



INSTRUCTIONS

Resetting of Form 86

Odometer Type Cyclometer Registers

GEI-52525A

GENERAL DESCRIPTION

These instructions cover the resetting procedure for Form 86 odometer-type cyclometer registers (see Fig. 1).

The register design (see Fig. 2) consists of a spring-held transfer pinion shaft (9) which can be deflected to allow the digit wheels (#2 - #5) to be manually reset by slipping by the transfer pinion teeth. Digit wheel #1 is not resettable.

The design includes two reset stops (7) which can be positioned to make the register either resettable or non-resettable (see Fig. 3).

With the flat side of the reset stop as shown parallel to the pinion shaft, the register is resettable. By turning the two reset stops (7, Fig. 2) at least 90°, the register is non-resettable.

If the reset stops are in the non-resettable position, it will be necessary to remove the register from the meter in order to reset the register.

If the reset stops are in the resettable position, the register may be reset without being removed from the meter.

NOTE: Unless otherwise specified, the Form 86 register will be supplied in the non-resettable position.

RESETTING TO ZERO READING ON METER WITH RESET STOPS IN RESETTABLE POSITION

CAUTION: Permanent damage may be caused to the digit wheels, pinions and shafts if parts are forced while in the non-resettable mode. Check position of reset stops before attempting to reset.

CAUTION: If resetting is not done correctly, the register may show portions of two numerals in the window or it can bind and become inoperative. A simple check as described in Step 1 will give a positive indication that the reset has been done correctly.

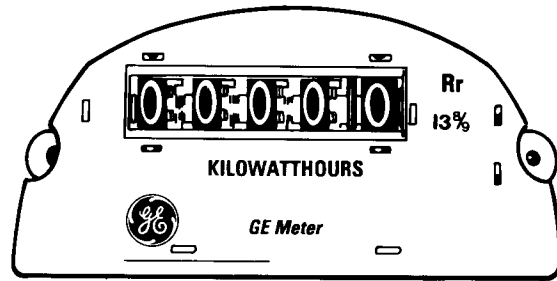
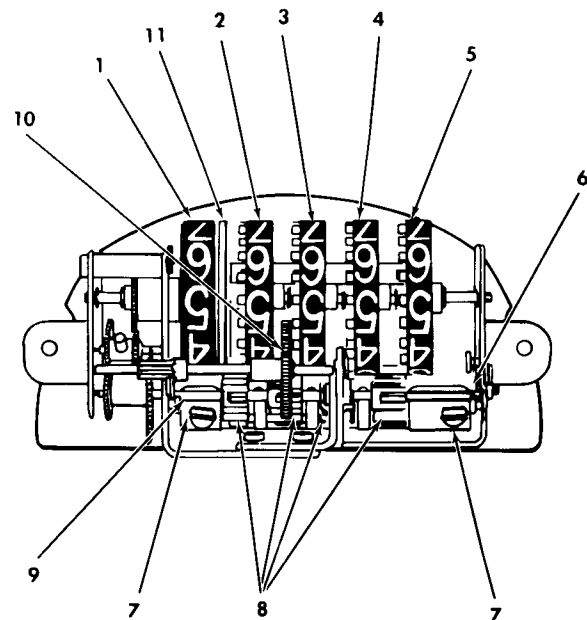


Figure 1



Rear View

- | | |
|-------------------|-----------------------|
| 1. Digit Wheel #1 | 7. Reset Stop (2 ea.) |
| 2. Digit Wheel #2 | 8. Pinions (4 ea.) |
| 3. Digit Wheel #3 | 9. Pinion Shaft |
| 4. Digit Wheel #4 | 10. Worm Gear |
| 5. Digit Wheel #5 | 11. Kick-Over Disk |
| 6. Spring (2 ea.) | |

Figure 2

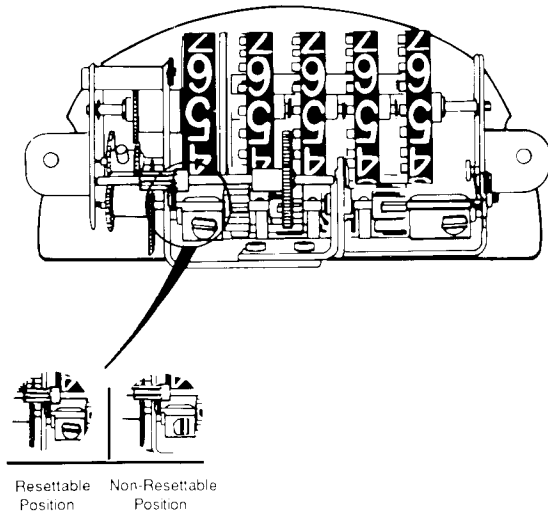


Figure 3

It is suggested that the step-by-step procedure be read completely before starting to reset a register.

The procedure for resetting the register consists of pushing the top of each wheel either forward or backward. This can be performed on all wheels except the fastest moving #1 wheel. Wheel #1 is directly geared to the worm on the meter rotor and it can only be reset by disengaging the register worm gear from the worm as will be described in Step 5.

