

# **X-CALIBUR**

DENTAL LIGHT

**BLU / BLW / BLC / BLT / BLPW**

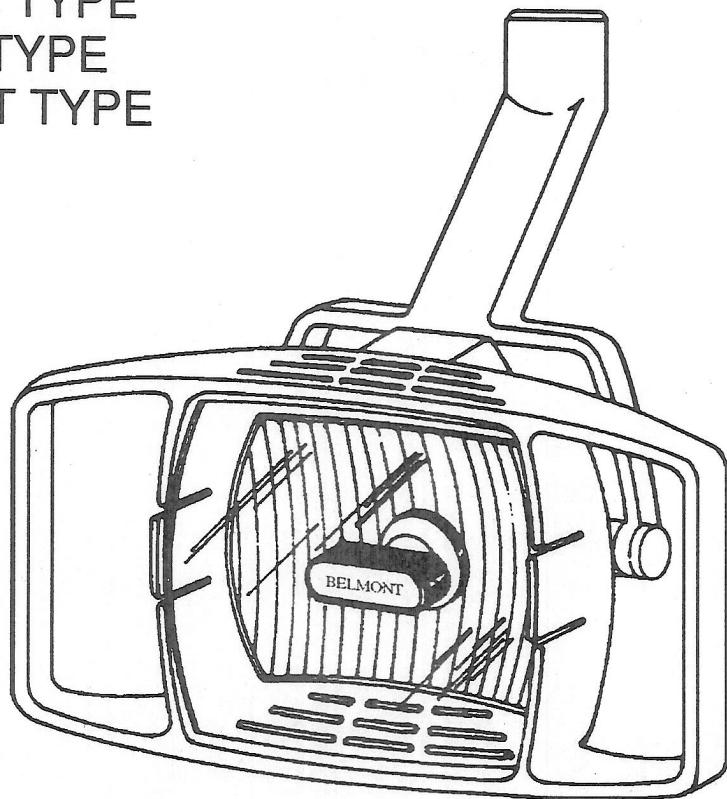
UNIT MOUNT TYPE

WALL MOUNT TYPE

CEILING MOUNT TYPE

TRACK MOUNT TYPE

CABINET MOUNT TYPE



**SERVICE MANUAL**

**Belmont**

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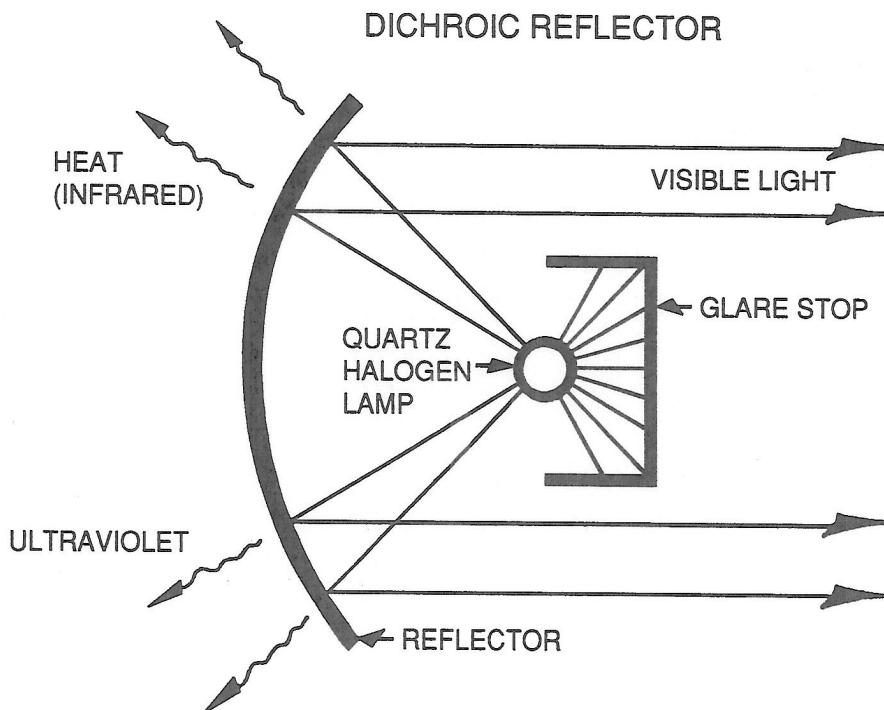
BLU .....	UNIT MOUNT TYPE
BLW .....	WALL MOUNT TYPE
BLC .....	CEILING MOUNT TYPE
BLT .....	TRACK MOUNT TYPE
BLPW .....	CABINET MOUNT TYPE

The Belmont lights incorporate the latest advances in dental lighting technology. The light is color matched to natural daylight, is easily cleaned, has a dual intensity on-off control and smooth easy positioning.

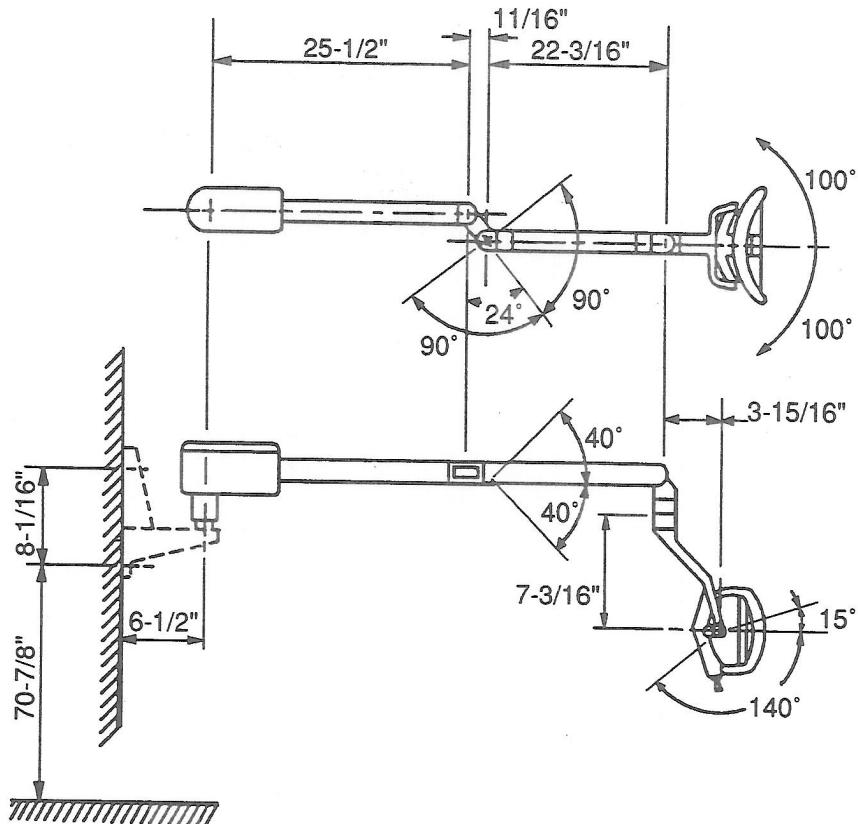
#### SPECIFICATIONS

Input Voltage .....	115V
Output Voltage .....	12V High, 10.5V Low
Power Output .....	55W High, 50W Low
Type Bulb .....	Tungsten Halogen
	Type JA 12V-55W
Focal Distance .....	28" (725mm)
Light Output .....	28,000 Lux High 15,000 Lux Low
Color Temperature .....	3,800° Kelvin
Light Pattern .....	3" x 7" at 28" Focal Distance (180 x 75) at 725mm

