PO/CL 470

INSTRUCTION

Chief Mechanical & Electrical Engineer
British Railways Board
14 Melbury Terrace
London NW1 6JU

Ref: 172-9-2

Date: February 1979

GLOUCESTER 3 PIECE BOGIES (CONSTANT FRICTION DAMPING).

Attention is drawn to the need to check Gloucester 3 piece bogies, of the constant friction damper type, for loss of damping effect.

Bogies of this type, of both 20 ton axle load and 25 ton axle load, can be readily identified by the shank of the damper bolt which protrudes through the bogie side frame. (See Attached Diagrams 1, 2, 2B, 3 and 4).

N.B. The nut shown on this protruding threaded shank of the damper bolt does not form a permanent part of the assembly and is to be used only for compressing the damper coil spring to facilitate dismantling of the bolster from the side frame.

If the shank of the bolt can be moved by hand a loss of damping has occurred and the defect must be rectified.

This check should be carried out when bogies are shopped for repair and also when there is evidence of broken damper coil springs during service.

It may be found that the following items need attention :-

a) Damper Pad

If the thickness at "A" is below the minimum figure shown a new pad must be fitted.

b) Arcuate Liners on Bolster

If the dimension across the faces of the liners, or the thickness of any one liner, is less than the minimum shown in the Diagram Appendices, one or both of the liners must be replaced as necessary.

c) Side Frame Damper Housing

If dimension "B" exceeds the maximum shown the surfaces must be built up by welding (using welding rods giving a weld strength of 850 to 1004 N/mm^2 (55 to 65TT) and dressed smooth to be within the dimension shown.

d) Damper Coil Spring

The free height must be within the tolerances shown at "C" and the springs must be replaced if necessary.

Cont'd

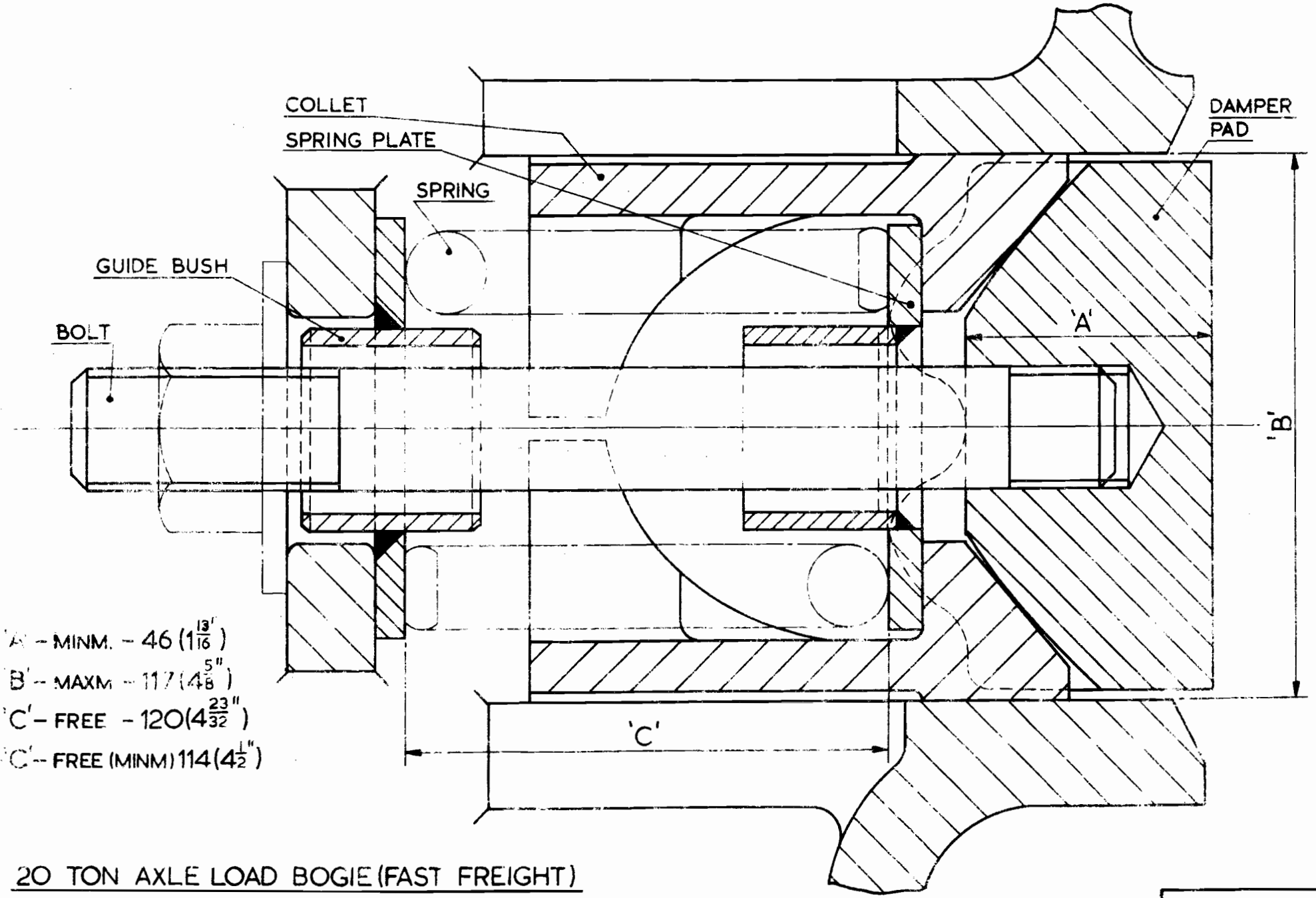
e) Loose Packing Washers and Shims

On certain early Gloucester 20 ton axle load bogies the appropriate damper coil spring compression was achieved by inclusion of 1/8" thick loose washers and slotted packing shims (see Diagram 2B). These washers and shims may be missing from the assembly and in such cases they should not be replaced and the 3/8" spring plate should be removed and replaced by a 5/8" spring plate (see Diagram 2).

