

The Dustmaster

Road Trains for *Transhuman Space*

by Royce Easton Day

The End of an Era: America/Mars Announces Last of the Dustmaster Road Trains to be Taken Out of Service

Reported by Teri Chow, for Teralogos News

Port Lowell, Mars (1/14) Representatives of the Martian Commonwealth Transportation Agency announced today that the last of the venerable Dustmaster road trains will be removed from their regular run between Plymouth and Anchorage. Assistant Director Peggy Kwan is quoted as saying, "With a new spur being added to the Equatorial Railway almost every two months, and the ever increasing traffic of independent cargo haulers represented by the Truckers Guild, we no see the need to continue the expensive government support the Dustmasters required."

The Dustmaster trains, known fondly by many as the "Rustmasters" for the inevitable patina of Martian soil that coated their hulls, were a key component in the early years of the United State's expansion across the Red Planet. Built in the late 2030s almost entirely (excepting their onboard nuclear reactors) from components manufactured on Mars, the Dustmasters provided critical heavy, long-range cargo movement for the scattered American colonies for over 60 years. Capable of hauling about 400,000 Martian pounds of cargo in up to six separate trailers, the Dustmasters could transport entire startup colonies, including the colonists, to their new homes in a single journey. In addition it could tow other specialized trailers such as the Mobile Lab, which was carried during the famed USAGS overland expedition that discovered the first of the Mars Conspiracy's ozone factories.

"Really, the Dustmasters are victims of their own success," says

Manuel Orico, a former Dustmaster maintenance engineer and current member of the Trucker's Guild. "They did the job of putting together America/Mars. Now they have to step aside and let the little guys like me pull up the slack."

"I think we're losing a critical transportation resource," countered Erica Montalban, Vice-President of Mars Development Corp's Transport Division. "A single Dustmaster can haul almost seven times the amount of cargo that an average cargo truck can, and it can keep that cargo moving through the day and night, without any need to stop to refuel. That's incredibly useful for independent colonists wanting to start their own community, away from well-worn travel routes."

That's true, admits Orico, but then he exclaims, "Ai! The routine maintenance was a killer when I worked on them. The drivers would haul their trains back into the shop after being out for a month or more in the field, and it would be four weeks at minimum before we could get them back on the road. But the real kicker was the RTGs. Yeah, they keep the Dustmaster going non-stop, but every 14 years or so they need to be swapped out to the tune of over a million dollars a pop. I think it was miracle that the Commonwealth managed to scam Congress into paying for the last replacement cycle."

At the height of their popularity in 60s through the 80s, there were at least 30 road trains operating all across Mars, hauling everything from robofacs to refrigeration units. That number dwindled to less than 10 in the early 90s, and then only three trains (one of which was being cannibalized for parts) maintaining the Plymouth-Anchorage route.

Despite pleas to the CTA and to the US Congress, no plans are currently underway to restart or replace the Dustmaster program. Many fans of the Dustmaster have suggested replacing the expensive RTG's with conventional hydrogen engines, but critics point out that the size of the necessary hydrogen power plant and its tankage would eliminate much of the Dustmaster's famed cargo capacity and range.

However, fans of the Dustmaster won't have to worry about it disappearing completely. Orico, thanks to generous donations from fellow Truckers Guild members, has transferred his ghost into the computer of Dustmaster No. 12, which operated from 2048 to 2085, before being transferred to the Commonwealth National Guard and recently sold for scrap. With the aid of his fellow Guild members, Orico intends to refurbish No. 12 to full working order, including the RTG. Until then, he's content to rebuild one of the cargo trailers the Guild also acquired into a portable museum displaying the Dustmaster's place in Martian history.

"I'm going to haul myself all over the Commonwealth and beyond," Orico claims, "so people can step aboard and see what the Dustmaster did to help build the homes they live in today. Sure it'd be cheaper to just to create a VR museum for them to access, but then they wouldn't have a chance to take a ride in the real thing."

