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## WAYNE DALTON WD-314961

# Wayne Dalton Torquemaster Plus Spring Installation and Maintenance Manual

Model: WD-314961

Brand: WAYNE DALTON

## IMPORTANT SAFETY INFORMATION

**WARNING: Garage door springs are under extreme tension and can cause serious injury or death if handled improperly. Installation and adjustment should only be performed by experienced professionals. If you are not confident in your ability to safely perform these steps, please contact a qualified garage door technician.**

- Always wear appropriate safety gear, including gloves and eye protection.
- Ensure the garage door opener is disconnected from power before beginning any work.
- Never attempt to release spring tension without the proper tools and knowledge.
- Keep children and pets away from the work area.

## PRODUCT OVERVIEW

This manual provides instructions for the installation and maintenance of the Wayne Dalton Torquemaster Plus Spring, Model WD-314961. This is a heavy-duty replacement spring designed for Wayne Dalton garage doors utilizing the Torquemaster Plus (TM3/TMII) spring system. It is specifically rated for 7 ft high garage doors with a balance weight between 50-59 lbs, offering a 10,000 high-cycle life.

Torquemaster Plus (TM3/TMII) springs are typically found on doors manufactured after February 2007 and feature a hexagon-shaped winding end.

## WHAT'S INCLUDED

- One (1) Right-hand wound TorqueMaster Plus spring
- Express Garage Doors installation reference manual (this document)

Note: Plastic and metal tubes are not included with the spring.

## PRODUCT IDENTIFICATION: TORQUEMASTER SPRING TYPE, HEIGHT, AND WEIGHT

Before installation, it is crucial to identify your existing Torquemaster spring type, door height, and door weight to ensure you have the correct replacement spring.

### 1. Determine Spring Style (Torquemaster Plus vs. Original)

Examine the winding end of your existing spring. Torquemaster Plus (TM3/TMII) springs have a hexagon-shaped winding end. Original Torquemaster (TM/TMI) systems typically have a counter gear visible on the outside of the bracket.

