

REV.  
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AS22520™/46

FEDERAL SUPPLY CLASS  
5120

RATIONALE

REVISION IS REQUIRED TO ADD POSITIONERS FOR THE AS39029/102 AND /103 INNER CONTACTS, MAKE MINOR EDITORIAL CHANGES, AND MAKE TECHNICAL CORRECTIONS IF NEEDED.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS22520.

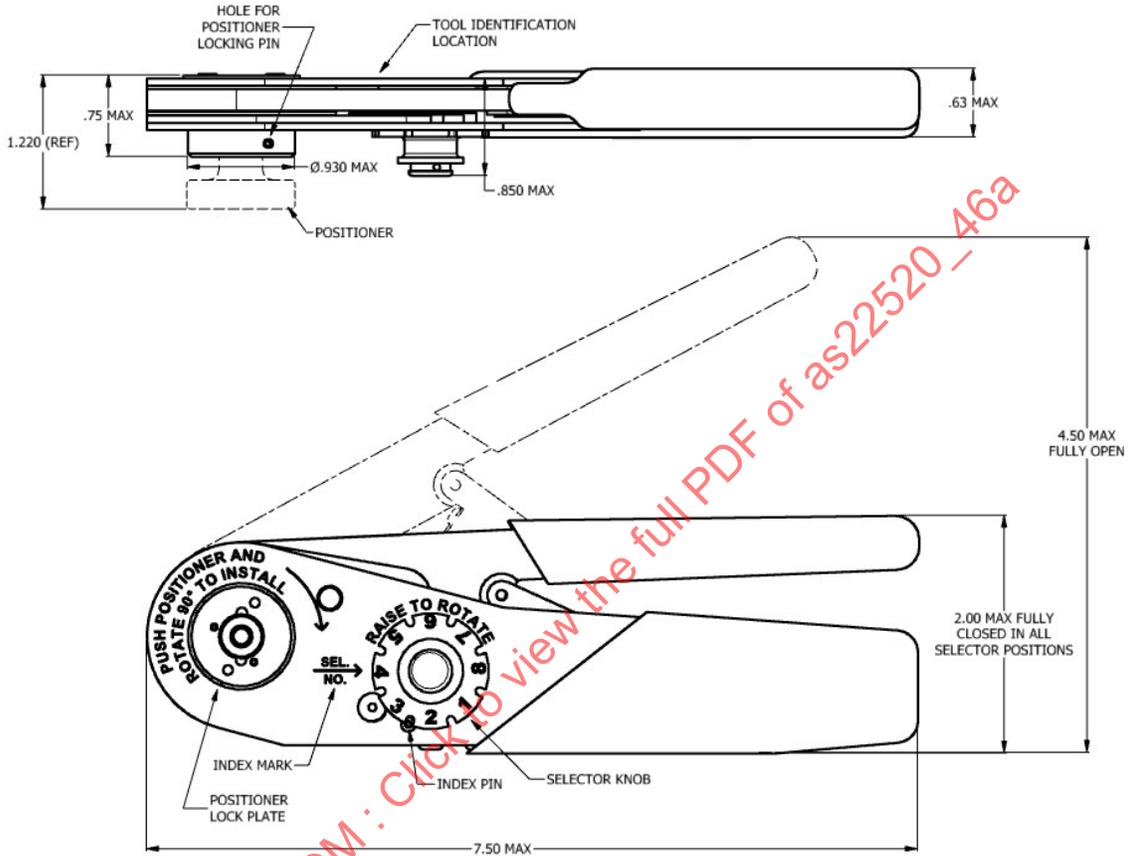
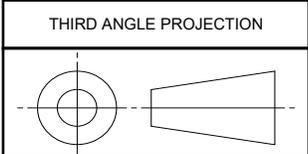


FIGURE 1 - M22520/46-01 TOOL

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For more information on this standard, visit  
<https://www.sae.org/standards/content/AS22520/46A/>



CUSTODIAN: AE-8C2

PROCUREMENT SPECIFICATION: AS22520



**AEROSPACE STANDARD**

CRIMPING TOOLS, TYPE 1, TERMINAL, HAND,  
WIRE TERMINATING FOR MINIATURE CO-AXIAL  
AND TRI-AXIAL INNER CONTACTS

AS22520™/46  
SHEET 1 OF 7

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ISSUED 2018-03 REVISED 2023-01

