



# 1964.5-1973 Mustang

## MOD1 Coilover Kit

FXXADK0100, FXXADK0200, FXXADK0400

FXXA1K0100, FXXA1K0200, FXXA1K0400



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Item	Description	Quantity
1	Upper Control Arm w/Shaft Kit, Ball joint, Offset Key & Hardware (Left)	1
2	Upper Control Arm w/Shaft Kit, Ball joint, Offset Key & Hardware (Right)	1
3	Coilover Spring (8"x2 1/2"x500 lb) *Unless specially configured	2
4	JRi Shock (Non/Single/Double Adjustable) *Adjustment depending on kit purchase	2
5	Coilover Shock Top Retaining Ring	2
6	Upper Coilover Mount	2
7	Coilover Mount Spacer *Included in 64-66 Mustang Applications	2
8	Coilover Bolt Kit (64-66/67-73)	1

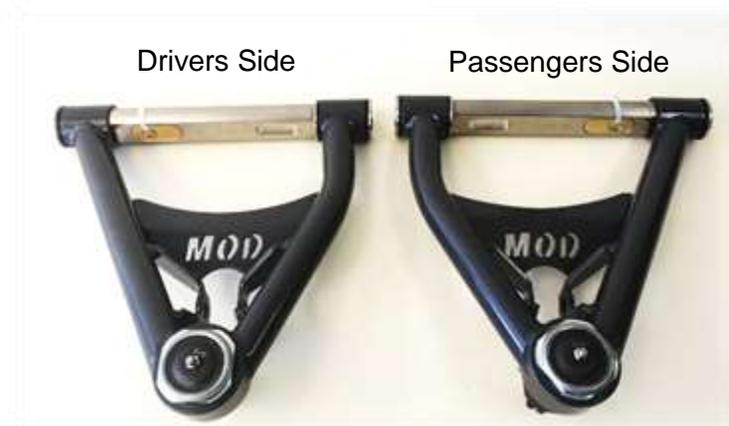
Read all installation instructions to their fullest before beginning the installation of your product. Always make sure to wear the appropriate safety equipment when working on your vehicle and that the car is safely placed on jack stands. If any questions arise before/during/after you install the product please call Mike Maier Inc. at (925)-443-6300 or email us at [maier@mikemaierinc.com](mailto:maier@mikemaierinc.com).

**NOTE: All work should be performed by a qualified technician.**

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## Pre-installation

1. Take note of all components included in the box and compare them with the included components above.



*Figure 1. Notice the orientation of the control arms. The arrow in the shaft assembly should be pointing towards the front bumper and the bent leg of the control arm should be on the rearward side of the vehicle. The yellow zinc plated alignment key may need to be flipped from factory installation depending on application.*

2. Ensure that the control arm has all necessary parts
  - a. Install the zerk fitting on top of the ball joint if it has not already been done.
  - b. Take inventory of the castle nut, washer, and cotter pin for the upper ball joint.

## Suspension Removal

1. Place at minimum the front of the vehicle on jack stands, ensuring the car is in gear and the parking brake is set. If you have MMi Subframe Connectors, then the jack stands can be placed directly under the subframe connectors.
  - a. \*Remember to loosen, but not remove lug nuts before jacking the vehicle
2. Remove front wheels from the vehicle



3. Disconnect the front sway bar end link from the lower control arm on both driver & passenger sides.
4. Open the hood and remove the 3 pieces of hardware that attach the shock mount to the shock tower.



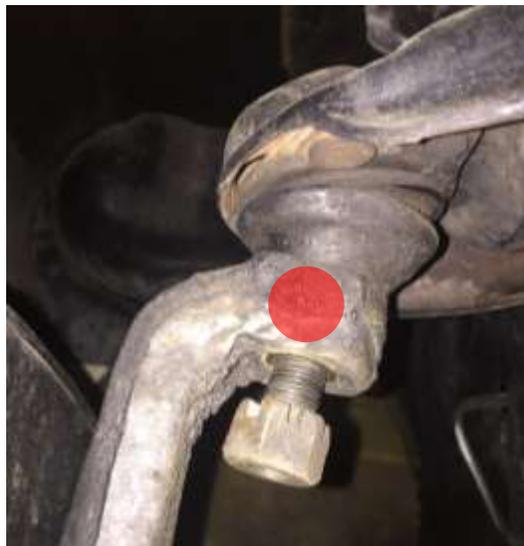
Figure 2 Shock & Shock Cap Removal.

