



# Harvesters

(including combines)

HSB, a Munich Re company, is a technology-driven company built on a foundation of specialty insurance, engineering, and technology, all working together to drive innovation in a modern world.

## Equipment description

Harvesting equipment varies not only by type of crop, but also by intended use of the crop and the farmer's preference. Small grain crops such as corn, wheat, or soybeans, and other field crops like potatoes, cotton, and animal forage, often involve use of large and powerful harvesting equipment. Harvesting may be done using a tractor and drawbar equipment towed behind the tractor and may require the tractor power take-off. Large, high-powered, self-propelled harvesters and combines are also common. Simple forage harvesting involves cutting, chopping, discharging, gathering, and baling prior to transport to storage for later use as animal feed. Harvesting grain crops involves not only cutting, but also threshing (separating the grain from the chaff) and discharging the chaff back to the field. Grain harvesters are usually equipped with small storage and conveyor systems used to transfer the separated grain to trucks or large grain carts. Potato, cotton, and other crops use purpose-built harvesting equipment that operates in a similar manner to grain crop equipment.

Most harvesting equipment is built for a specific crop. The original equipment manufacturer (OEM) provides appropriate owner/operator application, operation, maintenance, and repair guidelines. Copies of OEM application, operation, inspection, maintenance, and repair guides are usually available at no charge from the OEM and the OEM website.

## Maintenance tips

- It is important to routinely replace worn components on a harvester or combine. Worn components can place increased strain on other parts and almost always result in poor equipment performance. Poorly functioning equipment can lead to reduced harvest yield.



- Wheel-spindles and bearings should be checked for proper lubrication prior to each use.
- All tires should be checked for proper inflation and condition prior to each use.
- Surface dirt and rust often hide more serious deterioration. All surfaces of the equipment should be periodically cleaned and inspected.
- Regularly clean straw and chaff deposits from the engine compartment and around belts and pulleys to reduce risk of fire.

### Failure/Loss prevention tips

- This type of equipment is almost always supported by wheels and tires. Wheel-spindles and bearings require proper lubrication to prevent severe wear and eventual failure. Spindle and bearing grease should be inspected and maintained at proper levels and cleanliness prior to each use.
- Operating tires underinflated will result in rapid wear and sidewall damage. All tires should be checked for proper inflation and surface condition prior to each use.
- Routinely remove rocks and other obstructions from the fields. Foreign objects (such as rocks and tramp metal) can result in breakage or damage to the cutting surfaces and cutting drivetrain.
- Electronics and GPS guidance systems tend to be more fragile than the mechanical systems. Keep these systems cool, clean, and dry, and keep the electrical connections tight. Overvoltage events will almost always damage electronics and control boards.

### Energy savings/Conservation tips

- Operate the combine or self-propelled harvesters at the recommended speed. The faster the equipment operates, the more fuel it uses.
- Ensure the harvester gas cap fits properly. Caps that are damaged, loose, or missing will cause fuel to vaporize resulting in increased fuel costs.

### Safety tips

- Use equipment in the manner described by the OEM in owner's manuals. Make sure all safety guards are in position and correctly fitted before starting work. Do not run the combine with the guards raised or removed.
- Combines and harvesters are bulky vehicles and may have obstructed operator vision to the rear of the equipment. Be particularly careful when driving in reverse. Sounding the horn before starting the engine or reversing can help alert others.
- Make sure that all original audible and visual warning annunciators are maintained in working condition.

