

Knowledge Domain: Motors
Unit: Belts/Gears/Shafts/Coupling
Skill: Loosen/Tighten/Low Power

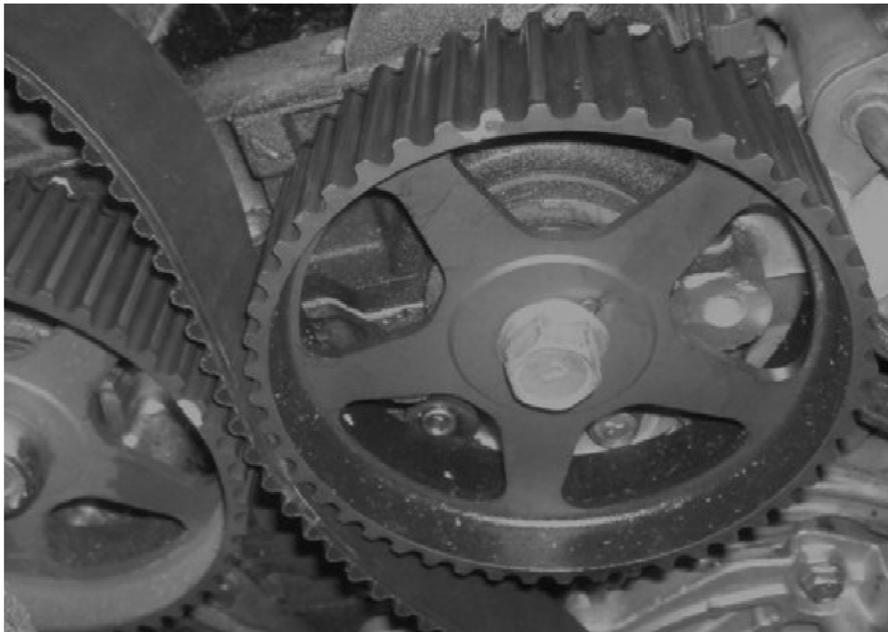
Tools and Parts Required:

- 1) Motor with a belt
- 2) Screw driver
- 3) Work gloves
- 4) Safety goggles
- 5) Wrench

Introduction

Motors of all sizes are used in many areas of hospitals. Moving parts such as belts and gears are likely to loosen and break in a motor. One key way to maximize the lifetime of a motor is to ensure that each part is properly fitted to the device. When a device has loose components, the device may still operate but with much less power. This skill will explain loosening and tightening of motor components.

Example



Above is an example of a loose belt that is no longer in contact with the corresponding gear.

Identification and Procedure

The most common indicator of a loose component in a motor is the sound of a misfire or misstep in the engine. If a strange sound is heard,

- Turn off the motor and look for loose parts.
- Examine any gear, shaft, or coupling that may need tightening.
- Also check for any connection that may need to be loosened.
- Next, turn the motor on a low power setting.
- Listen to and observe the motor to see if any piece is still in need of loosening or tightening.
- If a belt is moving but no power is transferred, remove the belt and check for glazing. Refers to the skill *Motors-Belts Gears and Shafts-Worn, Cracks and Glazing*.
- If a V-Belt is coming out of its groove, secure the belt in its groove or replace it.
- If no loose parts are directly observed yet the motor continues to operate on low power, check each component individually.

Exercise

Your instructor will provide you with a motor to practice on. Practice loosening and tightening a belt or other component with the steps described. If any piece was removed for maintenance, ensure that it has been properly attached. Your instructor must review your work before you move on.

Preventative Maintenance and Calibration

Always ensure that each belt, shaft, etc. is fully attached and safe by letting the machine run. Run on low power then check the full operation before returning to service.