

Steering Column Shaft Rattle Problems Repaired

—1968-69 Mustangs

A noise or rattle in the steering shaft may be due to a shearing of the plastic injection molded shear pins which retain the upper half of the steering shaft to the lower half, thus allowing relative movement between the two halves. This possibility should be considered in diagnosing any complaints of this nature.

CAUTION: Under no circumstances should an attempt be made to correct or eliminate looseness or rattles by welding or shimming the upper or lower shafts or by any other unauthorized correction, as the collapsibility and safety feature of the shaft and column will be seriously impaired. The proper procedures described herein will not impair the safety or function of the energy absorbing column.

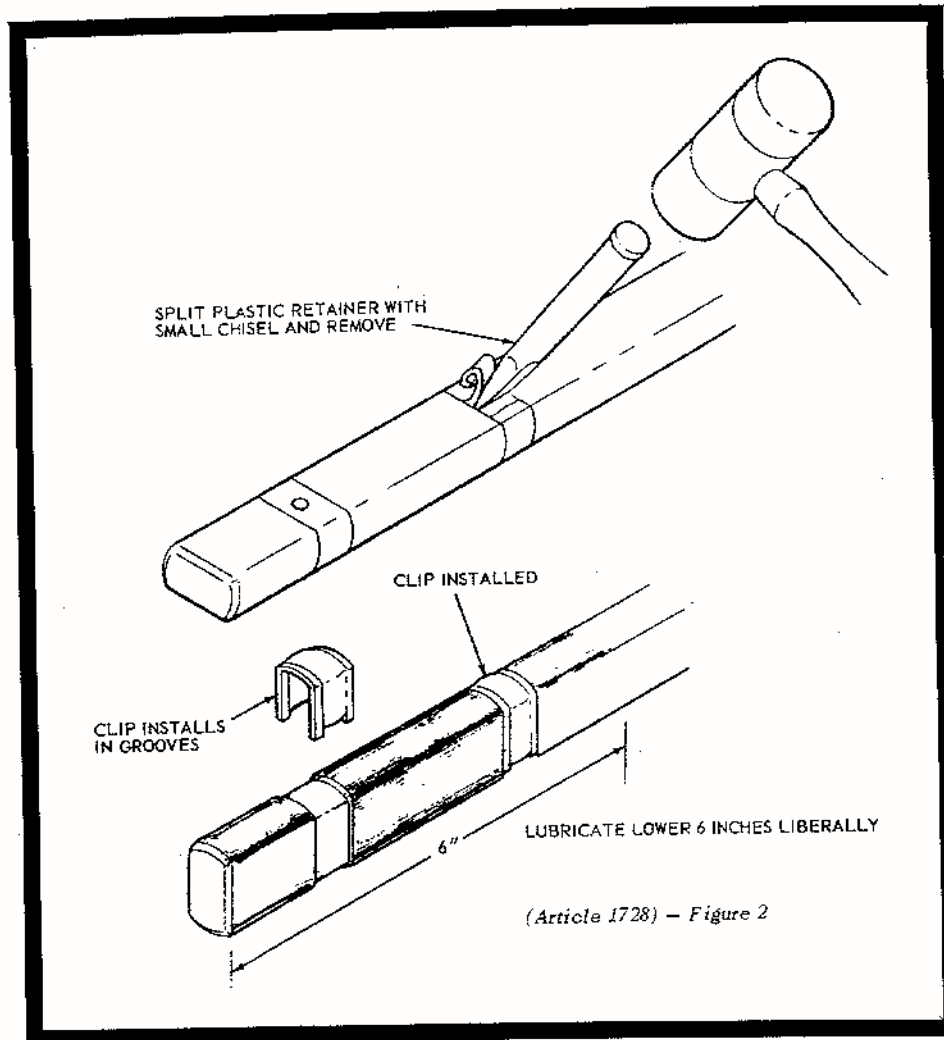
To remove the steering shaft, follow the procedure as outlined below:

