

Manua1



Service

VL550 Wash Luminaires

02.9683.0010



PHILIPS
VARI*LITE

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Version as of: **25 March 2011**

Part number: **02.9683.0010 0**

VL550 Wash Luminaires Service Manual

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Note: VL550 wash luminaires share many components / parts of the VL500 wash luminaires. This manual (02.9683.0010 0) covers maintenance procedures, information, and drawings specific to VL550 wash luminaires only. Please refer to the current service manual (02.9685.0010) for maintenance procedures, information, and drawings for VL500 wash luminaires.

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 1.214.647.7880 or 1.877.VARI-LITE (1.877.827.4548) 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 included at the end of this manual 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
Attention: Warranty Service (RMA# _____)
10911 Petal Street
Dallas, Texas 75238 USA

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

Manual Revision History

VERSION	DATE
Revision 0 (Initial Version)	25 March 2011

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

(by Low Voltage Directive 2006/95/EC)

EN 60598-1:2000/A11:2000 + A12:2002 Luminaire Safety Standard, General Requirements

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

EMC

(by Council Directive 2004/108/EC)

EN 61000-6-2:2001 Immunity for industrial environments

EN 61000-6-4:2001 Emission Standard for industrial environments

We certify that the product conforms to the protection requirements of council directives: 73/23/EEC (LVD) and 89/336/EEC (EMC)

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 only with certain type of lamps. Note specified lamp type before replacing lamps. Installing another type of lamp may be hazardous.
2. Luminaires may be mounted on any type of surface as long as mounting instructions are followed. See instructions detailed in this manual.
3. Replace fuses with same type and rating only.
4. 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 an HID type 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. Arc lamps emit ultraviolet radiation which can cause serious skin burn and eye inflammation. Additionally, arc lamps operate under high pressure at very high temperatures. Should the lamp break, there can exist a danger of personal injury and/or fire from broken lamp particles being discharged.
4. Wear eye protection when relamping.
5. Appropriate safety equipment (gloves, eye protection) should be used when handling damaged lamps.
6. If lamp is touched with bare hands, clean lamp with isopropyl alcohol and wipe with lint-free cloth before installing or powering up the luminaire.
7. 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.

ARC LAMP CHARACTERISTIC CONSIDERATIONS

1. Arc lamps require a period of time to relight after a power interruption or a severe voltage dip. In some cases, lamp will automatically relight after it has cooled depending on Lamp Power-Up State (L ON/ LOFF) system configuration setting.
2. Burning position is universal.

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-Scheinwerfer sind ausschließlich für den Einsatz mit bestimmten Philips und Osram HID-Lampen geeignet. Achten Sie auf den Lampentyp, bevor Sie die jeweiligen Lampen ersetzen. Die Installation eines anderen Lampentyps kann gefährlich sein.
2. Scheinwerfer können auf jeder beliebigen Oberfläche montiert werden, solange Sie die Montageanweisungen befolgen. Detaillierte Hinweise finden Sie in diesem Handbuch.
3. Ersetzen Sie Sicherungen nur mit Sicherungen vom gleichen Typ und gleicher Stärke.
4. 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 einen HID-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. Bogenlampen senden ultraviolette Strahlen aus, die Hautverbrennungen und Augenentzündungen verursachen können. Der Betrieb von Bogenlampen erfolgt unter Hochdruck und bei hohen Temperaturen. Sollte die Lampe zerbrechen, besteht die Gefahr von Körperverletzung bzw. von Feuer, das von Lampenteilen ausgelöst werden kann.
4. Tragen Sie beim Austausch der Lampen einen Augenschutz.
5. Die geeignete Sicherheitsausrüstung (Handschuhe, Augenschutz) sollte beim Umgang mit beschädigten Lampen verwendet werden.
6. Wenn die Lampe mit bloßen Händen berührt wird, reinigen Sie sie mit isopropyl Alkohol und einem flusenfreien Tuch, bevor Sie die Scheinwerfer installieren oder in Betrieb nehmen.
7. Wenn die Lampe beschädigt oder durch Hitzeeinwirkung 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.

BESONDERHEITEN VON BOGENLAMPEN

1. Bogenlampen benötigen eine gewisse Zeitdauer, um nach einem Stromausfall oder einem Spannungsgefälle wieder aufzuleuchten. In einigen Fällen wird die Lampe nach Abkühlung automatisch wieder aufleuchten, je nach der Systemkonfigurationseinstellung des Lampeneinschaltungsstatus (L ON/ LOFF).
2. Die Brennposition ist Universal.

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. Les luminaires VARI*LITE ont été conçus pour être utilisés uniquement avec certaines lampes Philips et Osram HID. Vérifier le type de lampe avant de remplacer les lampes. L'installation d'un autre type de lampe peut poser un danger.
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. Ne remplacer les fusibles qu'avec ceux du même type, ayant les mêmes caractéristiques.
4. 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 de type HID 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 isopropyl 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.

CONSIDÉRATIONS DES CARACTÉRISTIQUES DE LAMPES À ARC

1. Après une interruption de courant ou une baisse importante de voltage, les lampes à arc mettent du temps avant de se rallumer. Dans certains cas, la lampe se rallumera automatiquement après s'être refroidie. Cela dépend de la manière dont le système est réglé pour le statut de mise en marche de la lampe (L ON/ LOFF).
2. La position Brûler est Universelle.

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 CONTRA GOLPES 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. Las luminarias VARI*LITE han sido diseñadas para ser usadas solamente con algunas lámparas HID Philips y Osram. Tome nota del tipo de lámpara antes de reemplazarla. Instalación de otro tipo de lámpara puede ser peligroso.
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. Reemplace los fusibles solamente con los del mismo tipo y especificación.
4. 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 HID 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. Las lámparas de arco emiten radiaciones ultravioletas que pueden ocasionar serias quemaduras a la piel e inflamación a los ojos. Además, las lámparas de arco operan a alta presión y muy alta temperatura. Si la lámpara se rompe, puede existir el peligro de lesiones al personal o un incendio ocasionado por las partículas de la lámpara rota que se caen.
4. Use protección para los ojos cuando vuelve a colocar una lámpara nueva.
5. Use un equipo de seguridad apropiado (guantes, protección para los ojos, etc.) cuando trabaje con lámparas dañadas.
6. Si toca la lámpara con las manos, limpie la lámpara con alcohol isopropyl y con tela sin pelusas antes de instalar o volver a conectar la luminaria.
7. 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.

CONSIDERACIONES SOBRE LAS CARACTERÍSTICAS DE LA LÁMPARA DE ARCO

1. Las lámparas de arco requieren un período de tiempo para volver a iluminarse después de una interrupción de energía o de una severa caída de voltaje. En algunos casos, la lámpara se volverá a iluminar en forma automática después que se ha enfriado dependiendo de la configuración del sistema de energía de la lámpara (L ON / L OFF) (L encendida / L apagada).
2. La posición de encendido es universal.

安全性に関する注意事項

ここに記載されている製品を取り扱う場合は、まず本マニュアルおよび付属のマニュアルの安全性に関する情報と説明をすべてお読みください。また、実際に本製品を取り付けたり使用する際には、すべての注意事項および警告に留意して作業してください。

本マニュアルでは、以下の安全マークを使用しています。



注意：製品に損傷を与える危険性があります。



警告：人身事故につながる危険性があります。

感電、火災、UV放射に対する過度の露出、および人身事故を防ぐための一般的な情報については、以下の説明をお読みください。

警告：

火災の発生を防ぐためのヒント

1. VARI*LITE® 照明器具は、ランプを使用するように設計されています。ランプを交換する際は、ランプの種類（など）を確認するようにしてください。他の種類のランプを取り付けると危険です。
2. 照明器具は、本マニュアルの指示に従って操作するかぎり、どのようなタイプの表面にでも取り付けることができます。詳細については、本マニュアルを参照してください。
3. ヒューズを交換する場合は、同じヒューズ（同じ種類、同じクラス）を使用してください。
4. VARI*LITE® 照明器具は、可燃性物質または他の光源から必要な距離だけ離して配置してください。

警告：

感電を防ぐためのヒント

1. VARI*LITE® 照明器具は、乾燥した環境で使用するように設計されています。雨で濡れる場所や湿気が多い場所に取り付けると、照明器具が傷むことがあります。
2. VARI*LITE® 照明器具を修理点検する場合は、必ず先に電源を切ってください。
3. 照明器具の修理点検は、資格を持つ技師のみが行うようにしてください。

