

A SPOTTER'S GUIDE TO NICKEL PLATE ROAD MIKADOS

By Ray Breyer

Presented as a quick reference for modeling purposes (mainly), here's a quick rundown of all the major NKP Mikado classes and what they looked like throughout their service careers. This is only a very basic, down & dirty guide to help modelers figure out which basic class of engine they want to model, and as a basic "quick reference" for casual fans of the NKP to identify 2-8-2 engine classes. As with all things steam, each engine quickly took on a personality and look of its own, so for modeling an individual engine, please refer to several photos of the same engine, or at least the same class of engine from the same time period.

I'll quickly note any models out there (if any) for each engine class as I know of them. I'm a little light in the area of brass knowledge, so there WILL be a few holes!

I'll organize the chapters by engine class. First up is the H-5a and H-5b class of Mikados, which predated the USRA and USRA "clone" Mikes that were more commonly known on the railroad.

H-5a 500-509, 1917

The first Mikados owned by the Nickel Plate, these engines were a standard New York Central RR design, of which 676 were ultimately built for, or sold to, seventeen different railroads. Smaller than USRA light Mikes, they have a very "old" appearance. They were the largest, most powerful engines on the roster for just under a year, until the first batch of USRA 2-8-2s were delivered to the NKP in late 1918.



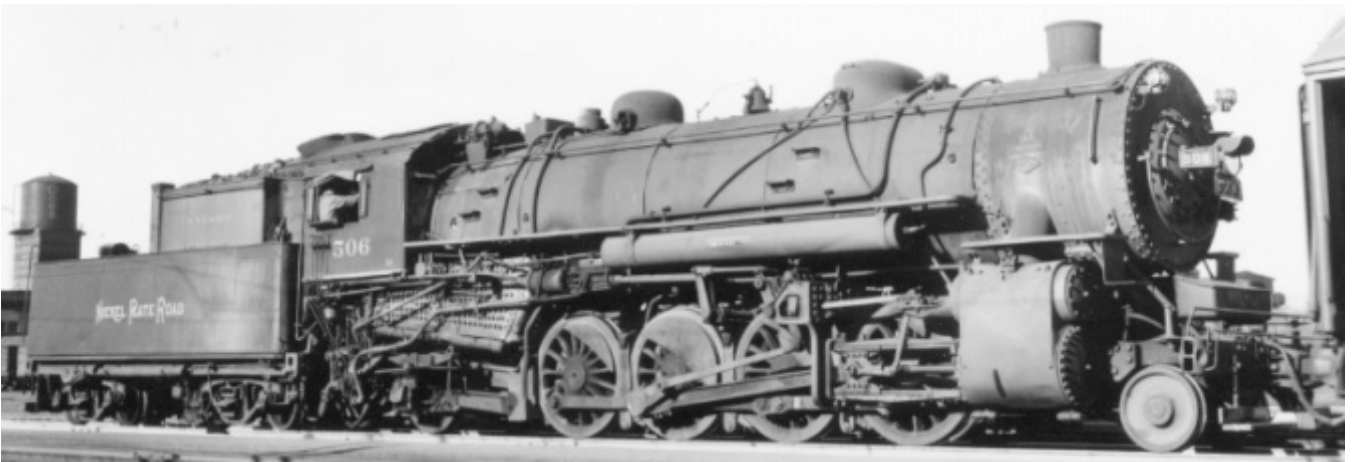
NKP 509 looking pretty much as built, in 1934. The only major changes to the engine have been to add a footboard pilot and coal bunker extensions to the tender.



NKP 507 in the late 1940s. Notice the new footboard pilot and cab, as well as the cut back switching tender (added to engines serving as local switchers on the Chicago to Buffalo mainline).



NKP 507 circa 1940. The engine still has its original cab & pilot, but the tender coal bunker has been enlarged.



NKP 506, Chicago, late 1950s. Most of the H-5 Mikes received cylinder braces during the late 1920s, but by 1950 most seemed to have lost them. Note that 506 and 507 (above) have had a grips box added to the pilot deck. Most H-5s that survived into 1950 had this addition, which seems to have been a late WWII addition to the engines (used to store the crew's gear, NOT used as a tool box!).

H-5b 510-534, 1917

Delivered within a month of the H-5a's, these engines originally only differed in manufacturer (Alco, versus Lima for the original ten). A few had their boiler pressure increased, and overall, this series of engines outlived the H-5a's (and most of the newer H-6's!).



NKP 512 in 1939, pretty much as built. Only the pilot has been changed,



NKP 524 in 1951. New tender, new cab, new pilot, Mar's light, second turbo generator slant mounted on the engineer's side, and a muffler. The engine should also sport a low water alarm on the fireman's side.



A rare color shot of a NKP H-5, number 531, taken somewhere in the Wheeling division (note the M-1 class Mikado behind). This photo was probably taken in 1954-1955, as the entire H-5 class was renumbered into the 950-970 series in mid-1955. The surviving 20 engines would look like the one in the photo below:



NKP 964 in the Conneaut dead line, 1957.

There were only a few oddities among the H-5 classes. At least one received a Worthington feedwater heater (as a testbed for that sort of engine appliance, before the NKP decided to add them to all of the H-6 Mikes), and a few received larger 13RA and 16Rx tenders (see below). Only a few ever received a Mars light, and at least two survived to scrapping in the late 1950s with their original four window cabs.



NKP 969 with 13RA tender.



NKP 955 with 16RA or RC tender.



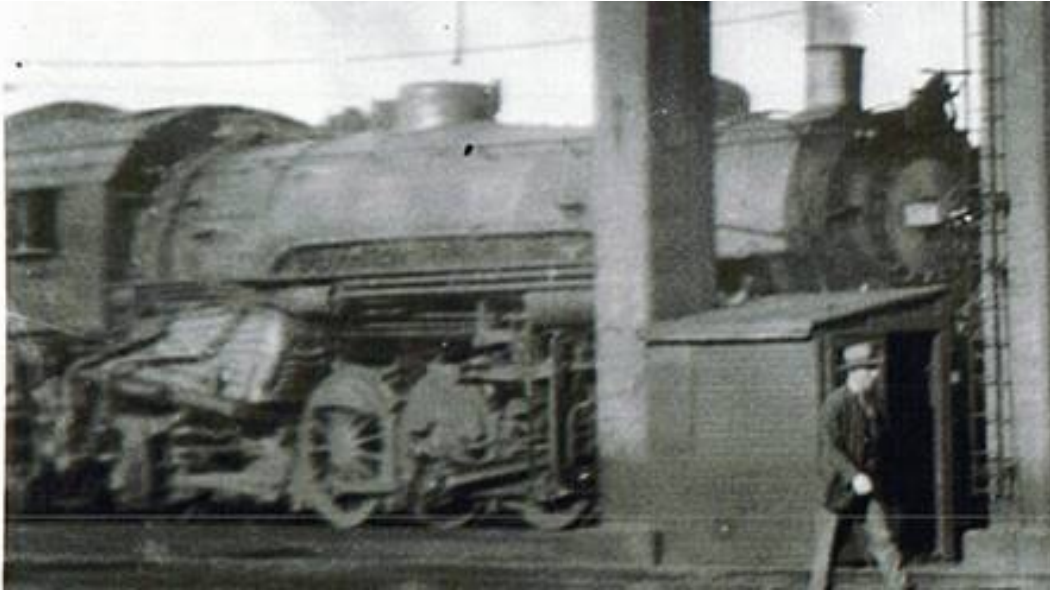
NKP 529 with Worthington BL feedwater heater, 1939.

MODELING NOTES:

These engines are a pain to model. Overland and Key came out with three brass versions of the H-5 type engines in the late 1970s and early 1980s: two NYC and one NKP versions. The models are scarce, have held their value well, and are in heavy demand among NYC modelers (NYC steam modeling SEEMS to be on the rise). But they suffer from Zamac rot of the gearboxes, and so are maintenance queens (they thankfully have a good Canon can motor, so only the gear tower has to be replaced). There was a series of articles in RMC in the late 1980s on modeling one of these engines using a Bowser L1a chassis, a Bowser K-11 cab, smokebox, and firebox, and a length of copper tubing. I've talked to the author of the article, and he says he'd use PVC these days. I played around with using a Mantua Mike as the chassis, as it's a more reliable drive train than Bowser's, but in the end buckled down and picked up one of the Overland brass models (of course, with a completely destroyed gear tower!). It's not a kitbashing project for the inexperienced, but a H-5 model on a medium or large NKP steam-era layout is a MUST, as they were assigned all over the system.

H-6a class 2-8-2: NKP 601-610, built 1918

The only “true” USRA Mikados on the NKP roster until the absorption of the LE&W in 1922, these were relatively plain Jane engines when delivered, but they went through changes quickly.



This is currently the only digitized image I have of a relatively unmodified H-6a, NKP 603 in Peoria, circa 1925. The engine appears to be completely stock, with only a new Pyle headlight and an angle-front bell mount with an odd (and non-NKP) anti-rotation bar at it's top (these bars were common on the NYC, but not the NKP). I can't clearly see the pilot, but it doesn't appear that the engine has pilot-mounted air pumps...yet.

By the late 1920s, the NKP was competing with several roads in the Midwest for fast freight traffic. With only Mikados on the roster until 1934, the USRA engines were quickly brought up to modern standards, and many changes were made across all H-6 sub-classes. For the H-6a engines, this meant (from a visual perspective) the addition of Worthington BL feedwater heaters, a second air pump, the air pumps moved to the pilot deck, a new pilot, moving the generator, and adding a low-water alarm and muffler. Since these engines came with the original USRA fabricated trailing truck, they never received booster engines. As with all of the other H-6 engines, the H-6a's started receiving different tenders to increase their ranges. In general, these enlarged tenders (13RA, 16RA, B and C, and 22RA) were added to an engine when it was assigned to a divisional “long range” assignment, so engines didn't keep a single tender throughout their careers.



NKP 610 after shopping in Conneaut, 1936. This is about what the entire class looked like from about 1928 to the end of WWII. The engine has retained its USRA bell mount, but now has the standard NKP Pyle headlight in a bracketless mount. The pilot is now the four-strap footboard pilot, common to most NKP Mikes as well as the Berkshires. The pilot also has both air pumps added to the pilot deck, and pump shields (similar, but different than the Berkshire's shields, they were also added to the road's Hudsons), as well as a flag box. Smokebox front hinges have been added, as well as new class lights. The walkways have been changed to run straight along the boiler sides, instead of in the USRA's typical stepped pattern. The cylinders have strap braces added. Farther back, the Worthington feedwater pump can be seen, in the location of the as-built engine's air pump location. The generator is on a side-mount bracket, and although not apparent in the photo, the engine now has a Barco low-water alarm and a blow-down muffler. For some reason, most of the engines in the H-6a class had one pair of sanding pipes and valves removed, leaving only the front most sanders intact. Small changes to the cab include a folding windshield and padded armrests. The standard USRA tender has had its coal capacity increased by two tons with the addition of coal board extensions (which were riveted steel).



The engineer's side of NKP 603, in 1941. Notice that this engine still has its original USRA pilot and bell bracket (as well as a new 16RC tender).

By the end of WWII, the NKP had a full roster of Berkshires, in addition to almost every Mikado bought. With the downturn in postwar traffic and a recessionary period, the NKP had more power than it needed. Instead of scrapping the older H-5 class and retaining only H-6's, the NKP decided to sell off some of the H-6 engines on the used engine market (yielding more than scrap value that would have been gained from selling off the obsolete H-5's). Since the H-6a class never received booster engines, they were some of the first to go. Almost

all of the H-6a class was either sold to the NdeM in 1945 and 1946, or scrapped by 1949. Only the 602 was kept on the roster, until her scrapping in 1956.



NKP 602 late in its career, around 1949 or so. The engine has received a few more changes that the rest of the H-6a class never saw: top mount check valves (like the rest of the H-6's, with the exception of the H-6o class), and multiple-bearing crossheads. The engine has a 16RC tender, and a different generator bracket. 602 would get the front-mounted flying numberboards in 1951, the only engine of the class to get those appliances (none would get Mars lights). And as seen below, the 602 also had an auxiliary air tank added to the pilot deck, just to the left of the flag box.



NKP 602, Frankfort, IN, 1951. Note that the engine has also received one of the solid steel "plow pilots", which seemed to have been swapped around quite frequently on various Mikes and Berkshires. No one has been able to pin down how many were made, or quite why, but the general consensus is that they were temporarily added to a few engines on each division, so the line would have some light snow-pushing ability.