STEERING COLUMN REMOVAL

1. Disconnect battery cable from negative post.
- 2a. Remove the bolt that attaches the flex coupling to the steering shaft.
- 2b. On column shift models, disconnect the shift rod(s) from the lever(s) at the lower end of the column tube flange.
3. Remove lower dash panel trim.
- 4a. Remove the nuts of screws that attach the toe plate to the dash panel and clamp to the steering column.
- 4b. On tilt wheel columns, working from the underside of the instrument panel, disconnect the steering column tilt control cable from the vacuum motor and mounting bracket.
- 5a. Disconnect the turn signal switch, horn wire, and emergency flasher wires at connectors.
- 5b. On column shift models with an automatic transmission, disconnect the wires from the neutral start switch.
6. While supporting the steering column, remove the nuts and bolts that attach column to instrument panel.
7. Lift the steering column and wheel assembly from the vehicle and place on work bench.

STEERING WHEEL REMOVAL

- 8a. Remove steering wheel crash pad.
- 8b. Disengage horn ring if so equipped.
- 8c. Disengage speed control bezels if so equipped.
9. Remove steering wheel from steering shaft with tool T-67L-3600-A. Do not use a knock-off type steering wheel puller or strike the puller or shaft with a hammer as



(Article 1728) — Figure 2

damage to the bearing or collapsible shaft may occur.

FIXED COLUMNS

10. Remove turn signal lever and switch assembly (position switch to one side).
11. Remove the upper bearing snap ring from top of steering shaft.
12. Remove steering shaft from column.
13. Remove the flexible joint, the locking ring, and insulator from the steering shaft.

TILT WHEEL COLUMNS

- 10a. Slide steering column covers out of work area as required.
- 10b. Remove wire harness retainer.
- 11a. Remove turn signal lever, switch (position switch to one side), and housing.
- 11b. Remove tilt mechanism spring.
- 12a. Remove tilt mechanism pivot pins using tool No. 67P3D739-A.
- 12b. Remove tilt mechanism assembly.
13. Remove steering shaft from column.
14. Separate upper and lower shaft and lay shafts so that holes in lower shaft for the

shear pins and centerline of plastic retainers are opposite. Draw a scribe mark on the upper shaft to indicate position of lower shaft. (See Figure 3).

15. Use a small chisel and mallet to remove plastic retainers from grooves. (See Figure 2).

15b. If the shaft shows any shape undercut other than a single step in the groove after removing the plastic retainer as shown in Figure 2, the correction is not applicable and the technician must then replace the shaft and proceed with steering shaft and column installation.

15c. If the shaft shows a single step after removing the plastic retainer as shown in Figure 2, the technician must continue as follows.

16. Apply C4AZ-19584-A or B or C1AZ-19590-B lubricant liberally over lower six inches of upper shaft. (See Figure 2).

17. Install two clips, Part No. C9AZ-3E629-B, into grooves in upper shaft. (See Figure 2).

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18. Place upper shaft in vise being careful to protect shaft surface, tap lower shaft on to upper shaft until scribe mark is reached. (See Figure 4).

STEERING SHAFT INSTALLATION IN FIXED COLUMNS

1. Install the flexible joint, the insulator and locking ring to the steering shaft.
2. Install the steering shaft in column.
3. Install the upper bearing snap ring to top of steering shaft.

TILT WHEEL COLUMNS

1. Install steering shaft in column.
2. Install tilt mechanism and pivot pins.
3. Install tilt mechanism spring.
- 4a. Install housing, switch assembly, and turn signal lever.
- 4b. Reposition steering column covers and retain harness with clamp.

STEERING WHEEL INSTALLATION ALL COLUMNS

5. Position the steering wheel on the shaft so that alignment mark on hub or wheel is adjacent to one on the shaft. Install a new lock nut and torque to 30-40 lb. ft.
- 6a. Re-engage speed control bezels if so equipped.
- 6b. Re-engage horn ring if so equipped.
- 6c. Install steering wheel crash pad.

