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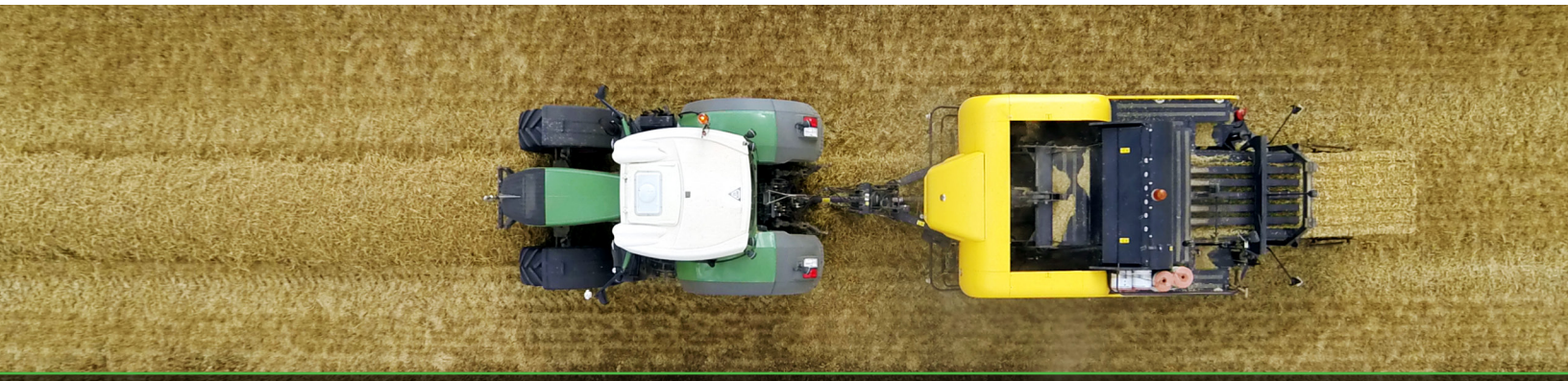

Baler

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

A baler is a farm machine that takes cut hay, straw, cotton, or other crops and forms them into large, compacted shapes to facilitate harvest. The dairy market wants large, round bales. The horse market wants small, square bales with fresh green looks and smell. The cattle and beef markets want large, round bales of varying qualities. The two main types of bailers are square and round balers. Square balers are used for small, rectangular bales that weigh 40 to 70 pounds each. The square baler picks up pre-cut crop from a windrow and feeds it into the bale chamber where it is cut again, compacted, tied, and discharged out the back of the machine. Round balers pick up the crop from the field and wrap the crop on itself in a cylindrical form using belts or rollers. As more crop is fed into the baler, the bale grows until its maximum size is reached. It is then discharged onto the field as a large, round bale. Balers are commonly powered by the power take-off but may be engine-driven. Some balers are hydraulic or electric motor-powered. The best source of information for applications, operation, and maintenance of a baler is the owner's manual provided by the original equipment manufacturer (OEM). If these manuals are lost or destroyed, free replacements can usually be obtained from the OEM. Many OEM websites have versions that can be downloaded for quick access or printing.

Maintenance tips

- At the end of the season, blow the baler clean with compressed air. Lightly oil the pickup and bale throat to minimize rust.
- Grease the bearings and bushings according to manufacturer's recommendations.
- Check belts, chains and sprockets for wear. Replace them as needed.

Failure/loss prevention tips

- Hitting foreign objects is a primary cause of baler failure. When windrowing, avoid large stones and stumps to prevent damage to the baler. Not only are repairs expensive, but baler failures during peak harvest season can cause unrecoverable downtime.
- Replace round baler belts when worn. Worn baler belts can result in slower feed rates, damage belt fasteners, and affect the belt tracking and roll quality.
- Baler drive-chains need proper tensioning and lubrication. Lubrication keeps grit from prematurely damaging chain pins and bushings.
- Chains stretch over time and should be replaced when wear is excessive. Stretched chains cause premature wear to drive sprockets.
- Bearings and universal joints need regular inspection, lubrication, and replacement when worn. A failed or seized bearing on a baler can result in collateral damage to other equipment parts. Replace bearings that show dryness from lubrication "wash-out", excessive play, or corrosion.
- Inspect hydraulic hoses and fittings for dry rot, cracks, and leaks. Hydraulic hoses operate under very high pressure. A burst hose cannot only cause baler failure, but also injury from sudden, unexpected equipment movement and spraying of hot, high-pressure oil.
- Inspect hose fittings for leaks, and tighten loose connections. Replace worn, leaky, and corroded fittings with new ones.
- Tighten loose hardware and replace broken or missing parts. Hardware can loosen from constant vibration.

Energy savings/conservation tips

- Tractor fuel is the primary energy used in the baling operation. Saving tractor fuel will save on energy costs.
- Minimize the number of passes on the crop field. Fewer trips across field will save fuel.

Safety tips

- Every year, hundreds of farm workers suffer amputations, loss of skin and tissue, and other bodily injuries from being pulled into hay balers. The intake area is the most dangerous because operators fail to perceive the speed and power of the machine. Never attempt to clear or push crop into the baler with your hand or foot. Turn off the tractor and the baler, and wait for flywheels to stop spinning before performing work on baler.
- Injuries also occur when the operator gets caught in the pick-up mechanism while trying to unplug the machine or hand-feed twine or hay into the baler.
- Since the baling equipment could be used infrequently, review the OEM manuals again to clarify any questions related to the baler operation and controls. Never attempt to stop a rolling, runaway, round bale.
- When transporting large, round bales with a front-end loader, always use a grapple hook. The grapple hook will prevent the bale from rolling back onto the loader arms.
- A rear-mounted loading spike is ideal because it eliminates the danger of roll-back and it does not block the operator's forward vision. Insert the spike into the centre of the bale for maximum control.

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