

Closing Report – EA04-005

Tailgate Support Cable Breakage in General Motors Model Years 1999-2004 Silverado and Sierra Vehicles and Model Years 2002-2004 Avalanche and Cadillac Escalade EXT Vehicles (designated C/K Models)

CONTENTS

- (1) Subject**
- (2) Background**
- (3) Population**
- (4) Product Description**
- (5) Product Changes**
- (6) ODI Investigation**
- (7) ODI Assessment**
- (8) GM's Actions**
- (9) Conclusion**

**Appendix A - Warranty Rate Comparison of Tailgate Cable Breaking for
1998 - 2001 model years C/K and S/T**

**Appendix B - Summary of Selected Tailgate Cable Injury Incidents for
2000 - 2004 model years C/K (Incidents listed have been
verified and additional details were obtained through ODI
interviews)**

**Appendix C - Summary of Partial or Complete Tailgate Separations –
2000 - 2004 model years C/K**

**Appendix D – Summary of Injuries and Complete or Partial Tailgate
Separations Reported through VOQ for 1997 - 1999 model
years C/K Models**

**Appendix E - Comparison of tailgate cable warranty rates among Peer
Vehicles**

(1) Subject

This report addresses the breakage of tailgate support cables installed in 1999-2004 Model Years General Motors Silverado and Sierra, 2002-2004 Model Years Chevrolet Avalanche, and 2002-2004 Model Years Cadillac Escalade EXT vehicles.

Reference Numbers: PE03-049, Campaign 04V-129

To assure consumers' privacy, ODI has redacted (blanked) the final six digits of all Vehicle Identification Numbers (VINs) in this report.

(2) Background

ODI opened Preliminary Evaluation PE03-049 on October 23, 2003, based on 16 complaints of broken tailgate cables, five of which were alleged to have caused or contributed to a personal injury. ODI's preliminary evaluation (PE) addressed 1999-2002 model year Silverados since the owners of these vehicles had reported a higher number of tailgate support cable breakage incidents than indicated by complaint data from owners of peer vehicles (Ford and Daimler Chrysler) or other models of General Motors' vehicles.

ODI sent General Motors a request for information on October 24, 2003. General Motors provided a response on December 12, 2003. On February 19, 2004, ODI elevated the investigation to Engineering Analysis EA04-005 and enlarged the scope of the investigation to include model year 2003 Sierras and 2002-2003 model year Avalanche and Cadillac Escalade EXT vehicles. These vehicles were added to the scope of the investigation because ODI began to receive VOQ complaints from owners of these vehicles and General Motors informed ODI that the tailgate support cables installed in these vehicles were essentially the same as those installed in the model year 1999-2002 Silverados.

General Motors filed a Defect Notice 04V-129 on March 17, 2004.

(3) Population

Table 1 summarizes the production of vehicles that General Motors (04V-129) has determined were manufactured with defective tailgate support cables.

Changes in Scope - Although 1999 model year vehicles were a part of the investigation scope of PE03-049, General Motors' campaign 04V-129 does not address the tailgate support cables installed in vehicles manufactured prior to October 1999. Charts 1 and 2 provide graphical summaries of the data that indicate that the incident rate of tailgate cable breakage in 1997-1999 model year C/K vehicles is significantly less than the incident rate of tailgate cable breakage in the model year 2000-2004 vehicles being addressed by Campaign 04V-129. General Motors included certain model year 2004 C/K vehicle production in the 04V-129 Campaign because a portion of model year 2004 vehicles had been manufactured prior to the October 6, 2004 date on which GM implemented an improvement in the tailgate support cable material.

Table 1 - Vehicles Addressed in Campaign 04V-129

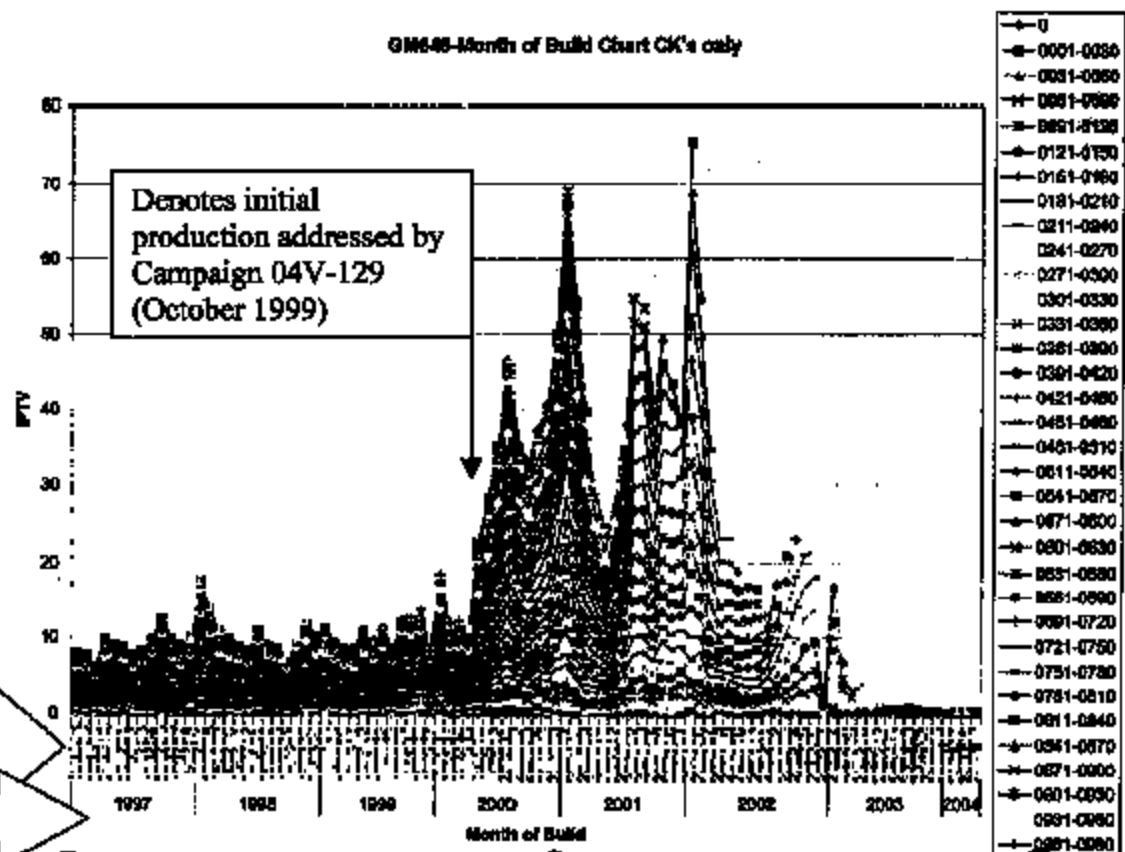
Make	Model	Model Year	Model Designation	Quantity Manufactured	Manufacturing Period
Chevrolet	CK	2000	Silverado	500,585	10/99 - 07/00
Chevrolet	CK	2001	Silverado	605,912	04/00 - 10/00
Chevrolet	CK	2002	Silverado & Avalanche	751,717	10/00 - 07/02
Chevrolet	CK	2003	Silverado & Avalanche	772,530	04/02 - 07/03
Chevrolet	CK	2004	Silverado & Avalanche	240,068	03/03 - 11/03
GMC	CK	2000	Sierra	148,233	10/99 - 07/00
GMC	CK	2001	Sierra	176,090	04/00 - 10/00
GMC	CK	2002	Sierra	190,340	10/00 - 07/02
GMC	CK	2003	Sierra	187,268	04/02 - 07/03
GMC	CK	2004	Sierra	62,960	03/03 - 11/03
Cadillac	CK	2002	Escalade EXT	12,513	10/00 - 07/02
Cadillac	CK	2003	Escalade EXT	11,131	04/02 - 07/03
Cadillac	CK	2004	Escalade EXT	2,864	03/03 - 11/03
TOTAL				3,660,213	

