

**Work Force**  
2 to 4  
Technicians  
**Removal**  
1 to 2 Hours  
**Installation**  
4 to 6 Hours

Technical  
Support  
800-327-8723

Emergency

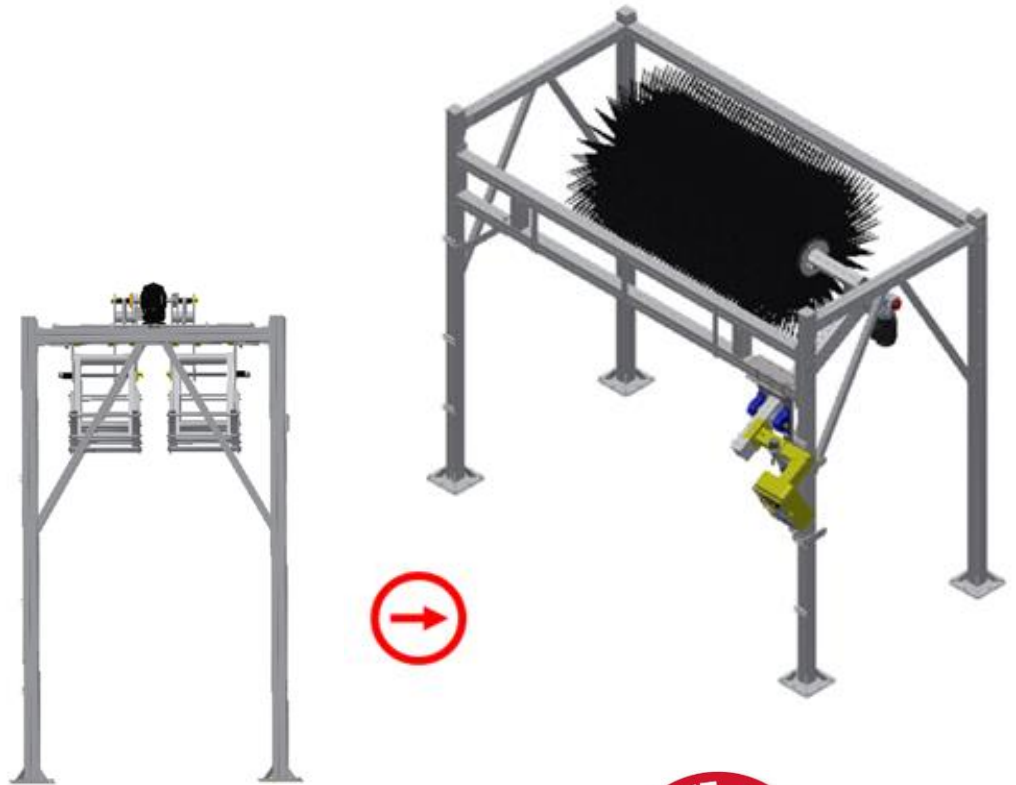


Register  
Warranty  
SonnysDirect.com  
Support Tab

Owner's Manual



## 804 Mitter to Compact Top Brush™



- 1 Checklist
- 2 Installation Dimensions
- 3 Retrofit Instructions



All parts and components **MUST** be installed by experienced and trained technicians.  
The **Quick Start** is a Summary Overview of the Installation Instructions. For detail instructions and Important Safeguards and Warnings, the **Owner's Manual** **MUST** be referenced online at [SonnysDirect.com](http://SonnysDirect.com) under Support Tab.

## CHECKLIST



**WARNING:** Make sure to follow Local and State Safety Wear Required Regulations to ensure the safety of all personnel. Failure to follow Safety Regulations may result in personal injury, death and/or dismemberment.



Hard Hat, Safety Glasses, Gloves, Impact Gun, Socket Set, 1” Hammer Drill, Wrenches, Level Tool, C Clamp, Allen Key Set, Tape Measure, Ladder, Forklift, Torque Wrench, Nip Scissors, Sledgehammer, Ratchet Strap or S-Hooks, Anti-Seize Never•Seez®



Ladder Safety



**Water - The Customer's Plumber is responsible for:**

- The Customer's Plumber is to provide and install a 1/2” city water line @60PSI (nominal) to the solenoid valve on the chemical distribution system for the Washer.

**Electric - The Customer's Electrician is responsible for:**

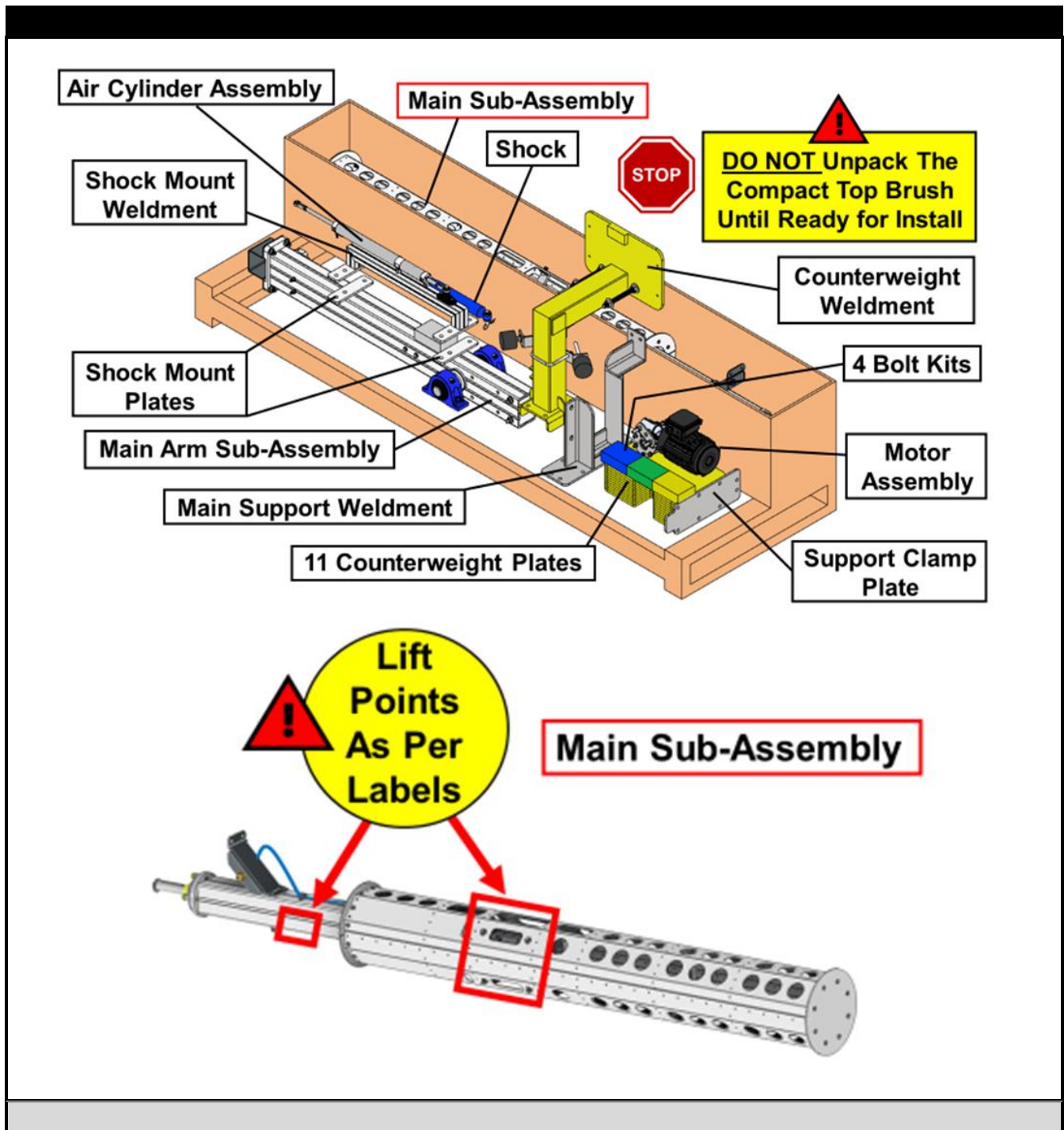
- The Customer's Electrician is to provide and install single phase power from the (24 or 110 VAC as determined at time of order) from the Customer's Controller system to the liquid solenoid valve for the brush spray bars. If required, the motor starter coil for the hydraulic power pack feeding the brush, and any pump motor for the chemical distribution system.
- The Customer's Electrician is to provide and install single phase power from the remote push-button station, through the tunnel equipment programmer; to the supplied air solenoid valve, on the Air Distribution Manifold for retract of both washers upon selective signal.
- The Customer's Electrician is to provide materials and install 208VAC or 230VAC or 460VAC, 3-phase, 60Hz power to the electric motor on the hydraulic power pack; or VFD panel from a properly sized three pole circuit breaker, and motor starter with three thermal overloads when applicable.

**Compressed Air - The Customer's Plumber is responsible for:**

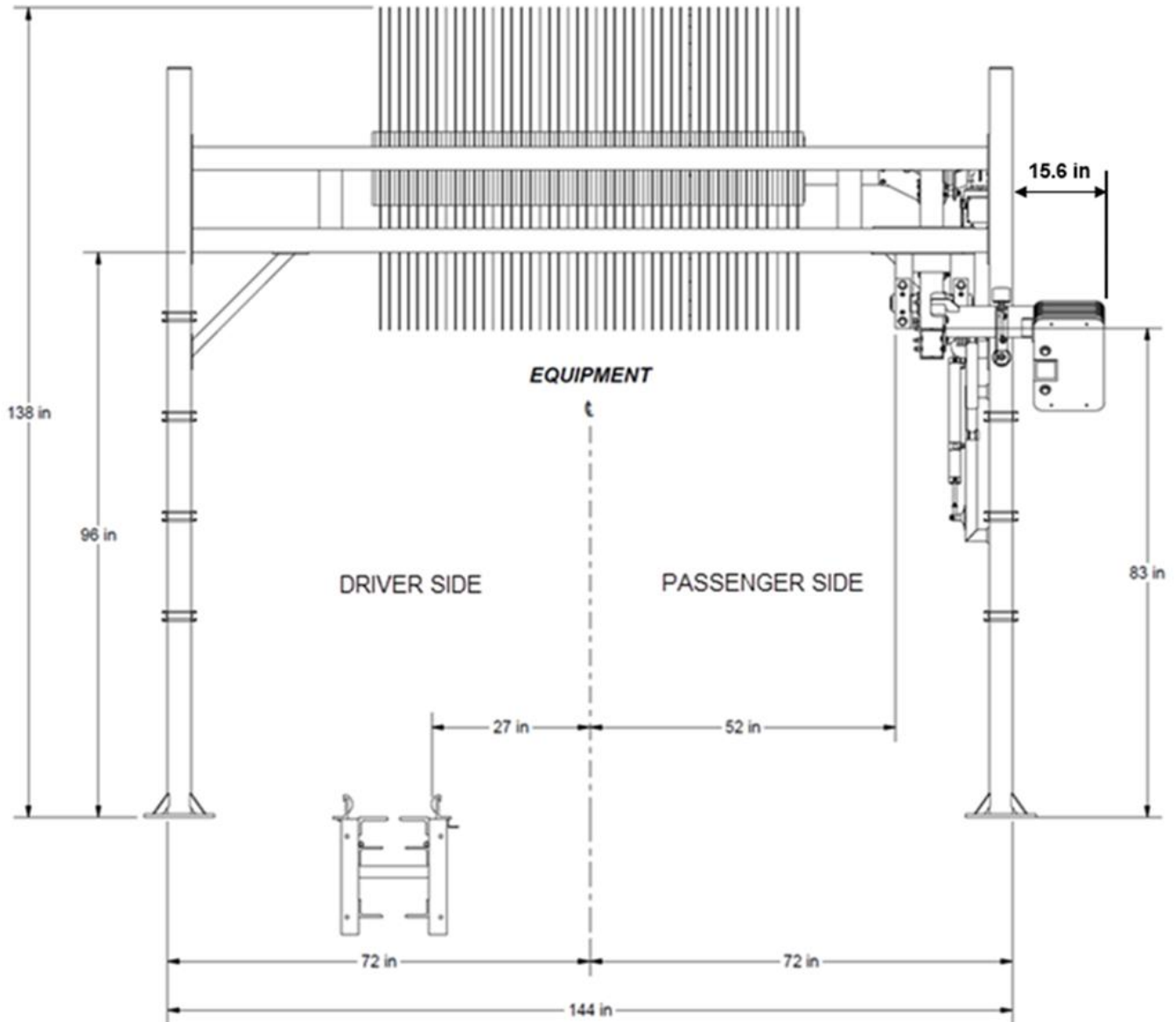
- The Customer's Plumber is to provide and install a 1/2” compressed air line from the Air Compressor to the Air Distribution Manifold for the retract functions.



