

GENERAL SERVICE BULLETIN

Automatic Transmission Damage Resulting From Improperly Towing Vehicles

22-7086
26 May 2022

This bulletin supersedes 21-7121.

Summary

This article supersedes GSB 21-7121 to update the Service Information.

This article is intended to assist with determining when automatic transmission damages are related to improperly towing a vehicle.

Service Information

Certain Ford and Lincoln vehicles have the capability of being flat towed (four-wheel-down towed, neutral towed) behind another vehicle (such as a motor home) when the proper precautions are taken and procedures are followed as directed by the Owner's Manual. The Ford RV and Towing Guide (available from www.fleet.ford.com/towing-guides) is another good resource for flat towing information. Additionally, for select vehicles, Ford Motor Company has published "how-to guide" videos on YouTube to educate customers on how to properly flat tow their supported vehicle. These videos are easily accessed by a Google or YouTube search of "Ford Flat Tow". The presence of a front mounted hitch or draw bar may indicate that the vehicle has been setup for flat towing.

Failure to follow the published procedures when flat towing may result in catastrophic damage to the transmission and/or driveline which is considered non-warrantable. Transmission damage can also result from improperly towing a vehicle with a wrecker (towing with the vehicles drive wheels on the ground). The Owner's Manual contains helpful information regarding vehicle towing constraints. Wrecker towing guides are also available on the Professional Technician System (PTS) website under the Owner Info tab.

Observations made by the owner and/or technician after improperly towing a vehicle may include (but are not limited to):

- Vehicle will not move
- Tires locked up while towing
- Grinding noises, improper shifting
- Burned (dark/black) transmission fluid
- Excessive metal debris found in the transmission pan upon inspection
- Melted plastic components internal to the transmission
- Other catastrophic damage to the transmission, transfer case, or driveline
- Illuminated malfunction indicator lamp (MIL) with diagnostic trouble code (DTC) P179D (and/or other DTCs) stored in the powertrain control module (PCM)

When this type of concern is found after flat towing (or improperly towing) a vehicle, it is the result of the customer not following the required towing guidelines, or the result of flat towing an unsupported vehicle. Related damages should not be covered under warranty. The customer may elect to work with their auto insurance company to potentially mitigate the costs of these repairs. If DTC P179D is present, follow the published diagnostic procedure in the Workshop Manual (WSM) to determine if the damage is flat tow related. Make sure diagnostic procedures are done thoroughly enough to detect any

improper vehicle towing.

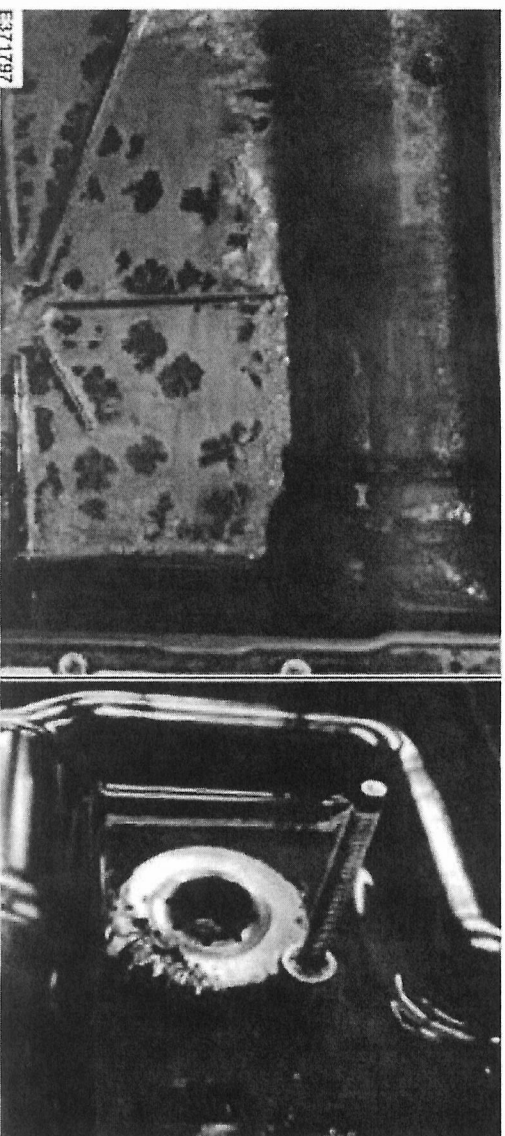
Transmission Analysis

The following images depict damages observed from various transmissions which were removed from vehicles that were improperly towed, leading to catastrophic failure. Figures 4-6, and 7-12 depict observations that will only be seen when a vehicle is improperly towed.

