



Arc 200

OWNER'S MANUAL



WARNING:

Read carefully and understand all **ASSEMBLY AND OPERATION INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item# 45432

Thank you very much for choosing a IRONTON product! For future reference, please complete the owner's record below:

Model: _____ Purchase Date: _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This machine is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted the distributor to determine if it can or should be performed on the product.

For technical questions please call the Northern Tool Welder Help Line at **1-877-304-0294**.

INTENDED USE

The ARC 200 is a AC only stick welder. It is intended for use for welding steel, stainless steel, cast iron and hard surfacing using electrodes from 1/16 inch to 5/32 inch. For best performance on steel, we highly recommend an 1/8 inch 6013 electrode.

Stick welding gives the operator the flexibility to use this welder for mobile applications, including outdoor applications. Stick electrodes contain a flux, making welding easy and does not require the use of a separate shielding gas which can be blown away by the wind in outdoor applications. Since this welder does not use shielding gas, the operator will not require to have or maintain shielding gas bottles, a regulator or gas hose.

This unit is intended to be used on a 50 amp 230V AC circuit without the use of an extension cord. If an extension cord is necessary for your application, please use the appropriate size and length of extension cord that will handle 50 amps the entire length of the extension. We highly recommend talking with a qualified electrician for cord size recommendations. This unit is supplied with a NEMA Class 6-50P plug and will require a NEMA Class 6-50R receptacle. Do not remove the power plug!

GENERAL SAFETY RULES



WARNING: Read and understand all instructions. Failure to follow all instructions listed below may result in serious injury.



CAUTION: Do not allow persons to operate or assemble this Arc 200 until they have read this manual and have developed a thorough understanding of how the Arc 200 works.



WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY CONSIDERATIONS

1.1 Your Welding Environment

- Keep the environment you will be welding in free from flammable materials.
- Always keep a fire extinguisher accessible to your welding environment.
- Always have a qualified person install and operate this equipment.
- Make sure the area is clean, dry and ventilated. Do not operate the welder in humid, wet or poorly ventilated areas.
- Always have your welder maintained by a qualified technician in accordance with local, state and national codes.
- Always be aware of your work environment. Be sure to keep other people, especially children, away from you while welding.
- Keep harmful arc rays shielded from the view of others.
- Mount the welder on a secure bench or cart that will keep the welder secure and prevent it from tipping over or falling.

1.2 Your Welder's Condition

- Check ground cable, power cord and welding cable to be sure the insulation is not damaged. Always replace or repair damaged components before using the welder.
- Check all components to ensure they are clean and in good operating condition before use.

1.3 Use of Your Welder

▲ CAUTION

Do not operate the welder if the output cable, electrode, torch, wire or wire feed system is wet. Do not immerse them in water. These components and the welder must be completely dry before attempting to use them.

- Follow the instructions in this manual.
- Keep welder in the off position when not in use.
- Connect ground lead as close to the area being welded as possible to ensure a good ground.
- Do not allow any body part to come in contact with the welding wire if you are in contact with the material being welded, ground or electrode from another welder.
- Do not weld if you are in an awkward position. Always have a secure stance while welding to prevent accidents. Wear a safety harness if working above ground.
- Do not drape cables over or around your body.
- Wear a full coverage helmet with appropriate shade (see ANSI Z87.1 safety standard) and safety glasses while welding.
- Wear proper gloves and protective clothing to prevent your skin from being exposed to hot metals, UV and IR rays.
- Do not overuse or overheat your welder. Allow proper cooling time between duty cycles.
- Keep hands and fingers away from moving parts and stay away from the drive rolls.
- Do not point torch at any body part of yourself or anyone else.
- Always use this welder in the rated duty cycle to prevent excessive heat and failure.

1.4 Specific Areas of Danger, Caution or Warning



Electrical Shock

▲ WARNING

Electric arc welders can produce a shock that can cause injury or death. Touching electrically live parts can cause fatal shocks and severe burns. While welding, all metal components connected to the wire are electrically hot. Poor ground connections are a hazard, so secure the ground lead before welding.

- Wear dry protective apparel: coat, shirt, gloves and insulated footwear.
- Insulate yourself from the work piece. Avoid contacting the work piece or ground.
- Do not attempt to repair or maintain the welder while the power is on.
- Inspect all cables and cords for any exposed wire and replace immediately if found.
- Use only recommended replacement cables and cords.
- Always attach ground clamp to the work piece or work table as close to the weld area as possible.
- Do not touch the welding wire and the ground or grounded work piece at the same time.
- Do not use a welder to thaw frozen pipes.



Fumes and Gases

▲ WARNING

- Fumes emitted from the welding process displace clean air and can result in injury or death.
- Do not breathe in fumes emitted by the welding process. Make sure your breathing air is clean and safe.
- Work only in a well-ventilated area or use a ventilation device to remove welding fumes from the environment where you will be working.
- Do not weld on coated materials (galvanized, cadmium plated or containing zinc, mercury or barium). They will emit harmful fumes that are dangerous to breathe. If necessary use a ventilator, respirator with air supply or remove the coating from the material in the weld area.
- The fumes emitted from some metals when heated are extremely toxic. Refer to the material safety data sheet for the manufacturer's instructions.
- Do not weld near materials that will emit toxic fumes when heated. Vapors from cleaners, sprays and degreasers can be highly toxic when heated.



