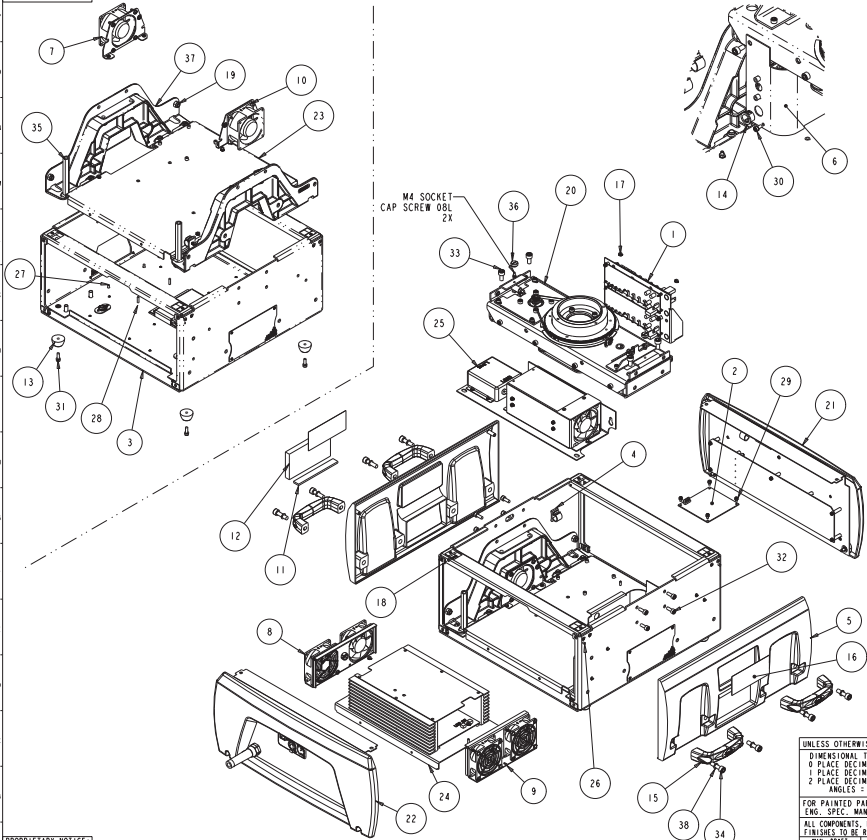


TOA002_SVC



FOR SERVICE REFERENCE ONLY

38	8	WASHER318_500_040	90706101	WASHER_040 X .318 ID X .500 OD
37	2	DB250	99260452	SUPPORT, BEAM, CAST TOP BOX, DL2
36	2	DB306	80071851	STUD, PANEL RETAINER, DL2
35	2	TW348	90702272	STANDOFF, 1/2 HEX, M8, FT 3.937L
34	8	SCREWM6AC30SS	91100830	SCREW,M6 SOCKET CAP 30 SS
33	4	SCREWM6AC16SSP	91100816	SCREW,M6 SOCKET CAP 16 SS W/PATCH
32	8	SCREWM6AC16SSP	91100816	SCREW,M6 SOCKET CAP 16 SS W/PATCH
31	4	SCREWM6AC16W-BZ	91000516	SCREW,M6 SOCKET CAP 16 BZ SEMS
30	3	SCREWM6AC08BZ	91000408	SCREW,M4 SOCKET CAP 08 BZ SEMS
29	4	SCREWM6AC06W-BZ	91000406	SCREW,M4 SOCKET CAP 06 BZ SEMS
28	4	SCREWM6AC02BZ	91010420	SCREW,M4 BUTTON 20 BZ W/PATCH
27	4	SCREWM6AC012BZ	91010412	SCREW,M4 BUTTON 12 BZ W/PATCH
26	4	SCREW-19PP3808TYPE-BZ	90709016	SCREW,M6 PHIL PAN 3/8 B TYPE BZ
25	1	TOA075	INTERNAL	POWER SUPPLY, MOUNTED W/LINE FILTER SG
24	1	TOA034	99070027EF	POWER SUPPLY, 2.5KW, CCL1, A1
23	1	TW102	99080307	PLATE, MOUNTING, POWER SUPPLY, MEA1
22	1	TOA076	INTERNAL	PANEL, ASM, I/O, COMPLETE SB 2.5
21	1	TOA067	INTERNAL	PANEL, ASM, FRONT, ELECT ENCL, SB
20	1	TW0081	INTERNAL	PAN BEARING COMPLETE SG
19	14	NUT, M8, LOCK, NY	90703105	NUT, M8-1.25, NYLOC
18	1	NUT, M8KEP	91201206	NUT, M8 KEPS
17	4	NUT, M4KEP	91201204	NUT, M4 KEPS
16	2	TOA52	99310509	LABEL, SIDE HOUSING, SHOWBEAM
15	4	SW14	90720055	HANDLE, SMALL W/ LOGO
14	1	BUSHING500SNAP	90410102	GROMMET, SNAP BUSHING, .50 ID
13	4	RUBBER, FOOT	90410089	FOOT, RUBBER STC/MH LONG
12	1	DB512	80260015	FILTER, INTAKE TOP BOX DL2
11	1	VELCRO_STRIP_HOOK88	90722021	FASTENER, VELCRO, 5/8" WIDE W/PSA, HOOK 88
10	1	TW0811	INTERNAL	FAN, ASSEMBLY, INTAKE, ELECTRONIC ENCLSR
9	1	TOA035	INTERNAL	FAN MOUNT ASSEMBLY, 2.5KW PS, INTAKE
8	1	TOA036	INTERNAL	FAN MOUNT ASSEMBLY, 2.5 KW PS, EXHAUST
7	1	TW0655	INTERNAL	FAN ASSEMBLY, EXHAUST
6	1	TW197	99080313	DUCT, DIVERTER, ENCLOSURE
5	2	TW201	99220033	COVER, SIDE, TOP BOX DL2
4	6	CLIP, .50, PUSH-ON, NY	90701271	CLIP, WIRE, .50 DIA, PUSH MOUNT
3	1	TW009	80110041	CHASSIS, ASSY, TOP BOX SG
2	1	TW229	80010206EF	BOARD, RGB LED CONTROL, MODULE ASSY
1	1	TOA081	INTERNAL	BOARD, LOGIC W/VERTICAL MOUNT SHD
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION
				BILL OF MATERIALS

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONAL TOLERANCES:
 0 PLACE DECIMAL = ±0.38
 1 PLACE DECIMAL = ±0.25
 2 PLACE DECIMALS = ±0.13
 ANGLES = ±0.5°
 FINISHES TO BE AMS COMPLIANT

RELEASE DATE: _____
 ENG: _____
 ME: _____
 MFG: _____
 DRW: _____
 DISPOSITION: ELECTRONICS, ASM, COMPLETE, SB

CC: _____
 QA: _____
 FINISH: NONE

High End 2105 GRACY FARMS LANE
 AUSTIN, TEXAS 78758
 (512) 836-2244
 FAX (512) 832-4128
 ***** http://www.highend.com



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FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592
 ALL COMPONENTS, MATERIALS AND FINISHES TO BE AMS COMPLIANT

INTERPRET DIMENSIONS PER ASME Y14.5M-1994
 THIRD ANGLE PROJECTION
 DIMENSIONS ARE IN MILLIMETERS

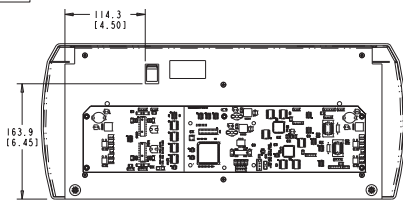
SI METRIC A1
 DO NOT SCALE

PART NO. INTERNAL TOA002_SVC

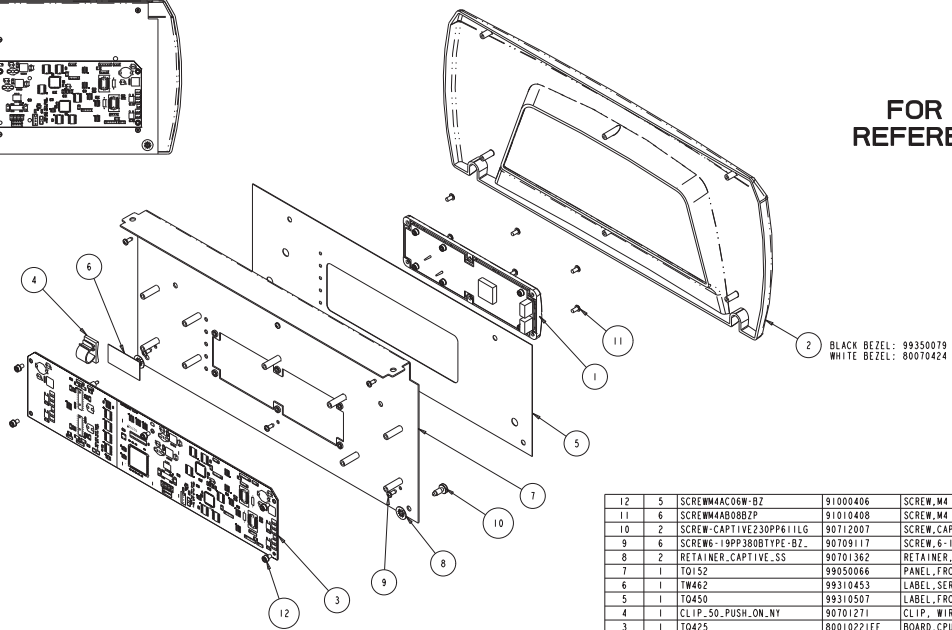
DRAWING NO. TOA002_SVC
 SCALE: 0.146
 SHEET: 1 OF 1

REV.

TOA067.SVC



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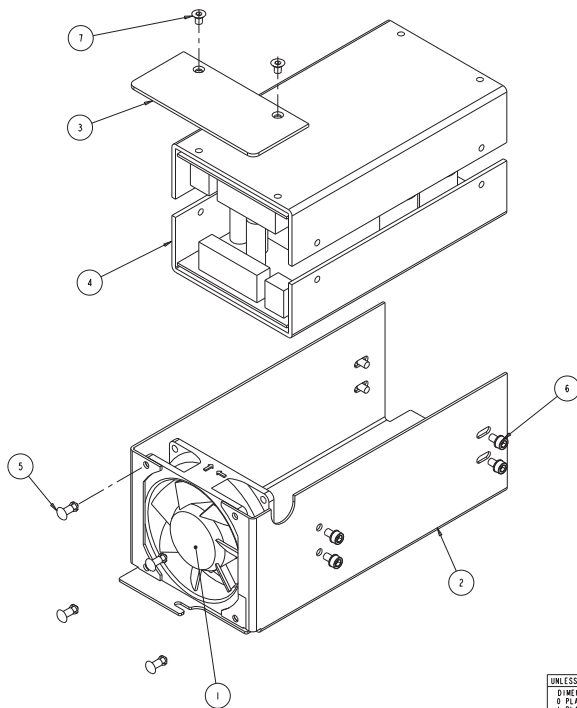


12	5	SCREWM4AC08W-BZ	91000406	SCREW,M4 SOCKET CAP 06 BZ SEMS
11	6	SCREWM4AB08BZP	91010408	SCREW,M4 BUTTON 08 BZ W/PATCH
10	2	SCREW-CAPTIVE230PP61LG	90712007	SCREW,CAPTIVE PHIL .23 OD X .611 LG CR
9	6	SCREW-19PP380BTYP-BZ	90709117	SCREW-6-19 PHIL PAN PLASTITE 3/8 BZ
8	2	RETAINER,CAPTIVE.SS	90701362	RETAINER,CAPTIVE.SS.MED
7	1	TO152	99050066	PANEL_FRONT.ELECTRONIC ENCLOSURE SHB/SG
6	1	TW462	99310453	LABEL_SERVICE HARNESS,SHOWGUN 1"x2"
5	1	TO450	99310507	LABEL_FRONT HOUSING,SHOWBEAM
4	1	CLIP_50_PUSH_ON_NY	90701271	CLIP, WIRE .50 DIA, PUSH MOUNT
3	1	TO425	80010221EF	BOARD_CPU PAN TILT & 2 PH MODULE ASSY
2	1	DB200	CHARTED	BEZEL, TOP BOX, DL2
1	1	TOA095EF	80010226EF	ASSY_VFD DISPLAY CLEAR WINDOW V3.6
ITEM NO. QTY.		FILENAME	PART NO.	DESCRIPTION

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DIMENSIONAL TOLERANCES:		ENG:	DA:				
0 PLACE DECIMAL = ±0.38		MEG:	DRW:				
1 PLACE DECIMAL = ±0.25							
2 PLACE DECIMALS = ±0.13							
ANGLES = ±0.5°							
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL WJ-0592		DESCRIPTION:		PANEL_ASM_FRONT_ELECT_ENCL_SB		FINISH:	
ALL COMPONENTS: MATTERING AND FINISHES TO BE BANS COMPLIANT		MATERIAL:		CHARTED		PART NO. INTERNAL TAOA067_SVC	
MIN. HOLE:		INTERPRET DIMENSIONS PER		ASME Y14.5M-1994		DRAWING NO. TAOA067_SVC	
FLATTEN:		THIRD ANGLE PROJECTION		DIMENSIONS ARE IN MILLIMETERS		SCALE: 0.500	
THICKNESS:		DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE		SHEET: 1 OF 1	
VOLUME:						REV.	

