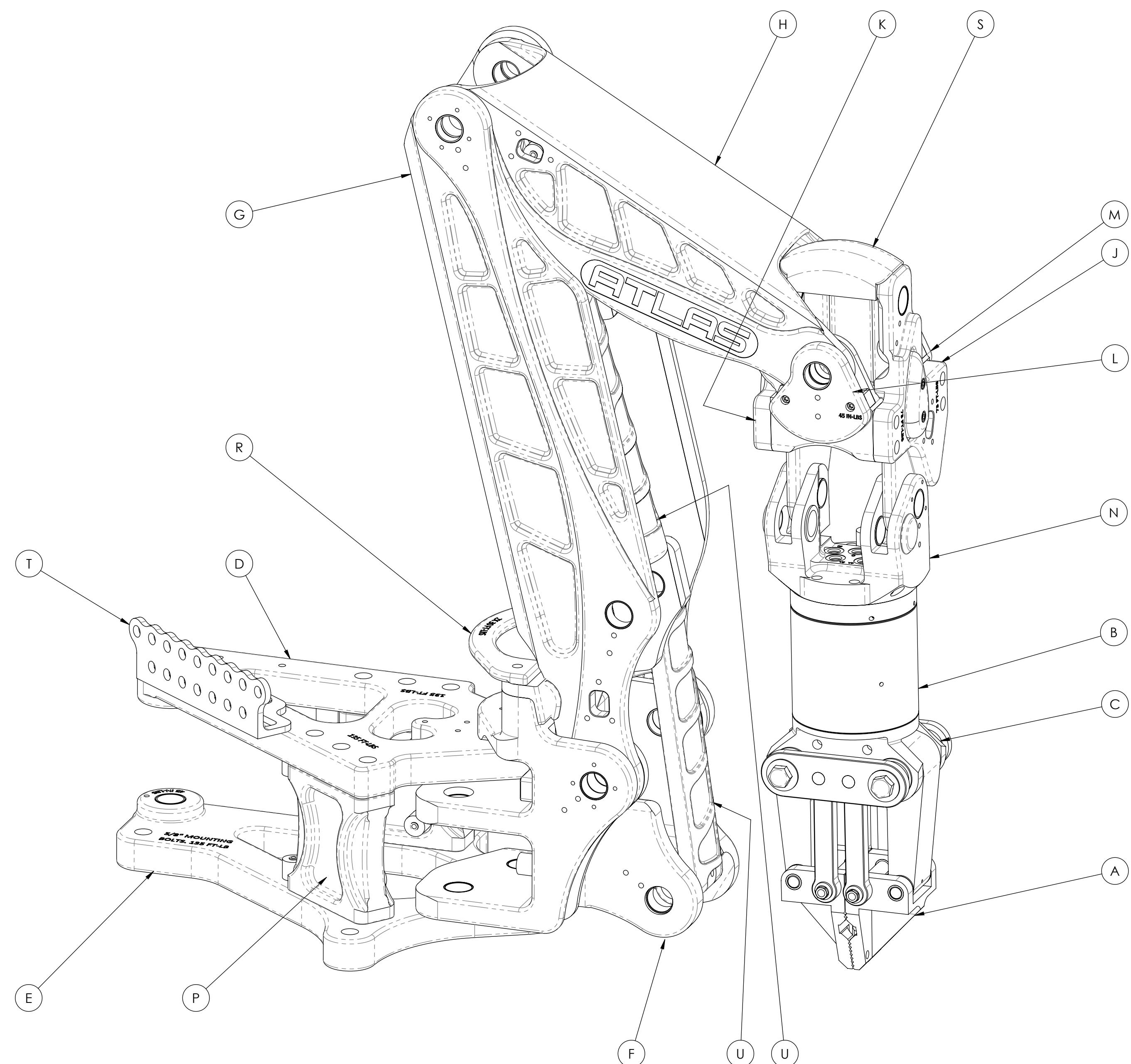


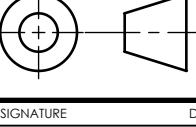
PCN	REV	ZONE	DESCRIPTION	DATE	BY	APPR
1276	0	-	RELEASED	3/23/11	NLH	TR



## STRUCTURE

TABLE APPLIES ONLY TO ASSEMBLY ON THIS SHEET

ITEM	PART NUMBER	DESCRIPTION	QTY
A	101-3299	JAW, PA, 6"	1
B	101-3786	WRIST MOTOR,ORION	1
C	101-3853	NOSE BLOCK KIT,CONAN/RIGMASTER	1
D	101-7160	PLATE ASSEMBLY, TOP,BASE,A7F	1
E	101-7161	PLATE ASSY,BOTTOM,BASE,A7F	1
F	101-7162	AZIMUTH ASSY,A7F	1
G	101-7163	UPPER ARM ASSY,A7F	1
H	101-7164	FOREARM ASSY,A7F	1
J	101-7165	PLATE ASSY,PITCH/YAW A,A7F	1
K	101-7166	PLATE ASSY,PITCH/YAW B,A7F	1
L	101-7167	PLATE ASSY,PITCH/YAW,RIGHT,A7F	1
M	101-7168	PLATE ASSY,PITCH/YAW,LEFT,A7F	1
N	101-7169	WRIST BASE ASSY,A7F	1
P	001-10477	PLATE,VERTICAL,BASE,A7F	2
R	001-10496	HOSE LOOP,AZIMUTH,A7F	1
S	001-10519	GUARD,PITCH/YAW,A7F	1
T	001-10621	MANF,HOSE,A7F	1
U	906-0063	MOLDED,ACTUATOR GUARD,A7F	2

GENERAL NOTES UNLESS OTHERWISE SPECIFIED		THIRD ANGLE PROJECTION	SCHILLING ROBOTICS	
INTERPRET DIMINISHING AND TOLERANCING PER ASME Y14.5M-1994. IN ADDITION, (3) DENOTES REGARDLESS OF FEATURE SIZE. ALL DIMENSIONS ARE IN INCHES. ALL MACHINED SURFACES TO BE AS RMS FINISH. DIMENSIONS ARE IN INCHES. CONCENTRIC FEATURES ARE TO BE CONCENTRIC WITHIN .005 RELATIVE TO FEATURE SIZE.		 DRAWN: N. HANER 5/20/10 DESIGNED: C. SAVARINO 1/23/09 CHECKED: C. SAVARINO LEAD: C. SAVARINO		PROJECT: UHD TITLE: SERVICE LAYOUT, ATLAS HYBRID
DECIMALS: XX .XX	FRACTIONS: XX 1/16 XX 1/32 XX 1/64	ANGLES: XX ° XX' XX" ±15°	LEAD:	SCALE: 1:3 DRAWING NUMBER: 050-0915 SIZE: D SHEET: 1 OF 10 REV: 0

