

Fabrication Guidelines for Trigger Release w/ Single Cable

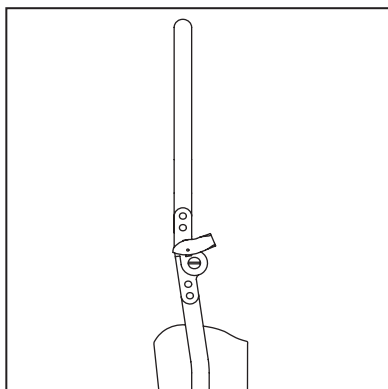


Fig. A

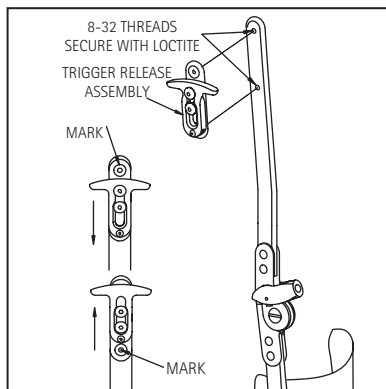


Fig. B

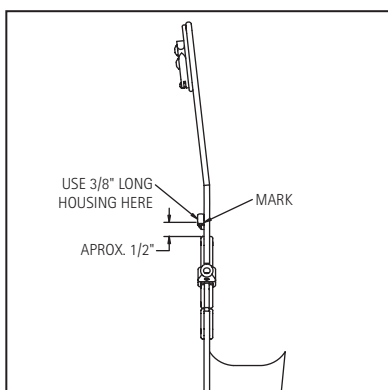


Fig. C

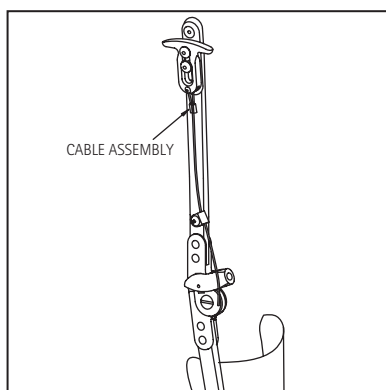


Fig. D

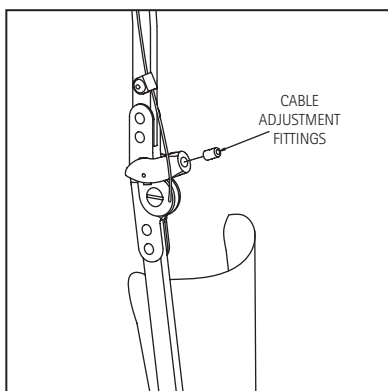


Fig. E

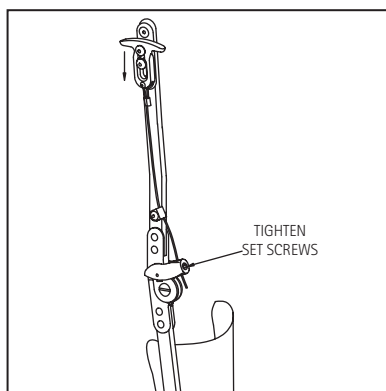


Fig. F

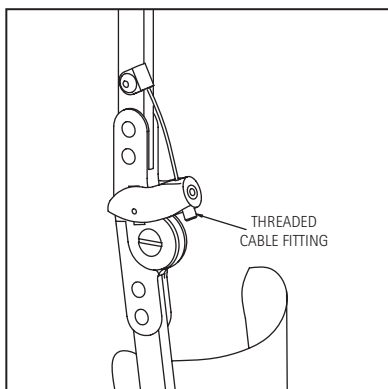


Fig. G

1. Fabricate orthosis as usual. Fig. A
2. Locate the Trigger Release Assembly on the lateral upright at a position that is easily hand accessible. Mark the two mounting hole locations with the assembly horizontally centered on the bar. Drill the two holes through the bar with a #29 (.136) drill bit. Thread the hole with an 8-32 tap. Fig. B
3. Attach the Trigger Release Assembly with the provided 8-32x5/16 Flat Head Socket Cap Screws to the lateral bar. Secure the screws with Loctite. Fig. B
4. Mark a cable guide location approximately 1/2" above the knee joint on the lateral side. Drill the marked hole through with a #29 (.136) drill bit and thread with an 8-32 tap. Secure the cable guide with the 8-32x1/4 Button Head Socket Cap Screw into the hole on the lateral side. Fig. C
5. Secure the looped end of the cable assembly to the Release Assembly with 6-32x1/4 Button Head Socket Cap Screw. Thread the cable through the housing to the lock on the lateral side. Fig. D
6. Place the Cable Adjustment Fitting with the set screw accessible into the end of the ring. Fig. E
7. Make sure the Trigger Release is in its lowest position. Thread the cable end through the cross-hole in the Cable Adjustment Fitting. Pull the cable tight and secure cable with the 6-32x1/8 set screw in the cable adjustment fitting. Fig. F (WARNING: Be sure not to adjust the fitting to a point that causes the locking mechanism in the knee joint to hang open.)
8. Trim the excess cable leaving approximately 1/4". Use the provided Threaded Cable Fitting to cover the cable if desired. Fig. G
9. When the fitting is adjusted pull up on the Trigger Release to unlock the knee joint. If the Trigger does not reach and maintain the unlocked position then the cable is too tight. If the ring lock does not unlock then the cable is too loose. In either case loosen the set screw in the cable adjustment fitting and adjust accordingly. To relock the knee joint push the Trigger Release toward the bar.

