

**INSTALLATION, OPERATION & SERVICE
MANUAL**

**Z300 LED
DENTAL LIGHT**

**Model Code:
P024591**

⚠ IMPORTANT

When installation is complete. Make sure to check all bolts, screws, and fasteners. Confirm that they are properly fastened.

⚠ IMPORTANT

The instructions contained in this manual should be thoroughly read and understood before installing or operating the equipment. Keep this manual with the equipment, so it can be referred to for future use.

TABLE OF CONTENTS

	PAGE
CONTACT & WARRANTY	1
INTENDED USE OF THE PRODUCT	2
CLASSIFICATION	2
ENVIRONMENT REQUIREMENTS	2
TERMS AND CONDITIONS OF SALE	3
CLEANING INFORMATION	3
INSTALLATION NOTES	4
SPECIFICATIONS	5
USER NOTES	5
INSTALLATION - RETROFIT KIT	6-7
DESCRIPTION OF FUNCTIONS	8
OPERATING & PROGRAMMING	9
RESISTANCE ADJUSTMENT	10-11
PARTS LIST	12

Warranty

All products except stools, sold to and installed by authorized Zakton LLC dealers are guaranteed against defects in materials and workmanship for a period of five (5) years after date of purchase. Upholstery is guaranteed for one (1) year after date of purchase. All handpiece illumination systems are guaranteed for six (6) months after date of purchase.

This warranty does not cover light bulbs of any kind. Faulty parts are determined by a dealer service representative, will be repaired or replaced; no claim for a labor or consequential damages will be allowed. Invoices for replacement parts may be subject to adjustment after the manufacturer has inspected the alleged defective parts.

The warranty does not cover normal wear, stains, cuts, or scratches of upholstery surface finishes, or parts sold to O.E.M. customers. This warranty does not cover damage resulting from the use of cleaning, disinfecting, or sterilization chemicals and processes. The warranty does not cover damage from improper installation or maintenance, accident, misuse, or accidents incurred in shipping and handling.

In the event of shipping damage, the purchaser must initiate all claims against the freight carrier in writing twenty-four (24) hours after the damaged items are received. The claim is the responsibility of the customer.

PRODUCT MODIFICATION

Zakton LLC continually works to offer better products. We reserve the right to make modifications without notice or obligation to modify previously manufactured products.

DOCUMENT INFORMATION

Zakton LLC does not warrant that this document is completely error free. Zakton LLC shall not be held liable for errors contained in this manual, for any consequential or other damages concerning the furnishings, performance or use of this material. Zakton LLC does not warrant the content of any kind in this document, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The information of this document is subject to change without notice. If you find any problems with this document, please report them to us in writing.

OTHER PRODUCTS & TRADEMARKS

All products or services mentioned in this document that are not Zakton LLC, are covered by the trademarks, service marks, or product names designated by the companies marketing those products. Refer to these respective manuals and instructions for all information regarding these products.

Intended Use of the Product

This product is solely used for diagnoses, treatment and relative procedures in dentistry. This equipment must be handled and/or operated by the qualified dentists or by the dental staff directly under the supervision of the dentist.

Patients are not allowed to handle and/or operate this equipment unless he or she is instructed to do so directly under the supervision of the dentist.

The dentist and staff or which this equipment is for should instruct and/or assist each patient in the way of approach and leaving from this equipment.

Identification of Symbols:



This symbol will indicate "caution, warning, & danger"

Classification:

Protection against electric shock: Class 1 Equipment

Protection against water ingress: Ordinary equipment

Equipment not suitable for use in the presence of a flammable anesthetic mixtures with air or with oxygen or nitrous oxide.

Operating Environment Requirements:

Ambient Temperature: 50°F ~ 104°F (10°C ~ 40°C)

Humidity: 30% ~ 75%

Atmospheric Pressure: 10.2psi ~ 15.4psi (700hpa ~ 1060hpa)

Storage Environment Requirements:

Ambient Temperature: -4°F ~ 158°F (-20°C ~ 70°C)

Humidity: 30% ~ 75%

Atmospheric Pressure: 10.2psi ~ 15.4psi (700hpa ~ 1060hpa)

Transportation Environment Requirements:

Ambient Temperature: -4°F ~ 158°F (-20°C ~ 70°C)

Humidity: 30% ~ 75%

Atmospheric Pressure: 10.2psi ~ 15.4psi (700hpa ~ 1060hpa)

CLEANING INFORMATION

TERMS AND CONDITIONS OF SALE

TERMS

50% upon agreement
50% before delivery.

