

Your Ref: SGN 1005Z
Our Ref : CI/TP21006625/D

18 December 2021

Joel Luo
66 Mei Hwan Drive
#06-09
Singapore 568429

AUTOMOBILE INSPECTION REPORT OF MOTOR CAR SGN 1005Z

1. I refer to your request on 13 December 2021 to conduct a physical inspection of a motor car bearing registration number SGN 1005Z (herein referred to as "**Motor Car**").
2. The purpose of this inspection was to primarily determine: -
 - a) whether the manual transmission assembly on the Motor Car was fitted in a secure manner that will not affect the structural integrity of the Motor Car; and
 - b) whether there was any operational issue(s) to the manual transmission system of the Motor Car.
3. Following the request, I had carried out a physical inspection of the Motor Car on 15 December 2021 at the premises SKM Motor Works Pte Ltd, No. 10 Kaki Bukit Road 2 #03-31, First East Centre, Singapore 417868. I also conducted a short test drive of the Motor Car during this inspection.
4. I now set out below my observations and comments with respect to this inspection and test drive.

Inspection of the Motor Car

5. The following general information of the Motor Car was first recorded at the time of my inspection: -

Vehicle Registration No.	: SGN 1005Z
Make / Model	: Honda Integra 2.0A
Chassis No	: JHMDC54506S200272
Year of Registration	: 2005 (Dec)
Mileage	: 130,744km

6. The Motor Car was fitted with a 6-speed manual transmission system. The input side of the transmission is bolted to the crankshaft side of the engine block. The left and right drive shafts were observed to be securely fitted from the main shaft, located inside the transmission, to the front left wheel and front right wheel respectively. There was also no crack and/or hole observed on the transmission housing.
7. The transmission of the Motor Car was supported by 3 brackets. One bracket at the front of the transmission, one bracket at the rear of the transmission and one bracket at the left side of the transmission. The brackets at the front and rear of the transmission were mounted onto the engine cross member while the bracket at the left side of the transmission was mounted onto the left side front chassis, adjacent to the left side front wheelhouse. All 3 brackets are with rubber bushing, which absorbs any vibrations arising from the rotation of the transmission gears, minimising any stress to the brackets and correspondingly also minimise any stress to the engine cross member and left side front chassis that these brackets are mounted onto.
8. The transmission of the Motor Car was operated by a clutch pedal, for engaging and disengaging the transmission gears, and a gear shifter for manually upshifting and downshifting of the transmission gear to be engaged. See photo 1 – 12 below.



Photo 1 shows the Motor Car hoisted up at the time of my inspection. The mileage of the Motor Car recorded was 130,744km.



Photo 2 shows a general view of the transmission (arrowed) that was fitted on the Motor Car. The input side of the transmission is bolted to the crankshaft side of the engine block. The left and right drive shafts were observed to be securely fitted from the main shaft, located inside the transmission, to the front left wheel and front right wheel respectively. There was also no crack and/or hole observed on the transmission housing.



Photo 3 shows another view of the transmission (arrowed) that was fitted on the Motor Car. The input side of the transmission is bolted to the crankshaft side of the engine block. There was no crack and/or hole observed on the transmission housing.



Photo 4 shows another view of the transmission (arrowed) that was fitted on the Motor Car, as viewed from the rear to front perspective of the Motor Car. There was no crack and/or hole observed on the transmission housing.

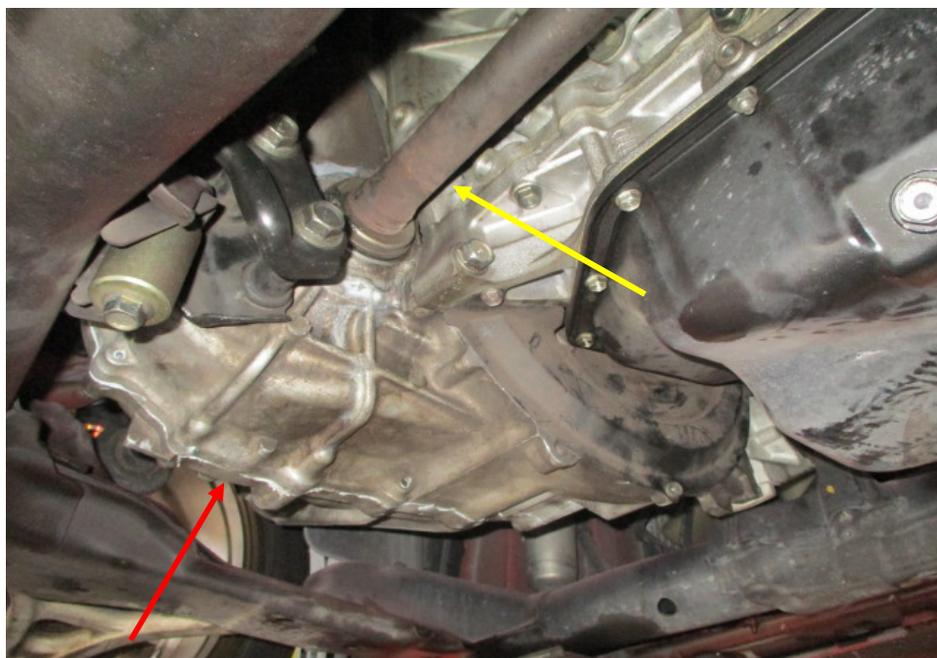


Photo 5 shows a general view of the transmission (red arrow) that was fitted on the Motor Car, as viewed from the rear right to front left perspective of the Motor Car. There was no crack and/or hole observed on the transmission housing. The left and right drive shafts were observed to be securely fitted from the main shaft, located inside the transmission, to the front left wheel and front right wheel respectively. The right drive shaft is highlighted by the yellow arrow.