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FOR SERVICE
REFERENCE ONLY



9	1	T0714	90409401EF	HARNSS.MPS.DC.OUT.DUAL.SHB
8	1	TW705	90409293EF	HARNSS., 40 V PS, ME-A1
7	2	SCREWM4A06B7	91040406	SCREW_M4 SOCKET CSNK FLAT 06 B7 W/PATCH
6	8	RIVETM4A06W-B7	91000406	SCREW_M4 SOCKET CAP 06 B7 SEMS
5	4	RIVET156X46PUSH-NY	90701336	RIVET., 5/32 PUSH .217-.256 NY BL
4	2	TZA037	99070025EF	POWER SUPPLY, SWITCHING 40 V MOTOR W/PFC
3	1	TW170	99080317	PLATE_FILL, 40 VOLT PS HOUSING
2	1	TW169	99350094	HOUSING, DUAL 40 VOLT POWER SUPPLY
1	1	CAT715EF	80270025EF	FAN,ASST,12 V 80MM 50 X 25MM DL7SG
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION

BILL OF MATERIALS

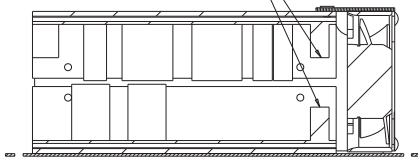
UNLESS OTHERWISE SPECIFIED:	RELEASE DATE:	CE:	High End 2106 GRACY FARMS LANE AUSTIN, TEXAS 78758 (512) 836-2240 FAX (512) 832-4128 ***** http://www.highend.com	LIGHTWAVE RESEARCH
DIMENSIONAL TOLERANCES:	ENG: MIKE BELL	QA:		
0 PLACE DECIMAL: ± 0.38	MEG:	DRW:		
1 PLACE DECIMAL: ± 0.25	MEG:			
2 PLACE DECIMALS: ± 0.13	ANGLES: $\pm 0.5^\circ$			
FOR PAINTED PARTS REFER TO:	DESCRIPTION:			
ENG. SPEC. MANUAL W1-0592	40 VOLT POWER SUPPLY ASSEMBLY			
ALL COMPONENTS: MATERIALS AND FINISHES TO BE DUNS COMPLIANT	MATERIAL:		FINISH:	
	UNCHARIT		N/A	
W.W. MARK:	INTERPRET DIMENSIONS PER	SI METRIC A1	PART NO.	DRAWING NO.
MIN. MARK:	ASME Y14.5M-1994		INTERNAL	TOA087_SVC
PLATINES:	THIRD ANGLE PROJECTION		DO NOT SCALE	SCALE: 1:600
SURFACES:	DIMENSIONS ARE IN MILLIMETERS			SHEET: 1 OF 2
VOLUME:				REV.

DISPOSABLE LEAD NOTICE

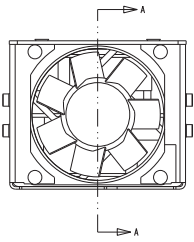
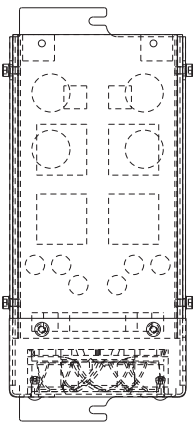
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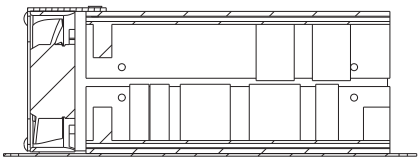
40V OUTPUT
SHOWS POWER SUPPLY
ORIENTATION



SECTION A-A



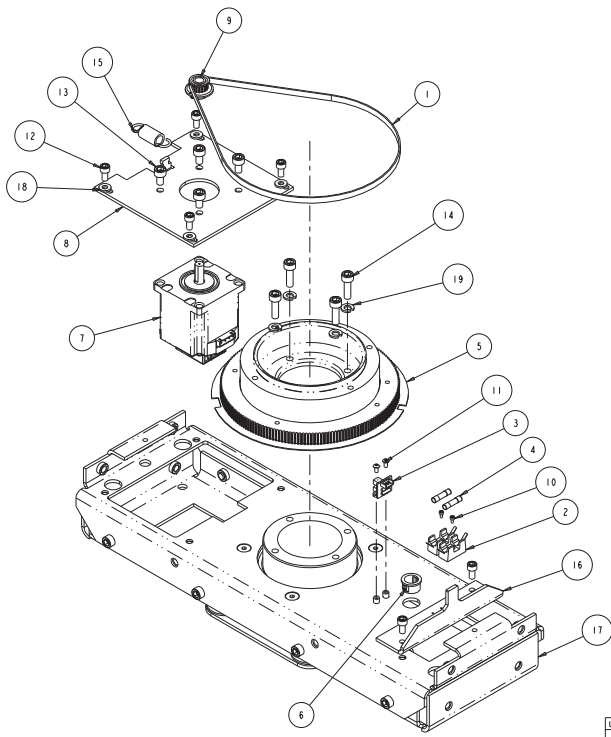
FAN COOLING
AIR DIRECTION



SECTION A-A

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DIMENSIONAL TOLERANCES:	ENG:	QA:		
0 PLACE DECIMAL = ±0.38	ME:	DRW:		
1 PLACE DECIMAL = ±0.13	WEG:			
2 PLACE DECIMALS = ±0.13	ANGLES = ±0.5°			
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592	DESCRIPTION: 40 VOLT POWER SUPPLY ASSEMBLY	MATERIAL:	FINISH:	
ALL COMPONENTS: MATERIALS AND FINISHES TO BE BANS COMPLIANT	INTERPRET DIMENSIONS PER ASME Y14.5M-1994 THIRD ANGLE PROJECTION DIMENSIONS ARE IN MILLIMETERS		PART NO. INTERNAL	DRAWING NO. TOA087_SVC
DO NOT SCALE	SCALE: 1:1000			SHEET: 2 OF 2

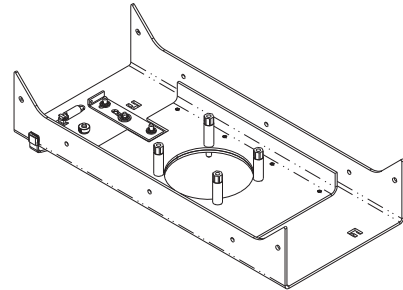
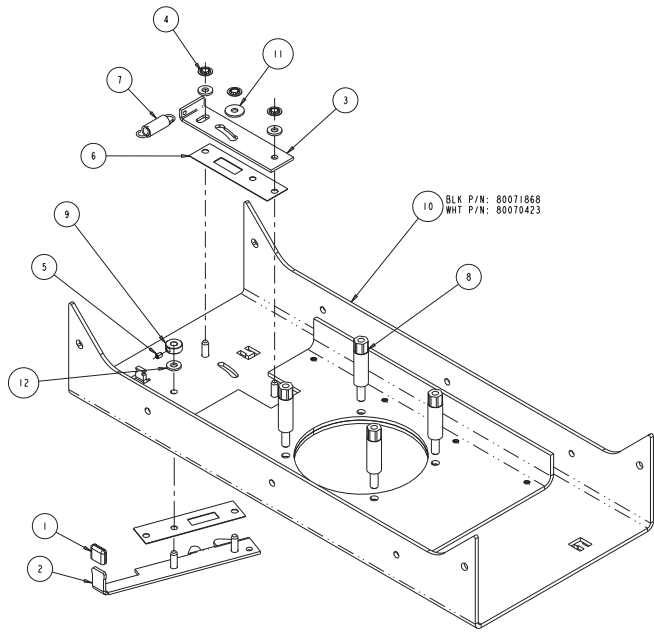


FOR SERVICE
REFERENCE ONLY

19	4	WASHER,M6,SPLIT,LOCK,SS	91109206	WASHER,LOCK,SPLIT,M6,SS
18	4	WASHER#10-204X440SS	90706012	WASHER,FLAT,#10,SS
17	1	TWA094	80460012	SUPPORT,ASSY,PAN BEARING V4
16	1	TWS36	99260515	STOP,PAN LOCK,SG
15	1	SPRING500_1250-LG	90701354	SPRING,EXTENSION,.500 X 1.25 LG
14	4	SCREWM6AC20SS	91100620	SCREW,M6 SOCKET CAP 20 SS
13	4	SCREWM6AC10SS	91100610	SCREW,M6 SOCKET CAP 10 SS W/PATCH
12	6	SCREWM5AC10SSP	91100510	SCREW,M5 SOCKET CAP 10 SS W/PATCH
11	2	SCREWM3AB06BZP	91010306	SCREW,M3 BUTTON SOCKET HD 06 BZ W/PATCH
10	2	SCREWM2AC04BZ	91050204	SCREW,M2 SOCKET CAP 04 BZ
9	1	TWS35	99430126	PINION ASSY 1.7T 3MM HTD, LOW PROFILE
8	1	TWS27	99260505	MOUNT,PAN MOTOR SG
7	1	TWS02	INTERNAL	MOTOR,ENCODER ASSEMBLY SB/SG
6	1	BUSHING500SNAP	90410102	GROMMET,SNAP BUSHING .50 ID
5	1	DBA015	INTERNAL	GEAR ASSY, PAN DL2
4	2	FUSEX20_5A-SLOW	90403012	FUSE, 5 AMP SLOW
3	1	FS709	80040022EF	BOARD,ASSY X-SPOT FLAG HOMING SENSOR
2	2	FUSE_HOLDERX20	90412018EF	BLOCK,FUSE SINGLE 5 X 20MM SINGLE
1	1	TWS04	99360050	BELT,TIMING 3MM HTD, 200 GROOVE, 6MM
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION

UNLESS OTHERWISE SPECIFIED:	RELEASE DATE:	CC:	2105 GRACY FARMS LANE AUSTIN, TEXAS 78758 (512) 836-2244 FAX (512) 832-4128 http://www.highend.com	LIGHTWAVE RESEARCH
DIMENSIONAL TOLERANCES:	ENG:	QA:		
0 PLACE DECIMAL = ±0.38	ME:			
1 PLACE DECIMAL = ±0.25	WEG:	DRW:		
2 PLACE DECIMALS = ±0.13	ANGLES = ±0.5			
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL WJ-0592	DESCRIPTION:	PAN BEARING COMPLETE SG		
ALL COMPONENTS: MATERIALS AND FINISHES TO BE BANS COMPLIANT	MATERIAL:	INTERNAL	FINISH:	NONE
MIN. HOLE:	INTERPRET DIMENSIONS PER ASME Y14.5M-1994	THIRD ANGLE PROJECTION	PART NO.	INTERNAL TWA081_SVC
FLATNESS:	DIMENSIONS ARE IN MILLIMETERS	DO NOT SCALE	SCALE:	0.630
TOLERANCES:			SHEET:	1 OF 1

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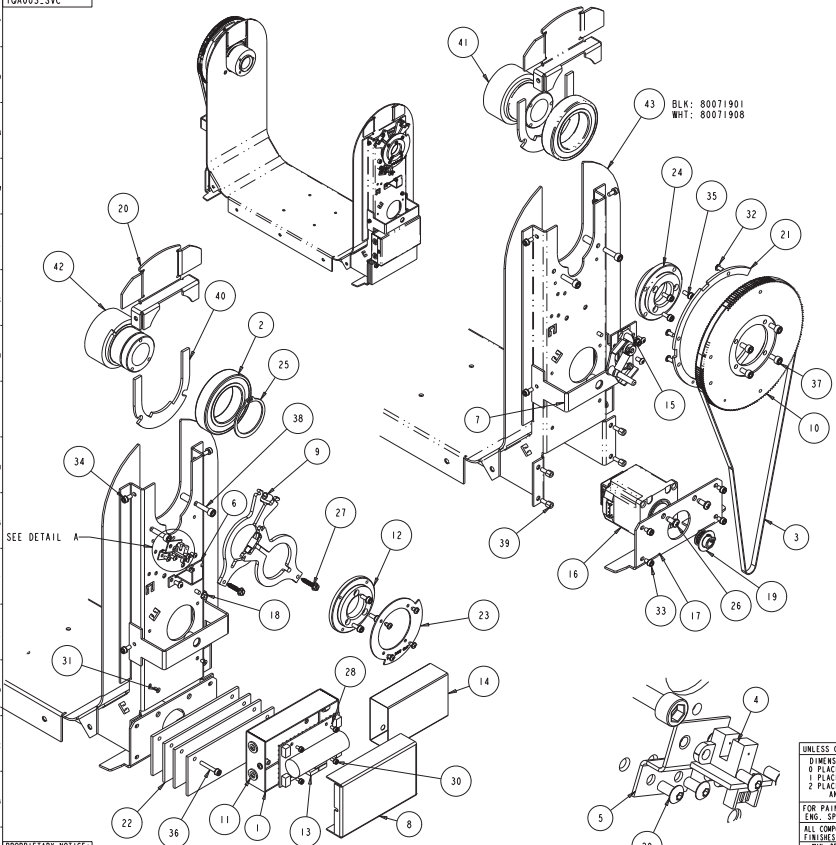
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION
12	3	WASHER10-204X440SS	90706012	WASHER, FLAT #10 SS
11	1	SP132	90706083	WASHER, THRUST, OPTICAL MODULE ASSY
10	1	DB195	CHARTED	SUPPORT, REINFORCED TORQUE BASE DLZ
9	1	SW329	90701187	STOP, WHEEL RETAINER
8	4	DB330	91200667	STANDOFF, WS-0.8 X 4.2 T HEX M-F STEEL
7	1	SPRING360.1120EXT	90701340	SPRING, EXTENSION .360 X 1.12 LG
6	2	DB210	99190090	SHIM, PAN LATCH, DLZ
5	1	SCREW6-32AS188BZ	90707093	SCREW, 6-32 SOCKET SET 3/16 BO PTCH FT PT
4	3	RETAINER_PUSH_SMM	90701364	RETAINER, PUSH-ON, SMM SHAFT
3	1	DB143	80070392	PLATE, DETENT, PAN LATCH, PLATED DLZ
2	1	DB134	80071849	LATCH, PAN LEVER
1	1	CAP_090X43710_SILVER	90724014	CAP, .090 X .437 I.D., PUSH ON, NY, SILVER

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DIMENSIONAL TOLERANCES:	ENG:	DA:		
0 PLACE DECIMAL = ±0.38	MEG:	DRW:		
1 PLACE DECIMAL = ±0.25	ANGLES = ±0.5°			
2 PLACE DECIMALS = ±0.13				
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592	DESCRIPTION:	TORQUE_ASM_LOWER SUPPORT W/LATCH SHD		
ALL COMPONENTS: MATERIALS AND FINISHES TO BE RANS COMPLIANT	FINISH:	NA		
INTERPRET DIMENSIONS PER ASME Y14.5M-1994 THIRD ANGLE PROJECTION DIMENSIONS ARE IN MILLIMETERS	PART NO.	INTERNAL TOA005_SVC		
DRAWING NO. TOA005_SVC	SCALE:	0.750		
SHEET:	1 OF 1			