N.B. It is recommended that this modification is carried out at any classified repair involving stripping of the bogies, irrespective of whether loss of damping has occurred.

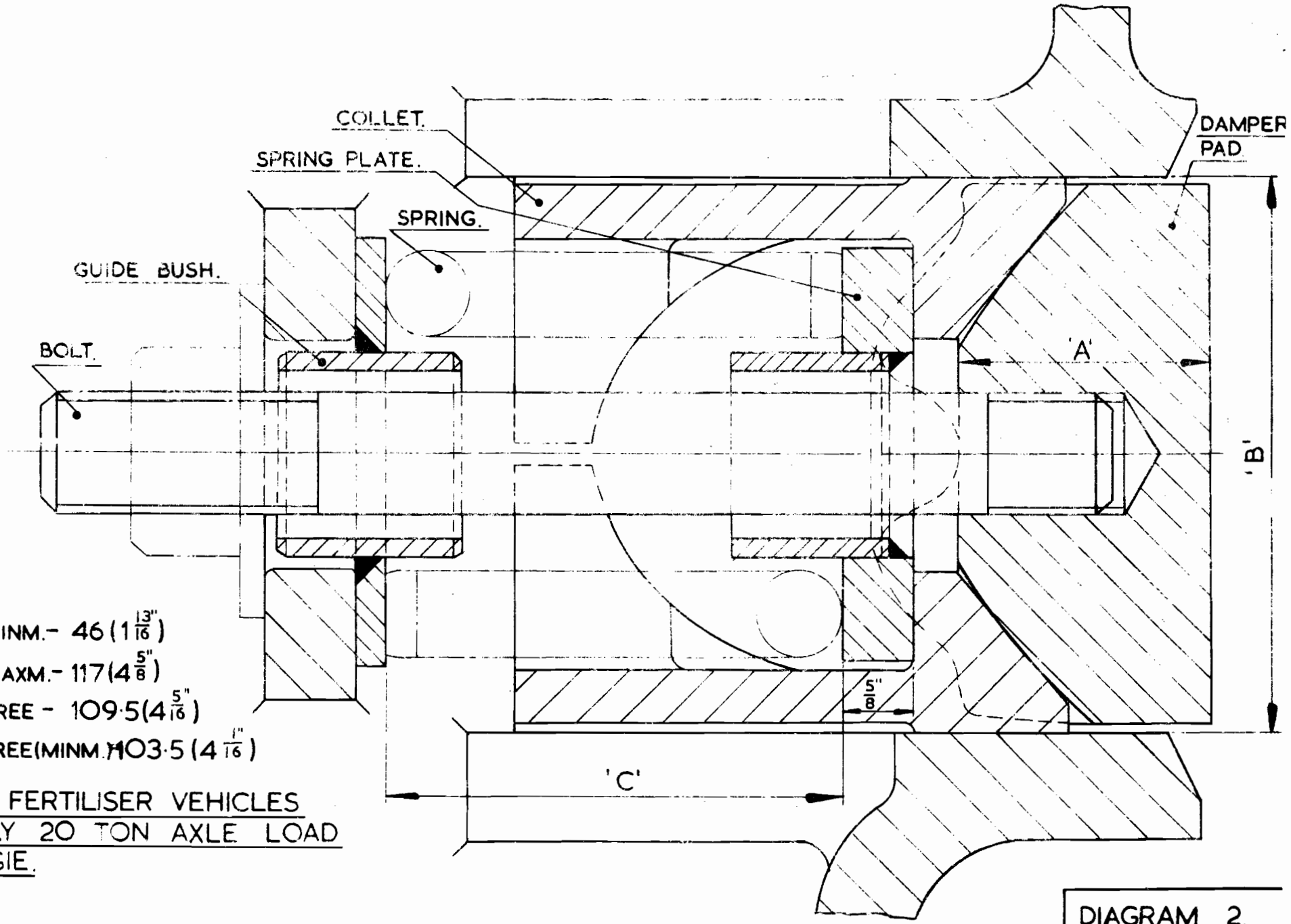
D J Stone

for K. Taylor



20 TON AXLE LOAD BOGIE (FAST FREIGHT)