UV and IR Arc Rays

▲ DANGER

- The welding arc produces ultraviolet (UV) and infrared (IR) rays that can cause injury to your eyes and skin. Do not look at the welding arc without proper eye protection.
- Always use a helmet that covers your full face from the neck to top of head and to the back of each ear.
 - Use a lens that meets ANSI standards and safety glasses. For welders under 160 Amps output, use a shade 10 lens; for above 160 Amps, use a shade 12. Refer to the ANSI standard Z87.1 for more information.
 - Cover all bare skin areas exposed to the arc with protective clothing and shoes. Flame-retardant cloth or leather shirts, coats, pants or coveralls are available for protection.
 - Use screens or other barriers to protect other people from the arc rays emitted from your welding.
 - Warn people in your welding area when you are going to strike an arc so they can protect themselves.



Fire Hazards

▲ WARNING

- Do not weld on containers or pipes that contain or have had flammable, gaseous or liquid combustibles in them. Welding creates sparks and heat that can ignite flammable and explosive materials.
- Do not operate any electric arc welder in areas where flammable or explosive materials are present.
 - Remove all flammable materials within 35 feet of the welding arc. If removal is not possible, tightly cover them with fireproof covers.
 - Take precautions to ensure that flying sparks do not cause fires or explosions in hidden areas, cracks or areas you cannot see.
 - Keep a fire extinguisher close in the case of fire.
 - Wear garments that are oil-free with no pockets or cuffs that will collect sparks.
 - Do not have on your person any items that are combustible, such as lighters or matches.
 - Keep work lead connected as close to the weld area as possible to prevent any unknown, unintended paths of electrical current from causing electrical shock and fire hazards.
 - To prevent any unintended arcs, cut wire back to ¼" stick out after welding.



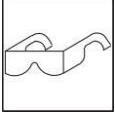
Hot Materials

⚠ CAUTION

Welded materials are hot and can cause severe burns if handled improperly.

-Do not touch welded materials with bare hands.

-Do not touch MIG gun nozzle after welding until it has had time to cool down.



Sparks/Flying Debris

⚠ CAUTION

Welding creates hot sparks that can cause injury. Chipping slag off welds creates flying debris.

-Wear protective apparel at all times: ANSI-approved safety glasses or shield, welder's hat and ear plugs to keep sparks out of ears and hair.



Electromagnetic Field

⚠ CAUTION

-Electromagnetic fields can interfere with various electrical and electronic devices such as pacemakers.

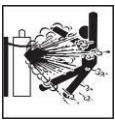
-Consult your doctor before using any electric arc welder or cutting device

-Keep people with pacemakers away from your welding area when welding.

-Do not wrap cable around your body while welding.

-Wrap MIG gun and ground cable together whenever possible.

-Keep MIG gun and ground cables on the same side of your body.



Shielding Gas Cylinders Can Explode

⚠ WARNING

High pressure cylinders can explode if damaged, so treat them carefully.

-Never expose cylinders to high heat, sparks, open flames, mechanical shocks or arcs.

-Do not touch cylinder with MIG gun.

-Do not weld on the cylinder

-Always secure cylinder upright to a cart or stationary object.

-Keep cylinders away from welding or electrical circuits.

-Use the proper regulators, gas hose and fittings for the specific application.

-Do not look into the valve when opening it.

-Use protective cylinder cap whenever possible

1.5 Proper Care, Maintenance and Repair

⚠ DANGER

-Always have power disconnected when working on internal components.

- Do not touch or handle PC board without being properly grounded with a wrist strap. Put PC board in static proof bag to move or ship.

-Do not put hands or fingers near moving parts such as drive rolls of fan

Arc 200 USE AND CARE

- **Do not modify the Arc 200 in any way.** Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. There are specific applications for which the **Arc 200** was designed.
- **Always check of damaged or worn out parts before using the Arc 200.** Broken parts will affect the **Arc 200** operation. Replace or repair damaged or worn parts immediately.
- **Store idle Arc 200.** When **Arc 200** is not in use, store it in a secure place out of the reach of children. Inspect it for good working condition prior to storage and before re-use.

TECHNICAL SPECIFICATIONS

Item	Description
Power Supply	230V, 50A, 60 HZ, Single Phase
No-Load Voltage	50 Volts AC
Output Range	65 - 200 Amp AC
Duty Cycle	10% @ 180A
Suggested Electrode	E6013
Electrode Diameter	1/16 inch to 5/32 inch
Dimensions	17.3" x 14.8" x 28.1"
Weight	57 lbs.