Front-End Date - ODI and General Motors have determined that tailgate cable breakage is caused by cable fatigue and corrosion, although the precise causes and/or contributing factors that account for the increased rate of tailgate cable breakage associated with model year 2000 - 2004 C/K vehicles is not completely understood since vehicles manufactured prior to model year 2000 were equipped with a tailgate support cable made of essentially the same materials, processing, etc.

On December 12, 2003, General Motors provided an analysis of warranty claims that summarizes the warranty claim rate for tailgate cables correlated to each month of production of the C/K model vehicle. This analysis depicts the calculated incident rate expressed as IPTV (incidents per thousand vehicles manufactured) for each month of vehicle production from August 1996 through September 2003 and indicates a significant increase in the warranty claim rate for tailgate support cable beginning in October 1999 (model year 2000 vehicles). Chart 1 is a graphical representation of the analysis results.

Charts 1 and 2 were developed based on selecting warranty claims that GM's coding system has identified as "broken," "collapsed," "cracked," "cut," "improperly cut," "sheared," or "inoperative" affecting either the right side (GM code B5750) or the left side (GM code B5751) tailgate support cable.

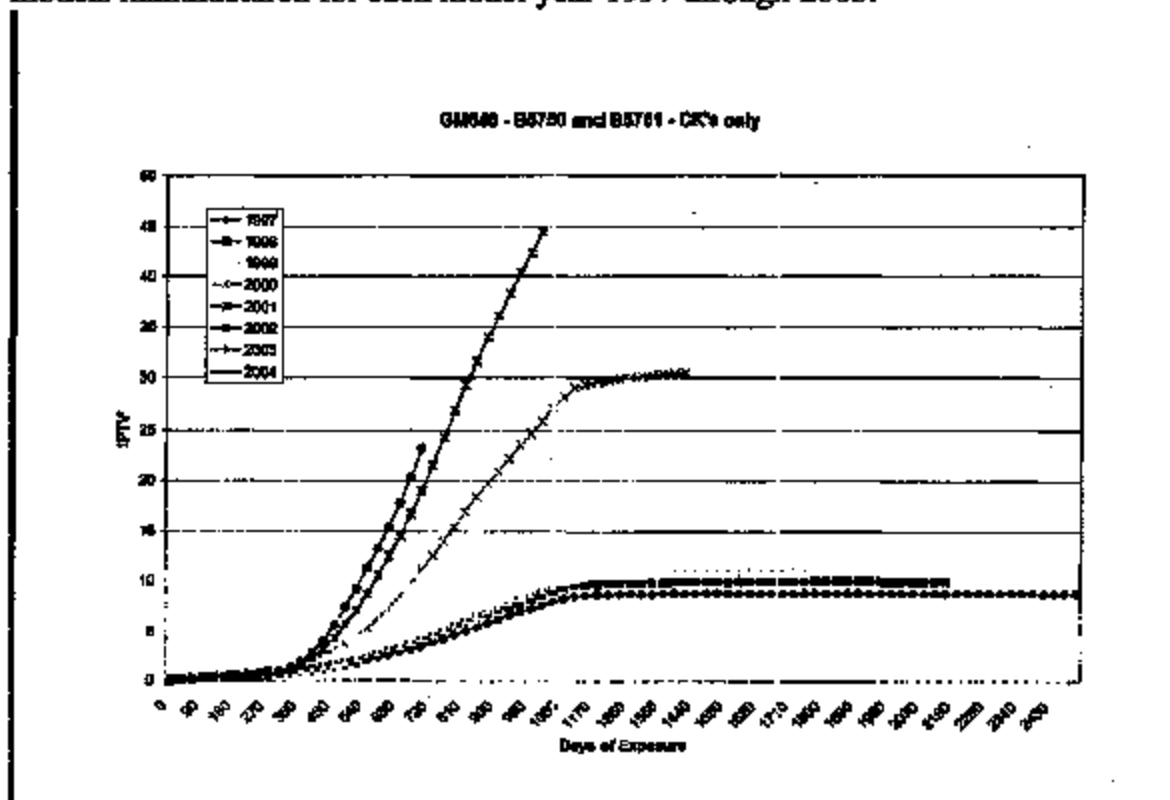
Chart 1 – Incident Rate (warranty claims per 1000 vehicles manufactured) for C/K models manufactured from August 1996 (model year 1997) through September 2003 (partial model year 2004).



