

Robotic Water-Cooled Torches

WX Series

WX500 WX400 WX451AW
WX450 WX401 WX452AW
WX451 WX402
WX452

Instruction Manual

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Please be sure to read the instruction
manual before operating.

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[1] NOTES REGARDING SAFETY

Be sure to read these instructions before using the welding torch.

- In order to ensure safe operation, this equipment should only be set up, inspected and maintained by a qualified person, or by someone who has a thorough understanding of the welding equipment and who has received sufficient training in its use.
- In order to ensure safe operation, this equipment should only be operated by people who have read these instructions thoroughly and understood their contents and who have the knowledge and ability to handle the equipment safely.
- It is recommended that instruction in all aspects of safe operation should be obtained from institutions and associations which provide courses in proper welding techniques taught by qualified welding instructors.
- After reread these instructions, keep them in a safe and easily-accessible place so that they can be reread at a later date as required.
- Please contact TOKIN CORPORATION or its dealer if there are any unclear points in this manual. If there are any questions regarding service, contact the dealer of your purchase or TOKIN CORPORATION. The contact address and the telephone number are printed on the rear cover of this instructions.

1. Precautions for safety

- Different degrees of personal injury or equipment damage can occur if this welding torch is used incorrectly. The terms and symbols which appear in the "NOTES REGARDING SAFETY" section of these instructions are classified into three ranks according to the possible degree of danger or injury that each one warns against.

Symbol	Term	Definition
	DANGER	The instructions which follow this term represent situations where failure to follow the instructions will almost certainly result in severe injury or death.
	WARNING	The instructions which follow this term represent situations where failure to follow the instructions can possibly result in severe injury or death.
	CAUTION	The instructions which follow this term represent situations where failure to follow the instructions may result in injury to the operator or physical damage.

In the above definitions, "severe injury" refers to cases of blindness, physical wounds, burns (high- and medium-temperature), electric shocks, fractures or poisoning which may leave scars or lasting ill-effects and for which medical treatment or prolonged hospitalization may be necessary. "Injury" refers to cases of physical wounds, burns and electric shocks for which prolonged medical treatment and hospitalization are not necessary, and "physical damage" refers to extensive damage that may result in damaged property or broken equipment.

2. Items that must always be observed for safety

**WARNING**

These items should be observed at all times in order to prevent the possibility of serious personal injury.

- Welding torches have been designed and manufactured with full consideration given to safety; however, the warning and cautions given in this "Notes Regarding Safety" section must always be strictly observed during use. If they are not observed, severe injury or death through misoperation may result.
- Do not unauthorized personal come into the area where welding equipment is being used.
- When welding equipment is turned ON, it generates a magnetic field. This magnetic field may adversely affect the operation of some sensors and gauges. For the same reason, people who are using a heartbeat pace maker must not go close to operating welding equipment or go into workshops where welding equipment is being used unless prior medical approval has been obtained.
- In order to ensure safe operation, welding torch, wire feeder and the welding power supply equipment should only be set up, inspected, maintained and repaired by a qualified person, or by someone who has a thorough understanding of welding equipment and who has received sufficient training in its use.
- In order to ensure safe operation, welding torch should only be operated by people who have read these instructions and the instructions for the wire feeder and power supply equipment through and understood their contents and who have the knowledge and ability to handle the equipment safely.
- Do not use welding torch for any applications other than for arc welding as explained in these instructions and in the instructions for the wire feeder and power supply equipment.

**WARNING**

These items should be observed at all times in order to prevent the possibility of electric shocks.

- *Touching the charged parts can cause fatal electric shocks or burns. Welding wire, contact tip and tip body are charged whenever the welding torch is turned ON and operating.
- Never Torch charged parts such as welding wire, or contact tip while welding torch is turned ON and operating.
- Grounding of welding power supply case and base metal and tools which are connected electrically to the base metal, must be carried out by a qualified electrician in accordance with the proper electrical engineering regulations.
- Turn OFF all input power supplies by turning OFF the switches in the distribution box before carrying out any inspections or maintenance.

- Inspections and maintenance should be carried out at periodic intervals, and the equipment must not be used until any damaged parts found have been repaired or replaced.
- Do not use cables that are damaged or that have exposed conductors, or that are rated lower than the specified level.
- Make sure that the cable is connected securely and that it is insulated.
- Welding cable should be connected as close as possible to the base metal being welded and it should be connected securely.
- Do not wear gloves which are torn or wet.
- Use a safety strap if welding in raised places.
- Turn OFF all power switches and the input power supply when not using.

**CAUTION**

Wear protective equipment at all times to protect yourself and others against arc beam, welding flashes, flying spatter and slag, and noise.

- *Welding flashes contain harmful ultraviolet and infrared lights which can cause inflammation or burn to eyes.
- *Flying spatter and slag can hurt the eyes and cause serious burns.
- *The noise generated by welding can cause problems with hearing.

- Always wear protective goggles or welding masks which have sufficient shielding properties when doing welding or when observing welding being done.
- Wear protective glasses to protect the eyes from spatter and slag.
- Hang a curtain around the area where welding is being carried out to prevent welding flashes from affecting passers-by.
- Wear protective clothing such as leather gloves, longsleeves, leg covers and a leather apron for protection while welding.
- Wear noise proof ear protectors if the noise level is too high.

**CAUTION**

Use protective equipment at all times to protect yourself and others against any fumes and gases that may be generated from welding.

- *Fumes and gases are generated when welding is carried out. Inhaling fumes and gases can be dangerous to your health.
- *Welding in confined spaces can reduce the oxygen content in the air, which can result in suffocation.

- To prevent gas poisoning and suffocation, always use a proper ventilation equipment to vent gases locally or entirely as stipulated by labor safety regulations and air contamination prevention regulations, or use an adequate breathing apparatus.
- When welding in a confined space, make sure that the air is circulating freely, wear some kind of breathing apparatus, and work only under the supervision of a properly trained supervisor.
- Toxic gases may be generated if welding is carried out near where degreasing, cleaning or demisting operations are also being carried out. Avoid welding near places where such operations are being carried out.
- Welding metal which has been plated with zinc will cause toxic fumes. Remove the plating before welding, or wear adequate absorption equipment for protection.

**CAUTION**

Be sure to observe the following to avoid burns from the nozzle and tip or injury from fine wire ends.

- *The nozzle or contact tip becomes very hot after use, and it can cause serious burns if touched.

- Do not touch the nozzle or tip immediately after welding has been completed.
- Do not bring the tip of the welding torch close to your face during wire inching.

**CAUTION**

Be sure to observe the following to avoid fires, explosions and rupturing.

- *Fires can be caused by spatter and base metals which are hot after welding.
- *Fire can occur as a result of heat generated by the flow of current if the cable has not been correctly connected or there is an incomplete contact in the current path at the base metal being used.
- *Explosions can occur if an arc is generated near containers that contain flammable substances such as gasoline.
- *Ruptures can occur if welding sealed objects such as tanks and pipes.

- Do not use the welding torch in places where flying spatter can cause flammable materials to ignite.
- Do not use the welding torch near places where flammable gases are present.
- Keep base metals away from flammable materials immediately after welding as they may have become hot.
- Remove any flammable materials on the other side of ceilings, floors and walls that are being welded as sparks from welding could cause such materials to ignite.
- The welding cable should be connected as close as possible to the base metal being welded, and it should be connected securely.
- Do not weld gas cylinders which still contain gas.
- Do not weld sealed tanks or pipes.
- Keep a fire extinguisher close by the place where welding is being carried out in case a fire starts.

[2] WX Series Torch Rated Specifications

		Water-Cooled Robotic Torches							
Model		WX500(S, R)		WX450(S, R)		WX451(S, R)		WX452(S, R)	
Torch Body Type		Straight	Curved	Straight	Curved	Straight	Curved	Straight	Curved
Rated Current	A	500(CO ₂) , 450(MAG)		500(CO ₂) , 450(MAG)		500(CO ₂) , 450(MAG)		500(CO ₂) , 450(MAG)	
Duty Cycle	%	100(CO ₂) , 100(MAG)		80(CO ₂) , 70(MAG)		80(CO ₂) , 70(MAG)		80(CO ₂) , 70(MAG)	
Attaching and Detaching System		×	×	×	×	○(2Piece)	○(2Piece)	○(3Piece)	○(3Piece)
Applicable Wire Size	mm	1.2 , 1.4 , 1.6		1.2 , 1.4 , 1.6		1.2 , 1.4 , 1.6		1.2 , 1.4 , 1.6	
	Standard Spec.	N Tip ϕ 1.6		N Tip ϕ 1.6		N Tip ϕ 1.6		N Tip ϕ 1.6	
Applicable Nozzle Size	mm	ϕ 16 , ϕ 19		ϕ 16 , ϕ 19		ϕ 16 , ϕ 19		ϕ 16 , ϕ 19	
	Standard Spec.	Air-Cooled ϕ 16		Air-Cooled ϕ 16		Air-Cooled ϕ 16		Air-Cooled ϕ 16	
Wire Clamp Specification		×	×	×	×	○	○	○	○
Water-Cooled Nozzle Specification		×	×	○	○	○	○	○	○
Cooling Method		Water-Cooled		Water-Cooled		Water-Cooled		Water-Cooled	
Cable Length	m	1~5		1~5		1~5		1~5	
Torch Weight	kg	1.4kg		1.4kg		1.4kg		2.1kg	
		The WX500SJ-2000 weight measurement is from the front end to 40 cm behind.		The WX450SJ-2000 weight measurement is from the front end to 45 cm behind.		The WX451SJ-2000 weight measurement is from the front end to 45 cm behind.		The WX452SJ-2000 weight measurement is from the front end to 50 cm behind.	
Features		This water-cooled torch shows marked improvement in performance, part replacement, and ease of handling.				Along with a 500A 80% utilization rate the torch body and cable assembly can be attached and detached easily.		Along with a 500A 80% utilization rate the torch body assembly, cable assembly, and clamp assembly can be attached and detached into 3 pieces.	

		Water-Cooled Robotic Torches						Aluminium Welding Torches			
Model		WX400(S,R)		WX401(S,R)		WX402(S,R)		WX451AW(S,R)		WX452AW(S,R)	
Torch Body Type		Straight	Curved	Straight	Curved	Straight	Curved	Straight	Curved	Straight	Curved
Rated Current	A	400(CO ₂) , 350(MAG)		400(CO ₂) , 350(MAG)		400(CO ₂) , 350(MAG)		350(MIG)		350(MIG)	
Duty Cycle	%	100(CO ₂) , 100(MAG)		100(CO ₂) , 100(MAG)		100(CO ₂) , 100(MAG)		50(MIG)		50(MIG)	
Attaching and Detaching System		×	×	○(2Piece)	○(2Piece)	○(3Piece)	○(3Piece)	○(2Piece)	○(2Piece)	○(3Piece)	○(3Piece)
Applicable Wire Size	mm	1.2 , 1.4		1.2 , 1.4		1.2 , 1.4		1.2 , 1.6		1.2 , 1.6	
	Standard Spec.	N Tip ϕ 1.2		N Tip ϕ 1.2		N Tip ϕ 1.2		DMIG Tip ϕ 1.2		DMIG Tip ϕ 1.2	
Applicable Nozzle Size	mm	350A ϕ 12, ϕ 16, ϕ 18		350A ϕ 12, ϕ 16, ϕ 18		350A ϕ 12, ϕ 16, ϕ 18		Aluminium MIG ϕ 16 Water-Cooled Nozzle		Aluminium MIG ϕ 16 Water-Cooled Nozzle	
	Standard Spec.	Air-Cooled Thick Nozzle ϕ 16		Air-Cooled Thick Nozzle ϕ 16		Air-Cooled Thick Nozzle ϕ 16		Same as above		Same as above	
Wire Clamp Specification		×	×	○	○	○	○	×	×	×	×
Water-Cooled Nozzle Specification		×	×	×	×	×	×	Standard	Standard	Standard	Standard
Cooling Method		Water-Cooled		Water-Cooled		Water-Cooled		Water-Cooled		Water-Cooled	
Cable Length	m	1~5		1~5		1~5		1~3		1~3	
Torch Weight	kg	1.4kg		1.4kg		2.0kg		1.5kg		2.2kg	
		The WX401SJ-2000 weight measurement is from the front end to 45 cm behind.		The WX401SJ-2000 weight measurement is from the front end to 45 cm behind.		The WX402SJ-2000 weight measurement is from the front end to 50 cm behind.		The WX451AWSJ-2000 weight measurement is from the front end to 45 cm		The WX452AWSJ-2000 weight measurement is from the front end to 50cm behind.	
Features				Along with a 400A 100% utilization rate the torch body and cable assembly can be attached and detached easily.		Along with a 400A 100% utilization rate the torch body assembly, cable assembly, and clamp assembly can be attached and detached into 3 pieces.		This is a water-cooled aluminium welding specialty torch. Along with a 350A 50% utilization rate the torch body assembly and cable assembly can be attached and detached easily. Both the standard water-cooled nozzle and end components cooling efficiency and has be improved.		Along with cooling efficiency improvements seen in WX451 the torch body assembly, cable assembly, and clamp assembly can be attached and detached into 3 pieces.	

[3] Model Notation

WX451
S
J
-
2730

Model

Torch Body Type ※1

S	Straight
R	Curved

Wire Feeder Specification

J	For Water-Cooled Use
K	For Air-Cooled Use

Special Specifications

Example 1: EURO Wire Feeder Connection
 Example 2: Nozzle ϕ 19/ Tip 1.4 ϕ
 Example 3: Coupler Coolant Connection (EURO)
 Example 4: Wire Clamp Specification
 Example 5: Built-in Voltage Sensor Type

Please specify cable length by units of 10mm. ※2

※1: The manufacturing number is printed on the torch body.
 ※2: Excluding the WX500 series, the manufacturer's serial number is engraved on the cable assembly.

<Annotation 1>

When operating WX torches, please always confirm the cooling water is flowing.

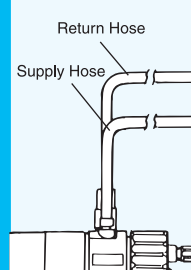
[4] Wire Feeder Connection Types

Quick Exchange Adapter

※Depending on the wire feeder model other adapters may be required.
 ※Please consult regarding wire feeders other than Panasonic or Daihen.

Connecting to Air-Cooled Wire Feeders

Air-Cooled K Type

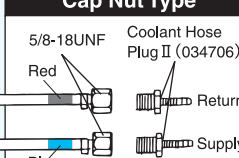


It's possible to connect to the below Daihen wire feeders without an adapter.

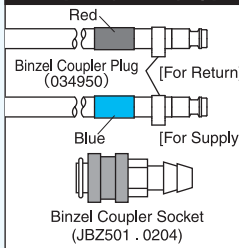
CMAW-7401 and CMAW-7402/CMAW-7403 use coupler coolant connections (EURO).
 CMV-7401/CMV-7402/CMV-7403 are built-in voltage sensor type.

Please check the coupler coolant connection.

