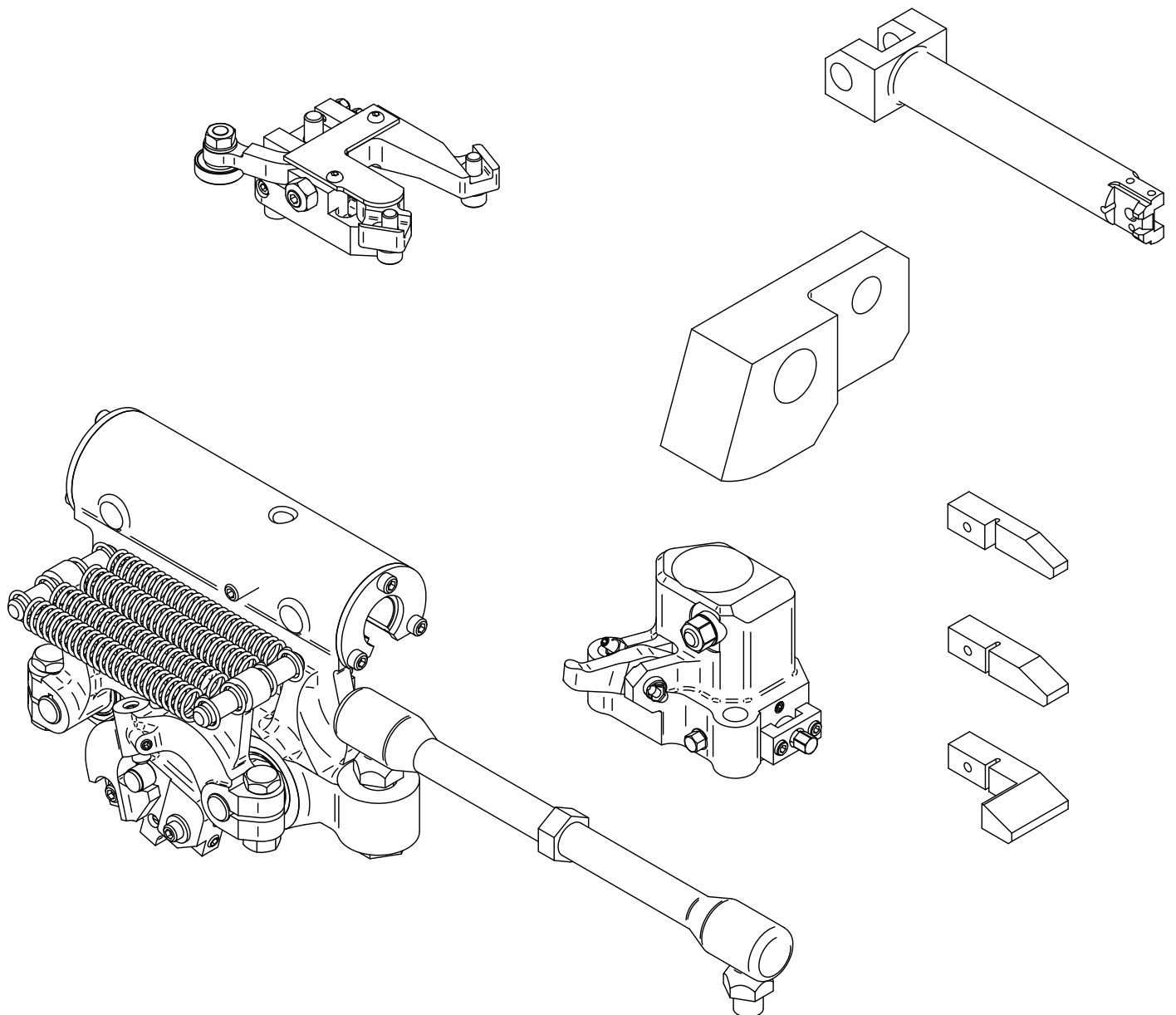




National Header



**When quoting or placing an order,
specify the following:**

- **Catalog & Page Number**
- **Serial Number**
- **Key Number**
- **Quantity**
- **Part Number (if available)**

**Please provide sample parts or prints
for items not found in this catalog.**

We at Star Metal Products look forward to serving you, and encourage you to review the following terms and conditions to ensure a mutually successful business transaction.

- Terms are net 30 days from shipment, F.O.B. Ourdock, Westlake, Ohio Freight Collect. All prices subject to change without notice.
- Our minimum billing is \$50.00
- Quotations are valid for 90 days unless otherwise specified.
- Star Metal Products Blanket Order Policy

Duration :

Blanket Orders will be held for a maximum time period of six months. Any line item open six months from the date of receipt of customer order will ship automatically. Duration of blanket order may extend up to one year, only if specific release quantities and release dates are supplied with customer order.

Releases :

Upon completion of job order, 25% of each line item (with a minimum of 1 piece) will be shipped to customer. The balance of each line item will be held for release by customer within the six month time frame.

- Cancellation will be subject to a charge for any applicable material used and labor employed for work in progress.
- **Returns :**
We regret that positively no tooling may be returned without factory authorization. Returns must be made within 60 days of receiving merchandise. We will not be responsible for shipping charges incurred by customers that deviate from this policy. We reserve the right to only repair tooling accepted under these conditions.

Cold Headers

1/8, 25, M34	Pg 3
3/16, #34, M56	Pg 4 - 5
34 2D3B	Pg 6 - 7
1/4, #45, M8 M68	Pg 8
5/16, #56, M10, M810	Pg 9 - 10
56 2D3B	Pg 10 - 12
3/8, #68, M1012, M12	Pg 13
1/2, #89, #810, M16	Pg 14
89 2D3B	Pg 14 - 15
1012, M20	Pg 16
1012 2D3B	Pg 16 - 17
31	Pg 21
51	Pg 18
61	Pg 19
62	Pg 20

Ball Headers

31 BH, 51 BH	Pg 21
81 BH, 111 BH	Pg 22
111 BH	Pg 22 - 24
141 BH, 201 BH	Pg 25
201 BH	Pg 26
241 COMBI HDR	Pg 27

Rivets Headers

M8 & 45	Pg 8
51	Pg 18
1/8, M3	Pg 28
3/16, M5	Pg 29
1/4	Pg 30
32	Pg 31

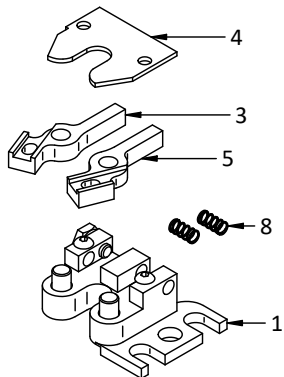
Punch Holders

Pg 32 - 33

NATIONAL 1/8, 25, M34 COLD HEADERS

1/8 & M34

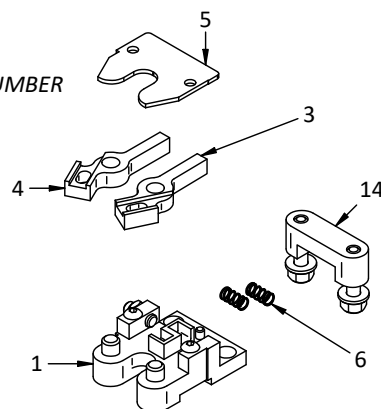
SPECIFY:
- SERIAL NUMBER
- KEY #



Key #	Description
1	TRANSFER HEAD
3	UPPER FINGER HOLDER
4	COVER
5	LOWER FINGER HOLDER
8	SPRING

25 & M34

SPECIFY:
- SERIAL NUMBER
- KEY #

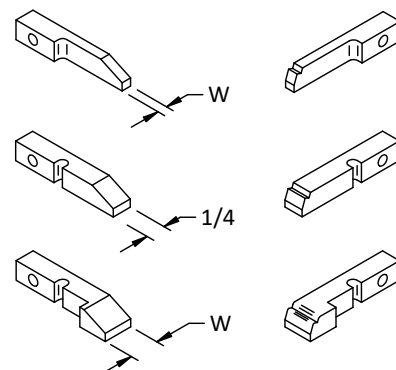
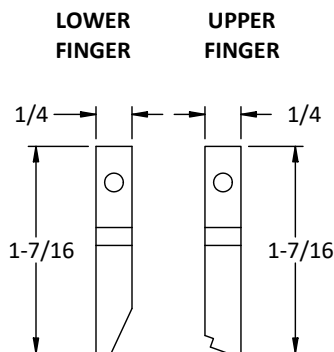


Key #	Description
1	TRANSFER HEAD
3	LOWER FINGER HOLDER
4	UPPER FINGER HOLDER
5	COVER
6	SPRING
14	CLAMP

Lower Part #	Wire Range	Upper Part #
3-18101L	0.126 / 0.156	3-18101U-1
3-18101L	0.071 / 0.125	3-18101U-2
3-18101L	0.040 / 0.070	3-18101U-3

EX: 3-18101U250-2
(U) Upper or (L) Lower
W - Width of Nose
Wire Range
UPPER HAND ONLY

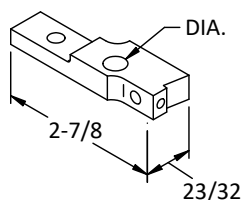
SPECIFY:
- PART #
- W



CUTTER HOLDER - SPECIFY DIA.

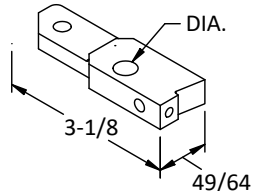
1/8

PART #: 3-2224



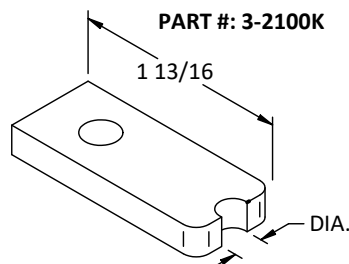
25 & M34

PART #: 3-2225

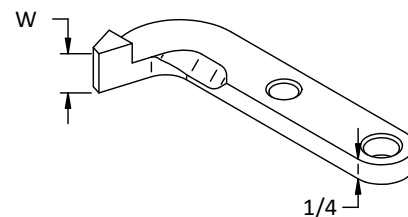


CUTOFF KNIFE

SPECIFY:
- WITH OR WITHOUT CARBIDE
- DIA.



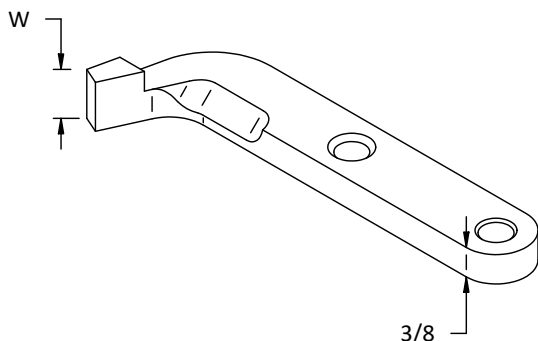
CARRY-OVER FINGER



Part #	Description	W
3-2108	MEDIUM	0.250
3-2116	LONG	0.500

NATIONAL 3/16, #34, M56 COLD HEADERS

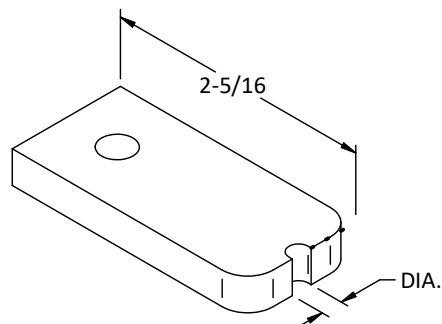
CARRY-OVER FINGER



Part #	Description	W
3-2109	MEDIUM	3/8
3-2117	LONG	5/8

CUTOFF KNIFE

PART #: 3-2101K

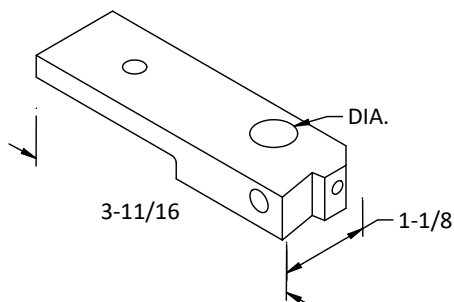


SPECIFY:

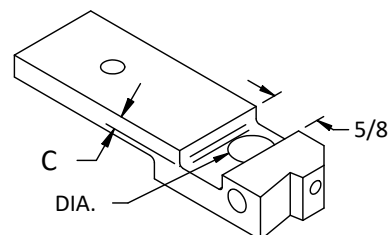
- WITH OR WITHOUT CARBIDE
- DIA.

CUTTER HOLDERS

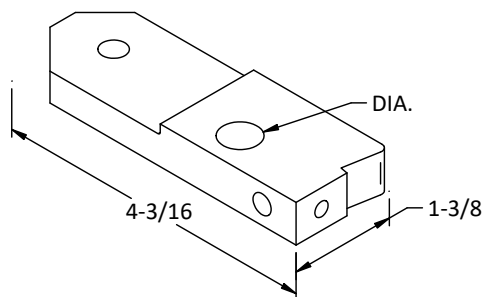
PART #: 3-2233
MEDIUM STROKE
SPECIFY DIA.



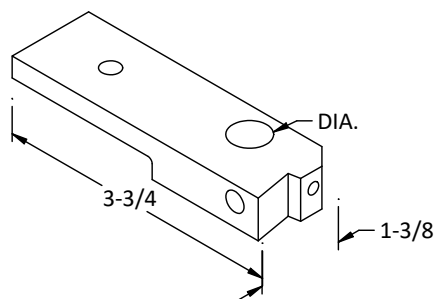
PART #: 3-2233S
SHORT
SPECIFY DIA. & C



PART #: 3-2234
LONG STROKE
SPECIFY DIA.



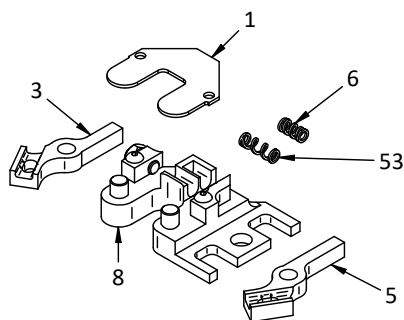
PART #: 3-2237
LONG STROKE
SPECIFY DIA.



NATIONAL 3/16, #34, M56 COLD HEADERS

3/16

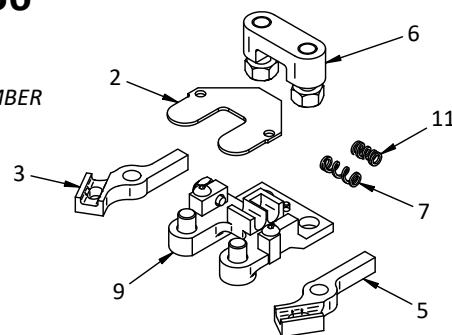
SPECIFY:
- SERIAL NUMBER
- KEY #



Key #	Description
1	COVER
3	UPPER FINGER HOLDER
5	LOWER FINGER HOLDER
6	SPRING - SHORT
8	TRANSFER HEAD
53	SPRING - LONG

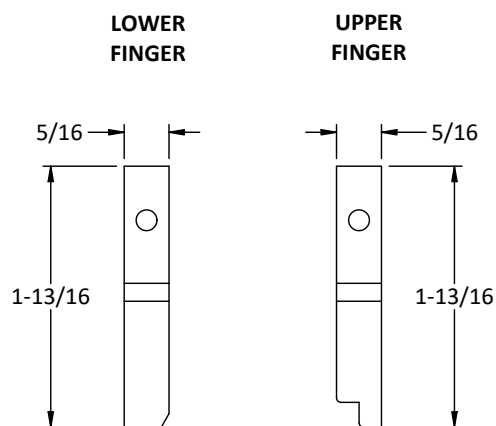
#34, M56

SPECIFY:
- SERIAL NUMBER
- KEY #



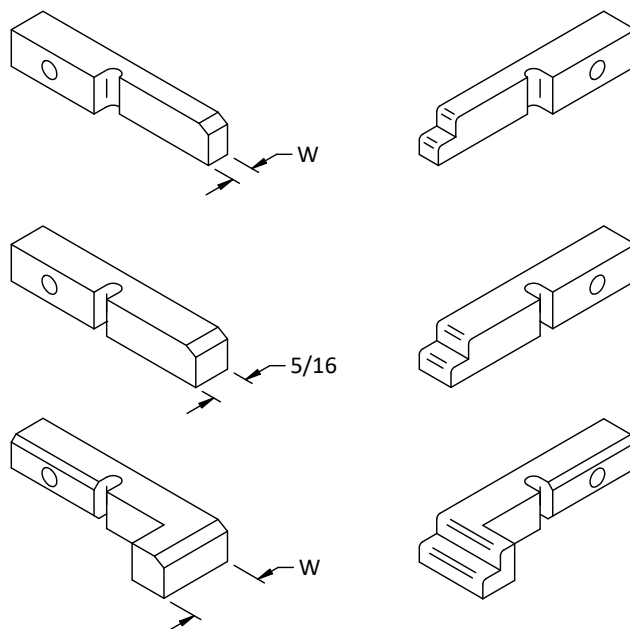
Key #	Description
2	COVER
3	UPPER FINGER HOLDER
5	LOWER FINGER HOLDER
6	CLAMP
7	SPRING - LONG
9	TRANSFER HEAD
11	SPRING - SHORT

TRANSFER FINGERS



SPECIFY:
- PART #
- W

Lower Part #	Wire Range	Upper Part #
3-1891L	0.219 / 0.250	3-1891U-1
3-1891L	0.188 / 0.218	3-1891U-2
3-1891L	0.157 / 0.187	3-1891U-3
3-1891L	0.126 / 0.156	3-1891U-4
3-1891L	0.094 / 0.125	3-1891U-5
3-1891L	0.063 / 0.093	3-1891U-6



