

Our reference: 21-8149

Date: 2/10/2021

INVOICE NO. 8149

Muhammad Syazwan Bin Mohamed Khairi

c/o Garage 13 Pte Ltd

8 Kaki Bukit Ave 4

#03-46 Premier@KB

Singapore 415875

Registration No. **SJQ8116P**

We enclose our fee note for your kind attention, which remains payable irrespective of the outcome of this case.

S/No.	Description of Services Provided	Qty	Amount
1	Being vehicle damage assessment report, inspection, photographs, transport and miscellaneous.	1	\$ 1,622.00
Total amount			<u><u>\$ 1,622.00</u></u>

Please kindly cross all cheques made payable to "Impact Analysis Consultant".

We thank you in anticipation for your prompt payment.



L. L. Tan (Ms)

Principal Consultant

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c/o Garage 13 Pte Ltd
8 Kaki Bukit Ave 4
#03-46 Premier@KB
Singapore 415875

Dear Sirs

**RE: Road Traffic Accident on 16/9/2021
Muhammad Syazwan Bin Mohamed Khairi**

In accordance with your instructions received in this office on **18/9/2021**, we made arrangements to examine the vehicle on **18/9/2021** at above-mentioned address. The following data was recorded:

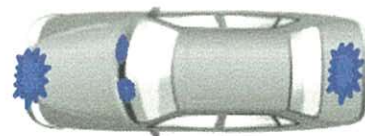
Vehicle details

Make	Toyota	Registration	SJQ8116P
Model	VIOS	Chassis	MR053HY9305111482
Colour	Red	Gearbox	Auto
Odometer	110081km	Paintwork	Good
Steering	In order	Brakes	In order
Condition	Good		

Tyre Depths

Front left	195/55R15	85% Bridgestone
Front right	195/55R15	85% Bridgestone
Rear left	195/55R15	85% Bridgestone
Rear right	195/55R15	85% Bridgestone

Impact Direction & Area of Damage:



Status	REPAIRABLE
Magnitude	Medium
Legal status	Unroadworthy

Following our examination of the accident damage, we have calculated repair times and method, which are detailed on page 2 & 3. We would recommend a sum of **\$27,300.00** and **15** working days for repair, which is sufficiently lower than the pre accident value to render the vehicle an economically and physically reliable proposition.

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Section A: Damaged Parts Assessment

Part's Description	Qty	Condition As inspected	Repairer's Estimate	Our Adjustment
List Items :				
Bonnet	1	repair.respray	488.90	0.00
Bonnet lock	1	distorted	75.20	75.20
Front bumper	1	deformed	455.60	455.60
Front bumper side retainer@\$55.60	2	necessary	111.20	111.20
Front bumper energy absorber @\$207.70	2	crumpled	415.40	415.40
Front bumper reinforcement	1	bent	399.70	399.70
Front bumper lower grille	1	broken	91.00	91.00
Front bumper tow cover	1	missing	30.20	30.20
Front bumper fog lamp@\$278.40	2	refix	556.80	0.00
Front bumper fog lamp cover@\$49.50	2	cracked	99.00	99.00
Front bumper logo	1	necessary	48.20	48.20
Front bumper inner top garnish	1	damaged	95.80	95.80
Front radiator grille	1	cracked	265.10	265.10
Front radiator grille moulding	1	cracked	105.00	105.00
Headlamp @\$398.50	2	holder broken	797.00	797.00
Headlamp top panel @\$155.20	2	bent	310.40	310.40
Headlamp lower panel @\$121.40	2	bent	242.80	242.80
Front fender @\$468.30	2	repair.respray	936.60	0.00
Front engine under cover@\$79.50	2	torn	159.00	159.00
Front support panel	1	bent	771.60	771.60
Front support panel side garnish@\$42.80	2	damaged	85.60	85.60
Front support panel side panel@\$85.90	2	bent	171.80	171.80
Front horn	1	cut/dented	99.80	99.80
Front aircon condenser	1	bent	1158.90	1158.90
Front radiator	1	cracked	1522.70	1522.70
Front radiator auto by pass hose@\$31.00	2	bent	62.00	62.00
Front radiator fan blade	1	distorted.jammed	171.80	171.80
Front radiator fan motor	1	ceased	234.40	234.40
Front radiator fan cowling	1	cut	265.70	265.70
Front radiator side garnish (top)	1	cracked	58.90	58.90
Front radiator side garnish (bottom)	1	cracked	75.10	75.10
Front radiator lower support panel	1	repair	244.80	0.00

