

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL10	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	HL110	N/A	HS342	HL870, HL79, HL82F, HL94, HL97
HL11VDF	FLUSH	SHEAR	100	6AL-4V	95	STD	1/16	HL111VDF	N/A	HS342 EXCEPT THREADS PER HS387	HL9F4GB
HL11	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	HL111	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL379
HL12	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	HL112	N/A	HS342	HL75, HL86, HL198, HL280
HL12V WD	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	HL112 WD	SPECIAL FOR BELL	HS342	HL75, HL86
HL12VDF	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	HL112VDF	N/A	HS 342, HS387	HL86GB
HL13	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	HL113	N/A	HS342	HL75, HL86, HL198, HL280
HL14	PROTRUDING	SHEAR	N/A	H-11 STEEL ALLOY	156	STD	1/16	HL214	N/A	HS342	HL574
HL15	FLUSH	SHEAR	100 REDUCED	H-11 STEEL ALLOY	156	STD	1/16	HL215	N/A	HS342	HL574
HL16	PROTRUDING	TENSION	N/A	H-11 STEEL ALLOY	156	STD	1/16	HL216	N/A	HS342	HL89, HL273
HL17	FLUSH	TENSION	100 MS24694	H-11	156	STD	1/16	HL217	N/A	HS342	HL89, HL273
HL18	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	HL62	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL19	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	HL63	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL20	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	HL64	N/A	HS342	HL75, HL86, HL87
HL21	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	STD	1/16	HL65	N/A	HS342	HL75, HL86, HL87
HL22	PROTRUDING	SHEAR	N/A	7075-T6	45	STD	1/16	HL122	N/A	HS342	HL77, HL182, HL277
HL23	FLUSH	SHEAR	100 MS20426	7075-T6	45	STD	1/16	HL123	N/A	HS342	HL77, HL182, HL277
HL24	FLUSH	SHEAR	100 SEALING	6AL-4V	95	STD	1/16	HL124	SEALING APPLICATION	HS342	HL70, HL79, HL82
HL25	FLUSH	SHEAR	100 SEALING	431 SST	125	STD	1/16	HL125	SEALING APPLICATION	HS342	HL70, HL79, HL86
HL26	PROTRUDING	SHEAR	N/A	INCONEL X-750	95	STD	1/16	N/A	N/A	HS340	HL70, HL79, HL82, HL88, HL94, HL97
HL27	FLUSH	SHEAR	100 REDUCED	INCONEL X-750	95	STD	1/16	N/A	N/A	HS340	HL70, HL79, HL82, HL88, HL94, HL97
HL28	FLUSH	SHEAR	100 REDUCED	305 SST	45	STD	1/16	N/A	STUD END	N/A	H70, HL79, HL82
HL29	FLUSH	TENSION	100 MS24694	7075-T6	45	STD	1/16	HL129	N/A	HS342	HL77, HL182, HL277
HL30	PROTRUDING	SHEAR	N/A	431 SST	125	STD	1/16	HL66	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL31	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/16	HL67	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL32	PROTRUDING	TENSION	N/A	431 SST	125	STD	1/16	HL36	N/A	HS342	HL73, HL75, HL86, HL87, HL89, HL273
HL33	FLUSH	TENSION	100 MS24694	431 SST	125	STD	1/16	HL37	N/A	HS342	HL73, HL75, HL86, HL87, HL89, HL273
HL34	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/16	N/A	STUD END	HS342	HL94, HL175
HL35	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	N/A	STUD END	HS342	HL70, HL79, HL82

HL PIN INDEX

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HL36	PROTRUDING	TENSION	N/A	431 SST	125	1/64	1/16	HL136	1/64 OVERSIZE FOR HL32	HS342	HL75, HL87, HL89, HL273
HL37	FLUSH	TENSION	100 MS24694	431 SST	125	1/64	1/16	HL137	1/64 OVERSIZE FOR HL33	HS342	HL75, HL87, HL89, HL273
HL38	PROTRUDING	TENSION	N/A	305 SST	45	STD	1/16	N/A	N/A	N/A	N/A
HL39	FLUSH	TENSION	100 MS24694	305 SST	45	STD	1/16	N/A	N/A	N/A	N/A
HL40	PROTRUDING	SHEAR	N/A	A-286	95	STD	1/16	HL140	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL297
HL41	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	HL141	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL297
HL42	PROTRUDING	SHEAR	N/A	305 SST	45	STD	1/16	N/A	N/A	N/A	N/A
HL43	FLUSH	SHEAR	100 REDUCED	305 SST	45	STD	1/16	N/A	N/A	N/A	HL70, HL79, HL82, HL94, HL97, HL175
HL44	PROTRUDING	SHEAR	N/A	RENE 41	95	STD	1/16	N/A	N/A	HS340	HL88
HL45	FLUSH	SHEAR	100 REDUCED	RENE 41	95	STD	1/16	N/A	N/A	HS340	HL88
HL46	PROTRUDING	SHEAR	N/A	.5TI MOLYBDENUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL47	FLUSH	SHEAR	100 REDUCED	.5TI MOLYBDENUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL48	PROTRUDING	TENSION	N/A	A-286	95	STD	1/16	HL248	N/A	HS342	HL75, HL78, HL86
HL49	FLUSH	TENSION	100 MS24694	A-286	95	STD	1/16	HL249	N/A	HS342	HL75, HL78, HL86
HL50	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	3/32	HL56	N/A	HS342	HL83, HL90, HL490, HLH579, HLS94, HL683
HL51	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	3/32	HL57	N/A	HS342	HL83, HL90, HL490, HLH579, HLS94, HL683
HL52	PROTRUDING	SHEAR	N/A	431 STAINLESS STEEL	125	1/64	1/16	HL458	N/A	HS342	HL79, HL82, HL94, HL175
HL52	PROTRUDING	SHEAR	N/A	431 SST	125	1/64	1/16	HL458	1/64 OVERSIZE FOR HL54	HS342	HL79, HL82, HL94, HL175
HL53	FLUSH	SHEAR	N/A	431 STAINLESS STEEL	125	1/64	1/16	HL459	1/64 OVERSIZE FOR HL61	HS342	HL79, HL82, HL94, HL175
HL54	PROTRUDING	SHEAR	N/A	431 SST	125	STD	1/16	HL52	N/A	H342	HL79, HL82, HL94, HL175
HL55	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	N/A	HS340	HL70, HL79, HL82, HL94, HL97
HL55V	N/A	N/A	N/A	N/A	N/A	1/64	N/A	N/A	N/A	N/A	N/A
HL56	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	1/64	3/32	HL68	1/64 OVERSIZE FOR HL50	HS342	HL83, HL91, HL579, HL594, HL683, HL694
HL57	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/64	3/32	HL69	1/64 OVERSIZE FOR HL51	HS342	HL83, HL91, HL579, HL594, HL683, HL694
HL58	PROTRUDING	SHEAR	PROTRUDING SHEAR	431 SST	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL30	HS342	HL84, HL197, HL294, HL382
HL59	FLUSH	SHEAR	100 REDUCED	431 SST	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL31	HS342	HL84, HL197, HL294, HL382
HL60	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	N/A	STUD-THREADED	HS340	HL72, HL86
HL61	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/16	HL53	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175

HL PIN INDEX

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HL62	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	1/64	1/16	HL218	1/64 OVERSIZE FOR HL18 OR HL418	HS342	HL79, HL82, HL94, HL175
HL63	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/64	1/16	HL219	1/64 OVERSIZE FOR HL19 OR HL419	HS342	HL79, HL82, HL94, HL175
HL64	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	1/64	1/16	HL220	1/64 OVERSIZE FOR HL20 OR HL420	HS342	HL75, HL87
HL65	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	1/64	1/16	HL221	1/64 OVERSIZE FOR HL21 OR HL421	HS342	HL75, HL87
HL66	PROTRUDING	SHEAR	N/A	431 SST	125	1/64	1/16	HL58	1/64 OVERSIZE FOR HL30	HS342	HL79, HL82, HL94, HL175, HL197, HL297
HL67	FLUSH	SHEAR	100 REDUCED	431 SST	125	1/64	1/16	HL59	1/64 OVERSIZE FOR HL31	HS342	HL79, HL82, HL94, HL175, HL197,297
HL68	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	1/32	3/32	N/A	1/32 OVERSIZE FOR HL50	HS342	HL92, HL492
HL69	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/32	3/32	N/A	1/32 OVERSIZE FOR HL51	HS342	HL92, HL492
HL101	FLUSH	SHEAR	100 SPECIAL	ALLOY STEEL	95	1/64	3/32	HL103	SPECIAL HEAD-1/64 OVERSIZE	HS340	HL83, HL91, HL579, HL594, HL683, HL694
HL102	PROTRUDING	SHEAR	N/A	17-4 PH ALLOY STEEL	110	STD	3/32	N/A	SPECIAL APPLICATION	HS340	N/A
HL103	FLUSH	SHEAR	100 SPECIAL	ALLOY STEEL	95	1/32	3/32	N/A	SPECIAL HEAD-OVERSIZE FOR HL101	HS340	HL92, HL492
HL104	PROTRUDING	SHEAR	N/A	17-4 PH ALLOY STEEL	110	STD	1/16	N/A	SPECIAL DESIGN	HS340, EXCEPT SECTION 11	HL79
HL105	FLUSH	N/A	100 SPECIAL	ALLOY STEEL	95	1/64	3/32	HL107	SPECIAL DESIGN 1/64 OVERSIZE, CLOSE TOLERANCE	HS340	HL92, HL492
HL106	PROTRUDING	SHEAR	N/A	A-286	95	STD	1/16	N/A	SEALING APPLICATION	HS342	HL97, HL297
HL107	FLUSH	N/A	100 SPECIAL	ALLOY STEEL	95	1/32	3/32	N/A	SPECIAL DESIGN-OVERSIZE FOR HL105, CLOSE TOLERANCE	HL340	HL92
HL108	PROTRUDING	SHEAR	N/A	1AL-8V-5FE TI	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL109	FLUSH	SHEAR	100 MS20426	431 SST	125	STD	1/16	N/A	N/A	HS340	HL70, HL79, HL82, HL94, HL97
HL110	PROTRUDING	SHEAR	N/A	6AL-4V	95	1/64	1/16	HL410	1/64 OVERSIZE FOR HL10	HS342	HL79, HL82, HL94, HL276, HL379
HL111	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	1/64	1/16	HL411	1/64 OVERSIZE FOR HL11	HS342	HL79, HL82, HL94, HL111, HL276, HL379
HL112	PROTRUDING	TENSION	N/A	6AL-4V	95	1/64	1/16	HL412	1/64 OVERSIZE FOR HL12	HS342	HL75, HL87, HL198, HL280

HL PIN INDEX

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HL113	FLUSH	TENSION	100 MS24694	6AL-4V	95	1/64	1/16	HL413	1/64 OVERSIZE FOR HL13	HS342	HL75, HL87, HL198, HL280
HL114	PROTRUDING	SHEAR	N/A	H-11	132	STD	1/16	HL314	N/A	HS342	HL574
HL115	FLUSH	SHEAR	100 REDUCED	H-11 STEEL ALLOY	132	STD	1/16	HL315	N/A	HS342	HL574
HL116	PROTRUDING	TENSION	N/A	H-11 STEEL ALLOY	132	STD	1/16	HL316	N/A	HS342	HL89, HL273
HL117	FLUSH	TENSION	100 MS24694	H-11 STEEL ALLOY	132	STD	1/16	HL317	N/A	HS342	HL89, HL273
HL118	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/32	N/A	SHORT THREAD	HS340	HL95
HL119	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/32	N/A	SHORT THREAD	HS340	HL95
HL120	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/32	N/A	SHORT THREAD	HS342	HL96
HL121	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	STD	1/32	N/A	SHORT THREAD	HS342	HL96
HL122	PROTRUDING	SHEAR	N/A	7075-T6 ALUMINUM ALLOY	45	1/64	1/16	HL258	1/64 OVERSIZE FOR HL22	HS342	HL377
HL123	FLUSH	SHEAR	100 MS20426	7075-T6 ALUMINUM ALLOY	45	1/64	1/16	HL259	1/64 OVERSIZE FOR HL23	HS342	HL377
HL124	FLUSH	SHEAR	100 SEALING	6AL-4V TITANIUM ALLOY	95	1/64	1/16	N/A	SEALING, 1/64 OVERSIZE FOR HL24	HS342	HL79, HL82
HL125	FLUSH	SHEAR	100 SEALING	431 SST	125	1/64	1/16	N/A	SEALING-1/64 OVERSIZE FOR HL25	HS342	HL79, HL87, HL94
HL126	PROTRUDING	SHEAR	N/A	INCONEL X-750	95	STD	1/32	N/A	N/A	N/A	N/A
HL127	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	STD	1/16	N/A	STUD-THREADED WITH SHANK PORTION	N/A	N/A
HL128	PROTRUDING	SHEAR	SELF-ALIGNING	6AL-4V	95	STD	1/16	N/A	SELF-ALIGNING HEAD	N/A	N/A
HL129	FLUSH	TENSION	100 MS24694	7075-T6 ALUMINUM ALLOY	45	1/64	1/16	HL729	1/64 OVERSIZE FOR HL29	HS342	HL182, HL377
HL130	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	N/A	SPECIAL THREAD LENGTH	HS342	N/A
HL131	FLUSH	TENSION	100 MS24694	6AL-4V TITANIUM ALLOY	95	STD	1/16	N/A	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS340	HL75, HL86
HL132	PROTRUDING	N/A	SEALING	6AL-4V	95	STD	1/16	N/A	SEALING-WITH WET SEALANT	HS342	HL70, HL79, HL82, HL94

