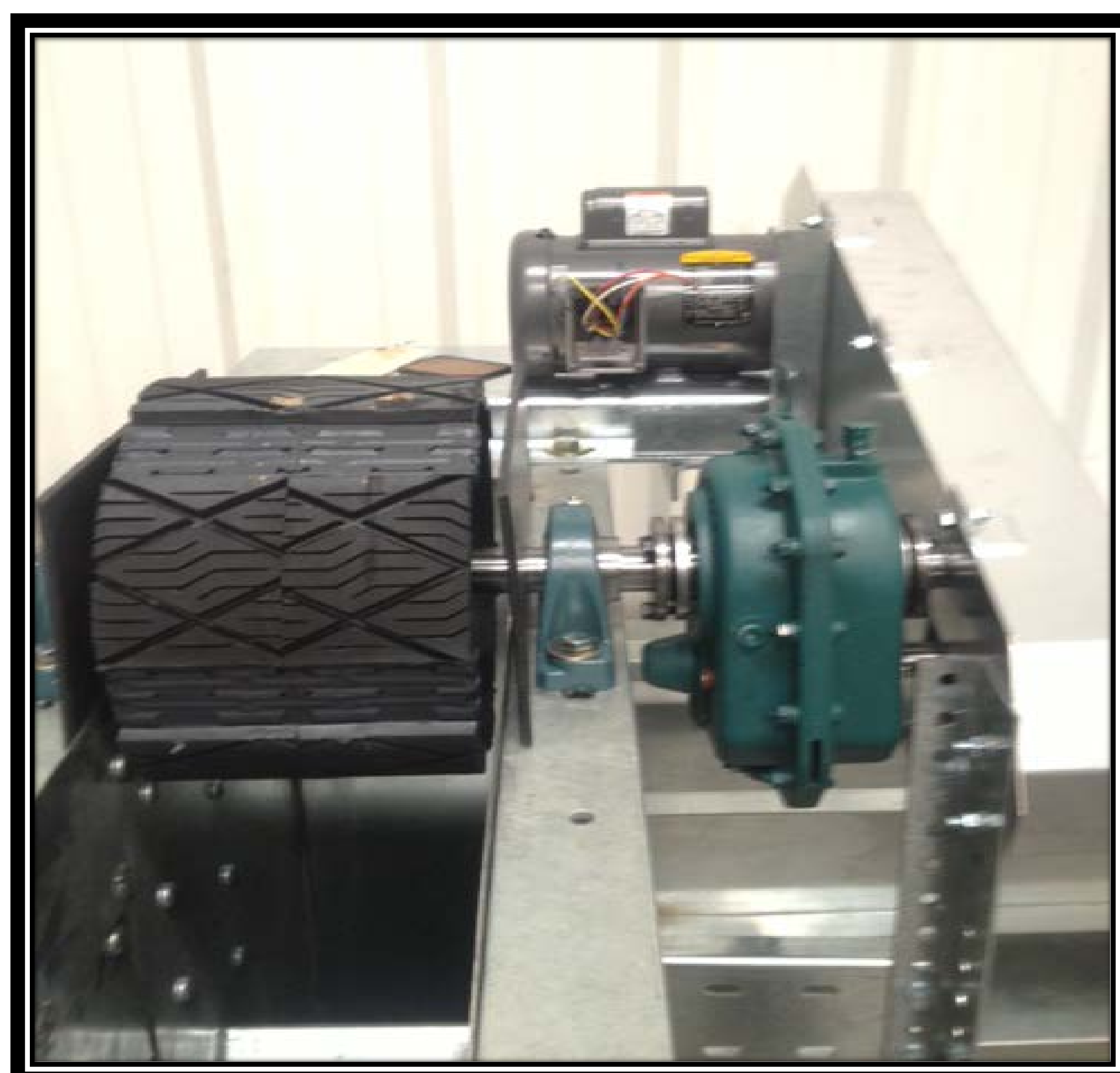


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Grain Leg Training Module

Project Overview:

- The objective of this project was to create a training module that CGB could use to train employees on the components and maintenance of a grain leg.
- The deliverables in this project are a scaled, operating model of a grain leg and a basic training presentation module
- The biggest constraint of this project is the environment in which the training module will be placed, a training center in Illinois with a 14' height maximum.
- The problem this project will solve is creating a streamlined, standard way of training employees to cut down on breakdowns, accidents, and the time and money needed for training.



Pictured are the drive pulley, motor, gearbox, bearing, and motor. These are the drive components of the leg.



Pictured here are a bucket and a piece of the belt. There are 110 buckets inside the leg attached to 28' of belt.

Alternate Solution:

The main alternative would have been the creation of a computer driven, video and slideshow based training module. This would have possibly been more cost effective and more mobile. However, this lacks the hands on learning aspects the sponsor was looking for.

Project Budget:

Item	Cost
Riley Grain Leg	Donated (valued \$5,000)
Lexan (plexiglas)	\$100
Travel Costs	\$100
Electrical Supplies	\$50
Leg Assembly Extra Parts	\$50
Total	\$300 (\$5300)
*Estimated Annual Usage	\$3200

*Estimated Annual Usage includes costs of operating leg, depreciation, wage of employee, and building operation

Project Solution:

- The first step in solving the problem was the construction of the Riley grain leg. This included the assembly, drivetrain installation, and belt bucket installation.
- The second step in solving this problem was adding viewing windows to show the inner working by installing Plexiglas cutouts.
- The third step was to create a training presentation that would allow the trainees to learn the components of the leg and the basic techniques to maintain the leg.

Bearing Lubrication

- Use silicone lubrication in grease gun to service bearing.
- Bearings are located on pulley drive shafts. There are two on each shaft.
- Follow manufacturer's recommended time table when greasing bearings



The training module includes the 12' grain leg (above) and the slide show (left) containing instructions on specific components of the leg