



# Piaggio MP3 Drive Belt Change

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Revised 02/13/2012

# Belt Replacement and Sources

- \* The manual says replace the belt every 6,000 miles.  
Few owners have reported failures under 8,000 miles.
- \* Be conservative with your first belt to see how your riding style affects belt wear.
- \* Piaggio part#: 832738
- \* Belt Sources: [PSN Tuning](#) (OEM) • [AF1 Racing](#) (OEM) • [AF1 Racing](#) (Athena) • [Scooter West](#) (OEM)

# Slider Replacement and Sources

- \* The manual calls to replace the rollers with the drive belt. However most owners consider this very conservative and that rollers can last through several belt changes.
- \* It's also the general consensus among owners that Dr. Pulley Sliders are a superior product to OEM rollers and last much longer.
- \* Suggest replacing sliders every third belt change.
- \* Dr. Pulley Sliders: [Buggy Parts NW](#)  
This link is for sliders that provide stock performance for the Piaggio MP3 400.

# Tools

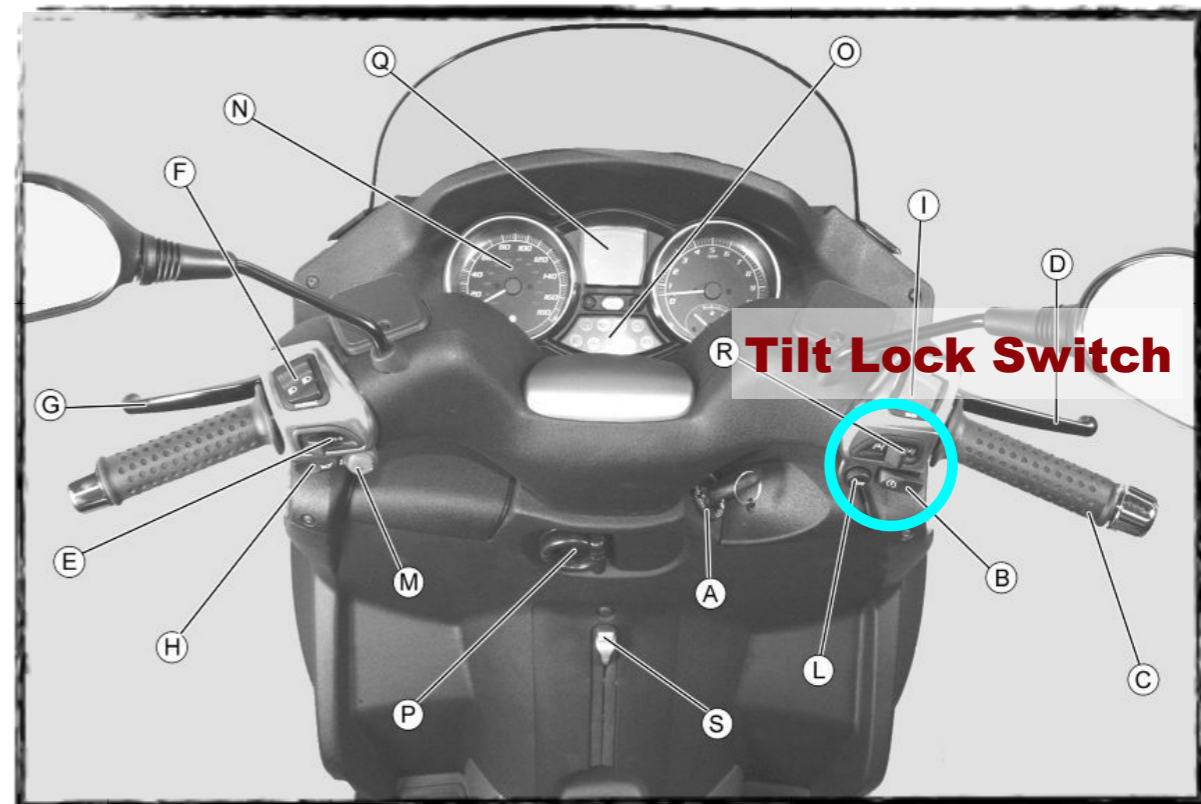
- \* Small Socket Wrench Set: [Gear Wrench 1/4" Drive Gear Ratchet Set](#)
- \* Socket Wrench: 27mm, 10mm (1/2 in. drive)  
The 10mm should be part of a set: [Craftsman 24 pc. Metric 1/2 in. drive](#)  
The 27mm is typically a special order: [Craftsman 27mm](#)
- \* Breaker Bar: [Craftsman 1/2 in. dr. 18 in. Flex Handle](#)
- \* Torque Wrench, with 200 Nm capacity:  
[Craftsman 150 ft./lb. Beam Style Torque Wrench](#)
- \* 21 x 23mm Deep Offset Wrench: [Craftsman 12 pt Deep Offset](#)
- \* Variator Holding Tool: [Scooter West](#) • [PSN Tuning](#)
- \* 1" wood dowel • hammer • phillips screw driver • containers for fasteners