MODELING NOTES:

The H-6a class Mikados, along with the H-6o class (which I'll get to in a later section) is about the simplest of the NKP Mikes to model. Using any USRA light Mike model on the market, you can quickly add a NKP correct engine to your roster. Unfortunately for most NKP steam modelers (who seem to prefer the 1950-1957 period), these engines were all off the roster by 1946, except for 602, which isn't so simple to model.

From front to back, modeling an H-6a is relatively easy. The four bar pilot is available from either a basket case Rivarossi Berk, a HOBBYLINE plastic kit, or the old Arbour Models cast lead kit (they're also fairly simple to scratchbuild). The air pump shields are easily fabricated out of .005" brass sheet (look for the September, 2000, issue of Mainline Modeler for plans of NKP 636, for dimensions on the shields). Carving off the stock USRA steps and walkway to add a new walk is a straightforward project, as is adding the new boiler rear details (I prefer Cary part 13-123 for NKP mufflers). Adding the Worthington feedwater heater and its related new piping is a small challenge, but Precision Scale makes a fantastic detail kit which includes all the necessary castings, wire for piping, and a great assembly drawing.

Modeling the 602 with her multi-bearing crossheads will be quite a challenge, as the only model engines with an even close arrangement are the Mantua Mike and the Bowser PRR L1a. Using either's drive train as a starting point will require adding new valve gear hangers, as neither come with the correct USRA style (and neither does the Bowser USRA light Mike!). Bowser has some casting that will work, but they're only listed in their printed parts catalog. Once the valve gear and hangers have been cobbled together, you'll have to use the Cary USRA light boiler, cut off the cab (it's wrong, cast on, and horrible looking), and add ALL of the needed details. It's not a project for the faint of heart, and redetailing a plastic USRA light Mike is a MUCH faster, cheaper, and stress-reduced project.

Modeling any of the non-stock tenders will also be a challenge. An old Berkshire tender will work in a pinch for the 22RA tenders, even though it's not 100% correct. The 16Rx tenders were issued in the early 1980s as a photoetched brass kit, but they're hard to assemble and scarce. A decent compromise would be adding a Precision Scale or Life-Like Buckeye truck in the lead truck position of the Bachmann Spectrum USRA long tender, and changing the coal space. The Bachmann USRA long tender will also work for the slightly smaller 13RA tender.

NOTE 1: Bowser is the NKP steam modeler's friend. Armed with a copy of their data book, you can find several NKP-specific parts in their line which are well buried, including a shielded whistle and two piping details which Cal-Scale made for Overland in the 1970s. Extras are still available. Bowser also bought the old Arbour line of steam kits, but has no plans to ever re-release them (they were THAT bad!). They do still have the complete Arbour parts line however, which included a NKP Berkshire. Several parts are useful for Mikado modeling, most important of all being the four-slat pilot.

NOTE 2: Using a Rivarossi Berk as a spare parts source is a great idea. They show up all the time on Ebay, and a dead one can be had for around \$20. Major parts from the Rivarossi Mike for use on a NKP Mikado include the tender (change the trucks!), the pilot, and the flying numberboards (which actually scale out a bit small, but are usable). I haven't looked at using the entire smokebox front for a later-looking Mike with Mar's light, but I really wouldn't consider it. The Mar's light casting is so crude as to be almost unusable. I'd also look at using the pilot air pump shields as a start on the somewhat different Mike shields.

If you can't find a Rivarossi Berk, look for the HOBBYLINE ones. They show up all the time on Ebay, and for around \$10. If I remember correctly, the tender is actually a better overall casting than the Rivarossi model!

H-6b class 2-8-2: NKP 611-615, built 1920

The first group of the “improved” USRA light Mikados, these engines were ordered very shortly after the NKP had some practical experience with their USRA lights. The engines were slightly redesigned with a number of improvements over the original USRA engines, including a Delta trailing truck, top-mounted check valves, a steam dome mounted throttle, Pyle front headlight, and the standard NKP four slat pilot. The class’ original tenders were the same as the USRA engines.

Due to experimentation with the H-6c class engine (see the next section) the engines quickly underwent many changes. The engines were fitted with trailing truck booster motors in 1922, and a second air pump was added to the engine (and the pumps moved to the pilot deck) in 1926, with the engines receiving cylinder braces around 1926 as well.



This is the earliest photo I have of an H-6b, NKP 612, taken around 1930. The engine features all the improvements and modifications listed above. You can tell that the engine is equipped with a booster engine in the trailing truck by noting the thick pipe extending above the boiler, just behind the stack (the pipe is the exhaust for the booster).



The other side of 612, taken in Conneaut in 1949. Besides a new 22RA tender, the engine is unchanged from its Depression era look.



A great rear-angle view of NKP 612, taken in Bellevue in 1938. I've mostly included this photo to show what the back of a 13RA tender looked like. Notice that in 18 years, the engine has had at least three different tenders!

At least two of the engines, numbers 611 and 613, received multiple-bearing crossheads in the early 1940s. All of the class received flying numberboards by 1950, and at least 614 received a Mars light. Most of the class received a stack extension (to improve drafting) by 1948. At least two (611 and 613) received sheet steel plow pilots in the 1940s. 611, 613 and 614, being the longest-lived of the class, had their booster engines removed by the early 1950s.



NKP 611, Peoria, July, 1941. The engine has had the multi-bearing crossheads added recently, but otherwise looks the same as it did throughout the 1930s. Surprisingly, while the NKP's records indicate that the 611 was fitted with a feedwater heater in April, 1922, the engine seems to have lost it during the Depression, while the rest of the class retained theirs into the 1950s.



NKP 611, Peoria, March, 1948. Barely seven years later, 611 looks much different. The engine is now trailed by a 22RA tender (fairly common for the Peoria division), new piping arrangement for the booster engine steam

feed pipe (the attachment at the top of the cylinders), flying number boards, a new sheet steel pilot, a stack extension, and even a new handrail above the cab window (three support stanchions instead of five). The engine is still equipped with a booster, so most of the major piping has stayed the same as in 1941.

The H-6b class lasted fairly long on the NKP roster, with the 611 lasting to 8/1955, the 612 to 8/1954, 613 to 8/1955, 614 to 4/1960, and 615 to 8/1953.



The last survivor of the H-6b class, NKP 614, photo taken around 1955 or 1956. The engine has lost its booster, is equipped with a 16RA tender, and has a Mars light.



The other side of 614, Edwardsville, 1955. The pilot truck has been painted white to aid in checking for cracked wheels, a practice common on the older H-5 and H-6 engines, as well as the remaining Consolidations on the roster.

MODELING NOTES: These engines are fairly straightforward to model, since they're still essentially a stock USRA light Mike. The two biggest challenges are in changing the walkway profile and adding a Delta trailing truck.

Precision Scale makes beautiful brass or plastic castings of the Deltas, both with and without booster engines, which can be used under any USRA Mike model out there. You might have to change the attachment point on the truck, depending on the engine model, but a little sheet brass and soldering will take care of that.

The only really "tricky" part to modeling a late-period H-6b will be in adding the stack extension. Most model stacks are WAY too thick, so you can't just add a bit of tubing to the inside of the stack and call it a day. You'll most likely have to find a Plastruct or Evergreen round tube that matches the exterior width of the model's stack, cut a length to glue to the top of the stack (it seems to be in the 8"-10" range. To me, it looks less high than the numberboards, which are 14"), and add some small Evergreen half round around the top. The stack extensions also have two small strap braces, one on each side of the seam. Scale 1x2 and four rivets will do the trick.

Another issue in modeling the H-6b and later Mikado classes is in modeling the steam dome throttle. NOBODY makes a casting that comes anywhere close to matching this detail, so it will have to be scratchbuilt.



639's throttle. Essentially, it's an L-shaped lever attached to a valve that runs into the steam dome, protected by a P-shaped sheet steel shield. For HO scale, a piece of brass wire bent to shape should do the trick for the lever and op rod, and a shield can be bent to shape out of styrene 1x2 or .008" sheet brass.



Second view of 639's throttle. As you can see in this photo, the shield includes a guide for the op rod. Maybe it's a bit trickier to build than I let on...



Third view of 639's throttle, this time nearly broadside so you can get a sense of scaling for making your own. Notice that the op rod from the throttle to the cab actually passes below all the other piping on the boiler. I haven't noted any shields or other guides for the op rod, besides at the throttle.

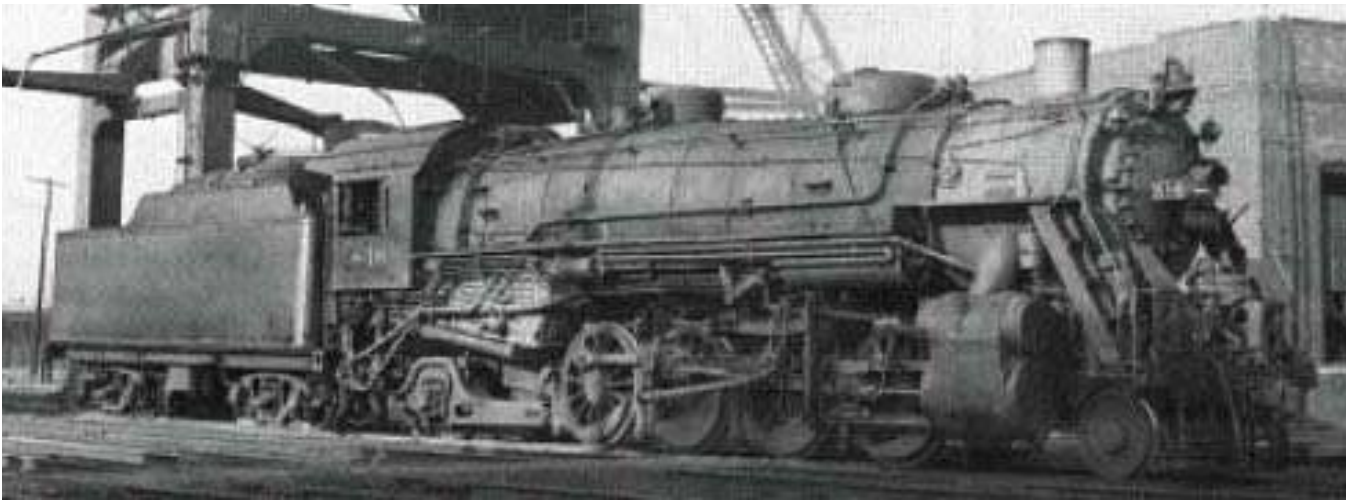
As before, the pilot is available from Arbour/Bowser or a derelict Berkshire model. Sheet steel pilots can be scratchbuilt from styrene, or as an even better solution, bought from Oregon Rail Supply. NKP modeler, fan and owner of ORS, Dick Yager got his hands on a supply of brass sheet pilots left over from a brass engine run (an S-class Berk or a Key H-6d Mike, I think), and has them for sale on his website. Also as before, the pump shields will have to be scratchbuilt, and something will have to be done about the tenders (Berk, Bachmann or scratch). I'd stay away from modeling 611 and 613 for the post-1940 period, as they have the multiple-bearing crossheads.

H-6c class: NKP 616, built 1921

NKP 616 was the sole engine in the H-6c class. Actually attached to the tail end of the H-6b order, the NKP ordered this engine with a few differences from the H-6b class, which is why it has its own class letter. The engine was ordered with a booster engine factory-installed, as well as different siphons and a couple of other minor improvements, which really make no difference from a modeling perspective. The engine was delivered one month after the H-6b class.



This is the Lima builder's photo for NKP 616. This is also how the H-6b class would also have looked when new. It's pretty much just a stock USRA light Mike with a Delta trailing truck and different check valves. The engine received a Worthington feedwater heater in 1926, a second air pump (and both pumps moved to the pilot deck, with shields) in 1926, and was rebuilt in 1930.



NKP 616, Peoria, 7/10/1933. At some point, the booster steam lines were moved from the inside of the boiler to a more conventional position running along the outside bottom of the boiler. The engine has also received a Pyle headlight and four slat pilot some time in the near future. The engine didn't last long enough on the roster to receive flying number boards or a Mars light, and I haven't seen anything that said she received multiple-bearing crossheads.

