



Store these instructions with the enclosed maintenance checklist in a safe place. You may also access them on our website.

Instruction Sheet

Prefab Joist 1' - 3' Ft. Drop Ceiling Kit - 7051



WARNING! Eye bolts will wear with use and must be inspected on a regular basis. Discontinue use of eyebolt and replace immediately when wear begins to show. Do not let wear exceed 30% of the eye bolt. Take time to familiarize yourself with the use and maintenance of this equipment before using. Please file this Instruction Sheet in an accessible location. The Instruction Sheet must be read and familiar to anyone who is using Southpaw Enterprises equipment.

IMPORTANT: Please check equipment immediately for any damage that may have resulted during shipping. If any damage has occurred, please contact Southpaw Enterprises, Inc. immediately.

Warning: Failure to properly install a Southpaw forged steel eyebolt (1/2" or 5/8") may result in serious injury or death. If you have any questions about the installation of the Southpaw forged steel eyebolt, please contact Southpaw Enterprises Customer Service at 1-800-228-1698.

MATERIALS LIST:

- 2 - pcs. strut 1-5/8" x 13/16" x 60" (XH90305)
- 1 - 5/8"-18 x 3' threaded rod (XH7060-A)

Packaged attached on struts:

- 4 - 90 degree angle brackets (XH90491)
- 4 - 1/2"-13 x 1" hex head bolts (XH90330)
- 4 - 1/2" split-lock washers (XH7052)
- 4 - channel nuts (XH90320)

- 1 - Instruction Sheet
- 1 - Maintenance Checklist

WORKING LOAD: 500 LBS.

TOOLS NEEDED:

- One 15/16" size open-end wrench *
- Two 3/4" size open-ended wrenches *
- Measuring Tape and Level
- Loctite "242" thread-locker compound

Inside Hardware Bag Package:

- 2 - 1/2"-13 x 2.5" hex head bolts (XH7039)
- 2 - 1/2"-13 size hex nuts (XH1046)
- 4 - 1/2" dia. hole fender washers (XH1003)
- 4 - 5/8" dia. split-lock washers (XH7042)
- 4 - 5/8" dia. hole flat washers (XH7047)
- 7 - 5/8"-18 size hex nuts (XH7014)
- 1 - Shackle Assembly (with ball joint rod end) (see page 5 for Hardware Bag contents image)

* Two adjustable wrenches may be used instead of open-ended wrench sizes listed above.

This kit contains everything needed for the average installation. Due to variables beyond our control in building construction (distance between joists, dimension of angle pieces in joist, etc.) you may have to vary from these instructions by replacing a bolt with one of the proper length, or cutting and shortening the length of a strut and/or the threaded rod.

NOTE: We recommend that you use "Loctite 242 thread locker" on all threaded connections. Apply Loctite onto the threaded rod as excess Loctite in rod end could cause ball to seize.

ASSEMBLY (See figure 1): Two people are required for installation.

- 1) Determine where you want to position the suspension attachment point. The attachment point must be directly under a joist **and** at least 6 feet away from any walls or other obstacles. Remove the ceiling tile where you will place the attachment point. Make sure that you have no obstructions (heating ducts, wiring, lights, etc.) that will block the brace struts.

The channel nut & bolt assemblies and the threaded rod (which are attached to and inside the two 60" metal strut channel pieces) were temporarily attached for shipment purposes only. This is not the proper positioning for installation.

All (4) of the 90 degree angle bracket assemblies -and- the 3 ft. threaded rod must be removed from the strut channel pieces prior to starting the installation process.

