99V-193
99i-006

TALKING POINTS: GM ABS BRAKE INVESTIGATIONS
July 21, 1999

- For several years, NHTSA has been conducting two investigations into alleged defects in the performance of the antilock brake systems (ABS) in certain light trucks manufactured by General Motors Corporation (GM). These investigations are: EA94-038, involving MY 1991-1997 Chevrolet Blazer, GMC Jimmy, and Oldsmobile Bravada sport utility vehicles (SUV) and Chevrolet S-10 and GMC Sonoma, Cyclone, and Typhoon pickup trucks (collectively referred to by GM as "S" and "T" vehicles); and EA95-026, involving MY 1992-1995 Chevrolet and GMC Suburban vehicles.

- Because of the complexity of the ABS systems on these vehicles, these have been two of the longest-lasting and most resource-intensive defect investigations ever conducted by the agency.

- Currently, NHTSA has on file 10,861 reports of brake problems on the S and T trucks equipped with EBC4 ABS units. These reports refer to 2,111 crashes and 293 injuries. There are 2,400 reports (782 crashes and 68 injuries) of brake problems on the Suburbans equipped with the EBC4 units. The vast majority of these reports have not been confirmed by the agency.

- GM recently notified NHTSA that it has determined that a safety-related defect exists in certain of the vehicles covered by EA94-038, as well as certain other GM light trucks, and that it will conduct a safety recall to remedy this defect. This defect was discovered as a result of GM testing of a condition discovered by NHTSA.

- This safety recall will apply to approximately 1.1 million MY 1991-1996 Chevrolet and GMC four-wheel drive SUVs and pickups equipped with a particular model of ABS system known as the EBC4. The defect relates to the signal received by the ABS system which tells it whether or not the vehicle is operating in the two-wheel or four-wheel drive mode. If the vehicle is operating in two-wheel drive, the ABS system erroneously believes that it is operating in four-wheel drive, a condition that could extend stopping distances.

S10 Blazer Sonoma Jimmy

- GM has also will conduct a service recall (referred to by GM as a "special policy") to address another potential problem identified by NHTSA, and confirmed by GM, during the EA94-038 investigation. NHTSA discovered that certain MY 1993-1996 GM light trucks equipped with EBC4 ABS units that utilize a "three-sensor" system could experience extended stopping distances during ABS stops on certain multiple transition surfaces; i.e., when the vehicle travels from a pavement surface with a relatively high coefficient of friction, onto a relatively slippery section of pavement, and then returns to the high coefficient pavement while the ABS is still operating. (The other trucks covered by EA94-038, including trucks equipped with four-sensor EBC4 ABS units, trucks equipped with rear-wheel anti-lock, or RWAL, systems, and those newer trucks equipped with EBC310 ABS units, did not experience this problem.)

- To address this condition, GM will provide, at no charge to owners, a modification of the algorithm, or computer program, which operates the ABS units on over 1.4 million S and T light trucks equipped with three-sensor EBC4 ABS units. In addition, GM will provide a similar modification to the ABS algorithm in over one million MY 1992-1995 Chevrolet Astro Vans and GMC Safari Vans and MY 1993-1996 G-vans equipped with three-sensor EBC4 ABS units.

- After considering all of the information developed during its extensive investigation, NHTSA has concluded that these two recall actions to be taken by GM will adequately resolve the issues raised by that investigation. The agency intends to close EA94-038.

- With respect to the investigation into the brake performance of the Suburbans, GM has advised NHTSA that it "commits to developing field action that would address customer satisfaction issues with 1992-1994 Suburbans." However, as of this time GM has not identified any specific action that it intends to take. Therefore, NHTSA's investigation into the ABS performance of the Suburbans (EA95-026) will remain open.

- These investigations provide an excellent reminder of the principle that as new and more complex technologies become available for use in vehicles, they can create potential safety problems that must be taken into consideration by manufacturers as they design their products. It also points up the complex nature of these emerging technologies in that the investigation involved an issue with software, an issue with hardware and an issue with the human/machine interface. While antilock brake systems on vehicles such as these can offer significant safety benefits when they operate properly, manufacturers must be particularly vigilant in assuring that they will perform properly under all reasonably anticipated driving conditions.

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Service Bulletin

File In Section: Special Policies
Bulletin No.: 99046
Date: December, 1999

99I-006

SPECIAL POLICY

SUBJECT: 99046 - SPECIAL POLICY - HIGH/LOW/HIGH ABS BRAKE ANOMALY

MODELS: 1993-1996 CHEVROLET, GMC, AND OLDSMOBILE S/T UTILITY
1994-1996 CHEVROLET AND GMC S/T PICKUP EQUIPPED WITH A V6 ENGINE
1993-1995 CHEVROLET AND GMC M/L VAN
1993-1996 CHEVROLET AND GMC G VAN

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THIS SPECIAL POLICY IS IN EFFECT UNTIL DECEMBER 1, 2002

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DUE TO THE AVAILABILITY OF PARTS, THIS SPECIAL POLICY WILL BE ADMINISTERED IN PHASES. THIS FIRST PHASE WILL BE THE REPROGRAMMING OF THE VCM IN 2WD AND 4WD 1994-1996 S/T PICKUPS AND 1995-1996 S/T UTILITIES EQUIPPED WITH A VCM. VEHICLES INVOLVED IN PHASE I ARE SHADED IN THE TABLE BELOW.