Fabrication Guidelines for Trigger Release w/ Single Cable & Bail Rod

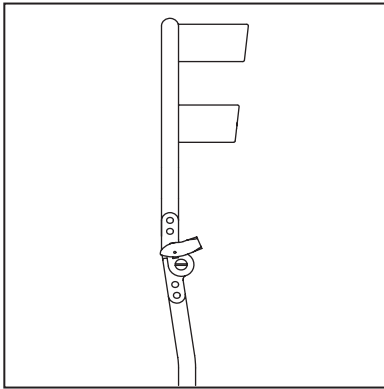


Fig. A

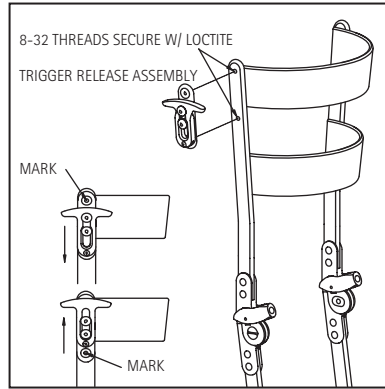


Fig. B

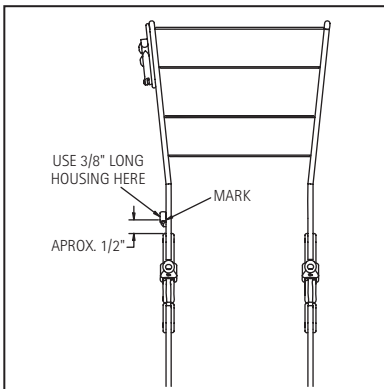


Fig. C

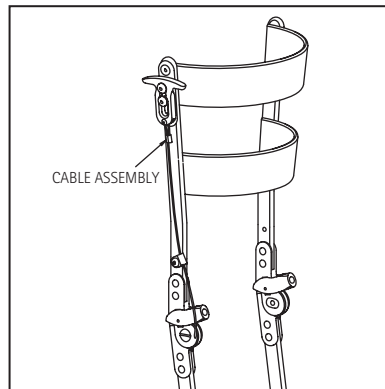


Fig. D

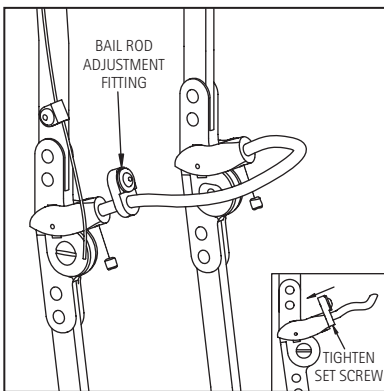


Fig. E

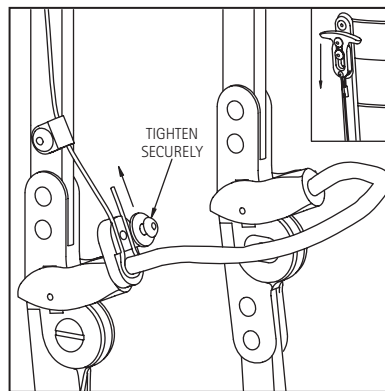


Fig. F

1. Fabricate orthosis as usual. (Do not secure the bail rod to the orthosis at this time.) Fig. A

2. Locate the Trigger Release Assembly on the lateral upright at a position that is easily hand accessible. Mark the two mounting hole locations with the assembly horizontally centered on the bar. Drill the two holes through the bar with a #29 (.136) drill bit. Thread the hole with an 8-32 tap. Fig. B

3. Attach the Trigger Release Assembly with the provided 8-32x5/16 Flat Head Socket Cap Screws to the lateral bar. Secure the screws with Loctite. Fig. B

4. Mark a cable guide location approximately 1/2" above the knee joint on the lateral side. Drill the marked hole through with a #29 (.136) drill bit and thread with an 8-32 tap. Secure the cable guide with the 8-32x1/4 Button Head Socket Cap Screw into the hole on the lateral side. Fig. C

5. Secure the looped end of the cable assembly to the Release Assembly with 6-32x1/4 Button Head Socket Cap Screw. Thread the cable through the housing to the lock on the lateral side. Fig. D

6. Place the Bail Rod Adjustment Fitting onto the end of the lateral side of the bail rod. Secure the bail rod to each lock with the set screws. Push the Adjustment Fitting against the lock on the lateral side and secure with set screw. Fig. E

8. Make sure the Trigger Release is in its lowest position. Thread the cable end through one groove, around the bail rod and back through the second groove in the Adjustment Fitting. Pull the cable tight and tighten the screw and washer against the cable. (WARNING: Be sure not to tighten the cable to a point that causes the locking mechanism in the knee joint to hang open.) Fig. F

9. When the cable is adjusted pull up on the Release Trigger to unlock position then the cable is too tight. If the ring lock does not unlock then the cable is too loose. In either case loosen the screw and washer on the Adjustment Fitting and move the cable accordingly. Once the mechanism works properly, trim the excess cable if desired. To relock the knee joint push the Trigger Release toward the bar.

Fabrication Guidelines for Trigger Release w/ Dual Cable (Plastic Cuffs)

