



Royal Canadian Mounted Police
Gendarmerie royale du Canada

Doc. no: G.S. 1045-185

Date: 2018-07-09

Specification

Badges, Rank, Officer's, Metal

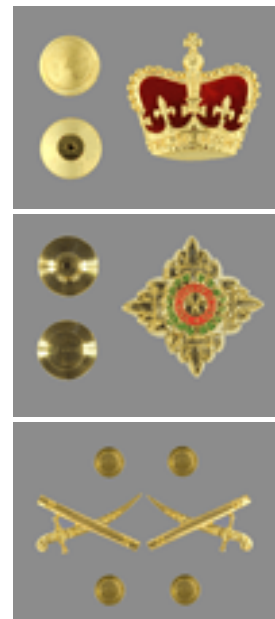
This document has 13 pages including the drawings.

This document was created in English.

The document is available in English and French.

English/Anglais
Français/French

The photograph on this page is for reference only.



Modifications

Date	Para. No's	Modifications
1982-03-17		Original Specification
1984-05-10	Drawing	Last drawing added.
2013-11-06	Para. 2.3 Para. 4.1.1 Para. 4.1.2 Para. 4.1.3 (new) Para. 4.1.4 Appendix 'A' Drawings. 1, 2, 3	Deleted. Certification of Compliance requirement added. Certification of Compliance requirement added; minimum and maximum values added. New attachments paragraph added. Enamel colour reference, paragraph renumbered. Certification of Compliance definition appendix added. Large Crown – pin location; Crossed Sword and Baton – measurements.
2014-05-14	Para. 1.1 Para. 4.1.1 & 4.1.2 Para. 4.1.2 (new) Para. 4.2 Para. 4.3 Para. 4.4 Para. 4.5 Para. 5 Appendix "A" All Drawings	Added list of items with MMR numbers to paragraph. Paragraphs merged and wording adjusted to require certificate of compliance depending on the construction method used. Paragraphs 4.1.3 and 4.1.4 renumbered. Paragraph modified. Tolerances adjusted. Construction detail for large crown added. Paragraph modified. Certificate of compliance requirement added. Enamelling detail amended. Deleted, Para. 6 renumbered. Certificate of compliance definition modified. Criteria in Table modified. Tolerances added to all drawings. Post height for small crown and star reduced to 8 mm. Post separation distance for large crown increased to 14 mm. Drawings for crossed sword and baton revised.
2015-12-14	Para. 1.4 Para. 3.3 Para. 4.1.1.1, 4.1.1.2 & 4.4 Appendix A	Added paragraph relating to translation. Deleted paragraph. Removed reference to certificate of compliance. Appendix removed.
2018-07-09	Para. 2.2 Para. 2.3 Para. 3.2 Para. 4.1.1.1	ASTM B560-00(2014) standard added New para added for Pantone colour reference Design paragraph updated Table added for metal composition, metal composition updated to include tolerance

Para. 4.1.1.2	Table added for metal composition, composition updated to ASTM B560-00(2014)
Paras. 4.1.2-4.1.5	Para. 4.1.2 Attachments replaced by paragraphs detailing each attachment. Following paragraphs renumbered
Para. 4.1.6	Red enamel added
Para. 4.1.7	Velvet material paragraph added
All drawings	Format updated
Drawing 1	Original Drawing 1 replaced by Drawing 1 and 2 Drawing of cotter pin added

RCMP VIEWING SAMPLE

A viewing sample, when available, will be supplied to the successful bidder.

This will be used for the guidance of the manufacturer in all factors not covered by this specification or referred to therein. Variation from the specification may appear in the sample in which case the specification must govern.

It may be obtained from:

Royal Canadian Mounted Police
ATTN: Uniform & Equipment Program
(440 Coventry Road, Warehouse Building)
73 Leikin Drive
Ottawa, Ontario
K1A 0R2

It will be sent “prepaid” and is to be returned “prepaid”.

