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AIR FORCE HEADQUARTERS



CADETS BRANCH - AIR FORCE

STANDING INSTRUCTION OPERATIONS 3-4

AIR FORCE GLIDER TRAILER TOWING OPERATIONS

Version 1

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References:

- A. Defence Road Transport Manual (DRTM) of 3 December 2013
- B. Youth Policy Manual Part 2 Edition 3 of 12 May 2017

INTRODUCTION

1. The use of Air Force glider trailers forms an integral part of AAFC glider operations. There is an increased risk of incidents from towing trailers in excess of 11 metres long, particularly when turning, cornering, reversing and manoeuvring in confined areas. Therefore, additional safety precautions and considerations are required to ensure the safe operation of Air Force glider trailers. The direction contained in this instruction must be adhered to and applied to all Air Force glider trailer towing operations. All aspects of driving vehicles and towing Air Force glider trailers is to be in accordance with References and A and B.

AIM

2. This instruction details CB-AF and AAFC policy for the safe conduct of Air Force glider trailer towing operations.

AUTHORITY

3. This instruction is issued under the authority of DGCADETS-AF.

SCOPE

4. This instruction covers:
- a. Trailer registration.
 - b. Authorised vehicles for glider trailer towing.
 - c. Trailer towing licence endorsements.
 - d. Personnel requirements.
 - e. General trailer stowage requirements.
 - f. Confined area manoeuvring.
 - g. Pre departure checklists.
 - h. Fatigue management.
 - i. Blood alcohol content.
 - j. Prohibited substances.
 - k. Road limitations.

POLICY

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5. This instruction supersedes direction given in CB-AF SI (OPS) 3-1 regarding Air Force glider trailer towing operations.
6. **Trailer Registration.** Defence owned trailers are State registered to the appropriate regional CB-AF Air Force Liaison Officer (AFLO). Any issues relating to the registration of a particular glider trailer are to be referred to the AFLO in the first instance. Trailers must be registered for road use and are not to be used if the registration has lapsed. Trailers are considered an item of “plant” and must be managed in accordance with Chapter 17 of the AAFC Safety Manual. Trailers must be inspected at least annually and all inspections and other maintenance must be recorded in the plant register.
7. **Authorised Vehicles.** In accordance with Reference B, Defence owned glider trailers should normally be towed behind Defence plated or Defence leased vehicles. In the event that a Defence plated or Defence leased vehicle is not available, the requirements provided at Attachment A must be followed if a privately owned or plated vehicle is used. The driver’s acknowledgement is located on CadetNet and related fact sheets are located on the Defence Youth 25 website. All towing vehicles must have adequate towing capacity.
8. **Licence Endorsements.** Familiarisation training by a Driver Testing Officer (DTO) is required prior to personnel towing Defence owned glider trailers. The driver of the towing vehicle must have their AC795, Defence Force Drivers Qualification Log (Blue Book), endorsed for glider trailer towing.
9. **Personnel requirements.** All Air Force Glider trailer towing operations are to be carried out with one driver and one observer. The observer acts as the safety person and must be present at all times. The observer is not required to have the mandatory licence endorsements unless they are driving the towing vehicle.
10. **General trailer stowage and other requirements.** Unauthorised items are not permitted to be carried or transported in glider trailers without CB-AF authorisation. A list of approved items that are authorised for carriage and transport inside glider trailers is in Annex A. Annex B lists applicable glider trailer tyre pressure operating limitations.
11. **Confined Area Manoeuvring.** When the driver of a Defence vehicle is required to manoeuvre in a confined area or reverse a trailer, an observer must be used at all times. Under civilian law, the observer is responsible for the safety of the vehicle. However, the driver is not absolved from their duty of care to other road users and pedestrians. The driver is to have a clear view of the observer at all times. Should the driver’s view of the observer become obscured, the driver is to stop the vehicle immediately. Ground manoeuvring of the trailer, either loaded or empty, without the aid of a vehicle/tow motor is to be done by a team sufficient to ensure safe manoeuvring with a separate team leader in control.
12. **Pre Departure Checklists.** Drivers of vehicles towing Air Force glider trailers are to conduct the checklist in Annex C prior to departing on any journey. Annex C also contains direction on regular checking of the trailer and its contents during the journey.
13. Commanding Officers of AAFC Aviation Training Squadrons (ATS) are to ensure that ATS Chief Flying Instructors (CFIs) manage the briefing and training of authorised drivers with regards to aspects of inspecting and securing the glider before and during transit. The CFI can delegate this task to a competent and trained AAFC member. This also includes the securing of the trailer once relocated.

