



Safety Management System

Safety Bulletin

No. 01/2019

Glider Trailers

Overview

Every Soaring Season we hear stories, usually third hand, about various on-road incidents involving members towing their gliders. Fortunately the majority of these incidents are minor but they all result in unexpected interruptions to travel and flying plans, and create unwanted frustration and unplanned expense.

Unfortunately most of these incidents also go unreported within our Safety, Operations Airworthiness Reporting (SOAR) system where we collect data on your often unfortunate experiences, so we miss out on the opportunity to learn so that others can avoid similar expensive experiences.

The following paragraphs will bring to your attention some of the common events we heard about. I am sure there are many others, and as I've said before the only reason we do not know about them is because they have not been reported.

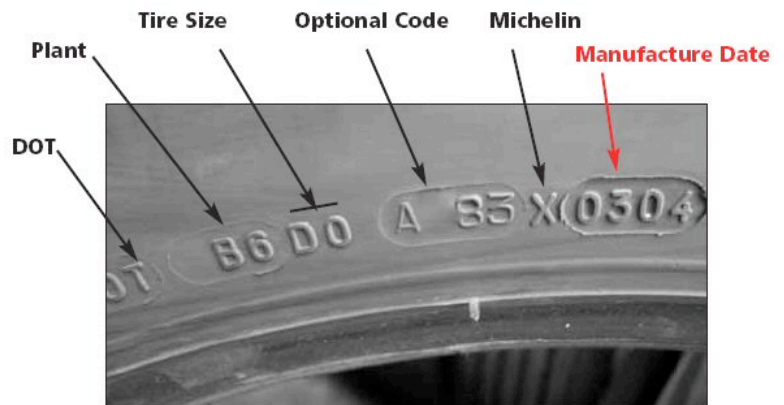
Trailer Towing Threats

Mechanical

Tyres - **most** glider trailers don't do many kilometres and over winter are in storage. Many glider trailers are also fitted with re-treaded lightweight car tyres. It's not uncommon to hear about tyre blowouts and tread delamination destroying the tyre and sometimes causing trailer damage. One reason for re-tread tyre failures put forward by the tyre industry is that during winter a small amount of moisture can make its way between the tread and the tyre case, and when the trailer is towed during summer on our hot roads that moisture expands resulting in a either a blowout or delamination. This can result in secondary damage to the trailer and, in some cases, loss of control damaging the tow vehicle, the trailer, glider and potentially a third party.

The second problem experienced with tyres, also as an outcome of the small number of kilometres per year, is that the tyre sidewalls start to deteriorate long before the tread runs out. So how old is too old, and how do I determine how old the tyres are? The answer to the first question is that tyres are stamped with their manufacture week and year, refer to the following photo. The answer to the second question depends on who you ask, it will also depend on where and how they been stored.

What kind of tyre is best? Some trailers, because of their rim size and manufactures data plates, are limited to car tyres whereas others have the option of Light Truck Tyres. Light Truck Tyres have the advantage of thicker treads and stiffer sidewalls, which are more robust. Provided the tyres are in good condition, car tyres should be as reliable except in extremely rough conditions.



Tyre Pressures – ensure your tyres are properly inflated before towing.

Brakes and Bearings – once again due to the low usage particularly during winter, moisture can settle onto brakes and bearings where corrosion can occur and its not unusual to hear stories of failures of these parts during summer too. Servicing these parts prior to the season is highly recommended prior to departing on a long road trip. It's also recommended to stop after about 20km or so on the first day to ensure that the rolling gear is not overheating; if it's making a noise it is unlikely you're going to hear it from the comfort of an air conditioned vehicle.

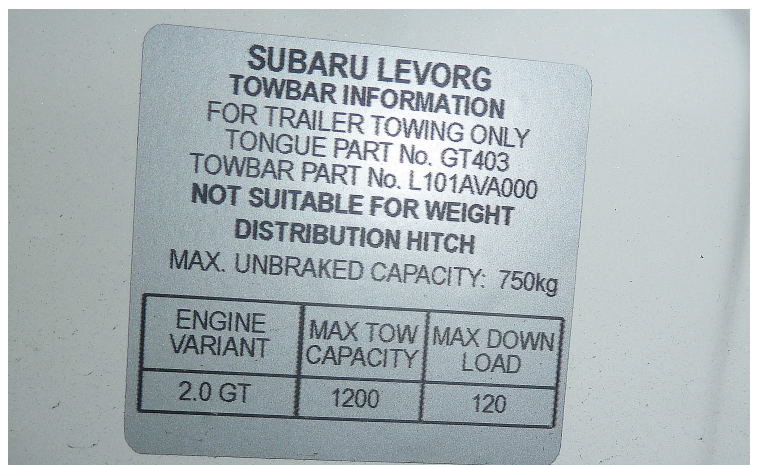
Trailer Fittings - It's also not unusual to hear stories about failures of trailer fittings; sometimes resulting in damage to the glider. Occasionally these failures are the result of deterioration over time, and in some cases it's because people are unfamiliar with how the fittings work. This is less common with the newer commercially built trailers but there are a lot of older style trailers in use, and almost everyone has a different way of securing wings, tailplanes and the fuselage. It is important to ensure that tow-out and other equipment transported in the trailer is securely tied down so it can't move and cause damage to the glider.

Lights – while most modern trailers are fitted with LED lights many of the older trailers are fitted with older less reliable incandescent lights. Many of the older trailers also have old wiring and a voltage drop of up to 6 volts from the tow vehicle to the back of the trailer has been recorded.

Tow Vehicles

Tow Combinations – ensure that your tow vehicle is legal to tow the trailer you intend to tow, otherwise you could void your insurance.

While most SUV style vehicles can legally tow most single seat gliders, many cannot legally tow a large two-seat glider trailer when fully loaded. How do you establish your vehicle's towing limitations? It will be in the owner's handbook, or on the driver's door pillar. An example of a door pillar sticker applied on modern vehicles is opposite. Larger 4WD vehicles will also publish Gross Vehicle Mass (GVM) and it can be easy to exceed with a loaded tow vehicle and trailer.



Recently GFA received a report of a Tow Bar falling of a vehicle while the glider trailer was attached. Fortunately the driver suspected that something was not quite right and stopped to check. Some manufactures stipulate in their vehicle operating and service manuals that

vehicles fitted with tow bars require additional service checks to the tow bar mounting points to ensure they are secure.

Recommendations

So before embarking on that next soaring trip, give your glider trailer the same level of preparation that you give your glider using a pre-season maintenance schedule. Obviously each trailer will be different but general categories should include:

1. Trailer

- Roadworthy Items
 - Tyres
 - Brakes
 - Bearings
 - Lights
- Fittings
 - Glider Fittings
 - Accessory Fittings

2. Tow Vehicle

- Roadworthy and Legal Tow Combination
 - Maintain and check tow fittings as described in the owner's maintenance manual.
 - Ensure that your tow vehicle trailer can legally tow the trailer

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