trucks, 8' Pullman doors and DF-2 loaders.

After building all models covered in this series of articles every style and class of PS-1 40 footers will grace your WP collection. The 40' PS-1's wore just about every paint scheme used by WP and will add color and history to your collection. Note. After many requests about the WP decals that Detail Assoc. has but not out. Peter Arnold of DA has said they will be out soon and the FRRS will have them for sale ASAP.

1952-1953
Purch. from Pullman 1960 @ $4500ea
1952...retired Jul 67 Associated Metals, Benicia
1953...Running Boards removed 1968. Failed in service on PC at Enola, Pa May, 1974

1961-1970
Purch. from Pullman 1953 @ $7500ea
Accepted at Michigan City, Indiana on Feb 26, 1954.
Special distinctive stencilling applied at Sacramento shops.
1961...3404
1962...3403
1963...3410 ret 75
1964...3407 ret 79
1965...3402 ret 68
1966...3405 ret 76
1967...3408
1968...3409 renumbered to 23001
1969...3406 ret 79
1970...3401 ret 71

3423-3426
Purch. from Pullman 1961
3423-3424, 16 Belts DF @$12,174
3425-3426, 19 Belts DF @$12,079

A well worn WP 1952 at Portola just shortly before retirement
Norman Holmes photo

WESTERN PACIFIC
Mileposts
MAY 1956

shippers learn how damage to freight can be

Substantially Reduced

Two cutaway working models of a Western Pacific cushion underframe car have been giving shippers and other interested persons an inside look at freight damage prevention.

The two models, with tops and sides removed for better vision, carry a miniature load to simulate in proportion a loaded box car. With the cushion underframe device disconnected, an operator sends one car coasting down an incline to crash into the other car at the far end of a 20-foot track, at a speed comparable to 10 miles an hour. The loads are tumbled around just as would a carload of freight subjected to rough handling.

When the one car is again sent down the incline with the cushion underframe device in operation, the loads remain in their original position even though the force from the contact of the two model cars is identical to the previous demonstration. The effect clearly demonstrates lading protection afforded by this feature.

A sliding sill running lengthwise through a car underframe is the secret to the cushioning effect of the cushion underframe car. When an impact is made against the car, contact by the striking car is first made on the coupler of the struck car. The coupler drives in, with closing action and impact absorption taking place in the conventional draft gear under mild, low speed impact. Under heavy impact the draft gear becomes overloaded and goes solid, leaving the bulk of dangerous shock energy to be handled by the cushion underframe. The impact forces the cushion underframe's sliding center sill through bolsters and crossbearers, which causes the lugs on the center sill to press against a rubber cushion in the heart of the cushion underframe. As the cushion is compressed, it is squeezed against an abutment welded to a shear plate which, in turn, is fastened to the car body. When sufficient compression of the rubber cushion is reached, the inertia of the car body is overcome. The car then moves in the same direction as the sliding sill. This cushioning lengthens the travel of the impact, allowing energies caused by the coupler impact to fan out and run off gradually through shear plate, car body and lading, without permanent deformation or fracture. Coupler forces are not transmitted to the car structure through the body bolsters as in conventional cars. The cushion underframe elements return to neutral position, ready to absorb and dissipate the coupler shock of the next impact. Cushion underframe action is equally effective either buff or pull, such as when train slack is being run out, and during road and switching operations.

In 1952, WP's research section and the Pullman-Standard Car Manufacturing Company sponsored a research program on two pilot models of CU cars. As a result of these tests, several other railroads have purchased CU-