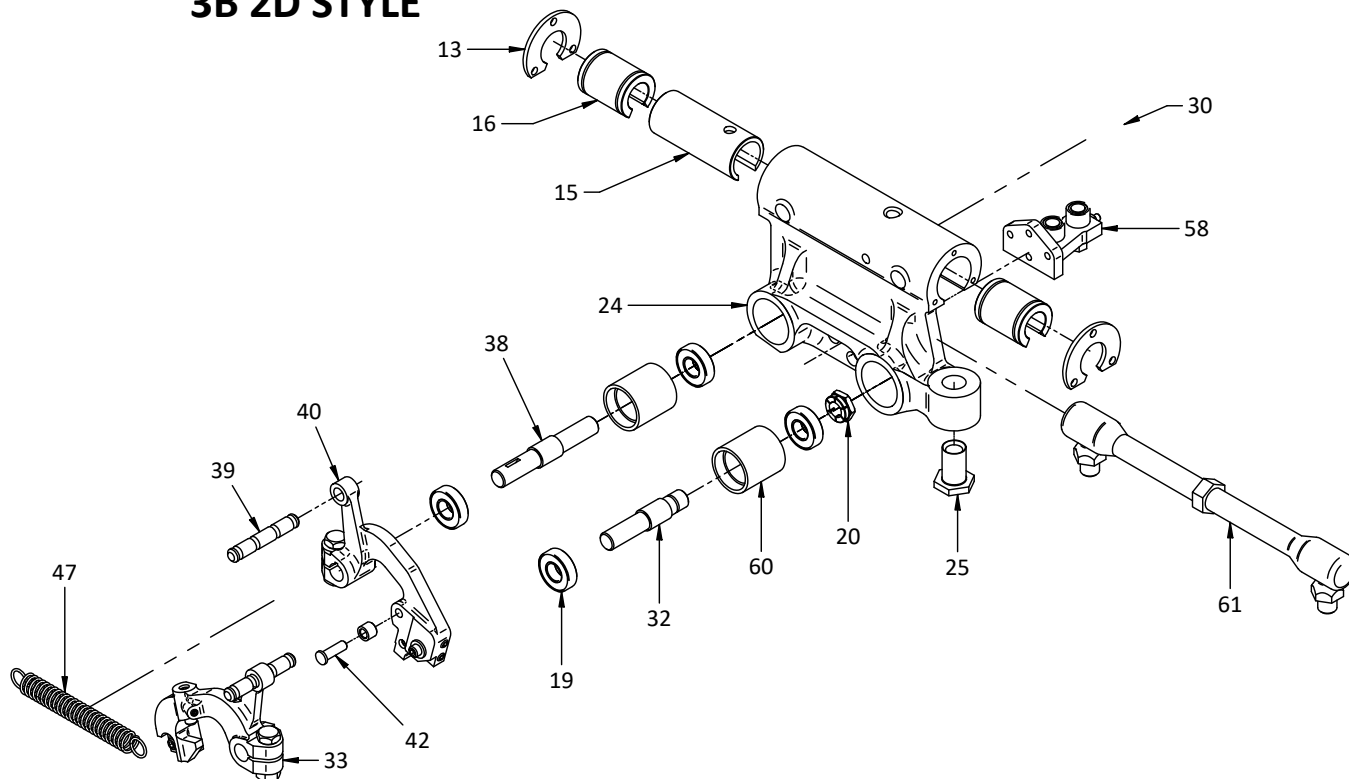
EX: 3-1891U312-2

(U) Upper or (L) Lower
W - Width of Nose
Wire Range
UPPER HAND ONLY

NATIONAL #34 COLD HEADERS

2ND STATION TRANSFER SLIDE

3B 2D STYLE

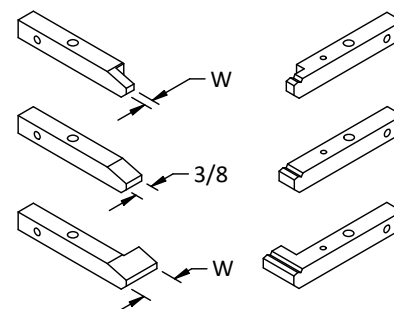
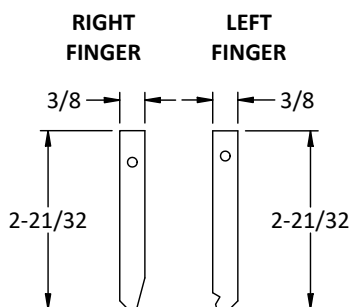


Key #	Description	Key #	Description
13	COVER	38	LONG SHAFT - LH
15	SPACER	39	SPRING MOUNT PIN
16	BUSHING	40	LEFT ARM W/ STRIPPER
19	BEARING	42	DRIVE PIN
20	LOCK NUT	47	SPRING
24	SLIDE	58	BRACKET
25	LINK SLEEVE	60	BEARING
32	SHORT SHAFT - RH	61	CONNECTION
33	RIGHT ARM		

Left Part #	Wire Range	Right Part #
3-3000L-1	0.063 / 0.125	3-3000R
3-3000L-2	0.126 / 0.187	3-3000R
3-3000L-3	0.188 / 0.250	3-3000R
3-3000L-4	0.251 / 0.312	3-3000R

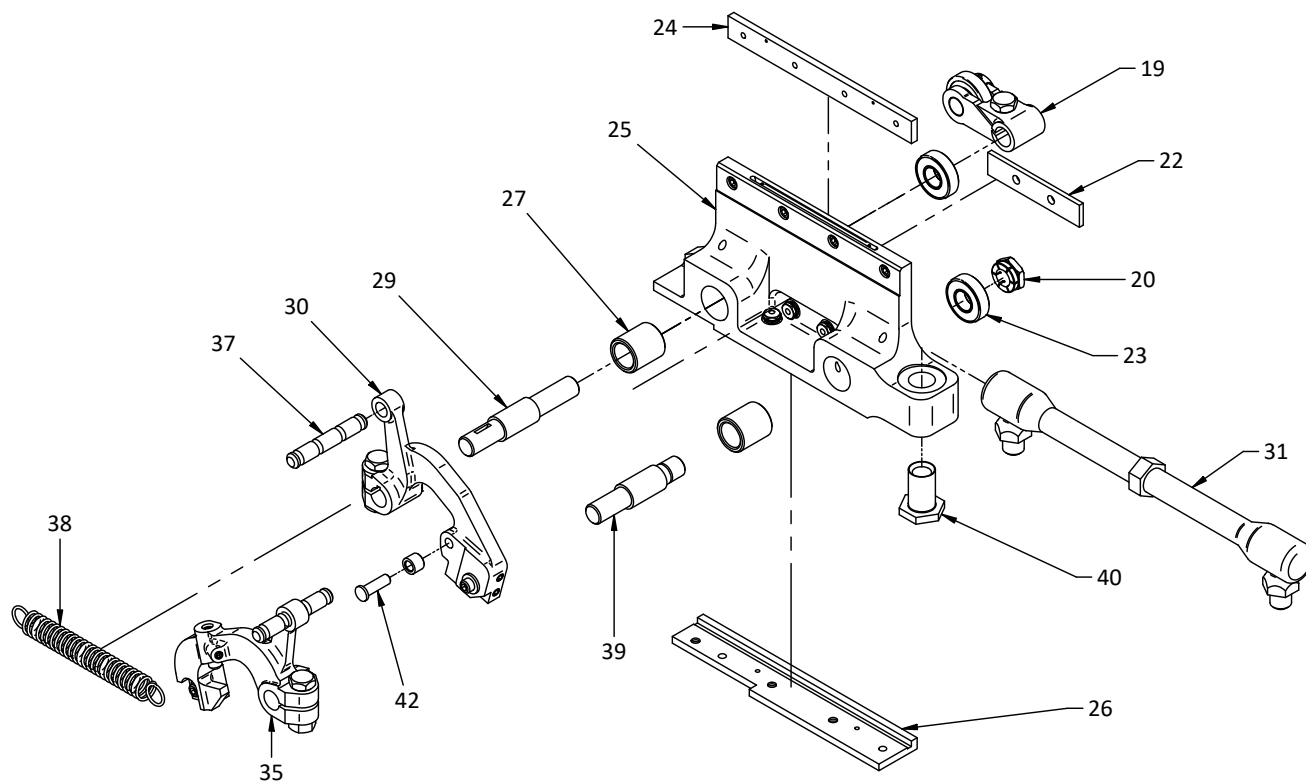
EX: 3-3000L375-2
 (L) Left or (R) Right Hand
 W - Width of Nose
 Wire Range
 LEFT HAND ONLY

SPECIFY:
 - PART #
 - W



NATIONAL #34 COLD HEADERS

2ND STATION TRANSFER SLIDE BOLTMAKER STYLE

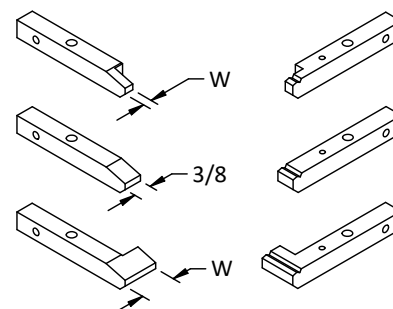
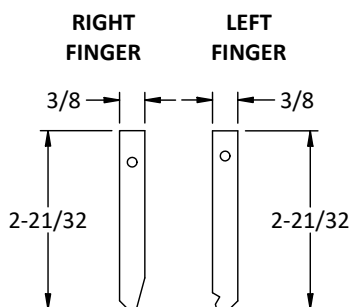


Key #	Description	Key #	Description
29	LONG ARM SHAFT	30	ARM
19	LEVER	31	CONNECTION
20	LOCK NUT	35	RIGHT ARM
22	RETAINER	37	SPRING MOUNT PIN
23	BEARING	38	SPRING
24	TOP WEAR PLATE	39	SHORT ARM SHAFT
25	SLIDE BODY	40	LINK SLEEVE
26	WEAR PLATE	42	DRIVE PIN
27	BUSHING		

Left Part #	Wire Range	Right Part #
3-3000L-1	0.063 / 0.125	3-3000R
3-3000L-2	0.126 / 0.187	3-3000R
3-3000L-3	0.188 / 0.250	3-3000R
3-3000L-4	0.251 / 0.312	3-3000R

EX: 3-3000L375-2
 (L) Left or (R) Right Hand —
 W - Width of Nose
 Wire Range
 LEFT HAND ONLY

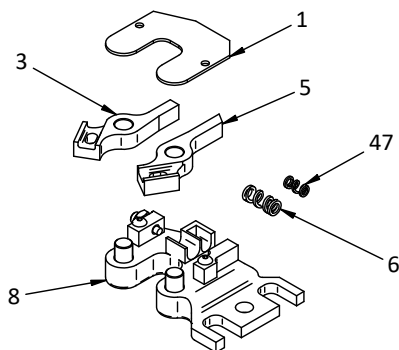
SPECIFY:
 - PART #
 - W



NATIONAL 1/4, #45, M8, M68 COLD HEADER: M8 & 45 TRH

1/4

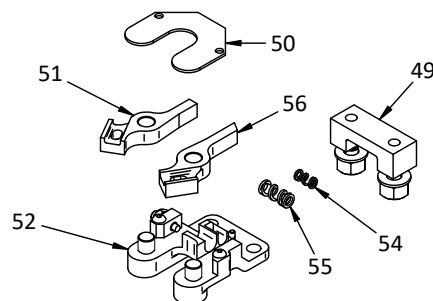
SPECIFY:
- SERIAL NUMBER
- KEY #



Key #	Description
1	COVER
3	UPPER FINGER HOLDER
5	LOWER FINGER HOLDER
6	SPRING - LONG
8	TRANSFER HEAD
47	SPRING - SHORT

#45 (M68) & M8

SPECIFY:
- SERIAL NUMBER
- KEY #

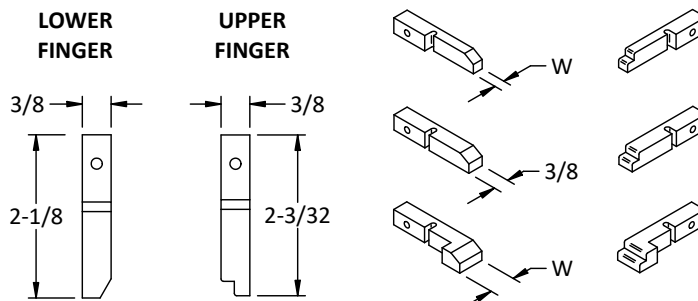


Key #	Description
49	CLAMP
50	COVER
51	UPPER FINGER HOLDER
52	TRANSFER HEAD
54	SPRING - SHORT
55	SPRING - LONG
56	LOWER FINGER HOLDER

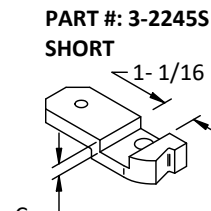
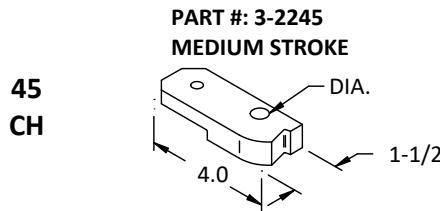
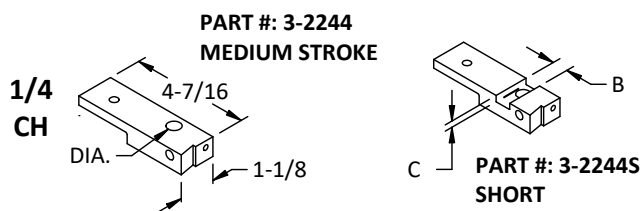
Lower Part #	Wire Range	Upper Part #
3-1887L-1	0.251 / 0.312	3-1887U-1
3-1887L-2	0.188 / 0.250	3-1887U-2
3-1887L-2	0.146 / 0.187	3-1887U-3
3-1887L-2	0.100 / 0.145	3-1887U-4

EX: **3-1887U375-2**
(U) Upper or (L) Lower
W - Width of Nose
Wire Range

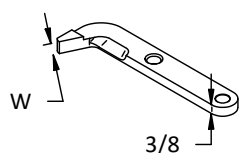
SPECIFY:
- PART #
- W



CUTTER HOLDER - SPECIFY PART #, B, C, & DIA.

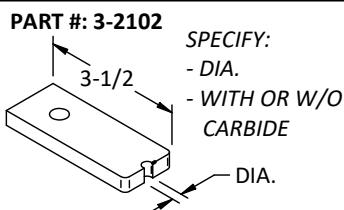


CARRY-OVER FINGER

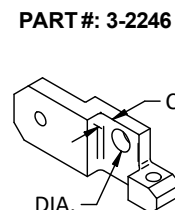


Part #	Description	W
3-2110	Medium	3/8
3-2118	Long	5/8

CUTOFF KNIFE

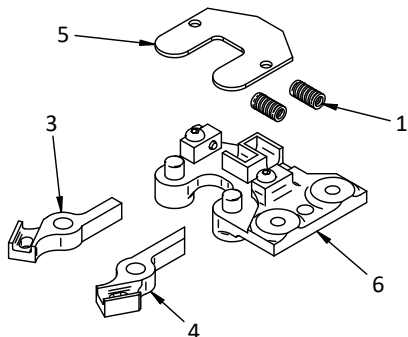


45 & M8 TRH



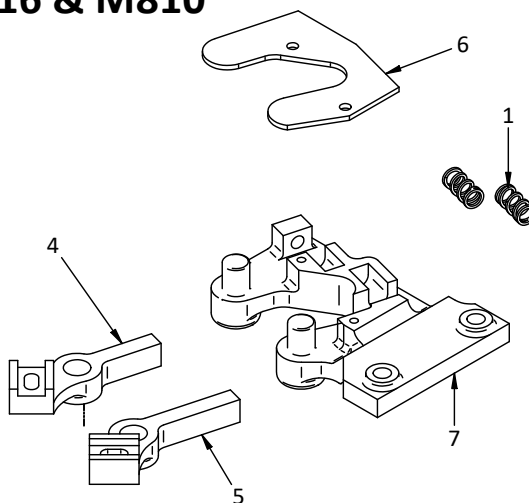
NATIONAL 5/16, #56, M10, M810 HEADER

5/16



Key #	Description
1	SPRING
3	UPPER FINGER HOLDER
4	LOWER FINGER HOLDER
5	COVER
6	TRANSFER HEAD

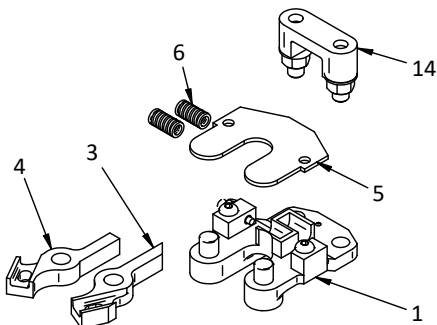
5/16 & M810



Key #	Description
1	SPRING
4	UPPER FINGER HOLDER
5	LOWER FINGER HOLDER
6	COVER
7	TRANSFER HEAD

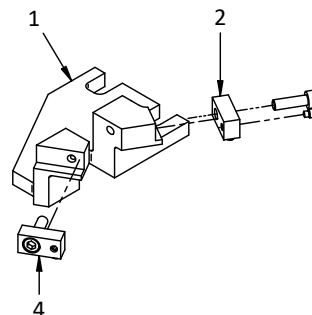
SPECIFY:
- SERIAL NUMBER
- KEY #

#56, M10, M810



Key #	Description
1	TRANSFER HEAD
3	LOWER FINGER HOLDER
4	UPPER FINGER HOLDER
5	COVER
6	SPRING
14	CLAMP

M810



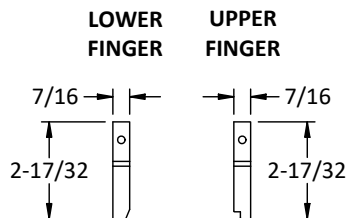
Key #	Description
1	TRANSFER HEAD
2	BLOCK
4	BLOCK

