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Wayne Dalton 9200 - Foamcore™ 9600 - Thermogard® 9900 - Thermowayne™ TorqueMaster™ Installation Instructions Layout

IMPORTANT! READ IMPORTANT SAFETY NOTICES AND REFER TO INSERT SHEET INSTRUCTIONS TITLED "REMOVING THE OLD DOOR/ PREPARING THE OPENING". IF THE INSERT SHEET INSTRUCTIONS ARE NOT INCLUDED, CONTACT WAYNE-DALTON CORP. FOR A FREE COPY. If removing an existing door, carefully follow the directions given on the insert sheet instruction in the portion titled "Removing the Old Door".

WARNING! REMOVAL OF AN EXISTING DOOR CAN BE DANGEROUS. FOLLOW INSERT SHEET INSTRUCTIONS CAREFULLY. OTHERWISE SERIOUS INJURY OR DEATH COULD RESULT. Begin the installation of the door by checking the opening. It must be the same size as the door. Vertical jambs must be plumb and the header level. Side clearance, from edge of door to wall, must be minimum of 3-1/2" (89 mm) on each side. For proper opening preparation refer to the portion of the insert sheet instructions titled "Preparing the Opening". Follow the steps below. The steps correspond to the illustrations on the garage door layout. **NOTE:** It is recommended that 5/16" x 1-5/8" lag screws be pilot drilled using a 3/16" drill bit, and 1/4" x 2" lag screws and 1/4" x 1-1/2" lag screws be pilot drilled using a 1/8" drill bit, prior to fastening.

1A-1C Put the lower Twistlock tab on the flagangle into the Twistlock hole in the vertical track. Give the flagangle 1/4 turn to lock in place. Repeat for other side.

2A-2C Using a hammer, tap the horizontal angle towards the curved end of the track until the hole in track and angle are aligned. Set tracks aside.

NOTE: For larger size doors, a full length horizontal angle is already spot welded to the horizontal track.

3 Measure the length of the vertical tracks. Using the jamb bracket schedule (located on backside), determine the placement of the jamb brackets for your door height.

4 TorqueMaster™ drums are marked right and left. Make sure you place the cable from the right hand drum on the right hand bottom bracket, and left hand drum on the left hand bottom bracket. Insert rollers into bottom brackets and hinge tubes on bottom section.

NOTE: Verify astragal (bottom seal) is aligned with door section. If there is more than 1/2" excess astragal on either side, trim off so that astragal is aligned with door section.

IMPORTANT! Right and left hand is always determined from inside the building looking out.

5A-5C Before installing the bottom section, measure and cut vinyl jamb weather-stripping (may not be included) for entire garage door opening. Temporarily nail the weather-stripping to the door jambs and header. Center the bottom section in the door opening. Level it using wooden shims under the bottom astragal as needed.

6A-6C Position the first vertical track over the rollers of the bottom section. Make sure the counterbalance cable is located between the rollers and the door jamb. Secure jamb brackets and flagangles to the jamb using 5/16" x 1-5/8" lag screws. Install the other vertical track the same way. Hang cables over flagangles.

IMPORTANT! The tops of the vertical tracks must be level from side to side. If the bottom section was shimmed to level it. The vertical track on the shimmed side, must be raised the height of the shim.

7A-7C Place rollers into hinge tubes of second section (lock section). With assistance, lift second section and guide rollers into the vertical tracks. Keep sections aligned and fasten hinges to connect the sections using 1/4-14 x 5/8" self tapping screws. Repeat for other section(s) except top section.

IMPORTANT! Push & hold the hinge leaf against section while securing with 1/4-14 x 5/8 self tapping screws.

NOTE: To install lock (sold separately), see lock instructions included in the lock assembly bag.

8 To install the L-shaped top brackets, align the top holes in the top bracket base with:
a) the second set of holes in the endcap for Model 9100, 9200, and 9600 doors.
b) the first set of holes in the endcap for Model 9900 doors.

Fasten using (4) 1/4-14 x 5/8 self tapping screws. Secure the top bracket slide to the bracket base using (2) 1/4-20 carriage bolts and nuts. Insert rollers into top slide.

9A-9C Model 9100 and 9200 Foamcore™ doors over 13" wide require a 3" U-Bar (supplied). Center the U-Bar over the top rib of the top section and secure it to the section using (6) 1/4-20 x 5/8" self drilling screws.