KNOW YOUR WELDER

Description

The IRONTON ARC 200 is an AC Arc Welder and comes complete with a handle and wheels for portability. It operates on 230V AC Single phase 60 Hz power and requires a 50 amp circuit breaker. This unit features attached weld cables and is equipped with thermal overload protection. It is designed to weld mild steel and alloys with electrodes up to 5/32" on materials up to 3/8" thick. This unit is great for farm and light industrial applications.



ON/OFF Switch

In the "OFF" position no power is being supplied to the electrode holder. In the "ON" position power is supplied to the main transformer and control circuit.

Indicator Lights

There are two indicator lights: 1) Power and 2) Thermal Overload. When the machine is turned on, the power indicator will be on. When the thermal overload indicator is on, it indicates the machine has exceeded the duty cycle and the internal temperature is too high. The machine automatically turn off welding output but the fan will remain on to cool down the internal components. When the internal temperature had decreased, the machine will automatically turn welding output back on.

Ground Cable and Clamp

The ground cable and clamp are attached to the work piece to complete the circuit allowing the flow of current needed to weld.

Welding Cable and Electrode Holder

One end of the cable is connected to the output connector of the welder. The electrode is held in the electrode holder for welding.

Current Adjustment

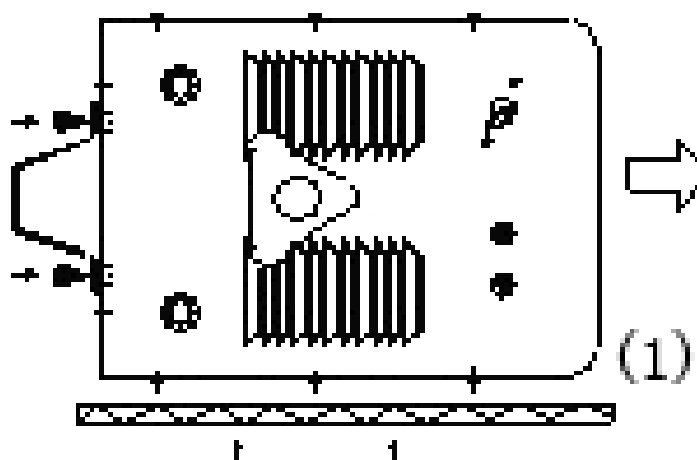
Current adjustment is on the front panel of the machine. It has infinite current output adjustment from 60 to 200 Amps as indicated on the amperage indicator window on the top of the machine.

Power Cord

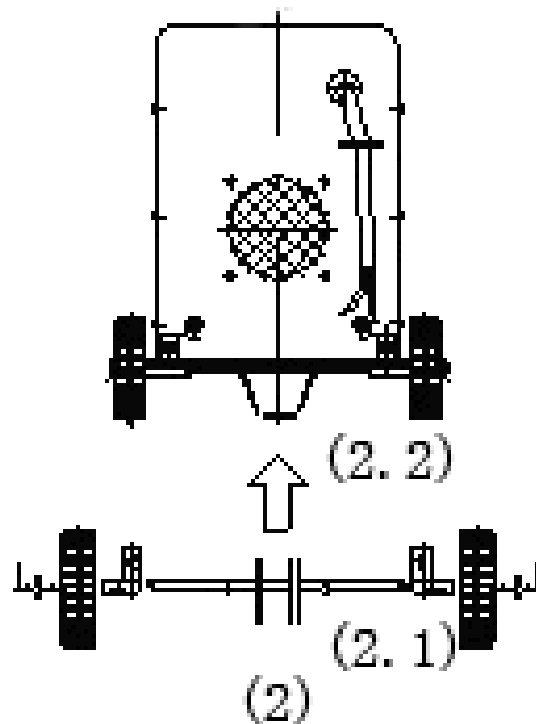
The power cord connects the welder to the 230 volt power supply. Plug the 50 amp NEMA 6-50P plug into a NEMA 6-50R receptacle to supply power to the welder.

ASSEMBLY

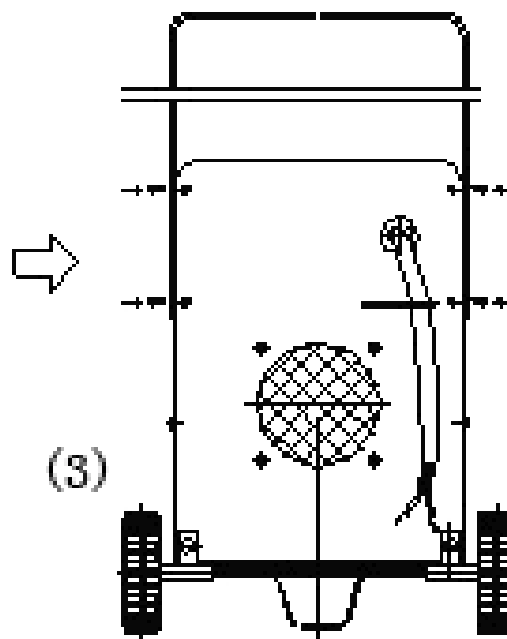
1. Tools required for assembly: Open-end wrenches 8 and 10mm.
2. 1. Lay the machine side panel on a flat surface. Install the metal bracket support on the bottom using two sets of screws and washers from the hardware bag. See following image.



