

# ACCUTRON<sup>®</sup> QUARTZ €

Service Manual for Stepping Motor Quartz (S.M.Q.) Series 242

# **Table of Contents**

Page
0

Introduction to the Basic Electronic Function of Bulova Accutron Quartz Series 242
Technical Data
Power Cell
Setting Instructions and Synchronizing Electronic ACCUSET <sup>®</sup> Circuit
Using the ACCUSET Corrector5
Servicing
Cleaning and Lubrication5 Lubricants5
Mechanical Check Points
Electrical Check Points5
ACCUSET Contact Check
Basic Test Procedure for S.M.Q. Series 2426-7
Checking the Components
Removing the Components
Electronic Circuit
Resonator (Quartz) Cannister with Nest8
Stepping Motor         8           Model 2426.10         8
Setting Instructions
Parts Assembly Sequence for Series 242 8-9
Parts List for Model 2421.109
Parts List for Model 2422.1010 Parts List for Model 2423.1010
Parts List for Model 2425.1010
Illustrated Parts List
Notes 10-11

# BASIC ELECTRONIC FUNCTION OF ACCUTRON QUARTZ SERIES 242 Refer to Fig. 1

The Accutron Quartz Series 242 is powered by a 1.55 volt "Bulova 242" battery. Voltage from the battery is introduced into the electronic circuit, which then transmits current to the Quartz Crystal circuit causing it to vibrate at 32,768 Hz (cycles per second). The accuracy of the watch is dependent on the frequency of the Quartz Crystal. If the Quartz frequency is incorrect, the TRIMMER capacitor regulator, within the movement, can be turned to make adjustments of up to 8 seconds per day.

This Quartz frequency (rate) must then be converted to one-second impulses before it can be used to mechanically drive the hands of the watch. This is accomplished by means of an electronic divider circuit. The divider circuit, which contains 15 stages, receives the signal generated by the Quartz Crystal and divides this signal by two in each of the 15 stages.

The 15th stage emits one pulse per second. The divider circuit divides the 32,768 Hz to 1 Hz  $(2^{15} = 32,768)$ , which drives the stepping motor in the timekeeping mode. The motor in turn drives the gear train which is connected to the dial train causing the hands to turn.

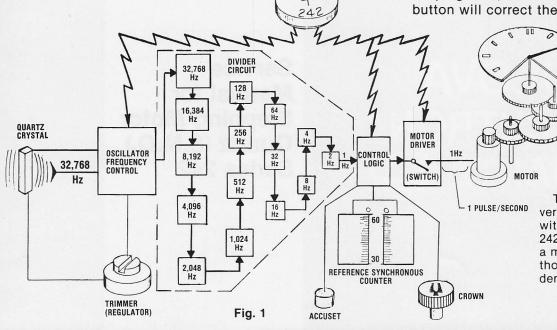
### **ACCUSET®** Operation

In addition to the 15 stage divider, and other circuits, there are also two independent counter ACCUSET control logic circuits. These logic circuits perform the resetting function for the ACCUSET feature. Both are set to zero when the crown is out (see Fig. 5, Pg. 4, Position 3) and the ACCUSET button is pushed and released. When the stem is pushed in (Position 1 or 2) both circuits start to count continuously, one count per second up to 60, and then start over again.

At a later date, if the sweep hand indicates a timekeeping error, within 30 seconds, pushing the ACCUSET button will correct the error. It will cause the motor (and

therefore the hands) to stop or double pulse in relation to the error. This is the means by which a timekeeping error can be corrected. *More detailed instructions are found on Pages 4 and 5.* 

This illustration is a simplified version of the complicated circuit within the Accutron Quartz Series 242. It is not intended to be used as a means of conveying any other thought but a practical way of demonstrating basic theory.



# **Technical Data**

Bulova Accutron Quartz Series 242—Electronic ovement with quartz resonator, stepping motor id ACCUSET





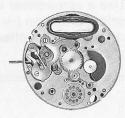


Fig. 2

#### Diameter

26 mm.-111/2 ligne

#### Thickness

4.55 mm—Caliber 2421.10 5.50 mm—Calibers 2422.10, 2423.10, 2426.10

# **Quartz Frequency**

32,768 Hz (Cycles per second)

#### **Electronic Circuit**

C-MOS Integrated Circuit—one second signal increments

#### **Stepping Motor**

Bipolar, 12 steps per revolution

Jwer Cell

One Silver Oxide Battery, 1.55 V., "Bulova 242"

#### **Power Consumption**

Max. 7.5 Microamperes (Normal Running) Max. 3.0 Microamperes (Disconnect Position 3)

## **Disconnect System**

When the stem is pulled out as far as it will go (Position 3), the motor and hands stop, but the Resonator (Quartz) continues to vibrate, without affecting the synchronization of the electronic ACCUSET circuit.

# ACCUSET

A device that corrects the second hand by merely depressing a push button. The second hand is reset automatically to the time standard.

