

INTERNATIONAL
STANDARD

ISO
9457-2

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**Road vehicles — Metric starter motor
pinions —**

Part 2:

Pinions with 20° pressure angle

*Véhicules routiers — Pignons de démarreurs à module métrique —
Partie 2: Pignons à angle de pression de 20°*



Reference number
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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9457-2 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 15, *Interchangeability of components of commercial vehicles and buses*.

ISO 9457 consists of the following parts, under the general title *Road vehicles — Metric starter motor pinions*:

- *Part 1: Currently used pinions*
- *Part 2: Pinions with 20 degree pressure angle*

Annex A of this part of ISO 9457 is for information only.

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Road vehicles — Metric starter motor pinions —

Part 2:

Pinions with 20° pressure angle

1 Scope

This part of ISO 9457 specifies the metric modules, number of teeth and other tooth characteristics which are necessary to ensure interchangeability of starter motor pinions with a pressure angle of 20°, used on starter motors for reciprocating internal combustion engines for road vehicles.

2 Specified starter pinions

Table 1 shows the specified combinations between the metric modules and the number of teeth.

Table 1 — Combinations between metric modules and number of teeth

Module <i>m</i>	Number of teeth, <i>z</i>							Pressure angle α
	8 1)	9	10	11	12	13	15	
2,25	x	x	x	x	—	—	—	20°
2,5	x	x	x	x	x	—	—	
3,0	—	x	x	x	x	—	—	
4,0	—	—	x	x	x	x	x	

1) Care shall be taken regarding the contact ratio and hence the noise that eight-tooth pinions can generate.

3 Dimensions

Detailed tooth dimensions and the inspection value W_2 (base tangent length) of the starter motor pinions specified in table 1 are given in table 3.

The tooth dimensions specified in table 3 are calculated by using the values for the tooth proportions h_a/m given in table 2, h_f/m of 1,167 and a maximum tool radius of ρ_{fp} , expressed in millimetres, of 0,3*m*.

If necessary, a radius may be inserted between $d'_{a, \min}$ and d_a .

NOTE 1 The symbols used, which are in accordance with ISO 701[2], are illustrated in figure 1.