

## VEHICLE DISMANTLING PROCEDURES

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## INTRODUCTION

This guide describes the efficient, safe and environmentally-friendly vehicle dismantling procedures recommended by ARPAC. It illustrates, using photos, dismantling steps for specific parts or the entire vehicle.

It is aimed not only at apprentices, enrolled or not in an apprenticeship program, but also at experienced dismantlers who want to improve their working techniques, as well as supervisors and managers who teach or supervise these technicians.

Its design is based on the professional standard describing the competencies of the dismantler business.

We hope this guide will help those who want to properly learn their trade, or perform it following the code of practice.

**MR. PIERRE ROBITAILLE**

President of the ARPAC Board of Directors

**MR. STEPHANE GRAVEL**

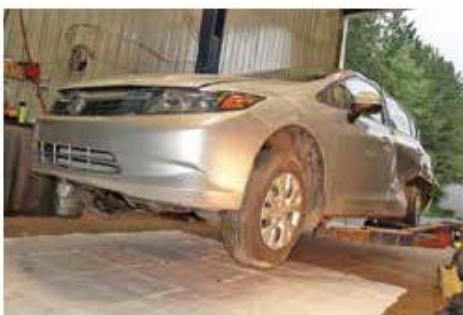
Vice-President of the ARPAC Board of Directors  
Head of the Labor Training Committee

## ADVICE AND DISCLAIMER

- Every vehicle dismantling is different. It is therefore necessary to adapt the steps in this guide based on the requirements of the moment and the characteristics of the vehicle.
- The photos in the guide are merely examples to illustrate the kind of part to disassemble or the step of the procedure. It is likely that, in everyday reality, the parts and their position on the vehicle may differ.
- The vehicle fleet is evolving. Any changes to procedures or suggestions for improving this guide can be sent at any time to **ARPAC: info@arpac.org or 1 (855) 504-8315**.

## 1. DISMANTLING ORGANIZATION

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1 - DISMANTLING ORGANIZATION		ARPAC - Vehicle Dismantling Procedures	
1.1 VEHICLE SETUP	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p><b>1.</b> <b>First:</b> Check for the presence of fluids or parts comprising a risk (e.g.: battery, fuel, fluid, refrigerant gas, etc.).</p> <p><b>2.</b> Determine the damages or the state of the vehicle.</p> <p><b>3.</b> Determine the balance point and the lifting points of the vehicle.</p> <p><b>4.</b> Put the vehicle on the lift system skids.</p>	<p><i>In businesses where the "decontamination" is carried out in a different place from dismantling, the immediate supervisor should be notified if there are fluids or parts comprising a risk.</i></p> <p><i>Otherwise, set the vehicle up properly in the dismantling area and implement the appropriate procedures from <b>Section 2</b>.</i></p> <p><i>This involves detecting the parts or sections of fragile or unstable vehicles which could be dangerous when disassembling.</i></p> <p><i>Use axle stands to ensure load balancing.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Securing the vehicle consists of ensuring stability and attaching unstable parts. This is especially important in the case where the vehicle is severely damaged or compromised due to rust or missing parts.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Hydraulic lift, hoisting equipment, wheeled charger, dismantling table.</li> <li>Axle stand.</li> <li>Chains.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of parts or vehicle falling.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>1.1 Prepare the Work Area.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Functional arrangement of the dismantling area.</li> <li>Accurate evaluation of the balance point of the weight to lift.</li> </ul>

CONTINUED ▼

1.1 VEHICLE SETUP	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p><b>5.</b> Test the vehicle balance.</p> <p><b>6.</b> Check stowing of fragile mechanical components.</p> <p><b>7.</b> Secure the vehicle or its components, if required.</p>	<p><i>Raise the vehicle 30 cm and push to verify its stability.</i></p> <p><i>E.g.: engine, transmission, chassis frame or mechanical parts.</i></p> <p><i>Securing is generally done by attaching the part using a chain or similar.</i></p>	<p><b>MASTERY OF THE COMPETENCE CRITERIA (CONTINUED)</b></p> <ul style="list-style-type: none"> <li>Secure mounting of the vehicle on lifting equipment or a dismantling table:             <ul style="list-style-type: none"> <li>Proper stability;</li> <li>Optimal balance.</li> </ul> </li> <li>Properly securing unstable or dangerous parts.</li> </ul>

## **2. FLUIDS AND PARTS COMPRISING A RISK**

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2.1 BATTERY	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p>1. Disconnect the battery</p> <p>2. Unmount and remove the battery.</p> <p>3. Check the seal of the battery.</p> <p>4. Place the unusable battery in a catchment tray.</p>	<p><i>Use battery clamps if needed.</i></p> <p><i>The tray must be watertight and resistant to acid runoff.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>It is important to eliminate all sources of electrical power to make sure that none of the components can function or produce sparks.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Battery clamps.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>The battery must be recovered because it contains products damaging to the environment.</li> <li>It is mandatory to store batteries in a catchment tray.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of jamming.</li> <li>Risk of overexertion (heavy item).</li> <li>Accidental contact of acid on the skin must be quickly cleaned off.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>The Auto Prévention organization.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.2 Neutralize Power Sources.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of procedures and techniques for removing the battery and its components.</li> </ul>

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2 - FLUIDS AND PARTS COMPRISING A RISK		ARPAC - Vehicle Dismantling Procedures	
2.1 BATTERY	STEPS	DETAILS	ADDITIONAL INFORMATION
	<p><b>5.</b> Store reusable batteries in the proper location.</p>		<p><b>MASTERY OF THE COMPETENCE CRITERIA (CONTINUED)</b></p> <ul style="list-style-type: none"> <li>• Proper, efficient and safe recovery of the battery and components.</li> <li>• Compliance with health, safety and environmental protection standards.</li> </ul>

2 - FLUIDS AND PARTS COMPRISING A RISK		ARPAC - Vehicle Dismantling Procedures	
2.2 FUELS	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.2.1 Fuel and Tank Recovery</b> <b>Method: Tank pumping</b>    <p><b>1.</b> Secure the tank with an hydraulic jack or using a table.</p> <p><b>2.</b> Clear the passage necessary to extricate the tank.</p> <p><b>3.</b> Unbolt or cut the steel tank straps.</p>	<p><b>1.</b> Secure the tank with an hydraulic jack or using a table.</p> <p><b>2.</b> Clear the passage necessary to extricate the tank.</p> <p><b>3.</b> Unbolt or cut the steel tank straps.</p>	<p><i>E.g.: cut the exhaust system.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Before emptying tank, it is preferable to disassemble and remove it.</li> <li><b>Important:</b> Make sure that no one performs operations involving the risk of sparks (grinding, welding, cutting, etc.) while clearly indicating the danger.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Knowledge of the sources of sparks.</li> <li>Knowledge of the risks of fire and explosion.</li> <li>Procedures in the event of fire (fire training).</li> <li>WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Suitable hose clamps.</li> <li>Spill kit.</li> <li>Powder extinguisher.</li> <li>Hydraulic jack.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Residual fuels must be recovered because they are damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of overexertion (heavy items).</li> <li>Risk of explosion and fire due to gases and fuels.</li> <li>Necessity of controlling nearby ignition sources (sparks, open flames, static electricity, etc.).</li> <li>Ventilated work area.</li> </ul>

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2.2 FUELS	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.2.1 Fuel and Tank Recovery</b> <b>Method: Tank pumping</b>    <p><b>4.</b> Ensure the balance of the part on the hydraulic jack.</p> <p><b>5.</b> Disconnect and crimp or block the hoses.</p> <p><b>6.</b> Disconnect the electrical wires.</p> <p><b>7.</b> Ask for help from a colleague to remove the tank, if necessary.</p> <p><b>8.</b> Remove the tank.</p>	<p><b>4.</b> Ensure the balance of the part on the hydraulic jack.</p> <p><b>5.</b> Disconnect and crimp or block the hoses.</p> <p><b>6.</b> Disconnect the electrical wires.</p> <p><b>7.</b> Ask for help from a colleague to remove the tank, if necessary.</p> <p><b>8.</b> Remove the tank.</p>	<p><b>CONTINUED ▼</b></p>	<p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>The Auto Prévention organization.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.2 Neutralize Power Sources.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of procedures and techniques to empty the tank.</li> <li>Proper, efficient and safe recovery of fuel.</li> <li>Collection of fuel into the proper container.</li> <li>Proper coordination with other team members.</li> <li>Compliance with health, safety and environmental protection standards.</li> </ul>

2 - FLUIDS AND PARTS COMPRISING A RISK		ARPAC - Vehicle Dismantling Procedures	
2.2 FUELS	STEPS	DETAILS	ADDITIONAL INFORMATION
<p><b>2.2.1 Fuel and Tank Recovery</b> <b>Method: Tank pumping</b></p>  <p><b>9</b></p>  <p><b>10</b></p> <p>Flammable</p>  <p><b>11</b></p>	<p><b>9.</b> Take the tank to the location provided for emptying it (well-ventilated area).</p> <p><b>10.</b> Delineate the work zone using a cone and notify colleagues to not produce ignition sources at less than 6 meters, nor open flames at less than 11 meters.</p> <p><b>11.</b> Remove the pump and the gas gauge.</p>	<p><i>Use a signal such as a siren or indicate the danger by shouting.</i></p> <p><i>Have an ABC portable extinguisher nearby.</i></p>	

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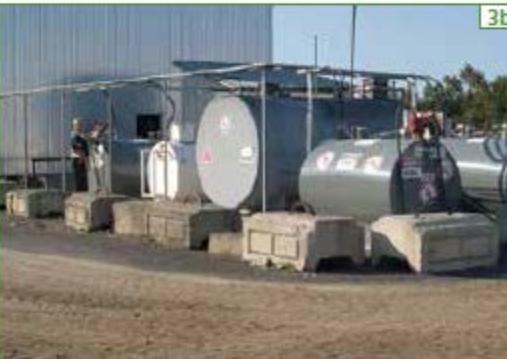
2.2 FUELS	STEPS	DETAILS	ADDITIONAL INFORMATION
<p><b>2.2.1 Fuel and Tank Recovery</b> <b>Method: Tank pumping</b></p>   	<p><b>12.</b> Insert the transfer hose into the tank opening.</p> <p><b>13.</b> Siphon or pump the fuel to the storage tank.</p> <p><b>14.</b> Arrange the empty tank and the pump in order to air them out.</p>		

2.2 FUELS	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.2.2 Fuel Recovery</b> <b>Method: Tank puncturing</b> <p> 1 Flammable</p>  2  3 	<p><b>1.</b> Delineate the work zone using a cone and notify colleagues to not produce ignition sources at less than 6 meters, nor open flames at less than 11 meters.</p> <p><b>2.</b> Place a catch basin underneath the tank.</p> <p><b>3.</b> Puncture the tank and allow it to empty.</p>	<p><i>Use a signal such as a siren or indicate the danger by shouting.</i></p> <p><i>Have an ABC portable extinguisher nearby.</i></p> <p><i>With a pointed brass rod or a suitable drill.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Due to potential fuel vapors, the smallest spark can cause a fire.</li> <li>Important: Make sure that no one performs operations involving the risk of sparks (grinding, welding, cutting, etc.) while clearly indicating the danger.</li> <li>The tank is not removed as it will be punctured to recover fuel.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Knowledge of the sources of sparks.</li> <li>Knowledge of the risks of fire and explosion.</li> <li>Procedures in the event of fire (fire training).</li> <li>WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Spill kit.</li> <li>Pointed brass rod or suitable drill to avoid the risk of sparks.</li> <li>Powder extinguisher.</li> <li>Asbestos jacket.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Residual fuels must be recovered because they are damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of explosion and fire due to gases and fuels.</li> <li>Necessity of controlling nearby ignition sources (sparks, open flames, static electricity, etc.).</li> </ul>

## 2 - FLUIDS AND PARTS COMPRISING A RISK

ARPAC - Vehicle Dismantling Procedures

2.2 FUELS	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.2.2 Fuel Recovery</b> <b>Method: Tank puncturing</b> 	<p><b>4.</b> Pump or transfer the fuel from the catch basin to the storage tank.</p>		<p><b>HEALTH AND SAFETY AT WORK (CONTINUED)</b></p> <ul style="list-style-type: none"> <li>• Ventilated work area.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• The Auto Prévention organization.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.2 Neutralize Power Sources.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of procedures and techniques to empty the tank.</li> <li>• Proper, efficient and safe recovery of fuel.</li> <li>• Collection of fuel into the proper container.</li> <li>• Proper coordination with other team members.</li> <li>• Compliance with health, safety and environmental protection standards.</li> </ul>

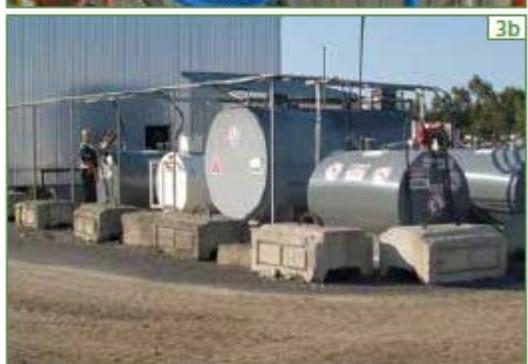
2.3 OILS	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.3.1 Brakes, Power Steering and Transmission</b> <b>Method: pumping from above</b>   	<p><b>1.</b> Remove the cap from the part.</p> <p><b>2.</b> Insert the transfer hose into the tank opening.</p> <p><b>3a and 3b.</b> Siphon or pump the fluid into a basin or the storage tank.</p>		<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Suitable pump.</li> <li>The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Oils must be recovered because they are damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of splashing: wear glasses and gloves.</li> <li>Accidental contact of oil on the skin must be cleaned off immediately.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.3 Collect Oil, Washer Fluid and Antifreeze.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of procedures and techniques to collect oils.</li> <li>Proper, efficient and safe recovery of oils.</li> <li>Collection of oils into the proper containers.</li> <li>Compliance with health, safety and environmental protection standards.</li> </ul>

2 - FLUIDS AND PARTS COMPRISING A RISK		ARPAC - Vehicle Dismantling Procedures	
2.3 OILS	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.3.2 Engine, Transmission, Differential, Transfer Case</b> <b>Method: Draining from below</b>  <p><b>1/2/3</b></p> <p><b>4</b></p> <p><b>5</b></p>	<ol style="list-style-type: none"> <li>Set up a catch basin under the part.</li> <li>Remove the part's cap or cover and drain the liquid.</li> <li>Replace the cap or cover when the part is empty.</li> <li>If needed, remove the filter and put a cap on the filter opening.</li> <li>Put the filter in a collection tray.</li> </ol>		<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Suitable pump.</li> <li>The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Oils must be recovered because they are damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of splashing: wear glasses and gloves.</li> <li>Accidental contact of oil on the skin must be cleaned off immediately.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.3 Collect Oil, Washer Fluid and Antifreeze.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of procedures and techniques to collect oils.</li> <li>Proper, efficient and safe recovery of oils.</li> <li>Collection of oils into the proper containers.</li> <li>Compliance with health, safety and environmental protection standards.</li> </ul>

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2.3 OILS	STEPS	DETAILS	ADDITIONAL INFORMATION
<p><b>2.3.2 Engine, Transmission, Differential, Transfer Case</b></p> <p><b>Method: Draining from below</b></p>  	<p><b>6a and 6b.</b> Siphon or pump the fluid into a basin <b>or</b> the storage tank.</p>		

2.4 WINDSHIELD WASHER FLUID	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p><b>1.</b> Remove the cap from the part.</p> <p><b>2.</b> Insert the transfer hose into the tank opening.</p> <p><b>3a and 3b.</b> Siphon or pump the fluid into a basin or the storage tank.</p>		<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>The windshield washer fluid is generally a methanol-based product (alcohol).</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Suitable pump.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>The windshield washer fluid must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of splashing: wear glasses and gloves.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.3 Collect Oil, Washer Fluid and Antifreeze.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of procedures and techniques to collect windshield washer fluid.</li> <li>Proper, efficient and safe recovery of windshield washer fluid.</li> <li>Collection of windshield washer fluid into the proper container.</li> <li>Compliance with health, safety and environmental protection standards.</li> </ul>

2.5 ANTIFREEZE	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.5.1 Antifreeze Surplus Tank</b> <b>Method: pumping from above</b>   	<p><b>1.</b> Remove the cap from the part.</p> <p><b>2.</b> Insert the transfer hose into the tank opening.</p> <p><b>3a and 3b.</b> Siphon or pump the fluid into a basin or the storage tank.</p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Spill kit.</li> <li>Suitable pump or siphon.</li> <li>The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Antifreeze does not separate from water. It must be recovered because it is a powerful contaminant to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of splashing: wear glasses and gloves.</li> <li>Accidental contact of antifreeze on the skin must be quickly cleaned off.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.3 Collect Oil, Washer Fluid and Antifreeze.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of procedures and techniques to collect antifreeze.</li> <li>Proper, efficient and safe recovery of antifreeze.</li> <li>Collection of antifreeze into the proper container.</li> <li>Compliance with health, safety and environmental protection standards.</li> </ul>	

## 2 - FLUIDS AND PARTS COMPRISING A RISK

ARPAC - Vehicle Dismantling Procedures

2.5 ANTIFREEZE	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.5.2 Radiator Antifreeze</b> <b>Method: Draining from below</b>   	<ol style="list-style-type: none"> <li>1. Set up a catch basin under the part.</li> <li>2. Cut or puncture the hoses, or remove the part's cap.</li> <li>3. Drain the liquid.</li> <li>4. Remove the surplus antifreeze using air pressure, if necessary.</li> <li>5. Cap the openings once empty.</li> </ol>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Spill kit.</li> <li>• The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• Antifreeze does not separate from water. It must be recovered because it is a powerful contaminant to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Risk of splashing; wear glasses and gloves.</li> <li>• Accidental contact of antifreeze on the skin must be quickly cleaned off.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.3 Collect Oil, Washer Fluid and Antifreeze.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of procedures and techniques to collect antifreeze.</li> <li>• Proper, efficient and safe recovery of antifreeze.</li> <li>• Collection of antifreeze into the proper container.</li> <li>• Compliance with health, safety and environmental protection standards.</li> </ul>	<p>CONTINUED ▼</p>

2.5 ANTIFREEZE	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.5.2 Radiator Antifreeze</b> <u>Method:</u> Draining from below  	<p><b>6a and 6b.</b> Siphon or pump the fluid into a basin <b>or</b> the storage tank.</p>		

