

AUSTRALIAN MOTOR VEHICLE CERTIFICATION BOARD

Comprising Commonwealth, State and Territory Authorities

CIRCULAR NO. 38-1-2
APPROVAL BY THE ADMINISTRATOR OF RUNNING CHANGES FOR
ADR 38 - HEAVY TRAILER BRAKING SYSTEMS

INTRODUCTION

1. This Circular is not applicable to the Low Volume Assessment Scheme. Each individual trailer submitted for Low Volume Assessment is treated as a unique trailer and information can not be carried over from a previous Assessment.

TRAILERS

2. A running change is a change in the specification of the Trailer braking system which is made during the production life of the Trailer. The revised specification supersedes the original specification in the application for Compliance Plate Approval. When the running change has been approved, the Compliance Plate Approval will not be valid for any more new trailers made to the original specification. The approval of the Administrator will be required for each Make-Model and Variant affected by a running change.

Any of the following changes to a Trailer Model covered by a Compliance Plate Approval will require the approval of the Administrator as running changes:

- (a) the use of a sub-assembly with a different Compliance Mark Approval Number
- (b) the replacement of an approved sub-assembly, including any changes (not covered by the Compliance Mark Approval) to an approved sub-assembly.
- (c) the replacement of any component of the braking system (including the suspension system), not contained in an approved sub-assembly, with a component of a different make or model or specification.

These changes should be once only in nature and the change, once completed, should be intended for the remainder of the Trailer Model's production.

Any changes not described above, or changes which form part of an optional specification may require a new Trailer Model or Variant to be designated. Refer to Circular No. 0-3-5.

Where a Trailer demonstrated compliance by the use of approved sub-assemblies a change from one approved Variant of one of those sub-assemblies to another Variant of the same sub-assembly or changes covered by the Compliance Mark Approval of that approved sub-assembly are not considered to be changes to the trailer.

SUB-ASSEMBLIES

3. A running change is a change in the specification of the approved sub-assembly which is made during the production life of the sub-assembly. The revised specification supersedes the original specification. When the running change has been approved, the Compliance Mark Approval will not be valid for any more new sub-assemblies made to the original specification. The approval of the Administrator will be required for each Make-Model and Variant affected by a running change.

Any of the following changes to a sub-assembly Model (defined in Circular No. 38-1-3) covered by a Compliance Mark Approval will require the approval of the Administrator as a running change:

- (a) the use of components of different make-model or specification, or a different configuration of components, in a suspension system, except for changes between under slung and over slung springing with no other component or geometry changes.
- (b) the use of components of different make-model or specification or a different configuration of components in a control system.
- (c) the use of components of different make-model or specification or a different configuration of components in a foundation brake system.
- (d) any change to any of the components used in a total trailer brake system sub-assembly which leaves the range of values for which the Compliance Mark approval was issued (GTMR, TTAL etc) unchanged.

These changes should be once only in nature and the change, once completed, should be intended for the remainder of the sub-assembly Model's production.

Any changes not described above, or changes which form part of an optional specification may require a new sub-assembly Model or Variant to be designated. Refer to Circular No. 38-1-3.

PRIOR APPROVAL

4. Normally such running changes require the approval of the Administrator before being incorporated into production. In some circumstances it may be impractical to follow this course of action but the Administrator must be notified before production commences. In all instances the manufacturer must accept full responsibility for the compliance of the modified trailer or sub-assembly, including the undertaking to recall any non-complying trailer or sub-assemblies for modification.

APPLICATION PROCEDURES

5. The procedure to be followed in seeking approval of a proposed running change is for the manufacturer to make an application to the Administrator. There is no standard format for such an application. However it should include a full description of the proposed change together with revised drawings, parts lists and installation instructions as appropriate. A justification for continuation of compliance must accompany the application. This should include the results of any tests conducted and may use parts of the submission of evidence Form CB 38 as appropriate. The Vehicle Identification Number of the first modified Trailer shall be stated.

TESTING REQUIREMENTSTrailers

6. Where the characteristics of the original component or the replacement component are not known, tests must be conducted to demonstrate continuation of compliance. It may be possible to test the original and replacement components and determine some, or all, of the characteristics. In this case the procedure in 7 can be followed in respect of the characteristics which have been determined.

For example, a relay valve is changed and only the pressure drop across the original and replacement valves can be determined. These results will enable the original trailer's service brake effectiveness results to be corrected for the replacement valve. However, the entire time response test will have to be repeated with the replacement valve installed.

Where it is not possible to determine the characteristics of the components all the relevant tests must be conducted on the modified trailer. If it is not clear which tests need to be conducted a preliminary application can be made to the Administrator requesting those details.

7. Where all the characteristics of the original and replacement components are known, trailer testing will not be required where a comparison of the modified and original trailers can be made for all the relevant performance requirements in ADR 38. Parts of the submission of evidence Form CB 38 may be used in making this comparison. It will be necessary to provide brief details of the testing which was conducted to determine the characteristics of the components. Published literature for proprietary components will be acceptable.

8. Whenever a change in brake friction material (linings or pads) is made the foundation brakes must be tested, using the replacement material, for service brake fade performance and service brake system water performance.

9. Additional testing may be required where a running change is made to a trailer which has previously been subject to a running change. Any comparison of modified trailers should be made to the originally approved Trailer.

Sub Assemblies

10. For Suspension Systems the validity of the skid limits must be demonstrated, by testing if appropriate. Testing to demonstrate the wheel lock up conditions for several brake torque distributions under the same conditions for the original and modified systems will be adequate. If the wheel lock up conditions are not the same then a full series of tests to re-establish the skid limits must be conducted. Any changes which cause a variation in skid limits will not be accepted as running changes. Instead a new Model will be required.

11. For Control Systems it must be demonstrated (by testing if appropriate) that the output to input Control Signal ratio (C) is unaltered and that the time response measurements continue to comply. The value for maximum actuator volumes used during the time response tests for the modified system must be the same as used for the original system. Confirmation that the modified system complies with all the design requirements must also be given. Any change which causes a variation in the value of C, the value of A, or the Emergency Brakes cut in level (if it is dependant on actuator stroke) will not be accepted as a running change. Instead a new Model will be required.

12. For Foundation Brake systems it must be demonstrated (by testing if appropriate) that the output torque per unit Control Signal to the brake actuator (T) is unaltered and that the Gross Axle Load Rating is the same as, or greater than, the original system. Whenever a change in brake friction material (lining or pads) is made the Foundation Brake system must be tested using the replacement brake material. The brake actuator and actuator arm sizes used in any tests must be the same as those used in the original tests. Any changes which cause a variation in the value of T, or a decrease in GALR, will not be accepted as running changes. Instead a new Model will be required.

13. For Total Trailer Brake Systems the validity of the range of values for GTMR, Total Trailer Axle Load, Static axle loads and wheelbase and centre of mass height (if applicable) must be demonstrated, by testing if appropriate, in respect of each modified sub-assembly. The testing procedures outlined in 10 to 12 may be appropriate or tests may need conducting to re-establish the range of values. Written confirmation that all the design requirements continue to be met must also be given. Any changes which cause a variation in the range of values will not be accepted as running changes. Instead a new Model will be required.

14. Additional testing may be required where a running change is made to a sub-assembly which has previously been subject to a running change. Any comparison of modified sub-assemblies should be made to the originally approved sub-assembly.

APPROVAL OF CHANGES

15. When the testing (if required) is completed and the results (as appropriate) have been provided, and continuing compliance has been demonstrated to the satisfaction of the Administrator, the Administrator will advise the manufacturer of extension of the approval to incorporate the running change as outlined.