#### Displays

Model 2421.10—Hour, Minute and Sweep Second Model 2422.10—Hour, Minute, Sweep Second and Date Model 2423.10—Hour, Minute, Sweep Second, Date and Day Model 2426.10—Hour, Minute, Sweep Second, Date and Time Zone Feature

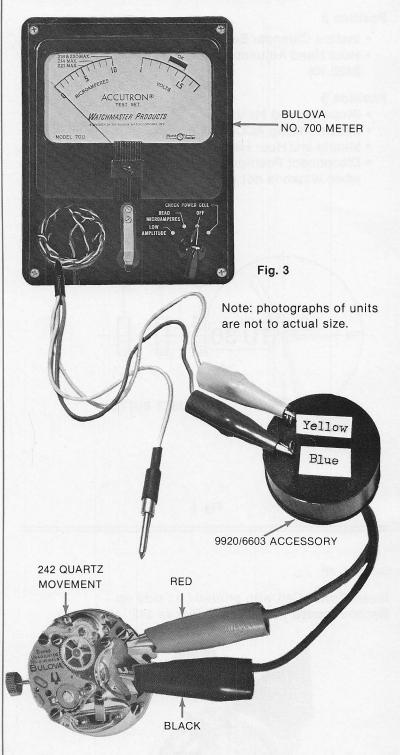
#### **Day Indicator**

In two languages: English and Spanish, or English and rench

**NOTE:** THE CALIBER NUMBER IS ENGRAVED INSIDE THE BATTERY WELL.

# **Tools and Equipment**

Bulova Accutron Meter No. 700 Bulova S.M.Q. Meter Accessory No. 9920/6603



Driving Wheel Removing Tool: PRESTO #3 for 5 Spoke Wheel



Frequency Counter With 32,768 Hz capacity

# **Crown Positions**

# **Position 1**

Normal Running

# **Position 2**

- Instant Calendar Setting
- Hour Hand Adjustment for Time Zone Feature (Model 2426.10)

# **Position 3**

- Stops Second Hand
- Synchronizing ACCUSET circuit
- Minute and Hour Hand Setting
- Disconnect Position: Conserves life of power cell when watch is not in use

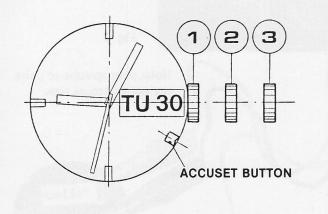
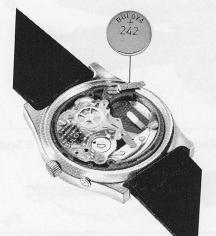


Fig. 5

**Power Cell** 

Insert Power Cell with printed (+) side up. Recommended Power Cell: "Bulova 242" (1.55 volt)



Note: The caliber number is engraved inside the battery well.

Fig. 6

**Checking the Frequency (Rate)** 

Quartz Frequency is 32,768 Hz. Rate should be within  $\pm$  0.17 seconds per day.

Adjusting the Frequency (Rate)

Use a screwdriver to turn the trimmer in the appropriate direction (+ or -) (See Fig. 1, Pg. 2). The maximum rate change is approximately 8 seconds per day.

Setting Instructions and Synchronizing Electronic ACCUSET Circuit

# Important: It is necessary to re-synchronize ACCUSET circuit after:

- A. Installing a Power Cell.
- B. Servicing the Movement.
- C. Interruption of Current (e.g. loose contact screw).

# Setting Instructions

**Step 1.** When sweep second hand of the watch reaches the 60th second mark (12 o'clock marker), pull crown out to Position 3 (See Fig. 5). (All hands will now stop.)

**Step 2.** Press and release ACCUSET button. (ACCUSET circuit is now synchronized with position of second hand.)

**Step 3.** Turn hands forward until date changes. (This establishes midnight.)

**Step 4.** If A.M., advance hands 5 minutes ahead of a time standard being used. Then gently turn the minute hand back to correct time.

If P.M., advance the hands past 12 o'clock (noon) to 5 minutes ahead of time standard and then gently turn the minute hand back to correct time.

**Step 5.** When time standard being used reaches the 60th second mark (12 o'clock marker), push crown to the "intermediate" position (Position 2). All hands will start instantly.

**Step 6.** First set the date, then the day. Crown must remain in Position 2. Slowly turn crown forward to correct date; backward to correct day. Push crown "in" (Position 1).

**Note:** Day Indicator is printed in English and Spanish, or English and French. Set accordingly.

Calendar cannot be set manually between 9:00 P.M. and 1:00 A.M. However, the mechanism will not be damaged if crown is accidentally turned during this period of time.

**Additional Setting Information** 

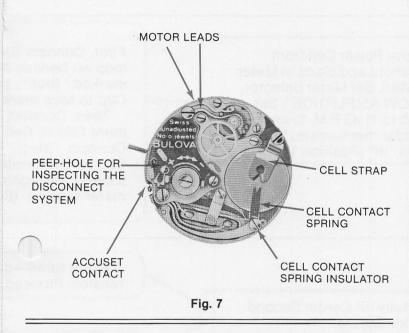
Once the ACCUSET circuit has been set (Refer to Step 1 and Step 2), there is no need to reset it, unless the power cell has been removed, or there has been an interruption of current.

#### Using the ACCUSET Corrector

After a period of time, if the watch is no longer accurate to the exact second, press and release the ACCUSET button the instant the *time standard* used reaches the 60th second (12 o'clock) marker. (Maxi-

um correction is + or - 30 seconds.) The sweep second hand of the watch will temporarily stop if it is fast, or accelerate if it is slow until it is in synchronization with the time standard.

**Important:** When the crown is "all the way out" (Position 3), motor and all hands stop. The ACCUSET circuit continues to operate and the quartz crystal continues to vibrate, using extremely little current. Store watches with crown in "out" (Position 3) to prolong battery life.



