HOOSIER FEEDER™

Centrifugal Feeder Operation Guide

1. Product Level in Feeder

The quantity of product in the feeder is crucial for optimal system performance and achieving maximum output rate.

Overfilling: This can cause jams, halting product flow, or reducing the output rate.

Underfilling: This can prevent the feeder from reaching its maximum output rate.

Recommendation: Maintain a consistent product level in the feeder to support its required output rate.

2. Feeder Speed

Increasing the feeder speed does not automatically result in higher output rates.

Feeder performance is influenced by sensor timers, air jet selectors, and mechanical tooling, all of which should be calibrated according to the factory's recommended speed settings.

Risks of Excess Speed: This may lead to system jams, inadequate output rate, and misoriented parts passing downstream.

Recommendation: Adjust the feeder speed according to factory recommendations to avoid operational issues.

3. Air Controls

Air jet pressures must be aligned with sensor timers, mechanical tooling, and feeder speed.

Each air jet should be set according to the factory's recommended settings to ensure proper operation.

Consequences of Improper Settings: This can cause jams, reduce output rate, and allow misoriented parts to travel downstream.

Recommendation: Regularly verify and adjust air jet pressures to adhere to the factory specifications.

4. Maintenaince

Adherence to the routine preventative maintenance procedures outlined in this manual is essential for smooth operation and minimizing unplanned repairs and downtime.

Recommendation: Follow the maintenance schedule to ensure the long-term reliability and performance of your system.

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Chain Tension Inspection & Adjustment

1. Ensure Safe Maintenance

Before adjusting the chain tension, ensure the machine is in safe maintenance mode. This involves disconnecting the power and turning off the air supply to avoid any accidents.

2. Inspect Chain Tension

In safe maintenance mode, grasp the chain between the sprockets and move it back and forth. The chain should not move more than 1 inch in either direction. Excessive movement indicates incorrect tension, which could lead to premature wear on the sprockets and chains or prevent the feeder from reaching the correct motor speed.

For a single-drive feeder, if the chain movement exceeds 1 inch, loosen the idler to adjust the
motor alignment.

For a dual-drive feeder, if the chain movement exceeds 1 inch, shift each motor mounting plate to correct the alignment.

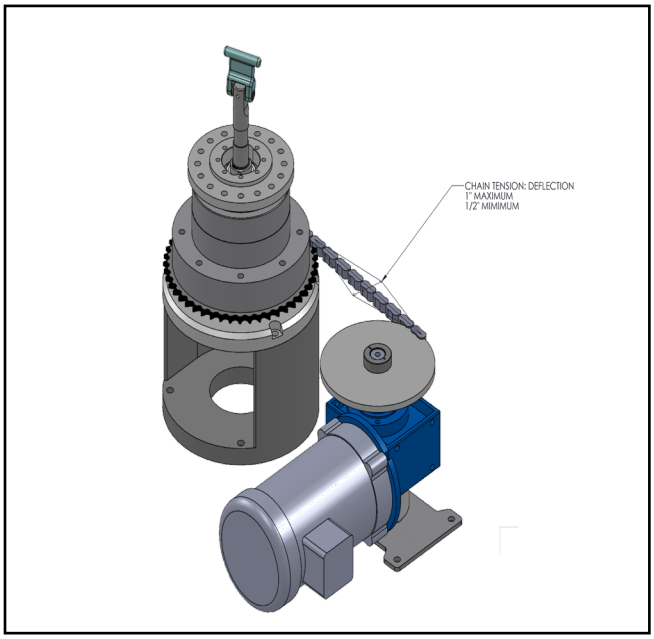
3. Make Adjustments

Re-tension the idler as needed.
After making adjustments, check that the sprockets are parallel within 1/32 inch. If not, realign the sprockets to ensure proper parallelism.

« Reminder »

By following these steps, you ensure that the chain tension is correctly adjusted, which helps in maintaining the optimal performance and longevity of the feeder system.

Diagram:



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Product Jamming

1. Check Number of Parts

Ensure the prefeeder delivers only the necessary number of parts to maintain efficient operation. Overloading the bowl can hinder the inside tooling's ability to singulate, orient, and perform other tasks. Excessive parts can lead to operational inefficiencies.

2. Verify Control Settings

Feeder bowls come with factory control settings tailored for specific product rates. Refer to the suggested settings provided by Hoosier Feeder Company in this manual. Note that these settings may need adjustment depending on the new installation location. If the bowl operates too quickly, the inside tooling may not function as intended.

Before modifying any factory settings, record the original values. If changes are made, please communicate them to Hoosier Feeder Company for documentation purposes.

