

VIA BOWLING FASTTRACK

Installation & Service

MANUAL



VIA BOWLING PRODUCTS

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I. General Description

1. The fasttrack ball return system is to send the ball back to the Blower where the player pick up the ball.
2. The fasttrack ball return system is composed of such components as fasttrack frame (Dolly), fasttrack motor, fast pulley assembly and adjust lever, ball sense assembly and track. (See fig. 1)

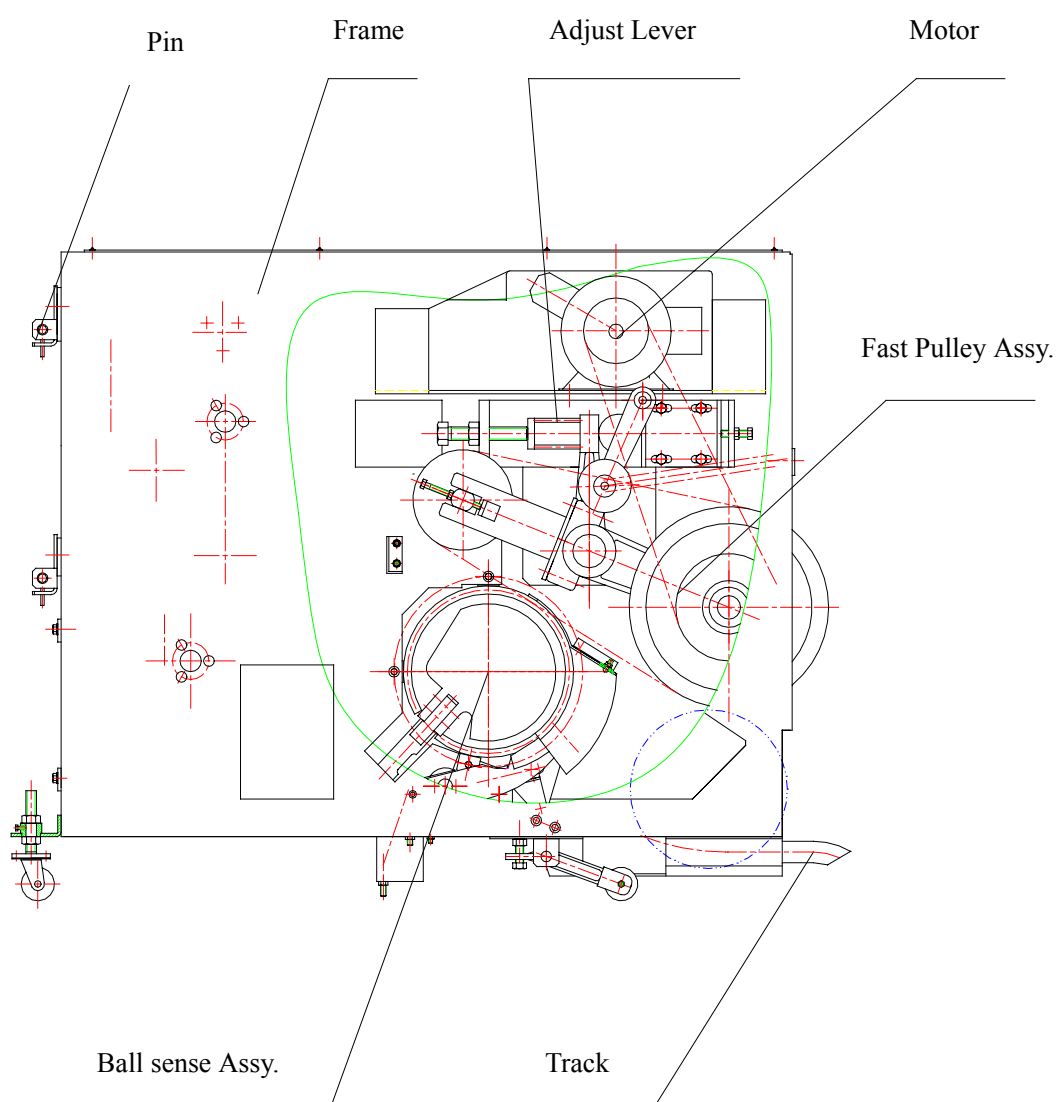


Fig. 1

3. Operating principle of the ball return system:

The ball rolls into Fastrack via the Ball Door. Directed by the ball-guided tray and Lock Assemble triged, it passes through the two disjunctors of the ball-holding baffle plate and comes into the track. And the ball accelerated by Flat Belt, then it flies to the Blower along the track.