Adventure Seeds

Of course Orico's Dustmaster doesn't have to be the only one that's managed to fall into private hands. With sufficient ingenuity, a group of PCs could find any number of interesting things to do with theirs. Some ideas are:

Von Ryu's Express: A mining corporation in a politically neutral section of Mars has been abusing their bioroid workforce beyond all acceptable standards. In retaliation, the bioroids broke their memetic programming and fought back, killing many guards and stealing a Dustmaster with a Pullman and two cargo trailers. Now it's a race across the deserts of Mars, as the bioroids try to reach a safe haven inside Chinese territory, while the mining corporation attempts to hunt them down without bringing the incident to the attention of either the Chinese or the Americans.

"We got a long way to go/And a short time to get there": There's plenty of alcohol to be had on Mars, but genuine hundred-year-old booze is another thing entirely. The PCs are truckers hired to pick up three cargo trailers worth of incredibly valuable Irish whiskey for transport from New Shanghai to the estate of one of the Millionaires of Mars in time for an exclusive soiree he's throwing. The pay is more than worth it, even if you consider that the adventurers have been given the wrong receiver's slip and have to steal the whiskey that their boss rightfully bought, then have to haul it literally halfway across Mars, while avoiding sabotage attempts by their employer's equally rich rivals who want to spoil the party, not to mention that crazy Marshall who seems to have a bug up his tailpipe over the woman the heroes picked up along the way...

Mars Wars: The B/r/o/t/h/e/r/h/o/o/d . . . er, the Trucker's Guild has finally run into some serious opposition. Mars Direct, a new trucking corporation, is attempting to undercut the independent truckers with cut rate pricing. When that doesn't work, unexpected ambushes start befalling lonely Guild members in the dusty expanse between destinations. Authorities have investigated the incidents, but no definite link between the accidents and Mars Direct has been found yet. Investigators blame the Martian Triads, but a few Guild members have other suspicions.

Now the Guild has a restored Dustmaster set to haul materials to a high-profile startup colony. The Guild has advertised loudly that this will be proof of their members' reliability and safety. In other words, it's a setup to lure Mars Direct into tipping their hand. One of the Dustmaster's trailers has been modified to conceal a pair of weapon turrets, while the other two hide several off-road vehicles with weapons of their own, in the hopes of catching any attackers off guard.

Can the Ares AutoDuelling Association be far behind?

Campaigning

For players with a gearhead frame of mind, GMs could do worse than to give them their own used road train to play with. Dustmasters served the same purpose as the railroad did during the

early days of the American West, transporting cargo and passengers with reasonable swiftness over sometimes hostile terrain. Of course the PC's would be faced with the problem of having a ground truck that has a maintenance overhead similar to that of some small spaceships, and a shortage of areas where it can park.

Besides the contemporary adventure seeds presented, a Dustmaster would also serve well as a mobile base for a historical Mars campaign. Able to traverse most Martian terrain, and carry loads more economically than a spacecraft or hopper, Dustmasters would be used extensively in the early days of American/Mars development, traveling colony to colony carrying vital supplies, needed technicians, and greenhorn colonists. The local Dustmaster arriving in town might be the only physical contact a colony has with the outside world for months at a time, and its crew a welcome source of news outside official communication channels.

Dustmaster Tractor

This is the basic tractor. It can support two crew members for 30 days of continuous operation. The cargo area is slightly less than a standard Martian cargo truck, but this is compensated for by its tremendous hauling capacity. Critical communications and navigation sensors have backups, as the Dustmaster was designed to operate in the field early in Mars colonial history, far away from conventional rescue or support. It can be operated by a single driver, relying on the NAI to drive while he sleeps, but a co-driver/cargo master is commonly carried as a backup, or simply as company for the very long haul.

Crew: Drivers (Driving (Heavy Wheeled), Electronics Operation (Sensors), Electronics Operation (Communications))

Subassemblies: Body +6, full-rotation turret [T:Body] -3, ten off-road wheels +4.

Powertrain: 4000-kW all-wheel drive. 4100-kW RTG. Two rechargeable twin E cells with 40 kWh total capacity.

Endurance: RTG provides 14 years of power. Batteries can power life support for 40 hours.

