

Your Ref: Mercedes Benz C180  
(chassis number WDD2050402F885501)  
Our Ref : CI/TP20010902/D

09 October 2020

**Sin Hock Lee Motor Repair**

51 Ubi Avenue 1 #01-09  
Paya Ubi Industrial Park  
Singapore 408933

**INSPECTION REPORT OF AN UNREGISTERD MERCEDES BENZ C180  
MOTOR CAR WITH CHASSIS NUMBER WDD2050402F885501**

1. I refer to your request on 29 September 2020 to conduct a physical inspection of an unregistered Mercedes Benz C180 motor car bearing chassis number WDD2050402F885501 (herein referred to as "**Motor Car**").
2. The purpose of this inspection is to primarily determine: -
  - a) the general road worthiness of the Motor Car, whether there is any possible mechanical problem(s) and/or operational issue(s) to the various operating systems of the Motor Car;
  - b) whether there was any work (repair) done to the chassis/structural body of the Motor Car, and if yes, whether all major components, welding and critical points of the Motor Car has been properly restored.

**Damage to the Motor Car**

3. From the photographs provided to me, it was observed that the Motor Car had sustained damages at its front right portion and rear portion. Body parts damaged at the front right portion include the front bumper, front right headlamp, front bonnet and front right fender amongst others.
4. For the rear portion, I had observed damage to Motor Car's rear bumper, rear bootlid, rear bootlid chrome moulding, rear left taillamp, rear exhaust muffler and rear left fender amongst others. See photo 1 – 3 below.



**Photo 1** shows the front right body of the Motor Car prior to any repairs being carried out (photograph provided to me). The Motor Car had sustained damages at its front right portion and rear portion. For the front right portion, the body parts observed to be damaged include its front bumper, front right headlamp, front bonnet and front right fender amongst others. The airbags of the Motor Car were not activated, as seen from the photographs that were provided to me.



**Photo 2** shows the rear right portion of the Motor Car prior to any repairs being carried out (photograph provided to me). Apart for the front right portion, the Motor Car had also sustained damage at its rear portion. The body parts observed to be damaged at the rear portion include the rear bumper, rear bootlid, rear bootlid chrome moulding and rear exhaust muffler amongst others.





**Photo 3** shows the rear left portion of the Motor Car prior to any repairs being carried out (photograph provided to me). Apart for the front right portion, the Motor Car had also sustained damage at its rear portion. The body parts observed to be damaged at the rear portion include the rear bumper, rear bootlid, rear left taillamp and rear left fender amongst others.

## Inspection of the Motor Car

5. Following the request, I had carried out a physical inspection of the Motor Car on 01 October 2020 at the premises of 51 Ubi Avenue 1 #01-09 Paya Ubi Industrial Park, Singapore 408933. I also conducted a short test drive of the Motor Car during this inspection. My observations and comments with respect to this inspection and test drive are set out below.
6. The mileage of the Motor Car recorded at the time of my inspection was 1,601km. The Motor Car was also hoisted up during the inspection to facilitate my examination of its undercarriage.

## Exterior Condition

7. The Motor Car was observed to be in a relatively good general condition with no loose exterior fittings observed.

## Tyres and Wheel Rims

8. It was fitted with 17inch sport wheel rims that were wrapped with tyres that were observed to be of serviceable condition. The tyres were also sufficiently inflated for vehicular operation. The tyre brand, tyre size and approximate remaining tread depth of the 4 tyres of the Motor Car were recorded as follows: -



**Body Panels (Detachable & Non-detachable)**

9. The detachable body panels of the Motor Car like the front fenders, front bumper, rear bumper, doors, bonnet and rear bootlid amongst others were all found to be fitted securely.
10. Checks on the non-detachable body panels like the rear fenders, floorboard, roof panel, pillars and rocker panels amongst others, revealed that these body panels were spot welded onto the chassis/structural body of the Motor Car. The original factory sealant at the joints of the non-detachable body panels was all untouched indicating no replacement of the non-detachable body panels was carried out; and that these body panels were all originally fitted except for the rear left fender and rear right fender, which were found to be replaced (refer to photograph 25 & 26 below).

**Chassis/Structural Body**

11. Visually, I did not find any weld marks, other than the original spot weld marks, on the chassis/structural body of the Motor Car. The original factory sealant at the joints along the chassis/structural body was also untouched, indicating that no replacement of the chassis/structural body was carried out; and that the chassis/structural body was originally fitted. I did however find signs of repair work carried out to the end section of the Motor Car's rear left chassis (refer to photograph 24 below).

