

**SUBJECT: Discontinuation of the availability of particular lead-forming style options for the Radial-Leaded ECC / ECK Ceramic Disc Capacitors**  
**ECC' \* 'xxxxxxxx ( Class 1 ) and ECK' \* 'xxxxxxxx ( Class 2 )**  
**Discontinued style's: D, M, C, J, W, Z, R, K Recommended Alternatives: A, E, N**  
**BULLETIN # : PDN.PG33.10.07.04-1** **DATE: October 7, 2004**

**LAST BUY DATE: December 24, 2004**

**LAST SHIP DATE: March 31, 2005**

**DISCONTINUATION DETAILS:**

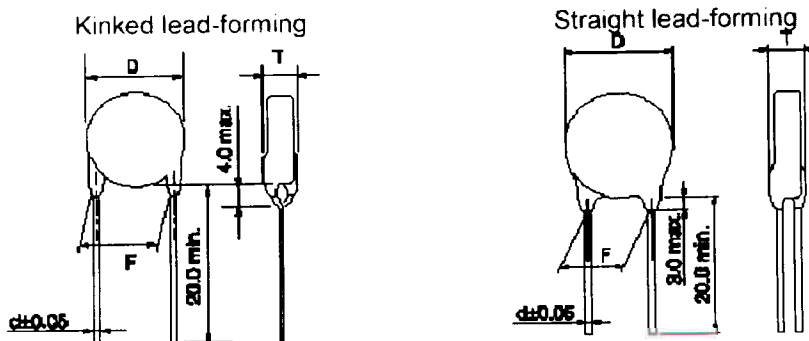
**Note: The lead-forming style is indicated by the 'letter' in position 4 ( \* ) of the P/N**

Discontinued Lead Styles		Recommended Alternative Lead Styles	
Current products		New standard (kinked type)	
Name of lead style	style	Name of lead style	style
Straight long lead, Bulk	D	Kinked long lead, Bulk	A
Straight short lead, Bulk	M		
Inner crimped lead, Bulk	C	Kinked short lead, Bulk	E
Outer crimped lead, Bulk	J		
Double crimped lead, Bulk	W		
Straight long lead, taping	Z	Kinked straight, taping	N
Inner crimped lead, taping	R		
Outer crimped lead, taping	K		

**Example: Discontinued ECKD3A102KBP => ECKA3A102KBP**

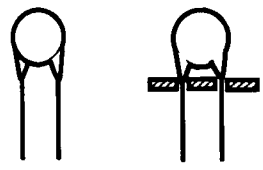

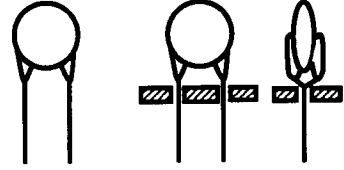
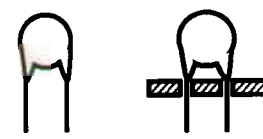

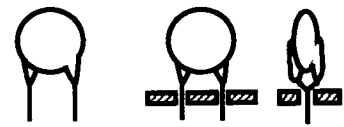
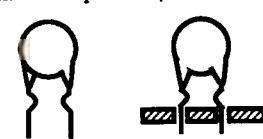
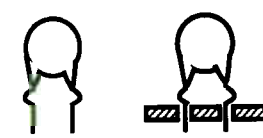
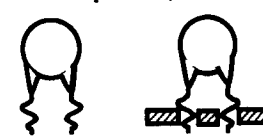
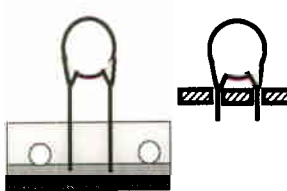
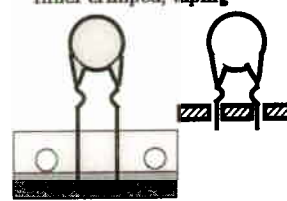

