



## **Automotive repairs — Terminology**

### **Part 1: Automatic transmission**



AS 3564.1:2020

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- Australian Automotive Aftermarket Association
- Institute of Automotive Mechanical Engineers
- Motor Trades Association of Australia
- Society of Automotive Engineers Australasia
- Victorian Automobile Chamber of Commerce

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## **Part 1: Automatic transmission**

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## Preface

This Standard was prepared by the Standards Australia Committee CS-078, Automotive Repairs Technology, to supersede AS 3564.1—1988.

The objective of this Standard is to outline a nomenclature for the repair and servicing of automatic transmissions in the automotive repair industry.

This Standard aims at eliminating confusion in relation to terminology describing repairs to automotive automatic transmissions.

The major changes in this edition are as follows:

- (a) Terms and definitions updated.
- (b) [Appendix A](#) added to provide requirements for general fitting checks.

The term “normative” is used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard.

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## NOTES



# Australian Standard®

## Automotive repairs — Terminology

### Part 1: Automatic transmission

#### 1 Scope

This Standard establishes a nomenclature for the repair and servicing of automatic transmissions in the automotive repair industry.

#### 2 Normative references

There are no normative references in this document.

#### 3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

##### 3.1

##### **automatic transmission**

transmission, including the torque converter, in which ratio changes are affected automatically using hydraulics or electronically, including —

- (a) Direct Shift Gearbox (DSG);
- (b) Dual Clutch Transmission (DCT); and
- (c) Continuously Variable Transmission (CVT)

##### 3.2

##### **flush**

process of cleaning a component with no external access

##### 3.3

##### **shall**

indicates that a statement is mandatory

##### 3.4

##### **should**

indicates a recommendation

##### 3.5

##### **transmission**

device for transmitting power at multiplicity of speeds and torque ratios

#### 4 Terminology relating to automatic transmissions

##### 4.1 Exchange or re-manufacture of automatic transmission

The words “exchange” or “re-manufacture”, where used in relation to an automatic transmission unit, shall mean that the unit in the vehicle is not the unit that was formerly in the vehicle, but is the identical model and correctly calibrated to suit the vehicle into which it has been fitted. Where either of the words is used, it shall be accompanied by an indication of the state of the unit, i.e. reconditioned, repaired, or used unit of unknown quality.

Where applicable, general fitting checks shall be carried out on completion of an exchange or re-manufacture of an automatic transmission, in accordance with [Appendix A](#).



## 4.2 Reconditioning of automatic transmission

The word “reconditioned” and its synonyms (e.g. “rebuilt”, “overhauled”) shall mean that, subsequent to the last use of that transmission in a vehicle, the following work has been completed on the unit:

- (a) All internal and external parts, including case, housing and electronic components have been dismantled, cleaned, and inspected.
- (b) Torque converter or fluid coupling has been split, cleaned and inspected.
- (c) Valve body has been dismantled, cleaned and inspected.
- (d) All the following have been replaced by new parts:
  - (i) Friction plates and bands.
  - (ii) Internal and external seals.
  - (iii) Sealing rings.
  - (iv) Gaskets.
  - (v) Filters.
  - (vi) Vacuum hoses.
- (e) All impaired, defective, or worn parts have been restored or replaced by new, reconditioned, or unimpaired parts, with all measuring and adjusting of such parts performed to manufacturer’s specifications.
- (f) Where present, vacuum modulator, all internal electrical and electronic components fitted directly to the transmission have been cleaned and tested in accordance with manufacturer’s specifications or replaced as required.
- (g) Make and model of the transmission and date of transaction have been recorded.

## 4.3 Removing and refitting of automatic transmission

The words “removed” or “refitted”, where used in relation to an automatic transmission, shall mean that the removal or installation of the transmission has been carried out in accordance with the vehicle manufacturer’s specifications, including —

- (a) flushing of the cooler and cooler lines to provide correct flow;
- (b) checking, scanning and reprogramming to manufacturer’s specifications; and
- (c) recording of the date of transaction and make and model of the refitted unit.

