

Donor car striping - REAR SUSPENSION

Rear shock absorber/coil spring assembly:

1. Loosen the wheel bolts and chock the front wheels. Now raise the vehicle, supporting it securely on the axle stands at a comfortable height and remove the wheels.
2. Remove the shock absorber lower mounting bolt. This is very tight and will need a good socket and breaker bar to undo!
3. Support the hub end of the swinging arm to prevent it dropping once the shock is removed.
4. Pry the shock from the swinging arm socket. This is also a tight fit and may need a tap with a hammer to loosen. Do not worry if you damage the shock body as they are not required for the build. But the **M14** bolt is, so retain for use later.

Exhaust system removal:

1. None of the exhaust system is required for your new Python and can be cut at accessible points and discarded. If it is in very good condition, you may want to save it and sell it on as they are very expensive. They often cost more than you paid for the car.
2. Discard all the heat shield and associated brackets.

Prop shaft:

1. Disconnect the prop shaft from the differential and remove the center bearing fixing bolts along with the bolts at the rear of the gear box drive coupling. This should now allow you to remove the prop shaft completely from the car.
2. Retain all nuts and bolts. Replace them into the original position finger tight as far as possible or bag and label. **DO NOT JUST THROW IN A BIG BOX**, as these bolts are all high tensile and are specific to the joint there are in. They may just look like any other bolt, but they are **NOT!** The use of the **WRONG** grade of bolt could result in failure under load, **with catastrophic results!**
3. If all the end joints are in good condition, the prop shaft can be reused. The prop shaft needs to be shortened by a professional (not a job that can be done in most homes). It, however, may be more economical to buy as **NEW** from the variety of companies. **RVD** can supply all relevant information for most engine options.

Drive shafts loosen bolts:

1. Whilst the hand brake is still connected and in operation use a **good quality Allen key** (cheap from the local market will not stand up at all, I have broken even **snap-on**) and a short piece of tub (or a hex drive socket and ½” impact driver, if available) loosen off the 6 bolts each end of the shaft on both sides, but do not remove totally at this point.
2. If any of the bolts will not come undone, do not worry at this point. They can be dealt with later with an angle grinder, once off the car and on the ground or bench. Just grind the head away until it releases the pressure. If you grind into the locking plate and damage the face, this will have to be replaced with the bolt on assembly.

Brake pipes & hand Brake cable:

Note: *It is best to drain all the old brake fluid from the system, by opening the bleed valve on all four calipers. Connect a piece of flexible pipe over the nipple and insert into a suitable container for disposal. Pump the brake pedal until all the fluid is expelled.*

1. If you plan to reuse the flexible rubber hoses, first make sure they are in good shape. Then carefully disconnect them from the chassis end and try not to twist the rubber too much as this can damage. **IF YOU ARE IN DOUBT THEY ARE IN GOOD CONDITION REPLACE THEM!**
2. If you plan to use **NEW** or **braded pipes**, just cut the rubber pipe from the chassis to the swinging arm with a craft knife or hack saw. Take care not to get fluid on your skin or near eyes when cutting pipes.
3. The hand brake cables are not required on your Python. These can be “CHOPPED OFF” at a suitable point to allow the rear sub-frame to be removed. RVD or a number of other companies that advertise in specialist car magazines can supply new cables. See **Rolling Chassis section**.
4. Disconnect all the wiring connections that go to the ABS sensors, the Speedo sensor in the differential, and the brake pad wear senders. **Note:** *Take care not to damage the ABS wires if you plan to fit the ABS on you Python, as they are almost imposable to repair. It is also very sensitive to small changes in resistance! RVD recommends the use of the ABS, as you never know when you may need it. If it was in working order before striping, then it should not be hard to refit and have operational on your Python.*

Rear Sub Frame removal:

1. There should be nothing else connected from the chassis to the Sub Frame. Place a trolley jack under the Diff to take the weight off the sub frame and component parts.
2. The only thing holding the sub frame in place are 3 or 4 bolt depending on the model. All donors have 2 large rubber bushes, one on each side of the car, just forward of the rear wheel arch. Locate these and remove the smaller bolts in the plate that is over the bottom of the bush (and under the sub frame).
3. Remove the large M14 bolt on each side. These will be very tight and will need a good long “breaker bar” or torque wrench to loosen! **Note:** the force required could be enough to rock the car **off the stands** if it is not well supported.
4. With a support at the rear of the diff, remove the bolt that passes through the sub-frame into the car chassis. This, too, will be very tight.
5. The sub-frame should now be free. It may not have come free from the large bushes as these fit into sockets in the body. The bush is alloy and years of salt from the road can corrode and get stuck in place. If this has happened, you will need a good strong pry bar to free then from the sockets. Do not worry about damaging the bush; you do not need them or the sub frame.
6. With the rear end free, remove hub supports and lower the jack to the ground. It is best to have someone else to help at this point to prevent snagging. Remove the whole rear end from under the car. Lift the hubs as you drag it on the trolley jack. Take care **not to drag the brake disk shields on the back of the hubs along the ground and bend/damage them.**

Rear anti-roll bar:

Note: The rear anti-roll bar is mounted more or less the same on all models. These are general instruction for removal, but keep in mind, there may be variations.

1. After removing the anti-roll bar brackets or nuts, disconnect the anti-roll bar from the link at each end of the bar.
2. Discard the old anti-roll bar, but **KEEP** the **rubbers** and the **end drop links** with all **bolts and brackets**. You will need all these parts later so bag and label all parts properly. **Note:** Replace any parts that are not in good condition.

Rear trailing arms:

1. Remove the driveshaft completely, as the bolts are loose and easy to remove. Take care not to damage the rubber boots. If they are damaged, replace as stated in the BMW workshop manual.
2. Store these carefully and **keep all bolts & plates with the shafts! Bag and tape to shafts.**
3. Remove the M12 bolt from the two mounting points to the sub frame and the one M14 bolt through the Link arm (dog bone) to the sub frame.
4. With these bolts removed, the swinging arm should come away complete. Place all bolts through the holes from which they came along with nuts and washers. If you are planning to replace all bolts with NEW, keep these as they are a good reference of grade and thread pitch as there are at least 4 pitches of thread in M12 alone!

Differential removal:

1. Loosen the two M12 bolts at the rear of the diff & the one M12 at the front below the drive flange.
2. Remove the two M12 bolts at the rear of the diff that run (Transverse) through the sub-frame and the void bushes in the cast bracket on the rear of the diff.
3. Remove the two M12 bolts from the cast bracket in the rear of the diff. Discard the cast bracket and fit the bolts back into the holes they came from.
4. Remove the front M12 bolt and the diff should be free to come away from the sub frame. Take care when removing, as it is heavy and hard to handle.
5. Remove the pressed steel plate from the side of the diff. This is held in place with three M14 bolts. Once removed, discard and place the M14 bolts back into there relevant holes and finger tight.
6. The sub frame should no longer have any parts bolted to it. If so it can be discarded with the other parts that are not retained for use in the build of you Python. If not, recheck all the steps.