



OWNER'S MANUAL WIRE FEEDER

MODEL: CM-743-U U30104



Ensure to read this instruction manual thoroughly for safe and proper use of the product.

December 16, 2015

DAIHEN Corporation

Manual No. : U30104-1

Notice : Machine export to Europe

This product does not meet the requirements specified in the EC Directives which are the EU safety ordinance that was enforced starting on January 1, 1995. Please make sure that this product is not allowed to bring into the EU after January 1, 1995 as it is.

The same restriction is also applied to any country which has signed the EEA accord.

Please ask us before attempting to relocate or resell this product to or in any EU member country or any other country which has signed the EEA accord.

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1 SAFETY INFORMATION

The following safety alert symbols and signal words are used throughout this manual to identify various hazards and special instructions.



WARNING

WARNING gives information regarding possible personal injury or loss of life.



CAUTION

CAUTION refers to minor personal injury or possible equipment damage.



Prohibited: indicates “Prohibited” matters.

2 ARC WELDING SAFETY PRECAUTIONS



WARNING

ARC WELDING can be hazardous.

- PROTECT YOURSELF AND OTHERS FROM POSSIBLE SERIOUS INJURY OR DEATH.
Be sure to:
 - Keep children away.
 - Keep pacemaker wearers away until consulting a doctor.
- Read and understand the summarized safety information given below and the original principal information that will be found in the PRINCIPAL SAFETY STANDARDS.
- Have only trained and experienced persons perform installation, operation, and maintenance of this equipment.
- Use only well maintained equipment. Repair or replace damaged parts at once.

ARC WELDING is safe when precautions are taken.



Before using this product, be sure to read this manual.

The device is manufactured using state-of-the-art technology and according to recognised safety standards. If used incorrectly or misused, however, it can cause.

- injury or death to the operator or a third party,
- damage to the device and other material assets
- belonging to the operating company,
- inefficient operation of the device

All persons involved in commissioning, operating, maintaining and servicing the device must:

- be suitably qualified
- have sufficient knowledge of welding
- read and follow these operating instructions carefully.

The operating instructions must always be at hand wherever the device is being used. In addition to the operating instructions, attention must also be paid to any generally applicable and local regulations regarding accident prevention and environmental protection

All safety and danger notices on the device

- must kept in a legible state
- must not be damaged or marked
- must not be removed
- must not be covered, pasted or painted the covers

2 ARC WELDING SAFETY PRECAUTIONS (Continued)

WARNING

2



ELECTRIC SHOCK can kill.

Touching live electrical parts can cause fatal shocks or severe burns. The electrode and work circuits are electrically live whenever the output is on. The power line and internal circuits of this equipment are also live when the line disconnect switch is on. When arc welding all metal components in the torch and work circuits are electrically live.

- Do not touch live electrical parts.
- Wear dry insulating gloves and other body protection that are free of holes.
- Insulate yourself from work and ground using dry insulating mats or covers.
- Be sure to disconnect the line disconnect switch before installing, changing torch parts or maintaining this equipment.
- Properly install and ground this equipment according to its Owner's Manual and national, state, and local codes.
- Keep all panels and covers of this equipment securely in place.
- Do not use worn, damaged, undersized, or poorly spliced cables.
- Do not touch electrode and any metal object if POWER switch is ON.
- Do not wrap cables around your body.
- When the wire feeder is not in use or the work is interrupted for a long time, shut off the power of all units.
- Blow dry air to parts periodically to remove dust and dirt.



ARC RAYS can burn eyes and skin: FLYING SPARKS AND HOT METAL can cause injury. NOISE can damage hearing.

Arc rays from the welding process produce intense heat and strong ultraviolet rays that can burn eyes and skin.

Noise from some arc welding can damage hearing.

- Wear face shield with a proper shade of filter (See ANSI Z 49.1 listed in PRINCIPAL SAFETY STANDARDS) to protect your face and eyes when welding or watching a welder work.
- Wear approved safety goggles. Side shields recommended.
- Use protective screens or barriers to protect others from flash and glare: warn others not to look at the arc.
- Wear protective clothing made from durable, flame-resistant material (wool and leather) and foot protection.
- Use approved earplugs or earmuffs if noise level is high. Chipping and grinding can cause flying metal. As welds cool, they can throw off slag.
- Wear approved face shield or safety goggles. Side shields recommended.
- Wear proper body protection to protect skin.

 **WARNING****WELDING can cause fire and explosion.**

Sparks and spatter fly off from the welding arc. The flying sparks and hot metal, spatter, hot base metal, and hot equipment can cause fire and explosion.

Accidental contact of electrode or welding wire to metal object can cause sparks, overheating, or fire.

- Protect yourself and others from flying sparks and hot metals.
- Do not weld where flying sparks can strike flammable material.
- Remove all flammables within 33ft. [10m] of the welding arc. If this is not possible, cover them with approved covers.
- Be alert that welding sparks and hot metals from welding can easily pass through cracks and openings into adjacent areas.
- Watch for fire, and keep a fire extinguisher nearby.
- Be aware that welding on a ceiling, floor, bulkhead, or partition can ignite a hidden fire.
- Do not weld on closed containers such as tanks or drums.
- Connect base metal side cable as close to the welding area as possible to prevent the welding current from traveling along unknown paths and causing electric shock and fire hazards.
- Remove stick electrode from holder or cut off welding wire at contact tip when not in use.
- Does not use the welding power source for other than arc welding.
- Wear oil-free protective garments such as leather gloves, a heavy shirt, cuffless trousers, boots, and a cap.
- A loose cable connection can cause sparks and excessive heating.
- Tighten all cable connections.
- When there is an electrical connection between a work piece and the frame of wire feeder or the wire reel stand, arc may be generated and cause damage by a fire if the wire contacts the frame or the work piece.

2 ARC WELDING SAFETY PRECAUTIONS (Continued)

WARNING

2



FUMES AND GASES can be hazardous to your health.

Arc welding produce fumes and gases. Breathing these fumes and gases can be hazardous to your health.

- Keep your head out of the fumes. Do not breathe the fumes.
- Ventilate the area and/or use exhaust at the arc to remove welding fumes and gases.
- If ventilation is poor, use an approved air-supplied respirator.
- Read the Material Safety Data Sheets (MSDS) and the manufacturer's instructions on metals, consumables, coatings, and cleaners.
- Do not weld or cut in locations near degreasing, cleaning, or spraying operations. The heat and arc rays can react with vapors to form highly toxic and irritating gases.
- Work in a confined space only if it is well ventilated, or while wearing an air-supplied respirator. Shielding gases used for welding can displace air causing injury or death. Be sure the breathing air is safe.



CYLINDER can explode if damaged.

A shielding gas cylinder contains high-pressure gas. If damaged, a cylinder can explode.

Since gas cylinders are normally part of the welding process, be sure to treat them carefully.

- Use only correct shielding gas cylinders, gas regulator, hoses, and fittings designed for the specific application; maintain them in good condition.
- Protect compressed gas cylinders from excessive heat, mechanical shock, and arcs.
- Keep the cylinder upright and securely chained to a stationary support or a rack to prevent falling or tipping.
- Keep cylinders away from any welding or other electrical circuit.
- Never touch cylinder with welding electrode.
- Read and follow instructions on compressed gas cylinders, associated equipment, and the CGA publication P-1 listed in PRINCIPAL SAFETY STANDARDS.
- Turn face away from valve outlet when opening cylinder valve.
- Keep protective cap in place over valve except when gas cylinder is in use or connected for use.
- Do not disassemble or repair the gas regulator except for the person authorized by the manufacturer of them.

2 ARC WELDING SAFETY PRECAUTIONS (Continued)

WARNING

Be sure to observe the followings for preventing physical injuries, a fire and electric shock.

Handling of plastic parts

Side door is made of polycarbonate.

Make sure to observe the following notice.

- Do not apply external force and a shock to side door. Otherwise it maybe broken and in trouble.
- Polycarbonate parts can be weakened or damaged by solvents and oils. If the side door or covers are damaged, repair or replace immediately.

Do not alter or remodel our products.

- You may get injured or have your equipment damaged because of fire, failure or malfunction caused by altering or remodeling the product.
- The warranty does not cover any altered or remodeled products.

2

2 ARC WELDING SAFETY PRECAUTIONS (Continued)

WARNING

2



Rotating parts may cause injuries. Be sure to observe the following.



If hands, fingers, hair or clothes are put near the fan's rotating parts or wire feeder's feed roll, injuries may occur.

- Do not use this equipment if the case and the cover are removed.
- When the case is removed for maintenance/inspection and repair, certified or experienced operators must perform the work. Erect a fence, etc. around this equipment to keep others away from it.
- Before touching rotating parts for maintenance, inspection and repair, shut off the welding power.
- Do not put hands, fingers, hair or clothes near the rotating fans or wire feed roll.



ARC WELDING work areas are potentially hazardous.

FALLING or MOVING machine can cause serious injury.

- When hanging the welding power source by a crane, do not use the carrying handle.
- Place the welding power source and wire feeder securely on a flat surface.
- Do not pull the welding power source across obstacles.
- Do not put wire feeder on the welding power source.
- Do not put the welding power source and wire feeder where they will pit or fall.

WELDING WIRE can cause puncture wounds.

- Do not press gun trigger until instructed to do so.
- Do not point gun toward any part of the body, other people, or any metal when threading welding wire.

PRINCIPAL SAFETY STANDARDS

Arc welding equipment – Installation and use, Technical Specification IEC 62081, from International Electro technical Commission

Arc welding equipment Part 1: Welding power sources IEC 60974-1, from International Electro technical Commission

Safety in Welding and Cutting, ANSI Standard Z49.1, from American Welding Society.

Safety and Health Standards, OSHA 29 CFR 1910, from Superintendent of Documents, U.S. Government Printing Office.

Recommended Practices for Plasma Arc Cutting, American Welding Society Standard AWS C5.2, from American Welding Society.

Recommended Safe Practices for the Preparation for Welding and Cutting of Containers That Have Held Hazardous Substances, American Welding Society Standard AWS F4.1, from American Welding Society.

National Electrical Code, NFPA Standard 70, from National Fire Protection Association.

Safe Handling of Compressed Gases in Cylinders, CGA Pamphlet P-1, from Compressed Gas Association.

Code for Safety in Welding and Cutting, CSA Standard W117.2, from Canadian Standards Association, Standards Sales.

Safe Practices For Occupation And Educational Eye And Face Protection, ANSI Standard Z87.1, from American National Standards Institute.

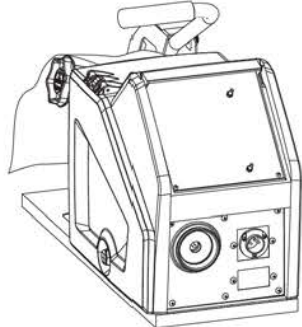
Cutting And Welding Processes, NFPA Standard 51B, from National Fire Protection Association.

NOTE: The codes listed above may be improved or eliminated. Always refer to the updated codes.

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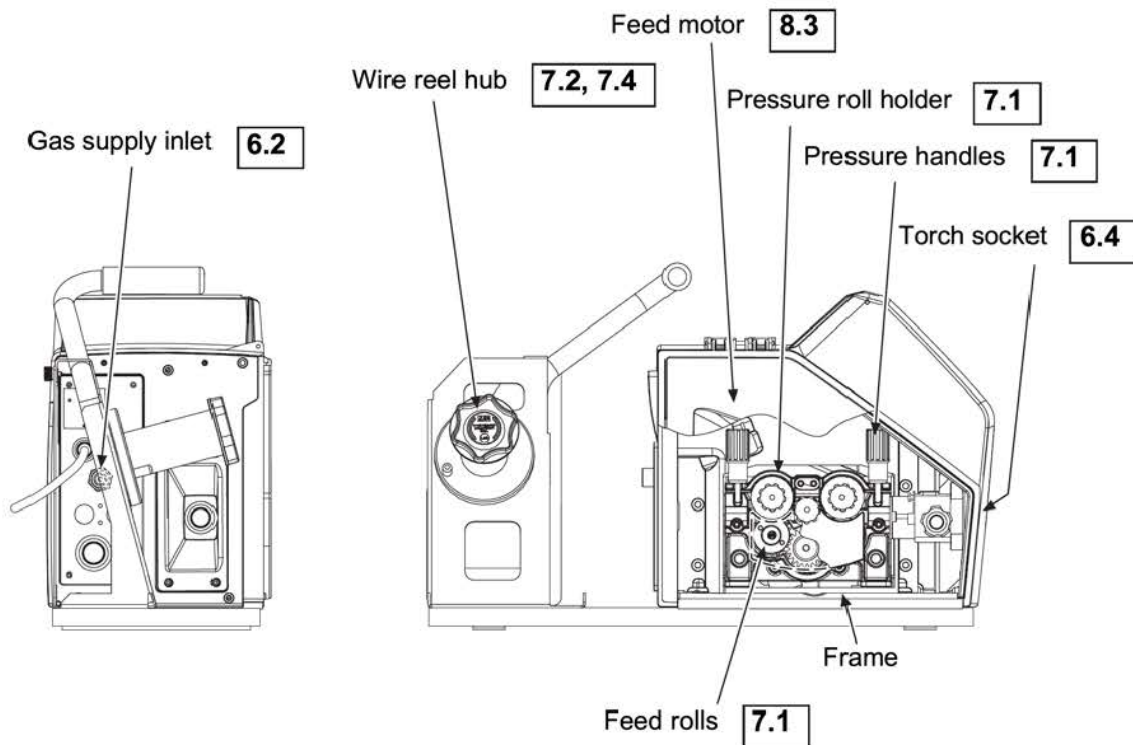
3 CHECKING OF QUANTITY OF THE ACCESSORIES

Check the quantity of parts when opening the package.

Wire feeder	Accessory		
	Description	Specification	Q'ty
	① GAS HOSE (3m)	U5971R00	1
	② SWITCH CORD	U5971S00	1
	③ TERMINAL	100-0816	2
	④ VINYL CAP	100-0817	2
	⑤ HOSE COVER	U1997C03	2
	⑥ HEXAGON SOCKET SCREW KEY (M4)	-	1




4 NAMES OF PARTS

- Refer to the section indicated in for details.






5 CARRYING AND INSTALLING OF THE WIRE FEEDER

5.1. Transportation

 WARNING	
Observe the following to avoid damage to the wire feeder or physical injury when carrying the equipment.	
	<ul style="list-style-type: none"> Do not touch the charging parts inside or outside the wire feeder. Disconnect the wire feeder from the welding power source by turning off the line disconnect switch in the power box to avoid an electric shock before carrying the equipment.
	<ul style="list-style-type: none"> Be sure to detach the wire reel from the wire feeder before lifting the equipment to the high places by a crane.

5.2. Installation

 WARNING	
When installing the wire feeder, follow the instructions below to avoid occurrence of fires during welding and physical damage by fume gas.	
	<ul style="list-style-type: none"> Do not place the welding machine near combustible materials and flammable gas. Remove combustible materials to prevent dross coming into contact with combustible objects. If that not possible, cover them with noncombustible covers.
	<ul style="list-style-type: none"> To avoid gas poisoning and danger of suffocation, wear a gas mask or adequately ventilate when using the welding machine in the place regulated by a local law. To prevent disorder or poisoning caused by fume, wear a gas mask or weld at a partial exhaust facility approved by the local regulation. Adequately ventilate or wear a gas mask when using the welding machine in a tank, a boiler, a hold of a ship, because heavier gas such as carbon dioxide or argon gases are drifting there. When using the welding machine at a narrow space, comply with a trained supervisor's directions. And be sure to wear a gas mask. Do not operate the welding machine near the place where degreasing, cleansing, and spraying are performed. Otherwise, poisonous gas may be generated. Be sure to wear a gas mask or adequately ventilate when welding a coating steel plate. (Poisonous gas and fume may be generated.) Do not place the welding power source, wire feeder, torch, and control cable (including the extension cable) in an area where the equipment can become wet.

5 CARRYING AND INSTALLING OF THE WIRE FEEDER (Continued)

CAUTION

Follow the instructions below when selecting an installation place for the wire feeder.

- Do not install in areas exposed to direct sunlight and rain.
- Do not place the welding power source, wire feeder, torch, and control cable (including the extension cable) in an area where the equipment can become wet.
- Install the wire feeder in the place where is altitude below 1,000m and the ambient temperature is between -10 °C and +40 °C (+14 °F and +104 °F).
- Install a wind shield to protect arc from wind.
- Fix the gas cylinder to a stand specifically made for gas cylinders.

6 CONNECTION PROCEDURE

CAUTION



Follow the instructions below to avoid electric shock.

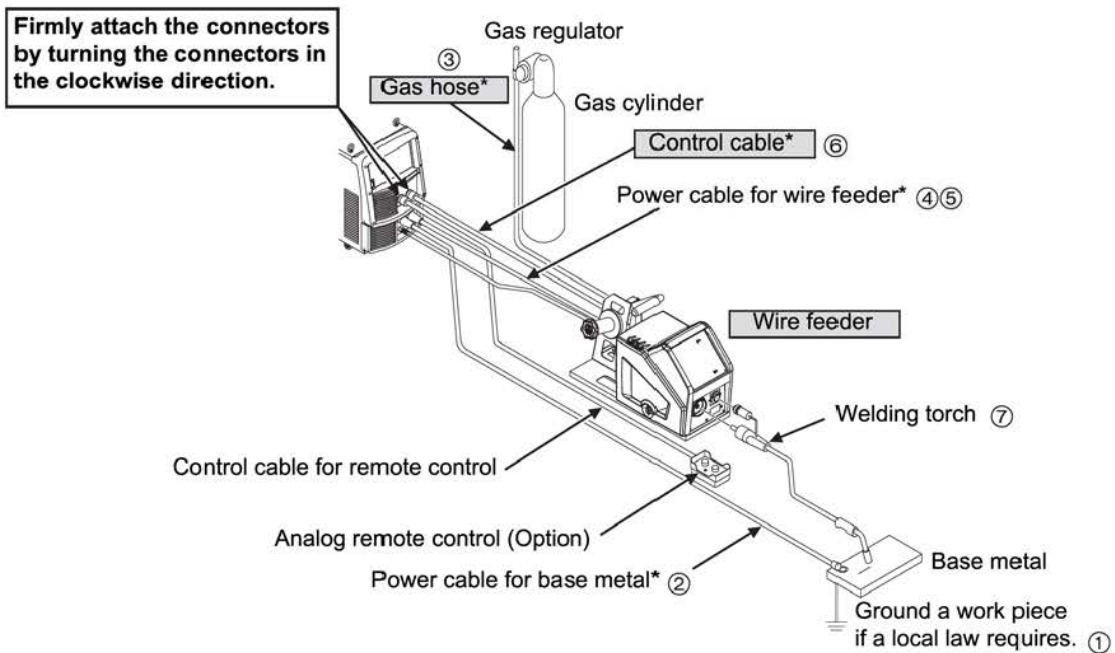
Do not touch live electrical parts, as this may cause in fatal shock and severe burns.

Do not touch live electrical parts, as this may cause in fatal shock and severe burns.

- Do not touch live electrical parts of the welding machine.
- Have a qualified electric engineer ground the case of the welding power source and the base metal or jig electrically connected, following a local law.
- Disconnect the wire feeder from the welding power source by turning off the line disconnect switch in the power box to avoid an electric shock before grounding the welding power source or base metal and connecting the cables or hoses.
- Do not use a cable with lack of capacity or a damaged cable.
- Tighten and insulate the connections of cables.
- Firmly attach the cover of the welding machine after connection of the cables.
- Do not place the welding power source, wire feeder, torch, and control cable (including the extension cable) in an area where the equipment can become wet.
- Insulate connected part of the bolt and the nut with the insulating tape surely after it tightens enough.

