

You're Ref: SMG 5349X 28th November 2022

Our Ref: CS4/TP22010112/P

Eurokars Habitat Pte Ltd

27 Leng Kee Road Singapore 159098

MECHANICAL INSPECTION REPORT OF MOTOR CAR SMG 5349X

- 1. I refer to your request on 12th September 2022 to conduct a physical inspection of a Motor Car bearing registration number SMG 5349X (herein referred to as "**Motor Car**").
- 2. The objective of the inspection is to determine the general road worthiness of the Motor Car as well as whether there was any abnormality to the various operating systems like the engine system, steering system and braking system amongst others.
- 3. Following the request, I had carried out a physical inspection of the Motor Car on 2nd November 2022 at the premises of Eurokars Aftersales Centre, 27A Tanjong Penjuru, Singapore 609042. A test drive of the Motor Car was also carried out during this inspection. I now set out below my observations and comments with respect to this inspection.

General Condition

- 4. The mileage of the Motor Car at the time of my inspection was 40,893km.
- 5. There was no visible damage observed on Motor Car at the time of my inspection.

Tyres and Wheel Rims

6. The condition of the Motor Car's 4 tyres was observed to be in serviceable condition. I did not find any tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the 4 tyres. The 4 tyres were also observed to be sufficiently inflated for vehicular operation. The tyre brand, tyre size and remaining tread depth of the 4 tyres were recorded as follows: -





Bridgestone 225/50R18 (6.6mm)

Bridgestone 225/50R18 (6.7mm)

7. The 4 tyres were observed to be wrapped around standard alloy wheel rims that were found to be without any damage. See photo 1 – 9 below.



Photo 1 shows the mileage of the Motor Car at the time of my inspection. The mileage observed was 40,893km.





Photo 2 shows a general view of the Motor Car's front body 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



Photo 3 shows a general view of the Motor Car's right body 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



Photo 4 shows the general view of the Motor Car's left body 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



Photo 5 shows the general view of the Motor Car's rear body 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



Photo 6 shows the condition of the front right tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 6.7mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).



Photo 7 shows the condition of the rear right tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 6.6mm. The tyre was also observed to be sufficiently inflated for vehicular operation with no tear, cut or burst mark(s).





Photo 8 shows the condition of the rear left tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 5mm. The tyre, which was wrapped around alloy wheel rim, was also observed to be sufficiently inflated for vehicular operation. The 4 tyres of the Motor Car were wrapped around standard alloy wheel rims.



Photo 9 shows the condition of the front left tyre of the Motor Car, which was observed to be in serviceable condition with remaining tread depth of approximately 6.9mm. There was also no tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the Motor Car's 4 tyres.



Engine Compartment & Operating Fluids

- 8. Upon examination of the engine compartment of the Motor Car, I had observed all the parts and components inside the engine compartment to be intact. The brake fluid, engine oil and engine coolant were all found to be of sufficient level for operating purposes. Visually, there was also no contamination found to these fluids.
- Further examination of the engine compartment revealed no sign(s) or indication(s) of fluid leakage and/or fluid stain within the engine compartment of the Motor Car.
- 10. My subsequent checks on the underside of the Motor Car also revealed no sign(s) or indication(s) of fluid leak and/or fluid stain(s). Visually, the various undercarriage components of the Motor Car were all observed to be intact and without any visible damage. See photo 10 15 below.



Photo 10 shows a general view of the Motor Car's engine compartment. The various parts and components inside the engine compartment were intact. There was also no sign(s) or indication(s) of fluid leakage and/or fluid stain within the engine compartment.



Photo 11 shows the instrument panel display brake fluid level sensor of the Motor Car at the time of my inspection. The brake fluid was observed to be of sufficient level.

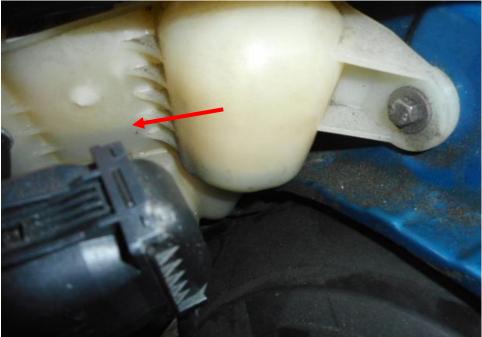


Photo 12 shows checks being carried out to the engine coolant of the Motor Car at the time of my inspection. The engine coolant was observed to be of sufficient level (arrowed) and without any visible contamination.



Photo 13 shows the instrument panel display of the engine oil level (arrowed) of the Motor Car at the time of my inspection. The engine oil was observed to be of sufficient level and without any visible contamination.