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TOA003_SVC

FOR SERVICE REFERENCE ONLY



ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION
43	1	TWA093	CHARTED	YOKE, WELDED ASSY PAINTED SG
42	1	TW381	99140021	TUBE, TILT W/ RETAINING GROOVE
41	1	CAT327	99140018	TUBE, TILT CATALYST HEAD, DL1
40	2	TW517	80070464	STOP, TILT TUBE SG
39	4	STANDOFF_M4X6_M-F	90702376	STANDOFF, 6MM X 6MM L W/F M4 ALUM
38	4	SCREWM5AC20SSP	91100520	SCREW, M5 SOCKET CAP 20 SS W/PATCH
37	4	SCREWM5AC10SSP	91100510	SCREW, M5 SOCKET CAP 10 SS W/PATCH
36	2	SCREWM4AC25W-BZ	91000425	SCREW, M4 SOCKET CAP 25 BZ SEMS
35	6	SCREWM4AC10W-BZ	91000410	SCREW, M4 SOCKET CAP 10 BZ SEMS
34	8	SCREWM4AC08BZ	91000408	SCREW, M4 SOCKET CAP 08 BZ SEMS
33	4	SCREWM4AC06W-BZ	91000406	SCREW, M4 SOCKET CAP 06 BZ SEMS
32	8	SCREWM4B08BZP	91010408	SCREW, M4 BUTTON 08 BZ W/PATCH
31	2	SCREWM3AF06BZP	91040306	SCREW, M3 SOCKET CSKN FLAT 06 BZ W/PATCH
30	4	SCREWM3AC06W-BZ	91000306	SCREW, M3 SOCKET CAP 06 BZ SEMS
29	4	SCREWM3AB06BZP	91010306	SCREW, M3 BUTTON SOCKET HD 06 BZ W/PATCH
28	6	SCREW6-19PP250TL-SZ	90709123	SCREW, 6-19 PHIL PAN 1/4 SZ PLASTITE
27	2	SCREW8-18SHB75ABTYPE-SS	90704040	SCREW, 8B HEX HEAD 7/8 SHEET METAL SS
26	2	SCREW10-14PP300TL-SZ	90709062	SCREW, 10 PHIL PAN 1/2 PLASTITE SZ
25	1	RING, RETAINING, 175, SHAFT	90701375	RING, RETAINING, EXTERNAL, 1.618
24	1	CAT328	99360041	PULLEY, ADAPTOR, TILT, DL1
23	1	TW519	99080311	PLATE, TILT SENSOR SG
22	4	TW542	80070473	PLATE, COUNTERWEIGHT, ONE SG
21	1	DE131	99080350	PLATE, TILT STOP V3
20	2	CAT181	80071806	PLATE, TILT BEARING RETAINER BLK DL1
19	1	TW335	99430126	PINION ASSY ITT 3MM HTD, LOW PROFILE
18	1	NUTM4KEP	91201204	NUT, M4 KEPS
17	2	TW526	99260504	MOUNT, TILT MOTOR, SG
16	1	TW502	INTERNAL	MOTOR, ENCODER ASSEMBLY SB/SG
15	1	CAT4031	NA	LATCH ASSY, TILT, DL
14	1	TW208_FORMED	90411075	INSULATOR, IGNITOR MEA1
13	1	TW426	90606007EF	IGNITOR, POWER SUPPLY, 2KW, CCI, A1
12	1	TW380	99400097	HUB, TILT SENSOR SG
11	4	BUSHING312IDSAP	90410157	GROMMET, SNAP BUSHING .312 ID
10	1	DE132	99430131	GEAR, PULLEY, 170T TILT/PAN DRIVE V2
9	2	FA089	80360009	DAMPENER, BRAKE ASSY PAN X-SPOT/SG
8	1	TW146	99080309	COVER, IGNITOR BRACKET SG
7	2	CAT196	99260424	BRACKET, YOKE ARM COVER RETAINER DL
6	1	CAT198	99263113	BRACKET, WIRE GUIDE, RIGHT, DL
5	1	TW529	99260506	BRACKET, TILT SENSOR, SG
4	1	F5709	80040022EF	BOARD, ASSY X-SPOT FLAG HOMING SENSOR
3	1	TW503_TENSIONED	99360049	BELT, TIMING 3MM HTD, 305 GROOVE, 6MM
2	2	BEARING_45-75MM_BALL	90719061	BEARING, 45MM, 6009 2RS
1	1	TW147	99080310	BASE, IGNITOR BRACKET SG

UNLESS OTHERWISE SPECIFIED:

DIMENSIONAL TOLERANCES:
 0 PLACE DECIMAL = ±0.38
 1 PLACE DECIMAL = ±0.25
 2 PLACE DECIMALS = ±0.13
 ANGLES = ±0.5°

RELEASE DATE: _____
 ENG: _____
 ME: _____
 DRW: _____

ALL COMPONENTS: MATERIALS AND FINISHES TO BE BANS COMPLIANT
 INTERPRET DIMENSIONS PER ASME Y14.5M-1994
 THIRD ANGLE PROJECTION
 DIMENSIONS ARE IN MILLIMETERS

MATERIAL: YOKO, SUB-ASSY SB
 FINISH: NA

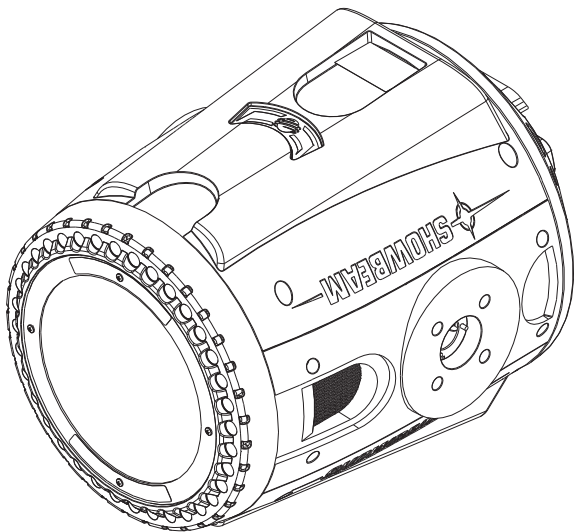
PART NO. INTERNAL TOA003_SVC
 DRAWING NO. TOA003_SVC
 SCALE: 0.143
 SHEET: 1 OF 1

High End 2105 GRACY FARMS LANE
 AUSTIN, TEXAS 78758
 (512) 836-2244
 FAX (512) 832-4128
 http://www.highend.com

LIGHTWAVE RESEARCH

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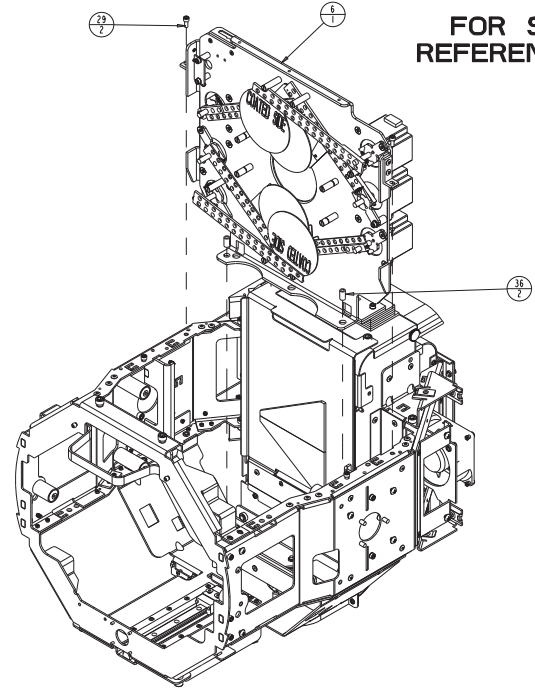
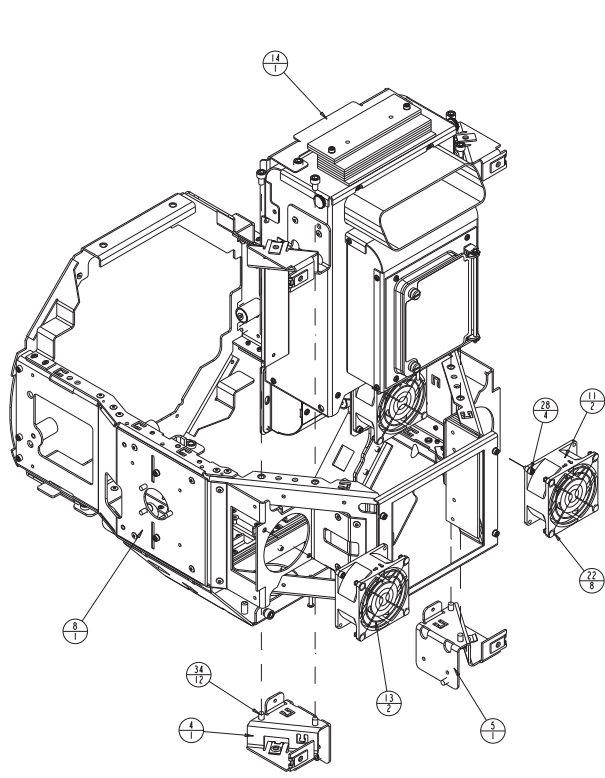
38	1	TOA038	INTERNAL	ZOOM FLICK RIGHT ASSEMBLY
37	1	TOA039	INTERNAL	ZOOM FLICK ASSEMBLY, LEFT
36	4	TUBE.156-280-RUBBER	90717053	TUBE,BUNA-N RUBBER, ID .156,OD.28,BLACK
35	2	TWA210	INTERNAL	SIDE COVER ASM. SG
34	16	SCREWM6AC10SS	91100810	SCREW,M6 SOCKET CAP 10 SS W/PATCH
33	6	SCREWM3AC10SSP	91100510	SCREW,M3 SOCKET CAP 10 SS W/PATCH
32	4	SCREWM4AF25BZ	91040425	SCREW,M4 SOCKET CSNK FLAT 25 BZ W/PATCH
31	6	SCREWM4AF10BZ	91040410	SCREW,M4 SOCKET CSNK FLAT 10 BZ W/PATCH
30	2	SCREWM4AF08BZ	91040408	SCREW,M4 SOCKET CSNK FLAT 08 BZ W/PATCH
29	4	SCREWM4AC10BZP	91050410	SCREW,M4 SOCKET CAP 10 BZ W/PATCH
28	4	SCREWM4AC08SS	91100408	SCREW,M4 SOCKET CAP 08 SS
27	4	SCREWM4AB40SS	91110440	SCREW,M4 BUTTON 40 SS
26	5	SCREWM3AB12SP	91010312	SCREW,M3 BUTTON SOCKET HEAD 12 BZ, W/PATCH
25	6	SCREWM3AB08BZP	91010306	SCREW,M3 BUTTON SOCKET HD 08 BZ W/PATCH
24	14	SCREW10-18PP500BTYP-SS	90709203	SCREW,10-18 PHIL PAN 1/2 B TYPE SS
23	2	RIVET-AK54ABS,B	90701161	RIVET,5/32 CSK 18B -.250 AL BLK PAINT
22	8	RIVET156X460PUSH,NY	90701336	RIVET, 5/32 PUSH .217-.256 NY BL
21	1	TO508	80450100	RAIL,CARRIAGE ASM,FX ZOOM,IKO LRXDC12
20	1	TO191	99080391	PLATE, ZOOM GUIDE
19	4	TO519	90410162	MOUNT, VIBRATION ISOLATION, 1.725LG
18	2	TO513	90410161	MOUNT, VIBRATION ISOLATION
17	1	MR113	99270084	MOTOR,STEP 2PH,NET S17LONG 12.7MM ND NMB
16	1	TOA058	INTERNAL	MODULE ASM,FLAGS/COLOR WHEEL,SHB
15	1	TK_BLOCK_IKO_LRDC12	85000272	IKO LRDC 12 CARRIAGE
14	1	TOA040	INTERNAL	HOUSING, REFLECTOR COMPLETE, SB
13	2	GRILL_80MM-FAN	99190100	GRILL,BLACK, 80MM FAN
12	1	TOA032	80450102	FRONT BEZEL ASSEMBLY, COMPLETE
11	2	TW703	80270038EF	FAN,ASST,SUNON 80 X80 X38MM 74.5 CFM
10	2	TO204	INTERNAL	COVER,ASM,HEAD,MAIN, SB
9	2	TWA000	INTERNAL	COUNTERLIGHT ASSEMBLY, HEAD SG
8	1	TOA055	80110066	CHASSIS,ASM,HEAD,SHB
7	1	TOA063	INTERNAL	BULKHEAD,ASM,FX,SINGLE GOBD,SHB
6	1	TOA048	INTERNAL	BULKHEAD,ASM,DIM/STROBE SB
5	1	TO194	99260590	BRACKET,LAMP HOUSING MOUNT RH SB
4	1	TO195	99260591	BRACKET,LAMP HOUSING MOUNT LH SB
3	1	CT143	80040021EF	BOARD,SENSOR MINIATURE ASST SB/SG
2	2	BLOWER,ASSY,97-97-33MM,W-TACH	80270049EF	BLOWER, ASSY, 24V DC 97 X 95 X 33MM SANYO DENKI
1	1	TWA212	80450093	BEZEL, REAR, HEAD ASM SG SVC
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION

BILL OF MATERIALS

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DIMENSIONAL TOLERANCES:	ENG:	QA:			
0 PLACE DECIMAL = ±0.38	MEG:				
1 PLACE DECIMAL = ±0.25	MEG:	DRW:			
2 PLACE DECIMALS = ±0.13	MEG:				
ANGLES = ±.8°					
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592	DESCRIPTION: HEAD,ASSEMBLY,SHB	MATERIAL:			
ALL COMPONENTS: MATERIALS AND FINISHES TO BE BENS COMPLIANT		FINISH:	NA		
MIN. HOLE FLATNESS TOLERANCES	INTERPRET DIMENSIONS PER ASME Y14.5M-1994 THIRD ANGLE PROJECTION DIMENSIONS ARE IN MILLIMETERS	SI A1	PART NO. INTERNAL	DRAWING NO. TOA004_SVC	REV.
VOLUME	DO NOT SCALE	SCALE: 0.147	SHEET: 1 OF 5		