# Belt Replacement Tasks

1. Secure Scooter
2. Remove Air Filter
3. Remove Transmission Cover
4. Remove Transmission Case
  - 4.1. Remove Driven Pulley Nut
  - 4.2. Remove Transmission Housing
5. Remove Variator and Clutch
6. Inspect Variator and Weights
7. Seat Belt on Clutch
8. Attach Variator and Clutch
9. Torque Variator Nut
10. Attach Transmission Cover
  - 10.1. Bolt on Housing
  - 10.2. Torque Driven Pulley Nut
11. Attach Transmission Cover
12. Attach Air Filter

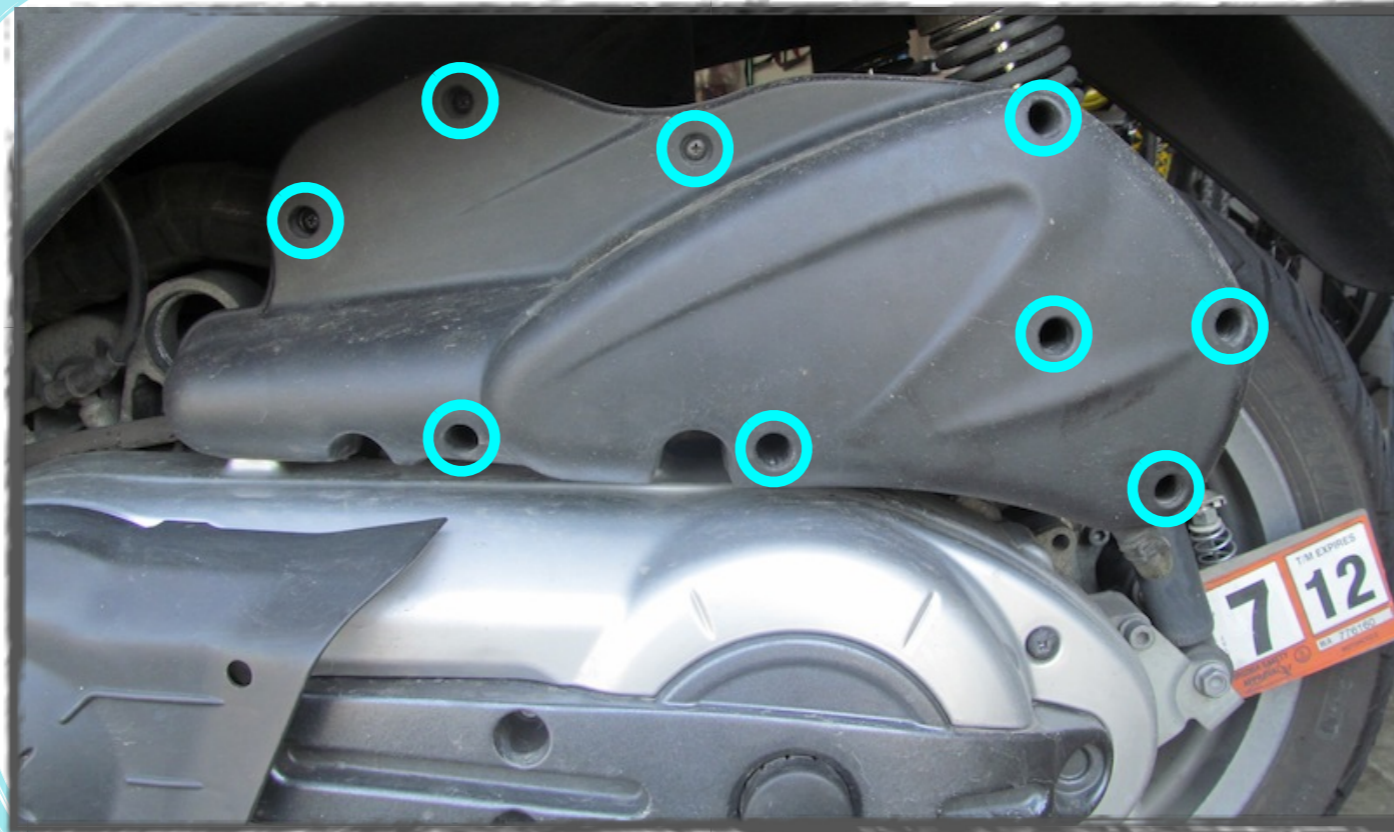
# 1. Secure Scooter

- \* Put scooter on its center stand.
- \* Disengage, then reengage suspension lock to level the scooter.
- \* Zip-Tie the front brake so it's engaged
- \* Leave the parking brake off.



