



LEXION Pre-harvest Clinic



Feederhouse conveyor

Chain conveyor

- Standard on all 700 series & 8000 – 7000 series
- Four chain, three slat configuration
- Manual chain tensioner (8000 – 7000 series)
- Hydraulic chain tensioner (700 series)



Belt conveyor

- Optional on 8000 – 7000 series (only)
- Four belt, three slat configuration
- Manual tensioner (same as chain conveyor)
- **Longer operating life than chains, up to 2x**
- **Quieter operation = more comfortable operator**



Feederhouse speed

High speed (80 – 100%)

- Best feeding in tough stem and straw crops (rice, green-stem soybeans)
- Best for aftermarket (MD) draper heads
- May be too aggressive on dryer crop

Mid-speed (50 – 80%)

- Good speed for most corn & soybeans
- Easy to moderate to thresh crops

Low speed (< 50%)

- Most gentle speed range
- Easy to thresh (corn, pulse crops)



- Feederhouse speed also controls header speeds.
- **Most adjustments will affect header performance more than combine performance.**
- 700 series feederhouse speed range: **290 – 430 rpm**
 - Displayed on CEBIS as top shaft speed
- 8000 – 7000 series feederhouse speed range: **510 – 740 rpm**
 - Displayed on CEBIS as header back shaft speed

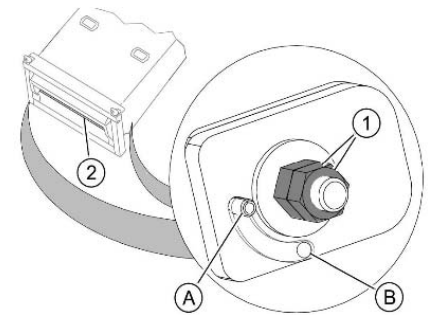
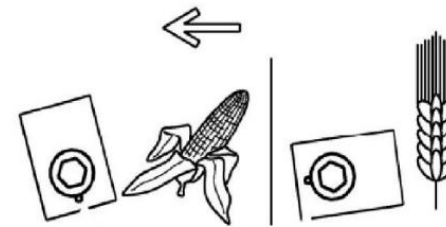
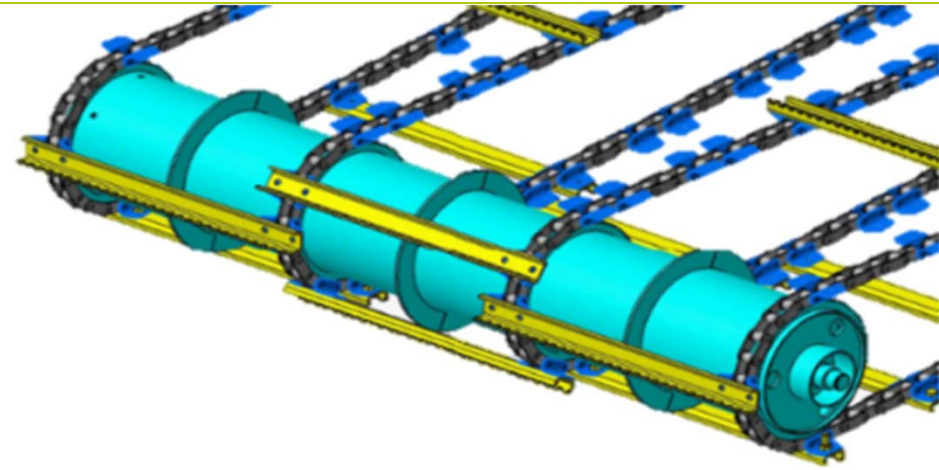
Feederhouse drum

Drum Up: wider intake of crop

- More efficient feeding in corn & sunflowers
- Less aggressive on any crop (seed beans)
- May cause feeding in issues in low volume small grains

Drum Down: narrow intake of crop

- Better feeding in small grains
- May increase shelling action at feederhouse opening
- Recommended when harvesting soybeans in rocky fields



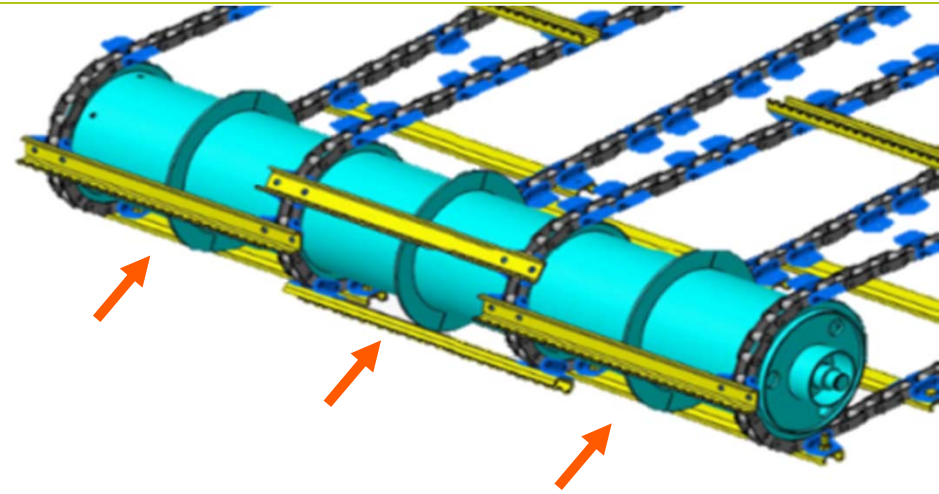
Feederhouse

Feederhouse support rings (chain conveyor only)

- Improves slat durability
- (6) half rings per drum
- Part number: **518 959.0** each half-ring
- Order six pieces when ordering

Installation:

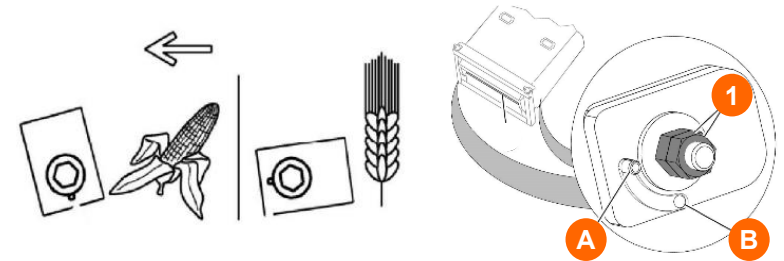
- Weld onto the skin of the drum
- **Remove the drum from the combine before welding on the support rings**



Feederhouse conveyor chain tension (8000 – 7000)

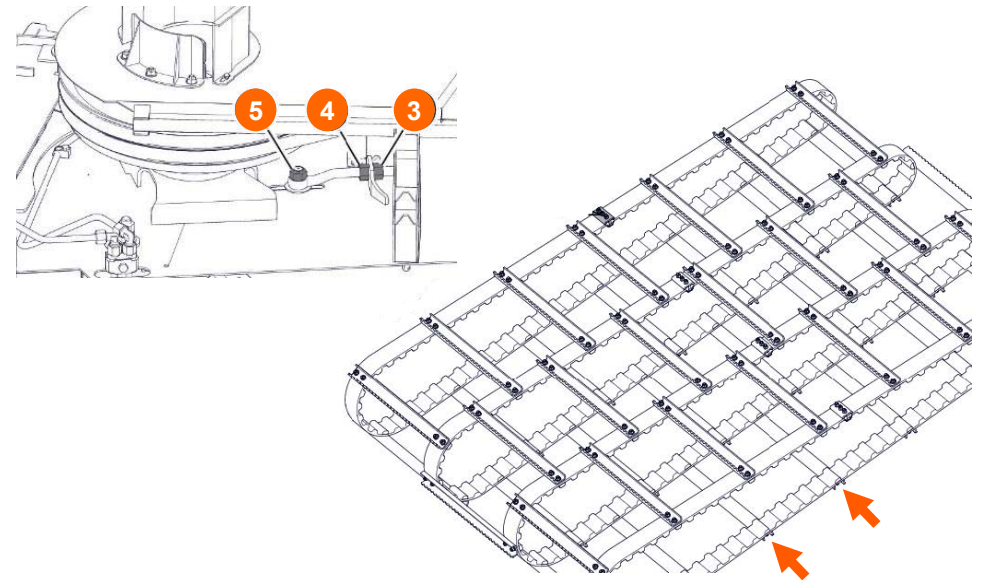
Feederhouse conveyor tension

- Position feederhouse parallel to the ground
- Loosen nuts (1) and place the drum in its low position (A)
- Optimal tension = slat #3 and #4 (from the front) barely touching the floor



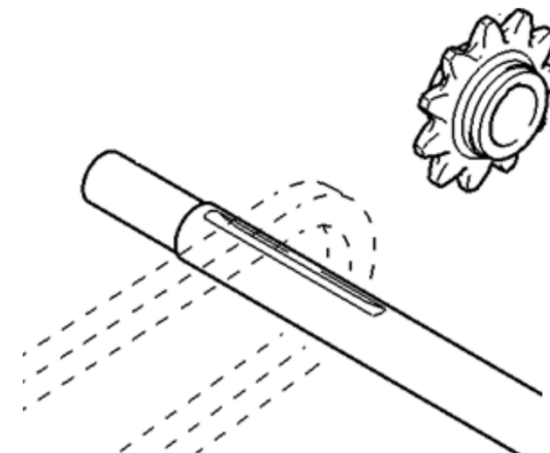
To tension:

1. Loosen nuts (3) and (5) on both sides
 2. Rotate nut (4) clockwise on both sides to evenly tension the conveyor
- 700 series maintains continuous tension hydraulically



Realign jumped feederhouse conveyor chain or belt

1. Removes the APS door below the cab
2. Remove the cover over the feederhouse top shaft
3. Back off chain / belt tension
- 4a. **Conveyor chain:** Place a deep-well socket between two teeth of the top drive sprocket and rotate the feederhouse drive backwards to pull chain back into time... repeat as needed until the slats are parallel with the floor
- 4b. **Conveyor belt:** Place (2) large deep-well sockets between two consecutive drive wheel spokes and rotate the feederhouse drive backwards to pull belt back in time... repeat as needed until the slats are parallel with the floor
5. Once the conveyor is back in time and the slats are parallel with the floor, engage the feederhouse reverser and listen for a popping or binding sound. If so, loosen all of the slats until they rattle on the chain or belt and re-tighten. The popping / binding sound is due to the conveyor being in a bind caused by it drifting towards the chain or belt that jumped out of time.



HP Feederhouse

Too far forward

- Aggressive cut angle alert
- Knife may cut closer to the ground, as well as rake up debris
- Increased risk of damaging knives or dirt intake

Too far backward

- Less likely to pick up rocks
- Retain slightly more crop
- May not get under lodged crop well enough
- May not cut close enough to the ground

For best results:

- When in doubt, start at 0-degrees
- Corn heads: 1-3 degree forward
- Flex heads 0-2 degree back



Side draper speed

Too fast

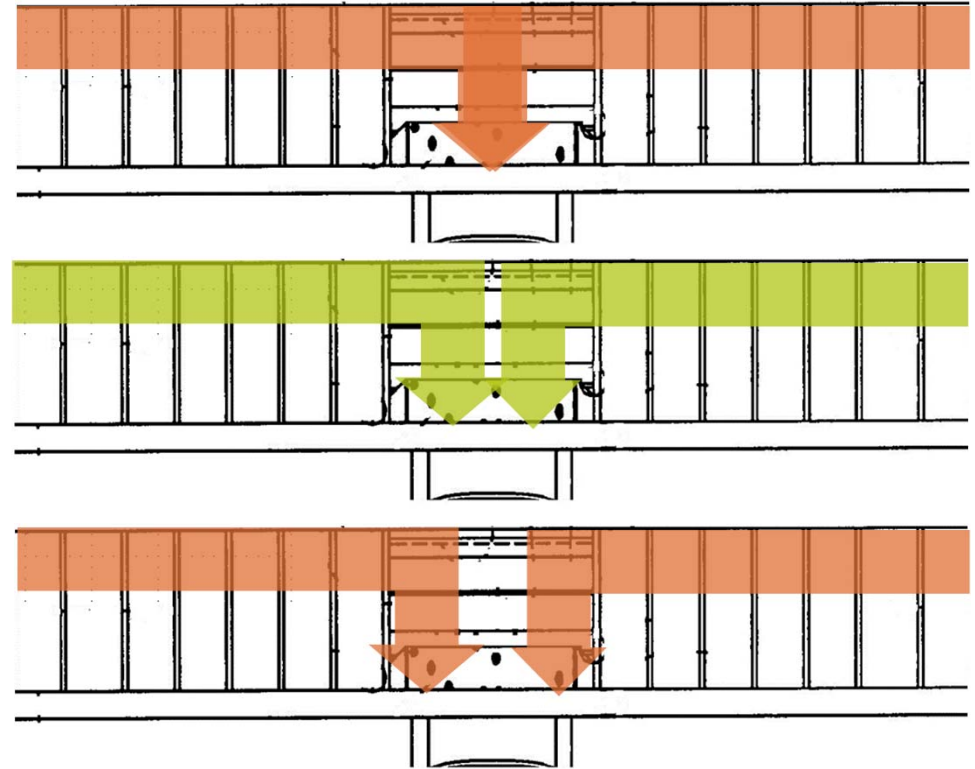
- Crop flow concentrated in center
- May not utilize full combine capacity (width)

