

Manua1



VL440 / VL770 / VL880 Spot Luminaires

02.9687.0010

Service



PHILIPS
VARI***LITE**

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VL440 / VL770 / VL880 Spot Luminaires Service Manual

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How To Obtain Warranty Service

A copy of the Vari-Lite Limited Warranty was included in the shipping package for this VARI*LITE product.

To obtain warranty service, please contact customer service at 1-877-VARI-LITE (1-877-827-4548), +1-214-647-7880, or entertainment.service@philips.com and request a Return Material Authorization (RMA) for warranty service. You will need to provide the model and serial number of the item being returned, a description of the problem or failure and the name of the registered user or organization. If available, you should have your sales invoice to establish the date of sale as the beginning of the warranty period.

Once you obtain the RMA, pack the unit in a secure shipping container or in its original packing box. Fill out the RMA form (obtained from the Vari-Lite web site www.vari-lite.com or through customer service) and place in shipping container along with a copy of your invoice (if available). Write the RMA number legibly on or near the shipping address label and return the unit, freight prepaid to:

Vari-Lite
10911 Petal Street
Dallas, Texas 75238 USA
Attention: Warranty Service / RMA Number

As stated in the warranty, it is required that the shipment be insured and FOB our service center.

Compliance Notice

FCC This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with Vari-Lite system, service, and safety guidelines, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

CE Declaration of Conformity

We declare, under our sole responsibility, that this product complies with the relevant clauses of the following standards and harmonized documents:

Safety

EN 60598-1:2008 Luminaire Safety Standard, General Requirements

EN 60598-2 17:1989/A2: 1991 Specification for Luminaires for Stage and Studio Lighting

EMC

EN 61000-6-2: 2005 Immunity Standard for industrial environment

EN 61000-6-4: 2007 Radiated and Conducted Emissions

We certify that the product conforms to the protection requirements of Low Voltage Directive 2006/95/EC and Council Directive 2004/108/EC.

Safety Notice

It is extremely important to read ALL safety information and instructions provided in this manual and any accompanying documentation before installing and operating the products described herein. Heed all cautions and warnings during installation and use of this product.

Safety symbols used throughout this manual are as follows:



CAUTION advising of potential damage to product.



WARNING advising of potential injury or death to persons.

GENERAL INFORMATION PERTAINING TO PROTECTION AGAINST ELECTRICAL SHOCK, FIRE, EXPOSURE TO EXCESSIVE UV RADIATION, AND INJURY TO PERSONS CAN BE FOUND BELOW.

WARNING:

INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST FIRE

1. VARI*LITE luminaires have been designed for use with specific light sources. The VL440 / VL770 / VL880 Spot Luminaires uses a special type of light source. Installing another type of light source will be hazardous and void the luminaire warranty.
2. Luminaires may be mounted on any type of surface as long as mounting instructions are followed. See instructions detail in this manual.
3. Note distance requirement from combustible materials or illuminated objects for VARI*LITE luminaires.

WARNING:

INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST ELECTRICAL SHOCK

1. VARI*LITE luminaires are designed for dry locations only. Exposure to rain or moisture may damage luminaire.
2. Disconnect power before servicing any VARI*LITE equipment.
3. Servicing to be performed by qualified personnel only.

WARNING:

INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST EXCESSIVE EXPOSURE TO UV RADIATION

1. Many VARI*LITE luminaires use a lamp that produces UV radiation. DO NOT look directly at lamp.
2. It is hazardous to operate luminaires without lens or shield. Shields, lenses, or ultraviolet screens shall be changed if they have become visibly damaged to such an extent that their effectiveness is impaired. For example, by cracks or deep scratches.

WARNING:

INSTRUCTIONS FOR PROTECTION AGAINST INJURY TO PERSONS

1. Exterior surfaces of the luminaire will be hot during operation. Use appropriate safety equipment (gloves, eye protection, etc.) when handling and adjusting hot equipment and components.
2. Luminaires will have a hot lamp when operating. Disconnect power and allow lamp to cool before replacing.
3. Wear eye protection when relamping.
4. Appropriate safety equipment (gloves, eye protection) should be used when handling damaged lamps.
5. If lamp is touched with bare hands, clean lamp with denatured alcohol and wipe with lint-free cloth before installing or powering up the luminaire.
6. The lamp shall be changed if it has become damaged or thermally deformed.

WARNING:

RF INTERFERENCE

1. This is a Class A product. In a domestic environment this product may cause radio interference, in which case, the user may be required to take adequate measures.

Sicherheitshinweise

Es ist äußerst wichtig, ALLE Sicherheitsinformationen und -hinweise in diesem Handbuch und dem beiliegenden Informationsmaterial zu lesen, bevor Sie die hierin beschriebenen Produkte installieren bzw. bedienen. Halten Sie bei der Installation und dem Einsatz dieses Produkts alle Warnhinweise und Vorsichtsmaßnahmen ein.

Folgende Sicherheitssymbole werden in diesem Handbuch verwendet:



VORSICHT - weist auf möglichen Produktschaden hin.



WARNUNG - weist auf mögliche Körperverletzung und Lebensbedrohung hin.

NACHSTEHEND FINDEN SIE ALLGEMEINE HINWEISE ÜBER SICHERHEITSVORKEHRUNGEN GEGEN ELEKTROSCHOCK, FEUER, ÜBERHÖHTE UV-STRAHLUNG UND KÖRPERVERLETZUNGEN.

WARNUNG:

HINWEISE ZUM FEUERSCHUTZ

1. VARI*LITE Beleuchtungen sind für Gebrauch mit spezifischen Lichtquellen bestimmt worden. Die VL440 / VL770 / VL880 Spot Luminaires Beleuchtung benutzt eine spezielle Art - Lichtquelle. Eine andere Art Lichtquelle anzubringen ist gefährlich und hebt die Beleuchtungsgarantie auf.
2. Scheinwerfer können auf jeder beliebigen Oberfläche montiert werden, solange Sie die Montageanweisungen befolgen. Detaillierte Hinweise finden Sie in diesem Handbuch.
3. Beachten Sie die Einhaltung des erforderlichen Sicherheitsabstandes der VARI*LITE - Scheinwerfer von brennbarem Material oder beleuchteten Objekten.

WARNUNG:

HINWEISE ZUM SCHUTZ GEGEN ELEKTROSCHOCK

1. VARI*LITE -Scheinwerfer eignen sich ausschließlich für trockene Standorte. Regen oder Feuchtigkeit können die Scheinwerfer beschädigen.
2. Unterbrechen Sie die Stromzufuhr, bevor Sie mit der Arbeit an VARI*LITE -Geräten beginnen.
3. Die Geräte sollten nur von qualifiziertem Personal gewartet werden.

WARNUNG:

HINWEISE ZUM SCHUTZ GEGEN ÜBERHÖHTE UV-STRAHLUNG

1. Viele VARI*LITE -Scheinwerfer verwenden die Lampentyp, der UV-Strahlen abgibt. **SCHAUEN SIE NICHT** direkt in die Lampe.
2. Es ist gefährlich, Leuchten ohne Linsen oder Blenden zu bedienen. Blenden, Linsen oder Ultraviolettsschirme müssen ausgetauscht werden, sofern deren Schutzwirkung durch sichtbare Beschädigung (z. B. Sprünge oder Schrammen) eingeschränkt ist.

WARNUNG:

HINWEISE ZUM SCHUTZ GEGEN KÖRPERVERLETZUNGEN

1. Bei Betrieb sind die Außenflächen der Scheinwerfer heiß. Verwenden Sie bei der Bedienung von aufgeheizter Apparatur die jeweils geeignete Sicherheitsausrüstung (Handschuhe, Augenschutz etc.).
2. Bei Betrieb der Scheinwerfer ist die Lampe heiß. Unterbrechen Sie die Stromzufuhr und lassen Sie die Lampe abkühlen, wenn Sie diese austauschen.
3. Tragen Sie beim Austausch der Lampen einen Augenschutz.
4. Die geeignete Sicherheitsausrüstung (Handschuhe, Augenschutz) sollte beim Umgang mit beschädigten Lampen verwendet werden.
5. Wenn die Lampe mit bloßen Händen berührt wird, reinigen Sie sie mit denaturiertem Alkohol und einem flusenfreien Tuch, bevor Sie die Scheinwerfer installieren oder in Betrieb nehmen.
6. Wenn die Lampe beschädigt oder durch Hitze einwirkung deformiert ist, muß diese ausgetauscht werden.

WARNUNG:

HF-INTERFERENZ

1. Es handelt sich um ein Produkt der Klasse A. In einer Wohnumgebung kann das Produkt Hochfrequenzstörungen verursachen. In diesem Fall müssen eventuell geeignete Maßnahmen getroffen werden.

Notes de sécurité

Avant de procéder à l'installation des produits décrits dans ce guide et de les mettre en marche, il est extrêmement important de lire TOUS les renseignements et TOUTES les directives de sécurité contenues dans ce guide ainsi que toute documentation jointe. Tenir compte de tous les avertissements et suivre toutes les précautions pendant l'installation et l'utilisation de cet appareil.

Les symboles de sécurité utilisés dans ce guide sont les suivants :



ATTENTION Ce symbole annonce que l'appareil risque d'être endommagé.



AVERTISSEMENT Ce symbole annonce qu'il y a risque d'accident grave ou même fatal.

CETTE SECTION CONTIENT DES INFORMATIONS GÉNÉRALES POUR SE PROTÉGER CONTRE LES DÉCHARGES ÉLECTRIQUES, LES INCENDIES, L'EXPOSITION EXCESSIVE AUX RAYONS UV ET TOUT AUTRE ACCIDENT POUVANT ENTRAÎNER DES BLESSURES.

AVERTISSEMENT:

DIRECTIVES POUR SE PROTÉGER CONTRE LES INCENDIES

1. Des appareils d'éclairage de VARI*LITE ont été conçus pour l'usage avec des sources lumineuses spécifiques. L'appareil d'éclairage de VL440 / VL770 / VL880 Spot Luminaires emploie un type spécial de source lumineuse de . L'installation d'un autre type de source lumineuse sera dangereuse et videra la garantie d'appareil d'éclairage.
2. Les luminaires peuvent être fixés sur tout type de surface tant que les directives de montage sont respectées. Voir les explications détaillées dans ce guide.
3. Vérifier la distance à respecter entre les matériaux combustibles ou les objets illuminés et les luminaires VARI*LITE .

AVERTISSEMENT:

DIRECTIVES POUR SE PROTÉGER CONTRE LES DÉCHARGES ÉLECTRIQUES

1. Les luminaires VARI*LITE sont conçus pour une utilisation au sec uniquement. Une exposition à la pluie et à l'humidité risque d'endommager le luminaire.
2. Débrancher l'appareil avant de procéder à la révision de tout matériel VARI*LITE .
3. Les révisions doivent être effectuées uniquement par des personnes qualifiées.

AVERTISSEMENT:

DIRECTIVES POUR SE PROTÉGER CONTRE UNE EXPOSITION EXCESSIVE AUX RAYONS UV

1. Plusieurs luminaires VARI*LITE utilisent une lampe qui produit des rayons UV. NE PAS fixer son regard sur la lampe.
2. L'utilisation des luminaires sans lentille ou blindage pose des risques. Tous blindages, lentilles ou écrans ultraviolet visiblement endommagés au point que leur efficacité en est affectée doivent être remplacés, par exemple s'il y a des fissures ou de profondes rayures.

AVERTISSEMENT:

DIRECTIVES POUR SE PROTÉGER CONTRE LES ACCIDENTS POUVANT ENTRAÎNER DES BLESSURES

1. Les surfaces externes du luminaire deviennent brûlantes quand l'appareil est en marche. Pour manœuvrer ou ajuster des appareils brûlants et leurs composants, se protéger suffisamment (gants, protection pour les yeux, etc.).
2. La lampe du luminaire est brûlante lorsqu'il est en marche. Débrancher le courant et attendre que la lampe ait refroidi avant de la remplacer.
3. Les lampes à arc émettent des rayons ultraviolets pouvant causer de graves brûlures sur la peau et une inflammation des yeux. De plus, les lampes à arc fonctionnent sous haute tension à de très hautes températures. Si la lampe se casse, les particules de la lampe cassée peuvent causer blessures et/ou incendie en s'éparpillant.
4. Se protéger les yeux pour remplacer la lampe.
5. Utiliser des appareils de protection appropriés (gants, protection des yeux) pour manier des lampes endommagées.
6. Si la lampe a été touchée avec des mains nues, la nettoyer avec de l'alcool dénaturé et l'essuyer avec un chiffon non-pelucheux avant d'installer ou de brancher le luminaire.
7. Si la lampe a été endommagée ou a reçu une déformation thermique, elle doit être remplacée.

AVERTISSEMENT:

INTERFÉRENCE RF

1. Cet appareil est de Classe A. Dans un environnement domestique, cet appareil peut causer des interférences radio, et si c'est le cas, l'utilisateur peut avoir à prendre des mesures adéquates.

Aviso sobre Seguridad

Es muy importante leer TODA la información e instrucciones sobre seguridad que se indica en este manual así como en los documentos adjuntos antes de instalar y operar los productos descritos. Se debe prestar atención a todos los avisos y advertencias durante la instalación y uso de este producto.

Los símbolos de seguridad usados en este manual son los siguientes:



CUIDADO, indica posibles daños al producto.



ADVERTENCIA, indica posibles lesiones o muerte a las personas.

LA INFORMACIÓN GENERAL RELACIONADA A LA PROTECCIÓN CONTRAGOLPES DE CORRIENTE ELÉCTRICA, INCENDIO, EXPOSICIÓN EXCESIVA A RADIACIÓN ULTRA VIOLETA Y LESIONES A LAS PERSONAS SE PUEDE ENCONTRAR SEGUIDAMENTE:

ADVERTENCIA:

INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA INCENDIO

1. Los alumbrados de VARI*LITE se han diseñado para el uso con fuentes de luz específicas. El alumbrado de VL440 / VL770 / VL880 Spot Luminaires utiliza un tipo especial de fuente de luz del . La instalación de otro tipo de fuente de luz será peligrosa y anulará la garantía del alumbrado.
2. Las luminarias se pueden instalar en cualquier tipo de superficie siempre que se sigan las instrucciones de instalación. Vea las instrucciones detalladas en este manual.
3. Tome nota de los requerimientos de distancia de materiales combustibles u objetos iluminados para las luminarias VARI*LITE .

ADVERTENCIA:

INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA CHOQUE ELÉCTRICO

1. Las luminarias VARI*LITE están diseñadas solamente para lugares secos. La exposición a la lluvia o humedad pueden dañar la luminaria.
2. Desconecte la energía antes de dar servicio a cualquier equipo de VARI*LITE .
3. El servicio debe ser realizado solamente por personal calificado.

ADVERTENCIA:

INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA LA EXPOSICIÓN EXCESIVA DE RADIACIÓN ULTRA VIOLETA

1. Muchas luminarias VARI*LITE usan un tipo de lámpara que produce radiación UV. NO mire directamente a la lámpara.
2. Es peligroso operar luminarias sin lentes o protectores. Debe cambiar los protectores, lentes o pantallas ultravioletas si se aprecia que han sido dañadas, y que su efectividad pudiera estar deteriorada. Por ejemplo, si tuvieran rajaduras o raspaduras profundas.

ADVERTENCIA:

INSTRUCCIONES PARA PROTECCIÓN CONTRA LESIONES DE PERSONAS

1. Las superficies exteriores de las luminarias están calientes durante su operación. Use un equipo de seguridad apropiado (guantes, protección para los ojos, etc.) cuando haga ajustes en el equipo y componentes que están calientes.
2. Cuando las luminarias están en operación la lámpara estará muy caliente. Desconecte la energía y deje que la lámpara se enfríe antes de reemplazarla.
3. Use un equipo de seguridad apropiado (guantes, protección para los ojos, etc.) cuando trabaje con lámparas dañadas.
4. Si toca la lámpara con las manos, limpie la lámpara con alcohol desnaturalizado y con tela sin pelusas antes de instalar o volver a conectar la luminaria.
5. Cambie la lámpara si está dañada o deformada termicamente.

ADVERTENCIA:

INTERFERENCIA RF

1. Este es un producto de Clase A. En el ambiente de la casa este producto puede ocasionar radiointerferencia, en cuyo caso, el usuario debe tomar las medidas adecuadas.



警告：

過度の UV 放射にさらされないためのヒント

1. VARI*LITE® 照明器具の多くは、UV 放射を生ずる HID タイプのランプを使用しています。ランプを直視することは避けてください。
2. レンズまたはシールドを使わずに照明器具を点灯すると危険です。レンズ、シールド、紫外線画面は、ひび割れや深い引っかき傷などにより、その効力が損なわれるようになったら取り替えるようにします。

警告：

人身事故を防ぐためのヒント

1. 照明器具が点灯しているときは、その外側が熱くなります。熱くなった器具やコンポーネントを取り扱う際には、適切な防具（手袋や保護用眼鏡）を使用してください。
2. 照明器具が点灯しているときは、そのランプが熱くなります。ランプを交換する場合は、照明器具の電源を切り、ランプの温度が下がるまで待ってください。ランプの裏ぶたをあけると、遮断スイッチが働いて、ランプの電源が切れる場合があります。
3. アーク灯は紫外線を放射します。この紫外線によって、ひどい火傷を負ったり、目の炎症を起こすことがあります。さらに、アーク灯は、高圧高温の状態です。そのため、万一アーク灯が破損すると、飛び散った破片で人身事故や火災が発生する危険性があります。
4. 再点灯するときには、保護用眼鏡を着用してください。
5. 損傷したランプを取り扱う場合は、適切な防具（手袋や保護用眼鏡）を着用してください。
6. 手袋を着用せずに直接手でランプを触った場合は、変性アルコールを使ってランプをきれいにし、糸くずの出ない布で拭いてから照明器具を取り付け、電源を入れるようにします。
7. 傷がついたランプや熱によって変形したランプは取り替えてください。

警告：

RF 干渉

1. 本製品は Class A に分類されます。本製品は、家庭環境において無線干渉を起こす可能性があります。その場合、使用者は適切な処置を取らなければならないことがあります。

アーク灯の特性

1. 停電後または大きな電圧ディップ後にアーク灯を再点灯する場合は、しばらく時間をおくようにしてください。Lamp Power-Up State) システム設定によっては、温度が下がったときに自動的に再点灯される場合もあります。
2. アーク灯は点光源です。

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Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

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Appendix A. Technical Bulletins and Notices

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Introduction

About This Manual

This manual provides descriptions, repair procedures, and illustrated parts breakdowns for all configurations of the VL440 / VL770 / VL880 Spot Luminaires. The manual is intended for use by Vari-Lite personnel and Authorized VARI*LITE Service Centers and technicians.



WARNING: It is important to read ALL accompanying safety and installation instructions to avoid damage to the product and potential injury to yourself or others.

This manual covers the following models:

Model	Part Number	Lamp Type	Color Mixing System	Dimmer	Gobo Positions	Luminaire Body Color
VL440 Spot	20.9687.0002	400W MSR Gold 400 MiniFastFit Lamp	CYM / 8 Filters	Glass Dimmer Wheel	7 Rotating / 10 Fixed (1)	Black
VL770 Spot	20.9687.0003	700W MSR Gold 700 MiniFastFit Lamp	CYM / 8 Filters	Glass Dimmer Wheel	7 Rotating / 10 Fixed (2)	Black
VL880 Spot	20.9687.0004	800W MSR Platinum 35 Lamp	CYM / 8 Filters	Glass Dimmer Wheel	7 Rotating / 10 Fixed (2)	Black

Notes:

- (1) = Luminaire accepts metal and glass gobos.
- (2) = Luminaire accepts glass gobos only.



Note: Performing maintenance procedures may void the product warranty. Refer to the Vari-Lite Limited Warranty card included in the product shipping package for more information.

Additional Documentation

For complete installation and operation instructions, refer to the VL440 / VL770 / VL880 Spot Luminaires User's Manual. This manual is available in electronic (PDF) format on the Vari-Lite web site at www.vari-lite.com in the Support (Product Downloads) section.

- VL440 / VL770 / VL880 Spot Luminaires User's Manual (02.9687.0001)

For more information regarding DMX512 systems, refer to the DMX512/1990 & AMX 192 Standards publication available from United States Institute for Theatre Technology, Inc. (USITT).

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www.usitt.org

Customer Service

Our Goal

At Vari-Lite, we are committed to providing you the highest quality in customer service. Our comprehensive resources are available to help your business succeed and ensure you get the full benefit of being a Vari-Lite customer. Whether your needs are telephone troubleshooting assistance, product training or technical service, our full-time staff of experienced professionals are on-hand to provide support.

How to Reach Us

For assistance in your area, call the dealer from which your product(s) was purchased.

or

Contact an Authorized Service Center.

or

Contact the Vari-Lite Customer Service Department, 7am - 6pm CST Monday through Friday, at the following:

phone: 1-877-VARI-LITE (1-877-827-4548)

e-mail: entertainment.service@philips.com

Additional Resources

For additional resources and documentation, please visit our website at www.vari-lite.com and follow the Support link.

Technical Bulletins and Notices

Technical bulletins concerning the latest changes to VARI*LITE equipment are issued from the Dallas, Texas USA office. They are documentation supplements that contain procedures for equipment upgrades, retrofits, and repairs not found in the existing manuals. Operator technical bulletins are also issued to document changes in control software. Technical bulletins are integrated into the appropriate equipment manuals as those manuals are revised. Bulletins are categorized by assembly or subassembly, and identified by a number such as SVL-001 (VL440 / VL770 / VL880 Luminaires Technical Bulletin number 1) or LSW-001 (Software release technical bulletin).

Technical notices are also issued from the Dallas, Texas USA office. They are non-procedural documents that contain information regarding product support issues, current equipment problems, software bugs, and documentation corrections. All technical notices begin with the prefix TN and are numbered sequentially, such as TN-138 (Tech Notice number 138).

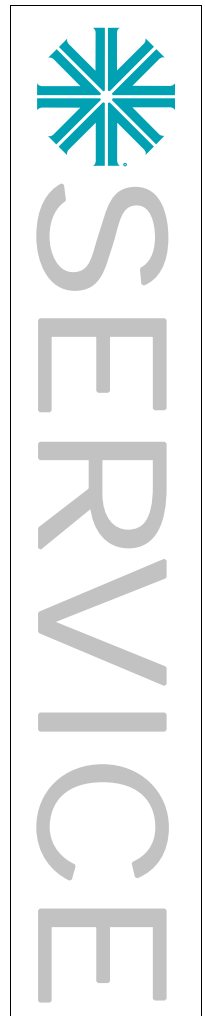
A list of current technical bulletins and notices associated with VL440 / VL770 / VL880 Spot Luminaires are found in "[VL440 / VL770 / VL880 Spot Luminaires Technical Bulletins and Notices](#)" on page 171.

CHAPTER 1.

Description

This chapter contains descriptions of luminaire features and components.

- **Features**
- **Components**
- **Principles of Operation**



Features

Mechanical

Color Mixing System

All models feature a three filter CYM cross-fading mechanism plus a fixed color wheel with 8 interchangeable color filters and 1 open space. Fixed wheel is capable of continuous rotation for additional effects.

Gobo Wheels

- All models feature one rotating gobo wheel with seven rotatable, indexable gobo positions and one open position. One fixed gobo wheel with 10 easily loaded patterns and one open position capable of continuous rotation for additional effects. 17 total gobos positions.
- VL440 Spot accepts both metal and glass gobos.
- VL770 & VL880 Spot accept glass gobos ONLY!.

Frost and Prism Capability

Independent, drop-in armature with frost glass. Second, independent, drop-in armature with rotating and indexable four facet prism. Both the frost and prism pieces are interchangeable.

Pan/Tilt

Smooth, time-controlled continuous motion by way of a high-power, three-phase stepper motor system.

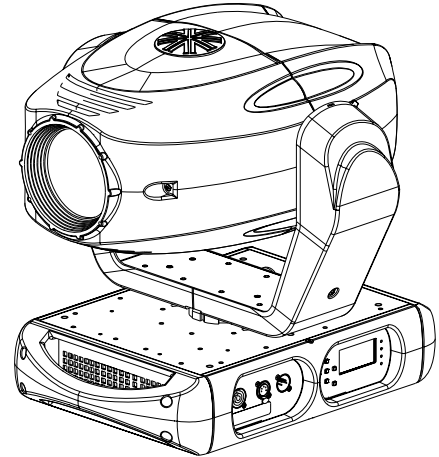
- Range: Pan - 540° , Tilt - 260°.
- Pan/Tilt Accuracy: 0.3° resolution.

Weights:

- VL440 Spot: 56 lbs. (25.5 kg)
- VL770 Spot: 56 lbs. (25.5 kg)
- VL880 Spot: 56 lbs. (25.5 kg)

Spacing:

All models hang on 23 inch (58.5 cm) centers.



Optical

Source

Model	Lamp	Color Temperature	Output
VL440 Spot	400W MSR Gold 400 MiniFastFit Lamp	6000K	9,000 Lumens
VL770 Spot	700W MSR Gold 700 MiniFastFit Lamp	6000K	15,000 Lumens
VL880 Spot	800W MSR Platinum 35 Lamp	6000K	19,000 Lumens

Reflector

Precision faceted, elliptical glass reflector system with dichroic cold mirror coating.

Zoom Optics / Control

- All models feature a high-speed, precision zoom optical system with continuously variable field angle from approximately 15° to 36°; programmable over a timed range of 1.5 seconds to 20 minutes.
- Variable beam focus to soften edges of gobos or spots.

Intensity Control

All models contain a coated glass dimmer wheel provides full-field dimming designed for smooth timed fades. These models also feature a high-performance dual blade strobe system capable of ultra-fast operation.

Operational

Power Requirements

- VL440 Spot: Standard AC power distribution from 100 - 240VAC, 50/60 Hz. The unit requires up to 6.6A (at 100V) depending on the AC supply voltage.*
- VL770 Spot: Standard AC power distribution from 100 - 240VAC, 50/60 Hz. The unit requires up to 10.2A (at 100V) depending on the AC supply voltage.*
- VL880 Spot: Standard AC power distribution from 100 - 240VAC, 50/60 Hz. The unit requires up to 12.0A (at 100V) depending on the AC supply voltage.*

Note: *For a breakdown of total luminaire current draw at different voltages for all models covered in this manual, see product user's manual.

Operational Temperature

-20° to 122°F (-29° to 50°C)

Cooling

Forced-air cooling.

Control

Control by DMX512 protocol. Compatible with a wide variety of DMX512 consoles.

DMX Channels

30 channels.

Mounting Position

- The luminaire can be mounted and operated in any orientation.

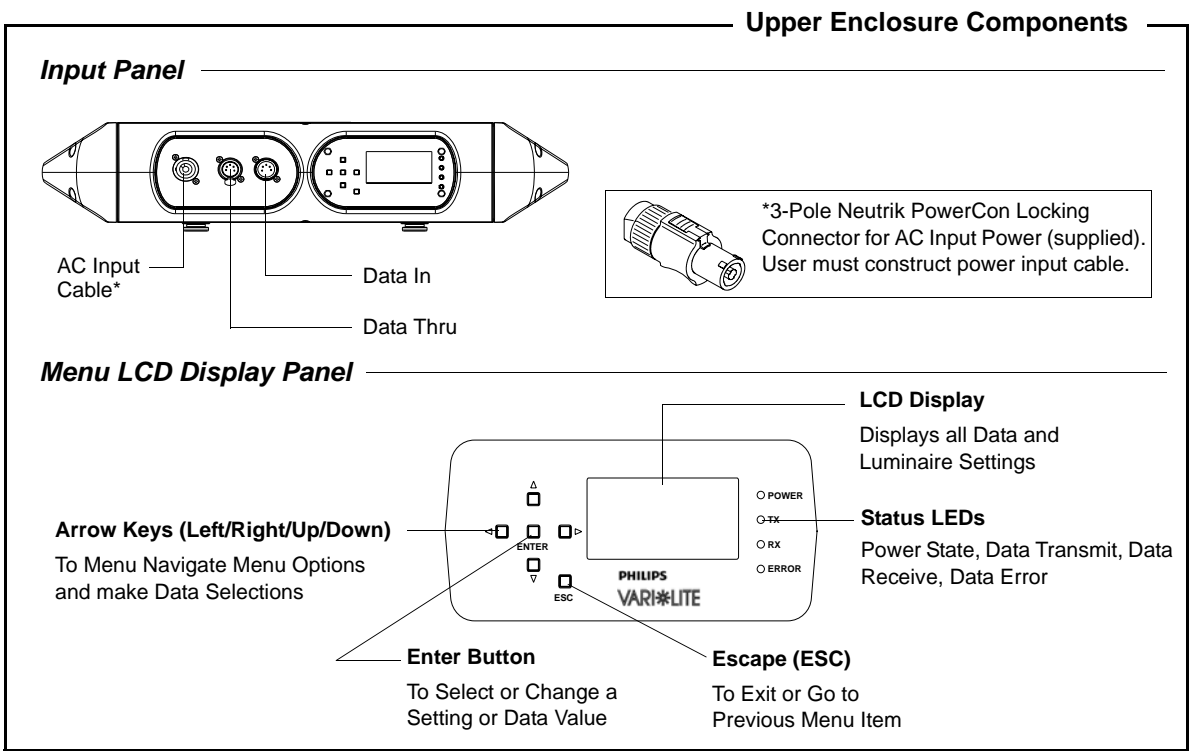
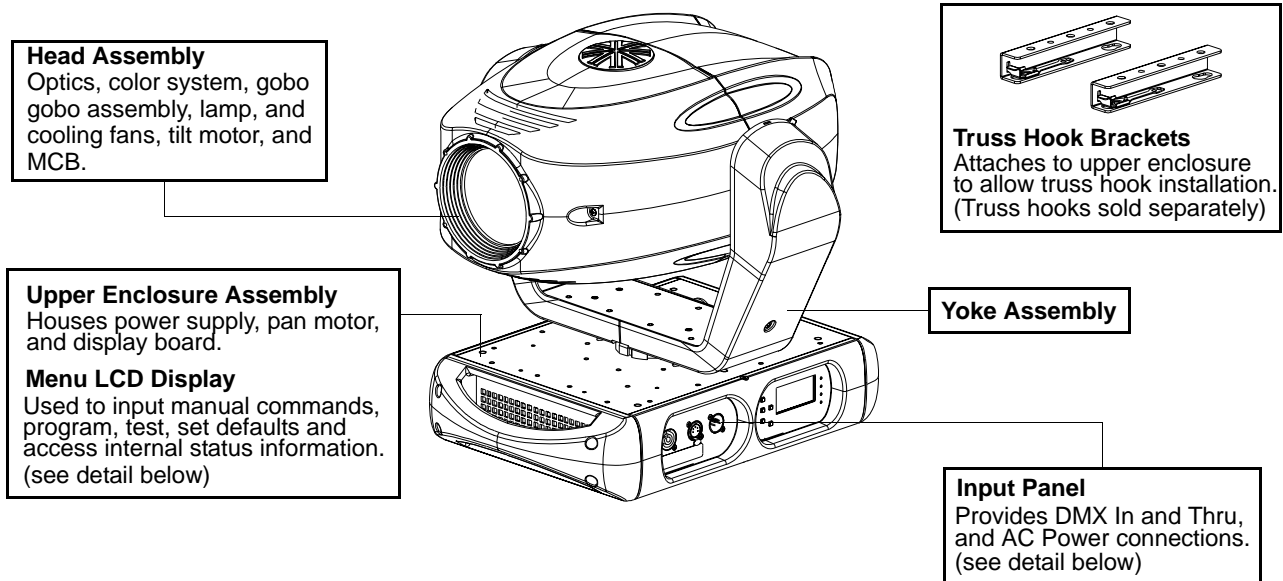
Technical Specifications

For additional technical specifications, refer to VL440 / VL770 / VL880 Spot Luminaires User's Manual (02.9687.0001) or the Vari-Lite web site at www.vari-lite.com.

Components

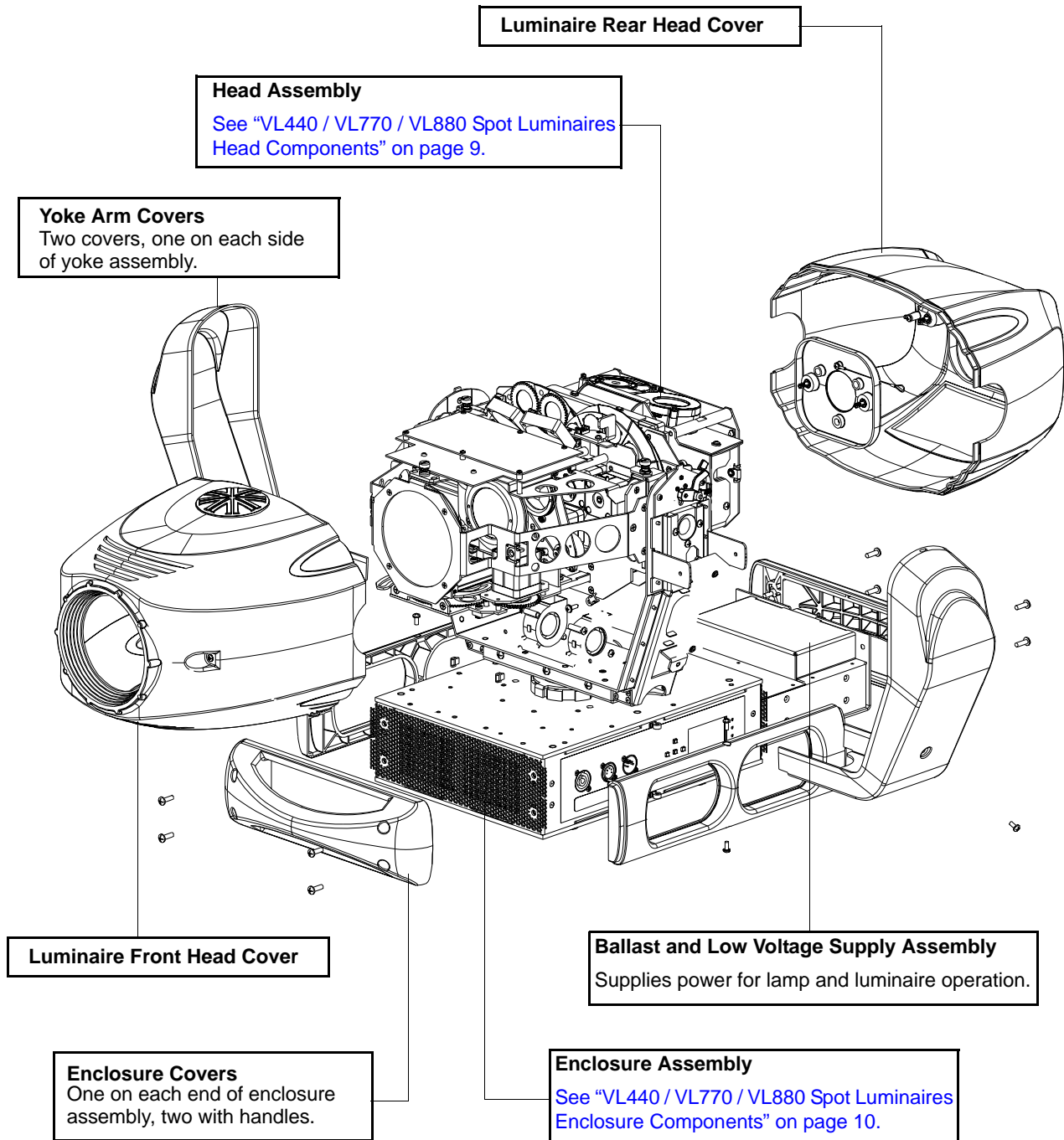
VL440 / VL770 / VL880 Spot Luminaires External Components

The following illustration shows the external luminaire components and controls.



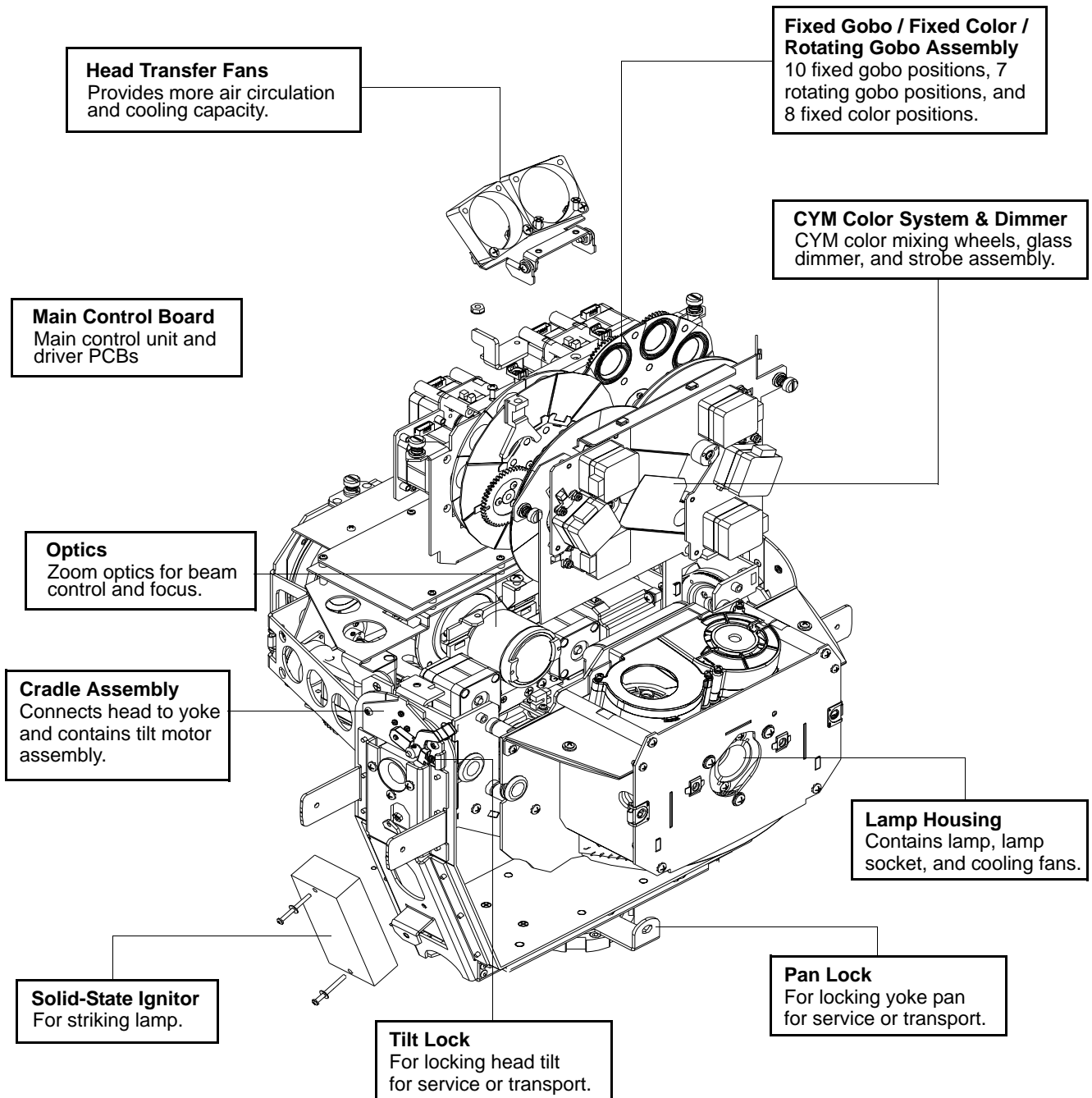
VL440 / VL770 / VL880 Spot Luminaires Components

The following illustration shows the major sub-assemblies and components of the luminaire.



VL440 / VL770 / VL880 Spot Luminaires Head Components

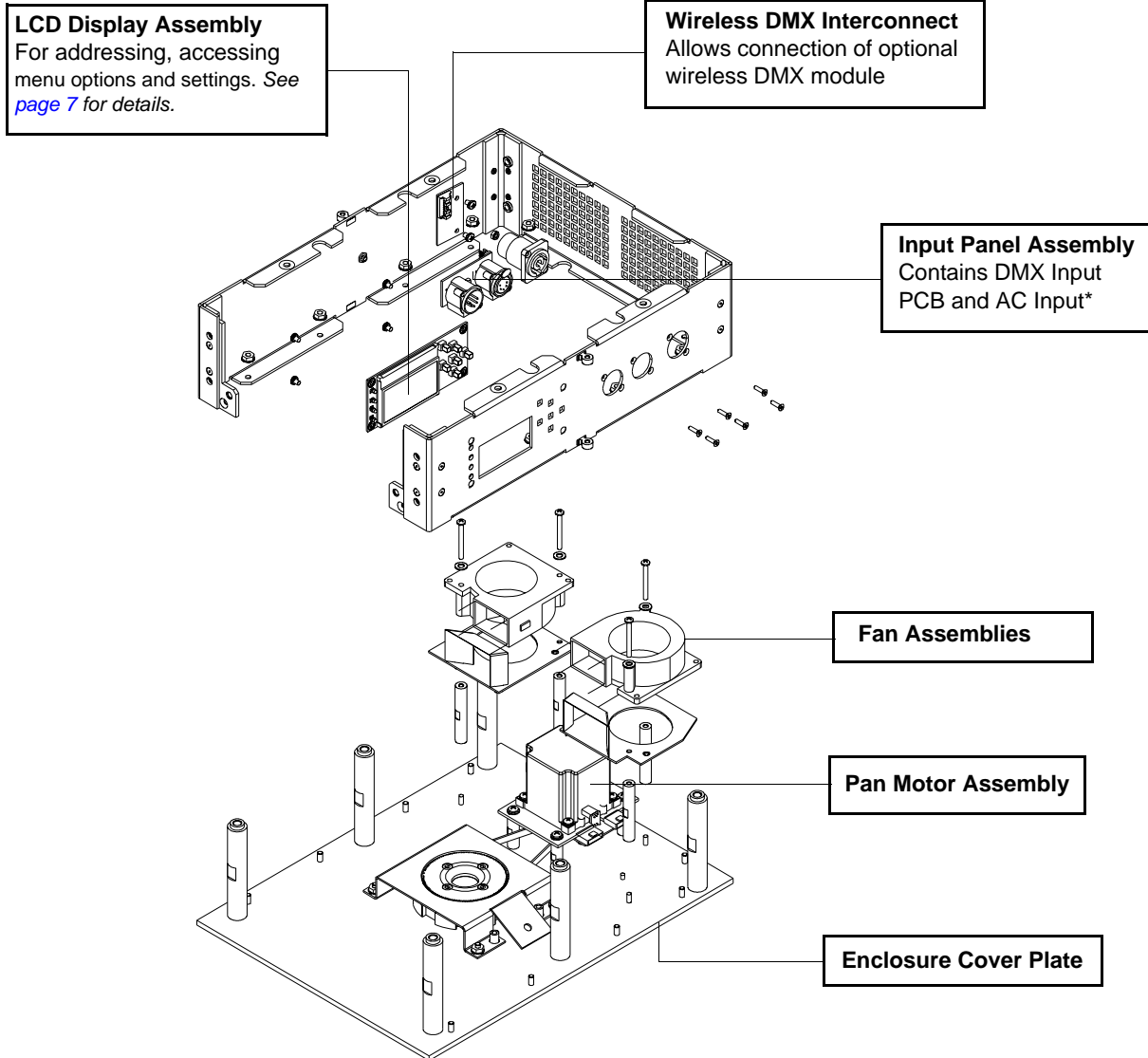
The following illustration shows the major sub-assemblies which are located in the luminaire head assembly.



Note: _____
Enclosure assembly not shown for clarity.

VL440 / VL770 / VL880 Spot Luminaires Enclosure Components

The following illustration shows the major sub-assemblies which are located in the luminaire enclosure assembly.



Note:

Other assemblies not shown for clarity. Power supply (not shown) is part of the generic luminaire assembly but is housed in the enclosure assembly.

***AC Input**

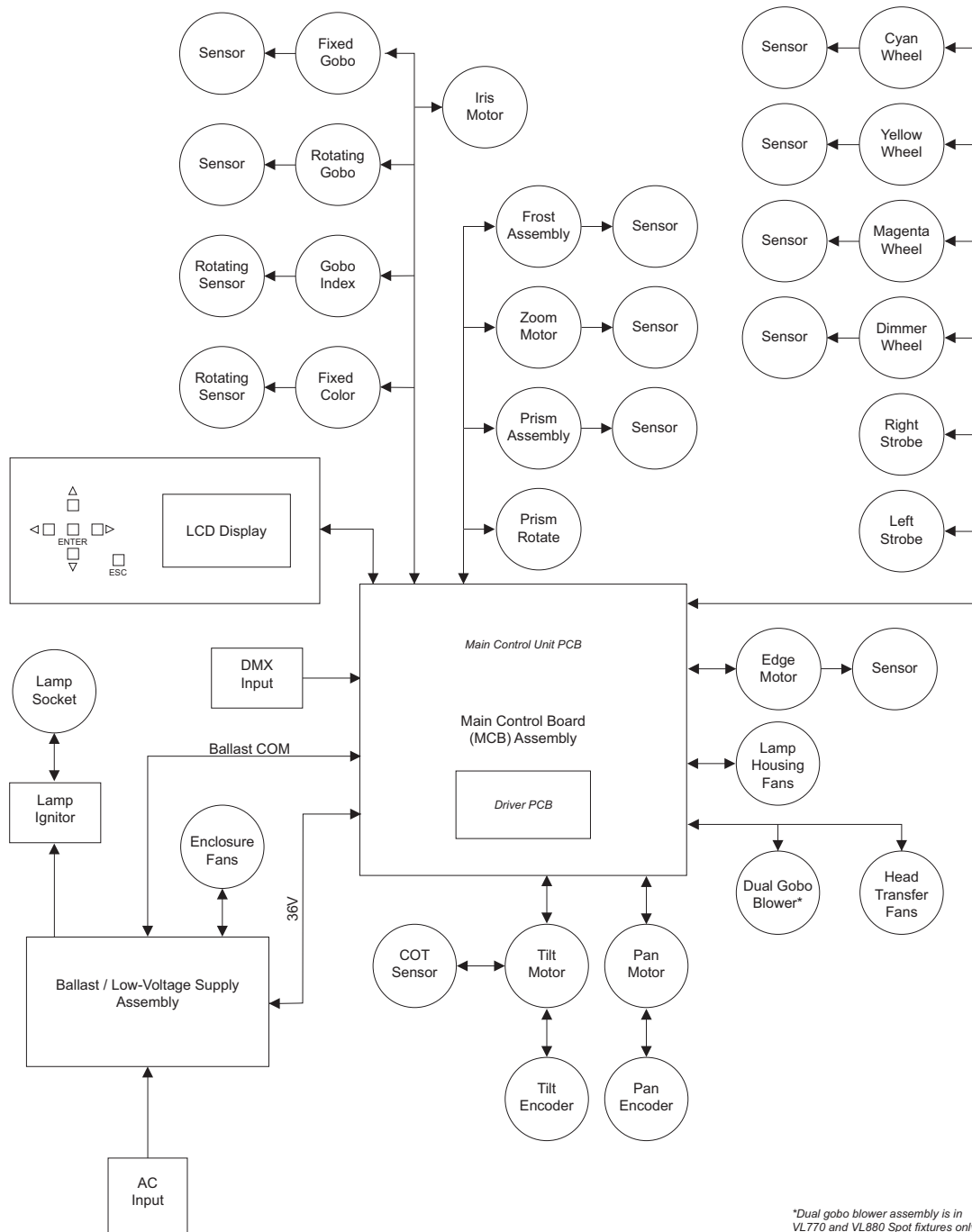
Requires standard AC power distribution from 100-240 VAC, 50/60 Hz., current depends on the AC supply voltage. See user's manual for more information on current draw

Wire**	Connection
Green/Yellow	AC Ground
Blue	AC Neutral
Brown	AC Line

** International (Harmonized) Standard

Principles of Operation

VL440 / VL770 / VL880 Spot Luminaires Functional Block Diagram



Notes

CHAPTER 2.

Maintenance

This chapter contains test, service, and standard maintenance procedures.

- **Testing**
- **Troubleshooting**
- **Special Care and Handling**
- **Maintenance Procedures**



WARNING: All maintenance procedures are to be performed with power completely removed from the luminaire. Never remove covers while unit is in operation.



WARNING: Maintenance, repairs, and adjustments should only be performed by a qualified, factory-trained service technician at an Authorized VARI*LITE Service Center.



SERVICE

Testing

Luminaire Self-Tests

The luminaire is capable of running self tests by using the TEST menu functions. For detailed instructions regarding the luminaire's self-test function, refer to the VL440 / VL770 / VL880 Spot Luminaires User's Manual (02.9687.0001).

Calibration Sequence

When the luminaire is powered up for the first time, the default setting is enabled and the lamp will remain off. When AC power is applied, the luminaire will immediately begin a calibration sequence that steps it through full pan and tilt movements. The internal color and beam mechanisms will also move through a full range of motion. After calibration, the luminaire head will either stop at its "home" position (which positions the pan axis at mid-rotation and the head parallel to the yoke with the lens pointing away from the luminaire enclosure) or move to its current DMX-defined position if DMX data is present. All internal mechanisms also move to their "home" or DMX-defined positions.



CAUTION: Before applying power, be sure the luminaire is hung (or positioned), and the service tilt and pan locks are disengaged, so that the head and yoke can move freely without restriction.

Sensor Testing

Most mechanisms within the VL440 / VL770 / VL880 luminaire are equipped with either optical or magnetic sensors. The VL440 / VL770 / VL880 master control board (MCB) has labeled test points for reading DC voltages at each sensor. Testing is best performed with a digital voltmeter for sensor readings or an Oscilloscope for pan/tilt encoder readings. The values can be used to determine whether a circuit is opening correctly or needs further troubleshooting.

Guidelines:

- The values will change depending on whether the sensor reading is Open or Closed.
- The values will be different depending on the type of sensor: optical or magnetic.
- As a general rule, if a change occurs from 5v to 0v or visa versa, then it is working.
- An Open reading occurs when the sensor is not aligned - tab not at sensor (typically a non-zero DMX value).
- A Closed reading occurs when the sensor is aligned -tab in or at sensor (typically a zero DMX value).
- Optical sensors read high when the sensor is Closed.
- Magnetic sensors read Low when the sensor is Closed.
- High value - 5 volts (typically 4.9 volts).
- Low value - 0 volts, or up to approximately 0.2 volts.

Notes regarding specific mechanisms:

- Tilt sensor reads high when the tab is in the sensor. The mechanism calibrates to the edge and its tab covers 50% of travel. Pan and tilt encoders are best read with a scope to read the encoder ticks.

Troubleshooting

Error Messages

If a problem occurs during luminaire calibration, at the end of the calibration sequence the Menu Display will cycle through any applicable error message(s), one at a time until the end of the list is reached. To review the error messages again, it will be necessary to access them using the Status function. (Refer to “[Troubleshooting Guide](#)” on page 16 for a list of possible causes and remedies associated with the error messages.)

To access error messages:

- Step 1. Press [Menu].
- Step 2. Press [Up] / [Down] arrows until **Fixture** appears. Press [Enter].
- Step 3. Press [Up]/ [Down] arrows to access **Status**. Press [Enter]. (Display will now scroll through any error messages or display OK if no errors.)

Display	Message
OK	No Errors Found
Pan/Encoder/Fail	Pan encoder failure.
Tilt/No Sens	Tilt sensor not found.
Tilt/Encoder/Fail	Tilt encoder failure.
Index/No Sens	Gobo Index sensor not found.
RotGobo/No Sens	Rotating Gobo wheel sensor not found.
FixGobo/No Sens	Fixed Gobo wheel sensor not found.
Dimmer/No Sens	Dimmer sensor not found.
Cyan/No Sens	Cyan sensor not found.
Yellow/No Sens	Yellow sensor not found.
Magenta/No Sens	Magenta sensor not found.
ColWheel/No Sens	Color wheel sensor not found.
Zoom/No Sens	Zoom sensor not found.
Edge/No Sens	Edge sensor not found.



WARNING: As with any repairs or maintenance to VARI*LITE luminaires, service should only be performed by a trained and qualified service technician or at an Authorized VARI*LITE Service Center.

Troubleshooting Guide

If a problem is suspected, try recalibrating the luminaire to prompt an error message. Refer to “[Error Messages](#)” on page 15 for more information. The chart below provides possible causes and remedies for various error messages and/or symptoms.

Table 2-1: Troubleshooting Guide

Message	Symptom	Description	Possible Cause/Remedy
Lamp Power Douse	Lamp does not strike upon start-up	Lamp Off option is configured	- Reconfigure lamp startup option in Lamp config menu.
n/a	Lamp douses frequently	Lamp Douse	Fan failure... - check head and enclosure fans for proper operation. Ballast overheating... - operating within the specified ambient temperature? - check enclosure vents for debris / dirt. - check fan settings in menu. - check enclosure fans for proper operation. NOTE: Upon initial power up, ballast fans will run for a few seconds and then operate as needed. Enclosure vents must be clear of debris and dirt to allow proper airflow.
n/a	Lamp will not strike	Lamp Strike Failure	Lamp cutout switch disengaged... - check lamp cutout switches at lamp box and fan ducts. Bad lamp... - replace lamp. Low input voltage... - check input power (must be 100 to 240 VAC).
n/a	Luminaire behaves oddly	Profile Not Matched	Profile not set correctly... - check Setup menu for correct type (console patch / profile).
n/a	Luminaire does not power up	No power	Circuit not energized... - verify circuit breaker (at source) is turned on. Not plugged in... - ensure A/C cable is connected to power source.
n/a	Self tests will not run or software download does not work from luminaire.	DMX Data Input	Detecting DMX data... - disconnect DMX input cable.
n/a	No response to DMX data	DMX Failure	DMX connector disconnected... - check DMX DATA IN connection.
n/a	Erratic control of luminaire	DMX Termination	No DMX termination or termination not correct... - check for DMX terminator.

Special Care and Handling



WARNING: As with any repairs or maintenance to VARI*LITE luminaires, service should only be performed by a trained and qualified service technician or at an Authorized VARI*LITE Service Center.

Introduction

The VL440 / VL770 / VL880 Spot Luminaires requires very little routine maintenance by the user. This section covers all the parts or assemblies that can be removed, cleaned, and checked by the user. Any additional maintenance or service should only be completed by an Authorized VARI*LITE Service Center.

Special Cleaning and Care Instructions

The VL440 / VL770 / VL880 Spot Luminaires requires special care when it comes to cleaning front and internal lens assemblies.

The following is a list of cleaning materials required to care for your VL440 / VL770 / VL880 Spot Luminaires:

- Lint free lens tissue
- Lint free cotton swabs (for hard-to-reach spot cleaning)
- Lint or powder free gloves
- Reagent grade isopropyl alcohol
- A mild soap solution.

Reagent grade isopropyl alcohol is good to use on the VL440 / VL770 / VL880 Spot Luminaires optics with anti-reflection coatings.

If the lens is still dirty after using isopropyl alcohol, for instance if fingerprints or oil is just redistributed and not cleaned off the optic, then a mild soap and water solution can be used to gently wash the lens. Repeat the cleaning with isopropyl alcohol to eliminate streaks and soap residue.



WARNING: Under no circumstances should ammonia-based cleaners or other harsh solvents be used on or near the VL440 / VL770 / VL880 Spot Luminaires. These types of cleaners or solvents can permanently damage the optics or housings of the fixture.

If you have any questions regarding the use or care of your VL440 / VL770 / VL880 Spot Luminaires, please contact Vari-Lite technical support at 1.877-VARI-LITE or +1.214.647.7880.

General Care and Equipment Handling

Below are some basic tips and information on handling VARI*LITE luminaires and their associated components.

Locations/Use



VARI*LITE luminaires are designed for dry locations only. Exposure to rain or moisture (including, but not limited to, fog machines, misters, etc.) may damage luminaires and will void the fixture's warranty.

Solid State Electronics



Electrostatic Discharge (ESD)

Electrostatic discharge (ESD) presents a significant danger to solid state electronic components (semiconductor devices and PC board assemblies). Static electricity can build on a variety of common objects (including people) simply by handling or moving. ESD rarely results in immediate failure of a component, but shows up later as an intermittent problem or severely reduces the life of the component. All VARI*LITE products use solid state electronics and appropriate precautions to protect them should be observed when servicing.

Printed Circuit Boards (PCBs)

All PC boards should be shipped in electrostatic shielding bags. When handling PC boards or components, devices such as conductive mats and conductive wrist straps should be used whenever possible. If these precautionary devices are not available, handling of PC boards and components should be avoided.



CAUTION: Black foam (used to package solid state electronics) should never be used for packing batteries or put in contact with PC boards which contain batteries.

Maintenance Procedures

Front Cover Assembly Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove front cover assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. As illustrated in [Figure 2-1](#), remove front head cover by loosening two quarter-turn Dzus fasteners.



Note: The front cover is secured by a safety tether.



CAUTION: Remove power and allow fixture to cool.

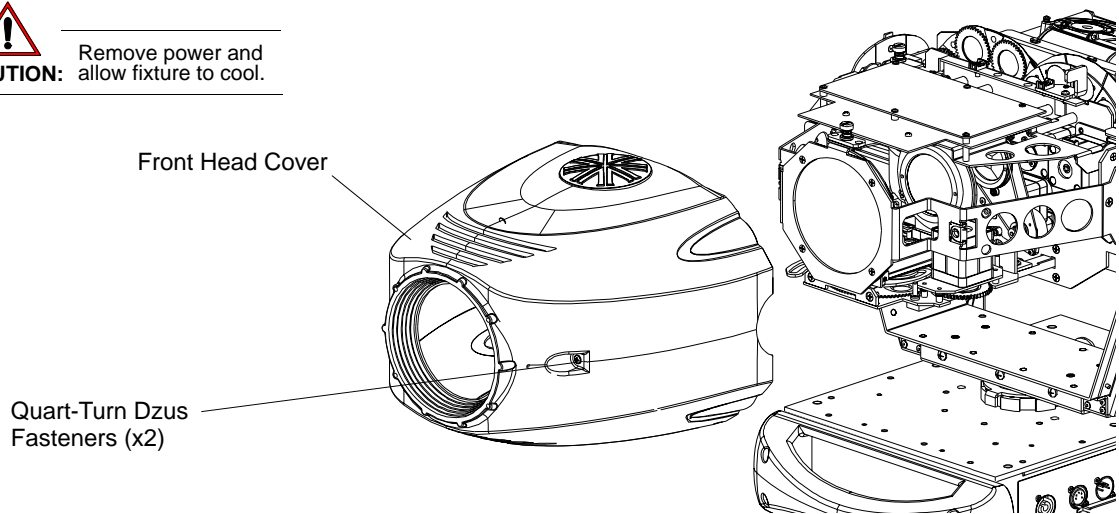


Figure 2-1: VL440 / VL770 / VL880 Front Head Cover Removal

- Step 3. Unclip safety tether at cover.
- Step 4. Reinstall by performing steps in reverse order.

Rear Cover Assembly Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove rear cover assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. As illustrated in [Figure 2-1](#), remove rear head cover by loosening two quarter-turn Dzus fasteners.



Note: The rear cover is secured by a safety tether.



CAUTION: Remove power and allow fixture to cool.

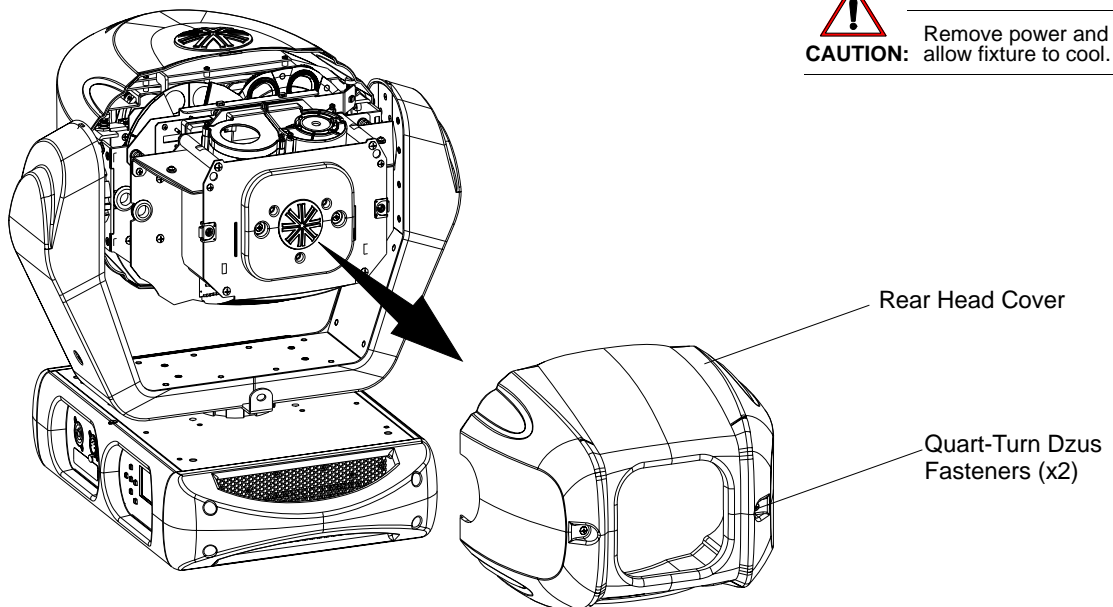


Figure 2-2: VL440 / VL770 / VL880 Rear Head Cover Removal

- Step 3. Unclip safety tether at cover.
- Step 4. Reinstall by performing steps in reverse order.

Lamp Removal and Installation



WARNING: Ensure that power is completely removed from luminaire when removing or installing lamp.



CAUTION: Wear cotton gloves or other covering while installing lamp. Touching lamp glass with bare fingers will leave oil and may cause the lamp to explode or reduce lamp life. If touched, use isopropyl alcohol and cotton cloth to thoroughly clean glass portion of lamp.

To remove and install lamp:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
- Step 2. Set the luminaire head horizontally.
- Step 3. Engage service tilt lock to secure luminaire head in position.
- Step 4. At back of luminaire, using #2 Phillips screwdriver, remove lamp socket cover by loosening the two quarter-turn fasteners. Note: lamp socket cover is connected with a safety tether.

