# **INSTALLATION GUIDE**



# TCP TWRB-07 Tower Export Brace 1971-73 Mustang and Cougar



**Description:** Tower export brace includes firewall mount, shock tower mounts, and adjustable aluminum rods with rod ends.

Applications: 1971-1973 Mustang and Cougar

Note: Product will not fit late model fuel injection plenum.

## **PARTS LIST**

#### **TCP TWRB-07 - Tower Export Brace**

Qty	Part Number	Description
2	7907-002	Export brace shock tower plate
1	7907-011	Export brace firewall bracket support
1	7907-013	Export brace firewall bracket
2	7907-38-13.25-S	Radius rod 3/8" thread x 13.25" long, aluminum, satin finish
1	7918-074	Hardware bag

#### 7918-074 - Hardware Bag

Qty	Part Number	Description
11	3101-038-16C	Locknut 3/8-16 nylon insert
2	3102-038-24LY	Jam nut 3/8-24 LH, yellow zinc plated
2	3102-038-24RC	Jam nut 3/8-24 RH, clear zinc plated
2	3104-038-C0.75C	3/8-16 x 3/4" button head cap screw
4	3104-038-C1.00C	3/8-16 x 1" button head cap screw
5	3104-038C1.25C	3/8-16 x 1-1/4" button head cap screw
2	3104-038C1.75C	3/8-16 x 1-3/4" button head cap screw
2	3108-038L-C	Lock washer 3/8" regular
2	3111-038x038-L	Rod end LH 3/8" thread x 3/8" bore x 1/2" ball width
2	3111-038x038-R	Rod end RH 3/8" thread x 3/8" bore x 1/2" ball width
22	3157-038S-C	Washer 3/8" flat SAE
2	7907-007	Tapered spacer
2	7907-009	Rod end clevis, 3/8"

# **INSTRUCTIONS**

The following installation photos were shot using a 1964-66 Mustang. Procedure is identical unless otherwise noted..

 Remove the shock stem hardware and the three nuts holding the factory shock mount.



2. Remove the shock mount from the shock tower.



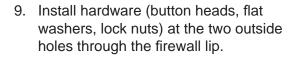
3. Unbolt the factory export brace from the firewall. Some OEM braces may be spot welded to the firewall lip. The spot welds will have to be ground or drilled out to remove the brace.



- 4. The factory brace (two braces on 71-73) can now be removed.
- 5. Any clean up work or painting in the areas from which the brace was removed must be done at this time.



- The firewall bracket installs centered onto the top side of the firewall-to-cowl sheet metal seam that protrudes from the firewall.
- 7. Measure from the inner fenders to find center, then clearly mark. The center holes in the firewall bracket will align with this mark.
- 8. Use a hammer and dolly to flatten the lip until the bracket can fully seat.



- Remove the cowl vents and check to make sure the area behind the firewall bracket is free from wiring or lines.
- 11. Using the bracket as a jig, drill the remaining 3/8" holes (4 total).
- Position the reinforcement plate inside the cowl space behind the firewall bracket.









13. Continue installing the remaining hardware, then tighten to 30 lb-ft.



- 14. Place the aluminum shock tower plate over the shock and onto the OEM bolts.
- 15. Place the factory upper shock mount on top of the aluminum shock tower plate.



- 16. Use OEM hardware to secure the shock mount and shock crossbar.
- 17. Repeat procedure for opposite side of vehicle.



- 18. Thread the jam nuts onto the rod ends. The yellow zinc jam nut indicates lefthand threads.
- 19. Apply a small amount of anti-seize to the threads of each rod end and thread them into the radius rods. The knurled end of radius rod indicates left-hand threads.
- 20. Leave jam nuts loose.
- 21. Bolt the radius rod assemblies to the firewall bracket using the 3/8-16 x 1" button head bolts, and locknuts. The rod end mounts below the bracket. Tighten to 30 lb-ft.

NOTE: The knurled end of each radius rod should be closest to the firewall.

