"THE MAXI"

A Multiple Pull Resistance Welder

Instructions for connection, safe use, and maintenance

Operating Specifications:

Primary Input. . . . . .220/240 volt, single phase 60Hz
Primary Amps 20
Duty Cycle 2.0%
Output . . . . . 2.2 kva

Manufactured in the United States of America
by Dent Fix Corporation
Lawndale, CA

"THE MAXI"

DF-505

Safety Instructions

- Read all instructions carefully before connecting or operating tool.
- Always wear safety glasses. Use a dust mask if the operation creates dust. Caution is the key to safety.
- Protect yourself from noise. Noise Levels vary with work. If noise level is high, wear ear protection.
- Wear gloves and protective clothing to avoid injuries from hot metal chips & pieces or malfunctioning attachments.
- Only use accessories that are designed specifically for this tool. Modifications to this tool may cause injury and may cause the tool to malfunction.
- Handle the tool safely. Do not operate the tool if it is damaged or in a wet environment.
- When not in use, disconnect tool from the power supply.
- Do not alter any part or component of this tool in any way, shape or form other than work authorized in the next statement.
- Note: Electrical connection & plug installation must be done by a trained electrician.

Green or Green Yellow is always ground.
Black & white and blue & brown are power.

Voltage on outlet should be verified as 208 or 220/240 volt. If outlet is 208 volt, open unit & exchange white wire for black wire marked 208 coming from the transformer to the circuit board connector marked R1. Care should be taken not to damage or break the circuit board or terminal. Make sure unit is disconnected from the power supply before doing any internal work.

Machine is wired for 220-240 volt operation from the factory.

Operation:

1. Read all safety instructions.
2. Grind paint or rust from area to be worked on. It is important that the panel be clean to bare shiny metal. Attach the ground cable to a bare metal surface on the same panel that is to be repaired. Never allow the welding electrode to make contact with the grounding clamp. A magnetic grounding clamp is available for a minimum charge.
3. Plug the power cord into appropriate outlet and flip switch to on position. A light in rocker switch will illuminate indicating the unit is operational.
4. Select appropriate pull electrode. Short Rod in conjunction with Lever Puller or by itself for straight pulls by hand. Long Electrode in conjunction with Slide Weight for heavier damage. Pin Electrode for welding stud pins. Flat Shrinking Tip for panel shrinking. Wiggle wire tip is located on the top of the blue handle.

   Note: Push Electrode all the way in until it stops, then tighten the Allen screw.
5. Always start welding with minimum weld time. Increase weld time only when necessary. Long Electrode may need a slight increase in weld time over the short rod. Wiggle Wire of 1/16 (.60) thickness should be welded with a shorter time that 3/16 (.90) wire. When proper weld time is used ti will be very easy to remove the wire by simply wiggling it up and down.
6. Pins are to be welded with a slightly longer weld time that is needed for wiggle wire. Pins are normally used with this tool only to pull heavier structures. They should be used as welded tab in conjunction with our DF-4 Maxi-Clamp or any other similar body clamp.
7. Shrinking can be done with either the supplied shrinking electrode or with the attached wiggle wire electrode on top of the blue pull handle. Use the wiggle tip when only a few high spots need shrinking. Taller high spots may need an increase in the timer knob. Wetting the panel with a spray bottle first can enhance the shrinking effect. As with anything, practice and experience will lead to greater control.

In Short

1. Install appropriate pull rod (electrode) and tighten allen set screw. Make sure that the rods and electrodes are pushed in all the way and securely

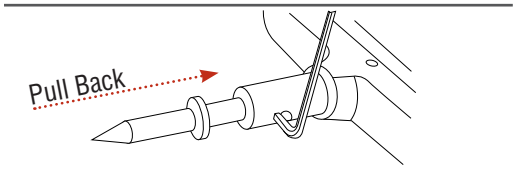
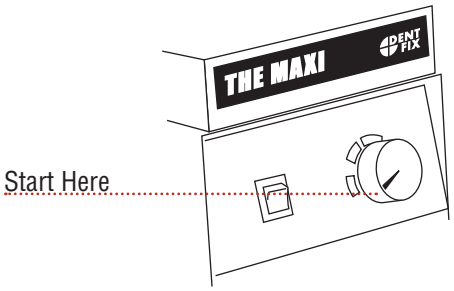


Figure 505.1

tightened (Figure 505.1).