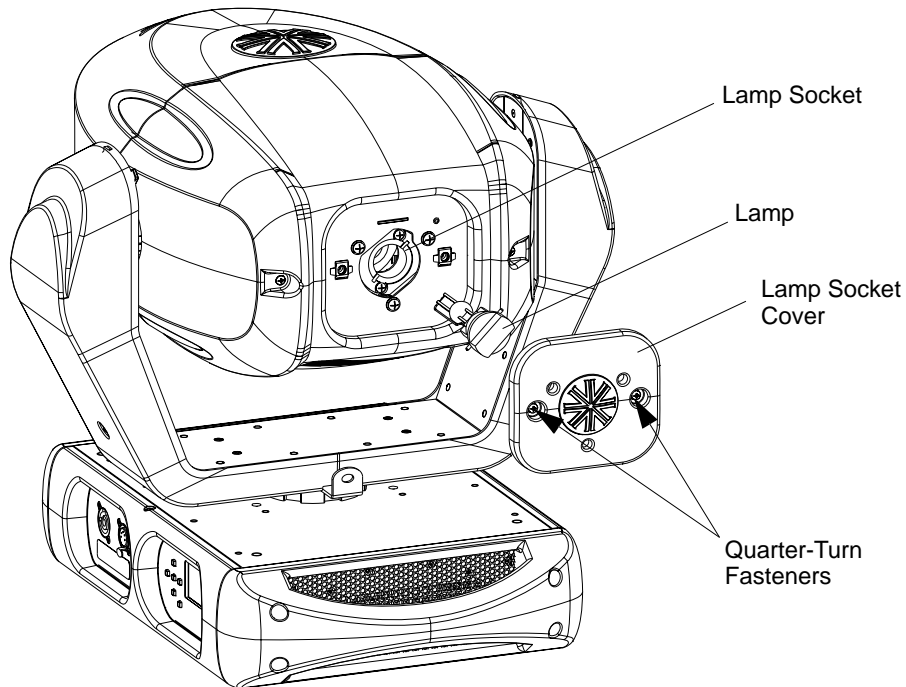


Figure 2-3: Lamp Socket Cover Removal

- Step 5. Remove old lamp from socket by rotating lamp base counter-clockwise until lamp tabs align with lamp socket slots.

Step 6. As shown in Figure 2-4, align lamp tabs with lamp socket.

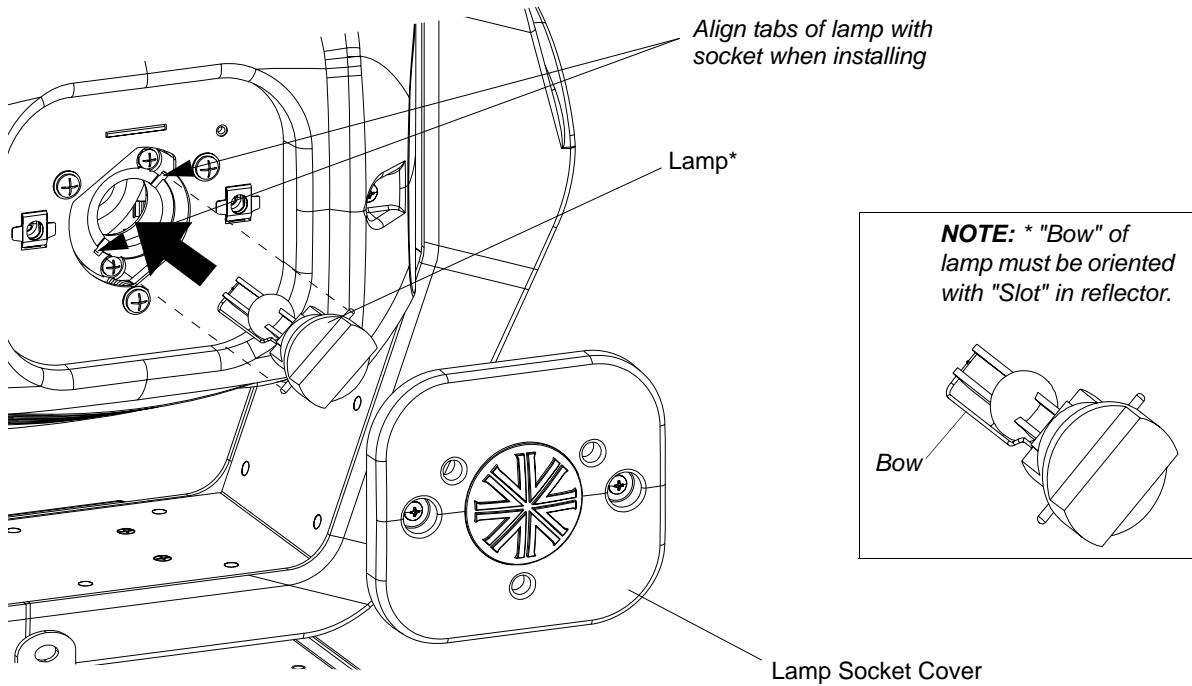


Figure 2-4: Lamp Installation

Step 7. Install lamp fully into lamp socket, taking care not to touch lamp glass.

Step 8. Turn lamp clockwise to seat lamp into socket. Lamp base should be aligned as illustrated in Figure 2-5.

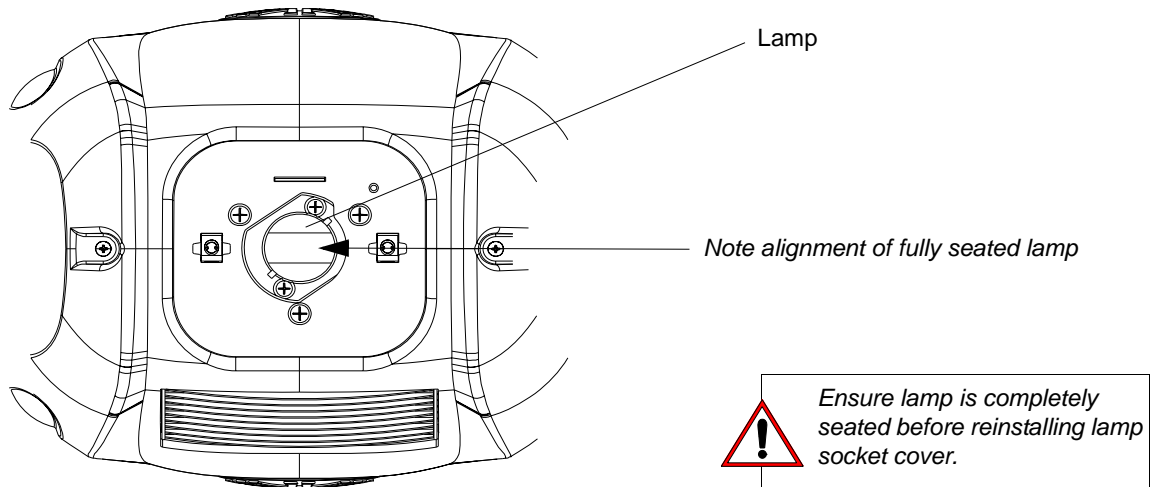


Figure 2-5: Installed Lamp

Step 9. Reinstall lamp socket cover. Make sure safety tether is completely encapsulated within lamp socket cover.

Step 10. Disengage service tilt lock to allow luminaire head to move freely.

Step 11. Align lamp as described in the luminaire's users manual.

Gobo Module Assembly Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove gobo module assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front and rear cover assemblies (see “Front Cover Assembly Removal” on page 19 and “Rear Cover Assembly Removal” on page 20).
- Step 3. At MCU, disconnect lamp fans harness at J6.
- Step 4. At Driver Board, disconnect Gobo Module and CYMD Module harness.
- Step 5. *For VL770 and VL880 luminaires only* - disconnect H1, H5 & H6 fan connectors.



CAUTION: In next step, be extremely careful when removing gobo module assembly so you do not damage gobos or color filters.

- Step 6. As shown in [Figure 2-6](#), loosen two captive fasteners and carefully pull Gobo Module assembly from luminaire.

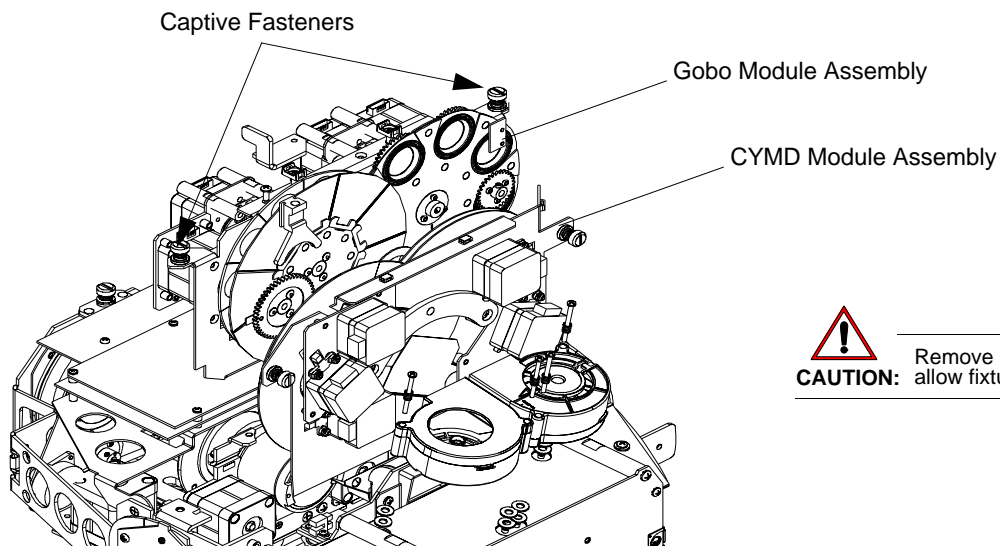


Figure 2-6: Gobo Module Assembly Removal

- Step 7. Reinstall by performing steps in reverse order.

CYMD Module Assembly Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove CYMD module assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front and rear cover assemblies (see “[Front Cover Assembly Removal](#)” on page 19 and “[Rear Cover Assembly Removal](#)” on page 20).
- Step 3. At MCU, disconnect lamp fans harness at J6.
- Step 4. At Driver Board, disconnect CYMD Harness.



CAUTION: In next step, be extremely careful when removing CYMD module assembly so you do not damage color filters or dimmer wheel.

- Step 5. As illustrated in [Figure 2-7](#), loosen two captive fasteners and carefully pull assembly from luminaire.

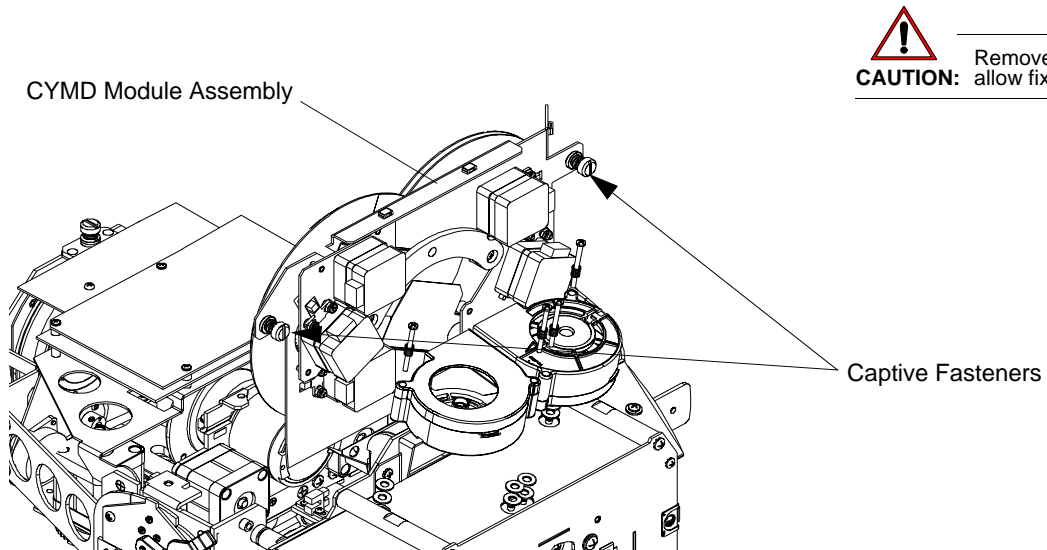


Figure 2-7: CYMD Module Assembly Removal

- Step 6. Reinstall by performing steps in reverse order.

Zoom Module Assembly Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove zoom module assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front and rear cover assemblies (see “[Front Cover Assembly Removal](#)” on page 19 and “[Rear Cover Assembly Removal](#)” on page 20).
- Step 3. Remove Gobo Module Assembly as described in “[Gobo Module Assembly Removal](#)” on page 23.
- Step 4. At Driver Board, disconnect Zoom Module Harness. Cut any cable ties and pull harness free. DO NOT cut any wires.
- Step 5. As indicated in [Figure 2-8](#), loosen captive screw and carefully tilt MCU/Driver Board assembly open.

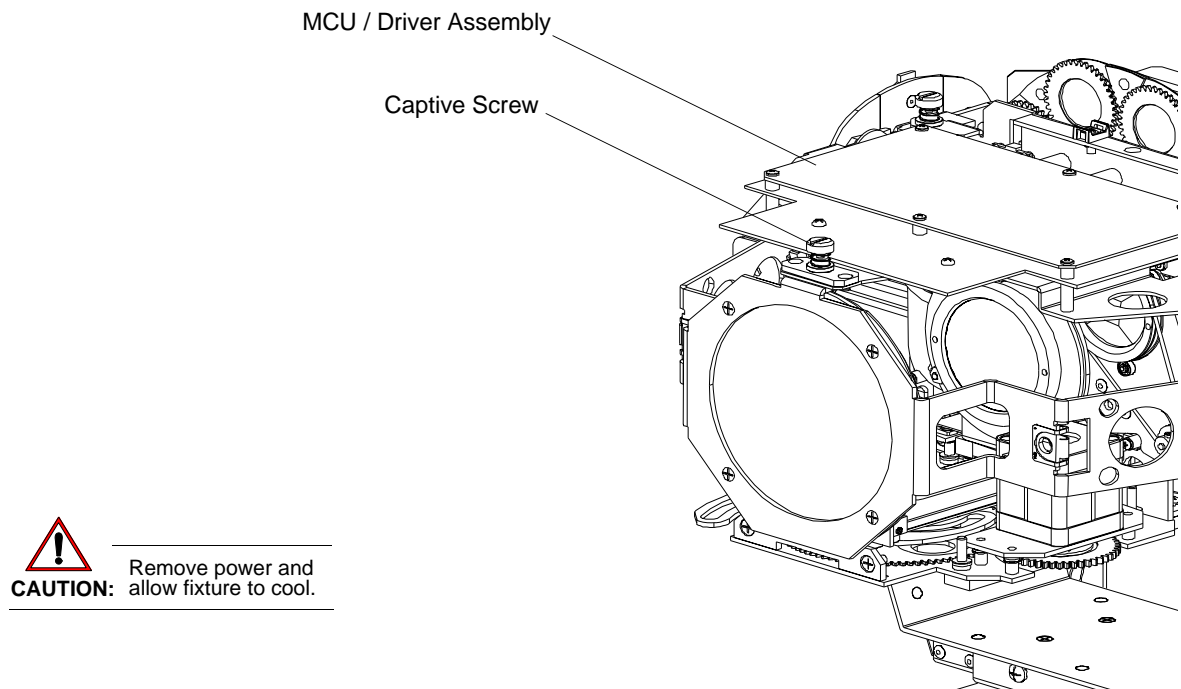


Figure 2-8: MCU Assembly Captive Screw

Step 6. At bottom of fixture, as shown in [Figure 2-9](#), remove four 8-32 x 1/2" PPZ SEMS screws securing zoom assembly to head frame assembly.

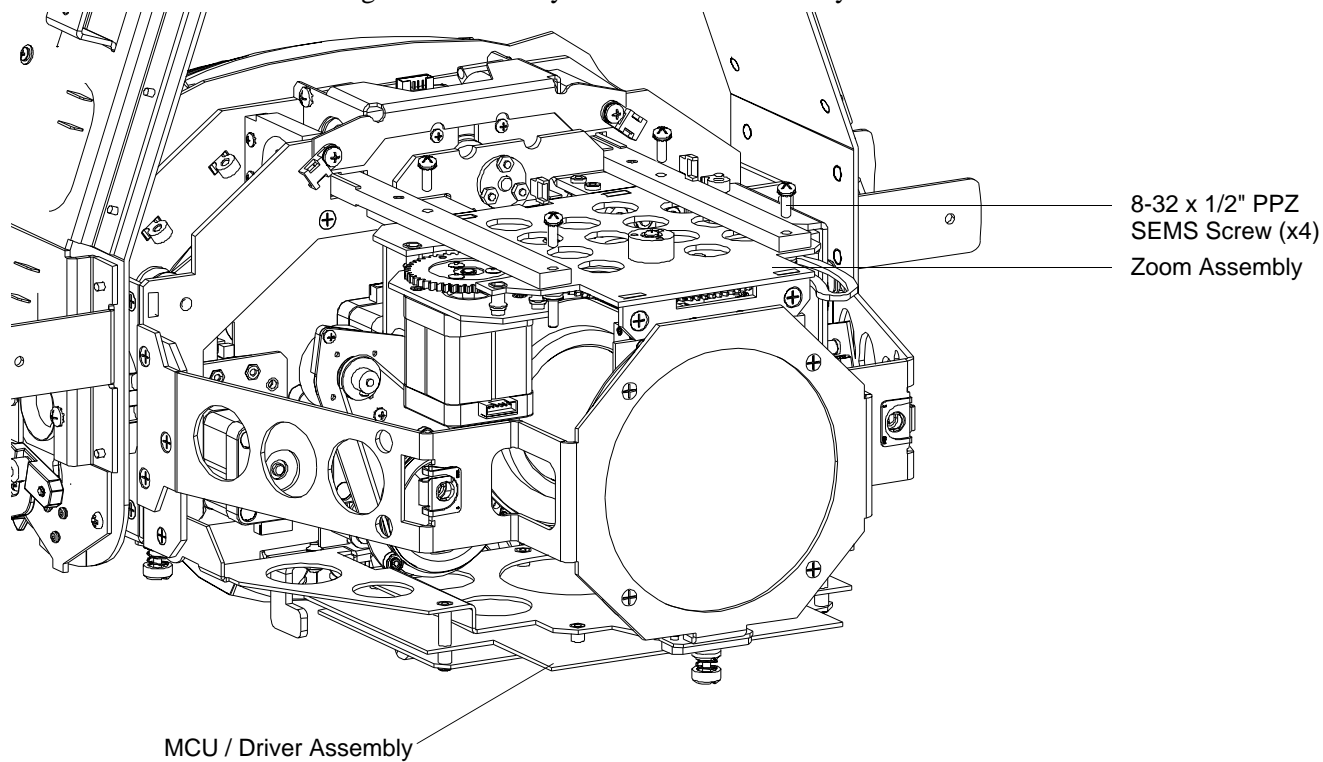


Figure 2-9: Zoom Module Assembly Removal

Step 7. Carefully remove zoom module assembly from fixture.

Step 8. Replace by performing steps in reverse order.

Main Control Unit (MCU) Assembly Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove MCU assembly:



CAUTION: When handling printed circuit boards (such as the MCU assembly) make sure to follow appropriate precautions to protect them ESD damage.

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front cover assembly as described in “[Front Cover Assembly Removal](#)” on page 19.
- Step 3. At MCU assembly, disconnect the following cable assemblies:
 - a. 36Vdc - Connector J7
 - b. DMX - Connector J10
 - c. Display Com - Connector J11
 - d. Ballast Com - Connector J8
 - e. Head Fans (*VL770/880 luminaires only*) - Connector J5
 - f. Wireless Accessory - Connector J12
 - g. Lamp Fans - Connector J6
- Step 4. Remove six 4-40 x 1/2" PPZ screws (as indicated in [Figure 2-10](#)).

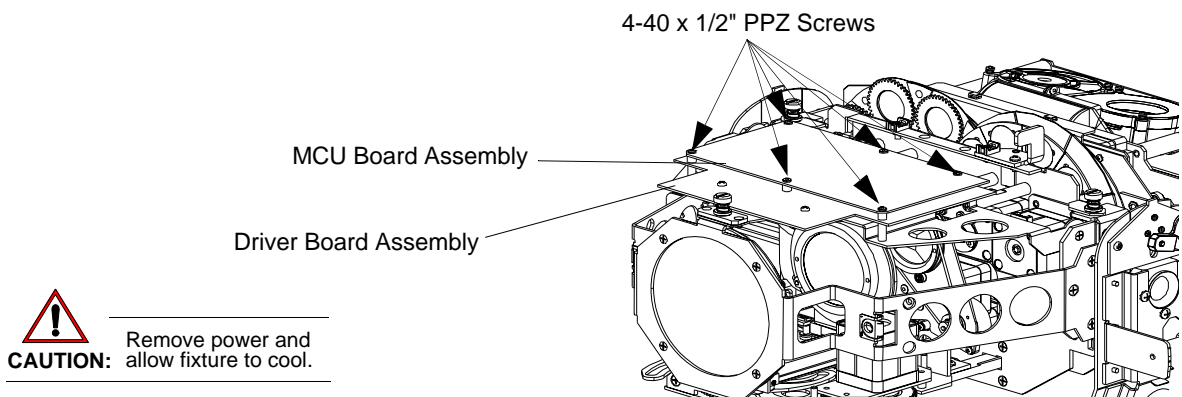


Figure 2-10: MCU Assembly Removal

- Step 5. Carefully disconnect MCU from Driver Board and remove from luminaire.
- Step 6. Replace by performing steps in reverse order.

Driver Board Assembly Removal



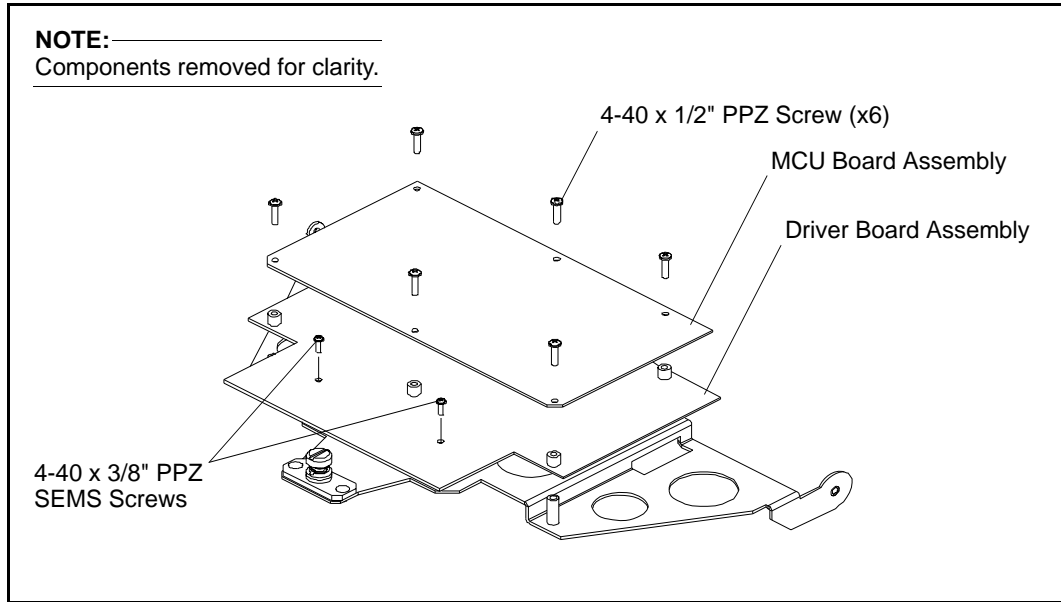
WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.


To remove driver board assembly:



CAUTION: When handling printed circuit boards (such as the MCU assembly) make sure to follow appropriate precautions to protect them ESD damage.

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front cover assembly as described in [“Front Cover Assembly Removal” on page 19](#).
- Step 3. Remove MCU assembly as described in [“Main Control Unit \(MCU\) Assembly Removal” on page 27](#).
- Step 4. At driver board assembly, disconnect the following cable assemblies:
- a. Pan Motor Power (make note of connector orientation) - Connector J9
 - b. 36Vdc - Connector J6
 - c. Zoom Harness
 - d. Gobo Harness
 - e. Tilt Harness - Connector J3
 - f. Pan Encoder - Connector J1
 - g. Edge Harness
 - h. CYMD Harness
- Step 5. At driver board assembly, remove two 4-40 x 3/8" PPZ SEMS screws as indicated in [Figure 2-10 on page 27](#).



 **CAUTION:** Remove power and allow fixture to cool.

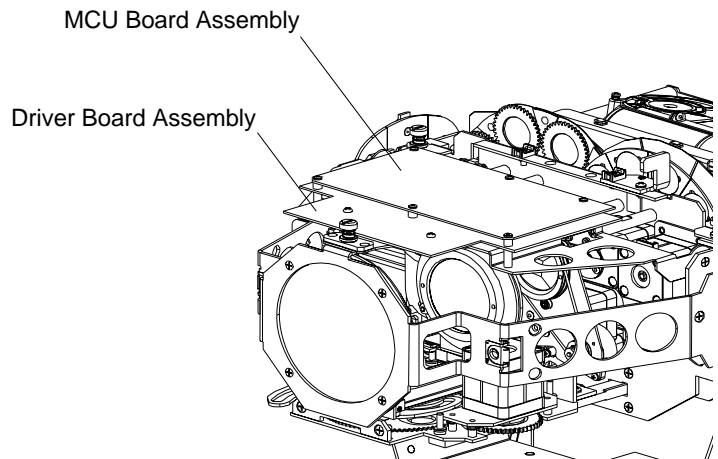


Figure 2-11: Driver Board Assembly Removal

- Step 6. Remove Driver Board Assembly from luminaire.
- Step 7. Replace by performing steps in reverse order.

Front Lens Assembly Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove front lens assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front cover assembly as described in “[Front Cover Assembly Removal](#)” on page 19.
- Step 3. At front lens, as indicated in [Figure 2-12](#), remove four 6-32 x 1/4" PFB screws and remove lens from inside.

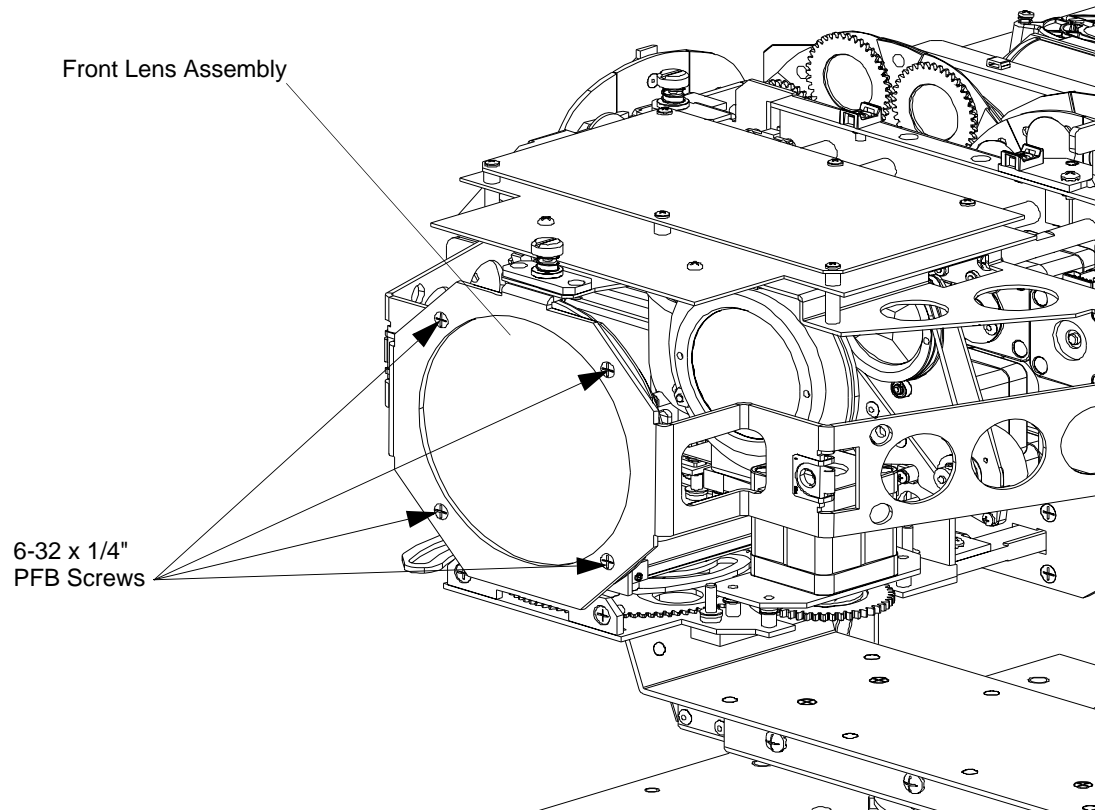


Figure 2-12: Front Lens Assembly Removal

- Step 4. Reinstall by performing steps in reverse.

UV / IR Filter Assembly Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove UV/IR filter assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front and rear cover assemblies (see “Front Cover Assembly Removal” on page 19 and “Rear Cover Assembly Removal” on page 20).
- Step 3. Remove Gobo Module Assembly as described in “Gobo Module Assembly Removal” on page 23.
- Step 4. Remove CYMD Module Assembly as described in “CYMD Module Assembly Removal” on page 24.
- Step 5. As shown in Figure 2-13, at UV/IR Filter Assembly, remove four 8-32 x 3/4" PFB screws and remove UV/IR Filter Assembly. Note air diverter placement.

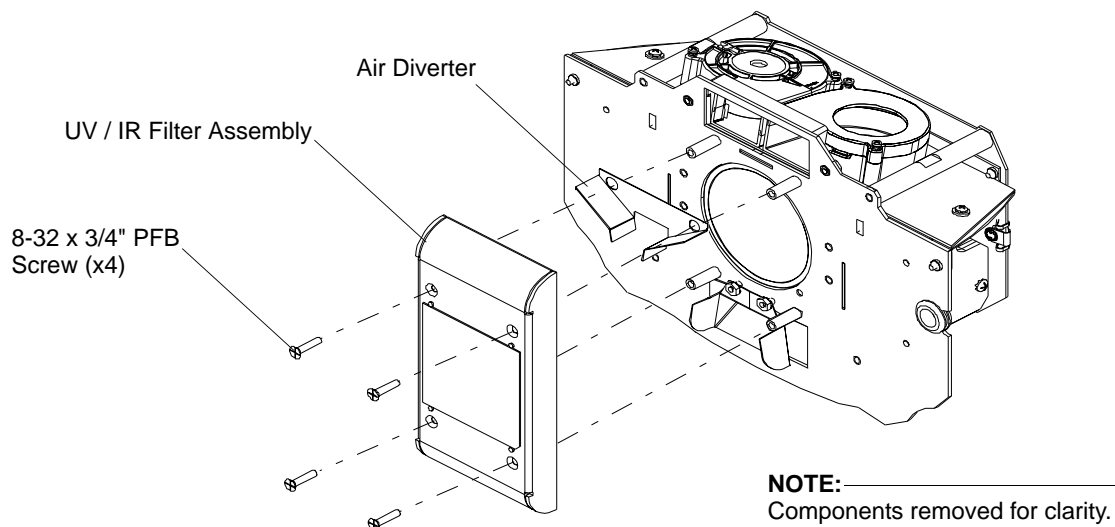


Figure 2-13: UV / IR Filter Assembly Removal

- Step 6. Reinstall by performing steps in reverse.

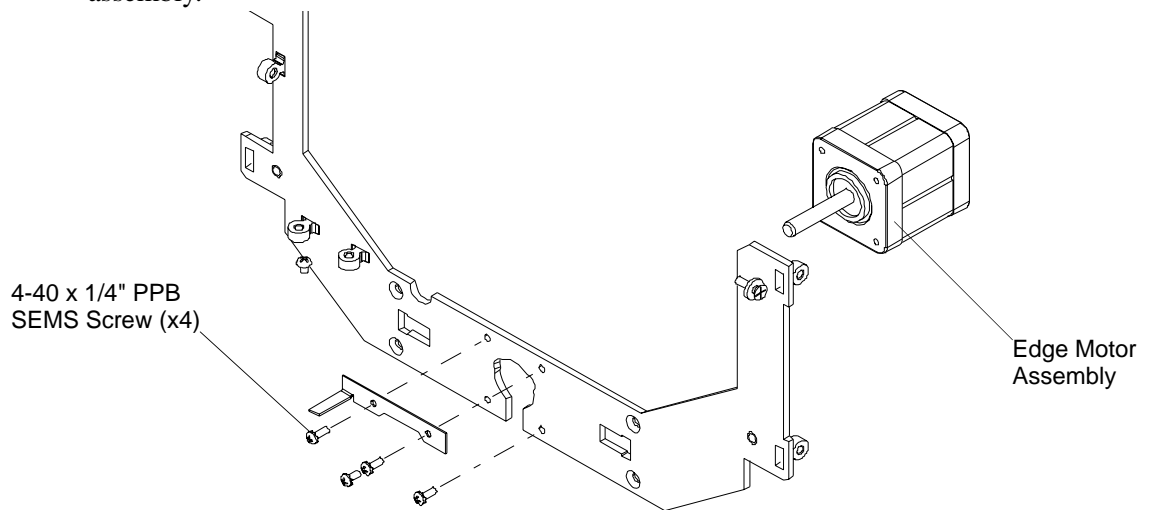
Edge Motor Assembly Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove edge motor assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front and rear cover assemblies (see “Front Cover Assembly Removal” on page 19 and “Rear Cover Assembly Removal” on page 20).
- Step 3. Remove Gobo Module Assembly as described in “Gobo Module Assembly Removal” on page 23.
- Step 4. Remove CYMD Module Assembly as described in “CYMD Module Assembly Removal” on page 24.
- Step 5. Remove Zoom Module Assembly as described in “Zoom Module Assembly Removal” on page 25.
- Step 6. Disconnect H3 fan and power from edge motor assembly.
- Step 7. Remove four 4-40 x 1/4" PPB SEMS screws, as shown in Figure 2-14, securing edge motor assembly.



NOTE: _____
Components removed for clarity.

Figure 2-14: Edge Motor Assembly Removal

- Step 8. Rotate motor shaft from edge carrier and remove motor.

Step 9. Reinstall by performing steps in reverse.



Note: When reinstalling edge motor assembly, the connector orientation should face in the downward position as shown in [Figure 2-15](#).

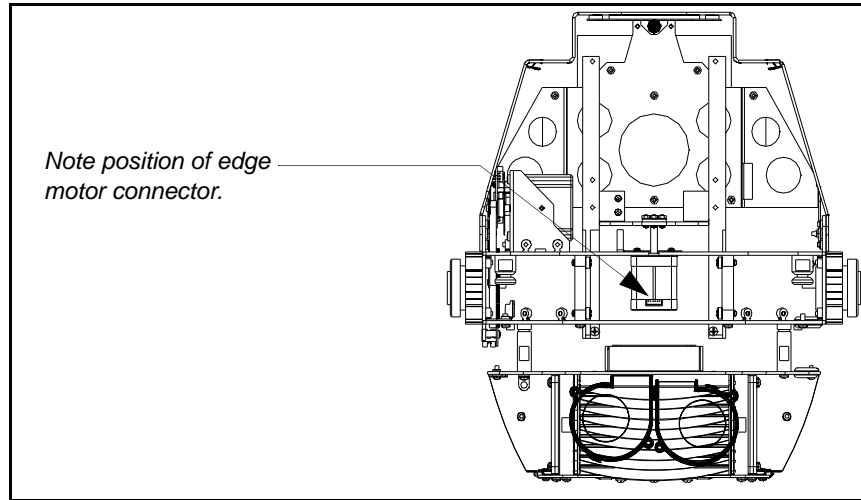


Figure 2-15: Edge Motor Assembly Connector Orientation

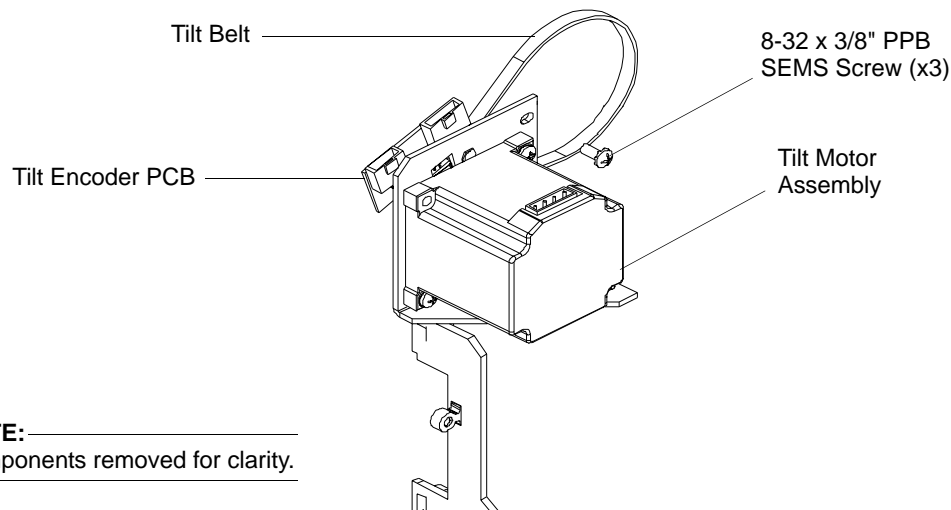
Tilt Motor Assembly / Tilt Encoder / Tilt Belt Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove tilt motor assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front and rear cover assemblies (see “Front Cover Assembly Removal” on page 19 and “Rear Cover Assembly Removal” on page 20).
- Step 3. Remove Gobo Module Assembly as described in “Gobo Module Assembly Removal” on page 23.
- Step 4. Remove CYMD Module Assembly as described in “CYMD Module Assembly Removal” on page 24.
- Step 5. Remove Zoom Module Assembly as described in “Zoom Module Assembly Removal” on page 25.
- Step 6. Cut cable tie connecting wiring to bottom of motor assembly.
- Step 7. Disconnect wiring from motor assembly and tilt encoder PCB.
- Step 8. As shown in Figure 2-16, remove three 8-32 x 3/8" PPB SEMS screws.



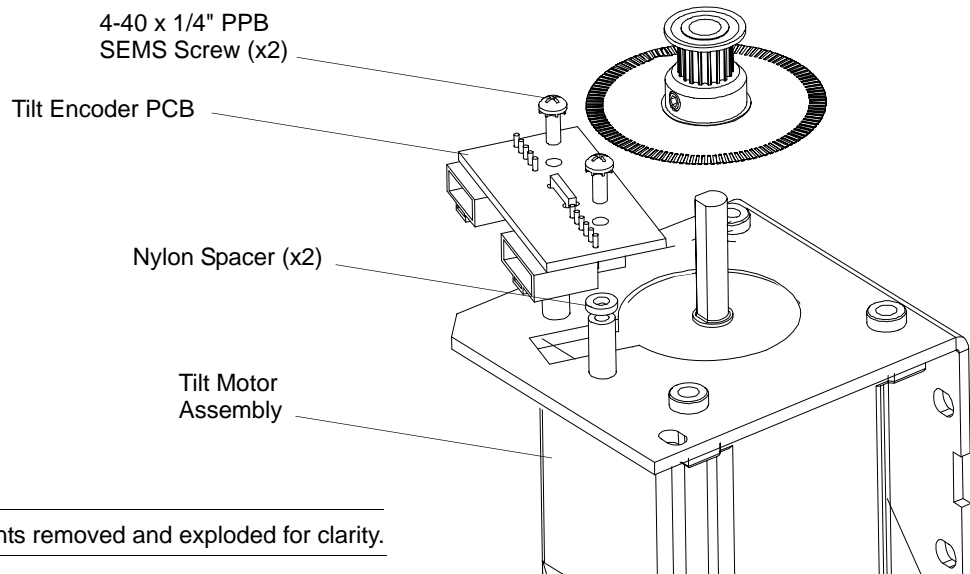
NOTE: _____
Components removed for clarity.

Figure 2-16: Tilt Motor Assembly Removal

- Step 9. Carefully, remove tilt belt from pulley and remove motor assembly. Note, when installing, loop tilt belt around pulley.
- Step 10. Start all three 8-32 x 3/8" PPB SEMS screws but **do not tighten at this time**.
- Step 11. Insert flat blade screwdriver into slot between bottom two screws and pull motor assembly to tighten belt tension (should be tight). Then tighten three 8-32 x 3/8" PPB SEMS screws.
- Step 12. Continue reassembly by following previous steps in reverse order.

To remove tilt encoder

- Step 1. Remove tilt motor assembly following procedure in [“Tilt Motor Assembly / Tilt Encoder / Tilt Belt Removal”](#) on page 34.
- Step 2. Remove two 4-40 x 1/4" PPG SEMS screws and associated nylon spacers and remove Tilt Encoder PCB.



NOTE: _____

 Components removed and exploded for clarity.

- Step 3. Reassemble following steps in reverse order.

To remove tilt belt:

- Step 1. Remove tilt motor assembly following procedure in [“Tilt Motor Assembly / Tilt Encoder / Tilt Belt Removal”](#) on page 34.
- Step 2. Disconnect all wiring coming through tilt belt side tilt tube, from inside head assembly.
- Step 3. Cut any cable ties required
- Step 4. Carefully, pull wiring through tilt belt.
- Step 5. Remove tilt belt.
- Step 6. Reassemble following steps in reverse order.

Tilt Sensor Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove tilt sensor:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. As shown in [Figure 2-17](#), remove both yoke covers by removing one 8-32 x 3/8" PPB SEMS screw per side.

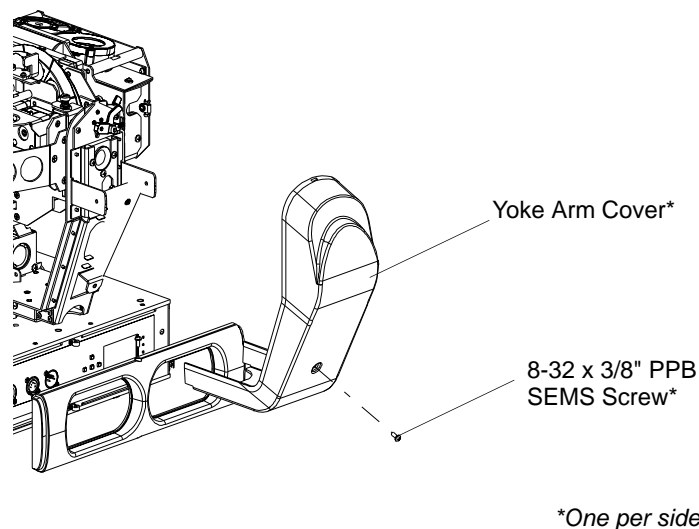
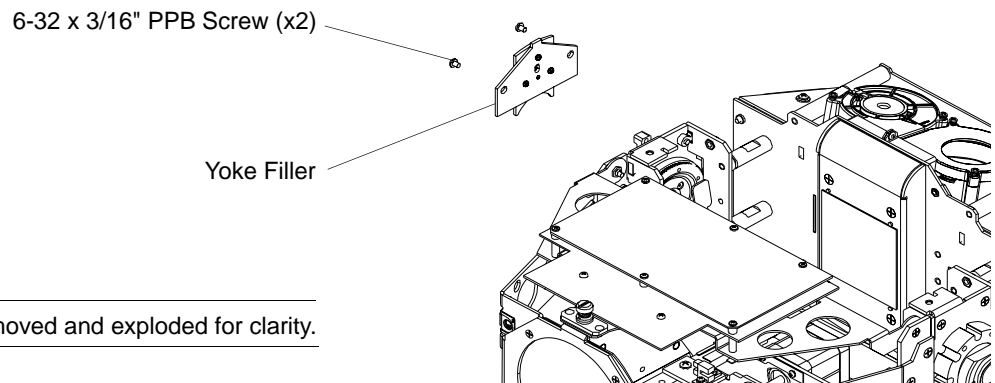


Figure 2-17: Yoke Arm Cover Removal

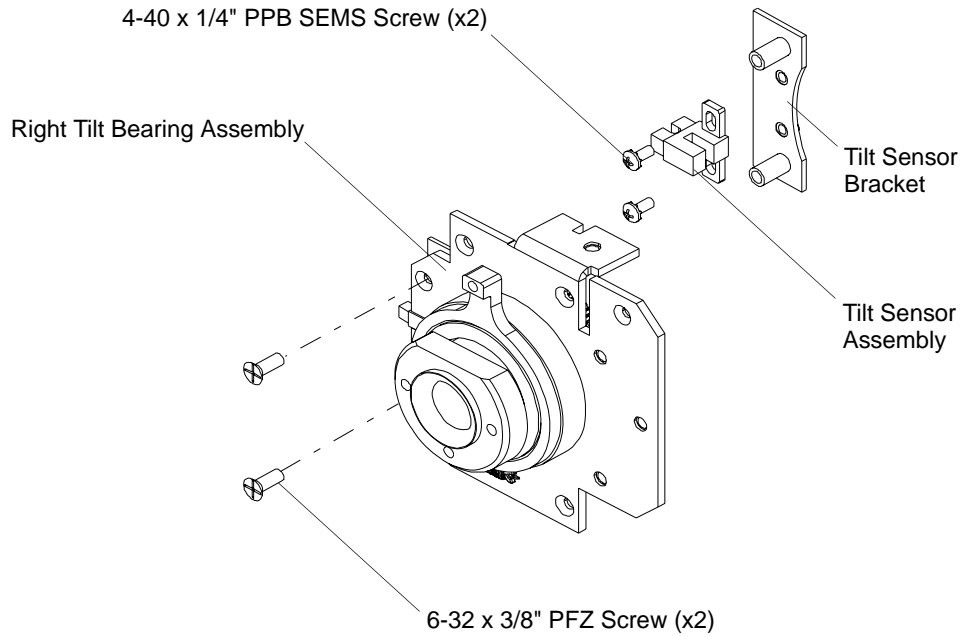
- Step 3. Remove Yoke Filler by removing two 6-32 x 3/16" PPB screws and one 8-32 x 3/8" PPB SEMS screw mounting tilt stabilizer to yoke filler.



NOTE: _____
Components removed and exploded for clarity.

Figure 2-18: Yoke Filler Removal

Step 4. Tilt head from side to side to access two 6-32 x 3/8" PFZ screws as indicated in Figure 2-19.



NOTE: _____
Components removed and exploded for clarity.

Figure 2-19: Tilt Sensor Removal

Step 5. Disconnect wiring at tilt sensor and remove tilt sensor.

Step 6. Reassemble following steps in reverse order.

Tilt Stabilizer Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove tilt stabilizer:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. As shown in [Figure 2-20](#), remove both yoke covers by removing one 8-32 x 3/8" PPB SEMS screw per side.

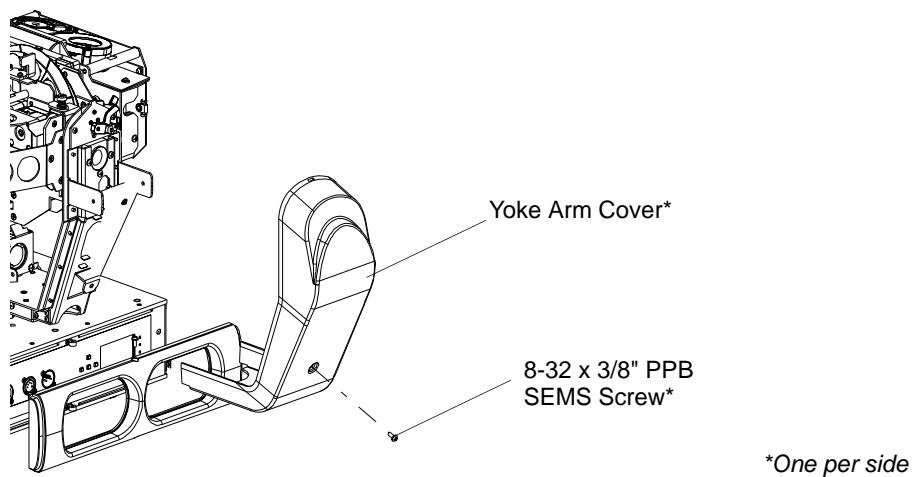


Figure 2-20: Yoke Arm Cover Removal

- Step 3. Remove Tilt Lock Assembly by removing two 6-32 x 3/16" PPB screws.

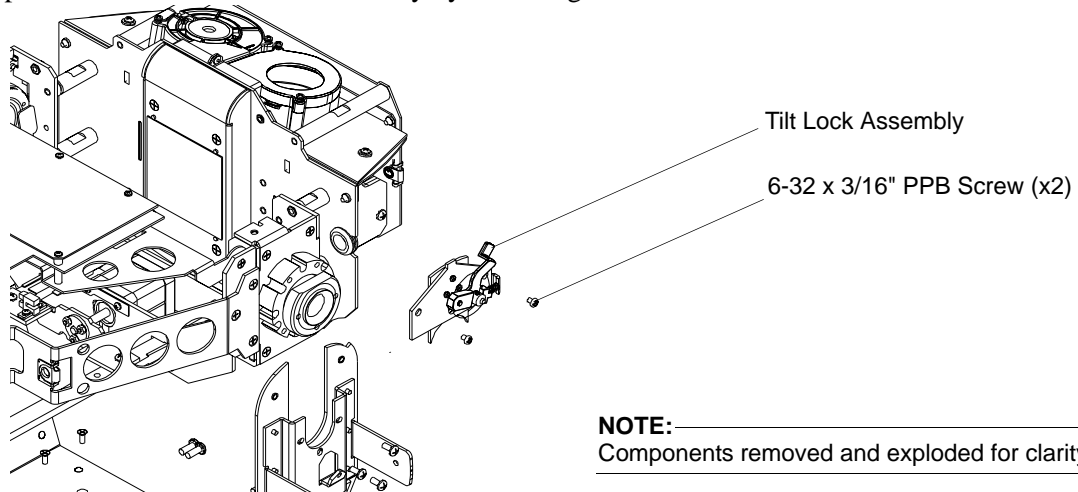


Figure 2-21: Tilt Lock Assembly Removal

- Step 4. Remove Yoke Filler by removing two 6-32 x 3/16" PPB screws and one 8-32 x 3/8" PPB SEMS screw mounting tilt stabilizer to yoke filler.

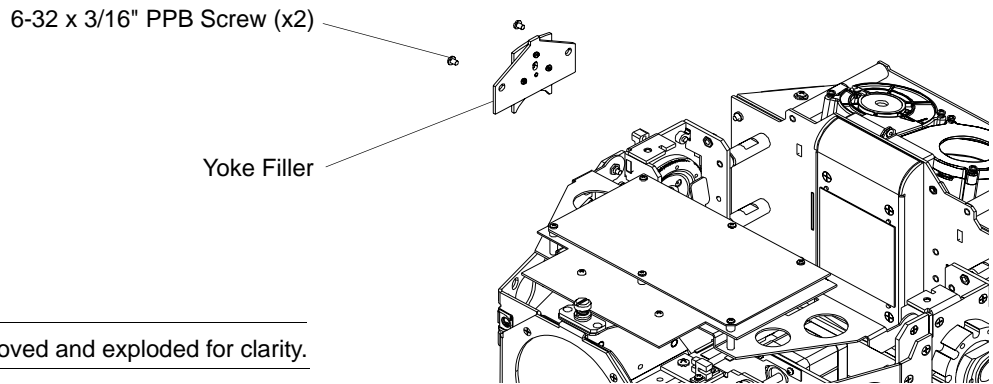


Figure 2-22: Yoke Filler Removal

- Step 5. Remove four 8-32 x 3/8" PFZ screws securing each tilt bearing to yoke.
 Step 6. Cut any cable ties to give enough wiring slack to lift head from yoke
 Step 7. At Right Tilt Bearing Assembly, disconnect extension spring from stabilizer and pass stabilizer around wiring and tilt bearing.

NOTE: _____
 Components removed and exploded for clarity.

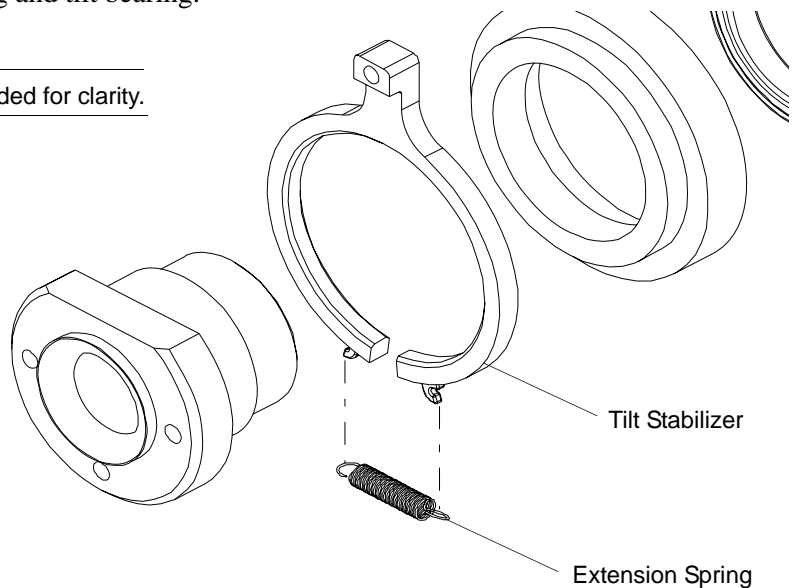


Figure 2-23: Tilt Stabilizer

- Step 8. Reassemble following steps in reverse order.

Ignitor Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove tilt sensor:

Step 1. Remove power from luminaire and allow unit to completely cool.

Step 2. As shown in [Figure 2-24](#), remove tilt lock side yoke arm cover by removing one 8-32 x 3/8" PPB SEMS screw.

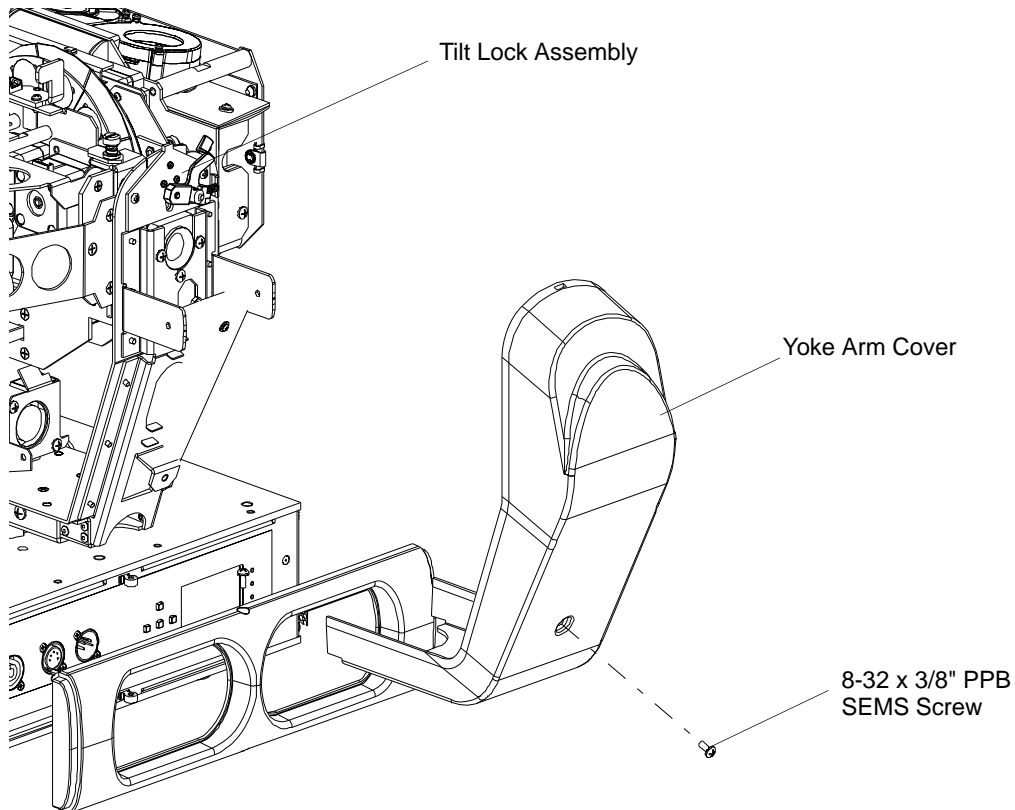


Figure 2-24: Tilt Lock Side Yoke Arm Cover Removal

Step 3. Disconnect wiring from ignitor.

Step 4. As shown in [Figure 2-25](#), remove ignitor as follows:

- a. Remove one 4-40 x 1-3/8" PPZ screw with #4 flat washer.
- b. Remove one 4-40 x 1-3/8" PPZ screw with #4 flat washer **AND** one #4 KEPS nut.

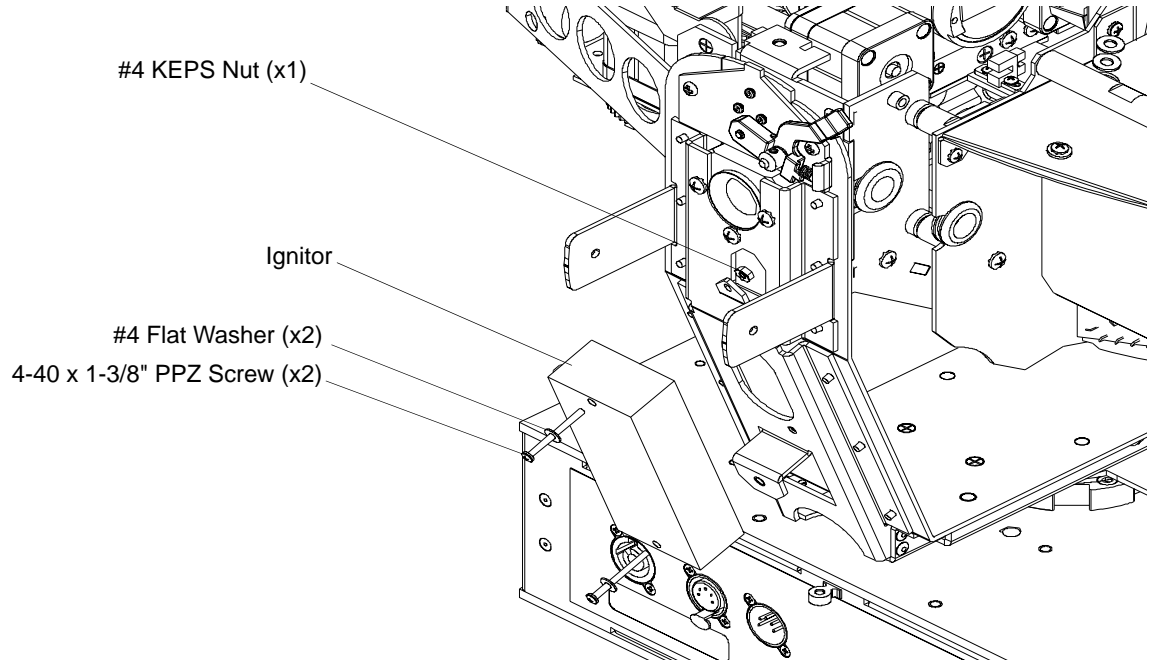


Figure 2-25: Ignitor Removal

Step 5. Reassemble by performing steps in reverse.

Lamp Socket Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove lamp socket assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove front and rear cover assemblies (see “[Front Cover Assembly Removal](#)” on page 19 and “[Rear Cover Assembly Removal](#)” on page 20).
- Step 3. Remove Gobo Module Assembly as described in “[Gobo Module Assembly Removal](#)” on page 23.
- Step 4. Remove CYMD Module Assembly as described in “[CYMD Module Assembly Removal](#)” on page 24.
- Step 5. As shown in [Figure 2-26](#), remove tilt lock side yoke cover by removing one 8-32 x 3/8" PPB SEMS screw.

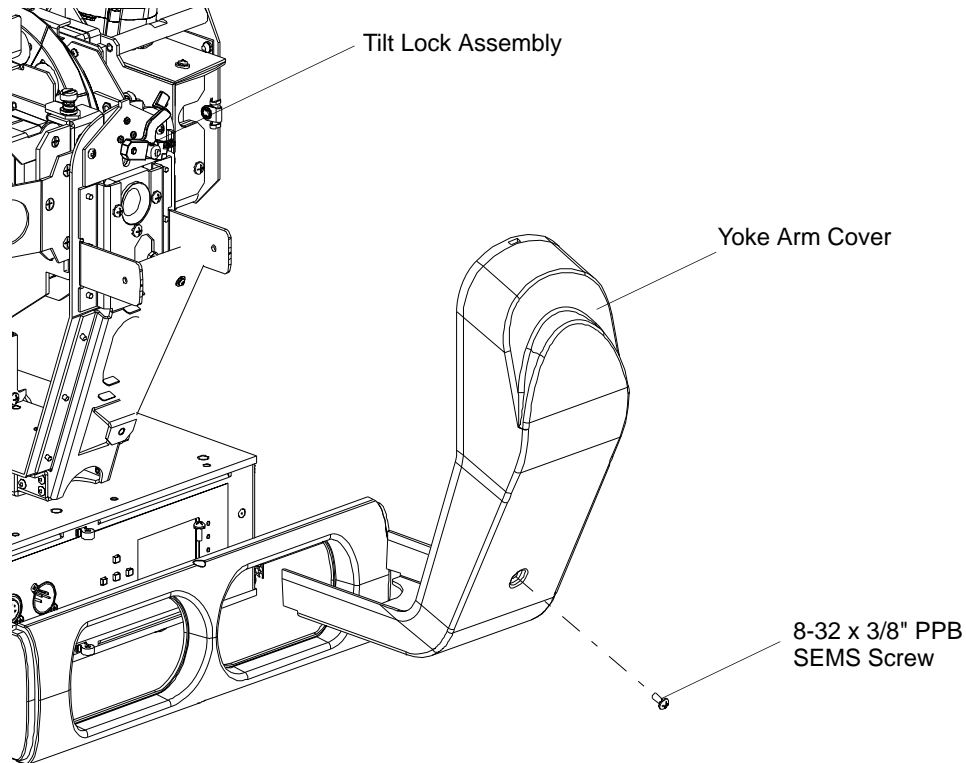


Figure 2-26: Tilt Side Yoke Arm Cover Removal

- Step 6. Disconnect lamp wires from output of ignitor and pass through tilt tube grommets to back lamp house.