NATIONAL 5/16, #56, M10, M810 HEADER

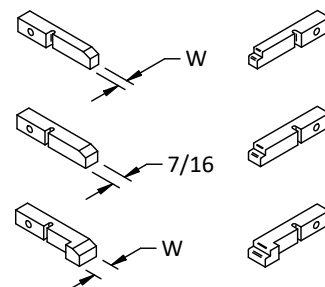
Lower Part #	Wire Range	Upper Part #
3-1877L-1	0.313 / 0.375	3-1877U-1
3-1877L-2	0.251 / 0.312	3-1877U-2
3-1877L-3	0.188 / 0.250	3-1877U-3
3-1877L-4	0.125 / 0.187	3-1877U-4

Ex: 3-1877U437-1

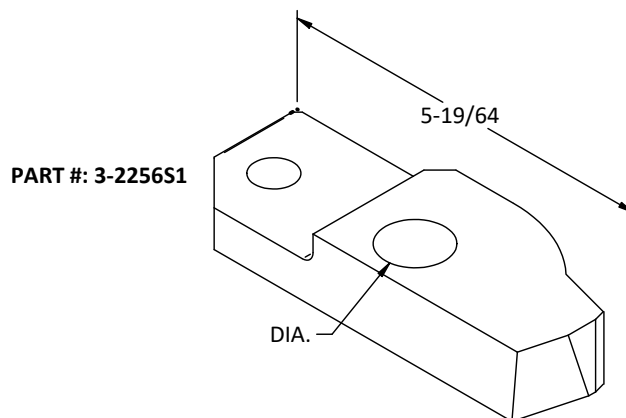
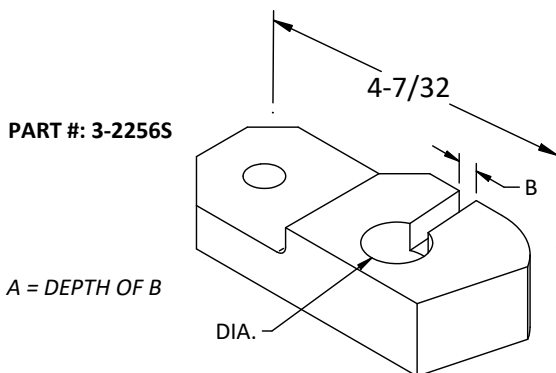
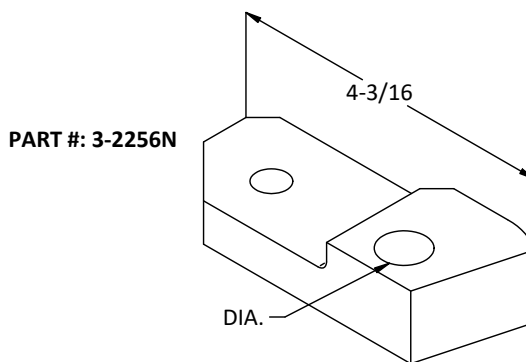
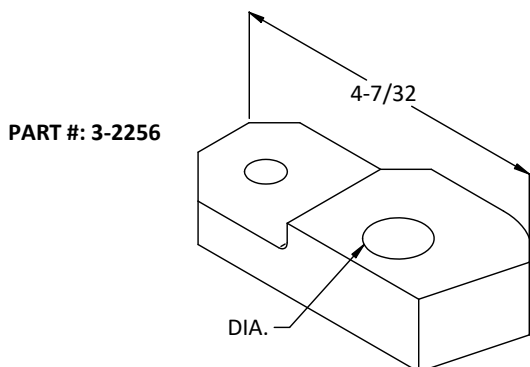
(U) Upper or (L) Lower
W - Width of Nose



SPECIFY:
- PART #
- W

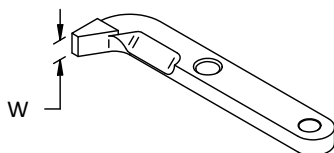


#56 CUTTER HOLDER - SPECIFY A, B, & DIA.



5/16 CARRY-OVER FINGER

Part #	Description	W
3-2111	Medium	1/2
3-2119	Long	5/8

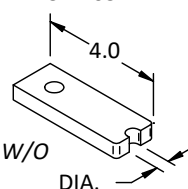


5/16 CUTOFF KNIFE

PART #: 3-2103K

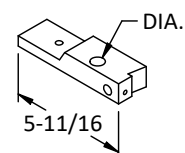
SPECIFY:

- DIA.
- WITH OR W/O
CARBIDE



5/16 CUTTER HOLDER

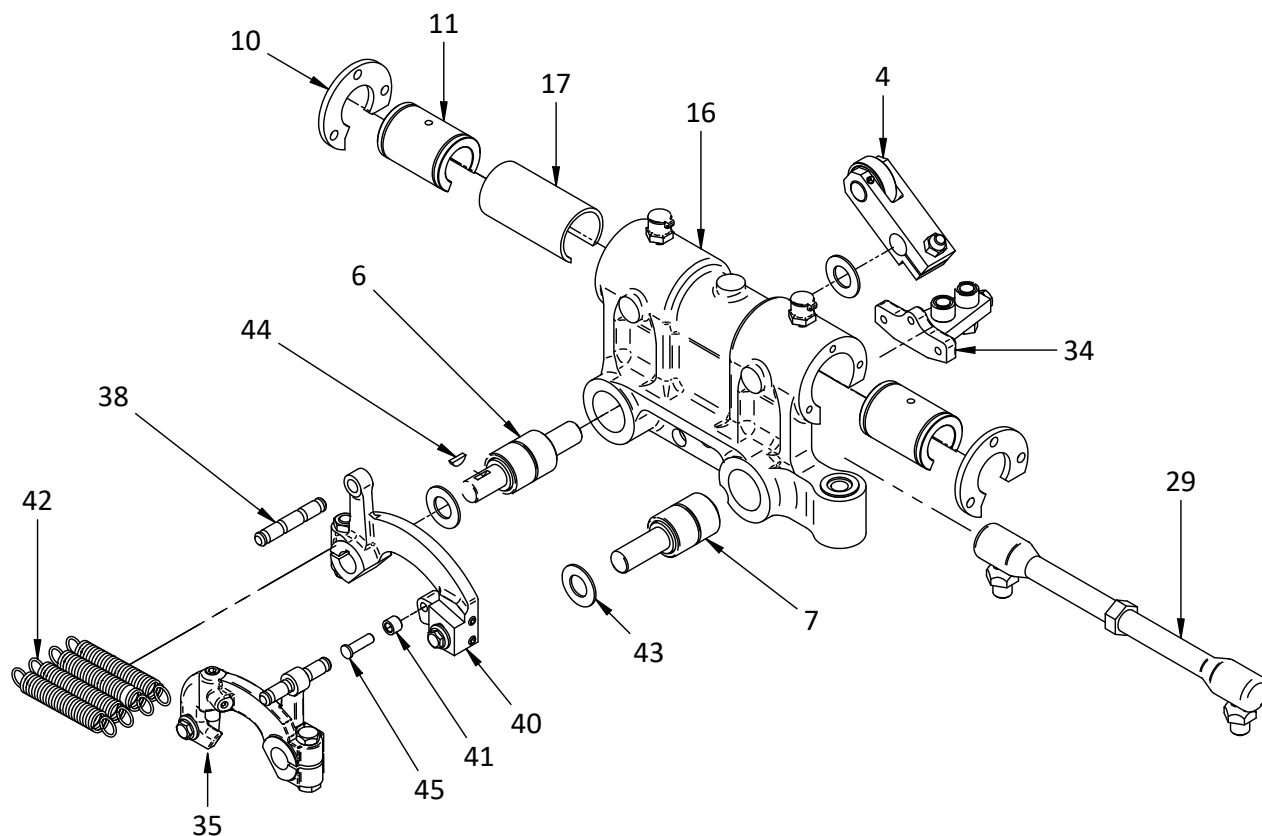
PART #: 3-2255



SPECIFY:
- DIA.

NATIONAL #56 HEADER

2ND STATION 3B 2D



Key #	Description	Key #	Description
34	BRACKET	35	ARM
4	LEVER	38	SPRING MOUNT PIN
6	ARM SHAFT - LONG	40	LEFT ARM
7	ARM SHAFT - SHORT	41	BUSHING
10	COVER PLATE	42	SPRING
11	BUSHING	43	SPACER
16	SLIDE	44	KEY
17	SLIDE BUSHING SPACER	45	PIN
29	CONNECTION		

Left Part #	Wire Range	Right Part #
3-3003L-1	0.080 / 0.155	3-3003R-1
3-3003L-2	0.156 / 0.200	3-3003R-1
3-3003L-3	0.201 / 0.295	3-3003R-1
3-3003L-4	0.296 / 0.385	3-3003R-1
3-3003L-5	0.386 / 0.500	3-3003R-2

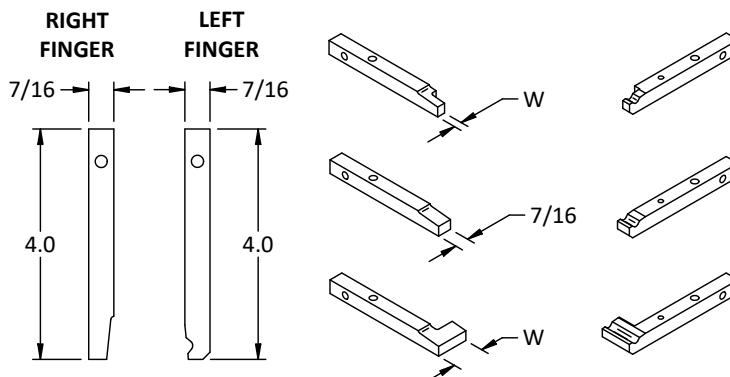
Ex: 3-3003L437-1

(L) Left or (R) Right

W - Width of Nose

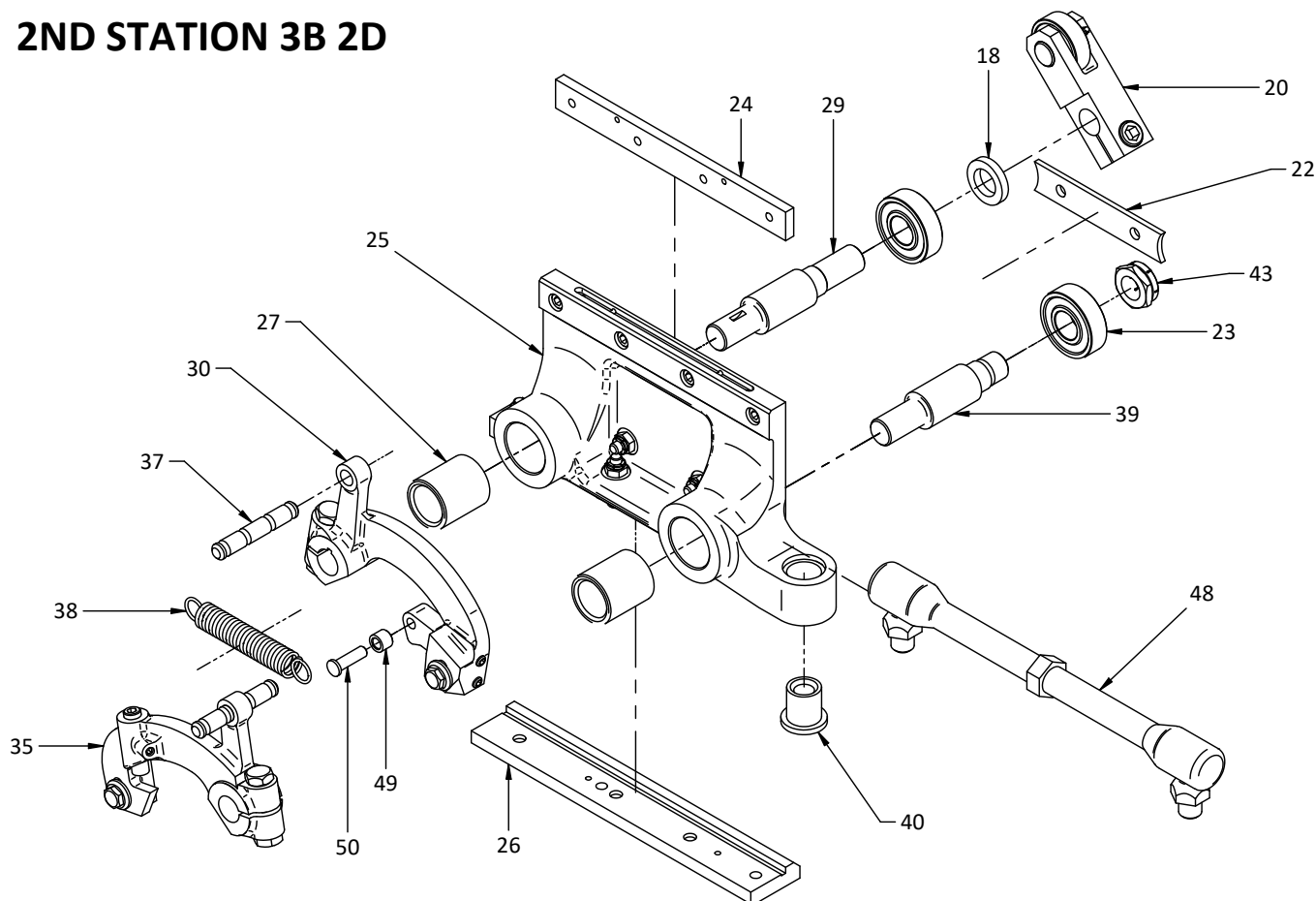
Wire Range

SPECIFY:
- PART #
- W



NATIONAL #56 CONVERTIBLE HEADER

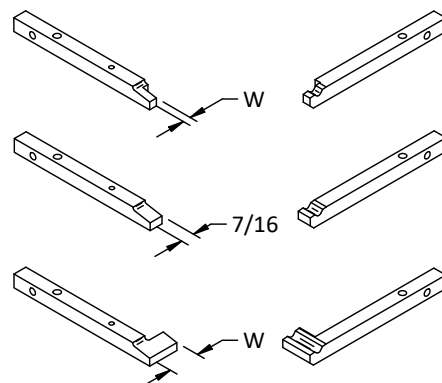
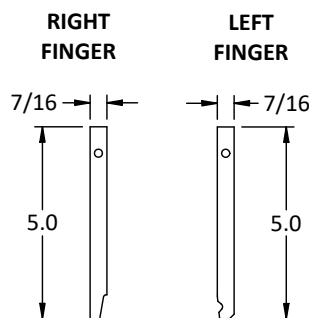
2ND STATION 3B 2D



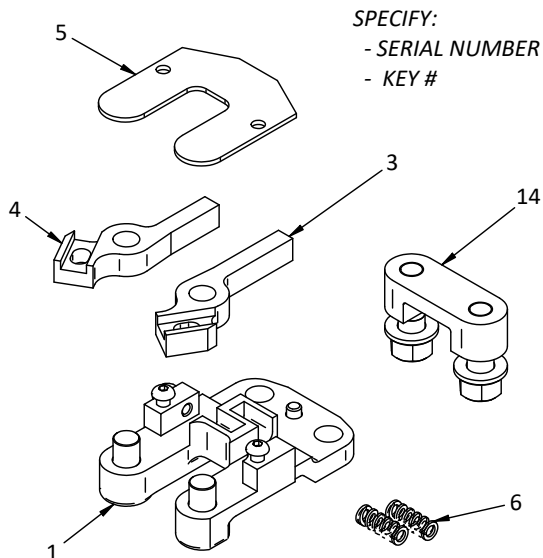
Key #	Description	Key #	Description	Key #	Description
18	WASHER	26	BOTTOM WEAR PLATE	39	RIGHT ARM SHAFT
20	ROLLER LEVER	27	BUSHING	40	STUD BUSHING
22	RETAINER	29	LEFT ARM SHAFT	43	LOCK NUT
23	BEARING	30	ARM	48	CONNECTION
24	TOP WEAR PLATE	35	RIGHT ARM	49	BUSHING
25	TRANSFER SLIDE BODY	37	SPRING MOUNT PIN	50	PIN
		38	SPRING		

Left Part #	Wire Range	Right Part #
3-3003L-1	0.080 / 0.155	3-3003R-1
3-3003L-2	0.156 / 0.200	3-3003R-1
3-3003L-3	0.201 / 0.295	3-3003R-1
3-3003L-4	0.296 / 0.385	3-3003R-1
3-3003L-5	0.386 / 0.500	3-3003R-2

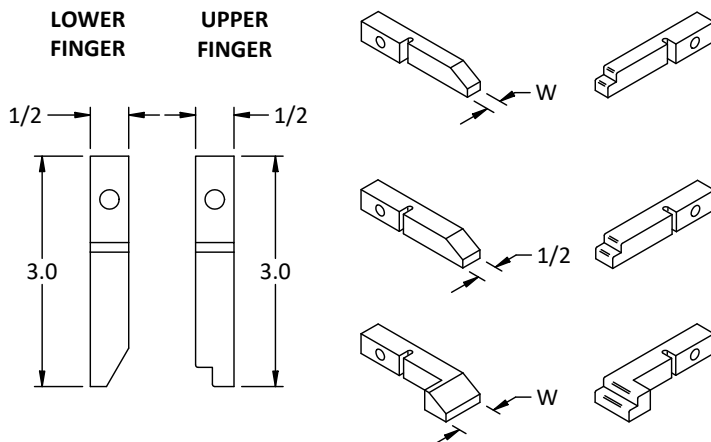
Ex: 3-3003CL437-1
 (L) Left or (R) Right
 W- Width of Nose
 Wire Range
 SPECIFY:
 - PART #
 - W



