



MISSOURI DEPARTMENT OF TRANSPORTATION
7' CUT ROTARY MOWER

GENERAL - The intent and purpose of this specification is to establish minimum quality, safety and performance standards for heavy-duty 3 point hitch type, P.T.O. driven 7-foot rotary mower. The purpose of this specification is to specify a mower engineered and designed that will assure Highway right-of-way mowing with a minimum amount of down time. Parts and service availability must be within 24 hour of contact.

DRIVE - The mower shall be gear driven with power transmitted directly from tractor P.T.O. The output shaft of gear-box shall be the spindle for the blade carrier assembly. The tractor yoke of the main driveshaft shall have a spring tension lock coupler for quick attachment to the tractor P.T.O. shaft. Driveline shall have a three-year warranty. A copy of the warranty must be included in your bid.

GEAR BOX ASSEMBLY - Gears shall be of forged heat treated steel running on lubricated bearings, completely enclosed in malleable or steel housing. Gear box shall be reinforced base mounted type. Gearbox bolts must have the capability of being retightened from the topside. All lubrication areas will be of easy access. Gear box will have a three year warranty. A copy of the warranty must be included in your bid. The gear box shall be the manufactures premium model; engineered, rated at minimum of 70 HP by the gear box manufacture in their standard engineer/sales data.

BLADE ROTATION - As viewed from above the deck, facing the tractor, the blade shall turn counter clockwise .

DRIVE LINES AND U-JOINTS - All U-Joints will be equipped with neoprene seals and needle bearings. P.T.O. drive lines shall have heavy duty four disk type and quick disconnect slip clutches. Drive line gear box will be a minimum 35R size and type (ASAE Category 4, 46 HP at 540 RPM) size. Power take-off shaft and driveline shall be of one brand manufacture. Driveline will allow a smooth transfer of torque during all modes and angles of operation of the mower. All universal joints shall be equipped with grease zerks. All universal joints and driveshafts shall be completely covered with a non-rotating shield in compliance with OSHA regulations.

STRUCTURAL - Deck minimum of 7 gauge steel and reinforced with 7 gauge steel to maintain integrity. Band or skirt will be 1/4" thickness rolled I beam sides with a minimum depth of 10 1/2" welded to the deck with a continuous weld. An under deck ring, 1/2" thick by 3" high by 48" in diameter, rolled from a continuous piece of flat steel shall be continuously welded, perpendicular to the bottom of the mower's deck. The ring shall be positioned so a blade would contact it just behind the blade cutting edge. The deck ring will provide reinforcement and protection of the deck.

BLADES AND RUNNERS - The blades shall be heavy-duty 1/2" x 3 1/2" SAE 5160 chrome steel suction type with breakaway feature. Blades may have a maximum 3" drop. Blades will be mounted with replaceable minimum 1 1/8" UNF hardened blade bolts with 1 1/2" blade wear surface. The gear box spindle shall be equipped with heavily reinforced round dish (stump jumper) blade carrier. Carrier will be a dish shaped minimum 7 gauge steel stamping with a minimum 30" diameter and 2 3/4" side height. When installed the top lip of dish shall be no more than 4" from the bottom of the deck. The blade carrier shall be dynamically balanced to minimize vibration. Replaceable, hard faced, skid shoes shall be provided to protect the leading edge of the mowersides.

CUTTING HEIGHT - Adjustable from 4" - 12".

WHEELS, AXLES AND SUSPENSIONS - The mower shall be equipped with one tail wheel for 3 point hitch. Wheel hub will be heavy duty cast type with grease zerk. Tire shall be a laminated type puncture proof tire .

HITCH - Hitch shall be a heavy-duty category one 3 point type. Hitch shall have 3 braces welded on both sides of hitch (total of 6 braces) and to the mower deck.

SAFETY - All guards and shields will meet SAEJ232 requirements. The mower shall have 3/8" safety chain guards to protect the area surrounding the mower from flying objects. A minimum 3/16" high strength aircraft cable shall be interlaced through the second to the lowest chain link.

COLOR - Color to be manufacturer's standard over a prime coat.



NOTE: Complete unit must be manufactured in accordance with the latest adopted OSHA or SAE Standards and amendments thereto.

The Missouri Highways and Transportation Commission reserves the right to waive technicalities and to reject any or all bids and no bid is final until formally accepted by the Commission.