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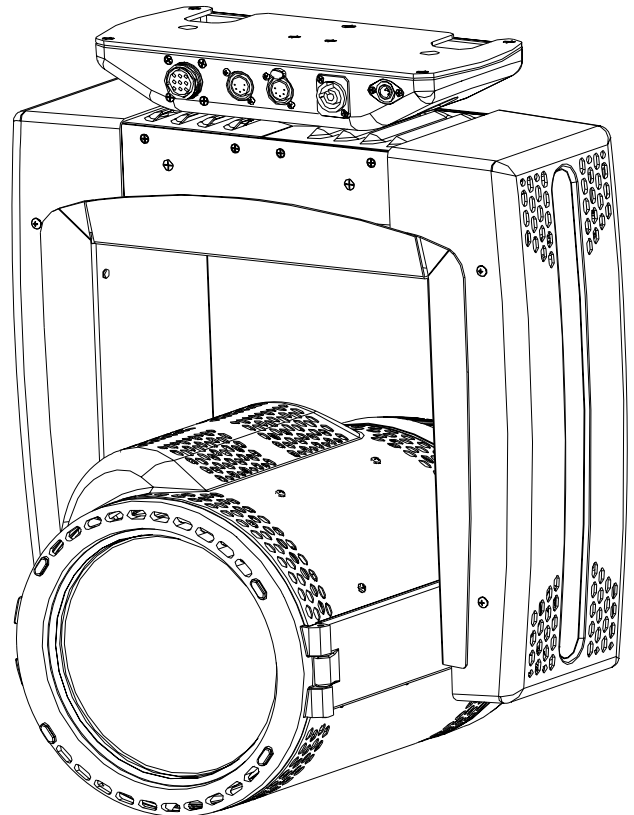
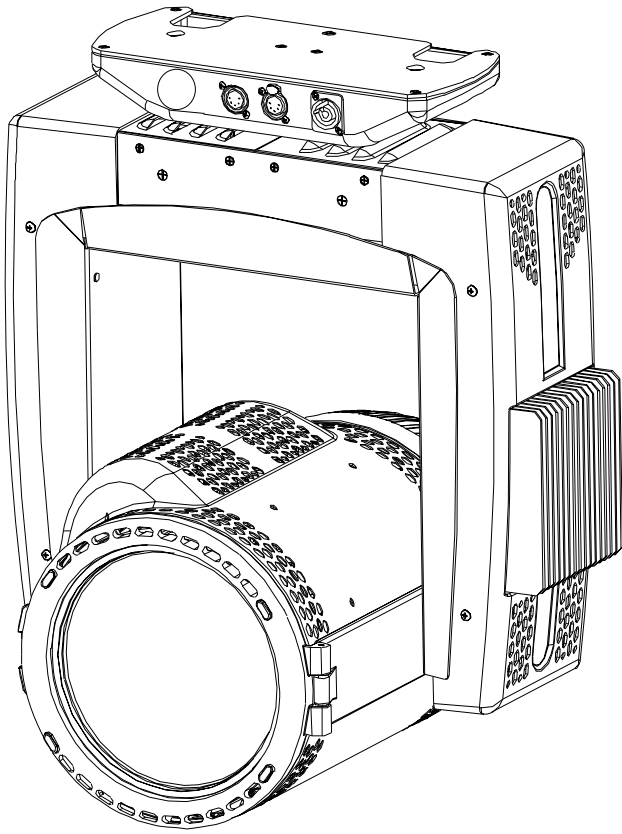
Note: Cables are available as complete assemblies only. The information contained in this section is for reference only.

Cables

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Introduction

Disclosure

This technical manual is confidential property of Vari-Lite. All information contained herein is the sole and exclusive property of Vari-Lite and may not be used, disclosed, or reproduced in any manner without the prior written consent of Vari-Lite.



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

About This Manual



Note: VL550 wash luminaires share many components / parts of the VL500 wash luminaires. This manual (02.9683.0010 0) covers maintenance procedures, information, and drawings specific to VL550 wash luminaires only. Please refer to the current service manual (02.9685.0010) for maintenance procedures, information, and drawings for VL500 wash luminaires.

This manual provides descriptions, repair procedures, and illustrated parts breakdowns for all configurations of the VL550 Wash Luminaires. The manual is intended for use by Vari-Lite personnel and by Authorized Vari-Lite Dealers and Service Centers only.

This manual covers the following models:

Model	Part Number	Lamp Type	Color Mixing System	Luminaire Body Color	Dimmer
VL550 Wash Luminaire	20.9683.0001	120V or 230V Tungsten*	Standard	Black	External - User Supplied
VL550 Wash Luminaire	20.9683.0011	120V or 230V Tungsten*	Pastel	Black	External - User Supplied
VL550D Wash Luminaire	20.9683.0002	120V Tungsten	Standard	Black	Integral 120V IGBT Dimmer
VL550D Wash Luminaire	20.9683.0012	120V Tungsten	Pastel	Black	Integral 120V IGBT Dimmer
VL550D Wash Luminaire	20.9683.0003	230V Tungsten	Standard	Black	Integral 230V IGBT Dimmer
VL550D Wash Luminaire	20.9683.0013	230V Tungsten	Pastel	Black	Integral 230V IGBT Dimmer

Notes:

- *For these models, lamp type is specified by customer at time of ordering the fixtures.
- Color Mixing Systems:
 - a. “Standard” is standard colors.
 - b. “Pastel” is softer, Broadway-type color palette.



Note: Performing maintenance procedures contained in this manual may void the product warranty. Refer to the Vari-Lite Limited Warranty card included in the shipping package for this VARI*LITE product.

Additional Documentation

A support web page for VL500 series luminaires is available at www.vari-lite.com (follow the Support link).

A user's manual is available for installation and operation of the VL550 wash luminaire. This manual is available in electronic (PDF) format.

- VL550 Wash Luminaires User's Manual (02.9683.0001).

Technical bulletins concerning the latest changes to VARI*LITE equipment are also available at the web site Technical Support Center. These are documentation supplements that contain procedures for equipment upgrades, retrofits, and additional repairs. Technical bulletins are integrated into the appropriate equipment manuals as those manuals are revised.

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) were purchased.

or Contact an Authorized Service Center.

or Contact the Vari-Lite Customer Service Department, 9am - 6pm CST Monday through Friday, at the following:

phone: 1.877.VARI-LITE (1-877.827.4548) or 1.214.647.7880

fax: 1.214.647.8038

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.

CHAPTER 1.

Description

This chapter provides an overview of VL550 (all versions as described in “[About This Manual](#)” on page 1) luminaire features, components, and operations.

- **Features**
- **Component Descriptions**
- **Principles of Operation**



Note: VL550 wash luminaires share many components / parts of the VL500 wash luminaires. This manual (02.9683.0010 0) covers maintenance procedures, information, and drawings specific to VL550 wash luminaires only. Please refer to the current service manual (02.9685.0010) for maintenance procedures, information, and drawings for VL500 wash luminaires.



SERVICE

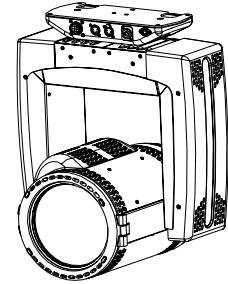
Features

Product Features

VL550 Wash Luminaire have the following features:

Color

Enhanced DICHRO*TUNE radial color changing mechanism featuring independent magenta, blue, and amber color control capable of smooth, timed color crossfades or changes.



Pastel (Dichroic Glass) Option:

As an option, all versions of the VL550 wash luminaires are available with “pastel” or lighter colored magenta and blue color filters. VL550 wash luminaires fitted with pastel-colored dichroic glass maintain the electrical specifications of the standard version of the VL550.

Intensity Control

- VL550: Intensity control via customer-supplied external dimmer.
- VL550D: Intensity control via on-board IGBT dimmer.

Beam Control

- A selection of six, easily interchangeable front lenses work with the internal radial diffusing mechanism to provide a variety of beam sizes and shapes.
- Stipple lens comes included in the standard models.

LCD Display

All VL550 wash luminaires come with a on-board, backlit LCD display for luminaire status, address, set-up, etc.

Pan and Tilt

Smooth, time-controlled continuous motion by way of a three-phase stepper motor system. Range: Pan - 540°, Tilt - 270°. Pan/Tilt Accuracy: 0.3° resolution.

Model Specific Features

Each individual configuration has the following specific features:

Tungsten Models without on-board IGBT dimmer:

VL550 Wash Luminaire (20.9683.0001)

- 120V (or 230V), 1200W (or 1000W) Tungsten Halogen lamp source.
- Standard color dichroic glass DICHRO*TUNE color system.

VL550 Wash Luminaire (20.9685.0011)

- 120V (or 230V), 1200W (or 1000W) Tungsten Halogen lamp source.
- Pastel color dichroic glass DICHRO*TUNE color system.

Tungsten Models with on-board IGBT dimmer:

VL550D Wash Luminaire (20.9683.0002)

- 120V, 1200W Tungsten Halogen lamp source.
- Standard color dichroic glass DICHRO*TUNE color system.
- 120V on-board IGBT dimmer.

VL550D Wash Luminaire (20.9683.0012)

- 120V, 1200W Tungsten Halogen lamp source.
- Pastel color dichroic glass DICHRO*TUNE color system.
- 120V on-board IGBT dimmer.

VL550D Wash Luminaire (20.9683.0003)

- 230V, 1000W Tungsten Halogen lamp source.
- Standard color dichroic glass DICHRO*TUNE color system.
- 230V on-board IGBT dimmer.

