St. Louis Car Company Records, Series 02. "PCC 1947"
OVERHEAD SHAFT

DOOR MOUNTING WITH
CAR WT. (EMPTY) = 36,000 LB.
PASSENGER LOAD = 6,000 LB.
TOTAL WEIGHT = 42,000 LB.
ROTARY INERTIA = 5,600 LB.
4 — 55 HP MOTORS PER CAR
GEAR RATIO = 7.17 TO 1
WHEEL DIAMETER = 25 IN.

AVG. VOLTAGE = 550 VOLTS
ACCEL. RATE = 3.5 MPH/PS
TRAIN RESISTANCE = DAVIS PLUS 6 LB. PER TON
LEVEL TANGENT TRACK

"SPEED-TIME", "DISTANCE-TIME" CURVES
TRANSIT RESEARCH CORP.
292 MADISON AVE. NEW YORK, NY.
USE DIMENSIONS ONLY 4-261
Shaft Brake Rate Versus Car Weight.

P.C.C. Drum Brake

Note: This curve is based upon the following data:
2. 25" wheels.
3. Friction 26 pounds per ton.
4. Rotary inertia of wheels, axles, motors = 2 tons.
5. 3140 in-lbs. torque.

Transit Research Corp
292 Madison Ave., New York, N.Y.

Use dimensions only 4-2h1
16 PER CAR

MOTOR LEAD TERMINAL

TRANSIT RESEARCH CORP
292 MADISON AVE. NEW YORK, N.Y.

USE DIMENSIONS ONLY 4-391
SPRING FOR TROLLEY

SECTION AA

1/8 G.A.P. 1N METALS
PRESS FIT INTO RECTANGLE 3" I.D.

1/8 B.C.
ROLLED BRASS SHEET

OPPOSITE SIDE FOR PLATING RACK

3/16" HOLE MAY BE ADDED HERE AND ON 3/16"

Sheet B. G. 18
ROLLED BRASS

BRASS TUBE
RUBBER CURLED TO

BRASS TUBE B. G. 18

0.000
0.003

3.007
3.000

2 1/2"

2 1/4"

3/4"

2 1/2"

2.5" + 0.000

1/8"

1/8"

1/8"

1/8"

1/8"

1/8"

1/8"

1/8"

6/32"
St. Louis Car Company Records, Series 02. "PCC 1947"

TORQUE ARM SANDWICH FOR TRUCK B-2

TRANSIT RESEARCH CORP
292 MADISON AVE. NEW YORK, N.Y.

USE DIMENSIONS ONLY B2-6e2

1.490" HOT ROLLED STEEL

RUBBER CURED TO METAL 45° ± 3° DUROMETER

1.500"

1/64" R.

0.500"

1/16"
Rubber 60° Durometer Adhered to Steel

Steel Sheet

6 7/8

3 7/16

2 9/16

6 holes 7/16 diameter in rubber only
6 holes countersunk in steel for 3/16 dia. steel rivets.

Longitudinal stop for track brake

Transit Research Corp
292 Madison Ave. New York, N.Y.

Use dimensions only

B2-6e5
MATERIAL:
NATURAL RUBBER DURONETER 53 ± 3
TENSILE 3500 P.S.I.

TORQUE ARM STABILIZER BRACKET
BUSHING FOR TRUCK B-2

TRANSIT RESEARCH CORP.
292 MADISON AVE., NEW YORK, N.Y.

USE DIMENSIONS ONLY B2-8c1
FOR TRUCK B-2
SWING LINK SNUBBER
INSULATING WASHER FOR CENTER BEARING OF TRUCK B-3

60" Duro Neoprene

Friction Fabric

Sandwich
A - ALL RUBBER SPRING
B - STEEL COIL SPRING
POSITIONS A & B MAY BE INVERTED

ARRANGEMENT OF C-2
SPRING IN TRUCK B-2

TRANSIT RESEARCH CORP
292 MADISON AVE.
NEW YORK, N.Y.

USE DIMENSIONS ONLY C2-1a1
RUBBER ELEMENT FOR SPRING C-2

TRANSIT RESEARCH CORP
292 MADISON AVE. NEW YORK, N.Y.

USE DIMENSIONS ONLY: C2-2a1
LOAD DEFLECTION CURVE FOR SPRING C-2

TRANSIT RESEARCH CORP
292 MADISON AVE.
NEW YORK, N.Y.

USE DIMENSIONS ONLY C2-2a2
LOAD DEFLECTION CURVE FOR SPRING C-2

TRANSIT RESEARCH CORP
292 MADISON AVE. NEW YORK, N.Y.

USE DIMENSIONS ONLY C2-2a2
MALLEABLE IRON  
REQ. 8 PER CAR

UMBRELLA FOR RUBBER ELEMENT OF SPRING C-2

TRANSIT RESEARCH CORP.  
292 MADISON AVE.  
NEW YORK, N.Y.

USE DIMENSIONS ONLY  
C2-3a1
STEEL PLATE
8 REQ. PER CAR

BOTTOM PLATE FOR
STEEL SPRING C-2

TRANSIT RESEARCH CORP.
292 MADISON AVE.
NEW YORK, N.Y.

USE DIMENSIONS ONLY
C2-5a1
RUBBER CUP FOR STEEL SPRING C-2

TRANSPORT RESEARCH CORP.
292 MADISON AVE.
NEW YORK, N.Y.

USE DIMENSIONS ONLY

C2-561
STEEL PLATE
8 REQ. PER CAR

BASE PLATE FOR
STEEL SPRING C-2

TRANSIT RESEARCH CORP
292 MADISON AVE. NEW YORK, N.Y.