YOU WILL BE NOTIFIED OF THE NEXT PHASE VIA DCS MESSAGE.

	MODEL YEAR			
	1993	1994	1995	1996
M/L Van	Part Chg.	Part Chg.	Part Chg.	N/A
G Van	Part Chg.	Part Chg.	Part Chg.	Part Chg.
S/T Pickup w/LB4 & Man Trans	N/A			N/A
S/T Pickup w/LB4 & Auto Trans	N/A	Part Chg.	Part Chg.	N/A
S/T Pickup w/L35/LF6	N/A	Part Chg.		
S/T Utility w/LB4	Part Chg.	Part Chg.	N/A	N/A
S/T Utility w/L35/LF6	N/A	Part Chg.	(+K29) Part Chg.	
S/T Utility - AWD	Part Chg.	Part Chg.	Part Chg.	Reprogram (Later Phase)

CONDITION

The federal government's highway safety agency, the National Highway Traffic Safety Administration (NHTSA) has identified, and General Motors Corporation has confirmed, the existence of a condition in the antilock braking system of some Chevrolet, GMC, and Oldsmobile S/T utilities, 1994-1996 Chevrolet and GMC S/T pickups equipped with a V8 engine, 1993-1995 Chevrolet and GMC M/L vans, and 1993-1996 Chevrolet and GMC G vans, all equipped with the Lucas Varity three-sensor ABS system. On rare occasions, this condition can result in longer stopping distances during certain antilock brake applications, as explained below.

If the customer is driving on a road surface that supports good traction and they begin to stop by applying the brake pedal firmly, and both front wheels of their vehicle then pass onto a slippery surface (such as an ice-covered or wet patched asphalt part of the road), the antilock brake system will adjust the brakes at each of the wheels to take advantage of the available traction. This will allow the customer to steer and maintain stability, which is normal ABS operation, as their owner's manual explains in more detail.

However, if the customer is still braking while the vehicle leaves the slippery surface and both front wheels get back on a higher-traction surface, the ABS may perform as if the vehicle were still on the slippery surface and the vehicle may not stop as quickly. However, this will not happen every time these conditions are encountered. It depends on several additional factors, such as vehicle speed and the length of the slippery surface.

The ABS system was designed with increased sensitivity to wheel slip in order to improve vehicle steerability while braking on very slippery surfaces. This improvement for steerability, however, made it possible for reduced front braking effectiveness to occur as described above.

SPECIAL POLICY ADJUSTMENT (Phase I)

This special policy adjustment covers the condition described above until December 1, 2002, regardless of vehicle mileage or ownership. Dealers are to reprogram the VCM. Use the following Service Procedure. This will be performed at no charge to the customer during this time. Other conditions that may cause similar or different brake complaints that are not a result of the condition listed above are not covered by this special policy. The customer should be informed that any further service that is not covered by this special policy would be their responsibility, if they elect to have the service performed.

VEHICLES INVOLVED

Involved are 1993-1996 S/T utilities, 1994-1996 S/T pickups equipped with a V6 engine, 1993-1995 M/L van, and 1993-1996 G vans built within the following VIN breakpoints:

YEAR	DIVISION	MODEL	PLANT	FROM	THROUGH
1994	Chevrolet	S/T Pickup	Linden	RK100001	RK183995
1995	Chevrolet	S/T Pickup	Linden	SK100036	SK263000
1996	Chevrolet	S/T Pickup	Linden	TK100019	TK240986
1993	Chevrolet	S/T Utility	Pontiac West	P0100001	P0196997
1993	Chevrolet	S/T Utility	Moraine	P2100001	P2218436
1994	Chevrolet	S/T Utility	Pontiac West	R0100001	R0184858
1994	Chevrolet	S/T Utility	Moraine	R2100001	R2179415
1994	Chevrolet	S/T Utility	Shreveport	R8100004	R8243099
1995	Chevrolet	S/T Utility	Moraine	S2100001	S2266695
1995	Chevrolet	S/T Utility	Shreveport	S8100001	S8266202
1995	Chevrolet	S/T Utility	Linden	SK100001	SK263010
1996	Chevrolet	S/T Utility	Moraine	T2100001	T2318776
1996	Chevrolet	S/T Utility	Shreveport	T8100001	T8232058
1996	Chevrolet	S/T Utility	Linden	TK100001	TK240987
1993	Chevrolet	M/L Van	Baltimore	PB100002	PB225276
1994	Chevrolet	M/L Van	Baltimore	RB100000	RB248996
1995	Chevrolet	M/L Van	Baltimore	SB100001	SB274040
1993	Chevrolet	G Van	Scarborough	P4100001	P4152035
1993	Chevrolet	G Van	Flint	PF300008	PF362809
1994	Chevrolet	G Van	Flint	RF100001	RF190429
1995	Chevrolet	G Van	Flint	SF100001	SF253581
1996	Chevrolet	G Van	Flint	TF100001	TF118295
1994	GMC	S/T Pickup	Linden	RK500002	RK525999
1995	GMC	S/T Pickup	Linden	SK500022	SK545830
1996	GMC	S/T Pickup	Linden	TK500012	TK532449
1993	GMC	S/T Utility	Pontiac West	P0500001	P0526015
1993	GMC	S/T Utility	Moraine	P2500002	P2543251
1994	GMC	S/T Utility	Pontiac West	R0500001	R0535325
1994	GMC	S/T Utility	Moraine	R2500001	R2527917
1994	GMC	S/T Utility	Shreveport	R8500003	R8533979
1995	GMC	S/T Utility	Moraine	S2500001	S2559899
1995	GMC	S/T Utility	Shreveport	S8500002	S8541078
1995	GMC	S/T Utility	Linden	SK500001	SK545839
1996	GMC	S/T Utility	Moraine	T2500001	T2580013
1996	GMC	S/T Utility	Shreveport	T8500001	T8536520
1996	GMC	S/T Utility	Linden	TK500001	TK532449
1993	GMC	M/L Van	Baltimore	PB500001	PB552970
1994	GMC	M/L Van	Baltimore	RB500000	RB558700
1995	GMC	M/L Van	Baltimore	SB500001	SB566562