PRICES

All prices are subject to change without notice.

FREIGHT

Products are shipped F.O.B. Sheridan, Colorado, U.S.A.

RETURNED GOODS

No goods may be returned without prior factory Returned Merchandise Authorization number.

The Returned Merchandise Authorization number must be visible on outside of returned merchandise shipping box.

Shipping boxes received without a Returned Merchandise Authorization number will be refused.

Returned merchandise must be received within 30 days after issuance of Returned Merchandise Authorization number.

Copy of original invoice must be sent along with returned merchandise.

All returned merchandise are subject to a 15% restocking charge.

DAMAGED MERCHANDISE

Zakton LLC responsibility for safe delivery ends upon the delivery of the shipment in good condition to the carrier. At the point of pick up by the carrier, the merchandise become the property of the consignee, and the carrier becomes the agent of the consignee. Shipments that arrive with external damage or obvious rough handling should be noted on the delivery receipt as "Received in Damaged Condition". If damage is revealed when merchandise are unpacked, inspection by the carrier should be demanded immediately.

ALL CLAIMS FOR DAMAGE CAUSED IN SHIPMENT MUST BE MADE TO THE CARRIER.

BARRIER TECHNIQUE

The best way to preserve the finish of your Zakton LLC Equipment is to use the barrier technique whenever possible. The barrier technique will ensure maximum longterm durability of the surfaces and finishes of the equipment.

CHEMICAL DISINFECTION

It is imperative that the equipment be thoroughly washed with a mild soap and warm water solution at least once a day regardless of the chemical disinfectant used. This will minimize the harmful effects of chemical disinfectant residue being allowed to build up on the equipment. Always follow the disinfectant manufacturer's directions for use. Disinfectant solutions that are relatively harmless to surfaces at their recommended strengths can be corrosive at higher than recommended dilution ratios. Consult your dental dealer regarding specific chemical disinfecting and cleaning products.

UNACCEPTABLE DISINFECTANTS

The following disinfectants will harm the surface finish of Zakton LLC equipment and are NOT RECOMMENDED. Use of these products will void your warranty.

Chemical Composition: Household Bleach at 5.25%, Ethyl Alcohol, Alcohol-Based Phenols/PH3NOL, Household Cleaners, Strong Phenols, Phenol-Alcohol Combinations, and Household Cleaners

Iodine-based products have been known to stain upholstered and painted surfaces.

CONDITIONALLY ACCEPTABLE DISINFECTANTS

These disinfectants have been found to be LEAST HARMFUL to the equipment surfaces. None of these products are recommended for chair upholstery. Use the barrier technique.

Chemical Composition: Enhanced Quaternary Ammonia, Mild Phenols, Glutaraldehyde/Phenol Sprays, Synergized Super Quat, Phenol/Water Sprays

HP CONTROL WATER LINES AND BOTTLED WATER SYSTEM FLUSH

Use care when flushing HP Control water lines and bottled water systems. If using a powdered flushing product with water, be sure that powder is thoroughly dissolved. Improper mixing will cause residual debris in the HP Control water lines and may cause damage and/or malfunction.

INSTALLATION NOTES

Check with local codes and the Americans with Disabilities Act requirements for installation of this product.
For service information contact your local authorized Zakton LLC dealer.

Precautions for Installation:

Keep the equipment away from water.

Keep in circumstances safe from influence by temperature, humidity, wind, sun light, air containing salts, and minerals.

Care about stability such as inclination, vibration and impact, including handling and transportation.

Do not keep the equipment in a place where chemicals are or where gas is emitted.

During lifting and unpacking of the equipment, make sure to hold reinforced and sturdy parts.

Do not drop or hit the equipment.

Do not connect to un-matched power supply.

Ground equipment properly before turning power on.

After the installation of equipment is completed, verify that all the mechanical and electrical functions are working properly.

Use thick gloves when unpacking the equipment.

Do not modify this equipment.

WARNING

Do not modify this equipment.

To avoid the risk of electric shock, this equipment must only be connected to supply mains with protective earth.
Installation and service work should be conducted by a qualified/authorized technician only.

CAUTION

Before use:

Make sure all connections are correct and the equipment functions properly.

Make sure the grounding wire is connected.

Make sure that wire harnesses are properly and firmly connected.

WARNING

Electro Magnetic Interferences:

Do not install this equipment near devices that generate an Electro Magnetic Interferences.

Do not use a device that creates an Electro Magnetic Interference, near this equipment.

This equipment may malfunction with nearby Electro Magnetic Interferences.

This equipment may turn off, on, or act erratically near devices with an Electro Magnetic Interference.

