

Internal Combustion Engines—Piston Rings—Vocabulary

This SAE Standard is equivalent to ISO Standard 6621-1.

1. **Scope**—Differences, where they exist, are shown in Appendix A with associated rationale.

This SAE Standard defines the most commonly used terms for piston rings. These terms designate either types of piston rings or certain characteristics and phenomena of piston rings.

The terms and definitions apply to piston rings for reciprocating internal combustion engines and compressors working under analogous conditions.

Appendix B is included which lists equivalent terms in English, French, Russian, German, Spanish, Portuguese, Italian, and Japanese.

- 1.1 **Rationale**—SAE J1588 is being discontinued because the content of this standard is also contained in ISO 6621-1. Therefore, to eliminate duplication and confusion in coordinating the standards between ISO and SAE, this document will be discontinued. The SAE Piston and Ring Standards Committee will now continue to support ISO in updating the standards as appropriate.

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2. References

2.1 Applicable Publications—The following publications form a part of the specification to the extent specified herein. Unless otherwise indicated the latest revision of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE DESIGNATION	ISO ¹ EQUIVALENT	
		INTERNAL COMBUSTION ENGINES—PISTON RINGS
J1588	6621/1	Vocabulary
J1589	6621/2	Measuring principles
J1590	6621/3	Material specifications
J1591	6621/4	General specifications
J1996	6621/5	Quality requirements
		INTERNAL COMBUSTION ENGINES—PISTON RINGS
J1997	6622/1	Rectangular rings
J1998	6622/2 TR	Rectangular rings with narrow ring width
J1999	6623	INTERNAL COMBUSTION ENGINES—PISTON RINGS— SCRAPER RINGS
J2000	6624/1	Keystone rings
J2001	6624/2 TR	Half keystone rings
J2002	6625	INTERNAL COMBUSTION ENGINES—PISTON RINGS— OIL CONTROL RINGS
J2003	6626	INTERNAL COMBUSTION ENGINES—PISTON RINGS— COIL SPRING LOADED OIL CONTROL RINGS
J2004	6627 TR	INTERNAL COMBUSTION ENGINES—PISTON RINGS— EXPANDER/SEGMENT OIL CONTROL RINGS
J2226		INTERNAL COMBUSTION ENGINES—PISTON RINGS— STEEL RECTANGULAR RINGS
	ISO 286	ISO SYSTEM OF LIMITS AND FITS