HL PIN INDEX

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HL133	FLUSH	TENSION	100 MS24694	A-286	95	STD	1/16	N/A	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS340	HS72, HL75, HL, 78, HL86, HL198
HL134	PROTRUDING	N/A	SEALING	7075-T6 ALUMINUM ALLOY	45	STD	1/16	N/A	SEALING-WITH WET SEALANT	HS342	HL77,HL277
HL135	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	HL235	STUD-THREADED	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL136	PROTRUDING	TENSION	N/A	431 SST	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL32	HS342	HL93, HL289, HL373
HL137	FLUSH	TENSION	100 MS24694	431 SST	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL33	HS342	HL93, HL289, HL373
HL138	PROTRUDING	SHEAR	N/A	A-286	95	STD	1/32	N/A	HONEYCOMB	HS342	N/A
HL139	FLUSH	SHEAR	100 REDUCED	6AL-4V TITANIUM ALLOY	95	STD	1/16	HL239	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL140	PROTRUDING	SHEAR	N/A	A-286	95	1/64	1/16	HL240	1/64 OVERSIZE FOR HL40	HS342	HL79, HL82, HL94, HL175, HL197, HL297
HL141	FLUSH	SHEAR	100 REDUCED	A-286	95	1/64	1/16	HL241	1/64 OVERSIZE FOR HL41	HS342	HL79, HL82, HL94, HL175, HL197, HL297
HL142	PROTRUDING	SHEAR	N/A	GREEK ASCOLOY	N/A	1/32	N/A	N/A	SHOULDER PIN	N/A	N/A
HL143	FLUSH	SHEAR	100 REDUCED	305 SST	45	STD	1/16	N/A	LONG THREAD	HS340	HL70, HL79, HL82, HL894, HL97, HL175
HL144	PROTRUDING	SHEAR	3.5D	A-286	95	STD	1/32	HL842	HONEYCOMB	HS342	N/A
HL145	FLUSH	SHEAR	100 MS20426	6AL-4V TITANIUM ALLOY	95	STD	1/16	HL245	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS342	HL70, HL79, HL82, HL94, HL97 HL175
HL146	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	HL246	STUD-THREADED WITH SHANK PORTION	N/A	N/A
HL147	FLUSH	SHEAR	100 SEALING	ALLOY STEEL	95	STD	1/16	N/A	SEALING APPLICATION	HL342	HL70, HL79, HL82, HL94, HL97
HL148	PROTRUDING	TENSION	N/A	A-286	95	STD	1/16	N/A	SIMILAR TO HL48	AMS7477	HL94, HL97, HL175
HL149	FLUSH	TENSION	100 MS24694	A-286	95	STD	1/16	N/A	SIMILAR TO HL49	AMS7477	HL94, HL97, HL175
HL150	PROTRUDING	SHEAR	N/A	PH15-7MO	125	STD	1/16	N/A	N/A	HS340	HL70, HL79, HL82, HL94, HL97
HL151	FLUSH	SHEAR	100 REDUCED	PH15-7MO	125	STD	1/16	N/A	N/A	HS340	HL70, HL79, HL82, HL94, HL97
HL152	PROTRUDING	TENSION	N/A	PH15-7MO	125	STD	1/16	N/A	N/A	HS340	HL73, HL75, HL86, HL87, HL89, HL273
HL153	FLUSH	TENSION	100 MS24694	PH15-7M0	125	STD	1/16	N/A	N/A	HS340	HL73, HL75, HL86, HL87, HL89, HL273
HL154	PROTRUDING	SHEAR	CURVED	A-286	95	STD	1/32	N/A	SPECIAL APPL	HS342	HLN1

HL PIN INDEX

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HL155	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	1/64	1/16	N/A	N/A	N/A	HL79, HL94
HL156	PROTRUDING	SHEAR	N/A	MP35N	132	STD	1/16	HL1256	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL157	FLUSH	SHEAR	100 REDUCED	MP35N	132	STD	1/16	HL863	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL158	PROTRUDING	TENSION	PROTRUDING TENSION	MP35N	132	STD	1/16	N/A	N/A	HS342	HL75, HL78, HL86, HL87, HL87, HL574
HL159	FLUSH	TENSION	100 MS24694	MP35N	132	STD	1/16	N/A	N/A	HS342	HL75, HL78, HL86, HL87, HL87, HL574
HL160	PROTRUDING	N/A	SEALING	ALLOY STEEL	95	STD	1/16	HL260	STUD-SEALING-THREADED	HS342	HL70, HL79, HL82
HL161	PROTRUDING	N/A	SEALING	ALLOY STEEL	95	STD	1/16	HL261	STUD-SEALING-THREADED, HEX BOTH ENDS	HS342	HL70, HL79, HL82
HL162	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	N/A	STUD-THREADED WITH SHANK PORTION	HS342	HL75/ HL86, HL87
HL163	FLUSH	SHEAR	100 MS20426	8-8-2-3 TI	95	STD	1/16	N/A	N/A	N/A	N/A
HL164	PROTRUDING	N/A	BUTTON	6061-T6	27	STD	1/16	N/A	CORROSION RESISTANT	HS340	HL172, HL172NA
HL165	FLUSH	N/A	90	6061-T6	27	STD	1/16	N/A	CORROSION RESISTANT	HS340	HL172, HL172NA
HL166	FLUSH	SHEAR	156, 2.5D	A-286	95	STD	N/A	N/A	HONEYCOMB	HS342	N/A
HL167	FLUSH	SHEAR	156, 2D CURVED	A-286	95	STD	1/32	N/A	HONEYCOMB	HS342	N/A
HL168	FLUSH	SHEAR	156, 3.5D	A-286	95	STD	1/32	N/A	HONEYCOMB	AMS7479	N/A
HL169	FLUSH	SHEAR	156, 3.5D	A-286	95	STD	1/32	N/A	HONEYCOMB	HS342	N/A
HL200	FLUSH	SHEAR	100 REDUCED, CROWN	ALLOY STEEL	95	STD	1/16	N/A	SAME AS HL19 EXCEPT HEAD STYLE	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL201	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	N/A	KNURLED GRIP DIAMETER-SAME AS HL19	N/A	HL70, HL79, HL82, HL94, HL97
HL202	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	3/64	1/16	N/A	3/64 OVERSIZE FOR HL18	HS342	HL279, HL394
HL203	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	3/64	1/16	N/A	3/64 OVERSIZE FOR HL19	HS342	HL279, HL394
HL204	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	3/64	1/16	N/A	3/64 OVERSIZE FOR HL20	HS342	HL287
HL205	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	3/64	1/16	N/A	3/64 OVERSIZE FOR HL21	HS342	HL287
HL206	PROTRUDING	SHEAR	4.5D	A-286	95	STD	1/32	N/A	N/A	HS342	HLN1
HL207	FLUSH	SHEAR	100 MS20426	ALLOY STEEL	95	3/64	1/16	N/A	3/64 OVERSIZE FOR HL525	HS342	HL279, HL394
HL208	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	N/A	LOCKWIRE LOCK, SAME AS HL18	HS342	N/A
HL209	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	N/A	LOCKWIRE LOCK, SAME AS HL19	HS342	N/A
HL210	PROTRUDING	SHEAR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL211	FLUSH	SHEAR	100 REDUCED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL212	PROTRUDING	SHEAR	N/A	7075-T6	45	STD	1/16	N/A	N/A	N/A	N/A
HL213	FLUSH	SHEAR	100 MS20426	7075-T6	45	STD	1/16	N/A	N/A	N/A	N/A
HL214	PROTRUDING	SHEAR	N/A	H-11	156	1/64	1/16	HL714	1/64 OVERSIZE FOR HL14	HS342	HL574
HL215	FLUSH	SHEAR	100 REDUCED	H-11	156	1/64	1/16	HL715	1/64 OVERSIZE FOR HL15	HS342	HL574
HL216	PROTRUDING	TENSION	N/A	H-11	156	1/64	1/16	HL516	1/64 OVERSIZE FOR HL16	HS342	HL89, HL273
HL217	FLUSH	TENSION	100 MS24694	H-11	156	1/64	1/16	HL517	1/64 OVERSIZE FOR HL17	HS342	HL89, HL273
HL218	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	1/32	1/16	HL202	1/32 OVERSIZE FOR HL18 OR HL418	HS342	HL84, HL197, HL294, HL382, HL675
HL219	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/32	1/16	HL203	1/32 OVERSIZE FOR HL19 OR HL419	HS342	HL84, HL197, HL294, HL382, HL675
HL220	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	1/32	1/16	HL204	1/32 OVERSIZE FOR HL20 OR HL420	HS342	HL93, HL293, HL375, HL393
HL221	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	1/32	1/16	HL205	1/32 OVERSIZE FOR HL21 OR HL421	HS342	HL93, HL293, HL375, HL393
HL222	PROTRUDING	SHEAR	N/A	7075-T6	45	STD	1/16	N/A	N/A	HS340	HL77, HL182, HL277
HL223	FLUSH	SHEAR	100 MS20426	7075-T6	45	STD	1/16	N/A	N/A	HS340	HL77, HL182, HL277
HL224	FLUSH	SHEAR	156, 3.5D	A-286	95	1/64	1/32	HL324	HONEYCOMB	HS342	N/A
HL225	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	N/A	STUD END	HS342	HL70, HL79, HL82, HL94, HL97, HL297
HL226	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/16	N/A	STUD END	HS342	HL75
HL227	FLUSH	SHEAR	100 REDUCED, CROWN	6AL-4V	95	STD	1/16	HL339	MECHANICAL LOCK	HS342	HL584
HL228	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	N/A	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL229	FLUSH	SHEAR	100 REDUCED, CROWN	ALLOY STEEL	95	STD	1/16	N/A	N/A	N/A	N/A
HL230	PROTRUDING	SHEAR	N/A	431 SST	125	STD	1/16	N/A	SPECIAL SOCKET DEPTH	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL231	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	STUD END	HS340	HL72, HL75, HL86, HL198
HL232	PROTRUDING	TENSION	N/A	431 SST	125	STD	1/16	N/A	SPECIAL SOCKET DEPTH	HS342	HL75, HL86, HL288, HL574