Internal Transmission Damage

Excessive metal debris observed in transmission oil pan (Figure 1)

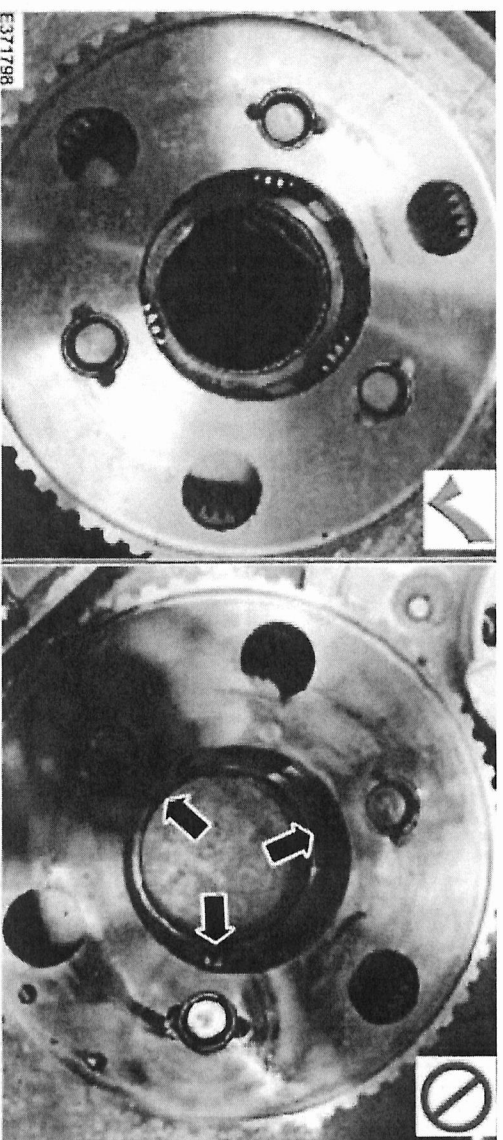
Figure 1



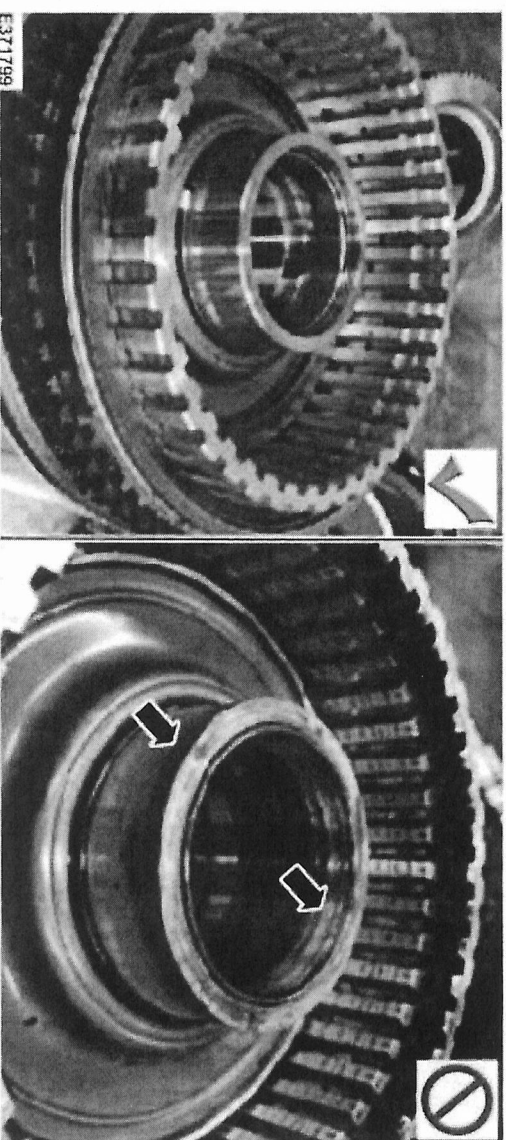
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Normal planetary gear set on the left (Figure 2), overheated planetary gear set (lack of lubrication) on the right. (Figure 2)

