

KOSTER'S MINIATURE RAILROAD SUPPLIES

\$1.00

1972



FELLOW LARGE SCALE MODEL RAILROADER - We present this, our 1972 catalog, hoping you will find it most useful. Any comments, and/or suggestions will be appreciated.

Sincerely,

WILFRED C. (BILL) KOSTER

Front Cover - One of our four wheel switchers crosses the trestle on the Flat River & Southern.

The Flat River & Southern is located in North Palm Bch., Florida, built to 1 1/2" scale and is open to the public. Ed Pruitt is the owner and welcomes visits by Live Steamers.

Rear Cover - An excellent 1 1/2" scale model of an F.E.C.caboose by Richard Beall of Miami, Fla.

Our goal is to provide you with accurate parts for building your railroad at low cost. If you need something that we do not have, and not available elsewhere, let us know. It may be our next new item.

OUR CATALOG POLICY - Purchasers of \$10.00 or more during the year will receive our next catalog free.

Prices, materials and specifications subject to change without notice.

We have a 7 1/2" gauge track, 1 1/4 miles north of the Seaboard Coast Line depot in Homestead. Visitors are welcome. Please call ahead, if possible.

KOSTER'S MINIATURE RAILROAD SUPPLIES
2100 N.W. 9th Ave. - P. O. Box 97
Homestead, Florida 33030

Phone (305) 247-2811

INDEX OF 1 1/2" SCALE EQUIPMENT

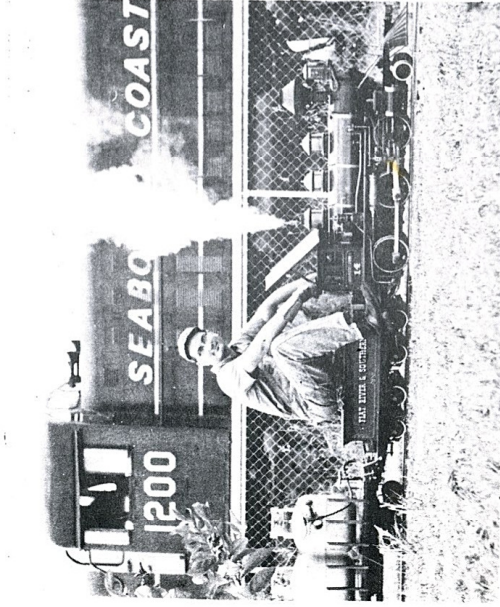
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To keep up with the hobby, we recommend:

LIVE STEAM MAGAZINE - published monthly - contains technical articles, live steam meets, plans and photos.
Subscription \$5.50 per year

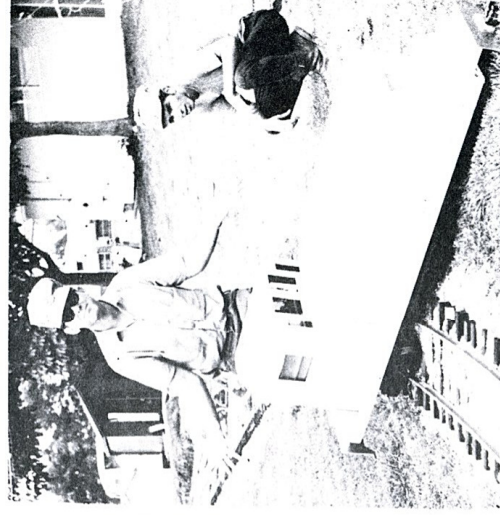


LIVE STEAM
P. O. Box 286
Cadillac, Michigan 49601



ACTION IN OUR BACKYARD

Tom Hill on F.R.& S. #14 meets the



John Coughran had an

DIESEL LOCOMOTIVES

4 WHEEL DIESEL SWITCHER

Body fabricated from 16 Gauge sheet iron and welded. with the roof removable for easy access to the battery. No springing is provided, since it is virtually impossible to spring a 4 wheel locomotive to accommodate all sizes of engineers sitting on the cab roof. Our engineers have ranged from 35 to 275 lbs. Controls can be mounted for operation sitting on the cab roof or for operation from the car behind. We favor sitting on the cab roof as it aids in switching, adds to the tractive effort available for starting and having little vibration due to the electric drive system providing a good ride. A large automobile battery will operate the locomotive from one to four hours, depending on the load pulled and grades. Recharge the battery overnight and you are ready for operation the next day. Each locomotive is custom built and track tested (7 $\frac{1}{2}$ " gauge only) before delivery. This locomotive is safe for children, our son having operated ours when he was only three years old. It makes a good yard goat, for switching cars, or on a work train when it is not desirable to steam up

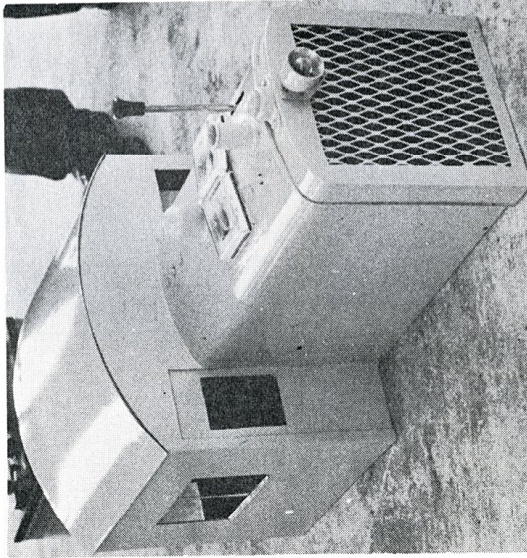


SPECIFICATIONS

Length - 32½" over couplers
Speed control - 6 position rotary switch
Voltage - 12 volts, D.C.
Wheels - 4 1/8" dia. (scale 33")
Motor - ½ H.P. @ 12 volts
Horn - 12 volt automotive type
Headlights - front and rear
Continuous tractive effort - 32 Lb.
Maximum train weight
Using cars with ball bearing
Trucks at continuous rating of motor up to 3% grade - 760 Lb.
up to 4% grade - 555 Lb.

Wheel base - 10"
Reversing by a toggle switch
Top Speed - 5 MPH actual (40MPH)
Current-39 Amps. Max. continuous
Weight - Approx. 135 Lb. without battery
180 Lb. with battery
Axle Bearings--Sealed ball bearings
up to 1% grade - 1980 lbs.
up to 2% grade 1125 Lb.
up to 3% grade - 760 Lb.
up to 4% grade - 555 Lb.

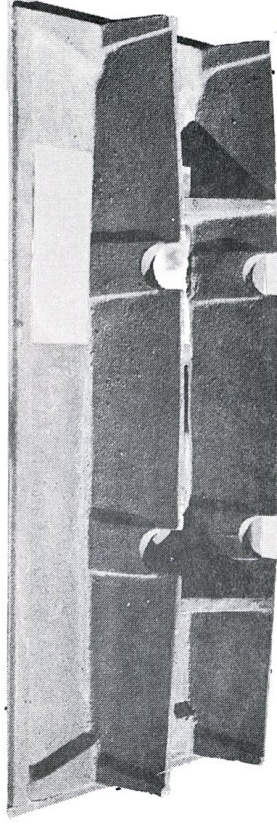
NOTE: For short grades (100' or less) it is possible to pull trains of from 50 to 75% more weight.



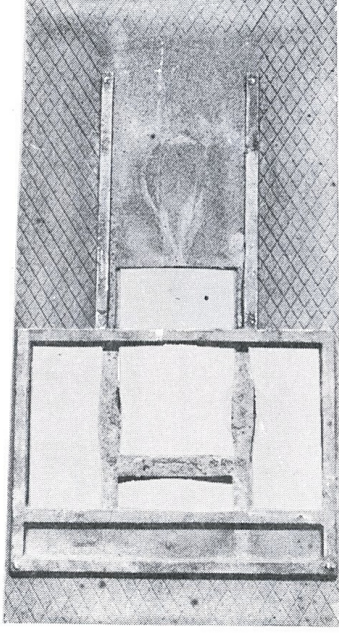
Delivery - 6 weeks from receipt of order
Price - ready to run, painted to your choice of up to 2 colors (frame and wheels one color, body a different color) without battery or battery charger
\$495.00 F.O.B. Homestead, Fla.
Available in 7½" or 7¼" gauge.
a 50% deposit is required with order.

(Photo of body removed from chassis)

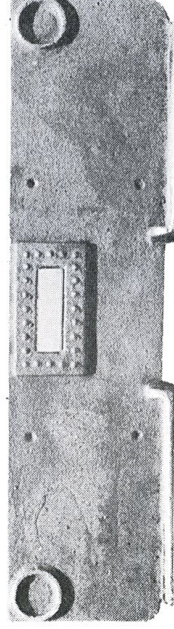
D-2



4 Wheel Switcher Chassis - Bottom View



4 Wheel Switcher Chassis - Top View



4 Wheel Switcher Pilot Casting

D-3

4 WHEEL SWITCHER PARTS AND KITS

DESCRIPTION	WEIGHT LBS.	MATERIAL	QUANTITY REQUIRED	STOCK OR	
				ROUGH CASTING PRICE Ea.	MACHINE WORK ONLY PRICE Ea.
Frame, 1 piece casting w/o ends	50	Iron	1	38.00	22.00
Pilot (end) with cap screws	6	Iron	2	4.50	2.20
Wheel - 4 1/8" dia.	2 1/4	Iron	4	1.95	3.60
Axle 13/16" Cold Rolled Steel	2	Steel	2	1.10	
Bearings, Federal 1203LL or equiv.	1 1/4	Steel	4	2.00	
Sprocket, axle Boston HKSU12-1	1	Steel	2	3.40	
Retainer, Bearing	1 oz.	Steel	4	.85	finished
Gear Box 3 to 1 ratio	4	Die cast	1	6.50	
Sprocket, gearbox input KSU 10-2	1/2	Steel	1	3.10	
Sprocket, gearbox output KSU8-1		Steel	2	2.50	
Bracket, gearbox	1	Iron	1	2.00	2.00
Chain, drive #41	1/2	Steel	3 ft.	1.50 ft.	
Motor, 12v/1/2 H.P., surplus aircraft modified for reversing	16		1	40.00	
Sprocket, motor KSU 8-1	1	Steel	1	2.50	
Relay and Diode Panel	1	Wire & asbestos	1	65.00	complete
Throttle (speed control switch)	1		1	3.00	complete
Switch, reversing	1/2		1	4.00	
Meter, volt 0-15 vdc	1/4		1	4.50	
Meter, amp 0-100 adc	1/4		1	5.00	
Horn, automotive	2		1	6.00	
Relay, horn	1/4		1	2.00	
Button, horn	2 oz		1	1.25	
Battery connector	2 oz.		2	.50	

Kit of rough castings, all parts shown above with instructions 195.00 110#
 Kit of machined castings, all parts shown above mach.w/instruc 260.00 110#
 Assembled chassis, all parts above, ready to run, painted 345.00 110#
 Body of switcher. without fittings 65 00 00#

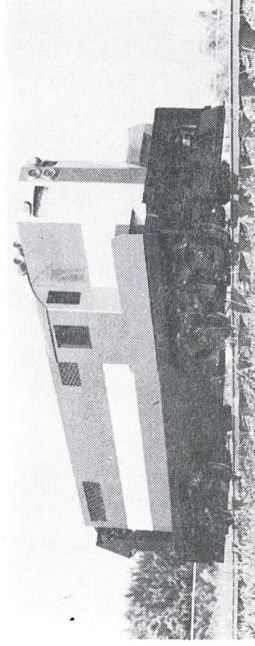
GP-7 DIESEL LOCOMOTIVE

This locomotive is modeled after the GP-7 produced by the Electromotive Division of General Motors. Scale dimentions have been adhered to, as closely as possible. The chassis is of an all welded construction, using 14 and 16 gauge sheet iron. Power is supplied to the wheels by a .55 H.P. motor on each axle, producing a total of 2.2 H.P.

Contols are mounted on rear,MU controls (to operate two or more locomotives simultaneously) can be provided. Four golf cart batteries are used to supply 24 volts for the controls and motors. Battery life will run from 1 1/4 to 6 hours, depending on the load pulled, grade, etc.

SPECIFICATIONS

Length - 86" over couplers Height - 22"
 Width - 15" Weight - Approx. 240 without batteries
 Wheels - 5" Diameter Approx. 500 with 4 batteries
 Current - 88 Amps. Max. continuous Horn - 12 Volt automotive type
 Total Horsepower - 2.2 H.P. (1,126 scale HP)
 Available in 7 1/2" or 7 1/4" gauge.



PERFORMANCE

Top Full Load Speed of Locomotive	5.6 MPH (45 Scale)	7.5 MPH (60 Scale)	11 MPH (88 Scale)
Maximum train weight,	up to 1% grade	4300 Lbs.	2700 Lbs.
using cars with ball bearing up to 2% grade	3340 Lbs.	2380 Lbs.	1420 Lbs.
trucks at continuous rating. up to 3% grade	2220 Lbs.	1550 Lbs.	860 Lbs.
Continuous tractive effort	1635 Lbs.	1100 Lbs.	570 Lbs.
	96 Lbs.	72 Lbs.	48 Lbs.

