

Mixers and Spreaders



TRUCK MOUNTING

TECHNICAL SPECIFICATIONS



Invest in Quality®

A WIDE SELECTION OF TRUCK MOUNT MACHINES

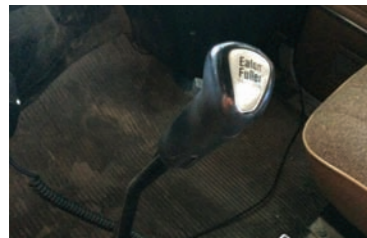


As the worldwide leader in spreading and mixing technology, Kuhn North America offers a complete line of 27 models of mixers and spreaders for truck mounting. Spreaders available for truck mounting include ProTwin® Slinger® side-discharge spreaders and the ProSpread® Commercial apron box spreaders, ranging in capacity from 242 cubic feet all the way up to 810 cubic feet. TMR mixers available for truck mounting include Vertical Maxx® twin-auger models, Reel Auggie®, Reel Commercial and Botec® four-auger models, ranging in capacity from 216 to 1,200 cubic feet. One delivery box model, the ProFeed 70110, is also available and has a capacity of 1,100 cubic feet. For proper operation, it is crucial that each of these machines is paired to the proper truck. This will allow each mixer and spreader to meet our high standards for quality performance and long life.



CHOOSING THE PROPER DRIVETRAIN

POWER BY THE NUMBERS



MANUAL TRANSMISSION

Most manual transmissions offer one or two gears that are low enough to achieve proper ground speed saving the expense of an additional gear reduction. A downside to a manual transmission, however, is that the PTO disengages when the clutch is depressed. This restricts PTO use to operations where the transmission will not be shifted.



AUTOMATED MANUAL TRANSMISSION

An automated manual transmission combines the ease of use of a fully automatic with the lower gearing of a manual transmission. These transmissions generally are more expensive, however the cost savings for not having to add an auxiliary transmission can make them competitively priced.



AUTOMATIC TRANSMISSION

Automatic transmissions eliminate the need to manually shift gears providing more user-friendly operation. Due to the size, weight and use of truck-mounted machines, automatic transmissions may require modifications such as an additional gear reduction to operate at an acceptable speed for unloading.



OPTIONAL AUXILIARY TRANSMISSION

An additional auxiliary transmission can be paired with any transmission to further reduce gearing and ground speed. This gearbox can be supplied in ratios of 2:1, 3.25:1, 4:1, 5:1 to provide ultra-low ground speeds that are preferred for many truck mount applications. The auxiliary transmission does disengage to allow the truck to operate at road speeds when necessary.



REAR DIFFERENTIAL GEARING

When selecting a truck to mount a mixer or spreader we recommend the lowest rear end gearing available. This improves functionality by reducing ground speed and may open up options for other higher geared transmissions.



OVERALL REDUCTION CALCULATION

[First Gear Ratio] × [Auxiliary Low Range Ratio] × [Rear End Ratio]

Example: 3500 RDS Allison Transmission

First Gear: 4.59

Auxiliary Low Range Ratio: 3.25:1

Rear Axle Ratio: 5.38

$4.59 \times 3.25 \times 5.38 = 80.3$ Overall Reduction

Greater reduction may be required in certain applications to reach even lower ground speeds.

GROUND SPEED CALCULATION

[Engine RPM] ÷ [Overall Reduction] × [60] ÷ [Tire Revolutions/Mile]

Example:

Mechanical Drive: 1750 RPM

Hydrostatic Drive: 2000 RPM

Overall Reduction: 80.3

Multiplier to convert RPM to mph: 60

Tire Revolutions/Mile: 496 (based on 11R 22.5 tire)

Mechanical Drive:

$(1750 \div 80.3) \times (60 \div 496) = 2.6$ mph

Hydrostatic Drive:

$(2000 \div 80.3) \times (60 \div 496) = 3.0$ mph

Without the 3.25:1 auxiliary transmission, this truck would have a ground speed of 8.6 mph at 1750 RPM or 9.8 mph at 2000 RPM.

MINIMUM RECOMMENDATIONS

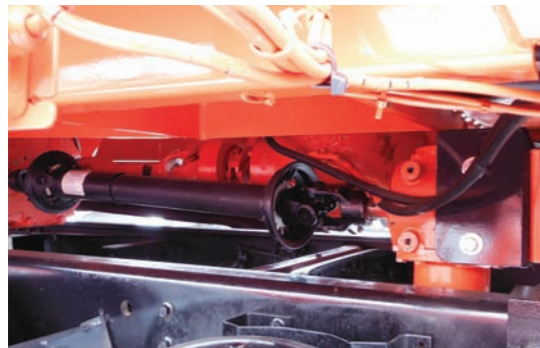
Machine	Ground Speed	1st Gear Ratio	Rear Axle Ratio	Overall Reduction
Mixers	2-3 mph	8:1	7:1	60:1-100:1*
Spreaders	3-6 mph	8:1	6:1	50:1

* Requirements may vary based on your feeding operation.

