SILVER SPORT Transmissions

BELLHOUSING ALIGNMENT DOWEL PIN INSTALLATION INSTRUCTIONS

NOTE: Some of the bellhousings are not deep enough to accept the longer dowels. In these cases, the longer dowels will need to be shortened from the end which sticks out of the engine block. The dowels are not hardened and can be cut with a hack saw. Deburr and chamfer the cut end of the dowels after shortening.

- Remove the stock dowel pins; Once you have determined that your bellhousing alignment needs correction and have obtained the correct offset pins, the old pins need to be removed from your engine block. The first thing to check is if your dowel holes are drilled all the way through the block where you can drive the dowels out from the front with a hammer and a drift or punch. If not, they will have to be removed from behind. There are many ways to accomplish this; here are some suggestions or possibilities:
 - a. Twist them out using locking pliers.
 - b. Put locking pliers on them with a gap between the pliers and the block face. Then, use two pry bars between the block and the pliers.
 - c. Drill a hole in the center, thread it, insert a bolt, and pull out with a slide hammer.
 - d. Weld a bracket or bolt head to them to obtain leverage for a slide hammer.
 - e. Make your own custom puller! Weld a bolt head or piece of all-thread to each of the old dowels with the bolt threads pointing back towards you. Drill three holes in a piece of angle iron or rectangular tubing about 1 or 2 inches apart. Install bolts through the outer holes, with nuts on the back side of the angle iron, to act as legs on the puller. You could use short pieces of rectangular tubing or steel rod as the legs if that is easier. Then, assemble the new tool to the engine with the dowel pin bolt coming through the center hole. Thread a nut onto the dowel pin bolt, and as you tighten it the dowel pin should be pulled out.
 - f. Heat may help.
- 2. Determine where the maximum offset is on each new pin by rolling the engine side of the dowel on a hard flat surface and looking for the maximum height point as it is being rolled. Mark the high spot with a dot from a paint marker or

permanent marker. Some offset dowels have the high spot already marked with a stamped number.



- 3. Clean the dowel holes in the block and check the inside diameter with a pair of calipers. Make sure the allen screws in the dowels are not tight if applicable. Then, measure the outside diameter of the new dowel pins and compare. You want to tap the pins in and still be able to twist them using the wrench flats on the offset dowels for fine-tuning of your alignment, but not have them loose enough that they will not stay in place. It is very important that the pins be sized correctly, and the inside of the holes are clean and rust-free.
- 4. If your number from your runout measurement is negative, point the high point of the offset dowels away from this number. If this number is positive, point the high point of the offset dowels towards this number **Always orient both pins in the same direction!**
- 5. Once the pins are oriented correctly, lock them in place by tightening the center screw (if applicable.) Re-install the bellhousing and repeat the bellhousing runout measurement procedure again to confirm that runout is less than .005" or 5 thousandths. NOTE: Minor adjustments to the orientation of the dowels may be needed to ensure runout is less than .005" or 5 thousandths.

For tech assistance, please call 865-609-8187, and our operator will connect you with the proper department.

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