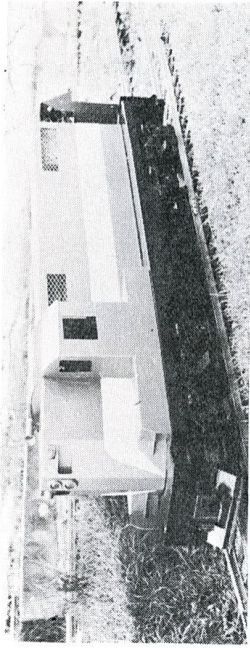
NOTE: For short grades it is possible to pull trains of 50% to 75% more weight, except in the unit geared for 5.6 MPH where wheelslip will probably occur with a 50% overload.

Delivery: 10 weeks from receipt of order.

Price - ready to run, painted your choice up to 2 colors with standard equipment including headlights, horn bell and dynamic brakes - without battery or battery charger- - - - - \$1,495.00 F.O.B.Homestead, Fla

Available in 7½" or 7¼" gauge.

A 50% deposit is required with order.

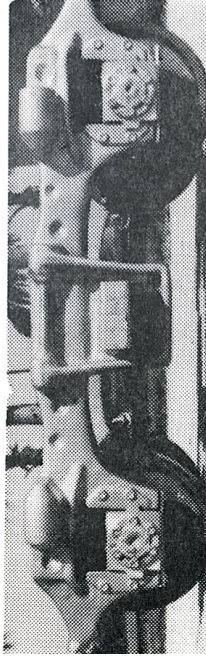


D-6

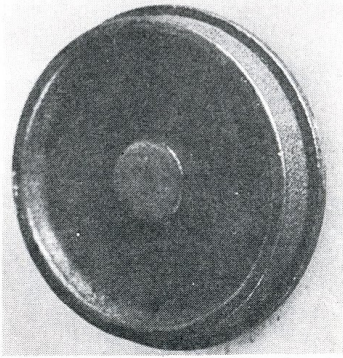
DIESEL TRUCKS

DESCRIPTION	WEIGHT LBS.	MATERIAL	QUANTITY REQUIRED	STOCK OR	
				ROUGH CASTING	MACHINE WORK ONLY
TRUCK, For GP or F units - 13½" wheel base (9'0" Scale)					
Side Frame	15	Iron	4	15.00	6.00
Bolster, Truck	1½	Alum.	2	4.00	2.20
Journal Box, Small* Large*	½	Alum.	8*	1.75	1.40
	¾	Alum.	8*	2.25	1.40
Body Bolster	1	Alum.	2	3.00	1.65
Axles, 13/16" Cold Rolled	2	Steel	4	1.10	2.20
Wheel, 5" Dia. (40" Scale)	3½	Iron	8	2.95	4.60
Bearing, Ball ½" ID.DC Sealed 1 oz	1	Iron	8	1.50	-
Springs 5/8" X 1" Med.Press. ½ oz	1	Steel	16	.50	-
All rough castings and springs, no axles or bearings				\$110.00	100 Lbs.pr
All rough castings springs, axles and bearings				125.00	108 Lbs.pr.
Single non-powered Diesel truck, machined, assembled and painted				115.00	54 Lbs
Pair of Diesel Trucks, machined assembled and painted (unpowered)				225.00	108 Lbs.

* 8 Journal Boxes (total) needed - either type or 4 of each



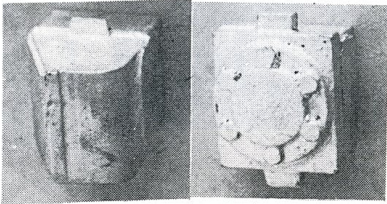
DIESEL TRUCK PARTS



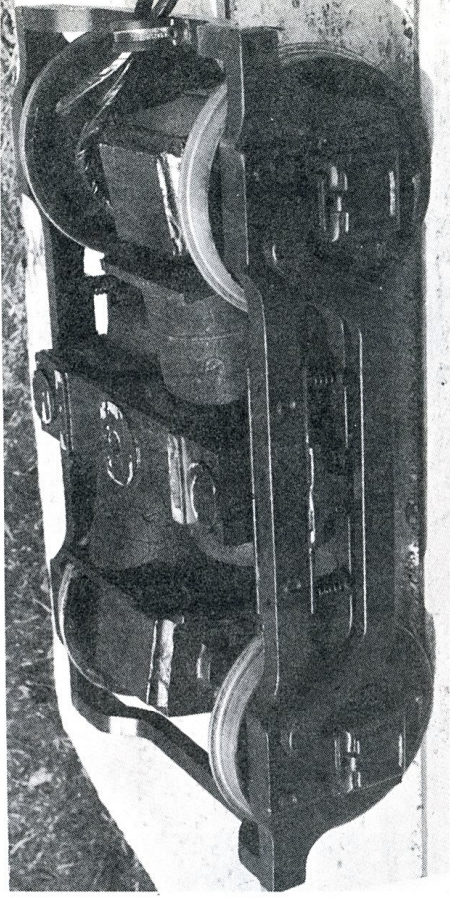
Diesel wheel 5" (40" scale)



Diesel Truck Bolster



Diesel
Journal Boxes



Our motors and gear boxes mounted

D-8

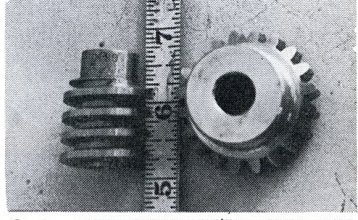
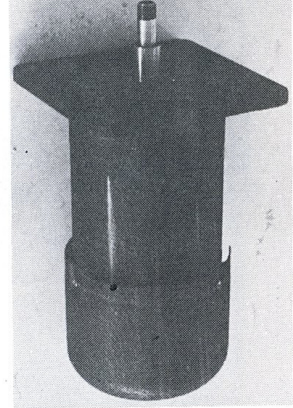
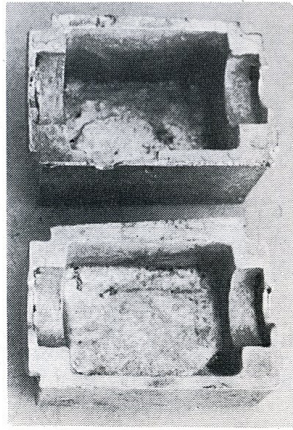
POWERED DIESEL TRUCKS

To power the trucks on the preceding page, the following parts are needed.

Motor	27 Volt, 22 amp. D.C., 7500 rpm, ball bearing, fan cooled surplus aircraft	\$16.00	6 Lbs.
Same as above, but modified for reversing and machined to fit gearbox		\$30.00	6 Lbs.
Gearbox	Aluminum, cast in two halves, unmachined	6.00	1 1/2 Lbs.
Machining and assembling gearbox, attaching to motor, (includes screws, grease fitting and grease)		\$18.00	
Worm & Gear, BOSTON GEAR WORKS, specify top speed (5.6, 7.5 or 11 mph)	5.6	22.85	1 Lb.
	7.5	14.50	3/4 Lb.
	11	26.00	1 Lb.
Machining and attaching worm to motor, gear to axle Bearings. Ball 5/8" I.D., D.C. Sealed. 2 required, \$2.00 ea.		6.00	
All parts machined and assembled to axle \$75.00 per axle when bought with truck or axle (machined)	7.5 mph	4.00	2 oz.
on preceding page. Add 9 Lb. per axle	5.6 or 11 mph		

Diesel truck, two motors machined and assembled (specify top speed)

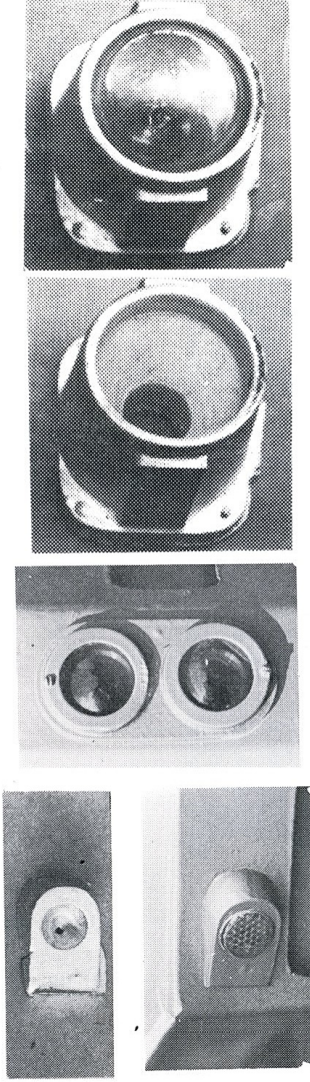
78 Lbs. per truck	5.6 mph	\$280.00
	7.5 mph	265.00
	11 mph	285.00



DIESEL LOCOMOTIVE PARTS

DESCRIPTION	WEIGHT LBS.	MATERIAL	QUANTITY REQUIRED	STOCK OR	
				ROUGH CASTING	MACHINE WORK ONLY
HEADLIGHT, GM Diesel Switcher Lamp for above. 12 volt, 32 cp	$\frac{1}{2}$ $\frac{1}{4}$	Alum.	2 per loco	4.00	1.50
Headlight. complete with lamp assembled and painted \$7.00 ea.			"	1.25	-
Headlight, GM SD type Diesel Lamp for above, 12 volt 32 cp	1 oz. $\frac{1}{4}$	Alum	2 per loco	.50	
Classification light, GM SD	1 oz.	Alum	4 per loco	.50	
Lens for above (red or green)	1 oz.	Plastic	1 per light	.12	
Bell for Diesel locomotives - 12 volt electric to be mounted inside or under your Diesel, with motor and switch.				\$14.95 ea.	5 Lbs.

NOTE: Lamps and bell above require a storage battery due to current requirements.



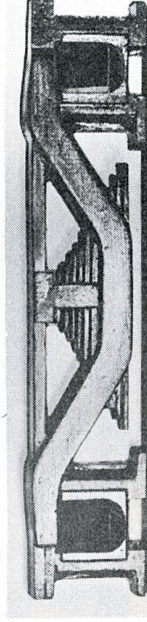
C. N. J. DIESEL TRUCKS

Our newest trucks are the C. N. J. Diesel trucks, as used on their small switcher. Presently, we only have the photo of the sideframe pattern, but expect to be able to deliver shortly.

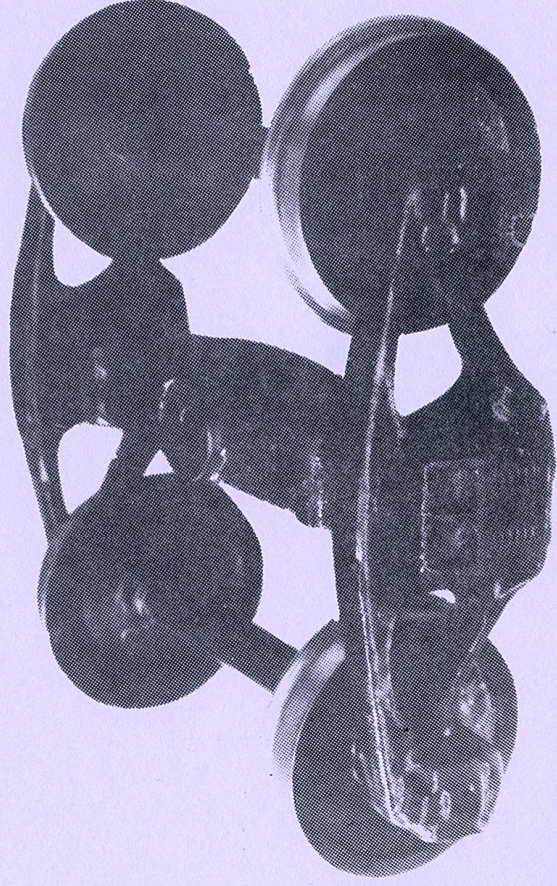
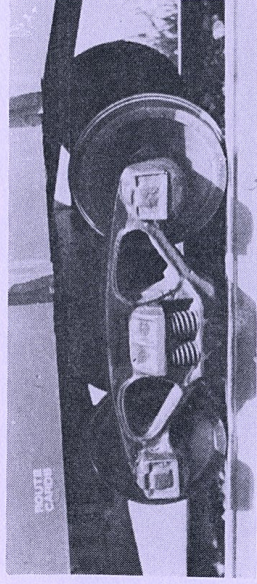
The truck is unsprung, but equalized.

DESCRIPTION	WEIGHT Lbs.	MATERIAL	QUANTITY REQUIRED	STOCK OR	
				ROUGH CASTING	MACHINE WORK ONLY
Side frame	12	Iron	4	12.00	3.00
Bolster, Truck	4	Iron	2	4.00	2.20
Body Bolster	3	Iron	2	3.00	1.65
Axles 13/16" Cold Roiled	2	Steel	4	1.10	2.20
Wheels, 4 1/2" Dia. (36"Scale)	3	Iron	8	2.45	4.10
Bearing, Ball 1 1/2" I.D.-DC sealed 1 oz			8	1.50	-
All rough castings, no axles or bearings				\$80.00	86 Lbs. Pr.
All rough castings, axles and bearings				95.00	94 Lbs. Pr.
Single truck, non powered, mach., assembled & ptd.				75.00	47 Lbs.
Fair of C.N.J. trucks, machined, assembled & ptd.				145.00	94 Lbs.

NOTE: Our motor units on page D-9 can be used to power this truck.