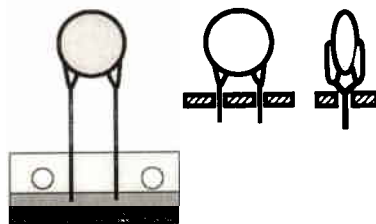
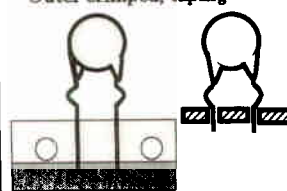
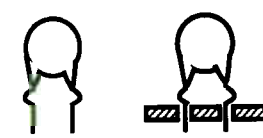
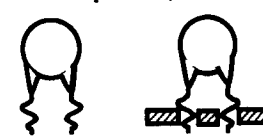
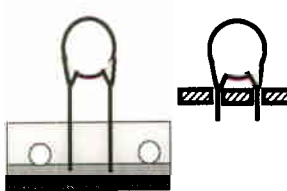
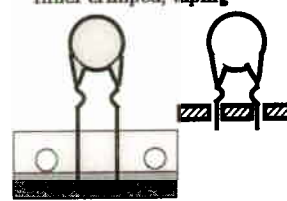

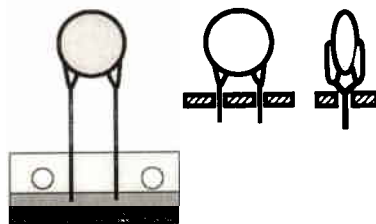
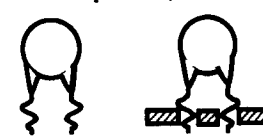
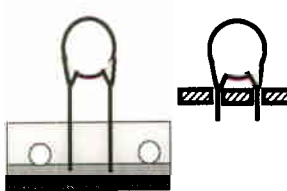
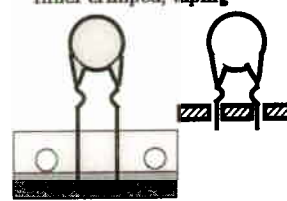

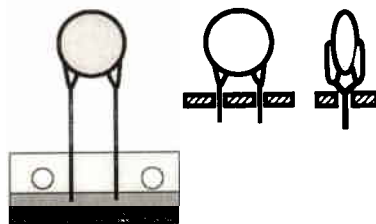
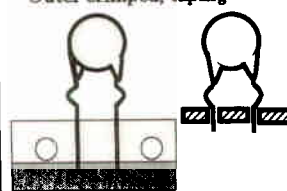
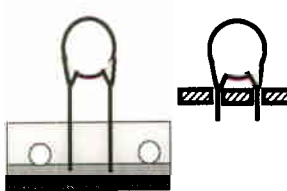
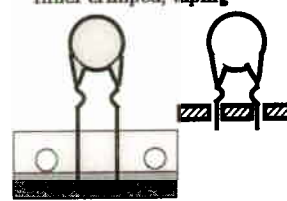

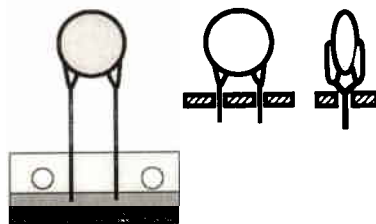
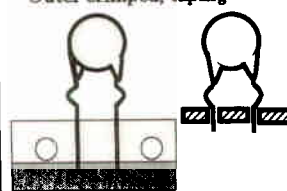
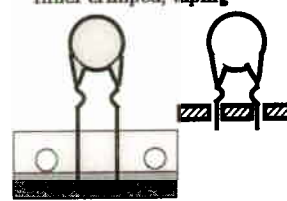

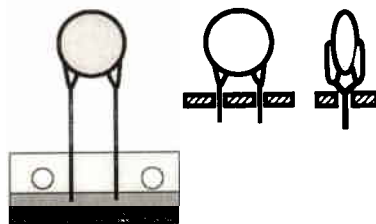
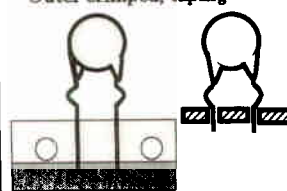
**See below for the difference between 'kinked' versus 'straight' lead forming**

Kinked leads are formed in such a way as being co-planar with the center line in the side view, which is not the case with Straight ( or Crimped ) lead-forming ( see diagrams below )



**and to the attached details regarding the other lead-forming styles**

Differences and characteristics compared with the current products and the standard Kinked type products

