

# TS93 STH

Surface Applied Closer

Pull side jamb mount spring track

Inverted closer with hold open (STH)

## Installation instructions

08280611 – 08-2019

| EN |

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# 1 Technical specifications

## 1.1 Overview

-  Caution: sex nuts are required for attachment of components to unreinforced doors and to wood or plastic faced composite type fire doors, unless an alternative method is identified in the individual door manufacturer's listings.
-  Arrows on closer mounting plate point downward.
-  Maximum door opening degree is 110°.
-  Follow included template to properly prepare door and frame for all accessories of the closer installation.
-  Minimum door width is 36".
-  Know the swing of the door which is being installed prior to installation.
-  Hold open range is from 80° to 105°.
-  Make sure door efficiently operates prior to installing closer.
-  Use closer body style "G" for this installation.
-  Verify closer spring size prior to installation.

## 1.2 Size selection chart

Table 1

Closer	Interior/ Exterior	Door Width		
		3'-0" min.	3'-6" max.	4'-0" max.
TS9315	Interior	♿	♿	♿

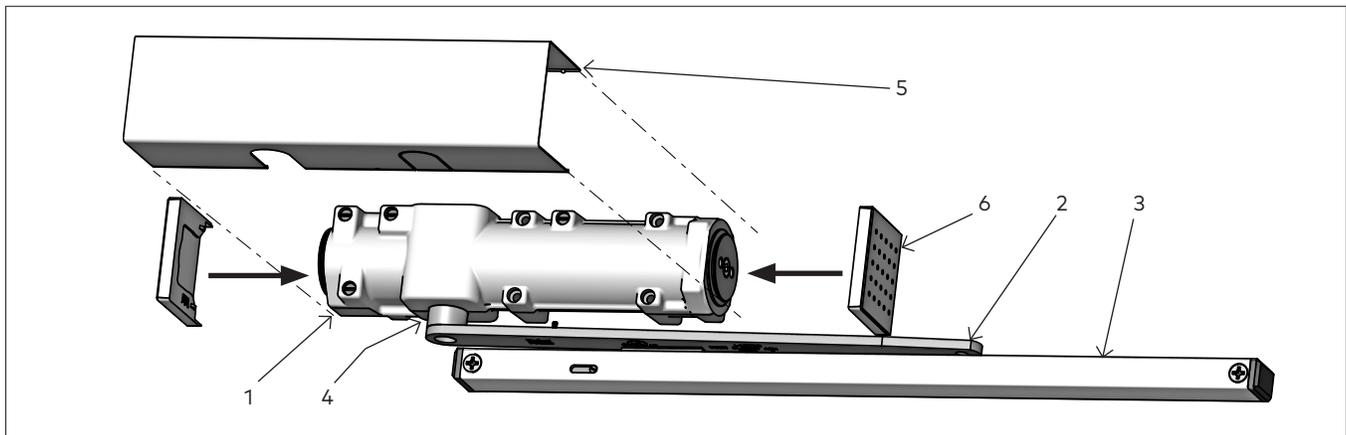
## 1.3 Tools recommended

Table 2

Drill bits:	#0 Phillips screwdriver	M5 hex key
Metal: No. 7No. 21 & 10-32 tap	#2 Phillips screwdriver	5/64" hex key
Wood: 9/64" & 11/64"	3/16" flat head screwdriver	3/16" hex key

