



JOHN EDWAR GONZALEZ ARIAS

TECHNICAL ENGLISH FOR **AERONAUTICAL** ENGINEERS



ESICI
ESCUELA DE INTELIGENCIA Y CONTRAINTELIGENCIA
"BERNABE GONZALEZ GARCIA" INSTITUCIÓN DE EDUCACIÓN SUPERIOR



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TECHNICAL ENGLISH FOR **AERONAUTICAL** ENGINEERS

John Edwar Gonzalez Arias

2026



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PROLOGUE

In today's aerospace world, technology is advancing faster than ever. With autonomous systems and international defense– cooperation becoming the norm, military aviation teams are under constant pressure to stay fully ready and perfectly coordinated.

In this environment, there is no room for error. Modern aircraft systems are highly complex and depend on smooth coordination among pilots, ground crews, maintenance teams, and logistics support. In many cases, the biggest challenge in maintaining air readiness is not just technical, it's communication.

Learning technical English is a pivotal step to take in your journey to becoming an aeronautical engineer. It is also a crucial step, as aeronautical engineers work depends on absolute clarity, precision, and international coordination in highly regulated and safety-critical environments. A single misinterpretation or ambiguous phrase can have catastrophic consequences; thus, absolute clarity and conciseness are mandatory.

Throughout the lessons in this book, you will learn grammar, writing, speaking and how to apply what you've learned in your everyday work experience. As you progress through this text, you will improve the vocabulary and confidence needed to operate effectively in the international aerospace industry. Approach these language exercises with the same analytical mindset you apply to your engineering career.

This book is specifically designed to bridge the gap between your natural engineering intuition and the language skills required to express, document, and defend your ideas.

Wilder Ancizar García Vargas
Army Non-Commissioned Officer
English Instructor, Army Aviation School

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SUMMARY

This book serves as an essential pedagogical tool designed to bridge the linguistic gap in the aerospace industry. Its primary objective is to empower aeronautical engineers, technicians, and military aviation personnel to master technical English, the universal language of aviation. Through a comprehensive approach, the text rigorously supports the development of applied grammar, reading comprehension for manuals, technical report writing, precise terminology pronunciation, and specialized professional vocabulary.

The greatest benefit of this book lies in its ability to transform theoretical language knowledge into practical, real-world operational skills. For engineers, it acts as an indispensable support system for accurately interpreting airworthiness directives, service bulletins, and complex blueprints, thereby drastically reducing human error in aircraft design and maintenance. For military personnel, it becomes a strategic guide that optimizes interoperability during international missions and standardizes safety communications under global regulations, such as ICAO standards.

Beyond basic grammar, the book features practical exercises based on authentic hangar and cockpit scenarios, facilitating the retention of critical concepts in aerodynamics, avionics, and propulsion systems. By enhancing pronunciation and oral communication, personnel gain the necessary confidence to interact effectively in high-pressure environments. In conclusion, this manual is not merely an educational resource; it is a cornerstone of operational safety and efficiency that elevates the professional standards of both civil and military aviation worldwide.

Key Words

Airworthiness, Avionics Systems; Maintenance Directive; Powerplant; Flight Control Systems; Flight Control Surfaces.

RESUMEN

Este libro es una herramienta pedagógica fundamental diseñada para cerrar la brecha lingüística en la industria aeroespacial. Su objetivo principal es capacitar a ingenieros aeronáuticos, mecánicos y personal militar de aviación en el dominio del inglés técnico, el idioma universal de la aviación. A través de un enfoque integral, apoya de manera rigurosa los procesos de gramática aplicada, comprensión lectora de manuales, escritura de informes de mantenimiento, pronunciación precisa de terminología y el desarrollo del vocabulario técnico especializado.

El mayor beneficio de este texto radica en su capacidad para transformar el conocimiento teórico en habilidades operativas reales. Para los ingenieros, el libro actúa como un soporte indispensable para interpretar con precisión directrices de aeronavegabilidad, boletines de servicio y planos complejos, reduciendo drásticamente el margen de error humano en el diseño y mantenimiento. Por otro lado, para el personal militar, se convierte en una guía estratégica que optimiza la interoperabilidad en misiones internacionales y estandariza la comunicación de seguridad bajo normativas globales como las de la OACI.

Además de la teoría, el libro incluye ejercicios prácticos basados en escenarios reales de hangares y cabinas, lo que facilita la retención de conceptos críticos de aerodinámica, aviónica y propulsión. Al mejorar la pronunciación y la comunicación oral, el personal adquiere la confianza necesaria para interactuar en entornos de alta presión. En conclusión, este manual no solo es un recurso educativo, sino un pilar de seguridad y eficiencia operativa que eleva el estándar profesional de la aviación civil y militar.

Palabras Claves

Aeronavegabilidad, Sistemas de Aviónica, Directriz de Mantenimiento, Grupo Propulsor, Sistema de control de vuelo, Superficies principales de control de vuelo

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SECCION I

**PROFESSIONAL SKILLS AND
AVIATION ENVIRONMENTS**

CHAPTER I:

THE AERONAUTICAL ENGINEER'S PROFILE

Welcome to your first step in technical English. In this chapter, we will learn how to introduce ourselves in a professional environment, identify our responsibilities, and describe the essential abilities and limitations of an aeronautical engineer.

1. VOCABULARY:

ACTIVITY 1: VOCABULARY MATCHING

Match the term on the left with its correct definition or synonym on the right:

TERM	DEFINITION / SYNONYM
1. Airworthiness	A. A person learning the job (usually a beginner).
2. Hangar	B. A drawing or digital plan for a project (like a wing).
3. Blueprint / Design	C. The official state of a plane when it is safe to fly.
4. Apprentice	D. The building where aircraft maintenance is performed.
5. Calculations	E. Mathematical process to ensure structural integrity.
6. Troubleshooting	F. Finding and fixing a technical problem.
7. Safety Protocols	G. Official rules to prevent accidents.

2. READING:

THE ROLES OF AN AERONAUTICAL ENGINEER

Aeronautical engineers **have** many important responsibilities in the aviation industry. They **can design** innovative *wings and fuselage* structures to **improve** *aerodynamics*. They **can** also **perform** complex *calculations* to ensure *flight safety* and structural integrity. In the *hangar*, an engineer **can supervise** *maintenance* teams and **verify** that every repair follows the official manual. They **are** responsible for the *airworthiness* of the aircraft, which means they **must confirm** that the plane is 100% ready for operation.

However, there are certain things an engineer **can't do** without specific extra *training*. For example, an engineer **can't fly** a commercial aircraft if **they do not have** a commercial pilot's license. Also, they **can't ignore** *safety protocols* or **modify** a design without official approval from authorities like the Federal Aviation Administration - FAA. While they understand how *engines work*, they **can't perform** physical repairs alone if they don't have the specific technician certification for that specific engine model.

ACTIVITY 2: TRUE OR FALSE (READING COMPREHENSION)

Read the text above and circle T or F:

- Engineers **can design** parts to make planes more aerodynamic. (T / F)
- An engineer **can fly** any plane because they know how it works. (T / F)
- Engineers **are allowed** to change designs without any official permission. (T / F)
- Maintenance supervision is a common task for an aeronautical engineer. (T / F)
- An engineer **can always perform** mechanical repairs alone. (T / F)

3. GRAMMAR: SUBJECT PRONOUNS & POSSESSIVE ADJECTIVES - COMPLETE

SUBJECT PRONOUN	POSSESSIVE ADJECTIVE	TECHNICAL EXAMPLE
I	My	I am the lead engineer. _____ task is to check the turbines.
You	Your	You are the inspector. Is this _____ signature?
He		He is the mechanic. His specialized tools are in the box.
She	Her	She works in Research and Development (R&D). _____ project is about biofuels.
It		The drone is small. Its battery lasts 30 minutes.
We	Our	We are a team. _____ goal is zero accidents.
They		They are the pilots. Their flight plan is ready.

ACTIVITY 3: PERSONAL INFORMATION & OWNERSHIP

Complete the sentences with the correct pronoun or possessive adjective:

- (We) _____ work at the airport. _____ office is in Terminal B.
- (She) _____ is an expert in CAD. I like _____ new wing design.
- The Boeing 747 is a classic. _____ wingspan is very large.
- (They) _____ are late. Where are _____ security badges?
- (I) _____ am an apprentice. This is _____ first day in the workshop.

4. GRAMMAR: “CAN” AND “CAN’T”

We use **can** to describe a skill or a physical/mental capability. It means you have the knowledge or the power to do something.

- **Positive:** “I **can** speak Spanish.” (I have the skill)
- **Negative:** “He **can’t** swim.” (He doesn’t have the ability)
- **Question:** “**Can** you play the guitar?”

We also use **can** to say that something is allowed, or to ask for consent. In casual settings, it is much more common than the formal “may.”

- **Giving Permission:** “You **can** use my charger if you need it.”
- **Asking Permission:** “**Can** I leave the table?”
- **Prohibition (No Permission):** “You **can’t** park your car here.”

ACTIVITY 4: PROFESSIONAL ABILITIES

Write “Can” or “Can’t” based on typical aeronautical standards:

- A professional engineer _____ use software to simulate flight conditions.
- A first-year student _____ sign a final safety release.
- We _____ improve fuel efficiency by using lighter materials.
- Technicians _____ smoke inside the maintenance hangar.
- _____ you identify the difference between a turboprop and a turbofan?

5. WRITING: PROFESSIONAL INTRODUCTION

ACTIVITY 5: YOUR PROFILE

Imagine you are applying for a job at an aerospace company. Write a paragraph (50-70 words) about yourself. You must include:

- Your name and current role (student/engineer).
- Use at least 3 possessive adjectives (my, our, his, etc.).
- List 3 things you **can** do (technical skills).
- List 1 thing you **can't** do yet.

6. INTERACTION: THE TECHNICAL INTERVIEW

ACTIVITY 6: ROLEPLAY

Work with a partner. One is the Interviewer, and the other is the Candidate. Complete the information.

CATEGORY	FIELD	EXAMPLE INFORMATION	YOUR INFORMATION (TO FILL OUT)
Personal Information	Full Name	Carlos Rodríguez	
	Address	123 Maple Street, Springfield	
	Email Address	carlos.rod@email.com	
	Phone Number	+1 555-0198-234	
	Date of Birth	March 24, 1995	
Professional Profile	Position Applied	Project Coordinator	
	Education	Industrial Engineering	
Abilities (CAN)	Technical Skill	He can use Microsoft Project	
	Soft Skill	He can lead large teams.	
	Language	He can write reports in English.	
Limitations (CAN'T)	Technical Skill	He can't use AutoCAD software.	
	Availability	He can't travel during weekends.	
	Language	He can't translate from French.	

Questions example:

SECTION	QUESTION
Personal Details	What is your full name?
	Where do you live?

SECTION	QUESTION
	What is your email address?
	What is your phone number?

SECTION	QUESTION
	When is your birthday?
Professional Status	What job are you applying for?
	What did you study?
Strengths (CAN)	What software can you use?
	What can you do very well at work?

SECTION	QUESTION
	What languages can you speak?
Limitations (CAN'T)	What software can't you use?
	What tasks can't you do right now?
	Can't you work on weekends?

7. CHAPTER'S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER II: CAREER PATHS AND AIRCRAFT EVOLUTION

In this chapter, we will learn how to describe current and past jobs in the aviation industry. We will also explore how aircraft components have changed over time while practicing the use of the possessive 's and the verb to be.

1. VOCABULARY:

ACTIVITY 1: VOCABULARY MATCHING

Match the words with their definitions:

TERM	DEFINITION / SYNONYM
1. Component	A. Something or someone competing for the same goal.
2. Predecessor	B. A specific part of an aircraft's structure.
3. Propulsion	C. An earlier version of a machine or technology.
4. Rival	D. The force that moves a plane through the air.

2. READING:

FROM WOOD TO CARBON FIBER

The aviation industry **is** a story of constant change. In the 1920s, aircraft **were** very simple. Most planes **were** made of *wood* and *fabric*. **The Wright brothers'** first flyer **was** a revolutionary machine, but it **was** slow. Today, materials **are** different. Modern jets **are** made of *composite materials* like *carbon fiber*.

Professional roles have changed, too. My grandfather **was** a *piston engine* mechanic 40 years ago. Now, **I am** a *propulsion* engineer. His *tools* **were** manual, but my tools **are** digital. Even though the technology is new, the goal is the same: *safety* and *efficiency*. This is **Boeing's** philosophy and **Airbus's** priority.

ACTIVITY 2: TRUE OR FALSE

Read the text and decide if the sentences are True (T) or False (F):

1. Aircraft in the 1920s were made of carbon fiber. (T / F)
2. The author's grandfather was an engineer. (T / F)
3. Modern tools are mostly digital. (T / F)
4. Safety was important in the past, and it is important now. (T / F)

3. GRAMMAR: VERB TO BE (PRESENT VS. PAST) - COMPLETE

We use **am/is/are** for current situations and **was/were** for past situations.

PRONOUN	PRESENT (NOW)	PAST (BEFORE)
I	Am	
You		Were

PRONOUN	PRESENT (NOW)	PAST (BEFORE)
He / She / It	Is	
We / They	Are	

ACTIVITY 3: PERSONAL INFORMATION & OWNERSHIP

Complete with the correct form of the verb to be (Present or Past):

1. Today, the weather _____ (is/was) perfect for flight testing.
2. In 1903, the first flight _____ (is/was) only 12 seconds long.
3. My colleagues _____ (are/were) at the conference in London last week.
4. Now, I _____ (am/was) an expert in aerodynamics, but five years ago I _____ (am/was) a student.

4. GRAMMAR: POSSESSIVE 'S

We use 's to show that something belongs to a person or a company.

- Example: **The engineer's** computer. (The computer of the engineer).
- Note: If the name ends in **s**, you can just add the apostrophe: **Airbus'** project.

ACTIVITY 4: REPHRASE THE SENTENCES

Use the possessive 's to rewrite these phrases:

1. The office of the supervisor -> The _____.
2. The design of the wing -> The _____.
3. The report of the technicians -> The _____.
4. The history of NASA -> _____.

5. GRAMMAR: THEN AND NOW

ACTIVITY 5: JOB EVOLUTION

Circle the correct word

This is about my Friend Mia. She (**is/ are**) Chinese. She (**is/ was**) 28 years old. We (**is/ are**) very good friends. We both work as cabin crews, but we (**are / are not**) coworkers. I work in American Airline and she lives in Beijing. We (**was / were**) at the aviation academic together. Later, we (**was / were**) at the same internship company, but we (**were / were not**) in the same department. I (**was / were**) at customer service and she (**is / was**) in disable passengers assistance. Now, I (**was / am**) a flight attendant in Miami and she (**is /was**) a flight instructor in China. We (**are/ were**) still good friends after 10 years.

6. INTERACTION: TALKING ABOUT CAREER PATHS

ACTIVITY 6: THE INTERVIEW

Use these questions to interview your partner about their past experiences and future goals.

