

ANNEX TO THE REGULATION OF THE BANKING CLEARING HOUSE

INSTRUCTION MANUAL FOR STANDARDIZATION OF CHECKS IN THE NATIONAL BANKING SYSTEM

A. OBJETIVE

The present instruction booklet has as its objective to establish the norms for the use of magnetic characters, the areas of distribution of zones in the body of the checks and the measurements and composition of the form of the check, with the purpose of the modernization of the procedures of inter-banking clearing and of the clearing house of the national banking system.

B. RESPONSIBILITIES

The responsibility and fulfillment of the present norms will be in charge of the *Banco de Guatemala*, of the Banks of the National Financial System and of the Check Printing Houses.

C. GENERAL NORMS

1o. DESCRIPTION OF THE CHARACTERS. For the electronic processing of the checks of the banking system of Guatemala the magnetic character as a standard, known as the "E-13B" will be used. With this name a special series of numbers and symbols is known, used in the Magnetic Ink Character Recognition (MICR), "E" since it was the fifth design proposed, "13" due to the width of the character (0.013 of an inch) and "B" because it was the second revision of the design made by the American Banking Association.


2o. COMMON LANGUAGE. The specifications of this common language have been taken as the American Standard that was published by the department of automatization of THE AMERICAN BANKERS ASSOCIATION; also, the established standards of the Mexican Banking Association were taken into consideration, for the automatic check process.

3o. DESIGNATION AND DESCRIPTION. The E-13B will cover the 10 numeric characters and 4 symbols.


1) The numeric characters are digits composed of 0 to 9.

0 1 2 3 4 5 6 7 8 9


2) The 4 symbols will have special functions:

 Number 10 Symbol


This is the “transit” symbol; it will be used for the lecto-classifier (equipment that can automatically read and classify the checks) to indicate where a transit numeral begins and where it ends.

 Number 11 Symbol

This is the “import” symbol; it will be used for the lecto-classifier to indicate where the codification of the check import begins and where it ends.

 Number 12 Symbol

This is the “on-us” symbol; it will be used to indicate the limits of the fields that are reserved for internal use of every banking institution.

 Number 13 Symbol

This is the “guide” symbol; it is used for the field separation, in such a way that it makes visual reading easier.

4o. DIMENSIONS OF THE CHARACTERS AND SYMBOLS. The characters and symbols of the E-13B will have the following dimensions:

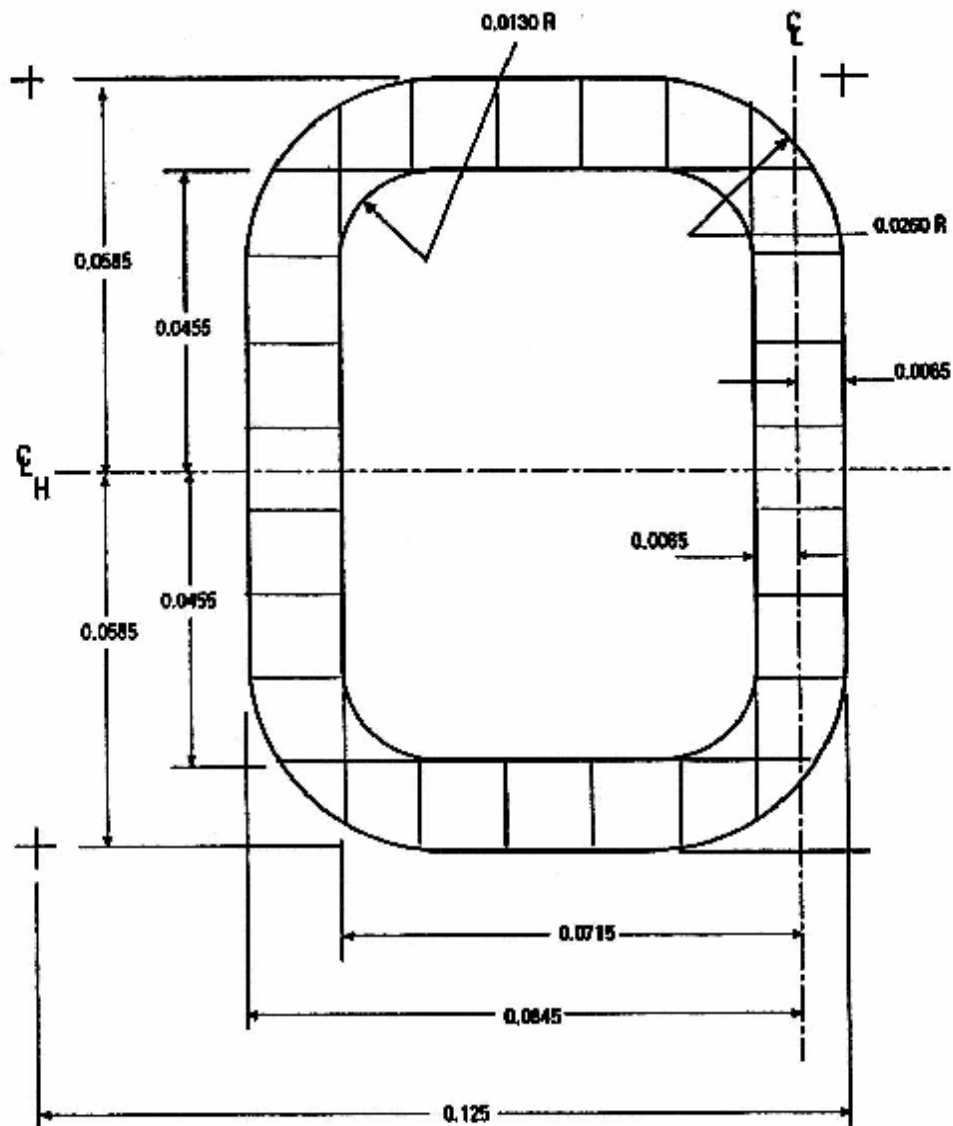
CHARACTERS AND SYMBOLS	IN INCHES	
	HEIGHT	WIDTH
1 and 2	0.117	0.052
3, 5 and 7	0.117	0.065
4, 6 and 9	0.117	0.078
0, 8 and the 4 symbols	0.117	0.091

The configuration of each character and its tolerance are presented as follows, and the following must be taken into consideration:

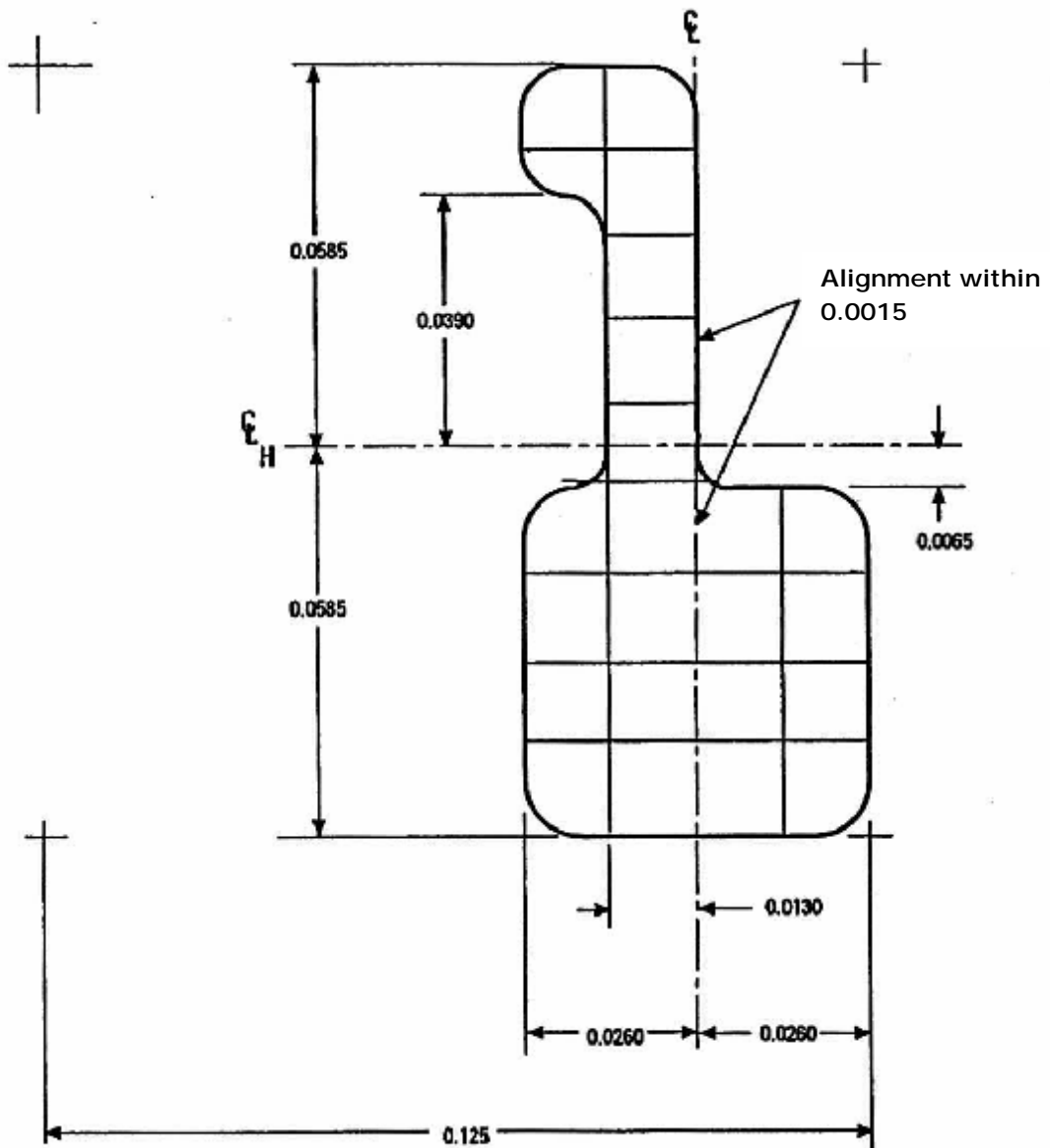
- The annotations in each drawing refer to the dimensions of the printed characters.
- The measurements are in inches.
- With the exception of zero, the radiuses of the corners are of 0.0065 of an inch.
- The minimum width of the horizontal bars is of 0.011 of an inch, which does not apply to the vertical bars.
- The tolerance is of +/- 0.0015 of an inch.
- They are not drawn on any scale.
- The symbols used are:

CL	Vertical Central Line
CLH	Horizontal Central Line
R	Curvature Radius

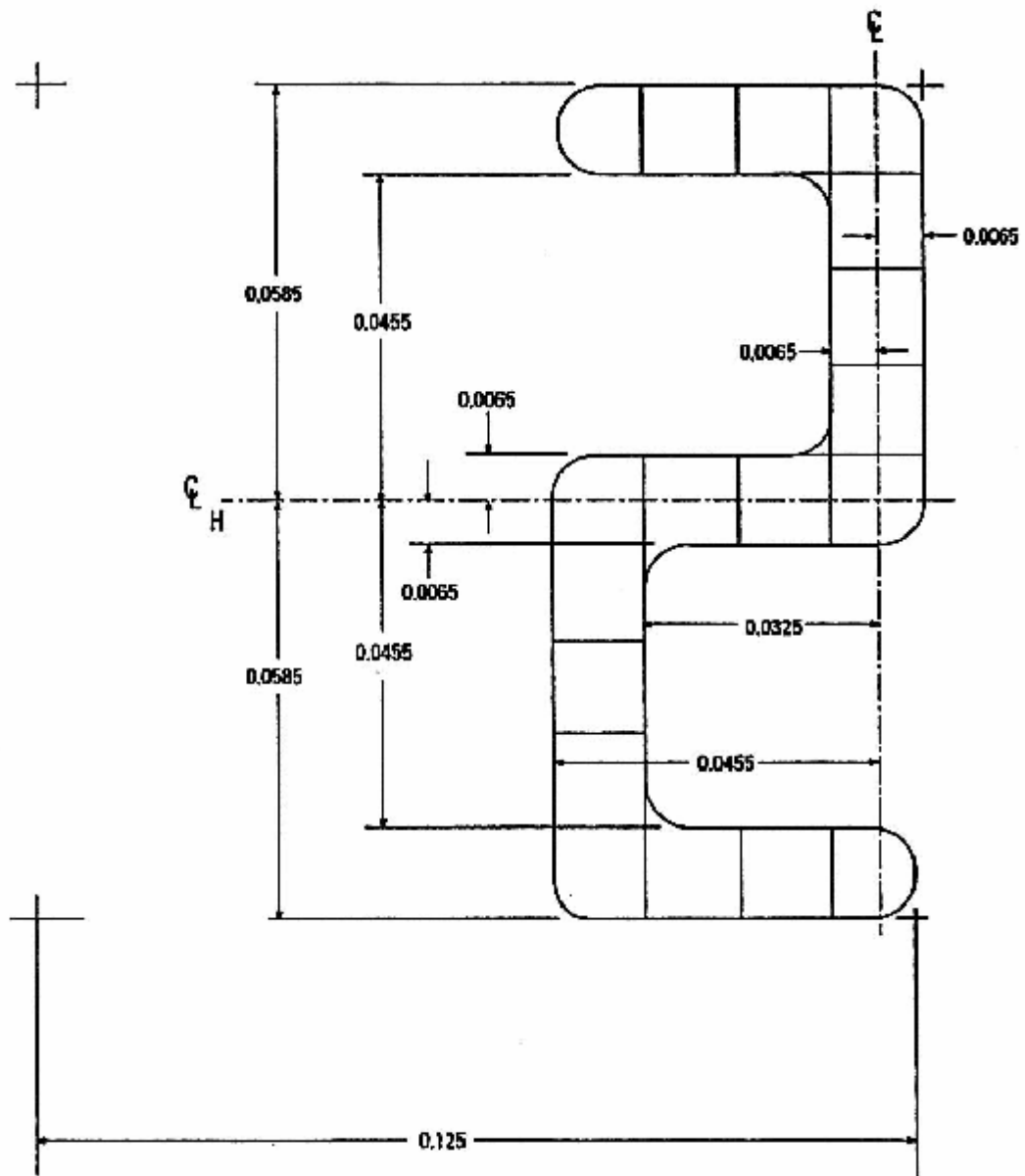
ZERO



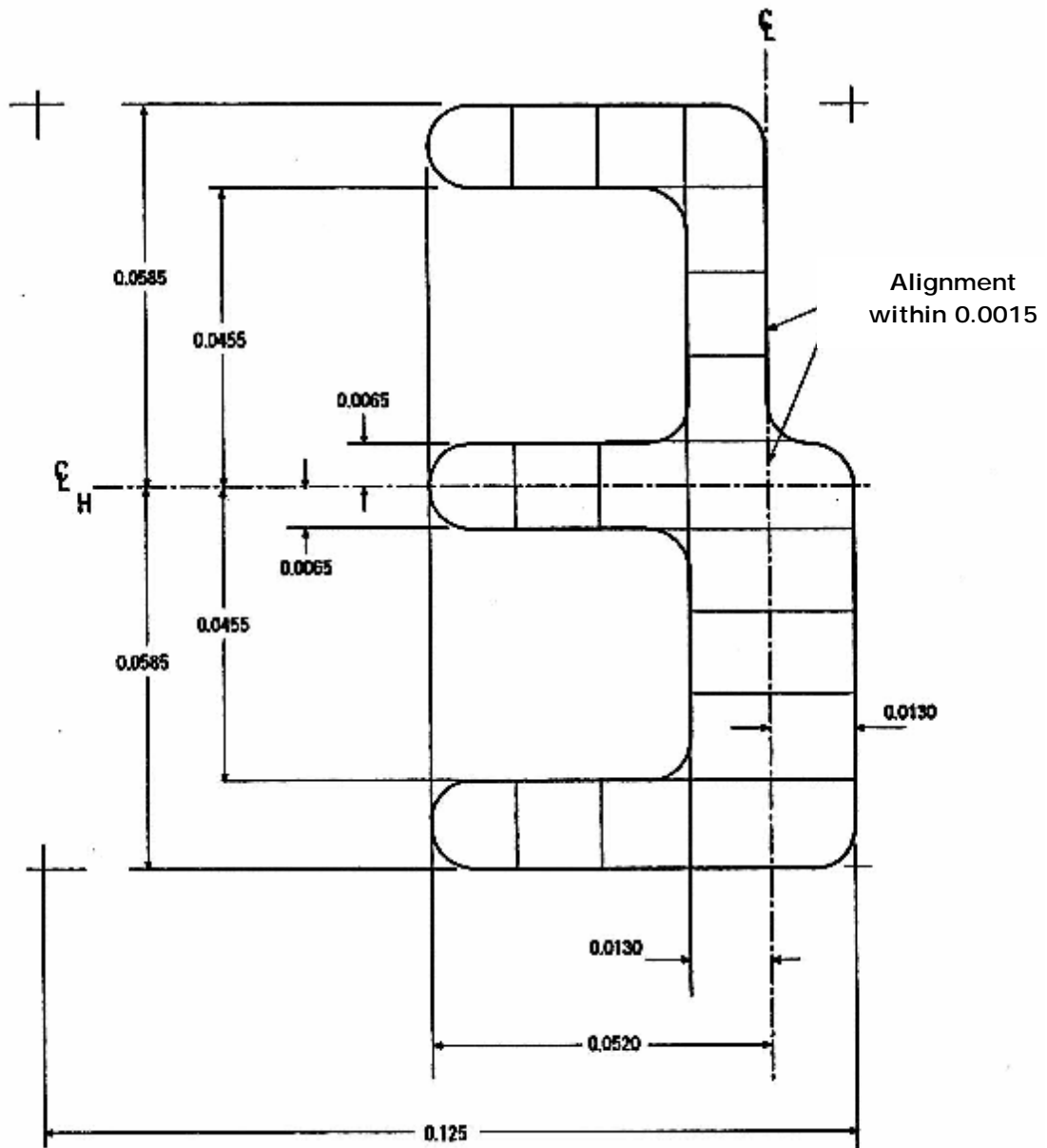
ONE



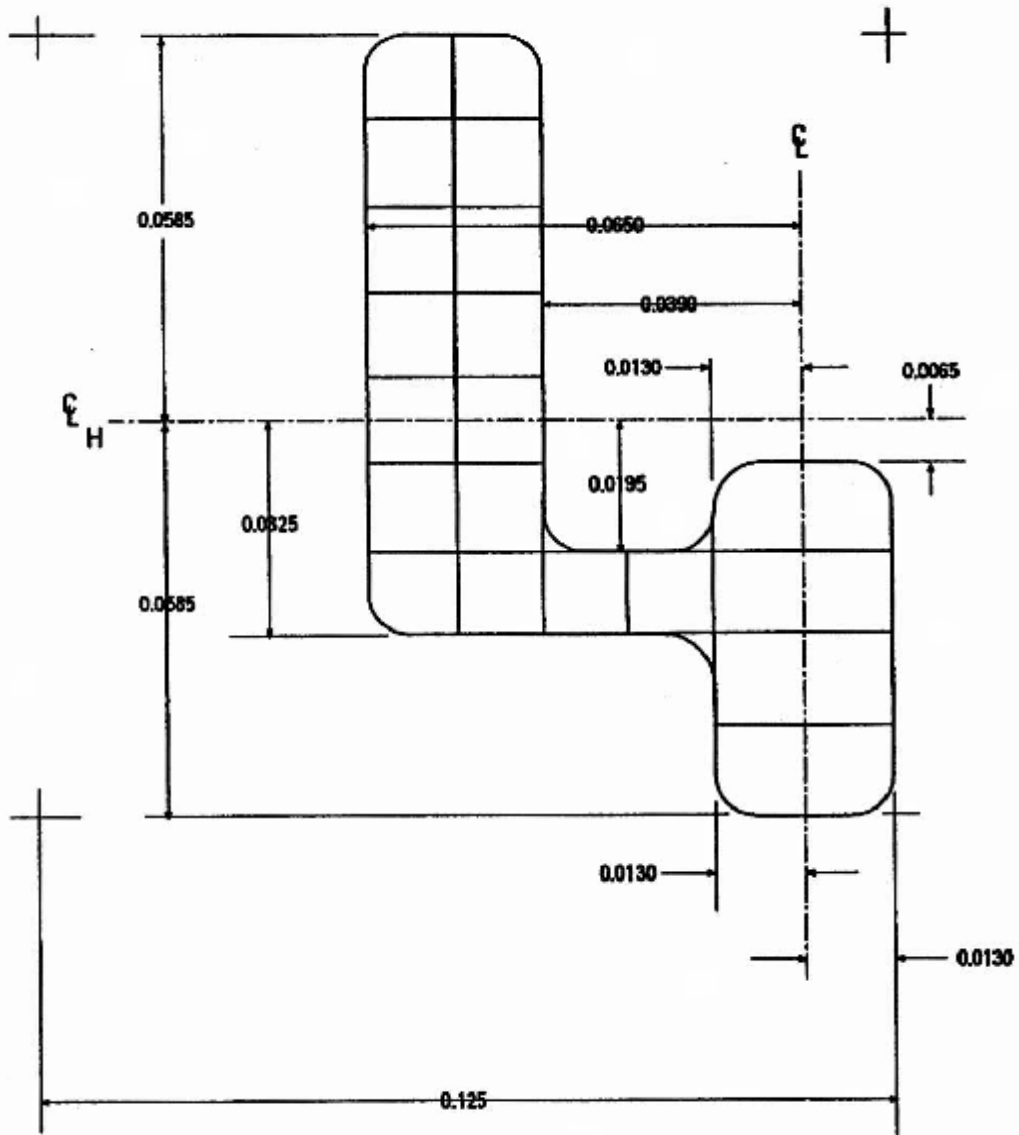
TWO



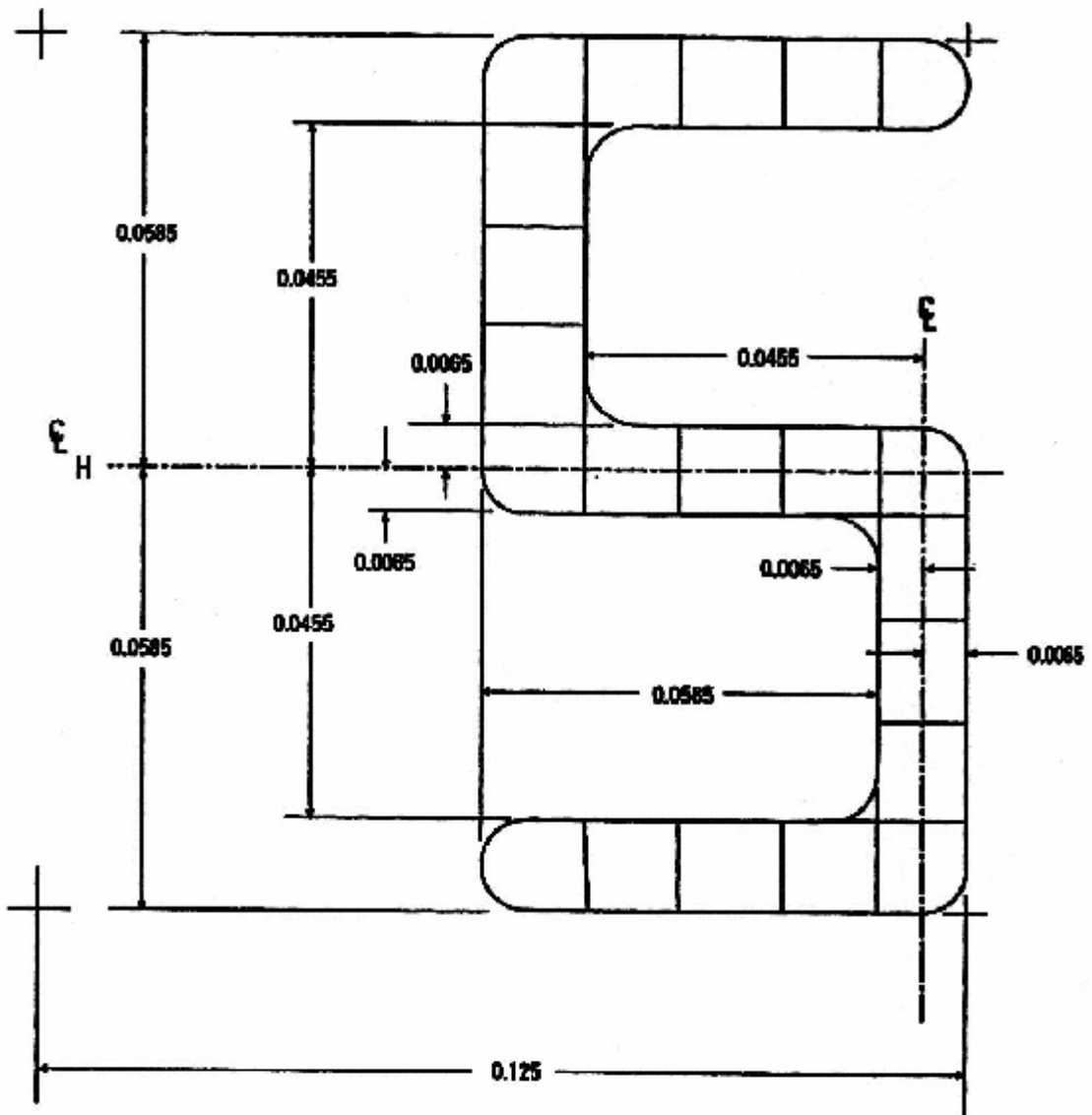
THREE



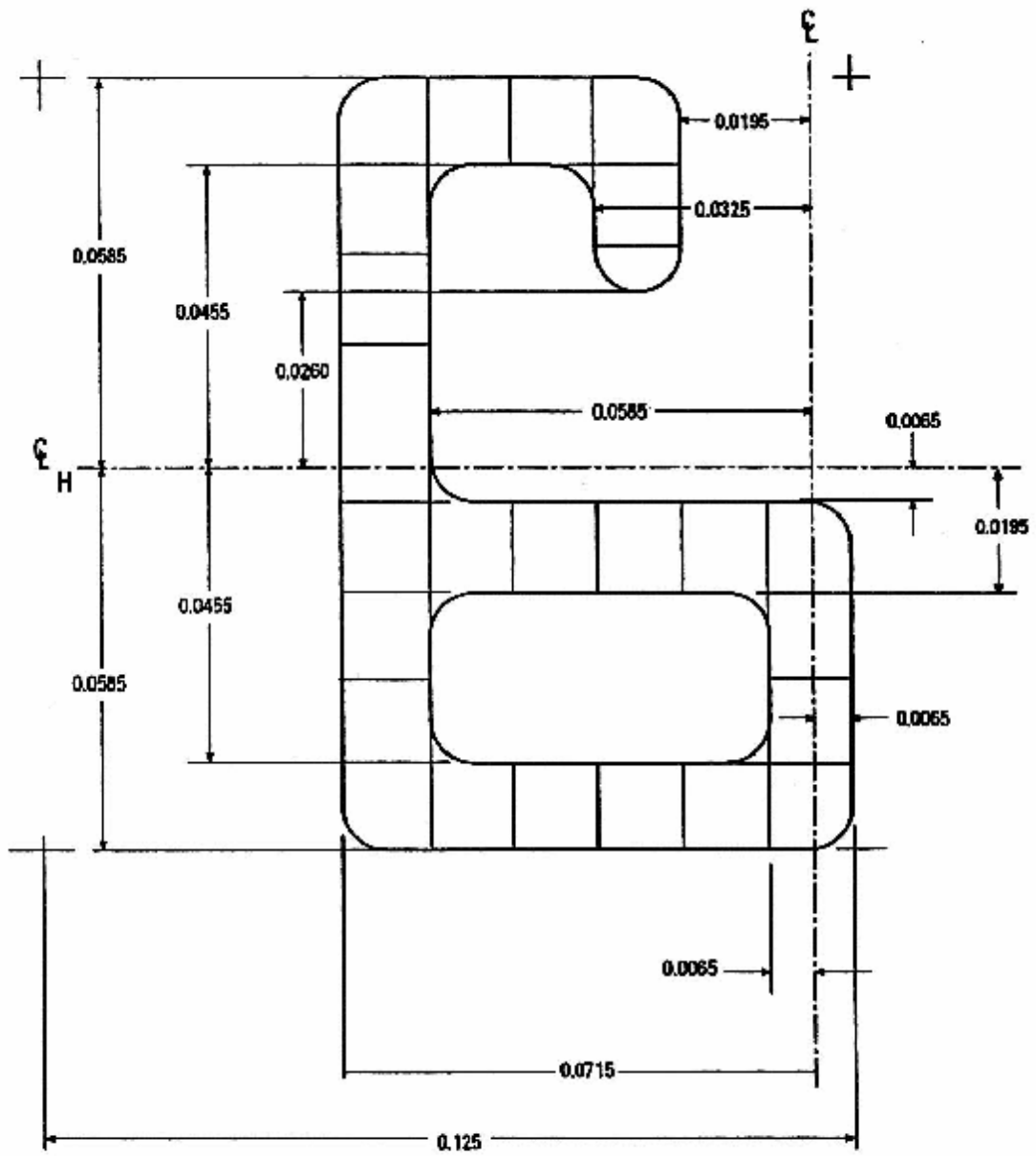
FOUR



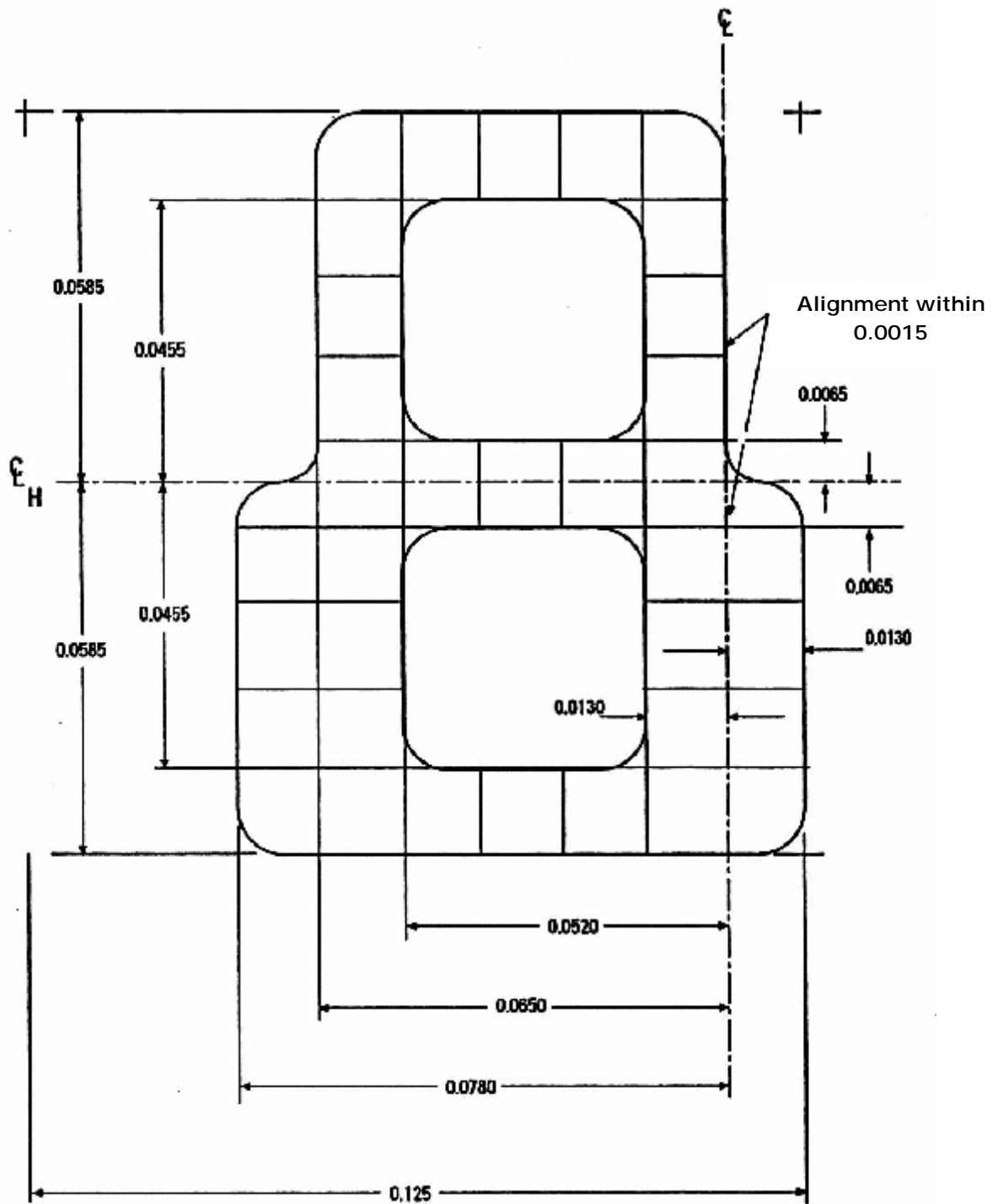
