	<b>Document Name</b>	<b>Date</b>	<b>Rev.</b>	<b>Page</b>	<b>Bulletin</b>
	Checking Brake Torque – Instruction for Benchmarking & Annual/Interim Qualification Testing	7/9/2015	A	1 of 5	1168

# **Hollister-Whitney Elevator Corporation**

## **Instruction for Checking Brake Torque by Slipping Brake – Empty Car**

For use with

**Hollister-Whitney Drum Brakes**

**&**


**Hollister-Whitney Disc Brakes**

**Mounted on Hollister-Whitney Machines**

**IMPORTANT NOTICE: This procedure may not be appropriate for some combinations of Gearing, Capacity, Hoistway Conditions and/or Machine Set-up. Each installation must be Field Tested for verification.**

### **Table of Contents**

Introduction – Verification of Brake Settings.....	2
Tools Required.....	2
Brake Torque Qualification Benchmarking.....	3
Brake Torque – Annual or Interim Testing .....	4
Contact Information for further Information or Questions.....	5

	<b>Document Name</b>	<b>Date</b>	<b>Rev.</b>	<b>Page</b>	<b>Bulletin</b>
	Checking Brake Torque – Instruction for Benchmarking & Annual/Interim Qualification Testing	7/9/2015	A	2 of 5	1168

## **Introduction – Verification of Brake Settings**

To comply with the A17 and B44 Codes, Hollister-Whitney requires all Hollister-Whitney Brakes to stop and hold a downward moving car loaded at 125% of capacity. This Instruction Bulletin is intended to be used AFTER this requirement is met to establish a Brake Sliding Torque Benchmark, thus allowing for future Annual Qualification Testing of the Brake.

***Brakes MUST be adjusted to meet all local, city, state and national codes.***

The installation crew, mechanic, adjuster, and maintenance personnel should be thoroughly familiar with the proper installation, adjustment, operation, and maintenance of the Hollister-Whitney Disc or Hollister-Whitney Drum Brake prior to any Brake adjustment or testing.

**SAFE ELEVATOR OPERATION DEPENDS ON PROPER BRAKE OPERATION DURING INSTALLATION, AS WELL AS THROUGHOUT THE LIFE OF THE ELEVATOR.**

For Standard Brake Adjustment Instructions please see:

<http://www.hollisterwhitney.com/#tech-support>

[http://www.hollisterwhitney.com/Documents/EDocs/E-163\\_92\\_Disc\\_Brake\\_Adjustment\\_-\\_Standard\\_Monitor.pdf](http://www.hollisterwhitney.com/Documents/EDocs/E-163_92_Disc_Brake_Adjustment_-_Standard_Monitor.pdf)

<http://www.hollisterwhitney.com/Documents/EDocs/E-164%20102-112%20Disc%20Brake%20Adjustment%20-%20Standard%20Monitor.pdf>

[http://www.hollisterwhitney.com/Documents/EDocs/E-165\\_Drum\\_Brake\\_Adjustment\\_-\\_Standard\\_Monitor.pdf](http://www.hollisterwhitney.com/Documents/EDocs/E-165_Drum_Brake_Adjustment_-_Standard_Monitor.pdf)

***Read and Understand ALL of the following Brake Instructions BEFORE starting this procedure!!***


## **Tools Required**

- Calibrated ½” Drive Torque Wrench – Dial Indicator or Digital Readout preferred, Click-Type not recommended.
- Hollister-Whitney Brake Load Testing Tool – See Table 1 Below

Tool P/N	Machine	Brake	Adjustment Document
34-224	#34	92 Disc	E-163
43-224	#43	90 Drum	E-165
44-224	#44	102 Disc	E-164
	#54	102 Disc	
53-224	#53	100 Drum	E-165
	#63	110 Drum	
64-224	#64	112 Disc	E-164
74-224	#74	120 Drum	E-165