II. Technical Parameter

Power of the Fastrack motor: 550W+60W

Length×Width×Height: 1145×250×1100 mm

III. Adjustment of the Ball Return System

Note: It is usually adjusted before leaving factory and does not need re-adjustment.

1. Adjustment of the Flat Belt (See fig. 2)

Any disalignment of the two axles of the fast pulley assembly will lead to the deviation of the Flat Belt. Therefore, regulate the two adjustment bolts of fast belt pulley on the traction wheel axle to solve the deviation problem.

Turn the primary wheel manually and observe the running of the Flat Belt, whenever the flat belt slides, loosen the nut on the deviated side and regulate the adjustment bolts clockwise to correct the displacement of Flat Belt and make it align with the center of the wheel. Alternatively, loosen the nut on the deviated side of the flat belt and regulate the adjustment bolt counterclockwise to correct the deviation.

2. Adjustment of Limited Cam and Pressing Force (See fig. 2)

- a. Adjustment of limited cam: Loose the four binding bolts of limited cam and regulate the Adjustment Bolt 1 of the cam, to make the distance between the fast

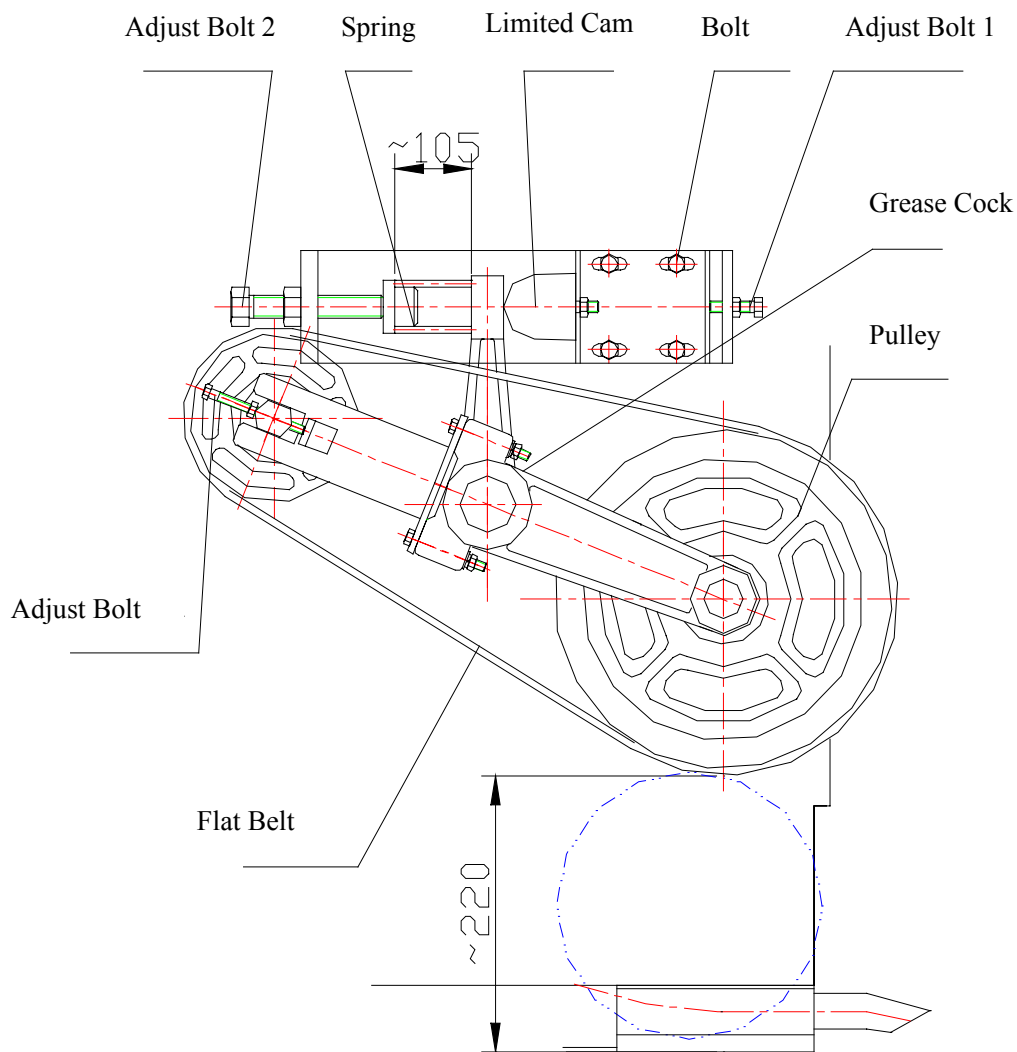


Fig. 2

pulley and bottom of the fasttrack frame be about 220mm. Then fasten the binding bolts.

b. Adjustment of pressing force: Loosen the pressure regulating screw nuts of the wheel rim, and regulate the adjustment bolt 2 clockwise or counterclockwise to make the spring reach a length of 105mm.

3. Adjustment of Ball-holding Baffle Plate Components (See fig.3)

Adjustment of ball-holding baffle plate components: Switch 1 and switch 2 are the key of the Lock Assembly,

which determines whether the ball can enter the track smoothly. Therefore, it is important to adjust the height of switches appropriately.

