As the combine moves through the field, the corn head gatherer points are positioned between the corn rows. The stalk rolls pull the cornstalks down so the deck plates will snap off the ears.

Trash knives prevent weeds and trash from wrapping around the stalk rolls. The gathering chains move the ears up to the auger. The auger moves the ears to the front of the feeder house.

It costs time and money if the gatherer row components are worn or not properly maintained.

Worn gatherer row components may result in:
- Stalk roll wrapping
- Row unit plugging
- Feeder house plugging
- Ear loss
- Pulling cornstalks out by the root
- Kernel damage

Two critical parts that affect productivity on a corn head are the stalk rolls and gathering chains.

John Deere stalk rolls are attached only at the back. There are no front hangers to snag weeds or stalks.
Fluted Stalk Rolls (90 Series Corn Head)

The straight, fluted stalk rolls are standard equipment on all 90 Series Corn Heads. The fluted stalk rolls are designed with a more aggressive stalk-stripping action for increased feeding capacity in down or weedy crops. The straight flutes provide a tighter working area (outer edge of flute to body of adjacent stalk roll) to produce a more aggressive feeding action. The full-length flutes also provide a 55 percent longer crop engagement area between the rolls to allow for faster pull-through action. This means less plugging in weeds. The ear-snapping zone of the straight fluted stalk rolls is farther forward than on tapered stalk rolls. Ears snap off sooner for faster crop gatherer action.

The more aggressive action of the straight fluted stalk rolls can provide up to 50 percent less trash intake in high-moisture corn. There is less breaking or tearing of stalks and leaves.

All fluted stalk rolls are formed from nodular iron and then placed in an automatic welding machine that hard-faces the surface of the stalk roll flutes. This ensures longer life for the stalk roll, season after season.

On a new stalk roll, the flutes are straight. As the flute becomes worn, it becomes concave at the rear of the stalk roll.

This concave shape will not allow the roll to aggressively pull the stalk downward and strip the ear from the stalk. And, the sharp, square edges of the flute become rounded as the stalk roll wears.

This results in less aggressive grabbing or “pull down” of the stalk and will cause crop loss.

A stalk roll can be checked for wear by placing a straight edge along the flute. If the difference between the high and low point is greater than 1/8-in., the stalk roll should be replaced.

Rebuilt stalk rolls will not provide the same high quality as new John Deere stalk rolls. Generally, rebuilt stalk rolls will not have consistent, uniform flute height.
The knife stalk rolls for the 90 Series Corn Head are designed to deliver improved field performance.

The John Deere knife stalk roll provides the aggressive feeding action necessary when harvesting high-yield corn. The knife stalk rolls cut the stalks from the stubble and chop the crop into average lengths of 10 to 16 inches.

The knife stalk rolls are a one-piece cast body with two attaching halves. Worn blades can be replaced without removal of the entire stalk roll or the trash knives.

Other brands of stalk rolls do not have the self-sharpening feature and hard-chrome plating. Both sides of the flute are plated. The edges wear at the same rate and tend to round off very quickly. Once the edges start to round, the aggressiveness of the flutes decreases. The 40 Series corn head came standard with tapered, fluted, stock rolls. The knife stalk rolls were designed for the 90 Series Corn Head but will retrofit to the 40 Series Corn Head. New trash knives must be installed. All flutes are hard-faced for long wear life. The straight fluted stalk rolls are not recommended for use on the 40 Series Corn Heads.

John Deere knife stalk rolls are self-sharpening. The tungsten carbide applied to the leading edge of the knife wears at a slower rate than the heat-treated trailing edge. The tungsten coating on the face chips off and maintains a sharp edge as the trailing edge wears. All blades are heat-treated for long wear life.

Knives have tungsten carbide coating for longer wear life. Knife rolls size stalks to enable faster residue breakdown and promote earlier soil warm-up.
Efficient corn harvesting depends on the strength and capacity of the corn head gatherer chain. The gatherer chain acts as a conveyor system to move the ears into the auger. Embossments in the sidebars and the flight lugs of the chain protect the connecting pinheads. Without these raised areas, the connecting pinheads would be exposed to excessive wear, resulting in premature chain failure.

The face of each flight is extended down to create a lip between the sidebars. The lip prevents debris from collecting at the roller, and reduces drag and wear to the chain and sprockets. The flight face slants at a 15-degree angle away from the roller chain. This slight angle creates a self-cleaning effect as the flight moves the ears toward the auger. Every element of the chain—pins, bushings, flights, roller, and sidebars—is heat-treated for strength and long life. Special lubricant penetrates each unit of the gatherer chain, reducing friction wear and providing smooth operation.

The gatherer chain is available with chromed pins. The chromed pins increase the wear life of the chain by 50 percent. Gatherer chain with chromed pins is standard equipment on the 90 Series Corn Head, and will retrofit to the 40 Series Corn Head.

Gatherer chains are considered worn if they have reached the point where no adjustment can be made to tighten the chain.

In extreme high-trash conditions, should material build-up be encountered, it is recommended that the gathering chain paddles be installed. The bundle contains paddles for installing on the gathering chain of the center two row units and provides more surface area to the gathering chain lugs to improve their conveying capacity in high trash harvesting conditions.

The gathering chain paddles can also be used on all prior corn heads to help relieve the material build-up in the center row units that can occur in very dry, high-trash harvesting conditions.

**Note:** Gathering chain paddles are a wear item. Wear life will generally last only one season. The actual wear life will depend on the crop condition, yield, and amount of acreage harvested. The gathering chain paddles are not a warranty item.
Customers who want hydraulically adjustable deck plates on their 40 Series Corn Heads now have that option.