Standard Cap Nut Type

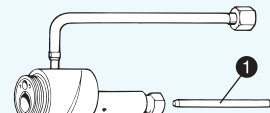


Special Specification Coupler (EURO) Type



Adapter Type

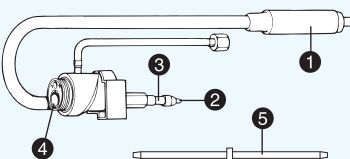
For Panasonic	034800	WX / NEW β N Air-Cooled Adapter
	034801	WX / NEW β N Air-Cooled Adapter (For Aluminum)



	Part No.	Part Name
①	020040	N EM EMC Guide Tube
①	020059	N Guide Tube For Aluminium

Wire Feeder Models
 YW-35DU1, YW-50DH1, YW-35DH1, YW-35H1TAS, YW-35KB3, YW-35DG1, YW-50DG1, YW-40DG1, YW-50AF2, YW-50DGW2, YW-50DEF1, YW-50AF2KFN, YW-50KC2KFN, YW-60KC2KFN, YW-50KB3KFN, YW-50CA2, YW-50CAL2, YW-60CA2, YW-60CAL2, YW-700KA1, YW-700DKA1TAH
 Aluminum MIG Wire Feeder Models
 YW-35DH1TAK, YW-35DHW1TAK, YW-35DG1TAK, YW-50DHW1TAK, YW-40DG1TAK, YW-40DGW1TAK

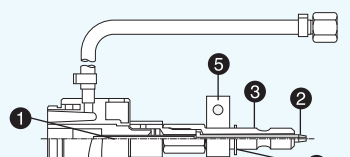
For Daihen	034810	WX / NEW β D Air-Cooled Adapter
	034823	WX / NEW β D Air-Cooled Adapter (For Aluminum)



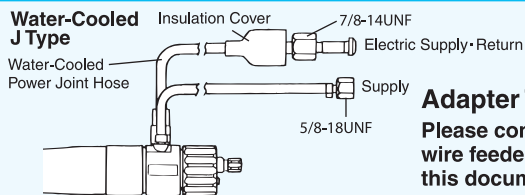
	Part No.	Part Name
①	020050	D Adapter Power Cable Adapter 500A
②	020052	D Adapter Outlet Guide
③	020053	D Adapter Guide Adapter
④	020041	D Guide Tube
⑤	020048	D Aluminium Guide Tube

(For Aluminium ⑤ will replace ② and ④.)

For Daihen (Digital)	034811	WX / NEW β D Air-Cooled CMRE-741 Adapter
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	Part No.	Part Name
①	020041	D Guide Tube
②	023022	WT64 Outlet Guide
③	020065	DD Adapter Guide Tube
④	STW-14	C-Shape Stop Ring
⑤	023551	DSRC-3531 P/C Fitting

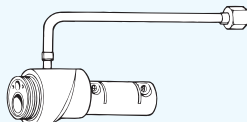


Adapter Type

Please consult if using other wire feeders not mentioned in this document.

For Panasonic 034700

WX/NEW β NW Water-Cooled Adapter B Type



Discontinued

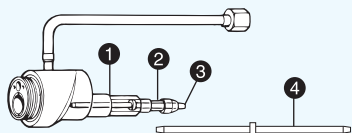
Wire Feeder Models YM-508UFHK7 YM-508UFHK6 YM-508UFHU60
YM-505UFMSK2 YW-501FW

For Daihen 034710

WX/NEW β D Water-Cooled Adapter F Type

034709

WX/NEW β D Water-Cooled Adapter F Type (For Aluminum)



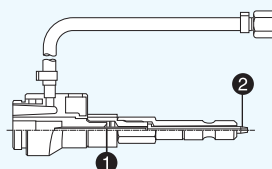
Part No.	Part Name
① 020041	D Guide Tube
② 020053	D Adapter Outlet Guide
③ 020052	D Adapter Guide Adapter
④ 020048	D Aluminium Guide Tube

Wire Feeder Models CMW-145 CMW-231 CMWH-231 CMLW-231
CMLWH-231 CMLWH-232

For Daihen (Digital)

034818

WX/NEW β D Water-Cooled CMW-741 Adapter/742 Adapter

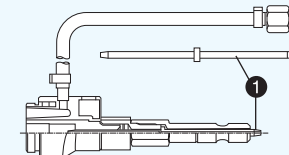


Part No.	Part Name
① 020041	D Guide Tube
② 023022	WT64 Outlet Guide

For Daihen (Digital)

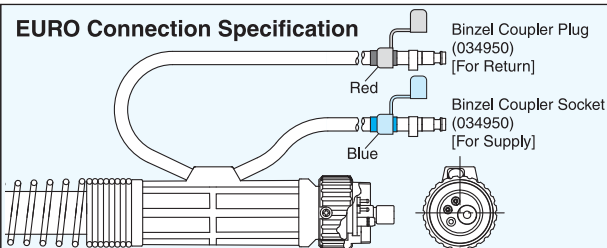
034821

WX/NEW β D Water-Cooled CMAW-741,742 Adapter



Part No.	Part Name
① 020080	D Aluminium Guide Tube (CMAW-741)

EURO Connection Specification



It's possible to connect to the below Panasonic wire feeders without an

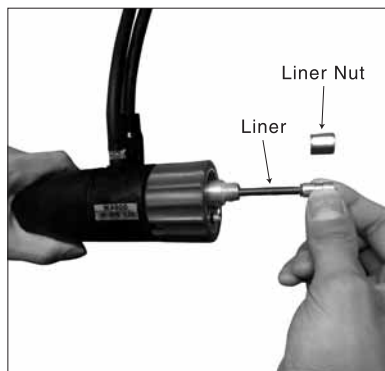
YW-35DE1, YW-35DEB1
YW-35DEC1, YW-35DED1
YW-50DEE1TAG (Aluminum MIG)
YW-35DEE1 (Aluminum MIG)

[Annotation 2] Please firmly tighten the torch adapter nut by hand. If inadequately tightened heat generation from poor electric supply and gas leaks may occur.

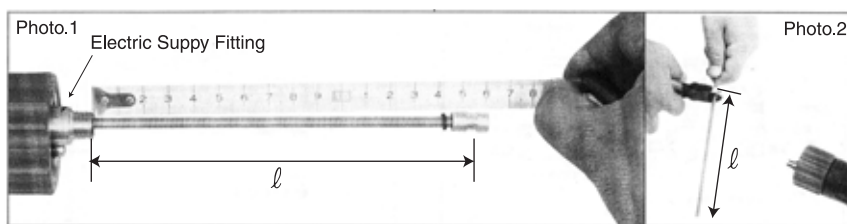
[5] Replacing the Liner

1 If wire feeding becomes unsteady due to liner wear or is clogged with wire shavings, rust or dirt, please replace the liner by the following procedure.

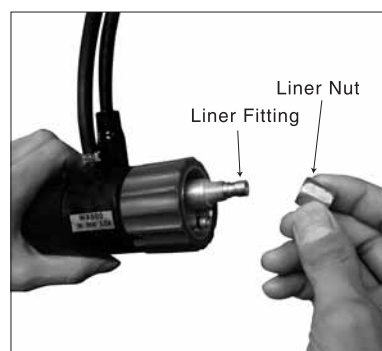
- ① Place the cable in a straight line.
- ② Unscrew the liner nut. Rotate the torch end counterclockwise until the liner fitting can be easily grasped.



- 2**
- ① Fully insert the new liner into the cable. Measure the length ℓ which protrudes from the end (Photo 1).
 - ② Pull the liner out and cut off the same length ℓ from the front. After cutting, file off any burred edges (Photo 2).

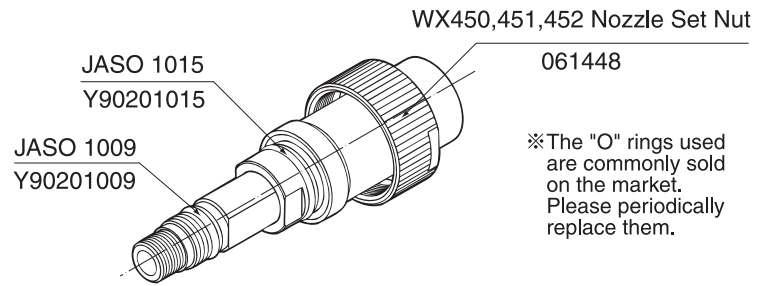


- 3**
- ① Without twisting insert the length-adjusted liner into the cable. Because the O-ring at the front of the liner fitting
 - ② After setting the liner as illustrated, tighten the liner nut by hand. Hand-tightening will be enough.

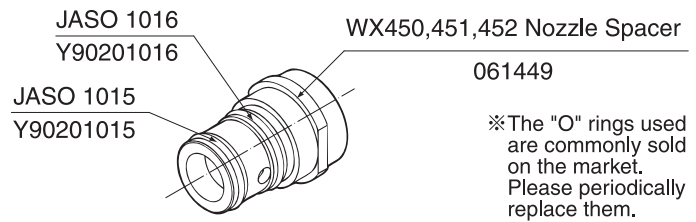


[6] Assembling the WX450, WX451, 452 End Parts

- 1** The torch body uses "O" rings in two places. Please set the JASO 1009 and JASO 1015 "O" rings into position on the torch body, and pass the nozzle set nut through. (If the "O" ring is coated with molybdenum (Mo), it will reduce the risk of damage when attaching and detaching.)



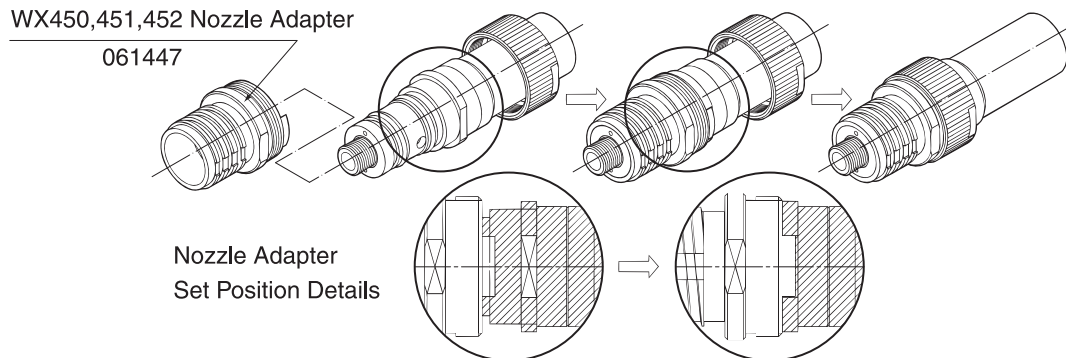
- 2** Please set the JASO 1015 and JASO 1016 "O" rings into position on the nozzle spacer. (If the "O" ring is coated with molybdenum (Mo), it will reduce the risk of damage when attaching and detaching.)



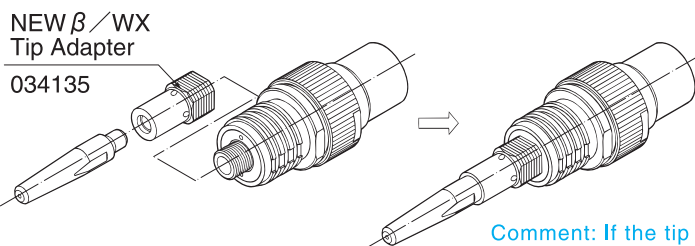
For Air-Cooled Nozzle

- 4** As in the below illustration, please first insert the nozzle adapter firmly and completely into the milled face of the nozzle spacer. Then tighten the nozzle set nut.

(When tightening the nozzle set nut into the nozzle adapter, use a regular or adjustable wrench on the respective milled faces on both sides. Also please be careful not to damage the nozzle adapter side when rotating the wrenches.)

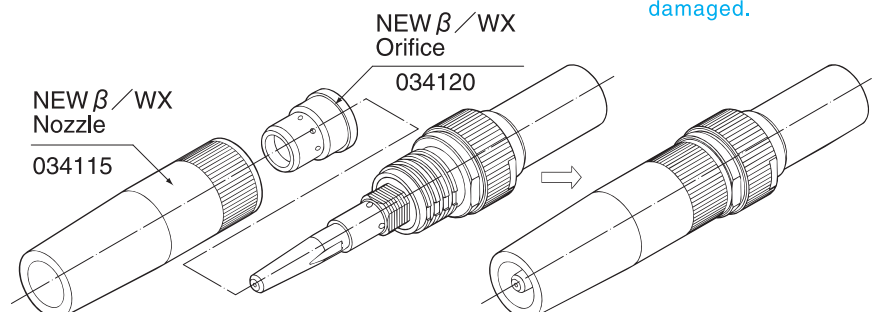


- 5** Set the end parts into the tip adapter and tighten the tip. (Please confirm the tip inner bore size is compatible with the wire diameter being used and tighten securely.)



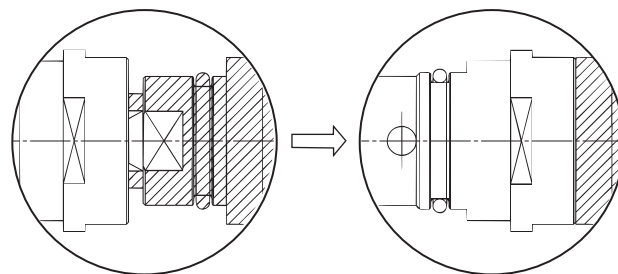
Comment: If the tip body is over tightened the center ceramic will be damaged.

- 6** Insert the orifice into the tip adapter and screw the nozzle in enough so that it doesn't loosen. (When firmly tightening the nozzle place a wrench on the milled face of the nozzle spacer and tighten.



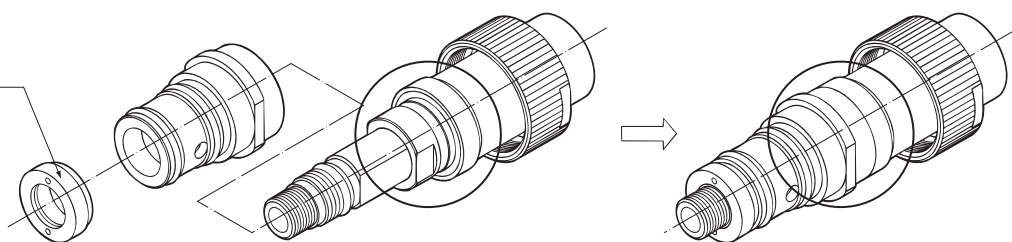
- 3** As in the below illustration, please first insert the nozzle spacer firmly and completely into the milled face of the torch body. Then tighten the WX center ceramic and nozzle spacer.

(Please be careful not to damage the center ceramic while fasteing.)