14. **Fatigue Management.** In accordance with Reference B, commanders, managers and staff authorised to task drivers for glider trailer towing are to be aware of the impact of driver fatigue. Prior to any task, commanders, managers and drivers are to ensure that towing vehicle operators have had sufficient rest. When conducting Air Force glider trailer towing operations, commanders will ensure adequate work rest cycles are observed.

15. Commanders are to ensure that drivers do not perform any combination of duties including driving tasks for a period greater than 12 consecutive hours. Drivers must have a minimum of eight hours of continuous rest in an environment conducive to sleep, in a 24 hour period. Drivers are responsible for advising their commander/manager when they assess they are too fatigued to safely operate a glider trailer towing vehicle.

16. The following rest cycle periods must be adhered to:

- a. Drivers must have a short halt of at least 10 minutes every two hours plus or minus 30 minutes.
- b. Drivers must not drive for a continuous period of more than five hours (including short halts).
- c. Drivers must have a minimum break of 30 minutes after five hours driving (including short halts).
- d. Drivers must not drive for a period of more than 12 hours including short halts, breaks, loading/unloading and servicing tasks in any 24 hour period which includes one period of eight hours continuous rest.
- e. Drivers' rest periods must not be taken in a moving vehicle.

17. **Blood alcohol content.** In accordance with Reference B, all drivers and observers engaged in towing Air Force glider trailers must have a blood alcohol content of 0.00% for all glider trailer towing activity.

18. **Prohibited substances.** In accordance with Reference B, all drivers and observers engaged in towing Air Force glider trailers must not consume or be under the influence of any form of prohibited substance.

19. **Road use only.** In accordance with Reference B, Air Force glider trailers may only be used on formed roads. The trailers may also be used on airside areas designated for glider, aircraft and vehicular use. The exception to these rules is if an Air Force glider needs to be recovered after an out landing.

Annexes:

- A. List of approved items authorised for carriage in glider trailers.
- B. Glider trailer tyre pressure operating limitations.
- C. Glider trailer towing operations pre departure checklist and in-transit inspections.

Attachment:

1. DGLOG Minute Towing of Defence owned trailers behind privately owned and plated motor vehicles of 18 Nov 16.

Keywords

CB-AF, AAFC, Trailer Towing

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LIST OF APPROVED ITEMS AUTHORISED FOR CARRIAGE IN GILDER TRAILERS

- Tail dolly
- Wing dolly
- Fuselage cradle
- Aircraft battery
- Battery charger
- Ballast (preferably installed correctly in the glider or trailer belly box)
- Glider covers and canopy cover (if required at the destination)
- Tie down equipment (secure in a lidded box or bag)
- Air Force provided rigging and derigging GSE
- Ground tow rope and tow out gear
- Aircraft spares (secure in lidded box)
- Equipment provided with Air Force trailer
- Parachutes in cockpit
- Aircraft documentation

GLIDER TRAILER TYRE PRESSURE OPERATING LIMITATIONS

1. Different types of tyres require different tyre pressures for optimal performance and minimum wear. For correct tyre pressure inflation see the below table.

Tyre size	Tyre pressure		Load index	Rim Size
	Bar (max)	PSI (max)		
165/80 R13	2.4 (3.0)	35 (44)	83	4J-5,5J x 13
175/70 R13	2.6 (3.0)	38 (44)	82	4,5J-6J x 13
185/70 R13	2.5 (3.0)	36 (44)	86	4,5J-6J x 13
155 R13 C (8PR)	3.7 (4.5)	54 (65)	88	4J-5J x 13
175/70 R14	2.6 (3.0)	38 (44)	84	4,5J-6J x 14
185 R14 C (8PR)	4.3 (4.5)	62 (65)	102	5J-6J x 14
185/65 R14 Reinforced	3.0 (3.4)	44 (49)	93	5J-6,5J x 14
195/65 R14	2.6 (3.0)	38 (44)	89	5,5J-7J x 14
195/70 R14	2.6 (3.0)	38 (44)	91	5J-6,5J x 14
195/70 R14 Reinforced	3.1 (3.4)	45 (49)	96	5J-6,5J x 14
195 R14 C	4.3 (4.5)	62 (65)	106	5J-6J x 14
205 R14 C	4.3 (4.5)	62 (65)	109	5,5J-6,5J x 14
195/65 R15	2.6 (3.0)	38 (44)	91	5,5J-7J x 15

2. Only qualified personnel may repair tyres. According to the road traffic licensing regulations, tyres must have a minimum profile depth of at least 1.6 mm at each point of the tyre. Wear markings, distributed evenly around the perimeter of the tyre, inform you on the condition of your tyres. Replace worn tyres immediately.

