



SILVER SPORT
Transmissions

1963 – 1979 C2/C3 CORVETTE (Factory Manual)

REMOVABLE CROSSMEMBER CENTER INSTALLATION MANUAL - TKO

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Before you start: The modifications required to create a removable center section from your factory crossmember will require cutting and machining tools and welding of supplied bolted joint flanges. The center section of the crossmember will be cut and 1/2" of length will be removed from both ends to make room for (2) 1/4" thick joint flanges to be welded in place. The special TKO crossmember mounting bracket (XMG-02501) and exhaust pipe support bracket (XMG-02502) will still be used to adapt original factory crossmember to accept the TKO mount with rubber isolator.

You should verify the parts you received. Compare the received items to the detailed invoice provided in your shipment.

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION

In addition to these instructions, you should have received the following instructions with your purchase of the SST TKO kit for the C2/C3 Corvette:

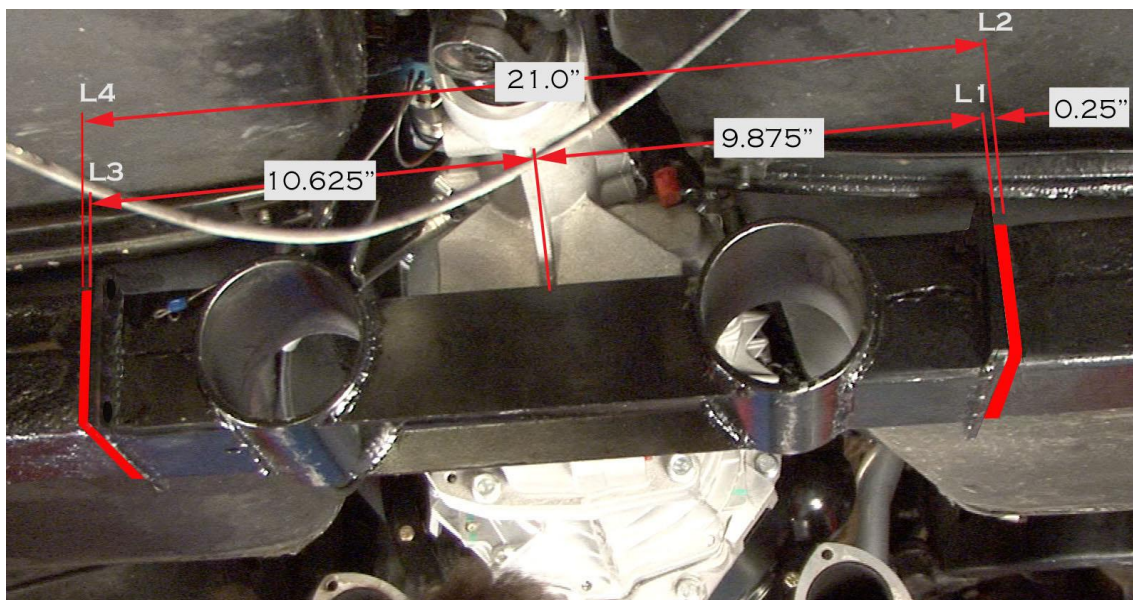
MAG-00602 GM Corvette 1963-1967 (C2) Factory Manual TKO Installation Instructions
MAG-00603 GM Corvette 1968-1982 (C3) Factory Manual TKO Installation Instructions

A. REMOVE EXISTING EQUIPMENT

1. Disconnect negative (-) battery cable.
2. Raise car securely on lift or jack stands.
3. Remove exhaust pipes from the crossmember tubes.
4. Remove E-brake pulley, bushing, bolt, washer, and nut. Secure brake cable lines.
5. Measure and record the engine drivetrain angle or vertical position of transmission output shaft to tunnel reference surface. Secure rear of engine with hydraulic jack.