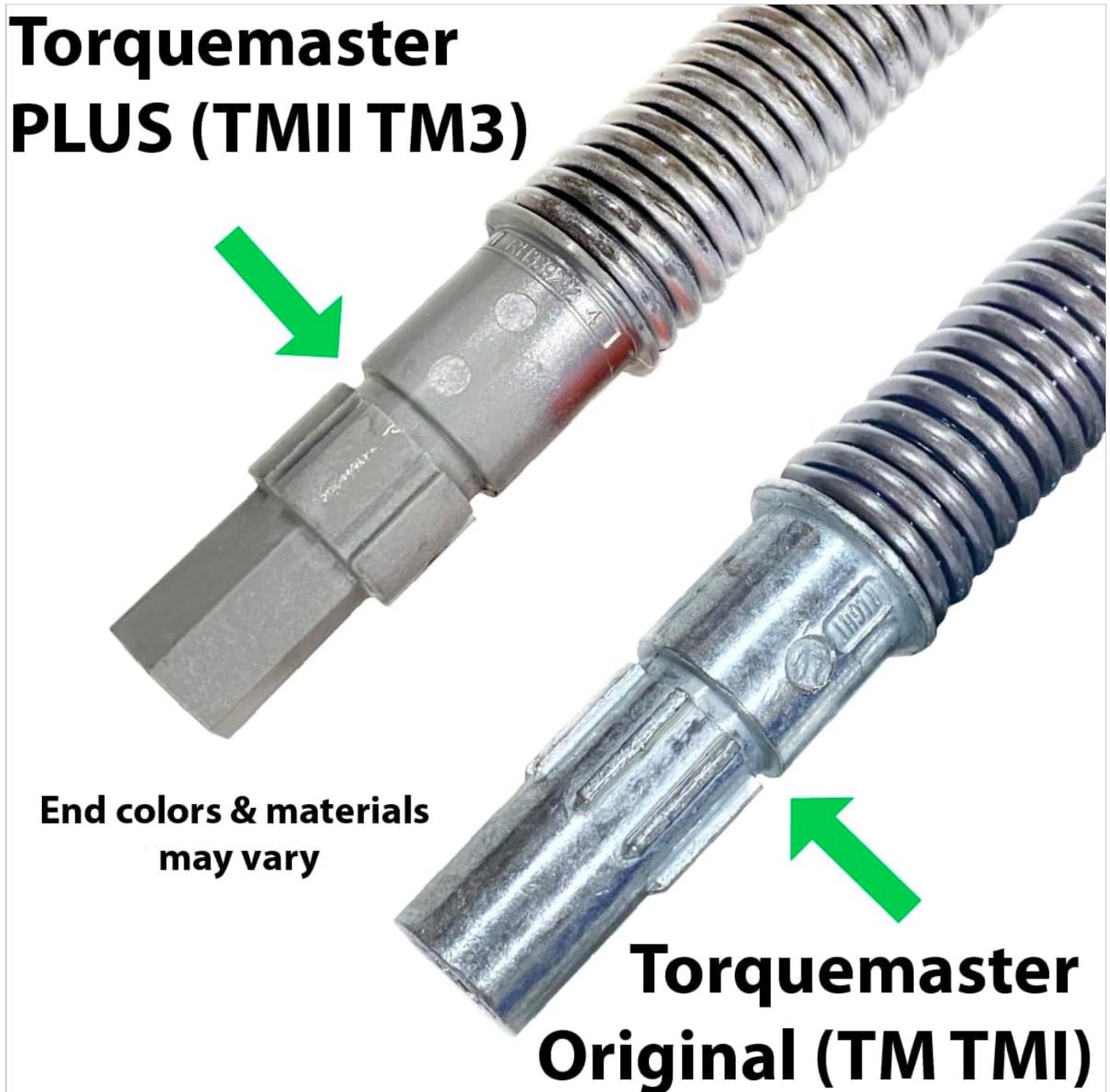


Image: Comparison of Torquemaster Plus (TMII TM3) with a hexagon-shaped end (top) and Torquemaster Original (TM TMI) with a splined end (bottom). Note that end colors and materials may vary.

### 2. Measure Door Height

Measure the height of your garage door. For doors measuring between 6'6" and 7'5", select a 7 ft height spring. For doors measuring between 7'6" and 8'5", select an 8 ft height spring. Alternatively, check the label on the metal spring tube, which often lists the correct door height.

### 3. Measure Door Weight

The most accurate way to determine door weight is to use a bathroom scale. If your spring is broken, lift the door slightly and slide a bathroom scale under the center. Ensure the full weight of the door is on the scale by making sure both cables are slack. If there is still tension on the cables, the reading will not be accurate. If weighing is not possible, look for a yellow or white label on the spring tube, which often lists the exact door weight (e.g., 'WT 71' for 71 lbs).

Your browser does not support the video tag.

Video: This video from Express Garage Doors Inc. explains how to order Torquemaster Springs by identifying the spring type, door height, and door weight. It demonstrates how to measure door height and weight, and how to read the spring tube label for specifications.

## TOOLS REQUIRED FOR INSTALLATION

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- Power drill with socket set
- Ratchet wrench with 5/8 inch socket
- 3-inch socket extension
- Flathead screwdriver
- Phillips screwdriver
- Locking pliers
- Needle-nose pliers
- Step ladder

## INSTALLATION INSTRUCTIONS

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This section outlines the step-by-step process for installing your Wayne Dalton Torquemaster Plus Spring. Refer to the safety information before proceeding.

Your browser does not support the video tag.

Video: This video from Express Garage Doors Inc. provides a step-by-step guide on how to install Wayne Dalton TorqueMaster Plus Springs, covering tools required, spring insertion, cable drum installation, end bracket mounting, cable adjustment, spring winding, and door balancing.

### Step 1: Insert the New Springs

1. Slide your new right-hand spring into the metal tube, ensuring the perch end goes in first.
2. Place the tube back onto the center wall bracket and flag brackets above your door.

### Step 2: Install Cable Drums

1. Ensure the end of the spring hangs out of the tube by approximately 5 inches on each side.
2. Center the tube within the wall bracket.
3. Bend the center tab over the bushing to secure.
4. On the right side, the teardrop peak on the tube should point straight up.
5. Slide the correct drum over the winding shaft until it is fully seated.
6. Wrap the cables 1.5 turns or align them with previous settings.
7. If using optional drum wraps (for rear-mount low headroom setups), slide and snap them into place until they click securely. Ensure the tabs face the correct direction (left/right labeled).

### Step 3: Mount End Brackets

1. Identify the right end bracket by its cable guide.

2. If the ratchet wheel falls out, reinstall it with the teeth facing upward (clockwise).
3. Slide the end bracket onto the winding shaft, matching the splines.
4. Ensure the tab is properly seated.
5. Attach the bracket to the flag angle using a carriage bolt, washer, and nut.
6. Secure the bracket to the jamb with a lag screw.