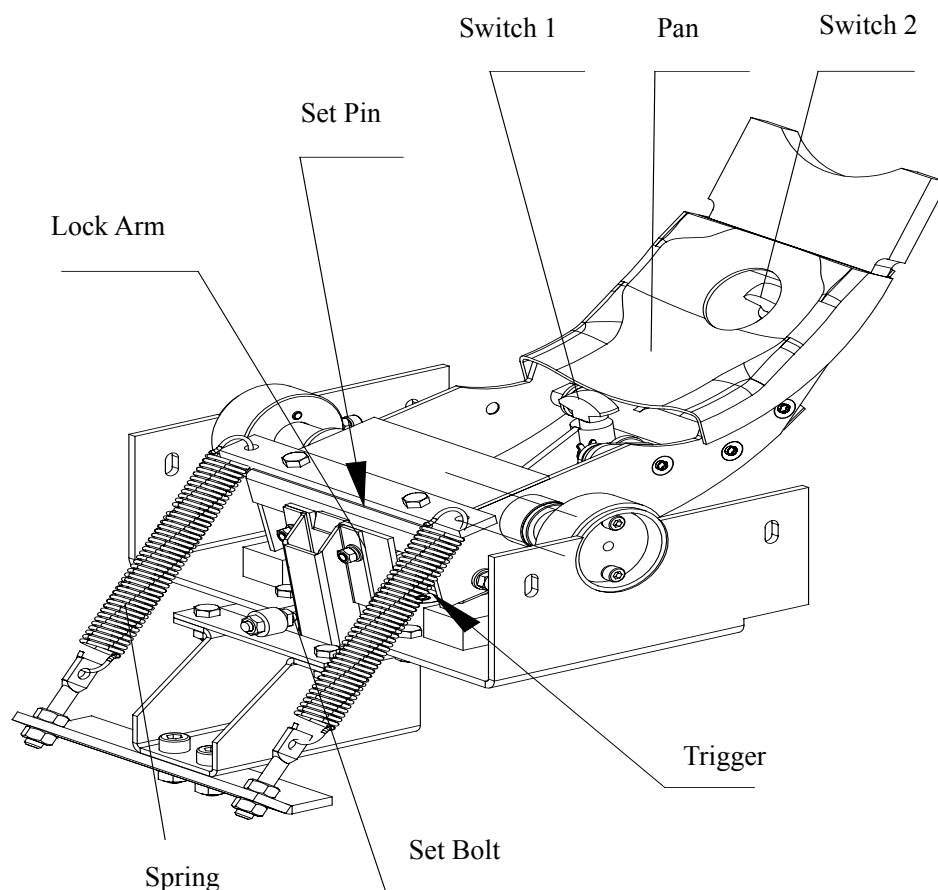


Fig. 3

- a. The Lock Assembly will not open unless both switch 1 and 2 are pressed down at the same time. Either one of them will not open the Lock Assembly.
- b. When the Lock Assemble opens while only switch 1 is pressed down, it should be adjusted. Loose lock-nut of Switch 1, adjust switch and make the ball enter smoothly and can press down it, then the Set Pin should not separate from the Lock Arm with a joggling distance of 2-3mm.

c. When the ball pan opens while only switch 2 is pressed down, the distance between the Set Bolt and the Lock Arm should be adjusted. Loosen the nuts on the Set Bolt to reduce the distance (changed into about 0.5mm) or regulate the trigger to increase its distance with the Lock Arm so as to ensure the one between the Limited Bolt and Lock Arm.

d. After the switch 1 and 2 are adjusted respectively, fasten all the nuts and test with a ball. (Suggestion: put a 16 lb. ball onto the ball pan and let it roll down naturally. When the Lock Assembly opened; and Pan comes down and restores smoothly, the adjustment is over. When the ball pan opens but can hardly restores, Set bolt should be adjusted backward so that the interspace is enlarged a little. (Or expand the spring a little). If the Lock Assembly does not open, make re-adjustment according to step b and c.

4. Adjustment of Rudder and Ball Sense and Paddle Assembly

a. Operation of ball sense assembly:

Adjust the height of cam follower bearing, make it can reach the Rudder Cam, and high enough to reach the Cam. The cam follower bearing can be adjusted with inserting spacers. (See fig. 4)

b. Adjustment of Rudder Bracket Shaft (See fig. 4 & 5)

- The Rudder Bracket are mounted at the position near the center of both frames of Fasttrack, and with a 15mm deviation close to the left frame.
- Loosen the bolts to adjust.
- Remove the spring from the Belt Tighten and remove the belt from the Crank Pulley.