FIVE



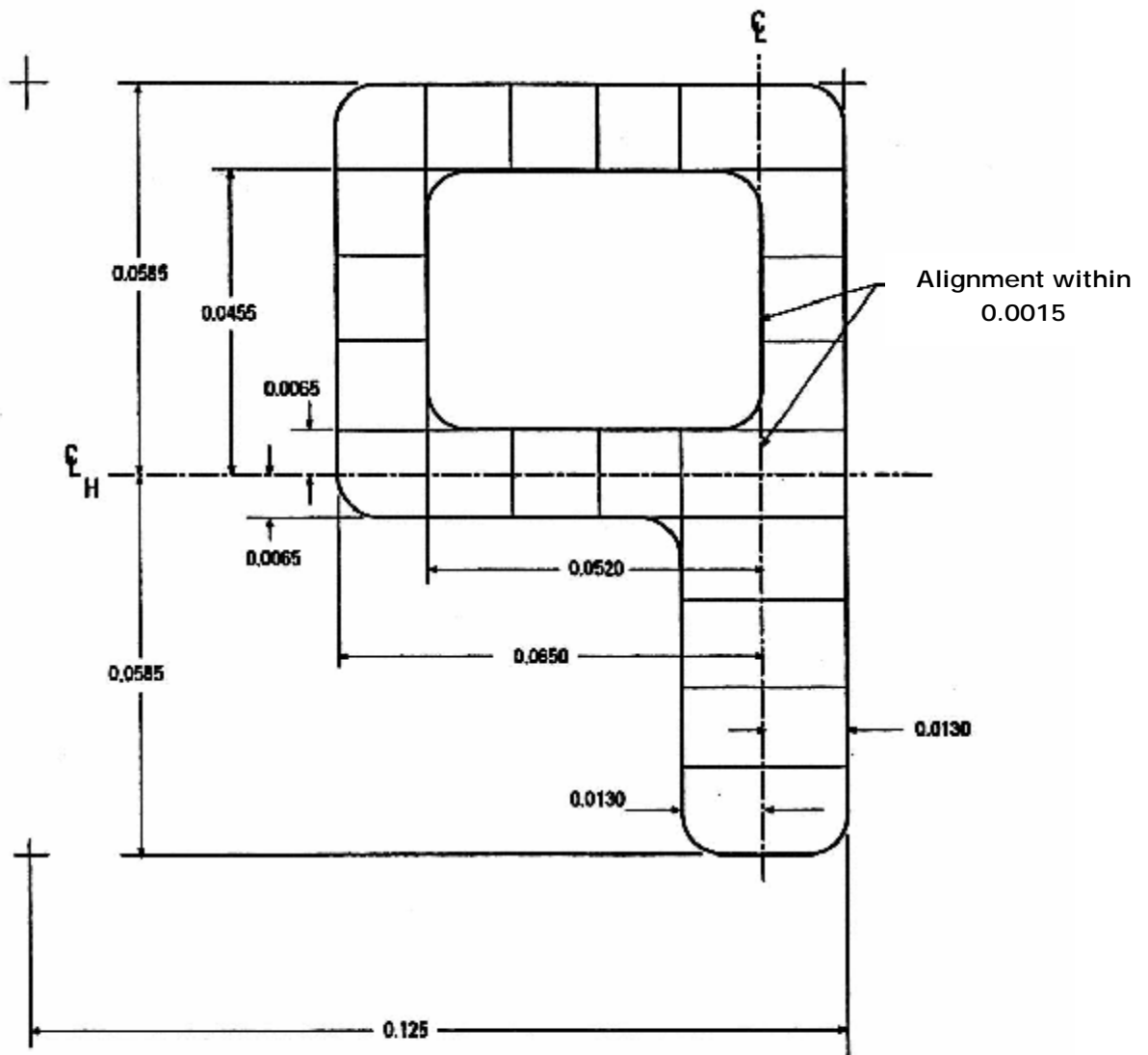
SIX



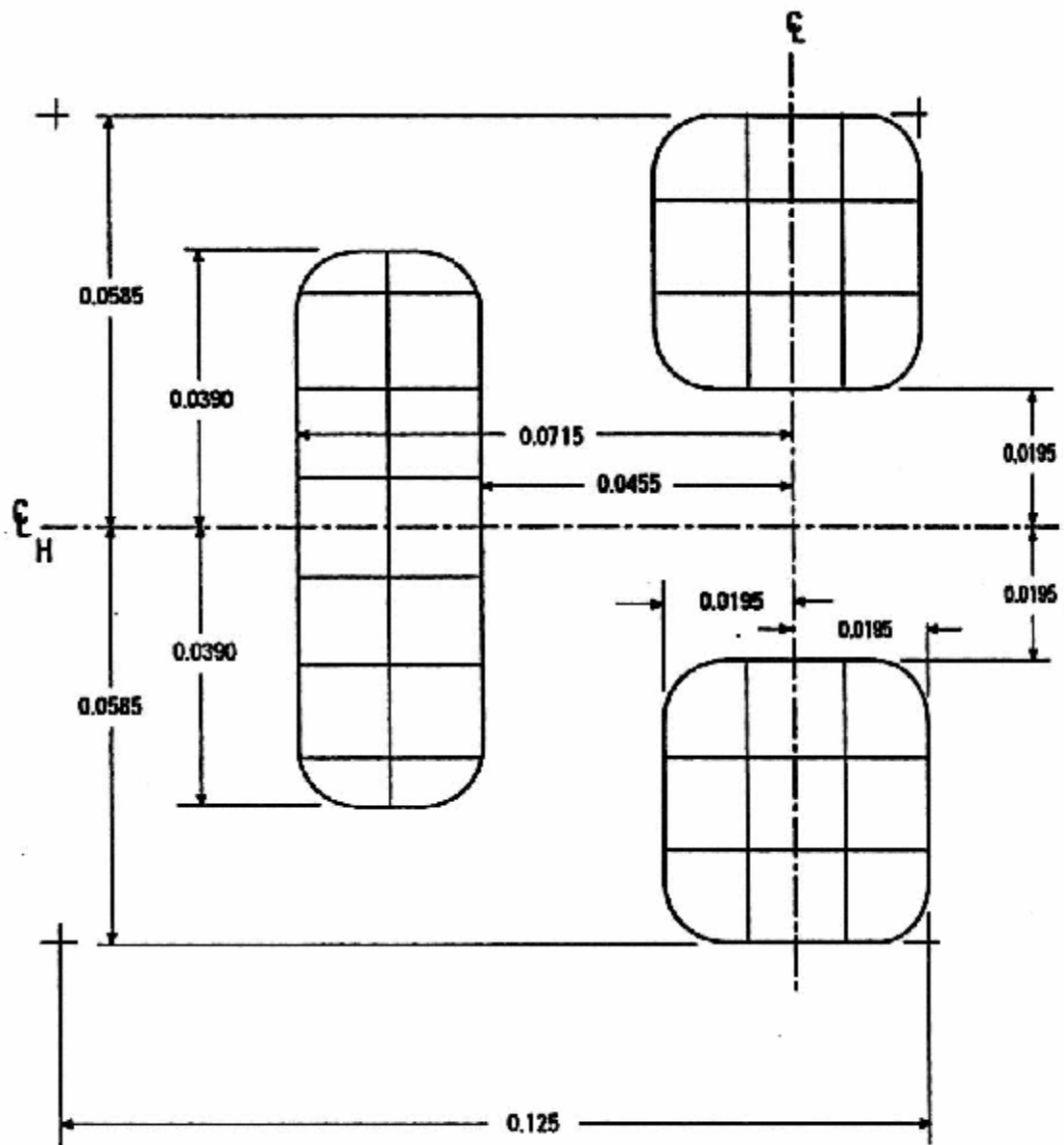
EIGHT



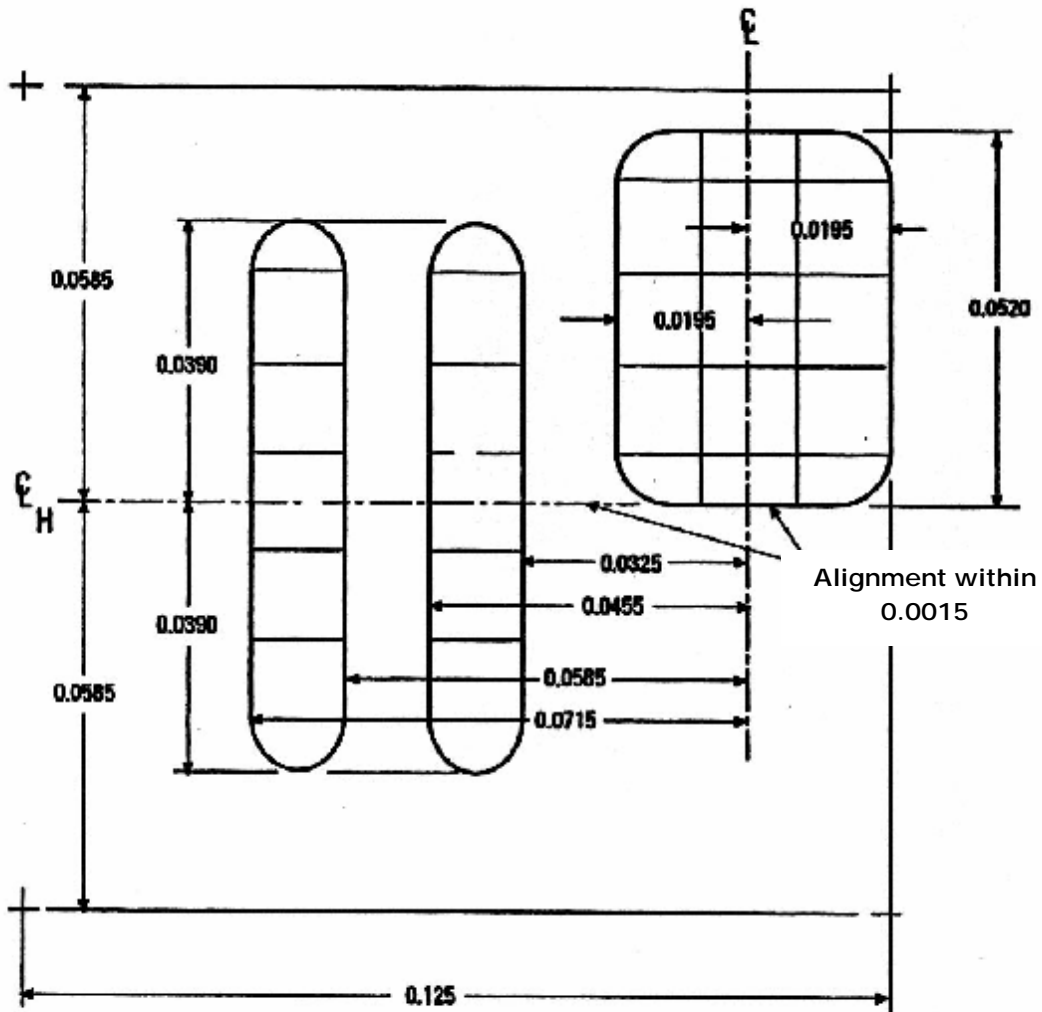
NINE



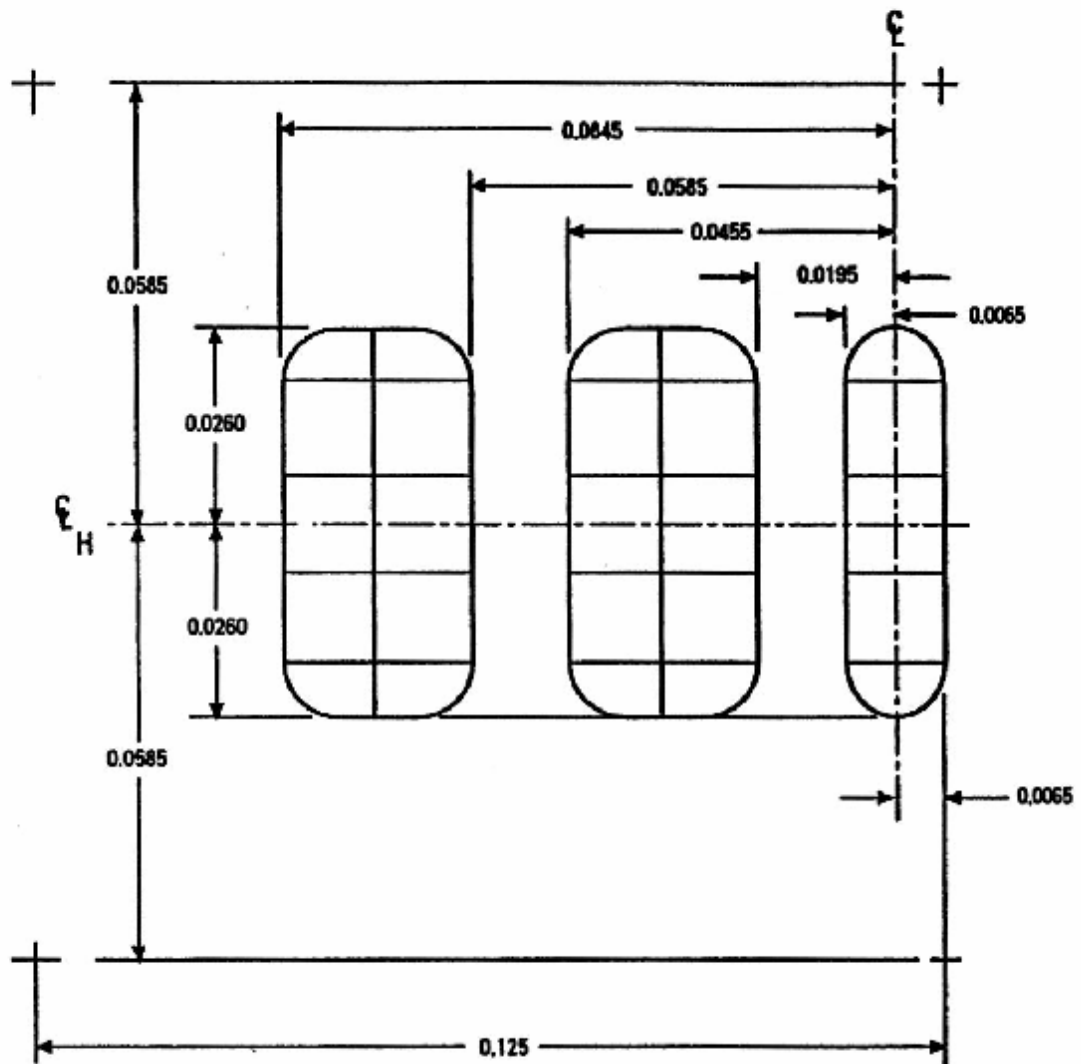
TRANSIT SYMBOL 10



"ON-US" SYMBOL 12



GUIDE SYMBOL 13



5o. LOCATION IN THE FIELDS.**1. Common Template**

To the Location and specification of fields the name Common Template will be given.

1.1 Horizontal reference margin

All of the distances that are indicated in the horizontal sense will be measured from the right margin of the document of the check. The positions of the fields will be found from right to left.

1.2 Vertical reference margin

All of the heights that are indicated will be measured using the inferior margin of the document as a base.

6o. IMPORT FIELD. This first field will occupy the positions 1 to 12 of the common template, counting from right to left of the document. The length of this field will be 12 positions that include 2 symbols that limit the import.