The viewing sample must be returned to the RCMP in the same condition as received by the manufacturer. Lost or damaged viewing samples must be replaced by an identical item or the RCMP must be reimbursed for the cost of an acceptable replacement.

SPECIFICATION
BADGES, RANK, OFFICER'S, METAL

1. **Definitions**

- 1.1 This specification governs the manufacture and inspection of Badges, Rank, Officer's, Metal. The specific items covered under this specification with stock numbers are as follows:
- i. 4250-150 – Badge, Rank, Officer's, Metal, Crown, Small / Insigne de grade métallique pour officier – couronne – petit;
 - ii. 4250-400 – Badge, Rank, Officer's, Metal, Crown, Large / Insigne de grade métallique pour officier – couronne – gros;
 - iii. 4300-157 – Badge, Rank, Officer's, Metal, Star, Small / Insigne de grade métallique pour officier – étoile – petit;
 - iv. 4300-408 – Badge, Rank, Officer's, Metal, Star, Large / Insigne de grade métallique pour officier – étoile – gros;
 - v. 4325-109 – Badge, Rank, Officer's, Metal, Crossed Sword & Baton, Small / Insigne de grade métallique pour officier – épée et bâton croisés – petit;
 - vi. 4325-303 – Badge, Rank, Officer's, Metal, Crossed Sword & Baton, Large / Insigne de grade métallique pour officier – épée et bâton croisés – gros.
- 1.2 This specification, viewing sample, drawing or other information issued in connection therewith, may only be used for specific enquiries, solicitations, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for Badges, Rank, Officer's, Metal.
- 1.4 This specification has been translated into French from this original English language document.

2. **Applicable Documents**

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the solicitation, unless otherwise specified.
- 2.2 American Society for Testing and Materials
ASTM B86-13 Standard Specification for Zinc and Zinc Aluminum Alloy Foundry and Die Castings
ASTM B560-00(2014) Standard Specification for Modern Pewter Alloys

- 2.3 Pantone
Colour Bridge Coated, first edition, second printing

3. **General Requirements**

- 3.1 The article or material covered by this specification must be free from material and manufacturing defects that may affect its appearance or serviceability. In all particulars not covered by this specification or contract documents, production must be equivalent in all respects to the viewing sample.
- 3.2 **Design** – The Badges, Rank, Officer's, Metal are designed to be worn on the shoulder strap. The badges must be constructed using either of the pressure die cast or rubber cast methods.

4. **Detail Requirements**

4.1 **Components**

4.1.1 **Composition Requirements**

- 4.1.1.1 **Pressure Die Cast Badge** – The base metal must be zinc alloy no. 3 for pressure die casting, conforming to the composition requirements in Table I.

Table I	
Tested to ASTM B86-13	
Composition Requirements	% by Weight
Aluminium	3.7-4.3
Magnesium	0.02-0.06
Copper	0.1 max
Iron	0.05 max
Lead	0.005 max
Cadmium	0.004 max
Tin	0.002 max
Zinc*	remainder

*determined arithmetically by difference

- 4.1.1.2 **Rubber Cast Badges** – The base metal must be a tin alloy for rubber casting conforming to the composition requirements in Table II.

Table II	
Tested to ASTM B560-00 (2014)	
Composition Requirements	% by Weight
Tin	90-93
Antimony	6-8
Copper	0.25-2.0
Lead	0.05 max
Arsenic	0.05 max
Iron	0.015 max
Zinc	0.005 max