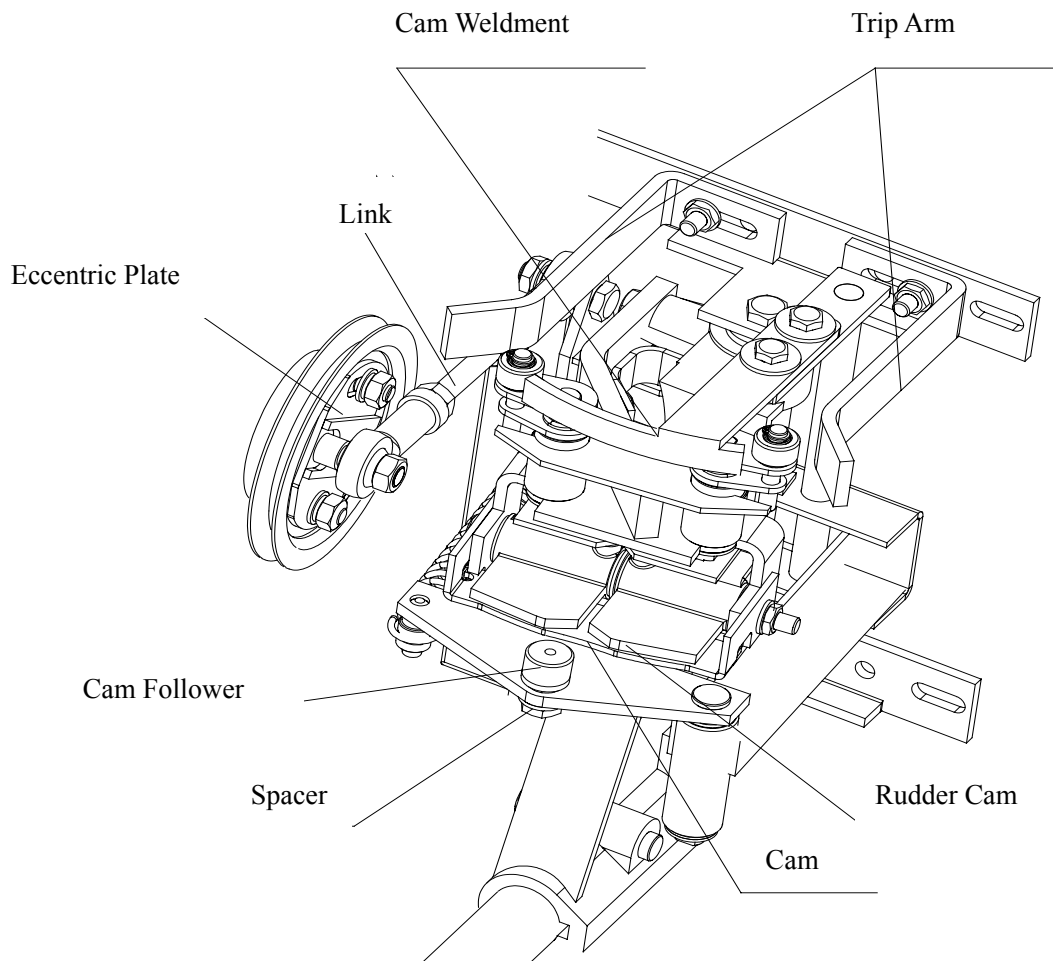


Fig. 4

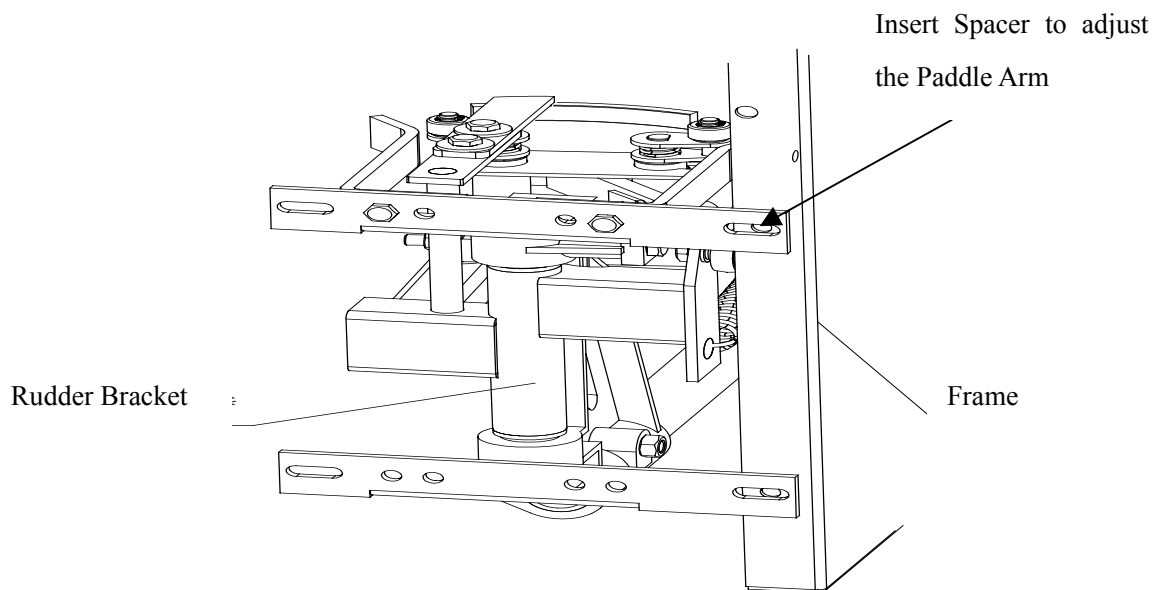


Fig. 5

c. Adjustment of Rudder and Ball Sense

1. Remove the two Trip Arms.
2. Remove the nuts from the eccentric axis. (See fig. 6)
3. Pull out and turn away the link from the eccentric axis.
4. Loose the Nuts of adjustment axis, and clockwise revolve the adjustment plate to the biggest degree, then fasten all nuts.