YEAR	DIVISION	MODEL	PLANT	FROM	THROUGH
1993	GMC	G Van	Scarborough	P4500001	P4519317
1993	GMC	G Van	Flint	PF500004	PF522530
1994	GMC	G Van	Flint	RF500001	RF536616
1995	GMC	G Van	Flint	SF500001	SF559023
1996	GMC	G Van	Flint	TF500001	TF862777
1993	Oldsmobile	T Utility	Moraine	P2700001	P2709695
1994	Oldsmobile	T Utility	Pontiac West	R0700001	R0709971
1994	Oldsmobile	T Utility	Moraine	R2700001	R2707710
1996	Oldsmobile	T Utility	Moraine	T2700001	T2712525

PARTS INFORMATION

This phase requires no parts. Calibrations are available in October, 1999 on TIS 2000 CD #21 or Techline CD #20/21 or later versions.

CUSTOMER NOTIFICATION

Customers will be notified of this special policy on their vehicles, in phases, by General Motors (see copy of typical customer letter included with this bulletin - actual divisional letter may vary slightly).

SERVICE PROCEDURE

VCM Programming

Important: For 1995 S/T utilities with L35, check the Service Parts Identification (SPID) label on the inside of the glovebox to determine if the vehicle has a VCM. If there is an RPO of "K29", the vehicle has a PCM and is not programmable.

The new calibration will be available in October, 1999 on TIS 2000 CD #21 or Techline CD #20/21 and later versions. The calibration is programmed into the vehicle's VCM via a Techline Tool. Use a Techline Terminal or scan tool to perform the learn procedure and program the VCM.

Important: Use the calibration file "Special Policy 99046" on TIS 2000 CD #21 or Techline CD #20/21 or later versions.

1. To ensure VCM programming/RPO configuration, confirm that the following conditions exist in order to prepare for VCM programming:
   - The battery is fully charged
   - The ignition switch is in the "RUN" position
   - The Data Link Connector (DLC) is accessible
2. Refer to the latest Techline Terminal and equipment user's instructions.
3. Clear the diagnostic trouble codes (DTCs) after the programming is complete.

CLAIM INFORMATION

For vehicles repaired under warranty, submit a claim with the information indicated below:

REPAIR PERFORMED	PART COUNT	PART NO.	PARTS ALLOW	CC-FC	LABOR OP	LABOR HOURS
VCM Reprogram	0	N/A	N/A	MK-95	T5535	0.7

PHASE I 99046

(Sample of Notification Used)

December, 1999

Dear Chevrolet/GMC Customer:

As the owner of a General Motors truck equipped with the Lucas Varity three-sensor antilock brake system (ABS), your satisfaction with our product is of utmost concern to us.

Condition: The federal government's highway safety agency, the National Highway Traffic Safety Administration (NHTSA) has identified, and General Motors Corporation has confirmed, the existence of a condition in the antilock braking system of some Chevrolet and GMC 1994-1996 S/T pickups equipped with a V6 engine, and 1995-1996 S/T utility vehicles. On rare occasions, this condition can result in longer stopping distances during certain antilock brake applications, as explained below.

If you're driving on a road surface that supports good traction and you begin to stop by applying your brake pedal firmly, and both front wheels of your vehicle then pass onto a slippery surface (such as an ice-covered or wet patched asphalt part of the road), your antilock brake system will adjust the brakes at each of the wheels to take advantage of the available traction. This will allow you to steer and maintain stability, which is normal ABS operation, as your owner's manual explains in more detail.

However, if you are still braking while the vehicle leaves the slippery surface and both front wheels get back on a higher-traction surface, the ABS may perform as if the vehicle were still on the slippery surface and the vehicle may not stop as quickly. However, this will not happen every time these conditions are encountered. It depends on several additional factors, such as vehicle speed and the length of the slippery surface.

Your ABS system was designed with increased sensitivity to wheel slip in order to improve vehicle steerability while braking on very slippery surfaces. This improvement for steerability, however, made it possible for reduced front braking effectiveness to occur as described above. Therefore, GM has developed a software change that will make your vehicle less sensitive to wheel slip under the circumstances described above.

