QQV-099

RECALL CAMPAIGN

REF. NO. 27
ABS / ASR ELECTRONIC CONTROL UNIT
360 MODENA / 360 MODENA F1

APRIL 2000

READ, INITIAL AND PASS ON »

Service Manager	Parts Manager	Service Writer	Technician					Warranty Clerk

Ferrari

Ferrari North America, Inc.

April 13, 2000

Dear Ferrari Dealer:

Ferrari S.p.A., the manufacturer of Ferrari automobiles, has decided that a defect, which relates to motor vehicle safety, exists in certain 1999 model year Ferrari 360 Modena vehicles.

On certain Ferrari vehicles, 1999 model year 360 Modena / 360 Modena F1, with Vehicle Identification Numbers from 114015 to 117981, which have a Vehicle Assembly Number from 32108 to 34949, the ABS (anti-lock braking system) / ASR (traction control system) Electronic Control Unit is affected by an error in production by the supplier (Bosch). This error may cause the braking system's ABS feature not to function and may cause the brake failure warning light to illuminate. Also, due to the characteristics of the braking system, this error will cause the EBD (electronic brake force distribution) feature not to function, which could cause vehicle instability under very hard braking. If this condition would occur, the result could be reduced control of the vehicle that could result in a vehicle crash. If the vehicle's use is continued despite an illuminated brake failure warning light eventual brake failure can occur and can result in a vehicle crash.

The remedy consists of replacing the ABS / ASR electronic control unit with an updated version.

The corrective action will require approximately **1.0 hour**.

We have accordingly sent notices to all owners of the affected vehicles advising them of this problem and requesting that they contact any Authorized Ferrari Dealer for the repairs, as per the attached notification letter.

Upon transmittal of the repair under the normal warranty system, we will of course reimburse you for the labor and parts necessary to carry out this campaign.

Obviously, if you have any of the affected vehicles in your stock, you must not sell them until you have performed the necessary repairs. If you have already sold any vehicles with the chassis numbers specified in the enclosed instructions and have not yet sent in the retail sales cards, please do so at once so we may notify these owners.

Thank you for your cooperation.

Best Regards,

Enzo Francesconi
Director of Technical Services

Ferrari North America, Inc.
250 Sylvan Avenue
Englewood Cliffs, NJ 07632
Telephone 201.816.2600
Fax 201.816.2626

RECALL CAMPAIGN NO. 27

INTRODUCTION: Ferrari 360 Modena / 360 Modena F1 ABS / ASR Electronic Control Unit

SUBJECT: Recall Campaign No. 27

VEHICLES: Ferrari model year 1999 360 Modena / 360 Modena F1, with Vehicle Identification Numbers from 114015 to 117981, which have a Vehicle Assembly Number from 32108 to 34949.
See attached list of affected vehicles.

CONDITION: The ABS (anti-lock braking system) / ASR (traction control system) Electronic Control Unit is affected by an error in production by the supplier (Bosch). This error may cause the braking system's ABS feature not to function and may cause the brake failure warning light to illuminate. Also, due to the characteristics of the braking system, this error will cause the EBD (electronic brake force distribution) feature not to function, which could cause vehicle instability under very hard braking. If this condition would occur, the result could be reduced control of the vehicle that could result in a vehicle crash. If the vehicle's use is continued despite an illuminated brake failure warning light eventual brake failure can occur and can result in a vehicle crash.

REMEDY: The remedy consists of replacing the ABS / ASR electronic control unit with an updated version.

PARTS:

Part Number	Quantity	Description
184541	1	ABS/ASR Electronic Control Unit Kit

LABOR:

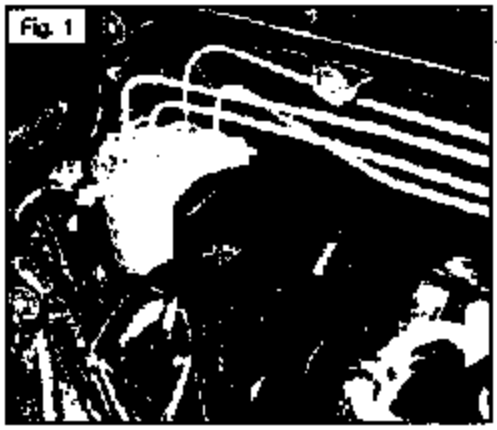
Campaign Number	27	Defect Code	01
Component Code	430071	Cost Code	24
Labor and Operation (Includes R&R ECU and Road Test)	4300710	Time	1.0 hour

REIMBURSEMENT: Upon receipt of claim via M.O.D.I.S.

