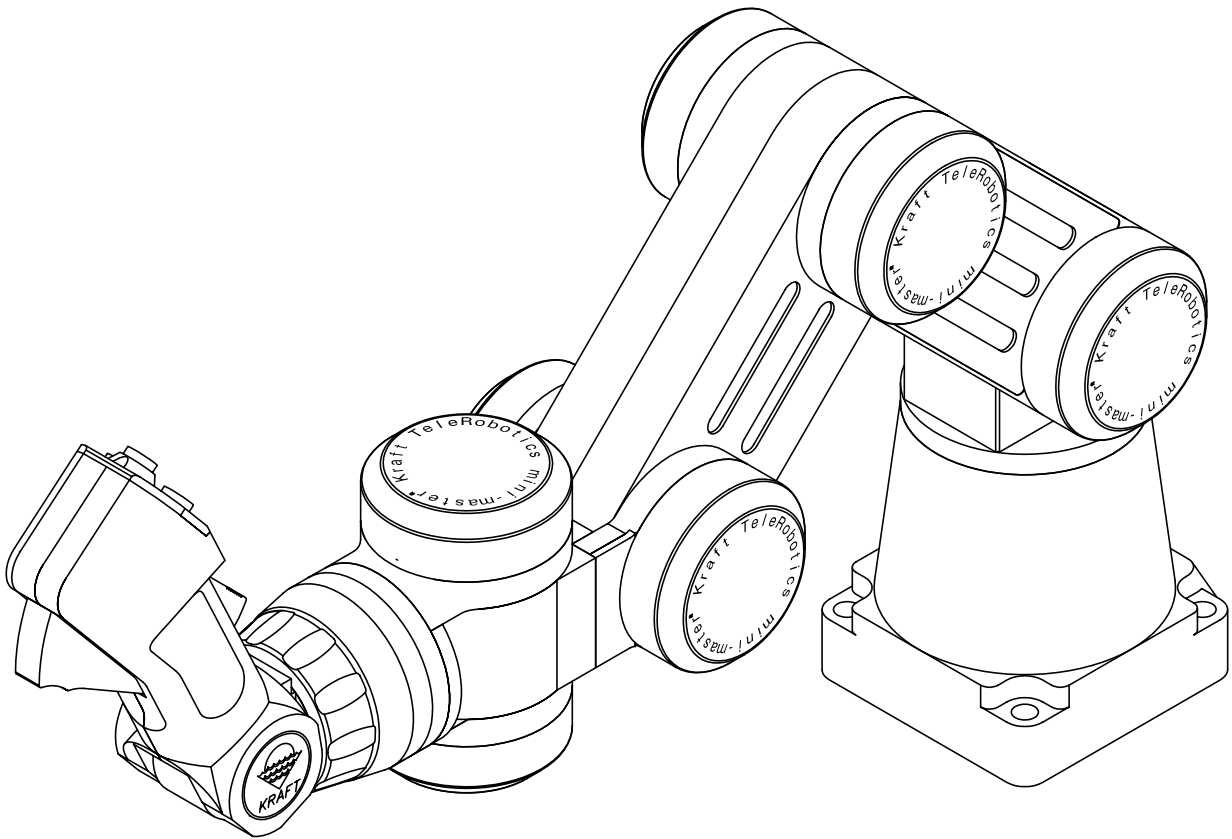

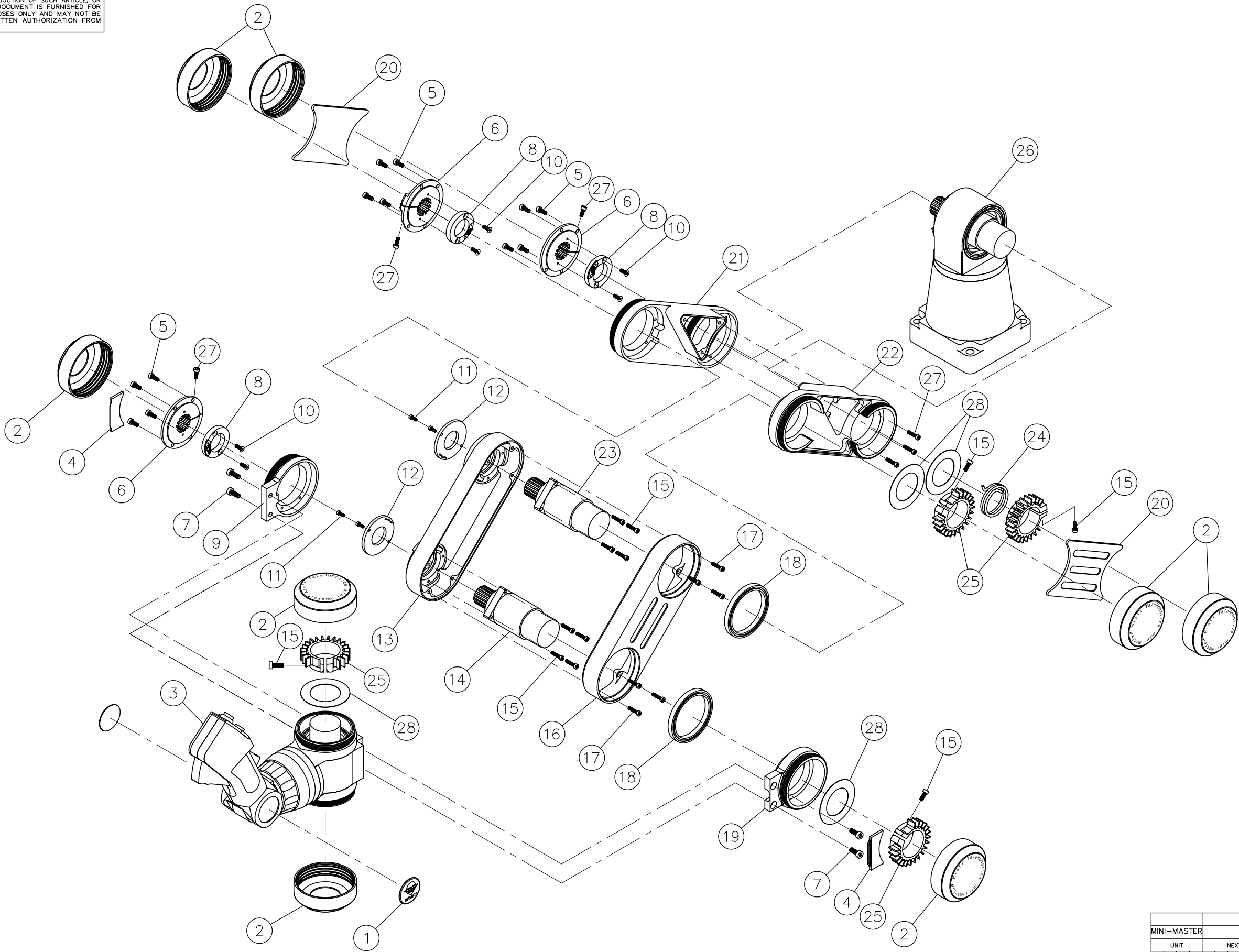


THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.




ITEM		PART NO.		DESCRIPTION		QTY
MINI-MASTER				 KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214		
UNIT		NEXT ASSY		TITLE		
				FORCE FEEDBACK MINI-MASTER		
				DWG. NO. 620-0048-00		SIZE INCHES
				TOLERANCES xx ±.01 ANGLES ±1/2° xxx ±.005		FINISH INCHES
				DIN RLC DATE 02/01/04		SCALE NTS
				DATE		SHT 1 of 1

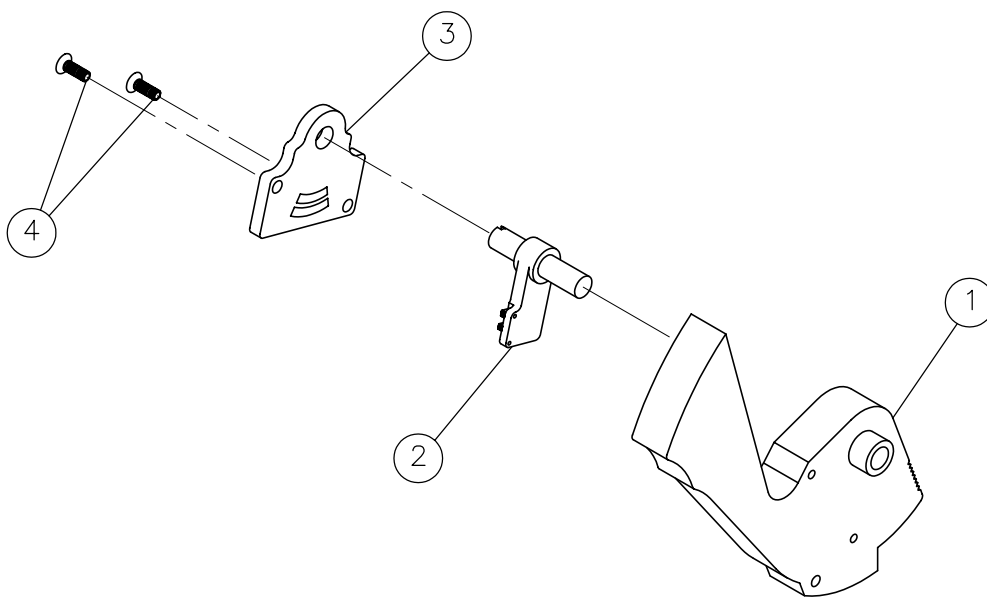
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.




028	052-5019-20	WASHER	4
027	050-0280-06	SCREW, 4-40 x 3/8 SHC	6
026	600-0257-00	AZIMUTH/SHOULDER ASS'Y	1
025	066-0821-01	HEATSINK	4
024	053-4003-00	SPRING, TORSION; LEFT HAND	1
023	600-0261-00	ACTUATOR	1
022	066-0801-01	UPPER ARM; LEFT HALF	1
021	066-0800-01	UPPER ARM; RIGHT HALF	1
020	066-0802-01	COVER, UPPER ARM	2
019	066-0797-01	BRACKET, PITCH/YAW LEFT	1
018	093-5019-00	BEARING, BALL	2
017	050-0280-08	SCREW, 4-40 x 1/2 SHC	6
016	066-0799-01	FOREARM; LEFT HALF	1
015	050-0276-06	SCREW, 2-56 x 3/8 SHC	12
014	600-0260-00	ACTUATOR	1
013	066-0798-01	FOREARM; RIGHT HALF	1
012	529-0144-00	ELEMENT, POTENTIOMETER	2
011	050-0273-04	SCREW, 0-80 x 1/4 SHC	4
010	050-0429-04	SCREW, 0-80 x 1/4 FHP	6
009	066-0796-01	BRACKET, PITCH/YAW RIGHT	1
008	529-0145-00	WIPER, POTENTIOMETER	3
007	050-0280-05	SCREW, 4-40 x 5/16 SHC	4
006	068-0500-01	COUPLING	3
005	050-0276-04	SCREW, 2-56 x 1/4 SHC	12
004	066-0803-01	COVER	2
003	600-0256-00	GRIP/ROLL/YAW ASS'Y	1
002	068-0501-02	CAP	8
001	014-2094-00	LOGO, KRAFT ENCAPSULATED	2
ITEM	PART NO.	DESCRIPTION	QTY

MINI-MASTER				DASH NO.	 KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214	
UNIT	NEXT ASSY					
				HED BY	TITLE FINAL ASSEMBLY FORCE FEEDBACK MINI-MASTER	
				DATE	DWG. NO. 700-9075-00	SIZE MATERIAL
				CAD	TOLERANCES	
				ECO NO.	xx ±.01 INCHES	FINISH
				NO.	ANGLES ±1/2" .xxx ±.005 INCHES	
				REV.	DRN RLC	SCALE
				DATE	02/01/04	DATE
						NTS
						SHT 1 OF 1


THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



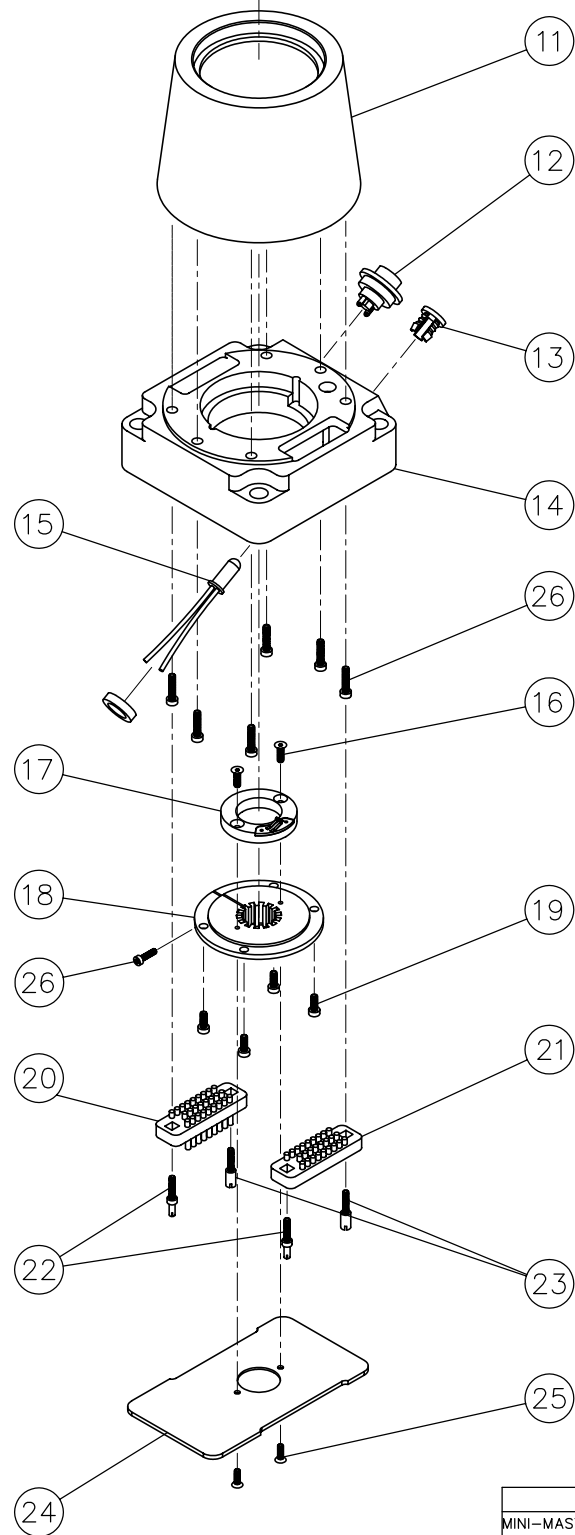
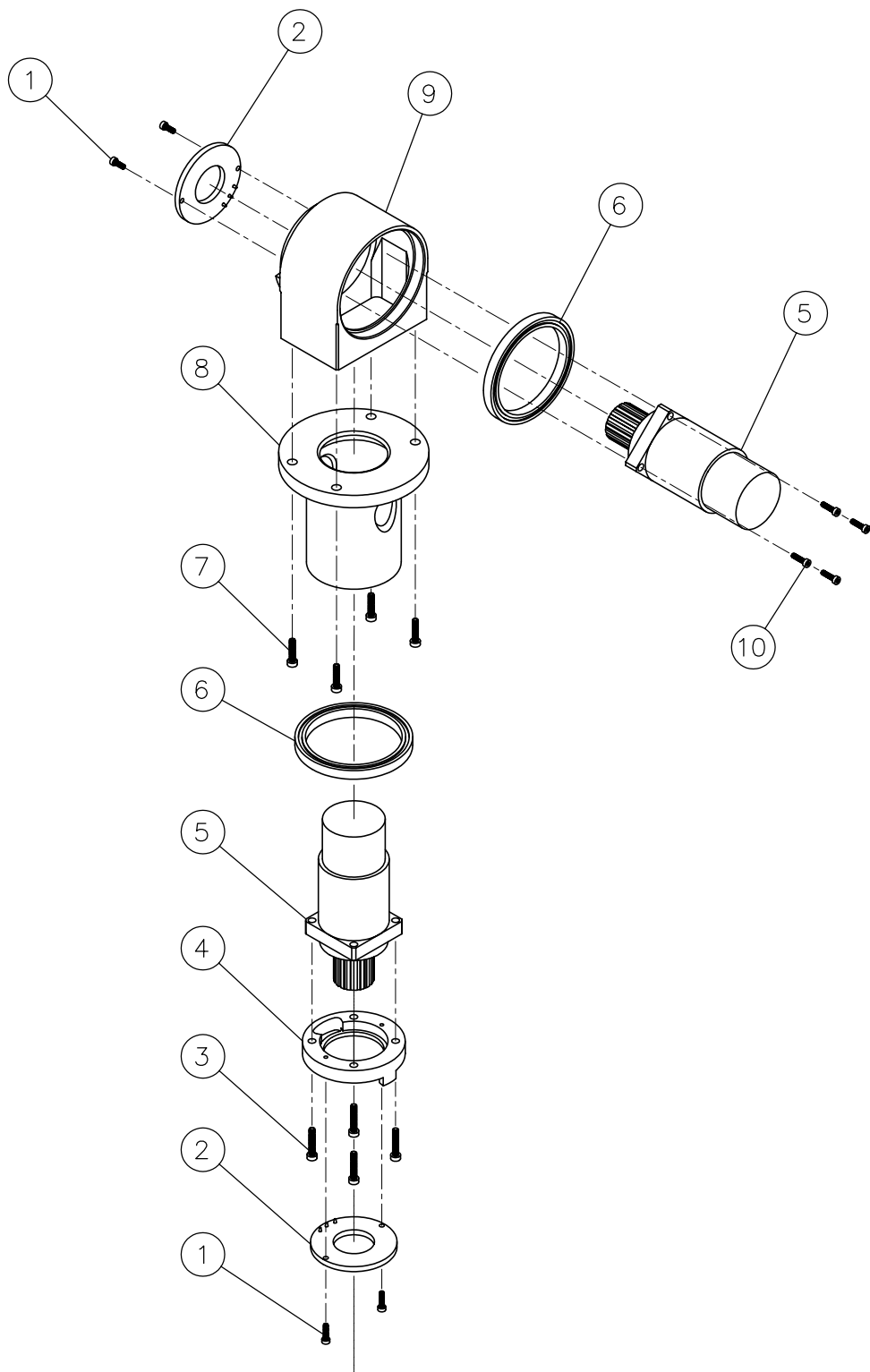
004	050-0429-03	SCREW, 0-80 x 3/16 FHP	2
003	529-0146-00	ELEMENT, POTENTIOMETER	1
002	529-0148-00	WIPER, TRIGGER POT	1
001	066-0819-01	TRIGGER	1
ITEM	PART NO.	DESCRIPTION	QTY

MINI-MASTER		600-0256-00		 <b>KRAFT TELEROBOTICS INC.</b> OVERLAND PARK, KANSAS 66214	
UNIT		NEXT ASSY			
				<b>TITLE</b> TRIGGER ASSEMBLY <b>FORCE FEEDBACK MINI-MASTER</b>	
				<b>DWG. NO.</b> 600-0259-00 <b>SIZE</b> <b>MATERIAL</b>	
				<b>TOLERANCES</b> <b>FINISH</b> XX ±.01 INCHES ANGLES ±1/2" .0005 INCHES	
<b>REV.</b> 0 <b>DIN</b> RLC <b>CHK</b> <b>MECH</b> <b>DATE</b> 02/01/04 <b>DATE</b> <b>DATE</b>				<b>SCALE</b> <b>SHT</b> 1 <b>NTS</b> <b>OF</b> 1	




MINI-MASTER		600-0256-00		DASH NO.	 KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214	
UNIT		NEXT ASSY				
				HED BY	TITLE ROCKER POT ASSEMBLY FORCE FEEDBACK MINI-MASTER	
5/01		DATE		DWG. NO.	SIZE	MATERIAL
				600-0258-00		
CAD		ECO NO.		TOLERANCES		FINISH
				.XX ±.01 INCHES .XXX ±.005 INCHES		
0		REV.		DIM RLC DATE 02/01/04	CHK MECH DATE	SCALE NTS
						SHY 1 OF 1

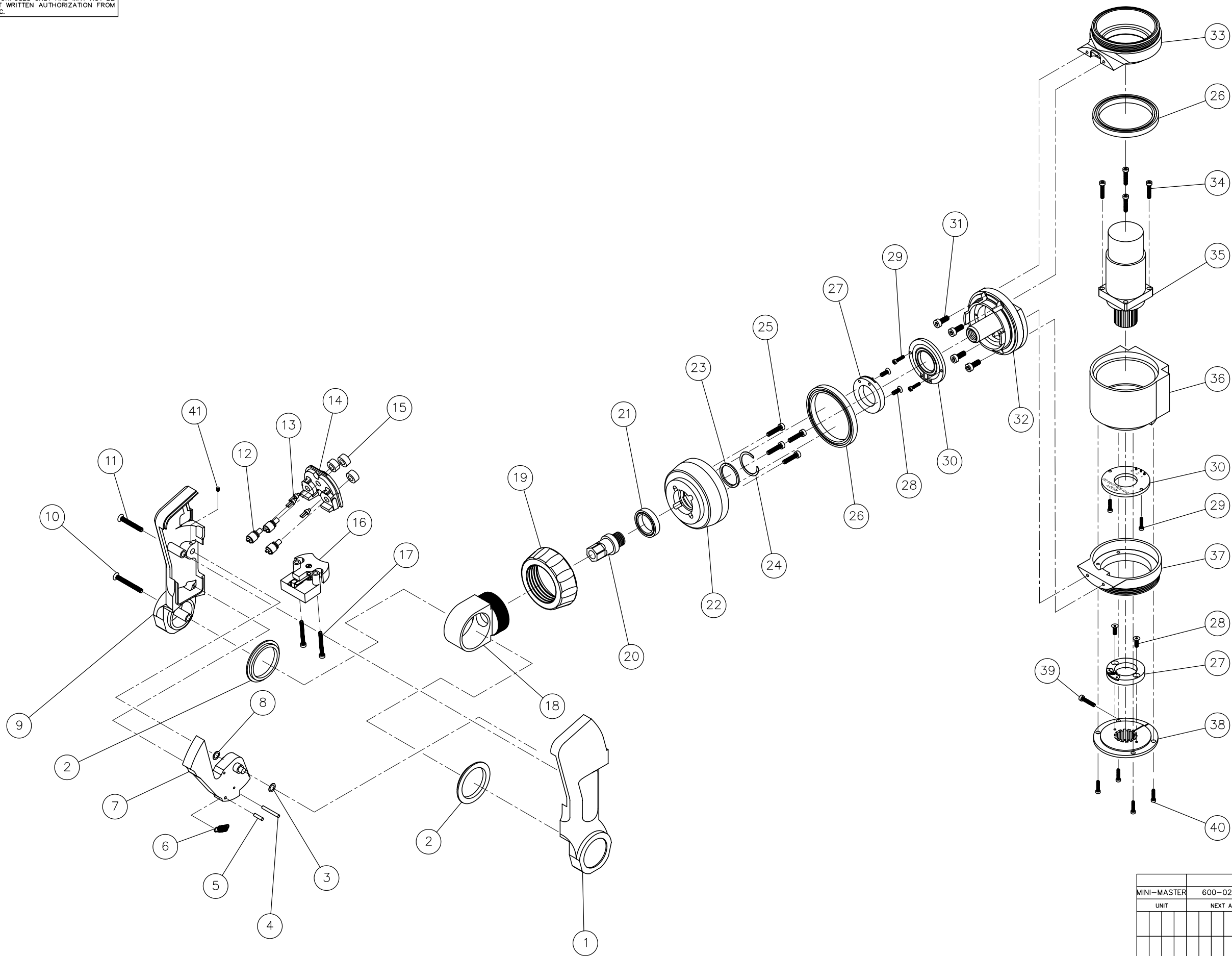
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



026	050-0280-06	SCREW, 4-40 x 3/8 SHC	7
025	050-0429-03	SCREW, 0-80 x 3/16 FHP	2
024	014-2093-00	PLATE, SERIAL NO.	1
023	575-0033-00	GUIDE, POLARIZING; F	2
022	575-0032-00	GUIDE, POLARIZING; M	2
021	327-3018-26	CONNECTOR, HD F	1
020	327-3017-26	CONNECTOR, HD M	1
019	050-0276-03	SCREW, 2-56 x 3/16 SHC	4
018	068-0500-01	COUPLING	1
017	529-0145-00	WIPER, POTENTIOMETER	1
016	050-0429-04	SCREW, 0-80 x 1/4 FHP	2
015	551-0005-00	LED, BLUE	1
014	066-0812-02	BASE	1
013	575-0031-00	BEZEL, LED	1
012	574-0002-00	SWITCH, PUSHBUTTON	1
011	068-0514-01	HOUSING, AZIMUTH ACTUATOR	1
010	050-0276-06	SCREW, 2-56 x 3/8 SHC	4
009	066-0813-01	HOUSING, SHOULDER	1
008	068-0515-01	MOUNT, AZIMUTH ACTUATOR	1
007	050-0280-05	SCREW, 4-40 x 5/16 SHC	4
006	093-5019-00	BALL BEARING	2
005	600-0261-00	ACTUATOR	2
004	068-0499-01	MOUNT, MOTOR/POT	1
003	050-0276-08	SCREW, 2/56 x 1/2 SHC	4
002	529-0144-00	ELEMENT, POTENTIOMETER	2
001	050-0273-04	SCREW, 0-80 x 1/4 SHC	4
ITEM	PART NO.	DESCRIPTION	QTY

MINI-MASTER		700-9075-00										DASH NO.		 KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214	
UNIT		NEXT ASSY										HED BY		TITLE	
												2/01		BASE/SHOULDER ASSEMBLY FORCE FEEDBACK MINI-MASTER	
												DATE		DWG. NO. 600-0257-00 SIZE MATERIAL	
												CAD		FINISH	
												ECO NO.		TOLERANCES .XX ±.01 INCHES ANGLES ±1/2° .XXX ±.005 INCHES	
												1		REV. RLC DATE 02/01/04 CHK MECH DATE DATE SCALE NTS SHIT OF 1	

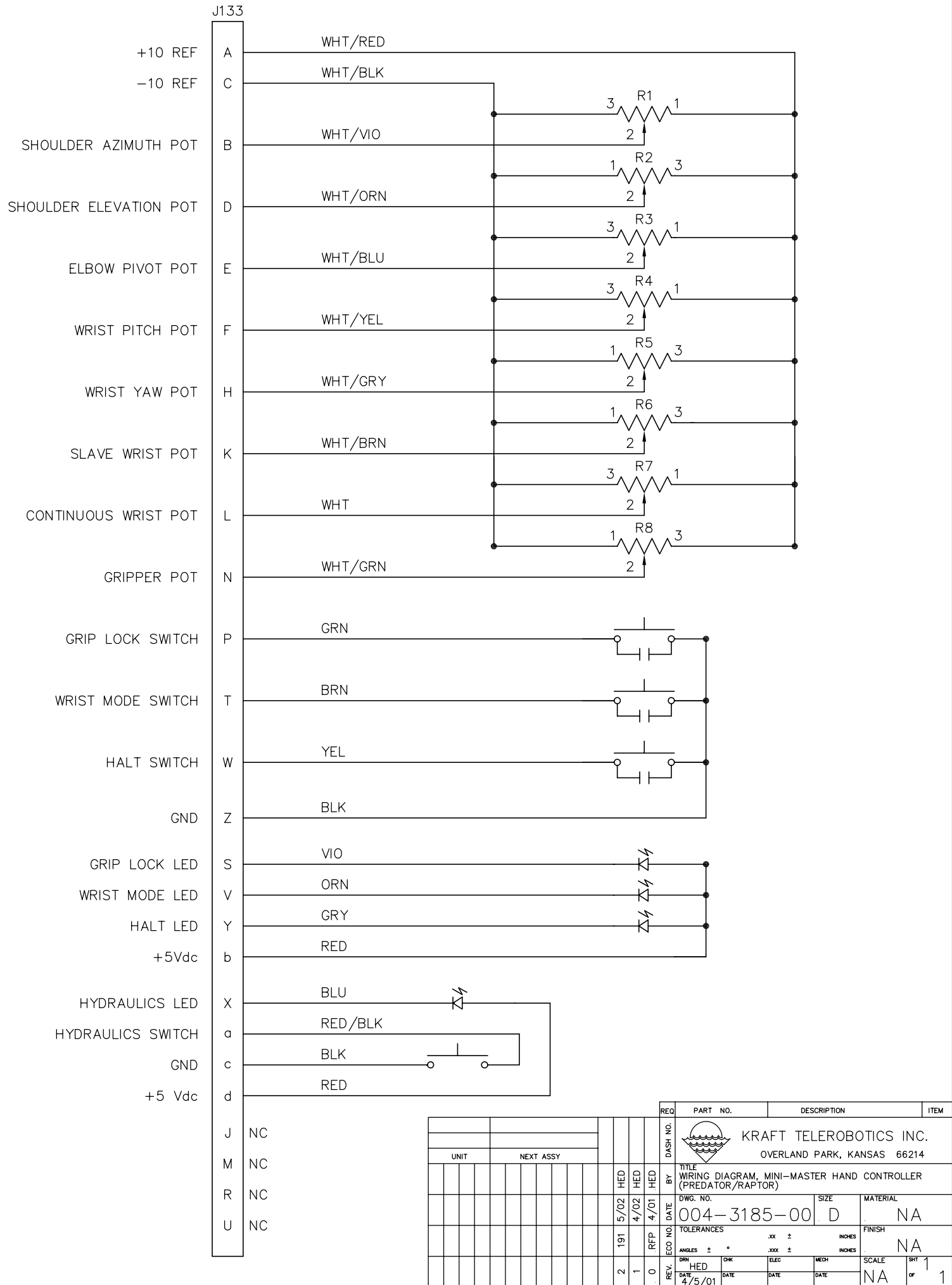
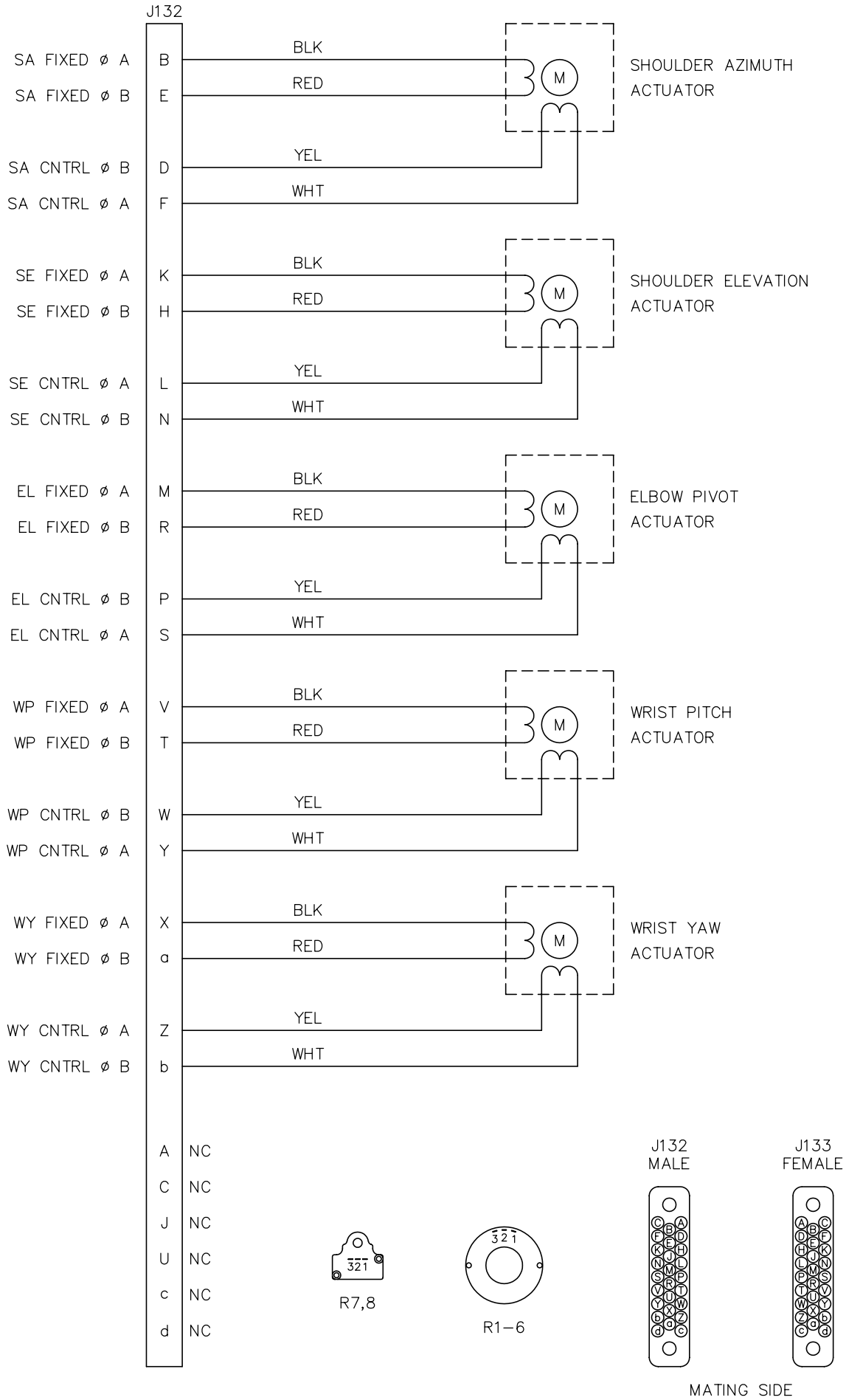
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT Telerobotics, Inc. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT Telerobotics, Inc.