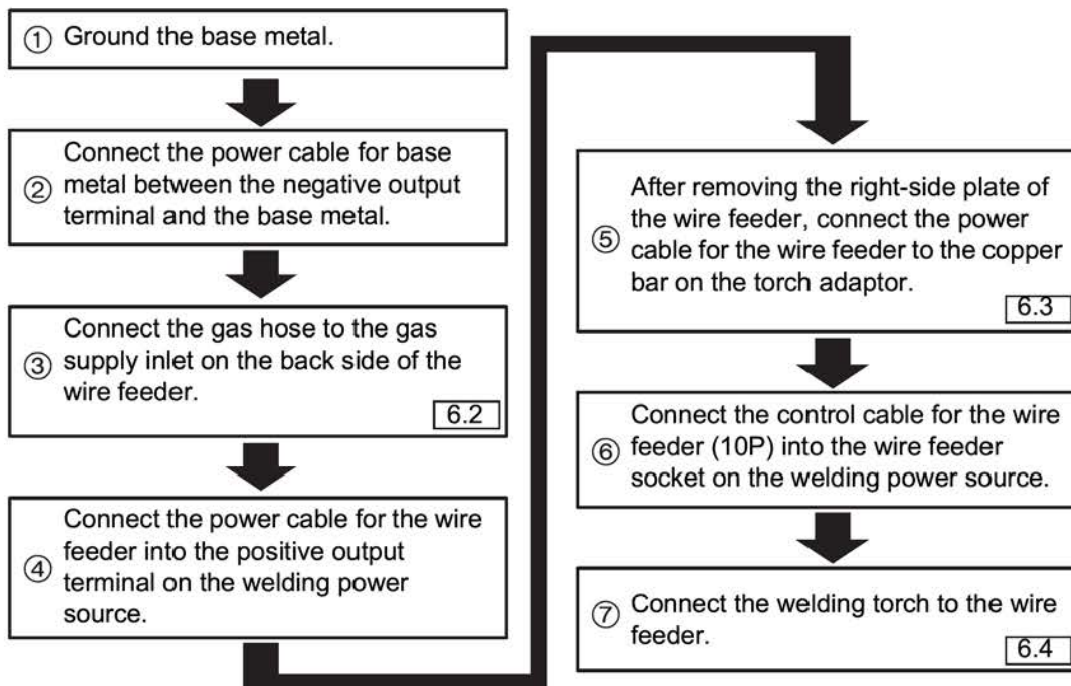
6 CONNECTION PROCEDURE (Continued)

6.1. Connection flow chart



NOTE:

- Standard composition consists of the parts indicated in . Preparation of the parts except the standard composition is required to use the wire feeder.
- For cables and hoses marked with "*", dedicated cables and hoses having different length are provided. For details, refer to information in "9.14. Optional Accessory".



6 CONNECTION PROCEDURE (Continued)

6.2. Connecting of the Gas Hose

WARNING

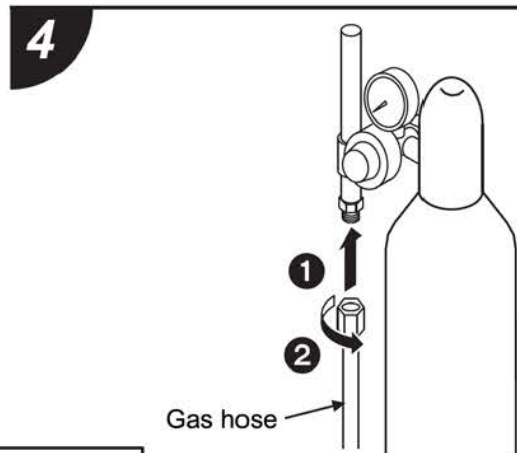
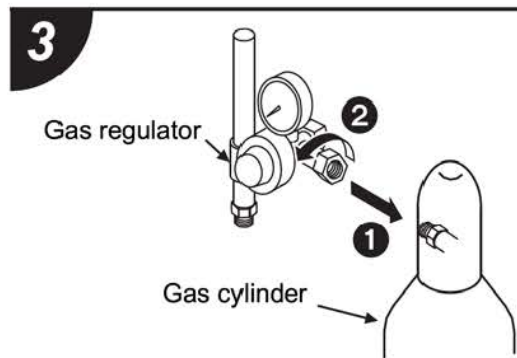
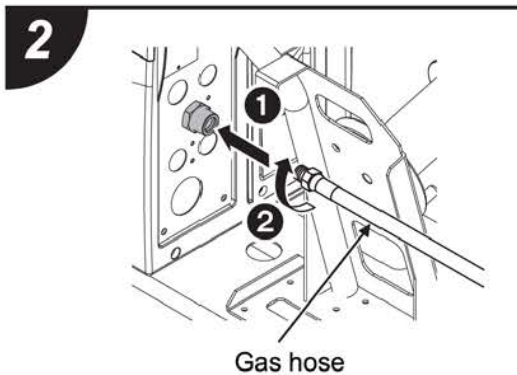
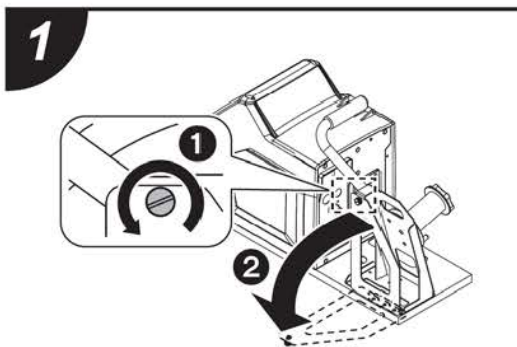


- You may suffer from danger of suffocation caused by lack of oxygen when shield gas keeps drifting in a closed place. Be sure to turn off the shield gas at the main when the welding power source is not in use.

- Be sure to connect the gas hose after fixing to the stand, as physical injuries may result from the gas cylinder falling down.
- Attach a proper gas regulator to the gas cylinder. Failure to observe this requirement may result in physical injuries. The gas regulator for high pressure gas must be used.

■ How to connect the gas hose

Connect the gas hose following the procedure shown below.



Firmly tighten the nuts using a wrench, etc. to connect the gas hose and gas regulator.

6 CONNECTION PROCEDURE (Continued)

6.3. Connecting of the Power Cable

⚠ WARNING

Touching live electrical parts may cause in fatal electric shock and severe burns.

- Do not touch live electrical parts of the welding machine.
- Have a qualified electric engineer ground the case of the welding power source and the base metal or jig electrically connected in accordance with a local law.
- Disconnect the wire feeder from the welding power source by turning off the line disconnect switch in the power box to avoid an electric shock before the welding power source or base metal and connecting the cables or hoses.
- After connecting the cables, cover the power source with the cover or case.
- When using the welding machine in such a humid environment as construction site, on the steel plate, or on steel structure, install a leakage breaker.

⚠ CAUTION

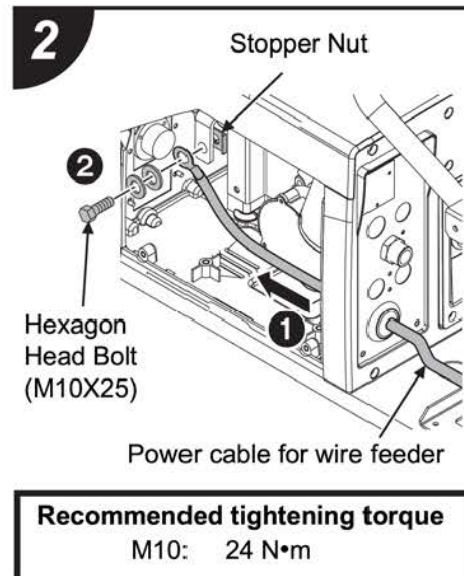
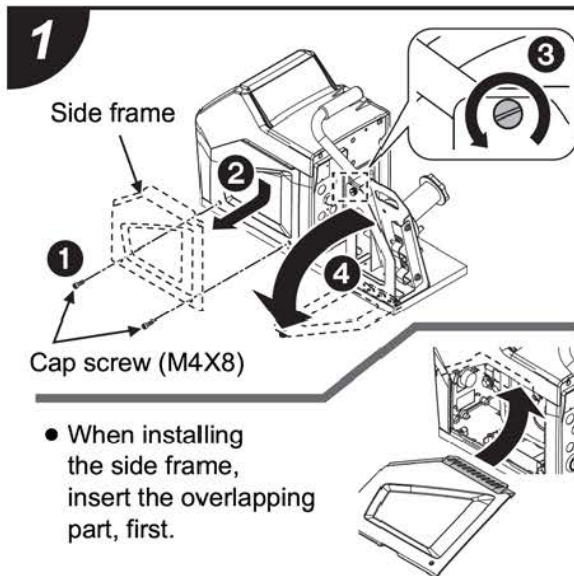
- Use the proper power cable that matches the welding current.

Welding current	Cable thickness
0 — 200A	AWG 1 [38mm ²] or more
200 — 350A	AWG 2/0 [60mm ²] or more
350 — 500A	AWG 3/0 [80mm ²] or more

* When performing pulse welding using a 56ft. [17m] or more cable, use the thicker cable by one rank.

■ How to connect the power cable

Connect the power cable following the procedure shown below.



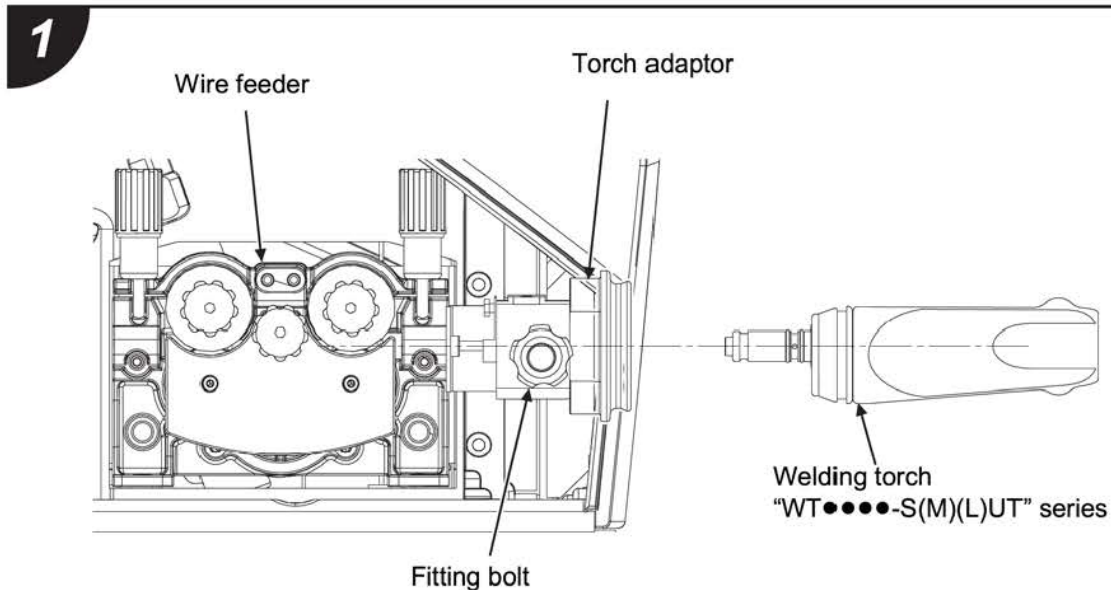
6 CONNECTION PROCEDURE (Continued)

6.4. Connecting of the Welding Torch

Welding torch is connected with the part torch adaptor of Wire feeder, fixing bolt is tightened, and welding torch is fixed.

⚠ CAUTION

- Please tighten fixing bolt securely to fix Torch. Otherwise, it causes the electric shock and a fire by feeding power the defect.



[Note]

This product can connect the following welding torch per the standard specifications.

- OTC CO₂/MAG Welding torch
"WT3510- S(M)(L)UT" series, "WT4000- S(M)(L)UT" series

When following welding torch is connected, it is necessary to prepare optional parts and optional kit separately.

- OTC CO₂/MAG Welding torch
"WT5000- S(M)(L)UT" series
Option kit: Torch adaptor kit (K5975K00)
- OTC MIG Welding torch
"WTA200-SUT", "WTA300-SUT", "WTAW400-SUT"*1
Option kit: Aluminum kit (K5975E00)
*1: When using this torch, the Water Cooling kit (K5975L00) is required.

Please use the following torches if voltage detection is required.

- OTC CO₂/MAG Welding torch
"WT3500-S(M)(L)D" series
"WT3510-S(M)(L)D" series
"WT3520-S(M)(L)D" series
Option kit: Voltage detection adaptor kit (K5975V00)

7 WELDING PREPERATION

7.1. Checking of wire size / Replacement of feed roll

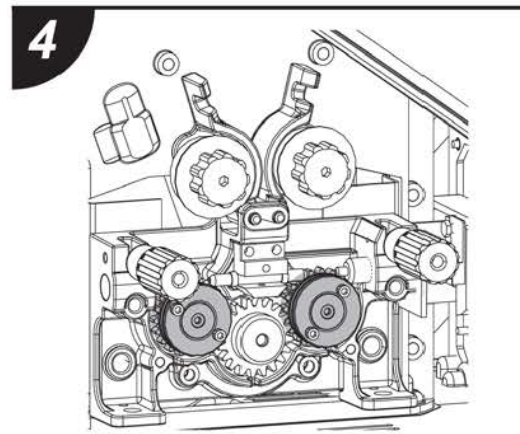
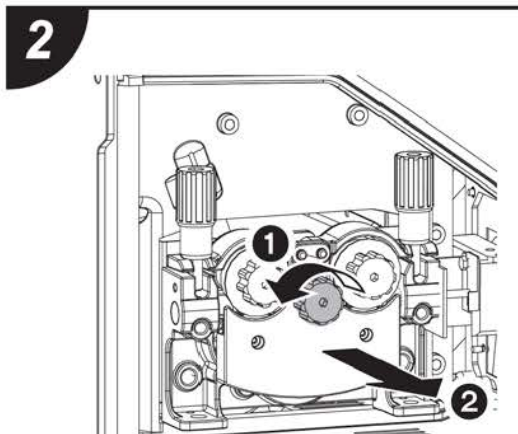
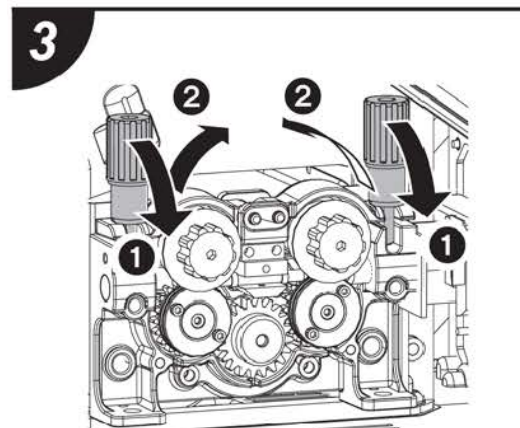
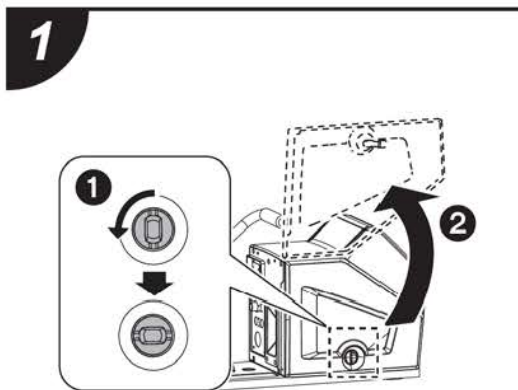
Check whether the feed rolls suitable to the wire being used are installed.

Use feed rolls suited to the wire size.

Using an improper feed roll will cause it slip to disable normal wire feed or deform the wire, resulting in improper welding.

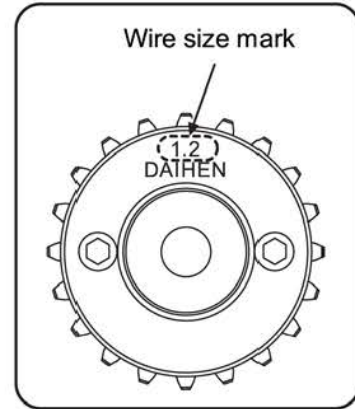
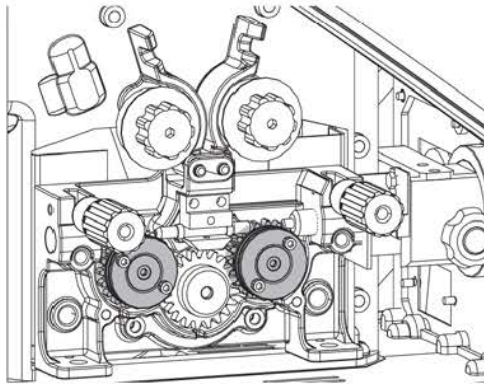
■ Procedure for checking feed roll

Check whether feed rolls suitable for the wire size are mounted following the procedure shown below.



7 WELDING PREPERATION (Continued)

5

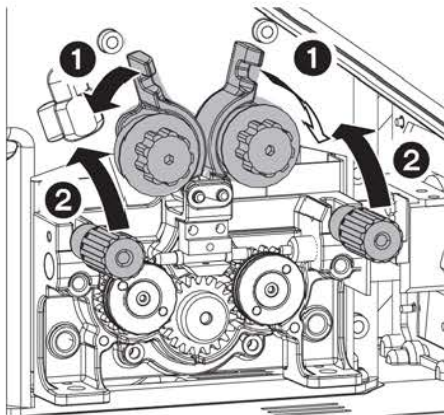


When **replacement** of feed rolls **are needed**.

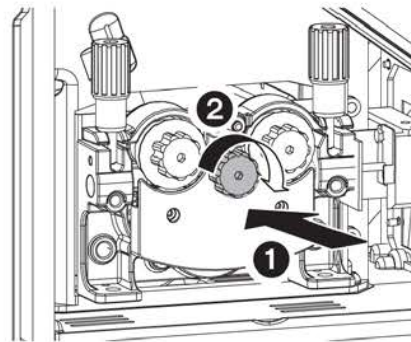
Go next page for replacement.

When suitable feed rolls **are already installed**.