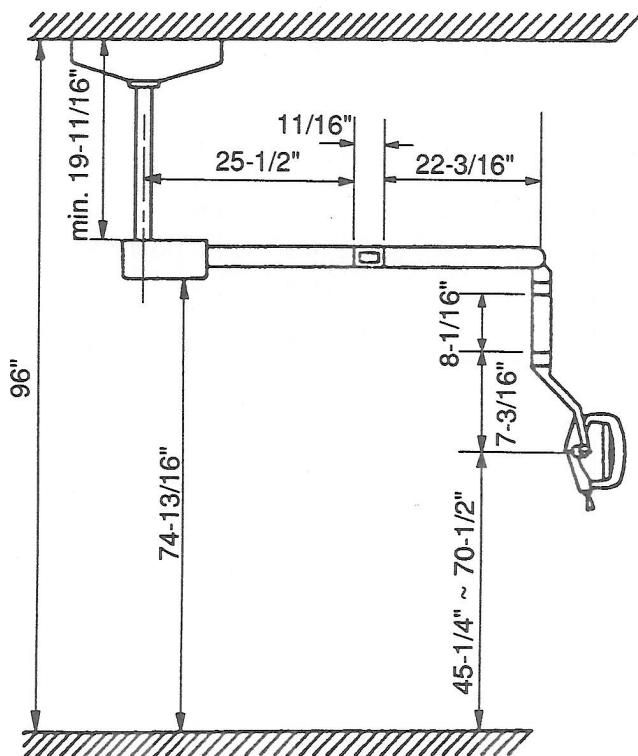
The Dichroic Reflector allows heat (infrared) and ultraviolet to pass harmlessly through the back of the lamp housing. Only white light is focused on the patient for reduced eyestrain and comfort.



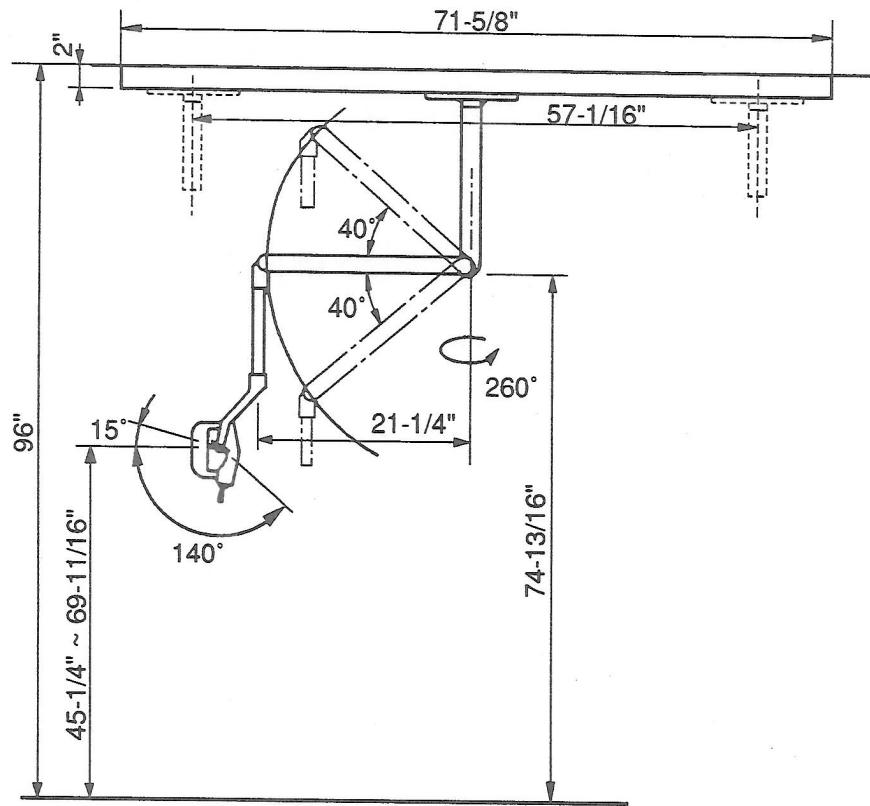
**UNIT DIMENSIONS**  
**BLU / BLW UNIT & WALL MOUNT TYPE**



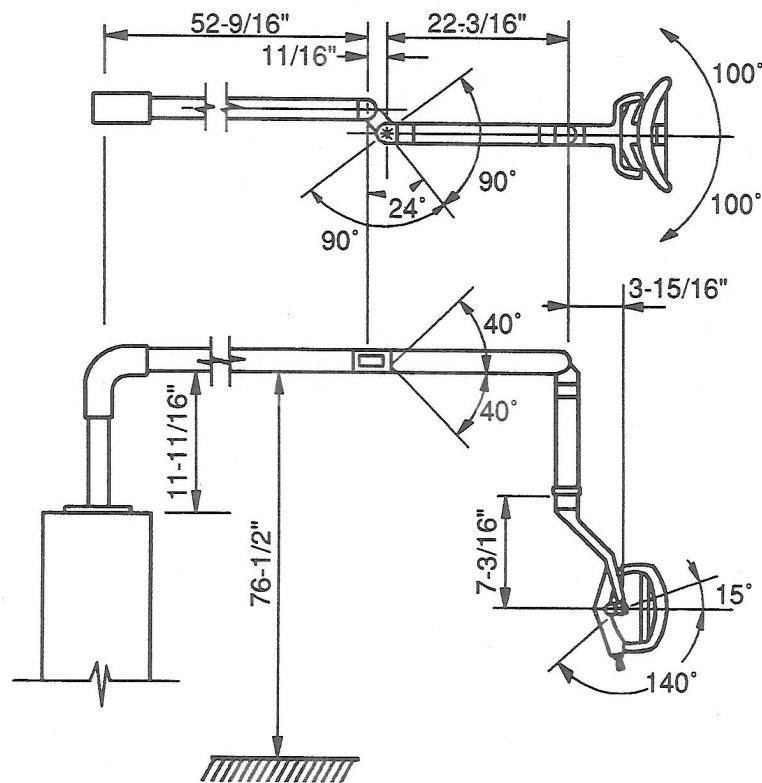
**BLC CEILING MOUNT TYPE**



### BLT TRACK MOUNT TYPE



### BLPW CABINET MOUNT TYPE



# OPERATION & SERVICE INSTRUCTIONS

## DUAL INTENSITY ON/OFF SWITCH

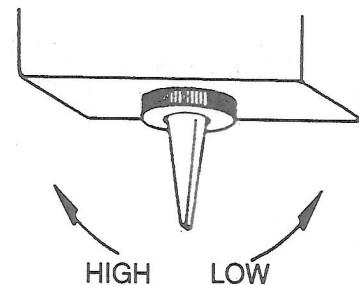
1. High Beam; push toggle to left

2. Low beam; push toggle to right

Switch is conveniently located in light head enabling intensity to be changed from seated position.

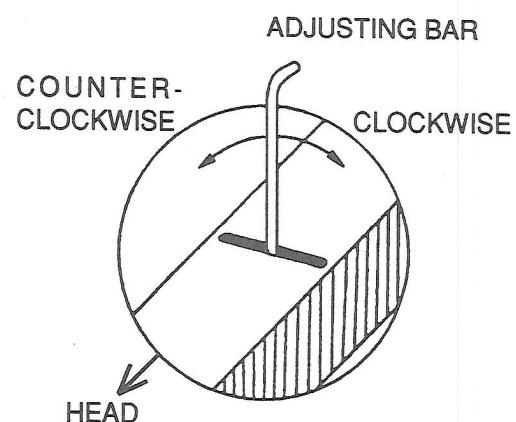
Low intensity - for longer lamp life and examining facial surfaces.

High intensity - for color matching and examining lingual surfaces.



