Terminal Tractor/Yard Spotter

Used Yard Spotter Hayward - 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. Tow tractors are responsible for moving multiple trailers in a train. 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 is the amount of traction a unit has on the ground. The heavier the load is, the more tractive effort is needed. 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 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 Numerous businesses need to transport items of different sizes on a regular basis including manufacturing, parcel delivery services and airport baggage. 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. These load carrier tow tractors fall under the material handling equipment industry which includes other machines such as pallet jacks, forklifts and cranes. These units only transport loads at ground level and do not lift or lower items from shelving or off the ground. In order to be ready for transport, items must be secured on a wheeled platform or already on wheels to use the tow tractor. Wheeled platforms are called skates, trollies and bogies. The tow tractor joins to the trolly and functions similarly to a train locomotive. Generally, the steel coupling on the tow tug's male-end joins to the front trolly's female-end. 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 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. 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. 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 is vital for safety-sensitive places including airports and manufacturing facilities. It is more economical to tow multiple items when possible with a tug than using a forklift truck to transport single items. They are safe and easy to maneuver. 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. 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 compact machines are simple to use and can maneuver easily. 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 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 The

pushback concept is commonly used in aviation for cargo and large passenger planes. Pushback refers to the process of pushing an aircraft back from an airport terminal by some means other than the aircraft’s own power. Heavy-duty tow tractors are known as pushback tugs or pushback tractors complete this task. 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 typical tractor for large aircraft weighs up to 54 tons. They usually have a driver’s cab that can be raised and lowered to increase visibility when 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. The tow bar is laterally fixed at the nose landing gear; however, it is possible to make height adjustments with slight vertical movements. 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. 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 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 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 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.