041	050-0120-02	SCREW, 2-56 x 1/8 SET	1
040	050-0276-04	SCREW, 2-56 x 1/4 SHC	4
039	050-0280-06	SCREW, 4-40 x 3/8 SHC	1
038	068-0500-01	COUPLING	1
037	066-0794-01	BRACKET, YAW/ROLL (BOTTOM)	1
036	066-0795-01	HOUSING, WRIST YAW	1
035	600-0260-00	ACTUATOR	1
034	050-0276-06	SCREW, 2-56 x 3/8 SHC	4
033	066-0793-01	BRACKET, YAW/ROLL (TOP)	1
032	068-0516-01	BASE, WRIST ROLL	1
031	050-0280-04	SCREW, 4-40 x 1/4 SHC	4
030	529-0144-00	ELEMENT, POTENTIOMETER	2
029	050-0273-04	SCREW, 0-80 x 1/4 SHC	4
028	050-0429-04	SCREW, 0-80 x 1/4 FHP	4
027	529-0145-00	WIPER, POTENTIOMETER	2
026	093-5019-00	BALL BEARING	2
025	050-0280-07	SCREW, 4-40 x 7/16 SHC	4
024	058-0287-08	RETAINING RING	1
023	100-0180-08	SEAL	1
022	068-0517-01	HOUSING, WRIST ROLL	1
021	093-5020-00	BALL BEARING	1
020	068-0519-01	SCREW, WR HOUSING RETAINING	1
019	068-0518-01	NUT, SWIVEL LOCK	1
018	066-0814-01	SWIVEL, GRIP	1
017	051-0121-00	SCREW, 2-56 x 5/8 SHC	2
016	600-0258-00	ROCKER POTENTIOMETER ASS'Y	1
015	574-0019-00	CAP, SWITCH (BLACK)	3
014	066-0820-00	SWITCHPLATE	1
013	551-0003-01	LED (GREEN)	3
012	574-0018-00	SWITCH, PUSHBUTTON	3
011	050-0436-10	SCREW, 4-40 x 5/8 FHP	1
010	050-0436-12	SCREW, 4-40 x 3/4 FHP	1
009	066-0815-00	GRIP, RIGHT HALF	1
008	052-5018-40	WASHER	1
007	600-0259-00	TRIGGER POTENTIOMETER ASS'Y	1
006	053-0003-00	SPRING, TRIGGER	1
005	057-1009-04	PIN, SPRING 1/16 x 1/4 (SS)	1
004	057-1008-08	PIN, DOWEL 1/16 x 1/2 (SS)	1
003	052-5017-40	WASHER	1
002	068-0520-00	BEARING	1
001	066-0816-00	GRIP, LEFT HALF	1
ITEM	PART NO.	DESCRIPTION	QTY

[illegible]

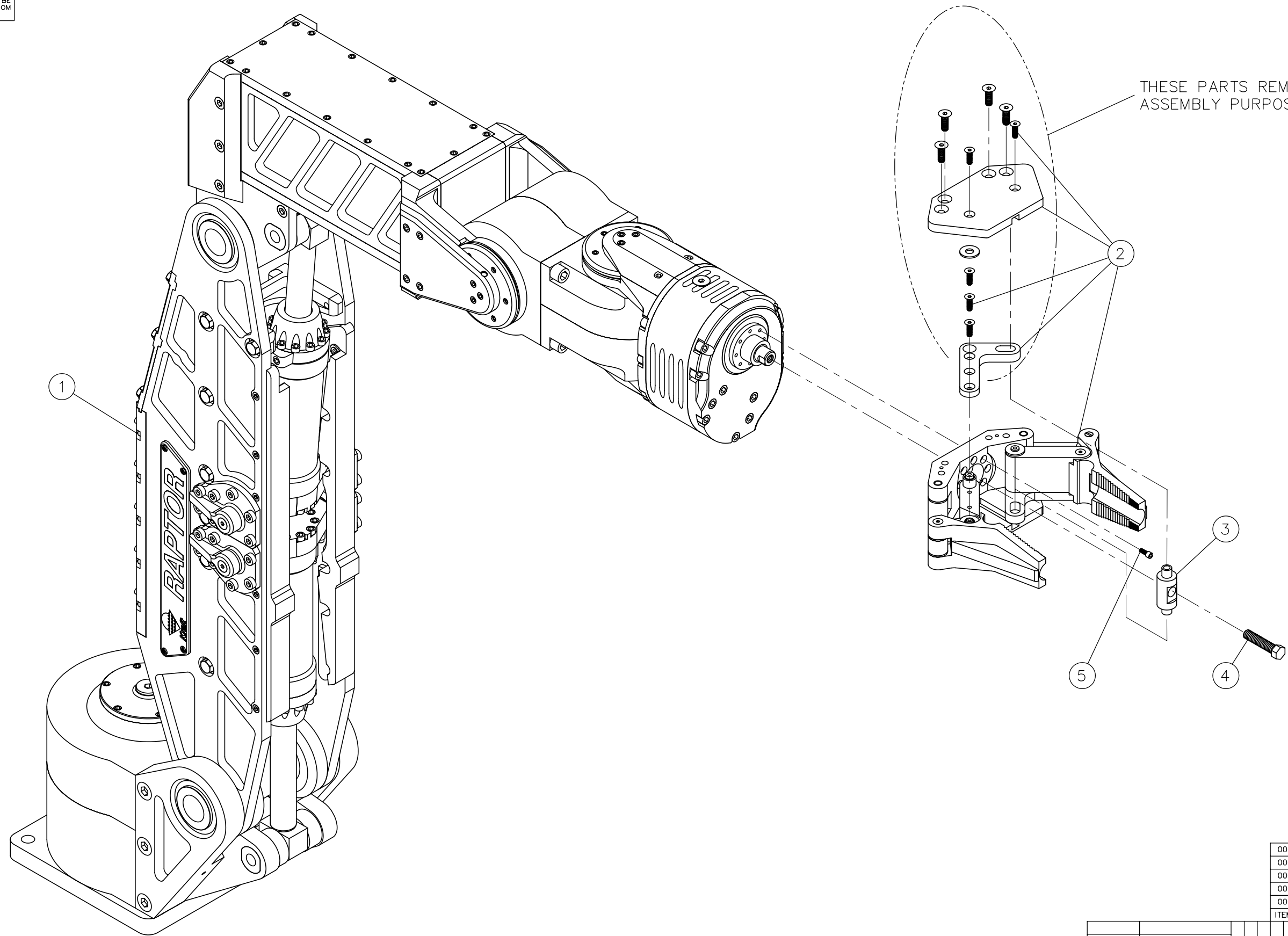
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



REQ		PART NO.		DESCRIPTION		ITEM
DASH NO.		KRAFT TELEROBOTICS INC.		OVERLAND PARK, KANSAS		66214
BY		TITLE		WIRING DIAGRAM, MINI-MASTER HAND CONTROLLER		(PREDATOR/RAPTOR)
DATE		DWG. NO.		SIZE	MATERIAL	
4/01		004-3185-00		D	NA	
ECO NO.		TOLERANCES		XX ±	FINISH	
191		RFP		XX ±	INCHES	
2		1		XX ±	INCHES	
DATE		DATE		DATE	SCALE	
4/5/01		4/5/01		4/5/01	NA	
REV		DATE		DATE	SHT	
HED		HED		DATE	1	
4/5/01		4/5/01		4/5/01	of	
1		1		1	1	



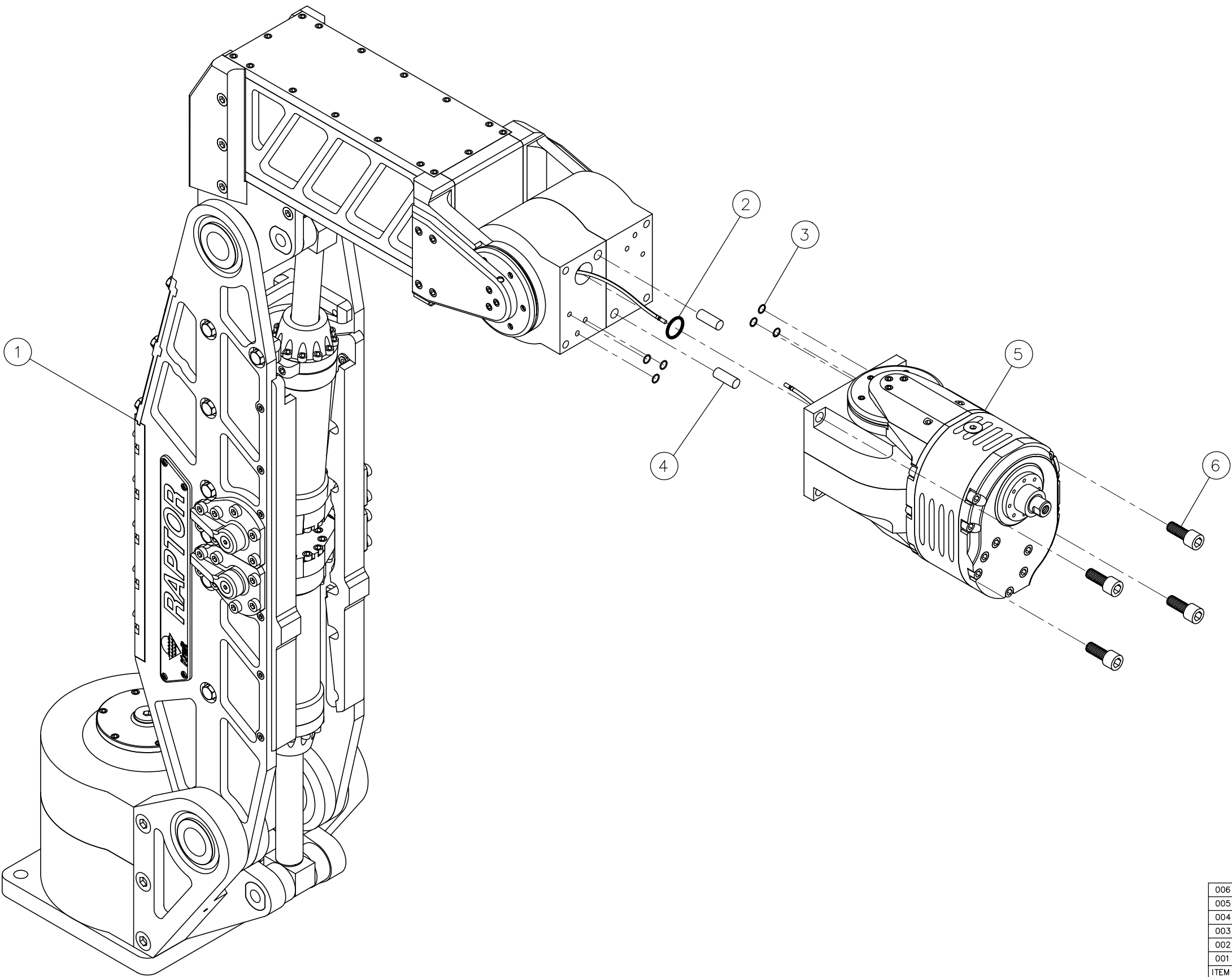
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TLERBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TLERBOTICS, INC.



005	050-0288-10	SCREW, SHC 10-24 x 5/8	4
004	050-0338-24	SCREW, HHC 7/16-20 x 1 1/2	1
003	068-0537-00	SWIVEL	1
002	600-0133-02	GRIPPER ASS'Y	1
001	600-0250-01	ARM/WRIST ASS'Y	1
ITEM	PART NO.	DESCRIPTION	QTY

[illegible]

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TLERBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TLERBOTICS, INC.



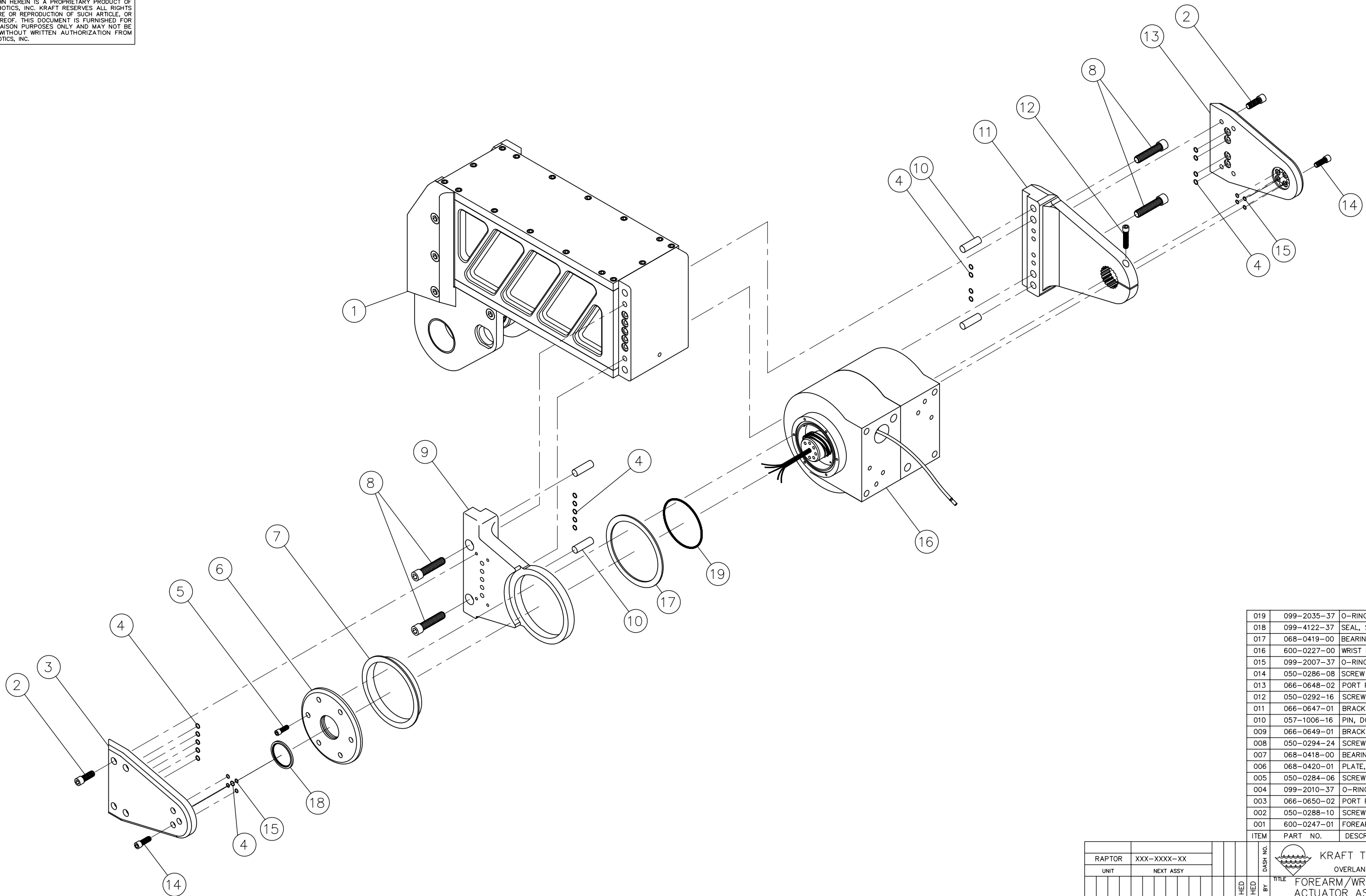
006	050-0296-16	SCREW, SHC 3/8-16 x 1	4
005	600-0238-00	WRIST YAW/ROLL ACT. ASS'Y	1
004	057-1005-12	PIN, DOWELL 3/8 x 3/4 (SS)	2
003	099-2011-37	O-RING	6
002	099-2023-37	O-RING	1
001	600-0249-01	UPPER ARM/FOREARM ASS'Y	1
ITEM	PART NO.	DESCRIPTION	QTY

[illegible]






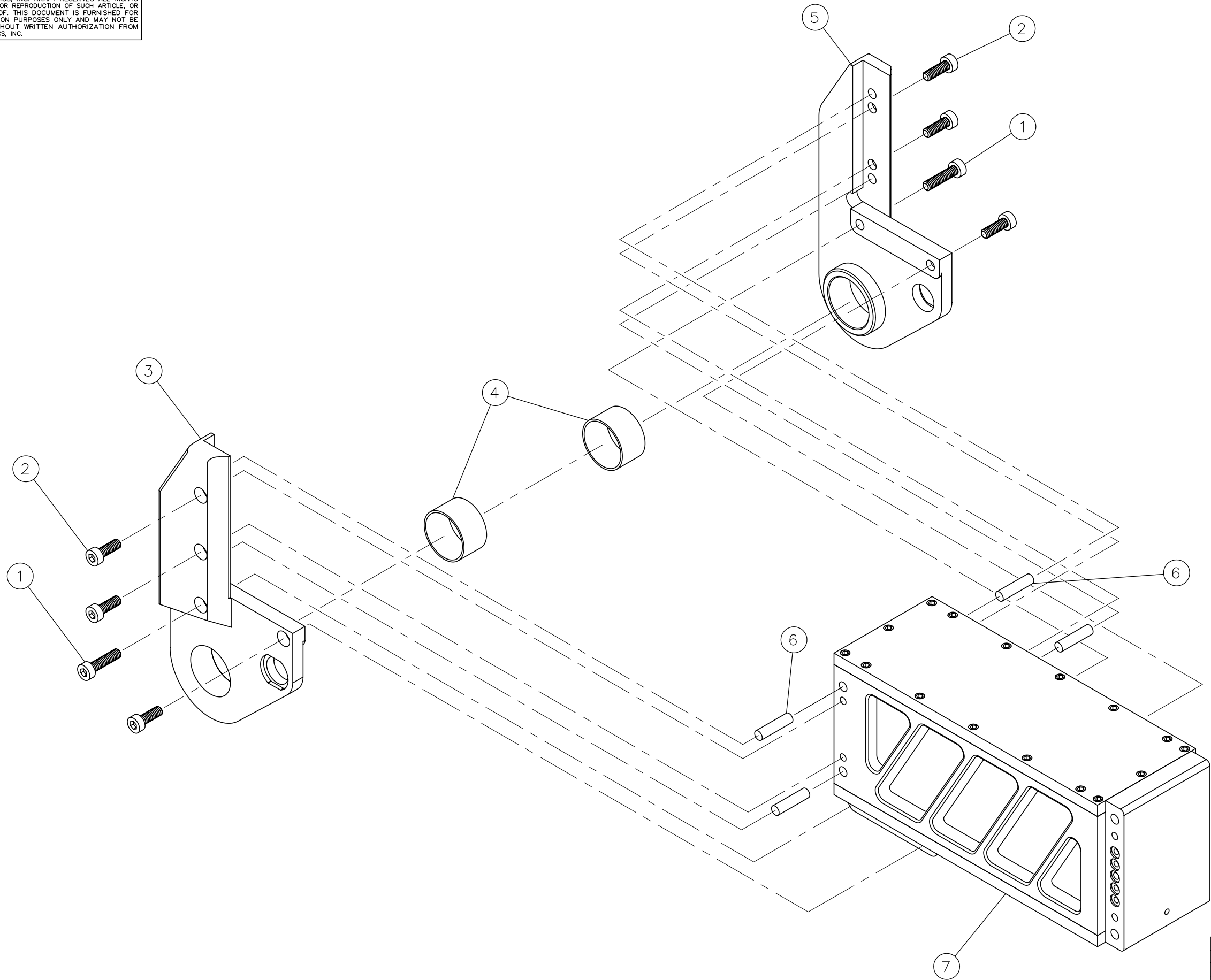
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



019	099-2035-37	O-RING	1
018	099-4122-37	SEAL, SHAFT	1
017	068-0419-00	BEARING	1
016	600-0227-00	WRIST PITCH ACT. ASS'Y	1
015	099-2007-37	O-RING	8
014	050-0286-08	SCREW SHC 8-32 x 1/2	6
013	066-0648-02	POT PLATE, WP SHAFT SIDE	1
012	050-0292-16	SCREW, SHC 1/4-20 x 1	1
011	066-0647-01	BRACKET, WP SHAFT SIDE	1
010	057-1006-16	PIN, DOWEL 5/16 x 1 (SS)	4
009	066-0649-01	BRACKET, WP POT SIDE	1
008	050-0294-24	SCREW, SHC 5/16-18 x 1 1/2	4
007	068-0418-00	BEARING	1
006	068-0420-01	PLATE, SEAL	1
005	050-0284-06	SCREW, SHC 6-32 x 3/8	6
004	099-2010-37	O-RING	19
003	066-0650-02	POT PLATE, WP POT SIDE	1
002	050-0288-10	SCREW, SHC 10-24 x 5/8	8
001	600-0247-01	FOREARM/ELBOW ASS'Y	1
ITEM	PART NO.	DESCRIPTION	QTY

RAPTOR		XXX-XXXX-XX								DASH NO.		 KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214	
UNIT		NEXT ASSY										TITLE FOREARM/WRIST PITCH ACTUATOR ASS'Y	
						HED		HED		BY		SIZE MATERIAL	
						7/04		DATE		600-0248-01		FINISH	
						227		ECO NO.		TOLERANCES .XX ± INCHES .XXX ± INCHES		SCALE SHY 1	
						1		0		DRN RLC DATE 3/30/03		CHK DATE DATE DATE	
										ELCO MECH DATE DATE		NTS OF 1	

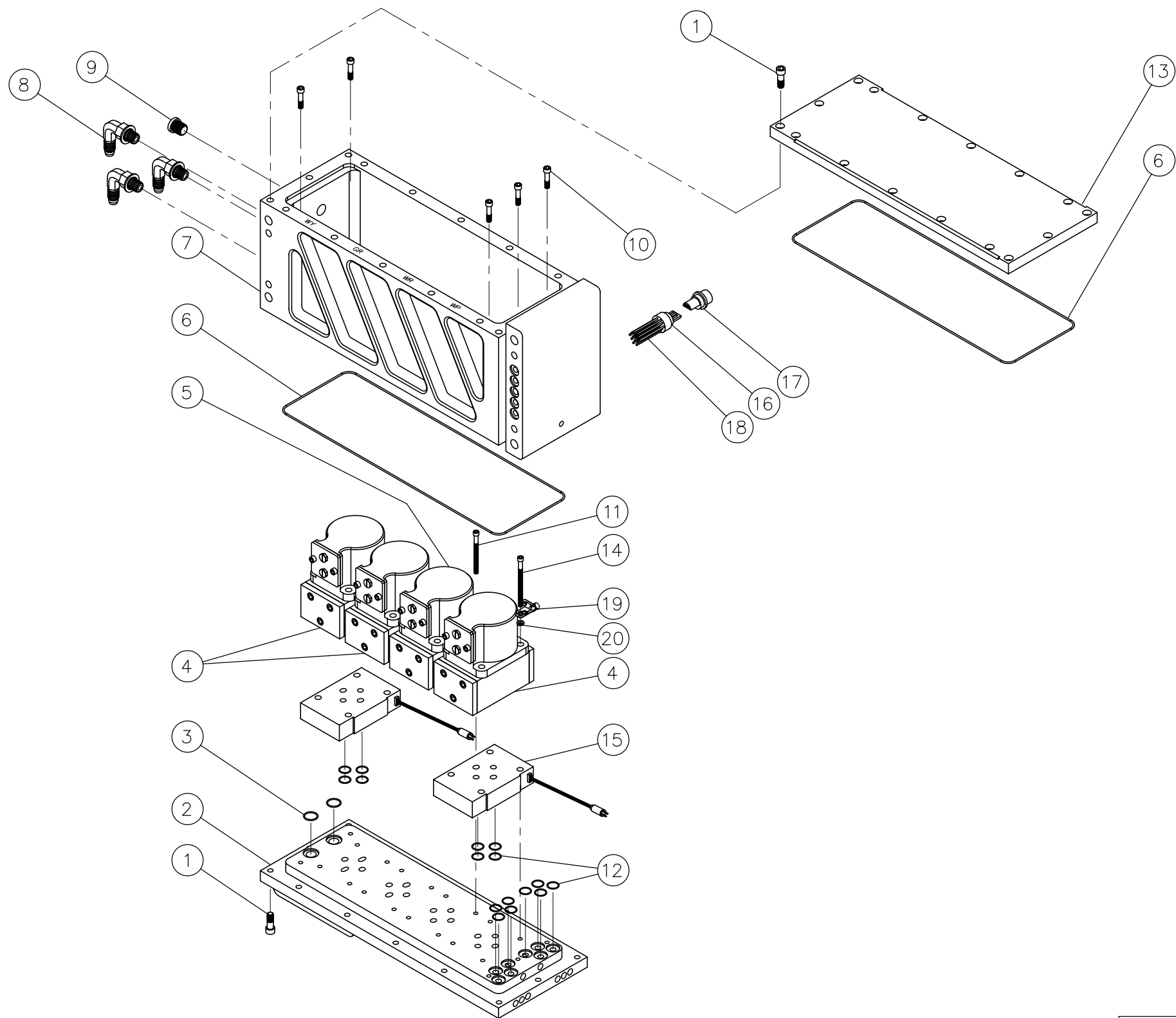
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.