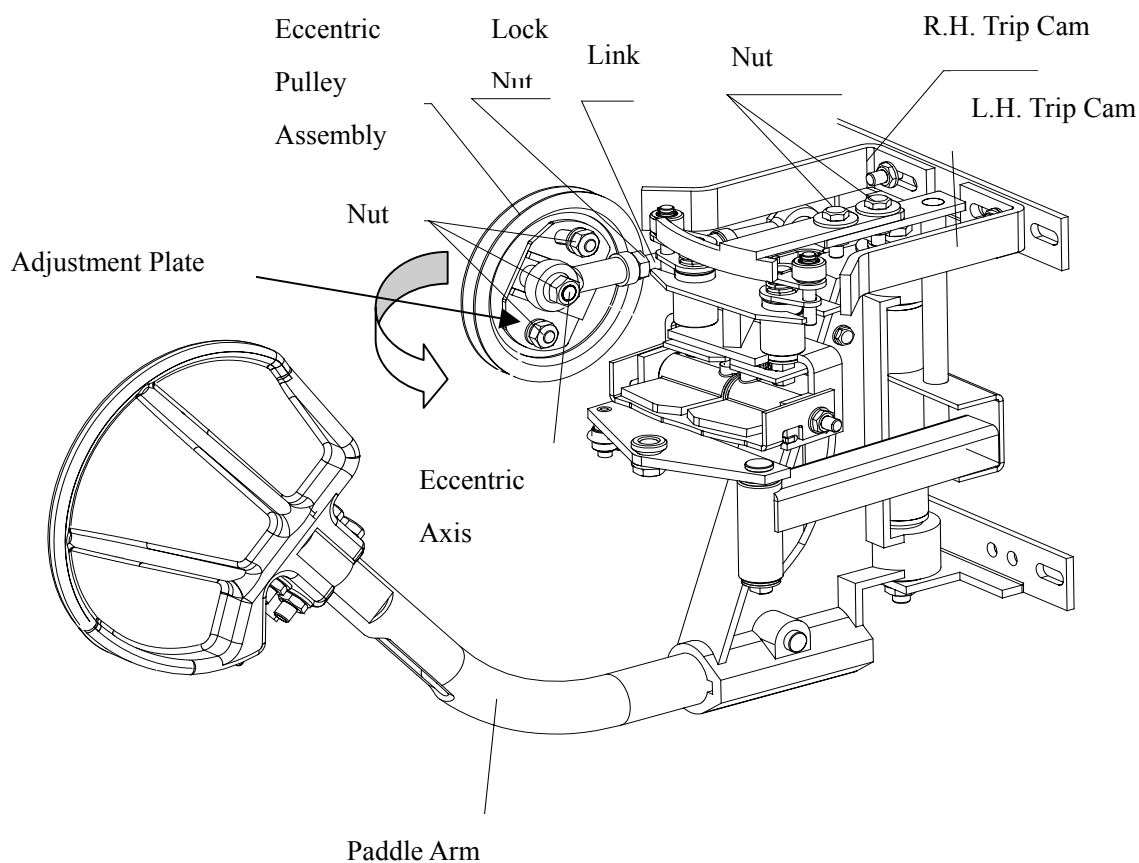


Fig.6

d. Adjustment of Paddle Arm Assembly

1. Run the Rudder, make sure the paddle Arm can touch the both frames of Fasttrack, the Paddle Arm should move smoothly.
2. If the rod does not move smoothly, insert some spacer between the Bracket and Frame to adjust the Paddle Arm. (See Fig. 5)

