

## NON-MACHINABLE SURCHARGE RATE STAMPS

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According to Section 133 in the United States Postal Service (USPS) Domestic Mail Manual for First-Class mail prices and fees, there is an additional fee charged for mail pieces that cannot be processed in the automated sorting machinery. This non-machinable surcharge is added per piece and applies to letter-size pieces that have one or more of the following characteristics:

1. Has an aspect ratio (length divided by height) of less than 1.3 or more than 2.5.
2. Is polybagged, polywrapped, enclosed in any plastic material, or has an exterior surface made of a material that is not paper. (Not applicable to windows in envelopes made of paper.)
3. Has clasps, strings, buttons, or similar closure devices.
4. Contains items such as pens, pencils, keys, or coins that cause the thickness of the mail piece to be uneven; or loose keys or coins or similar objects not affixed to the contents within the mail piece.
5. Is too rigid (does not bend easily when subjected to a transport belt tension of 40 pounds around an 11-inch diameter turn).
6. For pieces more than 4¼ inches high or 6 inches long, the thickness is less than 0.009 inch.
7. Has a delivery address parallel to the shorter dimension of the mail piece.
8. Is a self-mailer (folded paper sheets) that is not prepared according to specified requirements.
9. Is a booklet (bound paper sheets) that is not prepared according to specified requirements.

At the current rate, effective since 10 April 2016, this non-machinable surcharge is 21 cents for stamped letters weighing not over one ounce. Added to the one-ounce first-class letter rate of 47 cents, the surcharge makes the total cost for mailing such a piece 68 cents. This also happens (not coincidentally) to be the cost for mailing a regular two-ounce first-class letter.

Beginning in 2010, the USPS has issued a series of stamps that meet this non-machinable total fee for a one-ounce letter. One of the reasons that these stamps became necessary is that greeting card manufacturers began producing cards in square shapes instead of the traditional rectangular shapes that were historically common. This shape violated rule number one in the above characteristic listing.

I am not sure why these square-shaped cards have become so popular, especially since you have to pay more to send them. Perhaps it is because they were fashionable for wedding announcements. And now they are available for Christmas greetings and every other holiday.

**64c.** The first stamp design in this series was released on 17 May 2010, at the National Stationery Show in New York City. At that time, the one-ounce first-class letter rate was 44 cents and the surcharge was 20 cents. This rate had been in effect since 11 May 2009.

The 64c stamp pictured a Monarch Butterfly and was intended primarily for use on the square greeting card envelopes; thus the release at the Stationery show.

As part of this arrangement, participating card manufacturers were to print a silhouette image of a butterfly on their envelopes, making it easy for customers to understand they needed the new butterfly stamp, or equivalent postage, to mail the card.



*Danaus plexippus*  
USA, 2010, Sc#4462

Envelope Indicium  
butterfly silhouette

The USPS chose the butterfly as a symbol for use on all future stamps for non-machinable letters. The USPS planned to issue a new butterfly design for this stamp whenever postal prices increased.

The Greeting Card Association recommended to its members that all square envelopes and those that fell within the non-machinable letter category carry the Butterfly stamp icon in the upper right-hand corner, thus making it easier for mailers to determine the postage for these types of greeting cards and invitations.

The Butterfly stamp icon carries text that reads: "Butterfly Stamp or Equivalent Postage Required." This implies that mailers should use either the Butterfly stamp, or postage totaling its value.

The dimensions of the Butterfly stamp are 1¼"×1¼" and the Butterfly stamp icon measures 1½"×1½". This size differential allows the stamp to completely cover the icon. The USPS also specified that the icon should be placed 3/16" from the top and right edges of the envelope, thus allowing room for placement of the stamp.

So far, all five stamp images in this series have been created by artist Tom Engeman of Bethany Beach, Delaware. He created the designs on a computer using images of preserved butterflies as a starting point. The results are a highly stylized, simplified image of the species rather than an exact replica.

Graphic artist Derry Noyes, art director for the USPS stamp program, incorporated Engeman's artwork into the stamp design. She also served as the art director and the typographer for the project.

The 64c stamps were gravure printed by Avery Dennison. They produced an initial print run of 20 million stamps on pressure-sensitive self-adhesive paper. Colors used in the printing were cyan, magenta, yellow, black, cool gray, and orange. Plate numbers in the four corners of the 20-stamp panes include the letter "V" to identify Avery Dennison as the printer followed by six single digits, one for each print color. They are serpentine die cut 10½.

The adhesive used on the paper for these stamps is not water-soluble, which makes them almost impossible to remove from envelopes. Most collectors save the used stamps on piece, by trimming the excess paper close to the stamp without cutting into the stamp design.

