



U.S. Department  
of Transportation  
**National Highway  
Traffic Safety  
Administration**

# ODI RESUME

INVESTIGATION: PE02-039  
DATE OPENED: 1-Apr-02      DATE CLOSED: 30-JUL-02  
SUBJECT: Alleged Clutch Pedal Bracket/Firewall Failure  
PROMPTED BY: IE02-026  
PRINCIPAL ENGINEER: Christopher J. Santucci

MANUFACTURER: Toyota  
MODEL(S): T100  
MODEL YEAR(S): 1993-1998  
VEHICLE POPULATION: 56,530

PROBLEM DESCRIPTION: Clutch pedal bracket or mounting surface on firewall allegedly fractures while driving.

## FAILURE REPORT SUMMARY

	ODI	MANUFACTURER	TOTAL
COMPLAINTS:	17	58	75
CRASHES:	0	0	0
INJ CRASHES:	0	0	0
# INJURIES:	0	0	0
FAT CRASHES	0	0	0
# FATALS	0	0	0

ACTION: This Preliminary Evaluation (PE) is closed.

ENGINEER: [Signature] DIV CH: [Signature] OFC DIR: [Signature]  
DATE: 7/30/02      DATE: 7/30/02      DATE: 7/30/02

SUMMARY: ODI has received 17 complaints alleging that either the clutch pedal mounting bracket or a portion of the firewall where the bracket attaches fractures while driving. Toyota has received a total of 58 owner and field reports regarding the subject components. No crashes have been reported. Failure of the clutch pedal bracket will cause the loss of ability to engage or disengage motive power to the wheels.

According to Toyota, failure of the clutch pedal bracket while the vehicle is in motion does not adversely affect stopping distance and that the vehicle remains controllable. Recognizing that the failure is occurring at a reasonably high rate, Toyota has disclosed 1585 warranty claims and good-will repairs on 1425 unique vehicles that relate to the alleged defect.

(con't)

V105  
7/30/02

(con't)

A subject vehicle, a 1996 Toyota T100 4-cylinder pickup truck with 73,922 miles, was located. The vehicle (VIN JT4JM11D9T0013298) was evaluated by ODI and it was concluded that it:

- a. is difficult to push out of gear with the throttle applied;
- b. is easy to push out of gear with the throttle released; and
- c. will stall when at a stop, in first gear if the clutch is quickly released.

The agency examined the potential risk to highway safety if the clutch pedal were to suddenly become inoperative. Three scenarios involving failure were evaluated. The first scenario involved failure while the vehicle is cruising. In this case, the vehicle is in a forward gear, the throttle is being applied in order to maintain velocity, the operator's foot is off the clutch pedal, and the clutch is engaged. Failure of the pedal system would not allow the operator to disengage the clutch. With a failed clutch pedal, the operator will be able to remove the transmission from the cruising gear, but will not be able to place the shift lever into another gear\*. Effectively the transmission is stuck in neutral and is no longer capable of being placed into any gear. It is important to note that the operator can remove the shift lever from top gear (or any gear) without the use of the clutch as long as the throttle is released (See point b. above). Without motive power, the vehicle can safely be steered and stopped as normal (with the exception of the lack of engine braking). Toyota has provided data showing that during this case, stopping distance remains acceptable. Power assist to the steering and brakes remain effective and the operator should be able to safely steer and stop the vehicle.

The second scenario evaluated was failure during a left hand turn in front of oncoming traffic. During a normal turning operation for a ninety-degree intersection in which no stop is required, there is usually one gear used. Since these turns are relatively low speed maneuvers, a lower gear such as second is appropriate. Upon approaching the intersection, the operator would depress the clutch pedal, release the throttle, and be unable to select a lower gear\*. Since braking ability is not compromised, the operator should be able to safely stop the vehicle before entering the intersection. At higher speeds, vehicle momentum should carry the vehicle through the intersection because the operator has the ability to safely steer the vehicle.

The third scenario evaluated was failure while the vehicle is stopped, the transmission is in 1<sup>st</sup> gear, and the clutch pedal is depressed. In testing the subject vehicle, the clutch pedal was quickly released in order to simulate failure. As is normal while stopped at an intersection, the brake pedal was also depressed and no pressure to the throttle was applied. Upon release of the pedal, the vehicle stalled and unintentional movement of the vehicle was minimal.

Although potential of failure is high, given the wide range of years the vehicle was produced, along with the absence of any crashes, a safety-related defect has not been identified at this time and further use of agency resources does not appear to be warranted. Accordingly, this investigation is closed. The closing of this investigation does not constitute a finding by NHTSA that a safety-related defect does not exist. The agency will take further action if warranted by the circumstances.

*\*The agency recognizes that the vehicle can be placed in another gear without the use of the clutch pedal by matching engine speed to drive train speed, but since this is not a common technique used by drivers it will be assumed that the operator does not realize this is possible.*