



## FITTING INSTRUCTIONS

### FOR PATROLAPART Y62 Air Suspension Control Kit

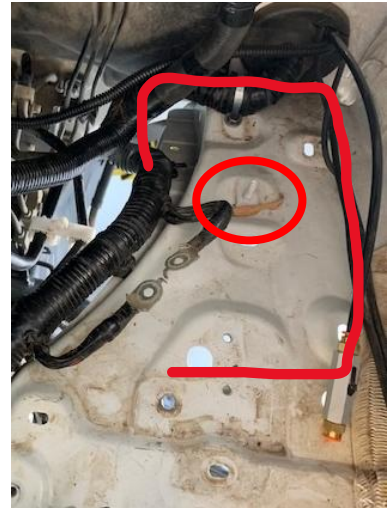
**SKU: PAP-1218**

1. **Ensure all Airline cuts are made using an airline cutter or a sharp blade- using side cutters will result in leaks.**
2. Disconnect Battery
3. Remove airbox.
4. Unbolt bracketry holding ECU's and Fuse box and remove.
5. Re route the main wiring harness to the engine side of the inner guard skirt
6. Move the loom running to the front of the vehicle (under the airbox) to the engine side of the guard liner.
  - Use the provided P Clips and existing bolts to hold the loom in place as illustrated
7. Assemble the Air Compressor onto the battery tray Provided-
  - a. Unbolt the base plate of the compressor mount and re-use the bolts to bolt the compressor to the new tray- make sure the bolt heads are on the underside of the tray.
  - b. Move the compressor ECU to the top of the Air Compressor mount- as pictured- Re use the bolts.
    - i. Leave front bolts loose until later. At which point you use the longer M5 bolts to attach the top brace to ECU and Tray.
  - c. Use the Bracket Provided by Patrolapart to mount the Valve block to the Air Compressor Mount- (Discard the bracket provide with the Valve Block)
    - i. Ensure the valve block is mounted with he wiring plug at the bottom.
    - ii. Use the m6x20mm flanged Bolt on the top mount- this bolt also secure' s the P clamp for the wiring loom.
    - iii. Use the m6x16mm flanged bolt on the bottom mount.
    - iv. Ensure you note down which port is what on the valve Block as its impossible to read once in the vehicle.
  - d. Mount the engine ECU to the back bracket on the compressor tray- with the plugs facing towards the engine, slide the ecu all the way to the passenger side of the bracket.
    - i. Fit the Fuse box bracket under the top bolts of the ECU – as pictured above.



-Use the M6x30mm Flanged Bolts - and re-use original nuts

- e. Fit the compressor intake hose and connect the filter to the end, which sits under the relay on the side of the compressor Housing- connect the 30cm section of straight hose to the filter and leave loose for now.
8. Use the provided 6mm Hose and Elbow to make a right-angle bend from the Compressor into the valve Block.
9. Use the Red hose to run air to each airbag- Measure out the approx. length required to do each side and cut the air line so it can be installed (leave plenty of extra length to allow for routing of the line)
10. Mark the red hose for left and right- and pair with the black air line for the air tank.
  - a. Run the airlines down the inner guard and down the wheel arch to under the vehicle, follow the route marked in Red
11. Locate the Stud for the compressor tray lower Mount- get the nut started- then leave it ready for the compressor bracket to slide under it. Re-use an existing nut for this – see the stud circled in Red.



12. Slide the compressor mount into place- get all the bolts started but leave loose, Use existing Bolts for securing the tray.

13.
  - a. Fit the top support strap under the ECU mounting bolts and across to the inner guard.
  - b. ensure all wiring looms are secured and not rubbing on sharp edges.
  - c. Plug the engine ECU in, ensure it has clearance all around- if need-be, loosen and slide on the bracket.
  - d. Attach the earth wires to the threads in the engine side of the compressor tray ensuring they have a good clean contact surface.



14. Once everything is routed correctly tighten all mounting bolts for the compressor bracket.
15. Plug the previously run airlines for, left airbag, right airbag, and the air tank into the valve block.
16. Fit the Smaller Engine ECU to the engine side of the bracket.

-use the M6x20 Flanged bolts with Flanged Nuts



17. Connect the wiring harness to the compressor assembly – route the harness as pictured.

- a) Use the 13mm P Clamp to hold the loom in place and attach under the top bolt of the Valve block bracket.
- b) Attach the relay to the side of the compressor housing using an M5x15mm Bolt and Nyloc nut.



18. Bolt the original fuse/Relay box to the provided bracket using M6x20 Flanged bolt and Flanged Nut

19. Run the Power cables and Harness for inside the vehicle across to the Driver side of the vehicle.

20. Connect the earth wires to the main earth point under the battery is preferred.

21. Connect the main power wires directly to the battery using the supplied in-line fuse.

22. Run the control loom into the cabin through the grommet next to the brake pedal.

- a. Connect the handbrake signal wire to the handbrake.
- b. Connect the ignition wire to an ignition source.
- c. Discard the speed sensing wire.
- d. Fit the up down button into one of the switch spots in your dashboard.
- e. You can choose to fit the service switch into the dash, or tie it up under the dash- this switch is only required when working on the vehicle.
- f. The remote control panel does not need to be installed all the time, you can choose to mount this in the vehicle, or just plug it in when you want to use it.

23. Run the Sensor harness along the chassis rail with the airlines.
24. Refit the airbox and re-connect any plugs or hoses disconnected in the engine bay.

## **Under the Vehicle**

25. With the Rear wheels removed, remove the nut from the rear bolt on the upper control arm.
  - a) On the left side you also need to release the clip that holds the wiring loom in place.
26. Bolt the Height Sensors to the mounting brackets using the m5x12 Button head Bolts.

