

Maintenance (Trial run · Periodic inspection)

Notes

- <To Maintenance manager>
- Inspections item at the time of the pre-use test run(Checking at periodic inspection).
- For using safely, please inspect the system one month after starting regular operation.
- The inspection cycle is mentioned below. However, determine your own inspection cycle based on the actual operating rate and environmental condition.
- Items in bold: Inspection items requiring particular attention.

Result	○ : Normal	Measures	○ : Exchange required
	×		● : Finished with exchange
			△ : Adjustment required
			▲ : Finished with adjustment

A title	Check day	Y	D	M	The check person in charge
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Name	Contents of inspection	Remedy	※	Result	Measures	Inspection cycle (standard)
Tro-Reel unit	Check to see if there is any foreign particles adhering on its sliding surface or if it is seriously contaminated.	Clean with a specific purpose cleaner or waste cloth.				
	Is there any ark generated protrusion (convex shaped) on its sliding surface?	Remove any protrusion (convex) on the arc scratch using a file. ※ If you can not fix, please replace the duct. scratch using a file.				
	Is there damage and crack at the insulating sheath ?	If the tip of the sheath thickness is 1.2mm or less, please replace insulation	○			
	What is the meander of the duct or swell in the regulations?<Refer to installation manual11> The serpentine tolerance: standard ± 5 mm Tolerance of modulation : standard ± 3mm	Adjust it within specified size. ·Adjust the length of the duct, or Aalign the joiner. ·Adjust the mounting position of the hangers.	○			
	Is there a significant twisting or bending of the duct?	Correct the twisting or bending of the duct. ※ If you can not fix, replace the duct.	○			
	Isn't the unit dislocated from the hanger? <Refer to installation manual4>	Review for any dislocated position on the unit. Correct if any.	○			
	Are there occurred whiskers(Bali) of conductors ?	If whiskers (Bali) occurs , remove by using the conductor cleaner.				
	Amount of wear of the conductor is correct? Amount of wear of the conductor :0.7 mm or less	If it exceeds a threshold amount of wear, please replace the main conductor In case of wearing down to the replacement indication line at next inspection, please replace earlier than usual.				
	Don't the insulated sheath and the resin part of collector spinning shaft touch?	Check the amount of wear of the collector and conductor of the duct, replace it if necessary.				
Joiner(Center feed-in joiner)	Are not there the cracks and damaged on a plastic part?	When damage and crack occurred in the fixed end insulator, please change it.				the number of passes through the collector's arm: 1,000,000
	Is there any fixed screw loosen?	Retighten.	○			
	Are correct clearance size of between the conductors ? <Refer to installation manual11> ·Or less · 10 ℃: 5 ~13 mm·11 ℃ ~ 40 ℃: 3 ~10 mm	Adjust the proper clearance size. ·Adjust the length of the duct, or Aalign the joiner. ·Adjust the mounting position of the hangers.	○			
	Are correct joiner mounting size? <Refer to installation manual11> ·Or less · 10 ℃: 3003 mm · 11 ℃ ~ 40 ℃: 3000 mm	Adjust it within specified size.	○			
	Are correct cutting size of the duct or the duct end ? <Refer to installation manual7> · The duct cutting Size: size of between Joiner (L) -3mm ※ The same is the case of the Center Feed-in Joiner . ·Cutting Size of the duct end :Remove the insulating sheath 27.5mm from the edge of the duct,	Adjust it within specified size.	○			
	Are insert the conductor and sheath of a duct certainly? <Refer to installation manual8>	Insert the duct to ensure.	○			
Hanger	Did you set up the correct size and mounting hangers? <Refer to installation manual11> ·Straight sections: Max 600 mm ·Curved section : Max 500 mm	Adjust to the proper pitch	○			
	Is there any fixed screw loosen?	Retighten.	○			
Guide cap	Are not there the cracks and damaged on a plastic part?	When damage and crack occurred in the fixed end insulator, please change it.	○			
	Amount of wear of the plastic is correct? Amount of wear of the plastic :0.5 mm or less Exchange of a guide is when the conductor sliding surfaces will become taller than the guide-cap sliding surfaces, the number of times of passage of the collector is 5 million times.	Please exchange, when the amount of wear of a guide cap resin part is 0.5 mm or more.				