- 4.1.2 **Shanks** – The shanks must be made of brass. The shanks must have a height of 7 mm and the loop must have an interior diameter of 3 mm, as per drawing 1.
- 4.1.3 **Cotter Pins** – The cotter pins must be made of brass and dimensioned as per drawing 1.
- 4.1.4 **Pins** – The pins must be made of brass, 8 mm in length. The large crown and large star badges must each have two pins positioned horizontally, 14 mm apart.
- 4.1.5 **Clutch Fasteners** – The clutch fasteners must be flathead locking style, the flathead must be 8 mm in diameter. The fasteners must be made of brass.
- 4.1.6 **Enamel** – The enamel must be soft epoxy. The red colour must be Pantone 7621C, and the green colour must be Pantone 341C.
- 4.1.7 **Velvet Material** – The material must be plain velvet, cotton or polyester. The velvet material must be red in colour to match Pantone 7621C.
- 4.2 **Dimensions** – The dimensions must be in accordance with the drawings and subject to a tolerance ± 0.75 mm, except for the length of the shanks and pins which must have a negative tolerance only.
- 4.3 **Construction** – The construction of the Badges, Rank, Officer's, Metal must be either pressure die cast or rubber cast using the metal composition specified in para. 4.1.1.
- 4.3.1 If the badges are constructed using the pressure die cast method, after the initial casting operation, the area where the gate is broken off must be lightly sanded, the

badge must be buffed and lightly coined where necessary to bring out fine detail and a mirror finish.

4.3.2 Large size crowns must be a two layer construction with the red velvet material specified in para. 4.1.7 placed between the layers as per drawing 2.

4.4 **Finish** – The badges must be electroplated to a fine quality jewelry standard. The badges must be adequately cleaned and polished prior to plating and have a bright nickel plating as an undercoating for the gold plating. When badges are rubber cast the bright nickel undercoating must be no less than 20µm in thickness. A final electroplated, hard, 18k gold finish must be applied. The finish must be no less than 0.2 µm thickness. The gold plating must be smooth, fine grained, and adherent and free from exposed base material or under plate. It must be free from blisters, pits, nodules, porosity, indications of burning, excessive edge build-up or other defects.

4.5 **Enamelling** – The background for the lettering and leaves on the large star must be filled with the material specified in para. 4.1.6. Wipe or run over on other areas will not be accepted.

4.6 **Attachments** – The small crown and small star must each be equipped with a cotter pin specified in para. 4.1.3, dimensioned as per the drawings. The large crown, large star, and small and large crossed sword and baton must each be equipped with a clutch fastener as specified in para. 4.1.5.

5. **Quality Assurance Provisions**

5.1 **Responsibility for Inspection** – Unless otherwise stipulated in the contract, it is the prime contractor's responsibility to satisfy the RCMP, Uniform and Equipment Program that the material and services being supplied conform to this specification. This may be accomplished by performing the tests specified in this specification or by demonstrating to the satisfaction of the RCMP, Uniform and Equipment Program that conformity to this specification of manufacturing processes is assured. The contractor's own facilities may be used or any independent, North American, certified testing facilities.

5.2 The RCMP, Uniform and Equipment Program reserves the right to perform any inspection considered necessary to ensure the material and services conform to the specified requirements. For the purpose of inspection, a portion of each delivery not exceeding two percent or two out of any number delivered under 100 may be put to tests that could destroy the articles. If found to be inferior or not in accordance

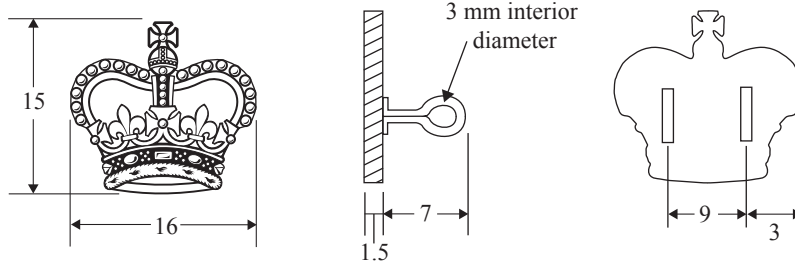
with this specification, all articles so destroyed must be replaced by others of proper quality and pattern at the expense of the contractor. The entire delivery may also be rejected if it is found that articles previously rejected due to non-repairable defects are redelivered for inspection.

- 5.3 The contractor will be promptly notified when any articles are not accepted and such articles will be returned at the contractor's risk and expense.

