Bobbin Winder BNBW-2E

Read this manual carefully before operating the machine.

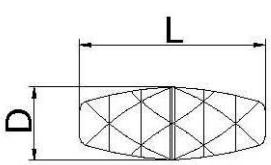
Operating Instructions

1 Technical Data

Machine Specification

Items	Specification		Notes
Machine model	BNBW-2E		
Motor shaft speed	1375 RPM/50Hz	1655 RPM/60Hz	By voltage request
Main shaft B-41	1434 RPM	1434 RPM	Based on different motor pulley size and frequencies 50Hz/60Hz.
Take-up speed B-1045	3821 RPM	3821 RPM	
High precision pre-lubricated bearings	24 hours machine running, durable, no wear and tear!		
Power consumption	0.25 KW		
Machine net weight	90 Kgs		
Packing gross weight	105 Kgs		
Packing measurements	Sized: 87 L x 66 W x 39 H (cm)		
Export packaging	Wooden Case		
Suitable material	Cotton & SP & Nylon (bottom thread)		E.g.:SP80/2 & Long Filament
Application of bobbins	Lace & Quilting (Embroidery)		
Bobbin output capacity	7.2 kg per 24 hrs (4.2grams ea. bobbin)		80/2 Cotton/SP
	8.2 kg per 24 hrs (4.2grams ea. bobbin)		70/2 Cotton/SP
	9.6 kg per 24 hrs (4.2grams ea. bobbin)		60/2 Cotton/SP

Standard bobbin sizes

Picture	Size	D (mm)	L (mm)
	#6	12	35
	#7	12.7	33
	#9	12	38
	#10	15	43
	Plastic Shuttle	**14.5**	**43**

Machine Specification

Sizes can be #6, #7, #9, #10 or the usual size, which can be smaller or bigger according to user's requirement.

2 Setting up the machine

CAUTION

Machine damage

Each Bobbin Winder is equipped with 1/4HP motor. Due to different power supply in each country, the power connection is different, too.
Please note the motor running direction carefully. See ARROW sign on machine. Machine must run in the same direction as indicated by the ARROW sign. If this is not followed, your machine may get damaged.

CAUTION

Installing the motor belt

After the machine is set up and before the drive belt is installed, check again the running direction of the motor.

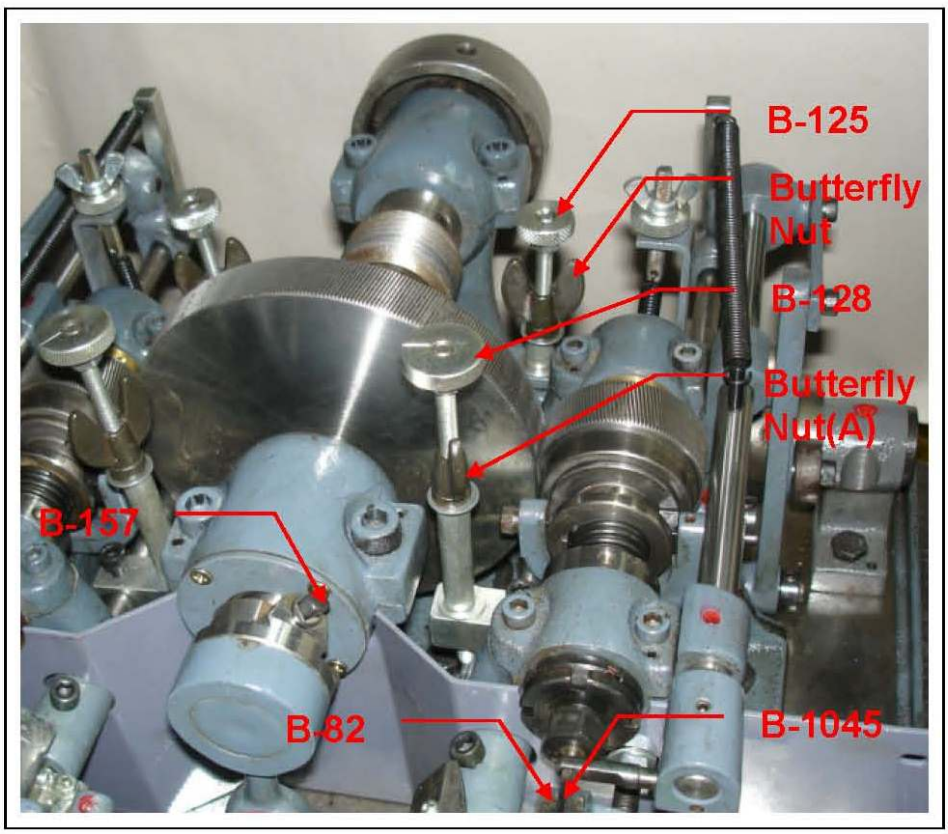
CAUTION

Note that the motor wiring must be correct. Refer to the sticker on the motor which indicates Power Voltage, Frequency and Circuit Drawing. The running direction of the motor is different, depending on the wire connection.

