1511 Hancel Parkway Mooresville, IN 46158 317-837-2444

Subframe Stiffening System
2005-2014 Mustangs
(FIT-M03)

Twisting, bending, twisting, bending.....unlike a human, this is NOT the way a car stays in shape! Even everyday driving puts your car through a workout of twists and bends. Installing Stifflers FIT System integrates the front and rear subframe and ties them into the rocker panel, forming a triangulated web of strength and stiffness. The end result is your car keeps its' shape, improving your handling, launches, ride quality and more.

(Please read all instructions prior to beginning installation. Contact your dealer with any questions.)

Kit Includes:

1	Driver Subframe Connector
1	Passenger Subframe System
2	14x2.0x95mm HHCS
2	14x2.0 Nyloc Nuts
4	½" USS Washers
2	Spacers
4	Plastic End Plugs

Required Tools: Basic Hand Tools
MIG Welder
Torque Wrench
Floor jack
Black Rust Preventative Paint

Install Time: 3 hrs. (Coupe) / 4 hrs. (Convertible)

Installation:

1. Disconnect battery.
2. Raise vehicle to allow access for installation. [*NOTE: It is recommended the vehicle's weight be supported by the suspension during installation. This can be accomplished by using a drive on style lift, ramps or raising the car and positioning jackstands under the suspension.*]
3. Lay subframe connectors (SFC) on ground and remove tape tabs located along top edges of rail and mounts to expose bare metal welding areas.
4. On Driver's side of car, find and remove protective plastic panel covering fuel and brake lines. Keep all OEM hardware and set panel aside.
5. Remove bolt securing E-brake bracket (Fig.1).
6. Loosen and remove lower control arm front mounting bolt (Fig.2). *[NOTE: Bolt may be pinched due to suspension loading making it difficult to remove. To assist removal, pull forward slightly on axle housing to relieve pressure while removing bolt.]*
7. ***[NOTE: If installing on a convertible refer to additional installation details on page 5 before continuing.]***
8. Locate Driver's side SFC (Fig.3) and loosely fasten into place with supplied bolt at control arm mount. A jack or clamp can be used to temporarily support the front section against bottom of car (Fig.4). *[NOTE: The lower control arm does not need to be in place for this step. The arm can be rotated downward slightly so the bolt can easily be put in place through mount.]*
9. Using the bare metal areas on the SFC as a guide, mark the locations for weldments along the car's underbody (Fig.5).
10. Remove SFC and grind paint from marked areas on car.
11. Replace SFC on vehicle. Using supplied hardware, fasten control arm into position as shown in Fig.6. ***[NOTE: Do not forget to insert spacer; it must be in place for bolt to torque correctly.]***
12. As before, support front of SFC against bottom of car using jack or clamp.
13. Snug control arm mounting bolts.
14. Place tack-welds within the designated welding areas working from front to rear of the SFC.

15. Remove support from front of SFC and finish-weld all designated areas starting at the front and working towards the rear. ***[NOTE: Use caution around fuel and brake lines.] [For convertibles weld SFC to mount bracket of factory rear brace at flanges.***
16. Clean weldments with wire brush. Spray all bare metal areas with rust preventative paint. If color matching is desired, use Textured Matte Black paint.
17. Repeat Steps 5~16 for Passenger side.
18. Final torque both control arms to 129ft-lbs.
19. Re-install E-brake brackets.
20. Cut out supplied paper template. Position on plastic panel as shown (Fig.7).
21. Trace onto panel and cut out area shown. (Fig.8)
22. Draw straight line on panel as shown in Fig.9 and remove end section.
23. Re-install plastic panel starting at front then bending the rear up and into position (Fig.10). Fasten with OEM hardware. ***[NOTE: It may be necessary to trim area shown with arrow for proper fit.]***
24. Insert supplied plastic end plugs into SFC to keep moisture out.
25. Lower vehicle and reconnect battery.

