

# Westfield SVA Checklist – An Incomplete Guide to SVA points to watch for.

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## Introduction

This list is based on our experience of SVA in June 2000. During the building of our Westfield SVA was constantly changing, it continues to today. Hence this is an incomplete list, which will also continue to change over time.

1. Always bear SVA in mind throughout the build. Position – Safety – Freedom. Position all components according to the manufactures instructions. If it is necessary to deviate then think Safety in locating the component. Think worst case in relation to surrounding components, suspension position when on the ground, fuel and hydraulic fluid leaks and electrics don't mix. Make sure it has Freedom and does not foul, knock, rub or catch any other component or individual.
2. Early on in the build decide whether you are going to use Fuel injection or Carburettors. Fuel injection is more involved but is the absolute safe way to pass the SVA emission control regulations. If you decide on a carburettor fuel system then you must use a pre 1995 engine to pass the emission control tests. The regulations actually changed in 1995 so 1994 would be a safe bet.
3. If the exhaust emissions of carburettor fitted cars have not been set on a rolling road or at an MOT station then they must at least be tested statically using An Exhaust Gas analyser and a carb balancer. ( "Gunsons" , available from Halfords or other Motorist DIY stores). If unsure set it a little on the lean side, ignore any popping and spitting on overrun and flat spots during the drive to the test centre. Make sure it is tractable over the appropriate rev range and have a screwdriver handy to allow any tweaks if there is a problem. If in any doubt get it checked by an expert before you go.
4. Neatly install all brake and fuel pipes and secure, using "P" clips, at 8-10" intervals along the bodywork. Use fuel securing clips on fuel hoses, not jubilee clips.
5. Neatly install Wiring making sure that it is secured at regular intervals with cable ties. Make sure it is routed away from heat fuel and hydraulic sources wherever possible. Always make electrical connections using approved connectors. Exposed wires in the engine bay should be covered with Spiral Wrap or some other protective conduit. Engine wiring looms near the exhaust system may need protecting with heat shielding tape. Wiring which passes through bodywork or bulkheads should be protected by grommets. Cover Exposed wiring tails to Indicators, rear lights, Headlamps etc with heat shrink, spiral wrap or some other conduit. Make sure these items are secured to chassis or bodywork (Any flapping wire is a red rag to a tester). Cover exposed wires to fuel tank sender and fuel pump with conduit. Ensure these are secure. Secure wiring for fuel sender to fuel tank using sticky backed pads and cable ties as required. Any additional wiring / modifications should be blended in to the wiring loom with loom tape and not left exposed.
6. There are bound to be areas of conflict between brake pipes, coolant pipes, and wiring at the back of the engine bay. Make the installation as neat and tidy as possible using hose/cable clips to hold and separate pipes and cables in relation to one another and eliminate chafing and fouling. (Suitable products are available from VWP - (Vehicle Wiring Products.0115 9305454).
7. Check radius of rear light reflectors. If necessary radius to 2.5 mm, with a needle file, wet and dry paper (used wet,) finally polish with chrome polish (Autosol works well).