3 Adjust the Bobbin Winder

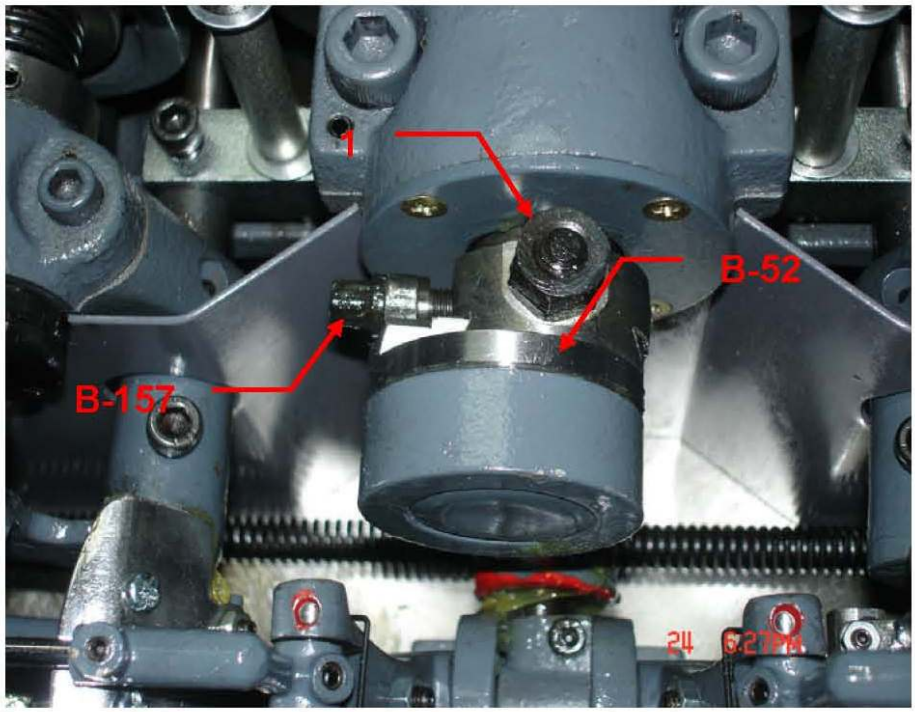
3.1 Overview

Design



3.2 Control and adjust the bobbin length

Design



1	Hexagonal nut	**B-52**	Eccentric head
B-157	Position screw		

Bobbin length

Note: The B-200 (connecting rod) is for the adjustment of the up and down movement.
B-200 is fit on B-52 (eccentric head).
B-157 is to adjust the eccentricity of B-52.

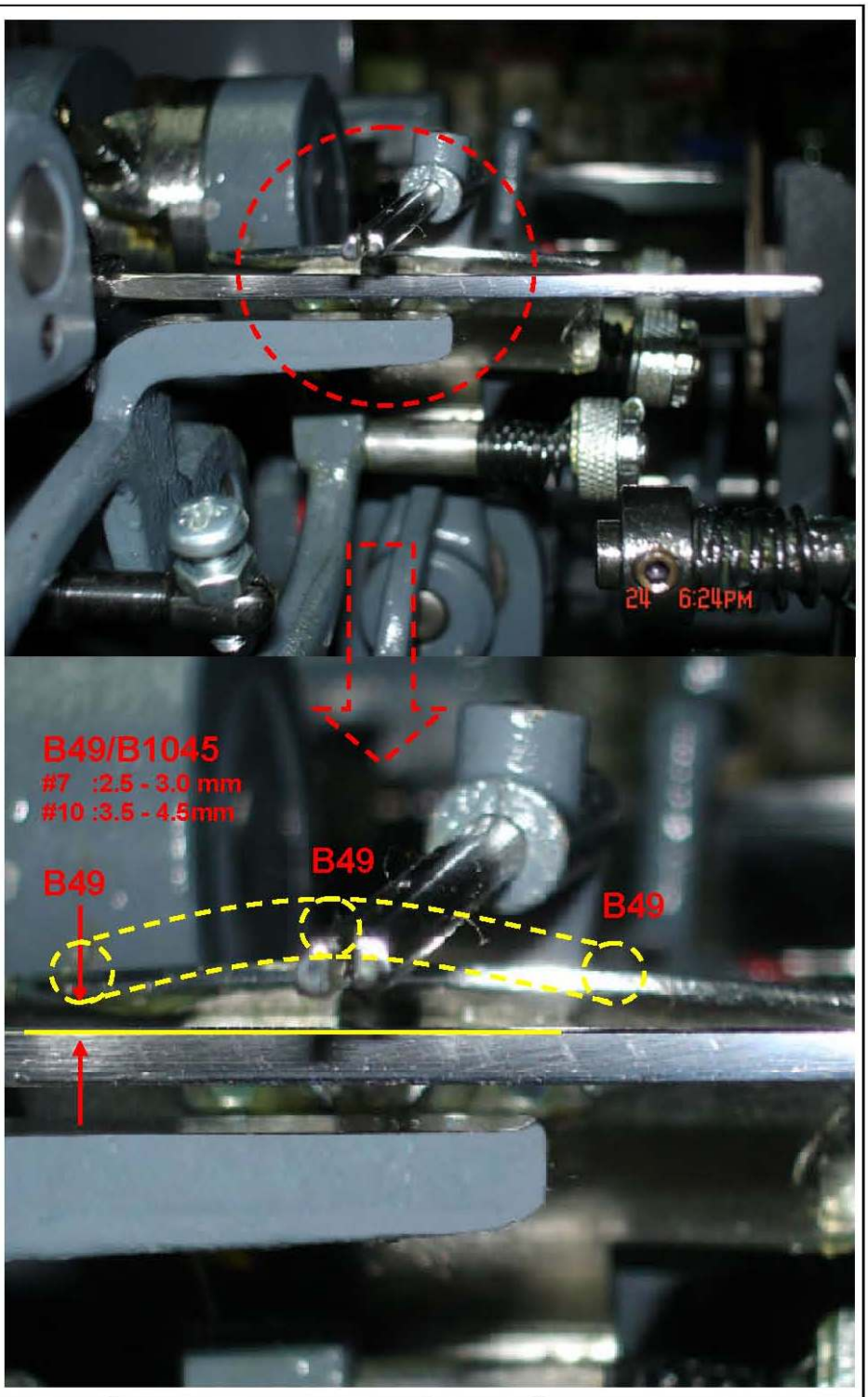
To adjust the bobbin length:

1. Loosen the hexagonal nut (1).
2. Turn the position screw (B-157) to adjust the bobbin length:
   counter-clock-wise: longer bobbin length
   clock-wise: shorter bobbin length

3. Tighten the hexagonal nut firmly (1).

3.3 Control and adjust the bobbin shape

Design



B-49	Yarn guide	**B-82**	Bobbin support
B-1045	Spindle		

Check

When we found that the bobbin shape has two thick ends:

1. Adjust the gap between the spindle (B-1045) and Yarn Guide(B-49)

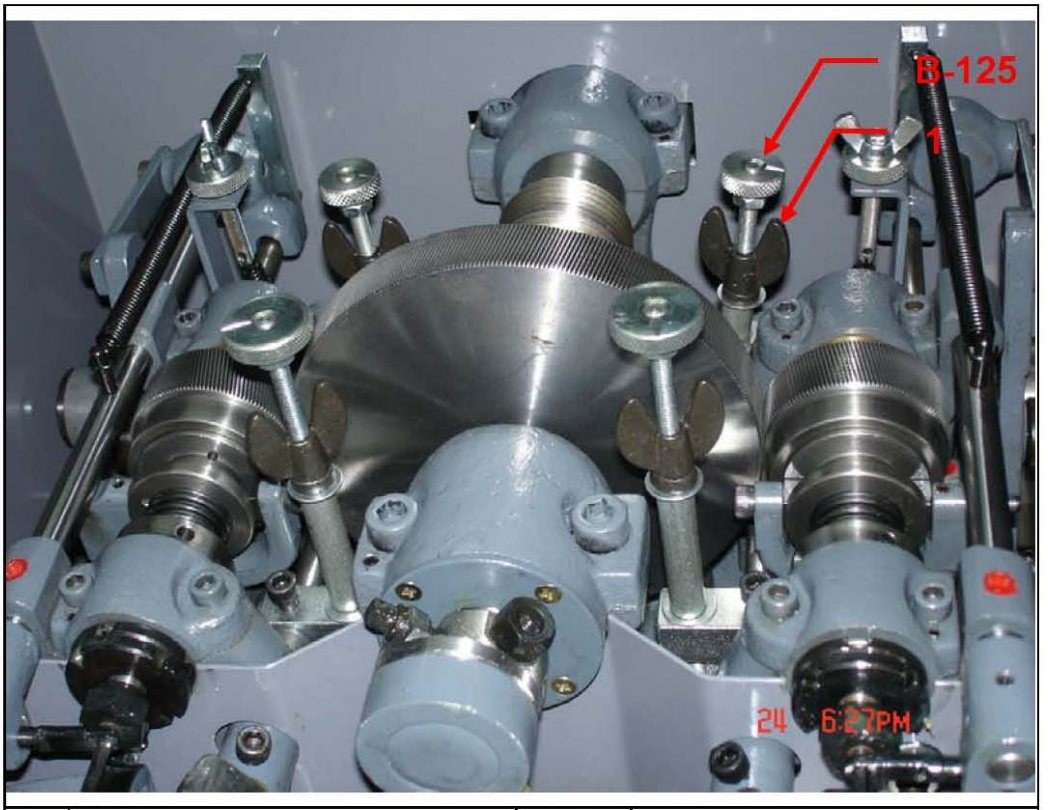
   Small bobbins (for example #7): gap distance around 2.5 - 3.0 mm
   Large bobbins (for example #10): gap distance around 3.5 - 4.5 mm

2. Check the tension of yarn above the yarn guide during machine running. If it is too strong, release it step by step and find out the best condition of bobbin shape.

   Note: Note to maintain the spring tension of B-82 & B-49 B-50.

1. If the adjustments above have not been effective, check the B-1045 surface. If it is damaged and becomes rough, replace B-1045.