44 BOGIES

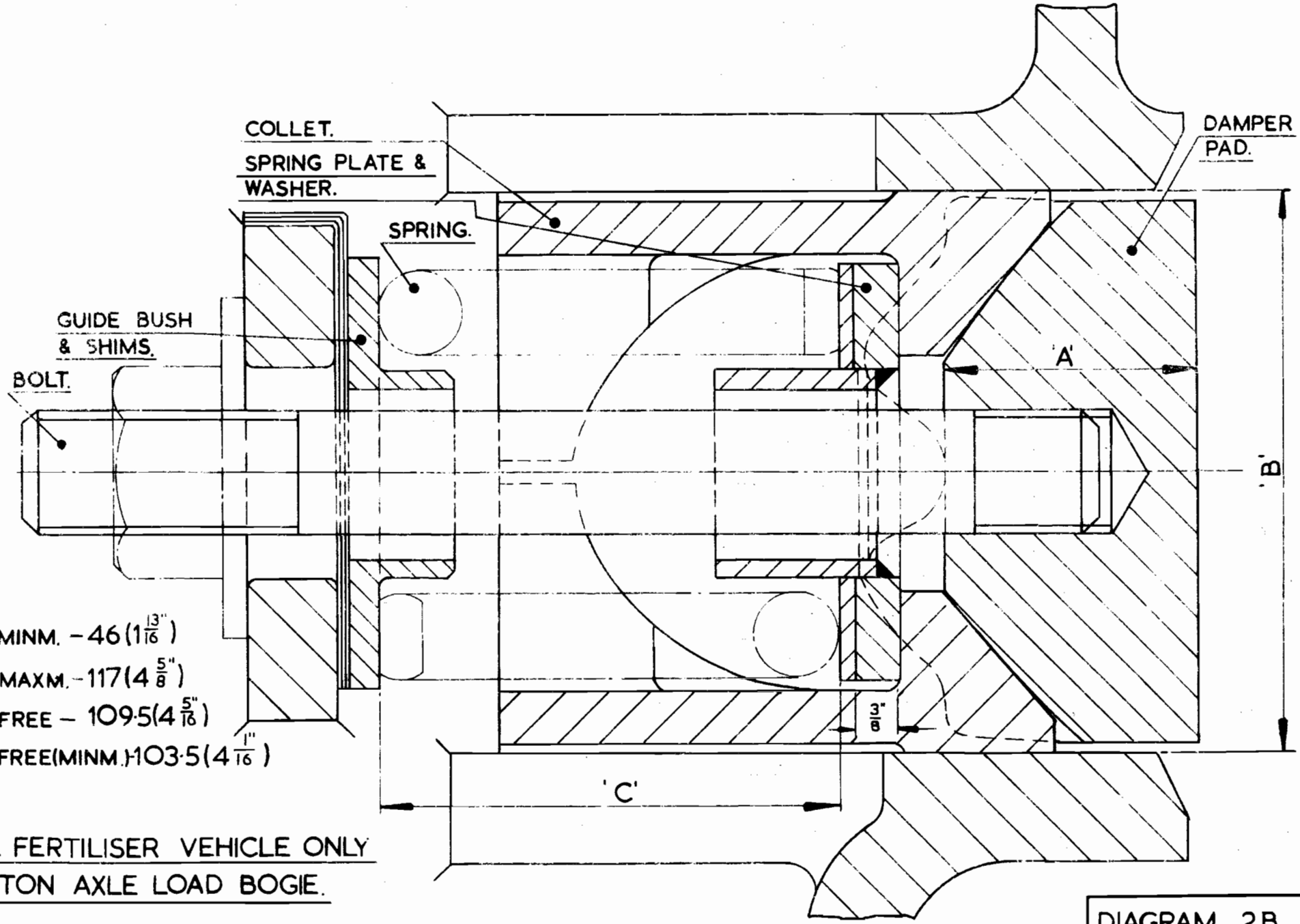
DIAGRAM. 1



'A'-MINM.- 46 ($1\frac{13}{16}$")
'B'- MAXM.- 117 ($4\frac{5}{8}$")
'C'-FREE - 109·5 ($4\frac{5}{16}$")
'C'-FREE(MINM.)103·5 ($4\frac{1}{16}$")

U.K. FERTILISER VEHICLES
ONLY 20 TON AXLE LOAD
BOGIE.