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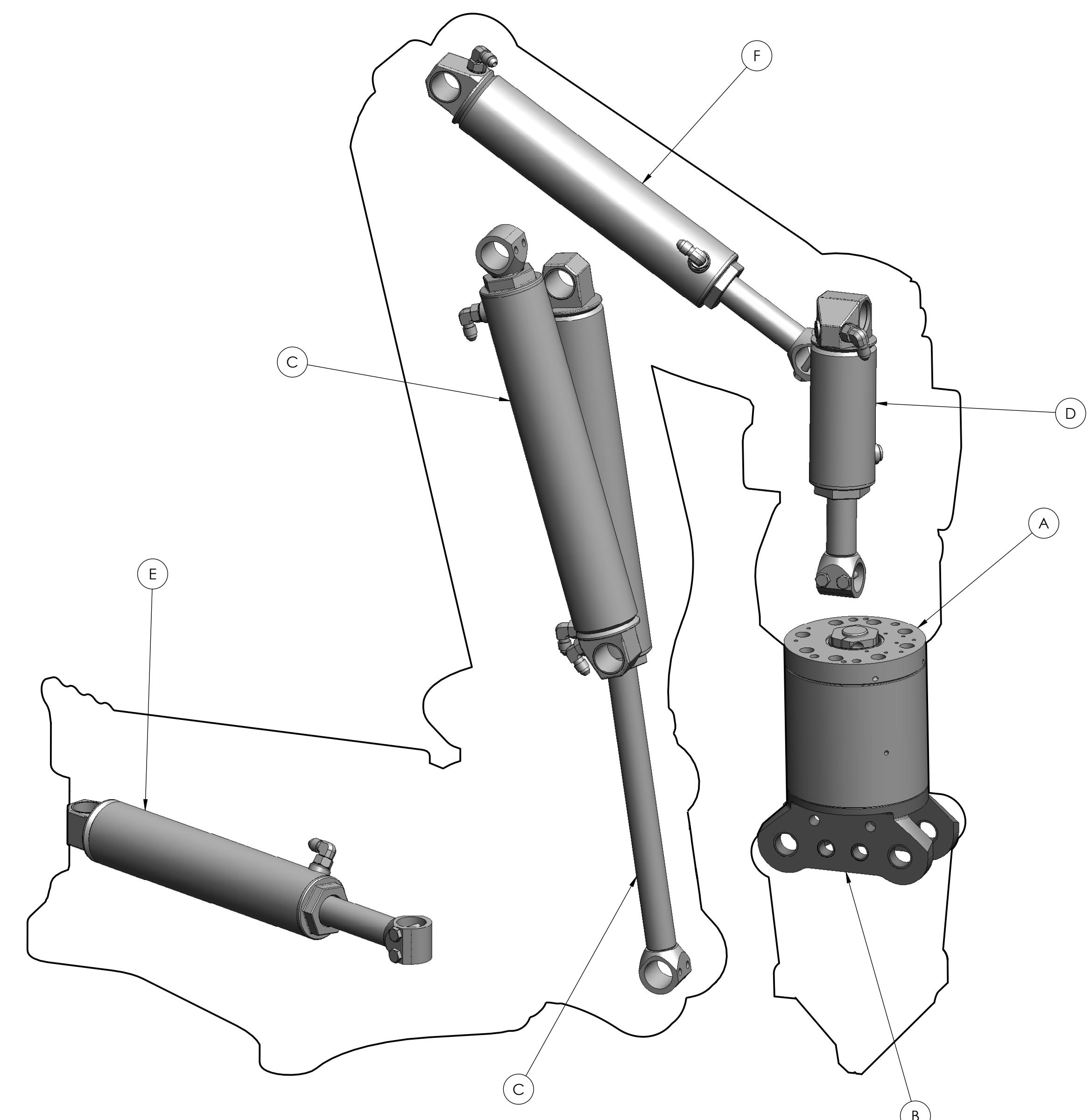
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## ACTUATORS

TABLE APPLIES ONLY TO ASSEMBLY ON THIS SHEET

ITEM	PART NUMBER	DESCRIPTION	QTY
A	101-3786	WRIST MOTOR,ORION	1
B	101-3853	NOSE BLOCK KIT	1
C	101-6837	LINEAR ACTUATOR,10 IN	2
D	101-6844	LIN ACTR,2.6 IN	1
E	101-6952-1	LIN ACTR,8IN BODY,.6IN STRK	1
F	101-6952-2	LIN ACTR,8 IN BODY,3.5 IN STRK	1

SCHILLING  
ROBOTICS

PROJECT UHD  
TITLE SERVICE LAYOUT, ATLAS  
HYBRID

SCALE: 1:3 DRAWING NUMBER 050-0915 SIZE D SHEET 2 OF 10 REV 0

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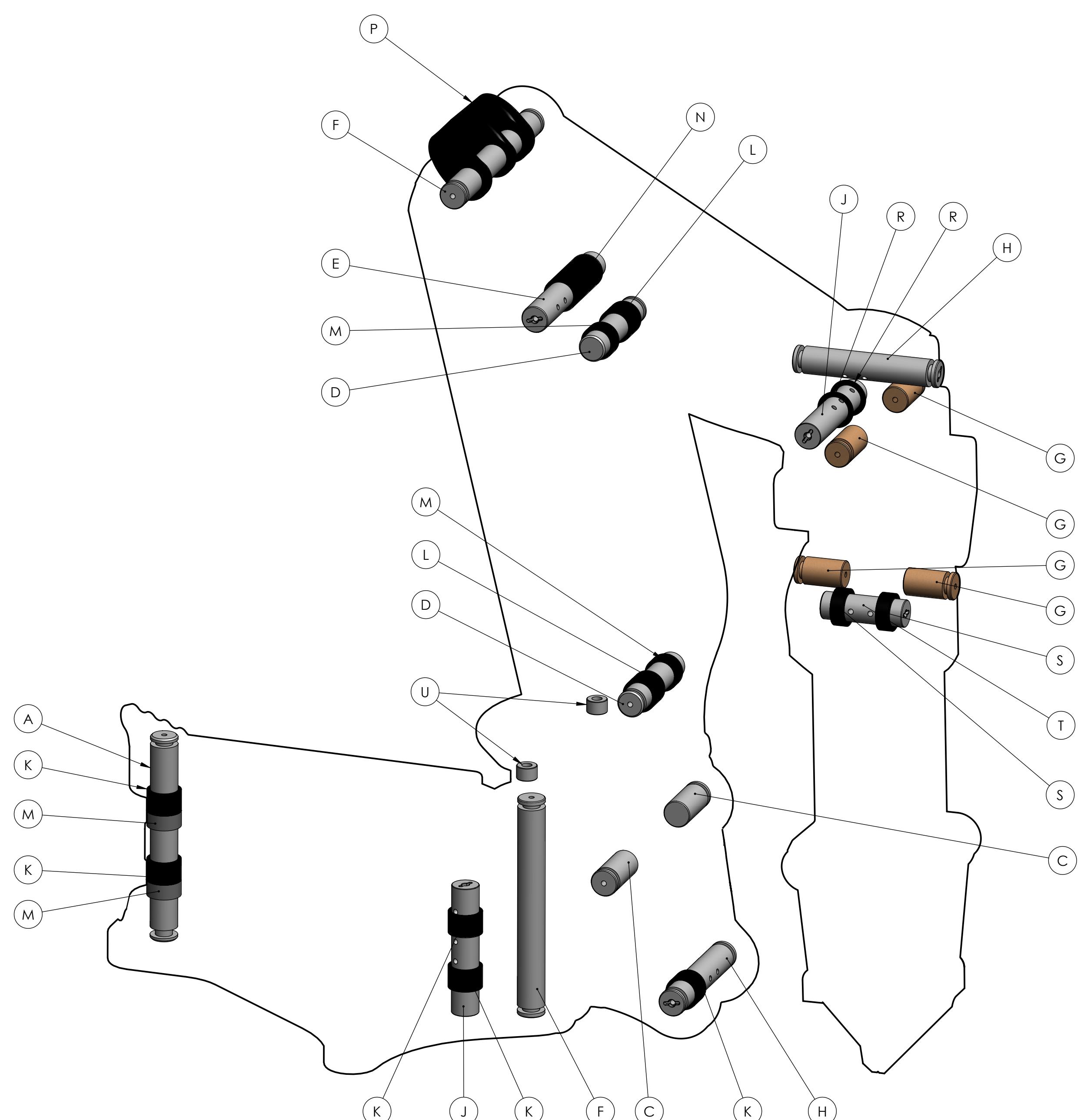
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## PINS AND SPACERS