DISPOSABLE LEADY NOTE:CC2

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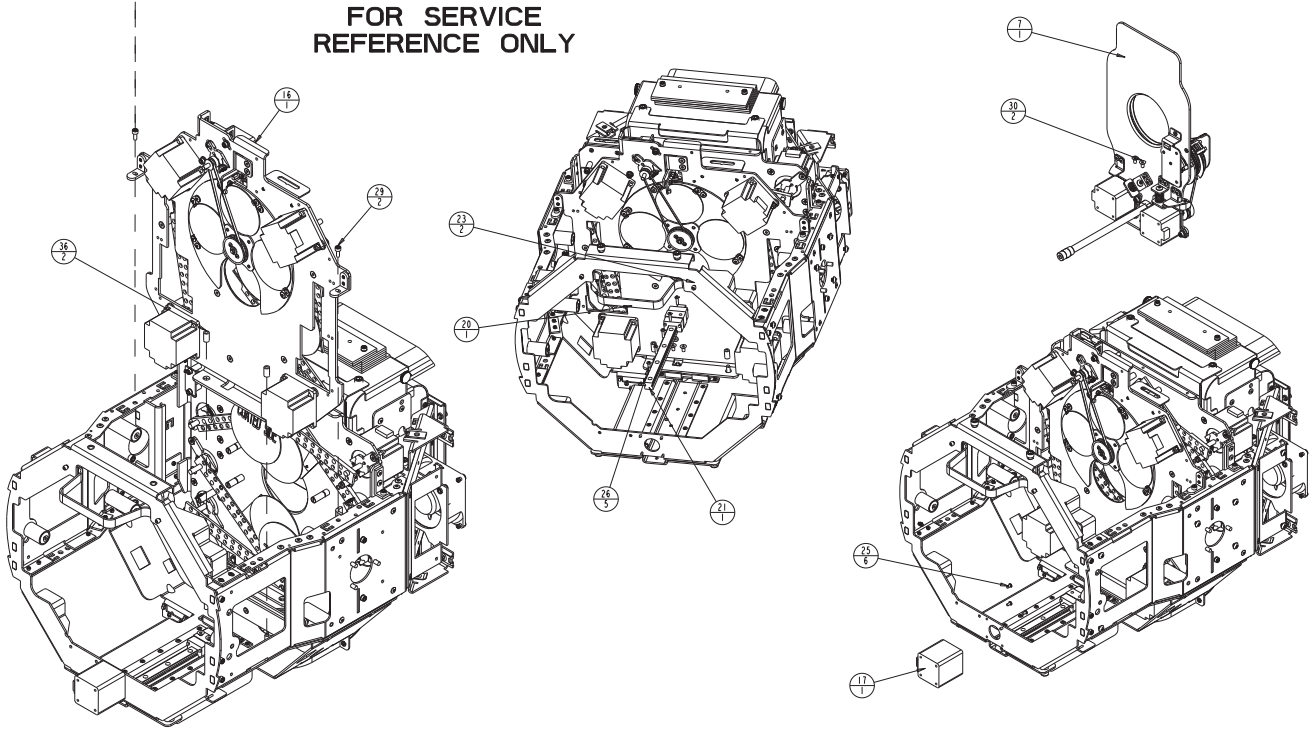


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DIMENSIONAL TOLERANCES:	ENG:	DA:			
0 PLACE DECIMAL: ±0.38	MEG:				
1 PLACE DECIMAL: ±0.13	MEG:	DRW:			
2 PLACE DECIMALS: ±0.13	ANGLES: ±0.5°				
FOR PAINTED PARTS REFER TO:	DESCRIPTION:				
ENG. SPEC. MANUAL W1-0592	HEAD ASSEMBLY_SHB				
ALL COMPONENTS: MATERIALS AND FINISHES TO BE BENS COMPLIANT	MATERIAL:				
	CHARTED				
MIN. HOLE:	INTERPRET DIMENSIONS PER			PART NO. INTERNAL TOA004_SVC	DRAWING NO. TOA004_SVC
MIN. HOLE:	ASME Y14.5M-1994				
FLATNESS:	THIRD ANGLE PROJECTION			DO NOT SCALE	SCALE: 0.167
THICKNESS:	DIMENSIONS ARE IN MILLIMETERS				SHEET: 2 OF 5
VOLUME:					

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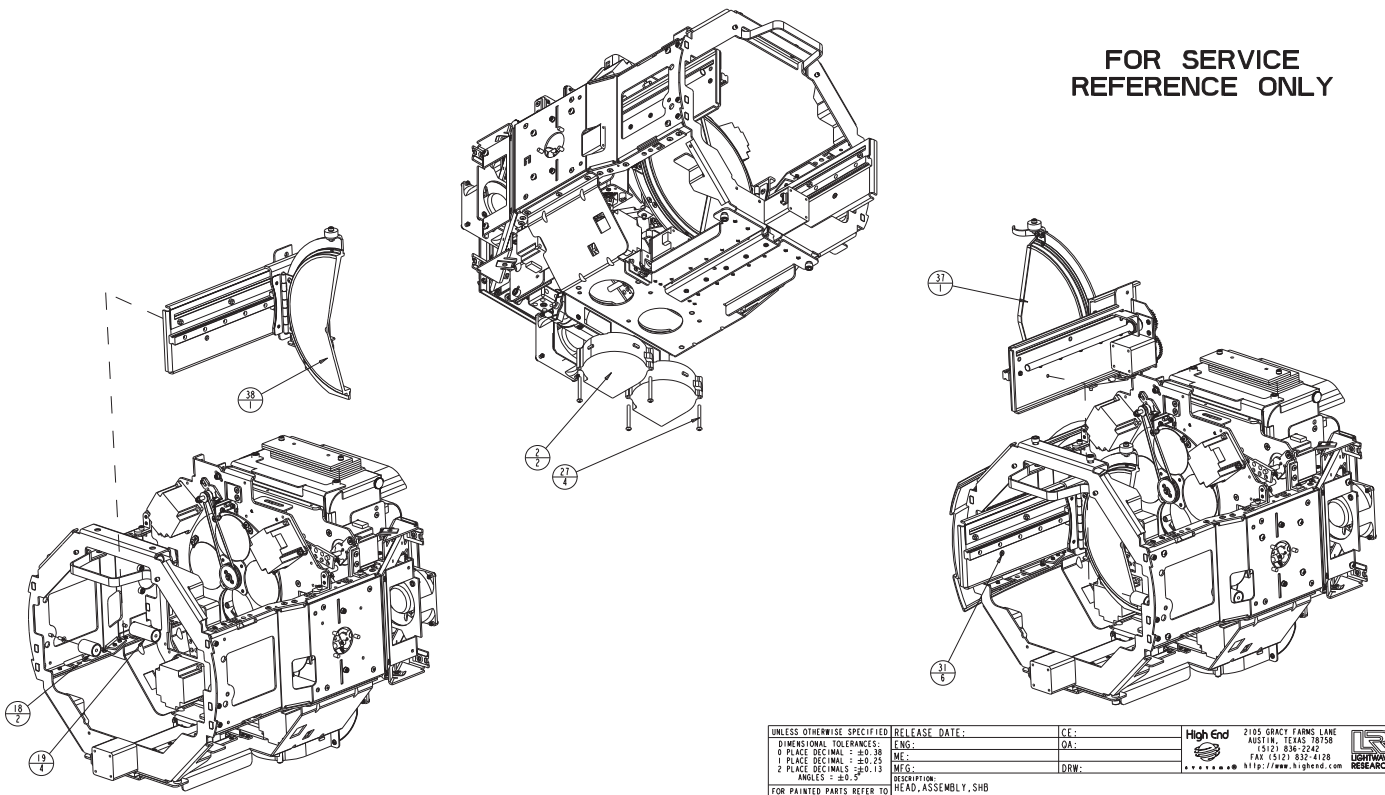


UNLESS OTHERWISE SPECIFIED:	RELEASE DATE:	CE:	High End	2105 GRACY FARMS LANE AUSTIN, TEXAS 78758 (512) 836-2240 FAX (512) 832-4128 http://www.highend.com	
DIMENSIONAL TOLERANCES:	ENG:	DA:			
0 PLACE DECIMAL: ± 0.38	ME:				
1 PLACE DECIMAL: ± 0.25	MG:	DRW:			
2 PLACE DECIMALS: ± 0.13	FINISH:				
ANGLES: $\pm 0.5^\circ$	DESCRIPTION:				
FOR PAINTED PARTS REFER TO:	HEAD ASSEMBLY_SHB				
ENG. SPEC. MANUAL W1-0592	MATERIAL:				
ALL COMPONENTS: HONEYWELL AND FINISHES TO BE BMS COMPLIANT	CHARTED				
MIN. HOLE:	INTERPRET DIMENSIONS PER	SI	PART NO.	DRAWING NO.	REV.
FLATNESS:	ASME Y14.5M-1994	METRIC	INTERNAL	TOA004_SVC	
THICKNESS:	THIRD ANGLE PROJECTION	A1	DO NOT SCALE	SCALE: 0.167	SHEET: 3 OF 5
VOLUME:	DIMENSIONS ARE IN MILLIMETERS				

DISPENSABLE NOTICE

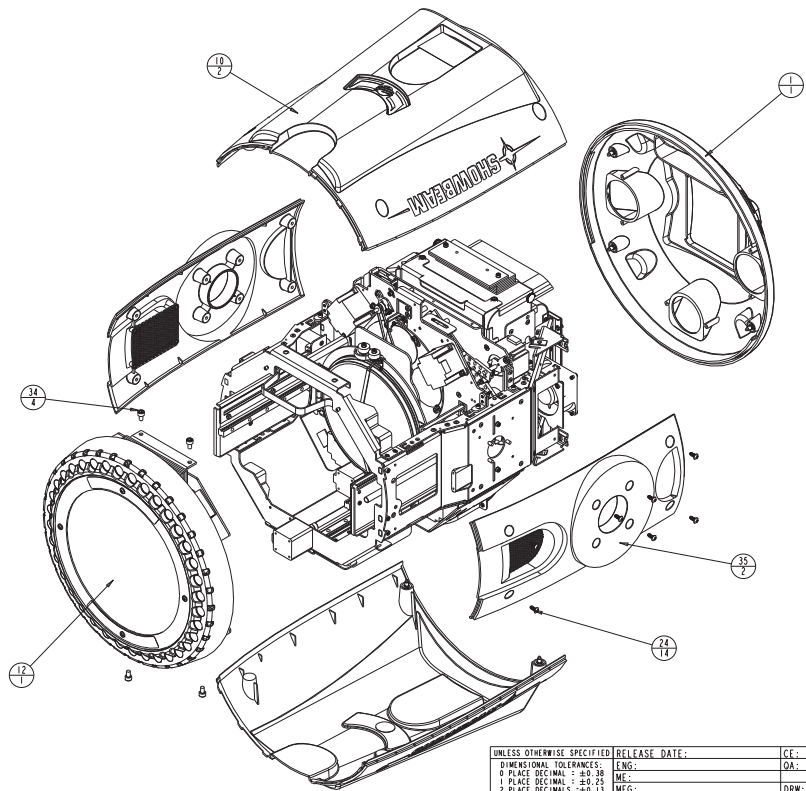
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UNLESS OTHERWISE SPECIFIED:	RELEASE DATE:	CE:	High End	2105 GRACY FARMS LANE AUSTIN, TEXAS 78758 (512) 836-2240 FAX (512) 832-4128 http://www.highend.com	
DIMENSIONAL TOLERANCES:	ENG:	DA:			
0 PLACE DECIMAL: ±0.38	MEG:	DRW:			
1 PLACE DECIMAL: ±0.25	MEG:				
2 PLACE DECIMALS: ±0.13	MEG:				
ANGLES: ±0.5°	DESCRIPTION:				
FOR PAINTED PARTS REFER TO:	HEAD ASSEMBLY.SHB				
ENG. SPEC. MANUAL W-0592	MATERIAL:				
ALL COMPONENTS: MATHEMATICAL AND FINISHES TO BE BENS COMPLIANT	CHARTED				
MIN. HOLE:	INTERPRET DIMENSIONS PER	SI	PART NO.	DRAWING NO.	REV.
FLATNESS:	ASME Y14.5M-1994	METRIC	INTERNAL	TOA004_SVC	
THICKNESS:	THIRD ANGLE PROJECTION	A1	DO NOT SCALE	SCALE: 0.167	SHEET: 4 OF 5
VOLUME:	DIMENSIONS ARE IN MILLIMETERS				

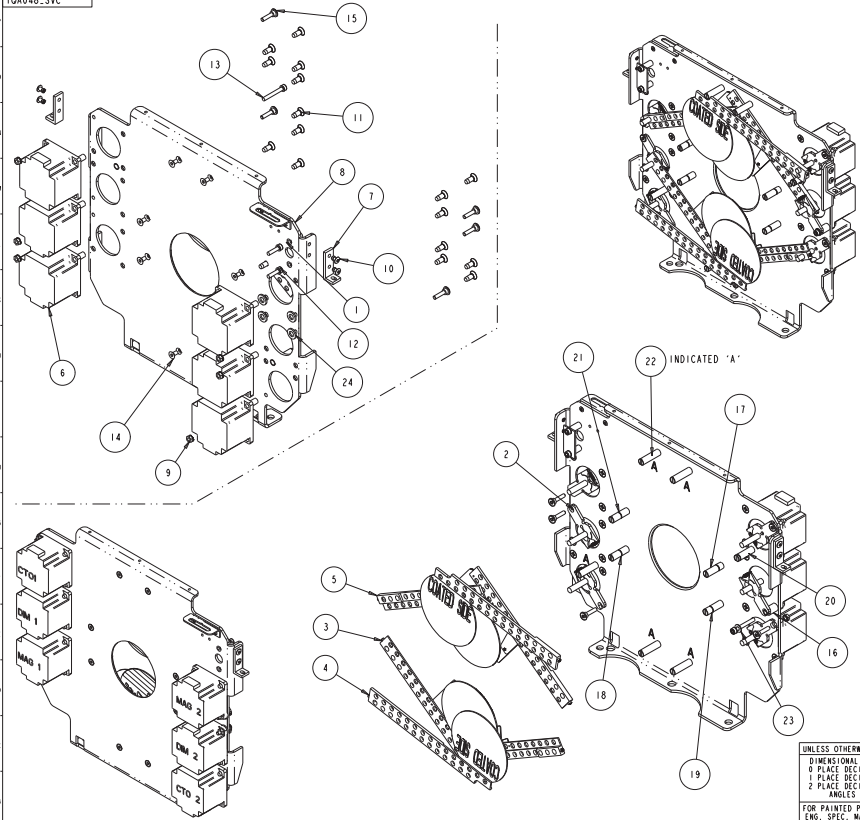


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DIMENSIONAL TOLERANCES:	ENG:	DA:			
0 PLACE DECIMAL: ±0.38	ME:				
1 PLACE DECIMAL: ±0.25	MG:	DRW:			
2 PLACE DECIMALS: ±0.13	ANGLES: ±0.5°				
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592	DESCRIPTION: HEAD ASSEMBLY, SHD				
ALL COMPONENTS: MATTERING AND FINISHES TO BE BANS COMPLIANT	MATERIAL: UNFINISHED				FINISH: NA
W. N. BAKI	INTERPRET DIMENSIONS PER ASME Y14.5M-1994	SI METRIC A1	PART NO. INTERNAL	DRWING NO. TOA004_SVC	REV.
FLATNESS:	THIRD ANGLE PROJECTION		DO NOT SCALE	SCALE: 0.167	SHEET: 5 OF 5
THICKNESS:	DIMENSIONS ARE IN MILLIMETERS				
VOLUME:					