FREIGHT CAR PARTS



FREIGHT TRUCKS

DESCRIPTION	WEIGHT LBS.	MATERIAL	QUANTITY REQUIRED	STOCK OR	
				ROUGH CASTING	MACHINE WORK ONLY
				Price Ea.	Price Ea.
AAR Truck, Bettendorf Type	4	Iron	2	3.50	2.20
Bolster	2 1/2	Iron	2	2.00	1.65
Body Bolster	3 3/4	Iron	4	3.50	1.80
Side Frame	2 1/4	Iron	8	1.95	3.60
Wheel 4 1/8" dia.	2	Steel	4	1.10	2.20
Axle, 13/16" Cold Rolled Steel	1 oz.		8	1.50	-
Bearing, Ball 1/2" ID D.C.Sealed	1 oz.		16	.50	-
Springs, 5/8" X 1" Med.Pressure	1/2 oz.	Steel			

All rough castings and springs, no axles or bearings \$45.00 44 lbs.

All rough castings springs, axles and bearings \$60.00 50 lbs.

Pair of freight trucks, machined, assembled and painted \$115.00 50 lbs.

Trucks may be made for 7 1/2" or 7 1/4" gauge - please specify.

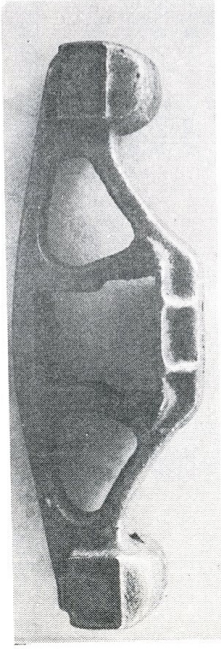
For heavy cars or tenders, 4 additional springs may be used.

Trucks may be had with tapered axles as per prototype for an additional machining charge of \$2.00 per axle, \$8.00 per pair of trucks.

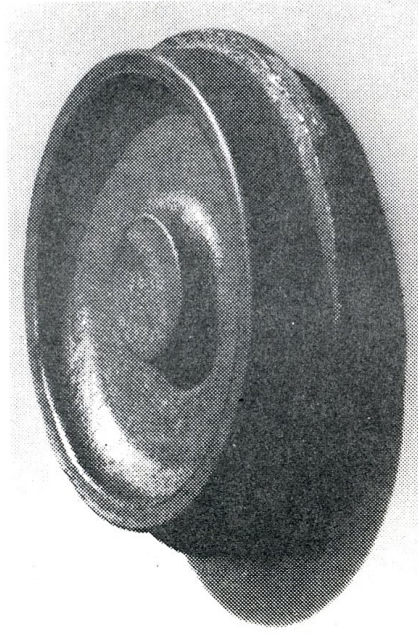
Machined wheels are supplied to LALS standards.

Prices and materials are subject to change without notice.

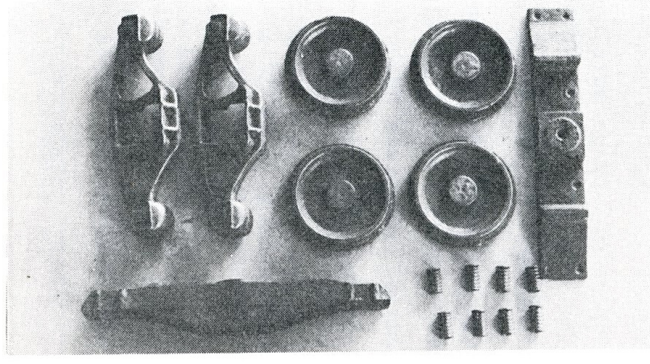
E 2



Sideframe

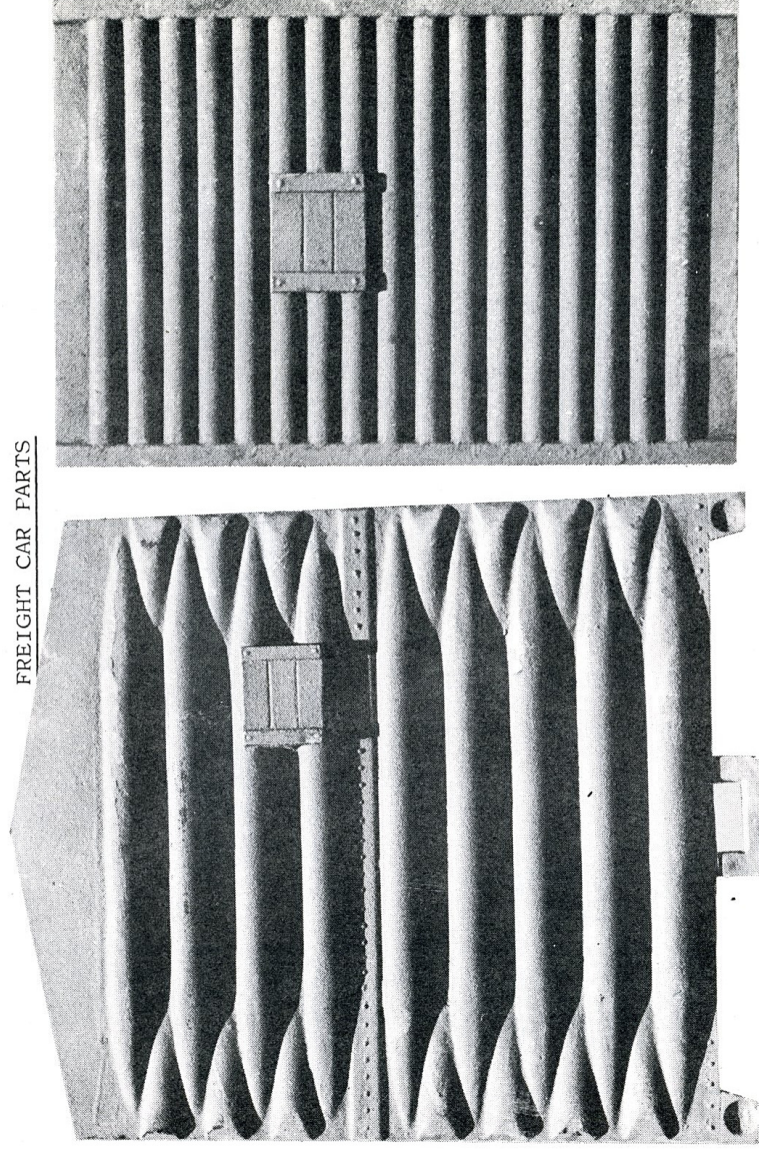


E-2 4 1/8" (33 scale) wheel, rough casting



Parts for one truck

FREIGHT CAR PARTS



Box Car End Price \$12.00 Weight 20 Lbs. Box Car Door Price \$7.00 10#

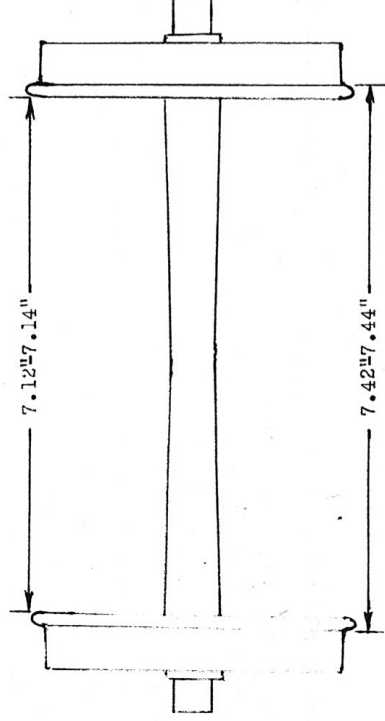
With these castings you can turn out a realistic box car. 16 ga. sheet metal is suggested for the sides, however wood may also be used. The ends can also be used for most refrigerator cars. Cast in iron to provide needed weight since most cars of these types carry no passengers.

F-4

FREIGHT CAR PARTS

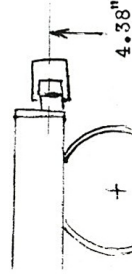


End Sill for Freight Cars Cast Iron Price - \$2.00 Ea. Weight 3#

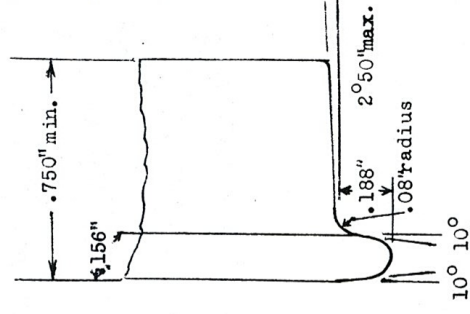


WHEEL & COUPLER
HEIGHT STANDARDS

1 1/2" Scale



F-5

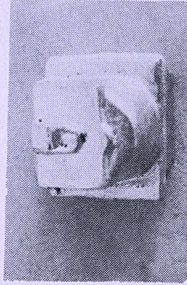


PASSENGER CAR PARTS

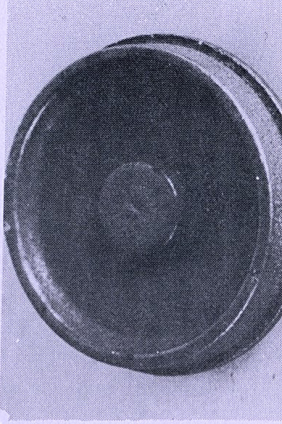
PASSENGER CAR PARTS

DESCRIPTION	WEIGHT LBS.	MATERIAL	QUANTITY REQUIRED	STOCK OR	
				ROUGH CASTING	MACHINE WORK ONLY
				Price Ea.	Price Ea.
Passenger Car Truck, 4 wheel commonwealth, 12" (8'0") wheelbase					
Bolster, truck		Iron	2		1.40
Bolster, body		Iron	2		4.10
Side Frame		Iron	4		2.20
Equalizer Bar		Iron	4		-
Journal Box		Alum.	8	1.50	-
Wheel, 4 $\frac{1}{2}$ " (36" Scale) dia.	$\frac{1}{2}$	Iron	8	2.45	4.10
Axle, 13/16" Cold Rolled	3	Iron	8	1.10	2.20
Bearing, Ball 1/2" I.D. Sealed	2	Steel	4		
Springs, 1" X 1 $\frac{1}{2}$ " M.P.	1 oz.		8	1.50	-
	2 oz.	Steel	4	1.00	-

All castings and springs, no axles or bearings
 All parts including axles and bearings, not machined.
 Pair of Passenger trucks. assembled and painted
 May be made for 7 $\frac{1}{2}$ " or 7 $\frac{1}{4}$ " gauge, please specify



P-1 Passenger Truck Journal Box



Passenger
Truck Wheel
Rough Casting

SIGNALS

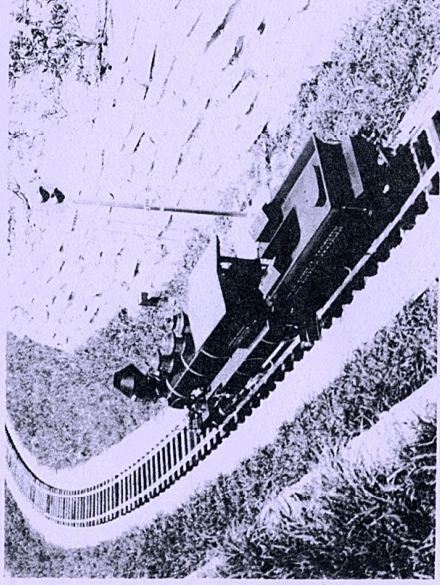
SIGNALS and SIGNALING EQUIPMENT

BLOCK SIGNAL, 2 light, custom made, height 44" \$60.00 ea.
BLOCK SIGNAL, 3 light, custom made, height 48" 65.00 ea.

NOTE: The signals are built to a scale of 3" to the foot for better visibility. This puts the light at approximately the same height as the engineer's eyes.



3 Light Signal



2 Light Signal on the F.R.& S.

Relay control boxes for above - custom made - state needs, we will quote price. Information needed - power source, two or three light, are additional contacts required, one or two direction operation?

S-1 We will be glad to develop your entire signaling system. Send us your track plan advising amount of traffic and direction of trains (one or

SIGNALS AND SIGNALLING EQUIPMENT

GRADE CROSSING SIGNAL

We were asked recently by a railroad to bid on supplying half size crossing signals for a walkway. This is a photo of our pilot model. We have castings available for the RAILROAD CROSSING and STOP ON RED SIGNAL. They are cast in iron, with raised letters. Also furnished when you purchase the castings are plans to complete your signal. We can also furnish the completed signal, ready to install on your railroad to protect a driveway, etc.