- 22. Bolt the rod end clevis to the shock tower plate with the 3/8-16 x 3/4" button head bolt, lock washer, and flat washer. Lightly tighten to remove free play, but allow rotation to align with the rod end.
- 23. To line up the rod end with the clevis, turn the radius rod to adjust the length. Keep the thread engagement of each rod end equal.
- 24. Install the 3/8-16 x 1-1/2" button head bolt and locknut to secure the radius rod at the shock tower end.
- 25. Tighten the clevis and through bolt to 30 lb-ft.









26. After both rod ends have been mounted, adjust the rod end so that it is not preloaded and can rotate freely.



- 27. Tighten the jam nuts to 30 lb-ft.
- 28. Installation is complete.





#### Ride-Height Variation (Coil-Over Only):

The TCP tower-brace plate can be used with either of the two styles of coil-over suspensions from TCP; bolton coil-over or full coil-over conversion. In each style of suspension, the top shock mount directly affects the ride-height.

Placing the **coil-over mount BELOW** the tower-brace plate is the standard ride-height position.

Placing the **coil-over mount ABOVE** the tower-brace plate lowers the ride height approximately 1/2".



Bolt-On Coil-Over mounted BELOW - standard ride height



Full Coil-Over mounted ABOVE - lowered ride height



Full Coil-Over mounted BELOW - standard ride-height

#### **WARRANTY NOTICE:**

There are NO WARRANTIES, either expressed or implied. Neither the seller nor manufacturer will be liable for any loss, damage or injury, direct or indirect, arising from the use or inability to determine the appropriate use of any products. Before any attempt at installation, all drawings and/or instruction sheets should be completely reviewed to determine the suitability of the product for its intended use. In this connection, the user assumes all responsibility and risk. We reserve the right to change specification without notice. Further, Chris Alston's Chassisworks, Inc., makes NO GUARANTEE in reference to any specific class legality of any component. ALL PRODUCTS ARE INTENDED FOR RACING AND OFF-ROAD USE AND MAY NOT BE LEGALLY USED ON THE HIGHWAY. The products offered for sale are true race-car components and, in all cases, require some fabrication skill. NO PRODUCT OR SERVICE IS DESIGNED OR INTENDED TO PREVENT INJURY OR DEATH.

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Technical Support: tcptech@cachassisworks.com



# **INSTALLATION GUIDE**



# TCP TWRB-08 Fender Monte Carlo Brace 1971-73 Mustang and Cougar





**Description:** Fender Monte Carlo brace includes fender mounts and adjustable aluminum rods with rod ends

Applications: 1971-1973 Mustang and Cougar

Note: Product will not fit late model fuel injection plenum

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#### **PARTS LIST**

#### TCP TWRB-08 Fender Monte Carlo Brace 1971-73 Mustang

Qty	Part Number	Description
1	7907-050-42.00-S	Radius rod 1/2" thread x 42" long aluminum satin finish
1	7918-075.12	Hardware bag 1
1	7918-075.22	Hardware bag 2

#### 7918-075.12 - Hardware Bag 1

Qty	Part Number	Description
8	3101-038-16C	Locknut 3/8-16 nylon insert
2	3101-050-13C	Locknut 1/2-13 nylon insert
1	3102-050-20LY	Jam nut 1/2-20 LH, yellow zinc plated
1	3102-050-20RC	Jam nut 1/2-20 RH, clear zinc plated
4	3104-038C1.00C	3/8-16 x 1" button head cap screw
4	3104-038C1.25C	3/8-16 x 1-1/4" button head cap screw
2	3104-050C1.75C	1/2-13 x 1-3/4" button head cap screw
1	3111-050X050-L	Rod end LH 1/2" thread x 1/2" bore
1	3111-050X050-R	Rod end RH 1/2" thread x 1/2" bore
16	3157-038S-C	Washer 3/8" flat SAE

#### 7918-075.22 - Hardware Bag 2

2	7907-004	Monte Carlo brace fender bracket
2	7907-012	Monte Carlo brace fender bracket support

## **INSTRUCTIONS**

The following installation photos were shot using a 1964-66 Mustangs. The installation procedure is identical.

