

PHASE 4: Decreasing steering + increasing throttle (or decreasing braking)

This is the apex-to-exit phase. Weight is being transferred inboard and aft, so the outside front damper moves in rebound and the inside rear damper moves in bump. The other two dampers are considered stationary.

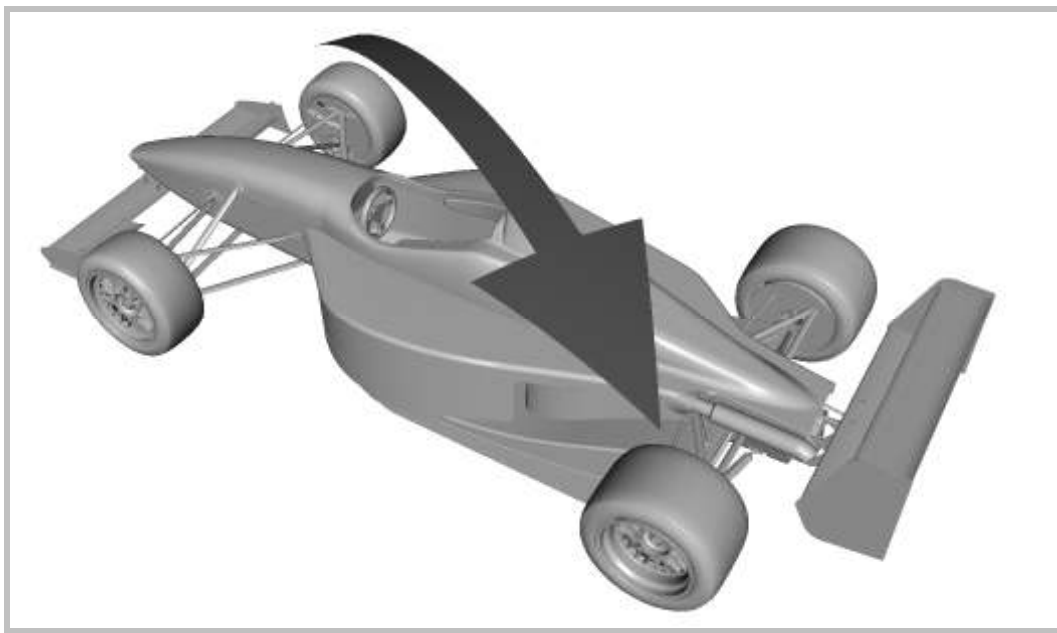


Figure 40 Phase 4 moves the outside front damper in rebound and the inside rear damper in bump.

EFFECTS OF DAMPER INDUCED WEIGHT TRANSFER

Let's start with some fundamental characteristics of cars and tires that will help clarify the discussion.

1. Each tire becomes less efficient with more vertical load on it.
2. The distribution of load among the 4 tires is determined by the direction the car is accelerating, CG height above ground, the 4 corner ride rates, 2 anti-roll bar rates, pavement ripples, **and the actions of the 4 dampers during transient maneuvers.**
3. The relative loads of the two tires on each end of the car determine how much grip that end of the car has. The best case is equal loading and the worst case is all of the weight on the outside tire.