

Terminal Tractor/Yard Spotter

Used Yard Spotter Santa Clarita - 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. 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. All tow tractors use the concept of tractive effort to move loads. The complete amount of traction a vehicle utilizes on the ground. The heavier the load is, the more tractive effort is needed. 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 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. These units only transport loads at ground level and do not lift or lower items from shelving or off the ground. This means that the load has already been on wheels or placed on a wheeled platform before transport. Wheeled platforms are called skates, trollies and bogies. The tow tug is attached to the trolley similar to train cars being attached to a locomotive. Generally, the steel coupling on the tow tug's male-end joins to the front trolley's female-end. The trolley's back portion has a male-end steel coupling that can be used to connect a variety of trollies to a single tug. Tow tractors with a train of trollies enable a wider range in the type of items that can be transported and in the types of conditions they can be transported. Trolley types differ to provide customization options. Most trollies types are compatible with each other, meaning they can be connected together. This means several different types of trollies can be used in a single train allowing greater flexibility for operations. 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. 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. These safety considerations are of special importance in busy areas such as manufacturing floors and airports. Towing solutions are a good alternative to traditional forklifts to handle many single items. Tugs are simple to move and provide a safe transport option. A key benefit of these units is that typically, the operator doesn't need a license. This is because the load is not lifted from the ground so it does not fall under the usual restrictions and licensing required of standard forklifts, cranes and other load lifting equipment.

Three subtypes of load carrier tow tractors include rider-seated, stand-in and pedestrian.

Pedestrian Tow Tractors Pedestrian tow tractors go by many names including electric tow tractor, electric tug, or electric tugger. These units are walk-behind models that move wheeled loads. It is compact, maneuverable and easy to use.

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

Rider-Seated Tow Tractors Rider-seated tow tractors are similar to stand-in models except they offer a seated platform for the operator. 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. These rider-seated options help to decrease driver fatigue allowing for greater 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. Enough ground friction is required to move the weighted aircraft, so these models need to be heavy themselves. 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 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. There are two subtypes of pushback tow tractors: 1. Conventional; and 2. Towbarless. Conventional Pushback Tow Tractors Conventional tugs use a tow bar to connect the tug to the nose landing gear of the aircraft. The tow bar is fixed laterally at the nose landing gear, but may move slightly vertically for height adjustment. 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. 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. Heavy-duty towbars required for sizeable aircraft ride on their own wheels when they are disconnected from the machine. The wheels are attached to a hydraulic jacking mechanism which can lift the towbar to the correct height to mate to both the airplane and the tug, and once this is accomplished the same mechanism is used in reverse to raise the tow bar wheels from the ground during the pushback process. 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 work without a towbar and scoop up the aircrafts' nose landing gear to lift it off of the ground instead. 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. Simplicity is the main advantage of the towbarless tugs since it is not necessary to maintain a variety of towbars. Directly connecting the tug to the landing gear allows operators to have better responsiveness and control while moving the aircraft.