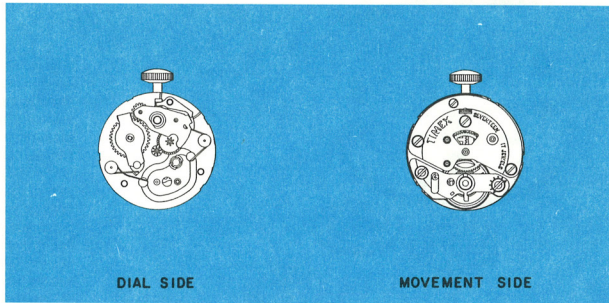


TIMEX model 79

SERVICE MANUAL
MODEL 79

7¼ lig.
16.51 mm
.650 in.

the TIMEX Model 79 Movement



The Timex Model 79 is a 7- $\frac{1}{4}$ ligne round movement featuring 17 jewels and plate and bridge construction.

An important feature of the Timex Model 79 is the escapement. Timex has developed a jeweled lever escapement which functions exactly as the conventional escapements, but eliminates the danger of loose pallet stones. In conventional jeweled club-tooth lever escapements, the pallet stones lie horizontal to the plane of the lever and are normally shellacked in place. This type of construction leads to frequent loosening of the stones during cleaning, thus requiring readjustment. The Timex design, however, uses pallet stones vertical to the pallet lever which are driven permanently in place. Since they are not fixed with shellack or other adhesives they will not loosen during cleaning and will not require adjustment, thus retaining full accuracy in the escapement.

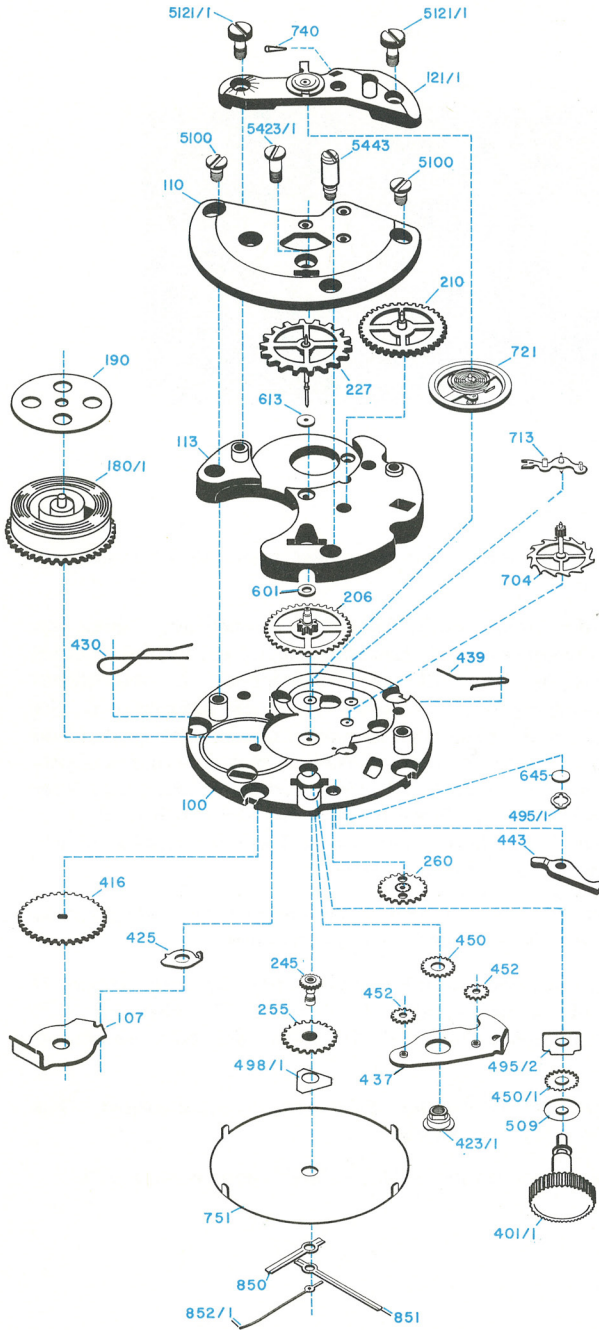
To clean the Timex Model 79 it is necessary to remove only the sweep second hand, minute hand, dial assembly, balance bridge and balance.

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 pivots and holes.

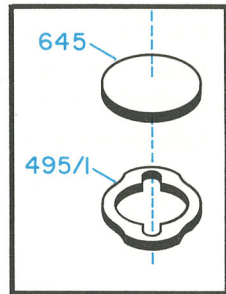
Pages 79.3 and 79.8 show procedures for dismantling the movement. The exploded view on 79.2 will guide reassembly.