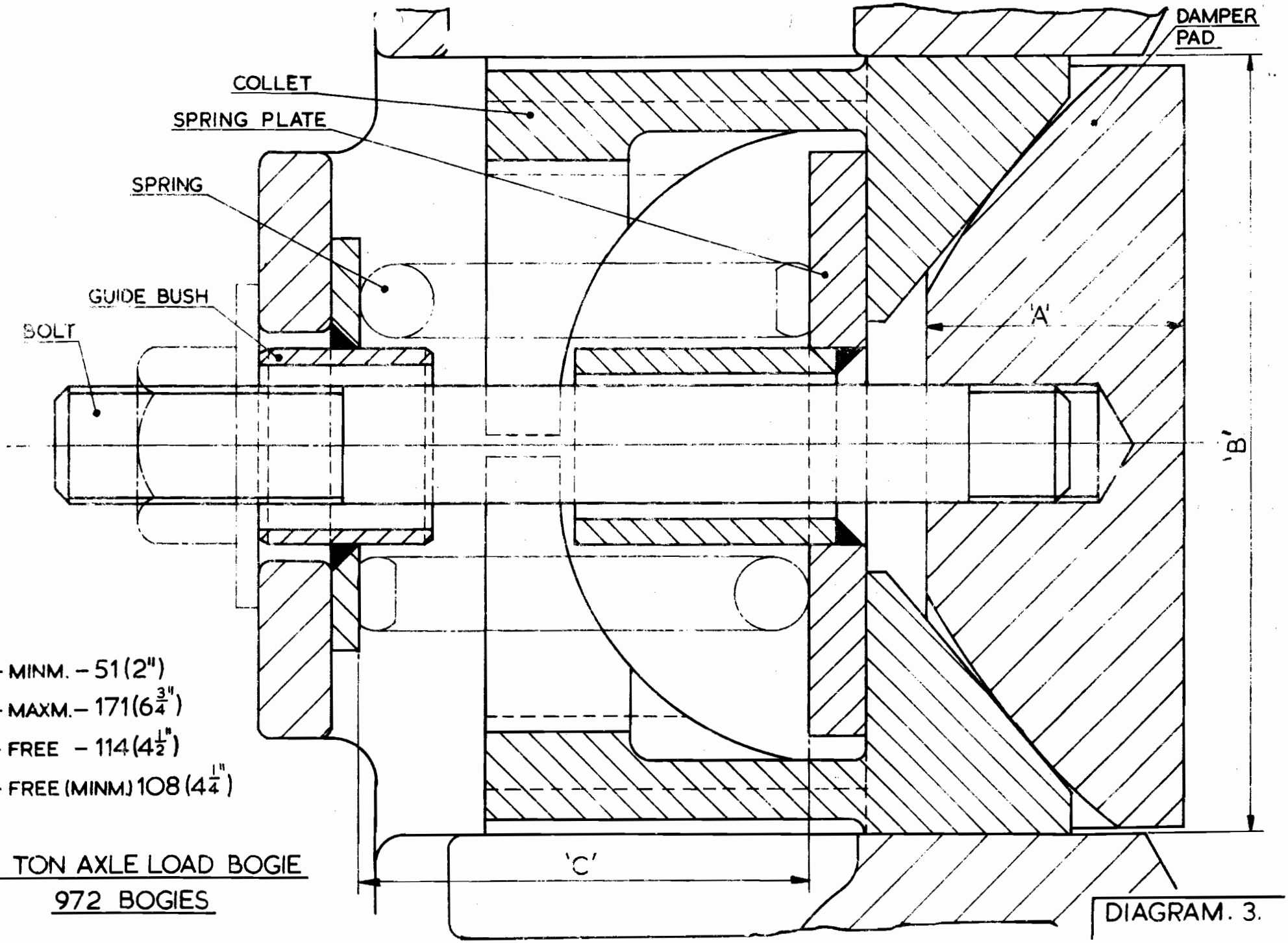
DIAGRAM 2.



'A' - MINM. - 46 ($1\frac{13}{16}$")
'B' - MAXM. - 117 ($4\frac{5}{8}$")
'C' - FREE - 109·5 ($4\frac{5}{16}$")
'C' - FREE (MINM.) 103·5 ($4\frac{1}{16}$")

U.K. FERTILISER VEHICLE ONLY
20 TON AXLE LOAD BOGIE.

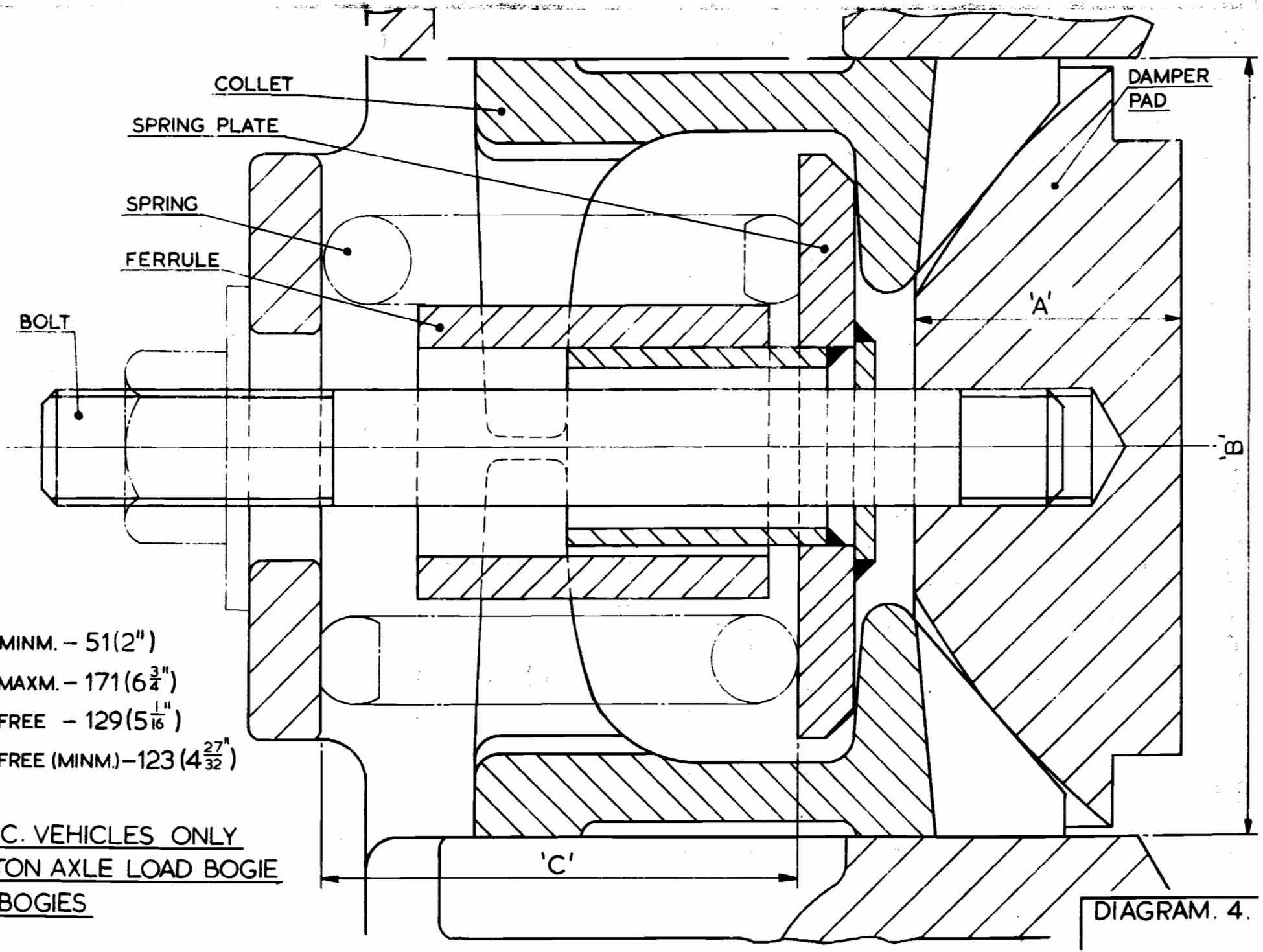
DIAGRAM 2B.



