simulator addons.

## 1.8 TL;DR

0–5

AIRPORT SIZE RANGE

4 passes

SIZE DERIVATION

20 NM

SANITY RADIUS

- Size is based on the **longest runway length**, but all-grass → cap 2, all-water → cap 1.
- MSFS 2020 airport data always takes priority over other simulators.
- If your destination doesn't appear in OnAir, check whether it requires a simulator addon.
- Military airports are identified by name suffix or a hardcoded list of ICAO codes.
- Basecamp airports are permanent fixtures — never merged, never overridden.

01

— END OF CHAPTER —

# 02

CHAPTER 02 · GROUND OPS

## FBO & Hangar

*How much does it cost to build an FBO at a Size 4 airport? Who pays the hangar storage fees? How much does the weekly ownership fee bite? Everything about FBO economics and hangar storage — excluding fuel pricing (→ Fuel chapter) and maintenance operations (→ Maintenance chapter).*

CH 02

GROUND OPS

FBO & Hangar

- 2.1 Two types of FBO: system and player-owned
- 2.2 The golden rule — everything scales with airport Size
- 2.3 What an FBO costs to build
- 2.4 Construction timers
- 2.5 What the system FBO already has
- 2.6 Cargo storage fees
- 2.7 Aircraft parking fees
- 2.8 The weekly ownership fee (Monday 04:45 UTC)
- 2.9 What an FBO owner actually earns
- 2.10 Logistic queries — the mission generator
- 2.11 Skills that gate FBO features
- 2.12 Auto-stop, auto-pause, deletion
- 2.13 TL;DR

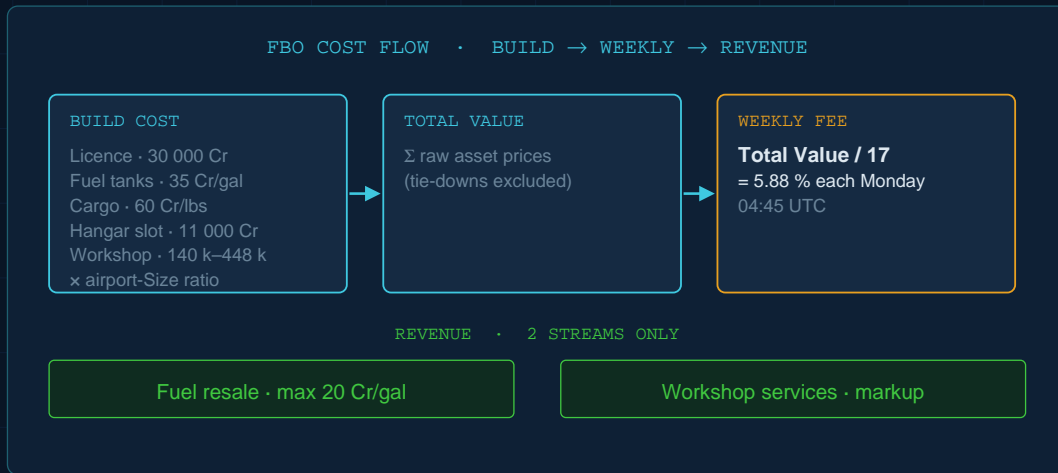


FIG 2.01 — FBO economics, build cost → weekly fee → revenue streams

## 2.1 Two types of FBO: system and player-owned

- **Every airport** in every world has exactly **one system FBO** (owned by no one). It is always there — you cannot buy it.
- A player can **build** their own FBO from scratch at any open airport.
- A player-owned FBO **coexists** with the system FBO at the same airport. Multiple players can each have their own FBO there.
- **One FBO per airport per company** — you cannot build two at the same airport.
- **Minimum skill required:** FBO Main Agreement, level 1 (see the Skills chapter).

## 2.2 The golden rule — everything scales with airport Size

Every construction cost is multiplied by an **airport size ratio**:

AIRPORT SIZE	MULTIPLIER
0	0.10
1	0.20
2	0.40
3	0.60
4	0.90
5	1.00

The same hangar slot costs **10x more at Size 5 than at Size 0**.

## CH 02

## GROUND OPS

## FBO &amp; Hangar

- 2.1 Two types of FBO: system and player-owned
- 2.2 The golden rule — everything scales with airport Size
- 2.3 What an FBO costs to build
- 2.4 Construction timers
- 2.5 What the system FBO already has
- 2.6 Cargo storage fees
- 2.7 Aircraft parking fees
- 2.8 The weekly ownership fee (Monday 04:45 UTC)
- 2.9 What an FBO owner actually earns
- 2.10 Logistic queries — the mission generator
- 2.11 Skills that gate FBO features
- 2.12 Auto-stop, auto-pause, deletion
- 2.13 TL;DR

**Reading rule for every table in this chapter:** all prices shown are at **Size 5** (multiplier 1.0). Multiply by the ratio above for your actual cost at a smaller airport.

## 2.3 What an FBO costs to build

### 2.3.1 Foundation (one-time, required)

ITEM	BASE COST (AT SIZE 5)
Paperwork & project management	1 500 Cr
FBO Exploitation Licence	30 000 Cr

**Example at Size 3** (multiplier 0.6): opening a minimum FBO =  $(1\,500 + 30\,000) \times 0.6 \approx$  **18 900 Cr** before any extension.

### 2.3.2 Storage & comfort extensions

All cost the **paperwork fee + the item cost × multiplier**, with a minimum of 1 000 Cr after multiplier (except tie-downs).

ITEM	UNIT COST (SIZE 5)	WHAT YOU BUY
Cargo storage	60 Cr / lbs	1 lbs of cargo capacity
100LL fuel tank	35 Cr / gal	1 gallon of avgas capacity
Jet fuel tank	35 Cr / gal	1 gallon of jet fuel capacity
Crew rooms	2 000 Cr / room	1 sleeping room
Tie-down spot	500 Cr / spot	1 outdoor aircraft parking spot
Aircraft hangar slot	11 000 Cr / slot	1 indoor aircraft storage slot

### 2.3.3 Workshop build cost

AIRCRAFT CLASS	BUILD COST AT SIZE 5
Single-Engine Piston (SEP)	140 000 Cr
Multi-Engine Piston (MEP)	154 000 Cr
TurboProp	238 000 Cr
Jet	294 000 Cr
Heavy Jet	448 000 Cr
Helicopter	448 000 Cr

## CH 02

## GROUND OPS

## FBO &amp; Hangar

- 2.1 Two types of FBO: system and player-owned
- 2.2 The golden rule — everything scales with airport Size
- 2.3 What an FBO costs to build
- 2.4 Construction timers
- 2.5 What the system FBO already has
- 2.6 Cargo storage fees
- 2.7 Aircraft parking fees
- 2.8 The weekly ownership fee (Monday 04:45 UTC)
- 2.9 What an FBO owner actually earns
- 2.10 Logistic queries — the mission generator
- 2.11 Skills that gate FBO features
- 2.12 Auto-stop, auto-pause, deletion
- 2.13 TL;DR

## 2.3.4 Workshop upgrade cost (Level 1 → Level 2)

AIRCRAFT CLASS	UPGRADE COST AT SIZE 5
SEP	70 000 Cr
MEP	77 000 Cr
TurboProp	119 000 Cr
Jet	147 000 Cr
Heavy Jet	224 000 Cr
Helicopter	224 000 Cr

Level 1 = repairs & scheduled inspections. Level 2 = annual checkups & full replacements. See the Maintenance chapter for details on what each level unlocks.

All workshop costs are also multiplied by the airport size ratio.

## 2.4 Construction timers

Timers are **parallel** — every extension runs its own countdown simultaneously. The displayed ETA reflects the longest ongoing job in the batch.

**Hard cap: 15 days.** Any extension that would take longer is clipped to 15 days.

ITEM	BUILD TIME
Paperwork	30 min
FBO Licence	~2 days
Cargo storage	~42 h for 10 000 lbs
Fuel tank	~42 h for 10 000 gal
Sleeping room	~1 day per room
Tie-down spot	~1.5 h for 1 spot
Aircraft hangar slot	~3 days for 1 slot; 5 slots = 15 days (cap)
Workshop Level 1 (SEP)	~2 days
Workshop Level 1 (Heavy Jet)	~6.4 days
Workshop Level 1 → 2 (SEP)	~1 day
Workshop Level 1 → 2 (Heavy Jet)	~3.2 days

- Construction runs on the server, independent of whether you are online.
- The capacity goes live **once per minute** after the build date has passed.
- **No skill reduces construction timers.**

CH 02

GROUND OPS

FBO & Hangar

- 2.1 Two types of FBO: system and player-owned
- 2.2 The golden rule — everything scales with airport Size
- 2.3 What an FBO costs to build
- 2.4 Construction timers
- 2.5 What the system FBO already has
- 2.6 Cargo storage fees
- 2.7 Aircraft parking fees
- 2.8 The weekly ownership fee (Monday 04:45 UTC)
- 2.9 What an FBO owner actually earns
- 2.10 Logistic queries — the mission generator
- 2.11 Skills that gate FBO features
- 2.12 Auto-stop, auto-pause, deletion
- 2.13 TL;DR

## 2.5 What the system FBO already has

System FBOs are pre-seeded with randomized capacities depending on airport Size. This is what you compete against.

### Fuel capacities (system FBOs)

SIZE	100LL (GAL)	JET FUEL (GAL)
0	800–1 900 (50 % of airports, otherwise none)	800–1 900 (20 % of airports, otherwise none)
1	1 200–2 400 (70 % of airports)	1 200–2 400 (50 % of airports)
2	16 000–176 000	0–352 000 (80 % of airports)
3	30 000–330 000	30 000–330 000
4	54 000–594 000	54 000–594 000
5	80 000–180 000	80 000–180 000

### Workshop availability (system FBOs)

SIZE	SEP	MEP	TURBOPROP	JET	HEAVY JET	HELICOPTER
0–2	—	—	—	—	—	—
3	■	■	—	—	—	—
4	■	■	■	■	—	■
5	■	■	■	■	■■	■

■■ Heavy Jet workshop: only **30 % chance** of existing at Size 5, and only at Level 2. Level 2 is standard from Size ≥ 4 for SEP/MEP/TurboProp/Helicopter, and Size 5 for Jet.

### Workshop markup (system FBOs)

System FBOs charge a random markup of **+10 % to +110 %** over the base maintenance price. A nearby player-owned FBO is almost always cheaper.

## 2.6 Cargo storage fees

When you store cargo at an airport, you pay an hourly fee — **unless** the cargo fits inside **your own FBO's** cargo capacity there.

### The formula

CH 02

GROUND OPS

FBO & Hangar

- 2.1 Two types of FBO: system and player-owned
- 2.2 The golden rule — everything scales with airport Size
- 2.3 What an FBO costs to build
- 2.4 Construction timers
- 2.5 What the system FBO already has
- 2.6 Cargo storage fees
- 2.7 Aircraft parking fees
- 2.8 The weekly ownership fee (Monday 04:45 UTC)
- 2.9 What an FBO owner actually earns
- 2.10 Logistic queries — the mission generator
- 2.11 Skills that gate FBO features
- 2.12 Auto-stop, auto-pause, deletion
- 2.13 TL;DR

**0.06 Credits per lbs per hour** (= Daily charge: weight × 24 × 0.06 Cr)

YOUR SITUATION AT THE AIRPORT	WHAT YOU PAY
You own an FBO with enough cargo capacity	<b>0 Cr</b> (free)
You own an FBO but cargo exceeds your capacity	Fee on the <b>overflow weight</b> only
You don't own an FBO there	Fee on the <b>full cargo weight</b>
Your company is paused	<b>Exempt</b> — no billing
The cargo is Food Rations	<b>Exempt</b> — always free

**Important:** the cargo storage fee is paid by the cargo owner — **the FBO owner does not collect it as revenue.** See §2.8 for what FBO owners actually earn.

- **Grace period:** 3 hours free after the cargo is unloaded.
- Fee is charged once per 24 h per airport.



## 2.7 Aircraft parking fees

Parking fees apply at the **airport level** — not at the FBO level. You pay them whether or not you own an FBO there. The fee is charged hourly on each aircraft.

### The formula

**Fixed part:**  $8.75 \times (0.5 + \text{Size} / 10)$  Cr/h **Heavy part:**  $0.125 \times (0.5 + \text{Size} / 10)$  Cr per 1 000 lbs / h, **for aircraft MTOW above 200 000 lbs only**

### Fees by airport Size

SIZE	FIXED / H	PER 1 000 LBS ABOVE 200 K LBS / H
0	<b>4.37 Cr</b>	0.06 Cr
1	<b>5.25 Cr</b>	0.07 Cr
2	<b>6.12 Cr</b>	0.08 Cr
3	<b>7.00 Cr</b>	0.09 Cr
4	<b>7.87 Cr</b>	0.11 Cr
5	<b>8.75 Cr</b>	0.12 Cr

**Example:** a 500 000 lbs aircraft parked 24 h at Size 5 =  $24 \times [8.75 + (500 - 200) \times 0.12]$  ≈ **1 074 Cr/day.**

CH 02

GROUND OPS

FBO & Hangar

- 2.1 Two types of FBO: system and player-owned
- 2.2 The golden rule — everything scales with airport Size
- 2.3 What an FBO costs to build
- 2.4 Construction timers
- 2.5 What the system FBO already has
- 2.6 Cargo storage fees
- 2.7 Aircraft parking fees
- 2.8 The weekly ownership fee (Monday 04:45 UTC)
- 2.9 What an FBO owner actually earns
- 2.10 Logistic queries — the mission generator
- 2.11 Skills that gate FBO features
- 2.12 Auto-stop, auto-pause, deletion
- 2.13 TL;DR

- Hangar slot vs. tie-down: **no price difference** — the distinction is organizational (indoor vs. outdoor capacity), not a fee difference.
- Airport owners can set a custom parking fee, capped at the values above.

## 2.8 The weekly ownership fee (Monday 04:45 UTC)

Owning an FBO has a recurring cost. The formula:

$$\text{Weekly fee} = \text{Total amount you built} \div 17$$

"Total amount you built" = sum of everything you constructed: Licence + fuel tanks + cargo capacity + sleeping rooms + hangar slots + workshop (Level 1 and Level 2 combined).

**Not included** in the weekly fee: tie-down spots and one-time paperwork charges.

- The fee fires when at least **6.5 days** have passed since your last payment. This is why your invoice can occasionally fall on a Sunday evening.
- If your company is **paused**, the fee is **skipped entirely**.

### Example

FBO AT SIZE 5	TOTAL BUILT VALUE	WEEKLY FEE
Licence only	30 000 Cr	1 765 Cr
Licence + 10 000 gal jet tank	380 000 Cr	22 352 Cr
Licence + jet tank + SEP workshop L1	520 000 Cr	30 588 Cr

**Rule of thumb:** your FBO costs about **5.88 % of its build value per week**. Over a year (52 weeks), you pay back roughly 3x what you originally spent. Plan your revenue streams accordingly.

## 2.9 What an FBO owner actually earns

Revenue comes from only **two** streams — and both require you to enable them and have the right skill:

REVENUE STREAM	SKILL REQUIRED	HOW TO ENABLE
Fuel resale to other players	Fuel Resale skill (level 1)	Enable "Allow fuel selling" in your FBO settings
Workshop services to other players	Workshop Resale skill (level 1)	Enable "Allow workshop services" in your FBO settings

**These are NOT revenue streams for FBO owners** (common misconceptions):

## CH 02

## GROUND OPS

## FBO &amp; Hangar

2.1 Two types of FBO: system and player-owned

2.2 The golden rule — everything scales with airport Size

2.3 What an FBO costs to build

2.4 Construction timers

2.5 What the system FBO already has

2.6 Cargo storage fees

2.7 Aircraft parking fees

2.8 The weekly ownership fee (Monday 04:45 UTC)

2.9 What an FBO owner actually earns

2.10 Logistic queries — the mission generator

2.11 Skills that gate FBO features

2.12 Auto-stop, auto-pause, deletion

2.13 TL;DR

- ■ Cargo storage fees — paid by cargo owners, not collected by the FBO.
- ■ Aircraft parking fees — go to the airport, not to you.
- ■ Logistic queries — these generate missions **for your company to fly**, not payments from others.

### Workshop markup

You set a markup multiplier (e.g., 1.5 = +50 %). The minimum is 1.0 (no discount). Your earnings when another player's aircraft is serviced:

**Your revenue = total price – (total price ÷ markup)**

**Example:** a 1 000 Cr repair at markup 1.5 → your revenue = 333 Cr.

### Fuel resale constraint

- **Maximum sell price:** 20 Cr/gal (hard cap, both fuel types).
- **Minimum sell price:** cannot go below the world's dealer price.



## 2.10 Logistic queries — the mission generator

A **logistic query** is a filter you attach to your FBO: range, heading, cargo weight limits, passenger limits, airport size filter. Triggering a query generates a batch of cargo/passenger missions from your FBO — for **your company** to fly.

### Queries available by skill level

SKILL LEVEL	TOTAL QUERIES AVAILABLE
1	1
2	3
3	5
4	8
5	10

### Cooldown per query slot

Each query has its own independent cooldown:

SLOT	COOLDOWN
1st query	~5 days
2nd query	~2 days
3rd–10th queries	23 hours each

## CH 02

## GROUND OPS

## FBO &amp; Hangar

- 2.1 Two types of FBO: system and player-owned
- 2.2 The golden rule — everything scales with airport Size
- 2.3 What an FBO costs to build
- 2.4 Construction timers
- 2.5 What the system FBO already has
- 2.6 Cargo storage fees
- 2.7 Aircraft parking fees
- 2.8 The weekly ownership fee (Monday 04:45 UTC)
- 2.9 What an FBO owner actually earns
- 2.10 Logistic queries — the mission generator
- 2.11 Skills that gate FBO features
- 2.12 Auto-stop, auto-pause, deletion
- 2.13 TL;DR

There is **no global weekly reset**. Each query's cooldown starts from the last time you triggered it. Stagger your triggers to keep a steady flow of missions.

### Bonus missions per query — Enhanced Queries skill

An additional skill (max level 3) multiplies the number of missions generated per query trigger. At max level, a single trigger can produce **4 to 12 missions** instead of the base 1 to 3.

## 2.11 Skills that gate FBO features

Full skill tree details are in the Skills chapter. Here is the FBO skill summary:

SKILL	MAX LEVEL	COST / LEVEL	UNLOCKS
FBO Main Agreement	5	1 pt	Build FBOs; logistic query ladder (1 / 3 / 5 / 8 / 10 queries)
Workshops Agreement	2	2 pts	L1 = basic workshop · L2 = annual checkups & replacements
Mechanic Speed	3	2 pts	Faster mechanic work (+5 / +10 / +20 %)
Fuel Resale	1	2 pts	Enable selling fuel to other players
Workshop Resale	1	2 pts	Workshop accepts other players' aircraft
Enhanced Queries	3	2 pts	More missions per logistic query trigger

## 2.12 Auto-stop, auto-pause, deletion

SITUATION	WHAT HAPPENS
Company <b>paused</b>	Weekly fee skipped. FBO hidden from other players. Not deleted.
<b>Insufficient funds</b>	No auto-shutdown. The fee is still debited.
Airport <b>closed</b> after you built there	Your FBO is not deleted. You simply cannot build a <b>new</b> FBO at a closed airport.

## CH 02

## GROUND OPS

## FBO &amp; Hangar

- 2.1 Two types of FBO: system and player-owned
- 2.2 The golden rule — everything scales with airport Size
- 2.3 What an FBO costs to build
- 2.4 Construction timers
- 2.5 What the system FBO already has
- 2.6 Cargo storage fees
- 2.7 Aircraft parking fees
- 2.8 The weekly ownership fee (Monday 04:45 UTC)
- 2.9 What an FBO owner actually earns
- 2.10 Logistic queries — the mission generator
- 2.11 Skills that gate FBO features
- 2.12 Auto-stop, auto-pause, deletion
- 2.13 TL;DR

SITUATION	WHAT HAPPENS
<b>Manual deletion</b>	Only allowed if no maintenance is currently active (or with force). All logistic queries and pending missions are deleted. Aircraft in your hangar stay parked at the airport.

## 2.13 TL;DR

- You **build** an FBO — you never buy one. System FBOs are permanent fixtures you compete against.
- Every construction cost is **multiplied by the airport Size ratio** (0.10 → 1.00).
- A Heavy Jet workshop at Size 5 costs **448 000 Cr** to build and **224 000 Cr** to upgrade to Level 2.
- **Cargo storage: 0.06 Cr / lbs / hour** after a 3 h grace period. Free inside your own FBO's capacity.
- **Aircraft parking** at Size 5: 8.75 Cr/h + 0.12 Cr per 1 000 lbs above 200 k lbs. Paid to the airport, not to you.
- **Weekly ownership fee = total built value ÷ 17**. About 5.88 % of what you've spent, every week.
- FBO owners earn **nothing** from storage fees or parking fees — only from fuel resale and workshop services.
- Logistic queries: **1 → 10 slots by skill level**, with **5-day / 2-day / 23-hour** cooldowns from slot 1 onward.