## UNPACKING THE COMPACT TOP BRUSH

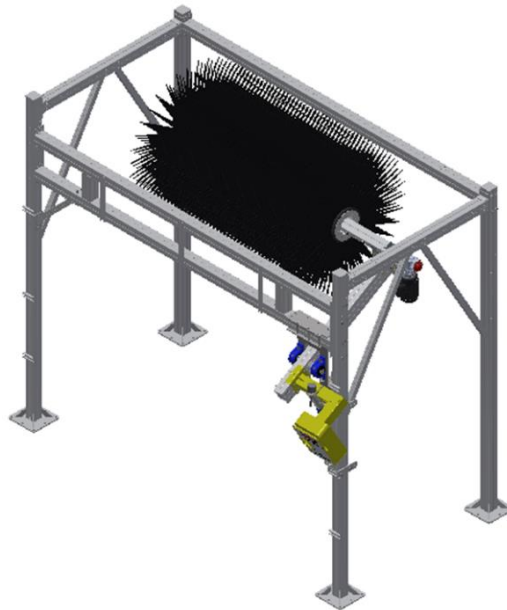


## INSTALLATION DIMENSIONS



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 Compact Top Brush is a trademarks of Sonny's Enterprises LLC.  
 Products mentioned herein are for identification purposes only and may be registered trademarks of their respective companies.  
 All other brand names, trademarks or registered trademarks are the property of their respective owners.

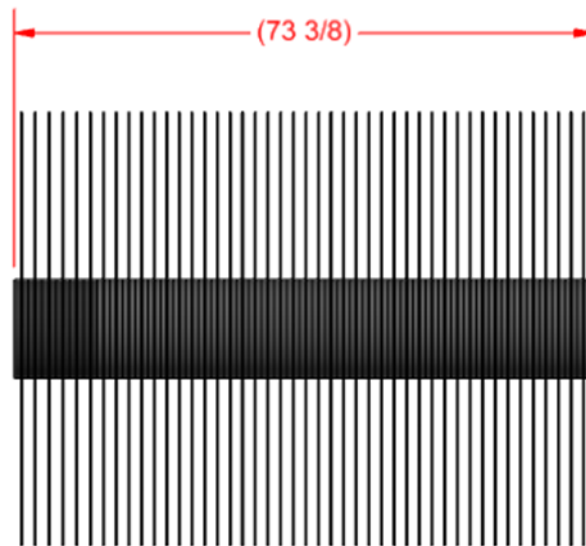
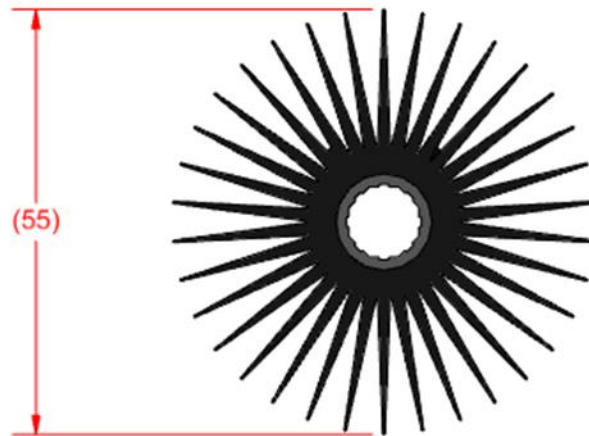
**COMPACT TOP BRUSH SPECIFICATIONS**



<b>Footprint Length</b>	<b>98"</b>
<b>Footprint Width</b>	<b>144"</b>
<b>Height</b>	<b>140"</b>
<b>Vehicle Clearance</b>	<b>90"</b>
<b>RPM</b>	<b>75 - 85</b>
<b>Drive Electric</b>	<b>1 HP Transtecno</b>