Specifications: Z300 LED Dental Light

Power Requirement: 100-240VAC, 50/60Hz, 0.7-0.35A

Operating Wattage: 9.82 Watts at 35,000 Lux (High)

Color Temperature: 5200K

Low Intensity: 15,000 Lux

Med Intensity: 24,000 Lux

High Intensity: 35,000 Lux

Focal Distance: 27"

Light Pattern: 3" X 6" (Soft Edge)

User Notes

Cleaning the Splash Shield:

Allow the light to cool before cleaning. Using only a soft lint free cloth or a gauze pad made of 100% cotton, lightly rub the Splash Shield to remove all residue, do not rub heavily. For stubborn stains, pre-clean the surface by soaking the cloth or gauze in water only or a solution of water and mild dishwashing liquid, then remove all residue as you dry the Splash Shield with the cloth or gauze.

During use:

Use the equipment only during required examination or treatment for each patient.

Always monitor the patient and equipment to make sure nothing is wrong.

If the equipment is not functioning properly and/or something is wrong with the patient, take proper action, stop the use of the equipment and keep the patient safe.

Make sure the patient does not touch or operate the equipment.

After use:

Turn off the equipment.

Clean the equipment and get it ready for next use.

WARNING

Use only the designated handles to position the equipment.

WARNING

Do not modify this equipment.

Do not use the equipment if it is malfunctioning in any way.

Do not use the equipment before daily check of equipment functionality.

Do not apply any solutions that contain organic solvents to plastic covers.

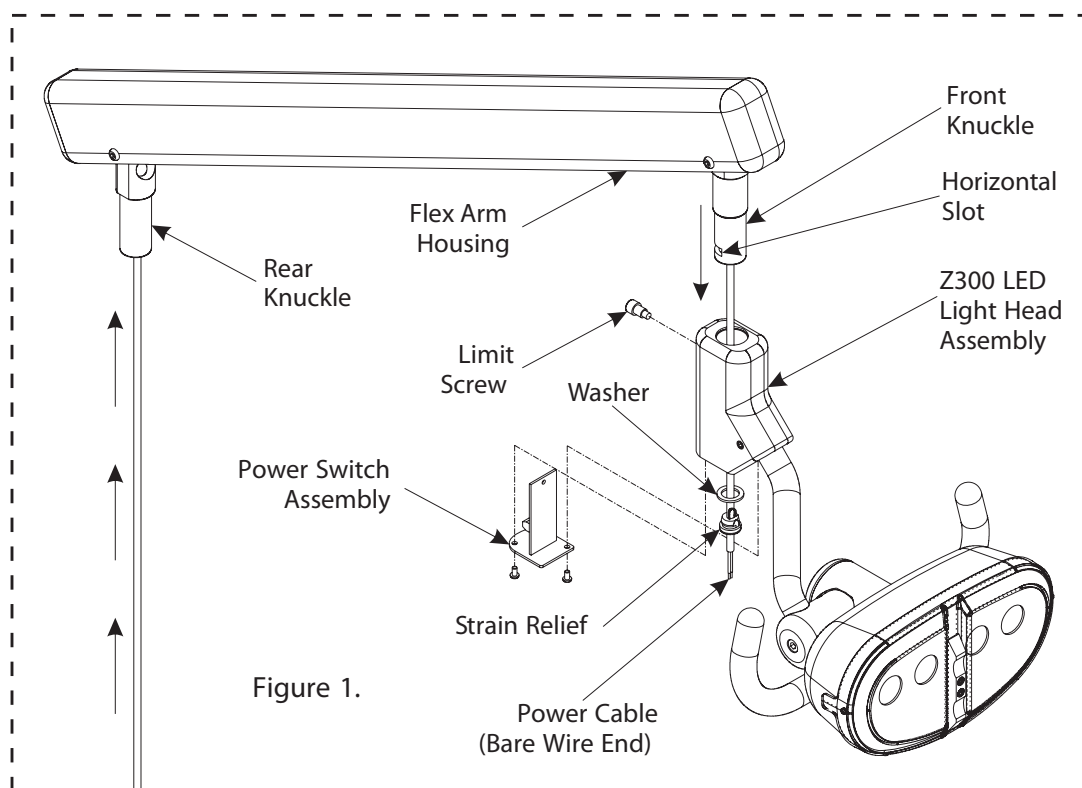
WARNING

Do not spray or apply excess liquids directly to equipment to prevent damage to electrical systems.

Warranty does not cover damage to equipment caused by disinfectant solutions.

