

AUSTRALIAN MOTOR VEHICLE CERTIFICATION BOARD

Comprising Commonwealth, State and Territory Authorities

CIRCULAR NO. 38-1-7

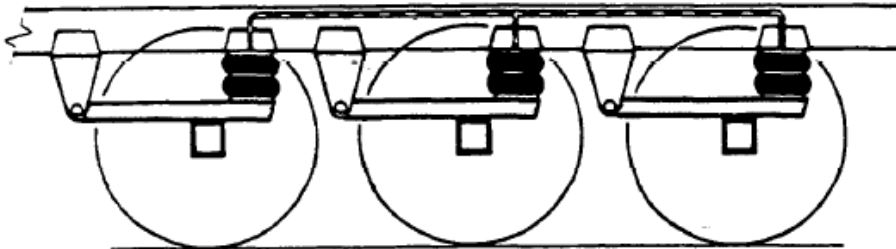
SUSPENSION TYPES

1. Suspension type is referred to in several of the forms used for application for Compliance Plate Approvals, Compliance Mark Approval and Low Volume Assessment in respect of ADR 38. Suspension type is the type grouping in the "ACVP" 'Guide to Heavy Vehicle Suspension Systems and Acceptable Axle Groups'. Changes from underslung to overslung springing can be ignored.
2. For your convenience the abovementioned book has been summarised and this summary can be found at Attachment 1. The summary is intended to cover the most common types of suspensions fitted to trailers. However, if the particular suspension type fitted is not covered then refer to the complete book which may be obtained from the Australian Government Printing Service's book shops.
3. Reference is also made to load sharing suspensions. A load sharing suspension is a suspension system that utilises pneumatic, hydraulic, mechanical or other means to effect substantially equal sharing by all the axles of an axle group of the total load carried by that group and has effective damping characteristics on all axles of the group.
4. Reference is also made to brake reactive suspension systems. A brake reactive suspension system is a load sharing suspension system in which there is transfer of vertical loading from one axle to another axle in the same axle group due to the application of the brakes

Brake
Reactive
Yes No

D.2. Air springs

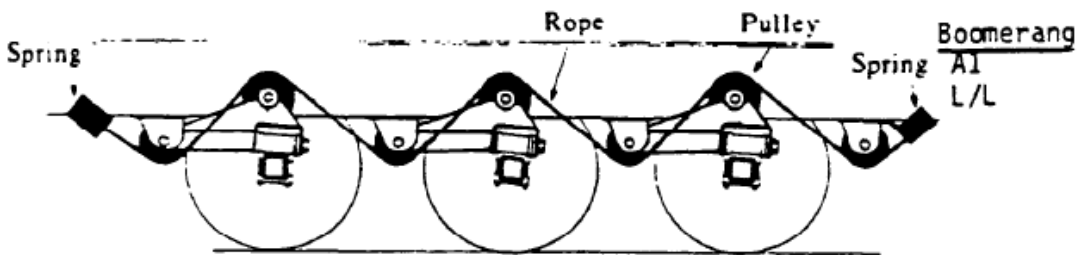
Trailing arms may be either rigid as shown, or in the form of a laminated cantilever spring



Franklin
274/286

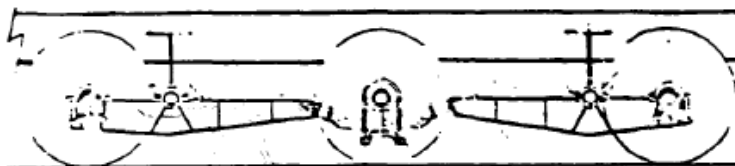
Multiple of any suspension units or system listed under C.24 may be used to form air suspended triaxle groups provided that the necessary conditions for load sharing between axles are satisfied.

D.3. Wire rope and springs



Boomerang
A1
L/L

D4. Spread beams and spring suspension.



