

MODELING WESTERN PACIFIC GP35, GP40 AND GP40-2 LOCOMOTIVES

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Prototypes

GP35 3001-3010 built 1963
GP35 3011-3012 built 1964
GP35 3013-3022 built 1965
GP40 3501-3510 built 1966
GP40 3511-3516 built 1967

GP40 3517-3526 built 1970
GP40 3527-3544 built 1971
GP40-2 3545-3549 built 1979
GP40-2 3550-3559 built 1980

Modeling

No existing plastic HO scale model of a GP35, GP40, or GP40-2 is correct right out of the box for modeling Western Pacific versions of these locomotives. Fortunately, the modifications range from minor modifications to some significant cutting and fitting (in the case of the second order GP40-2) to give models the "WP look". This presentation deals with modifying the Kato GP35 model, the current (Chinese built) Atlas GP40 model, and the Athearn "blue box" GP40-2 model.

Athearn recently (in 2018) upgraded their RTR version GP35, which is based on the Rail Power Products shell. Included in the upgrade are WP-specific headlights and front number board. The Athearn model is a phase 1a model.

Several years after this handout was first created, Athearn added the GP40-2 to their Genesis line and produced several models of both groups of WP units. Atlas also produced a GP40-2 in their Master product line and have released models in WP paint.

GP35

All of the WP locomotives are variants of the Phase 1 model.

3001-3010 are phase 1a

3011-3012 are technically phase 1b, but a Phase 1a model should be used to model these two locomotives due to the spotting features, which EMD changed at various times during production of the prototypes.

3013-3022 are phase 1c

A clarification regarding "phases" is helpful here. There are three primary spotting features useful in determining the phase of the locomotive. The features are;

- a- The number of louvers in the battery box doors ahead of the cab. This is not always a certainty, because the doors can, and were, switched around between locomotives. Phase 1a units have 9 louvers on the doors, while phase 1b and 1c have 2 louvers.
- b- The number of door latches on the engine compartment doors on the hood side. Phase 1a units have 6 pairs of door latches below the dynamic brake blister. A portion of phase 1b construction had significantly fewer (3 pairs) door latches, however EMD discovered this was an insufficient amount to keep the doors closed properly and resumed the use of 6 pairs by the time WP's phase 1b units were constructed.
- c- The style of radiator grilles on the hood sides. Phase 1a and 1b units have grilles with horizontally-oriented pieces as the primary parts of the grille. Phase 1c units were built with a different style grille, which has vertically-oriented pieces as the primary parts of the grille.

The door latches and grilles are less likely to be randomly switched around during normal maintenance making those features better for phase spotting.

All 22 locomotives were delivered with the modified number boxes and large headlight on the front, and large headlight on the rear. Units 3001-3012 were delivered with dual control stands, as well as fore and aft mirror/deflectors on both sides of the cab. Radio antennas were mounted on the top of the number boxes to the right of the horn.

3013-3022 saw two significant changes in practice. 1-These locomotives (and no other subsequent orders except the U23-B units) were equipped with a single control stand, and as a result only had mirror/deflectors forward of the cab side windows; 2- the radio antenna was relocated to the cab roof about 2/3 of the way back from the cab front, slightly to the right of center. The antenna remained in this location through the entire group of GP40 locomotives.

ANOMALIES

3004 received a standard EMD number box and headlights during wreck repairs circa 1970. 3009 and 3020 received WP-fabricated twin sealed beam headlights on the rear.

3003 is a special case. This unit was wrecked at Tobin, California, where it struck a rockslide and nearly ended up in the Feather River. WP repaired the unit in 1966, possibly with parts obtained from EMD. When repaired it had phase 1c style radiator grilles and a standard EMD sealed beam headlight mount on the rear. The unit was painted in Pumpkin II, with the side sill, long hood top and appliances painted black, though there is evidence that the side sill was repainted orange by November 1966. The stepwells and rear cooling fan housings have been painted silver.

