

Questions & Answers

New Procedures for the Technical Appraisal of a Vehicle

1- Since when have these new procedures been in effect?

The new procedures have been in effect since June 18, 2018.

In some cases, an additional technical analysis is necessary. The inspection agent must then transfer the file to the Direction générale de l'expertise légale et de la sécurité des véhicules (DGELSV). In these particular situations, additional processing time is to be expected.

2- Are these new regulatory provisions?

No, the new procedures are actually a new way to apply the current regulatory provisions.

3- Why have the procedures changed?

The procedures no longer made it possible to ensure that a rebuilt vehicle complied with the manufacturers' requirements and that it was safe.

4- Why is it essential to follow the manufacturers' recommendations?

The vast majority of recent vehicles are made of high-strength or ultra high-strength steel that requires specific repair techniques. The transfer of heat during the corrective procedures or the use of an inappropriate welding method could affect the steel's properties and reduce its strength. This is why the manufacturers' recommendations must be followed to the letter. A vehicle that has been repaired using the wrong techniques will not ensure an adequate level of safety.

5- What are the differences between spot welding, MIG brazing and MIG welding (three welding assembly techniques)?

- Spot welding is used to bond two or more thicknesses of sheet metal together using two electrodes. The two electrodes compress the pieces of metal to be welded against each other and send a short burst of high-intensity current through them, bonding the metal at that "spot" to create the weld. This technique makes it possible to limit the amount of heat that is transferred to the metal pieces and avoid compromising the mechanical properties of the welded parts.
- MIG welding fuses the filler metal and the part to be welded together. This process transfers a great deal of heat inside the welded parts and can reduce the properties of certain types of steel. It can be used for plug weld and butt weld assemblies when such welds are required. This technique is generally to be avoided when assembling high-strength steel parts.
- MIG brazing is an arc brazing method. An electric arc is initiated between the electrode (continuously fed welding wire) and the part. With the lower fusion

temperature of the copper-based wire, the transfer of heat inside the welded parts is kept to a minimum, with little or no changes to the mechanical properties of the high-strength steel. This assembly technique must only be used when required by the vehicle's manufacturer.

6- I own a MIG welder with shielding gas and a regular 70,000 psi (ER70XX) wire. Can I reassemble all types of vehicles?

No. Most manufacturers now require that high-strength steel parts be assembled using a spot welder. The welder must be adjustable to the parameters specified by the manufacturer. Moreover, for some vehicles, a pulse arc welder for MIG brazing could be required. The repair manuals are the best sources for this information.

7- Do I absolutely need a spot welder?

Most recent vehicles are made of high-strength steel that requires the use of very expensive modern spot welders. If you do not wish to purchase one, you can outsource that part of the assembly to a shop that is equipped with this type of welder. Manufacturer-certified shops and many body shops own these types of welders.

8- The manufacturer authorizes the assembly of 590 MPa high-strength steel using a regular MIG welder. Do I need to take any special precautions before I start?

Yes! Some vehicle manufacturers specify that the wire's resistance must be at least as high as the weakest component to be welded. Thus, to weld two 590 MPa (85,000 psi) parts, you must be sure to use a wire of at least 590 MPa that meets the manufacturer's requirements. However, not all manufacturers have this requirement. The repair manuals are the best sources for this information.

9- When is it necessary to provide a welding certificate?

A [welding certificate](#) (in French only) is required when repairs by welding were made to the vehicle's structure. If several assembly techniques were used, you must provide all of the corresponding certificates.

10- Where can I get the manufacturer's repair standards?

These standards are available on the manufacturers' portal OEM1STOP (www.oem1stop.com), various reference websites (Alldata, I-Car and others) or directly from a dealership.

11- What are structural parts?

They are the parts that make up the vehicle's structure (side rails, reinforcements, pillars, etc.). They are usually thicker than non-structural parts and generally made of high-strength or ultra high-strength steel. Examples of non-structural parts are a front fender; rocker panel exterior sheet metal; rear fender exterior sheet metal;* door exterior sheet metal; hood exterior sheet metal; etc. Be vigilant when you assemble a non-structural part onto a structural part made of high-strength steel, particularly when you reassemble exterior sheet metal onto an interior reinforcement. Specific assembly instructions must be followed, otherwise the properties of the high-strength steel part could be reduced.

*Unless otherwise indicated by the manufacturer.

12- I want to rebuild a vehicle for which the manufacturer provides instructions for repair. How do I go about it?