2.2. Install the axle tube/bracket for the axles and wheels on the axle. See following image. Stand the machine up and install the axle tube/bracket onto the back of panel using the screws and washers provided. (You may want to use a wooded block to hold the welder up for this step.)



2.3. Finally, install the handle using four sets of screw and washers as following:



▲ CAUTION

- Make sure the welder is disconnected to the power supply when assembling
- When machine is laid on its side do it gently or the impact could damage internal components.
- During installation use caution not to do personal injury from lifting.

INSTALLATION

1. POWER REQUIREMENT - AC single phase 230V, 60 HZ with a 50 amp circuit breaker is required. DO NOT OPERATE THIS UNIT if the ACTUAL power source voltage is less than 207 volts AC or greater than 253 volts AC.

▲ WARNING

- **High voltage danger from power source! Consult a qualified electrician for proper installation of receptacle. This welder must be grounded while in use to protect the operator from electrical shock.**
- **Do not remove grounding prong or alter the plug in any way. Do not use any adapters between the welder's power cord and the power source receptacle. Make sure the POWER switch is OFF when connecting your welder's power cord to a properly grounded 230 VAC, 60 HZ, Single Phase, 50 Amp input power supply.**

2. EXTENSION CORD - We do not recommend an extension cord because of the voltage drop they produce. This drop in voltage can affect the performance of the welder. If you need to use an extension cord, we recommend you check with a qualified electrician and your local electrical codes for your specific area. Do not use an extension cord over 25 ft. in length.

OPERATION

▲ WARNING

High voltage danger from power source! Consult a qualified electrician for proper installation of receptacle at the power source. This welder must be grounded while in use to protect the operator from electrical shock. If you are not sure if your outlet is properly grounded, have it checked by a qualified electrician. Do not cut off the grounding prong or alter the plug in any way and do not use any adapter between the welder's power cord and the power source receptacle. Make sure the POWER switch is OFF then connect your welder's power cord to a properly grounded 230 VAC, 60 HZ, single phase, 50 amp power source.

3. SETTING UP THE WORK PIECE

3.1 Welding positions

There are two basic positions, for welding: Flat and Horizontal. Flat welding is generally easier, faster, and allows for better penetration. If possible, the work piece should be positioned so that the bead will run on a flat surface.

3.2 Preparing the Joint

Before welding, the surface of work piece needs to be free of dirt, rust, scale, oil or paint or it will create brittle and porous welds. If the base metal pieces to be joined are thick or heavy, it may be necessary to bevel the edges with a metal grinder, the correct bevel should be around 60 degree. See following picture:

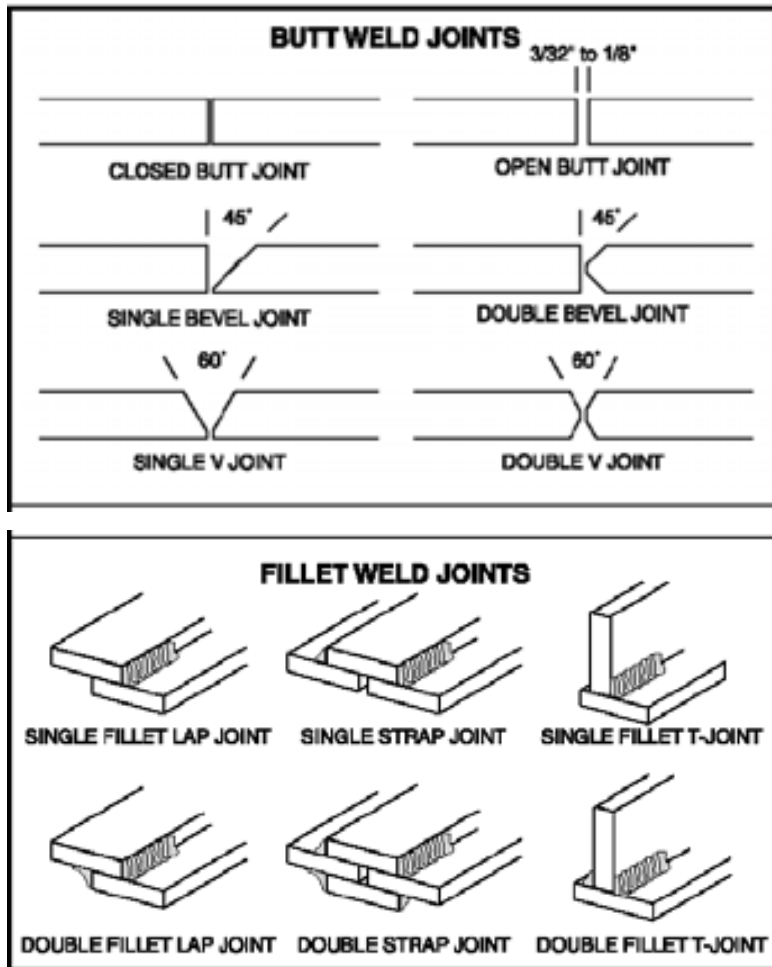
INCORRECT



CORRECT



Based on different welding position, there are different welding joint, see following images for more information.