# 02

— END OF CHAPTER —

# 03

CHAPTER 03 · FUEL

## Fuel



CH 03

FUEL

Fuel

- 3.1 Only two fuel types exist
- 3.2 Two prices that matter
- 3.3 Dealer price — one number per world
- 3.4 Sell price — rules and caps
- 3.5 Ordering fuel for your FBO
- 3.6 Weekly resupply of system FBOs
- 3.7 Refueling an aircraft at an FBO
- 3.8 Fuel weight (for Weight & Balance)
- 3.9 Fuel containers — portable fuel storage
- 3.10 Industrial fuel supply (background system)
- 3.11 Skills that affect fuel
- 3.12 Edge cases
- 3.13 TL;DR



FIG 3.01 — Fuel supply chain from dealer to aircraft

What does a gallon really cost? How long until my order is delivered? What's the cheapest way to fuel a Heavy Jet? Everything fuel-related — pricing, ordering, delivery, refueling, and weight.

### 3.1 Only two fuel types exist

TYPE	NAME	USED BY
0	100LL (Avgas)	Piston aircraft
1	Jet-A	Turbine aircraft (turboprops, jets, turbine helicopters)

There is no MOGAS, no Diesel, no SAF in OnAir. Every aircraft type uses one or the other.

### 3.2 Two prices that matter

Every FBO has two prices per fuel type:

PRICE	WHO PAYS IT	WHO SETS IT
Dealer price	The FBO owner (when ordering fuel for their stock)	The server — fixed per world
Sell price	Any pilot refueling at the FBO	The FBO owner (you, for your own FBO)

The difference is the FBO owner's **margin**.

CH 03

FUEL

Fuel

- 3.1 Only two fuel types exist
- 3.2 Two prices that matter
- 3.3 Dealer price — one number per world
- 3.4 Sell price — rules and caps
- 3.5 Ordering fuel for your FBO
- 3.6 Weekly resupply of system FBOs
- 3.7 Refueling an aircraft at an FBO
- 3.8 Fuel weight (for Weight & Balance)
- 3.9 Fuel containers — portable fuel storage
- 3.10 Industrial fuel supply (background system)
- 3.11 Skills that affect fuel
- 3.12 Edge cases
- 3.13 TL;DR

### 3.3 Dealer price — one number per world

The dealer price is **the same at every airport** within a given world. It never varies by location.

#### Seed values at world creation

WORLD MODE	100LL DEALER PRICE	JET-A DEALER PRICE
<b>Classic</b>	3.30 Cr/gal	2.98 Cr/gal
<b>Survival</b>	3.72 Cr/gal	3.36 Cr/gal

#### What never changes the dealer price

- The dealer price **never fluctuates** — it is a fixed world setting.
- **No seasonal modifier** ever changes fuel prices.



100LL

AVGAS (6.0 LB/GAL)

Jet-A

JET FUEL (6.7 LB/GAL)

20 Cr

MAX FBO RESALE

- **No country tax** affects in-game fuel.

◆◆◆

### 3.4 Sell price — rules and caps

#### Hard limits

CONSTRAINT	VALUE
<b>Maximum</b> sell price	<b>20 Cr/gal</b> (hard cap, both fuel types)
<b>Minimum</b> sell price	Must be ≥ the world's <b>dealer price</b>

#### System FBO sell prices

System FBOs have randomized sell prices set once at world creation. They vary by airport Size — larger airports tend to charge more:

CH 03

FUEL

Fuel

- 3.1 Only two fuel types exist
- 3.2 Two prices that matter
- 3.3 Dealer price — one number per world
- 3.4 Sell price — rules and caps
- 3.5 Ordering fuel for your FBO
- 3.6 Weekly resupply of system FBOs
- 3.7 Refueling an aircraft at an FBO
- 3.8 Fuel weight (for Weight & Balance)
- 3.9 Fuel containers — portable fuel storage
- 3.10 Industrial fuel supply (background system)
- 3.11 Skills that affect fuel
- 3.12 Edge cases
- 3.13 TL;DR

AIRPORT SIZE	APPROXIMATE SELL PRICE RANGE (100LL)
0	3.64 – 8.25 Cr/gal
1	3.82 – 8.66 Cr/gal
2	4.00 – 9.08 Cr/gal
3	4.37 – 9.90 Cr/gal
4	4.73 – 10.73 Cr/gal
5	5.10 – 11.55 Cr/gal

(Jet-A values are roughly 10 % lower due to the lower dealer price.)

Prices are set **once** at world startup and stay fixed. A cleanup pass will bump prices back up to dealer price if they somehow go below it.



### 3.5 Ordering fuel for your FBO

RULE	VALUE
<b>Price</b>	Dealer price × gallons ordered
<b>Delivery fee</b>	None
<b>Bulk discount</b>	None — linear pricing
<b>Lead time</b>	<b>+1 day</b> from order time
<b>Additional delay</b> (if another order is already pending)	+2 h per pending order
<b>Minimum order</b>	None
<b>Maximum order</b>	Limited by your remaining tank capacity
<b>Payment timing</b>	Debited <b>immediately</b> at order time

#### How delivery works

1. You place the order and are charged immediately. 2. The ordered quantity is held in a "pending delivery" state. 3. Once 24 hours have passed, the server flips the fuel from pending into your live tank stock.

#### The overflow guard

You cannot over-order: the server ensures that your current stock + already pending + new order does not exceed your tank capacity.

#### No cancellation

There is **no way to cancel a fuel order** once placed. You will wait for delivery.

## CH 03

## FUEL

## Fuel

- 3.1 Only two fuel types exist
- 3.2 Two prices that matter
- 3.3 Dealer price — one number per world
- 3.4 Sell price — rules and caps
- 3.5 Ordering fuel for your FBO
- 3.6 Weekly resupply of system FBOs
- 3.7 Refueling an aircraft at an FBO
- 3.8 Fuel weight (for Weight & Balance)
- 3.9 Fuel containers — portable fuel storage
- 3.10 Industrial fuel supply (background system)
- 3.11 Skills that affect fuel
- 3.12 Edge cases
- 3.13 TL;DR

## 3.6 Weekly resupply of system FBOs

Two scheduled events restock system FBOs:

- **Monday ~04:45 UTC** — main weekly restock
- **Friday ~04:45 UTC** — bonus mid-week restock (same volume)

### The refuel formula

For each system FBO, per fuel type:

CURRENT STOCK	WHAT HAPPENS
Below 50 % of capacity	Refilled to a <b>random level between 50 % and 100 %</b> of capacity
At or above 50 % of capacity	<b>+10 % of capacity</b> added

Sell prices are **not** reset by these restocks.

**Planning tip:** system FBOs are restocked on Monday and topped up on Friday. If you are running low, Monday morning restock is your closest guaranteed resupply.

## 3.7 Refueling an aircraft at an FBO

RULE	VALUE
<b>Price</b>	FBO sell price × gallons
<b>Handling fee</b>	None
<b>Per visit limit</b>	Limited by aircraft tank capacity and FBO remaining stock
<b>Out of stock</b>	Fails immediately — no queue
<b>Loading time</b>	Approximately 0.02 min per gallon, capped at <b>2 minutes</b> total

### Refueling at your own FBO

When you refuel your own aircraft at your own FBO, the server charges you **dealer price × gallons** — not your marked-up sell price. Your markup is only a cost to **other players**, not to yourself.

### Third-party refueling

When another player refuels at your FBO, they pay your sell price. You receive the difference between sell price and dealer price as profit.

## CH 03

## FUEL

## Fuel

- 3.1 Only two fuel types exist
- 3.2 Two prices that matter
- 3.3 Dealer price — one number per world
- 3.4 Sell price — rules and caps
- 3.5 Ordering fuel for your FBO
- 3.6 Weekly resupply of system FBOs
- 3.7 Refueling an aircraft at an FBO
- 3.8 Fuel weight (for Weight & Balance)
- 3.9 Fuel containers — portable fuel storage
- 3.10 Industrial fuel supply (background system)
- 3.11 Skills that affect fuel
- 3.12 Edge cases
- 3.13 TL;DR

## 3.8 Fuel weight (for Weight & Balance)

Fuel weight is a fixed constant per type — no temperature or altitude correction:

FUEL TYPE	WEIGHT
100LL (Avgas)	6.0 lbs/gal
Jet-A	6.7 lbs/gal

## 3.9 Fuel containers — portable fuel storage

A **fuel container** is a cargo item that lets you transport gallons between airports.

### Buying a container

- Price = gallons × FBO sell price (same as refueling).
- Weight = gallons × fuel density.
- Revenue goes to the FBO owner as a normal fuel sale.
- You specify the number of gallons — there is no fixed container size.

### Using a container on an aircraft

- Container must be at the same airport as the aircraft.
- Pumps as much fuel as the aircraft can accept.
- The container is destroyed if fully used; kept (with reduced weight) if partial.

### Pouring a container into your FBO tank

- Must be at an airport where you own an FBO.
- Fills your tank up to remaining capacity.
- If the container has more fuel than your tank can hold, the excess **stays in the container** — nothing is wasted.

## 3.10 Industrial fuel supply (background system)

Behind the scenes, large fuel orders are sourced from the factory industry:

- If a fuel factory within **250 NM** of your FBO has stock, it is used — no extra cost to you.
- If the factory is farther away, a per-nautical-mile transport surcharge is paid **to the factory owner**. You still pay only dealer price — the surcharge is invisible to you.

This is an industry economy mechanic; it does not affect what you pay at the pump.

## CH 03

## FUEL

## Fuel

- 3.1 Only two fuel types exist
- 3.2 Two prices that matter
- 3.3 Dealer price — one number per world
- 3.4 Sell price — rules and caps
- 3.5 Ordering fuel for your FBO
- 3.6 Weekly resupply of system FBOs
- 3.7 Refueling an aircraft at an FBO
- 3.8 Fuel weight (for Weight & Balance)
- 3.9 Fuel containers — portable fuel storage
- 3.10 Industrial fuel supply (background system)
- 3.11 Skills that affect fuel
- 3.12 Edge cases
- 3.13 TL;DR

## 3.11 Skills that affect fuel

SKILL	EFFECT
FBO Main Agreement ( $\geq 1$ )	Required to build an FBO and own a fuel tank
Fuel Resale (level 1)	Required to enable fuel selling to other players
AI Fuel Efficiency (levels 1–3)	Reduces fuel burn of <b>AI-flown aircraft</b> by $-1 / -2 / -4$ % (no effect on flights you fly yourself)

**No skill** changes dealer price, sell price range, ordering lead time, refueling speed, or fuel weight for W&B.

## 3.12 Edge cases

SCENARIO	WHAT HAPPENS
Tank already full — order excess	Blocked at order time
FBO stock empty — pilot tries to refuel	Fails immediately with an error
Container at airport with no FBO — pour into tank	Blocked — you need an FBO to accept the pour
Container at a non-home airport — use on aircraft	Works — containers are pumpable anywhere on the ground

## 3.13 TL;DR

- **Dealer price is flat** per world — no regional variation, no fluctuation.
- Classic: **3.30 Cr (100LL) / 2.98 Cr (Jet-A)** per gal - Survival: **3.72 / 3.36** per gal
- **Your sell price caps at 20 Cr/gal** and must be  $\geq$  dealer price.
- **Fuel delivery = +1 day**, no fee, no bulk discount.
- **System FBOs restock every Monday + Friday at ~04:45 UTC.**
- **Refueling at your own FBO only costs you dealer price** — your markup is not self-charged.
- **Fuel weight:** 6.0 lbs/gal (100LL) · 6.7 lbs/gal (Jet-A).
- Only the **AI Fuel Efficiency** skill affects fuel consumption — and only for AI-flown aircraft.

# 04

CHAPTER 04 · MAINTENANCE

## Maintenance & Workshop

*When is my engine due for inspection? How much does a 100 h check cost? Why did my aircraft condition drop sharply in just a few flights? Everything about how aircraft wear out and get repaired.*

CH 04

MAINTENANCE

Maintenance & Workshop

- 4.1 The 8 maintenance operations
- 4.2 How maintenance is priced
- 4.3 Price breakdown
- 4.4 How long does maintenance take?
- 4.5 Mechanics — the workforce
- 4.6 The full maintenance flow
- 4.7 The scheduled inspection
- 4.8 The annual checkup
- 4.9 Damage model — how condition drops
- 4.10 No workshop at the FBO — the truck call
- 4.11 Condition thresholds — when your aircraft is blocked
- 4.12 What does NOT exist
- 4.13 TL;DR

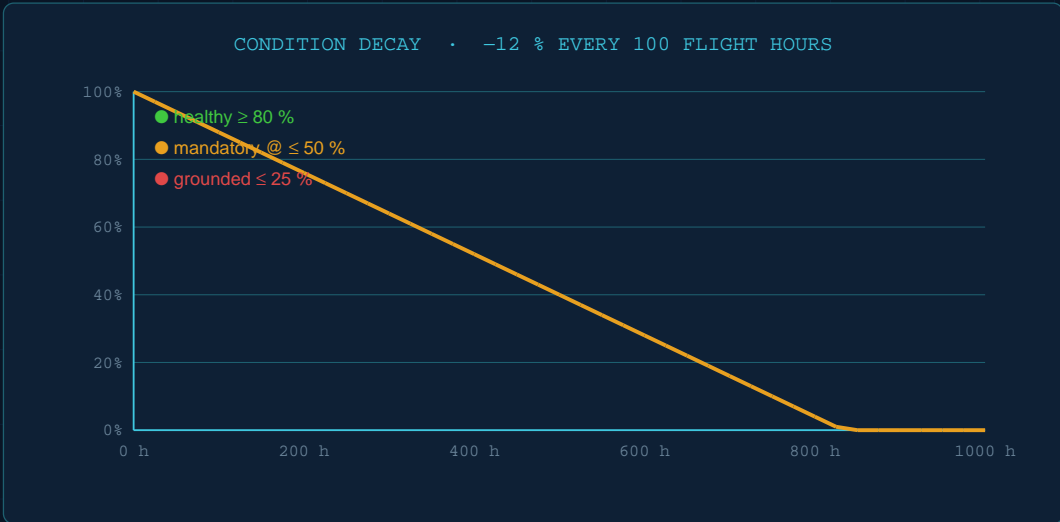


FIG 4.01 – Aircraft condition vs. flight hours (-12 % per 100 h)

## 4.1 The 8 maintenance operations

There is no propeller maintenance — just these eight operations:

OPERATION	WORKSHOP LEVEL	WHAT IT DOES WHEN COMPLETE
Seat reconfiguration	None (paperwork only)	Changes the cabin layout (Eco / Business / First split)
Scheduled inspection	Level 1	Resets the inspection countdown
Annual checkup	Level 2	Resets the annual due date
Failure repair	Level 1	Removes all recorded aircraft failures
Airframe repair	Level 1	Sets airframe condition to your chosen target
Airframe replacement	Level 2	Airframe → 100 %, hours → 0, maximum condition → restored
Engine repair	Level 1	Sets that engine's condition to your chosen target
Engine replacement	Level 2	Engine → 100 %, hours → 0, maximum condition → restored

Each engine is maintained individually. A twin-engine aircraft has two separate engine jobs.

### Workshop level rule

CH 04

MAINTENANCE

Maintenance & Workshop

- 4.1 The 8 maintenance operations
- 4.2 How maintenance is priced
- 4.3 Price breakdown
- 4.4 How long does maintenance take?
- 4.5 Mechanics — the workforce
- 4.6 The full maintenance flow
- 4.7 The scheduled inspection
- 4.8 The annual checkup
- 4.9 Damage model — how condition drops
- 4.10 No workshop at the FBO — the truck call
- 4.11 Condition thresholds — when your aircraft is blocked
- 4.12 What does NOT exist
- 4.13 TL;DR

- Level 1 required for: engine repair, airframe repair, scheduled inspection, failure repair.
- Level 2 required for: annual checkup, engine replacement, airframe replacement.

If the FBO has no workshop for the required level and class, the job is still accepted but a **truck-call surcharge** applies (see §4.10).

## 4.2 How maintenance is priced

All costs derive from a single base:

**Maintenance cost = 70 % of the aircraft's hourly operating cost**

So a Citation costs more to service than a Cessna 152 because its operating cost is higher.

Every quote starts with a **500 Cr paperwork & handling fee** (10 min). If paperwork is the only line item, the fee collapses to zero.

### FBO markup

When your aircraft is repaired at a **player-owned FBO that isn't yours**, the owner's markup multiplier is applied to the total price. System FBOs charge a random markup of +10 % to +110 %. Your own aircraft at your own FBO: **no markup applied**.

The markup portion is credited to the FBO owner immediately when the job starts.

## 4.3 Price breakdown

OPERATION	PRICING FORMULA (SIMPLIFIED)
Scheduled inspection	Hourly cost × inspection interval in hours × 0.02
Annual checkup	Hourly cost × average annual flight hours × 0.007
Engine repair	Hourly cost × condition loss % × a per-engine ratio
Engine replacement	Same as full repair (100 % condition loss), split across engine count
Airframe repair	Hourly cost × condition loss % × an airframe ratio
Airframe replacement	Calculated as a fixed 50 % delta — not a full rebuild
Failure repair (serious)	Equal to a full scheduled inspection cost
Failure repair (minor)	20 % of a scheduled inspection cost
Seat change	50 Cr per seat changed

CH 04

MAINTENANCE

Maintenance & Workshop

- 4.1 The 8 maintenance operations
- 4.2 How maintenance is priced
- 4.3 Price breakdown
- 4.4 How long does maintenance take?
- 4.5 Mechanics — the workforce
- 4.6 The full maintenance flow
- 4.7 The scheduled inspection
- 4.8 The annual checkup
- 4.9 Damage model — how condition drops
- 4.10 No workshop at the FBO — the truck call
- 4.11 Condition thresholds — when your aircraft is blocked
- 4.12 What does NOT exist
- 4.13 TL;DR

## Inspection intervals by aircraft class

CLASS	INTERVAL
SEP, MEP, TurboProp, Helicopter	100 h
Jet	400 h
Heavy Jet	600 h

The inspection interval depends on the aircraft class. The price scales with the interval — a Heavy Jet inspection is expensive because it covers 600 hours of operation.

## 4.4 How long does maintenance take?

OPERATION	DURATION
Paperwork	10 min
Scheduled inspection	10 h
Annual checkup	30 h
Engine replacement (per engine)	10 h per engine
Engine repair ( $\Delta\%$ )	$\Delta \times 100 \times 12$ min (e.g., 40 % repair = 480 min = 8 h)
Airframe repair ( $\Delta\%$ )	$\Delta \times 100 \times 12$ min
Airframe replacement	10 h
Failure repair — serious (condition $\leq 5\%$ )	30 h
Failure repair — intermediate (condition 5–50 %)	30 h
Failure repair — minor (condition $> 50\%$ )	2 h
Seat reconfiguration	1 min per seat, max 30 min

**Example:** repairing an engine from 60 % to 100 % ( $\Delta = 40\%$ ) → 480 min = 8 hours.

### Airport boost

An airport boost can reduce maintenance time:

–10 % per boost level (Level 1 → –10 %, Level 2 → –20 %, etc.)

CH 04  
MAINTENANCE  
**Maintenance & Workshop**

- 4.1 The 8 maintenance operations
- 4.2 How maintenance is priced
- 4.3 Price breakdown
- 4.4 How long does maintenance take?
- 4.5 Mechanics — the workforce
- 4.6 The full maintenance flow
- 4.7 The scheduled inspection
- 4.8 The annual checkup
- 4.9 Damage model — how condition drops
- 4.10 No workshop at the FBO — the truck call
- 4.11 Condition thresholds — when your aircraft is blocked
- 4.12 What does NOT exist
- 4.13 TL;DR

## 4.5 Mechanics — the workforce

Assignment is automatic. You do not pick which mechanic works on which aircraft.

### Mechanic speed

Mechanic speed is governed by their **Comfort** and **Punctuality** personal stats (each from 0 to 1):

MECHANIC QUALITY	WORK SPEED
Poor stats (all at 0)	0.90 work-hours per real hour
Average stats (all at 0.5)	1.00 work-hours per real hour
Excellent stats (all at 1.0)	1.10 work-hours per real hour

### How many mechanics can work at once

AIRPORT SIZE	MAX WORKING MECHANICS	MAX SIMULTANEOUS AIRCRAFT
0	2	1
1	4	2
2	6	3
3	8	4
4	10	5
5	12	6

Additional aircraft queue up and wait.

Mechanics must be: assigned as Mechanic category, from your company, currently at the FBO's airport, and not busy transporting or training.

