Minimum Control Requirements

1. Start the upper conveyor motor under push-button control.

2. Release one ring onto the upper conveyor.

3. When ring clears the plastic/metal sensors system, release another ring.

4. If ring is metal, operate Ring Release solenoid for 1st chute for

long enough to divert ring into chute 1.

5. If ring is plastic, operate Ring Release solenoid for 2nd chute for long enough to divert ring into chute 2.

6. Wait until there are at least three rings in each chute.

7. Release one metal and one plastic ring simultaneously.

8. When rings are detected in chute assembly areas, release a peg, and start the lower conveyor motor.

9. Divert completed assemblies (metal-plastic rings + peg) to Assembly Collection Area 1

.10. Release one metal ring.

11. When a metal ring is detected in chute assembly area 1, release a peg.

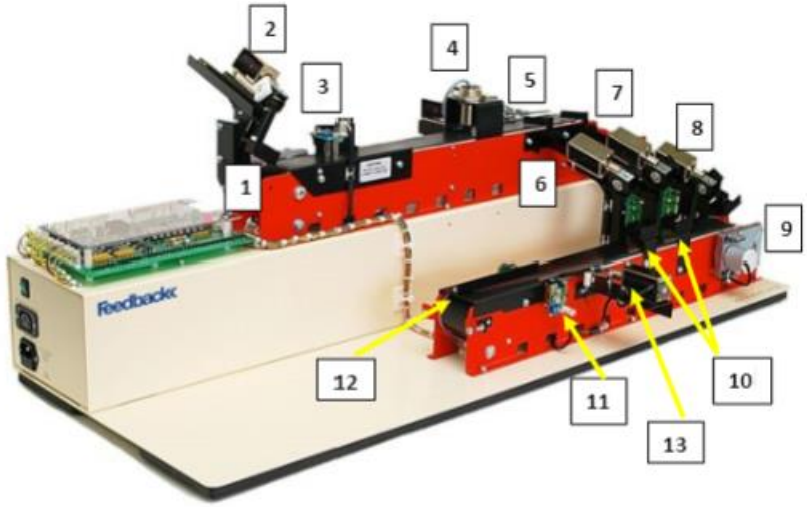
12. Divert completed assemblies (metal ring + peg) to Assembly Collection Area 2.

13. Release one plastic ring.

14. When a plastic ring is detected in chute assembly area 2, release a peg.

15. Divert completed assemblies (plastic ring + peg) to Assembly Collection Area 2.

16. Go to step 6



Workcell

Number	Description
1	Upper conveyor
2	Solenoid 1 (Ring dispenser)
3	Optical sensor
4	Inductive&optical sensor
5	Solenoid 2&3 (Ring release solenoids chute1&2)
6	Ring Release solenoid (assembly area 1)
7	Ring Release solenoid (assembly area 2)
8	Peg Release solenoid
9	Lower conveyor
10	Optical sensors (assembly areas)
11	Optical sensor (assembly collection areas)
12	Assembly Collection areas
13	Solenoid and lever