RECALL # 27
360 Modena / 360 Modena F1 ABS / ASR Electronic Control Unit

Technical Instructions
WARNING: READ ALL OF THESE INSTRUCTIONS BEFORE BEGINNING THIS REPAIR.

Electro-hydraulic ABS/ASR group
This group is positioned behind the removable panel at the rear of the luggage compartment and is a one-piece unit with the ECU for ABS/ASR (see Fig. 1) attached to the electro-hydraulic unit.



Preliminary operations
Remove the rear panel from the luggage compartment (see workshop manual page M3.06)

ATTENTION
TO GUARANTEE THE INTEGRITY OF THE HYDRAULIC UNIT IT IS IMPORTANT THAT THE REPLACEMENT OF THE ECU BE CARRIED OUT WITH STRICT COMPLIANCE WITH ALL OF THE INSTRUCTIONS AND WARNINGS GIVEN IN THIS BOOKLET. ANY DEVIATION FROM THESE SPECIFIC INSTRUCTIONS MAY COMPROMISE THE FUNCTIONING OF BOTH THE ABS/ASR AND THE BRAKING SYSTEM.

Required special tools:
Torx socket driver size **T20**;
Torque wrench with 1 ÷ 12 Nm scale:
Calibrated depth gauge

Conditions for ECU Replacement

The ABS/ASR is a safety system for the vehicle requiring that only qualified technical specialists undertake the checking of the system and the replacement of the electronic control unit.

REPLACEMENT OF THE ECU MUST NOT BE UNDERTAKEN IN THE OPEN AIR, IN THE RAIN, OR IN CONDITIONS OF HIGH AMBIENT HUMIDITY.

The replacement ECU kit includes:

Electronic control unit
6 New socket screws

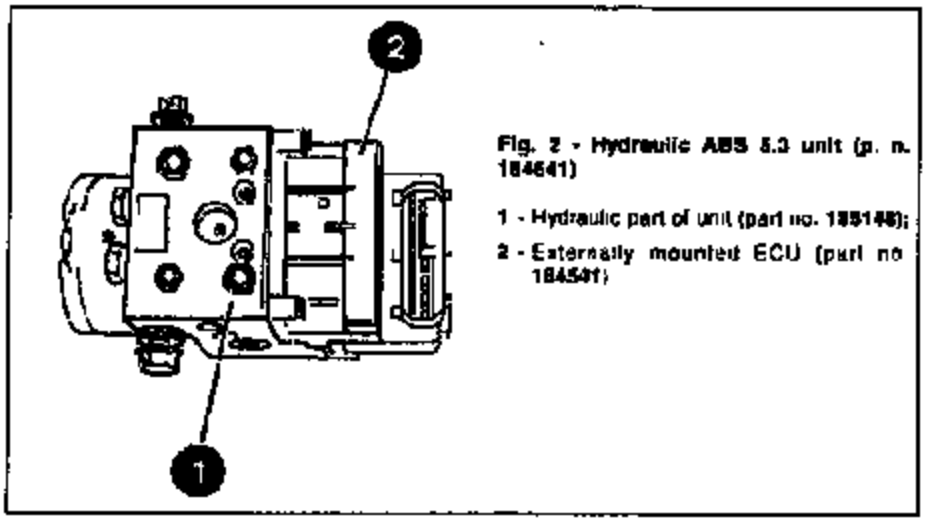


Fig. 2 - Hydraulic ABS 5.3 unit (p. n. 184641)

1 - Hydraulic part of unit (part no. 185148);

2 - Externally mounted ECU (part no 184541)

Sealing Surface Evaluation and Warnings:

Improper sealing of the external elements could cause corrosion of the components, the electro-magnetic valves of the electronic control unit and the hydraulic unit. This can cause irreversible long-term damage, which may not be possible to detect visually or to diagnose.