2.6 REFRIGERANT GAS (Halocarbon)	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<ol style="list-style-type: none"> <li>1. Check the equipment for leaks by connecting the machine to the vehicle.</li> <li>2. Verify that the collection containers can hold the quantity of system oil and refrigerant to be purged.</li> <li>3. Check for the presence of "stop-leak" in the system using a detector.</li> <li>4. Identify the type of refrigerant contained in the system and note it in the record.</li> <li>5. Set up the collection container corresponding to the type of gas. (See photo 1)</li> </ol>	<p><i>The presence of stop-leak can cause pumping equipment breakage. If there is any, a special pump is required to recover the product.</i></p> <p><i>An example of a record is presented as an Appendix, on page 106</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>• None</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Halocarbon recovery techniques (mandatory training and certification).</li> <li>• WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Specialized pump for refrigerant gases.</li> <li>• Gas detector for checking the type of refrigerant.</li> <li>• Collection carboys.</li> <li>• Recovery record.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• Refrigerant gases are very damaging to the environment. Their recovery is subject to strict regulations.</li> <li>• Only a trained and certified individual may conduct the recovery of refrigerant gas.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Risk of splashing or frostbite (if broken hose or valve): wear glasses and gloves.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Environmental Quality Act: Halocarbon Regulations.</li> </ul>

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## 2 - FLUIDS AND PARTS COMPRISING A RISK

### ARPAC - Vehicle Dismantling Procedures

2.6 REFRIGERANT GAS (Halocarbon)	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p><b>6.</b> Connect the collector to the high and low pressure ports.</p> <p><b>7.</b> Collect the fluid until the machine stops. (See photo 1)</p> <p><b>8.</b> Let stand at least 5 minutes and check the gauges for the presence of residual gas. (See photo 1)</p> <p><b>9.</b> Disconnect and store the machine.</p> <p><b>10.</b> Label or mark the purged parts.</p>		<p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>None. See instead the provincial regulations regarding halocarbons.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper, efficient and safe recovery of refrigerant gas.</li> <li>• Compliance with health, safety and environmental protection standards.</li> <li>• Systematic labeling of any part purged of a halocarbon.</li> <li>• Accurate recording of information in the refrigerant recovery records.</li> <li>• Leakproofness of the system to be purged correctly verified.</li> <li>• Type of refrigerant correctly identified.</li> <li>• Proper checking for the presence of stop-leak in the system.</li> </ul>

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## 2 - FLUIDS AND PARTS COMPRISING A RISK

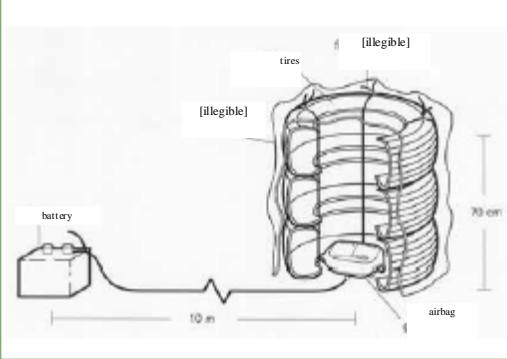
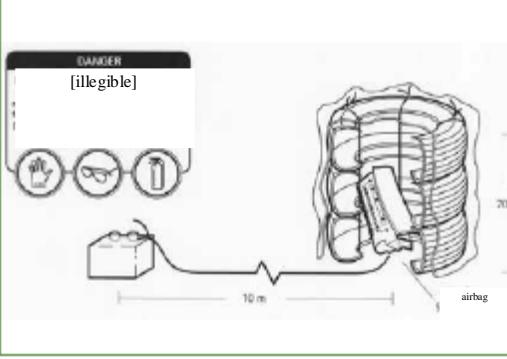
## ARPAC - Vehicle Dismantling Procedures

2.6 REFRIGERANT GAS (Halocarbon)	STEPS	DETAILS	ADDITIONAL INFORMATION
	<p><b>11.</b> Determine the amount of gas recovered using a scale.</p> <p><b>12.</b> Note the information in the record. (See photo 4)</p>		

2.7 TIRES AND WHEELS	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p><b>1.</b> Unscrew and remove the rims.</p> <p><b>2.</b> Remove the weights and put them in the appropriate collection tray.</p> <p><b>3.</b> Retrieve the pressure sensor (not shown), if necessary.</p> <p><b>4.</b> Deflate and remove the tires.</p>		<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Tire lever usage technique.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Tire lever.</li> <li>Wheel handling device.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Obligation to recover the tires (Recyc Quebec).</li> <li>Lead weights are harmful to the environment. They must be systematically retrieved.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of back pain.</li> <li>Risk of an accident with the tire iron.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Video: Tire servicing, at the site <a href="http://autoprevention.org">http://autoprevention.org</a>.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.4 Remove Tires and Lead Balancing Weights.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of recovery procedures and techniques for tires and their components.</li> <li>Compliance of recovered parts.</li> </ul>

2.8 AIRBAGS AND SRS	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.8.1 Recovery of Airbags and other Reusable SRSs</b>    <p><b>CONTINUED ▼</b></p>	<ol style="list-style-type: none"> <li>1. Ensure that the battery terminals are disconnected.</li> <li>2. Wait 20 minutes for the backup system to be completely discharged.</li> <li>3. Unbolt the airbag or SRSs.</li> <li>4. Disconnect the electrical wires.</li> </ol>	<p><i>It is important to disconnect the connections of the airbags rather than cut them, to prevent accidental deployment.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>• SRSs are additional restraint systems. They include all airbags, automatic belt tensioning system, the driver's seat position sensor, the weight sensor in the front passenger seat and sometimes other items, depending on the vehicle.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Airbag and SRS recovery technique (ARPAC specialized training).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Antistatic bags.</li> <li>• Antistatic bracelet.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• The contents of a non-activated explosive cartridge is harmful to the environment. This must not be sent for compacting with the vehicle frame. It must be recovered or deployed.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Airbags and SRS are pyrotechnical parts, i.e. explosives; their improper handling can cause injury. It is therefore very important to follow the safety instructions.</li> <li>• Other risk: awkward position under the dashboard (restricted space).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Manufacturer procedure.</li> <li>• ARPAC training manual.</li> <li>• Recommendations of the SAAQ [Société de l'assurance automobile du Québec, Quebec Automobile Insurance Association].</li> </ul>

2 - FLUIDS AND PARTS COMPRISING A RISK		ARPAC - Vehicle Dismantling Procedures	
2.8 AIRBAGS AND SRS	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>2.8.1 Recovery of Airbags and other Reusable SRSs</b>   	<p>5. Handle the airbag or SRS positioning the cover away from the body.</p> <p>6. Put the part into an antistatic bag.</p> <p>7. Remove the part with the cover (inflatable part) upwards.</p>	<p><i>Wear an antistatic bracelet.</i></p> <p><i>Do not stack items on the airbags or SRS that have not been neutralized.</i></p>	<p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.5 Retrieve Airbags and other additional Restraint Systems (SRS).</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper neutralization of SRS components.</li> <li>• Proper implementation of recovery procedures and techniques for SRS components.</li> <li>• Proper, efficient and safe recovery of airbags.</li> <li>• Respect for health and safety standards.</li> </ul>

2.8 AIRBAGS AND SRS	STEPS	ADDITIONAL INFORMATION
<p><b>2.8.2 Deployment of Airbags and Unusable SRSs</b></p>  	<p>The deployment of unusable airbags and other SRSs is complex and carries a major risk of accident if the recommended procedure is not carefully implemented.</p> <p>No dismantler should carry out this operation without having received training provided by ARPAC.</p> <p>This training very precisely describes the procedure to use. It is necessary to directly refer to it.</p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>SRSs are additional restraint systems. They include: the belts, side curtains, seat cushions, knee bolster cushions, rear back cushions and headrest cushions).</li> <li>It is important to disconnect the connections of the airbags rather than cut them to prevent accidental deployment.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Airbag and SRS recovery technique (ARPAC specialized training).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Multiple. See the ARPAC training.</li> <li>Antistatic bracelet.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>The contents of a non-activated explosive cartridge is harmful to the environment. This must not be sent for compacting with the vehicle frame. It must be recovered or deployed.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Airbags and SRS are pyrotechnical parts, i.e. explosives; their improper handling can cause injury. It is therefore very important to follow the safety instructions.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Manufacturer procedure.</li> <li>ARPAC training manual.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b><i>None. See the pertinent ARPAC training.</i></b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of recovery procedures and techniques for SRS components.</li> <li>Proper, efficient and safe deployment of airbags.</li> <li>Respect for health and safety standards.</li> </ul>

2 - FLUIDS AND PARTS COMPRISING A RISK		ARPAC - Vehicle Dismantling Procedures	
2.9 MERCURY-CONTAINING COMPONENTS	STEPS	DETAILS	ADDITIONAL INFORMATION
 <a href="http://www.elimimercure.ca">www.elimimercure.ca</a>  	<p><b>1.</b> Determine the presence of mercury-containing components.</p> <p><b>2.</b> Disassemble the parts containing the components.</p> <p><b>3.</b> Remove the mercury-containing component from the part.</p> <p><b>4.</b> Put the component into the collection tray reserved for mercury-containing parts.</p>	<p><b>Parts that could include mercury-containing components:</b></p> <ul style="list-style-type: none"> <li>- Level switch for trunk and hood lights;</li> <li>- Seat belt switch;</li> <li>- ABS sensor;</li> <li>- Alarm system;</li> <li>- Xenon or high-intensity discharge (HID) headlights.</li> <li>- Alarm systems installed after the manufacturing of the vehicle contain mercury.</li> <li>- Others</li> </ul> <p><i>See the quick reference document in Appendix 1.</i></p> <p><i>Also see the site <a href="http://www.switchout.ca">www.switchout.ca</a></i></p> <ul style="list-style-type: none"> <li>- List of vehicles with mercury-containing components;</li> <li>- Instructions regarding the removal of components;</li> <li>- Photos of components;</li> <li>- Demonstration video.</li> </ul>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>• Mercury bulbs in damaged vehicles may have leaks. They must be retrieved with care.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Basic tools.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• Mandatory recovery.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Health risk: mercury is a very dangerous product for the nervous system. Symptoms manifest in the long term.</li> <li>• Avoid direct contact of the product with skin.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Quick reference document (See Appendix 1).</li> <li>• Website: <a href="http://www.elimimercure.ca">www.elimimercure.ca</a></li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>2.6 Extract the Mercury-containing Components.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper enumeration and locating of mercury-containing components.</li> <li>• Proper implementation of recovery procedures and techniques for mercury-containing components.</li> <li>• Proper, efficient and safe recovery of mercury-containing components.</li> <li>• Compliance with health, safety and environmental protection standards.</li> </ul>

### **3. MECHANICAL PARTS**

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3.1 EXHAUST SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
 	<p><b>1.</b> Disconnect and remove oxygen probes if required.</p> <p><b>2.</b> Unbolt or cut:</p> <ul style="list-style-type: none"> <li><b>2a.</b> front hosepipe;</li> <li><b>2b.</b> catalytic converter;</li> <li><b>2c.</b> resonator;</li> <li><b>2d.</b> intermediate pipe;</li> <li><b>2e.</b> muffler;</li> </ul>	<p><i>Other name:</i></p> <ul style="list-style-type: none"> <li>- oxygen sensor (accepted)</li> </ul> <p><i>Other name:</i></p> <ul style="list-style-type: none"> <li>- Front exhaust pipe.</li> <li>- Cat or catcon</li> <li>- Catalyzer (accepted).</li> </ul> <p><i>Other name:</i></p> <ul style="list-style-type: none"> <li>- Rear exhaust pipe.</li> <li>- Tailpipe.</li> <li>- Auxiliary muffler</li> </ul>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>• The dismantling sequence may include other parts such as the manifold.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Metal pipe cutting techniques.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Reciprocating saw.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Risks during cutting of the part with the saw: falling parts and burns.</li> <li>• Wear gloves, a face shield and protective footwear.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.1 Disassemble the Exhaust System.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of exhaust system dismantling techniques.</li> <li>• Correct and efficient dismantling of the exhaust system and its components.</li> <li>• Compliance of recovered parts.</li> </ul>

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3.1 EXHAUST SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
	<b>2f.</b> tailpipe.	<i>Other name: - Exhaust pipe or outlet pipe.</i>	

3.2 COOLING AND AIR CONDITIONING SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
   <p><b>2.</b> Set up a catch basin under the part.</p> <p><b>3.</b> Disconnect the hoses and pipes.</p> <p><b>4.</b> Put a cap on the openings.</p> <p><b>5.</b> Unbolt and remove the fan.</p>	<p><b>1. First:</b> Make sure that the part does not contain antifreeze and refrigerant gas.</p> <p><b>2. Set up a catch basin under the part.</b></p> <p><b>3. Disconnect the hoses and pipes.</b></p> <p><b>4. Put a cap on the openings.</b></p> <p><b>5. Unbolt and remove the fan.</b></p>	<p><i>The refrigerant gases must be removed beforehand by a certified individual. See procedure 2.6</i></p> <p><i>Other name: - Radiator hose.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Basic tools.</li> <li>Reciprocating saw if damaged.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Refrigerants are governed by a special law. Certification is required to process them.</li> <li>Residual antifreeze must be recovered because it is damaging to the environment.</li> <li>Parts that have contained a refrigerant must be given a label in accordance with current regulations.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Burn risk if the part is still hot.</li> <li>Risk of splashing: wear glasses</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.2 Remove Cooling and Air Conditioning System Parts.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper application of dismantling techniques for cooling and air conditioning systems.</li> <li>Correct and efficient dismantling techniques for cooling and air conditioning systems.</li> <li>Compliance of recovered parts.</li> </ul>

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3.2 COOLING AND AIR CONDITIONING SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p>6. Unbolt and remove other components, if required:</p> <p>6a. power steering coolant;</p> <p>6b. air conditioning condenser;</p> <p>6c. transmission coolant;</p> <p>6d. antifreeze reservoir;</p>	<p>Other name for power steering: - <i>Assisted steering</i>.</p>	

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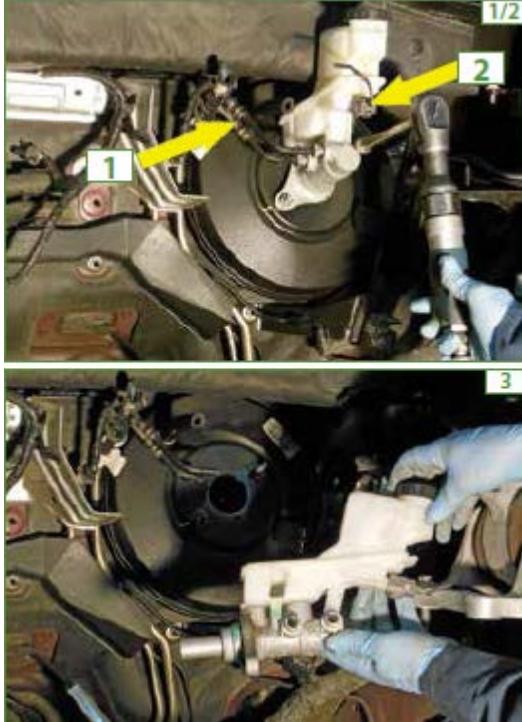
3.2 COOLING AND AIR CONDITIONING SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
 	<p>6e. air dryer.</p> <p>7. Unbolt and remove the radiator.</p>	<p>Other name: - French: dessiccateur.</p>	

3 - MECHANICAL PARTS		ARPAC - Vehicle Dismantling Procedures	
3.3 BRAKE SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.3.1 Front and Rear Disc Brakes</b>   	<p><b>1.</b> Unbolt the end of the steering rack and pinion.</p> <p><b>2.</b> Unbolt and remove the calipers.</p> <p><b>3.</b> Crimp the oil hoses, if necessary.</p> <p><b>4.</b> Unscrew or cut the oil hoses from the brakes.</p>	<p><i>Disable the hand brake before performing this operation.</i></p> <p><i>Put a catchment tray under the part, if necessary, to collect the remainder of the oil.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>The use of an absorbent might be required.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Basic tools.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of splashing: wear glasses and gloves.</li> <li>Accidental contact of oil on the skin must be cleaned off immediately.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of dismantling techniques for the braking system and its components.</li> <li>Correct and efficient dismantling of the braking system and its components.</li> <li>Compliance of recovered parts.</li> <li>Exact measurement of the diameter of the brakes.</li> <li>Inscription of proper information on the part.</li> </ul>

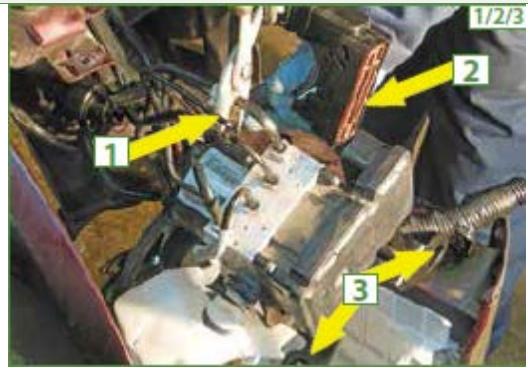
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3.3 BRAKE SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.3.1 Front and Rear Disc Brakes</b>  <b>5</b>  <b>6</b> A mechanic wearing blue gloves is shown working on a vehicle's front wheel assembly. In step 5, they are using a tool to remove the caliper bracket from the steering knuckle. In step 6, they are using a wrench to unscrew the disc from the hub. A callout box labeled 'Diameter' with an arrow points to the center of the disc. <p><b>5.</b> Remove the caliper bracket.</p> <p><b>6.</b> Unscrew (if necessary) and remove the disc.</p> <p><b>7.</b> Measure the diameter of the disc and record the information in the appropriate location.</p>		<p><i>Do not remove the universal joint bolt before removing the disc. Doing so would risk damaging the kingpin bearing.</i></p>	

3.3 BRAKE SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.3.2 Rear Drum Brakes</b>   	<p><b>1.</b> Remove the drum screws, if necessary.</p> <p><b>2.</b> Remove the drums.</p> <p><b>3.</b> Measure the diameter of the brakes and record the information in the appropriate location.</p>	<p><i>Disable or cut the handbrake cable before this operation if the drum is stuck.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Basic tools.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of dust in the eyes, wear glasses.</li> <li>Risk of inhaling brake dust harmful to health. Wear a dust mask.</li> <li>Risk of cuts on the hand, wear gloves.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of rear drum brake dismantling techniques.</li> <li>Correct and efficient rear drum brake dismantling.</li> <li>Compliance of recovered parts.</li> <li>Exact measurement of the diameter of the brakes.</li> <li>Inscription of proper information on the part.</li> </ul>

