



TRIAD

by AVID

AVID Durango Triad Slipper Assembly Instructions



INSTALLATION STEPS: AV1020-MOD / AV1020-STK

Requires 1020-DUR-UPGRADE Durango Triad Upgrade (Includes: Topshaft, Drive Plate, and Gear Cover)

- 1 Remove existing kit supplied slipper/spur gear assembly. Remove the pinion gear and make sure your car is OFF. Remove and open the gearbox and replace topshaft with AVID Triad Topshaft for Durango (from Durango Triad Upgrade). Assemble the gearbox and motor plate, install it in the car and start step 2.
- 2 Install 3 thin axle shims from the Triad bag.
- 3 Then add the black topshaft adapter as shown, large side facing outward.
- 4 Install 1 flat drive plate, with locating cutout facing toward the motor plate. This part will fit over the topshaft adapter to keep the plate centered on the topshaft.
- 5 Select the spur gear size for your application. STK kit includes a 72 and 76 while the Mod kit includes an 81 and 84 Triad spur gear.
- 6 Press 1 white slipper pad into each side of the spur gear. Note that the spur gear sides are labeled 1 and 2, with side 2 designating the taller outer side which uses 2 drive plates. Install the spur gear with pads onto the topshaft with the tall side facing out.
- 7 On side 2 of the spur gear, add 1 drive plate followed by the 3rd white slipper pad. Install the drive plate as shown with the locating cutout facing outward.
- 8 Find the 2 flat washers and 1 cone washer. Install them onto the topshaft as shown (flat-cone-flat). These washers keep the drive plate centered.
- 9 Install the special slotted Durango outer drive plate. Install the long slipper bolt with cross-pin. You will have 1 extra flat drive plate which is not used for the Durango.
- 10 On the opposite side of the gearbox, install the Durango kit spring with no washers and then the same 5.5mm hex adjust nut. Use the Durango supplied slipper nut (AVID recommends using a new nut). For extra safety, some racers flip the nut with the nylon locking portion facing the gearbox.
- 11 Re-install the motor and use the AVID gear cover for Durango. This lexan gear cover has the additional clearance needed for the Triad Slipper. Use the same gear cover mount screws.
- 12 Tighten the nut until all parts are clamped together. To get a close setting, try turning the spur gear with your fingers while holding the rear tires. Slowly tighten the nut, re-checking the amount of drag until it is difficult to turn by hand, but not locked. Re-Install the pinion, set gear mesh, install your gear cover, and get your car ready to run. Then refer to "Setting and Maintenance."



AVID Durango Triad Slipper Setting and Maintenance

- Warning:** Don't over-heat the slipper clutch. Setting the clutch by fixing the rear wheels is extremely stressful and you should only do short bursts of throttle to check the setting. If you cannot get the setting after 3 checks, let your slipper clutch cool for 5 minutes and then re-check. AVID is not responsible for over-heating the clutch from excessive full-throttle and fixed wheel slipper action.
- Setting Procedure:** Pre-set the spring tension as recommended to get the slipper setting close. Get your car ready to run and remove the slipper adjustment plug (to give access to the adjustment nut). There are 2 recommended methods to set your clutch, the track test and the popular "wheelie" test.

First, the track test (recommended for 17.5, SC, and stock racers). This is the least stressful method since your tires can slip against the track surface if the clutch is too tight. In a secluded area of the track (or you can substitute astro-turf or a parking lot), stand near your car and do some punch-off starts. Adjust the tension so that you can hear the clutch slipping for only 1-2 feet on launch from a stand-still. Also, you should have good power for the jumps. If your clutch makes a high pitch slipping sound for more than 2 feet, tighten it to get the correct setting. Re-check your clutch after the first 2 runs.

Second, the wheelie test should be used for Mod Racers only. Hold both rear tires and slowly apply the throttle 1-2 seconds to confirm the clutch is slipping (not a full throttle burst). If you can hear the clutch slipping, then try a quick burst to full throttle. The goal is to set the clutch so that there is enough drag to lift the front tires about 2 inches (50mm) off of the table. Try tightening the nut if needed to increase the drag and re-check. Adjust to get the desired result, taking breaks to let the clutch cool after every 3 full throttle burst checks. With new pads, there will initially be a bit more drag until they are broken in... so re-check your clutch after the first 2 runs.

- Cleaning:** As the slipper pads break-in and wear, a small amount of white PTFE powder is normal as the pads wear. You can brush off any excess in-between re-builds.
- Typical Maintenance Schedule:**

Every week: remove gear cover for visual inspection; brush off any white powder from the pads.

Every month: Manually spin gear when holding rear tires to confirm smooth operation. If clutch is tight or rough operating, remove all parts and replace worn components.

Every 1-2 months (or 8 track days): Remove nut and all components. Check pads for wear. Replace slipper pads if there is any discoloration, dirt contamination, or noticeable wear.

*Change spur gears as needed. With a good quality pinion gear, you can run a spur gear for months.

Part Number	Description	Qty
AV1020-MOD	Triad Slipper Kit, Mod Racer	Kit
AV1020-STK	Triad Slipper Kit, Stock Racer	Kit
AV1020-1	Drive Plates	3
AV1020-2	Triad Drive Pads	3
AV1020-2-R	Triad Drive Pads Red	3
AV1020-SPR	Triad Spring, Shims and Adapter Set	Kit
AV1020-DUR-UPGRADE	Durango Triad Upgrade Pack	Pack
AV1020-TOP-DUR	Triad Durango Topshaft	1
AV1020-DUR-COVER	Durango Gear Cover	1
AV1020-1-DUR	Triad Drive Plate, DEX210 Outer	1

Part Number	Description	Qty
AV1020-66	Triad Slipper Gear, 66 T	1
AV1020-69	Triad Slipper Gear, 69 T	1
AV1020-72	Triad Slipper Gear, 72 T	1
AV1020-75	Triad Slipper Gear, 75 T	1
AV1020-76	Triad Slipper Gear, 76 T	1
AV1020-78	Triad Slipper Gear, 78 T	1
AV1020-81	Triad Slipper Gear, 81 T	1
AV1020-84	Triad Slipper Gear, 84 T	1
AV1020-87	Triad Slipper Gear, 87 T	1