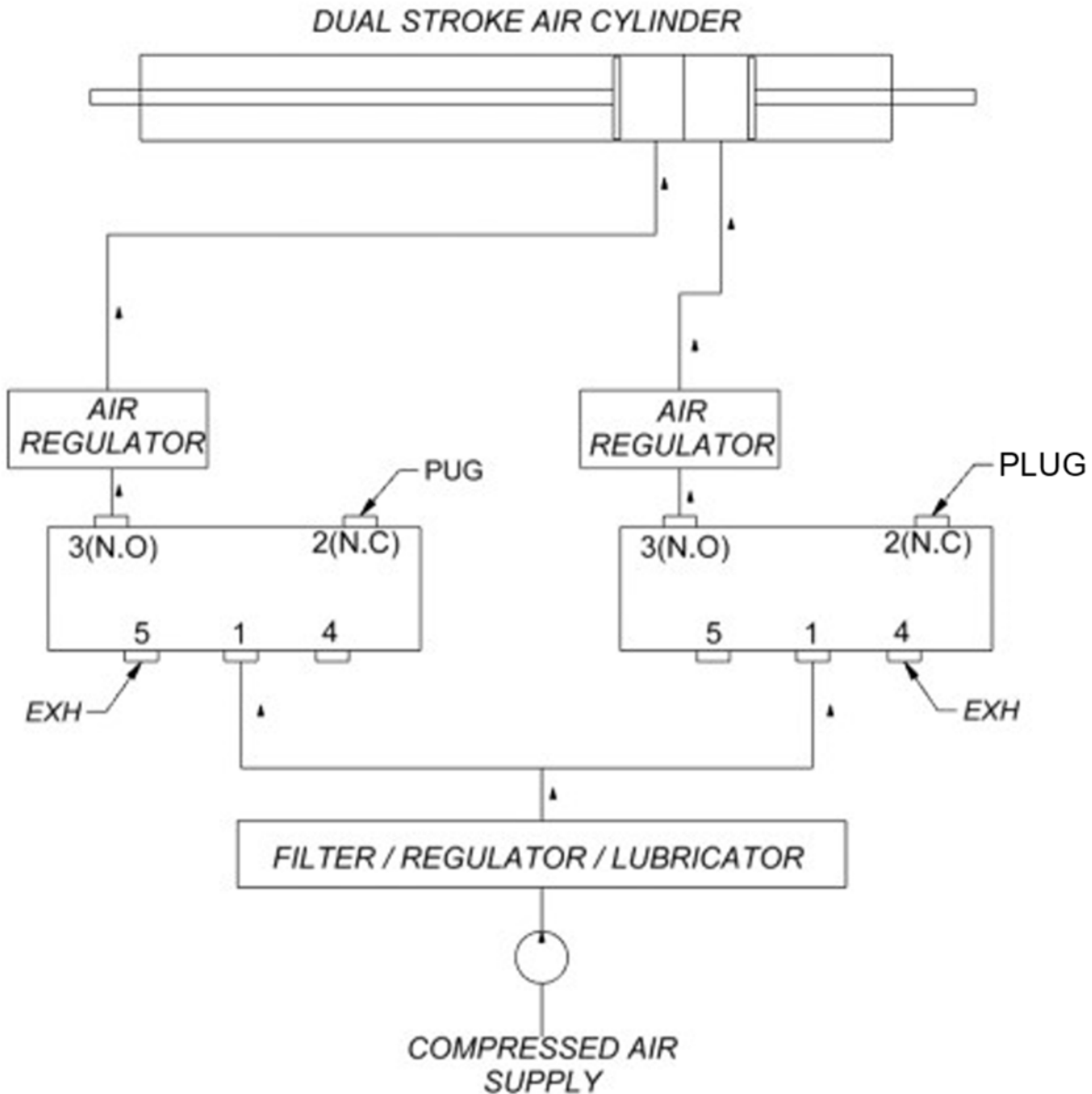
**BRUSH DIMENSIONS**

<b>Diameter</b>	<b>55"</b>
<b>Length</b>	<b>73" (Nominal)</b>



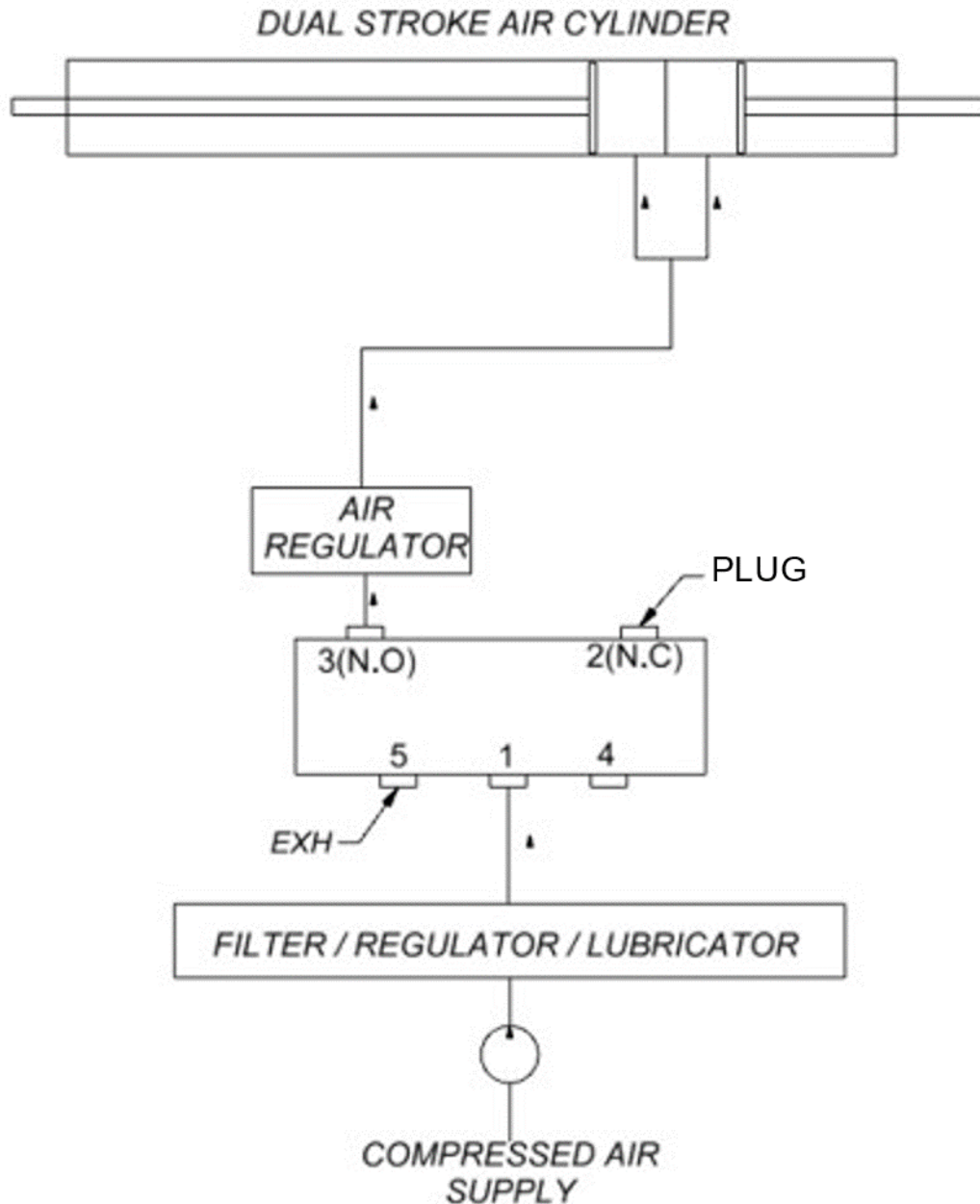
## AIR CYLINDER POSITIONS

### Compact Top Brush - Pneumatic Diagram Three Position Control



## AIR CYLINDER POSITIONS

### Compact Top Brush - Pneumatic Diagram Two Position Control





**REMOVE 804 MITTER**

**1** Remove Front 2 Gussets

**2** Remove Front Cross Beam & ALL Mitter Cloth Material

**3** Secure Beams to Forklift with Straps

**4** Disconnect Water Manifold

**5** Loosen Concrete Anchors and Keep Nuts On

**6** Remove Bolts & 804 Mitter

**7** Remove 2 Gussets and Cross Beam

**8** Keep Cross Beam and Hardware

Make Sure Concrete Anchors Remain Inserted Into the Floor