Interview Questions 1

1. What is your university's nickname?
2. Who was your first mentor in the aviation industry?
3. What is your current favorite subject in engineering?
4. What is your favorite Colombian aeronautical company to work with? Why?
5. What is the most interesting job position for you? Why?
6. Was your father's or your mother's career related to aeronautics, too?

ACTIVITY 7: THE INTERVIEW

Write your partner's answers in a paragraph. Use possessive's

My partner's name is _____ . His/Her university's nickname is...

7. CHAPTER'S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER III: EXTERNAL PARTS AND PROFESSIONAL INTERESTS

In this chapter, we explore the external structure of an aircraft. We will learn how to describe the functions of each part using the **Present Simple** and how to express professional **interests** and make **requests** in the hangar.

1. TECHNICAL VOCABULARY:

External Parts and Functions

The external structure of an aircraft is a complex system where every component has a specific aerodynamic or structural purpose.

Main Components:

- **Fuselage:** This is the aircraft's central body. It **connects** all other parts and **houses** the *payload* (passengers or cargo) and the flight *crew*.
- **Wings:** These are the primary lifting surfaces. A wing **generates** *lift* by creating a pressure difference between its upper and lower surfaces.
- **Ailerons:** Located on the trailing edge of each wing, an aileron **controls** the aircraft's *roll*.
- **Flaps:** These are movable panels on the wings. A flap **increases** lift and *drag* during takeoff and landing.
- **Empennage:**
 - **Vertical Stabilizer:** It **prevents** lateral instability. The **Rudder** is attached here and **controls** the *yaw* (left/right movement).
 - **Horizontal Stabilizer:** It **provides** longitudinal stability. The **Elevator** is attached here and **controls** the *pitch* (up/down movement).
- **Engines:** An engine **provides** the necessary *thrust* for propulsion. In modern jets, it usually **hangs** under the wings in a *nacelle*.
- **Landing Gear:** This system **supports** the aircraft on the ground and **absorbs** the shock of landing.
- **Cockpit:** The area at the front where the pilot **operates** the aircraft's controls.
- **Spoilers:** (write the function): _____
- **Slats:** (write the function): _____
- **Antenna:** (write the function) _____

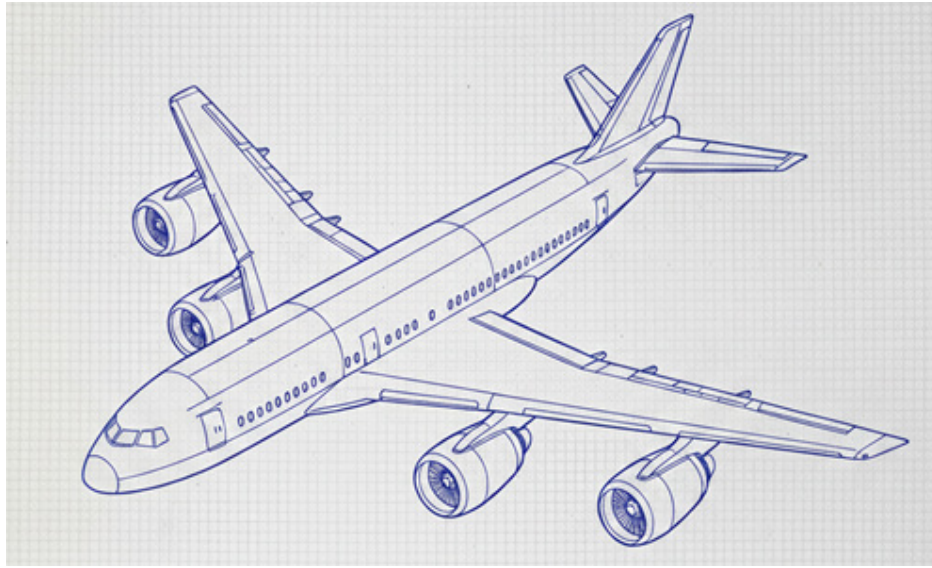
ACTIVITY 1: COMPLETE THE VOCABULARY

Complete the aircraft's parts categorization parts

MAIN/PRINCIPAL CONTROL SURFACES	SECONDARY CONTROL SURFACES	OTHER PARTS

ACTIVITY 2: VOCABULARY MATCHING

Match each aircraft's part from the reading



2. GRAMMAR: PRESENT SIMPLE (POSITIVE)

A. Conjugation Chart

SUBJECT	VERB (EXAMPLE)	TECHNICAL SENTENCE
I	work	I work with the structures team.
You	inspect	You inspect the rudder for damage.
He	<u>fixes</u>	He fixes the hydraulic lines.
She	<u>studies</u>	She studies the wing's lift coefficient.
It	produces	It (the engine) produces 30,000 lbs of thrust.
We	test	We test the ailerons before every flight.
They	design	They design aerodynamic winglets.

B. The 3 Rules for Third Person Singular (He, She, It)

RULE	ENDING	CONDITION	TECHNICAL EXAMPLES
Rule 1	-s	Most verbs	Generate- Generates / Control-Controls
Rule 2	-es	Verbs ending in: -ch, -sh, -s, -x, -o	Fix -Fixes / Reach -Reaches
Rule 3	-ies	Verbs ending in: Consonant + Y	Study -Studies/ Modify - Modifies

ACTIVITY 3: GRAMMAR PRACTICE

Complete the sentences with the correct form of the verb in parentheses:

- The stabilizer _____ (keep) the aircraft steady during flight.
- An aeronautical engineer _____ (study) the airflow over the wings.
- The pilot _____ (push) the throttle to increase speed.
- This sensor _____ (notify) the crew about ice on the wings.
- The landing gear _____ (retract) after take-off.

3. READING:

PROFESSIONAL ROUTINE AND FUTURE GOALS

My name is Sarah, and I am a **maintenance engineer** at a busy international hub. My daily routine **starts** at 6:00 AM with a rigorous “**walk-around**” inspection. First, I **examine** the **fuselage** for any surface irregularities or **signs of fatigue**. My **colleague**, David, **inspects** the landing gear’s tires and hydraulic lines simultaneously. We **check** every **rivet** and **bolt** because the aircraft’s safety **depends** on our precision. If a component **appears worn**, I **report** it to the supervisor immediately.

Regarding my professional preferences, **I’m a big fan of** **aerodynamic surfaces** like the **empennage** and **wings**. **I’m keen on** understanding how the **rudder controls** the **yaw** and how the **elevator adjusts** the **pitch** during climb. I also **enjoy troubleshooting** complex propulsion systems because **I’m into** **high-performance** technology. My job **requires** constant learning, and **I like** the challenge of solving mechanical **puzzles** every day. For me, the hangar **is** the most exciting place in the world.

Looking toward the future, **I’d like** to specialize in next-generation composite materials. **I would love** to lead a team of **structural designers** at a major company like Airbus or Boeing. **I’m looking forward to** developing a new wing design that **reduces fuel consumption** and **increases lift efficiency**. Right now, **I’m dying** to start my **Master’s degree** in Aerospace Engineering because **I want** to reach a **senior position** in the industry.

ACTIVITY 4: READING COMPREHENSION

A. Multiple Choice

1. At what time does Sarah’s routine start?
 - a) 8:00 AM
 - b) 6:00 AM
 - c) 12:00 PM
2. What is Sarah into?
 - a) Cabin service
 - b) High-performance technology
 - c) Airport security
3. What is Sarah looking forward to?
 - a) Becoming a pilot
 - b) Developing a new wing design
 - c) Moving to a different city

B. Questions

1. What does Sarah examine during her “walk-around” inspection?
2. Why does she want to study a Master’s degree next year?
3. List three different ways Sarah expresses interest or desire in the text.

4. WRITING: FUNCTIONS

ACTIVITY 5:

Write a short paragraph (50-60 words). Describe the main and secondary control surfaces’ functions.

5. INTERACTION: OFFERS AND REQUESTS IN THE HANGAR

Useful Expressions:

- **Requests:** "Can you help me with...?", "I need...", "Please, check the..."
- **Offers:** "Can I help you?", "I can show you...", "Do you want...?"

ACTIVITY 6: ROLEPLAY

With a partner, simulate a conversation in the hangar. (10 lines conversation)

- **Student A:** You are the supervisor. Ask your partner to check a specific part (Request).
- **Student B:** You are the technician. Agree and offer help with another part (Offer).

6. CHAPTER'S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER IV: HANGAR ROUTINES AND MAINTENANCE HABITS

In this chapter, we focus on daily habits and safety customs in the hangar. We will learn how to describe maintenance procedures using the Present Simple (Negative and Questions) to talk about what we do not do and how to ask for technical information.

1. TECHNICAL VOCABULARY: MAINTENANCE AND HANGAR TOOLS

Maintenance is not just about fixing problems; it is about following habits and safety customs.

Key Vocabulary:

- Daily Inspection
- Preventive Maintenance
- Overhaul
- Torque Wrench
- Hydraulic Fluid
- Safety Wire
- Consumables
- Calibration

ACTIVITY 1: COMPLETE THE PUZZLE WITH THE WORDS FROM

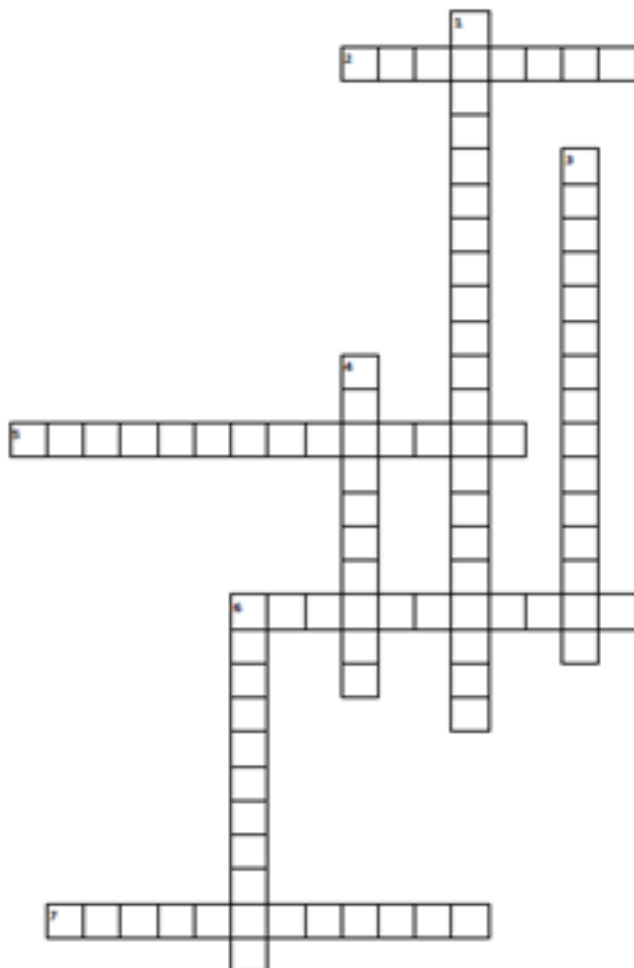
“Key Vocabulary”

Across

2. A complete disassembly and inspection of an engine or component.
5. The liquid used in the landing gear and brake systems.
6. The process of adjusting an instrument for accuracy.
7. A tool used to apply specific pressure to bolts.

Down

1. Scheduled work to prevent future failures.
3. A routine check performed every 24 hours.
4. A wire used to prevent bolts from loosening due to vibration.
6. Items used once, like filters, oil, or cleaning rags.



ACTIVITY 2: FILL IN THE BLANKS

Use the vocabulary above to complete the sentences:

1. We use a _____ to ensure the bolts on the engine are tight.
2. The technician checks the _____ level in the landing gear.
3. Does the team perform a _____ before every flight?
4. We always apply _____ to critical fasteners for safety.
5. The laboratory verifies the _____ of all digital sensors.

2. GRAMMAR: PRESENT SIMPLE (NEGATIVE AND QUESTIONS)

To talk about habits and customs that are NOT true, or to ask information, we use the auxiliary **DO** and **DOES**.

FORM	STRUCTURE	AERONAUTICAL EXAMPLES
Negative (don't)	I / You / We / They + don't + Verb	We don't use expired oil in the engines.
Negative (doesn't)	He / She / It + doesn't + Verb (no -s)	The pump doesn't work without pressure.
Yes/No Question	Do + I / you / we / they + Verb...?	Do you inspect the fuselage every day?
Yes/No Question	Does + he / she / it + Verb (no -s)...?	Does the radar require new calibration?
Wh- Question	Wh- word + do / does + Subject + Verb...?	Where does the team store the blueprints?

ACTIVITY 3: GRAMMAR TRANSFORMATION

Change these positive sentences into Negative and Question forms:

1. (+) The hangar opens at 5:00 AM.
 a. (-) _____
 b. (?) _____
2. (+) Technicians use safety wires in the tail section.
 a. (-) _____
 b. (?) _____

3. READING:**HABITS IN THE MAINTENANCE HANGAR**

Maintenance habits are essential for flight safety. At "SkyTech Solutions," the team **does not start** a project without a safety *briefing*. Every morning, the supervisor **asks** the team about the *day's goals*. They **don't use** *damaged* tools, and they always **verify** the *calibration* of the sensors. These customs **prevent** accidents during the *overhaul process*.

What **do** technicians **do** in their free time? Most engineers at the hangar **don't like** to stop learning. After work, some colleagues **watch** documentaries about aviation history or **play** *flight simulators*. Others **don't stay** in the office; they **prefer** to exercise to maintain the physical strength required for hangar work. These habits **keep** the team healthy and *focused*.

Does everyone **follow** the same routine? No, they **don't**. The night *shift team* **doesn't attend** the morning briefing. Instead, they **read** the digital *logs* from the *day shift*. This transfer of information **is** a *critical custom*. Why **do** they **do** this? Because a small *mistake* in communication **causes** major problems in the air.

Does a lead engineer **work** alone? No, he **doesn't**. He **coordinates** with the logistics department *to ensure*

they **have** all the necessary *consumables*. When a part **doesn't arrive** on time, the team **doesn't stop** working; they **perform** other inspections. This flexibility **is** part of the hangar's professional culture.

ACTIVITY 4: READING COMPREHENSION

A. Multiple Choice

1. Does the team start projects without a safety meeting?
 - a) Yes, they do.
 - b) No, they don't.
2. Do technicians exercise to stay healthy for work?
 - a) Yes, they do.
 - b) No, they don't.
3. The night shift team attends the morning briefing.
 - a) True
 - b) False

B. Questions (Answer in full sentences):

1. What kind of tools do the technicians not use?

2. Why do the night shift technicians read the digital logs?

3. What does the lead engineer do when a replacement part doesn't arrive?

4. WRITING: MY MAINTENANCE HABITS

ACTIVITY 5: PARAGRAPH WRITING

Write a description of your personal routine or ideal maintenance habits as Aeronautical Engineer (60-80 words). You must include:

- Two things you do (Positive).
- Two things you don't do for safety (Negative).
- One question

5. INTERACTION: THE HANGAR INSPECTION CHALLENGE

ACTIVITY 6: ROLE PLAY

Instructions for Students

1. **Role A (The Safety Auditor):** Your goal is to find out if the hangar is safe. Ask questions about daily habits.
2. **Role B (The Hangar Technician):** Answer the questions. Sometimes you follow the rules (+), and sometimes you don't (-).