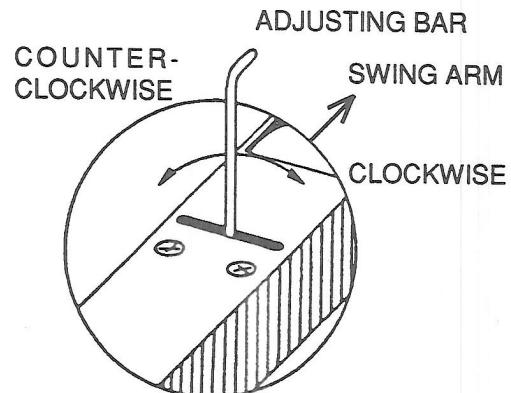
## BALANCE ARM ADJUSTMENT (Should drifting occur)

**IMPORTANT:** Use slot closest to head when making adjustment for drifting of balance arm. Insert adjusting bar into slot on top of balance arm, turn spring adjustment nut clockwise for more tension; counterclockwise for less tension.

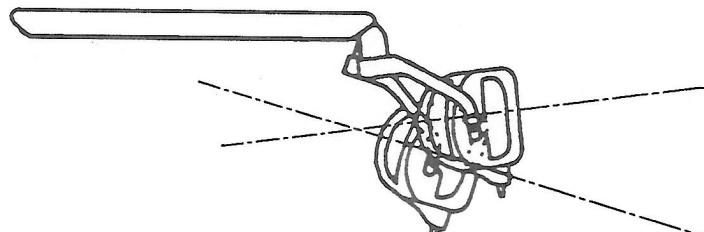


## HEAD ANGLE ADJUSTMENT

**IMPORTANT:** Use slot closest to swing arm (H-shaped casting bracket) when adjusting angle of head. Insert adjusting bar into slot on top of balance arm, turn head angle adjustment nut clockwise for downward angle; counterclockwise for upward angle.



Adjusting bar is supplied in envelope with allen wrenches.



Upward angle when turning spring adjustment nut counterclockwise.

Downward angle when turning spring adjustment nut clockwise.

## VOLTAGE CHECK FOR LIGHT TRANSFORMER

There are four in-coming wire positions on the transformer; 120V, 115V, 100V and 0 (this is your "common or neutral"), and three out-going positions; 12V, 10.5V and 0 (common).  
The transformer should already be wired in the 115V position.

If the dental light should appear too dim or too bright, check the in-coming (AC) voltage.

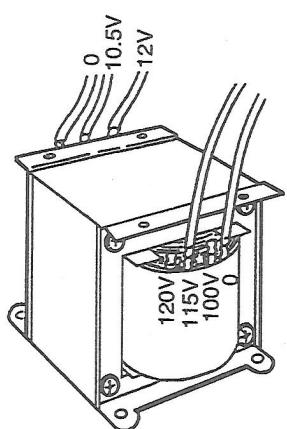
The line voltage coming in should NOT exceed 115V.

If the in-coming voltage is more than 115V, then hook up the wire to the 120V position. This allows less out-going voltage to the light.

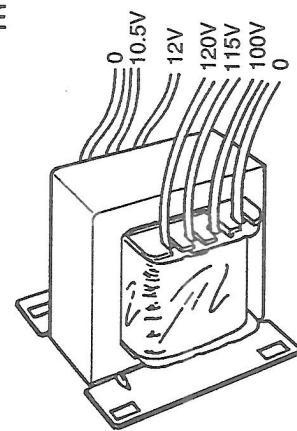
If the in-coming voltage is less than 115V, then hook up the wire to the 100V position. This allows more out-going voltage to the light.

The out-going voltage should NOT exceed 12.5V.

### OLD TYPE



### NEW TYPE



## BULB CHANGING

1. To install replacement bulb (P/N HLU-1006), turn unit off and remove back cover.
2. Push in and turn counterclockwise knob of bulb retainer to remove bulb retainer.
3. Remove bulb by grasping lead wire and pull bulb from housing. Disconnect lead wire when bulb is completely removed.
4. Clean new replacement bulb surface with alcohol, attach lead wire and insert new bulb into housing.
5. After new bulb is seated in housing, insert and lock bulb retainer into position.

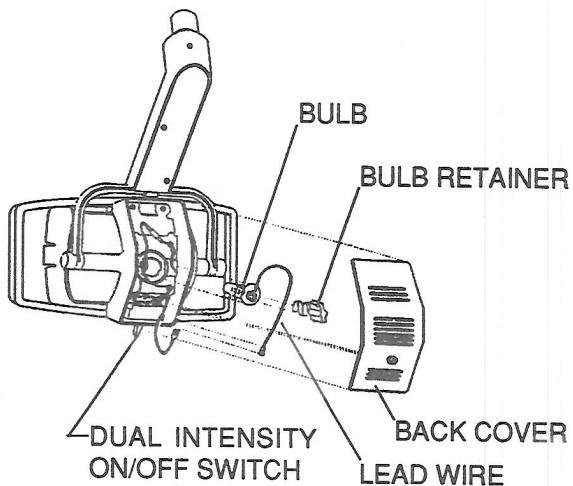
**IMPORTANT:** Do not touch glass with bare hand. Light bulb surface must be clean. Oil or body moisture will affect light intensity. If glass surface is touched, clean with alcohol.

## CLEANING

Use soft cloth or cotton only. Clean both sides of lens. Inside surface of reflector can be cleaned with a soft damp or dry cloth. Back side of the reflector should be wiped gently with a soft cloth. Extreme care should be taken not to scratch surface or mar appearance of painted surfaces. Exterior cleaning is all that should be necessary until after many months of use.

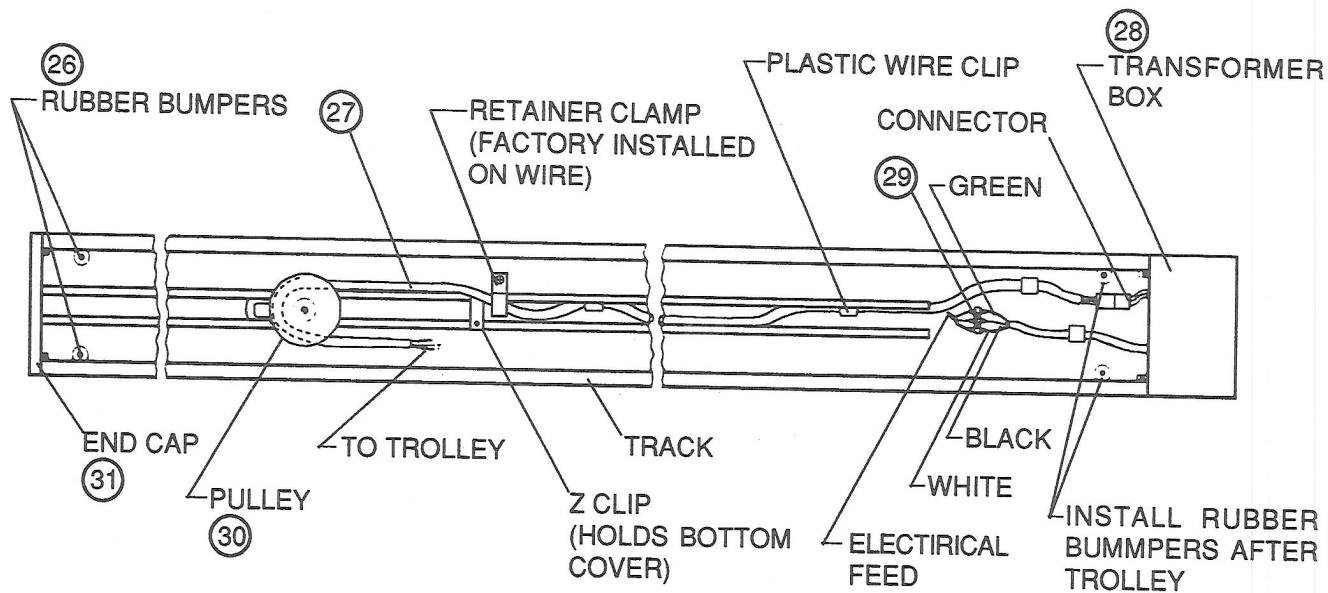
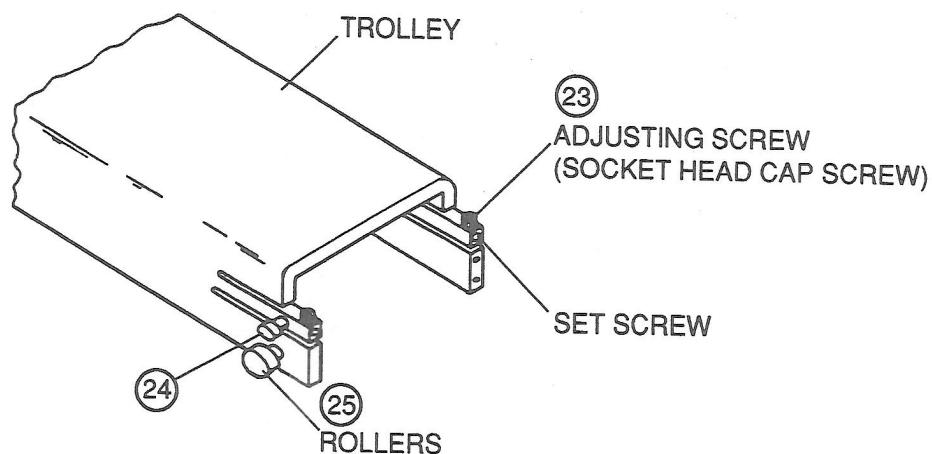
## LUBRICATION