Brentwood
BS 1068
Neway
RTS.Mech
TR.Mech

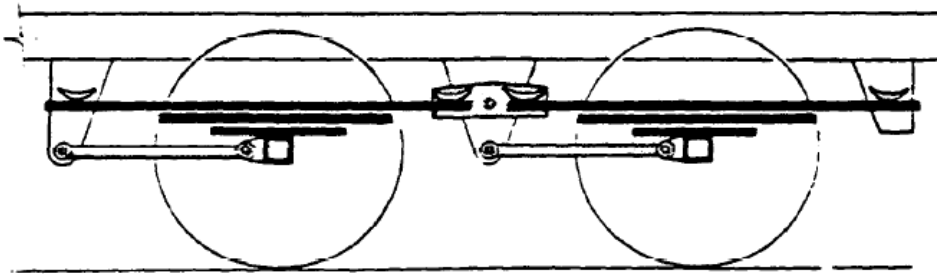
A summary of the Advisory Committee on Vehicle Performance's booklet, "A Guide to Heavy Vehicle Suspension Systems and Acceptable Axle Groups".

The suspension systems are listed by type number. The makes and models included in the 'Guide' are listed alongside each suspension system.

A 'X' will be entered in the appropriate column of 'Brake Reactive - Yes No' only when the AMVCB has been able to determine the characteristics of the suspension.

Brake
Reactive
Yes No

C.1 Four spring suspension - short rockers



Trailermaster
76,100

Reyco
101/102
21B
Transpro shd
SHD-UM2

Haulmark
T4/T4u
T5

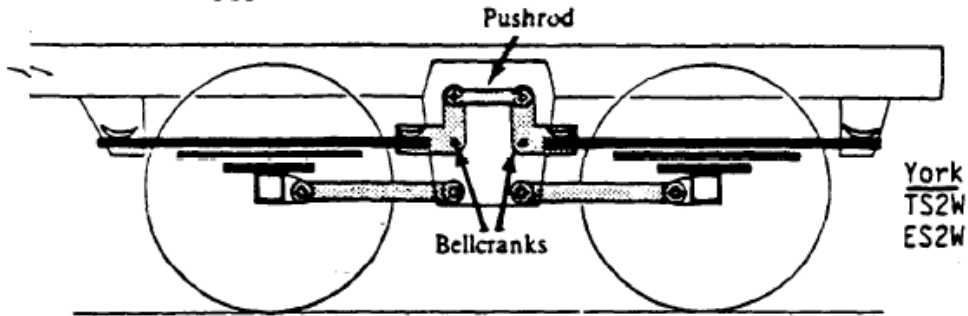
Tank Quip Goth
6 Rocker

Brake
Reactive
Yes No

Antap
Bartlett
1513/1311/
1515/1313/
1109
BPW VB
VA-VAK-2
Blair PD276
Calandro
50/50
Tandem
Dayton 4-
spring (or
Truckmaster)
Franklin 917
Freighter
-TAA 29/35/
36/39/40/49
-VA 35
VE 35/40
Fruehauf F2/
F2U
Gwynne 2A
68W/R36
Kenworth
Gilderide
McGrath MF
2B
Transequip
TQ
Volvo L-
ride
York ES2/
TS2

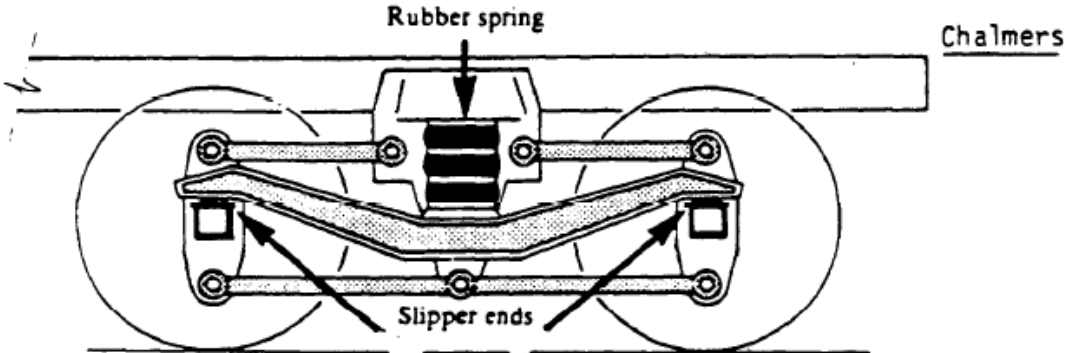
C.3 Four spring suspension - bellcranks and short pushrods

