Basic Pneumatic Circuit







Check location	Description	Related items	
1	Filter/Regulator	Drain cock	
	7 11007 1100010101	Bonnet	Body
		Pilot valve	
2	Solenoid valve	PE port	Bonnet
	Fitting/Tubing/	Silencer	
3	Speed controller	_	
4	Air cylinder	Air Cushion	
	7	Auto Switch	<u></u>
		3	PE port (Pilot exhaust)

Check	location	Detailed status	[Probable cause] and Actions
① Filter/Regulator		☐ IN and OUT piping is connected in reverse.	[Insufficient pressure and flow rates] • Reconnect piping.
		☐ Specified power is not supplied. ☐ Light does not turn ON with electric signal.	[Insufficient voltage] [Broken wire] · Check the power supply
		Does not switch by manual operation.	[Foreign matter caught in solenoid valve] · Replace solenoid valves · Purify the air. *1
		☐ Minimum operating pressure or more is not supplied.	[Insufficient pressure] · Change to operating pressure range. · Consider external pilot type.
② Solenoid valve		☐ PE port is plugged.	[Operation trouble caused by pilot back pressure] Open or attach silencer.
		☐ Silencer is clogged.	[Operation trouble caused by back pressure] · Remove foreign (drain) objects · Replace silencers
		☐ There is always leakage from the silencer.	[Foreign matter caught in solenoid valve] • Replace solenoid valves • Purify the air. *1 [Wear of cylinder piston seal] • Replace piston seal
③ Fitting/Tubing		☐ Bent or flattened	[Insufficient pressure and flow rates] • Reconnect tubing.
③ Speed Controller	Air Cushion	 ☐ Restrictor is not adjusted properly. ☐ Not adjusted 	[Fully closed] · Needle adjustment
	Load/Guide	☐ Floating mechanism is not installed.	[Increase of sliding resistance] [Lateral load/Moment] · Install floating mechanism. · Readjust alignment.
		☐ Guide and rods are off center.	
	Auto Switch	Does not turn ON or OFF. Does not turn ON. (Does not operate.)	[Positional deviation] [Broken wire] [Over-current] · After confirming operation, reattach. · Replace auto switches
		☐ Fixed position has deviated.	[Positional deviation by vibration, etc.] • Reattach
4 Air Cylinder		☐ There is scratching on body. There are scratches or cuts in cable.	· Replace auto switches
	Operation (Failure)	☐ Does not reach required stroke.	[Guide and rods are off center] [Air cushion is completely closed] · Readjust [Positional deviation of stopper and shock absorber] · Readjust
		☐ Shock absorber is not functioning normally.	[Positional deviation of stopper and shock absorber] · Readjust [Shock absorber out of oil] · Replace shock absorbers

^{*1} The purification measures for the air are to ① install an air dryer or air filter, and ② check if the air dryer and air filter are operating normally.