Fig. 1

Fig. 2

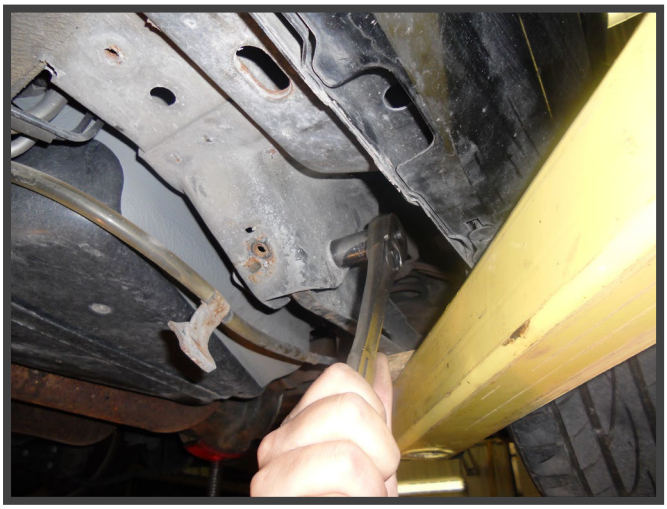


Fig. 3

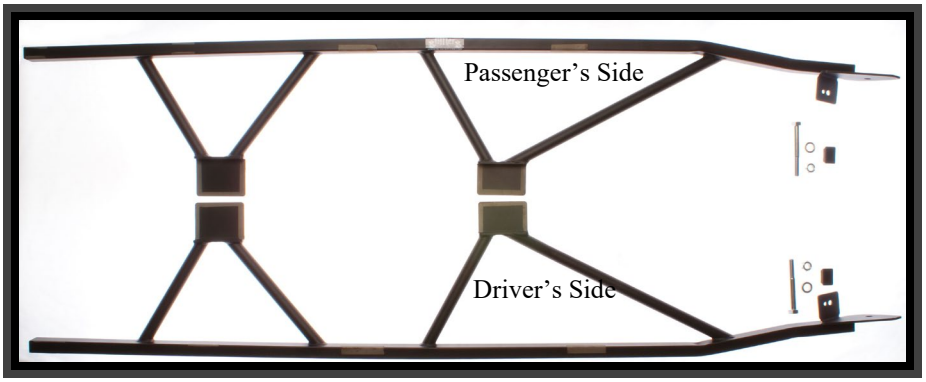


Fig. 4 (Shown with prototype SFC)