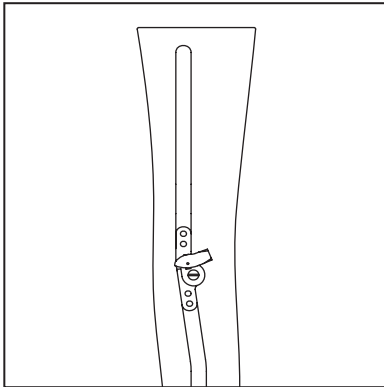


Fig. A

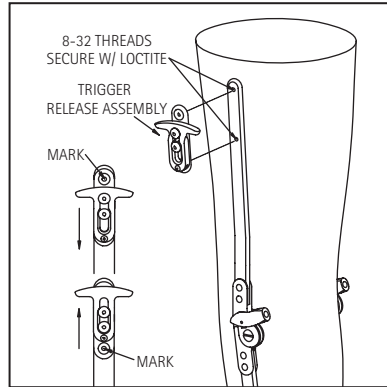


Fig. B

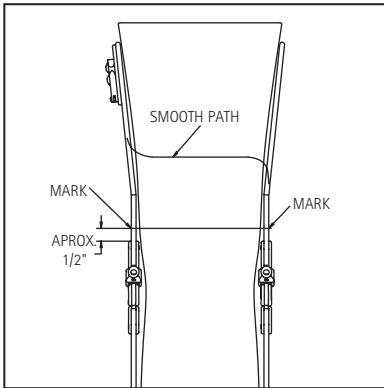


Fig. C

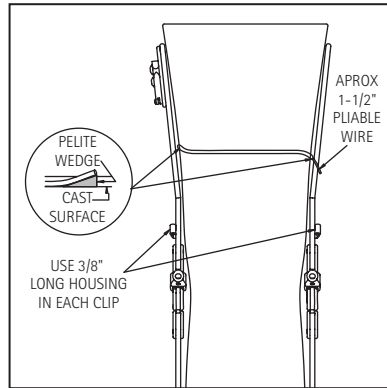


Fig. D

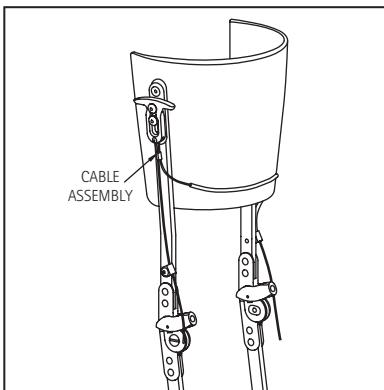


Fig. E

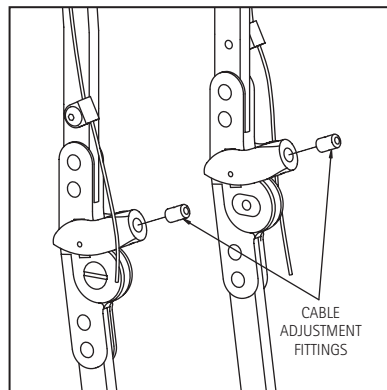


Fig. F

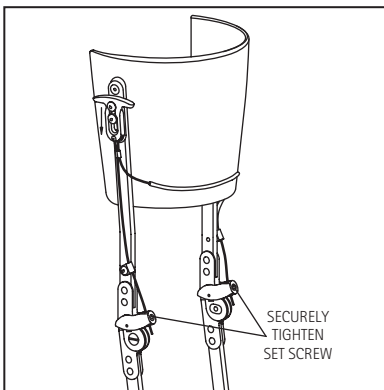


Fig. G

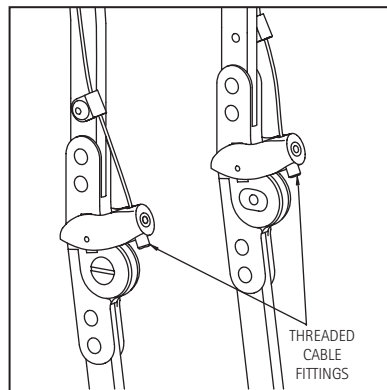


Fig. H

1. Modify cast as usual. Fig. A
2. Bend knee joints roughly for reference of the cable path. Temporarily attach joints to cast. Draw regular trim lines on the cast for reference. Fig. A
3. Locate the Trigger Release Assembly on the lateral upright at a position that is easily hand accessible. Mark the two mounting hole locations with the assembly horizontally centered on the bar. Drill the two holes through the bar with a #29 (.136) drill bit. Thread the hole with an 8-32 tap. Fig. B
4. Attach the Trigger Release Assembly with the provided 8-32x5/16 Flat Head Socket Cap Screws to the lateral bar. Secure the screws with Loctite. Fig. B
5. Mark two cable clamp locations approximately 1/2" above the knee joint on the medial and lateral sides. Drill the holes with a #29 (.136) drill bit and thread with an 8-32 tap. Fig. C
6. Use a cable housing with a pliable wire inserted to form a path around the thigh section. The path should be a smooth arc from the Trigger Release across on the medial side. (To prevent binding in the cable the radius of the arcs must be greater than 1-1/2"). Fig. C. A PeLite™ wedge may be used at the ends of the housing to ramp the housing out of the plastic creating a smoother path to the Trigger Release and the lock. Fig. D
7. Secure each end of the housing to the PeLite™ wedge. Leave approximately 1-1/2" of the pliable wire on the medial side so that it may be extracted after the thermoplastic process. Fig. D