#### Servicing

**Note:** For disassembly and reassembly sequence, see pages 8 and 9. Circled numbers refer to the assembly sequence of various parts.

The following components should *not* be dipped in solvent:

- Dial Support (#10.106)
- Electronic Circuit (#10.513)
- Calendar Mechanism Maintaining Plate (#13.101)
- Stepping Motor (#20.510)
- Resonator (Quartz Cannister with Nest) (#40.510)
- Date Indicator (#91.440)
- Day Indicator (#91.441)
- Casing Ring (#93.010)

**Note:** Electronic Unit Support Bridge (#10.580) and the Battery Support (#20.701) may be left in the movement.

# **Cleaning and Lubrication**

After removing the components listed above, clean movement using "One-Step", "Miracle Plastic" or equivalent solution. Never oil train wheels with conventional watch oil. If cleaned in conventional manner, do not oil train wheels but lubricate the dial train, setting and calendar mechanism as shown on pages 8 and 9, using the lubricants listed.

### Lubricants:

Setting and Calendar Mechanisms—use thick oil such as "Moebius 9024".

Calendar Jumper Springs contacting plastic—use light grease such as "KT 22".

**Check the Following Mechanical Points:** 

• Hand adjustment: hands level, not touching dial markers, etc.

• Driving wheel correctly fitted on the third wheel pivot

- Functioning of the calendar mechanism
- Functioning of the hand setting mechanism

• Stop lever should not touch the intermediate train wheel when setting stem is in the "intermediate" (Position 2) or pushed "in" (Position 1).

• Freedom of the train wheels:

To check train freedom, remove power cell, electronic circuit, driving wheel and motor. Reinstall driving wheel.

With the stem in the "in" position, direct a stream of air from a watchmaker's hand blower horizontally against the driving wheel. The train wheels will turn if they are free. If not free, recheck for train blockage, excessive tension of center second spring, calendar mechanism blockage, etc.

Check the Following Electrical Points:

Screws of electronic circuit are tight

• Contact spring screw is fitted with its insulator (Part #20.652)

• Printed circuits are clean (use leather buff, no abrasives)

• Contact of the disconnect system as follows: Sight through view-hole (Fig. 7, Pg. 5). Make sure contact spring presses on setting lever contact stud when the hand setting crown is pulled "out" as far as it will go (Position 3).

**Check ACCUSET Contact As Follows:** 

• Contact spring *should* touch the main plate when ACCUSET button is pressed with movement in the case.

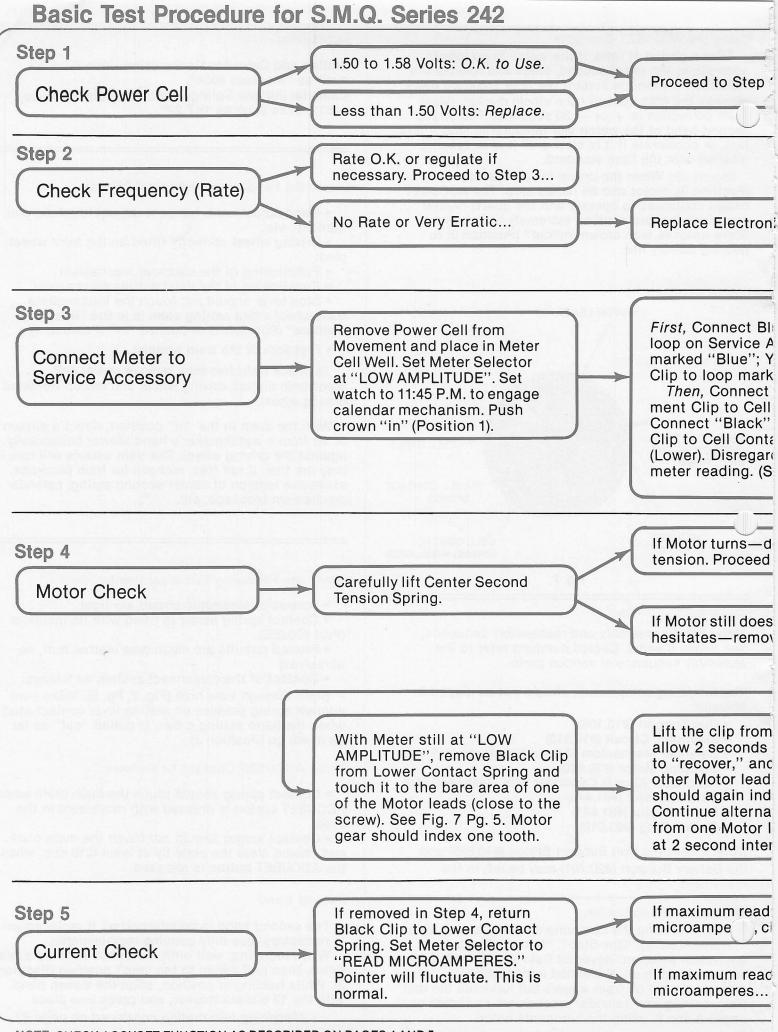
• Contact spring should *not* touch the main plate, and should clear the plate by at least 0.10 mm. when the ACCUSET button is released.

#### Second Hand

The second hand is counterpoised. If replacement is necessary, use only genuine replacements.

