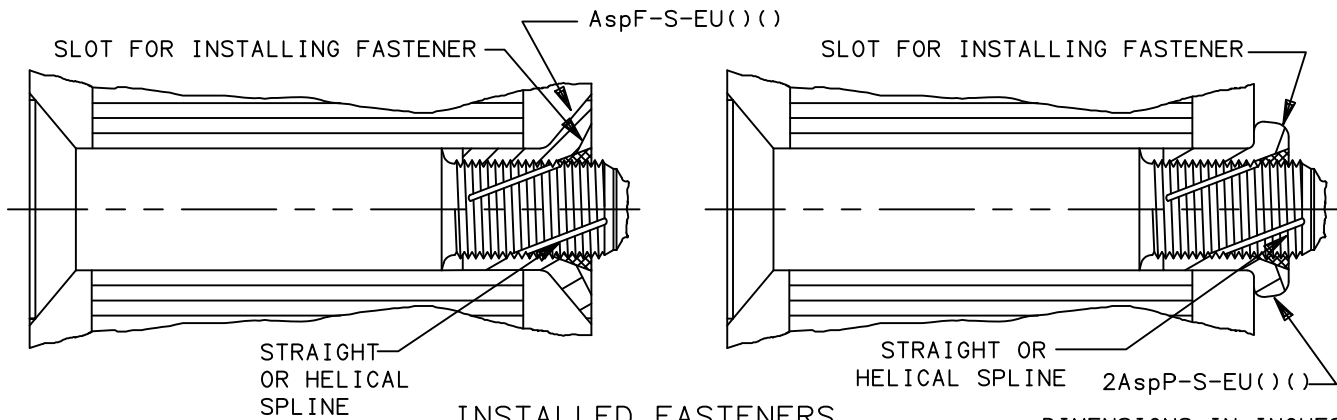
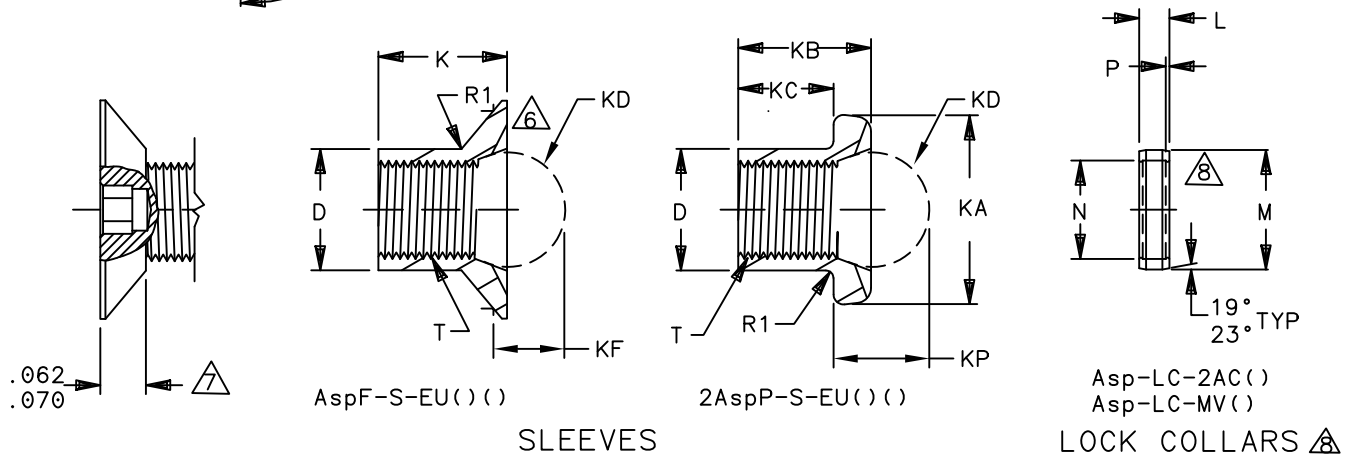