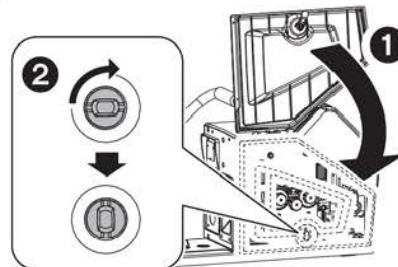
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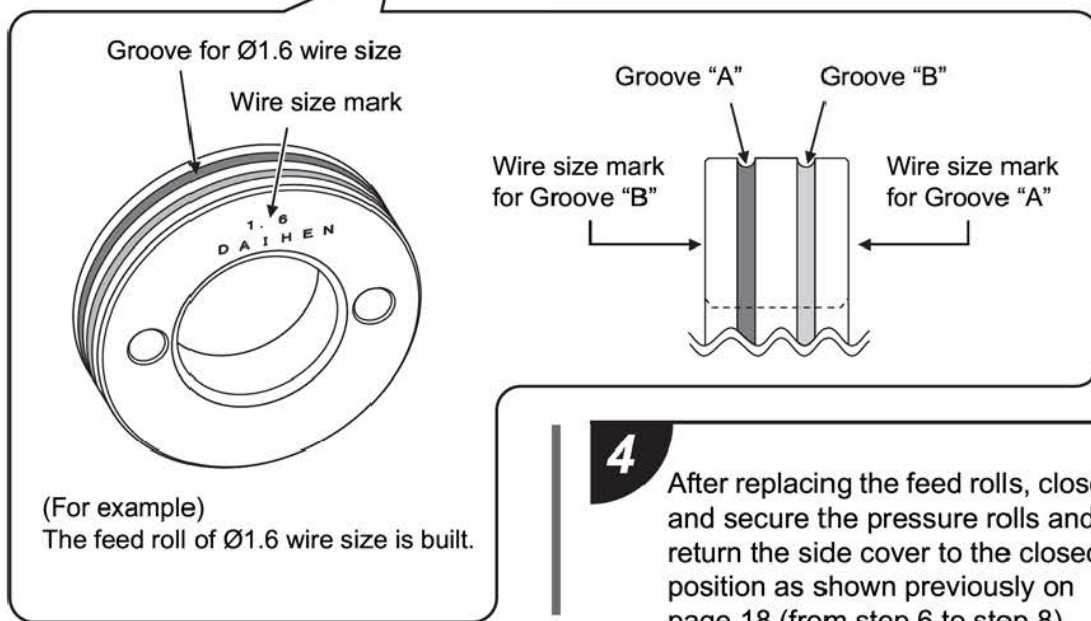
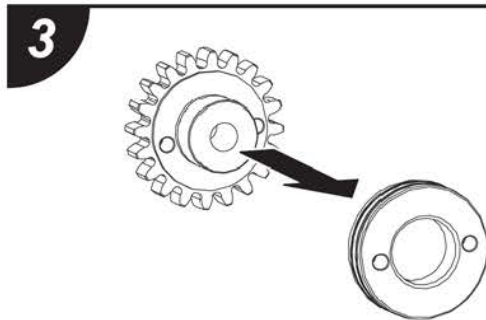
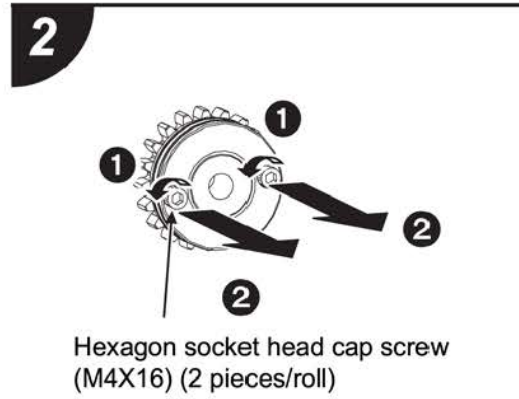
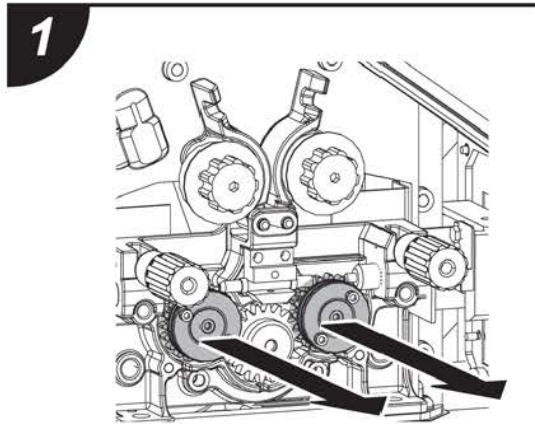


7

7 WELDING PREPERATION (Continued)

■ Replacement of feed roll

Carry out the "Procedure for checking feed roll" (⇒ 17) in advance, and then remove the feed roll with gear.



7 WELDING PREPERATION (Continued)

7.2. Fitting of Wire

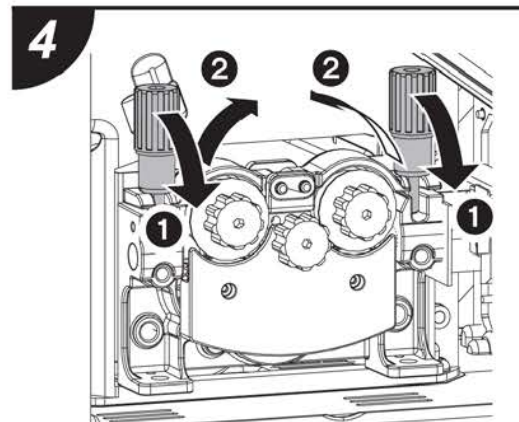
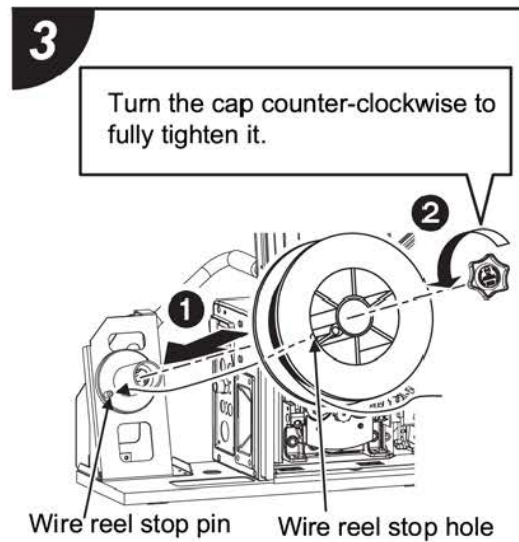
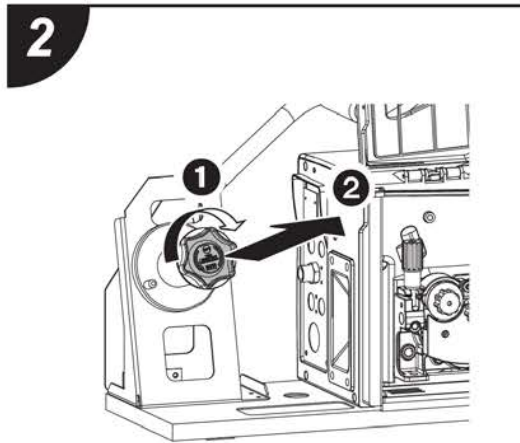
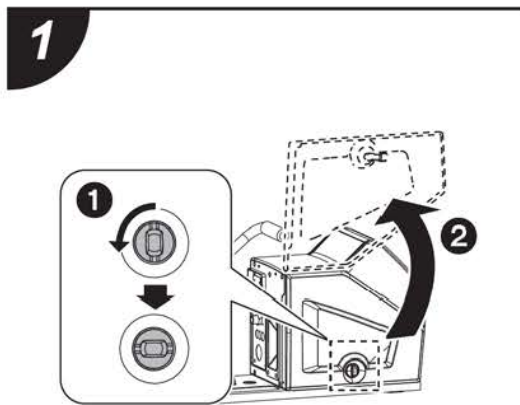
WARNING



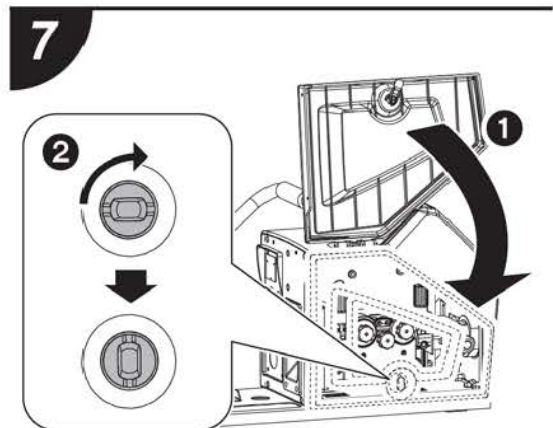
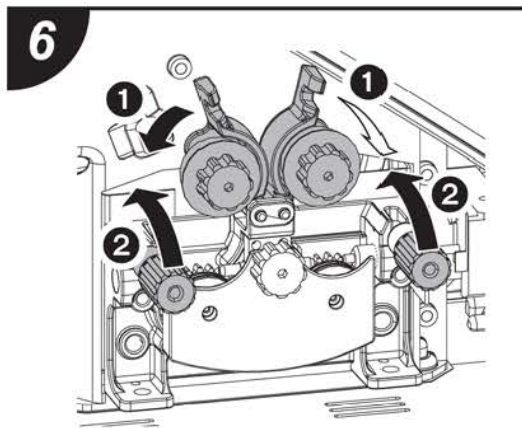
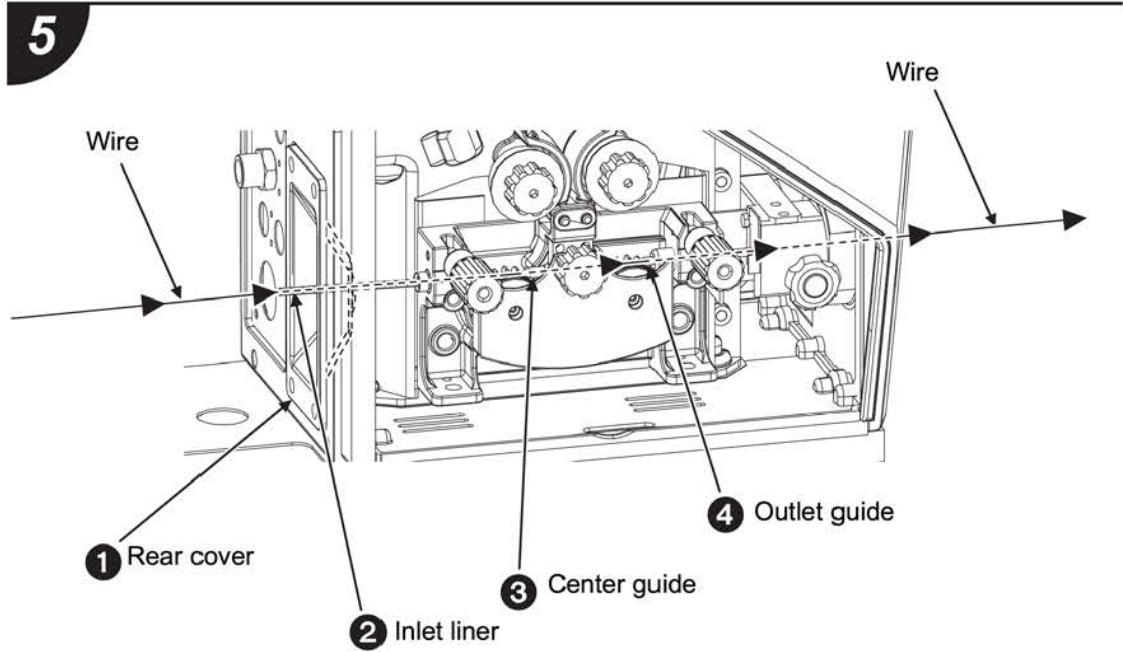
- When the wire is set on the wire reel shaft, fully tighten the cap to prevent falling.
- In case a breakage, crack or deformation is found in the wire reel shaft or cap, do not use but replace it.

■ Fitting of Wire

Fit the wire following the procedure shown below.



7 WELDING PREPERATION (Continued)



7

7 WELDING PREPERATION (Continued)

7.3. Adjusting of the wire pressure

- Set to the proper wire pressure for the wire type by turning the pressure handle.
- The numeral on the pressure scale set with the right pressure handle should be correspond to the one set with the left pressure handle.

Recommended wire pressure adjustment

	Wire diameter		Pressure handle scale	Wire straightener scale
	(Ø mm)	(inch)		
Hard aluminum AL/MG (HARD)	1.6	1/16	2-3	2-3
	1.2	3/64	1-2	3-4
	1.0	0.035	1-2	4-5
Soft aluminum AL/PURE (SOFT)	1.6	1/16	2-3	2-3
	1.2	3/64	1-2	4-5
Mild steel Stainless steel	1.6	1/16	3-4	(2-3)
	1.4	0.055	3-4	(3-4)
	1.2	0.045	2-3	(3-4)
	1.0	0.040	2-3	(4-5)
	0.9	0.035	2-3	(4-5)
	0.8	0.030	1-2	(4-5)

7 WELDING PREPERATION (Continued)

7.4. Adjusting of the wire reel hub

After performing inching operation, take care to adjust the brake of the wire reel hub to prevent the wire from going too slack. The bake has been properly adjusted before shipment. Therefore, readjustment of the brake is not required for welding in standard welding conditions.

WARNING



Observe the following precautions to prevent serious personal injury caused by fall of the wire reel at the time of wire reel hub adjustment or hanging bracket installation.

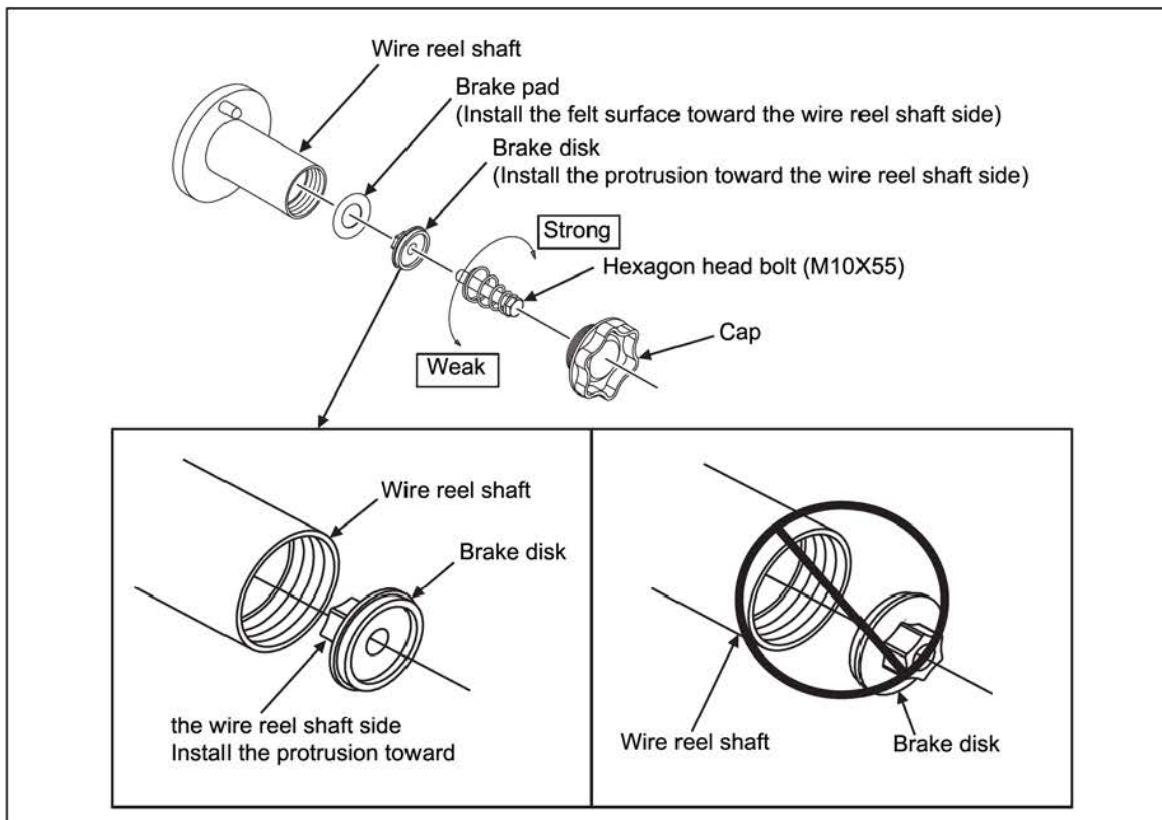
- Mount the brake pad to the wire reel shaft as illustrated below with care placed to the mounting direction.
- Mount the brake disk to the wire reel shaft as illustrated below with care placed to the mounting direction.
- In the event that the brake pad and the brake disk are used in wrong directions, the hexagon head bolt comes loose due to rotations of the wire reel shaft and may fall together with the wire reel shaft.

■ How to adjust the wire reel hub

Make adjustment of brake tension following the procedure shown below.

1. Detach the cap knob from the wire reel shaft.
2. Adjustment of the brake can be achieved by turning the hexagon bolt (M10).

* If the brake pad and brake disk are disengaged by mistake, assemble them by referring to the diagram below.



7 WELDING PREPERATION (Continued)

7.5. Wire Feeding by Performing Inching Operation

WARNING



- Do not look into the tip hole to check for the rate of wire feeding while inching.

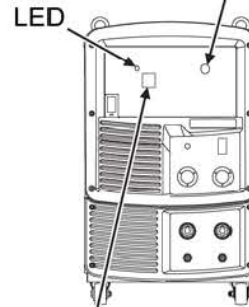
CAUTION



- Keep away your hands, fingers, hair or clothes from the rotating parts of the feed roll, etc. to prevent you from being caught into the rotating parts while inching.

Straighten out the welding torch, and then press the inching key (LED turns ON) to feed wire. Release the inching key when the wire is about 10mm away from the end of the tip. (LED goes out) Wire feed rate can be adjusted with the parameter adjusting knob. In addition, operation can also be made with the inching button of the remote controller (optional accessory). In this case, adjustment can be made with the current knob of the remote controller. Adjustment cannot be made with the parameter adjusting knob of the front panel.

Parameter adjusting knob




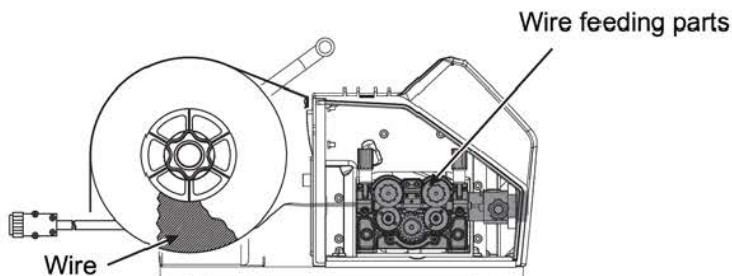
INCHING key

WARNING



Touching the charging parts may cause fatal electric shocks and burns.

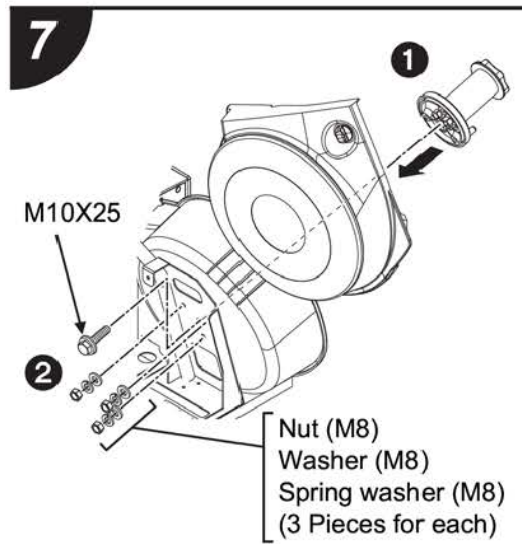
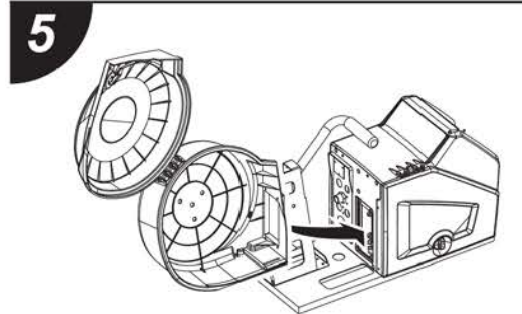
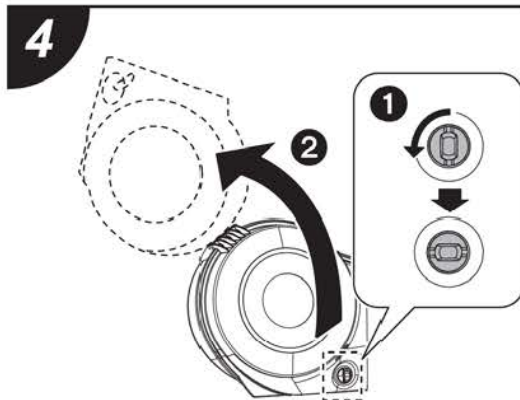
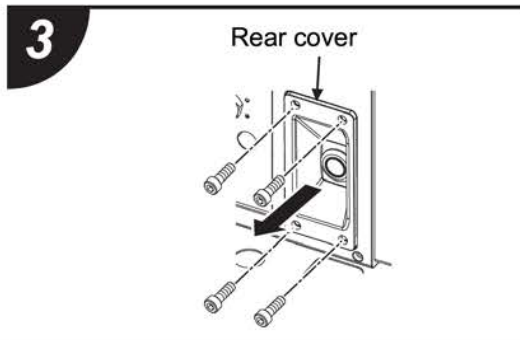
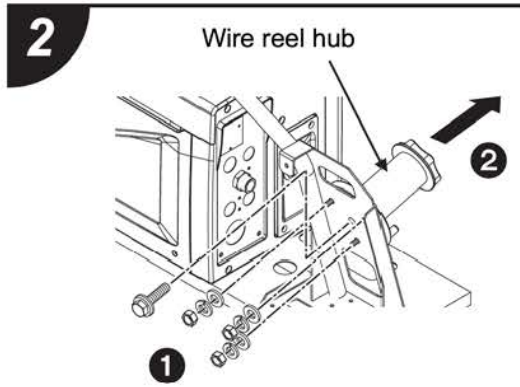
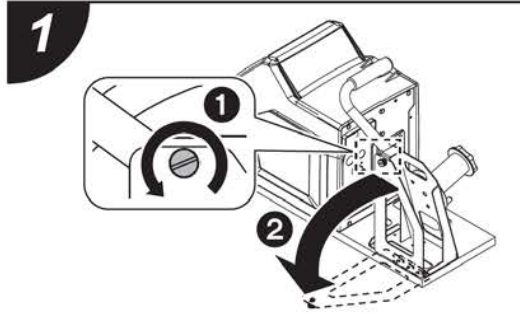
- Never touch live electrical parts in the wire, wire feeder and feeder block. The parts indicated as  in the figure are the charging parts during welding.
- Be sure to close the side door of the wire feeding section to prevent electric shock and fingers from being caught in the wire feeder. Replace the damaged cover with a new one. Do not use the wire feeder with the side door removed.