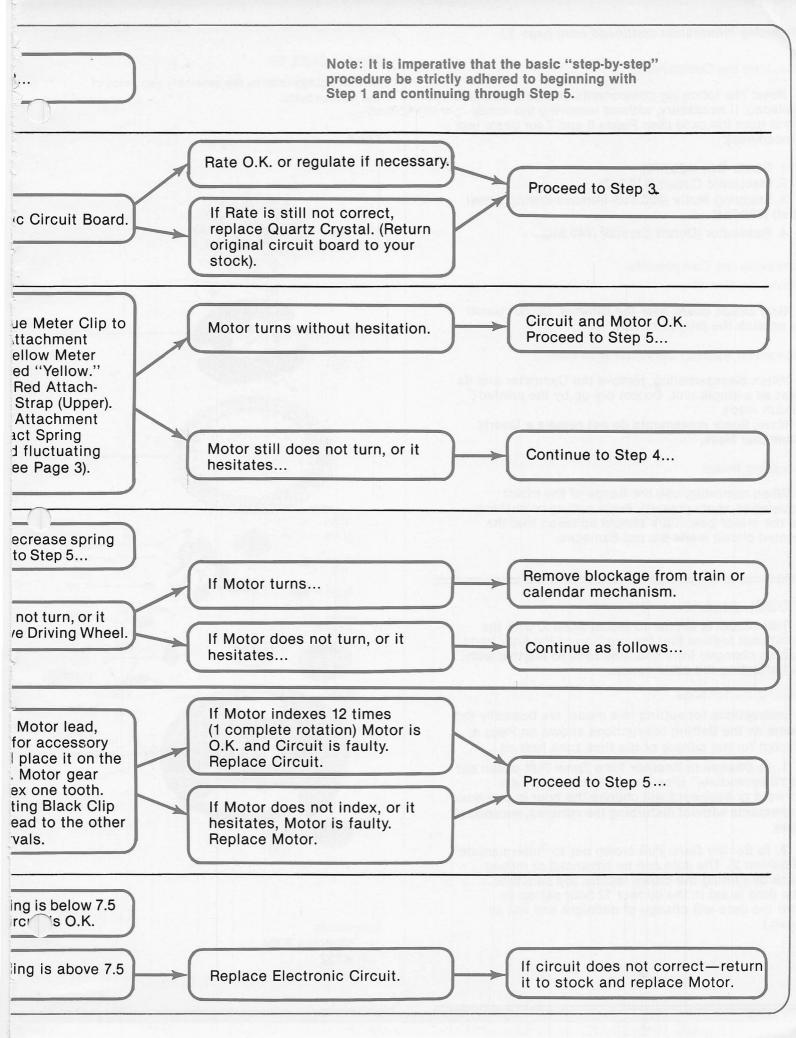
When redialing, wait until motor has indexed a few times, then pull crown to the "out" position (Position 3). While holding in position, align the sweep hand with the 12 o'clock marker, and press into place.

(Servicing information continued on page 8.)



NOTE: CHECK ACCUSET FUNCTION AS DESCRIBED ON PAGES 4 AND 5.

6



#### **Checking the Components**

**Note:** The following components can be tested and replaced, if necessary, without removing the movement from the case (See Pages 6 and 7 for basic test procedures):

- 1. Power Cell (#20.570)
- 2. Electronic Circuit (#10.513)

3. Stepping Motor (#20.510) (remove driving wheel first) (#30.051)

4. Resonator (Quartz Crystal) (#40.510)

Removing the Components Electronic Circuit

Grip circuit board near the trimmer. Do not touch or scratch the printed circuit.

# **Resonator (Quartz) Cannister with Nest**

When disassembling, remove the Cannister and its nest as a single unit. Do not pry up by the printed circuit leads.

Note: Some movements do not require a Quartz Cannister Nest.

#### **Stepping Motor**

When removing, use the flange of the motor housing to apply presure. Avoid pulling or pushing on the motor gear. Care should be taken that the printed circuit leads are not damaged.

# **MODEL 2426.10**

This model is similar to Model 2422.10 with the additional feature that the position of the hour hand can be changed from one time zone to another without affecting the other hands.

#### Setting Instructions

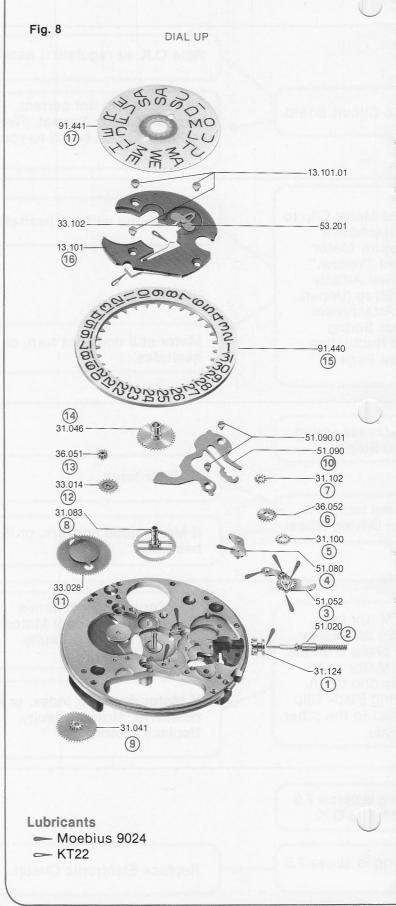
Instructions for setting this model are basically the same as the Setting Instructions shown on Page 4, except for the setting of the time zone feature.