### Pooling your mechanics

All available mechanics' work power is **pooled and split evenly** across the aircraft currently being worked on. Assigning two mechanics to one aircraft cuts the clock time roughly in half.

### System FBOs

No mechanics needed. Maintenance time at a system FBO runs in **real time** (1 h real = 1 work-hour, no speedup from extra mechanics).



## 4.6 The full maintenance flow

1. **Get a quote** — your aircraft must be idle. If using a player FBO, at least one mechanic must be on-site.
2. **Start the job** — cash check. If balance is sufficient, cargo and passengers on

## CH 04

## MAINTENANCE

## Maintenance &amp; Workshop

- 4.1 The 8 maintenance operations
- 4.2 How maintenance is priced
- 4.3 Price breakdown
- 4.4 How long does maintenance take?
- 4.5 Mechanics — the workforce
- 4.6 The full maintenance flow
- 4.7 The scheduled inspection
- 4.8 The annual checkup
- 4.9 Damage model — how condition drops
- 4.10 No workshop at the FBO — the truck call
- 4.11 Condition thresholds — when your aircraft is blocked
- 4.12 What does NOT exist
- 4.13 TL;DR

the aircraft are automatically unloaded. Aircraft status changes to **Maintenance**. The full amount is charged immediately. 3. **Maintenance progresses** — driven by the scheduler every **15 minutes**. Idle mechanics are assigned. Remaining work hours decrease based on pooled mechanic power. 4. **Job completes automatically** — all changes (condition resets, etc.) are applied. Aircraft returns to **Idle**. You receive a notification. 5. **Cancel** — you get back the base repair cost, but **the markup already paid to the FBO owner is not refunded**.

## 4.7 The scheduled inspection

- **Countdown:** decremented by actual flight hours at the end of every registered flight.
- **Due:** when the countdown hits 0, your aircraft is blocked until the inspection is done.
- **Warning:** shown when  $\leq 5$  hours remain.
- **Intervals:** 100 h (GA/TurboProp/Helicopter) · 400 h (Jet) · 600 h (Heavy Jet).

## 4.8 The annual checkup

- **Calendar-based**, not flight-hours. Due one year after the last checkup.
- Warning appears **15 days** before the due date.
- Always requires **Level 2 workshop** for the aircraft's class.
- **Does not repair anything** — it is a compliance reset only. Do not confuse it with an airframe replacement.
- Duration: always **30 hours**.

## 4.9 Damage model — how condition drops

Condition wears down on **two parts separately**: the airframe (the whole airframe) and **each engine individually**.

### Base wear per flight

–12 % condition per 100 flight hours (both airframe and engine, under normal operation)

### Below 80 % condition — wear accelerates

CONDITION	WEAR MULTIPLIER
80 %	×1.0 (normal)
70 %	×1.17
60 %	×1.33

CH 04

MAINTENANCE

Maintenance & Workshop

- 4.1 The 8 maintenance operations
- 4.2 How maintenance is priced
- 4.3 Price breakdown
- 4.4 How long does maintenance take?
- 4.5 Mechanics — the workforce
- 4.6 The full maintenance flow
- 4.7 The scheduled inspection
- 4.8 The annual checkup
- 4.9 Damage model — how condition drops
- 4.10 No workshop at the FBO — the truck call
- 4.11 Condition thresholds — when your aircraft is blocked
- 4.12 What does NOT exist
- 4.13 TL;DR

CONDITION	WEAR MULTIPLIER
50 %	×1.50
40 %	×1.67

**Practical meaning:** once you drop below 80 %, every flight costs *more* condition than the last. Below 50 %, the spiral accelerates quickly.

**Past hightime — wear accelerates further**

Each aircraft type has a "hightime" threshold (total airframe hours). Past it, wear multiplies again on top of the below-80 % factor.

**Maximum condition slowly decreases**

Each flight also lowers the **maximum possible condition** slightly. A full airframe replacement is the only way to restore the ceiling.

**Engine TBO (Time Between Overhaul)**

Once engine hours exceed the aircraft type's Time Between Overhaul:

**Condition drops 3× faster per flight.**

TBO is a hard line — cross it and engine degradation triples.

**Flight events that cause extra damage**

EVENT	EXTRA DAMAGE
Hard landing	+0.2 % airframe condition loss
Excessive G-force	Up to +0.025 % per event
Poor AI pilot stats	Up to +0.05 % per flight
Engine failure (sim event)	Engine condition → random 0–50 %

**Floor**

Airframe condition cannot go below 0 %. An aircraft can reach 0 % and still exist — it just cannot fly until major repairs are completed.



**4.10 No workshop at the FBO — the truck call**

If the FBO has no workshop for the required level and aircraft class, the job is still possible but with a surcharge:

**Truck call cost = (sum of other repair items) × 0.5 + 2 000 Cr**  
**Truck call time = 60 min extra**

CH 04

MAINTENANCE

Maintenance & Workshop

- 4.1 The 8 maintenance operations
- 4.2 How maintenance is priced
- 4.3 Price breakdown
- 4.4 How long does maintenance take?
- 4.5 Mechanics — the workforce
- 4.6 The full maintenance flow
- 4.7 The scheduled inspection
- 4.8 The annual checkup
- 4.9 Damage model — how condition drops
- 4.10 No workshop at the FBO — the truck call
- 4.11 Condition thresholds — when your aircraft is blocked
- 4.12 What does NOT exist
- 4.13 TL;DR

Anything done without a proper workshop is **50 % more expensive**. Always check for a properly equipped FBO nearby before scheduling maintenance.

**There is no parts shortage system.** Parts are always available. No shipping delays or stock-outs. The surcharge is purely monetary.

## 4.11 Condition thresholds — when your aircraft is blocked

Your aircraft is **blocked from flying** when:

TRIGGER	THRESHOLD
Engine or airframe condition	≤ 50 %
Scheduled inspection overdue	Countdown hits 0
Annual checkup overdue	Calendar date passed
Any recorded failure	At least 1 failure on file

A **warning** (not a block) appears when:

TRIGGER	THRESHOLD
Engine or airframe condition	50 % < condition ≤ 60 %
Scheduled inspection	≤ 5 hours remaining
Annual checkup	Within 15 days
Engine hours	Past Time Between Overhaul
Airframe hours	Past hightime threshold

## 4.12 What does NOT exist

- ■ No **propeller** maintenance — the model covers airframe + each engine only.
- ■ No **parts sourcing** delays — parts are always available.
- ■ No **airport-size price modifier** on maintenance cost itself (only the truck-call surcharge depends on having a workshop).
- ■ **Cancelling maintenance does not refund the markup** paid to the FBO owner.

## 4.13 TL;DR

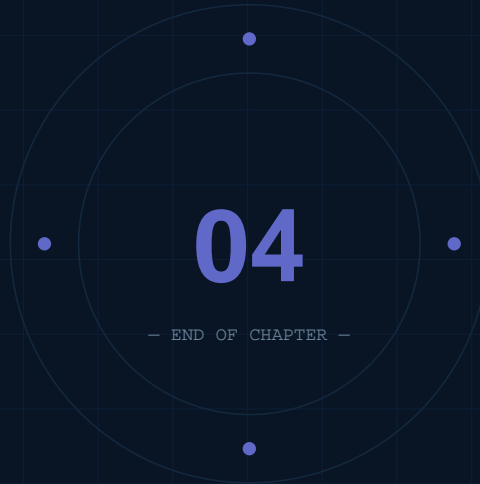
## CH 04

## MAINTENANCE

## Maintenance &amp; Workshop

- 4.1 The 8 maintenance operations
- 4.2 How maintenance is priced
- 4.3 Price breakdown
- 4.4 How long does maintenance take?
- 4.5 Mechanics — the workforce
- 4.6 The full maintenance flow
- 4.7 The scheduled inspection
- 4.8 The annual checkup
- 4.9 Damage model — how condition drops
- 4.10 No workshop at the FBO — the truck call
- 4.11 Condition thresholds — when your aircraft is blocked
- 4.12 What does NOT exist
- 4.13 TL;DR

- Base price = **70 % of hourly operating cost** for the aircraft type.
- **Scheduled inspection:** 100/400/600 h intervals depending on class. Price scales with the interval.
- **Annual checkup:** once a year, requires Level 2 workshop. Does **not** repair — compliance reset only.
- **Condition drops 12 % per 100 flight hours**, accelerating below 80 % and past hightime/TBO.
- **Cancel refunds the repair cost but not the markup** already paid to the FBO owner.
- **No workshop at the FBO** = +50 % and +2 000 Cr truck-call surcharge.
- Aircraft is **blocked** at condition  $\leq 50$  % or when inspection/checkup is overdue.
- Mechanic speed range: **0.90–1.10** work-hours per clock-hour (driven by Comfort & Punctuality stats).



# 05

CHAPTER 05 · SKILLS

## Company Skills

*How many skill points will I need to max the FBO branch? Is the -10 % landing fee skill worth 3 points? Which skill hides a non-linear bonus? Everything about the 23-skill tree.*

CH 05

SKILLS

Company Skills

- 5.1 How you earn skill points
- 5.2 The cost model
- 5.3 Respec — resetting the skill tree
- 5.4 All 23 skills
- 5.5 The fine print — skills with hidden behaviour
- 5.6 Branch diagrams
- 5.7 Hidden rules worth knowing
- 5.8 Recommended starter builds
- 5.9 TL;DR

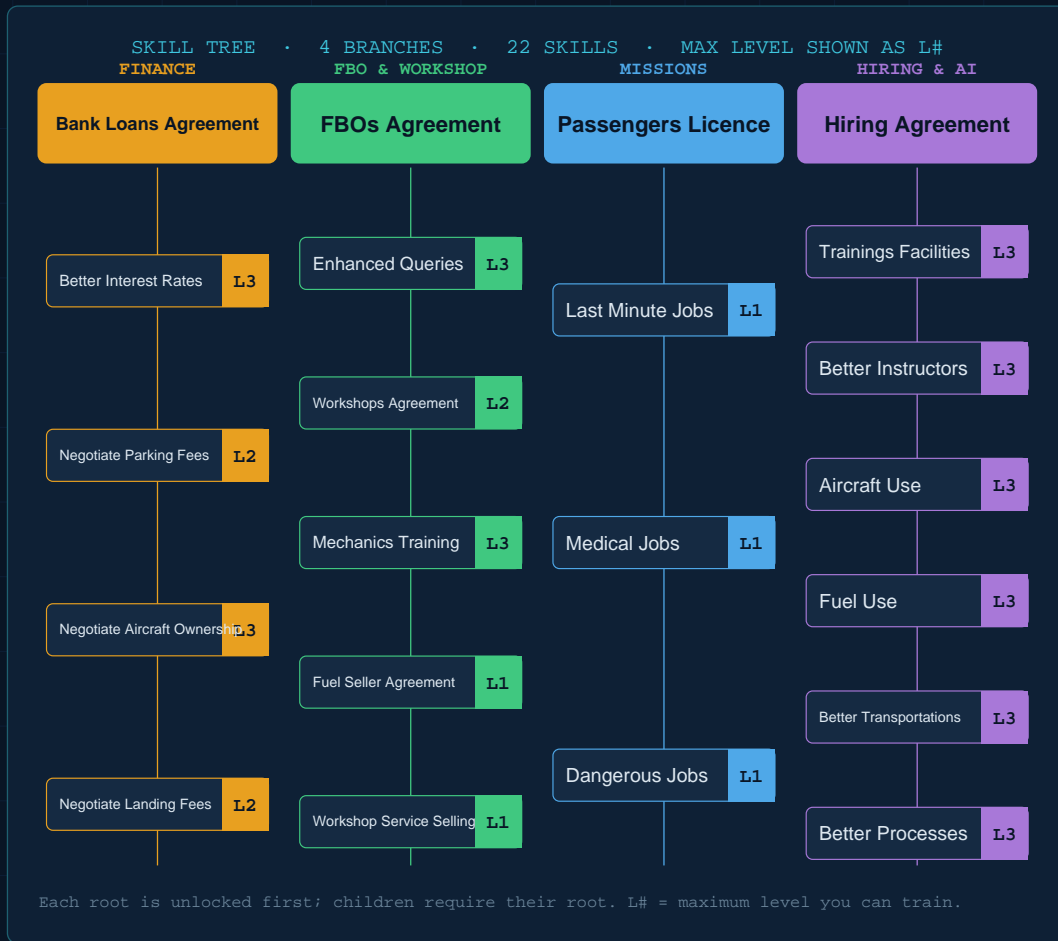


FIG 5.01 – The 3-branch skill tree at a glance

## 5.1 How you earn skill points

SOURCE	POINTS
Company creation	+1 pt
Every company level-up	+2 pts
Creating a Virtual Airline	+5 pts
Airliner company upgrade (if below level 3)	Catch-up bonus
Main quest milestones	Variable

### Company XP formula

$$XP \text{ needed for level } N = N \times 1\,000$$

Level 10 requires 10 000 XP earned since level 9. This is linear — every level always costs the same XP gain.

## CH 05

## SKILLS

## Company Skills

- 5.1 How you earn skill points
- 5.2 The cost model
- 5.3 Respec — resetting the skill tree
- 5.4 All 23 skills
- 5.5 The fine print — skills with hidden behaviour
- 5.6 Branch diagrams
- 5.7 Hidden rules worth knowing
- 5.8 Recommended starter builds
- 5.9 TL;DR

## 5.2 The cost model

Every level within the same skill costs the **same** number of points:

Taking a 2-point-per-level skill to level 3 costs **6 points total** — not 2+4+6.

### Root skills (1 point each)

Four branch roots can be unlocked with your creation point:

- **Bank Loans Agreement** — Finance branch
- **FBO Main Agreement** — FBO branch
- **Passengers Licence** — Mission branch
- **Hiring Agreement** — AI/Employees branch

A fresh company with 1 point can pick **exactly one** root.

## 5.3 Respec — resetting the skill tree

RESPEC	COST
First time	Free
Each subsequent	1 % of company value × reset count (capped at 5 % of company value)

A respec wipes your current skill allocation. Your **total earned skill points are preserved** — you rebuild from scratch with everything you've accumulated so far.

**Scenario note:** companies started in certain scenarios have all skills at maximum by default.

## 5.4 All 23 skills

### FINANCE branch

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT PER LEVEL
Bank Loans Agreement	1	1 pt	—	Unlocks bank loans

## CH 05

## SKILLS

## Company Skills

- 5.1 How you earn skill points
- 5.2 The cost model
- 5.3 Respec — resetting the skill tree
- 5.4 All 23 skills
- 5.5 The fine print — skills with hidden behaviour
- 5.6 Branch diagrams
- 5.7 Hidden rules worth knowing
- 5.8 Recommended starter builds
- 5.9 TL;DR

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT PER LEVEL
Loan Interest Reduction	3	2 pts	Bank Loans	-1 / -2 / -3 % annual interest (floor: 5 %)
Parking Fee Reduction	2	2 pts	Bank Loans	-5 / -10 % parking fees
Weekly Ownership Reduction	3	3 pts	Loan Interest	-3 / -5 / -10 % weekly ownership fee ■
Landing Fee Reduction	2	3 pts	Parking Fee	-5 / -10 % landing fees

## FBO branch

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT PER LEVEL
FBO Main Agreement	5	1 pt	—	Logistic query slots: 1 / 3 / 5 / 8 / 10 (see FBO chapter)
Enhanced Queries	3	2 pts	FBO Main	Jobs per query: 2-6 / 3-9 / 4-12 ■
Workshops Agreement	2	2 pts	FBO Main	L1 = workshop Level 1 · L2 = workshop Level 2
Mechanic Speed	3	2 pts	Workshops	+5 / +10 / +20 % mechanic work speed
Fuel Resale	1	2 pts	FBO Main	Enable fuel selling to other players
Workshop Resale	1	2 pts	Workshops	Workshop accepts other players' aircraft

## MISSION branch

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT
Passengers Licence	1	1 pt	—	Unlocks passenger missions

## CH 05

## SKILLS

## Company Skills

5.1 How you earn skill points

5.2 The cost model

5.3 Respec — resetting the skill tree

5.4 All 23 skills

5.5 The fine print — skills with hidden behaviour

5.6 Branch diagrams

5.7 Hidden rules worth knowing

5.8 Recommended starter builds

5.9 TL;DR

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT
Last-Minute Jobs	1	2 pts	Passengers	Unlocks last-minute job market
Medical Transport	1	2 pts	Passengers	Medical transport certification
Dangerous Goods	1	2 pts	Passengers	Hazardous materials certification

## AI / EMPLOYEES branch

SKILL	MAX LEVEL	COST / LEVEL	PREREQUISITE	EFFECT PER LEVEL
Hiring Agreement	1	1 pt	—	Unlocks hiring employees and freelancers
Training Efficiency	3	2 pts	Hiring	+5 / +10 / +20 % training quality
Training Speed	3	2 pts	Hiring	+5 / +10 / +20 % training speed
Aircraft Condition	3	1 pt	Training Efficiency	-1 / -2 / -3 % aircraft wear
AI Fuel Efficiency	3	3 pts	Training Efficiency	-1 / -2 / -4 % AI pilot fuel burn
Employee Transport Speed	3	3 pts	Training Speed	+5 / +10 / +20 % employee relocation speed
XP Bonus	3	2 pts	Aircraft Condition	+1 / +2 / +3 % XP ■ (conditional — see §5.5)

**Total to max everything: 98 points.** Starting from 1 point at company creation + 2 per level, you need roughly **level 49** to fully max the tree (without counting VA, quest, or Airliner bonuses).

**Deleted legacy skills:** three old load-speed skills were removed from the game. They no longer exist and cannot be unlocked.

## 5.5 The fine print — skills with hidden behaviour

## CH 05

## SKILLS

## Company Skills

- 5.1 How you earn skill points
- 5.2 The cost model
- 5.3 Respec — resetting the skill tree
- 5.4 All 23 skills
- 5.5 The fine print — skills with hidden behaviour
- 5.6 Branch diagrams
- 5.7 Hidden rules worth knowing
- 5.8 Recommended starter builds
- 5.9 TL;DR

## ■ Weekly Ownership Reduction — the non-linear jump

The three levels do not reduce evenly:

LEVEL	REDUCTION
1	-3 %
2	-5 %
3	-10 %

The jump from Level 2 to Level 3 is **twice as large** as Level 1 to Level 2. If you only have 6 points to spare, stopping at Level 2 misses more than half the total benefit. Push to Level 3.

## ■ Enhanced Queries — the description is misleading

The in-game description says "+1 / +2 / +3 jobs per query". The **actual formula multiplies the entire range**:

LEVEL	JOBS GENERATED PER QUERY TRIGGER
0 (no skill)	1 – 3
1	2 – 6
2	3 – 9
3	4 – 12

Level 3 **quadruples** both the floor and the ceiling of the range. This skill is significantly more powerful than its description implies.

## ■ XP Bonus — conditional activation

This skill adds +1 / +2 / +3 % to your XP **only on flights that already earned at least one XP bonus**. On a plain flight with no active bonuses, this skill does **nothing**.

To make it work, you need **Realistic Sim Procedures** enabled in your company settings so XP bonuses can activate (see the Flight Scoring chapter).

## Training Efficiency and Training Speed

These skills use a doubling progression:

LEVEL	EFFICIENCY BONUS	SPEED BONUS
1	+5 %	-5 % training time
2	+10 %	-10 % training time
3	+20 %	-20 % training time



## 5.6 Branch diagrams

## CH 05

## SKILLS

## Company Skills

- 5.1 How you earn skill points
- 5.2 The cost model
- 5.3 Respec — resetting the skill tree
- 5.4 All 23 skills
- 5.5 The fine print — skills with hidden behaviour
- 5.6 Branch diagrams
- 5.7 Hidden rules worth knowing
- 5.8 Recommended starter builds
- 5.9 TL:DR

**FINANCE branch**

```
Bank Loans Agreement (1 pt)
|-- Loan Interest Reduction (2 pts/lvl, 3 lvl) --- Weekly Ownership Reduc
tion (3 pts/lvl, 3 lvl)
+-- Parking Fee Reduction (2 pts/lvl, 2 lvl) ----- Landing Fee Reduction
(3 pts/lvl, 2 lvl)
```

Cost to max:  $1 + 6 + 9 + 4 + 6 = 26$  pts

**FBO branch**

```
FBO Main Agreement (1 pt/lvl, 5 lvl)
|-- Enhanced Queries (2 pts/lvl, 3 lvl)
|-- Fuel Resale (2 pts, 1 lvl)
+-- Workshops Agreement (2 pts/lvl, 2 lvl)
    |-- Mechanic Speed (2 pts/lvl, 3 lvl)
    +-- Workshop Resale (2 pts, 1 lvl)
```

Cost to max:  $5 + 6 + 2 + 4 + 6 + 2 = 25$  pts

**MISSION branch**

```
Passengers Licence (1 pt)
|-- Last-Minute Jobs (2 pts)
|-- Medical Transport (2 pts)
+-- Dangerous Goods (2 pts)
```

Cost to max:  $1 + 2 + 2 + 2 = 7$  pts

**AI / EMPLOYEES branch**

```
Hiring Agreement (1 pt)
|-- Training Efficiency (2 pts/lvl, 3 lvl)
|   |-- Aircraft Condition (1 pt/lvl, 3 lvl)
|   |   +-- XP Bonus (2 pts/lvl, 3 lvl)
|   +-- AI Fuel Efficiency (3 pts/lvl, 3 lvl)
+-- Training Speed (2 pts/lvl, 3 lvl)
    +-- Employee Transport Speed (3 pts/lvl, 3 lvl)
```

Cost to max:  $1 + 6 + 3 + 6 + 9 + 6 + 9 = 40$  pts

**5.7 Hidden rules worth knowing**

- **No rank gate** — the only gates are the prerequisite skill and having enough points. Nothing like "requires Company Rank 5".
- **Binary vs. graduated skills** — some skills simply unlock a feature (present/absent), others scale per level.
- **XP Bonus** only works if you habitually fly with Realistic Sim Procedures and earn XP bonuses.
- **Enhanced Queries** is quietly the best FBO skill — it multiplies the job range, not adds to it.
- **Weekly Ownership Reduction Level 3** is where most of the value lives — don't stop at Level 2.

