

## Overview

The System Performance Study (SPS) is a service offered by the Customer Terotechnology Support Group to help reduce the true life-cycle cost of installations using UNICO products. The SPS provides a “wellness” check of a system using basic measurement techniques to establish an engineering baseline for current and future performance comparisons.

## Step-by-Step Instructions

The SPS normally begins with step-by-step instructions on proper data-collection methods. Instruction is given in instrumentation and the use of data-collection points. The goal is to ensure that data collected during the SPS and data collected later will be scaled and measured in exactly the same manner.

## Verification and Repair

When the SPS begins, test data is carefully examined to verify that system hardware is functioning properly. Defective components are replaced and retested if possible. If motor problems are detected, such as worn commutators or brushes, faulty motors are repaired or replaced and then rechecked. Power supplies are analyzed for voltage regulation and stability. These steps ensure that the SPS data will form an appropriate baseline reference.

## Data Logging

Once the system is in proper working order, baseline data is collected. Velocity, current, and voltage waveforms are captured from each axis, and velocity and positioning accuracy is measured while the system is running at maximum operating speed. Together, this information presents the overall condition of the system and is used to determine if further investigation is necessary.

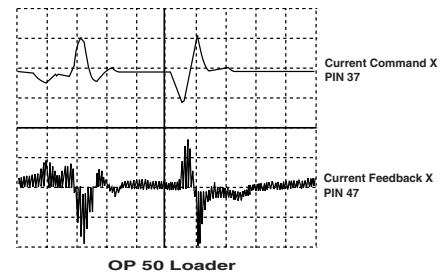
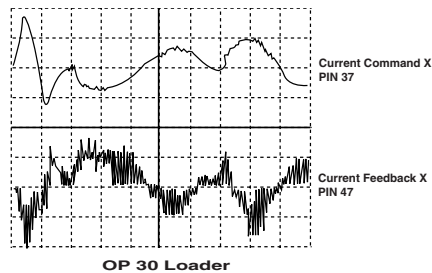
**SPS**

System  
Performance  
Study

## Overview

(continued)

## Sample Base Line Charts



## Data Recording

Once data is collected, it is labeled appropriately and bound in a *baseline data book*. Throughout the life of the machine, the user can determine if performance has changed by repeating the tests and comparing the new data to the original reference data.

## Special Information

The final section of the baseline data book provides additional important information, including:

- Preventive maintenance suggestions and procedures
- A preventive maintenance report form
- A record of all setup data
- A record of any outstanding or abnormal problems

## UNICO-Worldwide

### Corporate Headquarters

UNICO, Inc.  
3725 Nicholson Road  
P. O. Box 0505  
Franksville, Wisconsin  
53126-0505  
USA

voice: 262.886.5678  
fax: 262.504.7396

www.unicous.com

### United States

Novi, Michigan  
248.380.7610  
New Lenox, Illinois  
815.485.5775  
Sandy, Utah  
801.501.7586

### Canada

Mississauga,  
Ontario  
905.602.4677

### South America

El Tigre, Venezuela  
58.283.241.4024

### Europe

Milton Keynes,  
England  
44.1908.260000

Wilnsdorf, Germany  
49.2739.303.0

### Asia

Osaka, Japan  
81.66.945.0077

Beijing, China  
86.10.6218.6365