What Will Be Done: Upon your request, your Chevrolet/GMC dealer will make a change to your antilock braking system software to prevent this phenomenon from occurring. This software change will have only a slight effect on vehicle steerability during braking on very slippery surfaces and is designed to have no effect on normal ABS or other braking operations. This change should not affect how your brakes feel or create any perceptible difference in the steerability or stability of your vehicle while braking. This modification will be performed for you **at no charge** at any time until December 1, 2002.

How Long Will The Repair Take: Your Chevrolet/GMC dealer will modify your vehicle's ABS software. We estimate that it will take your dealer 45 minutes to perform this modification. Additional time may be required to schedule and process your vehicle. If your dealer has a large number of vehicles awaiting service, this additional time may be significant. Please ask your dealer if you wish to know how much additional time will be needed.

Contacting Your Dealer: Repairs and adjustments qualifying under this special coverage must be performed by a Chevrolet/GMC dealer. You may want to call the service department to arrange a convenient appointment. Should your dealer be unable to schedule a service date within a reasonable time, you should contact the appropriate Customer Assistance Center at the number listed below:

Division	Number	Deaf, Hearing Impaired or Speech Impaired *
Chevrolet	1-800-222-1020	1-800-833-2438
GMC	1-800-462-8782	1-800-462-8583

* Utilizes Telecommunication Devices for the Deaf/Text Telephones (TDD/TTY)

1-800-462-8782. The deaf, hearing impaired, or speech impaired should call 1-800-462-8583 (utilizes Telecommunication Devices for the Deaf/Text Telephones, TDD/TTY).

General Motors Corporation

File In Section: Special Policies
Bulletin No.: 99046(A)
Date: April, 2000

Service Bulletin

99j-006

SPECIAL POLICY

SUBJECT: 99046(A) - SPECIAL POLICY - HIGH/LOW/HIGH ABS BRAKE ANOMALY

MODELS: 1993-1996 CHEVROLET AND GMC S/T UTILITY
1994-1996 CHEVROLET AND GMC S/T PICKUP EQUIPPED WITH A V6 ENGINE
1993-1996 CHEVROLET AND GMC G VAN

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THIS SPECIAL POLICY IS IN EFFECT UNTIL DECEMBER 1, 2002

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THIS BULLETIN CANCELS AND REPLACES BULLETIN 99046 ISSUED DECEMBER, 1999. ALL COPIES OF BULLETIN 99046 SHOULD BE DESTROYED.

M/L VANS AND AWD T-UTILITY VEHICLES ARE NO LONGER INVOLVED IN THIS SPECIAL POLICY.

DUE TO THE AVAILABILITY OF PARTS, THIS SPECIAL POLICY IS BEING ADMINISTERED IN FOUR PHASES. THE FIRST PHASE, RELEASED IN DECEMBER, 1999, CONSISTED OF VEHICLES WITH A VCM. THIS SECOND PHASE WILL CONSIST OF 1993 MODEL YEAR VEHICLES. THE THIRD PHASE WILL CONSIST OF 1994 VEHICLES WITH A PCM. THE FOURTH PHASE WILL CONSIST OF 1995-96 VEHICLES WITH A PCM.

YOU WILL BE NOTIFIED OF THE THIRD AND FOURTH PHASES VIA DCS MESSAGE.

	MODEL YEAR			
	1993	1994	1995	1996
G Van	Part Chg.	Part Chg.	Part Chg.	Part Chg.
S/T Pickup w/LB4 & Man Trans	N/A	Reprogram	Reprogram	N/A
S/T Pickup w/LB4 & Auto Trans	N/A	Part Chg.	Part Chg.	N/A
S/T Pickup w/L35/LF6	N/A	Part Chg.	Reprogram	Reprogram
S/T Utility w/LB4	Part Chg.	Part Chg.	N/A	N/A
S/T Utility w/L35	N/A	Part Chg.	(+K29) Part Chg.	Reprogram
			(-K29) Reprogram	

CONDITION

The federal government's highway safety agency, the National Highway Traffic Safety Administration (NHTSA) has identified, and General Motors Corporation has confirmed, the existence of a condition in the antilock braking system of some 1993-1996 Chevrolet and GMC S/T utilities, 1994-1996 Chevrolet and GMC S/T pickups equipped with a V6 engine, and 1993-1996 Chevrolet and GMC G vans, all equipped with the Lucas Varity three-sensor ABS system. On rare occasions, this condition can result in longer stopping distances during certain antilock brake applications, as explained below.

If the customer is driving on a road surface that supports good traction and they begin to stop by applying the brake pedal firmly, and both front wheels of their vehicle then pass onto a slippery surface (such as an ice-covered or wet patched asphalt part of the road), the antilock brake system will adjust the brakes at each of the wheels to take advantage of the available traction. This will allow the customer to steer and maintain stability, which is normal ABS operation, as their owner's manual explains in more detail.

However, if the customer is still braking while the vehicle leaves the slippery surface and both front wheels get back on a higher-traction surface, the ABS may perform as if the vehicle were still on the slippery surface and the vehicle may not stop as quickly. However, this will not happen every time these conditions are encountered. It depends on several additional factors, such as vehicle speed and the length of the slippery surface.

The ABS system was designed with increased sensitivity to wheel slip in order to improve vehicle steerability while braking on very slippery surfaces. This improvement for steerability, however, made it possible for reduced front braking effectiveness to occur as described above.