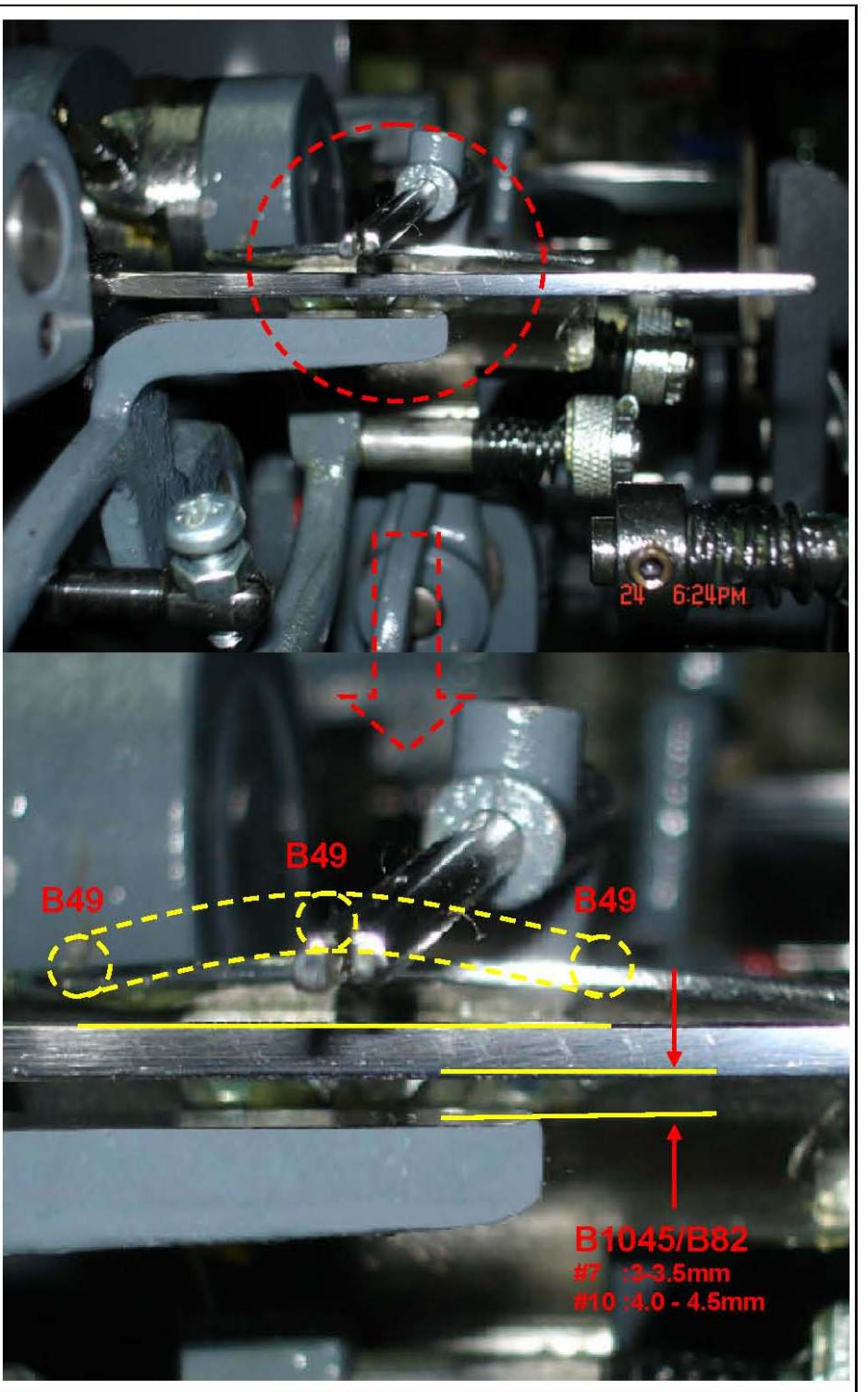
Design



1	Butterfly nut	**B-125**	Position screw

3.4 Adjust the bobbin size

Design



B-49	Yarn guide	**B-82**	Bobbin support
B-1045	Spindle		

Bobbin shape

To form the bobbin shape:

Note: The principle is to move the height of the bobbin support (B-82) to adjust how long the bobbin is touching B-82. For example, if the gap is bigger, the time of touching B-82 is longer. The time of touching B-82 will influence the shape of the bobbin. Try to adjust the highest and the lowest position of B-82 in order to get the best results.

1. First loosen the butterfly nut (1).
2. Turn the Position Nut (B-125) to adjust the bobbin diameter:
   counter-clock-wise: two ends of bobbin will become smaller
   clock-wise: two ends of bobbin will become larger
3. Examine the tension of yarn above yarn guide during machine running. If it is too strong, release it step by step and find the best condition of bobbin shape.

   Note: The round panel (Position Nut B-128) is to adjust the bobbin shape.

   For example: The position is at 12 o'clock; then turn the engraved mark clock wise (C.W.), turn it to 3 o'clock; then two ends of bobbin become smaller. If turning it counter clock wise (C.C.W.), turn it to 9 o'clock; two ends of bobbin shall become larger.

4. Tighten the butterfly nut firmly (1).

Bobbin size

To adjust to the bobbin size:

1. Check the gap between the spindle (B-1045) and the yarn guide (B-49):
   Small bobbins (for example #7): gap distance around 2.5 - 3.0 mm
   Large bobbins (for example #10): gap distance around 3.5 - 4.5 mm