Optimal speed

- Smooth, wide feed
- Good capacity to keep up with incoming crop

Too slow

- Chance of wrapping under side draper belts
- Chance of pinching crop in side-wall
- May back-feed over center feed drum



- Improper belt speed can create additional drag on power, increasing engine load, reducing ground speed and prematurely wear out the impeller

Dis-awning plates (all models)

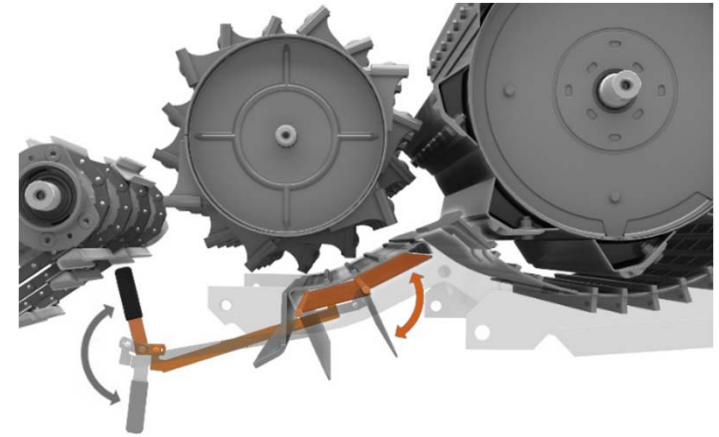
Rasp bar threshing models only

Open

- Pre separation (up to 30%)
- Decreased potential grain damage
- Large FM particles may enter grain sample

Closed

- More aggressive threshing
- May reduce FM in grain sample
- Potential for increased grain damage



Interchangeable grates

Advantages

- Fast and easy to change
 - 30% of the time required compared to competition
- Ensures optimal threshing performance

Benefits

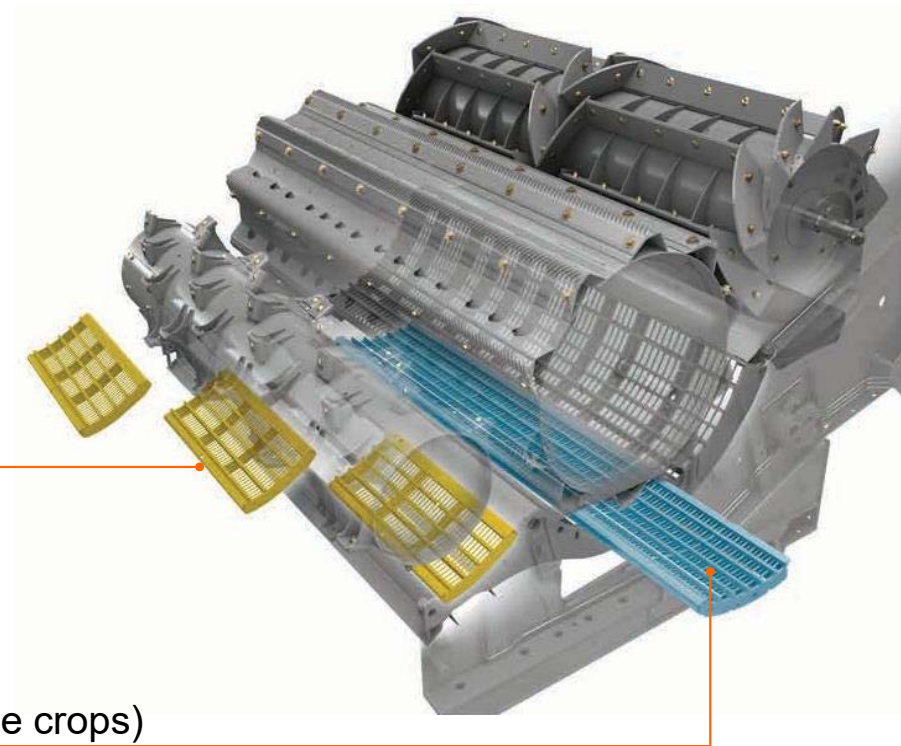
- Maximize quality and capacity

Interchangeable pre-concave grates ⇒ 15 mins to change

700 series, 8000 – 7000 series

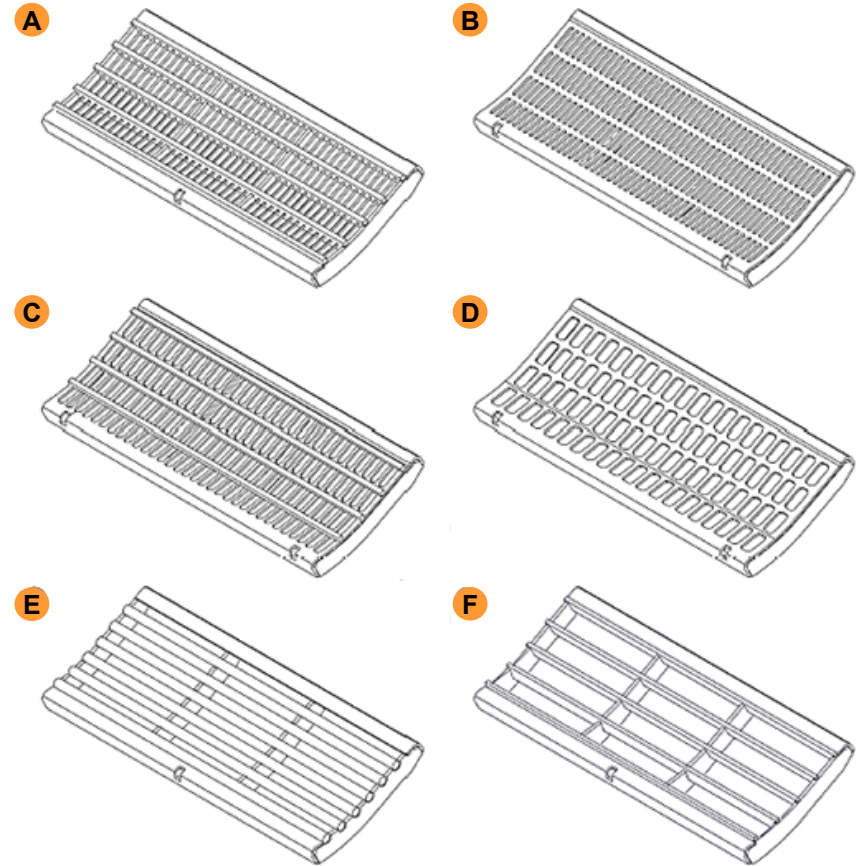
Main concave threshing segment ⇒ Specialty crops only (pulse crops)

8000 – 7000 series



Pre-concave grates

- A. 10 mm wire (grain, beans, milo)
- B. 6.5 x 40 mm smooth (dry small grains)
- C. 12 x 40 mm (soybeans, milo)
- D. 19 x 40 smooth (corn)
- E. Round bar (corn, beans)
- F. XL slotted (rice)



Self-cleaning rock trap (8000 – 7000)

Features

- 9 in. sump – entire machine width
- Lever operated ejection bar
- Kick-stand to hold door open

Advantages

- Lowers risk of damage when foreign objects are ingested
- Easy single lever operation
- Operator does not come into contact with falling debris – no digging by hand

Benefits

- Faster uptime
- More comfortable operator

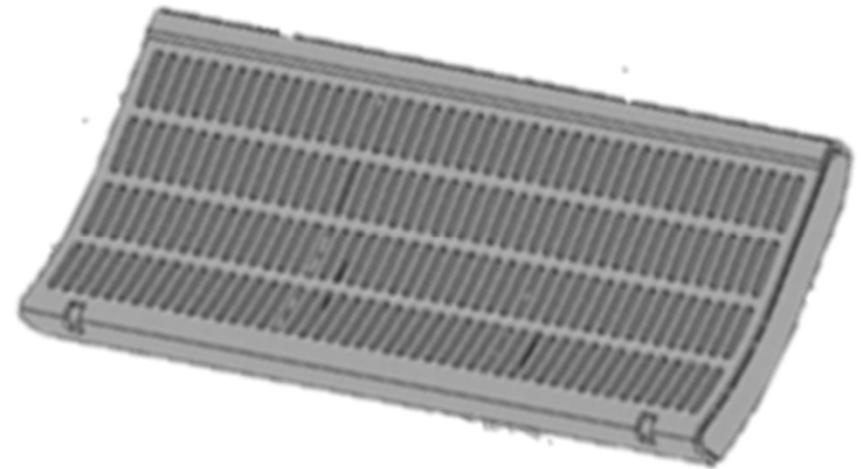


APS grates

6.5 x 40 mm slotted (smooth)

- Small hole grate for easy threshing crops:
 - Alfalfa
 - Barley
 - Blue grass
 - Canola
 - Flax
 - Grass seed
 - Malted barley
 - Oats
 - Wheat

- Not recommended for use with large grain or tough threshing crops
 - Ineffective threshing performance
 - Reduced pre-separation



Part	Standard chassis	Wide chassis	Quantity
6.5x40mm slotted	777 216.0	777 200.0	3

APS grates

6.5 x 40 mm key stock

- Small hole with key stock grate for tough to thresh crops
 - Alfalfa
 - Barley
 - Blue grass
 - Canola
 - Flax
 - Grass seed
 - Oats
 - Red & white clover
 - Wheat
- Not recommended for use with large grain crops or dry conditions
 - Potential for increased grain damage
 - Reduced pre-separation
 - Potential higher chaff load on cleaning shoe



Part	Standard chassis	Wide chassis	Quantity
6.5x40mm key stock	757 445.0	757 443.0	3

APS grates

10 x 40 mm key stock

- Medium hole with key stock grate for tough to thresh crops
 - Barley
 - Canola
 - Pulses (edible beans, peas, lentils)
 - Flax
 - **Soybeans**
 - Malted barley
 - **Milo**
 - Oats
 - **Rice**
 - Soybeans
 - Wheat
- Not recommended for use with large grain crops
 - Potential for increased grain damage in dry conditions

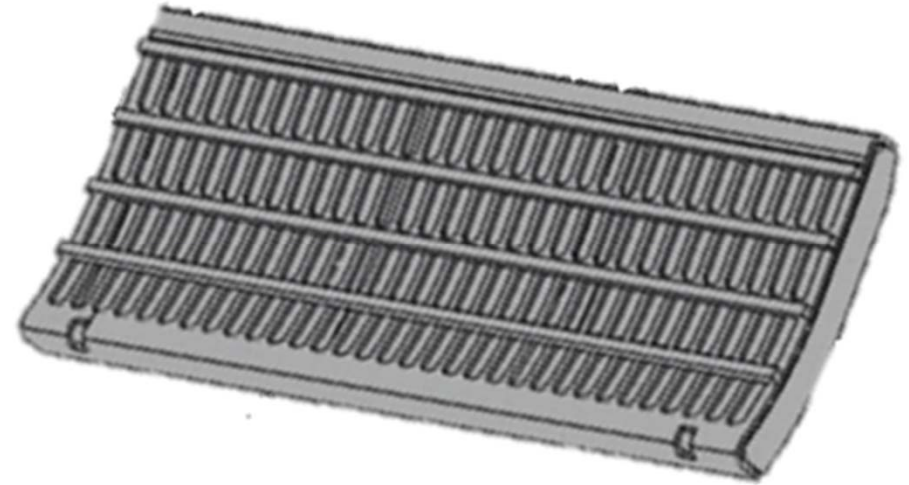


Part	Standard chassis	Wide chassis	Quantity
10x40mm key stock	777 238.1	777 249.1	3

