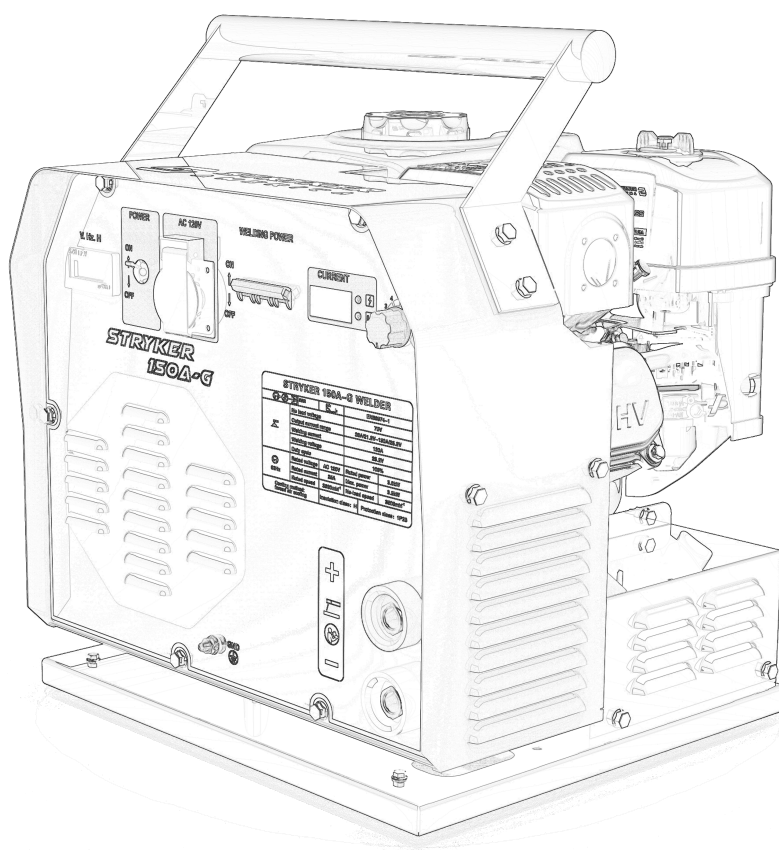




USER & SERVICE MANUAL

150A-G Engine Driven Welder

Warranty

Stryker America warrants to the end user all of its welding machines are free from manufacturer defects in materials and assembly for a period of 2 years from the date of purchase by the end user.

All warranty is null and void if the welding machine has been modified or damaged by the end user or used in any manner incorrectly.

Stryker America will assume all parts (including shipping) and labor repair costs to return the welding machine to correct working order, end user will be required to get the welding machine to a local Warranty / Repair Center.

Final determination will be made by Stryker America if the defect is covered by warranty based on information found at Warranty / Repair Center. If the defect falls under Warranty by Stryker America, Welder Repair or Replacement will be at the sole discretion of Stryker America.

WARRANTY LIMITATIONS

Stryker America's Liability under the Warranty Program shall not exceed the cost of correcting of the defect of the Stryker America Part.

Stryker America will not be liable for any incidental or consequential damages (such as loss of business etc) caused by the defect or the duration of time involved to correct the defect.

End Users Responsibility

The end user must maintain a copy of their original purchase receipt to help establish the date of purchase (this being the date the 2-year warranty begins).

The end user must do regular maintenance and have a copy of the receipts to prove appropriate maintenance has been done during the 2-year time frame.

All Stryker Welders have been designed for welding, with high quality designs and highest quality components to ensure professionally quality welding. Secondary, auxiliary power output is available on all Stryker Welders with the idea to allow for powering hand tools, lighting and other items to assist in the welding operation, but not designed as a “generator” for high power use. If high auxiliary power is what is wanted, we suggest you purchase a generator not a welder.

150A-G Welder (Overview)

This welder has been designed for high portability / mobility with high power and high duty cycle (in its category), designed for smaller welding operations. Designed for welding materials up to 1/4 to 3/8 inch thickness (thicker if the material is beveled with root pass and fill welding).

With a full tank of gas, the welder can be used for 2+ hours continuously, with a spare 10 liter spare fuel tank, a full workday of welding can be achieved.

Due to its high mobility, the welder can be very close to the welding location, please be aware of the engine exhaust fumes, do not use in an enclosed space and keep the unit above grade when in use.

With use of high quality welding cables (+ / -) up to 50 ft of distance can be used as a welding distance from the machine without any loss in power, with a longer distance possible but with a drop in amperage over long distances.

We have placed 12mm dinse output connectors on the welder allowing for the operator to quickly attach the cables and remove as needed to move the welder to new locations. Due to the ability to have the welder beside the welding location, a 15-20 ft long cable set is typically long enough for most operations, 25-30 ft extensions cables are available to extend the distance of the welder from the welding operation.

