

Door locks and catches

Parts needed:

1. Left and right hand door locks (part numbers _____).
2. Lack plates to fit locks.
3. (1 set) Chrome on brass door handles (made by builder or RVD).
4. Two Chrome on steel door knobs (made by builder or RVD).
5. Eight M4 Countersunk screws 16mm long + two nylock nuts (stainless steel are best).
6. Two lock trim plates Chrome on brass (made by builder or RVD).
7. Four M4 rivnuts.
8. Eight M6 (or ¼") X 50mm (2") Countersunk screws, with locknuts.

Tools required:

1. Drill & drill bits
2. Die grinder (or high speed drill) and rotary Burr's
3. Selection of files.
4. Rivnut insert tool.
5. Screw drivers and spanners (wrenches)

Door locks:

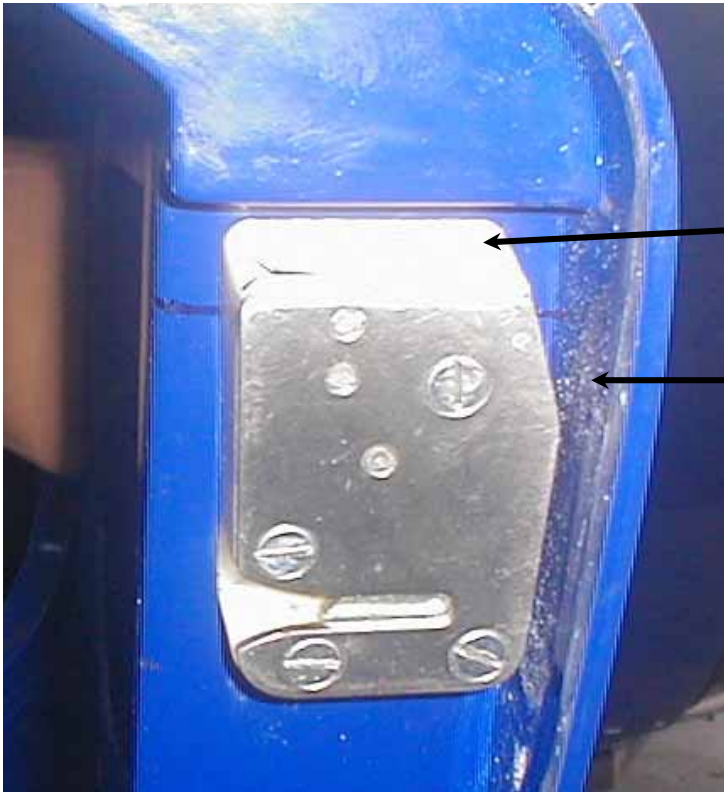
The doors of your Python a designed to take Layland Mini part number _____ and _____, these can be obtained from a number of suppliers (internet shops) and should look some what like the ones pictured below. Before fitting you will need to remove the "locking mechanism" this can be done easily with a large screw driver, and a pair of pliers.



1. Pry the round rod section out of its retaining clips using the screwdriver.
2. Then Pry out the plated lever plate (the part two the right in the picture) using a screwdriver or pliers.
3. With the Pliers remove the spring clip with the pliers (the part at the lower left of the picture)
4. Repeat this for the opposite hand lock. Now your locks can be fitted to the doors.

Method:

1. Your doors should be “rough” hung at this point as you will have needed to fit them fitted to fit the steel work in under there scuttle and the side plates. If you have removed to ease access to the cockpit, it will be easier to cut the lock holes on the bench than it is to cut the holes when on the car. It can be done on the car.



2. Using the “opposite hand” lock place the flat face of the lock on to the door and line up the top edge of the lock around $\frac{1}{2}$ 13mm from the step in the inner door panel.
3. Line the outer edge of the lock parallel to the edge of the door with a 3 to 4 mm gap ($\frac{1}{8}$ 5/32”)
4. Once you have the gaping correct hold the lock still and mark the hole position with a 6.4 (1/4”) drill bit, pass the drill bit down through the hole in the lock and make a small mark with the drill in all four holes.

5. remove the lock and drill the holes out to a round 5.5 mm (7/32”), replace the lock and check the position’s of the holes, open up the holes to 7mm (9/32”) once you are happy that the holes are in the correct position, drag any out of position holes over with a rat tail file and then open up full size.

