



Association of Auto Part Recyclers

GROUPE
AGÉCO

Quantis

Environmental and socioeconomic assessment of automotive parts recycling

Mindful of its environmental and social footprint, the ARPAC mandated Quantis and Groupe AGÉCO to carry out an environmental and socioeconomic assessment of its members' activities. This study summary details the environmental benefits associated with the use of recycled automotive parts and the social performance of ARPAC members.

Key study questions

- What is the environmental footprint of automotive parts recycling?
- Does parts recycling constitute a better option than manufacturing new original or generic parts?
- What are the socioeconomic contributions of ARPAC members?
- Do local and international new and recycled parts suppliers demonstrate socially responsible behaviours?

Study approach: life cycle analysis (LCA)

The consulting firms used LCA, a rigorous and world-renowned methodology, to carry out the study. The approach makes it possible to evaluate the **environmental impacts** and the **social performance** of product and businesses at **every life cycle stage**. The established profile is then global and comprehensive.

Life cycle of the product

Social performance

Concerned stakeholders

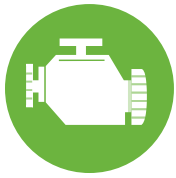
Environmental impacts

Addressed issues

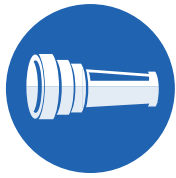


Environmental performance

What was compared?



Engine



Transmission



Door

Procurement options



Findings

The parts recycled by ARPAC members constitute a better choice than original or generic parts.*

Why choose recycled parts?



To avoid the production of new parts

When taking the entire life cycle into account, making a recycled part available on the market generates fewer impacts than producing a new original or generic part for all the environmental issues included in the study.



To extend the service lives of existing parts

The automotive parts recycling chain extends the service lives of functional parts that would have otherwise been recovered. The study confirmed that reusing the parts is more beneficial than scrapping them.



To reduce greenhouse gas emissions

Compared to a new part, a recycled part reduces the carbon footprint by:

The GHG reductions generated by the use of a recycled part are equivalent to these car travel distances:



1050 kg CO₂-eq



4000 km



950 kg CO₂-eq



3600 km



255 kg CO₂-eq



850 km

*This part of the study was performed in accordance with ISO 14040-44 standards and its compliance with these standards was validated by independent experts.

Social performance

What was evaluated?



The **social responsibility** of ARPAC members



The **economic contributions** generated by ARPAC members



The **social risks** associated with the supply chains of new original and generic parts manufactured in the United States and China, respectively

Findings

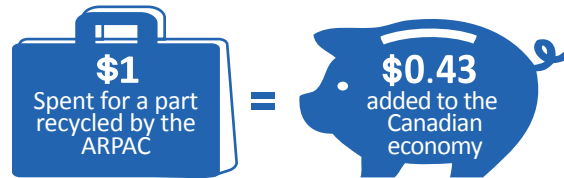
The auto parts recycled by ARPAC members constitute a better choice to ensure positive social and economic benefits for society.*

Why are recycled parts more beneficial to society?



Benefits for the Canadian economy

The activities of the ARPAC's 83 member businesses generate close to 1 800 direct and indirect jobs and provide an added value of \$81M to the Canadian economy.



Risks related to the Chinese parts sector

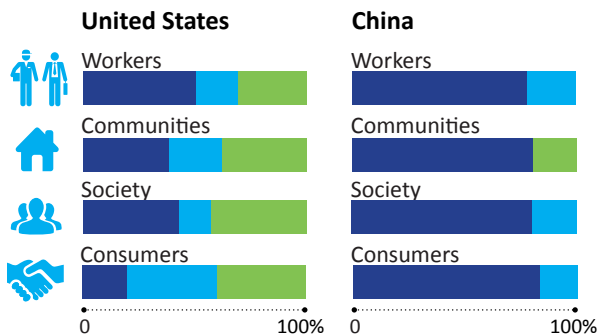
Original parts from the American supply chain and recycled by ARPAC members generate fewer social risks and more potential benefits than new generic parts originating from the Chinese value chain.



Responsible businesses

ARPAC members follow a code of ethics that makes them accountable to stakeholders. While several ARPAC members have implemented socially responsible practices, there is still room for improvement.

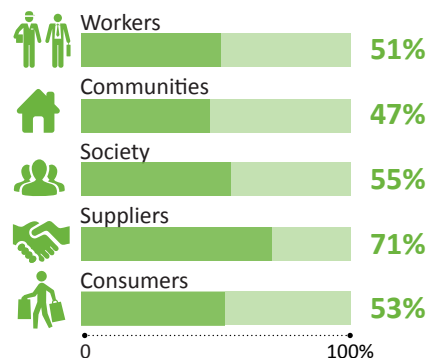
Social risk level of the two analyzed value chains



Share (%) of issues showing:

■ high risk of negative impacts ■ low risk of negative impacts ■ socially responsible behaviors

Progress accomplished in terms of social responsibility



■ Rate (%) of members' adherence to socially responsible practices

For more information

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*This part of the study was performed in accordance with PNUE/SETAC guidelines for social LCA.