5. Before being able to remove the shock it must be unbolted from its upper control arm mount. 2 studs protrude from the bottom of the shock into the spring saddle. Remove the 2 nuts and the shock/shock cap assembly can be removed through the top of the vehicle.
6. Remove the spring from the vehicle. In some applications where lowering springs have been installed on the vehicle the spring can be removed by simply moving the suspension into its full droop position. (Upper control arm pointing downward) In other applications the spring has enough preload on the suspension that it cannot be removed. **\*\*DANGER\*\***
  - a. We do not use spring compressors to remove springs due to the clearance inside of the shock tower. Do so at your own risk. Our inhouse method involves utilizing a oxy-acetaline torch to heat up the front side of a coil, once red hot use a jack to lift the lower control arm deforming the spring. Repeat on the rear section of the coil until the spring can be removed from the seat.



*Figure 3 Before removing factory spring.*

7. Remove the castle nut from the upper control arm to spindle connection.
8. Reinstall the castle nut upside down with several threads engaged.



*Figure 4 Castle nut removed and replaced upside down prior to disconnection of spindle from UCA.*

9. Using a steel mallet hit the spindle. (In location of red dot). It may take several strong blows to separate the upper ball joint from the spindle.
10. Remove the castle nut and disconnect the spindle from the upper control arm.

11. Unbolt the upper control arm from the shock tower
  - a. Note: In most cases a wrench is only needed on the inside of the shock tower. In rare cases the spline on the shaft kit has failed and a wrench is needed on both sides of the shock tower
  - b. If your car has shims between the shaft assembly and shock tower note the number of shims on the leading and trailing side of the shaft.



*Figure 5 Upper control arm removed from vehicle showing hardware to be removed from UCA.*

## **Shelby Drop Modification**

*Note: The Shelby drop is a relocation of the upper control arm in the shock tower. By relocating the upper control arm mounting point you are changing the amount of camber that is gained throughout the travel of the vehicle. By doing this you will improve the performance of the vehicle. Follow the template on the next page. By lowering the location over 1" you are NOT improving the performance of the vehicle.*

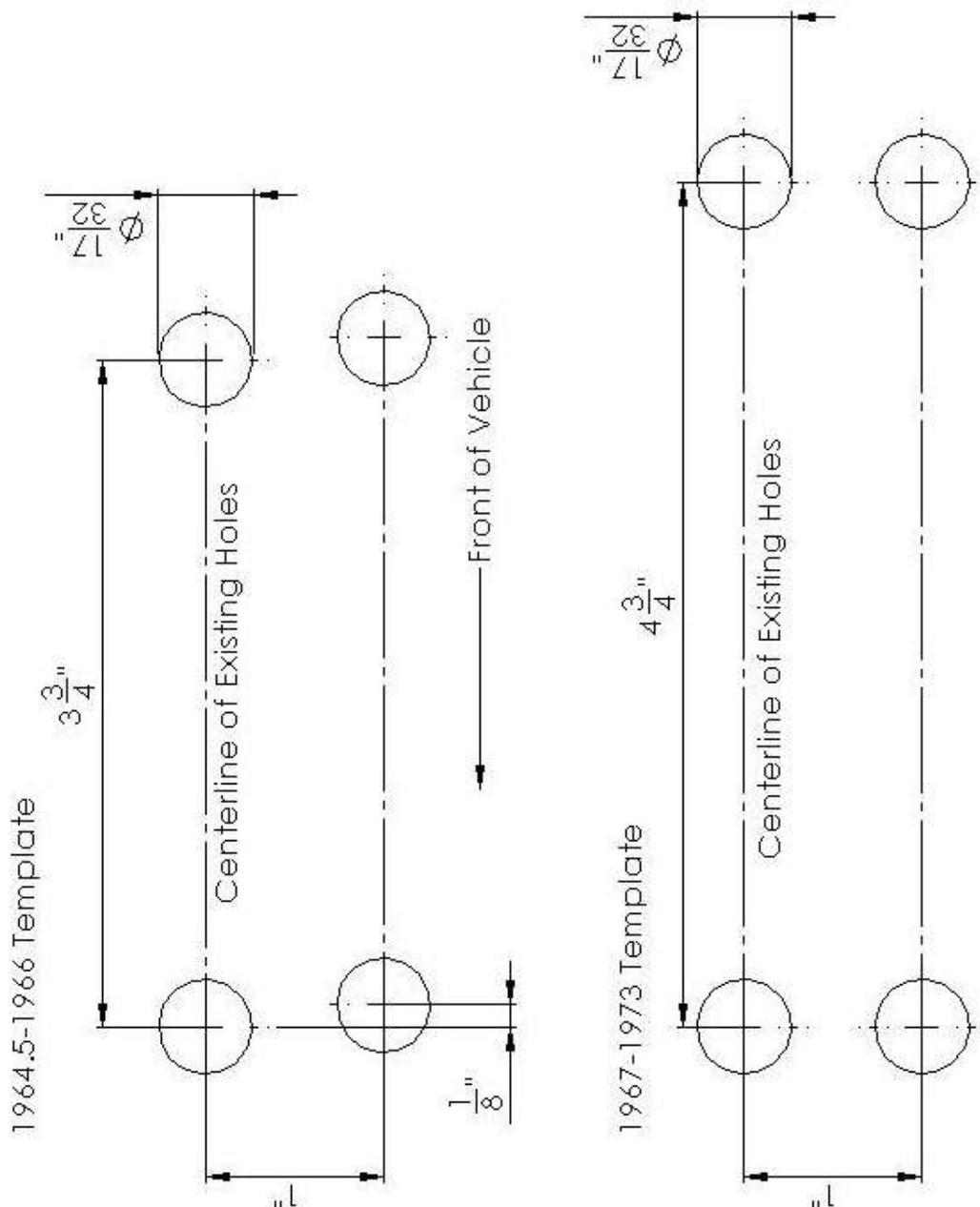
The directions are mentioned on this page and a paper template is included on the following page.