2. Grind area to be pulled. Area must be free of paint and rust. Should you be working on a galvanized panel, we recommend that you grind away the galvanization on the spots were welding will be done.
3. Begin with the shortest weld time setting. Increase weld time only if needed It will not be necessary to increase weld time beyond what is recommended for each tip (Figure 505.2)



Longer weld times do not increase adhesion of the pull rods, pins and wiggle wire.

Figure 505.2

4. You have a choice of five pulling methods and a shrinking tip (Figure 505.3). The damaged area will determined which electrode is to be used. Heavily damaged panels or long creases can be repaired using the wiggle wire in conjunction with the bear claws. Pulled by hand with the four finger or mechanically with the nine finger claw. By using the Bear Claws your pull power is spread over a wider area. The quality of finish you want will determine how and with which pull rod you finish the metal. It is possible by carefully pulling and shrinking to finish a panel repair and not have to use a dolly or hammer, only a file.

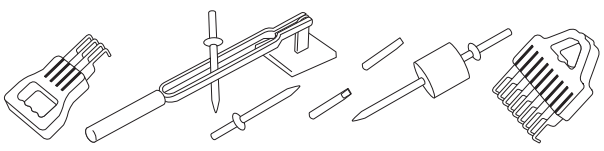


Figure 505.3

Note: Extensive shrinking may cause the unit to overheat. The transformer has a temperature fuse and will switch off temporarily. If your work requires extensive.

5. After welding, the best way to break off the pulling rod is by twisting. Wiggling from side by side may cause hole in the panel. Pins can be snipped of twisted off. Wiggle wire is removed by rocking up and down. We recommend using a Vise-Grip® model 8R. Please see Figure 505.4.

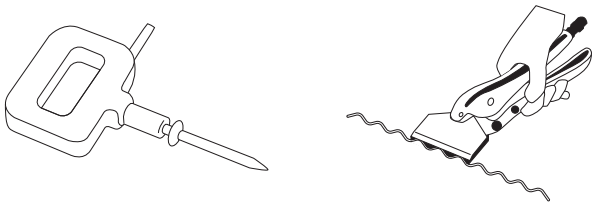


Figure 505.4

6. Shrinking tip will help smooth out high spots created by over pulling with rods or pins.
7. While using the tool it is periodically necessary to clean and regrind the tips of the pull rods. The tips are not being worn down, but actually add material that needs to be removed. The rods work better with a sharpened. point of 3/32 to 1/8 of an inch across the top.