## 1.4 Surface closer system

Fig.1

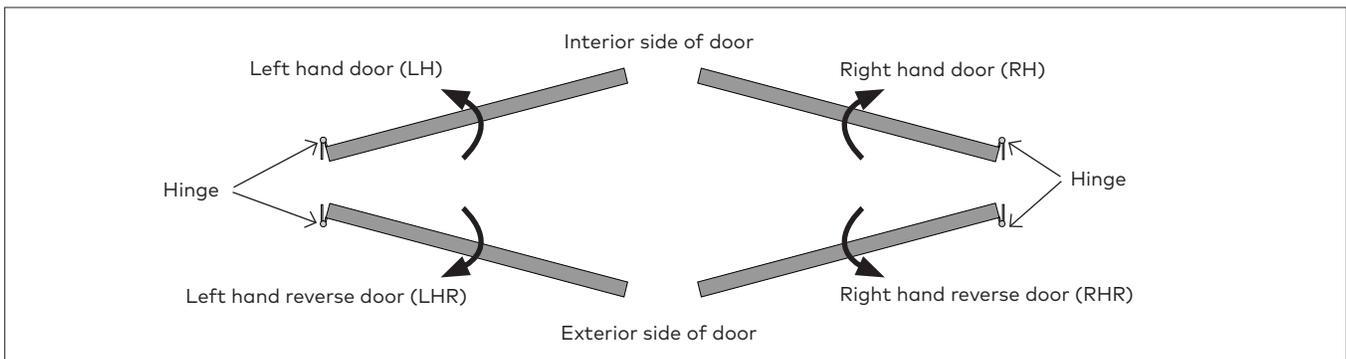


The surface closer is comprised of the following components.

- |    |                       |    |                 |
|----|-----------------------|----|-----------------|
| 1. | Closer body: "G" body | 4. | Pinion          |
| 2. | Main arm              | 5. | Closer cover    |
| 3. | Track assembly        | 6. | Closer end caps |

## 1.5 Handing the door

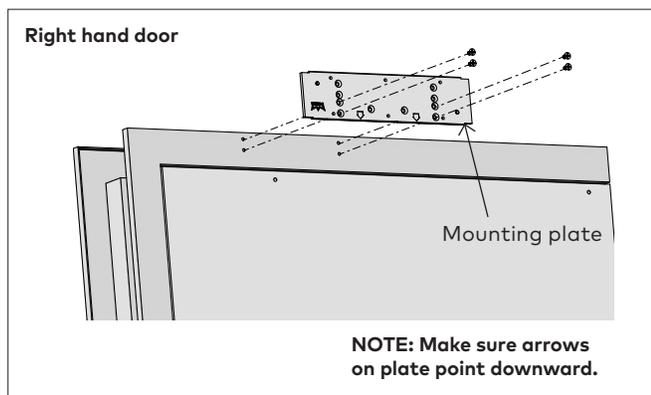
Fig.2



# 2 Installation instructions

## 2.1 Installing the mounting plate

Fig.3



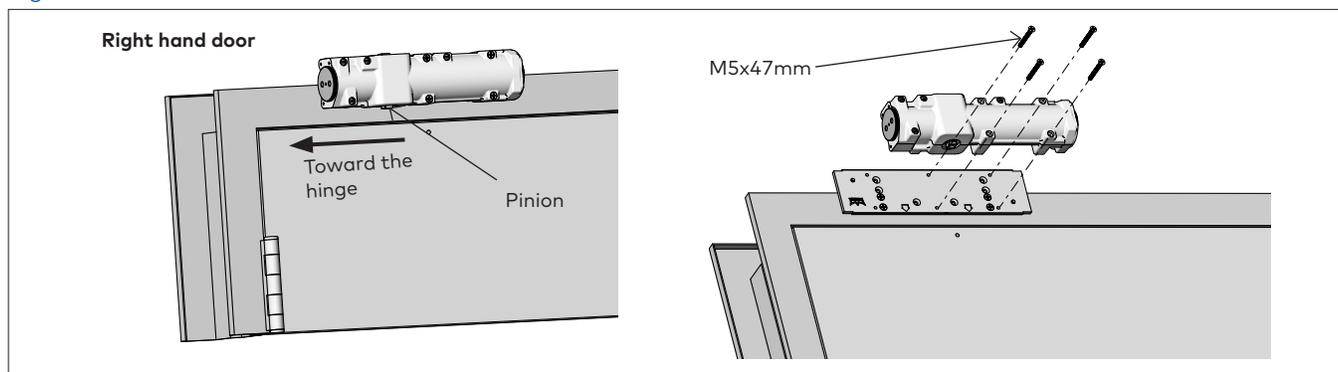
Reference template 08280612

**NOTE: For use on an inverted T-mount application (closer on frame, track on door) on the pull side of the door.**

- 2.1.1 Secure plate to mounting bracket.
- Use four 10-32x5/8" machine screws [ #10x1" wood screws ] provided with closer.