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL233	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	HL353	MECHANICAL LOCK	HS342	HL584
HL234	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/16	N/A	N/A	HS342	HL79, HL79, HL82, HL94, HL97, HL175
HL235	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/64	1/16	N/A	STUD-THREADED, 1/64 OVERSIZE FOR HL135	HS342	HL79, HL82, HL94, HL175
HL236	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	N/A	STUD	N/A	N/A
HL237	FLUSH	SHEAR	100 REDUCED	7075-T6	45	STD	1/16	N/A	N/A	N/A	N/A
HL238	FLUSH	SHEAR	100 SEALING	6AL-4V	95	STD	1/16	N/A	STUD-SEALING-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS342	HL70, HL79, HL82
HL239	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	1/64	1/16	N/A	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS-1/64 OVERSIZE FOR HL139	HS342	HL79, HL82, HL94, HL175
HL240	PROTRUDING	SHEAR	N/A	A-286	95	1/32	1/16	HL702	1/32 OVERSIZE FOR HL40 (UNPLATED) AND HL440 (PLATED)	HS342	HL84, HL197, HL294, HL382, HL675
HL241	FLUSH	SHEAR	100 REDUCED	A-286	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL41 (UNPLATED) AND HL441 (PLATED)	HS342	HL84, HL197, HL294, HL382, HL675
HL242	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/32	N/A	N/A	HS342	HL290
HL243	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/32	N/A	N/A	HS342	HL290
HL244	PROTRUDING	TENSION	N/A	WASPALOY	95	STD	1/16	N/A	N/A	N/A	HL189
HL245	FLUSH	SHEAR	100 MS20426	6AL-4V	95	1/64	1/16	HL345	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS-1/64 OVERSIZE FOR HL145	HS342	HL70, HL82, HL94, HL175
HL246	PROTRUDING	TENSION	N/A	6AL-4V	95	1/64	1/16	HL346	STUD - THREADED WITH SHANK PORTION-1/64 OVERSIZE FOR HL146	N/A	N/A
HL247	FLUSH	TENSION	100 MS24694	A-286	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL49 AND HL149	N/A	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL248	PROTRUDING	TENSION	N/A	A-286	95	1/64	1/16	HL748	1/64 OVERSIZE FOR HL48	HS342	HL75, HL87, HL278
HL249	FLUSH	TENSION	100 MS24694	A-286	95	1/64	1/16	HL749	1/64 OVERSIZE FOR HL49	HS342	HL75, HL87, HL278
HL250	PROTRUDING	SHEAR	N/A	6AL-4V	132	STD	1/16	N/A	SHORT THREAD	N/A	HL389, HL476, HL1276, HL73
HL251	FLUSH	SHEAR	100 REDUCED	455 SST	132	STD	1/16	N/A	SHORT THREAD	N/A	HL389, HL476, HL1276, HL73
HL252	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	HL352	MECHANICAL LOCK	HS342	HL584
HL253	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	N/A	N/A	AMS7477	HL70, HL79, HL82, HL94, HL97, HL173
HL254	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	HL554	-8 HEAD ON -6 SHANK	HS342	HL75, HL86, HL78
HL255	FLUSH	SHEAR	100 MS20426	ALLOY STEEL	95	1/32	1/16	HL207	1/32 OVERSIZE FOR HL525	HS340	HL84, HL97
HL256	FLUSH	TENSION	100 MS24694	N/A	N/A	N/A	N/A	N/A	LONG THREAD - SPECIAL DOOR APPLICATION	N/A	N/A
HL257	FLUSH	SHEAR	100 MS20426	A-286	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL445	HS342	HL84, HL197, HL294
HL258	PROTRUDING	SHEAR	N/A	7075-T6	45	1/32	1/16	HL322	1/32 OVERSIZE FOR HL22	HS342	HL377
HL259	FLUSH	SHEAR	100 MS20426	7075-T6	45	1/32	1/16	HL309	1/32 OVERSIZE FOR HL23	HS342	HL377
HL260	PROTRUDING	N/A	SEALING	ALLOY STEEL	95	1/64	1/16	N/A	SEALING APPLICATION-1/64 OVERSIZE FOR HL160	N/A	N/A
HL261	PROTRUDING	N/A	SEALING	ALLOY STEEL	95	1/64	1/16	N/A	SEALING APPLICATION-1/64 OVERSIZE FOR HL161	N/A	N/A
HL262	PROTRUDING	TENSION	N/A	WASPALLOY	95	STD	1/16	N/A	SPECIAL THREAD LENGTH	N/A	HL189
HL263	FLUSH	TENSION	100 MS24694	A-286	95	STD	1/16	N/A	MECHANICAL LOCK	HS342	HL584
HL264	FLUSH	SHEAR	156	A-286	95	STD	1/16	N/A	HONEYCOMB-SHORT THREAD	HS342	N/A
HL265	FLUSH	SHEAR	156, 2.5D	A-286	95	STD	1/16	N/A	HONEYCOMB	HS342	N/A
HL266	FLUSH	SHEAR	156, CURVED	PH13-8MO	108	STD	1/16	N/A	HONEYCOMB	N/A	N/A
HL267	FLUSH	SHEAR	156, 3.5D	PH13-8MO	120	STD	1/16	N/A	HONEYCOMB	HS342	N/A
HL268	NOT ASSIGNED	NOT ASSIGNED	NOT ASSIGNED	NOT ASSIGNED	NOT ASSIGNED	NOT ASSIGNED	NOT ASSIGNED	NOT ASSIGNED	NOT ASSIGNED	NOT ASSIGNED	NOT ASSIGNED
HL269	FLUSH	SHEAR	156, 3.5D	PH13-8MO	120	STD	1/32	N/A	HONEYCOMB APPLICATION	HS342	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL300	N/A	N/A	N/A	N/A	N/A	N/A	1/16	N/A	BREAK-STEM-INACTIVE	N/A	N/A
HL301	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/64	3/32	HL303	BREAK-STEM-1/64 OVERSIZE	N/A	HL92
HL302	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL303	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/32	3/32	N/A	BREAK-STEM-1/64 OVERSIZE FOR HL301	N/A	HL92
HL304	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL305	FLUSH	TENSION	100	ALLOY STEEL	95	1/64	3/32	HL307	BREAK-STEM-1/64 OVERSIZE	N/A	HL92
HL306	PROTRUDING	SHEAR	3.5D	6AL-4V	95	STD	1/32		HONEYCOMB	N/A	N/A
HL307	FLUSH	TENSION	100	ALLOY STEEL	95	1/32	3/32	N/A	BREAK-STEM-1/64 OVERSIZE FOR HL305, INTERFERENCE FIT	N/A	HL92
HL308	PROTRUDING	TENSION	HEX	A-286	95	N/A	N/A	N/A	STUD-BREAK STEM TYPE-THREADED WITH SHANK,HEX ON STUD END	N/A	N/A
HL309	FLUSH	SHEAR	100 MS20426	7075-T6	45	3/64	1/16	N/A	3/64 OVERSIZE FOR HL23	HS342	HL477
HL310	PROTRUDING	SHEAR	N/A	INCONEL 905	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL311	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	CLOSE TOLERANCE	HS340	HL378
HL312	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	N/A	N/A	SPECIAL LOCK FEATURE-SAME AS HL12	HS342	HL499
HL313	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	N/A	N/A	SPECIAL THREAD LENGTH	HS340	N/A
HL314	PROTRUDING	SHEAR	PROTRUDING SHEAR	H-11	132	1/64	1/16	HL914	1/64 OVERSIZE FOR HL114	HS342	HL574
HL315	FLUSH	SHEAR	100 REDUCED	H-11	132	1/64	1/16	HL915	1/64 OVERSIZE FOR HL115	HS342	HL574
HL316	PROTRUDING	TENSION	N/A	H-11	132	1/64	1/16	HL916	1/64 OVERSIZE FOR HL116	HS342	HL89, HL273
HL317	FLUSH	TENSION	100 MS24694	H-11	132	1/64	1/16	HL917	1/64 OVERSIZE FOR HL117	HS342	HL89, HL273
HL318	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	HL362	BREAK-STEM	HS42	N/A
HL319	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	HL363	BREAK-STEM	HS342	N/A
HL320	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	HL364	BREAK-STEM	HS342	N/A
HL321	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	STD	1/16	HL365	BREAK-STEM	HS342	N/A
HL322	PROTRUDING	SHEAR	N/A	7075-T6	45	3/64	1/16	N/A	3/64 OVERSIZE FOR HL22	HS342	HL477
HL323	FLUSH	SHEAR	100 MS20426	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL70, HL79, HL82, HL190, HL191
HL324	FLUSH	SHEAR	156, 3.5D	A-286	95	1/32	1/16	N/A	HONEYCOMB	HS342	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL325	FLUSH	SHEAR	100 MS20426	ALLOY STEEL	108	STD	1/16	HLT425	LEAD IN RADIUS	HS342	HLT70, HLT71, HLT94, HLT97
HL326	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	HLT426	N/A	HS342	HLT78, HLT86, HL386, HL1386
HL327	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	STD	1/16	HLT427	N/A	HS342	HLT78, HLT86, HL386, HL1386
HL328	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	STD	1/16	HLT428	N/A	HS342	HLT70, HLT71, HLT94, HLT97
HL329	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	108	STD	1/16	HLT1001	N/A	HS342	HLT70, HLT71, HLT94, HLT97
HL330	PROTRUDING	SHEAR	N/A	PH13-8MO	125	STD	1/16	N/A	N/A	HS342	HLT597
HL331	FLUSH	SHEAR	100 REDUCED	PH13-8MO	125	STD	1/16	N/A	N/A	HS342	HLT597
HL332	PROTRUDING	TENSION	N/A	PH13-8MO	125	STD	1/16	N/A	N/A	HS342	HL399
HL333	FLUSH	TENSION	100 MS24694	PH13-8MO	125	STD	1/16	N/A	N/A	HS342	HL399
HL334	PROTRUDING	SHEAR	N/A	PH13-8MO	125	STD	1/16	N/A	N/A	HS342	HL395
HL335	FLUSH	SHEAR	100 REDUCED	PH13-8MO	125	STD	1/16	N/A	N/A	HS342	HL395
HL337	FLUSH	SHEAR	100 MS20426	A-286	95	1/64	1/16	HL569	MECHANICAL LOCK-1/64 OVERSIZE FOR HL	HS342	HL684
HL338	PROTRUDING	SHEAR	N/A	A-286	95	N/A	N/A	N/A	STUD	N/A	N/A
HL339	FLUSH	SHEAR	100 REDUCED, CROWN	6AL-4V	95	1/64	1/16	HL739	MECHANICAL LOCK-1/64 OVERSIZE FOR HL227	HS342	HL684
HL340	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	REDUCED D & PD	HS342	HL78, HL86, HL198
HL341	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16		INTERFERENCE APPLICATION	HS340	H378
HL342	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	LONG THREAD	HS342	HL592
HL343	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	LONG THREAD	HS342	HL592
HL344	PROTRUDING	SHEAR	3.5D	A-286	95	STD	1/16	N/A	HONEYCOMB-SAME AS HL144 EXCEPT THIN HEAD	HS342	N/A
HL345	FLUSH	SHEAR	100 MS20426	6AL-4V	95	1/32	1/16	N/A	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS-1/32 OVERSIZE FOR HL145	HS342	HL84, HL197, HL294
HL346	PROTRUDING	TENSION	N/A	6AL-4V	95	1/32	1/16	HL146, HL246	STUD-THREADED WITH SHANK PORTION-1/32 OVERSIZE FOR HL146	HS342	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL347	FLUSH	N/A	80	INCONEL 718	N/A	N/A	N/A	HL560	SPECIAL SHANK - .125 SHANK WITH 10-32 THREAD	N/A	N/A
HL348	PROTRUDING	N/A	N/A	6AL-4V	95	STD	1/16	N/A	STUD-THREADED WITH SHANK PORTION , HEX BOTH ENDS	HS342	N/A
HL349	FLUSH	SHEAR	130, CROWN	6AL-4V	95	STD	1/16	HL549	MECHANICAL LOCK	HS342	HL585, HL788
HL350	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	3/32	HL356	BREAK-STEM	HS342	HL90
HL351	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	3/32	HL357	BREAK-STEM	HS342	HL90
HL352	PROTRUDING	TENSION	N/A	6AL-4V	95	1/64	1/16	HL732	MECHANICAL LOCK-1/64 OVERSIZE FOR HL252	HS342	HL684
HL353	FLUSH	TENSION	100 MS24694	6AL-4V	95	1/64	1/16	HL733	MECHANICAL LOCK-1/64 OVERSIZE FOR HL233	HS342	HL684
HL354	PROTRUDING	SHEAR	N/A	431 SST	125	STD	1/16	N/A	BREAK-STEM	HS342	N/A
HL355	FLUSH	TENSION	100 MS24694	305 SST	75	STD	1/16	N/A	FULL THREAD LENGTH	N/A	N/A
HL356	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	1/64	3/32	HL368	BREAK-STEM-1/64 OVERSIZE FOR HL350	N/A	N/A
HL357	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/64	3/32	N/A	BREAK-STEM-1/64 OVERSIZE FOR HL351	N/A	HL91, HL92
HL358	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	HL528	MECHANICAL LOCK	HS342	HL585
HL359	FLUSH	SHEAR	130, CROWN	6AL-4V	95	N/A	N/A	N/A	MECHANICAL LOCK	N/A	N/A
HL360	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	HL560	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS342	N/A
HL361	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/16	N/A	BREAK-STEM	HS342	N/A
HL362	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	1/64	1/16	N/A	BREAK-STEM-1/64 OVERSIZE FOR HL318	N/A	HL80
HL363	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/64	1/16	N/A	BREAK-STEM-1/64 OVERSIZE FOR HL319	N/A	HL80
HL364	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	1/64	1/16	N/A	BREAK-STEM-1/64 OVERSIZE FOR HL320	N/A	HL87
HL365	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	1/64	1/16	N/A	BREAK-STEM-1/64 OVERSIZE FOR HL321	N/A	HL87