Photo 14 shows the undercarriage of the Motor Car, at the area where the engine housing and transmission housing are located. I did not find any sign(s) or indication(s) of fluid leak and/or fluid stain(s) on the underside of the Motor Car.



Braking System & Steering System

- 11. 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. 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. The braking system of the Motor Car was in serviceable condition. This was taking into consideration that the brake fluid was of sufficient level, and also that there was no sign(s) of brake fluid leakage along the brake hoses and brake pipes.
- 12. 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 steering rack and pinion, tie rods, tie rod ends and ball joints revealed that these components were all generally in good condition. See photo 15 21 below.



Photo 15 shows the brake hose/pipe (arrowed) at the rear right wheel of the Motor Car. No leakage of brake fluid was observed. Visual examination of the various components of the braking system like the drum brake, brake booster, brake pedal etc. had revealed all to be intact and without visible damage.



Photo 16 shows the brake hose/pipe (arrowed) at the rear left wheel of the Motor Car. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Car. Static tests of the Motor Car's braking system had indicated that there was no internal leakage of pressure/vacuum. The undercarriage components of the Motor Car were also all found to be intact and without any visible damage.

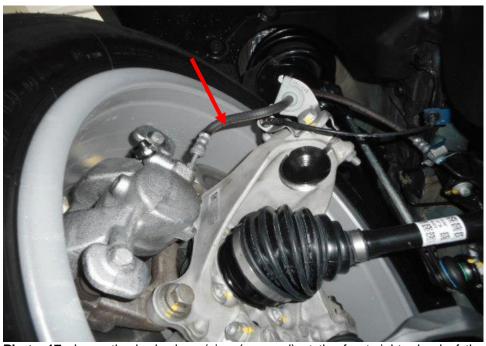


Photo 17 shows the brake hose/pipe (arrowed) at the front right wheel of the Motor Car. I did not observe any leakage of brake fluid at the time of my inspection of the Motor Car. Static tests of the Motor Car's braking system had indicated that there was no internal leakage of pressure/vacuum.



Photo 18 shows the brake hose/pipe (arrowed) at the front left wheel of the Motor Car. No leakage of brake fluid was observed. Visual examination of the various components of the braking system like the brake caliper (circled), brake booster, brake pedal etc had revealed all to be intact and without visible damage.



Photo 19 shows the front right wheel of the Motor Car turned to its full left. During my steering system test, I did not experience any abnormal free play and/or resistance when I had turned the steering wheel towards the left and right. This would suggest that the steering system of the Motor Car was in serviceable condition.

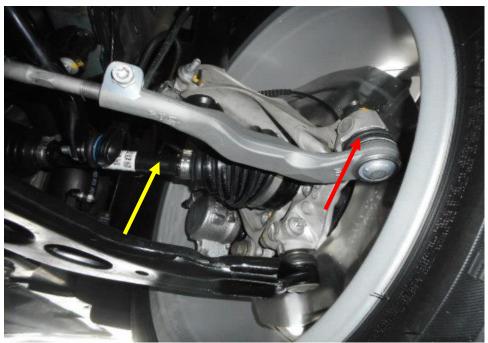


Photo 20 shows the various undercarriage components at the front right wheel of the Motor Car, in particular the steering tie rod (red arrow) and in particular the drive shaft (yellow arrow). The various steering components were all found to be intact, suggesting that the steering system of the Motor Car was in serviceable condition. There was also no sign of fluid stain observed on the various undercarriage components at the front right wheel of the Motor Car.



Photo 21 shows the various undercarriage components at the front left wheel of the Motor Car, which had included the steering tie rod (arrowed). The various undercarriage components of the Motor Car were all found to be intact without any visible damage.



Electronic Safety / Warning Indicators

13. Motor Car 's automatic self-test of the functionality of its electronic operating systems like the Anti-Lock Brake System (ABS), Traction Control System (TCS), Electrical Power Steering (EPS) and Supplemental Restraint System (SRS) during cranking of the engine had indicated that the system were in working condition and without abnormality. This can be established from the warning lights disappearing from the instrument panel after the self-test. See photo 22 & 23 below.



Photo 22 shows the warning light for Anti-Lock Brake System (ABS), Traction Control System (TCS), Electrical Power Steering (EPS) and Supplemental Restraint System (SRS) (arrowed) appearing on the instrument panel of the Motor Car during the self-test of its various electronic operating systems when its engine was cranked.



Photo 23 shows no warning lights illuminated on the instrument panel of the Motor Car after the engine was cranked. This would suggest that there was no abnormality to the electronic operating system of the Motor Car, like the ABS, TCS, EPS and SRS etc.