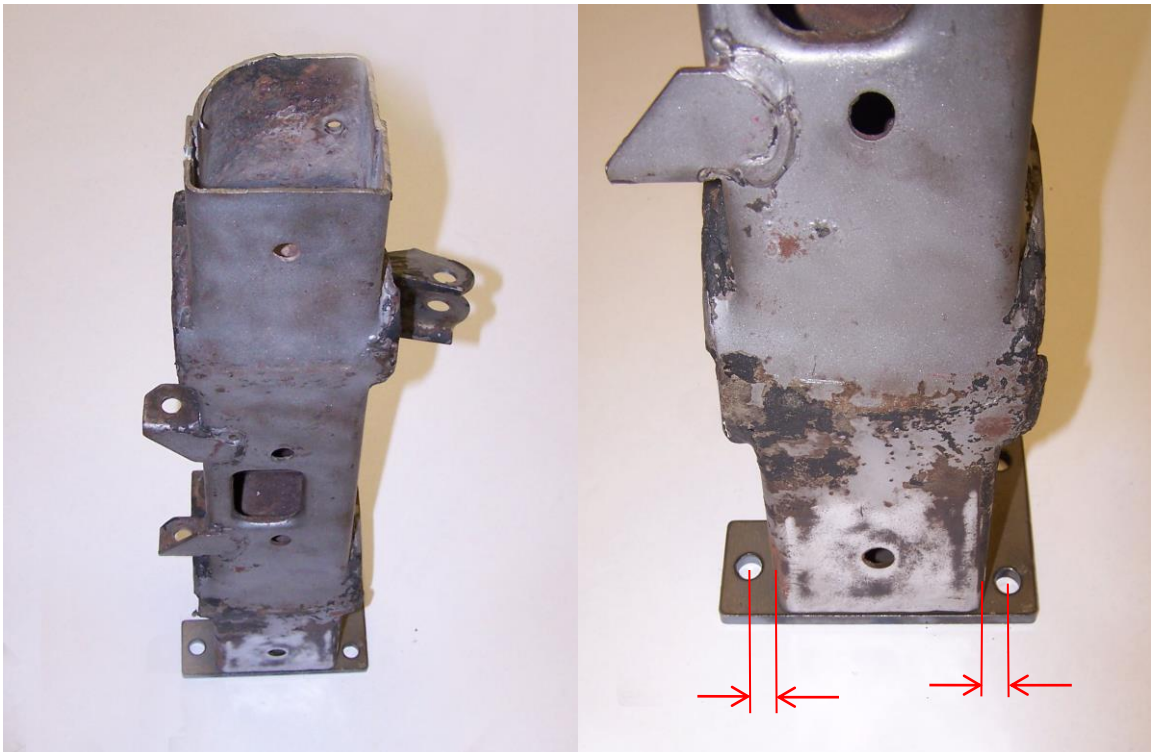
B. INSTALL NEW EQUIPMENT

The crossmember for original factory manual transmission option was welded in place to the frame. The center section of the crossmember (20.5" long) must be removed to make modifications and attach flanges for bolted joints.