To begin with, it is important to carefully read and understand the manufacturer's repair instructions. Then, the repairs must be made in accordance with the requirements indicated in the manufacturer's documents. Lastly, the joints must be made at the specified locations using the approved assembly methods. The documents used and photographs of all of the joints must be presented during the technical appraisal.

13- I want to rebuild a vehicle for which the manufacturer does not provide instructions for repair. How do I go about it?

You must have the structural repairs made at a shop that is certified by the manufacturer. During the technical appraisal, you will have to provide the invoice from the certified shop confirming that the repairs were made in accordance with the manufacturer's standards, the details of the repairs made as well as photographs of all of the repaired joints.

14- I want to rebuild a vehicle for which there are no instructions. How do I go about it?

When a manufacturer does not publish any repair instructions, any damaged structural parts must be replaced in their entirety and assembled as originally manufactured. During the technical appraisal, photographs of all the joints must be presented and the assembly methods must be specified.

15- Am I required to present the manufacturer's instructions during the technical appraisal?

No, it's not a requirement. However, if the instructions are not provided, are incomplete or have to be checked, it is the road vehicle inspection agent's duty to obtain them, which can prolong the technical appraisal process and generate additional costs.

16- I don't have all of the documents required in the new certification application (e.g. certain photographs are missing). What should I do? How can I complete this file?

You must do everything you can to provide the documents required in the rebuilding record. However, if you are unable to obtain all the required documents, present your file to the road vehicle inspection agent, who will be able to examine your file and indicate whether you have any possible options to complete the record.

17- If I don't have the instructions, can the road vehicle inspection agent help me?

If you were unable to get the instructions from the links provided at Question 10, it is your responsibility to contact a dealership of the vehicle's manufacturer to obtain the repair instructions.

18- I don't have the repair instructions for my vehicle. Can I repair it anyway?

Repairing the vehicle is not recommended. If you don't have the repair instructions, it is very likely that the repairs won't be compliant and that your vehicle will be refused during the technical appraisal.

19- Where can I get the new rebuilt vehicle certification application form?

saaq.gouv.qc.ca/fileadmin/documents/formulaires/demande-certification-vehicule-reconstruit.pdf

20- Do I have to provide photographs of every joint made?

Yes. Photographs of the work done on every joint must be provided. The road vehicle inspection agent must be able to see the joints made on the internal structural parts as well as the external parts. The photographs must clearly show each joint with regard to the entire vehicle.

Important: The date and the last 8 characters of the vehicle identification number (VIN) must appear on **all** of the photographs submitted in the file. This information must be **handwritten**.

21- When a damage appraisal indicates that a part needs to be replaced, do I systematically have to replace it?

When an appraiser indicates that a part needs to be replaced in the damage appraisal, it would be unusual for the part not to have sustained damage or that repairs could be made. If such were the case, however, photographs taken during disassembly must be provided. These photographs must show that the part was not damaged or that it could be repaired. When issues arise concerning damage appraisals, the road vehicle inspection agents refer to their technical support staff for analysis and a decision.

22- Can used structural parts still be utilized in a vehicle reconstruction?

A structural part can be reused. However, extreme care must be taken when the part is disassembled, making sure that neither its integrity nor its properties are affected.

23- Can a frame section still be replaced by disassembling it from the original manufacturer's joints?

Vehicles with a separate frame are made of steel with a strength of 50,000 psi or less. Replacing a frame section is authorized, providing it is disassembled from the **original manufacturer's joints**. However, assembly must be carried out as originally manufactured and the welds must be adequate. Photographs of the joints and the manufacturer's detailed instructions must be provided during the technical appraisal.

In the case of vehicles with frames made of steel with a strength of more than 50,000 psi, the manufacturer's instructions must be followed exactly. No other technique is authorized.

24- Can a frame section be replaced by sectioning it (elsewhere than at the original manufacturer's joints)?

Yes, but only when permitted by the manufacturer and in accordance with its instructions. In such a case, photographs of the joints and the manufacturer's detailed instructions must be provided during the technical appraisal.

25- Will these new requirements apply to an already rebuilt vehicle that is imported in Québec?

Yes. A vehicle that was rebuilt using inadequate repair methods could be refused during the technical appraisal.

26- How can I get information on the repair techniques required by vehicle manufacturers?

By referring to the body manuals issued by the various manufacturers. You can also undergo theoretical and practical training with organizations such as i-car (<https://www.i-car.ca/>).

27- I want to rebuild a Hyundai vehicle. How do I go about it?

In late 2020, Hyundai published repair instructions for most of its recent vehicles. You must therefore get the repair instructions and repair the vehicle in compliance with the instructions, as is the case when instructions are available.