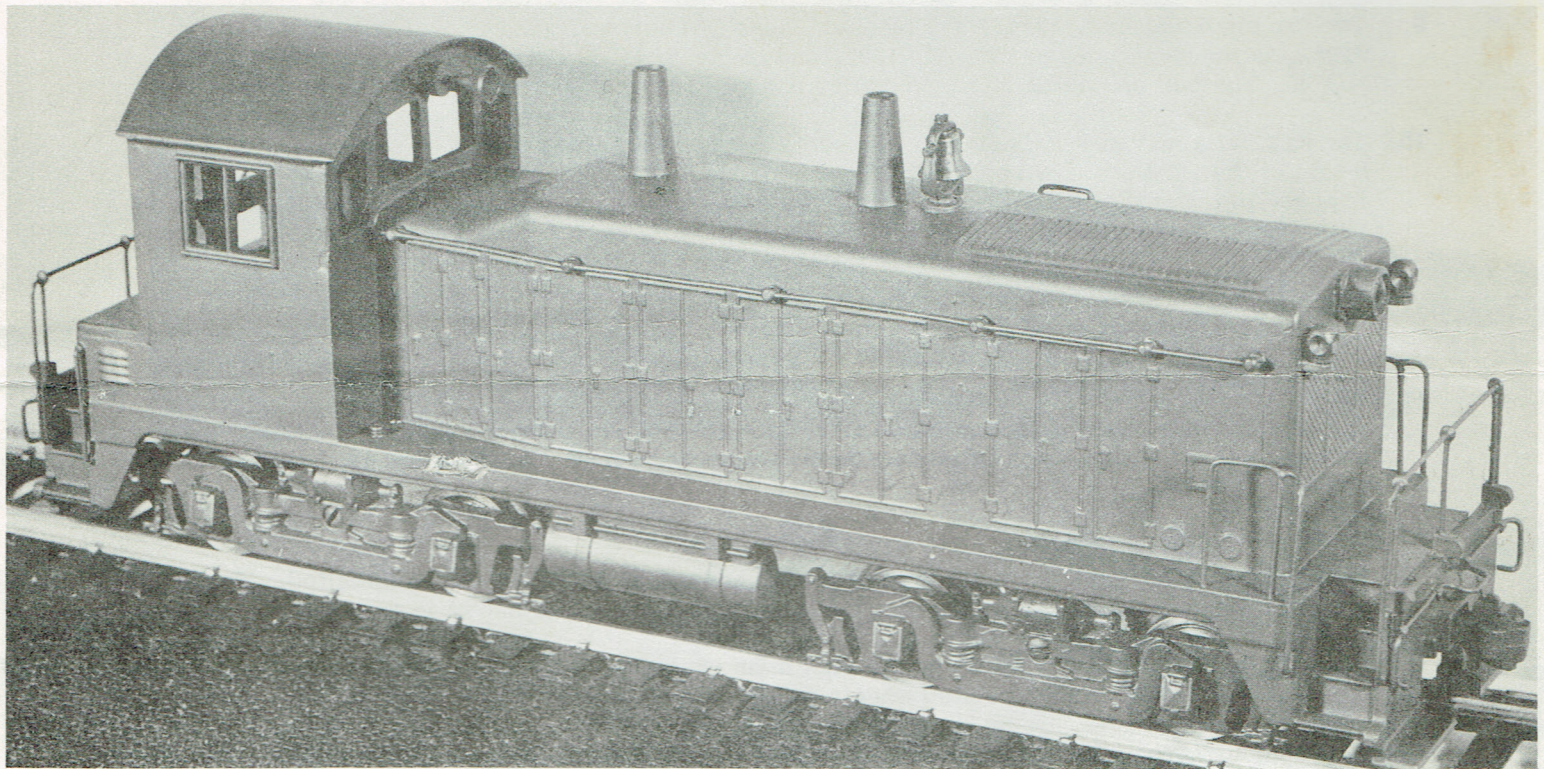


ALL-NATION



1000 H.P. E.M.D. DIESEL SWITCHER

