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title: Custom Label Messages
description: Custom printed shipping labels are a must when you need to include reference information on the label. ShipEngine specializes in making the process simple with our APIs.

Custom Label Messages

Business owners and online sellers understand that custom printed shipping labels are a must when sending return packages. For example, some companies require that a Return Merchandise Authorization (RMA) number be printed on the shipping label. It streamlines their returns process and saves time.

Another reason to create custom printed shipping labels is for international shipments. Many countries have strict laws what type of goods and products can be imported into their country. Because of customs import restrictions, international shipments must include declarations about the contents of the package.

A little secret many power shippers know is that returns get processed and approved much quicker when you include helpful reference information on the shipping label. That's why
ShipEngine created a simple way to create custom printed shipping labels using our APIs. Below is an example label:

![custom printed shipping labels](custom-label-message.png)

Not all carriers support custom label messages. ShipEngine currently supports label messages for Stamps.com, FedEx, UPS, OnTrac, Access Worldwide, APC, Globegistics, IMEX, and RR Donnelley.

Sample Use Cases

There's many reasons why labels need to be customized such as:
* A purchase order number needs to be visible on the label
* The original order number needs to be printed on the label
* An invoice reference number must be included for the return
* The Return Merchandise Authorization (RMA) number must be on the label
* The package is being sent internationally and requires customs declarations

API Endpoint

To create a custom label with a message, you need to send an HTTP `PUT` request to `https://api.shipengine.com/v1/labels`. From now on we'll refer to this as the `/v1/labels` API endpoint to keep things short.

Headers

There's five HTTP headers you need to set in your request:

HTTP Header	Description
`Content-Type`	The Content-Type header specifies the media type of your API request. ShipEngine requires all requests to be in JSON format, so this header should always be set to `application/json`.
`API-Key`	For this header you'll need to pass your ShipEngine API key. This is how ShipEngine knows who you are. If you don't have an API key yet, read our Getting Started guide to learn how to create one.
`reference1`	customer reference number 1
`reference2`	invoice number 1
`reference3`	purchase order number 1

Example: Stamps.com (USPS)
In this example, you'll send a `POST` request to create the custom label.

Request
Copy and paste the following code into curl and tap **Enter**. Remember to put your own API key in the `_YOUR_API_KEY_` placeholder on line #3. If you don't have an API key yet, read our Getting Started guide to learn how to create one.

Notice at the bottom of the request there's three reference items to use in our example.

```
curl -iX POST https://api.shipengine.com/v1/labels \
-H 'Content-Type: application/json' \
-H 'API-Key: 8IVNvJqxnegUpaPUcKaXpn0wb4YQkkEInqGjrXaCpWc' \
-d '
{
  "label_format": "png",
  "label_layout": "4x6",
```

```
    "shipment": {
      "service_code": "usps_priority_mail",
      "ship_to": {
        "name": "Jane Doe",
        "phone": "",
        "company_name": "",
        "address_line1": "525 S Winchester Blvd",
        "city_locality": "San Jose",
        "state_province": "CA",
        "postal_code": "95128",
        "country_code": "US"
      },
      "ship_from": {
        "name": "John Doe",
        "phone": "555-555-5555",
        "company_name": "",
        "address_line1": "4009 Marathon Blvd",
        "address_line2": "",
        "city_locality": "Austin",
        "state_province": "TX",
        "postal_code": "78756",
        "country_code": "US",
      },
      "confirmation": "none",
      "insurance_provider": "none",
      "packages": [
        {
          "weight": {
            "value": 1.0,
            "unit": "ounce"
          }
        }
      ]
    }
}'
```

