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BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा

स्वचल वाहन – ब्रेक प्रणाली – बैंजो बोल्ट संयोजन – आयाम

(पहला पुनरीक्षण)

Draft Indian Standard

**AUTOMOTIVE VEHICLES — BRAKING SYSTEMS — BANJO BOLT
CONNECTIONS DIMENSIONS**

(First Revision)

ICS 43.040

**Automotive Braking Systems, Vehicle Testing, Steering and
performance Evaluation Sectional Committee, TED 04**

**Last date for receipt of
comments is 05/09/2023**

July 2023

Price Group

Automotive Braking Systems, Vehicle Testing, Steering and performance Evaluation Sectional Committee, TED 04

FOREWORD

(Formal Clause to be added later)

This standard was first published in 1989. The present revision has been taken up with a view to incorporating the modifications found necessary as a result of experience gained on the use of this standard. Also, in this revision, the standard has been brought into the latest style and format of Indian Standard, and references to Indian Standards, wherever applicable have been updated.

This standard is one in the series of standards being developed for automotive hydraulic braking systems of road vehicles.

This standard does not preclude details of sizes and forms, necessary for any other applications. In the preparation of this standard, assistance has been derived from the following:

SAE J 1291-1980 Automotive hydraulic banjo bolt connections

DIN 74233 (Part 1)-1963 Brake lines for hydraulic brakes, hollow screws

The composition of the committee responsible for formulation of this standard is given as Annex A. (Will be added later)

Draft Indian Standard

AUTOMOTIVE VEHICLES — BRAKING SYSTEMS — BANJO BOLT CONNECTIONS DIMENSIONS

(First Revision)

1 SCOPE

1.1 This standard specifies dimensional requirements for threaded ports and banjo bolts for Interconnection of major components in automotive hydraulic brake systems.

1.2 This standard does not cover banjo blocks.

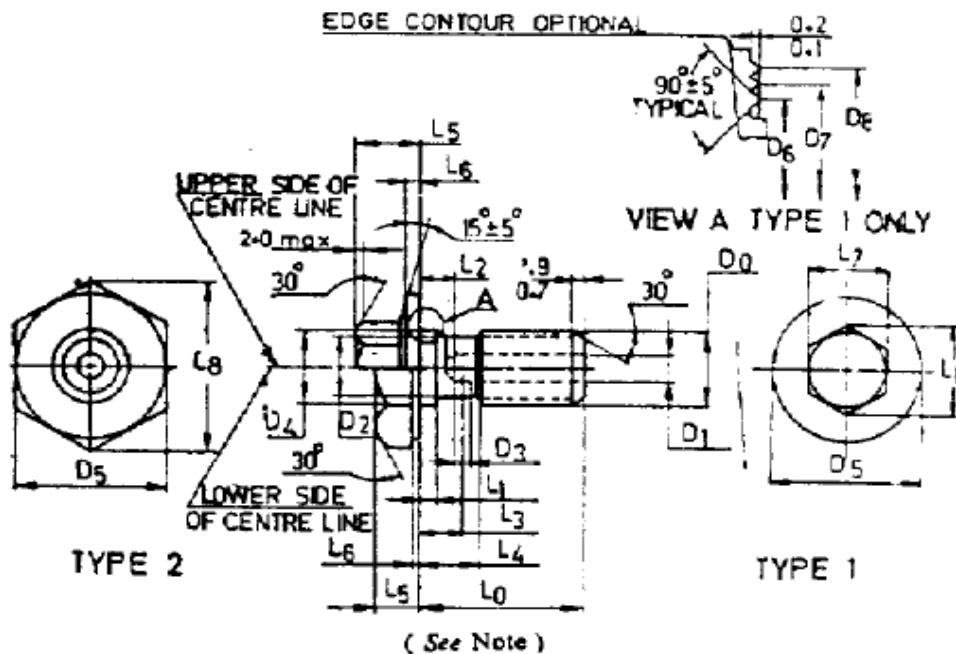
2 DIMENSIONS OF BANJO BOLTS

The dimensions and tolerances shall be as recommended in Tables 1 and 2.

3 DIMENSIONS OF THREADED PORTS

The dimensions and the tolerances for threaded ports for banjo bolts shall conform to Table 3.

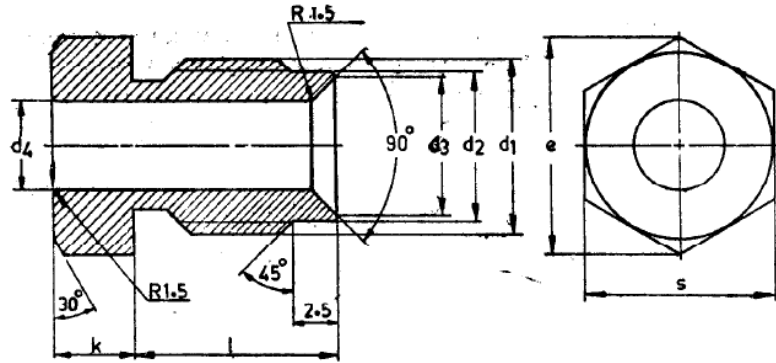
Table 1 Dimensions and Tolerances for Banjo Bolts
(Clause 2)



All dimensions in millimetres.

