

TEACHING TECHNICAL ENGLISH

- Target audience
- Sources
- Main principles
- Approaches
- Aspects of technical English

TARGET AUDIENCE

- **Flight personnel:**
 - pilots, navigators, radio operators;
 - flight engineers
- **Ground personnel:**
 - engineers, mechanics, load masters

SOURCES

- **TechTalk (Elementary, Pre-Intermediate)** by Vicki Hollett
- **Technical English (Elementary, Pre-Intermediate)** by David Bonamy
- **English for aircraft** by Philip Shawcross
- **Standard Aircraft Handbook for Mechanics and Technicians** by Larry Reithmaier
- **The cockpit review**
- **Lufthansa training manual**
- **Boeing 747-400 Video Training Course**
- **Internet**

MAIN PRINCIPLES

- **Technical accuracy = safety**
- **Relevant content**
- **Learn by doing**
- **Think English**
- **Recycling**
- **Enthusiasm**

APPROACHES



FUNCTIONAL



Work-specific functions:

giving instructions,
making recommendations,
suggesting solutions, etc.

Technology-specific functions:

describing cause, effect, action purpose,
movement, quantity, prevention, etc.

'Survival' English:

ordering food, finding the way,
asking for help, etc.



COMMUNICATIVE



New language



**Student-to-student
interaction
activities, games**



Thorough practice
Positive group dynamic

ASPECTS OF TECHNICAL ENGLISH

VOCABULARY

Specialized technical terms

fairlead cam
grommet output
bellcrank solder
bellows hydraulic
transmission pump

General vocabulary

battery stop go
socket plug email
ladder alarm
safety telephone
test working

gauge rotate
pressure glinder

General technical terms

ASPECTS OF TECHNICAL ENGLISH

VOCABULARY

Hold the handle.

Hold the tool in place.

The cargo is loaded in the **hold**.

Hold push-back for 10 minutes.



➤ illustrations

➤ lexical sets (shapes, physical properties)

➤ word families (vehicles- tug, tanker, loader, ambulance, etc.)

➤ common roots (transmit, transmitter, transmission)

➤ sequences (flight- push-back, taxiing, line-up, etc.)

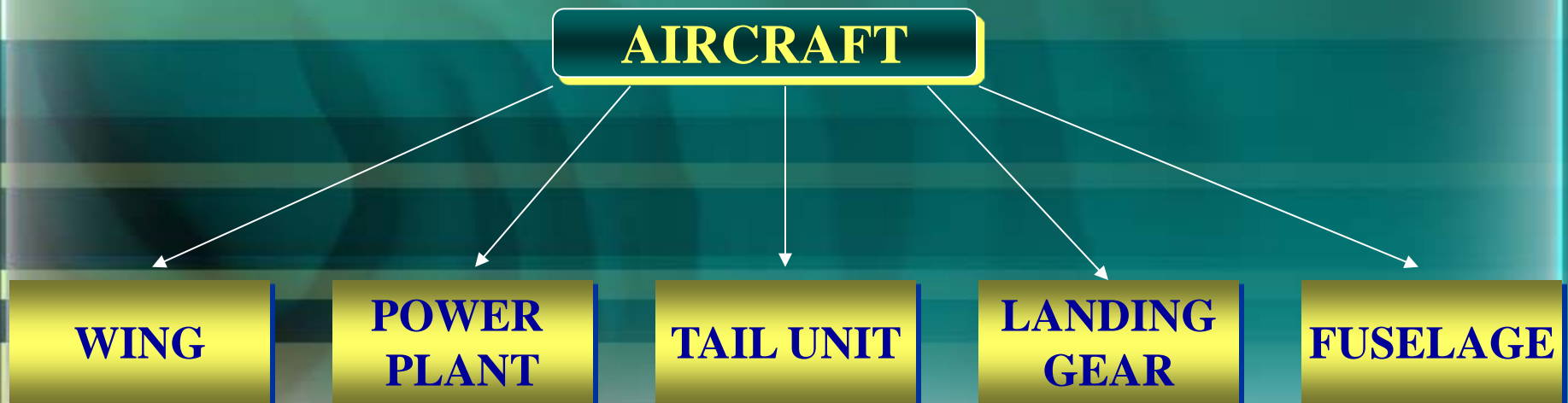
➤ contraries (push/pull)

➤ synonyms (perform=carry out).