Step 7. Loosen two quarter-turn Dzus rapier fasteners from lamp house cover and remove lamp.

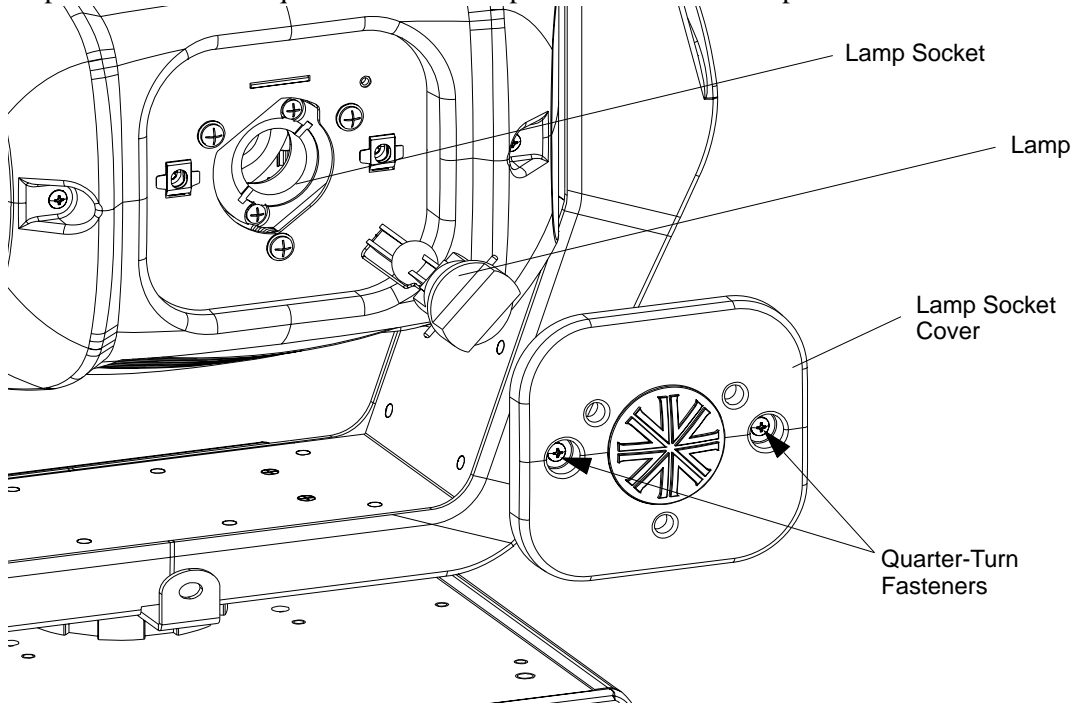


Figure 2-27: Lamp Socket Cover Removal

Step 8. Remove one 6-32 x 3/8" PPZ SEMS screw and flat washer and detach lamp cover tether from fixture.

Step 9. As shown in [Figure 2-28 on page 44](#), at each side:

- a. Remove two 8-32 x 5/8" PPZ SEMS screw (1 per side) at counter weight plate, closest to rear of assembly.
- b. Note, the counter weight plates will stay attached by 2 screws closest to inside of fixture.

Step 10. Remove two 6-32 x 3/8" PPZ SEMS screws from rear of assembly, closest to L1 & L2 fans.

Step 11. Remove four 8-32 x 3/8" PPB SEMS screws from rear.

NOTE:
Components removed and exploded for clarity.

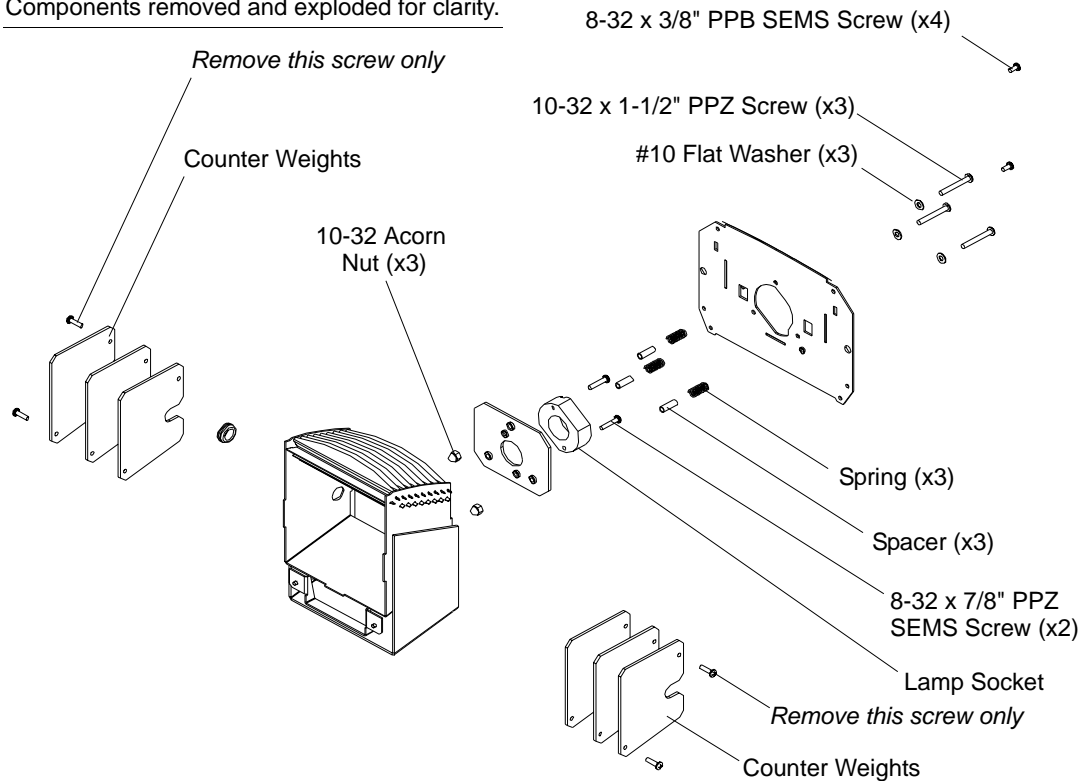


Figure 2-28: Lamp Socket Removal

Step 12. Carefully remove lamp housing, socket and rear plate.

Step 13. Slide lamp wires through hot box insulation blanket.

Step 14. Remove grommet from lamp housing and carefully slide lamp wire through lamp housing, then remove grommet from lamp wire.

Step 15. Remove three 10-32 Acorn nuts.

Step 16. Remove three 10-32 x 1-1/2" PPZ Screws and flat washers with spring and spacer.



CAUTION: Note orientation of lamp socket before removing lamp socket from fixture. Replacement socket must be installed in the same orientation.

Step 17. Remove two 8-32 x 7/8" PPZ SEMS screws mounting socket.

Step 18. Remove lamp socket.

Step 19. Reassemble by following steps in reverse order.

Note: Refer to [“Lamp Removal and Installation” on page 21](#) for lamp installation information.

Reflector Removal



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove reflector assembly:

- Step 1. Remove power from luminaire and allow unit to completely cool.
- Step 2. Remove rear cover assembly as described in [“Rear Cover Assembly Removal”](#) on page 20.
- Step 3. Loosen two quarter-turn Dzus rafter fasteners from lamp house cover and remove lamp.

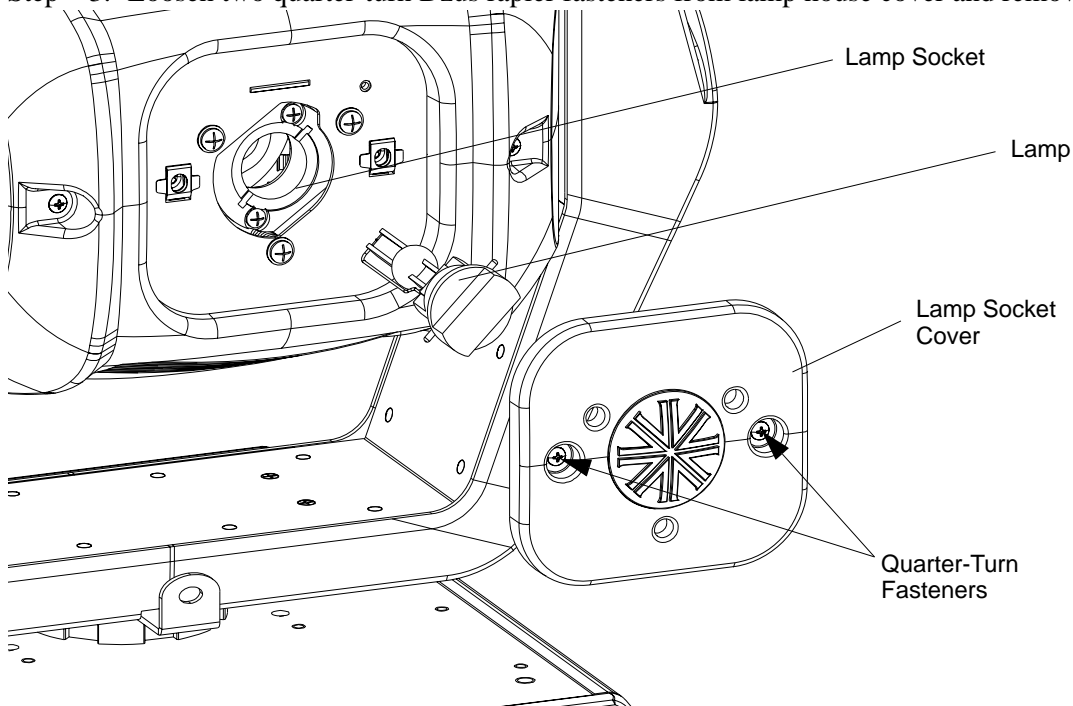


Figure 2-29: Lamp Socket Cover Removal

- Step 4. Remove one 6-32 x 3/8" PPZ SEMS screw and flat washer and detach lamp cover tether from fixture.
- Step 5. As shown in [Figure 2-28](#) on page 44, at each side:
 - a. Remove two 8-32 x 5/8" PPZ SEMS screw (1 per side) at counter weight plate, closest to rear of assembly.
 - b. Note, the counter weight plates will stay attached by 2 screws closest to inside of fixture.
- Step 6. Remove two 6-32 x 3/8" PPZ SEMS screws from rear of assembly, closest to L1 & L2 fans.

Step 7. Remove four 8-32 x 3/8" PPB SEMS screws from rear.

NOTE: Components removed and exploded for clarity.

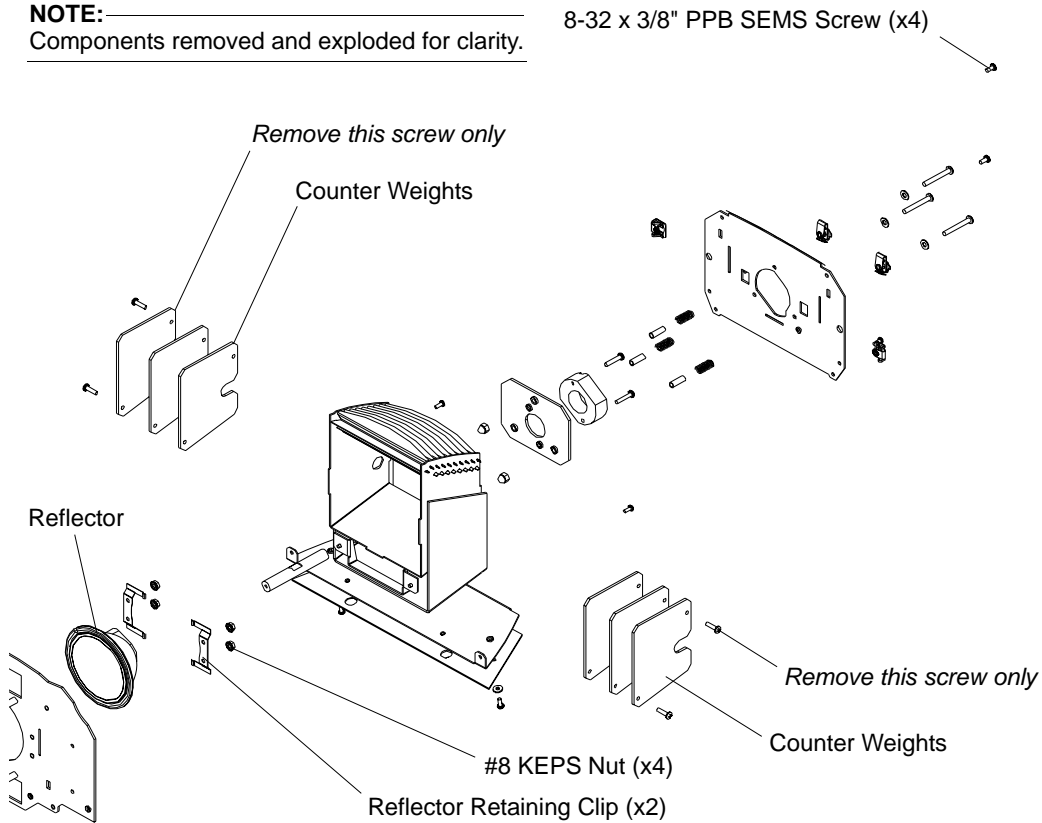


Figure 2-30: Reflector Assembly Removal

Step 8. Carefully remove lamp housing, socket and rear plate.

Step 9. At reflector, remove four #8 KEPS nuts and remove both reflector retainer clips.

Step 10. Remove reflector.

Step 11. Reassemble by following steps in reverse order.

Note: Refer to [“Lamp Removal and Installation” on page 21](#) for lamp installation information.

CYMD Wheel Replacement

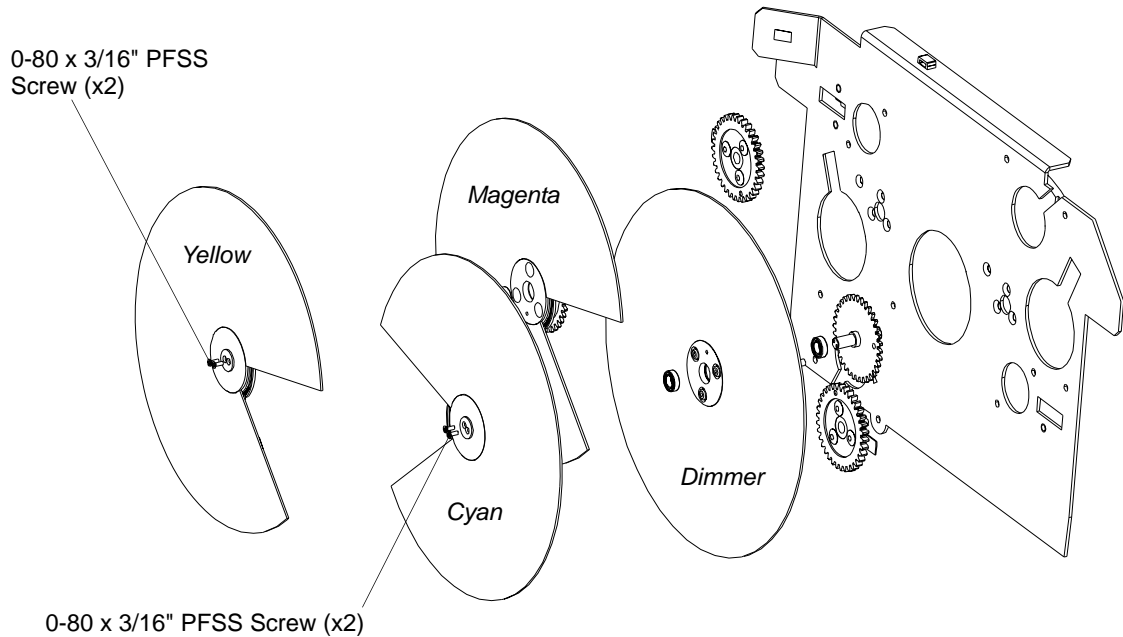
This section contains individual procedures to remove and install the dimmer, magenta, cyan, and yellow wheels.



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove color wheels and dimmer from CYMD assembly:

- Step 1. Remove CYMD assembly from luminaire by following procedure described in “[CYMD Module Assembly Removal](#)” on page 24.
- Step 2. At yellow wheel, remove two 0-80 x 3/16" PFSS Screws holding yellow wheel to shaft and remove wheel.
- Step 3. At cyan wheel, remove two 0-80 x 3/16" PFSS Screws holding cyan wheel to shaft and remove wheel.
- Step 4. Carefully remove magenta wheel from shaft.
- Step 5. Carefully remove dimmer wheel from shaft.



NOTE: Components removed and exploded for clarity.

Figure 2-31: CYMD Module Assembly Wheel Locations

To install dimmer wheel:

- Step 1. Carefully slide dimmer wheel assembly onto shaft (opposite side where wiring harness is attached).
- Step 2. Align timing mark on dimmer wheel with timing mark on drive pulley hub on motor shaft as shown in [Figure 2-32](#).

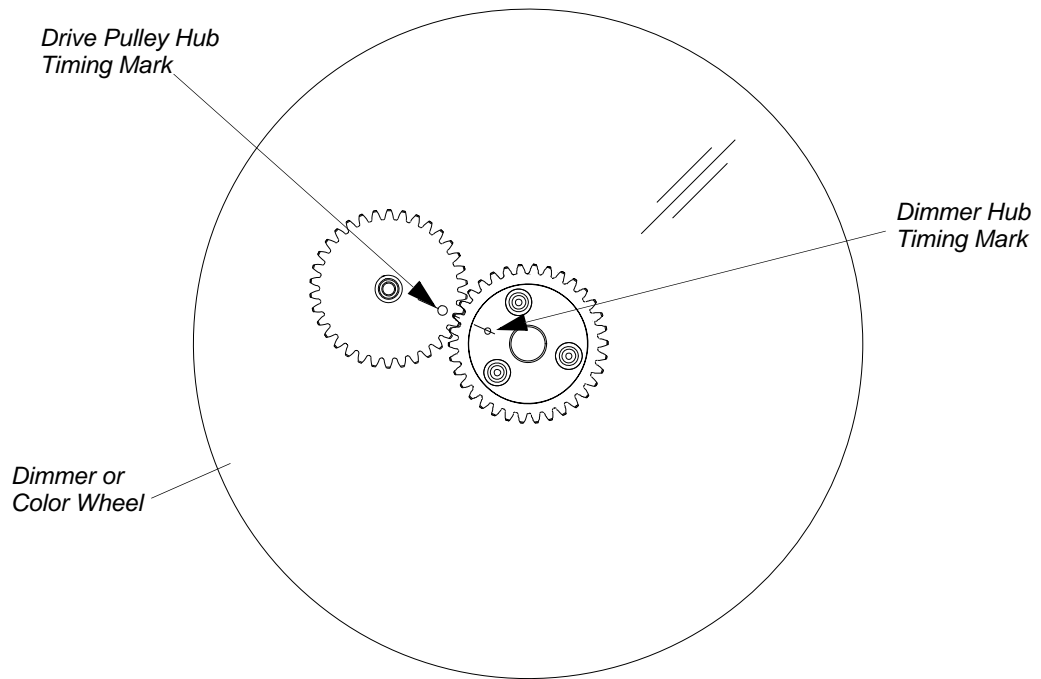


Figure 2-32: Wheel and Drive Hub Timing Marks

Note: When optical sensor tab on drive pulley is in sensor, the CLOSED portion of the dimmer wheel should align with gate.

To install magenta wheel:

- Step 1. Install dimmer wheel first by following previous procedure in this section.
- Step 2. Carefully slide magenta wheel assembly on to shaft (closest to where wiring harness is attached)
- Step 3. Align the timing mark on the magenta wheel with the timing mark on the drive pulley hub on motor shaft as shown in [Figure 2-32](#).

Note: When optical sensor tab on drive pulley is in sensor, the OPEN portion of the magenta wheel should align with gate.

To install cyan wheel:

- Step 1. Install dimmer and magenta wheels first by following previous procedures in this section.

- Step 2. Ensure that sensor tab on drive pulley of motor is in sensor slot.
- Step 3. Align wheel to shaft screws, so that open spot of wheel is in gate.



WARNING: It is very important not to over-tighten screws in the next step.

- Step 4. Install two 0-80 x 3/16" PFSS screws.

Note: When installing or reinstalling Cyan wheel, you must add a bead of RTV 5083 on top of 0-80 x 3/16" LG PFSS Screws (as illustrated in [Figure 2-33](#)). Allow enough time for RTV to cure before putting the assembly into use.

- Step 5. Ensure cyan wheel and dimmer wheel move independent of each other.

To Install Yellow Wheel

- Step 1. Install dimmer, magenta and cyan wheels by following previous procedures in this section.
- Step 2. Ensure that sensor tab on drive pulley of motor is in sensor slot.
- Step 3. Align wheel to shaft screws, so that open spot of wheel is in gate.



WARNING: It is very important not to over-tighten screws in the next step.

- Step 4. Install two 0-80 x 3/16" PFSS screws.

Note: When installing or reinstalling Yellow wheel, you must add a bead of RTV 5083 on top of 0-80 x 3/16" LG PFSS Screws (as illustrated in [Figure 2-33](#)). Allow enough time for RTV to cure before putting the assembly into use.

- Step 5. Ensure yellow wheel and magenta wheel move independent of each other.

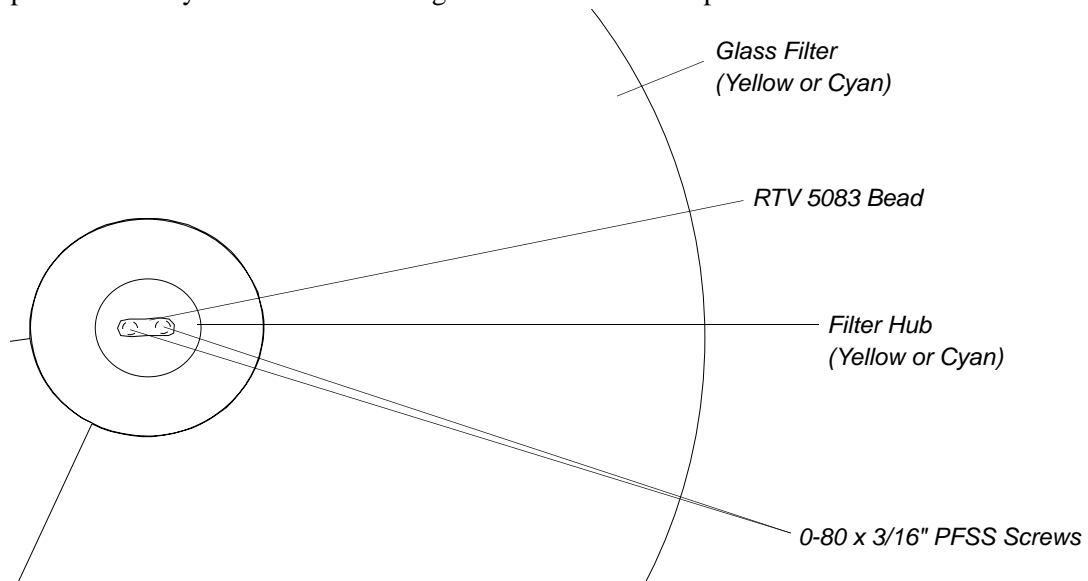


Figure 2-33: Cyan or Yellow Filter Wheel - RTV 5083 Bead

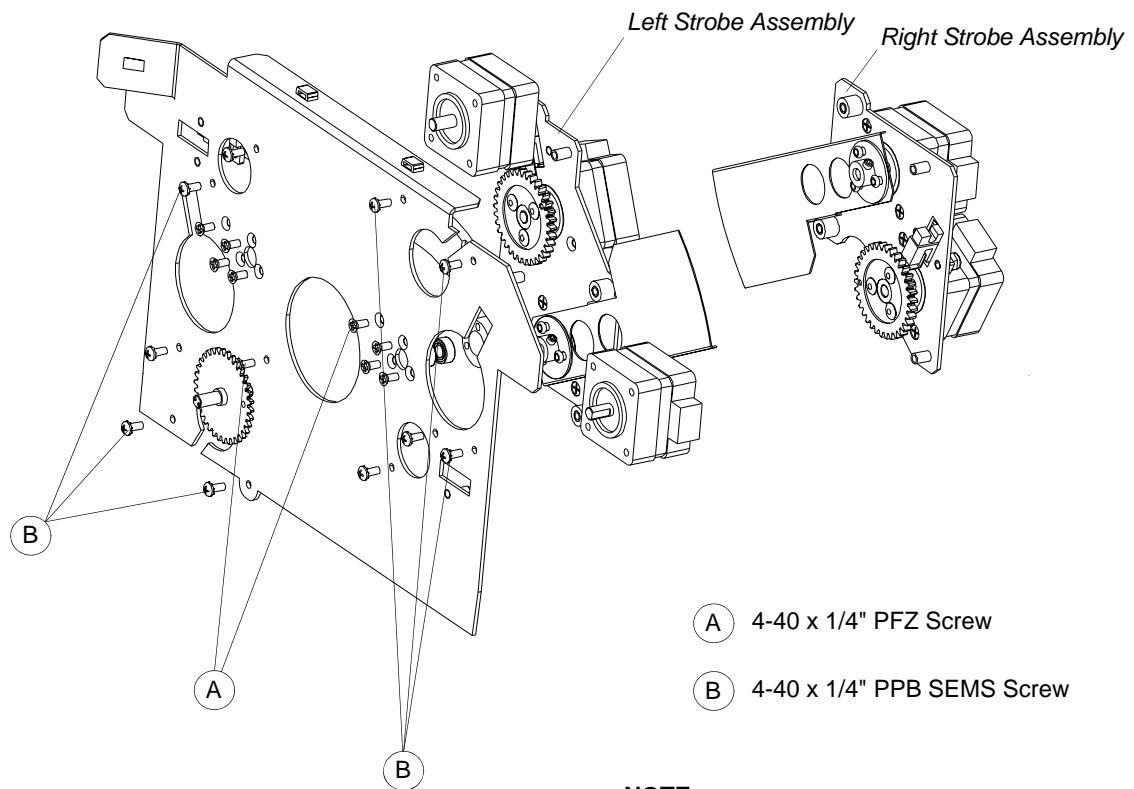
Strobe Assembly Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove the strobe assembly:

- Step 1. Remove CYMD assembly from luminaire by following procedure described in “[CYMD Module Assembly Removal](#)” on page 24.
- Step 2. Remove all glass wheels from CYMD assembly as described in “[CYMD Wheel Replacement](#)” on page 47.
- Step 3. Remove one 4-40 x 1/4" PPB SEMS screw mounting color mix shaft to bearing. Carefully remove shaft.
- Step 4. Remove one 4-40 x 1/4" PFZ and three 4-40 x 1/4" PPB SEMS screws and remove strobe assembly from CYMD assembly.



NOTE: Components removed and exploded for clarity.

Figure 2-34: Strobe Assemblies Removal

- Step 5. Reassemble following steps in reverse order.

Dimmer or Magenta Motor Assembly Replacement



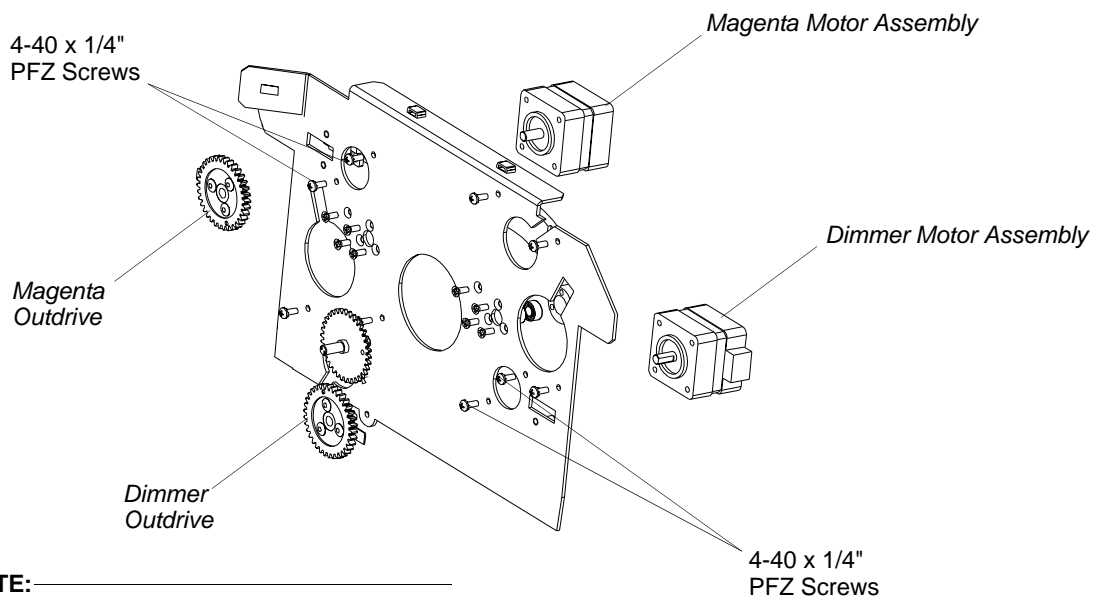
WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove the dimmer or magenta motor assembly:

- Step 1. Remove CYMD assembly from luminaire by following procedure described in “[CYMD Module Assembly Removal](#)” on page 24.
- Step 2. Remove all glass wheels from CYMD assembly as described in “[CYMD Wheel Replacement](#)” on page 47.
- Step 3. Remove appropriate strobe assembly.

Note: Screws, in the next step, have Loctite 242 and may require small amount of heat to loosen.

- Step 4. Using 1/16" Allen Driver, loosen cone set screw attaching Dimmer or Magenta Outdrive from motor shaft.



NOTE: Components removed and exploded for clarity.

Figure 2-35: Dimmer / Magenta Motor Assemblies Removal

- Step 5. Remove Outdrive.
- Step 6. Remove two 4-40 x 1/4" PFZ screws and remove motor.
- Step 7. When installing Outdrive, place sensor tab into optical sensor.
- Step 8. Apply Loctite 242 onto cone set screw.
- Step 9. Tighten cone set screw to flat part of shaft, with the slot centered in the sensor.
- Step 10. Continue reassembly following remaining steps in reverse order.

Strobe Blade Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove the strobe assembly:

Step 1. Remove appropriate strobe assembly as described in “[Strobe Assembly Replacement](#)” on [page 50](#).

Note: Cone Set Screw has Loctite 242 and may require small amount of heat to loosen.

- Step 2. Using 1/16" Allen driver, loosen cone set screw attaching strobe assembly to motor shaft.
- Step 3. Remove strobe blade assembly.
- Step 4. To Install, power motor to hold on whole step.
- Step 5. Hold blade against stop in closed position and slide blade onto motor shaft.
- Step 6. Set height per tolerance as shown in [Figure 2-36](#).

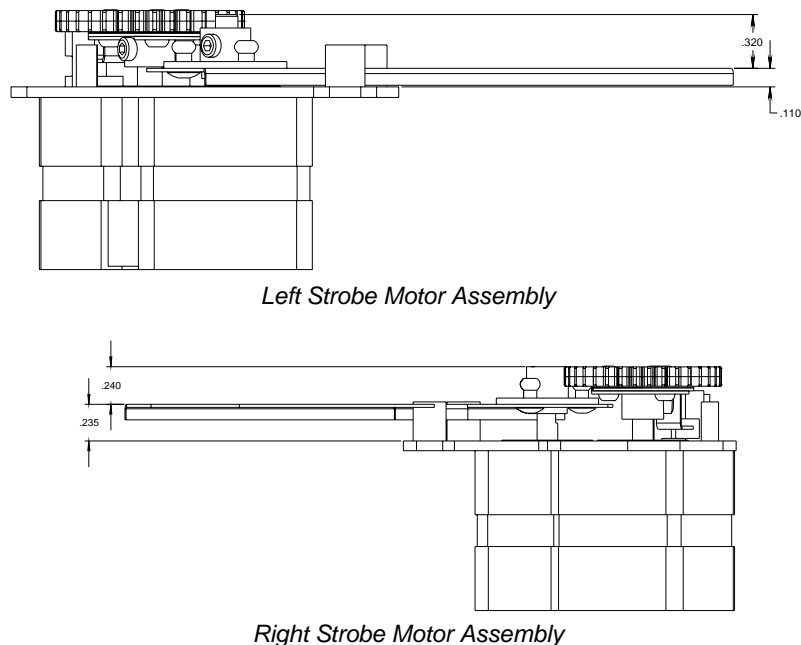


Figure 2-36: Strobe Assemblies - Strobe Blade Height Settings

- Step 7. Apply Loctite 242 to cone set screw threads.
- Step 8. Tighten set screw.
- Step 9. Reinstall strobe assembly.

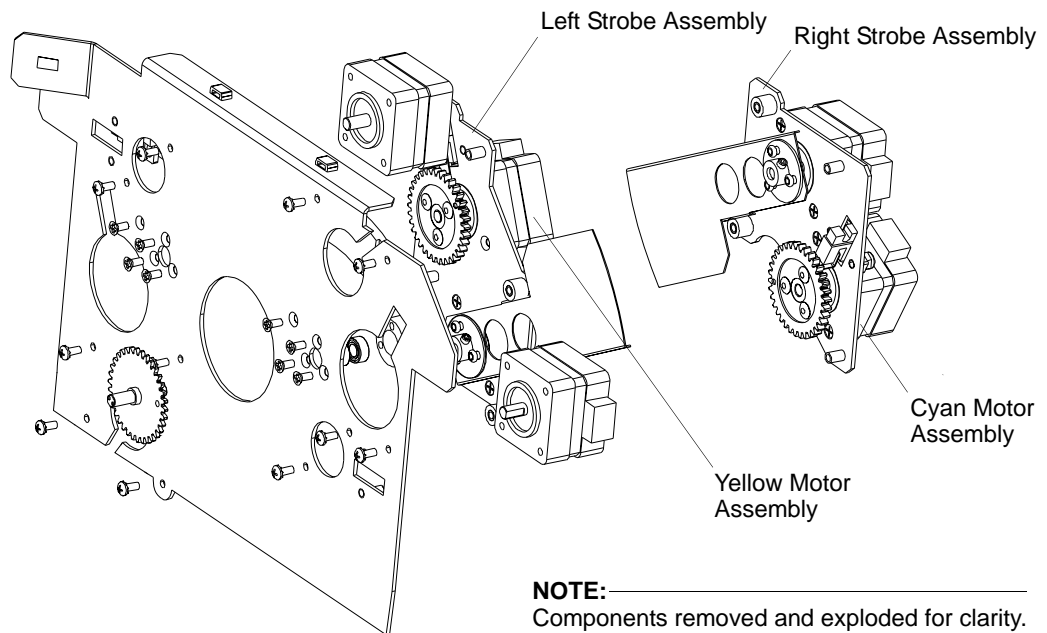
Cyan or Yellow Motor Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove the cyan or yellow motor assemblies:

- Step 1. Remove CYMD module assembly from luminaire as described in “CYMD Module Assembly Removal” on page 24.
- Step 2. Remove all glass wheels from CYMD assembly as described in “CYMD Wheel Replacement” on page 47.
- Step 3. Remove appropriate strobe assembly as described in “Strobe Assembly Replacement” on page 50. Refer to Figure 2-37 for motor location.



NOTE: Components removed and exploded for clarity.

Figure 2-37: Cyan and Yellow Motor Assemblies.

Note: Cone Set Screw has Loctite 242 and may require small amount of heat to loosen.

- Step 4. Using 1/16" Allen driver, loosen cone set screw attaching outdrive to motor shaft.
- Step 5. Remove outdrive.
- Step 6. At motor to be removed, remove two 4-40 x 1/4" PFB SEMS Screws securing motor.
- Step 7. Reassemble following steps in reverse order.

Fixed Color Wheel Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove the fixed color wheel assembly:

Step 1. Remove gobo module assembly from luminaire as described in “Gobo Module Assembly Removal” on page 23.

Note: Cone Set Screw has Loctite 242 and may require small amount of heat to loosen.

Step 2. Using 1/16" Allen driver, loosen cone set screw attaching fixed color wheel to drive shaft.

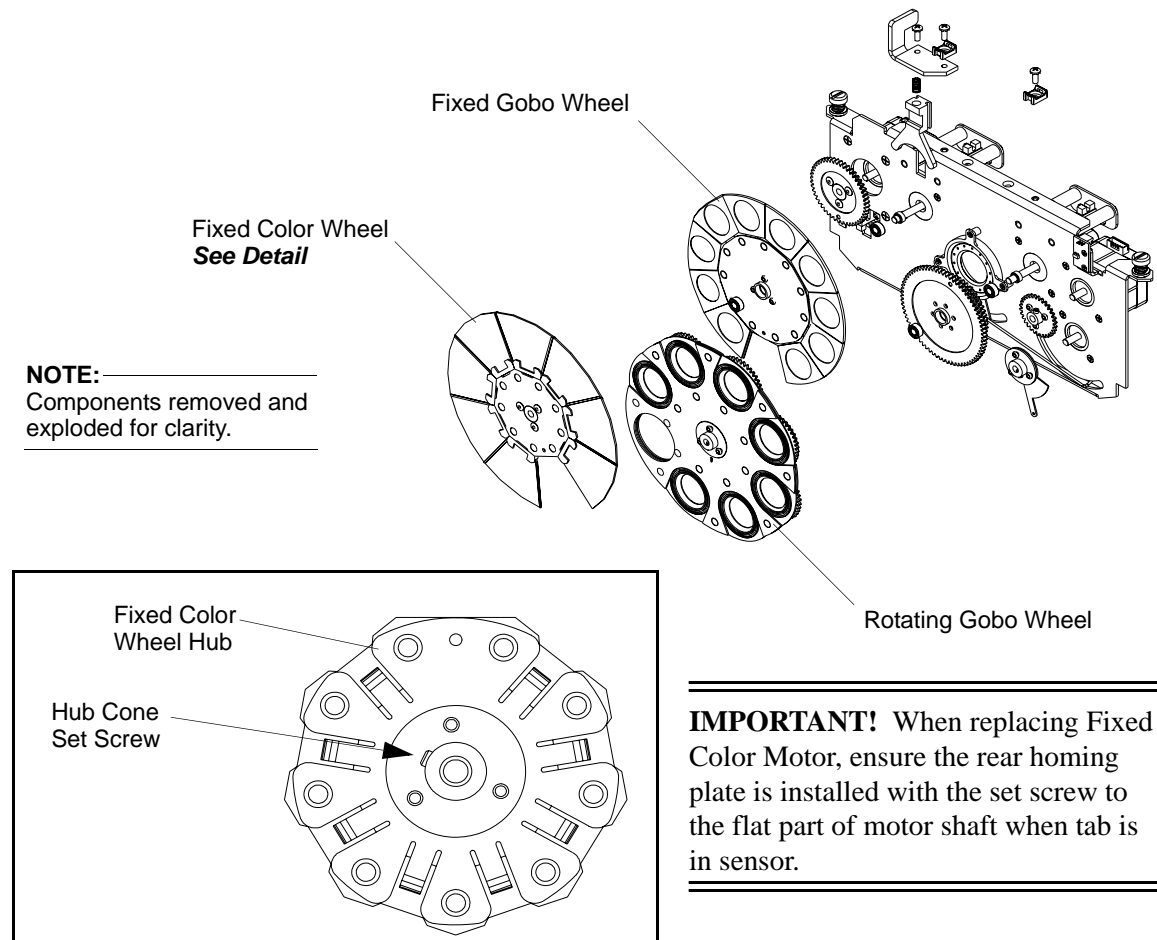


Figure 2-38: Fixed Color Wheel Assembly

Step 3. To install, align drive rear motor homing plate so tab is in optical sensor.

Step 4. Apply Loctite 242 on Cone set screw.

Step 5. Center open spot of wheel to gate and tighten set screw to flat motor shaft.

Rotating Gobo Wheel Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove the rotating gobo wheel assembly:

- Step 1. Remove gobo module assembly from luminaire as described in “Gobo Module Assembly Removal” on page 23.
- Step 2. Remove the fixed color wheel assembly from gobo module assembly as described in “Fixed Color Wheel Replacement” on page 54.

Note: Cone Set Screw has Loctite 242 and may require small amount of heat to loosen.

- Step 3. Using 1/16" Allen driver, loosen cone set screw attaching rotating gobo wheel to drive shaft.

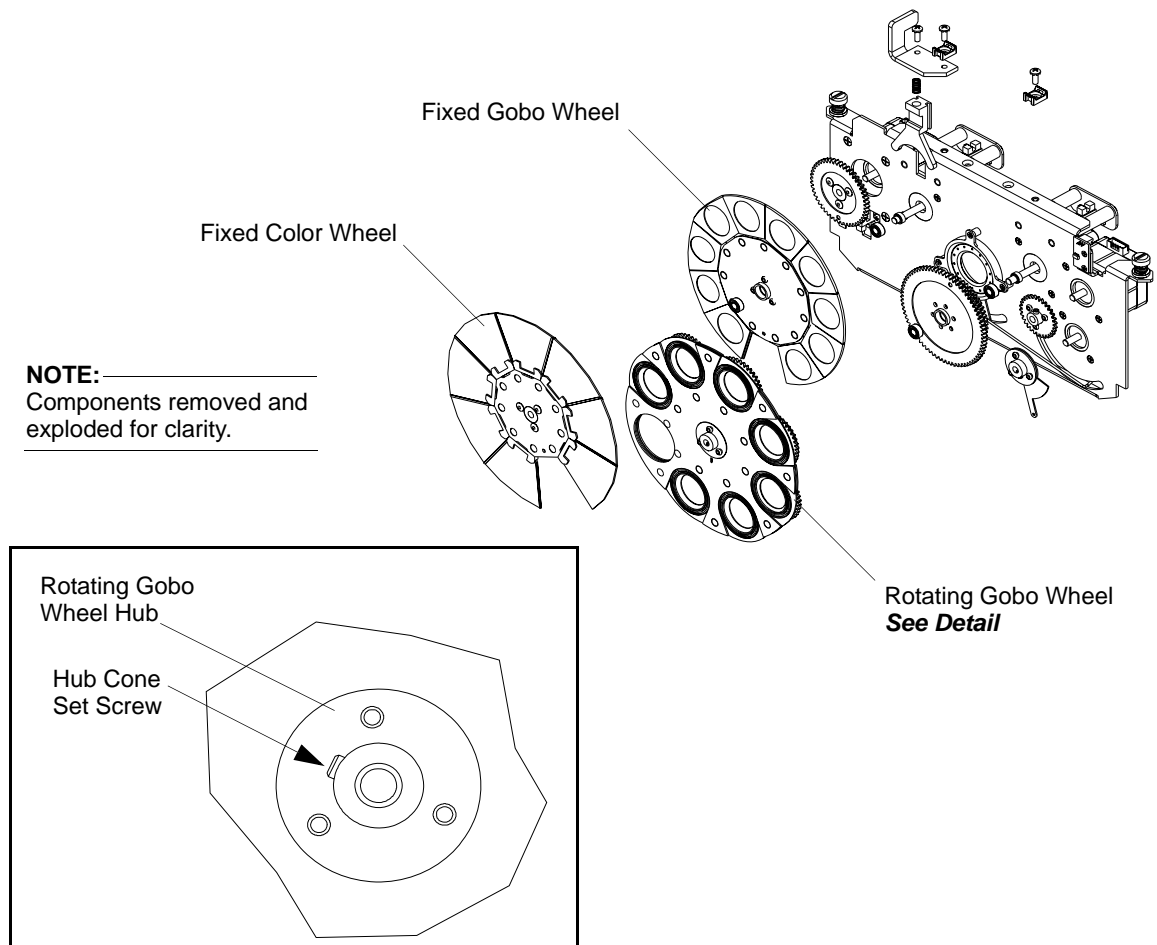


Figure 2-39: Rotating Gobo Wheel

Step 4. To install, align drive rear motor homing plate so tab is in optical sensor.

Step 5. Apply Loctite 242 on Cone set screw.

Step 6. Center open spot of wheel to gate and tighten set screw to flat motor shaft.



CAUTION: During reassembly, the alignment of the rotating gobo wheel assembly (alignment drive rear motor homing plate tab in the optical sensor) is very critical for index to calibrate correctly.

IMPORTANT! When replacing Rotating Gobo Motor, ensure the rear homing plate is installed with the set screw to the flat part of motor shaft when tab is in sensor. When replacing Index Motor, ensure the Index Outdrive is installed with set screw to flat part of motor shaft.

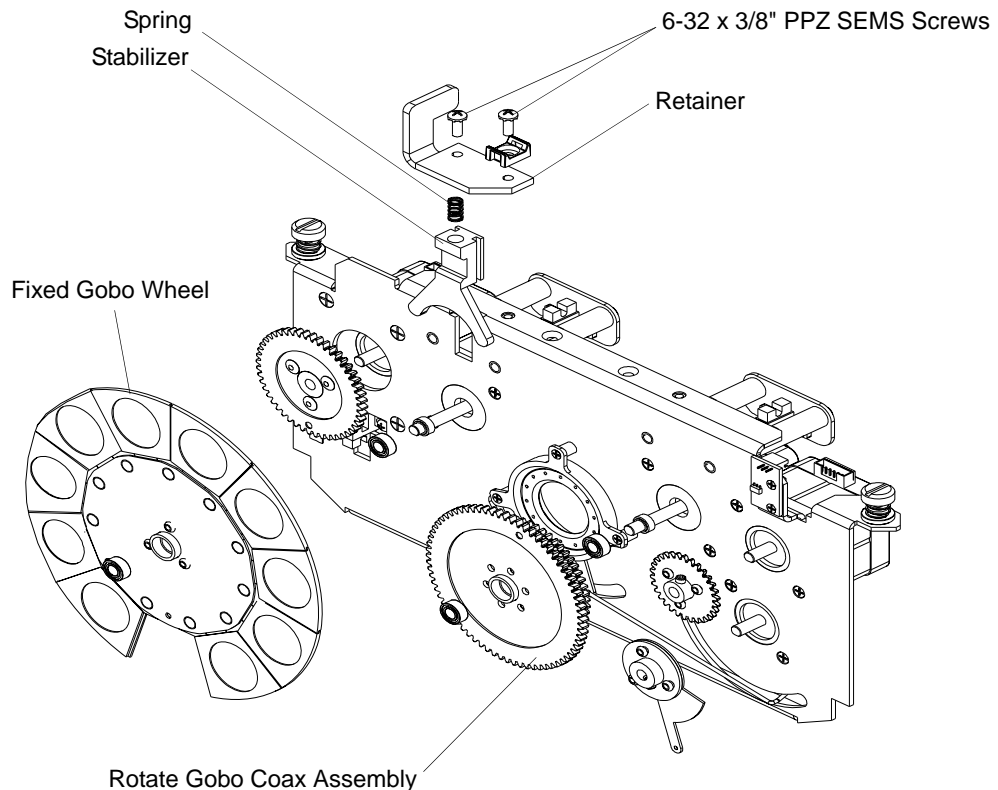
Fixed Gobo Wheel Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove the fixed gobo wheel assembly:

- Step 1. Remove gobo module assembly from luminaire as described in “Gobo Module Assembly Removal” on page 23.
- Step 2. Remove the fixed color wheel assembly from gobo module assembly as described in “Fixed Color Wheel Replacement” on page 54.
- Step 3. Remove the rotating gobo wheel assembly from gobo module assembly as described in “Rotating Gobo Wheel Replacement” on page 55.
- Step 4. Remove Rotate Gobo COAX assembly from shaft. Note that the bearings in the assembly that may come loose. Keep these bearings.
- Step 5. Remove two 6-32 x 3/8" PPZ SEMS screws mounting stabilizer retainer and carefully remove. Note that there is a spring between retainer and stabilizer that will be removed.



NOTE:
Components removed and exploded for clarity.

Figure 2-40: Fixed Gobo Wheel

Step 6. As shown in [Figure 2-41](#), slide Stabilizer from mount.

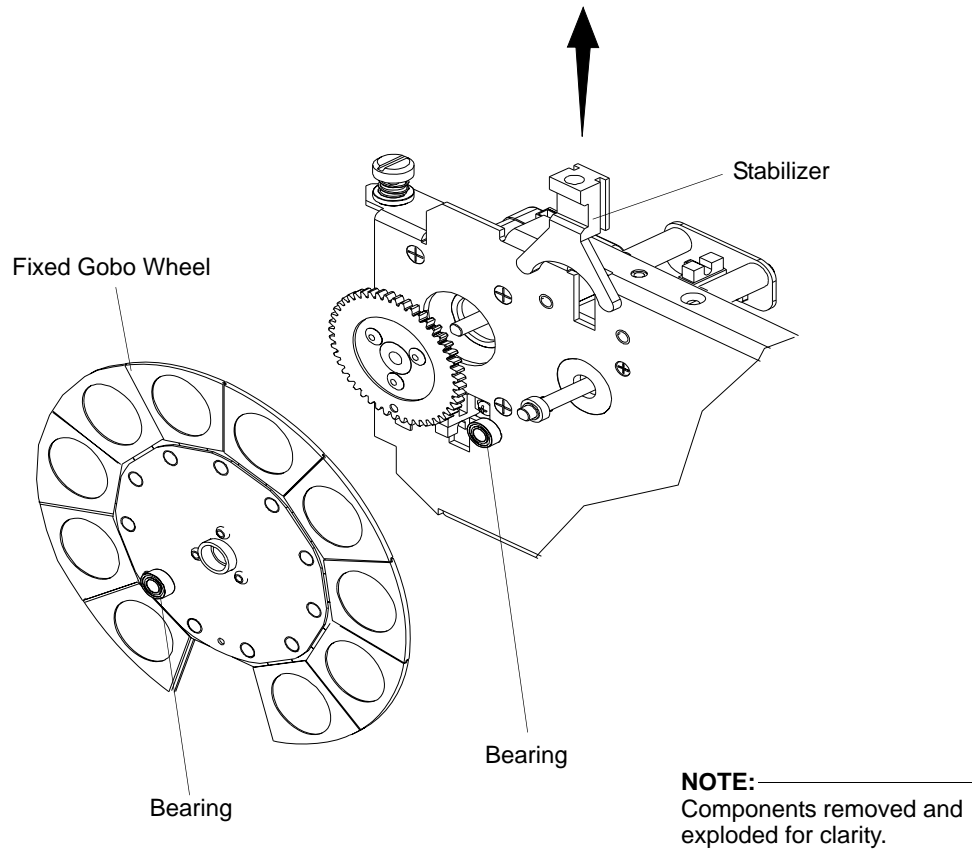


Figure 2-41: Fixed Gobo Wheel

- Step 7. Carefully lift wheel off shaft. Note bearings may come loose (refer to [Figure 2-41](#) for bearing locations).
- Step 8. When installing, align fixed gobo outdrive so tab is in sensor.
- Step 9. Align wheel so open spot is aligned with gate.
- Step 10. Slide on to shaft.
- Step 11. Continue reassembly by following steps in reverse order.

IMPORTANT! When replacing Fixed Gobo Motor, ensure the Fixed Gobo Outdrive is installed with set screw to flat part of motor shaft when tab is in optical sensor.

Iris Assembly Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work. Wear protection on hands (soft cotton gloves) when handling glass.

To remove the iris assembly:

- Step 1. Remove gobo module assembly from luminaire as described in “Gobo Module Assembly Removal” on page 23.
- Step 2. Remove the fixed color wheel assembly from gobo module assembly as described in “Fixed Color Wheel Replacement” on page 54.
- Step 3. Remove the rotating gobo wheel assembly from gobo module assembly as described in “Rotating Gobo Wheel Replacement” on page 55.
- Step 4. Remove the fixed gobo wheel assembly from gobo module assembly as described in “Fixed Gobo Wheel Replacement” on page 57.
- Step 5. Remove three 2-56 x 3/16" PFZ screws and remove iris assembly.

NOTE:
Components removed and exploded for clarity.

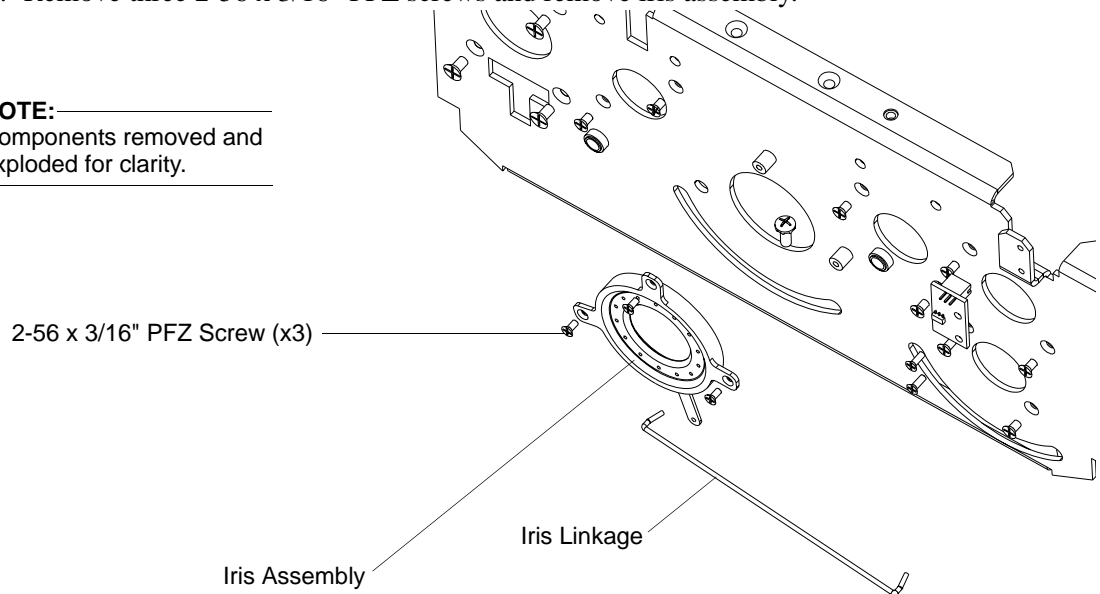


Figure 2-42: Iris Assembly

- Step 6. Disconnect iris linkage.
- Step 7. Reassemble by following steps in reverse order.

Ballast / LVS Assembly Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove the ballast / LVS assembly:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
 Step 2. At enclosure, remove display side handle by removing four 10-32 x 5/8" PPB screws.

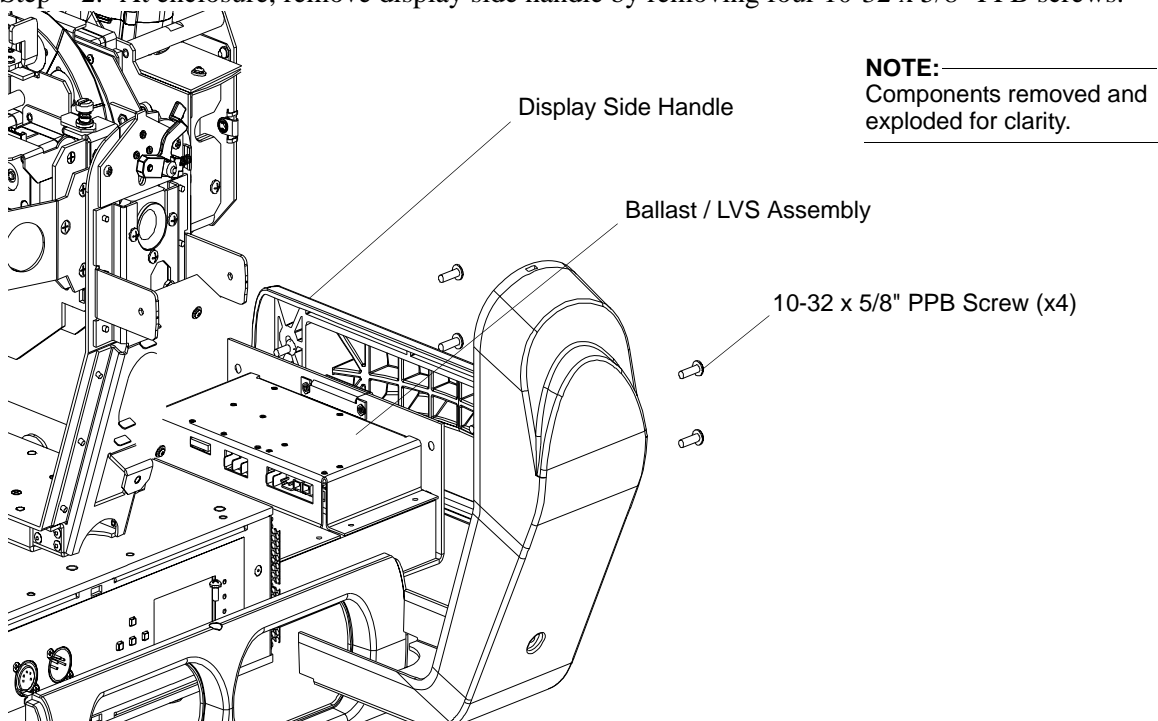


Figure 2-43: Ballast / LVS Assembly Removal

- Step 3. Remove the inlet exhaust screen.
 Step 4. Remove two 10-32 x 9/16" PFB screws in supply.
 Step 5. Slide Ballast / LVS assembly out of enclosure. Note, wiring is still attached to assembly.
 Step 6. Disconnect wiring:

Connection	Wire Color (s)
AC Line Input	Black, White, Green/Yellow
36 VDC Output	Orange/Black
Enclosure Fan	Red/Black (x2) <i>Note, it does not matter which wire goes where</i>
Lamp Wire	Black, White

- Step 7. Reassemble by performing steps in reverse order.

DMX PCB Assembly Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

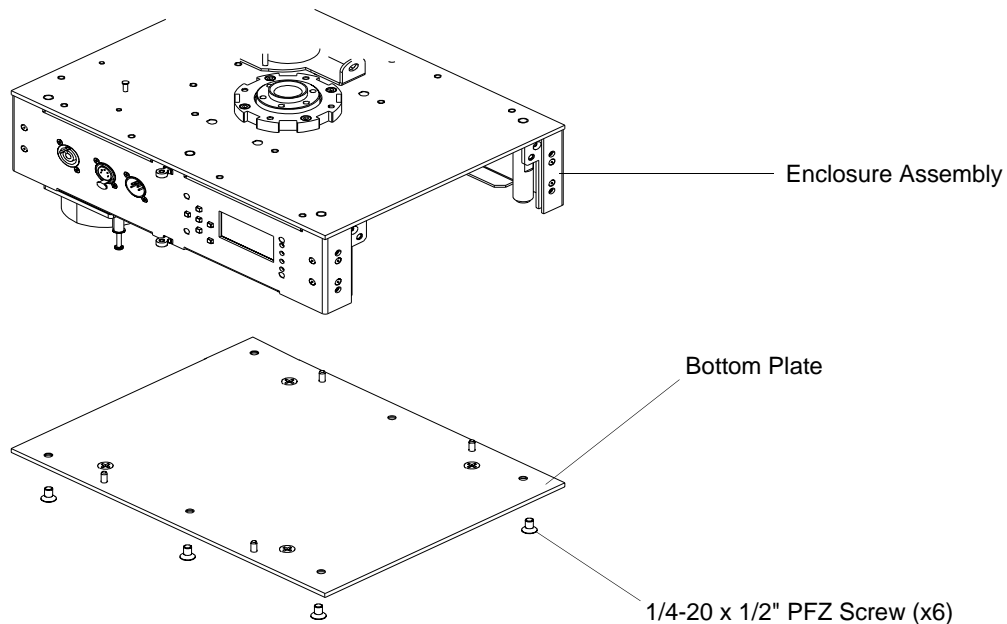
To remove the DMX PCB assembly:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
- Step 2. Remove Ballast / LVS assembly as described in “[Ballast / LVS Assembly Replacement](#)” on page 60.



WARNING: Do not set head on or damage front lens during next step!

- Step 3. Carefully, flip luminaire to access bottom of enclosure. Do not set on lens.
- Step 4. Remove six 1/4-20 x 1/2" PFZ screws and remove Bottom Plate from enclosure assembly.



NOTE:
Components removed and exploded for clarity.

Figure 2-44: Enclosure Assembly Bottom Plate Removal

- Step 5. At DMX PCB assembly, disconnect wiring.

Step 6. From front panel, remove four 4-40 x 3/8" PFB screws and remove DMX PCB assembly.

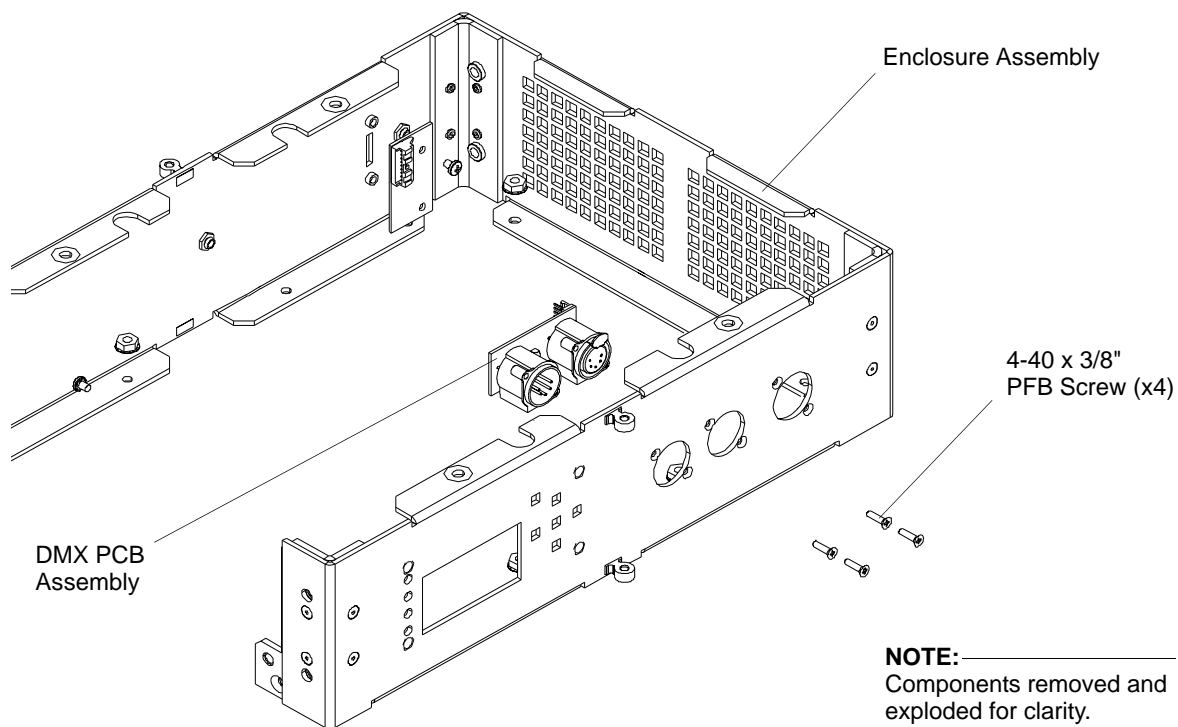


Figure 2-45: DMX PCB Assembly Removal

Step 7. Reassemble by performing steps in reverse order.