**Interior Compartment (Seats)**

12. The seats of the Motor Car were found to be secured to the floorboard of the Motor Car via seat rails bolted onto the floorboard. Retractable seat belt reels and pre-tensioners were fitted on all seats of the Motor Car. The seat belt reels were tested and were able to be fastened securely into the respective pre-tensioners that were fixed to the side of all the seats.

**Electronic Safety Features**

13. The Motor Car's automatic self-test of the functionality of its various electronic safety features like the Anti-Lock Brake System (ABS), Supplemental Restraint System (SRS), Electric Power Steering (EPS) and Traction Control System (TCS) during cranking of the engine had indicated that these electronic systems were in working condition. This was determined from the respective warning lights disappearing from the instrument panel after the self-test.

### **Engine Compartment & Operating Fluids**

14. My examination of the engine compartment of the Motor Car revealed that the various parts and components inside the engine compartment were all intact and properly fitted. The engine oil, brake fluid and engine coolant were all found to be of sufficient level for operating purposes. Visually, there was also no contamination found to these fluids.
15. My checks on the underside of the Motor Car revealed no sign(s) or indication(s) of fluid leakage and/or fluid stain(s). The engine block and automatic transmission assembly were both secured properly. They were not mounted onto the chassis/structural body or any integral body part of the Motor Car. All undercarriage components of the Motor Car were also observed to be intact and secured in an appropriate manner.

### **Steering System & Braking System**

16. Static brake tests conducted on the Motor Car revealed no abnormality. The brake booster had responded well to the various tests conducted. There was also no abnormal movement of the brake pedal when it was depressed. The brake hoses and brake pipes were all intact with no leakage found. In general, the static brake tests had suggested that there was no internal leakage of pressure/vacuum in the braking system of the Motor Car and that the braking system is in serviceable condition.
17. Static test on the steering system of the Motor Car also revealed no abnormality to the steering system. I did not experience any abnormal free play and/or other resistance when turning the steering wheel left and right to full lock positions. My visual examination of the various steering components which had included the rack and pinion, tie rods, tie rod ends, and ball joints revealed that these components were all generally in good condition.

### **Test Drive of the Motor Car**

18. I subsequently conducted a short test drive of the Motor Car to operationally determine if there was any possible mechanical problem(s) to the various operating systems of the Motor Car. The test drive was carried out within the building premise of 51 Ubi Avenue 1, where I was able to make multiple right turns and left turns; travel over road humps; left bend and right bend; upslope and downslope.

19. During this test drive, the general performance, stability, braking and handling of the Motor Car were satisfactory. No abnormal sound(s) was heard when executing left turns and right turns or when the Motor Car was going over road humps.
20. Operationally, I did not find any abnormal behaviour of the steering system and braking system. The Motor Car had responded well to my steering input and was able to come to a complete stop effectively during braking. The mileage of the Motor Car at the end of the test drive was 1,606km.

### **Conclusion**

21. Basing on my physical inspection of the Motor Car, I am of the view that the overall general condition of the Motor Car was relatively good as at the time of my inspection. There was also no sign(s) or indication(s) of fluid leak and/or fluid stain found.
22. The body parts at the front right portion and rear portion of the Motor Car were visually examined and overall, it was noted that the repair/restoration works carried out to the damaged area of the Motor Car (refer photograph 1 to 3 above) were reasonably adequate and in order.
23. I had found signs of repair work carried out to the end section of the Motor Car's rear left chassis. The repairs carried out were in order as the repairs did not involve any cutting and/or re-welding of the Motor Car's original chassis/structural body. Furthermore, lower body chassis alignment measurements carried out by STA Inspection Pte Ltd also showed the chassis/structural measurements of the Motor Car to be within acceptable tolerance (refer to Appendix 1 at page 21 of this report).
24. My test drive of the Motor Car revealed no evidence to suggest possible mechanical problem(s) to the Motor Car. I did not experience any abnormal behaviour and/or sound(s) from the various operating systems of the Motor Car. The general performance, stability, braking and handling of the Motor Car were satisfactory throughout the Motor Car's short test drive. In general, I had found the Motor Car to be of road worthy condition. See photo 4 – 26 below taken at the time of my inspection.