## 4.4 Repair

The word “repair”, where used in relation to an automatic transmission, shall mean that, subsequent to the last use of that automatic transmission unit in a vehicle, the following work has been completed on the unit:

- (a) A specific rectification of a limited nature has been carried out.
- (b) Date of transaction and odometer reading have been recorded.
- (c) General fitting checks have been carried out (see [Appendix A](#)).



#### 4.5 Servicing of automatic transmissions

The word “serviced”, where used in relation to an automatic transmission, shall mean that, subsequent to the last use of that automatic transmission unit in a vehicle, and subject to a prior road test, the following work has been completed on the unit:

- (a) Transmission fluid has been drained and replaced by new fluid conforming to vehicle manufacturer’s specifications.
- (b) Filters have been cleaned where serviceable or replaced by new transmission filters conforming to vehicle manufacturer’s specifications.
- (c) Band(s) have been checked and adjusted, where applicable.
- (d) Pan gasket and service-related gaskets and seals have been renewed.
- (e) Linkages have been checked and, where necessary, adjusted or replaced.
- (f) Operation of inhibitor switch has been checked and, where necessary, adjusted.
- (g) Vacuum modulator and related vacuum controls have been checked to ensure correct operation.
- (h) Throttle valve cable has been checked and adjusted, where fitted.
- (i) Vehicle has been scanned to identify if there are codes that affect the operation of the transmission and, where applicable, checked for fault codes and had the latest software updates loaded, where possible.
- (j) Vehicle has been road-tested and transmission confirmed to be operating correctly.
- (k) After the road test, transmission has been checked for visible oil leaks and oil level checked.
- (l) Date of transaction and odometer reading have been recorded.

NOTE A transmission flush is not a substitute for servicing of a transmission.

## **Appendix A** **(normative)**

### **General fitting checks**

#### **A.1 General**

This Appendix defines additional procedures to ensure the correct operation of items that could affect the performance of the transmission.

#### **A.2 Transmission cooling system**

Deterioration may have occurred during the life of the transmission. Where a replacement transmission is required, the cooling system efficiency shall be checked, restored to its original condition and rectified, as follows:

- (a) The core shall be replaced where —
  - (i) thorough cleaning is not possible;
  - (ii) corrosion has occurred on the fins;
  - (iii) fins are bent;
  - (iv) airflow passage through the fins is blocked; or
  - (v) an auxiliary oil cooler is installed.

NOTE The original air flow through the radiator cannot be obstructed or changed (e.g. by an air conditioning condenser, bull bars or driving lights).
- (b) Where an auxiliary cooler or filter is supplied, it shall be fitted in accordance with manufacturer's specifications.
- (c) External oil cooler, lines and hoses shall be inspected and thoroughly cleaned, or replaced where unserviceable.
- (d) Vehicle shall be road tested until transmission is at operating temperature. Fluid level shall be rechecked and transmission, oil cooler, hoses and connections inspected for leak.

The cooling system efficiency check, restoration and rectification shall be completed prior to customer handover.

#### **A.3 Electrical system**

The following electrical system checks shall be completed:

- (a) Powertrain Control Module (PCM) or Transmission Control Module (TCM) shall be scanned to ensure no faults exist. Where applicable, any adaptive learning shall be performed in accordance with manufacturer's specifications.
- (b) Transmission wiring harness and connectors shall be inspected for serviceability and repaired or replaced where found to be faulty.



- (c) Battery and charging system shall be checked for correct operation according to manufacturer's specifications.

#### **A.4 Mechanical fitment**

The following mechanical fitment checks shall be completed:

- (a) Engine to transmission mounting surfaces shall be inspected, cleaned, and checked for straightness, including flywheel runout, dowels and fasteners.
- (b) Replace engine and transmission mountings if deemed to be unserviceable
- (c) Dual mass flywheels shall be inspected and tested to ensure they are within manufacturer's specifications.

#### **A.5 Service**

First and subsequent service should be carried out to the manufacturer's instructions or as recommended by a transmission reconditioner.

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