1. TR refers to Technical Report

3. Piston Ring Classification

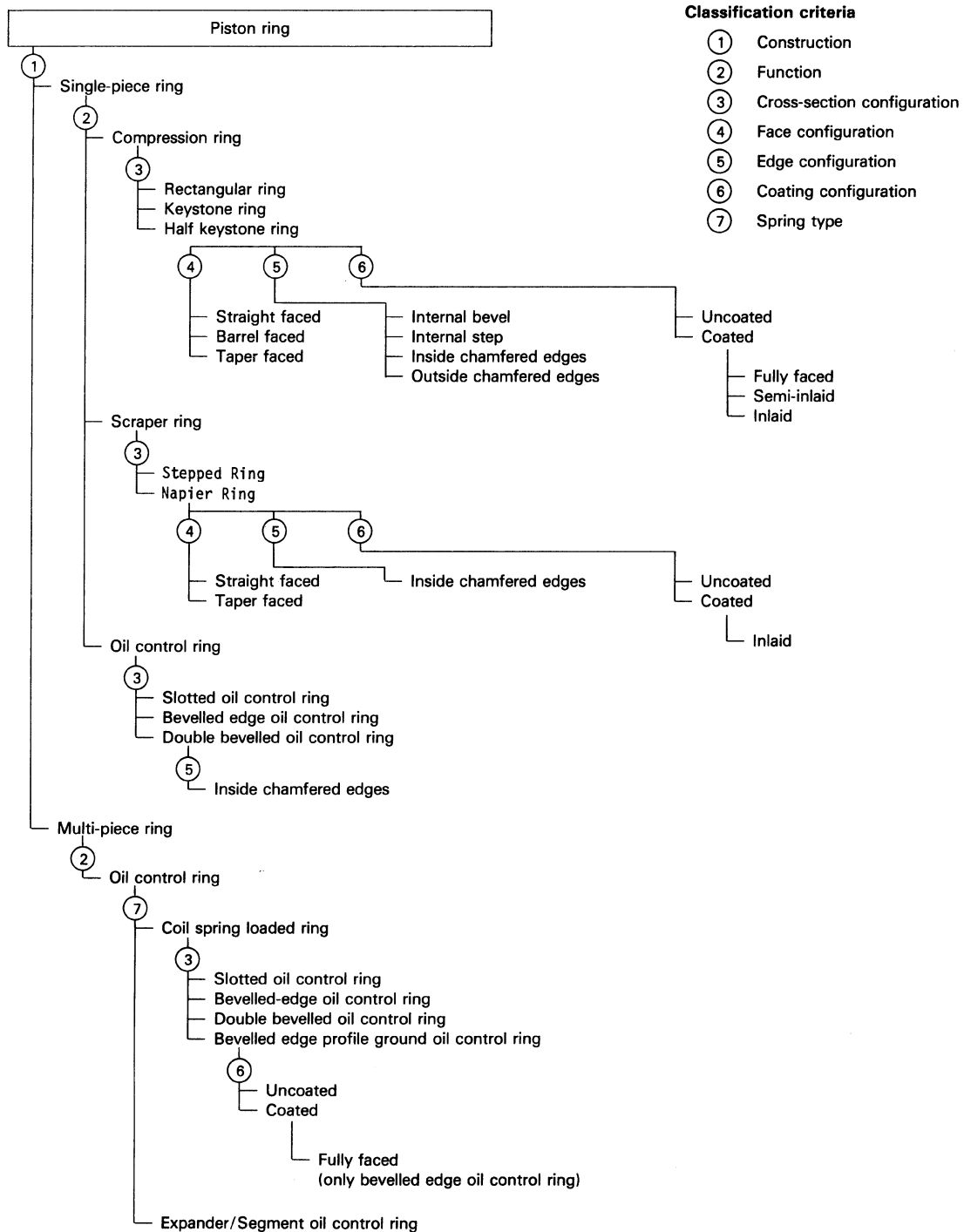


FIGURE 1—PISTON RING CLASSIFICATION

4. Piston Ring Types

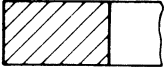
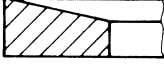
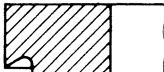
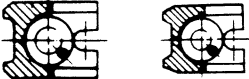
4.1 Cross section configuration	(These cross sections may be combined with the "common features" shown in 4.2, 4.3, 4.4 and 4.5)
Rectangular ring	
Keystone ring	
Half keystone ring	
Scraper ring (stepped)	
Scraper ring (Napier)	
Slotted oil control ring	
Bevelled edge oil control ring	
Coil spring loaded slotted oil control ring	
Coil spring loaded bevelled edge oil control ring	
Coil spring loaded double bevelled oil control ring	
Expander/Segment oil control ring	

FIGURE 2—PISTON RING TYPES

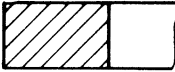
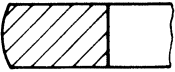
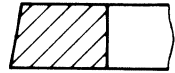
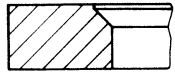
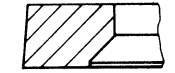
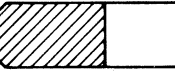
4.2 Face configuration	
Straight faced	
Barrel faced	
Taper faced	
4.3 Edge configuration	
Internal bevel top (positive twist type)	
Internal step top (positive twist type)	
Internal bevel bottom (negative twist type)	
Internal step bottom (negative twist type)	
Inside edges chamfered	
Outside edges chamfered	
Inside and outside edges chamfered	

FIGURE 2 (CONTINUED)

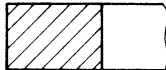
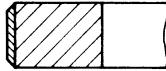
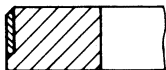
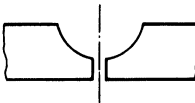
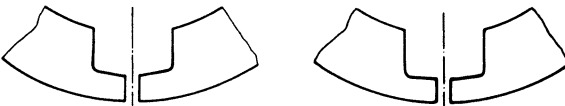
4.4 Coating configuration		
Uncoated		
Coated		
— Fully faced		
— Semi-inlaid		
— Inlaid		
4.5 Joint configuration		
Joint with side notch		
Joint with internal notch		

FIGURE 2 (CONTINUED)