8. Remove knee joints and fabricate w/ usual thermoplastic process.
9. Extract the wire from the housing by pulling on the excess carefully. Remove the plastic covering the housing exits on each end.
10. Secure a cable guide with 8-32x1/4 Button Head Socket Cap Screw into the holes on the medial and lateral side. (Routing the cable through the guides attached to the bar provides the best path toward the lock. Fig. D
11. Secure the looped end of the cable assembly to the Release Assembly with the 6-32x1/4 Button Head Socket Cap Screw. Lubricate the cable and thread the long side of the cable through the housing to lock on the medial side and the short side of the lock on the lateral side. Fig. E
12. Place the Cable Adjustment Fittings with the set screw accessible into the ends of each ring lock. Fig. F
13. Make sure the Release Trigger is in its lowest position. Thread the cable ends through the cross-holes in each Cable Adjustment Fitting. Pull the cable tight and secure cable with the 6-32x1/8 set screw in the Cable Adjustment Fitting. (WARNING: Be sure not to adjust the cable to a point that causes the locking mechanism in the knee joint to hang open.) Fig. G
14. Trim the excess cable leaving approximately 1/4". Use the provided Threaded Cable Fitting to cover the cable if desired. Fig. H
15. When both sides are adjusted pull up on the Release Trigger to unlock the knee joint. If the Trigger does not reach and maintain the unlocked position then one or both cables are too tight. If either ring lock does not unlock then one or both cables are too loose. In either case loosen the set screw in the Cable Adjustment Fitting and adjust accordingly. To relock the knee joint push the Trigger Release toward the bar.