007	600-0246-01	FOREARM MANIFOLD ASS'Y	1
006	057-1006-16	PIN, DOWEL 5/16 x 1 (SS)	4
005	066-0784-01	BRKT, ELBOW; LEFT	1
004	093-7024-14	BEARING, FLAMENT	2
003	066-0783-01	BRKT, ELBOW; RIGHT	1
002	050-0294-14	SCREW, SHC 5/16-18 x 7/8	6
001	050-0294-24	SCREW, SHC 5/16-18 x 1 1/2	2
ITEM	PART NO.	DESCRIPTION	QTY

[illegible]

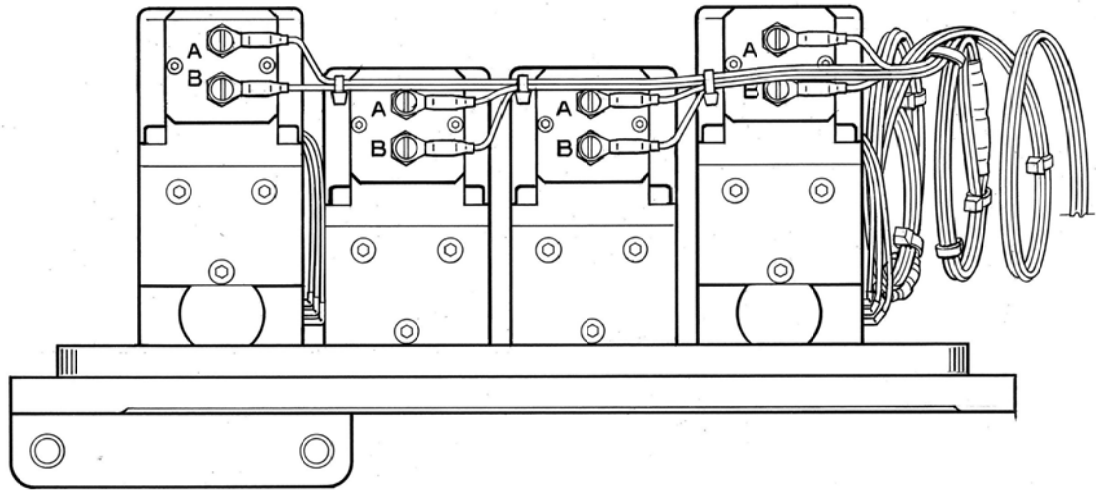
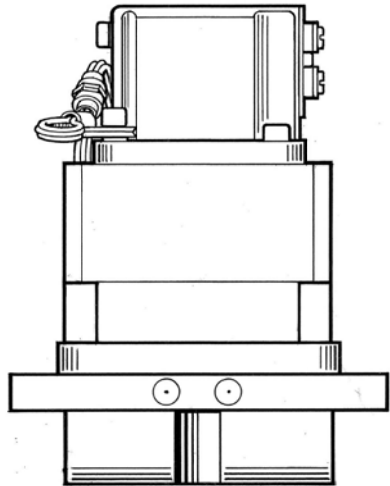
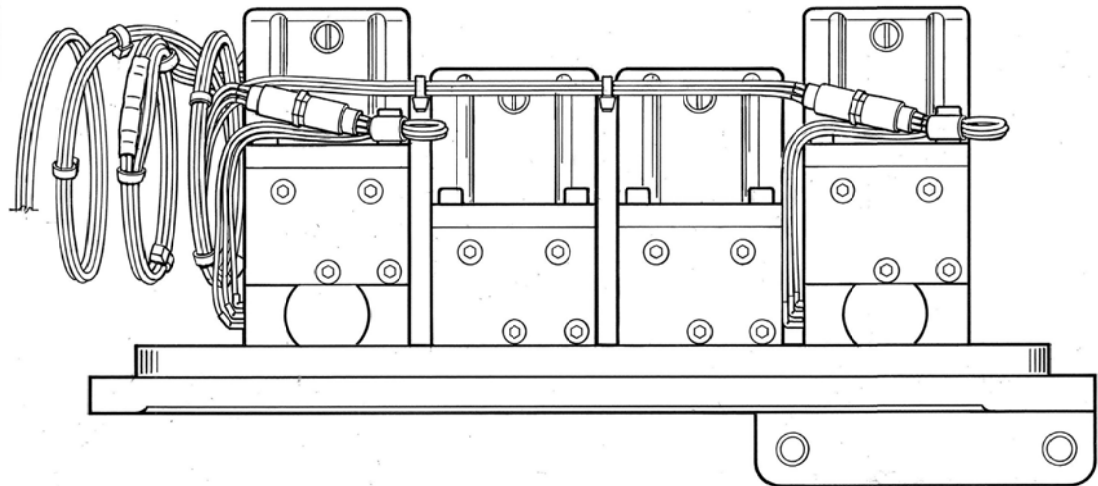
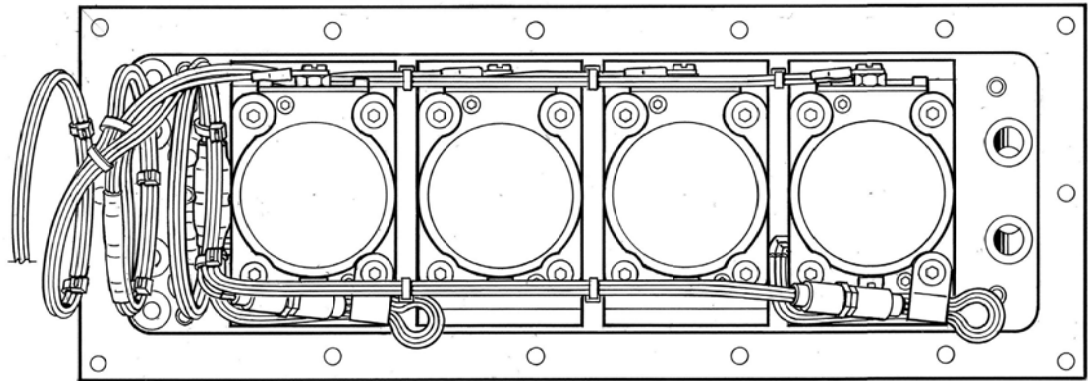
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TLEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TLEROBOTICS, INC.




020	068-0409-00	SPACER	2
019	058-0204-02	WIRE CLAMP	2
018	326-5172-00	WIRING HARNESS	1
017	327-3016-14	CONNECTOR	1
016	327-3015-14	CONNECTOR	1
015	576-0125-03	PRESSURE TRANSDUCER	2
014	050-0288-40	SCREW, SHC 10-24 x 2 1/2	8
013	066-0728-01	COVER, FOREARM	1
012	099-2011-37	O-RING	16
011	050-0288-28	SCREW, SHC 10-24 x 1 3/4	8
010	050-0288-16	SCREW, SHC 10-24 x 1	5
009	096-0124-04	PLUG, HOLLOW HEX	1
008	096-0120-06	FITTING, 90° ELBOW	3
007	066-0727-01	FOREARM	1
006	099-2170-37	O-RING	2
005	401-2002-00	VALVE, SERVO	1
004	401-2001-00	VALVE, SERVO	3
003	099-2012-37	O-RING	2
002	066-0785-02	FOREARM VALVE MANIFOLD	1
001	050-0286-08	SCREW, SHC 8-32 x 1/2	30
ITEM	PART NO.	DESCRIPTION	QTY

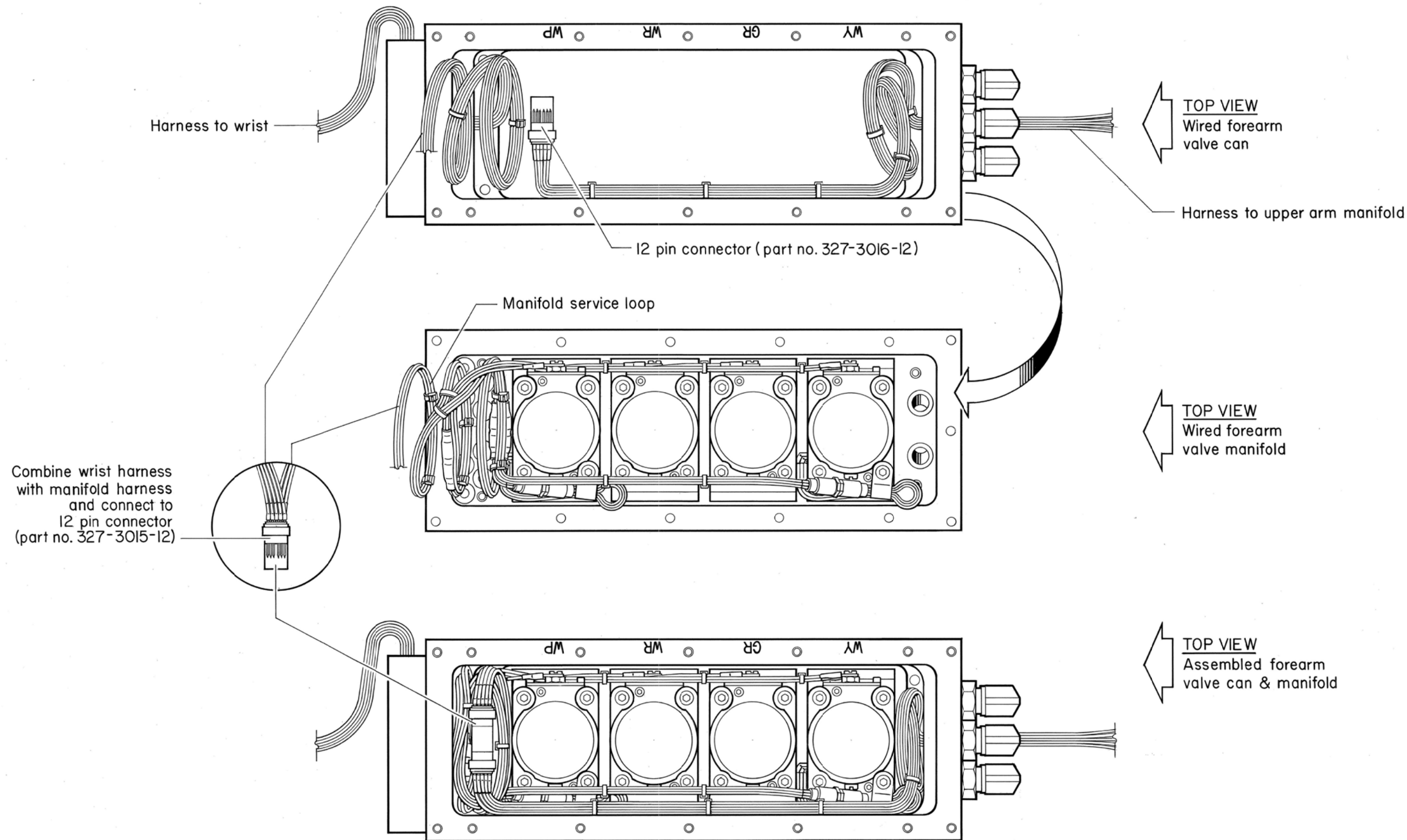
REV.		ECO NO.		CAD	7/03	DATE	DASH NO.			KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214
RAPTOR		600-0247-01					BY			
UNIT		NEXT ASSY						ASS'Y, VALVE MANIFOLD; FOREARM (W/FFB)		
						SIZE		MATERIAL		
						600-0246-01				
						TOLERANCES		FINISH		
						XX ± INCHES				
						XXX ± INCHES				
				2		DIM RLC CHK ELEG MICH		SCALE SHY		1
						DATE 5/18/03 DATE DATE DATE		NTS OF		1


THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



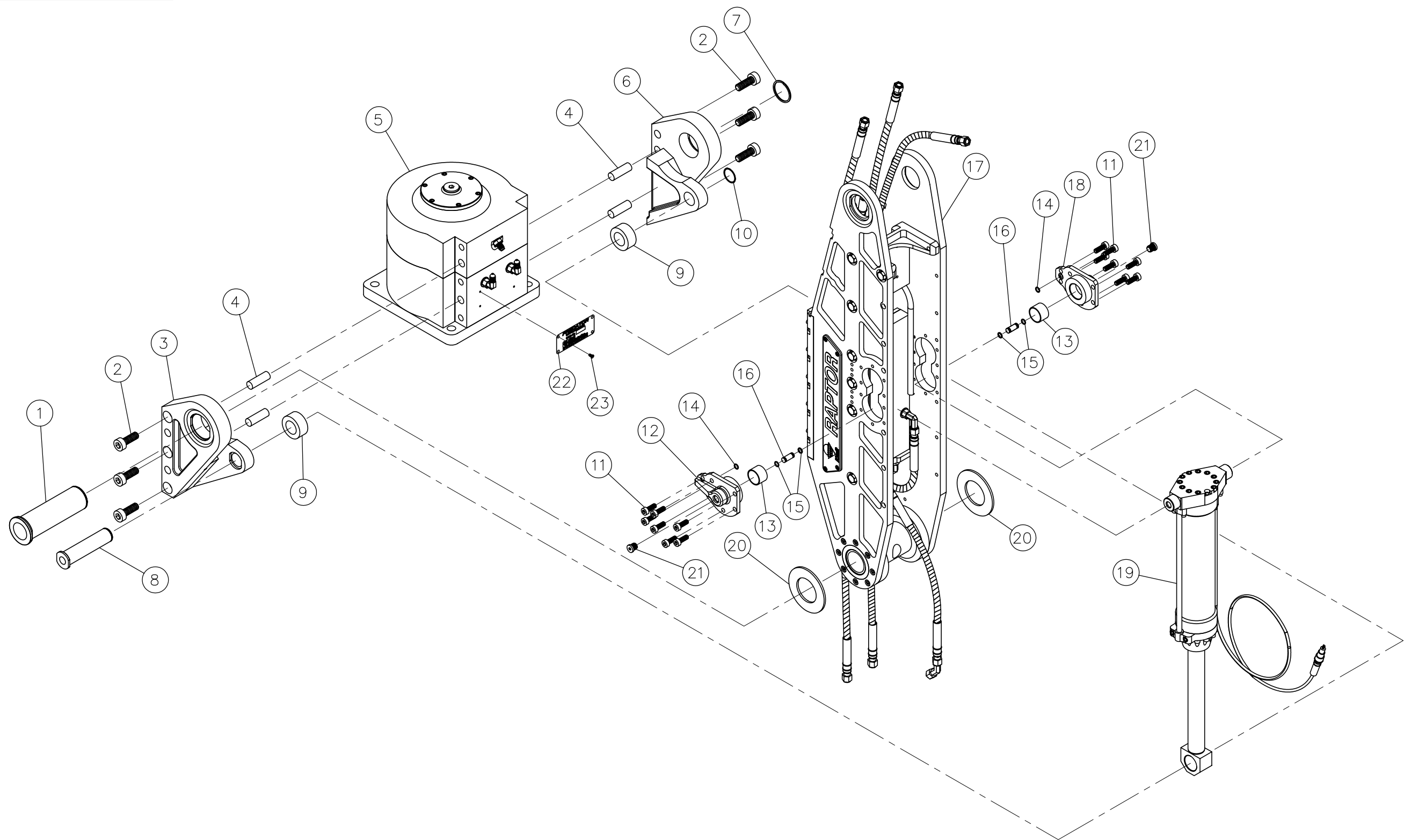
REQ										PART NO.										DESCRIPTION										ITEM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
										DASH NO.										 KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
UNIT										NEXT ASSY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.




										REQ	PART NO.		DESCRIPTION				ITEM		
										DASH NO.		KRAFT TELEROBOTICS INC.							
										OVERLAND PARK, KANSAS 66214									
UNIT										NEXT ASSY									
										BWK	BY	TITLE							
										9/98	DATE	FOREARM VALVE MANIFOLD ASS'Y							
										RFP	ECO NO.	DWG. NO.		SIZE		MATERIAL			
										REV.	LDB	600-0246-01		D					
										O	DATE	TOLERANCES		.XX ±.01		FINISH			
										9/30/98	DATE	ANGLES ±1/2°		.XXX ±.005		INCHES			
										REV.	LDB	DATE		MECH		SCALE			
										9/30/98	DATE	DATE		DATE		3 of 3			
										NTS	DATE	DATE		DATE		3 of 3			

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.

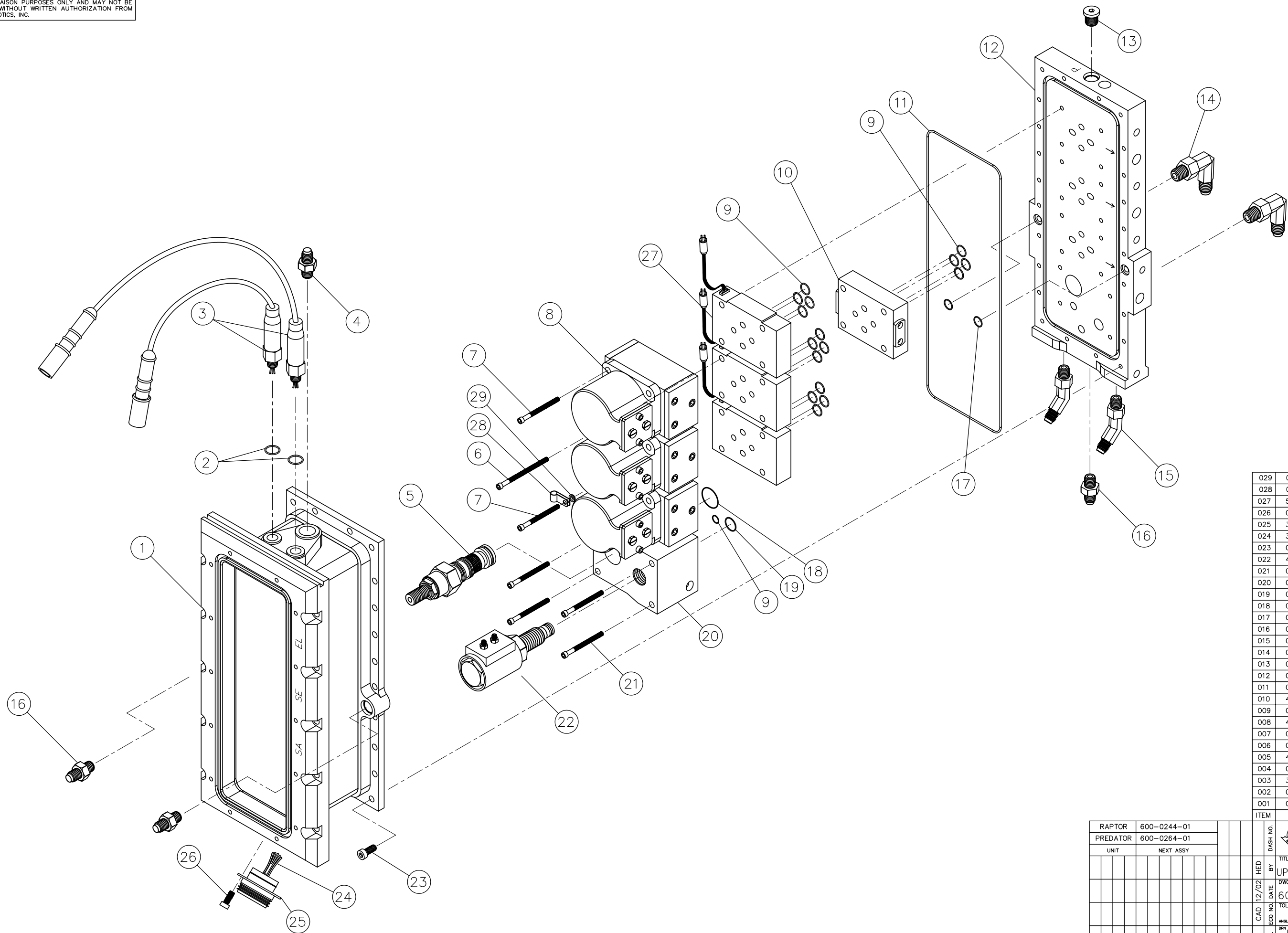


023	050-0167-04	SCREW, BHS 6-32 x 1/4	4
022	014-2091-00	SERIAL NUMBER PLATE	1
021	096-0124-00	PLUG	2
020	093-7026-24	BEARING	2
019	600-0242-00	ACTUATOR, LINEAR	1
018	066-0769-02	TRUNION PORT CAP; RIGHT	1
017	600-0244-01	UPPER ARM, ASS'Y	1
016	068-0496-00	PIN, TRUNION PORT	2
015	099-2010-37	O-RING	4
014	099-2009-37	O-RING	2
013	093-7023-08	BEARING	2
012	066-0770-02	TRUNION PORT CAP; LEFT	1
011	050-0292-12	SCREW, SHC 1/4-20 x 3/4	14
010	058-0282-14	RING, RETAINING	1
009	068-0489-01	SPACER	2
008	068-0475-00	PIN, ROD	1
007	058-0282-24	RING, RETAINING	1
006	066-0790-01	BRKT, ELEVATION; LEFT	1
005	600-0224-00	AZIMUTH ACTUATOR ASS'Y	1
004	057-1007-24	PIN, DOWEL 1/2 x 1 1/2 (SS)	4
003	066-0789-01	BRKT, ELEVATION; RIGHT	1
002	050-0300-20	SCREW, SHC 1/2-13 x 1 1/4	6
001	068-0498-00	PIN, SHOULDER	1
ITEM	PART NO.	DESCRIPTION	QTY


RAPTOR		600-0246-01										DASH NO.		 KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214	
UNIT		NEXT ASSY										HED BY		TITLE UPPER ARM/AZIMUTH ACTUATOR ASS'Y W/FFB	
												7/03		DWG. NO. 600-0245-01 SIZE MATERIAL	
												CAD		TOLERANCES .XX ± INCHES ANGLES ± .XXX ± INCHES	
REV.		ECO NO.										2		RLC DATE 4/6/03 CHK DATE ELEC DATE MECH DATE	
														SCALE 1 NTS OF 1	

[illegible][illegible]

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.

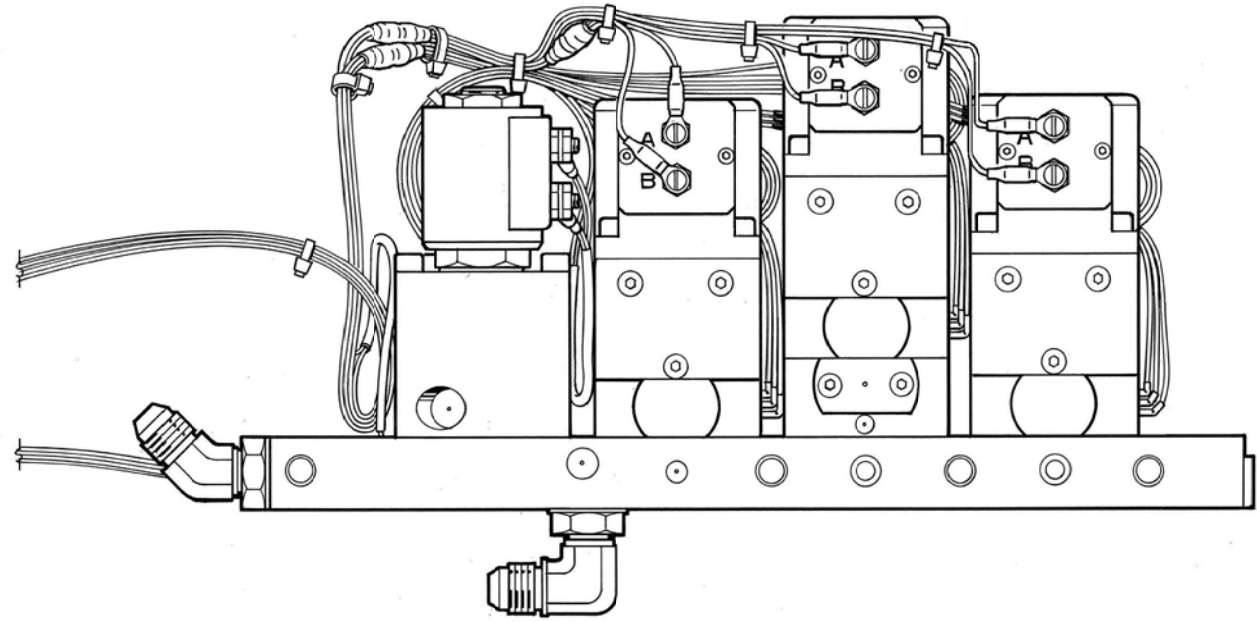
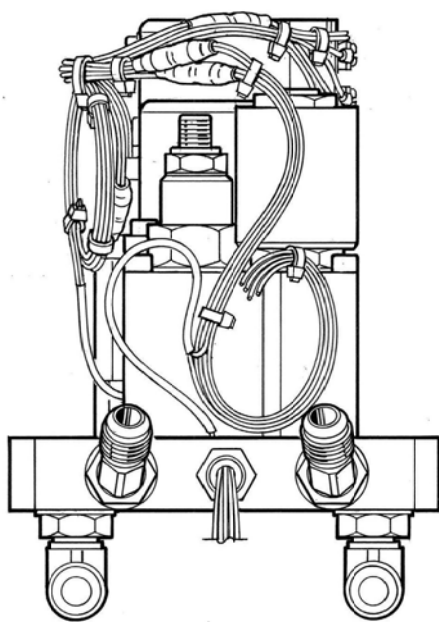
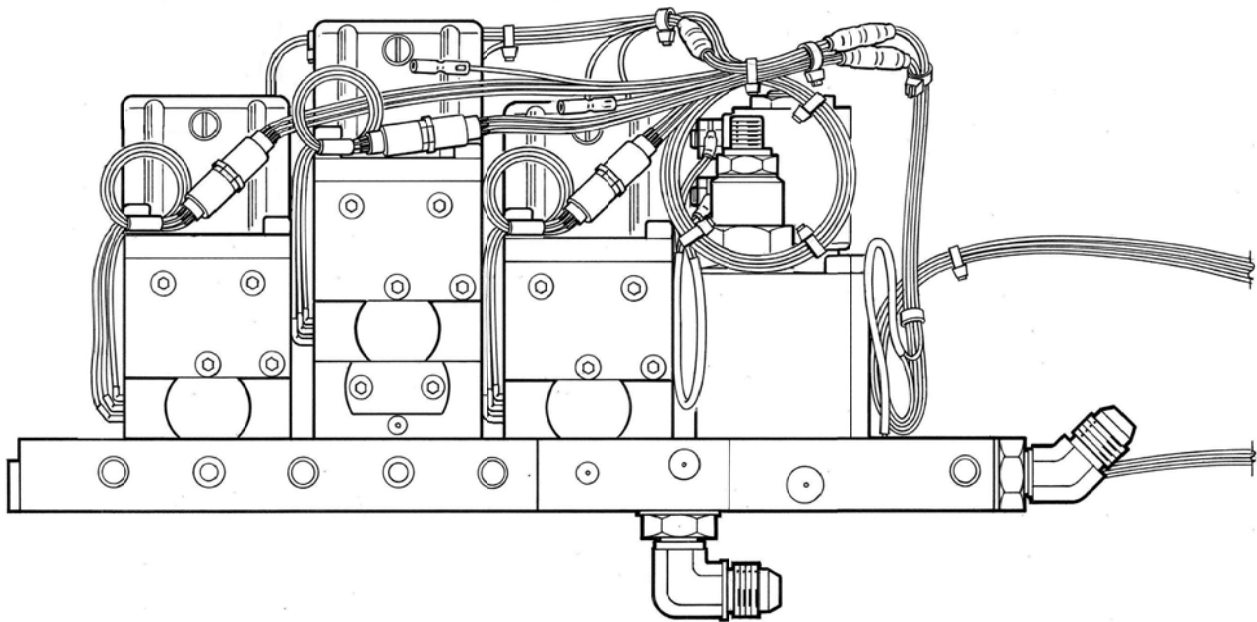
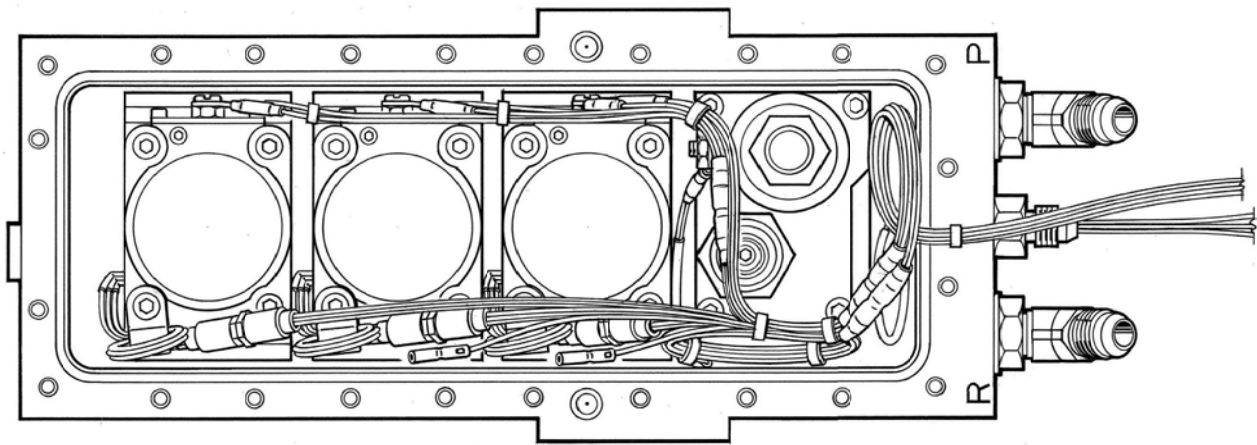


029	068-0409-00	SPACER	3
028	058-0204-02	WIRE CLAMP	3
027	576-0125-03	PRESSURE TRANSDUCER	3
026	050-0286-06	SCREW, SHC 8-32 x 3/8	4
025	327-2010-00	CONNECTOR, MIN-M-37-FCR	1
024	326-5171-00	WIRING, MANIFOLD; UA	1
023	050-0288-08	SCREW, SHC 10-24 x 1/2	24
022	401-2004-00	VALVE, SOLENOID	1
021	050-0288-36	SCREW, SHC 10-24 x 2 1/4	4
020	066-0732-02	BLOCK, PRESSURE REDUCING	1
019	099-2014-37	O-RING	1
018	099-2019-37	O-RING	1
017	099-2009-37	O-RING	2
016	096-0122-04	FITTING, STRAIGHT	3
015	096-0154-06	FITTING, 45° ELBOW	3
014	096-0120-06	FITTING, 90° ELBOW	2
013	096-0124-04	PLUG	1
012	066-0771-02	MANIFOLD, VALVE; UA	1
011	099-2169-37	O-RING	1
010	401-2006-00	VALVE, CHECK	1
009	099-2011-37	O-RING	17
008	401-2008-00	VALVE, SERVO	3
007	050-0288-40	SCREW, SHC 10-24 x 2 1/2	8
006	050-0288-56	SCREW, SHC 10-24 x 3 1/2	4
005	401-2003-00	VALVE, PRESSURE REDUCING	1
004	096-0122-06	FITTING, TUBE	1
003	326-0028-00	PENETRATOR ASS'Y	2
002	099-3903-39	O-RING	2
001	070-0160-02	CAN, VALVE	1
ITEM	PART NO.	DESCRIPTION	QTY

RAPTOR		600-0244-01		DASH NO.		KRAFT TELEROBOTICS INC.	
PREDATOR		600-0264-01				OVERLAND PARK, KANSAS 66214	
UNIT		NEXT ASSY		HED BY	TITLE		
				12/02	DWG. NO.	SIZE	MATERIAL
				CAD	UPPER ARM VALVE MANIFOLD ASS'Y (W/ FFB)		FINISH
				2	TOLERANCES		INCHES
					ANGLES ±		
				REV.	DIM RLC CHK ELEG MECH		SCALE
					DATE 11/25/02 DATE DATE DATE		
						NTS OF 1	

