



SKI SPINDLE BUSHING KIT INSTALLATION

This small kit can really change the way your sled handles. It is important to check the front end settings to gain the maximum benefit from these bushings.

- 1) Raise the front end of the sled, a tall jack stand works well. Pick it up high enough for the ski spindles to clear the floor.
- 2) Remove the skis. Remove the old bushings in the spindles. Carefully clean out the holes in the spindles. This is the time to check the camber setting of the spindles. Using a 5/8" bar set the radius rods to allow the bar to pass through both spindles without binding. The factory workshop manual gives a good breakdown on how to do this.
- 3) These bushings will cure any of the side to side play normally found in the ski spindle bushings from the factory, however, they will not cure loose rod ends, worn bushings in the bellcrank, or worn spindle to trailing arm bushings. These other components all have to be in excellent condition to have the steering work properly.
- 4) Insert the new bushing in the spindle hole. It is not necessary to take the spindle off the sled to install the new bushing. These are designed to have a light interference fit. The bushings can be lightly tapped in place with a small plastic mallet or a small dead blow hammer. It is possible to break the bushings from improper installation. A safer way to install would be to use a longer 3/8" bolt and 2 large washers. Put the bolt through one side, start the bushing, place a washer over the end of the bolt against the bushing, put a nut on it and tighten it to draw the bushing into place.
- 5) Note the delrin bushing is slightly longer than the width of the spindle. This has to be centered in the spindle hole. As the bushing is almost in place, loosen the nut and place some type of spacer under the washer by the bolt head. This will allow the end of the bushing to extend beyond the end of the spindle without being crushed. Center the bushing to that an even amount shows on both sides.
- 6) Slide the stainless steel inner bushing in place. If it binds, it may be necessary to ream the delrin bushing. Ream to 1/2" (.500). Most units will not require reaming as clearance is figured into the size of the bushings.
- 7) Install the skis using the new bolts and locknuts provided. Both of these are stronger than the originals. This is intentional. It is necessary to tighten up the bolts so that the sides of the skis are tight against the stainless bushing. This is important, if the sides are not tight against the bushing, abnormal wear will occur and you will lose the benefit of the new bushings. NOTE: If you have chrome moly composite skis, it will be harder to squeeze the ski side up against the bushing. This is why stronger bolts are supplied, go ahead and tighten them up.

- 8) After installing the skis, you'll want to set the toe out. The workshop manual suggests 0"-1/8" of toe out, using a bungee cord between the ski tips to hold them together. With the new bushings installed, it is no longer necessary to use the cord, the skis do not have any side to side play. We recommend setting the toe out to 1/4", much less than this will make the sled dart side to side.
- 9) Do not worry about the zerk fittings on the spindles if your sled has them, it is not necessary to grease these new bushings.
- 10) Remember to check the spindle bolts for tightness after a few hundred miles and occasionally in the future. The spindle bushings will last much longer if they're kept tight.
- 11) One more thing - - the instructions are lengthy, but it is necessary to adhere to them to get the best performance.

Parts Included:

- Delrin ski spindle bushings (2)
- Stainless steel inner bushings (2)
- Spindle bolts, grade 8 (2)
- Locke nuts (2)

Thank you for choosing HPE for your snowmobiling needs.