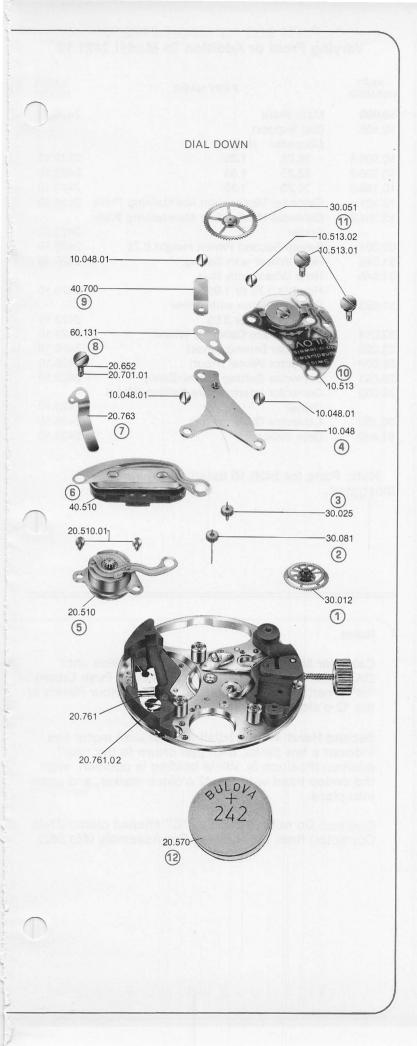
1. To Change to Another Time Zone: Pull crown out to "intermediate" (Position 2). Each slight turn forward or backward will change the hour in one hour increments without disturbing the minutes, seconds or date.

2. To Set the Date: Pull crown out to "intermediate" (Position 2). The date can be advanced or moved back by turning the crown rapidly. (Be sure that the time is set in the correct 12 hour period so that the date will change at midnight and not at noon.)

# Model 2423.10

Circled figures refer to the assembly sequence of the various parts.





PART NUMBER	PART NAME	BASIC MODEL
10.020	Main Plate	2421.10
10.048	Train Wheel Bridge	2423.10
10.048.01	Train Wheel Bridge Screw	2423.10
10.106	Dial Supports Diameter Height	
10.106-1	26.85 .40	2421.10
10.106-2	28.35 .40	2421.10
10.106-3	30.35 .40	2421.10
10.513	Electronic Circuit	2423.10
10.513.01	Electronic Circuit Screw	2423.10
10.513.02	Electronic Circuit Ground Screw (Use 10.048.01)	
10.580	Electronic Unit Support Bridge	2423.10
10.580.01	Electronic Unit Support Bridge Screw	2423.10
20.510	Stepping Motor	2423.10
20.510.01	Stepping Motor Screw	2423.10
20.570	Power Cell	242
20.652	Insulator for Contact Spring	2423.10
20.701 20.701.01	Battery Support Battery Support and Contact	2423.10 2423.10
20.701.01	Spring Screw (Use 10.513.01)	2423.10
20.701.02	Battery Support and Cell Strap Screw	2423.10
20.761	Power Cell-Strap	2423.10
20.763	Contact Spring	2423.10
30.012	Intermediate Double Wheel	2423.10
30.025.08	Third Pinion	2423.10
30.051 30.081	Drive Wheel over 3rd Pinion Sweep Second Pinion Height 5.80	2423.10
31.041	Minute Wheel	2421.10 2423.10
31.046	Hour Wheel Heights 1.71 or 1.42	2421.10
31.083	Cannon Pinion with Driver	
	Heights 2.35 or 2.60	
31.100	Set Wheel	2423.10
31.102 31.124	Motion Work Set Wheel Hand Set Pinion	2423.10
40.510	Resonator (Quartz)*	2423.10 2423.10
40.700	Resonator Cannister Retaining Clamp	2423.10
51.020	Hand Set Stem	2423.10
51.052	Rocking Bar	2421.10
51.080	Set Lever with Axle	2423.10
51.090	Set Lever Bridge (Jumper)	2423.10
51.090.01 56.070	Set Lever Bridge Screws Stop Lever	2423.10
60.131	Second Pinion Friction Spring	2423.10 2423.10
61.101	Rocking Bar Spring	2423.10
61.101.01	Rocking Bar Spring Screw	2423.10
61.241	Hour Wheel Friction Spring	
00 000 01	Use Dial Washer 7 AK #86-3	_
90.000.01 93.010	Dial Screws Casing Ring	2423.10
93.010	Diameter Height	
93.010-1	26.90 2.50	2423.10
93.010-2	28.40 2.95	2423.10
93.010-3	30.40 2.95	2423.10
-	63/64 Minute & Hour Hands	2423.10
_	65C Sweep Second Hand	2423.10

Parts List for Model 2421.10

\*Note: Some Resonators do not require a nest.