## CH 05

## SKILLS

## Company Skills

- 5.1 How you earn skill points
- 5.2 The cost model
- 5.3 Respec — resetting the skill tree
- 5.4 All 23 skills
- 5.5 The fine print — skills with hidden behaviour
- 5.6 Branch diagrams
- 5.7 Hidden rules worth knowing
- 5.8 Recommended starter builds
- 5.9 TL;DR

## 5.8 Recommended starter builds

### The FBO magnate (25 pts)

Max the FBO branch. Enable fuel and workshop resale. Max logistic queries and enhanced queries. Sell services to everyone.

### The cost-cutter (20 pts)

Bank Loans → Loan Interest L3 → Weekly Ownership L3 + the root. Cap your biggest recurring bills.

### The XP grinder (14 pts)

Hiring → Training Efficiency L3 → Aircraft Condition L3 → XP Bonus L3. Only effective if you fly with Realistic Sim Procedures.

### The passenger operator (5 pts)

Hiring + Passengers Licence + Last-Minute / Medical / Dangerous.  
Cheapest path to specialized job markets.



## 5.9 TL;DR

- **98 pts** to max everything. ~Level 49 from level-ups alone.
- **Respec is free the first time**, then 1 % × reset-count of company value (capped at 5 %).
- **Enhanced Queries** multiplies the job range (4–12 at max) — not just adds a flat number.
- **Weekly Ownership L3** is a non-linear jump — it gives more than Levels 1 and 2 combined. Don't stop at L2.
- **XP Bonus** is conditional — it only activates on flights that already have at least one XP bonus active.

# 05

— END OF CHAPTER —

# 06

CHAPTER 06 · FLIGHT OPS

## Flight Scoring

*What counts against my flight score? How do I land an "A"? Does a 98 % score pay me more money? Everything about how the server grades each flight.*

CH 06

FLIGHT OPS

Flight Scoring

- 6.1 The overall formula
- 6.2 Flight phases — how the server tracks where you are
- 6.3 How scoring works
- 6.4 General trackers (active throughout the entire flight)
- 6.5 Per-phase trackers
- 6.6 Landing ratings — the A/B/C/D/E scale
- 6.7 Key thresholds — quick lookup
- 6.8 What your score actually changes in the economy
- 6.9 The "no bonus" situation
- 6.10 Top 5 score killers
- 6.11 TL;DR



FIG 6.01 – The 8 flight phases automatically detected by the server

## 6.1 The overall formula

**Score % = total points earned ÷ total points possible**

- No phase weighting — a point earned during taxi counts the same as a point during cruise or landing.
- The maximum possible points depend on which trackers apply to your aircraft class and company settings.
- A typical jet flight has a maximum of around 80–90 points.
- Score is stored as a number from 0 to 1. The interface displays it as a percentage.

## 6.2 Flight phases — how the server tracks where you are

The server tracks 12 phases. They switch automatically based on your aircraft's state:

PHASE	WHEN IT STARTS
Aircraft Preparation	Before engines are running
Engine On	Engines running, not yet moving
Departure Taxi	Any ground movement
Takeoff	Accelerating on the ground, speed above 40 kts
Initial Climb	First 3 min after liftoff (small aircraft) or IAS > 240 kts (jets)
Climb	Average climb rate > +200 ft/min sustained for 30 s
Level Flight	Average vertical speed between –200 and +200 ft/min for 30 s

**CH 06**

FLIGHT OPS

**Flight Scoring**

- 6.1 The overall formula
- 6.2 Flight phases — how the server tracks where you are
- 6.3 How scoring works
- 6.4 General trackers (active throughout the entire flight)
- 6.5 Per-phase trackers
- 6.6 Landing ratings — the A/B/C/D/E scale
- 6.7 Key thresholds — quick lookup
- 6.8 What your score actually changes in the economy
- 6.9 The "no bonus" situation
- 6.10 Top 5 score killers
- 6.11 TL;DR

PHASE	WHEN IT STARTS
Descent	Average descent rate > -200 ft/min sustained for 30 s
Approach	Within 3 min flight-time of destination and radar altitude < 5 000 ft
Landing	On the ground, decelerating, speed < 40 kts
Arrival Taxi	After touchdown
Engine Off	All engines shut down

### 6.3 How scoring works

- Each tracker starts at full points.
- Each violation removes a fixed number of points.
- A minimum delay between penalties prevents you from being docked twice for a single brief event.
- Some trackers give you a grace period to correct before the first point is removed.
- Score floor = 0 — trackers cannot go negative.

### 6.4 General trackers (active throughout the entire flight)

TRACKER	MAX PTS	POINTS LOST / VIOLATION	NOTES
<b>Max G-force</b>	3	1	G < -1.0 or G > 2.5
<b>Max Pitch</b>	3	1	Pitch below -25° or above +25°
<b>Max Bank angle</b>	3	1	Above 35° (jets) or 45° (all others)
Beacon + Strobe lights	3	1	Both lights off while engines are running
Speed below FL100	3	1	Above 265 kts below 10 000 ft (20 s grace)
<b>Overspeed (VNE)</b>	<b>6</b>	<b>2</b>	Simulator overspeed warning active
<b>Stall warning</b>	<b>6</b>	<b>2</b>	Stall warning active above 150 ft AGL
<b>Flap overspeed</b>	<b>6</b>	<b>2</b>	Flaps extended above maximum flap speed

**CH 06**

FLIGHT OPS

**Flight Scoring**

- 6.1 The overall formula
- 6.2 Flight phases — how the server tracks where you are
- 6.3 How scoring works
- 6.4 General trackers (active throughout the entire flight)
- 6.5 Per-phase trackers
- 6.6 Landing ratings — the A/B/C/D/E scale
- 6.7 Key thresholds — quick lookup
- 6.8 What your score actually changes in the economy
- 6.9 The "no bonus" situation
- 6.10 Top 5 score killers
- 6.11 TL;DR

TRACKER	MAX PTS	POINTS LOST / VIOLATION	NOTES
Gear overspeed	6	2	Gear extended above maximum gear speed
Taxi lights	3	1	Lights on while taxiing > 7 kts ground speed

**Bank angle is a single threshold — not tiered.** There are no partial penalties at 30° or 40°. Once you exceed 35° (jets) or 45° (others), the tracker fires.

## 6.5 Per-phase trackers

### Aircraft Preparation

TRACKER	MAX PTS	NOTES
Engines already running at tracking start	3	All 3 points lost immediately — no recovery

### Departure Taxi

TRACKER	MAX PTS	NOTES
Landing lights off during taxi (optional)	1	180 s grace
Nav lights on (optional)	1	—
Ground speed below 40 kts	1	Taxi overspeed penalty

### Takeoff

TRACKER	MAX PTS	NOTES
Flaps deployed (jets only)	1	Flaps at 0 at rotation

### Initial Climb

TRACKER	MAX PTS	NOTES
Landing lights on (optional)	1	—
Nav lights on (optional)	1	—

### Landing (up to 35 points)

**CH 06**

FLIGHT OPS

**Flight Scoring**

- 6.1 The overall formula
- 6.2 Flight phases — how the server tracks where you are
- 6.3 How scoring works
- 6.4 General trackers (active throughout the entire flight)
- 6.5 Per-phase trackers
- 6.6 Landing ratings — the A/B/C/D/E scale
- 6.7 Key thresholds — quick lookup
- 6.8 What your score actually changes in the economy
- 6.9 The "no bonus" situation
- 6.10 Top 5 score killers
- 6.11 TL;DR

TRACKER	MAX PTS	POINTS LOST / STEP	HOW IT IS SCORED
<b>Vertical speed rating</b>	<b>10</b>	2	Based on V/S at touchdown (see §6.6)
<b>G-force rating</b>	<b>10</b>	2	Based on G at touchdown
<b>Airspeed rating</b>	<b>10</b>	2	Based on speed above reference speed
<b>Bounces</b>	<b>3</b>	1 per bounce	Each time airborne > 0.3 s after first touchdown
<b>Flaps deployed (non-helicopter)</b>	<b>1</b>	1	Flaps at 0 at touchdown
<b>Landing gear down</b>	<b>1</b>	1	Gear up at touchdown

Landing score is **set once at touchdown** and does not update afterward.

**Arrival Taxi**

TRACKER	MAX PTS
Landing lights off (optional)	1
Nav lights on (optional)	1
Ground speed below 40 kts	1
Flaps retracted (non-helicopter)	1

**Engine Off**

TRACKER	MAX PTS
Landing lights off (optional)	1
<b>Fuel reserve ≥ 30 min</b>	<b>5</b>

Running low on fuel at shutdown is one of the biggest single-point losses available.



**6.6 Landing ratings — the A/B/C/D/E scale**

Three independent ratings, each producing a letter and a score. The **worst of the three** is your displayed landing grade.

**CH 06**

FLIGHT OPS

**Flight Scoring**

- 6.1 The overall formula
- 6.2 Flight phases — how the server tracks where you are
- 6.3 How scoring works
- 6.4 General trackers (active throughout the entire flight)
- 6.5 Per-phase trackers
- 6.6 Landing ratings — the A/B/C/D/E scale
- 6.7 Key thresholds — quick lookup
- 6.8 What your score actually changes in the economy
- 6.9 The "no bonus" situation
- 6.10 Top 5 score killers
- 6.11 TL;DR

**Vertical speed at touchdown**

GRADE	V/S
A Very smooth	below 200 fpm
B Smooth	200–299 fpm
C Regular	300–399 fpm
D Hard	400–499 fpm
E Very hard	500 fpm or above

**G-force at touchdown**

GRADE	G
A	below 1.1 G
B	1.1–1.19 G
C	1.2–1.39 G
D	1.4–1.69 G
E	1.7 G or above

**Airspeed at touchdown**

Reference speed = maximum(stall speed, 25 kts) × 1.3

GRADE	SPEED ABOVE REFERENCE
A	Less than +10 kts
B	+10–19 kts
C	+20–29 kts
D	+30–39 kts
E	+40 kts or above

**Points per grade**

GRADE	LANDING POINTS (EACH OF THE 3 RATINGS)
A	10
B	8
C	6
D	4 — also triggers a Hard Landing event

CH 06

FLIGHT OPS

Flight Scoring

- 6.1 The overall formula
- 6.2 Flight phases — how the server tracks where you are
- 6.3 How scoring works
- 6.4 General trackers (active throughout the entire flight)
- 6.5 Per-phase trackers
- 6.6 Landing ratings — the A/B/C/D/E scale
- 6.7 Key thresholds — quick lookup
- 6.8 What your score actually changes in the economy
- 6.9 The "no bonus" situation
- 6.10 Top 5 score killers
- 6.11 TL;DR

GRADE	LANDING POINTS (EACH OF THE 3 RATINGS)
E	2 — also triggers a Hard Landing event

An A or B grade triggers a Soft Landing event, which unlocks an XP bonus (see §6.9).

## 6.7 Key thresholds — quick lookup

MEASURE	LIMIT
G-force envelope	-1.0 G / +2.5 G
Bank angle (jets)	±35°
Bank angle (all others)	±45°
Pitch	±25°
Speed restriction below FL100	265 kts
Stall warning trigger	Armed only above 150 ft AGL
Soft landing (V/S)	Below 200 fpm → +5 % XP bonus
Hard landing (V/S)	400 fpm or above
Fuel reserve minimum	≥ 30 min of cruise fuel flow
Bounce threshold	Airborne > 0.3 s after first touchdown
Taxi speed limit	40 kts

## 6.8 What your score actually changes in the economy

### ■ Cash payout

The flight score has zero effect on your cash earnings. Mission reward is fixed at dispatch. A 100 % score pays the same as a 40 % score.

### ■ XP bonuses

XP bonuses are **additive percentages** added on top of base XP (base XP is capped at 500 NM / 2 h of flight).

All bonuses require "Realistic Sim Procedures" enabled in your company settings.

XP BONUS	AMOUNT	CONDITION TO EARN IT
Comfort	+5 %	Zero bank, G-force, or pitch violations

## CH 06

## FLIGHT OPS

## Flight Scoring

- 6.1 The overall formula
- 6.2 Flight phases — how the server tracks where you are
- 6.3 How scoring works
- 6.4 General trackers (active throughout the entire flight)
- 6.5 Per-phase trackers
- 6.6 Landing ratings — the A/B/C/D/E scale
- 6.7 Key thresholds — quick lookup
- 6.8 What your score actually changes in the economy
- 6.9 The "no bonus" situation
- 6.10 Top 5 score killers
- 6.11 TL;DR

XP BONUS	AMOUNT	CONDITION TO EARN IT
Safety	+10 %	Zero of: engines-on at start, 250 kt excess, low fuel, no beacon, lights on at shutdown, landing lights violations
Aircraft handling	+5 %	Zero of: stalls, overspeeds, flap/gear overspeeds, hard landings, flap violations
Soft landing	+5 %	Landing rated A or B
Night landing	+3 %	Touchdown at night
Crosswind landing	+5 %	Crosswind component above the aircraft's reference
Short runway	+5 %	Destination is a Size 0 airport
IMC approach	+5 %	At least 50 % of approach in IMC or visibility below 1 600 m
<b>Score ≥ 98 %</b>	<b>+10 %</b>	Overall score above 98 %
<b>Score ≥ 95 %</b>	<b>+5 %</b>	Overall score above 95 %
Lights scoring enabled	+5 %	Company setting toggle
Sim failures enabled	+3 %	Company setting toggle

Stacking all bonuses → maximum of **+61 % over base XP**.

The **XP Bonus** skill (see the Skills chapter) multiplies on top of this — but only if at least one bonus above is active.

### ■ Reputation

For flights with Realistic Sim Procedures enabled, your score affects reputation gain:

SCORE	REPUTATION RESULT
100 %	Double the base reputation gain
50 %	Normal base gain only
0 %	Zero gain (never negative)

Without Realistic Sim Procedures, your score has **no reputation effect**.

### Checkride flights

Checkrides use a separate evaluation. The flight scoring still runs, but:

- No reputation gain or loss.
- Passing gives a **flat 100 XP**, regardless of distance or score.

### AI-flown flights

## CH 06

## FLIGHT OPS

## Flight Scoring

- 6.1 The overall formula
- 6.2 Flight phases — how the server tracks where you are
- 6.3 How scoring works
- 6.4 General trackers (active throughout the entire flight)
- 6.5 Per-phase trackers
- 6.6 Landing ratings — the A/B/C/D/E scale
- 6.7 Key thresholds — quick lookup
- 6.8 What your score actually changes in the economy
- 6.9 The "no bonus" situation
- 6.10 Top 5 score killers
- 6.11 TL;DR

- **No XP earned at all.**
- Reputation is based on crew stats, not flight score.

## 6.9 The "no bonus" situation

If you fly without **Realistic Sim Procedures** enabled in your company settings:

- All 13 XP bonuses above → inactive.
- Score-based reputation → disabled.
- The XP Bonus skill → useless.

Enable Realistic Sim Procedures in company settings to make your score matter economically.

## 6.10 Top 5 score killers

1. **Landing ratings** (up to 30 points total). A single D-rated landing costs 6 points on that rating alone. 2. **Fuel reserve below 30 min at shutdown** — 5 points lost, plus the Safety bonus is blocked. 3. **Stall, overspeed, flap/gear overspeed** — 6 points each. A single event can wipe 12 points. 4. **Starting with engines already running** — 3 points lost immediately, no way to recover. 5. **Bank angle above threshold** — 3 points lost, and blocks the Comfort XP bonus.

## 6.11 TL;DR

- **Score = total points earned ÷ total points possible.** No phase weighting.
- **Score does NOT affect cash** — only XP bonuses and reputation.
- **Landing is worth up to 30 points**, rated via 3 independent checks (V/S, G, speed). The worst grade is displayed.
- **Fuel reserve below 30 min = 5 pts lost + Safety bonus blocked.**
- The full XP bonus stack caps at **+61 % over base XP** — but only with Realistic Sim Procedures enabled.
- The **XP Bonus** skill only activates when at least one other bonus is already active.

# 07

CHAPTER 07 · MISSIONS

## Freelance & Missions

*Why does a 20-minute hop pay more per NM than a long-haul? What's the real formula behind freelance charter fares? Which multipliers stack? Everything about missions, freelance, regular routes, and the money they produce.*

CH 07

MISSIONS

Freelance & Missions

- 7.1 The 21 mission types
- 7.2 Two completely different pay engines
- 7.3 The grind pay formula — block by block
- 7.4 How freelance charters are priced
- 7.5 Logistic-center missions (FBO queries)
- 7.6 Regular routes — weekly recurring
- 7.7 Expiration, decline, and penalties
- 7.8 Skill requirements for missions
- 7.9 Cargo categories (14 types)
- 7.10 Concurrent mission caps
- 7.11 TL;DR

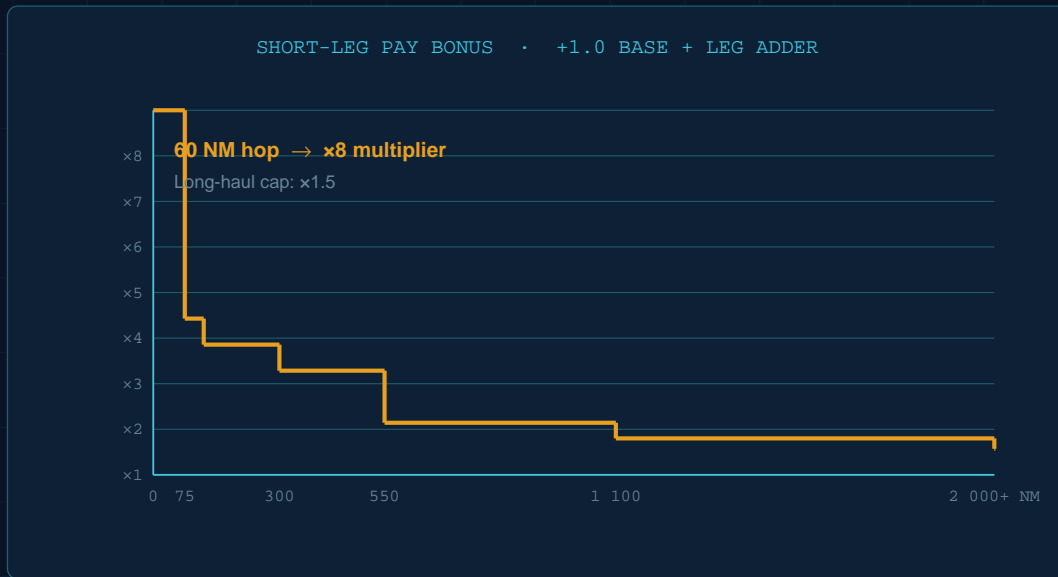


FIG 7.01 — Pay multiplier vs. longest-leg distance (short legs win)



FIG 7.02 — Mission type grid

## 7.1 The 21 mission types

Missions have two classifications — a **type** (what kind of job it is) and a **category** (where it comes from).