Response
The response returns a lot of information including links to download
the label.

```
HTTP/1.1 200 OK
Date: Mon, 02 Sep 2019 21:24:55 GMT
Content-Type: application/json; charset=utf-8
Content-Length: 1872
Connection: keep-alive
x-shipengine-requestid: 2ed31e37-bc81-4fac-81fb-1643408f6606

{
```

```
"label_id": "se-1183577",
"status": "completed",
"shipment_id": "se-3795476",
"ship_date": "2019-09-03T00:00:00Z",
"created_at": "2019-09-02T21:24:54.8549443Z",
"shipment_cost": {
  "currency": "usd",
  "amount": 7.99
},
"insurance_cost": {
  "currency": "usd",
  "amount": 0.0
},
"tracking_number": "9405511899223415376145",
"is_return_label": false,
"rma_number": null,
"is_international": false,
"batch_id": "",
"carrier_id": "se-108487",
"service_code": "usps_priority_mail",
"package_code": "package",
"voided": false,
"voided_at": null,
"label_format": "pdf",
"label_layout": "4x6",
"trackable": true,
"carrier_code": "stamps_com",
"tracking_status": "in_transit",
"label_download": {
  "pdf": "https://api.shipengine.com/v1/downloads/10/
d1mzQIGB9EGPcq6tRjm7xQ/label-1183577.pdf",
  "png": "https://api.shipengine.com/v1/downloads/10/
d1mzQIGB9EGPcq6tRjm7xQ/label-1183577.png",
  "zpl": "https://api.shipengine.com/v1/downloads/10/
d1mzQIGB9EGPcq6tRjm7xQ/label-1183577.zpl",
  "href": "https://api.shipengine.com/v1/downloads/10/
d1mzQIGB9EGPcq6tRjm7xQ/label-1183577.pdf"
},
"form_download": null,
"insurance_claim": null,
"packages": [
  {
    "package_code": "package",
    "weight": {
      "value": 1.00,
      "unit": "ounce"
    },
    "dimensions": {
      "unit": "inch",
      "length": 0.0,
```

```
          "width": 0.0,
          "height": 0.0
        },
        "insured_value": {
          "currency": "usd",
          "amount": 0.00
        },
        "tracking_number": "9405511899223415376145",
        "label_messages": {
          "reference1": "customer reference number 1",
          "reference2": "invoice number 1",
          "reference3": "purchase order number 1"
        },
        "external_package_id": null
      },
    }'
```

```
```

Below is the final version of the custom label with messages:

![custom printed shipping labels](example-custom-label.png)

Example: FedEx
The FedEx custom label messages has a unique set of values for the
three message fields. The Key values refer to the request and response
code objects. The FedEx Label Field values are where the messages
display on the label. In the following table are the FedEx mapping
definitions:

Key	FedEx Label Field	Character Limit
Reference 1	Customer Reference	35
Reference 2	Invoice Number	30
Reference 3	Purchase Order Number	30

Request
Copy and paste the following code into curl and tap **Enter**.
Remember to put your own API key in the `_YOUR_API_KEY_` placeholder
on line #3.

```
curl -iX POST https://api.shipengine.com/v1/labels \
-H 'Content-Type: application/json' \
-H 'API-Key: 8IVNvJqxnegUpaPUcKaXpn0wb4YQkkEInqGjrXaCpWc' \
-d '
{
  "shipment": {
    "service_code": "fedex_ground",
    "ship_to": {
      "name": "Jane Doe",
```

```
      "phone": "+1 (111) 111-1111",
      "company_name": "",
      "address_line1": "525 S Winchester Blvd",
      "city_locality": "San Jose",
      "state_province": "CA",
      "postal_code": "95128",
      "country_code": "US",
      "address_residential_indicator": "yes"
    },
    "ship_from": {
      "name": "John Doe",
      "phone": "555-555-5555",
      "company_name": "",
      "address_line1": "345 Chambers Street",
      "address_line2": "Suite 100",
      "city_locality": "4009 Marathon Blvd",
      "state_province": "TX",
      "postal_code": "78756",
      "country_code": "US",
      "address_residential_indicator": "no"
    },
      "packages": [
      {
        "weight": {
          "value": 1.0,
          "unit": "ounce"
        },
        "label_messages": {
            "reference1":"customer reference number 1",
            "reference2":"invoice number 1",
            "reference3":"purchase order number 1"
        }
      }
    ]
  }
}'
```

Response
The response returns the shipment information and three different
links to use when printing your label. Below the response is the
actual label for this example.

```
HTTP/1.1 200 OK
Date: Fri, 06 Sep 2019 21:42:57 GMT
Content-Type: application/json; charset=utf-8
Content-Length: 1842
Connection: keep-alive
```