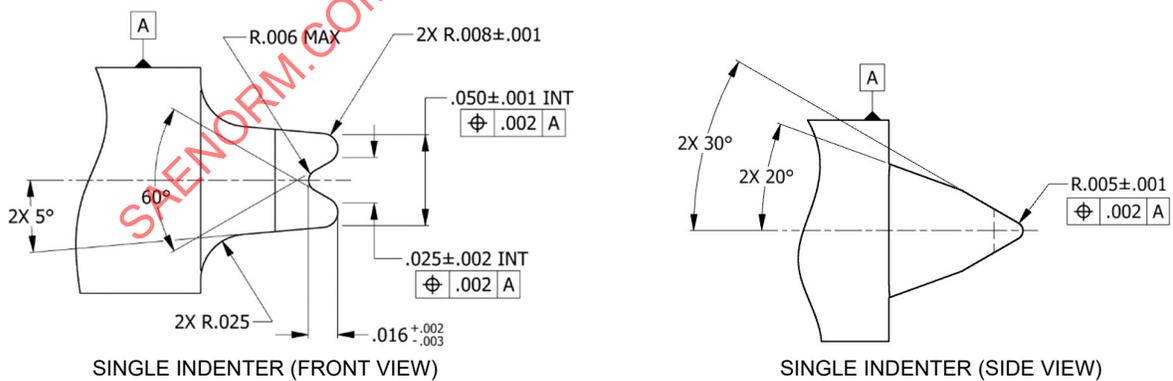
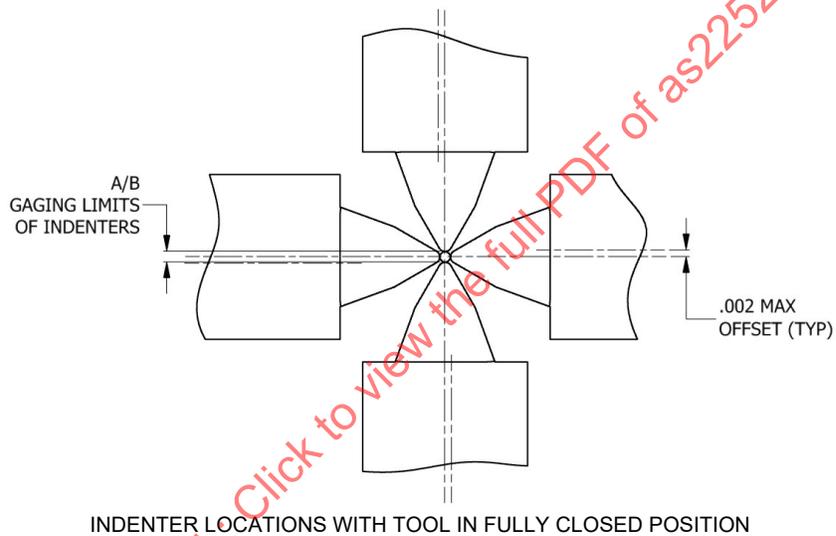
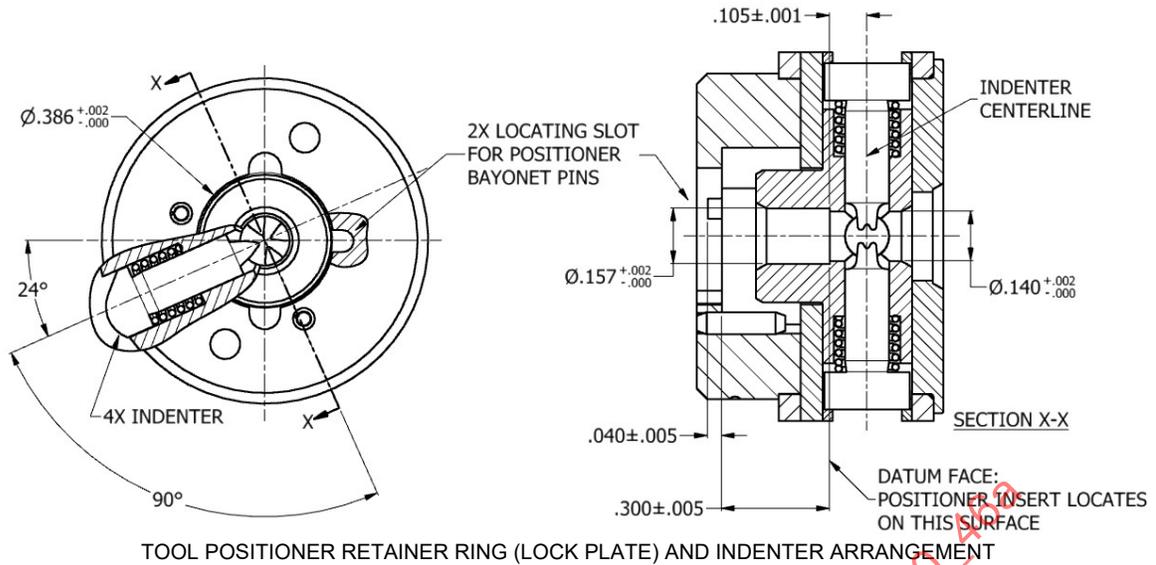
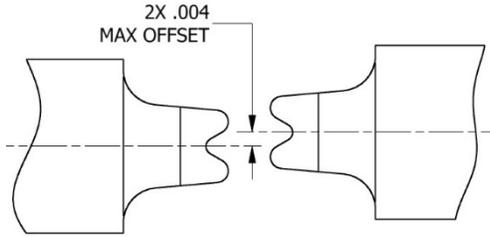


