LUBRICATION INSTRUCTIONS FOR

DIALS

LUB 4

After a dial has been in service for a period of time it may become necessary to clean and relubricate the dial to restore proper operation.

The frequency of relubrication depends on local conditions which affect the dial. These include usage as well as dust, humidity, and temperature. When the dial is operating improperly or when it has seen extensive service and its speed is too slow (under 8 pps), it is recommended that the dial be disassembled, cleaned, and relubricated. Readjustment or partial relubrication has proven to give only temporary improvement.

Lubricant Measure

In order to insure some control during lubrication, a standard quantity for applying lubricant has been established. This standard measure assures that approximately the correct amount of lubricant will be applied. This measure is defined as follows:

DIP - A dip is that amount of oil retained in the bristles of a No. 4 artist's brush after it has been dipped into a lubricant to a depth of 3/8'' and then drawn across the edge of a container to remove any surplus oil.

Types of Lubricants

The following types of lubricants are recommended for use with dials and each should be mixed thoroughly before application:

a. Dial lubricant (spec. 5909). This black non-graphite lubricant is compatible with plastics and provides rust protection. This lubricant is used on mechanisms which may be required to operate at low temperatures; it is widely used on dials. Order H-78612-64, dial lubricant (spec. 5909), 2 oz.

Procedure

Before lubricating the dial, remove the dial escutcheon using dial escutcheon tool H-26917. Remove the finger plate mounting screw and the finger plate. Remove the main spring assembly. Wipe all exposed parts thoroughly to remove old oil and dirt. Lubricate the dial following steps a. through g. below. If the dial is equipped with SATT spotter springs perform step h.

a. Distribute one dip of dial lubricant (spec. 5909) among the following points:

(1) The end of the pinion shaft, where the shaft bears in the finger stop.

(2) The shaft, where the shaft bears in the pinion shaft bearing bridge both above and below the bridge, and on the teeth and body of the pinion shaft from the finger stop to the worm gear.

(3) Apply the remainder of this dip over the face of the pawl stop arm on the finger stop in order to protect against rust.

b. Distribute one dip of standard dial lubricant among the following points:

(4) Around the junction between the main bearing and the metal main gear. NOTE: This point must be lubricated before the metal main gear is mounted.

(5) Over the top of the metal main gear.

(6) Apply the remainder of this dip evenly over the ratchet teeth.

c. Apply one dip of dial lubrication to:

(7) Between at least two-thirds of the metal main gear teeth.

d. Distribute one dip of dial lubricant among the following points:

(8) Around the governor shaft at the point where it enters the governor cup bearing.

(9) Around the governor shaft at the point where it enters the rear bearing screw.

(10) Apply the remainder of this dip over the worm and:

(11) The exposed length of the governor. This is to provide rust protection.

e. Distribute one dip of dial lubricant among the following points:

(12) The exposed end of the main bearing.

(13) The edge of the cam.

(14) Between at least two-thirds of the teeth of the worm gear.

(15) The ends of the governor buffers.

(16) (17) The two spring buffers. NOTE: Do not lubricate buffers made of hard rubber.

Before continuing the lubrication process, remove the fibre washer and the lift washer from the shaft assembly and wipe each piece clean.

f. Distribute one dip of dial lubricant among the following points:

(18) Around the head of the pin.

(19) Between the pawl and the pawl plate.

(20) Over the length of the shaft.

(21) Both sides of the lift washer.

(22) Both sides of the fibre washer.

(23) Both sides of the stainless steel washer.

(24) On the pawl spring anchor pin where the pawl spring rides.

(25) In the pawl spring anchor hole in the pawl.

(26) Through the coils of the pawl spring.

Reassemble the dial.

g. Apply one dip of dial lubricant to the following point:

(27) Between the coils of the main spring.

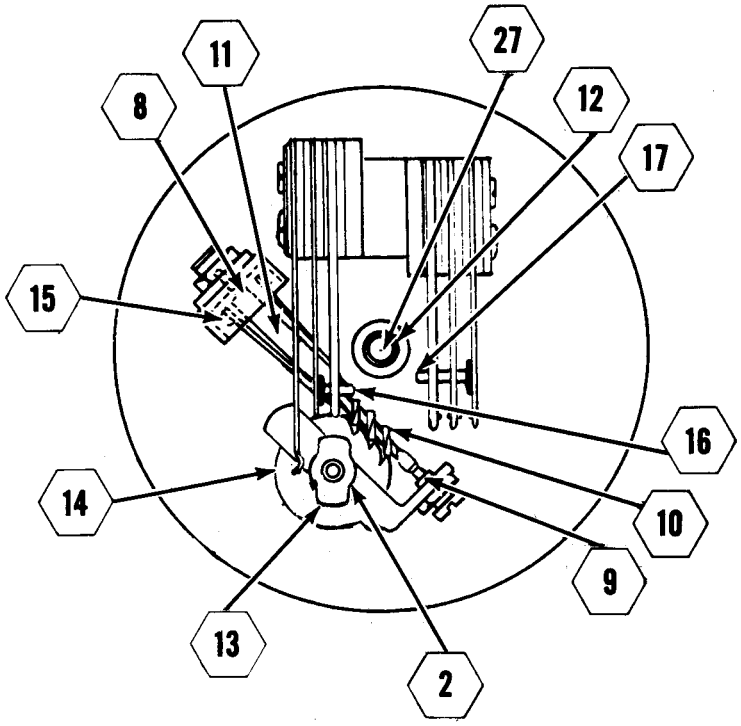
If the dial is equipped with SATT spotter springs, lubricate as follows:

