Terminal Tractor/Yard Spotter

Used Yard Spotter Riverside - 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. Tow tractors are responsible for moving multiple trailers in a train. Tow tractors can move aircraft into and outside of airport locations such as terminals and hangars. All tow tractors use the concept of tractive effort to move loads. Tractive effort refers to the total amount of traction a vehicle deploys on the ground. Tractive effort says that the heavier the load, the more tractive effort is required. The unit works by lifting a part of the load while it is towing; however, the load's wheels stay 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 traction created by this process enables the tow tractor to pull 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 Numerous businesses need to transport items of different sizes on a regular basis including manufacturing, parcel delivery services and airport baggage. 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. In order to be ready for transport, items must be secured on a wheeled platform or already on wheels to use the tow tractor. Bogies, skates and trollies are other names for wheeled platforms. The tow tractor joins to the trolly and functions similarly to a train locomotive. Usually, the tow tug has a male-end steel coupling that couples to the female-end fixed to the front of the trolly. 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. Tow tractors are capable of moving many machines in a variety of conditions. The availability of many different types of trollies also allows for greater customization in transporting items. Trollies can connect together and are compatible. Since multiple trolly 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. 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 is vital for safety-sensitive places including airports and manufacturing facilities. Towing solutions are a good alternative to traditional forklifts to handle many single items. 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. There are three subtypes of load carrier tow tractors: 1. Pedestrian; 2. Stand-in; and 3. 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 compact machines are simple to use and can maneuver easily. 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 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 refers to the process of pushing an aircraft back from an airport terminal by some means other than the aircraft's own power. This pushback process is done by using

specially designed heavy duty tow tractors called pushback tractors or pushback tugs. Pushback tractors are designed with a low profile design to enable them to move under the aircraft's nose in order to attach to the aircraft. 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. 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. 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. Laterally attached to the nose landing gear, the tow tractor can make certain slight vertical height adjustments if needed. At the end that attaches to the tug, the tow bar may pivot freely laterally and vertically. Acting like a giant lever, the tow bar can 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-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, as their name suggests, don’t rely on a towbar. Instead, these machines scoop up the nose landing gear to lift it off of the ground so the tug can move the plane. 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. The main advantage of a towbarless tug is simplicity; there is no need to maintain multiple towbars. Directly connecting the tug to the landing gear allows operators to have better responsiveness and control while moving the aircraft.