



STR Series Manure Semi-Tanker

Experience first-class
manure hauling



Daniel Landry, one of the owners of the Landrynoise farm in St-Albert, QC, Canada.

The Landrynoise farm produces around 16 million imperial gallons (19 US gallons) of manure per year which over two to three million has to be transported further away to temporary storages until manure application season. "Two years ago, when we started to build temporary storages and we began manure application to the land, we noticed a significant improvement in terms of efficiency, speed, savings in fuel and minimal wear and tear of tractor tires".

From the neighbor's point of view, it is reassuring to see a well-adapted vehicle which is in complete compliance with road regulations and width standards. "In the village I live in, the semi-tanker travels around unnoticed – it is not worse than a propane or fuel gas tank".



The STR Series Semi-Tanker is targeted towards any customer with liquid manure that needs to be transported over four miles (6 km) away. This can be individual dairy, hog and beef farmers as well as multi-site operations and custom manure operators.

Widen your horizons

The road to more efficient manure transport is now wide open. Extend your range of operation with the STR Series Manure Semi-Tankers from GEA — the first-class manure hauling solution.

Proper manure and nutrient management is a critical component of raising livestock. As farms grow, available land for manure application is often further away from the manure storage. With an increased distance, having a single semi-tanker nursing liquid manure spreader in the field is more cost effective.

Driving four miles down the road may seem like a short trip, but when it comes to hauling manure, costs go up exponentially beyond that mark and increase every additional mile. With the STR Series GEA Manure Semi-Tanker, you can achieve efficient, safe manure hauling while keeping your cost down — you save time, fuel and wear and tear on your equipment.

Safe and easy manure hauling

The STR Semi-Tankers are available in different models in compliance with National Highway Traffic Safety Administration (NHTSA) standards, US Department of Transportation (DOT) and Canada guidelines for vehicle configuration. These design/configuration options make the STR Series properly suited for transportation on a wider variety of roads compared to a traditional tractor and manure spreader. Experience first-class functionality and driveability of the STR Series Manure Semi-Tanker, and feel what is like to manage manure in the most convenient way.

Superior drivability

Manure hauling with a semi-trailer allows you to move a large volume of manure quickly over long distances. The field-proven and well-known unique reservoir shape provides enhanced function and drivability. A lower center of gravity than round tank shapes and internal baffles limit liquid movement inside the reservoir during travel.

High mechanical standards

The STR Series is designed with the highest level of quality components for long service life:

- Road-proven Manac galvanized undercarriage;
- 3/16 inch (4.7 mm) stainless steel reservoir and inside baffles;
- Integrated, in-tank 1" (25 mm) line for hydraulic fluid cooling;
- Wide-base super single tires or dual tires with aluminum rims and stainless steel fenders for the trailer and truck rear wheels.

Maximum efficiency

The STR Series makes manure hauling from the farm to the field easy thanks to the incorporated hydraulic articulated transfer pipe which allows quick manure transfer without needing to attach or prime hoses. Its ability to double as a spreader, via its rotative valve and spreading nozzle, is another major advantage for quick application on hard ground after forage harvest. The STR Semi-Tanker is equipped with the HE impeller hydraulic drive and 8 inches (203 mm) diameter discharge for maximum performance.

Main features

The STR Series is designed for road transportation and easy manure handling.



Self-operated top fill opening door

The top fill opening door is automatically activated as the parking brake is applied and released. Once the parking brake is released, it takes three wheel revolutions before the fill opening door closes by itself. This short delay is a safety precaution which ensures the loading pipe hose is out from the fill opening before closing the door.

Top fill indicator

A quick reference during operation to see if the reservoir is full. The indicator rod raises up as the manure reaches the indicator float inside the reservoir.



Tires and stainless steel fenders

Wide-base super single tires or dual tires with aluminum rims and stainless steel fenders for the trailer and truck rear wheels.



Bottom side openings

There are openings on both sides of the semi-tanker for gravity discharge or bottom loading or unloading.



Folding side access ladder

Provides easy access to the top of the reservoir.

Trailer landing gear

With a crank and cross shaft for easy adjustment.



Articulated transfer pipe

8 inches (203 mm) diameter 25 feet (7.6 m) long aluminum transfer pipe with up to 30 feet (9 m) span.

The semi-tanker articulated transfer pipe has a rotational angle of 270° to allow you to discharge manure on both sides of the semi-trailer. It can also be articulated up-and-down to ease manure discharge from different elevations.

Hydraulic fluid cooling system

Integrated, in-tank 1 inch (25 mm) line for hydraulic fluid cooling.



Adjustable and replaceable kingpin

The kingpin plate is bolted, thus replaceable and can be rotated 180° and/or moved forward to set the kingpin in the best position for a better weight distribution.

CONTROL SYSTEM

The optional control system package includes a wireless remote alongside a manual lever control.

The wireless remote control allows you to operate the semi-tanker functionalities from inside the truck cab or from any other position around the vehicle with optimal visibility during unloading.