Nozzle Spacer Set Position Details

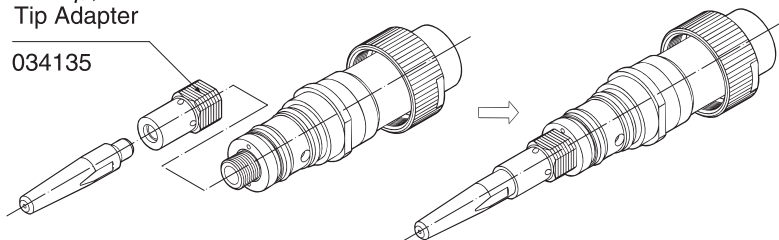
WX Center Ceramic
061445



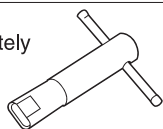
For Water-Cooled Nozzle

- 4** Set the end parts into the tip adapter and tighten the tip. (Please confirm the tip inner bore size is compatible with the wire diameter being used and tighten securely.) † For replacing tips only a specialty tool is available.

NEW β / WX
Tip Adapter
034135



Sold
Separately



YJ9905200
Tip Removal
Specialty Tool

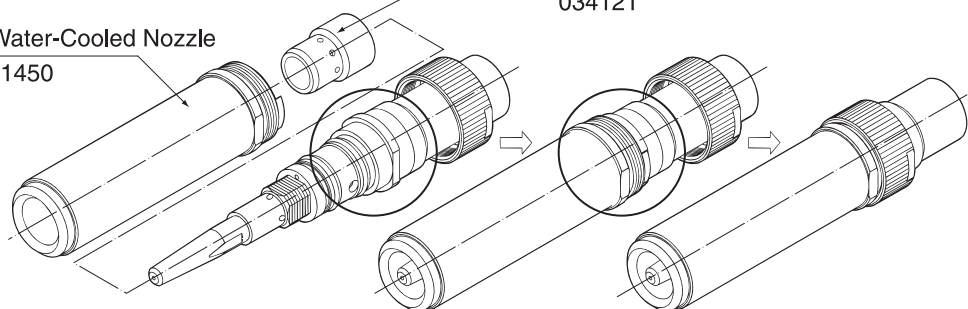
Comment: If the tip body is over tightened the center ceramic will be damaged.

- 5** Insert the WX water-cooled nozzle orifice into the tip adapter. For WX451AW/452AW, Y902ALW10, YMST-9902ALW-10 please insert the water-cooled nozzle sleeve. As in the below illustration, please first insert the water-cooled nozzle firmly and completely into the milled face of the nozzle spacer. Then tighten the nozzle set nut.

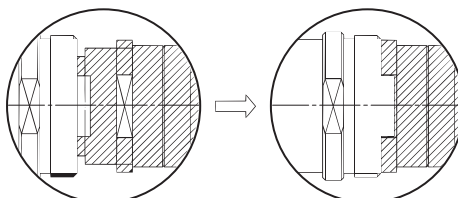
(When tightening the nozzle set nut into the water-cooled nozzle, use a regular or adjustable wrench on the respective milled faces on both sides. Also please be careful not to damage the water-cooled nozzle side when rotating the wrenches.)

WX450,451,452 Water-Cooled Nozzle
061450

WX Water-Cooled Nozzle Orifice
034121



Water-Cooled Nozzle
Set Position Details



WX500 S/R



The technical drawing illustrates the SPS-06 cable gland from three perspectives: front view, side view, and an angled view.

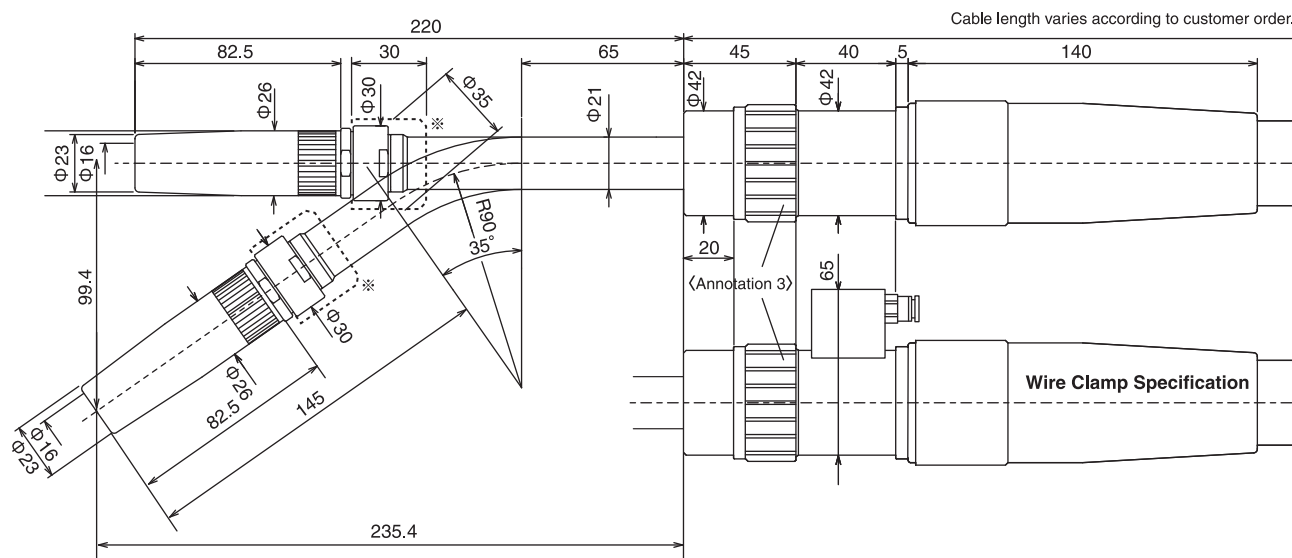
- Front View:** Shows the main body with a total length of 220 mm. The mounting flange has an outer diameter of $\Phi 42$ and a thickness of 5 mm. The main body has a diameter of $\Phi 21$. The distance between the mounting flange and the cable entry point is 65 mm. The cable entry point has a diameter of $\Phi 35$ and a height of 30 mm. The base has a diameter of $\Phi 26$ and a height of 82.5 mm. A note indicates "Cable length varies according to customer order."
- Side View:** Shows the profile of the gland with a total width of 140 mm. The mounting flange has a radius of R90° and a height of 20 mm. The main body has a diameter of $\Phi 21$.
- Angled View:** Shows the gland at a 35° angle. The total length along the axis is 235.4 mm. The mounting flange has a diameter of $\Phi 23$ and a height of 99.4 mm. The main body has a diameter of $\Phi 26$ and a height of 82.5 mm. The cable entry point has a diameter of $\Phi 30$ and a height of 145 mm.

[8] WX Series Dimension Diagram

〈Annotation 3〉 If the 061453 torch set nut becomes loose heat generation from poor electric supply may occur. Please periodically check and tighten as needed.

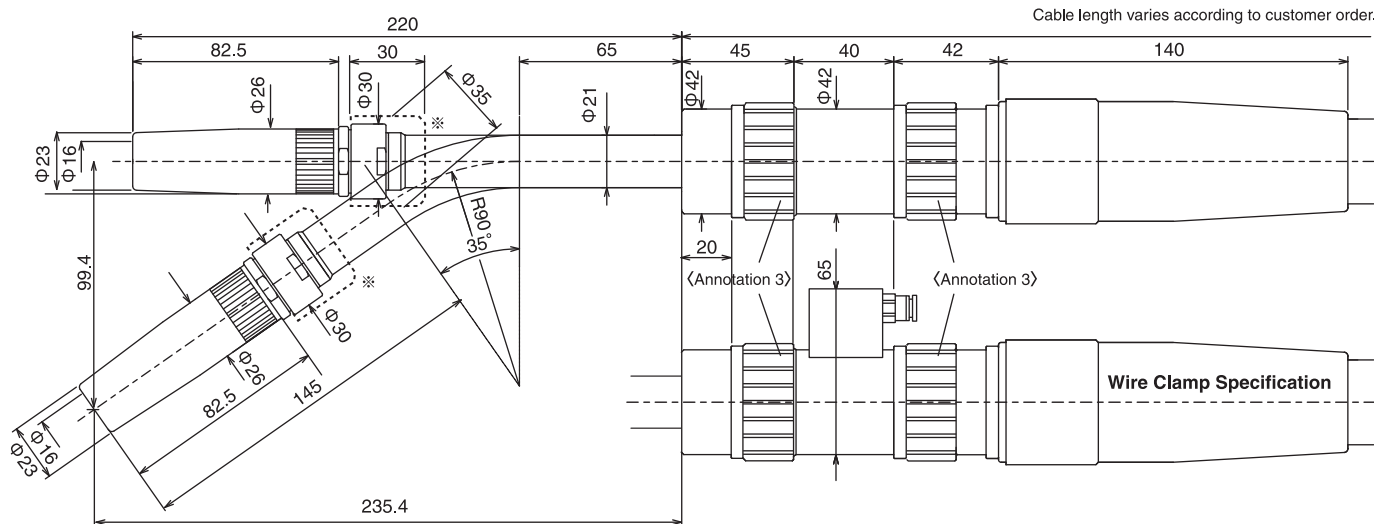
WX451 S/R

※The dotted line indicates the 061440 WX450,451,452 rubber cover.

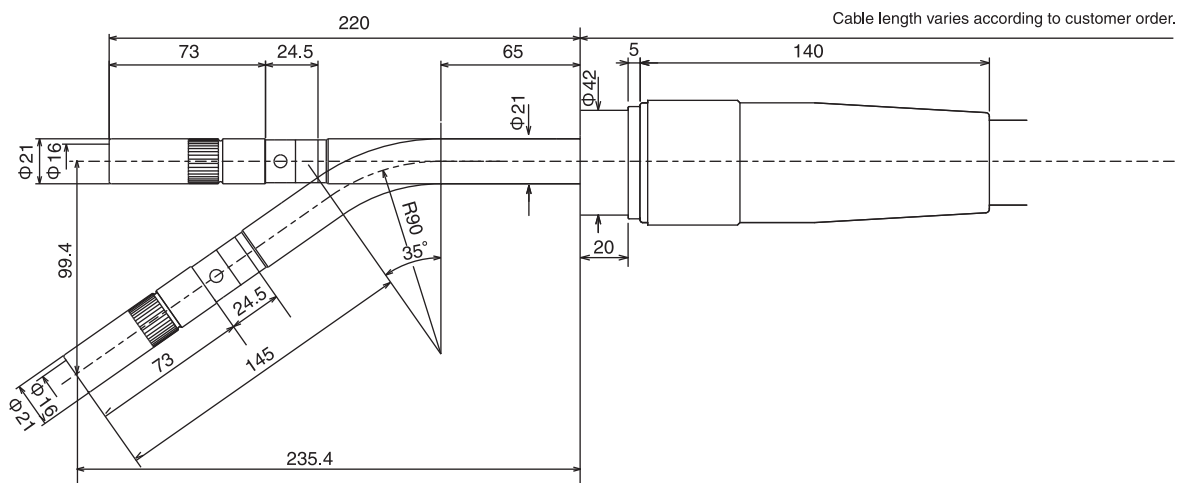


WX452 S/R

※The dotted line indicates the 061440 WX450/451/452 rubber cover.

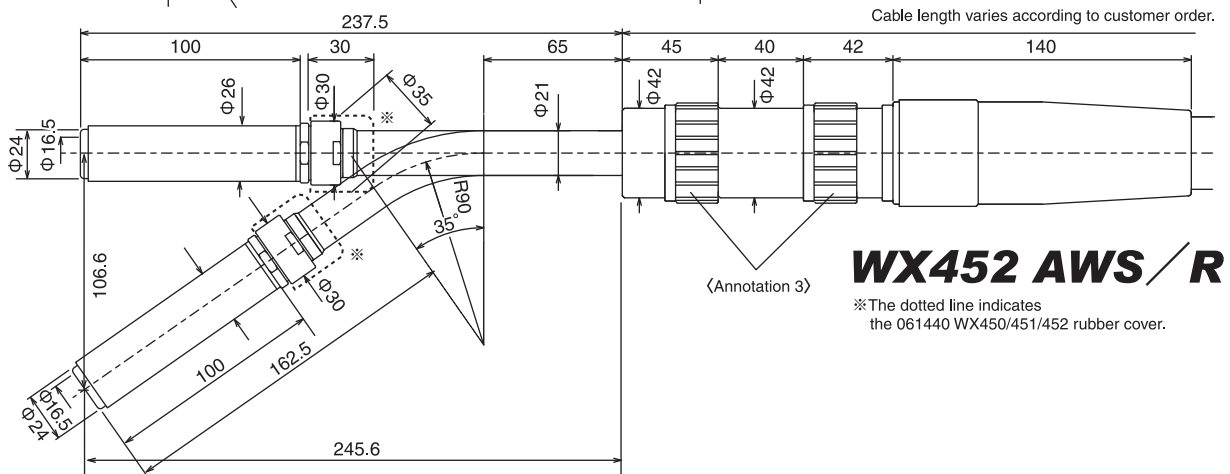
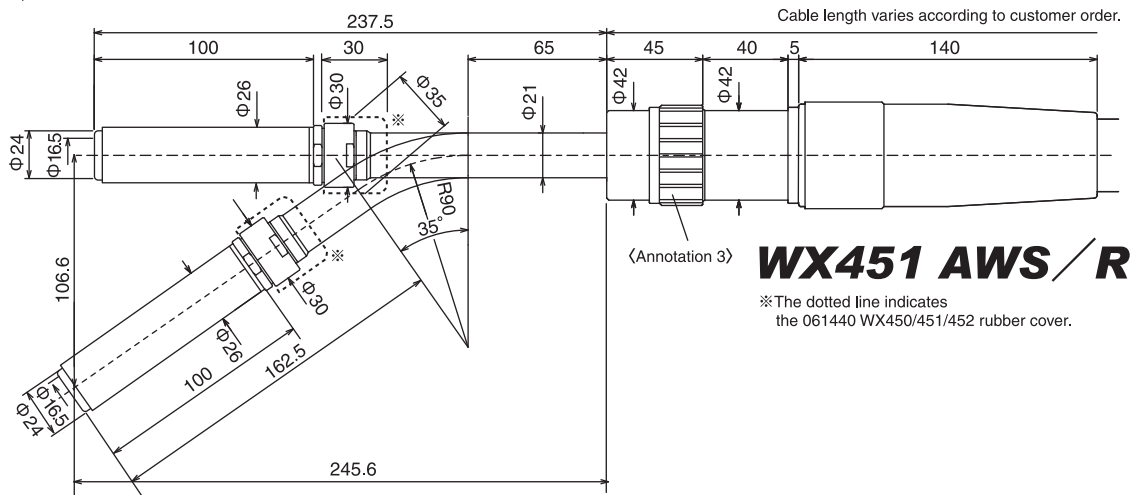
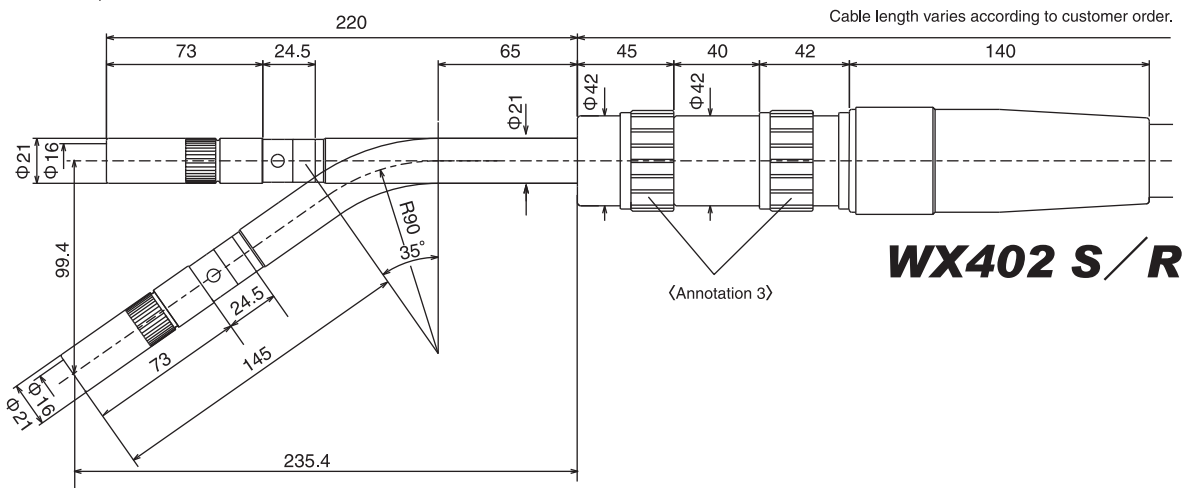
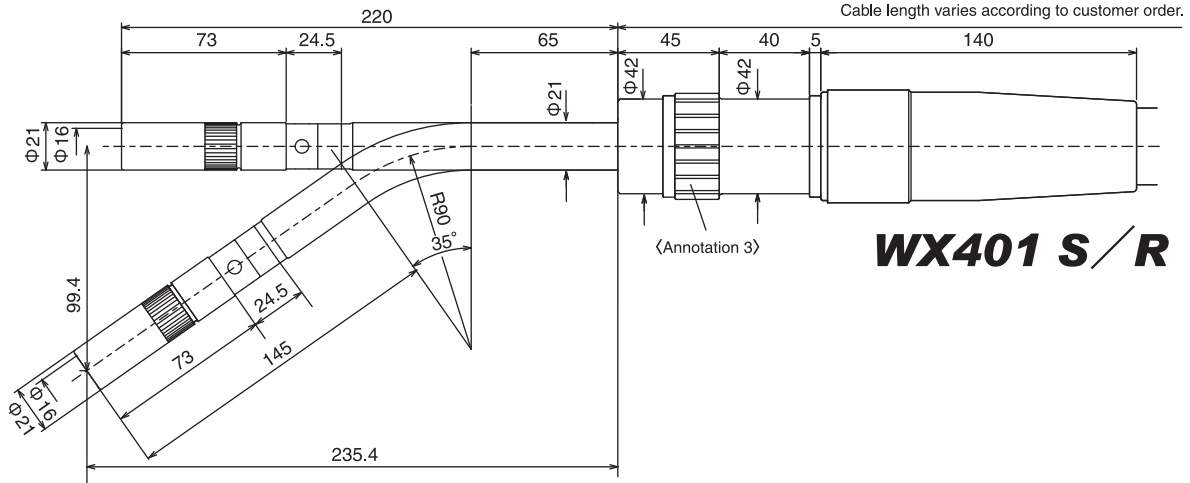


