

# **BE-03**

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## **MECHANICAL MAINTENANCE TRAINING**

### **TRAINER'S GUIDE**

**Duty BE: Ways and Gibs  
BE-03: Replace and Set Tychoway Bearings  
Issued 06/01/98**

## **Instructions To The Trainer**

1. The Learner will contact you when ready to practice the procedure to replace and set a Tychoway bearing.
2. Be prepared to demonstrate the steps for this task.
3. Ask the Learner to contact the Evaluator when ready for the Skill Check.



## **Skill Objective**

Given a Tychoway bearing (roller pack) that must be replaced, replace and set the Tychoway bearing.

### **Task Standards**

1. The machine must move on its axis without binding or looseness from one end of travel to the other.
2. Machines ways and Tychoway bearings must not be damaged.
3. The Tychoway bearings must be preloaded according to the machine manufacturer's specifications.
4. All safety requirements must be demonstrated.

## What The Learner Will Need

This section contains the safety information, tools, and resources you will need before you can replace and set a Tychoway bearing.



- Follow all Caterpillar facility safety standards when performing this task.



- replacement Tychoway bearing (or equivalent “roller pack” linear roller bearing)
- dial indicator and mounting hardware
- wrenches
- feeler gauges or shim stock
- shop towels
- general purpose degreaser
- oil specified for the machine lubrication system



- machine Operator
- machine manufacturer’s prints, instructions, and specifications



## Practice Set-Up

The Learner may perform the following practice to help prepare for the Skill Check. Set up a machine for the Learner to practice on, and provide. Assist the Learner during the practice, if necessary; answer any questions concerning the task; and be prepared to demonstrate the task to the Learner. Make sure the Learner follows safe work practices while practicing the task.

### Practice 1

For this practice, the Learner will need specifications and/or maintenance documentation on the target machine tool, possibly bearing manufacturers' catalogs, and access to a list of stocked bearings.

### Practice Objective 1

Select the correct Tychoway bearing for a particular machine tool. The selected bearing must match specifications and the bearing presently in the machine

### Practice 2

Locate a machine tool that is out of service or can be used during a scheduled shut down. A new bearing is not required. Show the learner what to look for when inspecting a used bearing and the surface of the way on which it rides.

### Practice Objective 2

Remove, inspect, and replace a Tychoway bearing.

1. The bearing must be identified as serviceable or in need of replacement.
2. After the bearing is reinstalled or replaced, the machine must move on its axis without binding or looseness from one end of travel to the other.
3. The Tychoway bearings must be preloaded according to the machine manufacturer's specifications.
3. All safety requirements must be demonstrated.

### **Practice 3**

Locate a machine tool that is out of service or can be used during a scheduled shut down. The Learner must have access to the machine tool documentation for this practice.

### **Practice Objective 3**

Check and establish the correct preload on a Tychoway bearing.

1. The Tychoway bearings must be preloaded according to the machine manufacturer's specifications.
2. All safety requirements must be demonstrated.

### **Next Step**

Allow the Learner to continue practicing and developing skills needed to demonstrate the task. The Learner should ask the Evaluator to schedule a Skill Check when ready to demonstrate the task unaided and meet all the task standards and safe work practices.