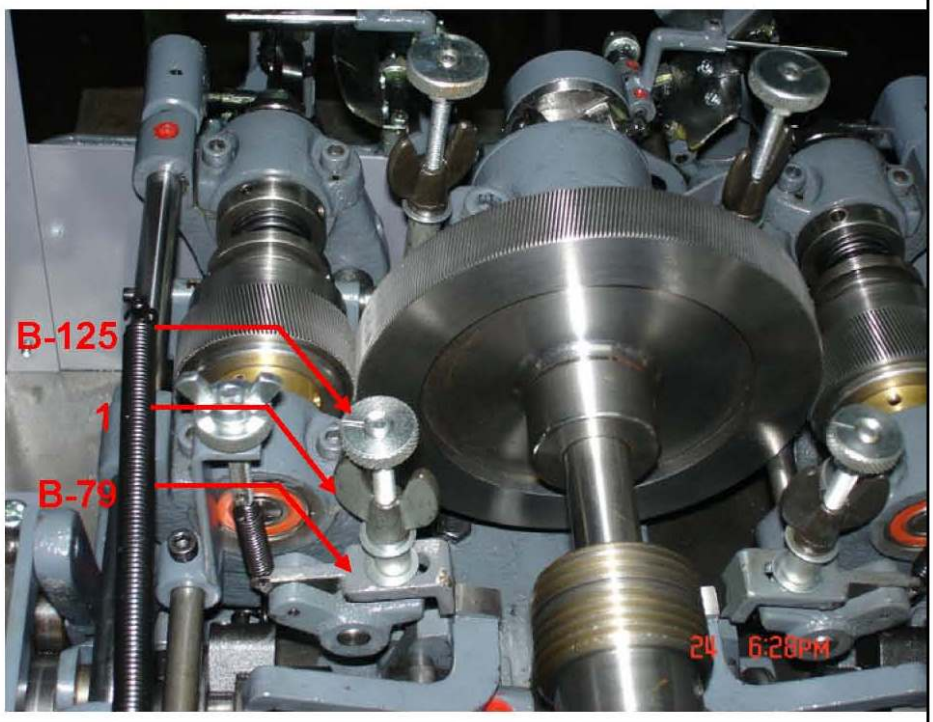
   Note: Maintain a little bit tension of B-49 so that its swinging acts like a curve. If the tension of B-49 is too low, its swinging will act irregularly; then the bobbin shape will not be good.

2. Check the gap between the spindle (B-1045) and the bobbin support (B-82):
   Small bobbins (for example #7): gap distance around 3 - 3.5mm
   Large bobbins (for example #10): gap distance around 4.- 4.5mm

   Note: To maintain the tension of B-82. See 3-6 "Control and adjust the bobbin tension".

3.5 Check and adjust the bobbin diameter

Design



1	Butterfly nut	**B-79**	Latch
B125	Screw		

Bobbin diameter

Note: The B-79 (latch) high or low is a factor related to bobbin diameter.

To adjust the bobbin diameter:

1. Loosen the butterfly nut (1).
2. Turn the position nut (B-125) to adjust the bobbin diameter:
   clock-wise: bobbin diameter becomes larger
   counter-clock-wise: diameter becomes smaller

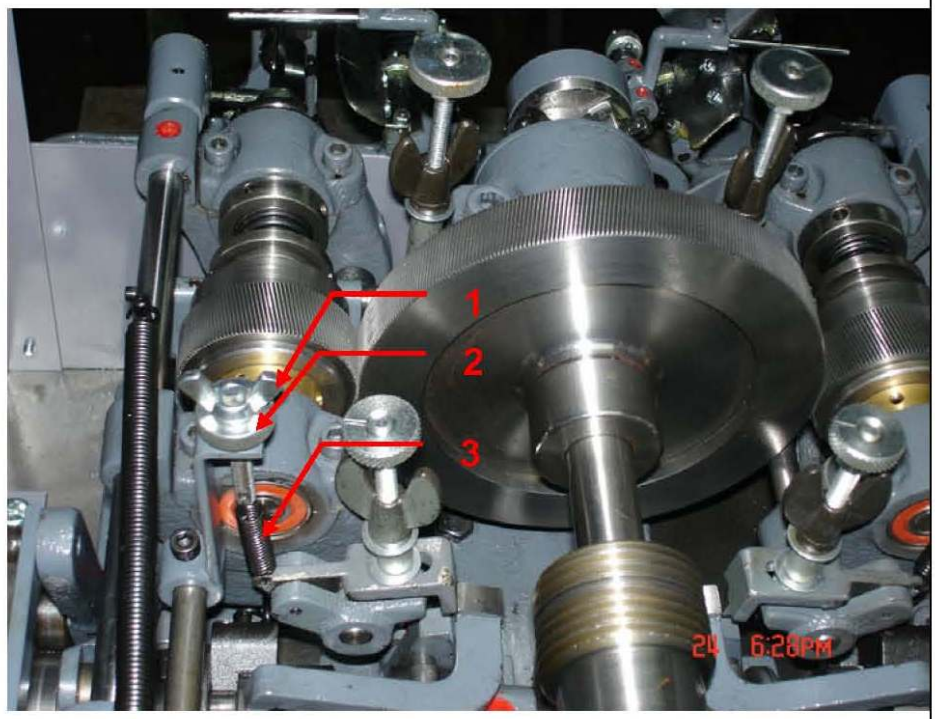
   Tip: Look at the round panel (position nut B-125) and you will see that there is an engraved mark.

   For example: the position is 12 o'clock, then turn to 3 o'clock CW wise, the diameter of bobbin becomes larger. When you turn counter clock wise (C.C.W.) to 9 o'clock, the diameter of bobbin becomes smaller.

3. Tighten the butterfly nut firmly (1).

3.6 Check and adjust the bobbin tension

Design



1	Nut	**3**	Spring
2	Position nut		

Bobbin tension

Note: When the spring is pulled tight; the tension of B-82 becomes tighter; then the bobbin shall become harder. If the spring is loosened, the bobbin shall become softer.