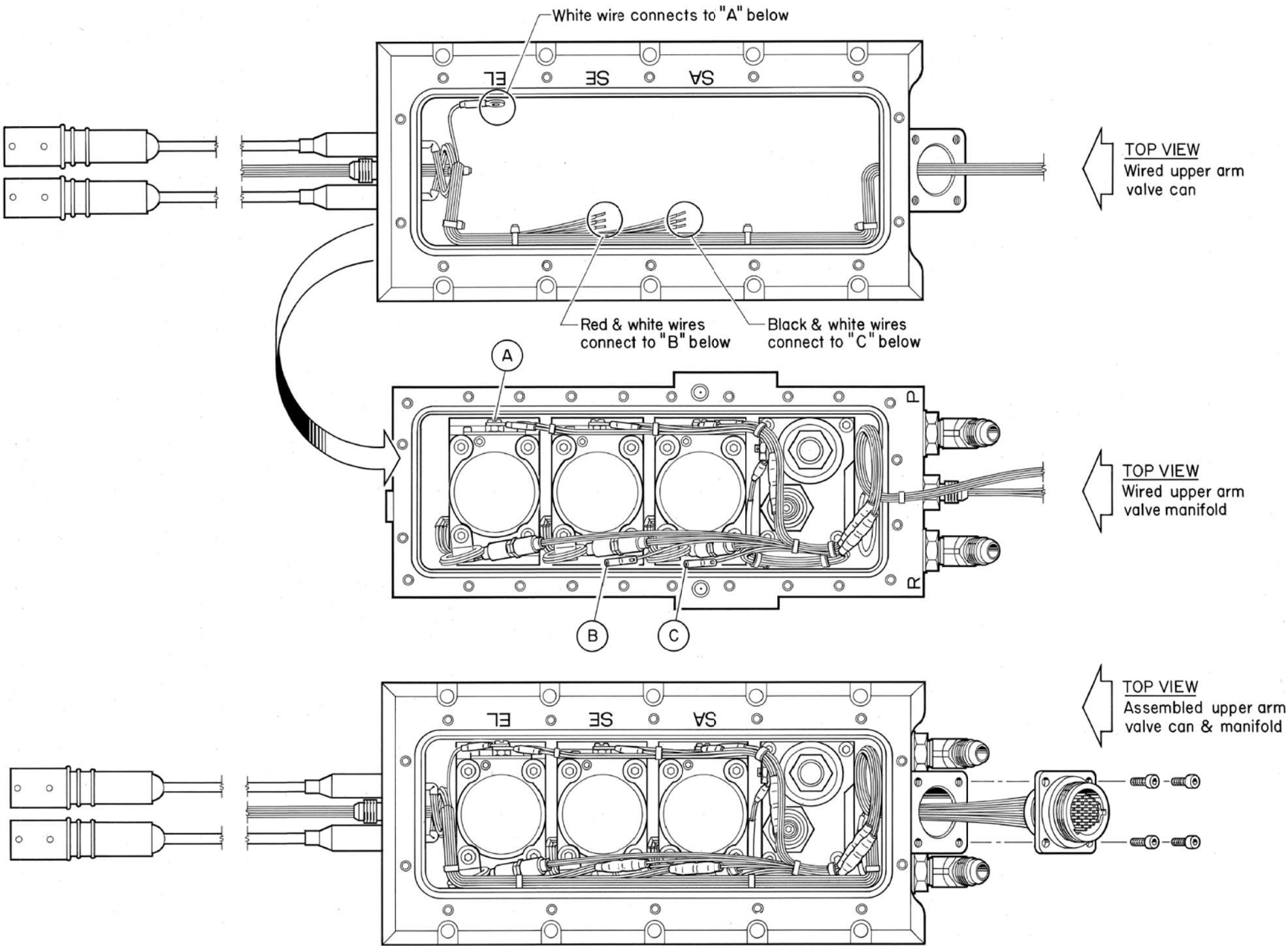


THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



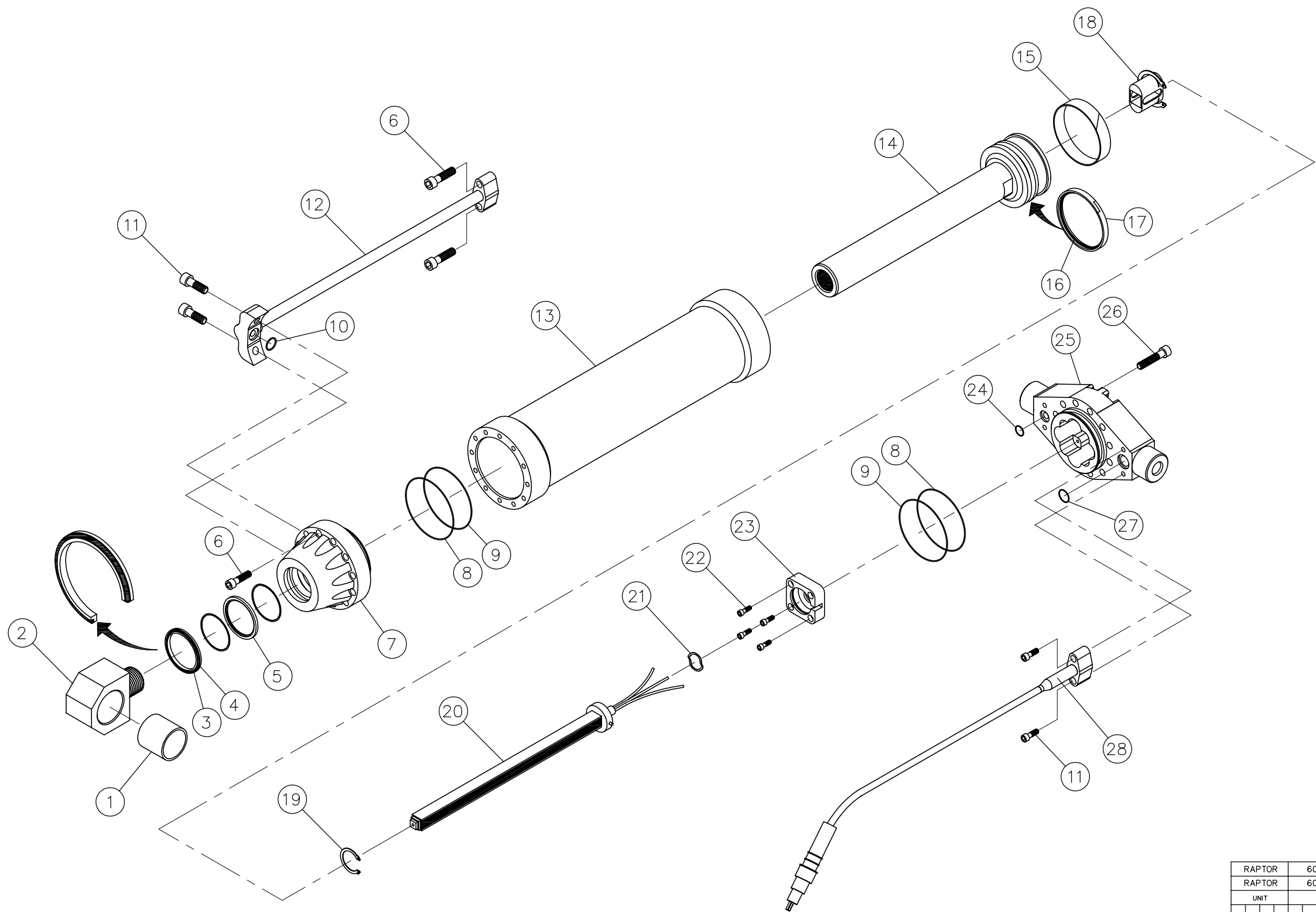
REQ		PART NO.		DESCRIPTION		ITEM
DASH NO.		BY		TITLE		
BWK		DATE		UPPER ARM VALVE MANIFOLD ASS'Y		
9/98		600-0243-01		D		
RFP		ECO NO.		TOLERANCES		
0		LDB		XX ±.01 INCHES		
3/30/98		DATE		XXX ±.005 INCHES		
		CHK		MECH		
		DATE		DATE		
				SCALE		
				NTS		
				2		
				3		

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



REQ		PART NO.	DESCRIPTION	ITEM
DASH NO.		KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214		
BWK		TITLE UPPER ARM VALVE MANIFOLD ASS'Y		
9/98		DWG. NO. 600-0243-01	SIZE D	MATERIAL
RFP		TOLERANCES xx ±.01 INCHES xxx ±.005 INCHES		FINISH
0		DRN LDB	CHK	MECH
DATE 8/30/98		DATE	DATE	SCALE NTS
				SHT 3 OF 3

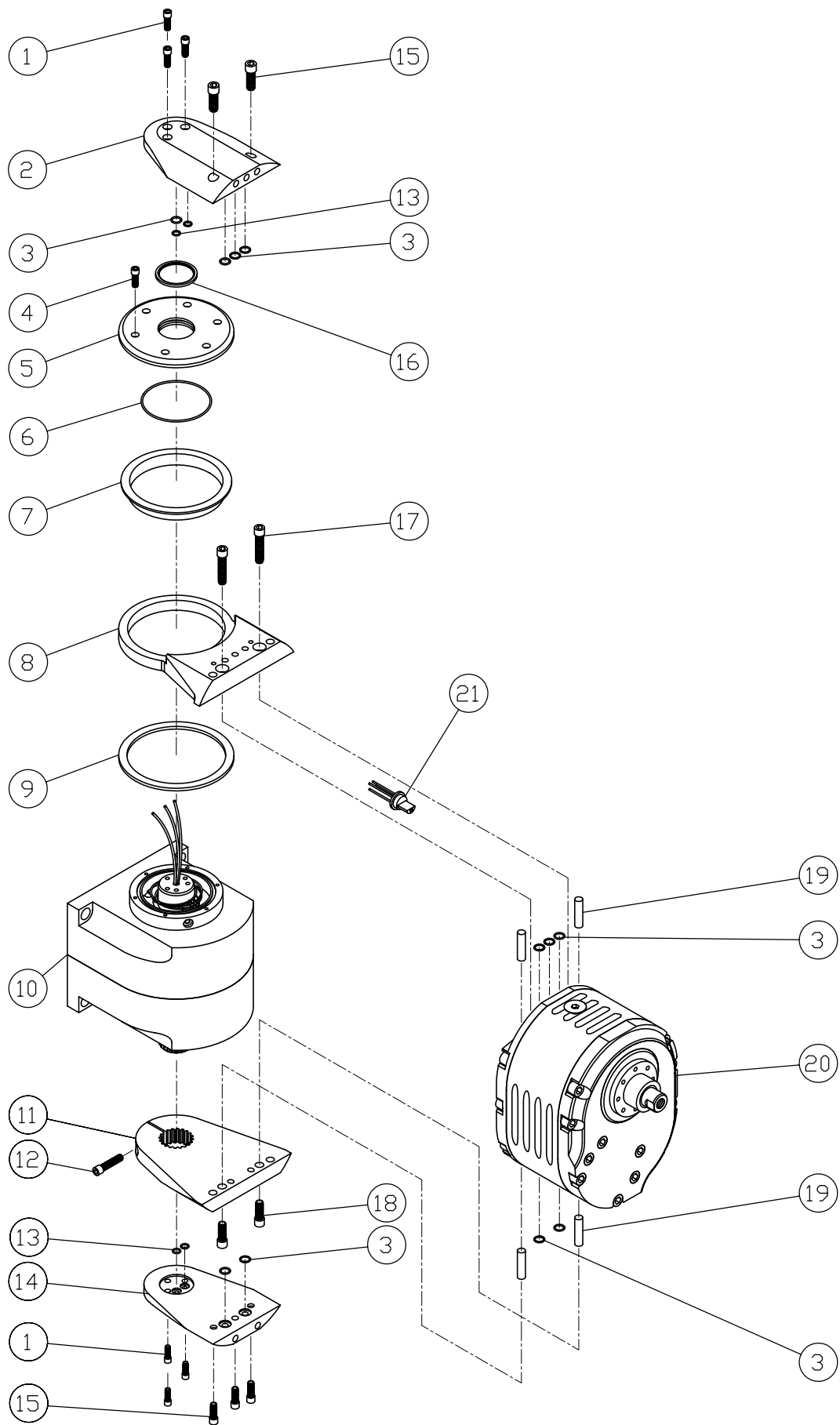
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.




028	326-0030-00	PENETRATOR ASS'Y	1
027	099-2011-37	O-RING	1
026	050-0288-20	SCREW, SHC 10-24 x 1 1/4	12
025	066-0766-01	CAP, CYLINDER	1
024	099-2009-37	O-RING	1
023	066-0729-01	PLATE, POT MOUNTING	1
022	050-0280-06	SCREW, SHC 4-40 x 3/8	4
021	529-0141-03	WAVE SPRING	1
020	529-0142-00	POTENTIOMETER, LINEAR	1
019	529-0141-02	SNAP RING	1
018	529-0141-01	WIPER, POTENTIOMETER	1
017	100-0173-30	SEAL, PISTON	1
016	099-2221-37	O-RING	1
015	100-0172-30	BEARING, PISTON	1
014	068-0494-00	PISTON/ROD	1
013	068-0492-01	BARREL, CYLINDER	1
012	097-5133-01	TUBE ASS'Y	1
011	050-0288-12	SCREW, SHC 10-24 x 3/4	4
010	099-2010-37	O-RING	1
009	099-2131-37	O-RING	2
008	100-8131-39	BACKUP	2
007	068-0493-01	HEAD, CYLINDER	1
006	050-0288-16	SCREW, SHC 10-24 x 1	14
005	100-0154-16	SEAL, ROD	1
004	100-0177-16	WIPER, ROD	1
003	099-2023-37	O-RING	1
002	066-0730-00	RODEND	1
001	093-7023-16	BEARING	1
ITEM	PART NO.	DESCRIPTION	QTY

[illegible]

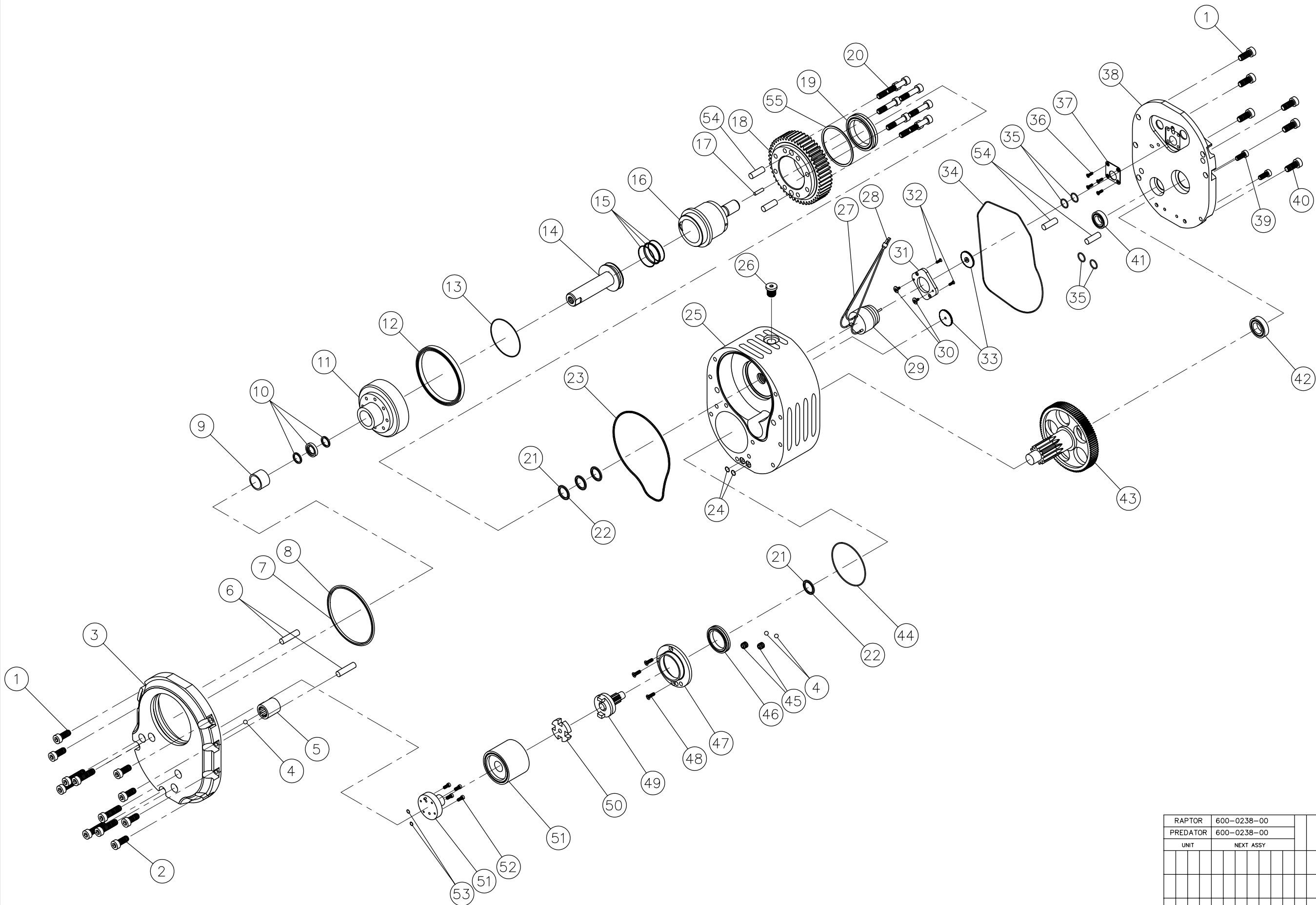
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



021	327-3016-04	CONNECTOR	1
020	600-0229-00	WRIST ROLL ACTUATOR ASS'Y	1
019	057-1001-16	PIN, DOWEL 1/4 x 1 (SS)	4
018	050-0292-10	SCREW, SHC 1/4-20 x 5/8	2
017	050-0292-14	SCREW, SHC 1/4-20 x 7/8	2
016	099-4122-37	SEAL, SHAFT	1
015	050-0288-08	SCREW, SHC 10-24 x 1/2	5
014	066-0652-02	PORT PLATE, WY SHAFT SIDE	1
013	099-2007-37	O-RING	4
012	050-0292-16	SCREW, SHC 1/4-20 x 1	1
011	066-0651-01	BRKT, WY SHAFT SIDE	1
010	600-0228-00	WRIST YAW ACTUATOR ASS'Y	1
009	068-0419-00	BEARING	1
008	066-0653-01	BRKT, WY POT SIDE	1
007	068-0418-00	BEARING	1
006	099-2035-37	O-RING	1
005	068-0420-01	PLATE, SEAL	1
004	050-0284-06	SCREW, SHC 6-32 x 3/8	6
003	099-2010-37	O-RING	11
002	066-0651-02	PORT PLATE, WY POT SIDE	1
001	050-0286-08	SCREW, SHC 8-32 x 1/2	6
ITEM	PART NO.	DESCRIPTION	QTY

RAPTOR		600-0250-01						DASH NO.		KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214			
PREDATOR		600-0269-01											
UNIT		NEXT ASSY											
		</											

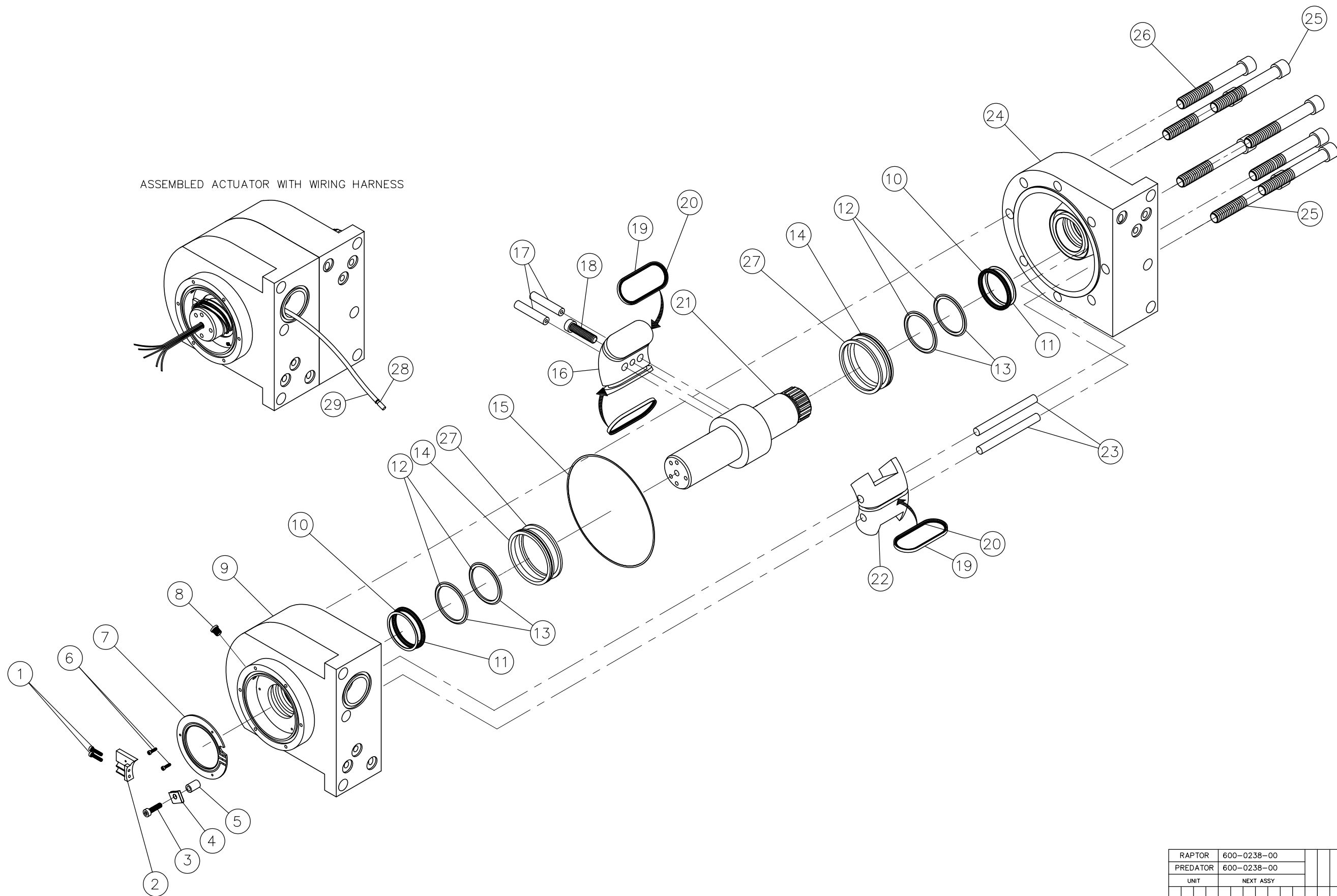
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



055	068-0536-00	SHIM	1
054	057-1001-12	PIN, DOWEL 1/4 x 3/4 (SS)	2
053	099-2010-37	O-RING	2
052	050-0284-06	SCREW, SHC 6-32 x 3/8	4
051	600-0223-00	MOTOR	1
050	066-0751-00	COUPLING, MOTOR	1
049	080-1021-00	GEAR, MOTOR OUTPUT	1
048	050-0436-06	SCREW, FHP 4-40 x 3/8	3
047	068-0421-00	RETAINER, BEARING	1
046	093-5005-00	BEARING, BALL	1
045	051-0117-00	CHECK VALVE BODY	2
044	099-2034-37	O-RING	1
043	080-1022-00	GEAR, MOTOR/GRIPPER	1
042	093-5002-00	BEARING, BALL	1
041	093-5014-00	BEARING, BALL	1
040	050-0286-12	SCREW, SHC 8-32 x 3/4	1
039	050-0286-06	SCREW, SHC 8-32 x 3/8	2
038	066-0656-02	PLATE, WR BASE	1
037	066-0659-01	WIRE, RETAINER	1
036	050-0432-03	SCREW, FHP 2-56 x 3/16	4
035	099-2011-37	O-RING	4
034	099-2048-37	O-RING	1
033	080-1024-00	GEAR, SPUR	2
032	050-0432-04	SCREW, FHP 2-56 x 1/4	2
031	066-0662-01	PLATE, POT. MOUNTING	1
030	058-0182-00	CLEAT, POT. MOUNTING	2
029	529-0132-01	POTENTIOMETER	1
028	327-3015-04	CONNECTOR	1
027	326-5167-00	WIRING HARNESS, WR POT	1
026	096-0124-04	PLUG, HOLLOW HEX	1
025	066-0863-01	BODY, WR ACTUATOR	1
024	099-2008-37	O-RING	2
023	099-2044-37	O-RING	1
022	100-0167-08	SEAL, SHAFT	4
021	099-2015-37	O-RING	4
020	050-0288-16	SCREW, SHC 10-24 x 1	8
019	093-5021-00	BEARING, BALL	1
018	080-1035-00	GEAR, CYL ROTATE	1
017	057-1002-08	PIN, DOWEL 1/8 x 1/2 (SS)	1
016	068-0534-02	CYL, GRIPPER	1
015	100-0156-20	SEAL, PISTON	1
014	068-0533-00	PISTON/ROD	1
013	099-2030-37	O-RING	1
012	093-5016-00	BEARING, BALL	1
011	068-0535-00	HEAD, GRIPPER CYLINDER	1
010	100-0154-10	SEAL, ROD	1
009	093-7028-00	BUSHING, BRONZE	1
008	100-0167-40	SEAL, SHAFT	1
007	099-2145-37	O-RING	1
006	057-1001-16	PIN, DOWEL 1/4 x 1 (SS)	4
005	093-3007-00	BEARING, NEEDLE	1
004	058-0180-06	BALL, 3/16 STEEL	3
003	066-0658-02	PLATE, WR COVER	1
002	050-0292-16	SCREW, SHC 1/4-20 x 1	6
001	050-0292-10	SCREW, SHC 1/4-20 x 5/8	11
ITEM	PART NO.	DESCRIPTION	QTY

RAPTOR		600-0238-00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
--------	--	-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.

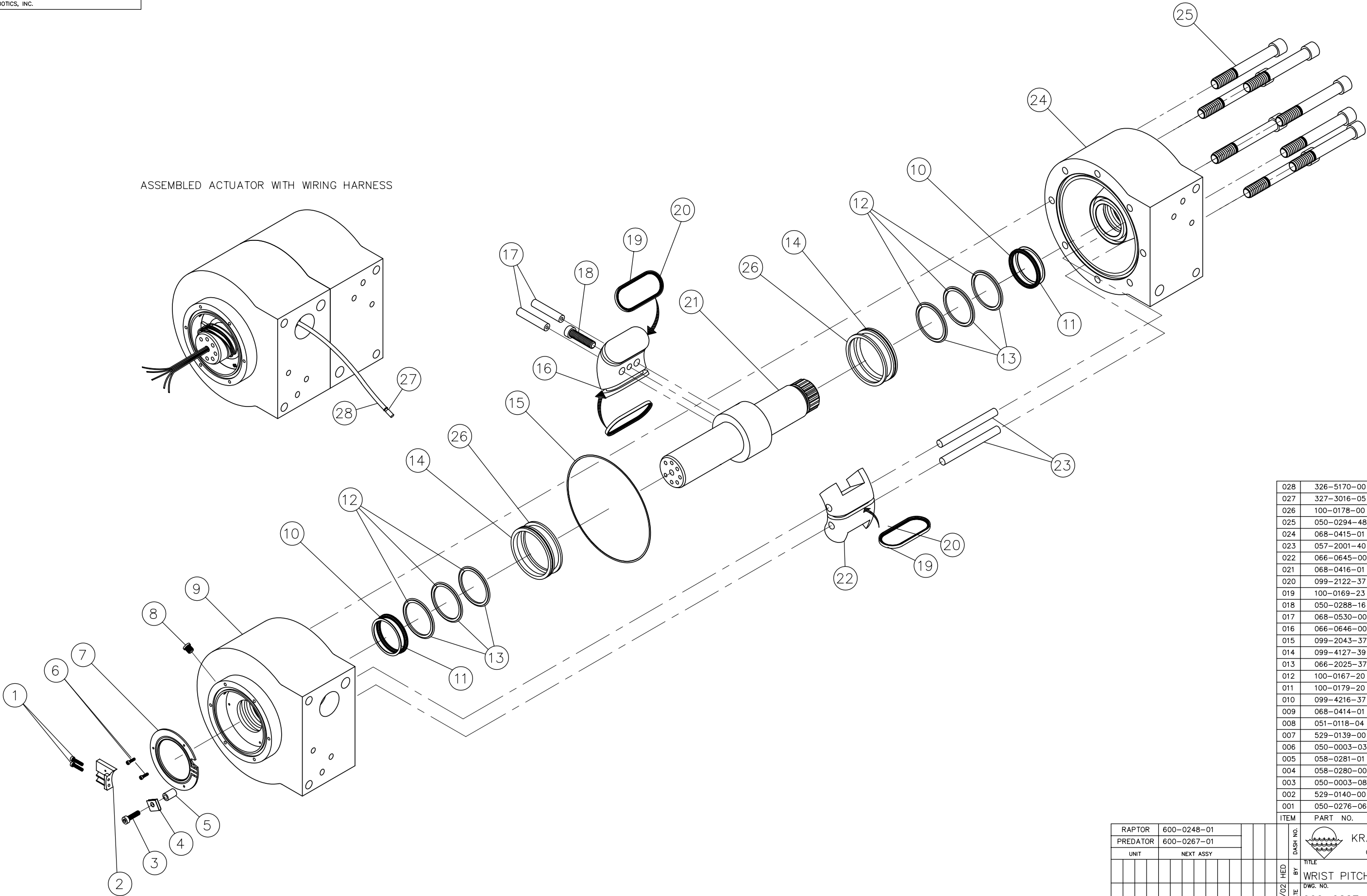


029	326-5169-00	WY WIRING HARNESS	1
028	327-3015-05	CONNECTOR	1
027	100-0178-00	SEAL SHOULDER	2
026	050-0294-40	SCREW, SHC 5/16-18 x 2 1/2	6
025	050-0294-32	SCREW, SHC 5/16-18 x 2	2
024	068-0413-01	CASE, WY ACT (SHAFT SIDE)	1
023	057-2001-40	PIN, DOWEL 1/4 x 2 1/2(HGS)	2
022	066-0645-00	VANE, STATOR	1
021	068-0417-01	SHAFT, WY ACTUATOR	1
020	099-2122-37	O-RING	3
019	100-0169-23	SEAL, VANE	3
018	050-0288-16	SCREW, SHC 10-24 x 1	1
017	068-0530-00	PIN, DOWEL 1/4 x 1 1/4 (SS) DRILLED	2
016	066-0646-00	VANE, ROTOR	1
015	099-2043-37	O-RING	1
014	099-4127-39	QUAD-RING	2
013	099-2025-37	O-RING	4
012	100-0167-20	SEAL, SHAFT	4
011	100-0179-20	BACKUP	2
010	099-4216-37	QUAD-RING	2
009	068-0412-01	CASE, WY ACT (POT SIDE)	1
008	051-0118-04	PLUG, 6-32 x 1/4	1
007	529-0139-00	POTENTIOMETER, ELEMENT	1
006	050-0003-03	SCREW, PHP 2-56 x 3/16	2
005	058-0281-01	STANDOFF	1
004	058-0280-00	CLAMP, WIRE	1
003	050-0003-08	SCREW, PHP 2-56 x 1/2	1
002	529-0140-00	POTENTIOMETER WIPER ASS'Y	1
001	050-0276-06	SCREW, SHC 2-56 x 3/8	2
ITEM	PART NO.	DESCRIPTION	QTY

RAPTOR		600-0238-00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
--------	--	-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.