8. Extend front indicator pods (SEiW, not necessary on SE and may not be necessary using Westfield modified pods) Ensure any wiring extensions in this area are electrically safe and secure, within the nose cone and engine bay.
9. If fitting Cycle wings ensure these do not contact the headlights or bodywork under any circumstances.
10. Aeroquips (flexible brake hoses). Ensure the front ones cannot touch bodywork or cycle wing brackets during steering movements from lock to lock. Cover the front Aeroquips with spiral wrap. The Westfield supplied stuff is a bit thin contact VWP for a suitable alternative.
11. Using plastic caps (available from Westfield) cover the nuts and bolts of the front suspension. Fitting most of the caps is self-explanatory. If you are unsure, Westfield will explain if asked. Within the kit will be 2 large oversize covers. Cut the top off these and split them. Fit them over the Ball joint locking nuts and secure with insulation tape. Similarly “butcher” two of the medium size caps and fit over the locking nuts for the track rod ends. Secure with insulation tape as before.
12. Fit sticky back foam rubber over the top and bottom side screen mounts. Securer by binding in place with duck tape.
13. Do not fit fasteners for Hood and Tonneau cover before SVA. If you do cover them with foam rubber. Also do not fit the optional lockable boot lid before SVA. If you do then cover the hinges with plastic tubing or foam rubber.
14. Don't depart too far from the basic building instructions before SVA. Leave the additional instruments, furry dice and other gizmos until after SVA. Keep as close as possible to Westfield's benchmark car to avoid a failure based on dubious considerations by the tester. – Afterwards is another story.
15. Fit 5 mm plastic beading around the case of the fog and reversing lamps between the lens and the case. Similarly fit the same type of beading around the back of the rear number plate. (A suitable beading can be obtained from VWP (Vehicle Wiring Products.0115 9305454).
16. Instrument panel – In general using the Westfield Wiring loom, VDO gauges and switches is not a problem. If you depart from this consult Westfield Technical dept. Some SVA centres require a separate tell tale for the fog lamp. This can be over come in a couple of ways. The guaranteed safe way is to mount a new (green or yellow) tell tale, below the ignition warning light, in the instrument panel and wire this to the +12v output side of the fog lamp switch. The other side of the tell tale is earthed via local connection to ground. So that when the fog lamp is on, the tell tale is illuminated. Some SVA testing centres will accept an alternative but it is not guaranteed. Cutting a slot in the top of the switch rocker, such that the switch illumination lamp shines through the slot when it is on. It means the same, but is not in effect a tell tale activated by the switch. In all cases it must be visible from the driving position. Lately Westfield have been using a rocker switch with a separate tell tale built in. The third terminal on the switch needs to be connected to a modification to the wiring loom. Consult Westfield about implementing this option.
17. Steering wheel. Racetech and other detachable steering wheels are not SVA compliant. The only solution here is to replace the Steering wheel and upper steering column shaft for a standard Westfield wheel for the duration of the test.

18. Heater / Demister. The tester placing his hand over the demister vent conducts this test, just as you did. So the test is subjective based on the testers opinion. Make sure the lower heater vents in to the footwell are closed to give maximum air through the demister vents. After all its what you would do in your production car to get effective demisting. Closing the lower vents may also save you from a comment on the edge radius of the directing vanes when open.
19. Fit 13 mm plastic /rubber U channel around the return edges of the scuttle. It may also be needed to cover the main bodywork return edges Trim one side down to 4 –5 mm, since it wont go between the chassis rail and the fibreglass. Tape the longer edge of the rubber edging to the top of the scuttle return . Use enough CC foam to hide the gap between the dash hoop and the scuttle locating block and run as far forward to cover the mounting bolt heads.
20. Use Duck tape under any self adhesive CC foam, when trying to circumvent the scuttle return edge problems. Firstly it helps to secure the rubber edging to the return and secondly it gives a secure surface for the CC foam to stick to.
21. Side Exhaust System. – Position the stainless steel cover over the silencer flush with the leading edge of the silencer and make sure it covers as much of the rear exhaust clamp as possible. The “Ashley” front exhaust clamp is often mentioned in SVA reports. Remove it, if already fitted, and radius the exterior edges to 2.5 mm using a file or “Dremel” grinder. Refit and ensure it is tight.
22. Cover any exposed bolts or screws under the dash with heater hose, foam rubber, carpet or any other suitable material. E.g.. Windscreen pillar mounting bolts, steering column bolts etc.
23. If exposed, cover the Windscreen wiper motor with the cover for a Mini Wiper motor (available at your local Rover dealer for about £1.65) Not necessary if you completely cover the aperture in to the scuttle in some way.
24. Cover the space frame member above the passenger and drivers feet with foam (plumbing pipe lagging foam and cable ties will do – if you are worried about the cable ties cover these with duck tape).
25. Cover the hood mounting brackets next to the roll over bar with heater hose.
26. If fitting 4 point harness. Use the inner (inertia reel belt mounting) turrets mounted on the chassis. Fit spacers to the outside mounting points. (Replace the Westfield ones, the VI thinks they are too weak, with spacers 30mm high made from 30 mm steel bar. With a 12 mm hole drilled through to accommodate the Seat Belt Eye bolt.) As insurance, radius the top of the spacer to 2.5 mm. It may be necessary to notch the lower face of the spacers to clear roll over bar mountings and welds. This is acceptable. It will be necessary to cut holes in the boot box lip to accommodate the spacers.
27. Make sure that the lap strap mounting plates do not trap the webbing between the plates and the carpets. Pack the mounting bolts with washers to make sure that the loop on the end of the lap strap is free to move in the plate. Use the correct high tensile bolts supplied with seat belts.
28. Seat belt fittings make sure they are completely secure. If fitting seats with slots in the headrest make sure the shoulder straps pass through the slots. With spacers fitted as above it may be that the seat belt eyebolts do not pass completely through the nut that forms the chassis mounting. Make sure it goes most of the way through. If acceptable,