STEERING COLUMN INSTALLATION ALL COLUMNS

7. Lift the steering column from the work bench and install in vehicle.
8. Install nuts and bolts finger tight attaching column to instrument panel.
- 9a. Connect the turn signal panel, horn wire and emergency flasher at connectors.
- 9b. On column shift models with an automatic transmission, connect the wires to the neutral start switch.
- 10a. Install the nuts or screws finger tight that attach the toe plate to the dash panel and clamp to the steering column.
- 10b. On tilt wheel columns, working from the underside of the instrument panel connect the steering column tilt control cable to the vacuum motor and mounting bracket.
11. Install the lower dash panel trim.
- 12a. Install the bolt that attaches the flex coupling to the steering shaft and torque to 20-30 ft. lb.
- 12b. On column shift models, connect the shift rod(s) to the lever(s) at the lower end of the column tube frame.
13. Align column and torque all finger tight bolts and nuts.
14. Connect the negative cable to the battery.
15. Check the turn signal, neutral switch (if applicable), and tilt mechanism (if applicable) for proper operation.

Spark Knock Occurring On Light Acceleration

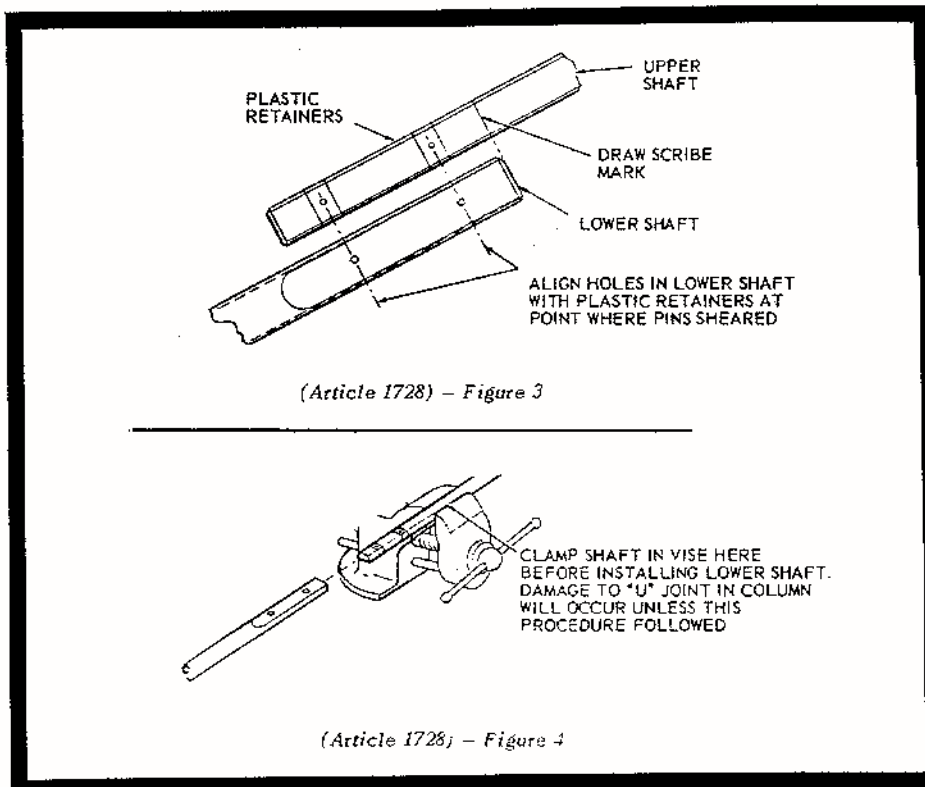
—1969 Mustang w/250 CID And Automatic Transmission

1. Verify the complaint — an engine noise resembling spark knock can be heard under light acceleration between 50 and 70 mph or during transmission upshift during W.O.T. at the same speeds.
2. Remove the plug in the end of the distributor diaphragm assembly and add a .060 inch shim to the C90F-12127-U (early built) or a .040 inch shim to the C90F-12127-V (late built) distributor vacuum diaphragm assembly. Refer to the 1969 Car Shop Manual, Volume 2, Group 09-01-07 and 08 for rework procedures.

Oil Baffle Tray Bolt Replacement

—1969-70 Boss 302 Mustangs

Oil baffle tray bolts (Part No. 359330-S2) should be replaced by new bolts from service stock whenever the tray is removed. This procedure is necessary because the bolts take a permanent set at assembly torques. Follow procedures outlined in 1970 Car Shop Manual for correct tray removal and installation.



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