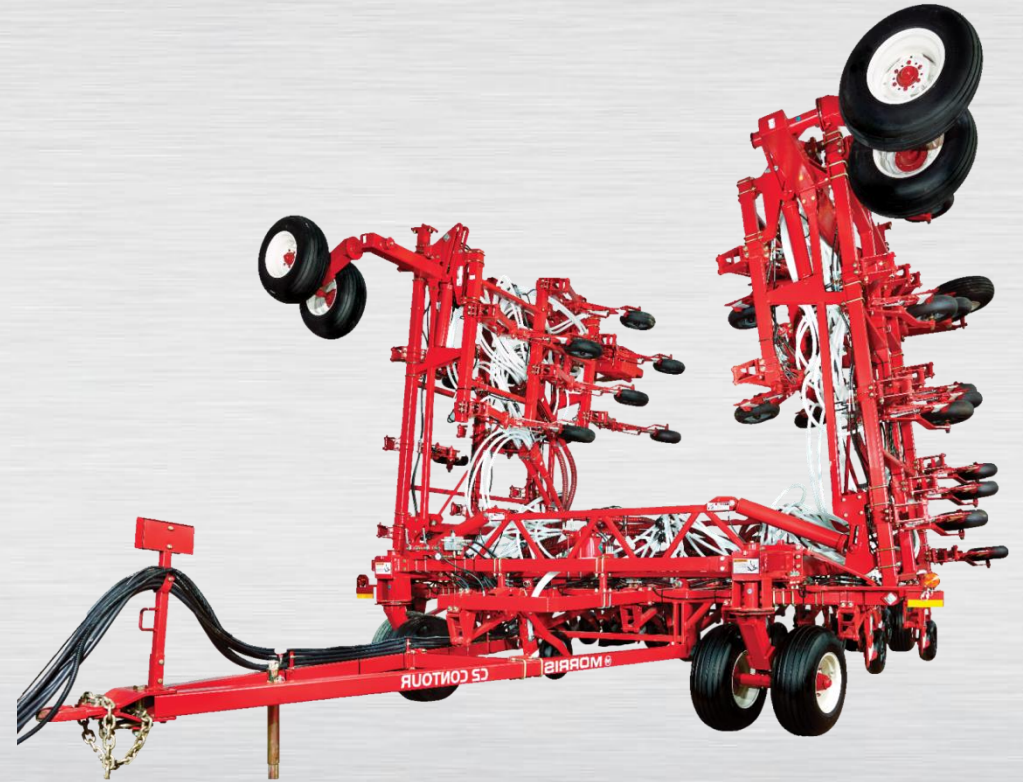


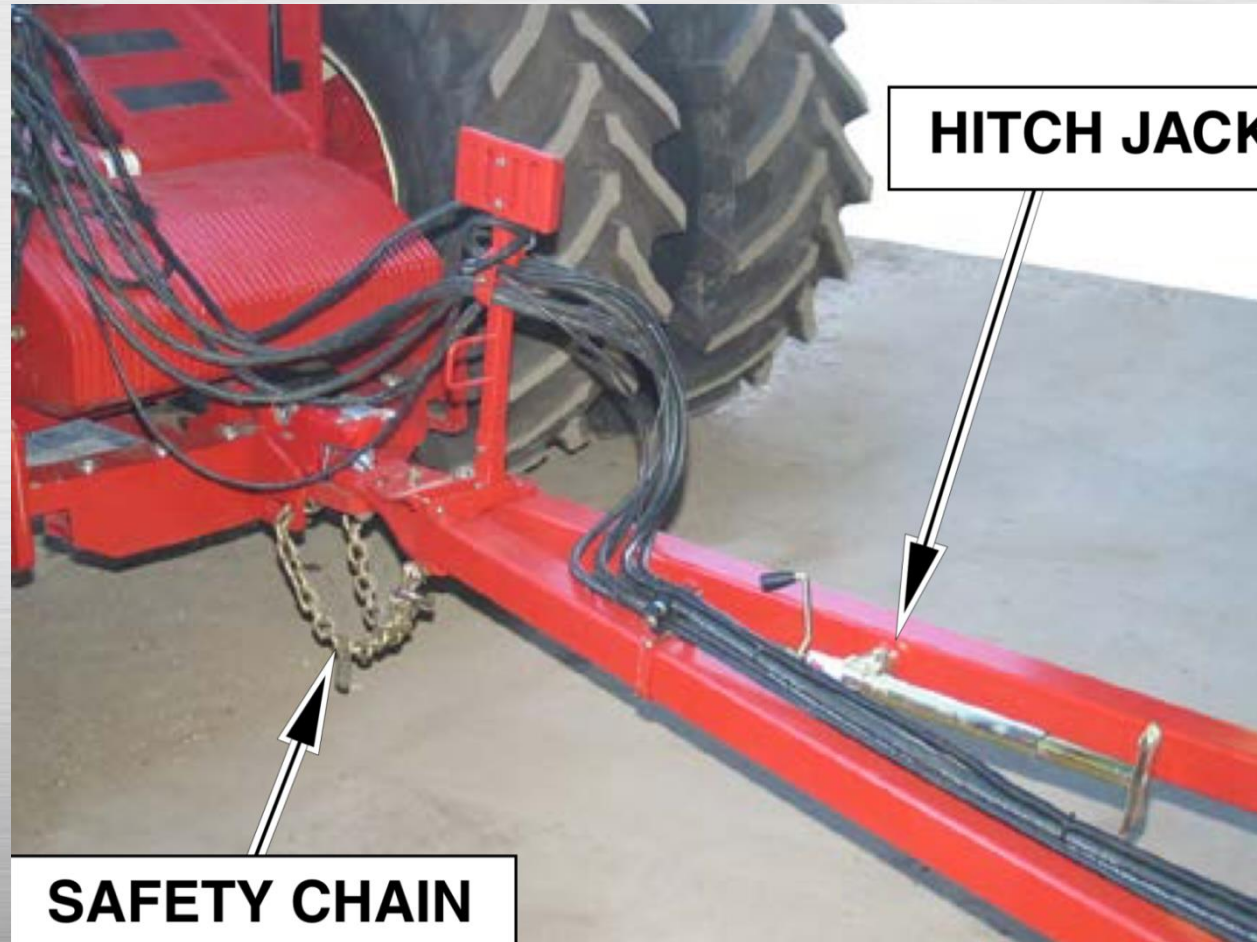
MORRIS **C2 CONTOUR**