A drop of oil once a year at pivot points will provide ample lubrication.

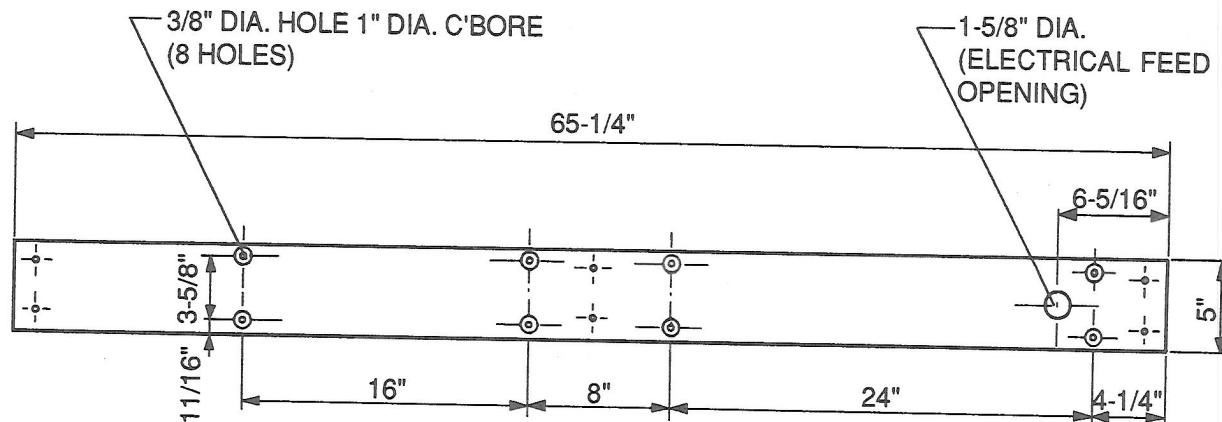


## BLT TRACK SPECIFICATIONS

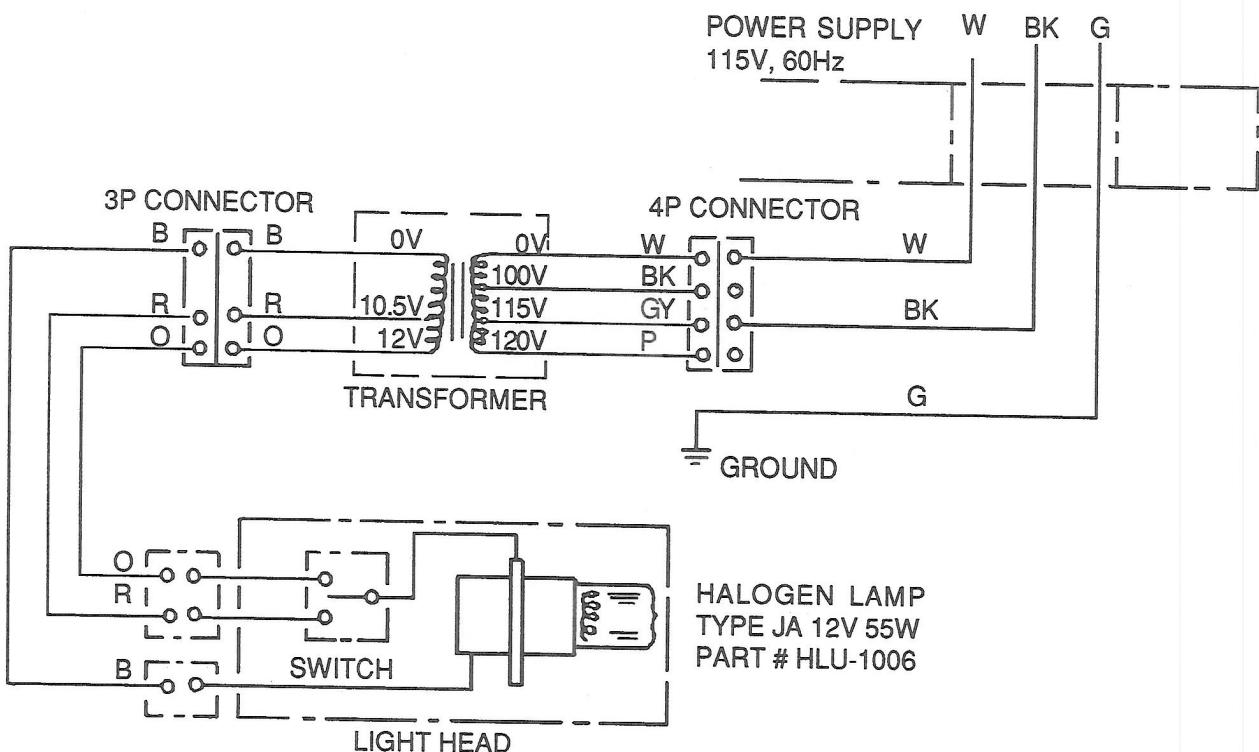
Check operation of trolley. It is factory adjusted to provide smooth effortless travel, without play; however, rollers can be readjusted if necessary. Loosen set screw (M4-5) and adjust adjusting screw (socket head cap screw) to vary roller clearance.