Cleaning and re-oiling instructions for the Model 79 are found on Page 79.9.

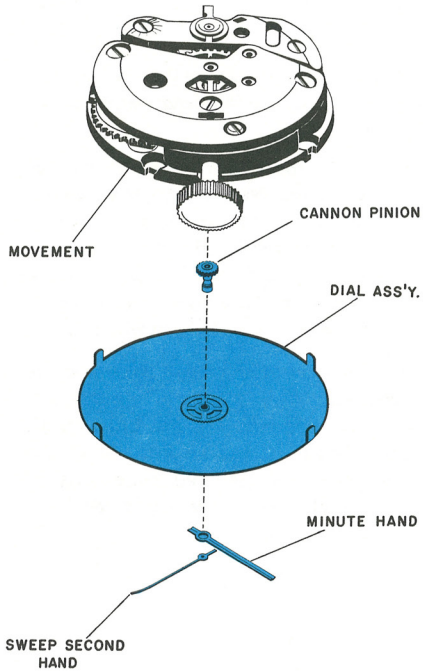
the TIMEX model 79 movement (exploded view)



- 100 DIAL PLATE ASS'Y.
- 107 RATCHET WHEEL BRIDGE
- 110 TRAIN WHEEL BRIDGE ASS'Y.
- 113 SPACER BLOCK
- 121/1 BALANCE WHEEL BRIDGE ASS'Y.
- 180/1 BARREL COMPLETE (WITH MAINSPRING)
- 190 BARREL COVER
- 206 CENTER WHEEL ASS'Y.
- 210 THIRD WHEEL ASS'Y.
- 227 FOURTH WHEEL ASS'Y.
- 245 CANNON PINION
- 255 HOUR WHEEL
- 260 MINUTE WHEEL ASS'Y.
- 401/1 WINDING STEM / CROWN
- 416 RATCHET WHEEL
- 423/1 ROCKING BAR BUSHING
- 425 CLICK
- 430 CLICK SPRING
- 437 ROCKING BAR ASS'Y.
- 439 ROCKING BAR SPRING
- 443 SETTING LEVER
- 450 INTERMEDIATE WIND PINION
- 450/1 WINDING STEM PINION
- 452 WIND AND SET PINION
- 495/1 RETAINING RING (CAP JEWEL)
- 495/2 WINDING BRIDGE
- 498/1 HOUR WHEEL WASHER
- 509 STEM WIND WASHER
- 601 JEWEL CENTER WHEEL UPPER
- 613 FOURTH WHEEL JEWEL
- 645 CAP JEWEL
- 704 ESCAPE WHEEL ASS'Y.
- 713 PALLET LEVER ASS'Y.
- 721 BALANCE ASS'Y.
- 740 HAIRSPRING WEDGE PIN
- 751 DIAL
- 850 HOUR HAND
- 851 MINUTE HAND
- 852/1 SWEEP SECOND HAND
- 5100 PILLAR SCREW
- 5121/1 BALANCE BRIDGE SCREW
- 5423/1 ROCKING BAR BUSHING SCREW
- 5443 SET LEVER SCREW



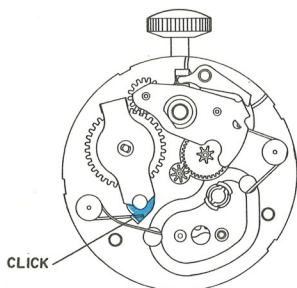
Disassembly of Movement (model 79)



Removing the dial and hands

- a) Remove sweep second hand
- b) Remove minute hand
- c) The dial is clamped directly to the movement by means of four tabs, which are bent over the dial plate. The dial may be removed by straightening these tabs.

Disassembly of Movement Cont'd.



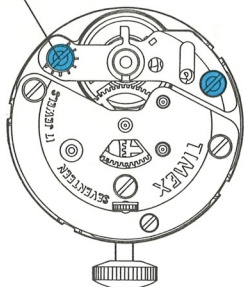
Removing the Balance

Before proceeding further with disassembly, the mainspring should be let down.

- a) Grasp the crown in the fingers of one hand and release the ratchet wheel by holding the click out of engagement with the ratchet wheel. Let the crown revolve slowly in the fingers, being careful not to let the crown slip.

The balance and bridge may now be removed. Two "V-conic" jewels are used as bearings for the balance on the Model 79 movement. Endshake adjustment is provided by means of the "endshake adjusting screw" on the balance bridge.

