STEERING Wheel alignment help please!

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Link to CF Thread

rene-paul

There is only one way to assemble. The 64 AIM has the info along with the 63 corvette Shop Manual combined with the 64 supplement.

Begin by removing the wheel from the hub.
Remove the horn contact so the nut securing the hub is exposed and remove the nut and the washer. The hub will have a chisel mark close to the splines (see Figure 7 below). This is the 12 o'clock position of the hub.

Now check and see if the steering shaft has a chisel mark (Also Figure 7). Replacement shafts may not have this mark. If your shaft has the mark, assemble the hub to the shaft aligning the marks. This will be the 12 o'clock position. You can now put the steering wheel on to the hub. Refer to AIM sect 9, sheet 5.00.

Move to the engine side and unbolt the coupler/rag joint halves. **Note that the upper coupler/rag joint half can only go on one way because there is a flat on the shaft that allows the clamping bolt to pass through. The flat will be facing the engine and be straight up and down** [this will locate 12 o'clock on an unmarked/chiseled shaft] (Figures 1&2). To recap so far, hub mark at 12, shaft at 12, upper coupler/rag on the shaft with bolt against the flat, loose.

The reference paper is for 69 and up I believe BUT it may apply if you are using a later steering gear. Original 63-67's steering gears had a full annulus around the input side of the steering gear. Later gears had only a flat which allowed the lower coupler/rag to go on only one way with the high point center at 12 o'clock. See what type of input gear you have. **63-67 steering gears had a chisel mark on the END (Figure 3)**, difficult to see if corrosion present. With the steering gear at **high-point-center** that chisel mark will be at 12 o'clock.

Clean that spline on the gear and mark the spline [I use white out] that matches the END chisel mark (Figure 4). Now make sure the lower coupler/rag SPLIT LINE matches the end mark and the white out marked spline (Figure 4). IF you have an original steering gear with a full annulus this is where the one spline off situation WILL occur. **This establishes all the 12 o'clock positions.**

Pitman arm can only go on one way. NOW you do the wheel alignment. Tie rod adjustment will now set toe AND steering wheel center.

There are other adjustments that must be paid attention too also. Steering tube location, column lower support and proper penetration of the upper coupler/rag onto the shaft.

The AIM and the Shop manual are to be referenced. Credit goes to Jim Shea's* paper. I applied it to the earlier columns. They are a bit different. Intermixing of parts can make it a bit challenging. Do not forget the torque wrench. Sorry for being long winded, hope this helps.

Brgds,
Rene

*STEERING WHEEL & STEERING SYSTEM CENTERING PROCEDURE
(CORVETTE 1963-82, CAMARO/FIREBIRD 1967-69, AND NOVA, SKYLARK,
VENTURA, APOLLO 1968-74, & OTHER GM REAR STEER VEHICLES)

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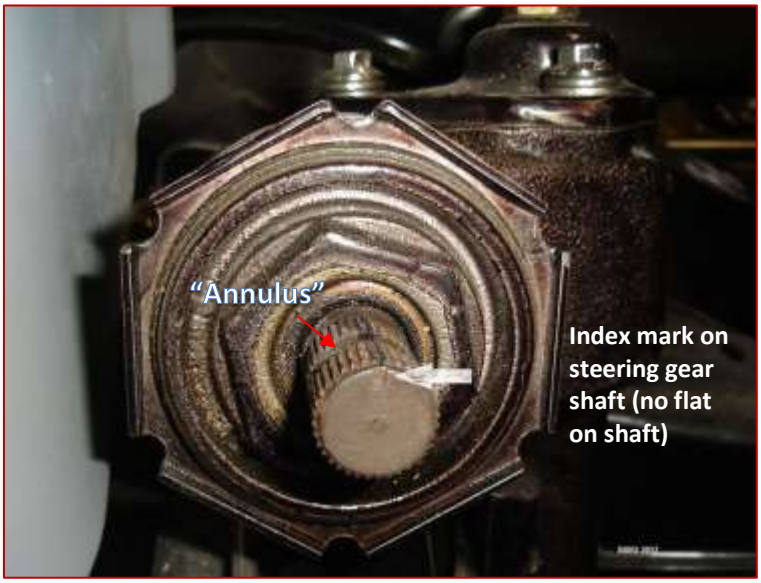
Buns

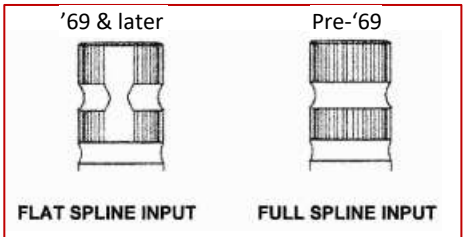
Some pictures to go along with rene-paul's most excellent write up.