SPECIAL POLICY ADJUSTMENT

This special policy adjustment covers the condition described above until December 1, 2002, regardless of vehicle mileage or ownership. The repairs will be made at no charge to the customer (see the service procedure for the appropriate repair). Other conditions that may cause similar or different brake complaints that are not a result of the condition listed above are not covered by this special policy. The customer should be informed that any further service that is not covered by this special policy would be their responsibility, if they elect to have the service performed.

VEHICLES INVOLVED

Involved are 1993-1996 S/T utilities, 1994-1996 S/T pickups equipped with a V6 engine, and 1993-1996 G vans built within the following VIN breakpoints:

YEAR	DIVISION	MODEL	PLANT	FROM	THROUGH
1994	Chevrolet	S/T Pickup	Linden	RK100001	RK183995
1994	Chevrolet	S/T Pickup	Shreveport	R8100004	R8243099
1995	Chevrolet	S/T Pickup	Linden	SK100036	SK263000
1995	Chevrolet	S/T Pickup	Shreveport	S8100001	S8266202
1996	Chevrolet	S/T Pickup	Linden	TK100019	TK240986
1996	Chevrolet	S/T Pickup	Shreveport	T8100001	T8232058
1993	Chevrolet	S/T Utility	Pontiac West	P0100001	P0196997
1993	Chevrolet	S/T Utility	Moraine	P2100001	P2218436
1994	Chevrolet	S/T Utility	Pontiac West	R0100001	R0184858
1994	Chevrolet	S/T Utility	Moraine	R2100001	R2179415
1995	Chevrolet	S/T Utility	Moraine	S2100001	S2266695
1995	Chevrolet	S/T Utility	Linden	SK100001	SK263010
1996	Chevrolet	S/T Utility	Moraine	T2100001	T2318776
1996	Chevrolet	S/T Utility	Linden	TK100001	TK240987
1993	Chevrolet	G Van	Scarborough	P4100001	P4152035
1993	Chevrolet	G Van	Flint	PF300008	PF362809
1994	Chevrolet	G Van	Flint	RF100001	RF190429
1995	Chevrolet	G Van	Flint	SF100001	SF253581
1996	Chevrolet	G Van	Flint	TF100001	TF118295
1994	GMC	S/T Pickup	Linden	RK500002	RK525999
1994	GMC	S/T Pickup	Shreveport	R8500003	R8533979
1995	GMC	S/T Pickup	Linden	SK500022	SK545830
1995	GMC	S/T Pickup	Shreveport	S8500002	S8541078
1996	GMC	S/T Pickup	Linden	TK500012	TK532449
1996	GMC	S/T Pickup	Shreveport	T8500001	T8536520
1993	GMC	S/T Utility	Pontiac West	P0500001	P0528015
1993	GMC	S/T Utility	Moraine	P2500002	P2543251
1994	GMC	S/T Utility	Pontiac West	R0500001	R0535325
1994	GMC	S/T Utility	Moraine	R2500001	R2527917
1995	GMC	S/T Utility	Moraine	S2500001	S2559899
1995	GMC	S/T Utility	Linden	SK500001	SK545839
1996	GMC	S/T Utility	Moraine	T2500001	T2580013
1993	GMC	G Van	Scarborough	P4500001	P4519317
1993	GMC	G Van	Flint	PF500004	PF522530
1994	GMC	G Van	Flint	RF500001	RF536616
1995	GMC	G Van	Flint	SF500001	SF559023
1996	GMC	G Van	Flint	TF500001	TF852777

PARTS INFORMATION

Parts required to complete this special policy are to be obtained from General Motors Service Parts Operations (GMSPO). Normal orders should be placed on a DRO = Daily Replenishment Order. In an emergency situation, parts should be ordered on a CSO = Customer Special Order.

IMPORTANT: It is estimated that only a small number of 1995 and 1996 S/T trucks with a VCM reflash may require LEGR valve replacement.

Part Number	Description	Quantity/ Vehicle
88880026	MODULE KIT, ELEK BRK CONT (vehicles equipped with a PCM)	1 - (If req'd)
17113533	VALVE-EGR (1995 S/T w/L35 & VCM)	1 - (if req'd)
17113618	VALVE ASM,EGR (1996 S/T w/L35 & VCM)	1 - (If req'd)
12555896	GASKET, EGR VLV	1 - (if req'd)

CUSTOMER NOTIFICATION

Customers will be notified of this special policy on their vehicles, in phases, by General Motors (see copy of typical customer letter included with this bulletin - actual divisional letter may vary slightly).

SERVICE PROCEDURE

VCM Programming - 1994-1995 S/T Pickups and 1995-1996 S/T Utilities equipped with a VCM

Important: For 1995 S/T utilities with L35, check the Service Parts Identification (SPID) label on the inside of the glovebox to determine if the vehicle has a VCM. If there is an RPO of "K29", the vehicle has a PCM and is **not** programmable, see procedure below.

The new calibration was available in October, 1999 on TIS 2000 CD #21 or Techline CD #20/21 and later versions. The calibration is programmed into the vehicle's VCM via a Techline Tool. Use a Techline Terminal or scan tool to perform the learn procedure and program the VCM.

Important: Use the calibration file "Special Policy 99046" on TIS 2000 CD #21 or Techline CD #20/21 or later versions.

