

Pulling Trailers

Trucks are designed to carry cargo or pull trailers. Sports cars are designed to carry 1 or 2 people and to go fast. Does your motorcycle look more like a sports car or a truck?

Motorcycles are not designed to pull trailers, carry heavy cargo or have sidecars. Most manufactures advise against pulling a trailer and it can void your warranty. Trailers can cause problems with your tires in addition to handling and stopping problems. The extra weight of the trailer tongue combined with quick starts and stops put too much stress on the back tire and can cause it to fail. At best, you should be sure the load rating is up to the task and expect accelerated wear on the rear tire.

Dunlop's Tire Tips - http://www.dunlopmotorcycle.com/infocenter_tiretips.asp?id=31#tip

states that:

The use of trailers contributes to tire damage and touring motorcycle instability. Although most motorcycle manufacturers recommend against their use, a percentage of the motorcycles we have inspected were so equipped. The trailer tongue weight added to an already heavily laden motorcycle can fail a rear tire. The percentage of overloaded motorcycle rear tires found during our inspection would have been higher if trailer tongue weight had been considered. The forces of rapid acceleration and deceleration may also multiply the effects of trailer tongue weight. The addition of accessories, cargo, and dual riding to touring motorcycles aggravates the problems of overloading and under inflation. The excessive flexing that results from under inflation or overload causes buildup of internal heat, fatigue cracking and eventual carcass breakup resulting in complete failure. A consequence of such failure may be an accident with serious personal injury or death.

It makes you think when you see 2 up on a bike with extra cargo high on the bike, pulling a trailer behind them.

If you are considering pulling a trailer, first you should make sure that your suspension and drive line as well as your tires are rated to carry the extra weight. Service brakes EARLY if they are the least bit questionable. Make sure that ALL of the tires have proper inflation. In addition to making sure that you have a reliable, safe ball hitch and trailer, make sure that you cross your chains under the tongue before connecting the chain to the hitch. Without this precaution, if the hitch dislodges from the ball, the tongue will fall and scrape against the road until it gets caught in the pavement. Crossed chains will catch the tongue. Invest in good chain connectors. Each time you start a journey, check them to make sure they are in good condition and working properly. Two chains are recommended and required in most states. Safety chains are very much like helmets -- you really, REALLY hope that you never actually need them, because if you do, you are almost certainly in very serious trouble! You are always responsible for any damage that the loose trailer might cause, provided you survive such an incident. When riding in a group pulling a trailer, be the last in line. Never ride behind any vehicle with a trailer.

When packing the trailer, make sure to put the heaviest objects in the bottom, on top of the wheels and just barely forward. If you put the heaviest objects to the rear, it can contribute to your hitch coming loose and/or result in some rather bizarre handling characteristics. If you put the load too far forward - it puts too much weight on your back tire, which may have various dangerous consequences (loss of steering, braking power, stability and probability of overheating and possibly blowing your back tire). Use lightweight blankets or empty cardboard boxes, etc in the front and back to secure the cargo and prevent load shift as you brake, accelerate or ride over any significant dips. You should check the position of the load each time you make a stop and at regular intervals. Try not to pack anything high, which will affect your center of gravity. If you must pack high, make sure that it is very light. Try to determine the total weight of your trailer and cargo and try to balance for 10% on the tongue. Check the weight distribution of your trailer while the tongue of the trailer is at the height it will be when connected to your bike. The weight transfer will lessen in proportion to the length of the tongue (longer being better). Never overload a trailer (300 lbs max. including the trailer, even if you have a large bike). The more weight the less control you will have. Double check to make sure that the coupler is latched and locked.

Always remember that you are pulling a trailer! If you are unable to see the trailer in your mirrors, put a flag on it. When you start to pull the trailer, take it easy the first few miles while you are getting used to the difference in handling.

