

# TRICKING OUT YOUR RIDE

Tougher rules on vehicle modifications kicked in yesterday. Motorists caught repeatedly for illegally modifying their engines and exhaust systems will have to take their vehicles for more frequent inspections. Second-time offenders need to take their vehicles for inspection every six months over two years. Those caught a third or subsequent time will have to do this every three months. **Adrian Lim, Bryandt Lyn and Chng Choon Hiong** look at the dos and don'ts of vehicle modification.

**LEGEND**

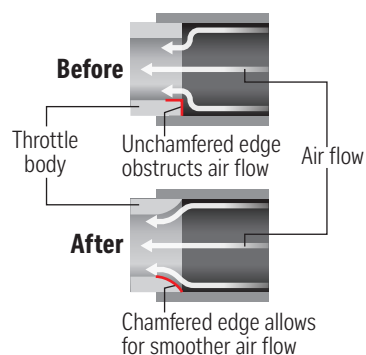
- ✓ Allowed
- ✗ Not allowed
- 🌀 Requires LTA approval

## Engine

Upgrades centre on increasing the quantity and efficiency of the air flow through the engine. Here are some common modifications:

### Throttle body

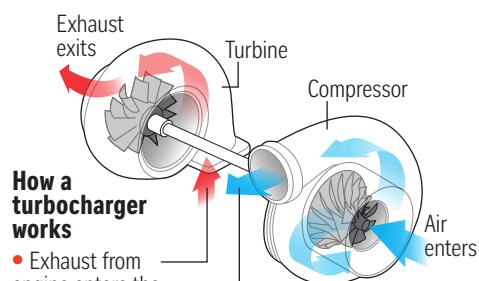
- ✓ Ridges and edges inside a stock throttle body smoothed out to reduce drag.



### Turbochargers

Through the use of exhaust gases, a turbocharger forces more air into the engine's combustion chamber, producing more power.

- 🌀 Turbochargers installed must be certified by the car's manufacturer and approved by LTA.



### Intake air filter

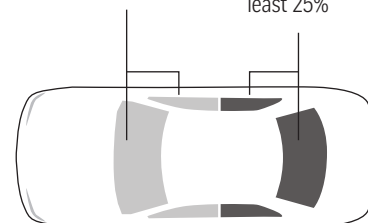
By using a high-performance air filter, more air can be sucked into the engine, allowing it to "breathe" better.

- ✓ Modification to air filters if it does not adversely affect the car's performance.

## Tinted windows

Tinted windows provide privacy and heat control.

- ✓ **Front windscreen and side windows:** Light transmittance of at least 70%
- ✓ **Rear windscreen and passenger windows:** Light transmittance of at least 25%



## Spoiler

At high speeds, spoilers exert a downward force to improve the tyres' grip on the road surface.

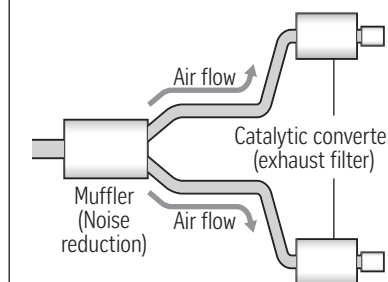
- ✓ Spoilers that do not extend beyond the width of the car or block the driver's view.



## Exhaust system

- ✗ Removing the catalytic converter and the muffler – a modification believed to increase horsepower.

- 🌀 Installing after-market exhaust systems with better performance if they are suitable for the car model.



## Bumpers and sideskirts

- ✓ Modified bumpers and sideskirts that do not exceed their cars' footprint or have sharp edges.

## Lamps

- ✗ Installing after-market high-intensity discharge (HID) kits on cars originally fitted with conventional halogen bulbs.
- ✗ Tinting and masking of vehicle lamps.

## Decorations

- ✓ Applying decals and repainting cars, but changes must be registered with the LTA.
- ✗ LEDs and neonlights on the car exterior as they can be distracting to other motorists.

## Brakes

- 🌀 Installing after-market brake systems.

## Rims

- ✓ Changing from steel to alloy rims can offer a significant reduction in weight.
- ✓ New rims which conform to car manufacturer's recommendations and do not protrude laterally from the car body.