6. Still using the “wrong” hand lock line up the holes in the lock and mark the top edge of the lock onto the GRP of the door along with the inside edge of the lock to door.
7. With a drill and rotary Burr cut out a large hole as shown in the picture to the right, make sure that you leave around 2-3mm of the GRP from the line that you just marked to make sure that the hole does not show from the edge of the lock once fitted. Leave around 5-6mm around the bolt holes.

8. The hole needs to be large as once you fit the Chrome handle to the lock it needs to be twisted to fit it into the door.

9. test fit the lock in the hole using just two fixing holes one at the top and one at the bottom, with a Phillips screw driver lack the lock over into the closed position. Reach inside the door to the back of the lock and press the “paddle” on the back of the lock this should release the catch. If you cannot make the lock release the hole may not be as large as it needs to be, and will need to be eased until the catch releases.



- 10.** Once the catch is working fine, refit the door temporarily (if not fitted) and fit the lock striker into the lock and click all the way home.

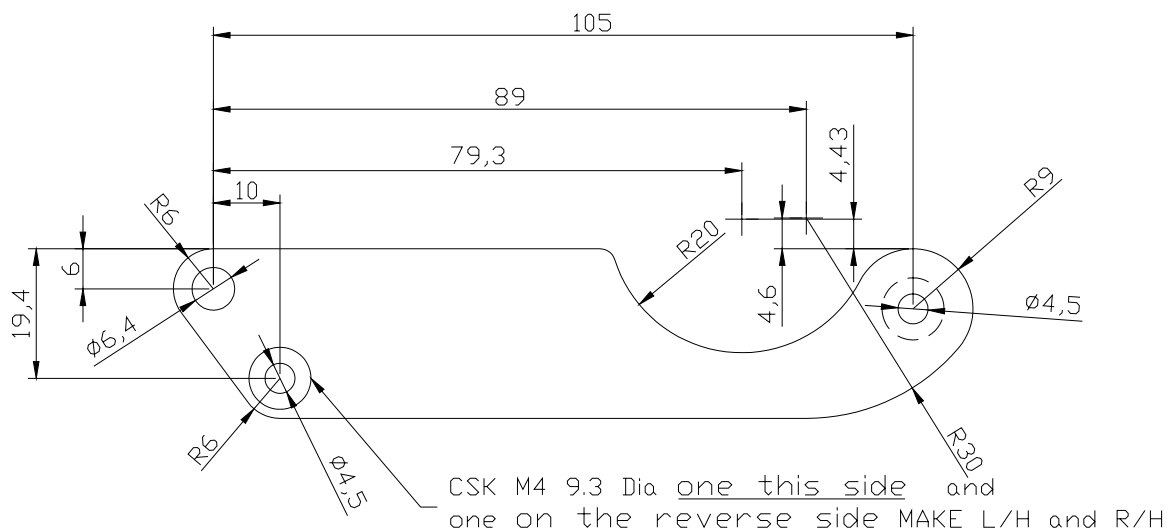


- 11.** With the striker in place close the door, it should just clear the body work. Make sure that the striker is full home into the slot. Once the door is close mark the top and bottom position of the striker onto the body of the car.
- 12.** You may need to push the striker closer to the body to get a good marking on the body, this can be done with a small screwdriver in the lock slot and pry the striker out to the body.
- 13.** Once marked pry back up into the lock and open the door. Remove the striker plate from the lock and trim the door opening flange as required to allow the plate to go down to the correct level. (As shown below in the 2nd picture on the right.)
- 14.** Using some off cuts of GRP that you have saved for cutting out the holes in the body earlier make up a packing piece to take up the gap between the rear bulkhead and the base of the striker plate.(as shown below)





15. Bond the spacer together with body filler or Resin and Cabosil (or equivalent) past. Rough up all the surfaces to be bonded, add bonding past and position the spacer piece into the correct position squeezing out the past and removing any air pockets, wipe of excess past and fill any void that are apparent.
16. Once the past ahs hardened clip the striker back into the lock close the door and mark the bolt hole positions on to the spacer block face. Open the door and drill two 6mm (1/4") holes and attach the striker from the lock, using washers to space the striker up to the required height.
Note: Allow some space under the striker for carpet later on. (as shown in 2nd picture above to the right)
17. Test close the door, if you have done a good job then the door should be very close to it correct position. If it is not you will need to drag the hole to allow a good fit of the door. If the hole becomes to large in the spacer its best to fill the part that is not required with fill, the hole need to be a round 10mm(3/8") once you have completed adjustments to allow for final fitting after painting.
18. Leaving the striker in place remove the lock from the door and fit the Chrome on Brass inner release handle. To the lever on the back side of the handle.