### Mission types

MISSION TYPE	NOTES
Standard cargo / PAX	The default — covers most job board missions
Perishable	Time-constrained cargo with expiry bonus
Medical	Requires the Medical Transport skill

## CH 07

## MISSIONS

## Freelance &amp; Missions

- 7.1 The 21 mission types
- 7.2 Two completely different pay engines
- 7.3 The grind pay formula — block by block
- 7.4 How freelance charters are priced
- 7.5 Logistic-center missions (FBO queries)
- 7.6 Regular routes — weekly recurring
- 7.7 Expiration, decline, and penalties
- 7.8 Skill requirements for missions
- 7.9 Cargo categories (14 types)
- 7.10 Concurrent mission caps
- 7.11 TL;DR

MISSION TYPE	NOTES
Bus trip	Passenger bus route
Event	Special event missions
Dangerous goods	Requires the Dangerous Goods skill
Executive PAX	High-value passengers
Fragile cargo	Carries a maximum G-force constraint
Sightseeing	POI-based tour
Fighter tour	Round-trip tour for fighter aircraft
Race	Racing mission
Regular route	Weekly scheduled route (see §7.6)
Rescue	Search-and-rescue with uncertain location
Undercover	Hidden destination missions
Glider free flight	Glider missions
Glider sightseeing	Glider POI tour
Aerosoft DLC missions	Special DLC content

## Mission categories

CATEGORY	WHERE IT COMES FROM
<b>Grind</b>	Job board, logistic center, regular routes
Main quest	Story missions
Side quest	Side story missions
Event	World event
<b>Freelance</b>	Freelance charters (5-job cap)
Work group relief	Ground operations relief

## 7.2 Two completely different pay engines

OnAir uses **two separate pay logics** depending on whether the job is freelance or grind. Understanding the difference is essential.

### Engine A — Grind (job board, logistic center, regular routes)

Grind pay is **freight-style**: you are paid for **what you carry** and **how far you carry it**. Cargo weight and passenger count both contribute, with passengers worth more per pound than

## CH 07

## MISSIONS

## Freelance &amp; Missions

- 7.1 The 21 mission types
- 7.2 Two completely different pay engines
- 7.3 The grind pay formula — block by block
- 7.4 How freelance charters are priced
- 7.5 Logistic-center missions (FBO queries)
- 7.6 Regular routes — weekly recurring
- 7.7 Expiration, decline, and penalties
- 7.8 Skill requirements for missions
- 7.9 Cargo categories (14 types)
- 7.10 Concurrent mission caps
- 7.11 TL;DR

cargo and premium classes (Business, First) worth more than Economy.

A series of bonuses then stack on top — short legs, special mission types, time-pressure cargo, multi-leg routes. A small random variation is added, a flat minimum is guaranteed, and the result is rounded.

The **shorter the leg**, the higher the per-mile rate. A 60 NM hop earns far more per mile than a 2 000 NM long-haul (see §7.3 for the full bonus ladder).

### Engine B — Freelance charter

Freelance pay is **time-based**, like an executive charter quote: the customer pays for the **estimated flight time** at an hourly rate, plus a fixed dispatch fee.

Two things drive your rate:

- **Your aircraft's speed** — faster cruise speed reduces estimated flight time, but the hourly rate is generous enough that even slow aircraft are paid fairly.
- **Your company reputation** — higher reputation means a higher hourly rate. Reputation directly grows your freelance income.

A freelance charter is priced like a **time-and-materials contract**, not a per-lb-per-mile job.

**Practical takeaway:** grind missions reward picking the right cargo for the right route. Freelance rewards building a reputation and flying steadily. Both can be profitable — they just optimize for different play styles.

## 7.3 The grind pay formula — block by block

### 7.3.1 Base rates

Base rates come from the reference economy (anchored to a Cessna 172 equivalent).

Passenger missions pay roughly **33 % more** per lb per NM than cargo.

A world-level "pay bonus" setting can increase these rates — different worlds may pay different amounts.

### 7.3.2 Seat class factors

How much each passenger class multiplies the base rate:

CLASS	FACTOR (UNDER 130 SEATS)	FACTOR (130+ SEATS)
Economy	1.0	1.0
Business	1.3	2.0
First	1.5	3.0

In practice, the server evaluates at a high seat count, so Business always pays  $\times 2.0$  and First always pays  $\times 3.0$ .

### 7.3.3 The bonus factor ladder — what really drives your pay

CH 07

MISSIONS

Freelance & Missions

- 7.1 The 21 mission types
- 7.2 Two completely different pay engines
- 7.3 The grind pay formula — block by block
- 7.4 How freelance charters are priced
- 7.5 Logistic-center missions (FBO queries)
- 7.6 Regular routes — weekly recurring
- 7.7 Expiration, decline, and penalties
- 7.8 Skill requirements for missions
- 7.9 Cargo categories (14 types)
- 7.10 Concurrent mission caps
- 7.11 TL;DR

The base freight rate is multiplied by a **bonus factor** that stacks several conditions together. The exact numbers are kept under the hood — what matters is the shape of the curve and which factors push it up.

**Short legs win — by a wide margin.** Trips under ~75 NM earn dramatically more per mile than long-haul flights. The bonus tapers as distance grows, flattening out for transcontinental routes (see *FIG 7.01* for the trend).

**Things that nudge your bonus upward:**

- **Distance** — the single biggest lever. A 60-mile hop pays *several times* more per mile than a 2 000 NM trip.
- **Special mission types** — rescue (especially when the location is unknown), fighter tours, sightseeing, and medical/dangerous-goods runs all carry meaningful premiums.
- **Time-constrained cargo** — perishables and rush jobs pay noticeably better, but miss the deadline and the penalty bites just as hard.
- **Human-only cargo or passengers** — a small but reliable bump.
- **Multi-leg routes** — each extra airport in the route adds a small bonus (capped at five legs).

**Things that barely move the needle:**

- Dangerous goods and fragile cargo only add a marginal premium on top of the certification gate.
- Adding more legs is a minor optimisation — useful but not transformative.

**Practical heuristic.** When you're hunting for high-value missions, scan the board for **short routes, rescue/medical jobs, and time-pressured cargo** before anything else. Distance is by far the most powerful factor — the curve is steep at the short end and gentle at the long end.

**7.3.4 Finalisation**

```

pay × bonus factor
pay × random jitter (±3 %)
pay + 300 Cr flat floor
pay rounded up to nearest 10 Cr
    
```

Penalty is calculated through the same pipeline.

**7.3.5 Company & airport boost on top**

EXTRA	VALUE
<b>Company pay bonus</b>	Applied to all grind missions (except logistic-center missions)
<b>Logistic Center boost</b>	+2 % to +30 % depending on airport Size and boost level
<b>Freelance Route boost</b>	+50 % / +100 % / +150 % by level

**7.3.6 Logistic-center boost by level and airport Size**

## CH 07

## MISSIONS

## Freelance &amp; Missions

- 7.1 The 21 mission types
- 7.2 Two completely different pay engines
- 7.3 The grind pay formula — block by block
- 7.4 How freelance charters are priced
- 7.5 Logistic-center missions (FBO queries)
- 7.6 Regular routes — weekly recurring
- 7.7 Expiration, decline, and penalties
- 7.8 Skill requirements for missions
- 7.9 Cargo categories (14 types)
- 7.10 Concurrent mission caps
- 7.11 TL;DR

BOOST LEVEL	SIZE 0	SIZE 1	SIZE 2	SIZE 3	SIZE 4	SIZE 5
1	+10 %	+8 %	+6 %	+4 %	+3 %	+2 %
2	+20 %	+16 %	+12 %	+8 %	+6 %	+4 %
3	<b>+30 %</b>	+24 %	+18 %	+12 %	+9 %	+6 %

Small airports get the most aggressive boosts.

### 7.3.7 Last-minute bonus

When a mission is within 2 days of expiry:

Up to **+15 %** bonus (reaches max ~24 h after the ramp begins)

Requires the **Last-Minute Jobs** skill to accept these missions.

## 7.4 How freelance charters are priced

### 7.4.1 Base pay

A freelance charter is quoted like a private-jet contract: the customer pays a **dispatch fee** plus an **hourly rate** for the planned flight time. Two factors set what you actually earn:

- **Aircraft cruise speed** — the planned time is estimated from your aircraft's published cruise speed, with a comfortable margin to absorb taxi, climb and descent. Faster jets bill fewer hours; slower aircraft compensate via the hourly rate.
- **Company reputation** — your hourly rate scales with your reputation. A well-regarded operator commands a noticeably higher rate than a new company. Reputation is the single biggest lever on freelance income.

A small fixed bonus is added for fighter aircraft, reflecting their specialised nature.

**Fare boosts on top of the base quote:**

- A multi-leg route that **passes through your home base** roughly **doubles** the pay — the engine intentionally rewards using your base airport as a hub.
- A charter tied to an **incident at an unknown location** carries a meaningful premium for the risk.

**No penalty.** Freelance charters never charge you a penalty if you cancel or fail. Worst case, the contract simply expires.

### 7.4.2 Reputation and XP from a freelance charter

Each freelance charter pays out **reputation** based on the route — a base reward plus a small bump per airport visited along the way. **Pilot certification roughly doubles** both reputation and XP gains.

XP scales with the **distance flown**, with the same certification bonus.

## CH 07

## MISSIONS

## Freelance &amp; Missions

- 7.1 The 21 mission types
- 7.2 Two completely different pay engines
- 7.3 The grind pay formula — block by block
- 7.4 How freelance charters are priced
- 7.5 Logistic-center missions (FBO queries)
- 7.6 Regular routes — weekly recurring
- 7.7 Expiration, decline, and penalties
- 7.8 Skill requirements for missions
- 7.9 Cargo categories (14 types)
- 7.10 Concurrent mission caps
- 7.11 TL;DR

### 7.4.3 Hard cap

**Maximum 5 concurrent freelance charters** per company. A 6th is refused.

## 7.5 Logistic-center missions (FBO queries)

Missions generated from your FBO's logistic queries behave as standard grind missions with these specifics:

- Range comes from your configured query parameters.
- **Airport boost is baked in** at generation (not added when you accept).
- **Company pay bonus is NOT applied** to logistic-center missions.
- Passenger seat split: pure-class if fewer than 14 passengers (all economy, or all business, or all first); mixed split otherwise.

## 7.6 Regular routes — weekly recurring

### The calendar

- Routes are rebuilt every **Sunday at 00:00 UTC**.
- One mission is spawned per route flight.
- **Mission expires:** 7 days after creation.

### Reliability mechanic

EVENT	CHANGE TO RELIABILITY
New route	0.50 (default)
Completed on time	+0.05
Skipped	-0.05
Completed late	-0.01

### How a route is priced

A regular route is paid like a scheduled airline service: each filled **economy, business or first-class seat** earns its own ticket price, plus a per-pound rate for cargo on board. **You set the prices yourself when you create the route**, and the system tracks how many of those seats are actually filled at departure time.

Skipping or cancelling a flight on a regular route triggers a fixed penalty proportional to the route's expected revenue.

Fill rates fluctuate with **time of day** and **day of week** — peak hours and weekday demand patterns mean a 7 am Monday departure usually books closer to capacity than a 2 am Sunday one.

## CH 07

## MISSIONS

## Freelance &amp; Missions

- 7.1 The 21 mission types
- 7.2 Two completely different pay engines
- 7.3 The grind pay formula — block by block
- 7.4 How freelance charters are priced
- 7.5 Logistic-center missions (FBO queries)
- 7.6 Regular routes — weekly recurring
- 7.7 Expiration, decline, and penalties
- 7.8 Skill requirements for missions
- 7.9 Cargo categories (14 types)
- 7.10 Concurrent mission caps
- 7.11 TL;DR

## Slot fees (at arrival and departure)

RULE	FEE
Airport Size 0 or 1	Free
You own the airport	Free
All other cases	$\max(50 \text{ Cr}, \text{route max pay} \times 2.5 \%)$ per hour slot

## Route rank levels

XP EARNED	LEVEL
0	0
200	1
500	2
1 000	3
2 000	4

There is no hard cap on how many regular routes a company can hold.

## 7.7 Expiration, decline, and penalties

## Unclaimed missions (on the board)

- About **3 %** of generated missions are "last-minute" (100 min to ~2 days to expiry).
- Otherwise, normal expiry: 2 days to several days depending on type.
- Expired unclaimed missions are deleted automatically every 5 minutes (up to 500 at a time).

## After you accept

MOMENT	PENALTY
First 15 min after acceptance	<b>No penalty</b>
Before expiration	Penalty × elapsed proportion
Past expiration	Full penalty (capped at 95 % of pay)

## Daily auto-decline

Missions that are more than **15 days past their expiry date** and not yet paid are automatically declined at **05:45 UTC** each day, with the computed penalty charged.

## CH 07

## MISSIONS

## Freelance &amp; Missions

- 7.1 The 21 mission types
- 7.2 Two completely different pay engines
- 7.3 The grind pay formula — block by block
- 7.4 How freelance charters are priced
- 7.5 Logistic-center missions (FBO queries)
- 7.6 Regular routes — weekly recurring
- 7.7 Expiration, decline, and penalties
- 7.8 Skill requirements for missions
- 7.9 Cargo categories (14 types)
- 7.10 Concurrent mission caps
- 7.11 TL;DR

## Voluntary decline

IMPACT	VALUE
Reputation	–0.1 % per decline (if a penalty applies)
Cash	Penalty charged (capped at 95 % of pay)

## 7.8 Skill requirements for missions

SKILL	REQUIREMENT
Passengers Licence	Required to accept PAX charters (except tours and freelance)
Last-Minute Jobs	Required to accept last-minute missions
Medical Transport	Required for medical missions
Dangerous Goods	Required for dangerous-goods missions

**No skill modifies mission count, generation range, or reward.** All revenue boosts come from: world pay bonus, airport boosts, company pay bonus, and (for freelance) reputation.

## 7.9 Cargo categories (14 types)

CATEGORY	COMMON USE
Standard goods	Default cargo
Medical	Medical missions
Time-constrained	Perishables
Dangerous goods	Hazmat missions
Quest items	Story missions
Containers	Fuel containers (100LL and Jet-A — see the Fuel chapter)
Special	Events, tours
Fragile	Max G-force tracked
Secret	Undercover missions
Racing	Race missions
Scheduled route	Regular route cargo

CH 07

MISSIONS

Freelance & Missions

- 7.1 The 21 mission types
- 7.2 Two completely different pay engines
- 7.3 The grind pay formula — block by block
- 7.4 How freelance charters are priced
- 7.5 Logistic-center missions (FBO queries)
- 7.6 Regular routes — weekly recurring
- 7.7 Expiration, decline, and penalties
- 7.8 Skill requirements for missions
- 7.9 Cargo categories (14 types)
- 7.10 Concurrent mission caps
- 7.11 TL;DR

CATEGORY	COMMON USE
Rescue	Rescue operations
Undercover	Hidden-location missions
Glider	Glider missions

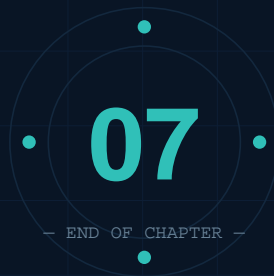
**Food Rations** are an industry merchandise type, not a cargo type — they are used by factory workers and weigh 3 lbs per unit.

## 7.10 Concurrent mission caps

SCOPE	CAP
Freelance charters	5 (hard limit)
Total missions (solo company)	100 + Company Level × 5
Total missions (VA)	Members × 50

## 7.11 TL;DR

- **Two pay engines:** Grind (per-lb-per-NM) and Freelance (per-hour with reputation multiplier).
- **Short legs pay far more:** legs under 75 NM → **×7 bonus factor** on top of base rate.
- **PAX class matters significantly:** Business = ×2.0 pay, First = ×3.0 pay.
- **Logistic-center boost** favors small airports (up to +30 % at Size 0, Level 3 boost).
- **Freelance cap = 5 concurrent** charters.
- **Default mission cap = 100 + Level × 5 total.**
- **Auto-decline** at 05:45 UTC for missions more than 15 days past expiry.

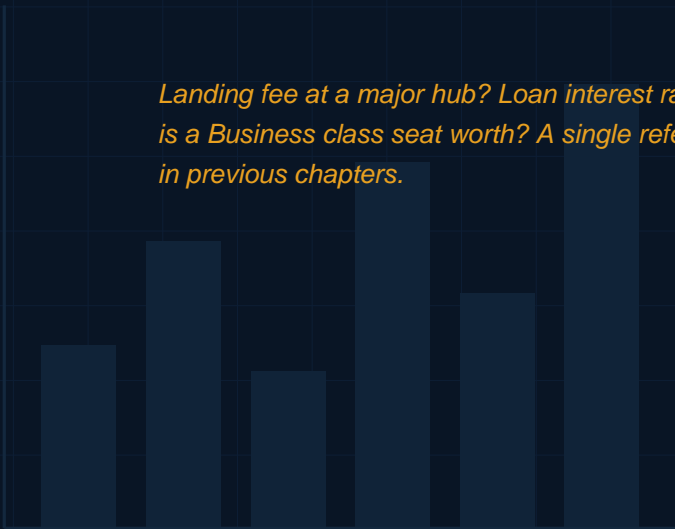


# 08

CHAPTER 08 · ECONOMY

## Economy & Global Constants

*Landing fee at a major hub? Loan interest rates? When does my company auto-pause? How much is a Business class seat worth? A single reference chapter for every recurring number not covered in previous chapters.*



CH 08

ECONOMY

Economy & Global Constants

- 8.1 Landing & parking fees
- 8.2 Bank loans
- 8.3 Weekly management fee — Challenge Mode only
- 8.4 Company auto-pause
- 8.5 Employee salaries
- 8.6 Account codes — your financial statements
- 8.7 Company level
- 8.8 Passenger class economics
- 8.9 Rescue mission ranges
- 8.10 Starting bonus — Advanced Management unlock
- 8.11 Aircraft wear constants
- 8.12 Flight duty caps
- 8.13 Leasing vs. owning
- 8.14 Industry fuel supply
- 8.15 Airport ownership
- 8.16 Internal balance constants (for reference)
- 8.17 TL;DR



FIG 8.01 — Income statement: revenue, expenses, net result

5%

LOAN RATE FLOOR

7Cr/klb

LANDING FEE

7d

AUTO-PAUSE

05:00

SALARIES UTC

## 8.1 Landing & parking fees

### Landing fee

**7 Cr × aircraft MTOW ÷ 1 000 lbs**

- Flat constant — **no airport-size modifier**, no time-of-day, no season.
- Charged when a flight is registered.
- Airport owners can set a **lower** custom rate — never higher than the default.
- **No takeoff fee**, no ATC fee, no handling fee.

**Example:** a 500 000 lbs widebody landing anywhere = **3 500 Cr** landing fee.

### Parking fee (hourly)

Same formula as the FBO & Hangar chapter — reproduced here for convenience:

AIRPORT SIZE	FIXED / H	PER 1 000 LBS ABOVE 200 K LBS / H
0	4.37 Cr	0.06
1	5.25 Cr	0.07
2	6.12 Cr	0.08

CH 08

ECONOMY

Economy & Global Constants

- 8.1 Landing & parking fees
- 8.2 Bank loans
- 8.3 Weekly management fee — Challenge Mode only
- 8.4 Company auto-pause
- 8.5 Employee salaries
- 8.6 Account codes — your financial statements
- 8.7 Company level
- 8.8 Passenger class economics
- 8.9 Rescue mission ranges
- 8.10 Starting bonus — Advanced Management unlock
- 8.11 Aircraft wear constants
- 8.12 Flight duty caps
- 8.13 Leasing vs. owning
- 8.14 Industry fuel supply
- 8.15 Airport ownership
- 8.16 Internal balance constants (for reference)
- 8.17 TL;DR

AIRPORT SIZE	FIXED / H	PER 1 000 LBS ABOVE 200 K LBS / H
3	7.00 Cr	0.10
4	7.87 Cr	0.11
5	8.75 Cr	0.12

## 8.2 Bank loans

**Access requirement:** you need the Loan Interest Reduction skill, which requires the Bank Loans Agreement skill first.

### How much you can borrow

$$\text{Max loan} = \min(10\,000\,000 \text{ Cr} ; \text{share capital} \times 3 + \text{company value})$$

Loan capacity is also multiplied by your current reputation.

### Difficulty modifier on capacity:

DIFFICULTY	CAPACITY MULTIPLIER
Easy	×1.5
Normal	×1.0
Hard	×0.7

### Annual interest rate

COMPANY CAPACITY BRACKET	ANNUAL RATE
Above 20 M Cr	6 %
Above 10 M Cr	7 %
Above 3 M Cr	8 %
Above 1 M Cr	10 %
1 M Cr or below	12 %

Your interest rate is then adjusted:

- Divided by  $(1 + \text{reputation} \div 10)$  → higher reputation, lower rate.
- Reduced by  $\text{Loan Interest Reduction level} \times 1 \%$ .
- **Floor: 5 %** — rate cannot go below this regardless of bonuses.

### Loan terms offered

- **Durations:** 12 / 18 / 24 / 48 months.