## 2.2 Installing the surface closer

Fig.4

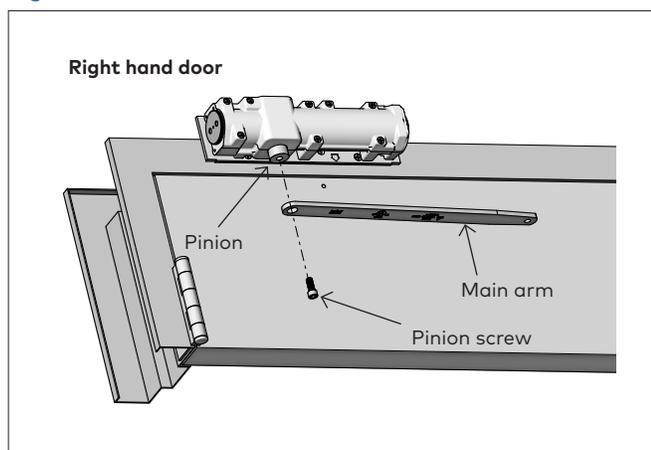


**NOTE: Orient pinion closest to hinge.**

- 2.2.1 Secure closer body to plate.
- Use four M5x47mm screws provided with plate itself.

## 2.3 Installing main arm

Fig.5

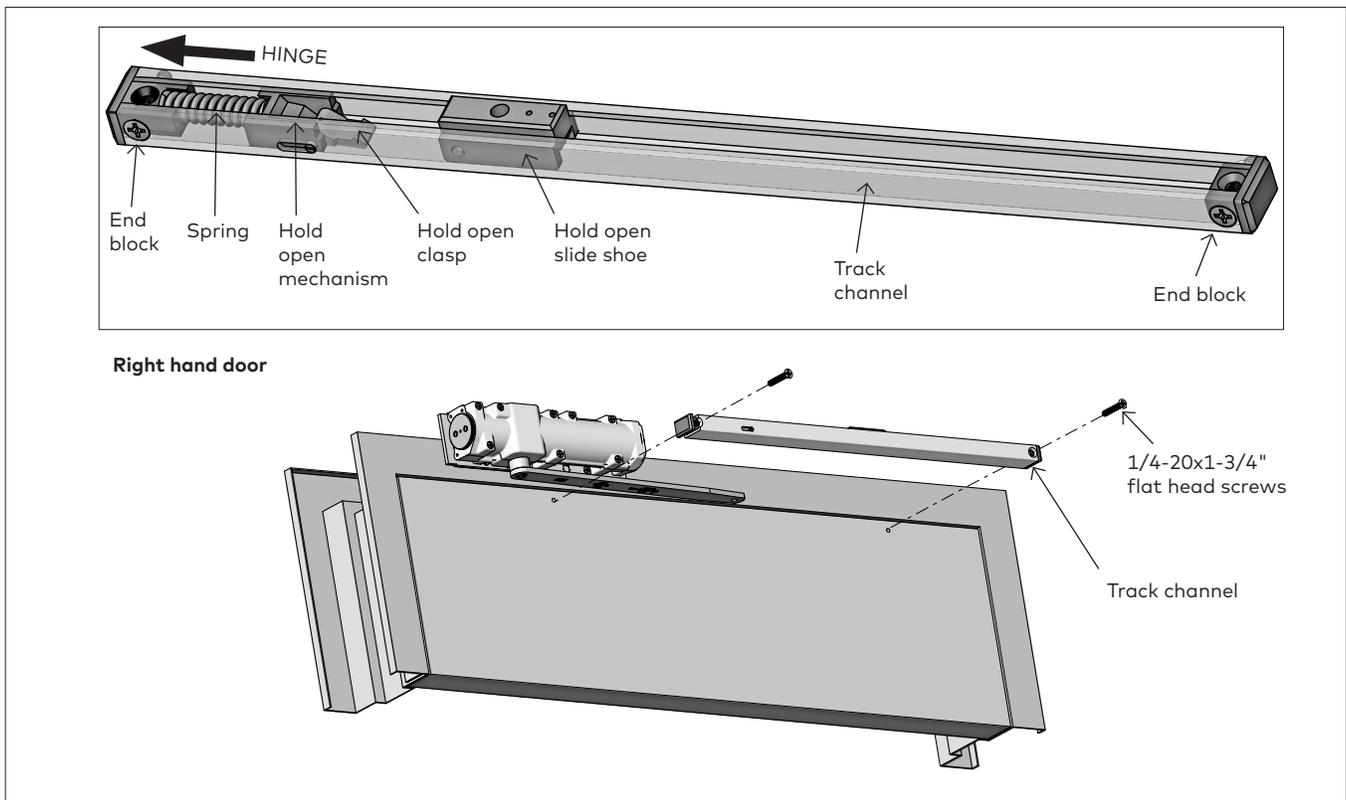


- 2.3.1 Secure main arm closer pinion.
- Use an M5 hex key and provided pinion screw [ M6x20 SHCS ]