DRIVE SELECTION FOR MAXIMUM PERFORMANCE

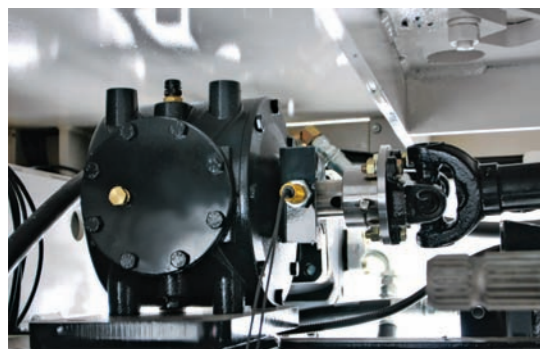


OPTIMIZING TRUCK CHASSIS SETUP



MECHANICAL DRIVE

Because mechanical-driven machines receive their power from the transmission, it's important that the transmission selected has the capacity to operate the PTO at the proper torque, speed, and direction of rotation. Mechanical drive systems cost less and have a number of different driveline options but are slightly less versatile than hydrostatic drives. They also cannot handle the startup torque of some of the largest Kuhn Knight mixers and spreaders.



HYDROSTATIC DRIVE

When incorporating a hydrostatic drive, the truck must be equipped with an engine PTO accessory in either the front (FEPTO) or rear (REPTO). The truck must also have bucket seats as opposed to bench seats to allow room for the control pedestal. Hydrostatic drives are more versatile with the mixer speed independent of the ground speed. A front-mounted hydrostatic pump powered by a FEPTO will require a truck with an extended front bumper, which may be done after-market or ordered stock from the truck manufacturer.



SELECTING THE RIGHT PTO

To properly order the correct PTO for a mechanical drive, it is important to know the make and model of your transmission as well as the number of transmission speeds. It is also helpful to know the year, make, model and engine of the truck.

DRIVELINE ANGLE

The driveline angle is critical for both mechanical and hydrostatic drive options. An improper angle may result in poor operation and decreased component life. We recommend a driveline angle in the range of 1-8 degrees for best performance.



FRAME MODIFICATION

Selecting the proper truck frame for mounting a mixer or spreader is critical. For small- to medium-sized models, a single C frame may be sufficient. On larger units, a double C frame is necessary to ensure proper support. Frame length is also very important. To ensure a proper fit, the frame may need to be stretched. When extending the frame, a minimum of three feet overlap between sections is required to ensure frame integrity.



WHEELBASE MODIFICATION

To optimize weight distribution and achieve proper driveline clearance it may be necessary to adjust axle position.



SUSPENSION MODIFICATION

To meet suspension requirements, modification to the front and/or rear spring packs may be necessary. Even with the upgraded suspension, the axles still must not be loaded beyond their rating. Additional modification may also be necessary for some reel mixers due to the weight and position of the augers.

KNOWING THE RATINGS



GROSS VEHICLE WEIGHT RATING

The maximum weight of a vehicle is specified by the manufacturer as gross vehicle weight rating (GVWR). This measurement refers to the weight of all truck components as well as the load applied. To ensure that your mixer or spreader has proper support, it is important to be mindful of the GVWR when purchasing your truck.



AXLE RATING

The maximum operating weight of each axle of a vehicle is specified by the manufacturer. Be sure to account for all possible uses and applications of your truck before choosing your chassis. It is crucial that you never load an axle beyond the manufacturer's axle rating.



SINGLE AXLE VS. TANDEM AXLE

For smaller, lower weight machines that handle smaller volumes, a single axle chassis is generally recommended. Single axles provide a tighter turning radius and cost less, saving you time and money. Larger units used for heavier loads often require a tandem axle configuration in order to meet the minimum weight requirements. They offer better flotation and sturdy support in these applications.



OUTSTANDING RELIABILITY & PERFORMANCE



FEEDLOT CORE RADIATOR/CHARGE AIR COOLER

This optional radiator and charge air cooler set is built with heavy-duty fins to allow for pressure washing. It is designed for agricultural use with a larger percentage of open space to allow for increased air flow and minimized plugging.



REMOTE A/C CONDENSER

For improved airflow through the radiator and charge air cooler, this air conditioning condenser is relocated to the side of the unit. This also reduces the labor required to clean crucial engine cooling components.



