

AS/NZS 1425:2007

AS/NZS 1425:2007

Australian/New Zealand Standard™

LP Gas fuel systems for vehicle engines



AS/NZS 1425:2007

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 26 March 2007 and on behalf of the Council of Standards New Zealand on 15 June 2007.
This Standard was published on 12 July 2007.

The following are represented on Committee ME-046:

Australian Automobile Association
Australian Chamber of Commerce and Industry
Australian Industrial Truck Association
Department of Mines and Energy (Queensland)
Department of the Premier and Cabinet
Department for Transport, Energy and Infrastructure (South Australia)
Energy Safety (Western Australia)
Engineers Australia
Federal Chamber of Automotive Industries
Gas Association of New Zealand
International Association for Natural Gas Vehicles
LPG Association of New Zealand
LPG Australia
Land Transport Safety Authority New Zealand
Motor Trade Association New Zealand
Motor Traders Association of New South Wales
Motor Traders Association of Australia
Roads and Traffic Authority of New South Wales
TAFE New South Wales
Victoria Police

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 Standards may also be withdrawn.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 Web Shop at www.standards.com.au or Standards New Zealand web site at 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 or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 06365.

AS/NZS 1425:2007

Australian/New Zealand Standard™

LP Gas fuel systems for vehicle engines

Originated in Australia as AS 1425—1973.
Originated in New Zealand in part as part of NZS 5422.1:1980.
Previous edition AS/NZS 1425:2003.
Seventh edition 2007.

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, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 8276 0

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 1425:2003.

The first edition of this Standard, published in Australia in 1973, was derived in the main from NFPA 58. A revision in 1979 introduced compartments and sub-compartments to control random leakage, required external filling points, and upgraded the strength of mountings, amongst other things. The first amendment in October 1980 introduced automatic fill limiters, and the second in 1981 virtually eliminated the hydrostatic relief valve.

The 1982 edition was generally a consolidation, in which editorial presentation was improved and a number of adjustments of detail occurred, the most significant of which was that attempts to make the excess flow valve more sensitive were abandoned in the face of experience with inadvertent shut-off of fuel to the engine. Amendment 1 of May 1984 corrected and clarified minor detail. Amendment 2 of December 1985, beside further polishing detail, upgraded a number of requirements related to the security of a container and its fittings in a collision.

Amendment 3 of July 1987 permitted safety valves to discharge into a sub-compartment or compartment. This represented a major reversal of the previous policy of insistence on piping such discharges to exit vertically outside the vehicle.

The 1989 edition of the Standard incorporated changes to the requirements for fixed liquid level gauges, sizing of ventilation ducts and their construction materials, heat shielding and the referencing of AS 3509—1988, *LP gas fuel vessels for automotive use*.

The 1999 edition was a Joint Standards Australia/Standards New Zealand edition and the layout and content of sections were restructured to facilitate easy referencing with the grouping of all material on a subject in the one location.

The 2003 edition introduced clauses related to the installation of fuel injection systems, the decommissioning of redundant LP gas fuel systems, medium pressure hose up to 450 kPa and an Appendix relating to exhaust emission testing. It also incorporated descriptive procedures for providing assurance of compliance with exhaust emission standards. Requirements were incorporated for certified kits to meet exhaust emission standards. Appendix D was introduced to outline requirements for testing vehicles, manufactured to comply with ADR 79/00, ADR 79/01, ADR 80/00 and ADR 80/01.

The 2007 edition of the Standard incorporates changes to requirements for valve materials and testing procedures and simplified emission testing requirements. In relation to ADR 79/02 vehicles, the committee will examine the need for further testing requirements for providing assurance of compliance.

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>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE AND APPLICATION.....	6
1.2 OBJECTIVE.....	6
1.3 REFERENCED DOCUMENTS	6
1.4 NEW DESIGNS AND INNOVATIONS	6
1.5 DEFINITIONS	6
1.6 VEHICLE MODIFICATIONS	10
1.7 MINOR ALTERATIONS.....	11
1.8 ENGINE MANAGEMENT SYSTEM.....	11
1.9 APPROVED EQUIPMENT.....	12
1.10 PREVIOUSLY USED EQUIPMENT	12
1.11 LP GAS WITHDRAWAL FROM AUTOMOTIVE SYSTEMS.....	12
1.12 DECOMMISSIONING OF LP GAS FUEL SYSTEM.....	12
1.13 WORKING AREA AND SAFE PRACTICES.....	13
1.14 REGULATORY AGENCIES	13
SECTION 2 COMPONENTS	
2.1 GENERAL SUITABILITY	14
2.2 MOVING PARTS.....	14
2.3 SUITABILITY FOR INSTALLATION.....	14
2.4 MODIFICATION	15
2.5 METALS.....	15
2.6 NON-METALS	15
SECTION 3 CONTAINER SUB-ASSEMBLY	
3.1 APPLICATION	16
3.2 CONTAINER	16
3.3 COMPONENTS FOR FIXED CONTAINERS.....	16
3.4 COMPONENTS FOR REMOVABLE CONTAINERS	16
3.5 COMPONENT SUITABILITY	17
3.6 FILLING CONNECTION	17
3.7 FILLER NON-RETURN VALVE SYSTEM.....	17
3.8 AUTOMATIC FILL LIMITER (AFL)	19
3.9 FIXED LIQUID LEVEL GAUGE	20
3.10 CONTENTS GAUGE.....	20
3.11 EXCESS-FLOW VALVE.....	20
3.12 SERVICE VALVE	20
3.13 AUTOMATIC FUEL SHUT-OFF DEVICE AT CONTAINER	20
3.14 FUEL FILTER.....	22
3.15 SAFETY VALVE.....	22
3.16 LOCATION OF CONTAINER COMPONENTS	23
3.17 COMPARTMENTS AND SUB-COMPARTMENTS.....	23
3.18 MOUNTING OF FUEL CONTAINER	25
3.19 CONTAINER LOCATION, GROUND CLEARANCES	29
3.20 PROTECTION	30
3.21 HEAT SHIELDING	32
3.22 SUITABILITY FOR HAZARDOUS ZONES	32

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
-