FIGURE 1 - M22520/46-01 TOOL (CONTINUED)

	<b>AEROSPACE STANDARD</b> CRIMPING TOOLS, TYPE 1, TERMINAL, HAND, WIRE TERMINATING FOR MINIATURE CO-AXIAL AND TRI-AXIAL INNER CONTACTS	<b>AS22520™/46</b> SHEET 2 OF 7	<b>REV.</b> <b>A</b>



OPPOSITE AND ADJACENT INDENTER CENTERLINES (TYP)

BASIC TOOL PART NUMBER, COLOR, AND INSPECTION GAGING INFORMATION TABLE

CRIMPING TOOL PART NO.	BODY COLOR	HANDLE GRIP COLOR	FOR INSPECTION GAGING USE
M22520/46-01	GOLD	BLACK	M22520/3-25 <sup>1/</sup>

<sup>1/</sup> INSPECTION GAGE ONLY APPLICABLE FOR THE TOOL SET AT SELECTOR POSITION NUMBER 8 (SEE APPLICATION NOTES).

INDENTER GAGE LIMITS TABLE

SELECTOR NUMBER	GAGING LIMITS OF INDENTERS	
	INSPECTION GAGE DIAMETERS (INCHES)	
	Ø GO A + .0001	Ø NO-GO D + .0001
1	.0070	.0090
2	.0095	.0115
3	.0120	.0140
4	.0150	.0170
5	.0180	.0200
6	.0225	.0250
7	.0260	.0285
8	.0305	.0330

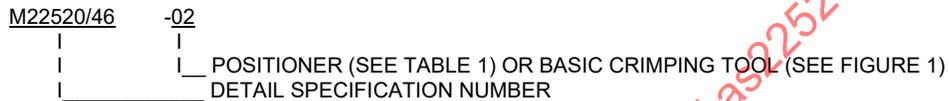
FIGURE 1 - M22520/46-01 TOOL (CONTINUED)

REQUIREMENTS: ALL COMPLETE REQUIREMENTS SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS22520.