NATIONAL 3/8, #68, M1012, M12 COLD HEADER



Key #	Description
1	TRANSFER HEAD
3	LOWER FINGER HOLDER
4	UPPER FINGER HOLDER
5	COVER PLATE
6	SPRING
14	CLAMP



EX: 3-1834U500-2

(U) Upper or (L) Lower
W - Width of Nose
Wire Range

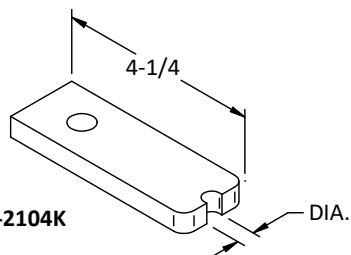
SPECIFY:
- PART #
- W

Lower Part #	Wire Range	Upper Part #
3-1834L-1	0.438 / 0.500	3-1834U-1
3-1834L-2	0.376 / 0.437	3-1834U-2
3-1834L-3	0.313 / 0.375	3-1834U-3
	0.251 / 0.312	3-1834U-4
3-1834L-4	0.125 / 0.250	3-1834U-5

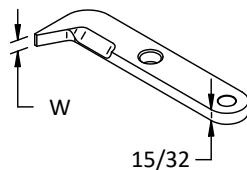
CUTOFF KNIFE

SPECIFY:
- DIA.
- WITH OR WITHOUT CARBIDE

PART #: 3-2104K

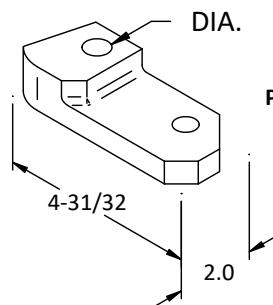


CARRY-OVER FINGER

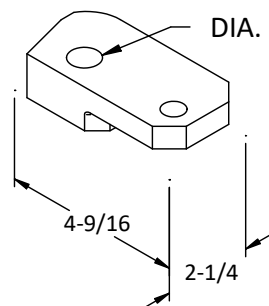


Part #	Description	W
3-2104	SHORT	1/4
3-2112	MEDIUM	15/32
3-2120	LONG	3/4

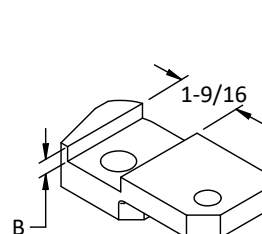
CUTTER HOLDER - SPECIFY PART #, B, & DIA.



**NEW STYLE
MEDIUM
PART #: 3-2268**



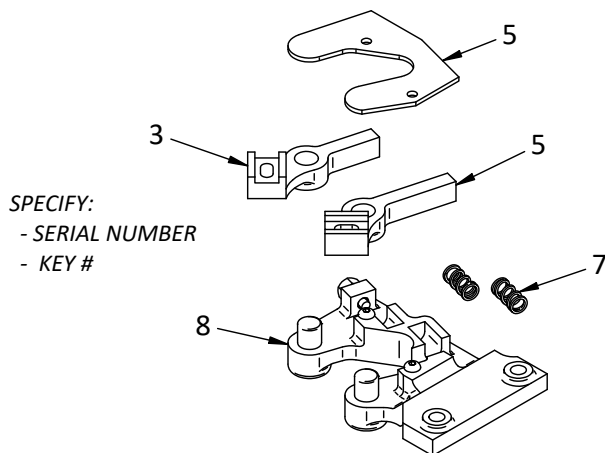
**OLD STYLE
MEDIUM
PART #: 3-2269**



**OLD STYLE
SHORT
PART #: 3-2269S**

NATIONAL 1/2, #89, #810, M16 COLD HEADER

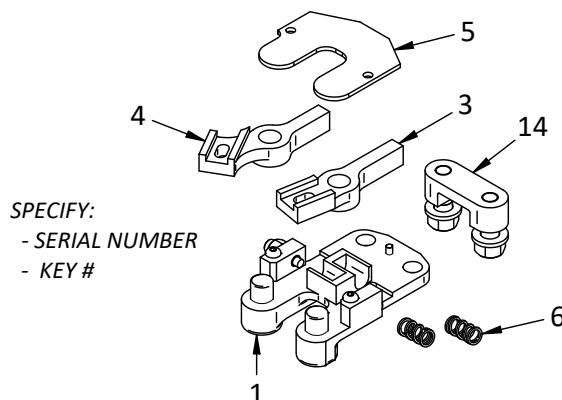
1/2 & #810



SPECIFY:
- SERIAL NUMBER
- KEY #

Key #	Description
1	COVER PLATE
3	UPPER FINGER HOLDER
5	LOWER FINGER HOLDER
7	SPRING
8	TRANSFER HEAD

#89, M16, #810



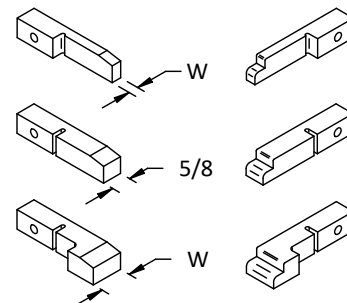
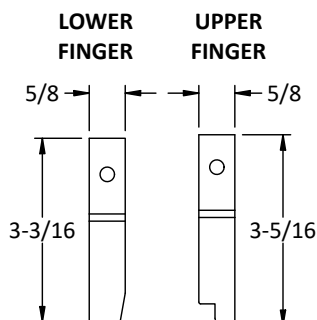
SPECIFY:
- SERIAL NUMBER
- KEY #

Key #	Description
1	TRANSFER HEAD
3	LOWER FINGER HOLDER
4	UPPER FINGER HOLDER
5	COVER PLATE
6	SPRING
14	CLAMP

Lower Part #	Wire Range	Upper Part #
3-1811L	0.501 / 0.625	3-1811U-1
3-1811L	0.375 / 0.500	3-1811U-2
3-1811LS	0.250 / 0.374	3-1811U-3

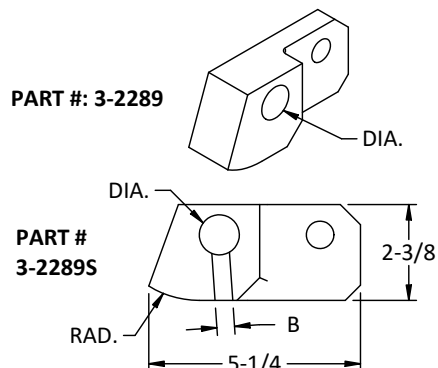
EX: 3-1811U625-2
(U) Upper or (L) Lower
W - Width of Nose
Wire Range

SPECIFY:
- PART #
- W

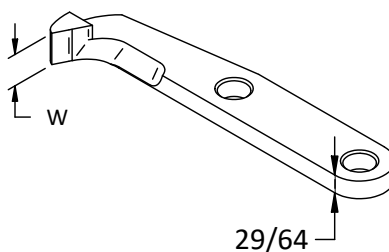


CUTTER HOLDER

SPECIFY PART #, B,
Depth of B, RAD., & DIA.

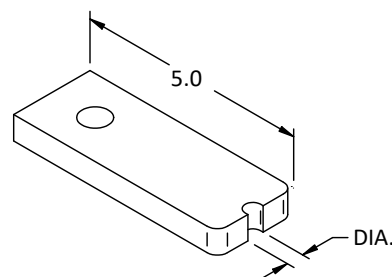


CARRY-OVER FINGER



Part #	Description	W
3-2113	MEDIUM	9/16
3-2121	LONG	1.0

CUTOFF KNIFE

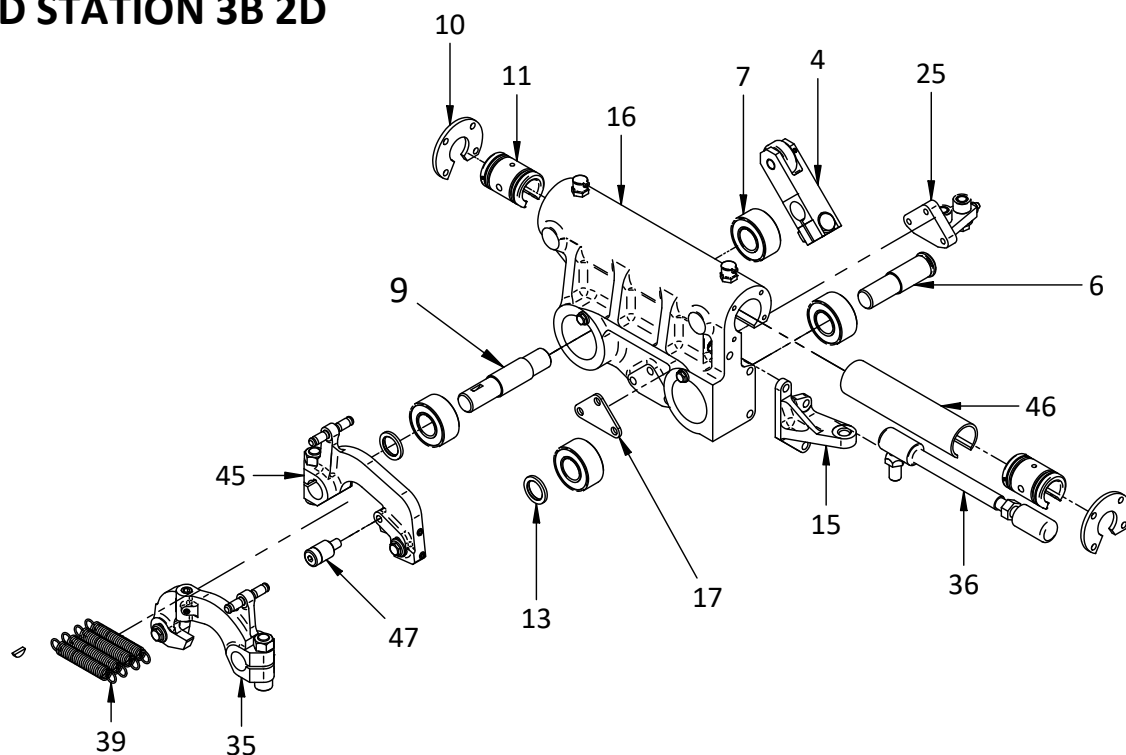


PART #: 3-2105K

SPECIFY:
- D
- WITH OR WITHOUT CARBIDE

NATIONAL #89 COLD HEADER

2ND STATION 3B 2D

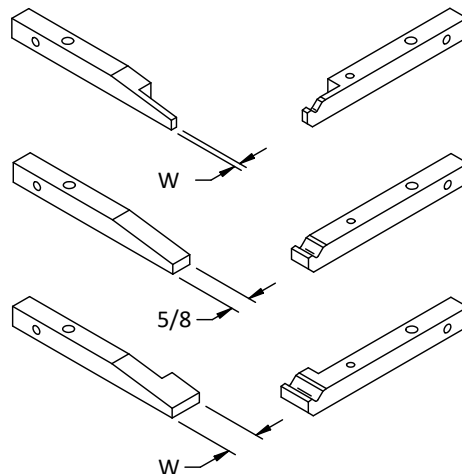
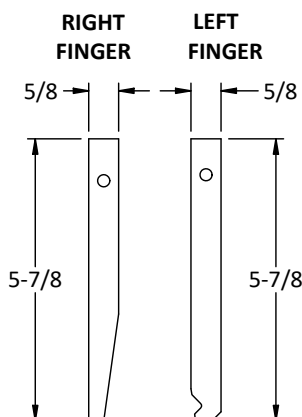


Key #	Description	Key #	Description	Key #	Description
4	BRACKET	11	BUSHING	35	RIGHT ARM
6	SHAFT	13	SPACER	36	CONNECTION
7	BEARING	15	BRACKET	39	SPRING
9	SHAFT	16	SLIDE	45	LEFT ARM
10	PLATE	17	PLATE	46	SPACER
		25	BRACKET	47	BUSHING

Left Part #	Wire Range	Right Part #
3-3006L-1	0.187 / 0.312	3-3006R
3-3006L-2	0.313 / 0.375	3-3006R
3-3006L-3	0.376 / 0.500	3-3006R
3-3006L-4	0.501 / 0.750	3-3006R

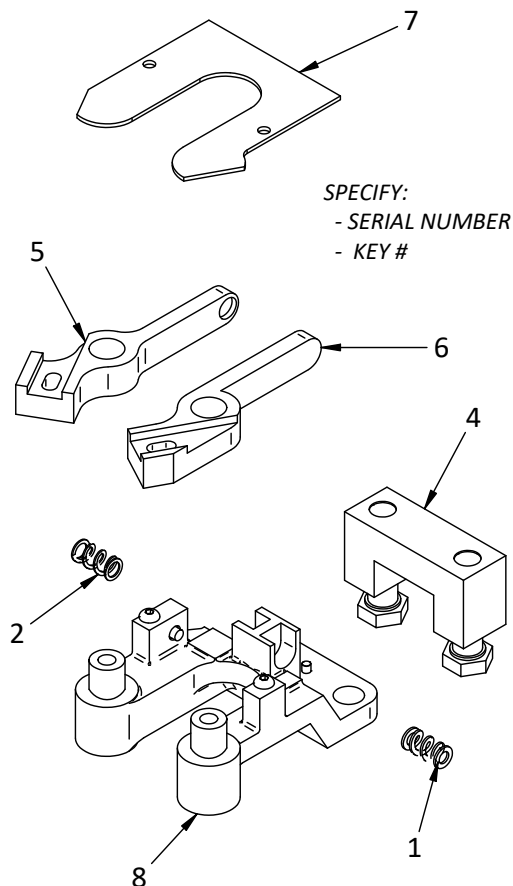
Ex: 3-3006L625-2
 (L) Left or (R) Right
 Width of Nose
 Wire Range
 LEFT ONLY

SPECIFY:
 - PART #
 - W



NATIONAL #1012, M20 COLD HEADER

#1012 & M20

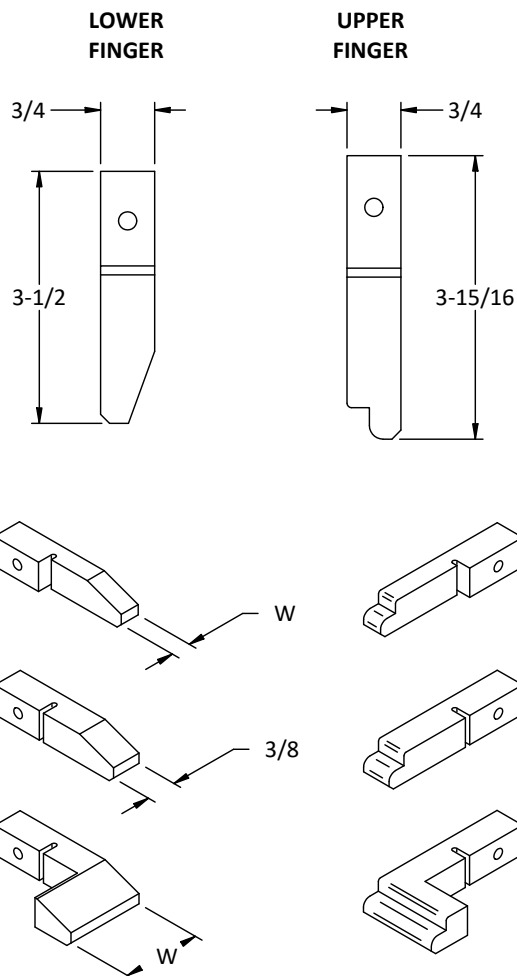
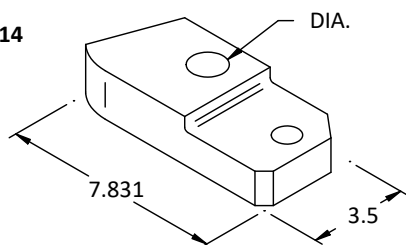


SPECIFY:
- SERIAL NUMBER
- KEY #

Key #	Description
1	LOWER SPRING
2	UPPER SPRING
3	CLAMP
4	UPPER FINGER HOLDER
5	LOWER FINGER HOLDER
6	COVER
7	TRANSFER HEAD

CUTTER HOLDER - SPECIFY DIA.

