

# CONSTRUCTION EQUIPMENT FUN FACTS

1.5%

Track hoes are used by every Michels operating group. Because of that, our fleet of track hoes is one of our largest fleets.

## On the Job: Track Hoe

Track hoes are usually equipped with buckets that range from 12 to 84 inches in size. They can also be equipped with:

Hydraulic hammers – for breaking rock Plate compactors – for compacting soil Frost hooks – for digging stumps and slabs Vacuums – for lifting pumps Handlers – for lifting drill stem Drivers – for putting sheeting into the ground Augers – for boring holes Wick machines – for placing wick drains Michels' smallest track hoe weighs 7,700 pounds and has 31hp. The largest weighs 146,000 pounds and has 463hp.

Track hoe and excavator are two names for the same piece of equipment, but track hoes and backhoes are different. A track hoe is bigger, has a digging arm, can rotate 360 degrees, and moves on tracks. A backhoe has a front bucket and a digging arm on the back, and moves on rubber tires.

## On the Job: Cat D8 Dozer

Caterpillar D8 dozers are the behemoths of the Michels dozer fleet. All of the D8s are crawlers, which means they move on tracks instead of tires. They play unique and specific roles in each operation.

#### Communications:

Used for ripping land and plowing fiber optic and electrical cables below grade across rugged terrain. The blades are removed, often to be replaced by a reel carrier on the front and a plow attachment on the back. Sometimes two D8s are tethered together, allowing the front dozer to help propel the plowing dozer in particularly demanding areas.



Pipeline: Specially equipped with a 17-foot angle blade and winches for clearing pipeline rights-of-way.

Materials: Topsoil removal and reclamation at pits and quarries, road building, and moving material around a crushing spread.

## **Fun Fact:**

D8 Dozers weigh 86,000 pounds or more than 12 Ford F-150 4WD pickup trucks.



Engine power: The 4,000-gallon dual-axle trucks are powered by 425hp engines. The 2,500-gallon, single-axle trucks are powered by 250hp engines.

## **On the Job: Fuel Trucks**

#### Capacity:

4,000 or 2,500 gallons of diesel fuel. Most trucks have multiple compartments, two pumps and two hoses to haul on- and off-road diesel fuel. Each reel holds up to 150 feet of 1 1/2-inch hose. The pumps are rated for up to 60 gallons per minute. All trucks have meters to show how much fuel was dispensed.

#### Uses:

Mobile fueling on the right-of-way of a pipeline construction spread Fueling of equipment in a gravel pit or quarry Fueling of road-paving equipment on a highway construction site

## On the Job: HDD Rig

Michels uses Horizontal Directional Drill (HDD) rigs to trenchlessly install pipe and conduit in places where open-cut trenching or excavating might not be possible, including interstate highways, wetlands and waterways. The drill rigs are designed, built and maintained in the Brownsville yard. Each drill rig has a computer-guided probe in the drill head. It sends parameters back to the operator so they know they are drilling along the planned path. Michels operators guide drill heads with pin-point accuracy.

Directional Crossings owns many large drill rigs. Pull capacity in pounds of force includes 1.2 million, 840,000, 440,000 and 220,000.

### **Fun Fact:**

In 1995, Dale Michels asked his team to build what would be the most powerful HDD rig in the industry at the time. He named the 1.2 million pound rig Hercules.

Michels HDD rigs

work throughout

complete drill rig, power unit and mud cleaning system can be moved on 3 semi trailer loads.

the world so

portability is

essential. A

PERSONNEL ONLY NECH PRESSURE NOSA AREA

The machines mine holes from 36 inches to 50+ feet in diameter. On the Job: TBM & MTBM

Tunnel Boring Machine & Microtunnel Boring Machine

Larger models are often built for a specific job.

Cort Mann Main No. Cape Horn Pump Stations to Fraser River

metrovancouver

Machines can be set up to bore through anything from hard rock to sand and clays.

The difference between a Tunnel Boring Machine (TBM) and a Microtunnel Boring Machine (MTBM) has nothing to do with size. An operator sits inside of a TBM while an MTBM is operated remotely from the surface by a person in a control container.

They are used for sewer, water, oil and gas, and transportation construction.

## MATCH THE EQUIPMENT

Can you match the different pieces of equipment that we've learned about to the correct names?



**Construction Fun! -**