Assembled and painted ready to install:

- 2 light (as shown) without bell or flasher mechanism \$150.00 66#
- 2 light, with bell. \$175.00 68#
- 2 Light, with bell & flasher \$225.00 80#
- 2 light, with bell, flasher & track detector circuit..\$250.00 82#
- 4 light, w/o bell or flasher..\$180.00 70#
- 4 light, with bell. \$205.00 72#
- 4 light with bell and flasher \$255.00 88#
- 4 light with bell, flasher and track detector circuit..\$280.00 90#

The Railroad Crossing signs are 4 1/2" X 23" and the Stop on Red Signal sign 11" X 13"

RAILROAD CROSSING sign - 2 castings

Cast Iron - - - - price \$14.00 pr 2C

STOP ON RED SIGNAL sign

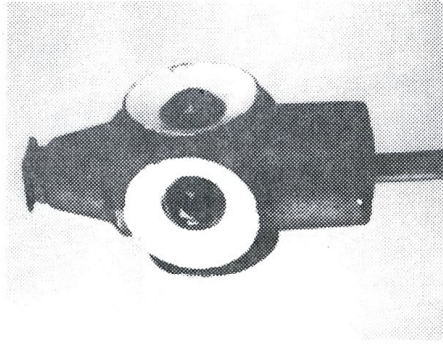
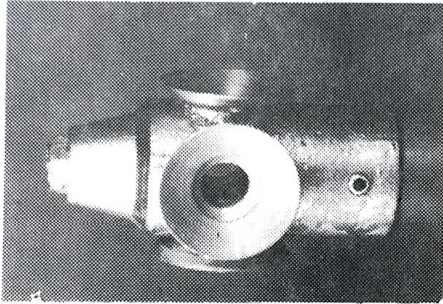
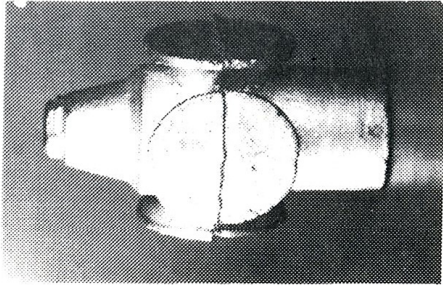
SIGNALS and SIGNALING EQUIPMENT

CROSSING BLINKER - 2" Scale for better visibility - 30" high

	WEIGHT	PRICE
All castings and lenses only.		
All castings, lenses, bulbs and pipe.		
Assembled and painted blinker		

SWITCHSTAND LIGHT

Rough Castings only	1 Lb.	\$4.00
Machined light with lenses and lamp 12 volt. .	1 1/2 Lb.	11.00
Assembled and painted	2 1/2 Lb.	12.00



S-3 Rough Casting

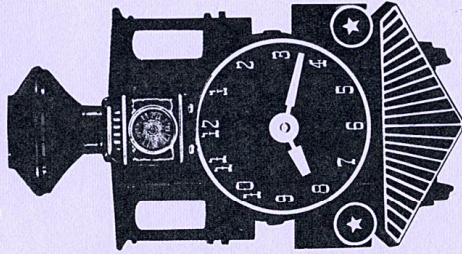
Machined Casting

Assembled and Painted

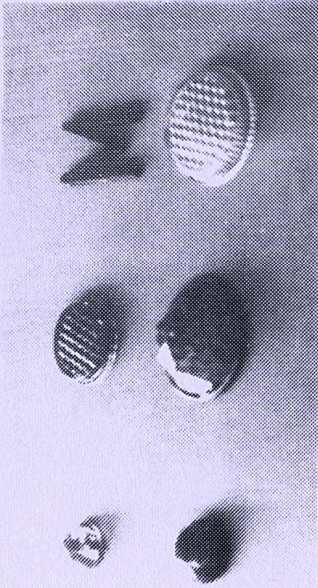
MISCELLANEOUS & RAW MATERIALS

MISCELLANEOUS PARTS

DESCRIPTION	PRICE
TRAIN CLOCK, Replica of old fashioned train with illuminated headlight glittering and flickering. Hangs or stands. 4½" dial. 11½" high. 6½" wide	\$ 12.95 POSTPAID



ILLUMINATED
HEADLAMP



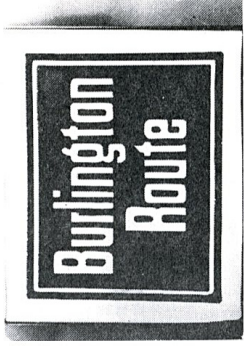
LENSES, Plastic for Signals, Marker Lights, etc.			
Size	Type	Available colors	Price
7/16"	Solid	Red, Green, Yellow, Clear	12¢
1/2"	Solid	Red, Green, Yellow	25¢
3/4"	Flat, reflector	Red, Green	12¢
1"	Flat, reflector	Red, Green, Yellow	12¢
1"	Convex	Red, Green, Yellow	12¢

T-1 NOTE: Flat reflector type is not recommended for color light signals

RAILROAD INSIGNIA IN BRONZE AT PRICES YOU CAN AFFORD



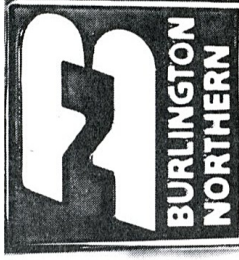
App. Weight—4.5 Pounds
6 1/2" x 9 1/2"



App. Weight—9 Pounds
7 1/2" x 9"



App. Weight—3 Pounds
10" Wing Spread



App. Weight—7 Pounds
8" x 8"

- One-Quarter Inch Thick Base With Three-Sixteenths Inch Raised Letters And Borders.
- Choice Of Satin Polish Or Bright (Mirror-Like) Finish.
- Priced At \$18.00 To \$23.00 In Satin Finish.
- Priced At \$22.00 To \$27.00 In Bright Finish As Shown At Left.
- Shipped Postpaid In The 48 Adjacent States.

	SATIN	BRIGHT
G. M. & O.	\$18.00	\$22.00
ROCK ISLAND	19.00	23.00
BURLINGTON NORTHERN	21.00	25.00

TRACK SUPPLIES

We do not supply rail, as we feel there are enough suppliers of rail presently. We do however, have frogs for Culp rail as listed and can supply switches, custom made, to your order.

Frogs for Culp Rail

#4 Cast Aluminum	6.95 ea.	1 1/4 Lb.
#6 Cast Aluminum	7.95 ea.	1 1/2 Lb.
#8 Cast Aluminum	8.95 ea.	1 3/4 Lb.

CUSTOM MADE SWITCHES

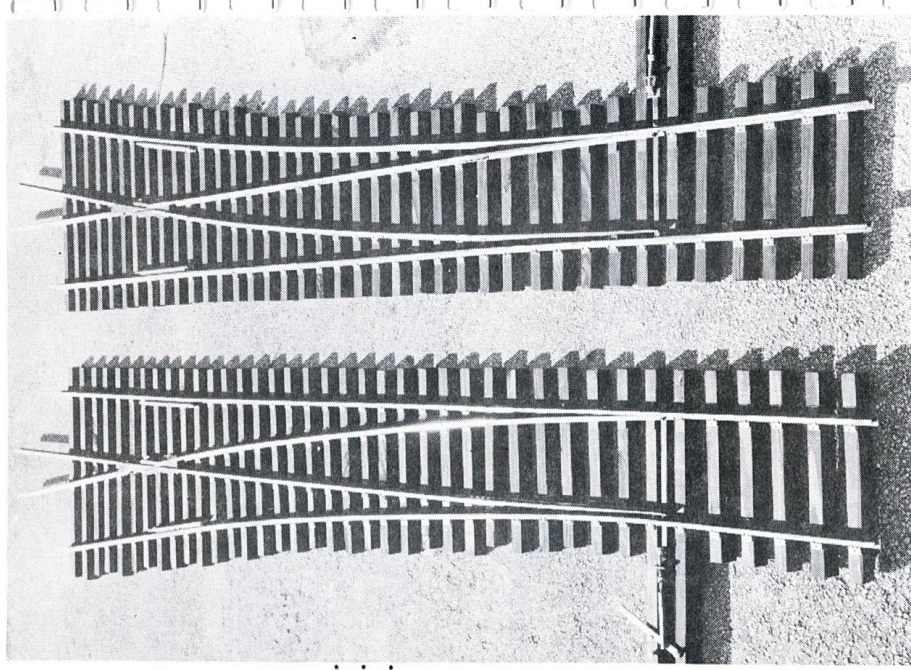
Built as pictured using Culp rail and our frogs

#4	\$125.00 ea.
#6	\$150.00 ea.
#8	\$175.00 ea.

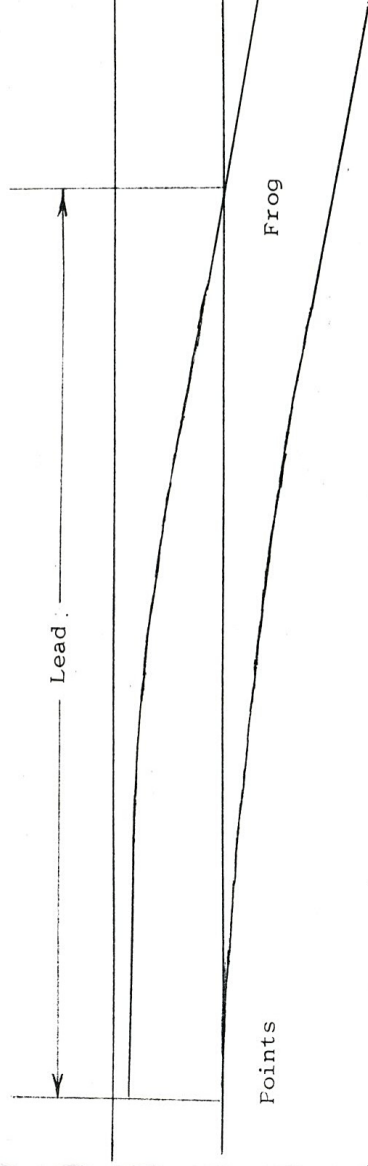
Specify right or left hand. Ties are pressure treated and creosoted.

Prices are F.O.B.

For shipping, a crating charge of \$25 will be added.



Two of our switches, #6 left and right hand.



TRACK SWITCHES (Turnouts)

Track switches are defined by right and left hand (the direction the diverging track leaves the main track and by the ratio of the angle of the diverging track as it goes through the frog. Thus, a number 6 switch has a ratio of 1 to 6 at the frog, etc. Frog angle naturally determines length (called lead) and radius of the curved rail. On the prototype railroads trains are permitted about 2 mph for each number in a switch (#6 = 12mph). Thus, the longer a switch, the faster a train can travel through it. In out model work we rarely have room for switches longer than #8. Dimensions for a few common sizes are as follows:

FROG NUMBER	Lead	Radius of lead curve	Degree of curve
4	57 3/8"	15' 0"	50
6	74 5/8"	35' 6"	20
8	88 1/8"	68' 9"	10
10	117 3/8"	100' 9"	7

T 4

RAW MATERIALS

DESCRIPTION	PRICE			
METALS:	1/4"	5/16"	3/8"	1/2"
Price per ft.				
Brass, square	.55	.85	1.25	2.20
Brass, round	.45	.65	.95	1.65
Cold Rolled steel, round	.20	.30	.40	.55
Aluminum rod, round	.25	.35	.45	.85
Angle Iron 1/2" X 1/2" X 1/8"				
3/4" X 3/4" X 1/8"				
Channel Iron 1" X 2"				
Brass Bar Stock 3/16" X 1/2"				
1/4" X 1/2"				
Aluminum Angle 1/2" X 1/2" X 1/8"				
Brass Tubing (12" lengths)				
1/16 3/32 1/8 5/32 3/16 1/4 7/32 3/8 1/2				
.20 .25 .25 .25 .30 .30 .30 .35 .45 per ft				

NOTE: Most other sizes and shapes of metal available - Ask for price.

LETTERS: Plastic, for making signs, etc. 1" high, 39 letters in red, black or white \$1.00 set

NUMERALS: Plastic, same as letters, 1" high, 60 numbers in red, black or white 1.50 set

(See photo of a plastic letter on page T-1)

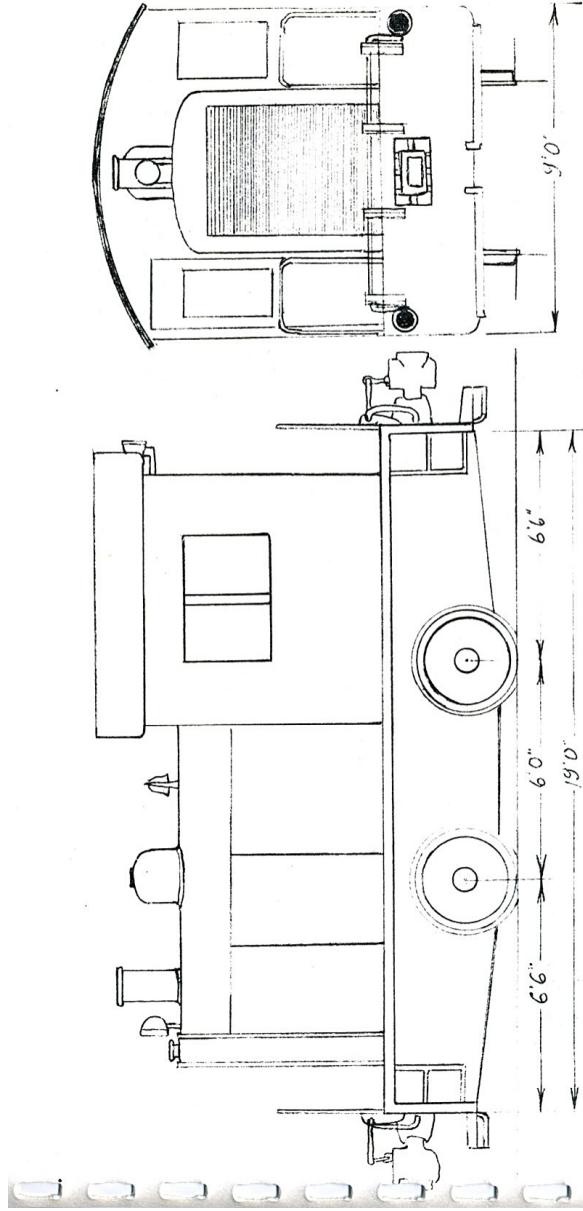
PROTOTYPE PLANS

PLAN SECTION.