Step 1: Useful Question (Auditor)

Use these structures to interview your partner:

- “Do you verify...?”
- “Does the supervisor check...?”
- “What tools do you use for...?”
- “Why does the team read...?”
- “Do you apply...?”

Step 2: Sample Responses (Technician)

Remember to use **don't** or **doesn't** for negative habits:

- “Yes, I verify..., but I don't ...
- “The supervisor doesn't check...; the apprentice does....”
- “We don't use.... It is...”
- “I start..., but I don't finish...”

Step 3: The “Find the Error” Task

Work with your partner to identify three bad habits in this fictional hangar description:

“At AeroFix Hangar, the technicians don't wear safety goggles. The lead engineer doesn't sign the airworthiness certificates after the repair. Also, the team uses a torque wrench that doesn't have a calibration sticker.”

- Habit 1: _____
- Habit 2: _____
- Habit 3: _____

6. CHAPTER'S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER V:

AVIATION REPORTS AND PAST MISSIONS

In this chapter, we explore events that happened in the past. We will learn how to report maintenance actions, describe previous flights, and use the **Simple Past** for regular and irregular verbs.

1. TECHNICAL VOCABULARY: INCIDENT REPORTING & TOOLS

When an engineer finishes a job, they write a report about what happened.

ACTIVITY 1: WRITE THE DEFINITIONS WITH YOUR OWN WORDS

- **Logbook Entry:** _____
- **Component Failure:** _____
- **Bird Strike:** _____
- **Emergency Landing:** _____
- **Faulty:** _____
- **Investigation:** _____
- **Replacement:** _____

ACTIVITY 2: SINGULAR AND PLURAL TECHNICAL TERMS

Write the plural form of these aeronautical nouns:

1. One **battery** -> Two _____
2. One **bushel** -> Two _____
3. One **fuselage** -> Two _____
4. One **wrench** -> Two _____
5. One **flap** -> Two _____

2. GRAMMAR: SIMPLE PAST (STRUCTURE & USAGE)

We use the Simple Past to talk about finished actions in the past.

A. Simple Past Structure Table

FORM	STRUCTURE	AERONAUTICAL EXAMPLE
Positive (+)	Subject + Verb (past)	The team installed the new sensor yesterday.
Negative (-)	Subject + did not (didn't) + Verb (base)	The pilot didn't notice any vibration initially.
Question (?)	Did + Subject + Verb (base)?	Did you check the logbook this morning?

*Note: In negative sentences and questions, the verb stays in its **base form** because "Did/Didn't" already indicates the past.*

B. Regular Verbs vs. Irregular Verbs

1. Regular Verbs: Add -ed

Check → *Checked*

Inspect → *Inspected*

2. Irregular Verbs: Change completely

Fly → *Flew*

Break → *Broke*

Find → *Found*

3. Pronunciation: The “-ed” Ending

There are three ways to pronounce the “-ed” in regular past verbs. This depends on the final sound of the base verb.

SOUND	RULE	EXAMPLE
/t/	After voiceless sounds: p, k, f, s, sh, ch	Help ed , Check ed , Fix ed , Wash ed
/d/	After voiced sounds: b, g, v, z, l, m, n, r, vowels	Repair ed , Install ed , Clean ed , Chang ed
/id/	After t or d	Inspect ed , Report ed , Want ed , Land ed

ACTIVITY 3: PRONUNCIATION SORTING

Read these verbs and write them in the correct column according to their “-ed” sound: (Fixed / Landed / Repaired / Checked / Inspected / Installed / Dropped / Decided)

/T/ SOUND	/D/ SOUND	/ID/ SOUND
1. _____	1. _____	1. _____
2. _____	2. _____	2. _____
3. _____	3. _____	3. _____

ACTIVITY 3: VERB TENSE PRACTICE

Complete the sentences with the past form of the verb in brackets:

- Last week, the pilot _____ (fly) to London.
- We _____ (inspect) the landing gear two hours ago.
- The mechanic _____ (see) a crack in the fuselage yesterday.
- They _____ (not / fix) the radio on Monday.
- _____ (Do / Did) you finish the maintenance report?

3. READING:

THE 1989 INCIDENT REPORT

Last month, our team **investigated** a historical flight from 1989. The flight **started** normally at 8:00 AM, but the pilots **noticed** a *strange* vibration in the *left engine*. They **checked** the *instruments*, but they **did not find** any immediate errors. Suddenly, the *oil pressure* **dropped** quickly, and the crew **decided** to return to the airport.

The technicians **discovered** that the engine **had** a *faulty internal blade*. This component **broke** during the climb and **caused** a small fire. Fortunately, the fire *suppression system* **worked** perfectly. The pilot **took** control of the aircraft and **landed** safely. All passengers **were** safe, and the airline **wrote** a detailed report about the event.

After the *landing*, the *maintenance crew* **removed** the engine for an *overhaul*. They **found** several metal pieces inside the *turbine*. The investigation **lasted** three months, and the company **installed** new *sensors* in all their airplanes. This incident **changed** the *safety protocols* for every *international hub*.

Looking back, we **learned** a lot from this mission. Many engineers **studied** the *logbooks* and **developed** better *preventive maintenance*. In the past, we **did not have** *digital sensors*, so inspections **were** more difficult. Today, we **use** that experience to prevent similar *failures*.

ACTIVITY 4: READING COMPREHENSION

A. Multiple Choice

1. When did the historical flight happen?
 - a) Last week.
 - b) In 1989.
 - c) Yesterday.
2. Did the fire suppression system fail?
 - a) Yes, it did.
 - b) No, it didn't.
3. How long did the investigation last?
 - a) One month.
 - b) Two hours.
 - c) Three months.

B. Questions:

1. What problem **did** the pilots **notice** at the beginning of the flight?
2. What **did** the maintenance crew **find** inside the engine after they removed it?
3. Why **were** inspections more difficult in the past according to the text?

4. WRITING: A PAST MAINTENANCE EVENT

ACTIVITY 5: INCIDENT REPORT

Write a short report (70-90 words) about a real or fictional flight or maintenance event.

- Use at least **four regular verbs** in the past.
- Use at least **three irregular verbs** in the past.
- Mention the **date** and the **aircraft parts** involved.

5. INTERACTION: INTERVIEWING A SENIOR ENGINEER

ACTIVITY 6: INTERVIEWING

Interview a Senior Engineer about his/her work mission. Be ready to share the answers in class

1. **Where did** you **go** for your last inspection?
2. **Did** you **see** any faulty components?
3. **What** tools **did** you **use** to fix the problem?
4. **How did** you **feel** when you finished the job?

6. CHAPTER’S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER VI: AIRCRAFT INVENTORY AND SPARE PARTS MANAGEMENT

In this chapter, we explore how to manage materials in the hangar and the warehouse. We will learn to describe availability using **There is / There are**, identify **Countable** and **Uncountable nouns**, and specify quantities with **Quantifiers**.

1. TECHNICAL VOCABULARY: THE WAREHOUSE

ACTIVITY 1: VOCABULARY MATCHING

- Consumables
- Fasteners
- Inventory
- Lead Time
- Sealant
- Spare Parts
- Stockroom



2. GRAMMAR: THERE IS & THERE ARE

We use **There is** and **There are** to express existence (what is present in the hangar).

FORM	SINGULAR (THERE IS)	PLURAL (THERE ARE)
Positive (+)	There is a turbine on the stand.	There are ten rivets in the bin.
Negative (-)	There isn't a manual here.	There aren't any spare tires.
Question (?)	Is there a supervisor?	Are there any tools available?

ACTIVITY 2: FILL IN THE BLANKS

Complete using “There is”, “There are”, “There isn’t”, or “There aren’t”:

1. (+) _____ a fire extinguisher near the door.
2. (-) _____ any airplanes in the hangar today.
3. (?) _____ a technician available for the inspection?
4. (+) _____ three engines waiting for repair.

3. GRAMMAR: COUNTABLE & UNCOUNTABLE NOUNS

TYPE	DEFINITION	EXAMPLES
Countable	Things we can count individually. They have singular and plural forms.	1 bolt, 2 bolts, 3 wings, 5 pilots.
Uncountable	Things we cannot count individually (liquids, gases, abstract concepts).	Fuel, oil, air, information, grease.

ACTIVITY 3: CLASSIFICATION

Write (C) for Countable and (U) for Uncountable:

1. Rivet: ____
2. Hydraulic Fluid: ____
3. Engine: ____
4. Electricity: ____
5. Tool: ____
6. Air: ____

4. GRAMMAR PART C: QUANTIFIERS

Quantifiers tell us “how much” or “how many”.

QUANTIFIER	USAGE	EXAMPLE
Some	Positive sentences (C & U)	There is some fuel in the tank.
Any	Negative and Questions (C & U)	Are there any spare parts?
Many	Large quantities (Countable)	There are many rivets in the box.
Much	Large quantities (Uncountable)	There isn't much oil left.
A few	Small quantities (Countable)	I have a few screws here.
A little	Small quantities (Uncountable)	We need a little sealant.

ACTIVITY 4: CHOOSE THE CORRECT QUANTIFIER

1. We don't have (much / many) batteries in stock.
2. Is there (any / some) grease for the landing gear?
3. There are (a few / a little) technicians in the office.
4. There is (a little / many) water on the hangar floor.

5. READING:

THE INVENTORY CHALLENGE

The **warehouse manager** at AeroLogic performs a weekly **inventory**. In the **stockroom**, **there is a lot of** work because the airline has many flights **scheduled**. Currently, **there are some** critical components in the warehouse, but **there aren't many** **spare tires** for the Boeing 737. This is a problem because the **lead time** for tires is usually one week.

In the **chemicals** section, **there is much** **hydraulic fluid**, but **there isn't any** **anti-corrosion** spray left. The manager checks the **fasteners** and finds that **there are many** **rivets** in **Bin A**, but only **a few** **bolts** in **Bin B**. He needs to order more bolts immediately to finish the wing **repair project**.

Regarding consumables, **there is a little** **grease** and **some** **cleaning rags** on the **shelf**. The supervisor asks, “**Are there any** safety **wires** available?” The assistant answers that **there are** two boxes in the back. **Proper** organization is important because **there is much** expensive **equipment** in this area.

Technicians often ask, “**Is there any** specific **tool** for the **turbine**?” The digital system shows that **there are** three **torque wrenches available**. However, **there isn't much** time to **calibrate** them before the next shift. Efficiency is the goal to avoid **delays** in the maintenance schedule.

Finally, the report shows **that there are a few** **missing items** from the emergency kit. The manager notes that **there isn't much** information about the last **shipment**. He prepares a new order because **there is** a strict safety protocol to follow in every international hangar.

ACTIVITY 5: READING COMPREHENSION

A. Multiple Choice

1. Why is the lack of tires a problem?
 - a) Because there is no space.
 - b) Because the lead time is one week.
2. How many torque wrenches are available?
 - a) Three.
 - b) A few.
 - c) None.

B. Questions:

1. What is the status of the anti-corrosion spray in the warehouse?
2. What does the manager need to order immediately and why?

6. WRITING: INVENTORY REPORT

ACTIVITY 6: HANGAR DESCRIPTION

Write a report (80-100 words) describing the inventory of your ideal hangar.

- Use **There is / There are** (positive and negative).
- Use at least **four quantifiers** (some, any, many, much, a few, a little).
- Mention at least **four technical items** (parts or liquids).

7. INTERACTION: INVENTORY

ACTIVITY 7: ROLE PLAY

Check the inventory list and practice with a partner, asking questions using there is, there are, and quantifiers

CATEGORY	ITEM NAME	QUANTITY STATUS	EXACT UNITS (REF)
Chemicals	Hydraulic Fluid (Skydrol)	Low	2 Liters
Chemicals	Aircraft Fuel (Jet A-1)	High	5,000 Gallons
Chemicals	Engine Oil	Empty	0 Quarts
Fasteners	Titanium Bolts (Grade 5)	Sufficient	450 Units
Fasteners	Rivets (Countersunk)	Abundant	2,500 Units
Consumables	Sandpaper (Grit 400)	Very Low	3 Sheets
Consumables	Cleaning Rags	High	200 Units
Safety Gear	Life Vests	Sufficient	50 Units
Safety Gear	Fire Extinguishers	Low	1 Unit

8. CHAPTER’S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER VII: CURRENT OPERATIONS AND PROFESSIONAL TRAINING

In this chapter, we will talk about what is happening in the hangar right now. We will describe our current maintenance tasks, our studies, and the equipment we possess.

1. TECHNICAL VOCABULARY: ACTIONS AND TRAINING

ACTIVITY 1:

Use the key vocabulary list and hints to find the words in the word search puzzle.

Key Vocabulary List:

- **Over**____: Doing a complete inspection and repair of an engine or component.
- **Trouble**____: Finding the cause of a technical problem.
- **Appren**____: A period of training to learn the trade from an expert.
- **Cali**____: Adjusting a tool or instrument for accuracy.
- **Work**____: A place or meeting for practical technical training.
- **Up**____: Improving a system or part to a newer version.



2. GRAMMAR: PRESENT PROGRESSIVE

We use the **Present Progressive** to describe actions happening **now** or temporary activities (like a current course).

FORM	STRUCTURE	EXAMPLE
Positive (+)	Subject + am/is/are + verb-ing	I am repairing the wing.
Negative (-)	Subject + am/is/are + not + verb-ing	They aren't working on the engine.
Question (?)	Am/Is/Are + Subject + verb-ing?	Is he studying for the FAA exam?

ACTIVITY 2: WHAT ARE THEY DOING?

Complete with the correct form of the Present Progressive:

1. Right now, the lead technician _____ (inspect) the fuselage.
2. We _____ (not / use) the hydraulic lift at the moment.
3. _____ (you / attend) the workshop on composite materials this week?
4. I _____ (study) avionics systems this semester.

3. GRAMMAR: HAVE GOT

In British English and technical contexts, **Have got** is very common to express possession of tools, parts, or qualifications. It is equivalent to "Have".

FORM	SINGULAR (HE/SHE/IT)	PLURAL (I/YOU/WE/THEY)
Positive (+)	He has got a license.	We have got new sensors.
Negative (-)	She hasn't got the tool.	I haven't got much time.
Question (?)	Has it got a leak?	Have you got the manual?

ACTIVITY 3: POSSESSION IN THE HANGAR

Rewrite the sentences using "Have got":

1. I have a specialized screwdriver. → _____
2. The plane doesn't have fuel. → _____
3. Do you have the safety certificate? → _____

4. GRAMMAR: OBJECT PRONOUNS - COMPLETE

Object pronouns replace a noun that receives an action. They are essential to avoid repetition.