'A' – MINM. – 51 (2")
'B' – MAXM. – 171 ($6\frac{3}{4}$")
'C' – FREE – 114 ($4\frac{1}{2}$")
'C' – FREE (MINM.) 108 ($4\frac{1}{4}$")

25 TON AXLE LOAD BOGIE
972 BOGIES

DIAGRAM. 3.

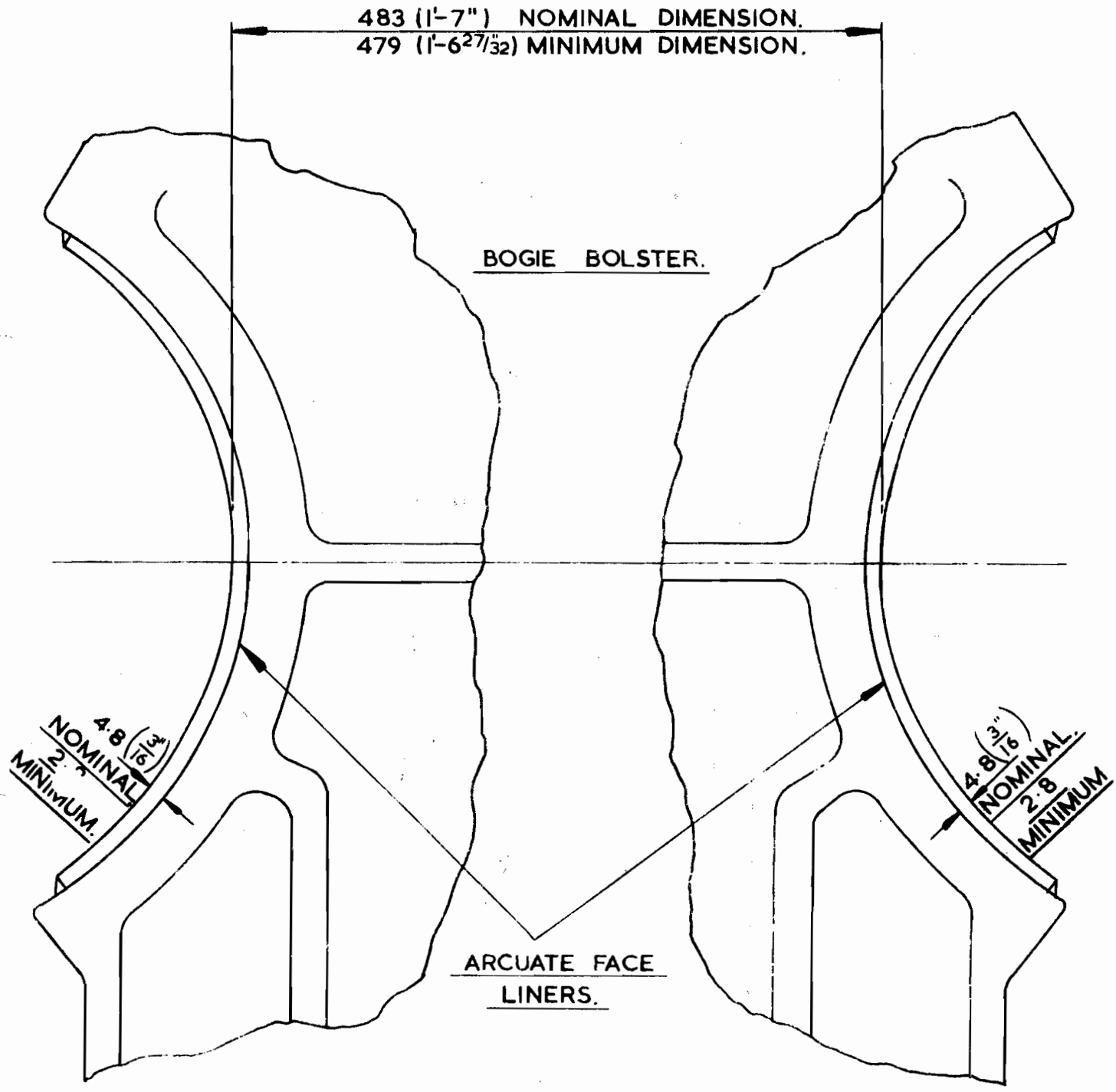


'A' – MINM. – 51(2")
'B' – MAXM. – 171($6\frac{3}{4}$")
'C' – FREE – 129($5\frac{1}{16}$")
'C' – FREE (MINM.) – 123($4\frac{27}{32}$")

B.O.C. VEHICLES ONLY
25 TON AXLE LOAD BOGIE
52 BOGIES

DIAGRAM. 4.