 Center the fender bracket against the passenger-side inner fender just behind the battery tray area; approximately 12-1/2" from the rear edge of the radiator support.

The top edge of the bracket must be even with bottom of the corner's radius where it meets the flat sheet metal.

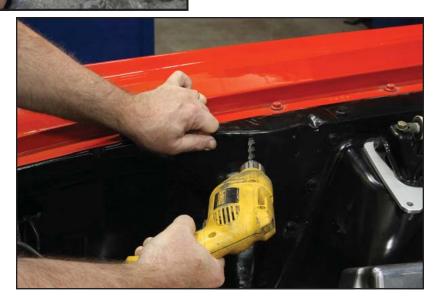
Fore/aft position can be varied for individual clearance issues.



- 2. Using a 1/8" bit, drill a hole through the center of one of the holes in the bracket.
- Place the bent steel support bracket into position on the opposite side of the inner fender to verify that the pilot hole is at the correct height. Make adjustments to the pilot hole as necessary.



4. Using a 3/8" bit, drill one of the two holes needed to mount the bracket.



5. Bolt the aluminum fender bracket and steel support bracket to the inner fender using a 3/8" button-head bolts, two flat washers, and a locknut.



6. Tighten the hardware to 30 lb-ft.



7. Drill the second hole through the inner fender. Make sure the bracket is square to the top of the inner fender.



8. Install the second set of 3/8" mounting hardware and tighten to 30 lb-ft.



9. Place a piece of masking tape on the inner fender above the bracket to help prevent the paint from lifting or chipping.



- 10. From underneath the fender, use the support bracket as a guide to drill 3/8" diameter holes through the inner fender.
- 11. Use very light pressure to prevent damaging the paint on the top surface.



12. Install 3/8" button head bolt, two flat washers, and locknut. Tighten to 30 lb-ft.



13. This is the completed fender bracket install on the passenger side.



14. Repeat the procedure for the driver side inner fender.



- 15. Thread the jam nuts onto the rods ends. The yellow zinc jam nut indicates left-hand threads.
- 16. Apply a small amount of anti-seize to the rod-end threads.
- 17. Thread the rod ends completely into radius rod. Knurled end of radius rod indicates left-hand threads.
- 18. Leave the jam nuts loose.



19. Bolt the radius-rod assembly to the first fender bracket using a 1/2-13 x 1-3/4" button-head bolt, and locknut.



20. Tighten the fasteners to 40 lb-ft.



- 21. The length of the radius-rod assembly will have to be adjusted to line up with the second bracket. Hold the loose rod end to prevent it from rotating while adjusting. Thread engagement of each rod end must remain equal.
- 22. Secure the second end of the radius rod and tighten to 40 lb-ft.



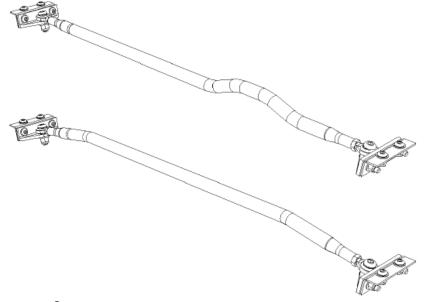
- 23. Tighten both jam nuts to lock the adjusted length.
- 24. The install is now complete.





#### **MODIFICATIONS**

25. Vehicles equipped with A/C or centrifugal superchargers must bend the radius rod to allow clearance. Performing this modification requires some fabrication skills and the correct dimensions will vary based on application. Overall rod length will shorten as bends are added. Two examples of possible modifications are illustrated.



# **INSTALLATION GUIDE**



# TCP TWRB-03 Tower Truss Support Brace





**Description:** Truss brace secures shock towers to fender brace straight aluminum tube; includes radius rods; rod ends; & tube clamps.

