

Vacuum Motor Cleaning and Maintenance



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Tools Required

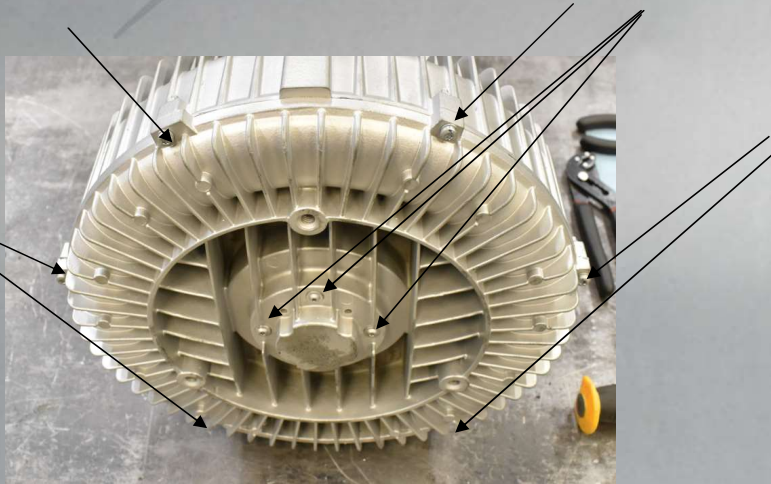
- Metric allen sockets
- Torx driver bits (T25 & T20)
- Bearing puller (3 jar preferred)
- Soft face hammer
- Pliers
- Pry bars
- Suitable bearing driver
- Compressed air
- #8-32 Threaded Rod 3-4" long
- Large and Small wire Brush
- PPE (gloves and eyewear)



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Remove Compressor Cover

- Remove the 6 front cover bolts (T25 bit) and the 4 bearing retainer bolts (T20 bit)



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Remove Compressor Cover

- Carefully remove front cover using suitable pry bars
- If you notice the cover not coming off and the impeller starting to pull forward. The following steps should be taken
- Remove back fan cover
- Apply a grip or vice grip around rear shaft to keep this from pulling forward.
- The rear fan is plastic so be aware if removing.



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Check Impeller Rotation

- At this point check rotation of the impeller - if impeller spins freely, you will not need to remove the bearing
- Clean the internal area of the impeller with a focus on the pictured area.
- Make sure to clean the side walls
- Also make sure the cover is clean as well.
- Once clean – used compressed air to remove all debris
- Jump to Step #9 for reassembly



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Remove Bearing

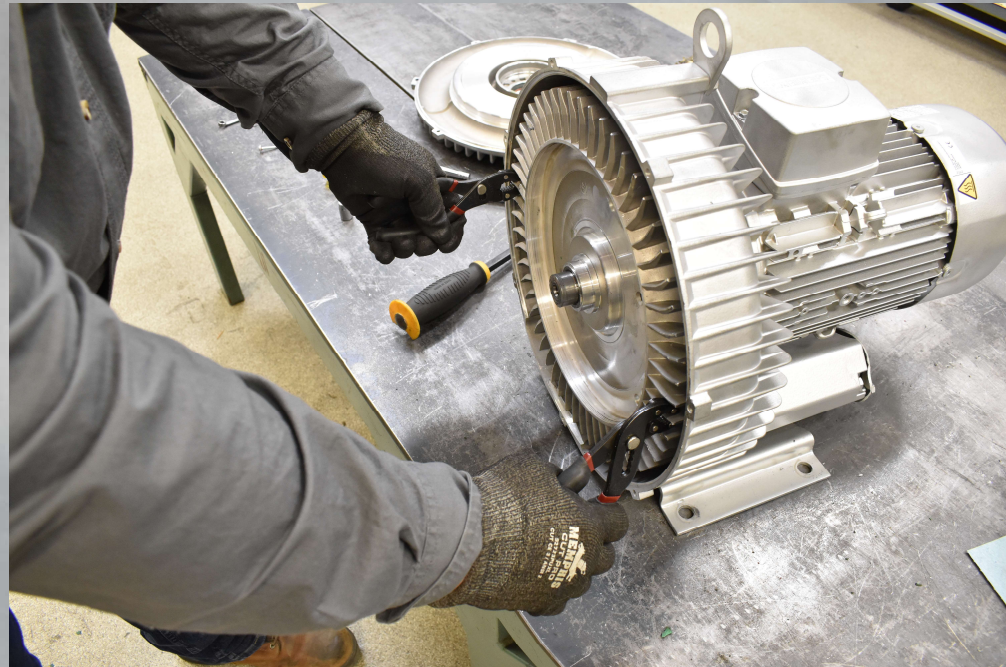
- Remove bearing retainer bolt
- Then use bearing puller to remove bearing and retainer plate.



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Remove Impeller

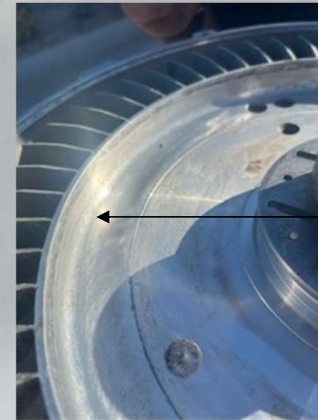
- Using two pair of pliers gently remove impeller from rotor shaft.
- Make sure to note orientation of impeller



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Clean Equipment

- Using compressed air and a soft brush, remove all dirt and debris from both sites of impeller, housing area and cover.
- Critical areas to clean
 - Internal ring of impeller
 - Cover ring
 - Outer ring of housing



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Reinstall Impeller

- Apply anti-seize paste or spray to the shaft and reinstall impeller making sure to line the keyway with the key in the shaft



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Bearing Installation

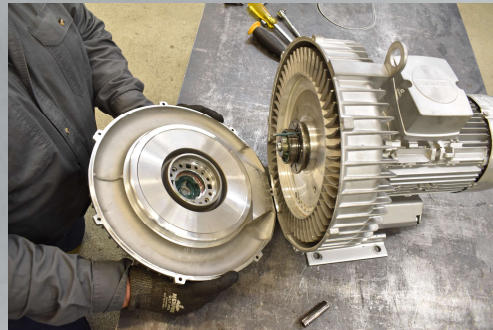
- Check bearing for damage and add new grease if needed.
- If adding new grease fill free space of bearing to approximately 50%
- Use Unirex N3 (ESSO) or suitable alternative according to DIN 51825-K3N
- Install bearing retainer plate with plastic shield facing impellers
- Using a bearing driver install bearing.
- Reinstall bearing retainer bolt and securely tighten.



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Install Cover

- Gently install impeller housing back onto housing and reinstall the 6 front cover bolts and 4 bearing retainer bolts
- HINT: thread a piece of all thread or similar into bearing retainer plate to facilitate proper alignment. I used some weld wire/rod to help align.



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Test

- Reaching through the fan guard ensure the blower spins freely and reinstall vacuum.
- You can also hook unit back up to power and ensure that unit is functioning as it should.
- If unit still does not function properly reach out to the Client Service Team at clientservices@tommycarwash.com or 616-795-4893.



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