Z300 LED Dental Light Head Retro Fit Kit - Installation Instructions

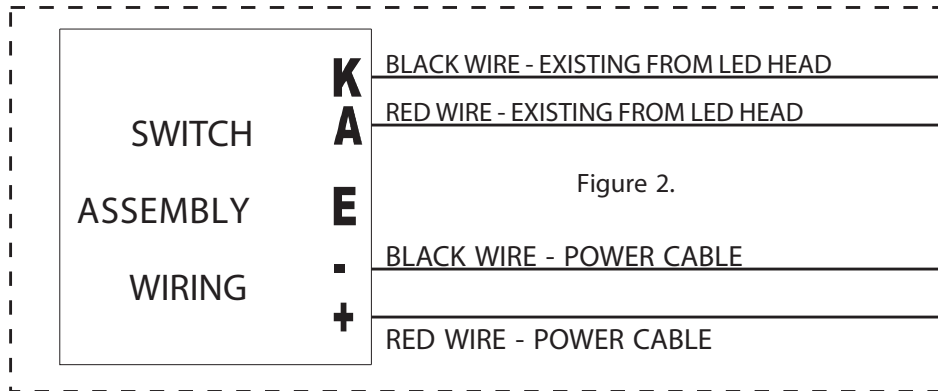
- Step 1. Unfasten the Limit Screw and remove the existing Zaktan Light Head from the Front Knuckle of the Light Flex Arm.
- Step 2. Before removing the existing Power Cable inside the Flex Arm. First, utilize it by firmly attaching the bare wire end of the new Power Cable to the transformer end of the existing Power Cable. Then use the existing Power Cable to pull the new Power Cable into place.



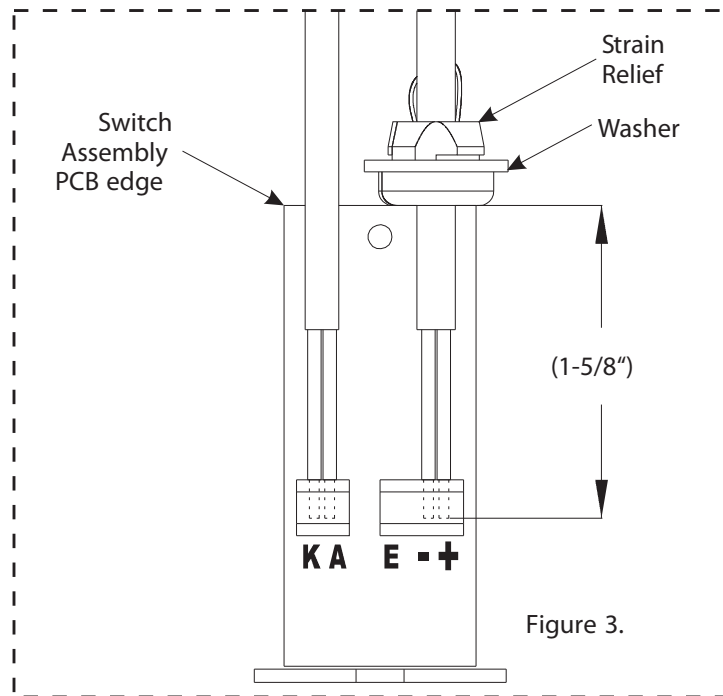
- Step 3. As mentioned in Step 2. Leading with the cut bare wire end of the new Power Cable, route the new Power Cable through the bottom of the Flex Arm Housing by first going in thru the Back Knuckle and then out the front Knuckle. Allow the cut bare wire end of the new Power Cable to exit about 8 inches from the end of the Front Knuckle. See Figure 1.
- Step 4. Remove the Power Switch Assembly from the Z300 LED Light Head Assembly by unfastening 2 screws. See Figure 1.
- Step 5. First, apply thread lock (Blue Loctite or equivalent) on the Limit Screw threads per manufacturer's instructions. Then route the bare wire end of the Power Cable thru the Light Head as shown, and using the Limit Screw, align and attach the Z300 Light Head Assembly to the Flex Arm Front Knuckle.
- CAUTION: Make sure the Limit Screw aligns with the horizontal slot of the Front Knuckle. See Figure 1.

Z300 LED Dental Light Head Retro Fit Kit - Installation Instructions

- Step 6. Partially install and hold in place, first the Washer, then the Strain Relief around the bare wire end of the new Power Cable. See figure 1.
- Step 7. Attach and secure the bare end of the Black Wire from the Power Cable exiting the switch housing of the Light Head to the Switch Assembly terminal marked with a minus/negative sign. See Figure 1. & Figure 2.
- Step 8. Attach and secure the bare end of the Red Wire from the Power Cable exiting the switch housing of the Light Head to the Switch Assembly terminal marked with a plus/positive sign. See Figure 1. & Figure 2.

