

## Hose Cold Flow Clamps

While repairing a vehicle, have you ever removed an old hose clamp and noticed the deep, yet intricate impression left behind in the hose compound. This is called “Compression Set”. This impression is now permanent and given time it will not rebound to its original appearance.

When you first install a clamp, the new hose material is compressed tightly. Given time the hose will relax or not push back as hard against the clamp. This is called “Cold Flow”. As the name suggests, the hose compound is actually moving out from underneath the clamp to find a location where there is less applied stress on it. This hose relaxation is usually perceived as a drop in screw installation torque.

A thermal cycle will accelerate the Cold Flow process and for this reason it is good practice to retighten the clamps after the engine has been warmed up and cooled back to room temperature.

For the same reason, it is good practice to retighten all clamps while performing periodic maintenance. Eventually the new hose will reach a point of near stability and clamps will go for long periods of time without needing to be retightened.

The newer hose compounds now being used are much better with regard to Cold Flow or relaxation than hoses used a couple of decades ago. But independent of hose brand, compound, or construction, all hoses will Cold Flow and eventually take on a Compression Set. To stay safe tweak those screws periodically.