

# Building a Hybrid RB26 Z

## The Engineering & Licensing Process

In Western Australia, you can apply for “Approval in Principle” to undertake an engine or other modification, provided you complete the correct paperwork and receive approval, prior to actually undertaking the change.

A **Modification Application Light (Production) Vehicles** is available from the Dept of Planning & Infrastructure on the following link: [www.dpi.wa.gov.au/licensing](http://www.dpi.wa.gov.au/licensing)

Office Use Only  
File Reference No

Department for Planning and Infrastructure  
VEHICLE SAFETY BRANCH

MODIFICATION APPLICATION

LIGHT (PRODUCTION) VEHICLES

The Vehicle Safety Branch is required to assess applications from people wishing to perform a modification on a vehicle that requires the approval of the Director General of the Department for Planning and Infrastructure (DPI). As part of this process applicants are required to complete this form, unless the modification is one that has been gazetted as a modification not requiring formal approval. This only applies to minor modifications such as fitting roof-racks and alarm systems.

A list of modifications that can be performed without receiving prior approval from DPI can be found on the DPI website:

<http://www.dpi.wa.gov.au/licensing/1882.asp>.

The finished modified vehicle must continue to comply with relevant vehicle standards including the Road Traffic (Vehicle Standards) Regulations 2002, Road Traffic (Vehicle Standards) Rules 2002 and the Australian Design Rules (ADRs).

In order to avoid inconvenience and unnecessary paperwork, applicants wishing to modify a vehicle are advised to refer to the national "Code of Practice for Light Vehicle Modifications" (VSB14) before completing this application. This code was developed to assist owners to perform safe and legal modifications..

The document is available on the Department of Transport and Regional Services website:

[http://www.dotars.gov.au/transport/safety/road/bulletin/vsb\\_ncop.aspx](http://www.dotars.gov.au/transport/safety/road/bulletin/vsb_ncop.aspx).

It is particularly important to read the *Preface* and *Introduction* sections of VSB14 before making application as they provide valuable and detailed background information.

Please note that whilst the Department is willing to assist modifiers, it does not offer a design service. You may need to employ a consultant if you are not sure how to design the intended modifications. You may also need to employ a consultant if you are proposing to carry out modifications for which VSB14 requires supporting reports.

A list of consulting engineers recognised by DPI (Publication IB-102, Engineering Signatories) can be found on the DPI website:

[http://www.dpi.wa.gov.au/mediaFiles/lic\\_IB-102l.pdf](http://www.dpi.wa.gov.au/mediaFiles/lic_IB-102l.pdf).

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This does not mean the work will automatically be approved on completion, and the car licensed. Provided however that you undertake the changes according to engineering specification, and get an approved engineer to examine and certify the work, then there is a good chance that the car will be licensed.

The form has to be submitted to the DPI Vehicle Safety Branch (93511680)  
21 Murray Rd South, Welshpool, WA 6106

My form took only a week to be reviewed, and a Approval In Principle letter date 11-12-07 was received allowing me to proceed.



Department for Planning and Infrastructure  
Government of Western Australia

Our Ref: **1V68CS3SR**  
Enquires Clive

Michael Rowe  
13 Paddington Street  
North Perth WA 6006

Dear Michael

**RE: VEHICLE MODIFICATIONS TO: 1976 NISSAN 260Z COUPE  
VIN RS30010303 REGISTRATION # 1CRP208**

Thank you for your letter seeking approval to modify a vehicle. While provision exists within the regulations for the Department to consider a request from an owner to modify a vehicle, assessment is based on safety of the public and whether the vehicle can safely accommodate the proposed conversion.

All vehicles must comply with Road Traffic (Vehicle Standards) Rules and Regulations 2002, which encompass modifications. In addition Australian Design Rules applicable to the vehicle must be maintained.

The Department for Planning and Infrastructure, Licensing Division has adopted the national "Code of Practice for Light Vehicle Modifications" VSB14. This code is to ensure that modifications to road vehicles are carried out in a safe and sound manner.

Available @ <http://www.dpi.wa.gov.au/licensing/1421.asp>

Policy regarding vehicle modifications is constantly under review and should a vehicle alteration previously granted be deemed unsatisfactory or abused by the owner, approval will be withdrawn.

Modifications to vehicles should only be carried out on vehicles that are in very sound condition throughout. Approval will not be given where vehicles are in substandard condition; e.g. Vehicles that are weakened by corrosion, have sustained major structural damage, are "cut and shut" vehicles or are in a state of general deterioration.

Modifiers and owners of vehicles need to be aware that compliance with the VSB 14 does not guarantee that a vehicle will be acceptable for registration in the case of a modified registered production vehicle. If, for example, a vehicle submitted for approval does not handle or brake satisfactorily or has any other feature that renders the vehicle unsafe or unroadworthy, it is most unlikely that it will be accepted for registration.



**Special Note:**

Modifications that require the removal, decommissioning or impedes the functionality of any of the safety, occupancy protection devices or supplementary Restraint Devices originally incorporated into the vehicle by the vehicle manufacturer will not be approved. The following will not apply if this is the case.

Modifications contained in your letter are within guidelines for approval, subsequently a detailed report summarising all facets of the modifications would be required to be submitted by a Consulting Engineer upon completion of the project.