e. Adjustment of Rudder and Ball Sense by Regulating the Link

1. Fix one end of the link onto the eccentric axis (See fig. 6), and revolve the rudder driving pulley (eccentric belt pulley wheel) while observing the movement of the rod assembly (ball sense rod).
2. Adjust the length of the link to have the rod assembly (ball sense rod) swing on the basis of the central line symmetrically. Then fix the fastening nuts. (See fig. 6)
While adjusting the links, extend the left one to increase the distance and shorten the right one to decrease the distance. Since both ends of the rod are with right hand screw thread, one end should be removed to adjust the other.
3. Loosen the fastening nuts on the adjustment plate, and move the plate counterclockwise to make the rod assembly contact both sides of the bracket with balanced force instead of towing the cam weldment. Then fasten the nuts.
4. Recheck the machine by turning the crank pulley (eccentric pulley wheel). If the rod assembly (ball sense rod) only contact one side of the bracket, re-adjust according to the Step 2.

f. Adjustment of Cam Weldment

1. Turn the crank pulley to make the rod assembly (ball sense rod) be situated in the oscillation center of the bracket plate. (See fig. 6)
2. Push the cam weldment follower of the cam weldment forward as much as possible.
3. There should be a gap of 3mm between the cam weldment and the cam weldment on both sides.
4. If adjustment is necessary, loosen the bolts of the bent lever and relocate the lever.
5. Then fasten the bolts and re-check whether the gaps on both sides accord with the requirements.

g. Adjustment of Trip Arm (See fig. 6)

1. Revolve the crank pulley to turn the rod assembly (ball sense rod) to the margin of its running distance so that the pulley can slightly contact the left bracket. The contacting position should be fixed.
2. Fix the left trip arm (baffle plate) to have the surface of the elbow of the arm contact the cam weldment. Then fasten the bolts.
3. Adjust the right trip arm (baffle plate) by repeating Step 1 & 2.

h. Inspection of Trip Arm

- a) Revolve the crank pulley manually.
- b) When the ball sense swings back and forth, push the cam weldment towards the rear side of the machine.

- c) When the cam weldment follower hits the trip arm, have the follower restore its position which heads to the front of the machine.
- d) Push forward the cam weldment follower and check whether it restores to position towards the front side. If it does, the adjustment is successful. Check the other side of the follower with the same method.
- e) Fix the triangle belt onto the crank pulley and the spring onto the belt tightening pulley.
- f) Re-check the operation of the cam weldment follower by touching it with screwdriver or wooden batten. If the follower does not restore to its position correctly towards the front, readjust the trip arm.

IV. Installation of Ball Return System (See fig. 7)

1. Place the spirit level, in turn, on the top and at each side of the dolly. Regulate the adjustment bolts of the rollers, left, right, front or back, to keep the dolly in horizontal position.
2. Adjust the height of the dolly so that the center of its entrance hole is slightly lower than the one of its return hole. Due to the flatness of the ground and the installing deviation of ball lane, adjust accordingly so that the upper side of the fasttrack frame is 33-37mm away from the top of the dolly.
3. After adjusting the height, fasten all the nuts.
4. The horizontal space should be based on the requirement that the four pins on the rear side of the dolly can be inserted into the corresponding holes of the fasttrack frame.

