

1924 Baldwin 2-10-0 Decapod

At a Glance

0-60 mph **est 76.5 sec**

0-1/4 mile **est 47.9 sec**

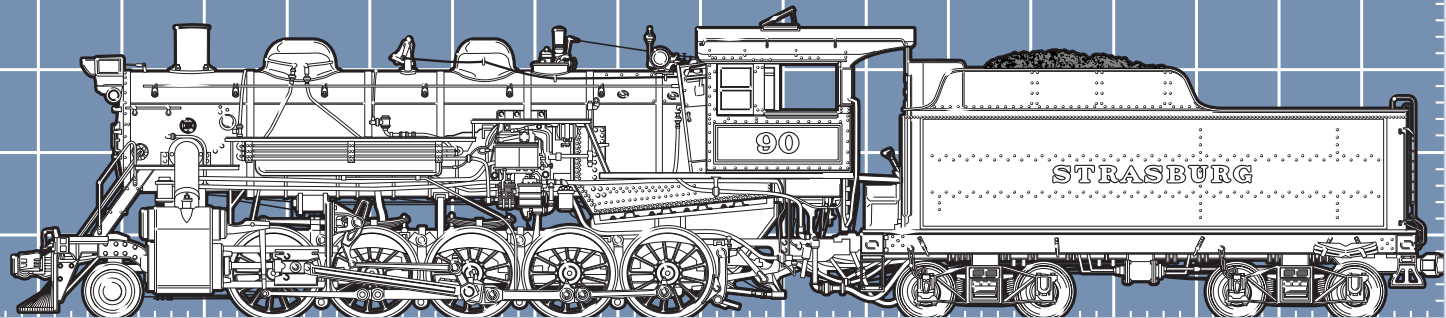
Top speed **60 mph**

Brake rating **very good**

List Price: **\$36,552**
Price as Tested: **Not for sale**
(but insured for **\$1,000,000**)

Price as tested incl std equip. (6ET automatic brake system, side air reservoirs, pneumatic brakes w/rear-mounted hangers, leaf-spring 3-point suspension, pneumatically operated sand traction control, 56-in. cast steel wheels, soot patina upholstery, wood trim, manual climate control, two-way radio, keyless entry, anti-theft system [provision for padlock on throttle], non-power seats, windows & door locks, non-panorama sunroof, bell), speedometer (\$750), Value Added Pkg (incl 250-watt 34-volt headlight bulbs, injector indicators, clean glass, rear markers, rear flange oilers, snap-lid oil cup driving box fills, Teflon valve seats, polished driving rods, epoxy-coated tender tank, striping package, cross-compound air compressor, automatic bell ringer) est \$40,000.

SCALE: 50 IN. (1270 mm) DIVISIONS
DRAWING BY TIM BARKER



SPECIFICATIONS

Engine

Type.....steel 2-cylinder, double-acting, piston valve, 90-degree right lead, alligator-type crosshead, outside connected
Valvetrain.....Walschaert
Displacement.....25,334 cu in.
Bore x stroke.....24.0 x 28.0 in.
Compression ratio.....variable
Horsepower (BLW).....1705 bhp = the ratio of: Calculated Water Evaporation/ Steam Used per I.H.P. Hour
Tractive force (cyl).....47,808 lb @ 80% cutoff; 39,168 lb @ 50% cutoff
Tractive force (boiler).....127,875 lb @ 5 mph; 21,312 lb @ 30 mph; 90,478 lb-ft @ 0 rpm
Torque on center.....
Torque w/crank-pins @ 45 deg.....127,935 lb-ft @ 0 rpm
Redline.....360 rpm
Fuel injection.....manual
Fuel.....bituminous coal; semi-bituminous coal; water

Warranty

Boiler.....none
Running gear.....none

Chassis & Body

Layout.....front engine, 10-wheel drive
Frame.....steel
Brakes.....trailing shoe
Total swept area.....6920.0 sq in.
Swept area/ton.....66.0 sq in.
Wheels.....steel, 56 x 4 with counterweights
Tires.....steel-banded ASTM A-551 Class C
Steering.....single axle lead truck, double heart links
Turning circle.....818 ft
Suspension.....leaf springs w/equalizer bars

General Data

Curb weight (locomotive only).....212,000 lb
Test weight.....212,300 lb
Weight dist, f/r %.....10/90
Wheelbase (locomotive only).....236.0 in.
Track.....56.5 in.
Length.....866.5 in.
Width.....125.0 in.
Height.....178.0 in.
Ground clearance.....8.0 in.
Trunk space.....4.6 cu ft (in tender)
Towing capacity.....8 passenger cars, 400 tons, typically

Accommodations

Seating capacity.....2
Standing capacity.....3
Head room.....48.0 in.
Seat width.....2 x 15.5 in.
Leg room.....72.0 in.
Seatback adjustment.....0 deg
Seat travel.....0 in.

Drivetrain

Transmission:.....1-speed manual
Gear Ratio Overall ratio (Rpm) Mph
Direct 1:1 1:1 (30) 5
Direct 1:1 1:1 (360) 60
Final drive ratio.....1:1
Engine rpm @ 60 mph.....360

Instrumentation

60-mph speedometer, 400-psi steam-pressure gauge, water level, 200-psi air-pressure gauge (locomotive), 200-psi air-pressure gauge (train)

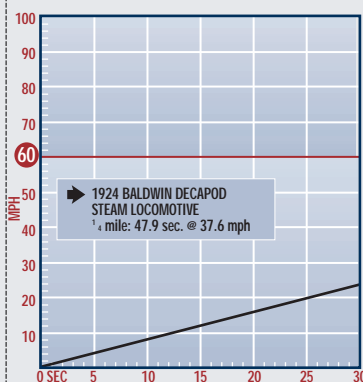
Safety

Masten Gregory Quick Release System steam whistle bell

PERFORMANCE

Acceleration

Time to speed Seconds
0-10 mph.....est 12.7
0-20 mph.....est 25.5
0-30 mph.....est 38.2
0-40 mph.....est 51.0
0-50 mph.....est 63.7
0-60 mph.....est 76.5
Time to distance
0-840 ft.....est 38.2
0-1320 ft (1/4 mile).....47.9 @ 37.6 mph



Braking

Minimum stopping distance
From 60 mph.....varies according to conditions
Control.....excellent
Brake feel.....very good
Overall brake rating.....very good
Subjective ratings consist of excellent, very good, good, average, poor; na means information is not available.

Handling

Lateral acceleration.....yes
Balance.....corners on rails
Speed through 700-ft slalom.....sluggish
Balance.....unsettling
Lateral seat support.....none

Interior Noise

Idle in neutral.....yes
Maximum.....wear earplugs

Fuel Economy

Normal driving.....100-gal. water/mile, 100-lb. coal/mile
10 mph loaded.....480-gal. water/mile, 800-lb. coal/mile
Cruise range normal.....90 miles water, 300 miles coal
Cruise range 10 mph loaded.....19 miles water, 38 miles coal
Fuel capacity.....9000 gal. water, 15 tons coal

Test Notes:

Tug the whistle cord, push and pull several levers and release the brakes. Grab hold of the baseball-bat-size throttle and pull. The Baldwin moves ahead with ease. There can be wheelspin if the 600-degree-superheated steam is released

too quickly into the cylinders. • During braking, just make sure you have plenty of track in front. • Around the skidpad, the 212,000-lb. locomotive will corner as fast as the turntable at the wheelhouse.

Test Conditions:

Temperature	Humidity	Elevation	Wind
90° F	100%	200 ft	In your face