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL366	PROTRUDING	SHEAR	3.5D	INCONEL 718	N/A	N/A	N/A	N/A	HONEYCOMB	N/A	N/A
HL367	FLUSH	SHEAR	156, 3.5D	7075-T6	45	STD	1/32	N/A	HONEYCOMB - SAME AS HL169	N/A	N/A
HL368	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	1/32	3/32	N/A	BREAK-STEM-1/32 OVERSIZE FOR HL350	N/A	N/A
HL369	FLUSH	SHEAR	100 REDUCED, CROWN	431 SST	125	STD	1/16	N/A	N/A	N/A	N/A
HL400	PROTRUDING	SHEAR	N/A	6AL-4V	95	N/A	N/A	N/A	KNURL LOCK	N/A	N/A
HL401	PROTRUDING	SHEAR	N/A	A-286	95	N/A	N/A	N/A	SHOULDER PIN	HS340	HL402
HL403	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/16	N/A	SHOULDER PIN	HS342	N/A
HL404	PROTRUDING	SHEAR	N/A	A-286	95	STD	1/16	N/A	SPECIAL THREAD LENGTH	HS342	HL70, HL79, HL82, HL94, HL97, HL297
HL405	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	SPECIAL THREAD LENGTH	N/A	N/A
HL406	PROTRUDING	TENSION	N/A	CP TI.	N/A	STD	1/16	N/A	SPECIAL APPLICATION - SEALANT INJECTION APPL.	N/A	HL388
HL407	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	N/A	LOCKWIRE LOCK	HS342	HL570
HL408	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	N/A	LOCKWIRE LOCK	HS340	N/A
HL409	FLUSH	TENSION	100 MS24694	A-286	95	STD	1/16	N/A	LONG THREAD	HS342	HL75, HL78, HL86
HL410	PROTRUDING	SHEAR	N/A	6AL-4V	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL10	HS342	HL84, HL197, HL294, HL382, HL675
HL411	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL11	HS342	HL84, HL197, HL294, HL382, HL675
HL412	PROTRUDING	TENSION	N/A	6AL-4V	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL12	HS342	
HL413	FLUSH	TENSION	100 MS24694	6AL-4V	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL13	HS342	HL93, HL375, HL478
HL414	PROTRUDING	SHEAR	N/A	H-11	125	STD	1/16	HL462	N/A	HS342	HL288, HL574
HL415	FLUSH	SHEAR	100 REDUCED	H-11	125	STD	1/16	HL463	N/A	HS342	HL288, HL574
HL416	PROTRUDING	TENSION	N/A	H-11	125	STD	1/16	HL464	N/A	HS342	HL89, HL273
HL417	FLUSH	TENSION	100 MS24694	H-11	125	STD	1/16	HL465	N/A	HS342	HL89, HL273
HL418	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	HL62A	N/A	HS342	HL70, HL79, HL82, HL94, HL97
HL419	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	HL63A	N/A	HS342	HL70, HL79, HL82, HL94, HL97
HL420	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	HL64A	N/A	HS342	HL486
HL421	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	STD	1/16	HL65A	N/A	HS342	HL486
HL422	PROTRUDING	SHEAR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL423	FLUSH	SHEAR	100 MS20426	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL424	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	STUD-THREADED WITH SHANK PORTION	HS342	N/A
HL425	FLUSH	SHEAR	100 MS20426	6AL-6V-2SN	95	STD	1/16	N/A	N/A	HS340	HL70, HL79, HL82, HL94, HL97, HL397
HL426	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	STUD END	HS342	HL75, HL78, HL86, HL198, HL280
HL427	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	STUD END	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL428	PROTRUDING	TENSION	N/A	A-286	95	STD	1/16	N/A	STUD END	HS342	HL75, HL78, HL86
HL429	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	N/A	STUD END	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL430	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	STUD END	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL431	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/16	N/A	STUD END	N/A	N/A
HL432	PROTRUDING	TENSION	N/A	431 SST	125	STD	1/16	HL36PB	N/A	HS340	HL73, HL75, HL86, HL87, HL89, HL273
HL433	FLUSH	TENSION	100 MS24694	431 SST	125	STD	1/16	HL37PB	N/A	HS340	HL73, HL75, HL86, HL87, HL89, HL273
HL434	FLUSH	N/A	100	431 SST	125	N/A	N/A	N/A	STUD	N/A	N/A
HL435	FLUSH	N/A	100	N/A	N/A	N/A	N/A	N/A	STUD INACTIVE	N/A	N/A
HL436	PROTRUDING	TENSION	N/A	ALLOY STEEL	108	STD	1/16	N/A	N/A	HS342	HL697PB, HL1375, HL1390
HL437	FLUSH	SHEAR	100 REDUCED, CROWN	ALLOY STEEL	108	STD	1/16	N/A	N/A	HS342	HL697PB, HL1375, HL1390
HL438	PROTRUDING	TENSION	N/A	ALLOY STEEL	108	STD	1/16	N/A	N/A	HS342	HL695, HL1375, HL1390, HL697
HL439	FLUSH	SHEAR	100 MS20426	455 SST	125	STD	1/16	N/A	N/A	HS340	HL70, HL79, HL82, HL190, HL191, HL391
HL440	PROTRUDING	SHEAR	N/A	A-286	95	STD	1/16	HL442	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL297
HL441	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	HL443	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL297
HL442	PROTRUDING	SHEAR	N/A	A-286	95	1/64	1/16	HL240	1/64 OVERSIZE FOR HL440	HS342	HL79, HL82, HL94, HL197, HL297
HL443	FLUSH	SHEAR	100 REDUCED	A-286	95	1/64	1/16	HL241	1/64 OVERSIZE FOR HL441	HS342	HL79, HL82, HL94, HL197, HL297
HL444	PROTRUDING	SHEAR	N/A	RENE 41	N/A	N/A	N/A	N/A	SPECIAL APPL	N/A	N/A
HL445	FLUSH	SHEAR	100 MS20426	A-286	95	STD	1/16	HL447	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL297
HL446	PROTRUDING	TENSION	N/A	H-11	132	STD	N/A	N/A	STUD-THREADED WITH SHANK PORTION	N/A	N/A
HL447	FLUSH	SHEAR	100 MS20426	A-286	95	1/64	1/16	HL257	1/64 OVERSIZE FOR HL445	HS342	HL79, HL82, HL94, HL175, HL297
HL448	PROTRUDING	TENSION	N/A	A-286	95	STD	1/16	HL452	N/A	HS342	HL75, HL78, HL86

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL449	FLUSH	TENSION	100 MS24694	A-286	95	STD	1/16	HL453	N/A	HS342	HL75, HL78, HL86
HL450	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	STD	3/32	HL456	N/A	N/A	N/A
HL451	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	108	STD	3/32	HL457	N/A	N/A	N/A
HL452	PROTRUDING	TENSION	N/A	A-286	95	1/64	1/16	HL454	1/64 OVERSIZE FOR HL448	HS342	HL75,HL87, HL278
HL453	FLUSH	TENSION	100 MS24694	A-286	95	1/64	1/16	HL455	1/64 OVERSIZE FOR HL449	HS342	HL75, HL87, HL278
HL454	PROTRUDING	TENSION	N/A	A-286	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL448	HS342	HL93, HL293, HL393, HL478
HL455	FLUSH	TENSION	100 MS24694	A-286	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL449	HS342	HL93, HL293, HL393, HL478
HL456	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	1/64	3/32	N/A	1/64 OVERSIZE FOR HL450	HS340	HL83, HL91, HL579, HL594
HL457	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	108	1/64	3/32	N/A	1/64 OVERSIZE FOR HL451	HS340	HL83, HL91, HL579, HL594
HL458	PROTRUDING	SHEAR	N/A	431 SST	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL54	HS342	HL84, HL197, HL294, HL382
HL459	FLUSH	SHEAR	100 REDUCED	431 SST	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL61	HS342	HL84, HL197, HL294, HL382
HL460	PROTRUDING	N/A	N/A	ALLOY STEEL	95	STD	1/16	N/A	STUD-THREADED WITH SHANK PORTION	HS342	N/A
HL461	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/16		LOCKWIRE LOCK	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL462	PROTRUDING	SHEAR	N/A	H-11	125	1/64	1/16	N/A	1/64 OVERSIZE FOR HL414	HS342	HL288, HL574
HL463	FLUSH	SHEAR	100 REDUCED	H-11	125	1/64	1/16	N/A	1/64 OVERSIZE FOR HL415	HS342	HL288, HL574
HL464	PROTRUDING	TENSION	N/A	H-11	125	1/64	1/16	N/A	1/64 OVERSIZE FOR HL416	HS342	HL89, HL273
HL465	FLUSH	TENSION	100 MS24694	H-11	125	1/64	1/16	N/A	1/64 OVERSIZE FOR HL417	HS342	HL89, HL273
HL466	PROTRUDING	SHEAR	N/A	455 SST	125	STD	1/16	N/A	N/A	N/A	HL70, HL79, HL82, HL94, HL97, HLHL175
HL467	FLUSH	SHEAR	100 REDUCED	455 SST	125	STD	1/16	N/A	N/A	N/A	HL70, HL79, HL82, HL94, HL97, HL175
HL468	PROTRUDING	TENSION	N/A	455 SST	125	STD	1/16	N/A	N/A	N/A	HL75, HL86, HL87, HL89, HL273
HL469	FLUSH	TENSION	100 MS24694	455 SST	125	STD	1/16	N/A	N/A	N/A	HL75, HL86, HL87, HL89, HL273
HL500	FLUSH	SHEAR	100 REDUCED, CROWN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL501	FLUSH	N/A	100 SPECIAL	ALLOY STEEL	95	N/A	N/A	N/A	HONEYCOMB	N/A	HL502-6
HL503	FLUSH	N/A	100	N/A	N/A	STD	1/16	N/A	N/A	N/A	N/A
HL504	FLUSH	N/A	100 SPECIAL	ALLOY STEEL	95	1/64	N/A	N/A	HONEYCOMB	HS340	N/A
HL505	FLUSH	SHEAR	100, LIGHTWEIGHT	7075-T6	45	STD	1/16	HL605	N/A	HS340	HL77-5, HL177-6 THRU -12
HL506	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/32	N/A	SHORT THREAD	N/A	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL507	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/32	N/A	SHORT THREAD	N/A	N/A
HL508	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	1/64	1/16	N/A	1/64 OVERSIZE FOR HL518	HS340	N/A
HL509	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	SHORT THREAD	HS342	N/A
HL510	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL379
HL511	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL379
HL512	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL75, HL86, HL198, HL280
HL512(BV, CP, PN,	PROTRUDING	TENSION	N/A	TITANIUM	95	STD	1/16	N/A	N/A	HS342	HL75, HL86, HL198, HL280
HL513	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL75, HL86, HL198, HL280
HL514	PROTRUDING	SHEAR	N/A	INCONEL 718	N/A	STD	1/16	N/A	N/A	N/A	N/A
HL515	FLUSH	SHEAR	100 REDUCED	INCONEL 718	N/A	STD	1/16	N/A	N/A	N/A	N/A
HL516	PROTRUDING	TENSION	N/A	H-11	156	1/32	1/16	N/A	1/32 OVERSIZE FOR HL16	HS342	HL289, HL373
HL517	FLUSH	TENSION	100 MS24694	H-11	156	1/32	1/16	N/A	1/32 OVERSIZE FOR HL17	HS342	HL289, HL373
HL518	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	HL508	N/A	HS342	N/A
HL519	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	N/A	SPECIAL THREAD LENGTH	HS342	HL586
HL520	PROTRUDING	N/A	N/A	ALLOY STEEL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL521	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	N/A	STUD END, HEX ON STUD END	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL522	PROTRUDING	TENSION	SPECIAL	WASPALOY	95	STD	1/16	N/A	N/A	HS342	HL189
HL523	FLUSH	SHEAR	100 MS20426	6AL-4V	95	STD	1/16	HL537	N/A	HS342	HL70, HL79, HL82, HL94, HL90, HL276, HL379
HL524	FLUSH	SHEAR	100, SEALING	ALLOY STEEL	N/A	STD	3/32	N/A	SEALING APPLICATION-SPECIAL DESIGN	HS340	HL594
HL525	FLUSH	SHEAR	100 MS20426	ALLOY STEEL	95	STD	1/16	HL527	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL526	N/A	N/A	BUTTON	A-286	95	N/A	N/A	N/A	HONEYCOMB-SEE HL564 FOR ASSEMBLY	N/A	N/A
HL527	FLUSH	SHEAR	100 MS20426	ALLOY STEEL	95	1/64	1/16	HL255	1/64 OVERSIZE FOR HL525	HS340	HL79, HL82, HL94, HL175
HL528	PROTRUDING	SHEAR	N/A	6AL-4V	95	1/64	1/16	HL728	MECHANICAL LOCK-1/64 OVERSIZE FOR HL358	HS342	HL684
HL529	FLUSH	SHEAR	82	7075-T6	45	STD	1/16	N/A	N/A	HS340	HL79
HL530	PROTRUDING	N/A	N/A	COLUMBIUM	N/A	STD	1/16	N/A	N/A	N/A	HL575
HL531	FLUSH	SHEAR	100 MS20426	COLUMBIUM	N/A	STD	N/A	N/A	N/A	N/A	HL575

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL532	PROTRUDING	SHEAR	N/A	300 MARAGING	156	STD	1/16	N/A	N/A	N/A	N/A
HL533	FLUSH	SHEAR	100 REDUCED	300 MARAGING	156	STD	1/16	N/A	N/A	N/A	N/A
HL534	PROTRUDING	N/A	N/A	6AL-4V	95	STD	1/16	N/A	N/A	N/A	N/A
HL535	FLUSH	SHEAR	100, LIGHTWEIGHT	7075-T6	45	STD	1/16	N/A	STUD END	HS340	HL177
HL536	PROTRUDING	N/A	N/A	6AL-4V	95	STD	1/32	N/A	N/A	N/A	N/A
HL537	FLUSH	SHEAR	100 MS20426	6AL-4V	95	1/64	1/16	HL823	1/64 OVERSIZE FOR HL523	HS342	HL79, HL82, HL94, HL190, HL276, HL379
HL538	PROTRUDING	SHEAR	N/A	RENE 41	95	N/A	N/A	N/A	SPECIAL APPL	N/A	N/A
HL539	FLUSH	TENSION	100 MS24694, CROWN	ALLOY STEEL	95	STD	1/16	N/A	N/A	HS342	N/A
HL540	PROTRUDING	SHEAR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL541	FLUSH	TENSION	100 MS24694	A-286	78	STD	1/16	N/A	SPECIAL THREAD LENGTH	AMS7477	HL75, HL78, HL86
HL542	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	LONG THREAD	HS342	HL692
HL543	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	LONG THREAD	HS342	HL692
HL544	PROTRUDING	SHEAR	N/A	UNITEMP 1753	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL545	FLUSH	SHEAR	100 REDUCED	UNITEMP 1753	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL546	PROTRUDING	TENSION	N/A	431 SST	125	N/A	N/A	N/A	SPECIAL APPL	N/A	N/A
HL547	FLUSH	SHEAR	156, 2.5D	6AL-6V-2SN	108	STD	1/32	N/A	HONEYCOMB	HS342	N/A
HL548	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	SPECIAL	N/A	SPECIAL GRIP - USE WITH HL1382	HS342	HL1382
HL549	FLUSH	SHEAR	130, CROWN	6AL-4V	95	1/64	1/16	HL927	MECHANICAL LOCK-1/64 OVERSIZE FOR HL349	HS342	HL684, HL988
HL550	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	3/32	HL556	N/A	HS342	HL579, HL594
HL551	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	3/32	HL557	N/A	HS342	HL579, HL594
HL552	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	3/32	HL558	N/A	HS342	HL587
HL553	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	STD	3/32	HL559	N/A	HS342	HL587
HL554	PROTRUDING	TENSION	SPECIAL	6AL-4V	95	1/64	1/16	HL954	1/64 OVERSIZE	HS342	HL75, HL87
HL555	FLUSH	SHEAR	156	6AL-4V	95	N/A	N/A	N/A	HONEYCOMB-ASSEMBLY OF HL569 PIN AND HL571 COLLAR	N/A	N/A
HL556	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	1/64	3/32	N/A	1/64 OVERSIZE FOR HL550	HS342	HL579, HL594, HL683
HL557	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	1/64	3/32	N/A	1/64 OVERSIZE FOR HL551	HS342	HL579, HL594, HL683
HL558	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	1/64	3/32	N/A	1/64 OVERSIZE FOR HL552	HS342	HL587
HL559	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	1/64	3/32	N/A	1/64 OVERSIZE FOR HL553	HS342	HL587
HL560	PROTRUDING	TENSION	N/A	6AL-4V	95	1/64	1/16	HL960	STUD	HS342	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL561	FLUSH	SHEAR	156	A-286	95	N/A	N/A	N/A	HONEYCOMB-ASSEMBLY OF HL568 PIN AND HL597 COLLAR	N/A	N/A
HL562	PROTRUDING	TENSION	N/A	PH13-8MO	120	N/A	N/A	N/A	N/A	N/A	N/A
HL563	FLUSH	N/A	100 SPECIAL	7075-T6	45	N/A	N/A	N/A	HONEYCOMB - SPECIAL THREAD LENGTH	HS340	N/A
HL564	PROTRUDING	N/A	BUTTON	A-286	95	N/A	N/A	N/A	HONEYCOMB-ASSEMBLY OF HL526 PIN AND HL598 COLLAR	N/A	N/A
HL565	FLUSH	N/A	100 SPECIAL	7075-T6	45	N/A	N/A	N/A	HONEYCOMB	N/A	N/A
HL566	PROTRUDING	TENSION	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL567	FLUSH	SHEAR	156	A-286	95	N/A	1/32	N/A	HONEYCOMB-MECHANICAL LOCK	N/A	N/A
HL568	FLUSH	SHEAR	156	A-286	95	N/A	N/A	N/A	HONEYCOMB-SEE HL 561 FOR ASSEMBLY	N/A	N/A
HL569	FLUSH	SHEAR	100 MS20426	A-286	95	1/32	N/A	N/A	HONEYCOMB-MECHANICAL LOCK-SEE HL555 FOR ASSEMBLY	HS342	HL684
HL600	FLUSH	SHEAR	100 MS20426 FLUSH SHEAR	A-286	95	STD	1/16	HL337	MECHANICAL LOCK	HS342	HL585
HL601	FLUSH	SHEAR	100 MS20426	ALLOY STEEL	95	STD	1/16	N/A	MECHANICAL LOCK	HS342	HL576, HL580, HL585
HL602	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	N/A	SHORT THREAD	HS342	HL1379
HL603	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	SHORT THREAD	HS342	HL1379
HL604	PROTRUDING	TENSION	RECESS	PH13-8MO	125	N/A	N/A	N/A	HONEYCOMB	N/A	N/A
HL605	FLUSH	SHEAR	100, LIGHTWEIGHT	7075-T6	45	1/64	1/16	HL717	1/64 OVERSIZE FOR HL505	HS340	HL577
HL606	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	SHORT THREAD	HS342	HL398
HL607	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	SHORT THREAD	HS342	HL398
HL608	PROTRUDING	SHEAR	N/A	A-286	95	STD	1/16	N/A	LOCKWIRE LOCK	HS342	N/A
HL609	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	SHORT THREAD	HS342	N/A
HL610	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL611	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL612	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL75, HL78, HL86
HL613	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL75, HL78, HL86
HL614	PROTRUDING	SHEAR	N/A	H-11	132	STD	3/32	HL662	N/A	HS342	HL673
HL615	FLUSH	SHEAR	100 REDUCED	H-11	132	STD	3/32	HL663	N/A	HS342	HL673