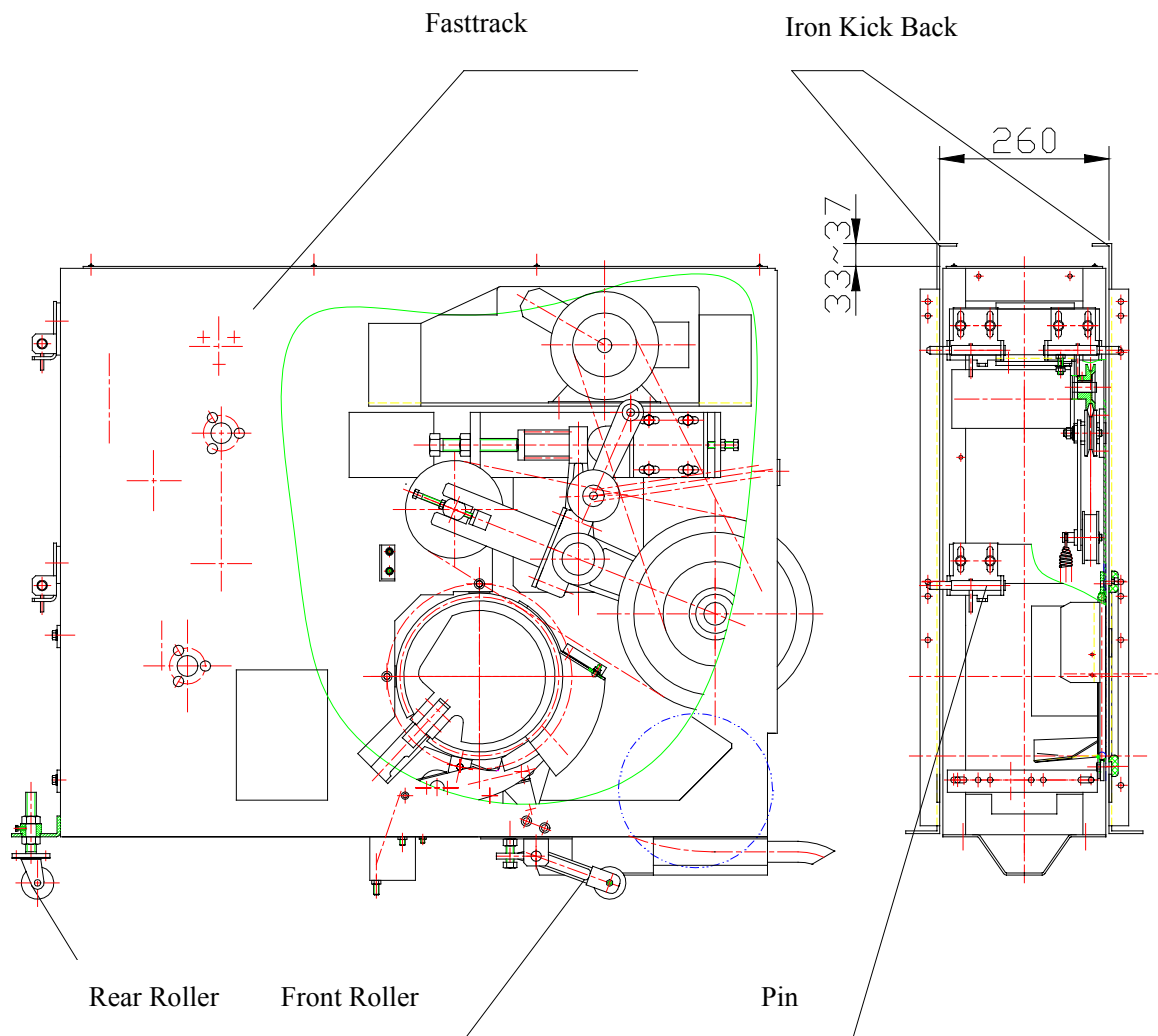


Fig. 7

V. Maintenance of Ball Return System

1. The ball return system needs maintenance after running for 500 hours.
2. Shut down the power supply and pull out the Fasttrack, clean up all omponents.

3. Check whether the components are worn out or damaged, replace them if necessary.
4. Check all of the fasteners, fastening the loosened bolts and nuts.
5. Inject grease in the grease cock and lubricate all the moving components with the engine oil, which should be innocuous and with effective lubricating property.
6. Replace the capacitor of the motor (60W) after running 3000 hours.

VI. Trouble shoot

Problems	Possible causes	Solutions
The ball return system does not run.	The power cord is not connected correctly; The small disjuncter is not closed. The connecting wire is not linked with the pin-depositing machine.	Connect the power cord correctly; Close the small disjuncter to the ON position; Connect all the wires well.
The ball does not enter the track.	The ball-holding baffle plate does not open. The amplitude of swing of the ball sense plate is not enough.	Adjust the ball-holding baffle plate. Adjust the ball sense system.