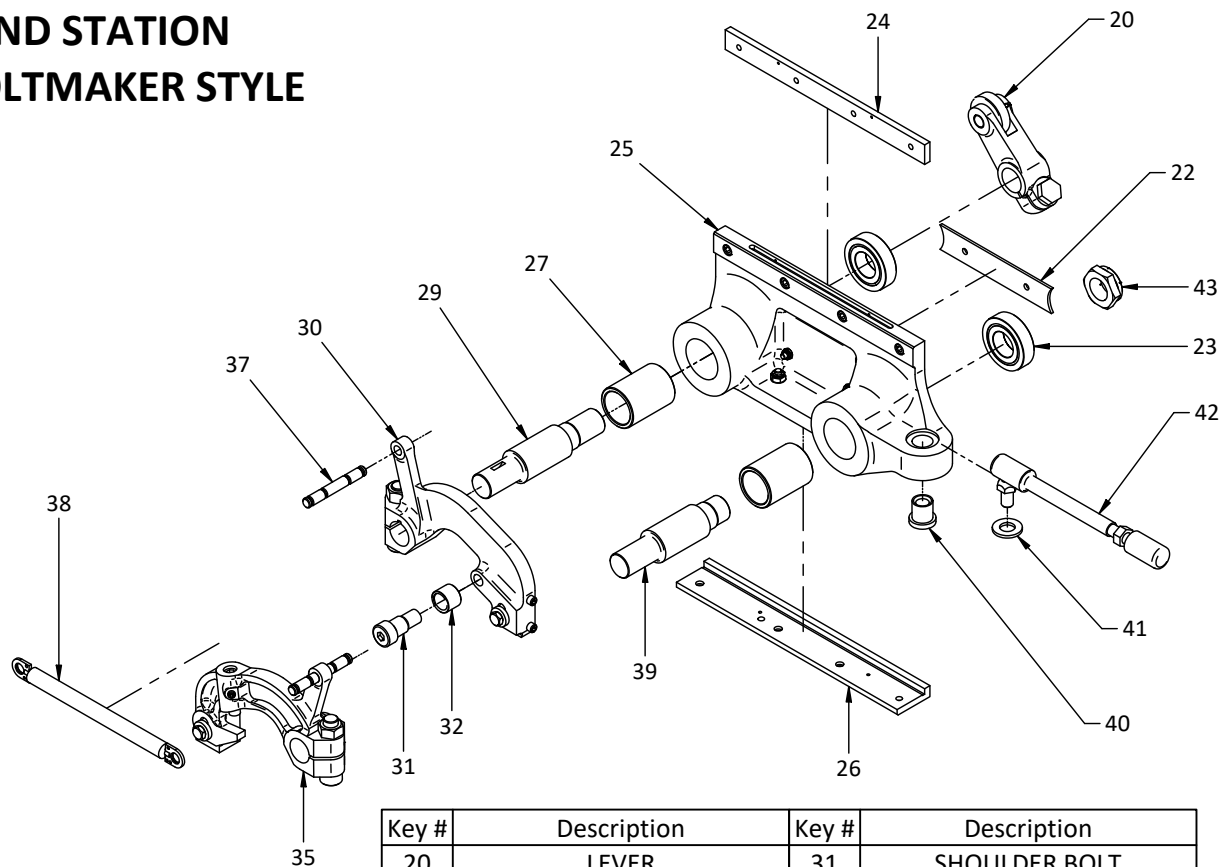
PART #: 3-2214



Lower Part #	Wire Range	Upper Part #
3-1812L-1	0.626 / 0.750	3-1812U-1
3-1812L-2	0.501 / 0.625	3-1812U-2
3-1812L-3	0.375 / 0.500	3-1812U-3
3-1812L-4	0.875 / 1.000	3-1812U-4
3-1812L-5	0.750 / 0.875	3-1812U-5

SPECIFY:
- PART #
- W

Ex: 3-1812L750-2
(L) Lower or (U) Upper Wire Range
W - Width of Nose

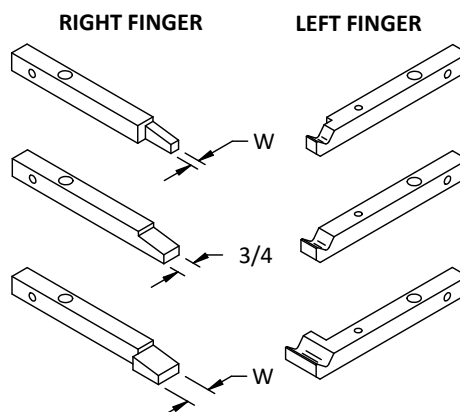
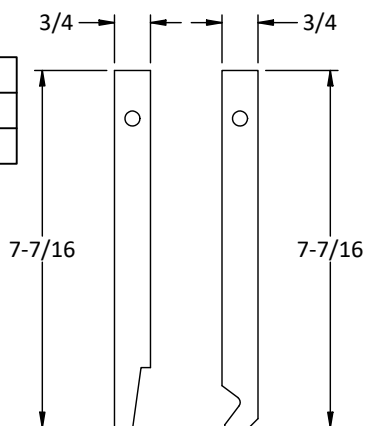
NATIONAL #1012 COLD HEADER**2ND STATION
BOLTMAKER STYLE**

Key #	Description	Key #	Description
20	LEVER	31	SHOULDER BOLT
22	RETAINER	32	BUSHING
23	BEARING	35	ARM
24	TOP WEAR PLATE	37	PIN
25	TRANSFER SLIDE BODY	38	BOTTOM SPRING
26	BOTTOM WEAR PLATE	39	SHAFT
27	BUSHING	40	BUSHING
29	SHAFT	41	WASHER
30	ARM	42	CONNECTION
		43	NUT

Left Part #	Wire Range	Right Part #
3-3009L-1	0.312 / 0.500	3-3009R
3-3009L-2	0.501 / 0.875	3-3009R

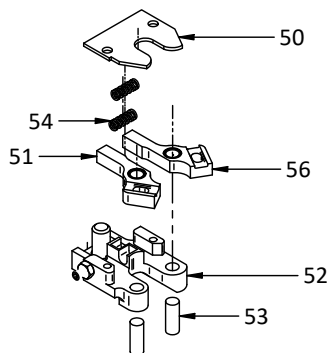
Ex: 3-3009L750-1
 (L) Left or (R) Right
 W- Width of Nose
 Wire Range
 LEFT ONLY

SPECIFY:
 - PART #
 - W

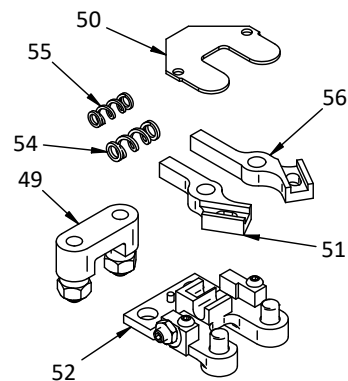


NATIONAL 51 COLD HEADER & 51 RIVET HEADER

SPECIFY SERIAL NUMBER AND KEY #



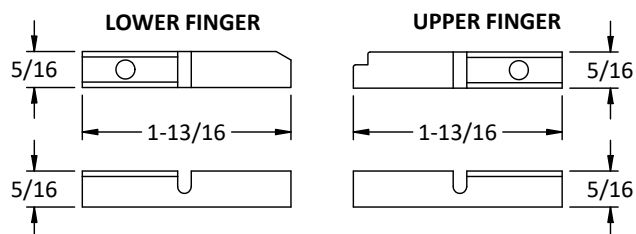
Key #	Description
50	PLATE
51	FINGER HOLDER - TOP
52	TRANSFER HEAD
53	CARBIDE PIN
54	SPRING
56	FINGER HOLDER - BOTTOM



Key #	Description
49	CLAMP
50	COVER PLATE
51	UPPER FINGER HOLDER
52	TRANSFER HEAD
54	SPRING
55	SPRING
56	LOWER FINGER HOLDER

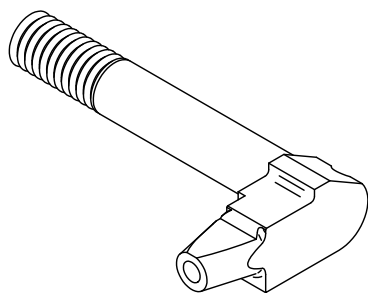
Lower Part #	Wire Range	Upper Part #
3-1851L313-1	0.219 / 0.250	3-1851U313-1
3-1851L313-2	0.188 / 0.218	3-1851U313-2
3-1851L313-3	0.157 / 0.187	3-1851U313-3
3-1851L313-4	0.126 / 0.156	3-1851U313-4
3-1851L313-5	0.094 / 0.125	3-1851U313-5
3-1851L313-6	0.063 / 0.093	3-1851U313-6

SPECIFY:
-PART #



WIRE STOP

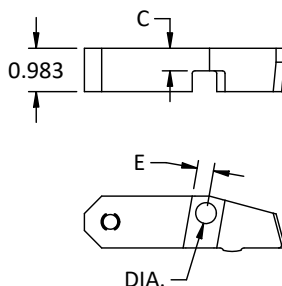
PART #: 3-51WS



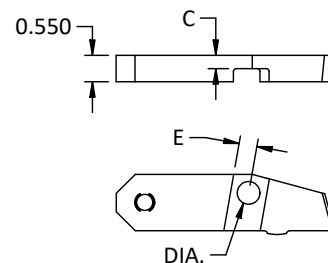
CUTTER HOLDERS

SPECIFY PART #, DIA., C, & E

51 L.S. D.S. HEADER
PART #: 3-1852

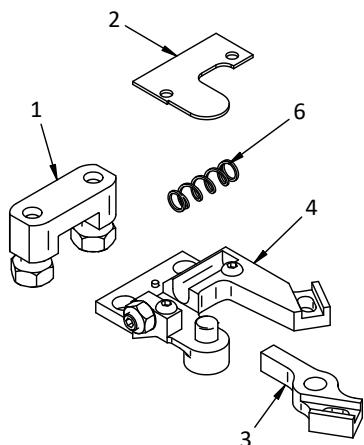


51 DS & RIVET HEADER
PART #: 3-1853
51 MS DS COLD HEADER
PART #: 3-1854

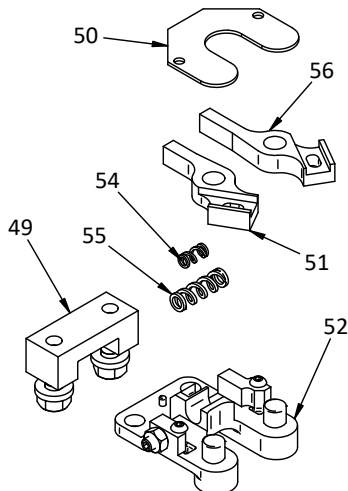


NATIONAL 61 COLD HEADER

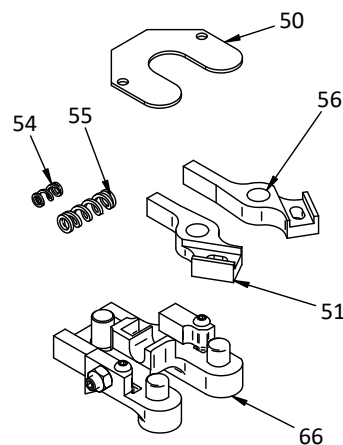
SPECIFY SERIAL NUMBER AND KEY #



Key #	Description
1	CLAMP
2	COVER PLATE
3	UPPER FINGER HOLDER
4	TRANSFER HEAD
6	SPRING



Key #	Description
49	CLAMP
50	COVER PLATE
51	LOWER FINGER HOLDER
52	TRANSFER HEAD
54	SPRING
55	SPRING
56	UPPER FINGER HOLDER



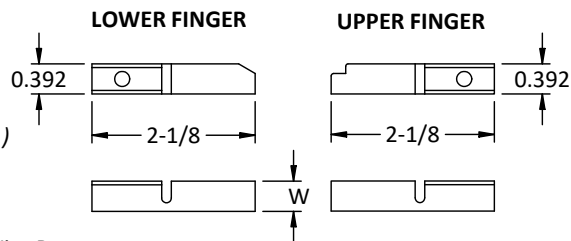
Key #	Description
50	COVER PLATE
51	UPPER FINGER HOLDER
54	SPRING
55	SPRING
56	LOWER FINGER HOLDER
66	TRANSFER HEAD

Lower Part #	Wire Range	Upper Part #
3-2061L-1	0.219 / 0.250	3-2061U-1
3-2061L-2	0.188 / 0.218	3-2061U-2
3-2061L-3	0.157 / 0.187	3-2061U-3
3-2061L-4	0.127 / 0.156	3-2061U-4
3-2061L-5	0.098 / 0.126	3-2061U-5

SPECIFY:
- PART #
- W
(0.197, 0.394, OR 0.591)

EX: 3-2061U394-2

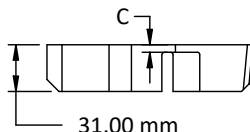
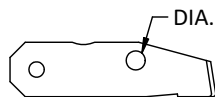
(U) Upper or (L) Lower Wire Range
Width of Nose



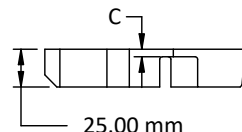
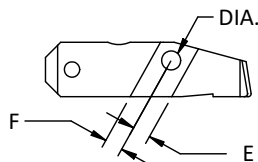
CUTTER HOLDERS - SPECIFY PART #, C, DIA., E, & F



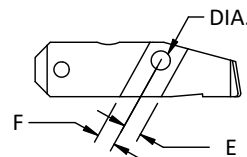
PART #: 3-2260



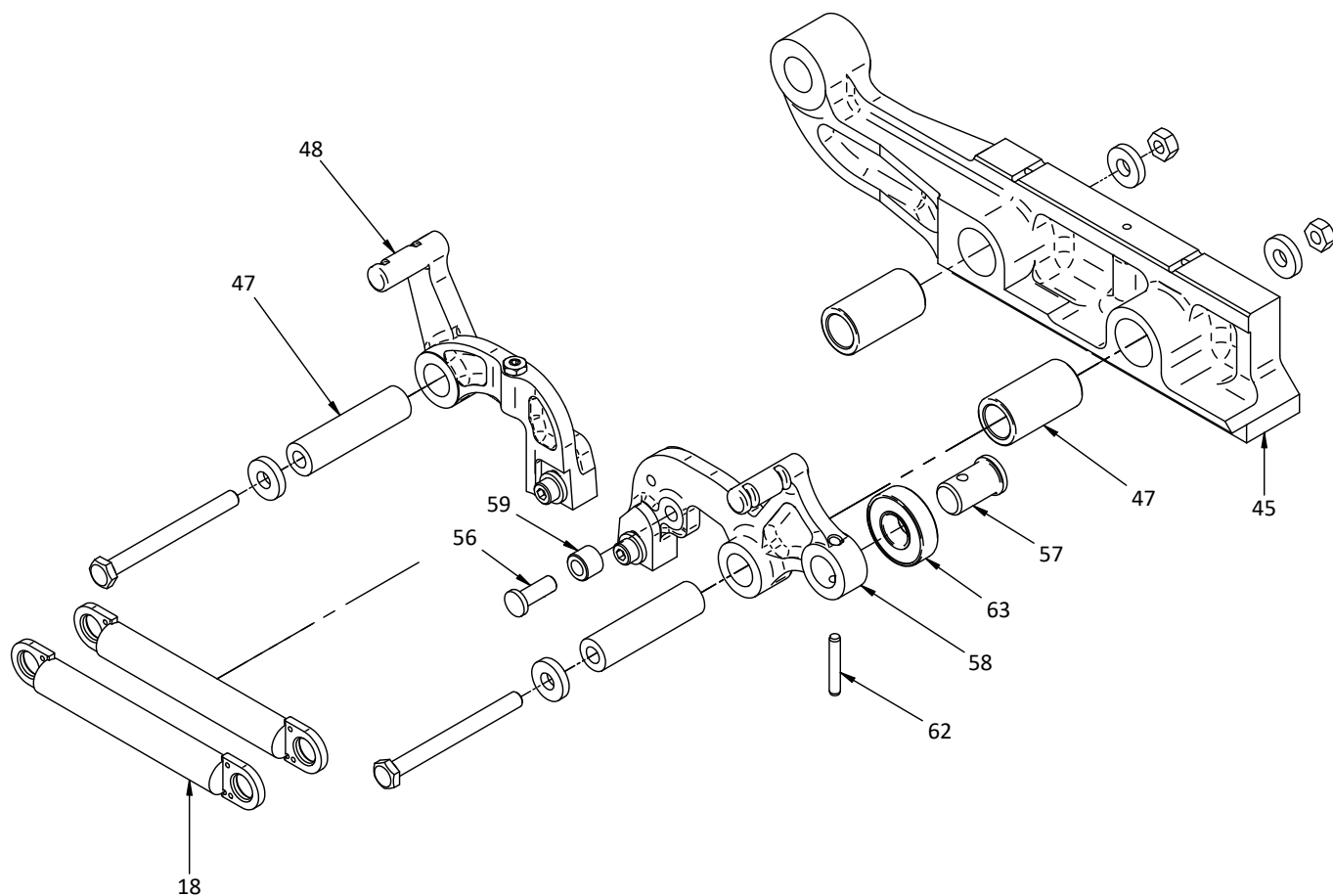
PART #: 3-2261



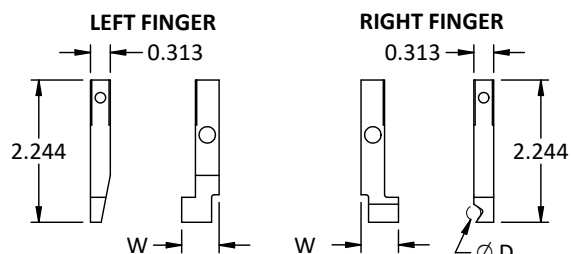
PART #: 3-2267



NATIONAL 62 COLD HEADER



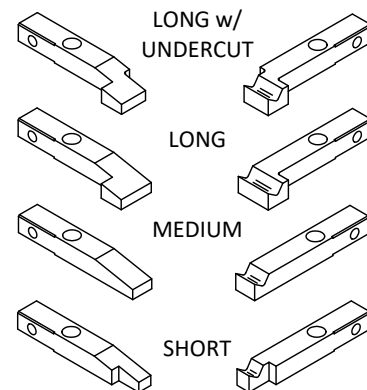
Key #	Description	Key #	Description
18	SPRING	56	DRIVE PIN
45	SLIDE	57	ROLLER PIN
46	SHAFT BUSHING	58	RIGHT ARM
47	ARM SHAFT	59	DRIVE BUSHING
48	LEFT ARM	62	ROLLER PIN
		63	ROLLER BEARING



Left Part #	Wire Range	Right Part #
3-62L	0.079 / 0.138	3-62R-1
3-62L	0.138 / 0.197	3-62R-2
3-62L	0.197 / 0.256	3-62R-3