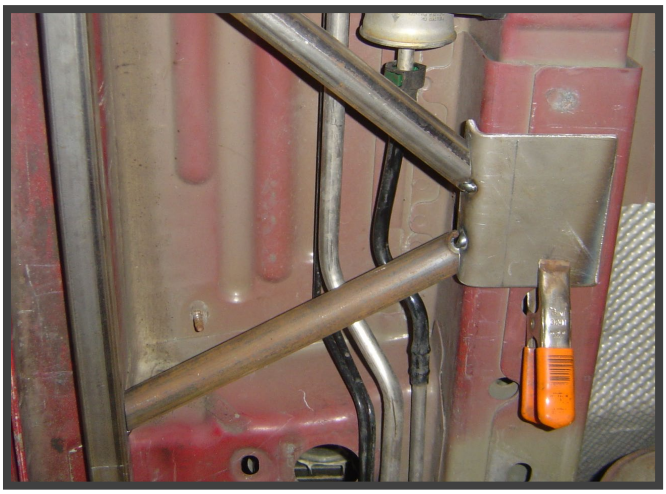


Fig. 5

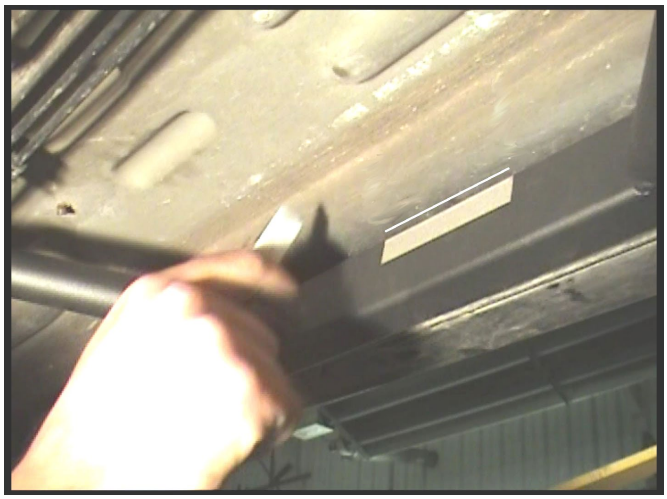
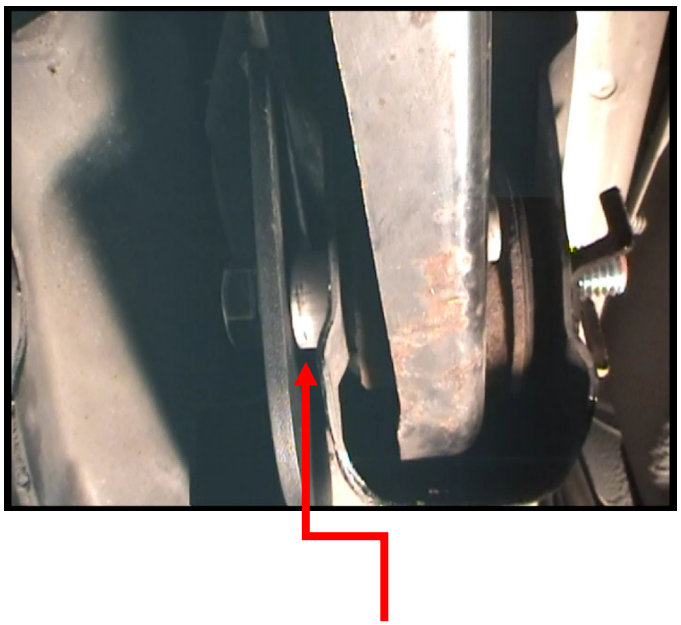


