

Hirane AS1600 Combi Unit Aluminum & Steel Dent Puller

The Hirane As1600 Combi unit offers the following features-

- Repair dents on Aluminum panels using latest Captive Discharge welding
- Shrink & Re-tension the repair area on Aluminum panels
- Repair dents on steel panels using Captive Discharge welding (NEW TECHNOLOGY) or by using normal transformer setting
- Shrink & Re-tension the repair area on steel panels



Example of small dent to be repaired on an Aluminum panel



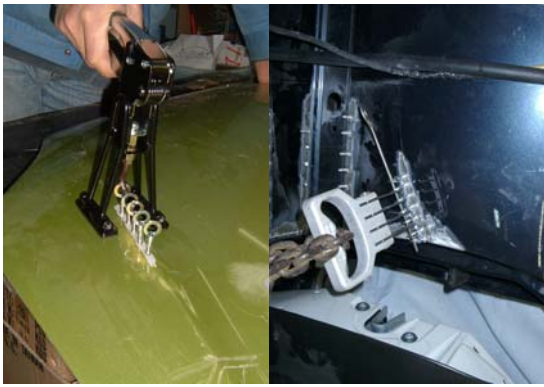
- There are currently over forty vehicle models using Aluminum panels

- Due to the design of these panels there is so much reinforcement on the rear side, it is impossible most times to repair the panel resulting in high replacement cost. Now with the Hirane As1600 unit, a panel can be repaired simply by the following steps.

Example of the repair process to remove a dent from an Aluminum panel



- Pulling stud welds to the surface of panel, there is no burn though to rear side of panel. No need to remove trims or re-paint rear side of panel.
- Spring-loaded handle allows operator to apply correct pressure each time to weld stud on correctly.
- By use of handy puller the operator can massage small dents out gently.
- Stud is removed from panel by either a final hard squeeze of handy puller or a twist action using a pair of side cutters.
- After removing dents on aluminum the material needs to be retention, we are the only manufacture who can offer shrinking / re-tensioning tools from the one unit
 - By use of copper electrode we can shrink high points
 - If you have oilcan we can re-tension panel with shrink rod.
 - Other competitors tell you to use gas torch, you have no control to the amount of heat been applied to panel.
- The technology used to weld the studs is commonly known as captive discharge welding. We charge a bank of capacitors to a high DC voltage, and then the charge is released to weld the stud to the surface.
- We use electronics to give exact control of this electrical charge; there is a digital display so you can set the required power.
- A very important feature of this unit we continually charge and discharge the capacitors, meaning that when you press the trigger to weld the stud you get the exact same voltage from stud to stud.
- One pulling stud welds to all grades of Aluminum panels.



If a larger repair is needed on the Aluminum panel a row of studs would be welded to the panel. Either by using the handy puller or pulling claw the dent can be pulled.

The following list are manufactures currently using some aluminum panels-

Acura, NSX
Aston Martin, Vanquish
Audi, A2 & A8
BMW, Z8 & 7 Series
Chrysler, Concorde, Plymouth Prowler & LHS
Ferrari, 360 Modena
Ford, Expedition, Explorer, F-150, Lincoln LS, Lincoln Navigator, Ranger & Town Car
Lotus, Elise Sport 190

General Motors, Buick LeSabre, Buick Rendezvous, Cadillac CTS, Cadillac Deville, Cadillac Escalade, Cadillac Seville, Chevy Tahoe, Chevy Venture, GMC Yukon, GMC Yukon XL, Olds Aurora, Pontiac Bonneville, Buick Park Avenue, Chevy Suburban, Olds Silhouette & Pontiac Montana
Honda, Insight
Jaguar, XJ
Land Rover, Discovery
Mercedes, CL500 Coupe & SL500
Nissan, Altima

Features of the AS1600 for Steel Dent Repairs

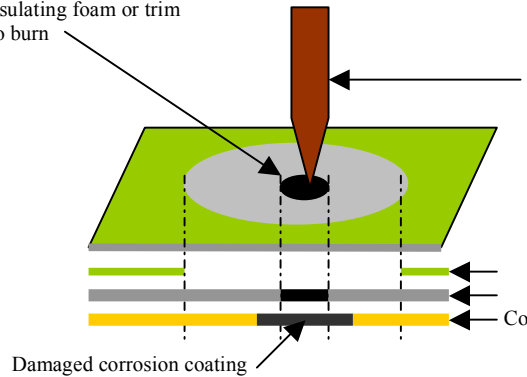
The AS1600 Combi is designed to work on both Aluminum & Steel. When it comes to steel the AS1600 offers the normal transformer type puller & the totally new Capacitor technology system as described below. The unit can also be used for shrinking & tensioning steel panels.

Many car manufactures are using thinner high-strength steel skin panels; Because of the thickness and tension of these high-strength steel panels the new capacitor system gives so much more control to repair these panels.

The normal type transformer dent puller

The following happens when the tip is welded to job-

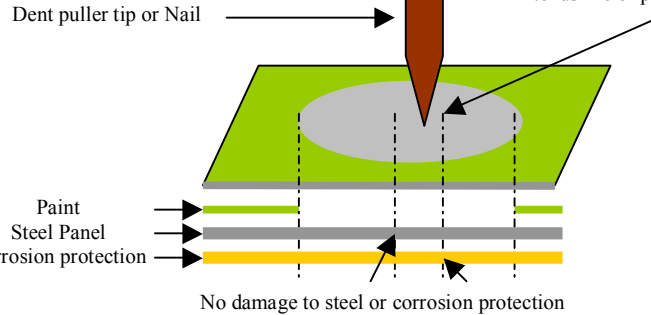
- Were the actual tip welds to the surface, the steel discolors this causes shrinking & hardened point that is difficult file and sand.
- The heat also causing shrinking of steel making it more difficult to get a metal finish repair
- Burn through of the paint & corrosion protection on rear-side of panel
- Risk of insulating foam or trim Starting to burn



The NEW Capacitor technology designed by Hirane.

Benefits of using capacitor system to weld tip to job-

- NO heating or discoloring of steel
- NO hardening of steel
- NO shrinking of steel
- NO burn through of paint or corrosion protection on rear-side of panel
- NO risk of foam or trim burning
- Extends life of puller tip by 200%



AS001 Rapid Puller (Optional)	AS280 Handy Puller (Optional)	AS295 Edge Puller Cassette (Optional)	AS159 Line Puller Kit (Optional)

Many manufactures are using High-Strength steel which proving harder to pull & you run the risk of damaging the steel if you mig weld a pulling plate / tab, therefore Hirane has developed the following system.



If you weld washers to the panel they either break off when pulling or you make pin holes in the metal or if you mig weld a plate / tab to the panel you create so much heat you weaken the structure of the steel and damage all the corrosion protection on the rear side of the panel. Plus risk burning wiring etc behind the panel.

With the New capacitor technology from Hirane Co. we can weld 5mm pulling studs that give the following benefits-

- Each stud has 30 times greater surface area than a washer to pull from.
- Each stud you can apply up to 500Kg / 1100lb. Pulling force.
- No Heat is created when welding stud, preventing any damage to High-strength steel.
- No burn through of paint or corrosion protection on rear-side of panel.
- No risk of burning wiring looms etc. behind the panel.

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