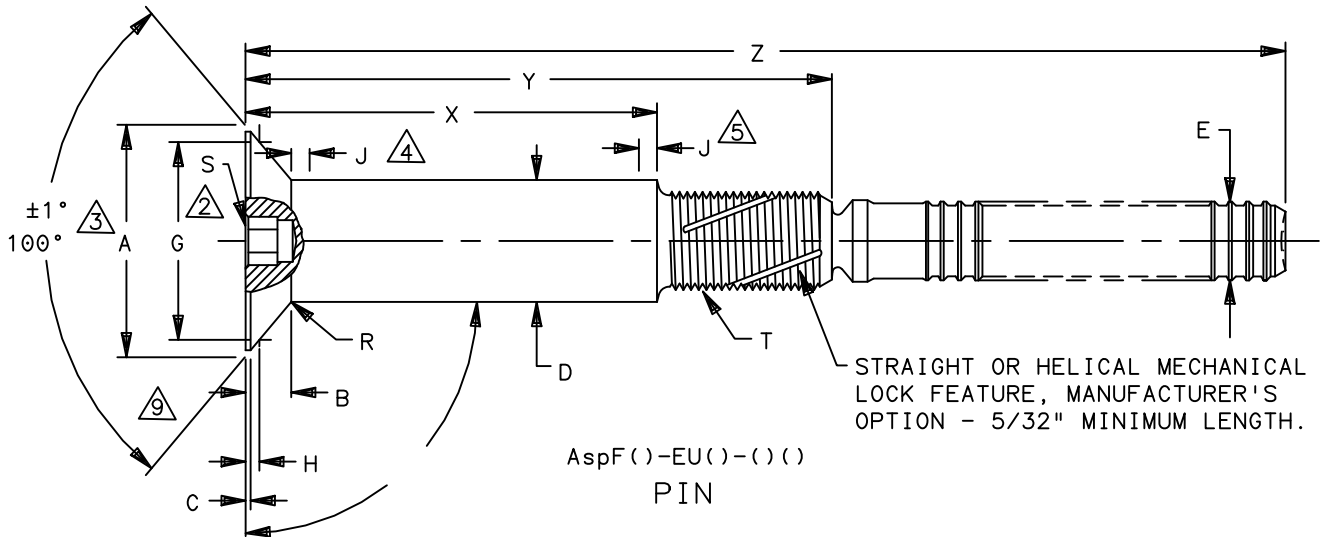