WX400 S/R

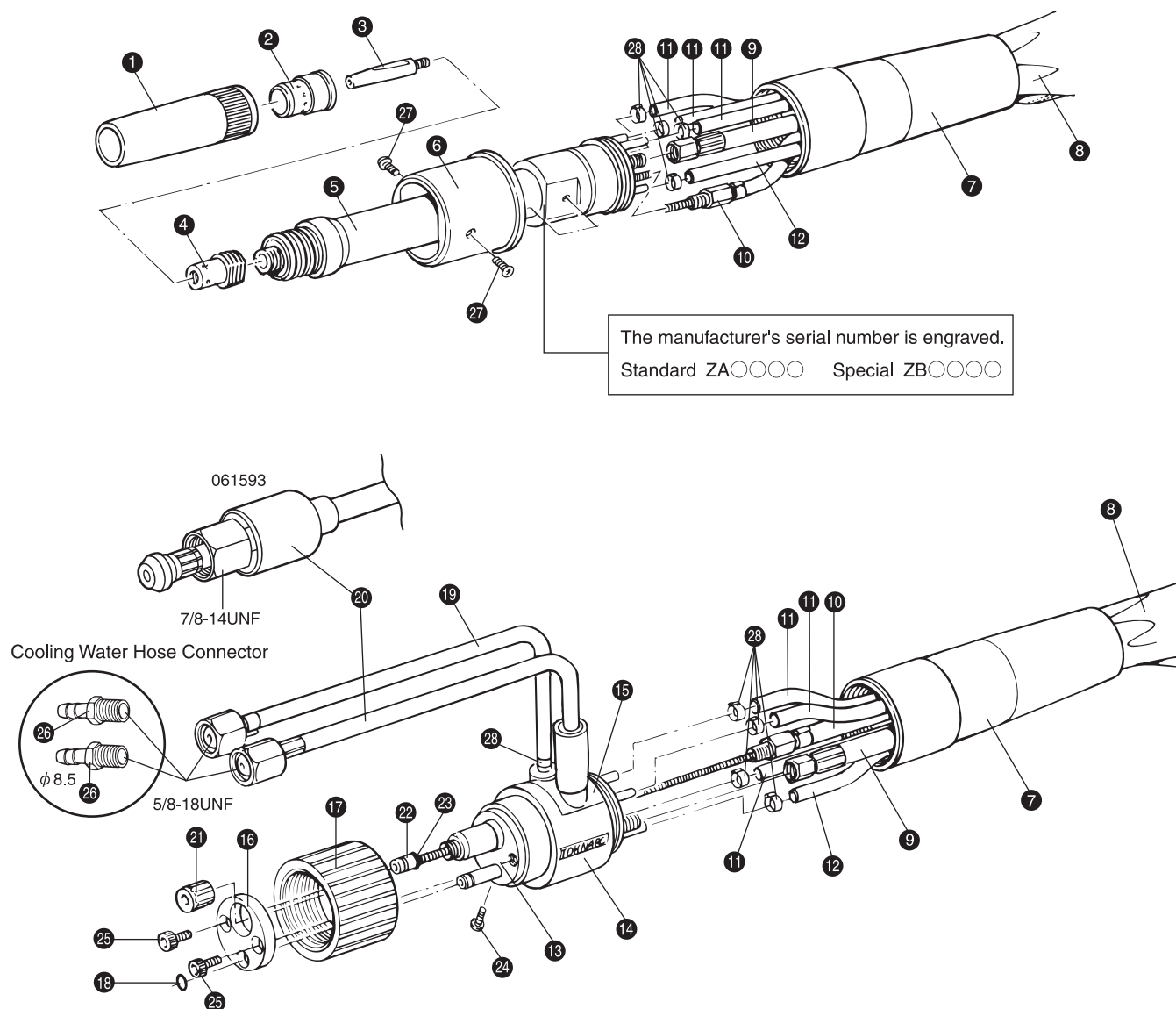


〈Annotation 3〉 If the 061453 torch set nut becomes loose heat generation from poor electric supply may occur. Please periodically check and tighten as needed.

[9] WX Series Dimension Diagram



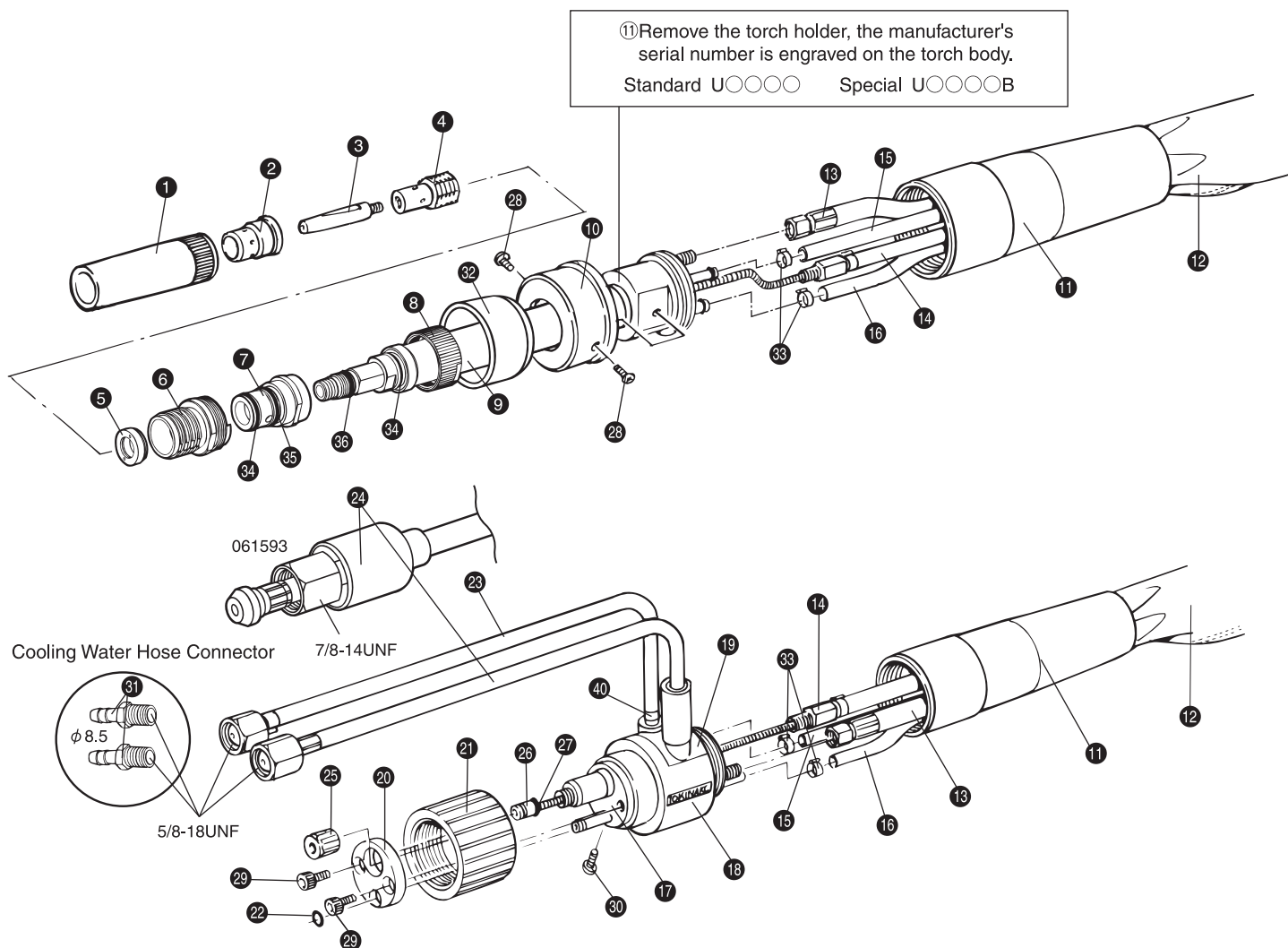
[10] WX500 Parts List



■ WX500 Parts List

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	034 115	NEW β/WX Nozzle 16mm	10		WX500 Flexible Conduit Cable	21	020 003	Liner Nut
	034 116	19mm	11		WX Inlet and Outlet Water Hose	22		Liner β 500/WX400/450/500 (With 23 O-Ring S-5) 1.2~1.6 φ
2	034 120	NEW β/WX Orifice	12		WX Gas Hose	23	061 446	O-Ring (S-5)
3	002 003	N Tip 1.2mm	13	061 582	WX500 Power Feeding Adaptor (With 24 Screw M4-L8)	24	020 004	Screw M4-L8
	002 017	1.4mm	14	061 583	WX Power Feeding Block Holder	25	061 594	Bolt M4-L10
	002 004	1.6mm	15	061 584	WX Feeding Block Cap	26	034 706	Cooling Water Hose Connector
4	034 135	NEW β/WX Tip Adapter	16	061 585	WX Adaptor Nut Fitting (With 25 Bolt M4-L10)	27	061 524	SUS bolt M4-L8
5	061 511	WX500S Torch Body	17	020 002	Adapter Nut	28	034531	Hose Clamp 10.0
	061 512	WX500R Torch Body	18	020 005	Adapter O-Ring (W1516-2)			
6	061 525	WX500 Torch Holder (With 27 SUS bolt M4-L8)	19	061 591	WX Adaptor Water Hose(Inlet)			
7	061 522	WX Cable Supporter	20	061 592	WX Adaptor Water Hose(Outlet)			
8		NEW β/WX Hose Sheath		061 593	WX Power Joint Cable			
9		WX500 Water-cooled Power Cable						

