THE ROLE OF AN AUTO RECYCLER IN NORTH AMERICA

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Outline

1. History of Auto Recycling
2. Operational Models
3. ELV Sourcing
4. ELV Depollution
5. Key Revenue Centres
6. Industry Standards – National and Global
7. Information Gaps

The History of Auto Recycling

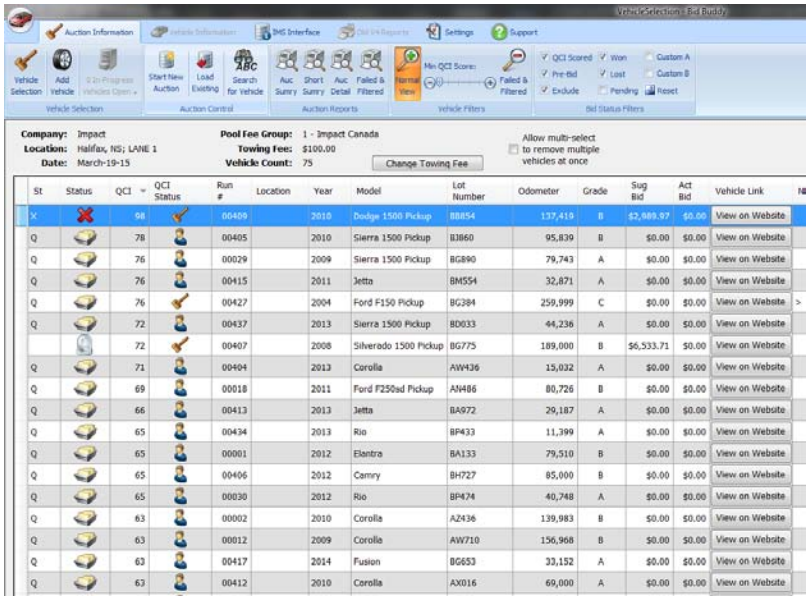
One of the oldest recycling industries in the world

Grand Rapids, 1928

The History of Auto Recycling

Today

- Sophisticated buying and pricing tools
- Integrated VIN decoding, auction analysis and vehicle purchasing tools
- Inventory management systems with international exchange networks
- Online parts databases loaded into insurance estimates, online parts stores, eBay



Typical Operational Models

1. Full Service

- Vehicle is purchased for the main purpose to harvest saleable re-usable parts
  - Parts are catalogued in Inventory Management Systems typically using with Hollander interchange
  - Vehicles are depolluted, dismantled and parts are warehoused
  - Vehicles are crushed after projected parts sales are met (3 months -3 years+)

Typical Operational Models

2. Self Service

- Vehicle is purchased for the purpose of both part sales and metal and core value
  - Vehicles are depolluted and staged so that retail customers can harvest their own parts
  - Vehicles are crushed regularly and sent to the shredder (3-6 months)

Typical Operational Models

3. Scrap Operations

- Vehicle is purchased for the sole purpose of metal and core value
  - Vehicles are depolluted, various metals separated, and crushed / shredded immediately following
  - Not all operate to the same standard

Where Do You Get an End of Life Vehicle (ELV)?

1. Economic Total Loss

- Collision repair estimate is too high for insurance company to repair so insurance company pays a settlement to claimant and salvage is sold as is

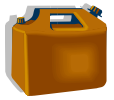
2. End-of-Live-Vehicle (ELV)

- Vehicle is sold or traded in as it is no longer fit for the road.
- This can come from OEM re-call, vehicle collection programs (ie: ‘Cash for Clunkers’) or private sale

How Do We Depollute an ‘ELV’

What is removed by a ‘Professional Auto Recycler’

- Fuels
  - Gasoline, diesel, propane
- Oils and fluids
  - Engine oil, A/T fluid, Gear oil, power steering fluid,
- Coolant, WWF, brake fluid
- Refrigerants
- Lead-acid batteries, NiMH Batteries, Li-ion Batteries
- Hazardous metals
  - Lead battery cables, lead tire weights, mercury containing devices
- Tires
- VINs are not universally retired and a Certificate of Destruction system does not exist in North America