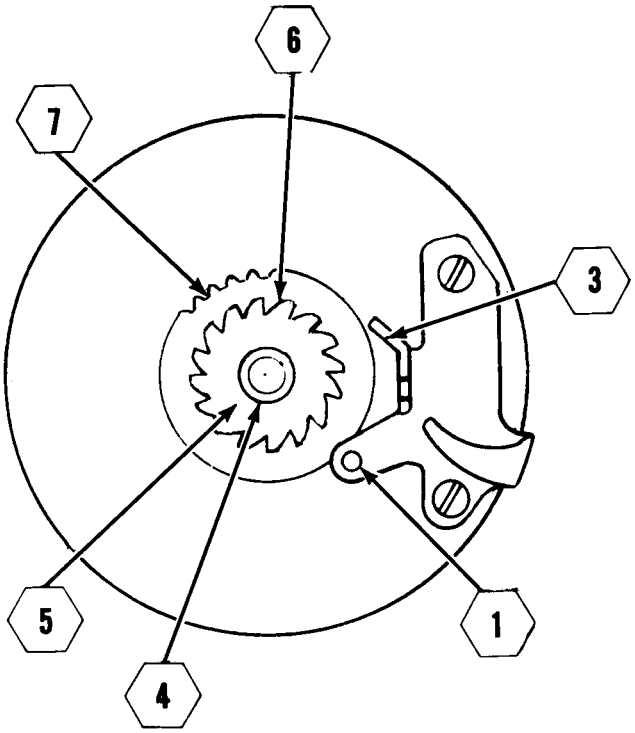
h. Distribute one dip of dial lubricant between the following points:

(28) Between each side of the spotter pawl, and the washers mounted on the same pin.

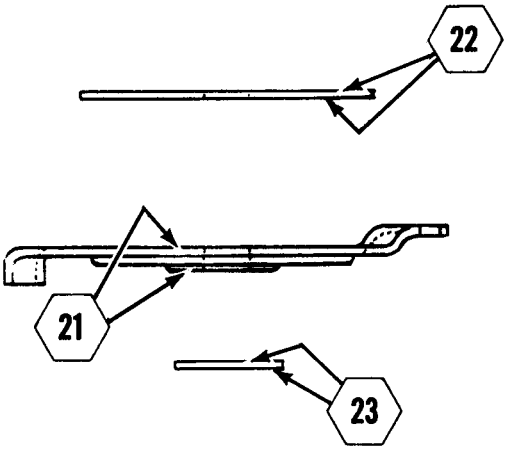
(29) The edge of the SATT cam.

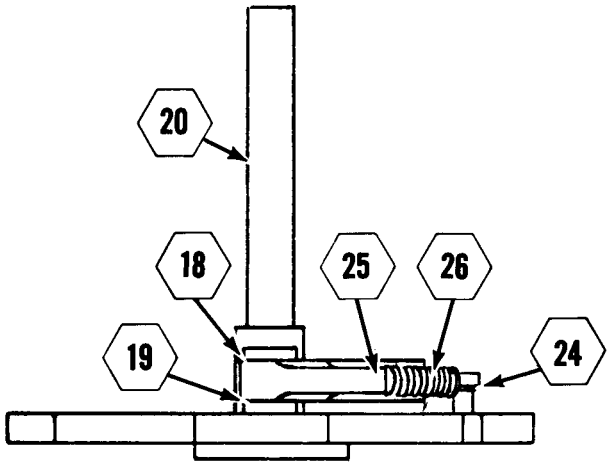
After lubrication, wipe any lubricant from parts and surfaces not intended to be lubricated.

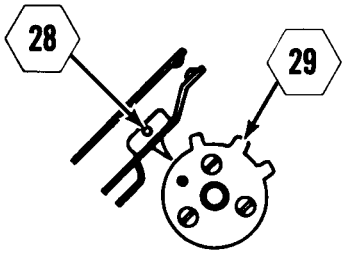




Dial lubrication.







FOR SATT DIALS ONLY

Dial lubrication.