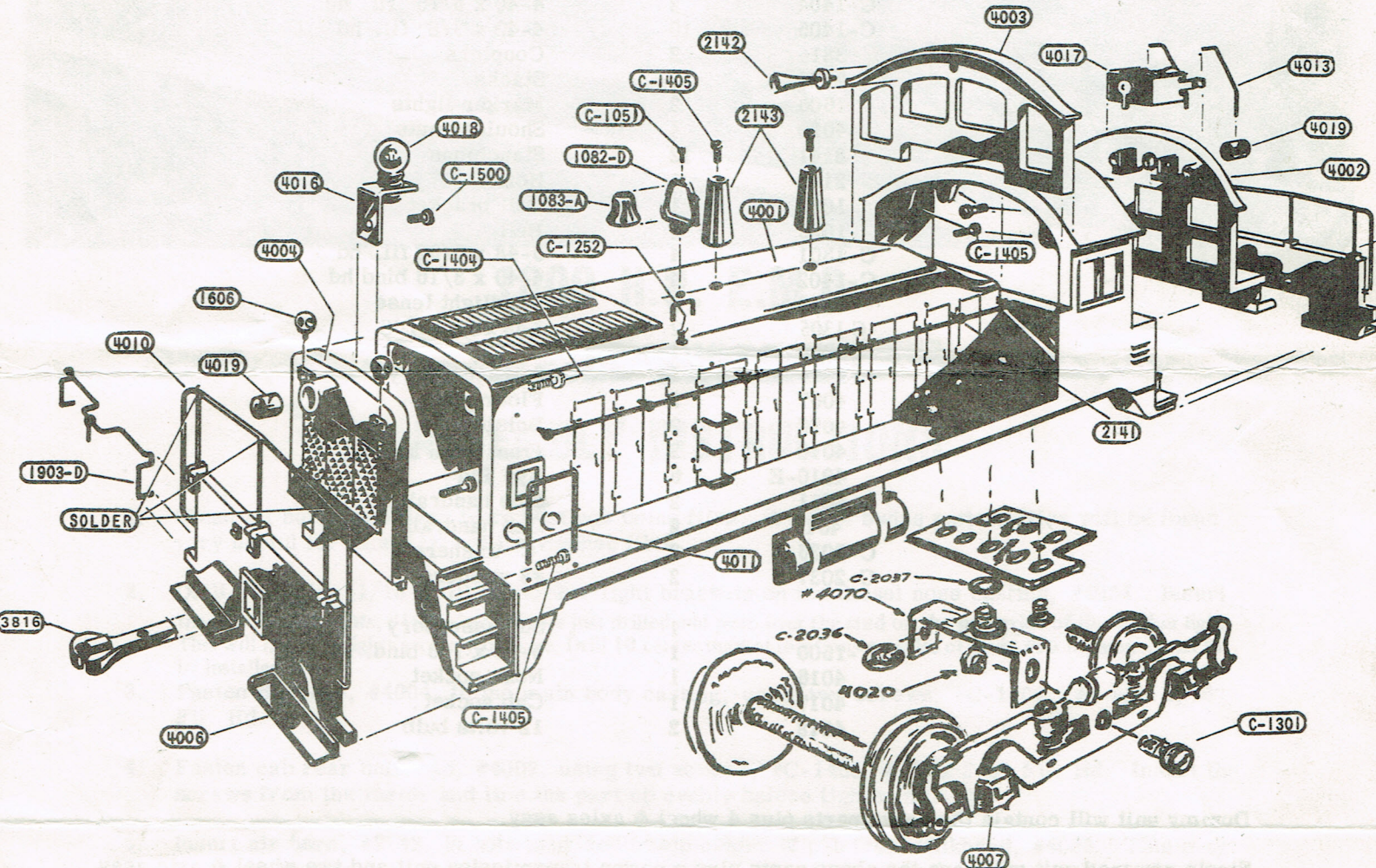
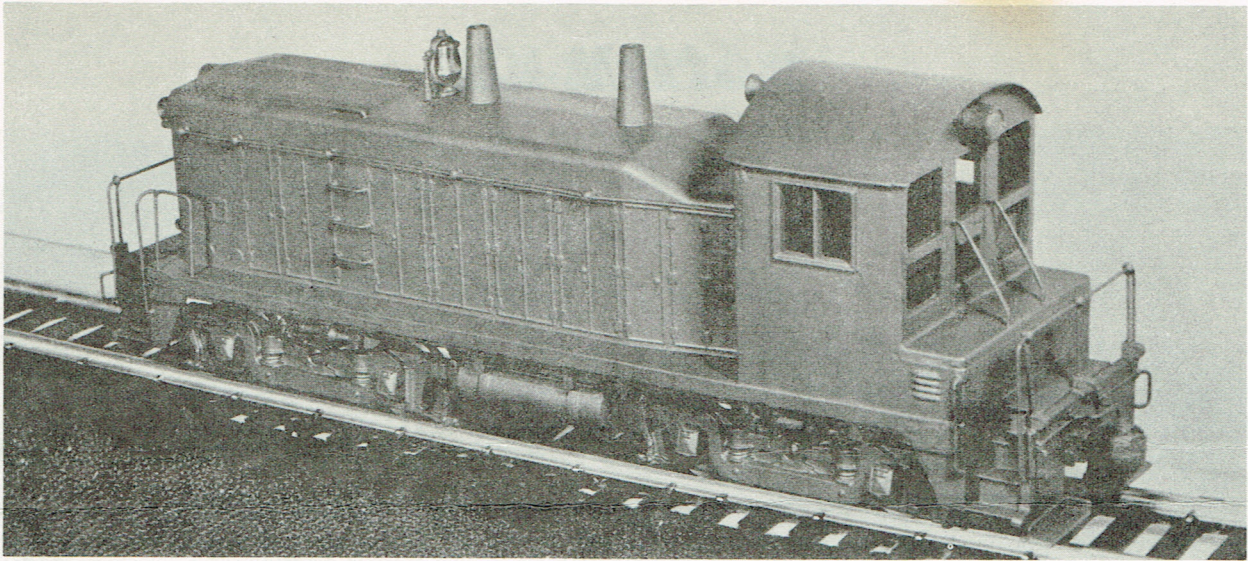
ASSEMBLY INSTRUCTIONS