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DIMENSIONS IN INCHES

PROCUREMENT SPECIFICATION: C2005
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DRAWN BY	DH	FSCM (Cage Code) 17446 - Carson
CHECKED BY	MM/HJ	

F ₇	REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION. CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2. (REF. ECR2670)		Asp [®] FASTENER, ADJUSTABLE PRELOAD SELF SUSTAINING POSITIVE MECHANICAL LOCK, 100° FLUSH HEAD INSTALLED WITH FLUSH AND PROTRUDING HEAD SLEEVES. (A-286 CRES 95 KSI SHEAR)	AspF()-EU()-()() PIN AspF-S-EU()() & 2AspP-S-EU()() SLEEVES Asp-LC-2AC & Asp-LC-MV LOCK COLLARS
	ISSUED	01/05/88		
	REVISD	04/01/2020		
PAGE	1 OF 5		ASP103	



Howmet Fastening Systems
 Carson Operations
 900 E. Watson Center Road
 Carson, California 90745 U.S.A.

Phone (310) 830-8200
 HFS_Carson_Engineering@howmet.com

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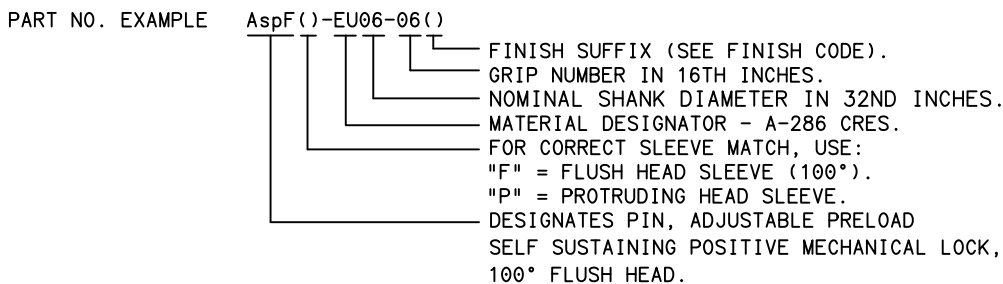
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Asp PIN PART NUMBER	NOM SIZE	A DIA NOM	B HEAD HEIGHT NOM	C MAX	D DIA BARE +.0020 - .0000	D DIA COATED +.0025 - .0000	E MAX DIA	G GAGE DIA ±.0001	H GAGE HEIGHT			J MAX	SLEEVES			
									MIN	MAX BARE	MAX COATED		K ±.005	KA DIA	KB ±.005	KC ±.005
AspF()-EU06()	13/64	.3805	.0751	.013	.2005	.2005	.132	.3271	.0205	.0243	.0255	.031	.175	.332 .305	.263	.200
AspF()-EU08()	17/64	.5010	.0994	.017	.2630	.2630	.174	.4319	.0270	.0310	.0322	.042	.229	.432 .400	.324	.229
AspF()-EU10()	21/64	.6275	.1263	.020	.3255	.3255	.194	.5450	.0325	.0367	.0379	.052	.285	.522 .480	.410	.285

NOM SIZE	SLEEVE			LOCK COLLAR				R RAD	R1 RAD	S HEX	T MODIFIED THREAD	MIN ULT TENSILE Δ		MIN ULT SHEAR Δ	HOLE LIMITS +.0045 - .0000	
	KD BALL	KF ±.0040	KP ±.0040	L ±.005	M DIA	N DIA	P TYP					WITH AspF-S-EU	WITH 2AspP-S-EU			
13/64	13/64	.1430	.1835	.050	.050	.200 .195	.164 .161	.015 .008	.020 .010	.025 .015	5/64	.1640-56 UNS-3()	1950	1590	1320	.2035
17/64	17/64	.1837	.2505	.065	.065	.262 .256	.216 .213	.022 .013	.020 .010	.030 .020	3/32	.2160-48 UNS-3()	3590	3590	2550	.2660
21/64	21/64	.2133	.3045	.083	.073	.314 .304	.253 .248	.028 .018	.030 .010	.040 .030	1/8	.2500-40 UNS-3()	4700	4700	3400	.3285

- Δ MINIMUM ULTIMATE TENSILE STRENGTH, OF INSTALLED FASTENER. (IN POUNDS)
- Δ HEX SOCKET.
- Δ NOMINAL THEORETICAL INTERSECTION DIAMETER.
- Δ MAXIMUM LENGTH OF PERMISSIBLE TAPER. DIAMETER MAY BE .002 GREATER THAN "D" WHEN MEASURED FROM TANGENCY OF HEAD TO SHANK DIAMETER RADIUS.
- Δ MAXIMUM LENGTH OF PERMISSIBLE UNDERFILL.
- Δ FLUSH HEAD DIMENSIONS SAME AS PIN, EXCEPT FILLET RADIUS.
- Δ .062/.070 HEAD HEIGHT FOR AspFP-EU06-06() ONLY AND AspFF-EU06-05().
- Δ MANUFACTURER'S OPTION TO SUPPLY SOLID OR SPLIT LOCK COLLAR.
- Δ CONICAL SURFACE OF HEAD TO BE CONCENTRIC WITH "D" DIAMETER WITHIN .003 FIR.
- Δ MINIMUM SHEAR STRENGTH OF INSTALLED FASTENER TESTED IN SINGLE SHEAR, WHEN SHEAR PLANE FALLS IN PIN THREADED SECTION ONLY.