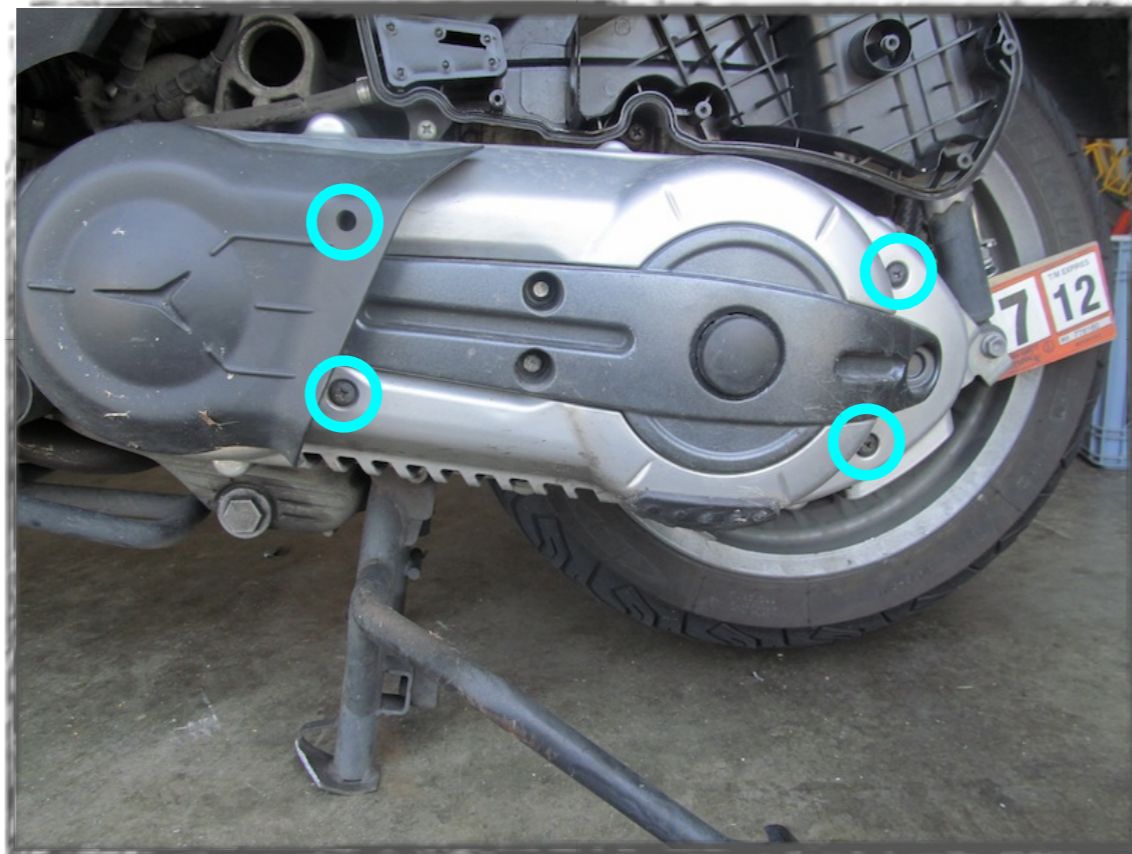
## 2. Remove Air Filter

- \* Using a phillips-head screwdriver, remove the nine (9) air filter screws.
- \* Use the phillips to push the screws out of the air filter cover and put them in a container. (Or you'll end up looking for them later.)
- \* Now is also a good time to clean the air filter.



# 3. Remove Transmission Cover

- \* Using a phillips-head screwdriver, remove the four (4) transmission cover screws and put them in a container.





# 4.1. Remove Driven Pulley Cover

- \* Remove the pulley cover by turning it a quarter turn to the right, then use a small blade screwdriver to remove the cover.

**Click the picture to Play**



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# 4.1. Remove Driven Pulley Nut

- \* Confirm that the parking brake is off.
- \* Put the 21 mm offset wrench on the nut at the 3 o'clock position.
- \* Put the breaker bar with the 10mm socket on the axel at the 7 o'clock position so it's resting on the ground.
- \* Brace yourself and pull up on the offset wrench.
- \* Slide the nut and washers onto a screwdriver to keep them in the correct order!