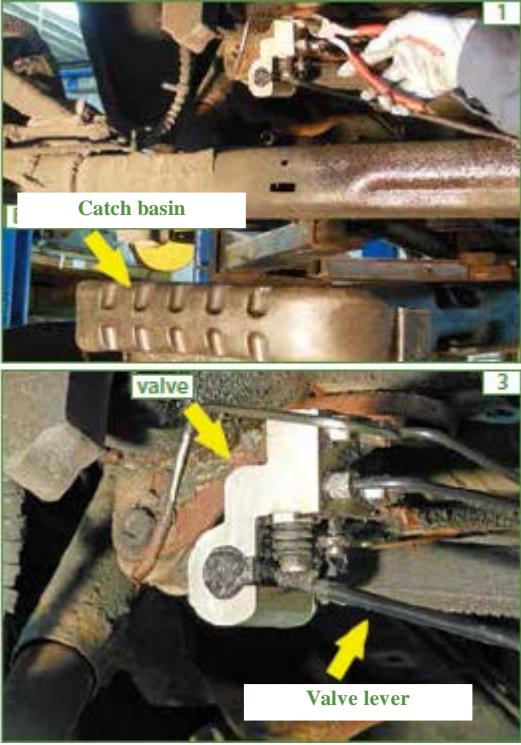
3 - MECHANICAL PARTS		ARPAC - Vehicle Dismantling Procedures	
3.3 BRAKE SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.3.3 Master Cylinder</b> 	<p><b>1.</b> Unbolt and block the brake lines, or crimp and cut them.</p> <p><b>2.</b> Disconnect or cut the electrical wiring.</p> <p><b>3.</b> Unbolt and remove the master cylinder.</p>	<p><i>Put a catchment tray under the part, if necessary, to collect the remainder of the oil.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Basic tools.</li> <li>The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of splashing: wear glasses and gloves.</li> <li>Accidental contact of oil on the skin must be cleaned off immediately.</li> <li>Risk of cuts.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of master cylinder dismantling techniques.</li> <li>Correct and efficient master cylinder dismantling.</li> <li>Compliance of recovered parts.</li> </ul>

3.3 BRAKE SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<p><b>3.3.4 Power Brakes (<i>Assisted brakes or brake "booster"</i>)</b></p>  <p><b>Vacuum Model</b>      <b>Hydraulic Model</b></p>	<ol style="list-style-type: none"> <li>1. Dismantle the cover on the steering column.</li> <li>2. Remove the lock (clip) from the power brake lever.</li> <li>3. Unbolt the power brake or, if required, unlock it by turning.</li> <li>4. Vacuum model: Secure the pin with tape to avoid losing it.</li> </ol>	<p><i>There are 3 types of power brakes:</i></p> <ul style="list-style-type: none"> <li>- <i>vacuum accumulator model;</i></li> <li>- <i>assisted hydraulic model;</i></li> <li>- <i>assisted electric model (not shown).</i></li> </ul>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>• None.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Basic tools.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Risk: awkward position under the dashboard (restricted space).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of power brake dismantling techniques.</li> <li>• Correct and efficient dismantling of power brakes.</li> <li>• Compliance of recovered parts.</li> </ul>

3.3 BRAKE SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.3.5 ABS Module</b> 	<ol style="list-style-type: none"> <li>1. Unbolt and block the brake lines, or crimp and cut them.</li> <li>2. Disconnect or cut the electrical wiring.</li> <li>3. Unbolt and remove the ABS module.</li> </ol>	<p><i>Put a catchment tray under the part, if necessary, to collect the remainder of the oil.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Basic tools.</li> <li>• The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Risk of cuts.</li> <li>• Accidental contact of oil on the skin must be cleaned off immediately.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b><i>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</i></b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of ABS module dismantling techniques.</li> <li>• Correct and efficient dismantling of the ABS module.</li> <li>• Compliance of recovered parts.</li> </ul>

### 3 - MECHANICAL PARTS

#### ARPAC - Vehicle Dismantling Procedures

3.3 BRAKE SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.3.6 Distribution Valve</b>  <p><b>Catch basin</b></p> <p><b>valve</b></p> <p><b>Valve lever</b></p>	<ol style="list-style-type: none"> <li>1. Unbolt and block the brake lines, or crimp and cut them.</li> <li>2. Disconnect or cut the electrical wiring (<i>not shown</i>).</li> <li>3. Unbolt and remove the valve with its lever.</li> </ol>	<p><i>Put a catchment tray under the part, if necessary, to collect the remainder of the oil.</i></p> <p><i>Unbolt the lever at the other end.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Basic tools.</li> <li>• The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Risk of cuts.</li> <li>• Accidental contact of oil on the skin must be cleaned off immediately.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of distribution valve dismantling techniques.</li> <li>• Correct and efficient of the distribution valve.</li> <li>• Compliance of recovered parts.</li> </ul>

3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.1 Front Kingpins</b>    <p><b>1.</b> <i>First:</i> Remove the front brakes.</p> <p><b>2.</b> Remove the safety pin and screw from the universal joint, if applicable.</p> <p><b>3.</b> Remove the bolts securing the shock absorber to the kingpin and uncouple them.</p> <p><b>4.</b> Turn the kingpin outwards and remove the universal joint.</p>	<p><b>1.</b> <i>First:</i> Remove the front brakes.</p> <p><b>2.</b> Remove the safety pin and screw from the universal joint, if applicable.</p> <p><b>3.</b> Remove the bolts securing the shock absorber to the kingpin and uncouple them.</p> <p><b>4.</b> Turn the kingpin outwards and remove the universal joint.</p>	<p><i>See procedure 3.3.1</i></p> <p><i>French for universal joint:</i></p> <ul style="list-style-type: none"> <li>– Cardan.</li> </ul> <p><i>See procedure 3.6.1</i></p> <p><i>A pneumatic hammer may be required.</i></p> <p><i>Note: if the universal joint sticks to the kingpin, unscrew the universal joint screw a quarter of the way to protect the threads and hammer at that spot.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Hydraulic tool to support the lower control arm.</li> <li>• Pneumatic hammer.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Projection risk: it is important to release the spring pressure (some older models or damaged vehicles).</li> <li>• Risk of overexertion (heavy items).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of front kingpin dismantling techniques.</li> <li>• Correct and efficient front kingpin dismantling.</li> <li>• Compliance of recovered parts.</li> </ul>

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3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<p><b>3.4.1 Front Kingpins</b></p>   	<p><b>5.</b> Remove, if applicable, the ball joint safety pins and unbolt the nuts.</p> <p><b>6.</b> Disconnect the ABS sensor wiring, if applicable.</p> <p><b>7.</b> Uncouple the kingpin.</p>	<p>Another name for ball joint:  – <i>Ball-and-socket joint</i>  French: <i>Rotule</i></p> <p><i>Never sever the cable, because it is an integral part of the ABS module.</i></p> <p><b>Attention:</b> hammer on the kingpin. <b>Do not</b> hammer on the bolt of the ball joint so that it does not get damaged.</p>	

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3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.1 Front Kingpins</b> 	8. Remove the kingpin.		

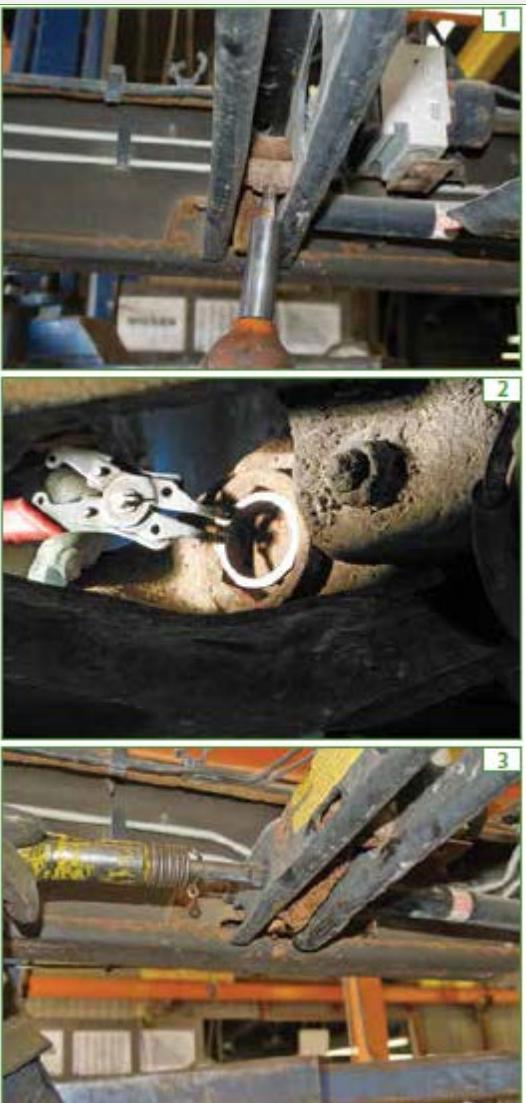
3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.2 Shock Absorbers in the Strut (e.g.: McPherson)</b>  <p><b>ATTENTION:</b> to avoid projection of the spring, do not unscrew the center bolt of the plate (on most models).</p>	<ol style="list-style-type: none"> <li>1. Unbolt the sway bar link.</li> <li>2. Unbolt the kingpin connected to the shock absorber.</li> <li>3. Unbolt the shock absorber plate.</li> <li>4. Remove the shock absorber.</li> </ol>	<i>French: Biellette</i>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Hydraulic tool to support the lower control arm for some models.</li> <li>Spring compressor.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Projection risk: it is important to release the spring pressure (some older models or damaged vehicles).</li> <li>Risk of overexertion (heavy items).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of shock absorber dismantling techniques.</li> <li>Correct and efficient shock absorber dismantling.</li> <li>Compliance of recovered parts.</li> </ul>

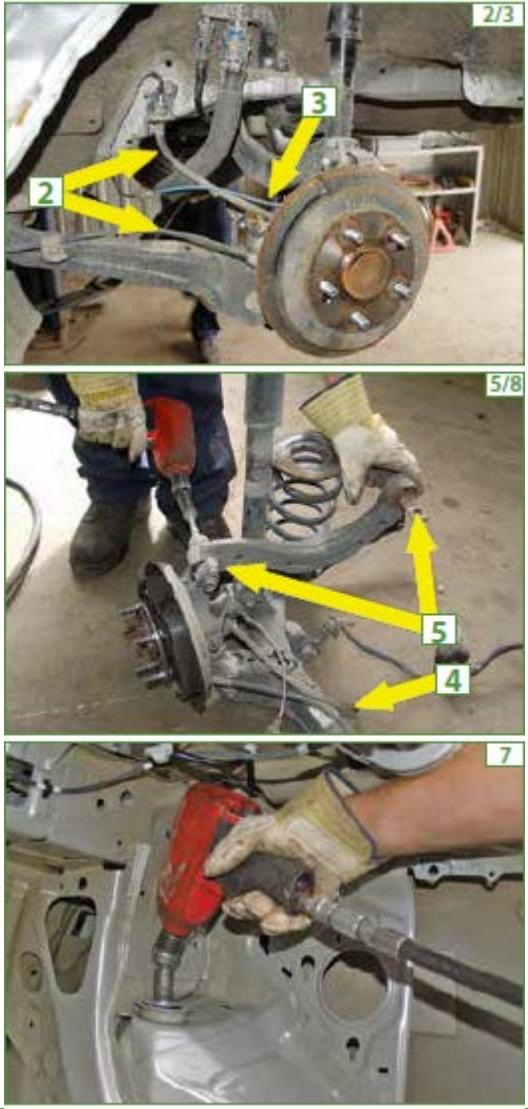
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3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.2 Shock Absorbers in the Strut (e.g.: McPherson)</b> 	<b>5.</b> Remove the spring with a spring compressor.	<b>ATTENTION:</b> Make sure that the part is well attached to the device.	

3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.3 Coil Springs without Struts</b>  <p><b>1.</b> Compress the spring using a hydraulic jack (note: the chain has no other role).</p> <p><b>2.</b> Unbolt the inside (2a) or outside (2b) bolt of the lower control arm.</p> <p><b>3.</b> Release the pressure from the hydraulic jack.</p> <p><b>4.</b> Retrieve the spring.</p>		<p><i>This procedure is intended for models without struts.</i></p> <p><i>On some models, the inside bolt must be removed while on others, the outside bolt must be removed.</i></p> <p><b>ATTENTION:</b> It is important to release the pressure of the spring before retrieving the part.</p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Hydraulic tool to support the lower control arm for some models.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Projection risk: It is important to release the pressure of the spring before retrieving the part.</li> <li>Risk of overexertion (heavy items).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of coil spring dismantling techniques.</li> <li>Correct and efficient dismantling of coil springs.</li> <li>Compliance of recovered parts.</li> </ul>

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3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.4 Torsion Bars</b>  <p><b>1.</b> Unscrew the tensioning bolt of the torsion bar.</p> <p><b>2.</b> Remove the locks (pins).</p> <p><b>3.</b> Remove the bar from the opening.</p>			<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Support for handling the part may be required due to the weight of certain parts.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Pneumatic hammer.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of the part falling. Wear protective footwear.</li> <li>Risk of overexertion (heavy items) on some models.</li> <li>Excessive noise (pneumatic hammers). Wear hearing protectors.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of torsion bar dismantling techniques.</li> <li>Correct and efficient dismantling of torsion bars.</li> <li>Compliance of recovered parts.</li> </ul>

3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.5 Rear Suspension</b>  <p><b>2/3</b></p> <p><b>5/8</b></p> <p><b>7</b></p>	<ol style="list-style-type: none"> <li><b>1.</b> <u>First</u>: release the coil spring pressure.</li> <li><b>2.</b> Cut or disconnect the hand brake tubes and wiring.</li> <li><b>3.</b> If applicable, disconnect the ABS brake cable.</li>   <li><b>4.</b> <u>First</u>: unbolt the lower control arm.</li> <li><b>5.</b> Unbolt the upper control arm.</li> <li><b>6.</b> Lower the vehicle to ground height.</li>   <li><b>7.</b> Unbolt the upper shock absorber tower.</li> <li><b>8.</b> Retrieve the rear suspension (see photo 5).</li> </ol>	<p><i>See procedure 3.4.3.</i></p> <p><i>This wire is electrical in nature. It must never be cut.</i></p> <p><i>See procedure 3.4.3. (2a and 2b)</i></p> <p><i>French: Table supérieure.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Support for handling the part may be required due to the weight.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Hydraulic jack.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Projection risk if the part falls on the ground. Wear protective footwear.</li> <li>Risk of overexertion (heavy items).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of rear suspension dismantling techniques.</li> <li>Correct and efficient dismantling of the rear suspension.</li> <li>Compliance of recovered parts.</li> </ul>

3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.6 Leaf Springs</b>  <p><b>1.</b> First: remove the differential.</p> <p><b>2.</b> Support the spring using a hydraulic jack.</p> <p><b>3.</b> Unbolt and remove the spring.</p>	<p><b>1. First:</b> remove the differential.</p> <p><b>2.</b> Support the spring using a hydraulic jack.</p> <p><b>3.</b> Unbolt and remove the spring.</p>	<p><i>See procedure 3.7.2.</i></p> <p><i>If the bolt is stuck, remove the leaf spring support with the leaf springs and uncouple these two parts using a hydraulic press.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Support for handling the part may be required due to the weight.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Hydraulic jack.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Projection risk if the part falls on the ground. Wear protective footwear.</li> <li>Risk of overexertion (heavy items).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of leaf spring dismantling techniques.</li> <li>Correct and efficient dismantling of leaf springs.</li> <li>Compliance of recovered parts.</li> </ul>

3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.7 Fixed Rear Axle</b>   	<ol style="list-style-type: none"> <li>1. Set up a hydraulic jack under the rear axle.</li> <li>2. Cut or disconnect the hand brake tubes and wiring.</li> <li>3. If applicable, disconnect the ABS brake cable (not shown).</li> <li>4. Unbolt the radius rod [also known as a radius arm, radius bar or torque arm].</li> </ol>	<p><i>This wire is electrical in nature. It must never be cut.</i></p> <p><i>In French: levier d'équilibre</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Support for handling the part may be required due to the weight of certain parts.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Pneumatic hammer.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of the part falling. Wear protective footwear.</li> <li>Risk of overexertion (heavy items).</li> <li>Excessive noise (pneumatic hammers). Wear hearing protectors.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of rear axle dismantling techniques.</li> <li>Correct and efficient dismantling of the rear axle.</li> <li>Compliance of recovered parts.</li> </ul>

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3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.7 Fixed Rear Axle</b> <p><b>5.</b> Unbolt the standard or U-bolts (models with leaf springs).</p> <p><b>6.</b> First: Unbolt the two trailing arms (coil spring models).</p> <p><b>7.</b> Lower the axle with the hydraulic jack.</p>		<p><b>See procedure 3.4.3.</b></p> <p><i>In French: Bras oscillant</i></p> <p><b>ATTENTION:</b> Do not damage the rubber bushings of the trailing arms while using the hoisting system.</p>	

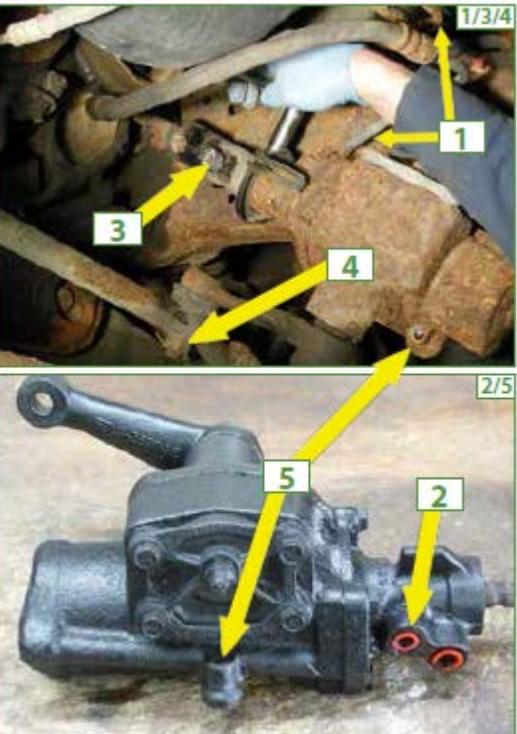
3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.4.8 Chassis Frame</b>  <p><b>1.</b> Anchor with a bracing system:</p> <ul style="list-style-type: none"> <li>✓ The engine.</li> <li>✓ The transmission.</li> <li>✓ The differential (if required).</li> </ul> <p><b>2.</b> Disassemble the two lower ball joints, the stabilizer arm and the tie rod ends.</p> <p><b>3.</b> Unbolt the lower engine brackets and the transmission brackets.</p>	<p><b>CONTINUED ▼</b></p>	<p><i>According to the type of vehicle, the brackets may be placed in different locations.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>• Where necessary, the balance point of the chassis should be determined to correctly set up the hydraulic jack.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Hydraulic jack or system of support.</li> <li>• Support bar for the engine, transmission and differential.</li> <li>• Support table.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Risk of overexertion (heavy items).</li> <li>• Risk of parts falling. Wear protective footwear.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of chassis frame dismantling techniques.</li> <li>• Correct and efficient dismantling of the chassis frame.</li> <li>• Compliance of recovered parts.</li> </ul>