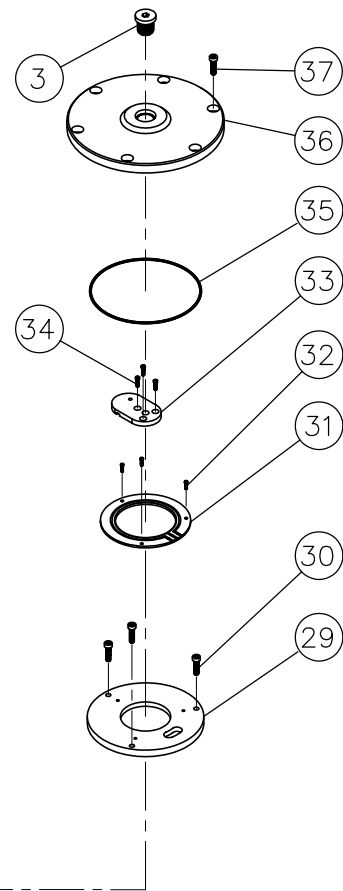
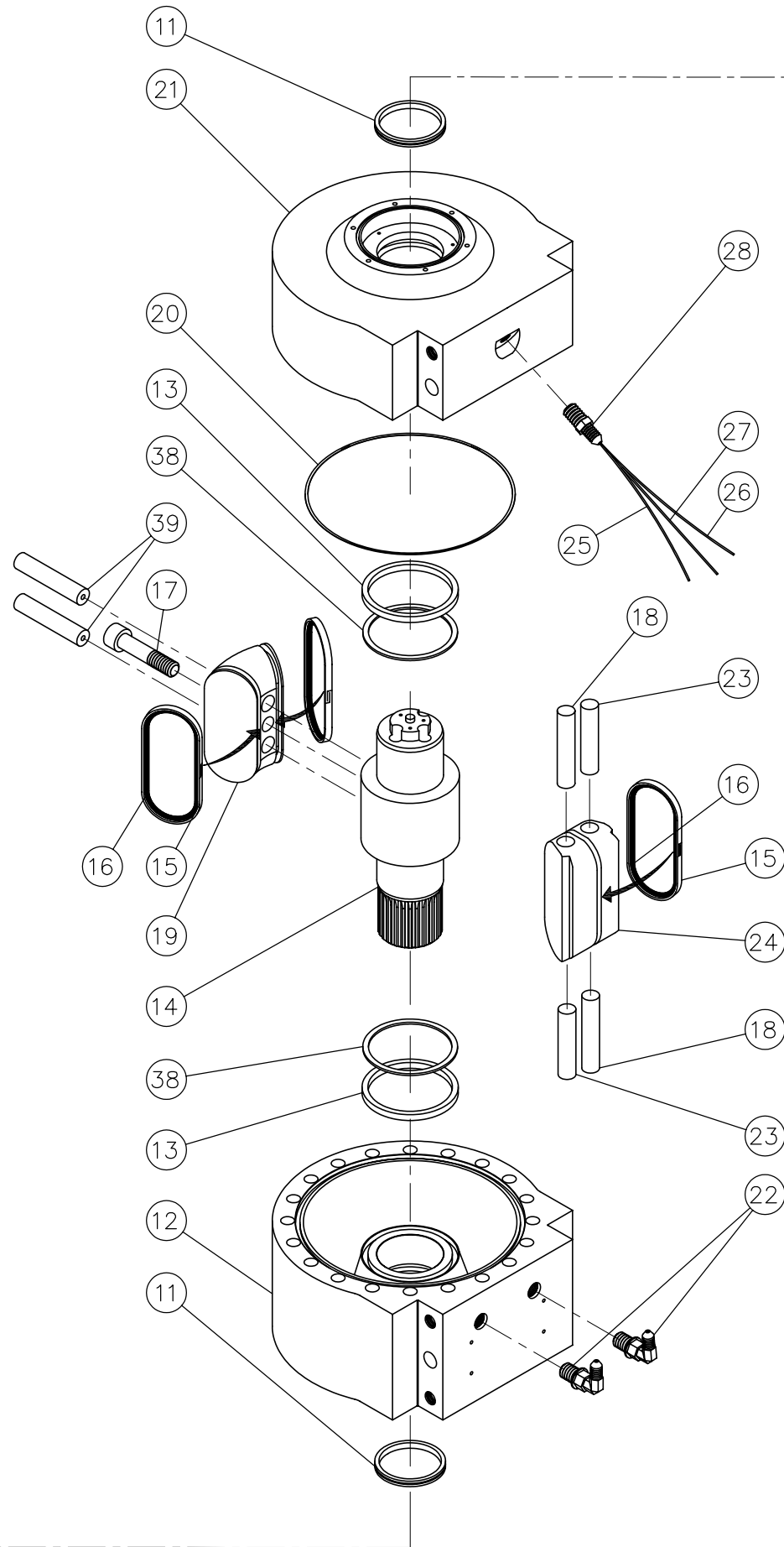
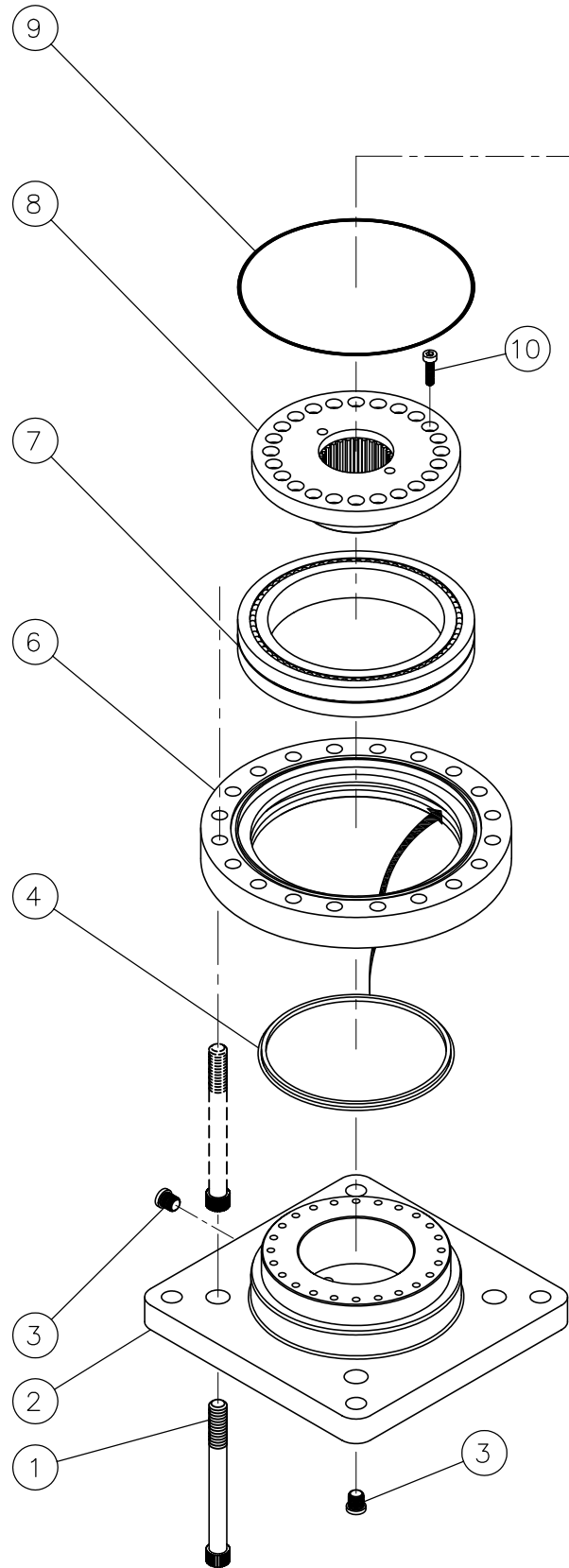
ASSEMBLED ACTUATOR WITH WIRING HARNESS



028	326-5170-00	WP WIRING HARNESS	1
027	327-3016-05	CONNECTOR	1
026	100-0178-00	SEAL, SHOULDER	2
025	050-0294-48	SCREW, SHC 5/16-18 x 3	8
024	068-0415-01	CASE, WP ACT (SHAFT SIDE)	1
023	057-2001-40	PIN, DOWEL 1/4 x 2 1/2(HGS)	2
022	066-0645-00	VANE, STATOR	1
021	068-0416-01	SHAFT, WP ACTUATOR	1
020	099-2122-37	O-RING	3
019	100-0169-23	SEAL, VANE	3
018	050-0288-16	SCREW, SHC 10-24 x 1	1
017	068-0530-00	PIN, DOWEL 1/4 x 1 1/4 (SS) DRILLED	2
016	066-0646-00	VANE, ROTOR	1
015	099-2043-37	O-RING	1
014	099-4127-39	QUAD-RING	2
013	066-2025-37	O-RING	6
012	100-0167-20	SEAL, SHAFT	6
011	100-0179-20	BACKUP	2
010	099-4216-37	QUAD-RING	2
009	068-0414-01	CASE, WP ACT (POT SIDE)	1
008	051-0118-04	PLUG, 6-32 x 1/4	1
007	529-0139-00	POTENTIOMETER, ELEMENT	1
006	050-0003-03	SCREW, PHP 2-56 x 3/16	2
005	058-0281-01	STANDOFF	1
004	058-0280-00	CLAMP, WIRE	1
003	050-0003-08	SCREW, PHP 2-56 x 1/2	1
002	529-0140-00	POTENTIOMETER WIPER ASS'Y	1
001	050-0276-06	SCREW, SHC 2-56 x 3/8	2
ITEM	PART NO.	DESCRIPTION	QTY

RAPTOR		600-0248-01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
--------	--	-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.

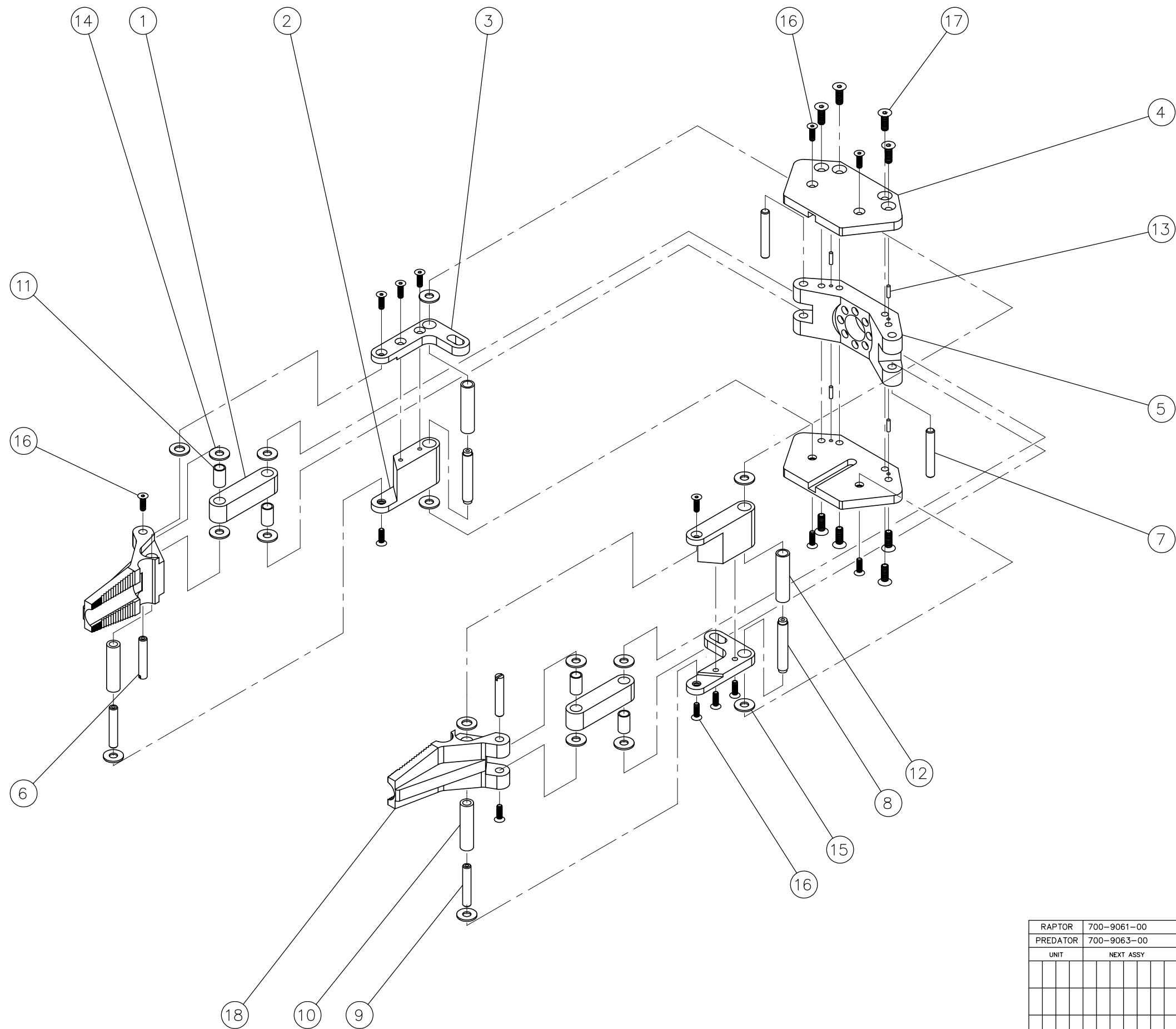


039	068-0531-00	PIN, 1/2 x 2 1/2 (SS) DRILLED	2
038	100-0175-42	SEAL, AZIMUTH SHAFT SHOULDER	2
037	050-0286-08	SCREW, SHC 8-32 x 1/2	6
036	068-0485-01	COVER, POTENTIOMETER	1
035	099-2040-37	O-RING	1
034	050-0436-06	SCREW, FHP 4-40 x 3/8	3
033	529-0143-00	POTENTIOMETER WIPER ASS'Y	1
032	050-0003-03	SCREW, PHP 2-56 x 3/16	3
031	529-0139-00	POTENTIOMETER, ELEMENT	1
030	050-0280-06	SCREW, SHC 4-40 x 3/8	3
029	068-0486-01	PLATE, POT MOUNTING	1
028	096-0157-04	FITTING, TUBE	1
027	325-0012-19	WIRE, 26GA WHT/VIOLET	52"
026	325-0012-12	WIRE, 26GA WHT/RED	42"
025	325-0012-11	WIRE, 26GA WHT/BLK	42"
024	066-0738-00	VANE, STATOR	1
023	057-2007-36	PIN, DOWEL 1/2 x 2 1/4(HGS)	2
022	096-0120-04	FITTING, 90° ELBOW	2
021	068-0482-01	BODY, AZ ACT UPPER HALF	1
020	099-2164-37	O-RING	1
019	066-0739-00	VANE, ROTOR	1
018	057-2007-40	PIN, DOWEL 1/2 x 2 1/2(HGS)	2
017	050-0298-32	SCREW, SHC 7/16-14 x 2	1
016	099-2230-37	O-RING	3
015	100-0171-48	SEAL	3
014	068-0483-01	SHAFT, AZIMUTH ACTUATOR	1
013	099-4229-37	QUAD-RING	2
012	068-0481-01	BODY, AZ ACT LOWER HALF	1
011	099-4328-37	SEAL, SHAFT	2
010	050-0292-16	SCREW, SHC 1/4-20 x 1	24
009	099-2163-37	O-RING	1
008	068-0479-00	COUPLING, AZIMUTH	1
007	093-3008-00	BEARING	1
006	068-0480-01	RING, AZIMUTH SEAL	1
005			
004	099-4356-37	SEAL	1
003	096-0124-04	PLUG, HOLLOW HEX	3
002	066-0737-01	PLATE, AZIMUTH MOUNTING	1
001	050-0296-80	SCREW, SHC 3/8-16 x 5	20
ITEM	PART NO.	DESCRIPTION	QTY

[illegible]



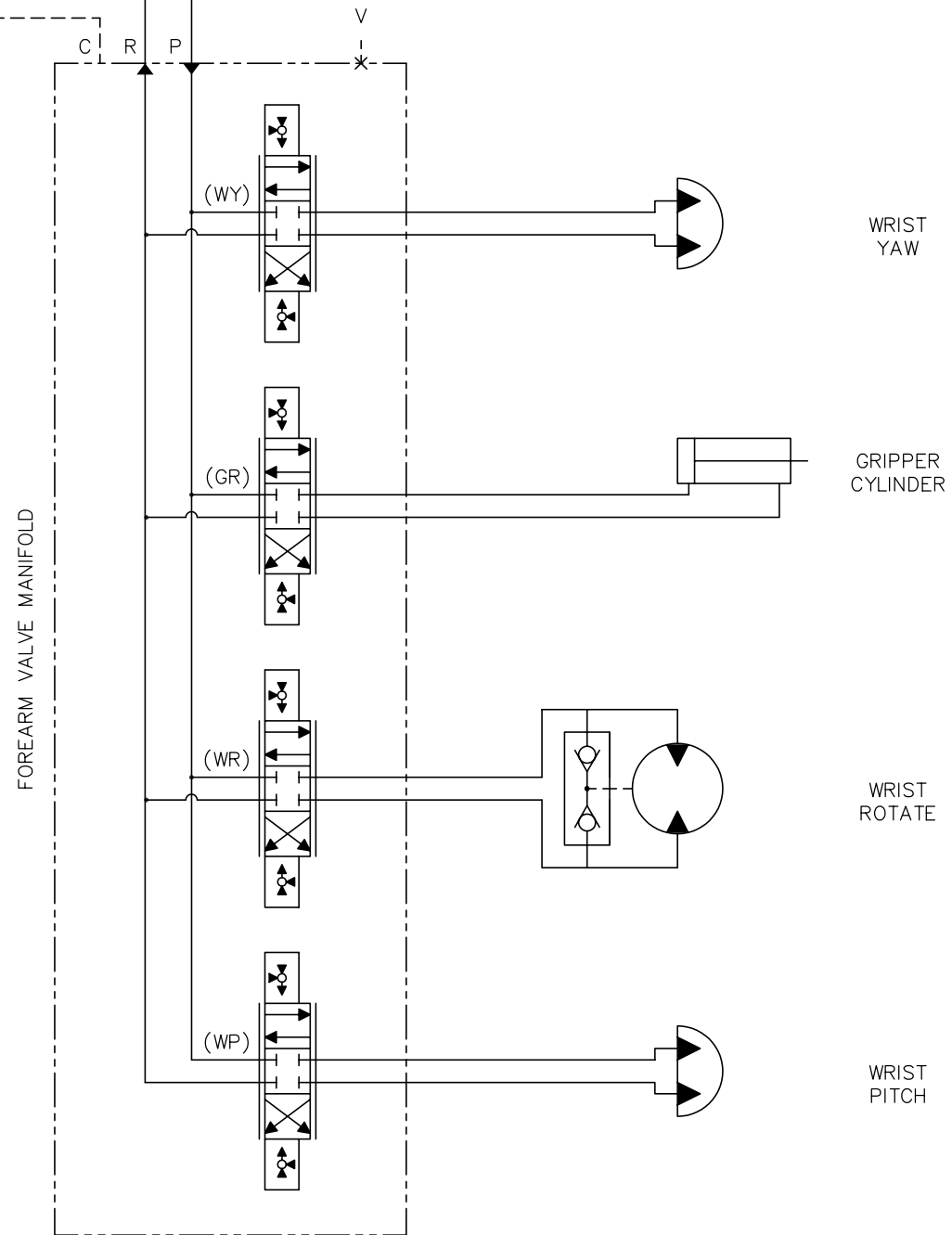
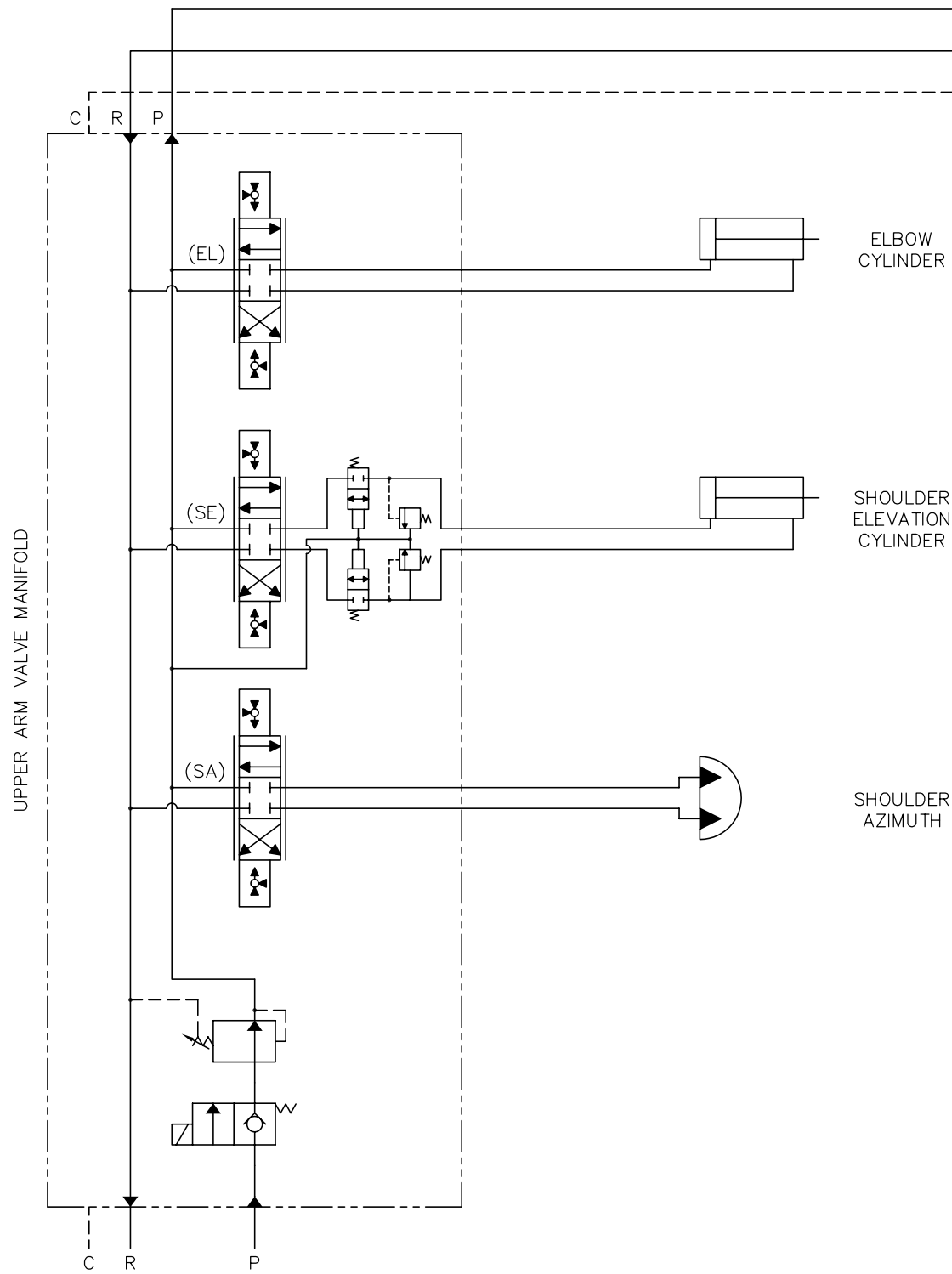
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



018	066-0765-00	JAW, .75" T-HANDLE	2
017	050-0214-12	SCREW, FHS 1/4-20 x 3/4	8
016	050-0210-10	SCREW, FHS 10-24 x 5/8	14
015	052-5001-20	WASHER, TEFLON	4
014	052-5002-20	WASHER, TEFLON	12
013	057-1002-08	PIN, DOWEL 1/8 x 1/2 (SS)	4
012	093-7002-32	BEARING	2
011	093-7003-12	BEARING	4
010	093-7003-23	BEARING	2
009	068-0234-00	PIN	2
008	068-0231-00	PIN	2
007	068-0232-00	PIN	2
006	068-0491-00	PIN	2
005	066-0323-03	BASE, GRIPPER	1
004	066-0324-01	PLATE, GRIPPER SIDE	2
003	066-0326-01	LEVER, LINK	2
002	066-0325-01	LINK, INNER	2
001	066-0327-01	LINK, OUTER	2
ITEM	PART NO.	DESCRIPTION	QTY

RAPTOR		700-9061-00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
--------	--	-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

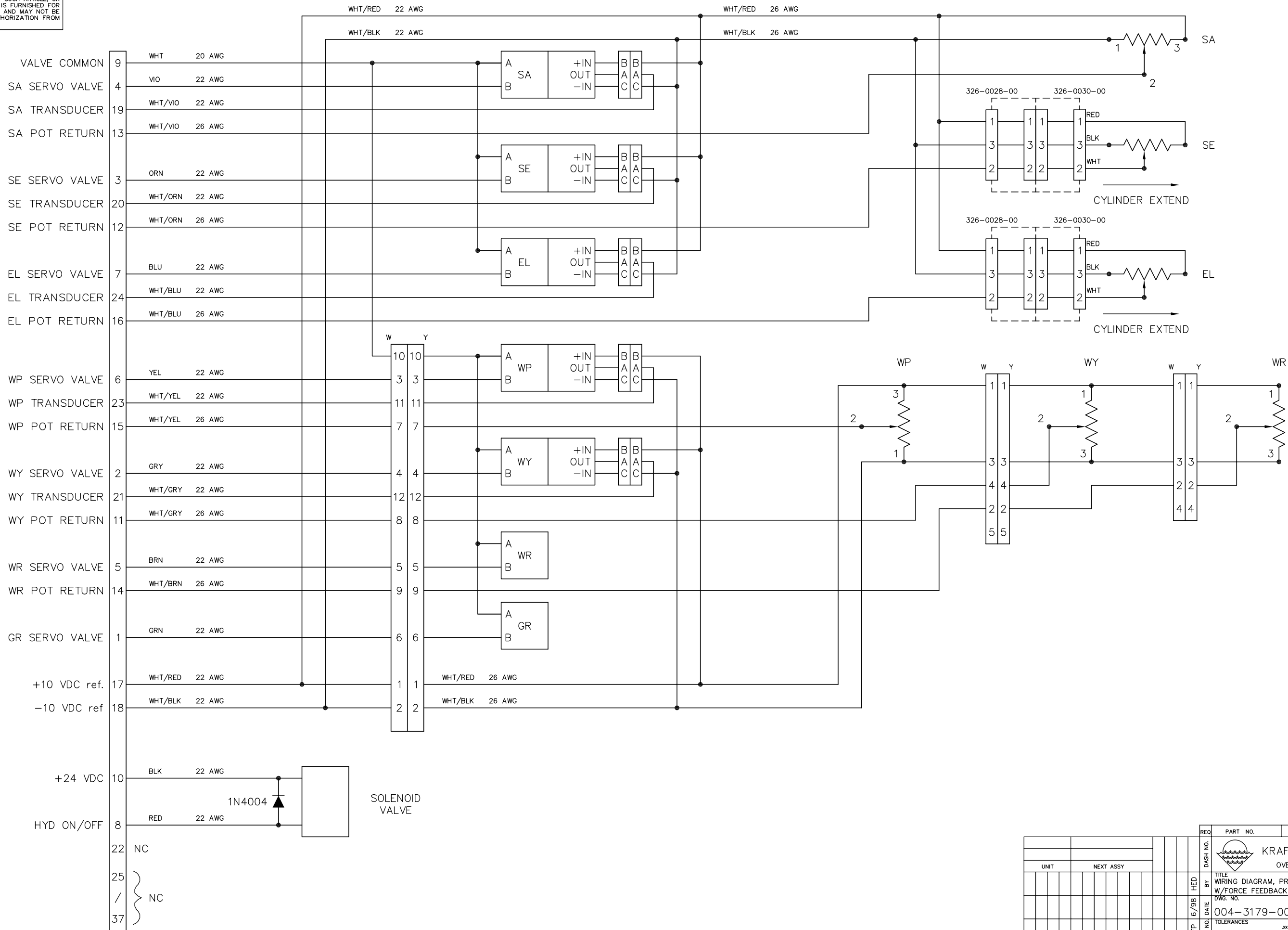
THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.