# Parts List for Model 2422.10 Varying From or Addition To Model 2421.10

PART NAME	BASIC MODEL
Main Plate	2422.10
Dial Supports	
Diameter Height	
26.85 1.35	2423.10
28.35 1.35	2423.10
30.25 1.35	2423.10
Calendar Mechanism Maintaining Plate	2423.10
Calendar Mechanism Maintaining	2423.10
Plate Screw	
Sweep Second Pinion Height 6.75	2423.10
Hour Wheel Heights 2.12 or 2.37	2423.10
Cannon Pinion with Driver	
Heights 3.30 or 3.55	2423.10
Intermediate Calendar Wheel	2423.10
Calendar Driving Wheel	2423.10
Rocking Bar	2423.10
Date Indicator	2423.10
	Main Plate Dial Supports Diameter Height 26.85 1.35 28.35 1.35 30.25 1.35 Calendar Mechanism Maintaining Plate Calendar Mechanism Maintaining Plate Screw Sweep Second Pinion Height 6.75 Hour Wheel Heights 2.12 or 2.37 Cannon Pinion with Driver Heights 3.30 or 3.55 Intermediate Calendar Wheel Calendar Driving Wheel Rocking Bar

# Parts List for Model 2423.10 Varying From or Addition To Model 2421.10

10.020       Main Plate       2423.10         10.106       Dial Support       Diameter       Height         10.106-1       26.85       1.35       2423.10         10.106-2       28.35       1.35       2423.10         10.106-3       30.25       1.35       2423.10         10.106-3       30.25       1.35       2423.10         13.101       Calendar Mechanism Maintaining Plate       2423.10         13.101.01       Calendar Mechanism Maintaining Plate       2423.10         30.081       Sweep Second Pinion Height 6.75       2423.10         31.046       Hour Wheel Heights 2.12 or 2.37       2423.10         31.083       Cannon Pinion with Driver       Heights 3.30 or 3.55       2423.10         33.014       Intermediate Calendar Wheel       2423.10         33.028       Calendar Driving Wheel       2423.10         33.020       Pinion of Day Corrector       2423.10         36.051       Corrector Setting Wheel (Day)       2423.10         36.052       Corrector Intermediate Setting Wheel       2423.10         53.201       Day Corrector       2423.10         53.201       Day Corrector       2423.10         91.440       Date Indicator       2423.10 </th <th>PART NUMBER</th> <th>PART NAME</th> <th>BASIC MODEL</th>	PART NUMBER	PART NAME	BASIC MODEL
Diameter         Height           10.106-1         26.85         1.35         2423.10           10.106-2         28.35         1.35         2423.10           10.106-3         30.25         1.35         2423.10           13.101         Calendar Mechanism Maintaining Plate         2423.10           13.101         Calendar Mechanism Maintaining Plate         2423.10           13.101.01         Calendar Mechanism Maintaining Plate         2423.10           30.081         Sweep Second Pinion Height 6.75         2423.10           31.046         Hour Wheel Heights 2.12 or 2.37         2423.10           31.083         Cannon Pinion with Driver         Heights 3.30 or 3.55         2423.10           33.014         Intermediate Calendar Wheel         2423.10           33.028         Calendar Driving Wheel         2423.10           33.102         Pinion of Day Corrector         2423.10           36.051         Corrector Setting Wheel (Day)         2423.10           36.052         Corrector Intermediate Setting Wheel         2423.10           51.052         Rocking Bar         2423.10           53.201         Day Corrector         2423.10           91.440         Date Indicator         2423.10	10.020	Main Plate	2423.10
10.106-1       26.85       1.35       2423.10         10.106-2       28.35       1.35       2423.10         10.106-3       30.25       1.35       2423.10         13.101       Calendar Mechanism Maintaining Plate       2423.10         13.101       Calendar Mechanism Maintaining Plate       2423.10         13.101       Calendar Mechanism Maintaining Plate       2423.10         13.101.01       Calendar Mechanism Maintaining Plate       2423.10         30.081       Sweep Second Pinion Height 6.75       2423.10         31.046       Hour Wheel Heights 2.12 or 2.37       2423.10         31.083       Cannon Pinion with Driver       Heights 3.30 or 3.55       2423.10         33.014       Intermediate Calendar Wheel       2423.10         33.028       Calendar Driving Wheel       2423.10         33.020       Pinion of Day Corrector       2423.10         36.051       Corrector Setting Wheel (Day)       2423.10         36.052       Corrector Intermediate Setting Wheel       2423.10         51.052       Rocking Bar       2423.10         53.201       Day Corrector       2423.10         91.440       Date Indicator       2423.10 <td>10.106</td> <td>Dial Support</td> <td></td>	10.106	Dial Support	
10.106-2       28.35       1.35       2423.10         10.106-3       30.25       1.35       2423.10         13.101       Calendar Mechanism Maintaining Plate       2423.10         30.081       Sweep Second Pinion Height 6.75       2423.10         31.046       Hour Wheel Heights 2.12 or 2.37       2423.10         31.083       Cannon Pinion with Driver       Heights 3.30 or 3.55       2423.10         33.014       Intermediate Calendar Wheel       2423.10         33.028       Calendar Driving Wheel       2423.10         33.102       Pinion of Day Corrector       2423.10         36.051       Corrector Setting Wheel (Day)       2423.10         36.052       Corrector Intermediate Setting Wheel       2423.10         51.052       Rocking Bar       2423.10         53.201       Day Corrector       2423.10         91.440       Date Indicator       2423.10		Diameter Height	
10.106-3         30.25         1.35         2423.10           13.101         Calendar Mechanism Maintaining Plate         2423.10           13.101.01         Calendar Mechanism Maintaining Plate         2423.10           13.101.01         Calendar Mechanism Maintaining Plate         2423.10           30.081         Sweep Second Pinion Height 6.75         2423.10           31.046         Hour Wheel Heights 2.12 or 2.37         2423.10           31.083         Cannon Pinion with Driver         4           Heights 3.30 or 3.55         2423.10           33.014         Intermediate Calendar Wheel         2423.10           33.028         Calendar Driving Wheel         2423.10           33.102         Pinion of Day Corrector         2423.10           36.051         Corrector Setting Wheel (Day)         2423.10           36.052         Corrector Intermediate Setting Wheel         2423.10           51.052         Rocking Bar         2423.10           53.201         Day Corrector         2423.10           53.201         Day Corrector         2423.10           91.440         Date Indicator         2423.10	10.106-1	26.85 1.35	2423.10