1. To ensure VCM programming/RPO configuration, confirm that the following conditions exist in order to prepare for VCM programming:
   - The battery is fully charged
   - The ignition switch is in the "RUN" position
   - The Data Link Connector (DLC) is accessible

2. Refer to the latest Techline Terminal and equipment user's instructions.
3. Clear the diagnostic trouble codes (DTCs) after the programming is complete.
4. If the vehicle is a 1994/1995 pickup with an LB4 engine, no further action is required.

   If the vehicle is a 1995/1996 S/T pickup or utility with an L35 engine, proceed to step 5.
5. With the ignition switch in the "RUN" position, but not running, use the Tech II to command the LEGR valve to 100% "desired" position, then back to 0% "desired" position. Monitor the LEGR valve "actual" position, which should track with "desired" position. When the "desired" is at either 0 or 100%, the "actual" should stop within 2% of the "desired". Repeat this step 1 more time.
   - If the "actual" position tracks with the "desired" position, no further action is required.
   - If the "actual" position does not track with the "desired" position ("actual" position sticks at a high percentage rate), then the LEGR valve should be replaced. Refer to the appropriate section of the service manual for replacement of the linear EGR valve.

Inspection/Installation of Module Kit - 1994-95 S/T Pickups & 1993-95 S/T Utilities equipped with a PCM

1. Raise the hood and locate the Electro-Hydraulic Control Unit (EHCU) mounted in the area of the left front wheel house.
2. Inspect the Electronic Brake Control Module (EBCM) cover for the "Kelsey Hayes" identification logo shown in the figure below.
3. Based on the results of the inspection performed in the previous step, proceed as indicated below:
   - If the unit does not have the "Kelsey Hayes" logo on it, no further action is required.
   - If the unit has the "Kelsey Hayes" logo on it, proceed to step 4 and replace the EBCM.

4. Disconnect the battery.
5. Disconnect the two EBCM electrical connectors.
6. Remove/relocate the air cleaner assembly or the windshield washer fluid bottle to gain access to the EBCM to Brake Pressure Modulator Valve (BPMV) attaching bolts.
7. Clean the EHCU of any foreign material.
8. Remove the seven bolts attaching the EBCM using the #25 torx tamper-proof bit provided with this bulletin.
9. Without utilizing any implement, such as a screwdriver to pry the components apart, carefully separate the EBCM from the Brake Pressure Modulator Valve (BPMV).
10. Remove the rubber diaphragm/gasket.

11. Without using any type of lubricate, install the new diaphragm/gasket, ensuring that the tabs are properly aligned.
12. Install the new EBCM to the BPMV and hand start the seven (7) new attaching bolts.
13. Using a star-pattern sequence, tighten the EBCM attaching bolts several times until a torque of 6 Nm (53 lb in) is achieved and maintained.
14. Connect the two EBCM electrical connectors.
15. Install the air cleaner assembly or windshield washer fluid bottle.
16. Connect the battery.
17. Turn the ignition to ON and check for proper function of the ABS and brake instrument panel lights (bulb check).
18. Using a Tech II, program the tire calibration and perform an ABS function test.

Inspection/Installation of Module Kit – G-Van

1. Raise the hood and disconnect the battery.
2. Raise the vehicle and suitably support.
3. Remove the Electro-Hydraulic Control Unit (EHCU) splash shield located outboard of the right frame rail at approximately the passenger's feet.
4. Remove the four bolts that secure the EHCU mounting bracket to the frame.

   NOTICE: To prevent damage (kinking or bending) to the brake lines, care must be taken when lowering the EHCU and bracket assembly to gain access to the Electronic Brake Control Module (EBCM).

5. Carefully lower and support the rear of the EHCU and the bracket assembly to gain access to the EBCM.
6. Inspect the EBCM cover for the "Kelsey Hayes" identification logo shown in the figure below.
7. Based on the results of the inspection performed in the previous step proceed as indicated below:
   - If the unit does not have the "Kelsey Hayes" logo on it, no further action is required. Proceed to step 17.
   - If the unit has the "Kelsey Hayes" logo on it, proceed to step 8, and replace the EBCM.

8. Disconnect the two EBCM electrical connectors.
9. Clean the EHCU of any foreign material.
10. Remove the seven bolts attaching the EBCM using the #25 torx tamper-proof bit provided with this bulletin.
11. Without utilizing any implement, such as a screwdriver to pry to the components apart, carefully separate the EBCM from the Brake Pressure Modulator Valve (BPMV).
12. Remove the rubber diaphragm/gasket.
13. Without using any type of lubricate, install the new diaphragm/gasket, ensuring that the tabs are properly aligned.

14. Install the new EBCM to the BPMV and hand start the seven new attaching bolts.
15. Using a star-pattern sequence, tighten the EBCM attaching bolts several times until a torque of 6 Nm (53 lb in) is achieved and maintained.
16. Connect the two electrical connectors to the EBCM.
17. Carefully raise the EHCU and bracket assembly into position and hand start the bracket to the frame attaching bolts.
18. Tighten the bracket to the frame attaching bolts to 75 Nm (55 lb ft).
19. Install the EHCU splash shield and tighten the attaching bolts to 16 Nm (12 lb ft).
20. Lower the vehicle
21. Connect the battery.
22. Turn the ignition to ON and check for proper function of the ABS and brake instrument panel lights (bulb check).
23. Using a Tech II, program the proper tire calibration and perform an ABS function test.