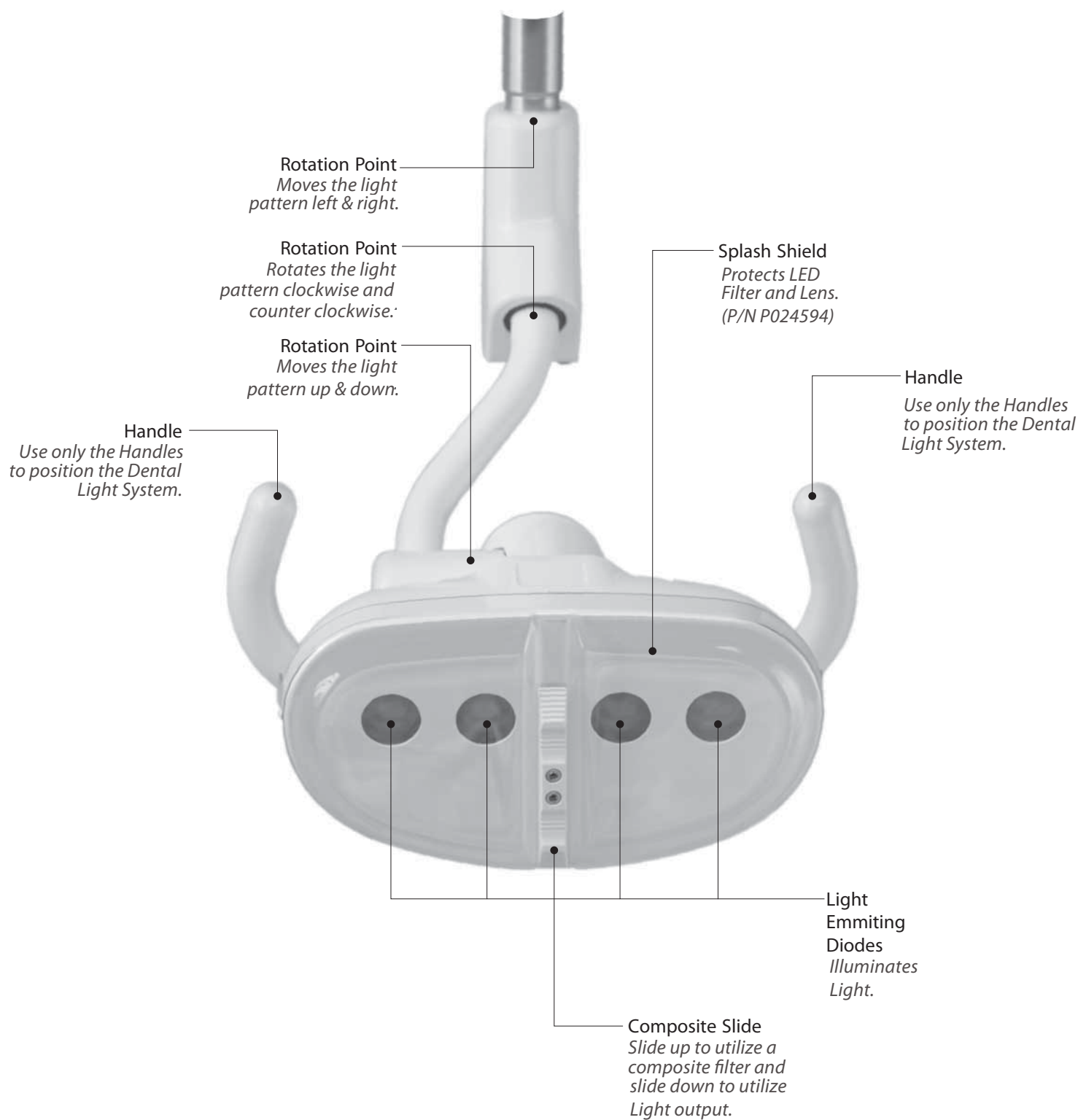


- Step 9. Using the washer to secure it, slide the Strain Relief down the Power Cable, to the Switch Assembly PCB edge and install. **IMPORTANT:** Make sure the Strain Relief is making contact with the PCB edge after it is secured with the washer. See Figure 3.