Name	Contents of inspection	Remedy		Result	Measures	Inspection cycle (standard)
Guide cap	Are correct clearance size of between the guide cap ? <Refer to installation manual⑦> Is the gap between the guide cap size correct? ·Guide cap mutual clearance: 10 ~ 20mm Horizontal: Max 2mm Vertical: Max 2mm Please have the above range, even when loaded to rated load on the trolley at any time.	Adjust it within specified dimension.		○		the number of passes through the collector's arm:1,000,000
	Is there any fixed screw loosen?	Retighten.		○		
Insulating piece	Is there any cracked or broken on plastic section?	Replace if cracked or broken sheath is found.		○		the number of passes through the collector's arm:1,000,000
	Are correct cutting size of the duct or the duct end ? <Refer to installation manual⑨> The duct cutting Size: The length of the duct (standard length L) -17.5 mm . ·Cutting Size of the duct end :Remove the insulating sheath 17.5mm from the edge of the duct,	Adjust its mounting dimension.		○		
	Are hanger located within 100 mm from side to side insulating piece? <Refer to installation manual⑨>	Adjust the position of Hunger.		○		
	Do not cover broken or damaged signal wires?			○		
Collector arm	Is the arm installing dimension correct? <Refer to installation manual⑩> Single-type (for mounting rod), tandem-type (for mounting rod) The length of to the center of themounting rod from the sliding surface (movable range): 65±10mm tandem-type (for mounting plate) The length of to themounting plate from the sliding surface (movable range): 65±10mm Single-type (for mounting plate) The length of to the center of themounting plate from the sliding surface (movable range): 60±10mm	Adjust the collector arm in the reference value.		○		Distance of the collector arm :3000km
	Is the center of a duct and the collector arm on a straight line? <Refer to installation manual⑩> Installation Tolerance: ± 3mm center"	Adjust its mounting dimension.		○		
	Is the collector arm attached in parallel with a duct, so that it cannot twist?	Mount the collector arm in parallel with the duct.		○		
	Is there any serious wear to replacement indication line Is there any serious wear to replacement indication line? or,Does exceed a travel distance of 20,000 km?	Collector shoes should be replaced when they partially wear down to the replacement indication line. Please exchange the collector shoes ahead of time when it will be worn out to the replacement indication line by the time of the next check. by the time of the next check.				
	Are there significant contamination,foreign matter adhering , occurred burr in collector?	Remove it with sandpaper or wes.				
	Is there any ark generated protrusion ?	Remove the protrusion (convex) on thearc scratch using a file.				
	Is there wear of plastic part of the collector plastic part?	Adjust the collector arms mounting dimensions.				
	Does the collector move smoothly?	If the motion is not smooth, replace the current collector and the collector arm.		○		
	Is there any curve or variation on the arm?	Replace the arm if there is curve or variation.		○		
	Is there any chip or broken?	Replace if chip or broken spring pin is found.		○		
	Is the collector shoes pulled by the lead wire?	If the collector shoes pulled, correct to have extra length on lead wire.		○		
	Is there any damage on the sheath of lead wire?	If there is damage, replace the collector shoes.		○		
	Are there any terminal screws or thefixed screws loosen?	Retighten.		○		
	Is not there any mistake in the contact terminal position (R, S, T, E, and signal connection line) of a lead?	Make a tightening of the connection terminals		○		
unit	After checking the above construction, to determine the insulation resistance. Working voltage 300V or less 150V or less voltage to ground: Longer than 0.1MΩ 150V or higher voltage to ground: Longer than 0.2MΩ Working voltage 300V or higher, than 0.4MΩ					the number of passes through the collector's arm:1,000,000