

AS/NZS 2739:2003

AS/NZS 2739

Australian/New Zealand Standard™

# **Natural gas (CNG) fuel systems for vehicle engines**

### **AS/NZS 2739:2003**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME-046, Gas Fuel Systems for Vehicle Engines. It was approved on behalf of the Council of Standards Australia on 22 October 2003 and on behalf of the Council of Standards New Zealand on 12 November 2003. It was published on 24 December 2003.

---

The following are represented on Committee ME-046:

Australian Automobile Association  
Australian Chamber of Commerce and Industry  
Australian Industrial Truck Association  
The Australian Gas Association  
Australian Liquefied Petroleum Gas Association  
Box Hill Institute of TAFE  
Department for Administrative and Information Services, S.A.  
Department of Natural Resources and Mines, Qld  
Department of Urban Services, A.C.T.  
Energy Safety, W.A.  
Federal Chamber of Automotive Industries  
Gas Association of New Zealand  
Institution of Engineers, Australia  
Land Transport Safety Authority, New Zealand  
LPG Association of New Zealand  
Motor Trade Association, New Zealand  
Motor Traders Association of N.S.W.  
Motor Traders Association of Australia  
TAFE, N.S.W.  
Transport, S.A.  
Victorian Police  
WorkCover N.S.W.  
Work Health Authority, N.T.

Additional interests participating in the preparation of this Standard:

Auckland University  
Australian Bus and Coach Association  
Gas Utilities

---

### **Keeping Standards up-to-date**

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at [www.standards.com.au](http://www.standards.com.au) or Standards New Zealand web site at [www.standards.co.nz](http://www.standards.co.nz) and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

---

AS/NZS 2739:2003

# Australian/New Zealand Standard™

## **Natural gas (CNG) fuel systems for vehicle engines**

Originated in Australia as AS 2739—1984.  
Originated in New Zealand as NZS 5422.2:1980.  
Previous edition AS/NZS 2739:1999.  
Fourth editions 2003.

### **COPYRIGHT**

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 5598 4

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME-046, Gas Fuel Systems for Vehicle Engines, to supersede AS/NZS 2739:1999.

This edition has been expanded to include exhaust emission testing (Clause 1.8.2 and Appendix E) and acceptance of components complying with ISO 15500, Parts 1 to 19.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the Appendix to which they apply. A ‘normative’ Appendix is an integral part of a Standard, whereas an ‘informative’ Appendix is only for information and guidance.

## CONTENTS

|                                                        | <i>Page</i> |
|--------------------------------------------------------|-------------|
| <b>SECTION 1 SCOPE AND GENERAL</b>                     |             |
| 1.1 SCOPE.....                                         | 5           |
| 1.2 OBJECTIVE.....                                     | 5           |
| 1.3 REFERENCED DOCUMENTS.....                          | 5           |
| 1.4 DEFINITIONS.....                                   | 5           |
| 1.5 NEW DESIGNS AND INNOVATIONS .....                  | 8           |
| 1.6 VEHICLE MODIFICATIONS.....                         | 8           |
| 1.7 MINOR ALTERATIONS .....                            | 9           |
| 1.8 ENGINE MANAGEMENT SYSTEM ALTERATIONS .....         | 9           |
| 1.9 EXHAUST EMISSION REQUIREMENT (Australia only)..... | 9           |
| 1.10 APPROVED EQUIPMENT .....                          | 9           |
| 1.11 PREVIOUSLY USED EQUIPMENT .....                   | 9           |
| 1.12 WORKING AREA AND SAFE PRACTICES.....              | 10          |
| <b>SECTION 2 COMPONENTS</b>                            |             |
| 2.1 GENERAL SUITABILITY .....                          | 11          |
| 2.2 COMPONENT PARTS.....                               | 11          |
| 2.3 MODIFICATION .....                                 | 11          |
| <b>SECTION 3 FUEL SYSTEM COMPONENTS</b>                |             |
| 3.1 APPLICATION .....                                  | 12          |
| 3.2 CYLINDER .....                                     | 12          |
| 3.3 COMPONENTS FOR REMOVABLE CYLINDERS .....           | 12          |
| 3.4 CYLINDER VALVE .....                               | 13          |
| 3.5 REFUELLING CONNECTION.....                         | 13          |
| 3.6 REFUELLING NON-RETURN VALVE.....                   | 13          |
| 3.7 LOCATION OF REFUELLING CONNECTION .....            | 13          |
| 3.8 REFUELLING INFORMATION PLATE.....                  | 14          |
| 3.9 SERVICE ISOLATION VALVE.....                       | 14          |
| 3.10 FUEL FILTER.....                                  | 15          |
| 3.11 AUTOMATIC FUEL SHUT-OFF DEVICE .....              | 15          |
| 3.12 FUEL FLOW REGULATION DEVICE .....                 | 15          |
| 3.13 CONTENTS INDICATOR .....                          | 15          |
| 3.14 CYLINDER COMPARTMENTS AND SUB-COMPARTMENTS .....  | 15          |
| 3.15 MOUNTING OF FUEL CYLINDER .....                   | 18          |
| 3.16 CYLINDER LOCATION AND GROUND CLEARANCES .....     | 20          |
| 3.17 PROTECTION.....                                   | 21          |
| 3.18 HEAT SHIELDING.....                               | 22          |
| <b>SECTION 4 FUEL SERVICE LINE</b>                     |             |
| 4.1 APPLICATION .....                                  | 24          |
| 4.2 RIGID PIPING .....                                 | 24          |
| 4.3 FLEXIBLE PIPING .....                              | 24          |
| 4.4 JOINTS AND CONNECTIONS .....                       | 24          |
| 4.5 PIPING INSTALLATION AND PROTECTION.....            | 24          |
| 4.6 PIPING OR FITTINGS IN ENCLOSED SPACES .....        | 25          |
| 4.7 TRAILERS AND SEMITRAILERS .....                    | 25          |
| 4.8 FUEL HOSE FOR PRESSURE NOT EXCEEDING 100 kPa ..... | 26          |
| 4.9 BREAKAWAY COUPLING .....                           | 26          |

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-