To adjust the bobbin diameter:

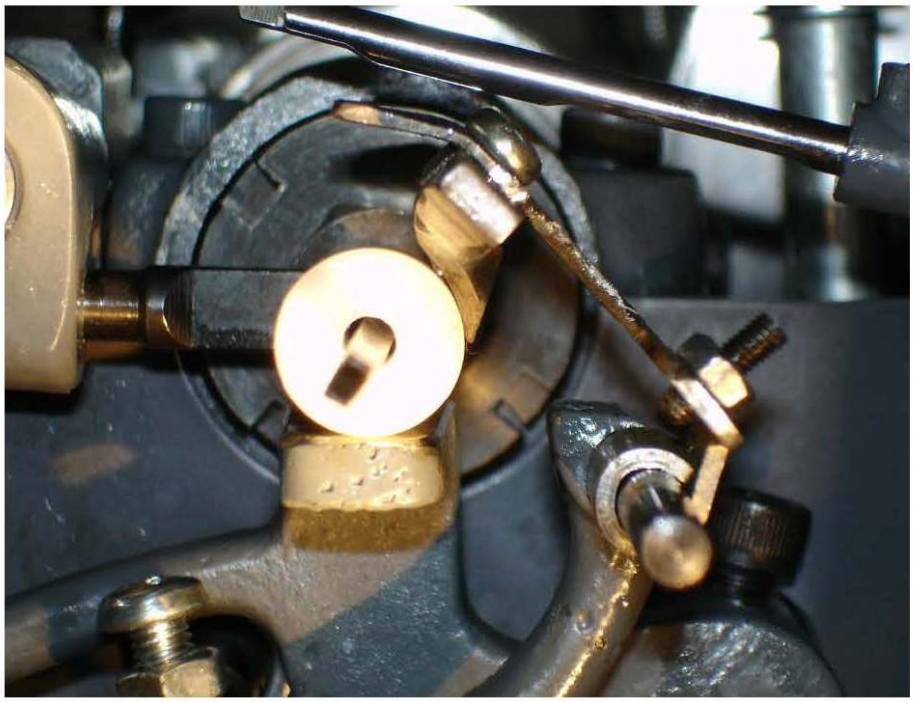
1. Loosen the fixed nut (1).
2. Turn the Position Nun (2) to tighten the spring (3).
   Spring tighter: The bobbins become harder.
   Spring loosened: The bobbins become softer.

   Note: The ideal hardness of the bobbin is such, when it is possible to dent it slightly with your fingers.

3. Fasten the nut again (1).

3.7 Adjust the tucker position

Design

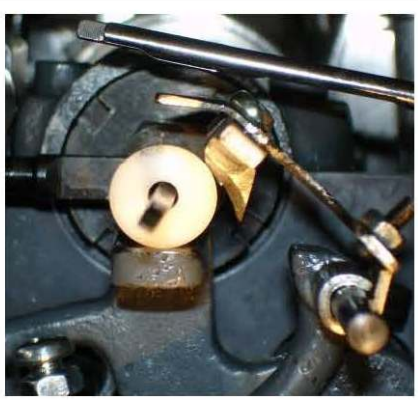


Standard position of the tucker

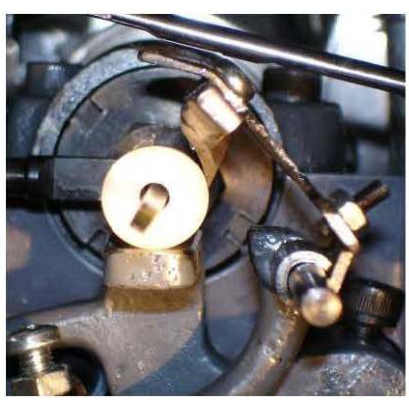
Position of the tucker

If tucker position is too high or too low, it shall not work well.

Design



Tucker is too low

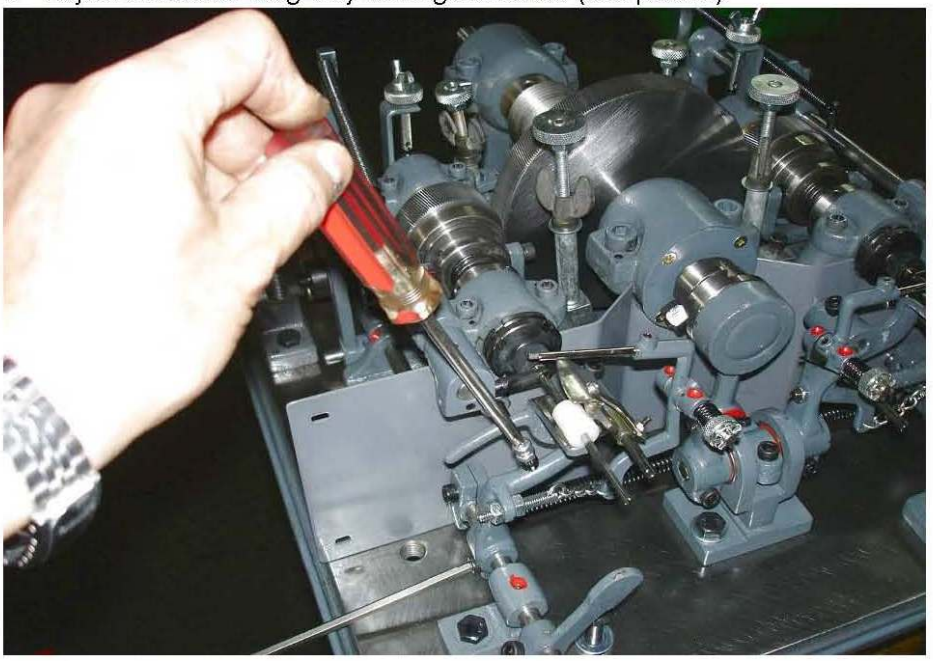


Tucker is too high

Procedure

To adjust the tucker height:

1. Adjust the tucker height by turning the screw (see picture):



2. Check the tension of B-74 before tucker operation

4 Maintenance

Lubrication schedule 3 months

This Bobbin Winder requires very little maintenance with long lubrication intervals. After unpacking the winder from the box, do not clean the grease. The greasing interval is three months.

Lubrication schedule weekly

The following parts need to be greased on a weekly basis:
B-8, B-9, B-30, B-32, B-33, B-34, B-75, B-201, B202

Brass ring

B-155: The Brass ring must be lubricated with spindle oil #10 from Mobile

Spare Parts

1 Standard Spare Parts

Standard Spare Parts

Number	Part name	Numbers
B-49	Thread Guide Right	1 pc.
B-50	Thread Guide Left	1 pc.
B-1045	Spindle for cop	2 pcs.
	Hand Tools unit	1 set

2 Optional Spare Parts

Spare Parts

Order according to the Spare Parts List or recommended by Pai Nein.

Part No.	Parts description	Illustration
B-1	BASE PLATE	
B-2	MAIN SUPPORT	
B-3	FRONT COVER FOR B-2	
B-3a	COVER FOR BALL BEARING	

Part No.	Parts description	Illustration
B-4	REAR COVER FOR B-2	
B-5	PULLEY	
B-6	NO LOAD PULLEY	
B-8	LARGE GEAR 357t (mm)	
B-9	WORM GEAR	
B-10	SMALL SUPPORT	
B-11	ROLLER LEVER	
B-11a	BOLT FOR B-11 & B-88 D10*280L (mm)	

Part No.	Parts description	Illustration
B-12	SUPPORT FOR LATCH	
B-13	SPINDLE SUPPORT	
B-13a	SPACE BUSHING D16*d10*14L (mm)	
B-15	COVER FOR B-13	
B-16	LEVER FOR SPRING	
B-17	ATTACK	
B-18	LEVER FOR EXPULSION	
B-20	POSITION RING FOR B-63	

Part No.	Parts description	Illustration
B-21	CLUTCH CONE	
B-22	BUSH	
B-23	CLUTCH	
B-24	UPPER SUPPORT FOR THREAD BRAKE	
B-25	FLAP	
B-26	MIDDLE SUPPORT FOR FELTS	
B-26a	MIDDLE SUPPORT FOR FELTS (Short)	
B-27	SUPPORT FOR CONE	

Part No.	Parts description	Illustration
B-28	GUIDE LEVER	
B-29	SUPPORT FOR WORM WHEEL	
B-30	WORM WHEEL	
B-31	MIDDLE SUPPORT FOR WORM WHEEL	
B-32	CLUTCH HUSK	
B-33	BIG CLUTCH HUSK	
B-34	CAM	
B-35	SUPPORT FOR B-92	

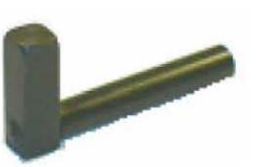
Part No.	Parts description	Illustration
B-36	SUPPORT FOR B-95	
B-39	SUPPORT FOR SCISSORS	
B-41	MAIN SHAFT D35*350 L (mm)	
B-42	SHAFT FOR WORM WHEEL D15*392L (mm)	
B-43	ROLLER FOR B-95 D10*d5*12L (mm)	
B-46	FLAP	
B-47	CAM FOR B-33	
B-49	THREAD GUIDE (Side divide)	

Part No.	Parts description	Illustration
B-50	THREAD GUIDE (Middle divide)	
B-52	ECCENTRIC HEAD	
B-54	FELT PAD	
-56	ROLLER FOR B-90	
B-58	NUT TO SMALL GEAR	
B-59	ROLLER FOR EXPULSION LEVER	
B-61	SHAFT FOR B-79 D10*200L (mm)	
B-62	SHAFT FOR EXPULSION LEVER D12*280L (mm)	

Part No.	Parts description	Illustration
B-1045	SPINDLE FOR COP	
B-63	MAIN SPINDLE D12*167L (mm)	
B-64	SHAFT FOR B-10,B-86,B-88 ETC D10*280L (mm)	
B-65	JAMMING SCREW FOR EXCENTRIC	
B-66	BLACK JAMMING NUT	
B-68	POSITION SCREW	
B-69	SPINDLE CHUCK	
B-71	SHAFT FOR B-72 D5*32 (mm)	

Part No.	Parts description	Illustration
B-72	SPUR STONE FOR B-90	
B-73	BOLT FOR B-27 D6*155L (mm)	
B-74	TUCKER	
B-75	SMALL GEAR 134t (mm)	
B-79	LATCH (LEFT&RIGHT)	
B-80	EXPULSION LEVER	
B-81	EXPULSION BOLT TO B-80	
B-82	BOBBINSUPPORT (LEFT&RIGHT)	