Figure 1

Figure 2

Figure 3





http://jimshea.corvettefaq.com/?p=1033

Figure 4

Figure 5

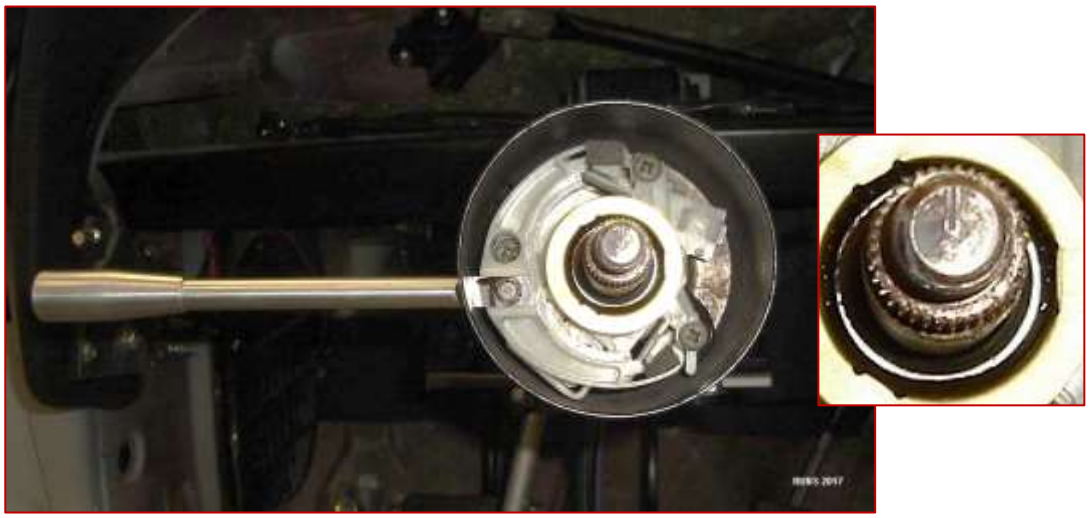


Figure 6

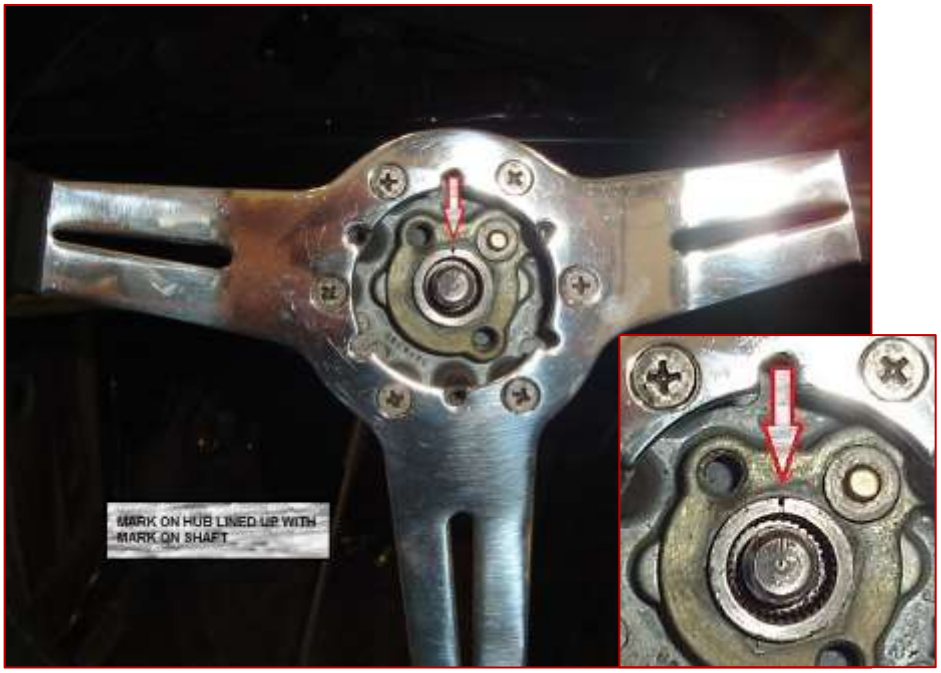


Figure 7