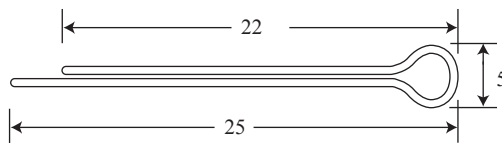
Drawing 1

G.S. 1045-185

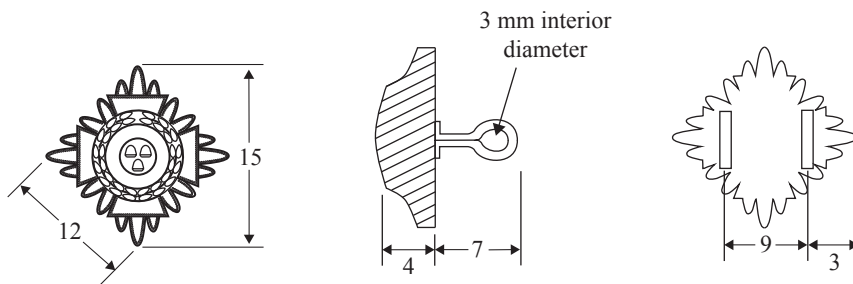
Badges, Rank, Officer's, Metal



Small Crown



Cotter Pin



Small Star

NOT TO SCALE

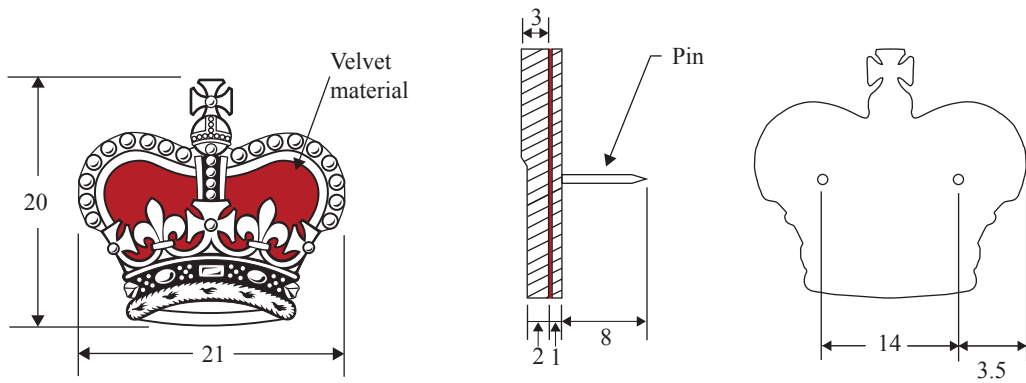
All measurements are shown in millimetres.

± 0.75 mm tolerance acceptable unless otherwise indicated.

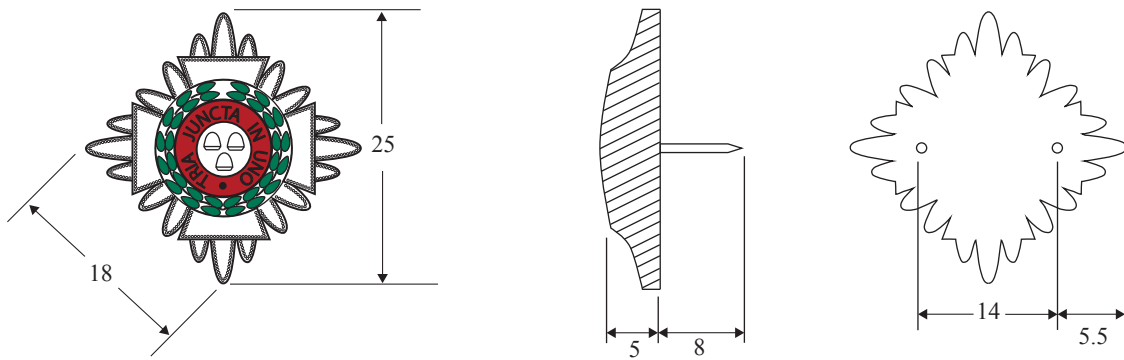
Drawing 2

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Badges, Rank, Officer's, Metal