- Step 10. First, pull back the 8 inch Power Cable slack thru the Flex Arm and mount the wired Switch Assembly. Second, route the remaining Power Cable thru the existing equipment and umbilical to the location of the new LED Power Supply. Third, connect the Power Cable to the mating LED Power Supply cable. Fourth, make sure Power Cable and all wiring is not damaged during all equipment articulation and operation, remove slack and adjust for movement as necessary to eliminate all pinch and stress points. Make sure all fasteners and connectors are secure.

Z300 LED Light Head - Description of Functions



Z300 LED Light Head - Operating and Programming

STANDARD MODE: ON/OFF - controlled by the Light Head Power Button.

CHAIR MODE: ON/OFF - controlled by the Chair Touch Pad Power Button.

OPERATING INSTRUCTIONS

Turn ON: Press and Release Power Button

1. Light illuminates

Note 1: STANDARD MODE - This is done by pressing the Z300 LED Dental LIGHT HEAD Power Button.

Note 2: CHAIR MODE - This is done by pressing the ZAKTON Dental CHAIR TOUCH PAD Light Power Button.
(In CHAIR MODE the Light Head Power Button will not turn ON illumination)

Illumination Intensity: Press and Release Light Head Power Button

1. Press and Release Z300 LED Light Head Power Button to cycle through LOW-MEDIUM-HIGH illumination intensities.

Note 1: LOW - GREEN (L) indicator is illuminated near Power Button

Note 2: MEDIUM - GREEN (L) & GREEN (M) indicator is illuminated near Power Button

Note 3: HIGH - GREEN (L), GREEN (M), & GREEN (H) indicator is illuminated near Power Button

(The Z300 LED will memorize the last illumination intensity when turned off)

Turn OFF: Press and Release Power Button

1. Light illumination stops

Note 1: STANDARD MODE - This is done by pressing the Z300 LED Dental LIGHT HEAD Power Button for 3 seconds.

Note 2: CHAIR MODE - This is done by pressing the ZAKTON Dental CHAIR TOUCH PAD Light Power Button.
(In CHAIR MODE the Light Head Power Button will not turn OFF illumination)

PROGRAMMING INSTRUCTIONS

Step 1. With power to the Light Head. Press and Hold Light Head Power Button (10-15 seconds) until Low, Med, & High indicators sparkle in a rotating sequence.

Step 2. Release Light Head Power Button

Step 3. Check which indicator remains illuminated for 5 seconds (Med or High).

(If a Mode change is not desired, wait (5-6 seconds) and allow the Dental Light to return to it's existing Service Mode)

Note 1: STANDARD MODE - (M) Indicator is illuminated for 5 seconds.

(In STANDARD MODE illumination ON/OFF is controlled by LIGHT HEAD Power Button.