13.101Calendar Mechanism Maintaining Plate Calendar Mechanism Maintaining Plate Screw2423.1030.081Sweep Second Pinion Height 6.752423.1031.046Hour Wheel Heights 2.12 or 2.372423.1031.083Cannon Pinion with Driver Heights 3.30 or 3.552423.1033.014Intermediate Calendar Wheel2423.1033.028Calendar Driving Wheel2423.1033.102Pinion of Day Corrector2423.1036.051Corrector Setting Wheel (Day)2423.1036.052Rocking Bar2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10	10.106-2	28.35 1.35	2423.10
13.101.01Calendar Mechanism Maintaining Plate Screw2423.1030.081Sweep Second Pinion Height 6.752423.1031.046Hour Wheel Heights 2.12 or 2.372423.1031.083Cannon Pinion with Driver Heights 3.30 or 3.552423.1033.014Intermediate Calendar Wheel2423.1033.028Calendar Driving Wheel2423.1033.102Pinion of Day Corrector2423.1036.051Corrector Setting Wheel (Day)2423.1036.052Rocking Bar2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10	10.106-3	30.25 1.35	2423.10
Screw         2423.10           30.081         Sweep Second Pinion Height 6.75         2423.10           31.046         Hour Wheel Heights 2.12 or 2.37         2423.10           31.083         Cannon Pinion with Driver         2423.10           33.014         Intermediate Calendar Wheel         2423.10           33.028         Calendar Driving Wheel         2423.10           33.102         Pinion of Day Corrector         2423.10           36.051         Corrector Setting Wheel (Day)         2423.10           36.052         Corrector Intermediate Setting Wheel         2423.10           51.052         Rocking Bar         2423.10           53.201         Day Corrector         2423.10           91.440         Date Indicator         2423.10	13.101	Calendar Mechanism Maintaining Plate	2423.10
30.081         Sweep Second Pinion Height 6.75         2423.10           31.046         Hour Wheel Heights 2.12 or 2.37         2423.10           31.083         Cannon Pinion with Driver         2423.10           31.083         Cannon Pinion with Driver         2423.10           33.014         Intermediate Calendar Wheel         2423.10           33.028         Calendar Driving Wheel         2423.10           33.102         Pinion of Day Corrector         2423.10           36.051         Corrector Setting Wheel (Day)         2423.10           36.052         Corrector Intermediate Setting Wheel         2423.10           51.052         Rocking Bar         2423.10           53.201         Day Corrector         2423.10           91.440         Date Indicator         2423.10	13.101.01	Calendar Mechanism Maintaining Plate	
31.046Hour Wheel Heights 2.12 or 2.372423.1031.083Cannon Pinion with Driver Heights 3.30 or 3.552423.1033.014Intermediate Calendar Wheel2423.1033.028Calendar Driving Wheel2423.1033.102Pinion of Day Corrector2423.1036.051Corrector Setting Wheel (Day)2423.1036.052Corrector Intermediate Setting Wheel2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10			2423.10
31.083Cannon Pinion with Driver Heights 3.30 or 3.552423.1033.014Intermediate Calendar Wheel2423.1033.028Calendar Driving Wheel2423.1033.102Pinion of Day Corrector2423.1036.051Corrector Setting Wheel (Day)2423.1036.052Corrector Intermediate Setting Wheel2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10	30.081		2423.10
Heights 3.30 or 3.55         2423.10           33.014         Intermediate Calendar Wheel         2423.10           33.028         Calendar Driving Wheel         2423.10           33.102         Pinion of Day Corrector         2423.10           36.051         Corrector Setting Wheel (Day)         2423.10           36.052         Corrector Intermediate Setting Wheel         2423.10           51.052         Rocking Bar         2423.10           53.201         Day Corrector         2423.10           91.440         Date Indicator         2423.10	31.046	Hour Wheel Heights 2.12 or 2.37	2423.10
33.014Intermediate Calendar Wheel2423.1033.028Calendar Driving Wheel2423.1033.102Pinion of Day Corrector2423.1036.051Corrector Setting Wheel (Day)2423.1036.052Corrector Intermediate Setting Wheel2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10	31.083	Cannon Pinion with Driver	
33.028Calendar Driving Wheel2423.1033.102Pinion of Day Corrector2423.1036.051Corrector Setting Wheel (Day)2423.1036.052Corrector Intermediate Setting Wheel2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10		Heights 3.30 or 3.55	2423.10
33.102Pinion of Day Corrector2423.1036.051Corrector Setting Wheel (Day)2423.1036.052Corrector Intermediate Setting Wheel (Day)2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10	33.014	Intermediate Calendar Wheel	2423.10
36.051Corrector Setting Wheel (Day)2423.1036.052Corrector Intermediate Setting Wheel (Day)2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10	33.028	Calendar Driving Wheel	2423.10
36.052Corrector Intermediate Setting Wheel (Day)2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10	33.102	Pinion of Day Corrector	2423.10
(Day)2423.1051.052Rocking Bar2423.1053.201Day Corrector2423.1091.440Date Indicator2423.10	36.051	Corrector Setting Wheel (Day)	2423.10
51.052         Rocking Bar         2423.10           53.201         Day Corrector         2423.10           91.440         Date Indicator         2423.10	36.052	Corrector Intermediate Setting Wheel	
53.201         Day Corrector         2423.10           91.440         Date Indicator         2423.10		(Day)	2423.10
91.440 Date Indicator 2423.10	51.052	Rocking Bar	2423.10
	53.201	Day Corrector	2423.10
01 441 Day Indicator 2423 10	91.440		2423.10
91.441 Day mulcator 2423.10	91.441	Day Indicator	2423.10