10A-10B Place top section in the door opening, align with other sections and secure it temporarily by driving a nail into the header near the center of the door and bending it over the section. Now flip up, hold tight against section, and fasten center hinges first, and end hinges last. When installing a door with a TorqueMaster™ counterbalance system, vertical track alignment is critical. Position flagangle between 1-11/16" (43 mm) to 1-3/4" (44 mm) from the edge of the door. Flagangles must be parallel to the door sections. Now complete the vertical track installation on both sides by securing the center jamb bracket and tightening the other lag screws.

IMPORTANT! The dimension between the flagangles must be door-width plus 3-3/8" (86mm) to 3-1/2" (89 mm) for smooth, safe door operation.

11A-11B To install horizontal track, place the curved end over the top roller. Align the key slot in the track with the quick install tabs on the flagangle. Push the curved portion of the horizontal track downward to lock into place, while raising the rear of the horizontal to align the horizontal angle with the flagangle. Level the horizontal track, then bolt the horizontal angle to the flagangle using (1) truss head bolt and nut. Repeat for other side. Vertically align the top section with the lower sections. Once aligned, move top bracket slide out to force top roller against horizontal track. Tighten nuts to secure top bracket slide to top bracket base. Repeat for other side. Remove nail that was temporarily holding top section in place.

IMPORTANT! Failure to remove nail before attempting to raise door could cause permanent damage to top section.

WARNING! DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR AS OUTLINED IN STEP 21, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE INJURY OR DEATH.

12A-12B i-drive™ Installation
NOTE: For non-i-drive™ operated garage doors see **Alternative Installations** on the reverse side of this manual.

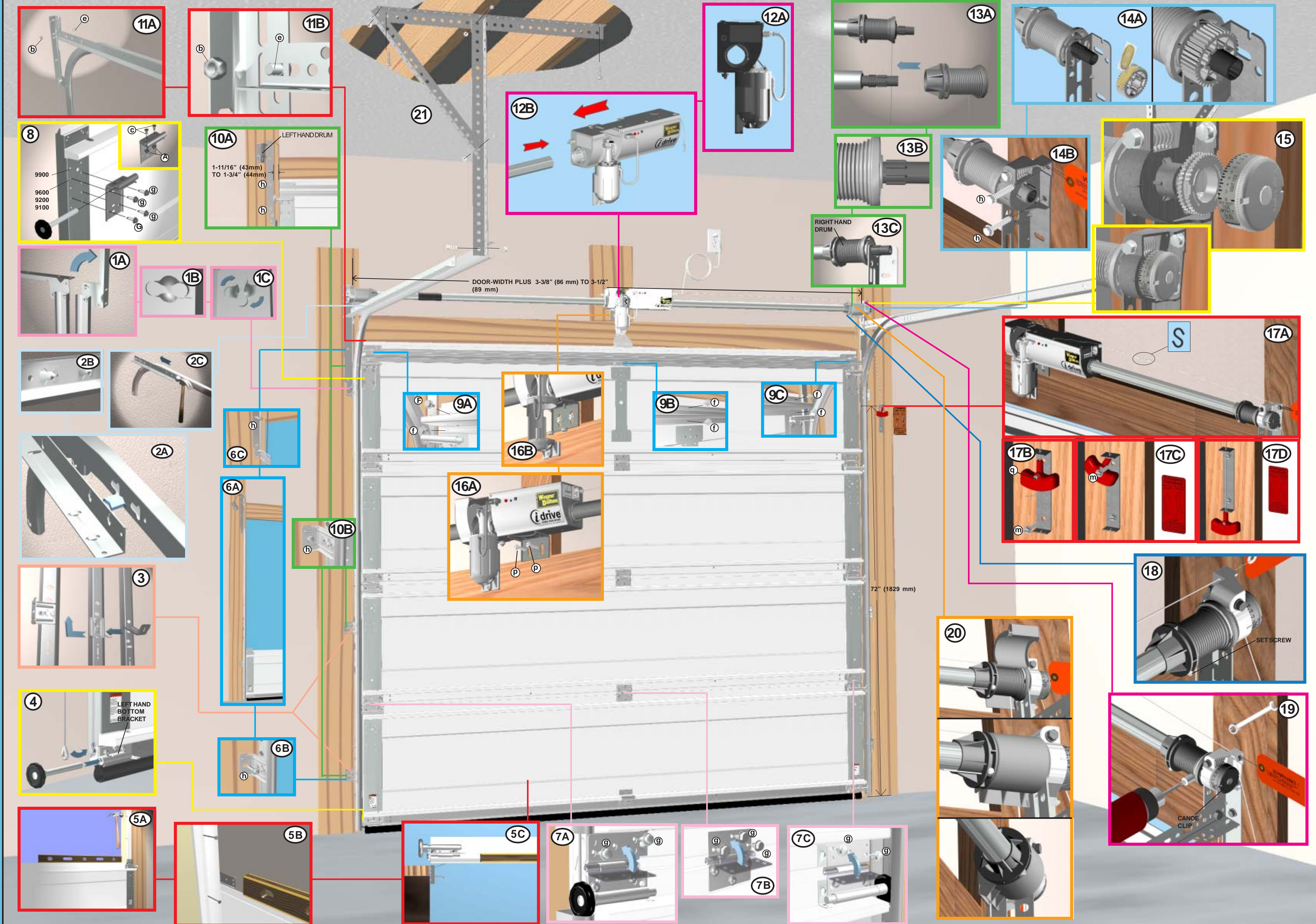
Lay the torque tube on the floor (inside garage) in front of the door with the labeled end to the left. **NOTE: Opener will not slide over a torque tube label.** Attempting to slide opener over the left end of the torque tube can damage the internal electronics.

