



SAFETY CHECKLIST FOR USED MACHINERY SELECTION

The operator of even the best equipped farm or ranch sometimes finds it necessary to make use of older machinery. These machines may be brought out of "retirement," borrowed or purchased to fill a need. If the need is temporary or experimental, purchase of a new machine may be uneconomic.

In addition to the "retired" implement from the home place, used equipment can be acquired from auctions, dealers and private sales. No matter where it's coming from, the used machine needs a good going over to determine its ability to do its job safely and well.

Farm Machinery Incidents vs. Age of Machine

Equipment can "age" in years, and from the amount of use it has been given and the care provided. The relationship between age and implication in incidents cannot be verified from statistics available to the National Safety Council. However, case history reports from newspaper clippings and other informal sources seem to incriminate old or worn-out machines as being involved in more than their share of incidents. Inability of the implement to cope with the job may cause clogging, drive slippage or frequent breakdown. These problems greatly increase the exposure of the operator to incident hazards.

While deciding on whether or not to use older equipment, bear in mind that features common to new machines may be lacking and capacity may be lower than you expect. Shields that you take for granted on new equipment might not have been supplied for the older models.

Used Machinery Checklist

The following checklist can be used to go over a machine to determine if it should or should not be purchased or returned to service if brought out of retirement.

General Considerations

Circle One

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|------------|-----------|---|
| Yes | No | Will the machine's size and capacity meet your needs? |
| Yes | No | Are parts available if needed to bring the machine back into serviceable condition and keep it running? |
| Yes | No | Are all the original guards and shields securely in place? |
| Yes | No | Can a missing shielding be obtained or fabricated? |
| Yes | No | Are hydraulic lines sound and free of cracks, bulges and make-shift repairs? |
| Yes | No | Are drive belts and chains serviceable? |
| Yes | No | Have previously broken components been adequately repaired? |
| Yes | No | Are warning decals readable? |

Tractors

Circle One

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| Yes | No | Are lights, reflectors and the slow-moving vehicle (SMV) emblem functional or easily repaired? |
| Yes | No | Is the tractor equipped with a manufacturer certified roll-over protective (ROPS) cab or frame? |
| Yes | No | If not, can a protective cab or frame be retrofitted to that particular tractor? |
| Yes | No | Are steps and hand-holds in place and in good condition? |
| Yes | No | Is the hydraulic system leak-free and in operable condition? |
| Yes | No | Are fuel lines and their connections in good condition? |
| Yes | No | Does the fuel tank filler cap fit properly and is the pressure vent open? |
| Yes | No | Is the power-take-off (PTO) master shield in place? |
| Yes | No | If the PTO master shield is the moveable type, can it be moved by hand without tools? |
| Yes | No | Is the exhaust system sound and leak-free? |
| Yes | No | Will the operator need acoustic ear muffs or plugs to protect his/her hearing from excessive noise? |
| Yes | No | Are cooling system components leak-free and in good condition? |
| Yes | No | Are brakes, steering, clutch, transmission, starter-transmission safety interlock and, if so equipped, the park-position lock all in good working order? |
| Yes | No | Is the electrical system functional and free of excessive corrosion and worn wires? |
| Yes | No | Does the engine hour-meter work and does it show a reasonable or acceptable number of hours of use? |
| Yes | No | If the hour-meter does not work, do you have a reliable indication of previous use? |
| Yes | No | Is the tractor's PTO speed OK for the equipment it will power? |
| Yes | No | Will the tires do the job for you? |

- Yes No** Do you have or can the proper ballast be acquired for the jobs the tractor will be doing?
- Yes No** Will the hitch handle heavy loads without risk of failure?
- Yes No** Is the seat comfortable and convenient for the intended operator?
- Yes No** Is the tractor free of non-standard accessories, such as an add-on power steering system, that might affect operation?

Tillage and Planting Equipment

Circle One

- Yes No** Are hydraulic lines free of damage, worn spots, bulges or poorly connected fittings that could rupture?
- Yes No** Is the hitch compatible with the tractor that will be used?
- Yes No** Are the frame and hitch in proper alignment and in good repair?
- Yes No** Can heavy components lifted by hydraulics be locked into position for servicing and transport?
- Yes No** Are drive-lines of powered implements equipped with shielding in working order?
- Yes No** If not, can replacement shielding be obtained?
- Yes No** Can tripped break-away components be reset easily?
- Yes No** Are tires serviceable for a reasonably useful life?
- Yes No** Are bearings and other moving parts "free?"

Harvesting and Crop Processing Equipment

Circle One

- Yes No** Will the machine handle expected crop yields and field conditions?
- Yes No** Are power drive-lines equipped with shielding in working order?
- Yes No** Are all original guards serviceable and in place?
- Yes No** If any shields or guards are missing or damaged, can replacements be obtained or fabricated?
- Yes No** Are gathering and cutting parts in good enough condition to work without slipping, clogging or scattering the crop?
- Yes No** Are reciprocating and rotating parts properly attached?
- Yes No** Are key warning decals readable?
- Yes No** Are chain and belt drives in good enough condition to operate without undo chance of breakdown under load?
- Yes No** Can drives still be adjusted for proper tension and for replacement?
- Yes No** Are all hydraulic lines in good condition?
- Yes No** If heavy components are lifted by hydraulics, can they be locked into position for servicing or transport?
- Yes No** Will all non-sealed bearings accept lubrication to prevent breakdown?
- Yes No** Is the machine free of torn or jagged sheet metal that could scratch or cut a worker?
- Yes No** Does the engine on a self-powered or self-propelled unit start easily and run smoothly, with fuel, electrical, cooling and exhaust systems in good working order?
- Yes No** Does the drive system of a self-propelled machine shift easily and run smoothly?
- Yes No** Do brakes, steering and other controls work properly?
- Yes No** Are lights, reflectors and SMV emblem functional or easily repaired?

Making the Decision

The points mentioned above are not all-inclusive and may not cover aspects of machinery management that do not impact directly on operator safety. But, after going through this checklist, you should have a good idea of what will be needed to bring the machine under study to a reasonably safe condition, thereby making it practical to consider for use.

Don't forget operator training as even an experienced worker may not have used a machine like the one you are bringing on board. The original operator's manual is the best place to start. Most manufacturers can provide the manual even though the one that came with the machine is long lost. Also, a neighbor with a similar machine may have the manual on file that you could copy.

Missing or illegible decals should be replaced. Talk to your dealer about this. Finally, keep a "close eye" on the used machine as it goes back into service. Expect additional adjustments to be needed as its components loosen up.

Information and recommendations are compiled from sources believed to be reliable. The National Safety Council makes no guarantee as to and assumes no responsibility for the correctness, sufficiency or completeness of such information or recommendations. Other or additional safety measures may be required under particular circumstances.