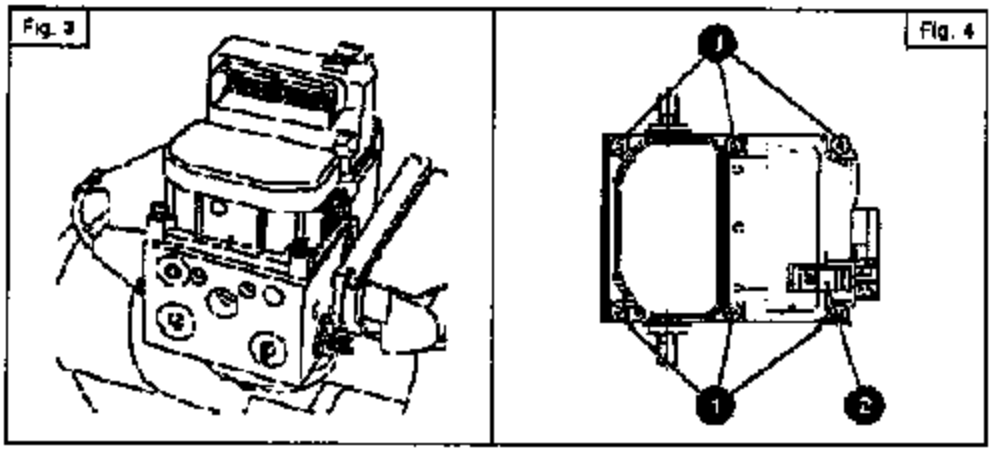
If this repair is not performed correctly, it is possible for one of the brake circuits to fail or for the regulation of the ABS/ASR system not to function.

The hermetic sealing that must be achieved is totally dependent on the condition of the rubber gasket and the mating surfaces.

The removal and refitting of the ECU or its replacement must be undertaken only after an in-depth evaluation of the condition of its gasket and the mating surfaces. The mating surfaces must be extremely clean, smooth and free from all marks and scratches. Any damage to the gasket and the complete unit must be replaced as the gasket itself is not replaceable.

Removal of the electronic control unit:

Make sure the ignition is OFF.
Disconnect the multi-plug cable harness by extracting the locking bracket.
Lift up the locking spring of the two-pin plug for the pump motor and disconnect it (see Fig.4, No. 2)
Pull out the cables from their locking support toward the pump motor.
Unscrew the control unit fixing screws (6 screws, Torx socket T20) (see Fig. 4, No.1)
THESE SCREWS MUST NOT BE USED TO INSTALL THE NEW CONTROL UNIT! NEW SCREWS ARE INCLUDED IN THE KIT OF REPLACEMENT PARTS.
Remove the control unit in an upward direction.
Protect the exposed electronic parts, the electro-valves and solenoids from bits of gasket or dirt, which may be stuck on the surface.



Preliminary checks of the electronic control unit gasket

Check to ensure that the gasket of the electronic control unit is in perfect condition even if it is new.
Check the gasket carefully for cuts, uneven surface, and elasticity using the tip of your index finger. The gasket must not be hard or rough and check that its profile is even.
Carry out any cleaning using a non-abrasive cloth. When cleaning the surface of the hydraulic group do not use chemical solvents.
Using a calibrated depth gauge, carefully measure the protrusion "a" (Fig. 5).
The protrusion of dimension "a" is an indication of the remaining thickness of the rubber gasket which will be compressed during the tightening and which is vital for sealing.
Measure the dimension of the protrusion using the calibrated depth gauge, taking care to apply it without pressure on the rubber gasket and make the measurement from the eyelets for the fixing screws.
Notice: the eyelets are the highest points.

Warning: The gasket is an integral part of the electronic control unit and **CANNOT** be replaced. If the gasket is damaged the electronic control unit must **NOT** be fitted!