19. The 6.4 mm hole fits over the pin at the top of the lever on the lock with the countersunk hole upper most, and the back edge of the handle parallel with the lever of the lock. Mark the 4mm hole onto the lock lever and drill a hole through the lock lever. De-Burr and fit one of the M4 CSK screws with a nylon lock nut. Now you should be able to “pop” the lock by lifting the lever. Repeat the same for the opposite hand lock.

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21. Lay the lock and handle on the out side of the door at the correct height, with the handle lying on the inside if the door. Mark the lowest point of the lever onto the angled part of the inner panel, lift the lever until it releases the catch and mark this point.

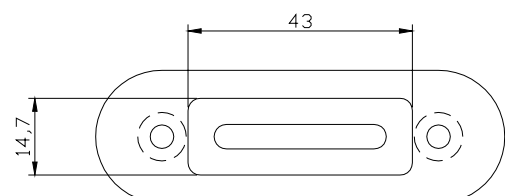
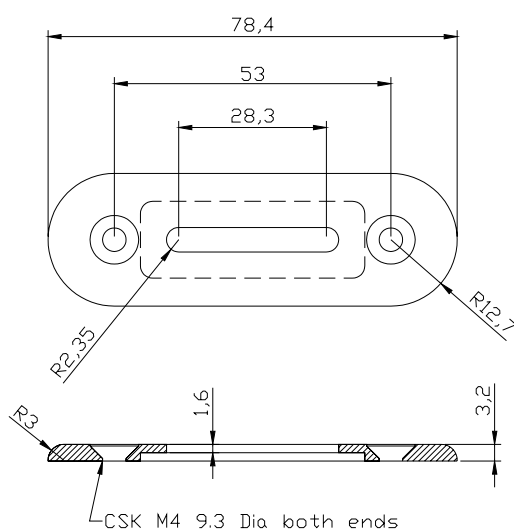


22. Make a small hole in the position shown, fit the lock in the hole and open up this slot until the lever can be passed through and the lock fitted back into its original position, **note:** a small bend will be required to bring the lever through the hole at the correct angle.

23. Once you have the lever hole in the door, offer over the cover plate position it that the latch releases just before the top of the slot is reached (about 7/8 of the way up) mark the two screw holes and drill and fit M4 rivnuts top and bottom.

24. Close the door and check the operation of the lock.

25. Lock cover plate is shown below



- 26.** The Cutout section at the rear of the plate is to take a piece of the leather from the trim to prevent the handle rattling in the slot, bond a small piece of leather into the back of the plate with “super glue” and then cut a slit in the center of the slot but not right to the end of the radius at the end.
- 27.** Once the latch is fitted the next step is to fit the inner door cards.



- 28.** There are many different designs that can be used for your Python, the one above is for fitting a door speaker and a pocket. But the design is totally up to the builder.
- 29.** Cut out the door card from 6mm (1/4”) ply wood, making it around 5mm (5/32”) smaller than the outer edge of the door and along the top edge and to the rear. This is to allow for the thinness of the covering material and padding to be fitted later.



- 30.** Using panel clips as shown above (of which there are many different types, and these are just one) Most of these clips fit through a hole in the ply wood, this makes the clip off to one side and hard to mark the position of the hole for the pin part.
- 31.** If you use a piece of off cut GRP too make a template to give the position of the pin this will aid marking the pin holes. Clamp the door card on to the inside of the door in the correct position to give an even gap around all edges. Mark

