



PETER HART

An Industry Guide to Improve Replacement Part Quality

Suppliers of parts who comply with this Guide will identify appropriate technical standards; have validation test reports; keep supply records; review part failures; have a warranty policy; and provide installation and rating information. These actions will assist the Supplier to determine and monitor the quality of parts it markets.

The Guide is applicable to all Suppliers, be they original equipment suppliers or aftermarket parts suppliers. All Suppliers of parts can and should comply with the requirements of this Guide. Purchasers should buy parts from Suppliers who declare that they supply their parts according to this Guide, so they can be confident that practices are being followed that promote

good part quality.

The Guide classifies replacement parts into four Safety Levels, as shown in the table. The actions that Suppliers should take to ensure the quality of parts are graduated according to Safety Level. This important work by ARTSA-i is funded by the NHVR's Heavy Vehicle Safety Initiative, supported by the Federal Government. Version 1.0 of the Guide can be found on the ARTSA-i website. ARTSA-i's next step is to communicate the Guide through Operator magazines, Operator associations and trade 'electronic media'. A group of Suppliers and Purchasers will then trial the Guide for the next 12 months to get experience of it. During this time ARTSA-i will seek the views

Safety Classification Guide: Reasonably possible consequences of Part Failure			
Serious crash or injury. Vehicle is illegal.	Moderate injury. Incapacitated vehicle. Vehicle may be illegal.	Minor injury. Loss of function. Vehicle is legal.	No injury. Inconvenience. Vehicle is legal.
Safety 1 High	Safety 2 Medium	Safety 3 Low	Safety 4 Minimal



The Guide would have required the Supplier to have the strength of this 'bubble gum' cast aluminium part tested, and for continuing quality assurance checks to be made every batch.

of a range of Suppliers, Operators and Associations about how to proceed. Once experience with the Guide is obtained and it has been fine-tuned, ARTSA-i will discuss future promotion of the Guide with the National Heavy Vehicle Regulator.

Some examples of Safety Level are:
Safety 1 Steering kingpin, steering arm, brake lining.
Safety 2 Load tiedown straps and mechanisms, brake drum.
Safety 3 Windscreen wiper rubber, fuel filter.

Safety 4 Bonnet emblem, antenna. Some questions that Purchasers should ask their Suppliers are shown in the box.
Dr. Peter Hart,
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- Q1** What is the Safety Level of the Part?
Suppliers should know the Safety Level of its parts and understand the good practice actions that are graduated by Safety Level.
- Q2** What technical standard should the Part comply to?
Suppliers should identify technical standards that could be applied to the type of parts they market.
- Q3** If the part could have a grading, rating or performance level, is this stated in the documentation?
Rating levels such as strength, D-value, weight, amperage, maximum pressure, flow-rate, etc., are important performance levels that should be stated in the part information.
- Q4** Are written installation and safety instructions provided with the part, or otherwise available?
This information should include the rating where it is relevant to correct selection. Instructions can be important to assist with safe installation.
- Q5** Are quality assurance checks conducted on at least some parts from each batch?
Suppliers should check that the quality of samples from each batch is OK, whether they are the manufacturer or not.
- Q6** Does the Supplier have a written warranty policy and a means of recording and then investigating failures?
Suppliers should investigate written (or formal) complaints about premature failures and should have a warranty policy for replacing defective parts.
- Additional Questions Relevant to Safety Level 1 & 2 Parts:**
- Q7** Could use of the part affect compliance with a design rule or vehicle-standards regulation?
If so, proof that the vehicle will continue to comply is needed. Note: If the Part is used at OEM level on a comparable vehicle model, then it may be acceptable even if it is not an Original Part. The Part might also have approved status that applies to many vehicle models.
- Q8** Does the part have a clearly visible part number and manufacturer's identification (label, stamping, ...)?
This is needed to verify that the correct part was supplied.
- Q9** Does the batch that the Part came from have a batch number?
This is necessary so that quality problems become apparent and can be traced to a date range or batch.
- Q10** Was the Part manufactured according to an engineering drawing and does the material meet a specification? What is the material strength?
Good quality parts must have properly documented and specified designs so that the performance of the part can be verified by engineering analysis and so consistent quality can be achieved.
- Additional Questions for Safety Level 1 Parts**
- Q11** Does the part have a unique serial number?
A unique serial number is not mandatory, but it is recommended.
- Q12** Has the model of the Part been tested against a technical standard and if so what standard and who did the test?
There may be a suitable technical standard for a Safety 1 part such as an ADR, UN Regulation, Australian Standard or an overseas technical standard. The manufacturer of the part should have the model of the part certified by a capable laboratory against a suitable technical standard. This information should be publicly known so the Purchaser can be confident that the part will perform adequately, and the installation is legal.
- Q13** If there is no technical standard that can be tested against (as in Q12), has comparison testing been done against an original equipment part for your vehicle?
A Safety 1 part should have some accreditation that provides confidence that it will perform adequately.

The Guide can be found at www.artsa.com.au/replacementpartsguide