



## Automatic Transaxle Lubrication = the Differential

By Loyale 2.7 Turbo, August 6, 2014 in Transmission, Axle, and Brakes

DifferentialAutomaticTransmissionJesZeKATF4EATLubricationShearingLoyale 2.7 TurboViscosity



Sign in to follow this

Followers0

Loyale 2.7 Turbo  
The Mighty "BumbleBeast"

Posted August 6, 2014

Report post



Members  
+ 1792  
7629 posts  
Roatán, Honduras.

## Automatic Transmissions'

With shared or independent **Differential** Lubrication.

Very **Basically** Talking, there are **Two** types of Lubrication Systems for the **Differentials**, that comes **integrated** onto the Automatic Transmission's Case, or "Transaxle" as those *combos* are known nowadays.

- **First Type:** The **Differential** has **its Own** Lubrication, independent from the Rest of the Transmission's Lubrication System and also uses **its own** independent **Lubricant**.
- **Second Type:** The Differential **shares** the same **Lubrication** system and the same **Lubricant** that is used for the Transmission.

Also, very **Basically** Talking, there are **Two** types of ATF Additives, which **independently** from the benefits they could do and their disadvantages; the ATF Additives could be divided in Two Big Groups:

- **First Group:** Are all of those ATF **additives** which actually "**Thins**" the ATF (getting **Lower** Viscosity) and works as **detergent**. In this group, you can find additives such like "**Trans-X**", and many more.
- **Second Group:** Are all of those ATF **additives** which actually makes the ATF to be "**Thicker**" or more Dense (Getting **Higher** Viscosity), and works as an added "Cushion" between moving parts to prevent shearing. In this group, you can find additives such like the "**Lucas Transmission Fix**" and many more.

### Why is this very important?

Because if you pour an ATF Additive that thins the ATF and works as detergent, onto an Automatic Transmission's Fluid which also lubricates the **Differential**, and you drive long term like that, there will be a very high Risk of Breaking the Differential Gears due to **improper Lubrication**. Independently from the advantages that such additives could do to the **Transmission**; they simply are **Not** intended for the **Differential**, period.



Loyale 2.7 Turbo

However, you might pour the same ATF additive onto transmissions which does **Not share** the ATF for the Differential, in such case there is No Risk for the differential, because it is **isolated** from the ATF and has its own lubricant.


So, in case of Automatic Transmissions that shares the Same ATF for the Differential, you might pour those detergent ATF additives for short term use only, in example to do a chemical *cleansing* of the internals prior to do a complete ATF drain and then Refill with fresh ATF; but if you really need to Pour an ATF additive for long term use, on this kind of Transmissions that shares the ATF with the Differential, I highly recommend to chose wisely, from the ones that doesn't thin the ATF.

► **Important Note:** Not all the ATF in the market, has the same additive package nor are suitable for all the automatic transmissions; in fact, if you use the Wrong ATF, the Transmission might get damage, such like premature wear and shearing; Always follow the Manufacturer's recommendation on the Manual.

In my case, for my Wife's car which has a version of the **4EAT**, I pour Valvoline's High Mileage ATF plus a quart of Lucas Transmission fix additive, and that combo makes the transmission to work smoothly and flawlessly; I do change all the Transmission ATF with said combo, on a yearly basis.

Remember, if you find this information useful, let me know by hittin' the "**Like**" Button. 😊

Kind Regards.

 8

◀ GO TO TOPIC LISTING  
Transmission, Axle, and Brakes

