

# Reducing or Eliminating the Hassle of Attaching/Detaching Implements and Trailers

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## Situation

For many growers, farmers and farm workers in Maine, the task of efficiently connecting to a farm implement or trailer, from the tractor or truck seat, can be frustrating. The difficulty of attaching may be due to poor visibility, bad weather conditions, equipment design, worker strength limitations, or lack of skill.

## Possible Solutions

The designers of equipment have realized this problem and have come up with several options as possible solutions. The solutions include an easy

hook-up design with quick connectors, telescoping lower arms of the three-point hitch, telescoping tongues, and back up cameras. You might be saying to yourself at this point, “My tractor and equipment are too old. There’s nothing I can do about it”. You are likely mistaken. Here is a list of options that you might want to consider.

## Quick Connectors

Quick connectors or quick hitches make for easy attachment. The tractor operator simply backs up to the implement, lowers the arms of the 3-point hitch to match the implement. The operator then lifts the lower arms and locks the implement into place. However, there are limitations.

## Considerations

When purchasing or renting implements, consider the category of your equipment. The category relates to the horsepower (HP) of the tractor and is the diameter of the pins and holes (balls) into which the pins fit. When selecting and using a quick hitch, the pins and holes need to match. A bushing (or sleeve) can be used to adapt pins or holes. In general, the categories for most farm equipment in the US are categories I and II. However, Category 0 and



Typical quick connector system

Category III tractors also exist. Their measurements are as follows:

- Category 0 (for small tractors under 20 HP) – all links are 5/8" diameter
- Category I (for tractors ranging from 20-45 HP) – top link of 3-point hitch 3/4"; lower link 7/8" diameter
- Category II (for tractors ranging from 40-100 HP) – top link of 3-point hitch 1"; lower link 1 1/8" diameter
- Category III (for tractors over 80 HP) – top link of 3-point hitch 1 1/4"; lower link 1 7/16" diameter

Some tractor models have swivel balls in the lower arms of the three-point hitch. The balls can be swiveled to a Category I or II size. Other models may have balls in the lower arms that can be removed and changed to the desired size.

Some lower arms the three-point hitch systems have a telescoping design, making it easier to connect to the implement. Make sure the lower arms lock into place after connecting the implement and before moving or using the implement.

With quick hitches, there may be a need for the driveshaft to be shortened or lengthened based on the new depth of the hitch. This may require purchasing a different driveshaft of the proper

length. Check with your local equipment dealer for their advice and recommendations.

## Disconnecting

Quick hitches also make for easy disconnecting. When disconnecting an implement, locate a level area for placement. Disconnecting implements with this method will make it easier to reconnect them to the tractor. Plan ahead and place implements in areas that are easy to access. Many farmers have a concrete pad or designated outdoor area on which equipment is placed or an equipment storage structure to help prolong the life of farm equipment. Always use the proper jack(s) and trigs to prevent tipping of implements. If an implement is not working or needs repair, use a lock-out tag to warn other workers.

## Telescoping Hitches on Trailer Tongues

When using a telescoping hitch, back up in the vicinity of the tongue. Release and extend the tongue to the draw bar and connect with the pin. Clip the pin in place for safety. Back up the farm tractor to lock the tongue in place. Check to make sure the telescoping tongue is locked into place. Most telescoping tongues have a safety feature that prevents the parts from completely separating.

### Quick Hitch

Quick Hitches fit to a specific width. Not all implements work with quick hitches. A top link mount may not fit correctly. When purchasing or borrowing implements, try to obtain those that are quick hitch compatible.

Common farm implements that accept or could be fitted for a quick hitch include the following:

- rotary mower (bush or brush hog)
- moldboard plow
- cultivator (rotovator)
- chipper (3-point hitch)
- ballast weight
- York rake
- flail mower
- disc harrow
- poly hopper (fertilizer spreader)
- sprayer
- pallet fork
- scraper blade
- round bale grinder
- bale wrapper



Telescoping tongue in the retracted (locked) position



Extended telescoping tongue for easy connecting

## Back-up Cameras

- Back up cameras can be purchased from a tractor dealer or auto parts stores. Camera kits come with a camera and a small monitor. Connect the wires to the backup lights on the tractor or truck, and mount the monitor in a convenient location such as a fender or cab frame of the tractor, on the windshield with a suction cup attachment, or the dashboard or center console of the truck.
- Check with your local farm tractor & equipment dealer for back-up camera availability and price for your specific tractor(s). If necessary, consider other options from auto parts retailers or from suppliers online.
- For tractors without a cab, you may need to remove the monitor or protect it from the elements when not in use.
- In addition to a backup camera, a regular camera system can be installed in a tractor to monitor rear implements at work. This could prove useful with implements such as balers and harvesters.

## Next Steps

- Visit your local farm equipment dealer to research what is available for your tractor(s) and implements in terms of quick-hitches, telescoping tongues and back up cameras.

- Search online for possible options for quick-hitches, telescoping tongues and back up cameras. Include images and videos in your search. Include your tractor make and model or your implement make and model in your search.

## Safety Reminders

- Always shut off the equipment when you leave the operator's station and when someone is attaching or working between the vehicle and implement.
- Never allow a person to stand in between the vehicle (tractor, 4-wheeler, or truck) and the implement to be attached in the connecting process. This is unsafe! They can be seriously injured or killed with one small mistake by the driver or the worker themselves.
- Always use properly sized pins with clips for all implements. Clips are an inexpensive insurance policy that prevent the pins from bouncing out and losing an implement while in transit. Have extra pins available.
- Always use a safety chain on pulled implements in addition to pins and clips when traveling on public roads.
- Always use the proper driveshaft for the implement to be used. Check the operator's manual for the proper driveshaft. Your local

equipment dealer can also provide this information. The factors you want to consider include proper length (shortness or lengthening), size, safety guard (shield), and condition. Never use a mismatched driveshaft on an implement. Doing so could create a hazardous situation.

- A work light on the back of a tractor can prove useful when attaching and detaching implements, especially inside poorly lit areas and at night. If a work light is not a part of your tractor, a portable work light on a stand and placed beside the connecting site could prove beneficial.

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