3.4 SUSPENSION SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<p><b>3.4.8 Chassis Frame</b></p>    <p><b>4. First:</b> Unbolt the steering column joint and the steering rack and pinion fastenings.</p> <p><b>5. First:</b> Remove the front exhaust pipe, if required.</p> <p><b>6. First:</b> Remove the radiator if required.</p> <p><b>7.</b> If necessary, cut or disconnect the steering rack and pinion hoses.</p> <p><b>8.</b> Ask a colleague for help moving the part.</p> <p><b>9.</b> Unbolt and remove the chassis frame.</p> <p><b>10.</b> Remove the sway bar, if required.</p>	<p><b>4. First:</b> Unbolt the steering column joint and the steering rack and pinion fastenings.</p> <p><b>5. First:</b> Remove the front exhaust pipe, if required.</p> <p><b>6. First:</b> Remove the radiator if required.</p> <p><b>7.</b> If necessary, cut or disconnect the steering rack and pinion hoses.</p> <p><b>8.</b> Ask a colleague for help moving the part.</p> <p><b>9.</b> Unbolt and remove the chassis frame.</p> <p><b>10.</b> Remove the sway bar, if required.</p>	<p><i>See procedure 4.1.2</i></p> <p><i>See procedure 3.1</i></p> <p><i>See procedure 3.2</i></p> <p><b>ATTENTION:</b> Detach all electrical wiring attached to the chassis frame. Do not cut or disconnect it.</p> <p><i>If needed, set up a hoisting system or a support table under the part.</i></p>	

3.5 STEERING SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.5.1 Steering Rack and Pinion: Model Bolted to the Chassis Frame</b> 	<p><b>1. First:</b> Remove the chassis frame.</p> <p><b>2. Unbolt the steering rack and pinion anchors on the chassis frame.</b></p>	<i>See procedure 3.4.8</i>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Lifting equipment.</li> <li>Cutting wheel.</li> <li>The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Accidental contact of oil on the skin must be cleaned off immediately.</li> <li>Risk of cuts. Wear gloves.</li> <li>Burn risk (sparks from using the cutting wheel). Wear a face shield.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b><i>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</i></b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of steering rack and pinion dismantling techniques.</li> <li>Correct and efficient dismantling of the steering rack and pinion.</li> <li>Compliance of recovered parts.</li> </ul>

3.5 STEERING SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<p><b>3.5.2 Steering Rack and Pinion: Model Bolted to the Passenger Compartment</b></p>  <p><b>1.</b> Unscrew the steering column joint.</p> <p><b>2.</b> Unbolt the tie rod ends at the pivot.</p> <p><b>3.</b> Unbolt the steering rack and pinion steering anchors.</p>	<p><b>See procedure 4.1.2</b></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Supporting tool.</li> <li>Cutting wheel.</li> <li>The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Accidental contact of oil on the skin must be cleaned off immediately.</li> <li>Risk of cuts. Wear gloves.</li> <li>Burn risk (sparks from using the cutting wheel). Wear a face shield.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of steering rack and pinion dismantling techniques.</li> <li>Correct and efficient dismantling of the steering rack and pinion.</li> <li>Compliance of recovered parts.</li> </ul>	<p><b>CONTINUED ▼</b></p>

3.5 STEERING SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<p><b>3.5.2 Steering Rack and Pinion: Model Bolted to the Passenger Compartment</b></p>  	<p><b>4.</b> Disconnect or cut the hoses and disconnect the electrical wiring.</p> <p><b>5.</b> If necessary, unbolt the rear of the chassis frame and lower it to provide space (not shown).</p> <p><b>6.</b> If necessary, remove the front left strut to reach the opening leading to the steering rack and pinion.</p> <p><b>7.</b> Remove the steering rack and pinion.</p>	<p><i>Never cut the electrical wiring.</i></p> <p><b>See procedure 3.4.8</b> <i>If required, set up a lifting system to support the chassis frame (not shown).</i></p> <p><b>See procedure 3.4.2 (strut)</b></p>	

3.5 STEERING SYSTEM	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.5.3 Steering Box</b>  <p><b>1/3/4</b></p> <p><b>2/5</b></p>	<ol style="list-style-type: none"> <li>1. Cut or unbolt the hoses.</li> <li>2. Put caps on the openings.</li> <li>3. Unscrew the steering column joint.</li> <li>4. Unbolt and uncouple the pitman arm ball joint.</li> <li>5. Unbolt and remove the chassis frame.</li> </ol>	<p><b>Put a catchment tray under the part, if necessary, to collect the remainder of the oil.</b></p> <p><b>See procedure 4.1.2</b></p> <p><i>French: bras de renvoi If needed, use a pivot puller.</i></p> <p><i>Without exception, do not unbolt the bolt that connects the steering box to the pitman arm.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Pivot puller.</li> <li>• Supporting tool.</li> <li>• The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Risk of overexertion (heavy items).</li> <li>• Risk of parts falling. Wear protective footwear.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.3 Disassemble the Parts for the Braking, Suspension and Steering Systems.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of steering box dismantling techniques.</li> <li>• Correct and efficient steering box dismantling.</li> <li>• Compliance of recovered parts.</li> </ul>

3.6 POWERTRAIN	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.6.1 Powertrain</b>  <p><b>1.</b> Remove the battery.  <b>2.</b> Remove cosmetic components.  <b>3.</b> Remove the air intake system.  <b>4.</b> First: make sure the vehicle is balanced and the engine is stabilized.  <b>5a.</b> Remove the air intake system.</p>	<p><b>1. First:</b> Remove the battery.  <b>2.</b> Remove cosmetic components.  <b>3.</b> Remove the air intake system.  <b>4. First:</b> make sure the vehicle is balanced and the engine is stabilized.  <b>5a.</b> Remove the air intake system.</p>	<p><i>See procedure 2.2</i>  <i>E.g.: battery cover, engine cover, etc.</i></p> <p><i>See procedure 1.1</i></p> <p><i>Automatic transmission only</i>  <i>French: volant-moteur</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>It is particularly important to secure and verify the balance of the vehicle because of the considerable weight changes caused by removal of the part.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Removable support table.</li> <li>Hydraulic jack and hoist.</li> <li>Axle stands.</li> <li>Engine crane.</li> <li>The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of excessive effort (heavy items, or parts loosening when the vehicle is damaged).</li> <li>Risk of parts falling. Wear protective footwear.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.4 Retrieve the Powertrain and its Components.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of powertrain retrieval techniques.</li> <li>Correct and efficient dismantling of the powertrain.</li> <li>Compliance of recovered parts.</li> </ul>

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3.6 POWERTRAIN	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.6.1 Powertrain</b>    <p><b>5b.</b> Unbolt the flywheel, if applicable.</p> <p><b>5c.</b> (Not shown) Turn the torque converter drive and push it towards the transmission to disengage it from the flywheel.</p> <p><b>6.</b> Unbolt:</p> <p><b>6a.</b> lower engine brackets and transmission brackets.</p> <p><b>6b.</b> engine-transmission coupling bolts;</p> <p><b>6c.</b> universal joint;</p>		<p><i>French: Convertisseur de couple. Without doing this, the front pump seal might become damaged.</i></p> <p><i>According to the type of vehicle, the brackets may be placed in different locations.</i></p> <p><i>Put a catchment tray under the part to recover the remaining oil.</i></p>	

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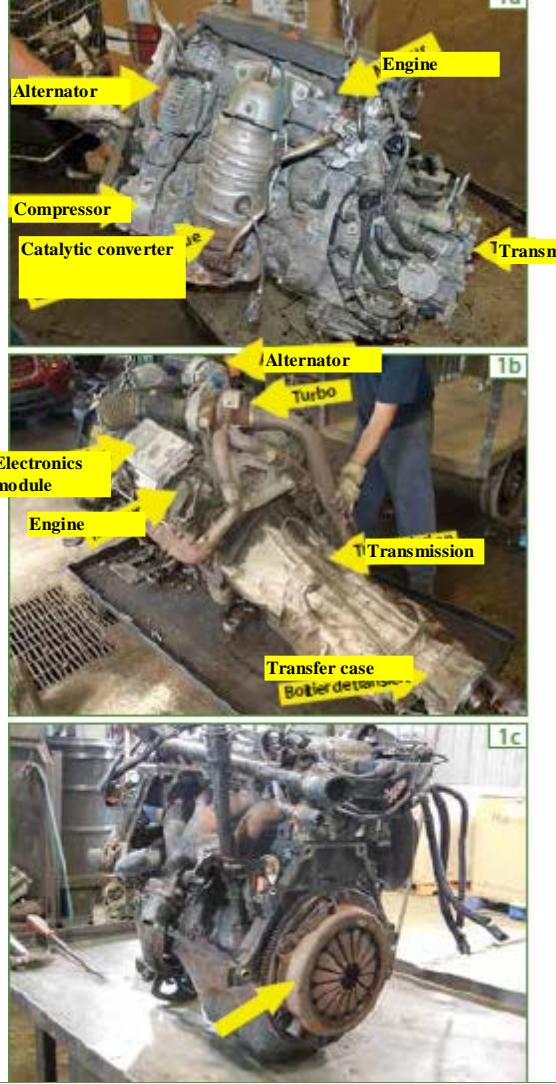
3.6 POWERTRAIN	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.6.1 Powertrain</b>   	<p><b>6d.</b> the driveshaft, if applicable.</p> <p><b>7. First:</b> Unbolt and remove the chassis frame.</p> <p><b>8.</b> Set up a recovery table under the powertrain.</p> <p><b>9. (Photos 9a-b)</b> Unbolt the upper brackets of the powertrain.</p>	<p>French: Arbre de transmission. For pickup truck, 4 x 4, or rear wheel drive model.</p> <p><i>See procedure 3.4.8</i></p>	

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3.6 POWERTRAIN	STEPS	DETAILS	ADDITIONAL INFORMATION
<p><b>3.6.1 Powertrain</b></p>   	<p><b>10.</b> Disconnect or cut the pipes and disconnect the electrical wiring and other cables.</p> <p><b>11. First:</b> Verify the vehicle balance.</p> <p><b>12.</b> Raise the vehicle frame to take the powertrain out.</p>	<i>See procedure</i> 1.1	

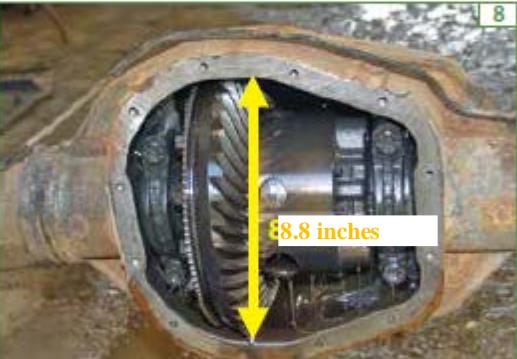
### 3 - MECHANICAL PARTS

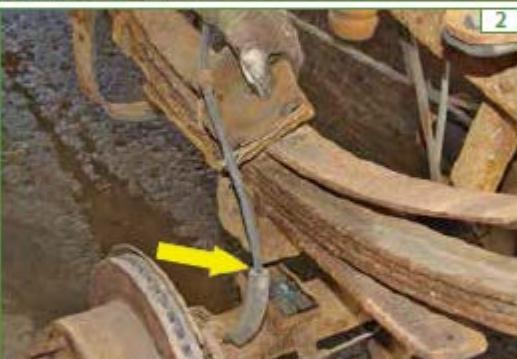
#### ARPAC - Vehicle Dismantling Procedures

3.6 POWERTRAIN	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.6.2 Powertrain Components</b>  <p><b>1a.</b> Separate the powertrain components.</p> <ul style="list-style-type: none"> <li>– alternator;</li> <li>– transmission;</li> <li>– compressor;</li> <li>– engine;</li> <li>– catalytic converter;</li> <li>– etc.</li> </ul> <p><b>1b.</b> Rear-wheel drive:</p> <ul style="list-style-type: none"> <li>– alternator;</li> <li>– turbo;</li> <li>– transmission;</li> <li>– transfer case;</li> <li>– electronics module;</li> <li>– engine;</li> <li>– etc.</li> </ul> <p><b>1a.</b> Clutch.</p>	<p><i>Put a catchment tray under the part to recover the remaining oil.</i></p> <p><i>Always plug the holes to prevent the inside of the parts rusting or clogging.</i></p> <p>French: embrayage</p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Wheeled workbench.</li> <li>• Engine crane.</li> <li>• The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Cut or jamming risk.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.4 Retrieve the Powertrain and its Components.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of powertrain component retrieval techniques.</li> <li>• Correct and efficient powertrain component dismantling.</li> <li>• Compliance of recovered parts.</li> <li>• Proper inscription of information on the driveshaft.</li> </ul>	

3.6 POWERTRAIN	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.6.2 Powertrain Components</b>   	<p><b>1d.</b> Starter.</p> <p><b>1e.</b> Power steering.</p> <p><b>1f.</b> Other components:</p> <ul style="list-style-type: none"> <li>(1) turbo;</li> <li>(2) power steering;</li> <li>(3) compressor;</li> <li>(4) alternator;</li> <li>(5) starter;</li> <li>(6) electronics module;</li> <li>(7) coil pack;</li> <li>(8) clutch;</li> </ul>	<p>French: Bloc de bobinage</p>	

3.7 DIFFERENTIAL	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.7.1 Differential Checking</b>    <p><b>3.7.1 Differential Checking</b></p> <p><b>1. Set up a catchment tray under the part.</b></p> <p><b>2. Remove the differential cover.</b></p> <p><b>3. Assess the condition of the oil.</b> <i>E.g.: color, odor, presence of residue.</i></p> <p><b>4. Assess interior component wear.</b> <i>E.g.: gears, ball bearings, clutch.</i></p> <p><b>5. Assess exterior component wear.</b> <i>E.g.: axle, ball bearings, gaskets.</i> “Bubbling” of rust on the part indicates that the exterior cage has been twisted or that the metal has been bent due to an accident.</p> <p><b>6. Apply an anti-corrosive coating inside the differential.</b></p>	<p><b>CONTINUED ▼</b></p>		<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>The differentials and its characteristics (e.g.: wear of the teeth, the cage, etc.).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Basic tools.</li> <li>The use of an absorbent might be required.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>Residual oil must be recovered because it is damaging to the environment.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Personal protection equipment: gloves, glasses and protective footwear.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.5 Check the Differential.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of procedures and techniques to open and re-close the differential.</li> <li>Proper cover seal.</li> <li>Proper differential lubrication.</li> <li>Proper assessment of the state of the gears.</li> <li>Accurate assessment of the wear of interior and exterior components.</li> <li>Proper differential ratio calculation.</li> <li>Exact measurement of the crown diameter.</li> <li>Inscription of proper information on the part.</li> </ul>

3.7 DIFFERENTIAL	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.7.1 Differential Checking</b>   	<p><b>7.</b> Determine the differential ratio. Here, on the plate, the ratio shows 3.73 (part of the number is rusted).</p> <p><b>8.</b> Determine the diameter of the crown, if required.</p> <p><b>9.</b> Record the ratio or diameter on the parts.</p> <p><b>10.</b> Re-close the differential.</p>	<p><i>If the ratio is not specified, it must be calculated by dividing the number of crown teeth by the number of pinion teeth.</i>  <i>E.g. (photo 8): <math>40: 13 = 3.08</math></i></p> <p><i>The shape of the cover and the number of bolts can help identify the model and thereby its diameter.</i></p> <p><i>Seal the differential well with silicone sealant.</i></p>	

3.7 DIFFERENTIAL	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.7.2 Differential Recovery</b>   	<p><b>1.</b> Unbolt the driveshaft.</p> <p><b>2.</b> Disconnect or cut handbrake cables.</p> <p><b>3.</b> Set up an hydraulic jack or jack posts under the differential.</p>	<p><i>See procedure 3.6.1 - 6d</i></p> <p><b>Do not cut:</b></p> <ul style="list-style-type: none"> <li>- The rubber hoses of the brakes.</li> <li>- The ABS module cable, if applicable.</li> </ul>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>• It is particularly important to secure and verify the balance of the vehicle because of the considerable weight changes caused by removal of the part.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Hydraulic jack.</li> <li>• Removable support table or axle stands.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Risk of overexertion (heavy items).</li> <li>• Risk of parts or vehicle falling.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>3.4 Retrieve the powertrain.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Proper implementation of differential retrieval techniques.</li> <li>• Correct and efficient dismantling of the differential and its components.</li> <li>• Compliance of the recovered part.</li> </ul>

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3.7 DIFFERENTIAL	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>3.7.2 Differential Recovery</b> 	<b>4.</b> Unbolt the differential.		

## 4. BODY and PASSENGER COMPARTMENT

arpac



## 4 - BODY AND PASSENGER COMPARTMENT

ARPAC - Vehicle Dismantling Procedures

4.1 PASSENGER COMPARTMENT	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.1.1 Seats, Belts and Fittings</b> 	<ol style="list-style-type: none"> <li>1. <b>First:</b> Remove the SRS and the airbags, if applicable.</li> <li>2. Unbolt the seats.</li> <li>3. Remove the seat belts.</li> <li>4. Remove the various fittings.</li> </ol>	<p><i>SRSs: additional restraint systems. See procedure 2.8.1</i></p> <p><i>E.g. : center console, molding, interior light, decorative items, etc.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Basic tools.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of excessive effort (heavy items, pulling carpets, etc.)</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>4.1 Disassemble the Passenger Compartment.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of passenger compartment accessory dismantling techniques.</li> <li>Correct and efficient dismantling of the passenger compartment.</li> <li>Compliance of recovered parts.</li> </ul>

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4.1 PASSENGER COMPARTMENT	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.1.1 Seats, Belts and Fittings</b>  A photograph showing a person's hands and arms working on the floor of a vehicle's passenger compartment. The person is wearing a yellow glove and a white protective suit. They appear to be using a tool to remove or loosen something on the floor. The floor is covered in debris, including metal parts and old carpeting. A small green number '5' is visible in the top right corner of the image.	<b>5.</b> Remove the carpets.		