fill the hole beneath the eyebolt with “Sikaflex”. If the difference is more than 2 to 3 turns replace the eyebolt with a longer one.

29. Ensure the seat belt Eyebolts is tight and facing fore/ aft. If not pack the bolt with washers to achieve the desired result.
30. Seats – Using Westfield Seats - you don’t have a problem. If using some other seats then ensure they are mounted according to the manufacturers instructions. Makes sure they are adjustable and firmly secured to the floor picking up the mounting points built in to the Westfield chassis.
31. Wheel hub covers. Rimstock / Team Dynamics and others make a nice hub cover characterized by a large simulated black plastic nut. The VI is known to fail vehicles fitted with this cover fitted to the spare wheel. (A non 2.5 mm radiused projection). Beg borrow or steal (I don’t advocate the last option) a replacement for the period of SVA. Team Dynamics have some nicely curved ones with flat centres that will pass. The can be replaced with your originals after SVA. As insurance, you may want to replace the road wheel hub covers with the same style (Though as far as we know there have been no failures in this area yet – But there is always a first time). You will find that the securing screws for these two hub covers need to be a different length. To avoid radius problems with screw heads, we recommend getting replacement screws from your Team Dynamics wheel stockist. These are “Allen” headed adjustable in length and fit into the hub cover recess – no projection – no fail.
32. Headlamp mounting brackets. A contentious area. There are more reports of passing than failing, but they have failed. We believe this to be one of those areas the tester will pick up if presented with a car that is, in his opinion, unprepared. If in doubt, cover them with foam rubber.
33. Headlamps can be set at an MOT testing station but don’t be surprised if the tester asks you to adjust them. We didn’t bother we guessed at it by shining the lamps against the back wall of the garage and adjusted them accurately, at the testers invitation, during the test.
34. Back to security and safety. Thoroughly inspect the vehicle yourself. Check and torque tighten to the manufactures specification all components. Pay particular attention to suspension and steering, these were fitted a long time ago during the build. If the tester finds something loose then you may be lucky the first time, and be asked to adjust it. The second time, watch out. Things like Battery tray not secure are avoidable. Brake sponginess (caused by air in the system) indicated by being able to pump up the pedal pressure – Fix it – Bleed the brakes again. At this stage of the game don’t blame the kit it’s your fault.
35. Check the travel of both clutch and accelerator pedals. Check the bolt and lock nut behind each of the pedals for correct clearance. Adjust the bolts until the pedal just touches. In the case of the clutch pedal, well beyond the clutch engagement points and the accelerator pedal, just before wide open throttle measured on the carbs or throttle bodies. Failure to do so, means the only limit to pedal travel is the respective cables, causing them to prematurely fail. Embarrassing on the way to the test or during the test.
36. Check the hand brake cable and adjust as necessary. Examine the handbrake cable when the handbrake is both off and on to make sure it does not chafe, foul or rub rear suspension and or brake components.

