

Keeping up with new repair techniques

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Over the last few issues of PanelTalk we have looked at a variety of topics from vehicle manufacturers relating to body construction and collision repair. All articles have highlighted that most vehicles produced since 2000 are now very product specific. Well, this time thanks to Nissan New Zealand we are reminded of this and the importance of using genuine parts and products.

We recently met with Nissan New Zealand to address new developments in their models. We were advised of a 2003 Edition Service Manual titled 'Fundamentals of Body Repair'. This manual covers all body construction types and materials most commonly used in the production of Nissan vehicles. Although this manual does not give in-depth specifications of specific models, it does cover many of the queries and gives an awareness of the concerns faced by our industry. The following is a topic taken from this manual.

(NOTE: The publication number of this manual is BR3E-FUNDZ-1 and is available through your Nissan parts department.)

BODY TYPES AND STRUCTURE TO INCREASE VEHICLE RIGIDITY AND STRENGTH

Urethane Foam Filler

Some vehicles have urethane foam filler in body panel spaces to provide extra rigidity for the lightweight body and to reduce noise and vibration.

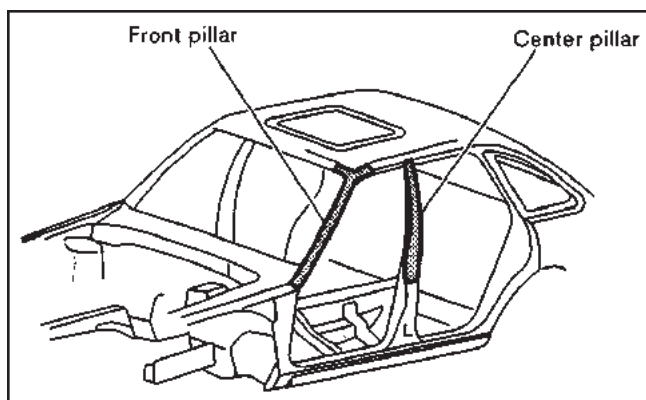


Figure 1. An example of applicable locations.

Required material characteristics for service

- Density: Over 0.1 g/cm³ (0.06 oz/cu in).
 - Noticeable volumetric changes should not occur with changes in humidity and temperature.
 - Material characteristics should not adversely affect ED (electrodeposition) coats.
- (Super Panel Filler (3M Brand) or equivalent)

Service parts availability

- Each service part will be ED coated. These are filled with urethane foam filler after the trim mounting clips have been installed and, for the front pillar, when the drain hose has been installed.
- When these parts are replaced, urethane foam filler must be injected into the place where it was cut away.

Weld Bond

Some vehicles have weld bond applied to the entire perimeter of the body panels at door locations and side roof rails to increase torsional rigidity and body strength.

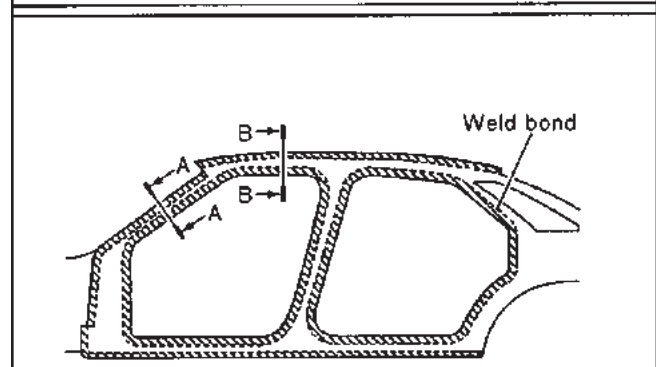
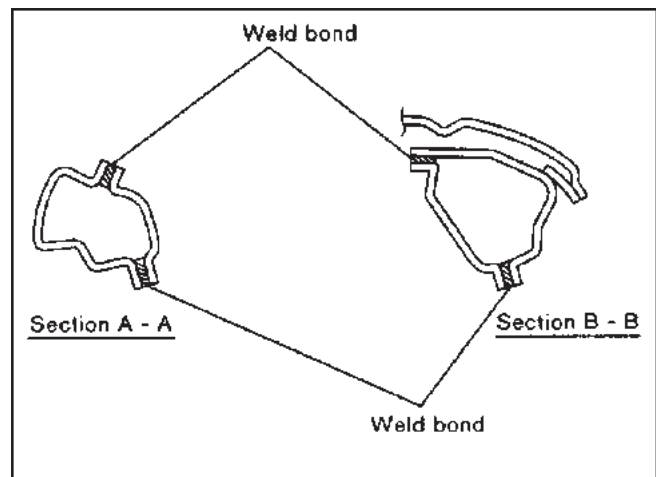


Figure 2. Applicable locations.

Required material characteristics for service

- Material should be a 2-components epoxy adhesive. (CIBA-GEIGY: Araldite AV 8113/Hardner HV8113 or equivalent)
- Use in conjunction with spot welding.

Service parts availability

- Assembled service parts will be provided with

applied weld bond.

- When any of these parts are replaced, weld bond must be applied to the mating surfaces on the panel. If these panel parts are fixed with MIG welding, avoid applying weld bond around MIG weld holes.

