

Australian Standard®

**EARTH-MOVING MACHINERY—
RATED LOADS AND VOLUMETRIC
RATINGS**

**Part 4—TRACTOR-SCRAPER—
VOLUMETRIC RATING**

(ISO Title: Earth-moving machinery—Tractor-scraper—
Volumetric rating)

This Australian Standard was prepared by Committee ME/63, Earthmoving Equipment. It was approved on behalf of the Council of the Standards Association of Australia on 3 March 1988 and published on 17 June 1988.

The following interests are represented on Committee ME/63:

Australian Mining Industry Council
Bureau of Steel Manufacturers of Australia
Construction Equipment Importers and Manufacturers of Australia
Department of Administrative Services
Department of Conservation, Forests and Lands, Vic.
Department of Defence
Department of Forestry, Qld.
Department of Industrial Relations and Employment, N.S.W.
Department of Labour, Vic.
Department of Mines, Qld.
Earth-movers and Road Contractors Association of Australia
Forestry Commission of New South Wales
Local Government Engineers Association of New South Wales
Metal Trades Industry Association of Australia
National Association of Australian State Road Authorities
Rural Water Commission, Vic.
Safety Institute of Australia
Telecom Australia
Tractor and Machinery Association of Australia
Water Board, Sydney

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 85189.

AS 2954.4—1988/ISO 6485—1980

Australian Standard®

**EARTH-MOVING MACHINERY—
RATED LOADS AND VOLUMETRIC
RATINGS**

**Part 4—TRACTOR-SCRAPER—
VOLUMETRIC RATING**

(ISO Title: Earth-moving machinery—Tractor-scraper—
Volumetric rating)

First published as AS 2954.4/ISO 6485—1988.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 4999 8

CONTENTS

	<i>Page</i>
1 SCOPE AND FIELD OF APPLICATION	3
2 REFERENCE	3
3 DEFINITIONS	3
4 VOLUMETRIC RATINGS	3
5 EXPRESSION OF RATINGS	4

 FOREWORD

1. This Australian Standard corresponds with ISO 6485—1980, *Earth-moving machinery — Tractor-scraper — Volumetric rating*.
2. Introduction to and complete listing of the SAA series of earth-moving machinery Standards (AS 2951 to AS 2958) is available on request.
3. For the purpose of this Australian Standard the words 'International Standard' should be replaced by 'Australian Standard'.
4. ISO Standard referred to in this Standard corresponds with the following Australian Standard:

ISO Standard	Australian Standard
ISO 7133	AS 2951.6

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

Earth-moving machinery—Rated loads and volumetric ratings

Part 4—Tractor-scraper—Volumetric rating

1 Scope and field of application

This International Standard specifies a procedure for approximating the volume of typical materials contained in the bowl of open bowl scrapers. The volumes are based on the inside dimensions of the bowl and representative volumes on top of the bowl. This rating method is intended to provide a consistent means of comparing capacities; it is not intended to define actual capacities that might be observed in any specific application.

2 Reference

ISO 7133, *Earth-moving machinery — Tractor-scrappers — Terminology and commercial specifications*.

3 Definitions

3.1 open bowl scraper: Scrapers which require the application of tractive effort to load material into the bowl. This tractive effort may be developed by the tractor-scraper itself, by another tractor-scraper temporarily or permanently connected, or by a pushing tractor.

3.2 components of open bowl scrapers: See figures 1 and 2.

4 Volumetric ratings

4.1 Positioning of the bowl.

4.1.1 The bowl shall be positioned so that the lowest flat surface of the floor is horizontal or as close to horizontal as possible.

4.1.2 The ejector shall be fully retracted.

4.1.3 The apron shall be fully closed. Any adjustment of apron closure shall be such as to minimize any opening between the apron and cutting edge.

4.2 Boundaries of the struck volume.

4.2.1 The interior surface of the apron.

4.2.2 When the top of the apron in the closed position is below the plane of the bowl mean sides, a plane of 1:1 (45°) slope, up and rearward, from the top edge of the apron to the plane of the bowl mean sides is added. See figure 3.

4.2.3 If in the position of 4.1.3, the apron does not contact the cutting edge, the opening shall be closed by the plane defined by the line of intersection of the cutting edge and the bowl floor and the line defined by the outermost points of the apron lip.

4.2.4 The interior surfaces of the cutting edge, bowl floor, ejector and bowl sides.

4.2.5 The plane defined by the mean lines. Mean lines are horizontal lines above which, in a side view of the bowl, there is an area of bowl side equal to the non-bowl side area under the lines. See figure 4.

4.3 Boundaries of the top (heaped) volume.

4.3.1 Any load-carrying extension of the ejector above the upper plane of the struck volume. See figure 5.

4.3.2 Planes of 1:1 (45°) slope, up and in, from the upper edges of the struck volume and surfaces of 4.3.1. See figure 5. It does not mean that the material will form this angle but this angle of repose generally expresses best the angle of repose of the usual soils.

4.4 Rated volume is the sum of the struck and top (heaped) volumes.

4.5 The effect of local discontinuities — gussets, apron arms, etc. on the volumes shall be ignored.