C2 DRILL TRAINING

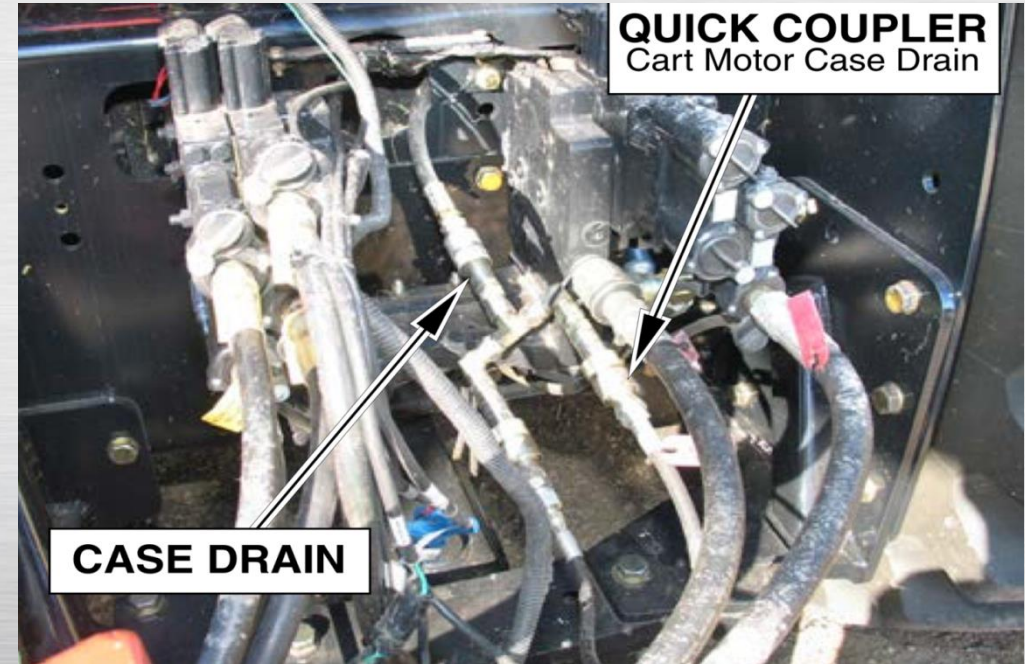
Module 9: 2016 Service & Maintenance Tips

