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Cooperative Engineering Program

SAE J712 JUN86

**Industrial and
Agricultural Disc
Wheels**

SAE Recommended Practice
Reaffirmed June 1986

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INDUSTRIAL AND AGRICULTURAL DISC WHEELS

1. **PURPOSE:** The purpose of this recommended practice is to provide a selection of disc wheels for industrial and agricultural application with a maximum of interchangeability.

This is accomplished by establishing 5 groups of disc wheels, in each of which the hub mounting elements are common. These groups are designated 4 bolt, 5 in bolt circle; 5 bolt, 4.5 in bolt circle; 5 bolt, 5.5 in bolt circle; 6 bolt, 6 in bolt circle; and 8 bolt, 8 in bolt circle.

Further, this recommended practice establishes an SAE part number and the maximum rated radial load for each standard wheel. In addition, the standard requires the wheel manufacturer's name or trademark to be impression stamped on the wheel with location at the discretion of the manufacturer.

2. **4 BOLT, 5 IN BOLT CIRCLE GROUP:** This group is provided for light duty implement service. There are 4 mounting holes on a 5 in (127 mm) diameter bolt circle.

There are 4 wheels in this group in 2 offsets and 4 rims of 14 in and 15 in diameter.

See Fig. 1 for SAE part numbers, dimensions and rated loads.

3. **5 BOLT, 4.5 IN BOLT CIRCLE GROUP:** This group is provided for light duty implement, lawn and garden tractor, or front tractor wheel service. There are 5 mounting holes on a 4.5 in (114.3 mm) diameter bolt circle.

There are 6 wheels in this group in 1 offset and 5 rims of 12 in diameter.

See Fig. 2 for SAE part numbers, dimensions and rated loads.

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4. **5 BOLT, 5.5 IN BOLT CIRCLE GROUP:** This group is provided for medium duty implement service. There are 5 mounting holes on a 5.5 in (139.7 mm) diameter bolt circle.

There are 6 wheels in this group in 1 offset and 6 rims of 14 in and 15 in diameters.

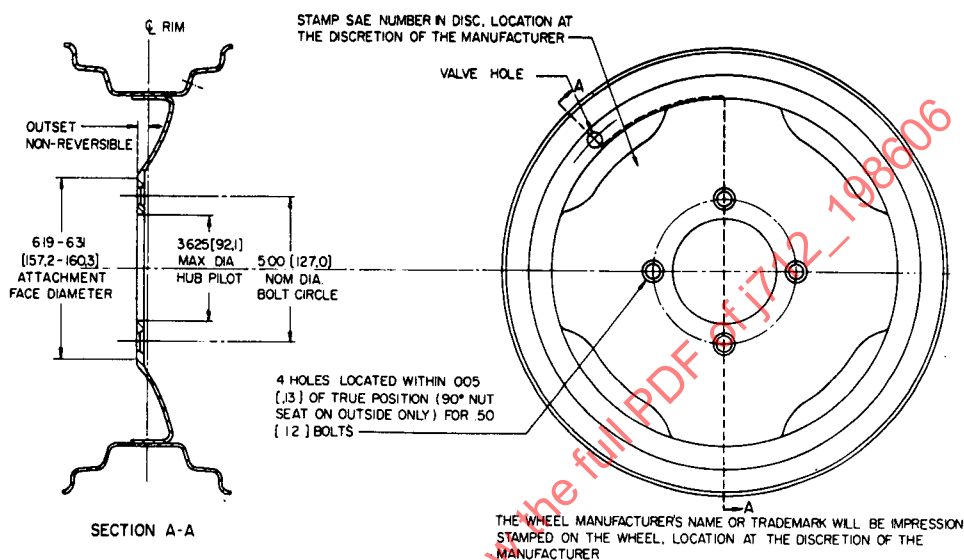


FIG. 1--4 BOLT, 5 IN BOLT CIRCLE GROUP

SAE Wheel No.	Rim Size	Outset, in (mm)	Max. Rated Radial Wheel Load ^a , lb (kg)
401	14 x 5 KB	.38 (10)	1250 (570)
402	14 x 6 KB	.38 (10)	1250 (570)
403	15 x 4 J	.44 (11)	1250 (570)
404	15 x 4-1/2 KB or K	.38 (10)	1250 (570)

^aDetermine wheel loads with machine at rest. This rating applies up to 20 mph (32 km/h) maximum travel speed.