GP40

The delivery of 3501-3516 continued practices adopted with the last order of GP35 units. When GP40 purchases were resumed in 1970, some significant changes were adopted. First was the change to dark green paint. The 3517-3526 series, as well as 3506, which had been sent to EMD for repairs following a wreck in the fall of 1969 arrived in the new green colors. The 3506 was upgraded electrically to match the 3517 group and was equipped with a Pyle Gyalite in the low hood, but did not receive a pilot plow. Another physical change was a different style M/U stand with a single receptacle instead of the earlier style with the separate plug on top for the field loop dynamic brake system. This second plug became unnecessary when the field loop control system was replaced with a more modern type. Additionally, these were the first GP40s to receive a Pyle gyalite oscillating headlight with one clear lens and one red lens on the short hood.

The 3527-3544 group received a year later had three changes of note. 1- a larger plow, similar to the one installed on the U30-B units. The prior group received a smaller plow; 2- the dynamic brake blister was extended further forward on these units in order to move the dynamic brake wiring further away from the heat of the exhaust stack; 3- the traction motor cooling duct on the left side behind the cab has two horizontal stiffening crimps not present on the earlier locomotives.

It is sometimes erroneously stated (in all likelihood sometimes assumed mistakenly because of the presence of the extended blister) that some WP units were equipped with extended range dynamic brakes. No WP locomotive was ever equipped with extended range dynamic brakes.

ANOMALIES

3502 received a WP-fabricated sealed beam headlight on the rear only. 3506 received wreck repairs at EMD and was upgraded to the same appearance as the 3517-3526 group, but was never equipped with a plow. 3513 and 3515 received plows on the front pilot. 3532 was the only 3517-3544 group unit to receive nose initials in green paint. 3540-3541 were painted in Bicentennial colors as 1776 and 1976. They were repainted in the new image scheme in 1979.

GP40-2

The first group (3545-3549) were delivered with no oscillating headlight on the short hood. WP retrofitted a Pyle gyalite to 3549 by 1983 and probably had plans to install them on the other four, however this was not done prior to the UP acquisition. These were the first locomotives to be equipped with cab air conditioning.

The second group, 3550-3559, were subject to Federal noise control regulations that went into effect in 1980. As a result, these units came with "Q" type cooling fans and a modified exhaust system, both of which reduced the ambient noise of the fans and prime mover. These units had the nose mounted Pyle gyalites with two clear lenses installed at the factory.

M-K rebuild program

The surviving GP35 and GP40 units in the 3501-3516 groups were sent over a period of time in 1979 to Morrison-Knudsen in Boise, Idaho where they were upgraded with some "dash-2" electrical systems as well as Pyle gyalite oscillating headlights with two clear lenses (3506 was already gyalite equipped). The locomotives also received cab air conditioning and "New Image" paint during the process. Locomotives that had plows installed already retained them, but they were not added by M-K if not already so equipped. As part of the process, WP sold the locomotives to a financial institution which then leased them back to WP on a long-term lease.

Painting and Lettering notes

- 3013-3022 roadname, locomotive class, and number on the cab sides were changed to white.
- Black antiglare top of nose adopted circa 1968.
- 3506, 3517-3526; dark green paint was adopted, along with orange striping and lettering in 1970
- 3527 series wore brighter green paint, dubbed "Perlman green" in 1971.
- WP nose initials adopted 1972?
- Sterling polyurethane green adopted 1974.
- New image paint adopted 1979. GP35/GP40 units in new image: 3504, (3003, 3513 before rebuilding), 3519, 3523, 3524, 3525, 3528, 3540, 3541, 3544
- New image units painted by WP have the top of the short hood painted green anti-glare. The handrail stanchions on the ends are painted orange
- New image units painted by Morrison-Knudsen have the top of the short hood painted orange and the handrail stanchions on the ends are painted green.
- New image units painted by EMD have the top of the short hood and the handrail stanchions on the ends painted orange.

PARTS LIST

3001-3022, 3501-3516
DA 1402, 1504, 1602, 1805, 2604
DW 187
Utah Pacific 77

3517-3544
DA 1402, 1505, 1602, 1805, 2604
DW 138, 140(3527), 155(3517) 187
Utah Pacific 77

Air conditioners – DA 2309, DW 158

*Handout updated 08-22-18