



Japanese Vehicles and HFC134a emissions from passenger cars

Kimiko Hirata

Kiko Network, JAPAN

Khirata@qb3.so-net.ne.jp

Japanese Vehicles and HFC emissions

Export
4.2 mil/y

Used car
Export
0.5 - 1 mil?/y

Not
covered

Outside

Production: 8.5 mil vehicles/year

leakage

Registry&Sale: 4.3 mil/y

HFC134a Initial charge
6 - 7 Mt [CO₂eq]

20-25% loss
during lifetime
(15g/y × 10y = 150g)

Disposal
5 millions /y

Recovery
0.01–0.03M t
[CO₂eq]

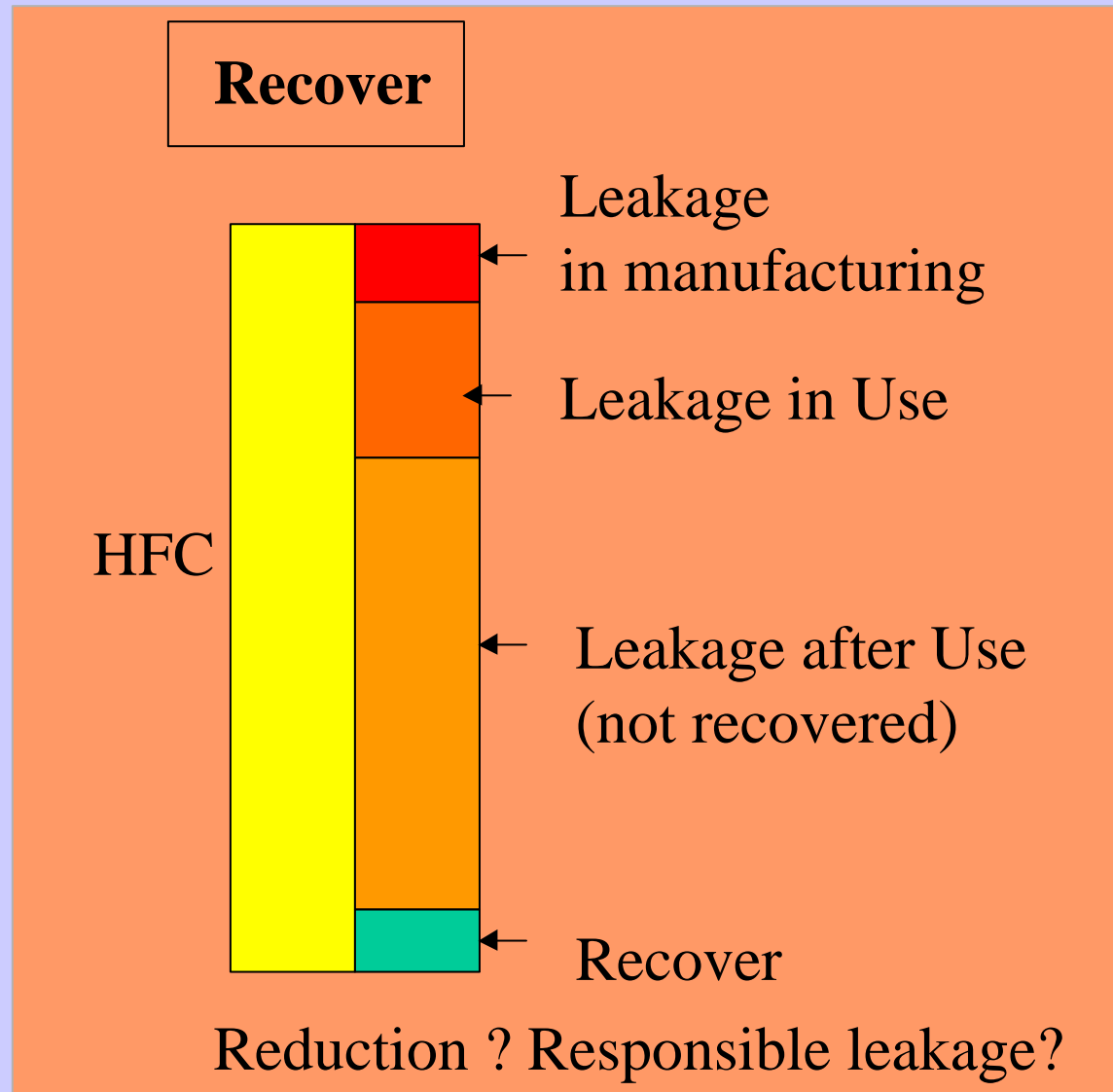
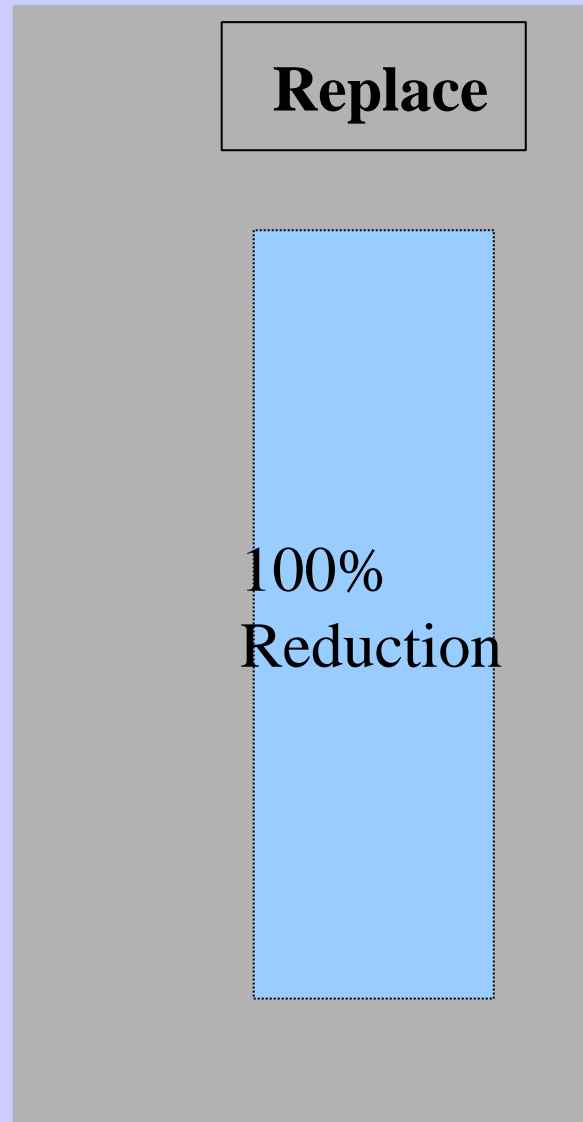
Japan