37. Noise – The Westfield exhaust system is pretty close to the noise limit ( Ours measured over 100dB @ 3,500 rpm but passed at 98.4dB @ 3000 rpm). Exhaust systems sourced from elsewhere should be checked before SVA. In our experience the test is conducted about 10ft away from the side of a building or fence with the exhaust pointing towards it. If it fails ask if the car can be turned around and tested again. If it still fails you will need to investigate a remedy with Westfield or your exhaust supplier.
38. If you have a limited slip differential you must tell the tester. He's probably noticed but some test centres drive only a single wheel to check brake efficiency this will destroy the LSD. If the tester insists on carrying out the test inform him that is at his risk for any repair, replacement and labour costs involved.. Some centres have full axle rollers. These run at no more than 1.5 mph and should be safe to use. This speed is about the same as the difference between wheels when going very fast around tight corners – Exactly what LSD is all about.
39. Weight and Fuel Tanks. The test asks that you submit the vehicle with a full fuel tank. People have been asked to go and fill up before the weight test is conducted. Westfield standard and Long Range tanks fitted to an SE, and SEiW models will not present a weight problem. Long Range tanks fitted to SEight models can be overweight if presented for SVA testing with a full fuel tank. Consult Westfield on the advisability of fitting Long range tanks to SEight models before SVA.
40. Apply for SVA about 6 weeks before you think you will be ready. The paperwork takes about 2 weeks to go through Swansea. "D" day is about a week before your test is due. If you are not ready then, or very close to it, cancel the test with your testing centre and re-book it. The VI insists on 3 working days notice of cancellation.
41. So you think you are ready and you've done it all. Then read about other peoples SVA test, particularly their failures, and ensure you don't have the same problem. Consult the Westfield technical dept and be guided by them. They are not fool proof, but have a lot more experience of SVA than the rest of us.
42. If you have time, some people have had Pre SVA checks done by Westfield and others have put their cars through an MOT. It's not fool proof, but can give you a certain amount of peace of mind, that somebody else has examined the car and not found any faults, or directed you towards a potential problem you can fix. It will certainly pick up problems with emissions and brakes. You are legally entitled to drive the car to the SVA or MOT testing station, which gives you a chance to test the speedometer.
43. Presentation is where SVA begins and can fall down. An unprepared car or an under prepared car will collect 1/1/2 pages of faults and a retest. A well-prepared car may be given the benefit of the doubt and offered the opportunity to fix it on the spot. But nothing is guaranteed. You can but do your best.
44. Take plenty of tools, cable ties, rubber hose of various diameters, self adhesive closed cell foam, beading of various diameters to the test. If minor points are picked up like chafing by a loose wire, or a pipe, the tester may allow you the opportunity to rectify them.
45. Remember to take with you to the test. Your SVA appointment form (This is your authorisation to drive), driving license, insurance cover note. All of these to waive at the nice friendly constable who's noticed you haven't got any number plates and tax disk. You wouldn't be the first to be stopped.

46. On the day of the test make sure you are there in plenty of time. It's better that you should be waiting for the tester than the other way around. Arrive at the test Centre with a full tank of fuel as instructed on the SVA appointment form. Be prepared during the test for grimaces, gestures, smiles, frowns and silences. Testers are probably trained in non-informative body language. You can't read anything in to these mannerisms, but you will try.
47. Be pleasant, considerate and don't upset the tester with smart remarks or nervous banter be diplomatic. If he asks why did you choose his test centre tell him it was the nearest. Accept what the tester says with grace. We were told by one test centre that it is rare to pass first time, but don't take it personally. Get to know the tester and let him get on with it. Don't get in the way – except when asked to. Don't be too smug when the MAC is handed over- at least not until you are out of eye / ear shot.

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We hope you find this document useful and wish you a successful test. Telling us about your experience will help to keep this document up to date. We can be contacted: [emeng@ilsuk.clara.co.uk](mailto:emeng@ilsuk.clara.co.uk)

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