References:

http://www.dunlopmotorcycle.com/infocenter_tiretips.asp?id=31#tip

<http://www.motorcyclecruiser.com/streetsurvival/packing/>

<http://www.motorcycletrailer.com/tlrload1.htm>

http://www.msgroup.org/forums/mtt/topic.asp?TOPIC_ID=142&SearchTerms=trailers

<http://www.scif.com/news-info/lc-bulletins/bungee.htm>

Cargo and Bungee Cords

There is never enough room on a motorcycle if you are touring for several days. Remember this rule - there are stores all over the world that carry toothpaste, sweatshirts, underwear, jeans, etc. If you forget something, or run out of something, you can usually buy it somewhere along the way. Washing your clothes frequently is another alternative.

Here are the do's and don'ts: Try to keep the weight as close to the center of gravity of the bike as you can. The center of gravity is usually near the top of your transmission case. Heavy = keep it low. Be careful what you strap to sissy bars = keep it light. If you have saddlebags, keep the weight balanced. If you don't have a passenger you can make use of the empty seat. Don't obstruct airflow to the engine. Be mindful of chains and hot areas and careful not to block your lights (especially that all-important brake light!)

Be aware the GVWR (gross vehicle weight rating) that is recommended for your bike by the manufacturer. Your owner's manual and the VIN plate both list GVWR, the maximum total

weight of bike, fluids, riders and luggage that the manufacturer recommends. There is also a GAWR (the A stands for axle) for front and rear wheels. Keep in mind the weight of accessories that you may have added to your bike - those little gadgets and extra chrome can add up over time. Make sure that your tires have proper inflation.

Dunlop recommends the following guidelines for touring motorcycle loading:

A. Light loads-single rider with some luggage (up to 200 lbs total) - minimum tire pressure of 32 psi front and 36 psi rear must be maintained.

B. Heavier loads-dual riding and/or luggage (from 200lb. Total up to maximum motorcycle capacity stated in the owner's manual - pressure of 36 psi front and 40 psi rear must be maintained.

For any dual riding or fully loaded use, 40 psi must be maintained in all Dunlop rear tires fitted to touring motorcycles.

Be cautious while you are getting used to the difference in handling due to the extra weight. If you notice a increase in braking distance, your back tire is getting hot, or you experience significant handling difficulties, stop and remove some weight. Your cargo is not worth your life. UPS, USPS and FedEx will be delighted to ship your items to you at home, or send them ahead of time to your destination if that is possible. One of the smartest ideas I ever saw, was a UPS booth set up at a motorcycle rally. I'm sure that helped to increase sales for the rally vendors.

Bungee Cords

Careful of bungee cords. A cord that is under tension suddenly letting go can translate to a painful and dangerous experience! A cord can recoil at speeds up to 60 mph! If a cord looks worn - throw it out.

- a hook can be pulled out of the user's hand as it's being stretched into place
- the hook may disengage from the attachment point
- the attachment structure could fail
- the hook itself could straighten out
- a cord could break
- a hook could break away from the cord

You may want to use different devices such as rope, nylon straps with connectors or an elastic cord net with many different hook ends all around it.

If you must use bungee cords, follow these safety procedures recommended by State compensation Insurance Fund:

- using extreme caution when stretching the cord over a load
- securing hook ends carefully
- never extending the cord beyond its capacity of length or load
- keeping the face and other vulnerable body parts away from the cord's rebound path
- never using bungee cords to hold a surface which reacts to wind or air movement

Sidecars

The Sidecar/Trike Education Program (S/TEP) is an organization that offers training for 3-wheeled motorcycle based vehicles, similar to the Motorcycle Safety Foundation courses offered for 2-wheeled motorcycles. 3-wheeled motorcycles are significantly different in handling dynamics and characteristics from 2-wheeled motorcycles. Training is offered at several locations throughout the United States and Canada. Course schedules and class information is listed below. For more information about this program please contact the Evergreen Sidecar/Trike Program Coordinator, Monty E. Lish at (800) 521-0778 or mel@esc.org

<http://www.esc.org/sidecar.html>