Part No.	Parts description		Illustration
B-84	BINDING PLATE		
B-85	BINDING PLATE		
B-86	BINDING LEVER	(LEFT&RIGHT)	
B-88	LEVER FOR SCISSORS	(LEFT&RIGHT)	
B-90	CLUTCH LEVER	(LEFT&RIGHT)	
B-92	LATCH (LEFT&RIGHT)		
B-95	LATCH (LEFT&RIGHT)		
B-95a	SPRING TO B-95		

Part No.	Parts description	Illustration
B-96	LEVER FOR OPENING LATCH	
B-98	FLAP (LEFT&RIGHT)	
B-100	SHAFT FOR SPUR STONE	
B-110	SCREW TO B-18	
B-113	SCREW BOLT FOR B-79	
B-114	DISTANCE BUSH D10.5*50L	
B-115	BOLT FOR THREAD BRAKE D6*70L	
B-116	SCREW BOLT FOR THREAD BRAKE	

Part No.	Parts description	Illustration
B-120a	BOLT FOR SPRING TO B-92 B-95	
B-125	POSITION NUT TO B-113	
B-126	SHAFT FOR B-36 & B-95	
B-127	COTTER PIN	
B-128	POSITION NUT FOR THREAD BRAKE B-116	
B-129	POSITION SCREW FOR SPRING B-180 (D5mm)	
B-130	HUSK FOR THREAD BRAKE	
B-131	HUSK FOR THREAD BRAKE	

Part No.	Parts description		Illustration
B-133	DISK FOR FELT PADS		
B-134	SHAFT FOR B-56 B-90		
B-135	COVER FOR CONNECTING ROD		
B-137	ROLLER FOR B-11 B-92	D10*d5*8L (mm)	
B-138	SCREW BOLT TO B-18 & B-59		
B-139	SCREW BOLT	FOR B-11 B-92 B-137	
B-141	SCREW BOLT FOR B-43 & B-95		
B-143	POSITION RING	D16*d8*8t (mm)	

Part No.	Parts description		Illustration
B-144	POSITION RING	D18*d10*8t (mm)	
B-145	BOLTS FOR SCISSORS	M4*25L (mm)	
B-149	BUTTON FOR COVER		
B-150	SHAFT FOR B-18	M10P1.5*D10 (mm)	
B-152	SHAFT FOR B-90	M8P1.25*D8 (mm)	
B-153	DISK	FOR THREAD BRAKE B-116	
B-154	BOLT FOR B-28	D10*120L (mm)	
B-155	RING TO B-75		

Part No.	Parts description	Illustration
B-157	POSITION SCREW TO B-52	
B-158	TURN OFF LEVER	
B-158a	SPRING FOR B-158	
B-160	BAR FOR THREAD BRAKE D15*740L (mm)	
B-161	SCISSOR HALF (LEFT&RIGHT)	
B-162	SCISSOR HALF (LEFT&RIGHT)	
B-168	ATTACK BOLT FOR B-86	
B-169	CAM	

Part No.	Parts description	Illustration
B-170	DISTANCE BUSHING D10.5*15L (mm)	
B-172	LONG SPRING D11*215L (mm)	
B-173	SPRING FOR CLUTCH CONE	
B-174	SPRING FOR CLAW CLUTCH	
B-175	SPRING FOR EXPULSION LEVER D9*130L (mm)	
B-177	SPRING TO B-82	
B-178	SPRING TO B-98 D5*58 (mm)	
B-179	SPRING TO B-161 & B-162 (LEFT&RIGHT)	

Part No.	Parts description	Illustration
B-180	SPRING TO B-84 & B-85 (LEFT&RIGHT)	
B-185	SPRING FOR THREAD BRAKE	
B-200	CONNECTING ROD	
B-201	BUSH	
B-202	BALL BAR	
B-203	SUPPORT FOR THREAD GUIDE	
B-204	BALL BAR SUPPORT	
B-206	LEVER FOR THREAD GUIDE (LEFT&RIGHT)	

Part No.	Parts description	Illustration
B-207	LEVER CARRYING THREAD GUIDE	
B-208	SHAFT FOR B-206 B-207	
B-209	TENSION HEAD TO B-208 (d6)	
B-210	SPRING TO B-206 (LEFT&RIGHT)	
B-211	COVER	
B-212	UNDER FRONT PIECE	
B-213	UPPER FRONT PIECE	
B-214	PROTECTION BOX	

Part No.	Parts description	Illustration
B-215	MOTOR BELT PULLEY D78/60Hz (mm) D93.5/50Hz (mm)	
B-216	TENSION ROD OF SUPPORT PLATE	
B-217	BUTTERFLY NUT OF SUPPORT PLATE	
B-218	BUTTERFLY NUT (LARGE)	
B-220	SUPPORT FOR THREAD GUIDE	
B-221	SPRING ROD OF EXPULSION LEVER	
B-222	CHAIN SET FOR THREAD BAR	
B-223	TURN OFF LEVER FRAME	

Part No.	Parts description	Illustration
5200	BALL BEARING TO B-200 D30*10d*14H (mm)	
6303ZZ	BALL BEARING D47* 17d*14H (mm)	
6204ZZ	BALL BEARING 47D* 20d*14H (mm)