

DONUT INSTALLATION

The more Elan owners I meet the more I see a kind of neurosis concerning the rotoflex couplings used on the Elan. These anxieties can be alleviated if proper care is used. The originals have lasted safely up to the 50,000 mile mark on street cars, though changes at half that distance probably make more sense. Aside from outright "chunking" and tearing apart in competition, the failure mode is minute cracks which appear around the metal fastener holes. To properly inspect for these cracks it is necessary to simulate a load condition upon them similar to driving. Unless you want your woman to actually drive over you slowly whilst you inspect, you should jack up one side of the car under the rear of the lower A arm until a small jack can safely be placed under the rear most portion of the fiberglass runner which extends from wheel well to wheel well. Be careful as you will be under the car. Now lower the car to rest securely on the stand. To inspect, get under and lower the suspension until the donuts are loaded. Turn and inspect each joint. If may be necessary to wipe dust off in order to determine if the suspect line you see is a mere stretch mark (re: flesh) or a bona fide crack. If the things are beginning to crack, it's probably time to change. Small 1/16"-1/8" cracks do not mean call AAA for a tow, but neither should you take on turn 9 at Riverside.

Leaving you to your own devices on procuring the donuts (e.g., Lotus/West Lnsenada Express), a few tips on installation: First, maintain the half shafts in a parallel position, one that allows the donuts to be least distorted. Compress the donut with two 2" hose clamps strung end-to-end. A trick is to tighten the clamp as much as possible with a standard screw driver. ALL FASTENERS CAN BE SLID IN AND OUT WITH HAND PRESSURE IF COMPRESSION IS CORRECT. This also saves threads on the hardware, allowing them to be reused. Use good stuff-grade 6 or better. Look for bolt head marking of + or better. If replacing both or all four donuts save yourself some effort by putting them on the half shafts first and then fitting the completed units. Coming apart is the easiest. Also, going together is easier on the inboard units as they don't involve the disc.

The solution found to the assembly of the outer donut, disc and hub fork is as follows: Do it second. Get one spare 7/16" bolt to use as a pilot, inserting it from the inside position at the 6 o'clock position. Insert it from the back through the hole and rotate the assembly to 12 o'clock (the position between the caliper flange and the strut tube). Take the bolt you intend to use and carefully insert it from the front, touching the tip of the pilot. Reach inside and push outward on the pilot just a bit less than you push inward on the outer. If they move out together the pilot will allow the good bolt to displace it and go through the disc, fork and donut. Loosely put the nut on this bolt and proceed. The second and third will be increasingly difficult to do, but this method is the best. Gradually tighten the bolts through a rotating sequence to 50 ft. lbs. or better, depending on the tensile strength. Never try to economize with cheap hardware. The Lotus stuff is good (revelation!) Most catastrophic donut failure occurs from LOOSE and FAULTY fasteners rather than bad donuts, so stay after them - check them about every 1500-2500 miles for torque; you'll see the donuts at the same time.

Remember, if you complete the exercise with no busted knuckles you'll be an accomplished mechanic and about \$50-\$100 richer. Also you'll be better able to change the donuts than your mechanic.

Tom Dill