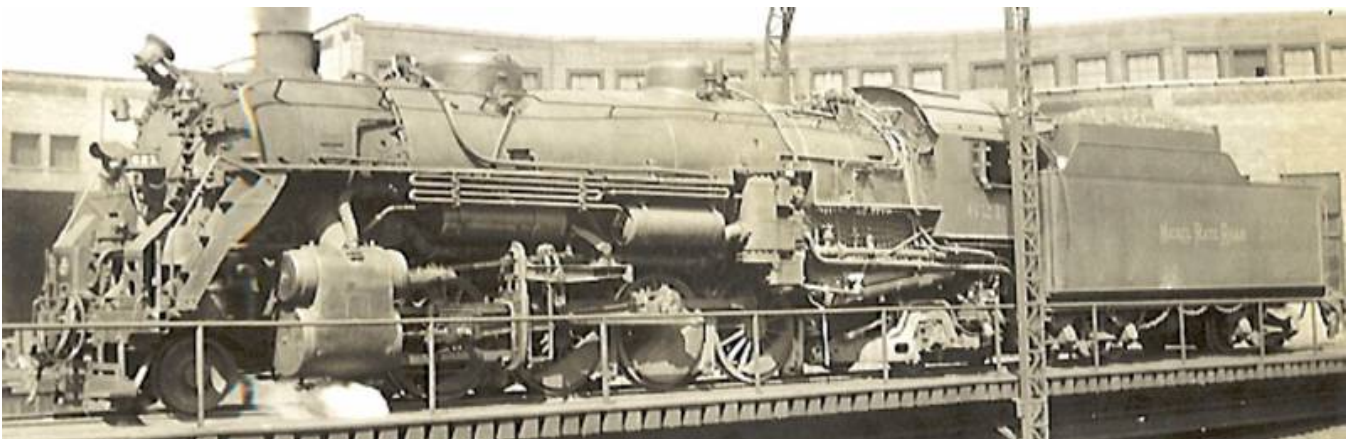
The engine was a test bed for the NKP Mikes. It was fitted with at least three different feedwater heaters, and various other small appliances at one time or another. Possibly because of all of the "messing around" the mechanical department did with the engine (and its resultant metal fatigue), it didn't last long on the NKP roster, being sold to the AC&Y in 10/1946 (becoming their #408, the engine was scrapped when the road dieselized in 1950).

H-6d class: NKP 617-631, built 1922

The Nickel Plate's mechanical department thought long and hard when ordering the road's later Mikados, and spent a lot of time studying the dynamometer car's performance data. With eight orders for 105 engines in only eight years, they had a lot of work to do. Each of the H-6 classes were subtly different from one another, building upon the practical experiences from running the previous class through their paces. The H-6d class is a logical evolution of the H-6b and c classes, and especially the 616 test bed engine.

Ordered only a year after the H-6b and c classes, the H-6d engines reflected the improvements made to the H-6c. They all came factory-equipped with a booster engine mounted to the trailing truck, as well as other minor appliances, such as automatic lubricators. The engines came with a new cab design that was slightly different than the stock USRA, but were delivered with the standard USRA short tenders and pilots. Weighing slightly less than the H-6b class, they nonetheless were rated at the same tractive effort, due to a redistribution of the engine's overall weight over the drivers.

As with all the other NKP Mikados, changed to the H-6d class came quickly. They received the now standard four-slat pilot, twin shielded air pumps on the pilot deck, a Worthington BL feedwater heater, cylinder braces, and new headlights by 1925-1926. Several engines received a sheet steel pilot during the Depression (624, 625, 627, 629). At least six engines of the class received multiple-bearing crossheads during the WWII period (618, 620, 623, 625, 626, 629). During 1947-1951, the entire class received flying number boards, and after 1951, at least six engines received a Mars light (619, 620, 624, 625, 627, 631).



NKP 621 in Peoria, 1930.



NKP 619, Lorain, OH, 9/26/30.

The above two photos illustrate the fireman's side of the H-6d class shortly after their 1925-26 shoppings. Note the subtle piping differences between "identical" engines, especially around the cooling coils and backhead. Also note that engine 619 has retained its as-built pilot. Oddly, its also equipped with a USRA-style bell bracket, something usually not found on any of the NKP's non-USRA engines, and something that the H-6d's were not delivered with.



NKP 622, Conneaut, OH, 1939.



NKP 623, Congerville, IL, 10/5/42.

The engineer's side of the post-1926 engines. Oddly, these engines had several variations of sander lines. The engines were delivered with four, but all of the above photos show two. The photos below again show the engines with four sander lines.

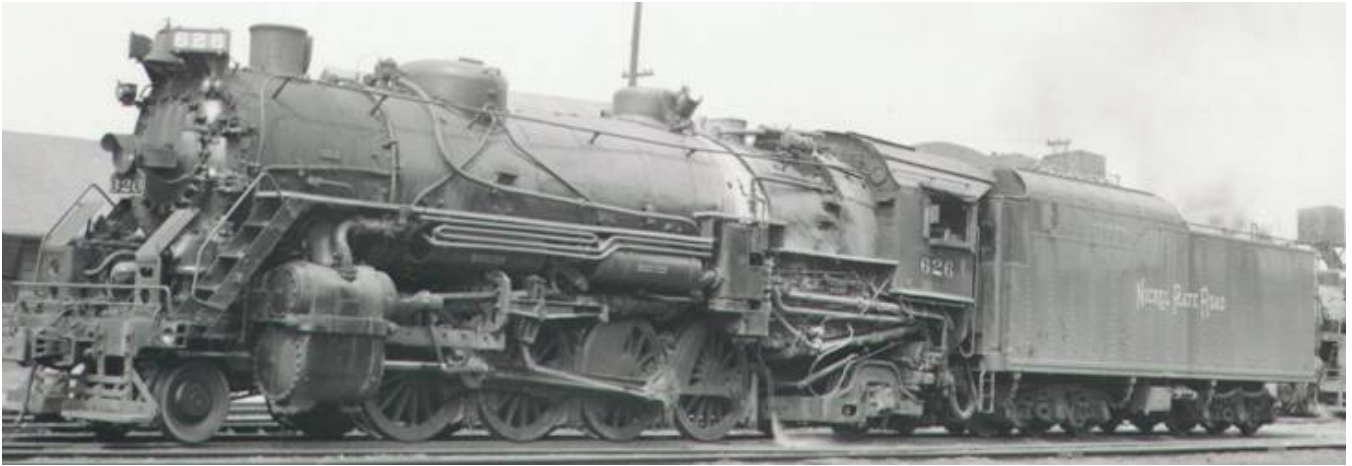


NKP 617, Peoria, 1948.



NKP 617, Peoria, 1947.

The above two photos show NKP 617 in the post-1947 look. The engine has received flying number boards, but otherwise looks pretty similar to the post-1926 engines. Note that it has an auxiliary air tank on the pilot deck. Several of the NKP H-6 engines received this addition, seemingly added at random (for example, NKP 587 has a different style auxiliary air tank on its pilot deck, in a slightly different location).



NKP 626, Peoria, 1950, showing what the engines with multiple-bearing crossheads looked like.



NKP 619, Valparaiso, 1956.



NKP 619, Argos, 1953.

The above two photos of NKP 619 illustrate what the remaining H-6d engines looked like late in their careers. The Worthington feedwater heater has been removed, and the engine now has a Mars light. Sister engine 620

had whitewashed pilot truck wheels, and 620, 624 and 625 received stack extensions. All four of these engines ended their careers with the 22RA tenders.

Most of the H-6d class lasted well into the 1950s, with the majority of the engines being sold for scrap between late 1955 and early 1956. 630 was scrapped (due to an accident, I think) in 1946, 618, 628 and 629 were scrapped by 1954, and the 631 survived until 1962. Thankfully, one of the class, NKP 624, survives today as a park engine in Hammond, Indiana. It's equipped with sheet steel pilot, Mar's light, and 22RA tender, but has had her Worthington feedwater heater removed. The engine never received multiple-bearing crossheads.

MODELING NOTES:

The H-6d series of engines is the last of the "easy" NKP H-6 Mikes to model, as all later engines were delivered with a different long frame Baker valve gear hanger (frankly, they look like Walschaerts valve gear hangers to me, but I've been told that they were a standard Baker catalog item). The main challenges to modeling the H-6d class is in changing the relatively minor details on any USRA light Mikado model: Delta trailing truck with booster (or without, for post-1951 engines), NKP pilot, deck-mounted air pumps and shields, top-mount check valves, and the walkways. The cab isn't really very much different from the USRA cabs, with the window being in a slightly different position on the cab. Realistically, no one will notice the difference.

Most of these engines had long tenders after 1930 or so (the earliest photo I have of a 16RA behind an H-6d is dated 1931, while the latest photo I have of a 13Rx behind an H-6d is 1942. The earliest photo I have of a 22RA behind an H-6d is 1949), so to properly model one of these engines you'll have to model the long tenders as well.

H-6e class: NKP 632-661, built 1923. Part one: Elesco-equipped engines

The H-6e class Mikados, as the pinnacle of NKP 2-8-2 development, were the 500 pound gorillas on the roster until the introduction of the S-class Berkshires in 1934. Even after most of the Berkshires were delivered by 1944, the H-6e's were regularly called on as high speed mainline freight engines until the mid-1950s.

The engines were delivered with as many power-enhancing devices as possible: booster engines, feedwater heaters, automatic lubricators, new siphons, redesigned valve gear, and extra air capacity to name a few. When delivered, they looked twice as massive as the other H-6's on the roster, and while rated at the same 64,100 pounds of tractive effort as the rest of the Mikes, could actually out pull them at slow speeds or on flat grades, due to their extra 11,000 pounds over the drivers.

This section will deal with the first half of the engine class, NKP 632-646. When ordered, the Nickel Plate couldn't quite decide on standardizing on an Elesco or Worthington feedwater heater system, so the order was split between the two styles, with the first 15 receiving the Elescos. This caused a bit of difference in evolution of the two halves of the class, so I'll concentrate on one at a time (frankly, this class should have been split up into two classes by the mechanical department). I'll finish the class in the next section.

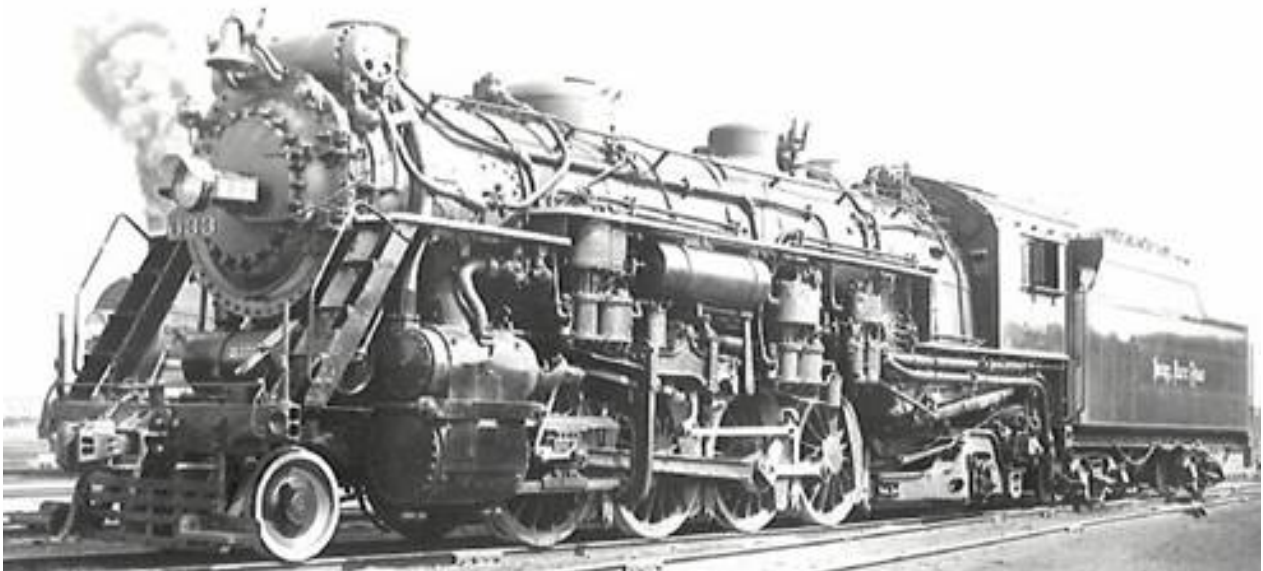


NKP 645, Lima builder's photo, 1923. This is how the 616-646 looked when they rolled out of Lima's shops and onto the Nickel Plate. The engine is equipped with a Delta trailing truck with booster, new style long Baker valve gear hanger, the NKP four slat pilot, USRA short tender and cab, and an Elesco feedwater heater. On the fireman's side you'd see the Elesco feedwater pump and two air pumps. When delivered, these engines had too much weight on the fireman's side (due to the three pumps) and they rode rough. These engines didn't look like this for very long.