A conversion kit allows you to order a hydraulic deck plate bundle for 90 Series Corn Heads and retrofit it to a 40 Series Corn Head.

The conversion kit contains a template (A), center punch (B), and installation instructions.

Note: When ordering parts for hydraulic deck plate conversion, select the bundle for the 90 Series Corn Head that corresponds to the customer’s 40 Series Corn Head model. Then order parts below for each row-unit.

Applications

Note: Combine must be equipped with reel fore/aft hydraulic adjustment option in order to operate hydraulic deck plates.

The hydraulic deck plate indicator is located in the VisionTrak™ display of the ComandTouch™ cornerpost.

- Permits operators to easily view where the deck plates are positioned within the range of adjustment
- A mechanical indicator is available as a field installed attachment for use with 10 Series and 9000 Series Combines

Note: For use on combines equipped with fore- and-aft reel adjustment option only.
Customers can replace the dented, rusted, or worn-out steel fenders and points on their 40 Series Corn Head with Perma-Glide polyethylene replacement parts.

Perma-Glide points cost approximately 25 percent less than steel and weigh 30 percent less.

The points, center covers, and fenders are made of roto-molded, green polyethylene with a hollow-body structure. They won’t rust and never need painting.

The smooth, low profile improves feeding of down or lodged stalks. Poly points dampen ear bounce and reduce potential ear loss. Perma-Glide points fit better and are easier to adjust than competitors’ poly points. Remove a single lock pin and lift the center cover for easy service.

Perma-Glide fenders replace early model “high tin” or later model “low tin” fenders.

### Trash Knife Kit

**Part numbers:**
AH211791 — for tapered stalk rolls
AH211792 — for straight-fluted or knife stalk rolls

**Application:** 40 and 90 Series Corn Heads

Prevent grass and other trash from wrapping on the stalk rolls. Kits include right- and left-hand trash knives — packaged in a convenient kit, and priced up to 27 percent less than purchasing the parts individually. Each kit includes hardware for both 40 and 90 Series Corn Heads and instructions.

### Corn Head Row-Unit Slip Clutch

**Part number:** AH146250

**Application:** 40 and 90 Series Corn Heads

Provides ultimate protection in the most demanding conditions with the corn head row unit slip clutch. This pre-assembled slip clutch reduces repair time, and costs up to 38 percent less than purchasing the individual parts.
The shoe on the Perma-Glide point has a smaller, smoother profile than competitive shoes. This cast-iron shoe also adds just enough weight to keep the point from riding over heavy, thick weeds. Competitive shoes are plastic and therefore weigh less and may allow the point to ride over weeds.

Installation of the points is simple and easy. All required mounting brackets and hardware are provided except for high-tin fenders, up to PIN 38060.

### Part number Description
AH159908 Center point (28- and 30-in. rows)
AH159909 Center deck (28- and 38-in. rows)
AH166222 Center point (36- and 38-in. rows)
AH166221 Center deck (36- and 38-in. rows)
AH159910 Right-hand fender
AH159911 Left-hand fender
AH159912 Outer point

For those 40 Series Corn Heads, up to PIN 380600, additional parts will be required for the right-hand and left-hand fenders. See below.

### Additional parts required for left-hand fenders.

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<tr>
<th>Part number</th>
<th>Description</th>
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<tbody>
<tr>
<td>E50102</td>
<td>3/8-in. locknut</td>
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<td>H101253</td>
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<td>strap</td>
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<td>3/8 x 1-1/4-in. GGE</td>
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<td>24H1308</td>
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</table>

To prevent possible injury due to entanglement in exposed drives, DO NOT install Perma-Glide fender assemblies on 243, 244, 343, or 344 Corn Heads. Outer sheet metal skirts (wheel shields) providing drive protection on the right-hand end of these machines will not attach to the Perma-Glide fenders.

### Reflective Shoe Cover

John Deere has improved the composite shoe cover with an embedded reflective strip in the top of the cover, and simplified the installation to just snap on over the existing cast point, eliminating the need to remove the bolt.

- Bright yellow color and reflective strip added in the middle of the shoe provide better visibility in down corn, narrow rows, and during nighttime harvesting
- Help the operator keep close tabs on the level of the corn head
- Designed to create a smooth surface to prevent bunching of trash in damp or down corn conditions
• Additional value to your customer with this updated design – run longer with less fatigue. Reduced fatigue is a value you can sell, especially to your older customers.
• No tools are necessary to install the covers – just snap them on over the cast shoes

**Manage Corn Stalk Residue with StalkMaster**

StalkMaster, an integrated corn stalk chopper for 893 and 1291 Corn Heads, helps to reduce residue management costs, improve residue degradation, and improve next crop tillage or seeding performance. StalkMaster chops the stalks behind the row units and eliminates any need for second-pass chopping operations, saving fuel, labor, and additional tractor operation costs.

**IMPORTANT:** *StalkMaster requires more power than non-chopping corn heads; therefore it is recommended to use with the high-torque variable speed or high-torque fixed speed drive. Additionally, power requirements of the new StalkMaster will result in slower ground speeds compared to non-chopping corn heads if operating at power limit.*

**StalkMaster features:**
• Under each row is a robust gearbox unit, each with two rotary chopper knives rotating perpendicularly to the corn stalks
• Chopper speed changes with the variable speed feeder house drive, ranging from 2,200 rpm to 3,045 rpm
• For versatility, StalkMaster knives can be easily removed if chopping is not desired