If left outdoors (in a yard or in the back of an open pick-up truck) a waterproof vinyl cover is recommended to help keep water and dirt out of the welder for a longer life.

The unit has been designed with 2 sets of vibration dampers, 1 set of 4 to absorb the engine vibrations and 1 set of 4 acting as a set of “feet” on the base to keep the machine from moving during use on hard surfaces.

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1. SAFETY INSTRUCTIONS

Before using this welder, you must read this instruction manual. Incorrect operation or abuse of the welder will result in the safety of the operator and damage to the welder, public or private property.

***** *Protect yourself and others, welding can put you and others under multiple hazards:***

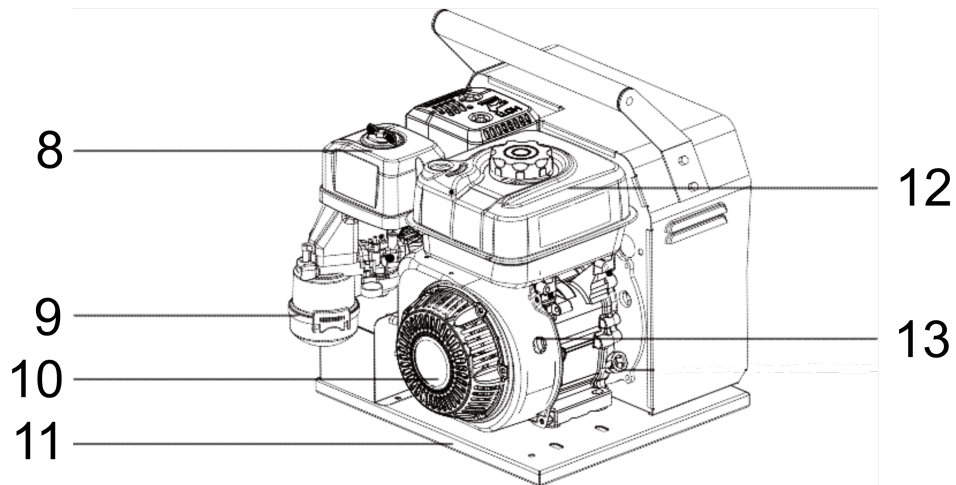
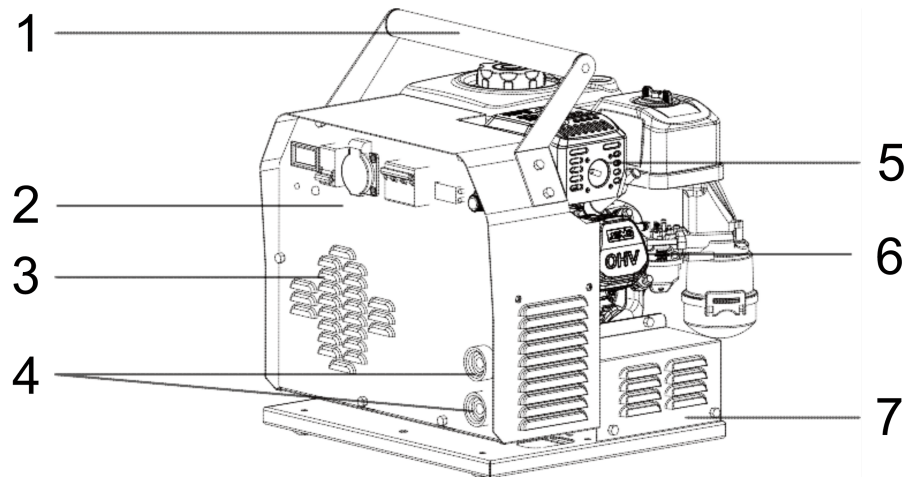
- 1.1. Take adequate measures to protect the eyes: it is very important to protect the eyes during welding, not only for the operator, but also for any other personnel in the vicinity of the welding operation. Eye hazards include welding flash caused by arc glare reflections. So, if you stare at the flash without protection, you may have severe pain or even blindness. For this purpose, the owner/operator must ensure that the welder is used by a person. Professional protective equipment must be used during operation: A properly fitted welding helmet with the correct shading of glass plus any protective light barriers if any other personnel will be in the vicinity of the welding.
- 1.2. Power and welding current may cause electric shock. Please do not touch the inside and outside of the welder; ensure that you and others have dry insulation against the ground, so that the body is completely isolated from the ground or electrodes.
- 1.3. Welding fumes and gases can be harmful to humans. Please never leave your head in the position of the welding or engine exhaust fumes ALWAYS ENSURE that there is sufficient fresh air circulation around the operator.
- 1.4. People using a pacemaker should not engage in welding operations and welders in use, without the consent of a medical professional, and the magnetic field generated when the welder is energized can adversely affect the operation of the pacemaker.
- 1.5. Welding splatter can cause fire or explosion. Do not allow welding near flammable materials; do not perform welding in hazardous locations such as closed tanks or pipes.