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL616	PROTRUDING	TENSION	N/A	H-11	132	STD	3/32	HL664	N/A	HS342	HL673
HL617	FLUSH	TENSION	100 MS24694	H-11	132	STD	3/32	HL665		HS342	HL673
HL618	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	N/A	SPECIAL FILLET-SAME AS HL18	N/A	N/A
HL619	FLUSH	SHEAR	100 REDUCED, CROWN	ALLOY STEEL	108	STD	1/16	N/A	N/A	HS342	HL285
HL620	PROTRUDING	SHEAR	N/A	BERYLLIUM	N/A	STD	N/A	N/A	N/A	N/A	N/A
HL621	FLUSH	SHEAR	100 REDUCED	BERYLLIUM	N/A	STD	N/A	N/A	N/A	N/A	N/A
HL622	PROTRUDING	SHEAR	N/A	7075-T6	45	STD	3/32	N/A	N/A	HS340	HL677
HL623	FLUSH	SHEAR	100 MS20426	7075-T6	45	STD	3/32	N/A	N/A	HS340	HL677
HL624	PROTRUDING	N/A	N/A	ALLOY STEEL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL625	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	N/A	MECHANICAL LOCK	N/A	N/A
HL626	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	N/A	N/A	HS342	HL874, HL875
HL627	FLUSH	SHEAR	100	ALLOY STEEL	95	STD	1/16	N/A	N/A	HS342	HL779, HL782, HL785, HL795
HL628	PROTRUDING	TENSION	N/A	ALLOY STEEL	108	STD	1/16	HL820	N/A	HS342	HL75, HL87, HL288, HL574
HL629	FLUSH	SHEAR	100, SPECIAL	ALLOY STEEL	108	STD	1/16	HL833	N/A	HS342	HL79, HL82, HL94, HL794
HL631	FLUSH	SHEAR	100 REDUCED, CROWN	H-11	125	STD	1/16	N/A	N/A	HS342	HL94, HL97, HL175, HL288, HL574
HL632	PROTRUDING	TENSION	N/A	INCONEL 718	108	STD	1/16	N/A	N/A	HS342	HL75, HL86, HL87
HL633	FLUSH	SHEAR	100 MS20426	A-286	95	STD	1/16	HL738	MECHANICAL LOCK	HS342	HL576, HL580, HL585
HL634	PROTRUDING	SHEAR	N/A	H-11	125	1/32	1/16	N/A	N/A	N/A	N/A
HL635	FLUSH	SHEAR	100 REDUCED	H-11	125	1/32	1/16	N/A	N/A	N/A	N/A
HL636	PROTRUDING	TENSION	N/A	H-11	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL416	HS342	HL289, HL373
HL637	FLUSH	TENSION	100 MS24694	H-11	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL417	HS342	HL289, HL373
HL638	FLUSH	TENSION	MS24694	TITANIUM	95	STD	1/16	N/A	N/A	HS342	HL70, HL97, HL570, SW1000
HL639	FLUSH	SHEAR	100 REDUCED	PH13-8MO	125	STD	1/16	N/A	N/A	N/A	HL70, HL79, HL379
HL640	PROTRUDING	SHEAR	N/A	A-286	95	STD	3/32	HL642	N/A	HS342	HL579, HL694
HL641	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	3/32	HL643	N/A	HS342	HL579, HL694
HL642	PROTRUDING	SHEAR	N/A	A-286	95	1/64	3/32	N/A	1/64 OVERSIZE FOR HL640	HS32	HL579, HL694
HL643	FLUSH	SHEAR	100 REDUCED	A-286	95	1/64	3/32	N/A	1/64 OVERSIZE FOR HL641	HS342	HL579, HL694
HL644	PROTRUDING	SHEAR	N/A	PH13-8MO	125	STD	1/16	HL744	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175, HL574

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL645	FLUSH	SHEAR	100 REDUCED	PH13-8MO	125	STD	1/16	HL751	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175, HL574
HL646	PROTRUDING	TENSION	N/A	PH13-8MO	125	STD	1/16	HL746	N/A	HS342	
HL647	FLUSH	TENSION	100 MS24694	PH13-8MO	125	STD	1/16	HL753	N/A	HS342	HL75, HL78, HL86, HL87, HL89, HL273
HL648	PROTRUDING	TENSION	N/A	A-286	95	STD	3/32	HL652	N/A	HS342	HL678
HL649	FLUSH	TENSION	100 MS24694	A-286	95	STD	3/32	HL653	N/A	HS342	HL678
HL650	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	N/A	N/A	N/A	MECHANICAL LOCK	N/A	N/A
HL651	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	N/A	MECHANICAL LOCK	HS342	HL576, HL580, HL585
HL652	PROTRUDING	TENSION	N/A	A-286	95	1/64	3/32	N/A	1/64 OVERSIZE FOR HL648	HS342	HL678
HL653	FLUSH	TENSION	100 MS24694	A-286	95	1/64	3/32	N/A	1/64 OVERSIZE FOR HL649	HS342	HL678
HL654	PROTRUDING	SHEAR	N/A	PH13-8MO	125	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL655	FLUSH	SHEAR	100 REDUCED	PH13-8MO	125	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL656	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	N/A	N/A	N/A	MECHANICAL LOCK	N/A	N/A
HL657	FLUSH	SHEAR	100 REDUCED	INCONEL 718	108	STD	1/16	HL829	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL658	PROTRUDING	SHEAR	N/A	INCONEL 718	108	STD	1/16	HL830	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL659	FLUSH	TENSION	100 MS24694	PH13-8MO	125	STD	1/16	N/A	N/A	HS340	HL70, HL79, HL82, HL190, HL191, HL391
HL660	PROTRUDING	TENSION	N/A	PH13-8MO	125	STD	1/16	N/A	MECHANICAL LOCK	HS342	N/A
HL661	FLUSH	TENSION	100 MS24694	INCONEL 718	108	STD	1/16	N/A	N/A	HS342	HL75, HL78, HL86
HL662	PROTRUDING	SHEAR	N/A	H-11	132	1/64	3/32	HL734	1/64 OVERSIZE FOR HL614	HS342	HL673
HL663	FLUSH	SHEAR	100 REDUCED	H-11	132	1/64	3/32	HL735	1/64 OVERSIZE FOR HL615	HS342	HL673
HL664	PROTRUDING	TENSION	N/A	H-11	132	1/64	3/32	HL736	1/64 OVERSIZE FOR HL616	HS342	HL673
HL665	FLUSH	TENSION	100 MS24694	H-11	132	1/64	3/32	HL737	1/64 OVERSIZE FOR HL617	HS342	HL673
HL666	PROTRUDING	N/A	N/A	A-286	95	STD	1/16	N/A	FULL THREADED SHANK	N/A	N/A
HL667	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	HL867	HONEYCOMB	HS342	N/A
HL668	PROTRUDING	TENSION	N/A	A-286	95	STD	1/16	HL868	HONEYCOMB	HS342	N/A
HL669	FLUSH	SHEAR	156, 3.5D	A-286	95	STD	1/16	N/A	HONEYCOMB	HS342	N/A
HL701	FLUSH	SHEAR	100 REDUCED	INCONEL 718	125	STD	1/16	HL937	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL702	PROTRUDING	SHEAR	N/A	A-286	95	3/64	1/16	N/A	N/A	HS342	HL279, HL394
HL703	FLUSH	SHEAR	100 MS20426	6AL-4V	95	STD	1/16	N/A	N/A	N/A	N/A
HL704	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	N/A	N/A	N/A	N/A
HL705	FLUSH	SHEAR	100 REDUCED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL706	PROTRUDING	TENSION	N/A	A-286	95	3/64	1/16	N/A	3/64 OVERSIZE FOR HL48	HS342	HL287
HL707	FLUSH	SHEAR	100 MS20426, CROWN	ALLOY STEEL	N/A	N/A	N/A	N/A	MECHANICAL LOCK	N/A	N/A
HL708	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	N/A	STUD 3/16th STUD END	N/A	N/A
HL709	FLUSH	SHEAR	100 REDUCED, CROWN	6AL-4V	95	STD	1/16	N/A	SHORT THREAD	HS342	N/A
HL710	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	N/A	N/A	N/A	N/A
HL711	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	N/A	HS340	HL378
HL712	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	N/A	N/A	N/A
HL713	FLUSH	SHEAR	100 REDUCED	INCONEL	718	STD	1/16	N/A	LONG THREAD	N/A	N/A
HL714	PROTRUDING	TENSION	N/A	H-11	156	1/32	1/16	N/A	1/32 OVERSIZE	HS342	HL674
HL715	FLUSH	SHEAR	100 REDUCED	H-11	156	1/32	1/16	N/A	1/32 OVERSIZE FOR HL15	HS342	HL674
HL717	FLUSH	SHEAR	100, LIGHTWEIGHT	7075-T6	45	1/32	1/16	HL817	1/32 OVERSIZE FOR HL505	HS340	HL577
HL718	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	STD	1/16	HL762	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL719	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	108	STD	1/16	HL763	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL720	PROTRUDING	TENSION	N/A	ALLOY STEEL	108	STD	1/16	HL764	N/A	HS342	HL75, HL86, HL87, HL288, HL574
HL721	FLUSH	TENSION	100 MS24694	ALLOY STEEL	108	STD	1/16	HL765	N/A	HS342	HL75, HL86, HL87, HL288, HL574
HL722	PROTRUDING	TENSION	SPECIAL	WASPALLOY	95	STD	1/16	N/A	SPECIAL HEAD W/O HEX SOCK	HS342	HL189
HL723	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	N/A	N/A	N/A	N/A	GOOD YEAR 338N 016-1	N/A	N/A
HL724	FLUSH	SHEAR	100 REDUCED	N/A	N/A	1/32	1/16	N/A	SEALING APPLICATION	N/A	N/A
HL725	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	N/A	N/A	N/A	N/A	GOOD YEAR 338N 016-1	N/A	N/A
HL726	PROTRUDING	TENSION	N/A	ALLOY STEEL	108	STD	1/16	N/A	N/A	HS342	HL874, HL875
HL727	FLUSH	SHEAR	100, SPECIAL	ALLOY STEEL	108	STD	1/16	N/A	N/A	HS342	HL779, HL782, HL785, HL795
HL728	PROTRUDING	SHEAR	N/A	6AL-4V	95	1/32	1/16	N/A	MECHANICAL LOCK-1/32 OVERSIZE FOR HL358	HS342	HL684
HL729	FLUSH	TENSION	100 MS24694	7075-T6	45	1/32	1/16	N/A	1/32 OVERSIZE FOR HL29	N/A	N/A
HL730	PROTRUDING	TENSION	N/A	INCONEL 718	125	STD	1/16	HL938	N/A	HS342	HL75, HL78, HL86, HL87