PowerCon (AC Input) Assembly Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

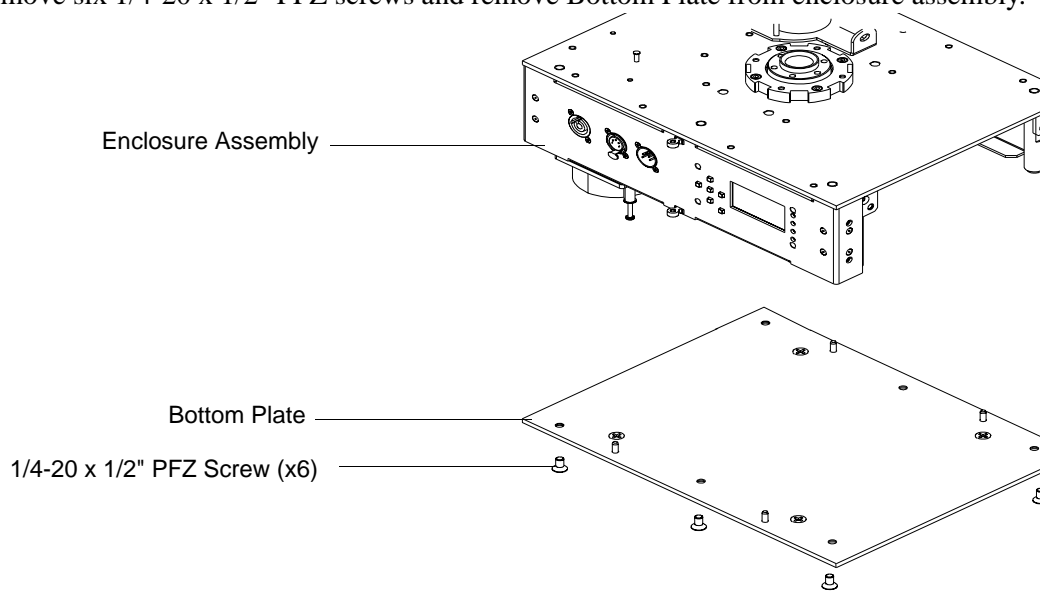
To remove the PowerCon (AC input) assembly:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
- Step 2. Remove Ballast / LVS assembly as described in [“Ballast / LVS Assembly Replacement”](#) on page 60.



WARNING: Do not set head on or damage front lens during next step!

- Step 3. Carefully, flip luminaire to access bottom of enclosure. Do not set on lens.
- Step 4. Remove six 1/4-20 x 1/2" PFZ screws and remove Bottom Plate from enclosure assembly.



NOTE:
Components removed and exploded for clarity.

Figure 2-46: Enclosure Assembly Bottom Plate Removal

Step 5. As indicated in Figure 2-47, remove fan assembly by removing two 6-32 x 1/4" PPZ SEMS screws.

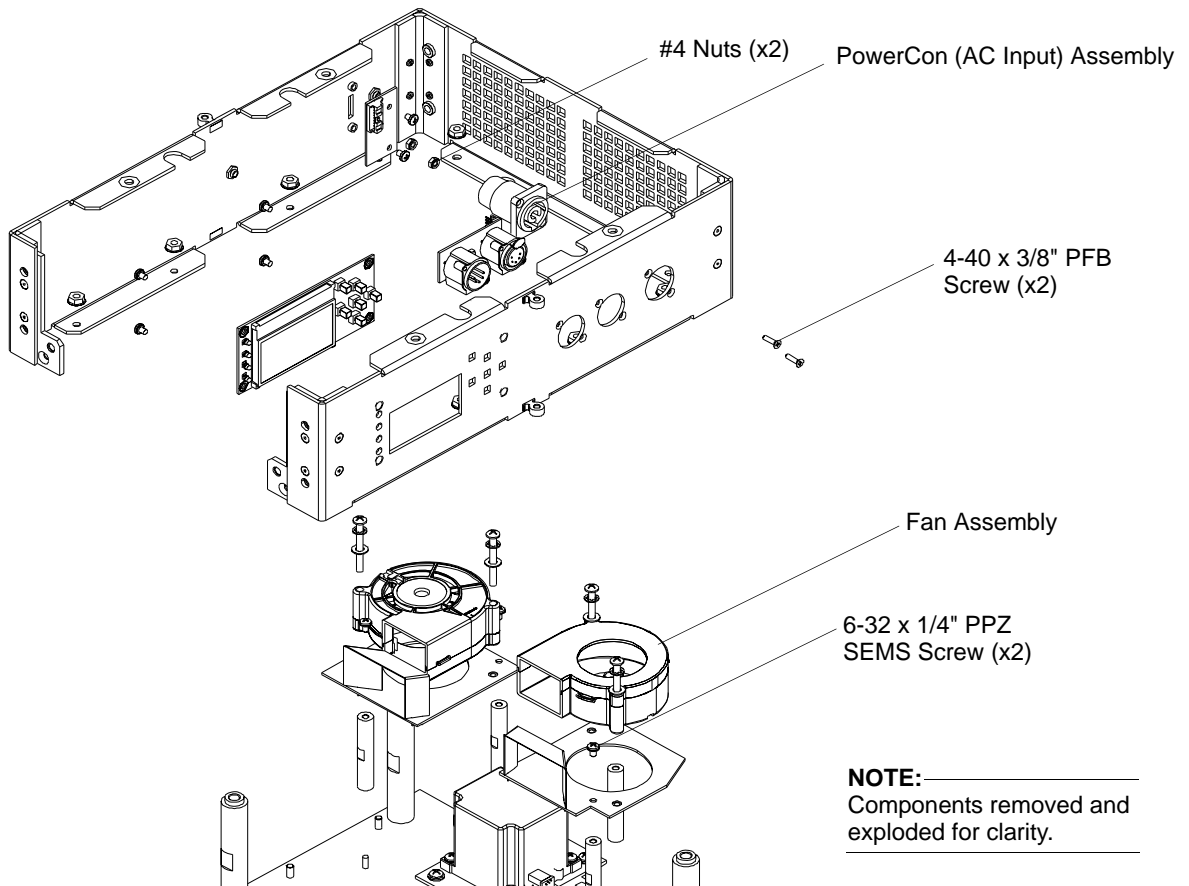


Figure 2-47: PowerCon (AC Input) Assembly Removal

Step 6. Disconnect wiring from PowerCon (AC Input) assembly.

Step 7. At front panel, remove two 4-40 x 3/8" PFB screws and nuts and remove PowerCon (AC Input) assembly.

Step 8. Reassemble by performing steps in reverse order.

Display PCB Assembly Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove the display PCB assembly:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
- Step 2. Remove Ballast / LVS assembly as described in [“Ballast / LVS Assembly Replacement”](#) on page 60.



WARNING: Do not set head on or damage front lens during next step!

- Step 3. Carefully, flip luminaire to access bottom of enclosure. Do not set on lens.
- Step 4. Remove six 1/4-20 x 1/2" PFZ screws and remove Bottom Plate from enclosure assembly.

NOTE:
Components removed and exploded for clarity.

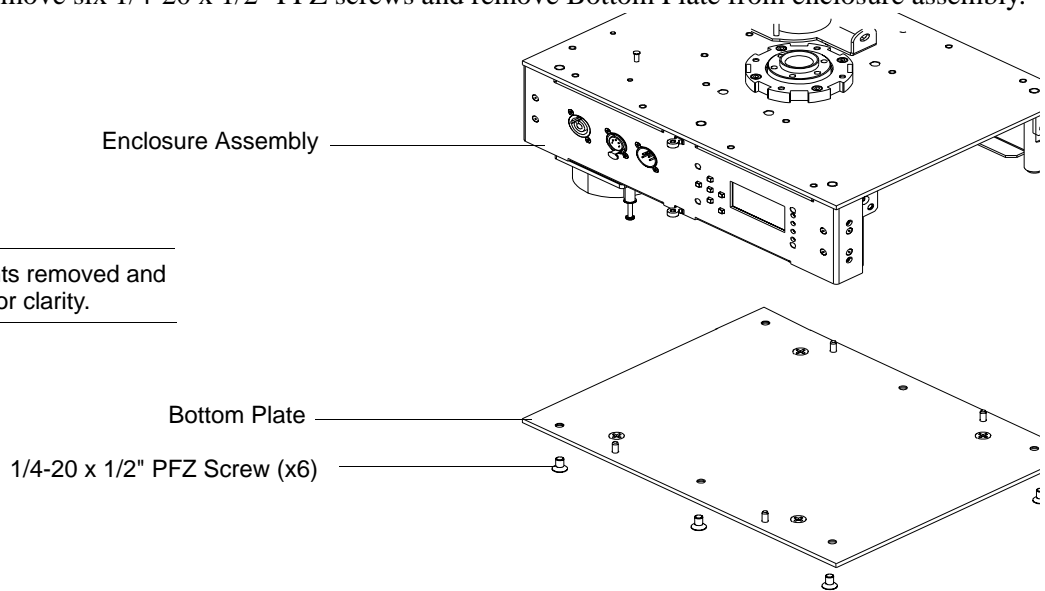


Figure 2-48: Enclosure Assembly Bottom Plate Removal

- Step 5. At Display PCB assembly, disconnect all wiring.

Step 6. As shown in [Figure 2-49](#), remove four 6-32 x 3/16" PPZ screws and remove Display PCB assembly.

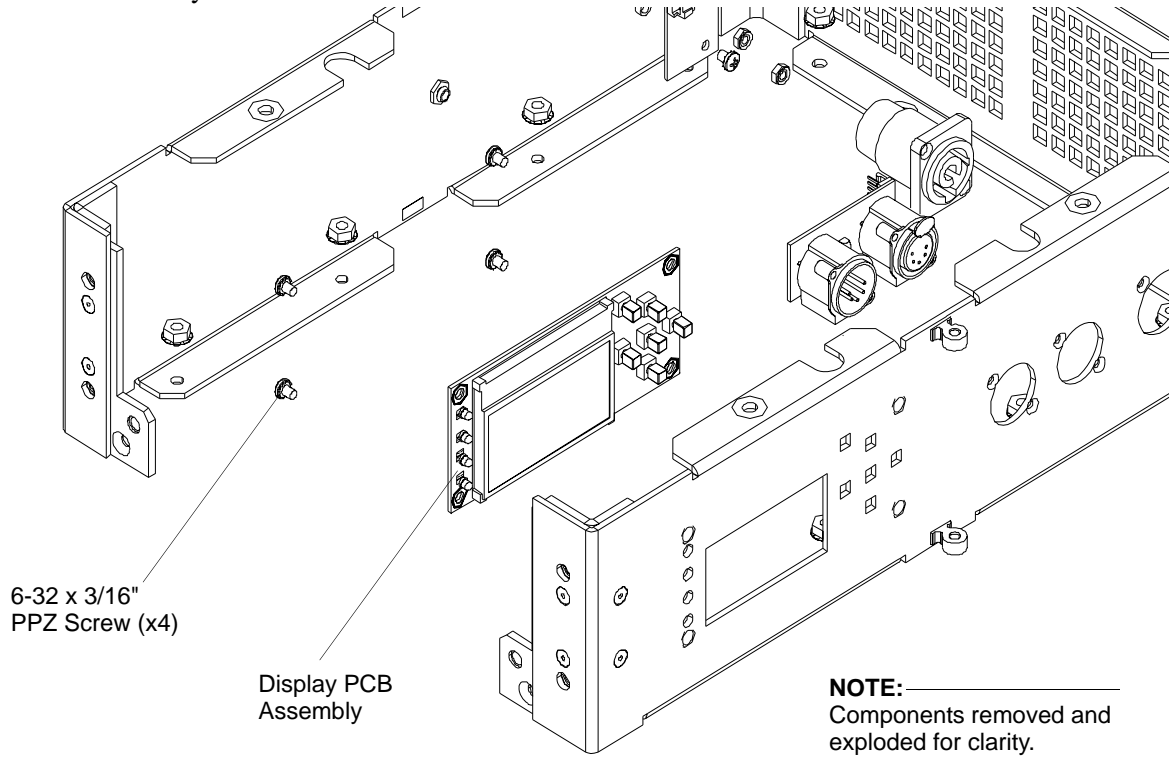


Figure 2-49: Display PCB Assembly Removal

Step 7. Reassemble by performing steps in reverse order.

Wireless DMX Interface PCB Assembly Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove the wireless DMX interface PCB assembly:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
- Step 2. Remove Ballast / LVS assembly as described in “[Ballast / LVS Assembly Replacement](#)” on page 60.



WARNING: Do not set head on or damage front lens during next step!

- Step 3. Carefully, flip luminaire to access bottom of enclosure. Do not set on lens.
- Step 4. Remove six 1/4-20 x 1/2" PFZ screws and remove Bottom Plate from enclosure assembly.

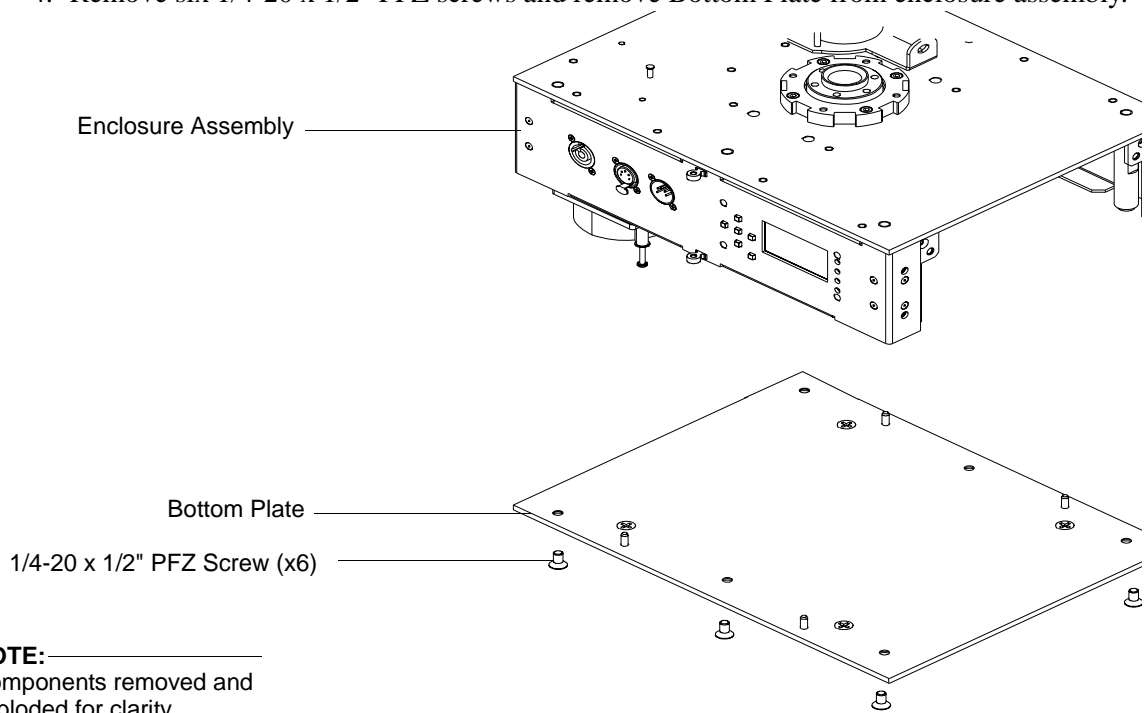


Figure 2-50: Enclosure Assembly Bottom Plate Removal

- Step 5. At wireless DMX interface PCB assembly, disconnect all wiring.

Step 6. As shown in [Figure 2-49](#), remove two 6-32 x 3/16" PPZ screws and remove wireless DMX interface PCB assembly.

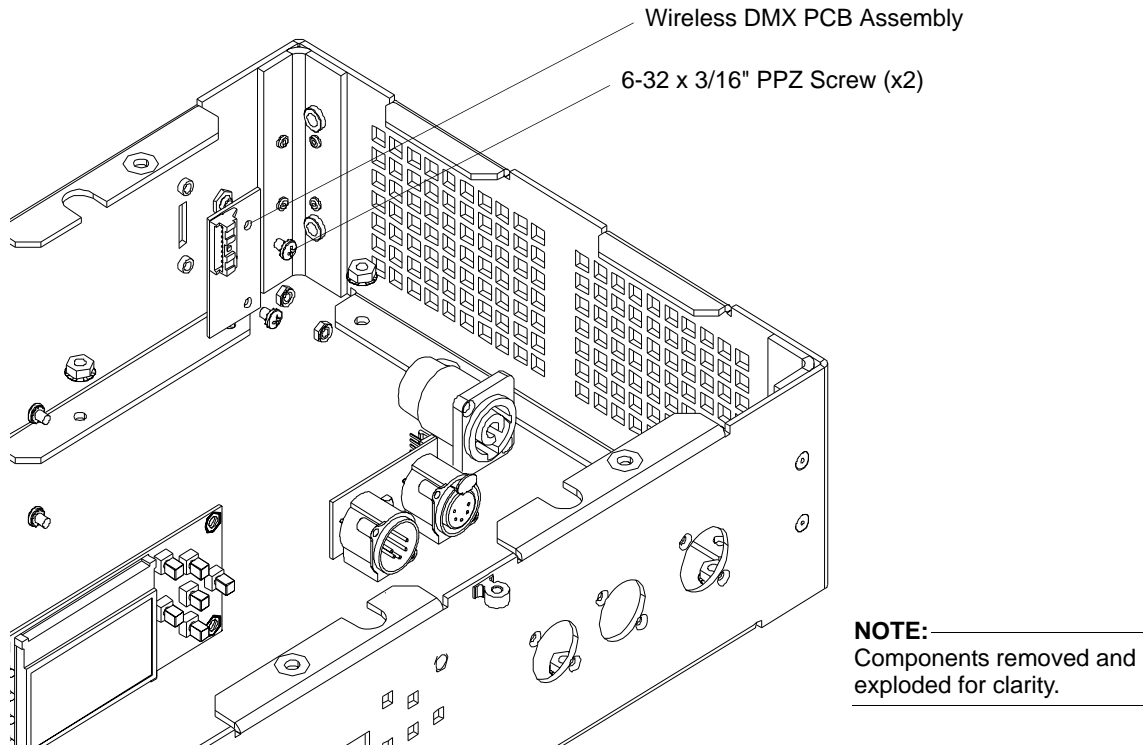


Figure 2-51: Wireless DMX Interface PCB Assembly Removal

Step 7. Reassemble by performing steps in reverse order.

Pan Motor Assembly Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

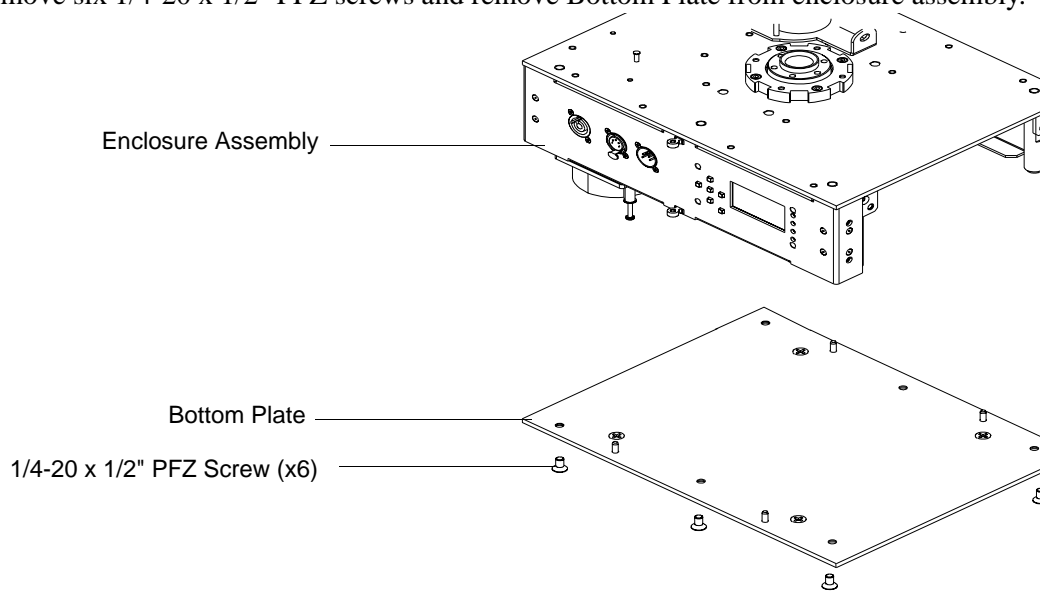
To remove the pan motor assembly:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
- Step 2. Remove Ballast / LVS assembly as described in “[Ballast / LVS Assembly Replacement](#)” on page 60.



WARNING: Do not set head on or damage front lens during next step!

- Step 3. Carefully, flip luminaire to access bottom of enclosure. Do not set on lens.
- Step 4. Remove six 1/4-20 x 1/2" PFZ screws and remove Bottom Plate from enclosure assembly.



NOTE:
Components removed and exploded for clarity.

Figure 2-52: Enclosure Assembly Bottom Plate Removal

Step 5. As indicated in Figure 2-53, remove both fan assemblies by removing two 6-32 x 1/4" PPZ SEMS screws (per fan assembly).

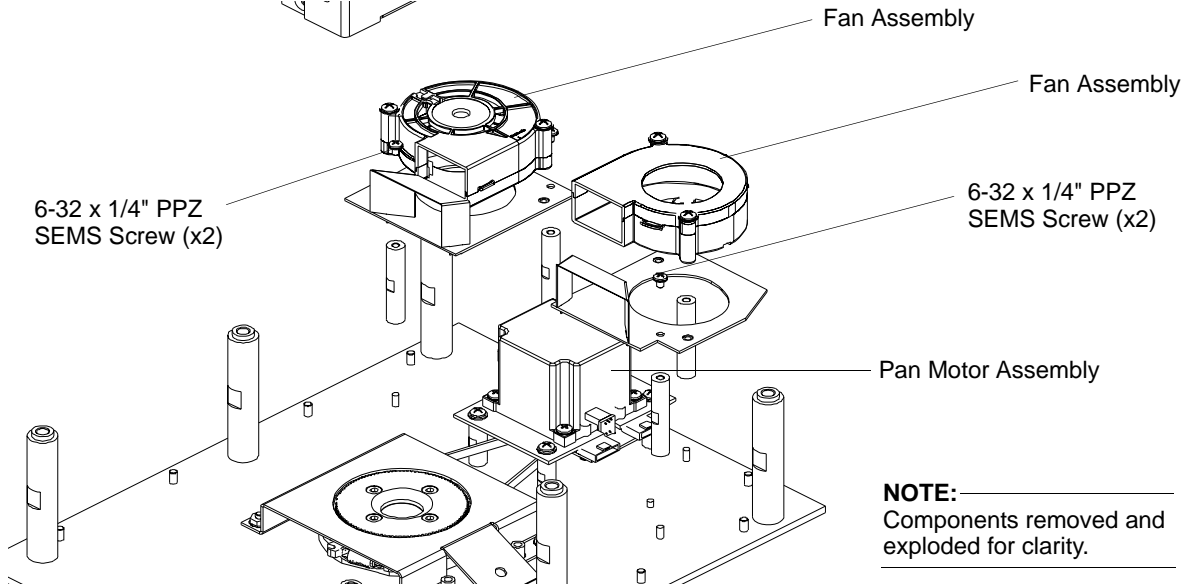


Figure 2-53: Enclosure Fan Assemblies Removal

Step 6. Disconnect wiring from motor and encoder assemblies.

Step 7. Remove four 8-32 x 1/4" PPB SEMS screws and their flat washers.

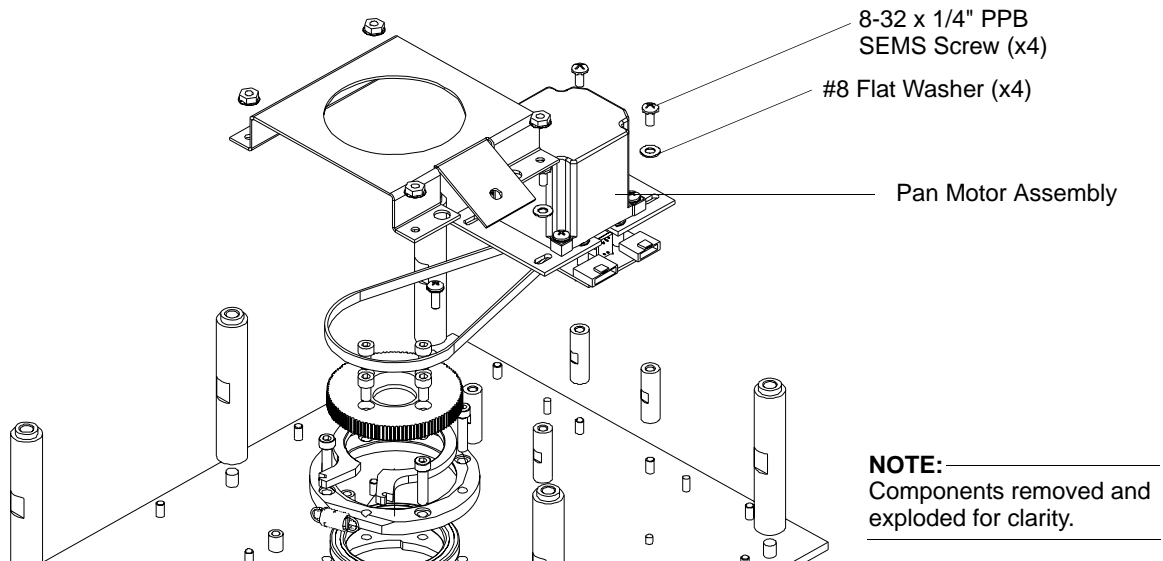


Figure 2-54: Pan Motor Assembly Removal

Step 8. Remove pan motor assembly

Step 9. Reassemble by performing steps in reverse order.

Note: Ensure proper belt tension when replacing.

Pan Belt Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove the pan belt:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
- Step 2. Remove Ballast / LVS assembly as described in [“Ballast / LVS Assembly Replacement”](#) on page 60.



WARNING: Do not set head on or damage front lens during next step!

- Step 3. Carefully, flip luminaire to access bottom of enclosure. Do not set on lens.
- Step 4. Remove six 1/4-20 x 1/2" PFZ screws and remove Bottom Plate from enclosure assembly.

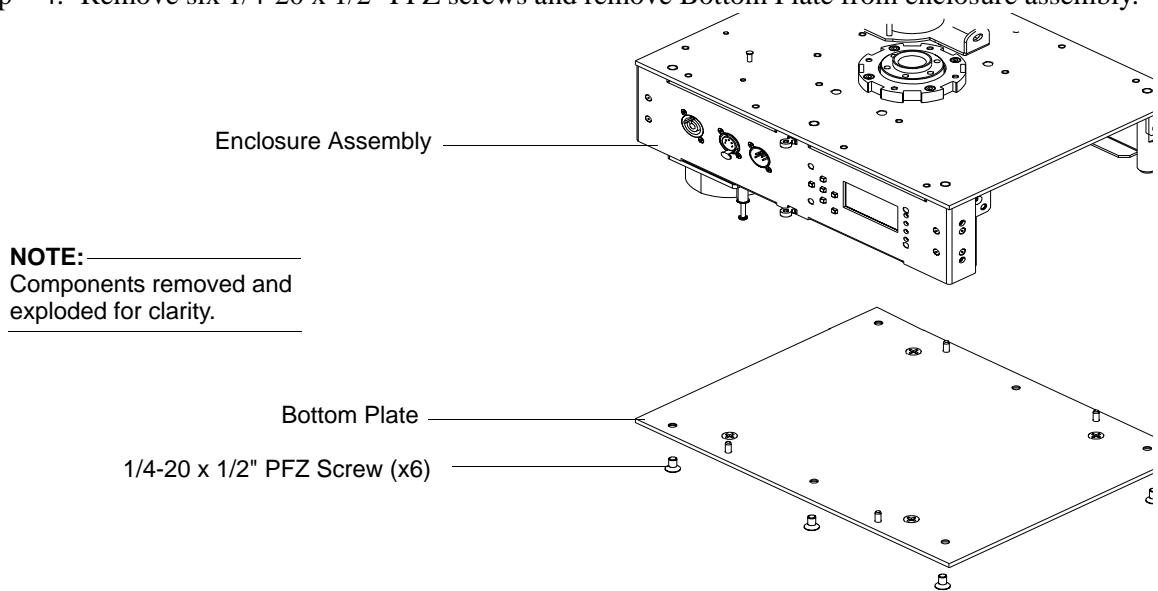


Figure 2-55: Enclosure Assembly Bottom Plate Removal

- Step 5. Remove pan motor assembly as described in [“Pan Motor Assembly Replacement”](#) on page 69.

Step 6. At Wire Tray, remove four 8-32 x 1/4" PPZ SEMS screws and remove tray.

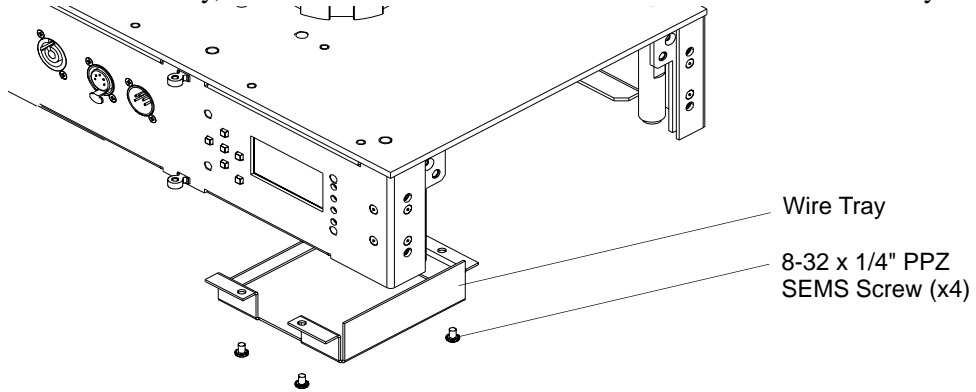


Figure 2-56: Wire tray Removal

Step 7. Disconnect all wiring from inside enclosure

Step 8. At pan pulley cover, remove four 8-32 KEPS nuts and remove cover.

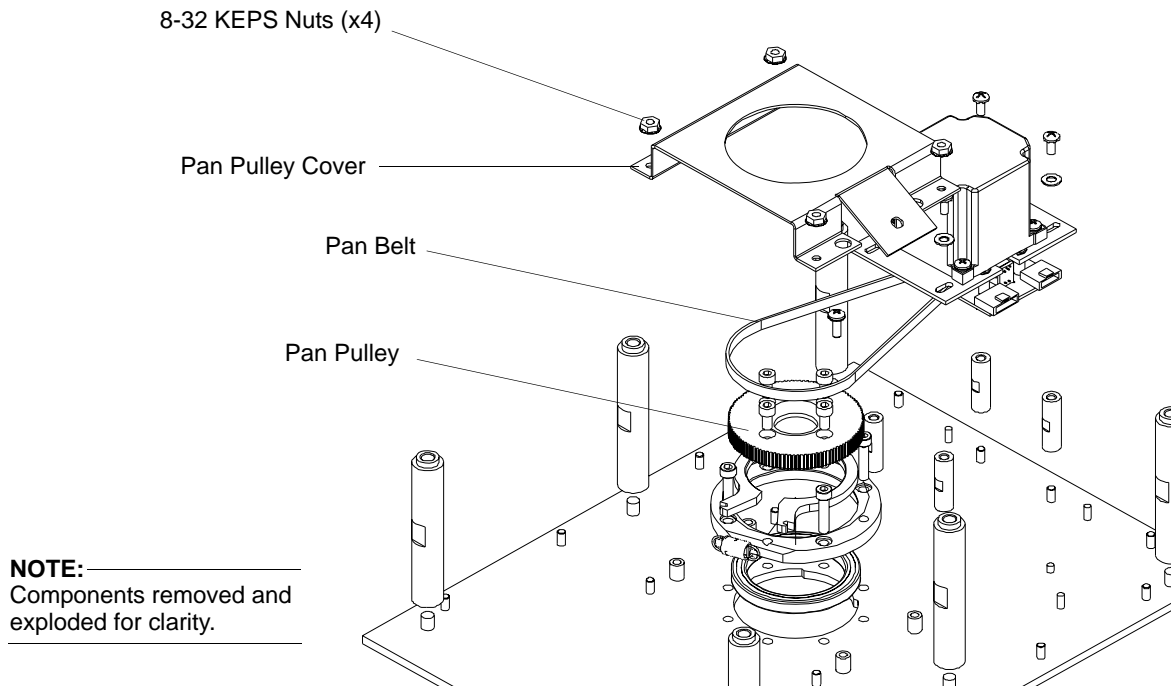


Figure 2-57: Pan Pulley Cover Removal

Step 9. Slide pan belt over and off pan pulley.

Step 10. Reassemble by performing steps in reverse order.

Note: Ensure proper belt tension when replacing.

Pan Stabilizer Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

To remove the stabilizer:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
- Step 2. Remove Ballast / LVS assembly as described in [“Ballast / LVS Assembly Replacement”](#) on page 60.



WARNING: Do not set head on or damage front lens during next step!

- Step 3. Carefully, flip luminaire to access bottom of enclosure. Do not set on lens.
- Step 4. Remove six 1/4-20 x 1/2" PFZ screws and remove Bottom Plate from enclosure assembly.

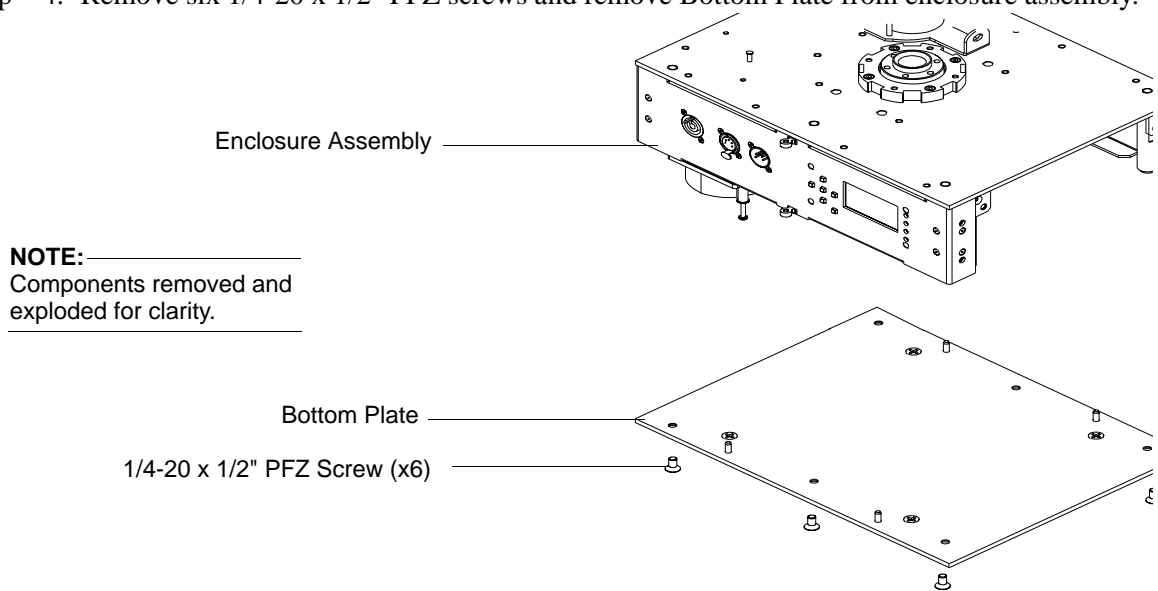


Figure 2-58: Enclosure Assembly Bottom Plate Removal

- Step 5. Remove pan motor assembly as described in [“Pan Motor Assembly Replacement”](#) on page 69.

Step 6. At Wire Tray, remove four 8-32 x 1/4" PPZ SEMS screws and remove tray.

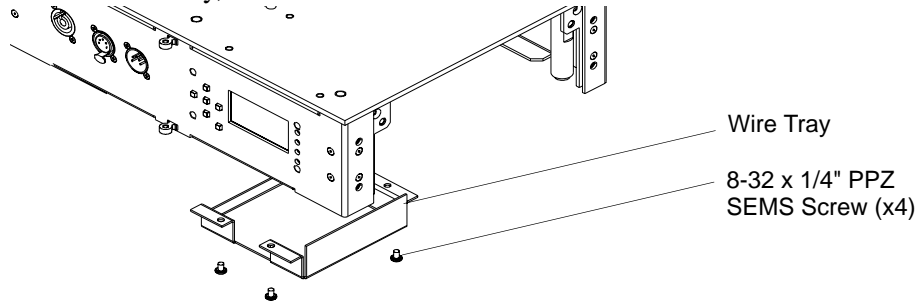


Figure 2-59: Wire tray Removal

Step 7. At pan pulley cover, remove four 8-32 KEPS nuts and remove cover.

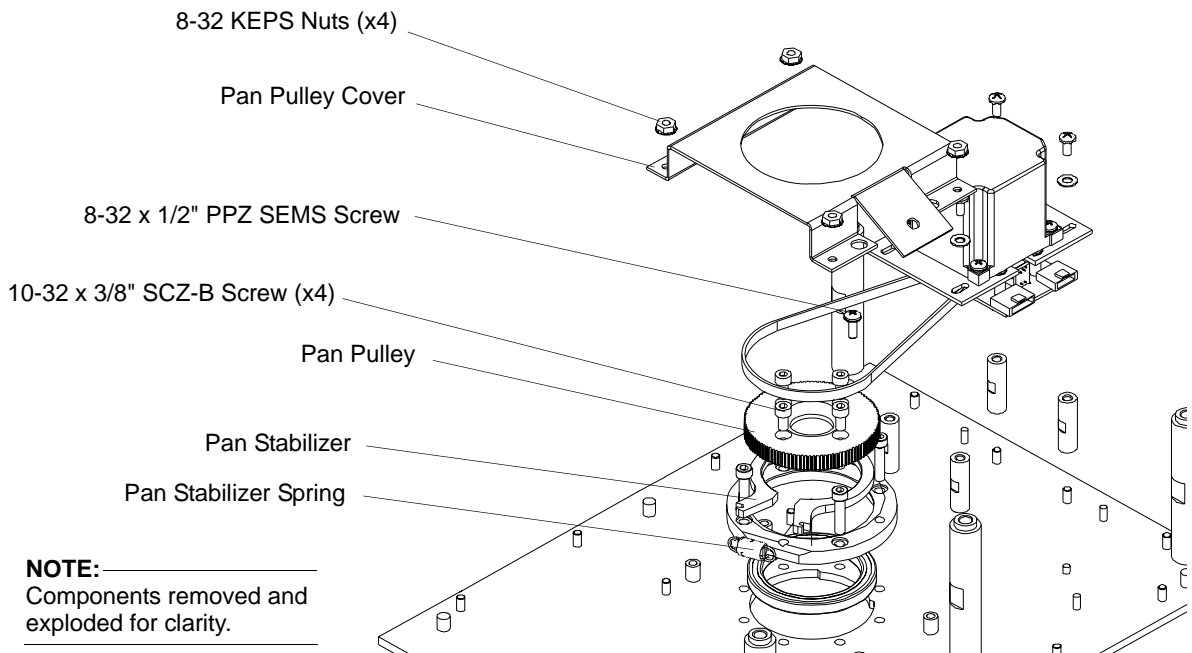


Figure 2-60: Pan Pulley Cover Removal

Step 8. Slide pan belt over and off pan pulley.

Step 9. Using 5/32" Allen driver, remove four 10-32 x 3/8" SCZ-B screws and remove pulley from pan tube.

Step 10. At Stabilizer mount, remove one 8-32 x 1/2" PPZ SEMS screw.

Step 11. Remove spring from stabilizer, pass stabilizer around wiring harness. **IMPORTANT! When replacing stabilizer, install new spring.**

Step 12. Reassemble by performing steps in reverse order.

Note: Ensure proper belt tension when replacing.

Enclosure Fan Assemblies Replacement



WARNING: Ensure that power is completely removed (disconnected) from luminaire before attempting any work.

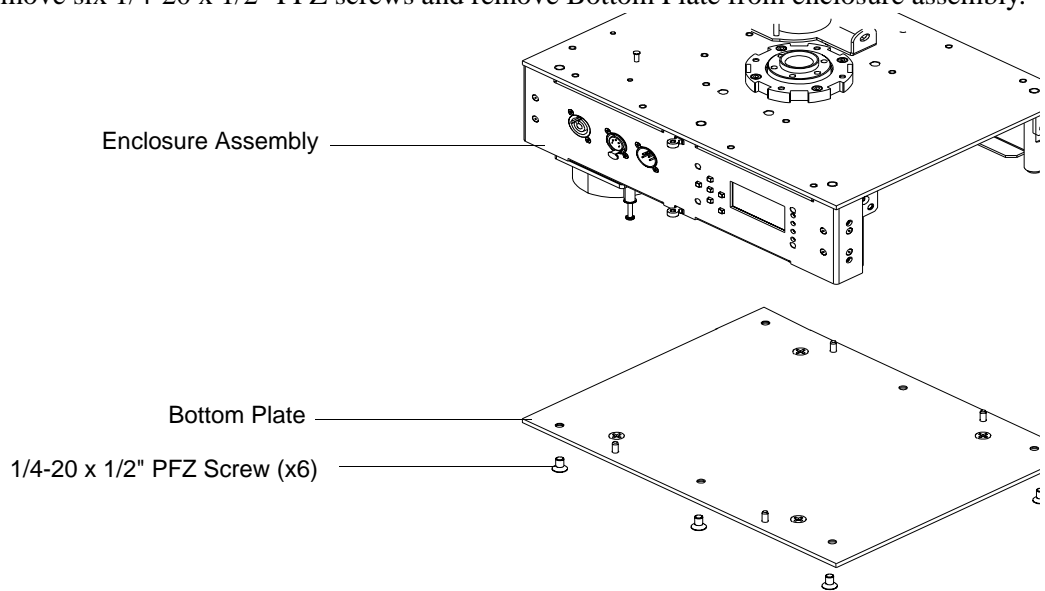
To remove one or both enclosure fan assemblies:

- Step 1. Ensure power is completely removed from luminaire and luminaire has cooled completely.
- Step 2. Remove Ballast / LVS assembly as described in “[Ballast / LVS Assembly Replacement](#)” on page 60.



WARNING: Do not set head on or damage front lens during next step!

- Step 3. Carefully, flip luminaire to access bottom of enclosure. Do not set on lens.
- Step 4. Remove six 1/4-20 x 1/2" PFZ screws and remove Bottom Plate from enclosure assembly.



NOTE:
Components removed and exploded for clarity.

Figure 2-61: Enclosure Assembly Bottom Plate Removal

Step 5. As indicated in Figure 2-47, remove both fan assemblies by removing two 6-32 x 1/4" PPZ SEMS screws for each assembly.

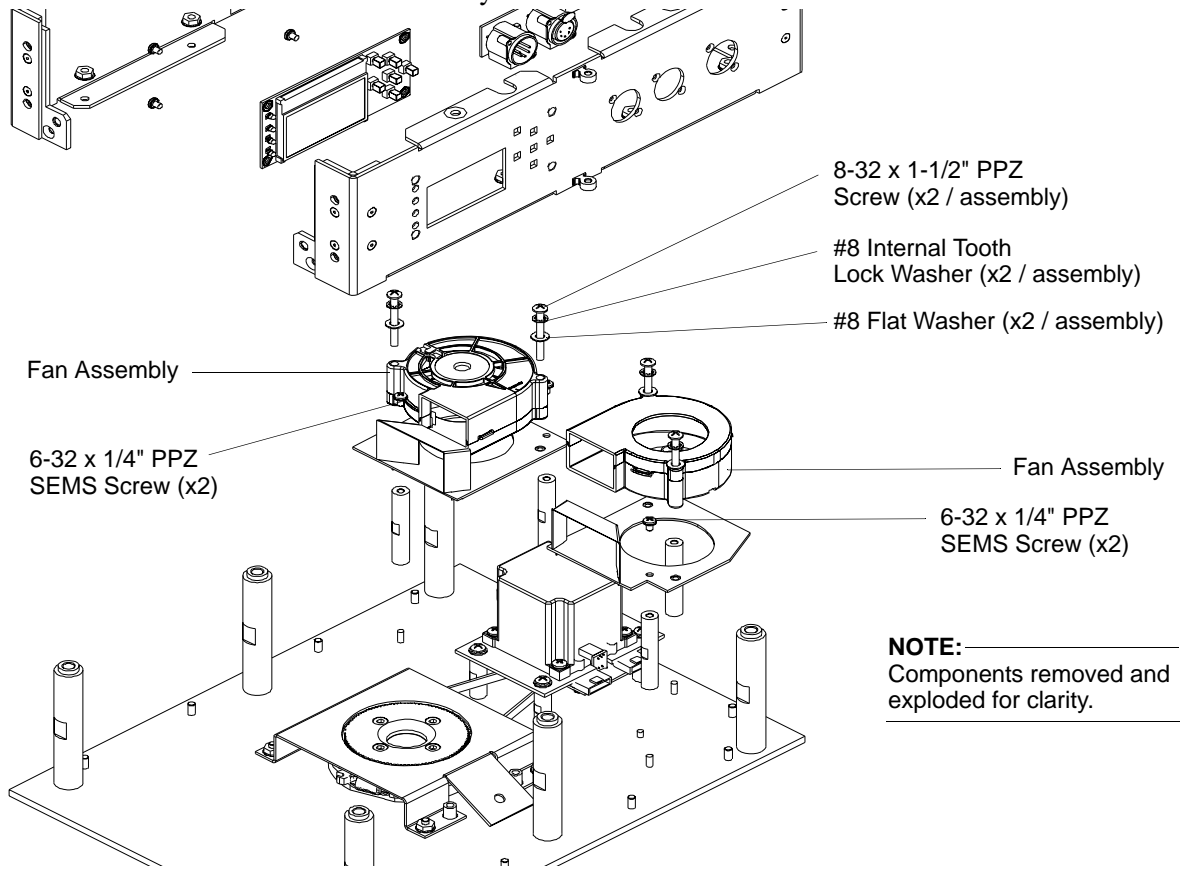


Figure 2-62: Enclosure Fan Assemblies Removal

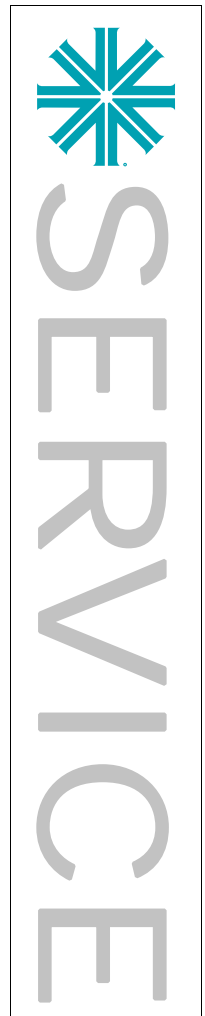
- Step 6. Remove fan from mounting assembly by removing two 6-32 x 1-1/2" PPZ screws, #8 internal tooth lock washers, and #8 flat washers (per assembly).
- Step 7. Disconnect wiring and remove fans.
- Step 8. Reassemble by performing steps in reverse order.

CHAPTER 3.

Illustrated Parts Breakdown

This chapter contains illustrated parts breakdowns for all VL440 / VL770 / VL880 Spot Luminaires assemblies.

- **VL440 Spot Luminaire Drawing Tree**
- **VL770 Spot Luminaire Drawing Tree**
- **VL880 Spot Luminaire Drawing Tree**
- **Top Assembly**
- **Head Assembly**
- **Enclosure Assembly**
- **Cable Assemblies**



Drawing Trees

VL440 Spot Luminaire Drawing Tree

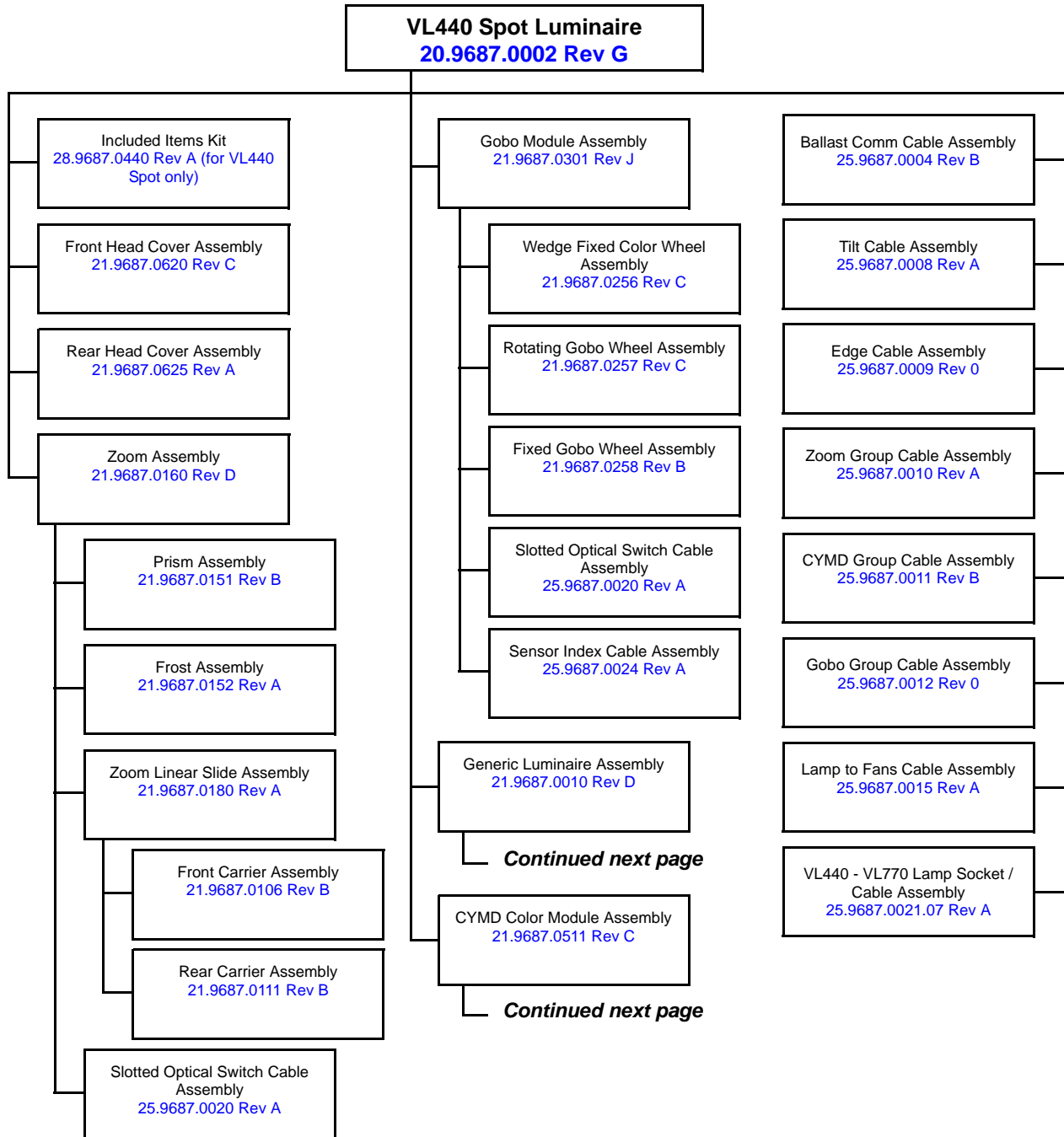


Figure 3-1: VL440 Spot Luminaire Subassembly Drawing Tree Part 1

VL440 Spot Luminaire Drawing Tree (continued)

Continued from previous page

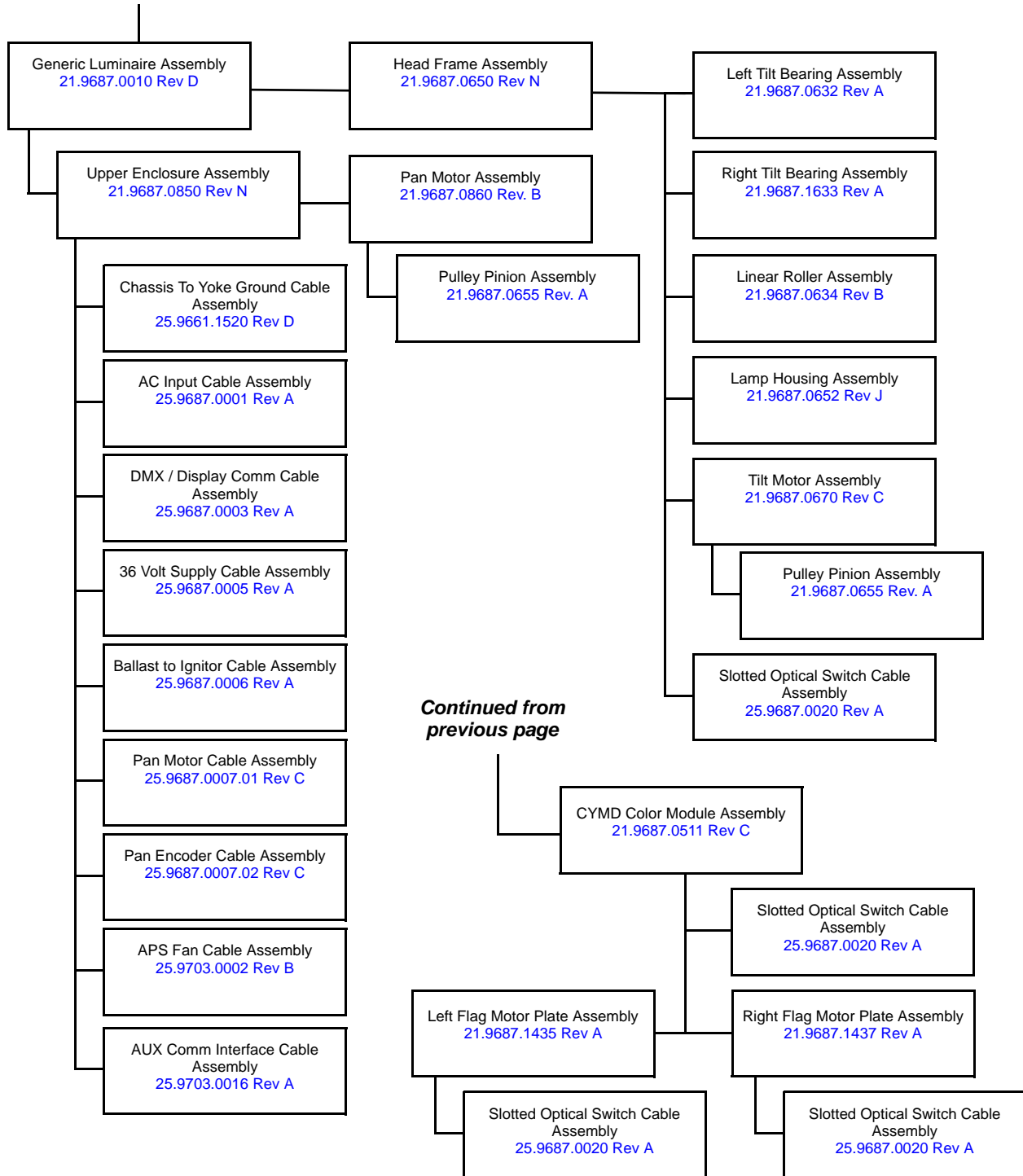


Figure 3-2: VL440 Spot Luminaire Subassembly Drawing Tree Part 2

VL770 Spot Luminaire Drawing Tree

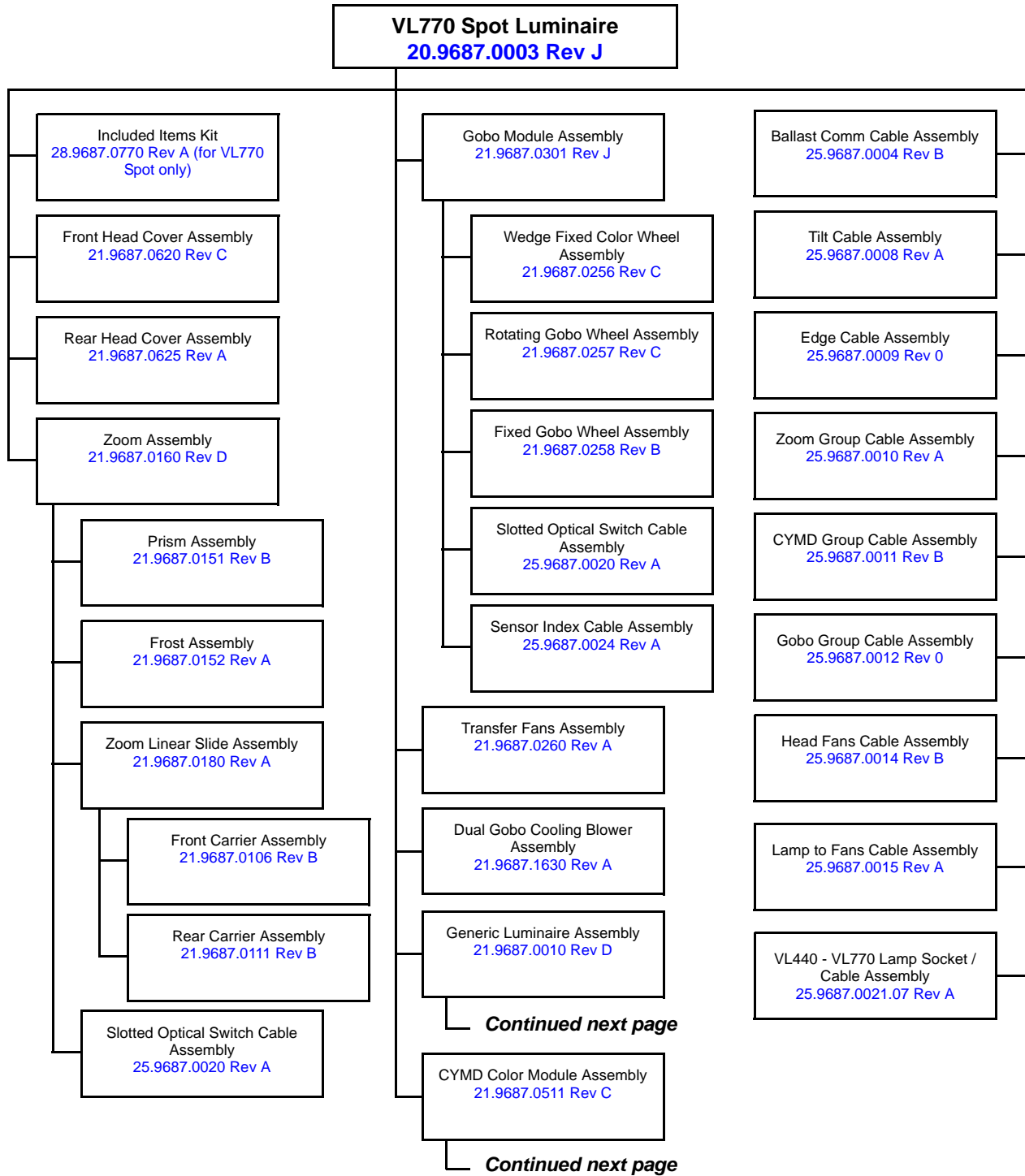


Figure 3-3: VL770 Spot Luminaire Subassembly Drawing Tree Part 1

VL770 Spot Luminaire Drawing Tree (continued)