Occupancy: 2 RCS, 1 cabin. Cargo: 3,750 cf.

 Armor
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 All:
 4/10
 4/10
 4/10
 4/10
 4/10

Equipment:

Body: Small complexity 6 computer with backup, two 10,000-mile range radios, 2 internal navigation systems, safety module, winch [F], remote hitch, small airlock, 60 man-day limited lifesystem.

Turret: Light sensor suite.

Statistics: Size: 10'×16'×30' **Payload:** 76,120 **Ewt:** 69,025 lbs. **Lwt:** 145,145 lbs. **Lwt. On Mars:** 55,155 lbs. **Volume:** 6,000 cf. **Maint:** 15 hours. **Price:** \$1,746,386

HT: 12 HP: 6,000 [Bod] 4 [Tur] 180 [each Whl]

Performance (on Mars) gSpeed road/off-road (no trailers): 210/55 gAccel: 10 gDecel: 20 gMR: 1 gSR: 6 gSpeed (one cargo trailer): 150/40 gAccel: 5 gSpeed (two cargo trailers): 125/30 gAccel: 5 gSpeed (three cargo trailers): 110/25 gAccel: 5 gSpeed (four cargo trailers): 95/25 gAccel: 4 gSpeed (five cargo trailers): 90/20 gAccel: 4 gSpeed (six cargo trailers): 80/20 gAccel: 4

Design Notes: WVMDS design. Immense body and 0.05 VSP turret with heavy frames. Wheels have improved suspension, improved brakes, all-wheel drive, smartwheels, and are puncture resistant. Armor is steel and body is sealed. Ground Pressure: High.

Cargo Trailer

The basic cargo trailer, used for 90% of the Dustmaster's missions. The trailer is little more than an airtight box the size of a standard cargo container set on wheels. There have no inherent power or life support connections, so anyone traveling in the trailer will have to be either Mars adapted or bring their own oxygen (or both, if they're sealed in with no way to open the doors.)

Crew: None.

Subassemblies: Body +6, ten off-road wheels +4.

Cargo: 5,000 cf.

 Armor
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 All:
 4/10
 4/10
 4/10
 4/10
 4/10

Equipment Body: Trailer pin, remote hitch.

 Statistics

 Size: 10'×16'×30'
 Payload: 100,000 lbs. Ewt: 45,200 lbs.
 Lwt: 145,200 lbs. Lwt. on

 Mars: 55,176 lbs.
 Volume: 6,000 cf.
 Maint: 26 hours Price: \$575, 250

HT: 12 HP: 6000 [Bod] 180 [each Whl]

Design Notes: WVMDS design. Immense body with heavy frame. Wheels have all-wheel drive, improved suspension, improved brakes, smartwheels, and are puncture resistant. Armor is steel and the body is sealed. Ground Pressure: High.

Flatbed Trailer

Similar to the cargo trailer, but delete all armor and sealing.

 Statistics

 Size: 10'×4'×30'
 Payload: 200,000 lbs.

 Ewt.: 35,200 lbs.
 Lwt.: 235,300 lbs.

 Lwt. On Mars: 89,376 lbs.
 Price: \$549.500

 Volume: 6000 cf.
 Maint: 27 hours
 Price: \$549.500

HT: 12 HP: 6000 [Bod] 180 [each Whl]

Tanker Trailer

A multipurpose trailer, the tanker is designed to transport up to 30,000 gallons of liquid in one 20,000 and one 10,000 gallon tank. Usually it's used as a mobile gas station for conventional hydrox powered vehicles that are accompanying the Dustmaster. The built-in fuel electrolysis unit can process up to 240 gallons of water into 378 gallons hydrogen and 180 gallons of oxygen and hour. At that rate it would take a little over two days of continuous operation to fill both tanks to capacity, so they are usually topped off before a journey begins.

Crew: None.

Subassemblies: Body +6, ten off-road wheels +4.

Power: None. Power for the electrolysis unit is provided by the tractor (only when both are parked, obviously.)

Cargo: One 20,000 gallon storage tank, and one 10,000 gallon storage tank.