TABLE APPLIES ONLY TO ASSEMBLY ON THIS SHEET

ITEM	PART NUMBER	DESCRIPTION	QTY
A	001-10478	PIN,SLOTTED,SS,17-4,1"X7.8"	1
C	001-10483	PIN,SLOTTED,17-4,1" X 2.25"	2
D	001-10484	PIN,SLOTTED,17-4,1"X4.5"	2
E	001-10485	PIN,THREADED,17-4,1"X6.1"	1
F	001-10486	PIN,SLTD,17-4,X8.3"	2
G	001-10487	PIN,SLTD,17-4,1" X 1.8"	4
H	001-10488	PIN,THREADED,17-4,1" X 5.4	2
J	001-10489	PIN,THREADED,17-4,1" X 4.8"	2
K	001-10500	SPACER,1.25 OD,1.0 ID,.82 L	5
L	001-10524	SPCR,1.25 OD,1.0 ID,1.0 L	2
M	001-10525	SPACER,1.25 OD,1.01 ID,.57 L	4
N	001-10526	SPACER,1.25 OD,1.0 ID,2.75 L	1
P	001-10670	HOSE GUARD,ELBOW,A7F	1
R	001-10671	WASHER,1.0 ID X .05 THK	2
S	001-4898	SPR,PITCH ACTR ROD END,ORION	2
T	001-4711	PIN,PITCH	1
U	001-10493	SPACER,HARD STOP,AZIMUTH,A7F	2

**SCHILLING**  
ROBOTICS

PROJECT UHD  
TITLE SERVICE LAYOUT, ATLAS  
HYBRID

SCALE: 1:3 DRAWING NUMBER 050-0915 SIZE D SHEET 3 OF 10 REV 0

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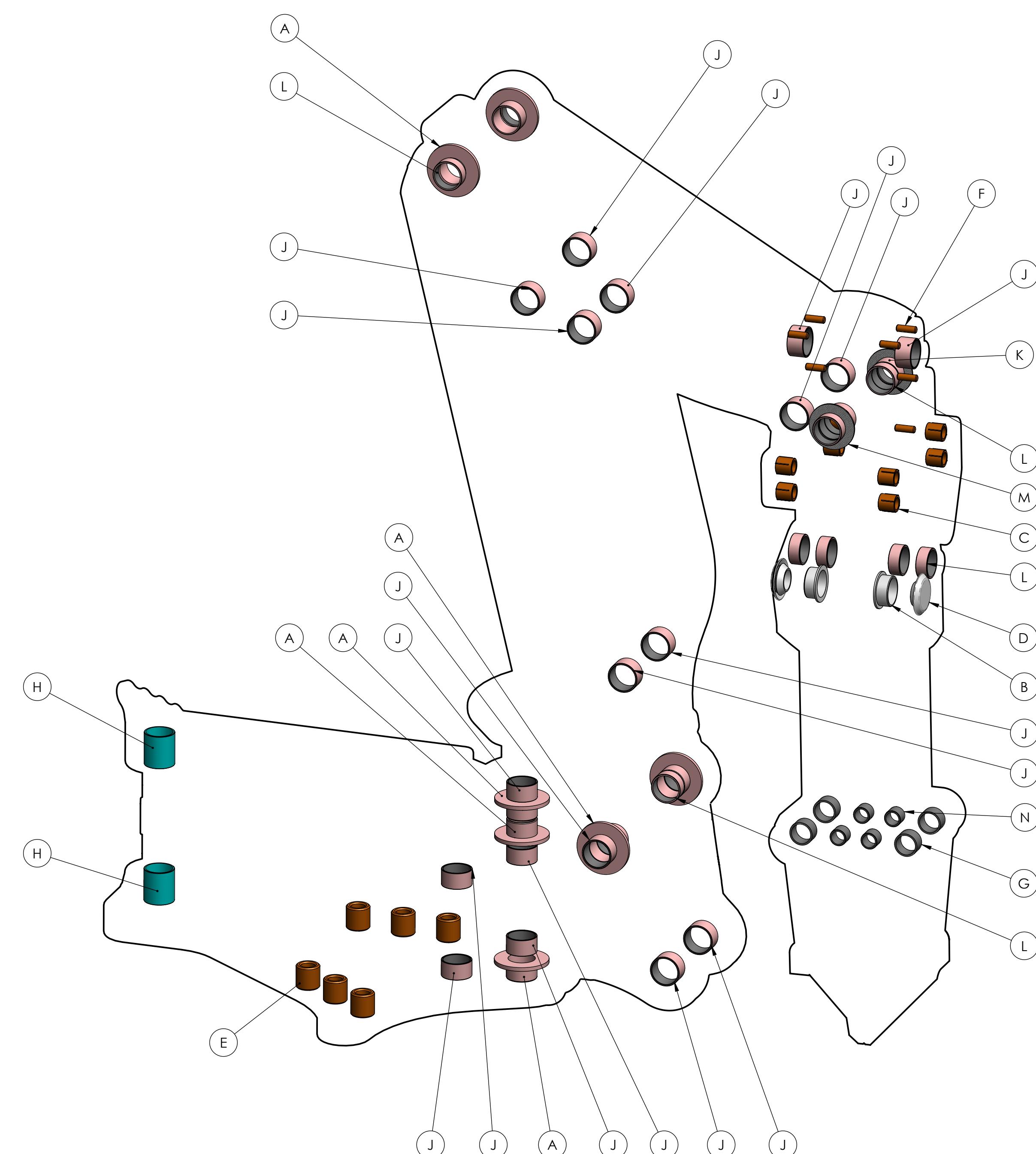
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## BUSHINGS AND INSERTS

TABLE APPLIES ONLY TO ASSEMBLY ON THIS SHEET

ITEM	PART NUMBER	DESCRIPTION	QTY
A	001-10523	BRNG,TOP HAT,1.0 ID,.735 LG	7
B	001-5368	BRG,TOP HAT,ORION	2
C	002-1281	INSR,1/2-20 SS,MS51830-206	8
D	002-1784	PLUG,CAPLUG BPF-1-1/8-6	2
E	002-4980	KEENSERT,SS,5/8 - 11	6
F	002-5056	PIN,DOWEL,1/4 DIA,3/4 L,316 SS	8
G	003-0050	BRG,CJ12E144 DIXON	4
H	003-0114	BRG,PVT,LIN ACTR,T2 GAMMA	2
J	003-0263	BRG,DIXON,CJ16E18-5	19
K	003-0263-1	BRG,DIXON,1.0 ID X .530 LG	2
L	003-0263-2	BEARING,DIXON,1.0X1.125X.438L	12
M	003-0298	BRG,THRUST,1"IDX1.75"OD'X.0585	2
N	003-0113	BEARING,JAW,GAMMA	4