The following plans, with the exception of the 4 wheel switcher were furnished by the Santa Fe Railroad. They are reprinted from a plan book no longer available, and represent locomotives and cars as they looked about 1950.

Since all of the Santa Fe plans are to a scale of $1/8"$ to the foot, a model built in $1\ 1/2"$ scale would be 12 times larger. Thus, $1"$ on the plan equals 1 foot in $1\ 1/2"$ scale. For easy conversion you may have the plans photostated to a larger scale, or as we do, take a 35 mm slide of the plan and project it to full size and trace on a piece of paper. To get a good slide you must be able to focus to a foot or less and a single lens reflex type camera is almost a necessity. If you do not own such a camera, perhaps you have a friend that has one. For best results, make the plan fill the entire slide area. One problem exists in this method, sometimes due to imperfections in the lenses your projected image will not be square, therefore you will need to square it up afterwards, particularly at the edges.

We acknowledge with thanks, the courtesy of the Atchison, Topeka and Santa Fe Railway Company in granting us permission to use their plans featured in our catalog on pages U-3 through U-11.



Whitcomb 30-ton, 4 wheel diesel switcher.

DIESEL LOCOMOTIVES (Passenger)

Body, red and stainless steel.
Striping, red, yellow & black.
Trucks, aluminum.
(Freight)
Body, blue and yellow.
Striping, yellow.
Trucks, black.
(Switchers)
Body, black

Santa Fe Color Chart

REFRIGERATOR CARS

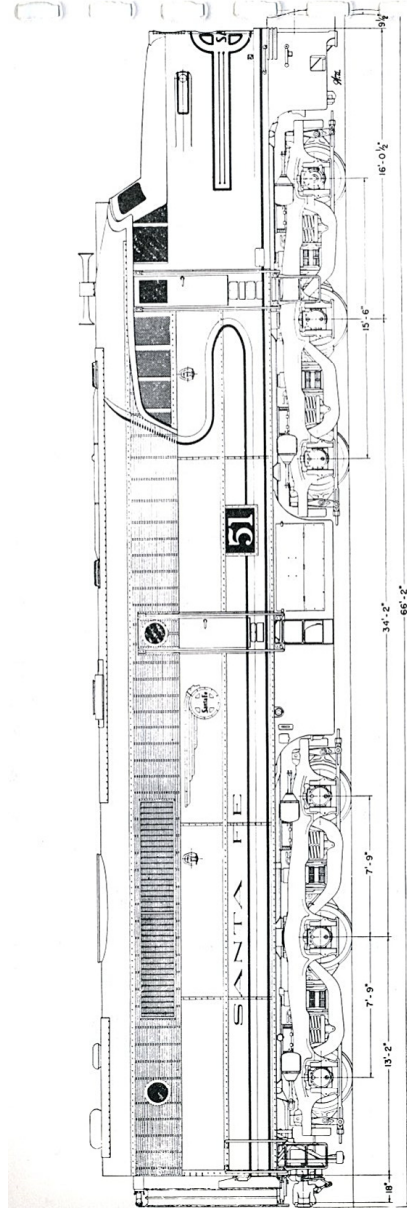
Underframe, black.
Trucks, black.
Sides, yellow.
Ends, sill steps, black.
Letters, numbers, black.
Roof & steps, black.

STOCK CARS

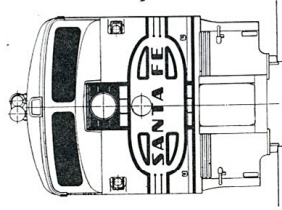
Underframe, mineral brown
Trucks, mineral brown.
Sides & ends, min. brown.

TANK CARS

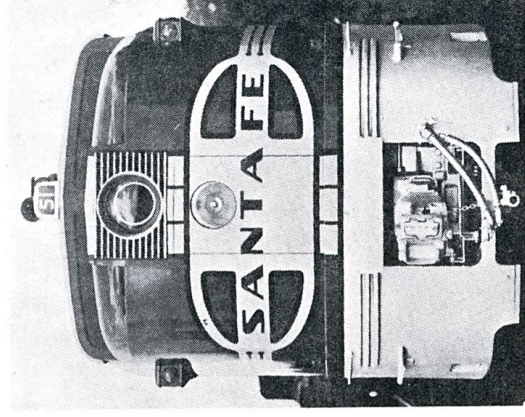
Underframe, black.
Trucks, black.
Tank, Black
Bands around tank, gray.
CABOOSE CARS
Car, exterior, mineral brown
Car, interior, silver gray
Roof, black.
Underframe, black
Trucks, mineral brown
Handrails black (also wh-



Alco Passenger Diesel Class 51

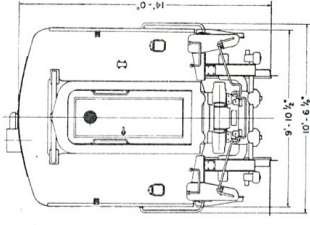
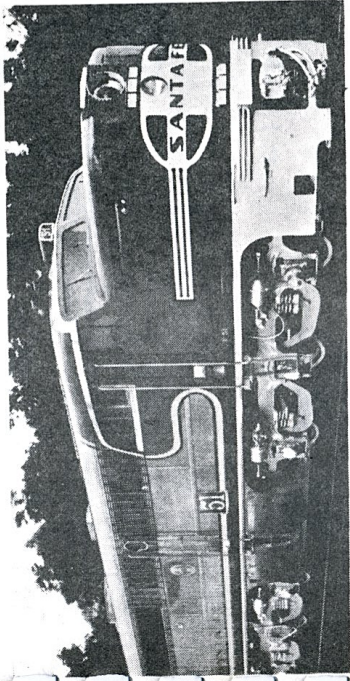
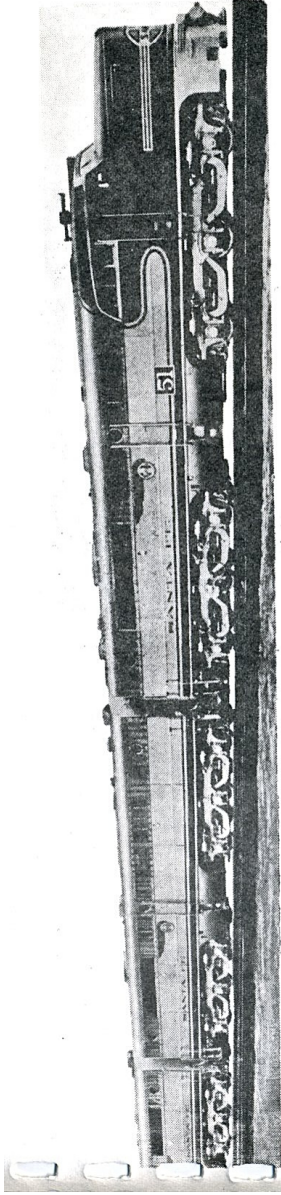


Road Numbers 51-78
(Alco-built in 1946-48.)

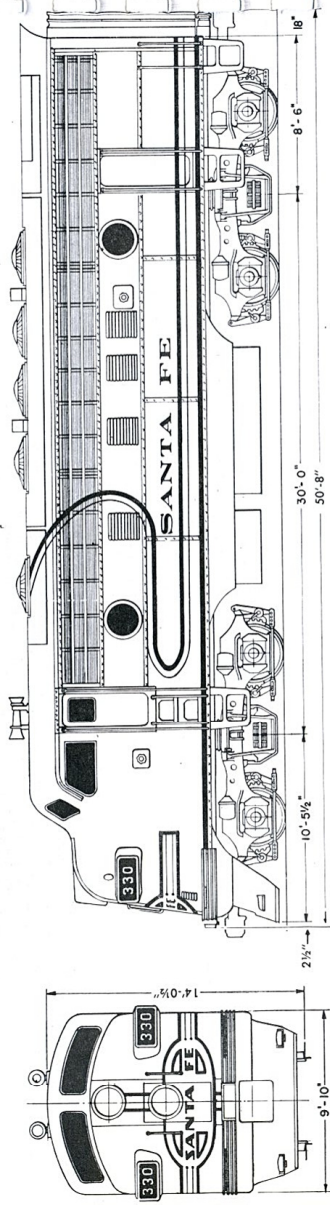
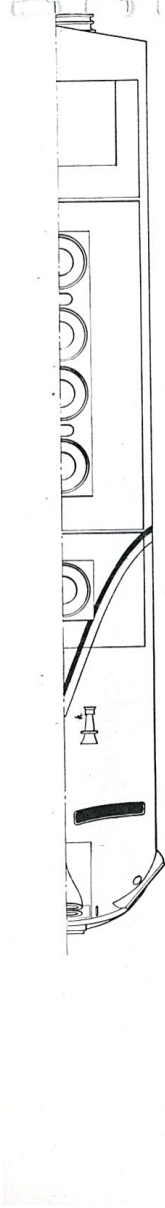
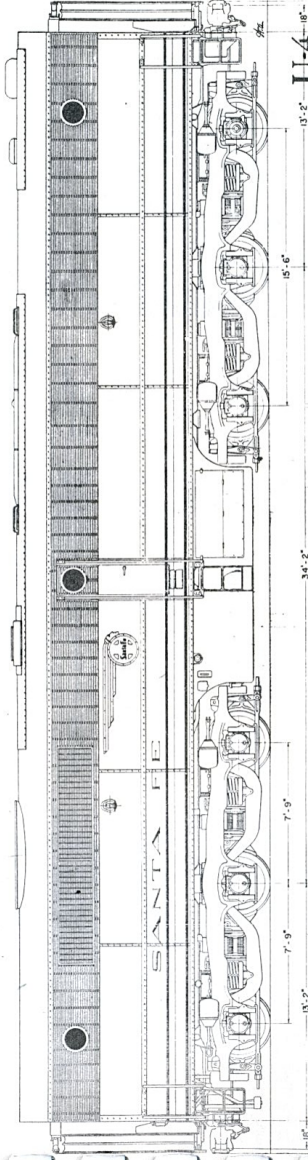


Notice that the nose of this Alco locomotive is vertical an advantage to the model-builder, for this type is easier to model in sheet metal than a slope front.

Scale: 1/8" = 1'-0"



Building a diesel from scratch is easier if paper patterns are first made by cardboard. These patterns are used to cut the surfaces, especially those around the cab and nose. When the paper pattern is perfect, it can then be duplicated in sheet brass, bent to shape and soldered in place. Heavy modelbuilders use automobile-canister-copper filter wire to simulate the horizontal corrugations along the upper part of the locomotive.



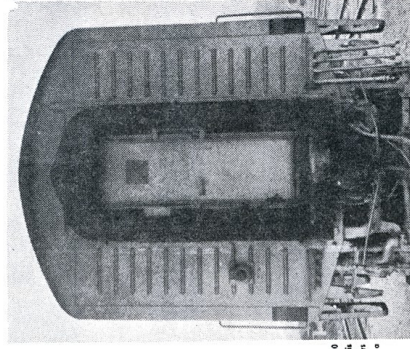
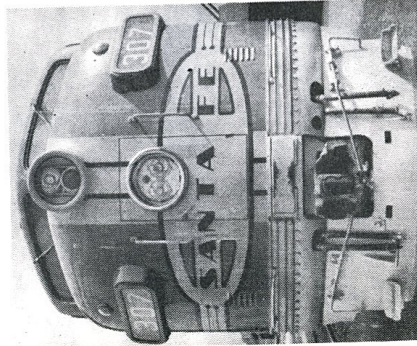
Scale: 1/8" = 1'-0"