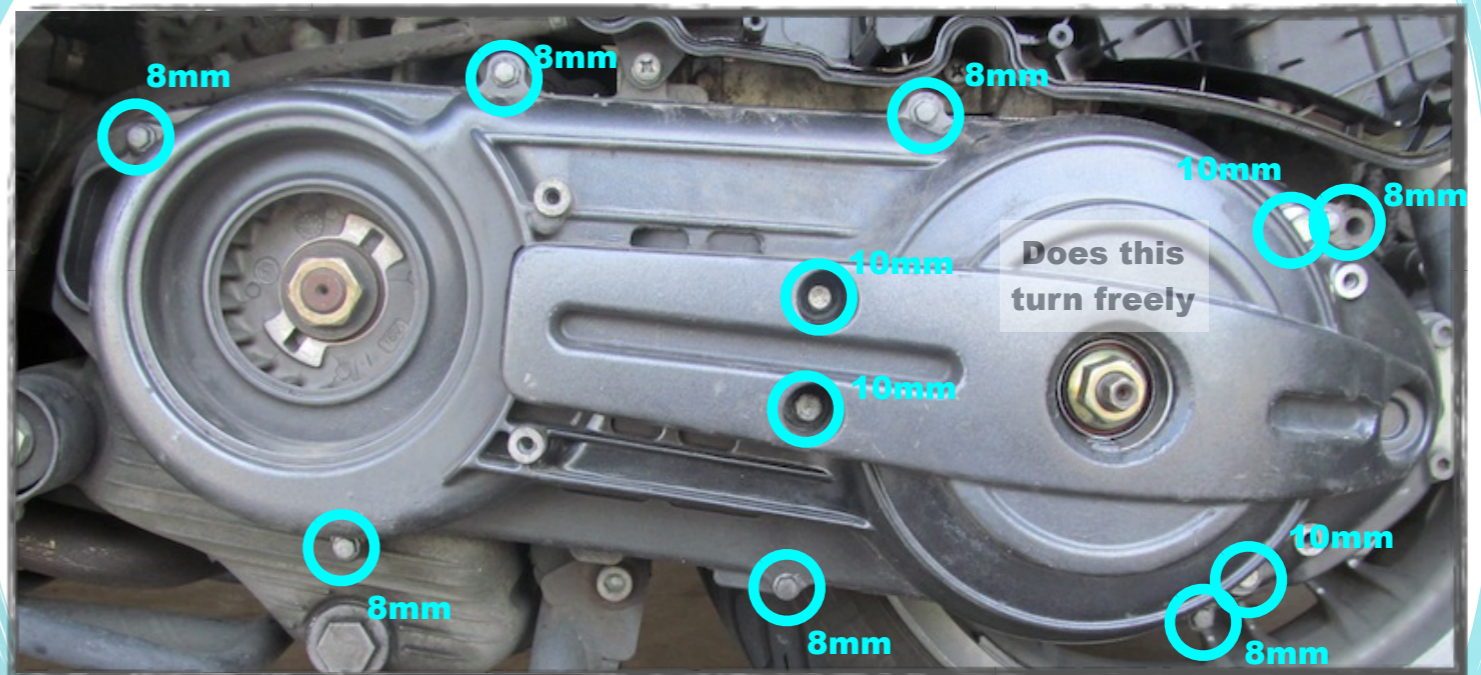
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# 4.2. Remove Transmission Housing