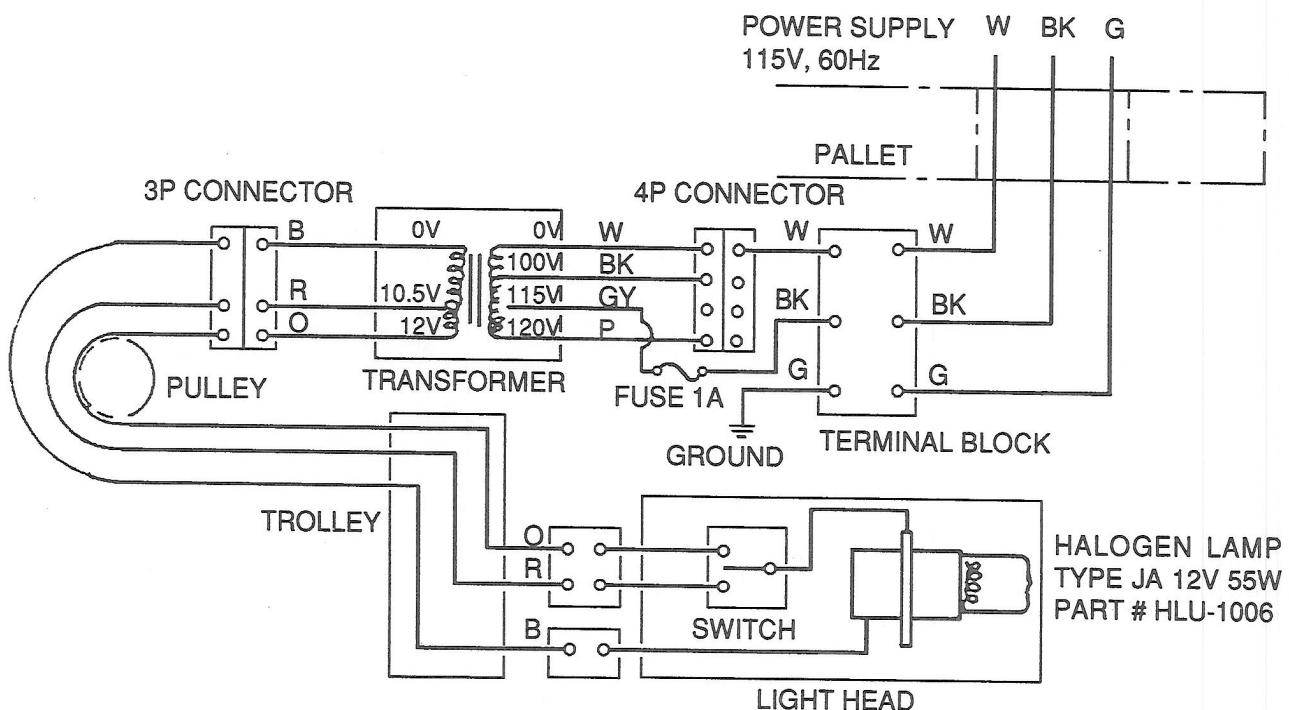
## PALLET DIMENSIONS



# BLU / BLW / BLC / BLPW WIRING DIAGRAM

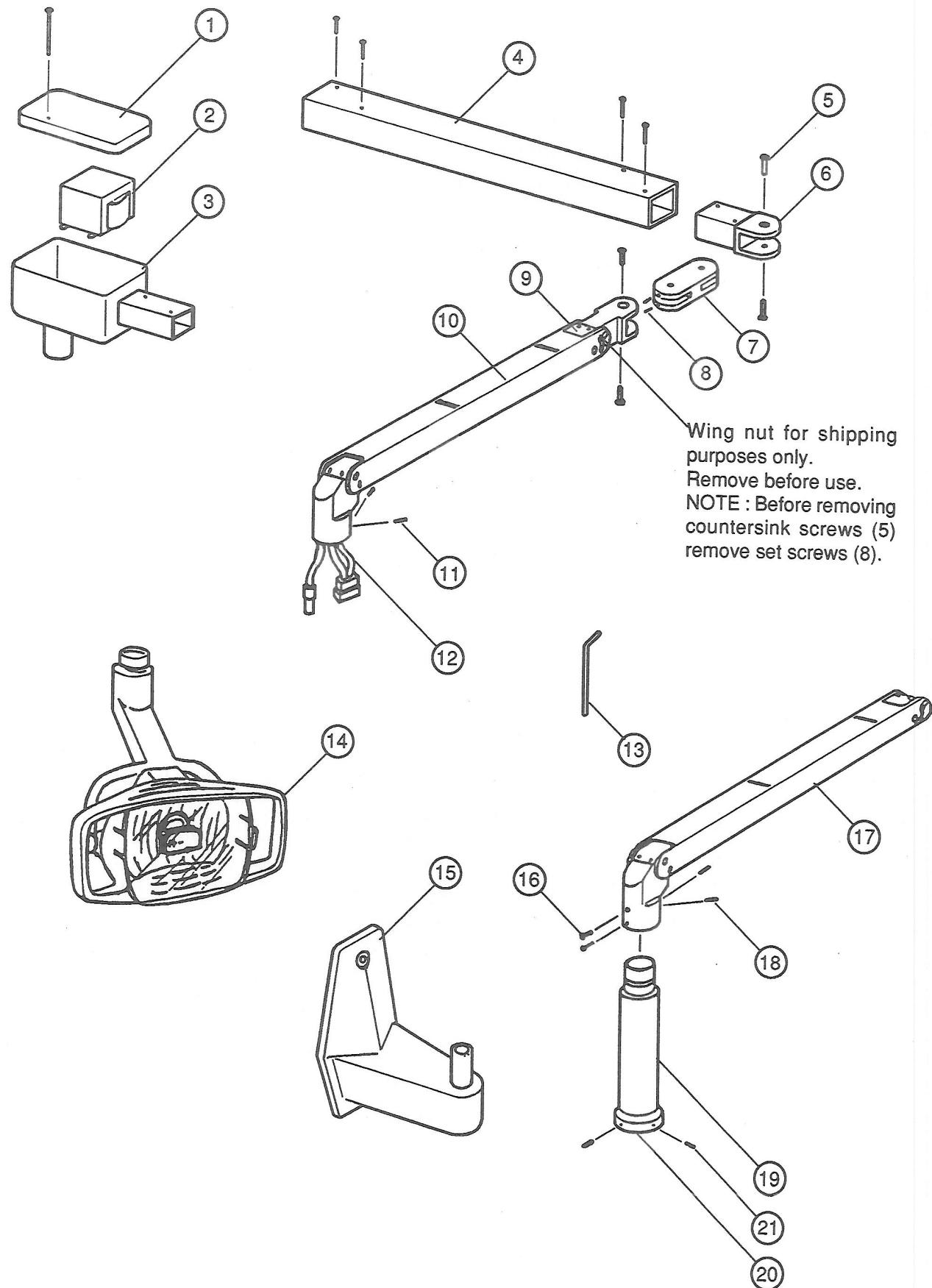


# BLT WIRING DIAGRAM



SYMBOL	COLOR	SYMBOL	COLOR
B	BLUE	O	ORANGE
BK	BLACK	P	PINK
G	GREEN	R	RED
GY	GRAY	W	WHITE

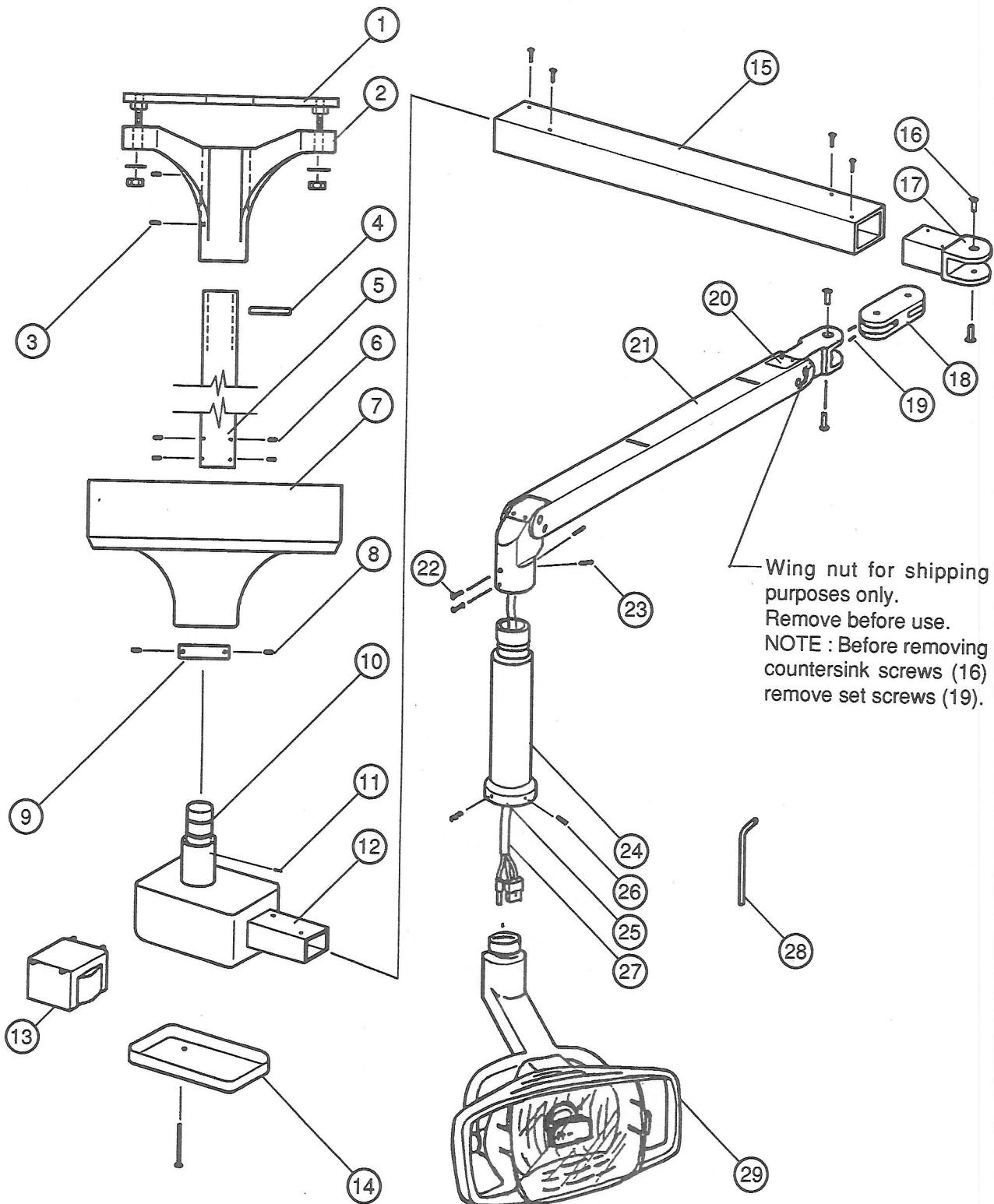
## BLU / BLW EXPLODED VIEW



## BLU / BLW PARTS LIST

INDEX #	PART #	DESCRIPTION	QTY.
1	HLU-0010P	Housing Cover for Transformer [Ral-White]	1
2	HLU-0015	Transformer (115V)	1
3	HLU-0020P	Transformer Housing [Ral-White]	1
4	HLU-0030P	Swivel Arm [Ral-White] for BLU	1
	HLU-0031P	Swivel Arm [Ral-White] for BLC, BLW	1
5	HLU-0070	Countersink Screw (M5-15)	4
6	HLU-0040P	Swivel Arm Knuckle [Ral-White] for BLU	1
	HLU-0041P	Swivel Arm Knuckle [Ral-White] for BLC, BLW	1
7	HLU-0050P	H-Shaped Casting [Ral-White]	1
8	HLU-0090	Set Screw (M4-5)	2
9	HLU-0063	Yoke Joint Cover	2
10	HLU-0060P	Balance Arm Assembly [Ral-White] for BLU	1
11	HLU-0080	Set Screw (M5-8)	2
12	HLU-1130	Wire Harness in Balance Arm for BLU, BLW, BLC	1
13	HLU-1060	Adjusting Bar	1
14	HLU-2040P	Head Assembly [Ral-White]	1
15	HLU-0100P	Wall Mount Bracket [Ral-White] with Bolts	1
16	HLU-0064P	Round Head Screw (M4-10) [Ral-White]	2
17	HLU-0061P	Balance Arm Assembly [Ral-White] for BLW, BLC, BLPW	1
18	HLU-0080	Set Screw (M5-8)	2
19	HLU-0190P	Head Suspension Tube [Ral-White]	1
20	HLU-0195	Collar for Head Suspension Tube	1
21	HLU-0196	Set Screw (M5-8)	2

