Terminal Tractor/Yard Spotter

Used Yard Spotter El Cajon - Tow tractors, sometimes call towing tractors or tow tugs, are vehicles used in transporting loads horizontally in warehouses, manufacturing plants, airports, arenas and other large facilities. 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 hangers. The tractive effort concept is how loads move from place to place. Tractive effort refers to the total amount of traction a vehicle deploys on the ground. Heavier loads require more tractive effort compared to lighter loads. 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 tractive effort is increased by the unit's hydraulic mast. This has been engineered to produce downforce on the drive wheel directly under the mast. The traction created by this process enables the tow tractor to pull very large and heavy loads. Types of Tow Tractors Heavy-duty tow tractors and load carriers are two types of 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 and load carriers easily transport single items that have been deposited on wheeled platforms and move them with ease. These load carrier tow tractors fall under the material handling equipment industry which includes other machines such as pallet jacks, forklifts and cranes. 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. In order to be ready for transport, items must be secured on a wheeled platform or already on wheels to use the tow tractor. The wheeled platforms are called bogies, trollies or skates. The tow tug is attached to the trolly similar to train cars being attached to a locomotive. Generally, the steel coupling on the tow tug's male-end joins to the front trolly's female-end. The trolly's back portion has a male-end steel coupling that can be used to connect a variety of trollies to a single tug. These machines can transport a variety of items in varying conditions. Different trolly types are on the market to facilitate better transportation customization. Most trollies types are compatible with each other, meaning they can be connected together. Different kinds of trollies can be maneuvered in a single train, creating flexible transport options. Load carrier tow tractors deliver a clear view for the operator which can be better than relying on forklifts. Load carrier tow tractors transport trollies in a forward direction which decreases the safety concerns common with reverse forklift operations. These safety considerations are of special importance in busy areas such as manufacturing floors 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. A key benefit of these units is that typically, the operator doesn't need a license. Tow tractor operators do not need licenses since they don't lift loads off of the ground. Three subtypes of load carrier tow tractors include rider-seated, stand-in and pedestrian. 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. It is compact, maneuverable and easy to use. Stand-in Tow Tractors The most common design for businesses that rely on horizontal manufacturing transport and order picking are stand-in tow tractors. 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 models are commonly used for transporting loads over farther distances such as moving checked baggage from the airport check-in to the aircraft at the terminal. 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. Pushing an aircraft back from the airport terminal without using the aircraft's own power is the pushback concept. Pushback is achieved by employing pushback tugs or pushback tractors. 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. While the vehicle is referred to as a pushback tug or pushback tow tractor, it is also used to tow aircraft in areas where taxiing the aircraft is not practical or safe, such as moving large aircraft in and out of maintenance hangars. There are two subtypes of pushback tow tractors: 1. Conventional; and 2. Towbarless. Conventional Pushback Tow Tractors Conventional units rely on a tow bar to connect the tug to the aircraft's nose landing gear. The tow bar is fixed laterally at the nose landing gear, but may move slightly vertically for height adjustment. At the end that attaches to the tug, the tow bar may pivot freely laterally and vertically. In this manner, the tow bar acts as a large lever to rotate the nose landing gear. There are a towbar and precise tow fitting that acts as an adapter between the standard-sized tow pin and on the landing gear of the aircraft. Heavy towbars have their own wheels for big aircraft and can ride on these wheels when disconnected from planes. 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. 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.