Large Crown



Large Star

NOT TO SCALE

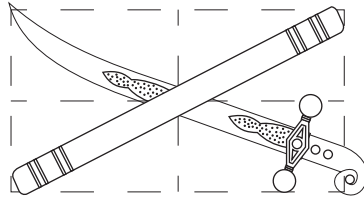
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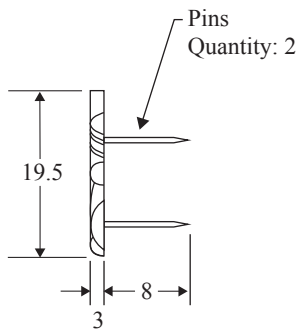
Drawing 3

G.S. 1045-185

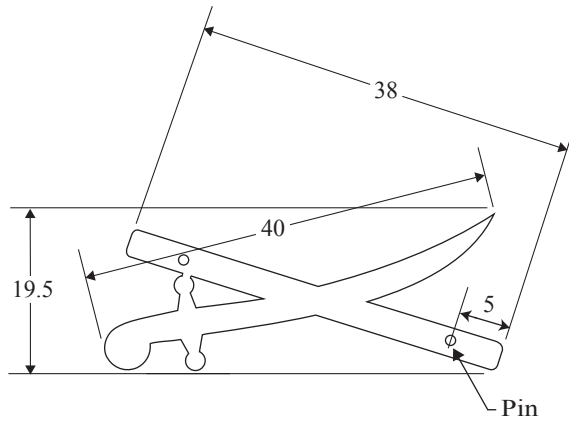
Badges, Rank, Officer's, Metal
Crossed Sword and Baton
Small



Front View of Left Shoulder Cross Sword and Baton
(Right Shoulder to be mirror image)



Side View



Back View

NOT TO SCALE

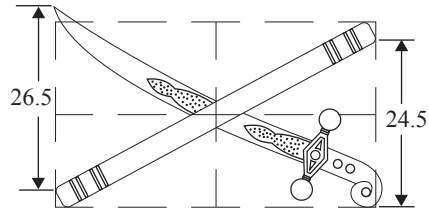
All measurements are shown in millimetres.

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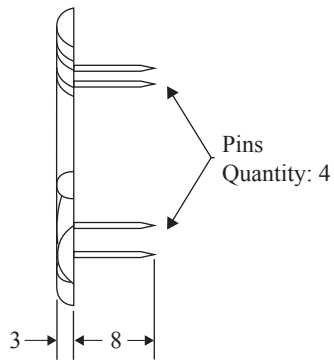
Drawing 4

G.S. 1045-185

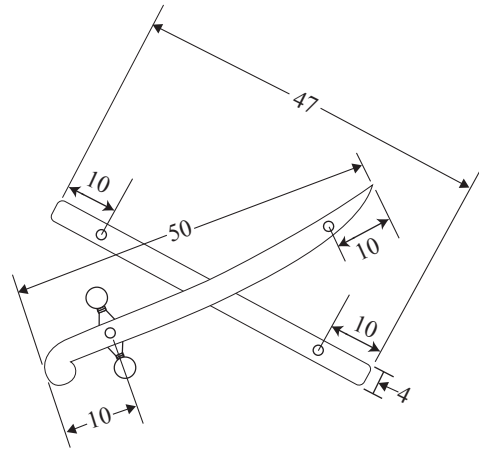
Badges, Rank, Officer's, Metal
Crossed Sword and Baton
Large



Front View of Left Shoulder Cross Sword and Baton
(Right Shoulder to be mirror image)



Side View



Back View

NOT TO SCALE

All measurements are shown in millimetres.

± 0.75 mm tolerance acceptable unless otherwise indicated.