APS grates

12 x 40 mm key stock

- Large hole with key stock grate for tough to thresh crops
 - Barley
 - Canola
 - Pulses (edible beans, peas, lentils)
 - “Green-stem” Soybeans
 - Malted barley
 - Milo
 - Oats
 - Rice
 - Soybeans
 - Wheat
- Not recommended for use with large grain crops
 - Potential for increased grain damage



Part	Standard chassis	Wide chassis	Quantity
12x40mm key stock	91022328	91022481	3

APS grates

19 x 40 mm slotted (smooth)

- XL hole for easy threshing crops
 - Corn
 - Pulses (edible beans, peas)
 - “High moisture” Corn
 - Milo
 - Popcorn
 - Soybeans
 - Sunflowers
- Not recommended for use in small grains or tough threshing crops
 - Ineffective threshing performance



Part	Standard chassis	Wide chassis	Quantity
19x40mm slotted	757 441.0	757 439.0	3

APS grates

Round bar

- Gentle threshing round bar grate with large slotted openings to maximize pre-separation in:
 - Corn
 - Edible beans
 - “High moisture” Corn
 - Milo
 - Peas
 - Popcorn
 - Soybeans
 - Sunflowers
- Not recommended for use in small grains or tough threshing crops
 - Potential higher chaff load on cleaning shoe
 - Tough to thresh crop may not be threshed



Part	Standard chassis	Wide chassis	Quantity
Round bar	1 809 068.0	1 809 067.0	3

APS Equipment (8000 – 7000)

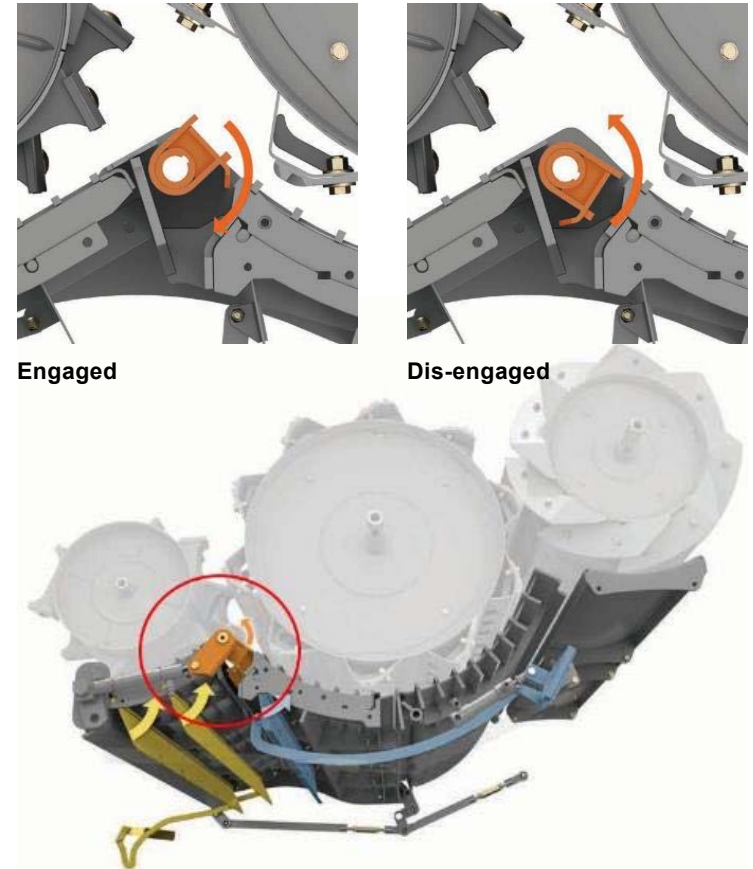
APS equipment

1. Threshing bar (standard on small grains models)

- Can be engaged on the fly from the operator seat
- Increases threshing action at front of main concave
- Increases wrap on threshing cylinder
- Potential for increased grain damage
- Potential increased chaff load on cleaning shoe

2. Concave cover plate (standard)

- Can be engaged on the fly from the operator seat
- Helps remove white caps
- Increases threshing action
- Less open area – potential for lower capacity in large-kernel crops



30-inch threshing cylinder speed range (8000 - 7000 series)

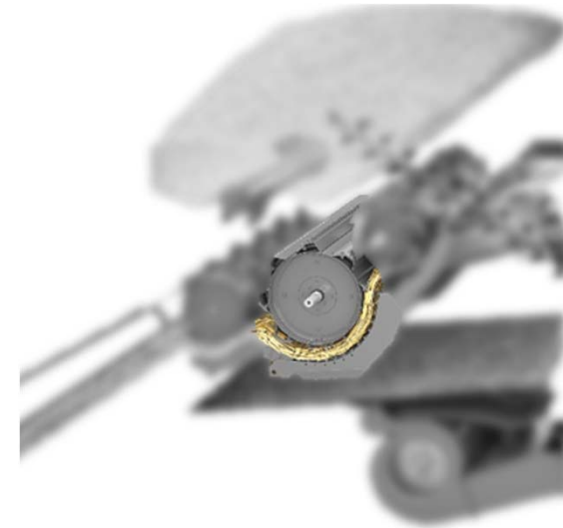
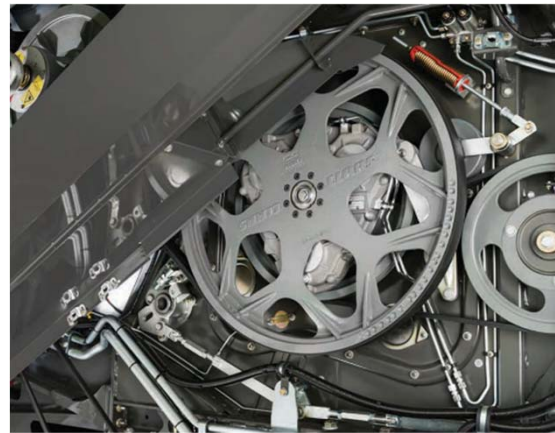
CLAAS ACADEMY

High range (wheat and rice)

- 330 – 930 rpm
- Increased threshing action
- Threshing below 500 rpm not recommended (shift to low)

Low range (corn and soybeans)

- 170 – 460 rpm
- Higher torque than high range has at 400 – 450 rpm



LEXION Pre-harvest clinic



Threshing enhancements (700 series)

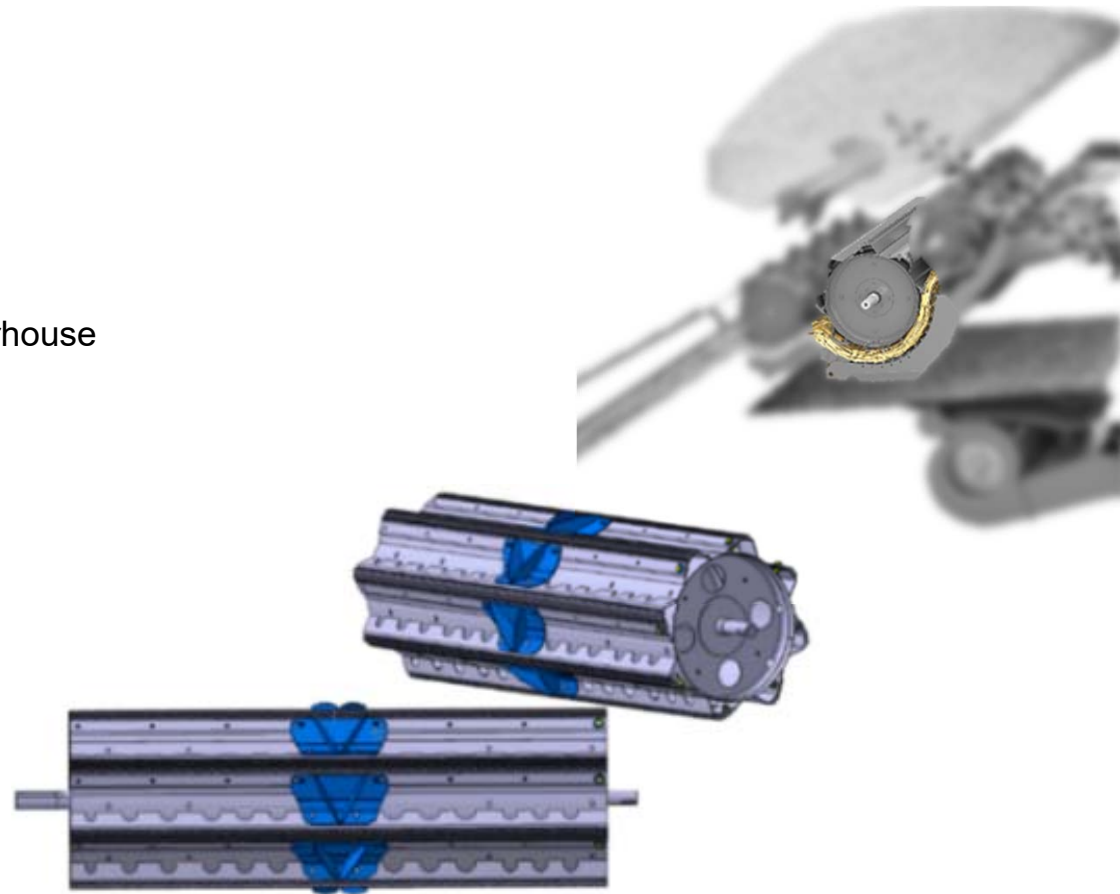
CLAAS ACADEMY

V-plates (aka "Dakota Kit")

- Improves crop flow through the rear impeller
- Enables threshing cylinder to be run in low range
- Easier on the crop

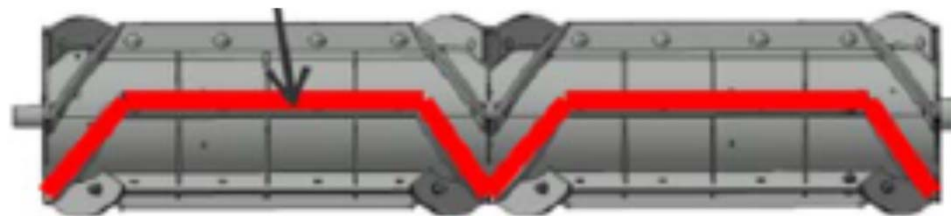
700 series install

1. Access through door located under cab/above feederhouse
2. Attaches using center two rasp bar bolts
3. Part number: **1816 934.0**

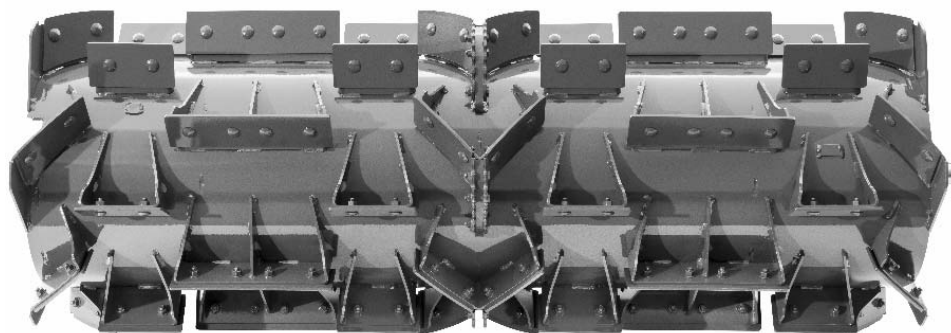


Rear impeller

700 Series 18 inch impeller



8000 – 7000 24 inch impeller



700 series impeller

CLAAS ACADEMY

Worn impeller (without wear strips)

- Inspect prior to harvest (access through grain tank floor)
- Rounded tapered edges below will result in inefficient feeding and slow harvest



700 series impeller

CLAAS ACADEMY

Rear impeller wear strips

- If the center vanes are worn down a half-inch or more compared to the vanes on the end of the impeller, the following will result:
 - Back-feeding
 - Increased (%) engine load = slower harvest
 - Replace wear strips