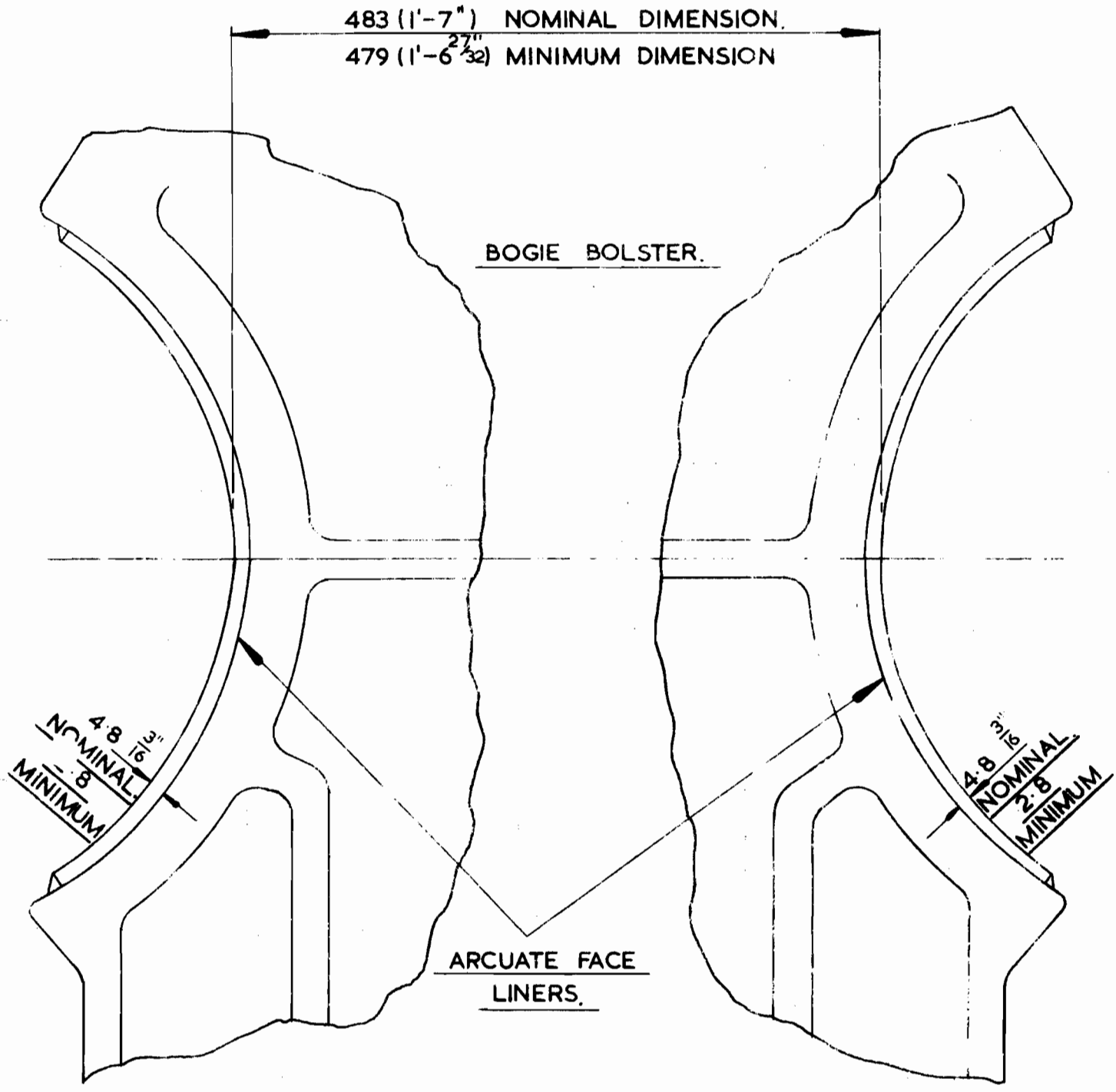
CONSTANT PRESSURE DAMPER
20 TONS AXLELOAD.



PLAN VIEW.

APPENDIX TO DIAG. 1.