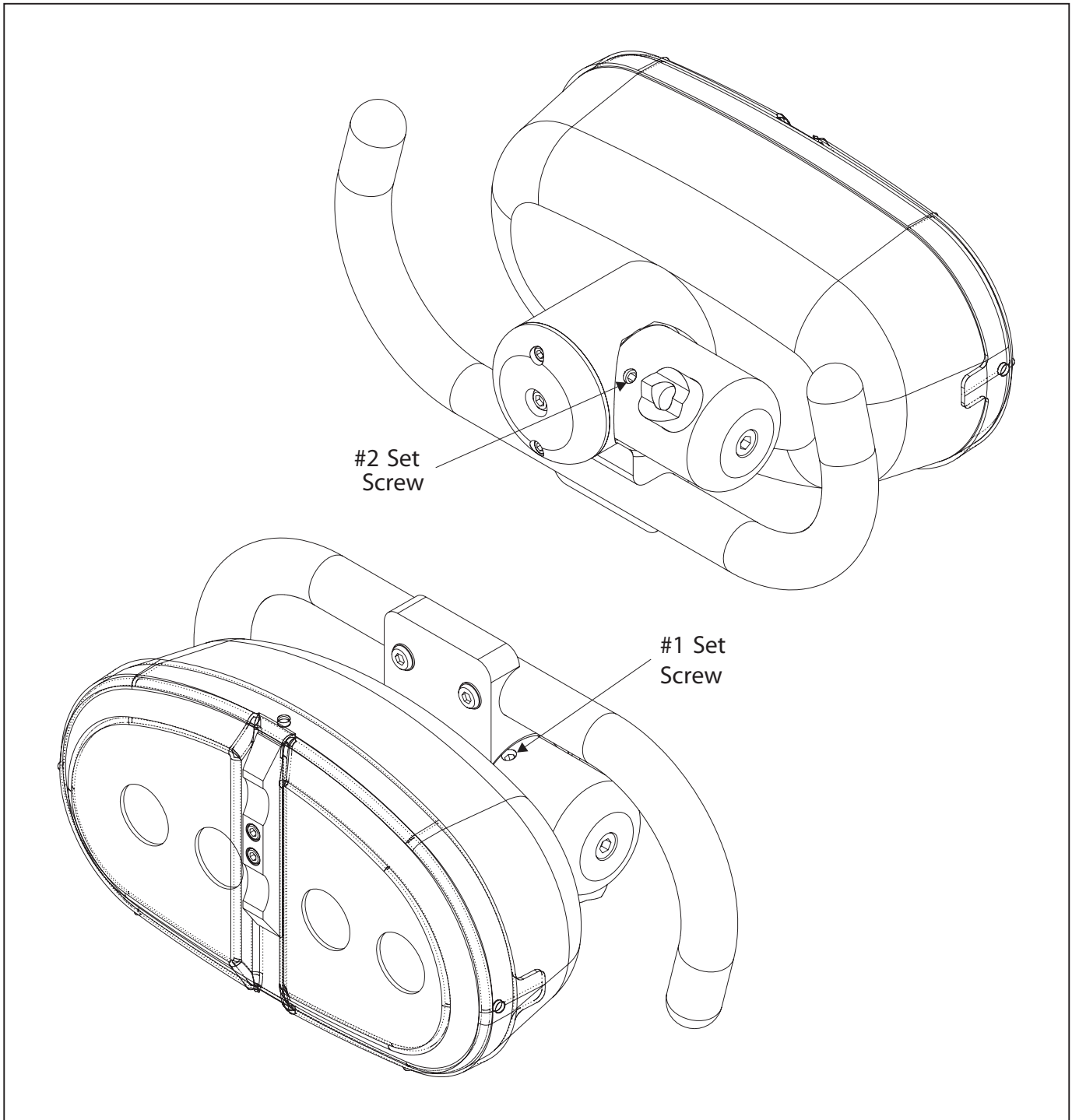
Note 2: CHAIR MODE - (H) Indicator is illuminated for 5 seconds.

(In CHAIR MODE illumination ON/OFF is controlled by CHAIR TOUCH PAD Light Power Button ONLY.

Step 4. Cycle thru STANDARD (M) & CHAIR MODE (H) Indicator by pressing LIGHT HEAD Power Button within the 5 second Indicator illumination.

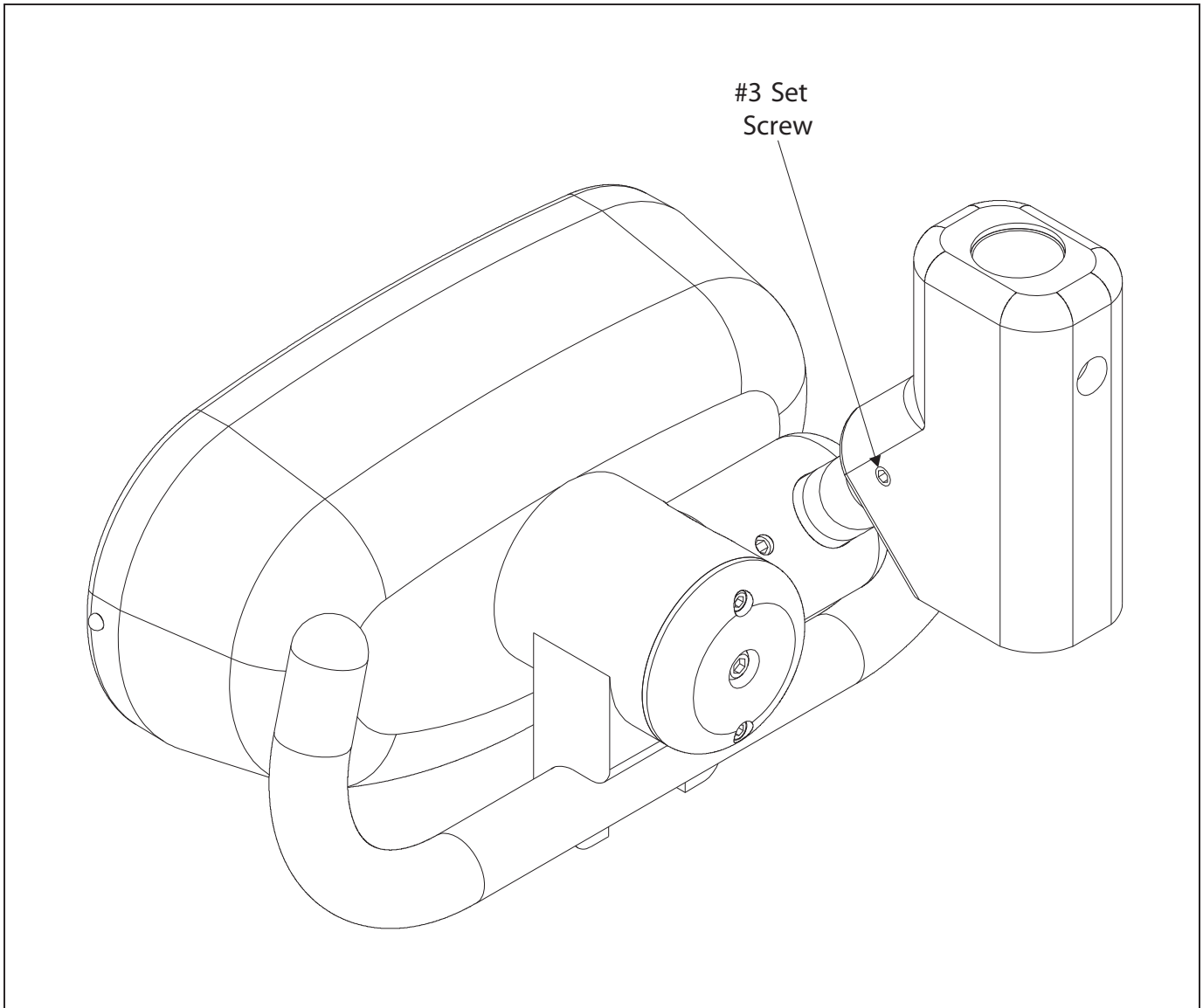
Step 5. After desired Mode is achieved, wait (4 seconds) and allow the Dental Light to resume to Service Mode.