Fabrication Guidelines for Trigger Release w/ Dual Cable (Metal Bands)

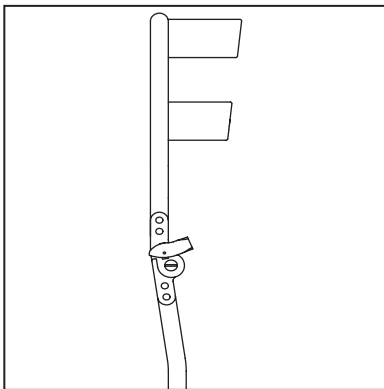


Fig. A

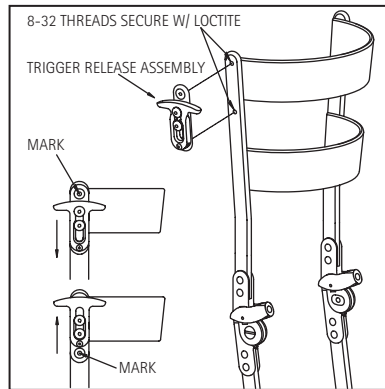


Fig. B

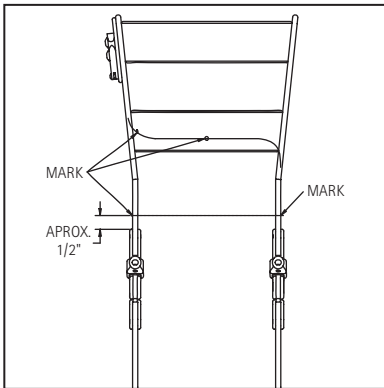


Fig. C

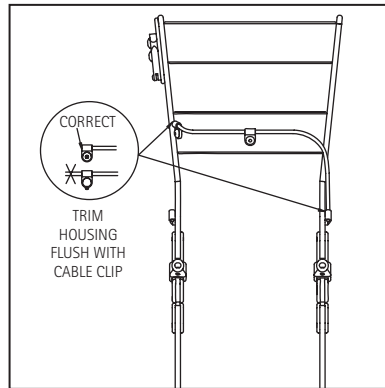


Fig. D

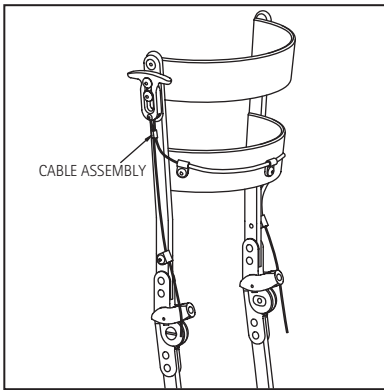


Fig. E

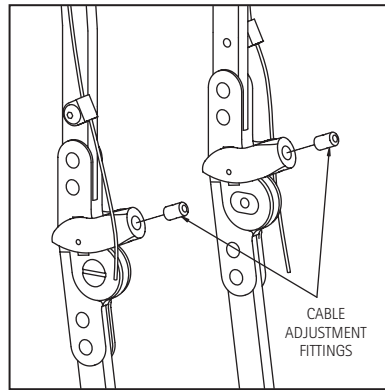


Fig. F

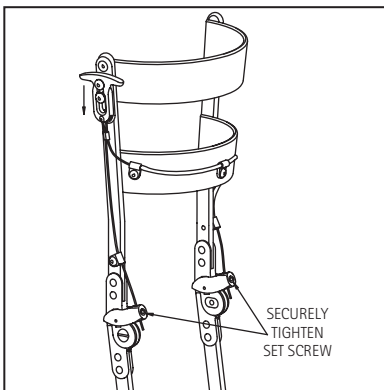


Fig. G

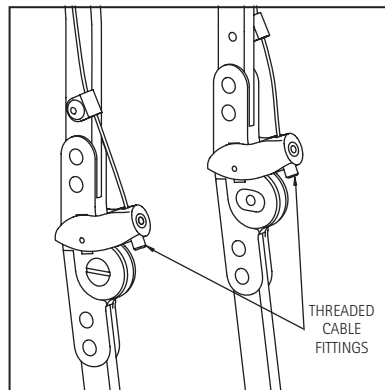


Fig. H

1. Fabricate orthosis as usual. Fig. A
2. Locate the Trigger Release Assembly on the lateral upright at a position that is easily hand accessible. Mark the two mounting hole locations with the assembly horizontally centered on the bar. Drill the two holes through the bar with a #29 (.136) drill bit. Thread the hole with an 8-32 tap. Fig. B
3. Attach the Release Trigger Assembly with the provided 8-32x5/16 Flat Head Socket Cap Screws to the lateral bar. Secure the screws with Loctite. Fig. B
4. Select a path along the lower posterior thigh band for routing the cable to the medial side. The path should consist of a smooth arc from the Release Assembly on the lateral side, a straight line, and a smooth arc down toward the lock on the medial side. (To prevent binding in the cable the radius of the arcs must be greater than 1-1/2".) Fig. C
5. Mark two cable guide locations at the entrance of the smooth arc from the Release Assembly and at the center of the straight-line path toward the medial side. Mark the last two cable guide locations approximately 1/2" above the knee joint on the medial and lateral sides. Drill the four marked holes through with a #29 (.136) drill bit and thread with an 8-32 tap. Fig. C