1. Clean all burrs and flash from castings using files. A set of Swiss pattern files will be found very useful for this. Do not use coarse files.
2. Drill two holes (1/16 drill) in marker light brackets on the diesel nose casting, #4004. Insert the two marker lights, #1606, in the holes just drilled and peen over the stud on the underside of the marker light. This will hold the lights securely in place. Drill 10 center market locations on sides of body #56 for stanchions to be installed later.
3. Fasten the nose, #4004, to the main body casting, using two screws, #C-1404. #4-40 x 5/16" Fil. Hd.
4. Fasten cab rear bulkhead, #4002, using two screws, #C-1405, 4-40 x 3/8" Fil. Hd. Insert the screws from the inside and line the part up evenly before tightening.
5. Insert air horn, #2142, in hole provided in top center of cab front bulkhead, #4003. This may be peen or cross drill the stud and insert a piece of wire to hold the horn in position. The front bulkhead is fasten in place as shown using method describe in #4.
6. A little filing may now be necessary to give a perfectly smooth surface where the nose and cab castings join the body casting. If this is done carefully, the joints will not show after painting.
7. The next step is to install the front and rear pilots, #4006. These are fastened in place using screws #C-1405. NOTE: If coupler release rods are going to be installed, the mounting bosses should be drilled using a #64 drill before pilots are mounted.
8. Clean the flash and raised lettering from couplers. Mount on bosses using # C-1305 screws (3-48 x 3/8" RHMS) and # C-1306 bushings that are packaged with the pre-drilled couplers.

9. The two smoke stacks, #2143, are mounted using two screws, #C-1405. The bell bracket, #1082, is mounted using screw, #C-1252, and the bell, #1083, is mounted using screw, #1051.
NOTE: The bell should be removed before painting and replaced later.
10. The handrails may now be installed. Take six handrail stanchions, #2141, and thread on a length of the .032 brass wire, #1903D. Starting next to the cab, tap one stanchion in part way. Proceed to the next one and so on until all six are part way in. Proceed to tap them all the way in making sure that the wire is kept taut. The same procedure should be followed on the opposite side. The balance of the handrails are preformed and may be installed by following the drawing. The three step on the left side and the hand hold on the top of hood may be installed if desired using a piece of the .032 wire to form the parts. Holes will have to be drilled using a #66 drill for a press fit.
11. The body is now ready to be painted. First clean thoroughly using lacquer thinner. A coat of primer should first be applied and then sanded smooth with very fine sandpaper. The final coat may now be applied. Spraying both the prime coat and the finish coat will produce the most satisfactory results. The colors used will depend upon the prototype followed.
12. Before mounting trucks in place, the two headlight lenses, #4019 should be installed. These are pressed into position from the inside. Then install socket as shown in drawing.
13. The assembly of trucks is shown on the plan in an exploded view. This should be self explanatory. Remember to keep insulated wheels on one side in each truck, to prevent short circuit.
14. Mount dummy trucks to floor plates. Place one #C-2037, #8 washer, over kingpin to act as a spacer. Then put kingpin through floor plate as shown on drawing and lock in place with #C-2036, 'C' washer.
15. The final step is the installation of the trucks to the body. This is done by using #C-1402, #4-40 x 3/16" Bind. Hd. screws. These are placed through the holes in the floor plates and into the threaded holes in the body as shown drawing.

For mounting power trucks, see instructions that are given with the transmission units.