Seat Belts

14. The front right, front left, rear right and rear left seat belts of the "Motor Car" were tested and all the seat belts were able to be fastened securely into the respective pre-tensioners that were fitted at the sides of each seat.

Operational Behaviour of the Motor Car

15.A 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 was carried out during this inspection The test drive was carried out along the arterial roadways surrounding Eurokars Aftersales Centre, 27A Tanjong Penjuru, Singapore 609042 where I was able to make multiple right turns and left turns; travel over road humps; left bend and right bend; upslope and downslope.



16. During the operational test, the transmission system of the Motor Car was able to be shifted to drive mode and reverse mode without any difficulty. There was no abnormal sounds heard and/or abnormal behaviour of the Motor Car's engine system. It was able to move forward and backward normally. The braking system was also found to be in working condition as the Motor Car was able to slow down and come to a complete stop upon depressing of the brake pedal. (Refer to photo 2 & 19)

Conclusion

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.

- 17.A short operational test of the Motor Car, which I had conducted, did not produce any sign(s) or symptom(s) to suggest that there was any abnormality to its engine system, its transmission system and braking system. The general performance, stability, braking and handling of the Motor Car were satisfactory
- 18. The 4 tyres of the Motor Car were also found to be in serviceable condition. I did not find any tear, cut or burst mark(s) on the outer and the inner sidewalls as well as across the tread of the 4 tyres. The 4 tyres were also observed to be sufficiently inflated for vehicular operation with remaining tread depth of approximately 5mm to 6.9mm.



19. A lower body chassis alignment measurements of the Motor Car carried out by STA Inspection Pte Ltd on 15 November 2022 showed the chassis/structural measurements of the Motor Car to be within acceptable tolerance (refer to Appendix 1 at page 18 and 19 of this report).

Sherwin Beh

Technical Investigator

Ang Bryan Tani

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

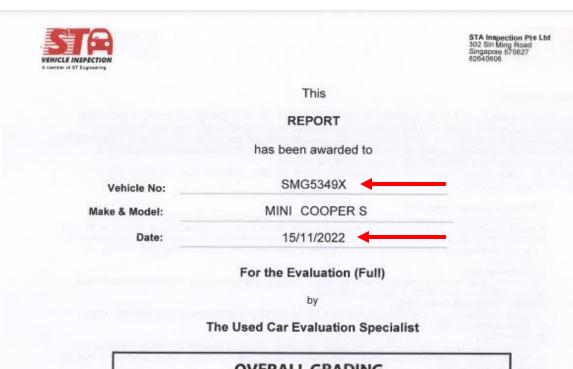
Senior Technical Investigator

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Appendix 1



OVERALL GRADING			
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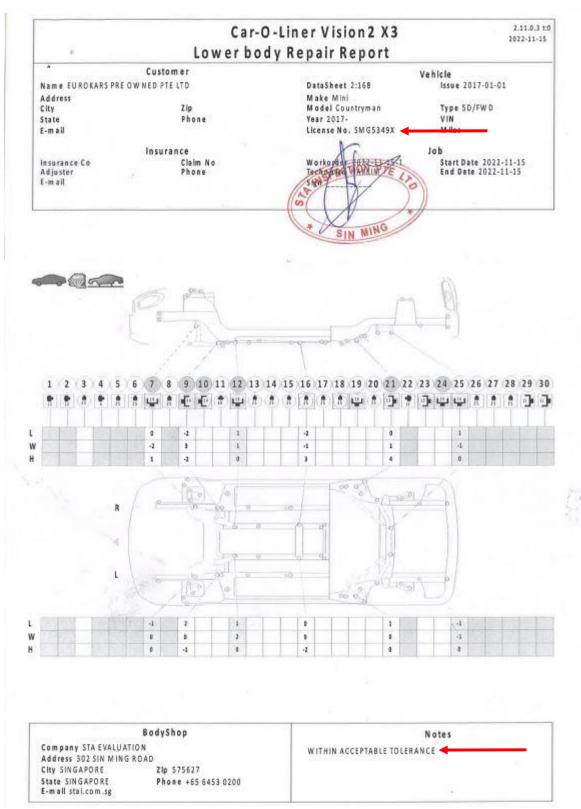
- Note: 1. This Evaluation does not include all the required Tests for the LTA Road Worthiness Inspection which is also available LTA Vehicle Inspection package, please check with our friendly STA Evaluation staff.
 - This is NOT a LTA Road Worthiness Inspection Certificate and NOT valid for Road Tax Renewal.



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Appendix 1 shows the lower body chassis measurements of the Motor Car that was carried out by STA Inspection Pte Ltd on 15 November 2022. I note that the chassis/structural measurements of the Motor Car were within acceptable tolerance (arrowed).