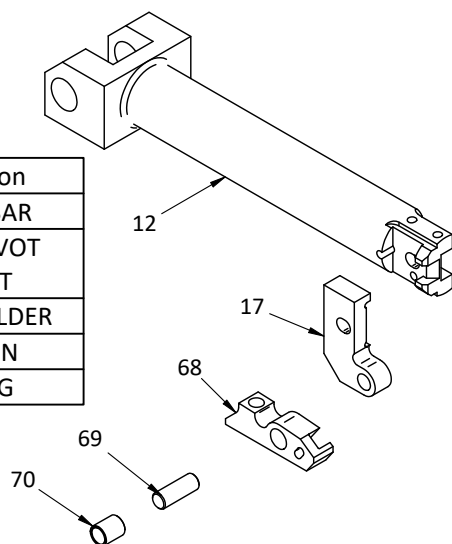
Example: 3-62LU375-2
 (L) Left or (R) Right Hand
 (U) Undercut
 Width of Nose
 Wire Range
 RIGHT HAND ONLY

SPECIFY:
 - PART #
 - W
 - UNDERCUT



NATIONAL 31 BALL HEADER

Key #	Description
12	CUTOFF BAR
17	FINGER PIVOT BRACKET
68	FINGER HOLDER
69	PIVOT PIN
70	BUSHING

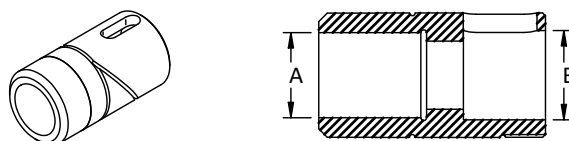


CARRY-OVER FINGER SPECIFY WIRE SIZE & W

	WIRE SIZE	
	Wire Size	Wire Size
	0.0866	0.096
	0.0173	0.0310 / 0.0315
	0.0402	0.048 / 0.050

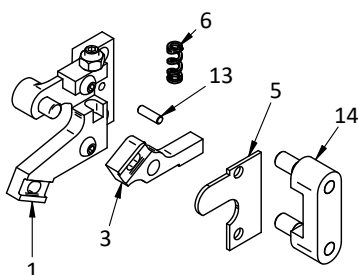
TOOL HOLDER

SPECIFY SERIAL NUMBER, A, & B

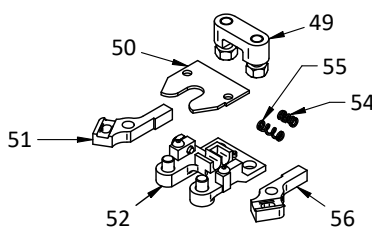


NATIONAL 51 BALL HEADER : 31 COLD HEADER

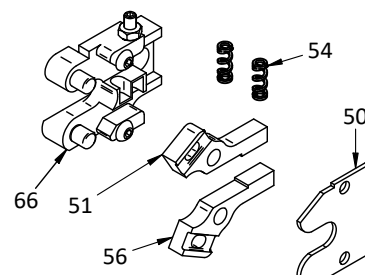
SPECIFY SERIAL NUMBER & KEY #



Key #	Description
1	HEAD
3	UPPER FINGER HOLDER
5	COVER
6	SPRING
13	PIN
14	CLAMP



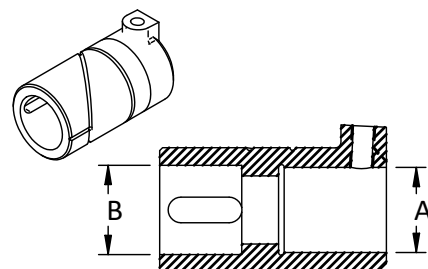
Key #	Description
49	CLAMP
50	COVER
51	UPPER FINGER HOLDER
52	HEAD
54	SPRING
55	SPRING
56	LOWER FINGER HOLDER



Key #	Description
50	COVER
51	UPPER FINGER HOLDER
54	SPRING
56	LOWER FINGER HOLDER
66	HEAD

TOOL HOLDER

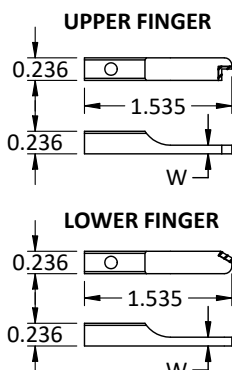
SPECIFY SERIAL NUMBER, A, & B



Lower Part #	Wire Range	Upper Part #
3-2051LF-1	0.126 / 0.154	3-2051UF-1
3-2051LF-2	0.098 / 0.125	3-2051UF-2
3-2051LF-3	0.071 / 0.097	3-2051UF-3
3-2051LF-4	0.043 / 0.070	3-2051UF-4

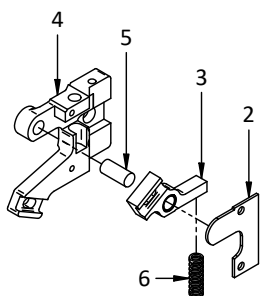
Ex: 3-111UFC236-1
 (U) Upper or (L) Lower
 Carbide
 Width of Nose
 Wire Range

SPECIFY:
 - PART #
 - W
 - WITH OR WITHOUT CARBIDE

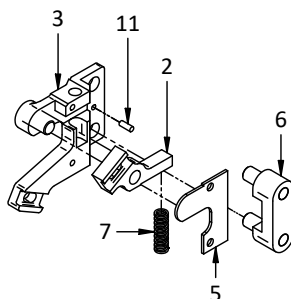


NATIONAL 81 BALL HEADER

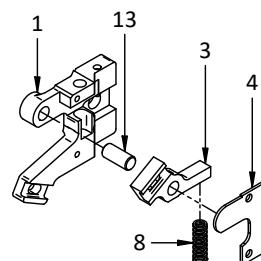
SPECIFY SERIAL NUMBER & KEY #



Key #	Description
2	PLATE
3	FINGER HOLDER - TOP
4	TRANSFER HEAD
5	CARBIDE PIN
6	SPRING



Key #	Description
2	FINGER HOLDER - TOP
3	ASSEMBLY
5	PLATE
6	ASSEMBLY
7	SPRING
11	PIN

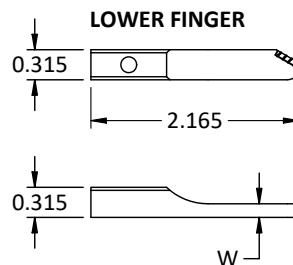
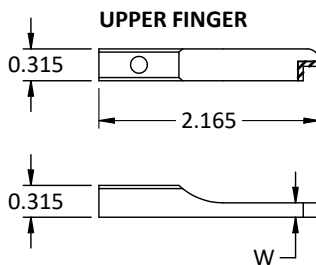


Key #	Description
1	TRANSFER HEAD
3	FINGER HOLDER - TOP
4	PLATE
8	SPRING
13	PIN

Lower Part #	Wire Range	Upper Part #
3-81LF-1	0.251 / 0.281	3-81UF-1
3-81LF-2	0.217 / 0.250	3-81UF-2
3-81LF-2	0.189 / 0.216	3-81UF-3
3-81LF-3	0.154 / 0.188	3-81UF-4
3-81LF-3	0.126 / 0.153	3-81UF-5

SPECIFY:

- LOWER OR UPPER
- WIRE RANGE
- W



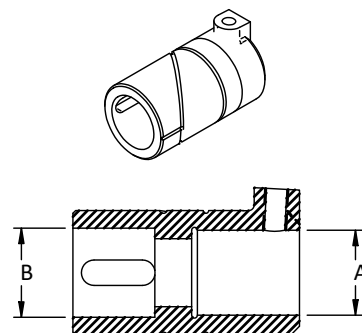
Ex: 3-81UFC236-1

(U) Upper or (L) Lower
Carbide Wire Range
Width of Nose

NATIONAL 111 BALL HEADER

TOOL HOLDER

SPECIFY SERIAL NUMBER, A, & B



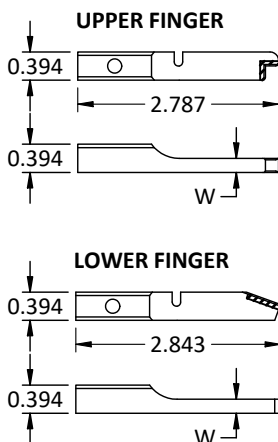
Lower Part #	Wire Range	Upper Part #
3-111LF-1	0.264 / 0.315	3-111UF-1
3-111LF-2	0.224 / 0.263	3-111UF-2
3-111LF-3	0.185 / 0.223	3-111UF-3
3-111LF-4	0.169 / 0.209	3-111UF-4

Ex: 3-111UFC236-1

(U) Upper or (L) Lower
Carbide
Width of Nose
Wire Range

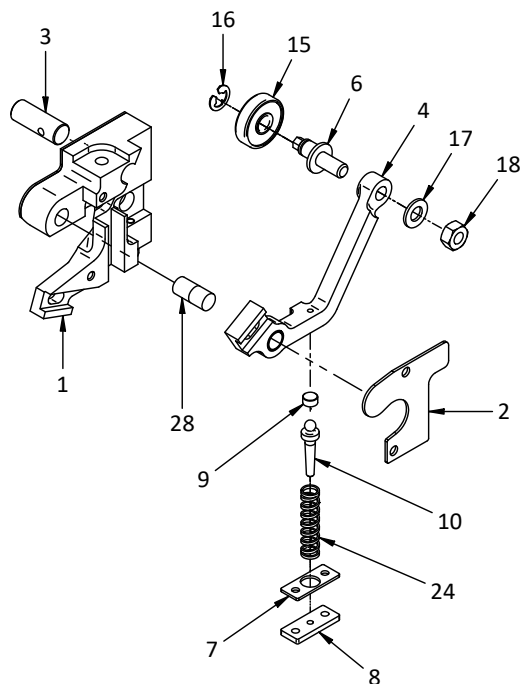
SPECIFY:

- PART #
- W
- WITH OR WITHOUT CARBIDE



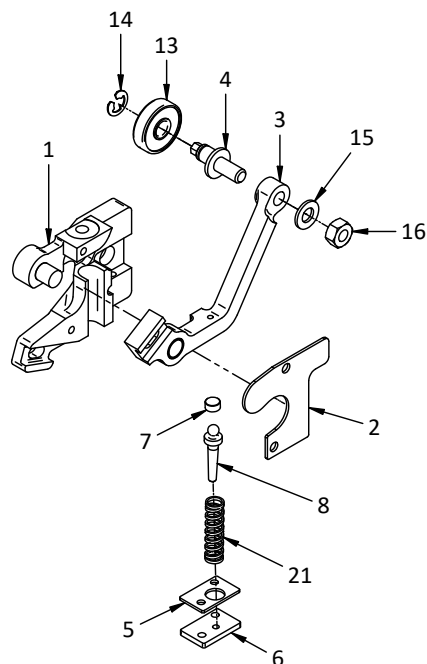
NATIONAL 111 BALL HEADER

Key #	Description
1	TRANSFER HEAD
2	PLATE
3	PIN
4	FINGER HOLDER
6	PIN
7	plate
8	plate
9	SEAT
10	PIN
15	BEARING
16	RETAINER
17	WASHER
18	NUT
24	SPRING
28	PIN

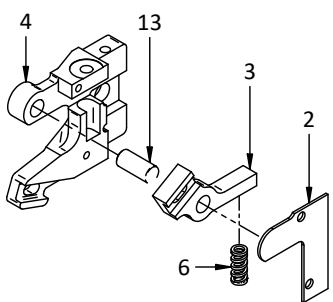


SPECIFY SERIAL NUMBER & KEY #

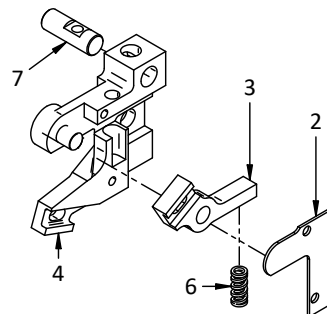
Key #	Description
1	TRANSFER HEAD
2	PLATE
3	FINGER HOLDER
4	PIN
5	PLATE
6	PLATE
7	SEAT
8	PIN
13	BEARING
14	RETAINER
15	WASHER
16	NUT
21	SPRING



NATIONAL 111 BALL HEADER

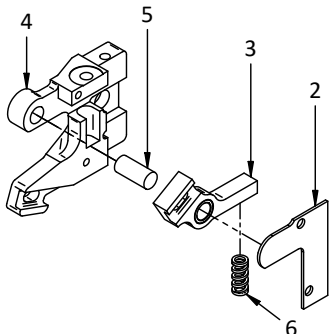


Key #	Description
2	PLATE
3	FINGER HOLDER - TOP
4	TRANSFER HEAD
6	SPRING
13	PIN

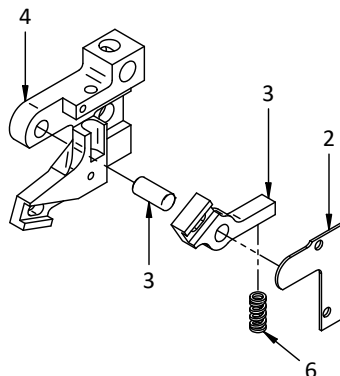


Key #	Description
2	PLATE
3	FINGER HOLDER - TOP
4	HEAD
6	SPRING
7	PIN

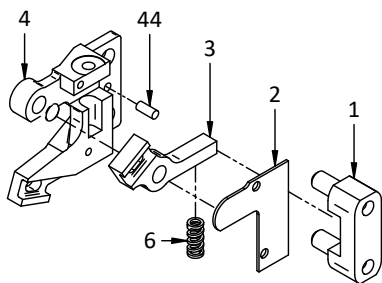
SPECIFY:
- SERIAL NUMBER
- KEY #



Key #	Description
2	PLATE
3	FINGER HOLDER - TOP
4	TRANSFER HEAD
5	CARBIDE PIN
6	SPRING



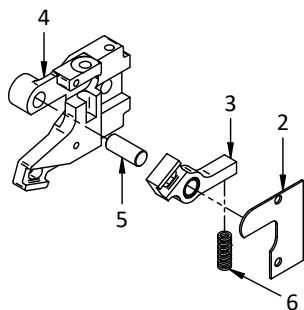
Key #	Description
1	FINGER HOLDER - TOP
2	TRANSFER HEAD
3	PIN
4	SPRING
5	PLATE



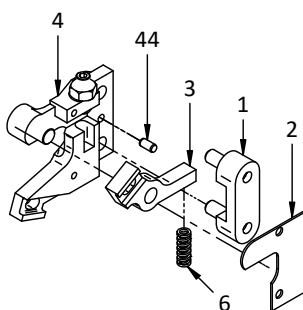
Key #	Description
1	CLAMP
2	PLATE
3	FINGER HOLDER
4	TRANSFER HEAD
6	SPRING
44	PIN

NATIONAL 141 BALL HEADER

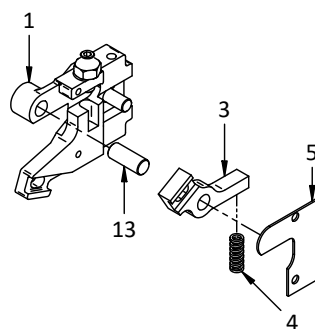
SPECIFY SERIAL NUMBER & KEY #



Key #	Description
2	PLATE
3	FINGER HOLDER - TOP
4	TRANSFER HEAD
5	CARBIDE PIN
6	SPRING



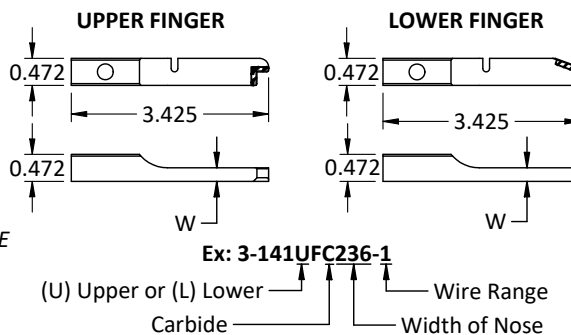
Key #	Description
1	CLAMP
2	PLATE
3	FINGER HOLDER - TOP
4	TRANSFER HEAD
6	SPRING
44	PIN



Key #	Description
1	TRANSFER HEAD
3	FINGER HOLDER - TOP
4	SPRING
5	PLATE
13	PIN

Lower Part #	Wire Range	Upper Part #
3-141LF-1	0.437 / 0.500	3-141UF-1
3-141LF-2	0.375 / 0.436	3-141UF-2
3-141LF-3	0.312 / 0.312	3-141UF-3
3-141LF-4	0.250 / 0.311	3-141UF-4
3-141LF-5	0.188 / 0.249	3-141UF-5
3-141LF-6	0.125 / 0.187	3-141UF-6

SPECIFY:
- PART #
- W
- WITH OR
WITHOUT CARBIDE



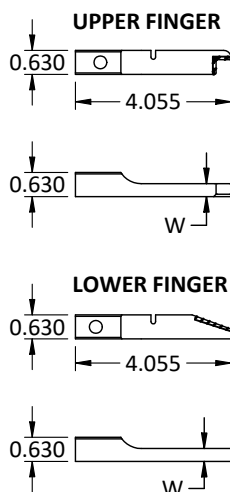
NATIONAL 201 BALL HEADER

Lower Part #	Wire Range	Upper Part #
3-201LF-1	0.563 / 0.623	3-201UF-1
3-201LF-1	0.500 / 0.562	3-201UF-2
3-201LF-2	0.437 / 0.499	3-201UF-3
3-201LF-2	0.376 / 0.436	3-201UF-4
3-201LF-3	0.312 / 0.375	3-201UF-5
3-201LF-3	0.250 / 0.311	3-201UF-6

