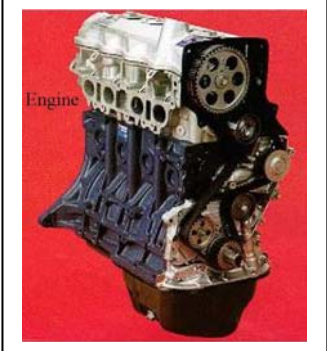





GUIDELINES FOR VEHICLE MODIFICATIONS

VEHICLE MODIFICATIONS THAT REQUIRE LTA'S APPROVAL

S/N	COMMON TYPES OF MODIFICATIONS	GUIDELINES	PHOTO
1	Engines (e.g. replacement of old or irreparable engine to a new or reconditioned engine.)	<p>LTA allows changing of engines provided that it is of the same type as the original one. Therefore, LTA would require the following to be submitted for evaluation:</p> <p><u>New or reconditioned engines</u></p> <ul style="list-style-type: none"> a) Invoice or bill of sales from the supplier of the replacement engine. b) Certification from vehicle manufacturer or the local sole agent stating that the replacement is of the same type as the original one. <p><u>Swapping of engines</u></p> <ul style="list-style-type: none"> a) Swapping of engines between two registered vehicles is allowed, provided that both engines are of the same type and engine capacity. b) After the swap, one of the vehicles must be scrapped immediately while the other must be produced for inspection at LTA. 	
2	Exhaust system (e.g. exhaust manifolds, catalytic converters, mufflers, etc.)	<p>The exhaust system, which consists of the exhaust manifold, catalytic converter and muffler, is used as part of a vehicle's exhaust emission control system to ensure that the exhaust emission meets our environmental requirements. Any modification to the exhaust system would therefore require LTA's approval. The following should be submitted to LTA for evaluation:</p> <ul style="list-style-type: none"> a) Certification from the product manufacturer stating that the proposed aftermarket exhaust system is suitable for the make and model of the vehicle. b) Certification or test reports from LTA/NEA recognised test 	


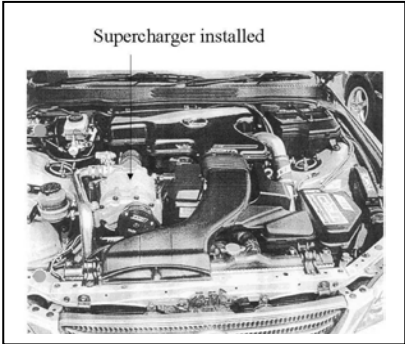
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S/N	COMMON TYPES OF MODIFICATIONS	GUIDELINES	PHOTO
		<p>laboratories to show that the aftermarket exhaust system when fitted to the vehicle on a per make and model basis complied with prevailing exhaust emission standards.</p> <p>Note: Removing catalytic converters and mufflers are not allowed as it will adversely affect the exhaust emission characteristics of the vehicle.</p>	
3	Hoods or Canopies (e.g. attachment/detachment of aluminium hoods or canvas covers on open deck goods vehicles.)	The addition of hoods or canopies may affect vehicle safety. Therefore, the proposed drawing or sketches of the hood or canopies must be presented during an inspection at any LTA authorised inspection centres for evaluation.	
4	Seating arrangements (e.g. Adding or removing seats, re-arranging seats, etc.)	Modifying the seating arrangements may have safety implications such as overloading and obstruction of access to the gangway. Therefore, approval must be sought from LTA and submission of drawings or sketches of the proposed seating arrangements is required for evaluation.	

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S/N	COMMON TYPES OF MODIFICATIONS	GUIDELINES	PHOTO
5	Sunroofs	<p>The addition of sunroofs may affect vehicle safety. Therefore, the sunroof fitted must meet one of the recognised international standards e.g. ECE, DOT, BS, JIS. The vehicle fitted with the sunroof must also pass an inspection at any LTA authorised inspection centres.</p>	
6	Superchargers or Turbochargers	<p>The addition of superchargers or turbochargers to a vehicle may adversely affect the safe operation and its exhaust emission characteristics. Therefore, LTA would require the following to be submitted for evaluation:</p> <ol style="list-style-type: none"> a) Technical specifications and installation details (including pictures and drawings) of the proposed supercharger or turbocharger. b) Certification from the vehicle manufacturer stating that the supercharger or turbocharger is suitable for the vehicle on a per make and model of the vehicle. c) Certification or test reports from LTA/NEA recognised test laboratories to show that the turbocharger or supercharger when fitted to the vehicle on a per make and model basis complied with prevailing exhaust emission standards. 	

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VEHICLE MODIFICATIONS THAT REQUIRE LTA'S APPROVAL

S/N	COMMON TYPES OF MODIFICATIONS	GUIDELINES	PHOTO
7	Transmissions or Gearboxes	<p>LTA allows the transmissions to be changed from manual to auto and vice versa. LTA requires the following to be submitted for approval evaluation:</p> <ul style="list-style-type: none"> a) Invoice of the proposed transmission from the supplier. b) Certification from the manufacturer stating that the transmission is suitable for the vehicle. 	