HITCHING TO THE TRACTOR



HITCHING TO THE TRACTOR

- What is the first hose you hook up and why?



HITCHING TO THE TRACTOR

- New Case Drain block now found on the front of the tow-between carts and also on the front of a C2 with a tow-behind cart.



HITCHING TO THE TRACTOR

C2



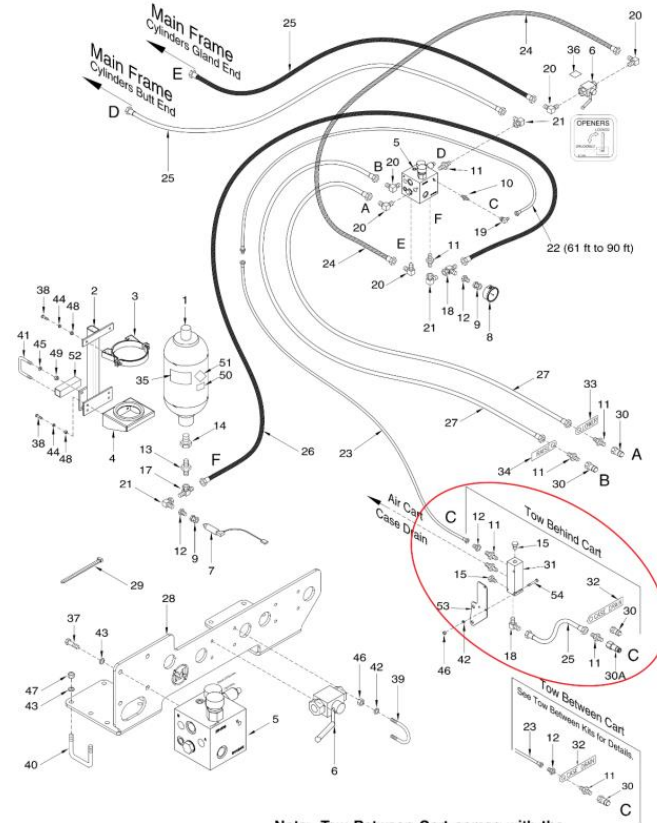
ASSEMBLY BULLETIN

No 259
Date September 28, 2015
Machine C2 Contour
Air Drill

Reference: Case Drain

Morris has introduced a new Case Drain Block for 2016 production year. The Case Drain Block combines all of the Air Cart's and Air Drill case drains into one single line to the tractor as illustrated below. (See page 2 for parts list)

Note: The length of the case drain hose item 23 changes between Tow Behind and Tow Between Carts.



Note: Tow Between Cart comes with the Case Drain Header installed.


Page 1 of 2

Morris Industries Ltd. 85 York Road, Yorkton, SK S3N 3Z4 Tel: 306-783-8585 www.morris-industries.com



TECH 355 - ACCUMULATORS

1. The accumulator used on the Contour Air Drills is generally trouble free. It should be checked periodically for the proper precharge pressure. The precharge pressure is different between the Contour Air Drill and the Contour 2 Air Drill.