7 WELDING PREPERATION (Continued)

7.6. When attaching the wire reel cover (K5951Q00) <OPTIONAL ACCESSORY>

When attaching the wire reel cover, perform the procedure shown below.



Recommended tightening torque	
M8:	6 N•m
M10:	24 N•m

8 MAINTENANCE AND TROUBLESHOOTING

8.1. Carrying Out Maintenance

WARNING



- Do not touch live electrical parts inside or outside the wire feeder.
- Disconnect the wire feeder from the welding power source by turning off the line disconnect switch in the power box to avoid an electric shock before carrying the equipment. Do not use the wire feeder with the side door removed.

In order to use the wire feeder safely and efficiently, be sure to conduct periodical maintenance and inspection. If flaw is found, ask for change or repair of the object part.

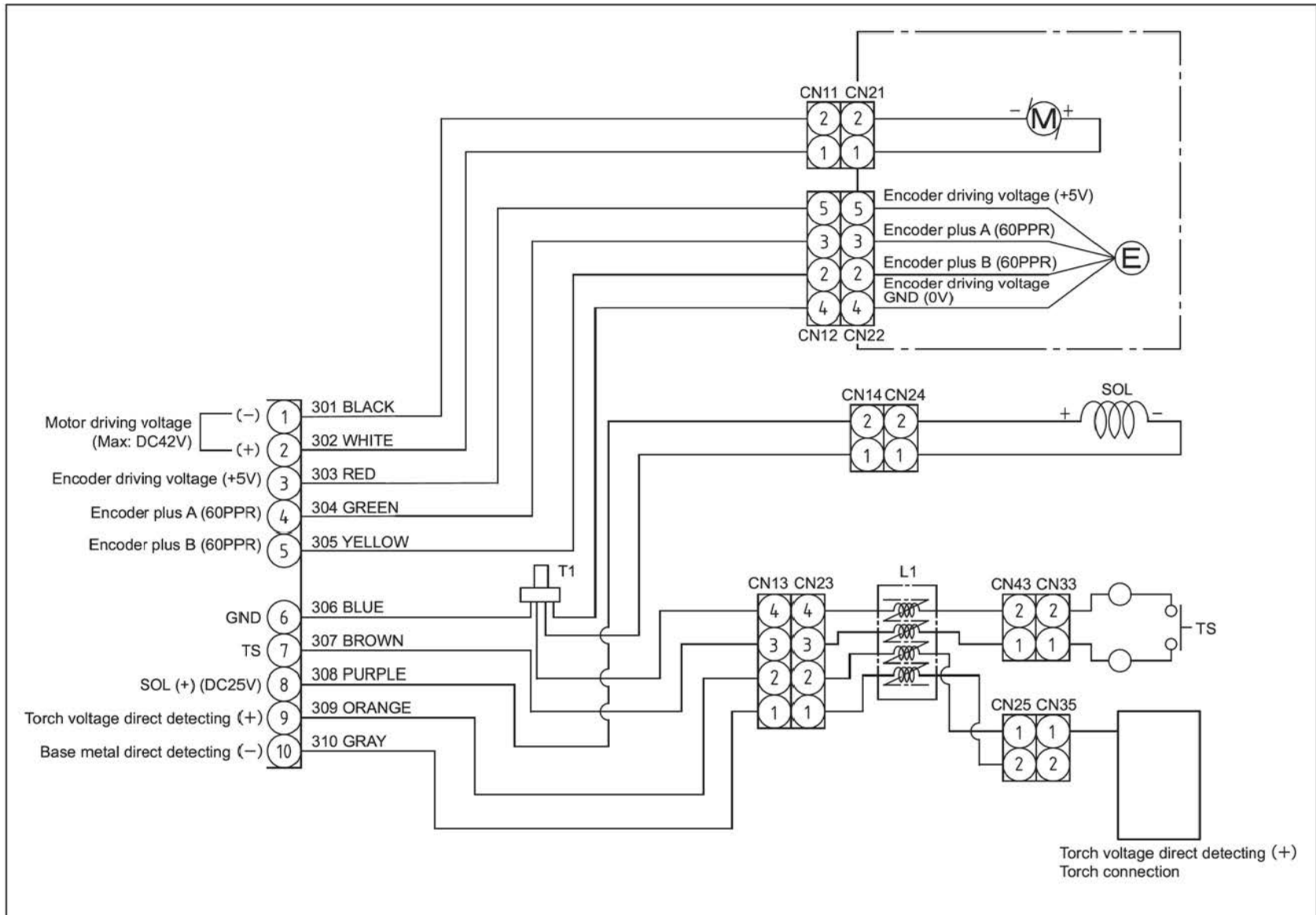
○: Necessary inspection item, –: Omissible inspection item

No.	Inspection item	Daily inspection	Periodical inspection in 3 to 6 months
1	Is there not abnormal vibration, buzz or odor?	○	–
2	Are there not discoloration of terminal parts and melting and deterioration of cable jackets?	○	–
3	Are fastening screws not loosened or is contact not deteriorated by rust at power cable connection part on the inlet side of wire feeder? Is insulation not problematic?	○	○
4	Is there not portion of cable that is beginning to break?	○	–
5	Is there not break in frames or covers or deformation?	○	○
6	Are covers and knobs fixed firmly? Are there no broken?	○	○
7	Is power cable, torch cable and gas hose connected firmly?	○	○
8	Is there not crack or break in parts and sheet metals inside wire feeder?	–	○
9	Is there not portion of wiring inside wire feeder that is beginning to break?	–	○
10	Is there no loosening of parts fixing?	–	○
11	Is there no connecting part of connector that is beginning to come out?	–	○
12	Remove dirt and dust inside wire feeder.	–	○

• Failure and countermeasures

No.	Phenomenon	Cause of failure/anomaly	Treatment
1	Wire is not fed. Wire gets deformed.	Wire pressure is too weak.	Refer to "7.3. Adjusting of the wire pressure".
		Wire pressure is too strong.	Refer to "7.3. Adjusting of the wire pressure".
		Feed roll of wrong wire size is used.	Replace it with the feed roll of proper wire size.
		Feed roll are worn.	Replace the feed roll, if necessary.
		Poor contact or breakdown in the control cable.	Confirm state of connection. Confirm cables. Replace cables.
		Trouble with the motor	Replace the motor, if necessary.
		Dust or chip is accumulated on the outlet guide and on the feed roll.	Remove the dust and chip.
		Feeding roll bearing failure	Replace it, if necessary.
2	Shield gas supply does not come out or does not stop.	Failure of gas solenoid valve.	Check for the operation of the gas solenoid valve, and then replace it if necessary.
3	Gas or water leakage from gas or water hose.	There are defects such as cracks.	Replace it, if necessary.
4	Wire is not fed smoothly through the wire reel.	Adjustment of the brake is either too strong or too weak.	Refer to "7.4. Adjusting of the wire reel hub".

< Schematic Diagram >



8 MAINTENANCE AND TROUBLESHOOTING (Continued)

8.2. Replacing of the Outlet Guide

WARNING

- Do not alter or remodel our products.
- You may get injured or have your equipment damaged because of fire, failure or malfunction caused by altering or remodeling the product.
- The warranty does not cover any altered or remodeled products.

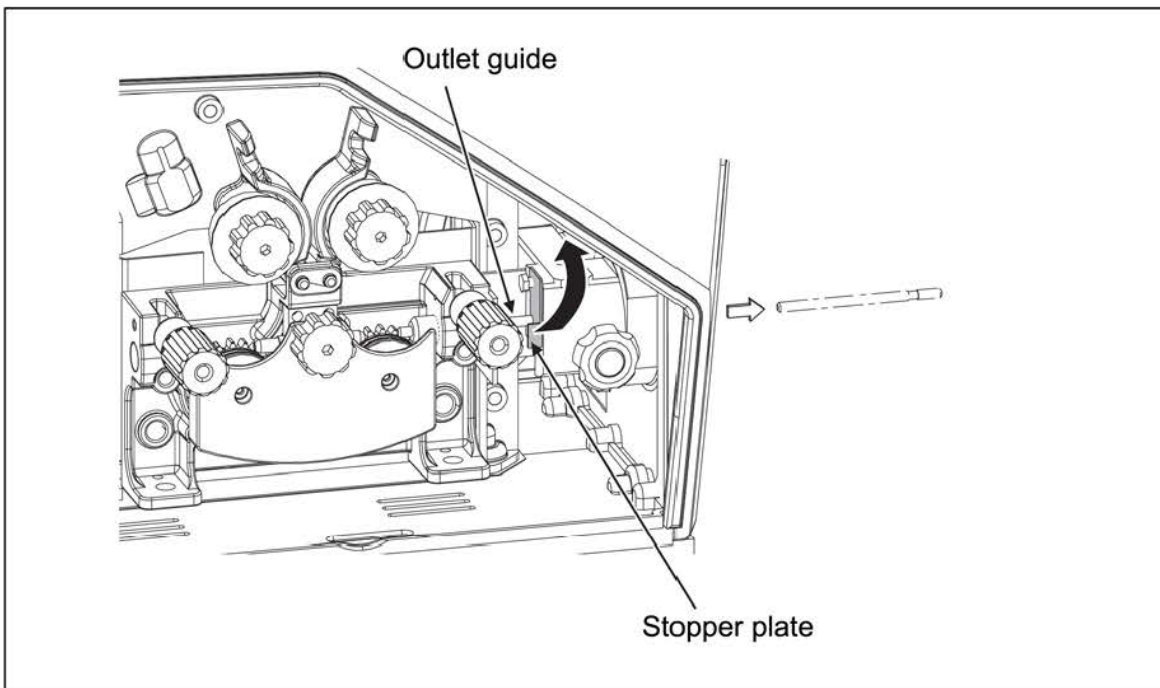
Follow the procedures below when replacing the outlet guide.

1. Open the side door.
2. Remove the feed cover.
3. Bring down the pressure handle, then raise the pressure roll holder.
4. Rewind the wire to reel.
5. Remove the torch from the wire feeder.

WARNING

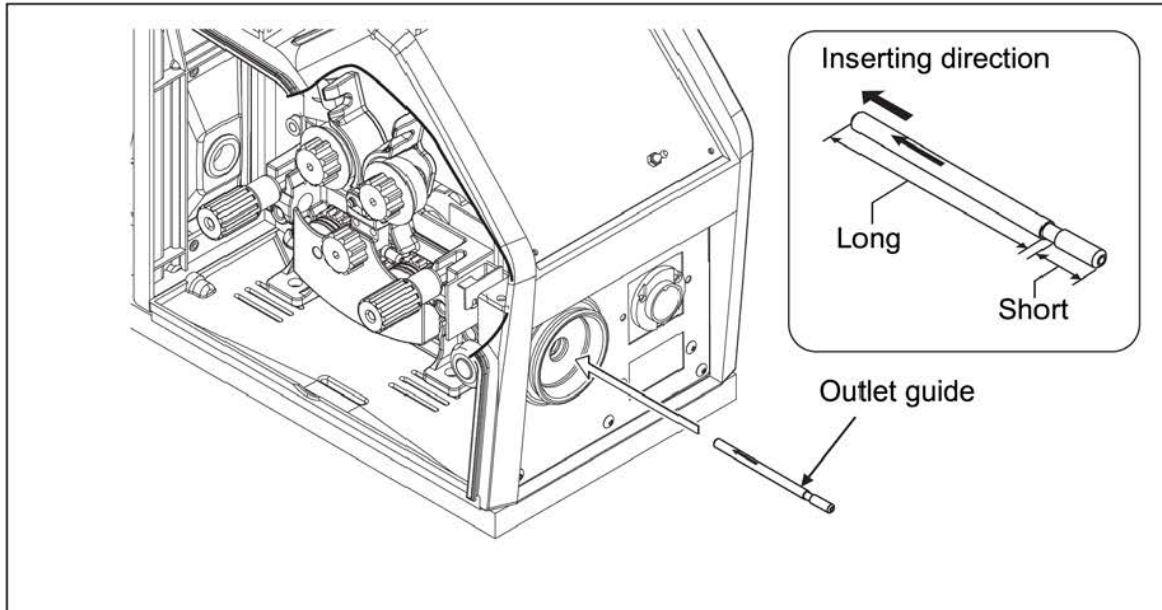
- Do not look into nor bring your face, eyes and body close to the torch connecting opening. Outlet guide or wire may fly out and stick into face, eye or body, causing injury.

6. Turn the stopper plate upward to unlock it.
7. Carefully pull the outlet guide toward the torch connection side to dismount it.

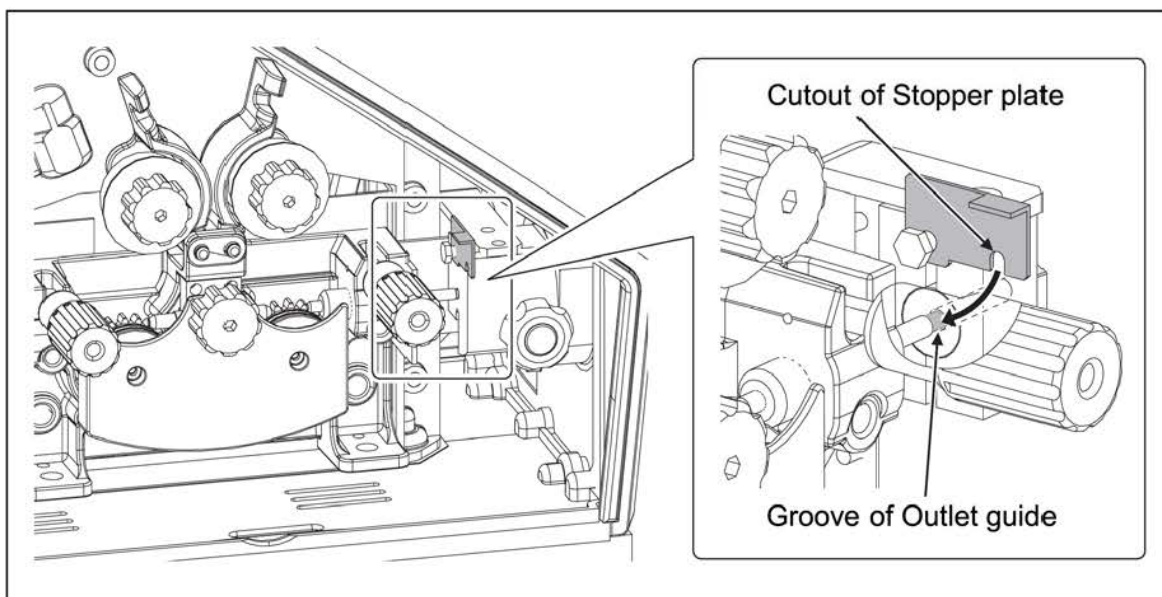


8 MAINTENANCE AND TROUBLESHOOTING (Continued)

- Put a new outlet guide through the torch connection port with careful attention paid to the direction of the outlet guide.



- Align the groove of outlet guide and the cutout of stopper plate, then move the stopper plate downward to lock the outlet guide.



- Reassemble the wire feeder following the reverse procedure.

8.3. Replacing of the Feed motor

WARNING

- Never attempt to disassemble the feed motor. This may result in damage to the wire feeder.
- Feed motor is built with dustproof structure, in which a rotary encoder is installed. If the feed motor is disassembled, its dustproof function will be lost or the rotary encoder damaged, resulting in failure.
- It is unable to clean the inside of the motor nor replace the brush.

* Target for life and replacement of feed motor

The life of the feeding motor is approximately 3,000 to 4,000 hours.

In addition, the life varies with the load conditions and ambient temperature.

* When the life of the feeding motor expires, the following phenomena occur.

It is recommended that the feeding motor be replaced in advance by referring to the lifetime.

When the motor does not operate, the following warning and abnormal status of the welding machine will be displayed.

Example)

[E-800] Abnormal encoder of feeding motor

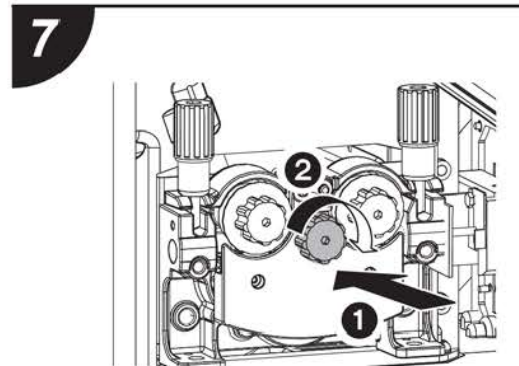
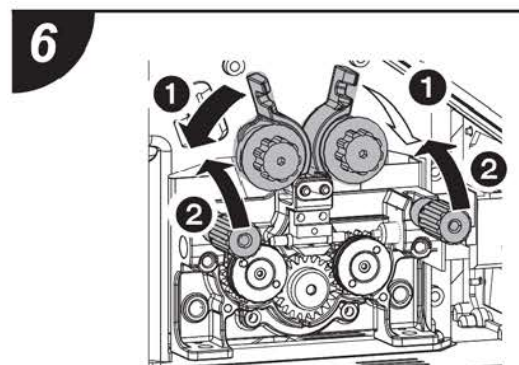
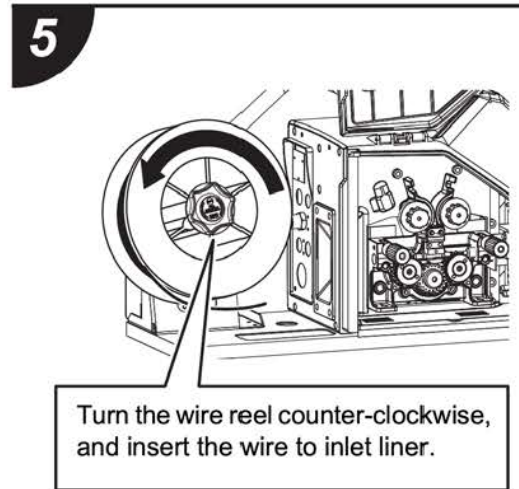
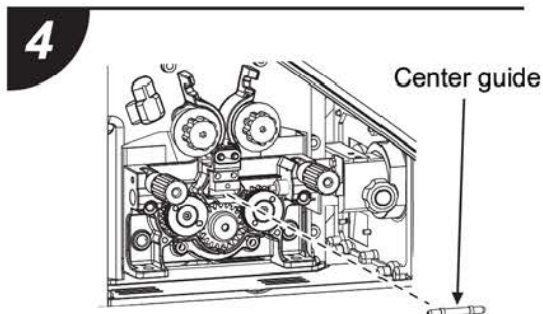
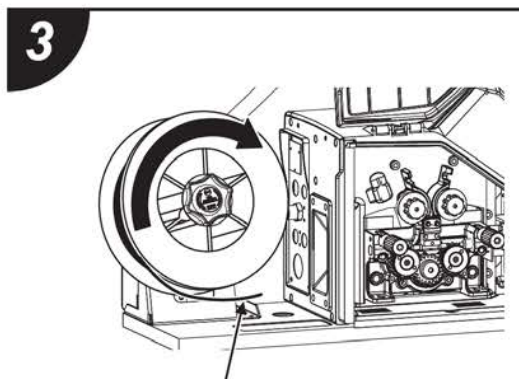
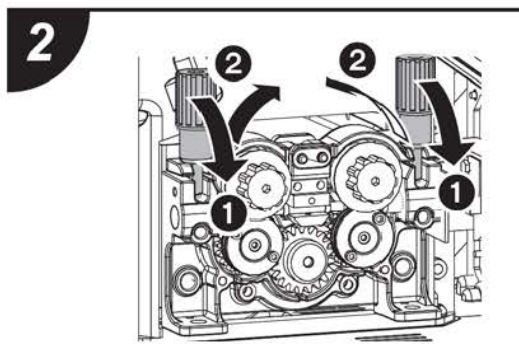
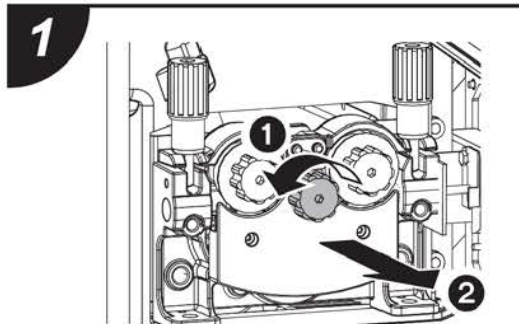
[E-820] Motor overcurrent (warning)

[E-830] Motor overcurrent (abnormal status)

8 MAINTENANCE AND TROUBLESHOOTING (Continued)

8.4. Replace the center guide

Replace the center guide following the procedure shown below.