The foregoing chart shows that the incident rate of broken (or incidents reported using similar descriptive words as identified above) tailgate support cables installed prior to October 1999 was significantly lower than the incident rate of breakage in tailgate cables installed during the following 2000-2002 model years of production.

General Motors also provided ODI with a chart indicating the tailgate cable performance for C/K model vehicles for each model year from 1997 through 2003. A graphical summary of the analysis results is depicted on Chart 2 below.

Chart 2 – Incident Rate (warranty claims per 1000 vehicles manufactured) for C/K models manufactured for each model year 1997 through 2003.



Source: Attachment 9B, GM response to ODI dated December 12, 2003.

This summary indicates that the incident rate of warranty for broken tailgate support cables installed in 2000-2002 model year C/K vehicles is significantly greater than the incident rate for 1997-1999 model year C/K vehicles. The apparent "flattening" of the incident rate after approximately 1080 days of product exposure (approximately three years) is due to the end of warranty coverage and is not an indication that the rate of tailgate breakage has abated or decreased.

End-Date – General Motors has established the end date of affected production as October 6, 2003, the date at which the “cable material [was changed] to 4.80 mm 7 x 19 medium strength Type 302 or 304 stainless steel.”

S/T Models – S/T model vehicles are not addressed in this report. S/T model vehicles were not included in the initial investigation scope of EA04-005 because ODI has given investigation priority to the much larger number of VOQ complaints associated with the C/K models than with S/T models. During this investigation, General Motors advised ODI that the tailgate support cables installed in S/T models were (except for length) similar to tailgate support cables in the C/K models. In order to assess whether the incident rate pertaining to S/T models might exhibit incident rates of tailgate support cable breakage similar to those of the C/K models, ODI requested General Motors to provide an incident rate comparison between S/T and C/K models. This information is provided in Appendix A of this report.

(4) Product Description

Each subject vehicle's tailgate has a support cable installed on the right side of the tailgate and a second cable installed on the left side of the tailgate. One end of each cable attaches to a support bolt mounted into the side of the tailgate door and the other end of each the cable attaches to a support bolt installed into the side of the tailgate doorframe.

When the tailgate is closed (raised), each cable is flexed or bent into a “U” shape within an enclosed space between the tailgate door and tailgate frame. When the tailgate is opened (lowered), both cables straighten from the at-rest “U” shape to support the weight of the opened tailgate and any loads that may be placed on the opened tailgate (e.g., cargo, ramps, seated individuals, etc.).

The tailgate can be removed from the vehicle by unclipping the tailgate mounted ends of the right and left support cables from their respective frame mounted support bolts and partially opening (lowering) the tailgate to approximately 45 degrees from horizontal. At this position, the hinge trunnion mounted to the right side of the tailgate can be separated from the mating hinge post mounted to the tailgate frame and the left side trunnion can be disengaged from the left side hinge post by displacing the tailgate rightward. Photographs depicting the tailgate are provided in the next section of this report.

According to General Motors (response # 19 to PE Information Request), “the right and left side tailgate support cables installed in GMT 400 subject vehicles are identical. The right and left tailgate support cables installed in GMT 800 subject

vehicles (C/K) are of the same material and construction." The response also states that the difference between the right and left tailgate cables in the GMT 800 (C/K) models is the orientation of the eyelets installed on the cable ends.

(5) Product Changes

According to General Motors' response to ODI inquiries (Request # 15), there have been several minor changes to the latch assembly, latch assembly spring, fork bolt detent, etc., but no significant changes to the cable size, shape, length, or material composition of the tailgate support cable until October 6, 2003 when the cable material was changed from, "4.8 (+.46 -0.00) dia.7 x 19 galvanized commercial braided steel" to "medium strength Type 302 or 304 stainless steel."

(6) ODI Investigation

ODI conducted the following investigation activities:

- (A) ODI inspected a MY 2001 Silverado (VIN 2GCEK19T21XXXXXX) and a MY 2002 Silverado (VIN 1GCGK13U42FXXXXXX) on November 15, 2003 at a GM truck dealership in Fairfax County, Virginia.

One purpose of the inspection was for ODI to gain a basic understanding of the installation, function, and removal features of the tailgate support cables and tailgate assembly. A second purpose of the inspection was to assess the validity of owner complaints regarding injury and property damage incidents. ODI observed that the tailgate could "drop" (fall) only a few inches beyond its normal open position (which is nearly horizontal) before being restrained by the rear bumper if one or both of the tailgate support cables were to break in a manner similar to those reported to ODI by owners.

Information and photographs summarizing this inspection are provided below.

Model Year 2001 1500 LT, VIN 2GCEK19T211XXXXXX



The tailgate is shown in the open (lowered) unloaded position supported by the tailgate support cables. Note the right side (far) cable appears to be slack while the left side (close) cable is taut.

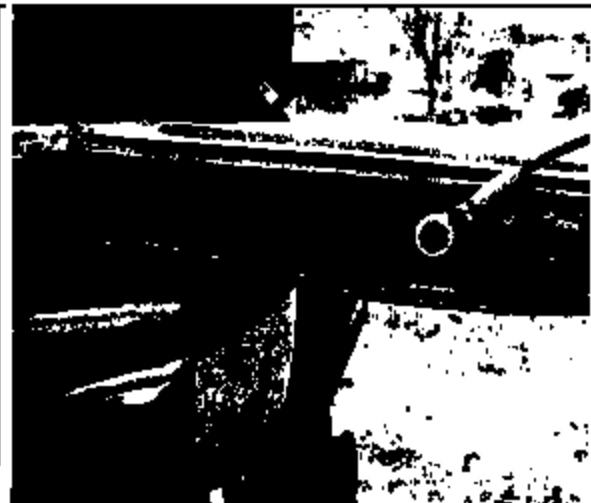


The tailgate is shown opened (lowered) with both tailgate support cables disconnected at one end to simulate the tailgate position if both cables were detached or broken. When the cables are not supporting the tailgate, the tailgate can open or drop until it is restrained by contact with the rear bumper.