Technical Support Bulletin

No.	355
Date	September 18, 2012
Machine	Contour Air Drills C1 and C2

SUPPORT

Reference: Opener Operating Pressure

There is distinct difference between the C1 and C2 Contour Openers in regards to required operating pressure. The C2 Opener develops approximately 33% more shank trip force than the C1 Opener at any given display pressure. Due to this operating pressure difference, the C2 accumulator only requires 350 psi nitrogen pre-charge versus the C1 accumulator pre-charge of 500 psi.

Below are the charts for determining operating range and shank trip out force. Note the difference in operating pressure between the two openers to achieve the same trip out force.

Note: Minimum Display Pressure must be 100 psi higher than nitrogen pressure to provide enough oil reserve for openers to follow the land contours.

C1 Contour

Shank trip force (lbs) is calculated by dividing the display pressure by 2
(ex. 800 psi display pressure = 400 lbs shank trip force).


Packing force is proportional to shank trip out force and is roughly 1/3 of the shank trip force (ex. 500 lbs shank trip force would give approximately 167 lbs of packing force).

C1 Accumulator Operating Range		
Nitrogen Pre-charge Pressure	Display Pressure	
	Minimum	Maximum
500 psi (3445 kPa)	600 psi (4137 kPa)	1200 psi (8274 kPa)

* Maximum system hydraulic pressure is 1200 psi or 4 times the pre-charge pressure, whichever is the lower number.

TECH 355 - ACCUMULATORS

2. If there is no or little pre-charge pressure in the accumulator the system the following symptoms may occur.



SUPPO

Technical Support Bulletin

No. 355

Date September 18, 2012

Machine Contour Air Drills
C1 and C2

Reference: Opener Operating Pressure

C2 Contour

Shank trip force (lbs) is calculated by dividing the display pressure by 1.5
(ex. 600 psi display pressure = 400 lbs shank trip force).

Packing force is proportional to shank trip out force and is roughly 1/3 of the shank trip force (ex. 500 lbs shank trip force would give approximately 167 lbs of packing force).

C2 Accumulator Operating Range		
Nitrogen Pre-charge Pressure	Display Pressure	
	Minimum	Maximum
350 psi (2413 kPa)	450 psi (3102 kPa)	1200 psi (8274 kPa)

* Maximum system hydraulic pressure is 1200 psi or 4 times the pre-charge pressure, whichever is the lower number.

Note: The shank trip out pressure needs to be determined by the Operator for each field. Shank trip out pressure is generally set at the minimum pressure that keeps the shanks solid in the vertical position and prevents them from repeatedly "tripping out", while still providing adequate packing.

Morris Industries Ltd. 85 York Road, Yorkton, SK S3N 3P2 Tel: 306-783-8585 www.morris-industries.com

WORK SWITCH ADJUSTMENT

Work Switch

(Optional equipment)