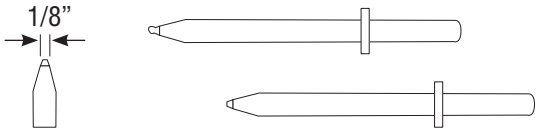


Figure 505.4

General Maintenance

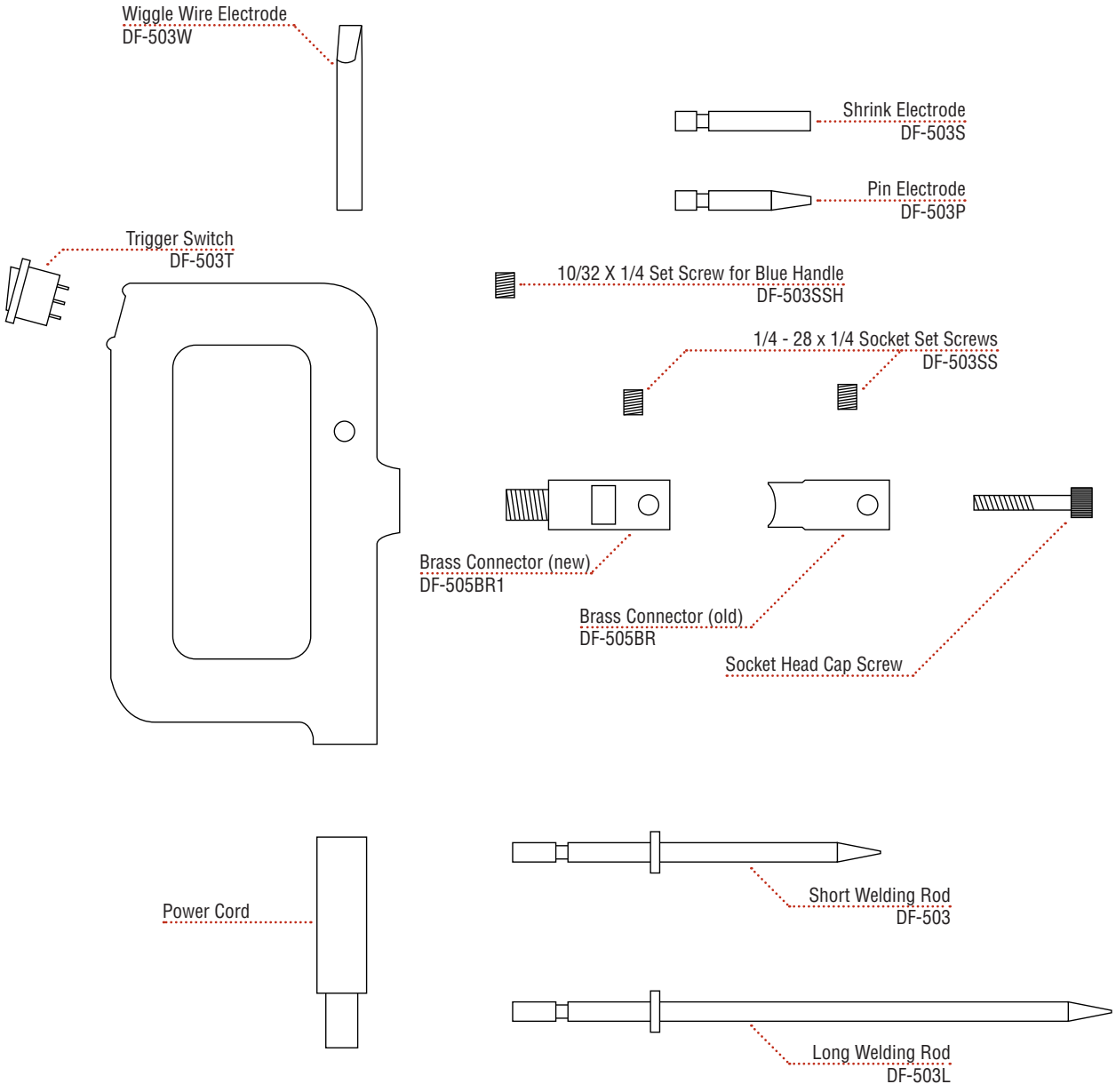
"The Maxi" DF-505 contains no customer serviceable parts. The unit should be opened only by a qualified electrician. Electrode tips will need to be cleaned and occasionally replaced. After prolonged use the allen screw holding the brass electrode holder to the blue handle may need to be re-tightened.

Three year warranty on internal components.

Troubleshooting

Answers to non performance of DF-505 Dent Pulling Station

When switching unit on, light on the switch or LED do not light up.	1. Check to make sure that the wires are connected correctly in the plug. The green wire is ground, with the black and white wires being the power. 2. Pull out On/Off switch to make sure that all wires are connected. 3. If On/Off switch lights up, but the Green power indicator LED on the front panel does not, most likely the circuit board is bad. 4. If On/Off switch lights up, and Green Power indicator LED lights up, but the Yellow indicator LED does not light up when the handle trigger is activated, check to make sure that trigger is not broken, nor that one of the cables on the trigger switch terminal block has been shorted out. 5. If time cannot be adjusted, check potentiometer connection on circuit board if it is good, then potentiometer needs to be replaced.
Total welds the moment weld electrode makes contact:	1. Circuit Board bad, relay shorted.
Electrode does not weld properly.	1. Grind weld electrode to a point, make sure its clean. 2. Replace weld electrode. 3. Bad contact between ground clamp and panel, make sure contact is clean. 4. Panels alloy composition maybe at fault, try to weld on different car or piece of metal. 5. 5. Possible power problem, use different outlet.


Wiggle Wire Electrode
DF-503W
Shrink Electrode
DF-503S
Pin Electrode
DF-503P
Trigger Switch
DF-503T
10/32 X 1/4 Set Screw for Blue Handle
DF-503SSH
1/4 - 28 x 1/4 Socket Set Screws
DF-503SS
Brass Connector (new)
DF-505BR1
Brass Connector (old)
DF-505BR
Socket Head Cap Screw
Power Cord
Short Welding Rod
DF-503
Long Welding Rod
DF-503L