**Photo 4** shows a general view of the front right body of the Motor Car at the time of my inspection. The Motor Car was observed to be in a relatively good general condition with no loose exterior fittings observed. The body parts at the front right portion of the Motor Car were visually examined and it was observed that the repair/restoration works carried out to the damaged area of the Motor Car (refer to photograph 1 above) were reasonably adequate and in order.



**Photo 5** shows a closer view of the front bumper, front right headlamp and front bonnet of the Motor Car at the time of my inspection. The body parts at the front right portion of the Motor Car were visually examined and it was observed that the repair/restoration works carried out to the damaged area of the Motor Car (refer to photograph 1 above) were reasonably adequate and in order.



**Photo 6** shows a closer view of the front bonnet and front right fender of the Motor Car at the time of my inspection. The body parts at the front right portion of the Motor Car were visually examined and it was observed that the repair/restoration works carried out to the damaged area of the Motor Car (refer to photograph 1 above) were reasonably adequate and in order.



**Photo 7** shows a general view of the rear right body of the Motor Car at the time of my inspection. The Motor Car was observed to be in a relatively good general condition with no loose exterior fittings observed. The body parts at the rear portion of the Motor Car were visually examined and it was observed that the repair/restoration works carried out to the damaged area of the Motor Car (refer to photograph 2 & 3 above) were reasonably adequate and in order.





**Photo 8** shows a general view of the rear left body of the Motor Car at the time of my inspection. The Motor Car was observed to be in a relatively good general condition with no loose exterior fittings observed. The body parts at the rear portion of the Motor Car were visually examined and it was observed that the repair/restoration works carried out to the damaged area of the Motor Car (refer to photograph 2 & 3 above) were reasonably adequate and in order.



**Photo 9** shows a closer view of the rear bumper, rear bootlid and rear left taillamp of the Motor Car at the time of my inspection. The body parts at the rear portion of the Motor Car were visually examined and it was observed that the repair/restoration works carried out to the damaged area of the Motor Car (refer to photograph 1 & 2 above) were reasonably adequate and in order.



**Photo 10** shows the rear left fender and rear left taillamp of the Motor Car at the time of my inspection. The body parts at the rear portion of the Motor Car were visually examined and it was observed that the repair/restoration works carried out to the damaged area of the Motor Car (refer to photograph 1 & 2 above) were reasonably adequate and in order.



**Photo 11** shows the chassis number of the Motor Car. The chassis number recorded was WDD2050402F885501





**Photo 12** shows a general view of the engine compartment of the Motor Car at the time of my inspection. The various parts and components inside the engine compartment were all observed to be intact and properly fitted. There was also no sign(s) or indication(s) of fluid leak and/or fluid stain found inside the engine compartment.



**Photo 13** shows the seats of the Motor Car, which were secured via seat rails (arrowed) to the floorboard. All the seats of the Motor Car were fitted with a retractable seat belt reel and pre-tensioner. The seat belts were tested and able to be fastened into the respective pre-tensions that were fitted on the side of each individual seat.





**Photo 14** shows the warning lights for the various electronic safety features appearing on the instrument panel of the Motor Car during its self-test when the engine is cranked, in particular the ABS, SRS, EPS and TCS lights (arrowed).



**Photo 15** shows the respective warning lights no longer illuminated, indicating that there is no fault detected to the ABS, SRS, EPS and TCS lights systems of the Motor Car during the self-test. These electronic systems were hence in working condition at the time of my inspection.



**Photo 16** shows the Motor Car hoisted up for checks on its undercarriage. There was no sign(s) or indication(s) of fluid leakage and/or fluid stain(s) on the underside of the Motor Car. The undercarriage components of the Motor Car were also all observed to be intact and secured in an appropriate manner.



**Photo 17** shows a general view of the control arms and linkages at the rear right wheel of the Motor Car. I did not observe any fluid leak and/or fluid stain on the underside of the Motor Car. All of the Motor Car's undercarriage components were observed to be intact and secured in an appropriate manner.