Strut "B"

Strut "A"

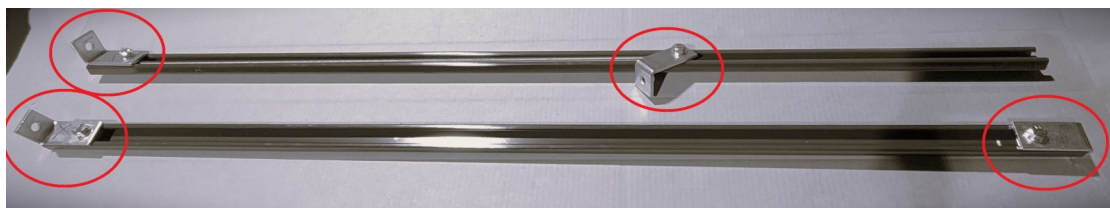


Figure 1: Finished assembly of rod end should resemble picture shown (without ceiling tile in place)

- Using a 3/4" open-ended wrench, loosen the 1/2" bolt on each of the four 90 degree angle brackets. Once the 1/2" hex bolt has been slightly loosened, slide the angle bracket with channel nut assembly out of the long strut channel's end. Remove the 3 ft. threaded rod and set to side. Note that (2) of the angle brackets have "X" marks on them.

Detach the 1/2" x 1" hex bolt, 1/2" split-lock washer, and channel nut off each of angle brackets. Next, re-assemble angle bracket as shown at below, ensuring proper orientation of hex bolt onto angle brackets which are marked with and "X". For the "X" marked brackets, the bolt should go through the 1/2" diameter hole on the shorter side of bracket. The larger, 5/8" diameter hole on longer side of 90 degree angle should remain open for use later in Step 8.

Figure 2.1



Figure 2.2

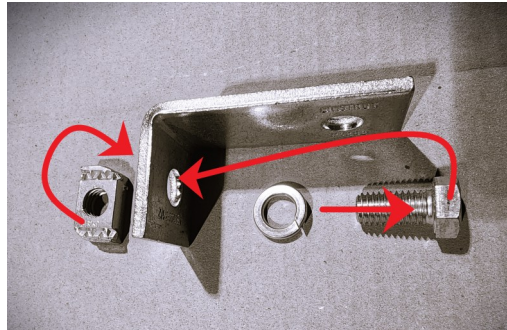
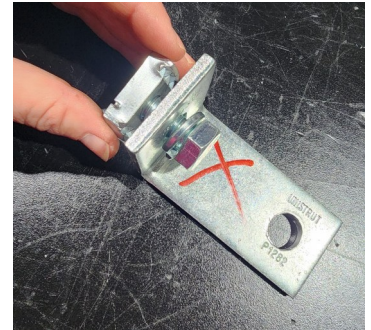


Figure 2.3



Note: the "shorter" side of the angle bracket has a 1/2" diameter hole
the "longer" side of the angle bracket has a 5/8" diameter hole

- Locate the 3 ft. threaded rod which was set aside. Screw a 5/8" hex nut on the threaded rod until there is 1.25 inches of thread length between the end of the rod and the hex nut. Hold the hex nut in place and then screw the steel ball joint rod end up onto the threaded rod against the hex nut. Do not use Loctite and finger tighten only as these 2 hardware items will need to be removed in future steps. This end of the threaded rod will be referred to as the "bottom end" of rod in future steps.

- On the opposite "top end" of the threaded rod, screw on two 5/8" hex nuts. Screw the hex nuts down far enough so there are a few inches of exposed threads remaining at top of rod. Place one split-lock washer and two 5/8" flat washers onto the top end of the threaded rod so that they are all above the two hex nuts.

- 6a: Put the top end of threaded rod (with two hex nuts and washers) upward and into ceiling cavity at the desired attachment position point. Pass the exposed threads on top end of rod up and through the middle opening in the bottom flanges of the joist — see figures 6.1 and 6.2. Move threaded rod upward until the two washers touch the bottom of joist flanges. Screw the two hex nuts down the rod, while continuing to push up on the rod from below, moving bolts downward until the 5/8" hex nut on bottom end of rod above the shackle is even with the inside of the ceiling tile.