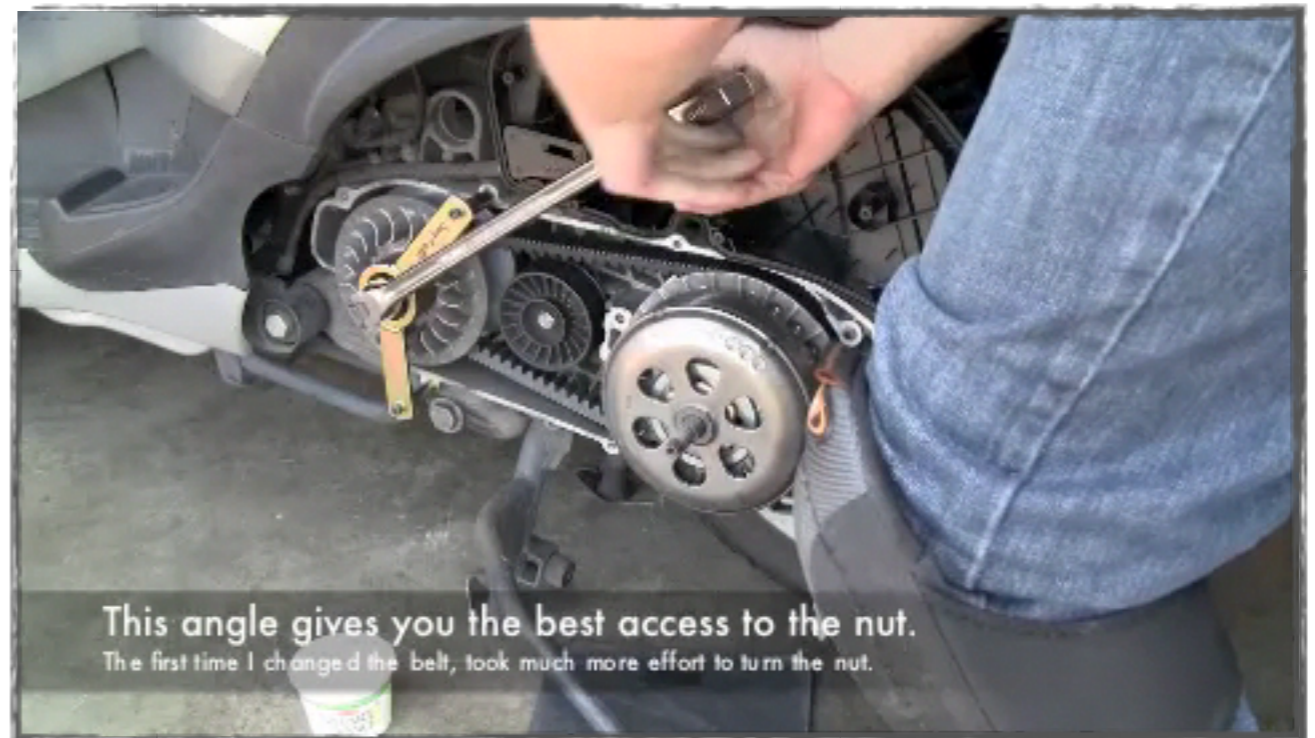
- \* Use the 1/4" socket set with extension.
- \* Remove the seven (7) 8mm bolts
- \* Remove the four (4) 10mm bolts.
- \* Once the housing is removed, confirm that the bearing in the housing for the axel turns freely.



# 5. Remove Variator and Clutch

- \* Attach the variator holding tool - use a 5mm allen to tighten the spacers.
- \* Use the breaker bar and the 27mm socket.
- \* Brace yourself and pull up on the breaker bar.
- \* Slide the nut, washers, outer fixed plate and large bushing onto a screwdriver to keep them in the correct order!
- \* Remove clutch bell.
- \* Remove clutch and belt.

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# 6. Inspect Variator and Weights

- \* Disassemble the variator and clean.
- \* Inspect the weights and shoes for wear.
- \* Optional replace the standard round weights with Dr. Pulley Sliders.

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# 7. Mount Drive Belt on Pulley

- \* Stand the clutch on its side on a soft surface.
- \* Position the 1" dowel between the two pulley halves.
- \* Using a hammer, drive the dowel between the two pulley halves to separate them.
- \* Put the belt between the two pulley halves.
- \* Confirm that the belt arrows are pointing to the left for a counter clockwise rotation.

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# 8. Attach Variator and Clutch

- \* Install the inner palates of the variator.
- \* Pinch the belt around the pulley then mount it in the transmission housing.
- \* Assemble the rest of the variator.
- \* Be careful not to trap the drive belt between the two halves of the variator.
- \* Attach clutch bell and silver washer.
- \* Apply a little grease or anti-seize to the exposed axel.