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL731	FLUSH	TENSION	100 MS24694	INCONEL 718	125	STD	1/16	HL939	N/A	HS342	HL75, HL78, HL86
HL732	PROTRUDING	TENSION	N/A	6AL-4V	95	1/32	1/16	N/A	MECHANICAL LOCK-1/32 OVERSIZE FOR HL252	HS342	HL684
HL733	FLUSH	TENSION	100 MS24694	6AL-4V	95	1/32	1/16	N/A	MECHANICAL LOCK-1/32 OVERSIZE FOR HL233	HS342	HL684
HL734	PROTRUDING	SHEAR	N/A	H-11	132	1/32	3/32	N/A	1/32 OVERSIZE FOR HL614	HS342	HL774
HL735	FLUSH	SHEAR	100 REDUCED	H-11	132	1/32	3/32	N/A	1/32 OVERSIZE FOR HL615	HS342	HL774
HL736	PROTRUDING	TENSION	N/A	H-11	132	1/32	3/32	N/A	N/A	N/A	N/A
HL737	FLUSH	TENSION	100 MS24694	H-11	132	1/32	3/32	N/A	N/A	N/A	N/A
HL738	FLUSH	SHEAR	100 REDUCED, CROWN	A-286	95	1/64	1/16	HL961	MECHANICAL LOCK-1/64 OVERSIZE FOR HL625	HS342	HL684
HL739	FLUSH	SHEAR	100 REDUCED, CROWN	6AL-4V	95	1/32	1/16	N/A	MECHANICAL LOCK-1/64 OVERSIZE FOR HL227	HS342	HL684
HL740	PROTRUDING	SHEAR	N/A	A-286	95	STD	1/16	N/A	N/A	N/A	N/A
HL741	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	1/32	1/16	N/A	SPECIAL SHANK	HS342	N/A
HL742	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	1/64	N/A	N/A	SPECIAL SHANK	N/A	N/A
HL743	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL592
HL744	PROTRUDING	SHEAR	N/A	PH13-8MO	125	1/64	1/16	HL844	1/64 OVERSIZE FOR HL644	HS342	HL79, HL82, HL94, HL175, HL197, HL574
HL745	FLUSH	SHEAR	100 REDUCED, WITH RECESS	PH13-8MO	125	1/64	1/16	HL845	N/A	HS342	HL79, HL82, HL94, HL175, HL297
HL746	PROTRUDING	TENSION	N/A	PH13-8MO	125	1/64	1/16	HL846	1/64 OVERSIZE FOR HL646	HS342	HL75, HL87, HL89, HL273, HL278
HL747	FLUSH	TENSION	100, MS24694, WITH RECESS	PH13-8MO	125	1/64	1/16	HL847	N/A	HS342	HL75, HL87
HL748	PROTRUDING	TENSION	N/A	A-286	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL48	HS342	HL93, HL293, HL393, HL478
HL749	FLUSH	TENSION	100 MS24694	A-286	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL49	HS342	HL93, HL293, HL393, HL478
HL750	FLUSH	SHEAR	100 MS20426	7075-T6	45	STD	1/16	N/A	THREADED SHANK	HS340	N/A
HL751	FLUSH	SHEAR	100 REDUCED	PH13-8MO	125	1/64	1/16	HL851	1/64 OVERSIZE FOR HL645	HS342	HL79, HL82, HL94, HL175, HL197, HL574
HL752	PROTRUDING	SHEAR	N/A	A-286	95	STD	1/16	N/A	MECHANICAL LOCK	HS342	HL576, HL580, HL585
HL753	FLUSH	TENSION	100 MS24694	PH13-8MO	125	1/64	1/16	HL853	1/64 OVERSIZE FOR HL647	HS342	HL75, HL87, HL89, HL273, HL278
HL754	PROTRUDING	SHEAR	N/A	INCONEL 718	125	STD	1/16	HL936	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL755	FLUSH	SHEAR	100, SPECIAL	6AL-4V	95	STD	1/16	HL855	N/A	HS342	HL70, HL79, HL82, HL94, HL175

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL755DF	FLUSH	SHEAR	100, SPECIAL	TITANIUM	95	STD	1/16	N/A	N/A	HS342, HS387	HL70AA, HL82AA, HL94GB, HL175GB
HL756	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	HL856	N/A	HS342	HL75, HL86
HL756DF	PROTRUDING	TENSION	N/A	TITANIUM	95	STD	1/16	N/A	N/A	HS342, HS387	HL75GB, HL86GB
HL757	FLUSH	SHEAR	100, SPECIAL	A-286	95	STD	1/16	HL857	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL178, HL794
HL758	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL874, HL875
HL759	FLUSH	SHEAR	100, SPECIAL	6AL-4V	95	STD	1/16	HL855	N/A	HS342	HL779, HL782, HL785, HL795
HL760	PROTRUDING	TENSION	N/A	A-286	95	STD	1/16	N/A	N/A	HS342	HL876, HL877
HL761	FLUSH	SHEAR	100, SPECIAL	A-286	95	STD	1/16	N/A	N/A	HS342	HL797, HL798
HL762	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	1/64	1/16	HL964	1/64 OVERSIZE FOR HL718	HS340	HL79, HL82, HL84, HL94, HL197
HL763	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	108	1/64	1/16	HL965	1/64 OVERSIZE FOR HL719	HS340	HL79, HL82, HL84, HL94, HL197
HL764	PROTRUDING	TENSION	N/A	ALLOY STEEL	108	1/64	1/16	HL820	1/64 OVERSIZE FOR HL720	HS342	HL75, HL87, HL288, HL574
HL765	FLUSH	TENSION	100 MS24694	ALLOY STEEL	108	1/64	1/16	HL821	1/64 OVERSIZE FOR HL721	HS342	HL75, HL87, HL288, HL574
HL766	PROTRUDING	TENSION	SPECIAL	WASPALLOY	95	STD	3/32	N/A	N/A	N/A	N/A
HL767	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	N/A	CTBOLT	N/A	N/A
HL768	PROTRUDING	TENSION	HEX	A-286	95	STD	1/16	HL816	HONEYCOMB	HS342	N/A
HL769	FLUSH	SHEAR	156, 3.5D	PH13-8MO	125	STD	N/A	N/A	HONEYCOMB	HS342	N/A
HL772	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	1/64	1/16	N/A	1/64 OVERSIZE FOR HL718 EXCEPT CADMIUM PLATE PER NAS672	HS340	HL79, HL82, HL84, HL94, HL197
HL773	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	108	1/64	1/16	N/A	1/64 OVERSIZE FOR HL719 EXCEPT CADMIUM PLATE PER NAS672	HS340	HL79, HL82, HL84, HL94, HL197
HL800	PROTRUDING	TENSION	HEX WITH RECESS	ALLOY STEEL	108	STD	N/A	N/A	WHEEL BOLT	HS340	HL799
HL801	PROTRUDING	TENSION	N/A	ALLOY STEEL	108	STD	N/A	N/A	WHEEL BOLT	HS340	HL891
HL802	PROTRUDING	TENSION	N/A	H-11	132	STD	N/A	N/A	WHEEL BOLT	HS340	HL890
HL803	FLUSH	SHEAR	100, SPECIAL	ALLOY STEEL	108	STD	1/16	HL813	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL178, HL794
HL804	PROTRUDING	TENSION	12 POINT	ALLOY STEEL	108	STD	N/A	HL889	N/A	HS340	HL889

HL PIN INDEX

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HL805	FLUSH	SHEAR	100 SPECIAL	6AL-4V	95	STD	1/16	HL855	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL178, HL794
HL806	PROTRUDING	TENSION	SPECIAL	2024-T6	36	STD	1/16	N/A	SPECIAL APPL	N/A	HL177
HL807	FLUSH	SHEAR	100 SPECIAL	2024-T6	36	STD	1/16	N/A	SPECIAL APPL	N/A	HL177
HL808	PROTRUDING	TENSION	12 POINT	H-11	132	STD	N/A	N/A	N/A	HS340	HL890
HL809	FLUSH	N/A	70	6AL-4V	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL810	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/32	HL826	SPECIAL APPL	HS342	N/A
HL811	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/32	HL921	SPECIAL APPL	HS342	N/A
HL812	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	SPECIAL APPL	HS342	HL198
HL813	FLUSH	SHEAR	100, SPECIAL	ALLOY STEEL	108	1/64	1/16	HL833	1/64 OVERSIZE FOR HL803	HS342	HL79, HL82, HL94, HL197, HL794
HL814	PROTRUDING	SHEAR	N/A	H-11	156	STD	1/32	HL1028	SPECIAL APPL	HS342	N/A
HL815	FLUSH	SHEAR	100 REDUCED	H-11	156	STD	1/32	HL1029	SPECIAL APPL	HS342	N/A
HL816	PROTRUDING	TENSION	HEX	A-286	95	1/64	1/16	HL958	HONEYCOMB-1/64 OVERSIZE FOR HL768	HS342	N/A
HL817	FLUSH	SHEAR	100, LIGHTWEIGHT	7075-T6	45	3/64	1/16	N/A	3/64 OVERSIZE FOR HL505	HS340	HL777
HL818	PROTRUDING	SHEAR	N/A	H-11	156	STD	1/32	N/A	N/A	N/A	N/A
HL819	FLUSH	SHEAR	100 REDUCED	H-11	156	STD	1/32	N/A	N/A	N/A	N/A
HL820	PROTRUDING	TENSION	N/A	ALLOY STEEL	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL628 OR HL720	HS342	HL93, HL375, HL393, HL478, HL674
HL821	FLUSH	TENSION	100 MS24694	ALLOY STEEL	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL721	HS342	HL93, HL375, HL393, HL478, HL674
HL822	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL78, HL86, HL198
HL823	FLUSH	SHEAR	100 MS20426	6AL-4V	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL523	HS342	HL84, HL197
HL824	FLUSH	SHEAR	100, SEALING	6AL-4V	95	STD	1/32	N/A	SEALING APPLICATION	N/A	N/A
HL825	FLUSH	SHEAR	100, SEALING	431 SST	125	STD	1/32	N/A	SEALING APPLICATION	HS342	N/A
HL826	PROTRUDING	SHEAR	N/A	6AL-4V	95	1/64	1/32	HL1026	1/64 OVERSIZE FOR HL810	HS342	N/A
HL827	FLUSH	SHEAR	100 MS20426	INCONEL 718	125	STD	1/16	N/A	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL828	PROTRUDING	TENSION	N/A	ALLOY STEEL	N/A	N/A	N/A	N/A	SHORT THREAD	N/A	N/A
HL829	FLUSH	SHEAR	100 REDUCED	INCONEL 718	108	1/64	1/16	HL831	1/64 OVERSIZE FOR HL657	HS342	HL79, HL82, HL94, HL175
HL830	PROTRUDING	SHEAR	N/A	INCONEL 718	108	1/64	1/16	HL832	1/64 OVERSIZE FOR HL658	HS342	HL79, HL82, HL94, HL175
HL831	FLUSH	SHEAR	100 REDUCED	INCONEL 718	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL657	HS342	HL84, HL197, HL294, HL382, HL675

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL832	PROTRUDING	SHEAR	N/A	INCONEL 718	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL658	HS342	HL84, HL197, HL294, HL382, HL675
HL833	FLUSH	SHEAR	100, SPECIAL	ALLOY STEEL	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL629 OR HL803	HS342	HL84, HL197, HL294, HL382
HL834	PROTRUDING	N/A	N/A	6AL-4V	95	STD	1/16	HL924	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS342	N/A
HL835	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL837	FLUSH	SHEAR	100, SEALING	A-286	95	1/64	1/16	HL839	SEALING APPLICATION	HS342	HL79, HL82
HL838	FLUSH	SHEAR	100, SEALING	A-286	95	1/32	1/16	N/A	SEALING APPLICATION	N/A	N/A
HL839	FLUSH	SHEAR	100, SEALING	A-286	95	1/32	1/16	N/A	SEALING APPLICATION	HS342	HL84, HL382
HL840	PROTRUDING	SHEAR	N/A	A-286	95	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL70, HL79, HL82, HL94, HL97, HL297
HL841	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL70, HL79, HL82, HL94, HL97, HL297
HL842	PROTRUDING	SHEAR	3.5D	A-286	95	1/64	1/32	HL852	HONEYCOMB	HS342	N/A
HL843	FLUSH	SHEAR	100 MS20426	7075-T6	45	STD	1/16	N/A	N/A	N/A	N/A
HL844	PROTRUDING	SHEAR	N/A	PH13-8MO	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL644	HS342	HL84, HL294, HL382, HL674, HL675
HL845	FLUSH	SHEAR	100 REDUCED WITH RECESS	PH13-8MO	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL745	HS342	HL84, HL197, HL294
HL846	PROTRUDING	TENSION	N/A	PH13-8MO	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL646	HS342	HL93, HL289, HL373, HL375, HL478
HL847	FLUSH	TENSION	100 MS24694 WITH RECESS	PH13-8MO	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL747	HS342	HL287, HL293
HL848	PROTRUDING	TENSION	N/A	A-286	95	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL75, HL78, HL86
HL849	FLUSH	TENSION	100 MS24694	A-286	95	STD	1/16	N/A	SPECIAL -5 SOCKET	HS342	HL75, HL78, HL86
HL850	PROTRUDING	TENSION	SPECIAL	6AL-4V	N/A	N/A	1/16	N/A	N/A	N/A	N/A
HL851	FLUSH	SHEAR	100 REDUCED	PH13-8MO	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL645	HS342	HL84, HL197, HL294, HL382, HL674, HL675
HL852	PROTRUDING	SHEAR	3.5D	A-286	95	1/32	1/32	N/A	HONEYCOMB, 1/32 OVERSIZE FOR HL144 AND HL842	HS342	N/A
HL853	FLUSH	TENSION	100 MS24694	PH13-8MO	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL647	HS342	HL93, HL289, HL373, HL375, HL478
HL854	PROTRUDING	SHEAR	N/A	431 SST	125	STD	1/32	N/A	SPECIAL APPL	N/A	N/A
HL855	FLUSH	SHEAR	100 SPECIAL	6AL-4V	95	1/64	1/16	N/A	1/64 OVERSIZE FOR HL755	HS342	HL79, HL82, HL94, HL175