9 PARTS LIST

Please contact your local dealer to order parts. (See the back cover for telephone and fax numbers, and mailing addresses.)

9.1. Main Body and Wiring (Fig.1)

Ref No.	Part number	Description	Q'ty	Remarks
1	K5975C00	DRIVE CASE	1	Assembly refer 9.2.
2	K5975B00	DRIVE UNIT	1	Assembly refer 9.3.
3	U30104C00	FRAME	1	Assembly refer 9.7.
4	K5975D00	TORCH ADAPTOR NO.4	1	Assembly refer 9.12.
5	U30104F00	FRONT PANEL	1	Assembly refer 9.8.
6	U30104R00	REAR PANEL	1	Assembly refer 9.9.
7	U30104E00	CONTROL CABLE	1	
8	U30104H00	REAR COVER	1	Assembly refer 9.10.
9	U30038F00	WIRE REEL HUB	1	
10	U30104X00	2P RECEPTACLE	1	
11	U30104Y00	HOSE BRACKET	1	Assembly refer 9.11.

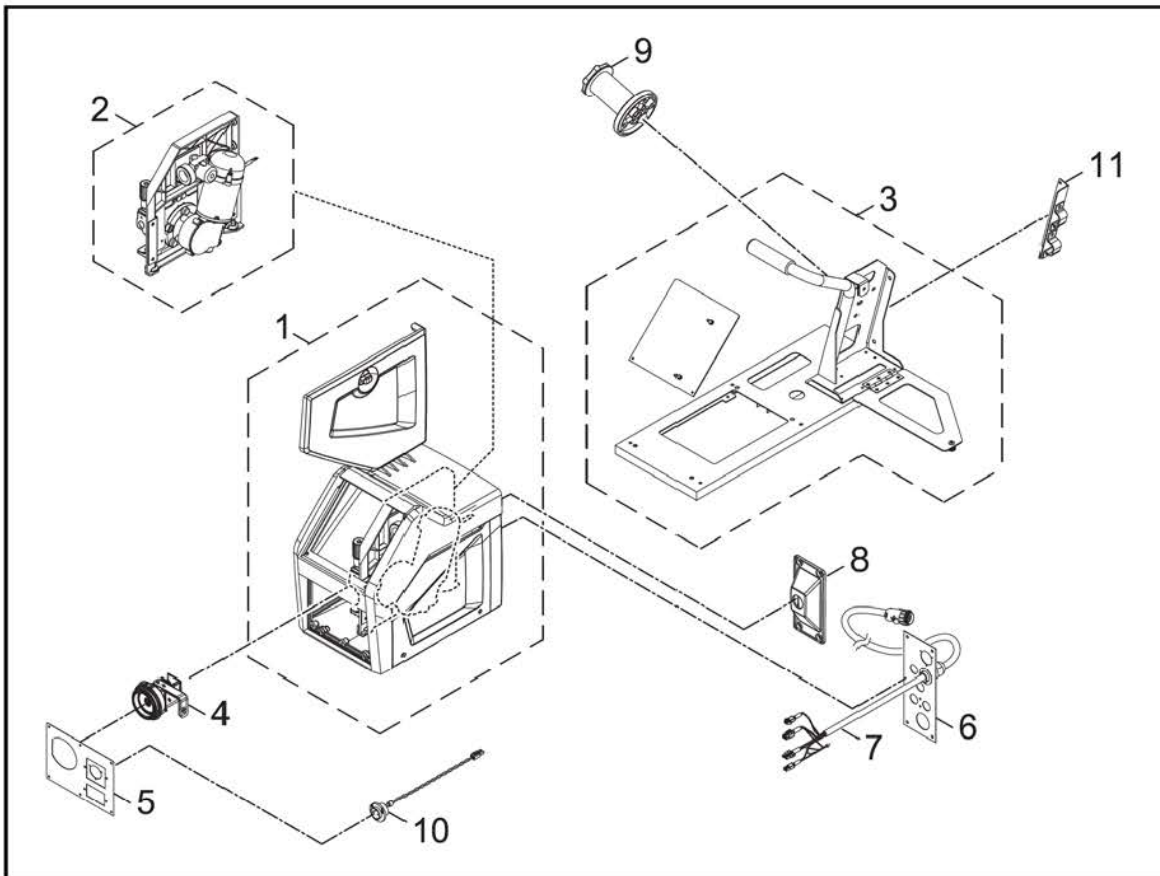


Fig.1 Main Body and Wiring Assembly

9 PARTS LIST (Continued)

9.2. Drive Case (Fig.2)

Ref No.	Part number	Description	Q'ty	Remarks
1	K5951B01	FRONT FRAME	1	
2	K5951B02	SIDE DOOR	1	
3	K5951B03	PIN	1	
4	K5951B04	REAR FRAME	1	
4-1	–	HEXAGON SOCKET HEAD BOLT	4	M5X25
5	K5951B05	BASE FRAME	1	
5-1	–	CAP SCREW	2	M5X10
6	K5951B06	SIDE FRAME	1	
6-1	–	CAP SCREW	2	M4X8
7	K5951B07	DOOR KNOB	1	
8	K5951B08	DOOR HOOK	1	

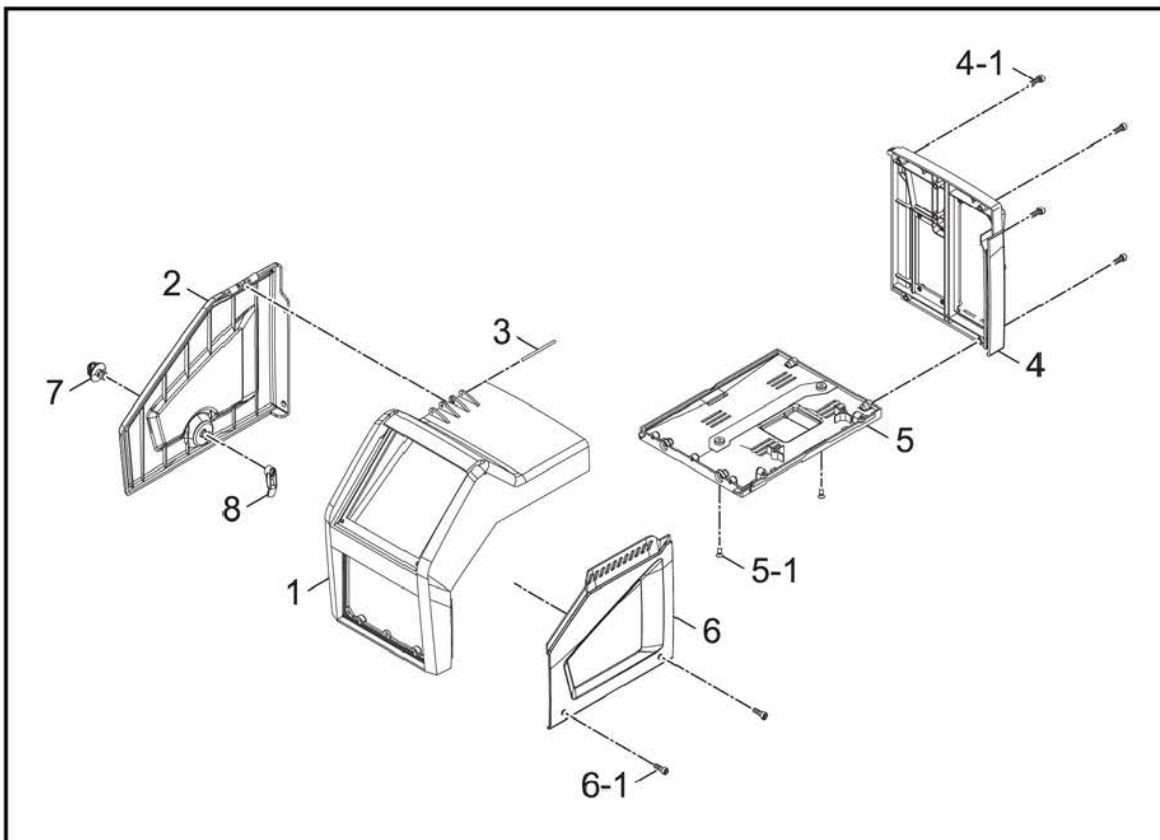


Fig.2 Drive Case (K5975C00)

9 PARTS LIST (Continued)

9.3. Drive Unit (Fig.3)

Ref No.	Part number	Description	Q'ty	Remarks
1	K5952B01	SEPARATE FRAME	1	
1-1	—	HEXAGON SOCKET HEAD BOLT	2	M5X25
2	K5953B00	WIRE FEEDER	1	Assembly refer 9.4.
3	U30024L00	FEED MOTOR	1	Assembly refer 9.6.
4	K5951W00	COMMON MODE COIL	1	
5	U30104G00	GAS LINE	1	Assembly refer 9.5.
5-1	—	PHILLIPS HEXAGON HEAD BOLT	2	M5X10
6	K5952B02	HANGER BRACKET	1	
6-1	—	PHILLIPS HEXAGON HEAD BOLT	2	M5X10
7	K5952B03	DRIVE PLATE 1	1	
7-1	—	PHILLIPS HEXAGON HEAD BOLT	3	M5X10
7-2	—	PHILLIPS HEXAGON HEAD BOLT	1	M6X12
8	K5952B04	DRIVE PLATE 2	1	
8-1	—	PHILLIPS HEXAGON HEAD BOLT	3	M5X10
8-2	—	PHILLIPS HEXAGON HEAD BOLT	1	M6X12

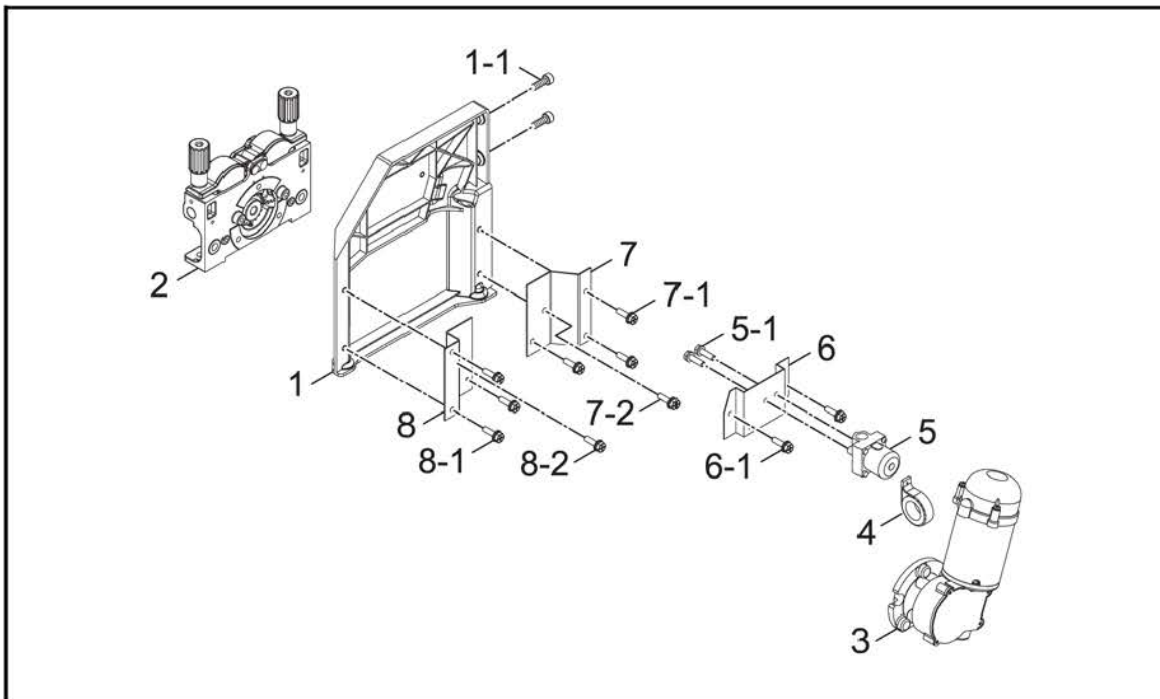


Fig.3 Drive Unit (K5975B00)

9 PARTS LIST (Continued)

9.4. Wire Feeder (Fig.4)

Ref No.	Part number	Description	Q'ty	Remarks
1	K5953B01	MAIN BRACKET	1	
2	L10595B02	PRESSURE HOLDER SHAFT	2	
2-1	-	E-TYPE RETAINING RING	2	E-5
3	L10595B03	FEED ROLL SHAFT	2	
4	U30023T00	PRESSURE ROLL HOLDER (L)	1	
5	U30023W00	PRESSURE ROLL HOLDER (R)	1	
6	L10595B04	COIL SPRING	1	
7	L10595B05	PRESSURE SPRING HOLDER	2	
8	L10595B06	PRESSURE HANDLE	2	
9	-	WASHER (SMALL)	2	M6
10	L10595B07	PRESSURE BOLT	2	
10-1	-	E-TYPE RETAINING RING	2	E-5
10-2	-	ROLL PIN	2	2.5X14
11	L10595B08	COMPRESSION SPRING	2	
12	-	HEXAGON SOCKET HEAD CAP SCREW	3	M6X18
13	-	WASHER (SMALL)	3	M6

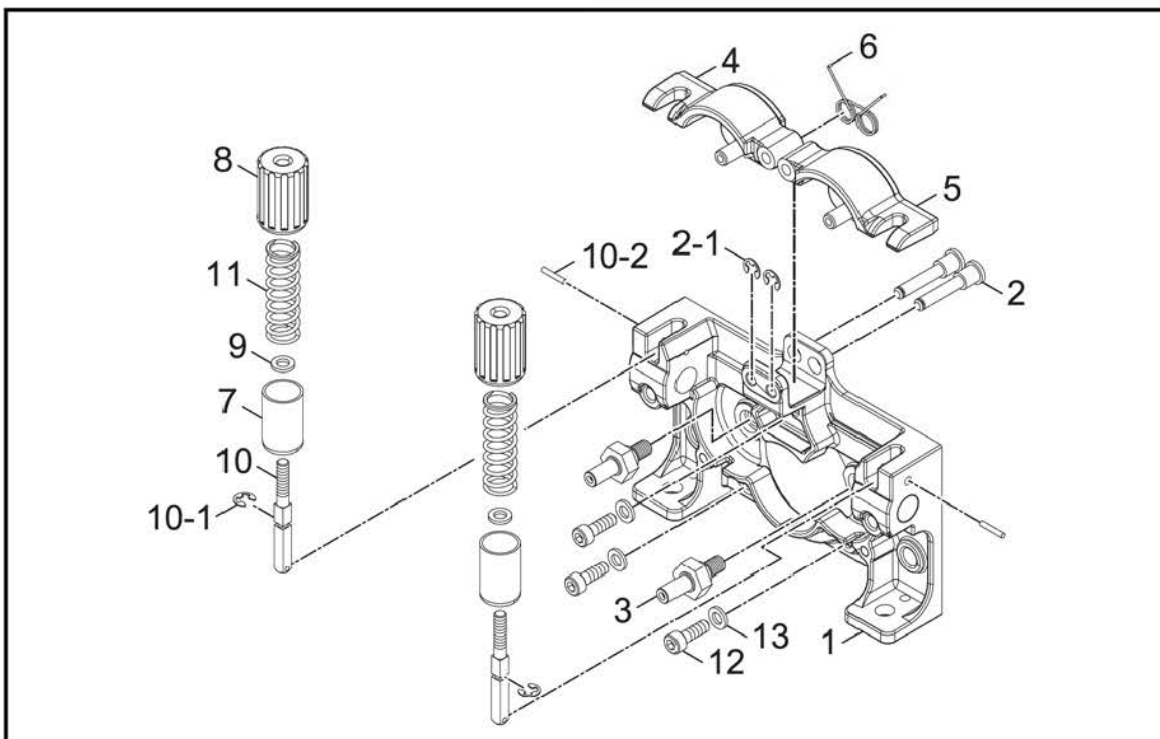


Fig.4 Wire Feeder Assembly (K5953B00)

9 PARTS LIST (Continued)

9.5. Gas Line (Fig.5)

Ref No.	Part number	Description	Q'ty	Remarks
1	W-31156 (DC 25V)	GAS SOLENOID VALVE	1	
2	U4179D01	HOSE ELBOW	1	
3	-	RECEPTACLE HOUSING	1	ELR-02V
3-1	-	PIN CONTACT	2	SLM-41T-P1.3E
4	-	TETRON HOSE	1	4X9(TR-4), Length: 15.4" [390mm]
5	-	EAR CLAMP	4	MH-4
6	P9400P02	HOSE ELBOW	1	
7	U30104G01	GAS CONNECTOR	1	
8	U30104G02	NUT	1	
9	-	TETRON HOSE	1	6X9.5, Length: 15.4" [390mm]