4.1 PASSENGER COMPARTMENT	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.1.2 Steering Column and Components</b>    <p><b>1.</b> Remove the fittings under the column.</p> <p><b>2.</b> Unbolt the steering column joint.</p> <p><b>3.</b> Align and secure the steering wheel in the center position.</p> <p><b>4.</b> Turn the ignition key to the off position.</p>	<p><b>1.</b> Remove the fittings under the column.</p> <p><b>2.</b> Unbolt the steering column joint.</p> <p><b>3.</b> Align and secure the steering wheel in the center position.</p> <p><b>4.</b> Turn the ignition key to the off position.</p>	<p><i>This is done to secure the clockspring.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Center the column.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Basic tools.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk: awkward position under the dashboard (restricted space).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>4.1 Disassemble the Passenger Compartment.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of dismantling procedures for the steering column and its components.</li> <li>Correct and efficient dismantling of the steering column and its components.</li> <li>Compliance of recovered parts.</li> </ul>

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## 4 - BODY AND PASSENGER COMPARTMENT

ARPAC - Vehicle Dismantling Procedures

4.1 PASSENGER COMPARTMENT	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.1.2 Steering Column and Components</b>  5	<p>5. Unbolt the column and disconnect the wiring.</p> <p>6. <b>First:</b> Remove the airbag.</p> <p>7. Unmount and unbolt the column components, if applicable:</p> <ul style="list-style-type: none"><li>✓ Turn signal switches;</li><li>✓ Others.</li></ul>	<i>See procedure 2.8.1</i>	

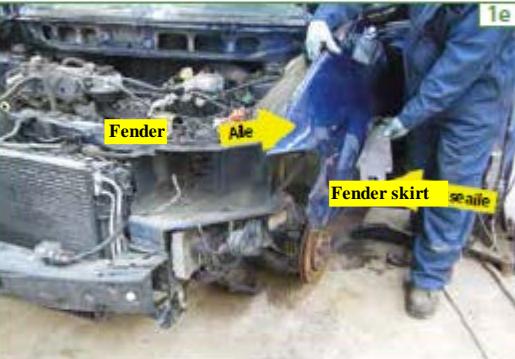
4.1 PASSENGER COMPARTMENT	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.1.3 Dashboard and Components</b>  <p><b>1.</b> Disassemble the dashboard components:</p> <p><b>1a.</b> audio and video systems;</p> <p><b>1b.</b> instrument panel.</p> <p><b>1c.</b> heater, evaporator and other heating components;</p> <p><b>1d.</b> computers and other electronic components;</p>	<p><b>1.</b> Disassemble the dashboard components:</p> <p><b>1a.</b> audio and video systems;</p> <p><b>1b.</b> instrument panel.</p> <p><b>1c.</b> heater, evaporator and other heating components;</p> <p><b>1d.</b> computers and other electronic components;</p>	<p><i>E.g.: odometer, temperature control, etc.</i></p> <p><i>E.g. : ECM (electronic control module), BCM (body control module), etc.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Basic tools.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk: awkward position under the dashboard (restricted space).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>4.1 Disassemble the Passenger Compartment.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of dismantling techniques for the dashboard and its components.</li> <li>Correct and efficient dismantling of the dashboard and its components.</li> <li>Compliance of recovered parts.</li> </ul>

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4.1 PASSENGER COMPARTMENT	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.1.3 Dashboard and Components</b>   1e 2	<p><b>1e.</b> glovebox.</p> <p><b>2.</b> Unbolt the dashboard, if required.</p>		

4.2 BODY	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.2.1 Car Body</b>  <p><b>1a.</b> hood;</p>  <p><b>1b.</b> headlights and sidelights;</p>  <p><b>1c.</b> bumper cover;</p>	<p><b>1.</b> Unbolt, unmount and, if required, disconnect the wiring:</p> <p><b>1a.</b> hood;</p> <p><b>1b.</b> headlights and sidelights;</p> <p><b>1c.</b> bumper cover;</p>		<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Support for handling the part may be required due to its weight or size (hood, hatch).</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Basic tools.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of excessive effort (heavy items, particularly the doors, the hood and the hatch).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>4.2 Disassemble the Body and its Components.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of dismantling techniques for the car body and its components.</li> <li>Correct and efficient dismantling of the car body and its components.</li> <li>Compliance of recovered parts.</li> </ul>

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4.2 BODY	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.2.1 Car Body</b>   	<p><b>1d.</b> bumper reinforcement;</p> <p><b>1e.</b> fenders and front fender skirts;</p> <p><b>1f.</b> radiator grille, if required;</p> <p><b>1g.</b> dashboard air vents;</p>		

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4.2 BODY	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.2.1 Car Body</b>   	<p><b>1h.</b> windshield wiper motor and linkage (transmission);</p> <p><b>1i.</b> door mirrors;</p> <p><b>1j.</b> doors and, if applicable, ground effects;</p>		

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4.2 BODY	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.2.1 Car Body</b>   	<b>1k.</b> hatch shock absorbers;  <b>1l.</b> hatch or trunk cover;  <b>1m.</b> tail lights;		

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4.2 BODY	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.2.1 Car Body</b> 	<b>1n.</b> trailer hitch, if applicable.		

## 4 - BODY AND PASSENGER COMPARTMENT

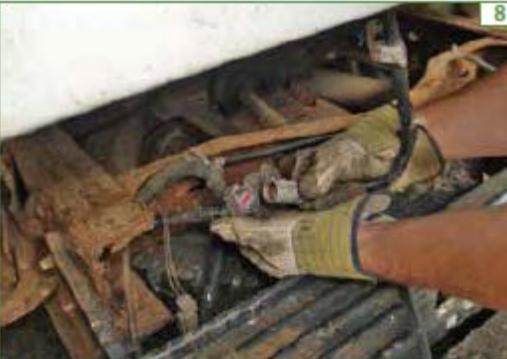
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4.2 BODY	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.2.2 Pickup Truck Cab and Box</b>   	<ol style="list-style-type: none"> <li>1. <b>First:</b> disassemble the passenger compartment, if required.</li> <li>2. Unbolt and unmount the cab.</li>   <li>3. Disconnect or cut the cab wiring and hoses;</li>   <li>4. Remove the bed liner from the box.</li> </ol>	<p><i>See procedure 4.1</i></p> <p><i>French: recouvrement esthétique</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Support for handling the part may be required due to its weight or size.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Forklift or hoist.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of overexertion (heavy items).</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>4.2 Disassemble the Body and its Components.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper implementation of dismantling techniques for the pickup truck cab and box.</li> <li>Correct and efficient dismantling of the pickup truck cab and box.</li> <li>Compliance of recovered parts.</li> </ul>

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4.2 BODY	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.2.2 Pickup Truck Cab and Box</b>   	<p><b>5.</b> Unbolt the fuel filler hose.</p> <p><b>6.</b> Unmount the tailgate.</p> <p><b>7.</b> Unbolt and unmount the box.</p>	<p><i>French: porte</i></p>	

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4.2 BODY	STEPS	DETAILS	ADDITIONAL INFORMATION
<b>4.2.2 Pickup Truck Cab and Box</b>   	<p>8. Disconnect the box wiring, if required.</p> <p>9a. (photos 9a and 9b) Move the cab and box with the lift system.</p>		

4.3 WINDSHIELD, REAR WINDOW, SIDE WINDOWS, SUNROOF	STEPS	DETAILS	ADDITIONAL INFORMATION
   <p><b>1.</b> Remove the fittings.  <b>2.</b> Remove the sunroof gutters.  <b>3.</b> Disconnect or cut the electrical and electronic components of the sunroof (not shown).  <b>4.</b> Disconnect and remove the rearview mirror.</p>			<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Support for handling the part may be required due to its weight or size.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Inductor usage technique.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Inductor.</li> <li>Windshield broach.</li> <li>Tool to remove moldings.</li> <li>Suction cups.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk: awkward position to unmount the part.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>4.3 Remove the windshield and rear window.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Proper verification of the condition of electrical and electronic components.</li> <li>Compliant disconnection of circuits.</li> <li>Correct retrieval of the rearview mirror.</li> <li>Proper implementation of detachment and removal techniques for the windshield and rear window.</li> </ul>

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4.3 WINDSHIELD, REAR WINDOW, SIDE WINDOWS, SUNROOF	STEPS	DETAILS	ADDITIONAL INFORMATION
 5	<p>5. Disconnect windshield and rear window wiring.</p>	<p><i>A support is required to unmount the part.</i></p>	<p><b>MASTERY OF THE COMPETENCE CRITERIA (continued)</b></p> <ul style="list-style-type: none"><li>Correct and efficient dismantling of the various vehicle windows.</li><li>Correct placement of the windshield and rear window on a protective support.</li><li>Compliance of recovered parts</li></ul>
 6	<p>6. Unmount the windshield.</p>		
 7	<p>7. Unmount the rear and side panel windows.</p>		<p>CONTINUED ▼</p>

4.3 WINDSHIELD, REAR WINDOW, SIDE WINDOWS, SUNROOF	STEPS	DETAILS	ADDITIONAL INFORMATION
 8	<p>8. Unbolt the sunroof.</p>		
 9	<p>9. Put each part on a protective support.</p>		

4.4 VEHICLE SECTIONING	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p><b>1.</b> Determine the location and pattern for cutting or, if applicable, unbolting:</p> <p><b>1a.</b> complete front end assembly or in sections;</p> <p><b>1b.</b> roof;</p> <p><b>1c.</b> body posts;</p> <p><b>1d.</b> complete rear or in sections;</p> <p><b>1e.</b> sectioning of pickup truck cab;</p>	<p>If needed, refer to the cutting diagrams presented in the document in Appendix 3.</p> <p><i>E.g. : side rail, tower, radiator brackets, etc.</i></p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>It is particularly important to secure and verify the balance of the vehicle because of the considerable weight changes caused by removal of the part.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Types of alloys and their characteristics (I-CAR training).</li> <li>Blowtorch cutting techniques (oxyacetylene cutting).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Chisels, blowtorch, reciprocating saw.</li> <li>Hoist, axle stands or hydraulic jack.</li> <li>Forklift.</li> <li>Axle stands.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Burn risk. Wear gloves and a face shield.</li> <li>Risk of overexertion (heavy items).</li> <li>Excessive noise. Wear hearing protectors.</li> <li>Risk of parts or vehicle falling. Wear protective footwear.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> <li>Industry standard for the quality of recycled parts (see Appendix 3).</li> </ul>

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4.4 VEHICLE SECTIONING	STEPS	DETAILS	ADDITIONAL INFORMATION
   <p><b>1f.</b> pickup truck box sectioning.</p> <p><b>2.</b> <b>First:</b> ensure the stability and balancing of the part and the vehicle.</p> <p><b>3.</b> Prepare and secure the cutting area.</p> <p><b>4.</b> Set up a receiving bracket under the part, if required.</p>	<p>If needed, refer to the cutting diagram in Appendix 3. E.g.: side rail, tower, radiator brackets, etc.</p> <p><i>See procedure 1.1</i></p> <p>E.g.: Remove the fittings, protect the windshield and rear window and make sure to eliminate the risk of accidents in the cutting area.</p>	<p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>4.4 Section the parts of the vehicle or component.</b></p> <p><b>MASTER OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Appropriate choice of cutting location and pattern.</li> <li>Accurate assessment of the nature and thickness of metal to be cut.</li> <li>Appropriate choice of tools and cutting method.</li> <li>Proper preparation and securing of the cutting area.</li> <li>Proper implementation of metal cutting techniques.</li> <li>Proper and efficient sectioning of the vehicle parts.</li> <li>Proper securing of cut edges.</li> </ul>	<p>CONTINUED ▼</p>

4.4 VEHICLE SECTIONING	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p>5. Choose the cutting tool and method.</p> <p>6. Unbolt the or cut the part.</p> <p>7. Secure cut edges with tape.</p> <p>8. Move the part with the lift system, if required.</p>	<p><i>The choice is made depending on the nature and thickness of the metal.</i></p> <p><i>E.g.: using the reciprocating or circular saw, or with a plasma cutter.</i></p>	

## **5. FINAL PREPARATION of PARTS**



5.1 QUALITY CONTROL	STEPS	DETAILS	ADDITIONAL INFORMATION
 	<p><b>1.</b> Do a visual inspection of the part.</p> <p><b>2.</b> Test the functioning of the part, if applicable.</p>	<p>If needed, refer to the checklist in Appendix 4: Visual Inspection of Parts.</p> <p>E.g.: Alternator, starter.</p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>Quality control can be done before, during or after dismantling.</li> <li>It is preferable to check electrical components before dismantling.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Damage assessment technique (e.g.: ARPAC training).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Quick charger (Booster pack).</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>Part manuals and software.</li> <li>Checklist: Visual Inspection of Parts (Appendix 4).</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>5.1 Check the State and Quality of Recovered Parts.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Accurate assessment of the quality of the part.</li> <li>Correct implementation of the mechanical, electrical or electronic test procedures for the part.</li> <li>Compliance of the parts or components.</li> </ul>

## 5 - FINAL PREPARATION OF PARTS

ARPAC - Vehicle Dismantling Procedures

5.2 PREPARATION OF PARTS	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p><b>1.</b> Remove the cables, pipes and components.</p> <p><b>2.</b> Block the openings.</p> <p><b>3.</b> Clean the parts.</p>	<p><b>GENERAL REMARKS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>Basic knowledge.</li> <li>WHMIS (Workplace Hazardous Materials Information System).</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>Pressure washer.</li> <li>Engine degreaser (biodegradable).</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>Risk of paint projection. Wear gloves and glasses.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>5.2 Prepare the Parts to make them Marketable.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>Appropriate choice of removing unnecessary elements of the part.</li> <li>Proper dismantling of unnecessary elements.</li> <li>Proper plugging of openings.</li> <li>Clean and appealing presentation of the part.</li> <li>Correct implementation of cleaning techniques.</li> <li>Compliance of the parts or components.</li> </ul>	<p>CONTINUED ▼</p>

5.2 PREPARATION OF PARTS	STEPS	DETAILS	ADDITIONAL INFORMATION
	<b>4.</b> Paint the parts.		

5.3 LABELING AND STORAGE	STEPS	DETAILS	ADDITIONAL INFORMATION
 	<p><b>1.</b> Verify and correct the part number (casting number) in the file, if necessary.</p> <p><b>2.</b> Measure and record the dimensions of the part, if applicable.</p>	<i>E.g. : Ford Ranger brakes</i>	<b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b> <ul style="list-style-type: none"> <li>Part classification and storage system.</li> </ul> <b>SPECIFIC TOOLS</b> <ul style="list-style-type: none"> <li>Labels.</li> <li>Barcode reader.</li> </ul> <b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b> <ul style="list-style-type: none"> <li>None.</li> </ul> <b>HEALTH AND SAFETY AT WORK</b> <ul style="list-style-type: none"> <li>Risk of overexertion (heavy items).</li> </ul> <b>REFERENCES</b> <ul style="list-style-type: none"> <li>Part manuals and software.</li> </ul> <b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b> <p><b>5.3 Label the Parts.</b></p> <p><b>5.4 Store the Parts.</b></p>
	<p><b>3.</b> Record the file number on the part.</p>		<b>MASTERY OF THE COMPETENCE CRITERIA</b> <ul style="list-style-type: none"> <li>Recording the identification number in the right location on the part.</li> <li>Correct and readable identification of parts.</li> <li>Proper application of the label to the part.</li> <li>Storage of parts in suitable places or containers.</li> <li>Proper installation and securing of parts on a bracket or in a container.</li> <li>Correct usage of the part classification and storage system.</li> </ul>

CONTINUED ▼

5.3 LABELING AND STORAGE	STEPS	DETAILS	ADDITIONAL INFORMATION
 	<p><b>4.</b> Affix the label on the part.</p> <p><b>5.</b> Record the location of the part when it was on the vehicle.</p> <p><b>6.</b> Store the parts in suitable locations or containers.</p>	<p><i>E.g.: left front suspension, right rear suspension, etc.</i></p> <p><i>E.g. : Ford Ranger brakes</i></p>	
			100

5.4 CLOSING THE FILE	STEPS	DETAILS	ADDITIONAL INFORMATION
  	<p><b>1.</b> Secure the remaining unstable parts for the transportation of the frame.</p> <p><b>2.</b> Note in the file:</p> <ul style="list-style-type: none"> <li>- the rejection of parts;</li> <li>- potentially marketable parts on the frame.</li> </ul> <p><b>3.</b> Send the frame to storage or for compacting.</p>	<p><i>They can be attached, or disassembled and put in the trunk or passenger compartment.</i></p>	<p><b>SPECIFIC KNOWLEDGE AND TECHNIQUES TO MASTER</b></p> <ul style="list-style-type: none"> <li>• Part classification and storage system.</li> <li>• Using the computer system.</li> </ul> <p><b>SPECIFIC TOOLS</b></p> <ul style="list-style-type: none"> <li>• Computer system.</li> </ul> <p><b>LEGAL OR ENVIRONMENTAL REQUIREMENTS</b></p> <ul style="list-style-type: none"> <li>• None.</li> </ul> <p><b>HEALTH AND SAFETY AT WORK</b></p> <ul style="list-style-type: none"> <li>• Cut or jamming risk.</li> </ul> <p><b>REFERENCES</b></p> <ul style="list-style-type: none"> <li>• Part manuals and software.</li> </ul> <p><b>CORRESPONDENCE WITH THE PROFESSIONAL STANDARD</b></p> <p><b>5.4 Close the Vehicle Dismantling File.</b></p> <p><b>MASTERY OF THE COMPETENCE CRITERIA</b></p> <ul style="list-style-type: none"> <li>• Accurate recording of information in the records and on forms.</li> <li>• Systematic inspection of the remaining frame.</li> <li>• Judicious identification of potentially marketable parts on the frame.</li> <li>• Proper securing of unstable parts.</li> <li>• Correct implementation of the removal procedure of the remaining frame.</li> </ul>

**HEALTH AND SAFETY AT WORK****Auto-prévention**

([www.autoprevention.org](http://www.autoprevention.org) 1 (800) 363-2344)

The organization offers free training, information and technical assistance on health and safety at work for the automotive services sector.