MATERIAL: PIN & SLEEVE - EU - A-286 CRES PER CHEMISTRY OF AMS5737.
 LOCK COLLARS - 2AC - 2219-T6 ALUMINUM ALLOY PER CHEMISTRY OF QQ-A-430.
 - MV - COMMERCIALLY PURE (CP) TITANIUM PER CHEMISTRY OF ASTM B348.
 HEAT TREATMENT: PIN & SLEEVE - MINIMUM SHEAR STRENGTH 95 KSI.
 FINISH: PIN & SLEEVE - PASSIVATED PER AMS2700.
 SUFFIX "AC" - ALUMINUM COATED PER KAL-GARD 2242 ON HEAD AND SHANK ONLY.
 LOCK COLLARS - 2AC - CHEMICAL SURFACE TREAT PER MIL-DTL-5541 CLASS 1A.
 - MV - NONE.
 LUBRICATION: SLEEVE - CETYL ALCOHOL (CHLORINE FREE) PER AS87132.
 IDENTIFICATION: SLEEVE - HUCK SYMBOL (X) & "EU".
 PIN - HUCK SYMBOL (X) & "EU", SLEEVE TYPE ("F" OR "P") AND GRIP DASH NUMBER.
 INSTALLATION: IN ACCORDANCE WITH HUCK BROCHURE HCB-135.



DIMENSIONS IN INCHES

ISSUED	01/05/88	Asp® FASTENER, ADJUSTABLE PRELOAD SELF SUSTAINING POSITIVE MECHANICAL LOCK, 100° FLUSH HEAD INSTALLED WITH FLUSH AND PROTRUDING HEAD SLEEVES. (A-286 CRES 95 KSI SHEAR)	AspF()-EU()-()-() PIN AspF-S-EU()-()-() & 2AspP-S-EU()-()-() SLEEVES Asp-LC-2AC & Asp-LC-MV LOCK COLLARS	
	REVISD			04/01/2020
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F7



Howmet Fastening Systems
 Carson Operations
 900 E. Watson Center Road
 Carson, California 90745 U.S.A.

Phone (310) 830-8200
 HFS_Carson_Engineering@howmet.com

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THESE DIMENSIONS ARE FOR AspFF-EU()-()-() PIN USING FLUSH SLEEVE.
 FOR PIN USING PROTRUDING SLEEVE SEE SHEET 4 OF 4.

GRIP NUMBER TABULATION											
GRIP DASH NO.	DESIGN GRIP RANGE		06 (13/64) DIA			08 (17/64) DIA			10 (21/64) DIA		
	MIN	MAX	X	Y	Z	X	Y	Z	X	Y	Z
			+ .005 - .010	± .010	+ .063 - .000	+ .005 - .010	± .010	+ .063 - .000	+ .005 - .010	± .010	+ .063 - .000
05	.251	.312	△	.342	1.156	—	—	—	—	—	—
06	.313	.375	.125	.405	1.219	—	—	—	—	—	—
07	.376	.438	.188	.468	1.281	.125	.477	1.438	—	—	—
08	.439	.500	.250	.530	1.344	.188	.540	1.500	—	—	—
09	.501	.562	.312	.592	1.406	.250	.602	1.563	.188	.607	1.688
10	.563	.625	.375	.655	1.469	.312	.665	1.625	.250	.670	1.750
11	.626	.688	.438	.718	1.531	.375	.727	1.688	.312	.732	1.813
12	.689	.750	.500	.780	1.594	.438	.790	1.750	.375	.795	1.875
13	.751	.812	.562	.842	1.656	.500	.852	1.813	.438	.857	1.938
14	.813	.875	.625	.905	1.719	.562	.915	1.875	.500	.920	2.000
15	.876	.938	.688	.968	1.781	.625	.977	1.938	.562	.982	2.063
16	.939	1.000	.750	1.030	1.844	.688	1.040	2.000	.625	1.045	2.125
17	1.001	1.062	.812	1.092	1.906	.750	1.102	2.063	.688	1.107	2.188
18	1.063	1.125	.875	1.155	1.969	.812	1.165	2.125	.750	1.170	2.250
19	1.126	1.188	.938	1.218	2.031	.875	1.227	2.188	.812	1.232	2.313
20	1.189	1.250	1.000	1.280	2.094	.938	1.290	2.250	.875	1.295	2.375
21	1.251	1.312	1.062	1.342	2.156	1.000	1.352	2.313	.938	1.357	2.438
22	1.313	1.375	1.125	1.405	2.219	1.062	1.415	2.375	1.000	1.420	2.500
23	1.376	1.438	1.188	1.468	2.281	1.125	1.477	2.438	1.062	1.482	2.563
24	1.439	1.500	1.250	1.530	2.344	1.188	1.540	2.500	1.125	1.545	2.625
25	1.501	1.562	1.312	1.592	2.406	1.250	1.602	2.563	1.188	1.607	2.688
26	1.563	1.625	1.375	1.655	2.469	1.312	1.665	2.625	1.250	1.670	2.750
27	1.626	1.688	1.438	1.718	2.531	1.375	1.727	2.688	1.312	1.732	2.813
28	1.689	1.750	1.500	1.780	2.594	1.438	1.790	2.750	1.375	1.795	2.875
29	1.751	1.812	1.562	1.842	2.656	1.500	1.852	2.813	1.438	1.857	2.938
30	1.813	1.875	1.625	1.905	2.719	1.562	1.915	2.875	1.500	1.920	3.000
31	1.876	1.938	1.688	1.968	2.781	1.625	1.977	2.938	1.562	1.982	3.063
32	1.939	2.000	1.750	2.030	2.844	1.688	2.040	3.000	1.625	2.045	3.125
33	2.001	2.062	1.812	2.092	2.906	1.750	2.102	3.063	1.688	2.107	3.188
34	2.063	2.125	1.875	2.155	2.969	1.812	2.165	3.125	1.750	2.170	3.250
35	2.126	2.188	1.938	2.218	3.031	1.875	2.227	3.188	1.812	2.232	3.313
36	2.189	2.250	2.000	2.280	3.094	1.938	2.290	3.250	1.875	2.295	3.375