Figures 6.1 and 6.2

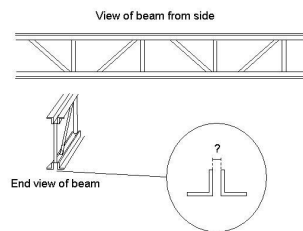


Figure 8
Threaded Rod Bottom End Hardware
Attachment Order Detail:

- 1 x 5/8" hex nut
- 1 x 5/8" split-lock washer
- 1 x 90 degree angle bracket (with channel nut/bolt assembly)
- 1 x 90 degree angle bracket (with channel nut/bolt assembly)
- 1 x 5/8" split-lock washer
- 1 x 5/8" hex nut
- Steel Ball Joint End
- Shackle Assembly
- (1/2" bolt attached through eye of Steel Ball Joint end with 1/2" nylon lock nut)



When Step 6 is completed successfully, the washers & hex bolts at top end of rod should be directly against the bottom flange of joist and the hex bolt on bottom end (above the shackle assembly's eyebolt) will be even with the ceiling tile. (see Figures 6.1 and 6.2)

- At bottom end of threaded rod, remove the shackle assembly and hex nut off of the bottom end of the rod. Set shackle assembly and 5/8" hex nut aside.
- Attach the following hardware (in sequential order) onto bottom end of threaded rod. Move each hardware item "upward" onto rod until all pieces are attached to threaded rod. See Figure 8 for a visual reference of how the completed hardware sequence will look at bottom end of threaded rod.

- 8) Position Strut "A" with the threaded rod through the open 5/8" hole on the longer side of angle bracket and then start a 5/8" hex nut on the threaded rod. Screw the hex nut up approximately 3" up from the bottom of the rod to hold the bracket in place while you attach the top bracket. Put the bolt between the bottom flanges of the attachment joist as shown in figure 2. Put two 1/2" fender washers and a lock washer on the bolt. Start a 1/2" hex nut on the bolt and tighten finger tight.
- 9) Remove the bottom hex nut from the threaded rod putting it through the open hole on the angle bracket of Strut B. Turn the brace strut towards the adjacent joist that it will be attached to. Put a 5/8" lock washer and a 5/8" hex nut on the threaded rod. Put the bottom bracket on Strut "B" up against the bottom bracket of Strut "A" at a 90 degree angle and tighten the bottom hex nut against the hinge finger tight.

- 10) Loosen the bolt holding the top bracket to the strut so that the bracket will slide on the strut. Put a 1/2" x 2-1/2" hex head bolt through the hole on the bracket. Slide the bracket on the brace until the bolt lines up between the bottom flanges of the adjacent joist. Put the bolt between the bottom flanges of the adjacent joist as shown in figure 3. Put two 1/2" fender washers and a lock washer on the bolt. Start a 1/2" hex nut on the bolt and tighten finger tight.

- 11) Using a level, position the threaded rod straight vertically. **Tighten All nuts and bolts securely.**

- 12) Measure from the center of the threaded rod to one side and one end of the ceiling tile support frame. Transfer these dimensions to the ceiling tile and cut a 1 inch diameter hole at this location.

- 13) Put a 5/8" hex nut on the rod and screw it up past the ceiling tile space. Screw the shackle assembly on the bottom end of threaded rod. Hold the shackle assembly's rod end and screw the hex nut down against it and tighten securely.

- 14) **Once installed and in place, there should be no threaded rod exposed from the top nut down to the shackle.**

- 15) Put the ceiling tile in place in the support frame with the shackle assembly's rod end going through the hole which was cut in the ceiling tile. Lower the ceiling tile down into place in the metal support frame.

- 16) If excessive squeaking occurs, remove shackle and lubricate ball joint with white lithium grease.

Figure 10 Strut "A" "lower end" Strut, Bracket & Channel Nut Assembly "Overlapping, Right Angle" Brackets



Figure 11 Strut A & B "lower ends" Bottom End of Threaded Rod completed, with eyebolt & shackle