By 1929, the H-6e class was undergoing significant changes. Most of the engines had their air pumps moved to the pilot (with shields), new headlights added, and most importantly, a new, larger cab added. These cabs were about two feet longer than the USRA cab, and slightly taller, with a different roof line curve. The windows were slightly smaller, and in a high, rear offset position on the cab.



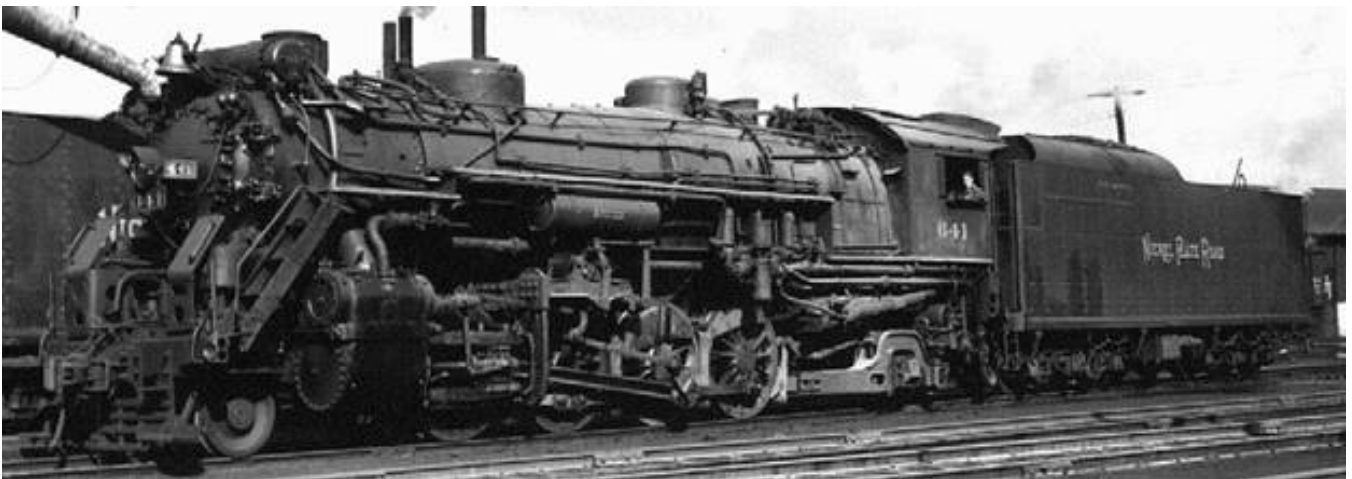
NKP 643, 1931. With the exception of the new, larger cab, this engine is pretty much stock. Note all the hardware on the fireman's side of the engine, which is what made these engines ride off-balance and rough. Also note that the smokebox is painted light graphite, a relatively short-lived system wide application that only survived past 1945 on the Pacifics and Hudsons.



NKP 633, Peoria, 10-1936. Another relatively stock engine, seen fairly late in its career. A few of the engines never received the pilot mounted air pumps (I'm noticing 646 and 647 in my photos).



NKP 642, in storage late in the Depression. This is what the engines looked like after the air pumps were moved to the pilot deck. Some engines received a second air tank on the fireman's side, just in front of the Elesco pump.



NKP 641, equipped with an earlier version of the Elesco feedwater pump. At least two engines received this pump (NKP 637 was the other).

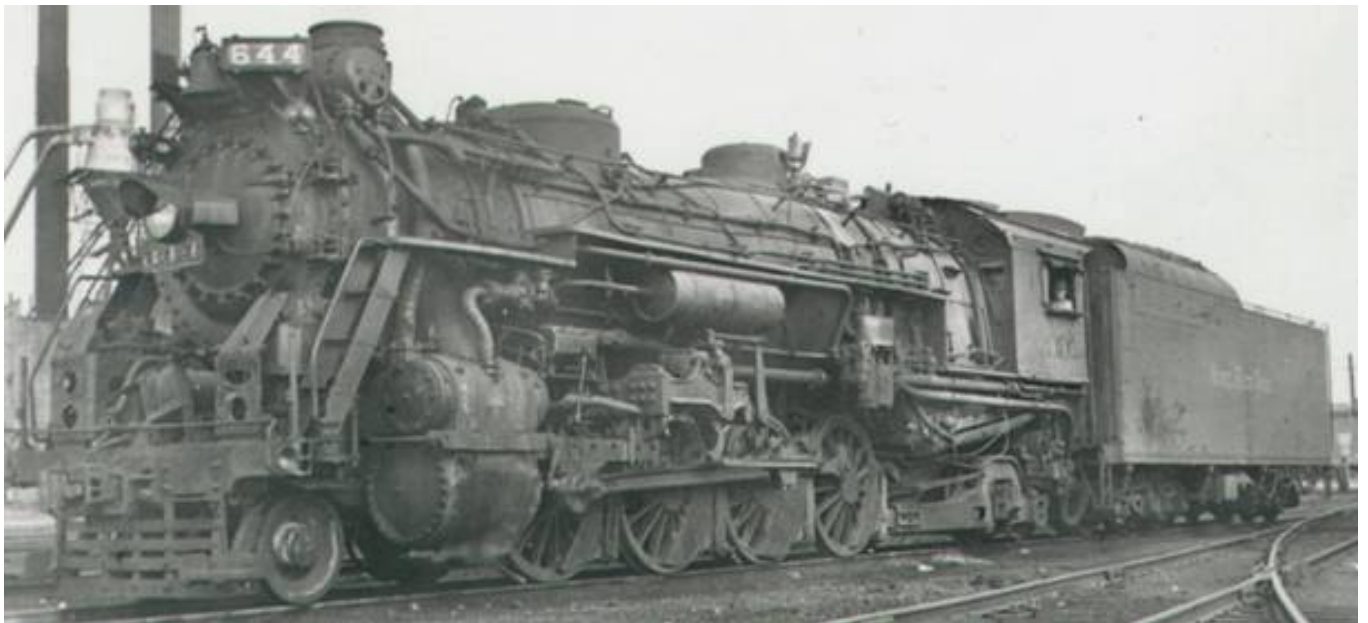


NKP 636, Madison, 1938. Again, a mostly stock engine, with the exception of the tender and cab.

By 1940, the NKP started converting several of the H-6e class to multiple-bearing crossheads. By 1947, these engines also started receiving flying number boards (all still on the roster by 1950 had them installed).



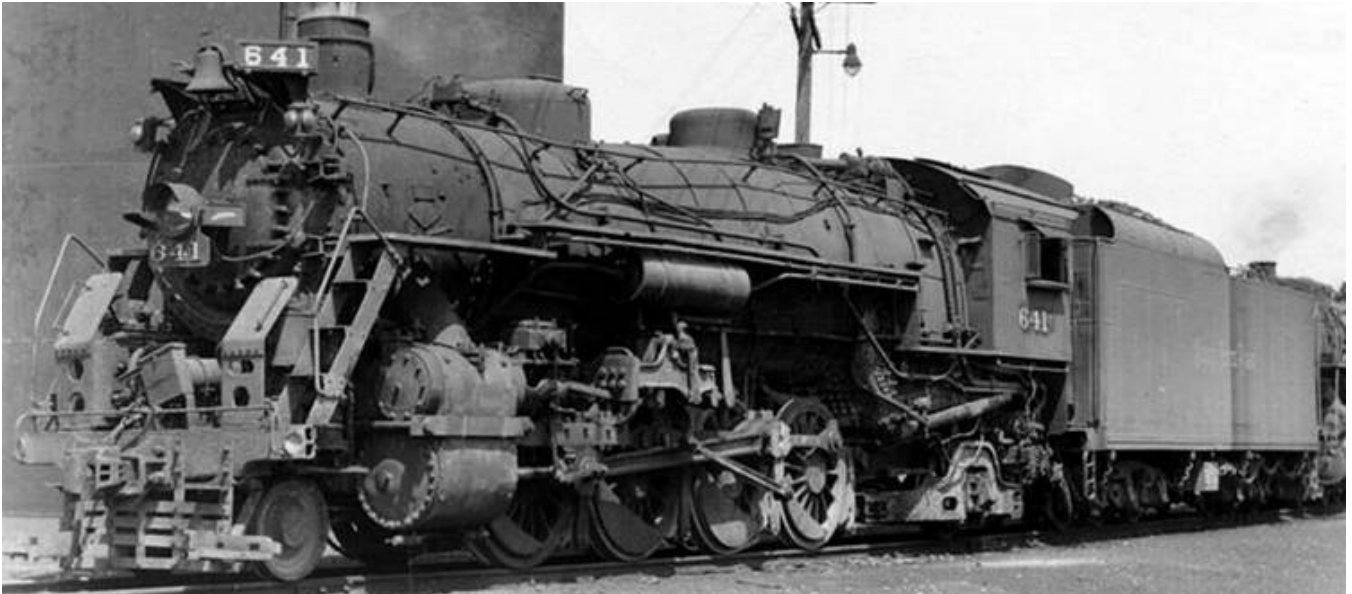
NKP 643. This engine has received multiple-bearing crossheads and flying numberboards. 643 was one of the few engines of this class to never have the air pumps moved to the tender deck (there's a large auxiliary air tank in place on the deck instead).



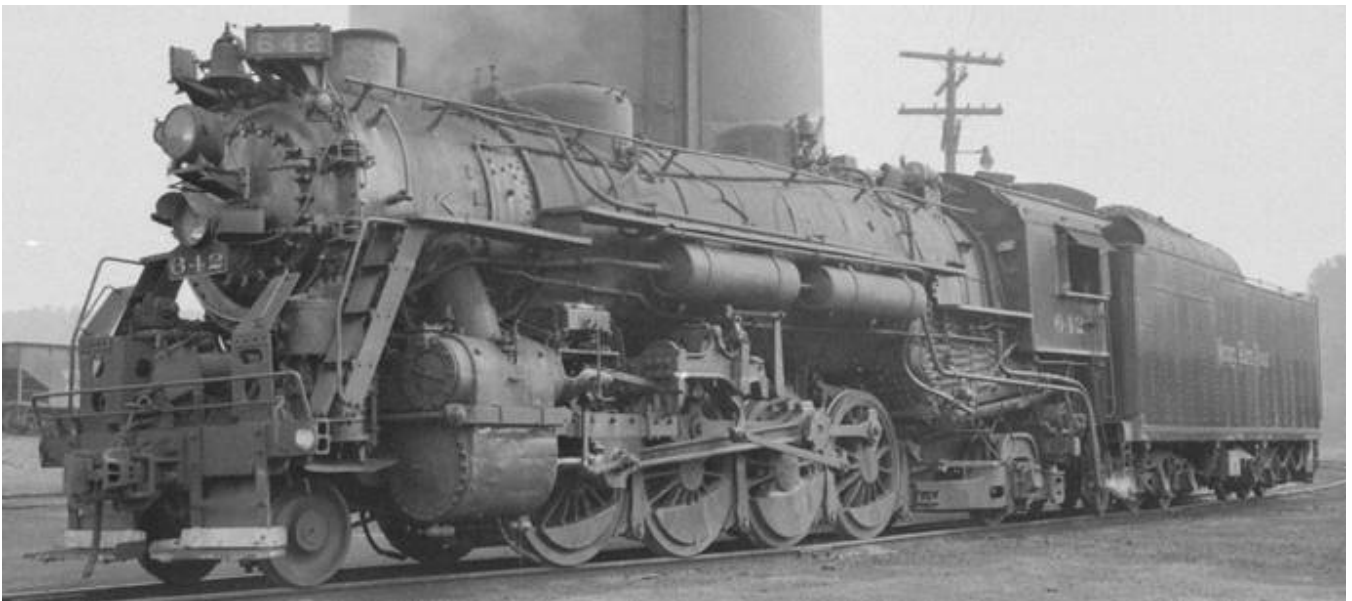
NKP 644, Peoria, 1947.



NKP 639, Peoria, 1951. Both this engine and 644, above, illustrate what the majority of the H-6e class looked like in the late 1940s. They still retain all their original equipment, plus have had much added. But by 1950, things started coming off.



NKP 641, Dillonvale, 1949. The engine has lost both the booster and feedwater heater, and has a stack extension added.



NKP 642, Dillonvale, 1950. This engine has lost the booster, feedwater heater, and original pilot, and has a Mars light and second air tank on the fireman's side added. A few of the H-6e's received these footboard pilots (642, 644, 646, 653, 661) due to being assigned to the Wheeling district (all W&LE steam engines had footboard pilots. NKP engines assigned had them added as well, since the ex-Wheeling crews demanded it!).



NKP 639, in the dead line at Bellevue, 1958. This is what an H-6e looked like shortly before retirement. This engine has lost its booster, feedwater heater, third air tank, and most of their resultant piping. By the end of their careers, these engines looked pretty naked.



NKP 639 while still in service, Lorain, OH, 1957. I have no idea why this engine has had a USRA-style bell bracket added, but didn't have it in 1951 (see above), or even earlier in the engine's career.

The H-6e class was a powerful engine type, and was relied upon by the Nickel Plate to run heavy trains quickly. More so than any other Mikado class on the roster, these engines were used to supplement the Berkshires on fast freights. Because of their hard use and constant upgrading, they underwent a dizzying array of changes throughout their careers, which is why this chapter is so photo heavy. For conciseness' sake, I've tabulated the engines I can identify as having the most obvious of the changes below (632-646 only):

Sheet steel pilot: 636, 637.

Footboard pilot: 642, 644, 646.

Multi-bearing crossheads: 633, 639, 641, 642, 643, 644, 645, 646.

Mar's Light: 639, 642, 643, 644, 645, 646.

Stack extension: 633, 639, 641, 642, 643, 644, 645.

The engine class stayed surprisingly intact for most of its career. 636 was destroyed in a wreck in 1945, six engines were sold to the NdeM in 1946, and two other engines were scrapped by 1949, but the rest of the class survived to at least late 1953, with nine of the original 30 lasting until the end of steam. The engines were disposed of as follows (632-646 only):

1945: 636.

1946: 632, 634, 638 to NdeM.

1949: 635, 637.

1954: 641

1955: 633, 640, 642.

1956: 644, 646.

1958-1962 (post-steam): 643, 645.

Survived & preserved: 639.

MODELING NOTES:

OK, I'll be blunt. This engine class is a pain to model. Besides scratchbuilding most or all of the engine and tender, or buying rare and sought-after brass imports, there is no way to accurately model this engine class. I'm modeling the Peoria Division, probably in the 1949/1950 time period right before the Berkshires were assigned. That means that I'll need at least three of the H-6e class in my roster, to represent the "big mover" engines for the division. I'm not about to buy brass, so here's how I plan on attacking this modeling challenge:

Boiler: any USRA light, probably Cary.

Chassis: Bowser L-1a 2-8-2.

Lead and trailing trucks: Precision Scale.

Baker valve gear: Bowser.

Multi-bearing crossheads: Bowser, from their M-1a kit.

Walschaerts valve gear hanger: Precision Scale. It's wrong (hugely oversized and actually for a Yellowstone, I think), and will need to be reshaped, but it's an easier task than scratchbuilding the part out of bar brass.

Cab: The NKPHTS offered a photo etched brass cab kit for the H-6e engines in the late 1970s. I've got two. If you can't find one floating around, look to the 2000 issues of Mainline Modeler for plans of the 636, for dimensions. I'd use .010" styrene with a .002" rivet pattern overlay.

Tender: Berkshire. Most H-6e's seem to have had the 22RA tenders for most of their careers. 639 and a couple of others in the class had the 13RA and 13RC tenders, but only for short periods of time.

All the small details are available through Bowser and Precision Scale (lean on Bowser's Cary line; they're the least expensive, and in some cases, the only thing available!). There's a lot of piping on a fully-equipped H-6e, but once you start to understand the logic of what went where, it's fairly simple to bend up and ACC in place.

It's the valve gear hanger that makes this engine such a pain to model. When Athearn brought out their USRA light Pacific with a similar hanger (MUCH better than the Pre Scale part), I snatched one up and immediately took it apart, to see if I could move the hangers from the Pacific to the Mikes. You can't. Not only are the bracket attachment lugs oriented in the wrong direction (towards the rear of the engine, instead of towards the front as on the Mikes), but the two mounting screw holes are in completely different places. And the part is cast in Delrin, making it impossible to cobble up into something useful for other steam engines. You MIGHT be able to use it in a metal chassis like the Bowser part, but I sold my Athearn Mike off a while ago and can't comment on that conversion.

The "cheap & dirty" way to use a better USRA light Mike model for an H-6e conversion would be to scratchbuild only the outside face of the valve gear hanger, and pin & glue it to the face of the USRA hanger. It won't be a perfect conversion, but it will look better than ignoring the problem.

H-6e class: NKP 632-661, built 1923. Part two: Worthington-equipped engines

This section will deal with the second half of the H-6e engine class, NKP 647-661. When ordered, the Nickel Plate couldn't quite decide on standardizing on an Elesco or Worthington feedwater system, so the order was split between the two styles, with the second 15 receiving the Worthington BL feedwater heater. This caused a bit of difference in evolution of the two halves of the class, so I've concentrated on one at a time.



A freshly shopped NKP 648, virtually unchanged from its as-delivered 1923 appearance (the engine has a new headlight and the bigger cab, as well as a probably brand-new 22RA tender). Note that the running board arrangement is different than on the Elesco-equipped engines. Also notice that the rear two pumps actually hang over and partially cover the tops of the drivers. The booster engine steam lines have been changed from their as-built configuration, to ease access (a big problem with boosters is their relatively high maintenance).



NKP 652, mid-1930s, mostly stock. The engine has received a new cab, pilot-mounted air pumps and headlight, but the booster steam lines are in their as-built locations. Note that the power reverse is mounted on a bracket that extends below the air tank. Also apparent is the pop valve shield; all of the H-6e's were so equipped.



NKP 660, Valparaiso, 1949, showing what the fireman's side of the engines looked like after the air pumps were moved to the pilot deck.

This sub-class of engines underwent the same sort of changes as their Elesco equipped relatives. By 1929/1930, the air pumps were moved to the pilot decks (except for 647, for some reason), the cabs were replaced, and most engines had a third air tank hung onto the fireman's side of the boiler. Most of the engines were also equipped with 16Rx or 22RA tenders. By WWII, the engines had Barco low-water alarms and mufflers installed, and a few engines received multiple-bearing crossheads. By 1947/1949, most had flying number boards added, and by 1952, any still on the roster had Mars lights.



NKP 654, Peoria, 1949. The engine has received multiple-bearing crossheads, flying number boards, two extra sanding lines, and a stack extension.



NKP 655, Peoria, 1950. The 16Rx tenders were very common on the Peoria Division.



NKP 651. I've included this relatively low-quality photo to illustrate just how big the new cabs were on the H-6e's.

By 1952, and nearing the end of the class' service lives, the engines started losing their booster engines and feedwater heaters, which were unnecessary in the mostly local switching duties they were downgraded to. The loss of so many major appliances simplified the look of the engines, giving them an airy, naked appearance.



NKP 654, Painesville, OH, 10/1956. The engine has lost its booster and Worthington feedwater heater, and has a sheet steel pilot, multiple-bearing crossheads, and a Mars light. Without the Worthington and booster piping, you can clearly see most of the lower boiler.



A stripped NKP 661, in the dead line at Bellevue, illustrating how the lack of major appliances makes the latter H-6e's look naked. The engine has been equipped with a footboard pilot.



NKP 647, Vermillion, 1956. The oddball of the sub-class, this engine never had its air pumps moved to the pilot deck. With the two air pumps still mounted below the fireman's side walkway, the engine looks more like it did when delivered, even without the feedwater heater and booster. The third air tank is on the pilot deck, and the engine has all of the modernization features, including Mars light and stack extension.

The H-6e class was a powerful engine type, and was relied upon heavily by the Nickel Plate to run heavy trains fast. More so than any other Mikado class on the roster, these engines were used to supplement the Berkshires on fast freights. Because of their hard use and constant upgrading, they underwent a dizzying array of changes throughout their lives, which is why this chapter is so photo heavy. For conciseness' sake, I've tabulated the engines I can identify as having the most obvious of the changes below (647-661 only):

Sheet steel pilot: 654.

Footboard pilot: 653, 661.

Multi-bearing crossheads: 647, 651, 654.

Mar's Light: 647, 653, 654.

Stack extension: 647, 653, 654, 655.

The engine class stayed surprisingly intact for most of its career. 636 was destroyed in a wreck in 1945, six engines were sold to the NdeM in 1946, and two other engines were scrapped by 1949, but the rest of the class survived to at least late 1953, with nine of the original 30 lasting until the end of steam. The engines were disposed of as follows (647-661 only):

1946: 649, 658, 660 to NdeM.

1953: 655, 657, 659.

1954: 648, 650, 652.

1955: 661.

1956: 651, 653, 656.

1958-1962 (post-steam): 654.

MODELING NOTES:

As with the engines equipped with Elesco feedwater heaters, this engine class will be difficult to model. With no correct valve gear hangers on the market, we modelers are faced with either scratchbuilding the part, finding a "make-do" solution, or ignoring the problem completely. I'm leaning towards a "veneer" solution, adding a scratchbuilt front face of the Walschaerts-style hanger to the stock USRA model's as-built hanger. It's not the best solution in the world, but one which is achievable by most modelers, and much better than just ignoring the problem. The rest of the conversion is pretty straightforward: add a new cab, add the feedwater heater (or not), add the small appliances and start hanging all the piping! The piping would intimidate most steam modelers, so it's probably best to make a detailed drawing of the boiler, all the appliances, and the pipe routings first. I've

done this for a couple of steam projects, and having all the data I needed on one clear line drawing (with the pipe sizes in different colors) eased the whole modeling project significantly.

One final word about the H-6e class, and on all the Mikado classes in general. Whatever you do when modeling NKP Mikes, be sure to find a single target engine to model, and then collect as much data as possible on that one engine. And whatever you do, DON'T rely on modeling the three engines that are preserved and on display! NONE of them actually look like they did when in service! 587 has a different tender and some minor piping arrangements, 624 has lost most of her major appliances (but she's closest to her last year in service), and 639 is all messed up. Her tender has been reworked, her pilot is different, and she's missing her feedwater heater and booster. You can definitely use these engines as a general guide (I do!), but definitely default to the in-service photos when a difference in detailing comes up.



NKP 639 in 1957.



NKP 639 in 2000. Spot the four major detailing differences between these two photos!

GENERAL MODELING NOTE: STACKS

Tony Koester wrote:

>>FYI, the Key H-6d has the 16RA tender -- and what appears to be a very tall stack. I added a bead of wire around the stack near the top and the side braces to simulate the stack extension. If I'm correct, those who model a Mike without the stack extension may find the Key models have a too-tall stack. You ever looked into this, Ray?

Actually, I did notice some differences between stacks when writing the first H-6e installment. It might be mostly an optical illusion due to the photo angles, but it does sort of look like the stacks on most of the classes varied in height between 1"-4". Here's what I'm seeing:



Builder's photo. The top of the stack is within 1"-2" of being even with the top of the sand dome.



This stack seems to be about the same height as stock.



As does this one.



Possibly the angle, but this stack looks to be an inch or two taller than stock.



As does this one.



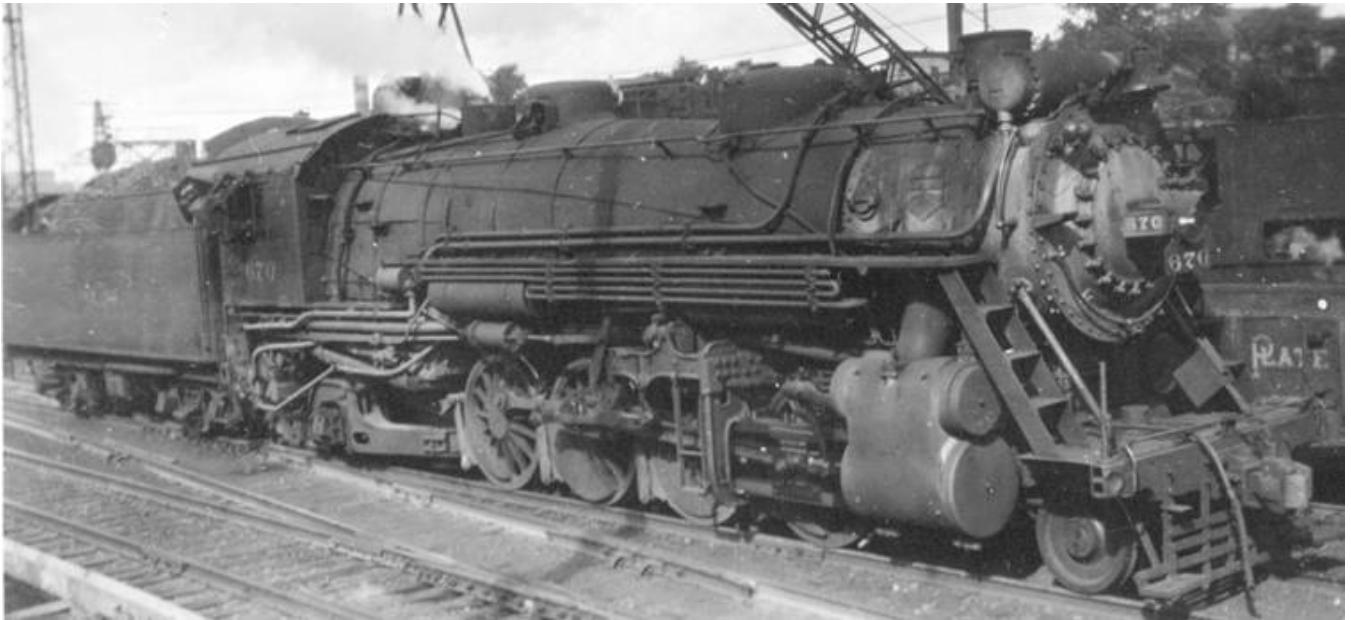
Obviously, the stacks with extensions stick way up in the air.

