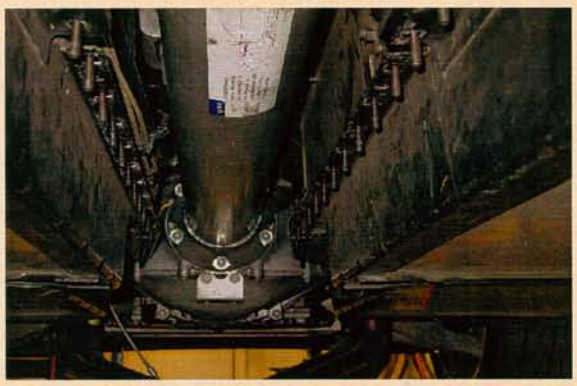
REPRINTED FROM AUGUST 2005

Corvette Fever

C5 CHASSIS MODS

Tunnel Tie-In

The C5 Corvette made new strides in the realm of chassis rigidity, but as with any structure, there's always room for improvement. It seems natural to apply this logic in the deep tunnel area found in the center of the car. The frame layout of the C5 presents two parallel hydroformed steel longitudinal rails. The OEM



chassis utilizes a thin-steel tunnel plate, conveniently tied to the rail and running the length of the chassis center tunnel. A beefier plate applied here provides significant benefits, and it's easy to see why. Tying together the two main chassis rails with a heavy-duty and rigid tunnel plate effectively boxes the chassis rails into a "U-channel" form, a structure that's inherently stiff. While the factory tunnel cover offers little torsional rigidity, the aftermarket stepped in with replacement tunnel plates that offer a real advantage. The concept is simple: add a thick aluminum plate in place of the flexible stamped-steel stocker to substantially buttress the structure.

A tunnel plate such as the unit offered by Elite Engineering can add impressively to the solid feel of a C5. The difference can be felt in handling, reduced noise, and a noticeable reduction in flex. Elite offers the tunnel plate in either its original ¼-inch thickness or an even heavier-duty ⅜-inch version. While the improved structure provided by the tunnel plate is reason enough to consider this mod, another is reduction in heat transfer into the car. The exhaust system of the C5 is tucked into the tunnel below the plate, and heat radiation into the passenger compartment is a fact of life. Elite offers a ceramic thermal-barrier coating applied to the tunnel plate to help diminish this condition. With the potential to offer added chassis stiffness, a more solid feel,

reduced noise, and better isolation from heat, the tunnel plate mod is a real winner for any C5.

At the time Tony was upgrading his C5, Elite had not yet introduced the heavier-duty ⅜-inch plate, so beginning with the ¼-inch tunnel plate, he decided to fabricate a second layer to bring the total thickness to ⅜ inch. Tony's installation also included a custom set of high-tensile studs to secure the piece, and he reports the added stiffness of the plate resulted in a noticeable improvement in chassis rigidity, adding another level of solidness to the car's feel. Shown here in sequence is the flexible stock sheetmetal tunnel versus the heavy plate, the tunnel prepped for the install, and the new tunnel plate in place.

ELITE ENGINEERING
Windsor, CO
(970) 674-1515
www.eliteengineeringusa.com