

WARNING FLASHERS

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1. GENERAL

1.01 This section covers the B, C, and D Warning Flashers which are used for warning traffic of a work area.

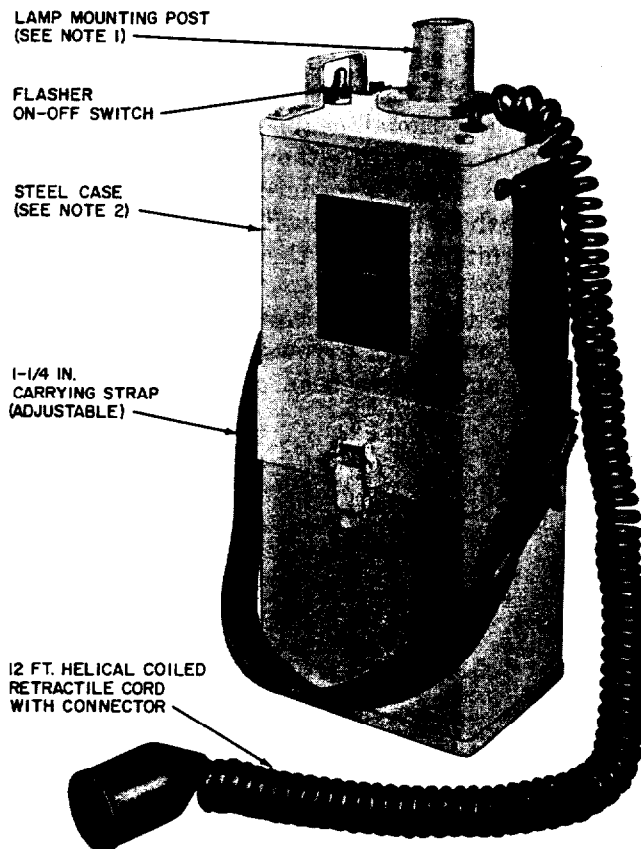
1.02 This section is reissued to include information on the C Warning Flasher which operates on 120-volts alternating or direct current. The B and D Warning Flashers are battery operated. The B Warning Flasher is superseded by the D Warning Flasher.

1.03 Each warning flasher is a complete unit equipped with either a cylindrical fresnel head or a directional head. The heads may be ordered equipped with either red or amber lens. Extra heads may be ordered separately. The warning flashers are used with the warning mast on the warning stand or the manhole guard.

1.04 Since this reissue covers a general revision, marginal arrows ordinarily used to indicate changes have been omitted.

2. DESCRIPTION

2.01 The B Warning Flasher (superseded), illustrated in Fig. 1, is a battery-operated unit which consists of a weatherproof lamp head and a steel case to house the batteries and electrical components. The five 45-volt batteries (KS-14370) required for operation must be ordered separately. The case is equipped with an



NOTES:

1. DIRECTIONAL AND FRESNEL HEADS ARE SAME AS THOSE USED ON D WARNING FLASHER.
2. CASE HAS COMPARTMENTS FOR FLASHING CIRCUITRY AND BATTERIES. THE FIVE KS-14370 BATTERIES REQUIRED FOR OPERATING FLASHER MUST BE ORDERED SEPARATELY.

**Fig. 1 — B Warning Flasher (Superseded)
Without Lamp Head**

on-off switch and a lamp mounting post. Under normal conditions, the B Warning Flasher will operate for approximately 120 hours. This flasher is not equipped with a booster switch to extend the useful life of the batteries. The directional and fresnel heads are the same as those used with the D Warning Flasher.

2.02 The C Warning Flasher (Fig. 2), which operates on 120-volts ac or dc, consists of a weatherproof lamp head and a steel case to house the electrical components. There are two fuses mounted in the base, one in each side of the incoming power cord. A switch located in the base provides for switching to ac or dc to match the power supply. The design of the electrical components of the flasher incorporates a safety feature which permits the flasher to be operated by ac when the power switch is in the dc position or by dc when the power switch is in the ac position for a period of about 10 minutes without permanently damaging the flasher.