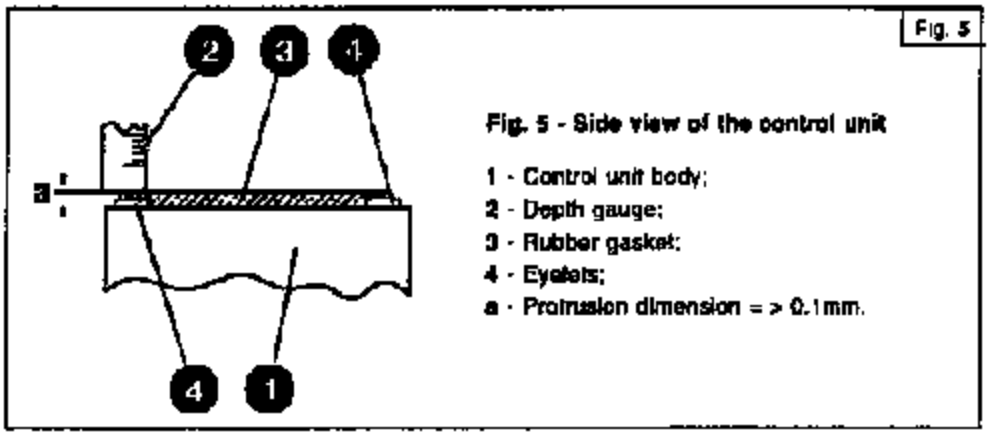


Fig. 5 - Side view of the control unit

1 - Control unit body;
2 - Depth gauge;
3 - Rubber gasket;
4 - Eyelets;
a - Protrusion dimension = > 0.1mm.

Sealing surface of the hydraulic unit:

Check that the sealing surface is clean.
Should there be significant deposits or gasket residue, wipe it carefully with a cloth dipped in rubbing alcohol, or use a plastic spatula.
Do not use chemical solvents (for example trichloroetylene, or cellulose thinners!)
The mating surface must not be touched by a file, metal scraper, abrasive paper or similar material.
Do not, under any circumstances, use compressed air to clean any part of the electronic control unit or the hydraulic unit.
Guide the electronic control unit with the coil side downward onto the valve body and place it into position without pressing down on it.

WARNING ABOUT FIXING SCREWS:
USE ONLY THE NEW SCREWS CONTAINED IN THE REPLACEMENT PARTS KIT.

Tightening / replacement frequency:
During the lifetime of the hydraulic unit, only five repeated tightening sequences are permitted.
It is also not permitted to re-cut or "tap out" the threads.

Procedure for tightening the screws:
Insert the six new screws into the holes of the electronic control unit without forcing them.
Fit the four screws in the area of the coil body first and screw them down only until the heads just come into contact with the electronic control unit body using a Torx bit in a screwdriver.
The screws must be free to turn without using undue force.

Using the torque wrench:

Minimum specification:	Range **1 + 12 Nm** (0.5 + 9.0 ft.lbs.), in graduations of **1 Nm** (0.5 ft.lbs.)
Recommendations:	Adjust the torque wrench precisely to **2.9 Nm ± 0.5 Nm** (2.14 ft. lbs. ± 0.4 ft. lbs.). Use a **49 mm long extension** for the Torx socket screws **T20**.

Warning: **Pay close attention to the graduated scale of your torque wrench.**

There are 6 screws, first, gradually tighten screws 1,2,3,4 (Fig. 6) in a cross sequence until the corners of the electronic control unit are seated on the body of the pump. Next, tighten the screws 1,2,3,4 only gently at first, then successively tighten the other two screws 5,6 (Fig. 6).

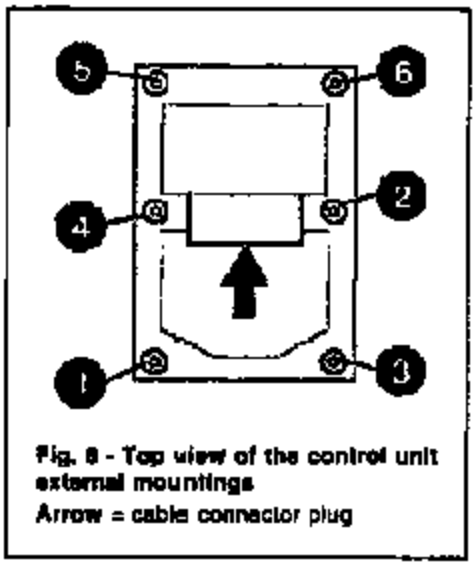


Fig. 6 - Top view of the control unit external mountings
Arrow = cable connector plug

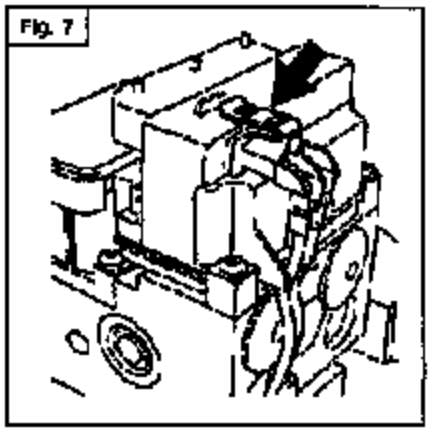
ATTENTION: **IF THE SCREWS REQUIRE AN EXCESSIVE TORQUE, AND THE THREADS ARE BINDING, THE ENTIRE HYDRAULIC UNIT MUST BE REPLACED. IF ON THE OTHER HAND THE TORQUE REQUIRED IS TOO LOW, THE PRESSURE EXERTED ON THE GASKET WILL BE INSUFFICIENT, OR THE SCREWS MAY WORK LOOSE DURING OPERATION OF THE CAR AND PROVOKE FAILURE DUE TO A DANGEROUS SEALING DEFECT.**