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL856	PROTRUDING	TENSION	N/A	6AL-4V	95	1/64	1/16	N/A	1/64 OVERSIZE FOR HL756	HS342	HL75, HL87
HL857	FLUSH	SHEAR	100 SPECIAL	A-286	95	1/64	1/16	HL957	1/64 OVERSIZE FOR HL757	HS342	HL79, HL82, HL94, HL175, HL197, HL794
HL858	PROTRUDING	TENSION	2.5D	6AL-4V	95	STD	1/16	N/A	HONEYCOMB	HS342	HCL74, HCL174, HLN1, HL185, HL276, HL298
HL859	FLUSH	SHEAR	156, 3.5D	6AL-4V	95	STD	1/16	N/A	HONEYCOMB	HS342	HL97
HL860	PROTRUDING	SHEAR	3.5D	6AL-4V	95	STD	1/16	N/A	HONEYCOMB	HS342	HCL74, HCL174, HLN1, HL185, HL276, HL298
HL861	FLUSH	SHEAR	100 REDUCED	431 SST	125	STD	1/32	N/A	SPECIAL APPL	N/A	N/A
HL862	FLUSH	SHEAR	100 MS20426	6AL-4V	95	STD	1/32	N/A	STUD	N/A	N/A
HL863	FLUSH	SHEAR	100 REDUCED	MP35N	132	1/64	1/16	N/A	1/64 OVERSIZE FOR HL157	N/A	HL79, HL82, HL94, HL175
HL864	PROTRUDING	SHEAR	3.5D	A-286	95	STD	1/32	N/A	HONEYCOMB	HS342	N/A
HL865	FLUSH	SHEAR	100 MS20426	6AL-4V	95	STD	1/16	HL923	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL866	FLUSH	SHEAR	156, 3.5D	A-286	95	N/A	N/A	N/A	HONEYCOMB	N/A	N/A
HL867	FLUSH	SHEAR	100 REDUCED	A-286	95	1/64	1/16	HL967	HONEYCOMB-1/64 OVERSIZE FOR HL667	HS342	N/A
HL868	PROTRUDING	TENSION	N/A	A-286	95	1/64	1/16	HL968	HONEYCOMB-1/64 OVERSIZE FOR HL668	HS342	N/A
HL869	FLUSH	SHEAR	156, 3.5D	A-286	95	STD	N/A	HL959	HONEYCOMB	HS342	N/A
HL900	PROTRUDING	SHEAR	N/A	6AL-6V-2SN	108	1/64	1/16	HL902	N/A	HS340	HL79, HL82, HL84, HL94, HL197
HL901	FLUSH	SHEAR	100 REDUCED	6AL-6V-2SN	108	1/64	1/16	HL903	N/A	HS340	HL79, HL82, HL84, HL94, HL197
HL902	PROTRUDING	SHEAR	N/A	6AL-6V-2SN	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL910	HS342	HL84, HL197
HL903	FLUSH	SHEAR	100 REDUCED	6AL-6V-2SN	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL911	HS342	HL84, HL197
HL904	PROTRUDING	TENSION	N/A	6AL-6V-2SN	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL912	N/A	N/A
HL905	FLUSH	TENSION	100 MS24694	6AL-6V-2SN	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL913	N/A	N/A
HL906	PROTRUDING	SHEAR	N/A	TI	N/A	N/A	1/16	N/A	N/A	N/A	N/A
HL907	FLUSH	SHEAR	100 REDUCED	TI	N/A	N/A	1/16	N/A	N/A	N/A	N/A
HL908	PROTRUDING	SHEAR	N/A	6AL-4V	95	N/A	1/16	N/A	KEY LOCK THREAD	HS342	N/A
HL909	FLUSH	TENSION	100 MS24694	6AL-6V-2SN	108	STD	1/16	N/A	N/A	HS340	HL72, HL75, HL86, HL198
HL910	PROTRUDING	SHEAR	N/A	6AL-6V-2SN	108	STD	1/16	HL950	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL379
HL911	FLUSH	SHEAR	100 REDUCED	6AL-6V-2SN	108	STD	1/16	HL951	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL379

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL912	PROTRUDING	TENSION	N/A	6AL-6V-2SN	108	STD	1/16	HL952	N/A	HS342	HL75, HL86, HL198
HL913	FLUSH	TENSION	100 MS24694	6AL-6V-2SN	108	STD	1/16	HL953	N/A	HS342	HL75, HL86, HL198
HL914	PROTRUDING	SHEAR	N/A	H-11	132	1/32	1/16	N/A	1/32 OVERSIZE FOR HL114	HS342	HL674
HL915	FLUSH	SHEAR	100 REDUCED	H-11	132	1/32	1/16	N/A	1/32 OVERSIZE FOR HL115	HS342	HL674
HL916	PROTRUDING	TENSION	N/A	H-11	132	1/32	1/16	N/A	1/32 OVERSIZE FOR HL116	HS342	HL373
HL917	FLUSH	TENSION	100 MS24694	H-11	132	1/32	1/16	N/A	1/32 OVERSIZE FOR HL117	HS342	HL373
HL918	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	N/A	N/A	HS340	HL70, HL82, HL94, HL97
HL919	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	N/A	N/A	HS340	HL70, HL82, HL94, HL97
HL920	PROTRUDING	TENSION	SPECIAL	ALLOY STEEL	95	STD	1/16	N/A	N/A	N/A	N/A
HL921	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	1/64	1/32	HL1027	1/64 OVERSIZE FOR HL811	HS342	N/A
HL922	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	N/A	KEY LOCK THREAD	HS342	N/A
HL923	FLUSH	SHEAR	100 MS20426	6AL-4V	95	1/64	1/16	HL955	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS-1/64 OVERSIZE FOR HL865	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL924	PROTRUDING	N/A	N/A	6AL-4V	95	1/64	1/16	HL942	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS- 1/64 OVERSIZE FOR HL834	HS342	N/A
HL925	FLUSH	SHEAR	100, SEALING	PH13-8MO	125	N/A	N/A	N/A	SEALING APPLICATION	N/A	N/A
HL926	N/A	N/A	FILLISTER	6AL-4V	95	STD	N/A	N/A	SPECIAL APPL	HS342	HL97
HL927	FLUSH	SHEAR	100 REDUCED, CROWN	6AL-4V	95	1/32	1/16	N/A	MECHANICAL LOCK	HS342	HL684, HL988
HL928	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	STD	1/16	HL962	N/A	HS342	HL70, HL79, HL82, HL94, HL97
HL929	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	108	STD	1/16	HL963	N/A	HS342	HL70, HL79, HL82, HL94, HL97
HL930	FLUSH	SHEAR	156	A-286	95	STD	1/16	N/A	MECHANICAL LOCK	HS342	HL585, HL882
HL931	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	N/A	1/16	N/A	INTERFERENCE APPLICATION	N/A	N/A
HL932	PROTRUDING	SHEAR	N/A	MP35N	145	STD	1/16	N/A	N/A	HS342	HL70, HL97, HL574
HL933	FLUSH	SHEAR	100 REDUCED	MP35N	145	STD	1/16	N/A	N/A	HS342	HL70, HL97, HL574
HL934	PROTRUDING	TENSION	N/A	MP35N	156	STD	1/16	N/A	N/A	N/A	HL78, HL89, HL273
HL935	FLUSH	TENSION	100 MS24694	MP35N	156	STD	1/16	N/A	N/A	N/A	HL78, HL89, HL273

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL936	PROTRUDING	SHEAR	N/A	INCONEL 718	125	1/64	1/16	HL946	1/64 OVERSIZE FOR HL754	HS342	HL79, HL82, HL94, HL175
HL937	FLUSH	SHEAR	100 REDUCED	INCONEL 718	125	1/64	1/16	HL947	1/64 OVERSIZE FOR HL701	HS342	HL79, HL82, HL94, HL175
HL938	PROTRUDING	TENSION	N/A	INCONEL 718	125	1/64	1/16	HL948	1/64 OVERSIZE FOR HL730	N/A	N/A
HL939	FLUSH	TENSION	100 MS24694	INCONEL 718	125	1/64	1/16	HL949	1/64 OVERSIZE FOR HL731	HS342	HL75, HL78, HL86
HL940	PROTRUDING	SHEAR	N/A	6AL-6V-2SN	108	STD	1/16	HL950	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL379
HL941	FLUSH	SHEAR	100 REDUCED	6AL-6V-2SN	108	STD	1/16	HL951	N/A	HS342	HL70, HL79, HL82, HL94, HL97, HL379
HL942	PROTRUDING	N/A	N/A	6AL-4V	95	1/32	1/16	N/A	STUD-THREADED WITH SHANK PORTION, HEX BOTH ENDS- 1/32 OVERSIZE FOR HL834	HS342	N/A
HL943	FLUSH	SHEAR	100 REDUCED	A-286	95	STD	1/16	HL945	NO HEAD MARKING INACTIVE	HS340	HL70, HL79, HL82, HL94, HL97
HL944	PROTRUDING	SHEAR	3.5D	A-286	95	STD	1/32	N/A	HONEYCOMB COARSE THREAD	HS342	N/A
HL945	FLUSH	SHEAR	100 REDUCED	A-286	95	1/64	1/16	N/A	1/64 OVERSIZE FOR HL943	HS340	HL79, HL82, HL94, HL197
HL946	PROTRUDING	SHEAR	N/A	INCONEL 718	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL754	HS342	HL84, HL197, HL294, HL382
HL947	FLUSH	SHEAR	100 REDUCED	INCONEL 718	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL701	HS342	HL84, HL197, HL294, HL382
HL948	PROTRUDING	TENSION	N/A	INCONEL 718	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL730	N/A	N/A
HL949	FLUSH	TENSION	100 MS24694	INCONEL 718	125	1/32	1/16	N/A	1/32 OVERSIZE FOR HL731	HS342	HL75, HL78, HL88
HL950	PROTRUDING	SHEAR	N/A	6AL-6V-2SN	108	1/64	1/16	HL902	1/64 OVERSIZE FOR HL910	HS342	HL79, HL82, HL94, HL197
HL951	FLUSH	SHEAR	100 REDUCED	6AL-6V-2SN	108	1/64	1/16	HL903	1/64 OVERSIZE FOR HL911	HS342	HL79, HL82, HL94, HL197
HL952	PROTRUDING	TENSION	N/A	6AL-6V-2SN	108	1/64	1/16	N/A	1/64 OVERSIZE FOR HL912	HS342	HL75, HL87, HL198
HL953	FLUSH	TENSION	100 MS24694	6AL-6V-2SN	108	1/64	1/16	N/A	1/64 OVERSIZE FOR HL913	HS342	HL75, HL87, HL198
HL954	PROTRUDING	TENSION	SPECIAL	6AL-4V	95	1/32	1/16	N/A	1/64 OVERSIZE FOR HL554	HS342	HL93, HL375, HL478
HL955	FLUSH	SHEAR	100 MS20426	6AL-4V	95	1/32	1/16	N/A	STUD	HS342	HL70, HL79, HL82, HL94, HL97, HL175
HL957	FLUSH	SHEAR	100 SPECIAL	A-286	95	1/32	1/16	N/A	1/32 OVERSIZE FOR HL757	HS342	HL84, HL197, HL294, HL382, HL675
HL958	PROTRUDING	TENSION	HEX	A-286	95	1/32	1/16	N/A	HONEYCOMB-1/32 OVERSIZE FOR HL768	HS342	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL959	FLUSH	SHEAR	156, 3.5D	A-286	95	1/64	N/A	HL966	HONEYCOMB-1/64 OVERSIZE FOR HL869	HS342	N/A
HL960	PROTRUDING	TENSION	N/A	6AL-4V	95	1/32	1/16	N/A	STUD	HS342	N/A
HL961	FLUSH	SHEAR	100 REDUCED, CROWN	A-286	95	1/32	1/16	N/A	MECHANICAL LOCK-1/32 OVERSIZE FOR HL738	HS342	HL684
HL962	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	1/64	1/16	HL964	1/64 OVERSIZE FOR HL928 OR HL718	HS342	HL79, HL82, HL84, HL94, HL197
HL963	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	108	1/64	1/16	HL965	1/64 OVERSIZE FOR HL929 OR HL719	HS342	HL79, HL82, HL84, HL94, HL197
HL964	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL928	HS342	HL84, HL197
HL965	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	108	1/32	1/16	N/A	1/32 OVERSIZE FOR HL929	HS342	HL84, HL197
HL966	FLUSH	SHEAR	156, 3.5D	A-286	95	1/32	N/A	N/A	HONEYCOMB-1/32 OVERSIZE FOR HL869	HS342	N/A
HL967	FLUSH	SHEAR	100 REDUCED	A-286	95	1/32	1/16	N/A	HONEYCOMB-1/32 OVERSIZE FOR HL667	HS342	N/A
HL968	PROTRUDING	TENSION	N/A	A-286	95	1/32	1/16	N/A	HONEYCOMB-1/32 OVERSIZE FOR HL668	HS342	N/A
HL969	N/A	N/A	N/A	A-286	N/A	N/A	N/A	N/A	HONEYCOMB APPLICATION	N/A	N/A
HL1011	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	N/A	SHORT THREAD	HS342	HL583
HL1012	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	HL1022	SPECIAL SOCKET	HS342	HL1075, HL1086
HL1012DF	PROTRUDING	TENSION	N/A	TITANIUM	95	STD	1/16	N/A	SPECIAL SOCKET APPLICATION	HS342, HL387	HL1187GB
HL1013	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	HL1023	SPECIAL SOCKET	HS342	HL1075, HL1086
HL1013DF	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	SPECIAL SOCKET APPLICATION	HS342, HS387	HL1187GB
HL1015	FLUSH	SHEAR	130 SHEAR	A-286	95	STD	1/16	N/A	MECHANICAL LOCK APPLICATION	HS342	HL576, HL585
HL1017	FLUSH	SHEAR	130 CROWN	6AL-4V	95	STD	1/16	N/A	N/A	HS342	N/A
HL1019	FLUSH	SHEAR	100 REDUCED	WASPALOY	95	STD	1/16	N/A	N/A	HS342	HL880
HL1020	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	N/A	SPECIAL SOCKET	HS342	HL1075, HL1086
HL1021	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	STD	1/16	N/A	SPECIAL SOCKET	HS342	HL1075, HL1086
HL1022	PROTRUDING	TENSION	N/A	TITANIUM	95	1/64	1/16	HL1032	SPECIAL SOCKET APPLICATION	HS342	HL1075, HL1086