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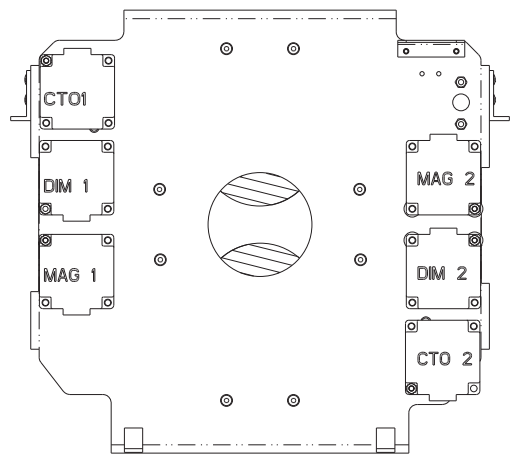
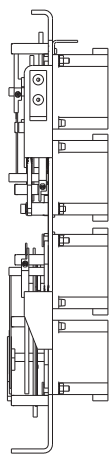
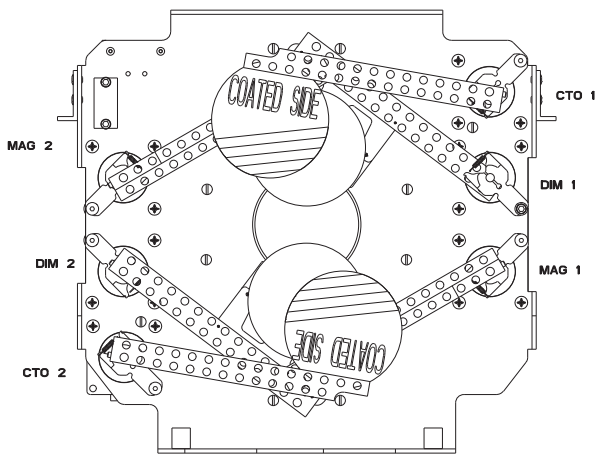
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION
24	4	WASHER_265_500_SS	90706020	WASHER, 1/4 FLAT SS .265x .50x .064
23	1	WASHER-32S	90706009	WASHER, 88 FLAT SS .174 X .375 X .032
22	5	T0368	85000273	STOP_M4,GROOVELESS,I,I LG
21	1	T0392	85000274	STOP_M4_DIM/STROBE/CTO_MAG 2
20	1	TW393	85000268	STOP, MAGENTA 2
19	1	TW392	85000267	STOP, MAGENTA 1
18	1	TW391	85000266	STOP, DIM/STROBE #2
17	1	TW390	85000265	STOP, DIM/STROBE #1
16	1	TW377	90702375	STANDOFF, BRAKE MOUNT
15	5	TW378	90702373	SCREW SHOULDER M4 MOTOR MOUNT
14	8	SCREWM44F08BZ	91040408	SCREW_M4 SOCKET CSNK FLAT 08 BZ W/PATCH
13	1	SCREWM44C30W-BZ	91000430	SCREW_M4 SOCKET CAP 30 BZ SEMS
12	2	SCREWM44C16W-BZ	91000416	SCREW_M4 SOCKET CAP 16 BZ SEMS
11	17	SCREW12-24FF500TL-SZ	90711060	SCREW, 12-24 PHIL FLAT 1/2 THRD ROLL, TRI LOBE
10	4	RIVETS4A0B.	90701197	RIVET, 5/32 DOMC .188 - .250 ALUMINUM
9	6	NUTM4KEP.	91201204	NUT, M4 KEPS
8	1	T0132	99260570	MOUNT_DIM/STROBE/CTO SHB
7	2	T0343	99260571	MOUNT_ANGLE_BULKHEAD_D/S SHB
6	6	MRO09	99270083	MOTOR_STEPPER NMB 23KM-K286-01V
5	2	TWA072	80560043	FLAG_ASSY_MAGENTA SG
4	2	TOA029	80560050	FLAG_ASM_C-T-O_SHB
3	2	TWA096	80560040	FLAG_ASSEMBLY_DIM/STROBE
2	6	TWA083	80140039	DAMPER_ASSY_MTR BRAKE_HI-TEMP_.25 DIA
1	1	FS719	80040024EF	BOARD_ASSY_TEMP SENSOR

UNLESS OTHERWISE SPECIFIED:	RELEASE DATE:	CC:	2105 GRACY FARMS LANE AUSTIN, TEXAS 78758 (512) 836-2244 FAX (512) 832-4128 http://www.highend.com	LIGHTWAVE RESEARCH
DIMENSIONAL TOLERANCES:	ENG:	QA:		
0 PLACE DECIMAL = ±0.38	MEG:	DRW:		
1 PLACE DECIMAL = ±0.25	MEG:			
2 PLACE DECIMALS = ±0.13	ANGLES = ±0.5°			
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592	DESCRIPTION:			
ALL COMPONENTS: MATERIALS AND FINISHES TO BE BANS COMPLIANT	DESCRIPTION:			
FINISH:				
FINISH:				

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DIMENSIONAL TOLERANCES PER ASME Y14.5M-1994 THIRD ANGLE PROJECTION DIMENSIONS ARE IN MILLIMETERS	PART NO. INTERNAL TOA048_SVC DO NOT SCALE SCALE: 0.333 SHEET: 1 OF 2	DRAWING NO. TOA048_SVC REV.
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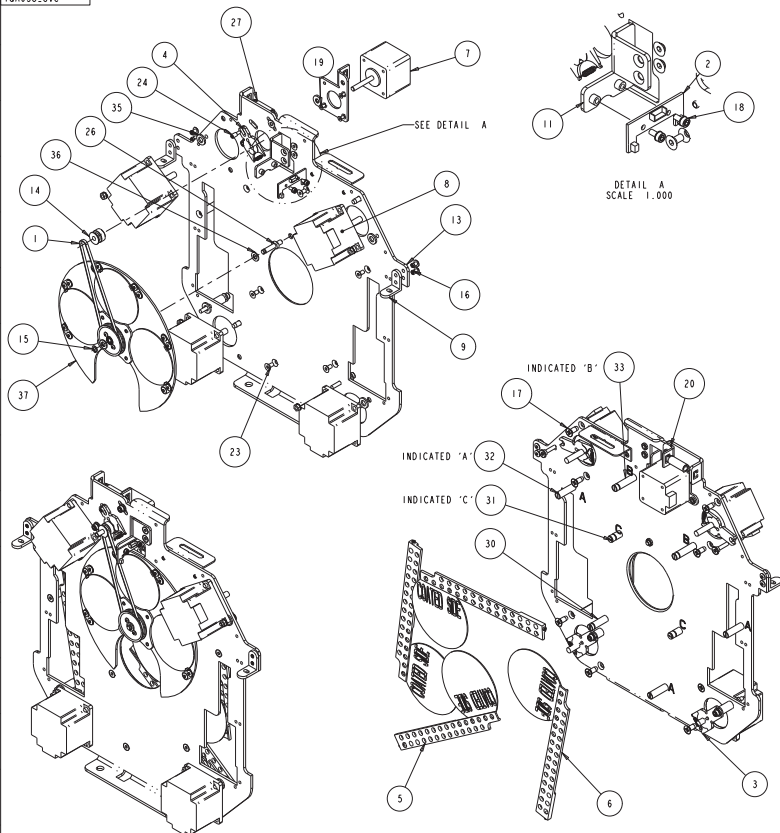
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DIMENSIONAL TOLERANCES:	ENG:	DA:			
0 PLACE DECIMAL: ±0.38	ME:	DRW:			
1 PLACE DECIMAL: ±0.25	MFG:				
2 PLACE DECIMALS: ±0.13					
ANGLES: ±0.5°					
FOR PAINTED PARTS REFER TO:	DESCRIPTION:				
ENG. SPEC. MANUAL W-0592	BULKHEAD_ASM_DIM1/STROBE_SB				
ALL COMPONENTS: MATERIALS AND FINISHES TO BE DUNS COMPLIANT	MATERIAL:	FINISH:			
	CHARTED	NA			
MIN. HOLE:	INTERPRET DIMENSIONS PER	PART NO.			
	ASME Y14.5M-1994	INTERNAL TOA048_SVC			
FLATNESS:	THIRD ANGLE PROJECTION				
TOLERANCES:	DIMENSIONS ARE IN MILLIMETERS	DO NOT SCALE	SCALE: 0.750	SHEET: 2 OF 2	
VOLUME:					

TOA058_SVC



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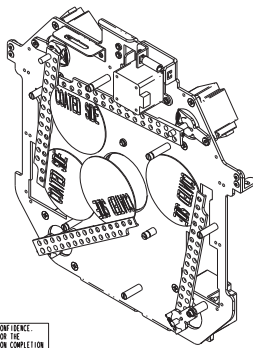
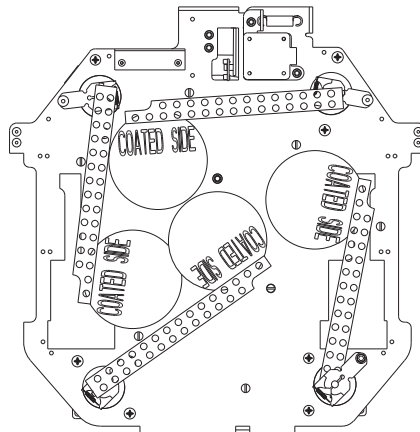
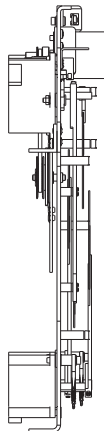
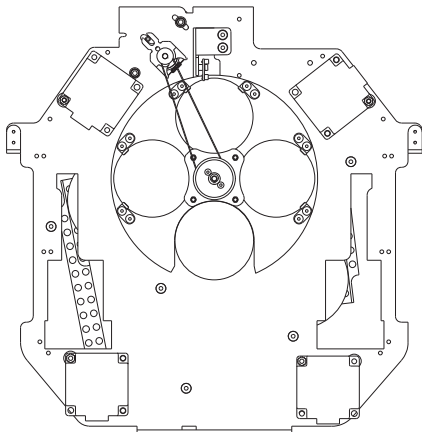
37	1	TOA043	80190091	WHEEL_ASM_COLOR_WHEEL_SHB
36	2	TO330	90709209	WASHER_THRUST_S.1 ID X 1.1 OD X 1.02
35	4	WASHER_265_500_SS	90706020	WASHER_1/4 FLAT SS .265x .50x .064
34	4	WASHERB-325	90706009	WASHER_W8 FLAT SS .174 X .375 X .032
33	2	TW374	80071906	STOP_M4_L=31.75 (1.25)
32	3	TW373	85000271	STOP_M4_L=25.4
31	2	TW372	80071904	STOP_M4_L=16.26 (1.64)
30	1	TW394	85000269	STOP_CYAN_R2_SG
29	1	TOS18	90702400	STANDOFF_MOTOR BRAKE_L= .675
28	1	TOS14	90702399	STANDOFF_BRAKE MOUNT
27	1	SPRING360_1250EXT	90701380	SPRING_EXTENSION .360 X 1.25 FREE LENGTH
26	1	TO321	99260555	SHAFT_MOUNTING_COLORWHEEL
25	2	TW376	90702373	SCREW_SHOULDER_M4_MOTOR MOUNT
24	1	TO361	90702385	SCREW_SHOULDER_M3_MOTOR MNT
23	10	SCREWMAAF08BZ	91040408	SCREW_M4 SOCKET CSKN FLAT 08 BZ W/PATCH
22	1	SCREWMAAC40W-BZ	91000440	SCREW_M4 SOCKET CAP 40 BZ SEMS
21	1	SCREWMAAC30W-BZ	91000430	SCREW_M4 SOCKET CAP 30 BZ SEMS
20	2	SCREWMAAC08BZ	91000408	SCREW_M4 SOCKET CAP 08 BZ SEMS
19	3	SCREWMAF06BZP	91040306	SCREW_M3 SOCKET CSKN FLAT 06 BZ W/PATCH
18	2	SCREWMAAC06W-BZ	91000306	SCREW_M3 SOCKET CAP 06 BZ SEMS
17	8	SCREW12-24PF500TL-SZ	90711060	SCREW 12-24 PHIL FLAT 1/2 THRD HOLL TRI LOBE
16	4	RIVET5440B	90701197	RIVET_5/32 DOME .188 - 250 ALUMINUM
15	1	RING_SMM_EXS	90701299	RETAINER_RING_EXTERNAL GROOVELESS 5mm
14	1	CC508	99360012	PULLEY_080 1/8W 16GR ALUM 2 SET MADE TO
13	1	TO121	99360384	PLATE_BULKHEAD_COLOR_SHB
12	4	NUTMAKEP	91201204	NUT_M4 KEPS
11	1	TO118	99260581	MOUNT_SENSOR_PCB_COLORWHEEL
10	1	TO119	99260582	MOUNT_MOTOR_TENSION_COLORWHEEL
9	2	TO130	99260584	MOUNT_BULKHEAD_FLAGCLR_WHL_SHB
8	4	M0009	99270083	MOTOR_STEPPER NMD 230W-R206-D1V
7	1	MR108_03	99270077	MOTOR_STEP 2PH MET S17 33.8mm ALNICO NMD
6	2	TOA027	80560051	FLAG_ASM_YELLOW_SHB
5	2	TOA028	80560052	FLAG_ASM_CYAN_SHB
4	1	SP093	80140026	DAMPER_MOTOR BRAKE ARAMID ASSY
3	4	TWA083	80140039	DAMPER_ASSY_MTR BRAKE_HI_TEMP .25 DIA
2	1	CT413	80040021EF	BOARD_SENSOR MINIATURE ASSY SB/SG
1	1	TO505	99360054	BELT_MXL_145 TOOTH_1/8 WIDE_HI TEMP

ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION
BILL OF MATERIALS				

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DIMENSIONAL TOLERANCES:	ENG:	DA:		
0 PLACE DECIMAL = ±0.38	MEG:	DRW:		
1 PLACE DECIMAL = ±0.25	MEG:			
2 PLACE DECIMALS = ±0.13	ANGLES = ±0.5			
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592	MATERIAL:		FINISH:	
ALL COMPONENTS: MATTERING AND FINISHES TO BE BENS COMPLIANT	CHARTED		N/A	
MIN. HOLE	INTERPRET DIMENSIONS PER ASME Y14.5M-1994		PART NO.	DRAWING NO.
FLATTEN:	THIRD ANGLE PROJECTION		INTERNAL	TOA058_SVC
TUCKERS:	DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE	SCALE: 0.500
VOLUME				SHEET: 1 OF 2

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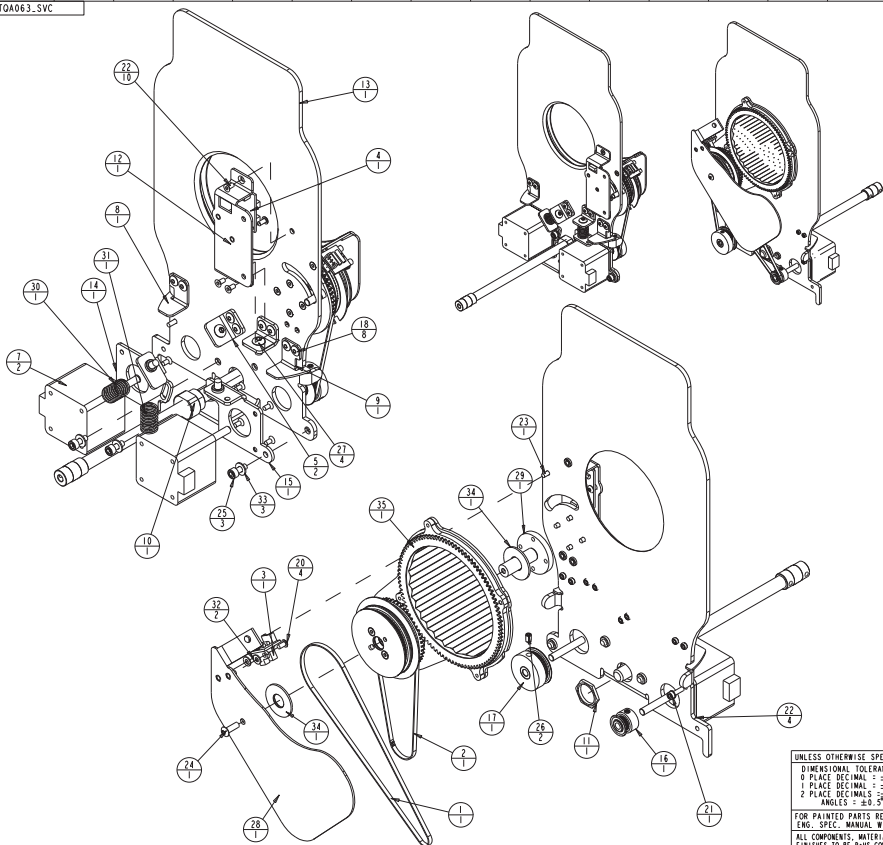


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DIMENSIONAL TOLERANCES:	ENG:	DA:			
0 PLACE DECIMALS: ±0.38	MEG:	DRW:			
1 PLACE DECIMALS: ±0.25	MEG:				
2 PLACE DECIMALS: ±0.13	MEG:				
ANGLES: ±0.5°	DESCRIPTION:				
FOR PAINTED PARTS REFER TO:	MODULE_ASM_FLAGS/COLOR WHEEL_SHB				
ENG. SPEC. MANUAL W1-0592	MATERIAL:	FINISH:			
ALL COMPONENTS: MATURING AND CHARTED		N/A			
MIN. HOLE:	INTERPRET DIMENSIONS PER		PART NO. INTERNAL TOA058_SVC DO NOT SCALE SCALE: 0.500 SHEET: 2 OF 2		
FLATNESS:	ASME Y14.5M-1994				
THICKNESS:	THIRD ANGLE PROJECTION				
VOLUME:	DIMENSIONS ARE IN MILLIMETERS				

TOA063_SVC



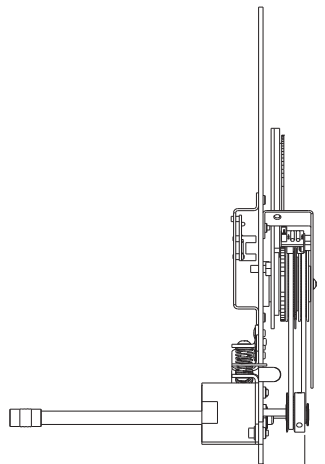
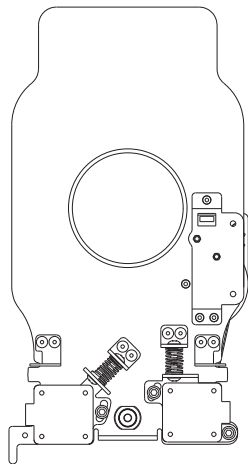
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REFERENCE ONLY

35	1	TOA061	INTERNAL	WHEEL ASM,FX,SINGLE GOBO,SHD	
34	2	TO374	90706208	WASHER,THRUST,1.0 OD,.5 ID, .055 THK	
33	3	WASHER-325	90706009	WASHER,48 FLAT SS .174 X .315 X .032	
32	2	WASHER,12X25T5_S2	90706128	WASHER, M3 FLAT X MT OD ZINC	
31	1	SPRING_COMP480_2000	90701395	SPRING,COMPRESSION,.480 OD,2.0 LONG	
30	1	SPRING_COMP480_1500	90701394	SPRING,COMPRESSION,.480 OD,1.5 LONG	
29	1	TO373	99260572	SHAFT, MOUNTING, FX WHEEL	
28	1	TO160	99190109	SHADE,BELT,FX WHEEL	
27	4	SCREWM5AB100ZP	91010510	SCREW,M5 BUTTON 10 BZ W/PATCH	
26	2	SCREWM4AS06CUP_SSP	91190406	SCREW,M4 SOCKET SET, CUP,.06 SS W/PATCH	
25	3	SCREWM4AC10BZP	91050410	SCREW,M4 SOCKET CAP 10 BZ W/PATCH	
24	1	SCREWM4AB12BZ	91010412	SCREW,M4 BUTTON 12 BZ W/PATCH	
23	1	SCREWM3AF08BZ	91040308	SCREW,M3 SOCKET CSNK FLAT 08 BZ W/PATCH	
22	14	SCREWM3AF06BZP	91040306	SCREW,M3 SOCKET CSNK FLAT 06 BZ W/PATCH	
21	1	SCREWM3AC10BZ	91000310	SCREW,M3 SOCKET CAP 10 BZ SEMS	
20	4	SCREWM3AB06BZP	91010306	SCREW,M3 BUTTON SOCKET HD 06 BZ W/PATCH	
19	1	TO384	90721017	SCREW, LEAD, FX ZOOM	
18	8	RIVET54A0B	90701197	RIVET,5/32 DOME,188 - .250 ALUMINUM	
17	1	TO390	80370028	PULLEY,TIMING, FX SPIN, .36T, MIL	
16	1	RB310	80370023	PULLEY,ASSY,DRIVE,18 TOOTH, .080 PITCH	
15	1	TO158	99080386	PLATE,MOTOR MOUNT,FX WHEEL,RIGHT	
14	1	TO157	99080385	PLATE,MOTOR MOUNT,FX WHEEL,LEFT	
13	1	TO155	99080382	PLATE,EFFECTS,SINGLE GOBO	
12	1	TO159	99080378	PLATE, SENSOR MOUNT, FX WHEEL, PIVOT	
11	1	NUT58-24LPS	90703053	NUT,PANEL MOUNT 5/8-24 X 3/32 BRASS	
10	1	TO372	90703111	NUT,LEAD SCREW, 3/8 X 1.00, 5 START	
9	1	TO162	99260576	MOUNT,ROLLER,FX WHEEL,RIGHT	
8	1	TO181	99260577	MOUNT,ROLLER,FX WHEEL,LEFT	
7	2	MR10B_03	99270077	MOTOR,STEP 2PH MET S17 33.8mm ALN/VC0 NMB	
6	1	SPI91	90701149	COUPLER,SLIM-LINE .88 VIBRATION CONTROL	
5	2	TO163	99260578	BRACKET,MOTOR TENSION,FX	
4	1	TOB90	80040019E	BOARD,SENSOR ASSY TECHNOBEAM	
3	1	FST09	80040022E	BOARD,ASSY X-SPOT FLAG HOMING SENSOR	
2	1	TO505	99360054	BELT,MXL,145 TOOTH,178 WIDE,HI TEMP	
1	1	TO509	99360062	BELT,FX WHEEL PIVOT,180T	
ITEM NO.		QTY.	FILENAME	PART NO.	DESCRIPTION
					BILL OF MATERIALS

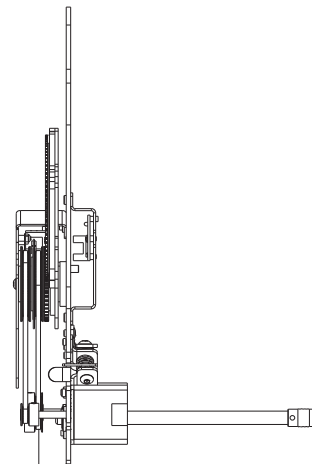
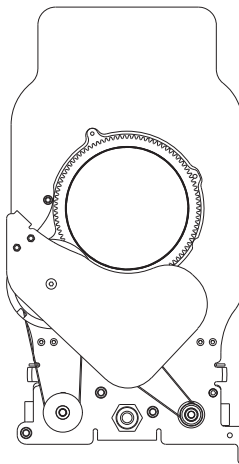
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DIMENSIONAL TOLERANCES:	ENG:	OA:			
0 PLACE DECIMAL = ±0.38	MEG:	DRW:			
1 PLACE DECIMAL = ±0.25	MEG:				
2 PLACE DECIMALS = ±0.13	MEG:				
ANGLES = ±0.5					
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL WJ-0592	MATERIAL:				
ALL COMPONENTS: MATERIALS AND FINISHES TO BE BANS COMPLIANT	FINISH:				
REV. DATE	INTERPRET DIMENSIONS PER ASME Y14.5M-1994 THIRD ANGLE PROJECTION DIMENSIONS ARE IN MILLIMETERS	SI A1	PART NO. INTERNAL TOA063_SVC	DRAWING NO. INTERNAL TOA063_SVC	REV.
VOLUME	DO NOT SCALE	SCALE: 0.800	SHEET: 1 OF 2		

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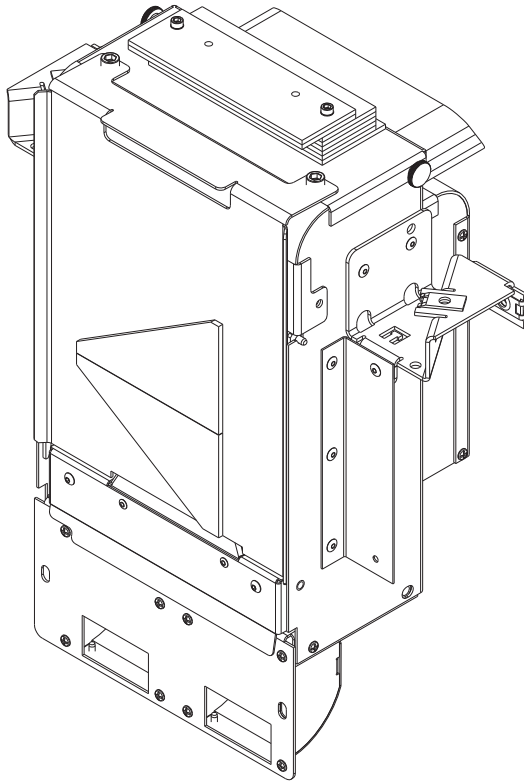
29.61
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(GOGO SPIN PULLY)



19.48
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(GOGO PIVOT PULLY)

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DIMENSIONAL TOLERANCES:	ENG:	DA:		
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1 PLACE DECIMAL: ±0.25	MFG:			
2 PLACE DECIMALS: ±0.13	DESCRIPTION:			
ANGLES: ±0.5°	FOR PAINTED PARTS REFER TO:			
	ENG. SPEC. MANUAL W1-0592			
	ALL COMPONENTS: MATTERING AND CHARTED			
	FINISHES TO BE BANS COMPLIANT			
	FINISH:			
	NA			
	MATERIAL:			
	INTERPRET DIMENSIONS PER			
	ASME Y14.5M-1994			
	THIRD ANGLE PROJECTION			
	DIMENSIONS ARE IN MILLIMETERS			
	VOLUME			
	SI METRIC A1			
	PART NO. INTERNAL TOA063_SVC			
	DRAWING NO. TOA063_SVC			
	DO NOT SCALE			
	SCALE: 0.800			
	SHEET: 2 OF 2			



