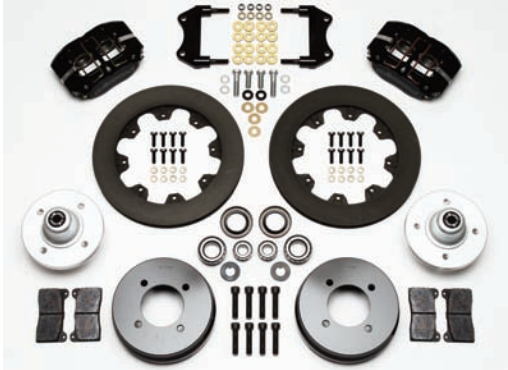


TIGER RAG

Slowing a hot Sunbeam Tiger convertible with Wilwood Disc Brakes



The Wilwood brake installation kit for the Sunbeam Tiger is part number 140-11743 and it features Dynapro Calipers working together with 11.75-inch rotors. The kit also comes with the aluminum caliper adapters, aluminum caliper brackets, BP-10 Smart Pads, and all of the hardware required to finish the installation.

The Sunbeam Tiger was an amazing car that was underestimated by many people when it was released. The Rootes Group, that was building the Sunbeam Alpine, was pleased by its rally successes until the competitors started using larger and more powerful engines. Sunbeam really couldn't afford to design a new more powerful engine, so the company talked to Carroll Shelby to see if he could install a small Ford V8 engine into an Alpine, similar to what he was doing with the Cobra. It took about a week for the Shelby engineers and fabricators to do the job and it was tested with good results. Shelby installed a 260 engine backed by a Toploader four-speed transmission. The car was sent back to England where it was met with mixed reactions until everyone got a chance to drive it.

It was agreed by everyone that the car should go into production, so the Rootes Group commissioned Jensen to manufacture the Tigers with the 260 Ford engines. The name Tiger goes back to 1926 when a Sunbeam racecar called the Tiger set the world land speed record of 150 mph. The Mark 1 Tigers were built with 260 Ford engines and there were two series of the Mark 1 cars. The series changed because the Sunbeam body changed slightly. There was also a Mark 2 Tiger produced with some body changes and a 200 horsepower 289ci engine powered it. There were 7,085 Tigers built from 1964 to 1967 and only 536 of them were Mark 2 Tigers. Production of the Tigers ended when Chrysler purchased the Rootes Group and there was no way that Chrysler

could sell a product with a Ford engine. Unfortunately Chrysler didn't have an engine that could be adapted to the Tiger.

The Tigers sold for \$3,500 when they were released in 1964 and that was considerably less than the Cobras. Shelby really liked the Tigers, so he raced one and won the 1964 SCCA Class B Pacific Coast Divisional Championship competing against Jaguars, Corvettes and even Cobras. Drag racers noticed the small lightweight Tigers and a warmed over Tiger set the AHRA National Record with an ET of 12.95 with a top speed of 108 mph. Carroll Shelby started offering speed parts for the Tigers that were called LAT options. LAT was short for Los Angeles Tiger options a division of Shelby. Tiger owners could purchase special wheels, a high rise Edelbrock intake manifold topped by a Holley carburetor, traction bars, scattershields, and a variety of other speed parts. Some of the early cars also got engine transplants using Shelby equipped high performance V8 engines rated at 306 horsepower.

Wilwood was recently asked to develop a custom disc brake system for a Tiger, so they did and that inspired a new kit that other Tiger owners could use to upgrade their brakes. The Wilwood kit requires the Tiger to be equipped with 15-inch wheels because the brake upgrade features Dynapro Calipers with 11.75-inch rotors. The complete kit is an easy bolt-on upgrade that comes with two-piece vented rotors, with an aluminum hat adapter. The kit includes caliper brackets, BP-10 Smart Pads and all of the hardware required to complete the installa-

tion. The Tiger Kit is part number 140-11743. The Tiger in this installation is powered by a 400 horsepower 302ci engine that accelerates far better than it decelerates. The car is driven on the street, but the owner also takes it to Shelby events where it sees some moderate track time, so improved brakes would definitely make the car nicer and safer to drive.

This installation was done at the Wilwood Engineering tech facility in Camarillo, California by the head technician, Tony Porto. Wilwood Engineering recommends persons experienced in the installation and proper operation of disc brake systems should only perform the installation of this kit. A hobby builder can install this kit if he has good mechanical ability, car building experience and a good assortment of tools. In order to com-

plete this installation you need a floor jack and jack stands, an assortment of wrenches and sockets, line wrenches, an impact gun, a ratchet wrench, a breaker bar, an inch-pound torque wrench and a foot-pound torque wrench.

Before the installation begins, it would be a good idea to spread all of the parts out so you can make sure that all of the parts are included in the kit. Check the components with the parts list on the instruction sheet to make sure everything is there. It would also be a good idea to have PTFE Thread Tape, Loctite 271, and Wilwood Hi-Temp 570 Racing Brake Fluid or Wilwood EXP 600 Plus Super Hi-Temp Racing Brake Fluid on hand. We will show you the entire installation so you can decide whether you can do the work yourself, or if it would be better to have a professional do it for you.



Using an impact gun and the appropriate size socket, the four lug nuts were disconnected and then the wheels and tires were removed from the car.