4. GROUND CLAMP CONNECTION

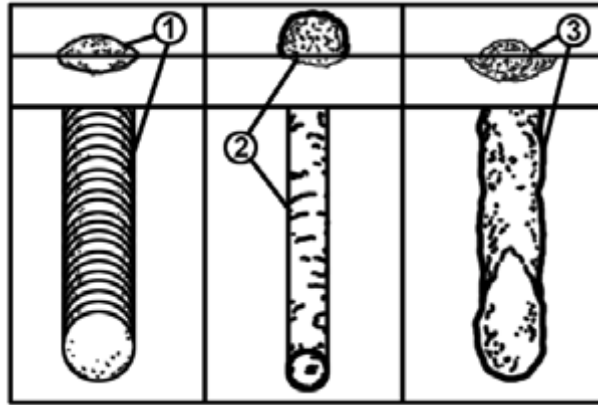
Clear any dirt, rust, scale, oil or paint on the ground clamp. Make certain you have a good solid ground connection. A poor connection at the ground clamp will waste power and heat. Make sure the ground clamp touches the metal.

5. ELECTRODE

The welding electrode is a rod coated with a layer of flux. When welding, electrical current flows between the electrode (rod) and the grounded metal work piece. The intense heat of the arc between the rod and the grounded metal melts the electrode and the flux. For best performance on this unit, we suggest the use of 6013 electrodes.

6. SELECTING THE PROPER ELECTRODE

There is no golden rule that determine the exact rod or heat setting required for every situation. The type and thickness of metal and the position of the work piece determine the electrode type and the amount of heat needed in the welding process. Heavier and thicker metals required more amperage. It is best to practice your welds on scrap metal which matches the metal you intend to work with to determine correct heat setting and electrode choice. See the following helpful trouble shooting tips to determine if you are using a correct electrode.



6.1. When proper rod is used:

6.1.a. The bead will lay smoothly over the work without ragged edges

6.1.b. The base metal puddle will be as deep as the bead that rises above it

6.1.c. The welding operation will make a crackling sound similar to the sound of eggs frying

6.2. When a rod too small is used;

6.2. a. The bead will be high and irregular

6.2. b. The arc will be difficult to maintain

6.3. When the rod is too large

6.3. a. The arc will burn through light metals

6.3. b. The bead will undercut the work

6.3. c. The bead will be flat and porous

6.3. d. Rod may be freeze or stick to work piece

Note: Rate of travel over the work also affects the weld. To ensure proper penetration and enough deposit of rod, the arc must be moved slowly and evenly along the weld seam.

7. SETTING THE AMPERAGE CONTROL

The welder has an infinite current control. It is capable of welding with electrodes up to 5/32" diameter. There is no golden rule that determines the exact amperage required for every situation. It is best to practice your welds on scrap metal which matches the metals you intend to work with to determine correct setting for your job. The electrode type and the thickness of the work piece metal determine the amount of heat needed in the welding process. Heavier and thicker metals require more voltage (amperage), whereas lighter and thinner metals require less voltage (amperage). Consult the welding electrode packaging for recommended welding amperage range.

8. WELDING TECHNIQUES

The best way to teach yourself how to weld is with short periods of practice at regular intervals. All practice welds should be done on scrap metal that can be discarded. Do not attempt to make any repairs on valuable equipment until you have satisfied yourself that your practice welds are of good appearance and free of slag or gas inclusions.

8.1 Holding the electrode

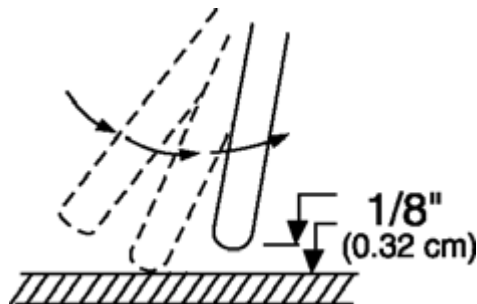
The best way to grip the electrode holder is the way that feels most comfortable to you. Position the Electrode to the work piece when striking the initial arc it may be necessary to hold the electrode perpendicular to the work piece. Once the arc is started the angle of the electrode in relation to the work piece should be between 10 and 30 degrees. This will allow for good penetration, with minimal spatter.

8.2 Striking the arc

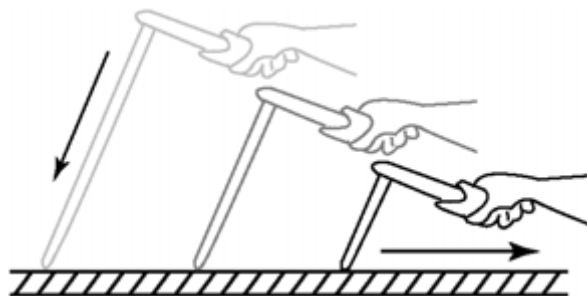
▲WARNING

EXPOSURE TO A WELDING ARC IS EXTREMELY HARMFUL TO THE EYES AND SKIN! Prolonged exposure to the welding arc can cause blindness and burns. Never strike an arc or begin welding until you are adequately protected. Wear flame-proof welding gloves, a heavy long sleeved shirt, trousers without cuffs, high topped shoes, and an ANSI approved welding helmet.