All Personnel **MUST** Stay Clear of Forklift

CAUTION

CAUTION

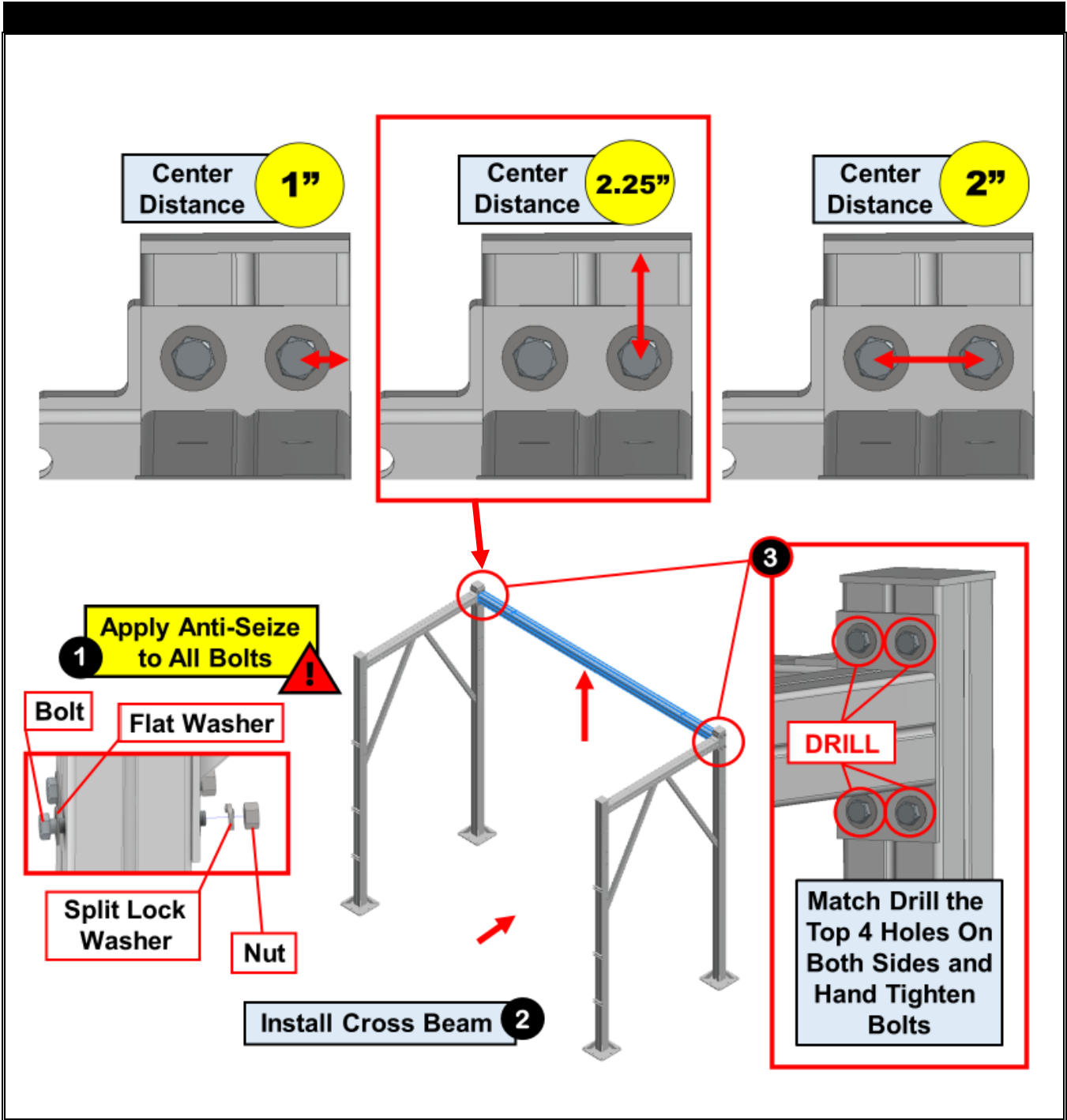
CAUTION

CAUTION

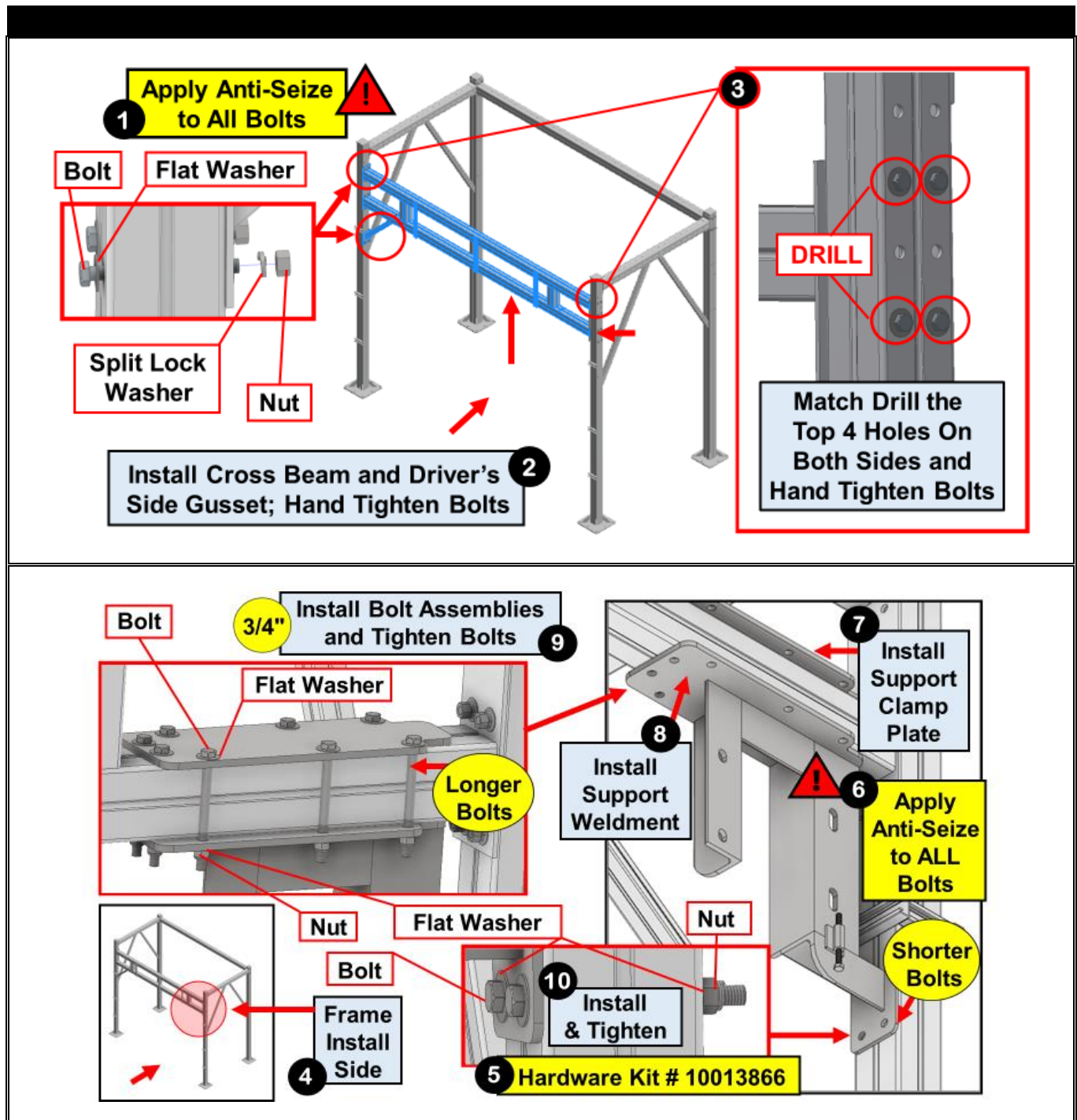
CAUTION

CAUTION

**INSTALL CROSS BEAM ONTO 804 MITTER FRAME**

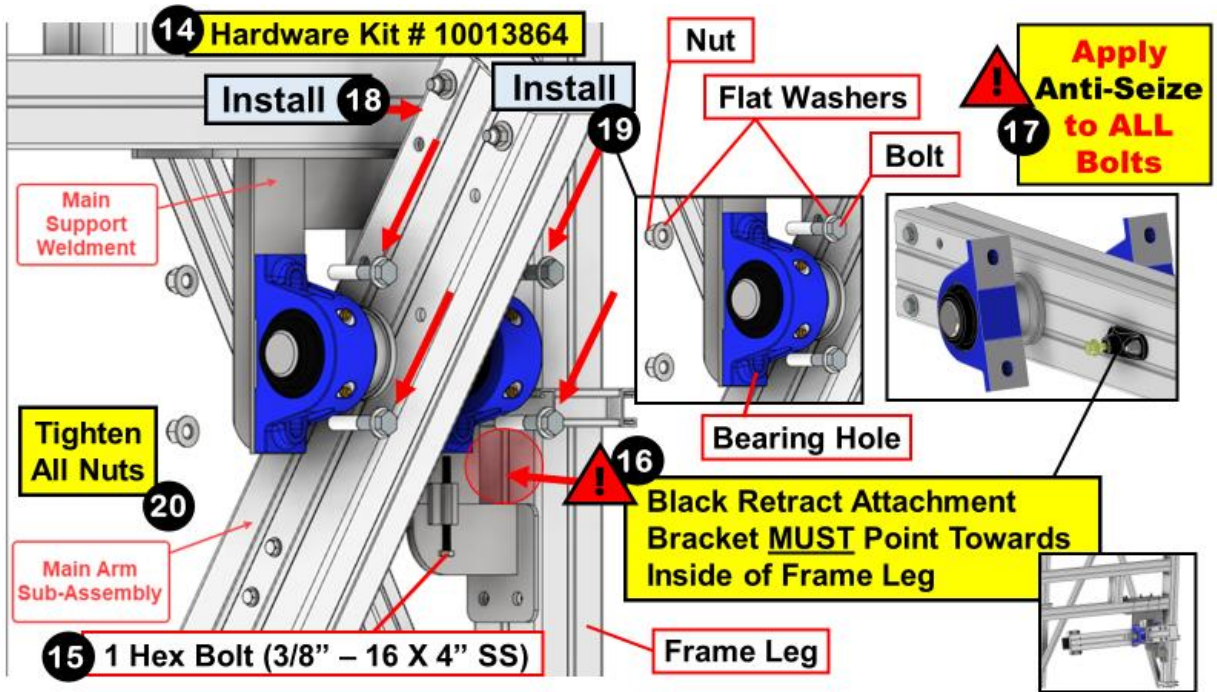
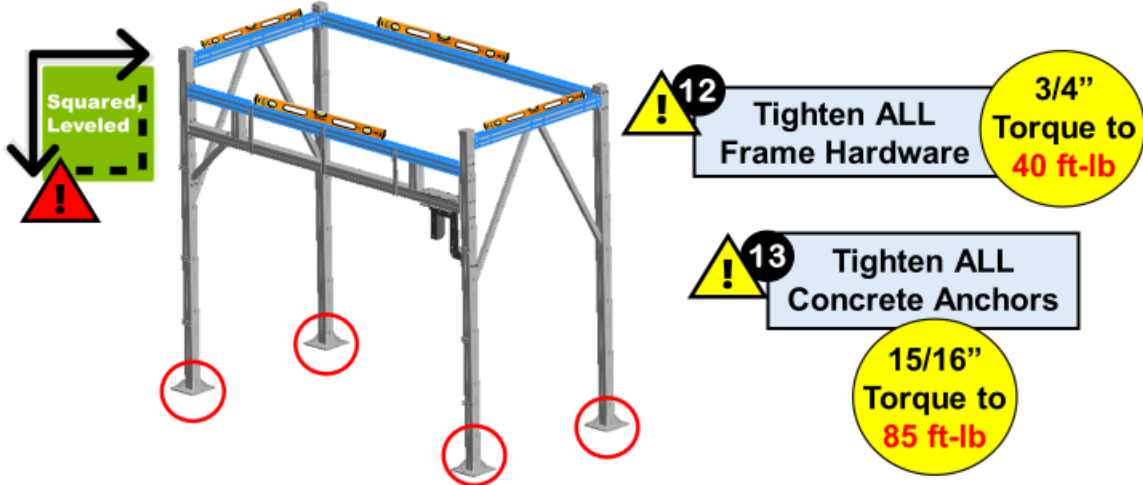


## COMPACT TOP BRUSH INSTALLATION

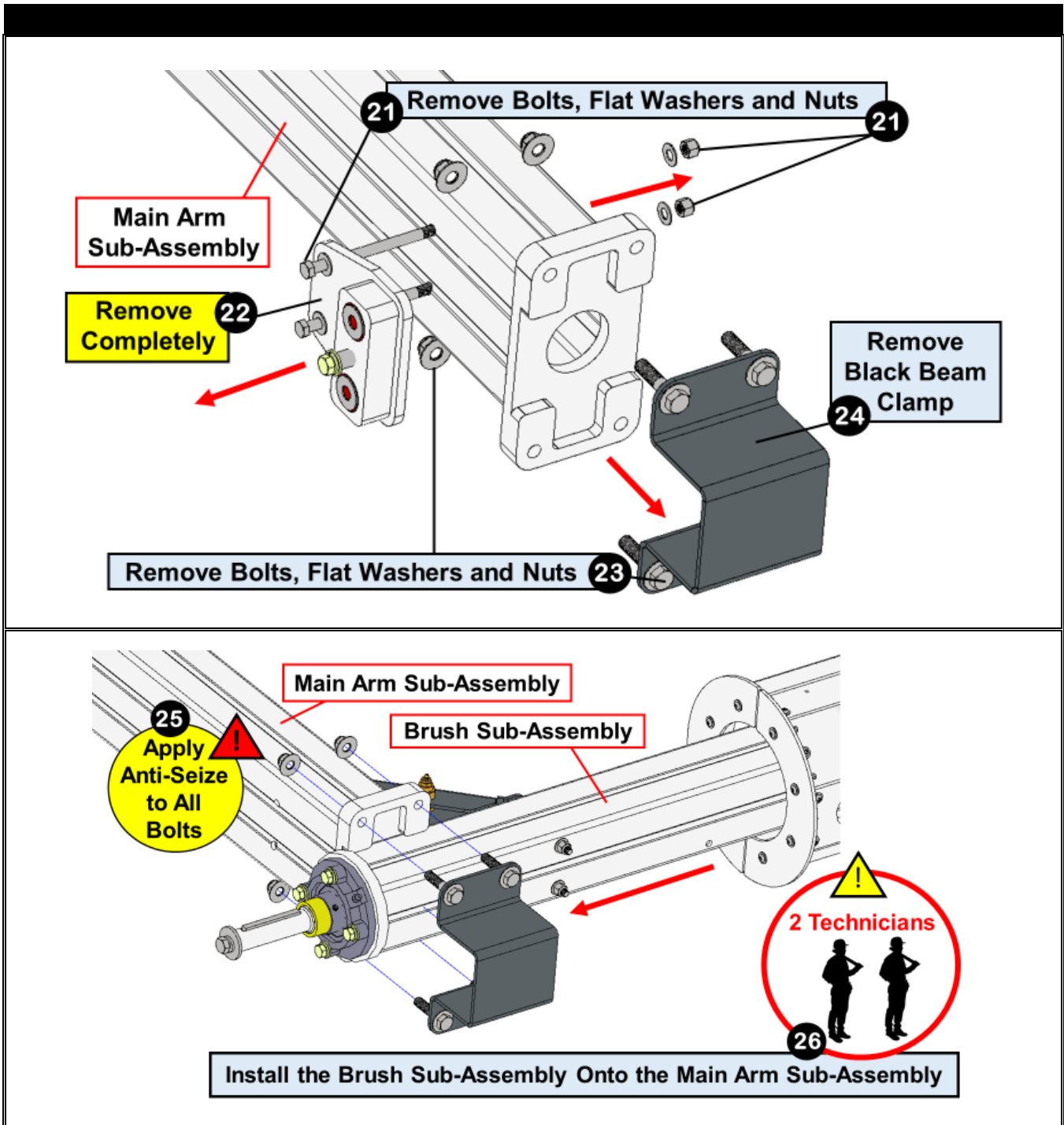


# COMPACT TOP BRUSH INSTALLATION

## 11 Level and Square Frame with Equipment Installation Dimensions

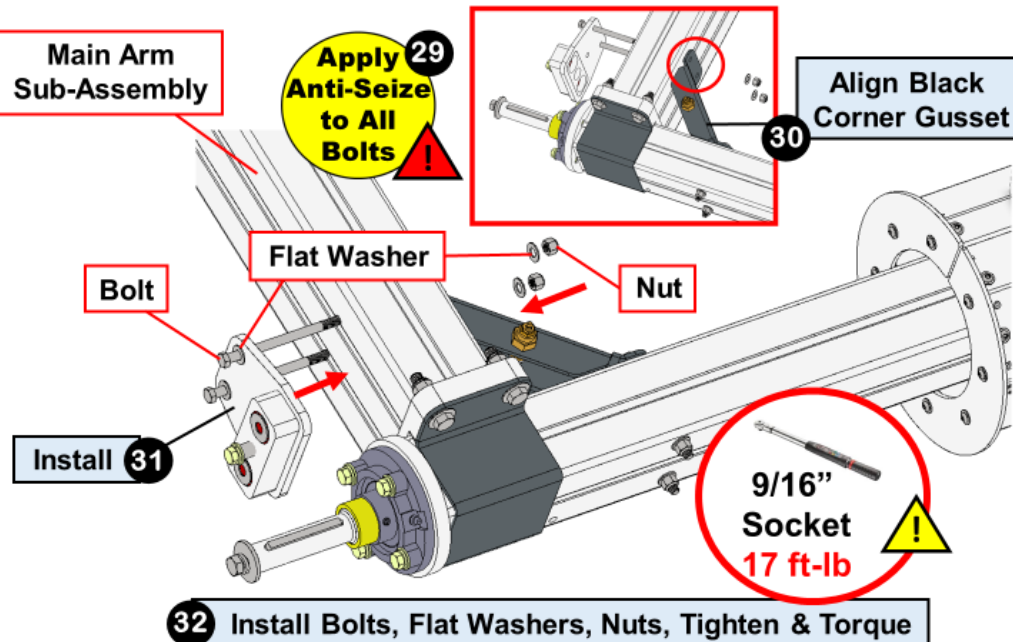
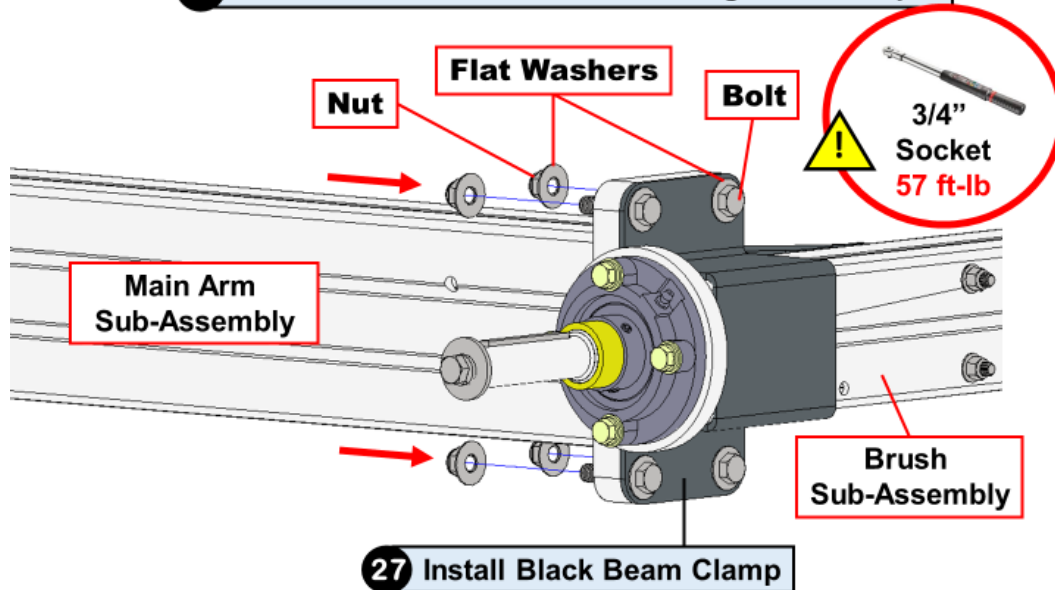