- 1.6. Exhaust pipes and mufflers are high-heat parts. Pay attention after operating the welder to avoid burns. The high temperature caused by the exhaust system is enough to ignite some materials. Do not place flammable materials near the welder or place any items on the welder to avoid fire.
- 1.7. The fuel of the welder is gasoline, and the discharge contains toxic gas carbon monoxide, so do not use it in a closed room or tight small areas to avoid carbon monoxide poisoning.
- 1.8. Gasoline is flammable and gasoline gas can cause an explosion. If a welder is running, let it cool first before refueling. Refueling should only be carried out in an outdoor open area, When refueling, there should be a fuel expansion space in the fuel tank to prevent accidents due to fuel expansion. It is forbidden to smoke next to gasoline, keep away from flames. Be sure to dry any spilled fuel before starting the welder.
- 1.9. Check the oil level before starting each time. If the oil level is lower than the lower limit or higher than the upper limit, the oil should be added or reduced to have normal operation, if the oil level drops to low the engine will automatically not start due to lack of oil. If engine will not start, first check oil level to confirm proper level.
- 1.10. Before the welding work, check the power output cables (+ / -) for wear and cracks in the casing, confirm protective machine grounding wire is correctly set (if required), confirm the ground cable is correct and a good ground has been made to the material to be welded.

2. WELDER SPECIFICATIONS

STRYKER 150A-G SPECIFICATIONS	
Welding rated no-load voltage (V)	DC75V
Rated welding output	30A/21.2V - 150A/25.2V
Current regulation	Stepless adjustment
Load duration	100% @ 25°C
DC inductance	Yes
Generation voltage (V)	120V / 60Hz
Rated power (kW)	3.0
Max Power supply (kW)	3.2
Power type	230SV/223cc
type	Gasoline / Air Cooled
Rotational speed	3800 rpm
Rated power (kW / HP)	4.0 / 5.4
Maximum power (kW / HP)	4.5 / 6.0
Fuel Tank (L)	3.6 L
Fuel consumption (75PRP)	1.9 L/h
Endurance (welding 60%)	1.9 H
Protection class	IP21S
Net weight (kg / lbs)	35 / 77
Gross weight (kg / lbs)	37 / 82
Overall size (L x W x H)	410mm x 445mm x 474mm 16.1" x 17.5" x 18.6"

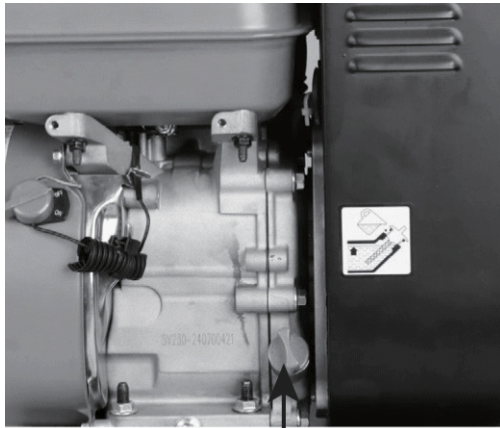
3. MACHINE COMPONENTS



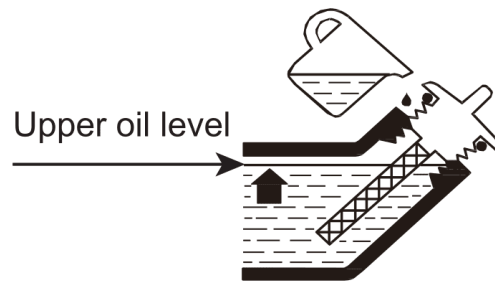
- | | | |
|--------------------|-------------------|-------------------------|
| 1. Handle | 6. Spark Plug Cap | 11. Base Plate |
| 2. Front Panel | 7. Reactor | 12. Fuel tank Assembly |
| 3. Air Intake | 8. Air Filter | 13. Start / Stop Switch |
| 4. Welding Sockets | 9. Carburetor | |
| 5. Muffler | 10. Pull Start | |

4. BEFORE STARTING

- 4.1. Check whether the welding machine parts are complete, and whether the connecting parts such as bolts and nuts and joints are loose or broken if any, should be repaired before starting.
- 4.2. Welders are shipped without any engine oil as per environmental standards.
- 4.3. Unscrew plug / dipstick to add oil (the equipment should be on flat ground).
- 4.4. Slowly add oil till the oil level is just reaching the lower edge of the filling hole.
- 4.5. Wipe dipstick clean and insert without threading in to confirm correct oil level