Without original builder's plans for each of the Mike classes, it's pretty hard to tell exactly tall each stack should be. It's up to us living in the 21st Century to figure out what feels right for our own modeling needs. Of course, fixing the problem might not be all that simple either, since there are so few stacks on the market. One of these days, I'll have to break down and buy one of each of Greenway's, Pre Scale's and Bowser's stacks, just to see what they're useful for.

And I like the wire bead idea for the stack extension better than my suggestion of half round. I must have been having an O scale moment, because nobody makes styrene half round small enough for HO!

H-6f class: NKP 662-671, built 1924

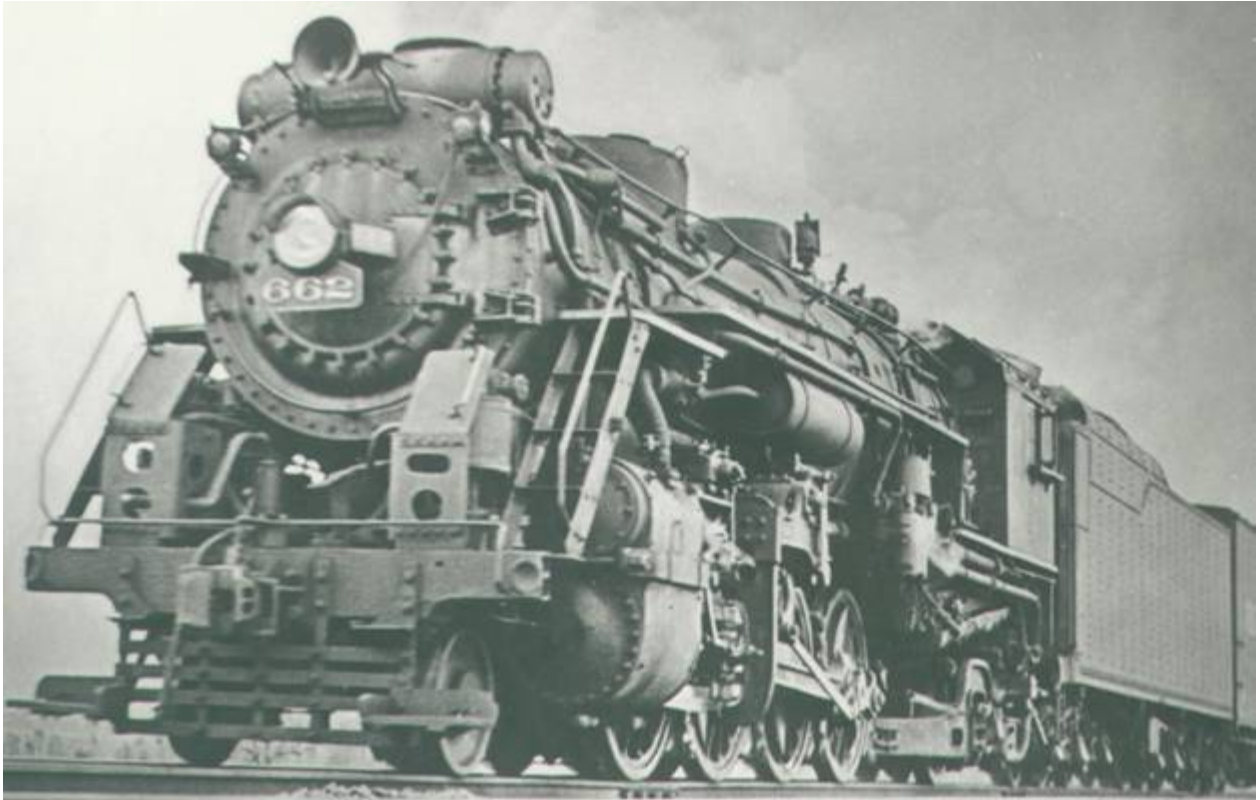
The last of the NKP Mikados ordered new, the H-6f class was essentially a continuation of the first half of the H-6e class. As built, they were virtually identical, delivered with Elesco feedwater heaters, booster engines, and USRA-style short tender. The engines DID have the larger cab factory-installed, and weighed some 500 pounds less than the H-6e's.



NKP 670. This photo was probably taken just pre-Depression, as the engine is completely stock but well-used. Note the lack of cylinder braces, which dates this photo to a fairly early period (maybe even 1925-26).



NKP 669, Conneaut, 8/24/33. Another view of an as-built H-6f. Note that both of the above engines have significantly more piping on the fireman's side than on the engineer's, and that the engines do not have a third air tank on the pilot deck. By 1929, some of the engines started receiving minor upgrading, mostly by moving the air pumps to the pilot deck (to improve the engine's balance) and the addition of blow-down mufflers and Barco low-water alarms.



NKP 662, Bellevue, 1940. The engine has had the air pumps moved to the pilot, and cylinder braces added, but isn't much changed from its as-delivered appearance.



NKP 668, Conneaut, 1939. The engineer's side of the H-6f, once the air pumps were moved to the pilot deck.

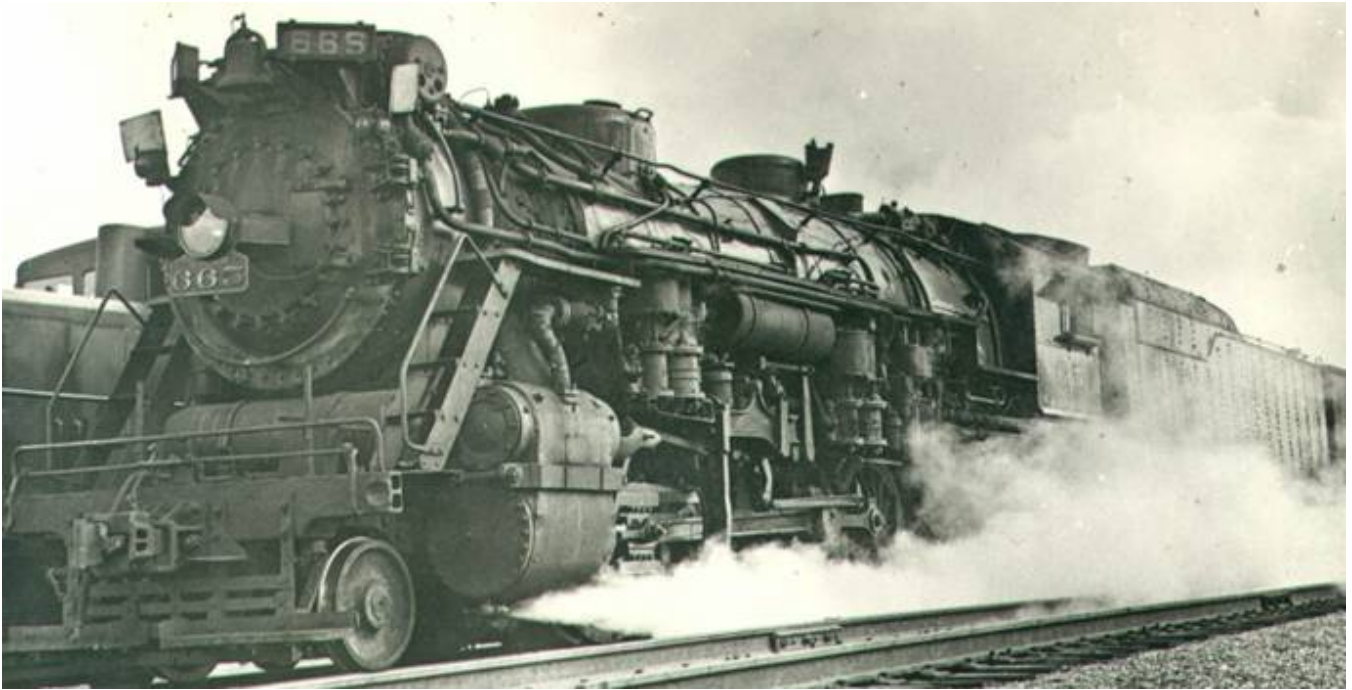


NKP 669, date and location unknown (but probably pre-1936 billboard reefer ban). I've included this photo to illustrate the only NKP steam engine snowplow pilot I've run across:



The thing's huge, and requires a completely new coupler and draft gear box! I've got other photos of 669 before it was wrecked in 1949, and the engine had a more conventional sheet steel pilot.

By the end of WWII, with the downturn of traffic, the NKP sold four of the class to the NdeM. The remaining engines all had flying numberboards added. During WWII, NKP 662 had multiple-bearing crossheads added, but seems to be the only engine of the class so equipped. NKP 668 was wrecked and scrapped in 1946, and NKP 669 in 1949, bringing the class down to four engines.



NKP 665, Bloomington, 1952 (“mighty 90” is hiding just to the left). NKP 663, 665, 667 and 669 never had their air pumps moved to the pilot decks. Being two of the three longest-lived of the class, this could be considered the class’ “normal” look!



A great shot (cropped up; sorry!) of H-6f’s 669 and 667, in Indiana just after WWII. Neither engine has had their air pumps moved (and never will), but they still have minor variations nonetheless. 669 has flying number boards, a standard four slat pilot, and its original tender (with coal bunker extensions). 667 doesn’t have the new numberboards, has a sheet steel pilot, and has a larger 13RA tender. Both engines have different steam turret piping arrangements as well. Oh, and the grabs above the cab windows each have different numbers of braces.

By 1953 or so, the H-6f class had undergone more changes. The Elesco feedwater heaters and booster engines had been removed, and stack extensions and Mars lights had been added. Relegated to mostly local switching duties and transfer runs, the class would look this way until the end of steam.



NKP 662, Madison, 1954. The engine has had the pilot truck whitewashed to check for cracks.



NKP 662, Vermillion, OH, 1956. A great shot of the business end of a late in life H-6f.



NKP 663, Delphos, 1953.



NKP 665. Undated, but definitely near the end of the engine's career.

This small ten engine class went through the same number of changes that the rest of the NKP's Mikes underwent, making tracking their changes difficult at times. Based on the 65 photos that I have of the class, here's a quick reference to which major appliances were added to which engines:

- Pilot air pumps: 662, 664, 666, 668, 670, 671.
- Sheet steel pilot: 665, 667, 669.
- Multiple-bearing crossheads: 662.
- Flying numberboards: 662, 663, 665, 667, 669.
- Stack extension: 662, 663, 665.
- Mar's Light: 662, 663, 665.

The engines only lasted as a whole class until 1946. After that, sales and wrecks quickly whittled down the class:

Sold to NdeM 1946: 664, 666, 670, 671.

Wrecked & scrapped 1946: 668.

Wrecked and scrapped 1949: 669.

Scrapped 1955: 667.

Scrapped 1956: 663.

Scrapped 1961-1962: 662, 665.

Final note: there were TWO NKP 671s on the roster:



This is also NKP 671, an ex-Wheeling M-1 class Mikado. Since the first 671 went to Mexico in 1946 and the Wheeling engines weren't renumbered until 1950, there was no conflict. We'll get to the M-1 class soon.

MODELING NOTES:

As with the H-6e class, these engines are difficult to model properly. Using the false valve gear hanger "veneer" technique I touched upon in the H-6e chapters, a fair compromise could be reached. If you go that route, just about any USRA light Mikado will do as an acceptable starting point. One thing making this conversion slightly easier is the fact that the H-6f's usually had the 22RA tenders attached to them.