SCHILLING  
ROBOTICS

PROJECT UHD

TITLE SERVICE LAYOUT, ATLAS  
HYBRID

SCALE: 1:3 DRAWING NUMBER 050-0915 SIZE D SHEET 4 OF 10 REV 0

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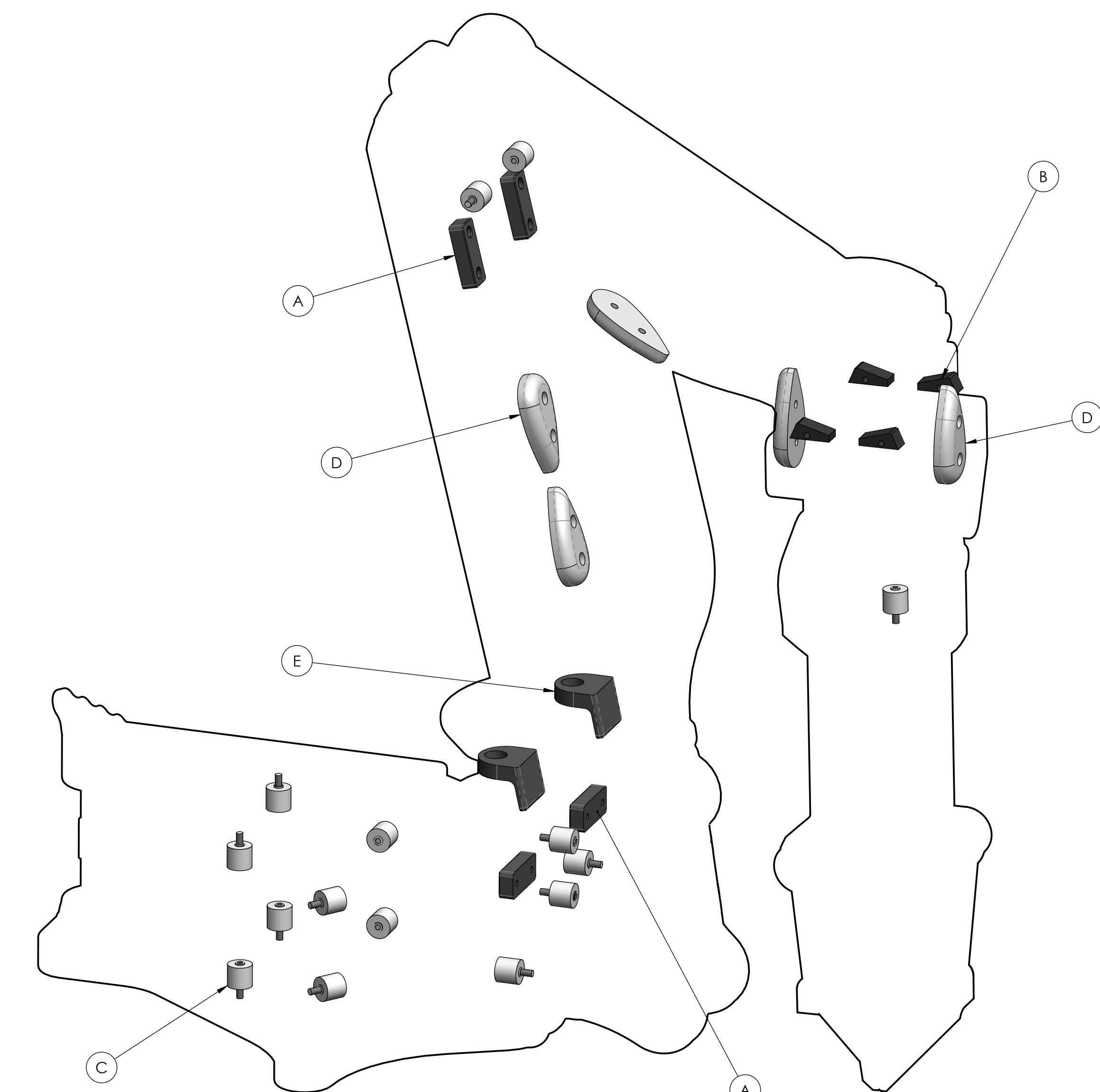
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## HARDSTOPS AND ANODES

TABLE APPLIES ONLY TO ASSEMBLY ON THIS SHEET

ITEM	PART NUMBER	DESCRIPTION	QTY
A	001-10492	HARD STOP,AZIMUTH,A7F	4
B	001-10538	STOP,PITCH,A7F	4
C	002-1440	ANODE,GALVANIC	15
D	002-3168	ANODE,T-20	5
E	001-10743	HARD STOP,SHOULDER,A7F	2

SCHILLING  
ROBOTICS

PROJECT UHD  
TITLE SERVICE LAYOUT, ATLAS  
HYBRID

SCALE: 1:3 DRAWING NUMBER: 050-0915 SIZE: D SHEET: 5 OF 10 REV: 0

## NOTES:

1. ITEMS LISTED BELOW TO BE TORQUED AS INDICATED:  
ITEMS: TORQUE:

X	15 INCH LBS.
U, H, J	45 INCH LBS.
M	78 INCH LBS.
C, F, R, G	8 FOOT LBS.
P	25 FOOT LBS.
K	73 FOOT LBS.
V	135 FOOT LBS.