EMD Dual Service Diesel

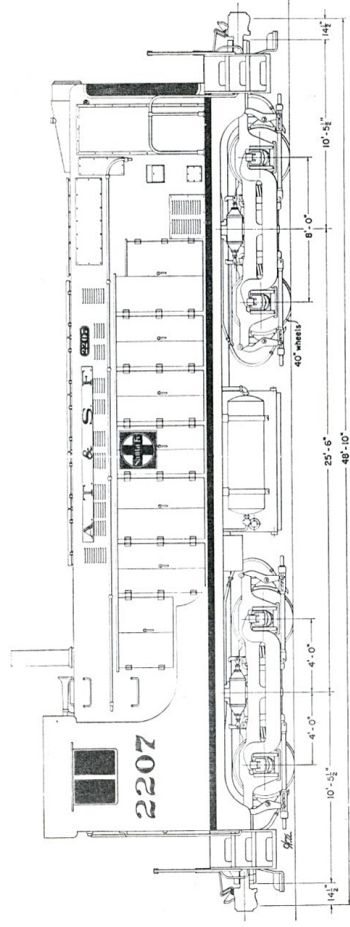
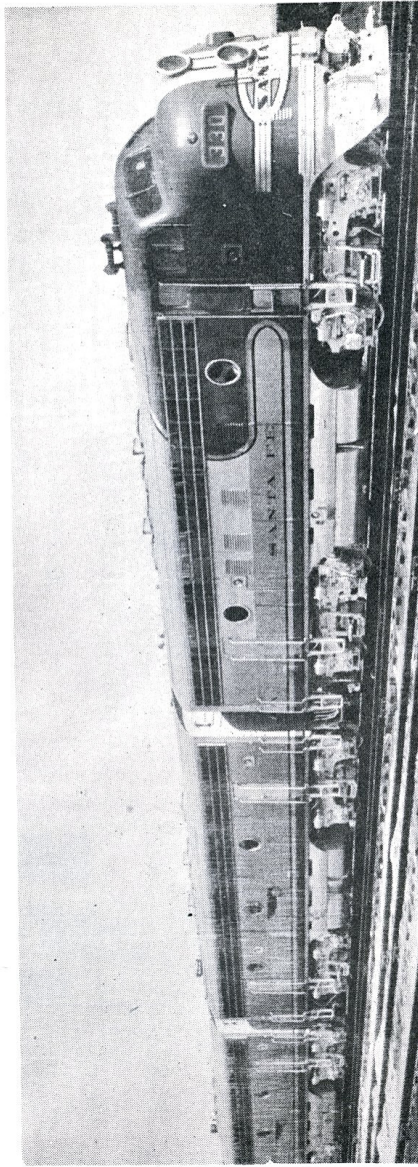
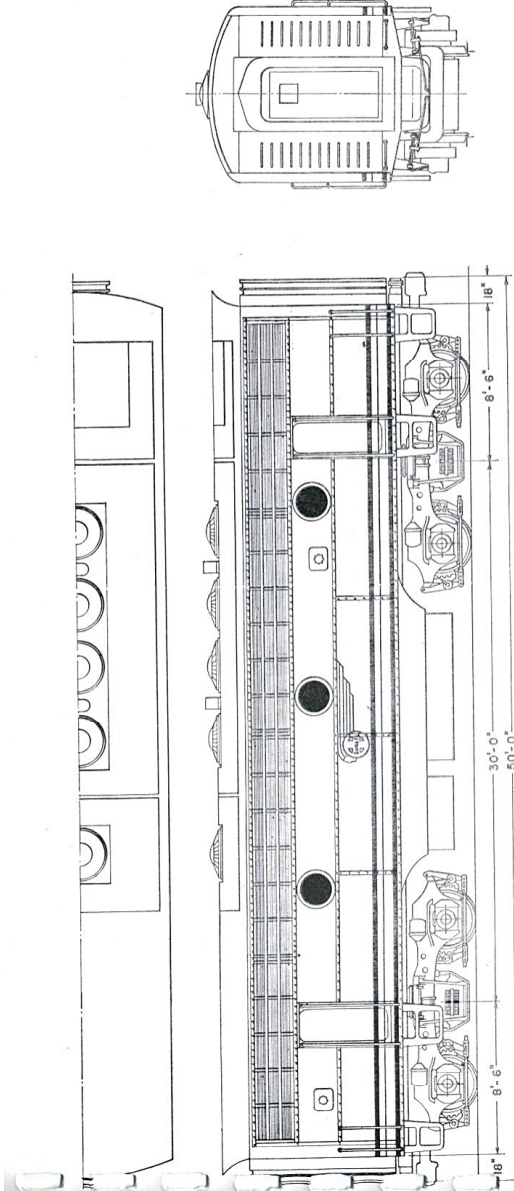
Class 300 Road Numbers 300-314

Class 325 Road Numbers 325-344

(EMD Bull 1949-53)



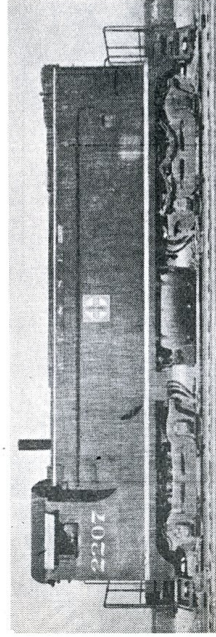
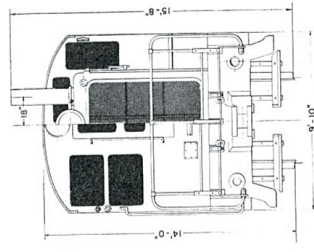
These Electro-Motive 6-7 engines are used for either passenger or freight on the demand warrants. The 300 class is geared to 100 miles per hour, is used exclusively in fast passenger service. The 325 class is geared to 85 miles per hour for fast freight or passenger service. All are equipped with steam generators and dynamic brakes. Locomotives of the 300 and 325 class are generally operated in units of three, a cab unit and two booster units.

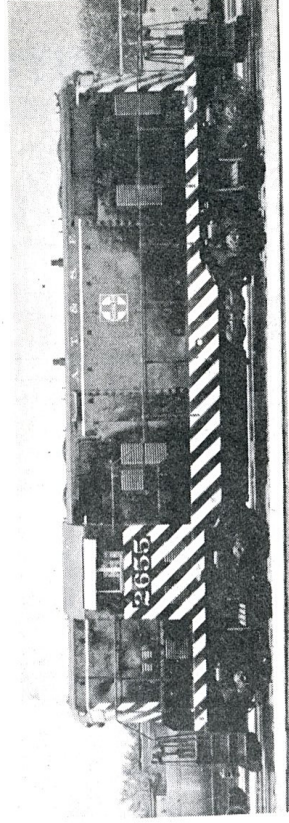
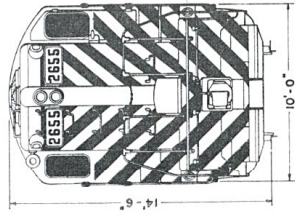


Diesel Switcher Class 2207

Road Numbers 2207-2259
(B.L.W. built in 1962-63)

Scale: 1/8" = 1'-0"



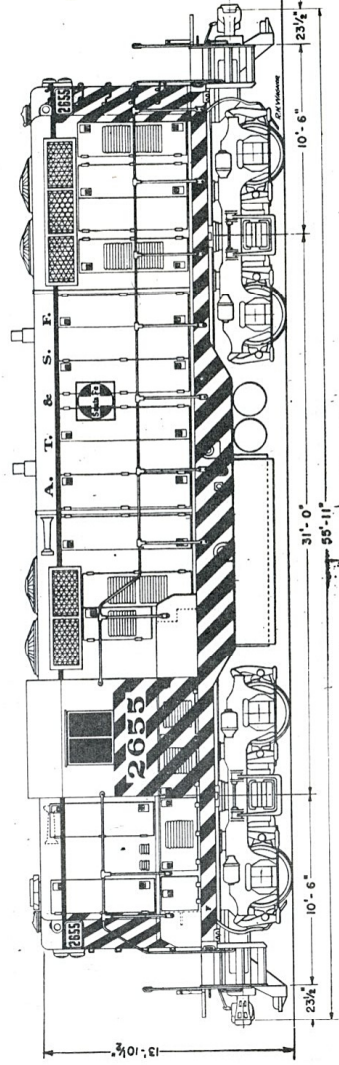


Diesel Road Switcher Class 2650

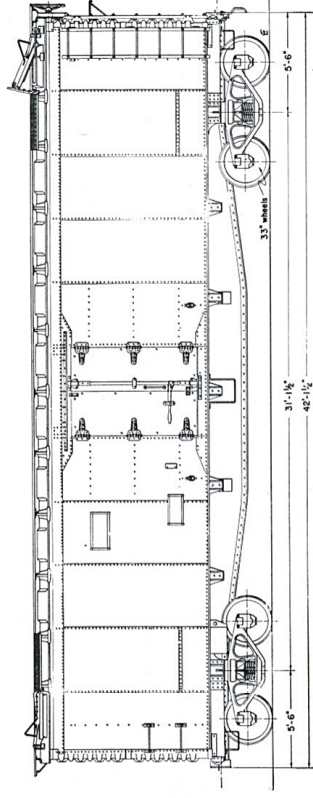
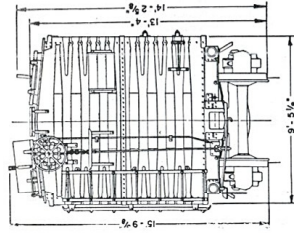
Road Numbers 2650-2848

(E. M. D built 1950-53)

These General Motors GP-7 engines (more commonly known as "Gaspas") are the mainstay of Santa Fe's diesel road switcher fleet. More are used than any other type of road switcher. A few are equipped with Class 2650's and 2651's. They are used primarily on the Coast and Gulf lines in yard, local freight and through freight service.



TLO

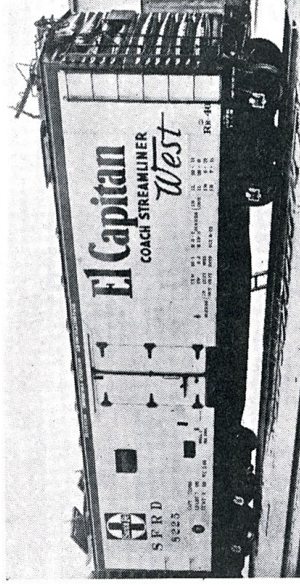
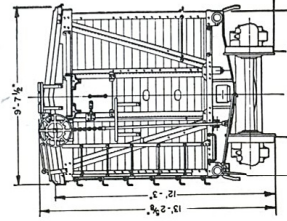


40 Foot Refrigerator

Class RR-40

Road Numbers 8100-8599
(Gree general repairs 1946 in some shops.)

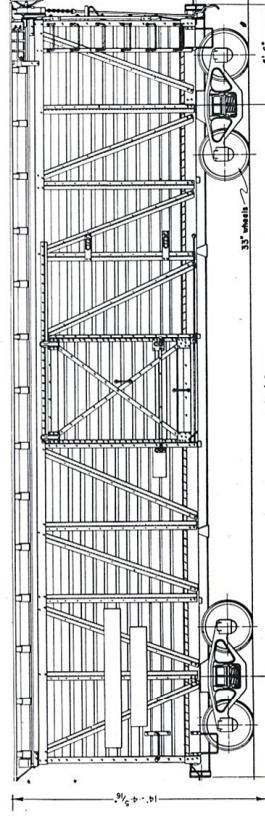
Scale: 1/8" = 1'-0"

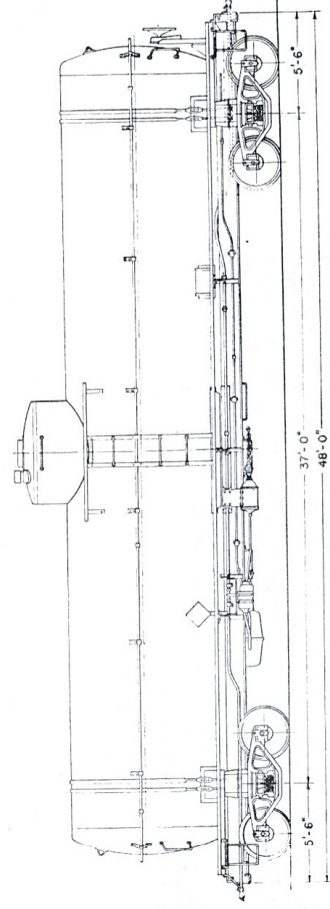


Stock Car

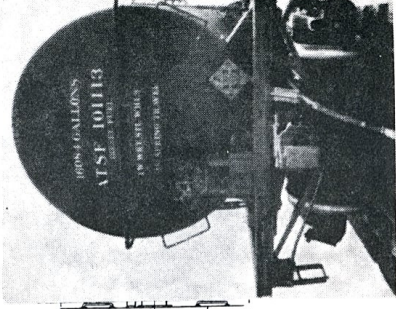
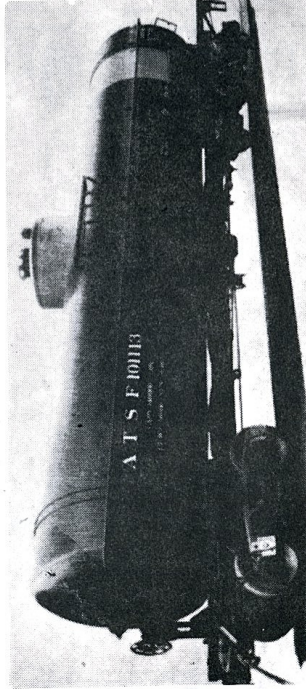
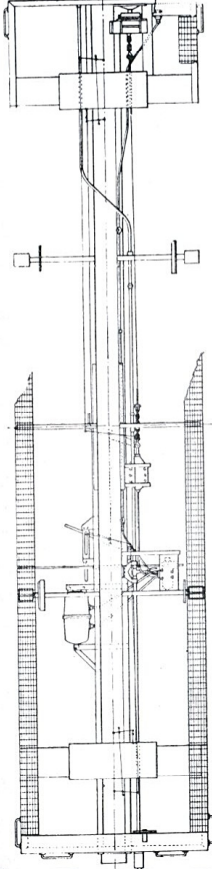
Class SK-U

Road Numbers 60502-60801
(Penn Car Co. built in 1929-30.)