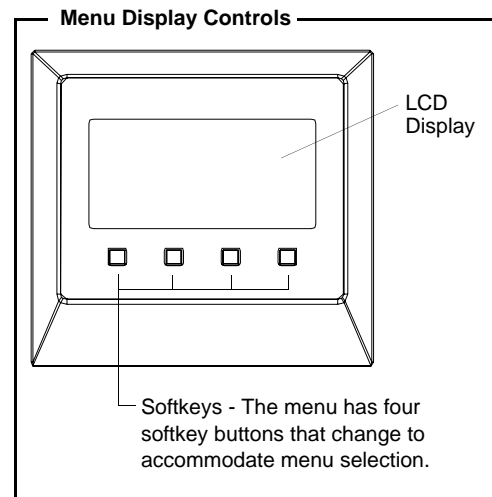
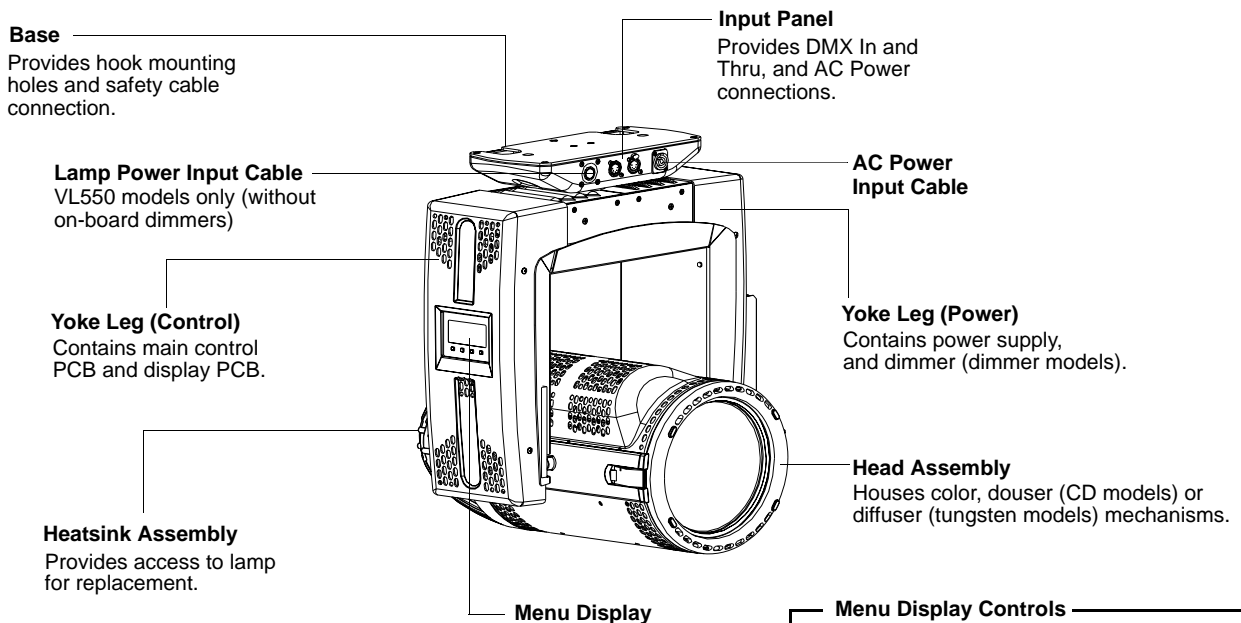
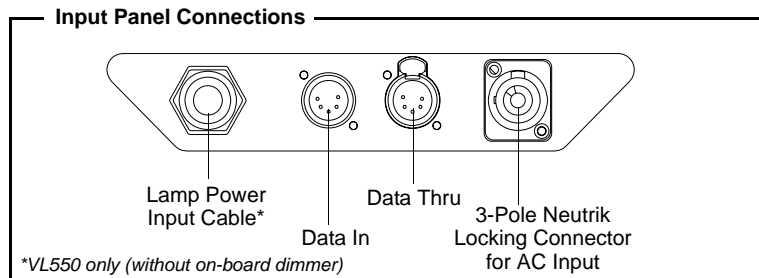
VL500D Wash Luminaire (20.9683.0013)

- 230V, 1000W Tungsten Halogen lamp source.
- Pastel color dichroic glass DICHRO*TUNE color system.
- 230V on-board IGBT dimmer.

Component Descriptions

External Luminaire Components

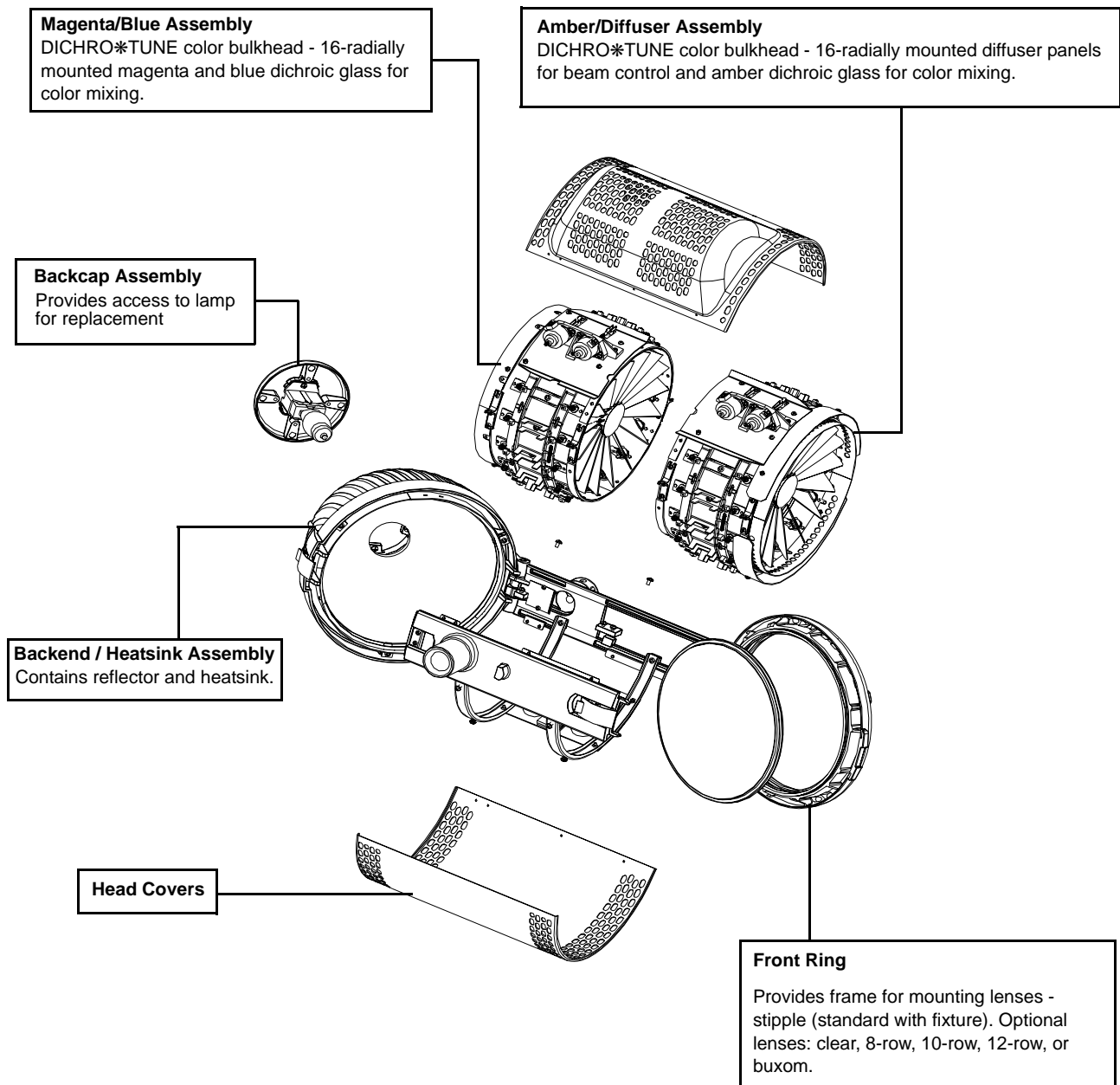
The following illustration shows the external luminaire components and controls.



Luminaire Internal Head Components

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

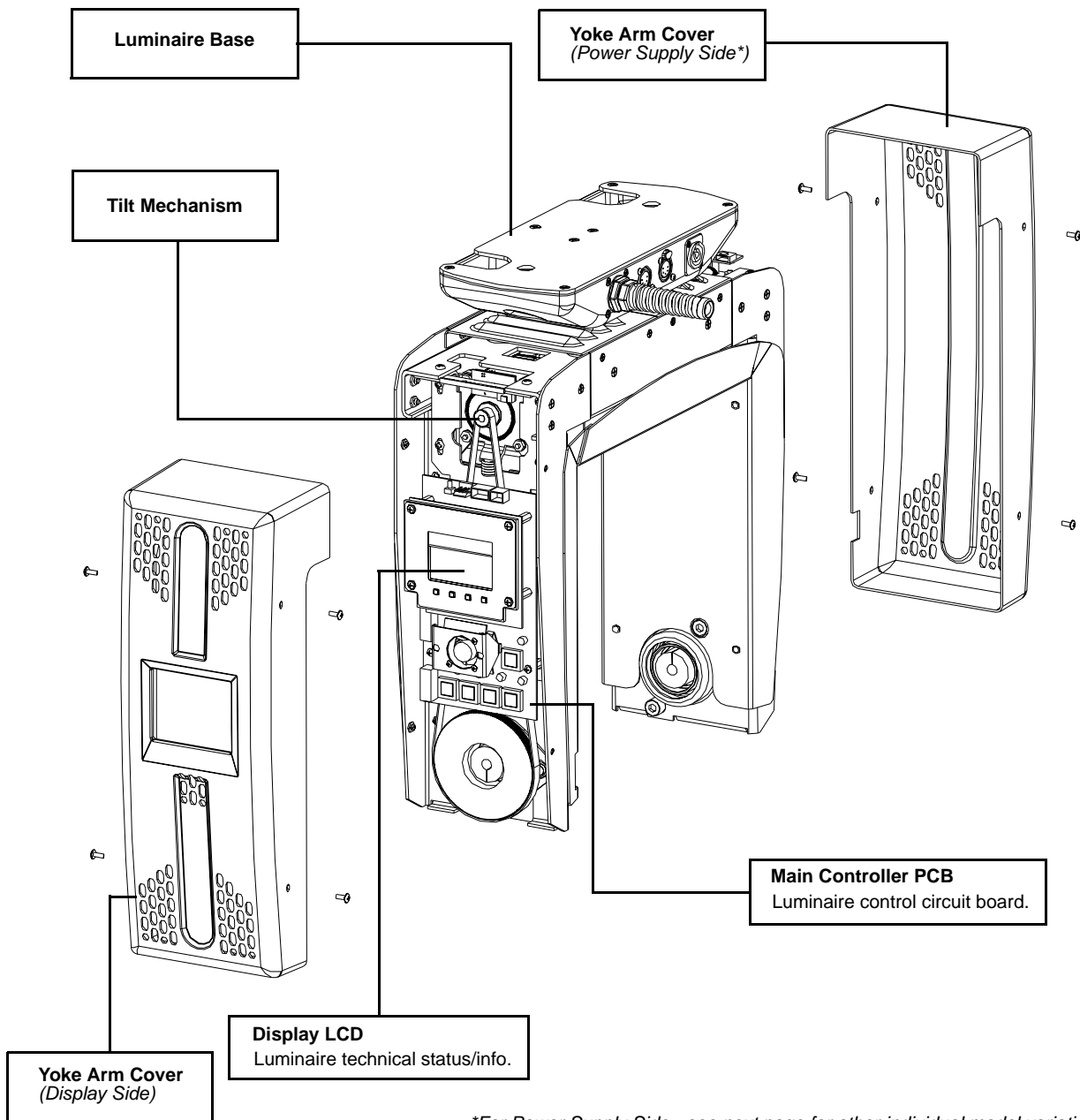
Note: Yoke assembly not shown for clarity.



