

ARMY TM 9-1240-379-34 MARINE CORPS TM 04332A-34

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TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL FOR TANK PERISCOPE:

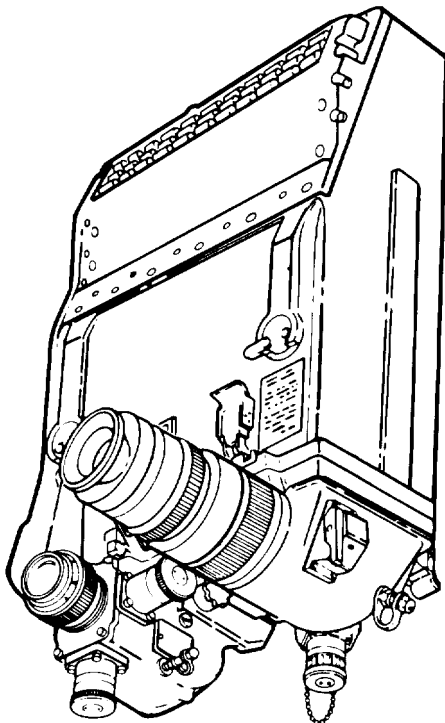
M32 (1240-00-766-4287)
M32C (1240-00-762-9335)
M32E1 (1240-01-016-2272)
M32CE1 (1240-01-092-7910)

TROUBLESHOOTING
(DIRECT SUPPORT)

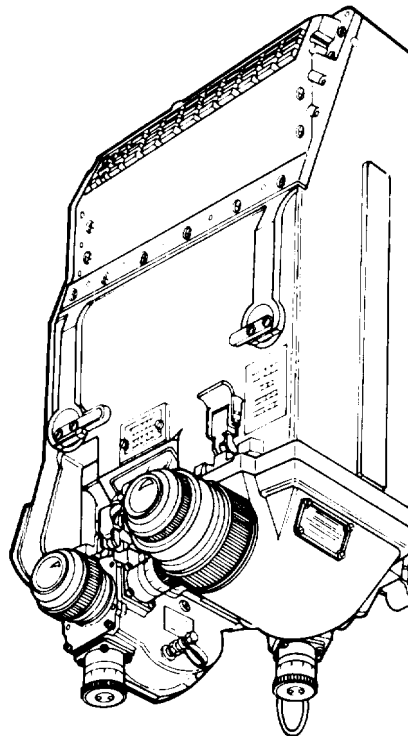
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MAINTENANCE
PROCEDURES
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M32E1/M32CE1
TANK PERISCOPE



M32/M32C
TANK PERISCOPE

TROUBLESHOOTING
(GENERAL SUPPORT)

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MAINTENANCE
PROCEDURES
(GENERAL SUPPORT)

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HEADQUARTERS, DEPARTMENT OF THE ARMY
HEADQUARTERS, US MARINE CORPS

MAY 1988

TECHNICAL MANUAL

No. 9-1240-379-34
No. 04332A-34

HEADQUARTERS
DEPARTMENT OF THE ARMY
HEADQUARTERS
US MARINE CORPS
Washington, DC, 12 May 1988

Direct Support and General Support Maintenance Manual

For

TANK PERISCOPE:
M32 (1240-00-766-4287)
M32C (1240-00-762-9335)
M32E1 (1240-01-016-2272)
M32CE1 (1240-01-092-7910)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. A reply will be furnished to you.

USMC users submit NAVMC Form 10772 direct to: Commanding General, Marine Corps Logistics Base (code 850), Albany, GA 31704-5000.

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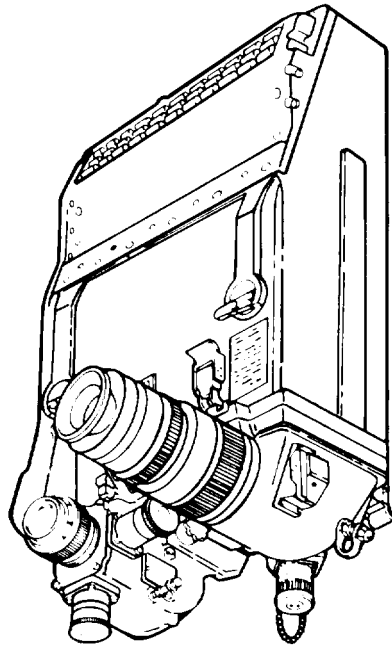
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*This manual supersedes TM 9-1240-379-34, December 1977, and TM 9-1240-313-34, June 1964, including all changes.

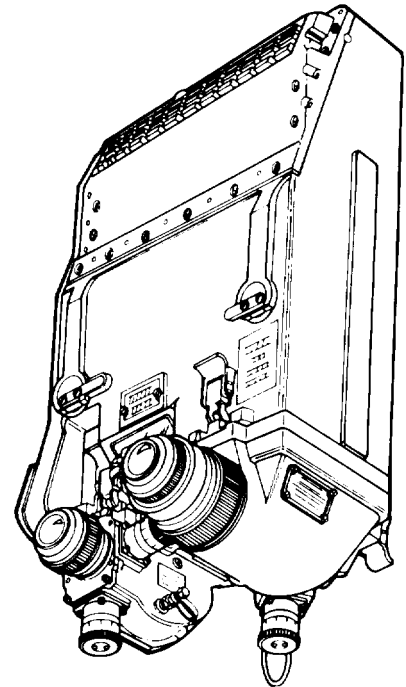
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CHAPTER 1 INTRODUCTION

Section I. GENERAL INFORMATION



M32E1/M32CE1
TANK PERISCOPE



M32/M32C
TANK PERISCOPE

1-1. SCOPE.

a. **Type of Manual.** Direct support and general support maintenance.

b. **Model Number and Equipment Name.** M32, M32C, M32E1, and M32CE1 Tank Periscopes.

c. **Purpose of Equipment.** Provides a unity power system for wide, close-up vision of terrain and a visible 8X system for sighting distant targets.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System

(TAMMS). USMC users will refer to TM 4700-15/1, Equipment Record Procedures.