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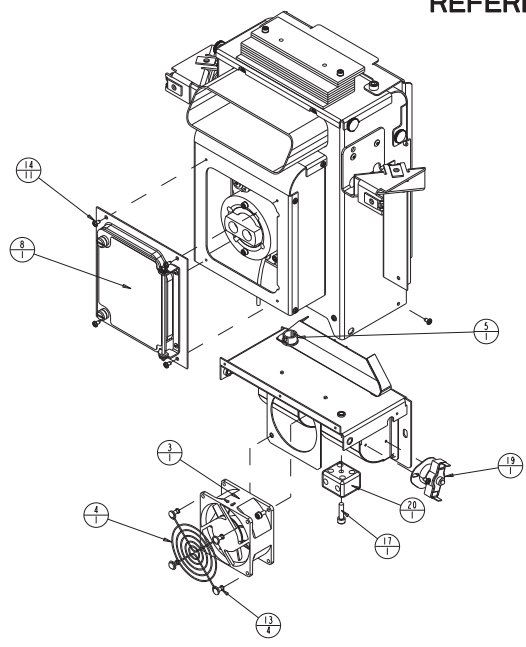
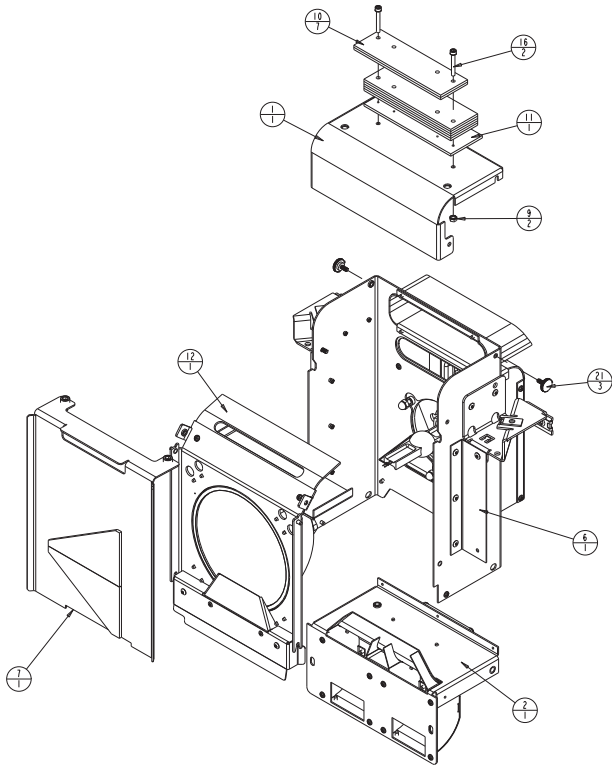
21	3	TWS44	90705033	THUMSCREW, M4, PANEL ACCESS
20	1	BLOCK, TERM-2 POLE, CERAMIC	90406197EF	TERMINAL, BLOCK, 2 POLE CERAMIC, UL
19	1	TW, THERMAL SWITCH, 90TABS	90413013EF	SWITCH, THERMAL, 250F 3/4" NOMW CLOSED MAN
18	2	SCREWM6AC10SS	91100610	SCREW, M6 SOCKET CAP 10 SS W/PATCH
17	1	SCREWM5AC20SSP	91100520	SCREW, M5 SOCKET CAP 20 SS W/PATCH
16	2	SCREWM4AC30W-BZ	91000430	SCREW, M4 SOCKET CAP 30 BZ SEMS
15	2	SCREWM4AC08BZ	91000408	SCREW, M4 SOCKET CAP 08 BZ SEMS
14	11	SCREWG-32PP250FTYPE-BZ	90709012	SCREW, 6-32 PHIL PAN 1/4 F TYPE BZ
13	4	RIVET156X460PUSH-NY	90701336	RIVET, 5/32 PUSH, 217-.256 NY BL
12	1	TOA071	INTERNAL	REFLECTOR, ASM, COMPLETE, SHB/SG
11	1	TWS21	90070469	PLATE, BASE, COUNTERWEIGHT SG
10	7	TWS22	90070469	PLATE, MID, COUNTERWEIGHT MEAI
9	2	NUTM4KEP	91201204	NUT, M4 KEPS
8	1	TOA073	INTERNAL	MOUNT, ASM, LAMP ACCESS DOOR (STAMPED)
7	1	TOA074	80580044	MIRROR, HOT, ASM, PLATE, HORIZONTAL GAP
6	1	TOA041	INTERNAL	HOUSING, ASM, REFLECTOR, UPPER COMPLETE, SHB
5	1	BUSHING500SNAP	90410102	GROMMET, SNAP BUSHING, 50 ID
4	1	GRILL_80MM-FAN	99190100	GRILL, BLACK, 80MM FAN
3	1	TW103	80270038EF	FAN, ASST, SUNON 80 X80 X38MM 74.5 CFM
2	1	TOA069	INTERNAL	DUCT, INTAKE, REAR, SB/SG
1	1	TW157	80070454	COVER, HOUSING, REFLECTOR SG
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION
				BILL OF MATERIALS

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DIMENSIONAL TOLERANCES:	ENG:	QA:		
0 PLACE DECIMAL = ±0.38	MEG:	DRW:		
1 PLACE DECIMAL = ±0.13	ANGLES = ±0.5°			
2 PLACE DECIMALS = ±0.13				
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W-0592	MATERIAL:	FINISH:		
ALL COMPONENTS, MATERIALS AND FINISHES TO BE HANS COMPLIANT	CHARTED			
	INTERPRET DIMENSIONS PER ASME Y14.5M-1994	PART NO.	INTERNAL	DRAWING NO.
	THIRD ANGLE PROJECTION		TOA040_SVC	REV.
	DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE	SCALE: 0.400
				SHEET: 1 OF 2

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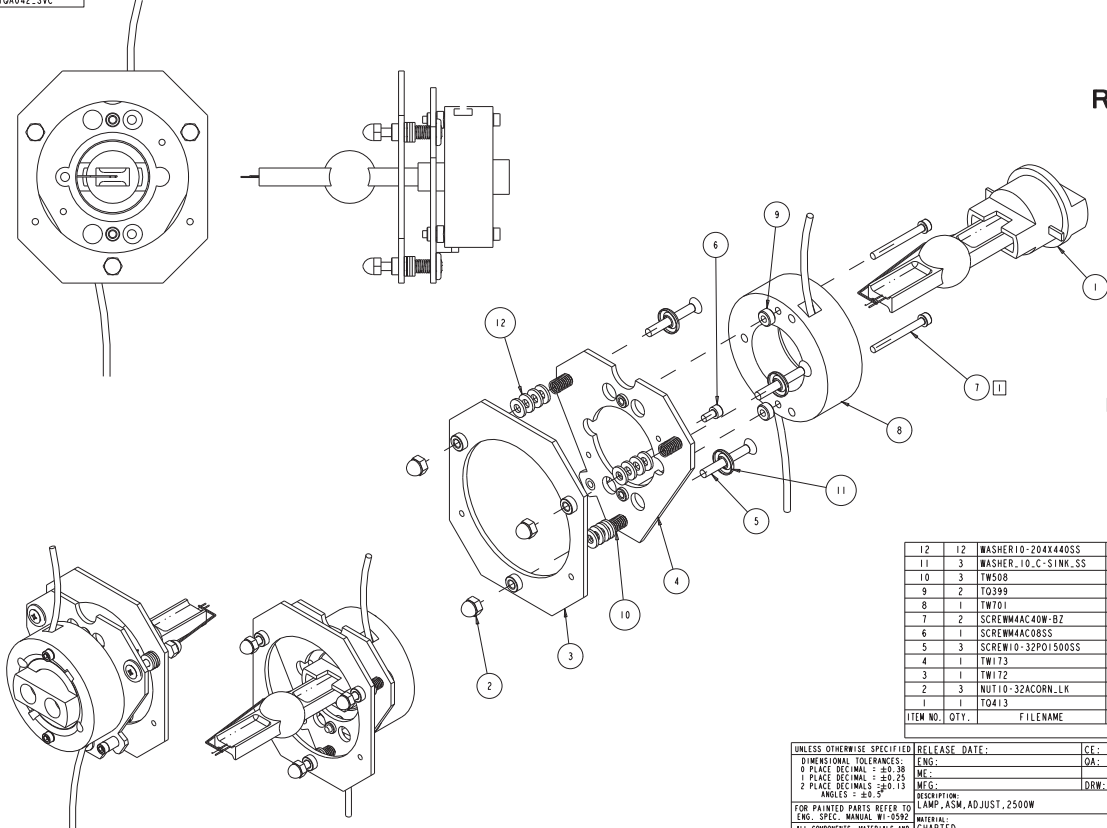
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DIMENSIONAL TOLERANCES:	ENG:	DA:			
0 PLACE DECIMAL: ±0.38	MEG:				
1 PLACE DECIMAL: ±0.25	MEG:	DRW:			
2 PLACE DECIMALS: ±0.13	ANGLES: ±0.5°				
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592	DESCRIPTION: HOUSING, REFLECTOR COMPLETE, SB	MATERIAL:			
ALL COMPONENTS: MATHEMATICAL FINISHES TO BE BANS COMPLIANT	FINISH:				
MIN. HOLE:	INTERPRET DIMENSIONS PER ASME Y14.5M-1994	PART NO.	INTERNAL	DRAWING NO.	TOA040_SVC
FLATNESS:	THIRD ANGLE PROJECTION	DO NOT SCALE	SCALE: 0.400	SHEET: 2 OF 2	REV.
TOLERANCES:	DIMENSIONS ARE IN MILLIMETERS				
VOLUME:					

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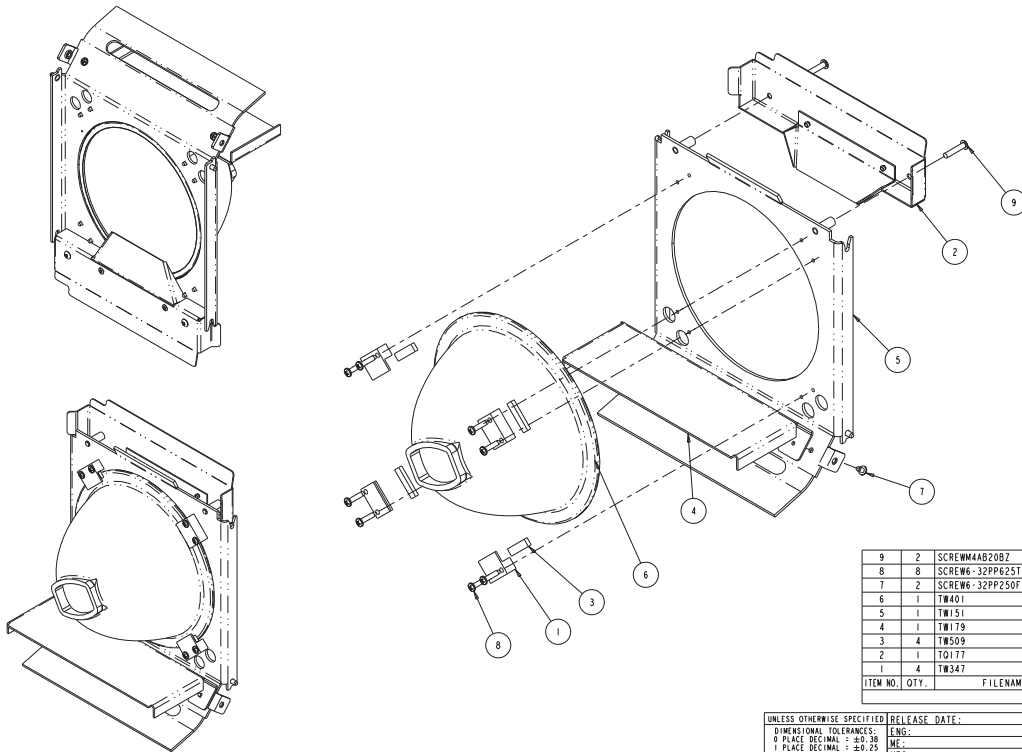
NOTES:
 □ TORQUE SCREW TO 11 IN/LB (2 PLCS)

12	12	WASHER10-204X440SS	90706012	WASHER_FLAT #10 SS
11	3	WASHER_10_C-SINK_SS	90706203	WASHER_#10_594 OD,CTS# FINISH,18-8,SS
10	3	TW508	90701210	SPRING, COMPRESSION, .30 OD x 1.0 L SS
9	2	T0399	99260592	SPACER,LAMP SOCKET,Z-AXIS
8	1	TW701	99150025EF	SOCKET,LAMP_PGJ50
7	2	SCREWM4AC0W-BZ	91100440	SCREW_M4 SOCKET CAP 40 BZ SEMS
6	1	SCREWM4AC0BSS	91100408	SCREW_M4 SOCKET CAP 08 SS
5	3	SCREW10-32PO1500SS	90709205	SCREW_10-32,PHIL OVAL 1 1/2,18-8,SS
4	1	TW173	99080303	PLATE,LAMP MOUNTING SG
3	1	TW172	99080302	PLATE,LAMP ADJUST, SG
2	3	NUT110-32ACORN_LK	90703108	NUT_ACORN10-32,SELF-LOCK,3/8W,13/32H SS
1	1	TO413	55030087	LAMP,2500 WATT FASTFIT
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION

BILL OF MATERIALS

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DIMENSIONAL TOLERANCES:	ENG:	DA:		
0 PLACE DECIMAL: ±0.38	MEG:	DRW:		
1 PLACE DECIMAL: ±0.25	MEG:			
2 PLACE DECIMALS: ±0.13	ANGLES: ±0.5°			
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592	MATERIAL:			
ALL COMPONENTS: MATERIALS AND FINISHES TO BE RANS COMPLIANT	FINISH:		NONE	
W.T. UNIT:	INTERPRET DIMENSIONS PER ASME Y14.5M-1994	SI METRIC	PART NO. INTERNAL TOA042_SVC	DRAWING NO. TOA042_SVC
FLATTEN:	THIRD ANGLE PROJECTION	DO NOT SCALE	SCALE: 1:600	SHEET: 1 OF 1
TICKERS:	DIMENSIONS ARE IN MILLIMETERS			
VOLUME:				

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9	2	SCREWM4B20BZ	91010420	SCREW_M4 BUTTON 20 BZ W/PATCH
8	8	SCREW6-32PP625T	90709017	SCREW_6-32 PHIL PAN 5/8 TYPE 23 SZ
7	2	SCREW6-32PP250TYPE-BZ	90709012	SCREW_6-32 PHIL PAN 1/4 F TYPE BZ
6	1	TW401	99130022	REFLECTOR, FACETED
5	1	TW151	80070450	PLATE_MOUNTING_REFLECTOR_SG
4	1	TW179	80070458	PLATE_LIGHT_BLOCK_REFLECTOR_SG
3	4	TW509	99330171	FOAM_SILICONE_STRIP_1/8 X 1/4
2	1	TO177	99080366	DUCT_AIR_DEFLECTOR_LAMP_SHB/SG
1	4	TW347	99260502	CLAMP_MOUNTING_REFLECTOR_SG
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION

BILL OF MATERIALS

UNLESS OTHERWISE SPECIFIED:	RELEASE DATE:	CE:	High End 2105 GRACY FARMS LANE AUSTIN, TEXAS 78758 (512) 836-2244 FAX (512) 832-4128 http://www.highend.com	 LIGHTWAVE RESEARCH
DIMENSIONAL TOLERANCES:	ENG:	DA:		
0 PLACE DECIMAL = ±0.38	ME:	DRW:		
1 PLACE DECIMAL = ±0.25	WEG:			
2 PLACE DECIMALS = ±0.13	ANGLES = ±0.5°			
DESCRIPTION:	REFLECTOR_ASM_COMPLETE_SHB/SG			
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W1-0592	MATERIAL:		FINISH:	
ALL COMPONENTS: MATERIALS AND FINISHES TO BE BANS COMPLIANT	CHARTEED		NA	
MIN. HOLE:	INTERPRET DIMENSIONS PER ASME Y14.5M-1994		PART NO.	DRAWING NO.
FLATNESS:	THIRD ANGLE PROJECTION		INTERNAL	TOA071_SVC
TOLERANCES:	DIMENSIONS ARE IN MILLIMETERS	DO NOT SCALE	SCALE: 0.750	SHEET: 1 OF 1
VOLUME:				REV.