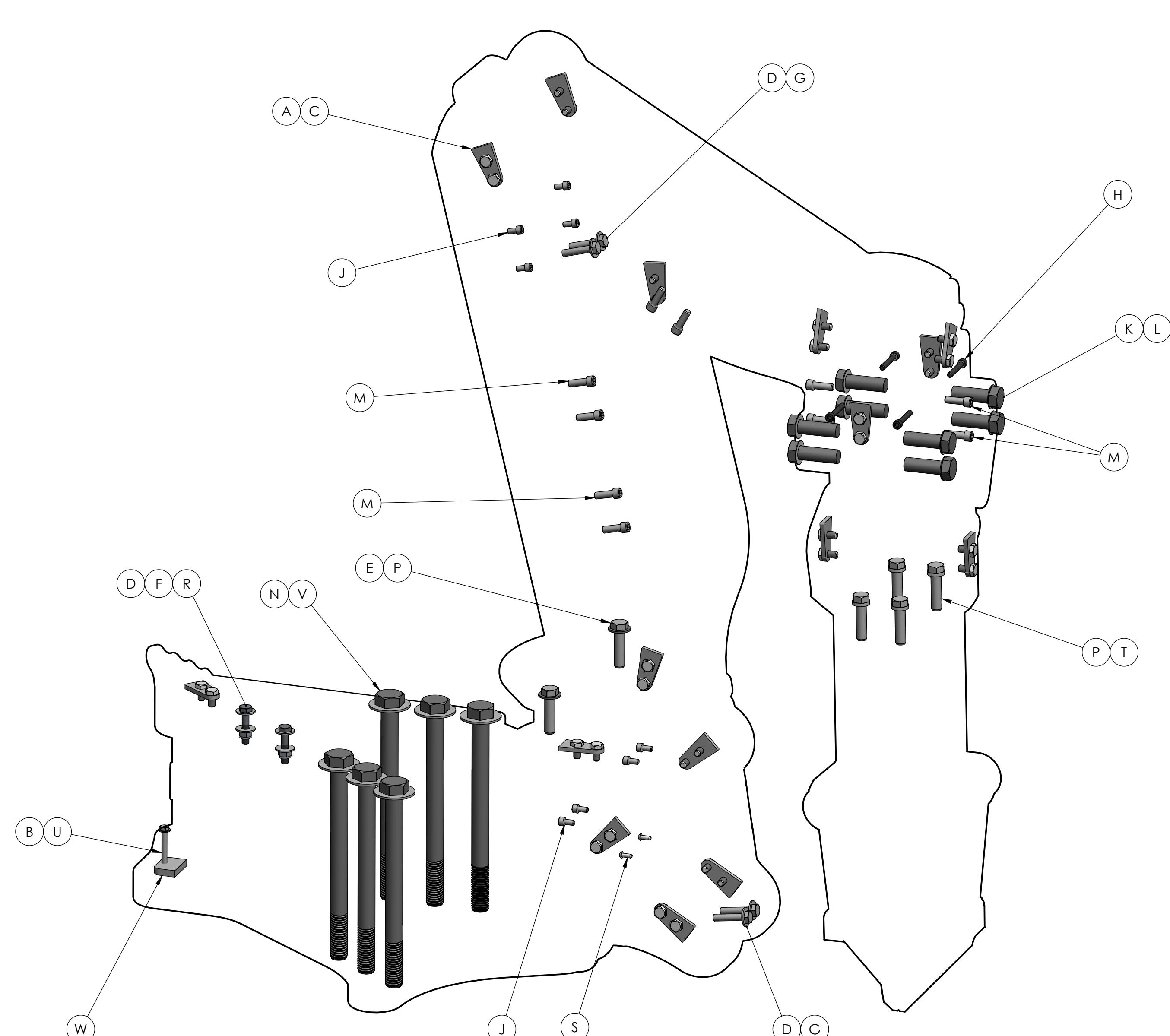


TABLE APPLIES ONLY TO ASSEMBLY ON THIS SHEET

ITEM	PART NUMBER	DESCRIPTION	QTY
A	001-4342	RETAINER, PIN	16
B	002-0024	WSHR,#10 316 SS	1
C	002-0029P	HHCS,1/4-20 X 1/2,SS,PATCH	38
D	002-0068	WSHR,FL,1/4,.316SS,.625 OD,.050	8
E	002-0163	WSHR,FLAT,3/8,SS	2
F	002-0183	NUT,1/4-20,SS,NYLNSR	2
G	002-1492P	HHCS,1/4-20 X 1.25,SS,P	4
H	002-0195P	SHCS,10-24X1-1/4,SS	4
J	002-0229P	SHCS,10-24X3/8,SS,PATCH	8
K	002-0715P	HHCS,1/2-20X1.5,.316SS,NLK	8
L	002-0811	WSHR,1/2,AN SS	8
M	002-0966P	SHCS,1/4-20 X .75,SS,PATCH	10
N	002-1240	WSHR,5/8,SS	6
P	002-1361P	HHCS,3/8-16UNC X 1.50,SS,P	6
R	002-1492	HHCS,1/4-20X1.25,SS	2
S	002-1527	SCR,DRIVE,SS,#6X3/8LONG,.120IN	2
T	002-1574	WSHR,.625ODX.385 IDX.125THK,31	4
U	002-3228P	HHCS,10-24 X 1 1/2,.316SS, P	1
V	002-4979	HHCS,5/8-11 X 7.5 L	6
W	001-10672	PIN KEEPER, 1/4" THK	1