Model Year 2002 1500 HD LS, VIN 1GCGK13U42FXXXXXX



The tailgate is shown in the open (lowered) unloaded position supported by the tailgate support cables. A minor distortion can be seen in the left cable at the point where the cable flexes when the tailgate is closed. This distortion may provide an indication that the interior cable is damaged.



The tailgate is shown opened (lowered) with both tailgate support cables disconnected at one end to simulate the tailgate position if both cables were detached or broken. When the cables are not supporting the tailgate, the tailgate can open or "drop" until it is restrained by contact with the rear bumper.

- (B) ODI summarized selected injury incidents (Appendix B) conveyed through VOQ reports. During the investigation, ODI conducted phone interviews with all of the owners who filed a VOQ claiming that the personal injury resulted from the tailgate support cable breaking. The purpose of the phone interviews was to verify that an injury had occurred as reported and to obtain additional information about the circumstances surrounding each incident. (ODI generally did not interview owners who reported injuries after December 2003.)

At the time that GM filed the Defect Notice (04V-129) on March 17, 2004, GM and ODI had jointly identified 134 injuries that were associated with tailgate cable(s) breaking. The severity of the injuries ranged from minor scrapes and cuts to head, neck and back injuries.

Appendix B summarizes selected injury incidents reported through VOQ reports received at ODI as of December 2003.

Shortly after March 17, 2004, ODI was notified of a fatality incident that occurred in Monterey, Tennessee, on March 14, 2004, involving a model year 2002 Silverado. In May 2004, ODI learned of a second fatality incident involving a model year 2000 "Chevrolet pick-up truck" that occurred in Falmouth, Maine, on May 6, 2004. In both incidents, the victim was alleged to have fallen from a seated position on the open tailgate of the vehicle after one or both of the tailgate cables fractured while the vehicle was being driven

ODI's analysis has identified the three principle groupings of risks posed when one or both of the tailgate support cables break:

- (1) Injuries and/or property damage caused by being tipped or jolted when the tailgate support cable broke unexpectedly
 - (a) when individuals were seated on the tailgate, or
 - (b) when individuals were standing on the tailgate while loading or unloading cargo, or
 - (c) when individuals were using ramps placed against the tailgate to load or unload equipment such as lawn mowers, ATVs, motorcycles, etc.
- (2) Injuries caused by being struck or pinched by the dropping tailgate.
- (3) The risk of complete or partial separation of the tailgate while the vehicle is stationary (during which the dropped door may pose a risk of injury to persons standing behind the vehicle) or being driven on a roadway (during which the partially or completely detached door may pose a risk to nearby individuals or vehicles).

The following table summarizes the incidents of partial or complete separation that have been reported to ODI. Appendix C provides additional information about these incidents.

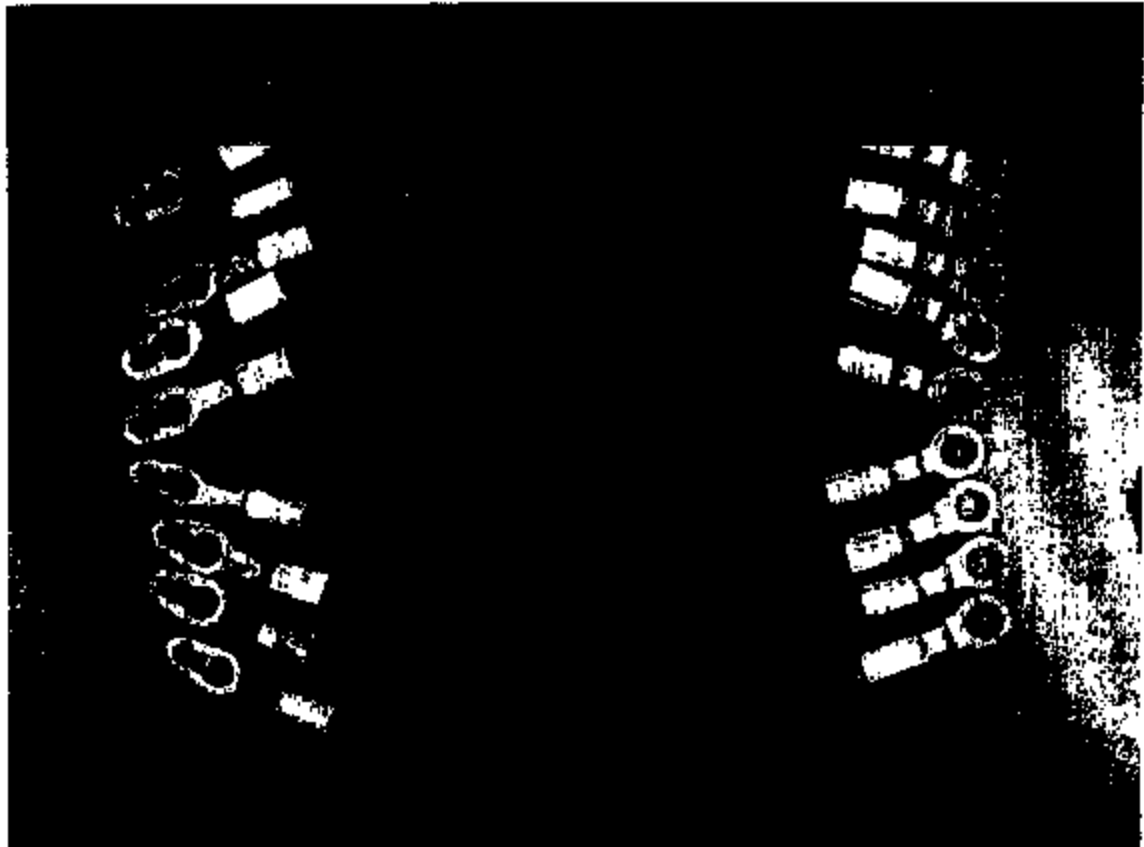
Incident Type	Vehicle Moving	Vehicle Stationary
Complete Separation of the tailgate from the vehicle	5	3
Partial Separation of the tailgate from the vehicle (i.e., the tailgate separated from one hinge trunnion after one tailgate support cable broke and the second unbroken cable prevented the complete separation of the tailgate from the vehicle)	9	ODI did not track partial separations in stationary vehicles.