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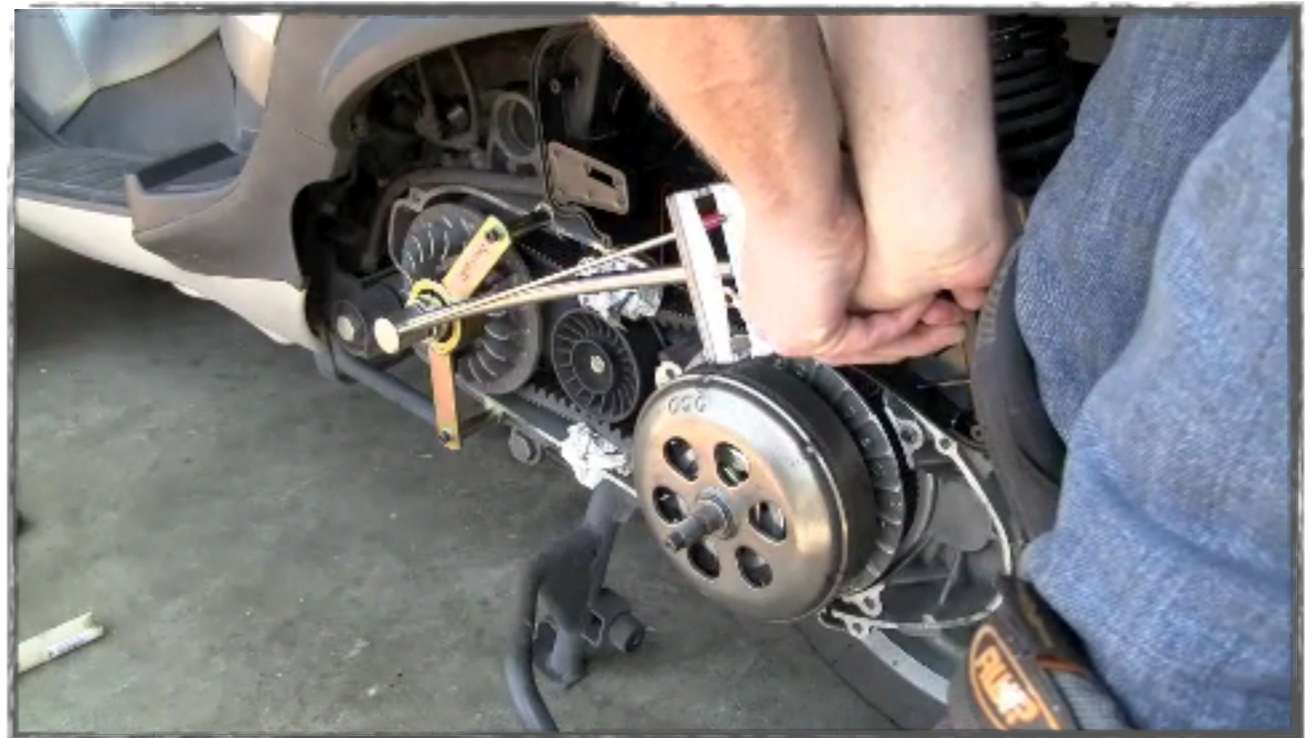


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# 9. Torque Variator Nut

- \* Install the inner palates of the variator.
- \* Pinch the belt around the pulley then mount it in the transmission housing.
- \* Assemble the rest of the variator.
- \* Be careful not to trap the drive belt between the two halves of the variator.
- \* **Tighten variator nut to 160–175Nm**
- \* Attach clutch bell and washer.
- \* Apply a little grease or anti-seize to the exposed axel.

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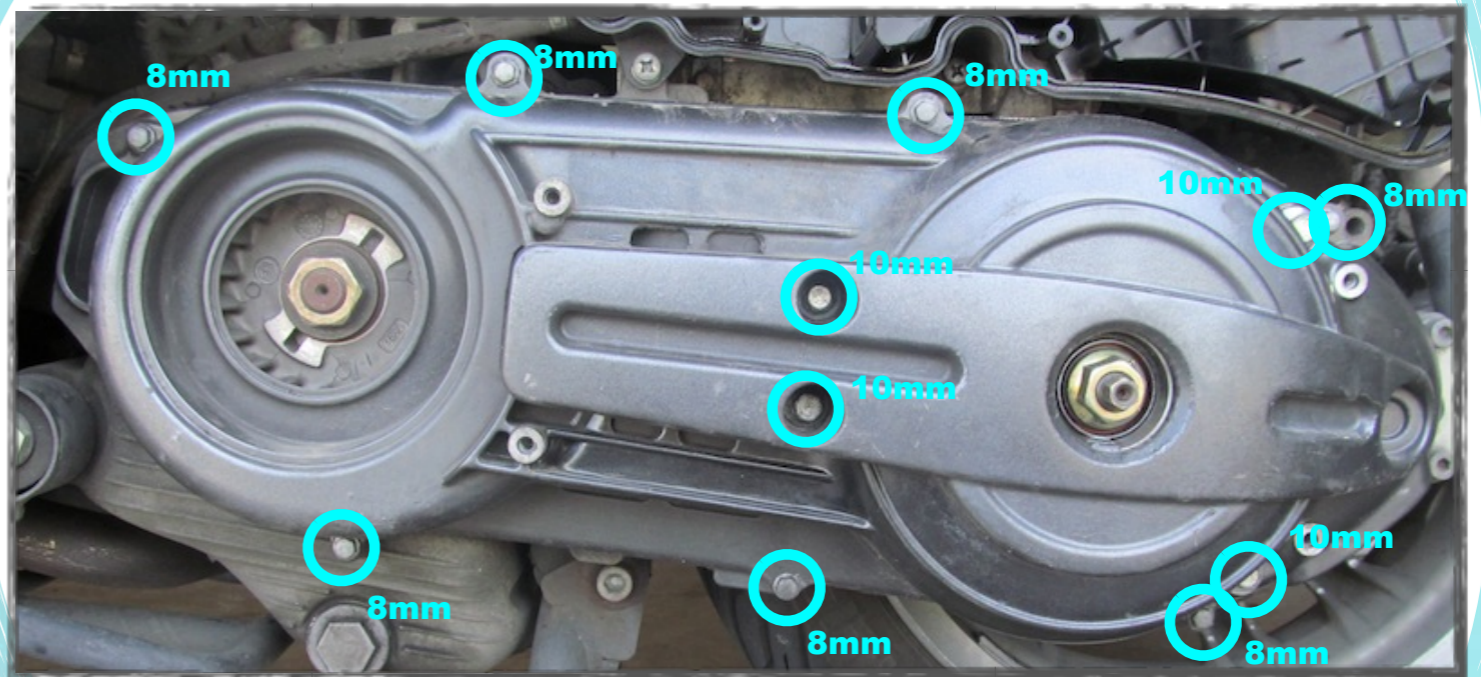
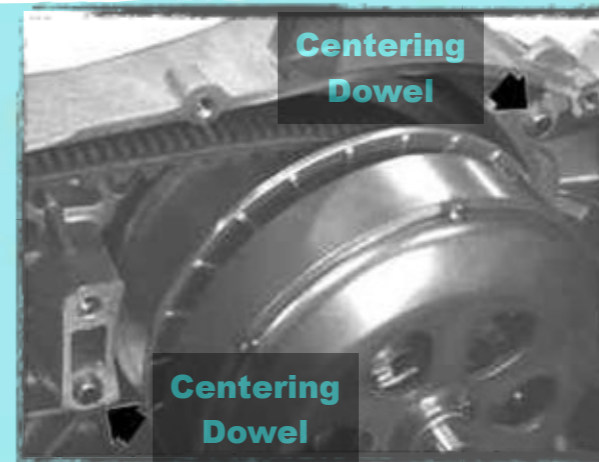


