New Gravity Hinge – Patent Pending

- Existing gravity hook requires frequent adjustment and is unreliable
- New gravity hinge:
  - Replaces gravity hook
  - Prevents arm from drifting out
  - Does not require adjustment
  - Robust enough to take force of cylinders if activated
  - Comprised of two components - simple to install
    - Hinge Assembly
    - Pocket Assembly
Old Gravity Hook Description

- The hook is designed to engage into a pin as the Curotto Can is rolled into the truck hopper.
- Once engaged, the hook prevents the arm from creeping out as gravity forces the lift cylinder to open.
- Without the hook, the arm will creep out and contact the inside, curbside of the FL body hopper.

Gravity Hook Engaged in Pin

Gravity Hook Pin & Bracket

Slotted holes on bracket allow for minor adjustment.
Old Gravity Hook Issues

• Reliability – the hook can pop off the pin when travelling down the road.
• High maintenance – in order to function properly, regular adjustment to the bracket is required. Most customers don’t do this and, as a result, the hook fails to engage.
• Damage to the Curotto Can components occur when the gravity hook fails.
New Gravity Hinge Description

- The new concept is made up of two components
  - Hinge
  - Pocket

- Hinge. The hinge mounts (bolted or mounted some other way) to the container, has a pin that allows the hinge to swing as the container is raised into the FL hopper. The hinge also has a stop that sets the position of the hinge at the optimum angle to enter the pocket.

- Pocket. The pocket mounts (welded or fastened in some other way) on the arm of the Curotto Can and is designed to receive the hinge at a determined angle.
Hinge Assembly

- Hinge assembly replaces gravity hook bracket
- Remove old bracket and replace with new
Pocket Assembly

- Second component – pocket assembly is welded to the corner of the dump arm AC02-S08
- The pocket receives the hinge when the Curotto Can moves approx 20 degrees from horizontal
- Secures the arm during the dump cycle, during travel and when stowed in FL Hopper
Gravity Hinge Installed

- Arm direction
- Hinge shown engaged in pocket
- Gravity Hinge & Bracket – transparent pocket
- Hinge stop
- Hinge pivot

The Curotto Can ©
Hinge in Resting Position

- These images demonstrate the position of the hinge in the working position – the Curotto Can down and level with the ground
- Notice that the hinge is not engaged allowing the Curotto Can arm to operate freely
Gravity Hinge Installation Instruction - Background

• This instruction will cover the procedure to:
  – Install Curotto Can’s new Gravity Hinge
  – Reroute grip cylinder hoses
• Curotto Can has developed a new latching system that will replace the existing “Gravity Hook” on its Curotto Can product
• The new latching system is called a “Gravity Hinge”
• This document will demonstrate the differences between the old “Gravity Hook” and the new and improved “Gravity Hinge”
• This is a critical component to the Curotto Can. It prevents the arm from moving when the Curotto Can is in the stowed position
• Rerouting the grip cylinder hoses will provide improved performance by routing hoses behind the existing bracket and shortening the bracket
Gravity Hinge Kit P# GHKT-01

1. (1) GH-001, Hinge
2. (1) GH-002, Bracket, Can Side
3. (1) GH-003, Pocket
4. (1) GH-004, Plate, Stiffener
5. (1) CF-13478 Bolt
6. (1) CF-37045, Nylock nut
7. (3) CF-33096, Washer
8. (1) AC02-023, Spacer
9. TC-12.7, Hose clamp
10. (2) CF-15209, Bolt
11. (4) CF-33817, Washer
12. (2) CF-38064, Lock nut
Preparation

- Some steps in these instructions will require the can to be operated to position the arm in the most convenient location to conduct the work.
- To do this, detach Curotto Can from the host truck.
- If possible, position the truck on the opposite side of the grippers so that the harness and quick couplers can be hooked up to the Curotto Can.
Step 1 – Remove Old Gravity Hook

• Remove the existing gravity hook and bracket components from the can and the arm
• Install the GH-002 bracket and bolt it in place (if GH-002 is not painted, please paint before installation)
Step 2 – Cut Off Unneeded Parts

- Cut AC02-135 stop flush to arm assembly
- Cut the gravity hook pin AC02-129 flush to the gravity hook bracket AC02-152
- Cut end of AC02-152 bracket
- Grind and paint
Step 3 – Grip Hose Reroute

Grip cylinder hose rerouting

• Remove grip function hose from AC02-152 bracket
• Cut the end of AC02-152 bracket just under the rubber pad
• On the back (can side), weld the provided hose clamp TC-12.7 weld plate in the position shown
• Let cool, paint and reinstall hoses
Step 4 Install Pocket GH-003

1. Locate the first bend from the bottom of the arm AC02-S08. This is the location where the pocket GH-003 butts against the arm. Butt the pocket to the highest vertical point before the bend.

2. Place the pocket GH-003 hose access hole up and clamp or hold in place as shown below.

3. Align horizontally with GH-002

4. Tack weld pocket to arm – make final alignment
Step 5 – Weld GH-003 Pocket to Arm

1. Weld pocket to arm leaving 3/8” on top and bottom

2. Join top and bottom welds on back side (do not weld the inside hose side)

3. Weld top and bottom here continuously

4. Let cool and paint
Step 6 – Install Stiffener Plate GH004

• Fit stiffener plate GH-004 to bracket and bolt in place using:
  1. (2) CF-15209, Bolt
  2. (4) CF-33817, Washer
  3. (2) CF-38064, Lock nut
     – Note: Stiffener plate is welded to the slide track only – do not weld GH-002 and GH-004 together – see weld instruction following
     – Note: Paint back of stiffener plate before installation
Step 7 Weld GH-004 Weld Instruction

1. Weld stiffener plate GH-004 to slide track AC02-A012 only as shown
2. Weld stiffener plate to slide track gusset
3. Let cool and paint
Step 8 Hinge GH-001 Installation & Adjustment

• Hinge GH-001 is adjustable to allow for some wear in arm pin components
• Fully retract arm – it is important the slide cylinder is bottomed out – watch the rod end to confirm that slide cylinder in completely retracted
• Position hinge GH-001, using the spacer and washer provided, allowing ¼” space between the hinge and the pocket