

## Terminal Tractor/Yard Spotter

Used Yard Spotter Manitoba - Tow tractors, also called tow tugs or towing tractors are popular for moving loads horizontally in airports, arenas, warehouses, manufacturing plants and other large buildings. These machines can tow numerous trailers in a train or snake-like formation. Tow tractors can move aircraft into and outside of airport locations such as terminals and hangars. Tractive effort is how these machines transport 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 Heavy-duty tow tractors and load carriers are two types of tow tractors. 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 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. This means that the load has already been on wheels or placed on a wheeled platform before transport. The wheeled platforms are called bogies, trollies or skates. The tow tractor attaches to the trolley and operates similarly to how train cars are attached to a locomotive. Generally, the steel coupling on the tow tug's male-end joins to the front trolley's female-end. The back of the trolley 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 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 trolley types are on the market to facilitate better transportation customization. Many trollies can be connected since they are compatible with one another. 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. Further, load carrier tow tractors tow their trollies behind them in a forward-only direction which decreases the safety concerns created by forklifts operating 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 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. 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 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. 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 The pushback concept is commonly used in aviation for cargo and large passenger planes. 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. 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. 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 These units use a tow bar to attach the tug to the nose landing gear on the aircraft. The tow bar is fixed laterally at the nose landing gear, but may move slightly vertically for height adjustment. The tow bar is able to pivot vertically and laterally at the end that connects to the tug. 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 towbars have their own wheels for big aircraft and can ride on these wheels when disconnected from planes. 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 do not use a towbar; they scoop up the nose landing gear and lift it off the ground, allowing the tug to maneuver the aircraft. 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.