If the import information of the check is captured by another means, this field could be used by the issuing banking institution for the means it considers convenient, without modifying the size of the field. The import fields can not be used in any other field.

7o. FIELD FOR THE NUMBER OF THE DOCUMENT AND ACCOUNT NUMBER. This second field will occupy positions 14 to 32 of the common template, counting from the right to the left of the document. The length of this field will be 19 positions. The suggested lengths are the following: a) Number of the document, will have 7 digits, positions 14 to 20; b) Symbol “on us”, will have 1 digit, position number 21; c) Account number will have 11 digits (including the control digit used by the banks), positions 22 to 32. The document numbers and/or minor accounts to these dimensions must be filled in on the left with non-significant zeros. The position of the symbol “on us” can vary according to the size of the document. The form and content of this field will be at the discretion of the banking institutions according to their banking institution’s codification system of the number of the document and the account number. This field must be coded in the pre-marking stage.

8o. TRANSIT NUMBER FIELD. This third field will occupy positions 33 to 43 of the common template counting from the right to the left of the document.

The length of this field will be 11 positions that include transit symbols in the ends. this field will contain the transit number that must be coded in the following manner:

- a) In positions 34 and 35, the bank code in charge of the account or document.
- b) In positions 36 and 37, the code of the currency in which the checkbook was issued. This field should be coded in the pre-marking stage.
- c) Positions 38 and 42 should be filled in with non-significant zeros. This field should be used at the criteria of the banking institutions, when the checks issued in foreign currency, are paid abroad.

9o. DOCUMENT TYPE FIELD. This fourth field will occupy positions 44 and 45 of the common template, counting from the right to the left of the document. This field will have a length of 2 positions that will include symbols on us in the extreme left and the code of the type of document it is, that will be coded in the pre-marking stage.

10o. BLANK FIELD. The total length that is coded in order to identify and process a document goes from position 1 to position 45 according to the common template. However, position 13 has been left blank, which can be used at each banking institution's criteria.

11o. CHECK SPECIFICATIONS.

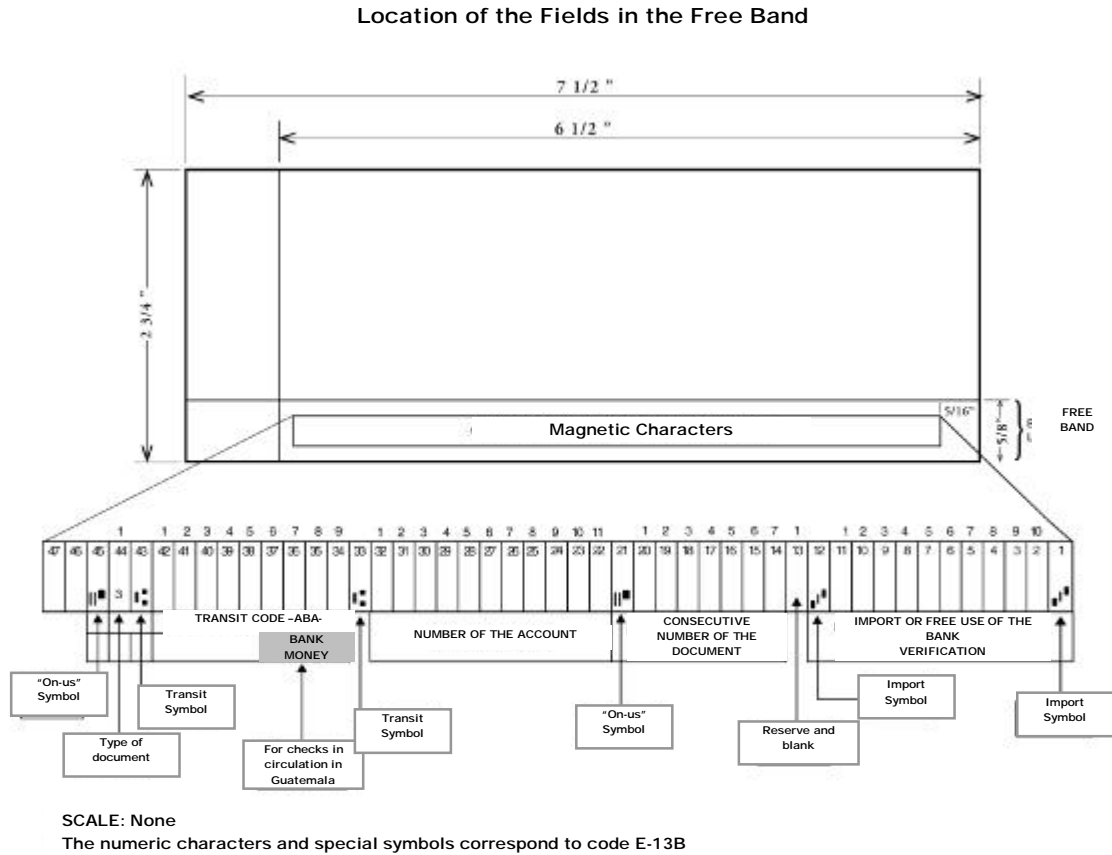
1. Size of the check

Due to the requirements of the lecto-classification equipment of magnetic characters, the size of the checks should be according to the following measurements:

Type of Check	Length	Height
Personal Check	6 1/2"	2 3/4"
Commercial/Voucher Check	7 1/2"	2 3/4"

2. Free Band

All checks must have on their lower free margin of 5/8 of an inch (16mm), in which the information of magnetic characters will be coded.



12o. DESCRIPTION OF THE CODE TABLES.

1. Bank Codes

- 01 Banco de Guatemala
- 04 El Crédito Hipotecario Nacional de Guatemala
- 05 Banco de Occidente, S. A.
- 12 Banco de los Trabajadores
- 13 Banco Inmobiliario, S. A.
- 15 Banco Industrial, S. A.
- 16 Banco de Desarrollo Rural, S. A. —BANRURAL—

- 17 Banco del Ejército, S. A.
- 19 Banco Internacional, S. A.
- 20 Banco del Café, S. A.
- 21 Banco Metropolitano, S. A.
- 22 Lloyd's TSB Bank Plc.
- 24 Banco del Quetzal, S. A.
- 25 Banco de Exportación, S. A.
- 26 Banco Promotor, S. A.
- 28 Banco Reformador, S. A.
- 30 Citibank, N. A. Sucursal Guatemala
- 31 Banco Uno, S. A.
- 32 Banco Corporativo, S. A.
- 33 Banco Empresarial, S. A.
- 34 Banco de Comercio, S. A.
- 35 Banco del Nor-Oriente, S. A.
- 36 Primer Banco de Ahorro y Préstamo para la Vivienda Familiar, S. A. —VIVIBANCO—
- 37 Banco de la República, S. A.
- 38 Banco SCI, S. A.
- 39 Banco Americano, S. A.
- 40 Banco Privado para el Desarrollo, S. A. —BANCASOL—
- 41 Banco de Antigua, S. A.
- 42 Banco de América Central, S. A.
- 43 Banco Cuscatlán de Guatemala, S. A.
- 44 Banco Agromercantil de Guatemala, S. A.
- 45 G&T Continental, S. A.

2. Type of document Code

- 1 Deposit
- 2 Credit Note
- 3 Check
- 4 Debit Note
- 5 Reserved
- 6 Reserved
- 7 Reserved
- 8 Reserved
- 9 Reserved
- 0 Reserved

3. Currency Codes

Currency	Description	Acronym
00	Reserved	
01	Quetzal	Q.
02	US dollar	US\$
03	Japanese Yen	YEN
04	Reserved	
05	Swiss Franc	FRS
06	Reserved	
07	Canadian Dollar	CAN
08	Reserved	
09	Sterling Pound	EST
10	Reserved	
11	Reserved	
12	Reserved	
13	Reserved	
14	Reserved	
15	Swedish Crown	COS
16	Costa Rican Colón	CCR
17	Salvadorian Colón	CSA
18	Mexican Peso	PM
19	Honduran Lempira	LH
20	Danish Crown	CD
21	Nicaraguan Córdova	CN
22	Venezuelan Bolívar	BV
23	Reserved	
24	Reserved	
25	Reserved	
26	Reserved	
27	Australian Dollar	DA
28	Euros	EUR
29	Reserved	
30	Reserved	
31	Reserved	
32	Reserved	
99	Reserved	

Note: The assignment of codes is the responsibility of the Accounting Section of the Department of Accounting and Monetary Issue of the *Banco de Guatemala*.

13o. DISTRIBUTION OF ZONES IN THE BODY OF THE CHECK. F1 For the distribution of the zones in the body of the check will take publication X9/TG-2 (1990) of the American Bankers Association as a reference adapting it to the national banking system.

Back side:

For the process of clearing between the banks in the system, the data that appears on the body of the check that will be divided into ten zones and according to the size of the check will be distributed as follows:

1. Drawee Bank

This area is located in the upper left hand corner of the check. It will identify the banking institution where the issuer has their account registered.

2. Name and/or Number of the Account (Personalization)

It will be printed in the upper center of the check, immediately after the Drawee Bank zone. This zone must contain the name of the account owner, as well as the number of the account.

3. Number of the Check

This number must be printed in the upper right corner of the check, immediately after the “Name and/or Number of account” zone.

4. Place and Date

This area will have a space to write the place where the check is issued and the date as of which the operation can be made effective. Its location is immediately under the “Drawee Bank” zone.

5. Check Import

It will indicate in numbers the amount for which the check has been drawn. It will be located on the immediate right of the “Place and Date” zone.

In this zone the printed symbols of the monetary unit will appear, in which the check is expressed, according to the detailed table in numeral 3. of article 12 of this instruction booklet.

6. Payable to the order of (Payable to)

The issuer must indicate in this zone the name of the person to which the check is issued. This zone will be located immediately below the zone of “Place and Date”.

