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RETREADED PNEUMATIC PASSENGER CAR AND LIGHT TRUCK TYRES



STANDARDS ASSOCIATION OF AUSTRALIA
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Australian Automobile Association
Australian Consumers Association
Australian Road Transport Federation
Australian Tyre Dealers Association
Australian Tyre Manufacturers Association
Confederation of Australian Industry
Department of Transport
State Transport Authority, S.A.
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AUSTRALIAN STANDARD

**RETREADED PNEUMATIC
PASSENGER CAR AND LIGHT
TRUCK TYRES**

AS 1973—1985

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PREFACE

This edition of this standard was prepared by the Association's Committee on Tyre Retreads to supersede AS 1973—1976, Retreaded Pneumatic Passenger Car Tyres. The new edition was found necessary especially in relation to specific maximum speed markings and identification of radial-ply and diagonal-ply tyres.

This standard is based on the 1976 edition and on BS AU 144b:1977, Specification for Retreaded Car and Commercial Tyres. It specifies requirements which should provide a satisfactory retreaded tyre for normal conditions of use for passenger cars, light trucks, and commercial vehicles.

For special conditions, the purchaser may specify additional requirements such as quality of rubber or greater tread depth, subject to agreement with the retreader.

The majority of retreaded tyres currently being produced provide a tread pattern depth equivalent to 100 percent of the maximum recommended by the Tyre and Rim Association of Australia for the corresponding new tyre. This standard specifies a minimum of 80 percent.

It should be noted that tread pattern depth is specified in terms of a 'maximum recommended' tread pattern depth, and that tyres with a tread pattern depth in excess of 100 percent of the maximum recommended for highway tread design may have a reduced performance because of increased heat generation and possible subsequent separation of the original tread or retread.

No limitation is placed on the number of times that a tyre can be retreaded, as this is determined by the continuing soundness of the casing, as disclosed during examination before processing.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

RETREADED PNEUMATIC PASSENGER CAR AND LIGHT TRUCK TYRES

1 SCOPE. This standard specifies requirements for the retreading of pneumatic passenger car and light truck tyres, and defines the performance, and dimensional and physical requirements for the retreaded tyres. The standard includes requirements for retread materials, limits of damage, processing, marking, and final inspection.

The range of tyres referred to is that covered by AS 2231 and those tyres in AS 2230 which are defined as light truck tyres. Unless otherwise specified, the requirements apply to both tubed and tubeless tyres.

2 REFERENCED DOCUMENTS. The following documents are referred to in this standard:

- AS 2230 New Pneumatic Highway Tyres Other Than Passenger Car Tyres
 AS 2231 New Tyres for Passenger Cars
 ADR 23B Australian Design Rule No 23B—New Pneumatic Passenger Car Tyres

3 DEFINITIONS. For the purpose of this standard, the following definitions apply (see also Figs 1 and 2):

3.1 Bead—the part of the tyre made of steel wires, wrapped or reinforced by ply cords, that is shaped to fit the rim.

3.2 Bead heel—the part of the bead which fills the angle formed by the junction of the rim flange and the rim bead seat.

3.3 Bead toe—the innermost part of the bead opposite the heel.

3.4 Belt—two or more layers of substantially inextensible cord material embodied circumferentially within a tyre immediately outside the casing plies.

NOTE: The cord angle relative to the tyre circumference is lower than that for the casing plies. Belts are used only in radial-ply and bias-belted tyre constructions.

3.5 Belt edge cover stripping—one or more layers of heat shrinkable organic textile cord fabric (e.g. nylon) placed over the belt edges of a steel-belted radial-ply tyre.

3.6 Bias-belted tyre—a tyre in which the cords in the tyre carcass are laid at alternate angles which are substantially less than 90 degrees to the centreline of the tread, and cord-reinforcing strips are incorporated into the tyre under the tread so that these cords make an included angle with the tyre centreline not greater than the same angle made by the carcass cords.

3.7 Breaker—one or more strips of cord material embodied circumferentially within a tyre immediately outside the casing plies.

NOTE: Breakers may be used in some diagonal-ply tyres.

3.8 Buffing—the preparation of the original surface of the worn tyre prior to the application of tread rubber.

3.9 Building—the application of tread rubber to the buffed and cemented surface of the tyre.

3.10 Carcass—the tyre structure except tread and sidewall rubber.

3.11 Casing—a worn tyre to which new tread rubber may be attached by retreading.

3.12 Cementing—the application of rubber cement to the buffed surface of the tyre.

3.13 Chafer—material in the bead area to protect the carcass against rim chafing.

3.14 Cords—the separate strands forming the casing plies, breakers, or belts in the tyre.

3.15 Crown—the portion of the tread between the shoulders of a tyre (see Figs 1 and 2).

3.16 Curing—the conditions necessary to produce a given state of vulcanization.

3.17 Diagonal-ply tyre—a tyre in which the cords in the tyre carcass are laid at alternate angles which are substantially less than 90 degrees to the centreline of the tread (see Fig. 1).

3.18 Fullcapping—new tread rubber applied to that area of the casing normally in contact with the road and extending over the shoulder area.

3.19 Inner liner—the layers which form the inside surface of a tubeless tyre, and which contain the inflating medium within the tyre.

3.20 Light truck tyres—a tyre designated by its manufacturer as being primarily intended for use on lightweight trucks or multipurpose passenger cars.

NOTE: The manufacturer may mark the tyres with LT or Light Truck or C.

3.21 Load rating—the maximum load which the tyre is allowed to carry.

3.22 Original tread separation—pulling away of the undertread from the tyre carcass.

3.23 Ply—a layer of rubber-coated, substantially parallel cords forming part of the tyre carcass.

3.24 Ply rating—a term used to identify a given tyre with its maximum recommended load when used in a specific type of service. It is an index of tyre strength, and does not necessarily represent the number of cord plies in a tyre.

3.25 Ply separation—the parting of rubber compound between adjacent plies.