Tech Note IAT2

Twin 14" Stamped Angle Spring Installation Guide

Ref: TNIAT2 Issue date: 13 Dec 2004 Issue number: 2

- 1. Check the condition of the flywheel. If it is cracked or warped, refer to the manufacturer's recommendations concerning resurfacing or replacement.
- 2. Check pilot bearing condition and fit in flywheel. It is always recommended to replace the pilot bearing.
- 3. Check the transmission main drive gear spline (input shaft) for excessive wear. Worn splines will prevent clutch discs from sliding freely. Make sure the disc slides back and forth on the splines without any binding,
- 4. Install two guide studs (3/8"-16TPI (Threads Per Inch) and 50mm (2") long) at the eleven (11) and one (1) o'clock positions.
- 5. Position the front disc into the flywheel making sure the side marked flywheel side faces the engine (flywheel).
- 6. Install the strap drive intermediate plate over the guide studs, Make sure that the side marked flywheel side faces the flywheel and drive straps are facing the transmission. The four holes through the drive straps are the pilot holes for the adapter ring.
- 7. If the intermediate plate is equipped with separator pins make sure that the pins are in contact with the flywheel surface.
- 8. Install the alignment tool through the rear disc, making sure that the side marked pressure plate side faces the transmission. Note: The long part of the hub should be toward the transmission. Position the alignment tool through the spline of the flywheel disc and into the pilot bearing hole.
- 9. Position the cover assembly over the guide studs on the flywheel by sliding it over the alignment shaft, centred but not supported by the alignment shaft. Start the bolts. IMPORTANT: Make sure the adjusting mechanism is at the bottom, where you can access it after the transmission is installed,
- 10. Tighten the bolts at 35-40 ft. tbs, in an even, modified star pattern. Make sure that the cover assembly seats correctly on the flywheel replace the two guide studs with bolts and tighten to 35-40 ft. lbs.
- 11. Remove the blocks under the release bearing cage. These should slide away freely.
- 12. Remove the alignment tool.
- 13. Position the clutch brake, if needed on the main drive gear.
- 14. Install the transmission using extreme care not to hang the weight of the transmission on the clutch. Discs will bend causing non-release. Locate the release yoke in the correct relation to the release bearing housing as the transmission is moved into place.
- 15. The release bearing housing has been pre-packed with some grease, however it must still be lubricated when the clutch is installed or premature failure may occur. Do not over grease, as the excess will find its way to the clutch friction material.
- 16. <u>If for some reason the clutch is removed, be sure to insert the blocks between the release bearing cage and the top of the cover.</u>



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Service Suggestions

When replacing the clutch, think in terms of the "total installation". Failure to replace other worn or damaged components in the clutch system may affect the performance of the replacement clutch you are about to install and may result in a dissatisfied customer. Warranty evaluation will take into account the following clutch related areas.

- Resurface the flywheel. There is no such thing as an "OK", used flywheel.
- Replace the pilot bearing.
- Replace and properly align the drive lugs in a pot type flywheel, where applicable.
- Install a new clutch brake where applicable.
- Check the clutch release fork for wear. No more than 0.25mm (0.010") allowed on either side. The release
 fork and shaft assembly must be true to the clutch bearing housing assembly, or correct release may not be
 achieved.
- Check the half shafts for wear, as well as the bushings.
- Look for the telltale rivulet of oil at the bottom of the flywheel housing.
- Check the splines on the input shaft. If they are worn, the discs may not slide freely.
- Check flywheel and clutch housing alignment.
- Check the linkage for wear or separation and lubricate grommets and other potential friction points.

TAKING A FEW EXTRA MINUTES TO CHECK THESE ITEMS WILL HELP ENSURE A PROLONGED, TROUBLE FREE CLUTCH LIFE.