Key Revenue Centers

There are four main revenue streams for auto recyclers

1. Recycled mechanical parts
2. Recycled body parts
3. Metal recycling
4. Remanufacturing industry

Customer 1: Mechanical Repair Industry

Mechanical Parts

- Mechanical parts for mechanical failures
  - Used parts are harvested from vehicles and undergo a quality inspection before being re-sold to the consumer
  - Mechanics shops, retail public, used car dealers, exporters and warranty companies are the primary customers

Customer 2: Collision Repair Industry

Insurance Repairs

- Many insurance estimates rely on recycled parts to repair claims
  - In North America, Audatex, Mitchell and CCC all have integrated recycled parts look ups for insurance estimates
  - Insurance companies themselves have developed software to enable estimators to source recycled parts
    - Intact Insurance – ProgiParts
    - State Farm – Parts Trader

Collision Repair Industry

- Use estimating software
- Rely on local suppliers, or online networks to source recycled parts (ie: car-part.com)

Customer 3: Metals Industry

Major supplier to the ferrous industry, but others too

- Steel
  - Biggest returns, most content
  - Can be broken in to No.1 Steel, scrap steel, cast iron, etc.
- Catalytic Converters
  - Platinum, palladium, rhodium, and gold
- Aluminum (clean and dirty)
  - Primarily wheels, radiators
  - Growing structural content
- Lead
  - Batteries, wheel weights, battery clamps
- Copper
  - Difficult to process, mostly wire harnesses, scrap alternators and starters
- Other?
  - NiMH / Li-ion batteries, circuit boards, etc.

Customer 4: Remanufactured Parts Industry

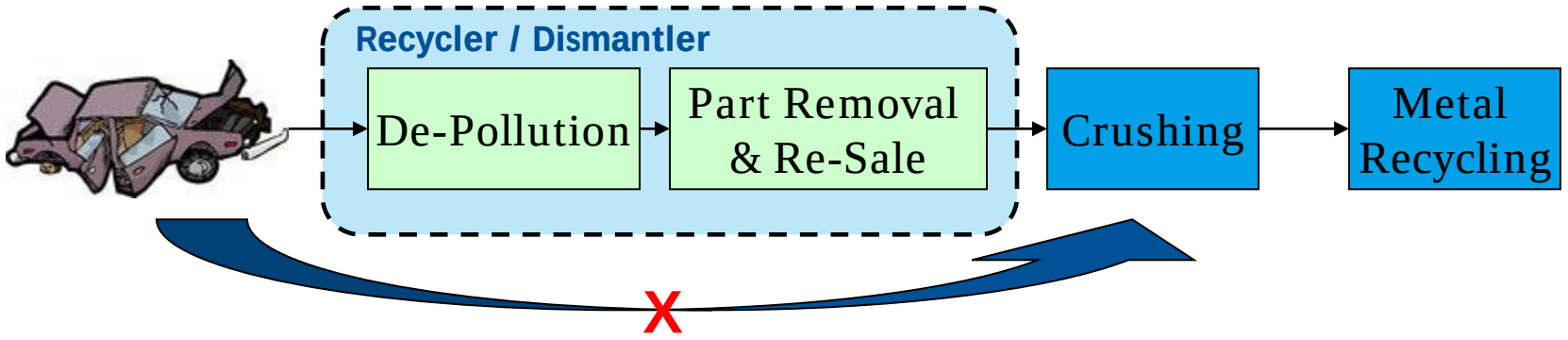
Cores

- This is the biggest growth sector in auto recycling in many years
- Core buyers have developed extensive buying software tools that mine auto recyclers inventory to supply their industry
- Auto recyclers can recycle components of parts rather than whole functioning units