The consultant's report is to address the following items:

1. Verify changes to the *Unladen Mass* of the vehicle does not cause the *Normal Loaded Vehicle Mass or Load Capacity* to be outside the parameters stipulated in the ADR's for the *Vehicle Category* stipulated on the *Compliance Plate* fitted to the vehicle.
2. Fitment and suitability of the Nissan RB26DETT turbo-charged petrol engine in regard to complying with Section LA2 of VSB 14.
3. The modifications to the exhaust system must comply with Section LA & LT4 of VSB 14.
4. Fitment, capability and suitability of the transmission matching the above engine complying with Section LB1 of VSB 14.
5. Fitment, capability and suitability of the modified braking system (if other than total OEM option) complying with Section LG1 & LG2 of VSB 14.
6. Verification that the speedometer has been tested (and recalibrated if necessary) to the applicable ADR or where no ADR is applicable an accuracy of +10% or - 0.
7. Any other test or report that the consultant may consider necessary to prove conformity and safety of the modifications.
8. Mandatory Upgrade of Safety Equipment if required will also require appropriate checklists to be supplied.
9. All appropriate checklists will be required to be completed by suitably qualified persons and are to be presented with the consultants report.

**Note:** This letter and the attached copy of your application is to be shown to your consultant so he is aware of the items to be approved, while some of the modifications requested have been approved subject to meeting requirements the above items must have an Engineering consultant report.



- **Approval in principle to modify is granted at this point; however final acceptance cannot be finalised until an Engineers Report is submitted to the Department for Planning & Infrastructure, Technical Policy and Services for assessment and approval.**
- The report must include the name and address details of the applicant, vehicle details e.g. Make and Model, Year, engine, transmission, vehicle identification number, engine number and the Technical Policy and Services file reference number for ease of processing.
- In the Engineering report the Engineer must have the following clause included:

"I have personally examined the vehicle described. I hereby certify that the particulars shown in this Report/Certificate are correct and in respect of the vehicle modifications described. The vehicle is sound in its design and construction and meets the requirements of VSB 14 VSB, Western Australian Road Traffic (Vehicle Standards) Rules and Regulations 2002, and where applicable, complies with affected Australian Design Rules."

To be acceptable, the report has to be issued by an engineer who is eligible for corporate membership of any professional engineering body.

- The modifications to the suspension, wheels and tyres must comply with Section LS of VSB 14.

This approval in principle for modification of the vehicle is valid for two years from the date of this letter; the Coordinator Technical Policy and Services must approve any further extension in writing.

Should you require any further assistance or seek further clarification, please do not hesitate to contact the author, on telephone number (08) 93511680.

Yours Sincerely

R Middleton  
Acting Manager Vehicle Standards  
Vehicle Safety and Standards Section  
11 December, 2007  
Per:

Other documentation of use can be found at the national website, [www.dotars.gov.au](http://www.dotars.gov.au) under the following:

***Vehicle Standards Bulletin 14 National Code of Practice for Light Vehicle Construction and Modification Feb 1 2006.***

There are several documents under this bulletin covering all systems of the vehicle, brakes, suspension, transmission, engine, seating and occupant protection, body & chassis.


# **Vehicle Standards Bulletin 14**

**NATIONAL CODE OF PRACTICE  
for  
LIGHT VEHICLE CONSTRUCTION  
and  
MODIFICATION**

**INTRODUCTION**

**1<sup>st</sup> February 2006**

You will also require an Engineer to provide a report to the Licensing Centre at Welshpool WA on the modifications to the vehicle. A list of Engineers is detailed under the DPI Website: ( [www.dpi.wa.gov.au/licensing](http://www.dpi.wa.gov.au/licensing) ) in the following document: ***IB-1021 Vehicle Safety Branch Information Bulletin – Engineering Signatories***



Department for Planning and Infrastructure  
Government of Western Australia

IB-1021

Vehicle Safety Branch Information Bulletin

## Engineering Signatories

This information sheet contains a list of people with experience in automotive design that have indicated that they are available for consultation.

They are all familiar with various aspects of vehicle construction and modification requirements for vehicles in WA. For a fee, they will provide advice to owners and vehicle constructors; undertake technical assessments and issue engineering certificates.

In publishing this list, the Vehicle Safety Branch does not endorse their services nor does it take any responsibility for their work.

It is the responsibility of the vehicle constructor or owner intending to engage the services of an engineering signatory to establish the signatory's experience for the proposed scope of work and for their fee arrangements before work is commenced. It would also be advisable to ascertain whether the signatory carries Professional Indemnity Insurance.

An engineering signatory who certifies a motor vehicle with respect to its construction or modification must:

- personally inspect the vehicle;
- ensure that any construction or modification of a vehicle complies with the requirements of the Road Traffic (Vehicle Standards) Rules 2002 (Rules-2002) and Road Traffic (Vehicle Standards) Regulations 2002 (VSR-2002) and where applicable, the appropriate Australian Design Rules;
- issue an engineering report, which satisfactorily addresses any concerns raised by officers from the Vehicle Safety Branch.

Engineering Signatories recognised by the Vehicle Safety Branch will generally have demonstrable experience in the industry and are members of one of the engineering organizations below:

- The Institution of Engineers, Australia (IE Aust), or
- The Society of Automotive Engineers, Australasia (SAE-A) - Automotive Signatory Group.

This is by no means the only criterion used to ascertain an individual's suitability to be an engineering signatory. Some people who have been accepted as signatories hold only engineering qualifications at Diploma level, but they also have extensive experience in their specific areas of work.

IB-1021 (May 06) Supersedes IB-102H (April 06) Application date Nov 03

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