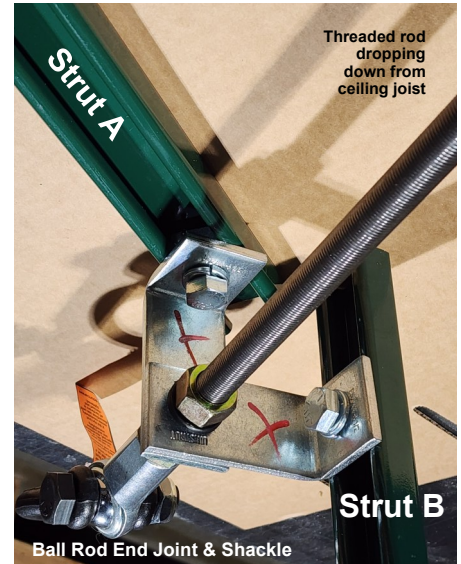
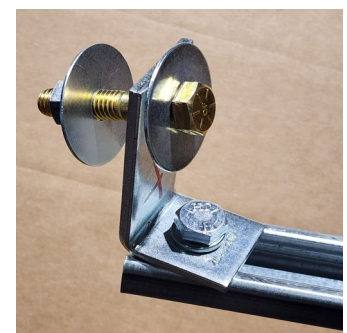
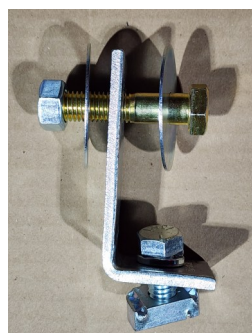
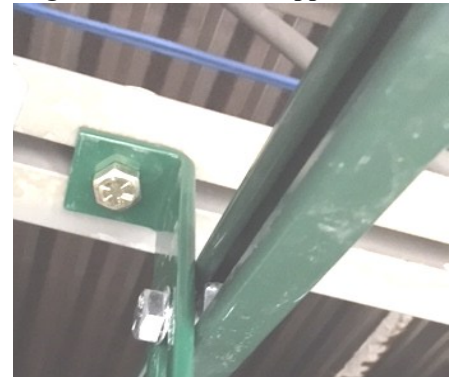


Figure 12 Strut "A" Upper End



Figure 12 Strut "B" Upper Middle



MAINTENANCE CHECKLIST:

All of the following wear points should be checked on a daily, weekly, or monthly basis (as indicated) and recorded on the maintenance checklist enclosed.

- On a **DAILY** basis, try to turn shackle assembly's silver metal connector end, the shackle loop's nylon lock nut, and the 5/8" nuts connected to end of the threaded rod. Check that there is no movement of the threaded rod. If any of the hardware turns at all or there is movement of the threaded rod, discontinue use until all hardware has been re-secured per directions. If shackle assembly is loose, remove the silver ball joint rod end off from the bottom of threaded rod, including washers, nuts, or lock nuts. Clean all hardware items and then re-install per the directions using Loctite 242 threadlocker.
- On a **WEEKLY** basis, check that all nuts and bolts are tightened securely—including all hardware mounted up inside the ceiling cavity area. If any hardware items have come loose, re-tighten per directions.
- **WARNING:** Check shackle loop and bolt as well as the eyeball socket joint DAILY for wear. If more than 30% of the thickness of the metal shackle is worn away, discontinue use until item has been replaced and all connecting hardware has been re-checked and re-tightened securely.
- Use a Southpaw Safety Rotational Device (#2000) to prevent abnormal wear and damage to equipment.

CAUTION

- ◆ **Check shackle assembly for wear and movement. Do not let wear exceed 30% of shackle loop thickness. If the shackle assembly moves excessively, discontinue use until all hardware is checked and tightened. Use a Southpaw Safety Rotational Device to prevent abnormal wear.**
- ◆ **Floor mats of proper thickness should be positioned properly under and around all suspended equipment.**

Safety Precautions - The safety of your clients is dependent on the appropriate choice of activity to match, yet challenge their physical abilities. Use appropriate spotting / safety techniques. In addition, the layout of your activity area, proper installation and maintenance of your equipment is critical. Southpaw equipment is not intended for recreational or outdoor use. Under no condition should this equipment be used without proper supervision.

This sheet is for example only. It is not meant to, in any way, replace local, county, state, or Federal standards. Be aware - it is your responsibility to find all pertinent safety information that pertains to your facility.



If you have any questions or comments, please call or write
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Item # 7051 Bagged Hardware Pack Contents:

