SD40-2T

Engine - EMD 16-645E3
Main Generator - AR10A7
Overall length - 70" 7 3/4" (23.36 m)
Width - 10' 3 1/8 " (3.127 M.)
Traction Motors - 6 D77 axle-hung
Fuel capacity - 4400 Gal. (16,656 Ltrs)
Cooling system - 275 Gal. (1,041 Ltrs.)
Max. Speed - 65 mph (104.6 km/h)
Tractive Effort - 83,100 lbs @ 11.1 mph

Horsepower - 3000
Gear Ratio - 62:15
Weight - 408,000 lbs (185,068 kg)
Height - 15' 7 3/16" (4.755 M.)
Wheel diameter - 40" (1,016 mm)
Lube Oil Capacity - 243 Gal. (920 Ltrs.)
Sand capacity (56 cubic feet)
Min. Continuous Speed - 11.1 mph (17.9 km/h)

Most of the UP SD40T-2's did not tarry long in the 4500-series, as they had to be renumbered to make room for the SD70M's which came along in 2001. On the left is a shot of 4515 as SP 8234 and on the right is a shot of 4555 as UP 4555.

A while back the powers-that-be at Bison Rail received a flyer from the Union Pacific announcng the upcoming sale of several of their older locomotives. Being in need of some good main line power, they decided to send a representive down there to see what they had and if the could afford any of them. Well, it turned out to be a very profitable trip as they were able to purchase 8 SD40T-2's that were originally owned by the Southern Pacific. The Union Pacific even offered to deliver them free to Chicago. Actually, what they did is find enough of the units with unexpired blue cards to split the 8 into two consists, put the dead-in-transit units behind the powered ones and add enough freight on the rear to run two paying trains to Chicago where the units were delivered to Bison Rail. Once in Chicago, they were put through the shop where they weree throughly upgraded and equipped with the latest microprocessor technology before sending them to the paint shop in Oelwein. They were than re-classified as SD40-3R's upon being released from the shops.

There is a spirit of good-natured competiveness between the various subdivisions on Bison Rail involving such things as on-time performance, safety records, etc. In recognition of this it was decided to paint these units in a special paint scheme for each subdivision. The basic scheme is the same for each unit, only the colors being changed for each Subdivision.

These units will be used for mainline running and will be kept as close to their home subdivision as possible. If they have to leave the Subdivision on a train, they will be turned around and returned as soon as the unit reaches it's destination.

The 8 SD40T-2's are numbered 4515, 4519, 4527, 4530, 4534, 4541, 4555, & 4563. Their history and specifics are given below.

Road #	Previous #	Original #	Builder #	Built	Assignment	Paint Scheme
4515	UP 4515	SP 8234	786265-5	3/80	WC	Brown
4519	UP 4519	SP 8239	786265-16	4/80	WC	Brown
4527	UP 4527	SP 8251	786265-22	4/80	CV	Blue

4530	UP 4530	SP 8255	786265-26	4/80	CV	Blue
4534	UP 4534	SP 8261	786265-34	5/80	CV	Blue
4541	UP 4541	SP 8272	786265-43	6/80	CGW	Green
4555	UP 4555	SP 8291	786265-62	7/80	MN	Red
4563	UP 4563	SP 8498	776068-10	1/78	HN	Black

The "Tunnel" motor was introduced in February of 1972 to counteract the breathing problems the Southern Pacific was having while running through tunnels. With the radiator intakes in the normal rooftop position, they were pulling in hot exhaust gases from the units in front of them while traveling through the long tunnels and snowsheds prevalent on the route. In the "Tunnel" motors the air intakes were placed at the extreme bottom of the unit (see photo). This is the easiest way to spot a "Tunnel Motor" as you can see all the way through the engine at this location. There are three fans located below these intakes which blow the cool air up to the radiators which are roof mounted. The first was the SD45T-2 and was only built for the SP. In 1974 it was rear of decided to switch to a SD40T-2 for a couple of reasons. One was the fuel crunch in the mid-70's the SD45T-2 had a 20-cylinder prime mover versus a 16- cylinder in the SD40T-2 and the other was the propensity for the 20-cylinder prime mover to break crankshafts. As a matter of interest. the UP had many of the SD45T-2's it acquired from the SP rebuilt back to SD40T-2's. SD40T-2's were also built for the Denver Rio Grande & Western, with the primary difference being that they had shorter fuel tanks. All of the SP SD40T-2's had the L-shaped engineer's window. There were 239 SD40T-2's delivered to the Southern Pacific, with 10 of them being lettered for the Cotton Belt. More information on "Tunnel Motors" can be found by going to espee.railfan.net, clicking on "Miscellaneous" and then scrolling down to "Tunnel Motors" or going to trainiax.0catch.com, clicking on"Train Info" and scrolling down to "Differences between SD40-2/SD45-2 and the "Tunnel Motors"".