Type of current			Kinked type products	Characteristics													
D	<p>Straight long lead, bulk</p> 		<p>A type (kinked long lead, bulk)</p> 	<p>After inserted into PWB</p> <ol style="list-style-type: none"> <li>1. To avoid the portion of the coating to be inserted into the lead hole of the PWB and to make sure to leak gas during soldering.</li> <li>2. 1 to 2 mm higher.</li> </ol>													
M	<p>Straight short lead, bulk</p> 			<p>E type (kinked short lead, bulk)</p> 	<p>After inserted into PWB</p> <ol style="list-style-type: none"> <li>1. To avoid the portion of the coating to be inserted into the lead hole of the PWB and to make sure to leak gas during soldering.</li> <li>2. M type is 1 to 2mm higher. Another has same height.</li> </ol>												
C	<p>Inner crimped lead, bulk</p> 	J				<p>Outer crimped lead, bulk</p> 	W	<p>Double crimped lead, bulk</p> 	Z	<p>Straight lead, taping</p> 	R	<p>Inner crimped, taping</p> 		<p>N type (kinked lead, taping)</p> 	<p>After inserted into PWB</p> <ol style="list-style-type: none"> <li>1. To avoid the portion of the coating to be inserted into the lead hole of the PWB and to make sure to leak gas during soldering.</li> <li>2. Z type is 1 to 2mm higher. Another has same height.</li> </ol>	K	<p>Outer crimped, taping</p> 
J	<p>Outer crimped lead, bulk</p> 	W				<p>Double crimped lead, bulk</p> 	Z	<p>Straight lead, taping</p> 	R	<p>Inner crimped, taping</p> 		<p>N type (kinked lead, taping)</p> 				<p>After inserted into PWB</p> <ol style="list-style-type: none"> <li>1. To avoid the portion of the coating to be inserted into the lead hole of the PWB and to make sure to leak gas during soldering.</li> <li>2. Z type is 1 to 2mm higher. Another has same height.</li> </ol>	K
W	<p>Double crimped lead, bulk</p> 	Z				<p>Straight lead, taping</p> 	R	<p>Inner crimped, taping</p> 		<p>N type (kinked lead, taping)</p> 			<p>After inserted into PWB</p> <ol style="list-style-type: none"> <li>1. To avoid the portion of the coating to be inserted into the lead hole of the PWB and to make sure to leak gas during soldering.</li> <li>2. Z type is 1 to 2mm higher. Another has same height.</li> </ol>	K	<p>Outer crimped, taping</p> 		
Z	<p>Straight lead, taping</p> 	R				<p>Inner crimped, taping</p> 		<p>N type (kinked lead, taping)</p> 			<p>After inserted into PWB</p> <ol style="list-style-type: none"> <li>1. To avoid the portion of the coating to be inserted into the lead hole of the PWB and to make sure to leak gas during soldering.</li> <li>2. Z type is 1 to 2mm higher. Another has same height.</li> </ol>	K		<p>Outer crimped, taping</p> 			
R	<p>Inner crimped, taping</p> 		<p>N type (kinked lead, taping)</p> 	<p>After inserted into PWB</p> <ol style="list-style-type: none"> <li>1. To avoid the portion of the coating to be inserted into the lead hole of the PWB and to make sure to leak gas during soldering.</li> <li>2. Z type is 1 to 2mm higher. Another has same height.</li> </ol>													
K	<p>Outer crimped, taping</p> 																

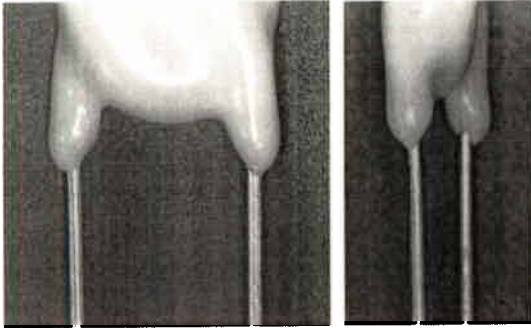
*Kinked lead type ( new standard products ) ?*

