MODIFIED LESSON SPECIFICATIONS AND INSTRUCTIONAL GUIDES – TP 1 OF EO M222.03

A-CR-CCP-702/PG-001

EO M222.03 – IDENTIFY COMPASS PARTS

1. **Performance.** Identify Compass Parts.

2. **Conditions**

   a. Given:

      (1) compass;

      (2) supervision; and

      (3) assistance as required.

   b. Denied: N/A.

   c. Environmental: Suitable classroom facility or training area large enough to accommodate the entire group.

3. **Standard.** In accordance with B-GL-382-005/PT-001, the cadet shall identify compass parts.

4. **Teaching Points**

TP	Description	Method	Time	Ref
TP1	Identify and describe the parts of the compass, to include: a. sight; b. compass cover; c. sighting mirror; d. sighting line; e. luminous index point; f. compass dial; g. dial graduations; h. orienting arrow; i. romer 1:25 000; j. compass base plate; k. declination scale; l. compass meridian lines; m. magnetic needle; n. luminous orienting points; o. luminous index point; p. romer 1:50 000; q. safety cord or lanyard; r. adjustable wrist lock; s. screwdriver; and t. declination adjustment screw.	Interactive Lecture	10 min	A2-041 (pp. 66 and 67)

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5. **Time**

a.	Introduction/Conclusion:	5 min
b.	Interactive Lecture:	10 min
c.	Total:	15 min

6. **Substantiation.** An interactive lecture was chosen for TP1 to present basic material, orient the cadets to the compass, and generate interest.

7. **References**

   a. A2-036 A-CR-CCP-121/PT-001 D Cdts (2003). *Royal Canadian Army Cadet Reference Book*. Ottawa, ON: Department of National Defence.

   b. A2-041 B-GL-382-005/PT-001 Canadian Forces. (2006). *Maps, Field Sketching, Compasses and the Global Positioning System*. Ottawa, ON: Department of National Defence.

8. **Training Aids**

   a. Presentation aids (eg, whiteboard/flipchart/OHP) appropriate for classroom/training area; and

   b. Compass.

9. **Learning Aids.** Compass.

10. **Test Details.** N/A.

11. **Remarks.** N/A.

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A-CR-CCP-702/PF-001

ROYAL CANADIAN ARMY CADETS

RED STAR

INSTRUCTIONAL GUIDE

SECTION 3

EO M222.03 – IDENTIFY AND DESCRIBE THE PARTS OF THE COMPASS

Total Time: 15 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-702/PG-001, Chapter 4. Specific uses for said resources are identified throughout the Instructional Guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

N/A.

APPROACH

An interactive lecture was chosen for this lesson to present basic material, orient the cadets to the compass, and generate interest.

INTRODUCTION

REVIEW

N/A.

OBJECTIVES

By the end of this lesson the cadet shall have identified the parts of the compass.

IMPORTANCE

It is important for cadets to be able to use a compass while navigating during expedition training. Each part of the compass has a specific name used to identify the part and its function. Cadets will rely on this information throughout navigation and expedition training.

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A-CR-CCP-702/PF-001

Teaching Point 1 **Identify and Describe the Parts of the Compass**

Time: 10 min Method: Interactive Lecture



Divide cadets into equal groups according to the number of compasses available. Starting with the compass opened, use the diagram in Figure 12-3-1 to identify the parts of the compass from the top (sight) to the bottom (screwdriver).

PARTS OF THE COMPASS

A – Sight. Located at the top of the compass cover, the sight is used to align an objective or bearing.

B – Compass Cover. The compass cover protects the compass dial and houses the sighting mirror.

C – Sighting Mirror. The sighting mirror is used to see the compass dial while setting a bearing.

D – Sighting Line. The sighting line is used when aligning the objective or bearing.

E – Luminous Index Point. The luminous index point at the top of the compass dial is where a bearing is set and read from.

F – Compass Dial. The compass dial houses the magnetic needle, the orienting arrow and the declination scale on the inside and the dial graduations on the outside.

G – Dial Graduations. The compass dial is graduated in 50 mil divisions from 0 to 6400 mils, or 2 degree divisions from 0 to 360 degrees. The dial is rotated by hand.