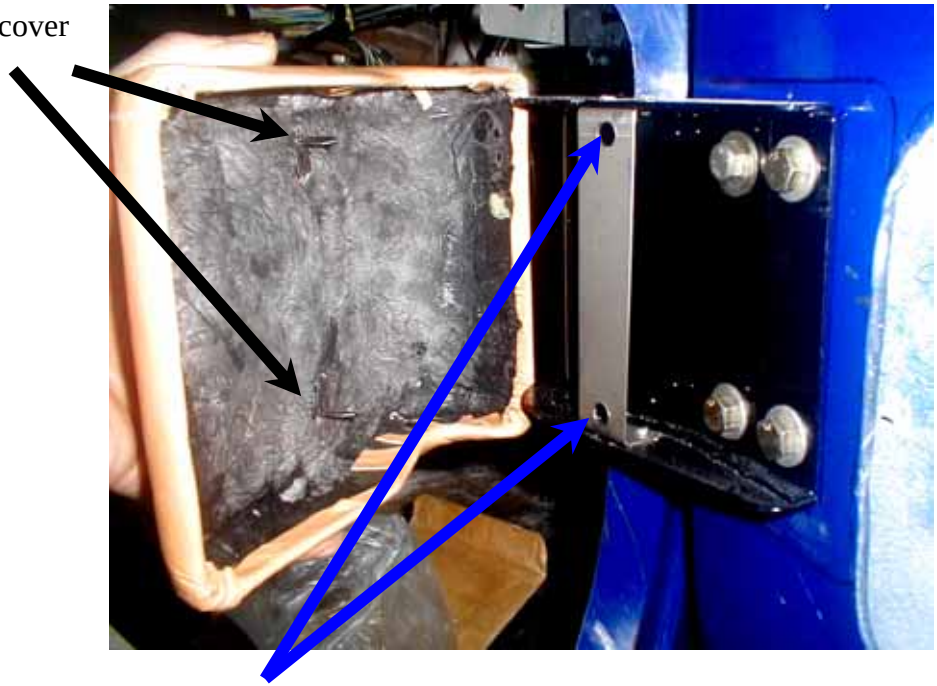


- 32.** Mark the hole's through the door card with a marker pen or a scribe, remove the door card. With the template tool that you made earlier line up the large hole with the mark a rotate the template until the pin hole is in a good position, as shown below and drill mark the pin hole.



- 33.** Drill out all the pin holes full size (its best to test the clips with a scrap piece of wood and GRP to obtain the best size of hole to drill) with just one or two clip on the door card place on to the door and "Pop" it home .
- 34.** The hinge cover now needs to be trimmed to fit over the hinge on the door side, place the cover over the hinge and trim back until it matches the door side profile of the hinge and will sit all the way down on to the hinge.
- 35.** Drill two hole the same size as in the door card for two more spring clips around 16mm (5/8") from the top and bottom flanges in the center of the hinge cover length,
- 36.** With a strip of alloy or Stainless steel bent and riveted between the top and bottom plates of the hinge, make two holes so that the GRP cover will clip over the hinge and hold firm in place

37. Spring clips in GRP cover



38. Holes for spring clips alloy in strip riveted too hinge top and bottom plate.



39. Place door card back into position with the hinge cover in position and make sure that there is the correct amount of clearance around the hinge cover to the door card, there should be around 4mm (5/32") gap from a trimmed hinge cover and around 6mm (1/4") on an untrimmed cover. This clearance is to allow for the covering thickness plus padding material. **Note: its best to have a clearance that is larger than you need than to tight, as a small even gap will look fine but to tight and the cover may not stay in place or will keep springing off when the door is closed.**

40. Now repeat the same for the other door, once complete you are ready to trim the cards. If you do not have the skills required or want to risk wasting expensive leather, then its best to get the trim done by a experienced car trimmer, If you have the equipment and some experience of machining of leather or vinyl then you may want to trim these parts your self.

41. If you decide to trim yourself decide on any design you may want to stitch into the material before you start cutting the material, it can be best to cut paper pattern's to find out the right amount and shape of material you need for each card. Mark the design on the door cards first with a marker pen to make sure that both are the same. As shown below.



42. Fit spring clips to the door card and position so that they line up with the holes in the doors correctly and cover the face side with duct tape or a small piece of leather glued over the tab of the clip to prevent them from moving around.



43. To make the stitch lines stand out when the card is padded you will need to stitch a “backing piece” on the back side of the foam & leather and fix it down to the door card with glue or staples. Starting at one end and working back one panel at a time as shown above, keeping the stitch lines straight as you go.



- 44.** Once you have all the padding and stitch lines fixed in to the correct position, you then need to pull the leather over the back of the card and staple in position making sure that the staples are the correct length and do not come through the other side of the card. It is best to leave the leather over length to pull it tight around the out side edges and trim after stapling, on the inside curves the leather has to be stretched and care has to be taken not to cut the “nick” on the back to far round that they show from the face side. The best way is to push your thumb hard round the corner and mark a line on the back of the leather to show how far you can cut the “nick’s” to allow the leather to come round to the back of the card.
- 45.** Once you have all the edges down all the way around you can fit pockets and speaker as per your design, to cover any paint that may show around the hinge cover and the door card it is best to staple a piece of leather on to the back of the door card that flaps under the edged of the hinge cover, preventing any paint colour showing.



- 46.** Fit door card to door after painting and stand back and admire your handy work!!