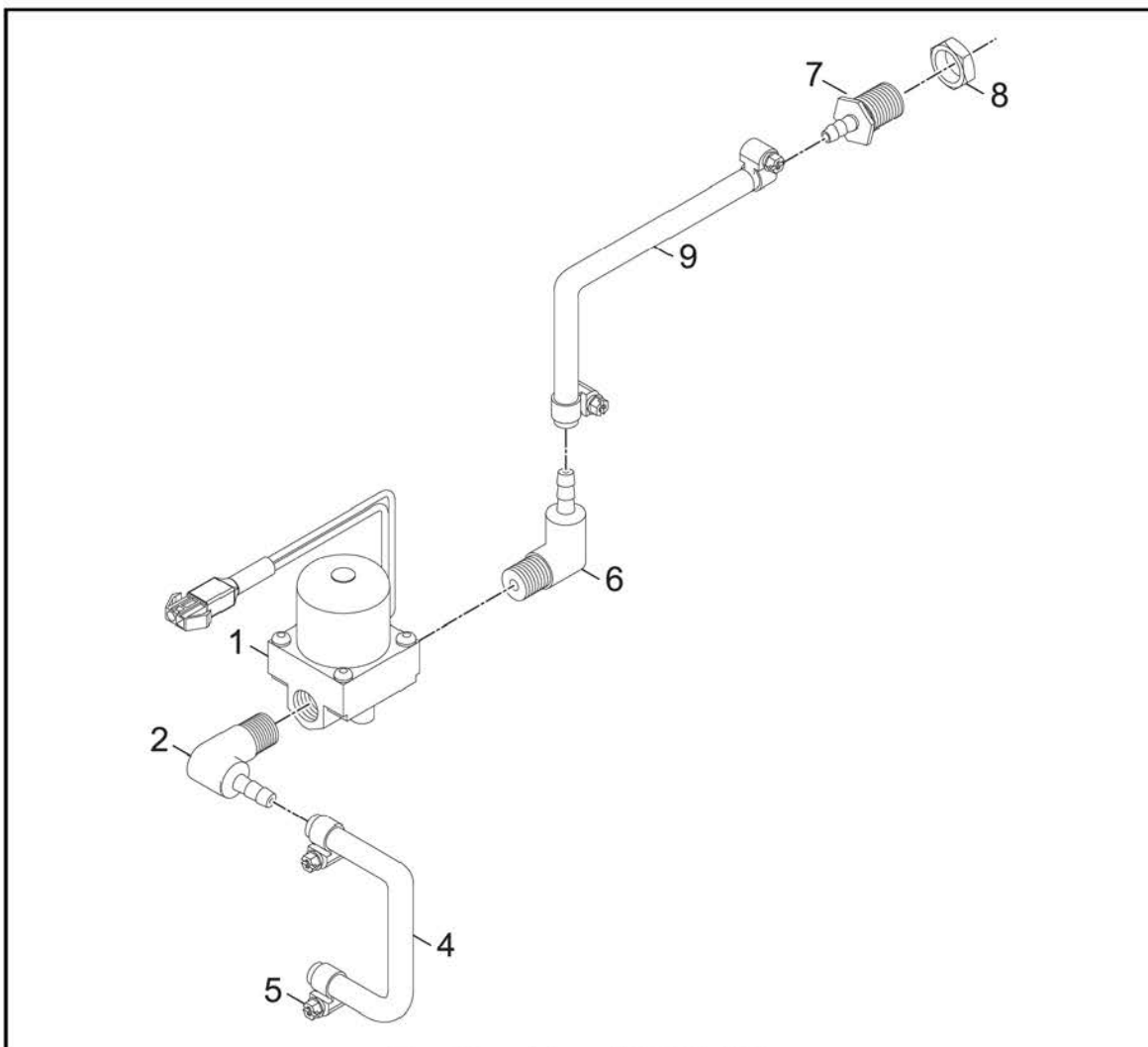


Fig.5 Gas Line (U30104G00)

9 PARTS LIST (Continued)

9.6. Feed Motor (Fig.6)

Ref No.	Part number	Description	Q'ty	Remarks
1	W-W03729	FEED MOTOR	1	
2	U30024L01	MOTOR MOUNT	1	
2-1	-	CAP SCREW	3	M6X16

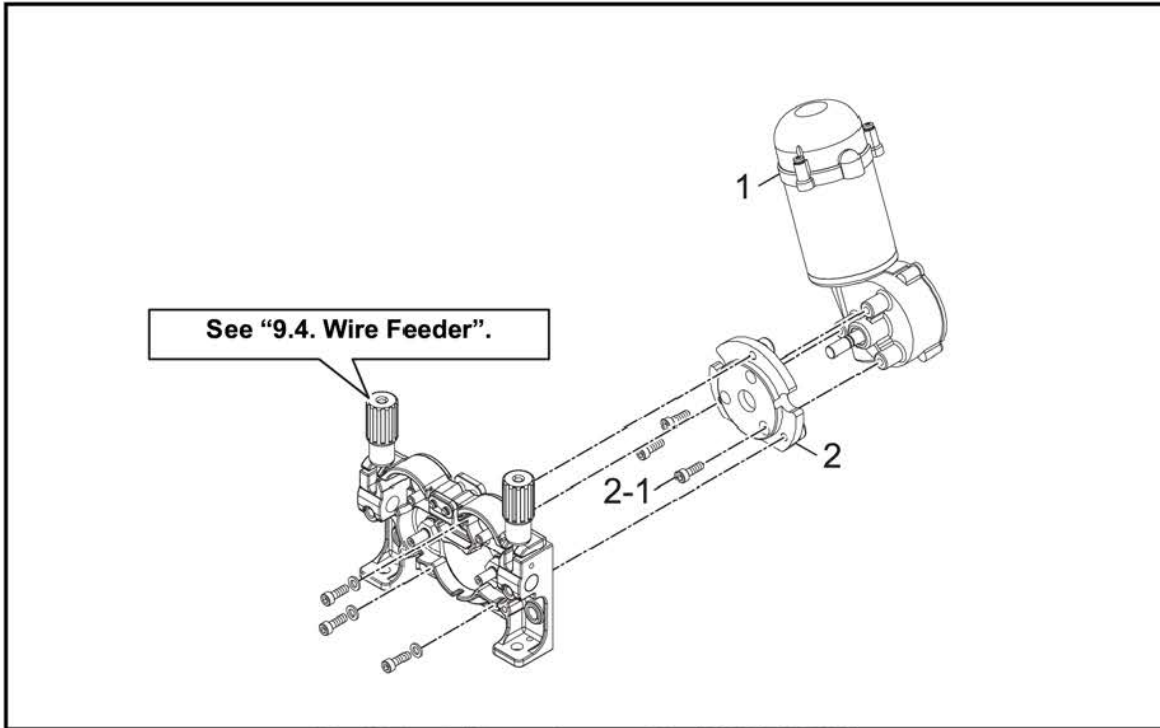


Fig.6 Feed Motor Assembly (U30024L00)

9 PARTS LIST (Continued)

9.7. Frame (Fig.7)

Ref No.	Part number	Description	Q'ty	Remarks
1	K5951C01	COVER PANEL	1	
1-1	–	CROSS-RECESSED HEAD SCREW	2	M4X8
2	U30022C04	MOUNTING PIN	2	
3	K5951C02	BASE	1	
3-1	–	HEXAGON SOCKET HEAD BOLT	4	M5X8
4	K5951X00	REEL STAND	1	
4-1	–	HEXAGON SOCKET HEAD BOLT	9	M6X10
4-2	–	SPRING WASHER	9	M6
4-3	–	WASHER	9	M6
5	K5951C03	REEL STAND COVER	1	
6	–	HINGE	1	B-100-6
6-1	–	PHILLIPS HEXAGON HEAD BOLT	6	M4X8
7	–	HANDLE GRIP	1	AG-001
8	–	KNURLING KNOB	1	NRS5_10
9	U30022C06	WIRE REEL COVER	1	
9-1	–	CROSS-RECESSED HEAD SCREW	2	M4X8

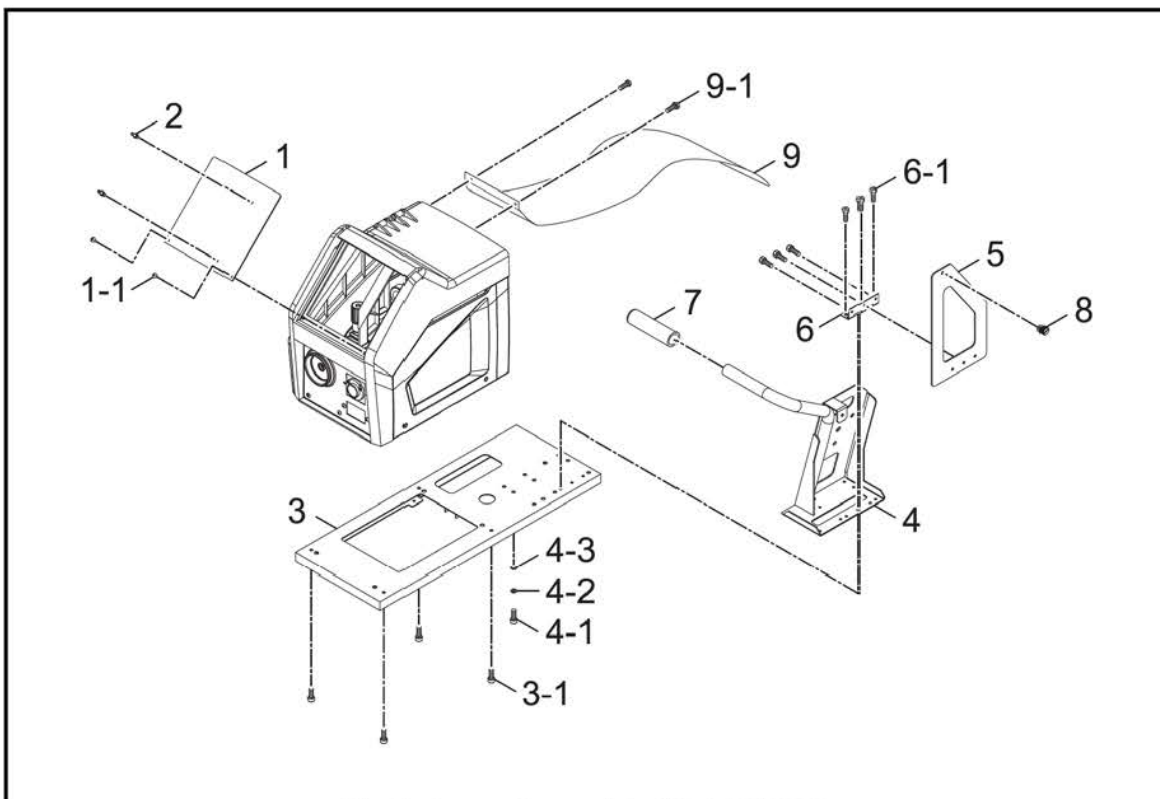


Fig.7 Frame Assembly (U30104C00)

9 PARTS LIST (Continued)

9.8. Front Panel (Fig.8)

Ref No.	Part number	Description	Q'ty	Remarks
1	U30104F01	FRONT PANEL	1	
1-1	-	CROSS-RECESSED HEAD SCREW	6	M4X8
2	U30104F02	CONNECTOR PANEL	1	
2-1	-	CROSS-RECESSED HEAD SCREW	2	M4X8
3	U30104F03	COVER PLATE	1	
3-1	-	CROSS-RECESSED HEAD SCREW	2	M4X8

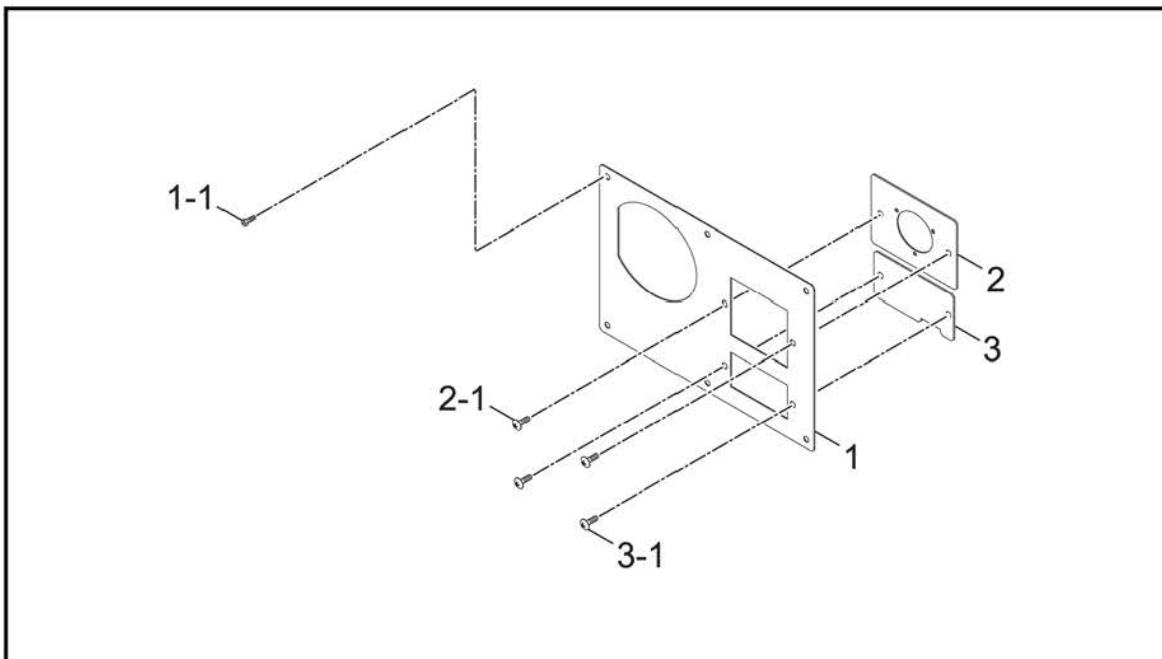


Fig.8 Front Panel (U30104F00)

9 PARTS LIST (Continued)

9.9. Rear Panel (Fig.9)

Ref No.	Part number	Description	Q'ty	Remarks
1	U30104R01	REAR PANEL	1	
1-1	-	CROSS-RECESSED HEAD SCREW	4	M4X8
2	K5952R02	COVER PANEL (B)	1	
2-1	-	SHEET METAL SCREW	3	M3X6
3	U30104R02	COVER PLATE	1	
3-1	-	PHILLIPS ROUND HEAD SCREW	2	M3X6
4	-	RUBBER BUSH	1	C-30-SG-36A-EP-UL
5	-	RUBBER BUSH	1	C-30-SG-20A-EP-UL
6	U30104R03	STOPPER PLATE	1	
6-1	-	PHILLIPS ROUND HEAD SCREW	2	M3X6

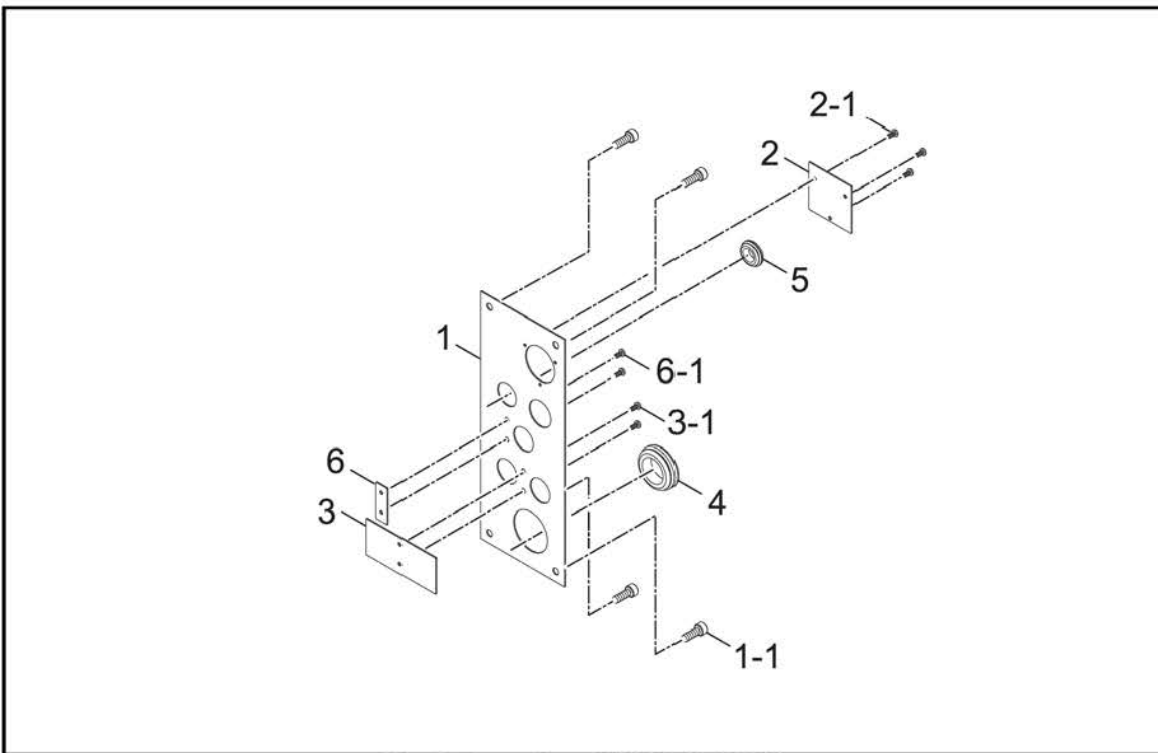


Fig.9 Rear Panel (U30104R00)

9 PARTS LIST (Continued)

9.10. Rear Cover (Fig.10)

Ref No.	Part number	Description	Q'ty	Remarks
1	K5951B11	HOUSING B	1	
1-1	-	HEXAGON SOCKET HEAD BOLT	4	M4X15
2	-	RUBBER BUSH	1	C-30-SG-26A-EP-UL

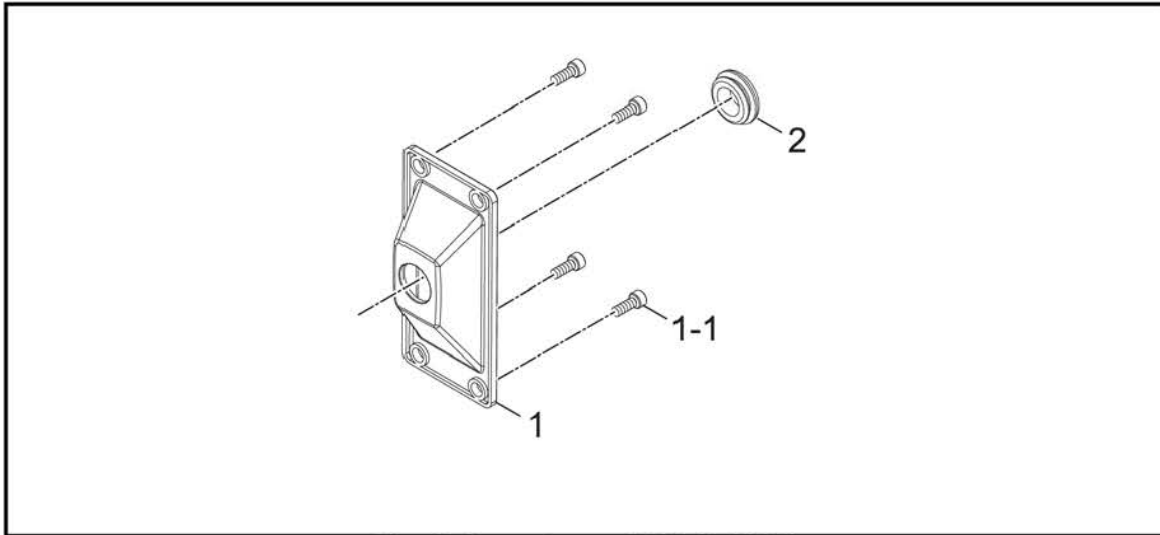


Fig.10 Rear Cover (U30104H00)

9 PARTS LIST (Continued)

9.11. Hose Bracket (Fig.11)

Ref No.	Part number	Description	Q'ty	Remarks
1	U30104Y01	HOSE BRACKET	1	
2	U5185J01	CABLE CLAMP	1	
2-1	-	PHILLIPS HEXAGON HEAD BOLT	2	M5X15
3	U1997C02	HOSE CLAMP	1	
3-1	-	PHILLIPS HEXAGON HEAD BOLT	2	M5X15
4	U1997C03	HOSE COVER	1	
5	-	PHILLIPS HEXAGON HEAD BOLT	1	M5X15