7. Sum of the import expressed in letters

This must indicate in letters the amount in which the check has been issued and will serve to verify the same. It must appear immediately below the area of “Payable to the order of”, completely covering the area of the check from the left to the right ends.

The name of the monetary unit must be right below the line.

8. Free or Name of the Account

This will be located in the lower right corner of the check, before the zone “Free Band”. This zone will be reserved for internal use of each bank.

9. Signature(s)

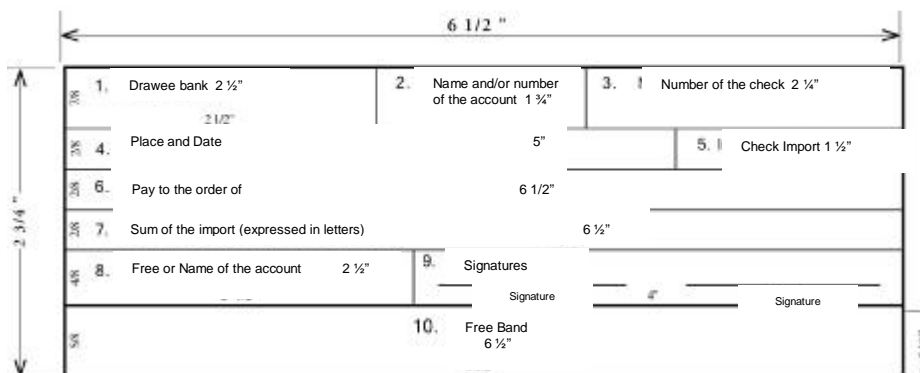
This will be located in the lower right corner of the check (over the free band for magnetic characters). The space for signature(s) must not interfere with the area destined for magnetic characters.

10. Free Band

This will consist of a band of 5/8 of an inch high, in the lower margin of the check, where only the magnetic characters will be printed.

Note: The banks of the system will be requested to the printing companies ensuring that the impressions of the requirements of the check, to be adjusted to sixths or eighths of an inch, so that the commercial checks or vouchers can be issued through computers.

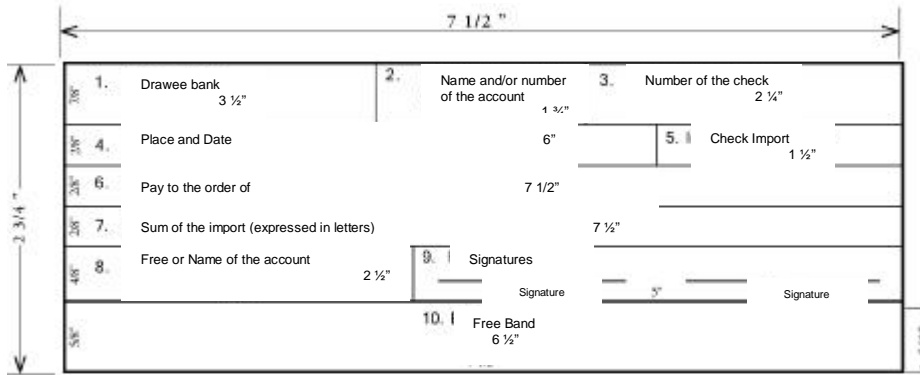
**Distribution of zones
Personal Check**



Measures for each zone in the body of the personal check

Zones	Denomination	Length	Height
-in inches-			
1	Drawee bank	2 ½	7/8
2	Name and/or Number of account	1 ¼	7/8
3	Number of check	2 ¼	7/8
4	Place and date	5	2/8
5	Import of the check	1 ½	2/8
6	Payable to the order of	6 ½	2/8
7	Sum of	6 ½	2/8
8	Free or Name of the account	2 ½	4/8
9	Signatures	4	4/8
10	Free band	6 ½	5/8

Distribution of zones
Commercial or Voucher Check



NOTE:

1. The measures are only an illustration and not necessarily correspond to the drawing.
2. The measure used is the inch.
3. The identification of each of the zones of distribution, will be under the criteria of each banking institution according to the laws that regulate said matter.

Measures for each zone in the body of the commercial or voucher check

Zones	Denomination	Length	Height
- en pulgadas -			
1	Drawee bank	3 ½	7/8
2	Name and/or Number of account	1 ¼	7/8
3	Number of check	2 ¼	7/8
4	Place and date	6	2/8
5	Import of the check	1 ½	2/8
6	Payable to the order of	7 ½	2/8
7	Sum of	7 ½	2/8
8	Free or Name of the account	2 ½	4/8
9	Signatures	5	4/8
10	Free band	7 ½	5/8

Reverse:

The reverse of a check will be reserved for the endorsement, and must be carefully designed in order to avoid that there would be interferences in its legibility.

For the effect, the specific zones are reserved for each participant in the endorsement of a document, the endorsement of a document, which must be strictly respected, in lieu of the fact that each endorsement that is located outside of its respected zone, will originate delay and/or non-payment.

1. Areas for endorsement

The reverse of the check will be divided in 2 main areas for endorsement:

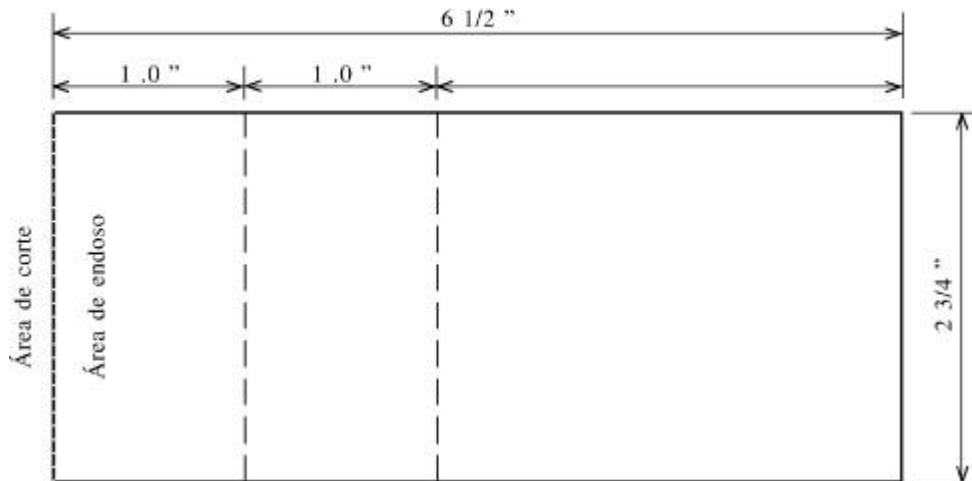
- A. Endorsement for the beneficiary
- B. Endorsement for the institution where the deposit is made

2. Measures of the areas for Endorsement

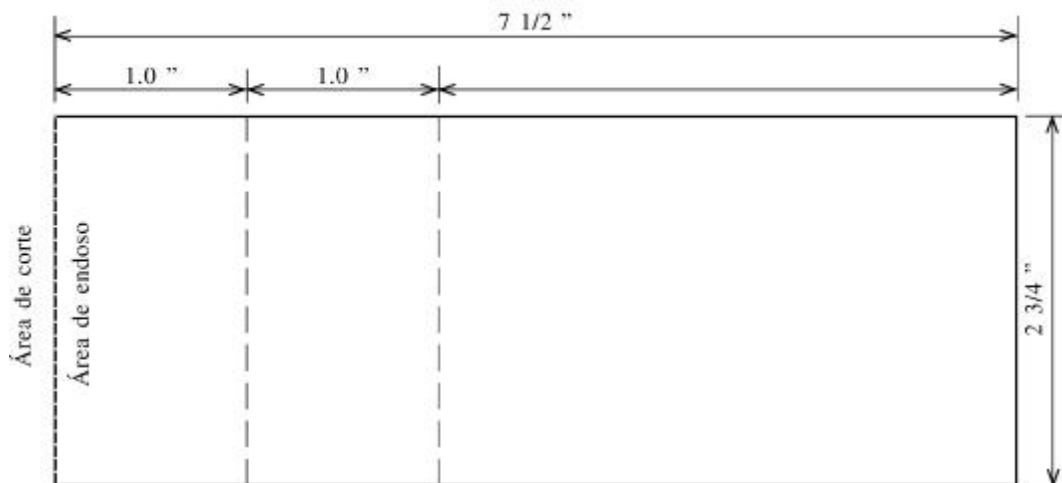
For the location of the two areas of endorsement of the personal and/or commercial or voucher checks, the left cut or cut line of the checkbook must be taken as the base line of the check, using the back side it as the reference. In the table below are detailed the measurements of the zones of endorsement for each type of check, as follows:

Type of check	1st. zone	2nd. zone
Personal Check	1.0"	1.0"
Commercial/voucher Check	1.0"	1.0"

Zones for Check Endorsement
Personal Check
Zonas para Endoso de los Cheques
Cheque Personal



Commercial or Voucher Check
Cheque Comercial o Voucher



Article 14. SPECIFICATIONS OF IMPRESION.

1. Specifications of the paper

For the impression of the checks a 24 pound paper that has this weight and associated characteristics is generally used. The minimum quality of the paper for checks must be of the typical characteristics in weight, thickness, rigidity and resistance to the printing normally associated to 20 pound white paper. In order to more precisely establish the characteristics of paper to be used in check printing with the magnetic characteristics for electronic processing, the detailed technical specifications are detailed as follows for the security of check printing:

Raw Material:	100% wood pulp, free of ground wood or non-whitened material.
Weight:	92 gr. with a tolerance of +/- 5 gr.
Thickness:	0.089 mm minimum 0.1 a 0.127 mm optimum 0.187 mm maximum
Taber Rigidity:	2.0 minimum 3.0 a 9.5 optimum 20.0 maximum
Elmendorf Printing Resistance:	40 gr. minimum in both directions.
Gurley Porous degree:	25 sec. per 100 cm ³ minimum 200 sec. per 100 cm ³ maximum
Satin finish (Roughness) Sheffield:	75 a 125 units optimum 150 units maximum
Friction coefficient de:	0.3 maximum 0.6 minimum
Thread Direction:	Lenghtwise
Reactive:	Con

Water Mark:	Must not interfere with the free band destined to magnetic character impression.
Color:	White in the band destined for the impression of magnetic characters.
Relative Humidity:	All trials must take place at a temperature of 20°C and at a relative humidity of 50%.
Wax removal trial:	The document must resist a trial of wax removal equal to Dennison 16-A.
Magnetic Particles:	The paper must be absolutely free of any iron or non-iron magnetic particle.

