

Maintenance Manual

Tripod Turnstile

1. Introduction

Thank you for purchasing the tripod turnstile product manufactured by ZKTeco. This product is manufactured in strict accordance with quality control standards. To protect the device from component abrasion and ensure long-term stable operation, it is recommended you perform periodic maintenance on the device.

2. Housing Cleaning and Interior Dust Removal

Check for dirt such as smudges and stains on the tripod turnstile housing on a periodic basis. Use cleaning agents to remove dirt, wipe the surface with soft cloth, and then apply a layer of rust preventive oil. Should accidental scratches occur, ask a qualified repair service to smooth out the patterns.

Note: It is recommended the housing be cleaned once every two weeks.

3. Periodic Maintenance of Internal Components

Usage times	Mechanism							Electronic			
	D50	D30	Position sensor	Position recover spring	Block arm	Hook on the block arm	Isolating plate	Control board	Wire	24 V power supply	Indicator light
50+W	○	○	○	○	○	○	○	○	○	○	○
100+W	○	●	○	○	●	●	○	○	○	○	○
150+W	○	○	○	○	○	○	○	○	○	○	○
200+W	○	●	○	○	●	●	○	○	○	○	○
250+W	○	○	○	○	○	○	○	○	○	○	○
300+W	○	●	○	○	●	●	○	○	○	○	○
Remarks: ● indicates Replace; ○ indicates Check.											

@50W Maintenance record

● Maintenance	In good condition after checking (√)		Clean after checking (C)		
	Fasten after checking (F)		Replace after checking (R)		
● Mandatory items	Housing cleaning and interior dust removal				
	Mechanism oiling				
● Check items					
D50		Block arm		Control board	
D30		Hook on the block arm		Wire	
Position sensor		Isolating plate		Indicator light	
Position recover spring		24 V power supply			

@100W Maintenance record

● Maintenance	In good condition after checking (√)		Clean after checking (C)		
	Fasten after checking (F)		Replace after checking (R)		
● Mandatory items	Housing cleaning and interior dust removal				
	Mechanism oiling				
● Replacement item	D30		Block arm		
	Hook on the block arm				
● Check items					
D50		Indicator light		Control board	
Position recover spring		Isolating plate		Wire	
Position sensor		24 V power supply			

@150W Maintenance record

● Maintenance	In good condition after checking (√)		Clean after checking (C)		
	Fasten after checking (F)		Replace after checking (R)		
● Mandatory items	Housing cleaning and interior dust removal				
	Mechanism oiling				
● Check items					
D50		Block arm		Control board	
D30		Hook on the block arm		Wire	
Position sensor		Isolating plate		Indicator light	
Position recover spring		24 V power supply			

200W Maintenance record

● Maintenance	In good condition after checking (√)		Clean after checking (C)		
	Fasten after checking (F)		Replace after checking (R)		
● Mandatory items	Housing cleaning and interior dust removal				
	Mechanism oiling				
● Replacement item	D30		Block arm		
	Hook on the block arm				
● Check items					
D50		Indicator light		Control board	
Position recover spring		Isolating plate		Wire	
Position sensor		24 V power supply			

250W Maintenance record

● Maintenance	In good condition after checking (√)		Clean after checking (C)							
	Fasten after checking (F)		Replace after checking (R)							
● Mandatory items	Housing cleaning and interior dust removal									
	Mechanism oiling									
● Check items										
D50		Block arm		Control board						
D30		Hook on the block arm		Wire						
Position sensor		Isolating plate		Indicator light						
Position recover spring		24 V power supply								

300W Maintenance record

● Maintenance	In good condition after checking (√)		Clean after checking (C)					
	Fasten after checking (F)		Replace after checking (R)					
● Mandatory items	Housing cleaning and interior dust removal							
	Mechanism oiling							
● Replacement item	D30		Block arm					
	Hook on the block arm							
● Check items								
D50		Indicator light		Control board				
Position recover spring		Isolating plate		Wire				
Position sensor		24 V power supply						

4. Appendix (Method and Tool)

4.1 Housing Maintenance and Interior Dust Removal

- Use cleaning cloth soaked with industrial alcohol to wipe the housing. Then apply a layer of rust preventive oil.
- If the arm for drop arm device is loose, tighten it clockwise, and use an Allen key to fasten the set screws.
- Remove dust on the internal PCB.