No-3

*Current products*

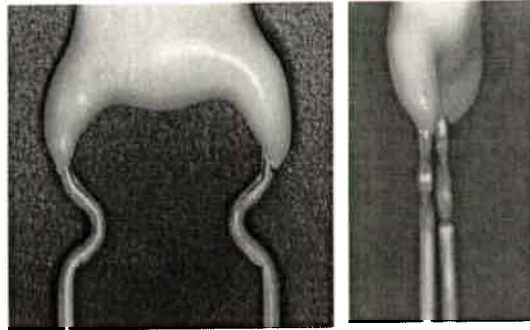
**Straight lead type**

D, M, Z



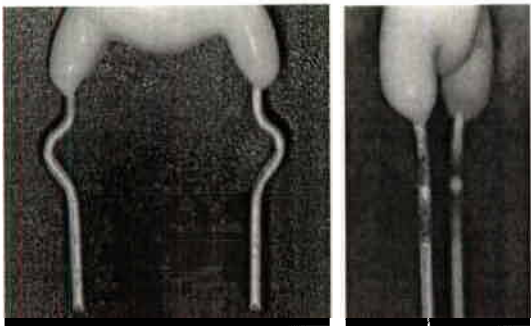
**Inner crimped lead type**

R, C



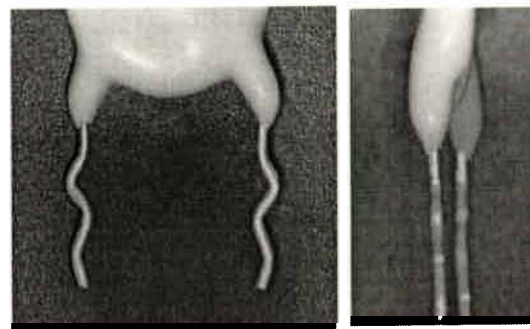
**Outer crimped lead type**

J, K

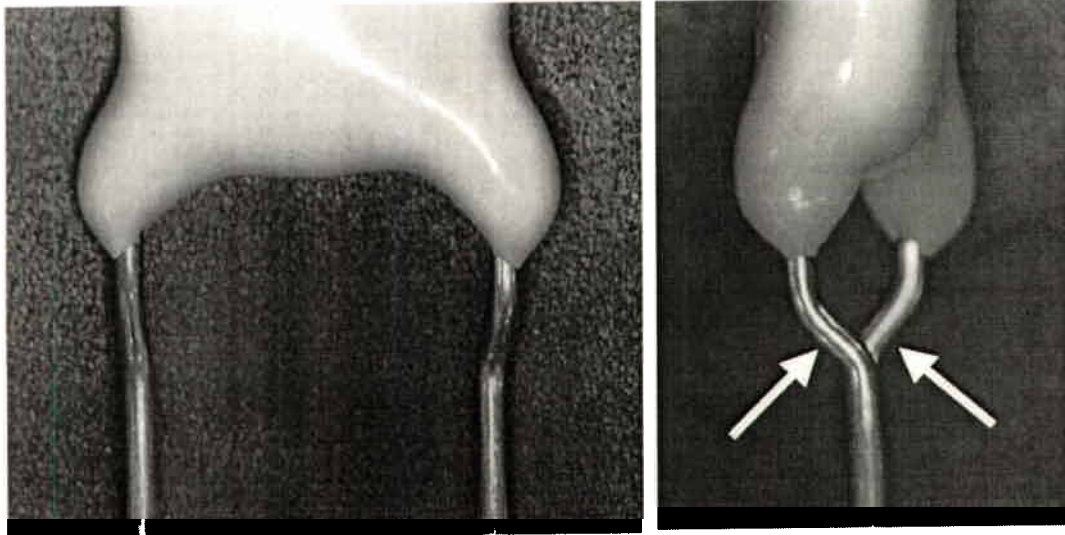


**Double crimped lead type**

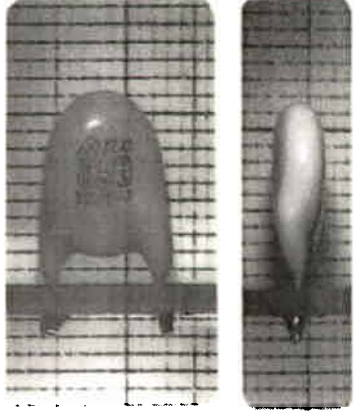

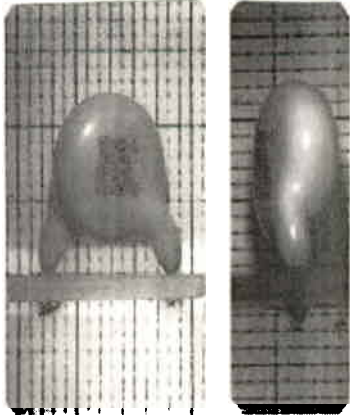
