

1.0 SCOPE

This unit must be the most current advertised production model as modified per specifications and approved by MnDOT furnished with all standard equipment advertised whether or not specifically called for here except where the item is replaced by optional over standard equipment or conflicting equipment is specified. The unit must be complete with all equipment required and ready for immediate operation to function as listed below and the unit must meet applicable codes and standards. All cranes must be vehicle mounted, and be: articulating, overhead rail style, telescoping or stick and forestry style and can have hydraulic or manual boom and outrigger functions.

2.0 CRANE REQUIREMENTS

- 2.1 Cranes offered must be intended for ½ ton trucks/vans through class 8 trucks.
- 2.2 Cranes must be the type that are mounted to truck chassis frame rails, bed-mounted or mounted to toolboxes, boxes on or in a utility body.
- 2.3 Rotating cranes must include 180° of stability minimum, if needed via outriggers with independent hydraulic functions offered as an option.
- 2.4 360° of stability via a front outrigger must be offered as an option where appropriate.
- 2.5 Base unit crane must be hydraulically powered via chassis engine with cruise/PTO, two speed engine idle, 12 volt motor or manual pump/winch. The base unit must include all items to make the crane fully functional in; i.e. Pumps, motors, hydraulic lines, battery cables, manual winches etc. PTO driven systems must be able to be turned on and off electrically (or electric over air) by a manual switch on the dash or by the chassis manufactures programmable switching.
- 2.6 Responders may want to offer as an option in section of pricing page: a two section tandem pump for powering augers and other attachments, hot shift for Allison New World Transmission, cable throttle control for engines without cruise or two speed idle, and other non-transmission drive systems, as a separate option.
- 2.7 Additional options offered should be die electric coated and heat shrunk electric connection and systems to allow the crane and other options such as a compressor to be run at the same time.
- 2.8 For the cranes that may be able to be extended over 11 feet 6 inches from the ground a additional out of the stowed crane position warning system when truck is not in neutral should be included as a option. Light and alarm should be included in the system price on the pricing sheets.
- 2.9 Crane controls must have wired remote or a wireless control offered as an option if applicable. Offer the wireless controller system as an option and also a replacement/extra controller as an option if a wireless system is available. List the optional control circuits the standard wireless remote controls on the price pages, and the cost for the added control circuits.
- 2.10 If an aftermarket throttle kit is required to achieve two speed control, it should be offered as an option.
- 2.11 Cranes must include capacity overload audible alert/load sensor where applicable.
- 2.12 Control valves must have main system relief section to prevent pump, cylinder and hose damage.
- 2.13 All boom lift cylinders must have pilot operating holding valve or counter balance valves and internal safety relief valves.
- 2.14 All boom extension cylinders must be double-acting and have pilot operating holding valve or counter balance valves and internal safety relief valves were they are required.
- 2.15 Cranes with non-manual winches or winch options must also include damage prevention device with winch options where applicable.
- 2.16 Cranes must be complete, installed and fully functional at time of delivery, including all modifications to truck to accomplish installation. If there are additional costs for installing fully hydraulic articulating cranes associated with different model trucks, like International and Freightliner or for different transmissions like Allison and manual transmission, list them on the pricing page for that model crane or in the crane options section if required for more than one model.
- 2.17 Factory standard paint color is acceptable but the paint is to be lead free.
- 2.18 Each crane must include one set of operator, parts and service/repair manuals.
- 2.19 Cranes must comply with the most current version of the OSHA and ANSI Standards. Contract Vendor to ensure equipment meets all current federal and Minnesota laws and codes.
- 2.20 The Contract Vendor or Contract Vendor's rep must provide training on use and maintenance of crane before payment will be made.

- 2.21 When offering options, such as but not limited to remote controls, winches, augers, etc., price must include everything needed so unit is complete, installed and ready to use by the operator. Tandem pumps, hose reels and other items for powering some of these options may be offered as a separate item.
- 2.22 The Contract Vendor must furnish a standard manufacturer's warranty. This warranty must commence when the unit is put into service. The responder must state warranty for all items requested on the pricing page.
- 2.23 Attachments are to be items such as augers, grapples, clams, post pounders, Man Baskets, etc. Hand held Items such as impact wrenches & ratchets will not be allowed on this contract