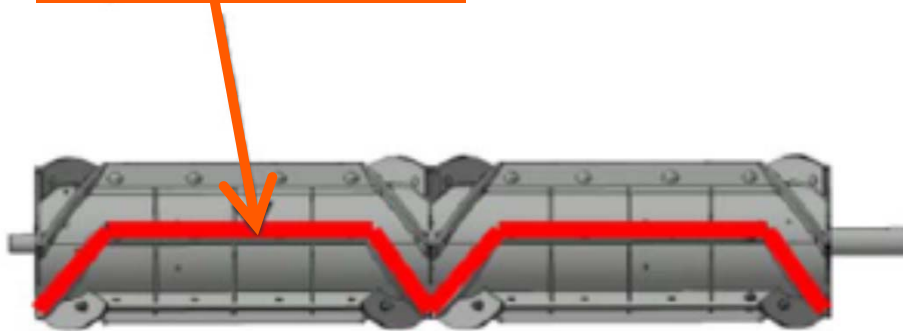


Rear impeller wear strips

- Inspect prior to harvest
- If the center vanes are worn down a half-inch or more compared to the vanes on the end of the impeller, the following will result:
 - Back-feeding
 - Increased (%) engine load
 - Replace wear strips



Rear impeller wear strips



		Part	Standard duty (5mm)	Heavy duty (8mm)
Standard chassis	Chevron		777 615.0	1809 844.0
	Flat vein		777 629.0	1809 848.0
Wide chassis	Chevron		777 615.0	1809 844.0
	Flat vein		777 639.0	1809 846.0

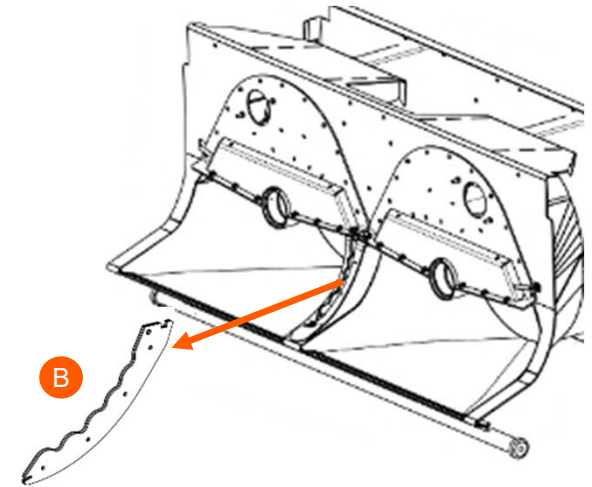
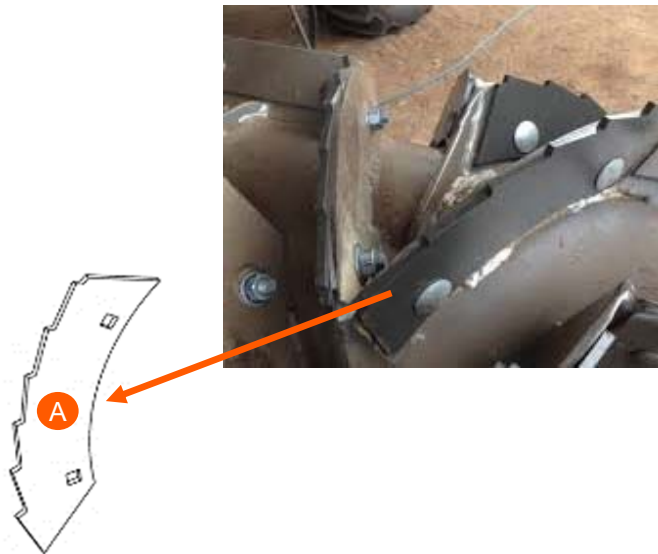
700 series impeller

CLAAS ACADEMY

Serrated impeller wear strips (aka “Sunflower” kit)

- Slicing action to cut through tough, ropey stems
- Improves crop flow efficiency, less wear-n-tear on crop
- Installed on center of rear impeller and divider between rotors

Note: Do not install the serrated wear (A) strips without the serrated divider (B)



Part	Standard chassis	Wide chassis
A. Serrated impeller wear strips + B. Serrated rotor intake divider	1498 884.0	1498 884.0

Rotor speed

High speed = high separation force

- Improved separation in high volume / high moisture stem and straw crops like wheat, rice, soybeans
- May limit capacity (“auger effect”) in dry corn
- Soybeans, wheat, rice, high moisture corn

Low speed = low separation force

- Can increase capacity in high-volume bulk crops
- Too low separation force can prevent grain from separating
- Most corn

Recommended

- Rotors to at least 100 rpm over threshing speed in all straw and stem crops (wheat, rice, soybeans)
- Rotors can actually run slower than threshing speed in corn



Rotors

Rotor cover plates

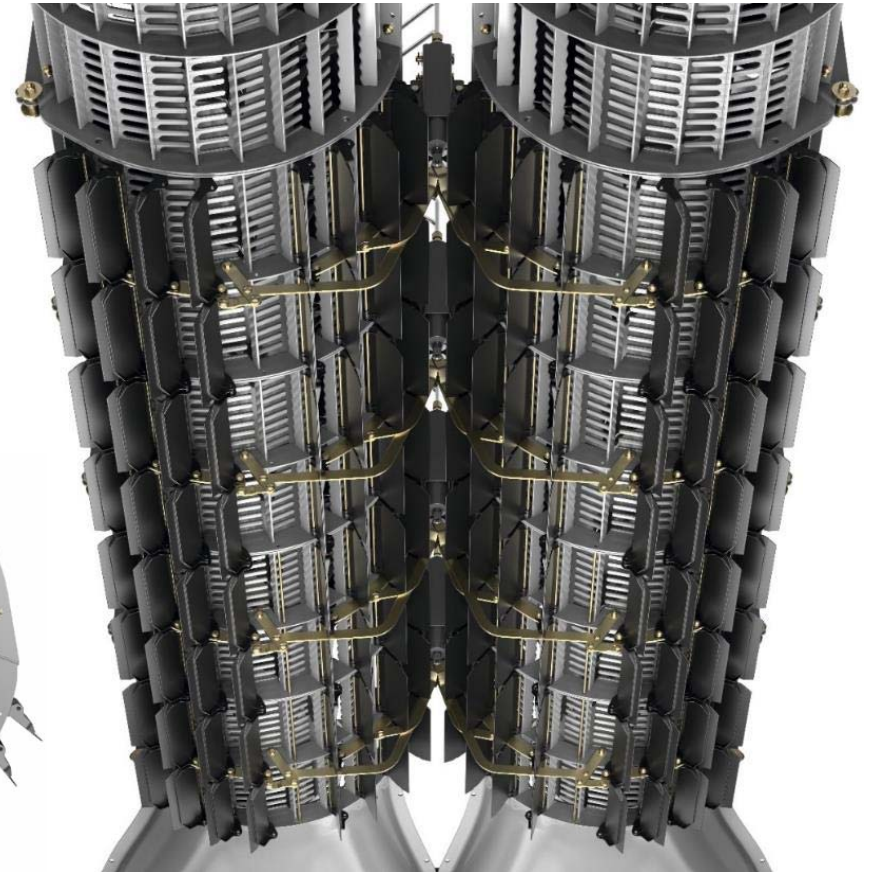
- Helps improve separation performance without causing drag on the crop flow
- Optimize material flow to the cleaning system

Closed (in-cab adjustment)

- Cleaner sample – less trash on sieves
- Limits separation area

Open (in-cab adjustment)

- Maximum separation area
- Greater amount of chaff to the sieves in dry conditions



Preparation pan (all models)



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Preparation pan

Pan segments

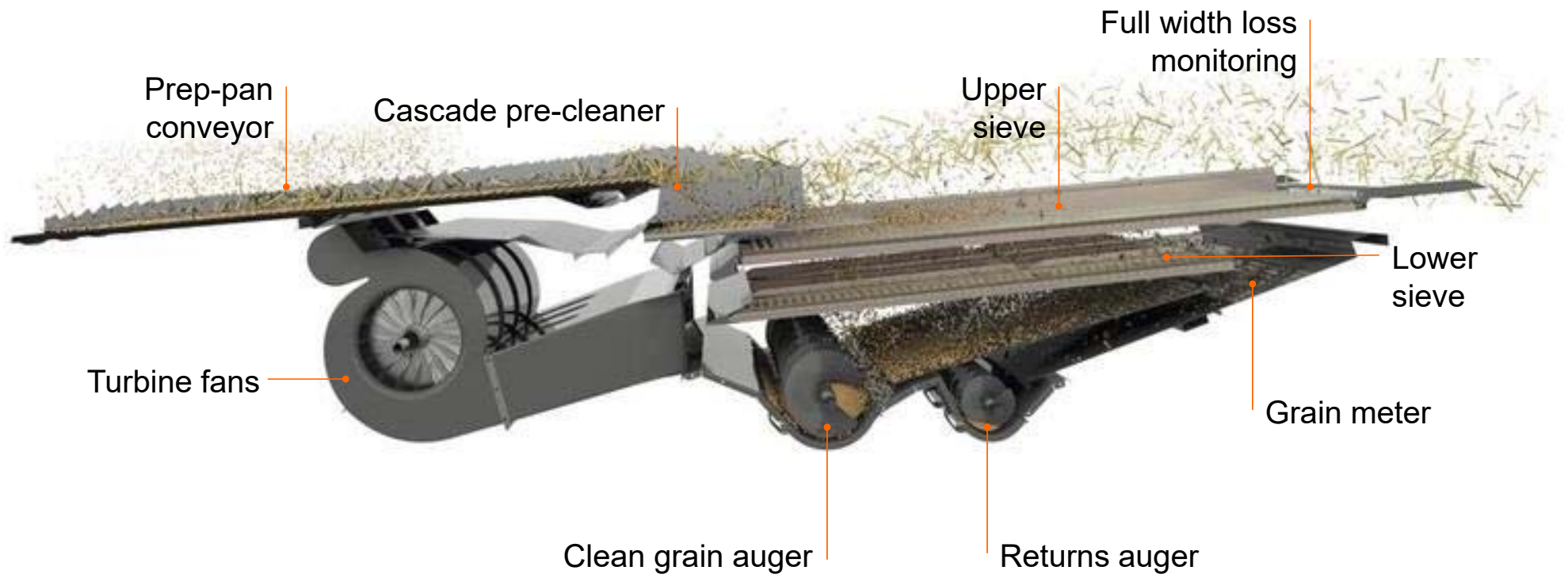
- Removed through door below rock trap
- Inspect periodically and clean as needed
- Build-up can impede material flow – inconsistent flow to sieves

Procedure:

1. Open & clean out the rock trap
2. Remove (3) bolts holding door below rock trap and open door
3. Pull floor pans out through door
4. Poly floors made of UHMW = easy to clean, blow off or wash off



JETSTREAM Cleaning



Upper sieve (chaffer)

Advantages

- Largest upper sieve area per class
 - Upper sieve (chaffer) is the combine's primary catch pan
 - Leading contributor of capacity
- No pre-sieve or chaffer style pre-cleaner needed
- Extra long to remain under the grain

Benefits

- Maximize grain retention, xx% more avg.



