

# **RBT3**

## **Rotary Belt Tensioner Kit Instructions**

For Use On The Following Fans:

**NBF48**

**NBCB52 , NBC54**

**NCFA36 , NCFB48 , NCF52**

**AL36 , AL42 , AL48 , AL54**

The RBT3 Rotary Belt Tensioner Kit consists of a Rotary Belt Tensioner pre-assembled to a Tensioner Bracket, and a Hardware Package containing all required fasteners.

### **ASSEMBLY INSTRUCTIONS**

To assemble the rotary belt tensioner to the fan, first determine the model and size of the fan it will be mounted on. There are specific instructions for each fan model and size. Also, determine whether the motor will be located at the top of the fan (typical for slope housing applications) or at the bottom of the fan (typical for square housing applications).

Next, go to the page of these instructions that has the applicable fan model listed at the top. On that page, locate the correct picture based on the fan model and size, and the desired motor location. Following the instructions under that picture, assemble the motor bracket and the tensioner bracket to the fan uprights using the holes specified. Then proceed to the last page to finish assembly.

Make sure the motor is properly mounted to the motor bracket. The tensioner bracket is slotted for adjustment so that the tensioner pulley can be aligned with the driven pulley on the blade assembly. As shown in Figure 1 on the last page, make sure that all three pulleys are in alignment.

**TO SET THE TENSIONER FOR THE CORRECT BELT TENSION,  
SEE THE INSTRUCTIONS ON THE LAST PAGE.**



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# NCFA36 AND NCF52 FANS



**NCFA36 with motor mounted at the bottom of the fan**

The motor bracket should be mounted to the fan uprights in the 3<sup>rd</sup> and 5<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the rear) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**NCFA36 with motor mounted at the top of the fan**

The motor bracket should be mounted to the fan uprights in the 3<sup>rd</sup> and 5<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the left upright (when viewed from the rear) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**NCF52 with motor mounted at the bottom of the fan**

The motor bracket should be mounted to the fan uprights in the 2<sup>nd</sup> and 4<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the rear) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**NCF52 with motor mounted at the top of the fan**

The motor bracket should be mounted to the fan uprights in the 3<sup>rd</sup> and 5<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the left upright (when viewed from the rear) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.

# NBF48, NCFB48 AND NBCB52 FANS



**NBF/NCFB48 with motor mounted at bottom of the fan**

The motor bracket should be mounted to the fan uprights in the 3<sup>rd</sup> and 5<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the rear) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**NBF/NCFB48 with motor mounted at the top of the fan**

The motor bracket should be mounted to the fan uprights in the 4<sup>th</sup> and 6<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the left upright (when viewed from the rear) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**NBCB52 with motor mounted at the bottom of the fan**

The motor bracket should be mounted to the fan uprights in the 3<sup>rd</sup> and 4<sup>th</sup> holes from the end of each upright, centered vertically, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the rear) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied. Note: It may be necessary to slightly adjust the motor bracket in it's slots to achieve proper belt tension.



**NBCB52 with motor mounted at the top of the fan**

The motor bracket should be mounted to the fan uprights in the 4<sup>th</sup> and 6<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the front) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



# NBC54 FANS



## **NBC54 with motor mounted at the bottom of the fan**

The motor bracket should be mounted to the fan uprights in the 2<sup>nd</sup> and 3<sup>rd</sup> holes from the end of each upright, centered vertically, using the existing 5/16" hardware. The belt tensioner should be mounted to the left upright (when viewed from the front) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied. Note: It may be necessary to slightly adjust the motor bracket in it's slots to achieve proper belt tension.



## **NBC54 with motor mounted at the top of the fan**

The motor bracket should be mounted to the fan uprights in the 3<sup>rd</sup> and 4<sup>th</sup> holes from the end of each upright, centered vertically, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the front) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied. Note: It may be necessary to slightly adjust the motor bracket in it's slot to achieve proper belt tension.

# AL36 AND AL42 FANS



**AL36 with motor mounted at the bottom of the fan**

The motor bracket should be mounted to the fan uprights in the 2<sup>nd</sup> and 4<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the rear) in the 6<sup>th</sup> and 7<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**AL36 with motor mounted at the top of the fan**

The motor bracket should be mounted to the fan uprights in the 4<sup>th</sup> and 5<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the left upright (when viewed from the rear) in the 8<sup>th</sup> and 9<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**AL42 with motor mounted at the bottom of the fan**

The motor bracket should be mounted to the fan uprights in the 3<sup>rd</sup> and 5<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the rear) in the 8<sup>th</sup> and 9<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**AL42 with motor mounted at the top of the fan**

The motor bracket should be mounted to the fan uprights in the 4<sup>th</sup> and 6<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the left upright (when viewed from the rear) in the 8<sup>th</sup> and 9<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.