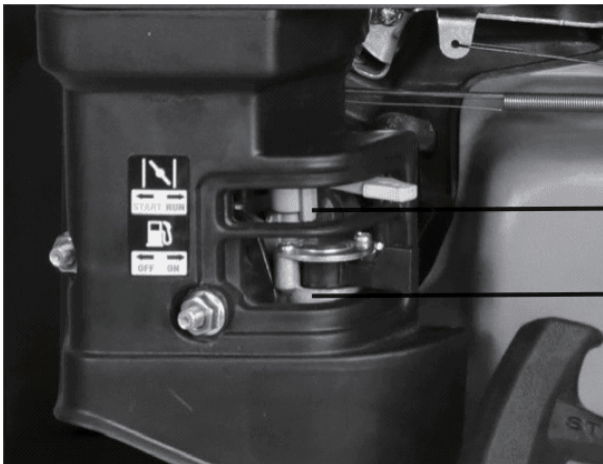
Oil filler



- 4.6. Engine oil recommended (4-stroke gasoline engine oil) is 5W-30.
- 4.7. Welders are shipped without any fuel in the fuel system as per environmental standards.
- 4.8. Unscrew Fuel Tank Cap and without removing fuel screen, fill fuel tank with standard grade unleaded gasoline till the tank is almost full (allow some space for expansion in heat), re-install Fuel Tank Cap.

5. PREPARING TO START

- 5.1. Turn the Fuel Switch Lever to the **ON** position “fuel valve” is located between the fuel tank and the carburetor. The first time starting when the welder is brand new it may take a bit of time for the fuel to fill the carburetor.
- 5.2. The Choke Switch Lever is used to open and close the throttle valve in the carburetor. When first starting, set the Choke Switch Lever to the **START** position to increase the concentration of the fuel mixture. After starting the engine allow the Choke Lever to stay on for 5-8 seconds then turn to the **RUN** position for normal welder operation.

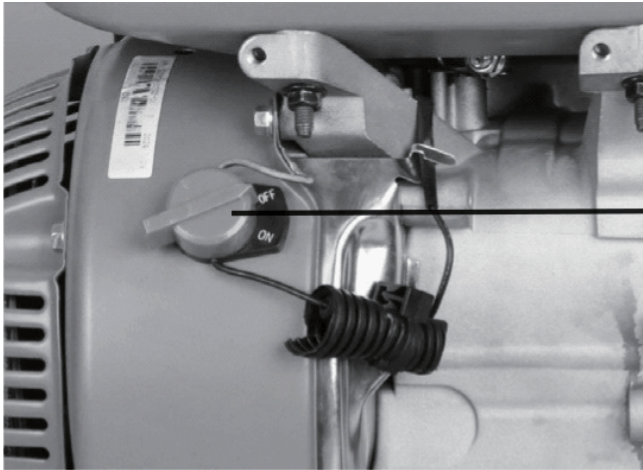


Choke Switch Lever

Fuel Switch Lever

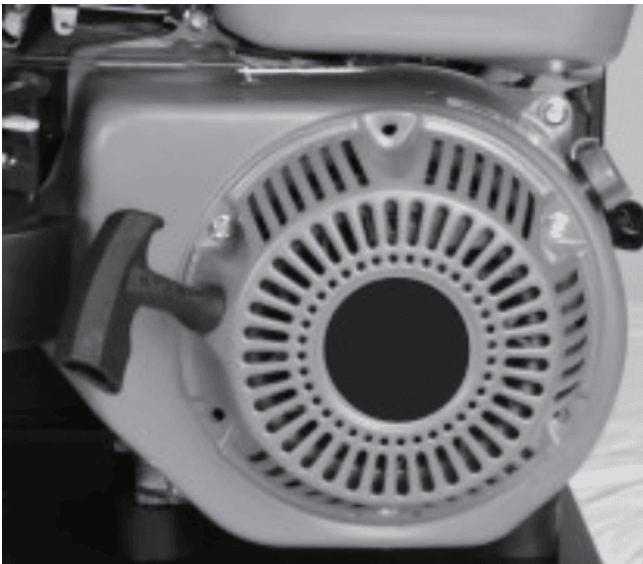
6. STARTING THE WELDER

6.1. To start engine, turn the Start Switch to the **ON** Position.



Start / Stop Switch

6.2. Pull the starter handle until you feel resistance and then pull quickly. If unsuccessful start, repeat until the unit starts successfully. After the start is successful, the start handle should be gently put back into the engine to avoid damage. Pull starter rope straight out of machine, not on an angle or the rope will rub against the welder unit, and the starter rope will wear out.