3. Trailer tyres must be changed if they are older than six years. Every tyre will have a four digit date stamp on the tyre wall denoting the date of manufacture. For example, if the manufacture date code is 1413, 14 denotes the week of manufacture and 13 represents the year, the tyre manufacture date was the 14th week of 2013.

**GLIDER TRAILER TOWING OPERATIONS PRE-DEPARTURE
CHECKLIST AND IN-TRANSIT INSPECTIONS**

External

- Ensure that the trailer is registered and roadworthy: lights and blinkers working, brakes serviceable. In the event the wrong light comes on (e.g. brake light instead of blinker), do not attempt to alter the trailer wiring. It is likely to be vehicle's wiring plug or adaptor that is at fault.
- Tyre condition and pressures (including the spare) must be even and to the OEM's specification (listed in Annex B) to avoid possible swaying at speeds.
- Ensure the belly storage box is locked and secure.
- If in your State or Territory the trailer requires an overhang exemption, ensure that the paperwork is with the trailer.
- Ensure the hitch locking handle on the draw bar has the green indicator visible.
- Ensure the trailer safety chain is secured to the vehicle attach point with a compliant D-shackle.
- Ensure trailer handbrake activation wire is attached to a vehicle attach point.
- Ensure trailer wiring adaptor is securely plugged into the vehicle socket.
- Once connected to vehicle ensure the trailer handbrake is in the off position (fully lowered) and ensure that any wheel chocks are removed.
- Dolly Wheel is to be removed and secured in the vehicle or trailer.

Internal

- If accessible, ensure that the derigging personnel have secured all items in the cockpit of the glider such as cushions, straps, total energy (TE) probe, parachutes and any items in the cockpit wall pockets.
- Ensure the canopy cover has been removed.
- Ensure that the Air Speed Indicator and the TE probe inlet tubes are taped over to prevent the ingress of foreign objects.
- Ensure that both canopy locks of both ASK 21 MI canopies are locked.
- Ensure that the rigging tool kit is stowed with the aircraft.
- Ensure that the Maintenance Release is placed in the cockpit.
- Ensure that the DG1000S wingtips are properly secured in the positions provided in the front of the trailer with elastic cords securing the items.

- Inspect and ensure that both the front and rear fuselage securing straps are correctly fitted and tight. Pay particular attention to ensure the tail wheel is housed in the wheel slot.
- For DG1000S airframes, inspect and ensure forward fuselage secure strap is tightly connected to fuselage dolly cradle.
- For ASK 21 MI airframes, a cable tie must secure the dolly legs in the down position and the hydraulic cylinder must be depressurised.
- Inspect and ensure the locking catch is engaged on fuselage dolly cradle and also ensure that the locking latch is taped (e.g. with electrical tape) to the cradle to prevent it slipping out of the locking position.
- Inspect and ensure the horizontal stabiliser is secured correctly on the ceiling of the trailer with locking pin engaged.
- Inspect and ensure the wings are fully installed in the trailer and the horizontal clamp fittings in the front of the trailer are snug against the spar and wingnuts are evenly tightened, firmly but not excessively tight.
- Inspect and ensure the wing root trolleys are at the forward stop.
- Inspect and ensure the aileron chocks are fitted and taped to the wing so that they don't depart during transit.
- Inspect and ensure that the airbrakes are closed/locked and flush with the wing, and importantly, taped down at each end of the brake approximately 300mm from each end.
- When closing the DG1000S trailer, ensure the wing tip derigging handles insert into the trailers rear internal slots in the final stages of closing. Don't force the trailer closed.

In-Transit

- Stop and inspect the trailer after the first 10 mins of travel** to ensure that the load has not moved and that everything has been secured correctly.
- The trailer is to be inspected internally on the first hour of transit and then again at every mandatory 2 hourly break,** or more regularly on rough roads.
- Particular attention should be directed to wings spar securing plates, locking nuts, airbrakes, aileron clamps and both fuselage securing straps.
- Ensure that no ancillary GSE has come loose.
- Inspect trailer tyres for any excessive wear, heat or visible deflation.
- Inspect wheel bearing dust cap (by lightly touching). Should the dust cap or centre area of wheel hub be excessively hot (untouchable), this is an indication the wheel bearings have seized. Transit should be ceased and road side assistance contacted.