27.

- b) Shorten the extension rod by one hole and mount to the sensor as pictured.
- c) Fit a pivot ball to the last hole (have the ball facing the front of the car- as pictured)



28. Bolt the mounting bracket into the vehicle and re-fit the factory nut.
  - a. Use the supplied m6x20 Bolts with captive washers and flange nut to secure the top of the bracket through the chassis.
  - b. Ensure the Control arm Nut is re-tightened with the vehicle at standard ride height.
  - c. On the Left side- re-clip the wiring harness into the provided hole in the bracket
  - d. On the RH side fit the heat shield to the bracket, using the M6 flanged bolts and flanged nuts



29. Remove the factory bump stop, set a left and right bump stop spacer bracket.
  - a. Fit a 6mm dowel pin to each bracket- (make sure you allow for left and right)
  - b. Fit a pivot ball for the height sensor to the top Hole on each bracket Closest to the top of the arm where the bush is.
  - c. Refit the bump stop with the spacer bracket installed between the bump stop and the suspension arm.



30. Cut 2 pieces of Threaded rod for the height sensor at 35mm Long.

- a. Screw into the 2 ball rod fittings- with a lock nut against one end
- b. Clip the rods into place.

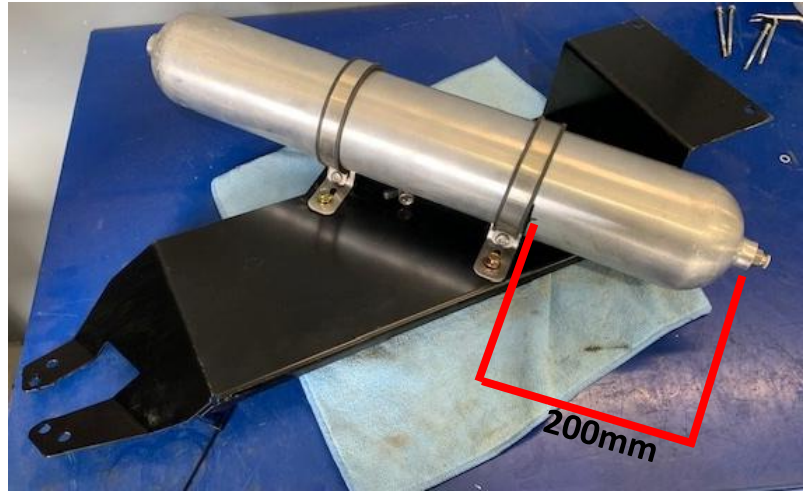
31. Route air airlines from the front of the vehicle along the chassis- avoiding sharp edges. And securing using cable ties.

32. Fit the Schroeder valves inline somewhere where you can access them

- a. These can either be just fitted in the airline and left under the vehicle or they can be fitted to the rear bumper or under the fuel flap- they are only required in an emergency or for finite adjustment during programming.
- b. Run the left air line straight to Left bag, cut to length and install.
  - i. Run the left sensor loom to the left sensor.
- c. Leave the air tank air line loose in the left wheel arch for now.
- d. Run the right airline and Sensor loom to the right side of the vehicle-
  - i. Run the lines across the chassis crossmember above the spare wheel being mindful to keep them as far away from the exhaust as possible.
  - ii. Connect the airline into the Braided hose coming from the airbags.
  - iii. Connect the sensor loom onto the sensor-
  - iv. Secure loom and airlines to chassis

33. Mount the air tank clamps onto the air tank loosely. (leave the tank off the bracket for now)

- a. Set the air tank up with the drain at the bottom, and approx. 200mm from the back end of the tank to the first bracket as illustrated.
- b. Fit a straight Air line push fitting into the back port of the tank (using sealant on thread)
- c. Fit the Plug supplied into the front port of the tank (Using sealant on thread)



34. Undo the tail shaft from the diff end and let the tail shaft drop out of the way.
  - a. Undo the 2 nuts where the handbrake cables fit to the studs on the floor brace and slip the handbrake cables out of the way.
  - b. Above the chassis crossmember over the diff you will see 2 bolts into the body of the car- Remove these and retain.
35. Slide the air tank, with clamps up above the secondary fuel tank on a (roughly) 45 degree angle, with the air line push fitting facing the passengers rear wheel area.
36. Slide the mounting bracket up into place- and start the 2 bolts at the back, do not tighten just yet.
37. Push the Mounting bracket up over the Handbrake Cable mounting studs, then slide the handbrake cables back into place and tighten all 4 bolts/nuts.
38. This stage can be fiddly, but it is certainly very achievable! Line the air tank mounting clamps up with the 4 holes in the mounting bracket, and secure with the supplied M8x20 Flanged Bolts and Nyloc Nuts. Then tighten the 2 clamping bolts also.
39. This stage can be fiddly, but it is certainly very achievable! Line the air tank mounting clamps up with the 4 holes in the mounting bracket, and secure with the supplied M8x20 Flanged Bolts and Nyloc Nuts. Then tighten the 2 clamping bolts also.
40. Before going any further, ensure tank has clearance to floor, and fuel tank, and not rubbing on anything.
41. Route the airline previously left in the passenger rear wheel well across the chassis crossmember and connect into the air tank.
42. Refit the Tail shaft.
43. Ensure all bolts and brackets are tight, and all suspension components have been tightened at their standard ride height position. Also Ensure Handbrake Functions as per before.

Refit the wheels and tighten.

Start the car and allow the compressor to run and fill the system with Air.

Following the supplied manual, follow the programming procedure.

If you need to adjust the height differently left to right- when in programming mode use the Schroeder valves to raise or lower one side.

Note: -The car will only access the lowered height when it senses the handbrake is on