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

Procedures and materials used for the destruction of the periscope to prevent enemy use will be found in TM 750-244-6.

1-4. PREPARATION FOR STORAGE OR SHIPMENT.

Requirements for storage or shipment are listed on page 2-49.

1-5. OFFICIAL NOMENCLATURE,
NAMES, AND DESIGNATIONS,

This listing includes nomenclature
references used in this manual.

COMMON NAME	OFFICIAL NOMENCLATURE
Cap assembly	Periscope subassembly
Deflection boresight knob assembly	Knob assembly
Elevation boresight knob assembly	Elevation knob assembly
Elevation boresight knob assembly	Boresighting knob assembly
Purging screw	Machine screw
RETICLE control knob	Knob
RETICLE variable resistor	Variable resistor
TUBE control knob	Knob
TUBE variable resistor	Variable resistor

1-6. REPORTING EQUIPMENT IM-
PROVEMENT RECOMMENDA-
TIONS (EIR).

If your tank periscope needs improvement,
let us know. Send us an EIR. You, the user,
are the only one who can tell us what you
don't like about your equipment. Let us

know why you don't like the design. Put it
on an SF 368 (Quality Deficiency Report).
Mail it to us at Commander, US Army Arma-
ment, Munitions and Chemical Command,
ATTN: AMSMC-QAD, Rock Island, IL
61299-6000. We'll send you a reply. USMC
users shall submit SF 368 in accordance
with MCO 4855.10.

Section II. REPAIR PARTS, SPECIAL TOOLS,
TMDE, AND SUPPORT EQUIPMENT

1-7. COMMON TOOLS AND
EQUIPMENT.

For authorized common tools and equipment
refer to the Modified Table of Organization
and Equipment (MTOE) applicable to your
unit.

1-8. SPECIAL TOOLS, TMDE, AND
SUPPORT EQUIPMENT.

Refer to appendix C of this manual for
manufacturing instructions for fabricated
tools.

1-9. REPAIR PARTS.

Repair parts are listed and illustrated in the
repair parts and special tools list (TM
9-1240-379-34P) covering direct support
and general support maintenance for this
equipment.

Section III. EQUIPMENT DESCRIPTION AND DATA

1-10. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

a. M32 and M32C Tank Periscope Characteristics.

(1) Visible 8X system:

	US Customary	Metric Conversion
Magnification	8X	
Field of view	8°	
Effective focal length (EFL) of objective	8.813 in.	22.385 cm
Exit pupil diameter	0.200 in.	0.508 cm
Clear eye distance	0.63 in.	1.60 cm
Diopter (one)	0.031 in.	0.079 cm

(2) Unity power system:

Horizontal field of view	30°32'
Vertical field of view	5°48'

(3) Infrared 8X system:

Magnification	8X	
Field of view	8°	
EFL of objective	7.8 in.	19.8 cm
Image intensifier magnification	7.7 in.	19.6 cm
Clear eye distance	0.63 in.	1.60 cm
Diopter (one)	0.017 in.	0.043 cm

b. M32E1 and M32CE1 Tank Periscope Characteristics.

(1) Visible 8X system:

	US Customary	Metric Conversion
Magnification	8X	
Field of view	8°	
EFL of objective	8.813 in.	22.385 cm
Exit pupil diameter	0.200 in.	0.508 cm
Clear eye distance	0.63 in.	1.60 cm
Diopter (one)	0.031 in.	0.079 cm

(2) Passive 7.1 X system:

Magnification	7.1X	
Field of view	8°	
EFL of objective	7.8 in.	19.8 cm
EFL of eyepiece	1.100 in.	2.794 cm
Exit pupil diameter	0.059 in.	0.15 cm
Eye relief	0.850 in.	2.159 cm
Clear eye distance	0.600 in.	1.524 cm
Diopter (one)	0.031 in.	0.079 cm

1-10. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES. (cont)

US Customary Metric Conversion

(3) Unity power system:

Horizontal field of view	30°32'
Vertical field of view	5°48'

c. Features. Each model of tank periscope consists of three separate and independent colimated units: head assembly, daylight body assembly, and infrared body assembly (night vision device for M32 and M32C) or elbow assembly (night vision device for M32E1 and M32CE1).

(1) The M32 and M32C tank periscopes contain a unity power system for wide, close-up vision of the terrain and a visible 8X system for sighting distant

targets. The visible 8X system is divided into one system for visible light observation of targets and an infrared system for night fighting targets.

(2) The M32E1 and M32CE1 tank periscopes have three optical systems consisting of a unity power system for wide, close-up vision of the terrain; a visible 8X system for visible daylight sighting of targets; and a passive 7.1X system for night sighting of targets.

1-11. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

a. Head Assembly (1). Light-gathering instrument; serves as input source for daylight and night sighting systems. An internal mirror can be rotated from a depression of 18 degrees to an elevation of 22 degrees from the line of sight; rotation is limited to gun elevation capabilities.

b. Daylight Body Assembly (2). Installed in left opening of head assembly. Houses visible 8X system. Monocular unit consisting of etched reticle positioned by deflection and elevation boresight knob assemblies for gun laying, adjustable diopter eyepiece, and an incandescent lamp to illuminate the reticle.