**⚠** Be sure main arm is parallel to door during application.

## 2.4 Installing track assembly

Fig.6



**NOTE: Spring tracks are preassembled.**

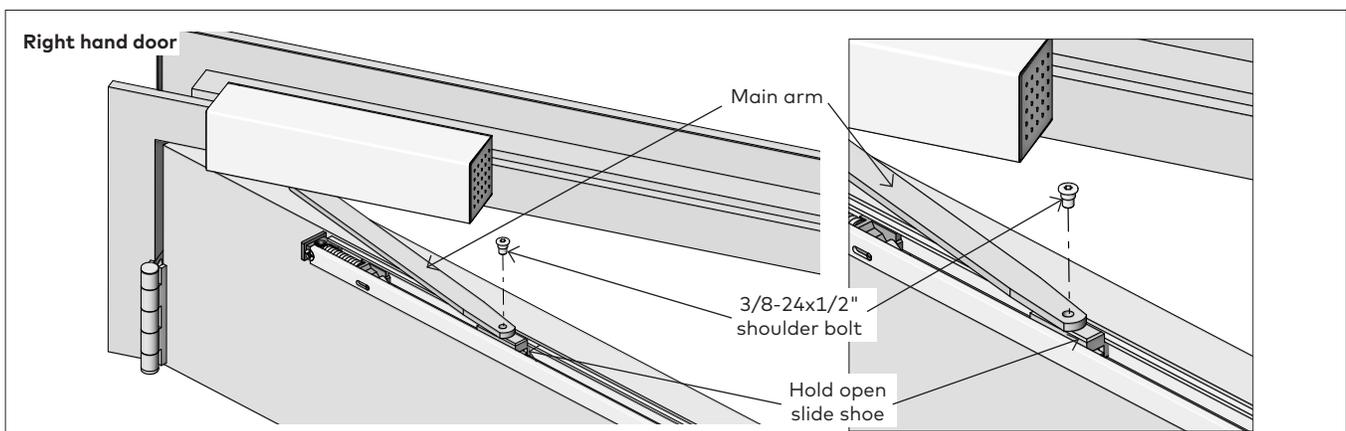
2.4.1 Orient track with open side facing upward.

2.4.2 Secure track channel to frame through end blocks.

- Use two 1/4-20x1-3/4" flat head screws [#14x2-3/4" wood screws].

## 2.5 Secure main arm

Fig.7



2.5.1 Secure main hold open slide shoe.

- Use one 3/8-24x1/2" shoulder bolt and an M5 hex key.