For the discriminating builder, use ALL-NATION super model railroad lacquers. "THE ONLY LACQUER THAT GIVES YOU A PERFECT SPRAY JOB"



NOTE

**NOSE
END**



Kingpins of Trucks
should be inserted
into holes marked (X)

Also note direction
bolsters are facing.

**CAB
END**



PARTS LIST

<u>PART No.</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
4001	1	Body casting
4002	1	Rear bulkhead
4003	1	Front bulkhead
4004	1	Nose.
4006	2	Pilots
1903-D	3	.032 x 10" wire
1905	1	#20 x 10" wire
2490	1	Sub accessory
4007	4	Sideframes
2491	1	Sub accessory
C-1051	1	0-80 x 1/8" fil. hd
C-1252	1	2-56 x 3/16" R.H
C-1404	2	4-40 x 5/16" fil. hd
C-1405	10	4-40 x 3/8" fil. hd
3816	2	Couplers
2143	2	Stacks
1606	2	Marker lights
4020	4	Shoulder nuts
2141	12	Stanchions
2142	1	Horn
1082	1	Bell bracket
1083	1	Bell
C-1301	4	3-48 x 5/32 fil. hd
C-1402	4	4-40 x 3/16 bind hd
4019	2	Headlight lense
C-1305	2	3-48 x 3/8 RHMS
C-1306	1	Bushing
2492	1	Sub accessory
4067	2	Floor plate
4070	2	Bolster
4010	2	Front & rear handrail
4010-E	6	Eye Pin
4011	2	Side handrail
4013	2	Cab handrail
C-2036	2	'C' washers
C-2037	2	#8 washers
2498	1	Sub assessor
C-1500	1	5-40 x 1/8 bind. hd
4016	1	Nose socket
4017	1	Cab socket.
4018	2	12 volts bulb

Dummy unit will contain the above parts plus 4 wheel & axles assy.

Single powered unit will have the above parts plus a power transmission unit and two wheel & axle assy.

Double powered unit will have the above parts plus a power transmission unit and auxiliary transmission unit.

ALL-NATION LINE
23 W 546 ST. CHARLES RD.
WHEATON, ILL. 60187.

ALL NATION LINE

MANUFACTURER AND DISTRIBUTOR "O" SCALE MODEL RAILROADS
DIVISION OF SCALE RAILROAD EQUIPMENT, INC.