1. DIMENSIONS: DIMENSIONS ARE IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS  $\pm .010$ , ANGLES  $\pm 5^\circ$ . OUTLINE CONFIGURATION OPTIONAL WITHIN MAXIMUM DIMENSIONS SHOWN IN FIGURE 1. BREAK ALL SHARP EDGES .005 R MAX.
2. MATERIALS: UNLESS OTHERWISE SPECIFIED, MATERIAL SHALL BE IN ACCORDANCE WITH AS22520. SURFACE TEXTURE SHALL BE 63 RMS OR BETTER IN ACCORDANCE WITH ASA B46 1-1962 (ANSI).
  - 2.1 INDENTER MATERIAL SHALL BE OIL HARDENED TOOL STEEL. THE INDENTER MATERIAL SHALL BE HARDENED TO ROCKWELL "C" 56-58.
  - 2.2 RETAINER RING (LOCK PLATE) SHALL BE T3 ALUMINUM (OR EQUIVALENT) IN ACCORDANCE WITH AMS-QQ-A-225/6.
  - 2.3 POSITIONER BODY MATERIAL SHALL BE ALUMINUM AMS-QQ-A-225/6. LOCATOR SHALL BE STAINLESS STEEL PER AMS-QQ-S-763, CLASS 304 (OR EQUIVALENT).
  - 2.4 GRIP SHALL BE PLASTIC AND WITHSTAND ALL REQUIREMENTS OF AS22520.
3. IDENTIFICATION MARKING AND COLOR:
  - 3.1 TOOL IDENTIFICATION SHALL BE MARKED IN ACCORDANCE WITH MIL-STD-130, STAMP OR LASER MARKED. TOOL IDENTIFICATION SHALL INCLUDE MANUFACTURER NAME AND PART NUMBER, THE TOOL PART NUMBER M22520/46-01, AND THE INSPECTION GAGE PART NUMBER M22520/3-25. ADDITIONAL TOOL MARKING AND COLOR SHALL BE AS SHOWN IN FIGURE 1.
  - 3.2 POSITIONERS SHALL BE MARKED AS SHOWN IN FIGURE 2. MARKING SHALL BE IN ACCORDANCE WITH MIL-STD-130, STAMP OR LASER MARKED. POSITIONER COLOR SHALL BE GOLD.
  - 3.3 DATA PLATES LABELS BE SHALL BE CLEARLY MARKED AS SHOWN IN FIGURE 3. ALL LABELS SHALL HAVE BLACK LETTERS PRINTED ON A CONTRASTING BACKGROUND. LABELS SHALL STILL BE ATTACHED AND LEGIBLE AFTER ALL AS22520 REQUIREMENTS. OTHER UNSPECIFIED LABELS ARE PERMISSIBLE ON TOOL FRAME AND POSITIONER.

	<b>AEROSPACE STANDARD</b>	<b>AS22520™/46</b> SHEET 3 OF 7	<b>REV.</b> <b>A</b>
	CRIMPING TOOLS, TYPE 1, TERMINAL, HAND, WIRE TERMINATING FOR MINIATURE CO-AXIAL AND TRI-AXIAL INNER CONTACTS		

- 3.4 OTHER LABELS ARE PERMISSIBLE ON TOOL FRAME AND POSITIONERS, PROVIDED THE LABEL IS ATTACHED AND LEGIBLE AFTER ALL REQUIRED BY AS22520 ENVIRONMENTAL TESTING. ALL LABELS SHALL HAVE BLACK LETTERS PRINTED ON A CONTRASTING BACKGROUND.
4. WEIGHT: WEIGHT OF TOOL FRAME WITHOUT POSITIONER SHALL NOT EXCEED 1.0 POUND AND THE POSITIONER SHALL NOT EXCEED .75 OUNCE.
5. TOOL COMPRESSION FORCE: THE COMPRESSION FORCE REQUIRED TO MAKE SATISFACTORY CRIMPS SHALL NOT EXCEED 65 POUNDS WHICH IS APPLICABLE FOR THE M39029/103-559 INTER CONTACT CRIMPED ON A M17/094-RG179 CABLE OR A COMPARABLE MATERIAL HARDNESS CONTACT/WIRE COMBINATION.
6. TOOL FRAME INDENTER GAGE LIMITS: INDENTER GO AND NO-GO INSPECTION GAGE LIMITS ARE DEFINED IN FIGURE 1 INDENTER GAGE LIMIT TABLE (SEE APPLICATION NOTES).
7. POSITIONER LOCK PLATE AND LOCATOR: THE POSITIONER LOCK PLATE SHALL PROVIDE POSITIVE DETENT FOR BAYONET LOCK PINS, AND A MEANS OF SECURING THE POSITIONER SO THAT IT CANNOT BE REMOVED WITHOUT REMOVING A LOCKING PIN OR WIRE. POSITIONER LOCATOR SHALL BE SPRING LOADED. SPRING SHALL DEPRESS .031 INCH MINIMUM WITH A FORCE OF 2 POUNDS  $\pm$  1 POUND.
8. CYCLE CONTROL RATCHET: THE TOOL SHALL BE MADE WITH A TAMPER-PROOF RATCHET WHICH LIMITS THE MOVEMENT OF THE TOOL HANDLE IN BOTH DIRECTIONS AND ASSURES A COMPLETE CLOSURE OF THE TOOL HANDLE PRIOR TO RELEASE.
9. PART IDENTIFICATION NUMBER (PIN):