Ex: 3-201UFC236-1

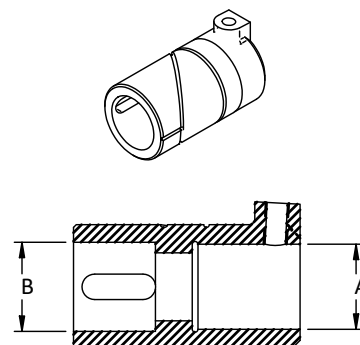
(U) Upper or (L) Lower
Carbide
Width of Nose
Wire Range

SPECIFY:
- PART #
- W
- WITH OR
WITHOUT CARBIDE

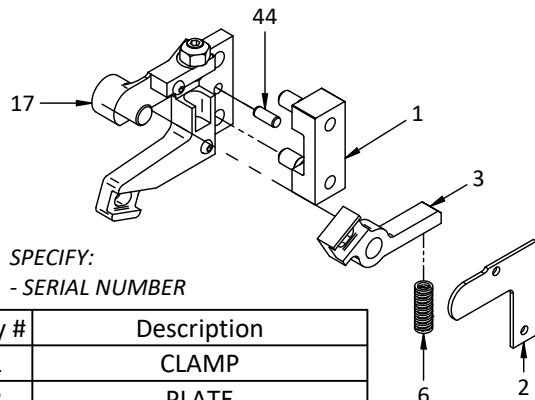


TOOL HOLDER

SPECIFY SERIAL NUMBER, A, & B

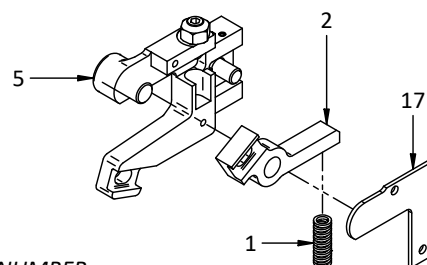


NATIONAL 201 BALL HEADER



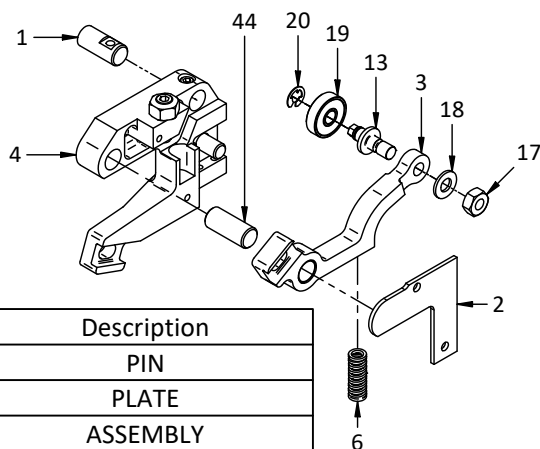
SPECIFY:
- SERIAL NUMBER

Key #	Description
1	CLAMP
2	PLATE
3	TOP FINGER HOLDER
6	SPRING
17	TRANSFER HEAD
44	PIN



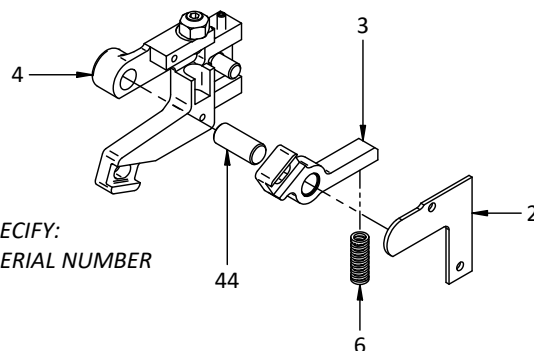
SPECIFY:
- SERIAL NUMBER

Key #	Description
1	SPRING
2	TOP FINGER HOLDER
5	TRANSFER HEAD
17	PLATE



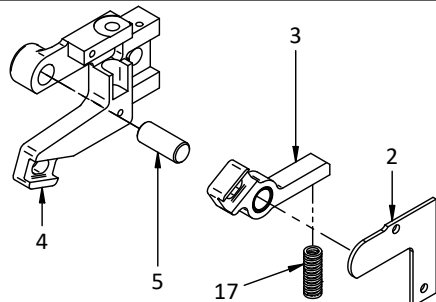
SPECIFY:
- SERIAL NUMBER

Key #	Description
1	PIN
2	PLATE
3	ASSEMBLY
4	transfer head
6	SPRING
13	PIN
17	NUT
18	WASHER
19	BEARING
20	CLIP
44	PIN



SPECIFY:
- SERIAL NUMBER

Key #	Description
2	PLATE
3	ASSEMBLY
4	TRANSFER HEAD
6	SPRING
44	PIN



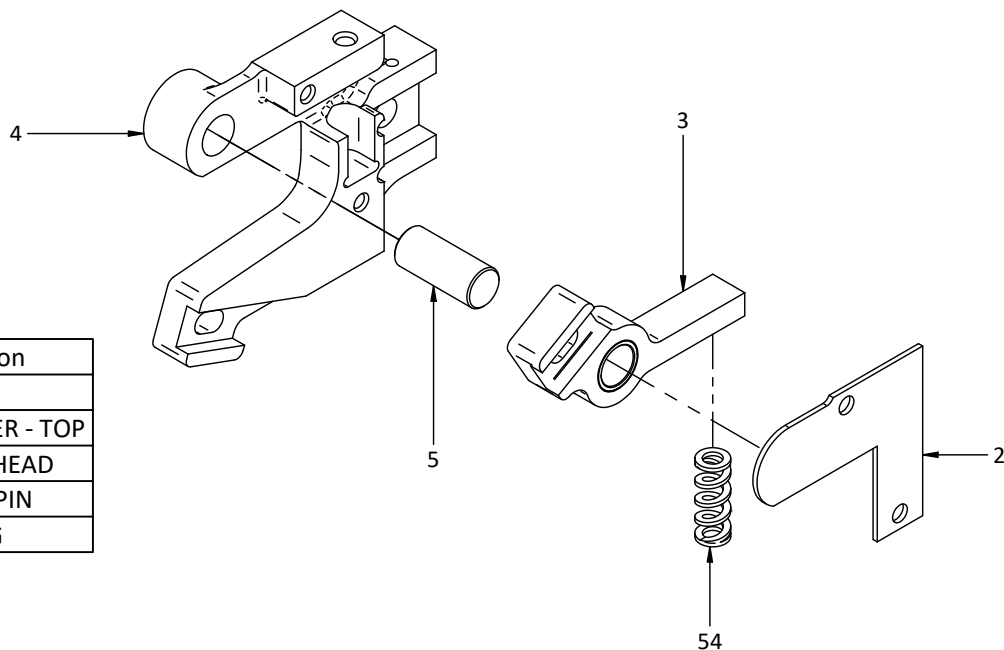
SPECIFY:
- WITH OR
WITHOUT CARBIDE

Key #	Description
2	PLATE
3	TOP FINGER HOLDER
4	TRANSFER HEAD
5	CARBIDE PIN
17	SPRING

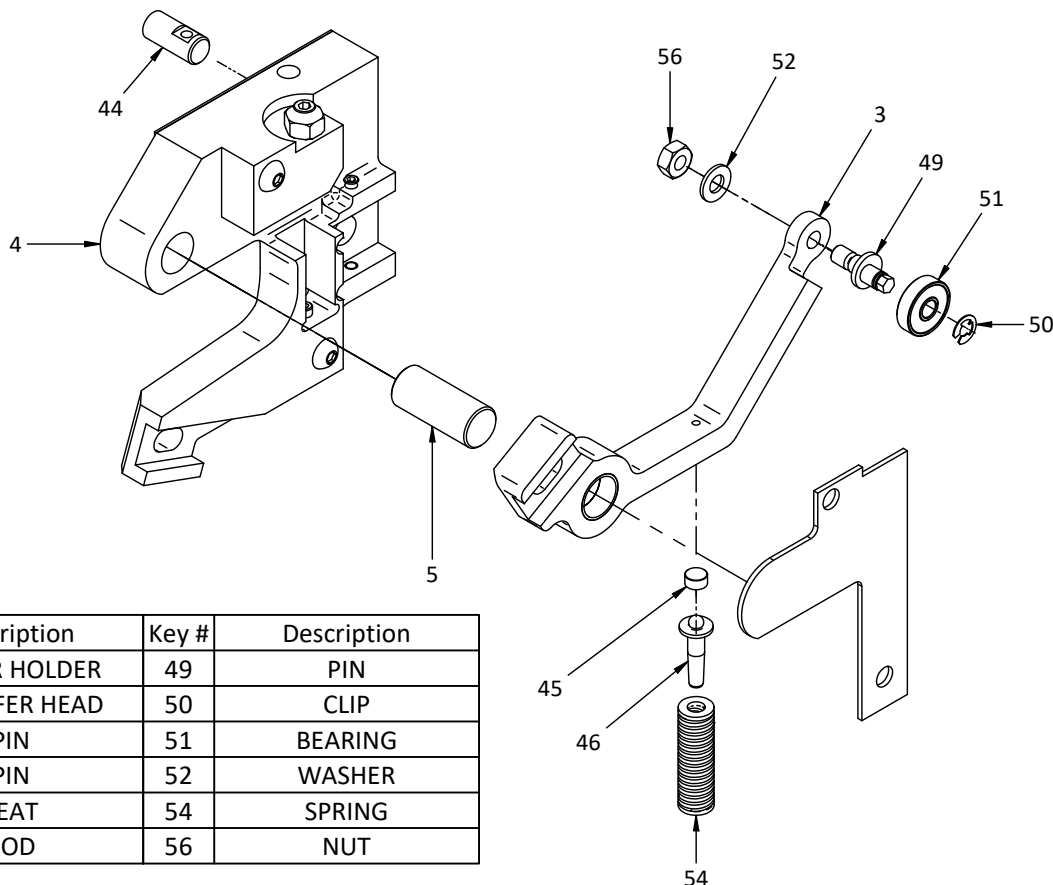
NATIONAL 241 COMBI HEADER

SPECIFY SERIAL NUMBER & KEY #

Key #	Description
2	PLATE
3	FINGER HOLDER - TOP
4	TRANSFER HEAD
5	CARBIDE PIN
54	SPRING

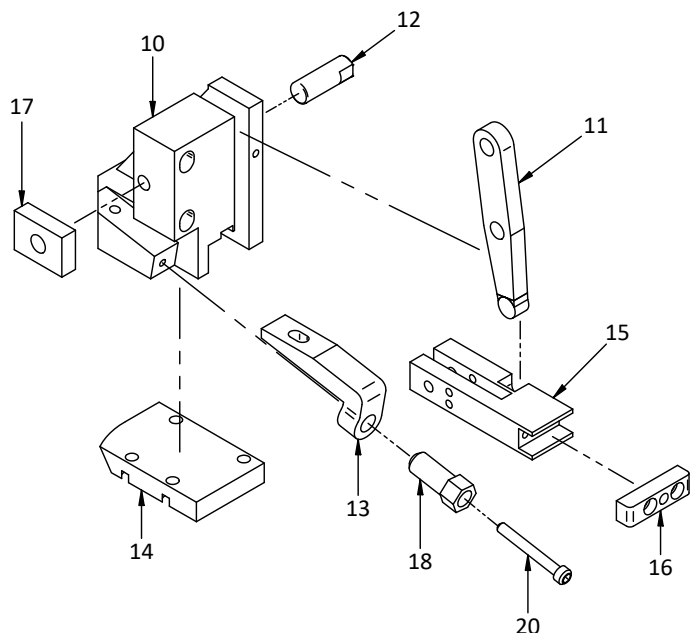


Key #	Description	Key #	Description
3	FINGER HOLDER	49	PIN
4	TRANSFER HEAD	50	CLIP
5	PIN	51	BEARING
44	PIN	52	WASHER
45	SEAT	54	SPRING
46	ROD	56	NUT



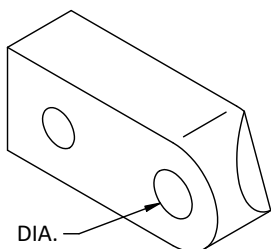
NATIONAL 1/8, M3 TUBULAR RIVET HEADER

1/8



Key #	Description
10	HEAD
11	TOGGLE
12	TOGGLE PIVOT PIN
13	WEDGE
14	CAP
15	SLIDE
16	SLIDE STOP
17	CLAMP
18	WEDGE ADJUSTMENT SCREW
20	SCREW

CUTTER - SPECIFY DIA.

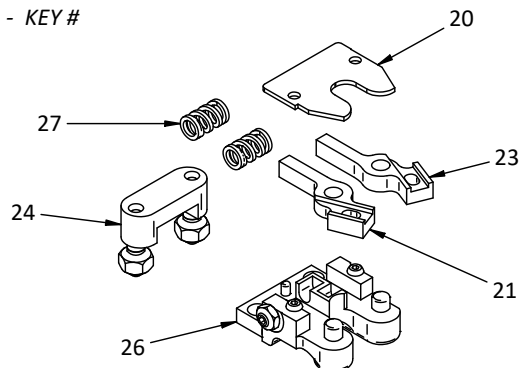


PART #: 3-2230

1/8 & M3

SPECIFY:

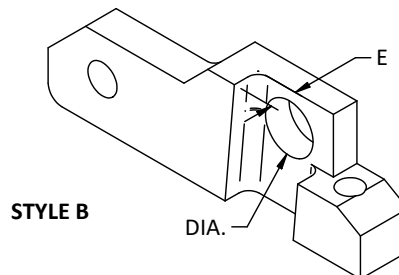
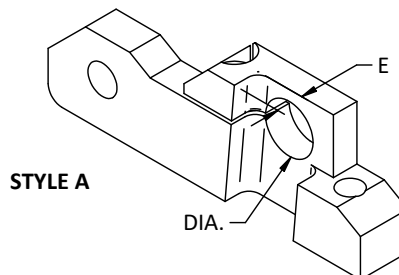
- SERIAL NUMBER
- KEY #



Key #	Description
20	COVER PLATE
21	UPPER FINGER HOLDER
23	LOWER FINGER HOLDER
24	CLAMP
26	TRANSFER HEAD
27	SPRING

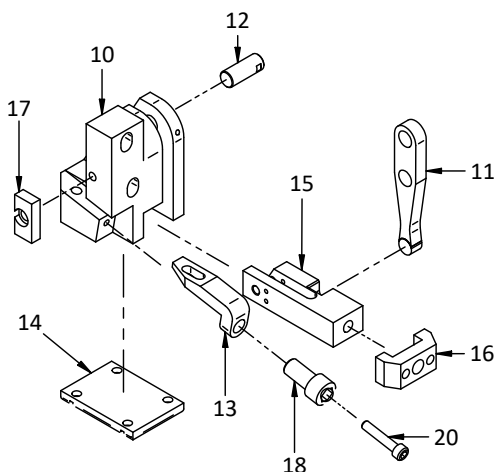
CUTTER HOLDER

SPECIFY THREAD SIZE, STYLE A or B, DIA., & E



NATIONAL 3/16, M5 TUBULAR RIVET HEADER

3/16

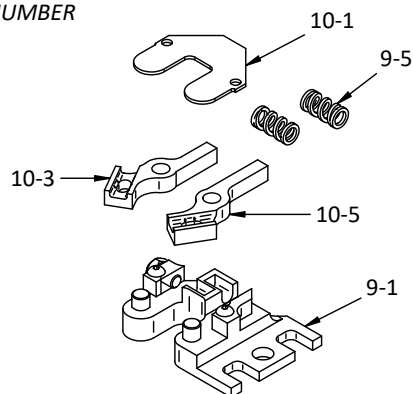


Key #	Description
10	HEAD
11	TOGGLE
12	TOGGLE PIVOT PIN
13	WEDGE
14	CAP
15	SLIDE
16	SLIDE STOP
17	CLAMP
18	WEDGE ADJUSTMENT SCREW
20	SCREW

M5 & 3/16

SPECIFY:

- SERIAL NUMBER
- KEY #



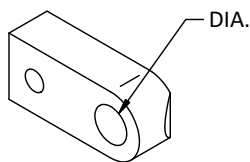
Key #	Description
9-1	TRANSFER HEAD
9-5	SPRING
10-1	COVER PLATE
10-3	UPPER FINGER HOLDER
10-5	LOWER FINGER HOLDER

CUTTER HOLDER

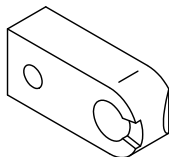
SPECIFY PART #, DIA., & E

CUTTER - SPECIFY PART # & DIA.