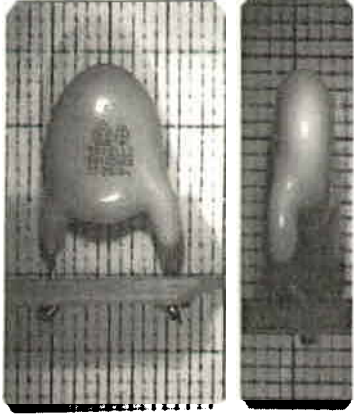
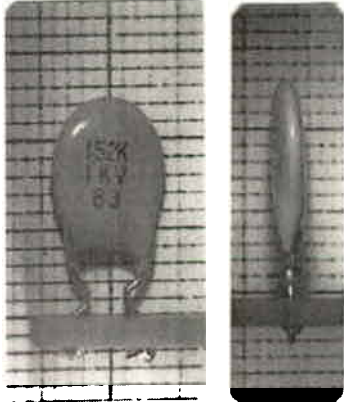
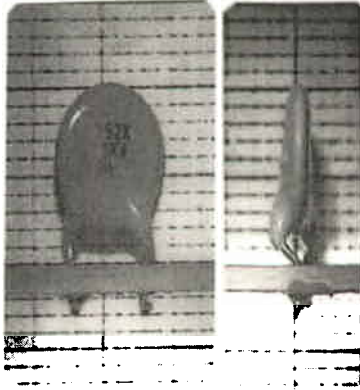
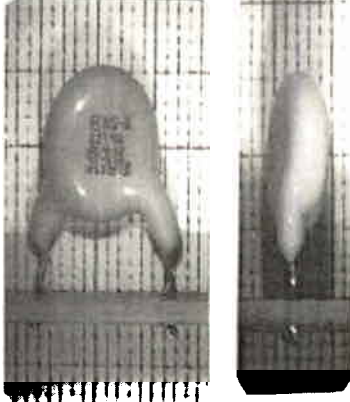
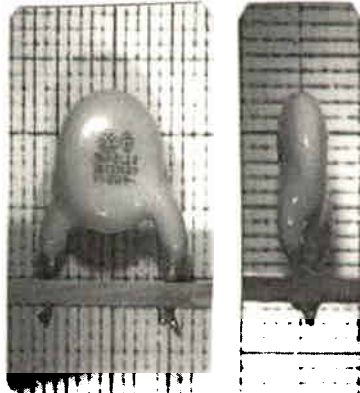
W



*A, E, N. Kinked lead type ( new standard )*



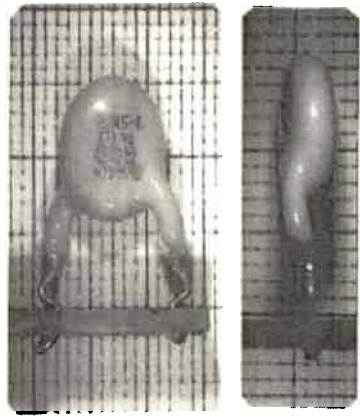

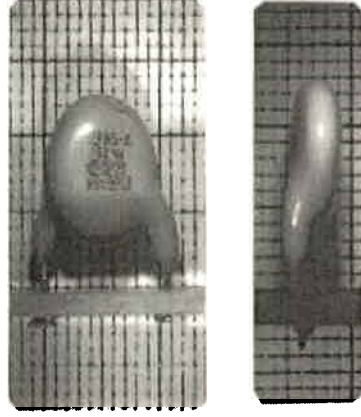
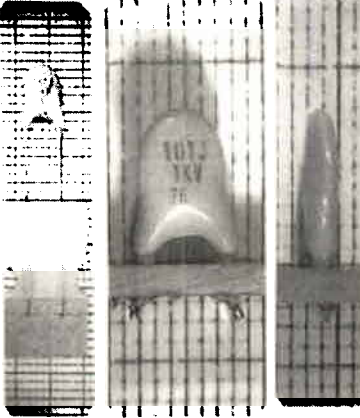