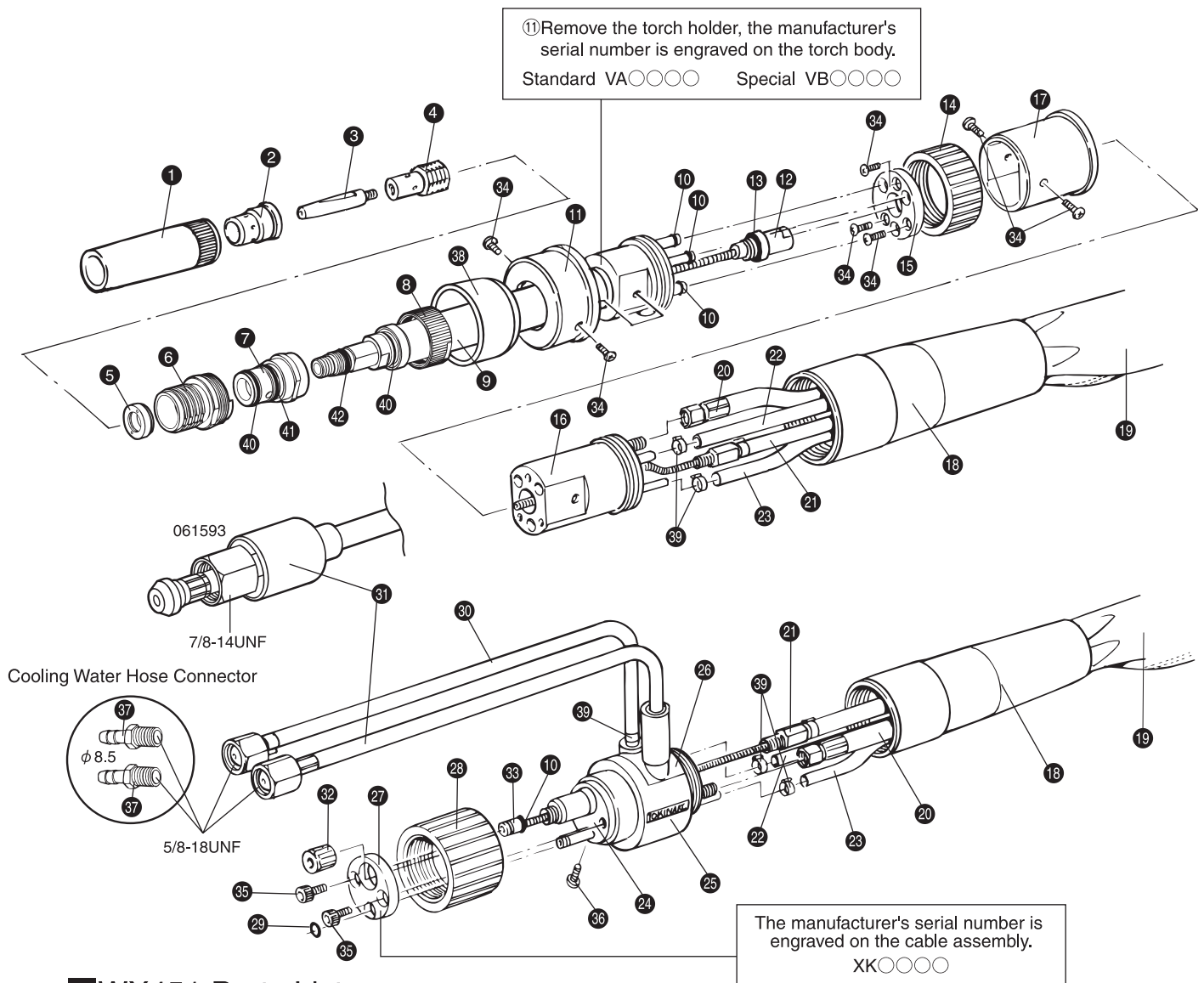
[11] WX450 Parts List



■ WX450 Parts List

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	034115	NEW β /WX Nozzle 16mm	13		WX401,451 Water-cooled Power Cable	28	061524	SUS bolt M4-L8
	034116	19mm	14		WX401,451Flexible Conduit Cable	29	061594	Bolt M4-L10
2	034120	NEW β /WX Orifice	15		WX Inlet Water Hose	30	020004	Screw M4-L8
3	002003	N Tip 1.2mm	16		WX Gas Hose	31	034706	Cooling Water Hose Connector
	002017	1.4mm	17	061492	WX400,401,402,450,451,452	32	061440	WX450,451,452 Cover Rubber
	002004	1.6mm			Power Feeding Adaptor	33	034531	Hose Clamp 10.0
4	034135	NEW β /WX Tip Adapter			(With ⑩ SUS boltM4-L8)	34	Y90201015	O ring 1015
5	061445	WX Senter Ceramic	18	061583	WX Power Feeding Block Holder	35	Y90201016	O ring 1016
6	061447	WX450,451,452 Nozzle Adapter	19	061584	WX Feeding Block Cap	36	Y90201009	O ring 1009
7	061449	WX450,451,452 Nozzle Spacer (With ③④O-ring 1015,1016)	20	061585	WX Adaptor Nut Fitting (With ②⑨ Bolt M4-L10			
8	061448	WX450,451,452 Nozzle Nut	21	020002	Adapter Nut			
9	061413	WX450S Torch Body (With ③⑥③④O-ring 1009,1005)	22	020005	Adapter O-ring (W1516-2)			
	061414	WX450R Torch Body (With ③⑥③④O-ring 1009,1005)	23	061591	WX Adaptor Water Hose(Inlet)			
			24	061592	WX Adaptor Water Hose(Outlet)			
10	061421	WX400,401,402,450,451,452 Torch Holder With ②⑧ SUS bolt M4-L8	25	020003	Liner Nut			
11	061522	WX Cable Supporter	26		Liner β 500/WX400,450,500 (With ②⑦ O-ring S-5)			
12		NEW β /WX Hose Sheath	27	061446	O ring (S-5)			

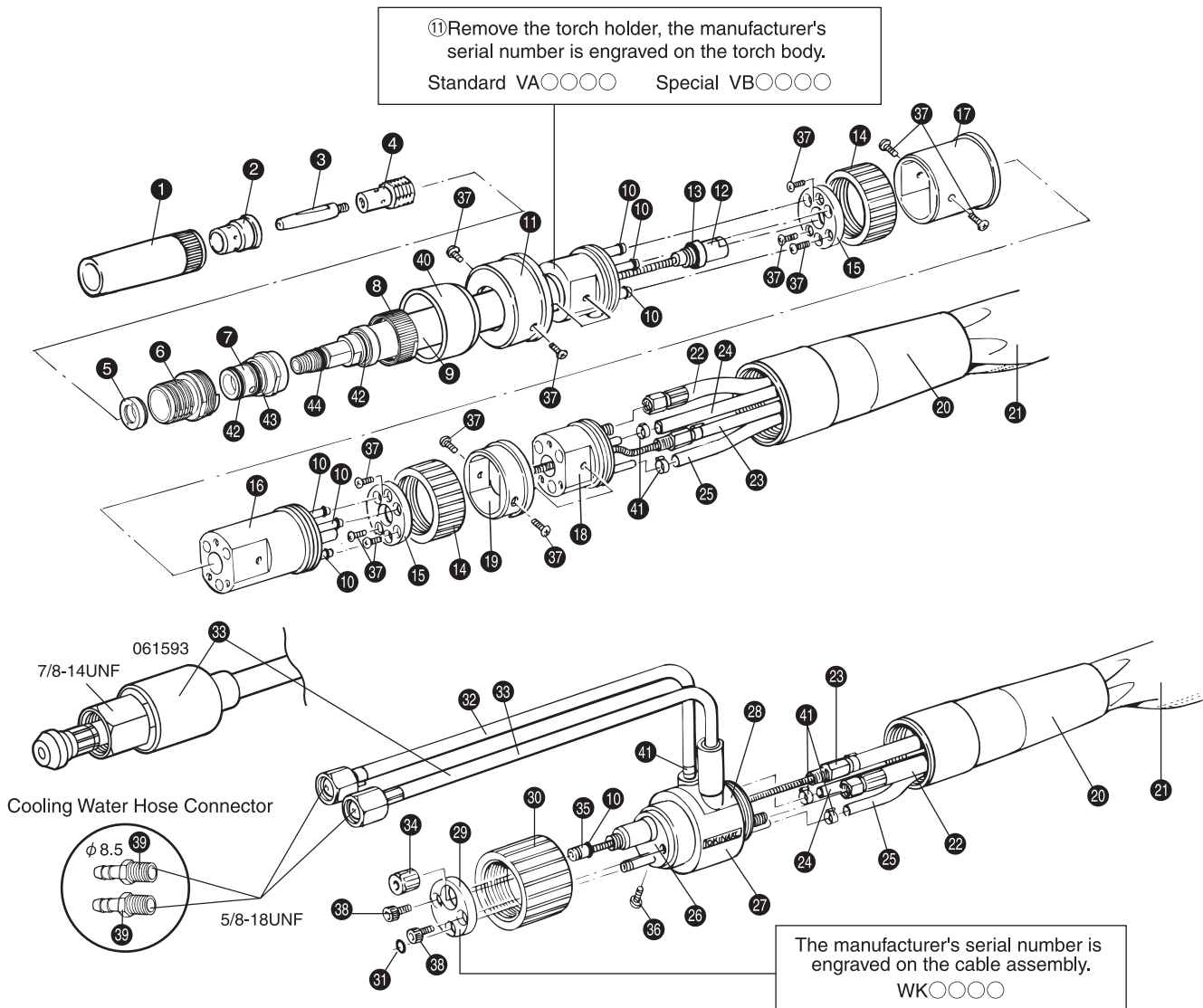
[12] WX451 Parts List



WX451 Parts List

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	034 115	NEW β /WX Nozzle 16mm	13	036 030	O-ring (S-9)	31	061 593	WX Power Joint Cable
	034 116	19mm	14	061 453	WX401,402,451,452 Torch Nut	32	020 003	Liner Nut
2	034 120	NEW β /WX Orifice	15	061 455	WX401,402,451,452 Torch Nut Fitting (With ③④ SUS bolt M4-L8)	33		Liner WX401,402,451,452 (With ⑩ O-ring S-5)
3	002 003	N Tip 1.2mm	16	061 454	WX401,451 Cable Adapter	34	061 524	SUS bolt M4-L8
	002 017	1.4mm	17	061 525	WX500 Torch Holder (With ③④ SUS bolt M4-L8)	35	061 594	Bolt M4-L10
	002 004	1.6mm				36	020 004	Screw M4-L8
4	034 135	NEW β /WX Tip Adapter	18	061 522	WX Cable Supporter	37	034 706	Cooling Water Hose Connector
5	061 445	WX Senter Ceramic	19		NEW β /WX Hose Sheath	38	061 440	WX451,452 Cover Rubber
6	061 447	WX450,451,452 Nozzle Adapter	20		WX401,451 Water-cooled Power Cable	39	034 531	Hose Clamp 10.0
7	061 449	WX450,451,452 Nozzle Spacer (With ④⑤ O-ring 1015,1016)	21		WX401,451 Flexible Conduit Cable	40	Y90201015	O ring 1015
8	061 448	WX450,451,452 Nozzle Nut	22		WX Inlet Water Hose	41	Y90201016	O ring 1016
9	061 443	WX451S,452S Torch Body (With ⑩④③④ O-ring S-5,1009,1005)	23		WX Gas Hose	42	Y90201009	O ring 1009
	061 444	WX451R,452R Torch Body (With ⑩④③④ O-ring S-5,1009,1005)	24	061 492	WX400,401,402,450,451,452 Power Feeding Adaptor (With ③⑤ SUS bolt M4-L8)		061 433	WX451S,452S Torch Body ASSY
			25	061 583	WX Power Feeding Block Holder		061 434	WX451R,452R Torch Body ASSY
10	061 446	O ring (S-5)	26	061 584	WX Feeding Block Cap		061 435	WX451S,452S Torch Body ASSY (Water Cooled Nozzle)
11	061 421	WX400,401,402,450,451,452 Torch Holder (With ③④ SUS bolt M4-L8)	27	061 585	WX Adaptor Nut Fitting (With ③⑤ Bolt M4-L10)		061 436	WX451R,452R Torch Body ASSY (Water Cooled Nozzle)
12	061 458	WX451S/452S Inner Tube (With ⑬ O-ring S-9)	28	020 002	Adapter Nut			WX401,451K Cable ASSY
	061 459	WX451R/452R Inner Tube (With ⑬ O-ring S-9)	29	020 005	Adapter O-ring (W1516-2)			WX401,451J Cable ASSY
			30	061 591	WX Adaptor Water Hose(Inlet)			
			31	061 592	WX Adaptor Water Hose(Outlet)			