SI No.	Thread Dia d_1	d_2 -0.1	d_3 +0.1	d_4 H 13	e	k ± 0.2	l	s $h 11$	Pipe outside Diameter
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
i)	M 10 \times 1	8.4	7.4	4.9	12.7	4.5	11.5	11	4.75
ii)	M 12 \times 1	10.4	9.5	6.15	13.8	5	15	12	6
iii)	M 14 \times 1.5	11.7	10.7	8.15	16.2	5	20	14	8
iv)	M 16 \times 1.5	13.1	12.7	10.15	19.6	5	20	17	10

Table 2 Dimensions of Banjo Bolts (Alternate)
(Clause 2)

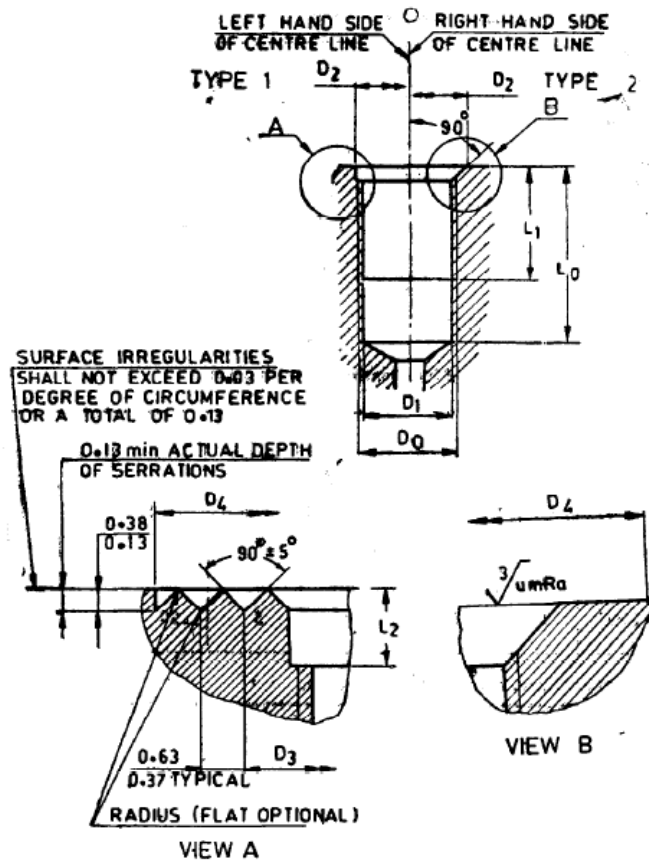


All dimensions in millimetres

SI No.	Thread Dia d_1	d_2 -0.1	d_3 +0.1	d_4 H 13	e	k ± 0.2	l	s $h 11$	Pipe outside Diameter
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
i)	M 10 \times 1	8.4	7.4	4.9	12.7	4.5	11.5	11	4.75
ii)	M 12 \times 1	10.4	9.5	6.15	13.8	5	15	12	6
iii)	M 14 \times 1.5	11.7	10.7	8.15	16.2	5	20	14	8
iv)	M 16 \times 1.5	13.1	12.7	10.15	19.6	5	20	17	10

NOTE — Details, not specified, may be suitably chosen.

Table 3 Dimensions and Tolerances for Threaded Ports for Banjo Bolts
(Clause 3)



All dimensions in millimetres

SI No.	D ₀ Thread 6H			Pitch Diameter		Minor Diameter		D ₁	D ₂		D ₃	D ₄		L ₀	L ₁	L ₂
	(2)	(3)	(4)	Max	Min	Max	Min	+0.0 -0.3	+0.0 -0.3	Type 1 Type 2	+0.0 -0.5	Type 1 Type 2	-0.0 -1.0	Min	+0.0 -1.0	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
i)	M 10		1.0	9.500	9.350	9.153	8.917	8.50	10.25	11.6	11.25	18.25	48.3	18.5	12.5	1.80
ii)			1.5	9.206	9.026	8.676	8.376	8.70	10.25	11.6	11.25	19.25	48.3	18.5	12.5	1.80
iii)	M 11		1.0	10.500	10.350	10.153	9.917	9.40	11.25	12.7	12.25	19.25	48.3	18.5	12.5	1.80
iv)			1.5	10.206	10.026	9.676	9.376	9.70	11.25	12.7	12.25	19.25	48.3	18.5	12.5	1.80
v)	M 12		1.0	11.510	11.350	10.153	10.917	10.30	12.25	13.0	13.25	20.25	48.3	18.5	12.5	1.80
vi)			1.5	11.216	11.026	10.676	10.376	10.70	12.25	13.0	13.25	20.25	48.3	18.5	12.5	1.80

ANNEX A
(Foreword)

COMMITTEE COMPOSITION

Automotive Braking Systems, Vehicle Testing, Steering and performance Evaluation
Sectional Committee, TED 04

(Will be added later)