Scratch the work piece with the end of electrode to start arc and then raise it quickly about 1/8 inch gap between the rod and the work piece, see following picture



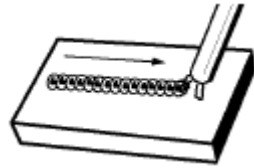
It is important that the gap be maintained during the welding process and it should be neither too wide or too narrow. If too narrow, the rod will stick to the work piece. If too wide, the arc will be extinguished. It needs much practice to maintain the gap. The beginners may usually get sticker or arc extinguishing. When the rod is stuck to the work piece, gently rock it back and forth to make them separate. If not, a short circuit will occur and it will break the welder. A good arc is accompanied by a crisp, cracking sound. The sound is similar to that made by eggs frying. To lay a weld bead, only 2 movements are required; downward (as the electrode is consumed) and in the direction the weld is to be laid, as in following figure:



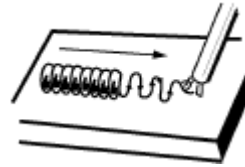
8.3 Types of weld bead

The following paragraphs discuss the most commonly used arc welding beads.

The stringer bead Formed by traveling with the electrode in a straight line while keeping the electrode centered over the weld joint.



Stringer Bead



Weave Bead

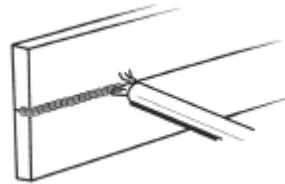
The weave bead Used when you want to deposit metal over a wider space than would be possible with a stringer bead. It is made by weaving from side to side while moving with the electrode. It is best to hesitate momentarily at each side before weaving back the other way.

8.4 Welding position

Flat position It is easiest of the welding positions and is most commonly used. It is best if you can weld in the flat position if at all possible as good results are easier to achieve.



Flat Position

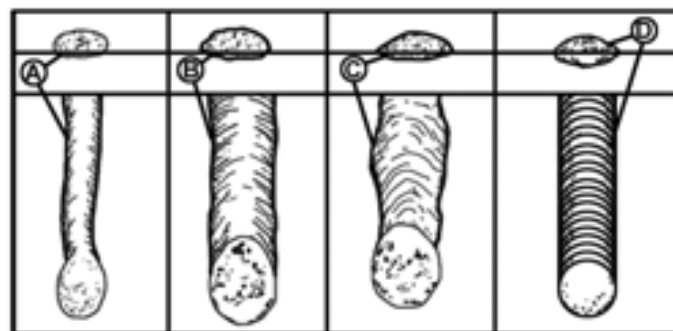


Horizontal Position

The horizontal position it is performed very much the same as the flat weld except that the angle is different such that the electrode, and therefore the arc force, is directed more toward the metal above the weld joint. This more direct angle helps prevent the weld puddle from running downward while still allowing slow enough travel speed to achieve good penetration. A good starting point for your electrode angle is about 30 degrees DOWN from being perpendicular to the work piece.

8.5 Judge the good weld bead

When the trick of establishing and holding an arc has been learned, the next step is learning how to run a good bead. The first attempts in practice will probably fall short of acceptable weld beads. Too long of an arc will be held or the travel speed will vary from slow to fast (see following)



- A. Weld speed is too fast.
- B. Weld speed is too slow.
- C. Arc is too long.
- D. Ideal weld.

A solid weld bead requires that the electrode be moved slowly and steadily along the weld seam. Moving the electrode rapidly or erratically will prevent proper fusion or create a lumpy, uneven bead.

▲ WARNING

ELECTRIC SHOCK CAN KILL! To prevent ELECTRIC SHOCK, do not perform any welding while standing, kneeling, or lying directly on the grounded workpiece.

8.6 Finish the bead

As the coating on the outside of the electrode burns off, it forms an envelope of protective gases around the weld. This prevents air from reaching the molten metal and creating an undesirable chemical reaction. The burning coating, however, forms slag. The slag formation appears as an accumulation of dirty metal scale on the finished weld. Slag should be removed by using a chipping hammer.

▲ WARNING

PEENING THE SLAG FROM A WELD JOINT CAUSES SMALL CHIPS OF METAL TO FLY THROUGH THE AIR! Metallic chips flying through the air can cause eye injury or injury to other parts of the head, hands or exposed portions of the body. Wear goggles or safety glasses with side shields and protect the hands and other exposed parts of the body with protective garments, or if possible, work with a shield between the body and the work piece.

The intense heat produced at the arc sets up strains in the metal joined by welding. Peening the weld not only removes the scale left behind in the welding but relieves the internal strains developed by the heating and cooling process.