3. Check Air Pressure Settings

Each feeder bowl is equipped with air pressure settings optimized for specific rates. The manual includes Hoosier Feeder Company's recommended settings from when the bowl was in their facility. These may need adjustment based on the new location. Incorrect air pressure can lead to ineffective part ejection, either failing to blow off bad parts or causing good parts to be ejected.

Note any changes made to air pressure settings and report them to Hoosier Feeder Company for record-keeping.

4. Evaluate the Changeover

Hoosier Feeder Company designs feeder bowls that are capable of handling multiple products through adjustable tooling or a changeover process. Improper adjustment or failure to change tooling when switching products can cause jamming. Ensure all adjustments are made appropriately when transitioning

5. Inspect the Product

Assess the product being fed into the bowl, especially if it varies in shape, size, or material. Ensure the product matches the bowl's control settings, air pressure settings, and tooling adjustments. New or freshly molded parts may differ in texture compared to those previously used, affecting how they interact with the bowl's tooling and running surface.

Record any differences in product texture and adjust settings accordingly to prevent jamming.

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Troubleshooting Guide

Feeder Stops or Runs Inefficiently

Possible Causes:
- Parts are dirty or damaged.
- Safety Door(s), guards, or covers are open.
- Max level on output conveyor reached.

Solutions:
- Inspect and clean or replace as needed.
- Check all safety doors, guards, and covers for proper alignment.
- Feeder may be designed to start and stop on demand from downstream operations.

Feeder/Bowl Won't Turn On

Possible Causes:
- Feeder is turned off and/or not connected to power.

Solution:
- Discharge/conveyor needs to be cleared.
- Motor speed needs adjustment.
- The motor may need to be replaced.

Bowl/Disc Rotate but Parts Jam

Possible Causes:
- Bowl or prefeeder speed are incorrect.
- Incorrect part is loaded.
- Tooling or air selectors need adjustment.

Solutions:
- Check factory recommended settings; correctly set bowl and prefeeder speeds.
- Check changeover instructions. Verify system is set up for specified parts to be run.

Bowl/Disc Won't Rotate

Possible Causes:
- Parts are jammed in the feeder.
- Air clutch is not engaged (scallop style feeder only).
- The clutch net is loose.

Solutions:
- Lock-out/tag-out; removed jammed part.
- Check main air supply; check solenoid valve operation.
- Inspect the clutch net for any signs of looseness or wear; tighten the clutch net to ensure proper engagement.

Jerking Rim, Bowl, or Disc

Possible Causes:
- Motor speed needs adjustment.
- Drive chain tension is too loose or too tight.

Solutions:
- Adjust motor speed as needed
- Inspect the drive chain and adjust the tension as needed.

Product Back Up

Possible Causes:
- The max level sensor is not operating properly.

Solution:
- Check sensor for proper operation; clean sensor fibers with a soft dry cloth.

For more information please contact Hoosier Feeder at (765) 445 - 3333 or visit us at www.hoosierfeeder.com.

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Troubleshooting Guide

Product Travels Around Feeder With No Output

Possible Causes:
- The inhibit gate or back pressure relief solenoid is not operating properly.
- Foreign debris is stuck in the tooling disturbing part flow through the system.

Solutions:
- Verify inhibit cylinder operations; check air pressure setting for cylinder or solenoid.
- Watch the feeder in operation and observe the part flow. Lock-out/tag-out; remove debris as necessary.

Cannot Reach Motor Speed

Possible Causes:
- Motor speed needs adjustment.
- Drive chain tension is too loose or too tight.

Solutions:
- Adjust motor speed as needed
- Inspect the drive chain and adjust the tension as needed.

Surface of Parts are Scuffed/Scratched

Possible Causes:
- Foreign debris is in the feeder.
- Parts scratched before introduction to the feeder.

Solutions:
- Lock-out/tag-out: Clean feeder bowl and center disc to remove any particulate or dust.
- Check upstream equipment for proper operation; check product supply.

Low Rate or Incorrect Part Exit

Possible Causes
- The feeder is "starved" for parts; not enough parts in the feeder.
- The feeder overloaded; too many parts in the feeder.
- The bowl or prefeeder speed is incorrect.
- Air supply is off or not set correctly.
- Tooling or air selectors need adjustment.
- Incorrect part is loaded.
- Foreign debris is stuck in the tooling, disturbing part flow through the system.

Solutions:
- Check the prefeeder speed. Check bowl level sensor location and operation; clean the sensor.
- Check the bowl speed; reset to original speed specifications.
- Check the air pressure settings on the regulators . Make sure all of the air selectors are blowing air and clear of debris.
- Check the changeover instructions. Verify system is set up for the part to be run.
- Make sure the prefeeder is set at the correct rate and there are sufficient parts in the prefeeder hopper. Check bowl level sensor location and operation. Clean the sensor.
- Watch the feeder in operation and observe the part flow. Lock-out/tag-out; remove debris as necessary.

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