H-6o class: NKP 586-600, built 1918

Built in 1918 by the USRA, and assigned to the New York Central System, these 15 engines were assigned to their Lake Erie & Western subsidiary. These were the newest and most powerful engines the LE&W had, and they were used everywhere on the system (at least, everywhere that the bridges would support them).

When the NKP absorbed the LE&W in 1922, they gained a whole new class of H-6 Mikados. The LE&W engines were built by Baldwin, while the virtually-identical H-6a's were built by Alco. Since the Baldwin engines were 1200 pounds lighter or so and made by a different manufacturer, the LE&W engines got their own class designation instead of being lumped in with the rest of the H-6a's. By the time the H-6o's joined the roster, the NKP had the more powerful H-6d, e and f classes on line, rendering the H-6o's obsolescent. While originally used as mainline freight engines, the H-6o's were gradually pushed back to secondary jobs, replacing 2-8-0s.



NKP 595, Bellevue, 9/26/30. A completely stock engine as received by the NKP from the LE&W. The engine still has its original, unmodified tender, USRA pilot, headlight and bell bracket. Note the ladder attached to the valve gear hanger, something that disappeared from the H-6a and o classes sometime in the late 1930s. Also note that the generator had been mounted sideways, and the bell has an anti-rotation bar, both common NYC practices. The engine hasn't yet had cylinder braces added.



NKP 597, St Mary's, OH, date unknown. This photo was probably taken in the 1935-1940 period, and still shows a virtually stock H-6o. The only NKP modifications made have been a new headlight, muffler and blow-down, and a coal space extension added to the tender.



NKP 593, Buffalo, 8/10/37. This engine has undergone a few more changes. It (and the rest of the class) now has cylinder braces, and has lost the bell's anti-rotation bar. Quite a few of the engines in this class, due to their light duty assignments, had passenger service air & signal lines added, so they could pinch hit for the passenger engines when need be (some of the H-5's also had air & signal lines added, mostly for service in Chicago and Buffalo).

By 1940, these engines started seeing the wide array of changes that the rest of the H-6 engines received. Due to their fabricated trailing truck, they never had booster engines added, but five engines did have a second air pump added, with the pumps moved to the pilot deck. These engines were also modernized with a Worthington feedwater heater of a different type than that added to the rest of the H-6 fleet. Several engines had standard four slat pilots added, and at least one engine (599) had multiple-bearing crossheads added.



NKP 587, Delphos, OH, 1947. One of the only slightly changed H-6o engines, it has received a muffler, blow-down, cylinder braces and a new bell bracket, and has lost the valve gear hanger ladder. The engine is now equipped with a 16RC tender, meaning that it's assigned to long-distance service, something relatively rare for an H-6o.



NKP 596, Crandall, IL, 1943. The engineer's side of a "typical" H-6o.



NKP 599, Delphos, date unknown. This is how the four engines which had their air pumps moved to the pilot deck looked before the addition of the Worthington feedwater heaters. Note that a four-slat pilot has been added, as well as multiple-bearing crossheads.



NKP 586, Madison, IL, 1938. This how the H-6o's looked with both the deck mounted air pumps and the feedwater heater added.

By the end of WWII and the downturn in traffic, the NKP sold off or scrapped dozens of engines. Due to the fact that the NKP really had no need for unmodified USRA light Mikados by that time, the H-6o class was gutted. Twelve of the engines were sold to the NdeM in 1945 and 1946, leaving only the 587 and 599 on the roster (590 had been scrapped in 1944).



NKP 599, Frankfort, 7/1948. Looking like any other early H-6 class on the roster, 599 now has multiple-bearing crossheads, flying number boards, an extended-range tender (I think it's one of the three elusive 16RB's), four slat pilot, and pilot pumps. The engine was also an early recipient of the Mars light. The engine still has its original USRA bell mount, a very unusually combination with the flying number boards.



NKP 587, Broad Ripple Park, 1967. Although now a display engine, this photo illustrates what the 587 MOSTLY looked like at the end of her career. The engine had a four-slat pilot and flying number boards added sometime between 1947 and 1955. However....the engine is missing its cylinder braces, Mars light (you can still see the mounting holes for the Mars light bracket today), and the tender's wrong (it had a 16RA when laid up in Frankfort. It was swapped with 639 in 1954, which was still in service, and received a 10RC in return. Nothing's

turned up showing exactly when or where the engine received the 22RA tender from NKP 611, but it was probably added to give 587 a beefier appearance while on display. I have ZERO in-service photos of an H-6o with a 22RA tender).

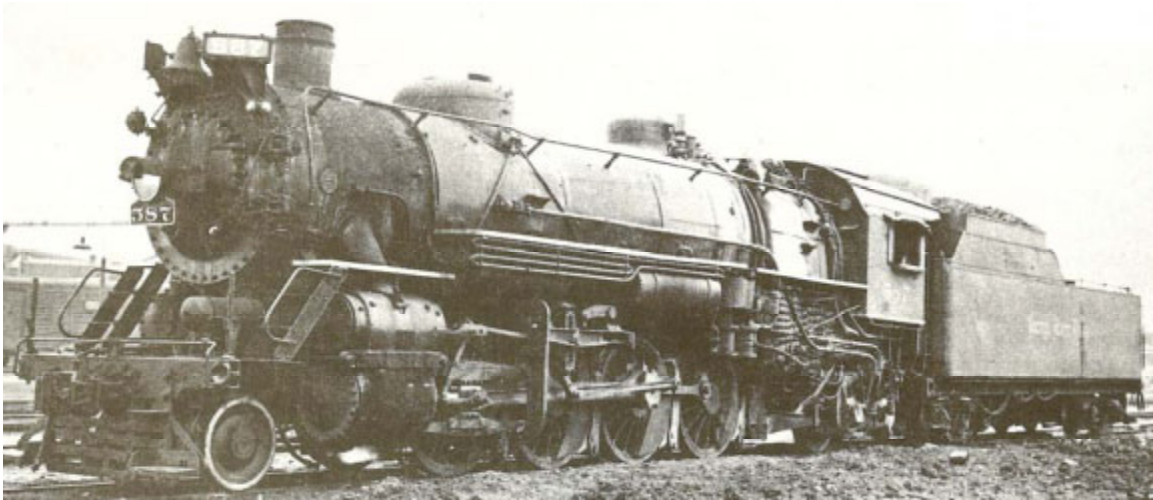
EDIT: according to an Email from Don Daily, the 587 did at one time in her service life have a 22RA tender:

“According to a May 1950 Book 86, ‘Diagram Book of NKP Locomotives’, the 587 & 599 both had 22RA tenders on March 22, 1950. Some time between then and October 1952 both the 587 & 599 received smaller tenders equipped with steam heat lines so they could be used in passenger service. The present tender on the 587 was then put on the 587 sometime before it was donated to Indianapolis.”

If 587 and 599 ever did run with a 22RA tender, it was for a VERY short period of time:



NKP 587, Delphos, OH, 1947.



NKP 587, Peoria, 2/18/51.

In four years the engine has taken on a completely different look, with new pilot, stack extension, flying number boards, and minor piping changes. So it IS possible that the engine, for a very specific period of time, did look like it does today. But I'm not going to suggest modeling the H-6o's with 22RA tenders until I see a photograph.

And I don't mean one from a dead line!



NKP 599, Frankfort, 1954. The engine is sitting in the weeds at the far western end of the yard, next to the Swift soybean plant. That's where all NKP steam went to die in Indiana, and where a lot of tender swapping took place.

Here's a quick reference for the H-6o class, showing which engines received various modifications:

Pilot pumps & shields: 586, 592, 594, 598, 599.
Worthington feedwater heater: 586, 592, 594, 598.
Four-slat pilot: 587, 589, 591, 592, 596, 598, 599.
Passenger steam & signal lines: 587, 588, 589, 591, 593, 597.
Mar's light: 587, 599.
Stack extension: 587, 599.
Flying numberboards: 586, 599.
Multiple-bearing crossheads: 599.
Non-USRA style bell bracket: 587.

Sold 1945/1946 to NdeM: all, except as noted below.

Scrapped 1944: 590.

Scrapped 1953: 599.

Preserved 1955: 587.

MODELING NOTES:

Along with the H-6a class, the H-6o is the easiest to model. Easier, in fact, since most engines never received such appliances as the flying number boards, multi-bearing crossheads, or Mars light. But if you're modeling post-1945, the only truly easy engine of this class to model is 587. But remember: don't just rush off, photograph her as she looks now, and crank out a model to run. It'll ONLY be correct for a post-1984, post-steam, and indeed post-NKP layout! The engine is mostly correct for her in-service appearance, but the big tender definitely dates her to either a VERY narrow steam-era window, or post-steam excursion service. Modeling 587 with either a 10RC or 16RA tender would probably be a better option (and a 10Rx tender comes with every USRA light Mike on the market!).

NKP 587 is fairly easy to model, since she never received front-mount air pumps, feedwater heater, or a Mar's light. Basically, all you'd need to do is change the front headlight, class lights, bell bracket, and add the flying number boards (installed in 1948 on 587). You'll need to add Precision Scale smokebox front hinges, a reserve air tank on the pilot deck, and change the pilot to a NKP straight-slat design (either old Arbour or HOBBYLINE. Arbour parts are available from Bowser). You'll have to scratchbuild the five sided NKP front number board.



NKP 587, Monticello, IL, 5/26/1996

Towards the rear of the engine, you'll need to change the cab, since nobody but brass manufacturers have ever gotten the USRA roof contour right. Greenway Products makes a one-piece brass USRA cab that's correct. The engine will need a muffler and blow-down pipe (make the lower exhaust shroud from a cut down Scale Scenics orange traffic cone!), a new turbo generator on an angle mount, a correct NKP shielded whistle (available from Bowser), a pop valve shield, and some extra piping around the backhead.



587's muffler



587's fireman's side boiler rear piping



587's engineer's side boiler rear piping



587 with 12Rx tender



587 with 16RC tender

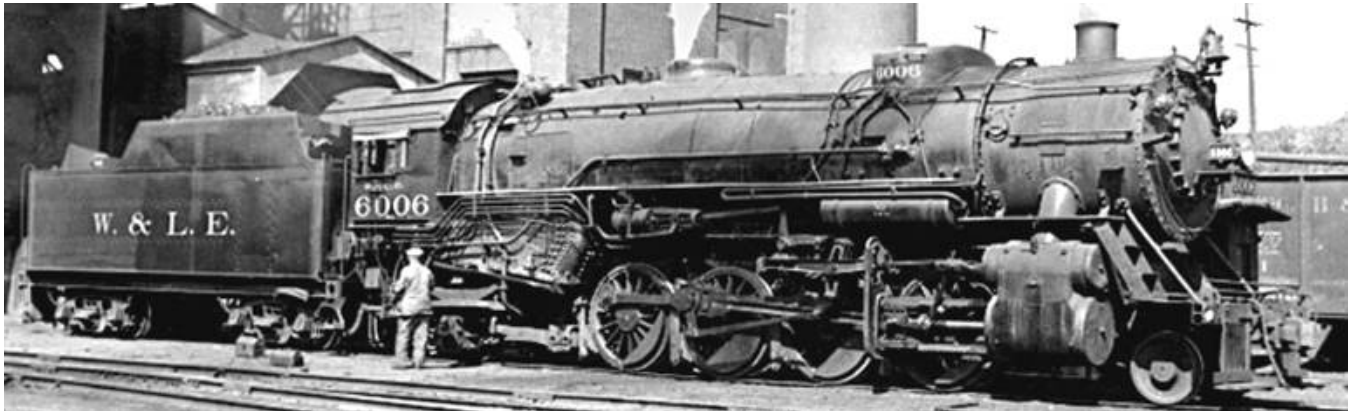


587 with 22RA tender

If you want to model NKP 599 late in life, you'll be starting with the Cary boiler/Bowser L-1a chassis combination. And if you want to model one of the engines with the feedwater heater system, Precision Scale makes a detailing kit which includes the correctly shaped superheated steam line for the fireman's side of the boiler.

M-1 class: NKP 671-690, built 1918

Originally W&LE 6001-6020, these engines were acquired by the Nickel Plate during their 1949 takeover of the Wheeling & Lake Erie. Assigned to the Wheeling by the USRA, they were delivered in August and October of 1918, along with the Wheeling's ten USRA-assigned 2-6-6-2s. They were the most powerful mainline freight engines the Wheeling had until the delivery of their Berkshires.



W&LE 6006, Rook, PA, 8/1937. A virtually stock engine, this engine has only had a few modifications made to her in the past 19 years. It now has a footboard pilot (ubiquitous on Wheeling engines), a third sanding line, a new headlight, and has had the generator moved to the engineer's side of the boiler. The stock USRA tender has had a large backup headlight added to the top deck, along with a slight increase in the coal bunker space (note the seam near the top of the coal bunker).