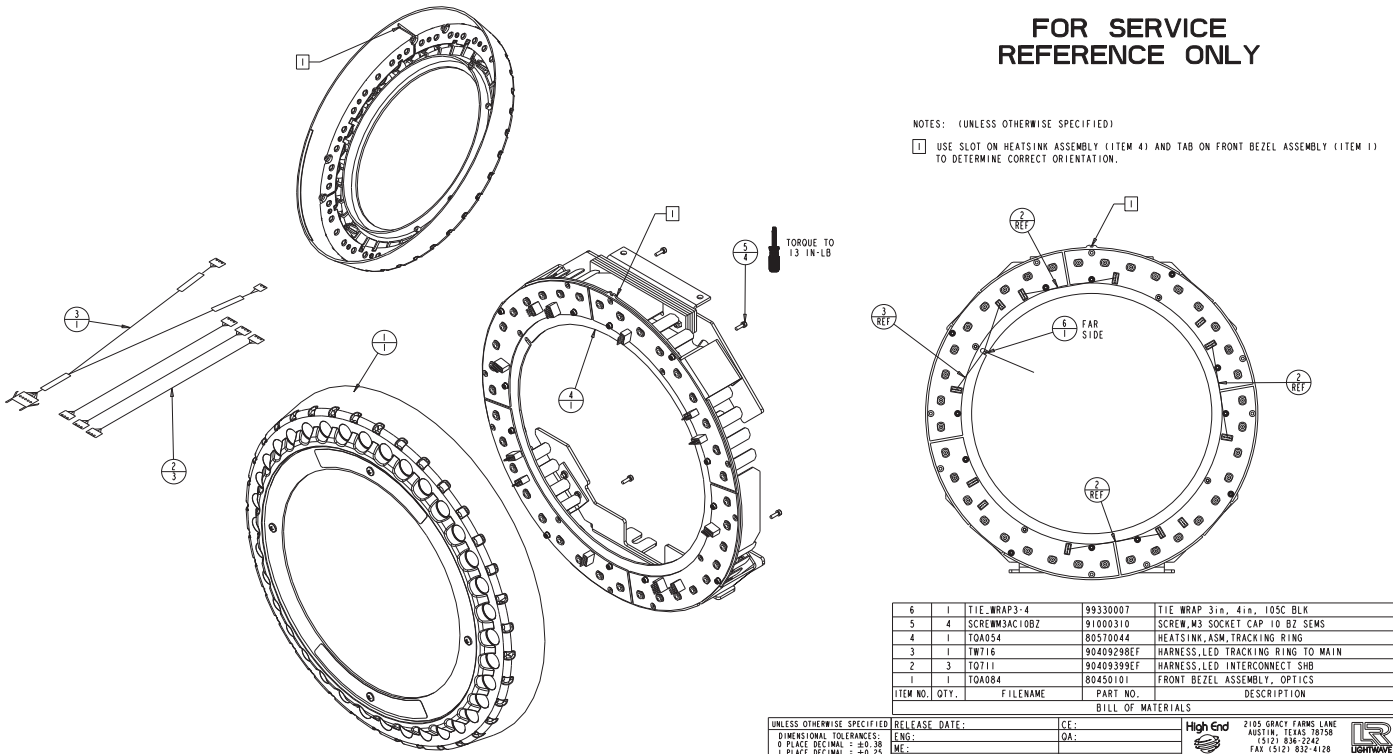
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NOTES: (UNLESS OTHERWISE SPECIFIED)

- 1 USE SLOT ON HEATSINK ASSEMBLY (ITEM 4) AND TAB ON FRONT BEZEL ASSEMBLY (ITEM 1) TO DETERMINE CORRECT ORIENTATION.



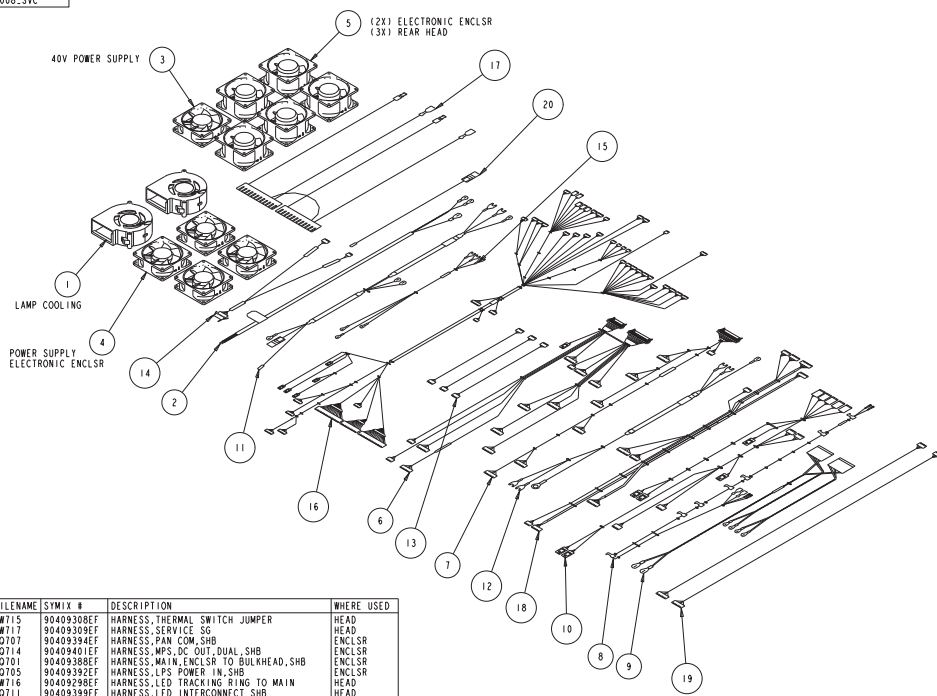
ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION
6	1	TIE_WRAP3-4	99330007	TIE WRAP 3in, 4in, 10SC BLK
5	4	SCREWM3AC10BZ	91000310	SCREW_M3 SOCKET CAP 10 BZ SEWS
4	1	TOA054	80570044	HEATSINK_ASM_TRACKING RING
3	1	TW716	90409298EF	HARNSS_LED_TRACKING RING TO MAIN
2	3	T0711	90409399EF	HARNSS_LED_INTERCONNECT SHB
1	1	TOA084	80450101	FRONT BEZEL ASSEMBLY_OPTICS

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DIMENSIONAL TOLERANCES:	ENG:	DA:		
0 PLACE DECIMAL = ±0.38	MEG:	DRW:		
1 PLACE DECIMAL = ±0.25	MEG:			
2 PLACE DECIMALS = ±0.13	ANGLES = ±0.5°			
FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL WJ-0592	DESCRIPTION: FRONT BEZEL ASSEMBLY, COMPLETE		FINISH: NA	
ALL COMPONENTS: MATERIALS AND FINISHES TO BE BANS COMPLIANT	MATERIAL: CHARTED			
MIN. HOLE:	INTERPRET DIMENSIONS PER ASME Y14.5M-1994	SI METRIC A1	PART NO. 80450102	DRAWING NO. TOA032_SVC
FLATNESS:	THIRD ANGLE PROJECTION		DO NOT SCALE	SCALE: 0.48x
THICKNESS:	DIMENSIONS ARE IN MILLIMETERS			SHEET: 1 OF 1
VOLUME:				

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TOA008_SVC

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FILENAME	SYM# #	DESCRIPTION	WHERE USED
TW115	90409308EF	HARNSS, THERMAL SWITCH JUMPER	HEAD
TW117	90409309EF	HARNSS, SERVICE SG	HEAD
T0707	90409394EF	HARNSS, PAN COM, SHB	ENCLSR
T0714	90409401EF	HARNSS, MPS, DC OUT, DUAL, SHB	ENCLSR
T0701	90409388EF	HARNSS, MAIN, ENCLSR TO BULKHEAD, SHB	ENCLSR
T0705	90409392EF	HARNSS, LPS POWER IN, SHB	ENCLSR
TW116	90409298EF	HARNSS, LED TRACKING RING TO MAIN	HEAD
T0711	90409399EF	HARNSS, LED INTERCONNECT SHB	HEAD
T0704	90409391EF	HARNSS, LAMP WIRE LPS TO IGNITOR, SHB	ENCLSR
TW108	90409395EF	HARNSS, ELECTRONIC ENCLSR, FAN, SHB	ENCLSR
TW105	90409293EF	HARNSS, DUAL MPS AC INPUT	ENCLSR
T0709	90409396EF	HARNSS, DUAL MODULE LINK, SHB	ENCLSR
T0703	90409390EF	HARNSS, DIMSTROBE, SHB	HD/ENC
T0702	90409389EF	HARNSS, CLR/EFFECTS/MODULE, SHB	HEAD
TW103	80270038EF	FAN, ASSY, SUNON 80 X80 X38MM 74.5 CFM	HD/ENC
TW121	80270040EF	FAN, ASSY, 80 x 80 x 25.2K BALLAST, TACH	ENCLSR
CA1715	80270025EF	FAN, ASSY, 12 V 80MM SQ X 25MM DL/SG	ENCLSR
T0712	90409400EF	CORD, AC POWER ASSY SECOW 1473, SHB	ENCLSR
T0710	80270049EF	BLOWER, ASM, 24VDC 35.3CFM, 97X33mm W/TACH	LAMP

ITEM NO.	QTY.	FILENAME	PART NO.	DESCRIPTION
20	1	TW115	90409308EF	HARNSS, THERMAL SWITCH JUMPER
19	2	TW117	90409309EF	HARNSS, SERVICE SG
18	1	T0707	90409394EF	HARNSS, PAN COM SHB
17	1	T0714	90409401EF	HARNSS, MPS, DC OUT, DUAL, SHB
16	1	T0701	90409388EF	HARNSS, MAIN, ENCLSR TO BULKHEAD, SHB
15	1	T0705	90409392EF	HARNSS, LPS POWER IN, SHB
14	1	TW116	90409298EF	HARNSS, LED TRACKING RING TO MAIN
13	3	T0711	90409399EF	HARNSS, LED INTERCONNECT SHB
12	1	T0704	90409391EF	HARNSS, LAMP WIRE LPS TO IGNITOR, SHB
11	1	TW108	90409395EF	HARNSS, ELECTRONIC ENCLSR, FAN, SHB
10	1	T0708	90409395EF	HARNSS, ELECTRONIC ENCLSR, FAN, SHB
9	1	TW105	90409293EF	HARNSS, DUAL MPS AC INPUT
8	1	T0709	90409396EF	HARNSS, DUAL MODULE LINK, SHB
7	1	T0703	90409390EF	HARNSS, DIMSTROBE, SHB
6	1	T0702	90409389EF	HARNSS, CLR/EFFECTS/MODULE, SHB
5	5	TW103	80270038EF	FAN, ASSY, SUNON 80 X80 X38MM 74.5 CFM
4	4	TW121	80270040EF	FAN, ASSY, 80 x 80 x 25.2K BALLAST, TACH
3	1	CA1715EF	80270025EF	FAN, ASSY, 12 V 80MM SQ X 25MM DL/SG
2	1	T0712	90409400EF	CORD, AC POWER ASSY SECOW 1473, SHB
1	2	T0710	80270049EF	BLOWER, ASM, 24VDC 35.3CFM, 97X33mm W/TACH

BILL OF MATERIALS

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DIMENSIONAL TOLERANCES:	ENG:	DA:		
0 PLACE DECIMAL = ±0.38	ME:			
1 PLACE DECIMAL = ±0.25	MEG:	DRW:		
2 PLACE DECIMALS = ±0.13	DESCRIPTION:			
ANGLES = ±0.5°	FOR PAINTED PARTS REFER TO ENG. SPEC. MANUAL W/0592			
	MATERIAL:			
	ALL COMPONENTS - MAT'RYNG AND FINISHES TO BE BMS COMPLIANT			
	FINISH:		NA	
	INTERPRET DIMENSIONS PER ASME Y14.5M-1994			
	THIRD ANGLE PROJECTION			
	DIMENSIONS ARE IN MILLIMETERS			
	DO NOT SCALE		SCALE: 0.300	

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DRAWING NO: TOA008_SVC
SHEET: 1 OF 1