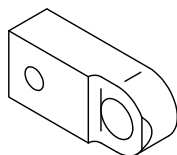
PART #: 3-2237



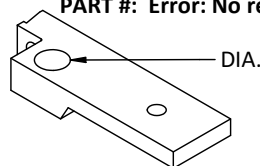
PART #: 3-2238



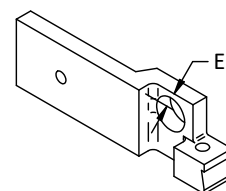
PART #: 3-2239



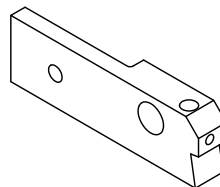
PART #: Error: No reference



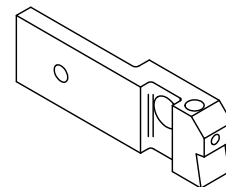
PART #: 3-2233RHS



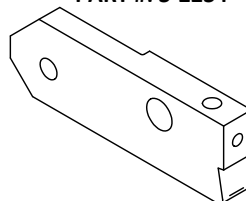
PART #: 3-2233



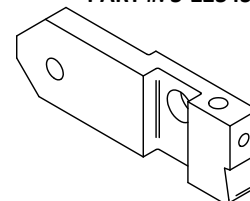
PART #: 3-2233S



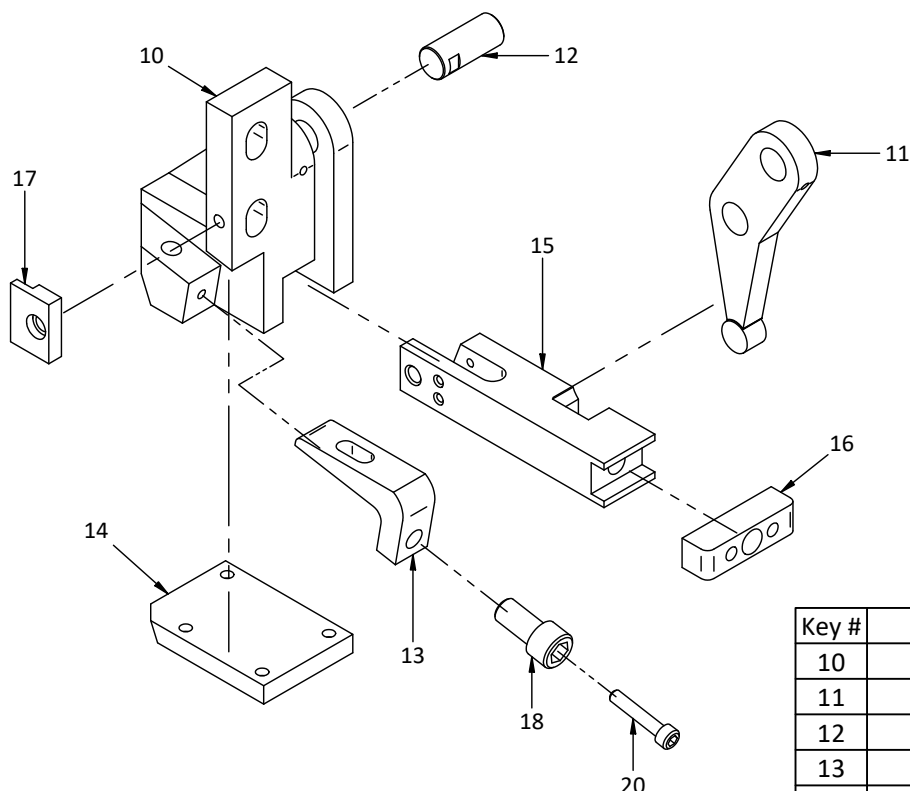
PART #: 3-2234



PART #: 3-2234S



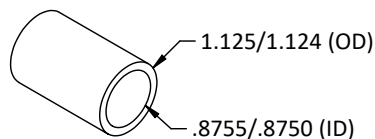
NATIONAL 1/4 TUBULAR RIVET HEADER



Key #	Description
10	HEAD
11	TOGGLE
12	TOGGLE PIVOT PIN
13	WEDGE
14	CAP
15	SLIDE
16	SLIDE STOP
17	CLAMP
18	WEDGE ADJUSTMENT SCREW
20	SCREW

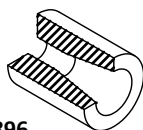
QUILL SLEEVE

PART #: 3-1895

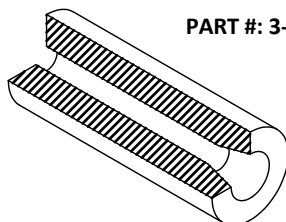


QUILL FILLER - SPECIFY PART

Part #: 3-1896



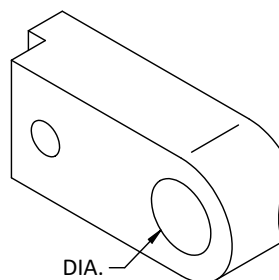
PART #: 3-1897



CUTTER

SPECIFY DIA.

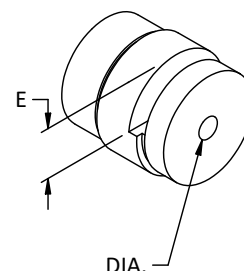
PART #: 3-1898



CUTTER PIN GUIDE BUSHING

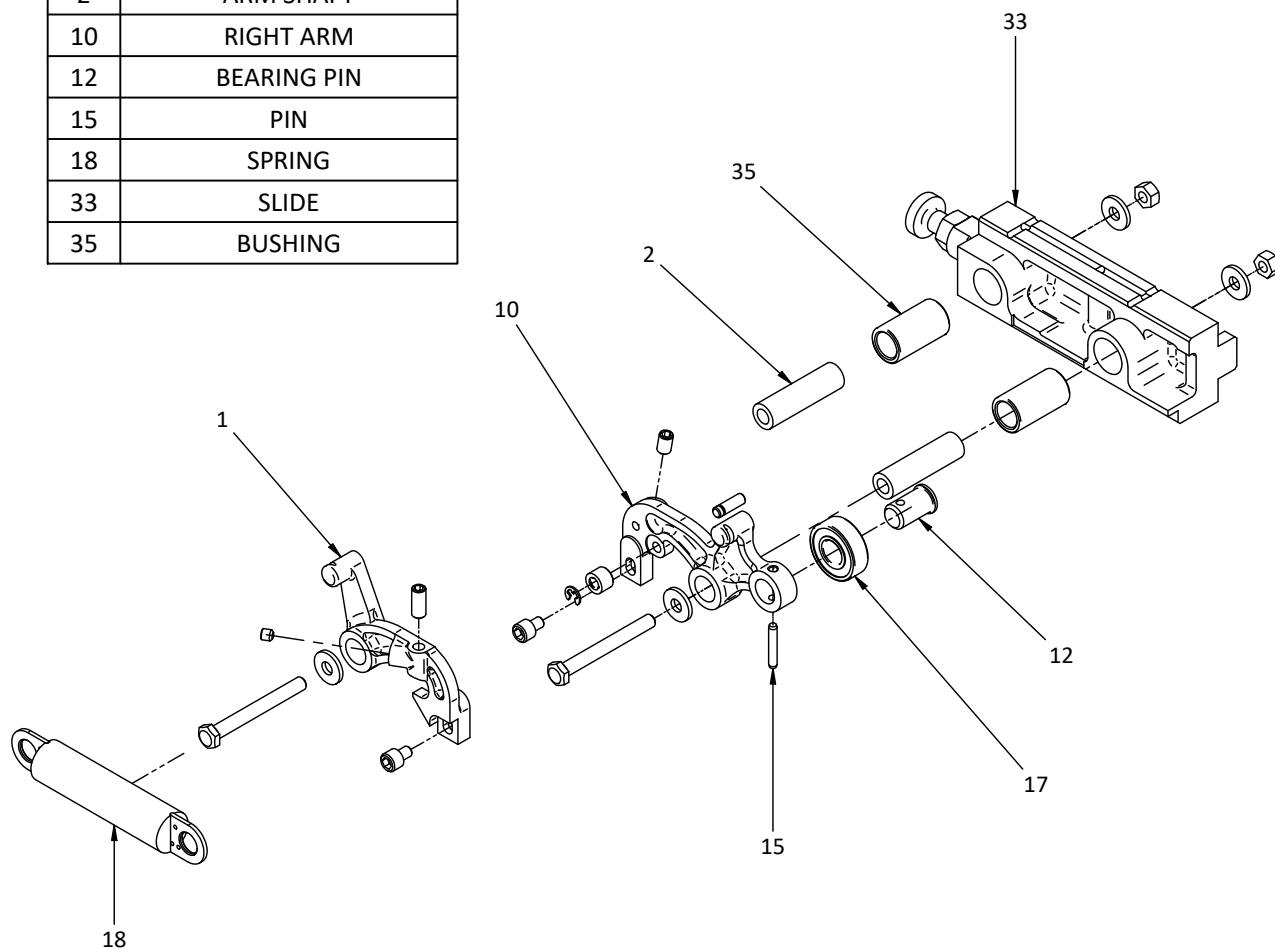
SPECIFY DIA. & E

PART #: 3-1899

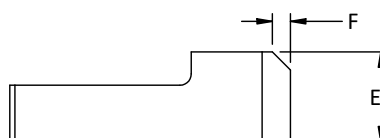
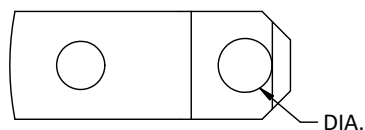
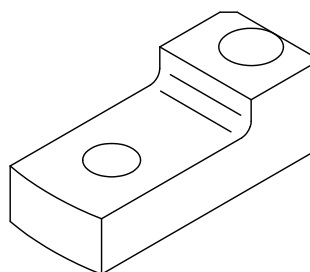


NATIONAL 32 TUBULAR RIVET HEADER

Key #	Description
1	LEFT ARM
2	ARM SHAFT
10	RIGHT ARM
12	BEARING PIN
15	PIN
18	SPRING
33	SLIDE
35	BUSHING



CUTTER HOLDER - SPECIFY DIA. , E, & F



NATIONAL PUNCH HOLDERS

ALL PIECES ON THIS PAGE ARE SPECIFIC TO A MACHINE SIZE.

PLEASE HAVE READY:

- YOUR MACHINE SERIAL NUMBER (FOR EASY ORDERING)
- SIZE OF MACHINE
- CODE (SEE BELOW)
- BORE SIZE ("D")

PICTURES FOR REFERENCE ONLY.

C = Cone
D = Duplex
F = Finish
S = Single

1st = Heading
X = Extrusion
T = Trim

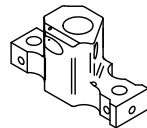
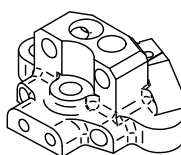
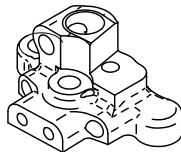
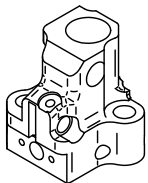
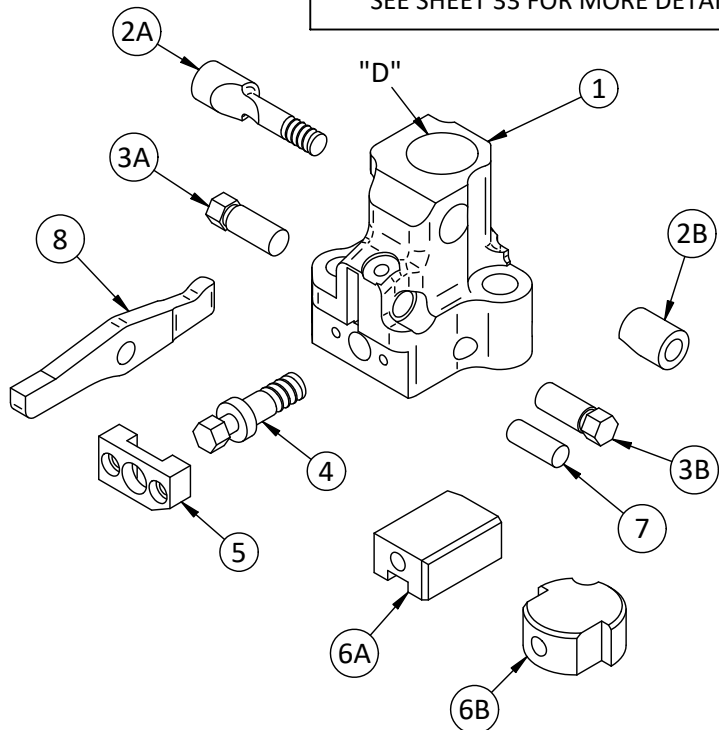
K = Kickout
N = None

C/K/C
(Code)

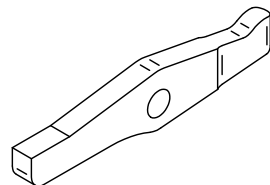
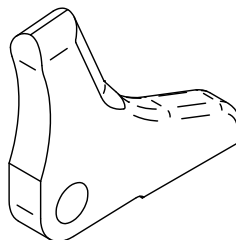
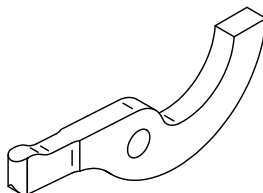
C = Combination
P = Phillips
S = Sliding
N = None

FOR CUSTOMER USE	
SERIAL NUMBER :	
MACHINE SIZE :	
CODE :	
BORE SIZE :	
SEE SHEET 33 FOR MORE DETAILS	

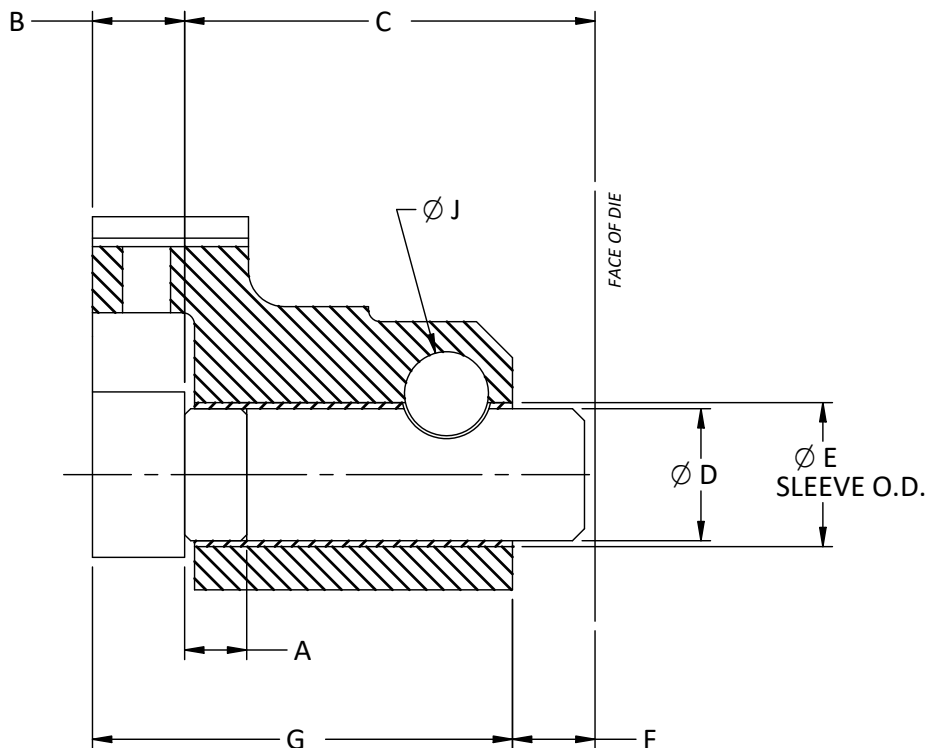
Key #	Description
1	Punch Block
2A	Draw Bolt
2B	Draw Bolt Sleeve
3A	Short Adjusting screw - Horizontal
3B	Long Adjusting screw - Horizontal
4	Adjusting screw - Vertical
5	Adjusting screw Retainer
6A	Centering Block
6B	Centering Block
7	Pin
8	Kick Out Lever



Kick Out Levers



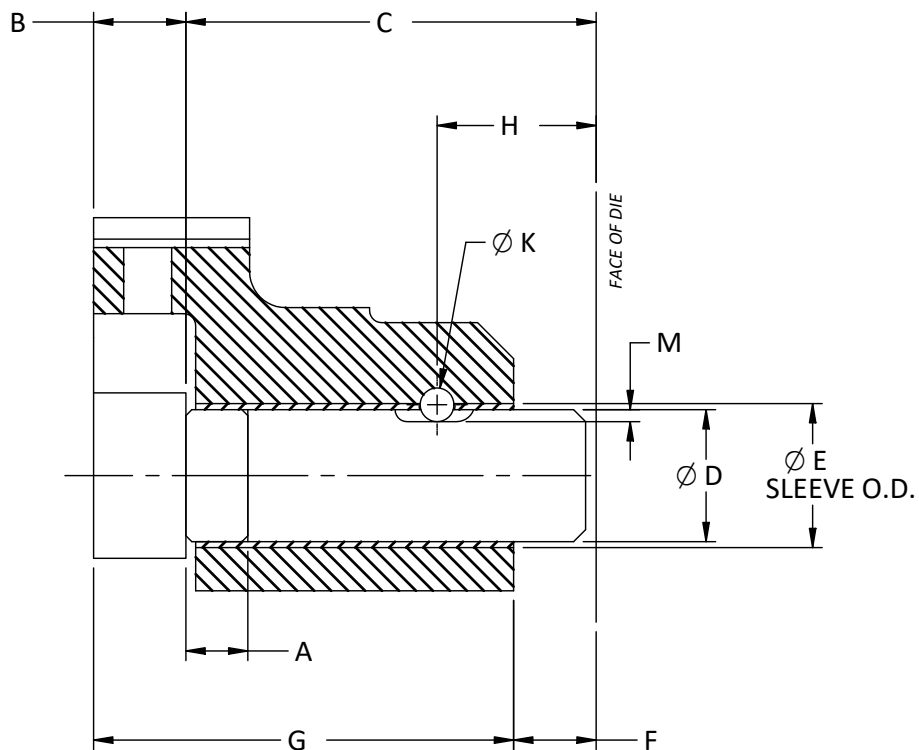
NATIONAL PUNCH HOLDERS



CLAMP STYLE

SPECIFY AS NEEDED

A = _____
 B = _____
 C = _____
 D = _____
 E = _____
 F = _____
 G = _____
 J = _____



SLIDING STYLE

SPECIFY AS NEEDED

A = _____
 B = _____
 C = _____
 D = _____
 E = _____
 F = _____
 G = _____
 H = _____
 K = _____
 M = _____