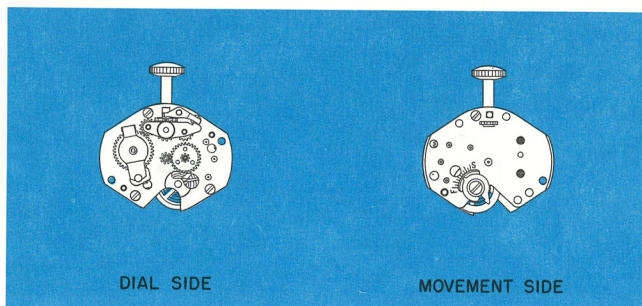


TIMEX model 23

SERVICE MANUAL
MODEL 23

6³/₄ by 8 lig.
15, 4 by 18, 1 mm
.605 by .713 in.

the TIMEX Model 23 Movement



The Timex Model 23 is a $6\frac{3}{4}'' \times 8''$ movement featuring "V-conic" bearings system and rugged two plate design.

Whereas most watches utilize bridges, Timex has constructed the Model 23 movement with full plates to take advantage of the accuracy inherent in this type of design. This accuracy insures complete interchangeability for the escapement and gear train without the need for selective fitting and adjustments which complicate the repair of most watches.

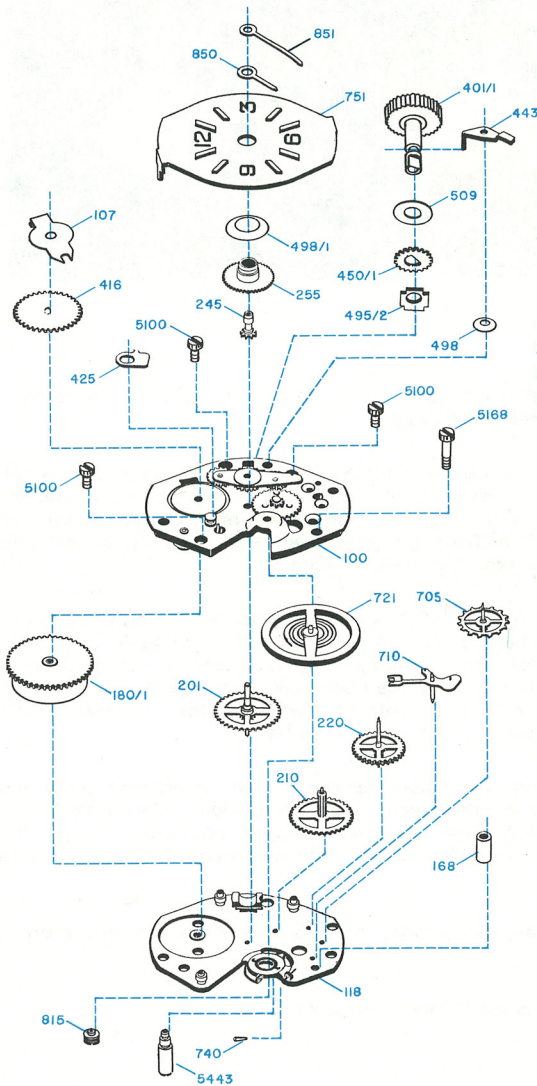
To clean the Timex Model 23, it is necessary to remove only the minute hand, dial and balance. The illustrations on Pages 23.3 through 23.5 show proper procedures. Timex has found, through long and careful research, that the best method of cleaning is with only the above-mentioned parts removed. The cleaning fluid, while removing any contamination from the movement, will also remove oil from the gear train, pivots and holes.

If further dismantling is required, removal of the movement plate will expose the gear train and associated parts. Reassembly should start with the movement plate, exercising normal care to insure proper positioning of pivots in their respective holes. The exploded view of the movement on Page 23.2 will guide reassembly.

Cleaning and re-oiling instructions for the Model 23 movement are given on Page 23.6.