Continued from previous page

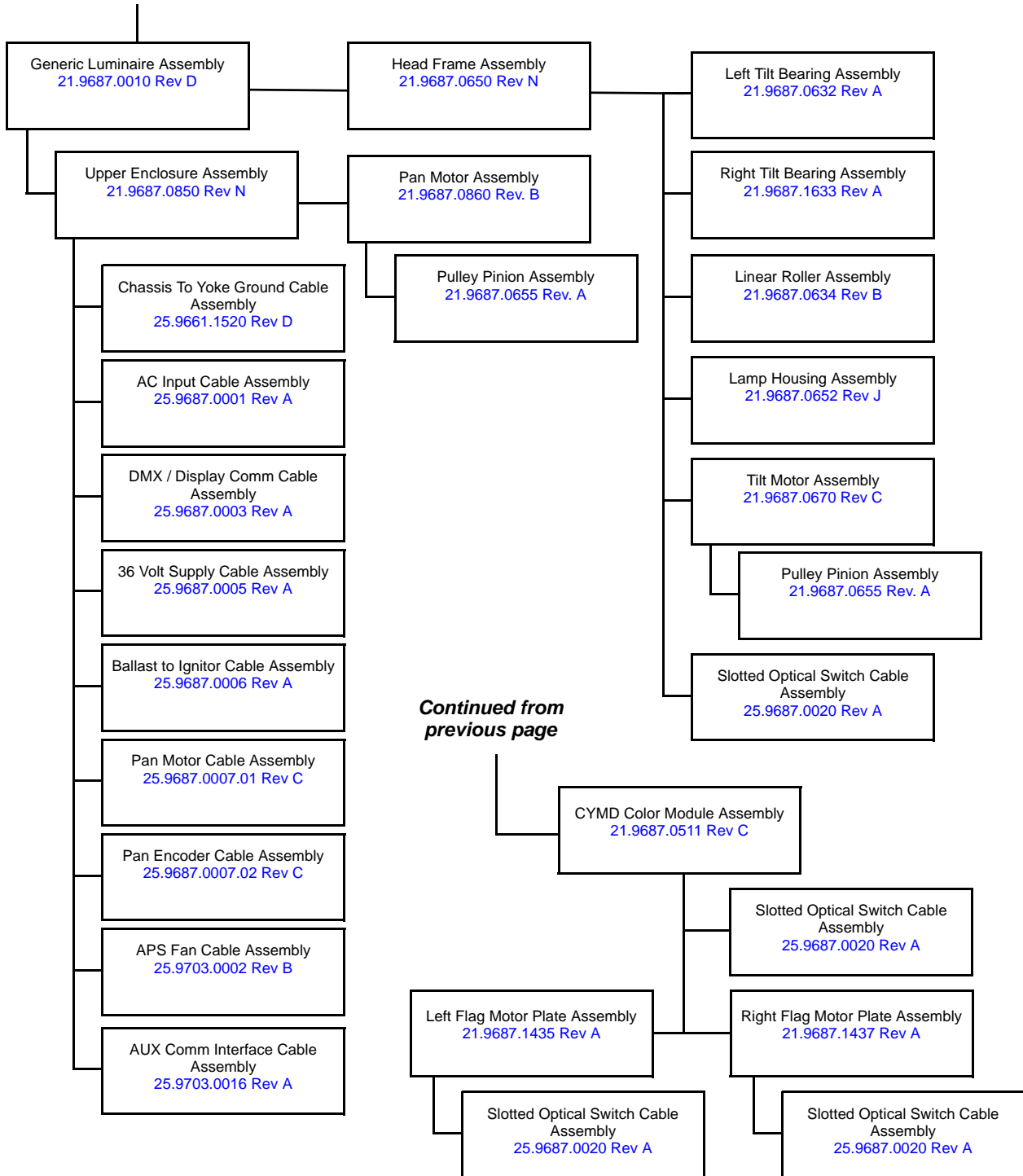


Figure 3-4: VL770 Spot Luminaire Subassembly Drawing Tree Part 2

VL880 Spot Luminaire Drawing Tree

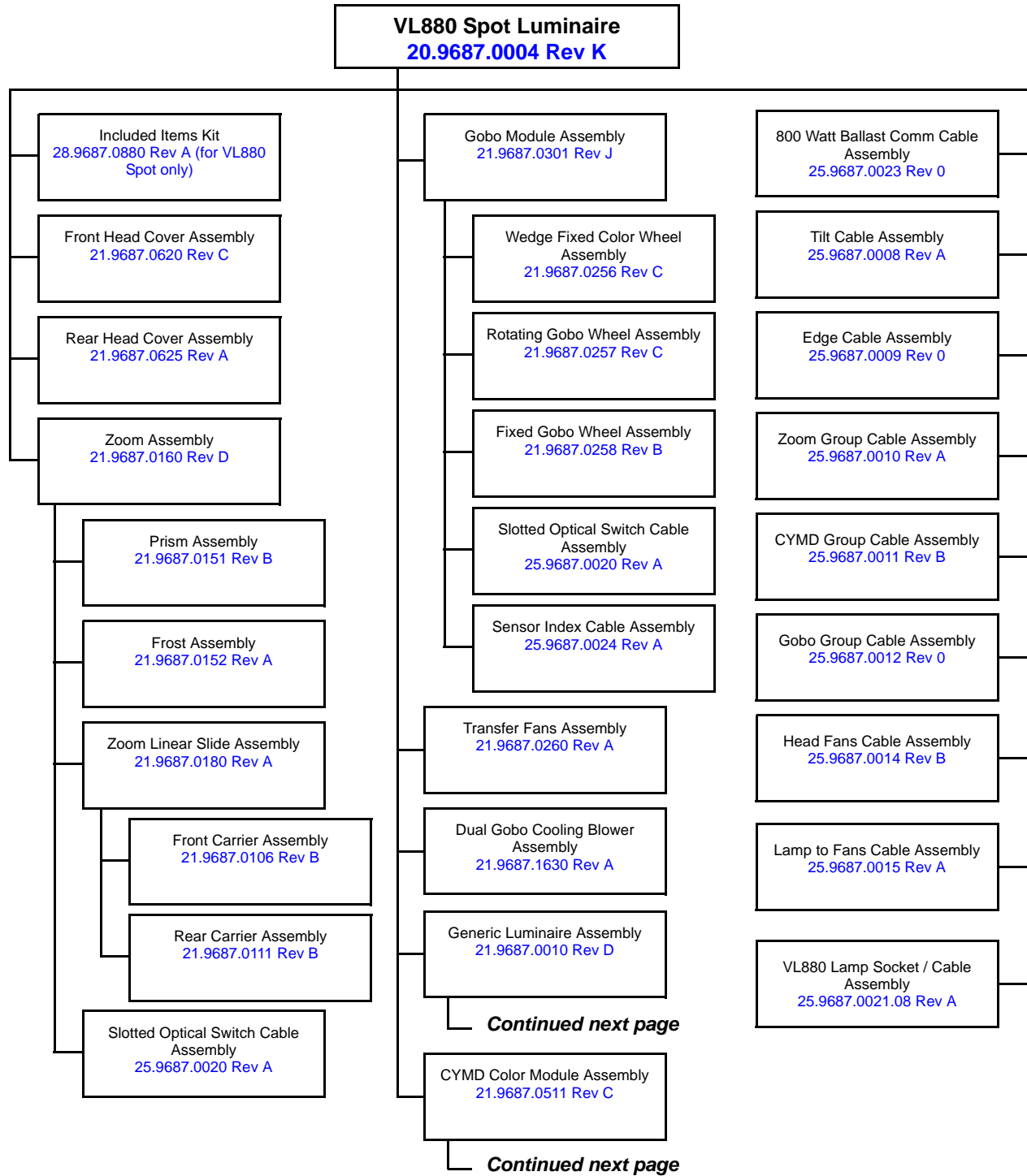


Figure 3-5: VL880 Spot Luminaire Subassembly Drawing Tree Part 1

VL880 Spot Luminaire Drawing Tree (continued)

Continued from previous page

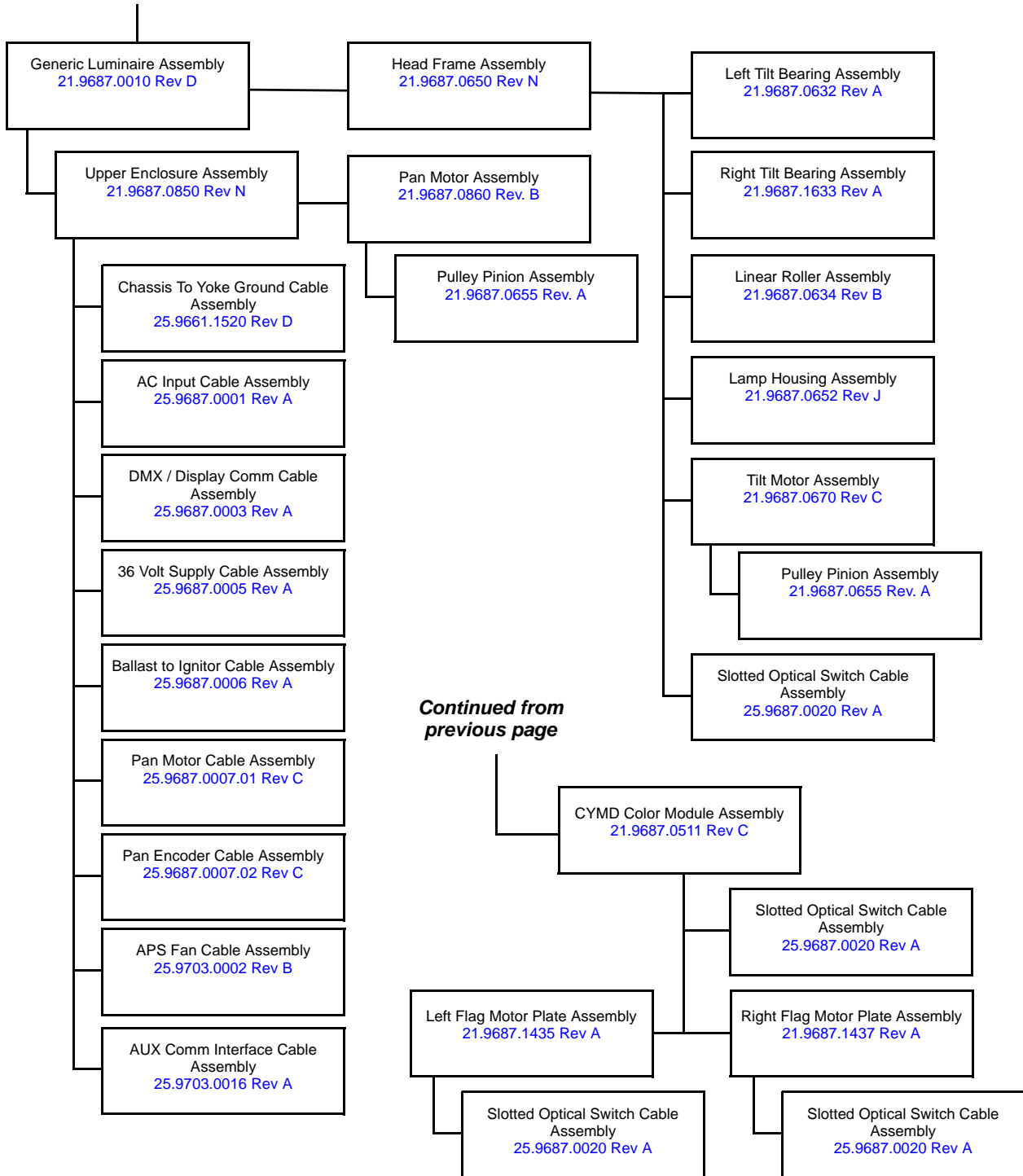


Figure 3-6: VL880 Spot Luminaire Subassembly Drawing Tree Part 2

Top Assembly

Included Items Kit

28.9687.0440 Rev A (for VL440 Spot only)

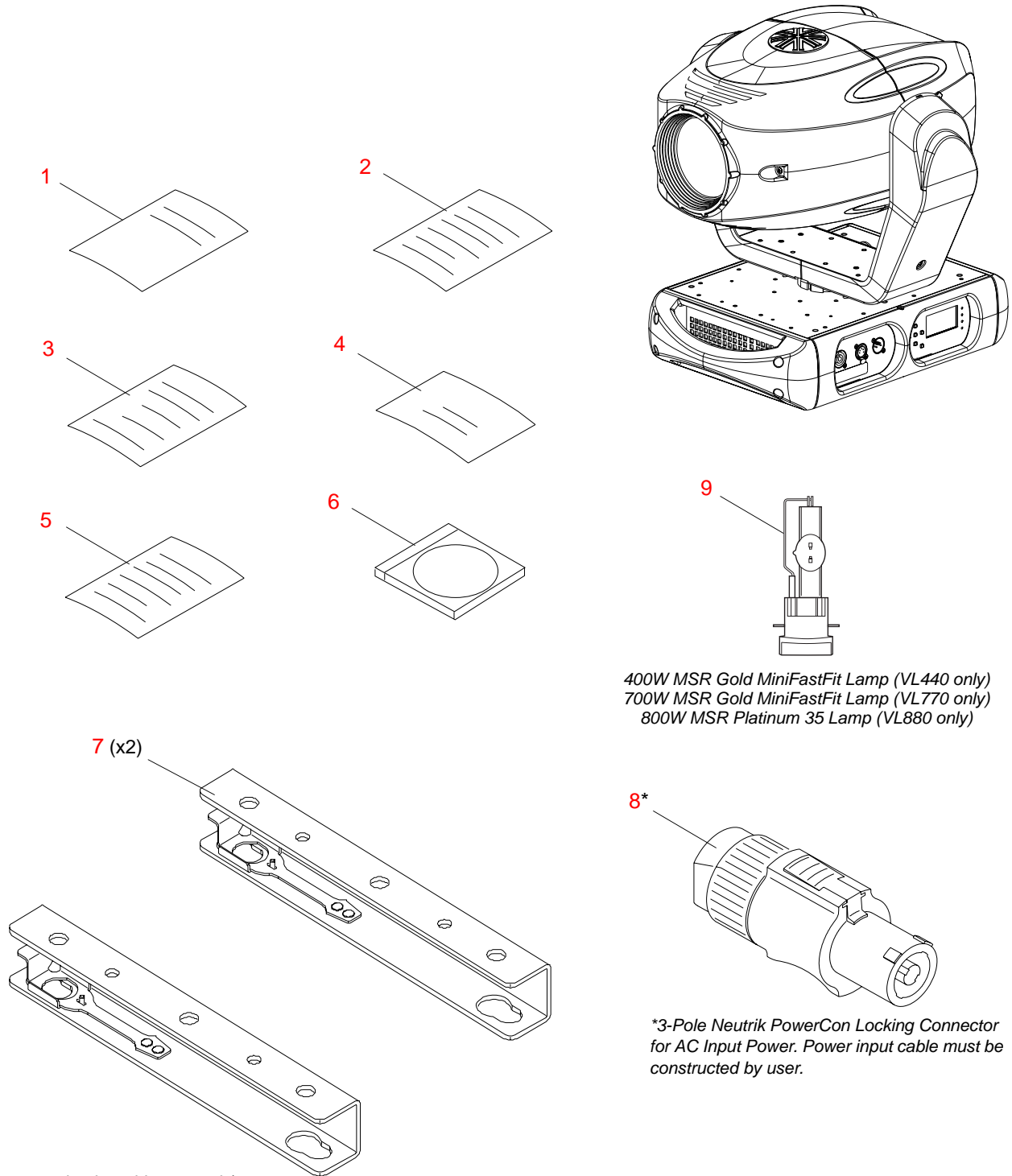
28.9687.0770 Rev A (for VL770 Spot only)

28.9687.0880 Rev A (for VL880 Spot only)

Refer to [Figure 3-7](#).

No.	Item	Qty.	UM.	Description
1	02.8001.0001	1	EA	PRODUCT SUPPORT SHEET, VARI-LITE CUSTOMER SERVICE
2	02.8001.0002	1	EA	VARI-LITE QUALITY ASSURANCE SHEET
3	02.8052.0001	1	EA	CARD, LIMITED WARRANTY
4	02.8700.0001	1	EA	CARD, PRODUCT REGISTRATION
5	02.9697.0002	1	EA	UNPACK/QUICK START SHEET, VL440 / VL770 / VL880 SPOT
-	04.4037.0001	5	EA	LABEL, 2.5 X .5 BARCODE (not shown)
-	04.9678.1001	2	EA	LABEL, GREEN ROHS COMPLIANT (not shown)
-	06.9687.0001	1	EA	SHIPPING FOAM (not shown)
-	07.5044.0001	1	EA	BAG, DESICCANT, SHIPPING BOX (not shown)
-	07.9687.0001	1	EA	CARDBOARD SHIPPING BOX, VL440/VL770/VL880 (not shown)
6	08.9687.0001	1	EA	CD-ROM, VL440/VL770/VL880 PRODUCT DOCUMENTATION, USER
7	22.9687.0805	2	EA	FAB ASSY, BRACKET TRUSS HOOK
8	52.6541.0001	1	EA	CONN., BLUE CABLE POWER INLET POWERCON
9	71.9687.0400	1	EA	LAMP, PHILIPS MSR400SA PGJ28 (VL440 SPOT ONLY)
	71.9687.0700	1	EA	LAMP, PHILIPS MSR700SA PGJ28 (VL770 SPOT ONLY)
	71.9687.0800	1	EA	LAMP, PHILIPS PLATINUM 35 800W PGJ28 (VL880 SPOT ONLY)

Included Items Kit (continued)



400W MSR Gold MiniFastFit Lamp (VL440 only)
 700W MSR Gold MiniFastFit Lamp (VL770 only)
 800W MSR Platinum 35 Lamp (VL880 only)

*3-Pole Neutrik PowerCon Locking Connector
 for AC Input Power. Power input cable must be
 constructed by user.

(Note, truss hooks sold separately)

Figure 3-7: Included Items Kit

VL440 Spot Luminaire

20.9687.0002 Rev G

Refer to [Figure 3-8](#), [Figure 3-9](#) and [Figure 3-10](#).

No.	Item	Qty.	UM.	Description
1	04.9687.0120	1	EA	PRODUCT ID LABEL, MODEL VL 440 SPOT
2	10.9687.0720	2	EA	YOKE ARM COVER
3	10.9687.0846	1	EA	PLATE, BALLAST LOCK
4	10.9687.0850	2	EA	BASE COVER, DISPLAY SIDE
5	10.9687.0852	2	EA	BASE COVER, HANDLE SIDE
6	10.9687.0855	2	EA	SCREEN, INLET / EXHAUST
7	10.9687.1102	1	EA	AIR DEFLECTOR, SVL
8	10.9687.1672.04	1	EA	REAR PLATE, VL440
9	21.9687.0010	1	EA	ASSY, SVL, GENERIC LUMINAIRE
10	21.9687.0160	1	EA	ASSY, ZOOM
11	21.9687.0301	1	EA	ASSY, GOBO MODULE
12	21.9687.0511	1	EA	ASSY, CYMD MODULE
13	21.9687.0620	1	EA	ASSY, HEAD COVER, FRONT
14	21.9687.0625	1	EA	ASSY, HEAD COVER, REAR
15	21.9687.0630	1	EA	ASSY, LAMP COVER
-	25.9687.0004	1	EA	CABLE ASSY, BALLAST COMM (not shown)
-	25.9687.0008	1	EA	CABLE ASSY, TILT (not shown)
-	25.9687.0009	1	EA	CABLE ASSY, EDGE (not shown)
-	25.9687.0010	1	EA	CABLE ASSY, ZOOM GROUP (not shown)
-	25.9687.0011	1	EA	CABLE ASSY, CMYD GROUP (not shown)
-	25.9687.0012	1	EA	CABLE ASSY, GOBO GROUP (not shown)
-	25.9687.0015	1	EA	CABLE ASSY, LAMP TO FANS (not shown)
-	25.9687.0021.07	1	EA	VL440 - 770 LAMP SOCKET ASSEMBLY (not shown)
-	28.9687.0440	1	EA	INCLUDED ITEMS KIT, VL440 SPOT (not shown)
16	53.2200.0004	1	EA	NUT, KEPS, #4-40
17	53.6517.0001	2	EA	SCREW, 10-32 X 3/8 PPZ
18	53.6545.0003	2	EA	SCREW, 8-32 X 3/8" PFZ
19	53.6553.0008	2	EA	SCREW, 10-32 X 9/16" PFB
20	53.6575.0009	6	EA	SCREW, 8-32 X 3/8" PPB SEMS
21	53.6575.0010	4	EA	SCREW, 8-32 X 1/2" PPZ SEMS
22	53.6580.0001	2	EA	SCREW, 4-40 X 1-3/8" PPZ

No.	Item	Qty.	UM.	Description
23	53.6627.0001	8	EA	SCREW, 10-32 X 5/8" PPB
24	55.2233.2001	2	EA	DZUS RAPIER MINI CLIP ON RETAINER
25	55.3301.0004	2	EA	WASHER, #4 FLAT SS
26	68.9665.0350	1	EA	IGNITOR, 350W / 400W
27	69.9687.0400	1	EA	ASSY, BALLAST 400W / 150W LVS
28	10.9687.1614	1	EA	BLOCKING PLATE, FAN LAMP COOLING
29	10.9687.1615	1	EA	AIR DIVERTER, SINGLE BLOWER, LAMP COOLING
30	40.9687.0001	1	EA	BLOWER, 75 X 30, 85C, HI-FLOW
31	53.6581.0002	2	EA	SCREW, 4-40 X 1-1/2" PPZ
32	53.6597.0001	2	EA	SCREW, 4-40 X 3/16" PPZ
33	55.6546.0004	8	EA	WASHER, TEFLON, 0.201" ID X 0.433" OD
34	55.6568.0115	2	EA	SPRING, CPRSN, 0.300" OD, 1.25" LG, 0.022" WD MW

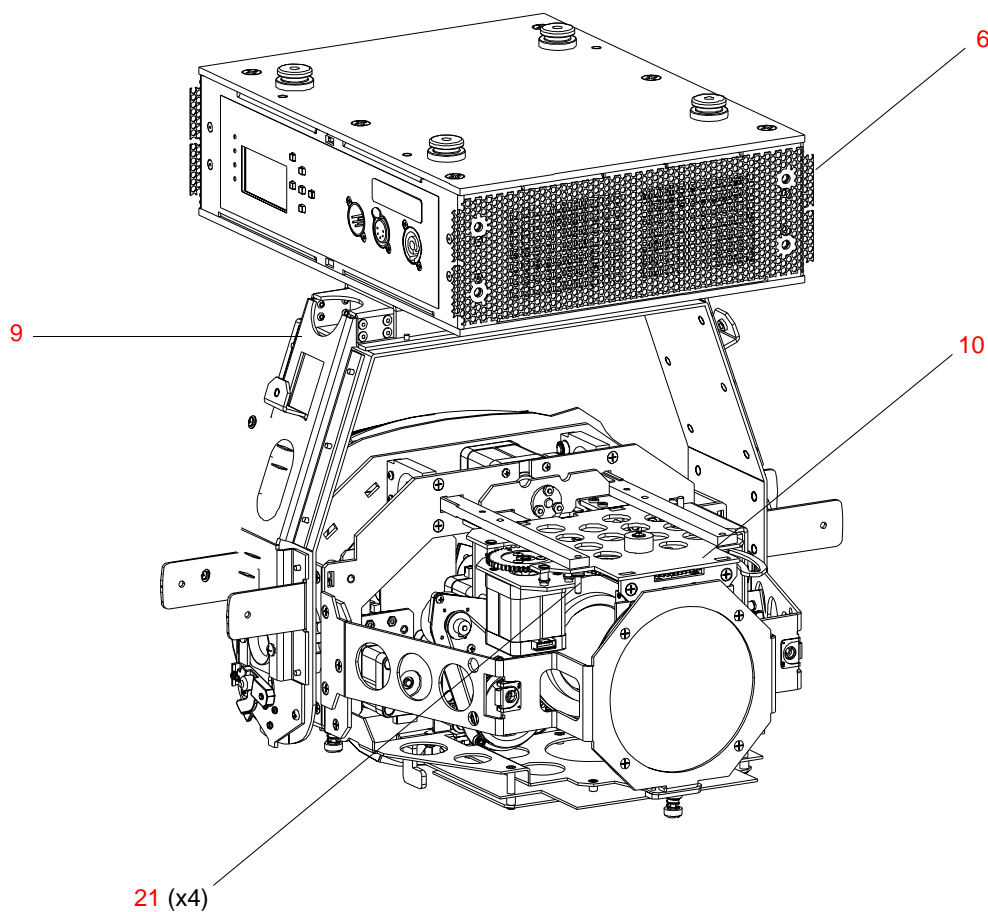


Figure 3-8: VL440 Spot Luminaire

VL440 Spot Luminaire (continued)

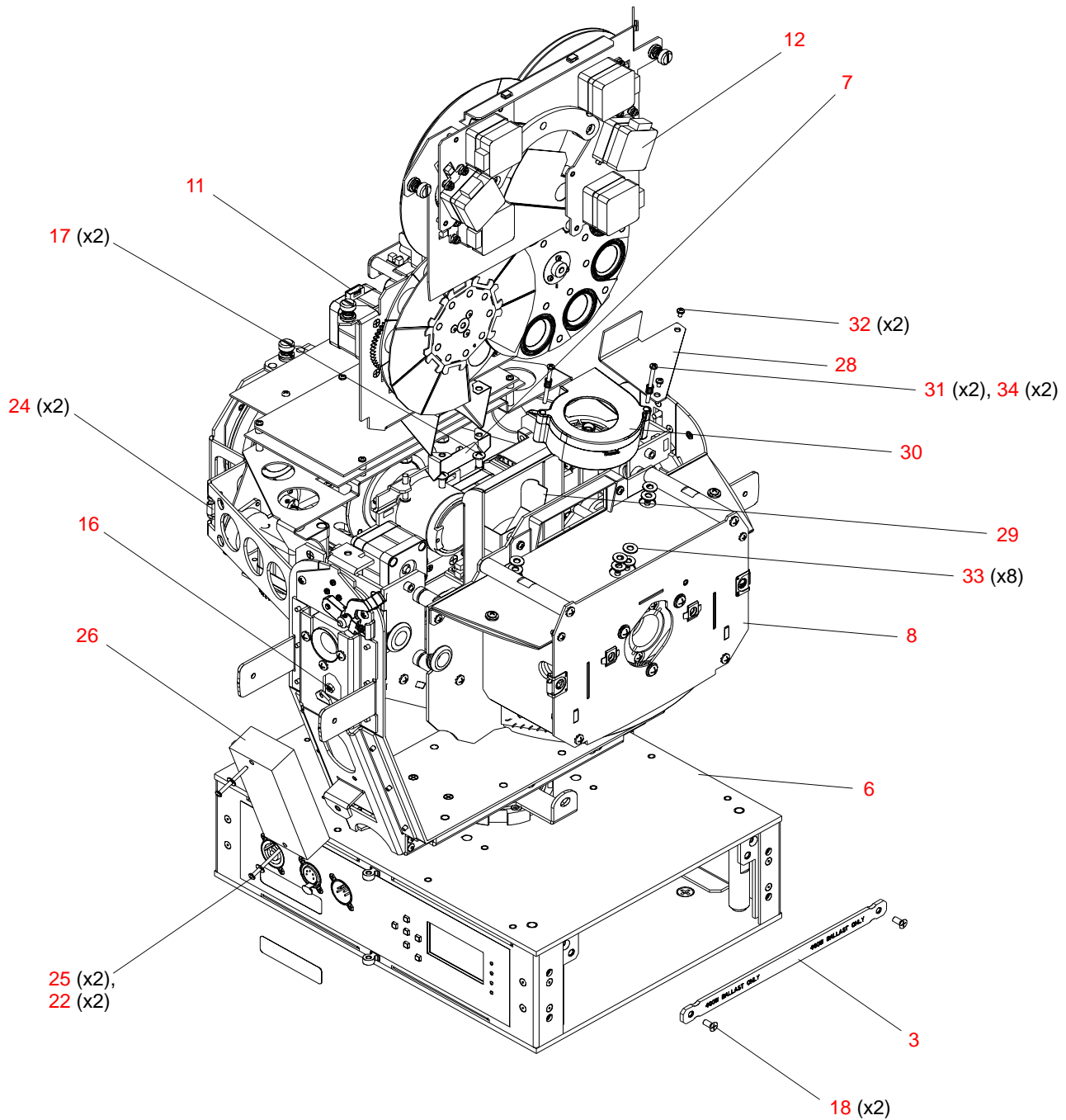


Figure 3-9: VL440 Spot Luminaire

VL440 Spot Luminaire (continued)

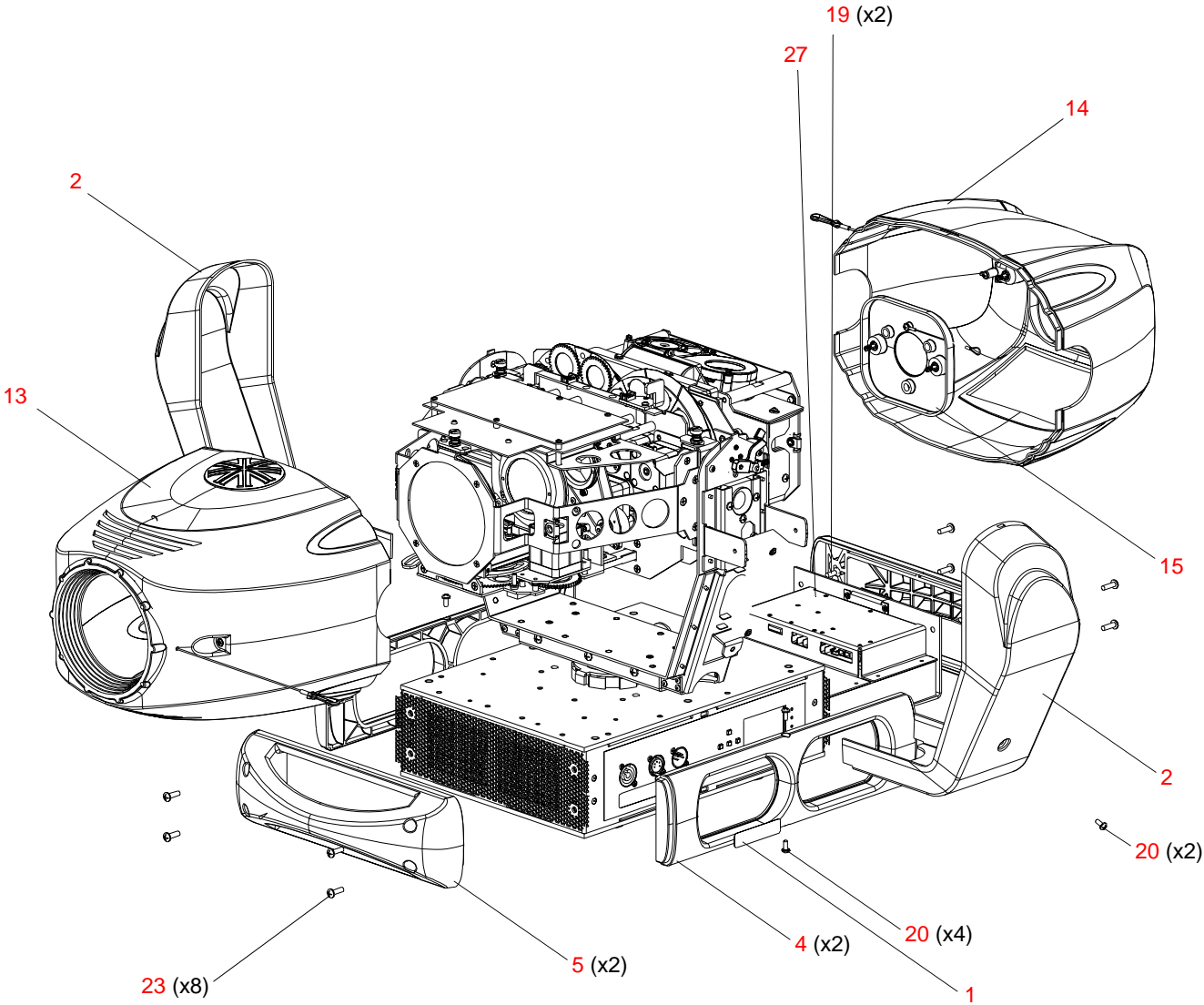


Figure 3-10: VL440 Spot Luminaire

VL770 Spot Luminaire

20.9687.0003 Rev J

Refer to [Figure 3-11](#), [Figure 3-12](#) and [Figure 3-13](#).

No.	Item	Qty.	UM.	Description
1	04.9687.0110	1	EA	PRODUCT ID LABEL, MODEL VL770 SPOT
2	10.9687.0720	2	EA	YOKE ARM COVER
3	10.9687.0850	2	EA	BASE COVER, DISPLAY SIDE
4	10.9687.0852	2	EA	BASE COVER, HANDLE SIDE
5	10.9687.0855	2	EA	SCREEN, INLET / EXHAUST
6	10.9687.1102	1	EA	AIR DEFLECTOR, SVL
7	10.9687.1672.07	1	EA	REAR PLATE, VL770
8	21.9687.0010	1	EA	ASSY, SVL, GENERIC LUMINAIRE
9	21.9687.0160	1	EA	ASSY, ZOOM
10	21.9687.0260	1	EA	ASSY, TRANSFER FANS
11	21.9687.0301	1	EA	ASSY, GOBO MODULE
12	21.9687.0511	1	EA	ASSY, CYMD MODULE
13	21.9687.0620	1	EA	ASSY, HEAD COVER, FRONT
14	21.9687.0625	1	EA	ASSY, HEAD COVER, REAR
15	21.9687.0630	1	EA	ASSY, LAMP COVER
16	21.9687.1630	1	EA	BLOWER ASSY, DUAL, GOBO COOLING
-	25.9687.0004	1	EA	CABLE ASSY, BALLAST COMM (not shown)
-	25.9687.0008	1	EA	CABLE ASSY, TILT (not shown)
-	25.9687.0009	1	EA	CABLE ASSY, EDGE (not shown)
-	25.9687.0010	1	EA	CABLE ASSY, ZOOM GROUP (not shown)
-	25.9687.0011	1	EA	CABLE ASSY, CMYD GROUP (not shown)
-	25.9687.0012	1	EA	CABLE ASSY, GOBO GROUP (not shown)
-	25.9687.0014	1	EA	CABLE ASSY, HEAD FANS (not shown)
-	25.9687.0015	1	EA	CABLE ASSY, LAMP TO FANS (not shown)
-	25.9687.0021.07	1	EA	VL440 - 770 LAMP SOCKET ASSEMBLY (not shown)
-	28.9687.0770	1	EA	INCLUDED ITEMS KIT, VL770 SPOT (not shown)
17	40.9687.0003	1	EA	FAN, AXIAL, 50 MM X 15 MM
18	53.2200.0004	1	EA	NUT, KEPS, #4-40
19	53.2200.0008	2	EA	NUT, KEPS, #8-32, KEPS SS
20	53.6517.0001	2	EA	SCREW, 10-32 X 3/8 PPZ
21	53.6553.0008	2	EA	SCREW, 10-32 X 9/16" PFB

No.	Item	Qty.	UM.	Description
22	53.6575.0003	2	EA	SCREW, 8-32 X 7/8" PPZ
23	53.6575.0009	6	EA	SCREW, 8-32 X 3/8" PPB SEMS
24	53.6575.0010	6	EA	SCREW, 8-32 X 1/2" PPZ SEMS
25	53.6580.0001	2	EA	SCREW, 4-40 X 1-3/8" PPZ
26	53.6609.0001	2	EA	SCREW, 6-32 X 3/8" PFZ
27	53.6627.0001	8	EA	SCREW, 10-32 X 5/8" PPB
28	55.2178.0001	2	EA	CABLE ANCHOR MOUNT, #8 SCREW
29	55.2233.2001	2	EA	DZUS RAPIER MINI CLIP ON RETAINER
30	55.3301.0004	2	EA	WASHER, #4 FLAT SS
31	68.9687.0001	1	EA	IGNITOR, 700W - 800W
32	69.9687.0700	1	EA	ASSY, BALLAST 700W / 150W LVS
33	10.9687.0610	1	EA	AIR DEFLECTOR, DUAL BLOWER
34	40.9687.0001	2	EA	BLOWER, 75 X 30, 85C, HI-FLOW
35	53.6581.0002	4	EA	SCREW, 4-40 X 1-1/2" PPZ
36	55.6546.0004	8	EA	WASHER, TEFLON, 0.201" ID X 0.433" OD
37	55.6568.0115	4	EA	SPRING, CPRSN, 0.300" OD, 1.25" LG, 0.022" WD MW

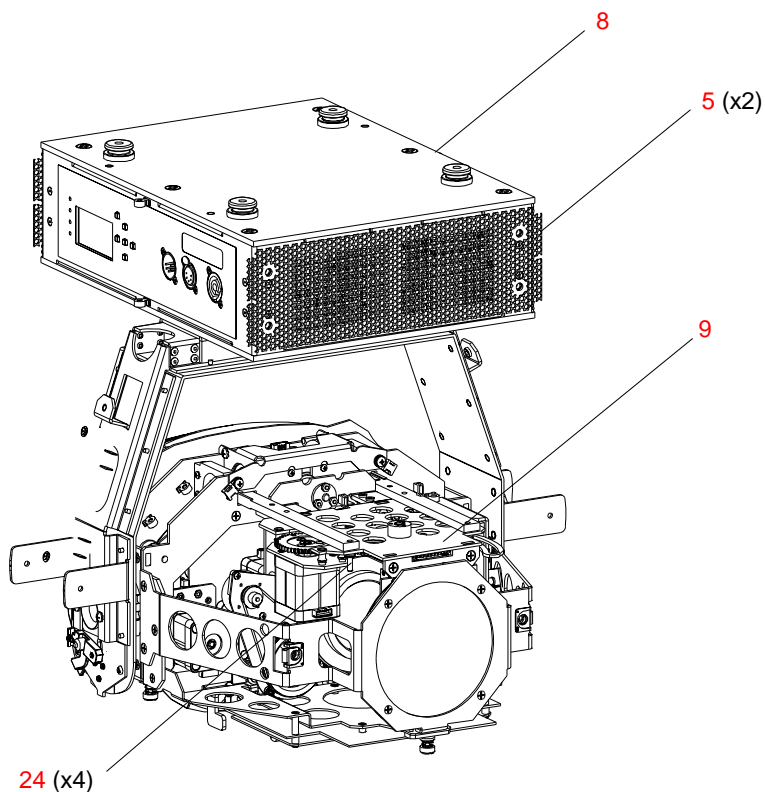


Figure 3-11: VL770 Spot Luminaire

VL770 Spot Luminaire (continued)

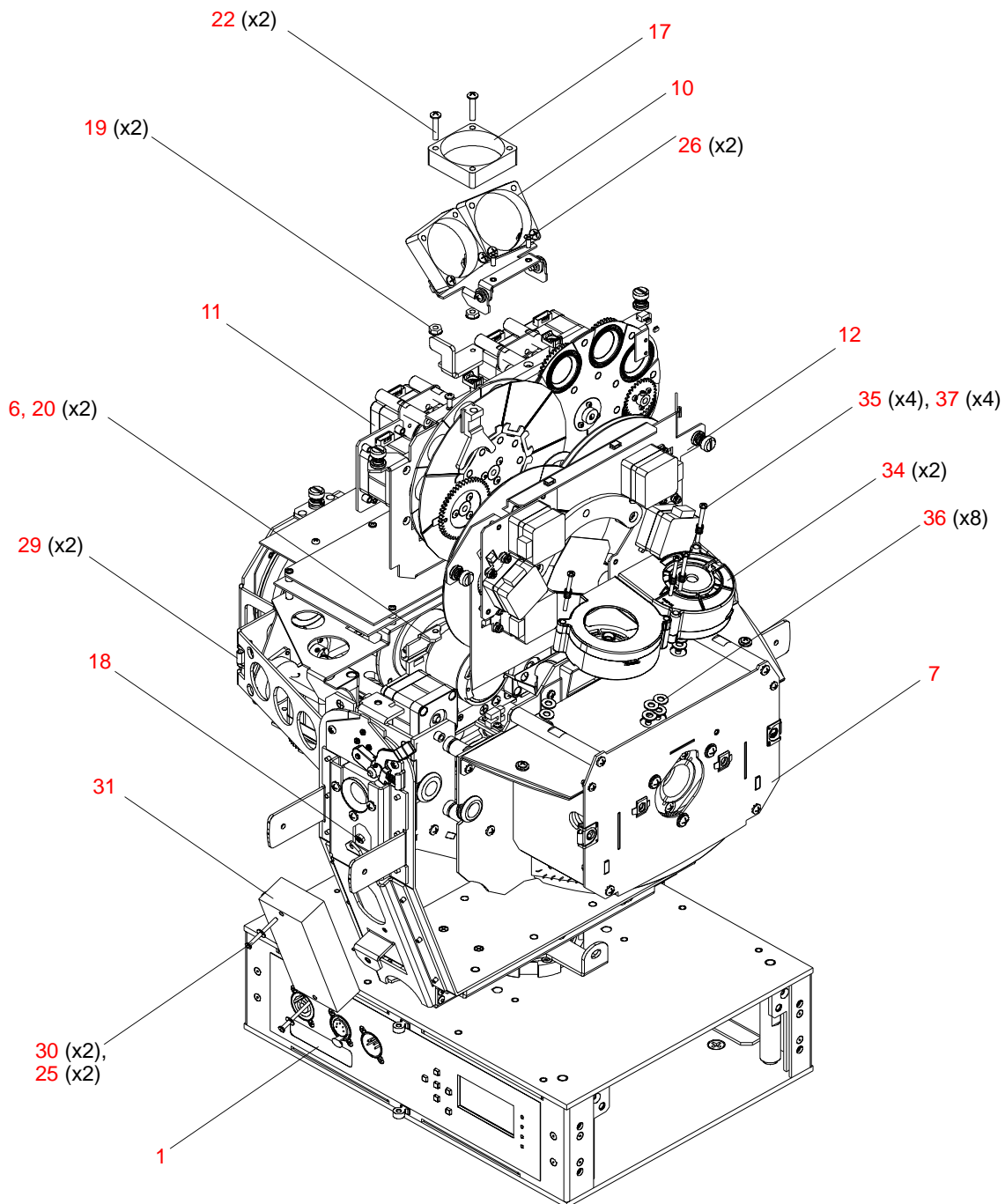


Figure 3-12: VL770 Spot Luminaire

VL770 Spot Luminaire (continued)

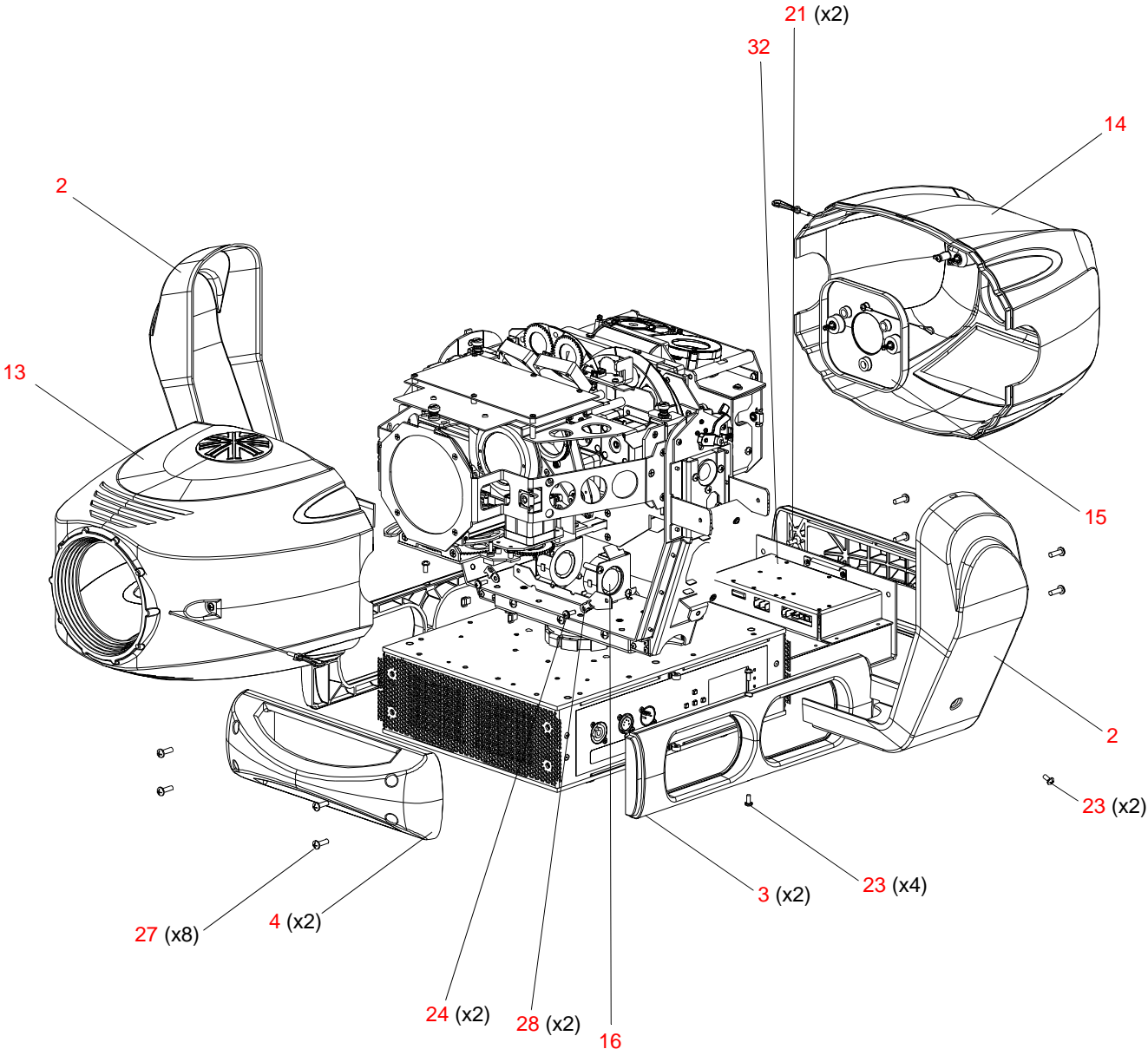


Figure 3-13: VL770 Spot Luminaire

VL880 Spot Luminaire

20.9687.0004 Rev K

Refer to [Figure 3-14](#), [Figure 3-15](#) and [Figure 3-16](#).

No.	Item	Qty.	UM.	Description
1	04.9687.0110	1	EA	PRODUCT ID LABEL, MODEL VL880 SPOT
2	10.9687.0720	2	EA	YOKE ARM COVER
3	10.9687.0850	2	EA	BASE COVER, DISPLAY SIDE
4	10.9687.0852	2	EA	BASE COVER, HANDLE SIDE
5	10.9687.0855	2	EA	SCREEN, INLET / EXHAUST
6	10.9687.1102	1	EA	AIR DEFLECTOR, SVL
7	10.9687.1672.08	1	EA	REAR PLATE, VL880
8	21.9687.0010	1	EA	ASSY, SVL, GENERIC LUMINAIRE
9	21.9687.0160	1	EA	ASSY, ZOOM
10	21.9687.0260	1	EA	ASSY, TRANSFER FANS
11	21.9687.0301	1	EA	ASSY, GOBO MODULE
12	21.9687.0511	1	EA	ASSY, CYMD MODULE
13	21.9687.0620	1	EA	ASSY, HEAD COVER, FRONT
14	21.9687.0625	1	EA	ASSY, HEAD COVER, REAR
15	21.9687.0630	1	EA	ASSY, LAMP COVER
16	21.9687.1630	1	EA	BLOWER ASSY, DUAL, GOBO COOLING
-	25.9687.0008	1	EA	CABLE ASSY, TILT (not shown)
-	25.9687.0009	1	EA	CABLE ASSY, EDGE (not shown)
-	25.9687.0010	1	EA	CABLE ASSY, ZOOM GROUP (not shown)
-	25.9687.0011	1	EA	CABLE ASSY, CMYD GROUP (not shown)
-	25.9687.0012	1	EA	CABLE ASSY, GOBO GROUP (not shown)
-	25.9687.0014	1	EA	CABLE ASSY, HEAD FANS (not shown)
-	25.9687.0015	1	EA	CABLE ASSY, LAMP TO FANS (not shown)
-	25.9687.0021.08	1	EA	VL880 LAMP SOCKET ASSEMBLY (not shown)
-	25.9687.0023	1	EA	CABLE ASSY, 800W BALLAST COMM (not shown)
-	28.9687.0880	1	EA	INCLUDED ITEMS KIT, VL770 SPOT (not shown)
17	40.9687.0003	1	EA	FAN, AXIAL, 50 MM X 15 MM
18	53.2200.0004	1	EA	NUT, KEPS, #4-40
19	53.2200.0008	2	EA	NUT, KEPS, #8-32, KEPS SS
20	53.6517.0001	2	EA	SCREW, 10-32 X 3/8 PPZ
21	53.6553.0008	2	EA	SCREW, 10-32 X 9/16" PFB

No.	Item	Qty.	UM.	Description
22	53.6575.0003	2	EA	SCREW, 8-32 X 7/8" PPZ
23	53.6575.0009	6	EA	SCREW, 8-32 X 3/8" PPB SEMS
24	53.6575.0010	6	EA	SCREW, 8-32 X 1/2" PPZ SEMS
25	53.6580.0001	2	EA	SCREW, 4-40 X 1-3/8" PPZ
26	53.6609.0001	2	EA	SCREW, 6-32 X 3/8" PFZ
27	53.6627.0001	8	EA	SCREW, 10-32 X 5/8" PPB
28	55.2178.0001	2	EA	CABLE ANCHOR MOUNT, #8 SCREW
29	55.2233.2001	2	EA	DZUS RAPIER MINI CLIP ON RETAINER
30	55.3301.0004	2	EA	WASHER, #4 FLAT SS
31	68.9687.0001	1	EA	IGNITOR, 700W - 800W
32	69.9687.0800	1	EA	ASSY, BALLAST 800W / 200W LVS
33	10.9687.0610	1	EA	AIR DEFLECTOR, DUAL BLOWER
34	40.9687.0001	2	EA	BLOWER, 75 X 30, 85C, HI-FLOW
35	53.6581.0002	4	EA	SCREW, 4-40 X 1-1/2" PPZ
36	55.6546.0004	8	EA	WASHER, TEFLON, 0.201" ID X 0.433" OD
37	55.6568.0115	4	EA	SPRING, CPRSN, 0.300" OD, 1.25" LG, 0.022" WD MW

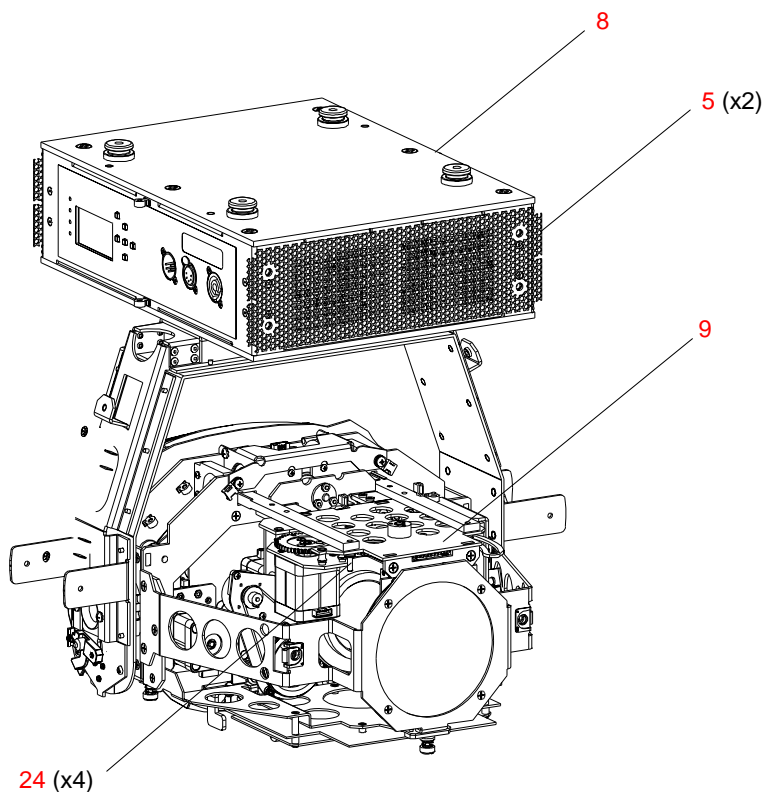


Figure 3-14: VL880 Spot Luminaire

VL880 Spot Luminaire (continued)

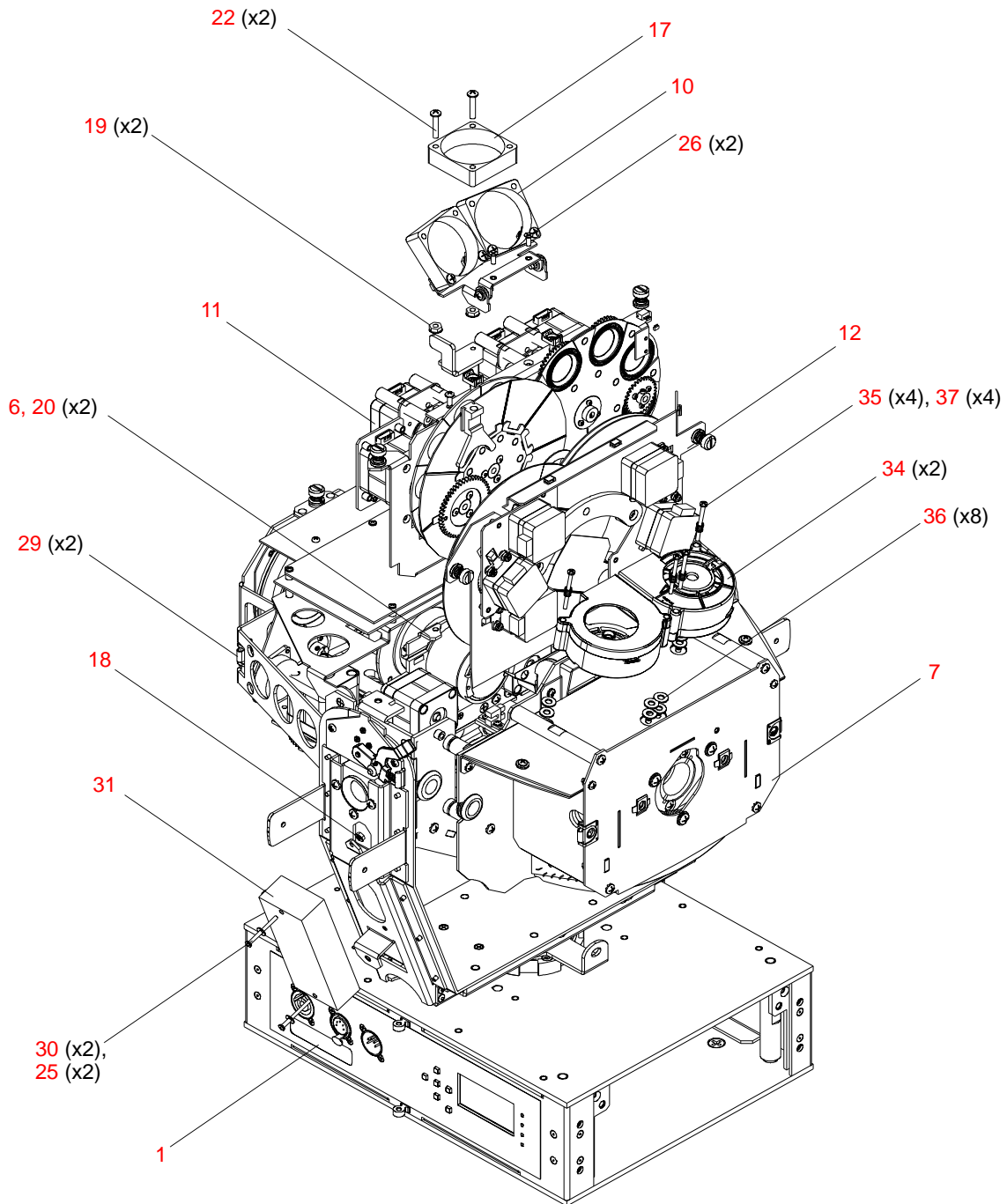


Figure 3-15: VL880 Spot Luminaire

VL880 Spot Luminaire (continued)

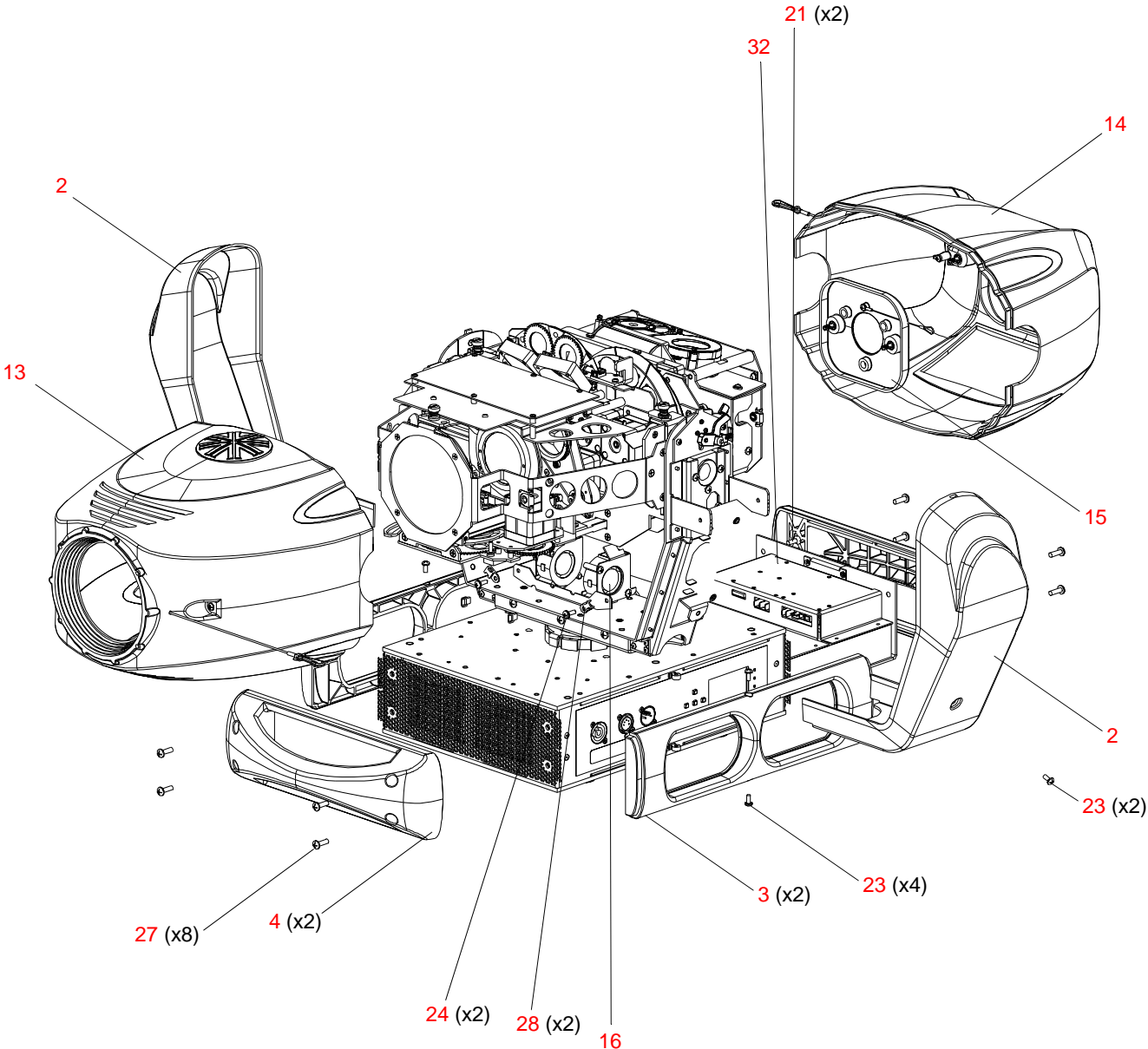


Figure 3-16: VL880 Spot Luminaire

Front Head Cover Assembly

21.9687.0620 Rev C

Refer to [Figure 3-17](#)

No.	Item	Qty.	UM.	Description
1	07.5049.0001	1	EA	LANYARD, NYLON, 8-INCH LONG
2	10.9687.0615	1	EA	FILTER FOAM, HEAD COVER, FRONT
3	10.9687.0620	1	EA	HEAD COVER, FRONT
4	10.9687.2653	1	EA	RETAINER, FILTER FOAM, HEAD COVER
5	53.5655.0250	3	EA	SCREW, #6 X 1/4" PPZ PLASTIC
6	55.2011.0003	1	EA	SNAP, SPRING 3/16" EYE DIA
7	55.2233.2003	2	EA	DZUS RAPIER 1/4-TURN STUD RETAINER, 5 MM
8	55.2233.2005	2	EA	DZUS RAPIER 1/4-TURN STUD, 5 MM, 12 MM LG

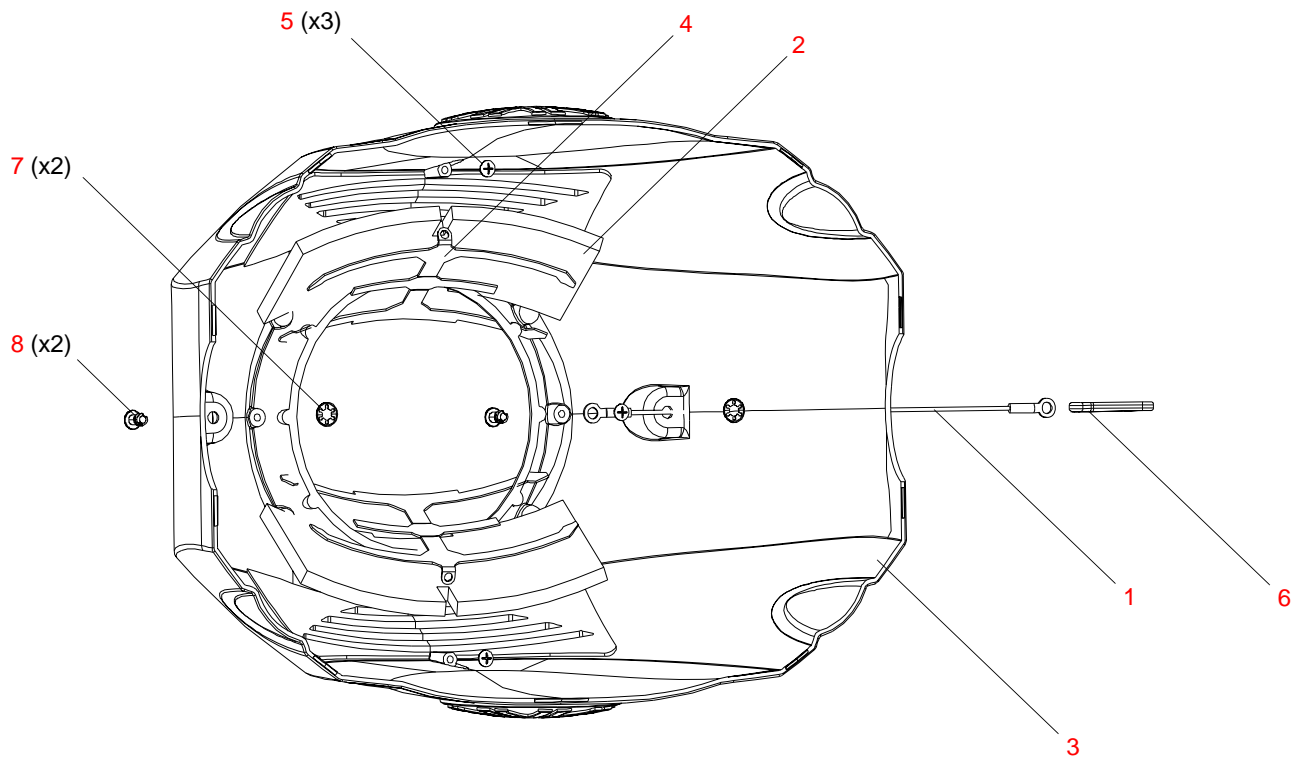


Figure 3-17: Front Head Cover Assembly

Rear Head Cover Assembly

21.9687.0625 Rev A

Refer to [Figure 3-18](#)