USE DIMENSIONS ONLY

C2-5c1
MALLEABLE IRON.
REQ. 8 PER CAR.

TOP PLATE FOR COIL OF
STEEL SPRING C-2

TRANSIT RESEARCH CORP
292 MADISON AVE. NEW YORK, N.Y.

USE DIMENSIONS ONLY
C2-5c2
ASSEMBLY OF SPRING C-3a

TRANSIT RESEARCH CORP
292 MADISON AVE., NEW YORK, N.Y.

USE DIMENSIONS ONLY C3a-1a1
NOTE:

ASSEMBLY PRESSURE IS ADJUSTED TO

OF THIS RING.

COMPENSATE FOR LARGER DIAMETER

TEMPERATURE IN SET UP PRESSURE IN

DEG. Fahrenheit

POUNDS (APPROX.)

58.500 10
55.900 90
46.250 10
43.200 60
31.200 40
20 20
0 0

ASSEMBLY PRESSURE TABLE
WHEELS D-2.2" AND D-3.4.

THREE PLATE SANDWICH FOR
HEAT TREAT TO PRODUCE 90,000 LBS. ELASTIC LIMIT

COMPLETE WITH HEX. NUT AND WASHER

SPACER BOLT 6 REQUIRED PER WHEEL

SPACER BOLT 6 REQUIRED PER WHEEL

HEAT TREAT NUT TO EQUAL CLASS 3 FRT.
12 S.A.E. THDS. PER INCH

SEMIFINISH WASHED FACED
1/2 S.A.E. REGULAR HEX. JAM NUT

1/8" MAX. ACROSS FLATS

1/8" MAX. ACROSS CORNERS

1/8" MIN. ACROSS CORNERS

2.067" THICKNESS 0.062
INTERNAL TOOTH TYPE 12
SHAKEDOWN LOCK WASHER

1 1/4" D. SEMI-CIRCULAR
UNDERCUT

1/16" D. THDS. PER INCH

12 S.A.E. THDS. PER INCH

3.1875" 0.000 3/16" WHEEL D-2 (CARNEGIE)

ST. LOUIS CAR COMPANY RECORDS, SERIES 02. "PCC 1947"
Complete with Hex. Nut & Washers.
Spacer Bolt. 6 Required per Wheel

Undercut

1/2" D. Semi-Circular

Washer Thickness .062
Internal Tooth - Type 12
Shakeproof Lock Washer

Class 2 Fit.
12 S.A.E. Thd. Per Inch.
Semi-Finished. Washer Faced
1/4" S.A.E. Regular Hex. Jam Nut
6 REO.D. PER WHEEL

2. ALTERNATE: HOT PRESSERD NUT A.S.I. C-1120 STEEL
   PREFERRED: BAR NUT A.S.I. C-1038 COLD UZAWN STEEL
   NUT NO. 1154

CREO.D. PER WHEEL

BRONZE 248-290
A.I.S.I. C-1038 STEEL HEAT TREATED
BOLT NO.

FOR ASSEMBLY SEE ORG.

FULL THREAD

A-12 NF-3 (BOTH ENDS)
HEX NUTS AND WASHERS SHOWN ABOVE.

SPACER BOLT 6 PER WHEEL COMPLETE WITH
CLASS 3 FIT. THD. PER INCH
12 S.A.E. THD. PER INCH

1/4 MAX. ACROSS FLATS
WASHER THICKNESS .065" INTRAL TOOTH TYPE 12
INTERNAL TOOTH TYPE 12

1/8" MAX. ACROSS FLATS
SHAKPROOF LOCK WASHER
NOM 1/8" MIN. ACROSS CORNERS

STRENGTH EQUAL TO BOLT.
HEAT TREATED TO PRODUCE
1/2 S.A.E. THD. PER INCH.
SEM-FINISHED WASHER FACED.
1/4 S.A.E. REGULAR HEX JAM NUT

12,000 LBS. TENSILE. 40 PER CENT REDUCTION IN AREA
90,000 LBS. ELASTIC. 20 PER CENT ELONGATION IN 2".
CARBON MANGANISE STEEL. HEAT TREATED TO PRODUCE
BOLT
A.I.S.I. C-1038 STEEL - MEAT TREATED
BRINELL 248-290
6 REQ'D PER WHEEL

NUT NO.
1. PREFERRED: BAR NUT A.I.S.I. C-1038 COLD DRAWN STEEL
2. ALTERNATE: HOT Pressed NUT A.I.S.I. C-1120 STEEL
12 REQ'D PER WHEEL

FOR ASSEMBLY SEE DRG.
P.C.C. TYPE 3-A

SPACER BOLT FOR WHEEL D3a-(Naco)

TRANSIT RESEARCH CORP.
292 MADISON AVE. NEW YORK, NY.

USE DIMENSIONS ONLY  D3a-4bl
DRUM BRAKE (CLARK) WITH EXTERNAL SHOES

HOLDS TO COMPENSATE FOR LINING WEAR

11" DIA BRAKE DRUM

3 1/2

8 3/32

5 1/6

VER.  

USE DIMENSIONS ONLY

TRANSIT RESEARCH CORP
292 MADISON AVE
NEW YORK, N.Y.

E2-1a1
PUNCH ALL HOLES - 0.66" DIA.

ACTUATOR BASE PLATE
FOR TRUCK B-3

TRANSIT RESEARCH CORP
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USE DIMENSIONS ONLY F1-2a2