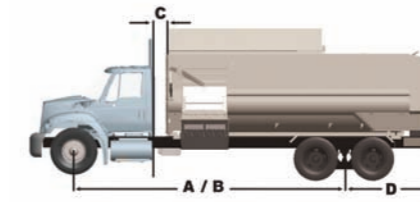
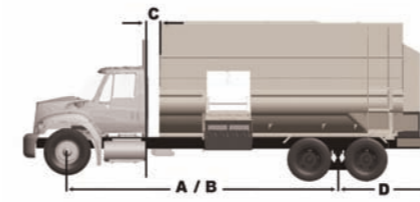
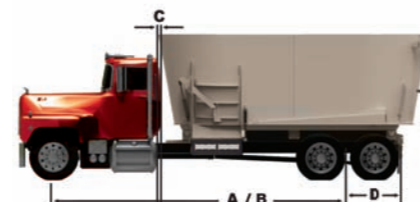
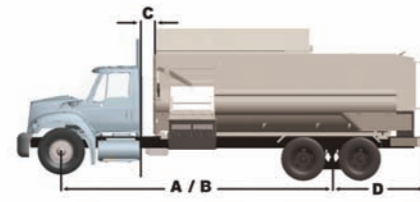
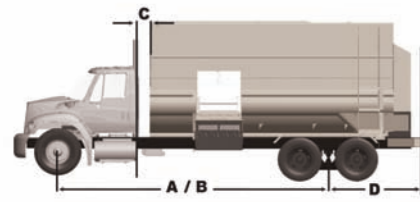
ASSIST AXLE

An air loaded assist axle may be required on some larger units. The assist axle may be mounted in front of the tandem axle (pusher) or behind (tag). This axle may be lowered when necessary to meet certain travel regulations, but may also be raised when not needed to improve cornering and save tire wear.



FLOTATION TIRES

Flotation tires help minimize compaction and maximize traction when hauling even the heaviest loads.