No.	Item	Qty.	UM.	Description
1	07.5049.0001	1	EA	LANYARD, NYLON, 8-INCH LONG
2	10.9687.0625	1	EA	HEAD COVER, REAR
3	53.5655.0250	1	EA	SCREW, #6 X 1/4" PPZ PLASTIC
4	55.2011.0003	1	EA	SNAP, SPRING 3/16" EYE DIA
5	55.2233.2003	2	EA	DZUS RAPIER 1/4-TURN STUD RETAINER, 5 MM
6	55.2233.2005	2	EA	DZUS RAPIER 1/4-TURN STUD, 5 MM, 12 MM LG

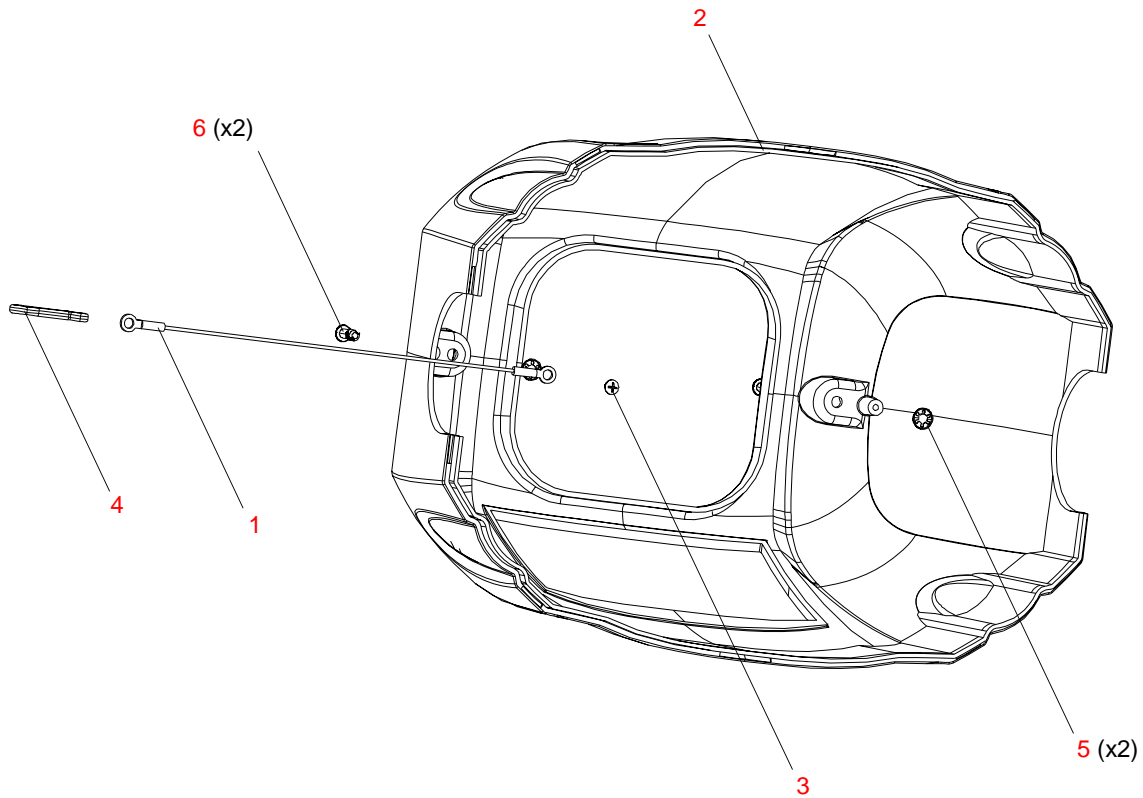


Figure 3-18: Rear Head Cover Assembly

Lamp Cover Assembly

21.9687.0630 Rev A

Refer to [Figure 3-19](#)

No.	Item	Qty.	UM.	Description
1	10.9638.0233	1	EA	TETHER, REMOVABLE COVER
2	10.9687.0630	1	EA	HEAD COVER, LAMP ACCESS
3	53.5655.0250	1	EA	SCREW, #6 X 1/4" LG PLASTIC THREADING
4	55.2233.2003	2	EA	DZUS RAPIER 1/4-TURN STUD RETAINER, 5 MM
5	55.2233.2005	2	EA	DZUS RAPIER 1/4-TURN STUD, 5 MM, 12 MM LG

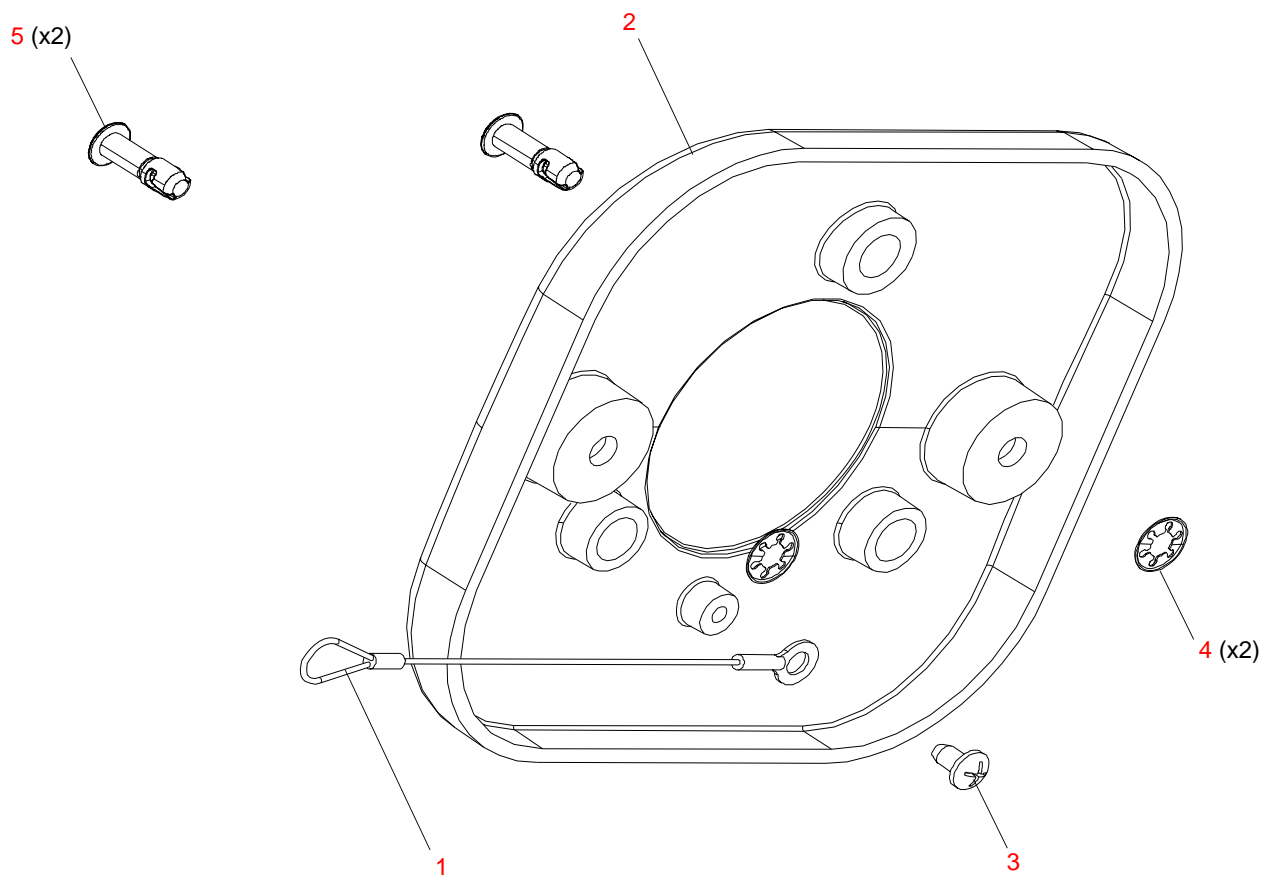


Figure 3-19: Lamp Cover Assembly

Transfer Fans Assembly

21.9687.0260 Rev A

Refer to [Figure 3-20](#)

No.	Item	Qty.	UM.	Description
1	10.9687.0250	1	EA	BRACKET, FAN, TRANSFER
2	10.9687.0251	1	EA	BRACKET, HINGE, TRANSFER FAN
3	40.9687.0003	2	EA	FAN, AXIAL, 50 MM X 15 MM
4	53.2200.0008	4	EA	NUT, 8-32 KEPS SS
5	53.6613.0001	2	EA	SCREW, 6-32 X 1/2" PPZ
6	53.6575.0003	4	EA	SCREW, 6-32 X 7/8" PPZ
7	55.6538.0002	4	EA	WASHER, #6 NYLON, NATURAL

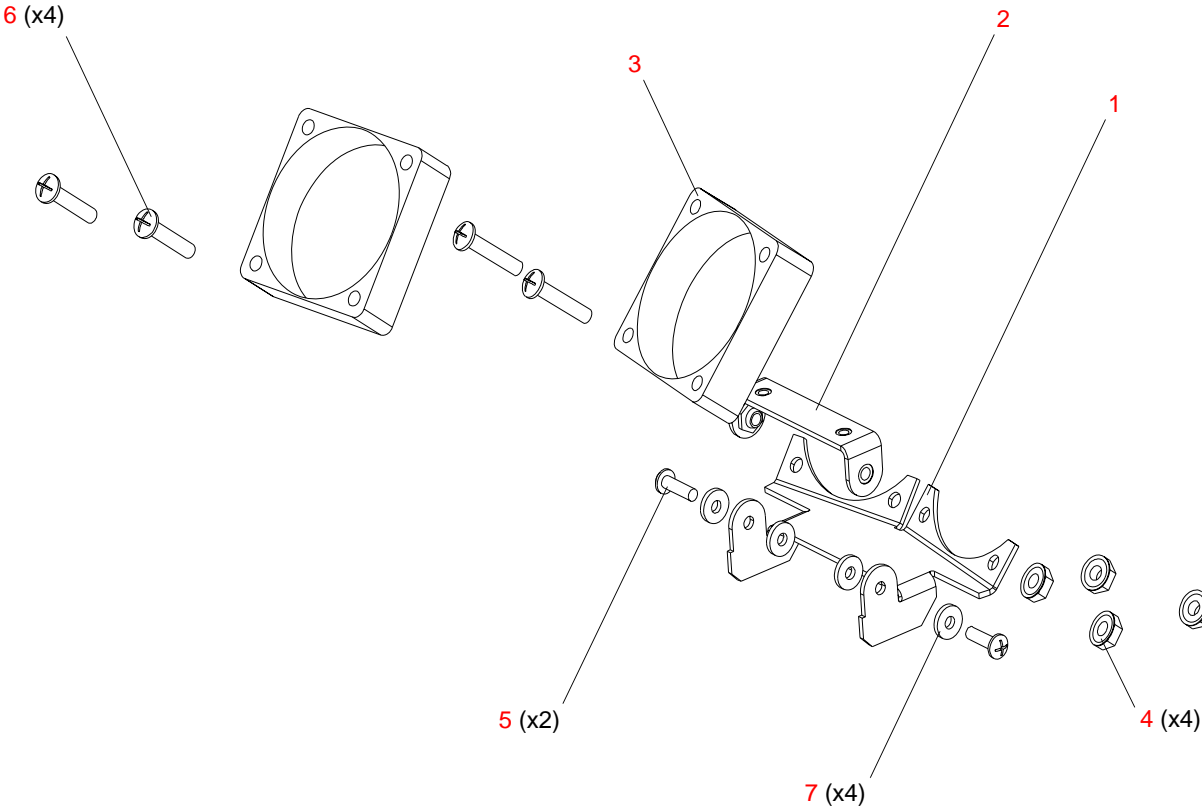


Figure 3-20: Transfer Fans Assembly

Dual Gobo Cooling Blower Assembly

21.9687.1630 Rev A

Refer to [Figure 3-21](#)

No.	Item	Qty.	UM.	Description
1	10.9687.1632	1	EA	BRACKET, DUAL BLOWER, GOBO COOLING
2	23.9687.0040	2	EA	BLOWER ASSY, 50 MM
3	53.6604.0004	4	EA	SCREW, #10-16 X 3/8" PPSS THD FORMING

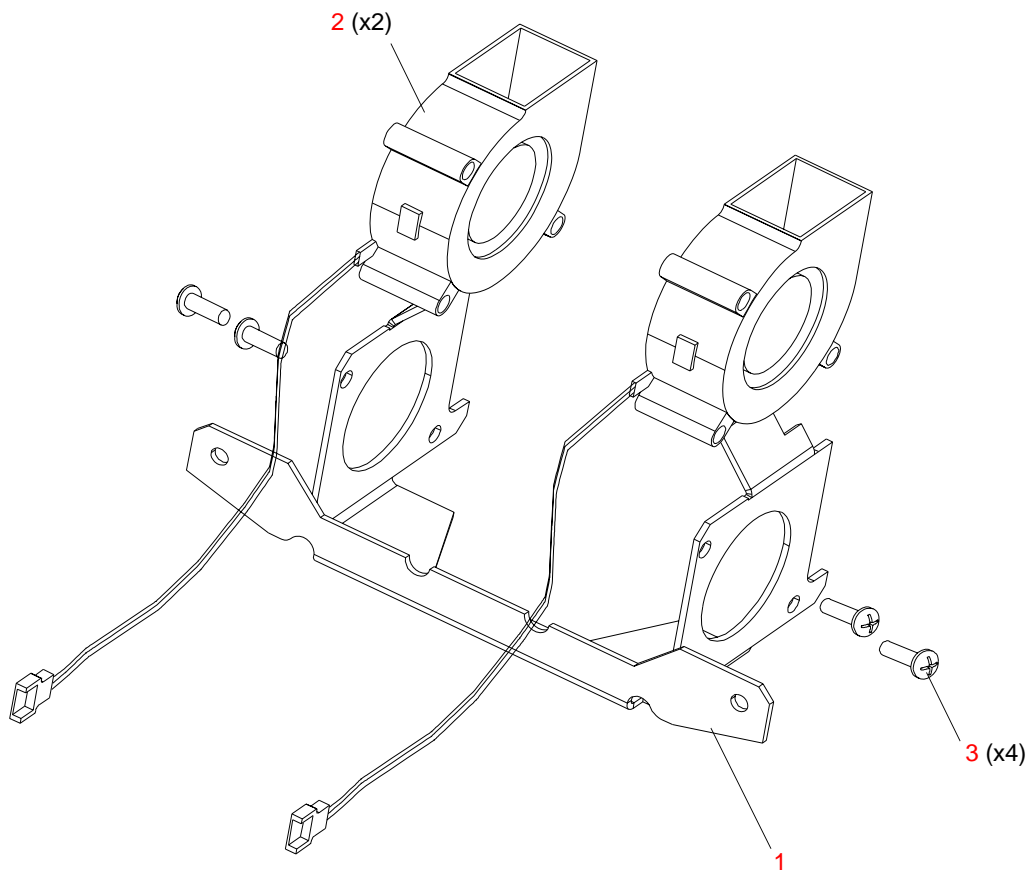


Figure 3-21: Dual Gobo Cooling Blower Assembly

Generic Luminaire Assembly

21.9687.0010 Rev D

Refer to [Figure 3-22](#)

No.	Item	Qty.	UM.	Description
1	21.9687.0650	1	EA	ASSY, HEAD FRAME
2	21.9687.0751	1	EA	ASSY, TILT LOCK
3	21.9687.0850	1	EA	ASSY, UPPER ENCLOSURE
4	22.9687.0701	1	EA	ASSY, YOKE
5	22.9687.0705	1	EA	ASSY, FILLER, YOKE, SLOTTED
6	53.6543.0003	4	EA	SCREW, 6-32 X 3/16" PPB
7	53.6575.0009	7	EA	SCREW, 8-32 X 3/8" PPB SEMS
8	53.6608.0001	4	EA	SCREW, 6-32 X 3/8" PFB
9	53.6682.0037	6	EA	SCREW, 10-32 X 1/2" LG PPZ SEMS

Generic Luminaire Assembly (continued)

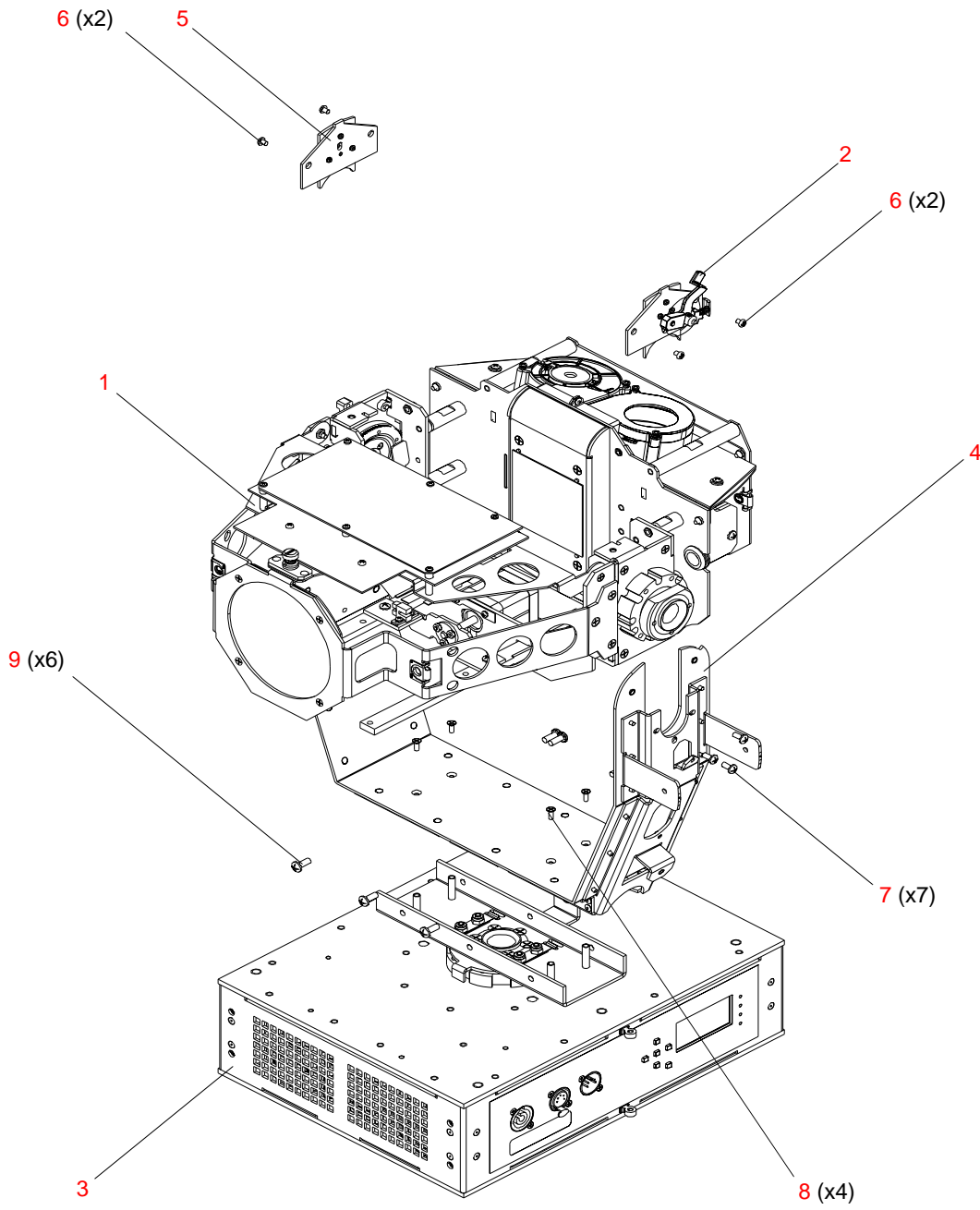


Figure 3-22: Generic Luminaire Assembly

Head Assembly

Head Frame Assembly

21.9687.0650 Rev N

Refer to [Figure 3-23](#)

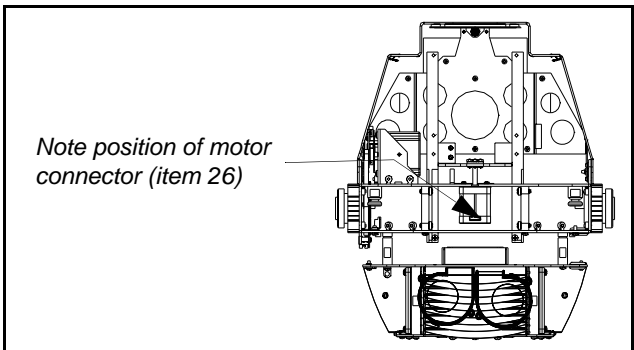
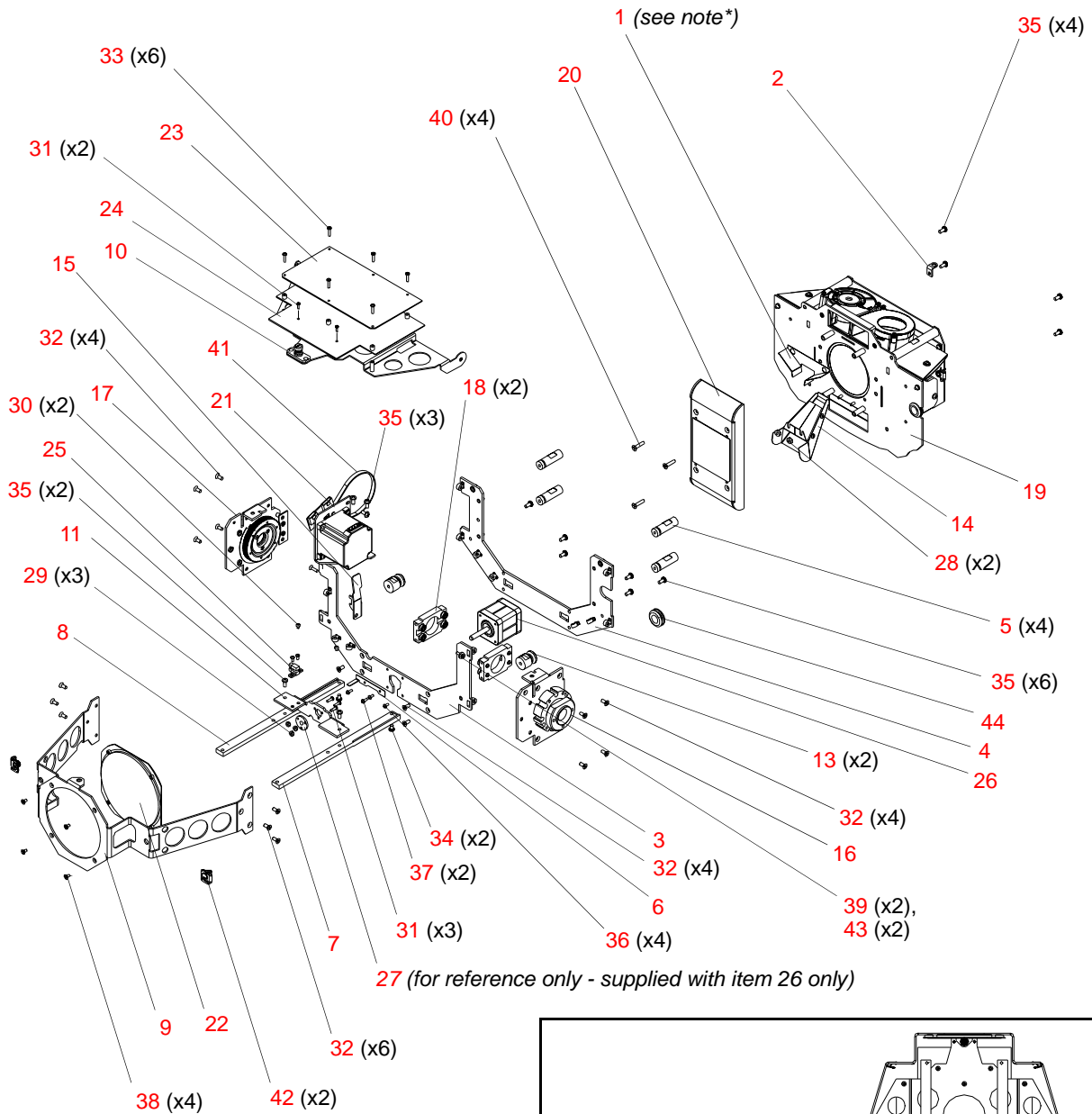
No.	Item	Qty.	UM.	Description
1	10.9687.0610	1	EA	AIR DEFLECTOR, DUAL BLOWER (NOTE, PART OF VL770 & VL880 TOP ASSEMBLIES ONLY - SHOWN FOR REFERENCE ONLY)
2	10.9678.0674	1	EA	BRACKET, COVER TETHER
3	10.9687.0651	1	EA	PLATE, CHASSIS, FRONT
4	10.9687.0654	1	EA	PLATE, CHASSIS, REAR
5	10.9687.0663	4	EA	STANDOFF, REFLECTOR BULKHEAD
6	10.9687.0664	1	EA	BRACKET, HOMING, FOCUS
7	10.9687.0667	1	EA	TRACK, LINEAR ROLLER
8	10.9687.0684	1	EA	TRACK, LINEAR ROLLER, TRACKING
9	10.9687.0685	1	EA	BRACKET, FRONT COVER SUPPORT
10	10.9687.0686	1	EA	BRACKET, CONTROL BOARD
11	10.9687.0688	1	EA	BRACKET, DRIVE NUT, FOCUS
12	10.9687.1617	1	EA	BRACKET, CABLE MANAGEMENT
13	10.9687.1661	2	EA	STANDOFF, POSITION, GOBO MODULE
14	10.9687.1691	1	EA	AIR DUCT, LAMP BASE PINCH
15	10.9687.2616	1	EA	BRACKET, CABLE MANAGEMENT
16	21.9687.0632	1	EA	ASSY, TILT BEARING, LEFT
17	21.9687.1633	1	EA	ASSY, TILT BEARING, RIGHT
18	21.9687.0634	2	EA	ASSY, ROLLER, LINEAR
19	21.9687.0652	1	EA	ASSY, LAMP HOUSING
20	21.9687.0654	1	EA	ASSY, BRACKET, UV/IR FILTER
21	21.9687.0670	1	EA	ASSY, TILT MOTOR
22	22.9687.0140	1	EA	ASSY, FRONT GLASS
23	24.9687.0700	1	EA	BOARD ASSY, MAIN CONTROL UNIT (MCU)
24	24.9687.0701	1	EA	BOARD ASSY, MOTOR DRIVER PCB
25	25.9687.0020	1	EA	SWITCH, SLOTTED OPTICAL
26	44.9687.0208	1	EA	MOTOR, SIZE-17, FOCUS
27	Nut for 44.9687.0208	1	EA	NUT, LEAD SCREW, FOCUS (NOTE, SUPPLIED WITH 44.9687.0208 ONLY)

VARI*LITE - VL440 / VL770 / VL880 SPOT LUMINAIRES SERVICE MANUAL

No.	Item	Qty.	UM.	Description
28	53.2002.0001	2	EA	NUT, 6-32 KEPS ZINC PLATED
29	53.2003.0001	3	EA	NUT, 4-40 KEPS ZINC PLATED
30	53.6513.0003	2	EA	SCREW, M3 X 0.5 X 4 MM PPB
31	53.6520.0001	5	EA	SCREW, 4-40 X 3/8" PPZ
32	53.6545.0003	18	EA	SCREW, 8-32 X 3/8" PFZ
33	53.6567.0001	6	EA	SCREW, 4-40 X 1/2" PPZ
34	53.6575.0008	2	EA	SCREW, 8-32 X 1/4" PPZ SEMS
35	53.6575.0009	15	EA	SCREW, 8-32 X 3/8" PPB SEMS
36	53.6592.0250	4	EA	SCREW, 4-40 X 1/4" PPB SEMS
37	53.6596.0002	2	EA	SCREW, 6-32 X 1/4" PPB SEMS
38	53.6607.0002	4	EA	SCREW, 6-32 X 1/4" PFB
39	53.6609.0500	2	EA	SCREW, 6-32 X 1/2" PFZ
40	53.9690.0051	4	EA	SCREW, 8-32 X 3/4" PFB
41	54.9687.0601	1	EA	BELT, TILT, GT2-2 MM, 143T, 6 MM WIDE
42	55.2233.2001	2	EA	DZUS RAPIER MINI CLIP ON RETAINER
43	55.6538.0002	2	EA	WASHER, #6 NYLON, NATURAL
44	55.6541.0010	1	EA	GROMMET, 1/2" ID, 1.0" OD, 3/8" THK, NEO

Note: Items 1 is shown for assembly reference only. This item is part of the top-level luminaire assembly for VL770 and VL880 fixtures only. See [“Top Assembly” on page 84](#) for more information.

Head Frame Assembly (continued)



*Shown for reference (positioning) only. Item 1 is used in VL770 & VL880 fixtures only.

Figure 3-23: Head Frame Assembly

Left Tilt Bearing Assembly

21.9687.0632 Rev A

Refer to [Figure 3-24](#).

No.	Item	Qty.	UM.	Description
1	10.9687.0656	1	EA	PLATE, BEARING MOUNT, RIGHT
2	10.9687.0659	1	EA	RETAINER, TILT BEARING
3	10.9687.0660	1	EA	TILT STOP
4	10.9687.0662	1	EA	TILT TUBE
5	53.6545.0003	4	EA	SCREW, 8-32 X 3/8" PFZ
6	53.6609.0500	3	EA	SCREW, 6-32 X 1/2" PFZ
7	54.9687.0250	1	EA	BEARING, 68072RS

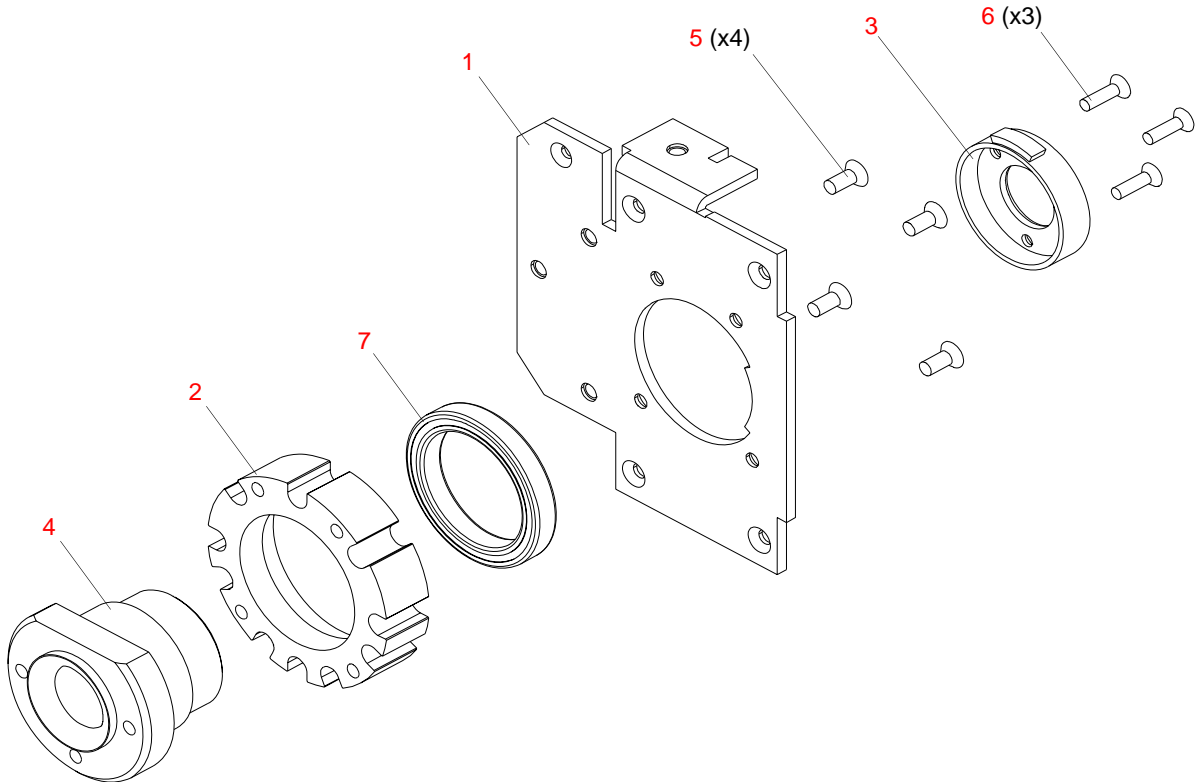


Figure 3-24: Left Tilt Bearing Assembly

Right Tilt Bearing Assembly

21.9687.1633 Rev A

Refer to [Figure 3-25](#).

No.	Item	Qty.	UM.	Description
1	10.9628.0211	1	EA	STABILIZER, PAN/TILT
2	10.9687.0652	1	EA	BRACKET, SENSOR, TILT HOMING
3	10.9687.0657	1	EA	PLATE, BEARING MOUNT
4	10.9687.0658	1	EA	PLATE, HOMING TILT
5	10.9687.0660	1	EA	TILT STOP
6	10.9687.0662	1	EA	TILT TUBE
7	10.9687.1659	1	EA	RETAINER, TILT BEARING, SMOOTH
8	25.9687.0019	1	EA	SENSOR SWITCH, SLOTTED OPTICAL
9	53.6527.0001	3	EA	SCREW, 6-32 X 1/2" SCSS, LOW PROFILE
10	53.6545.0003	4	EA	SCREW, 8-32 X 3/8" PFZ
11	53.6559.0001	3	EA	SCREW, 4-40 X 1/4" PFZ
12	53.6592.0250	2	EA	SCREW, 4-40 X 1/4" PPB SEMS
13	53.6609.0001	2	EA	SCREW, 6-32 X 3/8" PFZ
14	54.9687.0250	1	EA	BEARING, 68072RS
15	54.9687.0251	1	EA	PULLEY, TILT, 108T - GT2P
16	55.6603.0001	1	EA	SPRING, SS 4.6#/IN EXL

Right Tilt Bearing Assembly (continued)

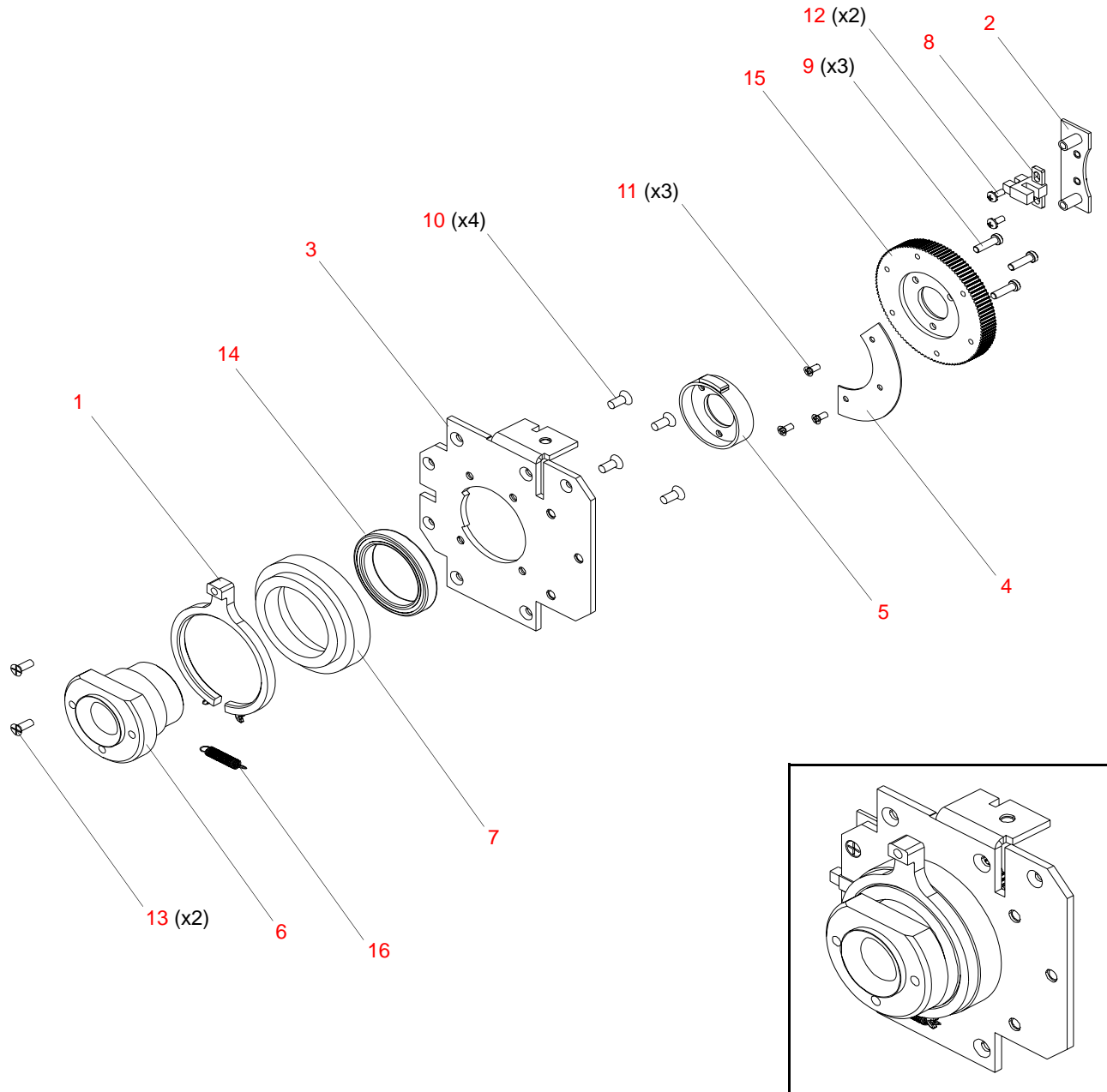


Figure 3-25: Right Tilt Bearing Assembly

Linear Roller Assembly

21.9687.0634 Rev B

Refer to [Figure 3-26](#).

No.	Item	Qty.	UM.	Description
1	10.9687.0670	4	EA	SHAFT, FOCUS BEARING
2	10.9687.1665	1	EA	BLOCK, LINEAR ROLLER
3	53.65200375	4	EA	SCREW, 4-40 X 3/8" PPZ SEMS
4	54.9687.0253	4	EA	BEARING, MR105ZZ

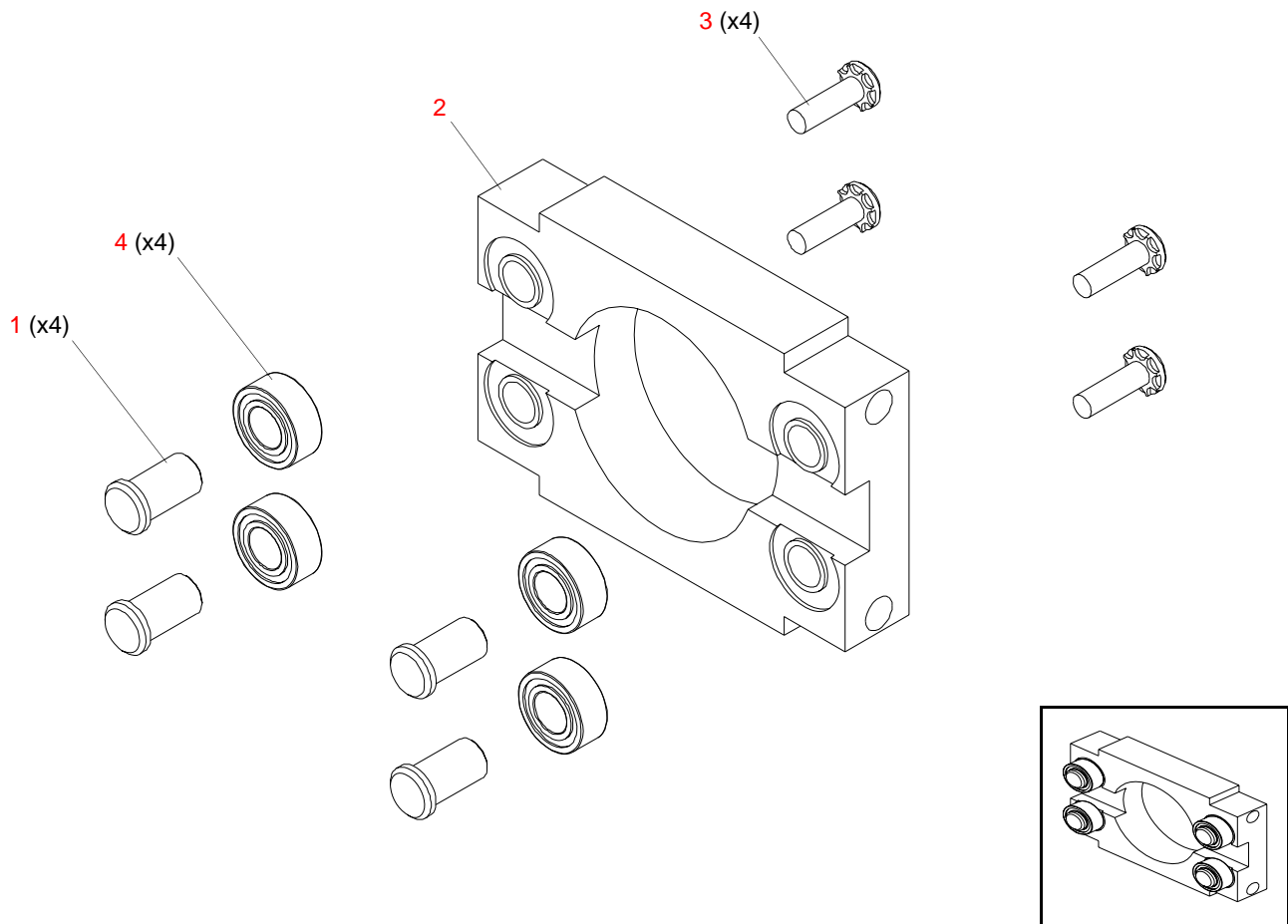


Figure 3-26: Linear Roller Assembly

Lamp Housing Assembly

21.9687.0652 Rev J

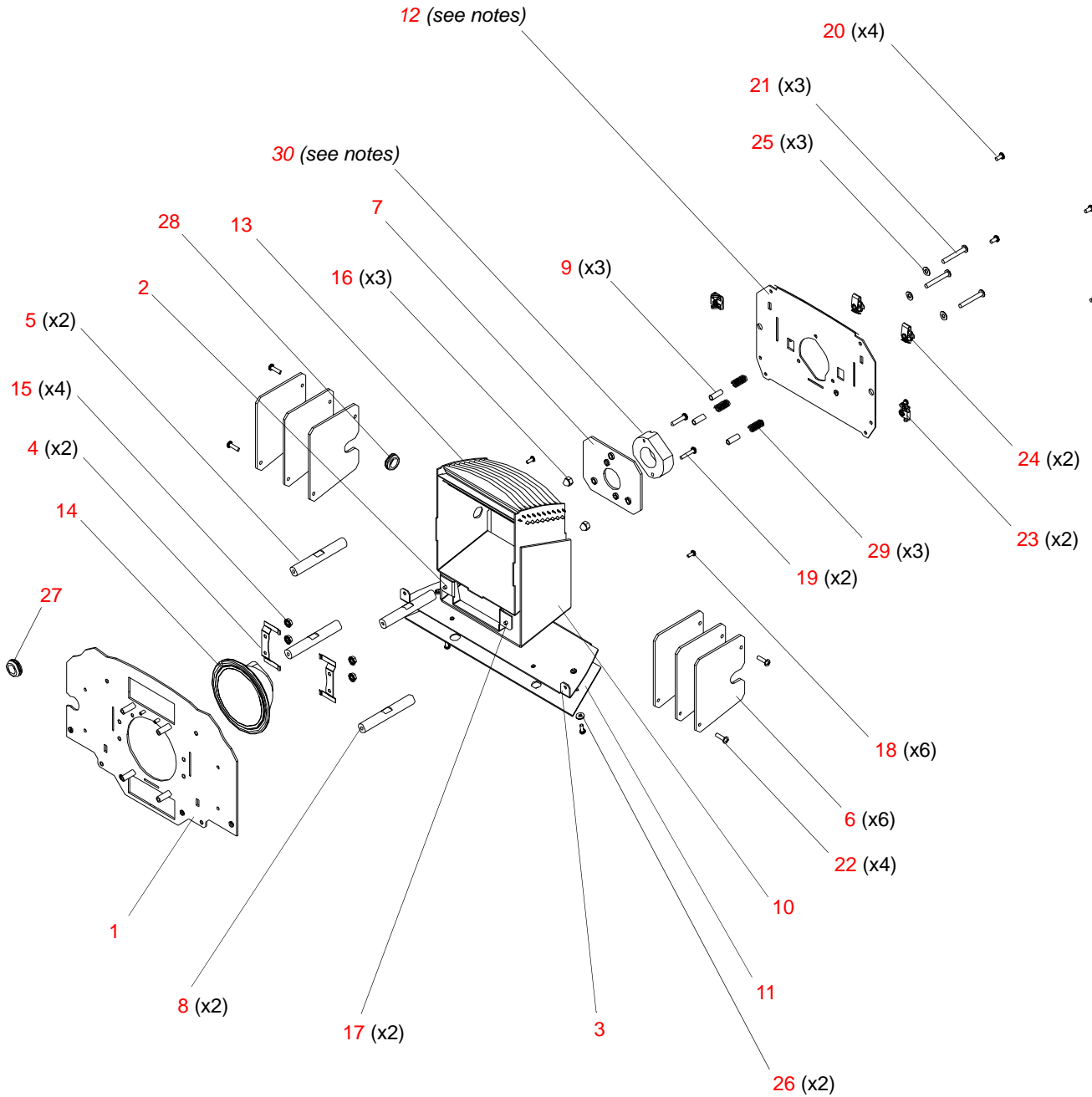
Refer to [Figure 3-27](#)

No.	Item	Qty.	UM.	Description
1	10.9687.0605	1	EA	PLATE, BULKHEAD, REFLECTOR
2	10.9687.0608.01	1	EA	FAN BRACKET, DUAL BLOWER
3	10.9687.0608.02	1	EA	BRACKET, DUAL BLOWER
4	10.9687.0640	2	EA	CLIP, REFLECTOR RETAINER
5	10.9687.0671	2	EA	STANDOFF, REAR PLATE
6	10.9687.0681	6	EA	BRACKET, IGNITOR
7	10.9687.0691	1	EA	PLATE, LAMP ADJUST
8	10.9687.0698	2	EA	STANDOFF, REAR PLATE, STEEL
9	10.9687.0699	3	EA	SPACER, LAMP ADJUST
10	10.9687.1611	1	EA	INSULATION BLANKET, HOT BOX
11	10.9687.1613	1	EA	FAN BRACKET, INSULATOR
12	10.9687.1672.XX	1	EA	PLATE, REAR (NOTE, PART OF TOP ASSEMBLY, SHOWN FOR REFERENCE ONLY)
13	22.9687.0610	1	EA	ASSY, REFLECTOR SHIELD
14	42.9687.0200	1	EA	REFLECTOR, FACETED, SVL
15	53.2004.0002	4	EA	NUT, 8-32 KEPS ZINC PLATED
16	53.2030.0001	3	EA	NUT, ACORN 10-32 THD 3/8" WIDE
17	53.6525.0188	2	EA	SCREW, 6-32 X 3/16" LG PPZ
18	53.6558.0009	6	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS
19	53.6575.0007	2	EA	SCREW, 8-32 X 7/8" LG PPZ SEMS
20	53.6575.0009	2	EA	SCREW, 8-32 X 3/8" LG PPB SEMS
21	53.6594.0003	3	EA	SCREW, 10-32 X 1-1/2" PPZ
22	53.6682.0025	4	EA	SCREW, 8-32 X 5/8" PPZ SEMS
23	55.2233.2001	2	EA	DZUS RAPIER MINI CLIP ON RETAINER
24	55.2233.2006	2	EA	DZUS RAPIER SNAP IN RETAINER
25	55.3301.0010	3	EA	#10 0.203 X 0.407 X 0.032 FLAT WASHER, STAINLESS STEEL
26	55.6528.0001	2	EA	WASHER, #6 FLAT ZINC
27	55.6541.0008	1	EA	GROMMET, 1/2" ID, 7/8" OD, 11/32" THK
28	55.6541.0011	1	EA	GROMMET, 1/2" ID, 13/16" OD, 5/8" X 1/16" GRV SIL
29	55.9687.0606	3	EA	SPRING, CPRSN, 0.36" OD X 1.5" LG X 0.042 WIRE

No.	Item	Qty.	UM.	Description
30	25.9687.0021.XX	1	EA	LAMP SOCKET ASSEMBLY (NOTE, PART OF TOP ASSEMBLY, SHOWN FOR REFERENCE ONLY)

Note: Items 12 and 30 are shown for assembly reference only. These items are part of the top-level luminaire assembly and are specific to their respective fixture. See [“Top Assembly” on page 84](#) for more information.

Lamp Housing Assembly (continued)



Notes: Items 12 and 34 are shown for assembly reference only. These items are part of the top-level luminaire assembly and are specific to their respective fixture. See "Top Assembly" on page 84 for more information.

Figure 3-27: Lamp Housing Assembly

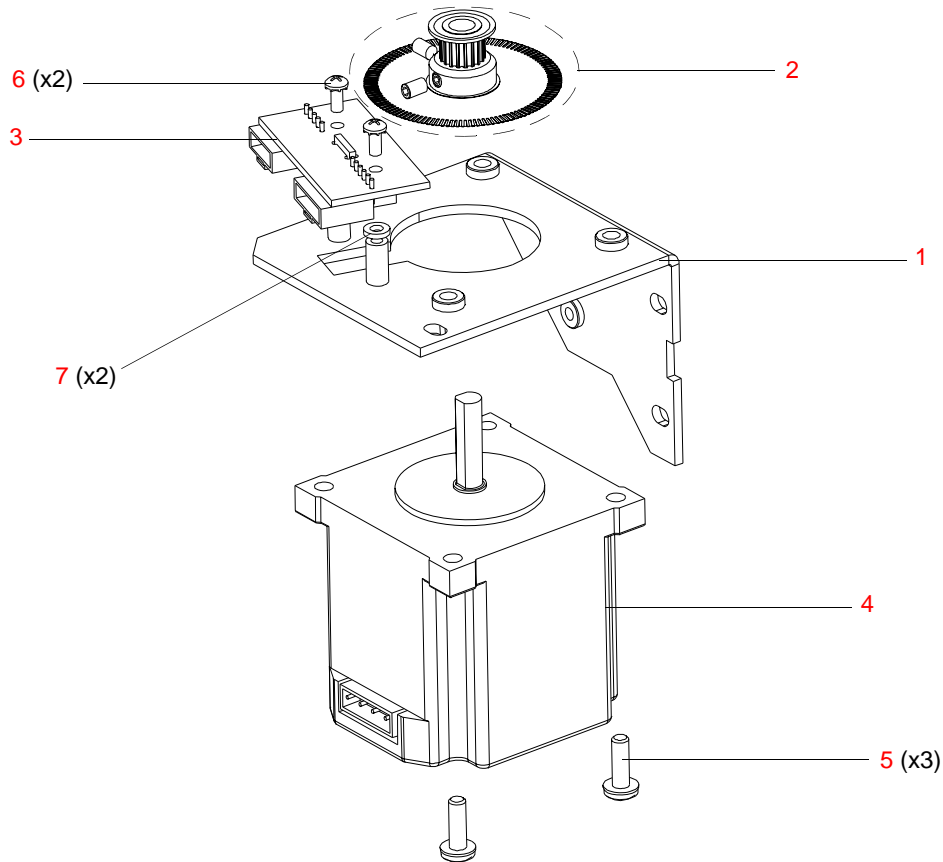
Tilt Motor Assembly

21.9687.0670 Rev C

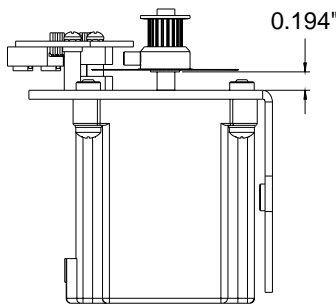
Refer to [Figure 3-28](#).

No.	Item	Qty.	UM.	Description
1	10.9687.0655	1	EA	BRACKET, MOTOR MOUNT, TILT
2	21.9687.0655	1	EA	PULLEY, PINION (INCLUDES ENCODER WHEEL AND SET SCREWS)
3	24.9661.5000	1	EA	BRD ASSY, PAN/TILT ENCODER
4	44.9678.1680	1	EA	MOTOR, 3 PHASE, SIZE 23 HIGH TORQUE
5	53.6575.0010	3	EA	SCREW, 8-32 X 1/2" LG PPZ SEMS
6	53.6592.0250	2	EA	SCREW, 4-40 X 1/4" LG PPB SEMS
7	55.2204.0001	2	EA	WASHER, #4 NYLON

Tilt Motor Mount Assembly (continued)



Drive Pulley Detail & Installation



- Step 1. Apply one drop of Loctite 603 to motor shaft.
- Step 2. Install drive pulley on motor shaft using twisting motion to insure coverage of shaft with loctite.
- Step 3. Do not allow Loctite to drip into motor bearing.
- Step 4. Set pulley height as shown above.
- Step 5. Apply Loctite 242 to pulley set screws. Insure set screws are aligned and tightened on flat sides of motor shaft.

Figure 3-28: Tilt Motor Mount Assembly

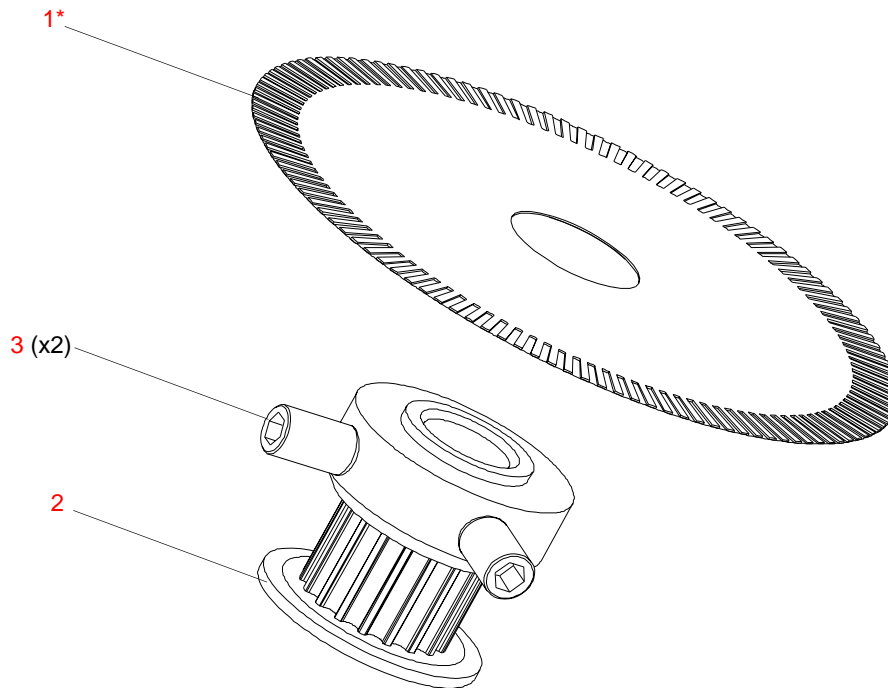
Note: Vari-Lite recommends that this assembly be replaced as a complete assembly. Although you can replace only the motor, the pulley (Item 2) is bonded to the motor shaft during assembly and cannot be removed intact. If you order a replacement motor (Item 4), also order the pulley (Item 2). Contact Vari-Lite Customer Service for installation information.

Pulley Pinion Assembly

21.9687.0655 Rev. A

Refer to [Figure 3-29](#).

No.	Item	Qty.	UM.	Description
1	10.9663.8820	1	EA	CODE WHEEL, 120 COUNT
2	10.9687.1655	1	EA	TIMING PULLEY, 18 GROVE, GT2, 6 MM BELT
3	53.5559.0250	2	EA	SCREW, SET 6-40 X 0.25" CONE POINT



NOTE: *On item 1, remove backing over adhesive and stick to item 2.

Figure 3-29: Pulley Pinion Assembly

Gobo Module Assembly

21.9687.0301 Rev J

Refer to [Figure 3-30](#) and [Figure 3-31](#)

No.	Item	Qty.	UM.	Description
1	10.9687.0202	1	EA	PLATE, MOTOR MOUNT, FIXED GOBO
2	10.9687.0229	4	EA	STANDOFF, MOTOR REAR, SENSOR
3	10.9687.0230	2	EA	BRACKET, SENSOR, HOMING
4	10.9687.0233	2	EA	SPACER, MOTOR SHAFT
5	10.9687.0237	1	EA	STABILIZER, FIXED GOBO
6	10.9687.0238	1	EA	STABILIZER, RETAINER
7	10.9687.0240	1	EA	LINK, IRIS CONTROL
8	10.9687.1201	1	EA	PLATE, GOBO MODULE
9	21.9687.0256	1	EA	WEDGE FIXED COLOR WHEEL
10	21.9687.0257	1	EA	ROTATING GOBO WHEEL
11	21.9687.0258	1	EA	FIXED GOBO WHEEL
12	22.9687.0201	1	EA	ASSY, OUTDRIVE, FIXED GOBO
13	22.9687.0202	1	EA	ASSY, OUTDRIVE, GOBO ROTATE
14	22.9687.0203	1	EA	ASSY, CONTROL ARM, IRIS
15	22.9687.0204	2	EA	ASSY, PLATE, HOMING, MOTOR REAR
16	22.9687.0222	1	EA	ASSY, COAX, GOBO ROTATE
17	22.9687.0230	1	EA	ASSY, IRIS, 25MM FIXED APERTURE
18	24.9678.3240	1	EA	PCB ASSY, WHEEL POSITION SENSOR
19	25.9687.0020	3	EA	SWITCH, SLOTTED OPTICAL
20	25.9687.0024	3	EA	CABLE ASSY, INDEX SENSOR
21	44.9687.1204	2	EA	MOTOR, SIZE-17, SHAFT 0.455"
22	44.9687.1210	2	EA	MOTOR, DUAL SHAFT
23	44.9687.1213	1	EA	MOTOR, SIZE-14, SHAFT 0.50" LG
24	53.5638.0252	4	EA	SCREW, 6-32 X 1/4" PFS UNDERCUT
25	53.6558.0009	3	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS
26	53.6575.0009	4	EA	SCREW, 8-32 X 3/8" PPB SEMS
27	53.6592.0250	8	EA	SCREW, 4-40 X 1/4" PPB SEMS
28	53.6598.0187	8	EA	SCREW, 4-40 X 3/16" PFB
29	53.6659.0005	2	EA	SCREW, 2-56 X 1/4" PFZ
30	53.6659.0008	3	EA	SCREW, 2-56 X 3/16" PFZ
31	54.9687.0253	4	EA	BEARING, MR105ZZ

No.	Item	Qty.	UM.	Description
32	55.1000.0009	1	EA	SPRING, COMPRESS SS 316
33	55.2123.0013	8	EA	WAVE SPRING, 0.265" ID X 0.367" OD X 0.006" THK
34	55.2179.0001	2	EA	CABLE ANCHOR MOUNT, #6 SCREW
35	55.3301.0010	2	EA	#10 0.203" X 0.407" X 0.032" FLAT WASHER SS
36	55.6546.0004	2	EA	WASHER, TEFLON, 0.201" ID X 0.433" OD

Important Notes About the Gobo Module Assembly:

- When replacing either Rotating Gobo or Fix Color Motor, ensure the rear homing plate is installed with the set screw to the flat part of motor shaft when tab is in sensor.
- When replacing Fixed Gobo Motor, ensure the Fixed Gobo Outdrive is installed with set screw to flat part of motor shaft when tab is in optical sensor.
- When replacing Index Motor, ensure the Index Outdrive is installed with set screw to flat part of motor shaft.