CH 08

ECONOMY

Economy & Global Constants

- 8.1 Landing & parking fees
- 8.2 Bank loans
- 8.3 Weekly management fee — Challenge Mode only
- 8.4 Company auto-pause
- 8.5 Employee salaries
- 8.6 Account codes — your financial statements
- 8.7 Company level
- 8.8 Passenger class economics
- 8.9 Rescue mission ranges
- 8.10 Starting bonus — Advanced Management unlock
- 8.11 Aircraft wear constants
- 8.12 Flight duty caps
- 8.13 Leasing vs. owning
- 8.14 Industry fuel supply
- 8.15 Airport ownership
- 8.16 Internal balance constants (for reference)
- 8.17 TL;DR

- Rate multipliers by duration:  $\times 1.0 / \times 1.5 / \times 1.9 / \times 2.0$ .
- Up to 16 loan options presented (4 amounts  $\times$  4 durations).

Repayment

- Deducted automatically every 7 days during the daily finance check at 04:45 UTC.
- Early repayment penalty: 10 % of the remaining principal.

8.3 Weekly management fee — Challenge Mode only

■ This fee (charged every Wednesday at 06:00 UTC) applies **only** to companies in **Challenge Mode**. Standard career companies **never** pay this fee.

Fleet portion (if you own or rent more than 5 aircraft)

The fee increases with fleet size, up to a cap:

FLEET SIZE	FEE RATE PER AIRCRAFT
6 aircraft	~0.02 % of base price
20 aircraft	~0.29 % of base price
35+ aircraft	~0.585 % of base price (cap)

FBO portion (if you own more than 3 FBOs)

A surcharge is added on top of your regular FBO weekly fees based on how many FBOs you own beyond 3.

8.4 Company auto-pause

**Trigger:** no login for 7 consecutive days.

VAs are excluded. Already-paused or deleted companies are excluded.

What changes when paused

SYSTEM	BEHAVIOUR WHEN PAUSED
Loan deductions	Skipped
Salaries	Skipped
Management fee (Challenge Mode)	Skipped
Your FBO visibility to others	Hidden

## CH 08

## ECONOMY

Economy &  
Global Constants

- 8.1 Landing & parking fees
- 8.2 Bank loans
- 8.3 Weekly management fee — Challenge Mode only
- 8.4 Company auto-pause
- 8.5 Employee salaries
- 8.6 Account codes — your financial statements
- 8.7 Company level
- 8.8 Passenger class economics
- 8.9 Rescue mission ranges
- 8.10 Starting bonus — Advanced Management unlock
- 8.11 Aircraft wear constants
- 8.12 Flight duty caps
- 8.13 Leasing vs. owning
- 8.14 Industry fuel supply
- 8.15 Airport ownership
- 8.16 Internal balance constants (for reference)
- 8.17 TL;DR

## How to unpause

Simply **log back in**. The pause is lifted automatically at the next daily cycle. No manual action needed.

## 8.5 Employee salaries

Paid every day at **05:00 UTC**. A salary fires when 7 or more days have passed since the last payment.

**Eligible employees:** non-player characters, not on a freelance contract, and from a company that has been active in the past 15 days.

### Pay formula

#### Regular employees:

```
salary = max(weekly guaranteed salary × days_elapsed ÷ 7, hourly rate × hours_flown)
```

The guaranteed minimum is prorated if fewer than 7 days have elapsed.

#### Freelance employees:

```
salary = max(3 hours of wages, hours_flown × hourly rate)
```

Guaranteed minimum = 3 hours of wages per payment (not a weekly prorated amount).

## 8.6 Account codes — your financial statements

Understanding these codes helps you read your company's income statement and balance sheet.

### Revenue

ACCOUNT	WHAT IT TRACKS
PAX revenue	Passenger transport earnings
Cargo revenue	Cargo transport earnings
Rental income	Renting your aircraft to others
FBO services	Workshop markup earned from other players
FBO fuel sales	Fuel resold at your FBO
Scenario revenue	Campaign/story mission rewards
VA revenue	Virtual Airline related income

CH 08

ECONOMY

Economy & Global Constants

- 8.1 Landing & parking fees
- 8.2 Bank loans
- 8.3 Weekly management fee — Challenge Mode only
- 8.4 Company auto-pause
- 8.5 Employee salaries
- 8.6 Account codes — your financial statements
- 8.7 Company level
- 8.8 Passenger class economics
- 8.9 Rescue mission ranges
- 8.10 Starting bonus — Advanced Management unlock
- 8.11 Aircraft wear constants
- 8.12 Flight duty caps
- 8.13 Leasing vs. owning
- 8.14 Industry fuel supply
- 8.15 Airport ownership
- 8.16 Internal balance constants (for reference)
- 8.17 TL;DR

ACCOUNT	WHAT IT TRACKS
Financial adjustments	Refunds and asset adjustments
Industry revenue	Factory production sales
Airport ownership	Landing/parking fee income as airport owner

Expenses

ACCOUNT	WHAT IT TRACKS
Fuel costs	Fuel burned on your flights
Staff salaries	Regular employee wages
Freelance salaries	Freelance employee wages
Outsourcing	Costs of outsourced jobs
Landing & parking	Fees you pay at other airports
Maintenance	Aircraft maintenance and inspections
Rental costs	Cost of renting aircraft from the market
Financial costs	Loan interest + weekly management fees
Training	Employee training expenses
FBO ownership	Weekly FBO ownership fees
Penalties	Mission penalty charges
Cargo storage	Hangar storage fees
Aircraft ownership	Weekly aircraft ownership fees
Industry expenses	Factory operating costs

**FBO fuel stock is an asset, not an operating expense.** When you buy fuel for your FBO tank, that money becomes the value of your fuel inventory. It is shown on the balance sheet under assets — not as a cost in your income statement.



## 8.7 Company level

- **XP to level up:**  $level1 \times 1\,000$  (linear — not exponential).
- **On level up:** +2 skill points granted.

Level-gated features

CH 08

ECONOMY

Economy & Global Constants

- 8.1 Landing & parking fees
- 8.2 Bank loans
- 8.3 Weekly management fee — Challenge Mode only
- 8.4 Company auto-pause
- 8.5 Employee salaries
- 8.6 Account codes — your financial statements
- 8.7 Company level
- 8.8 Passenger class economics
- 8.9 Rescue mission ranges
- 8.10 Starting bonus — Advanced Management unlock
- 8.11 Aircraft wear constants
- 8.12 Flight duty caps
- 8.13 Leasing vs. owning
- 8.14 Industry fuel supply
- 8.15 Airport ownership
- 8.16 Internal balance constants (for reference)
- 8.17 TL;DR

FEATURE	FORMULA
Max simultaneous missions	100 + level × 5
Max pilots (standard company)	2 + 2 × level × reputation
Max pilots (VA)	20 + 5 × level × reputation
Max airport ownerships	3 + level
Max AI routes	20 + level
Max basecamps	level × 2
Max factories	Base count + level

## 8.8 Passenger class economics

CLASS	FACTOR (UNDER 130 SEATS)	FACTOR (130+ SEATS)
Economy	1.0	1.0
Business	1.3	2.0
First	1.5	3.0

Standard passenger weight: **190 lbs.** Seat weight: **63 lbs.**

## 8.9 Rescue mission ranges

DETAIL	VALUE
Maximum search range	100 NM
Range tiers available	5 / 10 / 25 / 100 NM
Locations per tier	10

## 8.10 Starting bonus — Advanced Management unlock

When you upgrade from Freelance (Onboarding) mode to Advanced Career:

DIFFICULTY	WORLD TYPE	STARTING BONUS
Easy	Any	470 000 Cr

## CH 08

## ECONOMY

Economy &  
Global Constants

- 8.1 Landing & parking fees
- 8.2 Bank loans
- 8.3 Weekly management fee — Challenge Mode only
- 8.4 Company auto-pause
- 8.5 Employee salaries
- 8.6 Account codes — your financial statements
- 8.7 Company level
- 8.8 Passenger class economics
- 8.9 Rescue mission ranges
- 8.10 Starting bonus — Advanced Management unlock
- 8.11 Aircraft wear constants
- 8.12 Flight duty caps
- 8.13 Leasing vs. owning
- 8.14 Industry fuel supply
- 8.15 Airport ownership
- 8.16 Internal balance constants (for reference)
- 8.17 TL;DR

DIFFICULTY	WORLD TYPE	STARTING BONUS
Normal	Any	170 000 Cr
Hard	Survival world	10 000 Cr
Hard	Standard world	70 000 Cr

Your existing freelance cash is also **doubled** at unlock.

There is no creation fee when starting a company from scratch.

## 8.11 Aircraft wear constants

CONSTANT	VALUE
Condition loss per 100 flight hours	-12 %

**No idle condition decay.** Your aircraft's condition only drops from flight hours and specific events — not from sitting on the ramp.

## 8.12 Flight duty caps

LIMIT	VALUE
Maximum flight duty period	<b>14 hours</b>
Maximum single flight duration	<b>14 hours</b>
Mandatory rest after a duty period	<b>8 hours</b>
Relocation base time	<b>48 hours (2 days)</b>

## 8.13 Leasing vs. owning

DETAIL	VALUE
Weekly leasing cost	Weekly ownership fee × 1.2 ( <b>+20 % premium</b> )
Owned aircraft efficiency advantage	<b>2 % cheaper per hour vs. rented</b>

## CH 08

## ECONOMY

## Economy &amp; Global Constants

- 8.1 Landing & parking fees
- 8.2 Bank loans
- 8.3 Weekly management fee — Challenge Mode only
- 8.4 Company auto-pause
- 8.5 Employee salaries
- 8.6 Account codes — your financial statements
- 8.7 Company level
- 8.8 Passenger class economics
- 8.9 Rescue mission ranges
- 8.10 Starting bonus — Advanced Management unlock
- 8.11 Aircraft wear constants
- 8.12 Flight duty caps
- 8.13 Leasing vs. owning
- 8.14 Industry fuel supply
- 8.15 Airport ownership
- 8.16 Internal balance constants (for reference)
- 8.17 TL;DR

## 8.14 Industry fuel supply

DETAIL	VALUE
Fuel per factory shipment	5 500 gallons
Free delivery range	250 NM from your FBO
Surcharge beyond 250 NM	10 Cr per NM per shipment
Auto-sell to system discount	-40 % (you receive 60 % of base price)
System supply suppression range	200 NM around a player factory

## 8.15 Airport ownership

DETAIL	VALUE
Maximum airport Size that can be owned	5
Maximum missed weekly payments	1
Advance payment required	2 weeks upfront
Free kits at acquisition	10
Maximum ownerships per company	3 + company level

## Weekly kit cost by airport Size

SIZE	KITS NEEDED PER WEEK
0	1
1	2
2	3
3	5
4	25
5	50
Basecamp	0 (free)

## Revenue per flight as airport owner

SIZE	PER HUMAN FLIGHT	PER AI FLIGHT
0	1 000 Cr	50 Cr

CH 08

ECONOMY

Economy & Global Constants

- 8.1 Landing & parking fees
- 8.2 Bank loans
- 8.3 Weekly management fee — Challenge Mode only
- 8.4 Company auto-pause
- 8.5 Employee salaries
- 8.6 Account codes — your financial statements
- 8.7 Company level
- 8.8 Passenger class economics
- 8.9 Rescue mission ranges
- 8.10 Starting bonus — Advanced Management unlock
- 8.11 Aircraft wear constants
- 8.12 Flight duty caps
- 8.13 Leasing vs. owning
- 8.14 Industry fuel supply
- 8.15 Airport ownership
- 8.16 Internal balance constants (for reference)
- 8.17 TL;DR

SIZE	PER HUMAN FLIGHT	PER AI FLIGHT
1	1 200 Cr	60 Cr
2	1 400 Cr	70 Cr
3	1 600 Cr	80 Cr
4	1 800 Cr	90 Cr
5	<b>2 000 Cr</b>	100 Cr

- Human-only world: human-flight payout is doubled.
- AI flights earn 1/20th of the human rate.

## 8.16 Internal balance constants (for reference)

CONSTANT	VALUE	PURPOSE
Standard pilot cost	80 Cr/h	Economy baseline
Repositioning pilot (no crew)	<b>120 Cr/h</b>	Rental return without assigned crew
Weekly ownership amortisation	24 weekly payments	How long a new aircraft is expected to pay itself off
Rental return missing-fuel penalty	<b>×2.0</b> on missing gallons' value	
Lease return condition shortfall penalty	<b>×1.25</b> on repair cost delta	

## 8.17 TL;DR

- **Landing fee:** MTOW × 0.007 Cr/lb. No airport-size variation.
- **Loans:** 5 % floor, 6–12 % ladder by capacity, 10 % early-repayment penalty.
- **Weekly management fee: Challenge Mode only** — standard companies never pay it.
- **Auto-pause:** after **7 days** of inactivity. Unpause by simply logging in.
- **Salaries:** paid every 7 days at 05:00 UTC; higher of guaranteed minimum or hours × rate.
- **Airport ownership** scales steeply with size — Size 5 costs 50 kits/week but earns 2 000 Cr per human flight.
- **Starting bonus** at Advanced Management unlock: 470 k Cr (Easy) → 10 k Cr (Hard Survival).

# 09

CHAPTER 09 · FLEET

## Fleet & Aircraft

*How much is my 10-year-old Caravan worth today? What's the penalty for returning a rental with half-empty tanks? How does aircraft pricing actually work? Everything about aircraft lifecycle, pricing, rental, and leasing.*

CH 09

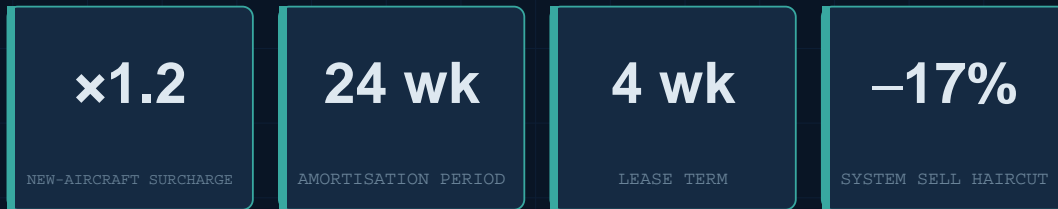
FLEET

Fleet & Aircraft

- 9.1 Three ways to have an aircraft
- 9.2 How aircraft are priced
- 9.3 Market value and how it depreciates
- 9.4 Used aircraft from the market
- 9.5 Rental mechanics
- 9.6 Lease mechanics
- 9.7 Test-flight onboarding (player add-on certification)
- 9.8 Aircraft cargo capacity
- 9.9 Parking — no condition impact
- 9.10 Reference constants
- 9.11 TL;DR



FIG 9.01 – Three ways to operate an aircraft, side-by-side comparison



## 9.1 Three ways to have an aircraft

MODE	UPFRONT COST	RECURRING COST	WHEN IT ENDS	MAINTENANCE
<b>Buy new</b>	Base price $\times 1.2$	Weekly ownership fee	Never	You pay
<b>Buy used (market)</b>	Roughly market value (with small random jitter)	Weekly ownership fee	Never	You pay
<b>Rent</b>	Security bond ( $10 \times$ hourly rate)	Hourly on flight time + daily if below minimum hours	Auto-terminated (see §9.5)	You pay
<b>Lease</b>	Nothing upfront	Weekly payment = $1.2 \times$ weekly ownership fee	After 4 weeks	You pay (not included)

## 9.2 How aircraft are priced

## CH 09

## FLEET

## Fleet &amp; Aircraft

- 9.1 Three ways to have an aircraft
- 9.2 How aircraft are priced
- 9.3 Market value and how it depreciates
- 9.4 Used aircraft from the market
- 9.5 Rental mechanics
- 9.6 Lease mechanics
- 9.7 Test-flight onboarding (player add-on certification)
- 9.8 Aircraft cargo capacity
- 9.9 Parking — no condition impact
- 9.10 Reference constants
- 9.11 TL;DR

## The base price formula

The server calculates each aircraft type's price from scratch using its real performance data:

1. **Total workload** = how much the aircraft can carry at cruise speed — combining cargo capacity, seat count, and cruise speed.
2. **Hourly operating cost** = derived from workload using a smooth curve anchored between a Cessna 172 (baseline) and a B747 (high end).
3. **Weekly ownership fee** = hourly operating cost minus fuel and pilot, multiplied by expected weekly hours:

AIRCRAFT CLASS	EXPECTED HOURS PER WEEK
SEP, MEP, TurboProp, Helicopter, Glider	14 h
Jet	21 h
Heavy Jet	28 h

4. **Base price** = weekly ownership fee × 24 (amortized over 24 weeks), rounded down to nearest 100 Cr.

## New aircraft surcharge

**New aircraft price** = Base price × 1.2 (+20 % for a brand-new aircraft)

## When prices are recalculated

- After any aircraft-type update by the moderation team.
- Every Monday around 05:15 UTC as part of the weekly maintenance cycle.

## The 10 % update threshold

If a price recalculation would change an existing aircraft's value by less than **10 %**, the update is skipped. If the change is 10 % or more, existing aircraft owners receive a credit or debit for the difference, and the aircraft's "for rent" and "for sale" flags are reset.



## 9.3 Market value and how it depreciates

### How value is calculated

**Market value** = Base price – cost of all deferred repairs

"Deferred repairs" includes: airframe condition shortfall + each engine condition shortfall + overdue scheduled inspection + overdue annual checkup.

**There is no age-based depreciation.** An aircraft does not lose value just from being old. Value drops only as condition drops — age matters only because more hours mean more wear.

### Hightime impact

CH 09

FLEET

Fleet & Aircraft

- 9.1 Three ways to have an aircraft
- 9.2 How aircraft are priced
- 9.3 Market value and how it depreciates
- 9.4 Used aircraft from the market
- 9.5 Rental mechanics
- 9.6 Lease mechanics
- 9.7 Test-flight onboarding (player addon certification)
- 9.8 Aircraft cargo capacity
- 9.9 Parking — no condition impact
- 9.10 Reference constants
- 9.11 TL;DR

Once an aircraft has exceeded its "hightime" threshold (high total hours), the calculation applies an additional **-25 %** factor to the value. A well-maintained hightime aircraft is still worth roughly **92 % of base price**; a worn hightime aircraft is worth less.

**Selling to the system**

Market value × 0.83 (-17 % haircut)

**9.4 Used aircraft from the market**

When a used aircraft is generated for the market:

FIELD	RANGE
Airframe hours	0 to 1.5x hightime threshold
Engine hours	0 to just below Time Between Overhaul
Price jitter	×0.98 to ×1.08

**Time Between Overhaul defaults (before any moderation)**

CLASS	DEFAULT TBO
SEP	1 200 h
MEP	3 000 h
Helicopter	1 000 h
Jet	2 200 h
Heavy Jet	2 500 h

**Freshly spawned new aircraft**

A new aircraft has 1–5 flight hours (near zero), 100 % condition on all parts, and full performance specs.

**9.5 Rental mechanics**

**Hourly rate**

The rental rate is calculated from the aircraft's maintenance cost portion plus a margin above operating cost. There is a **floor of 50 Cr/h**.

**Security bond**

## CH 09

## FLEET

## Fleet &amp; Aircraft

- 9.1 Three ways to have an aircraft
- 9.2 How aircraft are priced
- 9.3 Market value and how it depreciates
- 9.4 Used aircraft from the market
- 9.5 Rental mechanics
- 9.6 Lease mechanics
- 9.7 Test-flight onboarding (player addon certification)
- 9.8 Aircraft cargo capacity
- 9.9 Parking — no condition impact
- 9.10 Reference constants
- 9.11 TL;DR

$$\text{Bond} = \text{hourly rate} \times 10$$

Charged when you sign the rental agreement. Returned (minus penalties) when you return the aircraft.

### Daily minimum flight hours

Rentals require a minimum number of hours flown per day:

CLASS	MIN HOURS PER DAY (REALISTIC SETTING)
SEP, MEP, TurboProp, Helicopter, Glider	1 h
Jet	2 h
Heavy Jet	4 h
Human-only world	0 h (no minimum)

Your rental intensity setting reduces this requirement:

SETTING	HOURS REQUIRED
Realistic	Full minimum
Medium	50 % of minimum
Low	25 % of minimum

If you fall short of the daily minimum, the shortfall is charged at 05:15 UTC each day.

### Auto-termination

A rental is automatically cancelled if:

- **7 days pass** without a registered flight.
- The aircraft requires mandatory maintenance.

### Rental return penalties

INFRACTION	PENALTY
Missing fuel	Missing gallons × local max fuel price × 2.0
Returned at wrong airport	Round-trip rent fee + fuel + pilot cost + <b>+10 % paperwork</b>



## 9.6 Lease mechanics

- **Term:** fixed at **4 weeks**.
- **Weekly payment:** weekly ownership fee × 1.2 (+20 % over ownership cost).
- **Maintenance:** not included — you pay separately.

## CH 09

## FLEET

## Fleet &amp; Aircraft

- 9.1 Three ways to have an aircraft
- 9.2 How aircraft are priced
- 9.3 Market value and how it depreciates
- 9.4 Used aircraft from the market
- 9.5 Rental mechanics
- 9.6 Lease mechanics
- 9.7 Test-flight onboarding (player addon certification)
- 9.8 Aircraft cargo capacity
- 9.9 Parking — no condition impact
- 9.10 Reference constants
- 9.11 TL;DR

- Payments are deducted automatically each week. On expiry the aircraft returns to its owner.
- After the lease ends, the aircraft is cleaned up automatically within 15 days.