Industry Standards: Overview

Regulated Standards for processing ELVs

- There are currently no regulated standards for processing ELVs
  - High base-metal recycling rate for ELVs, but many not processed properly before recycling
  - ODSs, Mercury, Used Oil, etc. are released to the environment (contrary to prohibitions under laws)
  - More profitable to not to “de-pollute” - commodity business driven by least cost and production volume

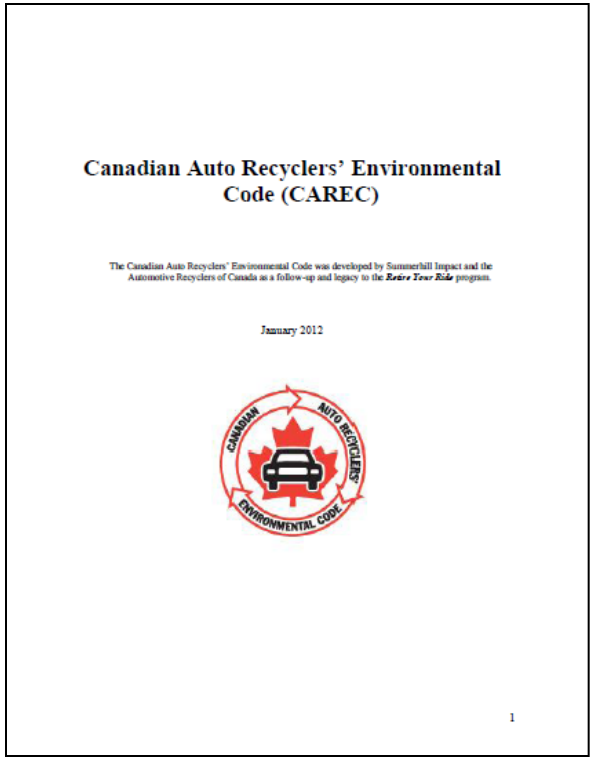


Industry Standards: Canada

Auto Recyclers of Canada (ARC)

- National association of auto recyclers
  - 7 provincial associations
  - 410 Members (out of 1,600 “legal” businesses)
  - Organized in 1997

- Canadian Auto Recycling Environmental Code (CAREC)
  - All members of ARC must comply and be audited to CAREC
  - Canadian Council of Ministers of the Environment has recognized CAREC as a starting point for a common level of ELV recycling in Canada


Canadian Auto Recyclers' Environmental Code (CAREC)

The Canadian Auto Recyclers' Environmental Code was developed by Summerhill Impact and the Automotive Recyclers of Canada as a follow-up and legacy to the *Retire Your Ride* program.

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Industry Standards: Canada

- Ontario and PEI have started to regulate ELV processing standards
  - Ontario recyclers must be registered in EASR in order to process more than 2 vehicles / year
  - PEI has drafted and is enforcing materials stewardship regulations specific to the processing of ELVs
  - Other provinces and members of ARC are pushing to enforce similar regulations

Industry Standards: International Collaboration & Standardization

International Round Table on Auto Recycling (IRT)

- Brings together the leading international automotive recycler associations, industry officials, guest speakers and local auto recyclers to discuss the global auto recycling industry
- Environmental Standards, Public Awareness, Government Engagement, Manufacturers Support, Industry Stewardship, Education and Training, and Research Information Sharing

Information Gaps: Necessary Information to Dismantle ELVs

Environmental Ingredients

- What is the car made of and what do we have to dispose of?

Employee Safety

- What hazards will ELV handling and dismantling pose to employees of auto recycling facilities?

OEM Risk Reduction

- Auto recyclers can reduce the risk to an OEM by properly quarantining parts

Consumer Safety

- We must ensure the consumer is safe, how do we ensure that safety?

Summary

A refined and professional industry

- Historically a profitable business, but has been refined over the years to be a professional and reputable industry
- Different standards and organization in all countries

Growing and developing standards

- National accreditations are becoming necessary for associations
- Associations are pushing for licensing and regulations

OEM Data is key to future

- Ensures environment, employee safety, OEM risk support, and consumer safety are preserved

THANK YOU! – Q&A?

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