Luminaire Yoke Components

The following illustration shows the major sub-assemblies that are located in the luminaire yoke assembly.

Note: Head assembly not shown for clarity.

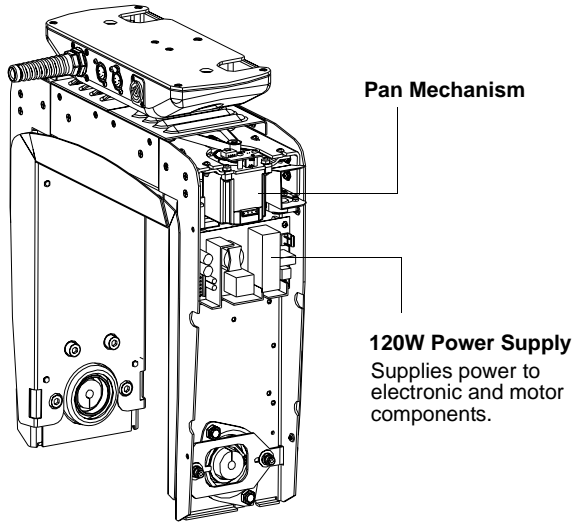


**For Power Supply Side - see next page for other individual model variations.*

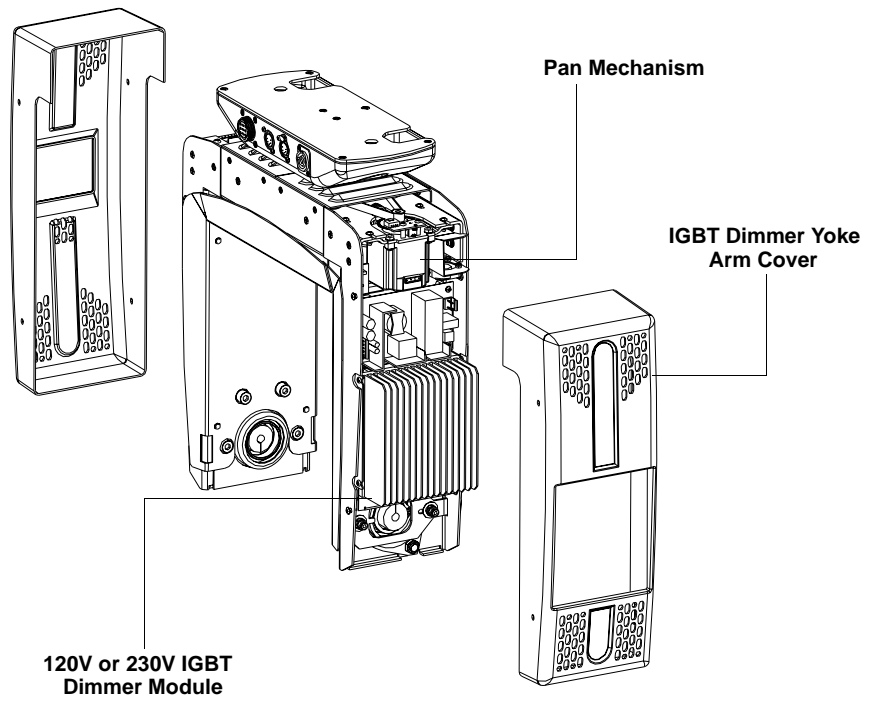
Luminaire Yoke Components (continued)

The following illustrations show additional model variations for the power supply side of the luminaire yoke assembly.

VL550 Models (120V or 230V)

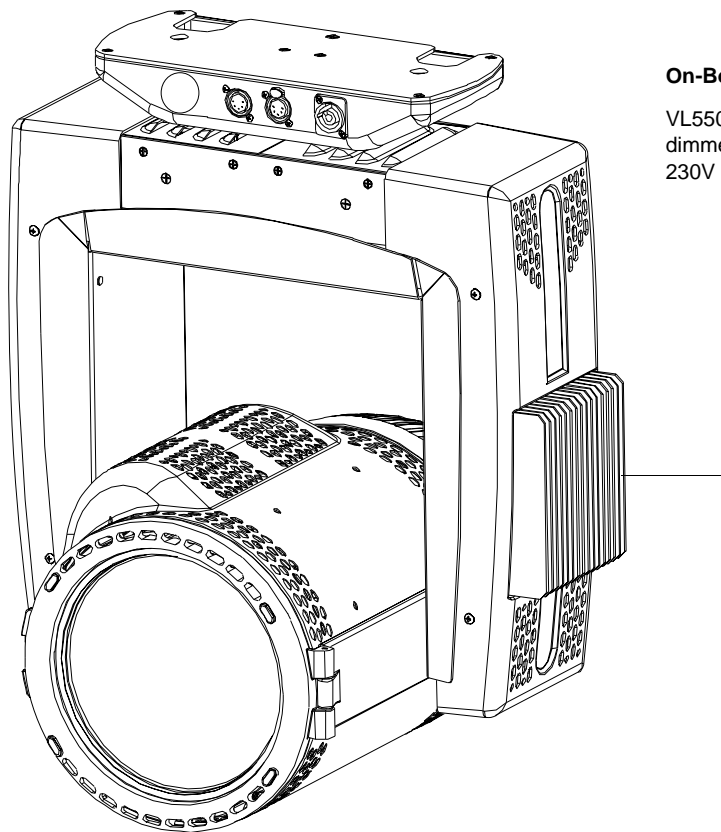


VL550D Models (120V or 230V)



Dimmer Models

An on-board dimmer is included with VL550D dimmer models. The dimmer heatsink is visible on the power-side yoke leg as shown in this illustration.



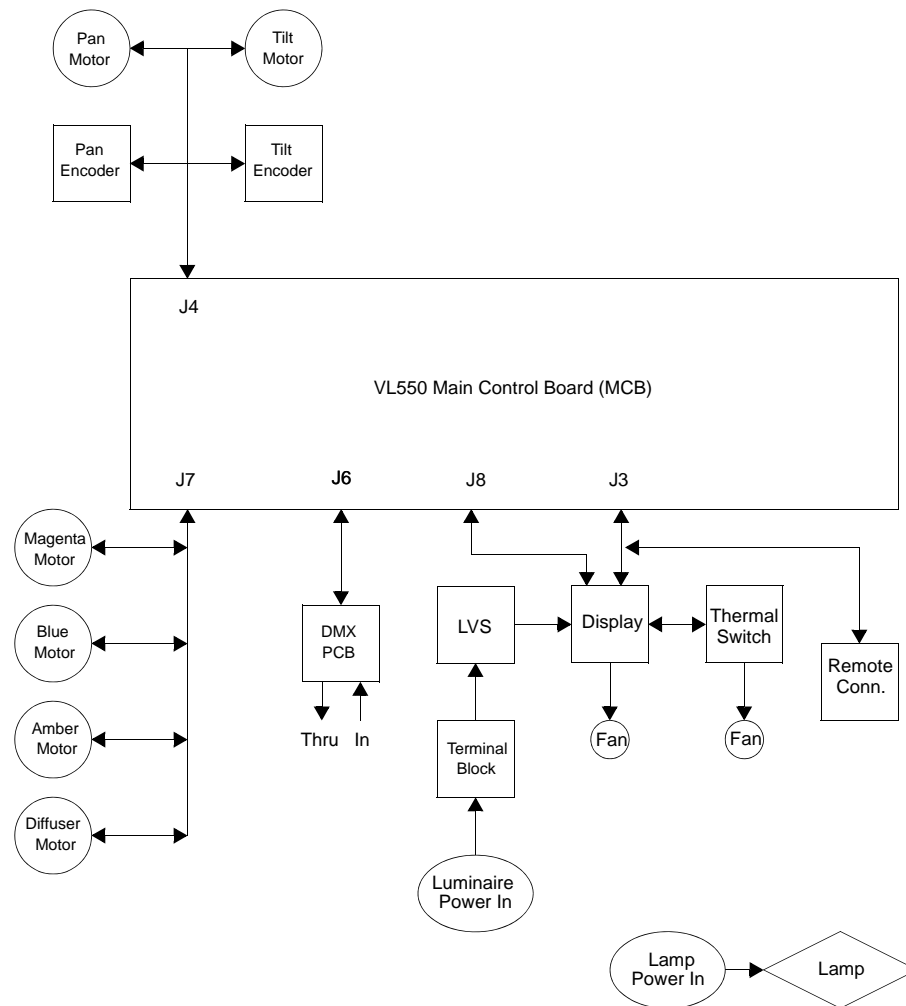
On-Board Dimmer

VL550D Models - Internal lamp power dimmer configured for either 120V or 230V operation depending on model.