# AL48 AND AL54 FANS



**AL48 with motor mounted at the bottom of the fan**

The motor bracket should be mounted to the fan uprights in the 3<sup>rd</sup> and 5<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the rear) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**AL48 with motor mounted at the top of the fan**

The motor bracket should be mounted to the fan uprights in the 4<sup>th</sup> and 6<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the left upright (when viewed from the rear) in the 7<sup>th</sup> and 8<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**AL54 with motor mounted at the bottom of the fan**

The motor bracket should be mounted to the fan uprights in the 3<sup>rd</sup> and 5<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the right upright (when viewed from the rear) in the 9<sup>th</sup> and 10<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



**AL54 with motor mounted at the top of the fan**

The motor bracket should be mounted to the fan uprights in the 4<sup>th</sup> and 6<sup>th</sup> holes from the end of each upright, using the existing 5/16" hardware. The belt tensioner should be mounted to the left upright (when viewed from the rear) in the 9<sup>th</sup> and 10<sup>th</sup> holes from the end of the upright, using the 5/16" hardware supplied.



Once the motor bracket and tensioner bracket are in place, thread the belt over the motor pulley, the tensioner pulley and the belt groove of the blade assembly. It may be necessary to push on the tensioner to get enough slack to thread the belt over the tensioner pulley. Check to see that the motor pulley is aligned with the other two pulleys (see Figure 1). If necessary, adjust the position of the motor pulley on the motor shaft.

To achieve proper belt tension, loosen the 3/8" bolt holding the tensioner to the tensioner bracket. Then, using a 15/16" wrench, rotate the tensioner assembly such that the alignment mark is between mark 1 and mark 2 on the idler arm (see Figure 2). Tighten the 3/8" bolt securely. Turn the blade assembly by hand to insure free rotation. **Do Not Over Tension The Belt.** This will cause premature belt and bearing failure. To check that the belt tension is not too high, place a finger midway between the fan pulley and motor pulley and push inward about 1/2". The force required to do this **is not** to exceed 5 pounds.

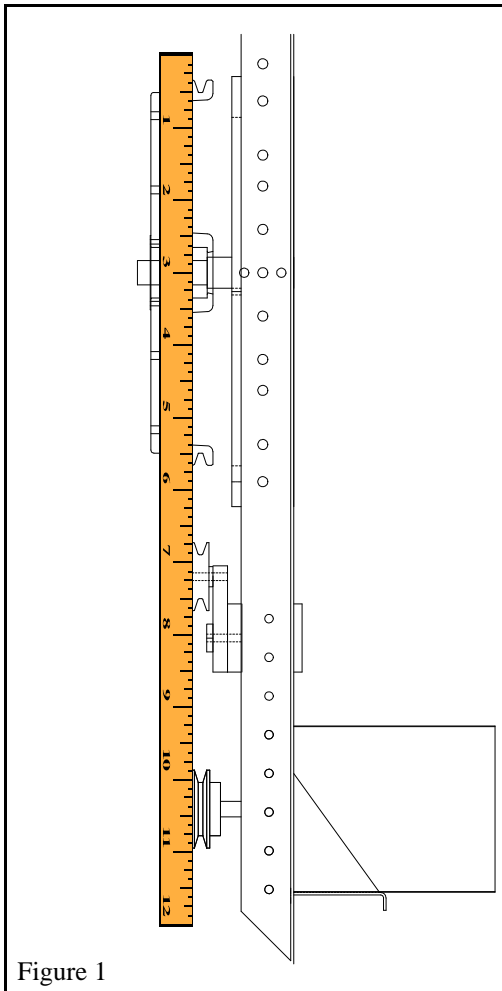


Figure 1

Check for proper belt/pulley alignment with a straight edge, such as a yard stick or a piece of dowel rod.

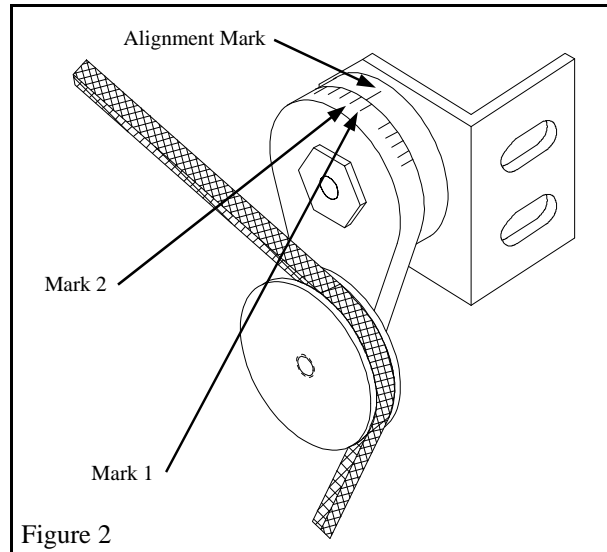


Figure 2

For proper belt tension, the alignment mark should be between mark 1 and mark 2 on the idler arm.