ODI has provided information regarding these incidents to GM at various intervals during the course of this investigation as the new information was received.

- (C) ODI searched the owner complaints (VOQ) to determine the extent to which ODI complaint records might indicate similar incidents of tailgate cable breakage among peer vehicles. ODI's investigation did not find any reports of similar tailgate breakage complaints from complaints by owners of peer vehicles.

Make of Vehicle Searched (MY 2000-2004)	Number of VOQ reporting tailgate cable support breakage
Ford	0
Daimler Chrysler	0
Toyota	0

- (D) ODI requested and obtained samples of fractured tailgate support cables from several vehicle owners who had filed a complaint with ODI. ODI examined and compared the returned cables. The break on each of the cables appeared to have occurred at approximately the same location on each of the broken cables. The break appeared to be a result of metal fatigue at the point of maximum cable flexure (or bending) in combination with corrosion of the cable that had degraded the strength of the cable at that location.



Photograph of broken cables returned to ODI. The upper six cables had broken and been removed from the right side tailgate position. The lower four cables had broken and been removed from the left side of the tailgate. ODI did not always receive complete sets (both right and left cables) from the same vehicle. As indicated in the photograph, each cable appears to have broken in the same general location.

(E) ODI reviewed the information that GM provided on December 12, 2003 in response to ODI's October 24, 2003 request for information.

(7) ODI Assessment

Types of Risks-

ODI has identified two predominant (*) areas of risk associated with a tailgate support cable that breaks: (1) individuals who are seated or standing on the tailgate and dropped to the ground by an abrupt downward tailgate displacement or jolt caused by one or both tailgate cables breaking (2) partial or complete separation of the tailgate from the vehicle when one or both tailgate cables break and (a) the tailgate is lowered or (b) the tailgate latch fails to hold and tailgate drops while the

vehicle is stationary or being driven on the roadway.

(*) ODI has received a few reports from individuals who have struck or pinched their hand, arm or leg when the tailgate dropped following a cable(s) break. These types of incidents have generally been less severe and less frequent than the other general risks identified above.

Fatalities-

ODI is aware of two fatalities associated with a tailgate support breaking. Other than being aware that the tailgate support cable breaking was a factor in these incidents, ODI has not investigated the contribution, if any, of other potentially pertinent factors (e.g., whether the cables had been subjected to prior use or abuse, etc.) that might have contributed to the incident causation. ODI is aware that each of the decedents had been riding on the tailgate of a moving vehicle that exposed them to a high risk of falling from the vehicle in the event the vehicle experienced a significant road-induced jolt.

Injuries-

ODI is also aware of 134+ injuries that had been by caused or closely linked to the tailgate support cables breaking. Although the majority of the injuries have been minor, some injuries are of a more serious nature consisting of neck and back injuries, a broken collarbone, etc.

ODI is not aware of any injuries or property damage caused by the partial or complete separation of the tailgate due to tailgate support cables breaking while the vehicle was being operated in the roadway. Although none of the reported partial or complete separation incidents have resulted in a personal injury, this type of incident poses a clear risk to proximate, especially trailing, vehicles.

ODI believes that each of the above-described situations poses a risk to safety.

(8) GM's Actions

General Motors filed a Defect Notice 04V-129 on March 17, 2004. This Notice provides for the replacement of the tailgate support cable in affected C/K model vehicles built between October 1999 and October 6, 2003.


(9) Conclusion

ODI is closing this investigation because General Motors has decided to conduct a Recall Campaign (04V-129) to correct the identified issue in the affected model year 2000 – 2004 vehicles.

ODI is aware that tailgate cable breakage has occurred in C/K vehicles manufactured prior to October 1999 (not addressed by GM Campaign 04V-129) and in S/T model vehicles (also not addressed by GM Campaign 04V-129). Based on available data, the rate of tailgate cable breakage in S/T and pre-October, 1999 C/K vehicles is lower than the failure rate of tailgate cables that had been installed in MY 2000-2004 vehicles that are within the scope of Campaign 04V-129.

ODI is concerned that tailgate support cables have and will continue to break in S/T model vehicles and C/K model vehicles manufactured prior to October 1999. Also, ODI believes that the incident count and incident rate are likely to increase since the failure modes, fatigue and corrosion, are regarded as "wear-out" types of failure modes that increase in rate and number as these components reach the end of their useful life. ODI is also concerned that the tailgate cables frequently break in an abrupt and catastrophic (complete) manner.

Without further investigation of the S/T and pre-October 1999 C /K vehicles, ODI cannot be certain whether certain factors might mitigate the frequency or severity of the risk when the tailgate cable(s) in these vehicles breaks. The preliminary injury statistics (See Appendix D) and incident rate of breakage based on warranty claims (See Appendix E) support the need for further investigation of these vehicles. Therefore, ODI has opened a Recall Query (RQ) to address tailgate support cable breakage in 1998 and 1999 model year C/K vehicles.