NUTS, BOLTS, WASHERS, AND KEEPERSSCHILLING  
ROBOTICS

PROJECT UHD

TITLE SERVICE LAYOUT, ATLAS  
HYBRID

SCALE: 1:3 DRAWING NUMBER 050-0915 SIZE D SHEET 6 OF 10 REV 0

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## O-RINGS AND SEALS

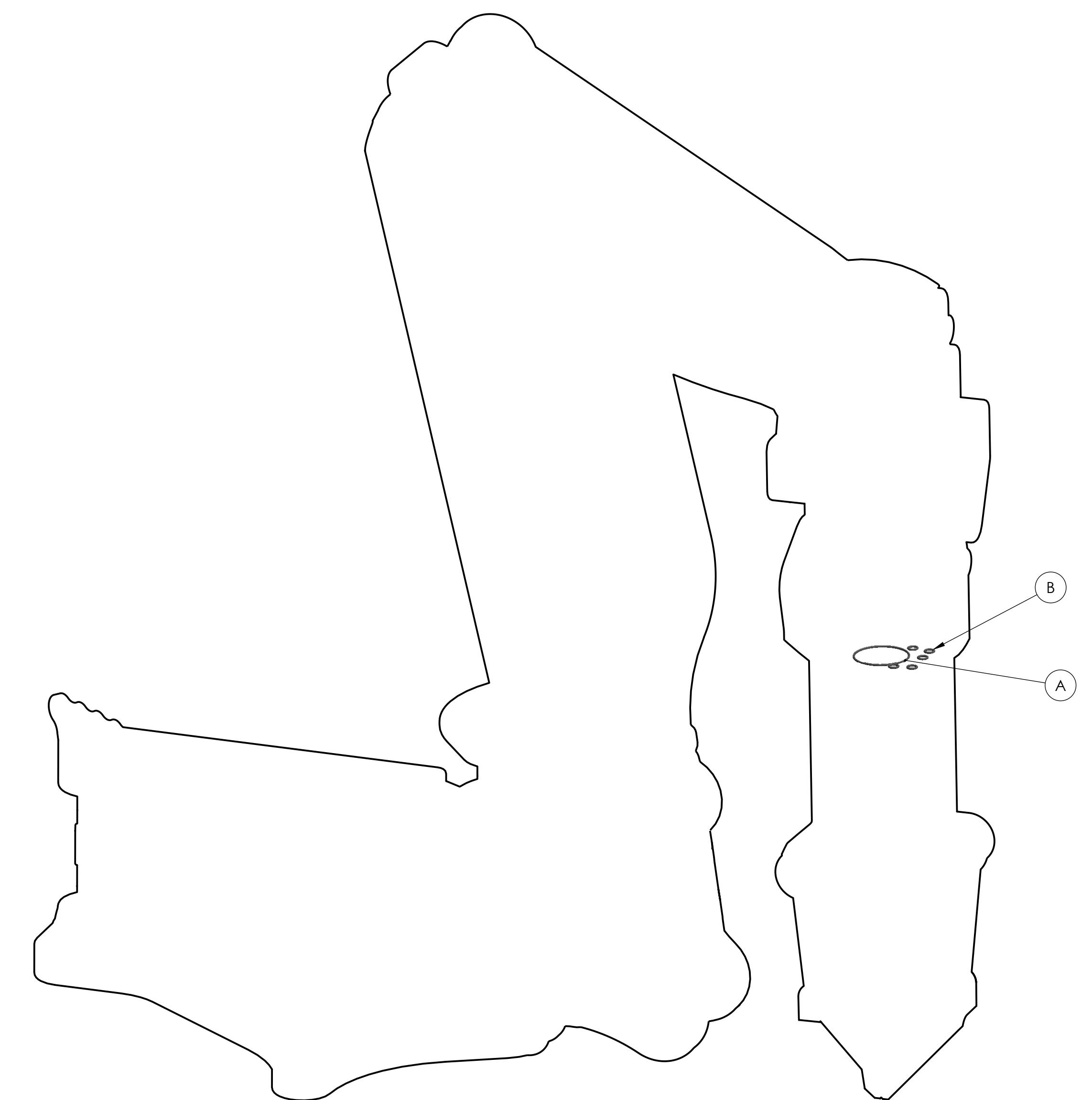


TABLE APPLIES ONLY TO ASSEMBLY ON THIS SHEET

ITEM	PART NUMBER	DESCRIPTION	QTY
A	004-0017	O-RING,2-031 BUNA 70	1
B	004-0222	O-RING,2-010 BUNA 90	5

SCHILLING  
ROBOTICS

PROJECT UHD

TITLE SERVICE LAYOUT, ATLAS  
HYBRID

SCALE: 1:3 DRAWING NUMBER: 050-0915 SIZE: D SHEET: 7 OF 10 REV: 0

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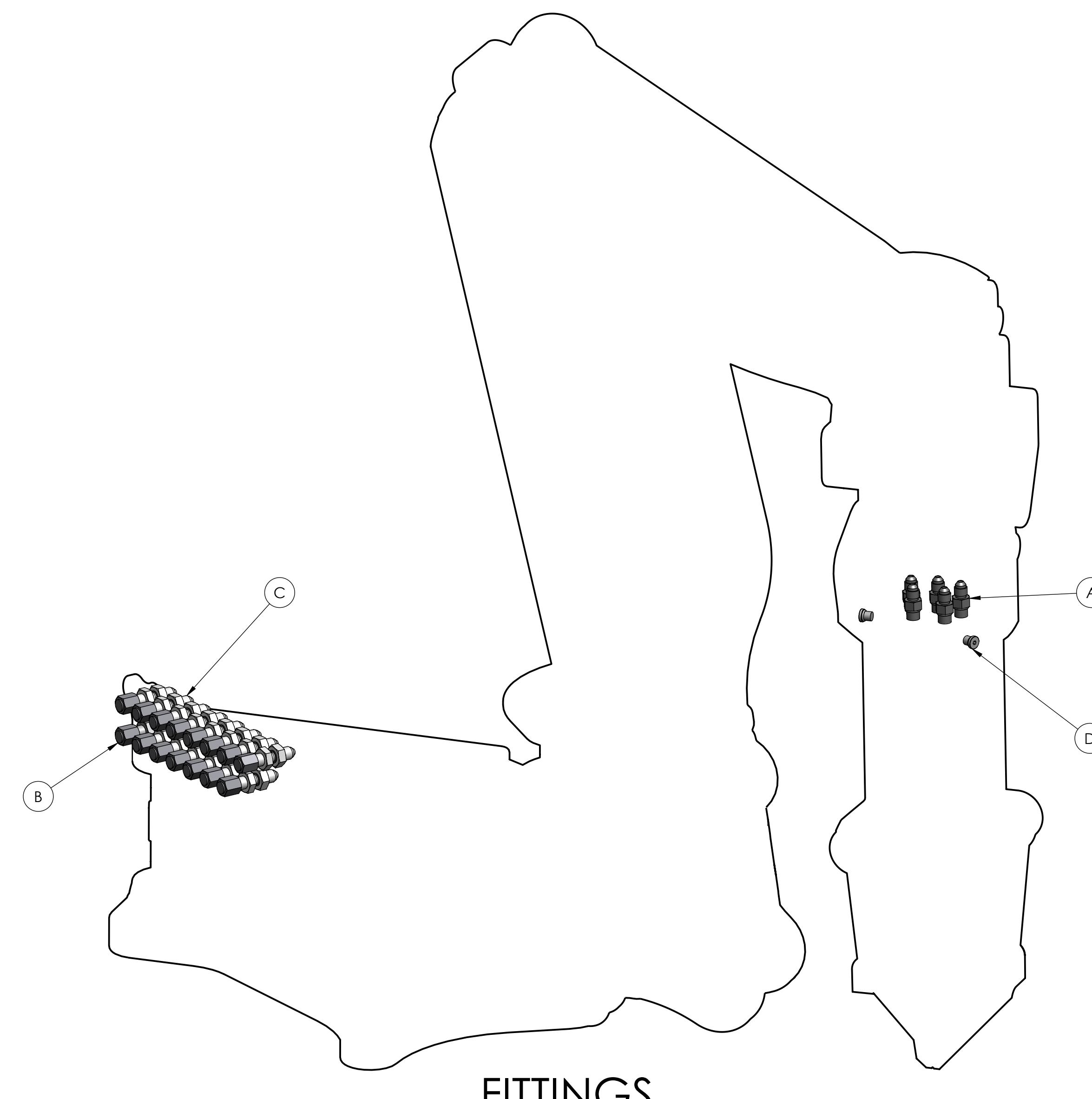


TABLE APPLIES ONLY TO ASSEMBLY ON THIS SHEET

ITEM	PART NUMBER	DESCRIPTION	QTY
A	006-0015	FTG, HYD, -4 JIC, -4 ST, 4F50X-SS	5
B	006-0027	FIT, HYD, -4, JIC, CAP-S(4FNTX-S)	15
C	006-0943	FIT, HYD, -4JIC, BHD, MALE, SS	15
D	101-4040	FTG, PLUG, -2 W/ URETHANE O-RING	2