**Commission de la Santé et de la Sécurité du Travail (Occupational Health and Safety Commission). WHMIS - Workplace Hazardous Materials Information System - A passport to health and safety.** (<http://www.csst.qc.ca>)

Once on the page, click the link to download the document.

**HALOCARBONS (REFRIGERANT GASES)**

Official Publisher of Quebec. *Halocarbon Regulations*.

Just click on the link or enter the document name in a search engine to download.

**AIRBAGS AND OTHER SRSs**

**ARPAC provides disassemblers specialized training on SRS removal and deployment.**

[www.arpac.org](http://www.arpac.org). 1 (855) 504-8315

Course title: *Airbags. Recycling procedures Course for recyclers*.

**Natural Resources Canada. Airbag deployment procedure. 2002.** (Presented as an Appendix).

**MERCURY-CONTAINING COMPONENTS:**

**Switch Out:** <http://www.switchout.ca> (or [www.elimimercure.ca](http://www.elimimercure.ca))

Switch Out is a national program to remove, collect and manage mercury-containing vehicle components.

On the "Educational Materials" page on the site, the following technical documents and videos (downloadable) are available to dismantlers under the "Switch Out Resources" link:

[\*\*Switch and sensor module removal guide\*\*](#)

[\*\*List of vehicles that may contain mercury convenience lighting switches\*\*](#)

[\*\*List of vehicles with mercury-containing ABS sensor modules\*\*](#)

[\*\*Removal instructions for mercury convenience light switches\*\*](#)

[\*\*Removal instructions for mercury-containing ABS G-Force sensor modules\*\*](#)

[\*\*Examples of what to include in Switch Out collection containers\*\*](#)

[\*\*Switch Out mercury clean up instructions\*\*](#)

[\*\*Switch removal quick reference \(poster\) \(see Appendix\)\*\*](#)

[\*\*Switch removal demonstrations \(in English\) - Video page of the site\*\*](#)

**SECTION CUTTING**

ARPAC.COMM. • *Industry standards for the quality of recycled automobile parts*. October 2003. 18 pages. (Presented as an Appendix).

**REFERENCE DOCUMENT FOR DAMAGE LOCATION.**

ARA [Automobile Recycling Association]:

[http://arav3.timberlakepublishing.com//Files/DamageLocator\\_Final\\_\(1\).jpg](http://arav3.timberlakepublishing.com//Files/DamageLocator_Final_(1).jpg)

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## **APPENDIX 1**

# **arpac**

**SWITCH REMOVAL QUICK REFERENCE**

# Switch Removal Quick Reference



## Convenience Light Switches containing Mercury

**Find the Switches Here**

**Typical Light Switch**

**Simple Steps for Removal**

- 1 Disconnect the battery.
- 2 Locate the lighting apparatus.
- 3 Cut the feed wire to this apparatus.
- 4 Unscrew and remove the entire lighting apparatus from the vehicle.
- 5 Open the lighting apparatus to expose the mercury-containing switch capsule.
- 6 Remove the capsule of the mercury-containing switch and put it in the Switch Out collection container.

**Makes and Models Containing Convenience Light Switches**

**UNDER THE HOOD OR IN THE TRUNK**

Audi 100	1977–1988	Audi 100/Avant
Audi 200	1980–1988	Audi V8
Chrysler	1998 (and prior years)	Audi 200
Ford	2001 (and prior years)	Audi Coupe Quattro
General Motors	2002 (and prior years)	Audi 80/90
Mazda Navajo	1993–1997	Dodge Stealth 4WD
Mazda B-Series Pickup	1995–1999	Eagle Z200 GTX AWD
Porsche	1976–1991	Jeep Cherokee
Volvo	1991 (and prior years)	Jeep Grand Cherokee

**AT THE SUN VISOR VANITY MIRROR**

Volvo	1991 (and prior years)	Jeep YJ
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## ABS G-Force Sensor Modules containing Mercury

**Find the Modules Here**

The mercury-containing switch capsules are located Inside the sensor housing

- A. Under the front wheel well
- B. On the drive shaft
- C. On the left frame rail below the driver
- D. Below the rear seat on the floor pan

**Makes and Models Containing ABS G-Force Modules**

Audi	1987–1993	Audi 100/Avant
	1989–1995	Audi V8
	1987–1991	Audi 200
	1987–1992	Audi Coupe Quattro
	1987–1992	Audi 80/90
Chrysler	1992–1996	Dodge Stealth 4WD
	1992	Eagle Z200 GTX AWD
	1992–2001	Jeep Cherokee
	1993–2001	Jeep Grand Cherokee
	1992–1995	Jeep YJ
	1997–2003	Jeep TJ
Ford	1993–1997	Ford Bronco
	1993–2002	Ford Explorer
	1995–2001	Ford Ranger 4x4
	1997–2002	Mercury Mountaineer AWD
Mazda	1993–2002	Mazda Navajo
	1995–2001	4x4 B-Series Pick-up
Nissan	1996	Pathfinder 4x4
Subaru	1990–1995	Legacy AWD with 5MT
	1993–1996	Impreza AWD with 5MT

**Simple Steps for Removal**

- 1 Disconnect the battery.
- 2 Locate the ABS G-Force sensor in the vehicle. The ABS G-Force modules can be located in various places.
- 3 Remove the ABS G-Force sensor and put the entire thing into the Switch Out collection container.

**NOTE:** the ABS G-Force sensor module contains two or three mercury-containing capsules that are fitted into the housing. Do not try to remove the sensor module's mercury-containing capsules.

## **APPENDIX 2**

**arpac**

**RECORD OF RECOVERY, MAINTENANCE AND DISMANTLING WORK**

Québec  Record of Recovery, Maintenance and Dismantling Work  
Hydrocarbon Regulations (Art. 59)

Vehicle or Transportation Refrigeration Air Conditioning Unit

1. Identification			
PARTICIPANT NAME:			
EMPLOYER NAME:			
ENVIRONMENTAL QUALIFICATION CERTIFICATE NUMBER:			
ADDRESS:			
CITY:			
POSTAL CODE:	PHONE:		
EMAIL:			
2. Type of Unit (check the applicable box)			
A	AIR CONDITIONING UNIT OF A VEHICLLE:	<input type="checkbox"/> AUTOMOBILE <input type="checkbox"/> UTILITY VEHICLE	<input type="checkbox"/> AGRICULTURAL MACHINERY
	VEHICLE REGISTRATION NUMBER:		
B	TRANSPORTATION REFRIGERATION UNIT:	<input type="checkbox"/>	
	UNIT SERIAL NUMBER (IF APPLICABLE):		
3. Hydrocarbon Recovery <sup>1</sup> (if applicable)			
A	RECOVERY CONTAINER <sup>2</sup> LEAK TEST RESULTS	<input type="checkbox"/> PASSED	<input type="checkbox"/> FAILED
	HYDROCARBON RECOVERY (ALL TYPES OF CFCs, HALONS, HCFCs, HFCs, PFCs AND REFRIGERANTS SOLD UNDER TRADEMARK EXAMPLES: CFC-12, HFC-134a, MP-39, ETC...)	TYPE:	
B	QUANTITY:	<input type="checkbox"/>	KG
4. Nature of Work on the Unit			
A	CHECK THE APPLICABLE BOXES:	<input type="checkbox"/> CONVERSION <input type="checkbox"/> MAINTENANCE	<input type="checkbox"/> DISMANTLING <input type="checkbox"/> REPAIR
	LEAK TEST RESULTS:	<input type="checkbox"/> REFILLING <sup>2</sup>	<input type="checkbox"/> NOT APPLICABLE
B	<input type="checkbox"/> PASSED	<input type="checkbox"/> FAILED	<input type="checkbox"/> NOT APPLICABLE
	HYDROCARBONS ADDED <sup>1</sup> :	TYPE:	
C	QUANTITY:	<input type="checkbox"/>	KG

<sup>1</sup>ACCORDING TO SAE J2209 (1999) OR THE EQUIVALENT, FOR CFC-12; ACCORDING TO

SAE J2210 (1999) OR THE EQUIVALENT, FOR HFC-134a.

<sup>2</sup>IT IS OBLIGATORY TO PERFORM A LEAK TEST BEFORE REFILLING. (ART. 9)

WARNING: A CONTAINER, OR A REFRIGERATION OR AIR CONDITIONING UNIT MAY ONLY BE REFILLED IF THE LEAK TEST IS SUCCESSFUL. (ART. 8)

<sup>3</sup>FILLING A VEHICLE AIR CONDITIONING UNIT OR TRANSPORTATION REFRIGERATION UNIT WITH CFCs IS PROHIBITED. (ART. 30)

I certify that the information provided in this report is accurate:	
Name of authorized individual (please print):	
Signature of authorized individual:	
	Date
	2014-09-05

This record must be kept for 3 years from the date of the last entry. (Art. 60)

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## **APPENDIX 3**



**arpac**

**INDUSTRY STANDARDS FOR THE QUALITY OF RECYCLED  
AUTOMOBILE PARTS**

# I ndustry Standards for the Quality of Recycled Auto Parts

Document developed by

ARPAC.COMM.inc using the ARA collision industry standards  
schedule

Revised -- October 2003

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## Appendices

## 1. Introduction

Please find attached the most recent version of the collision industry standards for assembly components, the description of parts, and the description and location of damage.

This document was produced by the computer communication committee of the Association of Auto Part Recyclers (ARPAC, *Association des Recycleurs de Pièces d'Autos et de Camions*) using the national standards provided by the ARA Interchange Committee in September 1999.

These documents are designed to be scalable and all participants will be able to help by continuously adding to and improving them. We also expect that all changes will remain consistent with the content of the first version of the standards.

In order to make this system an effective communication tool, recyclers must refer to it in a systematic way and make improvements according to good practice in order to perfect the quality of exchanges with insurers and repairers.

## 2. Business Operating Standards

### Damage Codes:

B = BURN  
C = CREASE/DEEP SCRATCH OR GRATED  
D = DENT/BUMP  
E = BENT/KINK  
H = HAIL  
J = RIP OR CRACK/TORN, BROKEN  
K = BUCKLE/DISTORTED, STRETCHED, WAVY  
L = LIP/BENT ON THE PART EDGE  
N = RISK OF PERFORATION, PERFORATION  
P = PARKING LOT DING/SMALL BUMPS  
PL= PLASTIFIED  
R = RUST ON SURFACE  
S = SCRATCH ON SURFACE  
T = PAINT PROBLEM/CHIPPED

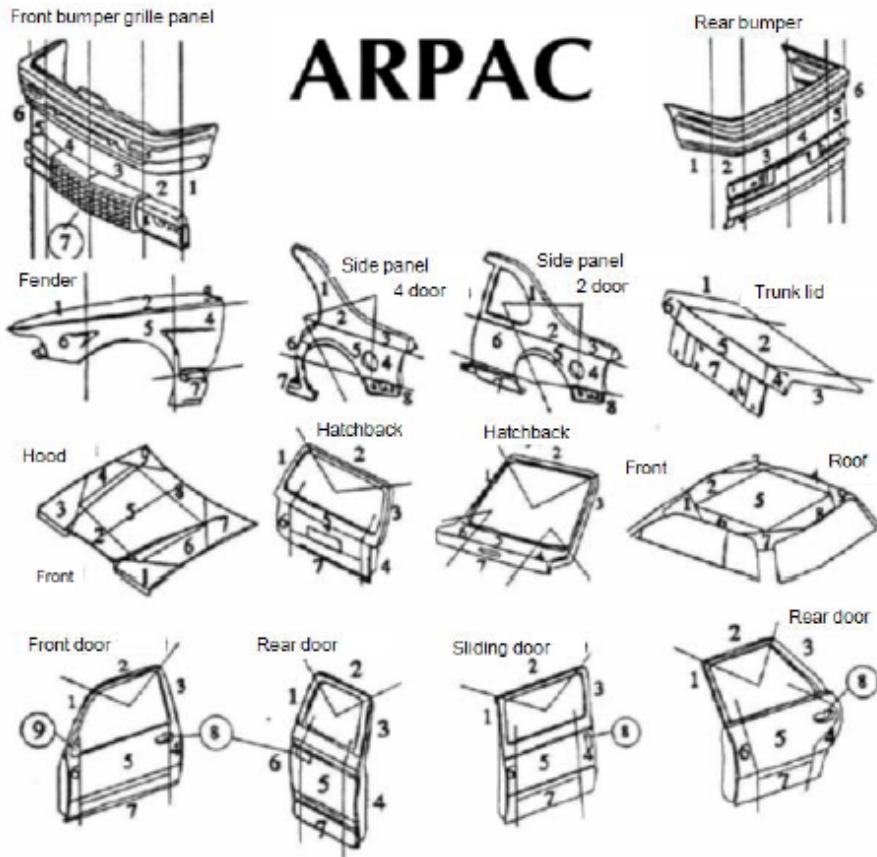
It is recommended to have:

- a chart of damage positioning;
- a display of inventory by quality code;
- an indication of whether or not a part has been transmitted over the network.

The glass color codes should be used by the recycler as well as the insurer.

Attached is a list of suggested abbreviations that can be recorded in notes for some parts in order to expedite the work of the officer in charge of identification at the recycler.

It should be noted that this information will not be sent over the network.

**Read:**

From front to back, top to bottom, left to right (as viewed from the driver seat), in an "S" pattern, with locations for handles (8) and door mirrors (9).

For bumper and front grille panels, use locations 1 and 6 only when the model is molded and continues along the body.

### 3. Quality Standards

Quality codes A to E as well as R and P are used to give a general idea of the required part.

For mechanical parts, the quality will be based on mileage and the proposed chart is as follows:

A	=	0 to 40 000 km
B	=	40 001 to 80 000 km
C	=	80 001 to 120 000 km
D	=	120 001 to 160 000 km
E	=	160 001 and + (engine to be sold without warranty)
P	=	for parts
R	=	repaired or rebuilt

For bodywork parts, the quality will be based on the number of repair hours required to bring the part to B quality.

A	=	like new
B	=	good part
C	=	up to 2 hours of repair work
D	=	between 2 and 4 hours of repair work
E	=	salvageable but more than 4 hours
P	=	for parts
R	=	repaired or rebuilt

## 4. Assembly Standards

The document produced by the ARA in September 1999 was used as a reference tool for the development of assembly standards. All assembly related to the body was analyzed and the majority of it was in accordance with our vision, except for the following:

- radiator, condenser and “fan” assembly are not part of the front assembly;
- the central rear panels do not form part of a bag panel;
- the wiper motors are not part of the hatchbacks of vehicles;
- the air filter housing is not part of the front;
- windshield washer tank and refrigerant are components of the front;
- the hinges and the retaining mechanism are not part of the hood assembly;
- the rear fender includes only the door for gasoline and wheel wells, interior, exterior and 6 inches of floor;
- front grille panel would not be considered an assembly;
- the front fender does not include molding and corner light;
- door hinges are not part of the assembly of the door except the hinge half if the latter is welded to the door.

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## Collision Industry Standards for Assembly Components

Updated and approved

30/05/2000

- Note that the terms used above require adaptation to technical language

<b>Assembly</b>	<b>Components Included</b>	<b>Not included, but may be offered</b>	<b>Reason</b>
<b>1. Front section</b>	Full body of the vehicle Front bumper assembly (see Articles 2 and 3), right and left fenders (Article 7), hood (Article 6), front grille panel (Article 4), grille, front firewall, radiator support, bolts.	Frame rails, side rail extensions, undercarriage, floor crossmembers, suspension components, mouldings <sup>1</sup> , ornaments, interior structure bolted parts, antenna and equipment bolted at the fender skirts, including the engine fan assembly, the radiator, the condenser, the fan and the air filter.	Mouldings are not included because the information held is insufficient to enable automatic selection of appropriate parts <sup>1</sup> . Antennas are not included for the same reason <sup>2</sup> .
<b>Complete cross-section<sub>4</sub></b>	Unibody vehicle i. Including the cowl: add all interior sheets of metal including skirts/side rails with machined joints.		
<b>Partial cross-section<sub>4</sub></b>	ii. Excluding the cowl: cut anywhere before the firewall	Unibody parts do not include the rear part of the components	
<b>2. Front or rear steel bumper</b>	2. Bumper guards, pads, reinforcements, shock absorbers, mounting brackets, headlights (if they are mounted on the bumper) bumper cover ends, face bars (if they are mounted on the bumper).	The fender skirt and the deflector are not included unless they form part of the bumper.	
<b>3. Rubber fairing</b>	3. Envelope, damping pads, reinforcements, headlights (if they are mounted on the fairing), face bars (if they are mounted on the fairing), retainers.		
<b>4. Grille panel</b>		Grille, headlights, headlight rings (if they are mounted on the grille) and mounting brackets. Core support, moulding <sup>1</sup> (emblem and ornament)	
<b>5. Grille</b>	Mounting brackets, headlights/face bars (if they are mounted on the grille).		
<b>6. Hood panel</b>	Insulators, brackets, hinges if they are connected to the hood during removal.	Accessories: latches and hooks mounted on the grille panel or core support, mouldings <sup>1</sup> , emblems and ornaments.	
<b>7. Left or right fender</b>	Single fender (does not include molding and/or corner light).	Full frame: mouldings <sup>1</sup> , extensions that are part of the grille panel or headlight and antenna.	Extensions are part of the grille panel and the headlight assembly is not included with the fender <sup>4</sup> .