Figure 2

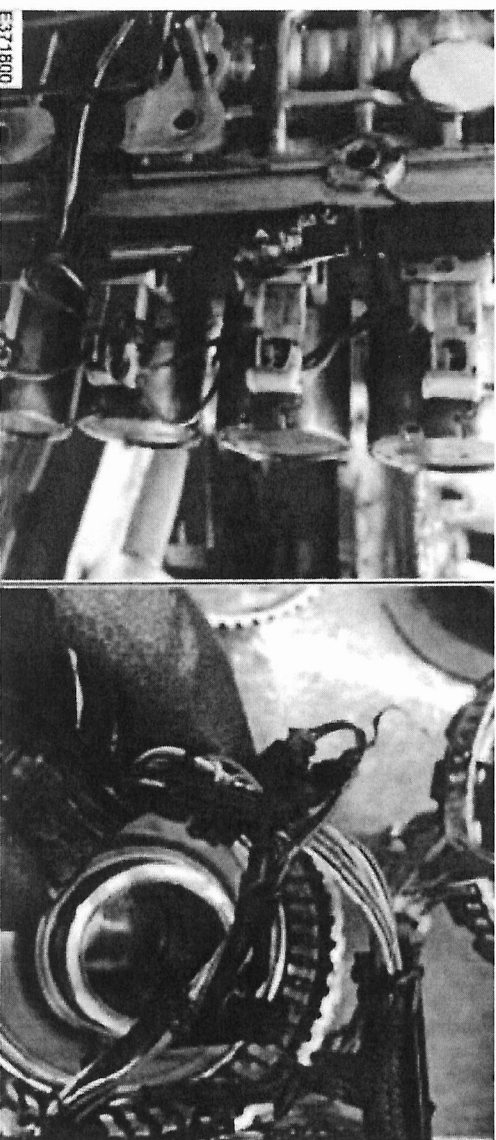


Normal clutch hub on the left (Figure 3), overheated clutch hub (bushing spun out from lack of lubrication) on the right. (Figure 3)



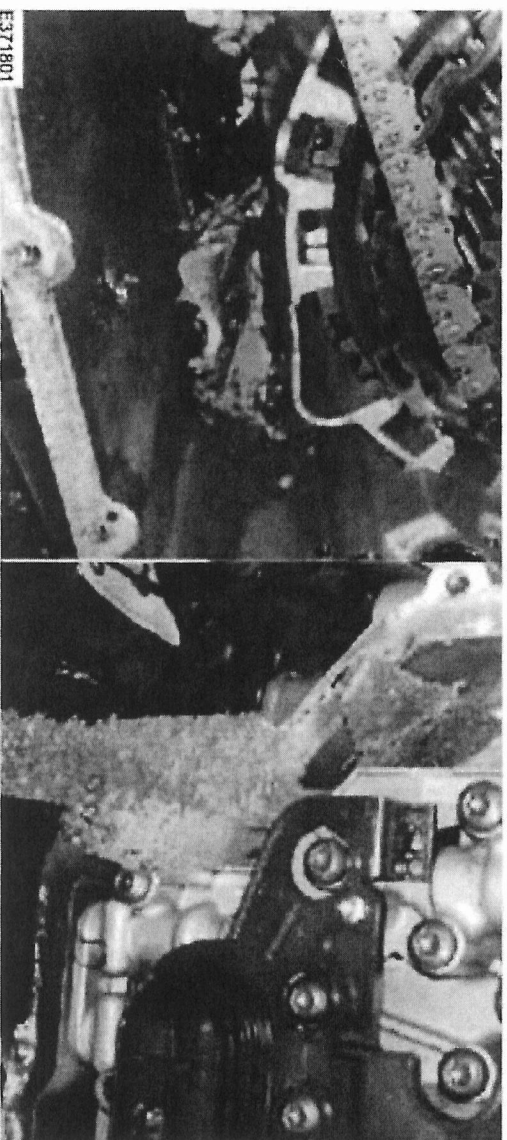
Transmission harness, connector shells, and other internal plastic components melted from severe overheating as a result of improper towing. (Figures 4-6)