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ROBOTICS

PROJECT UHD

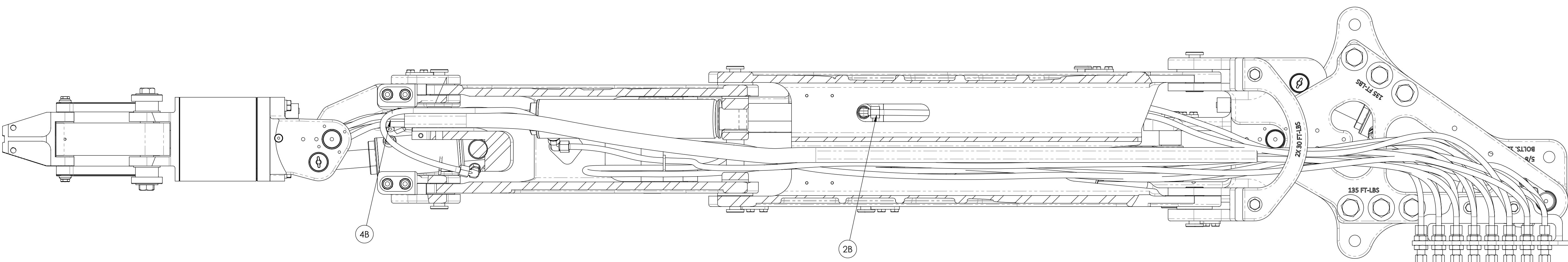
TITLE SERVICE LAYOUT, ATLAS  
HYBRID

SCALE: 1:3 DRAWING NUMBER: 050-0915 SIZE: D SHEET: 8 OF 10 REV: 0

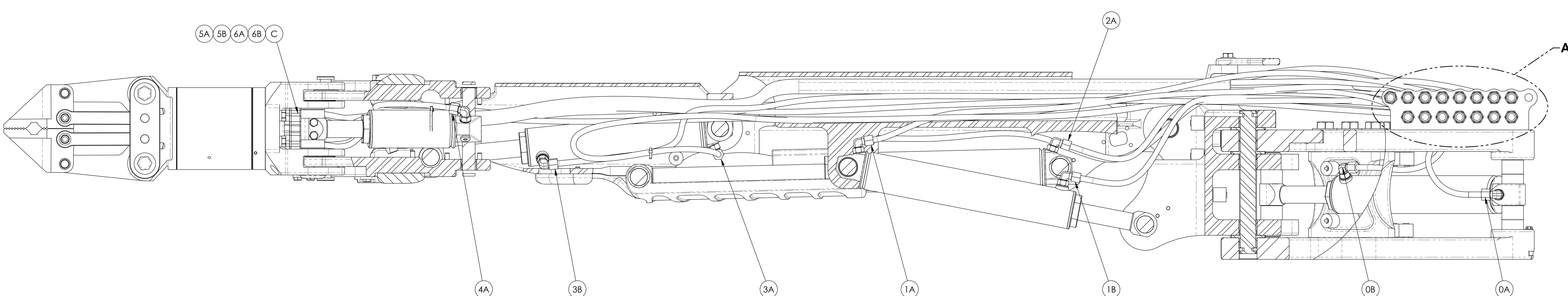
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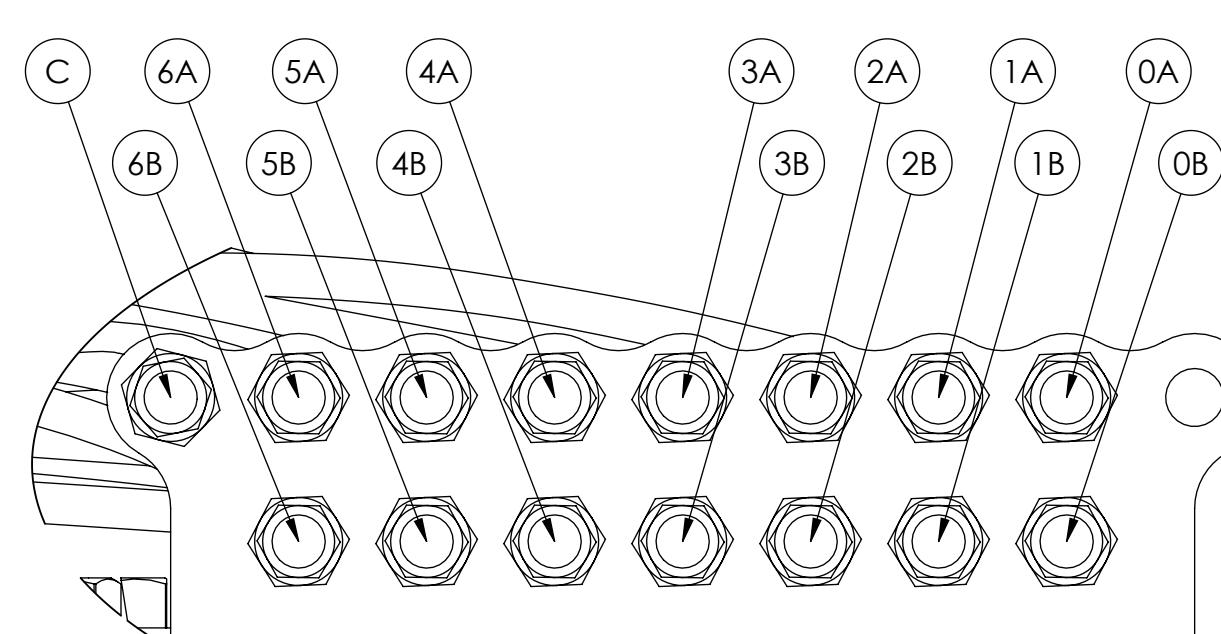
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DETAIL A  
SCALE 2 : 3

FITTING DESIGNATOR					
HOSE	PART #	DESCRIPTION	HOSE	PART #	DESCRIPTION
0A	006-2613-13	HOSE,-4 JIC,.56-DH,15.50 LG	0B	006-2613-14	HOSE,-4 JIC,.56-DH,17.00 LG
1A	006-2613-11	HOSE,-4 JIC,.56-DH,42.25 LG	1B	006-2613-12	HOSE,-4 JIC,.56-DH,32.00 LG
2A	006-2613-9	HOSE,-4 JIC,.56-DH,28.50 LG	2B	006-2613-10	HOSE,-4 JIC,.56-DH,41.75 LG
3A	006-2613-7	HOSE,-4 JIC,.56-DH,75.75 LG	3B	006-2613-8	HOSE,-4 JIC,.56-DH,62.00 LG
4A	006-2613-5	HOSE,-4 JIC,.56-DH,79.25 LG	4B	006-2613-6	HOSE,-4 JIC,.56-DH,69.25 LG
5A	006-2613-3	HOSE,-4 JIC,.56-DH,74.50 LG	5B	006-2613-4	HOSE,-4 JIC,.56-DH,73.50 LG
6A	006-2613-1	HOSE,-4 JIC,.56-DH,73.75 LG	6B	006-2613-2	HOSE,-4 JIC,.56-DH,72.75 LG
C	006-2613-15	HOSE,-4 JIC,.56-DH,72.50 LG			

## HYDRAULIC HOSE ROUTING SHEET SOME ITEMS REMOVED FOR CLARITY

## NOTES:

1. USE SHEET 11 FOR RIGHT HAND CONFIGURATION OF HYDRAULIC CONNECTIONS, ROUTE ALL HYDRAULIC HOSES ON LEFT SIDE OF ARM, AND ROUTE ITEM Y ON RIGHT SIDE OF ARM.