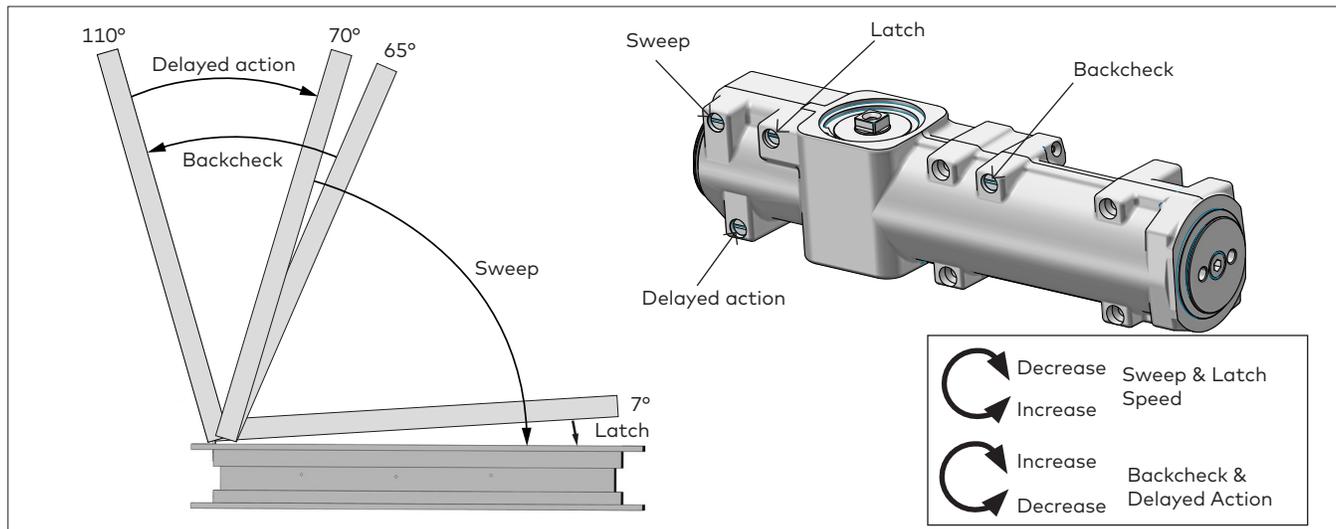
# 3 Adjustments

-  Confirm closer spring size prior to making any closing speed adjustments.
-  Do not back valve heads out beyond closer casting.

-  Maximum opening angle is 110°.
-  Door should close in 3 to 6 seconds from 90°.
-  Do not close valves completely.

## 3.1 Adjust closing speeds: sweep, latch, backcheck, delayed action

Fig.8

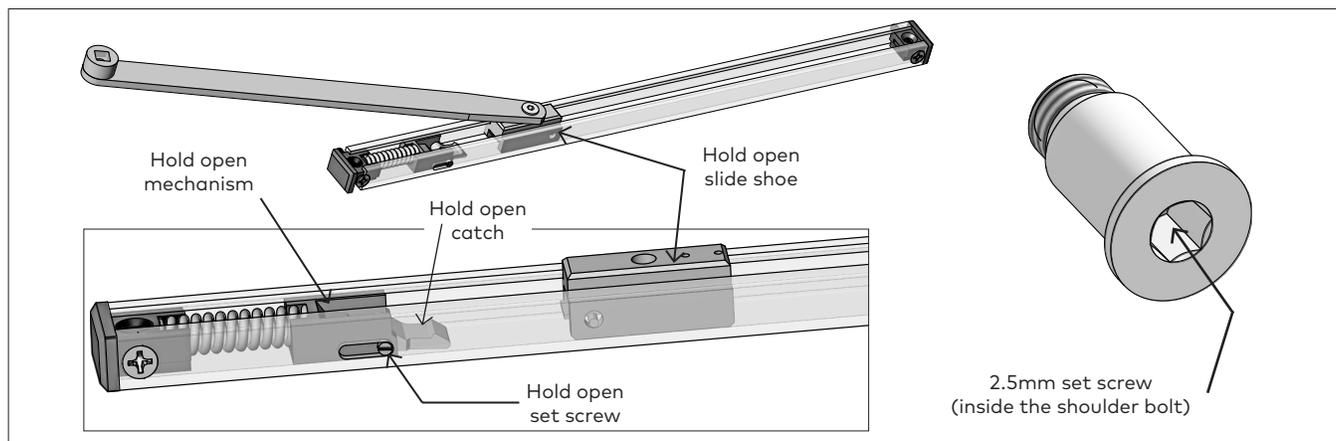


- 3.1.1 Adjust the **closing sweep speed** for the area from 70° - 0°
- Increase sweep speed: Turn valve counter-clockwise
  - Decrease sweep speed: Turn valve clockwise.
- 3.1.2 Adjust the **closing latch speed** for the area from 7° - 0°
- Increase latch speed: Turn valve counter-clockwise
  - Decrease latch speed: Turn valve clockwise

- 3.1.3 Adjust the **opening backcheck** for the area from 65° - 110°.
- Increase resistance: Turn valve clockwise
  - Decrease resistance: Turn valve counter-clockwise.
- 3.1.4 Adjust the **closing delayed action** for the area from maximum opening - 70°
- Increase delayed action: Turn valve counter-clockwise
  - Decrease delayed action: Turn valve clockwise

## 3.2 Adjust optional hold open

Fig.9



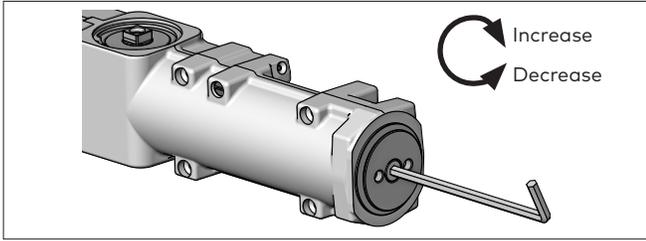
- Adjust hold open location:**
- Refer to template for varying hold open locations.