Table 1 – Tools used per Machine & Brake

- Hollister-Whitney Brake Tags (see Figure 2):
  - For each Hollister-Whitney Drum Brake, use one Tag #P-155B, or
  - For each Hollister-Whitney Disc Brake, use one Tag #P-156B

	Document Name	Date	Rev.	Page	Bulletin
	Checking Brake Torque – Instruction for Benchmarking & Annual/Interim Qualification Testing	7/9/2015	A	3 of 5	1168

## **Brake Torque Qualification Benchmarking**

- Confirm Car is Out of Service, and Main Line Power is OFF.
- **Confirm all Proper Safety Precautions are in place.**
- Confirm Empty Car is at Top Landing.
- Confirm Brakes have been properly adjusted and qualified for 125% Load. Refer to proper Brake Adjustment Document listed in Table 1. When Brake adjustment is confirmed, a benchmark for the “Empty Car – Brake Sliding Torque” may be established.
- Refer to Figure 1. Place appropriate Load Testing Tool over 2 bolt **heads** (this may be on the motor hub side, or on the machine side) of the machine shaft assembly.

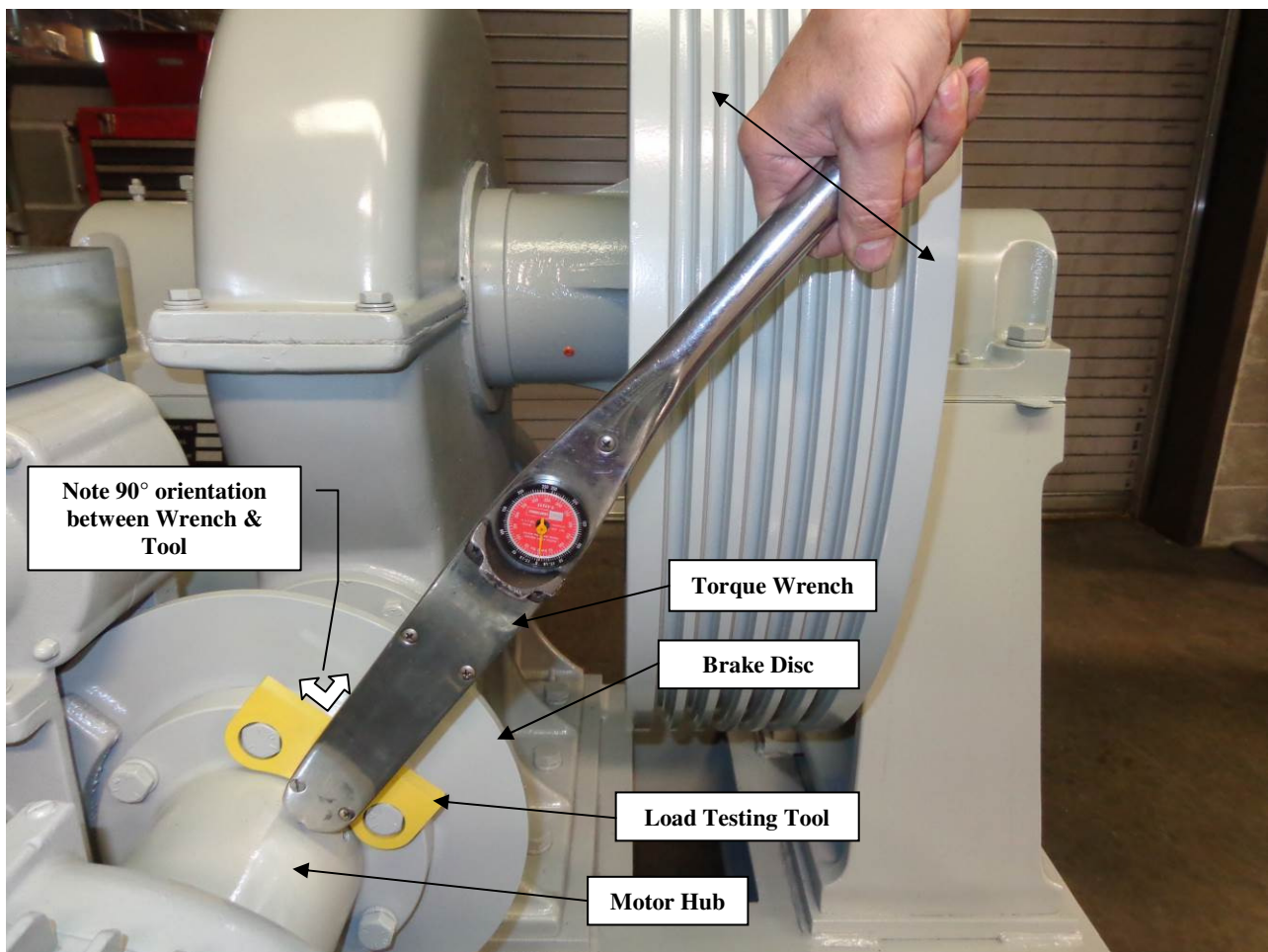



Figure 1 – Tool Placement: Disc Brake Testing, Drum Brake Similar, See Figure 3

**IMPORTANT:** Do Not attach or use one socket directly on one bolt; this may loosen or over-tighten a connecting bolt and may cause future issues.

- Insert ½” drive of Torque Wrench into ½” socket of Load Testing Tool. Note that short socket extensions may be necessary.

**IMPORTANT:** Note Orientation of Torque Wrench to Load Testing Tool must be 90° for proper torque testing.

- Take Careful note of Torque Indicator (dial, readout, or etc.) of Wrench.

	Document Name	Date	Rev.	Page	Bulletin
	Checking Brake Torque – Instruction for Benchmarking & Annual/Interim Qualification Testing	7/9/2015	A	4 of 5	1168

- Apply pressure to Wrench in appropriate direction to Lift Counter Weight (Empty Car Down). When Brake Disc slips, record Torque indicated.
- Apply pressure to Wrench in appropriate direction to Lift Empty Car (Empty Car Up). When Brake Disc slips, record Torque indicated.
- Refer to Figure 2. Using a scribe, punch, engraver or other permanent marking instrument, permanently record Torque on the appropriate Brake Tag in the spaces provided.
- Affix Tag to Brake, replacing old Brake Tag as applicable.
- When complete, remove all tools from machine, perform all safety checks necessary for returning the elevator to service.