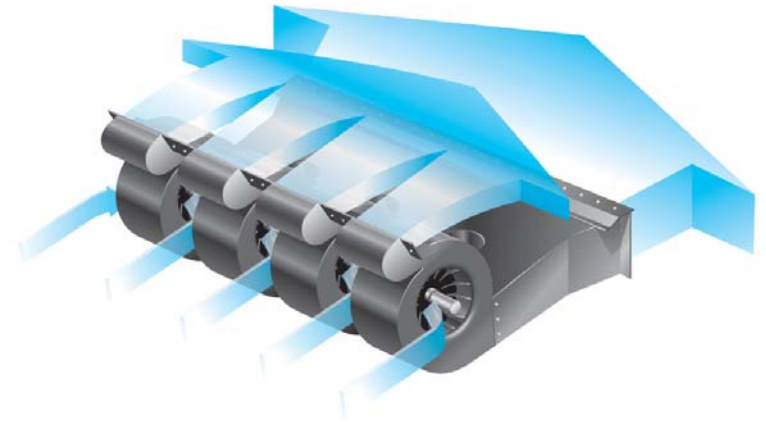
Turbine fans

Advantages

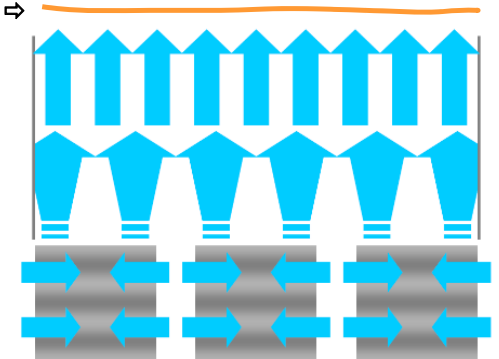
- Generates more pressure per RPM for more accurate control and easier fine-tuning fan speed
- More consistent air flow ensures even distribution to prevent high-pressure spikes to cause grain loss

Benefits

- Higher quality grain sample
- Reduces returns



Even distribution of air flow ⇨



Cleaning

Fan speed

1. Too high

- + Very clean sample
- Potential for increased losses
- Potential for increased returns

2. Too low

- + Reduced sieve losses
- + Potential for decreased returns
- Potential for increased FM in sample



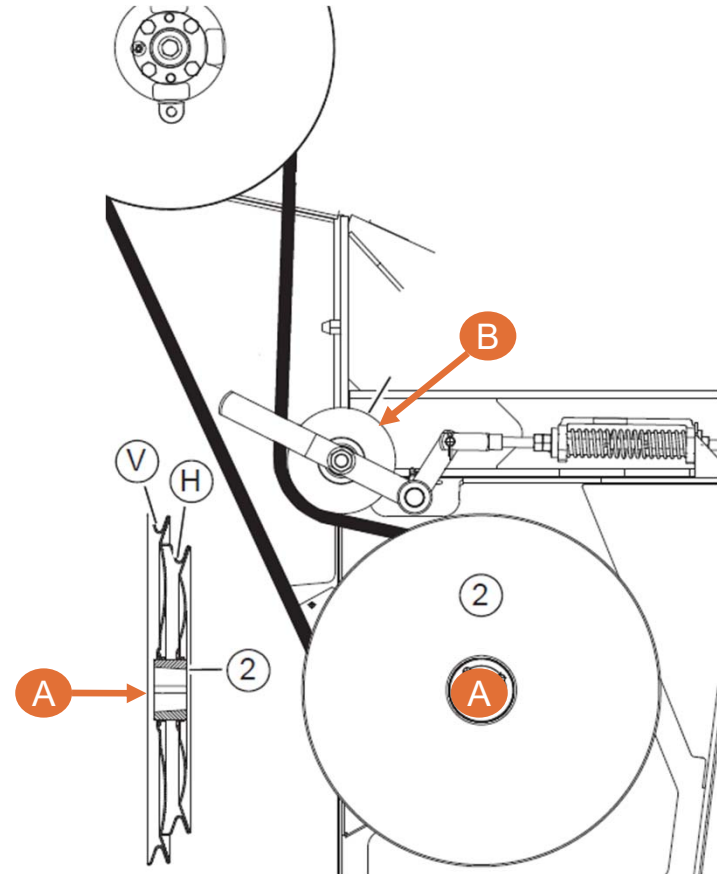
Cleaning

Wind reduction kit

When harvesting low weight crops, i.e. micro seeds, it will be necessary to reduce fan speed below the standard capabilities.

1. Double side 2-speed pulley (A)

- + Can be installed on the stage 3 cleaning fan belt drive
- + Enables the cleaning fan to operate in a lower speed range
 - Low range: 340 – 900 rpm
 - High range: 640 – 1600 rpm
- + An over center lever and idler (B) on the stage 3 idler pulley allows the operator to quickly shift between speed ranges
 - Recommended settings in crop settings guide



Upper sieve (chaffer)

Advantages

- Largest upper sieve area per class
 - Upper sieve (chaffer) is the combine's primary catch pan
 - Leading contributor of capacity
 - Less reliant on lower sieve for reduced returns
- No pre-sieve or chaffer style pre-cleaner required making settings easier and more accurate – maximize use of entire area

Benefits

- Maximize productivity without compromising grain retention



Sieves

TM6 sieve (upper and lower)

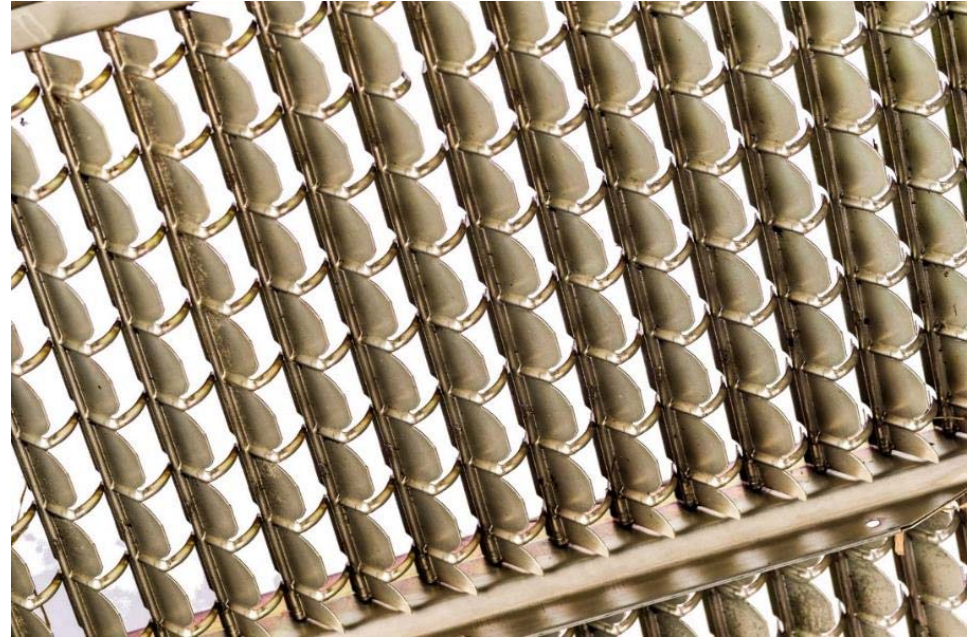
Premium sieves (upper and lower) for small grains and canola

Effective in:

- + Soybeans
- + Edibles
- + Sunflowers
- + Cereals
- + Small grains
- + Micro seeds

Not recommended for use in corn

- Fibers and silks have the potential to hair-pin on the foils and may cause the sieve to plug



Part	Standard chassis	Wide chassis	Quantity
Upper sieve	91022574	91022598	2
Lower sieve	756 446.0	756 448.0	2

Sieves

Standard frogmouth sieve (lower)

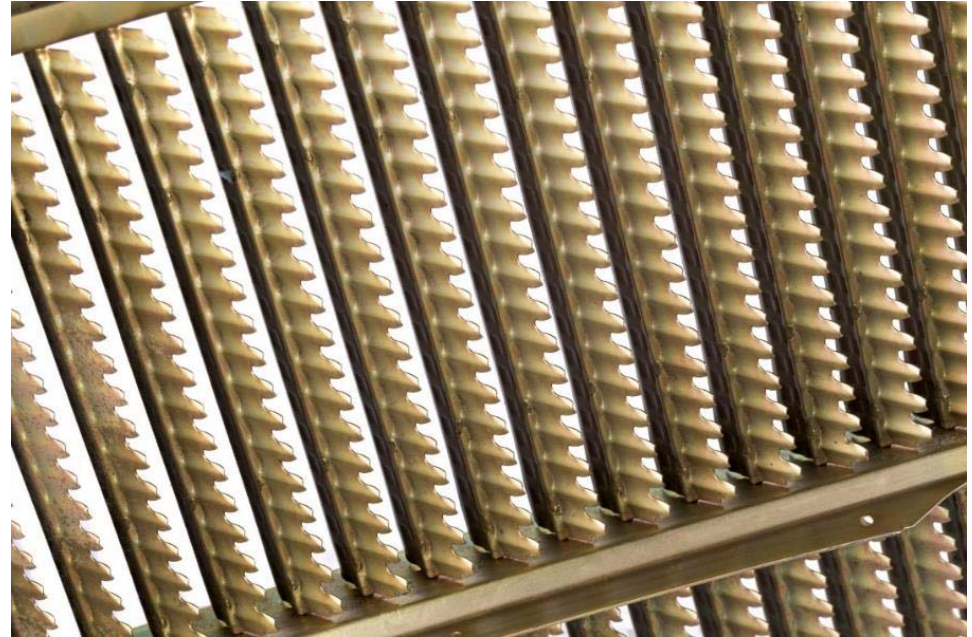
Small grains sieves without the airfoil effect of a TM6

Effective in:

- + Soybeans
- + Edibles
- + Sunflowers
- + Low yielding corn
- + Cereals
- + Small grains

Multi-purpose sieve

- Limited opening has potential to reduce capacity in high yielding crops



Part	Standard chassis	Wide chassis	Quantity
Upper sieve	91022572	91022596	2
Lower sieve	756 462.0	756 465.0	2

Sieves

Deep tooth sieve (upper / lower)

Premium corn sieve

Effective in:

- + Corn
- + Soybeans
- + Edibles
- + Sunflowers
- + Cereals

Not recommended for use in small grain

- Wide opening can increase large particles in grain sample



Part	Standard chassis	Wide chassis	Quantity
Upper sieve	91022576	91022600	2
Lower sieve	756 474.0	756 475.0	2

Sieves

Multi-crop (CB22)

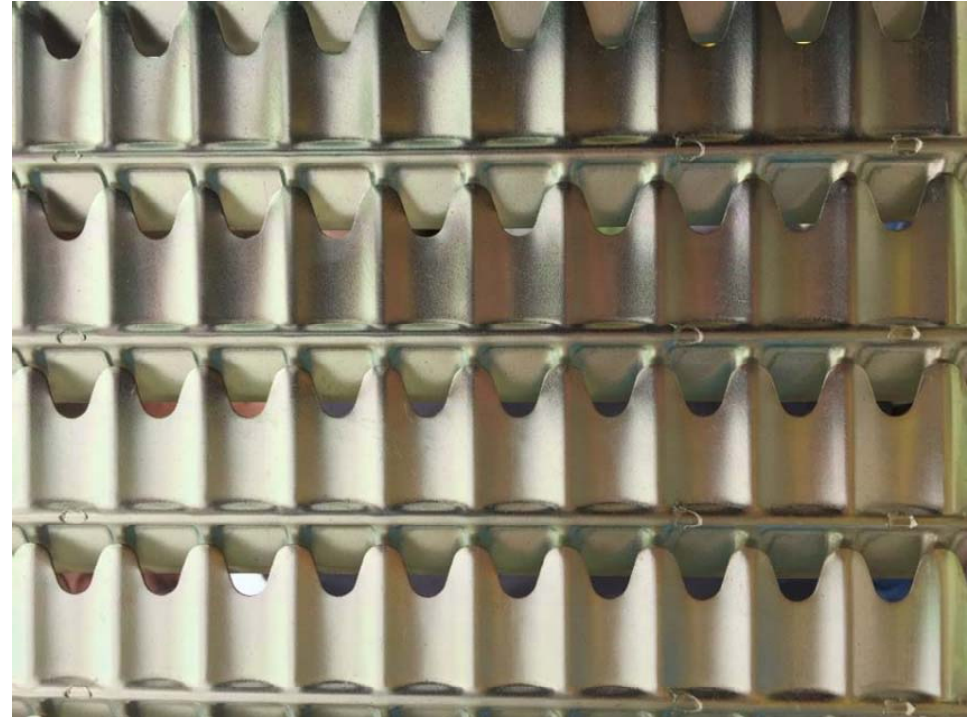
Bottom sieve only

Crops:

- + Corn
- + Soybeans
- + Rice
- + Small grains

Recommended for use with deep-tooth top sieve

- + Deep-tooth capacity, frog-mouth cleaning
- + Replaces current deep-tooth lower sieve
- + **CB22 setting at 4 = 0 on deep-tooth**



Part	Standard chassis	Wide chassis	Quantity
Bottom sieve	1818 483.1	1818 484.1	2





Lower sieve comparison

CB22




Deep-tooth



Tips for harvesting corn

Dry corn (<17%)	Lodged (down) corn	Soft / spongy cobs	High moisture corn
			
<ul style="list-style-type: none"> ▪ Smooth corn grates or round-bar grates ▪ Threshing speeds below < 340 rpm (700 series), < 250 rpm (8000 – 7000) ▪ Slow rotor speeds (<= 400 rpm) ▪ Start by dropping chopper to make sure no kernels are being left on the cob... kernels left on the cob will not set off the loss sensors 	<ul style="list-style-type: none"> ▪ Use auto-pilot to keep the combine and head on the rows (best way to harvest down corn) ▪ Remove one or both ear saver to prevent stalks from hanging up ▪ Timing gathering chain teeth helps pull stalks off the ground (warning: watch for rocks), as well as reduces the action on brittle stocks ▪ Keep head flat as possible using the HP feederhouse adjustment and adjust the points downward (manually) to get under the stalks. 	<ul style="list-style-type: none"> ▪ If the cobs bend or split when hand shelling – set concave 2-3 mm over cob diameter (increase as necessary) to keep from compressing the cob and blowing out its sides causing the threshing cylinder to rip them apart ▪ Wider concave may require faster threshing speeds ▪ Rotors can be used to help remove kernels (450 – 550 rpm)... above 450 rpm may require the operator to slow down to avoid loss in drier conditions ▪ Start by dropping chopper to make sure no kernels are being left on the cob 	<ul style="list-style-type: none"> ▪ Smooth corn grates or round-bar grates ▪ Threshing speeds 380 – 450 rpm (700 series), 320 – 380 rpm (8000 – 7000 series) ▪ Rotor speeds: 400 – 550 rpm ▪ Fan speed: 1200 rpm ▪ Upper sieve 14+ ▪ Lower sieve: 20 – 27 ▪ Drop chopper to make sure no kernels are being left on the cob

