

ENGINEERING ANALYSIS CLOSING MEMORANDUM

Subject: Alleged Inadvertent Sudden Vehicle Acceleration on Some Toyota Vehicles.

EA No: EA83-020 Date Opened: 9/15/82 Date Closed: \_\_\_\_\_

Basis: The Office of Defects Investigation received 4 reports alleging vehicle sudden acceleration and 2 reports reporting stuck or jammed accelerators.

The Alleged Problem: The vehicle may inadvertently suddenly accelerate while the driver is maneuvering the vehicle out of a parked or stationary position resulting in loss of vehicle control.

Description of Component or Vehicle System:

- Group A: Pendant type accelerator pedal, cable throttle linkage and gasoline carburetor.
- Group B: Organ type accelerator pedal, rod-link throttle linkage, and gasoline carburetor
- Group C: Pendant type accelerator pedal, rod-link throttle linkage, and electronic fuel injection.
- Group D: Pendant type accelerator pedal, cable throttle linkage, and electronic fuel injection.

Correspondence:

	<u>NHTSA to Mfg.</u>	<u>Mfg. to NHTSA</u>	<u>Mfg. to NHTSA Supplement</u>	<u>Confidentiality</u>		
				<u>Request to OCC</u>	<u>Response</u>	<u>Item</u>
1.	<u>9/15/82</u>	<u>11/5/82</u>	_____	_____	_____	_____
2.	<u>3/23/83</u>	<u>6/13/83</u>	_____	_____	_____	_____
3.	<u>1/17/84</u>	<u>3/2/84</u>	_____	_____	_____	_____

Problem Experience:

	Date 3/84	Date	Date
Reports-Total:	52 (A-30, B-5, C-12, D-5)		
ODI Omer:	14		
Mfg. Omer:	38		
Mfg. Field:	10		
Lawsuits	3		
Accidents	ODI	Mfg	ODI Mfg ODI Mfg
Property:	9	21	
Injury Accident/Injuries	2/3	11/11	
Fatal Accident/Fatalities			
Unknown			

Vehicle Population:

Model Year	Corolla	Calica	Corona	Tercel	Cressida	Starlet	Total
1979	A 242,300	A 138,200	B 33,400		B 11,600		425,500
1980	A 267,500	B 141,200	B 34,700	A 104,600	B 11,628		559,628
1981	A 264,100	B 98,700	B 25,300	A 118,500	B 29,583	A 36,000	572,183
1982	A 143,430			A 135,896	C 37,448	A 37,448	316,774
1983	A 175,198			A 147,965	D 39,755		362,918
Total	1,092,528	378,100	93,400	506,961	130,014	36,000	2,237,003

Warranty:

Model Year	Total Number of Warranty Claims
1979	32
1980	50
1981	59
1982	3
1983	3

Part Sales: N/A

Design, Material and/or Production Modifications: Same as described in  
Toyota Service Bulletin No. 005.

Testing: None

Contractor:

Date of Test Request

Date Report Received:

Description:

Results:

Additional Information: Service Bulletin

<u>Number</u>	<u>Date</u>	<u>Title</u>	<u>Description</u>
005	11/9/79	Accelerator Linkage (RT134)	A rubber ring was added to reduce vibration; and the accelerator rod torsion spring was changed to apply a stronger force on the pedal.
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Warning Symptoms: There are apparently no warnings to the driver when vehicle sudden acceleration occurs except in a few cases when the driver reported high engine noise before the vehicle accelerated.

Contributing Factors:

The review and analysis of available data in this Engineering Analysis has not revealed any causal factor common to any group of vehicles (model and/or model year) under this investigation. However, some possible causal factors are summarized as follows:

1. The engine fails to return to the normal idle speed because the throttle linkage became stuck when the accelerator connecting link was adjusted too short; the return spring is weak; the linkage rod was bent; or the floor mat interfered with the gas pedal.
2. The carburetor malfunctions because of throttle shaft binding in throttle body bore.
3. The electronic fuel injection system malfunctioned.
4. The cruise control system malfunctioned.
5. Driver error such as depressing the gas pedal instead of the brake pedal or depressing the brake and gas pedal at the same time.

Failure/Malfunction Modes: The vehicle may inadvertently, suddenly accelerate while the driver is maneuvering it out of a parked or stationary position.

Manufacturers Evaluation of the Problem: In their letter of January 17, 1984, Toyota stated that "Because many of these owner complaints describe the alleged malfunction in abstract terms, the examination of these descriptions did not reveal any identifiable common causes. These allegations cannot technically be explained. Therefore, it is difficult for Toyota to believe that a specific identifiable vehicle problem exists.

Insofar as Toyota has inspected and investigated some of these vehicles, we could not reproduce any of the alleged problems nor verify the existence of the problems in any cases.

In addition, to date we have been unable to determine whether these events may have been caused by the driver's operational error."

Reason for Closing:

No common causes of the inadvertent sudden vehicle acceleration have been identified. No failure or malfunction trend has been discovered.

The owner and field reports are spread over many different vehicle models, pedal types, throttle linkages and fuel systems; and showed no trend.

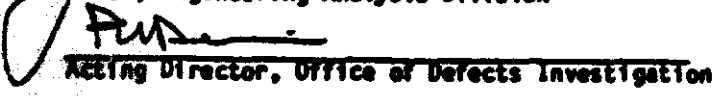
  
George H. Wang  
Safety Defect Engineer

11/26/84  
Date

I Concur:

  
James T. Talbot  
Chief, Engineering Analysis Division

11/26/84  
Date

  
P. A. ...  
Acting Director, Office of Defects Investigation

12/3/84  
Date