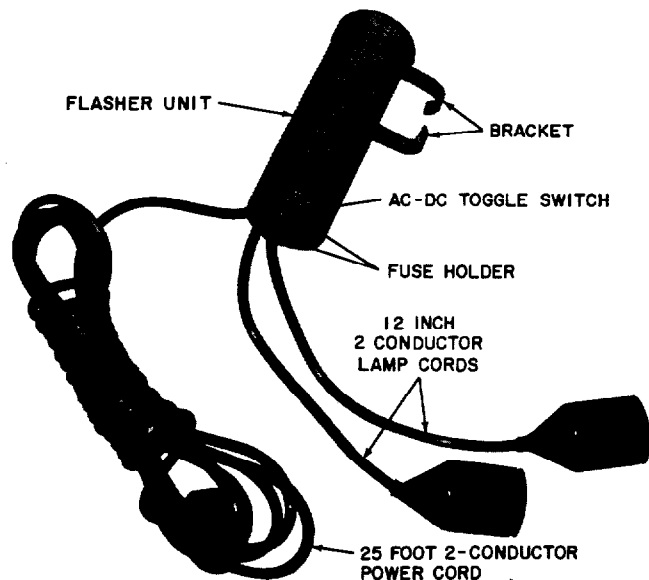


Fig. 2 — C Warning Flasher Without Lamp Head

2.03 There are two types of C Warning Flasher lamp heads (Fig. 3). One is a cylindrical or 360-degree fresnel type lens with the lens enclosing a 25-watt filament lamp in a partially guarded fixture. The other is a directional type which has a 25-watt filament lamp positioned at the focal point of a silvered para-

bolic reflector. The lamp is enclosed in a hooded housing equipped with a spread beam lens. Both types of lamp heads are provided with captive spring pins for securing them to the warning mast and with a 12-foot, 2-conductor coiled retractile cord which is fitted with a twist lock rubber plug.