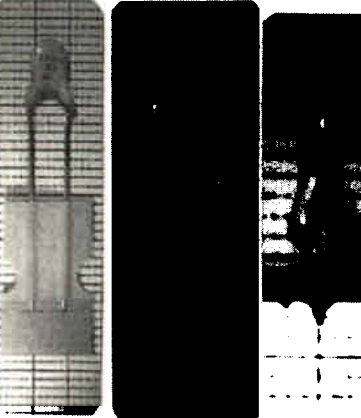
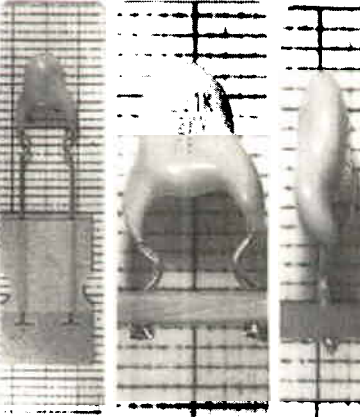

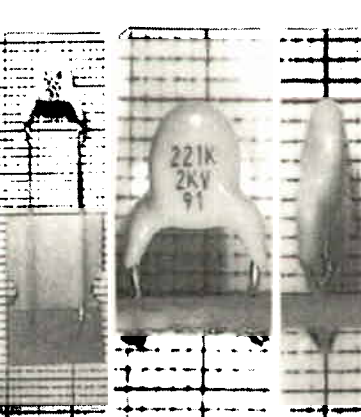
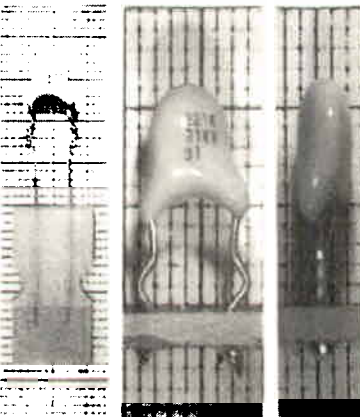

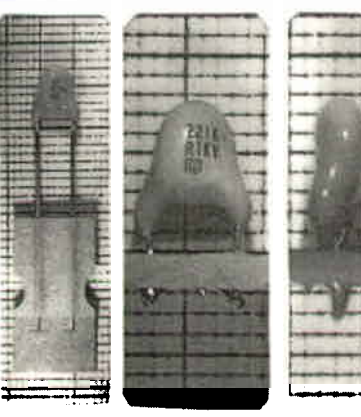
Compared with the shape of the conventional lead, this new type is twisted against the surface of capacitor element and is formed the lead as a stopper preventing the lead insulating material portion from entering into the printed wiring board.

Current products			Kinked lead type	
D		→	A	
M		→	E	
C		→	E	
J		→	E	



The real picture of before and after insert

NO-5

	Current products		Kinked lead type
W			
Z			
R			
K			

Current part No	Kinked part No
ECC D 3A *** KGE	ECC A 3A *** KGE
ECC D 3D *** KGE	ECC A 3D *** KGE
ECC D 3F *** KGE	ECC A 3F *** KGE
ECC M 3A *** KGE	ECC E 3A *** KGE
ECC M 3D *** KGE	ECC E 3D *** KGE
ECC M 3F *** KGE	ECC E 3F *** KGE
ECC Z 3A *** KGE	ECC N 3A *** KGE
ECC Z 3D *** KGE	ECC N 3D *** KGE
ECC Z 3F *** KGE	ECC N 3F *** KGE
ECC C 3A *** KGE	ECC E 3A *** KGE
ECC C 3D *** KGE	ECC E 3D *** KGE
ECC C 3F *** KGE	ECC E 3F *** KGE
ECC R 3A *** KGE	ECC N 3A *** KGE
ECC R 3D *** KGE	ECC N 3D *** KGE
ECC R 3F *** KGE	ECC N 3F *** KGE
ECC K 3A *** KGE	ECC N 3A *** KGE
ECC K 3D *** KGE	ECC N 3D *** KGE
ECC K 3F *** KGE	ECC N 3F *** KGE
ECC W 3A *** KGE	ECC E 3A *** KGE
ECC W 3D *** KGE	ECC E 3D *** KGE
ECC W 3F *** KGE	ECC E 3F *** KGE
ECC J 3A *** KGE	ECC E 3A *** KGE
ECC J 3D *** KGE	ECC E 3D *** KGE
ECC J 3F *** KGE	ECC E 3F *** KGE