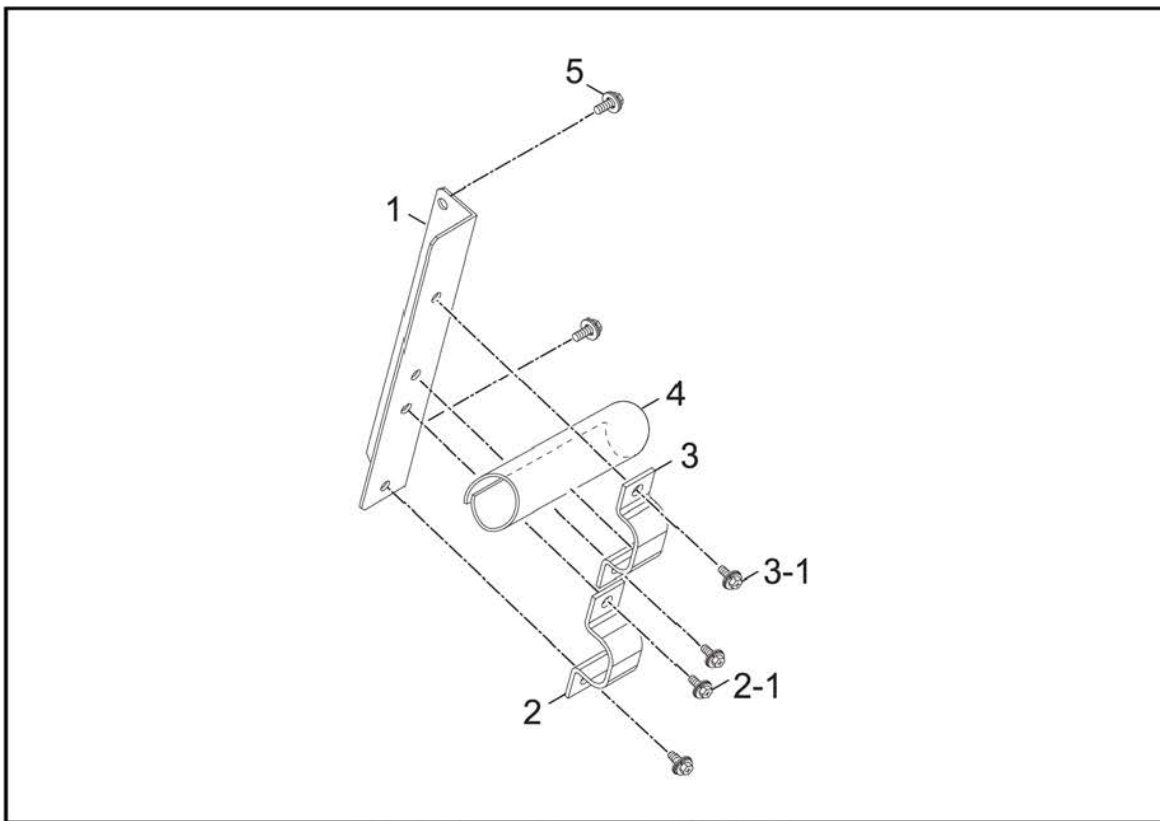


Fig.11 Hose Bracket (U30104Y00)

9 PARTS LIST (Continued)

9.12. Torch Adaptor NO.4 (Fig.12)

Ref No.	Part number	Description	Q'ty	Remarks
1	K5951D01	CONNECTION PLATE	1	
2	U30104D00	ADAPTOR(NO.4)	1	
2-1	–	CAP SCREW	2	M5X12
3	K5951D04	GUIDE ADAPTOR	1	
4	K5951D05	STOPPER PLATE	1	
4-1	K5951D06	STOPPER BOLT	1	
4-2	–	WASHER	1	M5
4-3	–	SPRING WASHER	1	M5
4-4	–	SHRINKAGE TUBE	1	NPE-25-12.5-2-5
5	K5975D01	COPPER BAR	1	
5-1	–	HEXAGON HEAD BOLT	1	M10X25
5-2	–	WASHER	1	M10
5-3	–	SPRING WASHER	1	M10
5-5	–	HEXAGON SOCKET HEAD BOLT	2	M5X15
5-6	–	WASHER	2	M5
5-7	–	SPRING WASHER	2	M5
6	K5975D02	INSULATING COVER	1	
6-1	–	SCREW	1	M4X8
7	U5971D03	FIXING BOLT	1	
8	U5975D03	STOPPER NUT	1	M10

9 PARTS LIST (Continued)

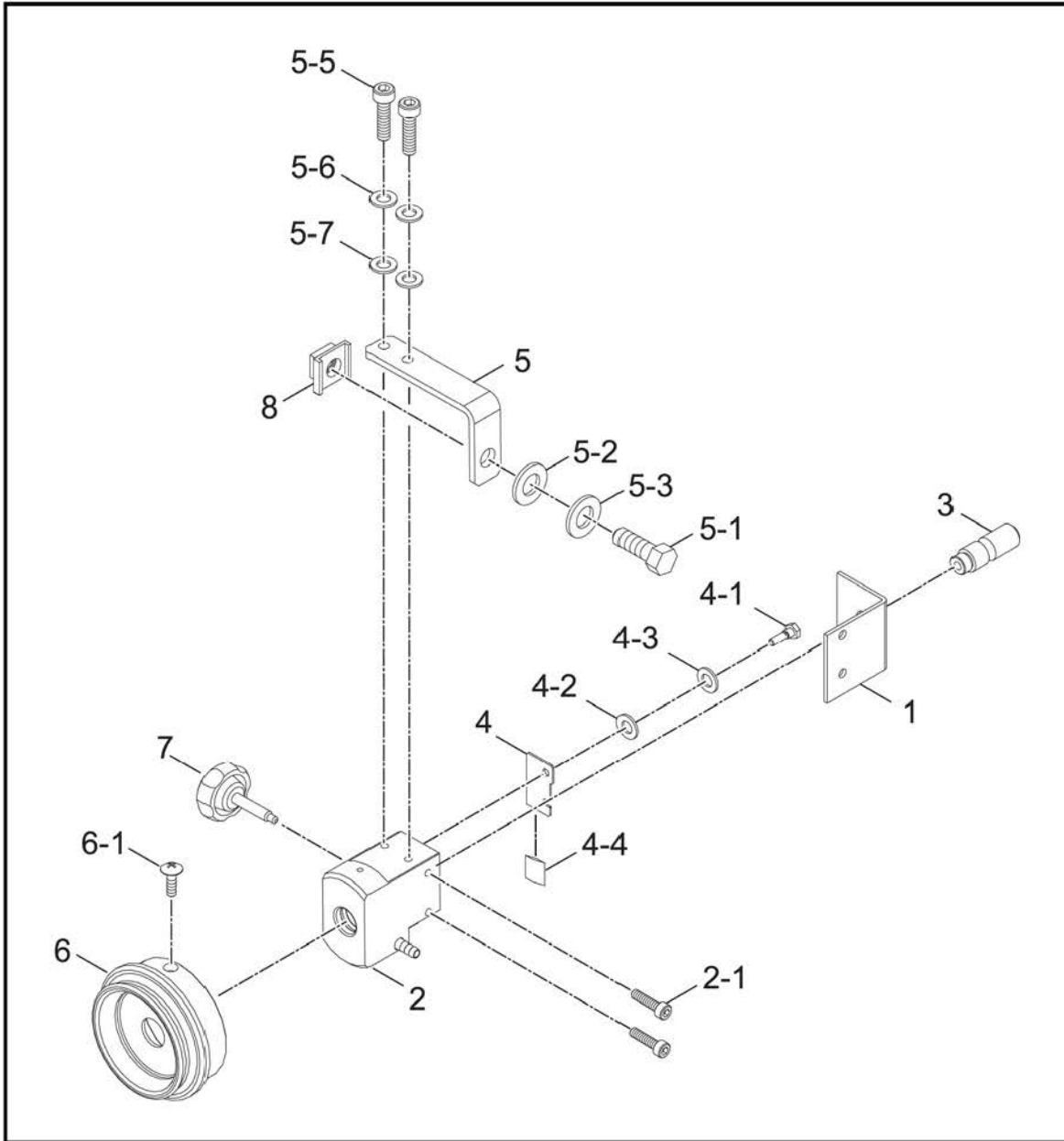


Fig.12 Torch Adaptor NO.4 (K5975D00)

9 PARTS LIST (Continued)

9.13. Attachment (Fig.13)

Ref No.	Part number	Description	Q'ty	Remarks
1	K5951J50	CENTER GUIDE Fe	1	
2	K5951J10	GUIDE BLOCK	1	
2-1	-	CAP SCREW	2	M5X20
3	L10595P00	GEAR	2	
4	K5439B12	FEED ROLL (0.9-1.0/1.2)	2	For Steel
4-1	-	HEXAGON SOCKET HEAD BOLT	4	M4X16
5	K5439C00	PRESSURE ROLL	2	
6	-	HEXAGON SOCKET HEAD BOLT	2	M6X30
7	-	WASHER(SMALL)	2	M6
8	L10595Q00	DRIVE GEAR	1	
8-1	-	PHILLIPS HEXAGON HEAD BOLT	1	M4X15
9	K5951T00	FEED COVER	1	
10	K5951J03	ROLL KNOB	2	
11	U30104B00	INLET LINER	1	ASSY
11-1	U30104B01	LINER ADAPTOR	1	
11-2	U30104B02	INLET LINER	1	
11-3	-	HEXAGON SOCKET SET SCREW	1	M4X6, TORQUE: 0.7 N•m
12	U30104J01	OUTLET GUIDE (0.9-1.2)	1	.035" - .045"

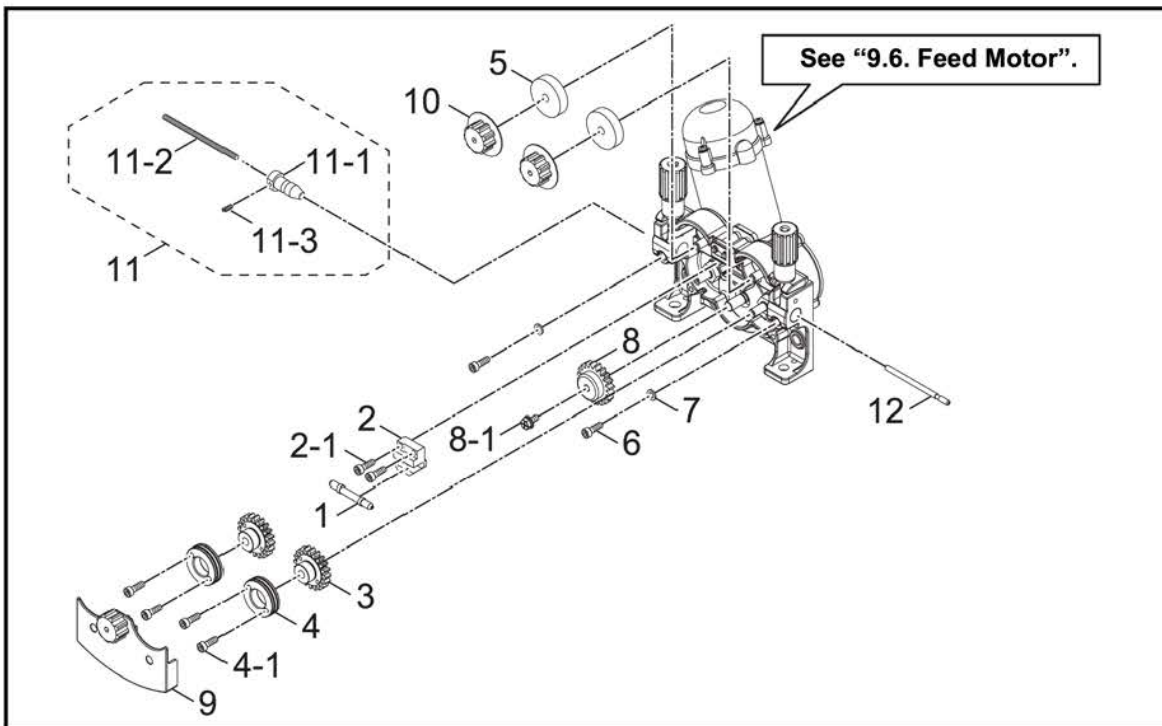


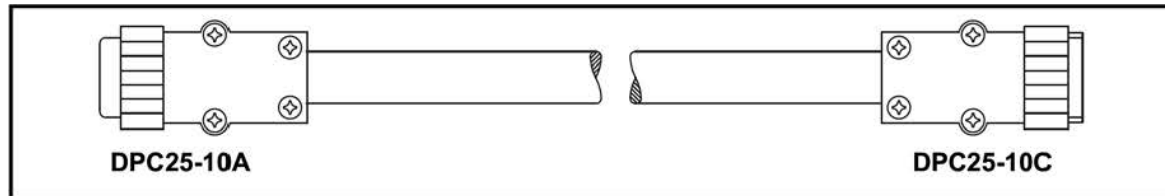
Fig.13 Attachment Assembly (U30104J00)

9 PARTS LIST (Continued)

9.14. Optional Accessory (1) Extension cable/hose

■ Control cable (10P)

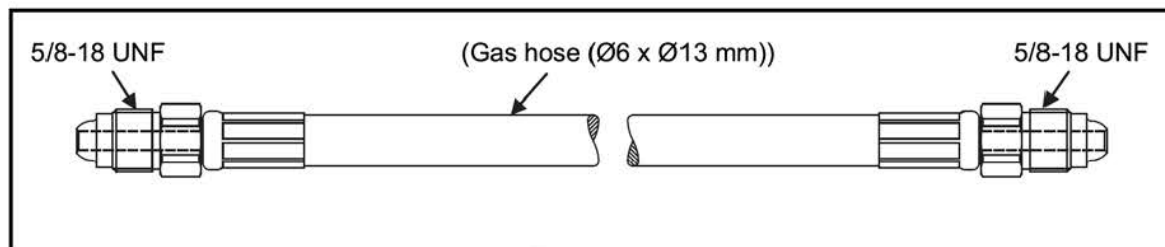
Model	Cable length			
	16ft. (5m)	33ft. (10m)	49ft. (15m)	66ft. (20m)
BKCPJ-1005	BKCPJ-1010	BKCPJ-1015	BKCPJ-1020	



Control cable: BKCPJ

■ Gas hose

Part number	Description	Length	Remarks
U5971R00	Gas hose	10ft. (3m)	



Gas hose

(2) Feed roll

Part number	Description	Q'ty	Remarks
K5439B01	FEED ROLL (1.4/1.6)	2	For steel (V type groove, for .052", 1/16")
K5439B04	FEED ROLL (1.2/1.4)	2	For steel (V type groove, for .045", .052")
K5439B05	FEED ROLL (1.2/1.2)	2	For steel (V type groove, for .045", .045")
K5439B06	FEED ROLL (1.4/1.4)	2	For steel (V type groove, for .052", .052")
K5439B07	FEED ROLL (1.6/1.6)	2	For steel (V type groove, for 1/16", 1/16")
K5439B09	FEED ROLL (0.6/0.8)	2	For steel (V type groove, for .024", .030")
K5439B11	FEED ROLL (1.2/1.6)	2	For steel (V type groove, for .045", 1/16")
K5439B13	FEED ROLL (0.8/0.9-1.0)	2	For steel (V type groove, for .030", .035"-.040")
K5463V02	FEED ROLL (1.0/1.2)	4	For aluminum (V type groove, for .040", 3/64")
K5463V03	FEED ROLL (1.2/1.6)	4	For aluminum (V type groove, for 3/64", 1/16")
K5463R02	FEED ROLL (1.0/1.2)	4	For aluminum (U type groove, for .040", 3/64")
K5463R03	FEED ROLL (1.2/1.6)	4	For aluminum (U type groove, for 3/64", 1/16")

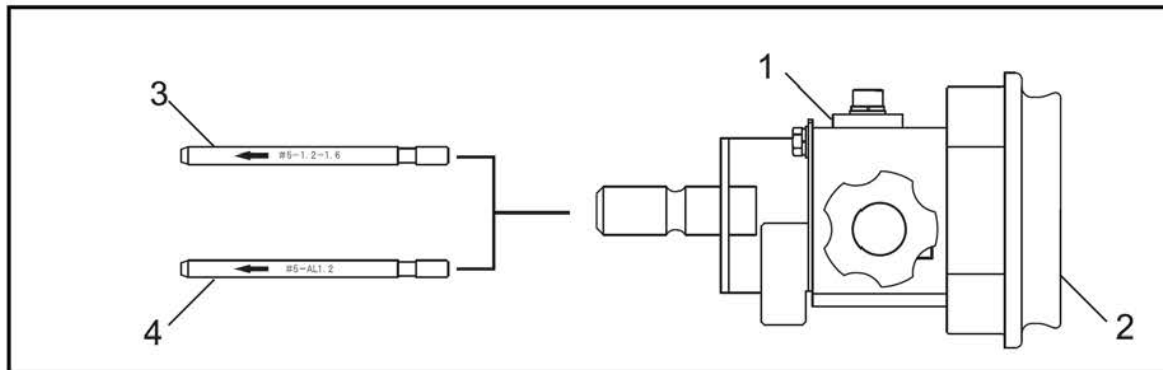
9 PARTS LIST (Continued)

(3) Outlet guide, center guide

Part number	Description	Q'ty	Remarks
K5975G01	Outlet guide NO.4 (0.6-0.9)	1	For steel, NO.4 (.023"-.035")
K5975G03	Outlet guide NO.4 (1.2-1.6)	1	For steel, NO.4 (.045"-1/16")
K5975G13	Outlet guide NO.5 (1.2-1.6)	1	For steel, NO.5 (.045"-1/16")
K5975G21	Outlet guide NO.4 (AL1.0)	1	For aluminum, NO.4 (.040"), Black
K5975G22	Outlet guide NO.4 (AL1.2)	1	For aluminum, NO.4 (3/64"), Black
K5975G23	Outlet guide NO.4 (AL1.6)	1	For aluminum, NO.4 (1/16"), Black
K5975G32	Outlet guide NO.5 (AL1.2)	1	For aluminum, NO.5 (3/64"), Black
K5975G33	Outlet guide NO.5 (AL1.6)	1	For aluminum, NO.5 (1/16"), Black
K5951J55	Center guide AL	1	For aluminum
K5975F02	Center guide (0.8-1.0)	1	For aluminum (.040"-1/16"), Black

(4) Torch adaptor NO.5 (K5975K00)

Ref. No.	Part number	Description	Q'ty	Remarks
1	K5975P00	Adaptor (NO.5)	1	
2	K5975K01	Insulating Cover NO.5	1	
3	K5975G13	Outlet guide NO.5 (1.2-1.6)	1	For steel (.040"-1/16")
4	K5975G32	Outlet guide NO.5 (AL1.2)	1	For aluminum (3/64"), black

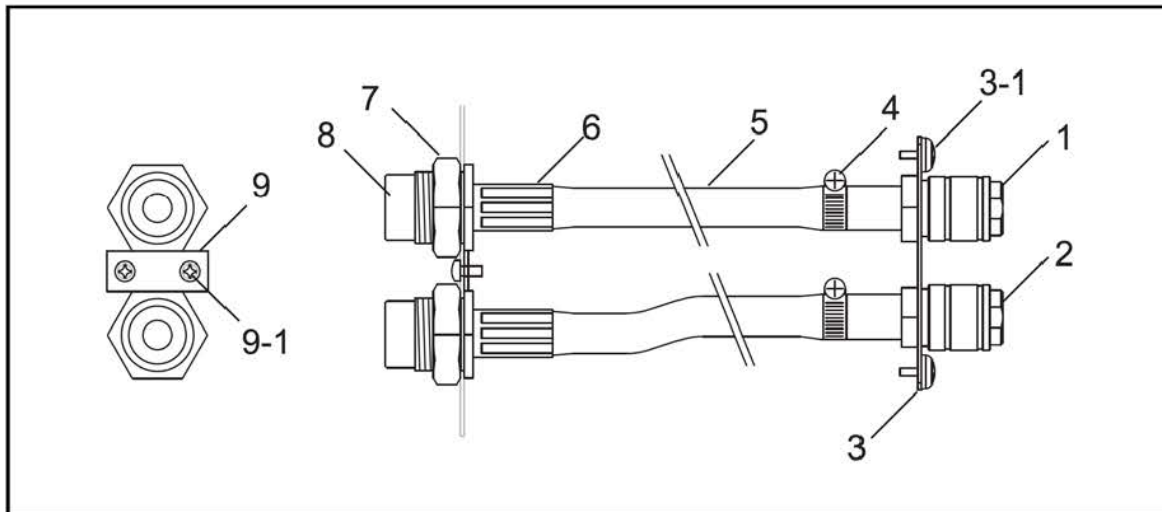


Torch adaptor NO.5 (K5975K00)

9 PARTS LIST (Continued)

(5) Water cooling kit (K5975L00)