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL1023	FLUSH	TENSION	100 MS24694	TITANIUM	95	1/64	1/16	HL1033	SPECIAL SOCKET APPLICATION	HS342	HL1075, HL1086
HL1025	N/A	N/A	N/A	6AL-4V	N/A	3/64	1/16	N/A	N/A	N/A	N/A
HL1026	PROTRUDING	SHEAR	N/A	6AL-4V	95	1/32	1/32	N/A	1/32 OVERSIZE	HS342	N/A
HL1027	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	1/32	1/32	N/A	1/32 OVERSIZE	HS342	N/A
HL1028	PROTRUDING	SHEAR	N/A	H-11	156	1/64	1/32	HL1030	1/64 OVERSIZE	HS342	N/A
HL1029	FLUSH	SHEAR	100 REDUCED	H-11	156	1/64	1/32	HL1031	1/64 OVERSIZE	HS342	N/A
HL1030	PROTRUDING	SHEAR	N/A	H-11	156	1/32	1/32	N/A	1/32 OVERSIZE	HS342	N/A
HL1031	FLUSH	SHEAR	100 REDUCED	H-11	156	1/32	1/32	N/A	N/A	HS342	N/A
HL1032	PROTRUDING	TENSION	N/A	6AI-4V	95	1/32	1/16	N/A	SPECIAL SOCKET SIZE	HS342	N/A
HL1033	FLUSH	TENSION	100, MS24694	6AI-4V	95	1/32	1/16	HL1013, HL1023	SPECIAL SOCKET APPLICATION	HS342	HL1075, HL1086
HL1034	PROTRUDING	TENSION	N/A	MP35N	N/A	STD	1/16	N/A	MP35N MULTIPHASE	N/A	HL78, HL89, HL273
HL1040	PROTRUDING	N/A	SPECIAL	A-286	95	STD	1/16	N/A	N/A	HS342	HL97
HL1041	FLUSH	N/A	100, SPECIAL	A-286	95	STD	1/16	N/A	N/A	HS342	HL97
HL1043	FLUSH	SHEAR	100	A-286	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL1045	FLUSH	SHEAR	100	A-286	N/A	1/64	N/A	N/A	LOCKWIRE LOCK	N/A	N/A
HL1047	FLUSH	SHEAR	100	A-286	N/A	1/32	N/A	N/A	LOCKWIRE LOCK	N/A	N/A
HL1048	PROTRUDING	TENSION	N/A	A-286	N/A	N/A	1/16	N/A	BOEING SPECIAL	N/A	N/A
HL1050	PROTRUDING	TENSION	N/A	ALLOY STEEL	N/A	STD	1/16	HL1052	N/A	HS342	HL75, HL86, HL87
HL1052	PROTRUDING	TENSION	N/A	ALLOY STEEL	N/A	1/64	1/16	HL1054	1/64 OVERSIZE FOR HL1050	HS342	HL75, HL87
HL1054	PROTRUDING	TENSION	N/A	ALLOY STEEL	N/A	1/32	1/16	HL1056	1/32 OVERSIZE FOR HL1050	HS342	HL93, HL293, HL375, HL393
HL1055	FLUSH	SHEAR	100 REDUCED	6AL-4V	95	STD	1/16	HL855	N/A	HS 342, EXCEPT AS NOTED 8	HL70, HL79, HL82, HL94, HL175
HL1056	PROTRUDING	TENSION	N/A	ALLOY STEEL	N/A	3/64	1/16	N/A	3/64 OVERSIZE FOR HL1050	HS342	HL287
HL1058	PROTRUDING	TENSION	N/A	A-286	N/A	1/64	1/16	N/A	BOEING SPECIAL	N/A	N/A
HL1060	PROTRUDING	N/A	N/A	6AL-4V	N/A	N/A	N/A	N/A	N/A	HS342, EXCEPT FORGING OF HEAD NOT REQUIRED	N/A
HL1068	PROTRUDING	TENSION	N/A	A-286	N/A	1/32	1/16	N/A	N/A	N/A	N/A
HL1156	PROTRUDING	SHEAR	N/A	MULTIPHASE MP35N	132	1/64	1/16	HL1256	N/A	HS342	HL79, HL82, HL94, HL197, HL175
HL1157	FLUSH	SHEAR	100	MULTIPHASE MP35N	132	1/32	1/16	HL1257	N/A	HS342	HL79, HL82, HL94, HL175, HL197
HL1158	PROTRUDING	TENSION	N/A	MULTIPHASE MP35N	132	1/64	1/16	HL1258	1/64 OVERSIZE	HS342	HL75, HL278, HL87, HL574
HL1159	FLUSH	TENSION	100 MS24694	MULTIPHASE MP35N	132	1/64	1/16	HL1259	1/64 OVERSIZE	HS342	HL75, HL278, HL87, HL574
HL1203	FLUSH	SHEAR	100 REDUCED	A-286	95	3/64	1/16	N/A	3/64 OVERSIZE	HS342	HL279, HL394
HL1205	FLUSH	TENSION	100 MS24694	A-286	95	3/64	1/16	N/A	3/64 OVERSIZE	HS342	HL287

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL1209	FLUSH	N/A	100 MS20426 FLUSH SHEAR	6AL-4V	95	STD	1/16	N/A	SPECIAL SHANK	N/A	N/A
HL1210	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	N/A	SPECIAL SHANK	HS342	HL1379, HL1384
HL1211	FLUSH	SHEAR	100 REDUCED	6AL-4V	N/A	STD	1/16	N/A	SPECIAL SHANK	HS342	HL1379, HL1384
HL1212	PROTRUDING	TENSION	N/A	6AL-4V	95	STD	1/16	N/A	SPECIAL SHANK	HS342	HL1387
HL1213	FLUSH	TENSION	100 MS24694	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL1387
HL1218	PROTRUDING	SHEAR	N/A	ALLOY STEEL	95	STD	1/16	N/A	SPECIAL SHANK	N/A	N/A
HL1219	FLUSH	SHEAR	100 REDUCED	ALLOY STEEL	95	STD	1/16	N/A	SPECIAL SHANK	N/A	N/A
HL1220	PROTRUDING	TENSION	N/A	ALLOY STEEL	95	STD	1/16	N/A	SPECIAL SHANK	N/A	N/A
HL1221	FLUSH	TENSION	100 MS24694	ALLOY STEEL	95	STD	1/16	N/A	SPECIAL SHANK	N/A	N/A
HL1223	FLUSH	N/A	100 MS20426	ALLOY STEEL	N/A	N/A	1/16	N/A	N/A	N/A	N/A
HL1239	FLUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL1240	PROTRUDING	SHEAR	N/A	A-286	N/A	N/A	1/16	N/A	SPECIAL SHANK	N/A	N/A
HL1241	FLUSH	SHEAR	100	A-286	N/A	N/A	1/16	N/A	N/A	N/A	N/A
HL1248	PROTRUDING	TENSION	N/A	A-286	N/A	N/A	1/16	N/A	N/A	N/A	N/A
HL1249	FLUSH	TENSION	MS24694	A-286	N/A	N/A	1/16	N/A	N/A	N/A	N/A
HL1256	PROTRUDING	SHEAR	N/A	MULTIPHASE MP35N	132	1/32	1/16	HL156 & HL1156	1/32 OVERSIZE FOR HL156 & HL1156	HS342	HL84, HL197, HL294, HL382, HL675
HL1257	FLUSH	SHEAR	100	MULTIPHASE MP35N	132	1/32	1/16	N/A	OVERSIZE FOR HL157	HS342	HL93, HL375, HL478, HL674
HL1258	PROTRUDING	TENSION	N/A	MULTIPHASE MP35N	132	1/32	1/16	N/A	1/32 OVERSIZE FOR HL158 & HL1158	HS342	HL93, HL375, HL478, HL674
HL1259	FLUSH	TENSION	100 MS24694	MULTIPHASE MP35N	132	1/32	1/16	N/A	N/A	HS342	HL93, HL375, HL478, HL674
HL1308	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	STD	1/16	N/A	SPECIAL CLAMPING APPL	HS342	HL1392
HL1309	FLUSH	SHEAR	100 REDUCED CROWN	ALLOY STEEL	108	STD	1/16	N/A	SPECIAL CLAMPING APPL	HS342	HL1392
HL1313	FLUSH	SHEAR	100 REDUCED CROWN	H-11	132	STD	1/16	N/A	LEAD IN RADIUS, LOCKHEED SPECIAL	HSERW	HL1399
HL1314	PROTRUDING	SHEAR	N/A	H-11	132	STD	1/16	N/A	LEAD IN RADIUS, LOCKHEED SPECIAL	HS1399	HL1399
HL1315	FLUSH	SHEAR	100 MS20426 CROWN	H-11	132	STD	1/16	N/A	LEAD IN RADIUS, LOCKHEED SPECIAL	HS342	HL1399
HL1316	PROTRUDING	TENSION	N/A	H-11	N/A	STD	1/16	N/A	LEAD IN RADIUS, LOCKHEED SPECIAL	HS342	HL87, HL1389
HL1317	FLUSH	TENSION	100 MS24694	H-11	N/A	STD	1/16	N/A	LEAD IN RADIUS, LOCKHEED SPECIAL	HS342	HL87, HL1389
HL1318	PROTRUDING	SHEAR	N/A	N/A	N/A	N/A	1/16	N/A	INTERFERENCE APPLICATION	N/A	N/A
HL1319	FLUSH	SHEAR	CROWN	ALLOY STEEL	N/A	N/A	1/16	N/A	INTERFERENCE APPLICATION	N/A	N/A
HL1325	PROTRUDING	N/A	100	ALLOY STEEL	108	STD	1/16	N/A	N/A	HS342	N/A

HL PIN INDEX

PART NUMBER	HEAD STYLE	APPLICATION	SPECIFIC HEAD STYLE	MATERIAL	SHEAR STRENGTH	SHANK DIAMETER	GRIP VARIATION	NEXT O/S	SPECIAL APPLICATION	PROCUREMENT SPECIFICATION	TYPICAL COLLARS
HL1328	PROTRUDING	SHEAR	N/A	ALLOY STEEL	108	1/64	1/16	HL1338	1/64 OVERSIZE	HS342	HL1390, HL695, HL1375, HL697
HL1329	FLUSH	SHEAR	100 REDUCED CROWN	ALLOY STEEL	108	1/64	1/16	HL1339	1/64 OVERSIZE	HS342	HL1390, HL695, HL1375, HL697
HL1338	PROTRUDING	SHEAR	N/A	N/A	108	1/32	1/16	N/A	N/A	N/A	N/A
HL1339	FLUSH	SHEAR	100 REDUCED CROWN	ALLOY STEEL	108	1/32	1/16	N/A	1/32 OVERSIZE	HS342	HLT270, HLT271, HLT294, HLT297
HL1510	PROTRUDING	SHEAR	N/A	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL583
HL1511	FLUSH	SHEAR	100	6AL-4V	95	STD	1/16	N/A	N/A	HS342	HL583
HL1512	PROTRUDING	TENSION	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL1515	N/A	SHEAR	100	TITANIUM	N/A	N/A	1/16	N/A	N/A	N/A	N/A
HL1525	FLUSH	SHEAR	100	ALLOY STEEL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL1526	PROTRUDING	TENSION	N/A	ALLOY STEEL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HL7692			156 FLUSH SHEAR 3.5D	PH13-8MO	125	STD	1/16		HONEYCOMB-SAME AS HL169 EXCEPT MATERIAL		
HL11213			100 MS24694 FLUSH TENSION	6AL-4V	95	STD	1/16		SPECIAL SHANK		
HL442006			PROTRUDING TENSION	RENE 41	95	STD					
HL442009			PROTRUDING TENSION	431 SST	125	STD	1/16				
HL442012			100 MS24694 FLUSH TENSION	ALLOY STEEL	95	STD			STUD SPECIAL GRIP VARIATION		
HL10V70	PROTRUDING	SHEAR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			100 MS20426 FLUSH SHEAR	6AL-4V	95	STD	1/16		SEALANT INJECTION PIN		