G. T. Bowman, Safety Defects Engineer

9/28/04
Date

I Concur:

Chief, Medium & Heavy Duty Truck Division

9/28/04
Date

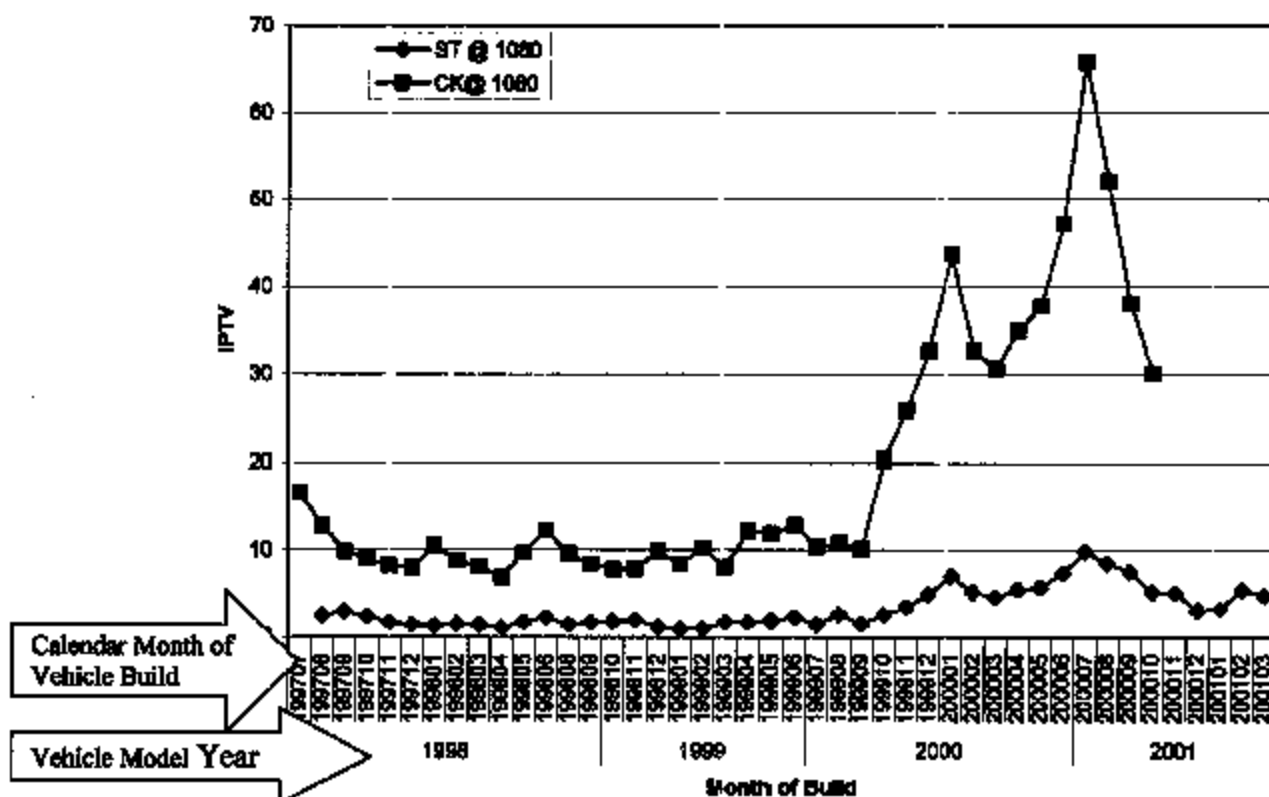

Director, Office of Defect Investigation

9/28/04
Date

EA04-005
Appendix A

The following chart depicts a comparison of the warranty claim incident rate for the tailgate support cable of the General Motors C/K with the S/T models correlated with each month of production from July 1997 (model year 1998) through March 2001 (partial model year 2001).

ST vs CK Warranty @ 1000 Days of Exposure
B5750 Tailgate Cable-Right-Replace, B5751 Tailgate Cable-Left-Replace



Prior to the 2000 model year, the warranty rate for the S/T models was approximately 2-3 incidents per 1000 vehicles manufactured and increased to approximately 5-10 incidents per 1000 vehicles during or after model year 2000. Prior to the 2000 model year, the warranty rate for the C/K models is approximately 8-12 incidents per 1000 vehicles manufactured and increased to approximately 10-65 incidents per 1000 vehicles manufactured during or after model year 2000.

Although tailgate support cable breakage has occurred at modest levels in the S/T models, the breakage of tailgate support cables appears to occur at a significantly higher rate and exhibits a significant "departure from norm" in vehicles manufactured in or after model year 2000.

**Summary of Personal Injuries reported through VOQ caused by
Tail Gate Dropping Unexpectedly**

ODI has verified all listed reports through phone interviews and obtained further details about each incident through these calls. ODI generally suspended these phone interviews in December 2003.

Date Rec'd	VOQ #	MY	VIN	Verbatim Consumer Statement from ODI VOQ
Dec 28 2003	10051215	2002 Avalanche	3GNEK13T12 GXXXXXX	TAILGATE CABLE SNAPPED ON A 2002 CHEVROLET AVALANCHE WHILE LOADING ATV. CABLES SNAPPED IN THE MIDDLE OF THE CABLE AND NOT AT ENDS. I WAS ASSURED BY SALES REPRESENTATIVE THAT THE TAILGATE CAN HANDLE THE WEIGHT OF AN ATV. THE TRUCK BED HAS AN ATV TREAD EMBEDDED INTO THE MAT TO ADD TRACTION WHILE LOADING AND UNLOADING. I BELIEVE THE CABLES NEED TO BE RECALLED AND CORRECTED BEFORE SOMEONE ELSE IS INJURED. I WAS QUOTED AN ESTIMATE OF \$123.00 TO FIX. I WANT THE MANUFACTURER TO PAY FOR THE DAMAGE SINCE IT RESULTED IN A MANUFACTURING DEFECT.
Dec 12 2003	10049575	2001 Sierra	2GTEC19V111 XXXXXX	2001 GMC SIERRA 1500 PICK-UP . TAILGATE CABLES SNAPPED (BOTH) WHEN I SAT ON THE TAILGATE. I AM NOT TOO HEAVY THE CABLES ARE DEFECTIVE BY ALLOWING WATER THE SEEP INTO THE CABLE AND RUST WHILE NOT SHOWING ANY OBVIOUS PROBLEM UNTILL THE FAILURE.
Nov 27 2003	10047701	2000 Silverado	1GCEK14T2Y EXXXXXX	BOTH TAILGATE CABLES ON MY 2000 CHEVY SILVERADO FAILED WHEN UNLOADING CARGO (5 GALLON PAILS OF CORN). I CAN SEE THEY WERE RUSTED OUT INSIDE THE PLASTIC CASING ENCLOSING THEM. I INJURED MY LEGS WHEN THE TAILGATE FELL.