TIGHTENING MUST BE DONE WITH A TORQUE WRENCH!
Analyses carried out have demonstrated that any attempt to tighten these screws to the prescribed torque will not succeed without the use of a torque wrench.

Final Checks:

Check that the casing of the electronic control unit is completely seated on the pump body at the corners.

Has the prescribed torque been reached?
If not the tightening must be repeated.
If the tightening has been completed correctly, proceed to the next step.



Connect the two-pin plug for the pump motor to the electronic control unit. You must fully engage the locking spring, you will hear a click when engaged correctly. (fig. 7)

Take off the protection cap (if fitted) that connects pins 26/31 of the ECU multi-plug.
Plug the connector into the control unit and lock it.

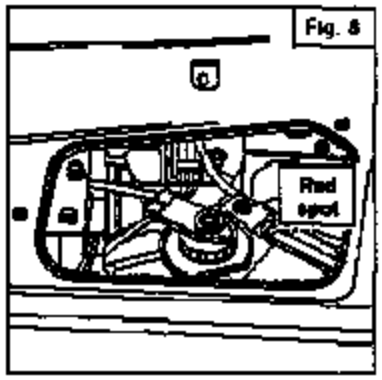
Final set up and testing

Using the **SD2 IN STAND ALONE MODE**, connect to the system and perform the brake system bleeding operation. Do NOT actually bleed the system by opening the hydraulic circuit, simply perform the bleeding using the SD2. This will electrically set up the ECU.

After the bleeding operation has been completed, connect the **SD2 IN LINK TO PC MODE** and perform the COMPLETE cycle test on the system to verify it's correct functioning. Retain the tester printout in your files for future reference.

At the end of this procedure, switch on the ignition. If the warning lamp lights and then extinguishes after about 10 seconds it confirms that the system is functional.
Road test the car to confirm the normal functioning of the system.

IMPORTANT:
All updated cars are to be identified by a spot of red paint applied to the hydraulic fluid reservoir (fig. 8).



Recall #27
List of Affected Vehicles
360 Modena / 360 Modena F1
ABS / ASR Electronic Control Unit

Vehicle Identification No.	Vehicle Assembly No.	Vehicle Identification No.	Vehicle Assembly No.
114015	32108	116637	33785
114021	32486	116639	33798
115013	32528	116641	33757
115014	32611	116738	33887
115015	32666	116753	33806
115016	32760	116754	33872
115017	32828	116755	33812
115018	32883	116756	33836
115019	32875	116757	33826
115020	34087	116758	33880
115250	33097	116759	33882
115251	33293	116760	34626
115471	32972	116761	34242
116132	33129	116762	34243
116133	33252	116834	34200
116172	33228	116835	34221
116174	33242	116836	34157
116177	33271	116837	34222
116179	33359	116838	34238
116351	33424	116839	34257
116352	33291	116840	34268
116353	33313	116841	34271
116354	33319	116842	34170
116423	33458	116843	34201
116442	33464	116904	34252
116443	33480	116905	34179
116444	33506	116906	34272
116447	33579	116907	34273
116470	33536	116908	34178
116471	33632	116909	34226
116472	33606	116910	34194
116586	33612	116911	34259
116587	33650	116912	34244
116588	33662	116913	34217
116589	33704	116914	34260
116590	33636	116915	34204
116591	33708	116917	34270
116592	33756	117277	34180
116629	33642	117278	34233
116631	34767	117279	34258
116632	33822	117280	34275
116633	33747	117281	34287
116635	33860	117303	34288
116636	33781	117304	34336

Recall #27
List of Affected Vehicles
360 Modena / 360 Modena F1
ABS / ASR Electronic Control Unit