1. Clean the area around the shock tower



*Figure 6 Shock tower wire wheeled and pilot holes drilled for Shelby drop on a 1964.5-1966 Mustang*

2. Cut out the respective template for your vehicle (1964.5-1966/1967-1973) and place it over the existing holes in your shock towers. (Consult MMI if you would like to purchase a sheet metal template)
  - a. Ensure that your PDF printing software does not scale the image, confirm by measuring the center to center hole distance after printing.
3. Center punch the new hole location and drill a 3/16" pilot hole.
4. Measure the new hole location confirming that it is correct (**1964.5-1966** should be 1" down and 1/8" aft from centerline of hole. **1967-1973** should be 1" down from centerline of hole).
5. Drill 17/32" hole. *Note:* If a 17/32" drill bit is not available a 1/2" drill is acceptable



## Upper Shock Tower Modification (1964.5-1966)

1. If a factory export brace is installed on the vehicle both it and the shock tower will need to be modified.
  - a. If running a MMi Shock Tower Brace only the shock tower modification is needed.
2. Using a porting tool enlarge the upper shock mounting holes to accommodate the MMi shock top and 3/8" hardware.
  - a. Slowly enlarge the holes and test fit a shock top and 3/8" hardware to ensure tight fitment.



## Upper Shock Tower Spring Seat Modification (1967-1973)

1. The factory spring seat must be removed by drilling out the spot welds using a 1/2" drill.
  - a. *Note:* Only drill deep enough to go through the weld and not the entire tower. This can be done by repeating step 1 and 2 until the parts are separated
2. Using a flat head screw driver pry the spring seat loose from the shock tower.
3. If there are any major ridges from removing the spring seat sand them flush to the shock tower surface.

## Shock Top Modification Factory/Reproduction Export Brace

*Note: This may or may not be required with your export brace. In some applications the rib will interfere with the edge of the shock top pad. In the steps below we will modify a 1964.5-1966 kit. A 1967-73 kit will only differ that instead of sanding the shock top spacer you will modify the shock top itself.*

1. Confirm that the shock top does not fit by fitting the shock top or shock top spacer (1964.5-1966).



*Figure 7 Shock top & spacer fitted to confirm the need to modify.*

2. Mark the edge of the shock top or spacer that needs to be modified.
3. Using a belt sander or other device remove material from the part as shown below.



*Figure 8 Showing modification and after modification of shock spacer.*

4. Refit the shock top to the export brace/shock tower and confirm proper fitment.

## Shock Top Installation

1. Open the associated hardware kit and take out the following hardware. Also take the shock top, shock top spacer (1964.5-1966 only), and shock top retaining ring out of the box.
  - a. Qty 3 3/8"x3" hex head cap screws (1964.5-1966)
  - b. Qty 3 3/8"x2" hex head cap screws (1967-1973)
  - c. Qty 3 3/8 washers
2. For the top of the shock tower the export/shock tower brace should be loosely mounted on the firewall, place the shock top spacer with the shock top and hardware through the shock tower. Place the retaining ring with the weld nuts facing downward onto the bottom side of the shock top. Loosely tighten all hardware.