**Summary of Personal Injuries reported through VOQ caused by
Tail Gate Dropping Unexpectedly
ODI has verified all listed reports through phone interviews**

Date Rec'd	VOQ #	MY	VIN	Verbatim Consumer Statement from ODI VOQ
Nov 13 2003	10046850	2002 GMC K3500	1GTJK33161F XXXXXX	I WAS STANDING ON THE TAILGATE OF MY 2001 GMC K3500 PREPARING TO UN LOAD MY NEW REFRIDGERATOR WHEN THE CABLES SNAPPED. THIS CAUSED ME TO FALL BACK DOWN ON THE STEPS TO MY FRONT PORCH. I HAVE BEAN HAVING MID TO UPPER BACK AND NECK PROBLEMS SINCE THIS HAPPENED. I HAVE BEAN SEEING A CHIROPRACTOR AND A ACUPUNCTURIST IN ORDER TO KEEP GOING TO WORK
Nov 10 2003	10046678	2001	2GCEK19T411 XXXXXX	WHILE LOADING FISHING EQUIPMENT , SLEEPING BAGS, THE TAIL GATE ASSEMBLY STRAPS BROKE ON BOTH SIDES. OWNER SUFFERED MINOR INJURIES. DEALERSHIPS IS AWARE OR THE PROBLEM. PLEASE PROVIDE FURTHER INFORMATION.
Nov 9 2003	10045812	2002	1GCHK29112 EXXXXXX	MY DAUGHTER CLIMBED UP ON THE TAILGATE OF MY 2002 CHEV PICK UP AND WAS STANDING UP WHEN THE CABLES BROKE. THE TAIL GATE DROPPED AND SHE FELL TO THE GROUND LANDING ON HER TAIL BONE.SHE WAS NOT SERIOUSLY INJURED BUT WAS VERY STIFF AND SORE AND COULDNT HARDLY WALK FOR 3 DAYS.
Nov 5 2003	10045457	1999	2GTEK19TXX 1XXXXXX	SIMULTANEOUSLY BROKEN TAILGATE CABLES RESULTING IN SEVERE PINCHING OF HAND CAUSING SWELLING AND PAIN.
Oct 31 2003	10046148	2000	1GCEK19T1Y EXXXXXX	CONSUMER PLACED CLOTHES INSIDE THE TAILGATE WHILE VEHICLE WAS PARKED, AND SIDE CABLES BROKE FROM THE TAILGATE KNOCKING CONSUMER TO THE GROUND. DRIVER SUSTAINED BACK INJURIES. HE DROVE HIMSELF TO THE HOSPITAL.

EA04-005
Appendix B
Sheet 3 of 3

Summary of Personal Injuries reported through VOQ caused by
Tail Gate Dropping Unexpectedly
ODI has verified all listed reports through phone interviews

Date Rec'd	VOQ #	MY	VIN	Verbatim Consumer Statement from ODI VOQ
Oct 31 2003	10046138	2000	1GCEC19T9Y EXXXXXX	WHILE LOADING THE VEHICLE TAILGATE SNAPPED AND COLLAPSED. CONSUMER SUSTAINED MINOR BACK INJURIES (MILD PAIN). *AK
Oct 29 2003	10043997	1998 Sierra	2GTEK19R3W 1XXXXXX	BROKEN TAIL GATE CABLES ON A 98 GMC K1500 PICKUP
Oct 28 2003	10043785	2001	2GCEK19T511 XXXXXX	BROKEN TAILGATE CABLES ON MY 2001 SILVERADO
Oct 24 2003	10044660	2002 Sierra	1GTHK29U12 ZXXXXXX	THE TAIL GATE CABLE SNAPPED IN HALF WHEN THE PASSENGER WAS EXITING THE BACK OF THE PICK UP. THE PASSENGER HIT HIS/HER HEAD ON THE DRIVEWAY, BUT DIDN'T SUSTAIN ANY INJURIES. THE CAUSE OF THE CABLE FAILURE WAS UNDETERMINED.
October 2003	10042517	2001	1GCHK23G82 FXXXXXX	WHILE ATTACHING A TRUCK TO THE BACK OF THE PICK UP THE TAILGATE CABLE BROKE, AND THE TRUCK FELL ON CONSUMER, BREAKING CONSUMER'S SHOULDER IN THREE PLACES. DEALERSHIP INDICATED THAT THIS WAS CAUSED BY THE TAILGATE RUBBER COATING RUSTING
July 2003	10028819	2000	2GCEK19T7Y 1XXXXXX	CONSUMER STATES THAT BOTH THE TAILGATE SUPPORT BRACKETS BROKE SIMULTANEOUSLY WHILE STANDING ON TRUCK BED. THE CONSUMER WAS INJURED AS A RESULT.
February 2003	10009498	2001	No VIN provided.	THE STRAPS FOR THE TAILGATE SNAPPED, AND CONSEQUENTLY CONSUMER WAS INJURED.
June 2002	8011931	2001	2GCEC19T21 1XXXXXX	WHILE 2 PERSONS WERE SITTING ON OPEN TAILGATE, TAILGATE ASSEMBLY BROKE ON BOTH SIDES, AND BOTH PERSONS SUFFERED MINOR INJURIES.
February 2002	9005863	1999	1GCEK14V6X EXXXXXX	TAIL GATE CABLE FAILED

EA04-005
Appendix C
Sheet 1 of 2

EA04-005 Tailgate Cable Breakage
VOQs reporting complete tailgate separation
C/K Model Years 2000-2004

	VOQ Number	Vehicle	Driving Circumstances
Vehicle Moving	10056807	2002 Escalade	high speed
	10059707	2001 Silverado	low speed
	10060944	2002 Silverado	accelerating from stop light
	10081808	2002 Avalanche	35-40 MPH on country road
	10083816	2003 Sierra	35 MPH on paved road; also dropped cargo (ATV) on roadway
Vehicle Stationary	10051437	2002 Avalanche	loading ATV onto bed with ramps
	10054029	2000 Sierra	loading
	10058789	2002 Avalanche	standing on tailgate unloading cargo