### Step 4: Adjust Cables

1. Start on the right side. Rotate the drum until the set screw faces away from the header.
2. Ensure the spring tube peak is straight up.
3. Loosen the set screw by about half a turn.
4. Confirm the cable is seated in the first and second grooves.
5. Pull the cable tight to remove any slack and ensure tension is equal on both sides.
6. Tighten the set screw snug.
7. Add 1.5 extra turns to the cable.
8. Trim any excess cable to about 6 inches and insert it into the drum.

### Step 5: Wind the Springs

1. Place vise clamps on both vertical tracks above the third roller to prevent the door from rising.
2. Use a ratchet with a 5/8 inch socket to wind the springs. Start on the right side.
3. Turn the pawl knob up and rotate counterclockwise to add turns. Mark the shaft to accurately count your turns.
4. After 2 to 3 turns, stop and check the cable tension on the left side.
5. Once both sides have even tension, finish winding both sides to the required number of turns for your door height, as listed in the winding chart below.
6. After winding, move the pawl knob down to lock the ratchet.

### Winding Chart by Door Height

| Door Height | Number of Turns |
|-------------|-----------------|
| 6'-0"       | 14 turns        |
| 6'-3"       | 14 1/2 turns    |
| 6'-6"       | 15 turns        |
| 6'-9"       | 15 1/2 turns    |
| 7'-0"       | 16 turns        |
| 7'-3"       | 16 1/2 turns    |
| 7'-6"       | 17 turns        |
| 7'-9"       | 17 1/2 turns    |
| 8'-0"       | 18 turns        |

*Important: Your door may be different from suggested chart values above. Make adjustments of  $\pm 1/4$  turn on each side as needed until the door is balanced.*

### Step 6: Balance the Door

1. Remove the vise clamps.
2. Lift the garage door halfway.
3. A balanced door should stay in place when lifted halfway.
4. If the door rises by itself, remove turns from the springs.
5. If the door is heavy to lift, add turns to the springs.
6. Always move the pawl knob up before making adjustments to the spring tension.
7. Ensure everything is tight and cables are aligned before reconnecting your garage door opener.

## OPERATION

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After successful installation and balancing, your garage door should operate smoothly and with minimal effort. The springs counterbalance the weight of the door, allowing it to be opened and closed manually or with an automatic opener.

- When operating manually, the door should feel light and stay in any position when released.
- When using an automatic opener, ensure the opener is properly reconnected and tested according to its own manual.

## MAINTENANCE

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Regular maintenance helps ensure the longevity and safe operation of your garage door springs and system.

- **Visual Inspection:** Periodically inspect the springs for any signs of wear, rust, or damage. Look for frayed cables or loose connections.
- **Lubrication:** Lubricate the springs and other moving metal parts (rollers, hinges) with a silicone-based lubricant annually. Do not use grease or oil, as these can attract dirt.
- **Balance Test:** Perform the balance test (lifting the door halfway and checking if it stays in place) at least once a year. If the door is out of balance, follow the adjustment steps in the installation section or contact a professional.
- **Professional Service:** Consider having your garage door system professionally inspected and serviced every 1-2 years.

## TROUBLESHOOTING

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If your garage door is not operating correctly after spring replacement, consider the following common issues:

- **Door is heavy to lift or falls:** The springs may not have enough tension. Carefully add turns as described in the 'Winding the Springs' section.
- **Door flies open or is difficult to close:** The springs may have too much tension. Carefully remove turns as described in the 'Winding the Springs' section.
- **Door is uneven:** Check that the cables are properly seated in the drums and that tension is equal on both sides. Adjust as necessary.
- **Unusual noises:** Inspect for loose hardware, lack of lubrication, or rubbing components. Lubricate moving parts and tighten any loose fasteners.

If problems persist or you are unsure about any troubleshooting steps, contact a qualified garage door technician.

## SPECIFICATIONS

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- **Manufacturer:** Wayne Dalton Parts
- **Part Number:** WD-314961

- **Item Weight:** 8.1 pounds
- **Product Dimensions:** 34.42 x 0.65 x 0.65 inches
- **Size:** Between 50 - 59lbs - Single spring (for 7 ft high doors)
- **Item Package Quantity:** 1
- **Included Components:** (1) Right-hand wound TorqueMaster Plus spring, Express Garage Doors installation reference manual

## WARRANTY

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Please refer to the manufacturer's official website or product packaging for specific warranty details regarding the Wayne Dalton Torquemaster Plus Spring.

## SUPPORT

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For further assistance, technical support, or to inquire about replacement parts, please contact Express Garage Doors Inc., the seller of this product. You may also refer to the official Wayne Dalton website for product information.