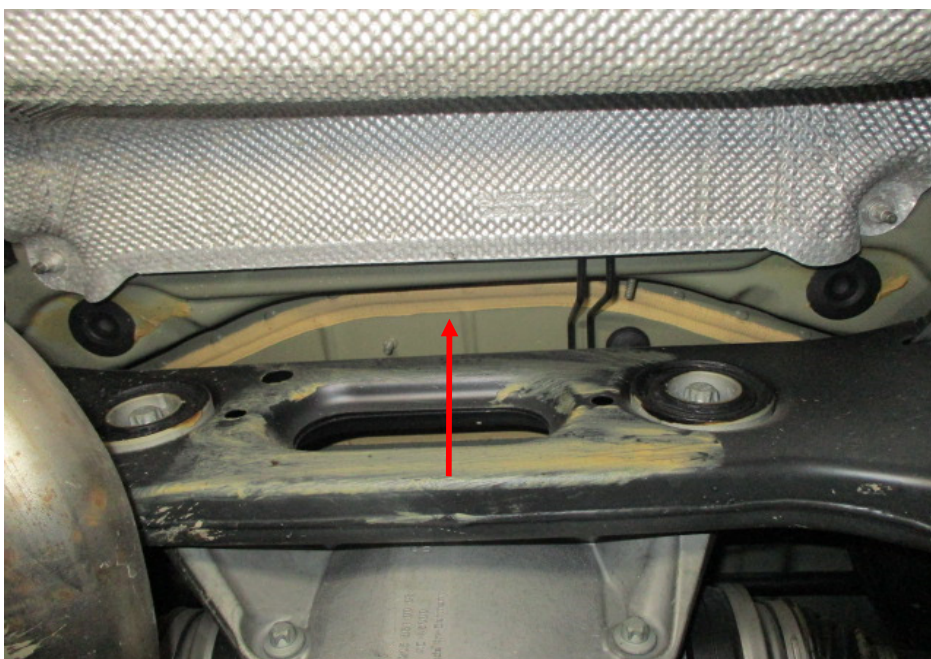
**Photo 18** shows the various undercarriage components at the front left wheel of the Motor Car. The mechanical components, control arms and linkages were all found to be intact and secured in an appropriate manner.



**Photo 19** shows the various undercarriage components at the front right wheel of the Motor Car. The mechanical components, control arms and linkages were all found to be intact and secured in an appropriate manner. I also did not observe any fluid leak and/or fluid stain on the underside of the Motor Car.

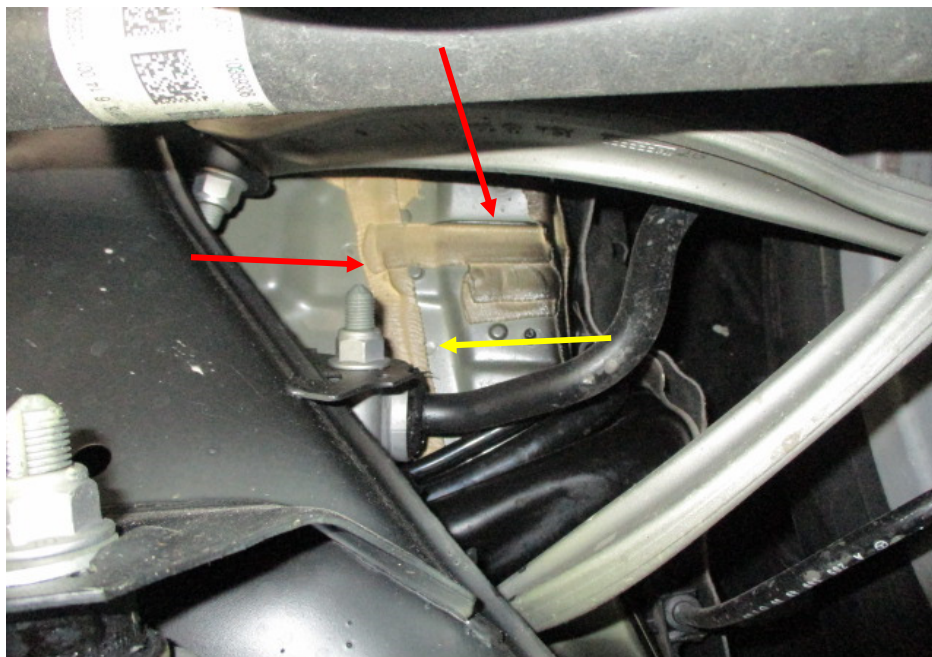


**Photo 20** shows the Motor Car's rear muffler (arrowed). My examination of the Motor Car's exhaust system revealed no sign(s) or indication(s) of any cut or weld marks along its exhaust pipes and on its catalytic convertor.