Assembly	Components Included	Not included, but may be offered	Reason
		Unibody frame: interior metal sheets, mouldings <sup>1</sup> , extensions that are part of the grille panel or headlights and antenna.	The information held on the antenna is not sufficient to automatically select the room adequate <sup>2</sup> .
<b>8. Left, right or rear door, sliding door, cargo and rear</b>	Optionally chosen glass <sup>1</sup> , door seals, window winder, power window motor (if automated), lock hardware (if automated), external handle, lower part of the hinges welded to the door.	Mouldings <sup>1</sup> , mount-welded hinges, mount seals, lock cylinder, inside lining panel, mounting block bolt, mirror, wiring harness and auto harness.	Information held on the mirror is insufficient to appropriately include the part. <sup>2</sup> The auto harness in the door is not included because it is part of the internal lining with color and option variations. <sup>3</sup>
<b>9. Trunk lid</b>	Sealing gaskets mounted on the lid, bolts mounted on the lid, lock, lower part of the hinges if welded to the lid, headlights or reflectors if mounted on the lid, defogger (if chosen as an option), windshield wiper or wiper motor (if chosen as an option).	Mouldings <sup>1</sup> , face bars, lock cylinder, interior and exterior lining panels, bolts/rear body panel locks, wiring harness, deflectors, luggage rack and spare tire carrier.	The spare tire carrier is a separate part. <sup>4</sup> Variations in body option codes does not allow providing the appropriate deflectors and luggage rack. <sup>3</sup>
<b>10. Hatch</b>	Optionally-chosen glass <sup>1</sup> , defogger (if chosen as an option), glass sealing gasket, sealing gaskets mounted on the hatch, hatch-mounted locks, locks, lights and reflectors mounted on the hatch, license plate holder and lower part of the hatch hinges if welded.	Mouldings <sup>1</sup> , face bars, lock cylinder, interior trim panels, bolts/locks mounted on the rear bodywork, deflectors, luggage rack and spare tire carrier, windshield wiper/motor.	The spare tire carrier is a separate part. Variations in body option codes does not allow providing the appropriate deflectors and luggage rack. <sup>3</sup>
<b>11. Roof</b>	Opening roof panel, motor or glass <sup>1</sup> with sealing gaskets, roof rails and pavilion mount supports.	Water stream gutter, pavilion, auto harness, rear glass, windshield, sunroof, vinyl cover, luggage rack.	Sunroofs are a separate part. Information held on vinyl covering is insufficient to supply the right parts. <sup>2</sup>
<b>12. Left or right side panel (section)</b>	Full frame: any metal sheet extensions, gas tank door, rear foot, fender or face bars if they are connected and headlights and fender gaskets.	Mouldings <sup>1</sup> , interior lining, car harness, fuel tank or fuel tank neck and any lights towards the rear.	Lights towards the rear are separate parts. <sup>4</sup>
<b>13. Short body rear assembly</b>		Gas tank, gallery, spare tire holder, rear suspension, air, glass, seats, interior lining, auto harness, moldings, deflectors, luggage rack and section of frame of a unibody frame vehicle.	In a full frame vehicle, frame rails are not included.
<b>14. Long body and</b>	Two side panels, roof, rear	Gas tank, gallery, spare	In unibody frame

Assembly	Components Included	Not included, but may be offered	Reason
<b>roof rear assembly</b>	panel of the body, internal structure to the floor, trunk, headlights, reflectors, bumper, glass (as optionally-selected).	tire carrier, rear suspension, antenna, seats, interior lining, seat belts, moldings and deflectors. <sup>1</sup>	vehicles, frame rails are not included. “Optionally-chosen glass” means that the windows are supplied as they were originally in the manufacture of the vehicle, and the type of glass must be verified before delivery. <sup>1</sup>
<b>15. Cabin attachment, for regular and extended crew cab</b>	Two corners of the rear cabin, roof and rear panel of the cab, lights, reflectors and glass (as optionally chosen <sup>1</sup> )	Seats, interior coverings, pavilion covering, moldings, seat belts and deflectors.	“Optionally-chosen glass” means that the windows are supplied as they were originally in the manufacture of the vehicle, and the type of glass must be verified before delivery. <sup>1</sup>
<b>16. Truck body assembly</b>	Right and left body (see Article 16), front panel, tailgate (see Article 10), headlight gaskets, floor, right and left cowl foot panel and tank access flap.	Mouldings <sup>1</sup> , frame rails, gas tank, fuel tank neck and cap and rear suspension components.	
<b>17. Right or left body panel</b>	Internal and external sheets of metal, extensions and attached side lights.	Mouldings <sup>1</sup> , mudguards, fuel tank neck and cap and lights towards the rear.	The lights towards the rear are separate parts. <sup>4</sup>

1. *As optionally chosen means that the part will be shipped with the original vehicle options. If the vehicle on which the part is to be installed includes different options, the party must take responsibility before making changes.*

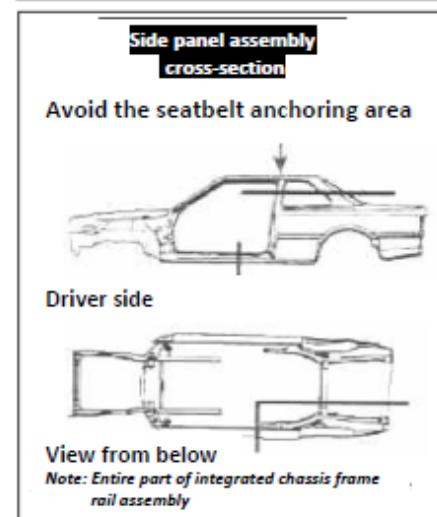
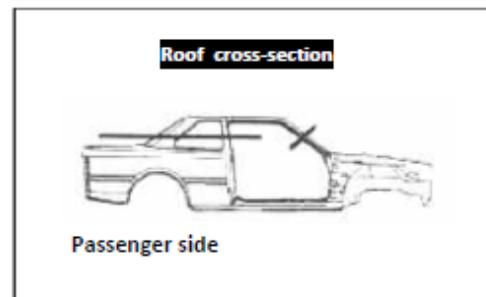
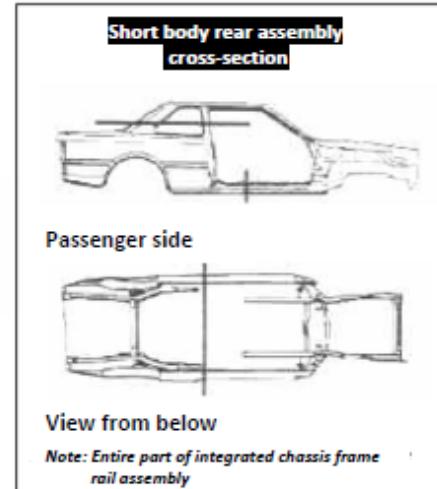
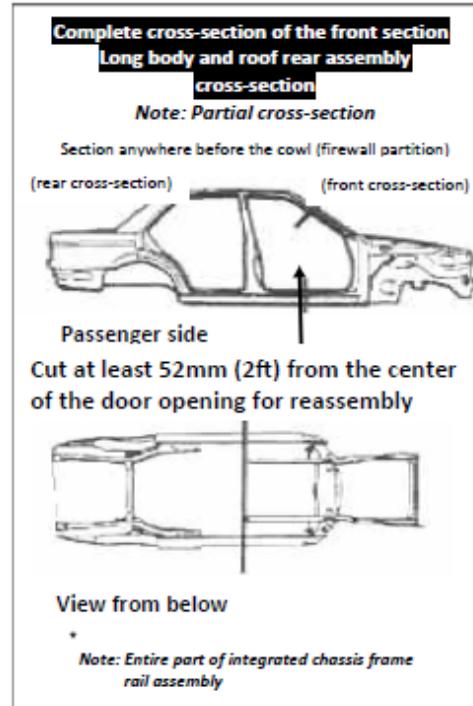
2. *For many types of parts, the options installed on a particular vehicle may be difficult to determine. Manufacturers commonly install parts with important variations without recording the changes. In the case of molding, it is not uncommon to find variations in a single production lot. Recyclers may be able to find the part that corresponds closely to that which is required. For a recycler to be able to provide this service, a detailed description of the part requested is required. The recycler can only ensure that the main assemblies match and work without other information.*

3. *The automatic selection of many optional parts is not possible given the limited information which is currently provided by automated systems. Work is underway to increase the flexibility of the systems currently used. Those who are doing the work are responsible for making information available to the automotive recycler until the improvements have been made.*

4. *Some parts, although they may be attached to the parts in question, are sold separately. Several conditions warrant this. Some parts subject to excessive demand separately, would increase the cost of the main part beyond the price established in the market if they were attached. Other parts would affect the value of an item if they were sold with the main part. Finally, in the case of certain parts, if they were attached to the main part, the many options involved in their manufacture would reduce the usefulness of the main part.*

## 5. Cross-section Standards

The sectioning methods presented below and used for many years in the industry have been validated by ARPAC.



It has been recommended to use the document produced for the ARA but made French. These sectioning methods are what we have used in the industry a very long time. This document must be provided to the insurer.

## 6. Damage Evaluation Standards (project)

A development project for a training program is expected to ensure good understanding of all standards by the various stakeholders.

## 7. Packaging and Shipping Standards

Possibly working with some carriers to train our recyclers so that their shipping departments become more efficient in how to pack a part, such that it retains its original quality, has been mentioned.

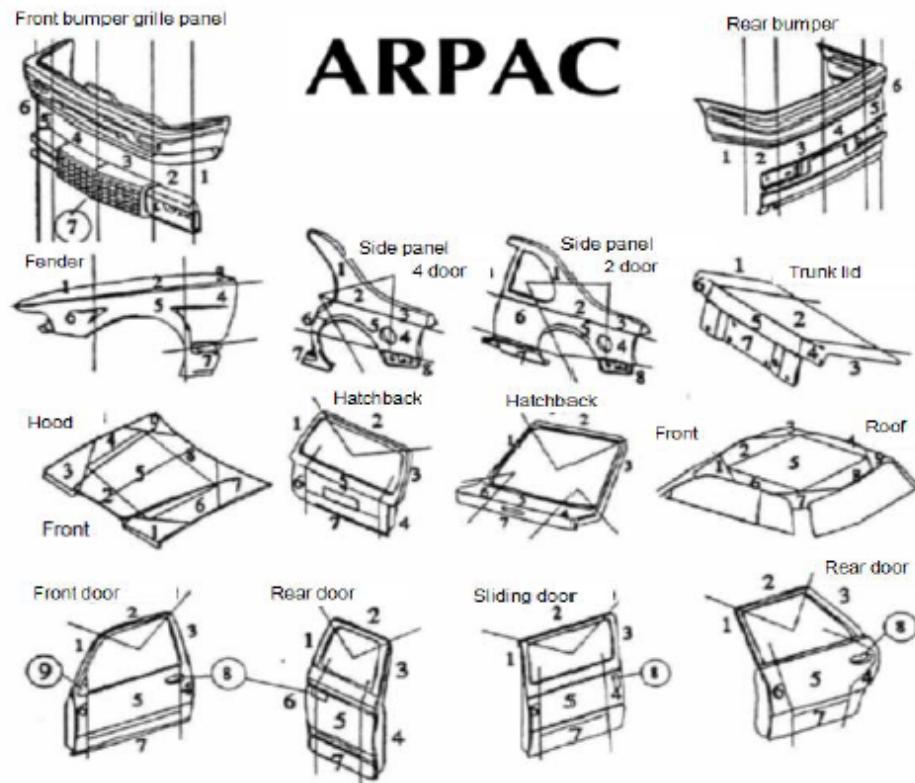
It has been said that it is the responsibility of the person receiving the part to produce a report for the transporter of the damage observed if the part is received in a state other than that in which it was expected.

A check sheet for evaluating the quality of the part, as presented on the next page, must accompany the consignment and be inserted into the packing pocket.

# Industry Standards

## Usage Form

Invoice number:	Part:
Part condition:	
Remarks:	
Shipper signature:	
Customer signature:	
Compliant:	Yes <input type="checkbox"/> No <input type="checkbox"/>
Transporter signature:	



## Appendices

## Windshield

The description of the windshield is indicated in a field with six spaces. The first two areas indicate tint, the color of the tint and the color of the glass. The following two spaces indicate whether or not there is an antenna and the last two spaces indicate whether the windshield is heated or not.

### Antenna Codes

WA = with antenna	WH = with heat
NA = no antenna	NH = no heat

*Example:* YT, WA, NH in the field description of a windscreens indicates that the glass is colored gray, the windshield is provided with an antenna and it is not heated.

## Radiators

Each radiator inventory will have two codes each composed of two letters. It will distinguish the transmissions according to their cooling mode, if they are automatic or manual and if the radiator has an engine oil cooler...

MT = manual transmission	EC = engine oil cooler
AT = automatic transmission	NC = no engine oil cooler

*Example:* AT, NC in the field description of a radiator indicates that the transmission is automatic and there is no engine oil cooler.

## Transmissions

Each transmission inventory will have two codes each composed of two letters. This allows distinguishing the transmissions according to cooling mode, and if they are automatic or manual.

MT = manual transmission	EC = engine oil cooler
AT = automatic transmission	NC = no engine oil cooler

*Example:* AT, NC in the field description of a radiator indicates that the transmission is automatic and there is no engine oil cooler.

## Doors

The field assigned to doors contains four codes indicated in 12 spaces. The first code indicates the type of window regulator, the second code indicates the glass color, the following code shows the type of lock and the final code describes the type of mirror, if included.

### Window Regulator Codes

P	= power windows
M	= manual windows

### Glass Color Codes

Use the manufacturer's codes marked on the glass.

E.g.: M75

## Bumpers

Two codes are attributed to bumpers. The first indicates the type of bumper and the last indicates the set of pads and guards. Note that the painted types include plastic bumpers.

Codes	
C	= chrome
P	= paint

### Bumper Pad and Guard Codes

PD	= pad	GD	= guard
PG	= pads and guards	PL	= plain
EC	= with bumper end cover		

*Example:* C, PG in the field description of a bumper indicates a chrome bumper with pads and guards.

## Upper Hatch

The upper hatch is a rear door that opens upwardly and whose hinge is in the upper part, compared to a lower hatch which opens at the bottom and whose hinge is located in the lower part or on the side. Three codes describe these parts; the first indicates the color of the glass, the second indicates whether the glass is equipped with a wiper and the last code indicates whether the glass is heated.

### Glass Color Codes

The glass color codes for upper hatches are exactly the same as those used for windshields.

### Wiper Codes

WW	=	with wiper
NW	=	no wiper

### Heating Codes

WH	=	with heating
NH	=	no heating

*Example:* CL, NW and NH in the description field for an upper hatch indicates clear glass without wiper and without heating

## Lower Hatch

The opening of the lower hatch is at the bottom or on the side and the hinge is therefore at the bottom or on the side compared to the upper tailgate that opens upward. As for the upper hatch, three codes are used to describe the lower hatch.

### Glass Color Codes

The color codes of the glass for lower hatches are exactly the same as those used for the windshield.

Window Regulator Codes

P	= power windows
M	= manual windows

Heating Codes

WH	= with heating
NH	= no heating

*Example:* P, YT and NH in the code field for the description of the lower hatch indicate that the window regulator is electric, the glass is colored gray and not heated.

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## **APPENDIX 4**



**arpac**

### **VISUAL INSPECTION OF MECHANICAL PARTS**

## LIST OF PARTS (REFERENCE THE FOLLOWING TABLE)

**English** (in alphabetic order)

ABS (electronic control unit)	38	Ignition coil	37
ABS electronic control unit	38	Leaf spring	9
ABS module	38	Mag wheel	2
Air filter box	36	Manifold	11
Alloy wheel	2	Multi-leaf spring	9
Alternator	18	Pickup truck cab and box	58
Axle shaft	16	Power steering pump	21
Axle shaft	16	Power steering pump	21
Blinker	46	Radiator	25
Blower motor	35	Radiator grille	45
Bumper	43	Radiator grille panel	48
Bumpers	43	Rear hatch	52
Catalytic converter	31	Rear section of the vehicle	57
Catalytic converter	31	Rear side panel	53
Chassis frame crossmember	10	Rear window	55
Compressor (air conditioner)	20	Rearview mirror	40
Condenser (air conditioning)	26	Roof	50
Crossmember	10	Side panel	53
Differential	17	Starter	19
Door	39	Steering box	23
Door	39	Steering column	24
Door glass	42	Steering rack and pinion	22
Door window	42	Strut	6
Door window or glass	42	Strut	6
Driveshaft	7	Sunroof	51
Engine	13	Suspension arms (lower or upper)	8
Engine oil pan	12	Suspension arms (Upper and lower control arm)	8
Exhaust hosepipe	32	Tail lights	46
Fan (for engine, radiator and condenser)	27	Tank filler pipe	30
Fender	49	Tire	4
Fender liner	49	Transfer case	15
Fender skirt	49	Transmission	14
Filler hose	30	Turn signal light	46
Filler neck	30	Universal joint (axle shaft)	16
Fog lights	46	Vehicle front end assembly	56
Front section of the vehicle	56	Vehicle rear end assembly	57
Fuel indicator	29	Wheel bearing	5
Fuel tank	28	Wheel rim	1
Gas gauge	29	Window regulator	41
Hatch	52	Window regulator	41
Headlights	46	Windshield	54
Heater motor	35	Windshield	54
Hood	44	Windshield wiper linkage	34
Hub bearing	5	Windshield wiper motor	33
Hub cap	3		

## VISUAL INSPECTION OF MECHANICAL PARTS

No.	PART NAME	VISUAL INSPECTION
1	<i>Wheel rim</i> <i>Rim</i>	<ul style="list-style-type: none"> <li>The wheel must not be bumpy or damaged.</li> <li>The lip must not be bent.</li> <li>Heavy rust is unacceptable.</li> <li>The bolt holes must not be deteriorated (damaged).</li> </ul>
2	<i>Alloy wheel</i> <i>Mag wheel</i>	<ul style="list-style-type: none"> <li>The wheel must not be bumpy or abraded.</li> <li>The finish of the wheel must not be in poor condition or chipped.</li> <li>The bolt holes must not be deteriorated (damaged).</li> </ul>
3	<i>Wheel cover</i> <i>Hub cap</i>	<ul style="list-style-type: none"> <li>The hub cap must not be broken or abraded.</li> <li>The hub cap lugs must not be broken.</li> <li>The fasteners or broaches must not be missing.</li> <li>The finish must not be in poor condition or chipped.</li> <li>The finishing or support screw must not be missing.</li> </ul>
4	<i>Tire</i>	<ul style="list-style-type: none"> <li>Tire wear must not exceed 6/32 or the manufacturer's wear mark must not be exposed.</li> <li>The tire must be uniformly worn.</li> <li>The shoulder of the tire on the wheel must not be abraded or cut.</li> <li>The tire must not have cuts or cracks.</li> <li>The tire must not be disintegrating from the inside or have suffered distortion.</li> </ul>
5	<i>Wheel bearing</i> <i>Hub bearing</i>	<ul style="list-style-type: none"> <li>The bearing must not be noisy.</li> <li>The wheel stud must not be missing or broken.</li> <li>The wheel bearing must not be too corroded nor have rust bubbles.</li> <li>The ABS sensor must not be broken or damaged.</li> <li>The threads must not be damaged and the bolt must not be broken inside the part.</li> <li>The location where the ABS sensor sits must not be damaged.</li> </ul>
6	<i>MacPherson strut</i> <i>Strut</i>	<ul style="list-style-type: none"> <li>The strut must not be broken or crooked.</li> <li>The strut must not have rust bubbles.</li> <li>The tower must not be damaged and the bearing must be functional.</li> <li>The spring must not be broken or damaged.</li> <li>The dust cover must not be missing or damaged.</li> <li>The strut must not have leaking oil.</li> <li>The ABS connector, the strut rod or the brake line must not be broken.</li> </ul>