4.2 Mechanism Lubrication

- Apply lubricating oil inside the mechanism evenly while rotating the tripod turnstile arm, as shown in the following figure.

Figure: Mechanism lubrication



4.3 Mechanism Checking

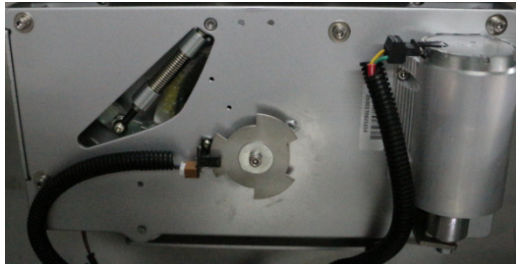
4.3.1 Cover Removal

- Use an Allen key to unfasten the two screws from the mechanism housing, take off the housing, unfasten the R-shaped clamp screws and the screws that fix the position sensor blocker, and remove the terminal posts, as shown in the following figures.

Figure: Mechanism housing

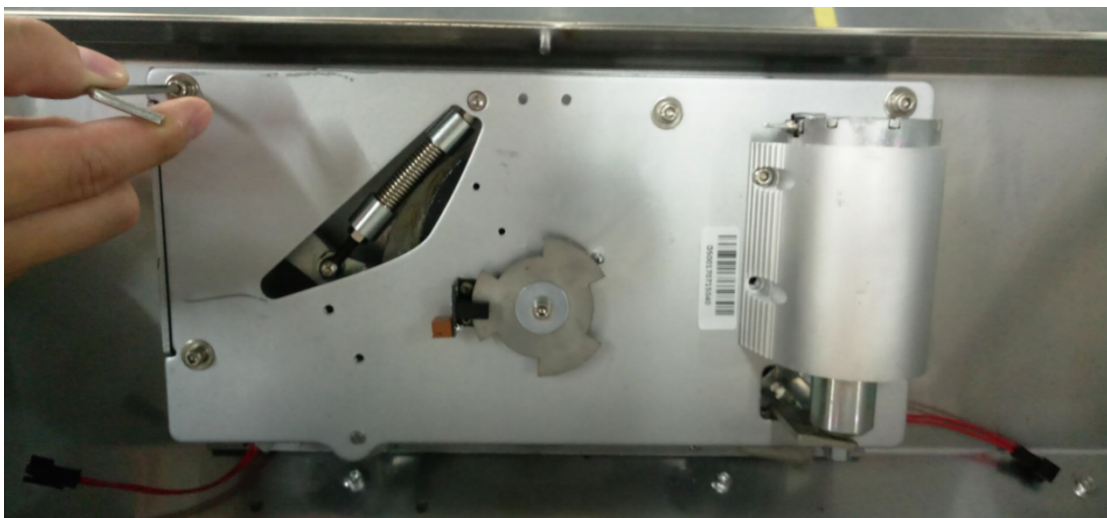


Figure: Position sensor



- Use an Allen key to unfasten the five screws from the mechanism cover and take off the cover, as shown in the following figure.

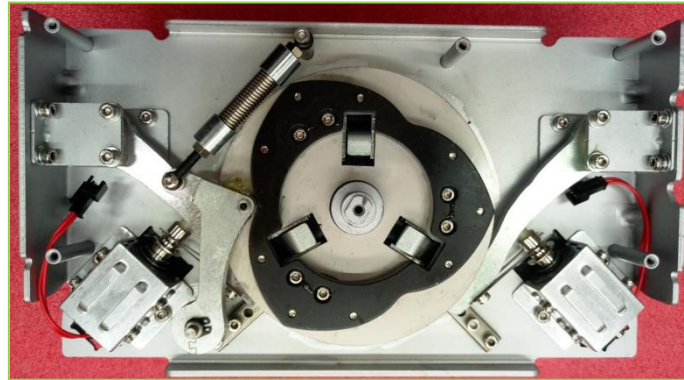
Figure: Mechanism cover



4.3.2 Unlock Solenoid Replacement

- Use an Allen key to unfasten the screws from the unlock solenoid, remove the terminal posts, and take off the unlock solenoid, as shown in the following figure.
- Install the new unlock solenoid on the mechanism base, apply screw glue, use the Allen key to fasten the screws, and re-insert the terminal posts. (The replacement method is the same for the left and right solenoids.)