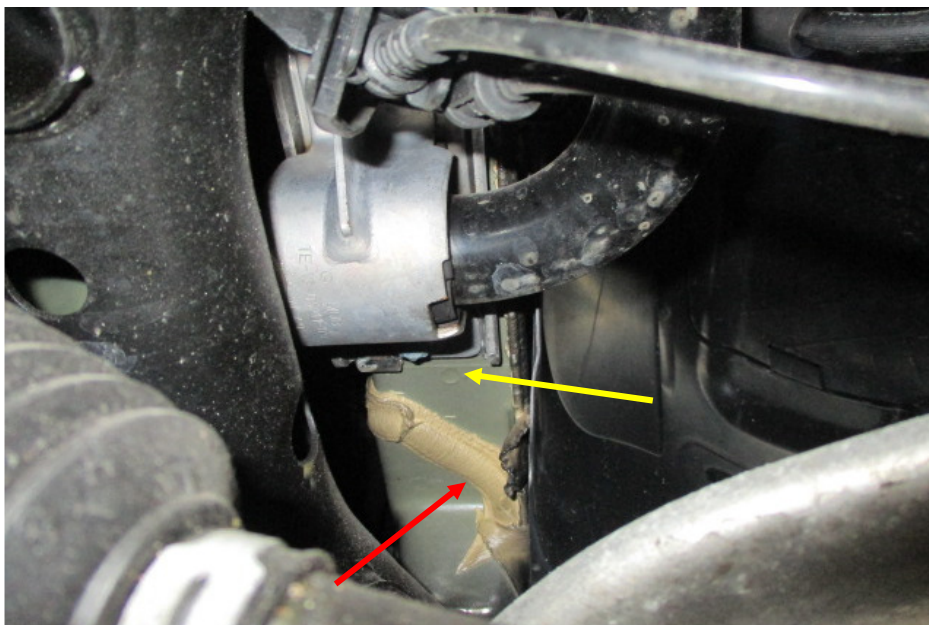


**Photo 21** shows the floorboard at the underside rear centre of the Motor Car. The original factory sealant (arrowed) at the joints along the non-detachable body parts at the underside of the Motor Car was untouched, indicating no work was done on the floorboard of the Motor Car and that the floorboard was originally fitted.



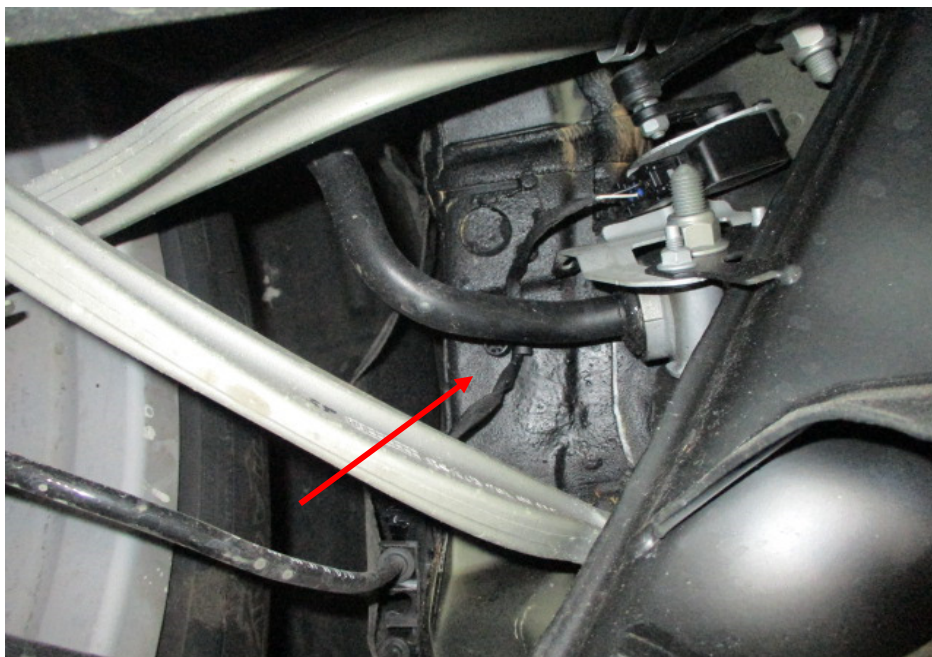


**Photo 22** shows the chassis/structural body at the underside rear right of the Motor Car. Visually, I did not find any weld marks other than original spot weld marks (yellow arrow) on the chassis/structural body of the Motor Car. The original factory sealant (red arrow) at the joints along the chassis/structural body was also untouched, except for the end section of the rear left chassis (refer to photograph 24 below).