No.	PART NAME	VISUAL INSPECTION
7	<i>Drive shaft</i>	<ul style="list-style-type: none"> <li>The driveshaft must not be broken or crooked.</li> <li>The thread must not be damaged.</li> <li>The bellows must not be defective.</li> <li>The stripes must not be damaged.</li> <li>The lock on the inner yoke must not be missing or broken.</li> <li>The location of the lock must not be broken or damaged.</li> <li>The bearing must be soft and must not hit the yokes.</li> </ul>
8	<i>Arm (lower and upper)</i> <i>Control arm (lower and upper)</i>	<ul style="list-style-type: none"> <li>The control arm must not be broken, crooked or damaged.</li> <li>The control arm must not have rust bubbles.</li> <li>The ball joint or its protector must not be broken or damaged.</li> <li>The inner bushing must be in good condition.</li> <li>The brackets must be intact.</li> </ul>
9	<i>Leaf spring</i>	<ul style="list-style-type: none"> <li>The leaf spring must not be broken or crooked.</li> <li>The bushing must not be damaged.</li> <li>The center brackets and bolt must be in good condition.</li> <li>The leaf springs must be assembled and unseparated.</li> </ul>
10	<i>Chassis frame</i> <i>crossmember</i> <i>Frame Crossmember</i> <i>Crossmember</i>	<ul style="list-style-type: none"> <li>The crossmember must not be crooked, perforated or damaged.</li> <li>The brackets must be in good condition.</li> <li>The control arm holes must not be chipped (damaged).</li> </ul>
11	<i>Exhaust manifold</i> <i>Exhaust headers</i> <i>Manifold (exhaust)</i>	<ul style="list-style-type: none"> <li>The tubing must not be broken or bubbled by overheating or have undergone distortion.</li> <li>The bolt must not be broken in the threads.</li> <li>The threads of the oxygen sensor must be in good condition.</li> </ul>
12	<i>Oil pan</i>	<ul style="list-style-type: none"> <li>The pan must not be bumpy, perforated, broken or rusted.</li> <li>The drainage cap thread must not be damaged.</li> <li>The brackets must be in good condition for aluminum models.</li> </ul>

## VISUAL INSPECTION OF MECHANICAL PARTS

No.	Part Name	Visual Inspection	No.	Part Name	Visual Inspection
13	Engine Motor	<ul style="list-style-type: none"> <li>The engine block and cylinder head must not be broken, damaged, or have a visible oil or antifreeze leak.</li> <li>The oil must not have a burnt smell and must have a good color.</li> <li>The engine must turn easily by hand to verify that it is not seized.</li> <li>The harmonic damper must not be damaged.</li> <li>Expansion plugs (frost plugs) must be in place.</li> <li>The timing belt must not be damaged.</li> <li>The intake manifold must not have been penetrated by any objects.</li> </ul>	18	Alternator	<ul style="list-style-type: none"> <li>The fan and housing must not be broken.</li> <li>The alternator must turn easily by hand.</li> <li>The threads must be in good condition and clear of broken bolts.</li> <li>The pulley must be present and turn right.</li> <li>The condenser must be in good condition.</li> </ul>
14	Transmission	<ul style="list-style-type: none"> <li>The transmission must not be broken or damaged.</li> <li>The transmission oil must not smell burnt and must have a good color (must not be like varnish).</li> <li>The oil gauge must not have gray filings.</li> <li>The torque converter drive must not be damaged or missing.</li> <li>The bolt must not be broken inside the threads or the threads must not be damaged.</li> <li>The kickdown cable must be in good condition.</li> <li>The wiring and condenser must be in good condition.</li> </ul>	19	Starter Motor starter	<ul style="list-style-type: none"> <li>The starter must not be broken or damaged.</li> <li>It must not be rusted or coated with a heavy layer of grease.</li> <li>The assembly bolt must be present and in good condition.</li> <li>The gear must have friction when turning it and be in good condition.</li> <li>The starter must not have wear on the bushings.</li> <li>The condenser must be in good condition.</li> </ul>
15	Transfer box Transfer case	<ul style="list-style-type: none"> <li>The transfer case must not be broken or damaged.</li> <li>The transfer case oil must not smell burnt and must have a good color.</li> <li>The transfer case must turn by hand.</li> <li>The shaft stripes must not be damaged.</li> </ul>	20	Compressor (air conditioner) Air conditioning compressor	<ul style="list-style-type: none"> <li>The compressor must not have an oil leak at the assembly joints.</li> <li>It must turn well.</li> <li>The wiring connector must be in good condition.</li> <li>The pulley must turn without involving the clutch.</li> </ul>
16	Axle shaft	<ul style="list-style-type: none"> <li>The driveshaft must not be bumpy or rusted.</li> <li>The balancing weights must be in place.</li> <li>The cross struts must be in good condition and turn smoothly.</li> <li>The yoke must be in good condition.</li> <li>The shaft must not be cracked or fissured.</li> <li>Check if the center bracket bearing is working properly.</li> </ul>	21	Pump (power steering) Power steering pump	<ul style="list-style-type: none"> <li>The pump must not have leaking oil.</li> <li>The pulley must turn right smoothly.</li> <li>The tank must not be cracked or broken.</li> <li>The oil must not smell burnt.</li> </ul>
17	Differential	<ul style="list-style-type: none"> <li>The differential must not be broken or damaged.</li> <li>The brackets must be in good condition.</li> <li>The differential must not have an oil leak.</li> <li>The differential must turn smoothly by hand.</li> <li>The differential must not have rust bubbles.</li> <li>It must be complete with axles.</li> <li>The axles must not twist when rolled by hand.</li> </ul>	22	Steering rack Steering gear Steering rack & pinion	<ul style="list-style-type: none"> <li>The steering rack and pinion must not have an oil leak on the bellows side or at the input seal.</li> <li>The threads of the bolt and hoses must not be damaged.</li> <li>The steering rack and pinion must turn well from one side to the other.</li> <li>The bushings must be in good condition.</li> <li>The brackets must not be crooked, broken or absent.</li> </ul>
			23	Steering gear-box Steering box	<ul style="list-style-type: none"> <li>The steering box must not have an oil leak.</li> <li>The bolt threads and those of the hose attachment must be in good condition.</li> <li>The steering box must turn easily by hand.</li> <li>The support brackets must not be broken.</li> </ul>

## VISUAL INSPECTION OF MECHANICAL PARTS

No.	Part Name	Visual Inspection	No.	Part Name	Visual Inspection
24	Steering column	<ul style="list-style-type: none"> <li>The column must be complete with its components.</li> <li>The wires or connectors must not be broken, cut or damaged.</li> <li>Plastic covers must be present and in good condition.</li> <li>The steering wheel must first have been locked in the center position with a clip, broach or other in order to not damage or break the clockspring.</li> <li>The ignition key should be attached to the steering wheel.</li> <li>The levers for the turn signal and headlights must be in good condition.</li> <li>The button for the hazard lights must not be broken or damaged.</li> <li>The steering wheel must not be twisted, abraded or damaged.</li> </ul>	29	Fuel indicator Fuel gage Gas gage Gage (fuel)	<ul style="list-style-type: none"> <li>The electrical wires and connectors must not be cut, repaired, missing or damaged.</li> <li>The pipes and hoses must not be cut, broken or damaged and their threads must be in good condition.</li> <li>The gauge must not be broken, twisted or damaged.</li> </ul>
25	Radiator	<ul style="list-style-type: none"> <li>The radiator fins must not be crushed.</li> <li>The radiator must not have scale (verdigris).</li> <li>The threads for the hose attachment must be in good condition.</li> <li>The radiator must not be bumpy, broken or cracked.</li> <li>The fastening brackets and grommets must be in good condition.</li> <li>The hose connectors must not be deformed.</li> </ul>	30	Filler neck Filler tube Filler hose Filler pipe	<ul style="list-style-type: none"> <li>The filler hose must not be cut, broken or damaged.</li> <li>The mounting plate must not be damaged.</li> <li>The brackets must not be broken or absent.</li> <li>The inner ventilation pipe must not have been cut.</li> <li>A small quantity of rust is tolerated, but heavy rust is not accepted.</li> </ul>
26	Condenser (air conditioner) Air conditioning condenser	<ul style="list-style-type: none"> <li>The condenser fins must not be crushed or disintegrated.</li> <li>The condenser must not be deformed.</li> <li>The hoses as well as their threads must be in good condition.</li> <li>The support brackets must not be damaged.</li> </ul>	31	Catalytic converter	<ul style="list-style-type: none"> <li>The converter drive must not be bumpy, cut, twisted or damaged.</li> <li>It must not have moving parts sounds on the inside when shaken.</li> <li>The internal filter must not be broken, loose or damaged at its internal input and output.</li> <li>The threads of the oxygen gauge must be in good condition.</li> <li>The input and output attachments must be in good condition and not have broken bolts or damaged threads.</li> <li>The flanges must not be twisted, rust, worn, thinned or damaged.</li> </ul>
27	Fans (motor, radiator and condenser) Engine fan Cooling fan Radiator fan Motor and radiator/condenser fan	<ul style="list-style-type: none"> <li>The fan brackets must not be broken or damaged.</li> <li>The fan blades must not be broken or damaged.</li> <li>The blades must turn easily by hand.</li> <li>The fan motor must not be broken or damaged.</li> <li>The motor connector must be in good condition.</li> </ul>	32	Flexible exhaust pipe Exhaust front pipe	<ul style="list-style-type: none"> <li>The hosepipe must not be cut, twisted, broken or damaged.</li> <li>The flanges must be in good condition.</li> <li>The hosepipe mesh must not be broken, bumpy, cut or damaged.</li> <li>The hosepipe must not be visibly covered in soot on the outside.</li> <li>The threads of the oxygen gauge must be in good condition.</li> </ul>
28	Fuel tank	<ul style="list-style-type: none"> <li>The tank must not be bumpy, perforated or damaged.</li> <li>The tank must not have suffered heavy rust (a small amount of rust is accepted).</li> <li>The gasoline intake opening, as well as the ventilation intake must not be broken or damaged.</li> </ul>	33	Motor wiper	<ul style="list-style-type: none"> <li>The engine must not be broken, bumpy or damaged.</li> <li>The electrical connectors must not be cut or damaged.</li> <li>Heavy rust is unacceptable.</li> <li>The brackets must be in good condition.</li> <li>The engine must not smell burnt or heated.</li> </ul>
			34	Wiper transmission Wiper linkage	<ul style="list-style-type: none"> <li>The windshield wiper linkage must not be broken, cut, twisted or damaged.</li> <li>The ball joints must not have wear and they must be complete with arms.</li> <li>The plastic bushings must be in good condition.</li> </ul>

## VISUAL INSPECTION OF MECHANICAL PARTS

No.	PART NAME	VISUAL INSPECTION
35	<i>Blower motor</i> <i>Heater blower motor</i> <i>Heater motor</i>	<ul style="list-style-type: none"> <li>The motor must not be broken, bumpy or damaged.</li> <li>The ventilation cage must not be broken or damaged.</li> <li>The electrical connectors must not be broken, cut or damaged.</li> <li>The motor must be turned by hand to see smooth rotation.</li> </ul>
36	<i>Air filter box</i> <i>Air-filter bowl</i>	<ul style="list-style-type: none"> <li>The box must be complete, unbroken and undamaged.</li> <li>Retaining fasteners must be present.</li> <li>The support brackets must not be broken.</li> </ul>
37	<i>Ignition coil</i>	<ul style="list-style-type: none"> <li>The ignition coil must not be broken, cracked or damaged.</li> <li>The electrical connectors must not be cut or damaged.</li> <li>The spark plug wires must not be broken, crooked or missing.</li> <li>The attachment fasteners must not be broken or missing.</li> </ul>
38	<i>ABS module</i> <i>ABS electronic control unit</i>	<ul style="list-style-type: none"> <li>The module must not be broken, bumpy or damaged.</li> <li>The electrical connectors must not be broken, cut or damaged.</li> <li>The part must be complete and not partly detached.</li> </ul>

No.	PART NAME	VISUAL INSPECTION
39	<i>Door</i>	<ul style="list-style-type: none"> <li>The doors must not be bumpy, twisted or rusted (2.5 hours of repair maximum accepted).</li> <li>The bottom of the door must not be rusted or bent.</li> <li>The door frame must not be bent or rusted.</li> <li>The hinge sockets must not be twisted or rusted.</li> <li>The electrical wiring must not have been cut or damaged.</li> </ul>
40	<i>Mirror</i>	<ul style="list-style-type: none"> <li>The rearview mirror must not be cracked, broken or damaged.</li> <li>The glass must not be scratched, broken, loose or chipped.</li> <li>The glass must be original, and not from a glazier.</li> <li>The electrical wiring must not be cut or damaged.</li> <li>The control cables must be in good condition and complete.</li> <li>The fastening threads must be in good condition.</li> </ul>
41	<i>Window regulator</i>	<ul style="list-style-type: none"> <li>The lever cables must not be rusted or damaged.</li> <li>Plastic pieces must not be broken or cracked.</li> <li>The gear teeth must be in good condition.</li> </ul>
42	<i>Glass (door)</i> <i>Door Glass</i>	<ul style="list-style-type: none"> <li>The glass must not be scratched, speckled or chipped.</li> </ul>
43	<i>Bumper</i>	<ul style="list-style-type: none"> <li>The bumpers must not be broken, cracked, chipped, bent or damaged.</li> <li>The fastening holes must not be broken.</li> <li>A previous bumper repair must have been carried out correctly, if applicable.</li> </ul>
44	<i>Hood</i>	<ul style="list-style-type: none"> <li>The hood must not be rusted in the assembly joints.</li> <li>The hood must not be bumpy, cracked or wavy.</li> <li>The threads for the hinge attachment must be in good condition.</li> <li>The hood must not have heavy rust or cracks around the mouth.</li> <li>The points that form the corners must not be damaged.</li> <li>An aluminum hood is not accepted due to the complexity of repair.</li> <li>The internal reinforcements must not be damaged.</li> </ul>
45	<i>Grille</i>	<ul style="list-style-type: none"> <li>The grille must not be broken, chipped or damaged. It must be complete.</li> <li>The anchors must not be broken or cracked.</li> <li>The fins must be present.</li> </ul>

## VISUAL INSPECTION OF MECHANICAL PARTS

No.	PART NAME	VISUAL INSPECTION	No.	PART NAME	VISUAL INSPECTION
46	<i>Headlamp</i> <i>Headlight</i> <i>Foglight</i> <i>Tail lamp</i> <i>Turn signal lamp</i> <i>Parking light</i>	<ul style="list-style-type: none"> <li>The headlights and lights must not be marred, scratched or broken.</li> <li>The headlights and lights must not have internal condensation.</li> <li>The lug brackets or anchor points must not be broken.</li> <li>The bulb sockets must be present.</li> <li>The headlights and lights must be complete.</li> </ul>	52	<i>Quarter panel</i> <i>Rear quarter panel</i> <i>Rear side panel</i>	<ul style="list-style-type: none"> <li>The driveshaft must not be broken or crooked.</li> <li>The thread must not be damaged.</li> <li>The bellows must not be defective.</li> <li>The stripes must not be damaged.</li> <li>The lock on the inner yoke must not be missing or broken.</li> <li>The location of the lock must not be broken or damaged.</li> <li>The bearing must be soft and must not hit the yokes.</li> </ul>
47	<i>Header panel</i> <i>Front end panel</i>	<ul style="list-style-type: none"> <li>The panel must not be broken, cracked, damaged or incomplete.</li> <li>The lug brackets must not be broken or missing.</li> </ul>	53	<i>Windshield</i>	<ul style="list-style-type: none"> <li>The windshield must not be marred, scratched, fissured, cracked or broken.</li> <li>The windshield must not have chips on the edge.</li> <li>The heating wires must not be cut or damaged for the relevant models.</li> </ul>
48	<i>Car fender</i> <i>Fender</i> <i>Fender skirt</i> <i>Fender liner</i>	<ul style="list-style-type: none"> <li>The fender and fender skirt must not be bent, twisted, bumpy or rusted.</li> <li>The fender and fender skirt must not be misshapen, cracked, broken or incomplete.</li> <li>The fastening holes must not be damaged.</li> </ul>	54	<i>Rear window</i>	<ul style="list-style-type: none"> <li>The window must not be marred or broken.</li> <li>The wires must not be cut or damaged.</li> <li>The electrical connectors must not be broken or missing.</li> <li>The window must not have chips on the edge.</li> <li>The contour molding must not be broken, cracked, damaged or missing for the relevant model.</li> </ul>
49	<i>Top</i> <i>Roof</i>	<ul style="list-style-type: none"> <li>The roof must not be bumpy, wavy, chipped or cracked.</li> <li>The pillars must not be damaged.</li> <li>A previous repair to the roof is generally not accepted.</li> <li>The internal reinforcements must not be damaged.</li> </ul>	55	<i>Front end assembly</i>	<ul style="list-style-type: none"> <li>The front end assembly must be complete.</li> <li>The front end assembly must not be bumpy or damaged.</li> <li>The cutting must be compliant (see Appendix 3).</li> </ul>
50	<i>Sunroof ou sun roof</i> <i>Moonroof ou moon roof</i>	<ul style="list-style-type: none"> <li>The sunroof must not be broken, cracked, damaged or incomplete.</li> <li>The anchors must not be broken or missing.</li> <li>The drainage hoses must not be cut or incomplete.</li> <li>The electrical connector must not be broken or damaged.</li> </ul>	56	<i>Rear end assembly</i>	<ul style="list-style-type: none"> <li>The vehicle rear end assembly must not be bumpy, rust or damaged.</li> <li>The cutting must be compliant (see Appendix 3).</li> </ul>
51	<i>Tailgate</i> <i>Rear hatch</i>	<ul style="list-style-type: none"> <li>The hatch must be complete.</li> <li>The hatch must not be bumpy, chipped or cracked.</li> <li>The interior lining must not be rusted.</li> <li>Model with glass: the de-icing lines must not be broken or damaged, and the glass must be present.</li> <li>A previous repair to the hatch is generally not accepted.</li> </ul>	57	<i>Cab and box pickup</i>	<ul style="list-style-type: none"> <li>The cab and box must not be bumpy, rusted, damaged and they must be complete.</li> <li>The brackets must not be cut or damaged.</li> <li>The floor must not be bumpy, perforated or damaged.</li> </ul>

## VEHICLE DISMANTLING PROCEDURES

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