Z300 LED Light Head Rotation Resistance - Adjustment Instructions



Simply tighten or loosen #1 & #2 Set Screws EQUALLY until the desired bearing resistance is achieved.

Z300 LED Light Head Rotation Resistance - Adjustment Instructions



Simply tighten or loosen #3 Set Screw until the desired
Bearing resistance is achieved.

CAUTION: Do not adjust the un-shown Set Screw directly on the opposite side.

Z300 LED Light Head with Power Supply (P024591) - Parts List

NO.	PART NO.	DESCRIPTION	QTY.
1	H001022	SOCKET HEAD BUTTON SCREW	2
2	H001040	SOCKET HEAD BUTTON SCREW	2
3	H001054	SOCKET HEAD CAP SCREW	2
4	H001082	SOCKET HEAD CAP SCREW	1
5	H001132	SOCKET HEAD BUTTON SCREW	1
6	H001248	SOCKET HEAD CAP SCREW	1
7	H001252	SOCKET HEAD CAP SCREW	1
8	H003010	SETSCREW	1
9	H003012	SET SCREW	2
10	H003038	SET SCREW - DOG POINT	1
11	H004012	STRAIN RELIEF	1

* INDICATES PART NOT SHOWN.

NO.	PART NO.	DESCRIPTION	QTY.
12	H004015	WASHER - NYLON	1
13	H004092	WASHER - SILICON	1
14	H004110	WASHER - INTERNAL LOCK	3
15	H012114	* BRADED SLEEVE	13"
16	H014329	* CONNECTOR - CLOSE END	2
17	P024522	LIGHT HEAD CHASSIS	1
18	P024523	HANDLE - LIGHT	1

NO.	PART NO.	DESCRIPTION	QTY.
19	P024527	LIGHT HEAD CAP	1
20	P024530	BEARING SET - SIDE ROTATION	1
21	P024531	ROTATION ARM MOUNT	1
22	P024532	LIGHT HEAD CONNECTOR TUBE	1
23	P024533	LIGHT HEAD ARM CONNECTOR	1
24	P024535	LIMIT SCREW	1
25	P024538	BEARING - FRONT ROTATION	1
26	P024553	* TOOL - ALLEN KEY	1
27	P024592	Z300 LED LIGHT KIT WITH POWER SUPPLY	1
28	P2291190	* MANUAL - Z300 LED LIGHT HEAD W/ POWER SUPPLY	1
29	H001280	* VELCRO - 1" WIDE MALE	3"
30	H001280	* VELCRO - 1" WIDE MALE	3"
31	H001281	* VELCRO - 1" WIDE FEMALE	3"
32	H001281	* VELCRO - 1" WIDE FEMALE	3"