Figure 9 Shock top assembly installed

## Upper Control Arm Installation

1. Gather the upper control arms, 1/4" offset key, and the following hardware;
  - a. Qty 2 1/2"x 2 1/2" hex head cap screws
  - b. Qty 2 1/2" nylock nuts
  - c. Qty 4 1/2" washers (*There are 2 sizes of 1/2" washers, use the washers with a larger outer diameter; 1 1/16" OD.*)

*Note: Make sure to select the control arm that has the arrow pointing to the front bumper when on the vehicle AND the bent tube on the trailing side of the car. Consult figure 1 on page 1 for an example.*

2. Place the upper control arm onto the shock tower and lightly bolt it in. Ensure there are washers on both the head of the bolt and on the inside of the shock tower.
  - a. The offset key may need to be rotated 180 degrees
3. Replace the sheet metal shims between the shaft kit and shock tower
4. Tighten the upper control arm hardware to approx. 65 ft-lbs.



Figure 10 Upper control arm installed in vehicle. Note: Front of vehicle is on left side of the page

5. If not already installed, fasten the zerk fitting to the top of the upper ball joint.
6. Remove the castle nut, washer and cotter pin from upper control arm.
7. Place the upper ball joint taper into the spindle and thread on the castle nut after the washer.
8. Tighten the castle nut to approx. 70 ft-lbs and tighten to next nearest cotter pin slot.
  - a. Install cotter pin and bend half of pin onto itself

## Coilover Shock Installation

1. Gather the coilover shock and associated spring and remove the spring retainer from the eyelet end of the shock.
  - a. On a non-adjustable shock using snap ring pliers remove the snap ring, then the black anodized retainer
  - b. On a single/double adjustable move the spring retainer towards the shock body and with your fingers remove the snap ring *Note the snap ring location*
2. Thread the spring preload ring towards the top of the shock body
3. Install the coilover spring and repeat step 1 in the opposite manner.
4. Gather the coilover assembly and the following hardware;
  - a. Qty 1 ½"x2 ¼" hex head cap screw (Lower coilover mount)
  - b. Qty 1 ½"x2 ½" hex head cap screw (Upper coilover mount)
  - c. Qty 2 ½" thin nylock nuts
  - d. Qty 4 ½" Washers *There are 2 sizes of ½" washers, use the washers with a larger outer diameter (1 1/16" OD) on the lower mount and the smaller outer diameter (7/8" OD) on the upper mount.*
5. Insert the shock with the larger end pointing upward and the Schrader valve pointing outward.
6. Bolt the coilover shock to the upper mount using the 2 ½" long bolts and washers with the smaller outer diameter.



Figure 11 Coilover shock partially installed.

7. Push the upper control arm downward and insert the lower shock eyelet into the upper control arm. Use the 2 ¼" long bolts and washers with a larger diameter to connect the shock and upper control arm.
8. Complete the install by tightening down the shock tops and upper & lower shock mounts.
9. Do a final bolt check on all hardware.
10. Before placing the car on the ground adjust the spring preload adjuster so it is touching the top of the spring.
11. Set your ride height using the spring adjusters on your JRi coilover shocks. We generally set the front approximately ½" lower in the front than the rear for street applications. This is assuming that your rear ride height is 7 ½" from the pinch weld to the ground using a 24.5" tall tire. Ride heights may need to be adjusted due to your tire & wheel combination, rear suspension, etc. Use this as a starting point.

## Alignment Specifications

The alignment setting below are a starting point for your vintage Mustang. Due to the variations in vehicle modifications (Power steering, wheel diameter, tire construction, etc) the values below should be used as a baseline. The values below may need to change based on the handling characteristics of your vehicle and the purpose of the vehicle. Consult Mike Maier Inc if you have any questions regarding alignments.

Camber: -0.5 °

Caster: +5.0 °

Toe: 1/16"-1/8" toe in

## Shock Settings

If a *single adjustable* shock is purchased turn the adjuster knob fully clockwise until it hits a stop and then turn it clockwise 10-15 clicks

If a *double adjustable* shock is purchased set the high speed (Large knob) 5 clockwise swipes from full soft (counter clockwise)