- Engage/Disengage hold open:**
- Flip hold open catch up or down by rotating hold open set screw, using a flat head screw driver.

- Adjust hold open force:**
- Slide the hold open slide shoe over the hold open catch.
  - Use an M2.5 hex key and rotate set screw to set desired hold open force. (Located inside M8x15 SHCS)
  - Increase force = clockwise
  - Decrease force = counter-clockwise

### 3.3 Adjust spring force

Fig.10



#### TS9356

**NOTE: Supplied with a size 6 spring setting.**

- Increase force: turn clockwise 6 times (max)

#### TS9315

**NOTE: Supplied with a size 2 spring setting.**

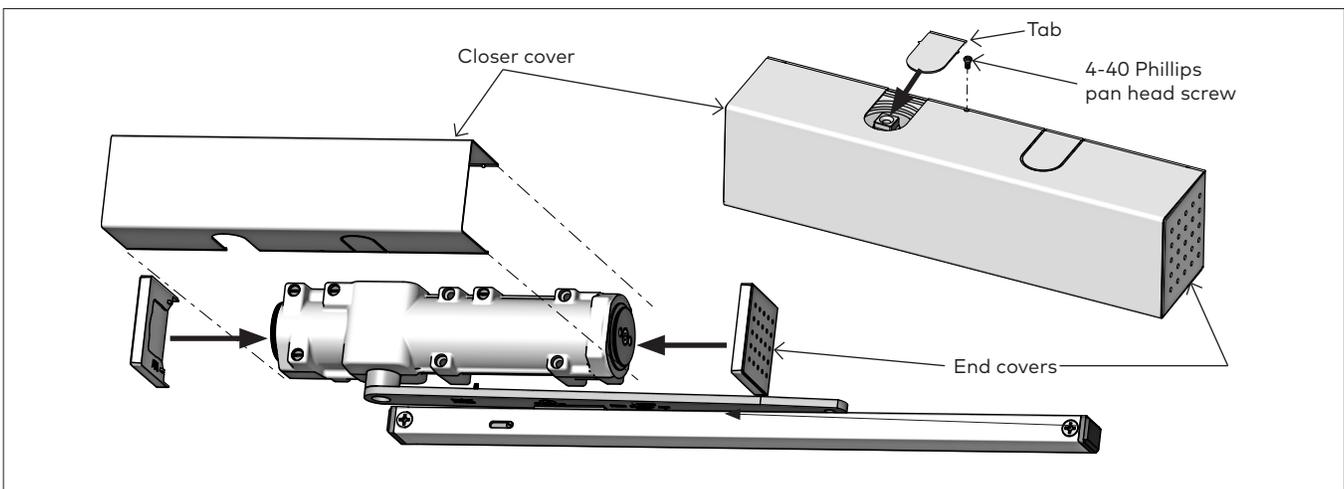
**Barrier free openings:** Take an opening force reading from the pull on the door. If required, adjust the spring force to meet the barrier-free requirement.

- **Decrease force:** turn counter-clockwise 5 times (max)
  - **Increase force:** turn clockwise 12 times (max)
- Depending on opening conditions, a door adjusted to meet barrier-free forces may not have sufficient power to reliably close and latch the door.

Top Jamb Mount, Pull side closers					
	Closer size	Max door weight (lbs)	Door width		Full turns
			Interior	Exterior	
TS9315	2	100	2'6"	---	0
	3	125	3'	2'6"	+3
	4	150	3'6"	3'	+9
	5	200	4'	3'6"	+12
TS9356	5	200	4'	3'6"	-4
	6	250	4'6"	4'	0

## 4 Install covers

Fig.11



- 4.1.1 Snap both end covers into place.
- 4.1.2 Remove un-needed tab and snap cover over closer body.

- 4.1.3 Attach with a 4-40 Phillips pan head screw.