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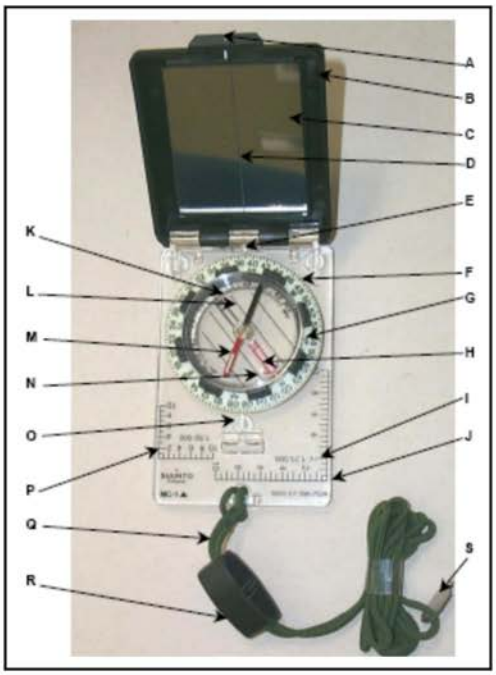

A-CR-CCP-121/PT-001 (p. 5-33)

Figure 12-3-1 Compass



This Instructional Guide is good for use with compasses that have dial graduations in either mils or degrees.

H – Orienting Arrow. The red orienting arrow is located inside the compass dial and is used to line up the magnetic needle. The orienting arrow is always set at 00 mils/degrees.

I – Romer 1:25 000. This romer is used to measure GR on maps with a 1:25 000 scale.

J – Compass Base Plate. The compass base plate is a clear piece of flat plastic, to which the cover, dial and lanyard are attached.

K – Declination Scale. The declination scale is used to compensate for the variation of magnetic declination between the compass and the map being used.

L – Compass Meridian Lines. Compass meridian lines are black or red lines inside the compass dial and are used to line up the compass dial with the grid lines on a map.

M – Magnetic Needle. The magnetic needle spins freely and points to magnetic north. The south end of the compass needle is black and the north end, with a luminous patch, is red.

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When the magnetic needle is lined up with the red orienting arrows, the mnemonic "Red in the Bed" is used to remember which end of the needle belongs between the arrows.

N – Luminous Orienting Points. There are two luminous orienting points located on either side of the orienting arrow.

O – Luminous Index Point. The luminous orienting point at the bottom of the compass dial is where a back bearing is read from.

P – Romer 1:50 000. This romer is used to measure GR on maps with a 1:50 000 scale.

Q – Safety Cord or Lanyard. The safety cord is used to fasten the compass to the body.

R – Adjustable Wrist Lock. The adjustable wrist lock is used to attach the compass to the wrist.

S – Screwdriver. The tiny screwdriver at the end of the safety cord is used to turn the screw to adjust the declination scale.

T – Declination Adjustment Screw. The declination adjustment screw is located on the back side of the compass dial and is used to adjust the declination scale (not shown).

When exposed to direct light, all luminous parts of the compass will glow in the dark making operating the compass at night possible.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS

Q1. What is the maximum number of mils or degrees on the dial graduations?

Q2. What mnemonic is use for putting the magnetic needle between the orienting arrows?

Q3. What direction does the red part of the magnetic needle point?

ANTICIPATED ANSWERS

A1. 6400 mils or 360 degrees.

A2. "Red in the Bed".

A3. Magnetic north.

END OF LESSON CONFIRMATION

QUESTIONS

Q1. What is the screwdriver on the compass used for?

Q2. What two directions are used to describe declination?

Q3. What direction is the declination adjusting screw turned to set an east declination?

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ANTICIPATED ANSWERS

A1. To turn the declination adjusting screw.

A2. East and west.

A3. Left.

CONCLUSION

HOMEWORK/READING/PRACTICE

N/A.

METHOD OF EVALUATION

N/A.

CLOSING STATEMENT

Compasses are used during navigation and trekking training exercises. Identification of the parts and the proper use of the compass is essential to ensuring accurate navigation.

INSTRUCTOR NOTES/REMARKS

N/A.

REFERENCES

A2-036 A-CR-CCP-121/PT-001 D Cdts (2003). *Royal Canadian Army Cadet Reference Book*. Ottawa, ON: Department of National Defence.

A2-041 B-GL-382-005/PT-001 Canadian Forces. (2006). *Maps, Field Sketching, Compasses and the Global Positioning System*. Ottawa, ON: Department of National Defence.

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