

## **M.P. 50'-6" 50-Ton All-Steel Automobile Cars and BX Express Box Cars**

By Ed Hawkins

On May 9, 1941, the Missouri Pacific Railroad placed an order for 100 50'-ton 50'-6" automobile cars with the American Car & Foundry Company. They were to become the first all-steel 50' box cars on MoPac's roster. The order was divided into three lot numbers depending on the interior arrangement. In December 1941 MoPac received the cars that were built at ACF's plant at Madison, Illinois.

Lot 2317, 40 cars, M.P. 88300-88339, equipped with Whitehead & Kales racks

Lot 2318, 35 cars, M.P. 88400-88434, equipped with Evans "Unitloaders"

Lot 2319, 25 cars, M.P. 86150-86174, without racks

The cars of 10'-6" inside height had an outside width of 9'-10 9/16" measured over the side sills. They came with a unique underframe that was atypical of the standard straight A.A.R. center sill design typically used on steel box cars during the early 1940s. Rather, a fish-belly center sill arrangement, 26" at the deepest point, was comprised of two built-up parallel structures formed by a pair of fish-belly webs 13" apart supported top and bottom with angles. The deepest portion of the center sill extended 17' long, 8'-6" on either side of the car's center line. The fish-belly center sill required 26" deep crossbearers at the points they connected with the center sill. The pair of crossbearers were positioned 8'-0 15/16" on each side of the car's center line, about 5" inboard of the spots where the center sill began its upward taper to the bolsters. The fish-belly center sill provided the necessary longitudinal strength that permitted the use of straight side sills that were formed with 10" channels. Four Z-section stringers, two on each side of the center sill, extended between the bolsters and provided additional strength and support. Truck centers were 40'-9 7/8" apart.

The car's side panels were riveted with four panels to the left side of the staggered 15' clear door opening and six panels to the right. The door openings were covered with a pair of equal-sized (8' nominal) 4-section Youngstown Steel Corrugated Doors with Camel door fixtures. Ends were two-panel Dreadnaught with 5 major corrugations on each of the top and bottom panels joined in the middle with a horizontal row of rivets. Each car received a Murphy raised-panel roof from Standard Railway Equipment Co. and a set of 8-rung side and end ladders.

Other specialty items included a set of Westinghouse AB air brakes with the reservoir located on the opposite side of the center sill as the cylinder and AB valve. A pair of pipes that connected the AB valve with the reservoir extended through holes in the webs of the fish-belly center sill. Each car also received an Ajax power hand brake, Apex Tri-Lok running boards and brake step, and bottom-activated A.A.R. Type "E" couplers. The cars originally rolled on spring-plankless Unit Trucks with 33" one-wear rolled steel wheels and 5'-6" wheel base.

When new the sides, ends, and roofs received a finish coat of synthetic freight car brown paint. Underframes and truck side frames were black. All stencils were white including 30" diameter Missouri Pacific Lines buzz-saw emblems.

The cars had been in freight service for less than one year when on September 11, 1942, the railroad ordered from ACF 50 more 50'-6" steel-sheathed box cars that were intended to be used for passenger express service. The order (Lot 2415) was never built, likely due to steel restrictions imposed by the War Production Board, and the order was later canceled on

March 2, 1943. In the meantime, MoPac pulled 50 of the steel auto cars from freight service and sent them to their company shops at Sedalia, Missouri, to be converted for passenger BX express box car service.

The 50 cars selected for passenger express service were M.P. 86150-86174 and M.P. 88300-88324. The other 50 cars, M.P. 88325-88339 and M.P. 88400-88434, remained in freight service. In November 1942 the 50 BX express box cars were ready for their new service after receiving a number of modifications including Allied Full-Cushion trucks, steam and signal lines, auxiliary doors fixed in place (7'-7 1/4" clear door opening), and repainted in Pullman Green with Dulux Gold stencils including 30" buzz-saw emblems.

The Allied Full-Cushion trucks were found to be problematic and the cause of some derailments. This led to 25 BX cars (M.P. 88300-88324) receiving new A-3 Ride Control trucks with Timken roller bearings in late 1946. In 1950 the other 25 cars received new trucks, this time Commonwealth BX trucks with 10' wheel base. Incidentally, the 50 cars used in freight service received *Route of the Eagles* slogans and larger 42" buzz-saw emblems when repainted after June 1949. This scheme was applied until 1961 when the slogans were dropped and replaced with 60" diameter buzz-saw emblems.