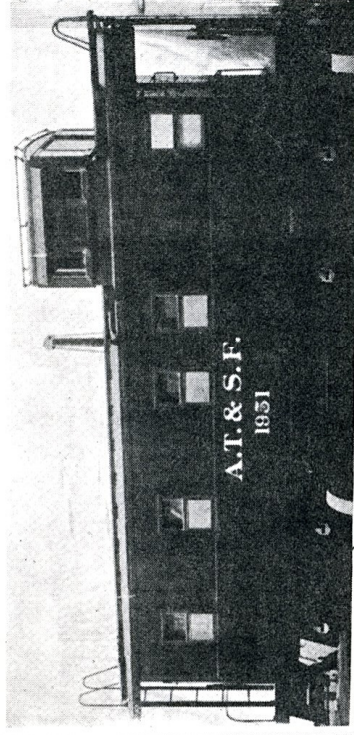
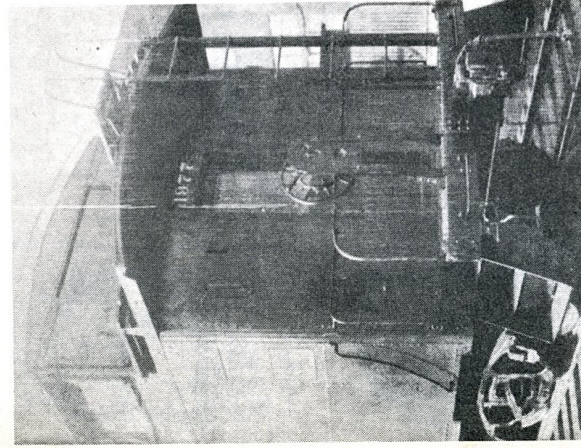


The walkway extends clear around the car. In the plan below, parts of it have been removed to show underframe detail. This series of cars uses non-skid walkways, a solid type on the ends and a grid type on the sides.

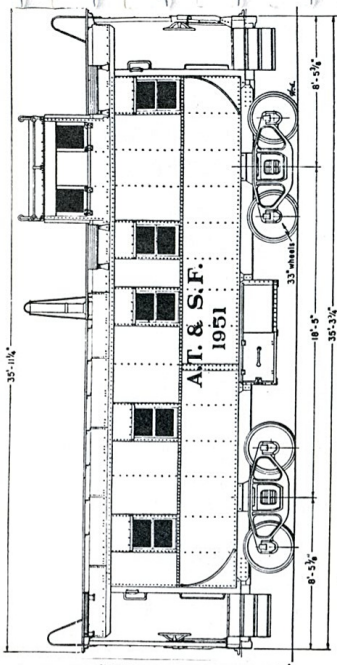
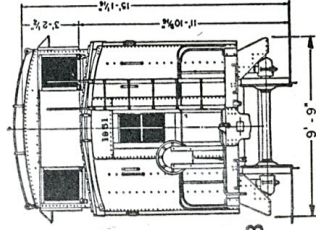


Tank Car

Class Tk-N Road Numbers 101100-101341
(GAT Corp. built in 1949)



Scale: 1/8" = 1'-0"



Caboose

Class Caboose
Road Numbers 1875-1978
(A. C. & F. Co. built in 1930.)

CONSTRUCTION

DIESEL LOCOMOTIVE CONSTRUCTION.

Our locomotives are powered by batteries, therefore the following will apply primarily to battery powered locomotives, but similar methods can be used with other drive systems. Also, our Diesel trucks can be connected to the output of a 24 volt D.C. generator, driven by a small gasoline engine, instead of the battery drive that we use. The advantage would be that you can run further than with the battery power. Disadvantages include maintenance of the engine, noise, vibration, exhaust smell and more limited starting power.

The first item is to decide what batteries will be needed to operate the locomotive. We use four 6 Volt golf cart batteries in our GP-7 series connected to obtain 24 Volts. This provides a range of up to about 30 actual miles on a full charge. If building an F type Diesel, you can get eight batteries inside the body. Four are connected in series and the other four are connected in series. Then both strings of four are connected in parallel; (plus to plus, minus to minus). This would then provide a range of up to about 75 miles, or more than you can run in a day. You can also run our trucks from two 12 Volt automobile batteries connected in series. While these will only provide a range of about ten miles, they are considerably lighter and make the locomotive more portable.

After deciding on the batteries, obtain the dimensions and locate evenly between the trucks as low as possible. We have two of our batteries in the fuel tank, about two inches above the rails, and the other two about six inches above the rails. This results in a low center of gravity, permitting faster operation on a given curve and is far safer in case of a derailment.

Frames for battery powered locomotives are best made of angle iron for strength, arc welded together. Wood can be used, but the weight of the batteries, which can be considerable, must be allowed for. One thing that must be taken into consideration, particularly on wood construction, is the amount of thrust on the coupler bolt, which can be considerable. We use 3/8" bolts, secured on both the top and bottom in wood construction.

ELECTRIC DRIVE LOCOMOTIVES

The problem encountered by most builders in electric drive systems is the method of speed control. Unlike gasoline engine driven systems, a Diesel built with electric traction motors can be run at any speed, even as slow as 1/4 MPH, regardless of load. Three basic systems have been used. The first involves switching battery cells in and out. This is cumbersome at best, and results in an uneven discharge of your batteries. The second method, and one we used until recently is a resistor grid to drop the voltage. This method involves designing the grid with the proper resistance for the motor involved, and can be made with nichrome wire on an asbestos board. This provides a fair method of speed control but has the disadvantage of variable voltage drop under changing loads, which makes the locomotive slow down considerably going up a grade. The method we are now using takes into account that a silicon diode has a fairly constant voltage drop under changing loads. Each diode drops approximately .8 volts, so to produce an 8 volt drop for our low speed on the four wheel switcher, we use 10 diodes in series.

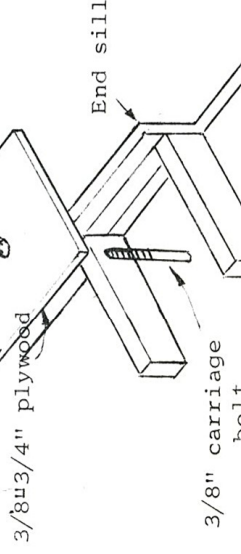
FREIGHT CAR CONSTRUCTION

While the best method for freight car construction is to follow the prototype and use mostly metal; good models have been built using wood. The gondola is the favorite of most 1 1/2" scale modellers, as it provides a strong car, yet is low enough to sit in well. When making any model, consideration should be given to the center of gravity with the passengers in the car. Seats should be placed as low as possible and weight can be added low in the car to help keep the center of gravity low. We try to keep the top of our seats no more than 15" above the rails.

For models built to ride in, they must be able to stand the wear of passengers riding in them and small fragile details should be avoided. A good model to follow is an HO gauge car, putting on the details that they have. We have tried using fiberglass inside of a 1/4" plywood body gondola with excellent results.

A strong center sill is needed and for light construction a 2 X 4 is suggested, with a plywood floor at least 1/2" thick. Couplers have to be held securely, and we use 3/8" carriage bolts as shown below.

3/8" nut
3/8" washer
Attach to spacer blocks
using wood screws



TRACK CONSTRUCTION

The first step is to lay out your track plan. Things to be considered are to keep the grades and curves within reason, and to avoid deep cuts or places where a lot of fill is required. Minimum prototype radii scaled down are shown on page Z-3 and can be used as an aid in track planning. With our four wheel switcher, a minimum radius of 5 feet or less can be used, and with our GP-7, 20 foot radius operation is possible. To keep down rail wear and derailments at least twice these values should be used, if possible. The loss in pulling power due to grades can be seen with the tables applicable to each locomotive. For best results, do not exceed 2%, if possible.

After the plan has been determined, lay it out on the property, using stakes and checking to see where cuts or fills will be needed. A straight piece of 2 X 4 100" long (8' 4") can be used to check elevations and grades. Place a level on top and check the difference between two points. Each inch difference represents 1% of grade.

Track is best fabricated on a jig, shown on the next page. Then carry each section out to location, bolt sections together and ballast using a rough rock, between $\frac{1}{4}$ and $\frac{1}{2}$ inch in size. Check track to be sure it is even lengthwise (constant grade or level) level crosswise and straight or to a constant radius. Easement curves are preferred where space permits and super elevation (raising the outside rail on a curve) can also be used but should be kept to about $\frac{1}{2}$ " maximum.

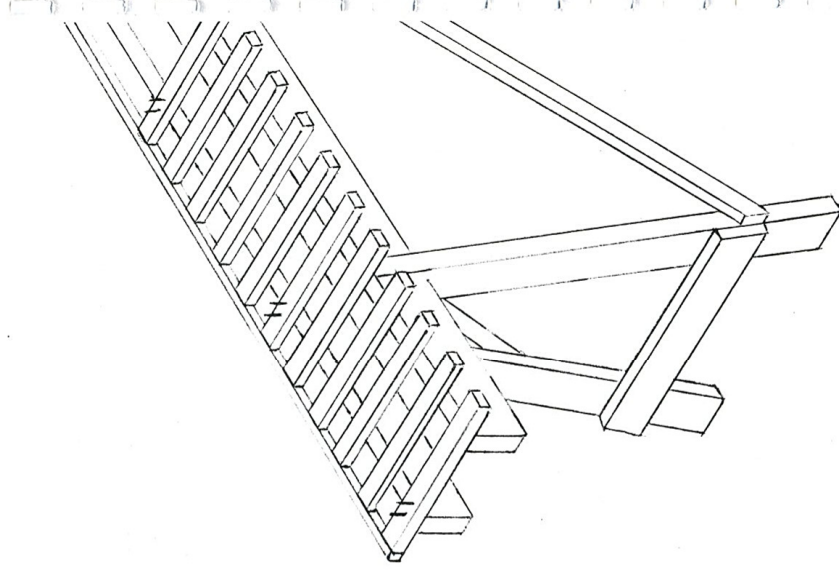
Scale size ties can be made using a 2x4 ripped in thirds. This provides ties with a size of approximately $1 \times 1\frac{1}{2}$ inches. By using the ties in an upright position showing the 1" dimension on top an 8" tie is represented. Tie length can be any dimension between 12 and $13\frac{1}{2}$ inches as prototype tie lengths are 8, $8\frac{1}{2}$ and 9 feet. **V-4**

TRACK CONSTRUCTION JIG

Construct using 2x4 lumber for the legs and lengthwise members. Total length should be ten feet or the length of your rails. Height should be 36-40 inches. Spacer blocks are 1x2 lumber, 12" long on 3" centers. Brace crosswise and lengthwise using 1x2 lumber. Attach a board to one side to line up the tie ends.

Place ties (actual size $1 \times 1\frac{1}{2}$ " x $12-13\frac{1}{2}$ ") in spaces. Then place two rails on ties, space to $7\frac{1}{2}$ " (or $7\frac{1}{4}$ "), adjust until centered on ties and put nails in every 5th spacer block on both sides of one rail. These nails will center the rails on each section. Spike the rails to the ties, leaving rail ends staggered 1 to 2 feet. (It is not desirable to have joints across from each other)

Build curve sections straight at first, then lay in place and drive ties on outside of curve toward rail ends. Ties should be driven in graduating amounts as they get closer to the rail ends. As the ties are thus driven you will notice the section gradually curves to the desired radius.



ENGINEERING

ENGINEERING SECTION

HOW MUCH TRAIN WILL A LOCOMOTIVE PULL?

First we need to calculate drawbar pull. A simple formula for determining this is:

$$\text{Drawbar pull} = \frac{\text{Motor H.P.} \times 308}{\text{Speed in M. P. H.}}$$

As an example, our GP-7 has 2.2 HP, (4-.55HP Motors) Assuming 7.5 version:

$$\text{Drawbar pull} = \frac{2.2 \times 308}{7.5}$$

Thus our GP-7 geared for 7.5 MPH has a continuous drawbar pull of 90 Lbs.. minus loss in the gear boxes which we will assume to be 20% for a pull of 72 Lbs.

Now we need to determine train resistance. Prototype cars have a rolling resistance of from 3 to 20 Lbs. per ton, depending on car weight, speed, type of bearings etc. For our models we can assume 10 Lbs. per ton with ball bearing trucks.

So, our GP-7 will pull about 7 tons on straight, level track.

For each percent of grade (1 foot in 100 ft) we must add 20 Lbs. resistance per ton. Therefore, on a 1% grade, total train resistance is 30 Lbs. per ton. allowing our locomotive to pull a 2 1/3 ton train. A 4% grade would give us a resistance of 90 Lbs. per ton, reducing our train weight to .8 ton, including the locomotive.

Curve resistance must also be added at the rate of .8 Lbs. per ton per degree of curve. 60 ft. radius (12 degrees) has 9.6 Lbs. resistance per ton.

45 ft. radius (16 degrees) has 12 Lbs. resistance per ton.
38.ft. radius (20 degrees) has 16 Lbs. resistance per ton

To check our figures we tested our Diesel on the Flat River & Southern. They have a grade that is 3% with 45' radius curves. It is a long grade (about 400') and a good test for any locomotive. Using the above figures, rolling resistance would be 10 Lbs. per ton, grade resistance 60 Lbs. per ton and curve resistance 12 Lbs. per ton, for a total train resistance of 82 Lbs. per ton. Therefore, our GP-7 should be able to pull almost 1760 Lbs. at full current rating of the motors. Our GP-7 pulled a load of 2220 Lbs. and showed a 15% overload for a few seconds.

ENGINEERING SECTION

WHAT TOP SPEED SHOULD A LOCOMOTIVE BE GEARED FOR?

First, let's see what the prototype would do on curves. A 60' radius (477') would limit trains to 29 mph, or less than 4 actual mph in our scale. Since we have less mass than the prototype we can go faster than scale speed around a curve. Using the cube root of our scale (2). we then arrive at the following scale speeds.