Subject	I	You	He	She	It	We	They
Object	Me		Him			Us	

ACTIVITY 3: POSSESSION IN THE HANGAR

Rewrite the sentences using "Have got":

1. I am checking the engine. → I am checking _____.
2. Please, give the wrench to the mechanic (male). → Give the wrench to _____.
3. The supervisor is training my colleague and me. → He is training _____.
4. We are testing the new batteries. → We are testing _____.

5. READING:

A BUSY DAY AT THE TRAINING HANGAR

Today is a very busy day at the AeroTech Academy. I am an *apprentice*, and **I am currently working** with my instructor, Mr. Miller. **We are performing** a major inspection on a Cessna 172. At this moment, **Mr. Miller is explaining** the *ignition system* to me. He is very patient, and **I am learning** a lot from *him*. We **have got** all the necessary tools on our *workbench*, so we don't need to go to the *stockroom*.

In the other corner of the hangar, **two senior technicians are troubleshooting** an *avionics* fault. **They are using** a digital *multimeter* to test the circuits. I can see **them** through the window; **they are looking** at the *wiring diagrams* on their tablets. They **haven't got** the *replacement* parts yet, so they are waiting for the *courier*. The supervisor **is talking** to **them** about the *delivery* time.

Meanwhile, **my classmates are attending** a specialized *workshop*. **They are studying** the new safety regulations for 2024. **The instructor is showing us** (the students) some videos about emergency *procedures*. We **haven't got** our final certificates yet, but **we are working** hard to pass the exam next month. *Training* is constant in this industry because **technology is always changing**.

I am also doing an online course about *composite materials*. It is a bit difficult, but **I am enjoying it**. My friend **Sarah is helping me** with the math calculations. She **has got** a lot of experience in *structural repairs*. Right now, **she is repairing** a small *crack* in a carbon fiber panel. **She is using** a *vacuum bag system* to cure the *resin*.

Finally, **the logistics team is upgrading** the hangar's software. **They are installing it** on all the computers. We **have got** a new *server*, so **the system is running** much faster now. It is a very *dynamic environment* where everyone is active and specialized. **We are not just working; we are building** our professional future in aviation.

ACTIVITY 5: READING COMPREHENSION

A. Multiple Choice

1. What is the narrator doing with Mr. Miller?
 - a) Upgrading software.
 - b) Inspecting a Cessna 172.
 - c) Taking an exam.
2. Why are the senior technicians waiting?
 - a) For the supervisor.
 - b) For the multimeter.
 - c) For replacement parts.
3. What is Sarah doing right now?
 - a) Studying math.
 - b) Repairing a carbon fiber panel.
 - c) Calibrating tools.

B. Questions:

1. Why is training constant in the aviation industry according to the text?
2. What equipment has the logistics team got now?

6. WRITING: MY CURRENT ROUTINE

ACTIVITY 6: PROFESSIONAL PROFILE

Write a paragraph (80-100 words) about your current studies or work.

- Use the **Present Progressive** for your current tasks.
- Use **Have got** to describe your skills or qualifications.
- Use at least **two object pronouns**.

6. WRITING: MY CURRENT ROUTINE

With a partner, simulate a conversation in the hangar. (5 lines conversation) use present progressive and technical vocabulary

- **Student A:** You are the supervisor. Ask your partner about the current activities
- **Student B:** You are the technician. Answer the question

8. CHAPTER'S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER VIII:

AIRCRAFT PERFORMANCE AND CAREER PATHS

In this chapter, we will learn how to compare different aircraft, discuss job responsibilities, and identify the most efficient technologies in aviation.

1. TECHNICAL VOCABULARY: PERFORMANCE & SPECS

To compare aircraft, we need adjectives and technical nouns related to their specifications.

Key Vocabulary List:

- **Fuel-efficient:** Using less fuel to travel the same distance.
- **Payload:** The total weight of passengers and cargo an aircraft can carry.
- **Wingspan:** The distance from one wingtip to the other.
- **Range:** The maximum distance an aircraft can fly without refueling.
- **Service Ceiling:** The maximum altitude an aircraft can reach.
- **Reliable:** Something you can trust to work correctly (consistent performance).

ACTIVITY 1: VOCABULARY SCRAMBLE

Unscramble the technical words:

1. **G E R A N:** _____ (The distance capability)
2. **D A O L Y A P:** _____ (The carrying capacity)
3. **B L E I A L E R:** _____ (Consistent and safe)
4. **N A P S G N I W:** _____ (The width of the wings)

2. GRAMMAR PART A: COMPARATIVES

We use **comparative adjectives** to compare two people, jobs, places or things.

ADJECTIVE TYPE	RULE	EXAMPLE
Short (1 syllable)	Add -er	The Boeing 747 is bigger than the 737.
Short ending in -y	Change -y to -ier	This engine is heavier than the old one.
Long (2+ syllables)	Use more	Avionics are more expensive than hardware.
Irregular	Special forms	Better (good), Worse (bad), Farther (far).

ACTIVITY 2: COMPARISON CHECK

Write the comparative form of the adjectives in brackets:

1. A turbofan engine is _____ (quiet) than a turbojet.
2. Working as a pilot is _____ (stressful) than working in logistics.
3. Composite materials are _____ (light) than aluminum.
4. Newer models are _____ (good) than older ones for the environment.

3. GRAMMAR PART B: SUPERLATIVES

We use **superlative adjectives** to compare one thing against a whole group (3 or more).

ADJECTIVE TYPE	RULE	EXAMPLE
Short (1 syllable)	The + -est	The Antonov 225 was the largest plane.
Short ending in -y	The + -iest	Monday is the busiest day in the hangar.
Long (2+ syllables)	The + most	Safety is the most important factor.
Irregular	Special forms	The best (good), The worst (bad).

ACTIVITY 3: THE BEST IN THE HANGAR

Choose the correct superlative form:

1. The Airbus A350 is one of the _____ (most fuel-efficient / fuel-efficientest) planes.
2. Troubleshooting is the _____ (difficullest / most difficult) task for apprentices.
3. The _____ (fastest / most fast) aircraft in the world is the SR-71.
4. In my opinion, being a technician is the _____ (better / best) job in aviation.

4. READING:

COMPARING THE FLEET AND THE TEAM

AeroLogic is **currently** updating its **fleet**. We are comparing the Boeing 787 Dreamliner with our older 767 models. The 787 is **faster** and **more efficient** than the 767. Its **range** is also **farther**, **allowing** us to fly directly to Asia. However, the 787 is **more expensive** to maintain because its technology is **more complex**. For our company, the Dreamliner is the **best investment** for **long-haul** flights.

Regarding our **staff**, we have different roles with different **requirements**. Mechanics have a **heavier** physical **workload** than flight **dispatchers**. However, dispatchers often have a **busier** schedule during **peak hours**. In the maintenance department, the lead engineer is the **most experienced** person in the team. He **handles** the **most critical** repairs, while the apprentices handle the **simpler** tasks.

When we talk about airports, London Heathrow is **larger** than Gatwick, but Gatwick is sometimes **noisier** because it is closer to residential areas. For pilots, landing at high-altitude airports is **more challenging** than landing at **sea-level** airports. The **highest service ceiling** for most commercial jets is around 43,000 feet, which is **higher** than the **altitude** of Mount Everest.

In terms of study paths, **the A&P** (Airframe and Powerplant) license is **longer** and **more difficult** to obtain than a basic technician certificate. It is the **most prestigious qualification** for a mechanic in the United States. Students say that the electronics module is the **hardest** part of the course, but it is also the **most interesting** section for those who love technology.

Finally, we are looking at the future of aviation. Electric planes are **cleaner** than traditional ones, but their batteries are currently **too heavy**. Engineers are working to find the **lightest** and **most powerful** energy source. The goal is to create the **fastest zero-emission** aircraft in history. Innovation is the **most exciting** part of being an aeronautical professional today.

ACTIVITY 4: READING COMPREHENSION

A. Multiple Choice

1. Why is the Boeing 787 more expensive to maintain?
 - a) Because it is slower.
 - b) Because its technology is more complex.
 - c) Because it is smaller.

2. Which job is described as the “most prestigious” for US mechanics?
 - a) Dispatcher.
 - b) Flight Pilot.
 - c) A&P License.

3. What is the main problem with current electric planes?
 - a) They are too noisy.
 - b) Their batteries are too heavy.
 - c) They are too small.

B. Questions:

1. Compare the workload of a mechanic and a flight dispatcher according to the text.
2. What is the “hardest” part of the aviation course for many students?

5. WRITING: AIRCRAFT COMPARISON

ACTIVITY 5: TECH COMPARISON REPORT

Compare two things in aviation (e.g., Two types of planes, two tools, or two jobs). Write 80-100 words.

- Use at least **3 comparatives** and **2 superlatives**.
- Use technical vocabulary

6. INTERACTION: THE CAREER DEBATE

ROLE PLAY / DISCUSSION:

In pairs, discuss which job in aviation is the best.

- **Student A:** Argues that being a **Pilot** is better (higher salary, travel, prestige).
- **Student B:** Argues that being a **Maintenance Engineer** is better (more stability, hands-on work, critical for safety).

Use *phrases like*: “I think being a pilot is **more exciting** because...”, “Yes, but engineers are **more important** for safety...”

6. CHAPTER’S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER IX: LOGISTICS, SUPPLY CHAIN, AND FUTURE INTENTIONS

In this chapter, we will focus on managing technical resources, ordering parts, and discussing future supply strategies using different future tenses.

1. TECHNICAL VOCABULARY: LOGISTICS & SUPPLY CHAIN

ACTIVITY 1: MATCHING THE VOCABULARY LIST

Lead Time	The complete list of items or parts in stock.
Backorder	A code used to follow the progress of a shipment.
Inventory	The time between placing an order and receiving it.
Consumables:	The company that sells the parts to the airline.
Tracking Number:	An order for a part that is temporarily out of stock.
Supplier / Vendor:	Items that are used once and replaced (oil, filters, sealants).

ACTIVITY 2: LOGISTICS LOGIC

Complete the sentences with the correct term from preview list:

1. We cannot change the oil because the filters are on _____; the factory is closed.
2. The _____ for the new landing gear is six weeks, so order it today!
3. I am checking the _____ to see if we have enough hydraulic fluid for the week.
4. Please send me the _____ so I can see where the engine parts are right now.

2. GRAMMAR: FUTURE FORMS REVIEW

FORM	TECHNICAL CONTEXT	EXAMPLE
Present Progressive	Meetings and shipments already scheduled.	We are receiving the shipment tomorrow at 08:00.
Be going to	Intentions or plans.	The manager is going to order more consumables soon.
Will / Won't	Predictions or actions at the moment.	I think the parts will arrive late because of the storm.

ACTIVITY 3: FUTURE IN THE WAREHOUSE

Fill in the blanks with the most appropriate future form:

1. (Arrangement) I _____ (meet) the supplier representative this afternoon at 2 PM.
2. (Prediction) Computers _____ (manage) all inventory automatically in five years.
3. (Intention) We _____ (clean) the entire storage area next Saturday.
4. (Spontaneous Decision) There is no oil! I _____ (call) the logistics department now.

3. GRAMMAR: SUGGESTIONS FOR LOGISTICS PROBLEMS

When parts are missing, we must suggest alternatives.

Useful Structures:

- **Why don't we** borrow the part from another hangar?
- **Let's** check the inventory one more time.
- **What about** using a different supplier for the filters?

ACTIVITY 4: PROBLEM & SUGGESTION

Write a suggestion for each problem:

1. **Problem:** We don't have enough sealant for the wing repair.
Suggestion: _____
2. **Problem:** The tracking number says the parts are in another country.
Suggestion: _____

4. READING:

THE GLOBAL SUPPLY CHALLENGE

Next month, AeroLogic **is going** to implement a new "*Just-in-Time*" logistics strategy. **We are changing** the way we store our consumables to save space in the hangar. **The logistics director is visiting** our facility on Tuesday to explain the new rules. We are preparing a presentation for him about our current inventory levels. I think this new system will make our work much faster and more organized.

However, we are currently facing some difficulties with our international vendors. Many specialized sensors are on *backorder*, and the lead time is increasing every week. **I am going** to contact a local *supplier* tomorrow to see if they have alternative parts. I am sure they **will help** us because we have a good professional relationship. If we don't get the sensors, we **will have** to *ground* two aircraft next weekend.

Regarding the new hangar construction, the **contractors are finishing** the *roof* this week. **We are moving** all the heavy machinery to the new location on June 15th. **I am going** to supervise the transport personally to *avoid* any *damage*. We have already rented special **trucks** for the move.

Predictions for the future of aviation logistics are very interesting. Experts say that 3D printing **will revolutionize** the industry. In the future, **we won't** wait for *shipments*; **we are going** to print small plastic and metal parts directly in the hangar. This technology **will reduce** the need for large *warehouses*. Our company is already testing a small 3D printer.

Finally, **why don't we** organize a training session for the new tracking software? Most technicians don't know how to use it yet. **Let's** ask the *IT department* to help us on Thursday morning. **I'm going** to send an email to everyone today to confirm the time. I think the team **will find** the new software very *useful*.

ACTIVITY 5: READING COMPREHENSION

A. Multiple Choice

1. What is the company moving on June 15th?
 - a) Small consumables.
 - b) Heavy machinery.
 - c) 3D printers.

2. What is the potential consequence of not getting the sensors?

- a) Printing them.
- b) Grounding aircraft.
- c) Moving to a new hangar.

3. What is the narrator's suggestion at the end?

- a) Buying more oil.
- b) Training for new software.
- c) Calling the vendors.

B. Questions:

1. How will 3D printing change the work in the hangar according to the text?
2. Why is the narrator contacting a local supplier tomorrow?

5. WRITING: SUPPLY REQUEST

ACTIVITY 6: INTERNAL MEMO

Write a short memo (80-100 words) to the Logistics Department.

- Explain that you are going to start a major inspection next week.
- Mention a specific part you need and your prediction about when you will need it.
- Make a suggestion about how to get the parts faster.

6. SPEAKING: SOLVE THE SHORTAGE

INTERACTION ACTIVITY:

Your team is repairing an engine, but you discover that the main gasket is broken and there are no replacements in the inventory.

- **Student A (Technician):** Explain the problem. Suggest calling another airline or checking the old stock.
- **Student B (Supervisor):** Respond to suggestions. Talk about your plans to solve the problem and make predictions about the delay.

Use: "We haven't got any...", "Why don't we...?", "I am going to...", "It will probably take..."