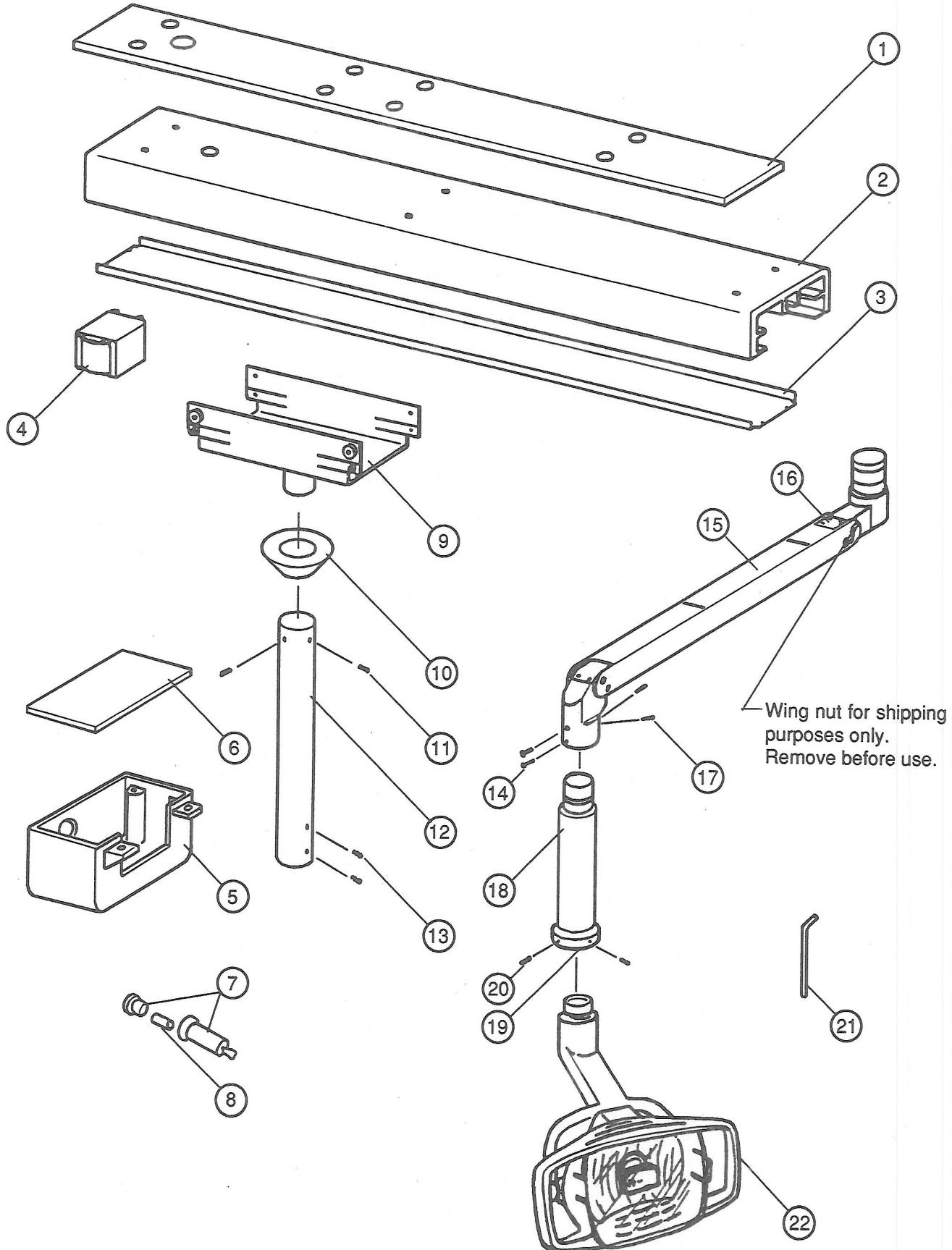
## BLC EXPLODED VIEW



## BLC PARTS LIST

INDEX #	PART #	DESCRIPTION	QTY.
1	HLU-0130	Mounting Plate	1
2	HLU-0140	Ceiling Flange	1
3	HLU-0146	Set Screw (M6-8)	4
4	HLU-0116	Roll Pin for Suspension Tube	1
5	HLU-0110P	Suspension Tube [Ral-White] for 8ft.	1
	HLU-0111P	Suspension Tube [Ral-White] for 9ft.	1
	HLU-0112P	Suspension Tube [Ral-White] for 10ft.	1
6	HLU-0115	Set Screw (M5-10)	4
7	HLU-0120P	Ceiling Flange Cover [Ral-White]	1
8	HLU-0126	Set Screw (M6-8)	3
9	HLU-0125	Stopper Ring for Ceiling Cover	1
10	HLU-0025	Joint for Transformer Housing	1
11	HLU-0026	Socket Head Shoulder Screw (M4)	1
12	HLU-0021P	Transformer Housing [Ral-White] for BLC	1
13	HLU-0015	Transformer (115V)	1
14	HLU-0010P	Transformer Housing Cover [Ral-White]	1
15	HLU-0031P	Swivel Arm [Ral-White] for BLC, BLU	1
16	HLU-0070	Countersink Screw (M8-15)	4
17	HLU-0041P	Swivel Arm Knuckle [Ral-White] for BLW, BLC, BLPW	1
18	HLU-0050P	H-Shaped Casting [Ral-White]	1
19	HLU-0090	Set Screw (M4-5)	2
20	HLU-0063	Yoke Joint Cover	2
21	HLU-0061P	Balance Arm Assembly [Ral-White] for BLW, BLC, BLPW	1
22	HLU-0064P	Round Head Screw (M4-10) [Ral-White]	2
23	HLU-0080	Set Screw (M5-8)	2
24	HLU-0190P	Head Suspension Tube [Ral-White]	1
25	HLU-0195	Collar for Head Suspension Tube	1
26	HLU-0196	Set Screw (M5-8)	2
27	HLU-1130	Wire Harness in Balance Arm for BLU, BLW, BLC	1
28	HLU-1060	Adjusting Bar	1
29	HLU-2040P	Head Assembly [Ral-White]	1

## BLT EXPLODED VIEW



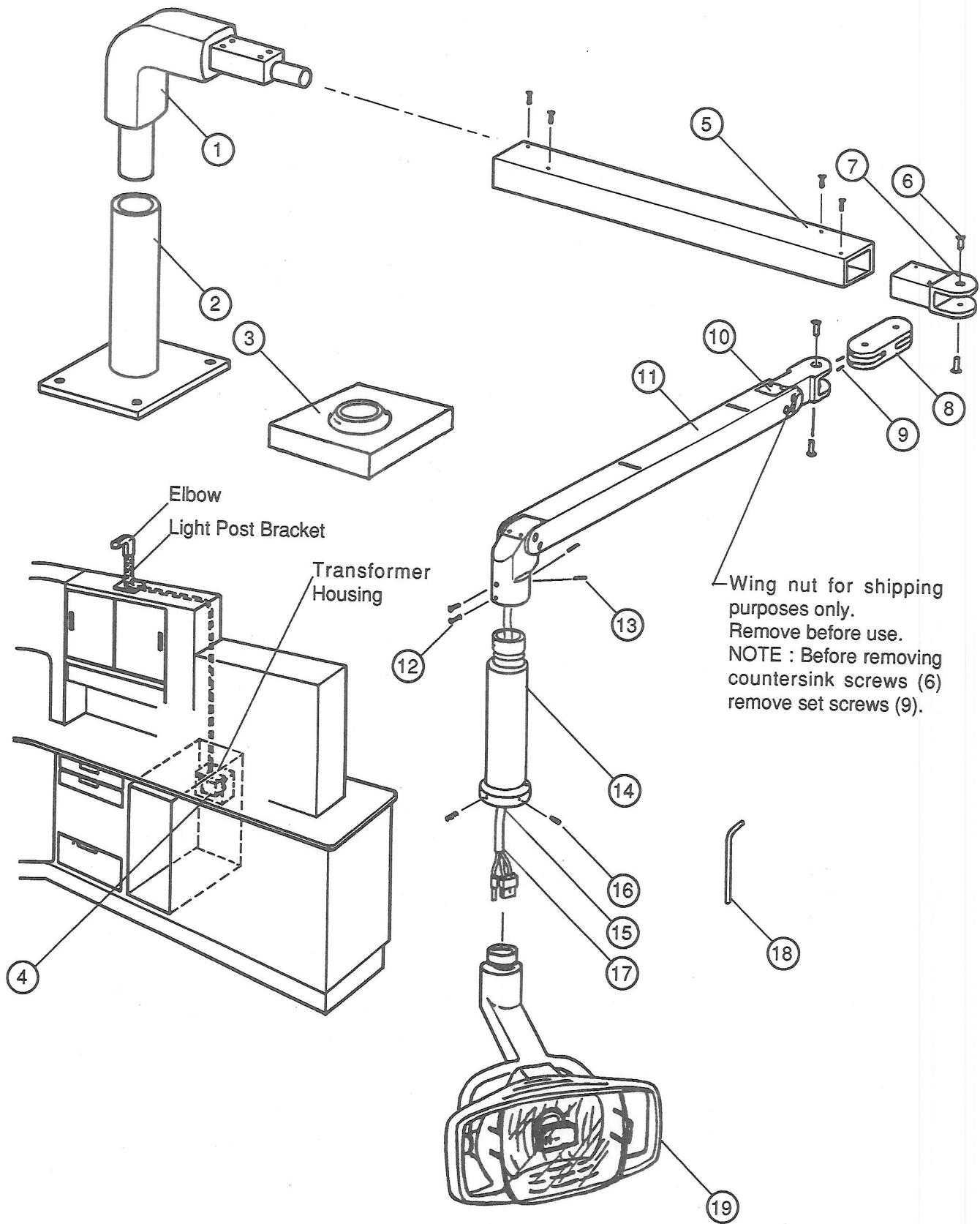
## BLT PARTS LIST

INDEX #	PART #	DESCRIPTION	QTY.
1	HLU-1100P	Pallet [Ral-White]	1
2	HLU-1110P	Track [Ral-White]	1
3	HLU-1120P	Bottom Cover [Ral-White]	1
4	HLU-0015	Transformer (115V)	1
5	HLU-1090P	Transformer Housing [Ral-White] for BLT	1
6	HLU-1095	Bottom Plate for Transformer	1
7	HLU-0200	Fuse Holder	1
8	HLU-0205	Fuse (1A)	1
9	HLU-1080P	Trolley Assembly [Ral-White]	1
10	HLU-0180	Collar [Black]	1
11	HLU-0156	Set Screw (M5-6)	2
12	HLU-0150P	Suspension Tube [Ral-White] for 8ft.	1
	HLU-0151P	Suspension Tube [Ral-White] for 9ft.	1
13	HLU-0115	Set Screw (M5-8)	4
14	HLU-0064P	Round Head Screw (m4-10) [Ral-White]	2
15	HLU-0062P	Balance Arm Assembly [Ral-White] for BLT	1
16	HLU-0063	Yoke Joint Cover	2
17	HLU-0080	Set Screw (M5-8)	2
18	HLU-0190P	Head Suspension Tube [Ral-White]	1
19	HLU-0195	Collar for Head Suspension Tube	1
20	HLU-0196	Set Screw (M5-8)	2
21	HLU-1060	Adjusting Bar	1
22	HLU-2040P	Head Assembly [Ral-White]	1