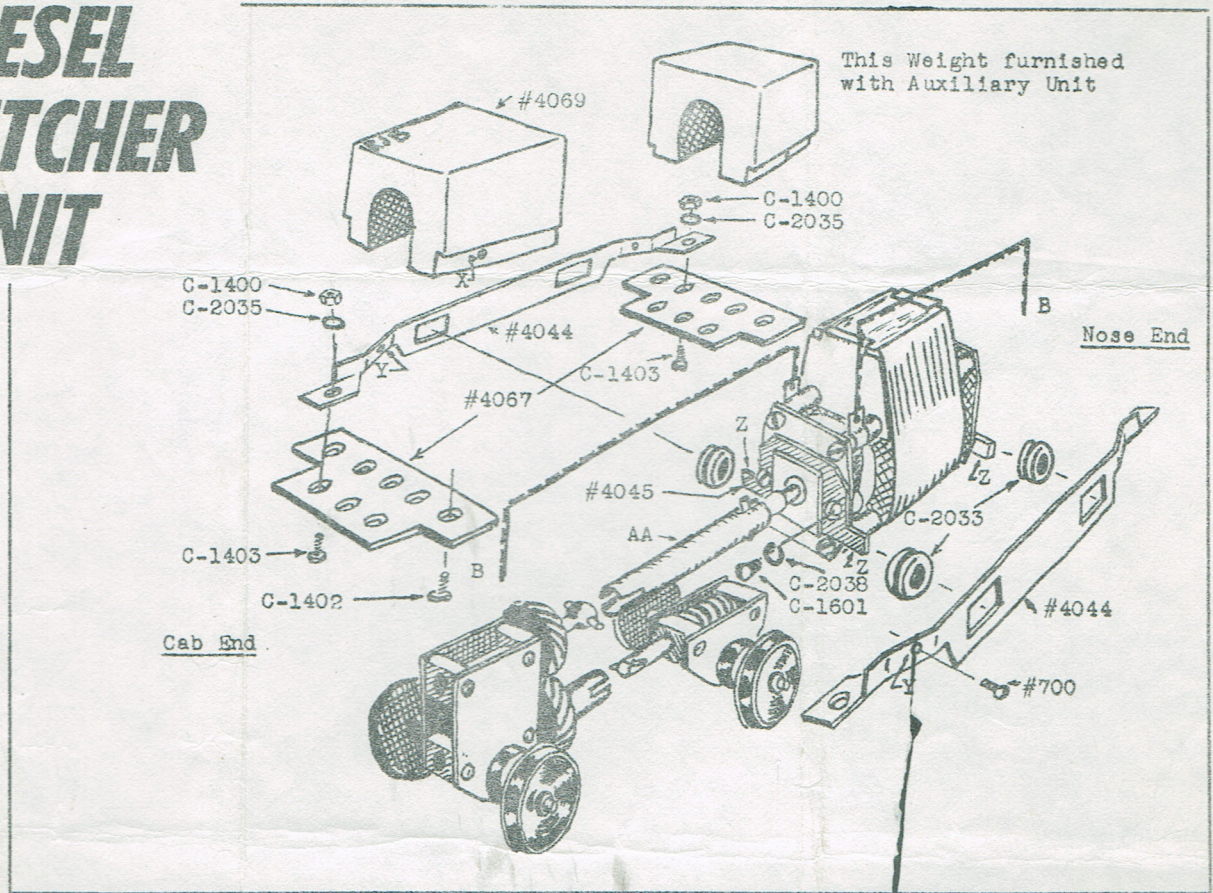
1020 BUSSE HIGHWAY

PARK RIDGE, ILLINOIS 60068

THE ALL-NATION LINE . . .

DIESEL SWITCHER UNIT

ALL NATION LINE
23 W 546 ST. CHARLES RD
WHEATON, ILL. 60187



INSTRUCTIONS

Please read CAREFULLY before construction

- (1) Assemble the 'Constant Torque' transmission by following the Diesel Switcher Instructions on trucks furnished with the Diesel Switcher Kit, with the following exception. Substituting the transmission in place of the 40" wheels and then following the remainder of the truck assembly as per instructions.
- (2) Mount the motor brackets #4045 to motor, by using screws #C-1601, and lock washers #C-2038.
- (3) Bend main frame #4044 as shown in drawing.
- (4) Mount rubber grommets #C-2033 into motor frame #4044 and place onto lugs (Z) of motor brackets #4045 as shown.
- (5) Mount the above assembly to the floor plates #4067 with screws #C-1403, lock washers #C-2035 and nuts #1400, in holes as shown in drawing.
- (6) Place your truck assembly into floor plate #4067 (supplied with Diesel kit) temporarily with the kingpin of bolster #4070 into hole as shown in Diesel Switcher drawing. Proceed with making the Ball Joint Coupling (AA) as per instruction enclosed with kit. When finished, mount permanently with washer #C-1804 between bolster #4070 and floor plate #4067, then lock with "C" washer #C-2036.
- (7) If mounting an Auxiliary power unit, follow instructions #1 and #6.
- (8) Attach wires as shown with the (B) being the nut #4020 on the truck assemblies by soldering. DO NOT solder on transmission.
- (9) Now place weight on frames #4044 and mark the approximate center of side of weight on both sides. Remove weight and center punch, then drill a $\frac{1}{4}$ " hole in #4044 (Y). Now place weight back into position and mark thru hole of frame #4044 the location of center for hole (X) for self tapping screw #700. Drill this with a #50 drill. Draw screw in tight and file the head of screw #700 for clearance into body.
- (10) Grease the gears, oil the bearings and suggest that you run it in, before installing into Diesel Switcher body.
- (11) You may now install the power assembly into the body by using #C-1402 screws, furnished with the Diesel Switcher kit, and as shown in Diesel Switcher instructions.

PARTS LIST

Power Unit #9040

- 1 Motor (single or double shaft DC)
- 1 'Constant Torque' Transmission
- 2 #4044 motor frame
- 1 #4069 weight
- 1 #1905 — #20 x 10" wire
- 1 #2496 accessories
- 1 Instructions

#2496

- 4 #C-1400 — 4-40 nuts
- 4 #C-1403 — 4-40 x $\frac{3}{16}$ " Bind. head
- 4 #C-1601 — 6-32 x $\frac{1}{8}$ " round head
- 2 #700 — 2-56 x $\frac{1}{4}$ round head S.T.
- 4 #C-2033 Rubber Grommets
- 4 #C-2035 — #6 Internal lockwashers
- 4 #C-2038 — #6 Split lockwashers
- 2 #4045 Motor Brackets

Auxiliary Unit #9041

- 1 'Constant Torque' Transmission
- 1 #4069 Weight
- 1 #4093 Ball Joint Coupling
- 2 #700 — 2-56 x $\frac{1}{4}$ round head S.T.

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