NOTE: Hold opener by the main body. Do NOT hold by the motor. Look into the opener's left side to ensure the left hand bearing and the internal (black) sleeve are aligned with the torque tube profile. Once aligned, slide the opener power head onto the right hand end of the torque tube. As the right end of the torque tube enters the internal (black) sleeve, rotate the opener back and forth slightly to help aid alignment.

NOTE: Do not force the opener onto the torque tube if misalignment occurs.

Continue sliding the opener power head onto the torque tube. Align the right hand bearing with the torque tube and slide the opener power head completely onto the torque tube until the torque tube exits the opener power head's right hand bearing. Continue sliding the opener power head to the center of the torque tube and plug the motor power cord into the opener power head.

IMPORTANT! Right and left hand are always determined from inside the garage looking out.



12A-12B Shake the torque tube gently to extend the winding shafts out about 5° on each side. For single spring applications, there will be no left hand winding shaft in the torque tube.

Lift the torque tube and rest on top of flagangles. Orient torque tube so that back of opener is flat against header/spring pad.

Cable drums and torque tube are cam shaped to fit together only one way. To install the cable drum, slide the drum over the winding shaft until the drum seats against the torque tube. The winding shaft must extend past the drum far enough to expose the splines and the groove. Align the winding shaft groove with the round notch in the flagangle. Repeat for opposite side for double spring applications.

For single spring applications, insert the left hand loose winding shaft into the left hand drum prior to sliding the drum over the torque tube.

NOTE: On single spring applications, take care in handling the loose winding shaft (left side) so that it does not slide back into the torque tube.

14A-14B Beginning with the right hand side, lubricate entire circumference of the drive gear with the oil provided in the packet. DO NOT SUBSTITUTE OIL. Slide the drive gear onto the winding splines until it touches the flagangles.

NOTE: No drive gear is required for the left side on single spring applications.

IMPORTANT! Warning tags must be securely attached to both end brackets.

Slide the right hand end bracket over the drive gear. Secure end bracket and the flagangle to the jamb using (2) 5/16 x 1-5/8" lag screws.

15 Beginning with the right side, install the counter gear with the missing tooth toward the outside, away from the end bracket. Press the counter gear onto the end bracket until snaps engage. Select the right hand counter cover assembly and align the hex of the counter cam with the end of the winding shaft. Also, align the "0" on the counter cover with the raised rib on the end bracket. Press the counter cover assembly against the counter gear until it locks into place. Repeat for left hand side for double spring applications.

NOTE: No drive gear, counter gear or counter cover assembly is required on left hand side for single spring applications. Only an end bracket is needed.

IMPORTANT! At this time do not wind counter balance springs!

