

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: February 3, 1977

Forwarded to:

Honorable Asaph H. Hall
Administrator
Federal Railroad Administration
400 Seventh Street, S. W.
Washington, D.C. 20590

REVISED: April 18, 1977

SAFETY RECOMMENDATION(S)

R-77-1 and 2

On January 16, 1977, the second locomotive unit and 12 cars of Amtrak train No. 57 derailed on the Louisville and Nashville Railroad Company track about 15 miles north of Birmingham, Alabama. The train, with SDP-40F-type locomotive units, was moving at a speed of 43 mph around a 5° curve; the superelevation of the curve was 4 inches, and the maximum allowable speed was 40 mph.

Seventeen trains with either the SDP-40F-type locomotive or the P-30CH-type have derailed since January 14, 1974. (See attachment.) Preliminary investigations of these accidents indicate that on curves which exceed 1°30' and which have certain deviations in track geometry, passenger train locomotives of the SDP-40F and P-30CH-types with 6-wheel trucks and which travel at speeds above 48 mph cause the outside rail to either move laterally or to tip outward. This permits the wheels of the locomotive and following cars to derail.

The gage widens even though the 6-wheel truck locomotives do not deviate from design standards, and inspections of the track indicate that it generally complies with the Federal Track Standard for the authorized speeds of the trains.

(2)

R-77-1 and 2

Therefore, the National Transportation Safety Board recommends that the Federal Railroad Administration:

Investigate immediately the interaction between SDP-40F and P-30CH locomotives of passenger trains and track conditions to determine the causes for the widening of the track gage and act to correct the causes. (Class I, Urgent Followup) (R-77-1)

Until such investigation and corrections are completed, restrict passenger trains with SDP-40F locomotives to speeds that will permit safe operation around curves of 1°30' or more on Class 4 or less track. The speeds should not exceed the equilibrium speed on such curves. (Class I, Urgent Followup) (R-77-2)

TODD, Chairman, BAILEY, Vice Chairman, McADAMS, HOGUE and HALEY, Members, concurred in the above recommendations.

Kay Bailey

for Webster T. Todd, Jr.
Chairman

Attachment

R-77-1 and 2

Train derailments involving six-axle SDP-40F and P30CH locomotives:

	DATE	PLACE	RR	TRAIN	SPEED MPH	° CURVE OR TANGENT	TRACK CLASS
1.	12-16-76	Ralston, Neb.	BN	No. 6	53	2°30'	4
2.	11-29-76	Sewell, W.Va.	C & O	No. 51	52	2°	4
3.	9-29-76	E. Sewell, W.Va.	C & O	No. 50	52	2°3'	4
4.	9-9-76	Vaiden, Miss.	ICG	No. 59	79	0° 30'	4
5.	6-30-76	Goodman, Miss.	ICG	No. 59	88	Tangent	4
6.	1-30-76	Shandon, Ohio	C & O	No. 51	50	4°	4
7.	1-24-76	Heath, Ohio	PC		70	Tangent	4
8.	1-5-76	Flynn, Mont.	BN	No. 10	60	3°22'	4
9.	10-1-75	Pulaski, Tenn.	L & N	Floridian	60	3°8'	4
10.	1-31-75	Huntington, W.Va.	C & O	No. 50	48	2°	4
11.	1-12-75	Castlerock, Wa.	BN	No. 11	59	2°32'	4
12.	12-28-74	Mifflin, Pa.	PC	No. 40	55	2°	4
13.	8-12-74	Wake Forest, N.C.	SCL	No. 81	58	3°15'	4
14.	7-16-74	Hartselle, Ala.	L & N	No. 316	60	2°4'	4
15.	7-5-74	New Florence, Pa.	PC	No. 30	52	2°	4
16.	4-30-74	Winamac, Ind.	PC	No. 53	47	1°	3
17.	1-14-74	Ardmore, Okla.	AT & SF	No. 15	56	3°10'	4