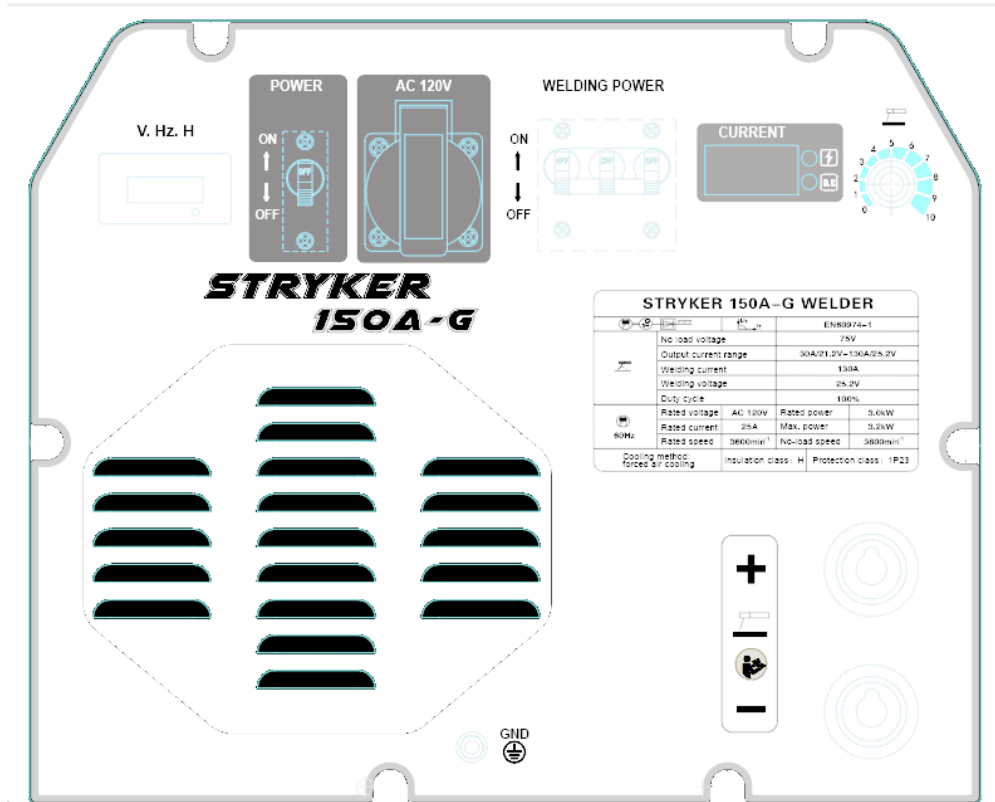


7. RUNNING

- 7.1. Ambient temperature during machine use should be: -10°C~40°C.
- 7.2. Ambient temperature during transportation and storage:-20°C~55°C.
- 7.3. Relative humidity: at 40°C: relative humidity should be ≤50%; at 20°C: relative humidity should be ≤90%. Use altitude ≤1000 meters.
- 7.4. Tilt angle: The tilt angle of the welding power source should not exceed 10 degrees.
- 7.5. If the welder auxiliary outlet is overloaded, the circuit breaker will automatically shut down. If the circuit breaker is automatically shut down, please check whether the other equipment outside the unit is working normally, and then check whether the load exceeds the rated load of the unit.
Special reminder: The circuit breaker is not responsible for controlling the output of the welding power supply only the auxiliary output.
- 7.6. It is recommended to use the following chart to select the Electrode and the output Amperage. ***Note: for reference only***

Workpiece thickness (mm)	≤2	3	4~5	6~12	More than 13
Welding rod diameter (mm)	1.6~2.5	2.5~3.2	3.2~4.0	4.0~5.0	5.0~6.0
Welding current (AMPS)	40~60	60~80	90~130	160~210	200~270

7.1 USING THE WELDER



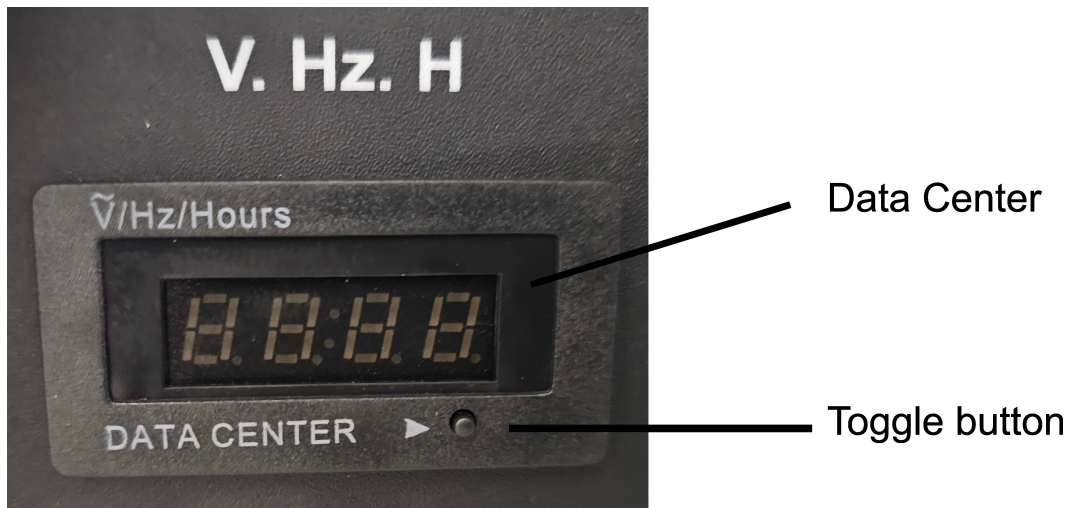
Setting up and using the welder:

- 7.1.1. If desired, attach a welder ground cable to the welder frame ground on the front panel and place the ground spike into the ground and connect the other end of the cable.
- 7.1.2. Install welding output cables, positive cable with electrode holder into the positive terminal on the front panel of the welder (red colour +) and the negative ground cable into the negative terminal on the front panel (black colour -). The connectors get inserted and turned to the right (clockwise) to lock into the outlet terminals.
- 7.1.3. Adjust the output amperage on the output dial and confirm the amperage required on the digital readout.
- 7.1.4. Confirm a good ground connection at the welding location and begin to weld, adjust output amperage as needed.

Using the Auxiliary Outlet:

- 7.1.5. Switch the outlet power switch to **ON** and plug in accessory and use as directed. If the equipment plugged and being used draws too much current it will trip auxiliary outlet breaker and cut off power to the outlet. If this happens, unplug the equipment and confirm its current draw and try another piece of equipment to see the results. If the breaker continues to disconnect the outlet power, there may be a problem with the circuit, have a qualified professional repair center test the circuit to confirm and repair any possible issues.

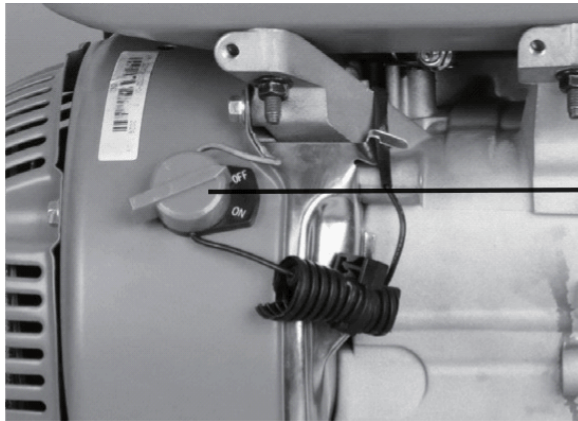
Digital Data Center:



- 7.1.6. The data center has 3 Settings (press button to toggle between screens):
1. HZ - The AC current frequency of the auxiliary outlet
 2. V - The AC current voltage of the auxiliary outlet
 3. HR - The number of hours the machine has been running (for machine service frequency)

8. STOPPING

- 8.1. Once you are finished welding, let the unit run with no load for 1-2 minutes, and then turn the start switch to the **OFF** position.



Start / Stop Switch

- 8.2. During transportation, the fuel Switch Lever should be turned to the **OFF** position.



Fuel Switch Lever

9. MAINTENANCE

Regular maintenance is essential to keep your equipment operating at peak performance. Performing maintenance on a seasonal basis simplifies the process by creating a manageable schedule. Every four months, spend approximately one hour performing basic maintenance tasks on the machine. To assist multiple users in tracking maintenance activities, a maintenance chart is provided below. This chart helps verify that regular upkeep has been completed.

DATE	MAINTENANCE PERFORMED	PARTS SERVICED / REPLACED

The following basic tools and supplies are required to perform routine maintenance:

HAND TOOLS	SUPPLIES
1. Screw Drivers - Flat and Philips Heads 2. Wrench Set – Metric 3. Small Pry Bar – Nylon or rubber coated if possible to avoid marring surfaces 4. Needle Nose Pliers 5. Adjustable / Slip Joint Pliers 6. ¼ Inch Ratchet Set with Deep Sockets and Various Extensions 7. Hose Clamp Pliers 8. Hose Squeeze Pliers 9. Wire Cutters 10. Brass Bristle Wire Brush with Handle 11. Oil Drain Bucket 12. Fuel Drain Container 13. Spark Plug Socket - 13/16" 14. Spark Plug Gauge 15. Funnel	1. Carburetor Cleaner 2. Brake Cleaner 3. Lubricant (WD-40 or Equivalent) 4. Compressed air Source (Can or Compressor) 5. Engine Oil (as recommended) 6. Hand Towels / Shop Rags

The following chart outlines the basic components for regular inspection and care:

Item: based on the running target month or the running hour to maintain		Each time	The first month or 20h	Every 3 months or 50h	Every 6 months or 100h	Every (1) year or 300h
Engine Oil	Check the Level	X				
	Change Oil		X		X	
Air Filter	Check Filter	X				
	Clean / Replace			X		
Sedimentation glass	Clean				X	
Spark plug	Check & Adjust				X	
	Replace					X
Valve clearance	Check - adjust					X
Combustion chamber	Clean	Every 500h				
Case and filter	Clean					X
Fuel hose	Check	X	Every 2 years (If necessary, replace)			

***** In dusty areas, the frequency of maintenance should be increased.**

9.1 OIL REPLACEMENT

- 9.1.1. The welder unit is placed on a flat surface, remove the oil cap / dipstick and then the oil draining bolt and sealing ring are removed (ensure a large enough container is used to catch the used oil).
- 9.1.2. Clean any oil dripping and re-install the oil draining bolt and tighten.
- 9.1.3. Using an appropriate funnel, pour in the recommended new oil until the upper limit mark is shown on the oil dipstick then screw in the oil cap / dipstick and tighten.
- 9.1.4. We recommend that you put the used oil in a sealed container and send it to the waste disposal site or waste recycling service station for disposal. Do not throw used oil into the garbage, pour on the ground or down the sewer.

9.2 CLEANING / CHANGING OF AIR FILTER

- 9.2.1. Clean the filter element with warm soapy water, rinse and dry, or clean the filter element with a non-combustible solution and allow to dry.
- 9.2.2. Dip foam pre-filter (if equipped) into clean filter oil and squeeze out excess oil. (If there is too much oil left in the filter element, the welder unit will smoke when it starts / runs).

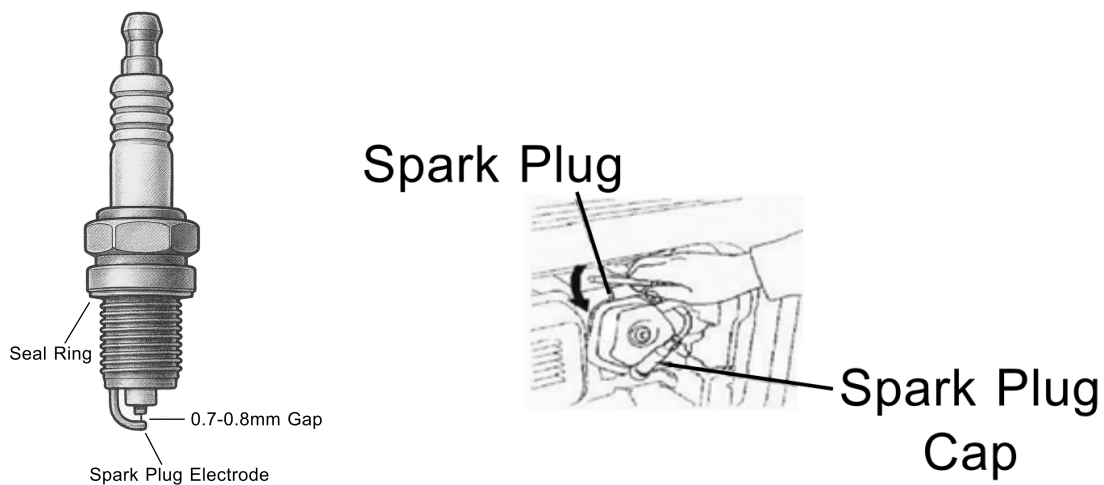


- 9.2.3. Wipe off the dust on the air filter holder and the air filter cover with a damp cloth, taking care not to allow dust to enter the air tube leading to the carburetor. Note: Dirty air filter elements can impede air from entering the carburetor, reducing engine performance. If the welder unit is used in places with a lot of dust, the air filter element should be cleaned more frequently than specified in the maintenance schedule.

9.3 SPARK PLUG MAINTENANCE

****** In order to ensure the normal operation of the welder unit, the spark plug gap must be adjusted correctly and the carbon deposits removed. Incorrect spark plugs installed can damage the engine.***

- 9.3.1. First clean the dirt around the spark plug, then remove the spark plug cap, and finally remove the spark plug with a special socket for the spark plug.



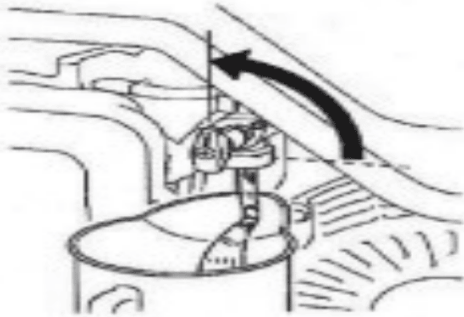
- 9.3.2. Inspect the spark plug, replace the spark plug if the electrode is worn or the insulator is broken, damaged or corroded.
- 9.3.3. If the spark plug is in good condition, use a spark plug gauge to measure the gap of the spark plug electrode. If necessary, bend the side of the electrode to adjust the gap. Spark plug clearance: 0.7-0.8mm

- 9.3.4. Ensure that the spark plug seal is in good condition and screw the spark plug in by hand to avoid cross threading or over tightening too tightly. After the spark plug is installed, tighten with a spark plug socket. If it is a used spark plug, tighten 1/8-1/4 turn after the spark plug is tightened. If it is a new spark plug, tighten 1/2 turn after the spark plug is tightened.