**Early termination**

25 % of remaining weekly payments

**End-of-lease condition penalty**

If the aircraft is returned in worse condition than when you received it:

$\text{Penalty} = \text{condition shortfall} \times \text{full repair cost} \times 1.25$

Applied to both airframe and each engine.

**9.7 Test-flight onboarding (player addon certification)**

If you own a third-party aircraft addon that isn't yet in the OnAir database, you can submit it through a test-flight process.

**What your simulator provides automatically**

Cruise speed, stall speeds, empty weight, max takeoff weight, fuel capacity, fuel type, engine type, cruise fuel flow, seat count, max payload, display name, and a unique addon hash.

**What you can optionally supply**

FIELD	RULE
Addon download URL	Must be a valid <code>http(s)://</code> URL or the word "default"
Data sheet URL	Optional
Proposed seat count	Used if you supply a number greater than 0
Proposed max payload	Used if you supply a number greater than 0

**Test-flight aircraft conditions**

The test aircraft is generated with 1–5 hours on the airframe, 100 % condition everywhere, and 50 % fuel.

There is no minimum distance or duration requirement — the flight just needs to register normally.

**After the test flight**

Once you complete the test flight, your addon enters the moderation queue. A moderator reviews it and either approves it, marks it banned (with a reason), or asks you to redo the test

## CH 09

## FLEET

## Fleet &amp; Aircraft

- 9.1 Three ways to have an aircraft
- 9.2 How aircraft are priced
- 9.3 Market value and how it depreciates
- 9.4 Used aircraft from the market
- 9.5 Rental mechanics
- 9.6 Lease mechanics
- 9.7 Test-flight onboarding (player add-on certification)
- 9.8 Aircraft cargo capacity
- 9.9 Parking — no condition impact
- 9.10 Reference constants
- 9.11 TL;DR

flight.

## 9.8 Aircraft cargo capacity

For every aircraft type, the server calculates how much payload is realistically available:

Maximum payload = aircraft total capacity minus half-fuel weight, minus standard pilot weight, minus copilot weight if applicable.

Fighters have slightly different rules — their cargo limit is calculated directly from the max takeoff weight.

### Short-range aircraft

Short-range aircraft (under ~500 NM) are limited to using only **60 %** of their theoretical maximum payload. This scales up toward ~97 % for longer-range aircraft. It is a balance design decision.

## 9.9 Parking — no condition impact

Your aircraft's condition does not decay while parked. Indoor hangar, outdoor tie-down, or apron — it makes no difference.

Condition only changes from flight hours and specific in-flight events. A grounded aircraft stays at exactly the same condition indefinitely.

## 9.10 Reference constants

CONSTANT	VALUE
Standard passenger weight	190 lbs
Standard seat weight	63 lbs
New aircraft price multiplier	×1.2
Weekly ownership amortisation	24 payments
System sell haircut	−17 %
Rental bond	10 × hourly rate
Rental floor rate	50 Cr/h
Owned vs rented cost advantage	2 % per hour

## CH 09

## FLEET

## Fleet &amp; Aircraft

- 9.1 Three ways to have an aircraft
- 9.2 How aircraft are priced
- 9.3 Market value and how it depreciates
- 9.4 Used aircraft from the market
- 9.5 Rental mechanics
- 9.6 Lease mechanics
- 9.7 Test-flight onboarding (player add-on certification)
- 9.8 Aircraft cargo capacity
- 9.9 Parking — no condition impact
- 9.10 Reference constants
- 9.11 TL;DR

CONSTANT	VALUE
Rental missing-fuel penalty	×2.0 on gallons' value
Lease weekly premium	×1.2 over ownership
Lease early termination penalty	25 % of remaining payments
Lease condition shortfall multiplier	×1.25

## 9.11 TL;DR

- **New aircraft = Base price × 1.2.** Used aircraft start lower depending on condition and hours.
- **No age-based depreciation** — value = base price minus accumulated repair backlog.
- **Hightime airframe** applies a –25 % factor to the pricing calculation.
- **Rental bond = 10 × hourly rate.** Return with missing fuel → **×2.0 penalty** on the missing gallons' value.
- **Lease = 4 weeks, 1.2 × weekly ownership.** Early termination = **25 %** of remaining payments.
- **No condition penalty** for parking — not indoors, not outdoors, not at any airport.
- Test-flight onboarding lets you submit add-on aircraft into the moderation queue without any minimum flight requirement.

09

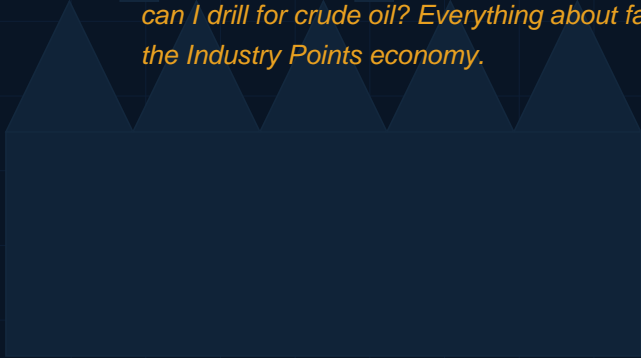
— END OF CHAPTER —

# 10

CHAPTER 10 · INDUSTRY

## Industries

*How do I turn an airport into a production hub? Why is my hunting camp underperforming? When can I drill for crude oil? Everything about factories, machines, production, supply & demand, and the Industry Points economy.*



## CH 10

## INDUSTRY

## Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

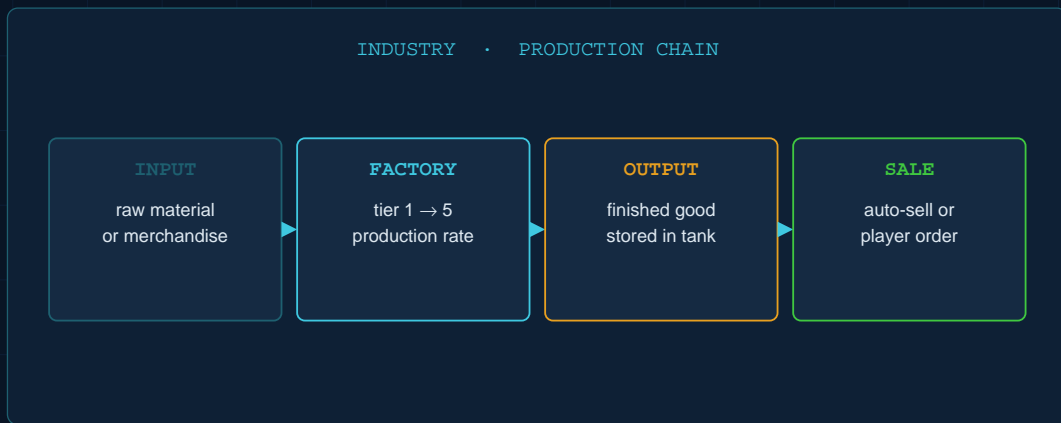


FIG 10.01 – The industrial production chain at a glance

## 10.1 What industries are

OnAir Industries is a **production sub-game** layered on top of running an airline. You build a **factory** at an airport, place **machines** on a grid, connect input and output storage, hire **work teams**, and run **recipes**. What your factory produces can go to:

- Your own storage
- Your FBO's fuel tanks
- The **Trading Hall** (global marketplace)
- Other factories via truck transport
- Contracts signed against existing demand

Two separate economies run in parallel:

- **Credits (Cr.)** — the main game currency.
- **Industry Points (IP)** — a soft currency earned and spent only inside the industry system. No cash equivalent, no accounting line.

### The airport ownership connection

The most important link between industries and the rest of the game: **Airport Ownership Kits** can only be produced by factories. You receive 10 free kits when you acquire an airport, but every weekly maintenance payment requires more — and only factories can make them. See the Economy chapter for airport ownership costs.

## 10.2 Building a factory

### What unlocks factories

No skill tree investment required. Access is based purely on your **company level**.

- Maximum factories per company: **20 + company level**.
- Maximum factories per airport: **equal to the airport's Size** (Size 1 = 1 factory, Size 5 = 5 factories). Basecamps allow up to 5.

## CH 10

## INDUSTRY

## Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

- You cannot build at someone else's basecamp.

**Cost**

**Zero credits to create an empty factory.** All costs come as you build, paid in IP and materials per machine and storage container.

**Factory tiers and grid size**

The tier determines how large your production floor is:

TIER	GRID SIZE	UPGRADE COST	WEEKLY MAINTENANCE
1	12 × 6 tiles	—	Free
2	13 × 7 tiles	<b>10 Factory Extension Kits</b>	1 kit / week
3	14 × 8 tiles	<b>35 kits</b>	2 kits / week
4	15 × 9 tiles	<b>100 kits</b>	<b>3 kits / week</b>

**Tier 4 is the maximum.** A Tier 5 tier does not exist.

Tier upgrades require **Factory Extension Kits** — a merchandise item that your own factories can produce (see §10.4). If you run out of kits, your Tier 2+ factory is frozen and all production stops.

**Surface type restrictions**

Each machine type requires a specific terrain: land, water, or forest. If your airport's surface doesn't match a machine's requirement, that machine is not available in the build menu.

**10.3 Five factory categories**

CATEGORY	TERRAIN	WHAT IT SPECIALIZES IN
<b>Wilderness</b>	Forest	Hunting, fishing, fish processing — raw nature outputs
<b>Mining</b>	Land	Ore extraction (results depend on location — see §10.10)
<b>Food</b>	Land	Meat, fish, canning, mixed food, food rations
<b>Manufactured Goods</b>	Land	Plastics, electronics, batteries, kits

CH 10

INDUSTRY

Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

CATEGORY	TERRAIN	WHAT IT SPECIALIZES IN
<b>Dispatch Hub</b>	Land	<b>Special</b> — wider input/output capacity, no production, pure logistics throughput. No tier upgrades, no worker teams.

The **Dispatch Hub** is the warehouse pattern: route large volumes of goods through a central point. Use it to consolidate production from multiple remote factories before sending to the Trading Hall or other destinations.

## 10.4 The 28 machine types

MACHINE	CATEGORY	NOTES
Hunting Camp	Wilderness	Output depends on how remote the location is (see §10.10)
Large Hunting Camp	Wilderness	Higher output, same location rules
Fishing Camp	Wilderness	Location-sensitive
Logging Camp	Wilderness	Forest only — produces logs
Meat Smoker	Food	Raw meat → smoked meat
Tannery	Food	Fur → leather / pelt
Fish Smoker	Food	Fish → smoked fish
Fish Oil Extractor	Food	Fish → fish oil
Food Mixer	Food	Ingredients → mixed food / rations
Canning Platform	Food	Preserved / canned outputs
Mining Facility	Mining	Location-sensitive (ore deposits)
Small Mining Facility	Mining	Lower output, easier to start
Oil Well	Mining	<b>Restricted to 18 geographic zones only</b> (see §10.10)
Small Oil Well	Mining	Same zone restriction
Sawmill	Manufactured Goods	Logs → lumber
Ore Refinery	Manufactured Goods	Ore → bars / plates
Blast Furnace	Manufactured Goods	Iron ore → iron bars

CH 10

INDUSTRY

Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

MACHINE	CATEGORY	NOTES
Oil Refinery	Manufactured Goods	Crude oil → 100LL / Jet-A / asphalt
Metal Cutting Machinery	Manufactured Goods	Metal plates → parts
Electronics Facility	Manufactured Goods	Electronic components
Batteries Facility	Manufactured Goods	Lithium parts → batteries
Optics Facility	Manufactured Goods	Glass → optical components
Gear Facility	Manufactured Goods	Hunting / mining / fishing / oil-well gear
Training Center	Manufactured Goods	Trainers + training gear for worker upgrades
Travel Tokens Facility	Manufactured Goods	Crew transport currency
<b>Factory Extension Facility</b>	Manufactured Goods	Produces the kits needed to upgrade and maintain Tier 2+ factories
<b>Airport Ownership Kit Facility</b>	Manufactured Goods	Produces the kits required for airport ownership

## 10.5 Six ways production can leave your factory

When a container is an output container, you choose where its goods go:

MODE	WHAT HAPPENS	YOU CONFIGURE
<b>Storage</b>	Goods stay in the container. Production stalls when it's full.	Nothing — goods wait
<b>Transport</b>	Auto-sends a truck when the container reaches a threshold.	Threshold + destination airport
<b>Trading Hall</b>	Listed on the global market at your set price. Can auto-sell to the system at 60 % of base price.	Price + auto-sell toggle
<b>Internal Transport</b>	Routes goods to another factory you own.	Destination factory
<b>FBO Refueling</b>	Pipes fuel directly into one of your FBO tanks.	Target FBO
<b>Local Dealer</b>	Publishes fuel into the airport's dealer supply at your price.	Price per gallon

## CH 10

## INDUSTRY

## Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

Changing a container's merchandise type at any time moves the existing stock to your goods inventory — nothing is destroyed.

## Container creation cost

CONTAINER LEVEL	IP COST
Standard	Free
Large container	70 IP

Deleting a container refunds its IP cost.

## 10.6 The production cycle

### When your factory ticks

The server processes factories every **3 minutes**. A factory gets a processing tick if:

- A machine just finished construction or production, **or**
- It has been more than **6 hours** since the last tick.

Up to 10 ticks happen per factory per processing pass.

### When a machine starts producing

A machine starts a new production cycle when all four conditions are met:

1. At least one work team is **fed** (food rations distributed today).
2. Work team **efficiency is above 20 %** (workers are not exhausted).
3. **Input materials are available** in the connected input containers.
4. **Enough Industry Points** are available if the recipe costs IP.

### How efficiency affects production time

If your work teams are worn down, production takes longer:

WORK TEAM EFFICIENCY	PRODUCTION TIME MULTIPLIER
80 % or above	×1.0 (normal speed)
60 %	×1.5
40 %	×2.0
20 %	×2.5
0 %	×3.0 (3× as slow)

Keeping your work teams well-rested and fed is essential for efficient production.

### What happens when a cycle completes

## CH 10

## INDUSTRY

## Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

- Output merchandise is added to the connected output containers.
- Industry Points are credited if the recipe generates them.
- Each work team's efficiency drops slightly based on how long the cycle took.

## 10.7 Work teams and food rations

A "work team" is one staffing slot on a machine. Each machine type has specific required team types (hunters, miners, fishermen, builders, etc.).

### Eight worker types

Worker · Hunter · Builder · Foreman · Trainer · Lumberjack · Fisherman · Miner

### The daily food ration cycle

Every day, each work team consumes **food rations** equal to the team size. If there aren't enough rations at the airport:

- The team is not fed → production **halts** for that team's machines.
- The client alerts you when you have **less than 3 days** of rations remaining.

**Food rations are produced by your own factories** (via the Food Mixer or Canning Platform) or can be purchased as cargo from the market.

### Efficiency vs. being fed — two different states

STATE	WHAT IT AFFECTS
<b>Fed / Not fed</b>	Fed → can produce. Not fed → halt.
<b>Fatigue (0–100 %)</b>	High → production is slower. 100% → production is 3x slower.

A work team can be fed but exhausted (produces slowly), or rested but starving (produces nothing).

### Replacing tired work teams

When a team's efficiency drops below ~60 %, the client alerts you. You can replace them with fresh workers drawn from the airport's worker supply. If none are available locally, the system can arrange a bus or boat transfer from a nearby airport — costed in Credits and IP.

The "Bulk Relieve" feature lets you replace all teams below a threshold at once.

## 10.8 Industry Points — the soft currency

## CH 10

## INDUSTRY

## Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

ACTION	EFFECT ON IP
Recipe that generates IP (on cycle complete)	<b>+IP</b>
Recipe that costs IP (on cycle start)	<b>-IP</b>
Creating a large container	<b>-70 IP</b>
Worker bus/boat transfer	-IP (varies by distance)
Deleting a container	<b>+IP refund</b>
Deleting a factory	<b>+IP refund</b> for all machines and containers

IP is shown in the interface as a colored pill — orange when positive, red when negative.

IP is **not** tracked in your financial accounts. It does not appear anywhere on your income statement or balance sheet. It is exclusively an industry resource.

## 10.9 Trading Hall — market, supply, and contracts

### System supplies

The server automatically generates supply listings on the Trading Hall to ensure goods are available before players have factories. Key behaviors:

- System supplies last 7 to 22 days.
- Price varies  $\pm 30\%$  from the base price for each merchandise type.
- If you have a player factory selling the same merchandise within **200 NM** of a system supply, the system supply is automatically disabled in that area. **The system gets out of your way when you set up shop.**
- Some common goods have unlimited supply available at any airport of sufficient size at base price.

### Demand listings (buy orders)

Both the system and other players can post demand listings. Player demands are paid upfront at creation; the system refunds any unfilled portion if cancelled.

### Contracts

You can sign a contract against an existing demand listing. Rules:

RULE	VALUE
Contract duration	<b>7 days</b> from signing
Auto-fulfillment	When matching merchandise arrives at the demand airport, stock transfers and Credits are credited automatically
Self-signing	<b>Not allowed</b> — you cannot fulfill your own demand

CH 10

INDUSTRY

Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

**Auto-sell to the system**

If you enable auto-sell on an output container set to Trading Hall mode:

**You receive 60 % of the merchandise's base price (40 % discount).**

The benefit: zero market management, guaranteed income. The cost: you leave 40 % of potential revenue on the table.



**10.10 Geography — where location matters**

Some machines are **location-sensitive**. What's under the ground affects what they can produce.

**Ore deposits**

Each ore type has a "hotspot" radius. Smaller radius = rarer, you need to scout. Larger radius = easier to find a working location.

ORE	HOTSPOT SIZE
Lithium	Smallest (very narrow deposits)
Copper	Small
Bauxite / Graphite / Iron	Medium
Coal / Limestone / Crude Oil	<b>Largest (most forgiving)</b>

**Practical:** if you're not near an ore deposit, your Mining Facility produces nothing useful. Check the in-game map tools before committing to a location.

**Crude oil — 18 geographic zones only**



CH 10

INDUSTRY

Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

FIG 10.02 — World distribution of the 18 Oil Well-eligible zones

Oil Wells only function inside one of **18 hardcoded geographic rectangles**. Key regions include:

ZONE	REAL-WORLD EQUIVALENT
Alaska / Canada / US East Coast	North America west and east
Texas / Gulf of Mexico / Caribbean	Southern North America
Venezuela / Colombia	Northern South America
Brazil	Eastern South America
Arctic Russia / Norwegian Sea	High north
North Sea (UK and Norwegian sides)	Northwestern Europe
North Africa / Sahara	Africa north
West Africa (Nigeria area)	Africa west
Southwest Africa (Angola)	Africa southwest
Siberia	Russia interior
Caspian / Kazakhstan	Central Asia
Middle East (Saudi Arabia, Iraq, Iran)	Middle East
India / Bangladesh	South Asia
Northeast China	East Asia
Indonesia / Southeast Asia	Southeast Asia
Australia	Oceania

If your airport falls outside all 18 zones, an Oil Well has **0 efficiency** — it produces nothing. Plan before building.

**Hunting camps — the proximity penalty**

Hunting Camps and Large Hunting Camps are penalized by **nearby airports**. Civilization scares the wildlife:

- Every airport within **30 NM** applies a penalty weighted by its Size.
- Your **home airport itself** also applies a penalty.

**Practical:** hunting works best at remote basecamps deep in wilderness. A Hunting Camp at a large hub airport loses most of its efficiency before you even start.



## CH 10

## INDUSTRY

## Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

## 10.11 Truck transport — moving goods between airports

When a container set to Transport mode reaches its threshold, an automatic truck delivery fires.

### Travel time

$$\text{Hours} = (\text{distance in NM} \times 1.5) \div 27 \text{ kts}$$

DISTANCE	APPROXIMATE TIME
50 NM	~2.8 h
100 NM	~5.6 h
250 NM	~14 h
500 NM	~28 h
1 000 NM	~56 h

The 1.5x multiplier accounts for roads not being straight lines.

### Cost (Credits)

$$500 \text{ Cr (fixed)} + 2 \times \text{base rate} \times \text{distance} \times \text{total weight}$$

Fuel shipments follow different rules — see the Fuel chapter (free within 250 NM, then 10 Cr per NM per shipment beyond that).

### Cost (IP)

1 IP per unit shipped (free if the destination is the same airport).

### On arrival

The transport delivers to the destination, attempts to fulfill any matching contracts automatically, and triggers worker replacement if the delivery included staff.

**Industry goods can also be shipped as regular cargo missions.** Workers travel as charter passengers; raw and refined goods travel as cargo. Your factory creates demand on the job board for nearby pilots.