Figure 4



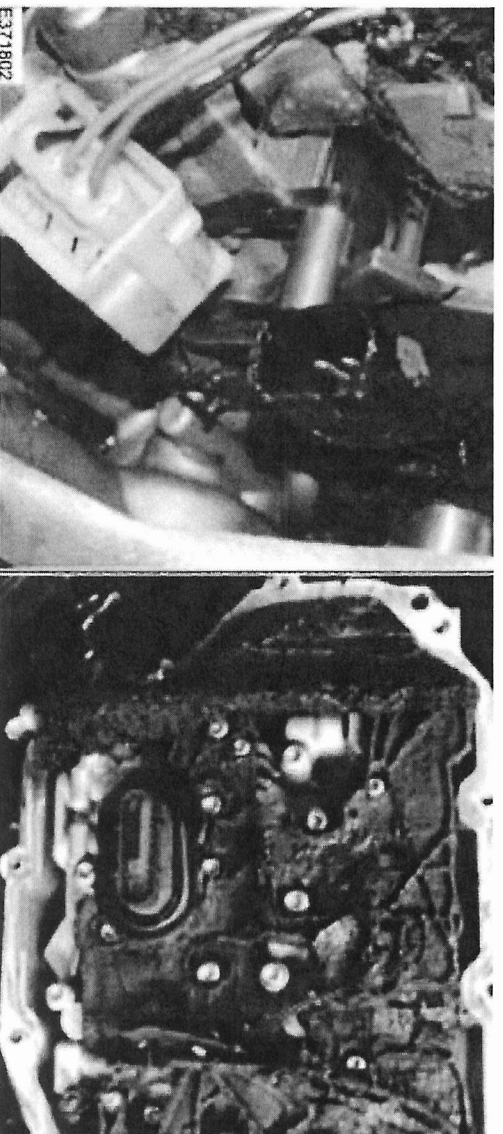
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Figure 5



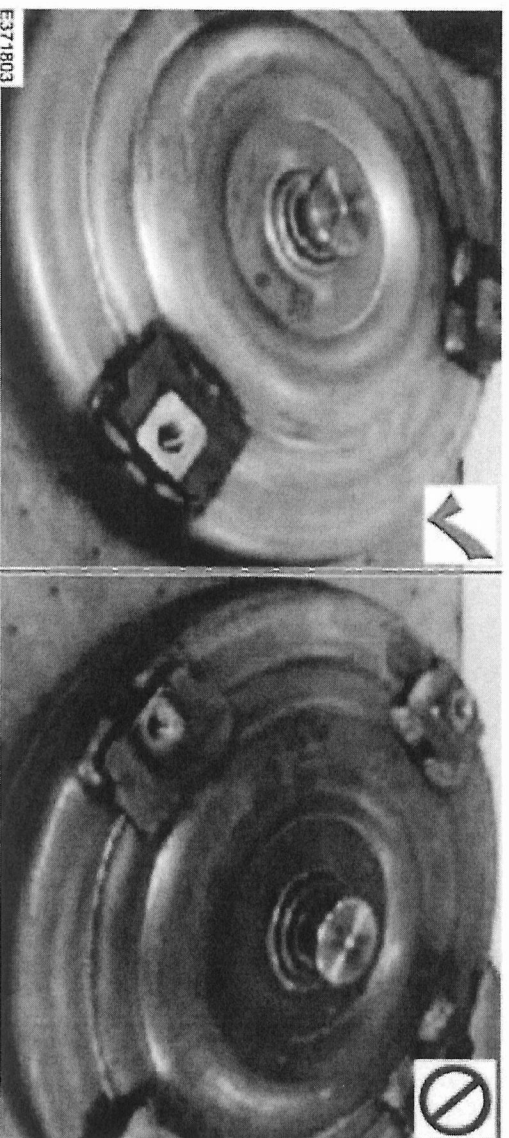
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Figure 6



If improperly towed the torque converter will still look normal, not discolored or overheated despite other components being overheated. Normal torque converter on the left, and an overheated torque converter on the right. (Figure 7)

Figure 7



Common Causes For Towing Related Transmission Damage

- Improperly wrecker-towing a vehicle with the drive wheels on the ground
- Towing an unsupported vehicle with all 4 wheels on the ground
- Flat towing a supported 4x4 vehicle without first entering neutral tow mode
- Failure to follow the Towing Section precautions specific to each vehicle model as outlined by the Owner's Manual while towing the vehicle.