

Gliding Australia Training Manual

Trainer Guide



Unit 35

Flight preparation: glider, trailer and pilot

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AIM

To develop the student's skills, knowledge and ingrained habits to minimise risks due to inadequate preparation for themselves, the glider and trailer. This is essential for the pilot to be able to concentrate on achieving their goals when flying cross country.

PRE-REQUISITE UNITS

- There are no pre-requisites for this unit

COMPLEMENTARY UNITS

This unit should be read in conjunction with:

- GPC Unit 36 Navigation and Airspace
- GPC Unit 38 Meteorology and Flight Planning
- GPC Unit 39 Advanced Soaring Instruments and Flight Computers

COMPETENCY ELEMENTS AND PERFORMANCE STANDARDS

ELEMENT	PERFORMANCE STANDARDS
1. Describe personal preparation	<ul style="list-style-type: none"> • Describe <ul style="list-style-type: none"> o Physical limitations that may affect a pilot's performance on the day of a flight o Personal needs for cross-country flying
2. Demonstrate glider preparation	<ul style="list-style-type: none"> • Demonstrate <ul style="list-style-type: none"> o Glider preparation to ensure the glider is ready to go
3. Demonstrate retrieve readiness	<ul style="list-style-type: none"> • List <ul style="list-style-type: none"> o Common faults that would prevent or delay a retrieve • Demonstrate <ul style="list-style-type: none"> o Trailer inspection to ensure the trailer is ready for go

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KEY MESSAGES

- Effective personal and equipment preparation leads to a greater likelihood of the pilot achieving their goals and increases their overall enjoyment of the sport.
- Being prepared and relaxed will reduce the risk when outlanding.
- Concerns over the state of a retrieve vehicle, the trailer or availability of crew leads to concerns about the possibility of an outlanding and not being willing to leave the circuit area, abandoning tasks at the first sign of difficulty and/or not concentrating on the basics of flying. The result is a pilot who is unable to enjoy cross country flight and is liable to leave the sport.

LESSON PLANNING AND CONDUCT

Briefing

This unit is a ground briefing only, but competency should be checked by observing and questioning using questions such as “What are you doing about ...?” or “Why are you doing ...?”

Whilst most of the material should be covered over time through normal training, it is helpful to present this section of the syllabus to a pilot as a whole to ensure clear understanding of the importance of being prepared and how this is achieved.

Brief the importance of preparation for successfully achieving cross country goals and the safety benefits.

Brief the following points (derived from the pilot guide).

Personal Preparation

- The importance of physical condition and rest.
- Fatigue and dehydration effects of alcohol on the days prior to a flight.
- Necessary personal items such as hat, sunglasses, clothing, drinking water, charged phone, satellite tracker/beacon.
- Meteorology and preflight planning, maps, airspace restrictions (Refer to Unit 38 – Meteorology and flight planning).
- SAR considerations (reference also GPC Unit 36 Navigation and Airspace - SAR).

Glider Preparation

- Checking the airworthiness of the glider in advance and cleaning (especially the canopy); checking gap tapes.
- Batteries must be fully charged and sufficient for the duration of the flight. Discharging lead acid batteries below 50% significantly reduces battery life. Modern electronic systems typically draw large current the may discharge the glider batteries in an extended flight.
- The glider must be adjusted for an extended flight – seating position comfortable (with the parachute) with everything within easy reach.
- The importance of being familiar with the instruments (particularly flight computers and oxygen systems
- Flight declaration. Emergency water and tie down kit.

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Trailer and Retrieve Preparation

- Trailers are commonly poorly maintained and have missing fittings. Is the trailer registered? Tyres must be in good condition and appropriately inflated. Discuss weight limits for car/trailer combinations, braking systems, electrical connections.
- Discuss common problems with pilot's cars for a retrieve – insurance for any driver, full tank of fuel (what sort of fuel), keys are not in the pilot's pocket!

Checklist

The pilot guide for this unit contains a checklist. Cover the points in the checklist and suggest that the student creates their own checklist for their specific circumstances.

EXERCISES

Spend time looking at and finding faults with various trailers and gliders around the club and point out the simple remedies. For example, what are the ballast limits for the glider? are the batteries charged? do you know how to operate the flight computer? Has the trailer been prepared for the upcoming flying season? Have the tyres been checked? are all the rigging aids present and working? can you find the keys to unlock the trailer?

Observe the student preparing for a cross country flight (even if the flight is not conducted).

Notes

- Training for this unit is best conducted with a number of pilots as a group in the form of a targeted discussion facilitated by the coach.
- Make sure all pilots participate and test that knowledge has been gained by re-questioning.
- Use a number of real trailers, both good and bad to demonstrate the common problems and the implications of them.
- Use a number of gliders to demonstrate seating positions and getting comfortable for a long flight.
- Encourage pilots to prepare and use checklists as an aid to being confident that all essential tasks have been completed.

COMMON PROBLEMS

Problem	Probable Cause
<ul style="list-style-type: none"> Not remaining hydrated in flight 	Not set up for comfortable peeing in flight
<ul style="list-style-type: none"> Rushed preparation on the day of the flight 	Lack of preparation prior to the day of the flight
<ul style="list-style-type: none"> Missing preparation items 	Not using a check list

THREAT AND ERROR MANAGEMENT

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- Ensure that the student has a good understanding of the need for thorough preparation to manage threats and errors in their future cross country flights.
- Cross country flight introduces additional threats beyond those arising from local soaring flights, such as longer flight times and outlanding. Poor physical and mental condition is a significant contributor to errors in judgement, particularly related to outlanding and normal landings at the end of the flight. Good preparation well before a cross country flight is essential for improving physical and mental condition.
- Timely preparation will reduce stress and fatigue, and improve comfort and hydration.
- Excessive use of alcohol in the days preceding a cross country flight will impact hydration and concentration.
- Outlanding risks are higher with lack of flight planning. Appropriate consideration before the flight to weather analysis, outlanding options, airspace, SAR arrangements etc. is essential to reduce the risk.