APPLICATION NOTES:

1. SEE TABLE 1 FOR APPLICABLE CONTACTS FOR EACH POSITIONER. THE TABLE MAY NOT BE ALL INCLUSIVE AND THE COMPONENT SPECIFICATION TAKES PRECEDENCE IN ALL CASES WHERE THERE IS A DISAGREEMENT.

**TABLE 1 - M22520/46 POSITIONER-INNER CONTACT ACCOMMODATION INFORMATION**

POSITIONER PART NO. M22520/46	AS39029 INNER CONTACTS ACCOMMODATED (M39029/XX-YYY) <sup>1/</sup>	CONTACT SUPPLIER	POSITIONER INFORMATION (SHEET NO.)
-02	/102-558	TE CONNECTIVITY	7
-03	/102-558	AMPHENOL	7
-04	--	TE CONNECTIVITY	8

<sup>1/</sup> CONTACT SUPPLIER SYMBOL IS MARKED ON THE CONTACT AND LISTED IN AIR1351.

2. UNLESS OTHERWISE SPECIFIED, FOR TOOL APPLICATIONS INSPECTION GAGING IS RECOMMENDED TO BE PERFORMED WITH THE GAGE SPECIFIED IN FIGURE 1 ON TOOL SELECTOR NUMBER 8. OTHER GAGE PINS MAY BE USED PROVIDING THE DIMENSION AND TOLERANCE OF THE INDENTER GAGE LIMITS ARE AS SPECIFIED IN FIGURE 1. TOOL SHALL BE REJECTED IF GO OR NO-GO GAGE DOES NOT COMPLY.
3. AS22520/46 CONFIGURATION IS FOR HAND CRIMPING ONLY.

NOTICE

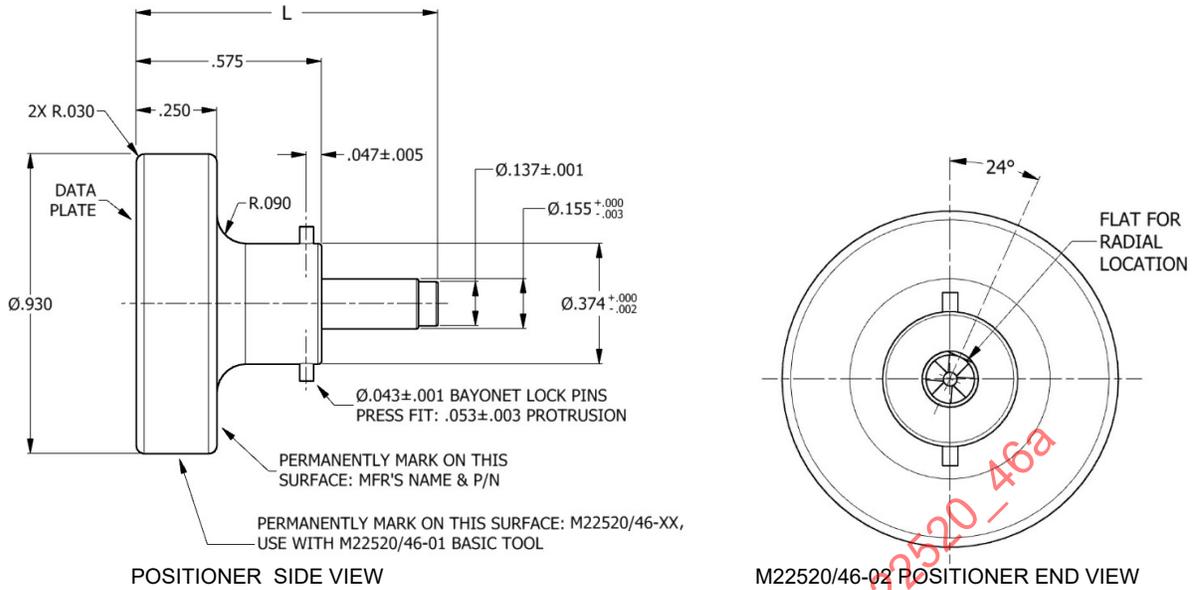
USE OF HAND CRIMPING TOOLS COVERED BY THIS SPECIFICATION AS A COMPONENT IN ANY POWERED "PRESS" MAY VIOLATE OSHA REGULATIONS CFR 1910.211.