Fig. 6



Location of spacer

Fig. 7

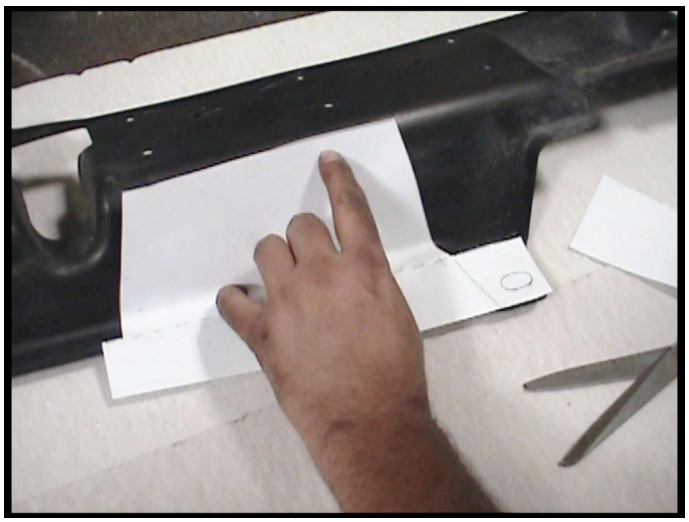


Fig. 8

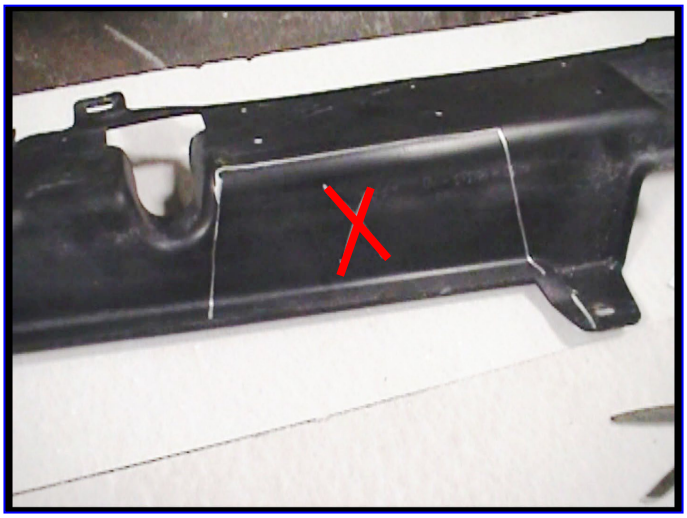


Fig. 9

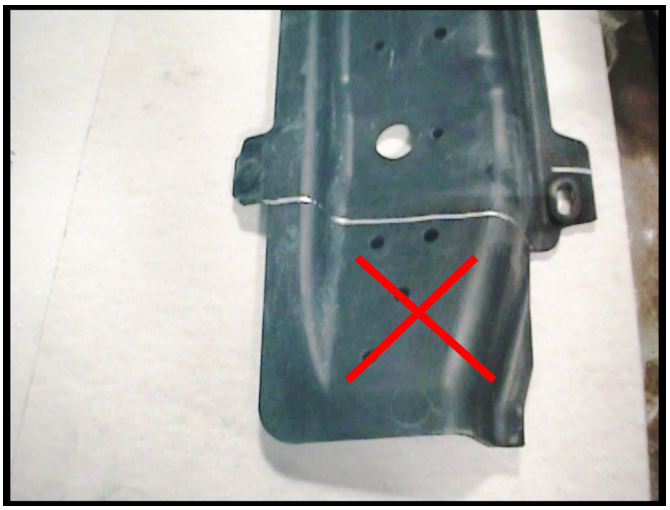
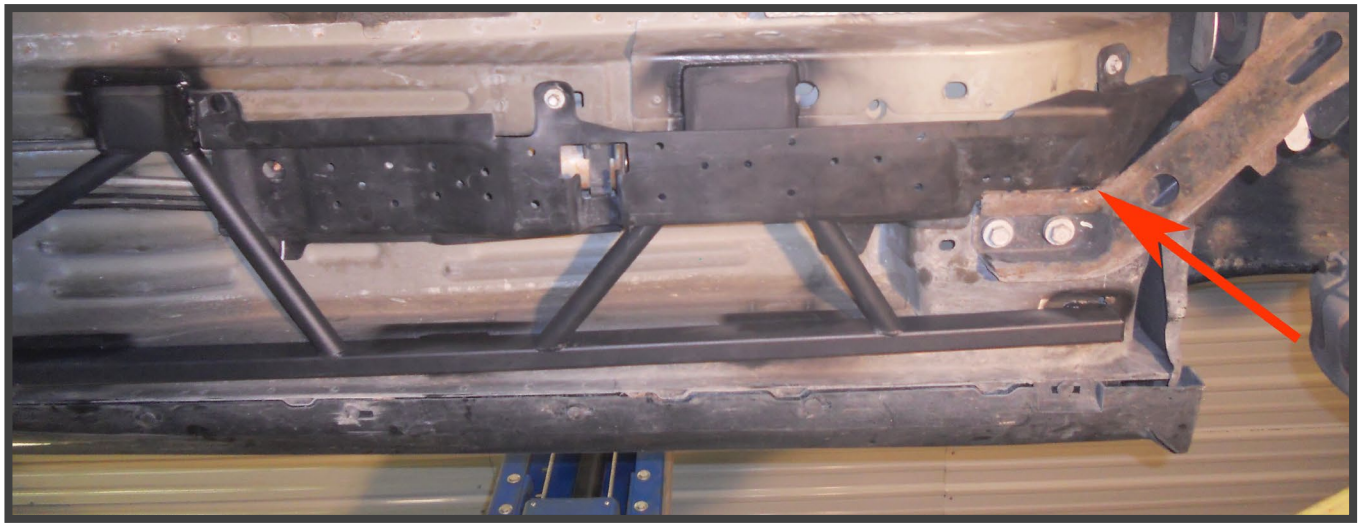


Fig. 10



1511 Hancel Parkway Mooresville, IN 46158 317-837-2444

Convertibles

Due to having no upper roof structure, convertibles are inherently prone to chassis twist and deflection in comparison to hard tops. To compensate for this, it is routine for auto manufactures to place additional reinforcement bracing under the vehicle in selective locations. In order to properly install this FIT System the factory bracing must be slightly modified or completely removed. **However, to achieve the stiffest vehicle possible we recommend the factory bracing be retained and modified as described below.**