Note: Pushrods may be compression struts as shown in diagram or tension rods

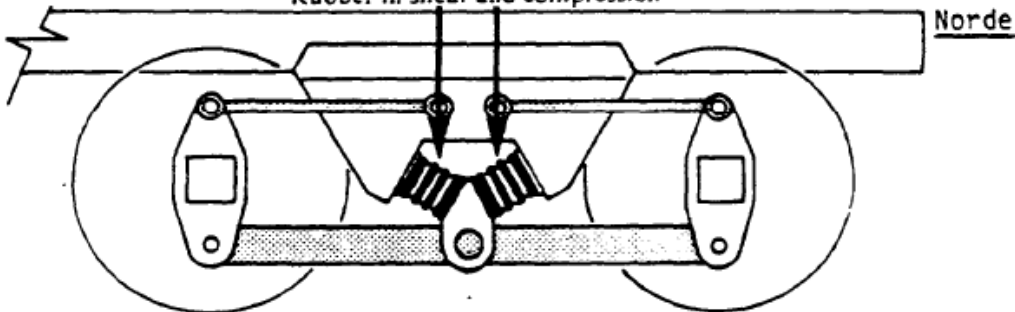


Brake
Reactive
Yes No

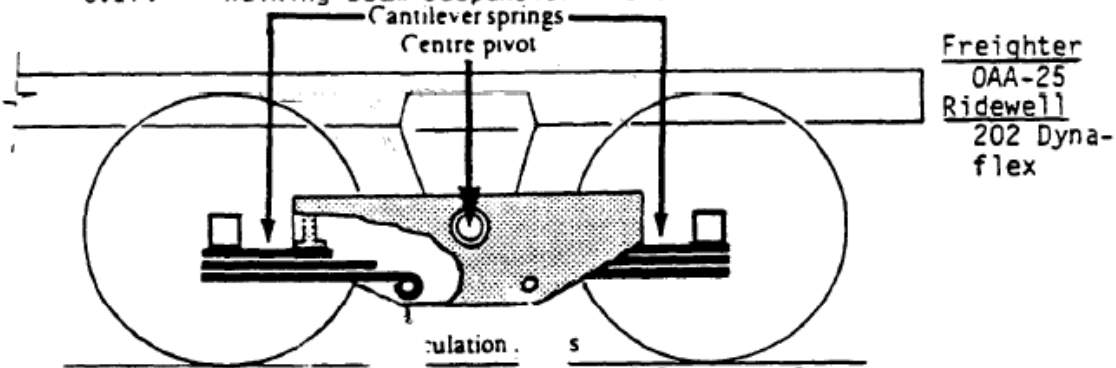
C.14. Walking beam suspension - rigid beam



