



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

ODI RESUME

Investigation: EA 05-002
Prompted By: PE04-057
Date Opened: 02/02/2005
Principal Investigator: Bob Young
Subject: Motorcycle spontaneous downshift and/or transmission lockup

Manufacturer: POLARIS INDUSTRIES, INC.
Products: 1999-2000 VICTORY MOTORCYCLE DIV, POLARIS INDUSTRIES, INC
Population: 9200

Problem Description: While underway, the transmission will suddenly downshift from 3rd to 2nd gear and/or lockup. Loss of motorcycle control may then occur.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	38	18	56
Crashes/Fires:	1	4	5
Injury Incidents:	1	0	1
# Injuries:	1	0	1
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	0	0

*Description Of Other:

Action: An Engineering Analysis (EA05-002) is opened.

Engineer: Bob Young
Div. Chief: Richard Boyd
Office Dir.: Kathleen C. DeMeter

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Summary: ODI opened the original PE based on allegations that the transmission would suddenly downshift without warning. It was also alleged that the transmission would lockup resulting in rear wheel skidding as well. Since opening the PE, we interviewed reporting owners, test-rode subject motorcycles; met with victory motorcycle dealers; and reviewed Polaris' response to our inquiry. Based on the information gathered, we find that transmission problems were/are quite prevalent in the subject vehicles and are continuing. Commonly, owners' first note degraded shift performance (typically false neutrals on 2-3 upshifts, difficulty finding neutral, harsh 3-2 downshifts, etc.). Dealers tell owners that degraded shift performance is not covered by either the basic or extended warranties but they would be willing to disassemble the transmission to learn more. However, owners are also told that, if no transmission problem is found, the owner will have to pay for the transmission disassembly. Unwilling to take a chance that nothing will be found (based on dealers' representations that shift difficulties are due to deficient owner operation), owners keep riding with shift quality issues. In some cases, owners contact the dealer again with the same result. Finally, shift quality becomes so poor that spontaneous, unintended 3-2 downshifts occur and/or the transmission (and, as a result, the rear wheel) locks up. As recently as last week, Polaris was offering some customers the option of installing an improved transmission if the owner pays the labor to have it installed (about \$500-\$700).

To learn more about this problem and Polaris' responses to it, ODI is upgrading PE04-057 to EA05-002.