TEAM LOSI PERFORMANCE

A-3101 HYDRA-DRIVE UNIT ONLY*
A-3100 COMPLETE HYDRA-DRIVE TRACTION CONTROL SYSTEM*
(Use with A-3110 Friction Slipper instructions)

*PATENTS PENDING

INTRODUCTION

The Hydra-Drive is the most technologically advanced slipper design available. Team Losi has spent over 2 1/2 years developing and testing the patented design of the Hydra-Drive device. We are certain you will be happy with its performance and find it was well worth the wait.

The unique design of the Hydra-Drive lets you adjust the slipper for maximum performance on the slippery parts of the track while maintaining normal acceleration in areas of higher bite as well as over jumps. This means that the Hydra-Drive is somewhat of a "Power On Demand" unit. You will also notice that the static adjustment will be much looser with the Hydra-Drive. This makes the friction slipper absorb bumps and impacts much better than a standard slipper while maintaining forward acceleration.

Once you become familiar with the adjustments of the Hydra-Drive, you will surely find it to be a very useful tool in tuning your car/truck. Once again, thank you for choosing Team Losi.

ASSEMBLY

The Hydra-Drive portion of the slipper *must* be used along with the Team Losi Friction Slipper. Before starting assembly of the Hydra-Drive unit, assemble the friction slipper per instructions for A-3110. Once assembly of the friction slipper is complete, the Hydra-Drive unit may be added.

1. Press eight threaded inserts (1) into inside housing (2).

2. Insert a 3/16" x 5/16" bearing (3) into short nose of impeller (4) - *not* the interlock side.

3. Cut 3/16" off tip of fluid bottle. *Do not* cut more than 3/16". If hole in bottle is too small, open it up with a pin or hobby knife. Cutting *too much* from the tip will leave the tip too large making it difficult to fill Hydra-Drive unit in later steps.

4. Apply a thin coat of fluid to a quad seal (5) and slide over the long nose of impeller (4) - interlock side.

5. Press the interlock side of the impeller (with seal and bearing in place) into inside housing (2) till it stops.

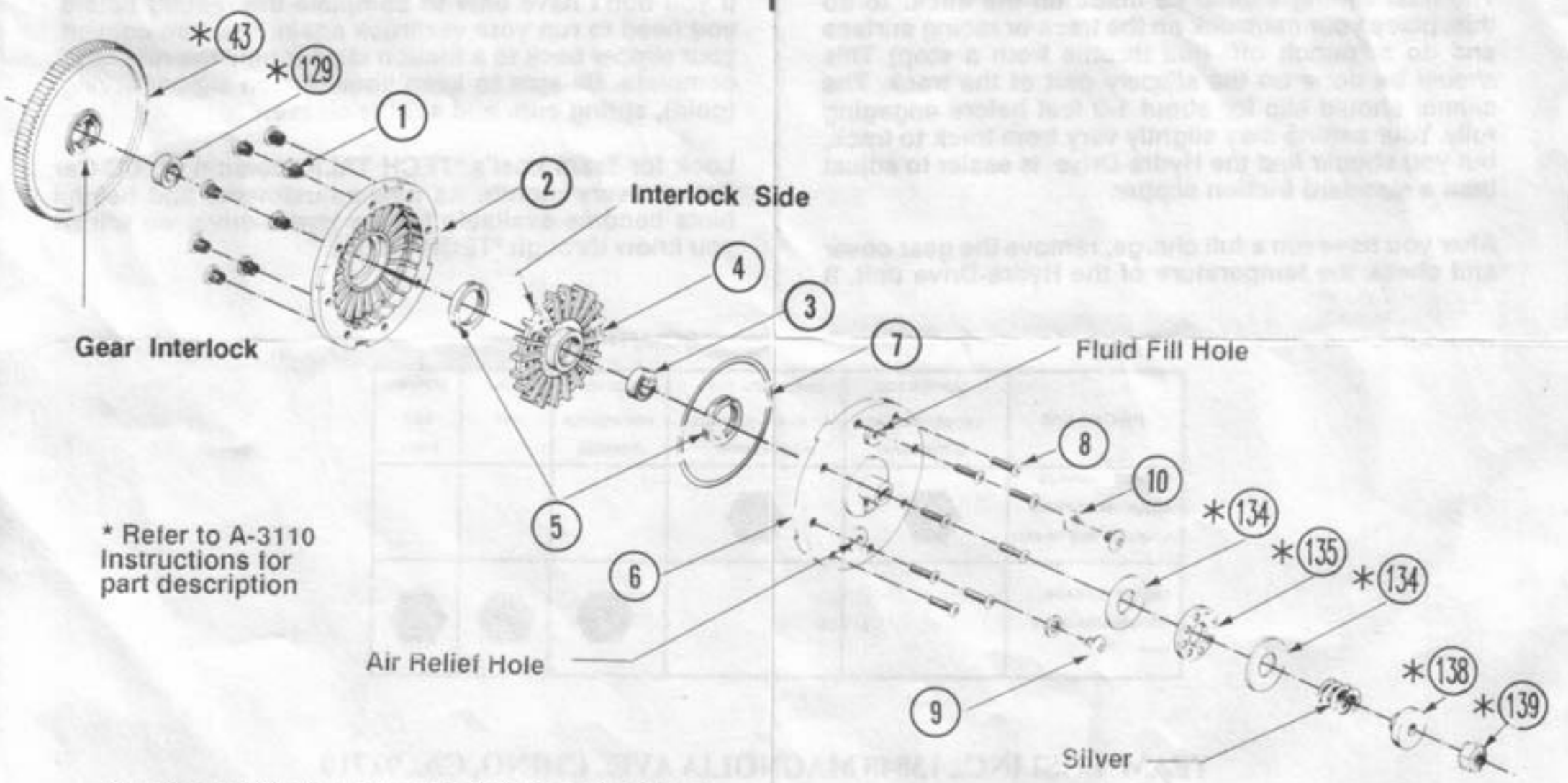
6. Apply a thin coat of fluid to the second quad seal (5) and slide over short nose of impeller (4).