Armor	F	RL	B	Т	U
All:	4/10	4/10	4/10	4/10	4/10

Equipment

One 20,000 gallon standard tank, one 10,000 gallon standard tank, six fuel electrolysis modules, remote hitch, trailer pin.

Statistics:

 Size: 10'×16'×30'
 Payload: 107,600 lbs.

 Ewt.: 83,300 lbs.
 Lwt.: 190,900 lbs.

 Lwt. on Mars: 72,542 lbs.
 Price: \$647,000

 Volume: 6,000 cf.
 Maint: 25 hours.
 Price: \$647,000

HT: 12 HP: 6,000 [Body] 180 [each Whl]

Design Notes: WVMDS design. Immense body with heavy frame. Wheels have all-wheel drive, improved suspension, improved brakes, smartwheels, and are puncture resistant. Armor is steel and body is sealed. Ground Pressure: High.

Pullman Trailer

The standard passenger trailer for the Dustmaster. Each Pullman can carry eighteen passengers in nine cabins, with life support and food for 30 days travel. Power normally is provided by the Dustmaster's RTG, but there are two twin E-cells connected to rooftop solar panels for emergency backup.

Crew: None. If VIP's are carried, then a pair of stewards usually occupies one cabin.

Subassemblies: Body +6, ten off-road wheels +4

Power: $2 \times \text{twin E-cells}$, 250 sq. ft. solar cells on roof.

Occupancy: 9 cabins. Cargo: 300 cf.

 Armor
 F
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 All:
 4/10
 4/10
 4/10
 4/10
 4/10

Equipment

Body: 540-man/day limited lifesystem, two 10,000-mile range radios, safety module, large airlock, remote hitch, trailer pin.

Statistics:

 Size: 10'×16'×30'
 Payload: 10,080 lbs.

 Ewt: 69,815 lbs.
 Lwt: 79,895 lbs.

 Lwt. on Mars: 33,460 lbs.
 Price: \$755,000.

 Volume: 6,000 cf.
 Maint: 23 hours.
 Price: \$755,000.

HT: 12 HP: 6,000 [Bod] 180 [each Whl]

Design Notes: WVMDS design. Immense body with heavy frame. Wheels have all-wheel drive, improved suspension, improved brakes, smartwheels, and are puncture resistant. Armor is steel and body is sealed. Ground Pressure: Low.

Mobile Lab

The Mobile Lab is used for long-range scientific expeditions. It has three separate science labs, an upgraded sensor suite, and can support 10 scientists for 30 days in the field. It also features a veterinary surgery for treating 'native' Martian life, a workshop for maintenance of remote science stations, and four microframes for any ghosts or high-end AI's to use. It also has a roomy cargo area for any other equipment the expedition might need.

Crew: Up to ten scientists, vets, and/or maintenance engineers.

Subassemblies: Body +6, full-rotation turret [T: Body] -1, ten off-road wheels +4.

Power: Two twin E-cells.

Occupancy: None. Usually a Pullman trailer accompanies the lab to give the lab's crew a place to sleep. **Cargo:** 2,000 cf.

 Armor
 F
 RL
 B
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 All:
 4/10
 4/10
 4/10
 4/10
 4/10

Equipment:

Body: Four microframes, two 10,000 mile-range radios, safety module, compact minifacturing workshop, three science laboratories, veterinary surgery, large airlock, 300 man/day limited lifesystem, remote hitch, trailer pin.

Turret: Medium sensor suite.

 Statistics:

 Size: 10'×16'×30'
 Payload: 20,000 lbs.

 Ewt.: 116,991 lbs.
 Lwt.: 136,991 lbs.

 Lwt. on Mars: 52,057 lbs.

 Volume: 6,000 cf.
 Maint: 10 hours.

 Price: \$4,080,384.

HT: 12 HP: 6000 [Bod] 180 [each Whl] 17 [Turret]

Design Notes: WVMDS design. Immense body and 0.5 VSP turret with heavy frames. Wheels have all-wheel drive, improved suspension, improved brakes, smartwheels, and are puncture resistant. Armor is steel and body is sealed. Ground Pressure: High.

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