

# ZF 6HP19A

---

Page 2: Flare into fourth, no up shift into fourth.

Page 3: Modification to Intermediate Shaft after 01/2005

## TECHNICAL INFORMATION BULLETIN

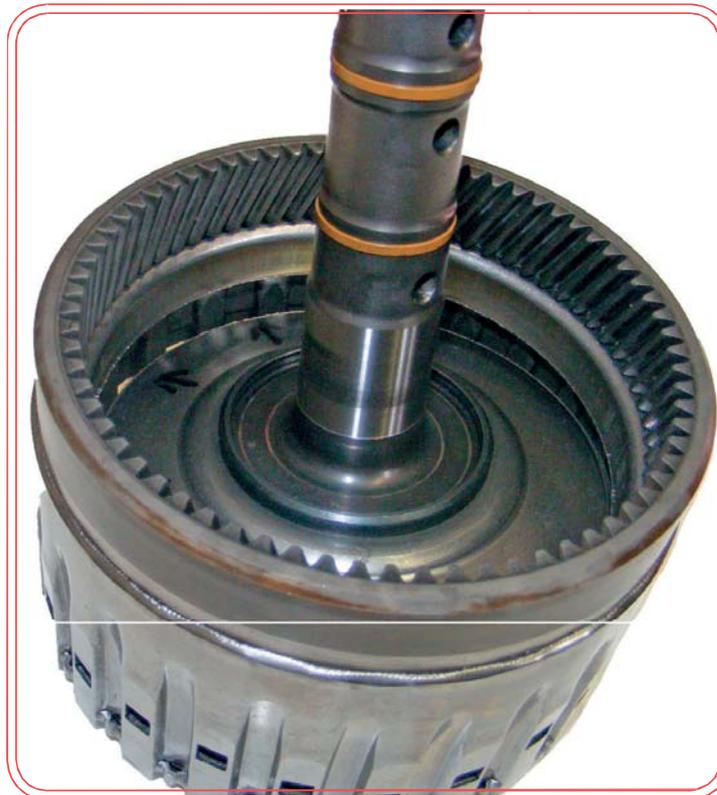
# ZF 6HP19 & 6HP19A Fitted to BMW, VW & Audi

### *Problem:*

Flare into fourth, no upshift into fourth, if throttle is released the transmission engages fourth OK and once in fourth will drive without problem on all throttle settings.

### *Possible cause:*

It not uncommon for the 'E' clutch drum assembly to crack around the inner circumference of 'E' clutch piston bore, this can be seen more readily from the annulus side of the drum as shown in the illustration below. We believe this is due to the constant flexing at this point caused by the planetary sun gears driving the annulus back and fourth during drive and overrun conditions, this gradually over time creates a stress fracture. The reason that once fourth has engaged all seems well is that when the throttle is released the annulus is drawn forward on overrun, closing the crack and allowing pressure to build up behind the piston, this pressure then further reinforces the closure of the crack keeping the clutch fully engaged, giving the impression that all is now well within the clutch.



In this illustration the crack has been opened up to emphasise the area to examine, it is quite often very difficult to see, so very careful examination is necessary



## TECHNICAL INFORMATION BULLETIN

### 6HP19.HUB01 Modified Intermediate Shaft

Models built after 01/2005 have received an update, which is our part number 6HP19.HUB01. This update was implemented because the hub was found to have a weakness which often resulted in premature failure. The material of the shaft was too thin, and has been replaced with a more substantial shaft on the current #812 hub (6HP19.HUB01).

This means that 6HP19A units (for example 1071 040 020) built before 01/2005 may have the old style hub, which can't be purchased from ZF any more. However, the old version can be updated to the modified units, by also changing the sun gear shaft #813 (6HP19.HUB02) and the sun gear shaft to intermediate shaft radial bearing #653 (6HP19.TOR02).

In a nutshell, if you have a 6HP19A unit built before 01/2005 with a damaged intermediate shaft #812, it may require sun gear shaft #813 and radial bearing #653 to make everything fit back together correctly.