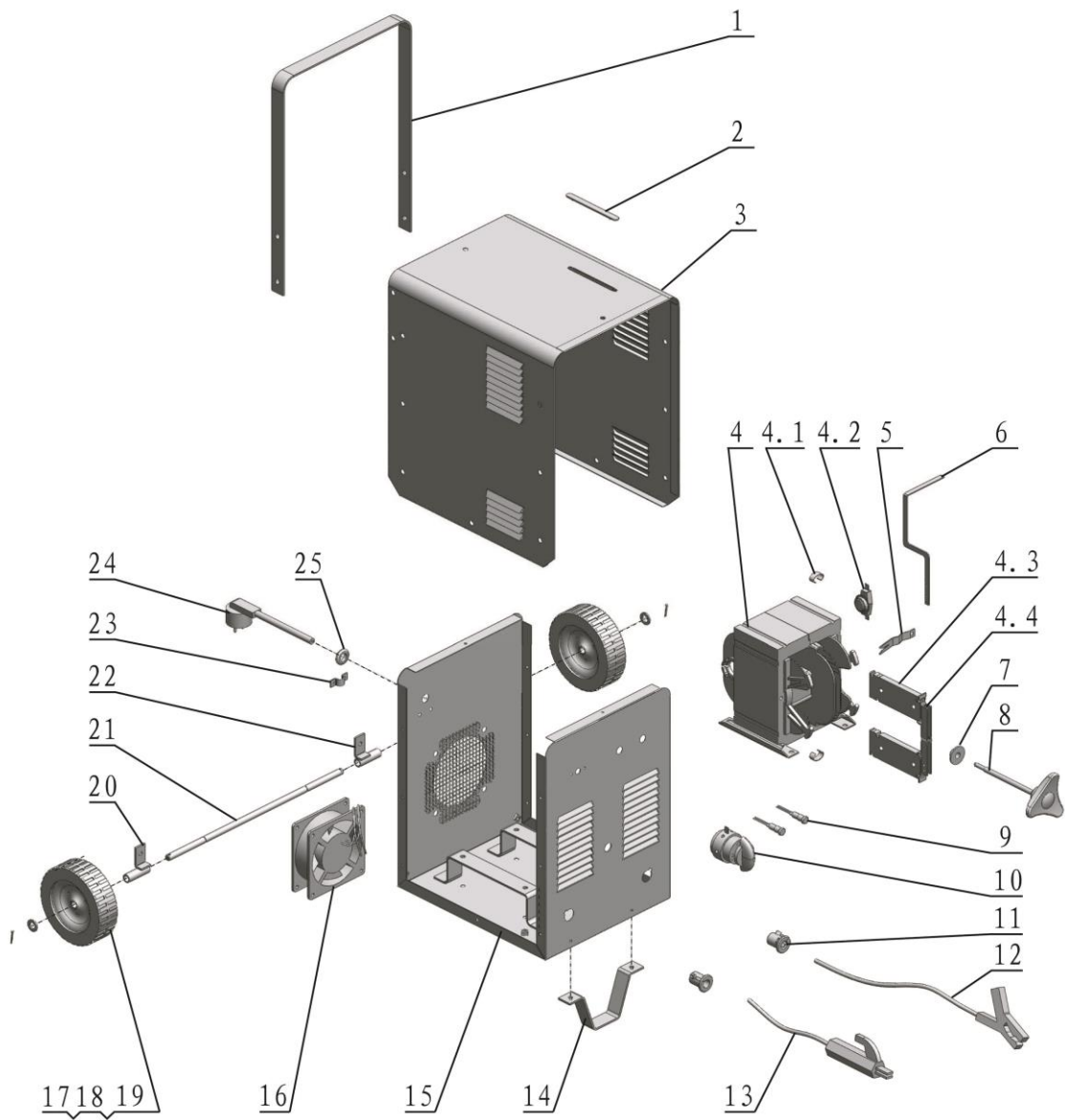
MAINTENANCE

- **Maintain your IRONTON Arc 200.** It is recommended that the general condition of any **IRONTON Arc 200** be examined before it is used. Keep your **IRONTON Arc 200** in good repair by adopting a program of conscientious repair and maintenance. Have necessary repairs made by qualified service personnel.
- Periodically clean dust, dirt, grease, etc. from your welder.
- Every six months, or as necessary, remove the cover panel from the welder and air-blow any dust and dirt that may have accumulated inside the welder.
- Replace power cord, ground cable, ground clamp, or electrode assembly when damaged or worn.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Unit Does Not Power Up	Unit Is Not Plugged In	Plug In Unit
	Input Power Circuit Breaker Not On	Reset Input Power Circuit Breaker
	The Main Power Switch Is Not Working	Replace Main Power Switch
Can Not Create An Arc	Work Piece is Painted Or Rusty	Remove All Paint And Rust
	Ground Clamp Is Connected Where There Is Paint Or Rust	Remove All Paint And Rust So Ground Clamp Is Connected To Bare Metal
	Ground Clamp Is Not Electrically Connected To The Work Piece	Make Certain The Ground Clamp Is Connected To The Work Piece
	Amperage Too Low for Electrode	Consult the electrode packaging for correct amperage settings.
	Not using recommended electrodes	This is an AC unit. Only use AC electrodes. For best results we suggest using 6013 electrodes.
Poor Welding Performance, excessive spatter	Damp Electrode	Use fresh and dry electrodes.
Electrode Sticks	The electrode is kept in contact with the work piece for too long while striking an arc.	This will take practice. Keep trying.
Welding Bead Is Too Thin	The welding travel speed is too fast	Reduce the welding travel speed. Maybe incorporate a slight weave over the joint.
Welding Bead Is Too Thick	The welding travel speed is to slow	Increase the welding travel speed.
For Assistance, Contact The Welder Help Line At 877-304-0294		