# Parts List for Model 2426.10 Varying From or Addition To Model 2421.10

PART NUMBER	PART NAME	BASIC MODEL
10.020 10.106	Main Plate Dial Support	2426.1
10.106-1	Diameter Height 26.85 1.35	2423.10
10.106-2	28.35 1.35	2423.10
10.106-3	30.25 1.35	2423.10
13.101	Calendar Mechanism Maintaining Plate	2426.10
13.101.01	Calendar Mechanism Maintaining Plate	
	Screw	2423.10
30.081	Sweep Second Pinion Height 6.75	2423.10
31.046	Hour Wheel with Spring	2426.10
31.048	Hour Wheel with Star	
	Heights 1.70 or 1.95	2426.10
31.083	Cannon Pinion with Driver	
	Heights 3.30 or 3.55	2423.10
33.014	Intermediate Calendar Wheel	2426.10
33.028	Calendar Driving Wheel	2426.10
36.030	Corrector Wheel (Hour)	2426.10
36.051	Corrector Setting Wheel (Zone)	2423.10
36.052	Corrector Intermediate Setting Wheel	
	(Zone)	2423.10
36.100	Corrector Driver (Hour)	2426.10
91.440	Date Indicator	2423.10

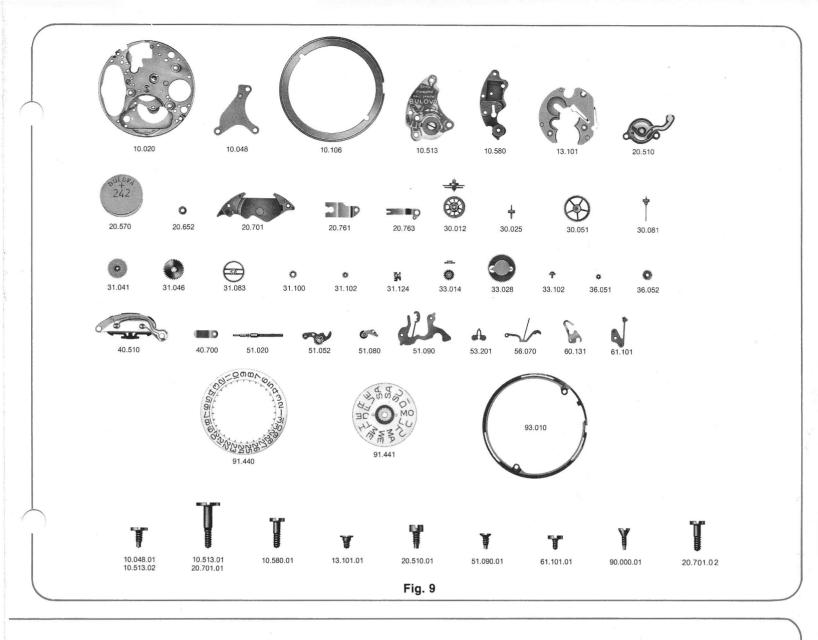
Note: Parts for 2426.10 listed above are **not** illustrated.

### Notes

**Calendar Mechanism:** Turn hands clockwise until *DATE* changes (disregard Day Indicator). Push Crown "in" (Position 1). Assemble Minute and Hour Hands at the 12 o'clock position.

**Second Hand:** When redialing, wait until motor has indexed a few times, then pull crown to the "out" position (Position 3). While holding in position, align the sweep hand with the 12 o'clock marker, and press into place.

**Caution:** Do not remove the "C" shaped clamp (Date Corrector) from the Rocking Bar Assembly (#51.052).



 $\int_{-\infty}^{\infty}$ 



## **BULOVA WATCH COMPANY, INC.**

**TECHNICAL INFORMATION SERVICES** 75-20 Astoria Blvd. Jackson Heights, New York 11370 (212) DE 5-6000

#### PATENT NOTICE

The ACCUTRON<sup>®</sup> Quartz Series 242 timepiece is manufactured by Bulova Watch Company, Inc., under issued patents as well as pending applications.

All information contained in this booklet is based on the latest product information available at the time of printing. The right is reserved to make changes any time without notice.

© 1978 Bulova Watch Company, Inc. All Rights Reserved.



PRINTED IN U.S.A.