GENERAL CONDITION OF AIRCRAFT

PRESENTATION

Nose, windshield, passenger compartment, tail fin, nose gear, airbrakes, engine nacelle, leading edge, wing tip, rudder, spoilers, cargo compartment, undercarriage, flaps, ailerons, trailing edge, technical compartment, elevators, stabilizer, slats, flight deck, APU, luggage compartment, main legs, sliding window



ANSWERS

AIRCRAFT

```
graph TD; AIRCRAFT --> WING; AIRCRAFT --> POWER_PLANT[POWER PLANT]; AIRCRAFT --> TAIL_UNIT[TAIL UNIT]; AIRCRAFT --> LANDING_GEAR[LANDING GEAR]; AIRCRAFT --> FUSELAGE;
```

WING

leading edge
airbrakes
trailing edge
wing tip
flaps
ailerons
spoilers
slats

POWER PLANT

engine nacelle
APU

TAIL UNIT

tail fin
rudder
elevators
stabilizer

LANDING GEAR

nose gear
undercarriage
main legs

FUSELAGE

nose
windshield
flight deck
sliding window
luggage compartment
cargo compartment
technical compartment
passenger compartment

ASPECTS OF TECHNICAL ENGLISH

STRUCTURE

Basic minimum of information

Presented in context (listening/ reading)



*Basic aspects of
English structure*

Word order

Sentence structure



*Complex structures
frequently used in
documentation*

Conjunctions

Passive Voice

WORD ORDER

PRESENTATION

Flight level \neq Level flight
Time check Check time

Проверка времени

Ground proximity warning system test switch



WORD ORDER

PRACTICE

Back of a seat:

seat back/ back seat

Air from engine compressor:

air bleed/ bleed air

System that provides hot air:

air bleed/ bleed air

WORD ORDER

PRACTICE

flap indicator position

flap position indicator

autopilot selector panel mode

autopilot mode selector panel

distribution cabin conditioned system air aft

aft cabin conditioned air distribution system

WORD ORDER

PRACTICE

Использование тяги

thrust use

Управление при помощи носовой опоры

nose wheel steering

Порядок аварийной эвакуации самолета

aircraft emergency evacuation procedure

WORD ORDER

PRACTICE

BODY GEAR STEERING

Steering system for the nose gear and body gear provide airplane directional control during ground maneuvers and taxiing. Body gear steering also reduces tire scrubbing when the airplane is turned with nose wheel angles greater than 20 degrees. As the nose gear turns in one direction, the body gear turns smaller proportional angles in the other direction.

ASPECTS OF TECHNICAL ENGLISH

RECEPTIVE SKILLS
READING/ LISTENING

- *Listening or reading for content.*
- *Listening or reading for language.*
- *Further practice.*