## COMPACT TOP BRUSH INSTALLATION

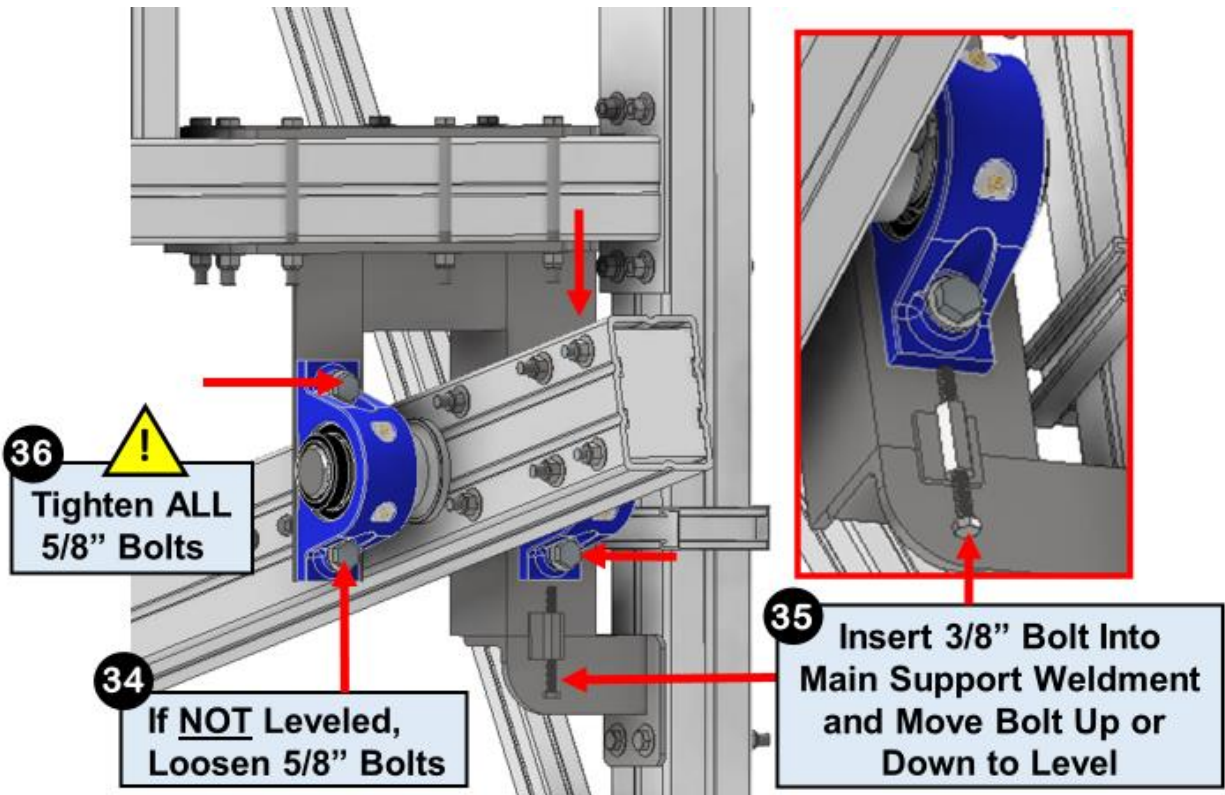
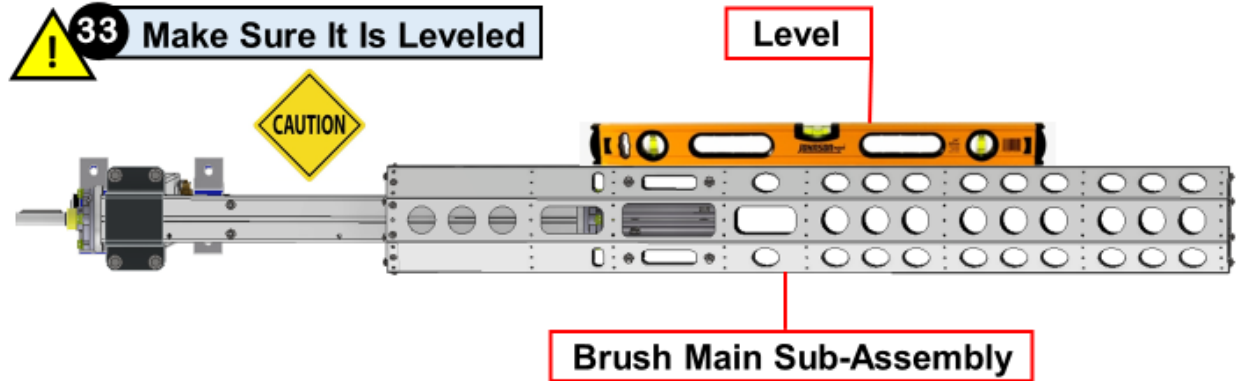


## COMPACT TOP BRUSH INSTALLATION

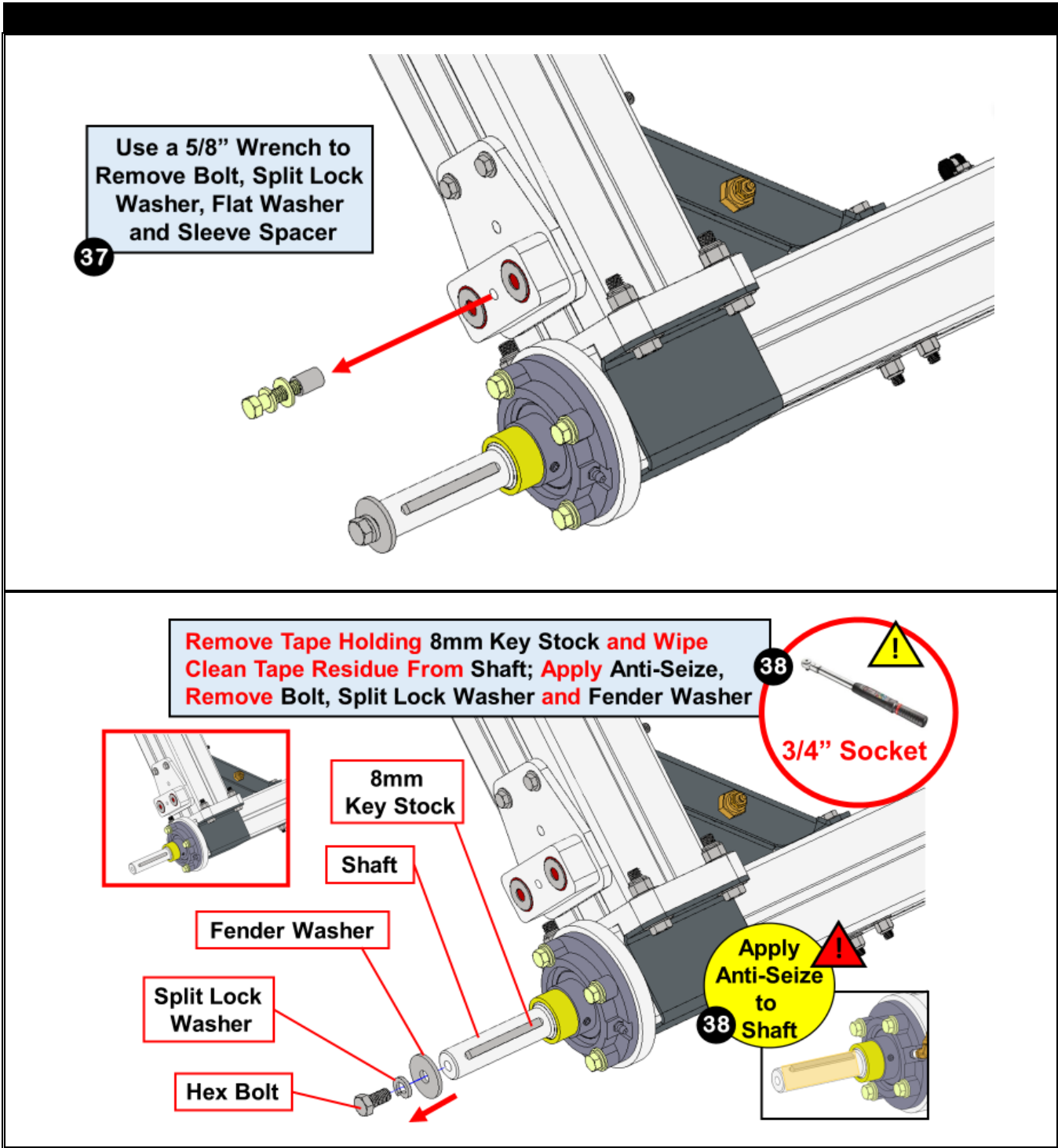
### 28 Install Bolts, Flat Washers, Nuts, Tighten & Torque