The Monarch butterfly (*Danaus plexippus*) has appeared previously on several US stamps and dozens of stamps from other countries. Its first US appearance was on a 1987 stamp (Sc#2287) commemorating North American wildlife. In 1999, both the adult and larva were depicted on stamps from the "Insects and Spiders" sheet.

This butterfly has also made secondary appearances on the "1990s Celebrate the Century" sheet (Sc#3191) and the State Flag stamp for Ohio (Sc#4314).



*Danaus plexippus* (larva & adult)  
USA, 1999, Sc#3351j & k

The Monarch is one of the most common and well-known butterflies found in North America. Its larvae feed on milkweed, which impart poisonous characteristics in both larvae and adults and cause predators to avoid them.

The Monarch is notable for its annual migration from the US and southern Canada to Mexico and southern California, which covers thousands of miles. Though not currently listed on any endangered lists, it is threatened by loss of habitat.

**65c.** The second stamp in this series was issued in Baltimore, Maryland, on 20 January 2012. This stamp was necessary to pay the new first-class letter rate that rose to 45 cents on 22 January. The surcharge remained at 20 cents, so the new denomination increased to 65 cents. This amount also paid the first-class rate for two-ounce letters.

Tom Engeman and Derry Noyes again teamed up to produce the design, which shows a stylized Baltimore Checkerspot butterfly (*Euphydryas phaeton*).

The stamps were gravure printed by Avery Dennison with an initial print run of 15 million again on pressure-sensitive self-adhesive paper of the same type as before. The colors used were gray, black, and two shades of orange. The plate numbers include the letter "V" followed by four single digits, one for each color. The stamps are serpentine die cut 10½ in panes of 20. Again these stamps are not soakable.



*Euphydryas phaeton*  
USA, 2012, Sc#4603

The Baltimore Checkerspot butterfly previous appeared on a US stamp as one of the block of four in the Butterfly issue of 1977 (Sc#1713).

Like the Baltimore Oriole, the Baltimore Checkerspot is named after George Calvert, Lord Baltimore, who helped found the colony of Maryland, because the colors on its wings resemble those on Calvert's coat of arms.

Since 1973, the Baltimore Checkerspot has been the official insect of the state of Maryland. A medium-sized butterfly with a wing span of 1¾ to 2¾ inches, it ranges from southern Canada to Georgia, and may be found as far west as Nebraska. Its orange and white spots form a checkered pattern on its black wings. It is often found in wet meadows where its primary food plant, the turtlehead, grows.



*Euphydryas phaeton*  
USA, 1977, Sc#1713

**66c.** The third stamp in the non-machinable series was issued in Pine Mountain, Georgia on 23 January 2013. This stamp became necessary due to the first-class mail rate increase to 46 cents that took effect on 27 January. The surcharge continued to be 20 cents, so the combined rate increased to 66 cents. This was also the two-ounce rate.

The same design team was involved in creating this stamp as the two previous stamps. By this time, Engeman had moved to Frederick, Maryland. This stamp depicts a stylized view of a Spicebush Swallowtail butterfly (*Papilio troilus*).

The stamps were gravure printed by Avery Dennison with an initial print run of 80 million stamps, a significant increase over the two previous issues. The printer used pressure-sensitive, self-adhesive paper of the same type as before.

The colors used were teal, cool gray, yellow, orange, green, powder blue, and black. The plate numbers on each corner of the pane include the letter "V" followed by seven single digits, one for each color. The stamps are serpentine die cut 10% in panes of 20. Again these stamps are not soakable. A total of 2,500 each die cut and imperforate uncut press sheets of 200 were also sold.



*Papilio troilus*  
USA, 2013, Sc#4736

The Spicebush Swallowtail has not appeared on any previous US stamps, but ten other countries have issued stamps with an image of this species including a 1998 souvenir sheet from Burkina Faso.

This species is found usually in the eastern US and southern Ontario, but occasionally strays as far as the American Midwest, Cuba, Manitoba, and Colorado. The only way one could end up in Burkina Faso is pinned to a tray.



*Papilio troilus* (larva)  
photo ©2006 Derek Ramsey

Both as larvae and adults, these butterflies hide from their predators in plain sight. They do this by mimicking other creatures or their surroundings. The caterpillar later morphs into what looks like a small green snake, with yellow and black markings that resemble a snake's eyes and a false forked tongue. The butterfly's chrysalis mimics a dried brown leaf, complete with veins.