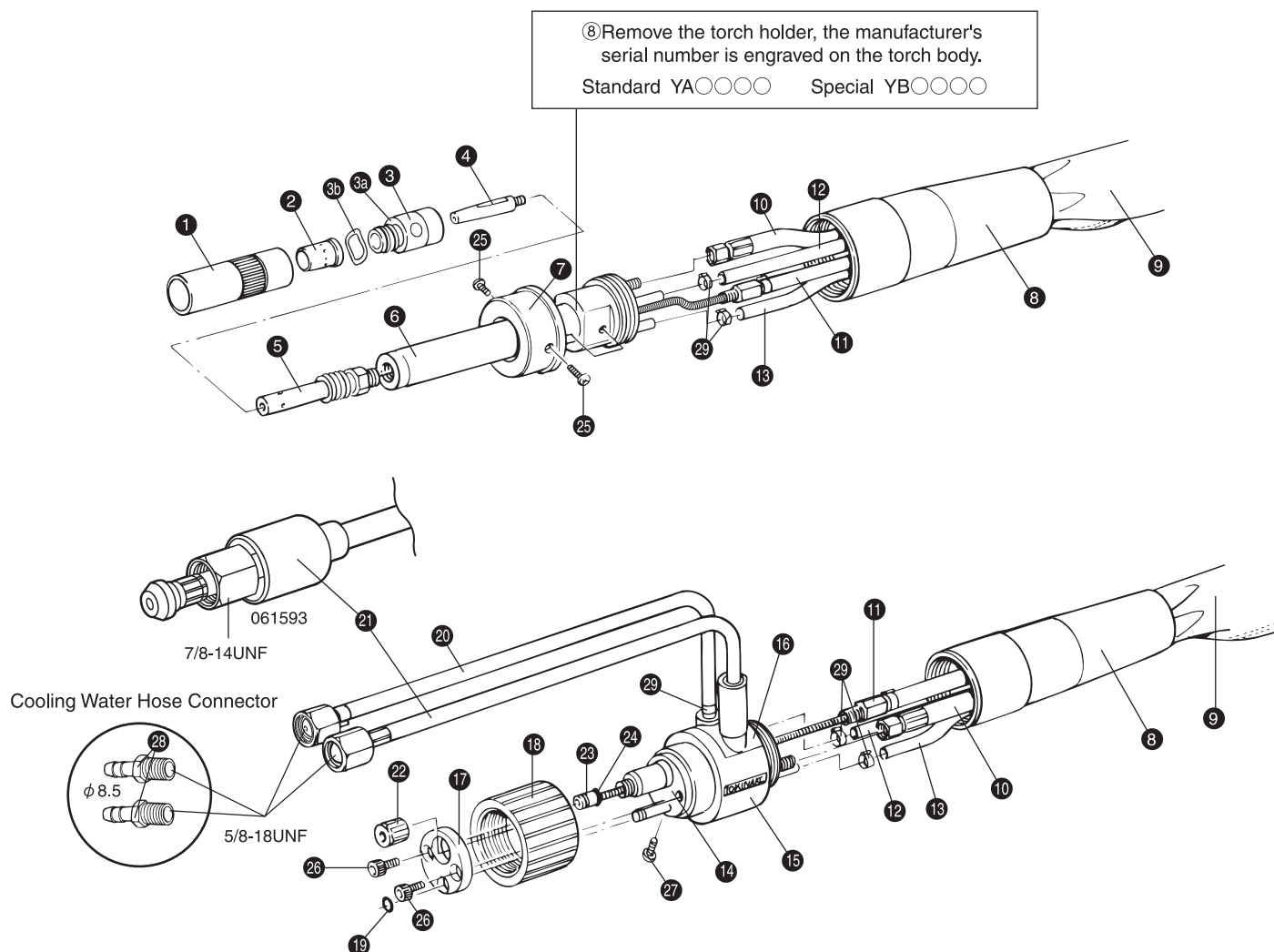
[13] WX452 Parts List



■ WX452 Parts List

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	034 115	NEW β /WX Nozzle 16mm	14	061 453	WX401,402,451,452 Torch Nut	33	061 592	WX Adaptor Water Hose (Outlet)
	034 116	19mm	15	061 455	WX401,402,451,452 Torch Nut Fitting		061 593	WX Power Joint Cable
2	034 120	NEW β /WX Orifice			With ⑦ SUS bolt M4-L8	34	020 003	Liner Nut
3	002 003	N Tip 1.2mm	16	061 457	WX402,452 Clamp Adapter	35		Liner WX401/402/451/452
	002 017	1.4mm	17	061 525	WX500 Torch Holder			(With ⑩ O-ring S-5) 1.2~1.6 ϕ
	002 004	1.6mm			(With ⑦ SUS bolt M4-L8)	36	020 004	Screw M4-L8
4	034 135	NEW β /WX Tip Adapter	18	061 481	WX402,452 Cable Adapter	37	061 524	SUS bolt M4-L8
5	061 445	WX Senter Ceramic	19	061 482	WX402,452 Cable Block Holder	38	061 594	Bolt M4-L10
6	061 447	WX450,451,452 Nozzle Adapter			(With ⑦ SUS bolt M4-L8)	39	034 706	Cooling Water Hose Connector
7	061 449	WX450,451,452 Nozzle Spacer	20	061 522	WX Cable Supporter	40	061 440	WX450,451,452 Cover Rubber
		(With ④⑤ O-ring 1015,1016)	21		NEWf β /WX Hose Sheath	41	034 531	Hose Clamp 10.0
8	061 448	WX451,452 Nozzle Nut	22		WX402,452 Water-cooled Power Cable	42	Y90201015	O ring 1015
9	061 443	WX450,451S,452S Torch Body	23		WX402,452Flexible Conduit Cable	43	Y90201016	O ring 1016
		(With ⑩④⑤ O-ring S-5,1009,1005)	24		WX Inlet Water Hose	44	Y90201009	O ring 1009
	061 444	WX451R,452R Torch Body	25		WX Gas Hose		061 433	WX451S,452S Torch Body ASSY
		(With ⑩④⑤ O-ring S-5,1009,1005)	26	061 492	WX400,401,402,450,451,452 Power Feeding Adaptor		061 434	WX451R,452R Torch Body ASSY
		(With ⑩ O-ring S-5)			(With ③⑥ Screw M4-L8)		061 435	WX451S,452S Torch Body ASSY
10	061 446	O ring (S-5)					061 436	WX451S,452S Torch Body ASSY
11	061 421	WX400,401,402,450,451,452 Torch Holder	27	061 583	WX Power Feeding Block Holder		061 456	WX402,452 Clamp ASSY
		(With ⑦ SUS bolt M4-L8)	28	061 584	WX Feeding Block Cap			WX402,452K Cable ASSY
12	061 458	WX451S,452S Inner Tube	29	061 585	WX Adaptor Nut Fitting			WX402,452J Cable ASSY
		(With ⑬ O-ring S-9)			(With ③⑧ Bolt M4-L10)			
	061 459	WX451R,452R Inner Tube	30	020 002	Adapter Nut			
		(With ⑬ O-ring S-9)	31	020 005	Adapter O-ring (W1516-2)			
13	036 030	O-ring (S-9)	32	061 591	WX Adaptor Water Hose (Inlet)			

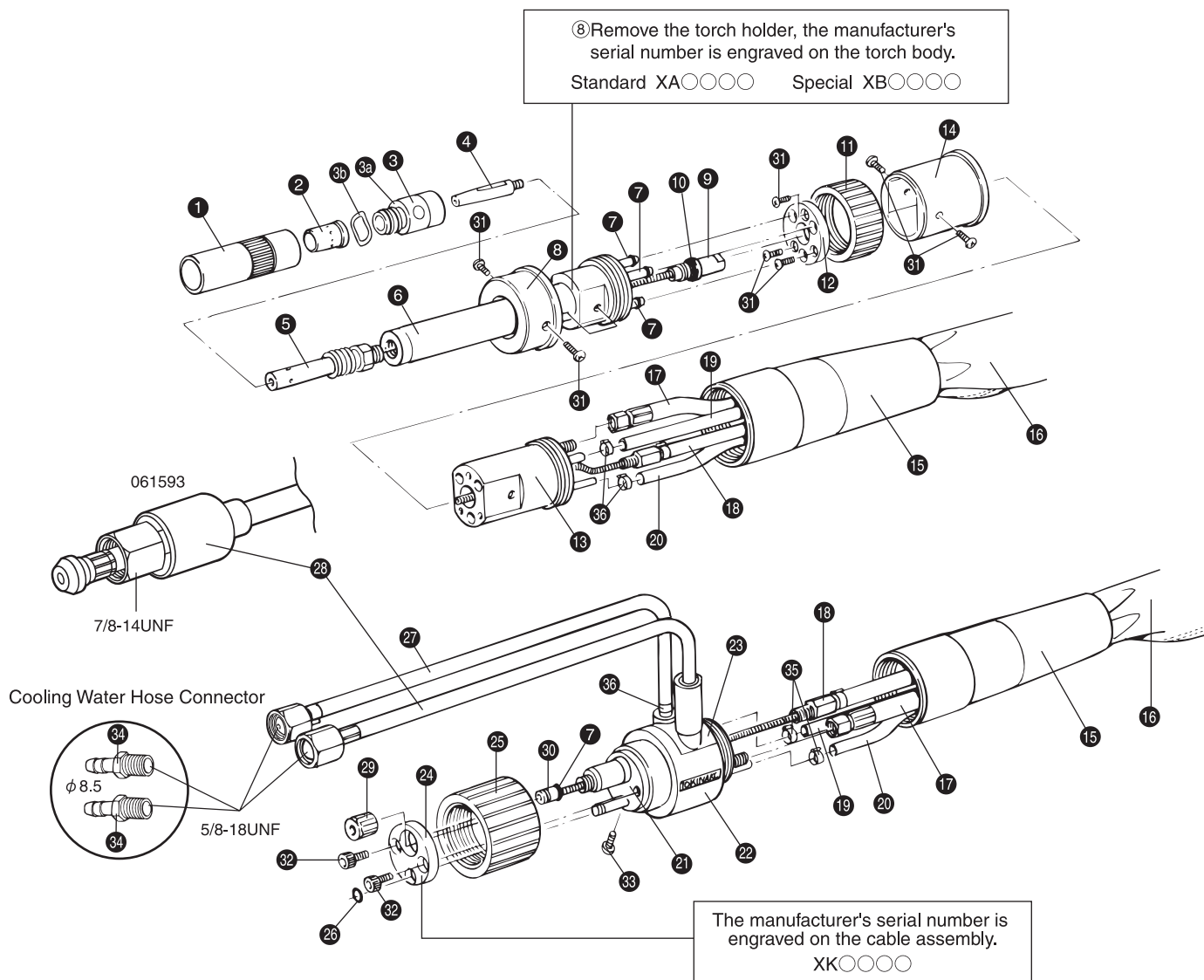
[14] WX400 Parts List



■ WX400 Parts List

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	001 002	N Nozzle 16mm	8	061522	WX Cable Supporter	21	061593	WX Power Joint Cable
	001 003	12mm	9		NEW β /WX Hose Sheath	22	020003	Liner Nut
	001 008	18mm	10		WX400,450 Water-cooled Power Cable	23		Liner β 500/WX400,450,500
	001 009	N Nozzle (Thick 2.5t) 16mm	11		WX400,450 Conduit Cable			(With ⑳ O-ring S-5) 1.2~1.6 ϕ
2	003 002	N Orifice S	12		WX Inlet Water Hose	24	061446	O-ring (S-5)
3	004 004	N Insulator S (With Wave Washer)	13		WX Gas Hose	25	061524	SUS bolt M4-L8
3a	004 002	N Insulator S	14	061492	WX400,401,402,450,451,452 Power Feeding Adaptor (With ㉓ Screw M4-L8)	26	061594	Bolt M4-L10
3b	255 406	Wave Washer S				27	020004	Screw M4-L8
4	002 003	N Tip 1.2mm				28	034706	Cooling Water Hose Connector
	002 017	1.4mm	15	061583	WX Power Feeding Block Holder	29	034531	Hose Clamp 10.0
	002 004	1.6mm	16	061584	WX Feeding Block Cap			
5	033 091	A-350 Tip Body	17	061585	WX Adaptor Nut Fitting (With ㉔ Bolt M4-L10)			
6	061 411	WX400S Torch Body						
	061 412	WX400R Torch Body	18	020002	Adapter Nut			
7	061 421	WX400,401,402,450,451,452 Torch Holder (With ㉕ SUS bolt M4-L8)	19	020005	Adapter O-ring (W1516-2)			
			20	061591	WX Adaptor Water Hose(Inlet)			
			21	061592	WX Adaptor Water Hose(Outlet)			

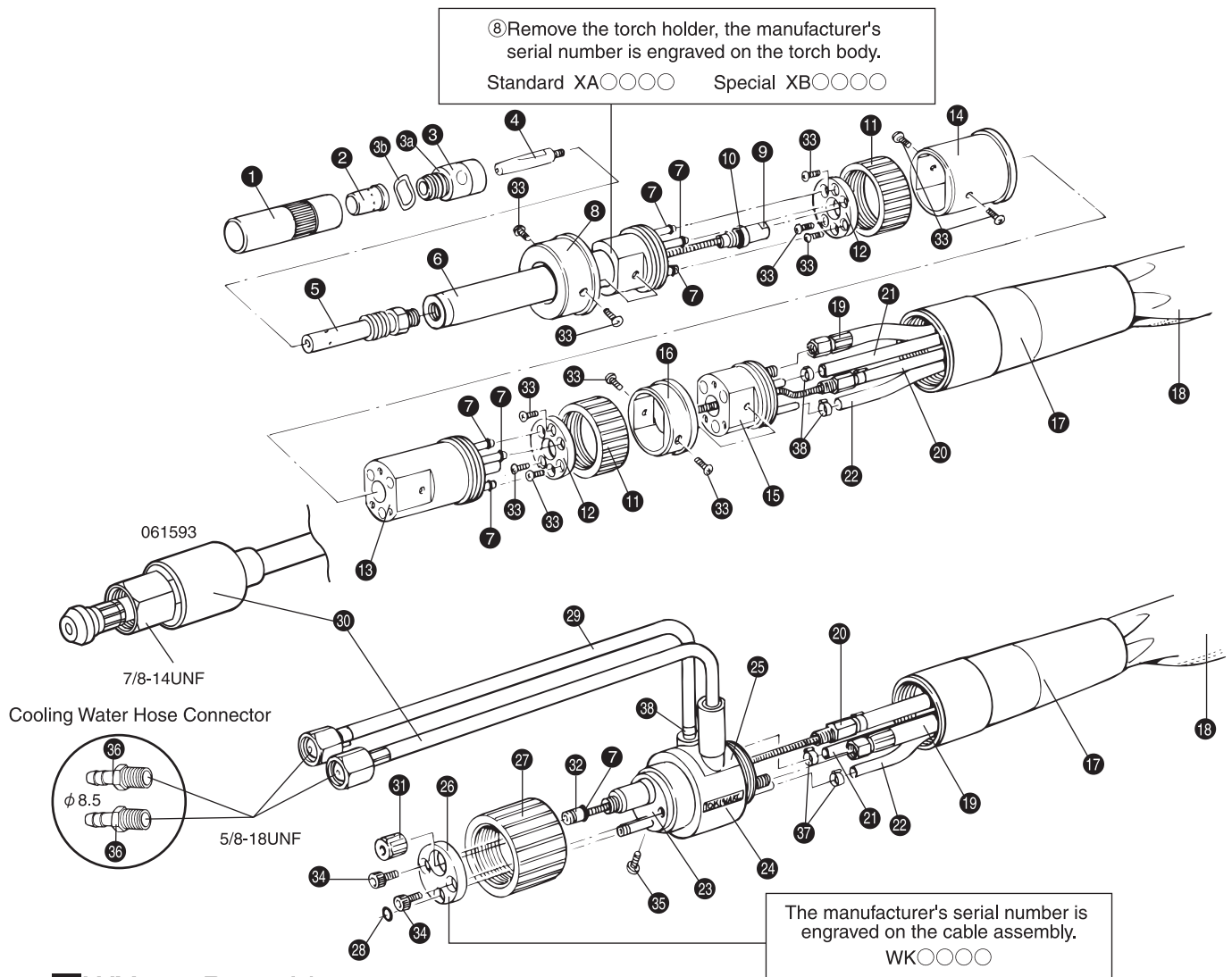
[15] WX401 Parts List



■ WX401 Parts List

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	001 002	N Nozzle 16mm	11	061 453	WX401,402,451,452 Torch Nut	30		Liner WX401,402,451,452
	001 003	12mm	12	061 455	WX401,402,451,452 Torch Nut Fitting			(With ⑦ O-ring S-5)1.2~1.6 φ
	001 008	18mm			With ③ SUS bolt M4-L8	31	061 524	SUS bolt M4-L8
	001 009	N Nozzle (Thick 2.5t) 16mm	13	061 454	WX401,451Cable Adapter	32	061 594	Bolt M4-L10
2	003 002	N Orifice S	14	061 525	WX500 Torch Holder	33	020 004	Screw M4-L8
3	004 004	N Insulator S(With Wave Washer)			(With ③ SUS bolt M4-L8)	34	034 706	Cooling Water Hose Connector
3a	004 002	N Insulator S	15	061 522	WX Cable Supporter	35	034 531	Hose Clamp 10.0
3b	255 406	Wave Washer S	16		NEW β / WX Hose Sheath		061 431	WX401S,402S Torch Body ASSY
4	002 003	N Tip 1.2mm	17		WX401,451 Water-cooled Power Cable		061 432	WX401R,402R Torch Body ASSY
	002 017	1.4mm	18		WX401,451Flexible Conduit Cable			WX401,451K Cable ASSY
	002 004	1.6mm	19		WX Inlet Water Hose			WX401,451J Cable ASSY
5	033 091	A-350 Tip Body	20		WX Gas Hose			
6	061 441	WX401S,402S Torch Body	21	061 492	WX400,401,402,450,451,452			
		(With ⑦ O-ring S-5)			Power Feeding Adaptor			
	061 442	WX401R,402R Torch Body	22	061 583	(With ③ Screw M4-L8)			
		(With ⑦ O-ring S-5)	23	061 584	WX Power Feeding Block Holder	For Aluminum wire ④⑨⑩ are as follows		
7	061 446	O-ring (S-5)	24	061 585	WX Adaptor Nut Fitting			
8	061 421	WX400,401,402,450,451,452 Torch Holder			(With ③ Bolt M4-L10)	4	002 018	N-MIG Tip 1.2mm
		With ③ SUS bolt M4-L8	25	020 002	Adapter Nut		002 019	1.6mm
9	061 451	WX401S,402S Inner Tube	26	020 005	Adapter O-ring (W1516-2)	9	061 429	WX401,402S Phosphor Bronze
		(With ⑩ O-ring S-9)	27	061 591	WX Adaptor Water Hose(Inlet)			Inner Tube (With ⑩ O ring S-9)
	061 452	WX401R/402R Inner Tube	28	061 592	WX Adaptor Water Hose(Outlet)		061 430	WX401,402R Phosphor Bronze
		(With ⑩ O-ring S-9)		061 593	WX Power Joint Cable			Inner Tube (With ⑩ O ring S-9)
10	036 030	O-ring (S-9)	29	020 003	Liner Nut	30		WX401,402,451,452
								Plastic Liner (With ⑦ O ring S-5)