Each wheel can be reset independently of the others. There may be some interaction if a wheel is advanced thru the 9 to 0 transfer position and therefore advance the next digit wheel.

Reset Procedures

1. Reset #2 Digit Wheel as follows (see Fig. 2):
 - a. Rotate digit wheel #2 forward or backward until "0" appears in the window (the reset action will deflect the pinion shaft so that the wheel teeth can be slipped by the pinion teeth. Each tooth slipped moves the digit wheel by half a numeral).
 - b. Check for proper reset. Two conditions must be met to ensure that the wheel tooth is properly engaged with its pinion tooth:
 - A complete numeral (zero in this case) appears in the window.

- There is rotary movement of the digit wheel within the window.
2. Reset #3 Digit Wheel as follows:
 - a. While holding #2 wheel with a finger of the right hand to ensure that it will remain in the previously reset position, rotate #3 wheel back to the zero position.
 - b. Again check for proper reset with the whole number in the window and up and down movement of the wheel as described in Step 1.
 3. Reset #4 and #5 Digit Wheel as follows:
 - a. Again while holding the previously reset digit wheels, rotate first the #4 wheel and then the #5 wheel to the zero position.
 4. Check all four digit wheels for proper reset, check for whole number in the window and rotary movement of the digit wheels as described in Step 1.
 5. Reset #1 Digit Wheel as follows:
 - a. Loosen the two register mounting screws enough so that the register worm gear can be demeshed from the worm on this meter rotor.
 - b. Rotate the #1 wheel backward to zero.
 6. Test that all wheels have been properly reset as follows:
 - a. Continue rotating the #1 wheel backward past zero so that all wheels move to the 99999 position.
 - b. Advance the #1 wheel back to zero and observe the free action of the digit wheel during kickover from 99999 to 00000.
 7. Retighten the two register mounting screws and recheck the mesh of the register worm gear to the worm on the meter rotor. Previous mesh should not have been affected.
 8. Check mesh between the disc shaft worm teeth and the register drive gear teeth. Mesh should be between 1/3 and 2/3 the depth of the disc shaft worm teeth.
 9. If mesh requires adjustment, using a standard screwdriver simply turn the adjustment on the register

drive gear bearing plate clockwise (for increased mesh), or counterclockwise (for decreased mesh). See Fig. 4.

NOTE: *The register drive gear to meter disc shaft mesh adjustment is accessible using a screwdriver from the left side of the meter/register.*

NOTE: *If this procedure is not followed, proper function of the register may be adversely affected.*

RESETTING TO A READING OTHER THAN ZERO

The procedure is the same as resetting the digit wheels to zero as described in Reset Procedures, except that the digit wheels will be rotated to the desired numbers rather than zero.

CAUTION: *Always make sure that the complete numeral is in the window and that there is up and down rotary movement of the digit wheels as described in Step 1 of Reset Procedures indicating that the digit wheel gear teeth are properly engaged with the pinion teeth.*

RESETTING A REGISTER WITH THE RESET STOPS IN THE "NON-RESETTABLE" POSITION

1. Remove mounting screws and remove register from meter.

2. With a screwdriver, rotate both reset stops so that the flat surface is nearest to and parallel to the

pinion shaft (as shown in Fig. 3).

3. Proceed to reset register to zero or any other numbers as described in Reset Procedures and **RESETTING TO READING OTHER THAN ZERO**.

4. Put register in "non-resettable" position (if desired) by rotating both reset stops at least 90° so that the curved portion of the stops are nearest to the pinion shaft (see Fig. 3).

5. Loosely assemble both register mounting screws to position the register for final seating. Do not tighten either screw without the other at least loosely assembled.

6. Tighten first the right side mounting screw, then tighten left side mounting screw.

7. Check mesh between the disc shaft worm teeth and the register drive gear teeth. Mesh should be between 1/3 and 2/3 the depth of the disc shaft worm teeth.

8. If mesh requires adjustment, using a standard screwdriver simply turn the adjustment on the register drive gear bearing plate clockwise (for increased mesh), or counterclockwise (for decreased mesh). See Fig. 4.

NOTE: *The register drive gear to meter disc shaft mesh adjustment is accessible using a screwdriver from the left side of the meter/register.*

NOTE: *If this procedure is not followed, proper function of the register may be adversely affected.*

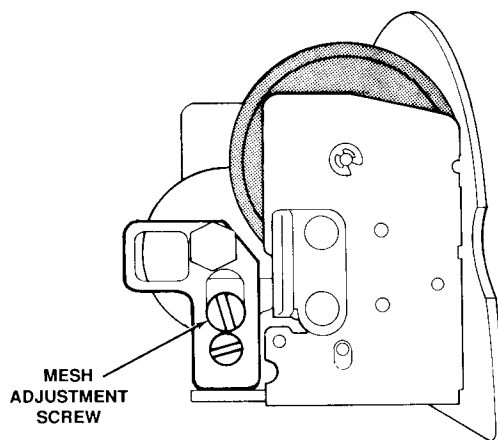


Figure 4