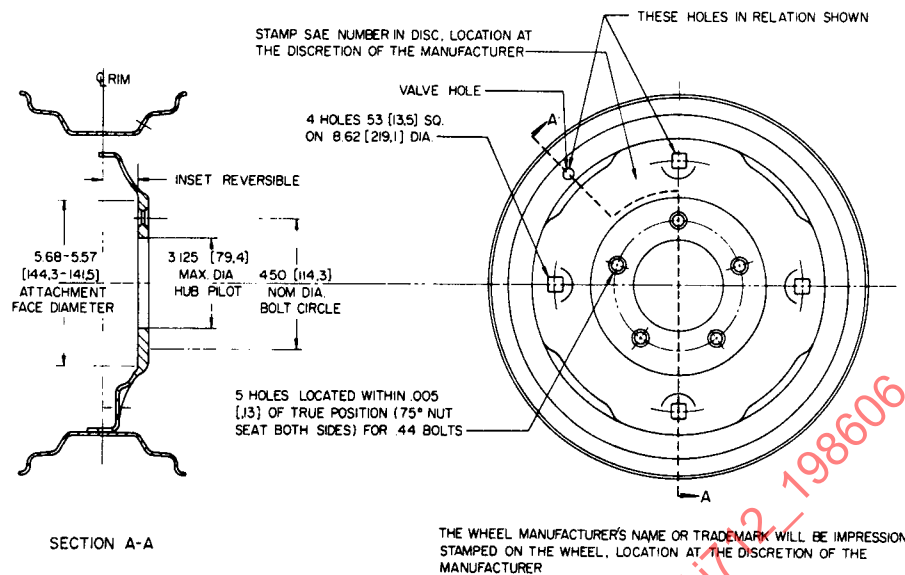


FIG. 2--5 BOLT, 4.5 IN BOLT CIRCLE GROUP

SAE Wheel No.	Rim Size	Inset, in (mm)	Max. Rated Radial Wheel Load ^a , lb (kg)
501	12 x 3.00 D	1.25 (32)	900 (410)
502	12 x 4 JA	1.25 (32)	900 (410)
503	12 x 5 JA	1.25 (32)	900 (410)
504	12 x 7 JA	1.25 (32)	500 (230)
505	12 x 7 JA	1.25 (32)	900 (410)
506	12 x 8-1/2 JA	1.25 (32)	900 (410)

^aDetermine wheel loads with machine at rest. This rating applies up to 20 mph (32 km/h) maximum travel speed.

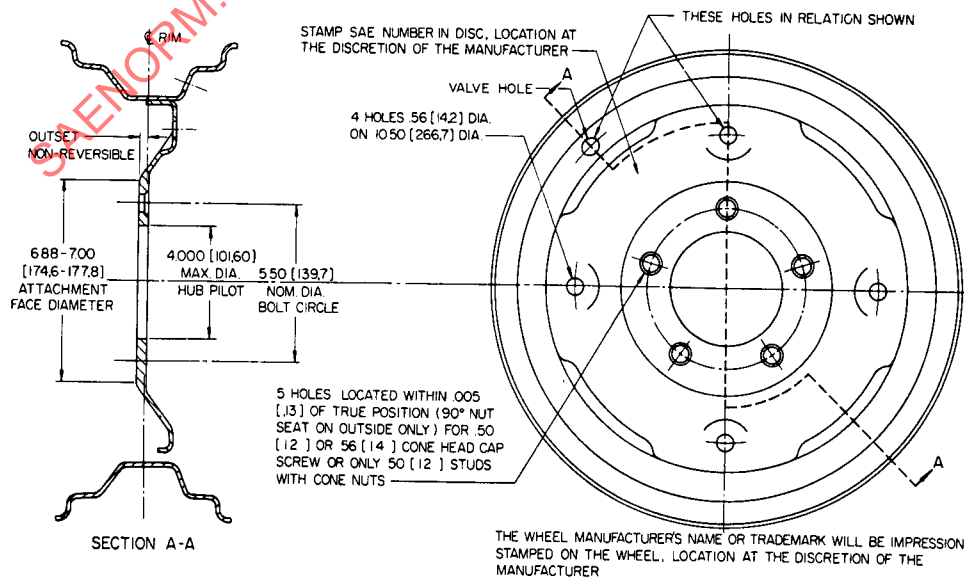


FIG. 3--5 BOLT, 5.5 IN BOLT CIRCLE GROUP

SAE Wheel No.	Rim Size	Offset, in (mm)	Max. Rated Radial Wheel Load ^a , lb (kg)
551	14 x 5 KB	.25 (6)	1800 (820)
552	14 x 6 KB	.25 (6)	1800 (820)
553	14 x 8 KB	.25 (6)	1800 (820)
554	15 x 5 KB or K	.25 (6)	1800 (820)
555	15 x 6 LB or L	.25 (6)	1800 (820)
556	15 x 8 LB	.25 (6)	1800 (820)

^aDetermine wheel loads with machine at rest. This rating applies up to 20 mph (32 km/h) maximum travel speed.