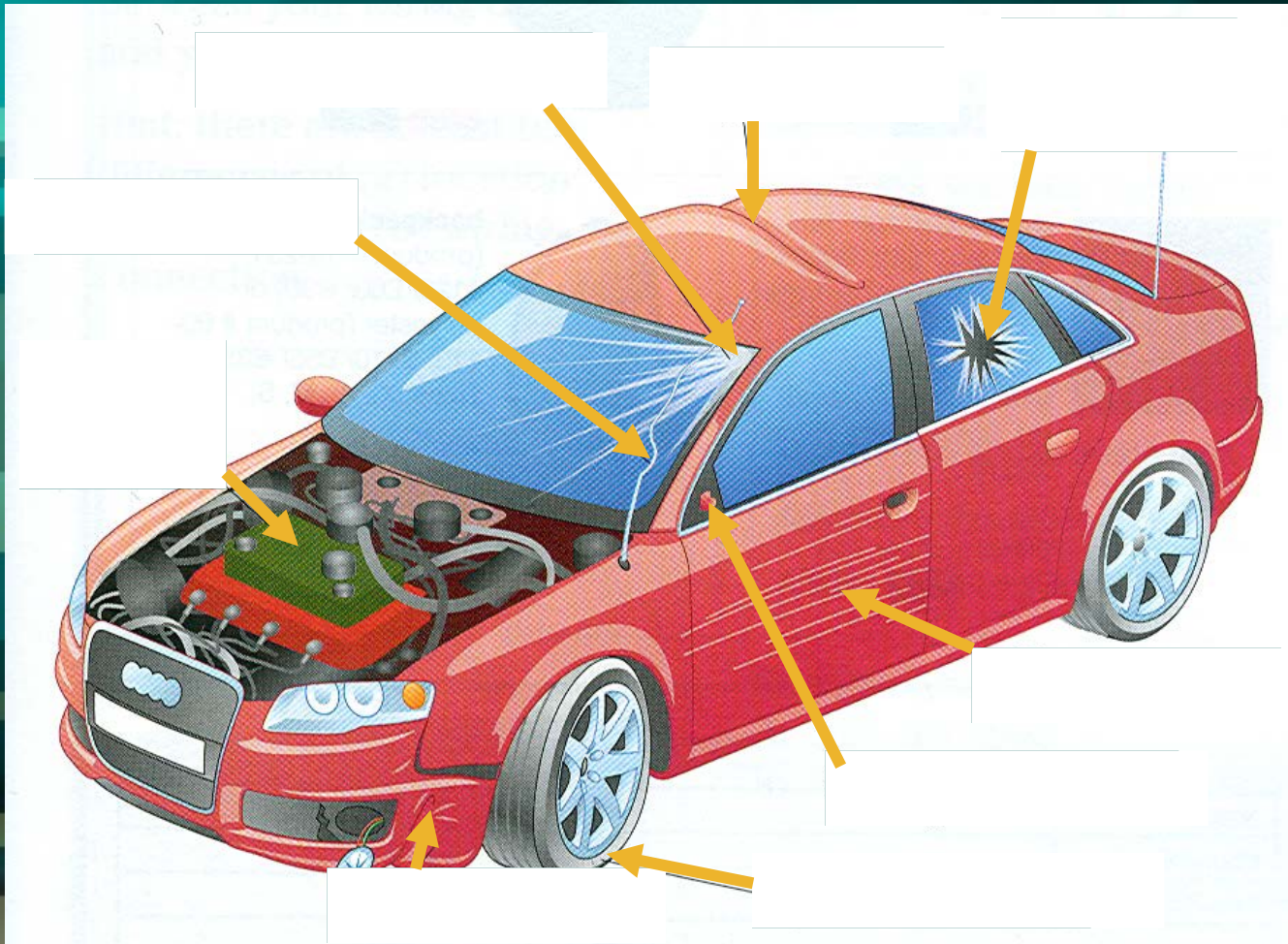
ASPECTS OF TECHNICAL ENGLISH

LISTENING

- complete a specification chart
 - fill in a form
 - label a spidergram
 - arrange notes into the correct order
 - physically carry out an instruction
- spoken instructions
 - travel directions
 - announcements
 - emergency phone calls
 - shouted warnings, etc.
(non-native/native speaker accents)

DAMAGE

PRESENTATION



FAILURES & DAMAGE

PRACTICE



ASPECTS OF TECHNICAL ENGLISH



READING

- complete a specification chart
- fill in a form
- label a diagram
- correct factual mistakes
- answer questions

authentic sources:

- manuals
- technical articles
- user guides
- textbooks
- reports
- specification charts

ASPECTS OF TECHNICAL ENGLISH

PRODUCTIVE SKILLS SPEAKING

```
graph TD; A([PRODUCTIVE SKILLS SPEAKING]) --> B[real-world situations:]; A --> C[information-gap activities];
```

real-world situations:

- giving personal information
- giving instructions
- checking and reporting on progress
- reporting damage
- checking information
- giving technical support
- making recommendations
- giving warnings and directions

- information-gap activities
- problem-solving tasks
- short talks based on notes and diagrams
(e.g. describe and compare devices and systems, explain how they work)

INSTRUCTIONS

PRESENTATION

Adjust

регулировать

Decrease

make smaller

Top up

fill, replenish

connect
tighten
fasten
raise
turn/switch on
extend
inflate
increase

lower
unfasten
loosen
turn/switch off
disconnect
decrease
retract
deflate

INSTRUCTIONS

PRACTICE

Press
Observe
Set
Release
Reset

1. ___ the rotary selector to "A"
2. ___ the push-button
3. ___ the blue lights illuminates
4. ___ the push-button
5. ___ the rotary selector to "NORM"

Depress
Check
Record
Ensure
Set
Monitor

1. ___ covers are removed
2. ___ oil level
3. ___ master switch to ON
4. ___ START push-button
5. ___ indications
6. ___ any anomalies

INSTRUCTIONS

PRACTICE

KNOB- rotate, turn, set, push, adjust

PUSH-BUTTON

CIRCUIT BREAKER

SEAT BELT

BRAKES

ESCAPE SLIDE

How do you...

- replace a light bulb?
- activate an escape slide?

INSTRUCTIONS

PRACTICE