Model Specifications

	MECH/FEPTO DRIVE CAB-TO-AXLE UNIT ¹	REPTO CAB-TO-AXLE UNIT ¹	SET BACK CAB UNIT	MIN AFTERFRAME ³	AXLE TYPE	MIN GVW	MIN FRAME SEC. MOD ²	MIN AXLE FRONT/REAR 1000#	MIN ENGINE HP	MIN PTO TORQUE
MODELS	A	B	C	D						
REEL AUGGIE										
3120	103"-109"	N/A	11"-17"	42"	Single	25,000	12.5	10/15	180 hp	200 ft. lbs.
3125	103"-109"	N/A	11"-17"	42"	Single	25,000	12.5	10/15	180 hp	200 ft. lbs.
3130	119"-125"	N/A	11"-17"	50"	Single	25,000	12.5	10/15	180 hp	200 ft. lbs.
RA 136	96"-102"	N/A	9"-15"	56"	Single	27,500	12.5	10/17.5	180 hp	250 ft. lbs.
RA 142	113"-119"	N/A	9"-15"	56"	Single	36,000	12.5	12/24	210 hp	250 ft. lbs.
REEL COMMERCIAL										
RC 250	118"-124"	130"-136"	9"-15"	56"	Single	45,000	17	12/33	210 hp	300 ft. lbs.
RC 260	138"-144"	150"-156"	9"-15"	66"	Single	48,000	17	12/36	250 hp	300 ft. lbs.
RC 260	138"-144"	150"-156"	N/A	66"	Tandem	51,000	17	14/37	250 hp	300 ft. lbs.
RC 270	157"-163"	169"-175"	N/A	80"	Tandem	56,000	17	14/42	285 hp	300 ft. lbs.
RC 295	157"-163"	169"-175"	N/A	90"	Tandem	64,000	23	18/46	285 hp	Hydrostatic
BOTEC										
4136	112"-120"	N/A	13"-24"	62"	Single	27,500	12.5	10/17.5	180 hp	180 ft. lbs.
4142	112"-120"	N/A	13"-24"	62"	Single	36,500	12.5	12/24	210 hp	180 ft. lbs.
4052	124"-138"	N/A	13"-24"	62"	Single	45,000	16	12/33	210 hp	250 ft. lbs.
4063	138"-152"	N/A	13"-24"	80"	Single	48,000	16	14/34	230 hp	300 ft. lbs.
4063	138"-152"	N/A	13"-24"	80"	Tandem	51,000	17	14/37	250 hp	300 ft. lbs.
4072	138"-152"	N/A	13"-24"	80"	Tandem	56,000	17	14/42	285 hp	300 ft. lbs.
4090	144"-152"	N/A	13"-24"	74"	Tandem	64,000	23	18/46	285 hp	300 ft. lbs.
VERTICAL MAXX - Front Discharge (FD) - Side Discharge (SD)										
VT 144 SD	109"-113"	N/A	N/A	60"	Single	42,000	12.5	12/30	250 hp	300 ft. lbs.
VT 156	128"-134"	128"-134"	N/A	72"	Single	54,000	17	14/40	300 hp	400 ft. lbs.
VT 156 SD	128"-140"	128"-140"	N/A	72"	Tandem	51,000	17	14/37	300 hp	400 ft. lbs.
VT 168 SD	154"-158"	173"-177"	N/A	72"	Tandem	54,000	17	14/40	300 hp	300 ft. lbs.
VT/VTC 180 SD	158"-164"	160"-164"	N/A	72"	Tandem	64,000	23	18/46	325 hp	Hydrostatic
VT/VTC 180 FD	194"-198"	213"-217"	N/A	72"	Tandem	62,000	23	16/46	325 hp	Hydrostatic
VT/VTC 1100 SD	158"-164"	160"-164"	N/A	72"	Tandem	72,000	23	20/52	375 hp	Hydrostatic
VT/VTC 1100 FD	194"-198"	213"-217"	N/A	72"	Tandem	72,000	23	20/52	375 hp	Hydrostatic
VTC 1120 SD	158"-164"	160"-164"	N/A	72"	Tandem	79,000	25	21/58	400 hp	Hydrostatic
VTC 1120 FD	194"-198"	213"-217"	N/A	72"	Tandem	79,000	25	21/58	400 hp	Hydrostatic
PROFEED DELIVERY BOX										
70110	175"-179"	N/A	17"-23"	80"	Tandem	72,000	23	20/52	300 hp	Hydrostatic
PROTWIN SLINGER										
8118	150"-156"	N/A	17"-23"	88"	Single	40,000	12.5	12/28	210 hp	300 ft. lbs.
8124	150"-156"	N/A	17"-23"	88"	Single	45,000	12.5	12/33	250 hp	300 ft. lbs.
8124	150"-156"	N/A	17"-23"	88"	Tandem	47,000	12.5	12/35	250 hp	300 ft. lbs.
SIC 132	157"-163"	163"-169"	17"-23"	88"	Tandem + TG	67,000	17	20/40/16	325 hp	300 ft. lbs.
SIC 132	190"-196"	196"-202"	17"-23"	52"	Tandem	60,900	17	20/46	325 hp	300 ft. lbs.
SIC 132	165"-171"	171"-177"	17"-23"	52"	Tandem	58,000	17	14/46	325 hp	Hydrostatic
COMMERCIAL PROSPREAD										
PSC 161	164"-168"	N/A	14"-20"	60"	Tandem	73,000	25	18/55	325 hp	300 ft. lbs.
PSC 161	164"-168"	N/A	14"-20"	60"	Tandem & Pusher	73,000	25	16/46/12	325 hp	325 ft. lbs.
PSC 171	186"-190"	N/A	14"-20"	65"	Tandem	76,000	30	18/58	375 hp	350 ft. lbs.
PSC 171	186"-190"	N/A	14"-20"	65"	Tandem & Pusher	76,000	30	16/46/15	375 hp	350 ft. lbs.
PSC 181	212"-216"	N/A	14"-20"	65"	Tandem & Pusher	84,000	40	16/48/20	425 hp	350 ft. lbs.

¹ This information may not apply to tilt cab trucks. A longer cab-to-axle may be required

² The FRAME SEC. MOD. column refers to the strength of the frame based on 110,000 PSI yield strength.

³ Protwin afterframes are required only for bumper supports and are non-load bearing.

THE RIGHT MACHINE TO MEET YOUR NEEDS

A MIXER OR SPREADER FOR EVERY APPLICATION

With 27 models of mixers and spreaders available for truck mounting, we have the machine to fit your unique situation. Contact your local Kuhn Knight dealer to find the right model for you.



1. Side-Discharge Spreaders – 2. Apron Box Spreaders – 3. Vertical Twin-Auger Mixers – 4. Reel Mixers – 5. 4-Auger Mixers – 6. Delivery Boxes

For more information about your nearest Kuhn dealer and other Kuhn products, visit our website at

www.KuhnNorthAmerica.com



Visit our YouTube channel to watch our latest product videos.

KUHN NORTH AMERICA, INC.

Corporate Headquarters
1501 West Seventh Avenue - Brodhead, WI 53520
Phone: (608) 897-2131 Fax: (608) 897-2561

Our machines comply with the North American safety regulations. In our leaflets, to better illustrate certain details of the machines some safety devices could have been removed. Conforming to the assembly and operator's manual, in no circumstances must machine be operated without these safety devices in place. All machines are equipped with safety devices which comply with the regulations of the countries in which they are delivered. In the interest of progress, we reserve the right to change without notice any specifications, design or materials listed. Patents filed in several countries.

Your Kuhn Knight dealer



www.KuhnNorthAmerica.com

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