## 10.12 Fees and factory lifecycle

### Weekly maintenance fees (Tier 2+ only)

## CH 10

## INDUSTRY

## Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

TIER	KITS REQUIRED PER WEEK
1	0 (free)
2	1 Factory Extension Kit
3	2 kits
4	<b>3 kits</b>

If kits are not available at the factory's airport when fees are due:

- Factory enters **Frozen** state — all production stops.
- Retry happens automatically after 1 day.

**The implication:** a Tier 4 factory burns 3 kits per week — 156 per year. You need a dedicated Factory Extension Kit production line, or a reliable import contract, to keep high-tier factories running.

### Inactivity archiving

A factory that has had **no activity for 6 months** is automatically archived:

- All IP spent on machines and containers is **refunded**.
- Construction materials are **not refunded** — they are lost.

### Paused company

If your company is paused (see the Economy chapter), all your factories are also archived. They can be revived when the company unpauses.

### Manual deletion

Deleting a factory refunds all IP but **does not refund construction materials**.



## 10.13 How industries connect to the rest of the game

### → FBO fuel supply

A factory producing fuel (100LL or Jet-A) with output mode set to FBO Refueling pipes fuel directly into your FBO's tank. This is the only way to have fuel in your FBO that is cheaper than the world dealer price — and the only practical path to undercutting prices in Survival mode.

### → Airport ownership

Airport Ownership Kits are produced **only** by the Airport Ownership Kit Facility. The weekly kit consumption ramps steeply with airport size (up to 50 kits per week at Size 5). Without an industry production line, owning a large airport is unsustainable long-term.

### → Cargo and charter missions

Industry workers and goods use the same mission system as regular jobs:

- Workers and specialized staff → travel as **charter passengers**.

CH 10

INDUSTRY

Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

- All raw and refined goods → shipped as **cargo**.

Every time you expand a remote factory, you generate a wave of cargo and charter demand for nearby pilots.



## 10.14 The merchandise catalog

### Staff (travel as charter passengers)

Worker · Hunter · Builder · Foreman · Trainer · Lumberjack · Fisherman · Miner

### Food chain

Raw Meat · Smoked Meat · Fur · Pelt · Leather · Fish · Smoked Fish · Fish Oil · Mixed Food · Vegetables · **Food Rations**

### Mining & metals

Copper Ore · Lithium Ore · Iron Ore · Bauxite · Graphite Ore · Coal · Limestone Copper Plate · Lithium Bar · Iron Bar · Aluminium Plate · Graphite Block Copper Part · Lithium Part · Aluminium Part · Graphite Part

### Energy / Oil

Crude Oil Tank · Oil Well Gear · Asphalt · **100LL Fuel Tank (5 500 gal)** · **Jet-A Fuel Tank (5 500 gal)**

### Manufactured goods

Plastic · Glass · Electronic Component · Battery · Opticals · Luxury Products · Steel Bar · Lumber · Log

### Gear

Hunting Gear · Fishing Gear · Mining Gear · Logging Gear · Training Gear · Ore Detector · Sulfuric Acid

### Strategic outputs

ITEM	WHY IT MATTERS
Factory Extension Kit	Required to <b>upgrade</b> and <b>maintain</b> every Tier 2+ factory. Without this, your upgrade path stops.

**CH 10**  
INDUSTRY

**Industries**

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

ITEM	WHY IT MATTERS
<b>Airport Ownership Kit</b>	The only way to sustain long-term ownership of large airports.
<b>Construction Kit</b>	Used to install a basecamp at a new location.

## 10.15 Strategic patterns

### Self-sustaining Tier 2+ factories

Above Tier 1, every factory needs Extension Kits weekly. Build a **Factory Extension Facility early** to produce your own, or maintain a steady contract supply from another player. Going Tier 3 or 4 without a kit pipeline is how factories freeze.

### The remote wilderness pattern

Hunting and ore-mining machines reward isolation. A **basecamp deep in forest with no nearby airports** is the best location for a Hunting Camp. Every airport within 30 NM drains efficiency. A large hub is the worst possible spot for a Hunting Camp.

### The spoke-and-wheel pattern with a Dispatch Hub

Build a Dispatch Hub at a large airport (Size 4–5) and raw extraction facilities at remote basecamps. The basecamps feed the hub via truck transport. The hub routes to the Trading Hall, FBOs, or refinement factories.

### Auto-sell vs. Trading Hall trade-off

STRATEGY	PROS	CONS
Auto-sell to system (60 % of base)	Zero management, predictable cash flow	<b>40 % revenue loss</b> on every unit
Trading Hall pricing	Full margin potential	Requires managing demand; inventory piles up if demand is slow

For high-demand goods (Food Rations, Lumber), the Trading Hall pays. For slow-moving specialty items, auto-sell is safer.

### The airport ownership pipeline

If you target Size 4–5 airport ownership, plan a dedicated production line:

Iron / Copper / Lithium ore → refined plates → parts → Electronics → Airport Ownership Kits

A Size 5 owned airport at boost level 1 earns ~100 000 Cr/week from human flights — but your kit production must keep pace with the 50 kits/week consumption.

## CH 10

## INDUSTRY

## Industries

- 10.1 What industries are
- 10.2 Building a factory
- 10.3 Five factory categories
- 10.4 The 28 machine types
- 10.5 Six ways production can leave your factory
- 10.6 The production cycle
- 10.7 Work teams and food rations
- 10.8 Industry Points — the soft currency
- 10.9 Trading Hall — market, supply, and contracts
- 10.10 Geography — where location matters
- 10.11 Truck transport — moving goods between airports
- 10.12 Fees and factory lifecycle
- 10.13 How industries connect to the rest of the game
- 10.14 The merchandise catalog
- 10.15 Strategic patterns
- 10.16 What industries are NOT
- 10.17 TL;DR

## 10.16 What industries are NOT

- ■ **No skill tree required** — only company level gates access.
- ■ **No upfront credit cost** to create a factory — only IP and materials as you build.
- ■ **No system-owned factories** — all factories are player-owned. The system only posts supply and demand listings.
- ■ **No condition decay on idle machines** — machines do not degrade from sitting unused.

## 10.17 TL;DR

- **Factories cost zero Credits to create** — only IP and materials as you build.
- **Tiers 1–4:** grids 12x6 to 15x9. Upgrade cost: 10 / 35 / 100 kits. Maintenance: 0 / 1 / 2 / 3 kits per week.
- **Production slows up to x3** at 0 % work team efficiency.
- **Workers need Food Rations daily.** No food → no production.
- **Six output modes:** Storage, Transport, Trading Hall, Internal Transport, FBO Refueling, Local Dealer.
- **Auto-sell to system = 60 % of base price** — a 40 % discount for zero management.
- **System supplies pause within 200 NM** of a player factory selling the same merchandise.
- **Crude oil works only in 18 hardcoded zones** (Texas, North Sea, Middle East, Indonesia, Australia, etc.).
- **Hunting Camps are penalized by every airport within 30 NM** — go remote.
- **Factory Extension Kits are your Tier 2+ lifeline** — produce them or import them.
- **Airport Ownership Kits** can only come from factories — there is no other source.
- **Inactive factory = archived after 6 months** (IP refunded, materials lost).

# 10

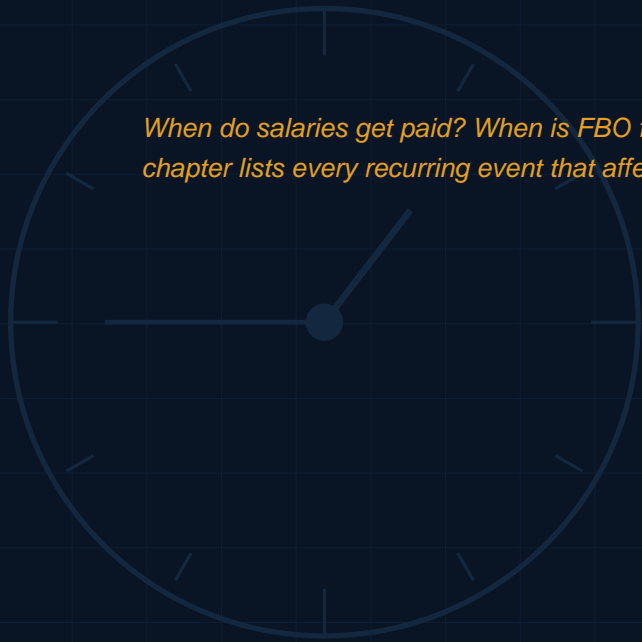
— END OF CHAPTER —

# 11

CHAPTER 11 · SCHEDULES

## Server Clock & Schedules

*When do salaries get paid? When is FBO fuel restocked? When are weekly fees charged? This chapter lists every recurring event that affects your company, in plain language.*



CH 11

SCHEDULES

Server Clock & Schedules

- 11.1 How the scheduler works
- 11.2 The 5 questions players ask most
- 11.3 Short-interval tasks (minutes)
- 11.4 Daily tasks (UTC)
- 11.5 Weekly tasks (UTC)
- 11.6 Network ports — technical reference
- 11.7 TL;DR — the dates to remember

All times in this chapter are **UTC**. The OnAir server always runs on UTC.

**Converting to your local time:** New York (winter, UTC-5) → subtract 5 h · Paris (winter, UTC+1) → add 1 h · Sydney (summer, UTC+11) → add 11 h

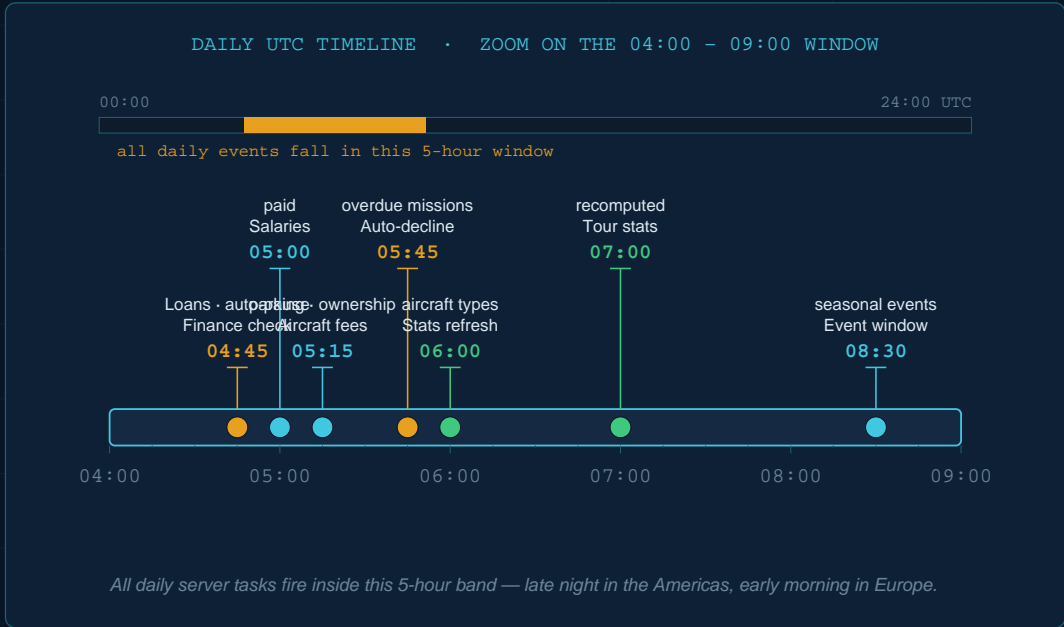


FIG 11.01 — Daily UTC timeline of key recurring server events

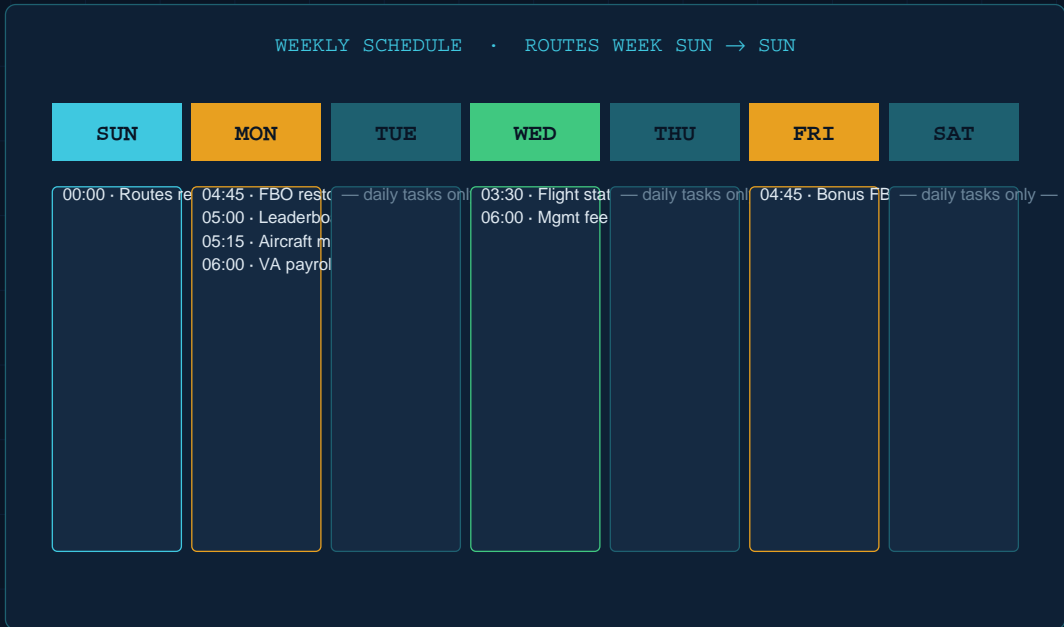


FIG 11.02 — Weekly schedule, Sunday-to-Sunday cycle

## 11.1 How the scheduler works

The server runs automated tasks continuously in the background. Two types exist:

CH 11

SCHEDULES

Server Clock & Schedules

- 11.1 How the scheduler works
- 11.2 The 5 questions players ask most
- 11.3 Short-interval tasks (minutes)
- 11.4 Daily tasks (UTC)
- 11.5 Weekly tasks (UTC)
- 11.6 Network ports — technical reference
- 11.7 TL;DR — the dates to remember

TYPE	HOW IT FIRES	EXAMPLE
<b>Recurring</b>	Every few minutes or hours, non-stop	"Maintenance progresses every 15 min"
<b>Scheduled</b>	Once a day or once a week at a fixed UTC time	"Salaries paid every day at 05:00 UTC"

These tasks run regardless of whether you are online.

## 11.2 The 5 questions players ask most

QUESTION	ANSWER
When are salaries paid?	<b>Every day at 05:00 UTC</b>
When are aircraft ownership & parking fees charged?	<b>Every day at 05:15 UTC</b>
When are FBOs restocked and FBO ownership fees charged?	<b>Monday at 04:45 UTC (+ bonus restock Friday at 04:45 UTC)</b>
When are loans checked for missed payments?	<b>Every day at 04:45 UTC</b>
When are overdue missions auto-declined?	<b>Every day at 05:45 UTC</b>

## 11.3 Short-interval tasks (minutes)

These run throughout the day. After any of these intervals, a page refresh will show updated results.

EVERY...	WHAT YOU SEE CHANGE
<b>1 min</b>	Aircraft in transit, warp or tarmac work progress. Warped flights get registered.
<b>1 min</b>	Outsourced cargo/charters you missed are marked expired.
<b>1 min</b>	FBO constructions finish; fuel orders are delivered.
<b>1 min</b>	Expired outsource listings are removed from the market.
<b>1 min</b>	Old completed missions are purged from your history.
<b>2 min</b>	One pending aircraft-type moderation request is processed.

## CH 11

## SCHEDULES

## Server Clock &amp; Schedules

- 11.1 How the scheduler works
- 11.2 The 5 questions players ask most
- 11.3 Short-interval tasks (minutes)
- 11.4 Daily tasks (UTC)
- 11.5 Weekly tasks (UTC)
- 11.6 Network ports — technical reference
- 11.7 TL;DR — the dates to remember

EVERY...	WHAT YOU SEE CHANGE
3 min	Employee and mechanic states update (training done, fatigue recovered, freelance availability).
3 min	Factories produce goods; inactive factories are archived.
5 min	Pending work orders execute; expired ones are deleted.
5 min	The multiplayer map refreshes.
5 min	Expired unclaimed missions are deleted.
5 min	Recurring hangar storage fees are charged.
5 min	Airport ownership rankings refresh; expired boosts are removed.
5 min	Industry merchandise transports arrive at destination.
10 min	Stuck flights are automatically repaired.
10 min	Rolling 1-month company reports are regenerated.
10 min	Weekly factory maintenance fees are calculated.
15 min	<b>Maintenance progresses</b> — mechanics advance on aircraft in the workshop.
20 min	Weather (METAR) refreshes for all airports.
60 min	Aircraft lease payments are processed.
60 min	Industry supply & demand levels are recalculated; stale contracts expire.

**Maintenance note:** Mechanics advance every **15 minutes**. If your mechanic appears to be working but nothing has changed, wait 15 min before worrying.

## 11.4 Daily tasks (UTC)

All daily tasks fire in the 04:45–07:00 UTC window — late night in the Americas, early morning in Europe.

TIME (UTC)	WHAT HAPPENS
04:45	Loans are checked for missed payments; inactive companies are auto-paused.
05:00	<b>Every employee's salary is paid.</b>

## CH 11

## SCHEDULES

## Server Clock &amp; Schedules

- 11.1 How the scheduler works
- 11.2 The 5 questions players ask most
- 11.3 Short-interval tasks (minutes)
- 11.4 Daily tasks (UTC)
- 11.5 Weekly tasks (UTC)
- 11.6 Network ports — technical reference
- 11.7 TL;DR — the dates to remember

TIME (UTC)	WHAT HAPPENS
05:15	Aircraft ownership fees, parking fees are charged; overdue rentals are terminated.
05:45	Missions past their deadline are automatically declined.
06:00	Aircraft-type statistics are regenerated.
07:00	Tour completion stats are recomputed.

**Budget tip.** The three fee tasks fire back-to-back: 04:45 → 05:00 → 05:15 UTC. Make sure your cash balance at 04:45 UTC can absorb *loan check + salaries + aircraft fees* within a 30-minute window.

## 11.5 Weekly tasks (UTC)

DAY	TIME (UTC)	WHAT HAPPENS
<b>Sunday</b>	00:00	Next week's Regular Route block is scheduled. This is the start of the "routes week".
<b>Monday</b>	04:45	System FBOs are restocked with fuel; <b>FBO owners are charged the weekly ownership fee.</b>
Monday	05:00	All leaderboards are rebuilt.
Monday	05:15	System aircraft go to maintenance; aircraft asset values refresh.
Monday	06:00	VA member salary distribution is paid.
<b>Wednesday</b>	03:30	Historical flight data is consolidated onto each aircraft (stats refresh).
Wednesday	04:30	VA shareholder asset values are updated.
Wednesday	06:00	<b>Weekly company management fee is charged</b> (Challenge Mode only — see the Economy chapter).
<b>Friday</b>	04:45	Bonus mid-week restock of system FBOs (same volume as Monday).

## CH 11

## SCHEDULES

## Server Clock &amp; Schedules

- 11.1 How the scheduler works
- 11.2 The 5 questions players ask most
- 11.3 Short-interval tasks (minutes)
- 11.4 Daily tasks (UTC)
- 11.5 Weekly tasks (UTC)
- 11.6 Network ports — technical reference
- 11.7 TL;DR — the dates to remember

**The Monday chain.** The four Monday tasks fire in sequence (04:45 → 05:00 → 05:15 → 06:00) because each feeds the next: FBO fees first → leaderboards → aircraft values → VA payroll last, using fresh data.

**Routes week = Sunday → Sunday.** If you edit a Regular Route, the change takes effect the following Sunday at 00:00 UTC when the weekly block is rebuilt.

## 11.6 Network ports — technical reference

The server is three separate processes that communicate with each other. Useful if you are troubleshooting a connectivity issue.

SERVICE	PROTOCOL	PORT	ROLE
World (real-time)	TCP	11000	Live broadcasts (aircraft positions, chat, etc.)
World (sim bridge)	WebSocket	11001	Live SimConnect data channel

In production, game server and auth use HTTPS on [server1.onair.company](https://server1.onair.company) and [auth.onair.company](https://auth.onair.company) — no raw port is exposed.

## 11.7 TL;DR — the dates to remember

- **Every day at 05:00 UTC** → salaries paid.
- **Every day at 05:15 UTC** → aircraft ownership & parking fees.
- **Monday 04:45 UTC** → FBO weekly fee + fuel restock.
- **Wednesday 06:00 UTC** → company weekly management fee (Challenge Mode only).
- **Friday 04:45 UTC** → bonus FBO fuel restock.
- **Sunday 00:00 UTC** → regular routes rebuilt for the coming week.
- **Maintenance progresses every 15 min** — not instantly.