(REFER TO PAGE 8 FOR THE FOLLOWING PARTS)

23	HLU-0166	Socket Head Screw (M5-25)	4
24	HLU-0165	Roller (Lower)	4
25	HLU-0160	Roller (Upper)	4
26	HLU-1115	Rubber Bumper	4
27	HLU-1140	Wire Harness for BLT	1
28	HLU-0210P	Transformer Box Assembly [Ral-White]	1
29	HLU-0220	Terminal Block (3P)	1
30	HLU-0170	Pulley Assembly	1
31	HLU-1070P	End Cap [Ral-White]	1

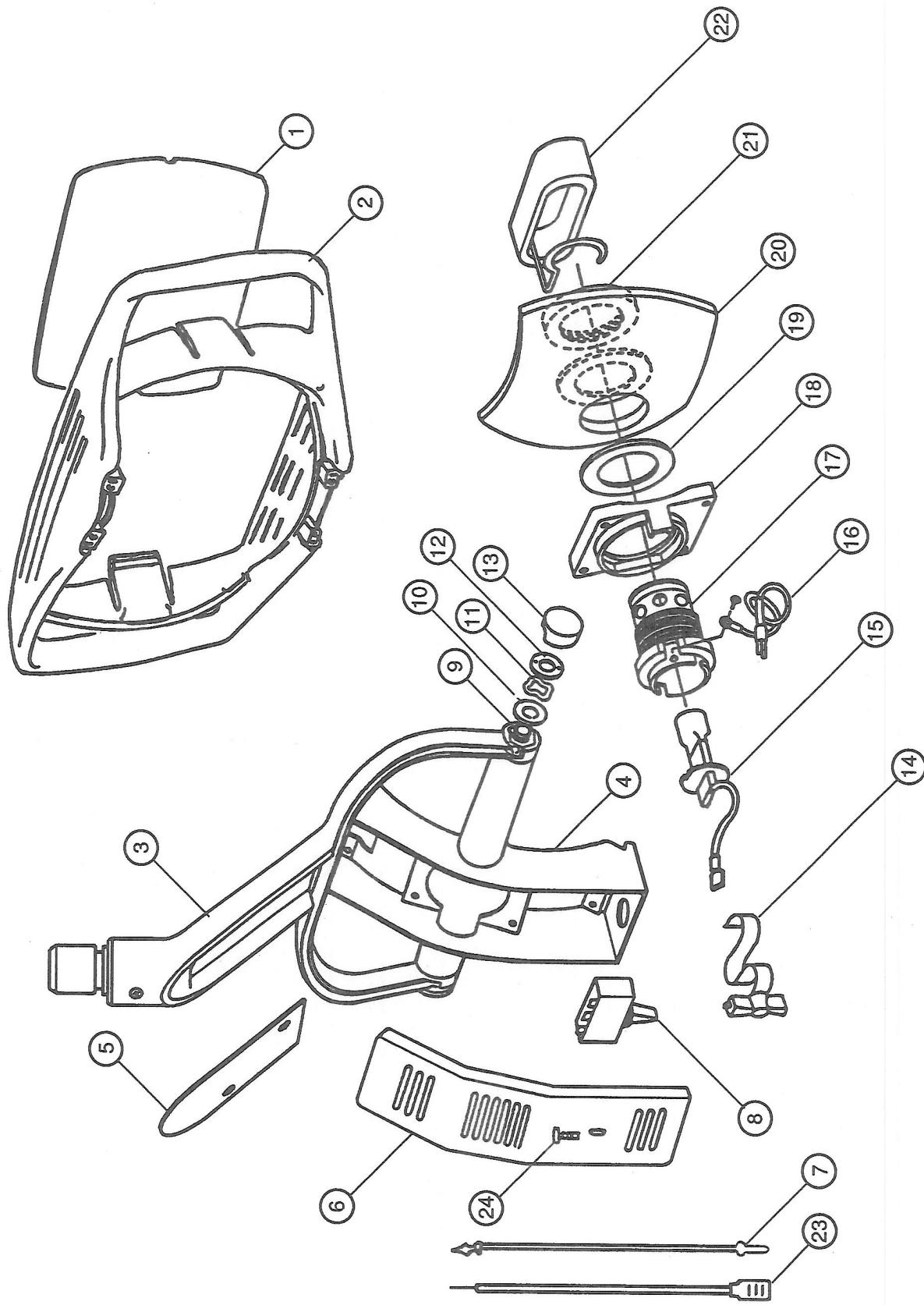
## BLPW EXPLODED VIEW



## BLPW PARTS LIST

INDEX #	PART #	DESCRIPTION	QTY.
1	HLU-0300P	Elbow [Ral-White]	1
2	HLU-0310P	Light Post Bracket [Ral-White]	1
3	HLU-0320P	Light Post Cover [Ral-White]	1
4	HLU-0015	Transformer (115V)	1
5	HLU-0032P	Swivel Arm [Ral-White] for BLPW	1
6	HLU-0070	Countersink Screw (M8-15)	4
7	HLU-0041P	Swivel Arm Knuckle [Ral-White] for BLC, BLW	1
8	HLU-0050P	H-Shaped Casting [Ral-White]	1
9	HLU-0090	Set Screw (M4-5)	2
10	HLU-0063	Yoke Joint Cover	2
11	HLU-0061P	Balance Arm Assembly [Ral-White] for BLW, BLC, BLPW	1
12	HLU-0064P	Round Head Screw (M4-10) [Ral-White]	2
13	HLU-0080	Set Screw (M5-8)	2
14	HLU-0190P	Head Suspension Tube [Ral-White]	1
15	HLU-0195	Collar for Head Suspension Tube	1
16	HLU-0196	Set Screw (5-8)	2
17	HLU-0350	Wire Harness in Balance Arm for BLPW	1
18	HLU-1060	Adjusting Bar	1
19	HLU-2040P	Head Assembly [Ral-White]	1

BLU / BLW / BLC / BLPW LIGHT HEAD EXPLODED VIEW



BLU / BLW / BLC / BLPW LIGHT HEAD PARTS LIST

INDEX #	PART #	DESCRIPTION	QTY.
1	HLU-2005	Front Shield	1
2	HLU-2001P	Handle [Ral-White]	1
3	HLU-2002P	Yoke [Ral-White]	1
4	HLU-2003P	Frame [Ral-White]	1
5	HLU-2008P	Yoke Cover [Ral-White]	1
6	HLU-2007P	Frame Back Cover [Ral-White]	1
7	HLU-1054	Yoke Wire Harness	3
8	HLU-1001	Power Switch	1
9	HLU-2107	Joint Bolt	2
10	HLU-2019	Flat Washer	2
11	HLU-2020	Wave Washer (ww-12)	4
12	HLU-2021	Nut for Joint Bolt	2
13	HLU-2022P	Yoke Side Cap [Ral-White]	2
14	HLU-2023	Spring Clip	1
15	HLU-1006	Halogen Lamp	1
16	HLU-2026	Ground Wire	1
17	HLU-2025	Lamp Socket	1
18	HLU-2010	Socket Housing	1
19	HLU-2011	Rubber Washer	2
20	HLU-2009	Reflector	1
21	HLU-2012	Nut	1
22	HLU-2006	Glare Stop	1
23	HLU-1057	Wire Harness - Switch to Bulb	1
24	HLU-2004	Thumb Screw for Frame Back Cover	1

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MODELS, PRICES, AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE



**Belmont**

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