See Fig. 3 for SAE part numbers, dimensions and rated loads.

5. 6 BOLT, 6 IN BOLT CIRCLE GROUP: This group is provided for general tractor and implement service. There are 6 mounting holes on a 6 in (152.4 mm) diameter bolt circle.

There are 40 wheels in this group in 1 offset and 22 rims of 14, 15, 16, 16.1, 18 and 20 in diameter.

See Fig. 4 for SAE part numbers, dimensions and rated loads.

6. 8 BOLT, 8 IN BOLT CIRCLE GROUP: This group is provided for heavy duty tractor and implement service. There are 8 mounting holes on an 8 in (203.2 mm) diameter bolt circle.

There are 7 wheels in this group in 1 offset and 7 rims in 15, 16 and 16.1 in diameter.

See Fig. 5 for SAE part numbers, dimensions and rated loads.

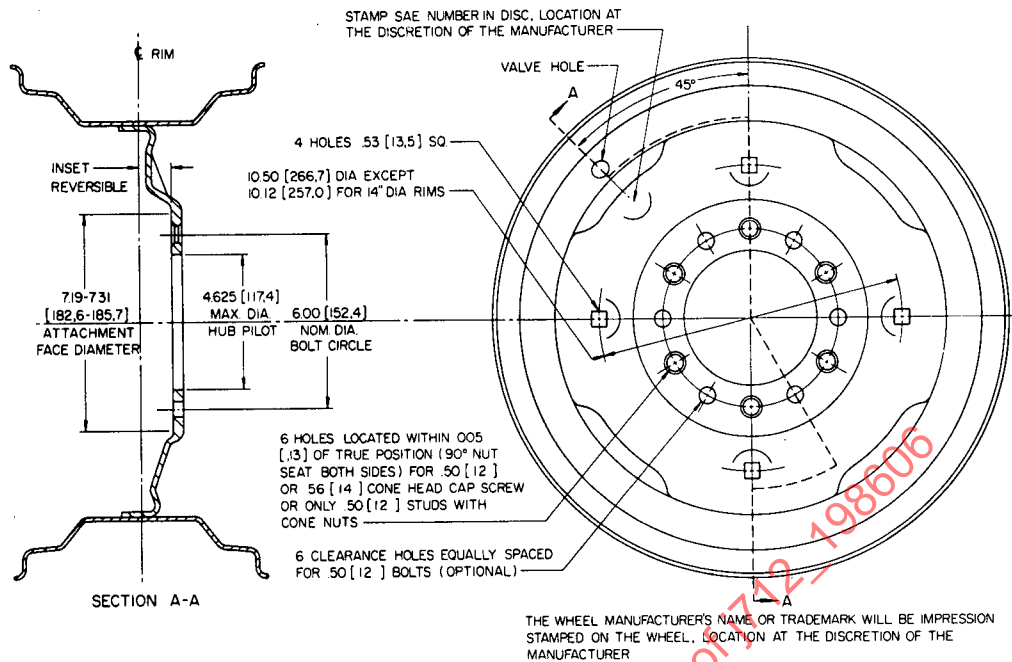


FIG. 4--6 BOLT, 6 IN BOLT CIRCLE GROUP

SAE Wheel No.	Rim Size	Inset, in (mm)	"Max. Rated" Radial Wheel Load ^a , lb (kg)
601	14 x 5 KB	1.12 (28)	1800 (820)
603	14 x 5 KB	1.12 (28)	2300 (1045)
605	14 x 6 KB	1.12 (28)	1800 (820)
607	14 x 6 KB	1.12 (28)	2800 (1270)
632	14 x 8 KB	1.12 (28)	2800 (1270)
609	15 x 3.00 D	1.12 (28)	1000 (455)
610	15 x 5 K or KB	1.12 (28)	1800 (820)
612	15 x 6 L or LB	1.12 (28)	1800 (820)
614	15 x 6 L or LB	1.12 (28)	2800 (1270)
616	15 x 6 L or LB	1.12 (28)	3300 (1500)
634	15 x 8 LB	1.12 (28)	2800 (1270)
635	15 x 8 LB	1.12 (28)	3500 (1590)
636	15 x W8L	1.12 (28)	2800 (1270)
637	15 x W8L	1.12 (28)	3500 (1590)
638	15 x 10 LB	1.12 (28)	2800 (1270)
639	15 x 10 LB	1.12 (28)	3500 (1590)
617	16 x 4.00 E	1.12 (28)	1800 (820)