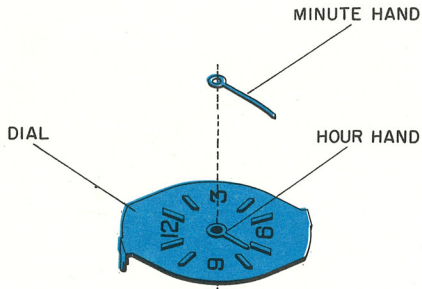
Reassembly techniques are shown on Page 23.7.

the TIMEX model 23 movement (exploded view)



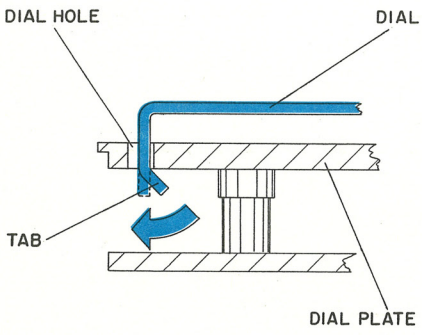
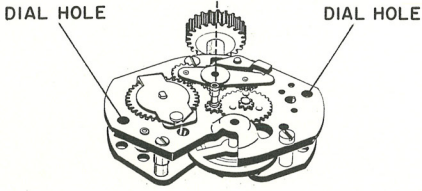
- 100 Dial Plate Assembly
- 107 Ratchet Wheel Bridge
- 118 Movement Plate Assembly
- 168 Tubular Pillar
- 180/1 Barrel Complete (with Mainspring)
- 201 Center Wheel Assembly
- 210 Third Wheel Assembly
- 220 Fourth Wheel Assembly
- 245 Cannon Pinion
- 255 Hour Wheel
- 401/1 Winding Stem with Crown
- 416 Ratchet Wheel
- 425 Click
- 443 Setting Lever
- 498 Friction Washer
- 498/1 Hour Wheel Washer
- 509 Stem Wind Washer
- 705 Escape Wheel Assembly
- 710 Pallet Lever Assembly
- 721 Balance Assembly
- 740 Hairspring Wedge Pin
- 751 Dial Assembly
- 815 Balance Screw Assembly
- 850 Hour Hand
- 851 Minute Hand
- 5100 Pillar Screw
- 5168 Tubular Pillar Screw
- 5443 Set Lever Screw

Disassembly of Movement for Cleaning (model 23)



Removing the Dial and Hands

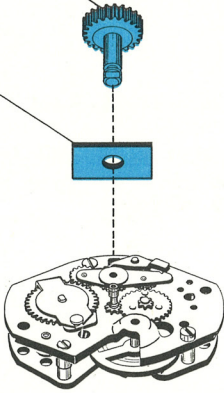
- a) Remove minute hand.
- b) Remove dial by straightening the two tabs which clamp the dial to the movement.



Disassembly of Movement for Cleaning Cont'd.

CROWN & STEM ASSEM.

DUST SEAL

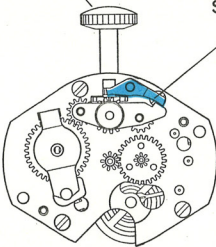


Removing the Crown and Stem

To remove the crown and stem, turn the set lever screw approximate 1 1/4 turns.

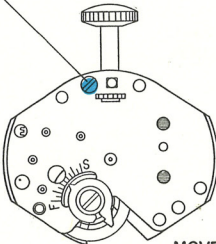
CROWN & STEM ASSEM.

SET LEVER



DIAL SIDE

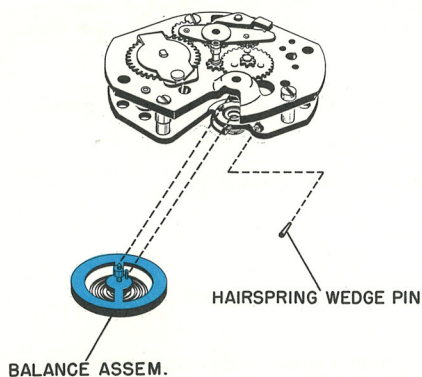
SET LEVER SCREW



MOVEMENT SIDE

Disassembly of Movement for Cleaning Cont'd.