CLAIM INFORMATION

For vehicles repaired under the terms of this special policy, submit a claim with the information indicated below:

REPAIR PERFORMED	PART COUNT	PART NO.	PARTS ALLOW	CC-FC	LABOR OP	MODEL	LABOR HOURS
VCM Reprogram & LEGR Function Test	0	N/A	N/A	MK-96	T5535	S/T	0.7
Replace LEGR Valve	2	---	*	MK-95	T5545	1995	0.4
						1996	0.2
Inspect Module – No Further Action Req'd	0	N/A	N/A	MK-96	T5546	S/T	0.2
						G	0.4
Inspect Module & Install Module Kit	1	---	*	MK-95	T5547	S/T	0.4
						G	0.7

The "Parts Allowance" should be the sum total of the current GMSPO Dealer Net Price plus the applicable Mark-Up or Landed Cost Mark-Up (for IPC) for the module kit needed to complete the repair.

PHASE I

99046

(Sample of Notification Used)

December, 1999

Dear Chevrolet/GMC Customer:

As the owner of a General Motors truck equipped with the Lucas Varity three-sensor antilock brake system (ABS), your satisfaction with our product is of utmost concern to us.

Condition: The federal government's highway safety agency, the National Highway Traffic Safety Administration (NHTSA) has identified, and General Motors Corporation has confirmed, the existence of a condition in the antilock braking system of some Chevrolet and GMC 1994-1996 S/T pickups equipped with a V6 engine, and 1995-1996 S/T utility vehicles. On rare occasions, this condition can result in longer stopping distances during certain antilock brake applications, as explained below.

If you're driving on a road surface that supports good traction and you begin to stop by applying your brake pedal firmly, and both front wheels of your vehicle then pass onto a slippery surface (such as an ice-covered or wet patched asphalt part of the road), your antilock brake system will adjust the brakes at each of the wheels to take advantage of the available traction. This will allow you to steer and maintain stability, which is normal ABS operation, as your owner's manual explains in more detail.

However, if you are still braking while the vehicle leaves the slippery surface and both front wheels get back on a higher-traction surface, the ABS may perform as if the vehicle were still on the slippery surface and the vehicle may not stop as quickly. However, this will not happen every time these conditions are encountered. It depends on several additional factors, such as vehicle speed and the length of the slippery surface.

Your ABS system was designed with increased sensitivity to wheel slip in order to improve vehicle steerability while braking on very slippery surfaces. This improvement for steerability, however, made it possible for reduced front braking effectiveness to occur as described above. Therefore, GM has developed a change that will make your vehicle less sensitive to wheel slip under the circumstances described above.

What Will Be Done: Upon your request, your Chevrolet/GMC dealer will make a change to your antilock braking system software to prevent this phenomenon from occurring. This software change will have only a slight effect on vehicle steerability during braking on very slippery surfaces and is designed to have no effect on normal ABS or other braking operations. This change should not affect how your brakes feel or create any perceptible difference in the steerability or stability of your vehicle while braking. This service will be performed for you at **no charge** at any time until December 1, 2002.

How Long Will The Repair Take: Your Chevrolet/GMC dealer will modify your vehicle's ABS software. We estimate that it will take your dealer 45 minutes to perform this modification. Additional time may be required to schedule and process your vehicle. If your dealer has a large number of vehicles awaiting service, this additional time may be significant. Please ask your dealer if you wish to know how much additional time will be needed.

Contacting Your Dealer: Repairs and adjustments qualifying under this special coverage must be performed by a Chevrolet/GMC dealer. You may want to call the service department to arrange a convenient appointment. Should your dealer be unable to schedule a service date within a reasonable time, you should contact the appropriate Customer Assistance Center at the number listed below:

Division	Number	Deaf, Hearing Impaired or Speech Impaired *
Chevrolet	1-800-222-1020	1-800-833-2438
GMC	1-800-462-8782	1-800-462-8583

* Utilizes Telecommunication Devices for the Deaf/Text Telephones (TDD/TTY)

Chevrolet/Pontiac-GMC Division
General Motors Corporation

PHASE II, III, & IV

99046

(Sample of Notification Used)

April, 2000

Dear Chevrolet/GMC Customer:

As the owner of a General Motors truck equipped with the Lucas Varity three-sensor antilock brake system (ABS), your satisfaction with our product is of utmost concern to us.

Condition: The federal government's highway safety agency, the National Highway Traffic Safety Administration (NHTSA) has identified, and General Motors Corporation has confirmed, the existence of a condition in the antilock braking system of some Chevrolet and GMC 1994-1995 Sonoma and S10 pickup trucks equipped with a V6 engine, 1993-1995 Jimmy and Blazer utility vehicles, and 1993-1996 full size vans. On rare occasions, this condition can result in longer stopping distances during certain antilock brake applications, as explained below.

If you're driving on a road surface that supports good traction and you begin to stop by applying your brake pedal firmly, and both front wheels of your vehicle then pass onto a slippery surface (such as an ice-covered or wet patched asphalt part of the road), your antilock brake system will adjust the brakes at each of the wheels to take advantage of the available traction. This will allow you to steer and maintain stability, which is normal ABS operation, as your owner's manual explains in more detail.