C.15. Walking beam suspension - rigid beam
Rubber in shear and compression

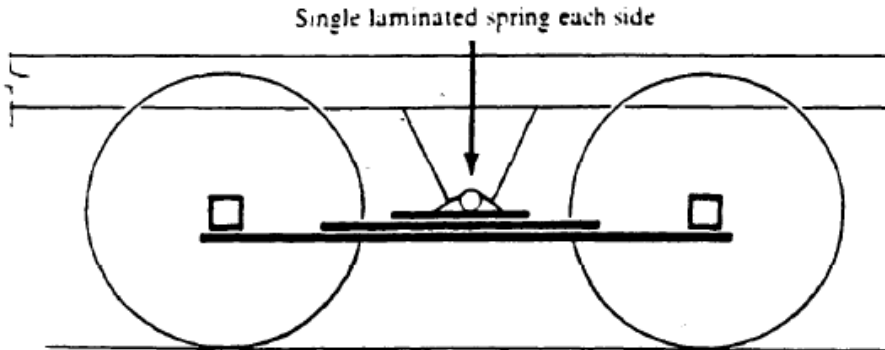


C.17. Walking beam suspension - articulated beam



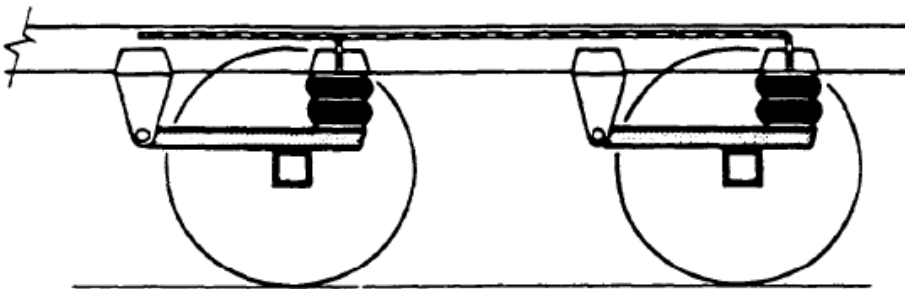
Brake
Reactive
Yes No

C.19. Walking beam suspension - flexible beam



Fleet FL2
Freighter
H.900
TAA 14
Fruehauf
M-2/M-2U
Gwynne P.20
Neway L.D.
Transpec/
BPW
York DN
Reyco 70

C.24 Air suspension - trailing arms

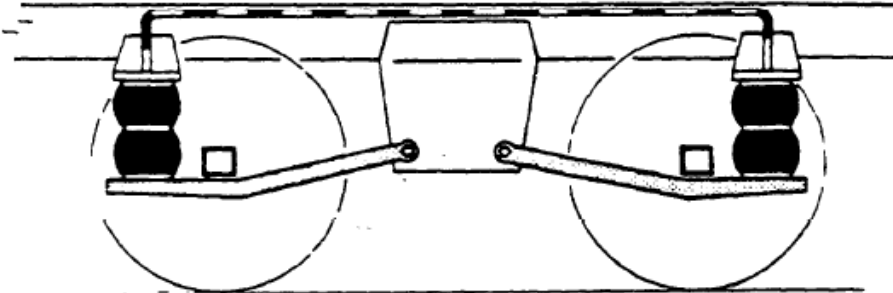


Denair Bogie
Franklin
282/209
Fruehauf
A-2/T-2
Kenworth
Dual-air
Neway ART
Neway AR-US
Page Trail-
master 900
Peterbilt
Air Leaf/
Air Trak
Ridewell
Trailing
Arm
Transpec
PAK 221
Western
Overslung/
Underslung

Trailing arms may be either rigid as shown, or in the form of a laminated cantilever spring

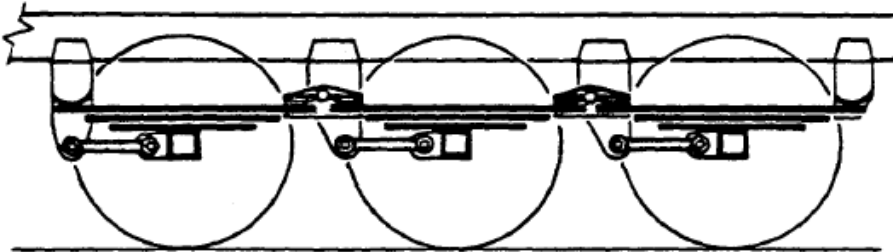
Brake
Reactive
Yes No

C.25. Air suspension - leading and trailing arms



GMC Astro-
aire

D.1. Laminated springs - short rockers



Blair PD277
BPW VB
VA-VAK
Dayton Tri-
Lite
Fleet Low-
load
(underslung)
Franklin 930
Freighter
35/36/39
/40/49 tri
VA 35 tri
VE 40
VE 35
Fruehauf
F3/F3W/
F3U/F3WU
Gwynne
3A68W/HMW
McGrath
MF 3B
Transequip
TQ Triaxle
York TS3/ES3
Tank Ovip
Goth 8
Rocker
Trailermaster
76,100
Reyco
Transpro
SHD-UM3
21B

Brake
Reactive
Yes No

Haulmark
TR8
TR8u
TR9A
TR9B
TR10