**Applications:** Comet '60-'65, Cougar '67-'70, Cyclone '64-'65, Falcon '60-'65, Mustang '64-'70, Ranchero '60-'65; Requires installation of tower export brace (TCP TWRB-01 OR TCP TWRB-04) and fender Monte Carlo brace (TCP TWRB-02 OR TCP TWRB-05)

#### **PARTS LIST**

#### **TCP TWRB-03 Tower Truss Brace**

Qty	Part Number	Description
2	7907-003	Truss brace 1" tube clamp
2	7907-38-08.00-S	Radius rod 3/8" thread x 8" long aluminum, satin finish
1	7918-027	Hardware bag

#### 7918-027 - Hardware Bag

Qty	Part Number	Description
8	3101-038-16C	Locknut 3/8-16 nylon insert
2	3102-038-24LY	Jam nut 3/8-24 LH, yellow zinc plated
2	3102-038-24RC	Jam nut 3/8-24 RH, clear zinc plated
2	3104-038C1.25C	3/8-16 x 1-1/4" button head cap screw
2	3104-038C1.75C	3/8-16 x 1-3/4" button head cap screw
2	3111-038x038-L	Rod end LH 3/8" thread x 3/8" bore
2	3111-038x038-R	Rod end RH 3/8" thread x 3/8" bore

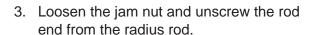
#### **OPTION: TCP TWRB-06 - Tower Brace Tapered Spacer Set (provides additional engine clearance)**

2	3104-0381.75	Button head 3/8-16 x 1-3/4" cap screw
2	7907-007	Export brace tapered spacer

### **INSTRUCTIONS**

Installation of the truss brace clamps requires one end of the Monte Carlo brace to be disassembled.

- Make note of how many threads are visible before the jam nut, so the radius rod can be reassembled to the same length.
- 2. Unbolt one end of the Monte Carlo brace from the fender bracket.



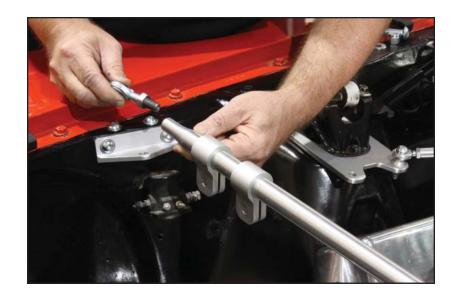




4. Slide both tube clamps over the end of the Monte Carlo brace.



5. Screw in the rod end to the previous length.



- 6. Bolt the rod end back onto the fender bracket. Tighten to 40 lb-ft.
- 7. Tighten the jam nut.



- 8. Thread the jam nuts onto the rod ends. The yellow zinc jam nut indicates left-hand thread.
- 9. Apply a small amount of anti-seize to the rod end threads.
- 10. Thread the rod ends completely into the radius rods. Knurled end of radius rod indicates left-hand threads. Jam nuts will be tightened after the radius rod assemblies are installed onto the vehicle.



- 11. Bolt the right-hand threaded end of the radius rod assembly (clear-zinc jam nut end) to the shock tower plate. Use a 3/8-16 x 1" button head bolt and locknut.
- 12. Tighten to 30 lb-ft.



If you need additional clearance for the valve covers or other accessories the optional TWRB-06 misalignment kit can be installed. Use a 3/8-16 x 1-3/4" button head bolt, supplied in the kit, and locknut.

Tighten to 30 lb-ft.



13. Bolt the opposite end of the rod to the bottom of the tube clamp, using a 3/8-16 x 1-3/4" button head bolt and locknut.



14. Tighten to 30 lb-ft.



- 15. Tighten jam nuts.
- 16. Repeat procedure for the opposite side of the vehicle.



17. The install is complete.



Here the install is complete with the optional misalignment spacer kit TWRB-06.



18. This shows the complete tower brace package installed.



#### NOTES:

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