15o. POSITION WITHIN THE FIELDS. The positioning within each group of characters that forma a field will have a tolerance toward the sides of 1/16 of an inch within the limits defined for its impression. When these fields are printed or coded in the same operation, it will not be necessary that empty spaces exist between fields therefore they can be immediately one after the other.

16o. SPACE BETWEEN CHARACTERS. The distance that must be kept between one character and another during printing, considering the average right contours, will be of 0.125 of an inch with a tolerance of more or less 0.010 of an inch. The accumulation of tolerance will be limited by the dimensions defined by the fields; therefore a field can not invade another.

17o. ALIGNMENT OF THE CHARACTERS. The horizontal alignment regarding the adjacent characters within a field must not vary, in the vertical sense more than 0.007 of an inch. In practice this alignment can be measured regarding the lower edge of the character taking into account that some characters do not reach the base line.

18o. INCLINATION OF THE CHARACTER. The maximum inclination permissible in the printing of a magnetic character will be more or less 1 1/2 degrees outside the vertical, taking into account the horizontal base of the lower margin of the document. For the appreciation of the inclination, each character must be judged independently of the rest, since it will be the total inclination of the character, including that which can be included in the line of

impression, which must be measured to see if it is within the established tolerance.

19. DIMENSIONS OF THE CHARACTERS. The exact dimensions of the magnetic characters E-13B were described in Article 4.

1. Definition of the average contour:

The average contour is an imaginary line that equally divides the irregularities of impression of the contour in points and ponds.

The result of the division with an imaginary line is that the white areas of one side of the average contour must be equivalent to the black areas on the other side of the line.

2. Average Contour of Tolerance:

The deviation that the average contour line can have outside the line of the specific nominal contour for the character must not exceed 0.0015 of an inch toward the sides.

3. Contour irregularities tolerance:

The points and ponds in the average contour can be extended more or less 0.0035 of an inch outside the nominal contour, this is 0.002 of an inch more than the maximum and minimum fixed tolerance; however, these irregularities can not occupy more than 25% of the total length of the contour.

4. Minimum Width of the horizontal bars:

The distance between the average contours of the horizontal bars must be of 0.011 of an inch. (This specification does not apply to the vertical bars, since these are completely specified in the dimensions that locate the contour).

20o. MAGNETIC INK. Preferably special magnetic ink will be used for the impression of these characters, in order to avoid that the documents be refused by the lecto-classifier machine. The use of any other technology for the printing of magnetic characters is accepted as long as they fulfill all the printing specifications.

21o. LACK OF MAGNETIC INK FOR PRINTING. The permissible lack of magnetic ink for character impression will be:

1. An only lack of ink:

For one area only in which ink lacks on any part of a character, including the edge, the maximum permissible surface for lack of ink, must be completely within 0.008 by 0.008 of an inch. However, if the lack of magnetic ink occurs in any of the double or triple widths and is totally surrounded by ink, it can extend to a square of 0.010 by 0.010 of an inch. There also exists the possibility that the lack of magnetic ink is in an area that is long and narrow, this lack of ink will be acceptable at any length as long as the width does not exceed 0.002 of an inch.

2. Various ink faults:

The total surface of lack of ink in any horizontal or vertical bar must not exceed 20% of the total surface of the bar.

22o. UNIFORMITY OF THE INK IN THE PRINTING. The ink must be deposited in the printing uniformly within the character contour; the conditions that lead to an excess of ink on the edges due to the impression or any other irregularity in the width of the ink film in the impression, must be avoided.

23o. INK SPOTS. Within the free band no ink spots will be allowed.

Maximum permissible Surface

- On the back of the document, within the free band of 5/8 of an inch on the lower part, ink spots of 0.006 by 0.006 of an inch will not be acceptable.
- The spots of up to 0.003 by 0.003 of an inch will be acceptable, whatever the amount of spots.
- The isolated spots of up to 0.004 by 0.004 of an inch will be acceptable if they are limited to one between characters and there are no more than five to a field.

24. EMBOSSING IN THE PRINTING. It is not tolerable that the depression caused by an excess of pressure from printing would be greater than 0.001 of an inch measured from the back of the document.

In practice, if the embossing is appreciated at sight or to touch from an experimented person, the printing will not be acceptable since it does not fit the specifications.

25o. GUILLOTINED. They must be cut in a straight angle and the lower edge must be parallel to the coding line printed with magnetic characters.

26o. PERFORATION OF THE CHECKS. Elongated perforations must be used and not rounded perforations for the extractable checks in the checkbooks.

27o. LEVEL AND FORM OF THE ELECTRIC SIGNALS. Because of the level the intensity of the electric signal generated by a magnetic character in the electromagnetic sensor device must be understood. When all the printing specifications have been observed and the adequate magnetic ink has been used, the signal level produced by the printed characters will be the last measure that will determine if they can be processed successfully. In order to measure the signal level, an amplitude or voltage has been defined for each character; this nominal signal will be called the 100% signal level. The specification for the signal level allows a deviation from 50% up to 200% of the nominal value. Since some deviations can occur do tot he variations in the ink or paper absorption, etc., it must be ensured that the signals generated by the printed characters are the closest possible to 100% signal level. A greater signal level generally corresponds to a thick ink film, while a level below the corresponding signal level corresponds to a very thin ink film.

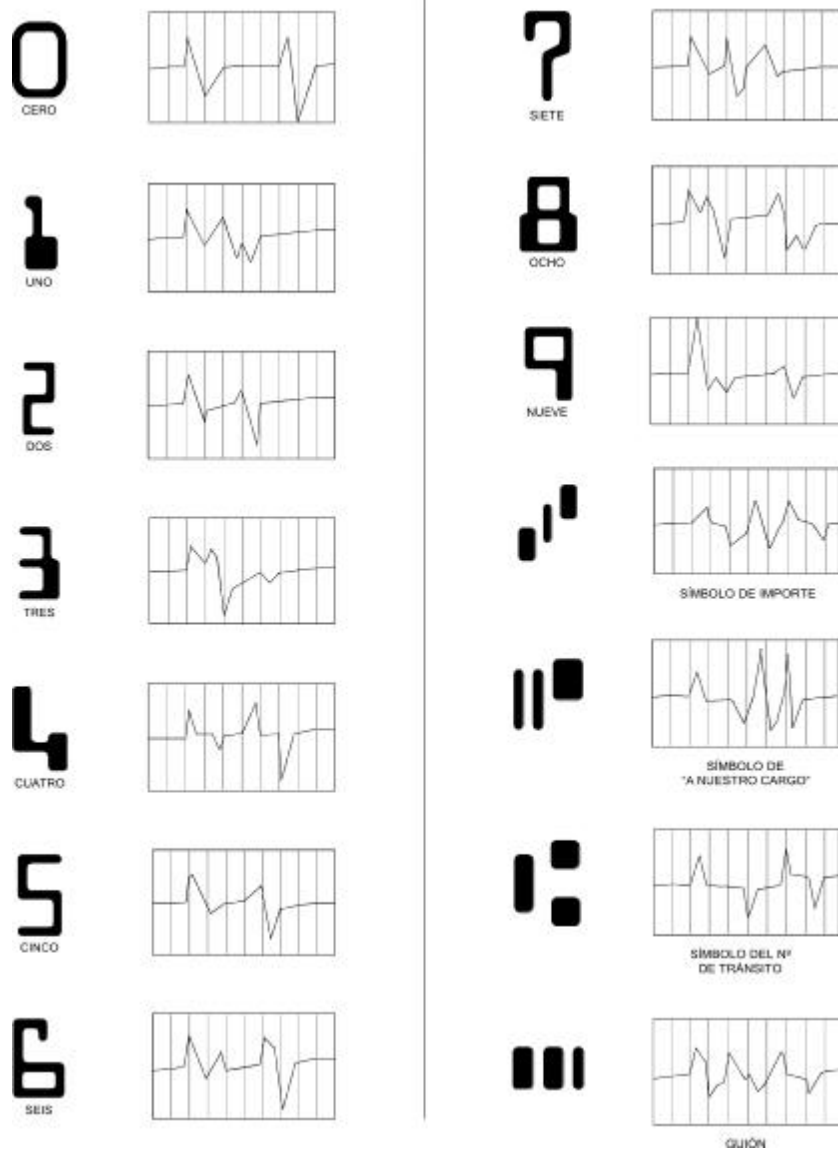
The nominal values for each one of the E-13B characters are the following:

Carácter	Valor Nominal	Carácter	Valor Nominal
0	130	?	75
1	85	8	105
2	105	9	165
3	85	10	105
4	105	11	70
5	105	12	100
6	105	13	67

In order to calculate the percentage regarding the nominal value the following formula must be used:

**Percentage of
the nominal value = (signal Value / Nominal Value) * 100**

To know the forms of the electronic impulses that produce each character of the E-13B language, in the following figure the impulses are represented by how they are seen in the oscilloscope.



28o. IMPRESSIONS IN THE BODY OF THE CHECK. The logos, designs in the security and any other type of special character backgrounds within the body of the check, will be for each banking institution to decide. The colors to use will preferably be light and free of any other iron containing material.

29o. MODIFICATIONS. The present instruction booklet can be modified only by the *Banco de Guatemala*.