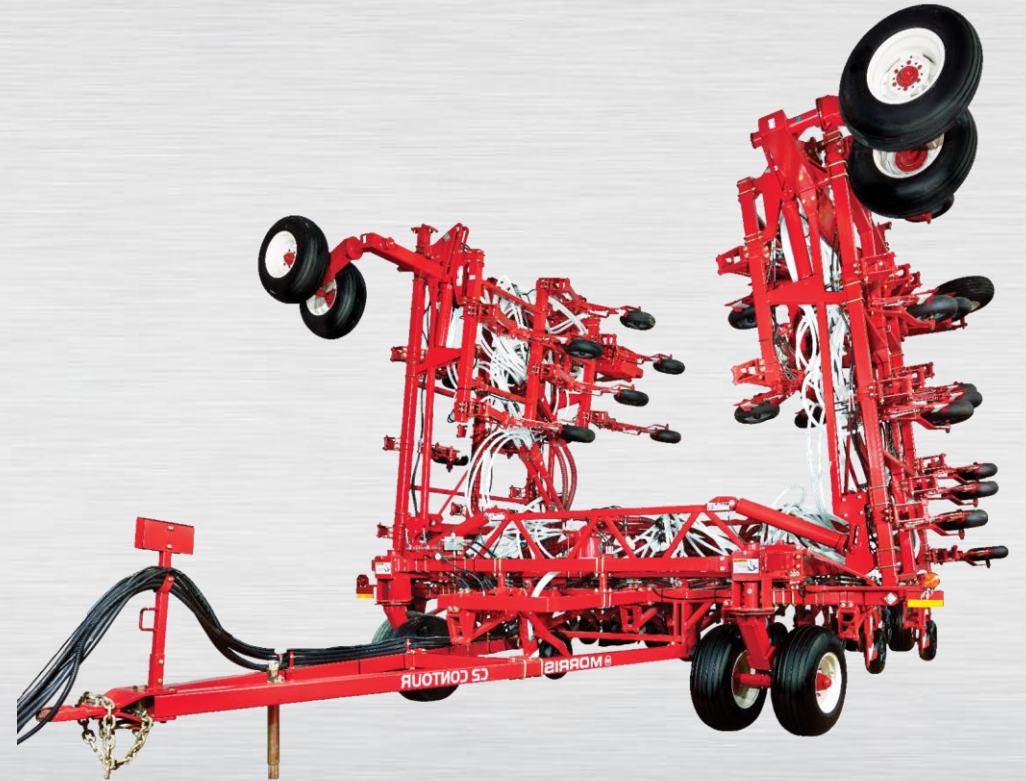


**M MORRIS**  
**C2 CONTOUR**



# C2 DRILL TRAINING

## Module 4: Opener Cylinder Troubleshooting

# OBJECTIVE

If you have a problem with opener pressure falling when travelling down the field and have to continue charging them with tractor hydraulics, or openers won't stay up when in transport even after being bleed properly, then you may have a opener cylinder with an internal leak. There are a few different ways to determine which cylinder is leaking.



# THE SOUND METHOD

1. Run the tractor hydraulics in the **lift** position.
2. Listen closely to the cylinders to try and hear any oil bypassing within it. Use a **stethoscope** if you have access to one.
3. This may only be possible if the cylinder has a really bad leak.



# TEMPERATURE METHOD

1. Run the tractor hydraulics in **lift** position.
2. Crack the bleed-off valve to allow oil to circulate, but not allow openers to drop.
3. The leaky cylinder will be warmer than the rest because oil will be passing through it. Use a **temperature gun** if you have access to one for accurate readings.





# OPEN CIRCUIT METHOD

1. Bleed off the hydraulic pressure from the accumulator.
2. Lift and lock the openers up.
3. Turn off the tractor oil supply system.



# OPEN CIRCUIT METHOD

4. Open the hydraulic line at the T on the cylinder end of the hydraulic ram.
5. Cap the T to prevent the oil from shooting out if openers lower by mistake.





# OPEN CIRCUIT METHOD

6. Hold the open line into a drain bucket.
7. Activate the hydraulics to the lift position.
8. If oil continues to flow out of the open cylinder line, then the ram is defective.