Principles of Operation

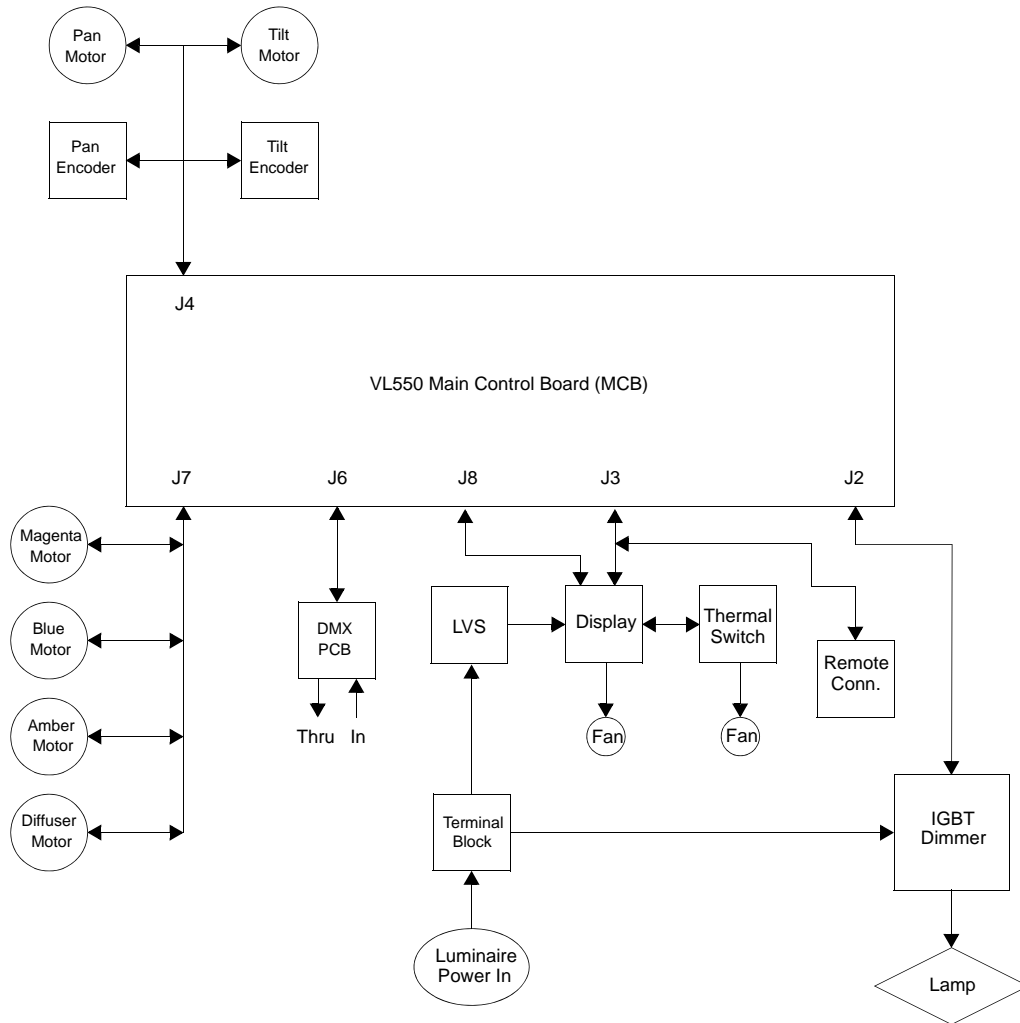
VL550 Incandescent Luminaires

VL550 Incandescent Block Diagram - Without On-Board IGBT Dimmer (120V or 230V)



VL550D Incandescent Luminaires

VL550D Incandescent Block Diagram - With On-Board IGBT Dimmer (120V or 230V)



CHAPTER 2.

Maintenance

This chapter contains test, service, and standard maintenance procedures for VL550 Wash Luminaires.

- **Testing**
- **Equipment Handling**
- **Maintenance Procedures**



Note: VL550 wash luminaires share many components / parts of the VL500 wash luminaires. This manual (02.9683.0010 0) covers maintenance procedures, information, and drawings specific to VL550 wash luminaires only. Please refer to the current service manual (02.9685.0010) for maintenance procedures, information, and drawings for VL500 wash luminaires.



WARNING: All maintenance procedures are to be performed with power removed from the luminaire. Never remove cover or backcap while lamp is in operation.



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



SERVICE

Testing

Running Parameter Tests

The luminaire is capable of running self tests by using the TEST menu functions. For complete details and values for each test refer to [“Diagnostic Tests” on page 16](#).

When running tests on multiple luminaires, a DMX termination connector is required at the last luminaire in the chain. (Refer to user’s manual for more information regarding the construction of this connector.)



Note: There is a known issue with all versions of code for the Series 500 luminaires concerning the “Test” menu options. Issues may arise when running a test from one type of Series 500 wash luminaire to multiple Series 500 wash luminaires (of a different type) across the Series 500 wash platform. To alleviate this, when testing in groups, only test same Lamp Type luminaires with other Series 500 wash luminaires. The issue, described above, does not pose any issues or problems when operating Series 500 wash luminaires during normal operation under DMX control.

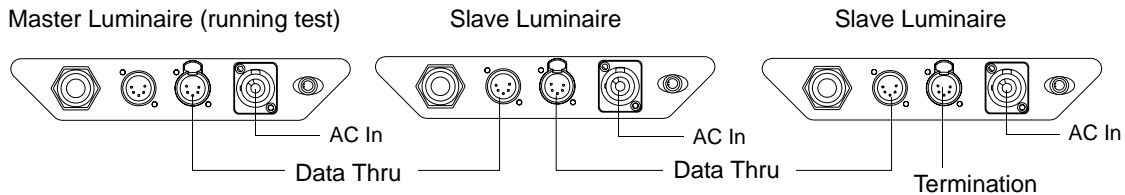


Figure 1: Test Setup

To run tests:

- Step 1. Press [Menu].
- Step 2. Press [Up] / [Down] arrows until Test appears. Press [Enter].
- Step 3. Use [Up] / [Down] arrows to select a parameter to test. Refer to [“VL550 Test Menu System Chart” on page 17](#) for a complete list of test parameters which can be chosen.
- Step 4. Press [Enter] to run test.
- Step 5. Press [Menu] to stop test at any time.

Note: Connected luminaires may not respond on the first action (may delay) of the master luminaire.

Movement Disable

The **Movement** option allows pan and tilt to be disabled so that the luminaire can be placed in any position for testing without movement occurring. In order to regain full control of the luminaire, **Movement** will need to be enabled after testing.

Note: When using the **Movement** option, pan and tilt will be disabled for all the luminaires that are linked.

To set movement option:

- Step 1. Press [Menu].
- Step 2. Press [Up] / [Down] arrows until **Config** appears. Press [Enter].
- Step 3. Press [Up] / [Down] arrows until **Pan/Tilt** appears. Press [Enter].
- Step 4. **Movement** will be displayed. Press [Enter].
- Step 5. Use [Up] / [Down] arrows to select **Enable** or **Disable**. Press [Enter] to select.

Diagnostic Tests

The following diagnostic tests are available in the test menu.

Test Descriptions

- All Seq..... Tests all functions in sequential order.
- Pan/Tilt Tests different pan and tilt movements.
- Pan..... Tests different pan movements.
- Tilt..... Tests different tilt movements.
- Dimmer..... Tests different dimmer moves/operation.
- Diffuser Tests diffuser movement.
- Cyan Tests Cyan color wheel movements.
- Yellow Tests Yellow color wheel movements.
- Magenta Tests Magenta color wheel movements.
- Encoder Disables pan and tilt and displays encoder value.
- Fan Tests fan level (speed 1 to 7, 7 is fastest).
- Temperature Displays LVS or MCB temperatures (in °C).

Test Menu System Chart

The following table shows all the tests that can be performed by accessing the tests via the luminaire’s on-board tech display.

Table 2-1: VL550 Test Menu System Chart

1st Level	2nd Level	3rd Level	4th Level	5thLevel	
Test ** <i>System Test</i>	ALL SEQ <i>Sequence Through All Tests</i>	RunTest	Press [Menu] to stop tests		
	Pan/Tilt <i>Pan/Tilt</i>	RunTest			
	Pan <i>Pan</i>	Pan 1			
		Pan 2			
	Tilt <i>Tilt</i>	Tilt 1			
		Tilt 2			
	Dimmer <i>Dimmer</i>	Dimmer 1			
		Dimmer 2			
		Dimmer 3			
	Diffuser <i>Diffuser</i>	Diffuser 1			
		Diffuser 2			
		Diffuser 3			
	Cyan <i>Cyan Color System</i>	Cyan 1			
		Cyan 2			
		Cyan 3			
	Yellow <i>Yellow Color System</i>	Yellow 1			
		Yellow 2			
		Yellow 3			
	Magenta <i>Magenta Color System</i>	Magenta 1			
		Magenta 2			
		Magenta 3			
	Encoder <i>Encoder (Allows hand movement to check values)</i>	Pan		Value <i>Displays encoder value</i>	
		Tilt		Value <i>Displays encoder value</i>	
	Fans <i>Fans Test</i>		Value 1 (slow) to 7 (fastest)		
	Temp <i>Temperature</i>	LVS Temp <i>Low Voltage Supply temperature</i>		Value <i>Displays temperature in °C</i>	
		MCB Temp <i>Main Control Board temperature</i>		Value <i>Displays temperature in °C</i>	

** Refer to “Diagnostic Tests” on page 16 for more information.

Equipment Handling

Below are some basic tips and information on handling VL550 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.