## COMPACT TOP BRUSH INSTALLATION

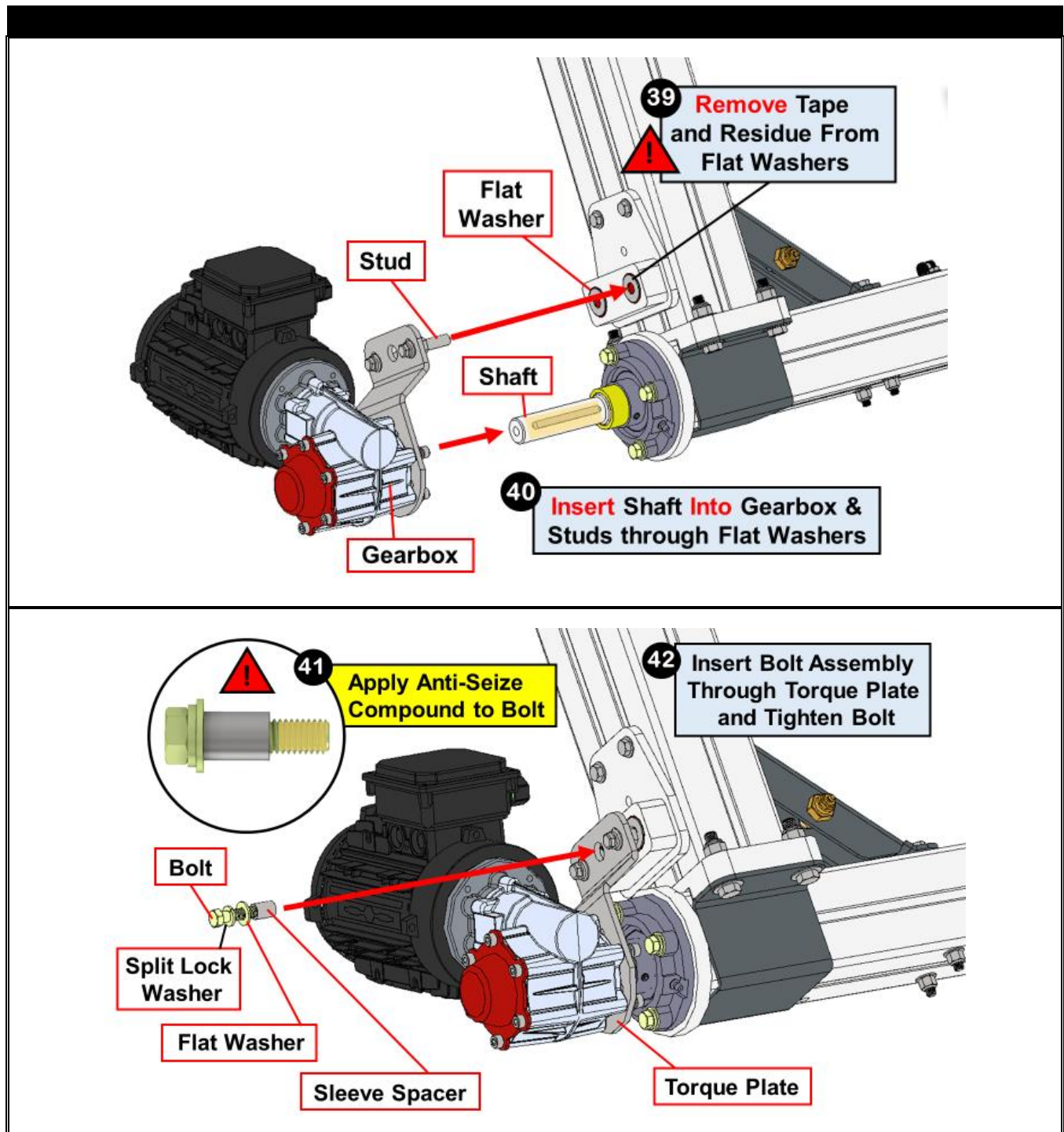


# COMPACT TOP BRUSH INSTALLATION





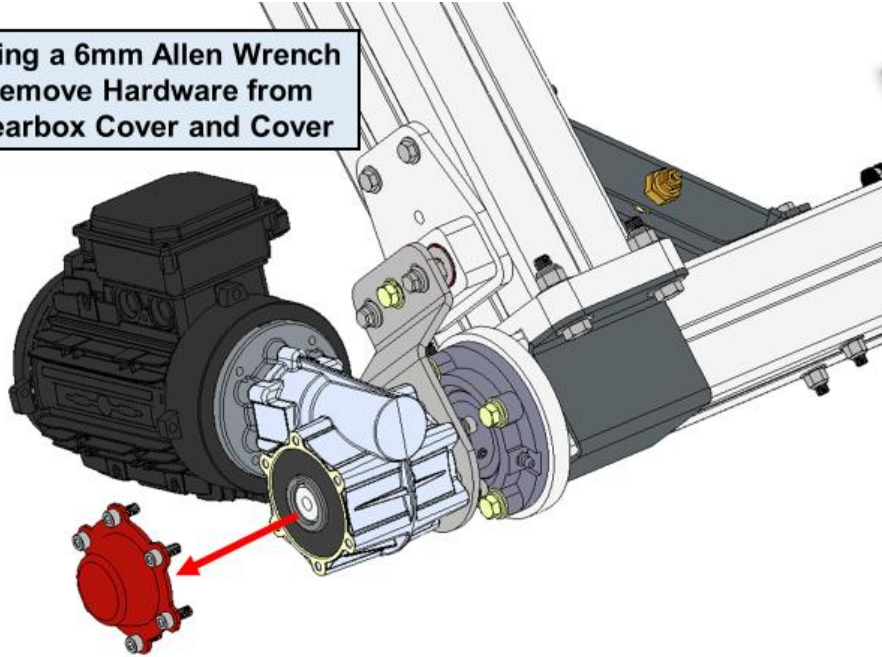
## COMPACT TOP BRUSH INSTALLATION



## COMPACT TOP BRUSH INSTALLATION

Using a 6mm Allen Wrench  
Remove Hardware from  
Gearbox Cover and Cover

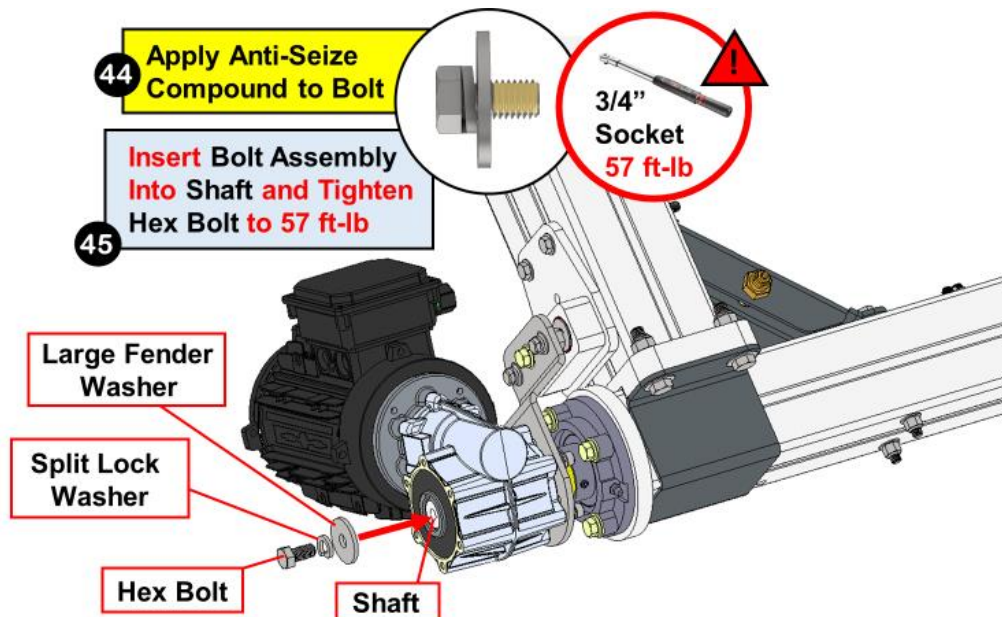
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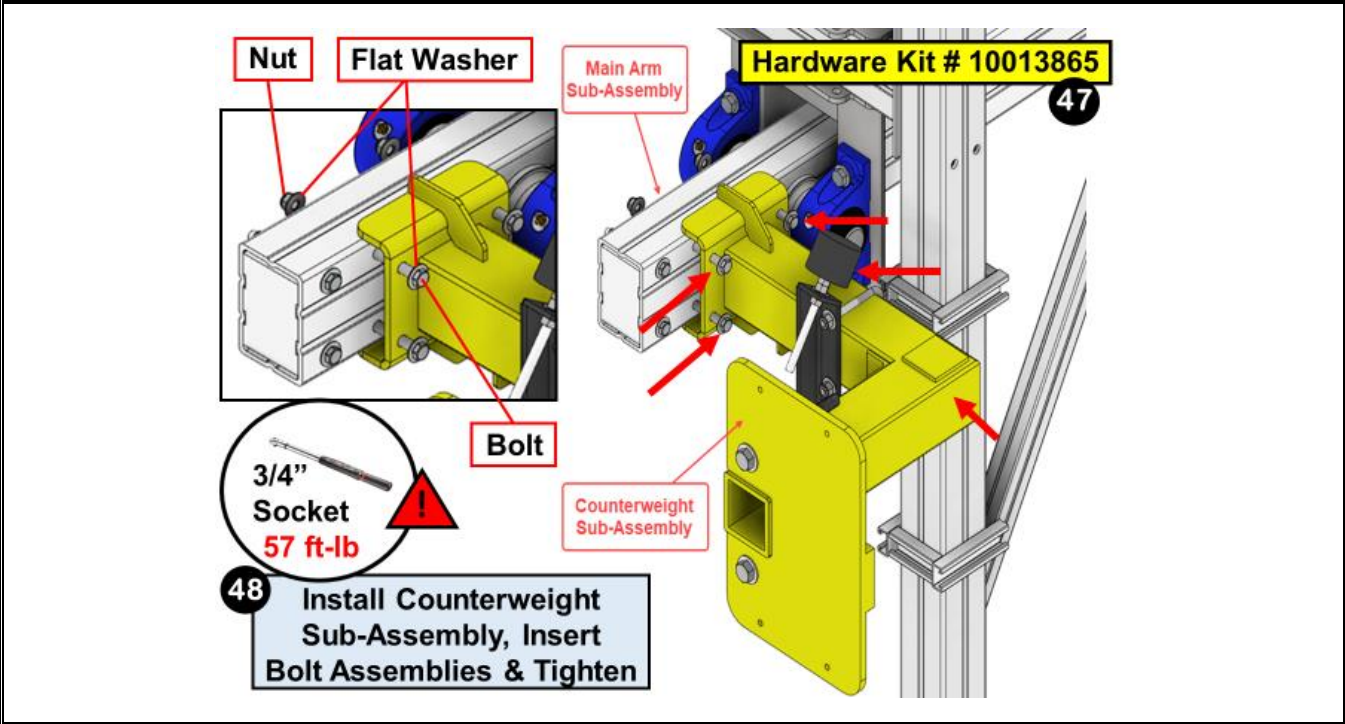
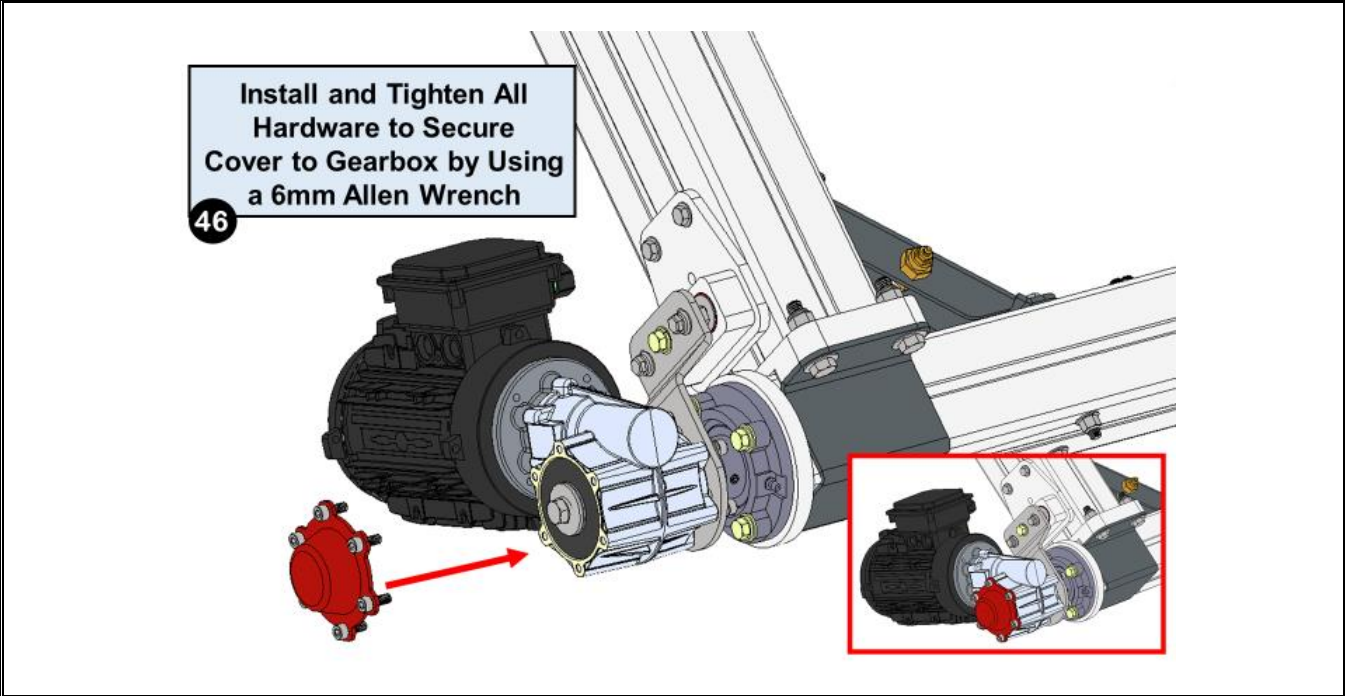
44 Apply Anti-Seize  
Compound to Bolt