Figure: Unlock solenoid



4.3.3 Drop Arm Solenoid Replacement

- Unfasten the four screws that fix the drop arm solenoid on the mechanism cover and take off the drop arm solenoid.
- Install the new drop arm solenoid, fasten the screws, and re-insert the terminal posts.

Figure: Drop arm solenoid



4.3.4 Block Arm Replacement

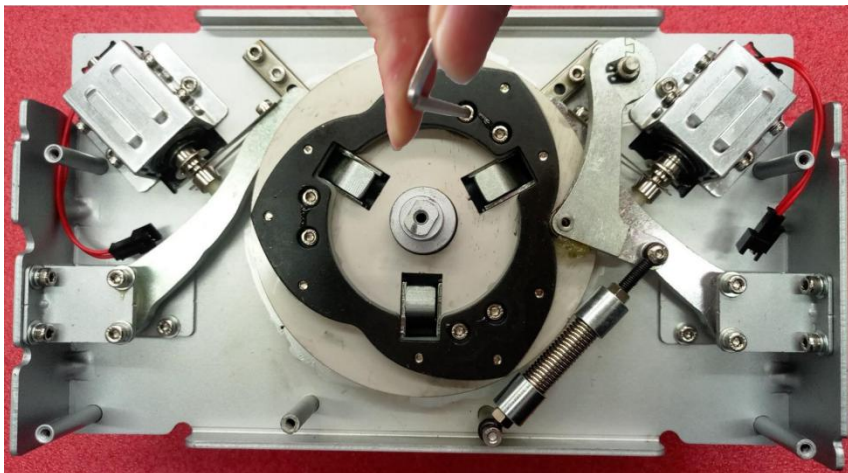
- Unfasten the screws from the block arm and take off block arm.
- Install the new block arm, apply screw glue, and fasten the screws.

Figure: Mechanism block arm



4.3.5 Isolating Plate Replacement

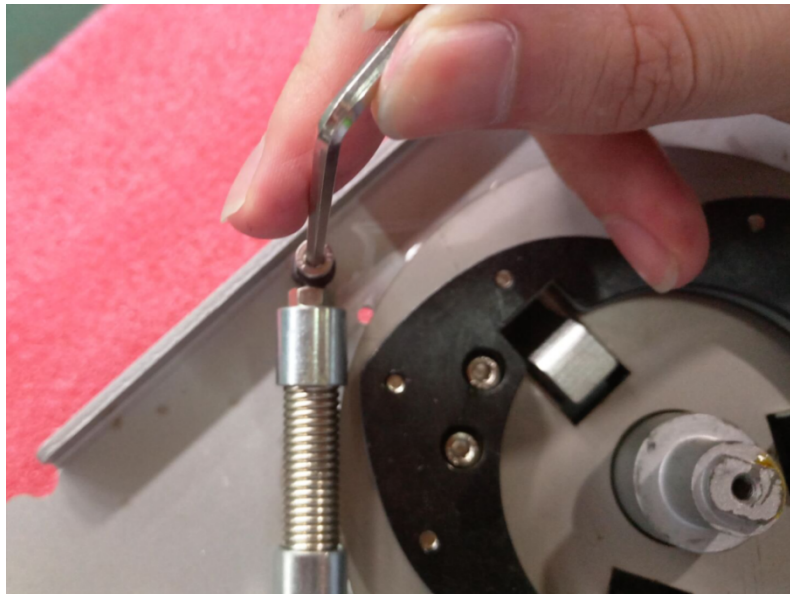
- Use an Allen key to unfasten the six screws from the 3-leaf wheel and the screws from the position recover spring, and take off the 3-leaf wheel and isolating plate in sequence, as shown in the following figures.
- Install the new isolating plate, fasten the screws.



4.3.6 Position Recover Spring Replacement

- Check whether the position recover spring is deformed and nuts are loose. Replace the position recover spring if deformed or fasten any loose nuts, as shown in the following figure.

Figure: Testing the position recover spring



4.3.7 Hook Replacement

- Take off the unlock solenoid.
- Take off the block arm and replace the hook.



5. Maintenance Tool Kit

Allen key set 	Multi-blade screwdriver 
Scissors 	Lubricating oil 
Multimeter 	Industrial alcohol 
Anaerobic adhesives 	Cleaning cloth 
Rust preventive oil 	

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