6. CHAPTER’S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER X: SAFETY PROTOCOLS AND FUTURE CONSEQUENCES

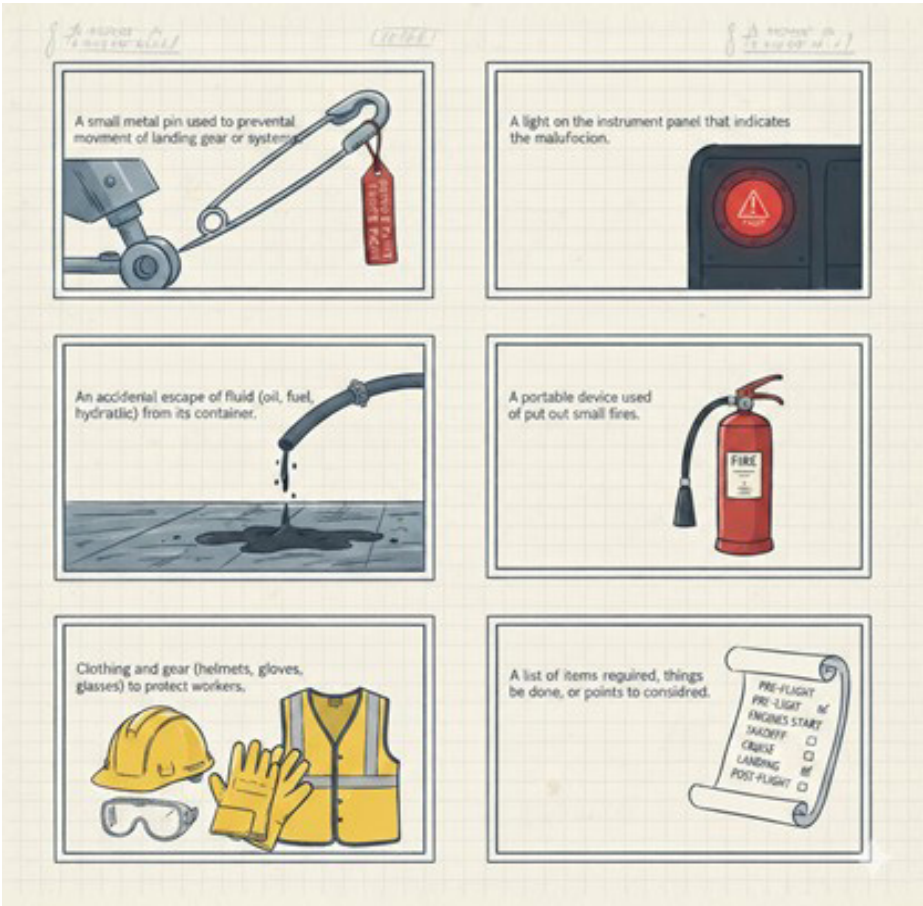
In this chapter, we will learn how to discuss safety procedures, give professional advice, and predict consequences using the First Conditional.

1. TECHNICAL VOCABULARY: SAFETY & EMERGENCIES

ACTIVITY 1: MATCH THE WORD WITH THE PICTURE

Key Vocabulary List:

- PPE (Personal Protective Equipment)
- Warning Light
- Safety Pin
- Checklist
- Fire Extinguisher
- Leakage



Match the problem with the correct safety tool:

There is smoke in the cabin.	a. Use the Checklist.
The technician is working with chemicals.	b. Use a Fire Extinguisher.
You need to verify all steps of a repair.	c. Check for Leakage
Consumables:	d. Wear PPE.

2. GRAMMAR: THE FIRST CONDITIONAL (REAL POSSIBILITIES)

We use the First Conditional to talk about things that are likely to happen in the future as a result of a specific condition.

CONDITION (IF + PRESENT SIMPLE)	RESULT (WILL + VERB)
If you follow the manual,	you will complete the task safely.
If there is a fuel leak,	the captain won't start the engines.
If the warning light turns red,	will you stop the test?

Note: You can also use **should** for advice in the result part:

Example: "If you see a spark, you **should** notify the supervisor."

ACTIVITY 2: ACTION AND CONSEQUENCE

Complete the sentences using the First Conditional:

1. If the technician _____ (not/wear) gloves, he _____ (get) a chemical burn.
2. The plane _____ (not/take off) if the weather _____ (be) too stormy.
3. If we _____ (find) any corrosion, we _____ (replace) the panel immediately.
4. What _____ you _____ (do) if the battery _____ (fail) during flight?

3. READING:

SAFETY FIRST IN THE HANGAR – UNDERLINE THE UNKNOWN TECHNICAL VOCABULARY

Safety is the most critical aspect of aeronautical maintenance. If we ignore a small mistake today, it will cause a major accident in the future. Every technician must follow the safety protocols strictly. For example, if you work near the engines, you must wear hearing protection. If you don't use your PPE, you will damage your health and the company will face legal problems.

Regular inspections are essential to prevent emergencies. If a mechanic identifies a hydraulic leakage during a routine check, he must report it before the next flight. If the fluid level is too low, the landing gear will not extend correctly. We always say: if you are in doubt about a component's condition, you should ask a senior engineer for advice.

Finally, fire prevention is a priority in the hangar. If a technician smokes near the fuel tanks, the risk of explosion will be extremely high. If an electrical fire starts, you should use a CO2 extinguisher, not water. If everyone follows these simple rules, the workplace will remain safe for the entire team.

Remember: if we work together, we will reach our goal of zero accidents.

ACTIVITY 3: READING COMPREHENSION

Answer the following questions based on the text using complete sentences:

1. What is the long-term consequence of ignoring a minor technical error today?
2. In which specific situation is it mandatory to wear hearing protection according to the text?
3. What will happen to the aircraft's landing gear if the hydraulic fluid levels are insufficient?
4. What professional advice does the text give for technicians who are unsure about a part's condition?
5. Why is using water to extinguish an electrical fire considered a mistake?

ACTIVITY 4: WARNING INSTRUCTIONS

- Use at least **three First Conditional sentences**.
- Give advice using **“should”**.
- Include vocabulary like *PPE*, *warning lights*, or *leakage*.

[illegible]

INTERACTION ACTIVITY:

- **Student A (Inspector):** Point out problems (e.g., a technician without a helmet, a tool on the floor, an open fuel container). Use: “If someone trips on this tool, they will...”
- **Student B (Hangar Manager):** Explain the consequence and give a solution/advice. Use: “You are right. If we don’t clean this, we will...”

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6. CHAPTER’S NOTES AND NEW VOCABULARY:
VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes



SECCION II

**PROFESSIONAL COMMUNICATION
AND LANGUAGE SKILLS**

CHAPTER 1:

PROFESSIONAL PROFILES AND OPERATIONAL NEEDS

In this chapter, you will learn how to introduce yourself in a professional aeronautical context and explain the requirements and motivations behind technical decisions.

1. TECHNICAL VOCABULARY: PROFESSIONAL ROLES & REQUIREMENTS.

Key Vocabulary List:

- **Airworthiness:** The measure of an aircraft's suitability for safe flight.
- **Compliance:** Meeting the rules and regulations set by aviation authorities (like FAA or EASA).
- **Troubleshooting:** The process of identifying and fixing technical problems.
- **Overhaul:** A comprehensive inspection and repair of an aircraft component to "as new" condition.
- **Upgrade:** To improve a system or part by replacing it with a newer version.

ACTIVITY 1: VOCABULARY IN CONTEXT

Complete the sentences using the words above:

1. Our airline needs to perform a complete engine _____ after 3,000 flight hours.
2. The technician is _____ the avionics system because the display is flickering.
3. We must ensure full _____ with the new safety directives issued this month.
4. The aircraft cannot leave the hangar until the engineer signs the certificate of _____.

2. GRAMMAR: EXPRESSING NEEDS, WANTS, AND REASONS

To communicate effectively as an engineer, you must distinguish between personal desires (*wants*) and technical requirements (*needs*).

STRUCTURE	USE	EXAMPLE
Need + to / Need + noun	Technical requirements or obligations.	We need to replace the brake pads.
Want + to / Want + noun	Intentions, goals, or preferences.	I want to specialize in composite materials.
Because / In order to	Giving reasons or explaining purposes.	We use titanium because it is corrosion-resistant.

Grammar Tip: Use "In order to" followed by a verb to express a professional purpose.

Example: "We are testing the sensors **in order to** verify the signal accuracy"

ACTIVITY 2: GRAMMAR PRACTICE

Rewrite the sentences using the word in brackets:

1. It is necessary to calibrate the radar. (Need)
2. My goal is to work for a major international airline. (Want)
3. The team is checking the landing gear. They want to find the leak. (In order to)
4. The supervisor is angry. The report is late. (Because)

3. READING:

THE ENGINEER'S PERSPECTIVE

My name is Elena, and I am a Senior Aeronautical Engineer specializing in propulsion systems. I currently lead a team of fifteen technicians at the maintenance hub. In my daily work, I need to ensure that every engine overhaul meets the highest safety standards. I want to improve our department's efficiency by implementing automated diagnostics, but this requires a significant investment in new hardware.

We are currently focusing on the new fleet of Neo aircraft. We need to monitor the thermal performance of the turbines closely because these engines operate at much higher temperatures than older models. I want my team to attend a specialized training course in France next month in order to master the new maintenance software. Most of the technicians are excited about this opportunity because they want to advance in their professional careers.

However, logistics can be difficult. We need a larger inventory of specialized tools in the hangar to reduce the aircraft turnaround time. I am meeting with the procurement manager today because I want to explain why we need to increase our annual budget. In order to maintain our airworthiness certification, we cannot compromise on the quality of our spare parts or our training protocols.

ACTIVITY 3: READING COMPREHENSION

A. Answer the following questions:

1. What is Elena's professional specialization and what is her current goal for the department?
2. Why is it necessary to monitor the thermal performance of the Neo aircraft turbines?
3. For what specific reason does Elena want her team to travel to France?
4. What does the department need in order to reduce the time an aircraft spends in the hangar?
5. According to the text, why can't the company compromise on the quality of parts?

4. WRITING: PROFESSIONAL INTRODUCTION & NEEDS

ACTIVITY 4: CAREER PROFILE

Write a professional introduction about yourself (100-120 words). You must include:

- Your name, current role, or the role you **want** to have.
- Two things you **need** to do in your daily work or studies.
- Reasons for your technical decisions using “**because**” and “**in order to**”.

5. CHAPTER’S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER 2: AVIATION PASSIONS AND CAREER PATHS

In this chapter, we will review how to describe your professional background, your current projects, and how your personal interests influenced your career in aeronautics.

1. TECHNICAL VOCABULARY: EVOLUTION & ENGAGEMENT

Key Vocabulary List:

- **Apprenticeship:** A period of time working for an expert to learn technical skills.
- **Flight Sim (Flight Simulator):** Software or hardware that replicates the experience of flying.
- **Hands-on experience:** Practical knowledge gained by doing something rather than just reading about it.
- **Aeronautical Modeling:** The hobby of building and flying scale models of aircraft.
- **To pursue:** To follow or try to achieve a professional goal over a period of time.

ACTIVITY 1: VOCABULARY MATCH

Match the word with its definition:

Apprenticeship	a. Practical, physical work with tools and engines.
Flight Sim	b. Building small-scale versions of planes.
Hands-on	c. A training program for young technicians.
Modeling :	d. A virtual environment for pilot training.

2. GRAMMAR REVIEW: TENSE CONTRAST

To tell your story, you need to move between the past, the present habit, and the present action.

TENSE	FUNCTION	KEY INDICATORS	EXAMPLE
Past Simple	Finished past events (How it started).	Yesterday, in 2015, ago.	I built my first model engine in 2010.
Present Simple	Habits and permanent technical facts.	Always, usually, every day.	The airline inspected engines every month.
Present Progressive	Actions happening right now or temporary.	Currently, at the moment.	We are upgrading the hangar lights this week.

ACTIVITY 2: TENSE TRANSFORMATION

Put the verbs in the correct tense:

1. When I was a child, I _____ (visit) airshows every summer with my father.
2. Currently, the engineering team _____ (evaluate) the performance of the new winglets.
3. Every morning, the lead technician _____ (check) the tool inventory before starting work.
4. I _____ (start) my career in maintenance five years ago as an apprentice.

3. READING: FROM HOBBY TO PROFESSION

Many engineers started their journey with a simple interest in mechanics. For example, Mark, a structural engineer, always loved building things. When he was a teenager, he **spent** most of his free time constructing complex aeronautical models. This hobby **helped** him understand the basics of aerodynamics and structural integrity before he **entered** university. He says that playing with simulators **was** the reason he **chose** this difficult path.

Today, Mark **is working** for a leading aerospace company. He **is currently managing** a project to design lighter fuselage sections for cargo planes. His typical day **starts** at 8:00 AM with a technical briefing. Although he is a professional now, he still **enjoys** aviation in his free time. On weekends, he usually **attends** local flying club meetings or **practices** on his high-end flight simulator at home.

The transition from a hobbyist to a professional requires constant learning. At the moment, Mark **is studying** for a certification in advanced composite materials. He **believes** that his early interest in modeling **gives** him a better “hands-on” perspective than colleagues who only studied theory. His passion for aviation **is growing** every day because he **combines** his technical job with the activities he loves.

ACTIVITY 3: READING COMPREHENSION

A. Answer the following questions:

1. How did Mark’s childhood hobby help him in his future university studies?
2. What specific project is Mark leading at his company right now?
3. Describe Mark’s typical weekend activities related to aviation.
4. Why does Mark think he has an advantage over colleagues who only studied theory?
5. What is Mark currently doing to improve his professional qualifications?

4. WRITING: MY AVIATION STORY

ACTIVITY 4: NARRATIVE ESSAY

Write a short text (100-120 words) about your interest in aviation.

- Paragraph 1: How did your interest start? (Use **Past Simple**).
- Paragraph 2: What are you doing now in your studies or work? (Use **Present Simple/Progressive**).
- Paragraph 3: What do you do in your free time related to your career?

Interview a senior Engineer in English about his/her background (at least 5 questions)
“When did you start...?”, “What are you doing currently?”, “How do you spend your free time?” etc.

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VOCABULARY LIST

[illegible]

Notes

CHAPTER 3: PROFESSIONAL EXPERIENCE AND CAREER OPPORTUNITIES

In this chapter, you will learn how to describe your technical background, talk about your professional achievements, and prepare your profile for job agencies in the aviation sector.

1. TECHNICAL VOCABULARY: EVOLUTION & ENGAGEMENT

Key Vocabulary List:

- **License / Rating:** An official document authorizing a person to perform specific maintenance tasks (e.g., A&P License, B1/B2 Rating).
- **Internship:** A temporary position at a company for a student or graduate to gain initial experience.
- **Skill set:** The range of abilities and knowledge a person possesses.
- **Proficiency:** A high degree of skill or expertise in a specific area.
- **Candidate:** A person who applies for a job or is nominated for a position.
- **Background:** A person's past experience, education, and knowledge.

ACTIVITY 1: RECRUITMENT CROSSWORD (VOCABULARY DEFINITIONS)

Complete the sentences with the correct term:

1. I have just completed a six-month _____ at the airport's avionics lab.
2. The airline is looking for a _____ with a valid B1.1 engine rating.
3. To work on the Boeing 787, you need a high _____ in composite materials.
4. My technical _____ includes five years of troubleshooting hydraulic systems.