Lamps

Servicing

- When handling a lamp, hold it by the ceramic base while wearing cotton gloves or finger cots. Do not touch the glass envelope (bulb). If you touch the glass with bare fingers, immediately wipe off any fingerprints with isopropyl alcohol.
- Use care when opening and closing the rear castings (or covers) of luminaires and cleaning reflectors. Any jarring can undo the optical alignment of the lamp.

Heat

On Forced Air Cooled Units

- When lamps are lit, the interiors of the luminaires become very hot. To aid in the airflow circulation within the luminaires, after dousing the lamps, wait ten minutes before removing power to the luminaires. This will provide enough time for the equipment fan to cool off the unit.

On Natural Convection Cooled Units

- When lamps are lit, the interior and exterior heatsink of the luminaires becomes very hot. Naturally convection cooled units require longer to fully cool before being handled. Users should wait until the unit is cool to the touch before servicing or handling.

Lamp Life

- When operating arc lamps, allow luminaires to operate for at least 3 minutes. It takes about 3 minutes for the fill components (mercury and halogen-metal compounds) in the lamp tubes to vaporize completely. If the lamps are switched off earlier than 3 minutes, the fill components are partially vaporized. The inadequately vaporized fill components and the electrode material (tungsten) are deposited in the areas of the lamp tubes that have remained cool. As a result, the lamp tubes blacken prematurely and reduce the service life of the lamps.
- If system will be unattended for more than two hours, luminaire lamps should be doused. Standby mode should not be used for more than two hours.

- When the lamp is struck, the luminaire should be maintained in a horizontal position when not in use.
- For arc lamp luminaires, heads should be tilted horizontal before starting lamps. Lamps generate light by an electrical discharge arc, whereby the electrons from two electrodes excite the fill components to give off light. Because of the alternating current “position”, the electrons are alternately given off by the two electrodes. When a lamp is set in a vertical position, the halogen-metal compounds, which determine the color temperature of the lamp, collect at the top end of the glass envelope. When the lamp is started, color deviations occur since the concentration of halogen compounds is greater around the top electrode than the bottom electrode. In addition, the fill components that are difficult to vaporize congeal around the bottom electrode, thereby reducing lamp life.

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** equipment uses 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

Lamp Replacement - Incandescent

Parts:

71.2529.0120	1 EA	1200 WATT TUNGSTEN HALOGEN LAMP, 120 VAC (VL550 AND VL550D MODELS)
71.2526.0230	1 EA	1000 WATT TUNGSTEN HALOGEN LAMP, 230 VAC (VL550 AND VL550D MODELS)

Tools:

- Cotton gloves or finger cots.



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace incandescent lamp:

Step 1. Remove power from luminaire.



WARNING: Lamps will be extremely HOT after operation. Allow lamp to cool before replacing.

Step 2. Set the luminaire head horizontally.

Step 3. Engage service tilt lock to secure luminaire head in horizontal position to access heatsink latch.

Step 4. As shown in [Figure 2](#), at heatsink assembly, open latch and swing open back of luminaire.

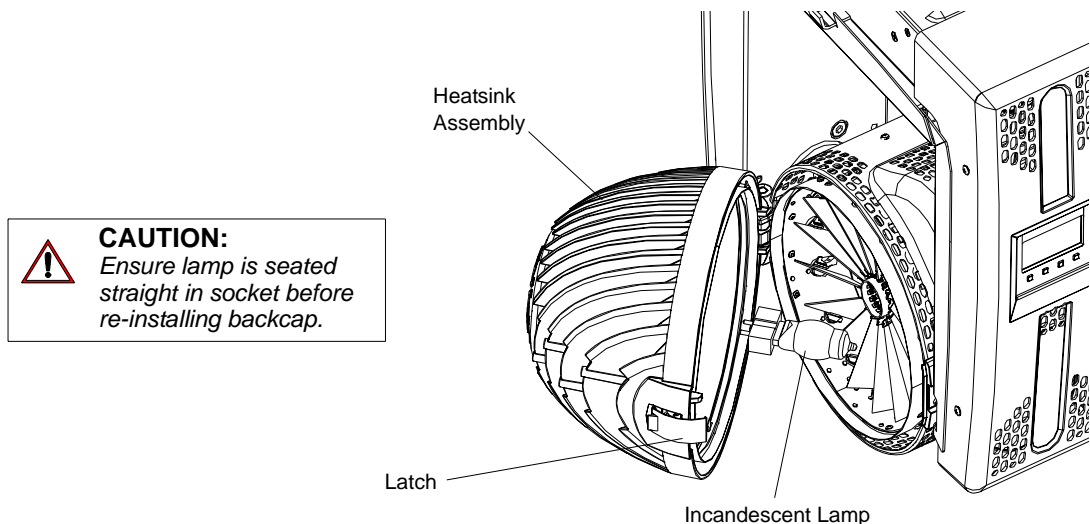


Figure 2: Lamp Replacement - Incandescent

Lamp Replacement - Incandescent (continued)



WARNING: Wear cotton gloves or other covering while servicing lamp. Touching lamp glass with bare fingers will leave oil and may cause the lamp to explode or reduce lamp life. If required, use alcohol and soft, lint-free cloth to thoroughly clean glass portion of lamp.

- Step 5. Remove lamp by pulling straight out of socket.
 - Step 6. Carefully clean reflector with soft, lint-free cloth to remove dust and other debris.
 - Step 7. Install lamp by pressing firmly into socket. Ensure lamp is fully seated in socket with base of lamp against socket base.
 - Step 8. Close and re-latch back of luminaire.
 - Step 9. Disengage service tilt lock to allow luminaire head to move freely.
-



Note: For an updated list of approved lamps for all versions of the VL550 luminaire, please refer to Vari-Lite Technical Notice TN-248 (current version) on the Vari-Lite web site at www.vari-lite.com.

Front Glass Replacement

Parts:*As needed:*

42.9685.0201	1 EA	GLASS, FRONT, CLEAR
42.9685.0207	1 EA	GLASS, FRONT, STIPPLE
42.9685.0203	1 EA	GLASS, FRONT, MED. FLOOD 8-ROW LENT.
42.9685.0206	1 EA	GLASS, FRONT, MED. FLOOD 10-ROW LENT.
42.9685.0204	1 EA	GLASS, FRONT, MED. FLOOD 12-ROW LENT.
42.9685.0205	1 EA	GLASS, FRONT, VERY WIDE FLOOD - BUXOM

Tools:

- Cotton Gloves or Finger Cots
- Clean, Lint-free (Soft) Cloth

To remove and replace front glass:



WARNING: Remove power from luminaire before performing maintenance.



Note: It is often easier to replace the lenses when the fixture is warm. However, use caution when handling a warm fixture as damage to glass components can occur (lamp, reflector, etc.).

Step 1. Remove power from luminaire.

Step 2. At front ring assembly, open latch and swing open. Refer to [Figure 3](#).

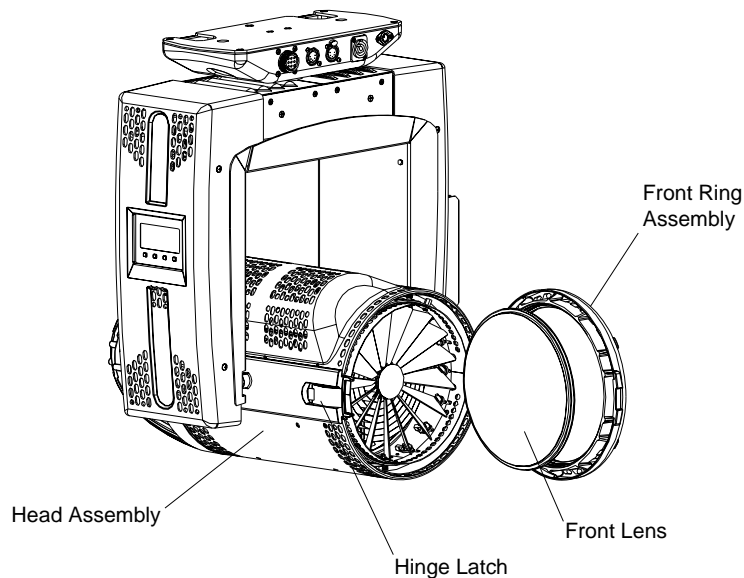


Figure 3: Replacing Front Glass

Front Glass Replacement (continued)



CAUTION: Wear thick, protective gloves or other protective covering while handling front lens. The lens is extremely fragile and can break if too much force is applied. If dirty, clean with isopropyl alcohol and a soft, lint-free cloth.

Step 3. At front ring assembly, carefully press front side of lens inward with thumbs while holding ring with fingers until glass is free of holder. Remove lens.



WARNING: In tungsten fixtures (VL550 and VL550D), Clear and Stipple lenses may be installed curve in (concave) and all Lenticular (8-Row, 10-Row, and 12-Row) and Buxom lenses **MUST** be installed curve out (convex).

Step 4. Position new glass in front ring assembly. Be sure glass is fully and properly seated into rubber ring. See [Table 2-2, “Lens Mounting Orientation”](#), for each model.

