

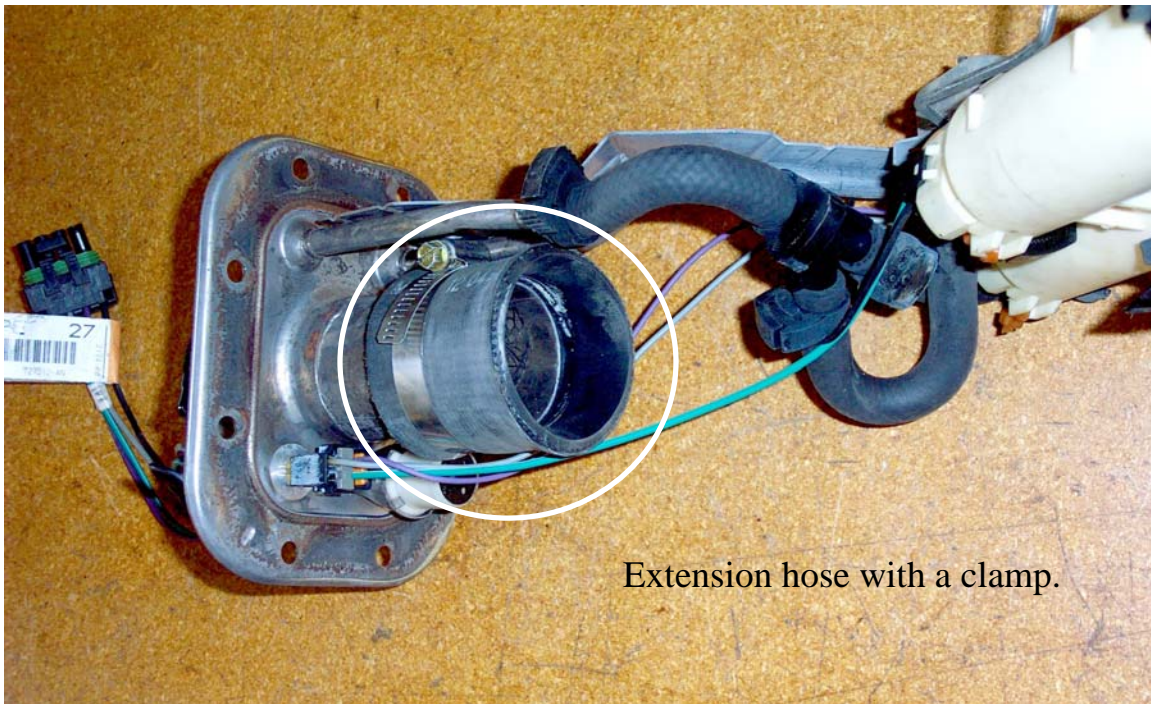
Heavyweight Discovery

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This is a legendary story as I recall it being told by factory Corvette technicians Gordon Killebrew and Jerry Watts. I have also drawn information from an article that was written by Dennis Gratton in the ZR-1 Registry's Legend magazine in May 1998. From the stories I was aware of the existence of the heavyweight ZR-1's. Until recently I had not encountered one.

During 1993 ZR-1 production the factory discovered that the ZR-1 weight classification was more than allowed by the government standard. The Gross Vehicle Weight Rating or GVWR is defined as the wet weight of the vehicle with optional equipment, a full tank of fuel, a full load of passengers and cargo. The GVWR is listed on a tag on the left door. Some factory people called these cars, "heavyweights". They weighed about 14 pounds too much. I am guessing that this happened at about VIN 150. They developed an immediate solution that could be applied to the overweight cars that they had access to and also apply to the cars in production so that they could keep production going. The method was to reduce the fuel tank capacity so that less fuel weight could be installed. They did this by extending the fuel filler neck one inch lower in the fuel tank. When the fuel level reaches the bottom of the neck the air trapped above that point prevents the addition of more liquid.

While servicing Fred Haraf's '93 VIN 190 I discovered exactly how they modified the fuel filler. They added an extension hose that lowers the overall length of the neck by one inch.



Extension hose with a clamp.

It is interesting to note that Fred had commented that the fuel tank capacity seemed small. The capacity of the tank is listed as 20 gallons. Experienced ZR-1 owners know that it is not possible to add more than 18 gallons to the tank. The upper area of the fuel tank is about 42" x 13". One inch of fuel at that level is about 2.4 gallons. If the refill limit is 18 gallons and a heavyweight is limited to one inch less fuel, the heavyweight may only accept about 15.6 gallons. Fuel weighs 6 pounds per gallon so the weight reduction would be about 14.4 pounds.

A heavyweight can be identified by looking down the fuel filler neck to see if there is a hose on the end. The hose can be removed to restore the capacity of the tank to the normal 18 gallons.

The final weight reduction solution was to lighten the crash energy absorption panels behind the front and rear fascias. Up to about mid '93 the absorber material was a honeycomb of gray polyurethane like material. The new lightweight absorbers are white Styrofoam material. The Styrofoam material was used from sometime after mid '93 production until the end of ZR-1 production.

All of this discussion about ZR-1 weight and GVWR begs the question, which ZR-1 model year is the lightest in terms of GVWR? This is a sample of GVWR's.

Model Year	GVWR	Option C2L	Comment
1990 VIN 0257	3949	Yes	
1990 VIN 1813	3949	Yes	
1990 VIN 2405	3949	Yes	
1990 VIN 2673	3949	Yes	
1991 VIN 0250	3934	Yes	Seat back tilt motor dropped.
1992 VIN 162	3950	Yes	ASR motor added.
1993 VIN 071	3952	No	
1993 VIN 190	3979	Yes	Fred's heavyweight.
1994 VIN 204	3942	Unknown	The option list label is missing.
1995 VIN 175	3936	Unknown	The option list label is missing.
1995 VIN 409	3962	Yes	

The only equipment option that could affect the weight of the car significantly was the dual top panel option. If the car has the dual top option it is listed as code C2L on the factory configuration sheet located under the console lid. It's in the right rear storage compartment on a '95. The clear top is code CC3. The solid top is code CF7. The option codes are listed in section 0A of the GM service manual. The listing in the '90 manual is more detailed than the listing in the '95 manual.

Based on this list of GVWR's, '91 seems to be the lightweight followed closely by '95 if VIN 175 has the C2L option.