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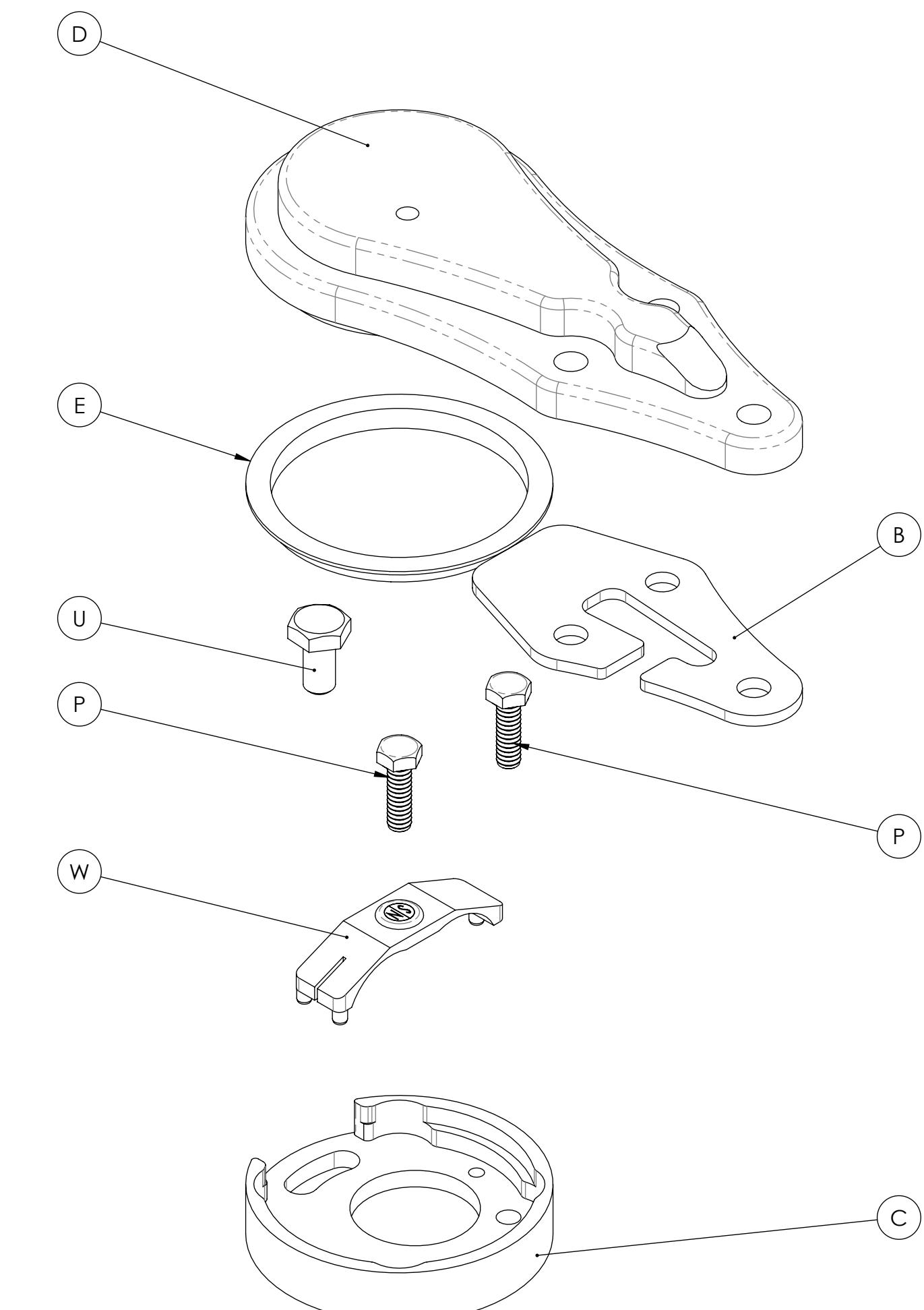
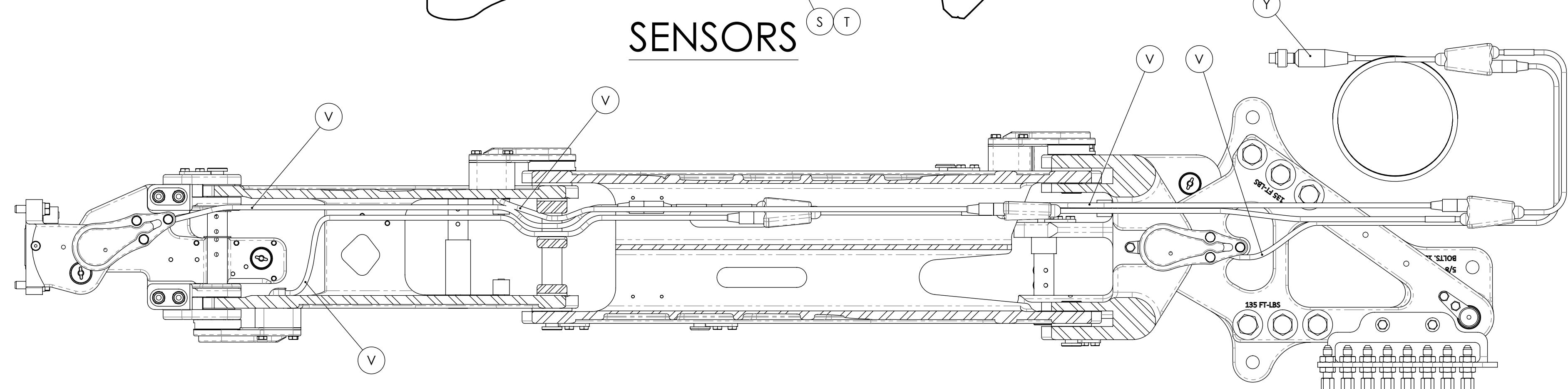


TABLE APPLIES ONLY TO ASSEMBLY ON THIS SHEET

ITEM	PART NUMBER	DESCRIPTION	QTY
A	001-10956	KEEPER, PIN, SENSOR, AZIMUTH, ATLAS	1
B	001-10957	SPACER, STANDOFF, SENSOR, ATLAS	5
C	001-10959	KEEPER, PIN, SENSOR, ATLAS	5
D	001-10960	COVER, SENSOR, ATLAS	5
E	001-10961	BRG, COVER, SENSOR, ATLAS	5
F	001-10962	STANDOFF, SENSOR, ELBOW, ATLAS	1
G	001-10963	STANDOFF, SENSOR, YAW, ATLAS	1
H	001-10964	STANDOFF, SENSOR, SHOULDER, ATLAS	1
J	001-10965	STANDOFF, SENSOR, AZIMUTH, ATLAS	1
K	001-10966	STANDOFF, SENSOR, PITCH, ATLAS	1
L	002-0257P	HHCS, 1/4-20 X .75, 316 SS, NLK	4
M	002-0134P	HHCS, 1/4-20 X 1, SS, NYLOCK	1
N	002-1492P	HHCS, 1/4-20 X 1.25, SS, NLK	3
P	002-3216P	HHCS, 10-24 X 5/8 316SS, NLK	10
R	002-1825	HHCS, 1/4-20 X 2.0, 316SS, NLK	3
S	002-3312	HHCS, 1/4-20 X 2.25, NLK	7
T	002-0790	WSHR, 1/4IDX-.50OD, SS, .032THK	17
U	002-0029P	HHCS, 1/4-20 X 1/2, SS, PATCH	5
V	101-7352	SENSOR ASSEMBLY, ATLAS HYBRID	5
W	101-7370	MAGNET ASSEMBLY, ATLAS HYBRID	5
Y	005-6437	CABLE, OCTOPUS, ATLAS HYBRID	1

**SCHILLING  
ROBOTICS**

 PROJECT UHD  
 TITLE SERVICE LAYOUT, ATLAS  
 HYBRID

SCALE: 1:3 DRAWING NUMBER: 050-0915 SIZE: D SHEET: 10 OF 10 REV: 0