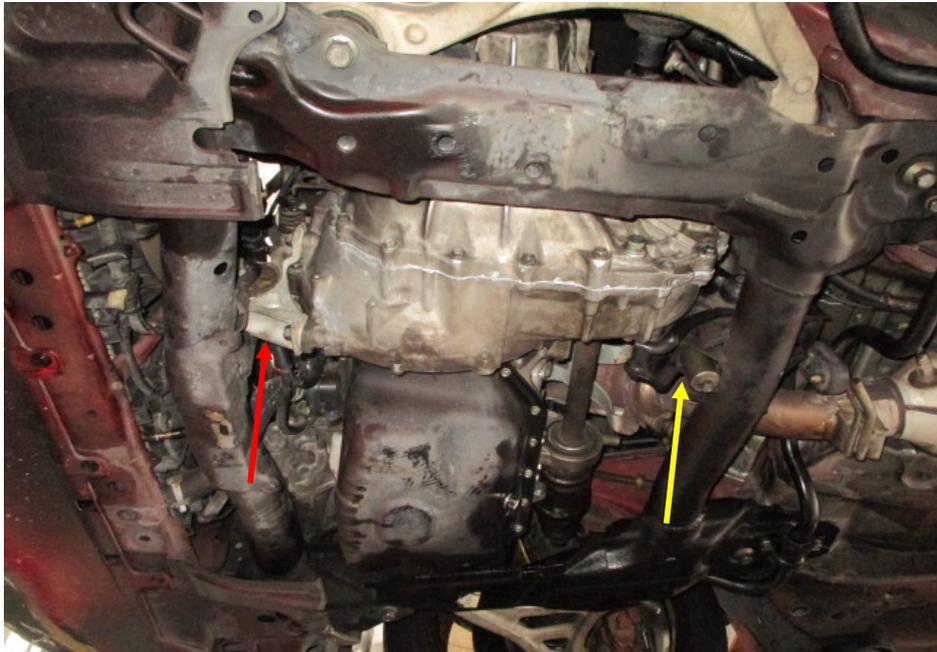


Photo 6 shows a general view of the transmission that was fitted on the Motor Car, as viewed from the left to right perspective of the Motor Car. The transmission of the Motor Car was supported by 3 brackets. One bracket at the front of the transmission, one bracket at the rear of the transmission and one bracket at the left side of the transmission. The brackets at the front (red arrow) and rear (yellow arrow) of the transmission were mounted onto the engine cross member.



Photo 7 shows the bracket (arrowed) supporting the front of the Motor Car's transmission. This bracket was mounted onto the engine cross member. The bracket was with rubber bushing that absorbs any vibrations arising from the rotation of the transmission gears, minimising any stress to the bracket and correspondingly also minimise any stress to the engine crossmember.



Photo 8 shows the bracket supporting the rear of the Motor Car's transmission. This bracket was mounted onto the engine cross member. The bracket was with rubber bushing (arrowed) that absorbs any vibrations arising from the rotation of the transmission gears, minimising any stress to the bracket and correspondingly also minimise any stress to the engine crossmember.



Photo 9 shows the bracket (arrowed) supporting the left side of the Motor Car's transmission. This bracket was mounted onto the left side front chassis, adjacent to the left side front wheelhouse. The bracket was with rubber bushing that absorbs any vibrations arising from the rotation of the transmission gears, minimising any stress to the bracket and correspondingly also minimise any stress to the left side front chassis member.