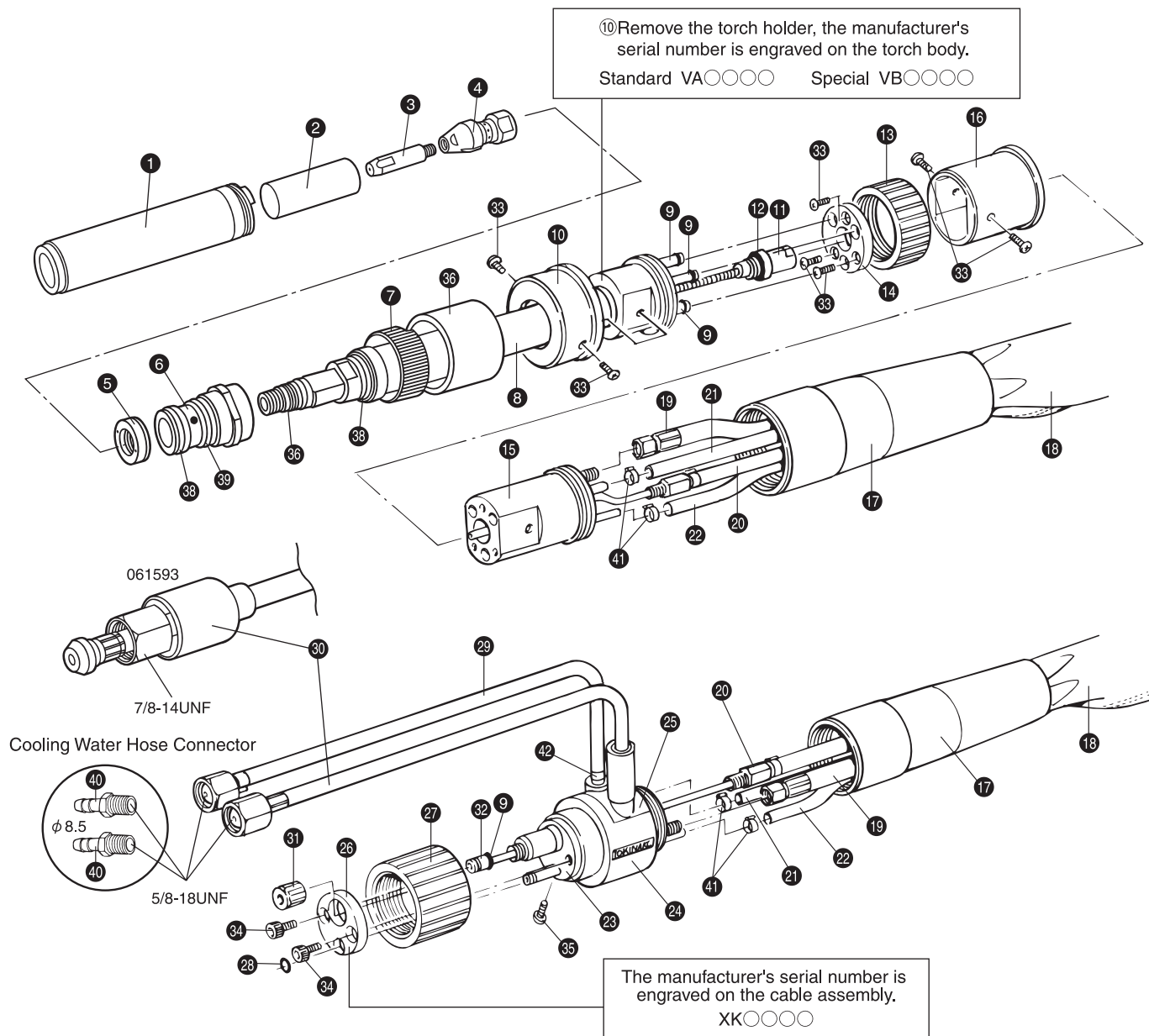
[16] WX402 Parts List



WX402 Parts List

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	001 002	N Nozzle 16mm	13	061 457	WX402,452 Clamp Adapter (With ⑦ O-ring S-5)	33	061 524	SUS bolt M4-L8
	001 003	12mm				34	061 594	Bolt M4-L10
	001 008	18mm	14	061 525	WX500 Torch Holder (With ③③ SUS bolt M4-L8)	35	020 004	Screw M4-L8
	001 009	N Nozzle (Thick 2.5t) 16mm	15	061 481	WX402,452 Cable Adapter	36	034 706	Cooling Water Hose Connector
2	003 002	N Orifice S	16	061 482	WX402,452 Cable Block Holder (With ③③ SUS bolt M4-L8)	37	034 531	Hose Clamp 10.0
3	004 004	N Insulator S (With Wave Washer)	17	061 522	WX Cable Support		061 431	WX401S,402S Torch Body ASSY
3a	004 002	N Insulator S	18		NEW β / WX Hose Sheath		061 432	WX401R,402R Torch Body ASSY
3b	255 406	Wave Washer S	19		WX402,452 Water-cooled Power Cable		061 456	WX402,452 @ Clamp ASSY
4	002 003	N Tip 1.2mm	20		WX402,452Flexible Conduit Cable			WX402,452K Cable ASSY
	002 017	1.4mm	21		WX Inlet Water Hose			WX402,452J Cable ASSY
	002 004	1.6mm	22		WX Gas Hose			
5	033 091	A-350 Tip Body	23	061 492	WX400,401,402,450,451,452 Power Feeding Adaptor (With ③⑤ Screw M4-L8)			
6	061 441	WX401S,402S Torch Body (With ⑦ O-ring S-5)	24	061 583	WX Power Feeding Block Holder			
	061 442	WX401R,402R Torch Body (With ⑦ O-ring S-5)	25	061 584	WX Feeding Block Cap			
7	061 446	O-ring (S-5)	26	061 585	WX Adaptor Nut Fitting (With ③④ Bolt M4-L10)			
8	061 421	WX400,401,402,450,451,452 Torch Holder With ③③ SUS bolt M4-L8	27	020 002	Adapter Nut			
9	061 451	WX401S,402S Inner Tube (With ⑩ O-ring S-9)	28	020 005	Adapter O-ring (W1516-2)	For Aluminum wire ④⑨②② are as follows		
	061 452	WX401R,402R Inner Tube (With ⑩ O-ring S-9)	29	061 591	WX Adaptor Water Hose(Inlet)			
			30	061 592	WX Adaptor Water Hose(Outlet)	4	002 018	N-MIG Tip 1.2mm
10	036 030	O-ring (S-9)		061 593	WX Power Joint Cable		002 019	1.6mm
11	061 453	WX401,402,451,452 Torch Nut	31	020 003	Liner Nut	9	061 429	WX401,402S Phosphor Bronze Inner Tube (With ⑩ O ring S-9)
12	061 455	WX401,402,451,452 Torch Nut Fitting With ③③ SUS bolt M4-L8	32		Liner WX401,402,451,452 (With ⑦ O-ring S-5) 1.2-1.6 ϕ		061 430	WX401,402R Phosphor Bronze Inner Tube (With ⑩ O ring S-9)
						32		WX401,402,451,452 Plastic Liner (With ⑦ O ringS-5)

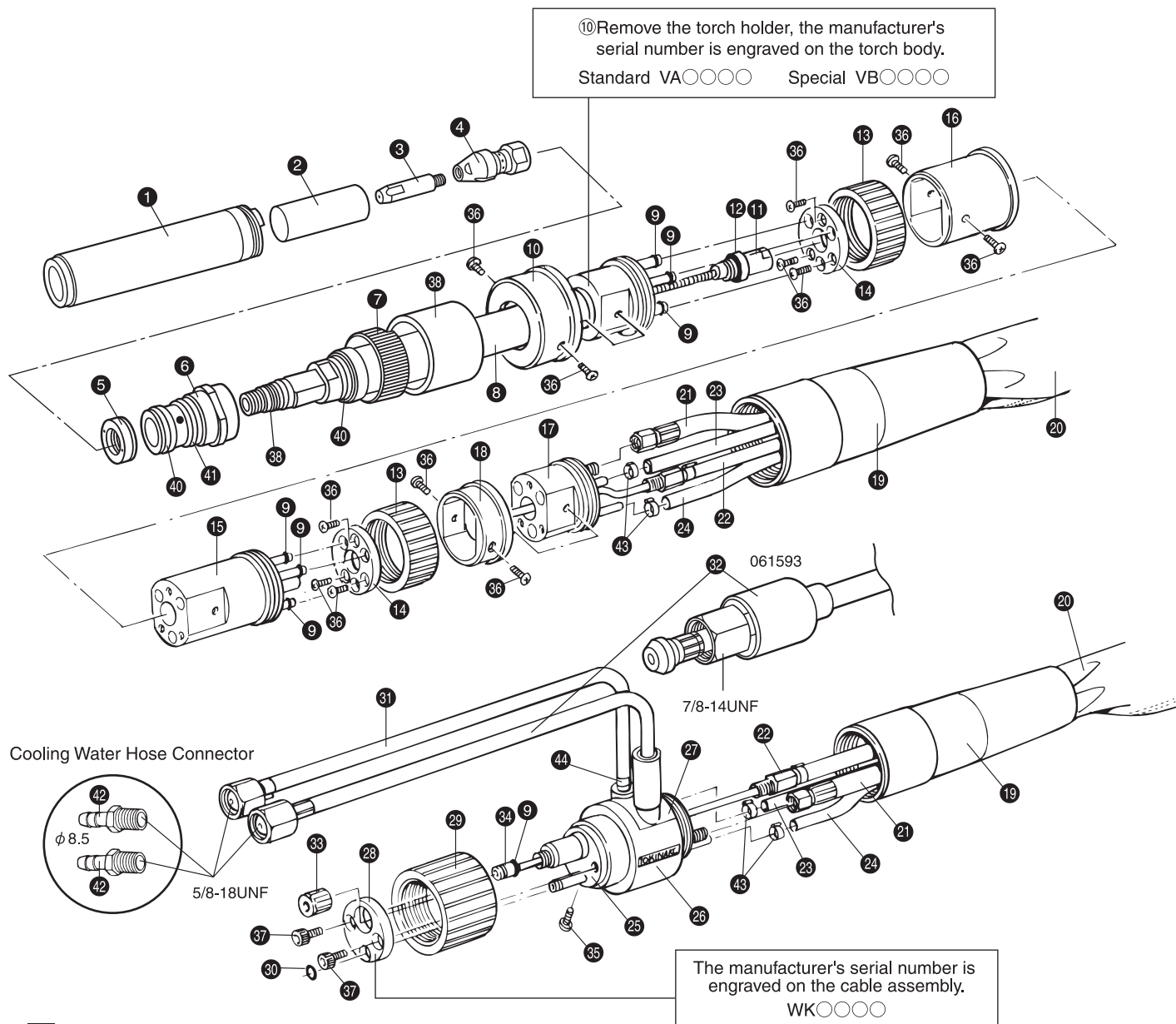
[17] WX451 AW Parts List



WX451AW Parts List

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	KW0205061	KWST-500AW Water-cooled Nozzle	12	036 030	O-ring (S-9)	28	020 005	Adapter O-ring (W1516-2)
2	Y902ALW10	YMST-9902ALW-10 Nozzle Sleeve	13	061 453	WX401,402,451,452 Torch Nut	29	061 591	WX Adaptor Water Hose(Inlet)
3	023 406	D-MIG Tip 1.2mm	14	061 455	WX401,402,451,452 Torch Nut Fitting	30	061 592	WX Adaptor Water Hose(Outlet)
	023 409	1.6mm			With ③③ SUS bolt M4-L8		061 593	WX Power Joint Cable
4	CT9908192	KWST-500AW Tip Body	15	061 454	WX401,451 Cable Adapter	31	020 003	Liner Nut
5	061 445	WX Senter Ceramic	16	061 525	WX500 Torch Holder	32		WX401,402,451,452 Plastic Liner
6	061 449	WX450,451,452 Nozzle Spacer			(With ③③ SUS bolt M4-L8)			(With ⑨ O ring S-5)
		(With ③③④ O ring 1015,1016)	17	061 522	WX Cable Supporter	33	061 524	SUS bolt M4-L8
7	061 448	WX450,451,452 Nozzle Nut	18		NEW β /WX Hose Sheath	34	061 594	Bolt M4-L10
8	061 443	WX451S,452S Torch Body	19		WX401,451 Water-cooled Power Cable	35	020 004	Screw M4-L8
		(With ⑨③③③ O-ring S-5,1009,1005)	20		WX401,451 Flexible Conduit Cable	36	061 440	WX450,451,452 Cover Rubber
	061 444	WX451R,452R Torch Body	21		WX Inlet Water Hose	37	Y90201009	O ring 1009
		(With ⑨③③③ O-ring S-5,1009,1005)	22		WX Gas Hose	38	Y90201015	O ring 1015
9	061 446	O-ring (S-5)	23	061 492	WX400,401,402,450,451,452 Power Feeding Adaptor	39	Y90201016	O ring 1016
10	061 421	WX400,401,402,450,451,452 Torch Holder			(With ③⑤ Screw M4-L8)	40	034 706	Cooling Water Hose Connector
		With ③③ SUS bolt M4-L8	24	061 583	WX Power Feeding Block Holder	41	034 531	Hose Clamp 10.0
11	TU0405109	WX451AWS/452AWS Inner Tube	25	061 584	WX Feeding Block Cap			
	-0001	(With ⑫ O-ring S-9)	26	061 585	WX Adaptor Nut Fitting			
	TU0405108	WX451AWR,452AWR Inner Tube			(With ③④ Bolt M4-L10)			
	-0001	(With ⑫ O-ring S-9)	27	020 002	Adapter Nut			