DIAGRAM & PARTS LIST



Reference #	Part#	Description	Qty.
1	1.1.01.05.0010	HANDLE	1
2	2.05.18.007	INDEX PANEL	1
3	1.1.01.01.0066	ENCLOSURE	1
4	1.1.02.03.0391	TRANSFORMER	1
4.1	2.06.29.051	CLIP CLUTH	2
4.2	2.07.36.739	THERMO-RELAY	1
4.3	1.1.02.03.0003	MOVABLE IRON CORE	2
4.4	2.01.29.052	MOVABLE IRON CORE SUPPORTER	1
5	2.06.29.221	SPRING	1
6	2.01.29.920	AMPERAGE INDICATOR	1
7	2.04.31.205	RUBBER RING	1
8	2.05.08.002	AMPERAGE ADJUSTMENT KNOB	1
9	1.2.07.02.0009	INDICATOR LIGHT WIRING	1
10	2.07.80.721	POWER SWITCH	1
11	2.05.05.201	CABLE HOLDER	2
12	1.2.08.02.0556	GROUND CABLE WITH CLAMP	1
13	1.2.08.01.0036	WELDING CABLE WITH ELECTRODE HOLDER	1
14	1.1.01.05.0016	BRAKE	1
15	1.1.01.04.0046	FRAME PLATE	1
16	2.07.89.004	FAN	1
17	2.06.21.104	COTTER PIN	2
18	2.06.17.019	FLAT WASHER	2
19	1.3.07.02.0841	WHEEL	2
20	1.1.03.01.0005	AXLE BRACKET(left)	1
21	2.01.29.958	AXLE	1
22	1.1.03.01.0006	AXLE BRACKET(right)	1
23	1.1.02.01.0011	CABLE CLAMP	1
24	1.2.07.01.0046	POWER CORD	1
25	2.04.31.104	COIL OUTER	1

For replacement parts please call **1-800-222-5381**. For technical questions contact our welder help line at 1-877-304-0294

WARRANTY

EFFECTIVE JULY 1, 2014

LIMITED WARRANTY

This warranty applies to the original purchaser and is subject to the terms and conditions listed below. This Limited Warranty is for new equipment sold after the above date, providing coverage for defects in material and workmanship at the time it is shipped from the factory.

Limited to the warranty periods below, Northern Tool + Equipment will repair or replace the item under warranty that fails due to defects in material and workmanship. Northern Tool + Equipment must be notified within 30 days of the failure, so as to provide instructions on how to proceed with the repair of your welder and warranty claim processing. Warranty period begins at the time the welder is purchased from Northern Tool + Equipment. **Keep your receipt as proof of purchase.**

Warranty Periods

Limited Warranty is divided into four categories. No Warranty, 90 days, 1 year and 3 year.

No Warranty

Normal wear items, MIG gun parts (contact tips, nozzle, contact tip adapter, MIG gun liner), drive roll, electrode holder, ground clamps, Plasma torch parts (nozzle, electrode, diffuser, cover) are considered consumable items and are not covered under warranty.

90 days

Parts for Northern Tool + Equipment welding carts and welding cabinets. This warranty covers the absence of or defective parts.

1 year

Parts and Labor on MIG gun parts (except those listed under normal wear items), cables, regulator, plasma torch (except those listed under normal wear items). Any shipping related to warranty repair is the responsibility of the customer.

1 year/3 year

Please see your product information to determine if your product has a 1 year or 3 year warranty. This warranty covers parts and Labor on items such as: transformer, reactor, rectifier, solenoid valve, PC Board, switches, controls, gas valve, drive motor, drive system other than drive roll and any other component that requires the removal of the sheet metal to access. Any shipping related to warranty repair is the responsibility of the customer.

Voiding Warranty

Warranty does not apply to: Shipping Damage, Misuse and abuse of the unit, alteration of the unit in any way.

Warranty Claim

This is a parts and labor warranty. **Do not return your unit.** Retain your receipt in the case a warranty claim is needed. No warranty will be provided without the original receipt from Northern Tool + Equipment. To make a warranty claim, call our welder help line at 877-304-0294, M-F 8:00 am to 5:00 PM Central time or email help@ntwelderhelp.com.



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