Tips for harvest corn

Specialty / food grade	Popcorn	All corn	
			
<ul style="list-style-type: none"> ▪ Harvested < 18% ▪ Smooth corn grates or round-bar grates ▪ Threshing speeds 200 – 300 rpm ▪ Adjust rear of concave to match front ▪ Set concave slightly over cob diameter ▪ Reduce cylinder speed until rotor loss begins ▪ Adjust rotor speed to minimize loss <ul style="list-style-type: none"> – Slower ground speed may be required to minimize grain loss due to a larger volume of un-threshed crop entering the rotors 	<ul style="list-style-type: none"> ▪ Harvested < 20% ▪ Very small ears / cobs and stalks ▪ Smooth or round bar grates preferred ▪ Dis-awning plates may need to be closed to create more crop-on-crop rubbing action ▪ Set concave according to cob diameter ▪ Threshing speed: 250 – 350 rpm (700 series), 190 – 200 rpm (8000 – 7000) ▪ Rotor speed: 400 rpm ▪ Rotor cover plates optional (as needed) ▪ Loss sensors set to 90 ▪ Feederhouse speed: <350 rpm ▪ Make sure corn head deck plate stationary side is adjusted all the way in for the narrowest gap when closed 	<ul style="list-style-type: none"> ▪ Set the concave according to cob diameter ▪ Set round bar 0 – 3 mm over cob diameter to start ▪ Set wire concave 2 – 3 mm over cob diameter to start 	

Tips for harvesting soybeans

Dry stems & pods



- < 380 rpm feederhouse speed
- Smooth or round-bar grates used (disawning plates may need to be closed)
- Low-range threshing with V-plates
- Rotors: 100 rpm over threshing speed
- Close first set of rotor cover plates to help cleaning and reduce returns
- Harvest at a 10 - 15° angle to the rows for more efficient cutting
- Feederhouse drum up if rocks aren't present
- Set reel tines perpendicular to the cutter bar at a height where the tines are half way in the crop

Lodged plants



- Reduce ground speed to ensure that the cutter bar is not riding over any plants
- Harvest at 10 – 15° to the rows
- Severe lodging – harvest plant tips first
- Adjust the reel out to about 12" in front of the cutter bar with its reel-tine angle set inward to lift the plants for improved cutting performance
- Operate the reel as low as necessary to lift the plants
- Reel speed may need to be increased slightly to aid in lifting and feeding the plants into the cutter bar

Green-stems, dry pods



- Use 10mm wire or 12mm keystone grates
- Thresh in high range without V-plates... Low range can be tried with V-plates only
- Rotors: 100 – 150+ rpm over threshing speed
- Reel tines perpendicular to the cutter bar

Green-stems, pods & leaves



- Use 10mm wire or 12mm keystone grates
- Thresh in high range (with or without V-plates)
- Rotors: 100 – 200+ rpm over threshing speed
- Reel tines perpendicular to the cutter bar

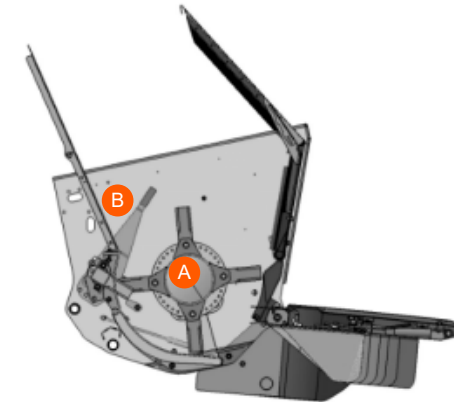
Tips for harvesting small grains

Whitecaps in sample	Too much trash (FM)	Long straw	All rice
			
<ul style="list-style-type: none"> ▪ Un-threshed kernels ▪ Tighten concave in 1 mm increments until removed ▪ Tighten lower sieve until removed (watch not to overload returns) ▪ Install cover plate under pre-concave (700 series); lever operated (8000 – 7000) ▪ Install filler strips (700 series wire concave only) ▪ Install intensive threshing segments (700 series), in-cab controlled (8000 – 7000) <ul style="list-style-type: none"> - May increase damage to straw, especially in dry conditions 	<ul style="list-style-type: none"> ▪ Increase fan speed in 10 rpm increments ▪ Tighten sieves in 1 – 2 mm increments ▪ Upper sieve for large pieces (straw) ▪ Lower sieve for un-threshed heads ▪ Install CB22 lower sieve if using deep-tooth lower sieve 	<ul style="list-style-type: none"> ▪ Avoid harvesting when crop is very dry ▪ Don't set concave too tight: > 12 mm ▪ Reduce threshing speed until rotor loss starts to increase ▪ Reduce rotor speed in 20 rpm increments, not going below 100 rpm over threshing speed ▪ Do not use intensive threshing segments 	<ul style="list-style-type: none"> ▪ Use the XL slotted pre-concave grates to achieve higher pre-separation for improved capacity

Residue Management

Basic Residue Management System

- Distributes chopped straw through four position vane tailboard, chaff through chaff spreader.
 - + In-cab hydraulic or lever operated manual high/low speed adjustment
 - + Lever operated particle size adjustment
 - + Lever operated spreading, windrowing, and width adjustment
 - + Ample spreading for application
 - + Crop changeover can be done from the cab



Residue Management

Advanced residue management system

- Distributes chopped straw and chaff through four position rotating paddle tailboard
 - + Automatic side wind and slope compensation
 - + Hydraulically actuated width adjustment
 - + Spread patterns up to 45 ft
 - + In-cab hydraulic or lever operated manual high/low speed adjustment
 - + In-cab hydraulic or lever operated particle size adjustment



Residue Management

Premium residue management system

- Distributes chopped straw and chaff through four position rotating finger paddle with oscillating deflectors tailboard
 - + Automatic side wind and slope compensation
 - + Spread patterns up to 45 ft
 - + Active, automatic adjusting spread pattern
 - + Multiple in-cab adjustments



Residue Management

Stationary knives (A)

3-position knife bank

- + Engaged by a lever or hydraulically from the cab

Available:

- Basic Chopper
- Advanced Chopper
- Premium Chopper

Engaged

- + Smaller residue size
- Increased horsepower load

Disengaged

- + Decreased horsepower load
- Larger residue size



Residue Management

Friction plate (A)

Speed bump in chopper chamber

- + Causes the crop to engage more of the rotary knives for increased chopping action
- + Engaged by a lever or hydraulically from the cab

Available:

- Advanced Chopper
- Premium Chopper

Engaged

- + Smaller residue size
- + Can use in place of or conjunction with stationary knives
- Increased horsepower load

Disengaged

- + Decreased horsepower load
- Larger residue size



Residue Management

Knife maintenance

Pre-harvest inspection

- Flip knives before harvest
- No broken knives
- Never run with a missing knife
- Sharp edges on cutting side

Sharp knives lead to:

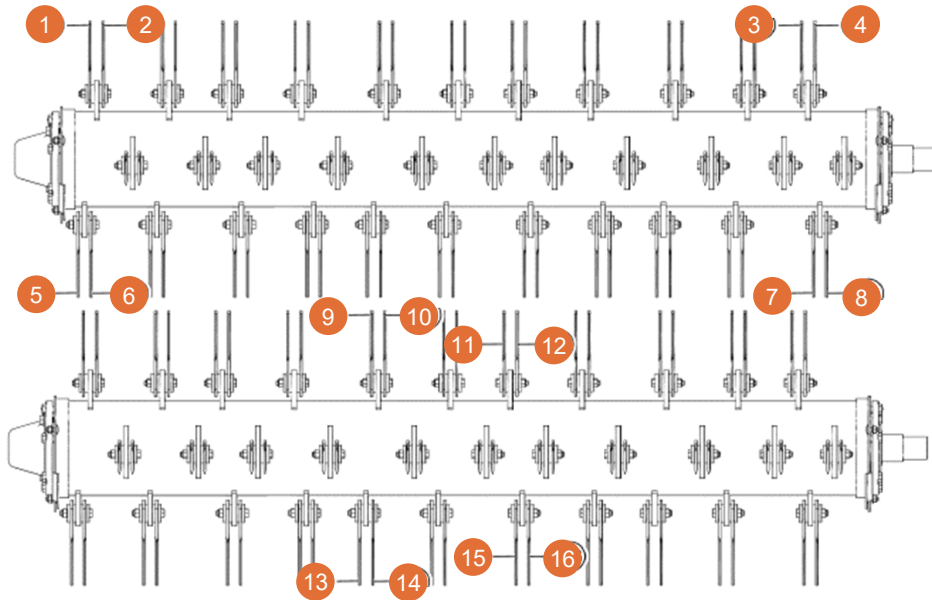
- + Less horsepower drag
- + Better chop quality
- + Better spread pattern

Worn knives can cause:

- Large horsepower drag
- Poor chop quality
- Poor spread pattern



Residue Management



Examples

- If knife #1 is worn, damaged or missing, replace #'s 1, 2, 3, 4, 5, 6, 7 & 8
- If knife #13 is worn, damaged or missing, replace #'s 9, 10, 11, 12, 13, 14, 15 & 16

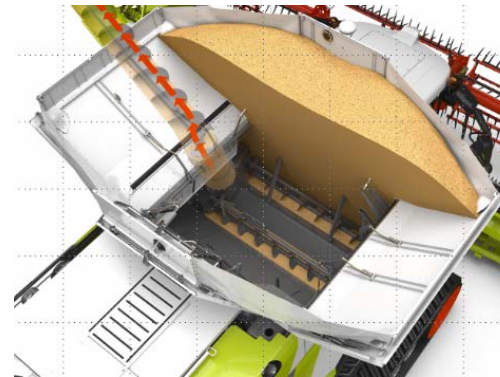
Standard Chopper	Part number	Wide / Standard
Rotating	0 353 195.0	64 / 52
Stationary	0 600 300.0	55 / 55
Advanced Chopper	Part number	Wide / Standard
Rotating	0 353 195.0	88 / 72
HD Rotating	1 815 999.0	88 / 72
Stationary	0 600 300.0	67 / 55
HD Stationary	0 737 600.0	67 / 55
Premium Chopper	Part number	Wide / Standard
Rotating	0 736 872.0	108 / 72
HD Rotating	0 553 860.1	108 / 72
Stationary	0 600 300.0	67 / 55
HD Stationary	0 737 600.0	67 / 55

Grain Handling

What's new

Unloading system

- + 5.1 bu./sec (7500 – 8800)
- + 4.3 bu./sec (7400)
- + Independent cross auger shut off (more control)
- + Default auger clean out cycle
- + Half-rate unloading for delicate or light crops
- + Less time spent unloading



Grain Handling

What's new

Clean grain elevator

- + 8000 bu./hr.
- + Increase in boot size
- + Manual elevator tensioning
- + Mass Flow Yield sensor

Returns Elevator

- + larger top cross auger diameter
- + Increased return elevator size
- + Improved return volume



Grain Handling

Elevator chain tension

- Slack chains can allow grain to enter the chain and get smashed as the chain rotates on the sprocket
- Up to 3 – 4% damage possible
- Manual elevator tension (all 7000-8000 series)

