Terminal Tractor/Yard Spotter

Used Yard Spotter Tennessee - 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. These machines can tow numerous trailers in a train or snake-like formation. Certain tow tractors can transport helicopters and giant airplanes for the purpose of positioning inside and outside airport hangars and terminals. 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 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 Two types of towing tractors include heavy-duty tow tractors and load carriers. Load Carriers Industries such as e-commerce, manufacturing, and airport baggage and parcel systems must regularly move many individual and varying sized items to or from a single location. 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. Load carrier tow tractor models are categorized in the material handling equipment that covers cranes, forklifts 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. Wheeled platforms are called skates, trollies and bogies. 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 back of the trolly has a male-end steel coupling that can then be used to attach multiple trollies onto a single tow tug, transporting all the trollies in a train-like formation. Tow tractors are capable of moving many machines in a variety of conditions. Trolly types differ to provide customization options. Trollies can connect together and are compatible. This means several different types of trollies can be used in a single train allowing greater flexibility for operations. A key benefit of using a load carrier tow tractor is that operators can enjoy a clear view instead of relying on forklifts. Load carrier tow tractors transport trollies in a forward direction which decreases the safety concerns common with reverse forklift operations. This design is excellent for locations that have a high level of safety such as manufacturing locations and airports. Towing solutions are a good alternative to traditional forklifts to handle many single items. They are safe and easy to maneuver. 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. These compact machines are simple to use and can maneuver easily. 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. 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. Rider fatigue is decreased with sit-down units for more efficiency and productivity. Heavy Duty Tow Tractors In the aviation industry, large passenger and cargo planes usually employ the concept of pushback. Pushback is the process of pushing an aircraft back from the terminal by means not originating from the aircraft's personal power. Heavy-duty tow tractors are

known as pushback tugs or pushback tractors complete this task. Pushback tugs feature a low-profile enabling them to travel under the aircraft’s nose for easy attachment. Since the aircraft weight is heavy, these units need to be heavy in order to retain adequate ground friction to move the aircraft. 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. 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. 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. On heavy towbars for large aircrafts, the towbar rides on its own wheels when not connected to an aircraft. Attached to the wheels, the hydraulic jacking mechanism allows the towbar to lift to the proper height to mate with the aircraft and tug. The same mechanism is employed in reverse to raise the towbar wheels off the ground for pushback. 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, 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 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. By connecting the tug directly to the aircraft's landing gear tug operators have better control and responsiveness when maneuvering.