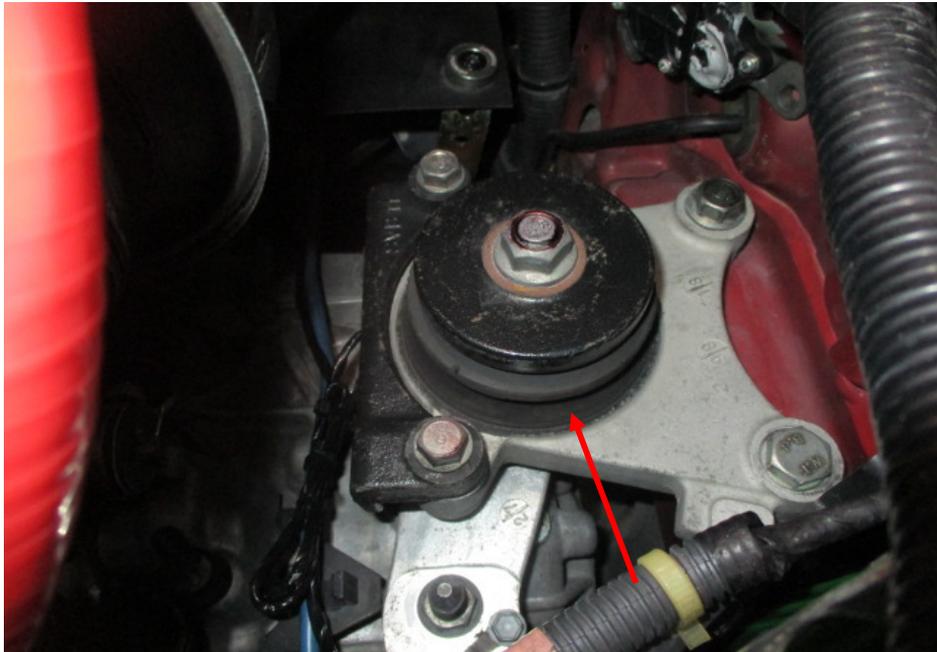


Photo 10 shows a closer view of the bracket supporting the left side of the Motor Car's transmission. This bracket was mounted onto the left side front chassis, adjacent to the left side front wheelhouse. The bracket was with rubber bushing (arrowed) that absorbs any vibrations arising from the rotation of the transmission gears, minimising any stress to the bracket and correspondingly also minimise any stress to the left side front chassis member.



Photo 11 shows the gear shifter (arrowed) that was fitted on the Motor Car, for manually selecting the transmission gear to be engaged. The gear selector fork from the transmission of the Motor Car connects to this gear shifter.

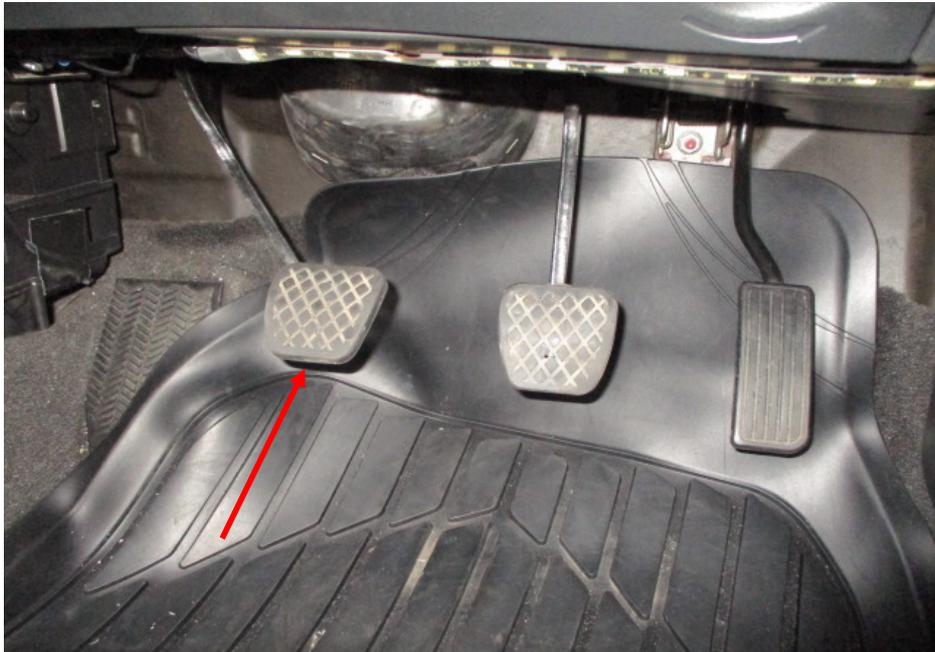


Photo 12 shows the clutch pedal (arrowed) of the Motor Car, for engaging and disengaging the transmission gears.

9. I subsequently test drove the Motor Car to primarily determine whether there was any operational issue(s) to its manual transmission system. The Motor Car was driven along the arterial roadways surrounding First East Centre.
10. The general performance of the manual transmission system of the Motor Car was satisfactory throughout the Motor Car's test drive. Operationally, I did not find any abnormal behaviour of the manual transmission system. I was able to engage the different transmission gears without any significant difficulty. Selecting the required transmission gear by manually upshifting and downshifting of the gear shifter was relatively smooth. The Motor Car was also able to reverse when the gear was manually shifted to reverse. The mileage of the Motor Car at the end of the test drive was 130,748km.
11. In summary, the transmission of the Motor Car was found to be secured properly. It was observed to be supported by 3 brackets with all related components forming a complete manual transmission system, securely fitted/attached. The fitting of the manual transmission system, as at the time of my inspection, did not compromise the structural integrity of the Motor Car.

12. The operating condition of the Motor Car's manual transmission system was found to be satisfactory during a test drive of the Motor Car that I had carried out.



Ang Bryan Tani

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

Senior Technical Investigator

Technical Investigation & Accident Reconstructionist (SAE-A)

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