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# 10.1. Attach Transmission Housing

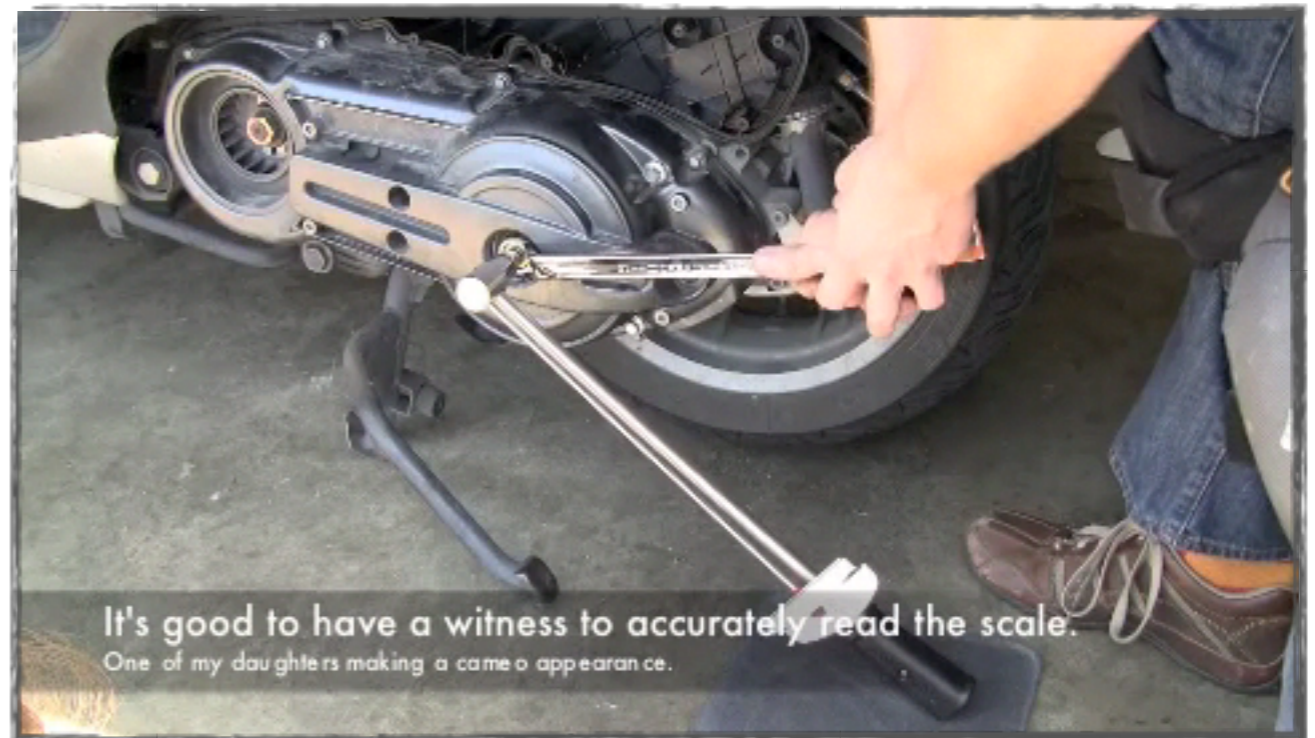
- \* Slide the silver washer on the axel.
- \* Make sure that centering dowels line up.
- \* Use the 1/4" socket set with extension.
- \* Attach the seven (7) 8mm bolts. Torque to 23–27Nm (or nice and tight)
- \* Attach the four (4) 10mm bolts. Torque to 11–13Nm (or nice and tight)