Ref. No.	Part number	Description	Q'ty	Remarks
1	-	QUICK CONNECTOR	1	FA3086
2	-	QUICK CONNECTOR	1	FA3076
3	K5951H01	WATER PLATE	1	
3-1	-	CROSS-RECESSED HEAD SCREW	2	M4X8
4	-	MICRO CLAMP	2	MH-5
5	-	TETRON HOSE	1	6X11, Length: 26.0" [660mm]
6	H10K37	AL CLAMP PIPE	2	
7	K5951G02	NUT	2	
8	K5975L01	WATER CONNECTOR	2	
9	U30104R03	STOPPER PLATE	1	
9-1	-	PHILLIPS ROUND HEAD SCREW	2	M3X6

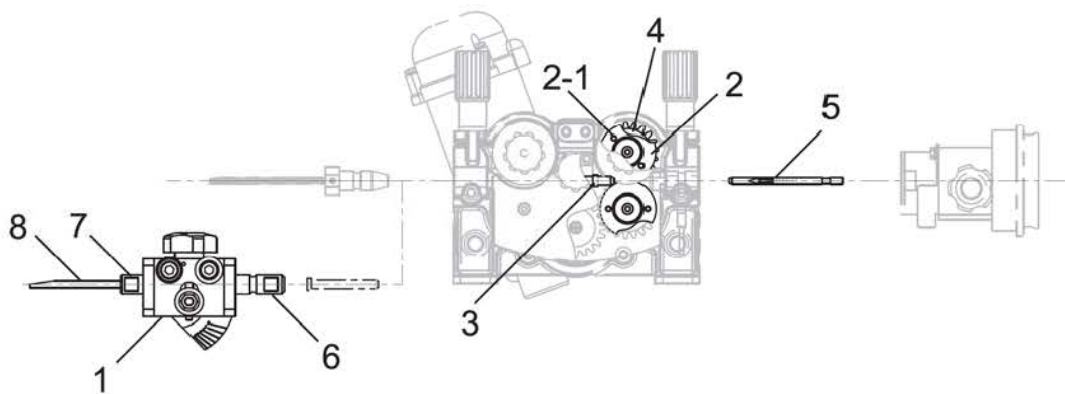


Water cooling kit (K5975L00)

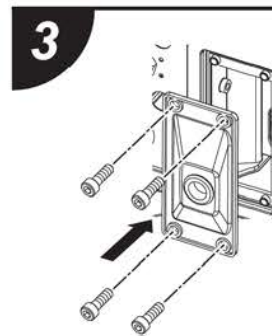
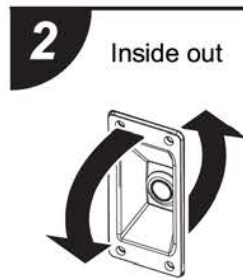
9 PARTS LIST (Continued)

(6) Aluminum kit (K5975E00)

Ref. No.	Part number	Description	Q'ty	Remarks
1	K5951U00	WIRE STRAIGHTENER	1	
2	K5463V03	FEED ROLL (1.2/1.6)	4	For aluminum (V type groove, for 3/64", 1/16")
2-1	-	CAP SCREW	4	M4X16
3	K5951J55	CENTER GUIDE AL	1	
4	L10595P00	GEAR	2	
5	K5975G22	OUTLET GUIDE NO.4 (AL1.2)	1	
6	U5204J07	INLET GUIDE	1	
7	K5951U10	LINER ADAPTOR	1	
8	K5951U11	INLET LINER	1	



Note) Before attaching the Aluminum kit (K5975E00)

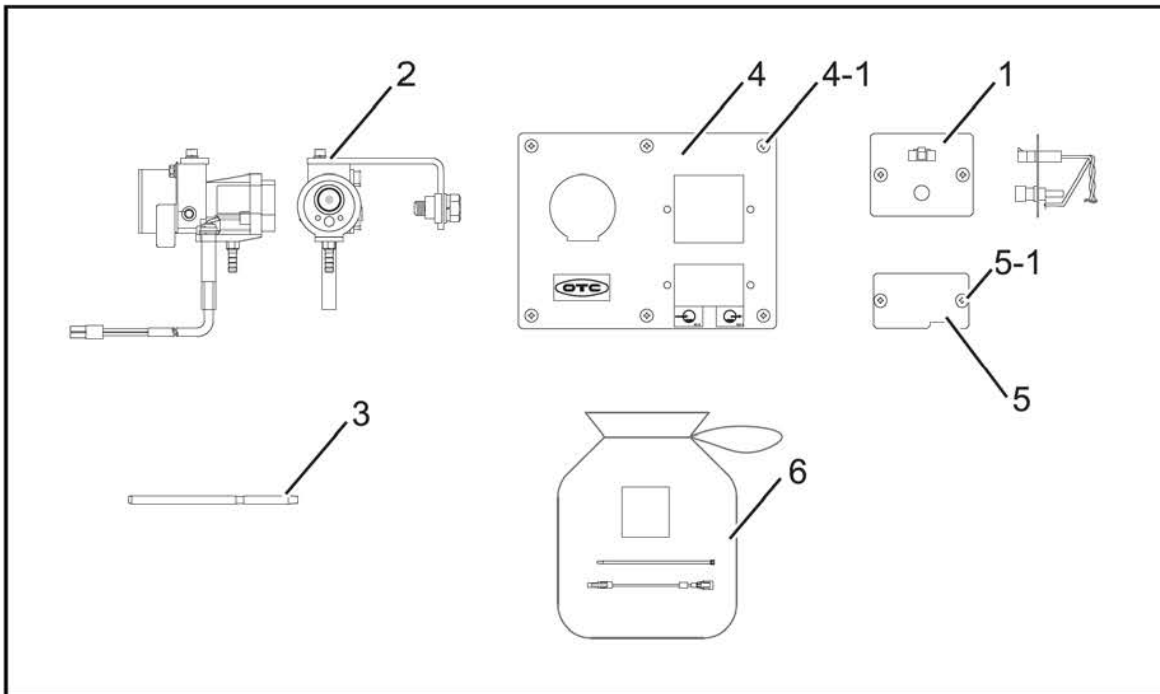


Aluminum kit (K5975E00)

9 PARTS LIST (Continued)

(7) Voltage detection adaptor kit (K5975V00)

Ref. No.	Part number	Description	Q'ty	Remarks
1	K5952E00	VOLTAGE DETECTION ADAPTOR	1	
2	K5977D00	CENTRAL ADAPTOR	1	
3	K5977J01	OUTLET GUIDE(0.9-1.2)	1	
4	K5977C01	FRONT PANEL(LABEL)	1	
4-1	-	CROSS-RECESSED HEAD SCREW	6	M4X8
5	U30104F03	COVER PLATE	1	
5-1	-	CROSS-RECESSED HEAD SCREW	2	M4X8
6	K5870P00	VOLTAGE DETECTION ADAPTOR KIT	1	For Torch

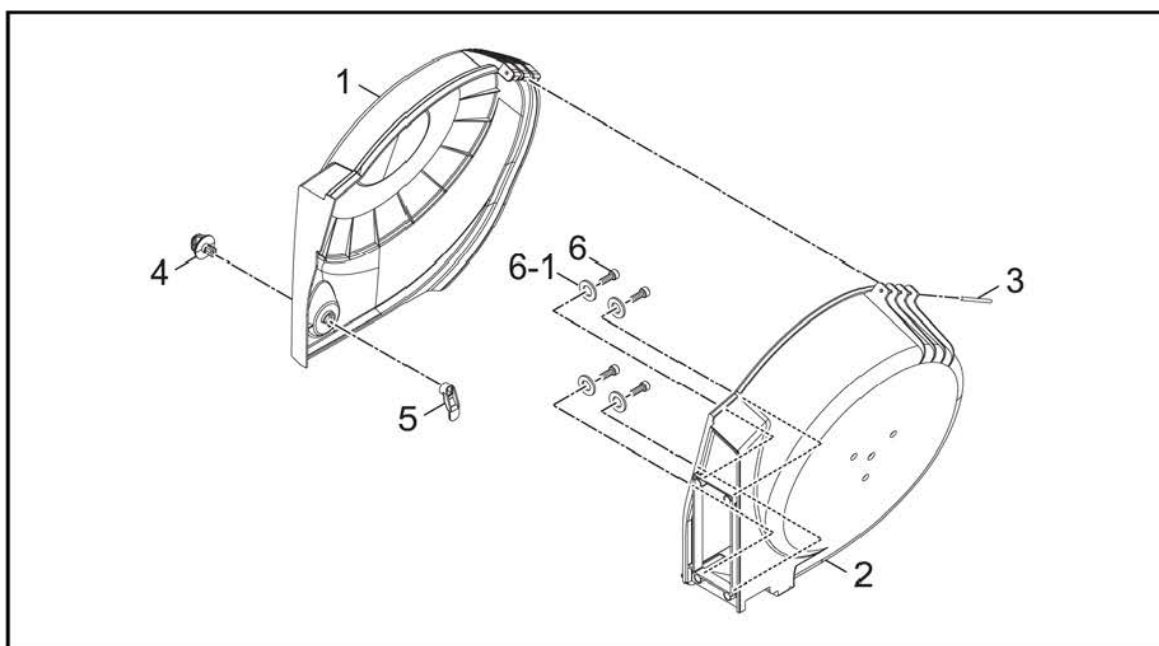


Voltage detection adaptor kit (K5975V00)

9 PARTS LIST (Continued)

(8) Wire Reel Cover (K5951Q00)

Ref No.	Part number	Description	Q'ty	Remarks
1	K5951Q01	COVER A	1	
2	K5951Q02	COVER B	1	
3	K5951B03	PIN	1	
4	K5951B07	DOOR KNOB	1	
5	K5951B08	DOOR HOOK	1	
6	-	HEXAGON SOCKET HEAD BOLT	4	M4X20
6-1	-	WASHER (SMALL)	4	M4



Wire Reel Cover (K5951Q00)

(9) Other optional parts

Part number	Description	Q'ty	Remarks
K5968A00	ANALOG PANEL 350A	1	
K5980A00	ANALOG PANEL 500A	1	
FCR-226	CO ₂ gas regulator (with heater)	1	Max. gas flow rate: 25 liter/min
NP-201	CO ₂ gas regulator (without heater)	1	Max. gas flow rate: 20 liter/min
AU-888	CO ₂ gas regulator (without heater)	1	Max. gas flow rate: 20 liter/min
FCR-100N	CO ₂ gas regulator for large current	1	Max. gas flow rate:100 liter/min
D-BHN-2	Argon gas regulator	1	For MAG gas flow rate:28 liter/min

9 PARTS LIST (Continued)

Table for Option parts and option KIT

NO.	Torch series	Welding wire	Option parts and option KIT				
			Outlet guide	Torch adaptor KIT	Water cooling KIT	Aluminum KIT	Voltage detection adaptor KIT
1	WT3510-S(M)(L)UT	Steel wire .035"-.045"	(U30104J01)* ¹	-	-	-	-
2		Steel wire .052"	K5975G03	-	-	-	-
3	WT4000-S(M)(L)UT	Steel wire .035"-.045"	(U30104J01)* ¹	-	-	-	-
4		Steel wire .052"-1/16"	K5975G03	-	-	-	-
5	WT5000-S(M)(L)UT	Steel wire .045"-1/16"	(K5975G13)* ³	K5975K00	-	-	-
6	WTA200-SUT	Aluminum wire .040"	K5975G21	-	-	K5975E00	-
7		Aluminum wire .3/64"	(K5975G22)* ²	-	-		-
8	WTA300-SUT	Aluminum wire .040"	K5975G21	-	-		-
9		Aluminum wire .3/64"	(K5975G22)* ²	-	-		-
10		Aluminum wire .1/16"	K5975G23	-	-		-
11	WTAW400-SUT	Aluminum wire .3/64"	(K5975G32)* ³	K5975K00	K5975L00		-
12		Aluminum wire .1/16"	K5975G33			-	
13	WT3500-S(M)(L)D	Steel wire .035"-.045"	(U30022J02)* ⁴	-	-	-	K5975V00
14	WT3510-S(M)(L)D	Steel wire .035"-.045"		-	-	-	
15	WT3520-S(M)(L)D	Steel wire .045"		-	-	-	

*1: It is a standard building in Wire feeder.

*2: It is attached to Aluminum KIT.

*3: It is attached to Torch adaptor KIT (NO.5).

*4: It is attached to Voltage detection adaptor KIT.

10 SPECIFICATIONS

10.1. Specifications

Model		CM-743-U
Applicable wire size	inch	(.030"), .035", .040", .045", (.052"), (1/16")
	mm	(0.8), 0.9, 1.0, 1.2, (1.4), (1.6)
Wire feeding rate		Max. 866.4 ipm [22m/min]
Applicable wire reel	Shaft diameter	1.97"Ø [50mmØ]
	External diameter	Max. 11.8"Ø [300mmØ]
	Wide	4.05" [103mm]
Mass of applicable wire		Max. 55.1 lbs [25kg]
Temperature range		14 ~ 104 ° F (-10 ~ 40 °C)
Moisture range		20% ~ 80% (no condensation)
Storage temperature range		14 ~ 140 ° F (-10 ~ 60 °C)
External dimensions (WxDxH)		10.00" x 24.06" x 15.47" (254mm x 611mm x 393mm)
Storage moisture range		20 ~ 80% (no condensation)
Mass		33.3 lbs [15 kg]

10 SPECIFICATIONS (Continued)

10.2. Available Welding Torch

Rated current	Duty cycle	Cooling method	Cable length			
			For mild steel			For aluminum
			10ft. [3m]	15ft. [4.5m]	20ft. [6m]	10ft. [3m]
350 A	30%	Air cooling	WT3500-SD*	WT3500-MD*	WT3500-LD*	-
	60%		WT3510-SUT	WT3510-MUT	WT3510-LUT	-
			WT3510-SD*	WT3510-MD*	WT3510-LD*	-
80%	WT3520-SD*		WT3520-MD*	WT3520-LD*	-	
400 A	60%		WT4000-SUT	WT4000-MUT	WT4000-LUT	-
500 A	60%		WT5000-SUT	WT5000-MUT	WT5000-LUT	-
200 A	60%		-	-	-	WTA200-SUT
300 A	50%	-	-	-	WTA300-SUT	
400 A	100%	Liquid cooling	-	-	-	WTAW400-SUT

* When using these torches, changing of the torch connection to Central Adaptor (K5977D00) is required.

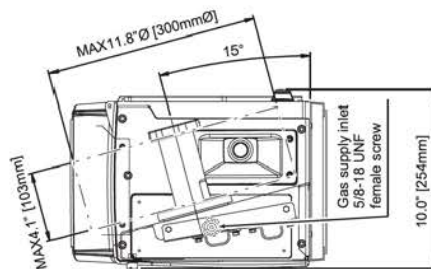
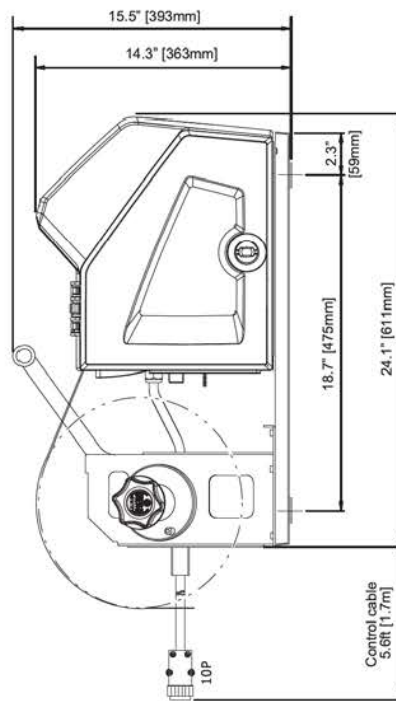
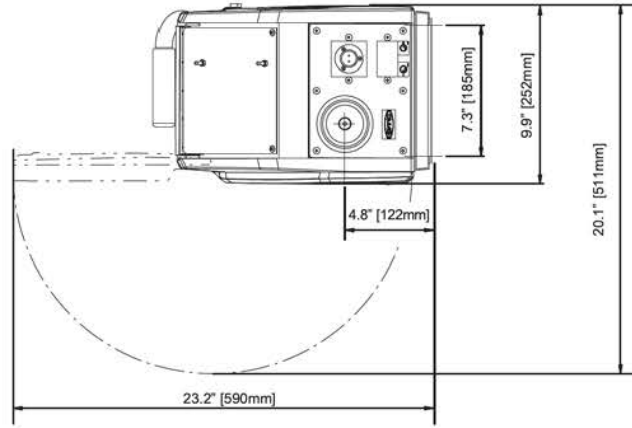
10.3. Standard Accessory

Part number	Description	Q'ty	Remarks
K5439C00	Pressure roll	(2)	Pre-installed
K5439B12	Feed roll(0.9-1.0/1.2)	(2)	Pre-installed, .035"-.040" / .045"
U30104J01	Outlet guide NO.4 (0.9-1.2)	(1)	Pre-installed, .035"-.045"
U5971R00	Gas hose	1	Attached, (10ft. [3m])
U5971S00	Switch cord	1	Attached
100-0816	Terminal	2	Attached
100-0817	Vinyl cap	2	Attached
U1997C03	Hose cover	2	Attached
-	Hexagon Socket Screw Key	1	M4

10 SPECIFICATIONS (Continued)

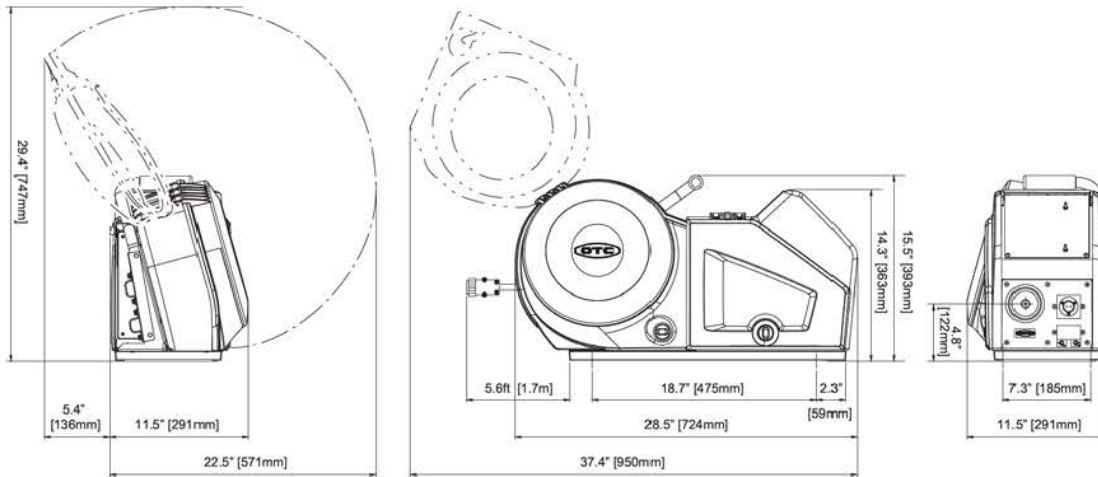
10.4. External View

■ CM-743-U Type Wire Feeder

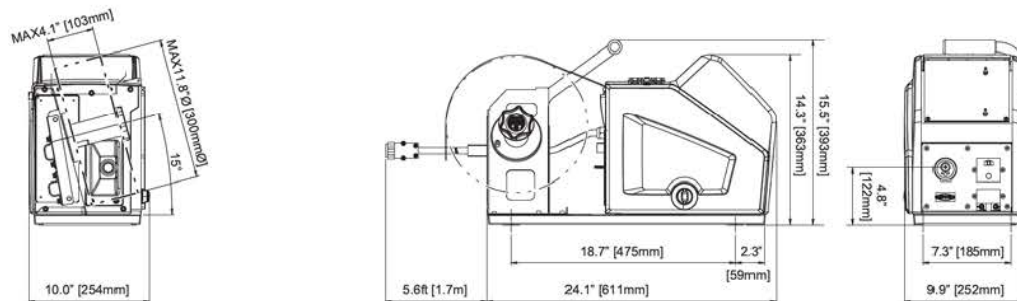


10 SPECIFICATIONS (Continued)

■ CM-743-U Type Wire Feeder (* Option: Full cover)



■ CM-743-U Type Wire Feeder (* Option: For voltage detection)





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