Insert Bolt Assembly  
Into Shaft and Tighten  
Hex Bolt to 57 ft-lb

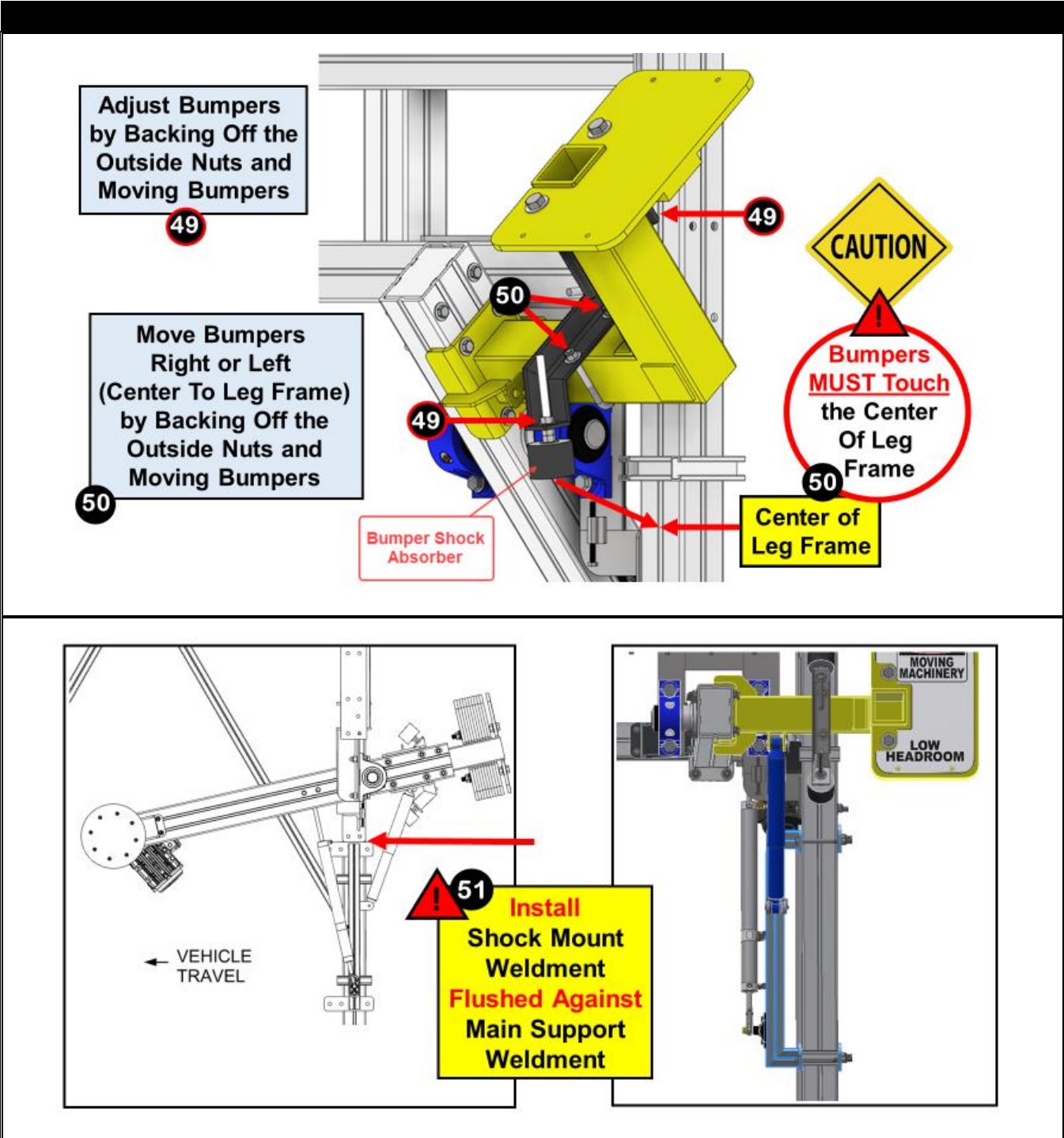
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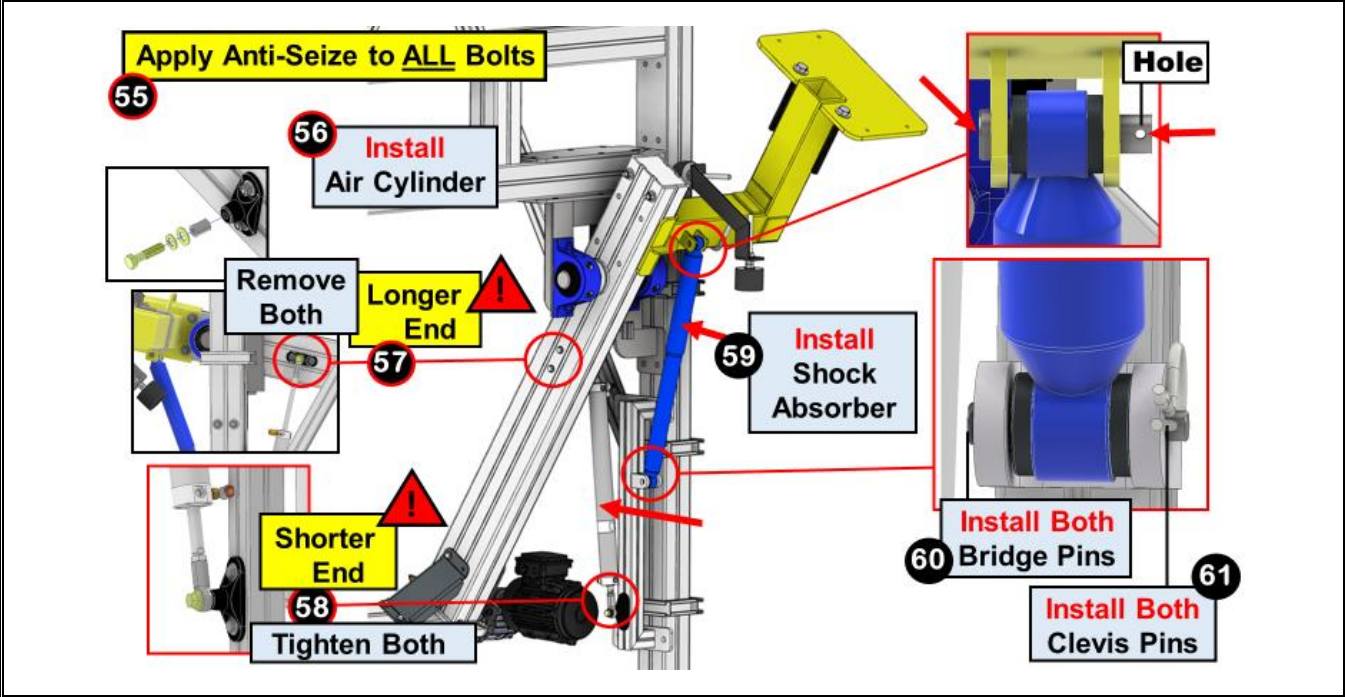
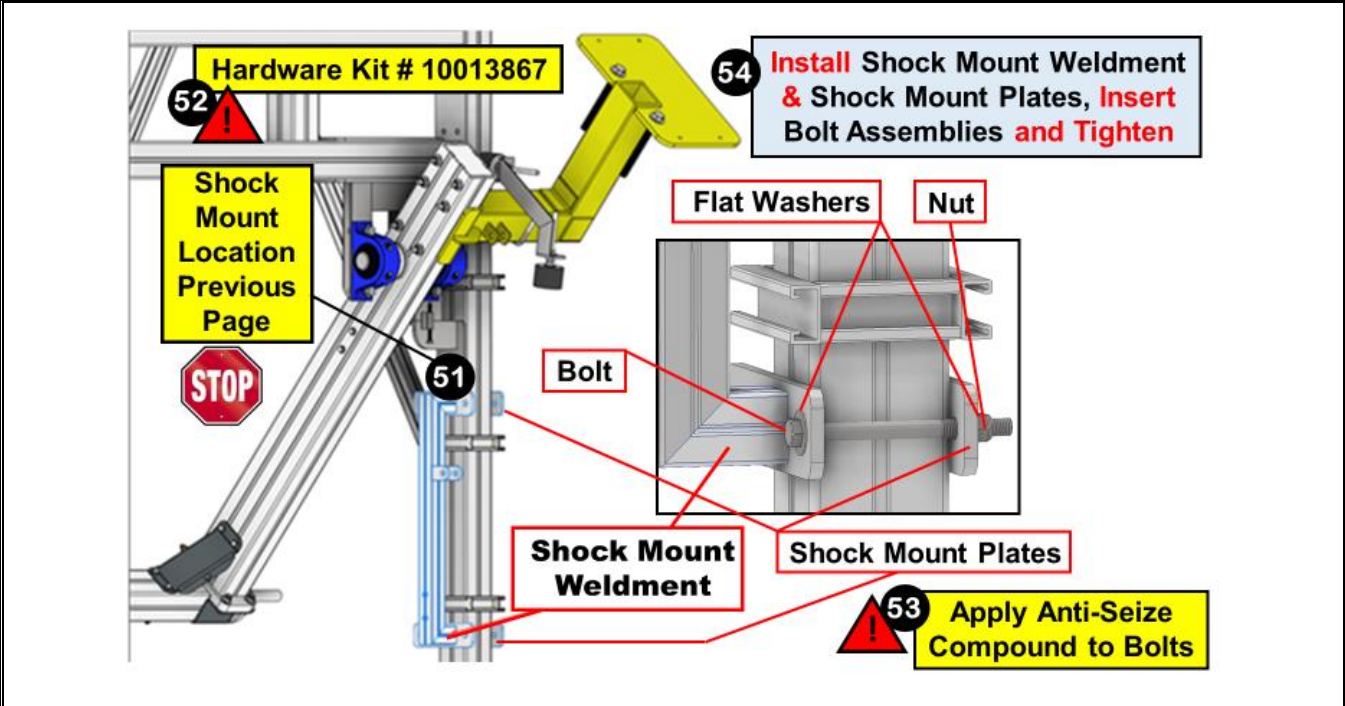
**COMPACT TOP BRUSH INSTALLATION**



