## **Instruction Sheet**

# **IS-03138**

## REAR FRAME DOUBLE CROSS MEMBER REINFORCEMENT

## APPLICATION

Model	VIN	
XL & XLII Series Vehicles Model Year: 1991 - 2004	From 2PC	/33495 <u>M</u> 101 <u>1110</u> up to XXXXXXXXX <u>X</u> XXX <u>XXXX</u>
H3 Series Vehicles Model Year: 1993 - 2004	From 2PCI	H33495 <u>P</u> 101 <u>1559</u> up to XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

## MATERIAL

Kit #121600 includes the following parts:

Part No.	Description	Qty
121161	Tube, Reinforcement	2
121597	Tube, Reinforcement	2
121598	Gusset, Rear	2
121599	Gusset, Front	2
D120083	Diagram, Assembly	1
IS-03138	Instruction Sheet	1
FI-03138	Feuille d'instructions	1

## PROCEDURE

**Warning:** Park vehicle safely, apply parking brake, stop engine and set battery master switch(es) to the OFF position prior to working on the vehicle.

## 1<sup>st</sup> PART

### PREPARATION

**Warning:** Ensure to safely support the vehicle by its jacking points during repair. Only the recommended jacking points must be used as outlined in Section 18 of Maintenance Manual : ?Body? under heading ?Vehicle jacking points? or in Operator's Manual.

- 1. Disconnect connecting rod from height control valve rubber bushing then move valve lever upwards to raise suspension.
- 2. Remove asphalt base undercoating (Gravel Guard 3M) and any rust present near the welding area, the welding areas are indicated in figure 1.
- 3. Weld reinforcement parts referring to figure 1 welding specifications
- 4. During cold weather, when base metal temperature is below 32 ?F (0 ?C), base metal must be preheated to at least 50 ?F (10 ?C) and this temperature must be maintained for the whole welding process. It is therefore preferable to leave the vehicle to repair in a heated area for about half a day or heat frame until it reaches 50 ?F (10 ?C) minimum. You can also circulate warm air using a fan.

Caution: Do not heat over 150 ?F (100?C).

## 2<sup>nd</sup> PART

### REINFORCEMENT PARTS INSTALLATION

#### Note: Welding must be done only by a qualified and experienced person.

- 1. Protective shields must be placed in order to protect components against heat, welding flash, welding arc and other elements associated with welding.
- 2. Always wear the appropriate safety equipment.
- 3. Weld in clean and well-ventilated area, and always have an appropriate fire extinguisher within your reach.
- 4. The following precautions are to be taken to protect the electronic control components :
- ? Cut off battery power (battery master switch) from battery compartment.
- ? Disconnect wiring harness connectors from ECM (Electronic Control Module). The ECM is mounted on the starter side of the engine.
- ? For vehicles equipped with an automatic transmission, disconnect wiring harness connectors from ECU (Electronic Control Unit). The ECU is located in rear electrical compartment.
- ? For vehicles equipped with ABS (Anti-Lock Brake System), disconnect wiring harness connectors from ABS Electronic Control Unit. The ABS Electronic Control Unit is located in the front service compartment.
- ? Do not connect welding cables to electronic control components.
- 5. Weld reinforcement parts as per figure 1 and refer to paragraph: **Steel Steel Welding** for welding specifications:
- 6. Once the welding beads are cold, sand blast or apply some lacquer thinner before applying a coat of primer onto the welding beads and onto both sides of reinforcement parts.

**Note:** Use the appropriate primer for the type of metal and follow manufacturer's instructions.

*Note:* Sand blasting the welding beads and reinforcement parts is preferable.

- 7. Then, apply an asphalt base undercoating (Gravel Guard 3M) onto both sides of reinforcement parts.
- 8. Reconnect components mentioned at step 4.

### STEEL – STEEL WELDING

**Caution:** Before welding, disconnect electronic modules and battery terminals.

**Warning:** Welding surfaces must be free of scale, slag, rust, paint, grease, humidity or other foreign material that would render welding impossible.

*Warning:* Welding must be done only by a qualified and experienced person.

- ? FCAW (Flux Cored Arc Welding) process ;
- ? Electrode wire conforms to A5.20 AWS (American Welding Society) specifications ;
- ? E4801T-9-CH, type electrode wire with 0,045" diameter (1,14 mm);

Material Thickness	Voltage	Current	Wire Feed Rate	Shielding Gas
1/8" to ½"	26 ± 2 volts	260 Amps	450 ipm. approx.	75% argon – 25% CO2 or 100% CO2

If necessary and with great care to prevent perforating the material, it is possible to use a conventional electric arc welding machine according to the following specifications:

- ? SMAW (Shielded Metal-Arc Welding) process ;
- ? Welding rod conforms to A5.1 of AWS (American Welding Society) specifications; E 7018 type welding rod with 1/8" diameter (3,2 mm).
- ? Current: 100 amperes to 150 amperes; optimum at 120 amps.

It is important to grind weld bead starts and stops and also to grind arc strikes from surfaces.