More than 90 % refrigerants of remaining
in scrapped cars are vented

- In 2001, 8.5 millions cars were produced and 4.2 millions were exported before registry.
- 5 millions cars are disposed per year and 0.5-1 millions of used cars per year are exported after that.
- Initial charge of HFC134a of all passenger cars are about 6-7 Mt-CO₂eq. Leakage during the regular usage in lifetime (150g/10y) is about 20-25% of original charge. And 0.01-0.03Mt-CO₂eq are recovered from EOL vehicles.
- This means 90% refrigerants remaining in EOL vehicles are vented. Compared to the original charge, recovery rates is less than 1%. Almost zero.

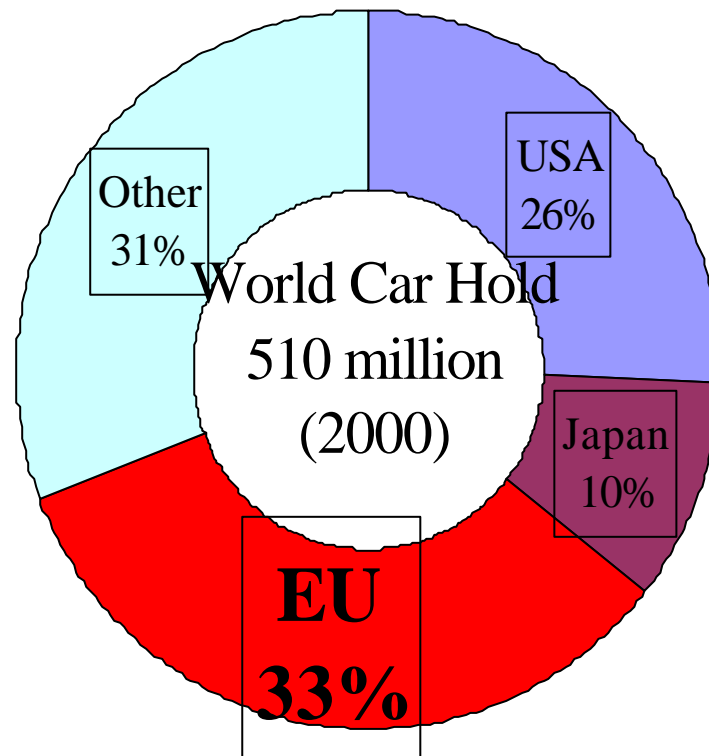
- Mandatory measure to recover refrigerants from EOL vehicles started from last October will improve current recovery rates to some extent. However, because of the still remaining leakages and vehicle exports, it is clear that it will not be satisfactory level. About 5 millions exported cars per year are not covered by domestic regulation anyway.
- Compared to the replacement to alternatives, there is a significant limitation to control HFC134a emissions.

Limitation of the emissions control



Impacts to global environment

European market is the biggest and holds 1/3 Vehicles in the world. It has huge responsibility to global environment.



Messages from Japanese NGO perspectives

.Policy prioritizing alternatives (phase out of HFC134a) and strong incentive for commercialization are **NECESSARY**

.That encourages further technology development and cost-effectiveness