7. Set aside inside housing/impeller assembly.

8. Check inside of the outside housing (6) for any flashing around the two threaded holes. If there is any, carefully remove it with a sharp hobby knife.

9. Lay O-ring (7) in groove on outside housing (6). Be sure O-ring (7) stays in groove or Hydra-Drive will leak.

10. With outside housing (6) facing up, assemble the two housings (6), (2) together. Align the small tab on the outside housing with the small slot on the inside



housing. Be sure that the large O-ring (7) from Step 10 stays in place.

11. Secure assembly with eight 2-56 x 5/16" buttonhead screws (8).

12. Lay assembly on table with outside housing (6) facing up. Insert tip of bottle into fluid fill hole in outside housing (6). Squeeze fluid into Hydra-Drive until it starts to come out of the air relief hole, then a bit more until fluid runs fairly clear (free of air bubbles).

13. Screw a 4-40 x 1/8" nylon screw (9) and nylon washer (10) into each bleeder hole. *Be careful not to overtighten.*

14. Wipe any excess fluid from the Hydra-Drive unit .

15. Remove adjustment nut, spring spacer, gold spring, spacer sleeve, thrust bearing and spring cup from assembled friction slipper.

16. Place Hydra-Drive unit over end of shaft, splined end first. carefully line up splines on gear with splines on Hydra-Drive and push together.

17. Install thrust bearing assembly over post in Hydra-Drive followed by silver spring, spring spacer and adjustment nut.

* *Note: Spacer sleeve, gold spring and spring cup are not used with Hydra-Drive.*

18. Before tightening adjustment nut, be sure that slipper pad is still aligned with gear plate. Tighten 4-40 nut until it just touches the spring. See slipper adjustment section for final adjustment instructions.

SLIPPER ADJUSTMENT

Due to the characteristics of the Hydra-Drive unit, the static adjustment of the slipper may be set much looser. The final setting should be made on the track. To do this, place your car/truck on the track or racing surface and do a "punch off" (full throttle from a stop) This *should* be done on the *slippery* part of the track. The slipper should slip for about 1-2 feet before engaging fully. Your setting may slightly vary from track to track, but you should find the Hydra-Drive is easier to adjust than a standard friction slipper.

After you have run a full charge, remove the gear cover and check the temperature of the Hydra-Drive unit. It should be slightly warm. If not your adjustment is probably *too tight.* If your Hydra-Drive is too hot to hold your finger on for about 5 seconds, your adjustment is *too loose.*

GENERAL NOTES

After the first couple of runs, you may notice a slight amount of leakage. This is due to the building of pressure at higher temperatures and is perfectly normal. Wipe off the fluid and keep running it. Leaking should stop after the first few charges. If leaking continues, *check* to see that the seals are properly seated.

When filling your Hydra-Drive unit, use *only* Team Losi Hydra-Drive Fluid. The Hydra-Drive slipper has been designed to use special fluid.

Running the Hydra-Drive slipper *too loose* will cause the unit to get *very hot*. This may cause a slight "fading" or change of adjustment. This excess heat could *cause damage* to the seals if run too loose for numerous runs. The slipper should be adjusted so that *immediately* following the run you can hold your finger to the Hydra-Drive for more than 5 seconds

REBUILDING HYDRA-DRIVE

If your Hydra-Drive ever starts to show signs of excess leakage, you may want to rebuild your unit. This can be done by using Team Losi P/N A-3130. The rebuild kit includes all parts necessary to rebuild your unit. (Impeller, seals, screws, inserts, nylon washers, friction pad, etc.)

To properly perform this rebuild, you need to remove all fluid from your parts. If a solvent is used, be sure to dry off all parts before installing new O-rings. Once your existing parts are clean, rebuild your unit according to the instructions using all of the new parts. *Be sure* to replace all of the seals with new ones.

If you don't have time to complete the rebuild before you need to run your car/truck again, you can convert your slipper back to a friction slipper until the rebuild is complete. *Be sure* to keep your friction slipper spring (gold), spring cup, and spacer sleeve.

Look for Team Losi's "TECH TALK" column in R/C Car Action every month. As new adjustments and helpful hints become available for the Hydra-drive, we will let you know through "TECH TALK".

SOLUTIONS

PROBLEM	SLIPPER TOO LOOSE - TIGHTEN & TRY AGAIN	CHECK ADJ. NUT FOR WEAR - REPLACE IF NECESSARY	CHECK SEALS FOR PROPER SEATING	REBUILD UNIT	SCREWS NOT TIGHT
SLIPPER CHANGES ADJUSTMENT FROM START OF RUN TO END	⬢	⬢			
EXCESS LEAKAGE FROM HYDRA-DRIVE UNIT			⬢	⬢	⬢

TEAM LOSI INC., 13848 MAGNOLIA AVE., CHINO, CA., 91710
MADE IN UNITED STATES OF AMERICA 800-0044 (Production Release)