ENDSHAKE ADJUSTING SCREW



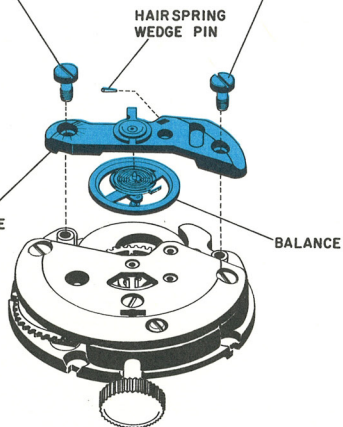
ENDSHAKE ADJUSTING SCREW

BALANCE BRIDGE SCREW

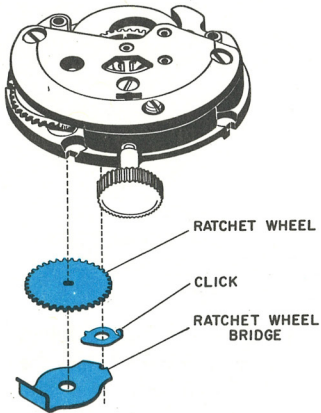
HAIRSPRING WEDGE PIN

BALANCE BRIDGE

BALANCE



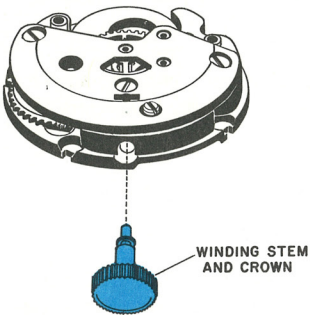
Disassembly of Movement Cont'd.



Removing the Ratchet Wheel

The next step in disassembly of the movement is removal of the ratchet wheel.

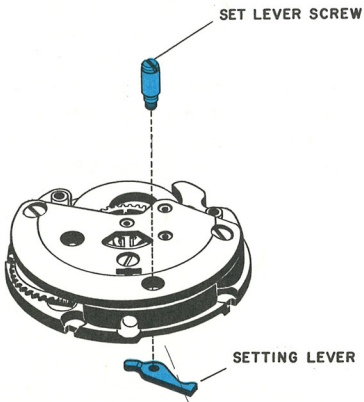
- a) Remove the ratchet wheel bridge by unhooking the front edge of the bridge from the slot in the dial plate.
- b) Remove the ratchet wheel
- c) Unhook the click spring from the click and remove the click—The click spring will remain with the dial plate.



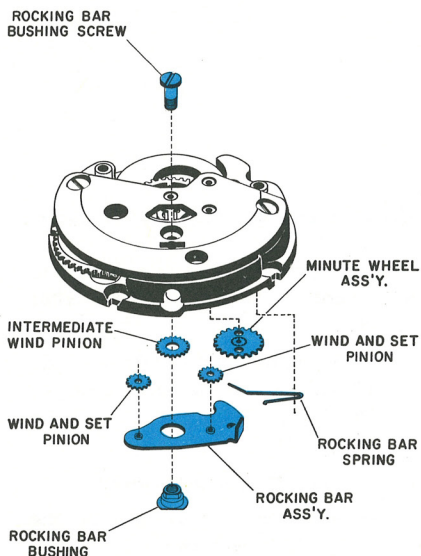
Removing the Stem

The stem is removed in the conventional manner by loosening the set lever screw.

If further disassembly is required, remove the set lever screw and set lever.

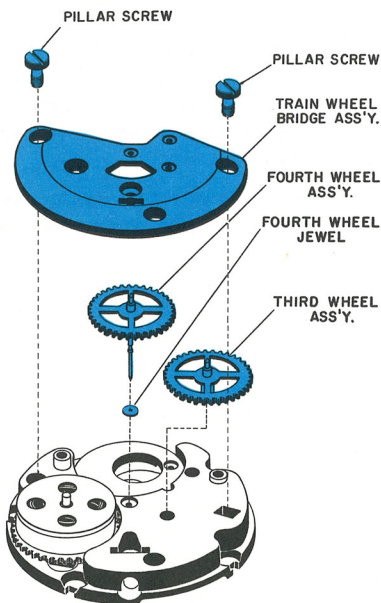


Disassembly of Movement Cont'd.



Removing the Wind and Set Mechanism

Removal of the rocking bar bushing screw will allow disassembly of the wind and set mechanism and the rocking bar spring.

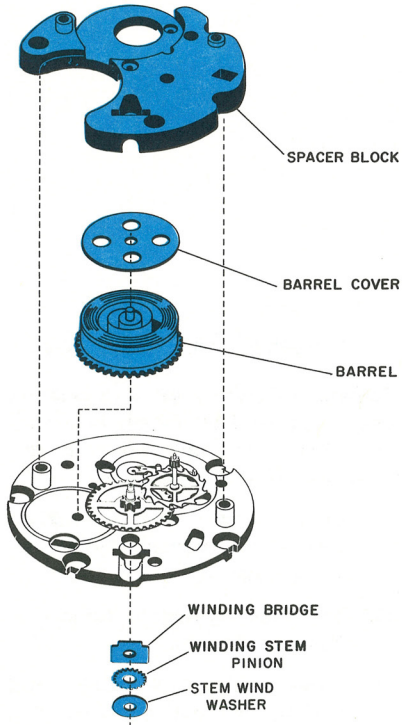


Removing the Train Bridge and Train

The Model 79 construction utilizes a spacer block between the train wheel bridge and dial plate.