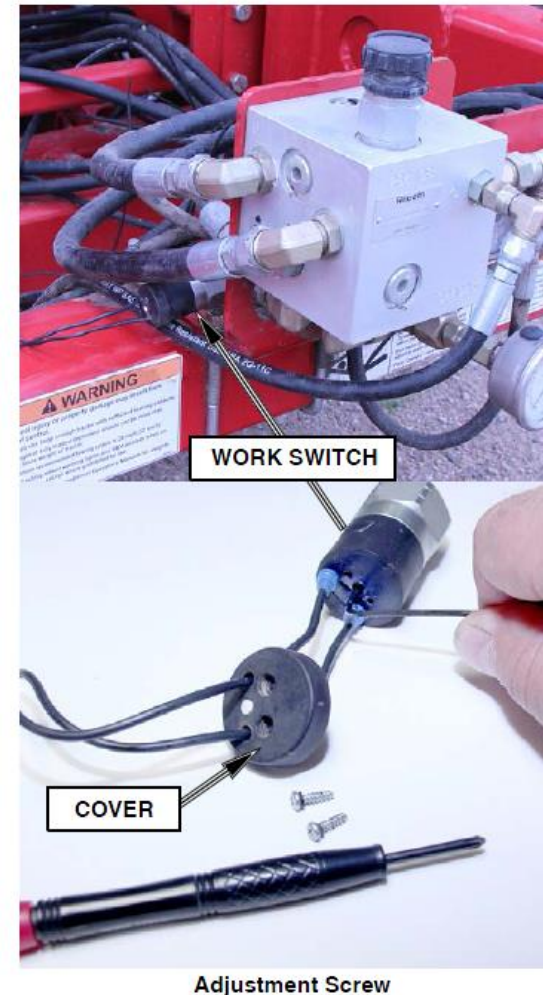
The pressure work switch activates the Air Cart Metering system by the hydraulic pressure on the opener lift side. When the openers are raised the switch opens at a pre-set pressure turning off the Air Cart metering and when lowered the switch closes at the pre-set pressure to turn on the metering.

The pre-set Factory set point meets most operators' preference. If the turn ON and OFF time needs to be adjusted follow the procedure below:

- Remove cover from back of switch.
- Insert a 3/32" allen wrench into the adjustment screw opening. Turn the screw clockwise to increase the set point or counter clockwise to decrease.
 - Increasing set point will cause the metering system to **turn ON quicker**. This will also cause the metering system to turn OFF later.
 - Decreasing set point will cause the metering system to **turn ON later**. This will also cause the metering system to turn OFF quicker.

Important

Ensure metering clutch is turned OFF when moving unit to prevent damage to metering wheels in the event pressure switch is in ON position.



TOWING IMPLEMENTS

- When towing always ensure that the truck/tractor is appropriate for the size of unit your pulling.
- - Use an agricultural tractor that is large enough with sufficient braking capacity so that the weight of the equipment towed does not exceed 1.5 times the weight of the tractor.
- • **Lock the front castor tires with safety pin on the drill when transporting these units for stability and safety. The added weight and stress can pull you into the ditch or cause damage to the front castors if not pinned for transport.**
- • Be aware of height, length and width of the implements. Make turns carefully and be aware of obstacles and overhead electrical lines.
- • Empty tanks before transporting. Do Not Exceed 20 M.P.H. (32 kph) with an empty air cart.
- • Use flashing amber warning lights, turn signals and SMV emblems when on public roads.
- • Do not transport in poor visibility.
- • The slow moving vehicle (SMV) emblem and reflectors must be secured and be visible on the machine for transport.
- • Avoid soft surfaces and shoulders of roads. The additional wing weight on the center wheels could cause the machine to sink.
- • Ensure safety chain is attached correctly to the towing vehicle and the hitch of the seed cart.
- • Check that wings are firmly seated in transport wing stops and locks installed if equipped.
- • Secure transport locks on depth control cylinders if equipped.
- • Be familiar with and adhere to local laws.



BLEEDING OPENER HYDRAULIC CYLINDERS



- What are the signs that the opener cylinders need to be bled?
- When an opener cylinder is replaced, is the bleeding process necessary?
- What is the bleeding process on the independent opener system?



BLEEDING OPENER HYDRAULIC CYLINDERS



Process

- Operate continuous hydraulic flow in the up direction
- Open the bleed valve (one wing at a time) up just enough so the openers don't fall. Do this for 15 minutes on each wing.
- Close the bleed valve.
- Do the same process now with continuous hydraulic flow in the down direction.



TECH 383 – CASTOR FORK GREASE PERIOD

- Morris has reduced the grease period for the castor forks to 50 hours or weekly on the C1 & C2 Contour Air Drill and RAZR Disc Drill units.
- Dealers should inform their customers to grease the castor forks at the beginning of each season and at 50 hour intervals during the season and then at end of season before storing.
- The 50 Hour grease decal can be ordered from Morris' Parts Department under part number C25809.



