

Terminal Tractor/Yard Spotter

Used Yard Spotter Alabama - Tow tractors, also called tow tugs or towing tractors are popular for moving loads horizontally in airports, arenas, warehouses, manufacturing plants and other large buildings. They are capable of towing several trailers in a train formation. Some are designed specifically to tow large aircraft in order to position them into and out of airport terminals and hangars. Tractive effort is how these machines transport loads. The complete amount of traction a vehicle utilizes on the ground. Tractive effort says that the heavier the load, the more tractive effort is required. Based on this principle, the tow tractor works by lifting a part of the load it is towing while making sure the load's wheels remain on the ground. The hydraulic mast on the tow tractor is responsible for lifting the load. It produces downforce on the drive wheel underneath to increase the tractive effort. Traction allows the machine to deliver very large and heavy loads.

Types of Tow Tractors There are two basic types of tow tractors: 1. Load carriers; and 2. Heavy-duty tow tractors; Load Carriers Many industries including airport baggage divisions, manufacturing, parcel transportation and e-commerce rely on moving items of various sizes to and from different locations. Tow tugs or load carrier tow tractors are excellent for these jobs as they can maneuver single items stacked on wheeled platforms for streamlined transport. The category that load carrier tow tractor models fall into includes forklift trucks, cranes and pallet jacks. Load carrier tow tugs transport loads at ground level only, rather than lifting or lowering off the ground or from shelving or other hard to reach areas. 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 joins to the trolley and functions similarly to a train locomotive. Typically, the tow tug features a steel coupling male-end that attaches to a female-end on the trolley's front. Trollies move in a train-like system thanks to the male-end steel coupling on the back which can connect to numerous units and allow a single tug to transport them. Tow tractors are capable of moving many machines in a variety of conditions. Trolley types differ to provide customization options. Many trollies can be connected since they are compatible with one another. Since multiple trolley types can be utilized in a single train, there is flexibility. An additional benefit of operating with load carrier tow tractors as opposed to forklifts is the unobstructed view offered by a tow tractor, increasing the safety of work areas. Further, load carrier tow tractors tow their trollies behind them in a forward-only direction which decreases the safety concerns created by forklifts operating in reverse. This design is excellent for locations that have a high level of safety such as manufacturing locations and airports. It is more economical to tow multiple items when possible with a tug than using a forklift truck to transport single items. Tugs are simple to move and provide a safe transport option. 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 subtypes of load carrier tow tractors: 1. Pedestrian; 2. Stand-in; and 3. Rider-seated.

Pedestrian Tow Tractors A pedestrian tow tractor, also referred to as an electric tug, electric tugger, electric hand tug or tow tractor, is a walk-behind machine designed for easy movement of wheeled loads. It is compact, maneuverable and easy to use.

Stand-in Tow Tractors Stand-in tow tractors are the most popular design for industries that involve order picking and horizontal transport in manufacturing. Stand-in tow tractors feature a tinier footprint compared to rider-seated editions and they offer a safe driver platform.

Rider-Seated Tow Tractors The rider-seated tow tractors are similar to the stand-in tow tractors with the exception they provide a seated platform for the driver. These types of load carrier tow tractors are popular where loads are transported over longer distances, such as airport baggage systems where checked baggage is transported from the check-in counter at the front of an airport to the aircraft at the terminal, often a great distance from one another. Reducing rider fatigue, the rider-seated models deliver more efficiency.

Heavy Duty Tow Tractors Aviation relies on the pushback concept for moving big passenger and cargo aircraft. Pushback is the process of pushing an aircraft back from the terminal by means not originating from the

aircraft's personal power. This pushback process is done by using specially designed heavy duty tow tractors called pushback tractors or pushback tugs. Pushback tractors are built with a low-profile to allow them to move underneath the nose of the aircraft so that it can attach. Since the aircraft weight is heavy, these units need to be heavy in order to retain adequate ground friction to move the aircraft. A common tractor for moving large aircraft can weigh in up to fifty-four tons. Their driver's cab has the ability to be lowered and raised for increased visibility during reversing. The pushback tow tractor and pushback tug are also employed when taxiing the aircraft is not an option. They are commonly used to move the machine into and outside of aircraft maintenance hangars. The two subtypes of pushback tow tractors include conventional tow tractors and towbarless tow tractors. Conventional Pushback Tow Tractors Conventional tugs use a tow bar to connect the tug to the nose landing gear of the aircraft. 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. The tow bar functions as a sizeable lever to facilitate nose landing gear rotation. Each aircraft type has a unique tow fitting so the towbar also acts as an adapter between the standard-sized tow pin on the tug and the type-specific fitting on the aircraft's landing gear. Heavy towbars have their own wheels for big aircraft and can ride on these wheels when disconnected from planes. The hydraulic jacking mechanism is attached to the wheels, allowing the towbar to lift to the correct height in order to mate with the tug and the aircraft. The same means are used in reverse during the pushback process to raise the towbar wheels from the ground. The towbar is capable of being connected at the tractor's rear or front, depending on if the machine needs to be pulled or pushed. Depending on whether the aircraft needs to be pushed or pulled, the towbar can be attached to the front or rear of the tractor. 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 design facilitates higher speeds greater aircraft control and can eliminate the necessity of having a worker inside of the cockpit to apply the brakes. The main advantage of a towbarless tug is simplicity; there is no need to maintain multiple towbars. Greater control and responsiveness while moving the aircraft is achieved with this direct connection of the tug to the landing gear.