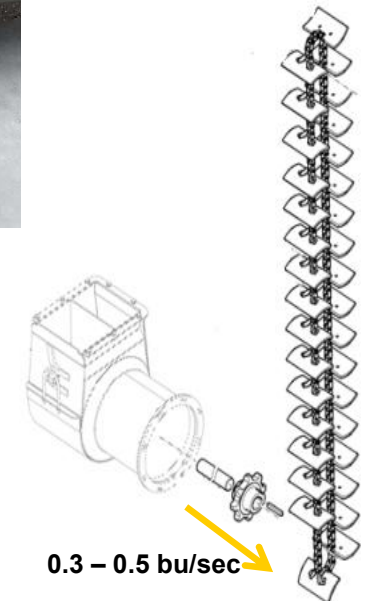
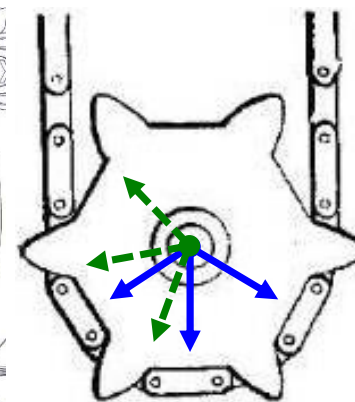
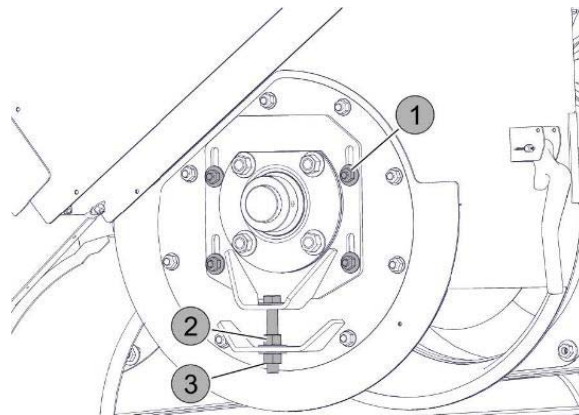
To tension chain:

1. Loosen nuts (1) and (2)
2. Adjust nut (3) until the chain slides side-to-side on the sprocket with resistance

Check 1-2x per week

If the chain runs too loose it can:

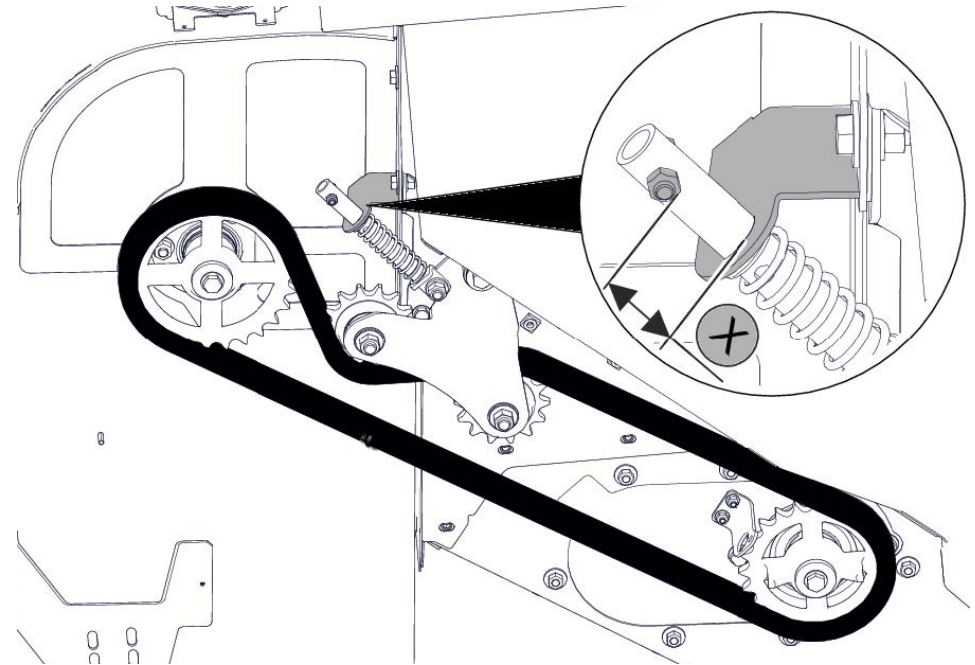
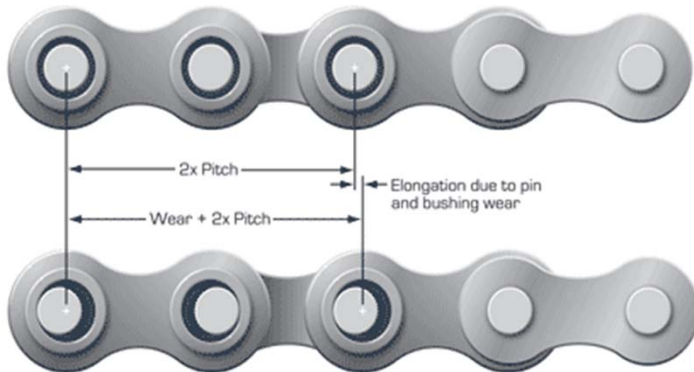
- Skew the accuracy of the yield sensor
- Wear the chain prematurely
- Increase the potential for grain damage



Grain Handling

Fountain auger drive chain inspection (prior to start of harvest)

- 700 series and 8000 – 7000 series
- If the gap at (X) is less than 5 mm then the chain should be shortened or replaced
- To determine if replacement is needed, remove the chain and inspect for side-play
- If there is side-play in the chain links due to wear, replace



Grain Handling

Returns / tailings elevator chain tension

700 series and 8000 – 7000 series

To tension the chain:

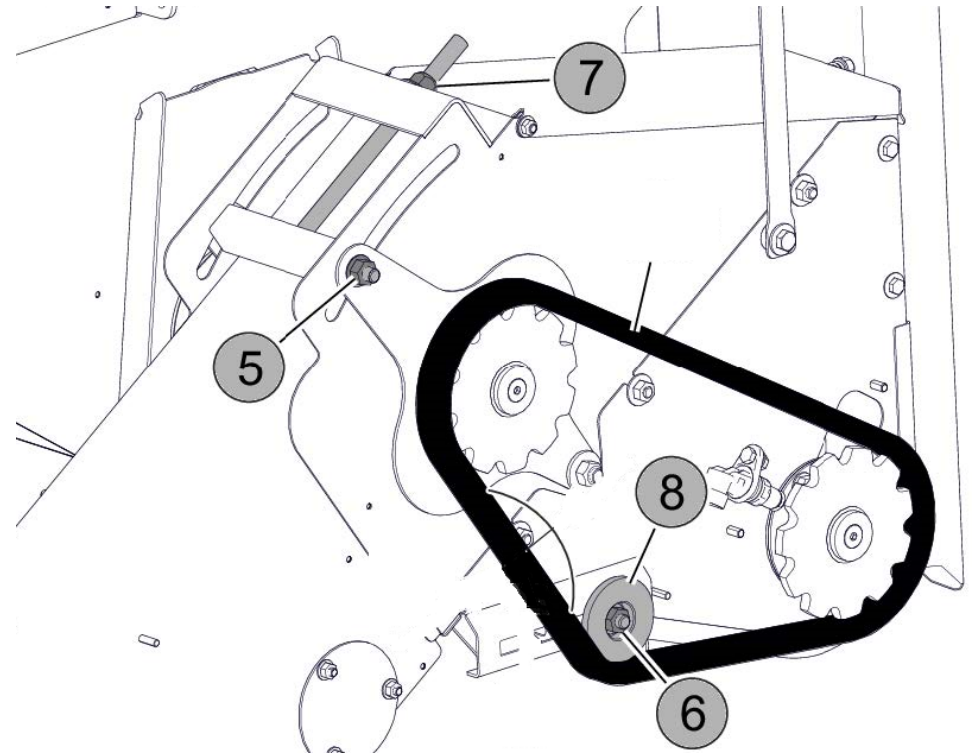
1. Loosen bolt (5) and rotate bolt (7) clockwise to draw the top shaft up to tension the elevator chain
2. Tension until the chain slides side to side on the lower sprocket with resistance

Top cross auger drive chain

To tension chain:

1. Loosen nut (6)
2. Slide idler (8) out by hand
3. While holding hand pressure on idler (8), tighten nut (6)

Check 1 – 2x per week

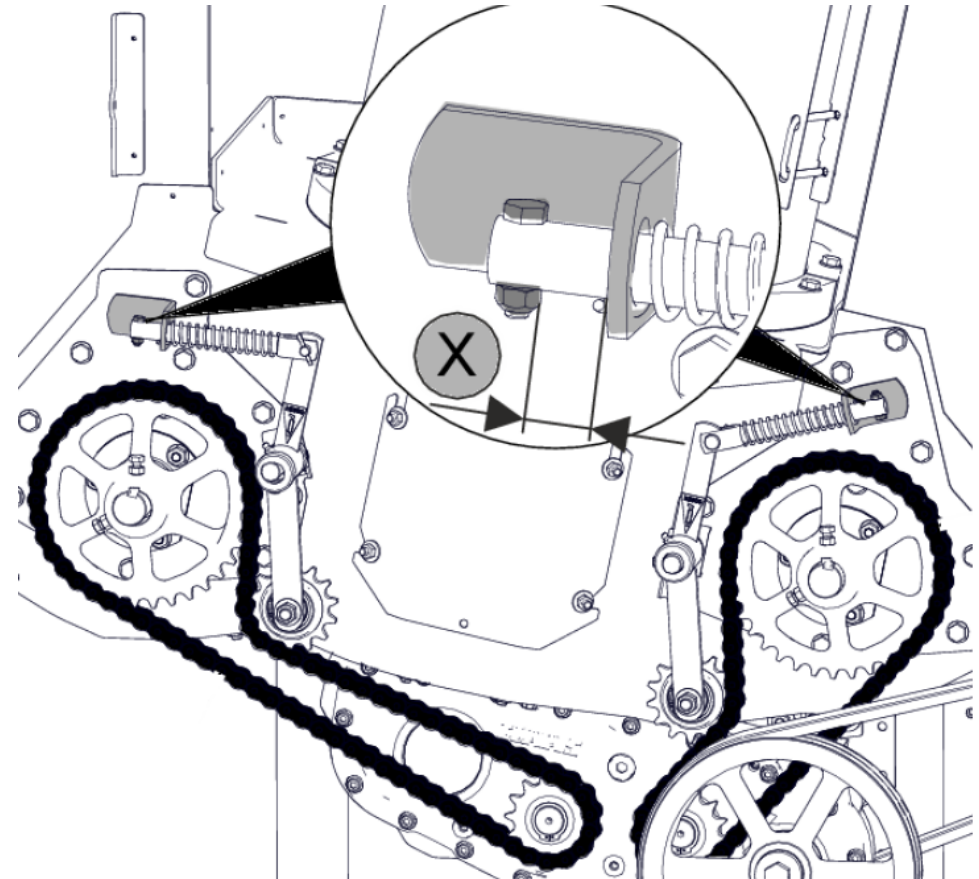
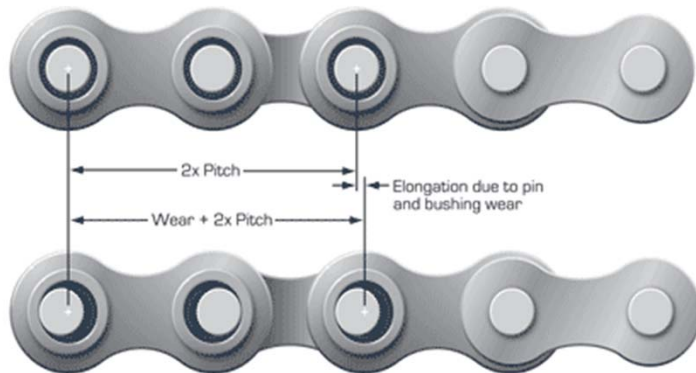


Grain Handling

Unloading drive chain inspection (prior to start of harvest)

8000 – 7000 series

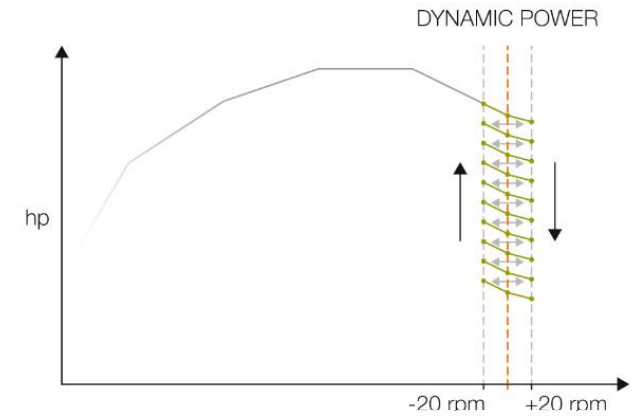
- If the gap at (X) is less than 5 mm then the chains should be shortened or replaced
- To determine if replacement is needed, remove the chains and inspect for side-play
- If there is side-play in the chain links due to wear, replace