W&LE 6008, Rook, PA, 11/5/48. The Wheeling didn't really modify their engines much, unlike the Nickel Plate. Ten years after the first photo, W&LE 6008 still looks like a stock USRA engine. The engine's tender, on the other hand, HAS been drastically changed. When received from the USRA, the Wheeling almost immediately swapped the long tenders of the 2-6-6-2s with ten short tenders from the 2-8-2s, to increase their ranges. Some time in the 1920s, the Wheeling modified the tenders to increase both their water and coal capacities, as clearly shown by all the rivet lines in the above tender. Somewhere along the line, the Wheeling either bought or built ten more USRA long-style tenders, and modified them as well. When the Nickel Plate added the M-1's to the roster, all twenty had the same basic enlarged tenders.

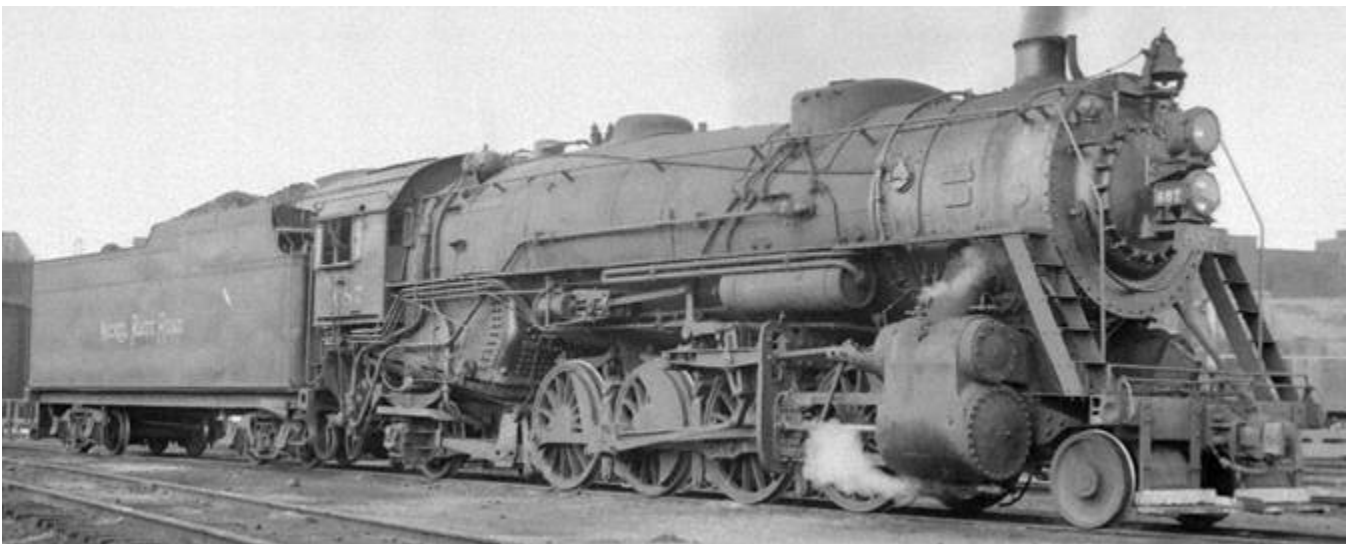


NKP 6007, Brewster, 8/13/50. When the NKP absorbed the Wheeling, they quickly renamed the Wheeling's engines, but didn't renumber them until between December, 1950 and April, 1951. So for a time, the Nickel Plate had four digit road numbers on some of their engines. 6007 is completely unchanged from her Wheeling days, but has a new name on her tender. Note all the patches on the side of the tender.

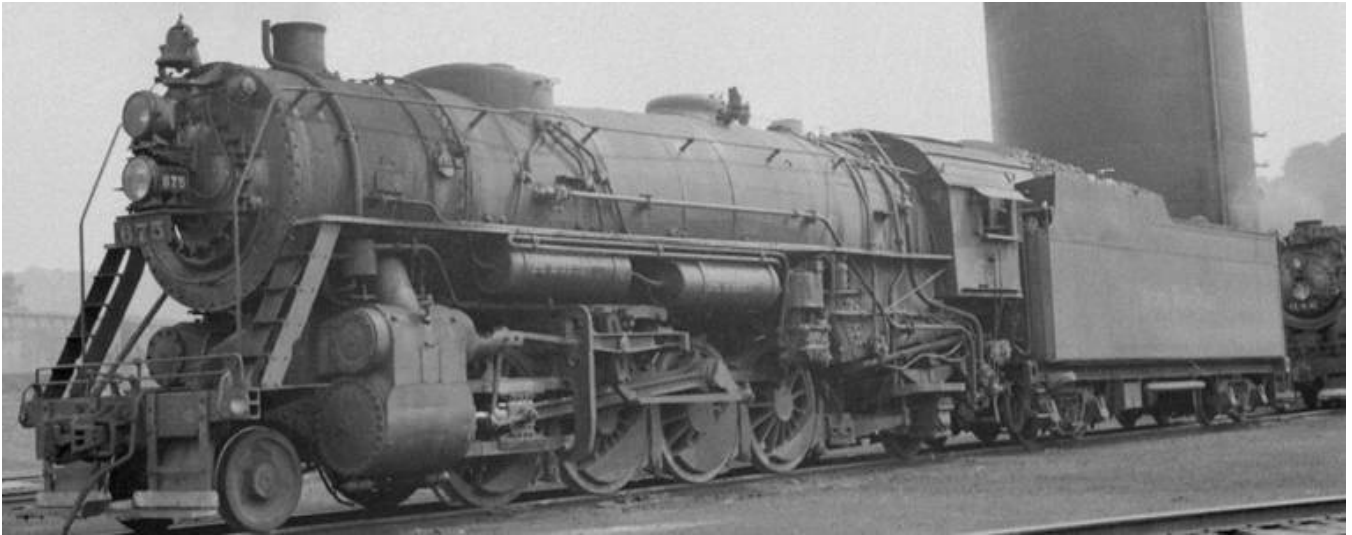
Once the Nickel Plate acquired these engines, they really didn't do much with them. By the end of 1951 the entire class was renamed and renumbered, and Mars lights were being added to all the engines. Besides that, the Nickel Plate just ran them until their flue time ran out.



NKP 683, Huron, 1954. This late in life M-1 shows how the class looked for most of their lives with the Nickel Plate, and shows off the gigantic tenders well. Note that the official initials of the NKP ("NYC&STL, W&LE Lessor") isn't stenciled onto the tender in the place designated by the lettering diagram (which says that it should be centered along the upper coal bunker side), but is much lower.



NKP 687, date and location unknown. This view highlights the front end of these engines, showing the Mars light bracket and the pilot. Note that the pilot steps are painted white for visibility (the tender footboards were also white), and that there is a protective plate bolted behind the support brackets. This photo also illustrates the one major change that the NKP made to these engines. Note the small pipe extending in front of the stack. As far as I can tell, this is an auxiliary exhaust for the super heaters.



NKP 675, Dillonvale, OH, 1955. This photo shows the auxiliary exhaust pipe more clearly. The small can below the running board, near where the exhaust ducks under the boiler, is not attached to the exhaust, but is the air line's oil separator. Remember: when modeling steam it does help to know what everything is, but it isn't necessary, so long as you model everything faithfully! When I was first modeling steam I had no clue as to what many of the parts were; I just added them!

The M-1 class didn't exist long in NKP service, with most engines being scrapped by the end of 1955. Only one engine survived to the end of steam on the Wheeling Division.

Scrapped 1954: 679, 683, 684, 686.

Scrapped 1955: 671, 672, 673, 676, 677, 680, 681, 682, 687, 688, 689.

Scrapped 1956: 674, 675, 685, 690.

Scrapped 2/1958: 678.

MODELING NOTES:

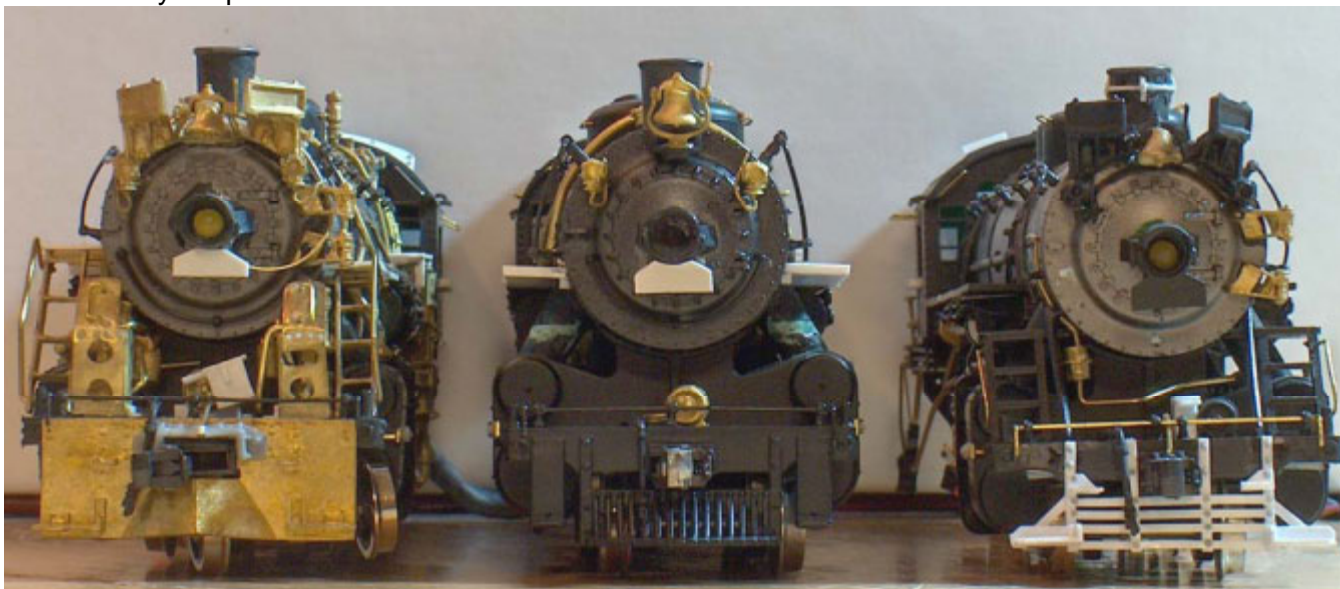
There are two routes available for modeling a USRA Heavy Mikado. You can either buy the BLI heavy, or create your own by adding a Cary Boiler to a Bowser USRA light chassis, and cobble together the long valve gear hanger (available on other Bowser kits).

For Wheeling modelers, these engines can be easy to model. If you're modeling the 1930s, just take the BLI Wheeling-decorated Mikes out of the box and run them. If you're modeling a later Wheeling period or the NKP years, you've got a few more challenges ahead of you.

Adding extra piping isn't all that big of a deal: just follow the prototype photos. For the auxiliary exhaust, just run a line from the stack to below the boiler, and hide it behind one of the air tanks. Changing the headlight and adding a Mars light isn't all that hard either, since Cal-Scale makes all the necessary parts. But the tender will give you fits. Thankfully, Bachmann sells the USRA long tender as an aftermarket part (their P/N 89831). Using this model as a starting point (just as the Wheeling did), cut off the top of the water bunker and the top lip of the coal space, and add .020" styrene (or whatever width matches the model's shell) to build up the bunkers. Add a .002" rivet overlay, replace the water bunker top, and you're done. If you're using the BLI engine with sound, just

move the PC boards to the new tender, mount them to the floor with .25" round nylon spacers, and drill out a series of holes in the tender floor for the sound to come out. The tender is a challenging project, but shouldn't be all that difficult (just tedious, with all the rivets you'll have to emboss in straight lines!)

I hope you've enjoyed this quick look into the ten classes of Nickel Plate Mikados. As a 1940s-era NKP steam modeler, I've amassed a large collection of data on these engines, and find them to be much more fascinating than the more famous Berkshires. In fact, one of the reasons why I chose to model 1948/1949 was because on the chunk of NKP that I'm modeling (the Peoria Division) Mikes held down all mainline freight assignments until diesels started bumping Berks off the mainlines in 1950. Modeling these engines correctly can be a challenge, but it's really not all that hard to do once you start the first one. Over the past two years I've built three, and each gets successively simpler to do!



NKP 624, 602 and 587, all ready for the paint shop. Three down, eight to go!

Regards,

Ray Breyer