Current part No	Kinked part No
ECK D 3A *** KB	ECK A SA *** KB
ECK D 3D *** KB	ECK A SD *** KB
ECK D 3F *** KB	ECK A SF *** KB
ECK M 3A *** KB	ECK E SA *** KB
ECK M 3D *** KB	ECK E SD *** KB
ECK M 3F *** KB	ECK E SF *** KB
ECK Z 3A *** KB	ECK N SA *** KB
ECK Z 3D *** KB	ECK N SD *** KB
ECK Z 3F *** KB	ECK N SF *** KB
ECK C 3A *** KB	ECK E SA *** KB
ECK C 3D *** KB	ECK E SD *** KB
ECK C 3F *** KB	ECK E SF *** KB
ECK R 3A *** KB	ECK N SA *** KB
ECK R 3D *** KB	ECK N SD *** KB
ECK R 3F *** KB	ECK N SF *** KB
ECK K 3A *** KB	ECK N SA *** KB
ECK K 3D *** KB	ECK N SD *** KB
ECK K 3F *** KB	ECK N SF *** KB
ECK W 3A *** KB	ECK E SA *** KB
ECK W 3D *** KB	ECK E SD *** KB
ECK W 3F *** KB	ECK E SF *** KB
ECK J 3A *** KB	ECK E SA *** KB
ECK J 3D *** KB	ECK E SD *** KB
ECK J 3F *** KB	ECK E SF *** KB

ECC D 3A *** KBP	ECC A 3A *** KBP
ECC D 3D *** KBP	ECC A 3D *** KBP
ECC D 3F *** KBP	ECC A 3F *** KBP
ECC M 3A *** KBP	ECC E 3A *** KBP
ECC M 3D *** KBP	ECC E 3D *** KBP
ECC M 3F *** KBP	ECC E 3F *** KBP
ECC Z 3A *** KBP	ECC N 3A *** KBP
ECC Z 3D *** KBP	ECC N 3D *** KBP
ECC Z 3F *** KBP	ECC N 3F *** KBP
ECC C 3A *** KBP	ECC E 3A *** KBP
ECC C 3D *** KBP	ECC E 3D *** KBP
ECC C 3F *** KBP	ECC E 3F *** KBP
ECC R 3A *** KBP	ECC N 3A *** KBP
ECC R 3D *** KBP	ECC N 3D *** KBP
ECC R 3F *** KBP	ECC N 3F *** KBP
ECC K 3A *** KBP	ECC N 3A *** KBP
ECC K 3D *** KBP	ECC N 3D *** KBP
ECC K 3F *** KBP	ECC N 3F *** KBP
ECC W 3A *** KBP	ECC E 3A *** KBP
ECC W 3D *** KBP	ECC E 3D *** KBP
ECC W 3F *** KBP	ECC E 3F *** KBP
ECC J 3A *** KBP	ECC E 3A *** KBP
ECC J 3D *** KBP	ECC E 3D *** KBP
ECC J 3F *** KBP	ECC E 3F *** KBP