To remove the train wheel bridge, remove the two pillar screws. Next, gently remove the train wheel bridge, the fourth wheel assembly and third wheel assembly. Note, the loose fourth wheel jewel located between the fourth wheel and the spacer block.

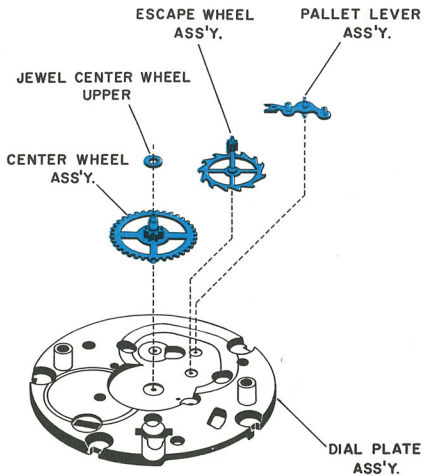
Disassembly of Movement Cont'd.



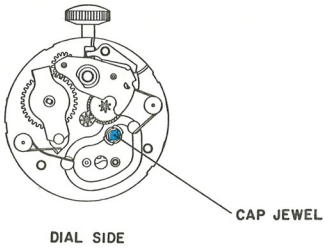
Removing the Spacer Block

The next step in disassembly is to remove the spacer block. Once this is removed, the remainder of the train together with the barrel may be removed.

Note the position of the loose center wheel jewel located between the center wheel and the spacer block.



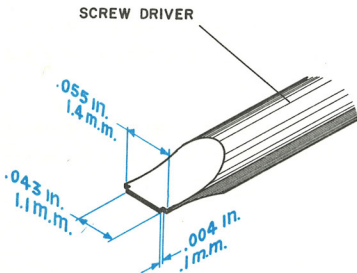
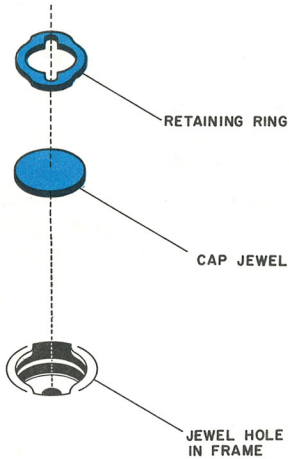
Disassembly of Movement Cont'd.



Removing the Cap Jewel

To remove the cap jewel, a screwdriver blade, reground as shown, is useful. This tool is available upon request from the Timex Corporation.

- a) Insert tip of revised screwdriver blade into elongated slot on retaining ring.
- b) Turn retaining ring $\frac{1}{4}$ turns in a clockwise direction.
- c) Remove screwdriver blade and carefully lift out retaining ring and cap jewel.



Cleaning and Lubricating the Model 79 Movement

Cleaning the Model 79 Movement

As mentioned on page 79.1, the best method of cleaning the Model 79 movement is with only the dial, hands, balance bridge and balance removed.

Place the movement in a cleaning machine with the train bridge side down. This will allow proper drainage of the cleaning fluid from the mainspring barrel. The movement should be well swirled in the cleaning fluid, after which two sets of rinsing fluids should be used. The final cleaning fluid must be absolutely clean. After cleaning, the movement should be thoroughly dried.

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 79 Movement

The "V-conic" bearing should be oiled $\frac{1}{2}$ to $\frac{3}{4}$ full before replacing the balance.

Oil both the top and bottom sides of the intermediate wind pinion and wind and set pinion.

The movement should be re-lubricated 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.

Re-assembly of the Model 79 Movement

After cleaning, the movement is ready to be reassembled—replace the balance and balance bridge. Replace the dial by bending the dial tabs to clamp the dial in place. Replace the minute and sweep hands.

The center of the fourth wheel staff should be supported at the train bridge side while replacing the sweep hand to avoid damage to the fourth wheel jewel.

As with most Timex movements, the hairspring is curbed against the inside edge of the regulator slot. Refer to re-assembly instructions regarding the hairspring for other Timex models.

If the movement has been completely disassembled, lubrication should be carried out during reassembly to facilitate reaching the fourth wheel jewel, center wheel jewel, etc.