EA04-005
Appendix C
Sheet 2 of 2

EA04-005 Tailgate Cable Breakage
VOQs reporting partial tailgate separation
C/K Model Years 2000-2004

Tailgate
displaced
and dragged
by a single
intact cable

VOQ Number	Vehicle	Driving Circumstances (verbatim summaries from VOQ are denoted in quotation marks)
10021443	2003 Silverado	Driving through road under repair / construction
10045498	2001 Silverado	"while driving"
10060636	2001 Silverado	"dragged [tailgate] for 30 feet"
10060601	2000 C/K	when accelerating
10062217	2000 Sierra	"tailgate was down" [occurred] "on busy street"
10062324	2001 Silverado	"swung around the side ... nearly htting the vehicle next to me."
10066005	2002 Avalanche	pulling from stop
10081006	1999 Silverado	"driving on a country park road at 15- 20 MPH, went over a speed bump and the tailgate opened and the right rear cable on the tailgate broke in two..."
10074880	2000 Silverado	traveling about 10 MPH making a right hand turn

EA04-005
Appendix D
Sheet 1 of 2

**Summary of Personal Injuries reported through VOQ caused by
Tail Gate Dropping Unexpectedly in C/K Model Vehicles
Manufactured prior to October, 1999
ODI has verified all listed reports through phone interviews**

VOQ #	Vehicle	Verbatim Consumer Statement from ODI VOQ
10062667	1999 Silverado	MY 1999 CHEV P/U TAILGATE CABLE BROKE CAUSING MINOR INJURY. I NOTICED AN ARTICLE RECALLING 2000-2004 GM'S. MY TRUCK WAS LESS THAN 3 YEARS OLD WHEN THE CABLE FAILED. 1999 GM VEHICLES SHOULD BE INCLUDED IN THE RECALL.
10045457	1999 C/K Pick-up	SIMULTANEOUSLY BROKEN TAILGATE CABLES RESULTING IN SEVERE PINCHING OF HAND CAUSING SWELLING AND PAIN.
9005863	1999 Silverado	TAIL GATE CABLE FAILED
10058972	1998 C/K Pick-up	TAILGATE CABLES BROKE WHILE LOADING FURNITURE ONTO TRUCK. DAMAGED TRUCK BED AND INJURED TWO FAMILY MEMBERS FROM THE CABLES BREAKING UPON LOADING FURNITURE INTO BED OF FAIRLY NEW TRUCK WITH ONLY 30 THOUSAND MILES ON IT. (29,995).
10067781	1999 Sierra	CORROSION IN TAILGATE RESTRAINT STRAPS CAUSED FAILURE WHILE SITTING ON TAILGATE TO UNLOAD SEWING MACHINE. MINOR INJURY TO PERSON. NO DAMAGE TO SEWING MACHINE. MINOR DAMAGE TO TAILGATE. LOOKING FOR REPLACEMENT STRAPS. (G.M. DEALER INSISTS STRAPS CANNOT BE PURCHASED SEPERATELY. PURCHASE OF COMPLETE LATCH ASSEMBLY REQUIRED AT 40 DOLLARS PER SIDE).

**Summary of Partial Tailgate Separations reported through VOQ in C/K
Model Vehicles Manufactured prior to October, 1999
ODI has verified all listed reports through phone interviews**

Vehicle Moving	VOQ Number	Vehicle	Driving Circumstances
	10062597	1999 Sierra	Driving on country gravel road high speed (partial separation) ".... I HAD ONE INCIDENT OF THE TAIL GATE FALLING OFF..."
	10081006	1999 Silverado	"driving on a country park road at 15-20 MPH, went over a speed bump and the tailgate opened and the right rear cable on the tailgate broke in two..."

Cargo Fell From Vehicle	VOQ Number	Vehicle	Driving Circumstances
	10080656	1997 Sierra	"lumber slid out of the truck while traveling"

**Summary of Non-injury Incidents reported through VOQ in C/K
Model Vehicles Manufactured prior to October, 1999**

	Sierras Manufactured Prior to October 1999	Silverados Manufactured Prior to October 1999	Total
Number of VOQ received prior to start of Investigation (October 23, 2003)	1	2	3
Number of VOQ received during investigations PE03-049 and EA04-005 (from October 23, 2003 until March 17, 2004 GM Campaign Announcement)	1	0	1
Number of VOQ received after March 17, 2004 GM Campaign Announcement affecting MY 2000-2004 Sierras and Silverados	5	8	13
Total	7	10	17

EA04-005
Appendix E
Sheet 1 of 1

In June 2004, ODI requested and received warranty rate information pertaining to broken tailgate support cables from manufacturers of peer vehicles, Daimler Chrysler and Ford. ODI summarized this peer information and combined it with information provided by General Motors to ODI in PE03-049 and EA04-005. This comparison is approximate because of the values are reported in a range to encompass the several years of production included in the summary and because there may be differences in warranty policies and search techniques among the manufacturers.

Incident rate Summary of Peer Vehicle Manufacturers
Broken Tailgate Support Cables

Vehicle Make - Model	Model Year	Incident Rate Range for Broken Cables (warranty claims within the 36 month warranty period)
GM C/K – Campaigned Vehicles	2000 - 2002 (*)	2.5 - 7.5 %
GM C/K -	1998 - 1999	0.8 - 1.2 %
Ford F150 - 250	1998 - 2000	0.008 - 0.06 %
Ford F250, 350, 450	1999 - 2000	0.019 - 0.1 %
Daimler (Dodge Ram)	1994 - 2001	0.03 - 0.45 %
GM S/T	1998 - 1999	0.2 - 0.3 %
GM S/T	2000 - 2001	0.5 - 1.0 %

(*) Warranty data for model years 2003 and 2004 are not included in this summary since this data is immature. Fully comparative data will not be available until recently manufactured product has passed the three-year warranty coverage period.