C - COMP  
P - PRESSURE  
R - RETURN  
V - VENT

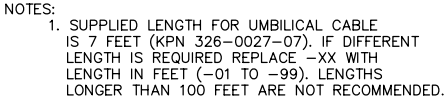
REQ		PART NO.		DESCRIPTION		ITEM
DASH NO.		KRAFT TELEROBOTICS INC.		OVERLAND PARK, KANSAS 66214		
UNIT		NEXT ASSY		TITLE		
				HYDRAULIC SCHEMATIC; PREDATOR/RAPTOR		
		DWG. NO.		SIZE	MATERIAL	
		004-5006-00		D	NA	
		TOLERANCES		FINISH		
		.xx ±.01		INCHES		
		.xxx ±.005		INCHES	NA	
		DRN	CHK	MECH	SCALE	SHT 1
		DATE	DATE	DATE		OF 1
		7/7/98				


THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



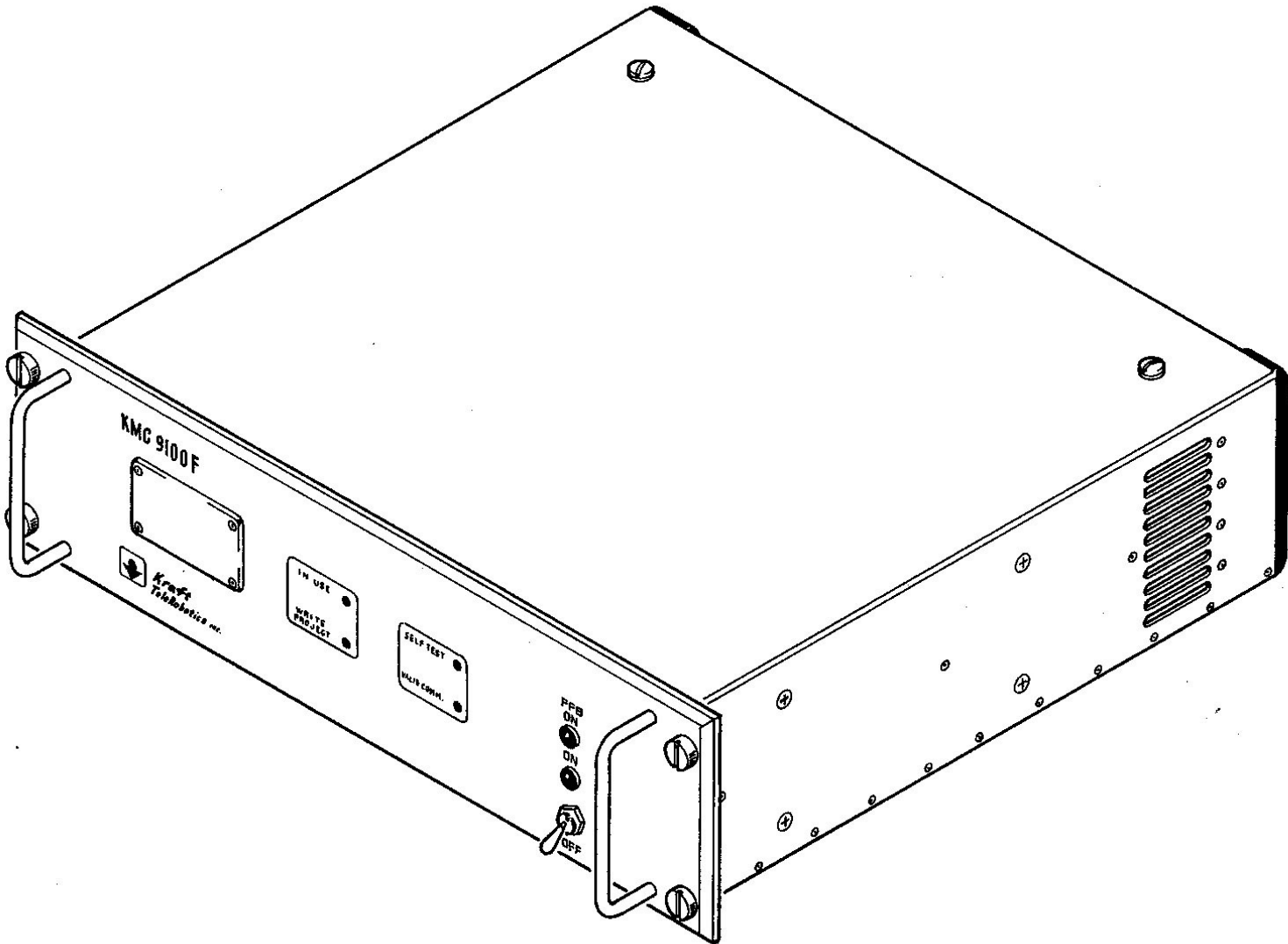
										REQ		PART NO.		DESCRIPTION				ITEM						
										DASH NO.				KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214										
UNIT				NEXT ASSY																				
											RED	BY	TITLE WIRING DIAGRAM, PREDATOR/RAPTOR MANIPULATOR W/FORCE FEEDBACK											
											6/98	DATE	DWG. NO.				SIZE		MATERIAL					
													004-3179-00				D		NA					
											RFP	ECO NO.	TOLERANCES										FINISH	
													.XX ± INCHES						NA					
													ANGLES ± ° INCHES											
											0	REV.	HED	CHK	MCH		SCALE		SHT					
												DATE	6/29/98	DATE	DATE	DATE	NA		OF 1					


CUSTOMER SUPPLIED  
BOTTLE OR ENCLOSURE



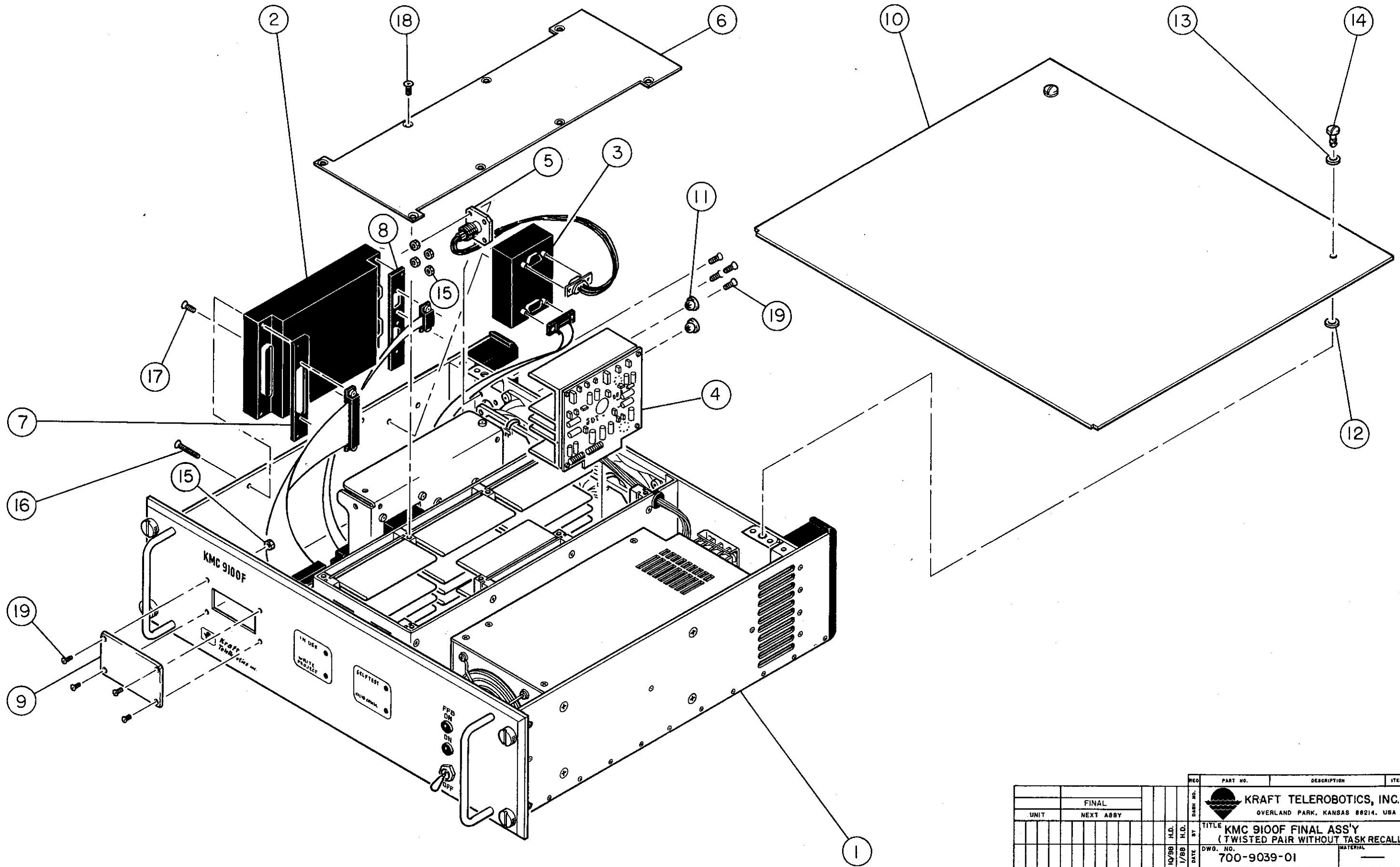
										REQ.		PART NO.		DESCRIPTION						ITEM		
										DASH NO.		 KRAFT TELEROBOTICS INC. OVERLAND PARK, KANSAS 66214										
UNIT				NEXT ASSY						TITLE		WIRING, RSD; PREDATOR \RAPTOR (TWISTED PAIR RS485)										
										165	5/00	HED										
										REV.	9/97	HED										
										ECO NO.	DATE	DATE	DWG. NO.		SIZE		MATERIAL					
													004-3178-00		D		NA					
										TOLERANCES										FINISH		
										ANGLES    ±    °		XX    ±		INCHES		NA						
												XXX    ±		INCHES								
										DIN	HED	CMK	ELEC		MEGH		SCALE					
										DATE	9/23/97	DATE	DATE		DATE		NA		SHT			
																				1		
																				of		
																				1		

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



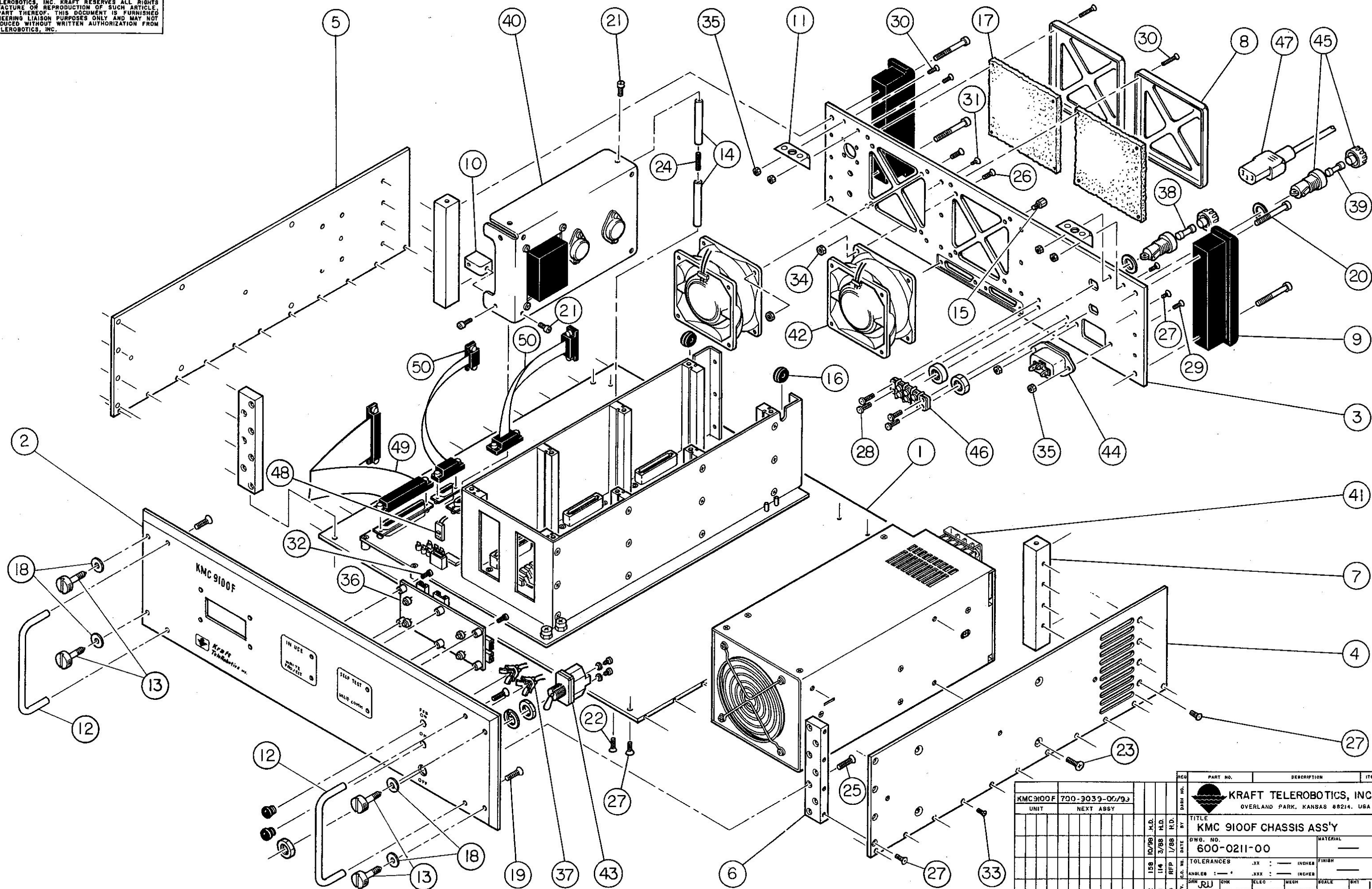
REQ		PART NO.		DESCRIPTION		ITEM	
				 KRAFT TELEROBOTICS, INC.			
				OVERLAND PARK, KANSAS 66214, USA			
				TITLE KMC 9100F ELECTRONICS CHASSIS			
				(W/O TASK RECALL)			
				DWG. NO. 620-0021-01		MATERIAL	
				TOLERANCES .XX : — INCHES		FINISH	
				ANGLES : — ° .XXX : — INCHES			
				REV. 01		DATE 1/18/88	
				ELEC		MECH	
				SCALE		SHT 1	
				DATE		OF 1	

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



REV		PART NO.	DESCRIPTION	ITEM
1		700-9039-01	KMC 9100F FINAL ASS'Y (TWISTED PAIR WITHOUT TASK RECALL)	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT TELEROBOTICS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT TELEROBOTICS, INC.



REV		PART NO.		DESCRIPTION		ITEM
KMC9100F		700-3039-00/93		KRAFT TELEROBOTICS, INC.		
UNIT		NEXT ASSY		OVERLAND PARK, KANSAS 66214, USA		
DATE		DATE		TITLE		
10/98		3/98		KMC 9100F CHASSIS ASS'Y		
114		1/88		DWG. NO.		
RFP		O		600-0211-00		
REV.		C.O. NO.		TOLERANCES		
2		1		.XX : — INCHES		
DATE		DATE		.XXX : — INCHES		
1/18/88		1/18/88		FINISH		
DATE		DATE		SCALE		
DATE		DATE		BHT		
DATE		DATE		OF		

This exploded view diagram illustrates the assembly of a computer case. The components are labeled as follows:

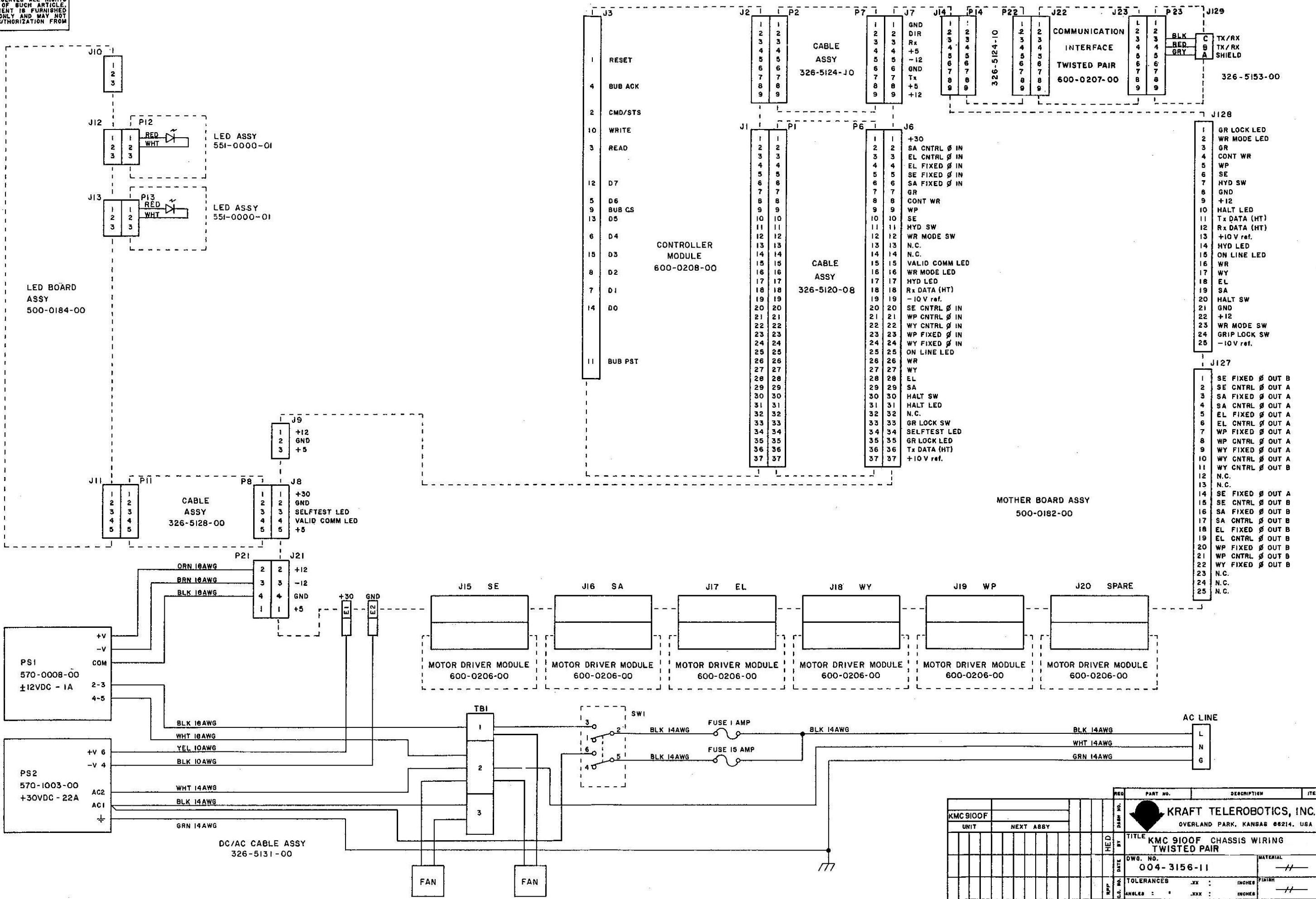
- 1**: The main base plate of the case.
- 2**: The top cover of the case.
- 3**: Vertical support pillars that connect the top cover to the base plate.
- 4**: A front panel or baffle plate that fits into the front of the case.
- 5**: Screws used to secure the front panel to the base plate.
- 6**: Screws used to secure the top cover to the pillars.
- 7**: Screws used to secure the base plate to the pillars.

The diagram shows the base plate (1) with various internal components like a power supply, cooling fan, and drive bays. The top cover (2) is shown being attached to the pillars (3) with screws (6). The front panel (4) is shown being attached to the base plate (1) with screws (5). The pillars (3) are also shown being attached to the base plate (1) with screws (7).

REQ		PART NO.		DESCRIPTION		ITEM	
KMC 9100F		600-0211-0C		KRAFT TELEROBOTICS, INC.			
UNIT		NEXT ASSY		OVERLAND PARK, KANSAS 66214, USA			
		H.D.		TITLE			
		BY		CARD CAGE ASS'Y			
		1-88		DWG. NO.		MATERIAL	
		DATE		600-0210-00		_____	
		RFP		TOLERANCES		FINISH	
				.XX : _____ INCHES		_____	
				ANGLES : — °		_____	
				.XXX : _____ INCHES		_____	
		O		DRN		SHT	
		REV.		CHK		SCALE	
		DATE		DATE		OF	
		1/15/88		DATE		DATE	



THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT OCEAN SYSTEMS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT OCEAN SYSTEMS, INC.



REV.	DATE	BY	CHK.	DATE	DESCRIPTION	ITEM
1	10/1/86	NRH			KMC 9100F CHASSIS WIRING TWISTED PAIR	1
TOLERANCES: .XX : INCHES FINISH: --						
SCALE: 1 : 1						

**KRAFT TELEROBOTICS, INC.**  
OVERLAND PARK, KANSAS 66214, USA


**UNIT: KMC 9100F**  
**NEXT ASSY:**

This diagram shows an exploded view of a mechanical assembly. The components are labeled with circled numbers 1 through 7. The assembly consists of a main rectangular frame (1) with a central opening. A horizontal plate (2) is positioned above the frame. A vertical plate (3) is positioned to the right of the frame. A series of four horizontal plates (4) are stacked within the frame. A series of four vertical plates (5) are stacked within the frame. A series of four horizontal plates (6) are stacked within the frame. A series of four vertical plates (7) are stacked within the frame. The diagram illustrates the relative positions and assembly sequence of these components.

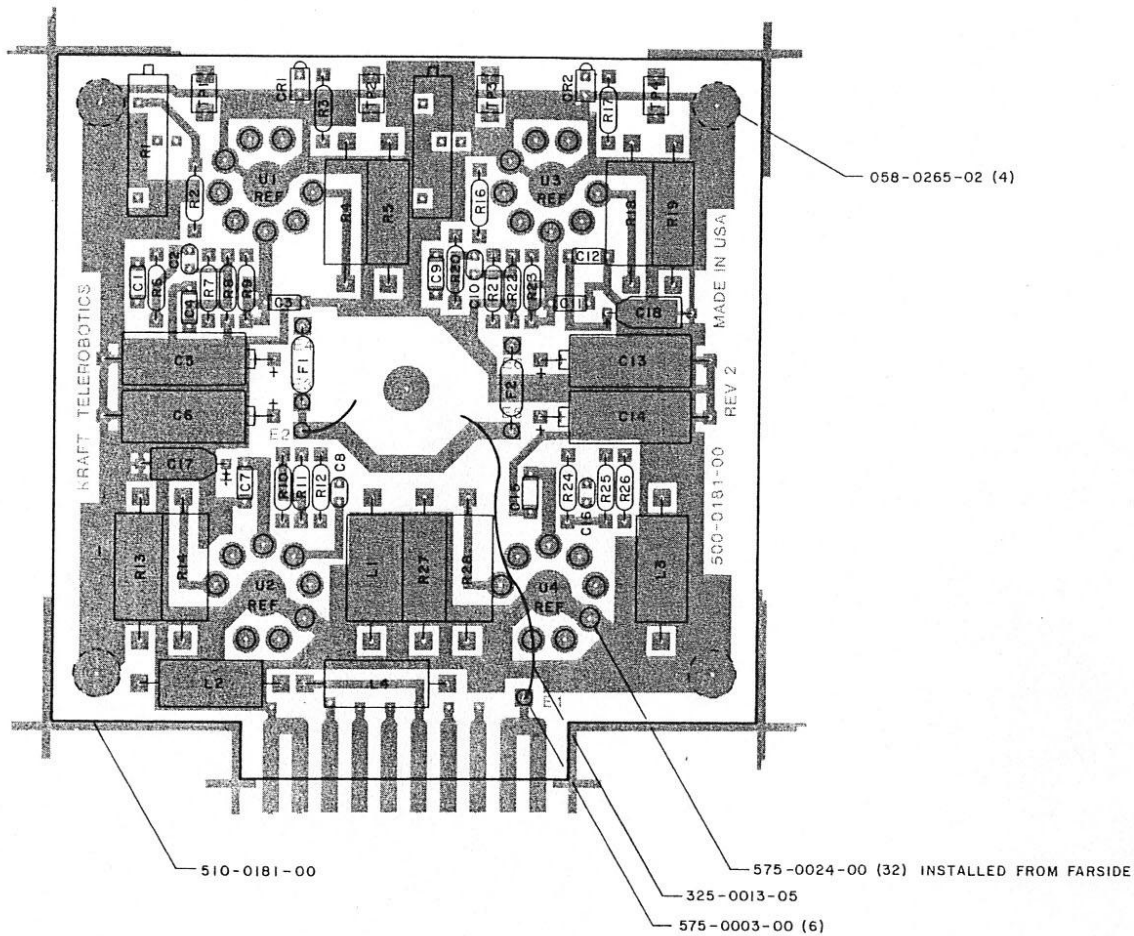
REQ		PART NO.		DESCRIPTION		ITEM	
KMC 9100F		700-9039-00/99		KRAFT OCEAN SYSTEMS, INC.			
UNIT		NEXT ASSY		OVERLAND PARK, KANSAS 66214, USA			
				TITLE			
				SERVO MOTOR DRIVER MODULE			
				DWG. NO. 600-0206-00		MATERIAL //	
				TOLERANCES .XX : INCHES		FINISH	
				ANGLES : .XXX : INCHES		//	
REV.		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	
DATE		DATE		DATE		DATE	
BY		DATE		DATE		DATE	
O		NRH		CHK		ELEG	


The schematic diagram illustrates a four-channel phase shifter circuit, organized into two main input sections: 'FIXED PHASE IN' and 'CONTROL PHASE IN'. Each section contains two op-amp channels (U1, U2 and U3, U4) that process the input signals. The 'FIXED PHASE IN' section uses a 4A fuse (F1) and a 1K resistor (R3) for the input signal. The 'CONTROL PHASE IN' section uses a 4A fuse (F2) and a 1K resistor (R17) for the input signal. The output of each channel is connected to a 5uH/100A inductor (L1, L2, L3, L4) and a 1W resistor (R1, R2, R3, R4). The circuit is powered by a +30V supply and includes various passive components like resistors (R1-R28), capacitors (C1-C18), and diodes (CR1, CR2). The output terminals are labeled 4, 3, 7, 6, 5, and 4, corresponding to the output signals.

1. ALL RESISTOR VALUES ARE IN OHMS, EW 1% UNLESS OTHERWISE SPECIFIED.  
2. ALL CAPACITOR VALUES ARE IN  $\mu$ f, UNLESS OTHERWISE SPECIFIED.

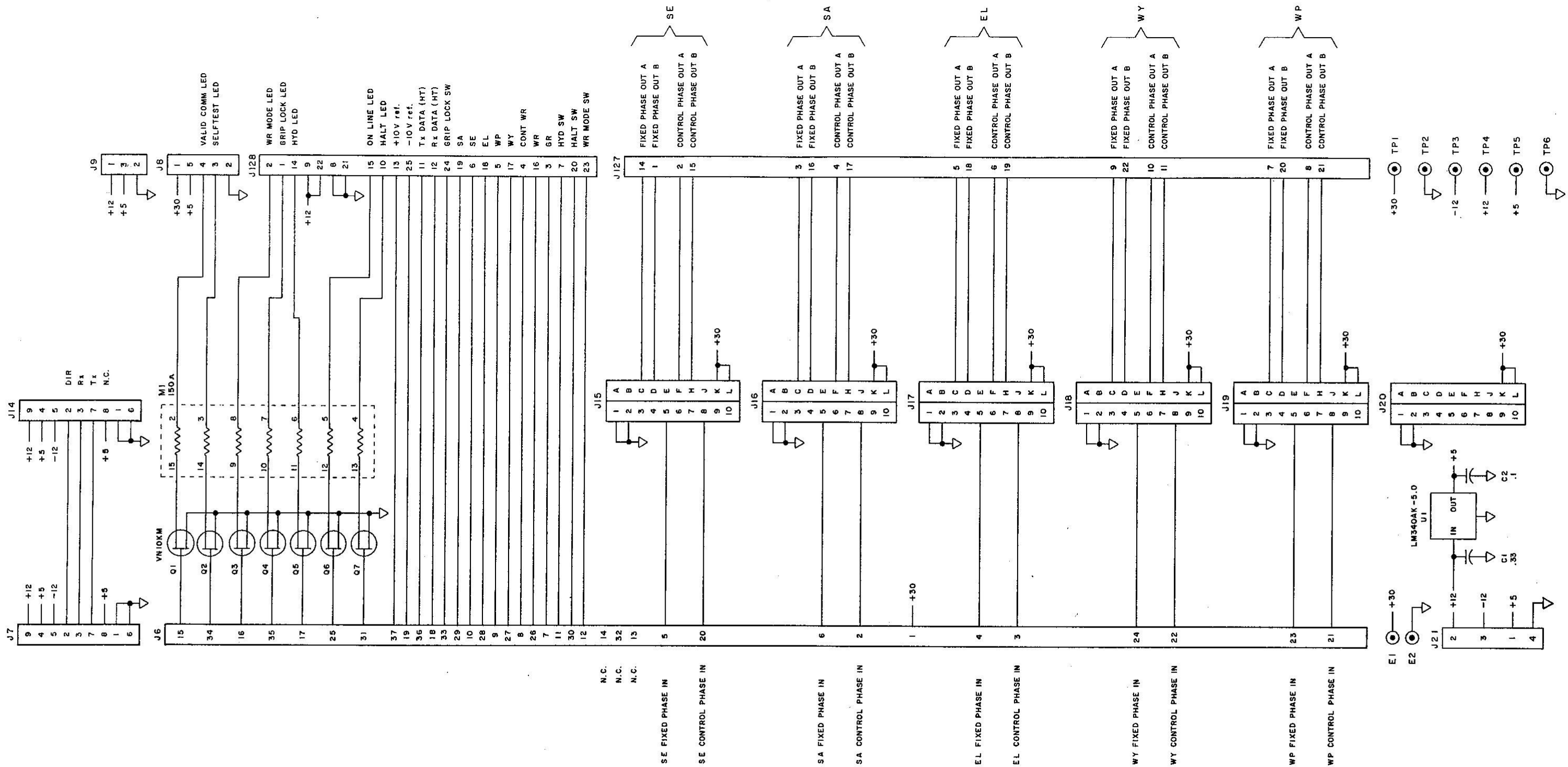
REQ				PART NO.		DESCRIPTION		ITEM	
KMC 9100F				 <b>KRAFT TELEROBOTICS</b> OVERLAND PARK, KANSAS 66214, USA					
UNIT						NEXT ASSY			
				TITLE		MOTOR DRIVER BOARD			
3/88				DWS. NO.		MATERIAL			
				002-0181-00				--	
R P P				TOLERANCES		FINISH			
				.XX : INCHES					
				.XX : INCHES					
Q				NRH		ELEC		SHT	
				DATE		DATE		OP	
				DATE		DATE		DATE	

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT OCEAN SYSTEMS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT OCEAN SYSTEMS, INC.



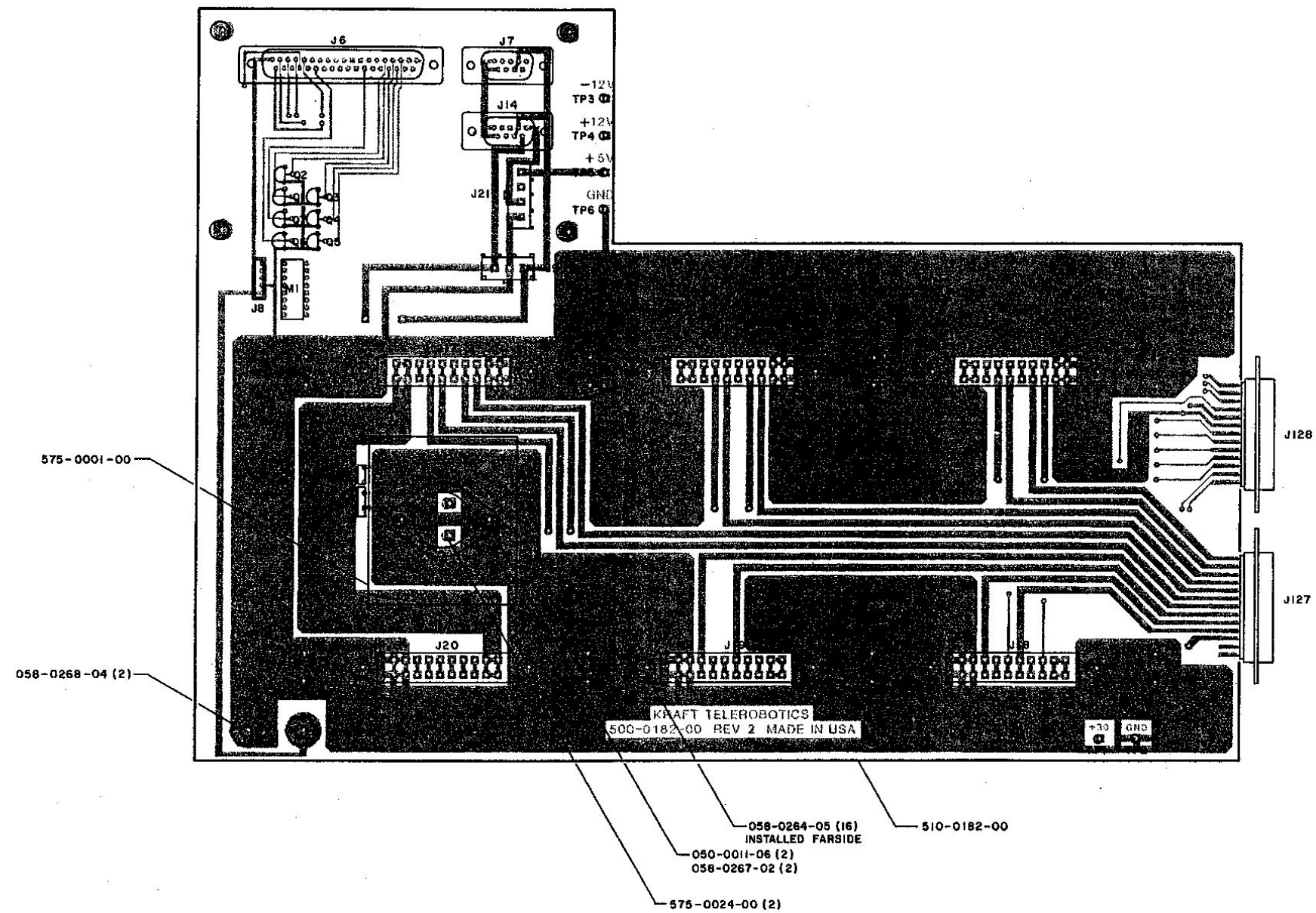
REQ		PART NO.	DESCRIPTION	ITEM
KMC 9100F		500-0181-00	 <b>KRAFT TELEROBOTICS</b> OVERLAND PARK, KANSAS 66214, USA	
UNIT		NEXT ASSY		
			TITLE	
			MOTOR DRIVER BOARD	
			DWG. NO.	
			006-0181-00	
			TOLERANCES	
			.XX : INCHES	
			.XXX : INCHES	
			ORIGIN	
			CHK	
			ELEC	
			MECH	
			SCALE	
			2:1	
			SHT	
			OF	
			1	

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT OCEAN SYSTEMS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT OCEAN SYSTEMS, INC.



