

Terminal Tractor/Yard Spotter

Used Yard Spotter Louisiana - Tow tractors are a common piece of industrial equipment used in large buildings, arenas, warehouses, airports and manufacturing plants for moving loads horizontally. They go by different names including tow tugs and towing tractors. These machines can tow numerous trailers in a train or snake-like formation. Some are designed specifically to tow large aircraft in order to position them into and out of airport terminals and hangars. The tractive effort concept is how loads move from place to place. Tractive effort is the amount of traction a unit has on the ground. Heavier loads require more tractive effort compared to lighter loads. The tow tractor lifts a portion of the load during towing while ensuring the wheels on the load still remain on the ground. The load is partially lifted by use of the tow tractor's hydraulic mast which is specifically designed to produce downforce on the drive wheel immediately beneath it, increasing the tractive effort. The tow tractor is capable of transporting very heavy and large loads thanks to the traction it provides.

Types of Tow Tractors Two types of towing tractors include heavy-duty tow tractors and load carriers. Load Carriers Industries such as e-commerce, manufacturing, and airport baggage and parcel systems must regularly move many individual and varying sized items to or from a single location. Tow tugs and load carriers easily transport single items that have been deposited on wheeled platforms and move them with ease. The category that load carrier tow tractor models fall into includes forklift trucks, cranes and pallet jacks. Load carrier tow tugs do not transport items from high places such as shelves or platforms. They only move cargo at ground level. Therefore, the load must already be on wheels or on a wheeled platform, ready to be transported. The wheeled platforms are called bogies, trollies or skates. The tow tractor attaches to the trolley and operates similarly to how train cars are attached to a locomotive. Generally, the steel coupling on the tow tug's male-end joins to the front trolley's female-end. The back of the trolley has a male-end steel coupling that can then be used to attach multiple trollies onto a single tow tug, transporting all the trollies in a train-like formation. These machines can transport a variety of items in varying conditions. The availability of many different types of trollies also allows for greater customization in transporting items. Many trollies can be connected since they are compatible with one another. This means several different types of trollies can be used in a single train allowing greater flexibility for operations. Load carrier tow tractors deliver a clear view for the operator which can be better than relying on forklifts. Additionally, load carrier tow tractors move their units in a forward-only way and this drastically decreases safety concerns associated with forklifts traveling in reverse. This design is excellent for locations that have a high level of safety such as manufacturing locations and airports. Towing many items at once saves time and money compared to relying on forklifts to move single things. Tugs are easy to move and safe to use. The operator doesn't require a license, which is another benefit compared to forklifts. No license is necessary since these units do not lift loads up from the ground like cranes, and forklifts that require licensing. There are three kinds of load carrier tow tractor units to choose from; pedestrian, stand-in and rider-seated.

Pedestrian Tow Tractors A walk-behind model that can transport wheeled loads is called a pedestrian tow tractor. These machines may go by the names of electric hand tug, electric tugger, electric tug or tow tractor. These machines are simple to use, extremely maneuverable and very compact.

Stand-in Tow Tractors Stand-in tow tractors are the most popular design for industries that involve order picking and horizontal transport in manufacturing. These units deliver a secure driver platform and deliver a smaller footprint compared to the rider-seated models.

Rider-Seated Tow Tractors Similar to stand-in tow tractors, rider-seated units have a seated operator platform. Rider-seated models are used for moving loads longer distances. They are popular for airport luggage transport to move checked baggage from the check-in counter to the aircraft parked at the terminal. Rider fatigue is decreased with sit-down units for more efficiency and productivity.

Heavy Duty Tow Tractors The pushback concept is commonly used in aviation for cargo and large passenger planes. Pushing an aircraft back from the airport terminal without using the aircraft's own power is the pushback

concept. Heavy-duty tow tractors are known as pushback tugs or pushback tractors complete this task. Pushback tugs feature a low-profile enabling them to travel under the aircraft's nose for easy attachment. Because of the added heavy weight of the aircraft, these tow tractors must be heavy enough to retain enough traction on the ground in order to move the aircraft. Large aircraft tractors can weigh as much as fifty-four tons. These models have a driver's cab that has the option of being raised or lowered during reverse for better visibility. The unit is called a pushback tow tractor or pushback tug but it is additionally used to move aircraft in situations where taxiing is not safe or practical including into and outside of aircraft maintenance. The two subtypes of pushback tow tractors include conventional tow tractors and towbarless tow tractors.

Conventional Pushback Tow Tractors Conventional units rely on a tow bar to connect the tug to the aircraft's nose landing gear. Laterally attached to the nose landing gear, the tow tractor can make certain slight vertical height adjustments if needed. The tow bar that attaches to the tug can pivot vertically and laterally. In this manner, the tow bar acts as a large lever to rotate the nose landing gear. Every aircraft has a special tow fitting and the towbar functions as an adapter between the fitting on the landing gear and the standard-sized tow pin. On heavy towbars for large aircrafts, the towbar rides on its own wheels when not connected to an aircraft. Attached to the wheels, the hydraulic jacking mechanism allows the towbar to lift to the proper height to mate with the aircraft and tug. The same mechanism is employed in reverse to raise the towbar wheels off the ground for pushback. The towbar can be connected at the front or the rear of the tractor, depending on whether the aircraft will be pushed or pulled.

Towbarless Pushback Tow Tractors Towbarless tractors do not use a towbar; they scoop up the nose landing gear and lift it off the ground, allowing the tug to maneuver the aircraft. This allows better control of the aircraft and higher speeds; it may also eliminate the need to have a worker in the cockpit to apply the aircraft's brakes. As there is no need to maintain numerous towbars, simplicity is the main advantage of this unit. Directly connecting the tug to the landing gear allows operators to have better responsiveness and control while moving the aircraft.