2. GRAMMAR A: PRESENT PERFECT STRUCTURE

The Present Perfect connects the past with the present. It is formed using the auxiliary verb **have/has** + the **past participle** of the main verb. It is also used to talk about experience for first time

SENTENCE TYPE	STRUCTURE	TECHNICAL EXAMPLE
Positive	Subj + have/has + Past Participle	I have updated the maintenance log.
Negative	Subj + haven't/hasn't + Past Participle	The technician hasn't signed the release.
Yes/No Q	Have/Has + Subj + Past Participle?	Have you checked the landing gear?
Wh- Q	Wh- + have/has + Subj + Past Participle?	Where have they stored the spare parts?

ACTIVITY 2: STRUCTURE DRILL

Change the sentences according to the instructions in brackets:

1. We have replaced the fuel filters. (Change to Negative)
2. She has finished the inspection. (Change to Yes/No Question)
3. The engineers have repaired the fuselage. (Change to Wh- Question with "What")
4. You haven't sent the CV yet. (Change to Positive)

I have worked as a recruitment consultant for five years, and I have seen how the market has changed since the pandemic. For example, many airlines have just introduced new environmental protocols. Consequently, engineers who have experience with electric propulsion or sustainable fuels have a better chance of being hired. We have already interviewed fifty candidates this month, but we haven't found a specialist in hybrid systems yet.

A typical successful candidate has completed several internships before applying for a permanent role. I have just met a young engineer from Spain who has lived in three different countries in order to gain international experience. He has practiced troubleshooting in different environments since he graduated in 2021. His skill set is very impressive because he has worked with both Boeing and Airbus fleets for short periods.

Applying for a job today is different than in the past. Agencies have developed online platforms where you can upload your license and ratings. I have already recommended twenty technicians for the new hangar project in Dubai. However, some applicants still haven't finished their English proficiency tests. Remember, if you haven't passed the technical English exam, most agencies will not accept your application even if you have a great background.

ACTIVITY 4: READING COMPREHENSION

A. Answer the following questions:

1. Why are international job agencies looking for talent in different regions?
2. What specific type of experience makes an engineer more "hirable" today according to the text?
3. How long has the consultant worked in recruitment and what change has she observed?

B. Answer the following multiple-choice questions:

1. Has the agency found a specialist in hybrid systems?
a) Yes, they found one recently. b) No, not yet. c) They aren't looking for one.
2. What is the most common reason for an agency to reject an application despite a good background?
a) Lack of international travel. b) Lack of English proficiency. c) Lack of digital profiles.

5. WRITING: THE AGENCY PROFILE

ACTIVITY 5: PROFESSIONAL SUMMARY

Imagine you are joining "AeroJobs Agency". Write a summary of your professional experience (100-120 words).

- Use **Present Perfect** structure (Positive and Negative).
- Use **at least 4 time markers** (for, since, already, just, etc.).
- Mention your **license/rating** and your **skill set**.

Work with a partner. One student is the Recruiter from an aviation agency and the other is the Candidate applying for a maintenance position. (at least 10 questions)

- Ask about the candidate's background.
- Ask if they have **already** performed specific tasks (troubleshooting, engine change, etc.).
- Ask how long they have had their license (using **for/since**).
- Ask if they have finished their English training **yet**.

- Describe your experience using “I have worked...”, “I have repaired...”.
- Use **just** to talk about your recent training or certification.
- Use **still** to explain things you haven’t finished (e.g., “I still haven’t finished my type rating on the A320”).
- Use **for** and **since** to talk about your professional history.

[illegible]

7. CHAPTER'S NOTES AND NEW VOCABULARY:

[illegible]

Notes

CHAPTER 4:

GIVING INSTRUCTIONS, SUGGESTIONS, AND OPINIONS

In this chapter, you will learn how to direct technical operations, provide safety advice, and express your professional viewpoint on maintenance procedures.

1. TECHNICAL VOCABULARY: AUTHORITY & PROCEDURES

Key Vocabulary List:

- **Mandatory:** Something that must be done; legally required.
- **Caution:** Care taken to avoid danger or mistakes.
- **Bypass:** To avoid a step or a system (often used in technical warnings).
- **Faulty:** Not working correctly; defective.
- **Precaution:** A measure taken in advance to prevent something dangerous.
- **Standard Operating Procedure (SOP):** A set of step-by-step instructions to help workers carry out complex routine operations.

ACTIVITY 1: VOCABULARY SELECTION

Choose the correct word for each maintenance scenario:

1. It is _____ to wear high-visibility vests on the ramp.
2. Never attempt to _____ a safety interlock during testing.
3. If you find a _____ sensor, you must tag it immediately.
4. Following the _____ ensures that the engine test is performed correctly.

2. GRAMMAR: OPINIONS, SUGGESTIONS, ADVICE, AND COMMANDS

In a hangar, the tone of your message depends on the situation (safety vs. casual improvement).

FUNCTION	COMMON STRUCTURES	TECHNICAL EXAMPLE
Opinions	I think..., In my opinion..., I believe...	I think the hydraulic pump is failing.
Suggestions	Why don't we...?, How about + ing...?, We could...	Why don't we check the wiring again?
Advice	You should..., You ought to..., I recommend...	You should wear ear protection near the APU.
Commands	Imperative verb (Do/Don't)	Disconnect the battery before opening the panel.

ACTIVITY 2: COMMUNICATION MATCH

Identify if the sentence is an Opinion (O), Suggestion (S), Advice (A), or Command (C):

1. [] Check the oil pressure every thirty minutes.
2. [] I believe we need to replace this bolt because of the corrosion.
3. [] You should consult the manual before adjusting the flight controls.
4. [] How about using the new torque wrench for this task?

3. READING:

THE SAFETY BRIEFING

“Good morning, team. Today we are starting the C-check on the Airbus A320. First, I have some **commands** for the junior technicians: **Clear** the work area of all unnecessary tools and **verify** the grounding cables immediately. Safety is our priority, so **do not enter** the fuel tank area without a secondary observer. These are mandatory steps to ensure a zero-accident environment during the week.

Regarding the landing gear issue, **I think** the recent delays are caused by the lack of specialized cleaning kits. **In my opinion**, the current cleaning method is not efficient enough for high-precision components. Therefore, **I suggest** that we implement a new ultrasonic cleaning station next month. **Why don't we** review the budget for this equipment in our next meeting? It could save us five hours per check.

Finally, for those working on the avionics upgrade, **I recommend** that you double-check the software version compatibility. You **should** always back up the system data before starting any upload. If you find any discrepancies, **I advise** you to stop the process and contact the manufacturer. **Don't take** risks with the flight management computer; it is better to be safe than fast”.

ACTIVITY 3: READING COMPREHENSION

1. What are the two specific commands given to the junior technicians at the beginning?
2. What is the supervisor's opinion about the current landing gear cleaning method?
3. What suggestion does the supervisor make to improve the efficiency of the C-check?
4. List two pieces of advice given to the engineers working on the avionics upgrade.
5. According to the text, what should a technician do if they find a software discrepancy?

4. WRITING: THE SAFETY MEMO

ACTIVITY 4: WRITING TASK

Write a short internal memo (100-120 words) for your team regarding a new maintenance tool or a safety concern.

- Use 1 **Command** (Imperative).
- Use 1 **Opinion** (I believe / I think).
- Use 1 **Suggestion** (How about / Why don't we).
- Use 1 **Advice** (Should / Recommend).

5. SPEAKING ACTIVITY: THE HANGAR MEETING

ROLEPLAY CONTEXT:

A technical problem has been found in the cargo door mechanism.

- **Student A (Lead Engineer):** Give commands to start the inspection and give opinions on what the problem might be.
- **Student B (Safety Officer):** Give advice on safety precautions and make suggestions on how to fix the problem faster.

Useful Phrases:

“Stop the operation!”, “I think the sensor is dirty”, “You should wear gloves”, “How about checking the actuators?”

6. CHAPTER'S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTERS 1 - 4 REVIEW QUIZ

PART 1: NEEDS, WANTS, AND REASONS

1. The engine _____ a full borescope inspection because the pilot reported a strange vibration.
 - a) wants
 - b) needs
 - c) needing
 - d) is wanting

2. The chief engineer _____ to meet with the maintenance crew to discuss the new safety protocols.
 - a) needs
 - b) is needing
 - c) wants
 - d) wanting

3. We are installing new seals _____ prevent hydraulic fluid leakage in the landing gear.
 - a) for
 - b) so
 - c) because
 - d) to

4. The cockpit windows _____ cleaning _____ the visibility is currently restricted.
 - a) want / to
 - b) need / because
 - c) needs / for
 - d) wanting / so

PART 2: PRESENT SIMPLE, PAST SIMPLE, AND PRESENT PROGRESSIVE

5. Every morning, the ground crew _____ the tire pressure on all active aircraft.
 - a) checks
 - b) is checking
 - c) checked
 - d) check

6. Look! The fuel truck _____ toward the Airbus A320 right now.
 - a) drives
 - b) is driving
 - c) drove
 - d) has driven

7. Yesterday, the technician _____ a small crack in the fuselage during the pre-flight check.
 - a) find
 - b) finds
 - c) found
 - d) is finding

8. While we _____ the avionics system, the power suddenly went out.
- a) test
 - b) tests
 - c) were testing
 - d) are testing

PART 3: PRESENT PERFECT & TIME MARKS (JUST, ALREADY, STILL, FOR, SINCE)

9. I _____ the technical manual, so I am ready to start the repair.
- a) already have read
 - b) have already read
 - c) already read
 - d) read already
10. The aircraft _____ arrived at the hangar; the doors are still opening.
- a) has just
 - b) has since
 - c) has for
 - d) has yet
11. We _____ the replacement parts _____ three weeks, and they haven't arrived yet.
- a) have waited / since
 - b) waited / for
 - c) have waited / for
 - d) are waiting / just
12. The mechanic _____ hasn't finished the electrical wiring check.
- a) already
 - b) just
 - c) still
 - d) since
13. They have worked on the turbine overhaul _____ 06:00 AM.
- a) for
 - b) since
 - c) just
 - d) already

PART 4: OPINIONS, SUGGESTIONS, ADVICE, AND COMMANDS

14. In my _____, the composite material is more durable than the old aluminum alloy.
- a) suggest
 - b) advise
 - c) opinion
 - d) command

15. I _____ that we double-check the torque values before closing the cowling.
- a) suggestion
 - b) suggest
 - c) command
 - d) advice
16. You _____ wear your safety harness whenever you are working on the stabilizer.
- a) should
 - b) want
 - c) opinion
 - d) needs
17. _____ touch that lever! The system is under high pressure.
- a) Not
 - b) Don't
 - c) Doesn't
 - d) No
18. If I were you, I _____ replace the battery instead of trying to recharge it.
- a) will
 - b) must
 - c) would
 - d) want
19. _____ the fire extinguisher near the welding station immediately.
- a) Placing
 - b) Place
 - c) To place
 - d) You place
20. It's better to _____ the manufacturer's guide for the specific lubricant type.
- a) follow
 - b) following
 - c) followed
 - d) follows

Compare your answers with your partners and discuss about them

CHAPTER 5:

DESCRIBING PAST EVENTS AND PROFESSIONAL ANECDOTES

In this chapter, you will learn to accurately report technical incidents and describe sequences of events using advanced past tenses. You will master the use of connectors to explain interruptions and simultaneous actions during maintenance procedures.

1. TECHNICAL VOCABULARY: INCIDENT REPORTING

Key Vocabulary List:

- **Failure:** The state of a component when it stops performing its required function.
- **Malfunction:** A failure to operate in a normal or satisfactory manner.
- **Troubleshoot:** The process of identifying and fixing the source of a technical problem.
- **Ground (verb):** To prohibit an aircraft from flying due to a technical or safety issue.
- **AOG (Aircraft on Ground):** A critical status indicating the plane needs urgent repair to fly.
- **Root Cause:** The fundamental reason why a failure or incident occurred.

ACTIVITY 1: VOCABULARY SELECTION

Choose the correct term to complete each maintenance scenario:

1. The inspector decided to _____ the aircraft after finding a leak in the fuel tank.
2. We spent five hours trying to _____ the avionics system, but the screen was still blank.
3. The _____ of the engine fire was a faulty electrical connection near the fuel line.
4. If a component has a _____, you must report it in the logbook immediately.

2. GRAMMAR: SIMPLE PAST VS. PAST PROGRESSIVE

In a technical environment, we often need to describe what we were doing when something went wrong.

FUNCTION	TENSE	TECHNICAL EXAMPLE
Completed Action	Simple Past	The technician replaced the valve yesterday.
Ongoing Action	Past Progressive	We were testing the engines at 10:00 PM.
Interruption	Continuous + When + Simple	I was checking the seals when I noticed the leak.
Simultaneous Actions	Continuous + While + Continuous	He was refueling while I was inspecting the tires.

ACTIVITY 2: TENSE CONTRAST

Complete the sentences with the correct form of the verbs in parentheses:

1. While the crew _____ (clean) the cockpit, they _____ (find) a loose wire.
2. The engine _____ (overheat) while the pilot _____ (taxi) to the runway.
3. I _____ (read) the manual when the alarm _____ (go off).
4. As the engineers _____ (inspect) the wing, they _____ (discover) severe corrosion.

3. READING:

THE MIDNIGHT AOG

“It was a routine night shift at the maintenance facility when the crew received an urgent notification regarding

Flight 402. The aircraft **was approaching** the gate when the pilot reported a sudden loss of pressure in hydraulic system B. While the ground crew **was preparing** the chocks and stairs, the maintenance lead began a preliminary visual inspection of the exterior.

As the technicians **were inspecting** the rear fuselage, they discovered a significant pool of red fluid near the left wheel well. It was clear that a high-pressure seal had failed during the landing sequence. The team immediately contacted the operations center to declare the aircraft AOG, as the leak was too severe for a quick turnaround.

The troubleshooting process took several hours of intense work. While one specialist **was checking** the digital telemetry data in the cockpit, two others **were dismantling** the actuator housing in the hangar. Eventually, they identified the root cause: a small metal fragment had entered the system, causing a catastrophic failure of the internal O-ring.”

ACTIVITY 3: READING COMPREHENSION

Answer the following questions based on the text:

1. What specific action was the aircraft performing when the pilot noticed the failure?
2. What did the technicians find under the fuselage during the inspection?
3. What was the official status of the aircraft after the inspection?
4. What were the two specialists doing while the others dismantled the housing?
5. According to the text, what was the root cause of the hydraulic failure?

4. WRITING: THE PROFESSIONAL ANECDOTE

ACTIVITY 4: WRITING TASK

Write a short report (100-120 words) about a technical incident you have experienced or heard of.

Your report must include:

- At least 2 sentences using **Simple Past**.
- At least 2 sentences using **Past Progressive**.
- Use the words: Troubleshoot, Root cause, and Failure.
- Describe the sequence: What were you doing? -> What happened? -> How was it solved?