DIMENSIONS IN INCHES

F7	REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION. CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2. (REF. ECR2670)		Asp [®] FASTENER, ADJUSTABLE PRELOAD SELF SUSTAINING POSITIVE MECHANICAL LOCK, 100° FLUSH HEAD INSTALLED WITH FLUSH AND PROTRUDING HEAD SLEEVES. (A-286 CRES 95 KSI SHEAR)	AspFF()-EU()-()-() PIN AspF-S-EU()-()-() & 2AspP-S-EU()-()-() SLEEVES Asp-LC-2AC & Asp-LC-MV LOCK COLLARS
	ISSUED	01/05/88		
	REVISD	04/01/2020		
PAGE	3 OF 5	ASP103		



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 Carson Operations
 900 E. Watson Center Road
 Carson, California 90745 U.S.A.

Phone (310) 830-8200
 HFS_Carson_Engineering@howmet.com

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 FOR PIN USING FLUSH SLEEVE SEE SHEET 3 OF 4.

GRIP NUMBER TABULATION											
GRIP DASH NO.	DESIGN GRIP RANGE		06 (13/64) DIA			08 (17/64) DIA			10 (21/64) DIA		
	MIN	MAX	X	Y	Z	X	Y	Z	X	Y	Z
			+ .005 - .010	± .010	+ .063 - .000	+ .005 - .010	± .010	+ .063 - .000	+ .005 - .010	± .010	+ .063 - .000
06	.313	.375	△	.468	1.281	—	—	—	—	—	—
07	.376	.438	.156	.530	1.344	.125	.572	1.533	—	—	—
08	.439	.500	.218	.592	1.406	.188	.635	1.595	—	—	—
09	.501	.562	.281	.655	1.469	.250	.697	1.658	.188	.732	1.813
10	.563	.625	.343	.718	1.531	.312	.760	1.720	.250	.795	1.875
11	.626	.688	.406	.780	1.594	.375	.822	1.783	.312	.857	1.937
12	.689	.750	.468	.842	1.656	.438	.885	1.845	.375	.920	2.000
13	.751	.812	.531	.905	1.719	.500	.947	1.908	.438	.982	2.063
14	.813	.875	.593	.968	1.781	.562	1.010	1.970	.500	1.045	2.125
15	.876	.938	.656	1.030	1.844	.625	1.072	2.033	.562	1.107	2.187
16	.939	1.000	.718	1.092	1.906	.688	1.135	2.095	.625	1.170	2.250
17	1.001	1.062	.781	1.155	1.969	.750	1.197	2.158	.688	1.232	2.313
18	1.063	1.125	.843	1.218	2.031	.812	1.260	2.220	.750	1.295	2.375
19	1.126	1.188	.906	1.280	2.094	.875	1.322	2.283	.812	1.357	2.437
20	1.189	1.250	.968	1.342	2.156	.938	1.385	2.345	.875	1.420	2.500
21	1.251	1.312	1.031	1.405	2.219	1.000	1.447	2.408	.938	1.482	2.563
22	1.313	1.375	1.093	1.468	2.281	1.062	1.510	2.470	1.000	1.545	2.625
23	1.376	1.438	1.156	1.530	2.344	1.125	1.572	2.533	1.062	1.607	2.687