TIE RODS & TORQUEING

Wing Tie-Rods



Mainframe Tie-Rods



TIE RODS & TORQUEING

- What are the 1" tie rods torqued to?
- What are the 1 ¼" tie rods torqued to?
- How should the tie rods be checked?
- When should they be re-torqued?

WORN, LOOSE OR OVER-TIGHT PARALLEL LINKAGE



WORN, LOOSE OR OVER-TIGHT PARALLEL LINKAGE

- There are 4 hinge bolts in the parallel link age assembly.
- When one or more independent opener assemblies will not drop to the ground what needs to be done?
- How should worn or loose independent opener assemblies be adjusted?

WORN, LOOSE OR OVER-TIGHT PARALLEL LINKAGE

- It is crucial Independent opener assemblies are mounted square to the frame of the C2



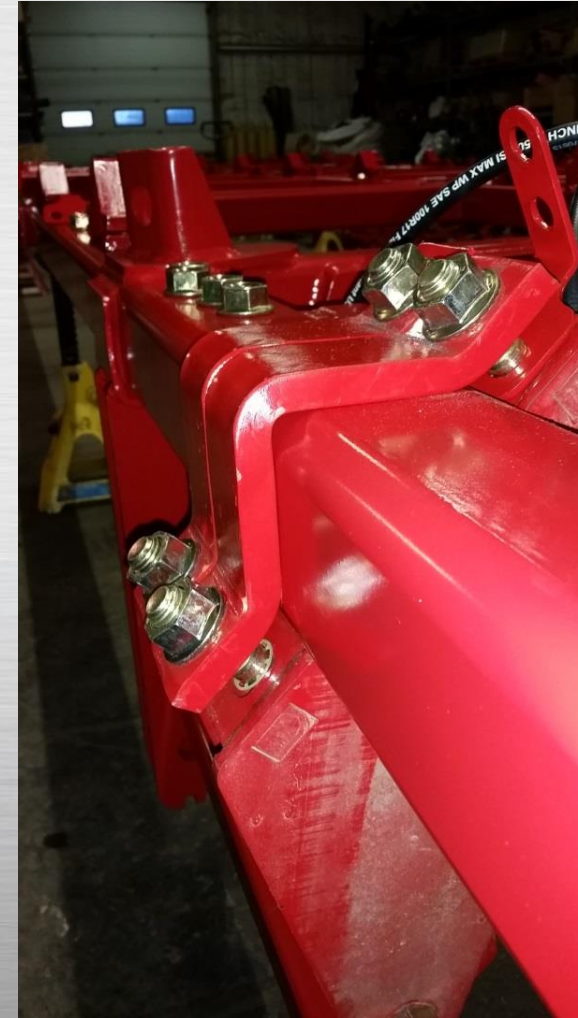
WORN, LOOSE OR OVER-TIGHT PARALLEL LINKAGE

- How much gap is allowable when mounting an opener assembly to the frame?



WORN, LOOSE OR OVER-TIGHT PARALLEL LINKAGE

- There should be no gap at all and assemblies should be mounted square to the frame as shown.



TECH 406 – IP OPENER MAINTENANCE



Reference: IP Opener Maintenance

It has come to Morris' attention that some customers of the IP openers are not aware of the S56459 Wear Guard. Contact your C2 customers that are using the IP Openers to make them aware that the Wear Guards need to be checked regularly and replaced before the IP Boot is damaged.



TECH 406 – IP OPENER MAINTENANCE



- At what point are the wear guards replaced?
- Is it necessary to remove the hoses from the IP Boot when replacing the wear guard?
- When installing the hoses into the IP boot how far is the hose inserted?

AIR PACKS



AIR PACKS



HOSE HOLDERS

- Is this hose holder tightened correctly?



WASHING

- It is highly recommended that drills and carts are washed inside and out after the seeding season. Residue shown below.



