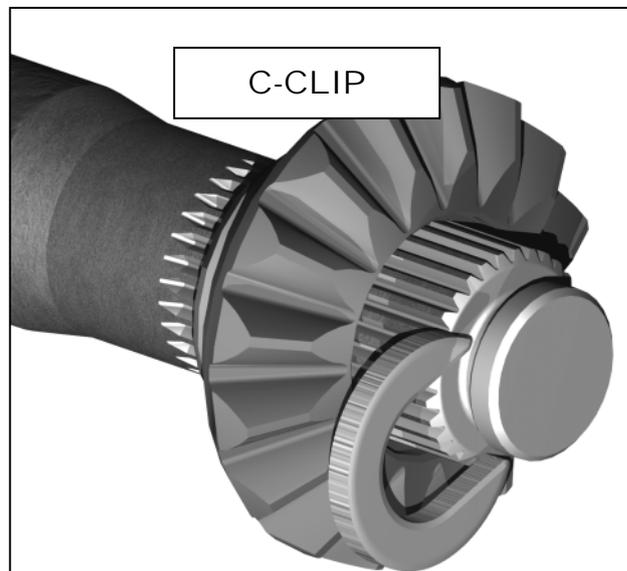
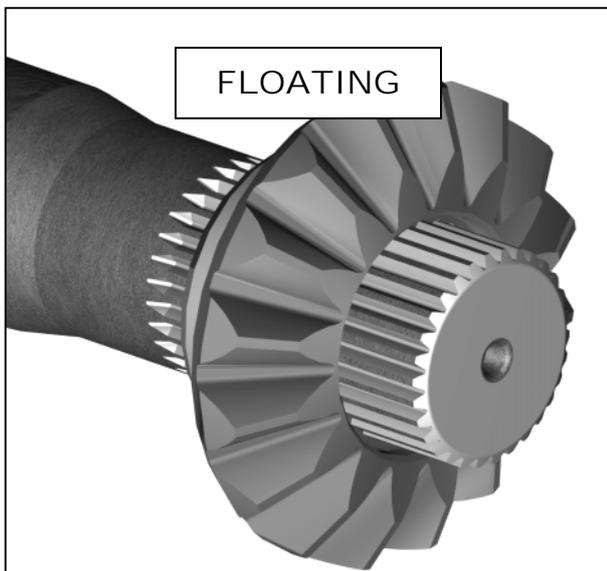


5.3

AXLE IDENTIFICATION

FLOATING vs. C-CLIP RETAINED AXLES

Floating axles are connected to the differential centre only by the sliding fit of the spline, whereas C-clip retained axles are completely retained to the vehicle by small 'C' shaped clips which assemble into a small groove on the inboard ends of the axle shafts on the inside of the differential. Air Locker differentials which support the use of C-clips incorporate a C-clip access window in the side of the differential case. These models will usually require the removal and reinstallation of the long cross shaft while the differential center is in the vehicle.



SEMI FLOATING vs. FULLY FLOATING AXLES

The difference between fully-floating (FF) and semi-floating (SF) rear axle shafts can usually be identified by the configuration of the hub in the centre of the wheels (refer to the diagram below). Fully floating axle shafts are independent of the wheel, and usually bolt onto a protruding part of the hub assembly. For this reason, fully-floating axle shafts can usually be completely removed from the vehicle without removing the wheel or disassembling the hub. In the case of semi-floating axle shafts, the wheel or rim usually bolts directly to a flat flanged section on the end of the axle shaft. Semi-floating axle shafts used in conjunction with drum brakes usually employ a thrust block inside the differential center to enable an end-float condition to be set-up at the hub end where the shafts are supported by the wheel bearing(s).

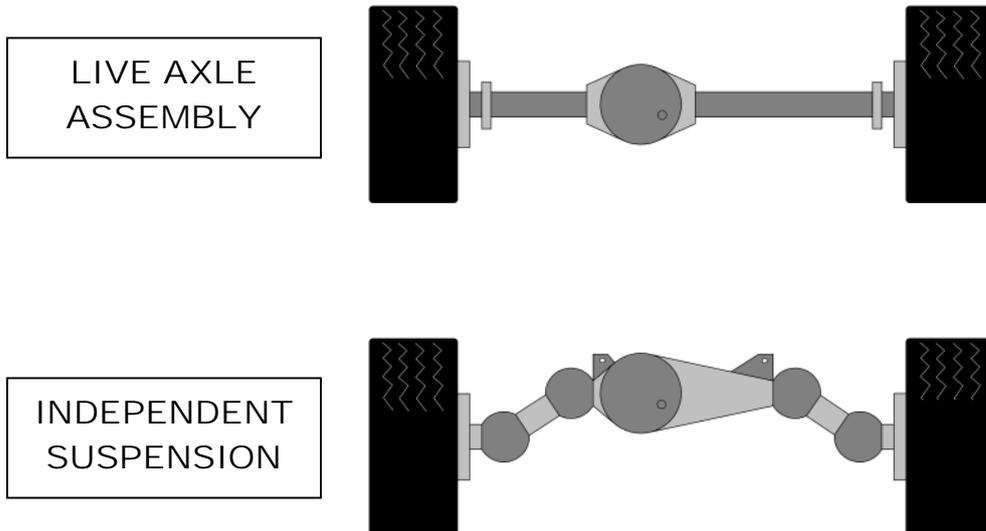


5.3

AXLE IDENTIFICATION

LIVE AXLE ASSEMBLIES vs. INDEPENDENT SUSPENSION (IFS & IRS)

Live axle assemblies are the most common axle in four wheel drive vehicles where the wheels, the axle shafts, and the differential centre all travel as a part of one straight rigid unit. In the case of a live axle, when one wheel is articulated upwards, the differential and the opposite wheel are forced to angle upwards with it. Independent suspensions are those where the differential is hard mounted to the chassis of the vehicle and the wheels are only connected to the differential by independently articulating CV shafts or half shafts. In independent suspensions the upward movement of one wheel has no effect on the opposite wheel except by means of an anti-sway bar.



SALISBURY LIVE AXLES vs. BANJO LIVE AXLES

Most live axle assemblies can be classified as either Salisbury or Banjo style. Also known as a Carrier Tube axle, the Salisbury live axle assembly consists of a cast centre section into which the axle tubes are permanently attached by welding or press fit. The differential centre is removed/installed into the assembly through a cover plate on the side of the axle assembly opposite to the drive pinion flange. The Banjo style live axle, also known as the Hotchkiss, the Drop Out, or the Third Member style axle assembly, consists of a removable cast centre section most commonly referred to as the third member, and a sheet metal housing incorporating the axle tubes. The third member is attached to the housing by a circular bolted flange. In the case of Banjo style axles, the third member must be completely removed from the vehicle and supported on a workbench before the differential centre can be removed from or installed into the third member.