SPECIFICATION NOTE:

1. REVISION INDICATOR: A CHANGE BAR (|) LOCATED IN THE LEFT MARGIN IS FOR THE CONVENIENCE OF THE USER IN LOCATING AREAS WHERE TECHNICAL REVISIONS, NOT EDITORIAL CHANGES, HAVE BEEN MADE TO THE PREVIOUS ISSUE OF THIS DOCUMENT. AN (R) SYMBOL TO THE LEFT OF THE DOCUMENT TITLE INDICATES A COMPLETE REVISION OF THE DOCUMENT, INCLUDING TECHNICAL REVISIONS. CHANGE BARS AND (R) ARE NOT USED IN ORIGINAL PUBLICATIONS, NOR IN DOCUMENTS THAT CONTAIN EDITORIAL CHANGES ONLY.

	<b>AEROSPACE STANDARD</b>	<b>AS22520™/46</b> SHEET 4 OF 7	<b>REV.</b> <b>A</b>
	CRIMPING TOOLS, TYPE 1, TERMINAL, HAND, WIRE TERMINATING FOR MINIATURE CO-AXIAL AND TRI-AXIAL INNER CONTACTS		

M22520/46-02, -03, -04, AND -05 POSITIONERS



PART NO.	L
M22520/46	±.020
-02	1.015
-03	.935
-04	.935

POSITIONER

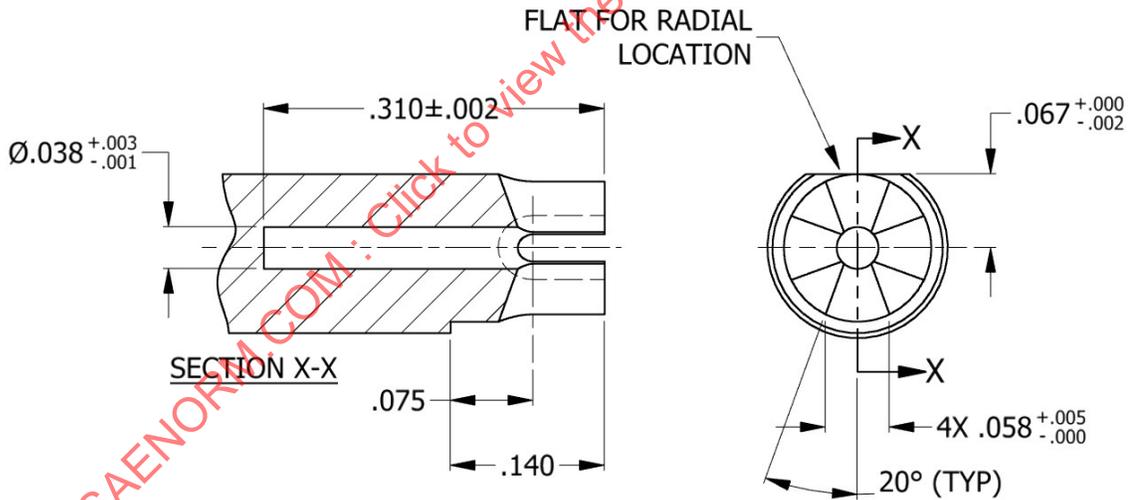


FIGURE 2 - M22520/46-02, 03, -04 , AND -05 POSITIONERS