SM1270EN

Service Manual

Allison Transmission

AUTOMATIC MODELS
(Hydraulic Controls)

HT 740(D)(RS)(FS)
HT 747(D)
HT 750CRD, HT 750DR(DB)(RS)
HT 750DRD(DB), HT 750DRI
HT 754CR(RS), HT 754CRD

DECEMBER 1996
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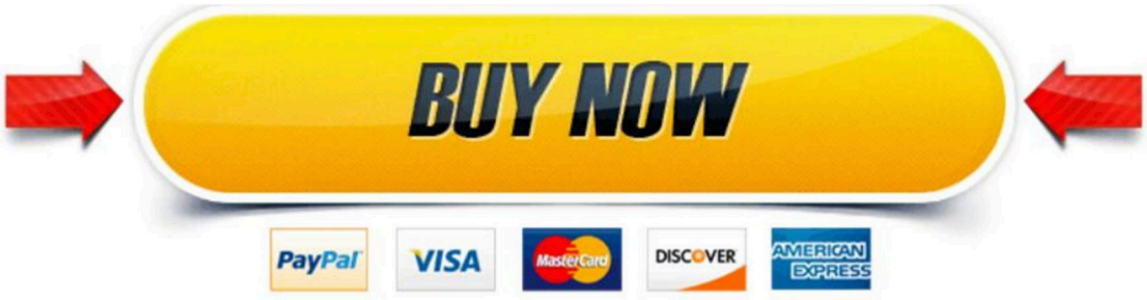
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IMPORTANT SAFETY NOTICE

IT IS YOUR RESPONSIBILITY to be completely familiar with the Warnings and Cautions described in this Service Manual. These Warnings and Cautions advise against the use of specific service methods that can result in personal injury, damage to the equipment, or cause the equipment to become unsafe. It is, however, important to understand that these Warnings and Cautions are not exhaustive. Allison Transmission could not possibly know, evaluate, and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Allison Transmission has not undertaken any such broad evaluation. Accordingly, ANYONE WHO USES A SERVICE PROCEDURE OR TOOL WHICH IS NOT RECOMMENDED BY ALLISON TRANSMISSION MUST first be thoroughly satisfied that neither personal safety nor equipment safety will be jeopardized by the service methods selected.

Proper service and repair are important to the safe, reliable operation of the equipment. The service procedures recommended by Allison Transmission and described in this Service Manual are effective methods for performing service operations. Some of these service operations require the use of tools specifically designed for the purpose. The special tools should be used when and as recommended.

WARNINGS, CAUTIONS, AND NOTES

Three types of headings are used in this manual to attract your attention:

WARNING!

is used when an operating procedure, practice, etc., which, if not correctly followed, could result in personal injury or loss of life.

CAUTION:

is used when an operating procedure, practice, etc., which, if not strictly observed, could result in damage to or destruction of equipment.

NOTE:

is used when an operating procedure, practice, etc., is essential to highlight.

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LIST OF WARNINGS

This Manual contains the following Warnings —

IT IS YOUR RESPONSIBILITY TO BE FAMILIAR WITH ALL OF THEM.

- **The device described below is intended to be used for dipstick calibration only. Do not attempt to check actual transmission fluid level with this method. Checking actual transmission fluid level with this method may require a technician to be under the vehicle with the engine running and SHOULD NOT BE ATTEMPTED.**
- **Shut off the engine, set the parking brake and/or emergency brakes, chock the vehicle wheels and take any other steps necessary to keep the vehicle from moving while doing Steps (4) through (9).**
- **To help avoid injury or property damage caused by sudden and unexpected vehicle movement, do not check the fluid level until you:**
  - **Put the transmission in N (Neutral).**
  - **Apply the parking brake and emergency brakes and make sure they are properly engaged.**
  - **Chock the wheels and take any other steps necessary to keep the vehicle from moving.**
- **To help avoid injury or property damage caused by sudden and unexpected vehicle movement, do not start a stationary stall test until you:**
  - **Put the transmission in N (Neutral)...and**
  - **Apply the parking brake and emergency brakes and make sure they are properly engaged...and**
  - **Chock the wheels and take any other steps necessary to keep the vehicle from moving.**
- **Do not burn discarded Teflon® seals; toxic gases are produced by burning.**
- **Never dry bearings by spinning them with compressed air. A spinning bearing can disintegrate, allowing balls or rollers to become lethal flying projectiles. Also, spinning a bearing without lubrication can damage the bearing.**
- **The main pressure regulator valve spring is under approximately 85 lbs (380 N) compression.**
- **Be sure the forward-clutch hub and the fourth-clutch driving hub are installed into the forward-clutch assembly. If these two hubs are installed into the fourth-clutch housing assembly by mistake, the transmission will operate in reverse when the driver selects any forward range.**
- **Do not install forward-clutch hub 19 (Foldout 13,B) and fourth-clutch driving hub 22 into the fourth-clutch housing assembly 12 (Foldout 14,A). If these two hubs are installed into the fourth-clutch housing assembly by mistake, the transmission will operate in reverse when the driver selects any forward range.**

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