# 10.2. Torque Driven Pulley Nut

- \* Confirm that the parking brake is off.
- \* Put the 21mm offset wrench on the nut at the 2 o'clock position.
- \* Put the torque wrench with the 10mm socket on the axel at the 5 o'clock position so it's resting on the ground.  
Put something soft under the handle to protect it.
- \* It's a good idea to have someone to read the scale for you as you're tightening.
- \* **Tighten to 92-100Nm**
- \* Attach nut cover by using its index and turning to the left.

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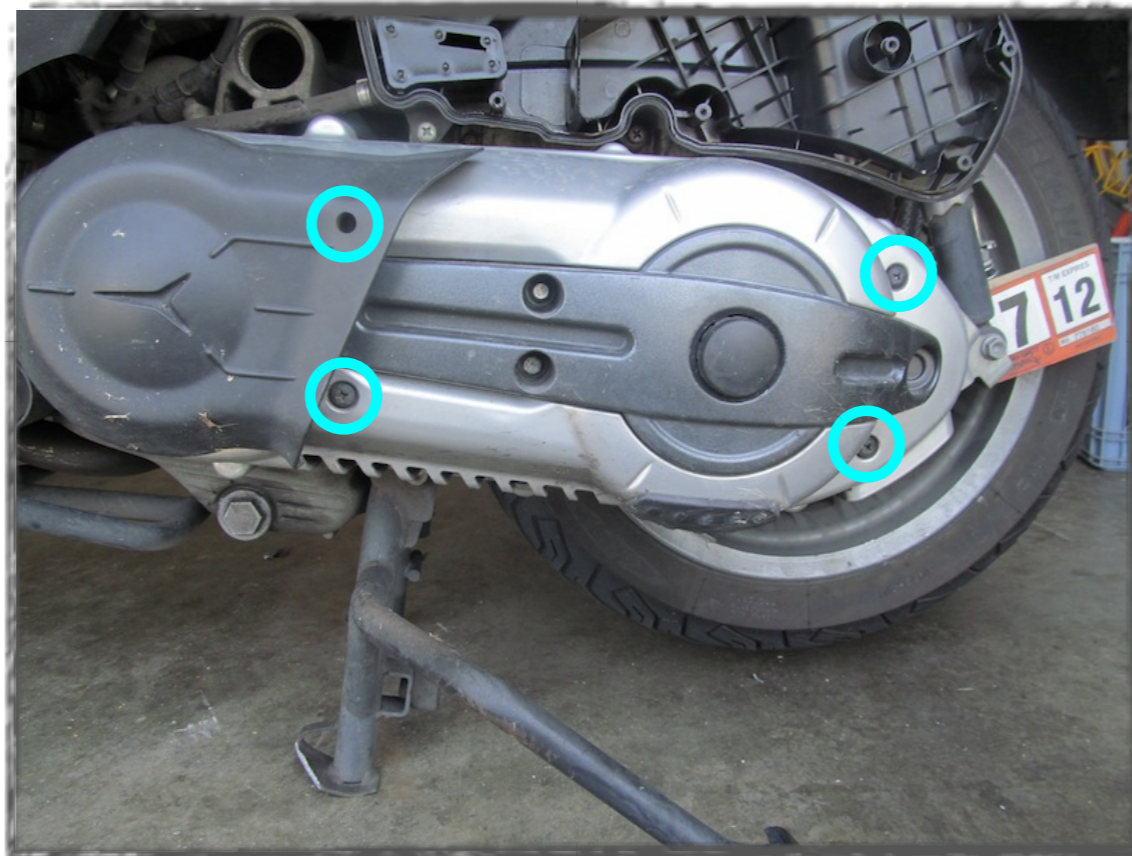


It's good to have a witness to accurately read the scale.  
One of my daughters making a cameo appearance.

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# 11. Attach Transmission Cover

- \* Using a phillips-head screwdriver, replace the four (4) transmission cover screws.



# 12. Attach Air Filter

- \* Using a phillips-head screwdriver, replace the nine (9) air filter screws.
- \* Turn the screws to the left until you hear or feel a click, or you've turned the screw completely around. This keeps the screw from cutting new threads in the plastic air filter, which over time would destroy the screw's ability to hold.

\* You're done!

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Turn to the left until there's a click.

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