x-shipengine-requestid: 9a899892-b3a9-481a-83fb-34dacb27a4f0

{
  "label_id": "se-1246920",
  "status": "completed",
  "shipment_id": "se-3908895",
  "ship_date": "2019-09-06T00:00:00Z",
  "created_at": "2019-09-06T21:42:56.7064865Z",
  "shipment_cost": {
    "currency": "usd",
    "amount": 13.70
  },
  "insurance_cost": {
    "currency": "usd",
    "amount": 0.0
  },
  "tracking_number": "789644838586",
  "is_return_label": false,
  "rma_number": null,
  "is_international": false,
  "batch_id": "",
  "carrier_id": "se-108563",
  "service_code": "fedex_ground",
  "package_code": "package",
  "voided": false,
  "voided_at": null,
  "label_format": "pdf",
  "label_layout": "4x6",
  "trackable": true,
  "carrier_code": "fedex",
  "tracking_status": "in_transit",
  "label_download": {
    "pdf": "https://api.shipengine.com/v1/downloads/10/
euHQnkvfFkm_tdWt9nfiOQ/label-1246920.pdf",
    "png": "https://api.shipengine.com/v1/downloads/10/
euHQnkvfFkm_tdWt9nfiOQ/label-1246920.png",
    "zpl": "https://api.shipengine.com/v1/downloads/10/
euHQnkvfFkm_tdWt9nfiOQ/label-1246920.zpl",
    "href": "https://api.shipengine.com/v1/downloads/10/
euHQnkvfFkm_tdWt9nfiOQ/label-1246920.pdf"
  },
  "form_download": null,
  "insurance_claim": null,
  "packages": [
    {
      "package_code": "package",
      "weight": {
        "value": 1.00,
        "unit": "ounce"
      },

```
      "dimensions": {
        "unit": "inch",
        "length": 0.0,
        "width": 0.0,
        "height": 0.0
      },
      "insured_value": {
        "currency": "usd",
        "amount": 0.00
      },
      "tracking_number": "789644838586",
      "label_messages": {
        "reference1": "customer reference number 1",
        "reference2": "invoice number 1",
        "reference3": "purchase order number 1"
      },
      "external_package_id": null
    }
  ]
```

Below is the label with messages. We've included numbers so you can
view the areas where the messages are printed on the shipping label:

![custom printed shipping label](fedex-custom-label-2019.png)
Example: OnTrac
The OnTrac custom label messages provides two reference fields:
reference 1 and reference 2. Reference 3 can be submitted, but OnTrac
ignores it. Below are the mapping values:

Key	OnTrac Label Field	Character Limit
Reference 1	Reference	25
Reference 2	Reference 2	25

Request
Copy and paste the following code into curl and tap **Enter**.
Remember to put your own API key in the `_YOUR_API_KEY_` placeholder
on line #3.

```
curl -iX POST https://api.shipengine.com/v1/labels \
-H 'Content-Type: application/json' \
-H 'API-Key: _YOUR_API_KEY_' \
-d '{
    "shipment": {
        "service_code": "sunrise_service",
        "ship_from": {
          "name": "John Doe",
          "company_name": "",
          "phone": "555-555-5555",
```

```
            "address_line1": "4009 Marathon Blvdt",
            "address_line2": null,
            "address_line3": null,
            "city_locality": "Austin",
            "state_province": "TX",
            "postal_code": "78756",
            "country_code": "US"
        },
        "ship_to": {
            "name": "Jane Doe",
            "company_name": null,
            "phone":"111-111-1111",
            "address_line1": "525 S Winchester Blvd",
            "address_line2": null,
            "address_line3": null,
            "city_locality": "San Jose",
            "state_province": "CA",
            "postal_code": "95128",
            "country_code": "US"
        },
        "confirmation": "None",
        "packages": [{
            "package_code": "package",
            "weight": {
                "value": 1,
                "unit": "ounce"
            },
            "label_messages": {
              "reference1": "Always be closing",
              "reference2": "Winter is here"
            }
        }]
    },
    "label_layout": "letter"
}'
```

Response
OnTrac labels only display messages in the reference 1 and reference 2
fields. Reference 3 can be submitted but are ignored by onTrac.
Messages longer than 25 characters may appear cut off by the label
margins. Below the response is the actual label for this example.

```
HTTP/2 400
date: Mon, 09 Sep 2019 17:37:40 GMT
content-type: application/json; charset=utf-8
content-length: 428
x-shipengine-requestid: 5323cad7-0a9f-4984-89e1-14076f21c674
```

```
{
  "request_id": "5323cad7-0a9f-4984-89e1-14076f21c674",
  "errors": [
    {
      "error_source": "shipengine",
      "error_type": "business_rules",
      "error_code": "unspecified",
      "message": "Connect a OnTrac account to your ShipEngine account
in order to make labels using the 'sunrise_service' service.",
      "field_name": "shipment._service_code",
      "field_value": "sunrise_service"
    }
  ]
```

```

INSERT GRAPHIC OF LABEL