9.4 FUEL

- 9.4.1. Depending on the area where you use the welder unit, the gasoline will deteriorate and oxidize to varying degrees. Even in a short period of 30 days, the gasoline will deteriorate and oxidize, causing blockage to the carburetor and fuel system, if the engine will not be used for more than a 30 day period, a gasoline stabilizer should be added to the fuel tank.
- 9.4.2. It is recommended to use a non-Ethanol Blend Fuel, if possible, Ethanol is a corrosive substance as well it causes the fuel to burn at a higher temperature, this could cause overheating of the machine if running in a hot climate with a high Ethanol blended fuel.
- 9.4.3. Gasoline deterioration can cause start-up difficulties and leave a gelatinous deposit to block the fuel system. If the gasoline in your welder unit deteriorates during storage, you may need to clean or repair the carburetor and other fuel system components.
- 9.4.4. The gasoline should not be left in the system over a full season of not being used (more than four months), drain all the gasoline from the fuel tank and carburetor at the end of the welding season and “fog” the engine cylinder before storage to ensure correct engine “winterizing” when not in use.
- 9.4.5. When preparing engine for storage, place a suitable petrol container under the carburetor and use a funnel to prevent gasoline spillage when draining the carburetor.
- 9.4.6. Loosen the carburetor drain bolt and drain the gasoline from the carburetor, tighten the fuel drain bolt when finished.
- 9.4.7. Place a suitable gasoline container under the carburetor inlet hose and use a funnel to prevent gasoline spillage when draining the fuel tank.

- 9.4.8. Remove the carburetor fuel inlet hose and turn the fuel valve to the **ON** position. Drain the gasoline completely and then reattach the fuel line to the carburetor.



NOTE - Sometimes you may hear metal knocking noise during heavy load operation, and it does not attract users attention. If the sound is emitted under normal engine operation, please change the gasoline type immediately. If the abnormal noise still exists after replacement, please contact an authorized Distributor. Long term running the welder unit with a metal knocking noise may cause damage to the engine. The damaged parts are not covered by the Manufacturer's Warranty if the incorrect type of fuel was used and caused engine damage.

10. COMMON FAULTS & REPAIRS

Fault(s)	Cause of issue	Troubleshooting
Unable to start engine	1. The fuel switch is not open. 2. The choke switch is not open. 3. The oil level is too low. 4. The oil warning system is faulty. 5. The fuel is old or not good. 6. The ignition system is faulty. 7. Spark plug is ok but still ignition issue.	1. Turn on the fuel switch lever to the ON position. 2. Turn the choke switch lever to the ON position. 3. Check the oil level and add if needed. 4. The oil warning sensor cable can be unplugged and attempt restart to determine if sensor is faulty. (After the determination, sensor should be replaced if faulty). 5. Replace the fuel in the tank and carburetor. 6. Check and clean / replace the spark plug if faulty. 7. Check the ignition coil, replace if faulty.
Welder has no output voltage	1. The welding machine Ground Cable Wire is faulty or not grounded correctly 2. The inverter temperature exceeds 75°C	1. Check and repair / replace cable as needed. 2. Shut down, allow to cool off and restart motor windings are not replaced.

	3. Short circuit. 4. The motor burned out. The winding has a short circuit, open circuit, and ground. 5. The circuit breaker is off.	3. Open the circuit breaker (auxiliary power only) 4. Replace motor. 5. Turn circuit breaker on.
Power output voltage is too high or too low	1. The speed is too low or too high. 2. The inverter system is broken. 3. Overload.	1. Adjust the speed. 2. Replace the inverter. 3. Reduce the load.
The output current is too high or too low.	1. The speed is too low or too high. 2. There is a problem with the rectifier module. 3. The winding has a short circuit, open circuit, and ground. 4. The circuit is not open/ closed.	1. Adjust the speed. 2. Replace the rectifier module. 3. Replace the sampling transformer coil or connect again. 4. Turn on/off the circuit.
Smoke in the welder	1. The rotor and the stator are touching. 2. The load is too heavy. 3. The winding is shorted or grounded. 4. The rectifier bridge on the inverter is short-circuited and grounded.	1. Replace or repair parts as needed. 2. Reduce the load. 3. Replace the motor winding assembly. 4. Replace the rectifier bridge.



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