*Papilio troilus*  
Burkina Faso, 1998, Sc#1112

**70c.** The fourth stamp in this series was issued in Kansas City, Missouri on 10 February 2014. The design change was to accommodate another first-class rate increase effective on 26 January 2014. This time not only did the one-ounce rate increase by 6.5 percent to 49 cents, but also the surcharge went up one penny to 21 cents. This made the combined non-machinable total exactly 70 cents.

The design team of Engeman and Noyes produced another stylized view, this time of the Great Spangled Fritillary butterfly (*Speyeria cybele*). The stamps were gravure printed by CCL Label, Inc. with an initial print run of 60 million stamps. CCL Label had acquired the Avery Dennison business during the previous year and assumed its printing contracts with the USPS.

These stamps used pressure-sensitive, self-adhesive paper of the same type as before. The colors used were brown, light brown, dark yellow, dark orange, orange, cool gray, and black. The plate numbers on each corner of the pane include the letter “C” followed by seven single digits, one for each color. The unsoakable stamps are serpentine die cut 10% in panes of 20. A total of 2,500 each die cut and imperforate uncut press sheets of 200 were also sold.

The Great Spangled Fritillary previously appeared on a 1991 US National Wildlife Federation cinderella stamp, but not on any regular issues. At least seven other countries have issued stamps depicting this species including our old friend Burkina Faso.

The Great Spangled Fritillary is named for the silvery spots found on the undersides of its wings. A large butterfly with a wingspan of 2¼ to 4 inches, it is found in all northern states and ranges as far south as northern Georgia in the east and central California in the west. It is rarely found in the central United States. Even though this butterfly is a common sight in much of the country, it can be puzzling to identify. Not only are females slightly darker than males, but individuals in eastern populations are more orange in color, while those in western populations are browner.

Although their markings may vary, all Great Spangled Fritillaries have one thing in common: A very close relationship with violets. Females lay their eggs on or near clumps of violets in August or September. When the eggs hatch, the larvae crawl to nearby violet plants where they hide among fallen leaves and begin to hibernate. When spring arrives, the caterpillars come out of hibernation and feed on fresh violet leaves before forming a chrysalis and transforming into adults.

Male Great Spangled Fritillaries emerge slightly before females do, starting in early summer. After mating in June or July, the males die. The females have long lives for butterflies, often surviving into October, when their frayed wings show their age. Strong and fast flyers, adult butterflies visit a wide range of flowers to feed on nectar. They are most often spotted in open habitat such as meadows, pastures, and prairies.

(71c). The latest stamp in our non-machinable series was issued on 1 June 2015, in Kansas City, Missouri. The design of this stamp differs from each of the previous members of this series in that it is non-denominated. Instead of a face value, the design includes an indicium “NON-MACHINEABLE SURCHARGE” to indicate its usage value. Like a regular Forever® stamp, this stamp will always be valid for the rate printed on it. The initial price and value was 71 cents. This amount paid the one-ounce first-class rate of 49 cents plus an increased surcharge amount of 22 cents that went into effect on 31 May 2015.

Engeman and Noyes again created a stylized design depicting the Eastern Tiger Swallowtail (*Papilio glaucus*). The stamps were offset printed with added microprint by Ashton-Potter (USA) Ltd. of Williamsville, New York, with an initial print run of 100 million stamps. This large quantity probably reflects the assumption that with the non-denominated indicium, there would be no need to replace the design for a long period.

This view was borne out in April 2016, when the USPS reduced the cost of a first-class stamp to 47 cents and the non-machinable surcharge to 21 cents.

These stamps used the same pressure-sensitive, self-adhesive paper. The colors used were black, cyan, magenta, yellow, and purple. The plate numbers on each corner of the pane include the letter “P” followed by five single digits, one for each color. The unsoakable stamps are serpentine die cut 10½ in panes of 20. A total of 250 die cut and 500 imperforate uncut press sheets of 200 were also sold.



*Speyeria cybele*  
USA, 2014, Sc#4859



*Speyeria cybele*  
Burkina Faso, 1998, Sc#1108e



*Papilio glaucus*  
USA, 2015, Sc#4999

The Tiger Swallowtail previously appeared on a US stamp in 1987 on the North American Wildlife sheet of 50 (Sc#2300). Because of its striking appearance and large size, it has also been a popular design for stamps from other countries having been depicted on more than 50 different issues of authorities from Angola to the United Nations.

Named for the black “tiger” stripes along the upper surfaces of its wings, the Eastern Tiger Swallowtail is easily spotted. Abundant from southern New England to Florida and west to the Great Plains and central Texas, this butterfly is a frequent visitor to gardens, woodlands, and riverbeds.

The specimen depicted on the non-machinable stamp is female identified by the conspicuous band of blue spots along the hindwing. The male, as shown on the wildlife stamp, does not have this blue band.