24	1.439	1.500	1.218	1.592	2.406	1.188	1.635	2.595	1.125	1.670	2.750
25	1.501	1.562	1.281	1.655	2.469	1.250	1.697	2.658	1.188	1.732	2.813
26	1.563	1.625	1.343	1.718	2.531	1.312	1.760	2.720	1.250	1.795	2.875
27	1.626	1.688	1.406	1.780	2.594	1.375	1.822	2.783	1.312	1.857	2.937
28	1.689	1.750	1.468	1.842	2.656	1.438	1.885	2.845	1.375	1.920	3.000
29	1.751	1.812	1.531	1.905	2.719	1.500	1.947	2.908	1.438	1.982	3.063
30	1.813	1.875	1.593	1.968	2.781	1.562	2.010	2.970	1.500	2.045	3.125
31	1.876	1.938	1.656	2.030	2.844	1.625	2.072	3.033	1.562	2.107	3.187
32	1.939	2.000	1.718	2.092	2.906	1.688	2.135	3.095	1.625	2.170	3.250
33	2.001	2.062	1.781	2.155	2.969	1.750	2.197	3.158	1.688	2.232	3.313
34	2.063	2.125	1.843	2.218	3.031	1.812	2.260	3.220	1.750	2.295	3.375
35	2.126	2.188	1.906	2.280	3.094	1.875	2.322	3.283	1.812	2.357	3.437
36	2.189	2.250	1.968	2.342	3.156	1.938	2.385	3.345	1.875	2.420	3.500

DIMENSIONS IN INCHES

F7	REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION. CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2. (REF. ECR2670)		Asp® FASTENER, ADJUSTABLE PRELOAD SELF SUSTAINING POSITIVE MECHANICAL LOCK, 100° FLUSH HEAD INSTALLED WITH FLUSH AND PROTRUDING HEAD SLEEVES. (A-286 CRES 95 KSI SHEAR)	AspF()-EU()-()-() PIN AspF-S-EU()-()-() & 2AspP-S-EU()-()-() SLEEVES Asp-LC-2AC & Asp-LC-MV LOCK COLLARS
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PAGE	4 OF 5	ASP103		



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Phone (310) 830-8200
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COMPONENTS AVAILABLE AS KITS

KIT PART NUMBER	KIT COMPONENT PART NUMBERS		
	PIN	SLEEVE	COLLAR
ASP19-EU()-()	ASPFF-EU()-()	ASPF-S-EU()	ASP-LC-2AC()
ASP19-EU()-()AC	ASPFF-EU()-()AC	ASPF-S-EU()AC	ASP-LC-2AC()

DIMENSIONS IN INCHES

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	ISSUED	01/05/88	Asp® FASTENER, ADJUSTABLE PRELOAD SELF SUSTAINING POSITIVE MECHANICAL LOCK, 100° FLUSH HEAD INSTALLED WITH FLUSH AND PROTRUDING HEAD SLEEVES. (A-286 CRES 95 KSI SHEAR)
	REVISED	04/01/2020	
PAGE	5 OF 5		Asp()-EU()-() PIN AspF-S-EU() & 2AspP-S-EU() SLEEVES Asp-LC-2AC & Asp-LC-MV LOCK COLLARS ASP103