5. SPEAKING ACTIVITY: THE HANGAR DEBRIEF

ROLEPLAY CONTEXT:

You are explaining an incident that occurred during your shift to the supervisor. (10 lines conversation)

- **Student A (Technician):** Explain the sequence of events using “I was... when...”. Describe the background actions and the sudden problem.
- **Student B (Supervisor):** Ask questions about the root cause and what the rest of the team was doing during the troubleshooting.

Useful Phrases:

“I was in the middle of a check when...”, “While we were looking at the logs, we realized...”, “What was the other mechanic doing?”, “Did you find the root cause?”

6. CHAPTER'S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER 6: INSTRUCTIONS, RULES, AND OBLIGATIONS

In this chapter, you will learn to interpret complex technical instructions, distinguish between legal obligations and professional advice, and communicate safety rules using “must,” “have to,” and “should.”

1. TECHNICAL VOCABULARY: RULES & REGULATIONS

Key Vocabulary List:

- **Compliance:** The act of obeying an order, rule, or request (legal or technical).
- **Mandatory:** Something that is required by law or rules; compulsory.
- **Advisory:** A report giving information or a recommendation (not always a strict rule).
- **PPE (Personal Protective Equipment):** Clothing or equipment designed to protect the body from injury.
- **Standard Operating Procedure (SOP):** A set of step-by-step instructions compiled by an organization to help workers carry out routine operations.
- **Violation:** An action that breaks a law, rule, or agreement.

ACTIVITY 1: VOCABULARY MATCH

Choose the correct word for each definition:

1. Step-by-step instructions for routine tasks: _____
2. Protective gear like gloves and helmets: _____
3. An action that breaks a safety rule: _____
4. Something you are forced to do by law: _____

2. GRAMMAR: SIMPLE PAST VS. PAST PROGRESSIVE

In a technical environment, we often need to describe what we were doing when something went wrong.

MODAL	MEANING	TECHNICAL EXAMPLE
Must	Strong personal obligation / Logical necessity	You must wear a harness when working at heights.
Have to	External obligation (Laws/Regs)	We have to follow FAA regulations for this repair.
Mustn't	Prohibition (Don't do it!)	You mustn't smoke near the fuel tanks.
Don't have to	No obligation (Optional)	You don't have to replace the seat covers today.
Should	Advice / Recommendation	You should double-check the torque values.

ACTIVITY 2: GRAMMAR PRACTICE

Select the best modal for each technical situation:

1. According to the manual, technicians _____ (must / should) sign the logbook after every task. It's a legal requirement.
2. You _____ (mustn't / don't have to) use a mobile phone while refueling the aircraft.
3. If the bolt looks slightly worn, you _____ (should / have to) replace it even if it's not broken.
4. We _____ (don't have to / mustn't) finish the inspection now; we can continue tomorrow morning.

3. READING:

MAINTENANCE SAFETY AND SOPS

In the aviation industry, safety is maintained through strict **compliance** with international regulations. Every technician **has to** follow the **Standard Operating Procedures (SOPs)** developed by the manufacturer and the airline. These rules are not optional; they are **mandatory**. If a mechanic ignores a step in the process, it is considered a safety **violation**, which can lead to the grounding of the aircraft or even criminal charges.

The use of **Personal Protective Equipment (PPE)** is another critical area of obligation. When working in the hangar, all personnel **must** wear high-visibility vests and safety boots. Furthermore, when handling chemical cleaning agents, you **must** use specialized gloves and eye protection. It is the responsibility of the supervisor to ensure that everyone is wearing the correct gear before the shift begins.

While regulations provide the rules, experienced engineers often give **advisory** tips to junior staff. For example, a senior lead might say that you **should** clean your tools immediately after use to prevent corrosion. Although you **don't have to** do it immediately by law, following this advice improves efficiency and tool life. Ultimately, to succeed in this field, you **must** be disciplined and pay close attention to every instruction.

ACTIVITY 3: READING COMPREHENSION

1. What happens if a mechanic ignores a step in the SOP?
2. Is it mandatory to follow the advisory tips from senior engineers?
a) Yes, always. b) No, they are recommendations. c) Only if the pilot says so.
3. Name two types of PPE mentioned in the text.
4. Why is compliance with international regulations important?
5. Which modal verb is used for external laws like FAA or EASA rules?
a) Should. b) Have to. c) Might.

4. WRITING: THE PROFESSIONAL ANECDOTE

Instructions: Write a memo (120-150 words) to your maintenance team about new hangar safety rules.

Requirements:

- Use **Must** or **Have to** for at least two strict rules.
- Use **Should** to give one piece of professional advice.
- Use **Mustn't** for one prohibition.
- Use at least 3 vocabulary terms (SOP, PPE, Mandatory, Violation).

5. SPEAKING: THE SAFETY AUDIT

ROLEPLAY CONTEXT:

A safety inspector is visiting the hangar.

- **Student A (Inspector):** Ask the technician about the rules. “What do you have to do before opening the engine cowling?” “Must you wear a helmet here?”
- **Student B (Technician):** Explain the obligations and prohibitions. Give advice to the inspector on how to stay safe in the hangar.

6. CHAPTER'S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER 7: SUGGESTIONS, PREDICTIONS, AND DIRECTIONS

In this chapter, you will learn how to make technical predictions about aircraft component life, provide professional recommendations for upgrades, and give precise directions for future maintenance tasks using conditional logic and modal verbs.

1. TECHNICAL VOCABULARY: RULES & REGULATIONS

Key Vocabulary List:

- **Service Life:** The period during which a component is expected to remain in a safe, serviceable condition.
- **Upgrade:** To replace a component or software with a newer or better version.
- **Lead Time:** The time between the initiation and completion of a production or repair process.
- **Redundancy:** The inclusion of extra components which are not strictly necessary to functioning, in case of failure.
- **Wear and Tear:** Damage or deterioration sustained in the ordinary course of use.
- **Shelf Life:** The length of time that an item remains usable or fit for consumption while in storage.

ACTIVITY 1: VOCABULARY APPLICATION

Fill in the blanks with the appropriate term from the list above:

1. If we install this new avionics unit, the system _____ will be significantly improved.
2. The current landing gear has reached the end of its _____, so we must replace it.
3. Because of the long _____ for the turbine blades, we should order them three months in advance.
4. Minor _____ on the seat covers is normal, but structural cracks are a safety concern.

2. GRAMMAR FOCUS: PREDICTIONS, SUGGESTIONS, AND CONDITIONALS

A. Modal Verbs for Predictions and Suggestions

FUNCTION	MODALS	TECHNICAL EXAMPLE
High Certainty	Will / Won't	The new software will reduce fuel consumption by 5%.
Possibility	May / Might	This seal might leak if we don't apply the sealant correctly.
Recommendation	Should / Ought to	We should upgrade the radar system during the next C-check.

B. Technical Conditionals (Real Conditionals)

TYPE	STRUCTURE	USAGE	EXAMPLE
Zero Conditional	If + Present, Present	General facts/Laws of physics.	If pressure drops , the alarm sounds .
First Conditional	If + Present, Will + Verb	Specific future predictions.	If we miss this inspection, the plane will be grounded.

ACTIVITY 2: GRAMMAR PRACTICE

Complete the sentences using the correct grammatical structure:

1. If the temperature _____ (reach) the limit, the bypass valve _____ (open) automatically.
(Zero Conditional)

2. We _____ (not / be) able to finish the overhaul if the parts _____ (not / arrive) by Friday.
(First Conditional)
3. The supervisor thinks that the battery _____ (might / fail) if we leave the lights on.
4. I suggest that we _____ (should / perform) a deep cleaning of the sensors.

3. READING:

THE FUTURE OF FLEET MAINTENANCE

Fleet managers are constantly analyzing data to make predictions about future maintenance needs. Currently, many airlines are moving toward “predictive maintenance.” If a sensor detects a slight change in engine vibration, the software **will notify** the engineering team immediately. This technology ensures that components are replaced before a failure occurs, which **may save** millions of dollars in AOG costs.

If we look at the current trends, most narrow-body aircraft **will receive** significant avionics upgrades in the next five years. These upgrades involve replacing old analog gauges with digital “glass cockpit” displays. While these systems are expensive, they provide better **redundancy** and improve pilot situational awareness. If an airline **upgrades** its fleet now, it **will remain** competitive in the global market.

However, engineers must consider the **lead time** for these new components. If the supply chain **is** slow, maintenance schedules **will suffer**. Therefore, logistics teams **must** coordinate with manufacturers to ensure parts are available. If a technician **follows** the new Standard Operating Procedures (SOPs) for these upgrades, the margin for error **is** significantly reduced.

Finally, the **service life** of traditional engines is being extended through better coatings and materials. If we **apply** these new thermal sprays, the turbine blades **will resist** higher temperatures. Experts suggest that if the industry **continues** to innovate, hydrogen-powered aircraft **might become** a reality by 2040.

ACTIVITY 3: READING COMPREHENSION

1. According to the text, what happens if a sensor detects a change in vibration?
a) The plane crashes. b) The software notifies the team. c) The flight is canceled.
2. What is the main benefit of upgrading to digital “glass cockpit” displays?
3. What is the consequence if the supply chain for components is slow?
a) Higher fuel costs. b) Maintenance schedules suffer. c) Pilots retire early.
4. Based on the text, what will happen if an airline upgrades its fleet today?
5. What is the expert prediction for the year 2040?
a) Electric planes. b) Hydrogen-powered planes. c) No more planes.

[illegible]

4. WRITING TASK: THE RECOMMENDATION REPORT

Instructions: Write a professional recommendation (120-150 words) for your manager regarding a component that needs to be upgraded or replaced.

Your report must include:

- Use **First Conditional** to explain the consequences of not acting (If we don't..., then...).
- Use **May** or **Might** to talk about possibilities.
- Use at least 3 vocabulary terms (e.g., Service life, Upgrade, Lead time).
- Give a clear **Direction** or **Instruction** using "I recommend" or "We should".

5. SPEAKING: THE PLANNING MEETING

ROLEPLAY CONTEXT:

You are in a monthly maintenance planning meeting. (At least 10 lines conversation)

- **Student A (Maintenance Planner):** Make predictions about which aircraft will need service next month and give directions on what to prioritize.
- **Student B (Logistics Manager):** Provide information about the lead time for parts and make suggestions on how to avoid delays.

Useful Phrases:

- "If we start now, we will finish by..."
- "The lead time for the actuators might be..."
- "I recommend that we order the seals immediately."
- "What will happen if the parts are late?"

6. CHAPTER’S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTER 8:

PROCUREMENT, DESCRIPTIONS, AND INVENTORY

In this chapter, you will learn how to describe technical components in detail, manage inventory using “some” and “any,” and explain procurement processes using the Passive Voice. You will also practice the language needed to purchase aircraft parts and verify specifications.

1. TECHNICAL VOCABULARY: PROCUREMENT & SPECS

To buy and describe aircraft parts, you must be familiar with logistics and physical attributes.

Key Vocabulary List:

- **Part Number (P/N):** A unique identifier assigned to a specific part to simplify inventory and ordering.
- **Lead Time:** The amount of time it takes from placing an order to receiving the item.
- **In Stock / Out of Stock:** Terms used to indicate if an item is currently available in the warehouse.
- **Specification (Spec):** A detailed description of the design, materials, and dimensions of a part.
- **Corrosion-resistant:** A material property that prevents damage from chemical reactions (rust).
- **Purchase Order (PO):** A commercial document issued by a buyer to a seller indicating types, quantities, and prices.

ACTIVITY 1: VOCABULARY MATCHING

Match the term with its practical application:

Part Number	a. “We need to wait 4 weeks for the delivery.”
Lead Time	b. “This alloy is perfect for high-moisture environments.”
In Stock	c. “Please check P/N 445-09 para the landing gear.”
Corrosion-resistant	d. “Yes, we have 50 units ready for immediate shipping.”

2. GRAMMAR FOCUS: QUANTITY AND PROCESSES

A. Determiners: Some and Any

In a warehouse context, we use these to talk about the presence or absence of supplies.

FUNCTION	MODALS	TECHNICAL EXAMPLE
Affirmative	Use Some	We have some titanium bolts in the bin.
Negative	Use Any	We don’t have any hydraulic fluid left.
Questions	Use Any	Are there any spare gaskets in the shop?
Requests	Use Some	Can you send me some lubricants, please?

B. The Passive Voice (Present & Past)

We use the Passive Voice when the action (the process) is more important than who did it.

- **Structure:** Object + am/is/are/was/were + Past Participle.
- **Active:** The supplier sends the parts.
- **Passive:** The parts are sent by the supplier.
- **Past Passive:** The order was placed yesterday.

ACTIVITY 1: VOCABULARY APPLICATION

Fill in the blanks with the appropriate term from the list above:

1. If we install this new avionics unit, the system _____ will be significantly improved.
2. The current landing gear has reached the end of its _____, so we must replace it.
3. Because of the long _____ for the turbine blades, we should order them three months in advance.
4. Minor _____ on the seat covers is normal, but structural cracks are a safety concern.

3. READING:

THE LOGISTICS OF AIRCRAFT MAINTENANCE

The procurement of aircraft components is a highly regulated and complex process. When a failure is detected, the technician must first verify if there are **any** spare parts available in the local inventory. If the required item is **out of stock**, a request is sent to the purchasing department. Every component is identified by a specific **Part Number**, and its technical **specifications** are checked against the manufacturer's manual to ensure compatibility.

High-quality materials are essential for flight safety. For instance, most fasteners **are made** of titanium or **corrosion-resistant** steel to withstand extreme pressure. When an order is confirmed, a **Purchase Order** is generated. However, logistics managers often face challenges with **lead times**. If a part is not available locally, it **is shipped** from a global distribution center, which can take several days or even weeks.

In the warehouse, strict organization is mandatory. **Some** parts are kept in climate-controlled environments to preserve their integrity, while others require specialized packaging. Once the parts arrive, they **are inspected** by quality control officers. If **any** discrepancies are found in the documentation, the parts are rejected and returned to the supplier. This ensures that only certified components are installed on the aircraft.

Finally, the ownership and possession of tools and parts are tracked digitally. Every technician is responsible for the tools in their possession. If **any** tool is lost, a report must be filed immediately. By maintaining a clear record of **some** of the most expensive assets, airlines can reduce costs and ensure that the right parts are always available when an **upgrade** or repair is needed.

ACTIVITY 3: READING COMPREHENSION

1. What is the first step a technician takes when a failure is detected?
2. Why are fasteners made of titanium or corrosion-resistant steel?
 - a) Because they are cheap.
 - b) To withstand extreme pressure.
 - c) To make the plane faster.
3. Who is responsible for inspecting the parts when they arrive?
4. What happens if a part is not available in the local warehouse?
 - a) The pilot.
 - b) Quality control officers.
 - c) The janitor.
5. According to the text, when are parts returned to the supplier?

