A Practical Solution to Sagging Springs
By Wendell Smith

Over time the suspension springs on our cars have a tendency to weaken. This causes the coach and fenders on the car to look like they were improperly constructed or that the car has too large a diameter of tires on it. Over time, the sagging of springs happens on any car, however I have found it is more pronounced with coil springs than it is with leaf springs.

1940 Chevrolet (nc) shown in storage with jack stands positioned on chassis to take car weight off coil springs.

Sagging is caused by the molecules natural tendency to realign due to the continuous weight placed on them when supporting the car. Springs are typically made of alloy steel that is heated to approximately 500 degrees F in a heat treating process which is followed by shot pining to remove processing stress. When doing a frame-off restoration most restorers either have springs re-arched or install new springs. When the springs are re-arched they are either bent cold in multiple locations with a hydraulic press, or they are re- bent using a heat treatment. The heat treatment involves heating the metal to 1,650 degrees F to remove the molecule memory, and then they are reshaped in the same manner that new springs are made.

When restoring my 1927 Rolls I did not buy new springs, or have the springs re-arched. I did clean and re-lubricate between the spring leaves. I have also employed a practice of taking the weight off the springs if the car is not going to be driven for three or more months. Most people in our hobby use jack stands to take the weight off the tires when storing cars for extended periods of time. This keeps the tires from getting flat spots from sitting and prolongs tire life. When taking the weight off tires most people place jack stands or blocks under the axles or spring shackles. It is just as easy to place the jack stands on the chassis or on chassis supports. By lifting on chassis points the springs have all of the car weight removed from them and even have a re-arching negative weight created from the weight of the axles, shackles, wheels, and tires.

Rolls Royce Phantom I positioned on car lift to allow negative *weight on leaf springs.*