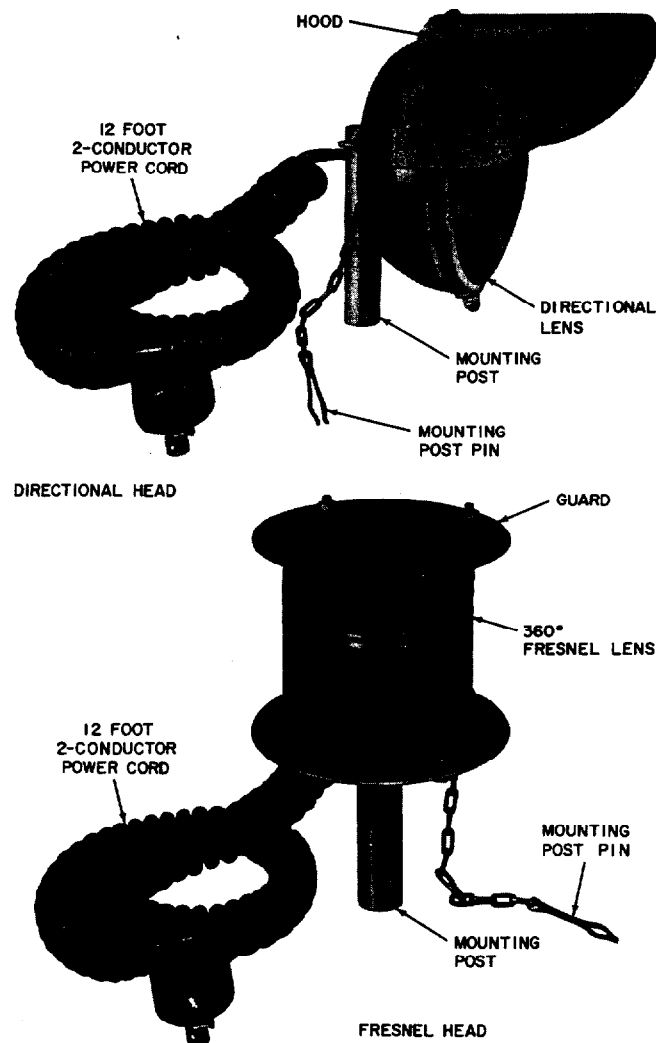


Fig. 3 — Lamp Heads for C Warning Flasher

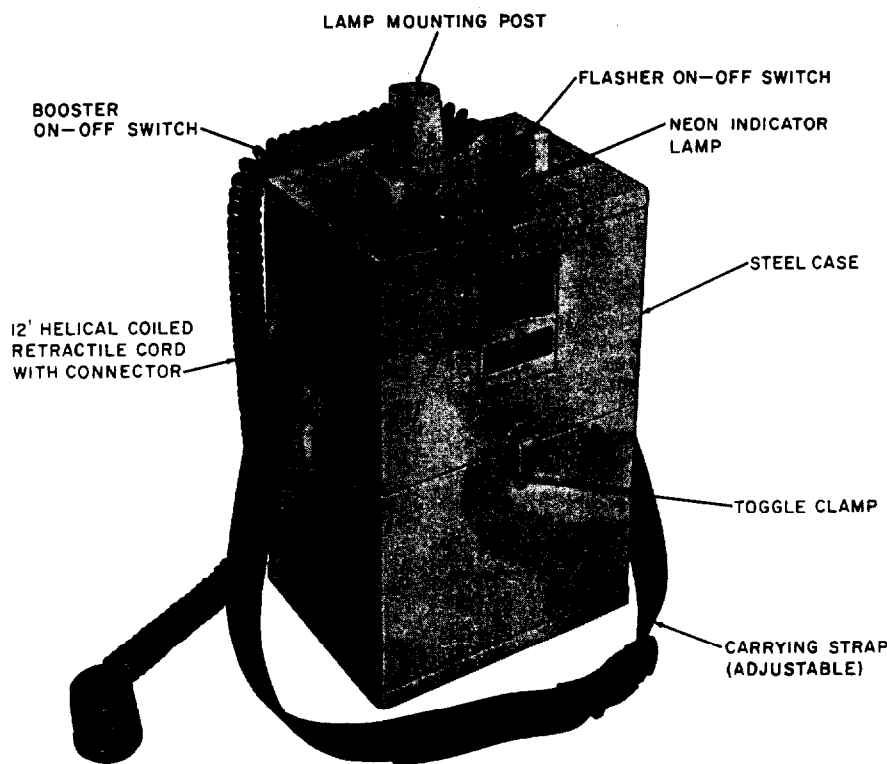
2.04 The D Warning Flasher (Fig. 4) is a battery-operated unit consisting of a weatherproof lamp head and a steel case to house the batteries and electrical components. The five 45-volt batteries (KS-14757) required for operation must be ordered separately. The case is equipped with a neon indicator light, a booster switch, and an ON-OFF switch. The flasher and indicator lamps start flashing immediately when the FLASHER switch is operated to the ON position.

2.05 When the D Warning Flasher is equipped with a new set of batteries, the flasher should, under normal conditions, operate for at least 450 hours with the BOOSTER switch in the OFF position. When the indicator lamp stops flashing, throwing the BOOSTER switch to the ON position will allow the flasher to op-

erate for at least 150 additional hours, thus making a minimum total of 600 hours of operation on one set of batteries.

Note: Batteries should be replaced approximately 150 hours after throwing the BOOSTER switch to the ON position.

2.06 There are two types of D Warning Flasher lamp heads (Fig. 5). One is a cylindrical 360-degree fresnel type lens with the lens enclosing a 7-watt filament lamp in a partially guarded fixture. The other is a directional type which has a 7-watt filament lamp positioned at the focal point of a silvered parabolic reflector. The lamp is enclosed in a hooded housing equipped with a spread beam lens. Both types of lamp heads are provided with captive spring pins for securing them to the warning mast and



NOTE:

CASE HAS COMPARTMENTS FOR FLASHING CIRCUITRY AND BATTERIES. THE FIVE KS-14757 BATTERIES REQUIRED FOR OPERATING FLASHER MUST BE ORDERED SEPARATELY.

Fig. 4 — D Warning Flasher Without Lamp Head

with a 6-inch, 2-conductor cord which is fitted with a twist lock rubber plug.