The express box cars served the railroad well through World War II and the immediate postwar years. In order for them to blend in better with the new lightweight passenger cars in Eagle colors and modernized or rehabilitated heavyweight cars, which had largely been upgraded and repainted in Eagle colors by the early 1950s, the BX express box cars began to receive Eagle paint effective June 4, 1951. While the paint scheme was ornate, the stencil arrangement was simplified by dropping the buzz-saw emblems. Unfortunately, to date no one has located a company builder's photo taken of a car at Sedalia after receiving Eagle colors. All that has been found is an extremely limited number of in-service photographs taken by rail enthusiasts. Because the BX express cars were part of the head-end consist, they didn't stay clean very long after having been freshly painted in Eagle colors.

Per Missouri Pacific Painting & Stenciling drawing GF-26519, dated June 4, 1951, the cars received Eagle paint per the following dimensions of parallel bands or stripes (measured from rail to top of car):

1. 3'-11 3/4" (measured from rail) – Gray
  2. 1" – Blue
  3. 2.5" – Yellow
  4. 2'-2 3/4" – Blue
  5. 4" – Aluminum
  6. 2'-7" – Blue
  7. 4" – Aluminum
  8. 12 1/2" – Blue
  9. 3" – Yellow
  10. From top yellow stripe to edge of roof – Gray
  11. Ends – Gray (see below)
  12. Roof color unspecified, possibly unpainted galvanized steel
  13. End placards – Black
- Black stencils over Gray background. White stencils over Blue background.

Revisions:

Gray ends changed to Blue (6-14-51)

"B" speed restriction stencil added (6-14-51)

Label holder added (6-12-53)

Reporting marks bars removed per A.A.R. Standard (12-15-58)

Due to the short time of 10 days from the drawing's inception to the revision made on 6-14-51, it's likely that few M.P. BX cars received gray ends. The "B" speed restriction code, which restricted the cars' speed to 75 mph, was 5" high and located above the repack stencils. The label holder (7 13/16" x 13") was added to the lower right corner of the auxiliary door that was fixed in place. Previous to the reporting marks bars being removed on 12-15-58, 1" bars were included above the reporting marks and below the car number. The latter change was applied to the entire fleet of freight cars.

In December 1958 the 50 BX cars were renumbered to a consecutive series M.P. 4300-4349 (M.P. 86150-86174 to M.P. 4300-4324 and M.P. 88300-88324 to M.P. 4325-4349). Curiously, the renumbering came 16 years after the BX cars were converted at Sedalia in 1942 and just four years from what would become the end of the express service and another renumbering when placed in freight service.

The BX express box cars were established to carry time-sensitive materials such as newspapers, magazines, packages, and storage mail all over the M.P. system where passenger trains with head-end equipment operated at no more than 75 mph. This excluded the first-class trains such as the *Colorado Eagle* and the first section of *The Eagle*. The BX cars were freely interchanged with other railroads and could routinely be found on the Santa Fe (*The Fast Mail*), the Pennsylvania Railroad (St. Louis to Pittsburgh, Philadelphia, and New York City), and the Baltimore & Ohio (to Cincinnati and Washington, D.C.), to name a few. Interchange agreements with other railroads were created such that BX cars from other roads were routinely found in the head-end consists of many MoPac trains.

The BX express passenger service lasted until circa September 1962, at which time the 50 cars were returned to freight service, received A-3 Ride Control trucks, and renumbered. However, the cars did not receive their original freight numbers. Refer to the table for renumberings that occurred in 1962 and 1966, the latter being a system-wide renumbering program. Even though the cars reverted to freight service, many of the cars continued to wear Eagle colors into the 1970s.

Original Nos.	12-58	9-62	Post-1966
86150-86174	4300-4324	88300-88324	353000-353024
88300-88324	4325-4349	88340-88364	353040-353064
88325-88339			353025-353039
88400-88434			353065-353099

In October 1963 and nearly 22 years of use, all 100 cars remained in service. In October 1966, soon after the renumbering program had begun, just four cars had been renumbered to the M.P. 353000-353099 series while 89 cars carried their 1962 numbers. In January 1970, 58 of the original 100 cars remained in service with 42 renumbered in the 353000 series, 6 in M.P. 88300-88364, and 10 in M.P. 88400-88434. By October 1972 the number of remaining cars had declined to 22 (all in the 353000 series) and by July 1976 to just 3 cars (353000, 353002, and 353080).

References:

*The Eagle*, Summer 1984

*Railway Prototype Cyclopedia*, Volumes 6 and 8