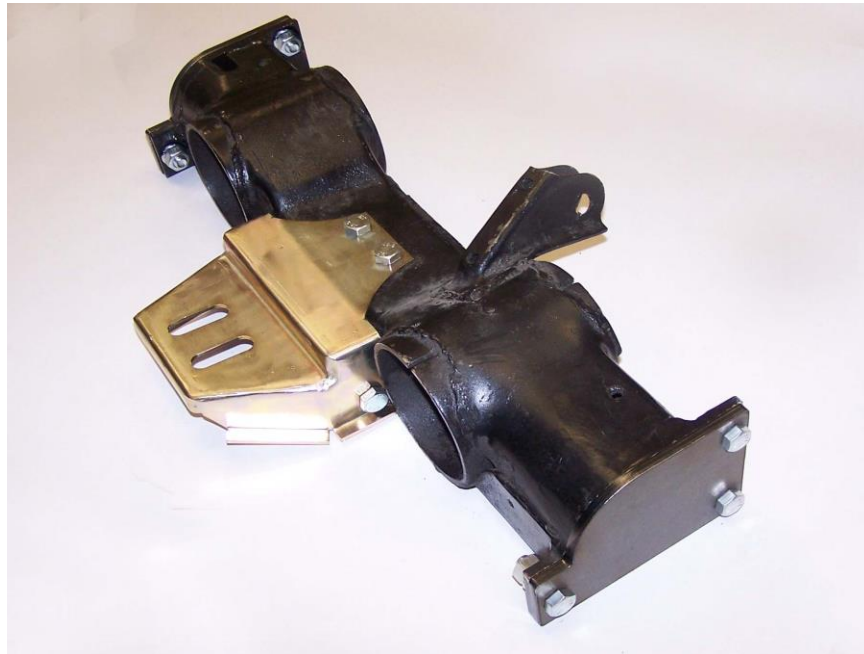
1. Begin by scribing reference marks on both ends of the crossmember near the frame rails and record measurement for frame width (FW). This measurement will be used later to assure that frame width does not change during modification of the crossmember.
2. Using a square, scribe a line (L1) on the crossmember passenger side located 9.875" from the centerline between the (2) transmission mounting bracket mounting holes on the crossmember. Continue the line as far as possible around the crossmember to guide your cut. This will be the first rough cut thru your crossmember.
3. Scribe a second line (L2) 0.25" from L1 toward the end of the crossmember welded to the frame and continue the line as far as possible around the crossmember to guide your cut. This second line will be the final finished trim cut on the passenger side of your crossmember.
4. Using a square, scribe a third line (L3) on the crossmember driver side located 10.625" from the centerline between the (2) transmission mounting bracket mounting holes on the crossmember. Continue the line as far as possible around the crossmember to guide your cut. This will be the second rough cut thru your crossmember that will remove the center section.

5. Scribe a fourth line (L4), 21.0" from L2 toward the driver side of the crossmember on driver side and continue the line as far as possible around the crossmember to guide your final cut. The L4 line will be the final finished trim cut on the driver side of your crossmember.
6. If crossmember is not bolted to transmission, support the center section before making first cut. Using an appropriate power saw, cut thru L1 on passenger side of crossmember. **Take precaution to not saw into floor above crossmember.**
7. With crossmember support in place, then proceed to cut thru L3 on the driver side. Unbolt at transmission isolator and remove center section.
8. The finished center section length will be 20" after removing approx. 1/4" from each rough cut end. Using a square, scribe finished cut line 1/4" from cut end on passenger side square to the bottom of crossmember. Measure to the driver side and scribe another line at 20".
9. Using appropriate tools, remove the rough cut ends to the 20" length.
10. Place one end of the center section over one of the flanges with the (2) hole side of flange facing to the rear. Center the center section top to bottom with flange. Align the center section front to back with equal distance from face of the center section to the flange holes. Tack weld in place for test fitting.



11. Repeat Step 11 for opposite end.

12. Measure overall length of center section with flanges now tack welded in place – should be 20.5”
13. You are ready to make final trim cuts to the crossmember end sections remaining attached to the car frame. The end sections will have scribed lines (L2,L4) from previous steps. If the center section with flanges measures differently from the 20.5” dimension, then the crossmember end scribe line locations will need to be adjusted to match. Remember – it is important to match the center section assembly width to the final opening width between the crossmember ends remaining attached to car frame.
14. Install the crossmember mounting bracket to the center section and attach the assembly to the TKO isolator. Install the remaining flanges to the center section with flange assembly with supplied hardware (HWG-Pack C3). Adjust height at rear of transmission if needed to match the measurements taken prior to cutting the crossmember.



15. Make final trim cuts keeping the finished edge square to the bottom of crossmember ends. Adjust location to get a tight fit. Recheck the FW measurements recorded prior to cutting crossmember. If the opening is too small the frame rails could be pushed out and if the opening is too wide the frame rails could be drawn in with either situation resulting in body distortion.
16. Once the transmission height setting is correct, the “loose” flanges that are bolted to center section for location can be tack welded to the crossmember end sections.

17. Remove the center section assembly to do the final weld on all tack welded flanges. You will not be able to weld across the top of the outer crossmember ends due to the clearance with floor. Apply body sealer LORD Fuser 803DTM Metal Sealer or equivalent across top of the flange to the cut crossmember joint to prevent water intrusion.
18. Paint all modified areas for corrosion protection and reinstall center section and bolt into place.

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TRANSMISSION SYSTEM!**