ECK D 3A *** MEH	ECK A 3A *** MEH
ECK D 3D *** MEH	ECK A 3D *** MEH
ECK D 3F *** MEH	ECK A 3F *** MEH
ECK M 3A *** MEH	ECK E 3A *** MEH
ECK M 3D *** MEH	ECK E 3D *** MEH
ECK M 3F *** MEH	ECK E 3F *** MEH
ECK Z 3A *** MEH	ECK N 3A *** MEH
ECK Z 3D *** MEH	ECK N 3D *** MEH
ECK Z 3F *** MEH	ECK N 3F *** MEH
ECK C 3A *** MEH	ECK E 3A *** MEH
ECK C 3D *** MEH	ECK E 3D *** MEH
ECK C 3F *** MEH	ECK E 3F *** MEH
ECK R 3A *** MEH	ECK N 3A *** MEH
ECK R 3D *** MEH	ECK N 3D *** MEH
ECK R 3F *** MEH	ECK N 3F *** MEH
ECK K 3A *** MEH	ECK N 3A *** MEH
ECK K 3D *** MEH	ECK N 3D *** MEH
ECK K 3F *** MEH	ECK N 3F *** MEH
ECK W 3A *** MEH	ECK E 3A *** MEH
ECK W 3D *** MEH	ECK E 3D *** MEH
ECK W 3F *** MEH	ECK E 3F *** MEH
ECK J 3A *** MEH	ECK E 3A *** MEH
ECK J 3D *** MEH	ECK E 3D *** MEH
ECK J 3F *** MEH	ECK E 3F *** MEH



Current part No	Kinked part No
ECK D HT*** KB	ECK A HT*** KB
ECK M HT*** KB	ECK E HT*** KB
ECK Z HT*** KB	ECK N HT*** KB
ECK C HT*** KB	ECK E HT*** KB
ECK R HT*** KB	ECK N HT*** KB
ECK K HT*** KB	ECK N HT*** KB
ECK W HT*** KB	ECK E HT*** KB
ECK J HT*** KB	ECK E HT*** KB

Current part No	Kinked part No
ECK D RS*** MEY	ECK A RS*** MEY
ECK M RS*** MEY	ECK E RS*** MEY
ECK Z RS*** MEY	ECK N RS*** MEY
ECK C RS*** MEY	ECK E RS*** MEY
ECK R RS*** MEY	ECK N RS*** MEY
ECK K RS*** MEY	ECK N RS*** MEY
ECK W RS*** MEY	ECK E RS*** MEY
ECK J RS*** MEY	ECK E RS*** MEY

ECK D NA*** ME	ECK A NA*** ME
ECK M NA*** ME	ECK E NA*** ME
ECK Z NA*** ME	ECK N NA*** ME
ECK K NA*** ME	ECK N NA*** ME
ECK W NA*** ME	ECK E NA*** ME
ECK J NA*** ME	ECK E NA*** ME

ECK D NA*** _B	ECK A NA*** _B
ECK M NA*** _B	ECK E NA*** _B
ECK Z NA*** _B	ECK N NA*** _B
ECK K NA*** _B	ECK N NA*** _B
ECK W NA*** _B	ECK E NA*** _B
ECK J NA*** _B	ECK E NA*** _B

ECK D AE*** Z_	ECK A AE*** Z_
ECK M AE*** Z_	ECK E AE*** Z_
ECK Z AE*** Z_	ECK N AE*** Z_
ECK C AE*** Z_	ECK E AE*** Z_
ECK R AE*** Z_	ECK N AE*** Z_
ECK K AE*** Z_	ECK N AE*** Z_
ECK W AE*** Z_	ECK E AE*** Z_
ECK J AE*** Z_	ECK E AE*** Z_

ECK D BE*** Z_	ECK A BE*** Z_
ECK M BE*** Z_	ECK E BE*** Z_
ECK Z BE*** Z_	ECK N BE*** Z_
ECK C BE*** Z_	ECK E BE*** Z_
ECK R BE*** Z_	ECK N BE*** Z_
ECK K BE*** Z_	ECK N BE*** Z_
ECK W BE*** Z_	ECK E BE*** Z_
ECK J BE*** Z_	ECK E BE*** Z_

ECK D TS*** __	ECK A TS*** __
ECK M TS*** __	ECK E TS*** __
ECK Z TS*** __	ECK N TS*** __
ECK C TS*** __	ECK E TS*** __
ECK R TS*** __	ECK N TS*** __
ECK K TS*** __	ECK N TS*** __
ECK W TS*** __	ECK E TS*** __
ECK J TS*** __	ECK E TS*** __