25 scale m.p.h. - under 16' radius	50 scale m.p.h. - 45' - 51' radius
30 scale m.p.h. - 16' - 21' radius	55 scale m.p.h. - 52' - 65' radius
35 scale m.p.h. - 22' - 28' radius	60 scale m.p.h. - 66' - 75' radius
40 scale m.p.h. - 29' - 37' radius	65 scale m.p.h. - 76' - 85' radius
45 scale m.p.h. - 38' - 44' radius	70 scale m.p.h. - 86' - 101' radius

These limits allow adequate safety margin. For example, I have run our GP-7 around a 35 foot radius at 72 scale mph (9 actual mph). I would not recommend this speed. and definitely not with passengers. (I had to sit on the deck of a flat car to be low enough to stay on). So, if the track you will operate on has curves of 65 foot radius or less and straight sections of under 100 feet, our gear ratio producing 60 scale mph (7.5 actual) is fast enough. The ratio producing 88 scale mph is only for large railroads. Since the continuous drawbar pull of our 45 scale mph locomotive is twice that of our unit geared for 90, it is recommended for railroads with steep grades (over 2%) and heavy trains.

NOTE: Due to the short wheelbase of our 4 wheel switcher, 5 mph (40 scale mph) is it's recommended top speed.

Y-2

ENGINEERING SECTION

HOW LONG WILL THE BATTERIES RUN AN ELECTRIC LOCOMOTIVE?

There are so many variables here that it is very difficult to answer. We recommend 4 golf cart batteries when using 4 motors on a Diesel. They will provide 75 amps for 75 minutes. Since our GP-7 has a full load rating of 88 amps, it would be possible to discharge the batteries completely in less than 75 minutes.

It is very unlikely that you would ever run at full load rating very long. In tests at the Flat River & Southern. our GP-7 covered approximately 12 miles (100 scale) on a charge. Average speed was 4 mph (32 scale) so 3 hours of operation were provided with total train weights of about 2000 lbs. on a railroad with steep grades. On our railroad with trains of average weight of 1200 lbs. and 1% grade we can operate for approximately 5 hours at an average speed of 7 mph for a total of 35 miles (280 scale). Remember, the hours of operation are only while the train is in motion. It took almost 6 hours to discharge the batteries on the F.R.& S. since almost 50% of the time involved station stops.

MINIMUM RADIUS SCALED DOWN TO 1½" SCALE FROM THE PROTOTYPE.

Alco PA-3	34 foot radius	EMD E-9	34 foot radius	EMD SW switcher	12'6"r
Alco FA-2	34 foot radius	EMD F-7	31 foot radius	N.Y.C.4-8-4 steam	
Alco RS-1	34 foot radius	EMD GP-9	34 foot radius	locomotive	39 ft.radius

Y-3

ORDER BLANK

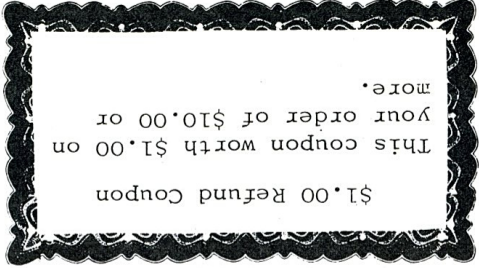
Koster's Miniature Railroad Supplies

P.O. Box 97
Homestead, Fla. 33030

DATE _____
HOW SHALL WE SHIP? Check box
☐ PARCEL POST ☐ GREYHOUND ☐ TRUCK FREIGHT

NAME	_____
STREET ADDRESS	_____
CITY	_____
STATE	_____
ZIP CODE	_____
QUAN.	_____
DESCRIPTION	_____
SHPG WEIGHT EACH	_____
PRICE	_____
TOTAL	_____

TOTAL
FOR GOODS
FLORIDA
SALES TAX
POSTAGE &
INSURANCE
TOTAL
ENCLOSED



PARCEL POST RATES								
Up to but not exceeding	1 & 2	3	4	5	6	7	8	
2 lbs.	.65	.70	.75	.80	.90	1.00	1.05	
3 lbs.	.75	.80	.85	.95	1.10	1.20	1.35	
4 lbs.	.80	.85	.95	1.10	1.30	1.40	1.60	
5 lbs.	.85	.90	1.05	1.20	1.45	1.55	1.90	
6 lbs.	.95	1.00	1.15	1.35	1.60	1.85	2.10	
7 lbs.	1.05	1.10	1.25	1.50	1.75	2.10	2.35	
8 lbs.	1.10	1.15	1.35	1.60	1.90	2.30	2.60	
9 lbs.	1.15	1.20	1.45	1.75	2.05	2.45	2.85	
10 lbs.	1.20	1.30	1.55	1.90	2.20	2.65	3.10	
11 lbs.	1.25	1.35	1.60	2.00	2.30	2.85	3.35	
12 lbs.	1.30	1.45	1.70	2.10	2.45	3.05	3.55	
13 lbs.	1.35	1.55	1.80	2.20	2.60	3.30	3.80	
14 lbs.	1.40	1.60	1.90	2.35	2.75	3.45	4.00	
15 lbs.	1.45	1.65	2.00	2.45	2.95	3.60	4.20	
16 lbs.	1.55	1.75	2.05	2.55	2.95	3.80	4.40	
17 lbs.	1.60	1.80	2.15	2.65	3.10	3.95	4.60	
18 lbs.	1.65	1.90	2.20	2.75	3.20	4.15	4.80	
19 lbs.	1.70	2.00	2.30	2.85	3.35	4.30	5.00	
20 lbs.	1.75	2.05	2.40	2.95	3.50	4.50	5.20	
22 lbs.	1.90	2.15	2.55	3.15	3.75	4.85	5.60	
24 lbs.	2.00	2.25	2.65	3.35	4.05	5.15	6.00	
26 lbs.	2.10	2.35	2.75	3.55	4.30	5.50	6.40	
28 lbs.	2.20	2.45	2.95	3.80	4.60	5.80	6.80	
30 lbs.	2.30	2.55	3.10	4.00	4.85	6.10	7.20	
32 lbs.	2.40	2.70	3.30	4.20	5.15	6.45	7.60	
34 lbs.	2.50	2.80	3.40	4.40	5.40	6.75	8.00	
36 lbs.	2.60	2.90	3.55	4.60	5.65	7.10	8.40	
40 lbs.	2.80	3.15	3.85	5.00	6.15	7.75	9.20	
PARCEL POST INSURANCE FEES								
GREYHOUND SHIPMENTS								
Value up to \$ 15.00 - - - 20¢ Greyhound shipments will be made								
Value \$ 15.01-\$ 50.00 - - - 30¢ collect. Greyhound is recommended								

is quiet - we operate at night in a residential neighborhood with no problems
requires less maintenance than a gasoline powered locomotive
is safer - no gasoline to worry about
produces high starting torque
has less vibration

- Should you use battery power?

ORDERING INFORMATION

All prices F.O.B.Homestead, Fla. Please allow for postage and insurance on small items. Large items sent freight collect. Assembled trucks and locomotives require crates for shipping. Crate costs are as follows:

For a pair of trucks \$10.00 (refundable if returned in good condition)
 For 4 wheel switcher 20.00; for GP Diesel \$30.00 (not refundable)
 Florida residents add 4% sales tax.

To determine your postal zone, use the following chart.

Zip Code Prefixes	Zone	Zip Code Prefixes	Zone	Zip Code Prefixes	Zone	Zip Code Prefixes	Zone	Zip Code Prefixes	Zone
006-043.....	6	193-196.....	6	330-333.....	1	474-478.....	5	500-628.....	6
044.....	7	197-199.....	5	334.....	2	479-497.....	6	629.....	5
045.....	6			335-338.....	3	498-499.....	7	630-636.....	6
046-047.....	7	200-283.....	5	339.....	2			637-639.....	5
048.....	6	284.....	4	350-359.....	5	500-508.....	6	640-676.....	6
049.....	7	285-289.....	5	360-361.....	4	510-513.....	7	677-679.....	7
050-079.....	6	290-292.....	4	362.....	5	514-539.....	6	792-797.....	6
080-084.....	5	293.....	5	363-368.....	4	540.....	6	798-799.....	7
085-098.....	6	294-295.....	4	369-397.....	5	541-544.....	7		
		296-297.....	5			545.....	6		
100-149.....	6	298-299.....	4	400-432.....	5	546.....	7	800-814.....	7
150-156.....	5			433-436.....	6	547-548.....	6	815-816.....	8
157-158.....	6	300-304.....	4	437-439.....	5	549.....	7	820-822.....	7
159.....	5	305.....	5	440-449.....	6	550-582.....	6	823-864.....	8
160-169.....	6	306.....	4	450-457.....	5	583.....	8	865-884.....	7
170-174.....	5	307.....	5	458-469.....	6	584.....	7	890-898.....	8
175-189.....	6	308-325.....	4	470-472.....	5	585-599.....	8	900-999.....	8
190-191.....	5	326-329.....	3	473.....	6				

The local zone rate applies to all parcels mailed at a post office or on its rural routes for delivery at that office or on its rural routes.

The following are wholly within the indicated zone:

Alaska.....	8	Idaho.....	8	Nevada.....	8	Tennessee.....	5
California.....	8	Kentucky.....	5	New Hampshire.....	6	Utah.....	8
Canal Zone.....	8	Louisiana.....	5	New Mexico.....	7	Vermont.....	6
Canton Island.....	8	Mariana Islands.....	8	Oregon.....	8	Virgin Islands.....	5
Caroline Islands.....	8	Marshall Islands.....	5	Puerto Rico.....	6	Wake Island.....	8
Connecticut.....	6	Maryland.....	6	Rhode Island.....	6	Washington.....	8
Delaware.....	5	Massachusetts.....	6				
District of Columbia.....	5						



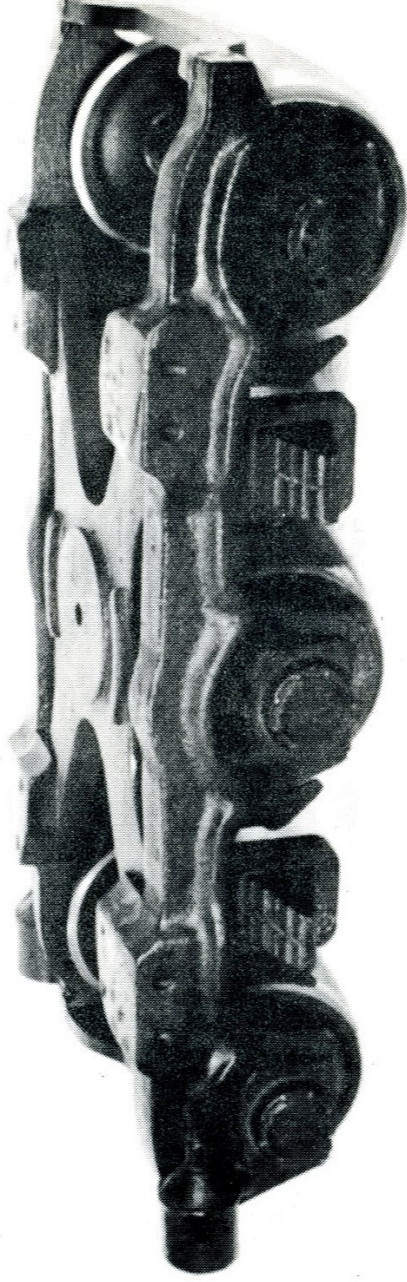
Florida East Coast Railroad caboose in 1½" scale by Richard Beall.

6 WHEEL COMMONWEALTH TENDER TRUCKS

DESCRIPTION	WEIGHT LBS.	MATERIAL	QUANTITY REQUIRED	STOCK OR	
				ROUGH CASTING	MACHINE WORK ONLY
				Price Ea.	Price Ea.
TRUCK, For large tenders - 18 3/4" wheel base (12' 6" scale)					
Side Frame	23	Iron	4	20.00	8.00
Bolster, Truck	15	Iron	2	8.00	4.00
Journal Box	2	Iron	12	2.25	2.50
Frame Ends	1	Iron	4	1.50	2.00
Brake Cylinder	2	Iron	4	2.50	1.00
Axles, 13/16" Cold Rolled	2	Steel	6	1.10	2.20
Wheel, 1 1/2" Dia. (36" scale)	3	Iron	12	2.45	4.10
Bearing, Ball 1/2" ID, DC Sealed	1 oz.	Iron	12	1.50	-
Springs, 3/4" X 1 1/2" Med. Press	1 oz.	Steel	12	1.10	-
All rough castings and springs, no axles or bearings				\$180.00	175 Lbs. Pair
All rough castings, springs, axles and bearings				200.00	190 lbs. Pair
Pair of 6 wheel Tender Trucks, machined, assembled and painted				340.00	180 Lbs.

Above prices are F.O.B. Homestead, Fla. Assembled trucks need shipping crates to protect trucks in transit. Crating charge for a pair of trucks is \$ 20.00

These trucks are accurately scaled from the Commonwealth 6 wheel, Roller Bearing design. They were used under large tenders. The trucks are sprung but not equalized. When used with the springs listed above the trucks will accommodate tenders up to 1,000 lbs. total weight. Other spring capacities are available. No body bolsters are provided as it is suggested that a piece of flat iron be used for the bolster. Minimum radius for this truck is 25 feet, due to it's long wheelbase.



6 Wheel Commonwealth Tender Truck

Do you have our 1972 catalog? It lists 3 other types of trucks, 2 other size wheels, freight car parts, diesel locomotives, signals, switches and many other items. Also, there is a plan section, construction and engineering data, etc. Sixty pages in all. Price - \$1.00 with a refund coupon on your first order that totals \$10.00 or more.

KOSTER'S MINIATURE RAILROAD SUPPLIES
P.O. Box 97
Homestead, Florida 33030