Incandescent Models (VL550 and VL550D models only)	
Clear Lens	<i>Concave or Convex</i>
Stipple Lens	<i>Concave or Convex</i>
8-Row Lens	<i>Convex Only</i>
10-Row Lens	<i>Convex Only</i>
12-Row Lens	<i>Convex Only</i>
Buxom Lens	<i>Convex Only</i>

Notes: Concave = Bubble In / Convex = Bubble Out

Table 2-2: Lens Mounting Orientation

Step 5. Close and latch front ring assembly.

Magenta/Blue DICHRO*TUNE Rear Bulkhead Replacement

Parts:

21.9685.0170	1 EA	ASSY, MAGENTA/BLUE (STANDARD DICHRO*TUNE COLORS - INCANDESCENT)
21.9685.0174	1 EA	ASSY, MAGENTA/BLUE (PASTEL DICHRO*TUNE COLORS - INCANDESCENT)

Tools:

- #2 Phillips Screwdriver

To remove and replace Magenta/Blue bulkhead assembly:

Step 1. **CLOSE ALL GLASS IN BULKHEADS** - Power up unit and allow all DICHRO*TUNE glass to calibrate. Once they close, power down unit.



WARNING: Remove power from luminaire before performing maintenance.

Step 2. Disconnect luminaire AC input cable from power source.

Step 3. Engage tilt lock so luminaire head is in horizontal position with top cover (one with bubble) facing up (as shown in [Figure 4](#)).

Step 4. As indicated in [Figure 4](#), open heatsink by releasing latch.

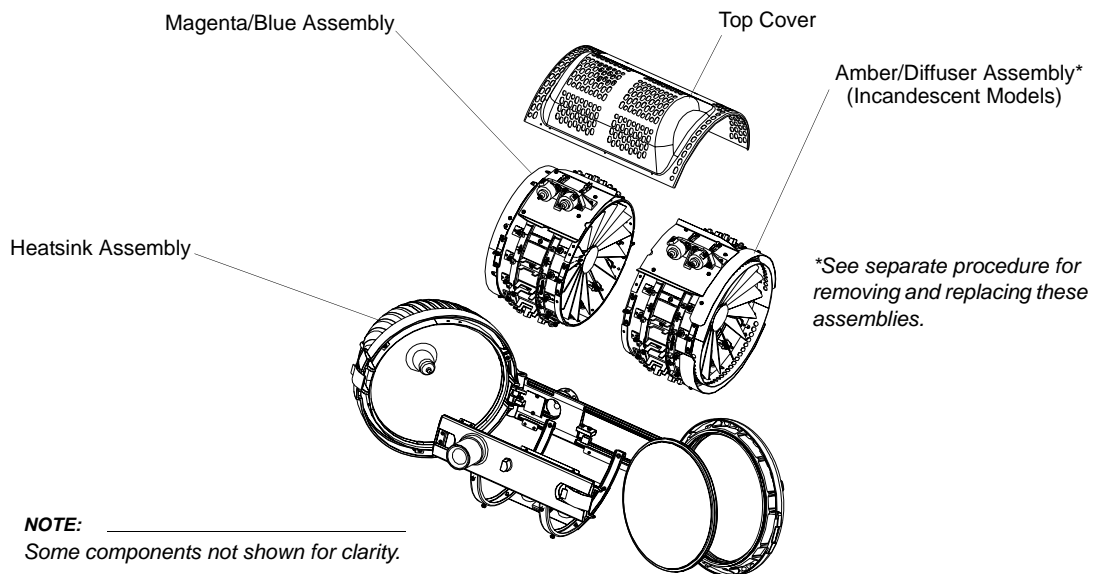
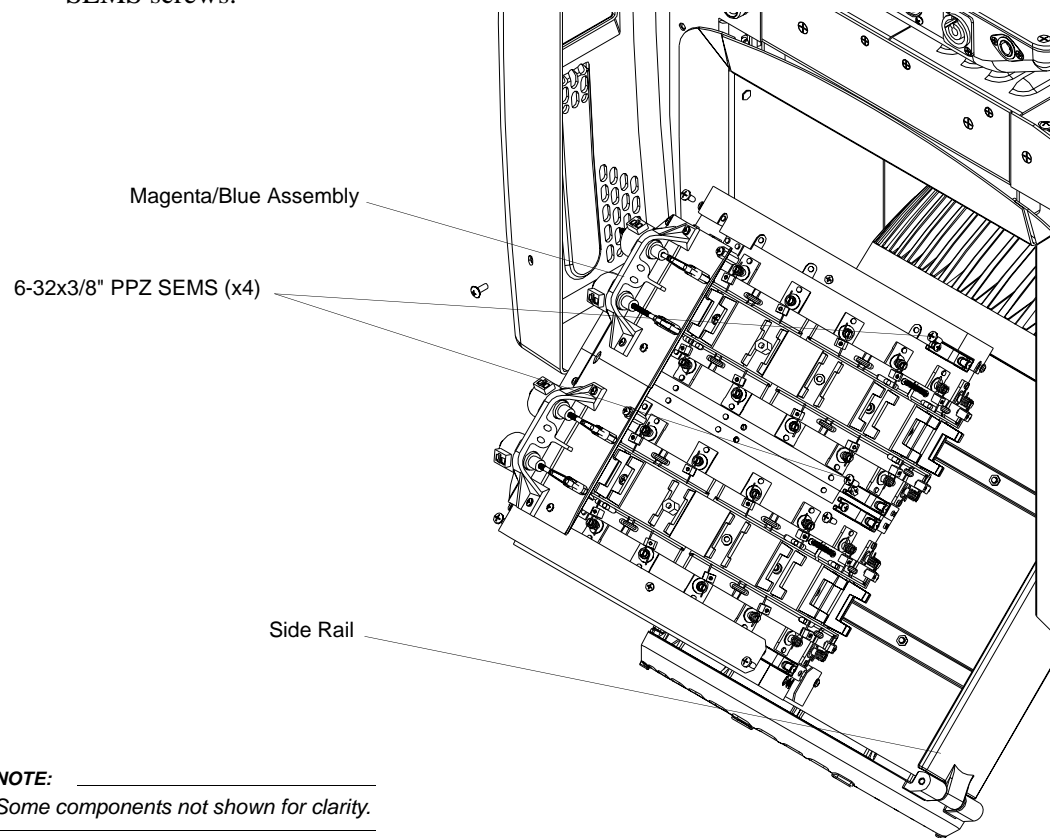


Figure 4: Magenta/Blue Color Bulkhead

Magenta/Blue DICHRO*TUNE Rear Bulkhead Replacement (continued)

- Step 5. At top cover, remove two (or four, depending on production date) 6-32x1/4" PPB SEMS screws.
- Step 6. Remove top cover.
- Step 7. Disconnect wiring at two linear actuators on Magenta/Blue DICHRO*TUNE Bulkhead.
- Step 8. As shown in **Figure 5**, at side rails from top, remove four 6-32x3/8" LG PPZ SEMS screws.



NOTE: _____
Some components not shown for clarity.

Figure 5: Magenta/Blue Color Bulkhead

- Step 9. Carefully lift Magenta/Blue bulkhead out of luminaire head.
- Step 10. Replace by performing steps 2 through 9 in reverse order.



Note: This is also the procedure to convert a standard color bulkhead to pastel color bulkhead or vice versa.

Amber/Diffuser DICHRO*TUNE Front Bulkhead Replacement

Parts:

21.9685.0171 1 EA ASSY, AMBER/DIFFUSER (INCANDESCENT MODELS)

Tools:

- #2 Phillips Screwdriver

To remove and replace Amber/Diffuser bulkhead assembly:

Step 1. **CLOSE ALL GLASS IN BULKHEADS** - Power up unit and allow all DICHRO*TUNE glass to calibrate. Once they close, power down unit.



WARNING: Remove power from luminaire before performing maintenance.

Step 2. Disconnect luminaire AC input cable from power source.

Step 3. Engage tilt lock so luminaire head is in horizontal position with top cover (one with bubble) facing up (as shown in [Figure 6](#)).

Step 4. As indicated in [Figure 6](#), open front ring by releasing latch.