6. Place three of the cable guides on the provided cable housing. Fix each clamp at one of the three holes on the path to the medial side with the provided 8-32x1/4 Button Head Socket Cap Screws. Cut any excess cable housing with wire cutters so that each of the two ends is flush with the cable guides. Movement in loose ends of the housing will cause loss in the cable travel and may prevent the medial side from unlocking.) Fig. D
7. Secure the remaining guide with the remaining 8-32x1/4 Button Head Socket Cap Screw into the lateral side. Fig. D
8. Secure the looped end of the cable assembly to the Release Assembly with the 6-32x1/4 Button Head Socket Cap Screw. Lubricate the cable and thread the long side of the cable through the housing to the lock on the medial side and short side to the lock on the lateral side. Fig. E
9. Place the Cable Adjustment Fittings into the ends of each right lock. Lightly secure with the set screw. Fig. F
10. Make sure the Trigger Release is in its lowest position. Thread the cable ends through the cross-holes in each Cable Adjustment Fitting. Pull the cable tight and secure cable with the 6-32x1/8 set screw in the Cable Adjustment Fitting. (WARNING: Be sure not to adjust the fitting to a point that causes the locking mechanism in the knee joint to hang open.) Fig. G
11. Trim the excess cable leaving approximately 1/4". Use the provided threaded cable fitting to cover the cable if desired. Fig. H
12. When both sides are adjusted pull up on the Trigger Release to unlock the knee joint. If the trigger does not reach and maintain the unlocked position then one or both cables are too loose. In either case loosen the set screw in the ring lock and turn the Adjustment Fitting accordingly. To relock the knee joint push the Trigger Release toward the bar.