The wireless remote features easy to use spring loaded toggle switches to activate the rotative valve and hydraulic pump while also having a manual option for the top fill opening door. The joystick gives responsive and accurate control of the articulated transfer pipe.



Hydraulic lever control

Model shown: STR 242 WH with articulated transfer pipe and integrated rotative valve and spreading nozzle. All models are fitted with indicator and signal lamps as well as side marker lamps to indicate presence of a long vehicle.

Main features

Spreading nozzle

The STR Series Manure Semi-Tanker is offered with an integrated rotative valve which incorporates the articulated transfer pipe and spreading nozzle to apply manure directly to land from the semi-tanker. The spreading nozzle is also available without the articulated transfer pipe and rotative valve kit.

HE impeller and housing

The STR Series is equipped with the HE impeller hydraulic drive and 8 inches (203 mm) diameter discharge for maximum performance. The impeller housing is made of abrasion-resistant (AR) steel to reduce wear associated with high-speed impeller rotation. The housing is bolted to the reservoir for easy replacement.

Galvanized, replaceable rear bumper

Model shown: STR 242 WH with articulated transfer pipe and integrated rotative valve and spreading nozzle.



Rear and top LED lights

Lights provide sufficient light to work in the dark with a beam pattern and broad coverage.

18 inches (457 mm) tapered hopper on top fill opening

This tapered extension provides easier positioning under the loading pipe.



Specifications

Customers must pay attention to every dollar spent in manure management operations. Reducing overhead and improving efficiency are two areas with quick, noticeable returns on investment. The table below is a comparison of manure hauling with a traditional liquid manure spreader hitched to a tractor versus a semi-truck with an STR Series Semi-Tanker.

Hauling 600,000 US gallons 5 miles (8 km) down the road
(120 dairy cows or 2,400 head of swine finisher both hauling twice per year)

	Two EL48-6D 6100 liquid manure spreaders (7,300 US gallons each)	One STR-242W Semi-Tanker and one EL48-6D 6100 liquid manure spreader (7,300 US gallons each)
Number of trips per year	82	82
Distance driven per year	658 miles (1,060 km)	658 miles (1,060 km)
Maximum road travel speed	22 mph (35 km/h)	55 mph (88 km/h)
Manure loading time	8 hours	8 hours
Manure hauling time	37 hours	15 hours
Manure transfer time	0 hours	8 hours
Land application time	16 hours	16 hours
Total machine hours per 10,000 US gallons of manure applied	1.03 hours	0.93 hours (10% savings)
Estimated fuel consumption per 10,000 US gallons of manure applied	11.2 gallons	6.4 gallons (43% savings)

More specific figures are available. Values based on approximately 6 minutes for loading, 6 minutes for transfer and 12 minutes for applying manure to the field. Fuel consumption based upon a 250 hp tractor and average semi-tractor use.

Models	Number of axles	Length of reservoir	Axle spacing	Reservoir capacity
STR-240	Tandem (2 axles)	40 feet (12.2 m)	52 inches (1.32 m)	5,900 US gal. – 4,900 imp. gal. – 22,300 L
STR-240H	Tandem (2 axles)	40 feet (12.2 m)	52 inches (1.32 m)	7,000 US gal. – 5,800 imp. gal. – 26,500 L
STR-240HH	Tandem (2 axles)	40 feet (12.2 m)	52 inches (1.32 m)	8,200 US gal. – 6,800 imp. gal. – 31,000 L
STR-242W	Tandem (2 axles)	42 feet (12.8 m)	96 inches (2.4 m)	7,100 US gal. – 5,900 imp. gal. – 26,850 L
STR-242WH	Tandem (2 axles)	42 feet (12.8 m)	96 inches (2.4 m)	7,400 US gal. – 6,150 imp. gal. – 28,000 L
STR-342	Tridem (3 axles)	42 feet (12.8 m)	61 inches (1.55 m)	7,700 US gal. – 6,400 imp. gal. – 29,150 L
STR-342H	Tridem (3 axles)	42 feet (12.8 m)	61 inches (1.55 m)	8,600 US gal. – 7,200 imp. gal. – 32,550 L
STR-342HH	Tridem (3 axles)	42 feet (12.8 m)	61 inches (1.55 m)	9,400 US gal. – 7,800 imp. gal. – 35,500 L
STR-342W	Tridem (3 axles)	42 feet (12.8 m)	72 inches (1.82 m)	8,600 US gal. – 7,200 imp. gal. – 32,550 L
STR-342WH	Tridem (3 axles)	42 feet (12.8 m)	72 inches (1.82 m)	9 400 US gal. – 7,800 imp. gal. – 35,500 L
STR-447	Tridem with auto-steer axle (4 axles)	47 feet (14.32 m)	100 inches (2.54 m) between auto-steer and first axle tridem 72 inches (1.82 m) tridem spread	10,500 US gal. – 8,800 imp. gal. – 39,800 L



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