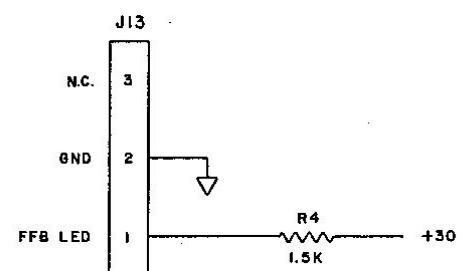
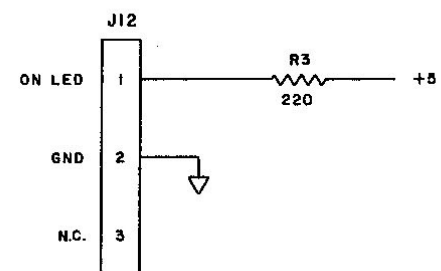
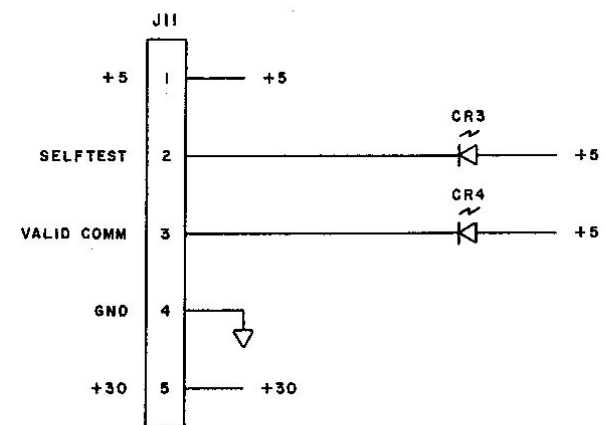
REV		PART NO.	DESCRIPTION	ITEM
1		002-0182-01	MOTHER BOARD	
2		11/4	7/88	MED
3		11/1	3/88	N/D
4		11/1	1/88	BY
5		11/1	1/88	BY
6		11/1	1/88	BY
7		11/1	1/88	BY
8		11/1	1/88	BY
9		11/1	1/88	BY
10		11/1	1/88	BY
11		11/1	1/88	BY
12		11/1	1/88	BY
13		11/1	1/88	BY
14		11/1	1/88	BY
15		11/1	1/88	BY
16		11/1	1/88	BY
17		11/1	1/88	BY
18		11/1	1/88	BY
19		11/1	1/88	BY
20		11/1	1/88	BY
21		11/1	1/88	BY
22		11/1	1/88	BY
23		11/1	1/88	BY
24		11/1	1/88	BY
25		11/1	1/88	BY
26		11/1	1/88	BY
27		11/1	1/88	BY
28		11/1	1/88	BY
29		11/1	1/88	BY
30		11/1	1/88	BY
31		11/1	1/88	BY
32		11/1	1/88	BY
33		11/1	1/88	BY
34		11/1	1/88	BY
35		11/1	1/88	BY
36		11/1	1/88	BY
37		11/1	1/88	BY
38		11/1	1/88	BY
39		11/1	1/88	BY
40		11/1	1/88	BY
41		11/1	1/88	BY
42		11/1	1/88	BY
43		11/1	1/88	BY
44		11/1	1/88	BY
45		11/1	1/88	BY
46		11/1	1/88	BY
47		11/1	1/88	BY
48		11/1	1/88	BY
49		11/1	1/88	BY
50		11/1	1/88	BY
51		11/1	1/88	BY
52		11/1	1/88	BY
53		11/1	1/88	BY
54		11/1	1/88	BY
55		11/1	1/88	BY
56		11/1	1/88	BY
57		11/1	1/88	BY
58		11/1	1/88	BY
59		11/1	1/88	BY
60		11/1	1/88	BY
61		11/1	1/88	BY
62		11/1	1/88	BY
63		11/1	1/88	BY
64		11/1	1/88	BY
65		11/1	1/88	BY
66		11/1	1/88	BY
67		11/1	1/88	BY
68		11/1	1/88	BY
69		11/1	1/88	BY
70		11/1	1/88	BY
71		11/1	1/88	BY
72		11/1	1/88	BY
73		11/1	1/88	BY
74		11/1	1/88	BY
75		11/1	1/88	BY
76		11/1	1/88	BY
77		11/1	1/88	BY
78		11/1	1/88	BY
79		11/1	1/88	BY
80		11/1	1/88	BY
81		11/1	1/88	BY
82		11/1	1/88	BY
83		11/1	1/88	BY
84		11/1	1/88	BY
85		11/1	1/88	BY
86		11/1	1/88	BY
87		11/1	1/88	BY
88		11/1	1/88	BY
89		11/1	1/88	BY
90		11/1	1/88	BY
91		11/1	1/88	BY
92		11/1	1/88	BY
93		11/1	1/88	BY
94		11/1	1/88	BY
95		11/1	1/88	BY
96		11/1	1/88	BY
97		11/1	1/88	BY
98		11/1	1/88	BY
99		11/1	1/88	BY
100		11/1	1/88	BY

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT OCEAN SYSTEMS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT OCEAN SYSTEMS, INC.

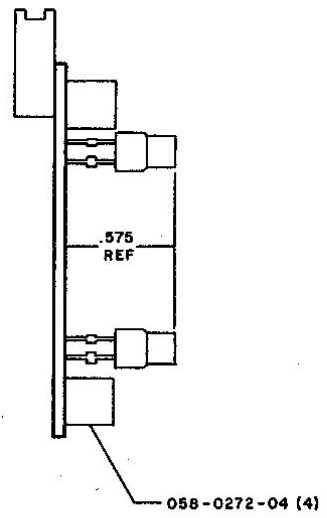
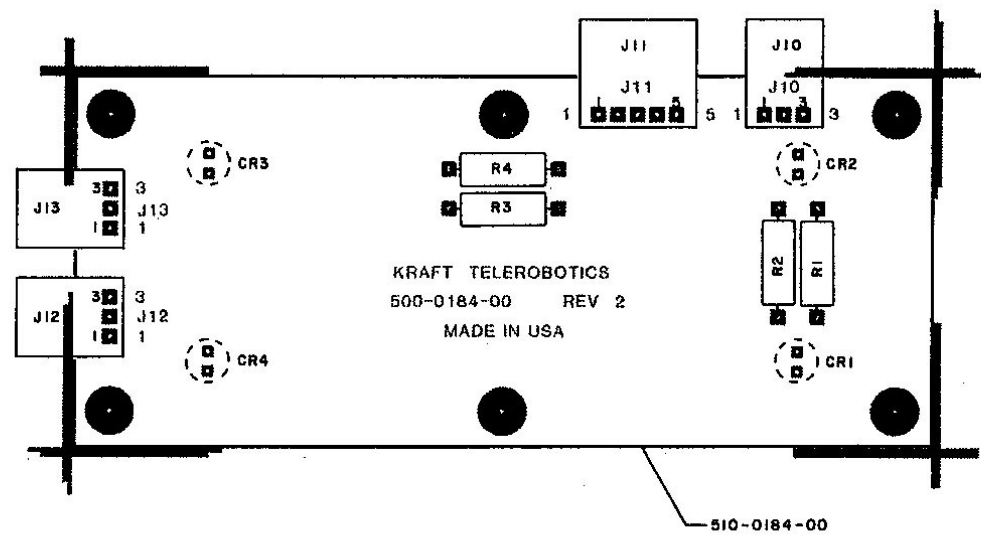


REQ		PART NO.		DESCRIPTION		ITEM	
				KRAFT TELEROBOTICS			
UNIT		NEXT ASSY		OVERLAND PARK, KANSAS 66214, USA			
				TITLE			
				MOTHER BOARD			
				DWG. NO.		MATERIAL	
				006-0182-00		--	
				TOLERANCES		FINISH	
				.XX		INCHES	
				.XXX		INCHES	
				ANGLES			
				.XX		INCHES	
				.XXX		INCHES	
				SCALE		UNIT	
				1:1		OF 1	



[illegible]

THE PART SHOWN HEREIN IS A PROPRIETARY PRODUCT OF KRAFT OCEAN SYSTEMS, INC. KRAFT RESERVES ALL RIGHTS OF MANUFACTURE OR REPRODUCTION OF SUCH ARTICLE, OR ANY PART THEREOF. THIS DOCUMENT IS FURNISHED FOR ENGINEERING LIAISON PURPOSES ONLY AND MAY NOT BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION FROM KRAFT OCEAN SYSTEMS, INC.



NOTES:  
1. TO INSTALL LEDS CR1 THRU CR4 USE .575 REF DIMENSION AND SOLDER ONE LEAD TO P.C. BOARD. MOUNT BOARD TO KMC 9100F FRONT PANEL (KPN 066-0387-02) FLUSH MOUNT LEDS AND SOLDER.

REQ		PART NO.		DESCRIPTION		ITEM
KMC 9100F		500-0184-00		KRAFT TELEROBOTICS		
UNIT		NEXT ASSY		OVERLAND PARK, KANSAS 66214, USA		
				TITLE		
				LED BOARD		
				DWG. NO.		
				006-0184-00		
				TOLERANCES		
				.XX : INCHES		
				.XXX : INCHES		
				SCALE		
				2:1		
				SHEET		
				1 OF 1		



KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: FFB MINI-MASTER FINAL ASSEMBLY  
REV 2                      7/28/2004

ASS'Y NO. 700-9075-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	014-2094-00	LOGO, KRAFT ENCAPSULATED	EA	2	FA
002	068-0501-02	CAP	EA	8	FA
003	600-0256-00	GRIP/ROLL/YAW ASS'Y	EA	1	FA
004	066-0803-01	PLATE, COVER	EA	2	FA
005	050-0276-04	SCREW, 2-56 x 1/4 SHC	EA	8	FA
006	068-0500-01	COUPLING	EA	2	FA
007	050-0280-05	SCREW, 4-40 x 5/16 SHC	EA	4	FA
008	529-0145-00	WIPER, POTENTIOMETER	EA	2	OB
009	066-0796-01	BRACKET, PITCH (RIGHT)	EA	1	FA
010	050-0429-04	SCREW, 0-80 x 1/4 FHP	EA	4	FA
011	050-0273-04	SCREW, 0-80 x 1/4 SHC	EA	4	FA
012	529-0144-00	ELEMENT, POTENTIOMETER	EA	2	OB
013	066-0798-01	FOREARM; RIGHT HALF	EA	1	FA
014	600-0260-00	ACTUATOR, WP	EA	1	FA
015	050-0276-06	SCREW, 2-56 x 3/8 SHC	EA	12	FA
016	066-0799-01	FOREARM; LEFT HALF	EA	1	FA
017	050-0280-07	SCREW, 4-40 x 7/16 SHC	EA	6	FA
018	093-5019-00	BALL BEARING	EA	2	FA
019	066-0797-01	BRACKET, PITCH (LEFT)	EA	1	FA
020	066-0802-01	PLATE, UPPER ARM COVER	EA	2	FA
021	066-0800-01	UPPER ARM; RIGHT HALF	EA	1	FA
022	066-0801-01	UPPER ARM; LEFT HALF	EA	1	FA
023	600-0261-00	ACTUATOR, EL	EA	1	FA
024	053-4003-00	SPRING, TORSION	EA	1	FA
025	066-0821-01	HEATSINK	EA	4	FA
026	600-0257-00	AZIMUTH/SHOULDER ASS'Y	EA	1	FA
027	050-0280-06	SCREW, 4-40 x 3/8 SHC	EA	6	FA
028	052-5019-20	WASHER	EA	4	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: RAPTOR FINAL ASS'Y W/FFB  
REV: 2

ASS'Y NO. 700-9061-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	600-0250-01	ARM/WRIST ASS'Y	EA	1	FA
002	600-0133-02	GRIPPER ASS'Y 3/4"	EA	1	FA
003	068-0316-00	SWIVEL	EA	1	FA
004	052-0022-11	NUT, NYLOCK 5/16-24	EA	1	OB
005	050-0288-10	SCREW, SHC 10-24 x 5/8	EA	8	OB

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: KMC9100F; TWISTED PAIR WO/TASK RECALL  
REV. 0

ASS'Y NO 700-9039-01

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	600-0211-00	CHASSIS ASS'Y	EA	1	
002	600-0208-00	CONTROLLER MODULE	EA	1	
003	600-0207-00	CIM; TWISTED PAIR	EA	1	
004	600-0206-00	SERVO MOTOR DRIVER	EA	5	
005	326-5129-00	CABLE ASSY; SIGNAL	EA	1	
006	070-0136-02	AIR TUNNEL COVER	EA	1	
007	066-0530-01	CONNECTOR MOUNTING PLT	EA	1	
008	066-0529-01	CONNECTOR MOUNTING PLT	EA	1	
009	066-0463-01	BEZEL, BLANK	EA	1	
010	066-0391-01	TOP PANEL	EA	1	
011	058-0266-04	PLUG, 1/4 HOLE	EA	2	
012	058-0212-00	RING, SNAP	EA	2	
013	058-0211-00	WASHER	EA	2	
014	058-0208-00	QT FASTNER	EA	2	
015	052-0007-11	NUT, HEX NYLOK 4-40	EA	8	
016	050-0442-16	SCREW, FHP 8-32 X 1	EA	4	
017	050-0440-06	SCREW, FHP 6-32 X 3/8	EA	4	
018	050-0441-04	SCREW, FHP 6-32 X 1/4	EA	8	
019	050-0436-06	SCREW, FHP 4-40 X 3/8	EA	8	

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: TRIGGER POTENTIOMETER ASS'Y (FFB MM)  
REV 0

ASS'Y NO. 600-0259-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	066-0819-01	TRIGGER	EA	1	FA
002	529-0148-00	WIPER, GR	EA	1	FA
003	529-0146-00	ELEMENT, POTENTIOMETER	EA	1	FA
004	050-0429-03	SCREW, 0-80 x 3/16 FHP	EA	2	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: ROCKER POTENTIOMETER ASS'Y (FFB MM)  
REV 1

ASS'Y NO. 600-0258-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	066-0818-02	ROCKER	EA	1	FA
002	050-0120-02	SCREW, 2-56 x 1/8 SET	EA	2	FA
003	058-0291-00	SPRING LEVER	EA	2	FA
004	053-4001-00	SPRING, TORSION	EA	1	FA
005	066-0817-00	HOUSING, ROCKER	EA	1	FA
006	529-0147-00	WIPER, WR	EA	1	FA
007	529-0146-00	ELEMENT, POTENTIOMETER	EA	1	FA
008	050-0429-03	SCREW, 0-80 x 3/16 FHP	EA	2	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: BASE/SHOULDER ASS'Y (FFB MM)  
REV 2

ASS'Y NO. 600-0257-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	050-0273-04	SCREW, 0-80 x 1/4 SHC	EA	4	FA
002	529-0144-00	ELEMENT, POTENTIOMETER	EA	2	FA
003	050-0276-08	SCREW, 2-56 x 1/2 SHC	EA	4	FA
004	068-0499-01	PLATE, POT. MOUNTING	EA	1	FA
005	600-0261-00	ACTUATOR	EA	2	FA
006	093-5019-00	BEARING, BALL	EA	2	FA
007	050-0280-05	SCREW, 4-40 x 5/16 SHC	EA	4	FA
008	068-0515-01	SPINDLE, AZIMUTH	EA	1	FA
009	066-0813-01	HOUSING, SHOULDER	EA	1	FA
010	050-0276-06	SCREW, 2-56 x 3/8 SHC	EA	4	FA
011	068-0514-01	HOUSING, AZIMUTH ACTUATOR	EA	1	FA
012	574-0002-00	SWITCH, PUSHBUTTON	EA	1	FA
013	575-0031-00	BEZEL, LED	EA	1	FA
014	066-0812-02	BASE	EA	1	FA
015	551-0005-00	LED, BLUE	EA	1	FA
016	050-0429-04	SCREW, 0-80 x 1/4 FHP	EA	2	FA
017	529-0145-00	WIPER, POTENTIOMETER	EA	1	FA
018	068-0500-01	COUPLING	EA	1	FA
019	050-0276-03	SCREW, 2-56 x 3/16 SHC	EA	4	FA
020	327-3017-26	CONNECTOR, HD M	EA	1	FA
021	327-3018-26	CONNECTOR, HD F	EA	1	FA
022	575-0032-00	GUIDE, POLARIZING; M	EA	2	FA
023	575-0033-00	GUIDE, POLARIZING; F	EA	2	FA
024	014-2093-02	PLATE, SERIAL NO.	EA	1	FA
025	050-0429-03	SCREW, 0-80 x 3/16 FHP	EA	2	FA
026	050-0280-06	SCREW, 4-40 x 3/8 SHC	EA	7	FA

# KRAFT TELEROBOTICS ASSEMBLY PARTS LIST

NAME: GRIP/ROLL/YAW ASS'Y (FFB MM)  
REV 2

ASS'Y NO. 600-0256-00  
PAGE 1

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	066-0816-01	GRIP, LEFT HALF	EA	1	FA
002	068-0520-00	BEARING	EA	2	FA
003	052-5017-40	WASHER	EA	1	FA
004	057-1008-08	PIN, DOWEL 1/16 x 1/2 (SS)	EA	1	FA
005	057-1009-04	PIN, SPRING 1/16 x 1/4 (SS)	EA	1	FA
006	053-0003-00	SPRING, TRIGGER	EA	1	FA
007	600-0259-00	TRIGGER ASS'Y	EA	1	FA
008	052-5018-40	WASHER	EA	1	FA
009	066-0815-01	GRIP, RIGHT HALF	EA	1	FA
010	050-0436-12	SCREW, 4-40 x 3/4 FHP	EA	1	FA
011	050-0436-10	SCREW, 4-40 x 5/8 FHP	EA	1	FA
012	574-0014-00	SWITCH, PUSHBUTTON	EA	3	FA
013	551-0003-01	LED (GREEN)	EA	3	FA
014	066-0820-02	SWITCH PLATE	EA	1	FA
015	574-0014-01	CAP, SWITCH (BLACK)	EA	3	OB
016	600-0258-00	ROCKER ASS'Y	EA	1	FA
017	050-0276-10	SCREW, 2-56 x 5/8 SHC	EA	2	FA
018	066-0814-01	SWIVEL, GRIP	EA	1	FA
019	068-0518-01	NUT, SWIVEL LOCK	EA	1	FA
020	068-0519-01	SCREW, RETAINING	EA	1	FA
021	093-5020-00	BALL BEARING	EA	1	FA
022	068-0517-01	HOUSING, WRIST ROLL	EA	1	FA
023	100-0180-08	SEAL	EA	1	FA
024	058-0287-08	RETAINING RING	EA	1	FA
025	050-0280-07	SCREW, 4-40 x 7/16 SHC	EA	4	FA
026	093-5019-00	BALL BEARING	EA	2	FA
027	529-0145-00	WIPER, POTENTIOMETER	EA	2	OB
028	050-0429-04	SCREW, 0-80 x 1/4 FHP	EA	4	OB
029	050-0273-04	SCREW, 0-80 x 1/4 SHC	EA	4	OB
030	529-0144-00	ELEMENT, POTENTIOMETER	EA	2	OB
031	050-0280-04	SCREW, 4-40 x 1/4 SHC	EA	4	FA
032	068-0516-01	BASE, WRIST ROLL	EA	1	FA
033	066-0793-01	BRACKET, YAW (TOP)	EA	1	FA
034	050-0276-06	SCREW, 2-56 x 3/8 SHC	EA	4	FA
035	600-0260-00	ACTUATOR	EA	1	FA
036	066-0795-01	HOUSING, WRIST YAW	EA	1	FA
037	066-0794-01	BRACKET, YAW (BOTTOM)	EA	1	FA
038	068-0500-01	COUPLING	EA	1	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: GRIP/ROLL/YAW ASS'Y (FFB MM)  
REV 2

ASS'Y NO. 600-0256-00  
PAGE 2

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
039	050-0280-06	SCREW, 4-40 x 3/8 SHC	EA	1	FA
040	050-0276-04	SCREW, 2-56 x 1/4 SHC	EA	4	FA
041	050-0120-02	SCREW, 2-56 x 1/8 SET	EA	1	FA
042	052-5019-20	WASHER	EA	1	FA



KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: ARM/WRIST ASS'Y (W/FFB)  
REV 0

ASS'Y NO. 600-0250-01

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	600-0249-01	UPPER ARM/FOREARM ASS'Y	EA	1	FA
002	099-2023-37	O-RING	EA	1	OB
003	099-2011-37	O-RING	EA	6	OB
004	057-1005-12	PIN, DOWEL 3/8 x 3/4 (SS)	EA	2	OB
005	600-0238-00	WRIST YAW/ROLL ACT. ASS'Y	EA	1	FA
006	050-0296-16	SCREW, SHC 3/8-16 X 1	EA	4	OB

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: UPPER ARM/FOREARM ASS'Y  
REV 1

ASS'Y NO. 600-0249-01

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	600-0245-01	AZ ACT/UPPER ARM ASS'Y	EA	1	FA
002	050-0292-12	SCREW, SHC 1/4-20 x 3/4	EA	14	OB
003	066-0769-02	TRUNNION PORT CAP; RIGHT	EA	1	FA
004	093-7023-08	BEARING, FILAMENT	EA	2	OB
005	099-2009-37	O-RING	EA	2	OB
006	099-2010-37	O-RING	EA	4	OB
007	068-0496-00	PIN, TRUNNION PORT	EA	2	FA
008	066-0782-01	CLAMP	EA	2	FA
009	050-0288-16	SCREW, SHC 10-24 x 1	EA	4	OB
010	066-0852-01	COVER, UPPER ARM	EA	1	FA
011	050-0331-08	SCREW, HHC 1/4-20 x 1/2	EA	6	OB
012	068-0476-00	PIN, ELBOW	EA	1	FA
013	058-0282-24	RING, RETAINING	EA	1	OB
014	600-0248-01	FOREARM / WRIST PITCH ASS'Y	EA	1	FA
015	068-0475-00	PIN, ROD	EA	1	FA
016	093-7026-24	BEARING, THRUST	EA	2	OB
017	058-0282-14	RING, RETAINING	EA	1	OB
018	066-0770-02	TRUNNION PORT CAP; LEFT	EA	1	FA
019	068-0489-01	SPACER	EA	2	FA
020	600-0242-00	ACTUATOR, LINEAR	EA	1	FA
021	066-0853-00	BUMPER, RIGHT	EA	1	FA
022	066-0854-00	BUMPER, LEFT	EA	1	FA
023	050-0289-08	SCREW, SHC 10-32 x 1/2	EA	12	OB
024	058-0288-00	INSERT, 10-32	EA	12	FA
025	096-0142-04	PLUG	EA	2	OB
026	052-6010-11	WASHER, FLAT; (SS) 1/4"	EA	6	OB

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: FOREARM/WRIST PITCH ACTUATOR ASS'Y  
REV: 1      7/28/2004

ASS'Y NO. 600-0248-01

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	600-0247-01	FOREARM/ELBOW ASS'Y	EA	1	FA
002	050-0288-10	SCREW, SHC 10-24 x 5/8	EA	8	OB
003	066-0650-02	PORT PLATE, WP POT SIDE	EA	1	FA
004	099-2010-37	O-RING	EA	19	OB
005	050-0284-06	SCREW, SHC 6-32 x 3/8	EA	6	OB
006	068-0420-01	PLATE, SEAL	EA	1	FA
007	068-0418-00	BEARING	EA	1	FA
008	050-0294-24	SCREW, SHC 5/16-18 x 1 1/2	EA	4	OB
009	066-0649-01	BRACKET, WP POT SIDE	EA	1	FA
010	057-1006-16	PIN, DOWEL 5/16 x 1 (SS)	EA	4	OB
011	066-0647-01	BRACKET, WP SHAFT SIDE	EA	1	FA
012	050-0292-16	SCREW, SHC 1/4-20 x 1	EA	1	OB
013	066-0648-02	PORT PLATE, WP SHAFT SIDE	EA	1	FA
014	050-0286-08	SCREW, SHC 8-32 x 1/2	EA	6	OB
015	099-2007-37	O-RING	EA	8	OB
016	600-0227-00	WRIST PITCH ACT. ASS'Y	EA	1	FA
017	068-0419-00	BEARING	EA	1	FA
018	099-4122-37	SEAL, SHAFT	EA	1	OB
019	099-2035-37	O-RING	EA	1	OB

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: FOREARM/ELBOW ASS'Y (W/FFB)  
REV 1

ASS'Y NO. 600-0247-01

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	050-0294-24	SCREW, SHC 5/16-18 x 1 1/2	EA	2	OB
002	050-0294-14	SCREW, SHC 5/16-18 x 7/8	EA	6	OB
003	066-0783-01	BRACKET, ELBOW; RIGHT	EA	1	FA
004	093-7024-14	BEARING, FILAMENT	EA	2	OB
005	066-0784-01	BRACKET, ELBOW; LEFT	EA	1	FA
006	057-1006-16	PIN, DOWEL 5/16 x 1 (SS)	EA	4	OB
007	600-0246-01	FOREARM MANIFOLD ASS'Y	EA	1	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: ASS'Y, VALVE MANIFOLD; FOREARM (W/FFB)  
REV 2

ASS'Y NO. 600-0246-01

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	050-0286-08	SCREW, SHC 8-32 x 1/2	EA	30	OB
002	066-0785-02	FOREARM VALVE MANIFOLD	EA	1	FA
003	099-2012-37	O-RING	EA	2	OB
004	401-2001-00	VALVE, SERVO	EA	3	OB
005	401-2002-00	VALVE, SERVO	EA	1	FA
006	099-2170-37	O-RING	EA	2	OB
007	066-0727-01	FOREARM	EA	1	FA
008	096-0120-06	FITTING, 90° ELBOW	EA	3	OB
009	096-0124-04	PLUG, HOLLOW HEX	EA	1	OB
010	050-0288-16	SCREW, SHC 10-24 x 1	EA	5	OB
011	050-0288-28	SCREW, SHC 10-24 x 1 3/4	EA	8	OB
012	099-2011-37	O-RING	EA	8	OB
013	066-0728-01	COVER, FOREARM	EA	1	FA
014	050-0288-38	SCREW, SHC 10-24 x 2 3/8	EA	8	OB
015	576-0125-03	PRESSURE TRANSDUCER	EA	2	OB
016	327-3015-14	CONNECTOR	EA	1	FA
017	327-3016-14	CONNECTOR	EA	1	FA
018	326-5172-00	WIRING,	EA	1	FA
019	058-0204-02	WIRE CLAMP	EA	2	FA
020	068-0409-00	SPACER	EA	2	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: UPPER ARM/AZIMUTH ACTUATOR ASS'Y (W/FFB) ASS'Y NO. 600-0245-01  
REV 2

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	068-0498-00	PIN, SHOULDER	EA	1	FA
002	050-0300-20	SCREW, SHC 1/2-13 X 1 1/4	EA	6	OB
003	066-0789-01	BRACKET, ELEVATION; RIGHT	EA	1	FA
004	057-1007-24	PIN, DOWEL 1/2 x 1 1/2 (SS)	EA	4	OB
005	600-0224-00	AZIMUTH ACTUATOR ASS'Y	EA	1	FA
006	066-0790-01	BRACKET, ELEVATION; LEFT	EA	1	FA
007	058-0282-24	RING, RETAINING	EA	1	OB
008	068-0475-00	PIN, ROD	EA	1	FA
009	068-0489-01	SPACER	EA	2	FA
010	058-0282-14	RING, RETAINING	EA	1	OB
011	050-0292-12	SCREW, SHC 1/4-20 x 3/4	EA	14	OB
012	066-0770-02	TRUNNION PORT CAP; LEFT	EA	1	FA
013	093-7023-08	BEARING, FILAMENT	EA	2	OB
014	099-2009-37	O-RING	EA	2	OB
015	099-2010-37	O-RING	EA	4	OB
016	068-0496-00	PIN, TRUNNION PORT	EA	1	FA
017	600-0244-01	UPPER ARM ASS'Y	EA	1	FA
018	066-0769-02	TRUNNION PORT CAP; RIGHT	EA	1	FA
019	600-0242-00	ACTUATOR, LINEAR	EA	1	FA
020	093-7026-24	BEARING, THRUST	EA	2	OB
021	096-0124-00	PLUG	EA	2	OB
022	014-2091-00	SERIAL NUMBER PLATE	EA	1	FA
023	050-0167-04	SCREW, BHS 6-32 x 1/4	EA	4	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: UPPER ARM ASS'Y W/FFB  
REV 2