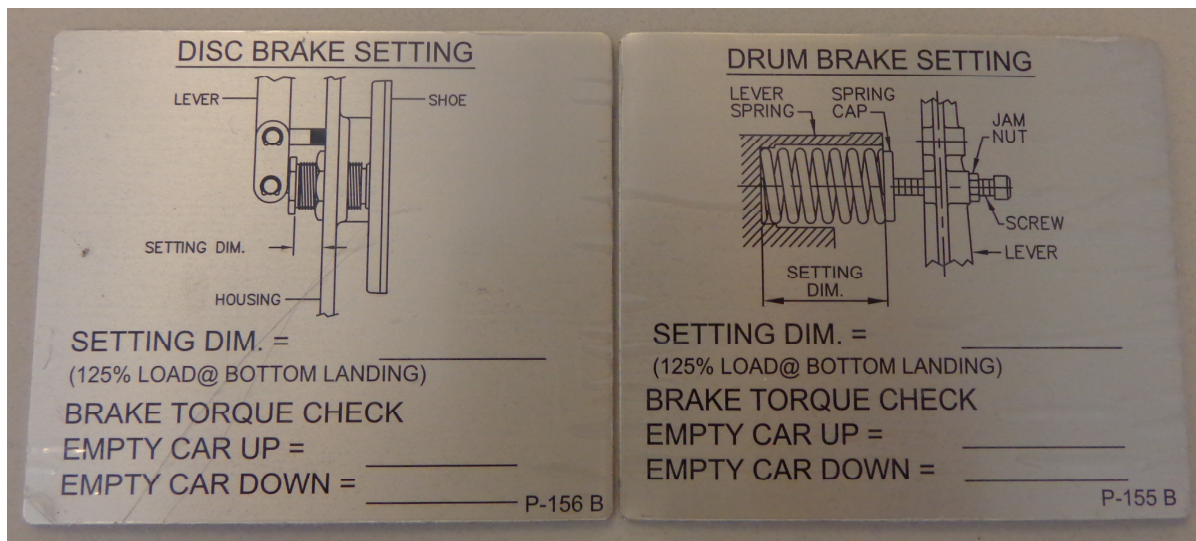



Figure 2 - Hollister-Whitney Brake Tags, Blank

### Brake Torque – Annual or Interim Testing

- Confirm Car is Out of Service.
- Confirm Brake has not been tampered with and is in good working order.
- Run elevator to assure proper Brake operation, arm alignment, and shoe clearance
  - Both shoes pick up and drop at the same time.
  - Brake arms
    - Disc Brake - parallel and straight up.
    - Drum Brake - orientation equal on both sides.
  - Shoes
    - Disc Brake - parallel to disc with proper and equal air gap on both sides.
    - Drum Brake - equal and proper air gap and heel and toe adjustment on both sides.
  - Proper setting of centering screws
  - Proper coil voltage to always energize the Brake. Coil may lose 30% of power when hot.
  - Proper adjustment of monitor switch or other brake switches to indicate proper Brake Operation.
- Confirm all Proper Safety Precautions are in place.
- Re-Confirm Car is Out of Service, and Main Line Power is OFF.
- Confirm Empty Car is at Top Landing.
- Refer to Figure 1. Place appropriate Load Testing Tool over 2 bolt heads (this may be on the motor hub side, or on the machine side) of the machine shaft assembly.

	Document Name	Date	Rev.	Page	Bulletin
	Checking Brake Torque – Instruction for Benchmarking & Annual/Interim Qualification Testing	7/9/2015	A	5 of 5	1168

**IMPORTANT:** Do Not attach or use one socket directly on one connecting bolt; this may loosen or over tighten a connecting bolt and may cause future issues.

- Insert ½” drive of Torque Wrench into ½” socket of Load Testing Tool. Note that short socket extensions may be necessary.

**IMPORTANT:** Note Orientation of Torque Wrench to Load Testing Tool must be 90° for proper torque testing.

- Take Careful note of Torque Indicator (dial, readout, or etc.) of Wrench.
- Apply pressure to Wrench in appropriate direction to Lift Counter Weight (Empty Car Down). When Brake Drum/Disc slips, record Torque indicated.
- Apply pressure to Wrench in appropriate direction to Lift Empty Car (Empty Car Up). When Brake Drum/Disc slips, record Torque indicated.
- Compare newly recorded Torques to Benchmarked Torques recorded on Brake Tag. Refer to Figure 2.
  - If new Torques are equal (or greater) than old Torques, take appropriate steps to record testing and return elevator to service.
  - If new Torques are less than old Torques, brakes must be readjusted and Benchmarks confirmed or reestablished. See appropriate Brake Adjustment Document listed in Table 1.
- When complete, remove all tools from machine, perform all safety checks necessary for returning the elevator to service.



Figure 3 – Tool Placement: Drum Brake Testing, Disc Brake Similar, See Figure 1

**Contact Information for further Information or Questions:**

**Hollister-Whitney Elevator Corporation**  
 #1 Hollister-Whitney Parkway  
 Quincy, IL 62305  
 Phone: 217-222-0466  
 Fax: 217-222-0493

[www.hollisterwhitney.com](http://www.hollisterwhitney.com)  
<http://www.hollisterwhitney.com/#tech-support>  
 e-mail: [info@hollisterwhitney.com](mailto:info@hollisterwhitney.com)