Knowledge Domain: Motors
Unit: Belts/Gears/Shafts/Coupling
Skill: Lovejoy Coupling

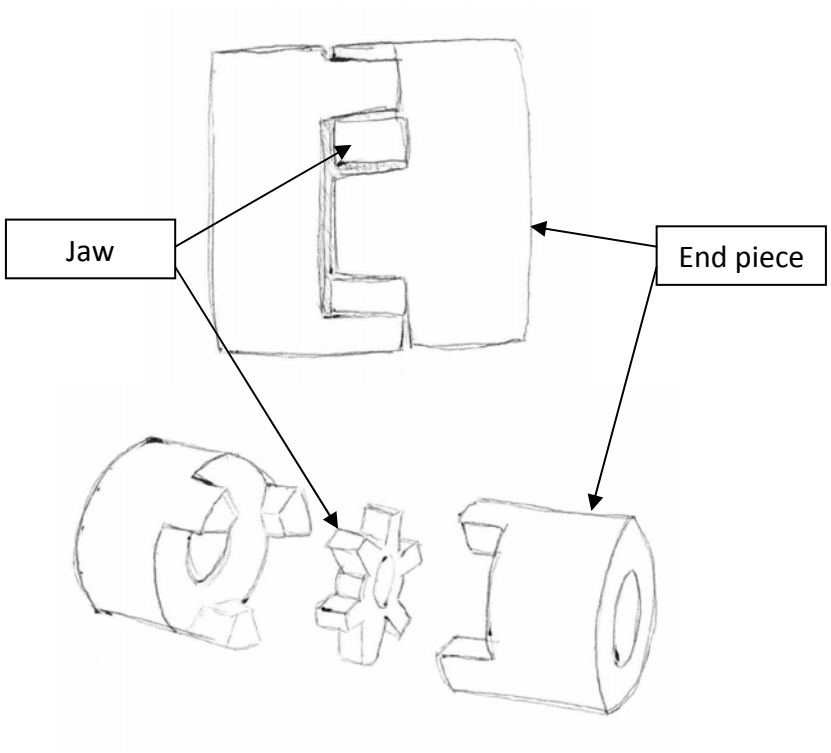
Tools and Parts Required:

1) **Lovejoy coupling, disassembled (optional)**
2) **Safety Glasses**
3) **Work Gloves**
4) **Screw Driver**
5) **Clamp**
6) **Wrench**

Introduction

Motors will often contain many different gears and connecting shafts. A common method of power transfer is the Lovejoy coupling. The Lovejoy coupling transfers power and reduces vibration in the system to protect other components. The coupling has three parts: two end pieces and a middle "jaw". The type of jaw determines the amount of vibration in the system. In this skill the maintenance of Lovejoy couplings will be discussed.

Example



A Lovejoy Coupling: Assembled (top) and Open (bottom)

Identification and Diagnosis

Lovejoy couplings are very reliable. Even if the middle piece or “jaw” breaks, power will still be transferred through the coupling. However, no vibration will be removed from system.

Procedure

- If the middle piece is broken, it may be advantageous to leave the device intact until a replacement can be found.
- If the coupling has been broken, it is possible to drill a hole through each end and use screws to hold the coupling tight. However, vibration will not be damped and components may be damaged.

Exercise

Your instructor will provide you with a motor to practice on. Examine a Lovejoy coupling in operation. If possible, find a Lovejoy coupling without the center jaw piece. Observe the difference between the damped and undamped coupling.

Preventative Maintenance and Calibration

Always insure that each belt, shaft, and other moving parts are fully attached and safe. Prior to returning the device to use, let the machine run for some time.