1. Due to the mounting location of the factory convertible bracing a section of it will need to be cut and removed to allow the FIT System to sit properly against the bottom of the car. To do this, the SFC must first be held in position and the locations for modifying marked.
2. Locate Driver's side SFC (Fig.3). Place the "L" shaped mounting brackets against the front frame rail while vertically aligning the rear bracket hole with the control arm mounting hole. Use a jack or clamps to temporarily support the SFC in place (Fig.12). ***[NOTE: The SFC will be laying on top of the factory support brace as shown in Fig.11]***
3. Place cutline on factory brace tube just in front of its' mounting bracket (Fig.13).
4. Mark locations where SFC hits on mounting bracket flanges (Fig.14).
5. Remove SFC and set aside.
6. **Cutting Factory Brace**
   The brace is now ready to be cut at the marked locations (Fig14). This can be done while on the car or the brace can be unbolted and removed for the modifications.
7. Using a cutoff wheel, cut out and remove sections of flange shown in white in Fig.15. Section marked with red "X" will be discarded.
8. Grind or hammer down end of rib section to allow SFC to sit flat (inside circle Fig.15)
9. Cut factory tube at location marked in Step#3.
10. Remove the two bolts located at the front of the factory brace (Fig.11) and discard cut section.
11. Repeat Steps 2-10 for Passenger side.
12. Return to Step 8 on page 1.

Fig. 11

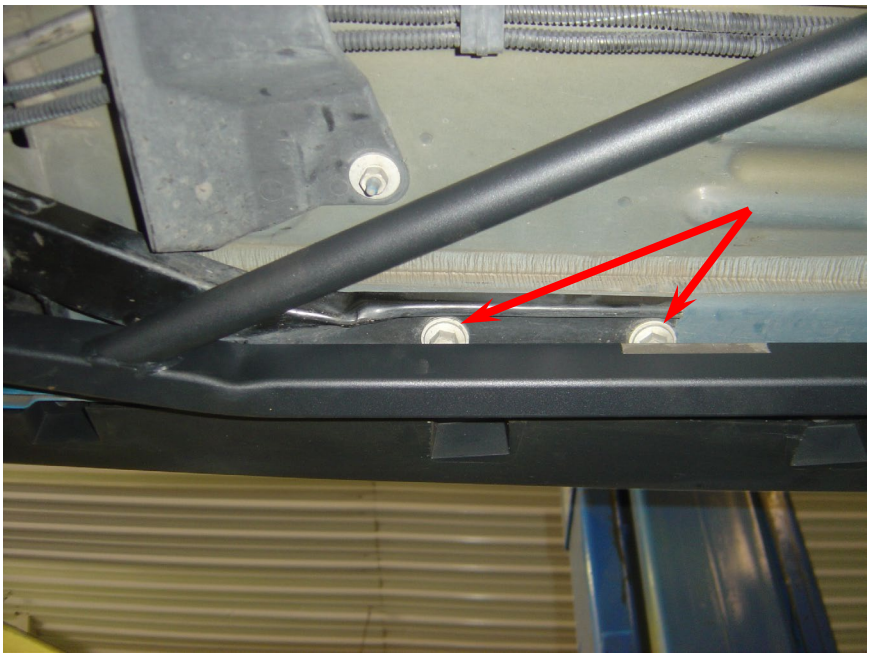


Photo shows driver side.

Fig. 12

Fig. 13

Fig. 14

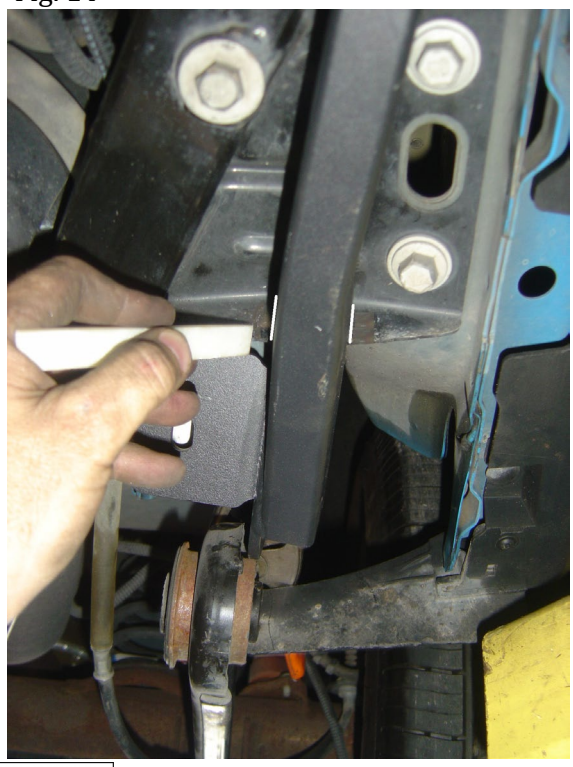


Fig. 15