However, if you are still braking while the vehicle leaves the slippery surface and both front wheels get back on a higher-traction surface, the ABS may perform as if the vehicle were still on the slippery surface and the vehicle may not stop as quickly. However, this will not happen every time these conditions are encountered. It depends on several additional factors, such as vehicle speed and the length of the slippery surface.

Your ABS system was designed with increased sensitivity to wheel slip in order to improve vehicle steerability while braking on very slippery surfaces. This improvement for steerability, however, made it possible for reduced front braking effectiveness to occur as described above. Therefore, GM has developed a change that will make your vehicle less sensitive to wheel slip under the circumstances described above.

What Will Be Done: Upon your request, your Chevrolet/GMC dealer will inspect the electronic brake controller module on your vehicle, and if necessary, install a new module to prevent this phenomenon from occurring. This new module will have only a slight effect on vehicle steerability during braking on very slippery surfaces and is designed to have no effect on normal ABS or other braking operations. This change should not affect how your brakes feel or create any perceptible difference in the steerability or stability of your vehicle while braking. This service will be performed for you at **no charge** at any time until December 1, 2002.

How Long Will The Repair Take: We estimate that it will take your dealer approximately 15-25 minutes to inspect the module, and if necessary, another 15-25 minutes to install a new module. Additional time may be required to schedule and process your vehicle. If your dealer has a large number of vehicles awaiting service, this additional time may be significant. Please ask your dealer if you wish to know how much additional time will be needed.

Contacting Your Dealer: Repairs and adjustments qualifying under this special coverage must be performed by a Chevrolet/GMC dealer. You may want to call the service department to arrange a convenient appointment. Should your dealer be unable to schedule a service date within a reasonable time, you should contact the appropriate Customer Assistance Center at the number listed below:

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* Utilizes Telecommunication Devices for the Deaf/Text Telephones (TDD/TTY)

Chevrolet/Pontiac-GMC Division
General Motors Corporation

GENERAL MOTORS OVERSEAS DISTRIBUTION CORPORATION

General Motors Building
3044 W. Grand Blvd.
Detroit, Michigan 48202

CABLE ADDRESS
"GMCOMM" DETROIT
TELEX NUMBERS
425543

April 2000

Dear General Motors Customer:

As the owner of a General Motors truck equipped with the Lucas Varity three-sensor antilock brake system (ABS), your satisfaction with our product is of utmost concern to us.

The federal government's highway safety agency, the National Highway Traffic Safety Administration (NHTSA) has identified, and General Motors Corporation has confirmed, the existence of a condition in the antilock braking system of some Chevrolet and GMC 1994-1995 Sonoma and S10 pickup trucks equipped with a V6 engine, 1993-1995 Jimmy and Blazer utility vehicles, and 1993-1996 full size vans. On rare occasions, this condition can result in longer stopping distances during certain antilock brake applications, as explained below.

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Your ABS system was designed with increased sensitivity to wheel slip in order to improve vehicle steerability while braking on very slippery surfaces. This improvement for steerability, however, made it possible for reduced front braking effectiveness to occur as described above. Therefore, GM has developed a software change that will make your vehicle less sensitive to wheel slip under the circumstances described above.

Upon your request, your GM dealer will inspect the electronic brake controller module on your vehicle, and if necessary, install a new module to prevent this phenomenon from occurring. This new module will have only a slight effect on vehicle steerability during braking on very slippery surfaces and is designed to have no effect on normal ABS or other braking operations. This change should not affect how your brakes feel or create any perceptible difference in the steerability or stability of your vehicle while braking. This service will be performed for you at no charge at any time until December 1, 2002.

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We estimate that it will take your dealer approximately 15-25 minutes to inspect the module, and if necessary, another 15-25 minutes to install a new module. Additional time may be required to schedule and process your vehicle. If your dealer has a large number of vehicles awaiting service, this additional time may be significant. Please ask your dealer if you wish to know how much additional time will be needed.

Repairs and adjustments qualifying under this special coverage must be performed by a GM dealer. You may want to call the service department to arrange a convenient appointment.

GMODC
General Motors Corporation

99046A

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(SUGGESTED DEALER LETTER)
FOR 99046A

As the owner of a General Motors truck equipped with the Lucas Varity three-sensor antilock brake system (ABS), your satisfaction with our product is of utmost concern to us.

The federal government's highway safety agency, the National Highway Traffic Safety Administration (NHTSA) has identified, and General Motors Corporation has confirmed, the existence of a condition in the antilock braking system of some Chevrolet and GMC 1994-1995 Sonoma and S10 pickup trucks equipped with a V6 engine, 1993-1995 Jimmy and Blazer utility vehicles, and 1993-1996 full size vans. On rare occasions, this condition can result in longer stopping distances during certain antilock brake applications, as explained below.

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We estimate that it will take us approximately 15-25 minutes to inspect the module, and if necessary, another 15-25 minutes to install a new module. Additional time may be required to schedule and process your vehicle. If we have a large number of vehicles awaiting service, this additional time may be significant. Please ask us if you wish to know how much additional time will be needed.

Repairs and adjustments qualifying under this special coverage must be performed by a GM dealer. You may want to call the service department to arrange a convenient appointment.

GMODC
General Motors Corporation

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