When loading your trailer, store heavy gear first, keeping it on or as close to the floor as possible. Heavy items should be stored directly over or slightly. ahead of the axles. Store only light objects on high shelves. Distribute weight to obtain even side-to-side balance of the loaded vehicle. Secure loose Items to prevent weight shifts that could affect the balance of the trailer.

With the trailer fully loaded, drive to a scale, unhitch the trailer from the tow vehicle, and weigh separately the load on the hitch coupler and the load on the axles. The load on each axle should not exceed its GAWR. The total of the axle loads and hitch load should not exceed the GVWR. For best towing stability the load at the hitch coupler should be between 10% and 15% of the fully loaded trailer weight. If a weight-distributing hitch is employed, the load on the axles should also be weighed with the trailer hitched to the tow vehicle to make certain the load on each axle does not exceed its GAWR. If weight ratings are exceeded, move or remove items to bring all weights below the ratings.

## SELECTION OF A TOW VEHICLE

If you plan to tow your trailer with your standard sedan, station wagon or pick-up truck which have not been specially equipped for towing, you may do so with probably no trouble if you do not travel extensively in hot climates or on mountain roads and if your trailer weighs less than about 3,000 pounds.

If you are buying a new vehicle, however, and you plan to use it for trailer towing, you should follow the recommendations of the auto manufacturer in making your selection. All the major auto manufacturers have studied the special needs of their vehicles for towing use and have printed brochures to help you properly match the tow vehicle equipment to your particular sized

Among the optional items which may be important for optimum performance are:

- 1. Axle ratio
- Engine cooling
  - a. Radiator size b. Fan design

  - Coolant recovery system
- 3. Transmission cooling
- 4. Alternator and battery size
- 5. Suspension system
- 6. Tire size or rating

Depending on the weight of your trailer and the type of driving you are planning, the vehicle manufacturer may or may not recommend all of the available options. Generally most of the options are recommended for:

- Extensive traveling under any conditions
- 3. Hot climate driving

2. Mountain driving

4. Heavy class trailers

Even with all the options, try to avoid any type of driving that will overheat your engine such as following a slow-moving truck up a long grade.

## **ABOUT HITCHES**

## **EQUALIZER HITCHES**

In addition to pulling the weight of a trailer, a two vehicle must also support about 10% to 15% of the actual weight of the trailer at the hitch point. With a 6,000 lb. trailer, this additional weight might be 700 or 800 lbs. This much weight added to your rear bumper area causes the car to become out of balance, and traction on the front wheels is lost. This will result in poor steering control, poor braking control, and can be potentially dangerous. Use of heavier springs, spring helpers or stiffer tires will not correct the basic out-of-balance condition. The problems from this condition are compounded when traveling over bumps and dips in the road. The balance problem is solved, however, by addition of a suitably matched "equalizer hitch," sometimes called a "weight distributing hitch." Without getting into a lengthy technical discussion, we can say that the effect of an equalizer hitch is to distribute the hitch load equally between the front and rear tow vehicle axles and the trailer axle(s). If the weight at the hitch was 600 lbs. then the effect of the equalizing hitch would be to distribute this weight in approximately equal portions to the three axles.

Instead of having the entire 600 lbs. sitting on the car's rear bumper, it is evenly distributed, and your tow vehicle can remain relatively level. This will not only give you better steering and brake control but will keep your headlight beams down on the road where they belong.

Most hitch manufacturers offer equalizing hitches in three or four sizes, designed to handle trailers of various hitch-weight classes. Unless you pull only a little folding camp trailer or a small light hard-top travel trailer, don't kid yourself into the idea that you can get by without an equalizer hitch. You owe it to the safety of your family and safety of those in other vehicles to maintain the best vehicle control, and a properly installed and adjusted equalizer hitch will help you do just that. Get the hitch size that is right for your requirements. Your dealer will help you select it on the basis on your trailer weight.

## SWAY BARS - SWAY CONTROLS

Except for the very light travel trailers, most trailers should employ some type of sway control device. There are several types of these devices available operating on different principles such as friction, cam action and computer operated braking of the trailer wheels. Each has some advantages over the others as their manufacturer's literature will tell you. They will all decrease the sway effects induced by passing trucks and strong side winds. They can make your towing safer when driving under adverse conditions.