

= Phantom 's Revenge =

Phantom 's Revenge (formerly known as Steel Phantom) is a steel roller coaster at Kennywood . When it opened in 1991 , it was the fastest roller coaster and had the longest drop of any roller coaster in the world . The ride was originally manufactured by Arrow Dynamics . After the 2000 season , D.H. Morgan Manufacturing was brought in to renovate the ride , most notably to remove the four inversions . Unlike most roller coasters , the ride 's second drop through Thunderbolt 's structure is longer than its first drop .

The ride has been ranked in the Golden Ticket Awards every year since 2000 . It was ranked in the top 10 every year from 2002 - 2011 . In addition , it has been ranked in the top 25 of Mitch Hawker 's Best Steel Roller Coaster Poll every year since 2001 and in the top 5 of the National Amusement Park Historical Association Favorite Steel Roller Coaster poll every year except 2008 .

= = History = =

Henry Henniger , the president of Kennywood Entertainment Company , wanted a large steel coaster in the late 1980s . The park had only built wooden roller coasters in the past . The park also had a very tight layout and they were not sure how to fit it into the park . On July 27 , 1990 , Kennywood announced the name of their new roller coaster would be Steel Phantom and it would use the same station as Laser Loop , which it replaced . The ride opened on May 10 , 1991 as the fastest and steepest steel roller coaster in the world . The inversions were a vertical loop , a Boomerang , and a corkscrew . As a result of the inversions , riders experienced more @-@ than @-@ usual head banging . Shortly after its debut , a trim brake was added because the coaster was going faster than it should through the inversions and riders were experiencing pain in their necks .

In March 2000 , Kennywood announced that they would dismantle Steel Phantom . A replacement for Steel Phantom was not announced at the time . " Just about anything is on the table " said Kennywood spokeswoman , Mary Lou Rosemeyer . After the decision to remove Steel Phantom was announced , the park started receiving complaints and emails about the decision . Kennywood ultimately decided to keep the roller coaster but make modifications to it . After the ride closed on Labor Day weekend in 2000 , Steel Phantom underwent extensive changes by D. H. Morgan Manufacturing , most notably the removal of all of its inversions . According to Kennywood , this was done because of many riders ' complaints of how rough the coaster was on their heads and necks . The modified coaster reopened on May 19 , 2001 as the Phantom 's Revenge . The coaster only operated with one train in its first season . In 2002 , magnetic brakes were added to the ride so a second train could be used . Phantom 's Revenge now has a top speed of 85 mph (137 km / h) , putting it in a three @-@ way tie for 10th place of the world 's fastest steel coasters , along with Goliath at Six Flags Magic Mountain , and Titan at Six Flags Over Texas . Due to the modifications , both Morgan style and Arrow style track are used on the coaster .

= = Ride experience = =

The ride is considered to be a terrain roller coaster , meaning the ride experiences various elevation changes . Unlike most roller coasters , the ride 's second drop is longer than the first . It drops through Thunderbolt 's structure , which is located at the bottom of a hill in a ravine .

= = = Layout = = =

= = = Phantom 's Revenge = = =

After leaving the station , the train makes a slight turn to the right before climbing the 160 @-@ foot (49 m) chain lift hill . After ascending the lift hill , the train drops to the right , reaching a speed of 60 miles per hour (97 km / h) . Riders then enter a straightaway before climbing a second hill which

drops them 228 feet (69 m) under the Thunderbolt 's structure , reaching a top speed of 85 miles per hour (137 km / h) . The train then makes a 360 degree turn , passing back under the Thunderbolt 's structure . Next , the train circles around the Turtle ride before traveling back under the second drop through a bunny @-@ hop . Riders then make a turn to the left , passing under the ride 's brake run and entering a second bunny @-@ hop . The train then enters a 180 degree curve , going through the last bunny @-@ hop and entering the brake run . One cycle of the ride takes approximately 1 minute and 57 seconds .

== Steel Phantom ==

After leaving the station , the train made a slight turn to the right , climbing the 160 @-@ foot (49 m) chain lift hill . After ascending the lift hill , the ride went down a banked drop to the right . After a straight section , the ride went up a second hill that turned slightly to the right . The train then dropped 225 feet (69 m) through the Thunderbolt 's structure , reaching a top speed of 80 miles per hour (130 km / h) . The train then turned to the left , entering a pair of trim brakes before heading into a vertical loop . After the loop , the train immediately went into a Boomerang , an element which turned riders upside down twice . The train then made a right turn into a corkscrew , the fourth and final inversion . After this , riders went through a right turn that passed under the corkscrew . After this , the ride ascended into the brake run . One cycle of the ride took approximately 2 minutes and 15 seconds .

== Trains ==

Phantom 's Revenge operates with two trains . Each train has seven cars that seat two riders in two rows for a total of 28 riders per train . After the ride was renovated , the trains were also renovated . Steel Phantom 's chassis , that was built by Arrow remained but Morgan built new , aerodynamic fiberglass bodies . Morgan also replaced the over @-@ shoulder @-@ restraints with lap bars and seatbelts .

== Track ==

Phantom 's Revenge 's steel track is approximately 3 @, @ 200 feet (980 m) in length and the height of the lift is approximately 160 feet (49 m) . Before the renovation , the length was 3 @, @ 000 feet (910 m) and the lift remained unchanged . The track was originally manufactured by Arrow Dynamics and painted black with silver / grey rails and grey supports . After the renovation , D.H. Morgan Manufacturing replaced the majority of the track and it was painted green with black supports . The only Arrow Dynamics track that remains is the lift hill , the station and the brake run / transfer track .

== Comparison ==

== Awards and rankings ==

* At the time , the roller coaster was Steel Phantom .