ASS'Y NO. 600-0244-01

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	050-0288-08	SCREW, SHC 10-24 x 1/2	EA	14	OB
002	066-0774-01	VALVE COVER	EA	1	FA
003	099-2169-37	O-RING	EA	1	OB
004	050-0292-12	SCREW, SHC 1/4-20 x 3/4	EA	26	OB
005	066-0779-01	UPPER ARM PLATE, RIGHT	EA	1	FA
006	600-0243-01	UPPER ARM MANIFOLD ASS'Y	EA	1	FA
007	097-0193-00	HOSE, UA/FA P-R	EA	2	OB
008	057-1007-16	PIN, DOWEL 1/2 x 1 (SS)	EA	2	OB
009	066-0781-01	BRACKET	EA	1	FA
010	097-0194-00	HOSE, UA/FA COMP	EA	1	OB
011	099-2009-37	O-RING	EA	4	OB
012	066-0780-01	UPPER ARM PLATE, LEFT	EA	1	FA
013	050-0333-12	SCREW, HHC 5/16-18 x 3/4	EA	12	OB
014	050-0286-06	SCREW, SHC 8-32 x 3/8	EA	8	OB
015	066-0788-01	NAME PLATE	EA	2	FA
016	050-0333-08	SCREW, HHC 5/16-18 x 1/2	EA	2	OB
017	093-7024-16	BEARING	EA	2	OB
018	068-0497-01	SPOOL	EA	1	FA
019	097-0196-00	HOSE, UA/SA COMP	EA	1	OB
020	097-0195-00	HOSE, SA A-B	EA	2	OB
021	061-6011-11	WASHER, FLAT; 5/16" (SS)	EA	14	OB

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: UPPER ARM VALVE MANIFOLD ASS'Y (W/FFB)  
REV 1

ASS'Y NO. 600-0243-01

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	070-0160-02	CAN, VALVE	EA	1	FA
002	099-3903-39	O-RING	EA	2	OB
003	326-0028-00	CABLE, PENETRATOR	EA	2	FA
004	096-0122-06	FITTING, TUBE	EA	1	OB
005	401-2003-00	VALVE, PRESSURE REDUCING	EA	1	FA
006	050-0288-38	SCREW, SHC 10-24 x 2 3/8	EA	4	OB
007	050-0288-56	SCREW, SHC 10-24 x 3 1/2	EA	8	OB
008	401-2008-00	VALVE, SERVO	EA	3	FA
009	099-2011-37	O-RING	EA	21	OB
010	401-2006-00	VALVE, CHECK	EA	2	FA
011	099-2169-37	O-RING	EA	1	OB
012	066-0771-02	MANIFOLD, VALVE; UA	EA	1	FA
013	096-0124-04	PLUG	EA	1	OB
014	096-0120-06	FITTING, 90 ELBOW	EA	2	OB
015	096-0154-06	FITTING, 45 ELBOW	EA	2	OB
016	096-0122-04	FITTING, STRAIGHT	EA	3	OB
017	099-2009-37	O-RING	EA	2	OB
018	099-2019-37	O-RING	EA	1	OB
019	099-2014-37	O-RING	EA	1	OB
020	066-0732-02	BLOCK, PRESSURE REDUCING	EA	1	FA
021	050-0288-36	SCREW, SHC 10-24 x 2 1/4	EA	4	OB
022	401-2004-00	VALVE, SOLENOID	EA	1	FA
023	050-0288-08	SCREW, SHC 10-24 x 1/2	EA	24	OB
024	326-5171-00	WIRING, MANIFOLD; UA	EA	1	FA
025	327-2010-00	CONNECTOR, MIN-M-37-FCR	EA	1	FA
026	050-0286-06	SCREW, SHC 8-32 x 3/8	EA	4	OB
027	576-0125-03	PRESSURE TRANSDUCER	EA	3	OB



KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: LINEAR ACTUATOR, ELEVATION, ELBOW  
REV: 2      7/28/2004

ASS'Y NO. 600-0242-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	093-7023-16	BEARING, FILAMENT	EA	1	OB
002	066-0730-00	RODEND	EA	1	FA
003	099-2023-37	O-RING	EA	1	OB
004	100-0177-16	WIPER, ROD	EA	1	OB
005	100-0154-16	SEAL, ROD	EA	1	OB
006	050-0288-16	SCREW, SHC 10-24 x 1	EA	14	OB
007	068-0493-01	HEAD, CYLINDER	EA	1	FA
008	100-8131-39	BACKUP-RING	EA	2	OB
009	099-2131-37	O-RING	EA	2	OB
010	099-2010-37	O-RING	EA	1	OB
011	050-0288-12	SCREW, SHC 10-24 x 3/4	EA	4	OB
012	097-5133-01	TUBE ASS'Y	EA	1	FA
013	068-0492-01	BARREL, CYLINDER	EA	1	FA
014	068-0494-00	PISTON/ROD	EA	1	FA
015	100-0172-30	BEARING, PISTON	EA	1	OB
016	099-2221-37	O-RING	EA	1	OB
017	100-0173-30	SEAL, PISTON	EA	1	OB
018	529-0141-01	WIPER, POTENTIOMETER	EA	1	OB
019	529-0141-02	SNAP RING	EA	1	OB
020	529-0142-00	POTENTIOMETER, LINEAR	EA	1	OB
021	529-0141-03	WAVE SPRING	EA	1	OB
022	050-0280-06	SCREW, SHC 4-40 x 3/8	EA	4	OB
023	066-0729-01	PLATE, POT MOUNTING	EA	1	FA
024	099-2009-37	O-RING	EA	1	OB
025	066-0766-01	CAP, CYLINDER	EA	1	FA
026	050-0288-20	SCREW, SHC 10-24 x 1 1/4	EA	12	OB
027	099-2011-37	O-RING	EA	1	OB
028	326-0030-00	CABLE, PENETRATOR	EA	1	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: WRIST YAW/WRIST ROLL ACTUATOR ASS'Y  
REV: 4      7/28/2004

ASS'Y NO. 600-0238-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	050-0286-08	SCREW, SHC 8-32 x 1/2	EA	6	OB
002	066-0654-02	PORT PLATE, WY POT SIDE	EA	1	FA
003	099-2010-37	O-RING	EA	11	OB
004	050-0284-06	SCREW, SHC 6-32 x 3/8	EA	6	OB
005	068-0420-01	PLATE, SEAL	EA	1	FA
006	099-2035-37	O-RING	EA	1	OB
007	068-0418-00	BEARING	EA	1	FA
008	066-0653-01	BRACKET, WY POT SIDE	EA	1	FA
009	068-0419-00	BEARING	EA	1	FA
010	600-0228-00	ACTUATOR, WRIST YAW	EA	1	FA
011	066-0651-01	BRACKET, WY SHAFT SIDE	EA	1	FA
012	050-0292-16	SCREW, SHC 1/4-20 x 1	EA	1	OB
013	099-2007-37	O-RING	EA	4	OB
014	066-0652-02	PORT PLATE, WY SHAFT SIDE	EA	1	FA
015	050-0288-08	SCREW, SHC 10-24 x 1/2	EA	5	OB
016	099-4122-37	SEAL, SHAFT	EA	1	OB
017	050-0292-14	SCREW, SHC 1/4-20 x 7/8	EA	2	OB
018	050-0292-10	SCREW, SHC 1/4-20 x 5/8	EA	2	OB
019	057-1001-16	PIN, DOWEL 1/4 x 1 (SS)	EA	4	OB
020	600-0229-00	ACTUATOR, WRIST ROLL	EA	1	FA
021	327-3016-04	CONNECTOR	EA	1	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: WRIST ROLL ACTUATOR ASS'Y  
REV: 4      7/28/2004

ASS'Y NO. 600-0229-00  
PAGE 1

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	050-0292-10	SCREW, SHC 1/4-20 x 5/8	EA	11	OB
002	050-0292-16	SCREW, SHC 1/4-20 x 1	EA	6	OB
003	066-0658-02	PLATE, WR COVER	EA	1	FA
004	058-0180-06	BALL, 3/16 STEEL	EA	3	FA
005	093-3007-00	BEARING, NEEDLE	EA	1	FA
006	057-1001-16	PIN, DOWEL 1/4 x 1 (SS)	EA	4	OB
007	099-2145-37	O-RING	EA	1	OB
008	100-0167-40	SEAL, SHAFT	EA	1	OB
009	093-7028-00	BUSHING, BRONZE	EA	1	FA
010	100-0154-10	SEAL, ROD	EA	1	OB
011	068-0535-00	HEAD, GRIPPER CYLINDER	EA	1	FA
012	093-5016-00	BEARING, BALL	EA	1	FA
013	099-2030-37	O-RING	EA	1	OB
014	068-0533-00	PISTON/ROD	EA	1	FA
015	100-0156-20	SEAL, PISTON	EA	1	OB
016	068-0534-02	CYL, GRIPPER	EA	1	FA
017	057-1002-08	PIN, DOWEL 1/8 x 1/2 (SS)	EA	1	FA
018	080-1035-00	GEAR, CYL ROTATE	EA	1	FA
019	093-5021-00	BEARING, BALL	EA	1	FA
020	050-0288-16	SCREW, SHC 10-24 x 1	EA	8	OB
021	099-2015-37	O-RING	EA	4	OB
022	100-0167-08	SEAL, SHAFT	EA	4	OB
023	099-2044-37	O-RING	EA	1	OB
024	099-2008-37	O-RING	EA	2	OB
025	066-0863-01	BODY, WR ACTUATOR	EA	1	FA
026	096-0124-04	PLUG, HOLLOW HEX	EA	1	OB
027	326-5167-00	WIRING HARNESS, WR POT	EA	1	FA
028	327-3015-04	CONNECTOR	EA	1	FA
029	529-0132-01	POTENTIOMETER	EA	1	OB
030	058-0182-00	CLEAT, POT. MOUNTING	EA	2	OB
031	066-0662-01	PLATE, POT MOUNTING	EA	1	FA
032	050-0432-04	SCREW, FHP 2-56 x 1/4	EA	2	OB
033	080-1024-00	GEAR, SPUR	EA	2	OB
034	099-2048-37	O-RING	EA	1	OB
035	099-2011-37	O-RING	EA	4	OB
036	050-0432-03	SCREW, FHP 2-56 x 3/16	EA	4	OB
037	066-0659-01	WIRE RETAINER	EA	1	FA
038	066-0656-02	PLATE, WR BASE	EA	1	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: WRIST ROLL ACTUATOR ASS'Y  
REV: 4      7/28/2004

ASS'Y NO. 600-0229-00  
PAGE 2

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
039	050-0286-06	SCREW, SHC 8-32 x 3/8	EA	2	OB
040	050-0286-12	SCREW, SHC 8/32 x 3/4	EA	1	OB
041	093-5014-00	BEARING, BALL	EA	1	FA
042	093-5002-00	BEARING, BALL	EA	1	FA
043	080-1022-00	GEAR, MOTOR/GRIPPER	EA	1	FA
044	099-2034-37	O-RING	EA	1	OB
045	051-0117-00	CHECK VALVE BODY	EA	2	FA
046	093-5005-00	BEARING, BALL	EA	1	FA
047	068-0421-00	RETAINER, BEARING	EA	1	FA
048	050-0436-06	SCREW, FHP 4-40 x 3/8	EA	3	OB
049	080-1021-00	GEAR, MOTOR OUTPUT	EA	1	FA
050	066-0751-00	COUPLING, MOTOR	EA	1	FA
051	600-0223-00	MOTOR	EA	1	FA
052	050-0284-06	SCREW, SHC 6-32 x 3/8	EA	4	OB
053	099-2010-37	O-RING	EA	2	OB
054	057-1001-10	PIN, DOWEL 1/4 x 5/8 (SS)	EA	2	OB
055	068-0536-00	SHIM	EA	1	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: WRIST YAW ACTUATOR ASS'Y  
REV 4

ASS'Y NO. 600-0228-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	050-0276-06	SCREW, SHC 2-56 x 3/8	EA	2	OB
002	529-0140-00	POTENTIOMETER WIPER ASS'Y	EA	1	OB
003	050-0003-08	SCREW, PHP 2-56 x 1/2	EA	1	OB
004	058-0280-00	CLAMP, WIRE	EA	1	OB
005	058-0281-01	STANDOFF	EA	1	OB
006	050-0003-03	SCREW, PHP 2-56 x 3/16	EA	2	OB
007	529-0139-00	POTENTIOMETER, ELEMENT	EA	1	OB
008	051-0118-04	PLUG, 6-32 x 1/4	EA	1	OB
009	068-0412-01	CASE, WY ACT (POT SIDE)	EA	1	FA
010	099-4216-37	QUAD-RING	EA	2	OB
011	100-0179-20	BACKUP	EA	2	OB
012	100-0167-20	SEAL, SHAFT	EA	6	OB
013	099-2025-37	O-RING	EA	6	OB
014	099-4127-39	QUAD-RING	EA	2	OB
015	099-2043-37	O-RING	EA	1	OB
016	066-0646-00	VANE, ROTOR	EA	1	FA
017	068-0530-00	PIN, 1/4 x 1 1/4 (SS) DRILLED	EA	2	OB
018	050-0288-16	SCREW, SHC 10-24 x 1	EA	1	OB
019	100-0169-23	SEAL, VANE	EA	3	OB
020	099-2122-37	O-RING	EA	3	OB
021	068-0417-01	SHAFT, WY ACTUATOR	EA	1	FA
022	066-0645-00	VANE, STATOR	EA	1	FA
023	057-2001-40	PIN, DOWEL 1/4 x 2 1/2 (HGS)	EA	2	OB
024	068-0413-01	CASE, WY ACT (SHAFT SIDE)	EA	1	FA
025	050-0294-32	SCREW, SHC 5/16-18 x 2	EA	2	OB
026	050-0294-40	SCREW, SHC 5/16-18 x 2 1/2	EA	6	OB
027	100-0178-00	SEAL, SHOULDER	EA	2	OB
028	327-3015-05	CONNECTOR	EA	1	FA
029	326-5169-00	WY WIRING HARNESS	EA	1	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: WRIST PITCH ACTUATOR ASS'Y  
REV 4

ASS'Y NO. 600-0227-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	050-0276-06	SCREW, SHC 2-56 x 3/8	EA	2	OB
002	529-0140-00	POTENTIOMETER WIPER ASS'Y	EA	1	OB
003	050-0003-08	SCREW, PHP 2-56 x 1/2	EA	1	OB
004	058-0280-00	CLAMP, WIRE	EA	1	OB
005	058-0281-01	STANDOFF	EA	1	OB
006	050-0003-03	SCREW, PHP 2-56 x 3/16	EA	2	OB
007	529-0139-00	POTENTIOMETER, ELEMENT	EA	1	OB
008	051-0118-04	PLUG, 6-32 x 1/4	EA	1	OB
009	068-0414-01	CASE, WP ACT (POT SIDE)	EA	1	FA
010	099-4216-37	QUAD-RING	EA	2	OB
011	100-0179-20	BACKUP	EA	2	OB
012	100-0167-20	SEAL, SHAFT	EA	8	OB
013	099-2025-37	O-RING	EA	8	OB
014	099-4127-39	QUAD-RING	EA	2	OB
015	099-2043-37	O-RING	EA	1	OB
016	066-0646-00	VANE, ROTOR	EA	1	FA
017	068-0530-00	PIN, 1/4 x 1 1/4 (SS) DRILLED	EA	2	OB
018	050-0288-16	SCREW, SHC 10-24 x 1	EA	1	OB
019	100-0169-23	SEAL, VANE	EA	3	OB
020	099-2122-37	O-RING	EA	3	OB
021	068-0416-01	SHAFT, WP ACTUATOR	EA	1	FA
022	066-0645-00	VANE, STATOR	EA	1	FA
023	057-2001-40	PIN, DOWEL 1/4 x 2 1/2 (HGS)	EA	2	OB
024	068-0415-01	CASE, WP ACT (SHAFT SIDE)	EA	1	FA
025	050-0294-48	SCREW, SHC 5/16-18 x 3	EA	8	OB
026	100-0178-00	SEAL, SHOULDER	EA	2	OB
027	327-3016-05	CONNECTOR	EA	1	FA
028	326-5170-00	WP WIRING HARNESS	EA	1	FA

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: AZIMUTH ACTUATOR ASS'Y  
REV 4

ASS'Y NO. 600-0224-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	050-0296-80	SCREW, SHC 3/8-16 x 5	EA	20	OB
002	066-0737-01	PLATE, AZIMUTH MOUNTING	EA	1	FA
003	096-0124-04	PLUG, HOLLOW HEX	EA	3	OB
004	099-4356-37	QUAD-RING	EA	1	OB
005					
006	068-0480-01	RING, AZIMUTH SEAL	EA	1	FA
007	093-3008-00	BEARING	EA	1	FA
008	068-0479-00	COUPLING, AZIMUTH	EA	1	FA
009	099-2163-37	O-RING	EA	1	OB
010	050-0292-16	SCREW, SHC 1/4-20 x 1	EA	24	OB
011	099-4328-37	SEAL, SHAFT	EA	2	OB
012	068-0481-01	BODY, AZ ACT LOWER HALF	EA	1	FA
013	099-4229-39	QUAD-RING	EA	2	OB
014	068-0483-01	SHAFT, AZIMUTH ACTUATOR	EA	1	FA
015	100-0171-48	SEAL	EA	3	OB
016	099-2230-37	O-RING	EA	3	OB
017	050-0298-32	SCREW, SHC 7/16-14 x 2	EA	1	OB
018	057-2007-40	PIN, DOWEL 1/2 x 2 1/2 (HGS)	EA	2	OB
019	066-0739-00	VANE, ROTOR	EA	1	FA
020	099-2164-37	O-RING	EA	1	OB
021	068-0482-01	BODY, AZ ACT UPPER HALF	EA	1	FA
022	096-0120-04	FITTING, TUBE; 90°	EA	2	OB
023	057-2007-36	PIN, DOWEL 1/2 x 2 1/4 (HGS)	EA	2	OB
024	066-0738-00	VANE, STATOR	EA	1	FA
025	325-0012-11	WIRE, 26GA WHT/BLK	IN	42	FA
026	325-0012-12	WIRE, 26GA WHT/RED	IN	42	FA
027	325-0012-19	WIRE, 26GA WHT/VIOLET	IN	52	FA
028	096-0157-04	FITTING, TUBE	EA	1	OB
029	068-0486-01	PLATE, POT MOUNTING	EA	1	FA
030	050-0280-06	SCREW, SHC 4-40 x 3/8	EA	3	OB
031	529-0139-00	POTENTIOMETER,ELEMENT	EA	1	OB
032	050-0003-03	SCREW, PHP 2-56 x 3/16	EA	3	OB
033	529-0143-00	POTENTIOMETER WIPER ASS'Y	EA	1	OB
034	050-0436-06	SCREW, FHP 4-40 x 3/8	EA	3	OB
035	099-2040-37	O-RING	EA	1	OB
036	068-0485-01	COVER, POTENTIOMETER	EA	1	FA
037	050-0286-08	SCREW, SHC 8-32 x 1/2	EA	6	OB
038	100-0175-42	SEAL, SHOULDER	EA	2	OB
039	068-0531-00	PIN, 1/2 x 2 1/2 (SS) DRILLED	EA	2	OB

# KRAFT TELEROBOTICS ASSEMBLY PARTS LIST

NAME: CHASSIS ASS'Y, KMC9100F  
REV. 2

ASS'Y NO. 600-0211-00  
PAGE 1

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	600-0210-00	CARD CAGE ASS'Y	EA	1	
002	066-0387-02	FRONT PANEL	EA	1	
003	066-0393-02	REAR PANEL	EA	1	
004	066-0389-01	RIGHT PANEL	EA	1	
005	066-0390-01	LEFT PANEL	EA	1	
006	066-0388-01	FRONT PANEL BRACKET	EA	2	
007	066-0545-01	REAR PANEL BRACKET	EA	2	
008	066-0564-01	FILTER COVER	EA	2	
009	066-0394-00	REAR BUMBER	EA	2	
010	066-0595-01	MOUNTING BLOCK	EA	1	
011	058-0207-00	QT FASTENER RECPT	EA	2	
012	058-0249-00	HANDLE	EA	2	
013	058-0283-00	SCREW, CAPTIVE	EA	4	
014	058-0261-32	STANDOFF, 3/8 X 2 R	EA	2	
015	058-0219-00	THREAD LOCK, FIXED	PR	2	
016	058-0189-06	GROMMET	EA	2	
017	058-0270-00	FILTER FOAM	EA	2	
018	058-0284-00	WASHER	EA	4	
019	050-0210-08	SCREW, FHS 10-24 X 1/2	EA	4	
020	050-0286-20	SCREW, CHS 8-32 X 1 1/4	EA	4	
021	050-0013-06	SCREW, PHP 8-32 X 3/8	EA	3	
022	050-0442-08	SCREW, FHP 8-32 X 1/2	EA	2	
023	051-0119-00	SCREW, FHP M4 x 6	EA	4	
024	051-0113-16	SCREW, TRD 8-32 X 1	EA	1	
025	050-0440-09	SCREW, FHP 6-32 X 9/16	EA	14	
026	050-0440-08	SCREW, FHP 6-32 X 1/2	EA	8	
027	050-0440-06	SCREW, FHP 6-32 X 3/8	EA	26	
028	050-0011-06	SCREW, PHP 6-32 X 3/8	EA	4	
029	050-0436-08	SCREW, FHP 4-40 X 1/2	EA	2	
030	050-0436-06	SCREW, FHP 4-40 X 3/8	EA	12	
031	050-0436-04	SCREW, FHP 4-40 X 1/4	EA	6	
032	050-0007-06	SCREW, PHP 4-40 X 3/8	EA	6	
033	050-0432-04	SCREW, FHP 2-56 X 1/4	EA	30	
034	052-0011-11	NUT, HEX NYLOK 6-32	EA	8	
035	052-0007-11	NUT, HEX NYLOK 4-40	EA	6	
036	500-0184-00	BOARD, LED	EA	1	
037	326-5119-01	LED ASS'Y	EA	2	



# KRAFT TELEROBOTICS ASSEMBLY PARTS LIST

NAME: CHASSIS ASS'Y, KMC9100F  
REV. 2

ASS'Y NO. 600-0211-00  
PAGE 2

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
038	559-0100-00	FUSE 1A 250V ABC	EA	1	
039	559-1500-00	FUSE 15A 250V ABC	EA	1	
040	570-0008-00	SUPPLY, LINEAR; +-12V	EA	1	
041	570-1004-00	SUPPLY, SWITCHING	EA	1	
042	573-0001-00	FAN	EA	2	
043	574-0011-00	SWITCH, POWER	EA	1	
044	575-0012-00	RECEPTACLE, AC	EA	1	
045	575-0015-00	HOLDER, FUSE	EA	2	
046	327-4001-03	TERMINAL BLOCK	EA	1	
047	326-0019-02	POWER CORD 14-3 2M	EA	1	
048	326-5128-08	CABLE ASS'Y, 5PIN (8")	EA	1	
049	326-5120-08	CABLE ASS'Y, 37PIN RB	EA	1	
050	326-5124-10	CABLE ASS'Y 9PIN RB	EA	2	
051	326-5131-00	WIRING HARNESS	EA	1	

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: CARD CAGE ASS'Y  
REV. 0

ASS'Y NO. 600-0210-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	500-0182-00	MOTHER BOARD, KMC9100-F	EA	1	
002	070-0135-01	AIR TUNNEL	EA	1	
003	066-0531-01	CARD GUIDE	EA	8	
004	066-0392-01	BOTTOM PANEL	EA	1	
005	050-0440-06	SCREW, FHP 6-32 X 3/8	EA	16	
006	050-0441-04	SCREW, FHP 6-32 X 1/4	EA	24	
007	050-0011-06	SCREW, PHP 6-32 X 3/8	EA	16	

# KRAFT TELEROBOTICS ASSEMBLY PARTS LIST

NAME: MOTOR DRIVER MODULE ASS'Y  
REV. 0

ASS'Y NO. 600-0206-00

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	066-0442-01	HEAT SINK	EA	1	
002	500-0181-00	BOARD, MOTOR DRIVER	EA	1	
003	574-0013-00	SWITCH, TEMPERATURE	EA	1	
004	545-0061-60	IC, PA61 POWER OPAMP	EA	4	
005	050-0284-05	SCREW, SHC 6-32 x 5/16	EA	8	
006	050-0284-06	SCREW, SHC 6/32 x 3/8	EA	4	
007	098-0117-00	TUBING, SHRINK	IN	8	
		(CUT TO .25" LENGTHS)	EA	32	

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: 3/4" T-HANDLE GRIPPER ASS'Y  
REV 2

ASS'Y NO. 600-0133-02

ITEM	PART NUMBER	DESCRIPTION	UM	QTY	RSD
001	066-0327-01	LINK, OUTER	EA	2	FA
002	066-0325-01	LINK, INNER	EA	2	FA
003	066-0326-01	LEVER, LINK	EA	2	FA
004	066-0324-01	PLATE, GRIPPER SIDE	EA	2	FA
005	066-0323-01	BASE, GRIPPER	EA	1	FA
006	068-0491-00	PIN	EA	2	FA
007	068-0232-00	PIN	EA	2	FA
008	068-0231-00	PIN	EA	2	FA
009	068-0234-00	PIN	EA	2	FA
010	093-7003-23	BEARING, FILAMENT	EA	2	FA
011	093-7003-12	BEARING, FILAMENT	EA	4	FA
012	093-7002-32	BEARING, FILAMENT	EA	2	FA
013	057-1002-08	PIN, DOWEL 1/8 x 1/2 (SS)	EA	4	FA
014	052-5002-20	WASHER, TEFLON	EA	12	OB
015	052-5001-20	WASHER, TEFLON	EA	4	OB
016	050-0210-10	SCREW, FHS 10-24 x 5/8	EA	14	OB
017	050-0214-12	SCREW, FHS 1/4-20 x 3/4	EA	8	OB
018	066-0765-00	FINGER, 3/4" T-HANDLE	EA	2	FA

# KRAFT TELEROBOTICS ASSEMBLY PARTS LIST

NAME: BOARD, LED; KMC9100 F  
REV. 2

ASS'Y NO. 500-0184-00

QTY	UM	PART NUMBER	DESCRIPTION	REF
1	EA	510-0184-00	PC BOARD, LED (rev 2)	PC1
3	EA	522-0221-37	RES, 220 OHM 1/2W 5% CC	R1-3
1	EA	522-1501-37	RES, 1.5K OHM 1/2W 5% CC	R4
1	EA	551-0002-01	LED, BARREL; YELLOW	CR1
2	EA	551-0002-00	LED, BARREL; RED	CR2
1	EA	551-0002-02	LED, BARREL; GREEN	CR3,4
2	EA	565-0003-43	CONN, 3PIN MPCRA	J10,12,13
1	EA	565-0005-43	CONN, 5PIN MPCRA	J11
6	EA	058-0272-04	SPACER, 1/4Rx1/4L #4	

KRAFT TELEROBOTICS  
ASSEMBLY PARTS LIST

NAME: MOTHER BOARD; KMC 9100F  
REV. 2

ASS'Y NO. 500-0182-00

QTY	UM	PART NUMBER	DESCRIPTION	REF
1	EA	510-0182-00	PC BOARD, MOTHER BD (rev 2)	PC1
1	EA	528-1500-80	RES, 150 OHM 2% x 8 DIP	M1
1	EA	531-0104-38	CAP, .1uf CER CK	C2
1	EA	531-0334-38	CAP, .33uf CER CK	C1
1	EA	547-3405-60	IC, LM340AK-5	U1
7	EA	550-0010-10	FET, VN10KM	Q1-7
6	EA	561-2020-22	CONN, CARD EDGE	J15-20
2	EA	562-0002-00	D CONN, 9PIN MPCN	J7,14
1	EA	562-2008-00	D CONN, 25PIN FLPCN	J127
1	EA	562-2009-00	D CONN, 25PIN MLPCN	J128
1	EA	562-3002-00	D CONN, 37PIN MPCN	J6
1	EA	564-2003-21	CONN, 3PIN MPC	J9
1	EA	564-2004-21	CONN, 4PIN MPC	J21
1	EA	565-0005-23	CONN, 5PIN MPC	J8
2	EA	058-0268-02	STANDOFF,SWAGE 3/8Hex x 1/4L 10-32	E1,2
2	EA	575-0023-00	JACK, TEST; BLK	TP2,6
1	EA	575-0023-01	JACK, TEST; BRN	TP3
1	EA	575-0023-02	JACK, TEST; RED	TP5
1	EA	575-0023-03	JACK, TEST; ORN	TP4
1	EA	575-0023-04	JACK, TEST; YEL	TP1
2	EA	575-0024-00	JACK, CAGE	FOR U1
1	EA	575-0001-00	HEAT SINK, TO3	FOR U1
2	EA	058-0267-02	STANDOFF,SWAGE 1/4D x 1/8L 6-32	FOR U1
2	EA	050-0011-06	SCREW, PHP 6-32 x 3/8	FOR U1
16	EA	058-0264-05	STANDOFF,SWAGE 1/4D x 5/16L 6-32	
3	PR	562-4002-00	THREAD LOCK, FIXED	

# KRAFT TELEROBOTICS ASSEMBLY PARTS LIST

NAME: SERVO MOTOR DRIVER  
REV. 2

ASS'Y NO. 500-0181-00

QTY	UM	PART NUMBER	DESCRIPTION	REF
1	EA	510-0181-00	PC BOARD, SMD (rev 2)	PC1
4	EA	521-0008-65	RES, 0.08 OHM 3W 1% WW	R13,14,27,28
4	EA	521-0010-65	RES, 0.10 OHM 3W 1% WW	R4,5,18,19
2	EA	520-1001-15	RES, 1.0K OHM 1/8W 1% MF	R3,17
4	EA	520-2001-15	RES, 2.0K OHM 1/8W 1% MF	R6,11,20,25
4	EA	520-4991-15	RES, 4.9K OHM 1/8W 1% MF	R8,9,22,23
1	EA	520-5991-15	RES, 5.9K OHM 1/8W 1% MF	R16
1	EA	520-1102-15	RES, 11K OHM 1/8W 1% MF	R2
6	EA	520-1003-15	RES, 100K OHM 1/8W 1% MF	R7,10,12,21,24,26
2	EA	529-2001-20	POT, 2K OHM TRIM	R1,15
4	EA	530-0102-38	CAP, 1.0K pf CER TS	C2,8,10,16
6	EA	530-0104-38	CAP, 100K pf CER CK	C3,4,7,11,12,15
2	EA	530-0474-38	CAP, 470K pf CER TS	C1,9
2	EA	532-0106-18	CAP, 10 uf TANT	C17,18
4	EA	532-0156-38	CAP, 15 uf TANT	C5,6,13,14
2	EA	551-0004-00	LED,	CR1,2
4	EA	554-0506-00	CHOKE, 5uH	L1-4
2	EA	559-0400-01	FUSE, 4AMP PICO	F1,2
6	EA	575-0003-00	TERMINAL, TURRET	E1-6
2	EA	575-0022-05	JACK, TEST; GRN	TP1,2
2	EA	575-0022-06	JACK, TEST; BLU	TP3,4
32	EA	575-0024-00	JACK, CAGE	
4	EA	058-0265-02	STANDOFF,SWAGE 1/4Rx1/8L #4 THRU	
4	IN	325-0013-05	WIRE, 22AWG TEF; YEL	