**Photo 23** shows the chassis/structural body at the underside front right of the Motor Car. Visually, I did not find any weld marks other than original spot weld marks (yellow arrow) on the chassis/structural body of the Motor Car. The original factory sealant (red arrow) at the joints along the chassis/structural body was also untouched, except for the end section of the rear left chassis (refer to photograph 24 below).





**Photo 24** shows the chassis/structural body at the underside rear left of the Motor Car. The end section of the chassis/structural body at the underside rear left was found sprayed with anti-corrosion protection. This is an indication that repair works were carried out at the end section of the chassis/structural body at the underside rear left. However, the rear left chassis of the Motor Car was still observed to be an originally fitted part.



**Photo 25** shows the left side "C" pillar of the Motor Car. I did not find any original weld marks at the left side "C" pillar of the Motor Car, indicating that the rear left fender of the Motor Car was replaced. The lack of original weld marks seen was due to replacement work when the replaced rear left fender was re-welded onto the Motor Car and smoothen for re-spraying work.



**Photo 26** shows the right side "C" pillar of the Motor Car. I did not find any original weld marks at the right side "C" pillar of the Motor Car, indicating that the rear right fender of the Motor Car was replaced. The lack of original weld marks seen was due to replacement work when the replaced rear right fender was re-welded onto the Motor Car and smoothen for re-spraying work.

**Ang Bryan Tani**

AMSOE, AMIRTE, AFF SAE, M.MATAI, AFF.Inst.AEA

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Technical Investigation & Accident Reconstructionist (SAE-A)


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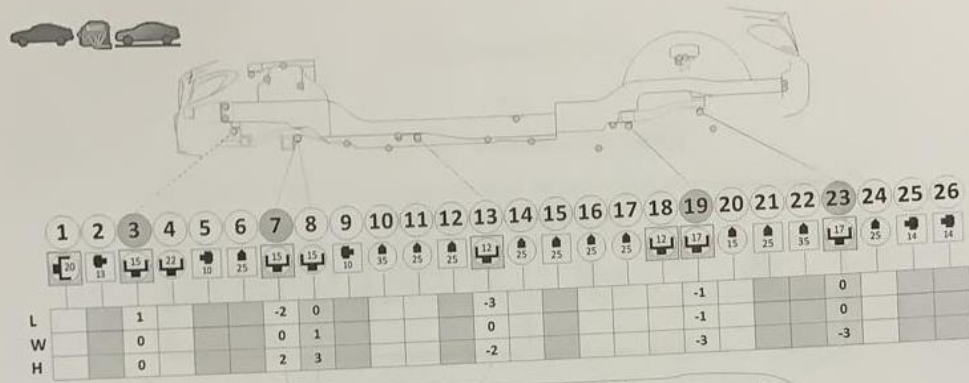
## Appendix 1

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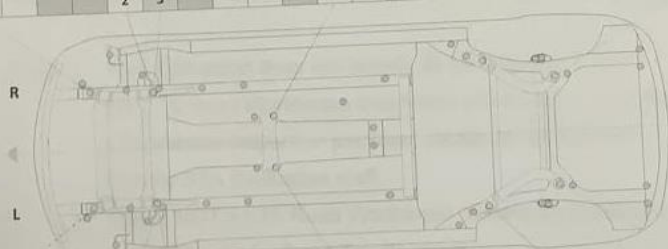
### Car-O-Liner Vision2 X3 Lower body Repair Report

<b>Customer</b>				<b>Vehicle</b>	
Name SIN HOCK LEE MOTOR REPAIR				DataSheet 14:164	
Address				Issue 2016-11-01	
City				Make Mercedes	
State				Model 180-500	
E-mail				Year 2014-	
Zip				Type 4D/RWD/RHD	
Phone				VIN	
				Miles	
				<b>Job</b>	
Insurance				Start Date 2020-10-09	
Claim No				End Date 2020-10-09	
Phone					
Insurance Co					
Adjuster					
E-mail					





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L																										
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H																										

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L																										
W																										
H																										

BodyShop	Notes
Company STA Evaluation Address 302 Sin Ming Road City SINGAPORE State E-mail baydennis@stegg.com Zip 575627 Phone +65 6453 0200	WITHIN ACCEPTABLE TOLERANCE

Appendix 1 shows the lower body chassis measurements of the Motor Car (red arrow) that was carried out by STA Inspection Pte Ltd. I note that the chassis/structural measurements of the Motor Car were within acceptable tolerance (yellow arrow).