619	16 x 4.50 E	1.12 (28)	1800 (820)
621	16 x 4.50 E	1.12 (28)	2300 (1045)
623	16 x 5.50 F	1.12 (28)	2800 (1270)
624	16 x 5.50 F	1.12 (28)	3300 (1500)
625	16 x 6 LB	1.12 (28)	2800 (1270)
627	16 x 8 LB	1.12 (28)	2800 (1270)
640	16 x W8L	1.12 (28)	1800 (820)
641	16 x W8L	1.12 (28)	2800 (1270)
642	16 x W8L	1.12 (28)	3500 (1590)
643	16 x 10 LB	1.12 (28)	2800 (1270)
644	16 x 10 LB	1.12 (28)	3500 (1590)
645	16 x W10L	1.12 (28)	2800 (1270)
646	16 x W10L	1.12 (28)	3500 (1590)
647	16.1 x W11C	1.12 (28)	2800 (1270)
648	16.1 x W11C	1.12 (28)	3500 (1590)
628	18 x 5.50 F	1.12 (28)	2600 (1180)
649	18 x 5.50 F	1.12 (28)	3500 (1590)
630	20 x 5.50 F	1.12 (28)	2800 (1270)
651	20 x 5.50 F	1.12 (28)	3500 (1590)
650	20 x W7A or W7B	1.12 (28)	2800 (1270)
652	20 x W7A or W7B	1.12 (28)	3500 (1590)
653	20 x W8B	1.12 (28)	2800 (1270)
654	20 x W8B	1.12 (28)	3500 (1590)

^aDetermine wheel loads with machine at rest. This rating applies up to 20 mph (32 km/h) maximum travel speed.

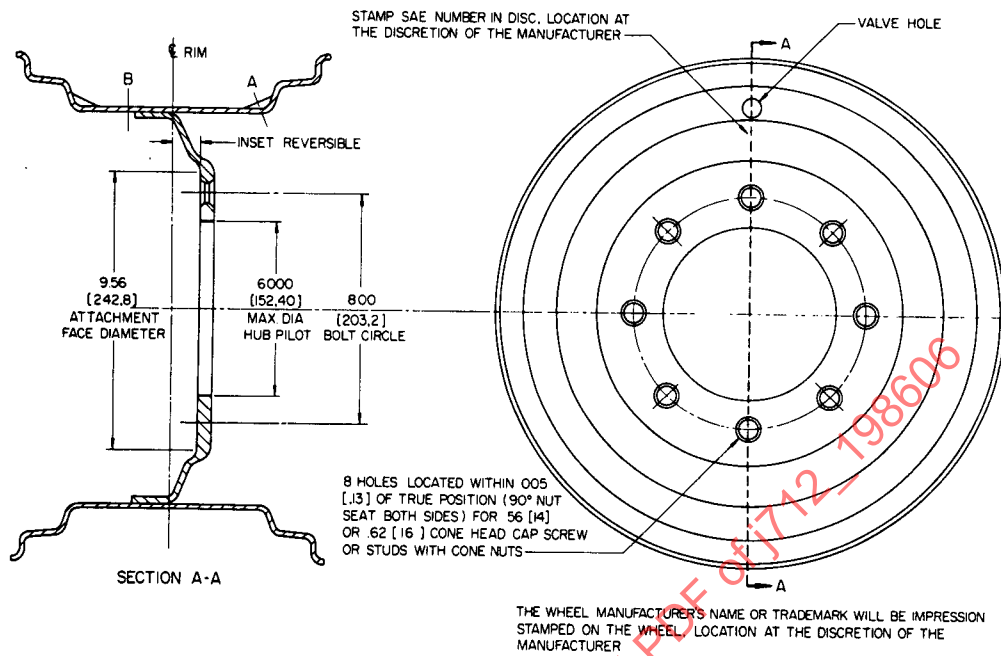


FIG. 5--8 BOLT, 8 IN BOLT CIRCLE GROUP

SAE Wheel No.	Rim Size	Inset, in (mm)	"Max. Rated" Radial Wheel Load ^a , lb (kg)	V/H
801	15 x 8 LB	1.09 (28)	4500 (2045)	A
802	15 x 10 LB	1.09 (28)	4500 (2045)	A
803	16 x W8L	1.09 (28)	5000 (2270)	A
804	16 x W10L	1.09 (28)	5000 (2270)	A
805	16.1 x W11C	1.09 (28)	5000 (2270)	A
806	16.1 x 14 LB	1.09 (28)	5000 (2270)	B
807	16.1 x 16 LB	1.09 (28)	5000 (2270)	B

^aDetermine wheel loads with machine at rest. This rating applies up to 20 mph (32 km/h) maximum travel speed.