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Front air cleaner box assy	1	cracked	758.30	758.30
Front air cleaner box air duct	1	damaged	85.70	85.70
Front chassis frame lh	1	re-straighten	958.85	0.00
Front view mirror	1	dislodged.broken	185.90	185.90
Front dashboard -steering garnish	1	cracked	211.40	211.40
Front steering wheel air bag	1	activated	1974.40	1974.40
Front steering wheel air bag sensor	1	malfunction	427.70	427.70
Front passenger air bag	1	activated	2660.80	2660.80
Front passenger air bag sensor	1	malfunction	485.90	485.90
Front air bag control unit (ECU)	1	malfunction	599.90	599.90
Front safety belt @\$686.60	2	stiffened	1373.20	1373.20
Front door @\$895.20	2	repair.respray	1790.40	0.00
Boot lid	1	bent.buckled	615.80	615.80
Boot lid top lock	1	damaged	122.40	122.40
Boot lid top lock cover	1	damaged	41.00	41.00
Boot lid lower lock	1	bent	55.50	55.50
Boot lid hinge @\$75.50	2	bent	151.00	151.00
Boot lid weatherstrip	1	ripped.nec	175.80	175.80
Boot lid logo	1	necessary	45.80	45.80
Boot lid emblem 'VIOS'	1	necessary	42.50	42.50
Boot lid emblem 'E'	1	necessary	25.00	25.00
Boot lid outer garnish	1	broken	248.90	248.90
Rear bumper	1	crushed	498.90	498.90
Rear bumper side retainer @\$35.20 (front)	2	necessary	70.40	70.40
Rear bumper side retainer @\$63.10 (rear)	2	necessary	126.20	126.20
Rear bumper reflector @\$115.00	2	broken	230.00	230.00
Rear chassis extension (crumple zone) @\$255.50	2	buckled	511.00	511.00
Rear chassis extension fastener @\$112.50	2	bent	225.00	225.00
Rear number plate lamp	set	broken	94.20	94.20
Rear tail lamp @\$377.80	2	broken	755.60	755.60
Rear tail lamp panel @\$195.80	2	crushed	391.60	391.60
Rear end panel	1	crushed	651.20	651.20
Rear end panel top garnish	1	deformed	201.50	201.50
Rear floor panel	1	crushed	826.70	826.70
Rear floor panel side panel rh	1	bent	198.90	198.90
Rear floor panel top cover	1	torn	211.50	211.50
Rear floor panel side cover @\$155.50	2	torn	311.00	311.00
Rear floor panel side sponge @\$175.60	2	compressed.torn	351.20	351.20
Rear floor panel sponge board centre	1	compressed.torn	195.90	195.90

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Rear fender @\$805.80	2	crushed	1611.60	1611.60
Rear fender splashield @\$58.60	2	damaged	117.20	117.20
Rear fender inner trim @\$311.70	2	crumpled	623.40	623.40
Rear windscreen moulding	1	necessary	118.80	118.80
Rear exhaust pipe	1	bent	596.20	596.20
Rear exhaust mounting	1	broken	48.60	48.60
Rear exhaust pipe insulator	1	crumpled	101.00	101.00
Rear fender air vent lh	1	cracked	88.40	88.40
Rear wheel housing @\$452.50	2	crushed	905.00	905.00
Rear fender fuel tank cover lh	1	dislodged	108.80	108.80
Rear door @\$892.20	2	repair.respray	1784.40	0.00
Rear door lock @\$233.80	2	jammed	467.60	467.60
Rear seat bracket assy * see photo	1	bent	298.90	298.90
Rear shock absorber @\$205.50	2	bent	411.00	411.00
Sub- Total cost			36773.85	30013.10
Percentage discount : 25%			9193.46	7503.28
Sub-Total costs for parts			27580.39	22509.83

Special Nett Items:

Front number plate	1	missing	50.00	50.00
Front bumper lower spoiler	1	deformed	530.00	530.00
Front bumper clip	set	necessary	45.00	45.00
Front radiator grille clip	set	necessary	30.00	30.00
Rear bumper lower spoiler	1	crushed	584.50	584.50
Rear bumper reverse sensor	set	malfunction	250.00	250.00
Rear bumper clip	set	necessary	50.00	50.00
Rear tail lamp clip @\$4.50	2	necessary	9.00	9.00
Rear fender shield clip	set	necessary	27.00	27.00
Rear windscreen sealant	1	necessary	60.00	60.00
Boot lid top spoiler	1	warped	956.00	956.00
Rear end panel sealant	1	necessary	40.00	40.00
Rear number plate	1	crushed	50.00	50.00
Rear floor panel seal	1	necessary	99.00	99.00
Rear fender sealant @\$35.00	2	necessary	70.00	70.00
Sub-Total costs for parts			2850.50	2850.50

Parts Repair

*	*	*	0.00	0.00
Sub- Total costs			0.00	0.00
Total costs for parts			30430.89	25360.33

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Section B: Labour Cost Calculation

To dismantle, replace, cut, weld, knock out dents to straighten accident parts as-mentioned on the 'Parts Repair' column inclusive of replacement parts.	Hourly rate	Manhr. Req.	Total
	\$ 45.00	75	\$ 3,375.00
Putty & Spray painting to adjacent panels. Job allowance. Paint / material.	Sub-contract work.		\$ 2,300.00
Apply rust proofing on the adjacent panels.	Sub-contract work.		\$ 200.00
Remove / replace aircon condenser and refill aircon gas	\$ 45.00	3	\$ 135.00
Remove and refix rear windscreen (2 man-job)	\$ 45.00	3.5	\$ 157.50
Remove and refix upholstery to facilitate repair of rear floor panel & rear fender rh/lh	\$ 45.00	5	\$ 225.00
Transfer boot lid mechanism	\$ 45.00	2	\$ 90.00
Remove and refix dashboard and internal wiring	\$ 45.00	5	\$ 225.00
Remove and replace rear cushion seat bracket	\$ 45.00	3	\$ 135.00
Specialist charges -Air bag reset	-	-	\$ 650.00
Specialist charges - Dignostic fault code / reset			\$ 150.00
Remove and refix fuel tank	\$ 45.00	2.5	\$ 112.50
Conduct water leak test for rear portion associated repair works	\$ 45.00	2	\$ 90.00
Remove and replace rear exhaust pipe	\$ 45.00	2.2	\$ 99.00
Remove / refix radiator, top up coolant & conduct pressure test	\$ 45.00	2	\$ 90.00
Remove and replace rear undercarriage works lh/rh	\$ 45.00	5	\$ 225.00
Specialist charges - Conduct rear chassis alignment	-	-	\$ 350.00
Remove and replace rear reverse sensor	\$ 45.00	1.8	\$ 81.00
Wiring / bulb checking (inclusive of re-focus / re-adjust on angle of light intensity.)	\$ 45.00	2.5	\$ 112.50
Total labour cost			\$ 8,802.50

Manhour rate and the number of manhours required for each repairing task are formulated based on individual workshop's operating cost and in-house@ IA Research Guidelines respectively.

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Section C: Summary Table of Total Repair Cost

Description		Cost
Damaged Parts Assessment (See section A)		\$25,360.33
Labour Cost Calculation (See section B)		\$8,802.50
Total cost		\$34,162.83
Lump sum repair		\$6,832.57
Further discount	20%	
Total Repair Cost		\$27,300.00

We would recommend a sum of \$27,300.00 and 15 working days for repair.
No further items will be approved without our expressed written agreement. Any significant additional items will be subject to a supplementary report.



Mechanical Engineer, Accident Expert Witness, Licensed Appraiser (Automobile)
B.Eng. (Hons, NUS)
Diploma.Mechanical Engineering
NTC-2 Automovite Technology
Sr.MIES, Institution of Engineers, Singapore (#20100091)
MATAI, Maryland Association of Traffic Accident Investigators
IAARS, International Association of Accident Reconstruction Specialists
PMC of Singapore Business Advisors & Consultants Council
ACTA certified Trainer, Singapore
Enterprise Singapore - Recognised Certification for Management Consultants
IMI Professional Certificate In Vehicle Accident Damage Assessment (UK)

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