CPS

DYNAMIC POWER

- Actively optimizes engine power and fuel based on engine load conserving fuel when power is not needed
 - + Works autonomously
 - + Lower fuel consumption
 - + High power output



Drive Systems

Main Drive

1. Engagement clutch
2. Unloading drive
3. Threshing drive
4. Rotor drive



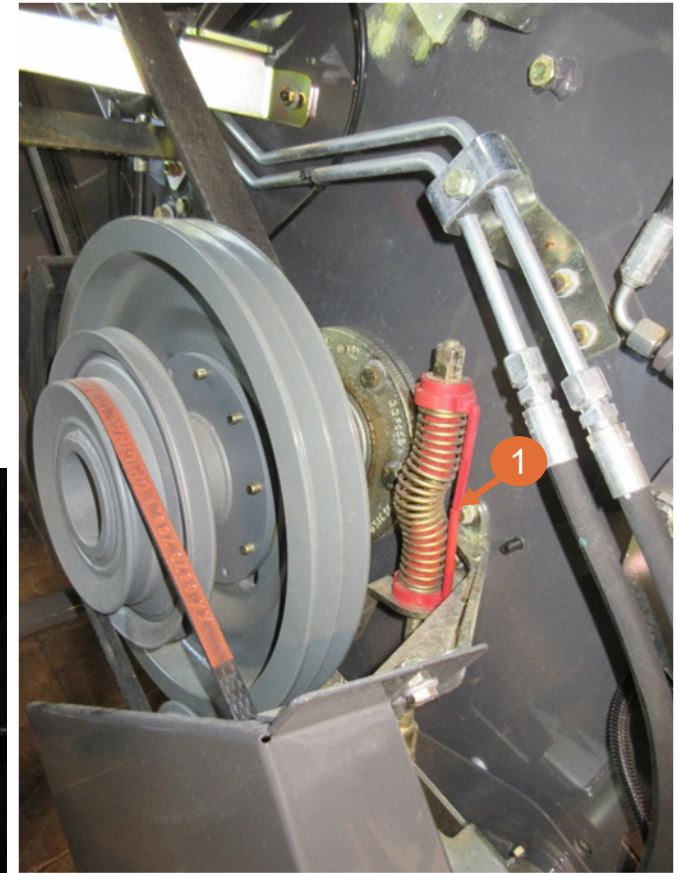
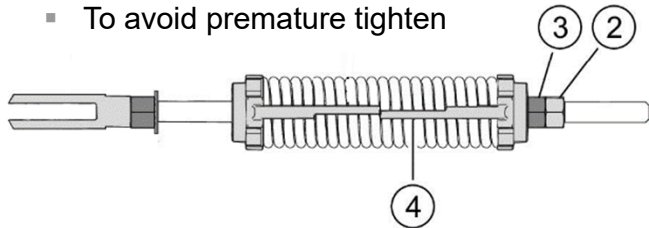
Drive Systems

Proper belt tensioning

- Know proper tensioning procedures
 - Reference the operator's manual
- Always set tensioners to the indicators (1)
 - All tensioners tip to tip (new for 7000-8000 series)
- Make sure that the detention nut (2), if equipped, is backed away from tensioner

To tension belts:

1. Loosen nuts (2) & (3)
2. Rotate nut (3) clockwise until the indicators (4) touch
 - To avoid premature tighten

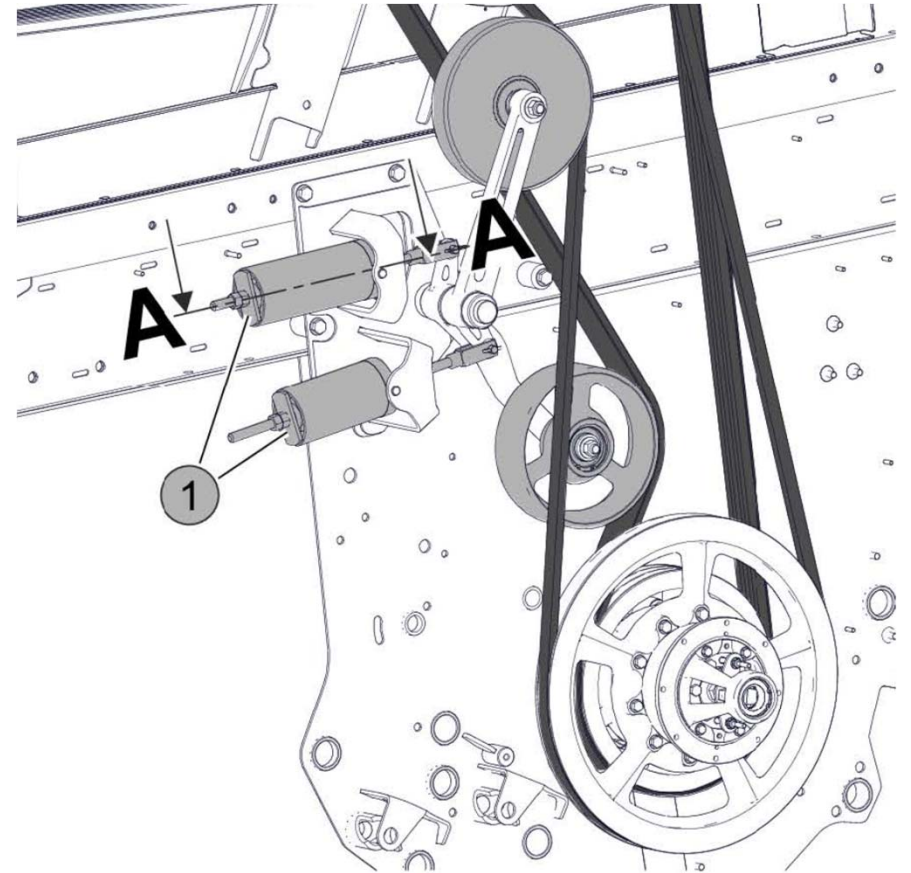
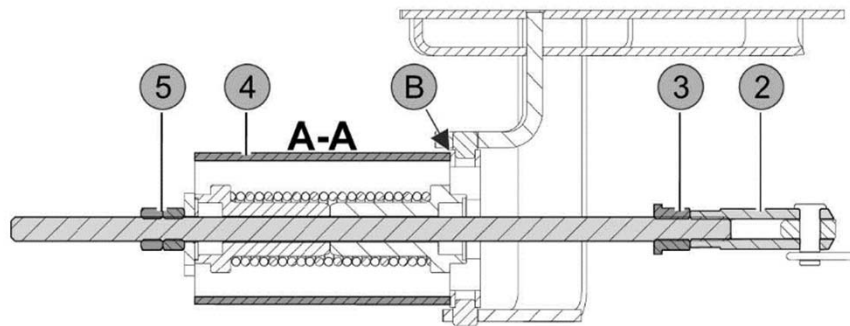


Drive Systems

Chopper drive belt tensioners

To tension belts:

1. Loosen jam nuts (5)
2. Rotate inner jam nut (5) until the tube bottoms out
 - Do not over tighten tube into base
3. Tighten jam nuts (5)



Cooling Package

Dynamic Cooling

- Overhead engine cooling system that draws air from above the combine (coolest & cleanest air) pulling it through the radiator and out the vents in the side panels, forcing dust and debris away from the combine to prevent it from being pulled in by the cooling fan.
 - + Variable fan drive provides cooling when required
 - + Effective and reliable cooling
 - + Increases air filter maintenance interval from days to weeks
 - + Conserves up to 20 hp over previous cooling system
 - + Easy access for inspection and servicing
 - + Low maintenance



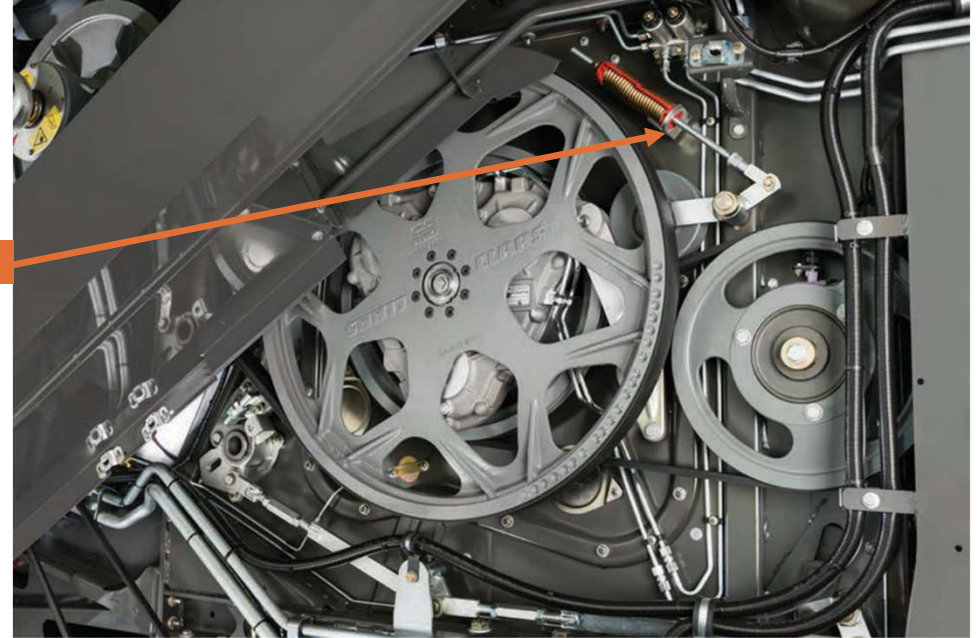
Slug Removal

Plugged APS cylinder

1. Open concave all the way (50 mm)
2. De-tension APS cylinder belt
3. Use the paddles on the APS cylinder to pry it backward



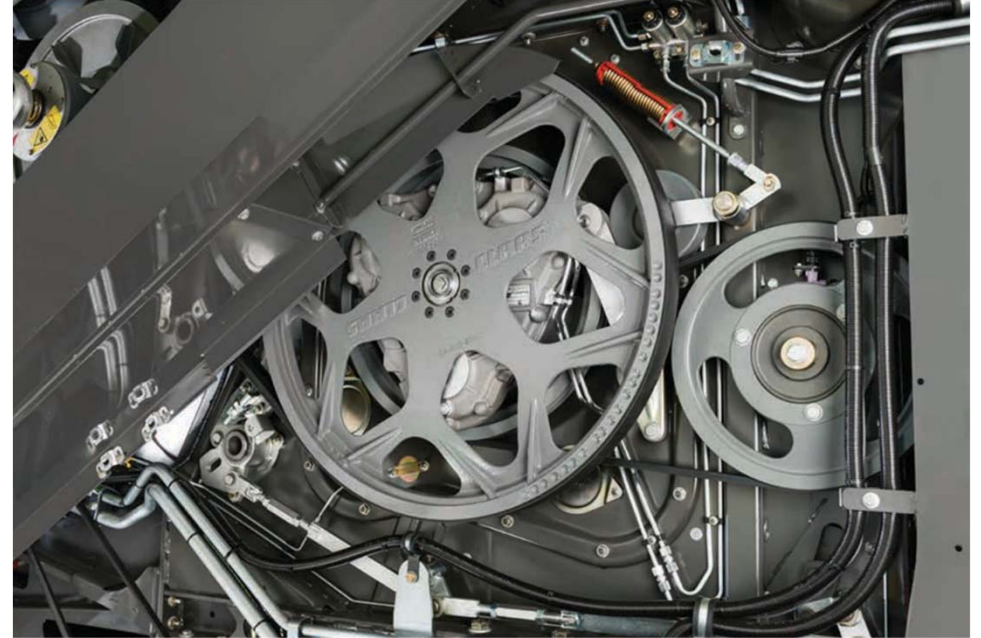
APS tensioner



Slug Removal

Plugged threshing cylinder

1. Disconnect APS 2 – speed gear box
 - APS is now in neutral
2. Open concave all the way (50 mm)
3. Use the paddles on the APS cylinder to pry it backward



Plugged rotors

1. Disconnect APS 2 – speed gear box
 - APS is now in neutral
2. Drop the chopper
3. Separate the rotor drive coupler between gear boxes
4. Engage separator and clean out the right-hand rotor
5. Re-connect the rotor drive coupler
6. Engage separator and clean out the left-hand rotor