16A-16B Locate the spring pad. The spring pad is a vertical running board directly above the center of the door. Remove (2) 1/4-20 flange nuts from bottom of opener power head. **NOTE: Do not discard flange nuts.** Place the support bracket underneath opener power head, to the right side of motor, centered on spring pad. Level the torque tube to the top of the door section with the i-drive™ resting on the support bracket. Once torque tube is level, secure support bracket to the spring pad with (2) 1/4 x 2" lag screws. Lift and slide the opener power head over the support bracket, aligning the mounting studs with the bracket slots. Loosely fasten to mounting studs with the (2) 1/4-20 flange nuts. **NOTE: Do not tighten 1/4-20 flange nuts to power head studs at this time.**

17A-17D Attach the loose disconnect cable (located in operator hardware bag) to the opener power head with "S" hook. Close both ends of "S" hook to lock assembly together. Thread the disconnect cable through hole in right hand end bracket and remove all slack between power head and right hand end bracket. Mark location on right door jamb, six feet above the ground to mount disconnect handle. Thread disconnect cable through handle bracket and then handle. Align top of handle bracket with mark on wall. Remove all cable slack between the power head and top of handle bracket.

Insert and tighten #6-20 x 1/2" screw until snug, and then tighten screw 1 to 1-1/2 additional turns to secure cable in handle. Trim off excess cable from bottom of handle.

Holding handle bracket, remove all remaining slack between power head. With slack removed, secure bottom of handle bracket with (1) 1/4 x 1-1/2" lag screw.

CAUTION: Pull handle just enough to remove the cable slack. Pulling the cable more could cause the opener power head to disconnect from the torque tube.

Rotate disconnect handle to one side exposing upper mounting hole in handle bracket. Secure handle bracket with a second 1/4 x 1-1/2" lag screw. Apply emergency disconnect label next to the mounted bracket. Use mechanical fasteners if adhesive will not adhere.

Using the emergency disconnect, pull disconnect handle downwards and place it in the manual door operated position. Use disconnect label for reference. Motor will be rotated 90° from its packaged position.

NOTE: If motor does not pivot 90°, see troubleshooting section in the i-drive™ main installation manual.

18 Clamp locking pliers onto both vertical tracks just above third roller. This is to prevent garage door from rising while winding counterbalance springs.

WARNING! FAILURE TO CLAMP TRACK CAN ALLOW DOOR TO RAISE AND CAUSE SEVERE INJURY OR DEATH.

Adjust the counter balance cables by rotating the drum until the set screw faces directly away from the header. Loosen the set screw no more than 1/2 turn. Pull on the end of the cable to remove all cable slack. Check to ensure the cable is aligned and seated in the first groove of the cable drum. Snug the set screw, then tighten an additional 1-1/2 turns. Cut off excess cable.

19 **IMPORTANT!** DO NOT USE IMPACT GUN TO WIND SPRING(S)

Beginning with the right hand side. Press and hold in the canoe clip. Ensure the cable is in the first groove of the drum. Using an electric drill (high torque gear reduced to 1300 RPM preferred) with a 7/16" socket, carefully rotate right hand winding bolt clockwise, until counter shows 2-3 turns. This will keep the counterbalance cable taut while adjusting the left hand side counterbalance cable. Repeat step 18 and 19 for left side. **NOTE:** Single spring applications require no spring winding.

Ensure counterbalance cable tension is equal for both sides prior to fully winding spring(s) to appropriate number of turns.

Carefully rotate the winding bolt head clockwise until the counter show the correct number of turns for your door. See the **Spring Turn** chart on the reverse side of this manual. Repeat for the opposite side on double spring TorqueMaster™ systems. If door raises off of floor remove 1/2 - 1 full turn from each spring before proceeding.

After spring is wound, hold the lock nut (in back of end bracket) stationary with a 7/16" wrench while rotating the winding bolt clockwise until snug. Tightening of the lock nut prevents spring from unwinding. Repeat for opposite side if necessary.

IMPORTANT! Adjustments to the recommended number of turns may be required. AFTER REAR SUPPORT ASSEMBLY IS COMPLETE, check door balance. If door raises off of floor under spring tension alone, then reduce turns until door will rest on floor. A "hot" door such as this can cause i-drive™ operation problems.

CONTINUE INSTALLATION INSTRUCTIONS ON REVERSE SIDE.