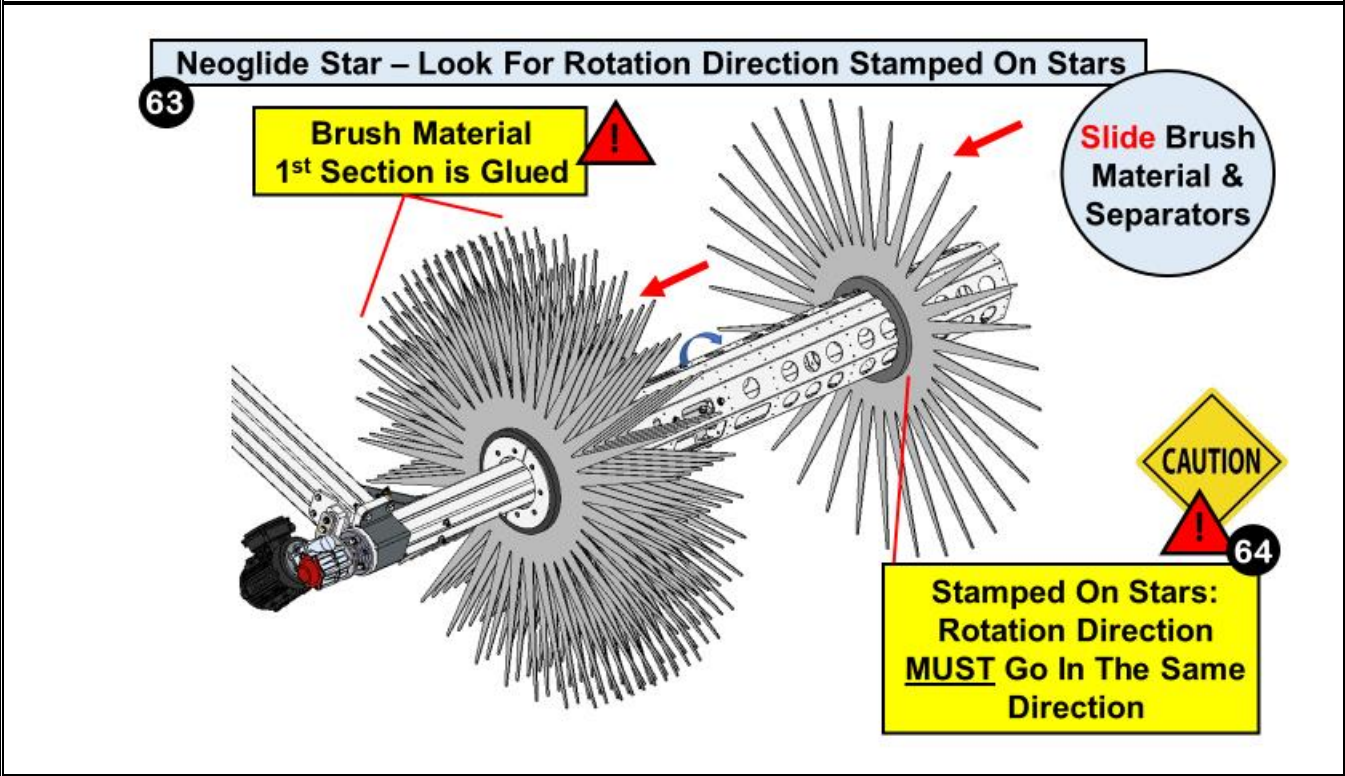
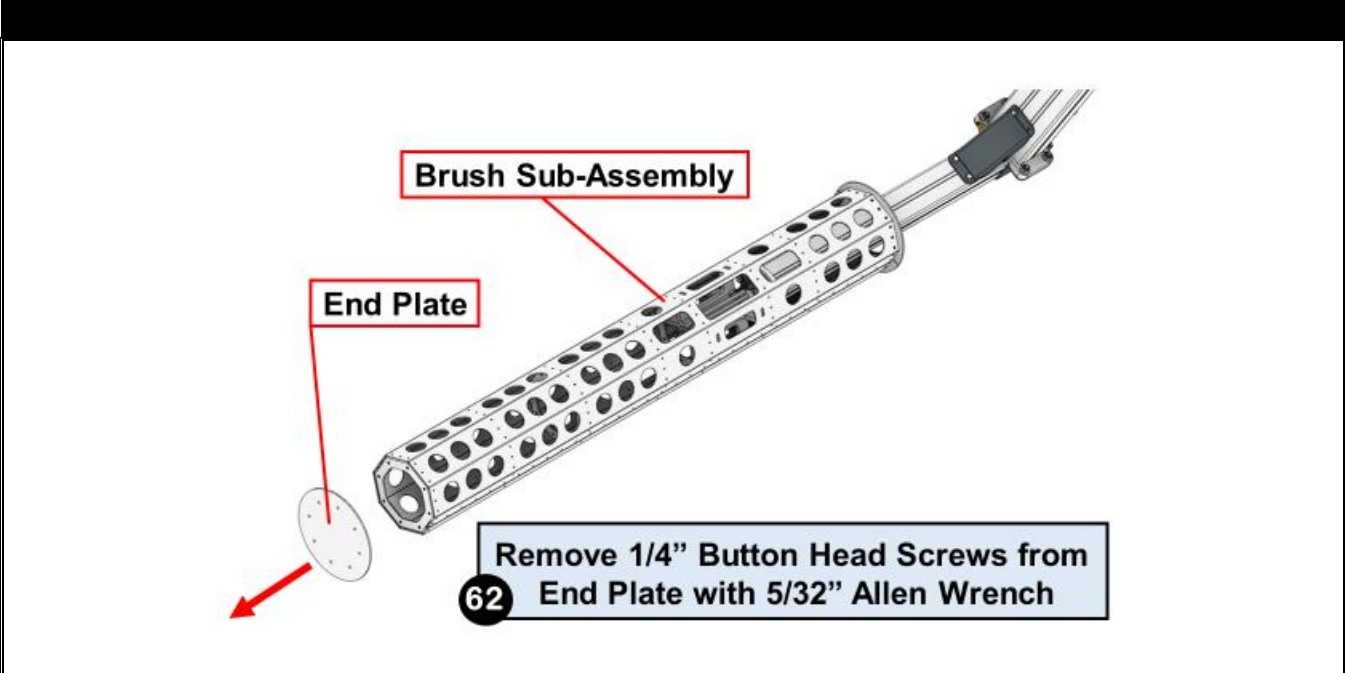
**COMPACT TOP BRUSH INSTALLATION**



**COMPACT TOP BRUSH INSTALLATION**



# COMPACT TOP BRUSH INSTALLATION



**COMPACT TOP BRUSH INSTALLATION**

**65** Last Section Will Stick Out 1/4" to 3/8" Past the End of Hub and Will Compress When End Plate Is Installed Back On

**66** **IMPORTANT:** Foam Applicator **MUST** Be Use Prior to Compact Top Brush

**67** **Note:** Air Is ONLY Used to Hold Brush In Retract Position

**68** Install End Plate and 1/4" Button Head Screws Onto End Plate with 5/32" Allen Wrench

**69** **IMPORTANT:** Tighten All 8 Button Head Screws All the Way to Ensure Neoglide Compressions

**70** Retracted Position

**CAUTION**

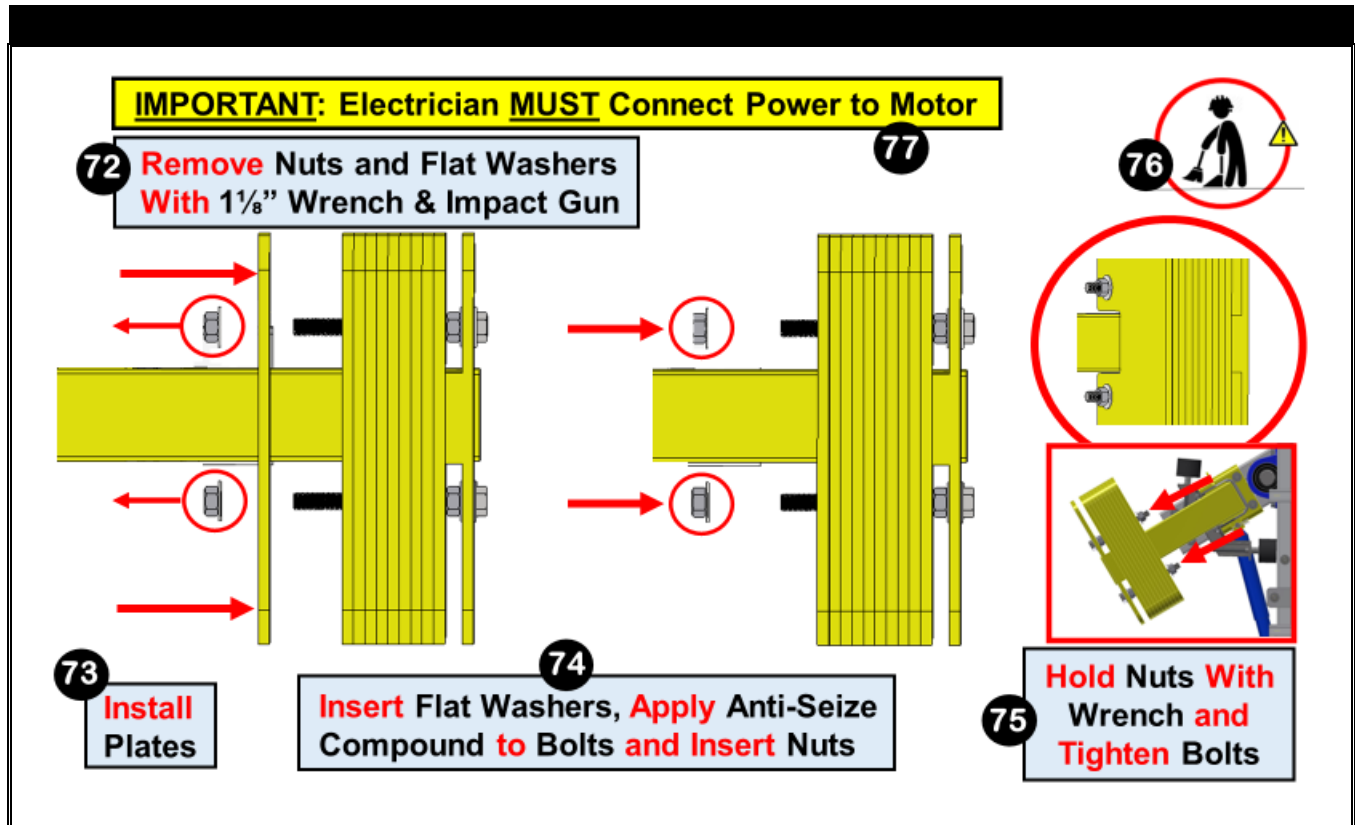
Plates

Counterweight Plates Are DOWN

Brush Is UP

**71** **WARNING:** The Brush **MUST** Be In the Retracted Position to Prevent Plates From Falling On Installer

## COMPACT TOP BRUSH INSTALLATION



## SPEED AND TORQUE ADJUSTMENTS

- Compact Top Brush requires a VFD for proper smooth operation. Acceleration time should be set to 3.0 seconds.
- The speed can be adjusted on the Variable Frequency Drive (VFD).
- To increase the speed, adjust the Hertz on the VFD to a higher number.
- To decrease the speed, adjust the Hertz on the VFD to a lower number.

**⚠ IMPORTANT: The Overload on the Motor Starter MUST be set at the lowest level to allow for operation. Adjust the amps in accordance with motor(s) name plate. For a 1HP Transtecno Motor, Overload Detection Level should be set to 2.3 amps.**



## ADJUSTMENTS AND TESTING

### Adjust the Cleaning Pressure of the Washer

**⚠** Air pressure should **NOT** be used in the washing operation. Compact Top Brush penetration should be between 4 to 6 inches across the entire vehicle. To adjust Compact Top Brush penetration, Counterweight Plates can be added or removed.

### Adjust the Rotation Speed of the Brush

**⚠** The Compact Top Brush speed should be adjusted using a VFD for the electric motor. Recommended Compact Top Brush speed should be around 85 RPM.

### Operating Speeds Chart

Chain Speed	Brush RPM
60-90 CPH	75-85
90-150 CPH	85-90
150-180 CPH	90-95

### Adjust for Smooth Retract Operation

To adjust the retract operation, the air pressure regulator should be adjusted to approximately 40-50 PSI in the retract position.

**⚠** The tunnel controller should be adjusted so that the Compact Top Brush is put into the wash position prior to the front of the car arriving at the Compact Top Brush. This will entail deactivating the retracts before the vehicle reaches the Compact Top Brush and setting the look ahead to check for the proximity of the next car.

**⚠ Note:** Retract Position for the Compact Top Brush is achieved by the Extension of the Air Cylinder.

**⚠ WARNING:** Make sure the proper Chemistry (Brush Lubrication) is being used in the Car Wash Tunnel to prevent vehicle and equipment damage.

## GENERAL OPERATION

**⚠ WARNING: Make sure the proper Chemistry (Brush Lubrication) is being used in the Car Wash Tunnel to prevent vehicle and equipment damage.**

### Compact Top Brush Operation

Compact Top Brush rotation starts and stops with a signal from the Customer Supplied Controller System to the Customer's Hydraulic Power Pack or VFD activating Compact Top Brush rotation. This Controller Start-Stop signal should also control soap solution delivery to the spray bar or manifold providing lubricity to the Compact Top Brush.

**⚠ IMPORTANT: MAKE CERTAIN THAT THE COMPACT TOP BRUSH ROTATES AGAINST VEHICLE TRAVEL.**

With the Compact Top Brush rotating (against the direction of vehicle travel and at proper RPM) the Compact Top Brush travels on vehicle's front hood and across the vehicle maintaining a steady contact; as it cleans the hood, roof, and trunk of the vehicle.

**⚠ Note:** Proper Compact Top Brush penetration on flat vehicle surfaces should be 4"-6". As the Compact Top Brush rounds corners, such as on windshields, the Compact Top Brush penetration may be greater, but not deeper than half the distance to the aluminum brush core.

### Retract Operation

When there is no vehicle approaching the Compact Top Brush the tunnel controller will retract the Compact Top Brush from the wash position, toward the ceiling.

**⚠ Note:** This can also be set up in the controller to retract for the beds of trucks to avoid problems.

**⚠ Important:** It is recommended that the Compact Top Brush be retracted for:

1. ALL roof racks.
2. Sun visors mounted over the windshield.
3. Rear wipers on Acura Integra's and Mazda RX-7's unless they are taped down.
4. Open bed pickup trucks.