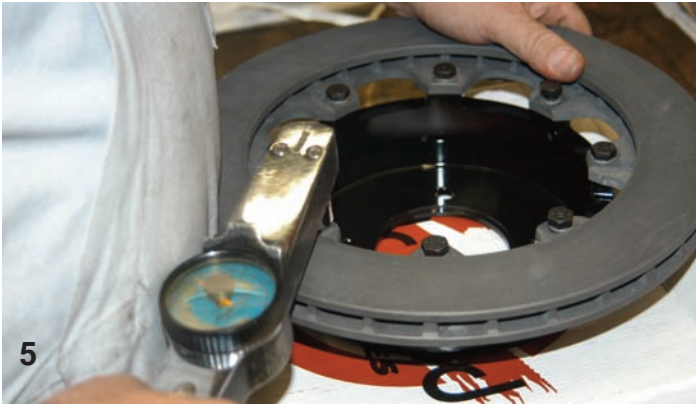
The Wilwood rotor has to be bolted to the aluminum hub assembly. Here the bolts are being coated with Loctite 271.



The original brakes used a single piston caliper and a small 10-inch diameter solid rotor. The brakes were adequate for standard driving with a 260 engine but certainly not enough for this car that sees track action with a very hot Ford 302ci engine.



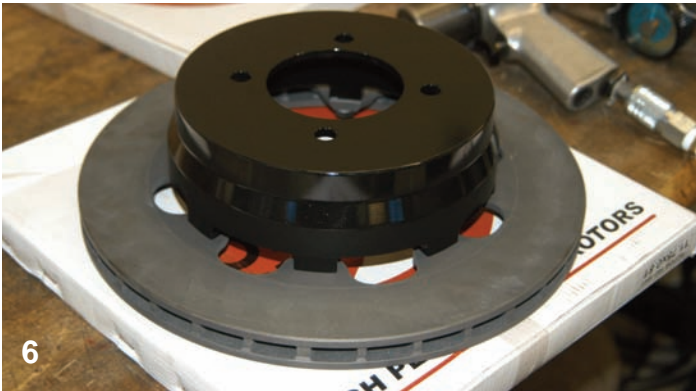
The bolts were screwed into the hub assembly finger tight. Notice each bolt uses a small flat washer.



After the bolts were snug, they were tightened to 180 in-lbs using an inch-pound torque wrench.



After the lug nuts were coated with Loctite, they were connected the rest of the way using an impact gun. The bolts were then tightened to 77 ft-lbs using a foot-pound torque wrench.



Here is the rotor assembly after the aluminum hat has been connected. The hat spaces the rotor in the proper location.



The inner hub bearing was coated with high temperature disc brake bearing grease before it was installed and then the grease seal was installed. This gives you an idea of how it is assembled.



This Tiger kit uses a special aluminum hub assembly that is designed for the four lug nut application. Here one of the lug nuts is being installed part way by hand.



After the lug nuts have been installed part way, they should be coated with Loctite 271 as seen here.

The dust cap was removed from the rotor by prying it up far enough to remove it by hand.



12 The cotter key was removed and then the spindle nut was disconnected from the spindle using channel lock pliers.



16 After the rotor was removed, the small bolts that secure the dust shield to the spindle assembly could be disconnected.



13 The caliper is held on with two bolts. Here the bolts are being broken loose with a large breaker bar. After the bolts are loose they can be removed with a ratchet wrench.



17 The dust shield was removed from the spindle to provide more clearance for the larger rotor.



14 After the caliper bolts were disconnected, the caliper could be removed from the disc brake assembly.



18 After the dust shield was removed, the spindle was cleaned off using a rag and cleaning solvent.



15 After the caliper was disconnected, the rotor assembly could be removed from the car.



19 The bolt that connects the bracket to the spindle was loaded with a spacer and a shim washer.



The caliper bracket was held up next to the spindle and the bolts were started finger tight.



After the bracket was started, the steering arm bolt had to be connected to the spindle. Using a socket wrench and the appropriate size socket, the steering arm was tightened to the spindle connection.



After the steering arm was tight, the bracket bolts were tightened using a socket wrench. The bolts were tightened to 77 ft-lbs using a foot-pound torque wrench.



Here is the caliper bracket assembly after the bolts have been tightened. A close look reveals how the caliper bracket fits in-between the spindle and the steering arm.



The hub assembly was installed on the spindle and the large flat washer and spindle nut was secured. The nut should be snug but it shouldn't be too tight. Remember to secure the nut with a cotter key.



The Wilwood dust cap was installed by screwing it into place.



The four lug nuts were lined up with the holes in the rotor adapter and then rotor was installed on the hub assembly.



The rotor was secured to the hub assembly using two lug nuts. The rotor has to be tight to check the rotor to caliper centering.



The caliper bracket stud was loaded with two shim washers.



The caliper was placed over the rotor and then the caliper was aligned over the two mounting studs. The caliper was centered over the rotor assembly.



The BP-10 Smart Pads were installed in the caliper making sure they are all the way in..



After the brake pads were in place, the spring-loaded retainer clip was installed.



After the retainer clip was installed, the bridge bolt and tube could be installed and tightened.



Here is the finished brake assembly using a Dynapro Caliper and an 11.75-inch rotor assembly. This should provide ample stopping power for the hot Tiger.

Wilwood Engineering

4700 Calle Bolero

Camarillo, CA 93012

(805) 388-1188

www.wilwood.com

Copyright © 2010 Wilwood Engineering, Inc. -

All Rights Reserved