Vehicle Identification No.	Vehicle Assembly No.	Vehicle Identification No.	Vehicle Assembly No.
117305	34365	117550	34625
117307	34385	117551	34632
117308	34400	117552	34633
117309	34504	117591	34622
117310	34519	117620	34653
117311	34543	117621	34684
117312	34564	117622	34689
117313	34789	117623	34685
117314	34567	117624	34693
117315	34583	117625	34696
117372	34290	117627	34721
117373	34299	117628	34720
117374	34300	117630	34730
117376	34314	117631	34786
117377	34322	117632	34740
117378	34361	117825	34760
117379	34363	117826	34782
117380	34436	117827	34788
117381	34369	117828	34790
117382	34387	117829	34800
117383	34403	117830	34811
117384	34415	117831	34812
117385	34437	117832	34825
117386	34438	117833	34827
117387	34447	117834	34845
117388	34464	117836	34872
117389	34465	117837	34873
117390	34485	117838	34874
117462	34580	117839	34882
117463	34603	117840	34883
117464	34636	117841	34898
117465	34640	117842	34899
117467	34905	117843	34947
117468	34906	117844	34930
117469	34907	117845	34932
117470	34487	117847	34948
117540	34655	117858	34816
117541	34523	117976	34908
117543	34545	117977	34934
117544	34621	117978	34935
117545	34588	117979	34949
117546	34592	117981	34909

Ferrari

Ferrari North America, Inc.

April 13, 2000

«MXFRST» «MXLAST»
«MXADD1»
«MXADD2»
«MXCITY», «MXST» «MXZIP»

Serial Number: «AOMAT»
Assembly Number: «ASSY»

Dear Ferrari Customer:

This notice is sent to you in accordance with the requirements of The National Traffic and Motor Vehicle Safety Act.

Ferrari S.p.A., the manufacturer of Ferrari automobiles, has decided that a defect, which relates to motor vehicle safety, exists in certain 1999 model year Ferrari 360 Modena vehicles.

On certain Ferrari vehicles, 1999 model year 360 Modena / 360 Modena F1, with Vehicle Identification Numbers from 114015 to 117981, which have a Vehicle Assembly Number from 32108 to 34949, the ABS (anti-lock braking system) / ASR (traction control system) Electronic Control Unit is affected by an error in production by the supplier (Bosch). This error may cause the braking system's ABS feature not to function and may cause the brake failure warning light to illuminate. Also, due to the characteristics of the braking system, this error will cause the EBD (electronic brake force distribution) feature not to function, which could cause vehicle instability under very hard braking. If this condition would occur, the result could be reduced control of the vehicle that could result in a vehicle crash. If the vehicle's use is continued despite an illuminated brake failure warning light eventual brake failure can occur and can result in a vehicle crash.

The remedy consists of replacing the ABS / ASR electronic control unit with an updated version.

Since your car is among those affected by the above condition, we kindly ask you to immediately contact any Authorized Ferrari Dealer in order to arrange an inspection of your automobile and to have the corrective action performed.

The corrective action for the above listed repair will be performed free of charge to you and will require approximately 1.0 hour to complete. Please plan, however, to leave your vehicle with the dealership all day to allow the dealer some flexibility for scheduling your repairs.

Ferrari North America, Inc.
250 Sylvan Avenue
Englewood Cliffs, NJ 07632
Telephone 201.816.2600
Fax 201.816.2626

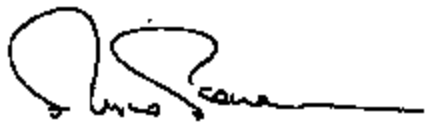
By the time you receive this letter, the Authorized Ferrari Dealers will have been supplied with the instructions to perform the repair. If the Dealer fails or is unable to make the necessary repairs free of charge within a reasonable time, or if you have any problem obtaining the needed repair, you should inform the National Headquarters of Ferrari North America, Inc., at:

Ferrari North America, Inc.
250 Sylvan Avenue
Englewood Cliffs, NJ 07632
(201) 816-2651 (National Technical Office)

If the affected vehicle is not repaired free of charge to you within a reasonable time, you may submit a written complaint to the Administrator, National Highway Traffic Safety Administration, (NHTSA), 400 Seventh Street, SW, Washington, DC 20590. You may also telephone the Auto Safety Hot Line at 800-424-9393 nationally or (202) 366-0123 for Washington, DC area residents.

We urge you to comply with this notice promptly and we apologize for any inconvenience this may cause you.

Best Regards,



Enzo Francesconi
Director of Technical Services

EF: rp