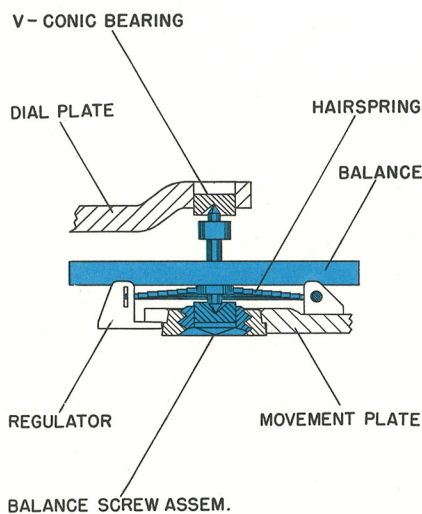
Removing the Balance



Two "V-conic" studs are used as bearings for the balance staff on the Timex Model 23 movement. The stud on the movement plate is driven into a screw so that fine endshake adjustment is possible.

Removal of the balance assembly should be carried out in the following manner:

- a) Remove the hairspring wedge pin, being careful not to distort either the pin or the hairspring.
- b) Rotate the balance slowly until the hairspring tail is free of the hairspring wedge pin bracket and the regulator.
- c) Loosen the balance screw assembly (counterclockwise direction) using a suitable screwdriver, until the end of the balance staff is free of the "V-conic" bearing. During the loosening of the screw, only minimum downward pressure should be applied with the screwdriver, as excessive downward pressure could seriously damage the balance staff points.
- d) Carefully remove the balance assembly.



Cleaning the Model 23 Movement

After removal of the balance, and the other parts mentioned in Pages 23.3 through 23.5, the movement is ready to be cleaned.

If a cleaning machine is used, place the movement in the basket with the dial plate down to insure proper drainage of the fluid from the mainspring barrel. It should be well swirled in the cleaning fluid after which two sets of rinsing fluid should be used. The final cleaning fluid must be absolutely clean. After cleaning, the movement should be thoroughly dried.

If a cleaning machine is not available, the same procedure should be followed manually, by re-inserting the stem, grasping the movement firmly around the stem and shaking it in the cleaning and rinsing fluids to insure that the fluid will pass through the entire mechanism.

The balance assembly should be cleaned separately in a small jar to prevent damage to the hairspring.

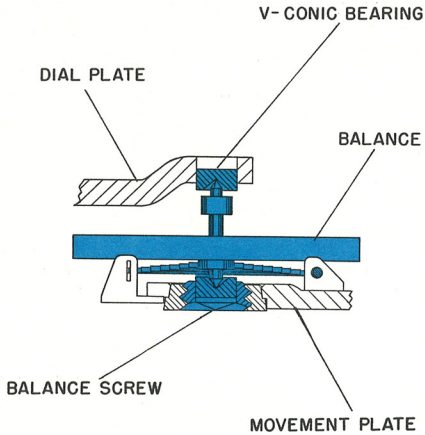
Only standard watch cleaning solutions should be used throughout.

Lubricating the Model 23 Movement

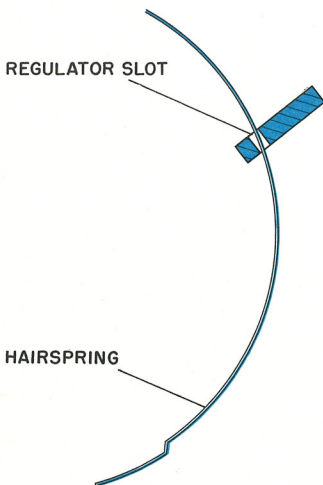
The movement should be re-oiled in the normal manner using only high grade watch oils (oil used in factory assembly is Elgin M56b). The mainspring is permanently lubricated with a solid coating which is not affected by normal cleaning solutions and should, therefore, not be oiled.

The "V-conic" bearings should be oiled no less than $\frac{3}{4}$ full before replacing the balance.

Reassembly of the Model 23 Movement



Replace the balance carefully into the movement by tilting the movement and inserting first, the movement side pivot (hairspring side) then, the dial side pivot into the "V-conic bearing". Adjust the balance screw enough to hold the balance in place. By rotating the balance, insert the hairspring into the regulator slot and hairspring wedge pin bracket. Before re-pinning the hairspring, make certain the impulse pin is within the slot on the fork. Repin the hairspring making sure that the wedge pin is straight and true, as any distortion to the pin could interfere with the normal "breathing" of the hairspring. The endshake is now finally adjusted using caution to apply only minimum downward pressure to the balance screw as excessive pressure could damage the points of the balance staff.



Inspect the hairspring to be certain that it is properly adjusted. As shown by the diagram, the hairspring should be positioned centrally within the hairspring slot.