Gobo Module Assembly (continued)

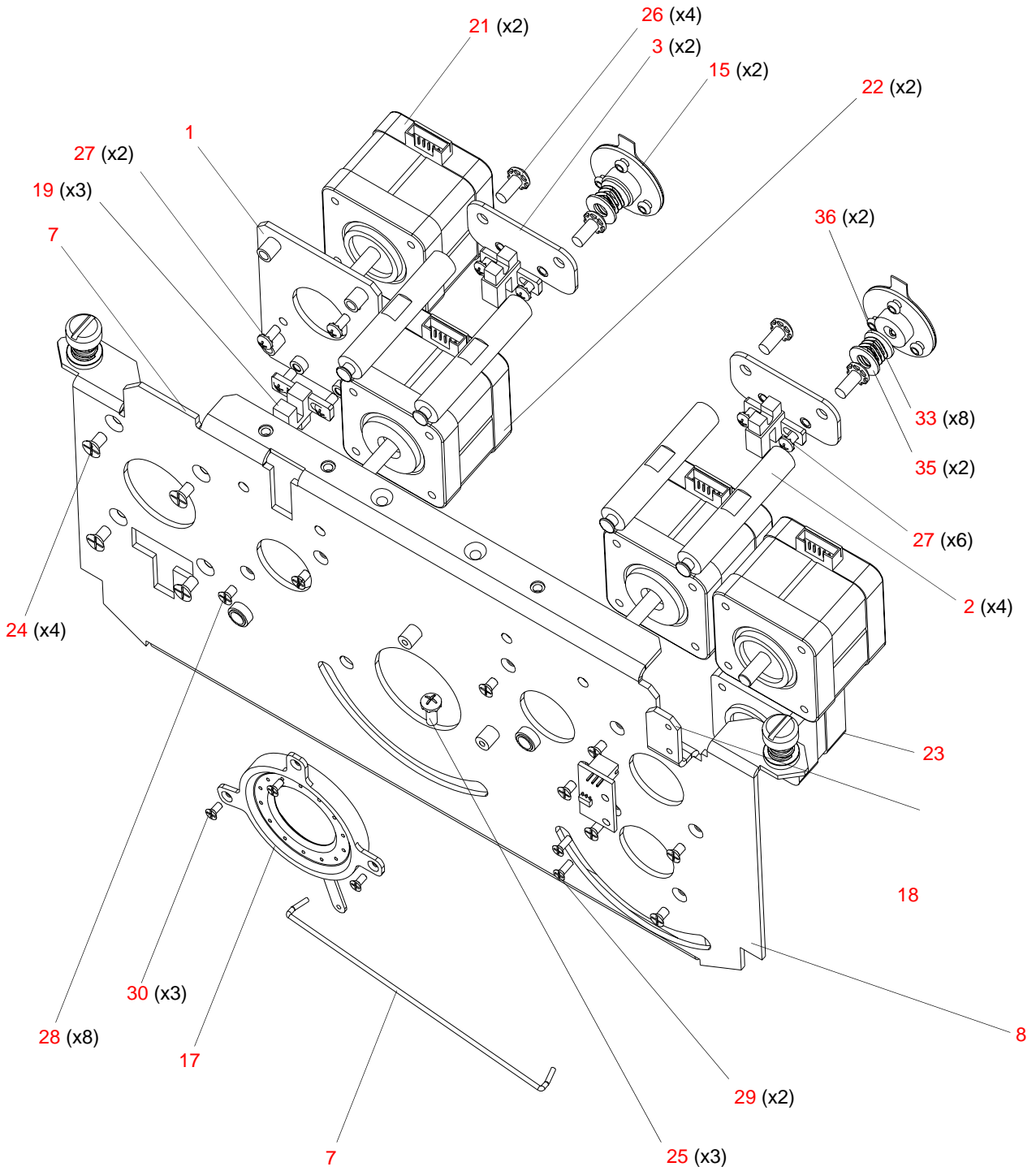
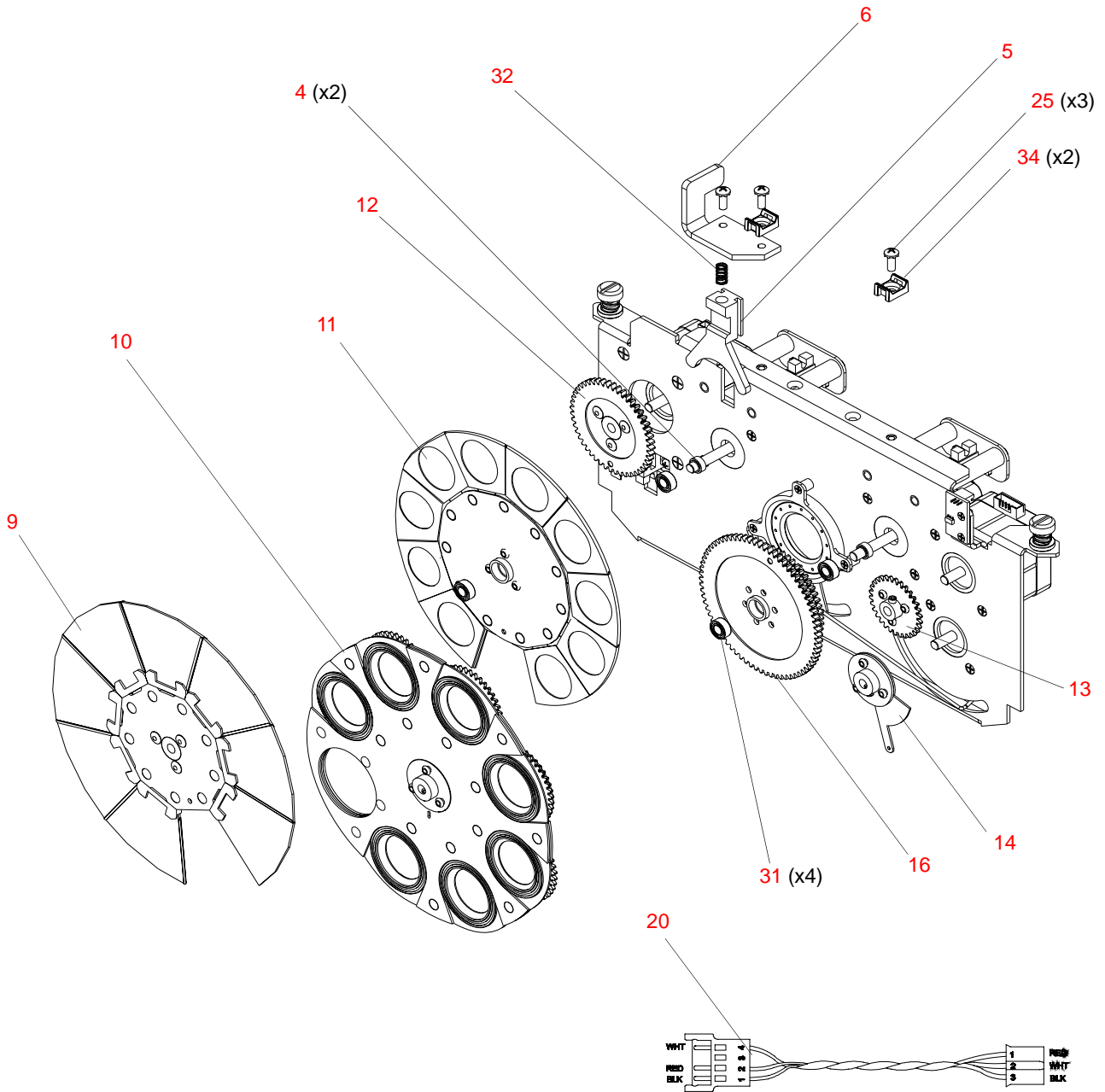


Figure 3-30: Gobo Module Assembly

Gobo Module Assembly (continued)



WIRE CHART		
CONNECTOR 1	WIRE COLOR	CONNECTOR 2
PIN 1	BLACK	PIN 3
PIN 2	RED	PIN 1
PIN 4	WHITE	PIN 2

Figure 3-31: Gobo Module Assembly

Wedge Fixed Color Wheel Assembly

21.9687.0256 Rev C

Refer to [Figure 3-32](#).

No.	Item	Qty.	UM.	Description
1	21.9687.0407	1	EA	FILTER ASSY, CTO
2	21.9687.0431	1	EA	FILTER ASSY, RED
3	21.9687.0433	1	EA	FILTER ASSY, MAGENTA
4	21.9687.0434	1	EA	FILTER ASSY, KELLY GREEN
5	21.9687.0435	1	EA	FILTER ASSY, CONGO BLUE
6	21.9687.0436	1	EA	FILTER ASSY, BLUE
7	21.9687.0439	1	EA	FILTER ASSY, DARK ORANGE
8	21.9687.0441	1	EA	FILTER ASSY, FLESH PINK
9	22.9687.0225	1	EA	ASSY, WEDGE WHEEL

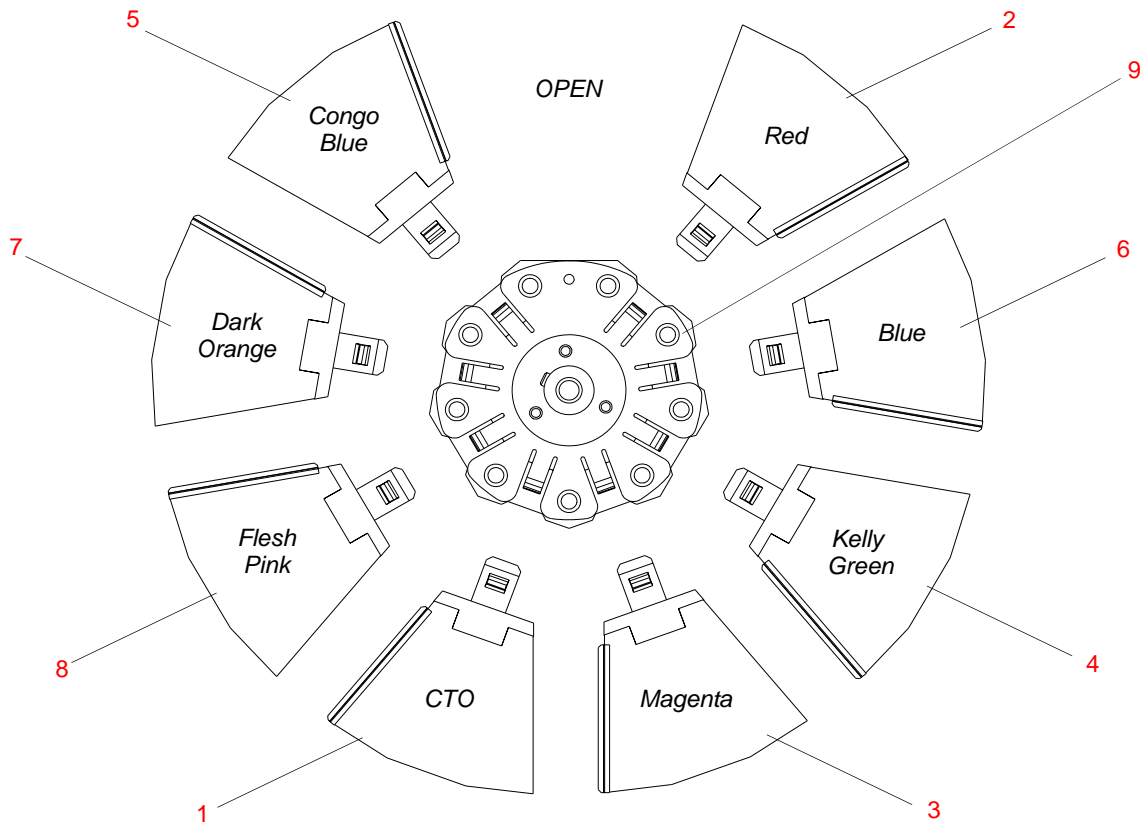


Figure 3-32: Wedge Fixed Color Wheel Assembly

Rotating Gobo Wheel Assembly

21.9687.0257 Rev C

Refer to [Figure 3-33](#).

No.	Item	Qty.	UM.	Description
1	21.6004.4009	1	EA	ASSY, ROTATING GOBO, TRIANGLE
2	21.6004.4011	1	EA	ASSY, ROTATING GOBO, VERTICAL SLOT
3	21.6004.4322	1	EA	ASSY, ROTATING GOBO, PINWHEEL 2
4	21.6004.6008	1	EA	ASSY, ROTATING GOBO, TRI CONE, W/ MAGNET
5	21.6004.7018	1	EA	ASSY, ROTATING GOBO, SHOCK BREAKUP
6	21.6004.7029	1	EA	ASSY, ROTATING GOBO, ALPHA RAYS
7	21.9687.8002	1	EA	ASSY, GAG ROTATOR, GLACIER
8	22.9687.0220	1	EA	ASSY, ROTATING GOBO WHEEL

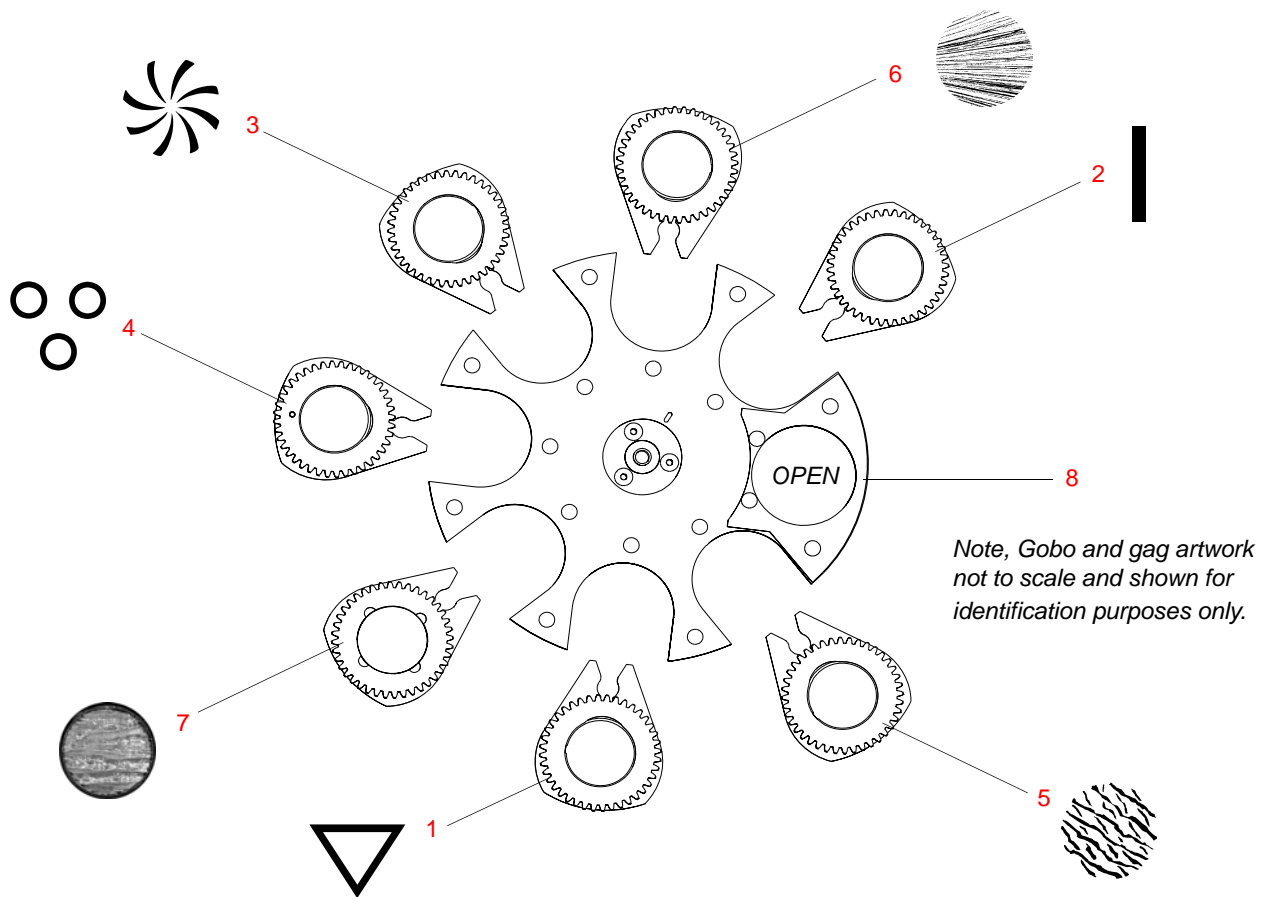


Figure 3-33: Rotating Gobo Wheel Assembly

Fixed Gobo Wheel Assembly

21.9687.0258 Rev B

Refer to [Figure 3-34](#).

No.	Item	Qty.	UM.	Description
1	22.9687.0224	1	EA	ASSY, FIXED GOBO WHEEL
2	41.6004.4001	1	EA	GOBO, FIXED, BATHTUB DRAIN, SVL
3	41.6004.4201	1	EA	GOBO, FIXED, HORIZONTAL BARS, SVL
4	41.6004.5011	1	EA	GOBO, FIXED, NIGHT SKY, SVL
5	41.6004.5501	1	EA	GOBO, FIXED, LEAVES, SVL
6	41.6004.5523	1	EA	GOBO, FIXED, TRIBAL BREAK-UP, SVL
7	41.6004.6001	1	EA	GOBO, FIXED, MEDIUM CIRCLE, SVL
8	41.6004.7002	1	EA	GOBO, FIXED, PEBBLES, SVL
9	41.6004.7008	1	EA	GOBO, FIXED, WAVE, SVL
10	41.6004.7015	1	EA	GOBO, FIXED, BLOCK BREAK-UP, SVL
11	41.6004.7025	1	EA	GOBO, FIXED, DUST BREAK-UP, SVL

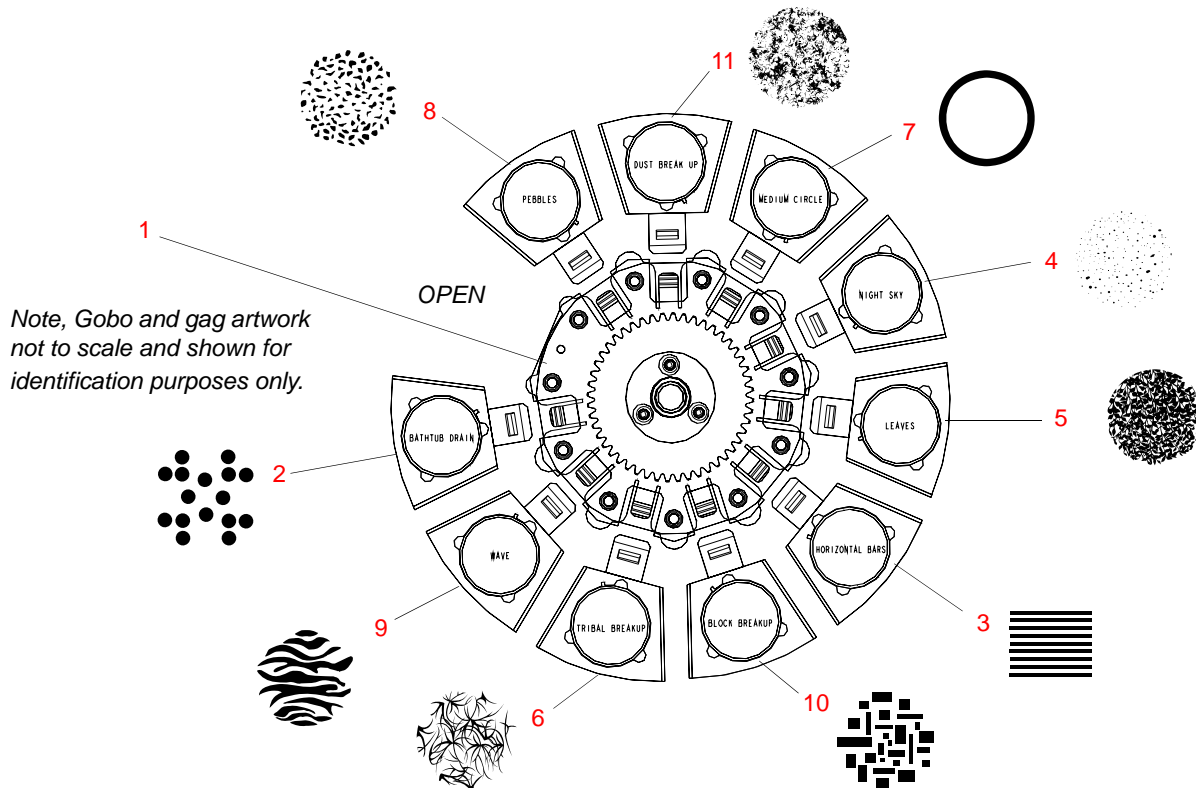


Figure 3-34: Fixed Gobo Wheel Assembly

CYMD Color Module Assembly

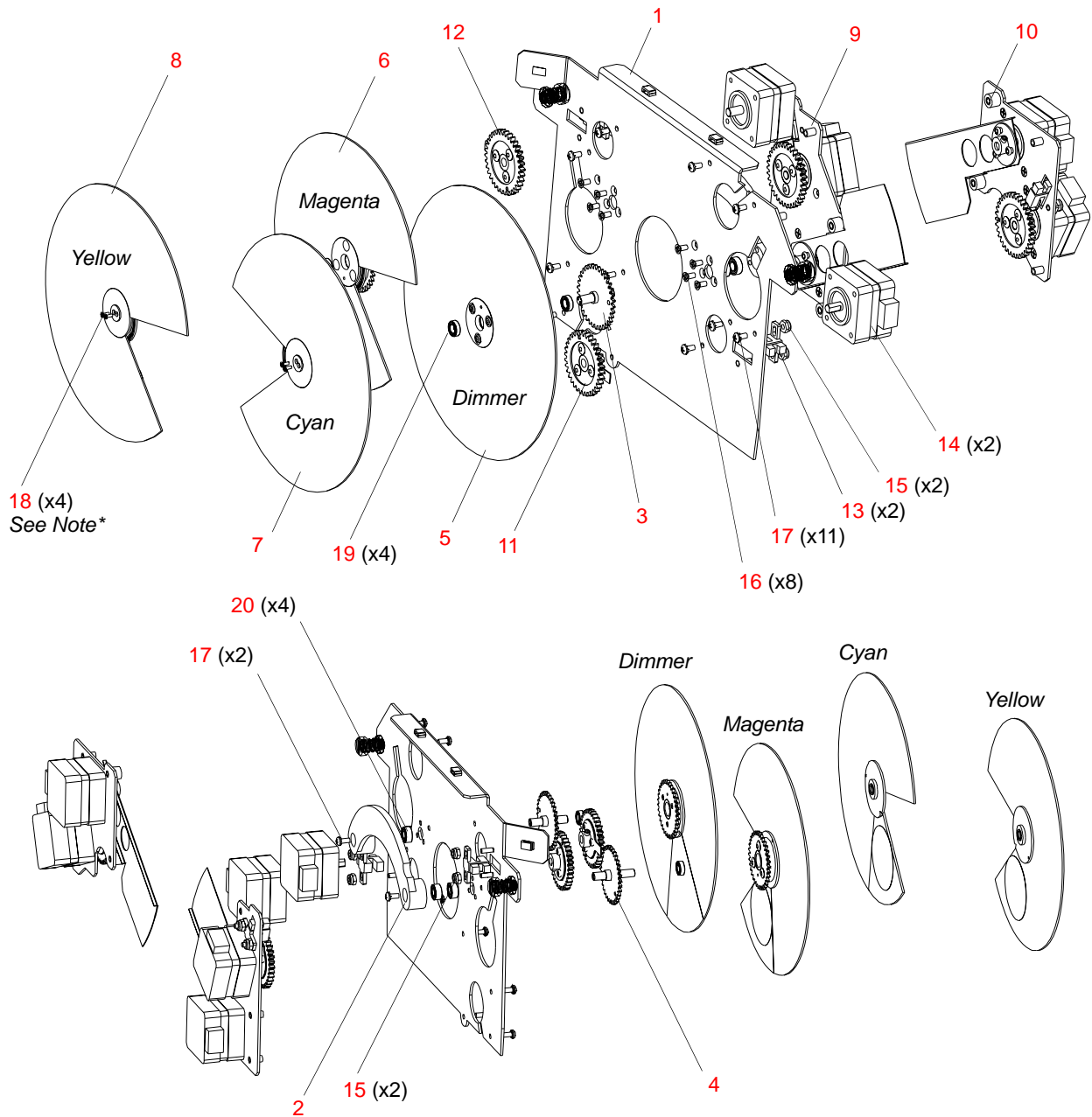
21.9687.0511 Rev C

Refer to [Figure 3-35](#).

No.	Item	Qty.	UM.	Description
1	10.9687.0438	1	EA	PLATE, COLOR MIX MODULE
2	10.9687.1406	1	EA	HOUSING, BEARING, COLOR MIX SHAFT, DUAL
3	10.9687.1407	1	EA	SHAFT, COLOR MIX, 1
4	10.9687.1408	1	EA	SHAFT, COLOR MIX, 2
5	21.9687.1415	1	EA	ASSY, DIMMER WHEEL
6	21.9687.1416	1	EA	ASSY, MAGENTA COLOR WHEEL
7	21.9687.1417	1	EA	ASSY, CYAN COLOR WHEEL
8	21.9687.1418	1	EA	ASSY, YELLOW COLOR WHEEL
9	21.9687.1435	1	EA	ASSY, FLAG MOTOR PLATE, LEFT
10	21.9687.1437	1	EA	ASSY, FLAG MOTOR PLATE, RIGHT
11	22.9687.0460	1	EA	ASSY, OUTDRIVE, DIMMER
12	22.9687.0462	1	EA	ASSY, OUTDRIVE, MAGENTA
13	25.9687.0020	2	EA	SWITCH, SLOTTED OPTICAL
14	44.9687.1203	2	EA	MOTOR, SIZE-14, SHAFT, 0.375" LG
15	53.2202.0004	4	EA	NUT, 4-40 HEX SS NYLON INSERT
16	53.6559.0001	8	EA	SCREW, 4-40 X 1/4" PFZ
17	53.6592.0250	13	EA	SCREW, 4-40 X 1/4" PPB SEMS
18	53.6661.0003	4	EA	SCREW, 0-80 X 3/16" LG PFSS
19	54.9687.0252	4	EA	BEARING, MR95ZZ
20	54.9687.0253	4	EA	BEARING, MR105ZZ

Note: When installing or reinstalling Yellow or Cyan wheels, you must add a bead of RTV 5083 on top of 0-80 x 3/16" LG PFSS Screws. Allow enough time for RTV to cure before putting the assembly into use.

CYMD Color Module Assembly (continued)



Note: * When installing or reinstalling Yellow or Cyan wheels, you must add a bead of RTV 5083 on top of 0-80 x 3/16" LG PFSS Screws. Allow enough time for RTV to cure before putting the assembly into use.

Figure 3-35: CYMD Color Module Assembly

Left Flag Motor Plate Assembly

21.9687.1435 Rev A

Refer to [Figure 3-36](#).

No.	Item	Qty.	UM.	Description
1	10.9687.1437	1	EA	PLATE, MOTOR STROBE
2	22.9687.0453	1	EA	ASSY, FLAG, DIM/STROBE
3	22.9687.1455	1	EA	ASSY, OUTDRIVE, OFFSET TAB, 0.155"
4	25.9687.0020	1	EA	SWITCH, SLOTTED OPTICAL
5	44.9687.1213	2	EA	MOTOR, SIZE-14, SHAFT 0.50" LG
6	55.2202.0004	2	EA	NUT, 4-40 HEX SS NYLON INSERT
7	53.6601.0001	4	EA	SCREW, 4-40 X 3/16" PFZ
8	55.6738.0005	2	EA	TUBING, SILICONE, 4 MM ID, 8MM SOFT RED

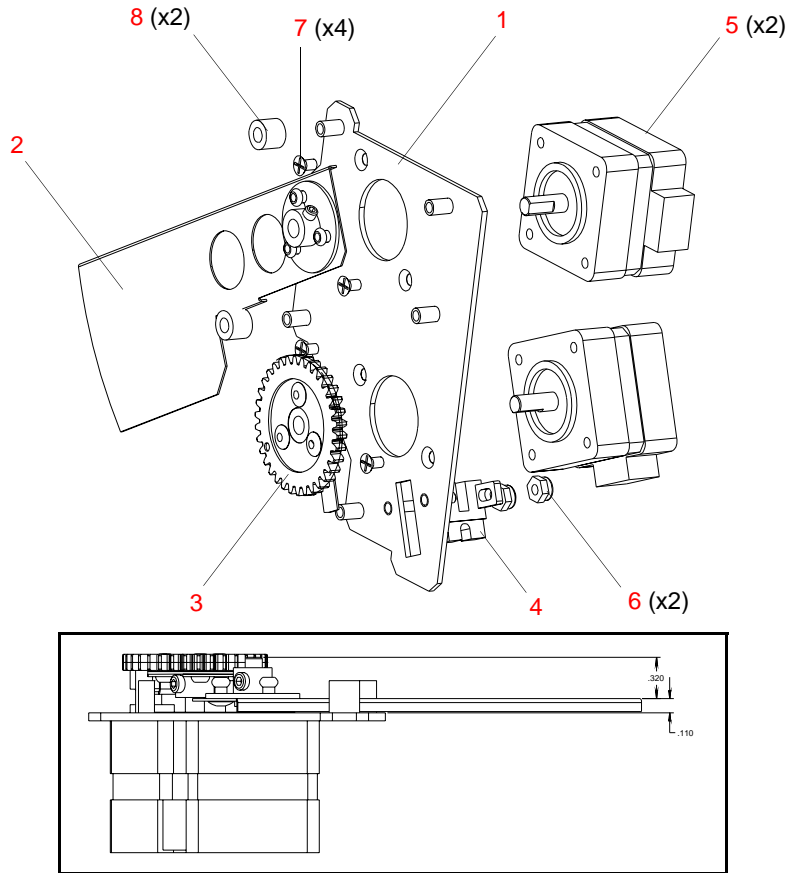


Figure 3-36: Left Flag Motor Plate Assembly

Right Flag Motor Plate Assembly

21.9687.1437 Rev A

Refer to [Figure 3-37](#).

No.	Item	Qty.	UM.	Description
1	10.9687.1439	1	EA	PLATE, MOTOR, DIMMER STROBE
2	22.9687.0453	1	EA	ASSY, FLAG, DIM/STROBE
3	22.9687.1456	1	EA	ASSY, OUTDRIVE, CYAN
4	25.9687.0020	1	EA	SWITCH, SLOTTED OPTICAL
5	44.9687.1213	2	EA	MOTOR, SIZE-14, SHAFT 0.50" LG
6	55.2202.0004	2	EA	NUT, 4-40 HEX SS NYLON INSERT
7	53.6601.0001	4	EA	SCREW, 4-40 X 3/16" PFZ
8	55.6738.0005	2	EA	TUBING, SILICONE, 4 MM ID, 8MM SOFT RED
9	55.9687.0203	2	EA	WASHER, SPACER, 0.120" ID X 0.250" OD X 0.047" THK

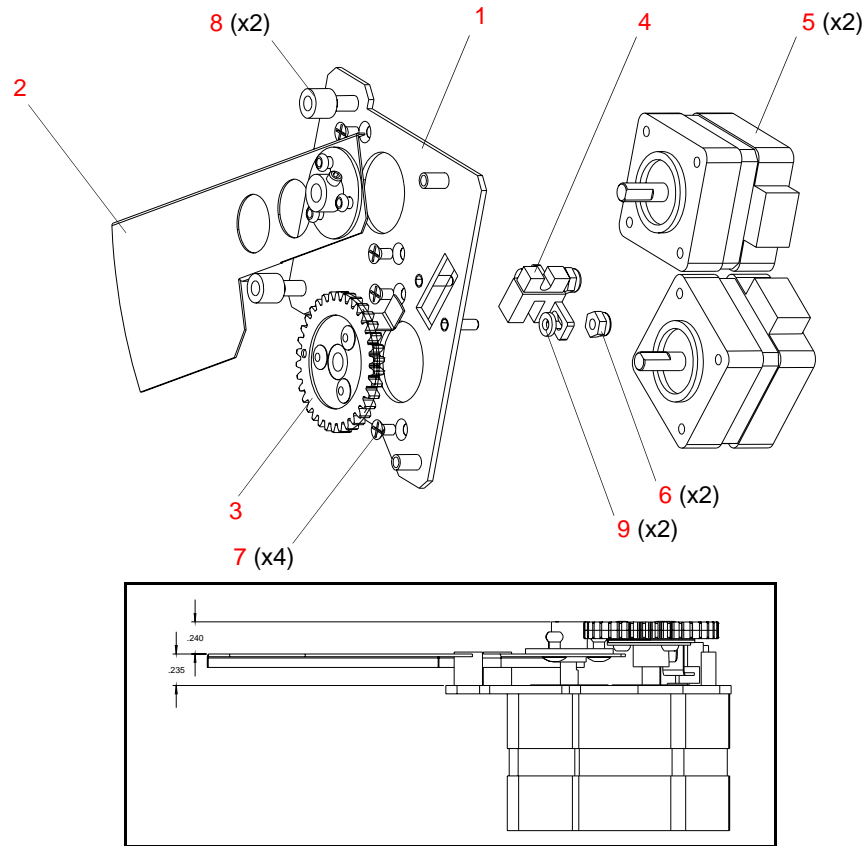


Figure 3-37: Right Flag Motor Plate Assembly

Zoom Assembly

21.9687.0160 Rev D

Refer to [Figure 3-38](#)

No.	Item	Qty.	UM.	Description
1	10.9687.0102	1	EA	PLATE, END, ZOOM
2	10.9687.0103	1	EA	CARRIER, GROUP ONE
3	10.9687.0110	1	EA	PLATE, BOTTOM, ZOOM
4	10.9687.0112	1	EA	BRACKET, SUPPORT, GROUP THREE
5	10.9687.0134	1	EA	BRACKET, ZOOM, HOME
6	10.9687.0160	1	EA	PLATE, GROUP THREE
7	10.9687.0192	1	EA	BRACKET, ZOOM MOTOR MOUNT
8	10.9687.0194	3	EA	STANDOFF, FLAG STOP
9	10.9687.0195	1	EA	BRACKET, FAN, GROUP ONE
10	10.9687.1107	1	EA	CARRIER, GROUP TWO
11	10.9687.1135	1	EA	TAB, HOMING, ZOOM
12	10.9687.0406	1	EA	HOUSING, BEARING COLOR MIX SHAFT
13	21.9687.0151	1	EA	ASSY, PRISM
14	21.9687.0152	1	EA	ASSY, FROST
15	21.9687.0180	1	EA	ASSY, LINEAR SLIDE, ZOOM
16	22.9687.0101	1	EA	ASSY, POSITIONING CAM
17	22.9687.0106	1	EA	ASSY, DRIVE GEAR, ZOOM
18	22.9687.0120	1	EA	ASSY, GROUP ONE, LENS
19	22.9687.0121	1	EA	ASSY, GROUP TWO, LENS
20	22.9687.0122	1	EA	ASSY, GROUP THREE, LENS
21	25.9687.0020	3	EA	SWITCH, SLOTTED, OPTICAL
22	44.9687.1209	2	EA	MOTOR SIZE-17, SHAFT 0.70"
23	44.9687.1215	1	EA	MOTOR SIZE-17, ZOOM
24	53.2200.0006	6	EA	NUT, KEPS, 6-32
25	53.6404.0003	3	EA	SCREW, 4-40 X 1.0" PPZ
26	53.6545.0003	4	EA	SCREW, 8-32 X 3/8" PFZ
27	53.6558.0007	4	EA	SCREW, 6-32 X 1/4" PPZ SEMS
28	53.6558.0009	2	EA	SCREW, 6-32 X 3/8" PPZ SEMS
29	53.6559.0001	5	EA	SCREW, 4-40 X 1/4" PFZ
30	53.6575.0009	2	EA	SCREW, 8-32 X 3/8" PPB SEMS
31	53.6575.0010	2	EA	SCREW, 8-32 X 1/2" PPZ SEMS

VARI*LITE - VL440 / VL770 / VL880 SPOT LUMINAIRES SERVICE MANUAL

No.	Item	Qty.	UM.	Description
32	53.6592.0250	9	EA	SCREW, 4-40 X 1/4" PPB SEMS
33	53.6599.0001	4	EA	SCREW, 4-40 X 3/8" PFZ
34	53.6659.0002	2	EA	SCREW, 2-56 X 1/4" PPZ
35	53.6608.0001	5	EA	SCREW, 6-32 X 3/8" PFB
36	53.6682.0026	2	EA	SCREW, 8-32 X 3/4" PPZ SEMS
37	54.9687.0104	2	EA	BEARING, DUAL SHIELDED, MR83
38	54.9687.0253	2	EA	BEARING, MR105ZZ
39	55.3301.0004	1	EA	WASHER, #4 FLAT SS
40	55.6520.0001	1	EA	WASHER, WAVE SPRING, 0.265" ID

Zoom Assembly (continued)

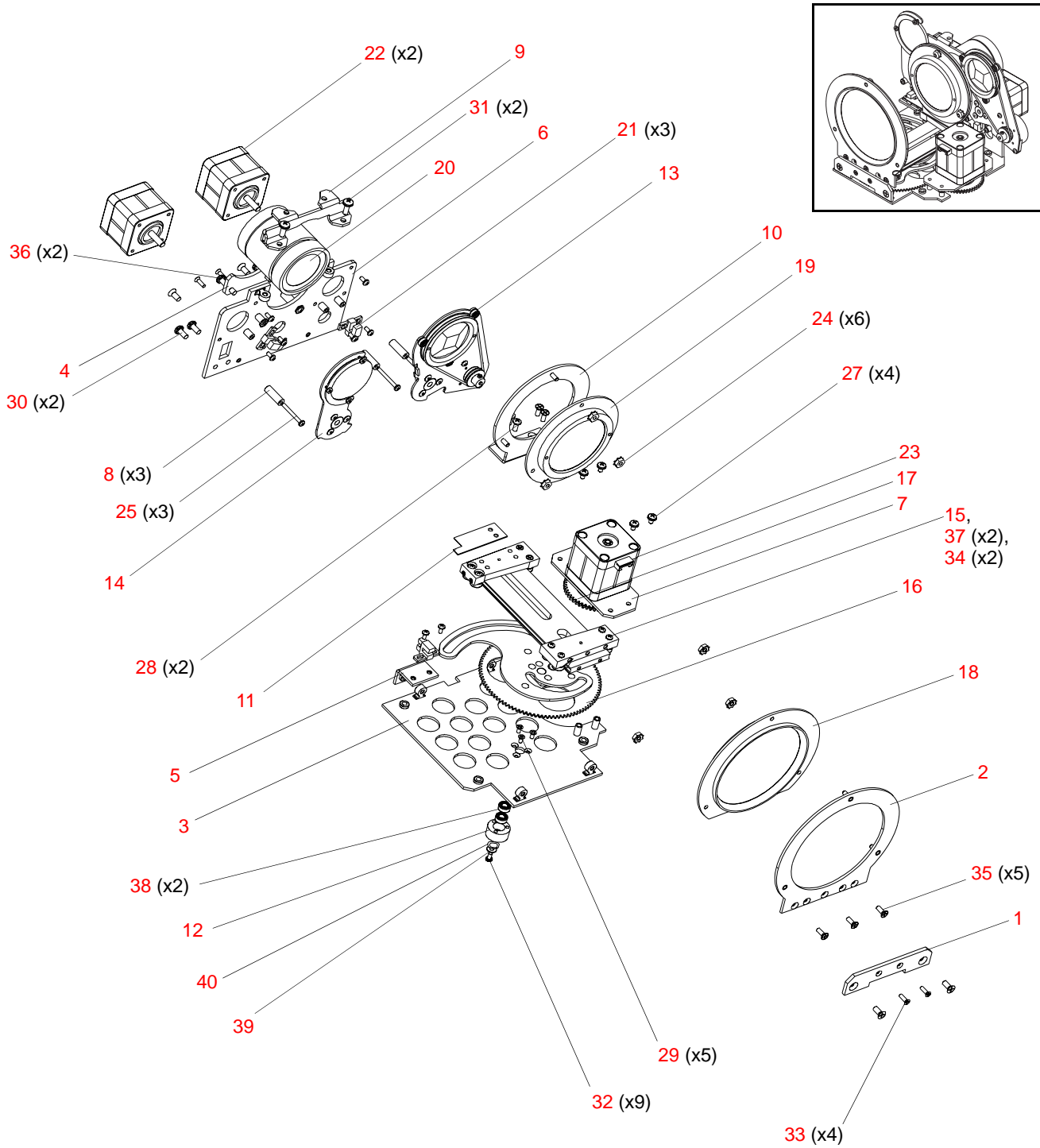


Figure 3-38: Zoom Assembly

Prism Assembly

21.9687.0151 Rev B

Refer to [Figure 3-39](#).

No.	Item	Qty.	UM.	Description
1	10.9687.0175	1	EA	ROTATOR, PRISM
2	10.9687.0176	1	EA	DRIVE PULLEY, O-RING
3	10.9687.1179	3	EA	SHAFT, BEARING, PRISM ROTATE
4	22.9687.0116	1	EA	ASSY, PRISM FLAG
5	42.9687.0130	1	EA	PRISM, 5-FACETS
6	44.9687.1218	1	EA	MOTOR, SIZE-14, LO-PRFL, 0.9 DEG
7	53.3301.0003	3	EA	WASHER, FLAT #2 AN ID 0.099 X 0
8	53.6578.0002	2	EA	SCREW, 6-32 X 3/16" SET CUP POINT
9	53.6592.0250	2	EA	SCREW, 4-40 X 1/4" PPB SEMS
10	53.6601.0001	2	EA	SCREW, 4-40 X 3/16" PFZ
11	53.6659.0005	3	EA	SCREW, 2-56 X 1/4" PFZ
12	54.9687.0104	3	EA	BEARING, DUAL SHIELDED, MR83
13	54.9687.0105	1	EA	BELT, O-RING, 1/16" DIA, 3.0" ID

Prism Assembly (continued)

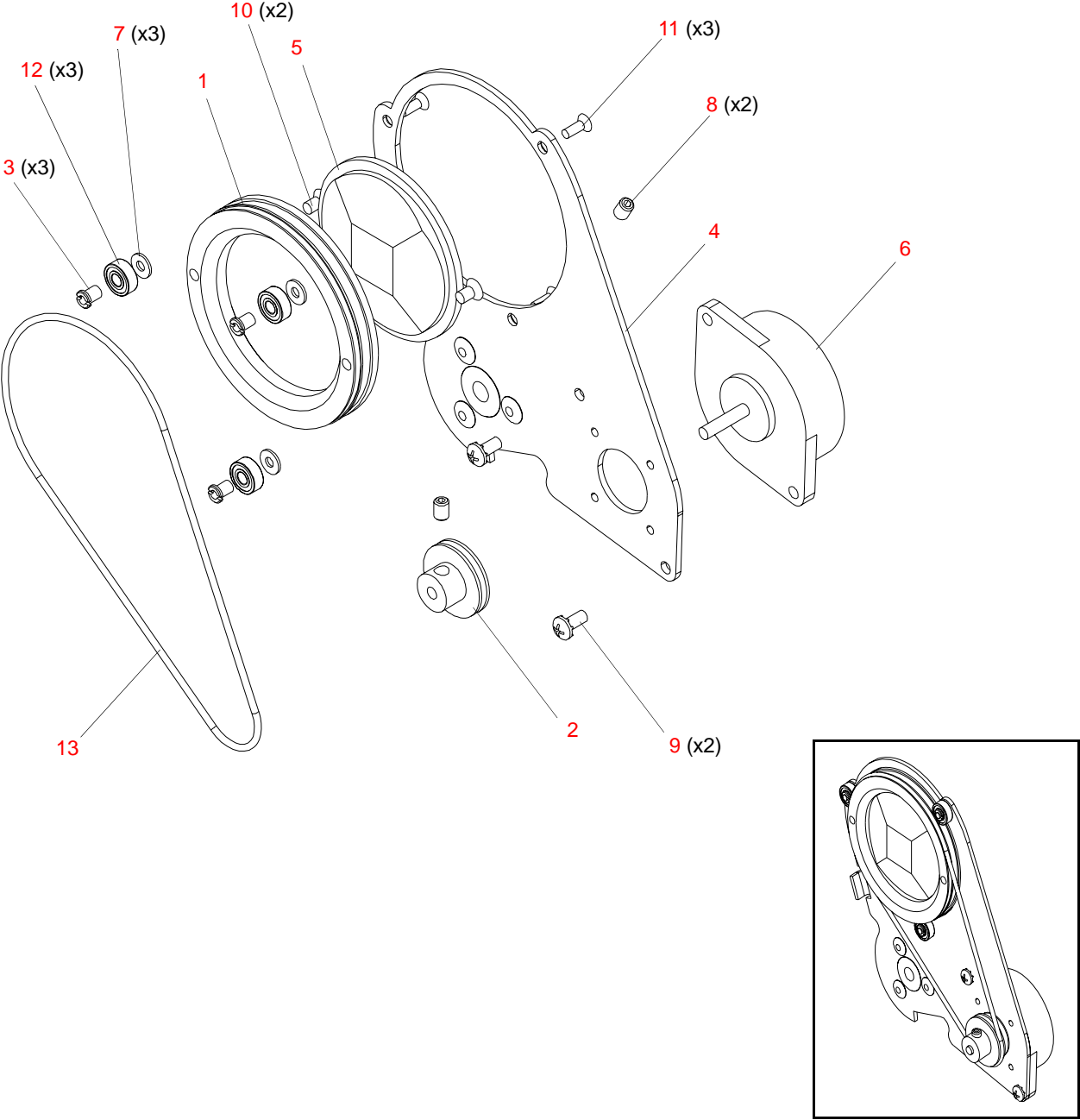


Figure 3-39: Prism Assembly

Frost Assembly

21.9687.0152 Rev A

Refer to [Figure 3-40](#).

No.	Item	Qty.	UM.	Description
1	10.9687.0177	1	EA	RETAINER, FROST GLASS
2	22.9687.0115	1	EA	ASSY, FROST FLAG
3	42.9687.0151	1	EA	GLASS, FROST, SVL
4	53.2009.0001	3	EA	NUT, HEX, 2-56
5	53.3303.0002	3	EA	WASHER, FLAT #2 LOCK INT TOOTH SS
6	53.6578.0002	1	EA	SCREW, 6-32 X 3/16" SET CUP POINT
7	53.6659.0002	1	EA	SCREW, 2-56 X 1/4" PPZ

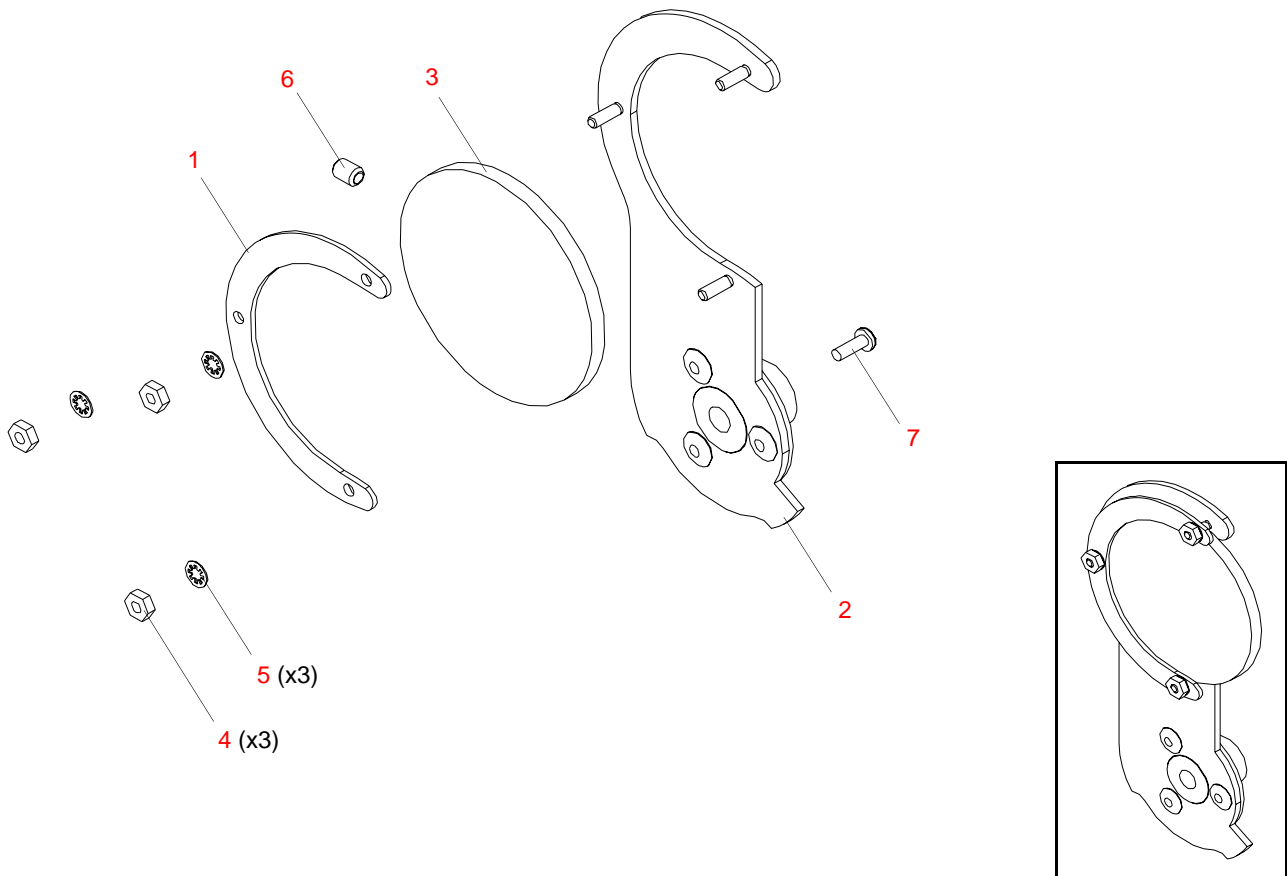


Figure 3-40: Frost Assembly

Zoom Linear Slide Assembly

21.9687.0180 Rev A

Refer to [Figure 3-41](#).

No.	Item	Qty.	UM.	Description
1	10.9687.0111	2	EA	SHAFT, CAM FOLLOWER
2	10.9687.0140	1	EA	RAIL, LINEAR SLIDE
3	21.9687.0106	1	EA	ASSY, CARRIER, FRONT
4	21.9687.0111	1	EA	ASSY, CARRIER, REAR
5	53.6659.0016	2	EA	SCREW, 2-56 X 5/8" PPZ SEMS
6	54.9687.0104	2	EA	BEARING, DUAL SHIELDED, MR83
7	55.3303.0002	2	EA	WASHER, #2 LOCK INT TOOTH SS

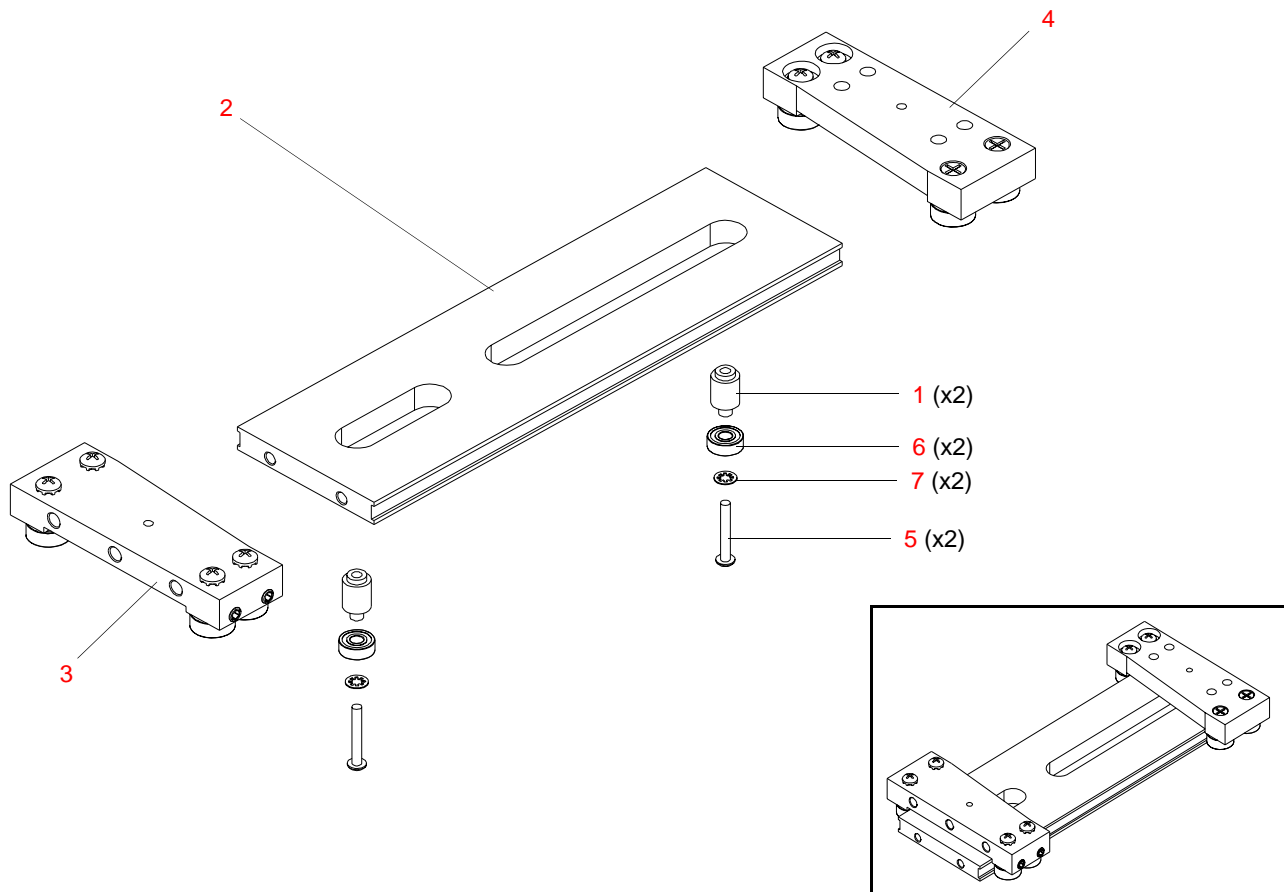


Figure 3-41: Zoom Linear Slide Assembly

Front Carrier Assembly

21.9687.0106 Rev B

Refer to [Figure 3-42](#).

No.	Item	Qty.	UM.	Description
1	10.9687.0145	1	EA	CARRIAGE, FRONT
2	10.9687.1670	4	EA	SHAFT, FOCUS BEARING
3	53.6558.1188	2	EA	SCREW, SET 6-40 X 0.188"
4	53.6596.0002	4	EA	SCREW, 6-32 X 1/4" PPB SEMS
5	54.9687.0253	4	EA	BEARING, MR105ZZ

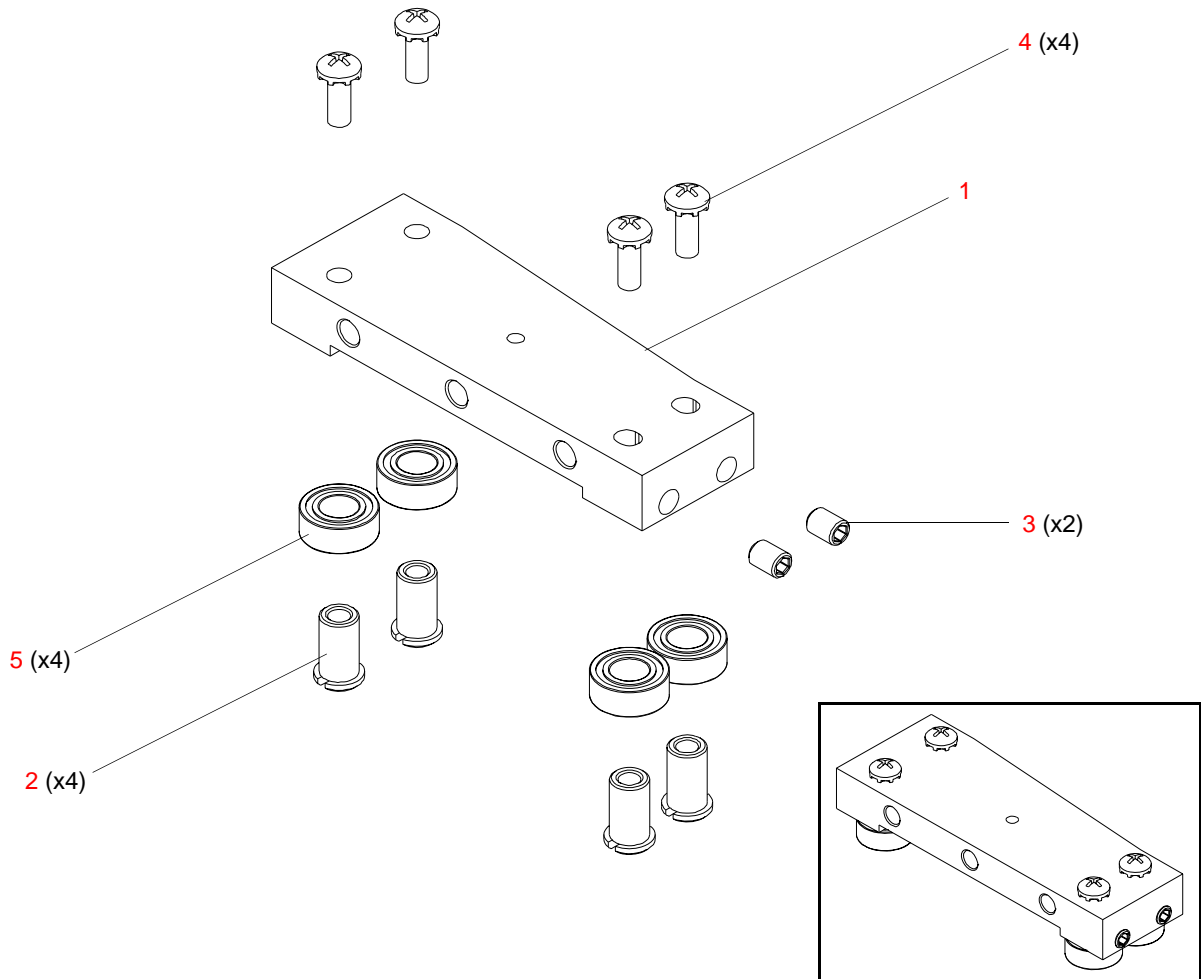


Figure 3-42: Front Carrier Assembly

Rear Carrier Assembly

21.9687.0111 Rev B

Refer to [Figure 3-43](#).