We acknowledge with thanks Mike Perez from Nissan New Zealand for his help in presenting the above technical issue and also for contributing the following item:

'I wish I had originally spent the extra couple of bucks'

The importance of using genuine parts, fluids and lubricants is stressed over and over so often that most repairers are sick of hearing or reading it. Many think it's just another gimmick to get customers, garages and body repair shops to pay exorbitant prices for parts they can get much cheaper at aftermarket suppliers. We can assure you there is a legitimate reason for this demand. I'll give you an example a little later on.

This is a never ending battle for you, but it also has ramifications for the motor vehicle distributors who must stand behind these vehicles even after accidents and repairs. This may be the reason you are required to repair the vehicle to the "manufacturer's original standards" no matter what the repair involved. In a lot of cases this is a pretty big ask, and we leave the "how" to you experts. However when it comes to the "what" category of what parts are fitted or what fluids and / or lubricants are used in completing the repair, we cannot compromise on our position. The only recommendation we can make or endorse is "genuine only". Those genuine parts have been through the research, development and test processes (these cost money) whereby they are manufactured for that specific model vehicle only. Aftermarket parts which may fit any number of different model vehicles have not been through the same processes and therefore are in most cases cheaper. We do not believe the higher level of quality of genuine components can be questioned when compared with aftermarket parts.

In the case of Nissan New Zealand, we do not have local expertise in body and panel repair. We leave that to you guys. We have no problems in providing whatever material we can from Nissan Japan, however when it comes to opinions as to whether any deviation from the repair manual is appropriate, we will not venture into that territory. We trust your expertise to ensure what needs to be done is done.

Now here is the educational, but not very economically beneficial (for this panel beater) story.

A late model Nissan vehicle (still under warranty) was involved in a relatively major frontal impact. A repair was carried out and the customer

went on their way happy as. Approximately 9 months later the vehicle experienced a corroded radiator. As this is unusual, but almost expected when non-genuine coolant is introduced into this Nissan model, we initiated an investigation when the warranty claim came in. We discovered the vehicle had had frontal repairs carried out 9 months previous. We also discovered that the local Nissan dealership had not sold any Nissan Genuine Coolant to that particular panel beater prior to the repair. When we received copies of the insurance estimates and the actual repair order for the panel repairs, we saw that coolant was claimed for, but the claimed cost was much lower than the required genuine coolant would have cost. When we questioned the panel beater, at first he said he had used genuine coolant, and then later said he had not actually removed the radiator during the repair, he had just "moved it over" to do the repair, so didn't use any coolant. I know, we found this strange also, since he had claimed "inhibitor" from the insurance company. After we pointed this out to him, we didn't have any further conversations. Funny that.

Based on our understanding of the situation, we took this panel beater to a disputes tribunal to

recover the costs required to repair the corroded radiator, which we claimed was caused by this panel beater not using Nissan Genuine Engine Coolant during the repair. Based on both sides of the story, we were awarded the cost of the parts but not labour. Considering the tribunal was questioning whether we even had the right to claim anything since we didn't own the vehicle (he decided we did), we consider the results a major victory. By the way, we also discovered the panel beater didn't use new paint clearing bolts for body harness ground/earth points, in the chassis repair.

Bottom line: at least for late model Nissan vehicles (VQ engine especially) the use of any coolant other than Nissan Genuine Engine Coolant will invariably result in corrosion in the cooling system, sometimes as quickly as 4 to 6 months after the introduction of the non-genuine coolant. Please, spend the extra couple of dollars to do the job right. It will pay off in the long run.

NECESSITY FOR NISSAN GENUINE ENGINE COOLANT

Merits

1. Since a special additive is included, Nissan Genuine Engine Coolant is aluminium corrosion – free, however some non – genuine coolants may contain aluminium corrosive properties.
2. Since a special additive is included, its composition operates on the aluminium surfaces of the engine cooling system to form an anti – corrosion film.
3. Replacement interval is doubled to 80,000 km or 48 months. The anti – corrosion properties coupled with the stable composition enable long term use of the coolant.
4. The special additive is non – amine which does not cause cancer. Nissan Genuine Engine Coolant is safer to the human body than other amine type engine coolants.
5. Nissan Genuine Engine Coolant has lubricating

properties to reduce friction on the mechanical seals in the water pump.

6. Its low foaming properties and solubility in air are effective for cavitation and heat spot prevention.

Characteristics

Materials	Purpose
Water	Improve solution of inhibitor and dye and for cooling performance
Ethylene Glycol	Prevent freezing / boiling over and cavitation
Inhibitor	Prevent metal corrosion
Anti – foam	Prevent cavitation
Dye	To distinguish the coolant from other fluids
Bittering Agent	Prevent accidental ingestion by humans

What happens if it's not used?

Engine coolant deteriorates due to heat and chemical changes over time. The colour will change from a bright colour to a darker colour when used. If deteriorated engine coolant or non – genuine coolant or plain water is used in a Nissan engine for an extended period of time, there is a possibility of the following:

- Coolant will leak from the radiator due to perforations caused by corrosion
- Coolant will freeze during cold weather resulting in cooling system and engine problems
- Engine will overheat

Nissan global policy is "any repairs for incidents within the engine cooling system may not be covered by the manufacturer's warranty even if such incidents occurred during the warranty period, if any coolant other than Nissan Genuine Engine Coolant is introduced into the cooling system".