4. WRITING TASK: REQUESTING A QUOTATION

Instructions: You need to order 20 high-pressure valves for a fleet upgrade. Write an email to a supplier (120-150 words).

Your report must include:

- Use **Passive Voice** to describe how the parts will be used (e.g., “The valves are needed for...”).
- Use **some** and **any** to ask about availability.
- Include at least 3 vocabulary terms (*Part Number, Lead time, Specifications*).
- Describe the object (material, size, or purpose).

5. SPEAKING ACTIVITY: THE PARTS DESK

ROLEPLAY CONTEXT:

You are at the warehouse counter.

- **Student A (Technician):** You need specific parts for a repair. Describe the objects you need and ask if there are **any** in stock.
- **Student B (Storekeeper):** Tell the technician what is available (**some**) and what isn't (**any**). Explain the **lead time** and how the parts **are handled**.

Useful Phrases:

- “Do you have any P/N 55-B in stock?”
- “These bolts are made of stainless steel.”
- “The parts were delivered this morning.”

6. CHAPTER’S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTERS 5 - 8 REVIEW QUIZ

1. The technician _____ the hydraulic lines when he noticed a small leak near the actuator.
 - a) inspected
 - b) was inspecting
 - c) has inspected
 - d) is inspecting

2. According to the AMM (Aircraft Maintenance Manual), the mechanic _____ wear safety goggles during the riveting process.
 - a) might
 - b) must
 - c) may
 - d) shouldn't

3. If the pitot tube _____ blocked, the airspeed indicator will provide unreliable data.
 - a) is
 - b) will be
 - c) was
 - d) has been

4. The landing gear _____ by the ground crew before the aircraft was cleared for taxi.
 - a) was retracted
 - b) retracted
 - c) was retracting
 - d) is retracted

5. While the pilot _____ the pre-flight checklist, the ATC tower changed the departure runway.
 - a) completes
 - b) was completing
 - c) completed
 - d) will complete

6. The lead engineer _____ sign the release to service (RTS) document before the plane can fly again.
 - a) has to
 - b) might
 - c) shouldn't
 - d) may

7. If we find any corrosion on the fuselage, we _____ replace the entire panel.
 - a) might
 - b) would
 - c) had to
 - d) are

8. Last night, the engine turbine blades _____ for cracks using non-destructive testing (NDT).
 - a) were inspected
 - b) inspected
 - c) are inspected
 - d) was inspected
9. You _____ use a torque wrench to ensure the bolts are tightened to the specific limit.
 - a) should
 - b) may
 - c) might
 - d) haven't to
10. The flight data recorder _____ by investigators yesterday to determine the cause of the flameout.
 - a) was recovered
 - b) recovered
 - c) is recovered
 - d) were recovered
11. If the weather _____ below minimums, the pilot will divert to the alternate airport.
 - a) drops
 - b) dropped
 - c) will drop
 - d) dropping
12. The avionics bay _____ when the fire alarm triggered during the ground test.
 - a) was being checked
 - b) checked
 - c) was checking
 - d) is being checked
13. Airlines _____ follow strict ETOPS regulations when flying twin-engine planes over the ocean.
 - a) have to
 - b) may
 - c) might
 - d) shouldn't
14. If the APU (Auxiliary Power Unit) fails, the crew _____ use an external power unit.
 - a) may
 - b) were
 - c) had
 - d) should to
15. While the engines _____, the ground staff observed an unusual vibration in the cowlings.
 - a) were running
 - b) run
 - c) are running
 - d) was running

16. You _____ smoke near the refueling area; it is strictly prohibited.

- a) must not
- b) don't have to
- c) might not
- d) should

17. New software _____ into the Flight Management System (FMS) next week.

- a) will be installed
- b) was installed
- c) is installing
- d) installed

18. If the cabin pressure _____, the oxygen masks will drop automatically.

- a) decreases
- b) will decrease
- c) decreased
- d) is decreasing

Compare your answers with your partners and discuss about them

CHAPTER 9:

OPINIONS, PROBLEM SOLVING, AND HYPOTHETICAL SITUATIONS

In this chapter, you will learn to express professional opinions on safety, discuss the advantages and disadvantages of technical solutions, and describe imaginary or past hypothetical scenarios using “would” and unreal conditionals.

1. TECHNICAL VOCABULARY: SAFETY & ANALYSIS

Key Vocabulary List:

- **Hazard:** A potential source of danger or risk.
- **Mitigation:** The action of reducing the severity or seriousness of a risk.
- **Redundancy:** The duplication of critical components to increase reliability.
- **Feasible:** Possible to do easily or conveniently; a practical solution.
- **Reliability:** The quality of being trustworthy or performing consistently well.
- **Drawback:** A feature that renders something less acceptable; a disadvantage or problem.

ACTIVITY 1: VOCABULARY IN CONTEXT

Complete the sentences using the words from the list above:

1. One major _____ of the older navigation system is its high power consumption.
2. We need to implement a risk _____ plan before we start the engine overhaul.
3. Is it _____ to replace the entire wiring harness during this check, or is it too expensive?
4. The system has triple _____, so if one computer fails, two others are still working.

2. GRAMMAR FOCUS: UNREAL CONDITIONALS (2ND & 3RD)

A. Second Conditional: Imaginary Present/Future

Used for hypothetical situations in the present or future that are unlikely or imaginary.

- **Structure:** If + Simple Past, **Would** + Verb.
- **Example:** If we **had** more budget, we **would buy** the latest diagnostic drone. (But we don't have the budget).

B. Third Conditional: Hypothetical Past

Used for situations that did not happen in the past (expressing regret or criticism).

- **Structure:** If + Past Perfect, **Would have** + Past Participle.
- **Example:** If the technician **had followed** the SOP, the leak **would not have happened**. (But he didn't follow it, and it happened).

ACTIVITY 2: GRAMMAR PRACTICE

Match the condition with the logical result:

If the airline invested in electric planes...	A. ...the failure would not have occurred.
If the pilot had noticed the light earlier...	B. ...they would save millions on fuel.
If I were the chief engineer...	C. ...the landing would have been safer.
If they had installed the backup seal...	D. ...I would prioritize safety over speed.

Safety experts often conduct “What-If” simulations to prepare for the unexpected. In a recent seminar, engineers discussed a hypothetical scenario: what **would happen** if a dual-engine failure **occurred** at low altitude? They concluded that if the crew **had practiced** this specific emergency in the simulator more frequently, they **would have managed** the glide path more efficiently. These discussions help identify **hazards** that are not obvious during routine operations.

When analyzing new safety protocols, there are always pros and cons. For example, adding more **redundancy** to fly-by-wire systems improves **reliability**, but the main **drawback** is the increased weight and complexity. If engineers **designed** a lighter backup system, it **would be** more **feasible** for small aircraft. However, the cost of **mitigation** must always be balanced against the operational budget of the airline.

Ultimately, problem-solving in aviation requires looking at past mistakes. If investigators **had not analyzed** the 2015 incident so thoroughly, we **would not have** the strict sensor requirements we have today. In my opinion, if every hangar **adopted** AI-driven maintenance tracking, the number of human errors **would decrease** significantly. We must continue to ask: “If this failed, what would the consequence be?”

ACTIVITY 3: READING COMPREHENSION

1. What is the goal of “What-If” simulations in aviation?
2. According to the text, what is the disadvantage of adding more redundancy?
 - a) Lower reliability.
 - b) Increased weight and complexity.
 - c) It is too fast.
3. What would happen to human errors if AI tracking were adopted?
4. True or False: The text suggests that the 2015 incident helped improve current sensor requirements.
5. What question should technicians always ask according to the final paragraph?

[illegible]

4. WRITING TASK: THE SAFETY PROPOSAL

Your report must include:

- Discuss 1 **Pro** (Advantage) and 1 **Con** (Drawback).
- Use the **Second Conditional** to describe a hypothetical benefit (If we used..., we would...).
- Use the **Third Conditional** to describe a past problem that could have been avoided (If we had had tablets, we would have found...).
- Give your professional opinion: “In my opinion,” or “I believe.”

ROLEPLAY CONTEXT:

- **Student A (Safety Inspector):** Argue for grounding the plane. Use “If we let it fly, a fire might occur.” Express your opinion strongly
- **Student B (Operations Manager):** Argue for a quick patch repair to avoid delays. Discuss the pros (time) and cons (risk). Use “If we had more time, I would agree with you, but...”

[illegible]

VOCABULARY LIST

[illegible]

Notes

CHAPTER 10:

TALKING ABOUT ACHIEVEMENTS AND PROFESSIONAL GOALS

In this final chapter of the module, you will learn to describe your professional successes, technical certifications, and career goals. You will master the use of gerunds and infinitives to express complex ideas about your experience in aviation maintenance.

1. TECHNICAL VOCABULARY: SUCCESS & QUALITY

Key Vocabulary List:

- **Milestone:** A significant stage or event in the development of something or someone's career.
- **Streamline:** To make an organization or system more efficient by employing faster or simpler working methods.
- **Breakthrough:** A sudden, dramatic, and important discovery or development.
- **Proficiency:** A high degree of skill; expertise.
- **Accomplishment:** Something that has been achieved successfully.
- **Benchmarking:** Evaluating something by comparison with a standard.

ACTIVITY 1: VOCABULARY SELECTION

Choose the correct word to complete each sentence:

- Obtaining my FAA A&P license was a major _____ in my professional life.
- We managed to _____ the inspection process, reducing the time by 20%.
- My _____ in using digital borescope tools helped the team find the engine crack.
- Reducing the number of AOG incidents this year is a significant _____ for the department.

2. GRAMMAR FOCUS: GERUNDS AND INFINITIVES

When we have two verbs together, the second one can be a **Gerund (-ing)** or an **Infinitive (to + verb)**, depending on the first verb.

VERB PATTERN	COMMON VERBS	TECHNICAL EXAMPLE
Verb + Gerund	Enjoy, Finish, Suggest, Recommend, Keep, Avoid	We finished testing the auxiliary power unit.
Verb + Infinitive	Plan, Decide, Hope, Manage, Want, Need, Fail	I managed to repair the circuit board.
Adjective + Infinitive	Easy, Hard, Important, Necessary	It is important to calibrate the tools daily.
Preposition + Gerund	About, In, At, For, Of	Thank you for helping with the landing gear.

ACTIVITY 2: GRAMMAR PRACTICE

Choose the correct form (Gerund or Infinitive) for each sentence:

- I am interested in _____ more about composite materials.
a) learn / b) learning / c) to learn
- The team decided _____ the software last night.
a) upgrade / b) upgrading / c) to upgrade
- You should avoid _____ magnetic tools near the compass.
a) use / b) using / c) to use

4. We hope _____ the new certification by the end of the year.
a) receive / b) receiving / c) to receive
5. _____ a clean hangar is essential for safety
a) Maintaining / b) To maintaining / c) Maintain

3. READING:

A DECADE OF EXCELLENCE IN MAINTENANCE

Reflecting on professional life allows engineers to identify their most important **accomplishments**. Ten years ago, I started **working** as a junior technician, and my primary goal was **to gain** as much experience as possible. I remember **spending** long nights in the hangar trying **to understand** the complexities of turbine engines. Eventually, I managed **to earn** my senior certification, which was a huge **milestone** that changed my career path.

Since then, I have focused on **streamlining** our quality control procedures. One of my biggest **breakthroughs** involved **implementing** a new digital tracking system for tool calibration. Before **introducing** this system, we failed **to keep** accurate records, which caused delays. Now, by **benchmarking** our performance against international standards, we have reached a high level of **proficiency** and reliability in our operations.

Looking forward, I plan **to continue** my education in sustainable aviation technologies. I enjoy **solving** complex technical problems, and I want **to lead** a team dedicated to hydrogen propulsion systems. Achieving these goals requires **committing** to lifelong learning, but I am excited **to face** the challenges of the future. I believe that **striving** for excellence is the only way **to succeed** in this demanding industry.

ACTIVITY 3: READING COMPREHENSION

Choose the best option for each question based on the text:

- What was the author's primary goal at the beginning of their career?
a) To lead a large team immediately.
b) To gain as much experience as possible.
c) To avoid working at night.
- Which event is described as a "huge milestone" in the author's path?
a) Starting as a junior technician.
b) Earning a senior certification.
c) Implementing a digital tracking system.
- What was the main problem before introducing the digital tracking system?
a) The tools were too expensive.
b) The hangar was too small.
c) Records were not kept accurately.
- What is the author's future professional plan?
a) To retire from the aviation industry.
b) To continue education in sustainable technologies.
c) To stop solving technical problems.

- According to the author, what is necessary to succeed in this industry?
 - a) Benchmarking against low standards.
 - b) Striving for excellence and lifelong learning.
 - c) Avoiding complex technical challenges.

4. WRITING TASK: MY PROFESSIONAL ACHIEVEMENT

Instructions: Write a short paragraph (120-150 words) about a professional achievement or a goal you have reached.

Requirements:

- Use at least 3 **Gerunds** and 3 **Infinitives**.
- Use at least 3 vocabulary terms

[illegible]

5. SPEAKING ACTIVITY: THE PERFORMANCE REVIEW

Instructions: Work with a partner responding to these prompts. Use the grammar and vocabulary learned in this chapter.

Part A: Personal Reflection

Answer the following questions using gerunds or infinitives:

1. What do you enjoy doing most during your shifts?
2. What technical skill do you want to improve next year?
3. What is a professional milestone you hope to reach in the future?

[illegible]

6. CHAPTER’S NOTES AND NEW VOCABULARY:

VOCABULARY LIST

WORD	DEFINITION	USE IT IN A SENTENCE

Notes

CHAPTERS 9 - 10 REVIEW QUIZ

1. If the airline _____ more simulators last year, the pilots would have finished their training sooner.
 - a) purchased
 - b) had purchased
 - c) purchases
 - d) has purchased

2. The maintenance manager suggested _____ the ultrasonic inspection to detect subsurface cracks.
 - a) performing
 - b) to perform
 - c) performed
 - d) perform

3. If I _____ the Chief Engineer, I would implement stricter FOD (Foreign Object Debris) protocols immediately.
 - a) was
 - b) am
 - c) were
 - d) had been

4. The ground crew must avoid _____ the engines until the area is completely clear of equipment.
 - a) to start
 - b) starting
 - c) start
 - d) started

5. The pilot managed _____ the aircraft safely even though the crosswind was extremely strong.
 - a) to land
 - b) landing
 - c) land
 - d) landed

6. If the mechanics _____ the service bulletin earlier, the engine failure might have been prevented.
 - a) receive
 - b) had received
 - c) received
 - d) have received

7. Repairing the composite wing section involves _____ specialized resins and vacuum bagging techniques.
 - a) to use
 - b) using
 - c) use
 - d) used

- 8. If the fire suppression system _____, the damage to the hangar would be much worse.**
- a) failed
 - b) fails
 - c) had failed
 - d) would fail

Compare your answers with your partners and discuss about them

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