No.	Item	Qty.	UM.	Description
1	10.9687.0146	1	EA	CARRIAGE, REAR
2	10.9687.1670	4	EA	SHAFT, FOCUS BEARING
3	53.6558.1188	2	EA	SCREW, SET 6-40 X 0.188"
4	53.6599.0001	2	EA	SCREW, 4-40 X 3/8" PFZ
5	53.6682.0002	2	EA	SCREW, 4-40 X 1/4" PPZ SEMS
6	54.9687.0253	4	EA	BEARING, MR105ZZ

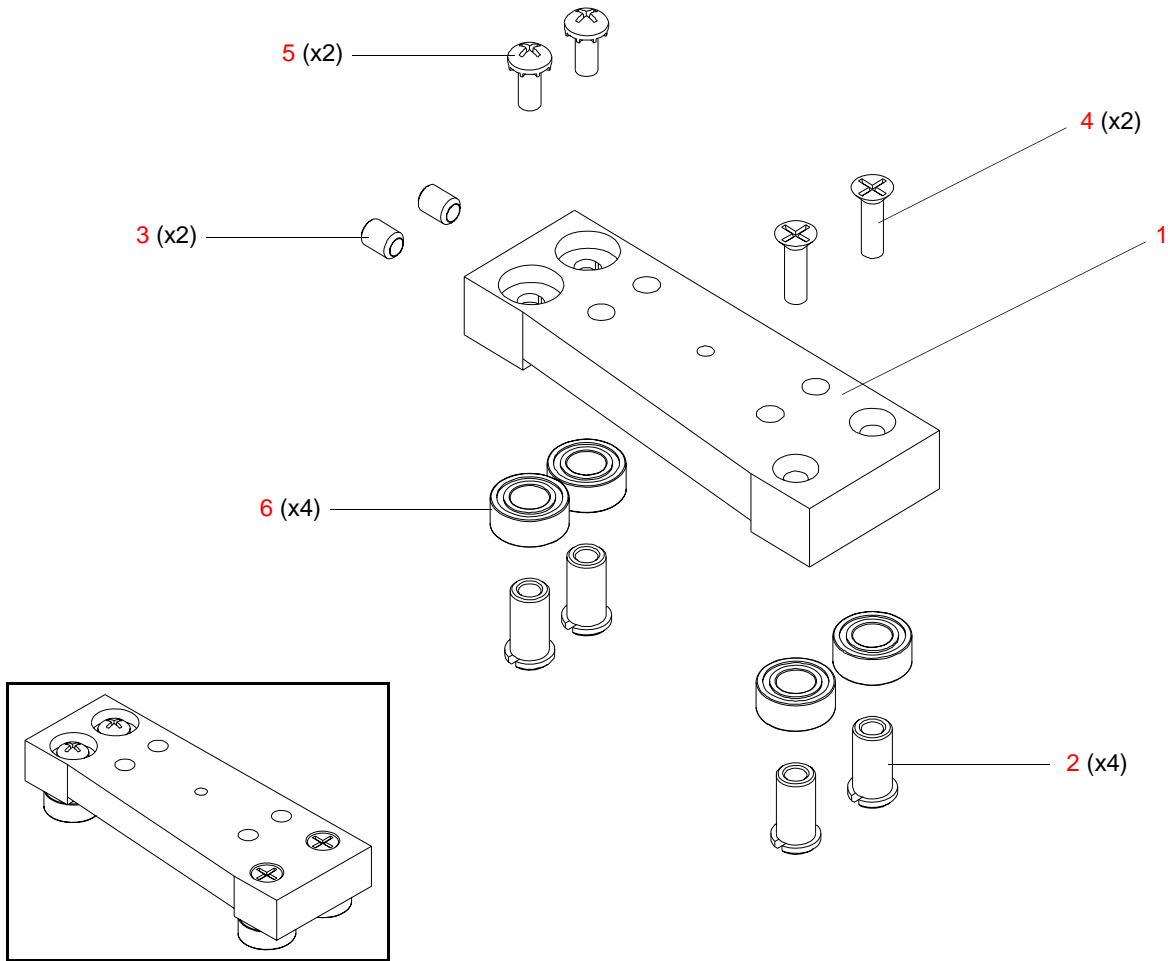


Figure 3-43: Rear Carrier Assembly

Notes

Enclosure Assembly

Upper Enclosure Assembly

21.9687.0850 Rev N

Refer to [Figure 3-44](#), [Figure 3-45](#) and [Figure 3-46](#)

No.	Item	Qty.	UM.	Description
1	04.9687.0100	1	EA	OVERLAY, INPUT PANEL VL400/700
2	04.9687.0150	1	EA	PRODUCT COMPLIANCE LABEL
3	10.9687.0814	1	EA	ADAPTOR, YOKE
4	10.9687.0819	1	EA	PLATE, BOTTOM, UPPER ENCLOSURE
5	10.9687.1820	1	EA	PLATE, TOP UPPER ENCLOSURE
6	10.9687.0823	6	EA	STANDOFF, UPPER ENCLOSURE
7	10.9687.0824	4	EA	STANDOFF, PAN MOTOR
8	10.9687.0825	2	EA	CAP., BEARING, PAN
9	10.9687.0827	1	EA	PULLEY, PAN, 108T-GT2P
10	10.9687.0828	1	EA	COVER, PAN PULLEY
11	10.9687.0829	1	EA	WIRE TRAY
12	10.9687.0836	4	EA	STANDOFF, BLOWER ASSY.
13	10.9687.0840	4	EA	MOUNTING BUTTON
14	10.9687.0841	1	EA	PAN LATCH
15	10.9687.0860	4	EA	TEFLON SPACER, PAN LOCK
16	10.9687.0861	2	EA	LATCH SPRING, PAN LOCK
17	10.9687.1811	1	EA	STABILIZER, 50 MM DIA
18	10.9687.1825	1	EA	CAP, BEARING, PAN, INSIDE
19	21.9687.0860	1	EA	ASSY, PAN MOTOR
20	22.9687.0807	1	EA	ASSY, PAN TUBE
21	22.9687.0810	1	EA	ASSY, PANEL, DISPLAY CONNECTOR
22	22.9687.0811	1	EA	ASSY, BLOWER DEFLECTOR, RIGHT
23	22.9687.0812	1	EA	ASSY, BLOWER DEFLECTOR, LEFT
24	24.9664.4895	1	EA	PCB ASSY, DMX INPUT
25	24.9690.0580	1	EA	BRD ASSY, VLX DISPLAY
-	25.9661.1520	1	EA	CABLE ASSY, ENCLOSURE TO YOKE CHASSIS GROUND (not shown)
26	25.9687.0001	1	EA	CABLE ASSY, AC INPUT
-	25.9687.0003	1	EA	CABLE ASSY, DMX/DISPLAY COMM (not shown)

VARI*LITE - VL440 / VL770 / VL880 SPOT LUMINAIRES SERVICE MANUAL

No.	Item	Qty.	UM.	Description
-	25.9687.0005	1	EA	CABLE ASSY, 36 VOLT SUPPLY (not shown)
-	25.9687.0006	1	EA	CABLE ASSY, BALLAST TO IGNITOR (not shown)
-	25.9687.0007.01	1	EA	CABLE ASSY, PAN MOTOR HARNESS (not shown)
-	25.9687.0007.02	1	EA	CABLE ASSY, PAN ENCODER HARNESS (not shown)
-	25.9703.0002	1	EA	CABLE ASSY, APS FAN (not shown)
-	25.9703.0016	1	EA	CABLE ASSY, AUX COMM INTERFACE (not shown)
27	40.9687.0001	2	EA	BLOWER 75X30, 85C, HI-FLOW
28	53.2003.0001	2	EA	NUT, 4-40 KEPS ZINC PLATED
29	53.2004.0002	14	EA	NUT, 8-32 KEPS ZINC PLATED
30	53.2202.0008	4	EA	NUT, 8-32 HEX SS NYLON INSERT
31	53.6515.0001	4	EA	SCREW, 10-32 X 3/4" SCB
32	53.6515.0375	4	EA	SCREW, 10-32 X 3/8" SCZ-B
33	53.6515.0875	4	EA	SCREW, 10-32 X 7/8" SKT CAP
34	53.6525.0188	6	EA	SCREW, 6-32 X 3/16" LG PPZ
35	53.6558.0007	4	EA	SCREW, 6-32 X 1/4" PPZ SEMS
36	53.6575.0005	4	EA	SCREW, 8-32 X 1-1/2" PPZ
37	53.6575.0008	4	EA	SCREW, 8-32 X 1/4" PPZ SEMS
38	53.6575.0009	4	EA	SCREW, 8-32 X 1/4" PPB SEMS
39	53.6575.0010	1	EA	SCREW, 8-32 X 1/2" PPZ SEMS
40	53.6598.0001	6	EA	SCREW, 4-40 X 3/8" PFB
41	53.6624.0001	6	EA	SCREW, 10-32 X 1/2" PFB
42	53.7017.0500	10	EA	SCREW, 1/4-20 X 1/2" PFZ
43	54.9687.0802	1	EA	BALL, 0.177" DIA STEEL
44	54.9687.0803	1	EA	BEARING, 6810-2RS
45	55.3301.0008	8	EA	WASHER, FLAT #8, SS
46	55.6503.0001	4	EA	WASHER, #8 LOCK INT TOOTH
47	55.6568.0075	1	EA	SPRING, EXTSN, 1/2" FL X 1/8" OD
48	90-2400	8	EA	BRD ASSY, VL WIRELESS INTERCONNECT

Upper Enclosure Assembly (continued)

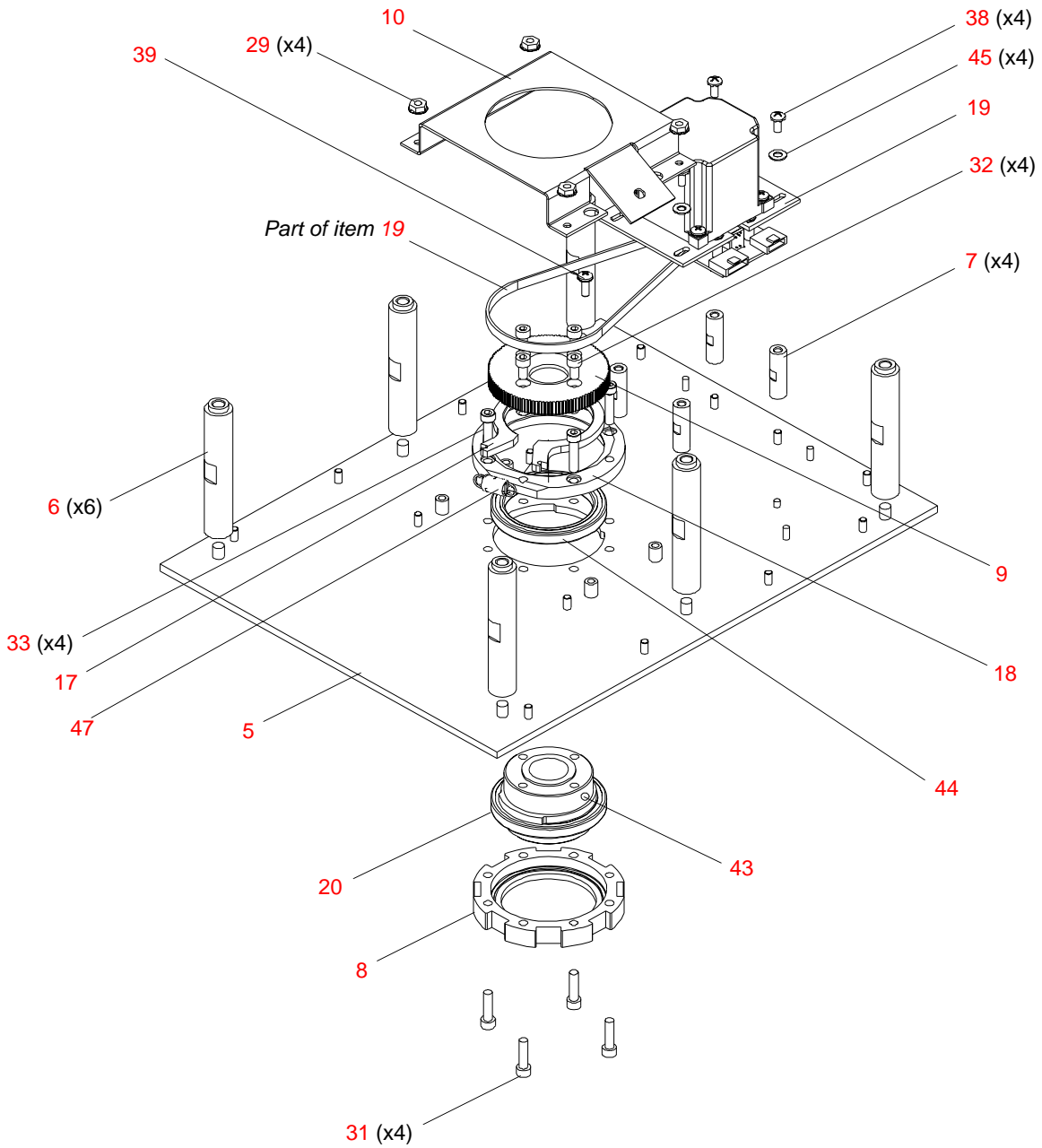


Figure 3-44: Upper Enclosure Assembly Part 1

Upper Enclosure Assembly (continued)

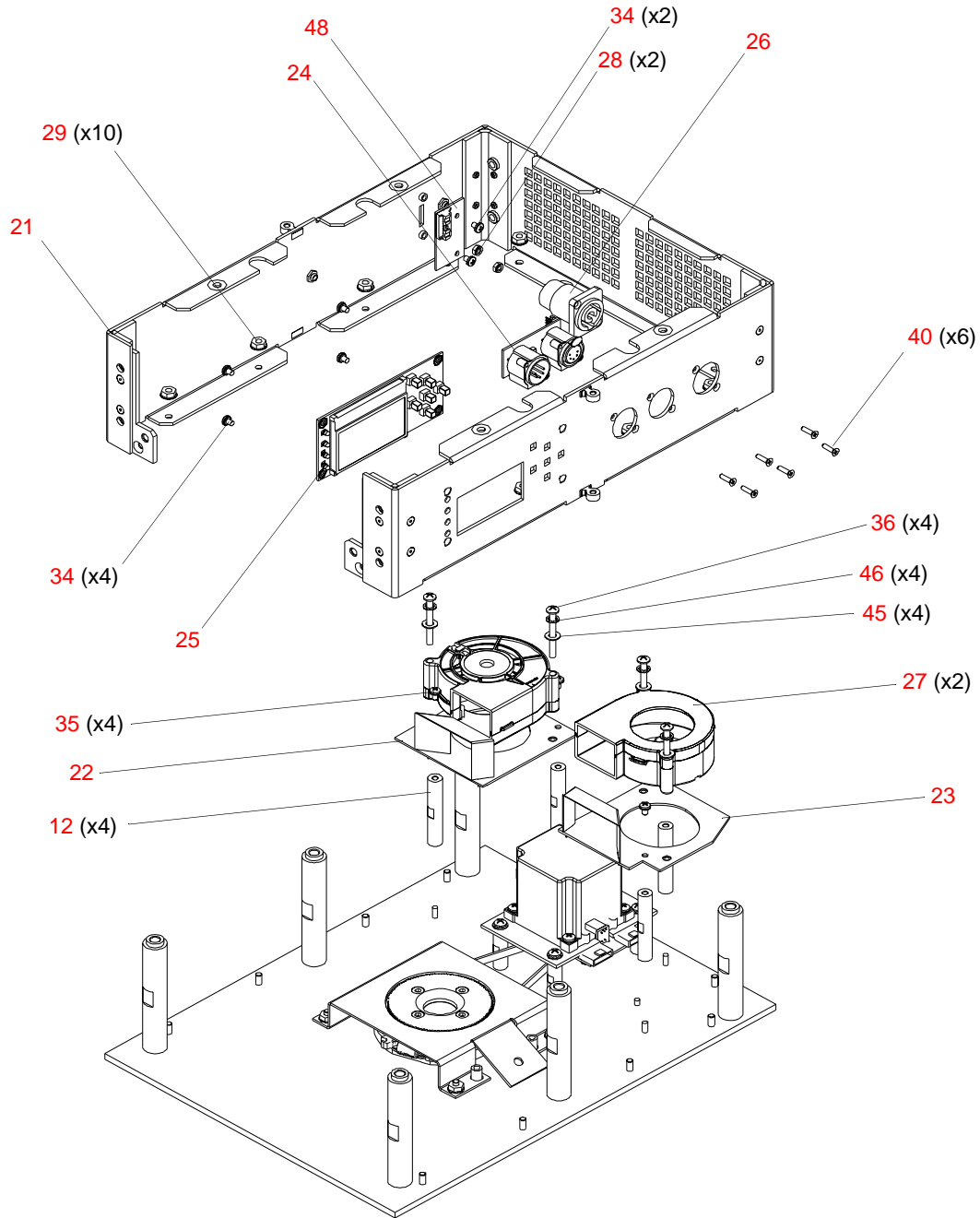
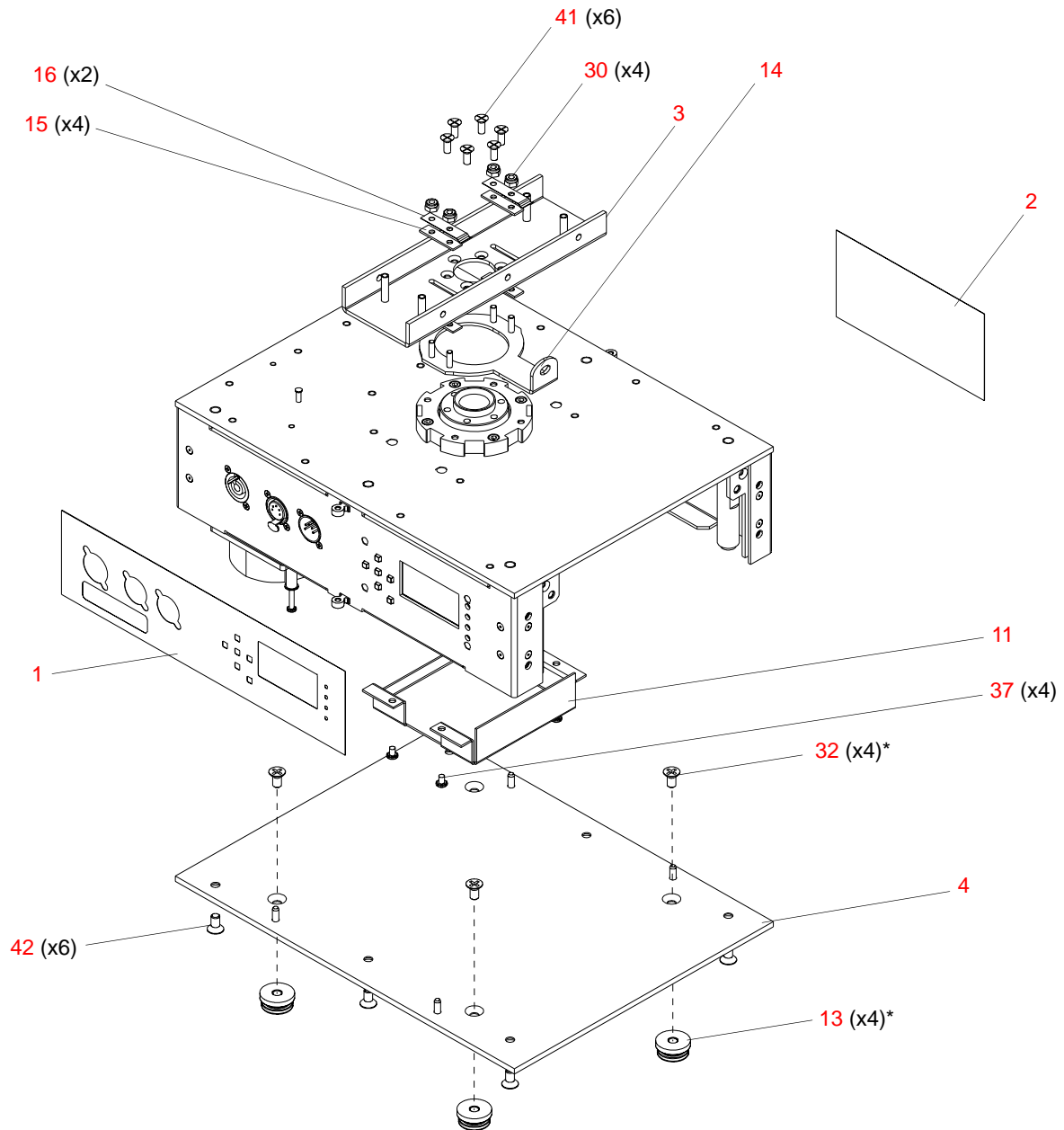


Figure 3-45: Upper Enclosure Assembly Part 2

Upper Enclosure Assembly (continued)



**Note: When installing these items, use thread locker Loctite 271 or equivalent.*

Figure 3-46: Upper Enclosure Assembly Part 3

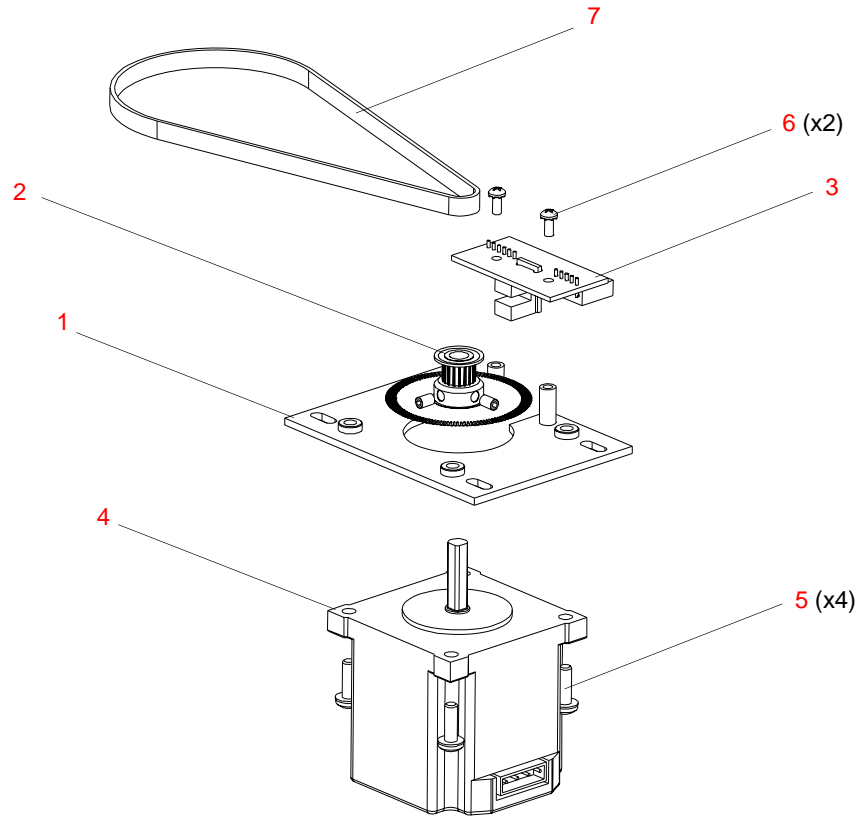
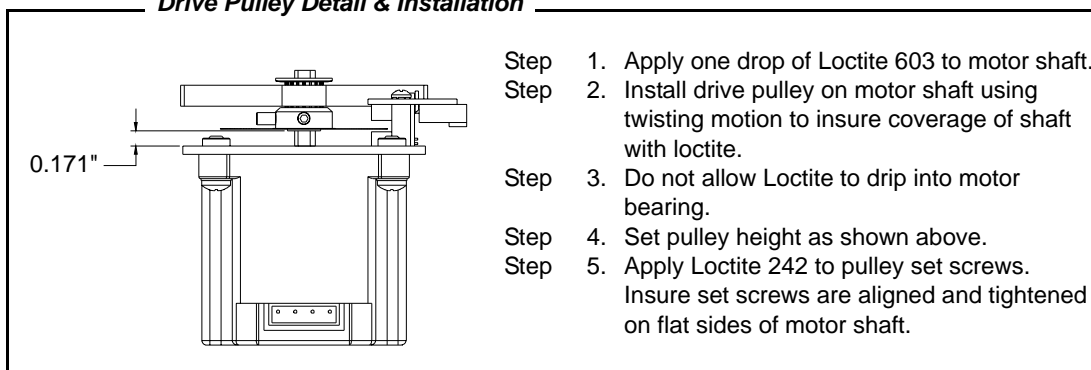
Pan Motor Assembly

21.9687.0860 Rev. B

Refer to [Figure 3-47](#)

No.	Item	Qty.	UM.	Description
1	10.9687.0822	1	EA	PLATE, PAN MOTOR MOUNT
2	21.9687.0655	1	EA	PULLEY, PINION (INCLUDES ENCODER WHEEL AND SET SCREWS)
3	24.9661.5000	1	EA	BRD ASSY, PAN/TILT ENCODER
4	44.9687.1680	1	EA	MOTOR, 3-PHASE SZ 23 HI-TRQ, MOONS
5	53.6575.0010	4	EA	SCREW, 8-32 X 1/2" PPZ SEMS
6	53.6682.0002	2	EA	SCREW, 4-40 X 1/4" PPZ SEMS
7	54.9687.0805	1	EA	BELT, PAN, 185 TOOTH, GT-2 MM, 6 MM WIDE

Pan Motor Assembly (continued)

**Drive Pulley Detail & Installation****Figure 3-47: Pan Motor Assembly**

Note: Vari-Lite recommends that this assembly be replaced as a complete assembly. Although you can replace only the motor, the pulley (Item 2) is bonded to the motor shaft during assembly and cannot be removed intact. If you order a replacement motor (Item 4), also order the pulley (Item 2). Contact Vari-Lite Customer Service for installation information.

Notes

Cable Assemblies

Chassis To Yoke Ground Cable Assembly

25.9661.1520 Rev D

Refer to [Figure 3-48](#).

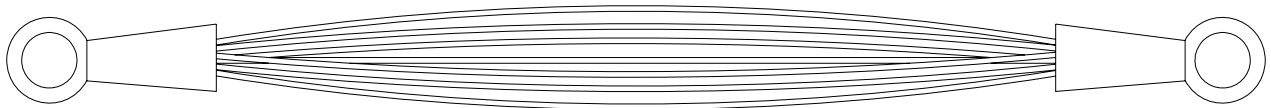


Figure 3-48: Chassis To Yoke Ground Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

AC Input Cable Assembly

25.9687.0001 Rev A

Refer to [Figure 3-49](#)

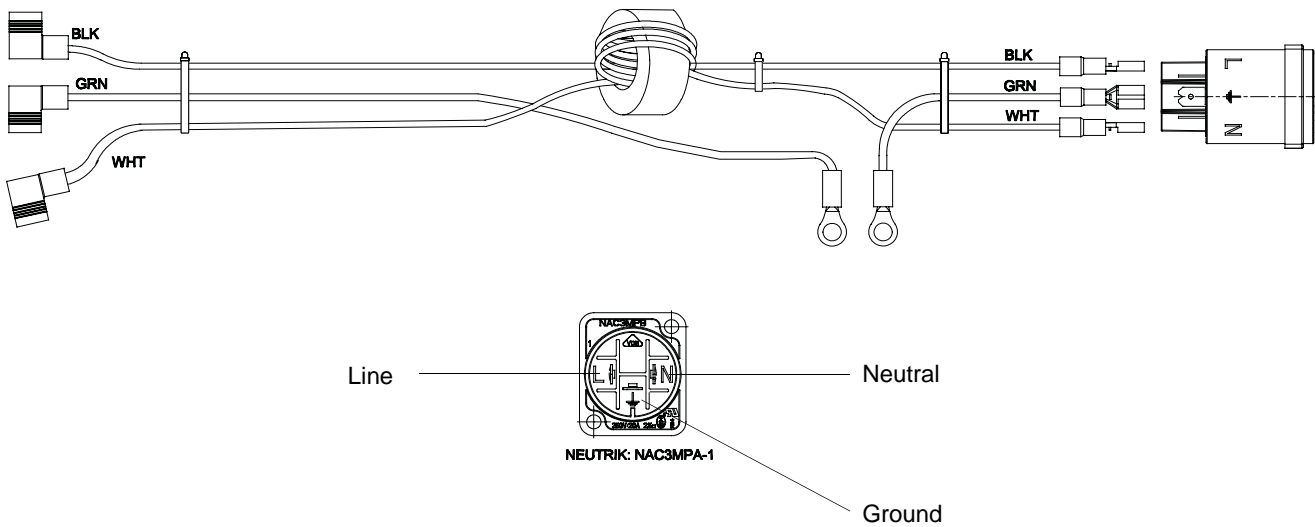


Figure 3-49: AC Input Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

DMX / Display Comm Cable Assembly

25.9687.0003 Rev A

Refer to [Figure 3-50](#)

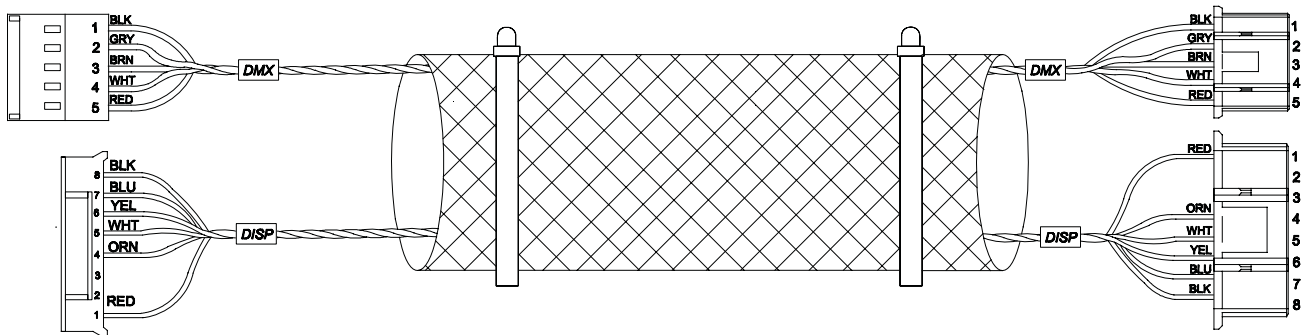


Figure 3-50: DMX / Display Comm Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Ballast Comm Cable Assembly

25.9687.0004 Rev B

Refer to [Figure 3-51](#)

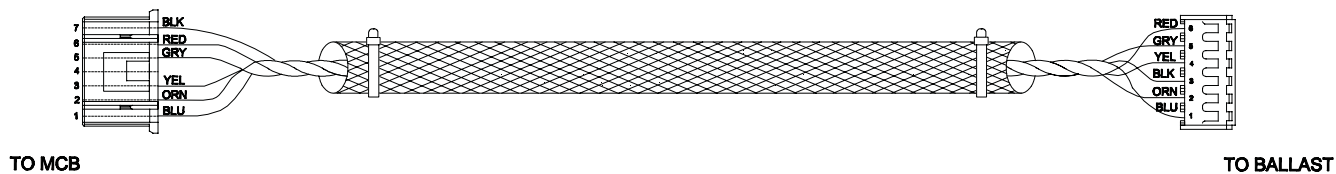


Figure 3-51: Ballast Comm Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

36 Volt Supply Cable Assembly

25.9687.0005 Rev A

Refer to [Figure 3-52](#)

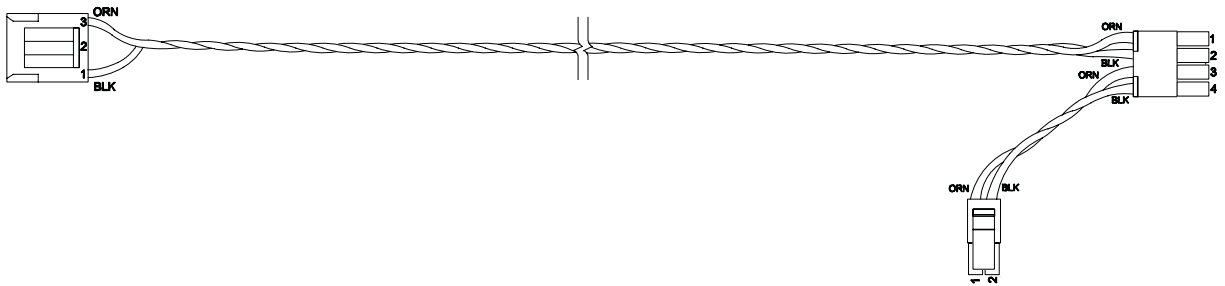


Figure 3-52: 36 Volt Supply Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Ballast to Ignitor Cable Assembly

25.9687.0006 Rev A

Refer to [Figure 3-53](#)

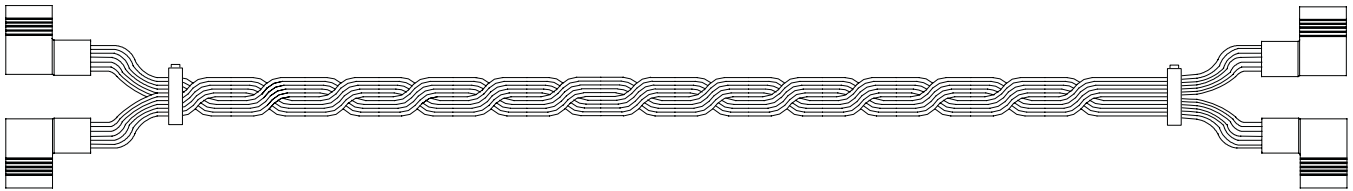


Figure 3-53: Ballast to Ignitor Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Pan Motor Cable Assembly

25.9687.0007.01 Rev C

Refer to [Figure 3-54](#)

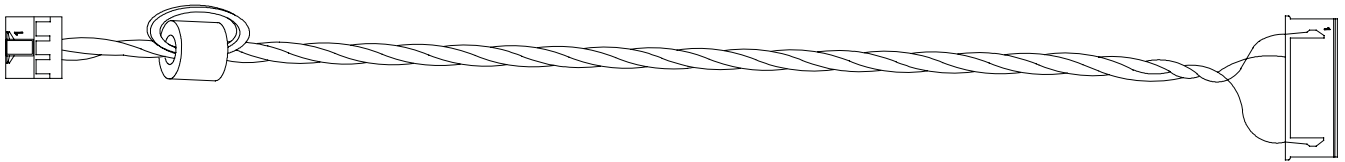


Figure 3-54: Pan Motor Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Pan Encoder Cable Assembly

25.9687.0007.02 Rev C

Refer to [Figure 3-55](#)



Figure 3-55: Pan Encoder Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Tilt Cable Assembly

25.9687.0008 Rev A

Refer to [Figure 3-56](#)

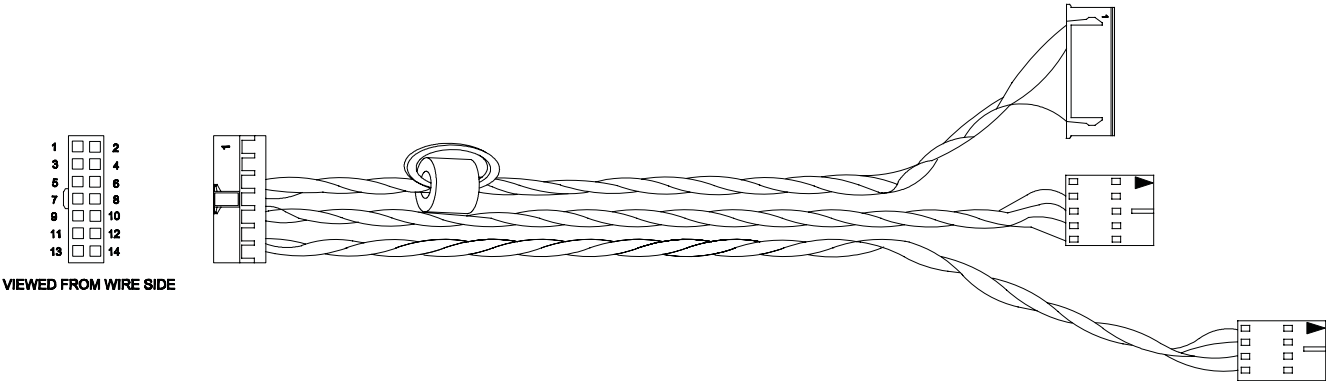


Figure 3-56: Tilt Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Edge Cable Assembly

25.9687.0009 Rev 0

Refer to [Figure 3-57](#)

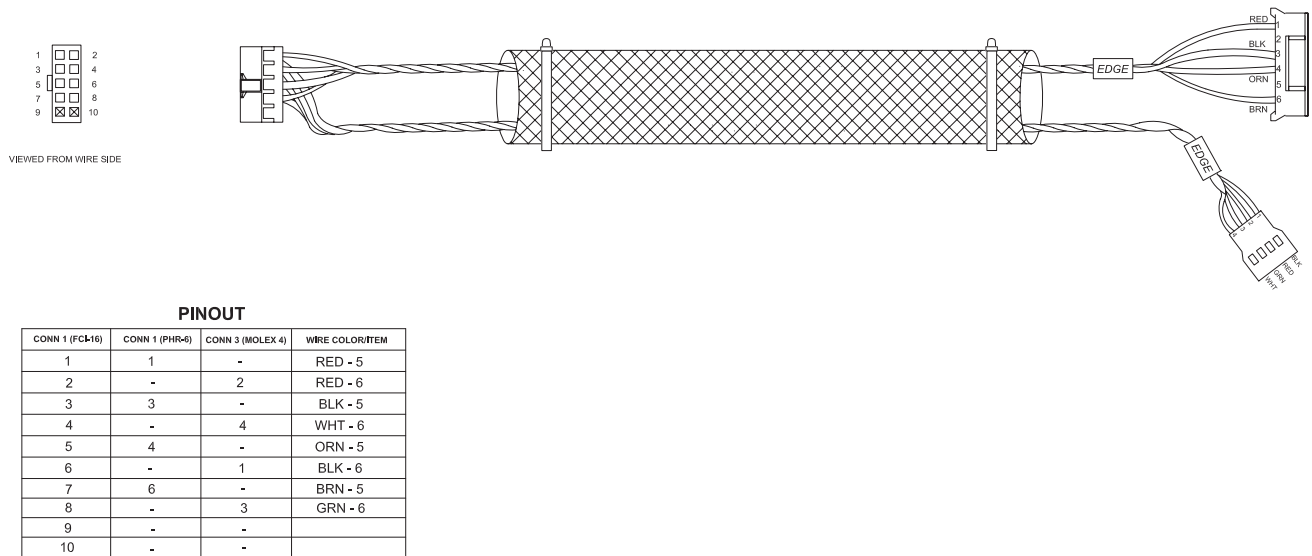


Figure 3-57: Edge Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Zoom Group Cable Assembly

25.9687.0010 Rev A

Refer to [Figure 3-58](#)

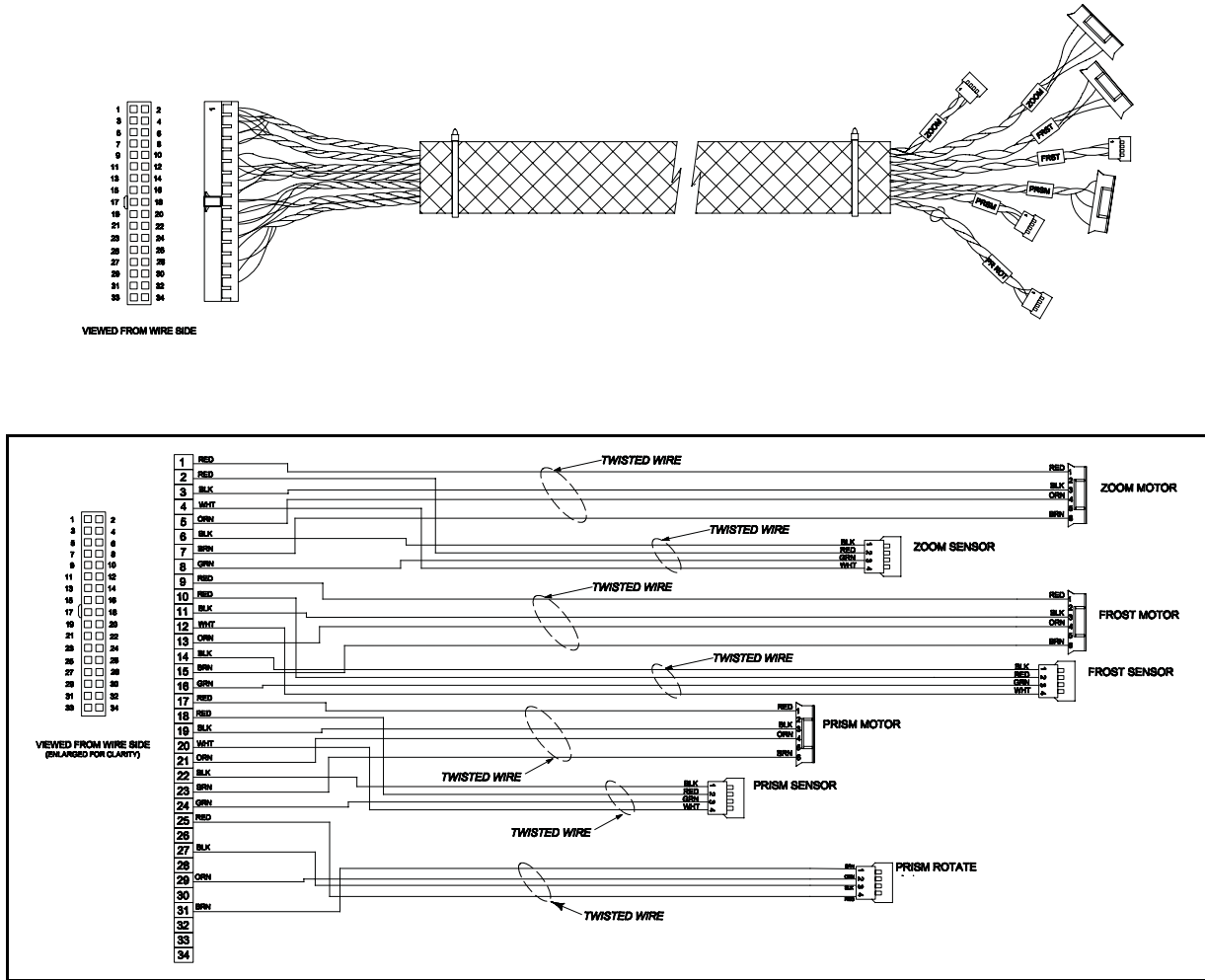


Figure 3-58: Zoom Group Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

CYMD Group Cable Assembly

25.9687.0011 Rev B

Refer to [Figure 3-59](#)

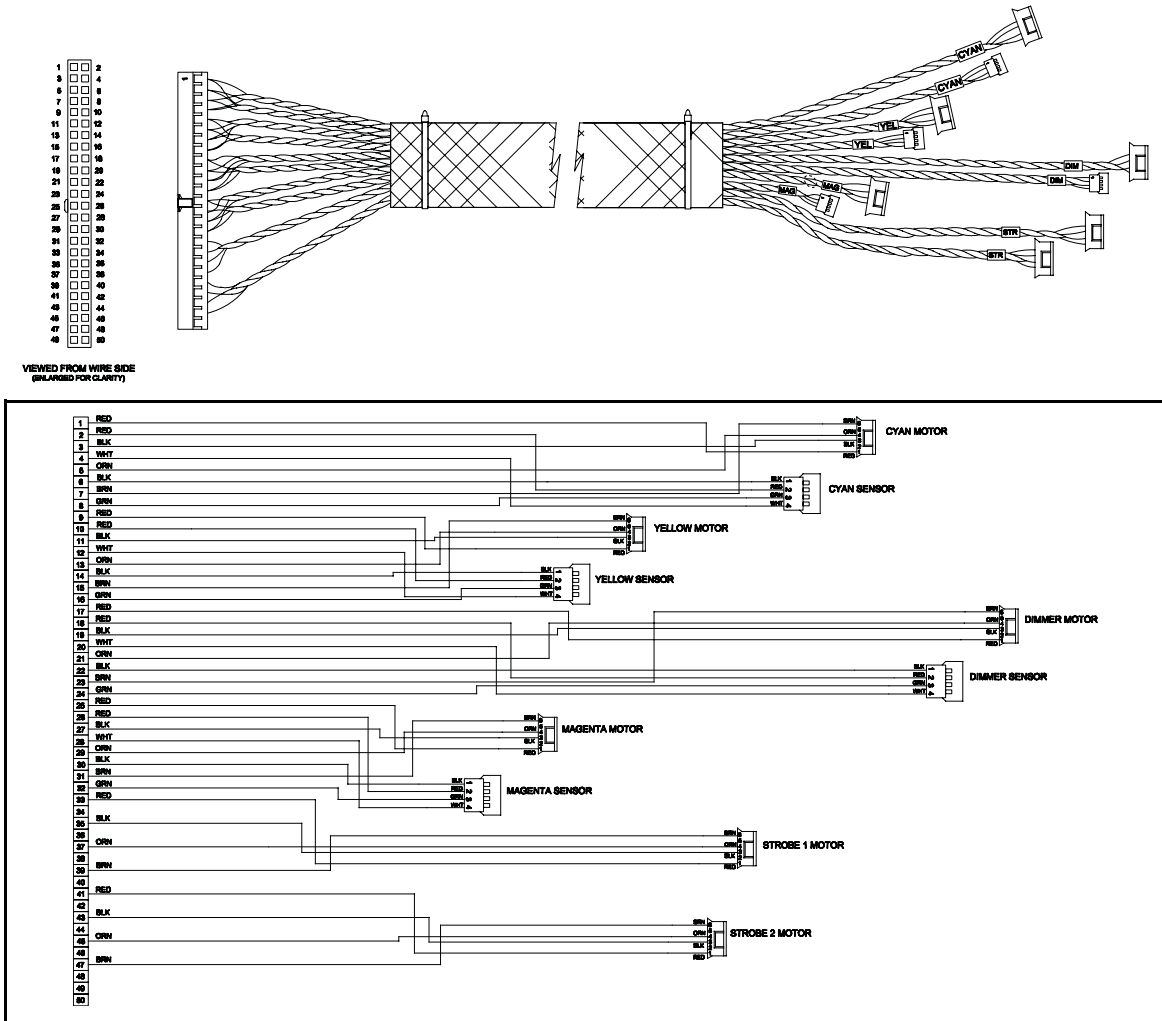


Figure 3-59: CYMD Group Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Gobo Group Cable Assembly

25.9687.0012 Rev 0

Refer to [Figure 3-60](#)

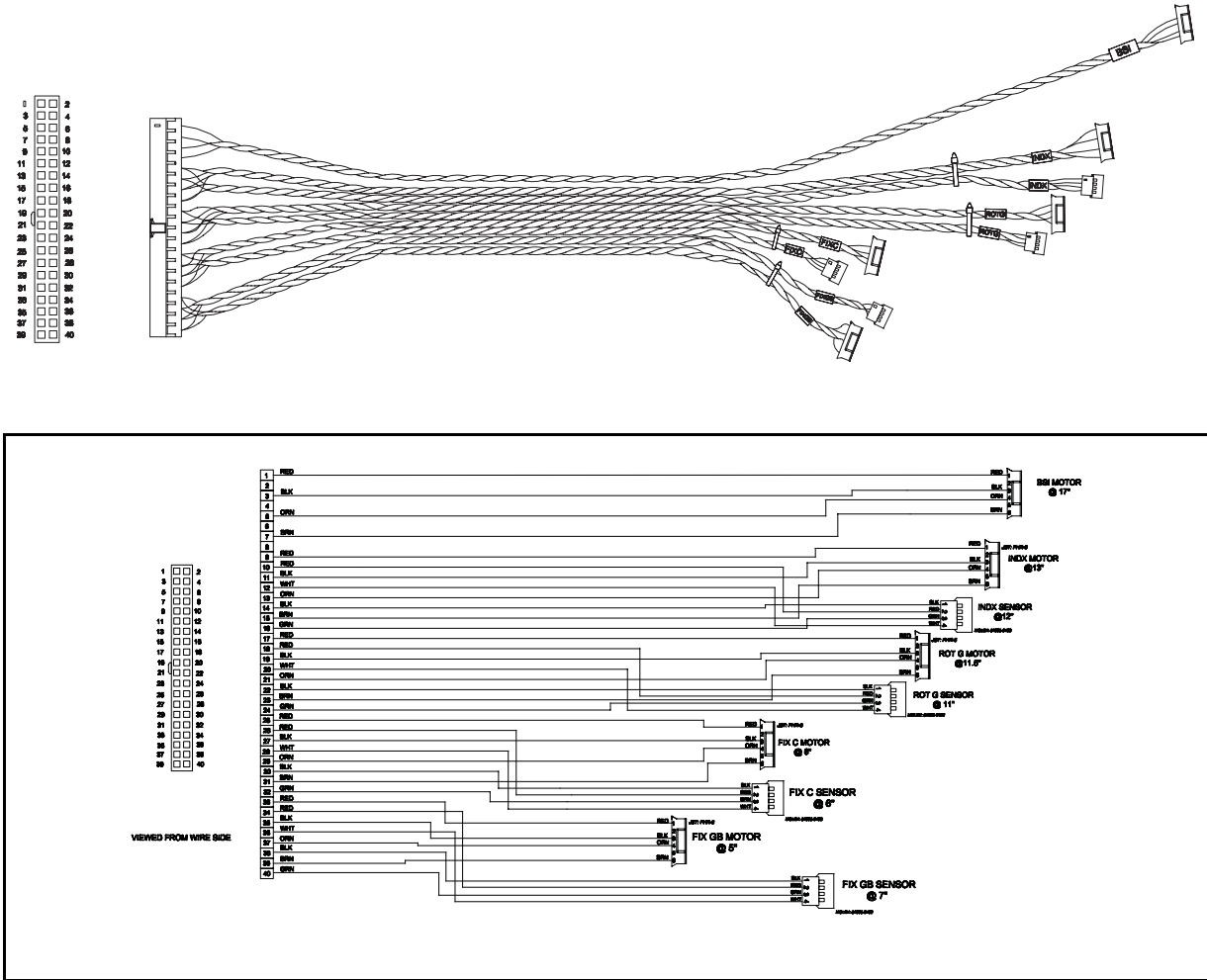


Figure 3-60: Gobo Group Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Head Fans Cable Assembly

25.9687.0014 Rev B

Refer to [Figure 3-61](#)

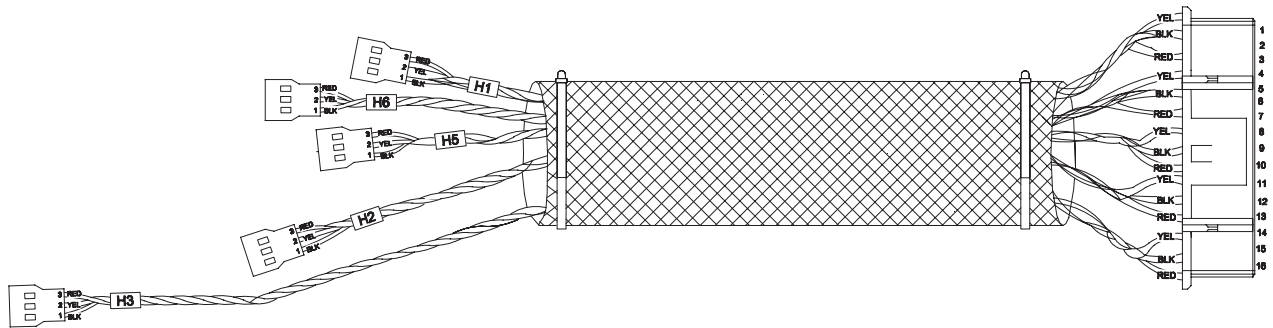


Figure 3-61: Head Fans Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Lamp to Fans Cable Assembly

25.9687.0015 Rev A

Refer to [Figure 3-61](#)

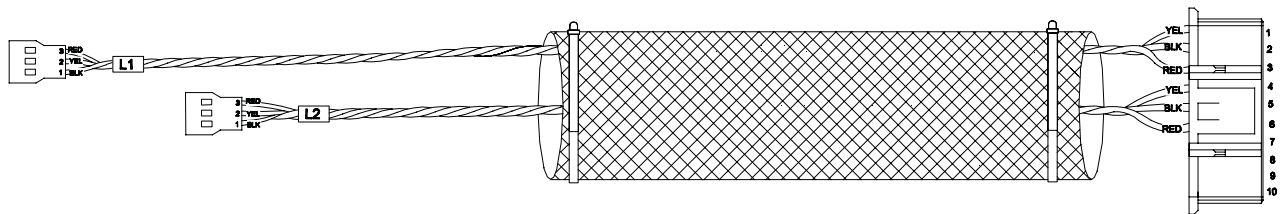


Figure 3-62: Lamp to Fans Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Tilt Sensor Cable Assembly

25.9687.0019 Rev 0

Refer to [Figure 3-63](#)

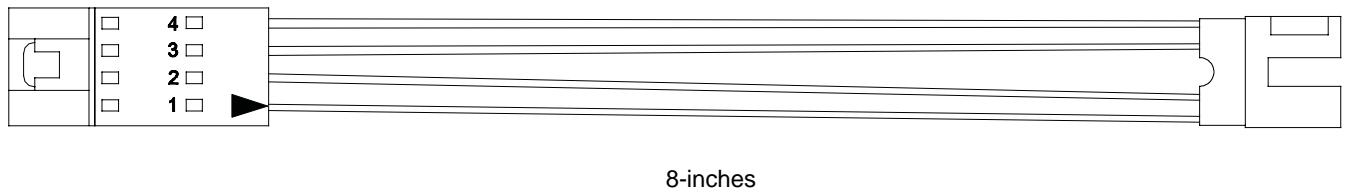


Figure 3-63: Tilt Sensor Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Slotted Optical Switch Cable Assembly

25.9687.0020 Rev A

Refer to [Figure 3-64](#)

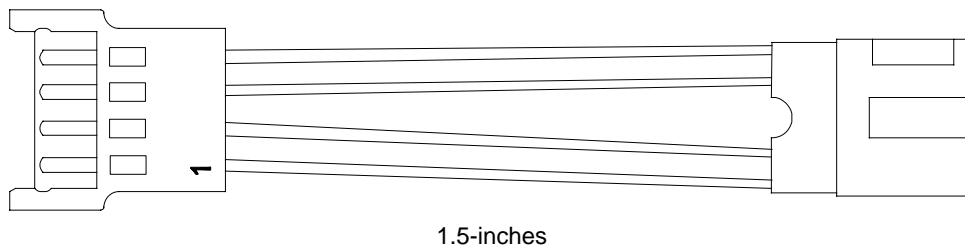


Figure 3-64: Sensor Switch Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

VL440 - VL770 Lamp Socket / Cable Assembly

25.9687.0021.07 Rev A

Refer to [Figure 3-65](#)

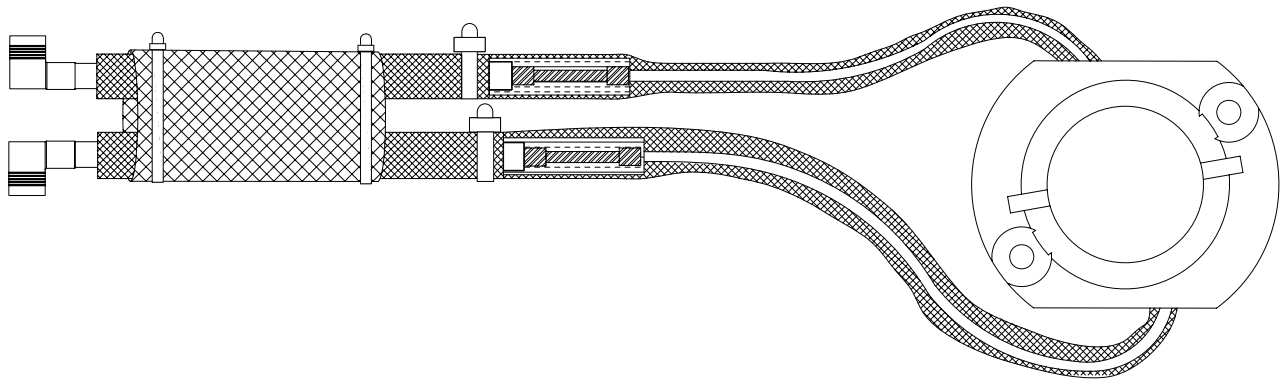


Figure 3-65: VL440 - VL770 Lamp Socket / Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

VL880 Lamp Socket / Cable Assembly

25.9687.0021.08 Rev A

Refer to [Figure 3-66](#)

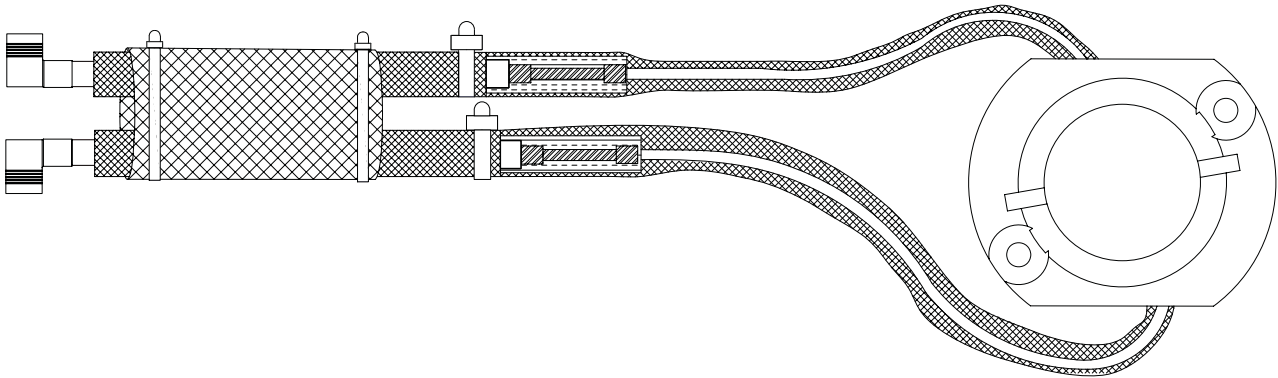


Figure 3-66: VL880 Lamp Socket / Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

800 Watt Ballast Comm Cable Assembly

25.9687.0023 Rev 0

Refer to [Figure 3-67](#)

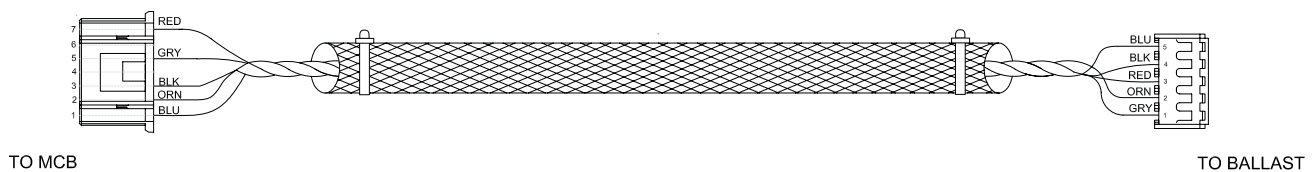


Figure 3-67: 800 Watt Ballast Comm Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Sensor Index Cable Assembly

25.9687.0024 Rev A

Refer to [Figure 3-68](#)

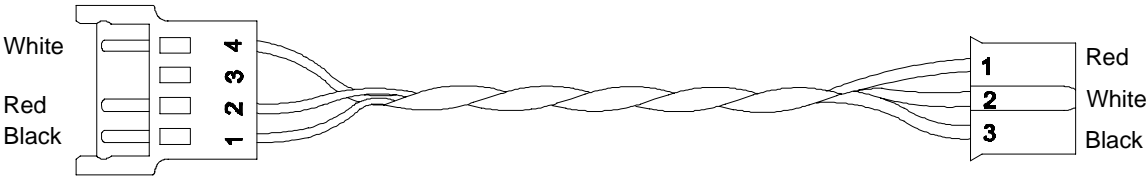


Figure 3-68: Sensor Index Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

APS Fan Cable Assembly

25.9703.0002 Rev B

Refer to [Figure 3-69](#)

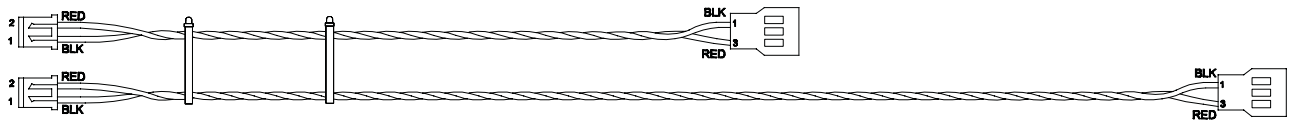


Figure 3-69: APS Fan Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

AUX Comm Interface Cable Assembly

25.9703.0016 Rev A

Refer to [Figure 3-70](#)

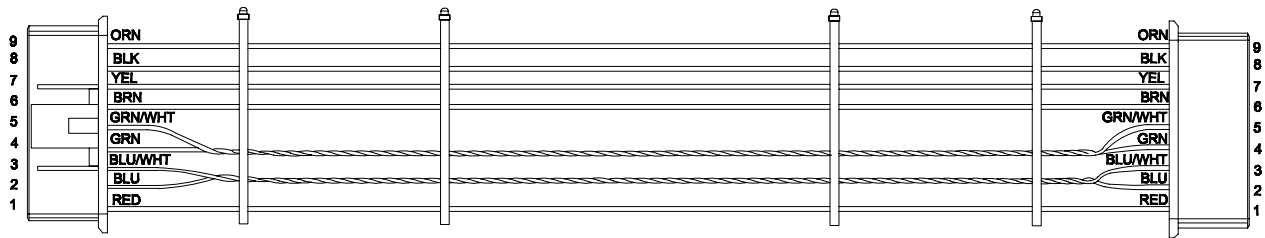


Figure 3-70: AUX Comm Interface Cable Assembly

Note: Cables are only available as complete assemblies. The information contained in this section is for reference only.

Notes

APPENDIX A.**Technical Bulletins and Notices****VL440 / VL770 / VL880 Spot Luminaires Technical Bulletins and Notices**

The following table identifies the current technical bulletins and notices associated with the VL440 / VL770 / VL880 Spot Luminaires. These improvements have been incorporated into this manual (where applicable) and are available on the Vari-Lite web site at www.vari-lite.com. Please note that not all bulletins or notices are applicable to all versions of the fixtures included in this manual. Refer to each bulletin and notice for specific information and application.

Technical Bulletins

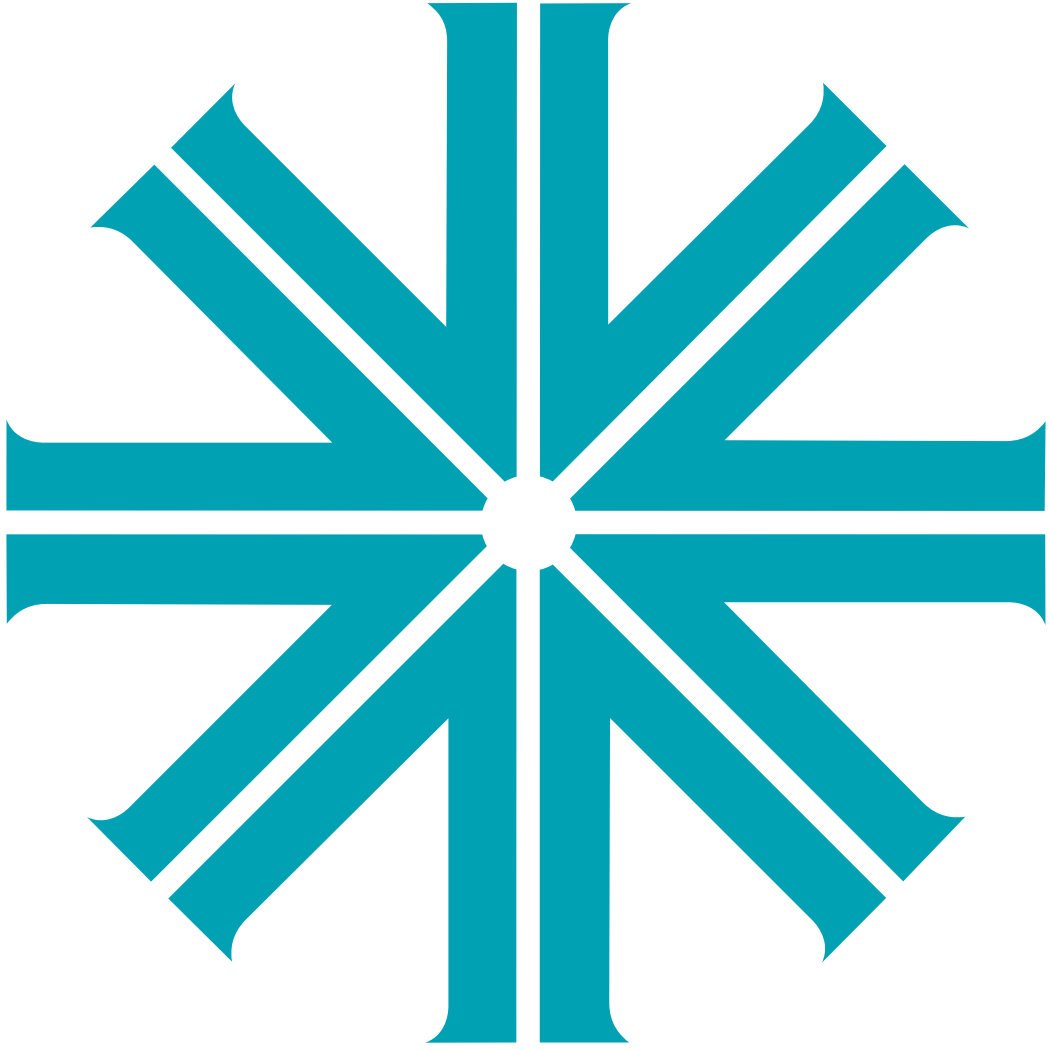
Technical Bulletin	Description	Model(s)
LSW-060	Software Release (SVL_113111.bin)	VL440/VL770/ VL880 Spot

Technical Notices

Technical Notice	Description	Model(s)
None		

For the latest technical bulletins and notices, please visit the Support section on the Vari-Lite web site at www.vari-lite.com.

Notes



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Date: **19 December 2011** / Manual Part Number: **02.9687.0010 0**

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