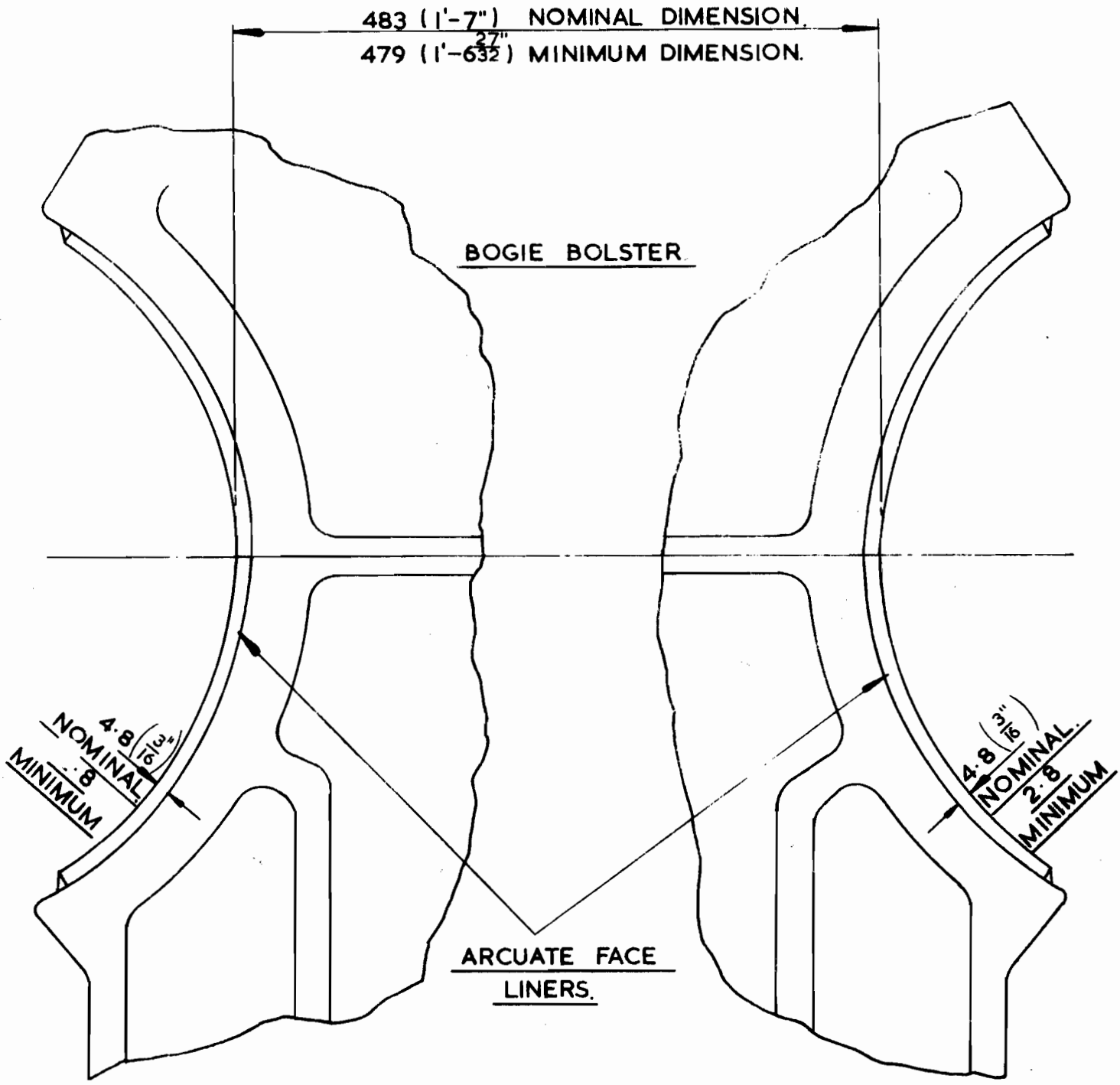
CONSTANT PRESSURE DAMPER
20 TONS AXLELOAD.



PLAN VIEW.

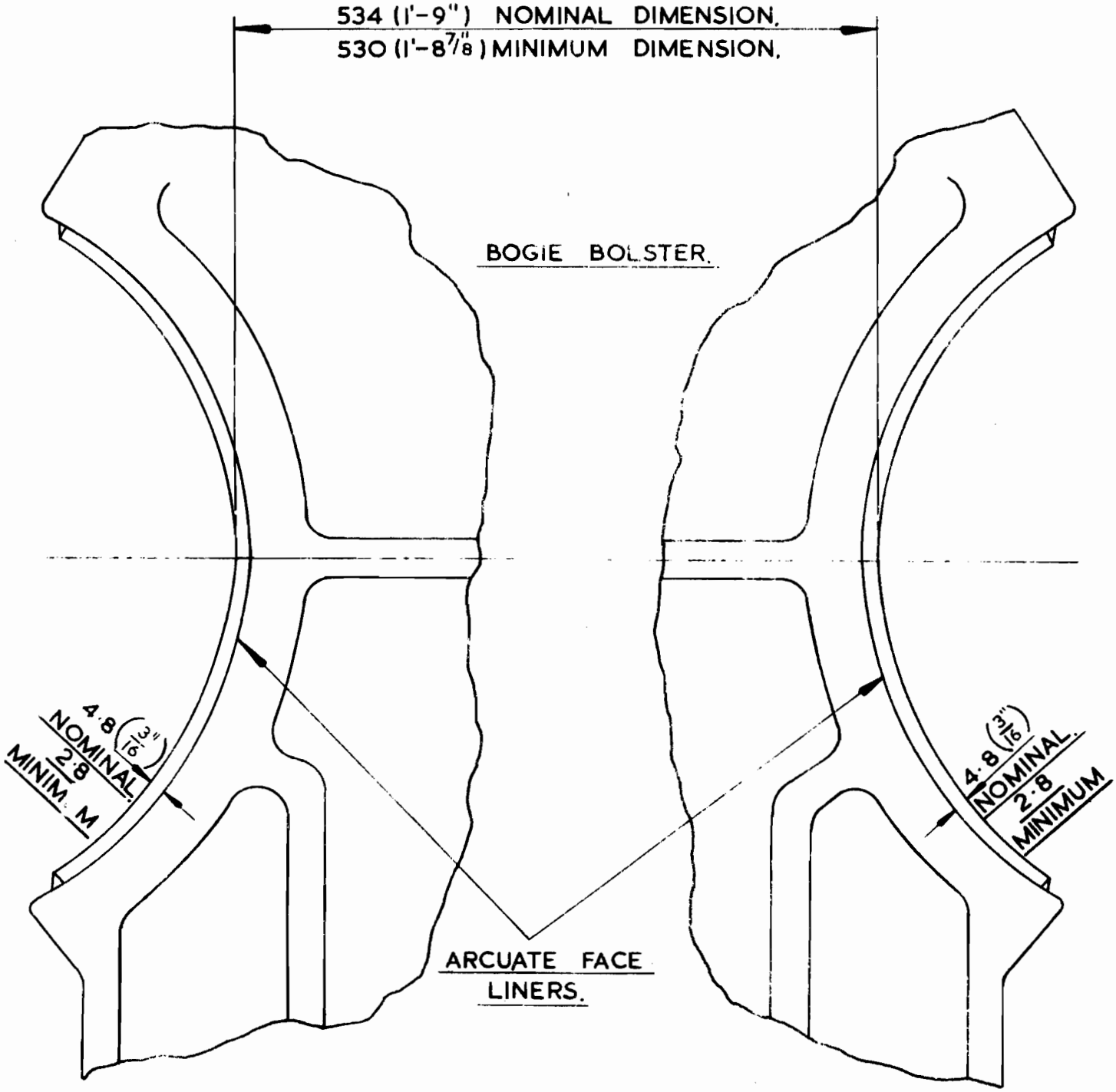
APPENDIX TO DIAG. 2.