3. MAINTENANCE

3.01 The battery circuit of the B and D Warning Flashers should be opened before removing the top cover of the case for repairs or

service of the circuitry. This can be done by placing the power switch in the OFF position. Opening of the top cover of the case automatically discharges the condenser of the circuit. If the battery circuit has not been opened, the batteries will be shorted and become useless.

4. REPLACEMENT PARTS

4.01 Ordering Information: Orders for replacement parts are worded as follows:

(Quantity) (Name of Part) for the B, C, or D Warning Flasher.

4.02 List of Replacement Parts: The following replacement parts may be obtained for the B, C, or D Warning Flasher.

Battery, Dry, KS-14370 (5 required), for B Warning Flasher

Battery, Dry, KS-14757 (5 required), for D Warning Flasher

Lamp, 7-watt, 120-Volt, Candelabra Base or GE 7C7 (or equivalent), for B or D Warning Flasher

Lamp, 25-watt, 120-Volt, Double Contact Bayonet Base, Clear Glass Bulb (GE 25T8 DC or equivalent) for C Warning Flasher

Lens, Fresnel (Red or Amber)

Lens, Directional (Red or Amber)

Head, Fresnel (Red or Amber) for B or D Warning Flasher

Head, Fresnel (Red or Amber) for C Warning Flasher

Head, Directional (Red or Amber) for B or D Warning Flasher

Head, Directional (Red or Amber) for C Warning Flasher

Fuse (Littlefuse 314-3AB 10 Amp, 250-Volt) (2 required) for C Warning Flasher

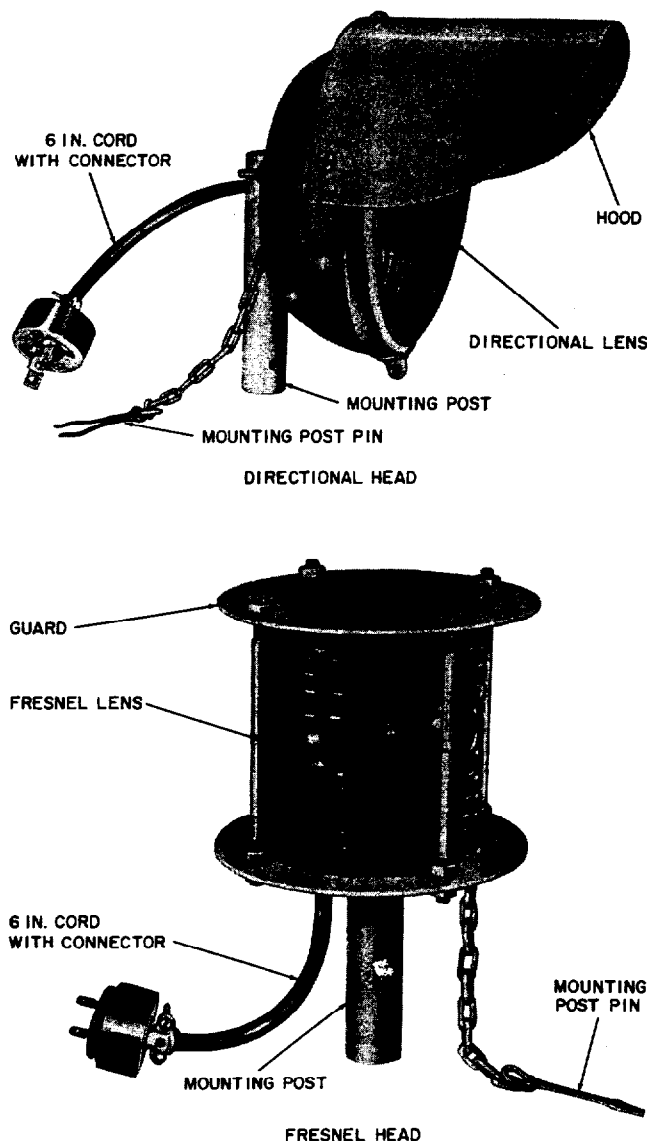


Fig. 5 — Lamp Heads for D Warning Flasher