[18] WX452AW Parts List



WX452AW Parts List

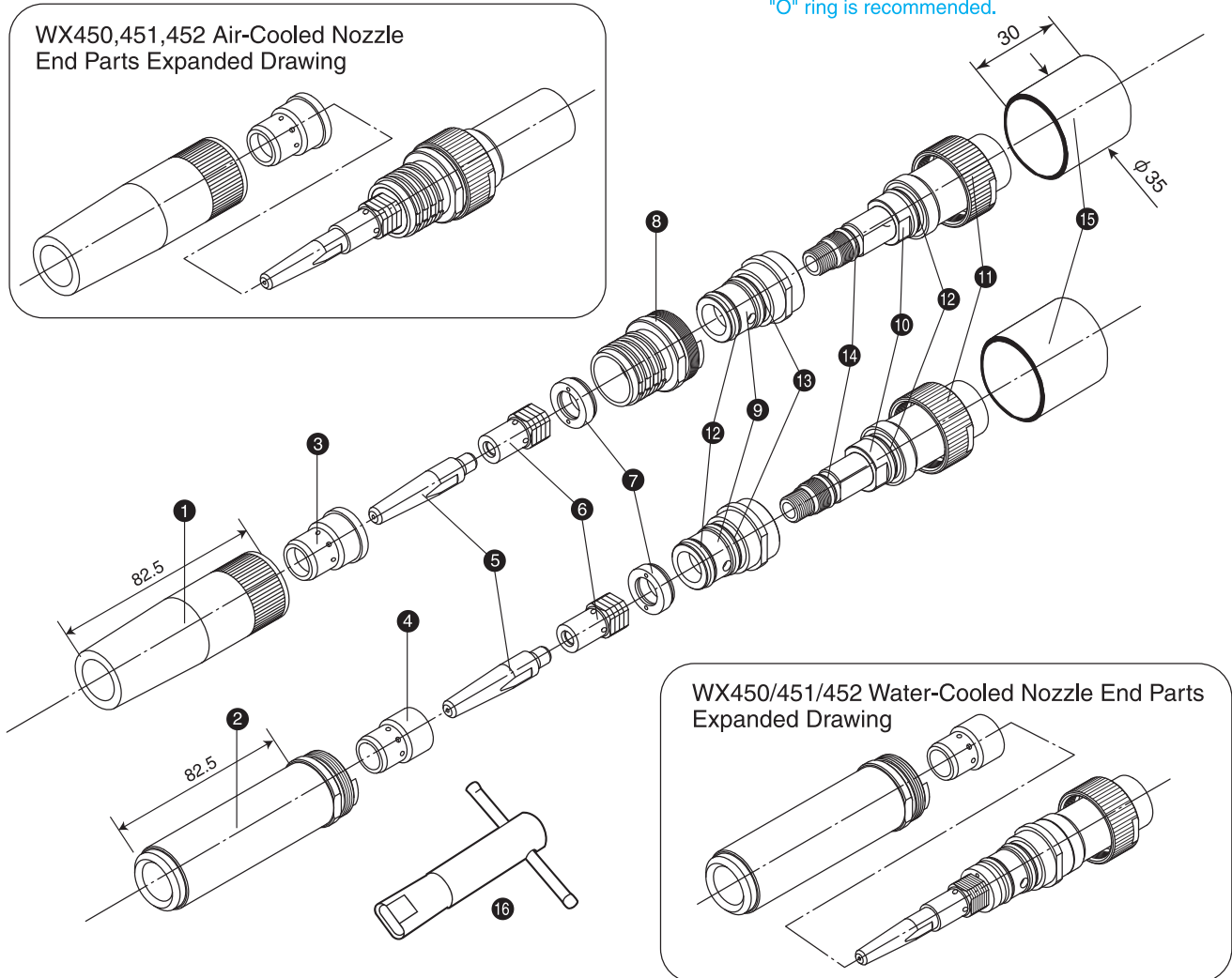
No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	KW0205061	KWST-500AW Water-cooled Nozzle	14	061 455	WX401,402,451,452 Torch Nut Fitting	30	020 005	Adapter O-ring (W1516-2)
2	Y902ALW10	YMST-9902ALW-10 Nozzle Sleeve	15	061 457	With ③⑥ SUS bolt M4-L8	31	061 591	WX Adaptor Water Hose(Inlet)
3	023 406	D-MIG Tip 1.2mm	16	061 457	WX402,452 Clamp Adapter	32	061 592	WX Adaptor Water Hose(Outlet)
	023 409	1.6mm	17	061 481	(With ⑨ O-ring S-5)		061 593	WX Power Joint Cable
4	CT9908192	KWST-500AW Tip Body	18	061 482	WX402,452 Cable Block Holder	33	020 003	Liner Nut
5	061 445	WX Senter Ceramic	19	061 522	WX Cable Supporter	34		WX401,402,451,452 Plastic Liner
6	061 449	WX450,451,452 Nozzle Spacer	20		NEW β /WX Hose Sheath	35	020 004	Screw M4-L8
		(With ④② O ring 1015,1016)	21		WX402,452 Water-cooled Power Cable	36	061 524	SUS bolt M4-L8
7	061 448	WX450,451,452 Nozzle Nut	22		WX402,452Flexible Conduit Cable	37	061 594	Bolt M4-L10
8	061 443	WX451S,452S Torch Body	23		WX Inlet Water Hose	38	061 440	WX450,451,452 Cover Rubber
	061 444	WX451R,452R Torch Body	24		WX Gas Hose	39	Y90201009	O ring 1009
		(With ⑨④④① O-ring S-5,1009,1005)	25	061 492	WX400,401,402,450,451,452 Power Feeding Adaptor	40	Y90201015	O ring 1015
9	061 446	O-ring (S-5)	26	061 583	(With ③⑤ Screw M4-L8)	41	Y90201016	O ring 1016
10	061 421	WX400,401,402,450,451,452 Torch Holder	27	061 584	WX Power Feeding Block Holder	42	034 706	Cooling Water Hose Connector
		With ③⑥ SUS bolt M4-L8	28	061 585	WX Feeding Block Cap	43	034 531	Hose Clamp 10.0
11	TU0405109	WX451AWS,452AWS Inner Tube	29	020 002	Adapter Nut			
	-0001	(With ⑫ O-ring S-9)						
	TU0405108	WX451AWR,452AWR Inner Tube						
	-0001	(With ⑫ KO-ring S-9)						
12	036 030	O-ring (S-9)						
13	061 453	WX401,402,451,452 Torch Nut						

[19] Water Cooled Nozzle Conversion Method

WX450,451,452 End Parts Expanded Drawing

For 450,451 and 452, exchange the parts to utilize the water-cooled nozzle.

Comment: Please be careful not to damage the "O" ring when replacing. Applying molybdenum grease to the "O" ring is recommended.



WX Consumable Parts List (WX450,451,452 Air Cooled Nozzl)

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	034 115	NEW β /WX Nozzle 16mm	7	061 445	WX Senter Ceramic	10	061 444	WX451R,452R Torch Body
	034 116	19mm	8	061 447	WX450,451,452 Nozzle Adapter			(With O-ring S-5 (14) (12) O ring 1009,1005)
3	034 120	NEW β /WX Orifice	9	061 449	WX450,451,452 Nozzle Spacer	11	061 448	WX451,452 Nozzle Nut
5	002 003	N Tip 1.2mm			(With (12) (13) O-ring 1015,1016)	12	Y90201015	O ring 1015
	002 017	1.4mm	10	061 443	WX451S,452S Torch Body	13	Y90201016	O ring 1016
	002 004	1.6mm			(With O-ring S-5 (14) (12) O ring 1009,1005)	14	Y90201009	O ring 1009
6	034 135	NEW β /WX Tip Adapter				15	061 440	WX450,451,452 Cover Rubber

WX Consumable Parts List (WX450,451,452 Water Cooled Nozzle)

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
2	061 450	WX450,451,452 Water-cooled Nozzle	9	061 449	WX450,451,452 Nozzle Adapter	12	Y90201015	O ring 1015
4	034 121	WX Water-cooled Nozzle Orifice			(With (12) (13) O-ring 1015,1016)	13	Y90201016	O ring 1016
5	002 003	N Tip 1.2mm	10	061 443	WX451S,452S Torch Body	14	Y90201009	O ring 1009
	002 017	1.4mm			(With O ring (14) (12) O-ring 1015,1016)	15	061 440	WX450,451,452 Cover Rubber
	002 004	1.6mm		061 444	WX451R,452R Torch Body			
6	034 135	NEW β /WX Tip Adapter			(With O ring S-5 (14) (12) O-ring 1015,1016)			
7	061 445	WX Senter Ceramic	11	061 448	WX450,451,452 Nozzle Nut			

WX Tools

No.	Part No.	Parts Name
16	YJ9905200	Contact Tip Removing Tool
17	034 922	Caulk Tool 150



17 Hose Clamp Pliers

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	061 453	WX401,402,451,452 Torch Nut	8	061 524	SUS bolt M4-L8	15	061 489	WX401R,402R Inner Tube(Wire Clamp (With⑩O-ring S-9)
2	061 455	WX401,402,451,452 Torch Nut Fitting With ⑧SUS bolt M4-L8	9	017 109	Air Cylinder			061 460
			10	017 111	Pipe Fitting		061 461	
3	061 483	WX401,451Wire Clamp Adapter	11	017 113	Hexagon Socket Head bolt M4-L6			
4	061 523	WX401,402,451,452 Wire Clamp Holder (With ⑭SUS Bolt M4-L8)	12	017 110	Bolt for CylinderM3-L25			
			13	061 439	WX401,402,451,452 Cylinder Insulation Cover			
5	061 901	WX401,402,451,452 Air Cylinder Pedestal	14	061 524	SUS bolt M4-L8	16	036 030	O-ring (S-9)
6	061 902	WX401,402,451,452 Wire Weight Rod	15	061 488	WX401S,402S Inner Tube(Wire Clamp)	1~14	061 486	WX401,451 Wire Clamp Unit
7	018 00A	WX Wire Clamp Paking						

To clean please first remove the torch body and pull out the liner from the cable. Then using pressurized air blow out the wire sediment.

Comment: When screwing in the wire set pin ⑥ into the air cylinder ⑨ please apply threadlocker.

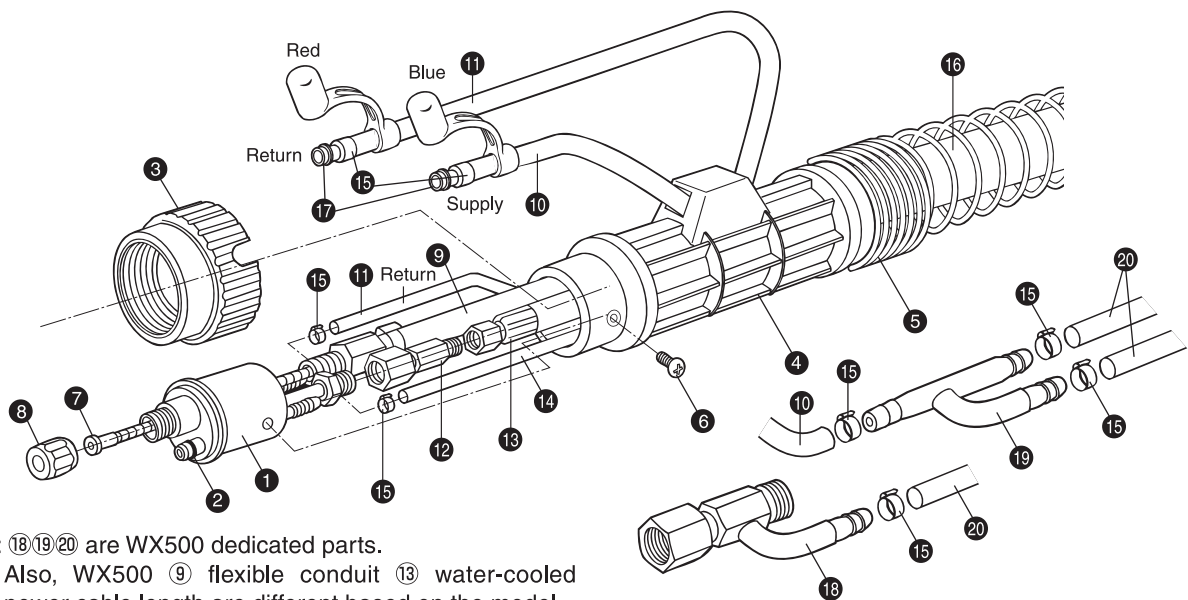
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No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	061 453	WX401,402,451,452 Torch Nut	8	061 524	SUS bolt M4-L8	16	061 489	WX401R,402R Inner Tube(Wire Clamp (With⑰O-ring S-9)
2	061 455	WX401,402,451,452 Torch Nut Fitting With⑧SUS bolt M4-L8	9	017 109	Air Cylinder		061 460	WX451S,452S Inner Tube(Wire Clamp (With⑰O-ring S-9)
3	061 480	WX401,451Wire Clamp Adapter (With⑮O-ring S-5)	10	017 111	Pipe Fitting		061 461	WX451R,452R Inner Tube(Wire Clamp (With⑰O-ring S-9)
4	061 523	WX401,402,451,452 Wire Clamp Holder (With⑧SUS bolt M4-L8)	11	017 113	Hexagon Socket Head bolt M4-L6			
			12	017 110	Bolt for CylinderM3-L25			
			13	061 439	WX401,402,451,452 Cylinder Insulation Cover	17	036 030	O-ring (S-9)
5	061 901	WX401,402,451,452 Air Cylinder Pedestal	14	061 524	SUS bolt M4-L8	1~15	061 487	WX402,452 Wire Clamp Unit
6	061 902	WX401,402,451,452 Wire Weight Rod	15	061 446	O-ring (S-5)			
7	018 00A	WX Wire Clamp Paking	16	061 488	WX401S,402S Inner Tube(Wire Clamp (With⑰O-ring S-9)			

To clean please first remove the torch body and pull out the liner from the cable. Then using pressurized air blow out the wire sediment.

Comment: When screwing in the wire set pin ⑥ into the air cylinder ⑨ please apply threadlocker.

[22] EURO Connection Specification Parts List



Comment: 18,19,20 are WX500 dedicated parts.
Also, WX500 9 flexible conduit 13 water-cooled power cable length are different based on the model.

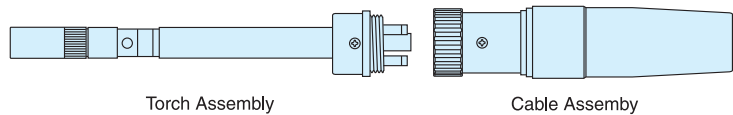
EURO Type Parts List

No.	Part No.	Parts Name	No.	Part No.	Parts Name	No.	Part No.	Parts Name
1	061492BZ	WX451 Power Feeding Adaptor EURO (With 2 O ring)	8	020003BZ	Liner Nut EURO	16		β /WX Hose Sheath
2	020005BZ	Adapter O-ring EURO	9		WX451Flexible Conduit Cable EURO	17	034 950	EURO Fitting Male
3	020002BZ	Adapter Nut EURO	10		WX Inlet Hose EURO	18	061 596	WX500ER Power Cable Adapter
4	061 527	WX Adapter Cover EURO	11	061592BZ	WX Adaptor Water Hose (Outlet) EURO	19	061 597	β 500 Inlet Water Hose Fitting
5	061522BZ	WX Cable Supporter EURO	12	061 595	WX451 Water-cooled Power Cable Conversion Adaptor EURO	20		WX Inlet and Outlet Water Hose
6	020004BZ	Screw M4-L6	13		WX451Water-cooled Power Cable EURO			
7		WX451 Liner 1.2-1.6mm EURO	14		WX Gas Hose			
		WX500 Liner 1.2-1.6mm EURO	15	034 531	Hose Clamp 10.0			

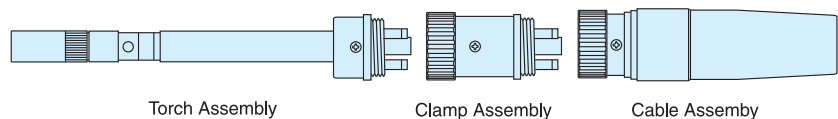
[23] Quick Attach and Detach System Explanation

[WX Series] Quick Attach and Detach System

▼ WX401S(451) Quick Attach and Detach System



▼ WX402S(452) Quick Attach and Detach System



The [WX Series] Quick Attach and Detach System Advantage

Although it's still necessary to first completely remove the existing torch from the robot. Once removed, simply detach and replace the desired part only.

〈Annotation 4〉 WX401,WX402,WX451,WX452 may be attached and detached in units.
To reduce downtime preparing the torch body assembly, clamp assembly, or cable assembly in advance is recommended.

TC1311T01-3

Robotic Water-Cooled Torches (WX Series)

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