CONSTANT PRESSURE DAMPER
20 TONS AXLELOAD.



PLAN VIEW
APPENDIX TO DIAG. 2B.

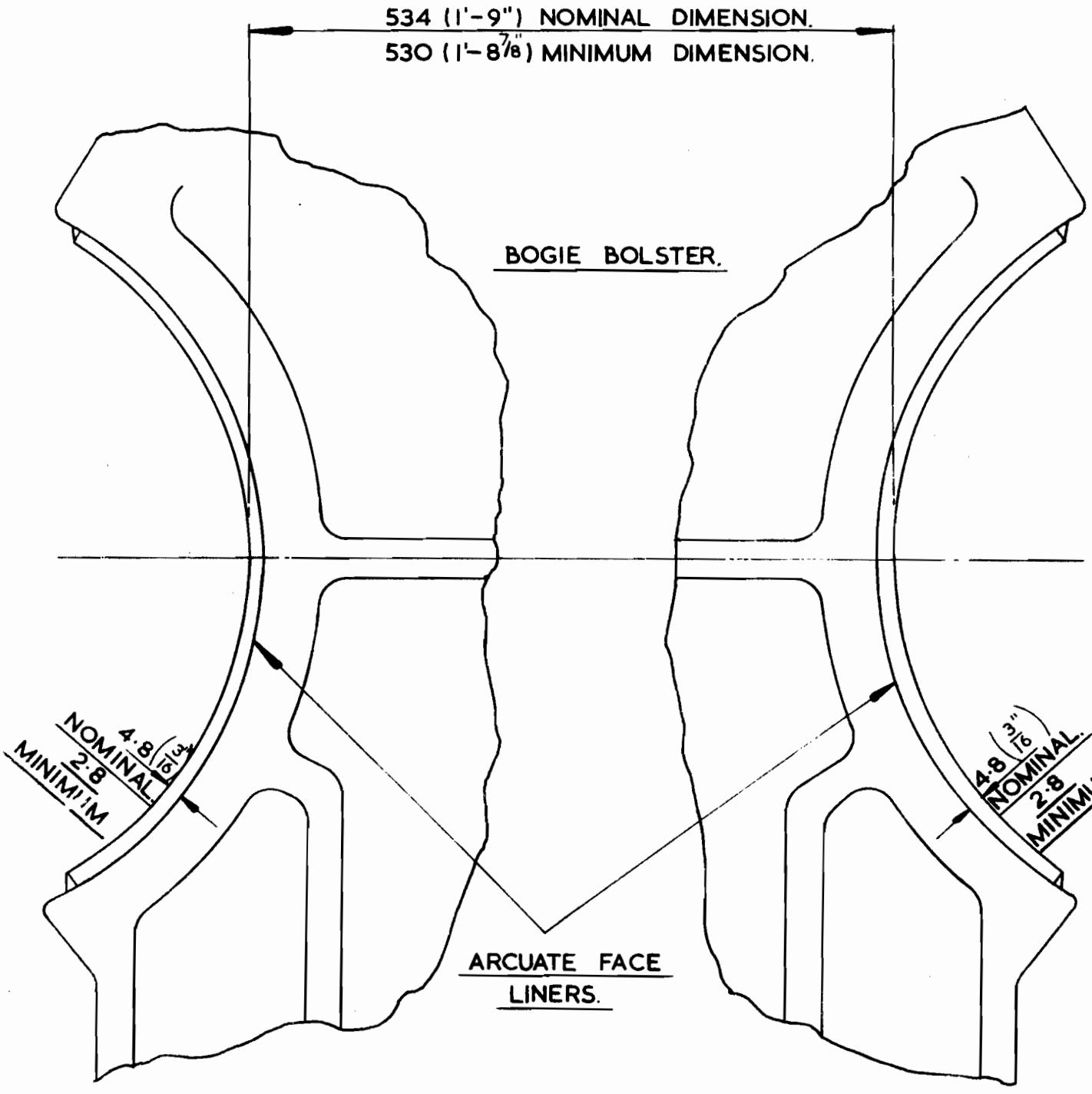
CONSTANT PRESSURE DAMPER
25 TONS AXLELOAD.



PLAN VIEW.

APPENDIX TO DIAG. 3.

CONSTANT PRESSURE DAMPER
25 TONS AXLELOAD.



PLAN VIEW.

APPENDIX TO DIAG. 4.