

# **Steeda S550 Mustang Pro Action Adjustable Dampers**

Installation Instructions For Part: 555-8155, 555-8156, 555-8157



## **Tools required**

- 1. Jack
- 2. Jack stands
- 3. Torque Wrench
- 4. 6mm wrench
- 5. 9mm wrench
- 6. 10mm wrench
- 7. 11mm wrench
- 8. 12mm drill bit and drill
- 9. 15mm wrench

- 10. 15mm socket
- 11. 17mm wrench
- 12. 18mm socket
- 13. 19mm wrench
- 14. Plastic pry bar or flathead screwdriver
- 15.15/16 socket
- 16. 22mm socket

#### **Rear:**

Note: When it comes time to remove the damper shaft nut DO NOT use an impact gun as you will cause damage to the internal valving of the dampers as well as possible damage to the seals. All disassembly and assembly of parts to the strut and damper shafts must be done by hand.

- 1. Jack up one side of the vehicle using the pinch welds, once high enough, place two jack stands underneath the pinch welds, one in the front of the chassis and one in the rear of the chassis. Once that side is securely supported by the stands lower your jack and repeat the process on the other side of the vehicle.
- 2. Remove the rear wheels; a 22mm socket fits the factory lug nuts.
- 3. Using an 18mm socket for the upper damper mount, remove the two bolts which hold the damper to the chassis. Next remove the two bolts located at the base of the damper using a 15mm socket; access to these bolts is gained underneath the factory control arm.



Figure 1

Figure 2

- 4. Once both the upper and lower bolts are removed, pull the stock damper assembly from the car.
- 5. Using a 15mm wrench and a 6mm wrench, remove the factory damper shaft nut and pull the factory damper mount, dust boot and bump stop off the assembly.
- 6. In order to fit the Steeda damper shafts you will need to drill the factory damper mount shaft hole from 10 mm to 12 mm.
- 7. Assembly the Steeda rear damper by first placing the nylon washer over the shaft. Then slide the factory bump stop and dust boot over top of this shaft.

#### Note: Steeda bump stops are recommended.



Figure 3

Figure 4

- 8. Re-install the now drilled stock damper mount and then install the provided spacer, and both jam nuts onto the damper shaft in that order. Before tightening the second jam nut down take a 19mm wrench and tighten the first jam nut down snugly.
- 9. Using a 19mm and 9mm wrench toque the first jam nut to factory specs. <u>DO NOT</u> use an impact gun to tighten this bolt! Then tighten the second jam nut to the first using the same torque value.
- 10. Now re-install the damper assembly into the vehicle using the factory bolts. Blue loctite is recommended for these bolts.
- 11. Re-mount the wheels making sure to torque them to the factory specifications.

## Front:

- 1. Remove the front wheels; a 22mm socket fits the factory lug nuts.
- 2. Using a 15mm socket remove the two bolts which secure the caliper to the knuckle. If you are having trouble accessing these bolts simply turn the wheel until they are easily reached. Once loose, rest the caliper on the front sub frame of the vehicle so that you do not damage the brake line.
- 3. Now disconnect the upper portion of the end link from the factory strut using an 18mm socket and a 17mm wrench which will hold the shaft in place. It is best not to use an impact gun for this as you can damage the bearing or the boot.
- 4. Using a plastic pry bar, remove the two line clips which are attached to the strut
- 5. Use a 15/16" socket to remove the two nuts which secure the strut to the knuckle. Using a hammer knock these two broached studs out of the knuckle. If you mar the ends of the bolts simply file or grind down the tips afterwards, this does not damage the bolt in any way.



Figure 5

Figure 6

6. Unlatch and raise the hood of the vehicle to gain access to the upper strut mount bolts. Using a 15mm socket remove all three nuts from the strut mount.

# Note: Once the last nut is removed the strut will be free so be prepared to support the strut while removing the nuts to prevent any damage to the parts.

7. Place the bottom of the strut in a vice and using two spring compressors, depress the factory spring until it unseats from the strut mount.



Figure 7

Figure 8

- 8. A 21mm wrench and a 10mm wrench can be used to remove the strut mount nut. Along with this nut remove the factory strut mount, dust boot, bump stop, and the compressed spring.
- 9. Remove the bottom rubber spring isolator from the factory strut and install it on the Steeda strut housing.
- 10. Assemble the Steeda Pro Action front strut by first installing the nylon washer, then the bumpstop and dust boot.
- 11. Slide the still compressed spring onto the Steeda Pro Action strut, making sure to align the tail of the spring to the end of the rubber stop.
- 12. On top of the spring place the factory strut mount onto the shaft, followed by the provided lock washer and nut.
- 13. Using a 22mm wrench and an 11mm wrench tighten the nut on the strut shaft to the factory torque spec.

#### Note: DO NOT USE an impact gun to tighten this nut!

- 14. Make sure the strut mount rotates freely and there is no binding in the unit. Once verified place the unit back inside the wheel well and tighten the strut mount nuts onto the strut mount studs.
- 15. Continue assembling the Steeda Pro action front struts in reverse order from how they were disassembled. It is worth noting that it is easiest to use and impact gun or wrench to tighten the broached bolts back into the knuckle upon re-assembly.

Once everything has been re-installed and torque you are finished! If you have installed aftermarket camber plates you will need an alignment.

#### Settings and adjustment:



Figure 9

In order to adjust the rebound damping in the vehicle, either in the front or the rear of the car, you will notice an adjustable valve is located at the top of the strut shaft. Simply place the adjustment knob inside the slot of the provided adjustment tool. Turning the tool counter clockwise will increase the rebound force provided by the damper, and turning the tool clockwise will result in less rebound force provided by the damper.

Steeda recommends setting the dampers to one turn away from the full soft position. If you find that the vehicle is oscillating excessively or is not handling appropriately simply add a bit more rebound force front and rear by turning the knob counterclockwise one turn at a time. After a short amount of experience with this system you can have it dialed in perfect for your own individual preferences!

When it comes to on track tuning of these dampers to improve the handling characteristics remember that dampers do not affect steady state cornering performance.

Vehicle turn in: If the car is understeering during turn in slowly remove rebound dampening to the rear of the car until you get to your desired level. If the car is oversteering during vehicle turn in, slowly add rebound dampening to the rear of the car until you reach your desired level.

Corner exit: If the car is understeering at corner exit, slowly add rebound damping to the front of the vehicle until you reach your desired level. If the car is oversteering during corner exit, slowly remove damping in the front of the vehicle until you reach your desired level.

Thank you for purchasing Steeda's Pro Action Struts and Shocks, the pinnacle of performance dampeners.