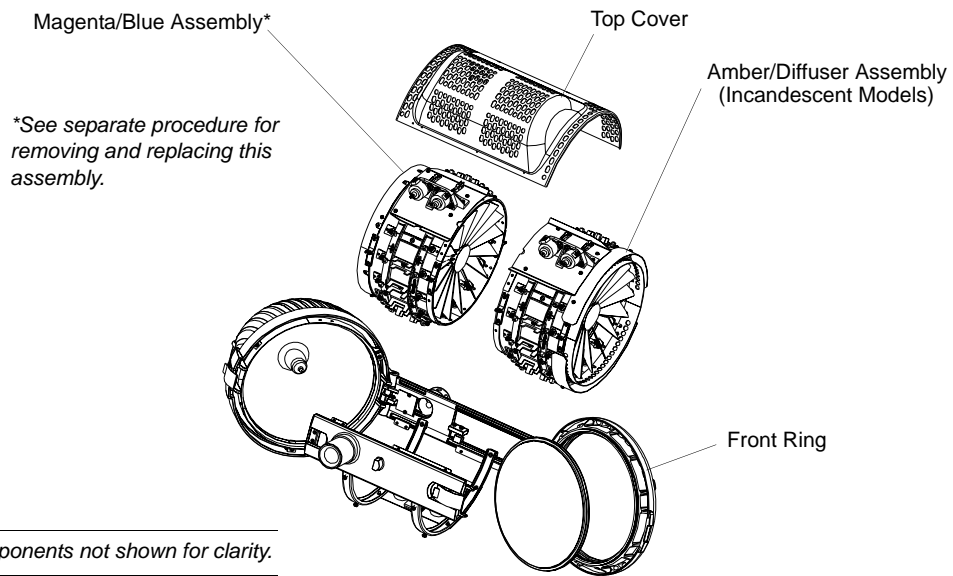


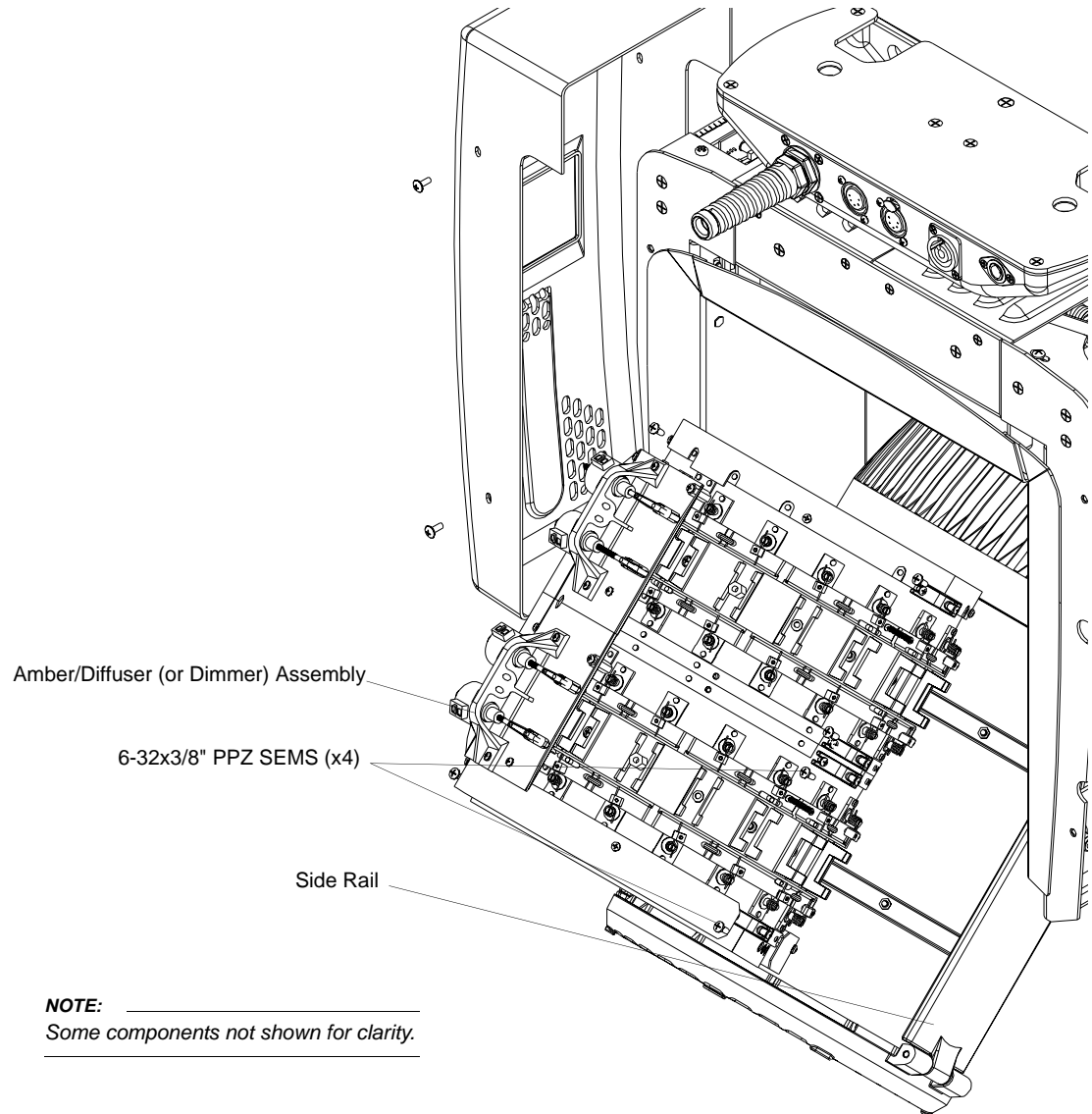
Figure 6: Amber/Diffuser Bulkhead

Step 5. At top cover, remove two (or four, depending on production date) 6-32x1/4" PPB SEMS screws.

Step 6. Remove top cover.

Amber/Diffuser DICHRO*TUNE Front Bulkhead Replacement (continued)

- Step 7. Disconnect wiring at two linear actuators on Amber/Diffuser (or Dimmer) DICHRO*TUNE Front Bulkhead.
- Step 8. As shown in **Figure 7**, at side rails from top, remove four 6-32x3/8" LG PPZ SEMS screws.



NOTE: _____
 Some components not shown for clarity.

Figure 7: Amber/Diffuser Bulkhead

- Step 9. Carefully lift Amber/Diffuser bulkhead out of luminaire head.
- Step 10. Replace by performing steps 2 through 9 in reverse order.

Color Filter and Diffuser Panel Replacement

Parts:

22.9685.0122	16 EA	ASSY, FILTER, MAGENTA, DICHRO*TUNE (STD)
22.9685.0123	16 EA	ASSY, FILTER, BLUE, DICHRO*TUNE (STD)
22.9685.0120	16 EA	ASSY, FILTER, MAGENTA, DICHRO*TUNE (PASTEL)
22.9685.0121	16 EA	ASSY, FILTER, BLUE, DICHRO*TUNE (PASTEL)
22.9685.0124	16 EA	ASSY, FILTER, AMBER, DICHRO*TUNE
22.9685.0126	16 EA	ASSY, FILTER, DIFFUSER PANEL

Tools:

- #1 Phillips screwdriver
- Tweaker Screwdriver
- Cotton Gloves or Finger Cots
- Clean, lint-free (soft) cloth

To remove and replace color filters or diffuser panels:

Step 1. Ensure glass filter or diffuser panels are in closed position.



WARNING: Remove power from luminaire before performing maintenance.

Step 2. Remove power from luminaire.

Step 3. Set the luminaire head horizontally.

Step 4. Engage service tilt lock to secure luminaire head in horizontal position to access heatsink latch.

Step 5. Remove desired bulkhead assembly as follows:

- a. For Magenta/Blue bulkhead removal, refer to, “[Magenta/Blue DICHRO*TUNE Rear Bulkhead Replacement](#)” on page 24. Remove Magenta/Blue bulkhead.
- b. For Amber/Diffuser bulkhead removal, refer to, “[Amber/Diffuser DICHRO*TUNE Front Bulkhead Replacement](#)” on page 26. Remove Amber/Diffuser bulkhead.



WARNING: Wear cotton gloves or other covering while handling filters or diffuser panels. If required, use isopropyl alcohol and soft, lint-free cloth to thoroughly clean glass portion of lamp.



CAUTION: Work carefully when removing filter and panels. Filters and panels are secured to silicone pad with UV-cured RTV and pad can become separated. If they become separated, a new filter or panel must be installed since RTV must be UV-cured.

Color Filter and Diffuser Panel Removal (continued)

Step 6. Disconnect actuator screw from Swivel Coupler using tweaker screwdriver by carefully prying apart from Drive Ring Link.

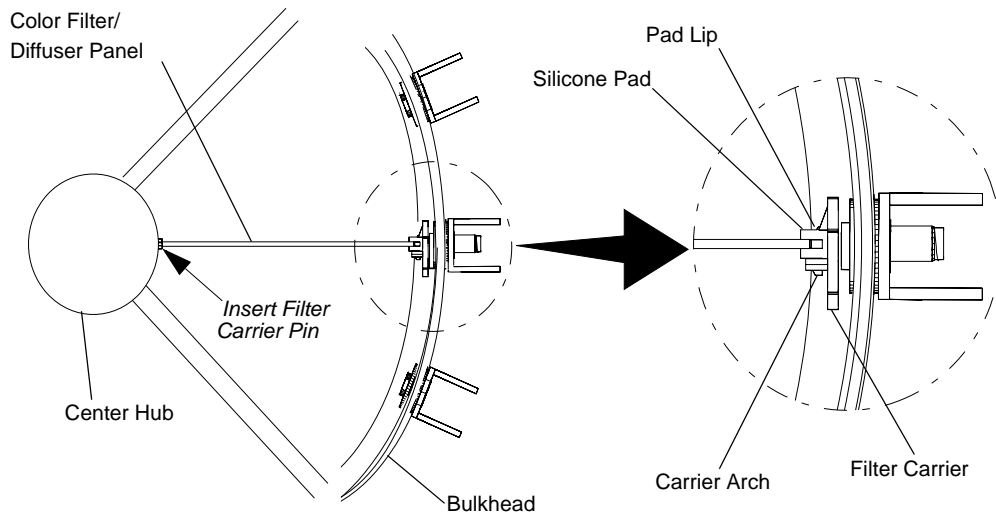


Figure 8: Color Filter and Diffuser Panel Removal

Step 7. Open glass filter or diffuser panels.

Step 8. Remove filter or panel as follows (shown in **Figure 8**):

- a. At filter or panel, gently push assembly (with silicon pad) in towards center hub (away from carrier) and work end of tweaker screwdriver between silicon pad and carrier.
- b. Gently work side of silicone pad (not under carrier arch) free.
- c. After side of silicone pad is free from carrier, remove silicone pad from under carrier arch and remove filter or panel.

Step 9. Insert filter carrier pin (of replacement filter or panel) into center hub as shown in **Figure 8**.

Step 10. Place side of silicone pad with lip into arch on installed carrier.

Step 11. Using tweaker screwdriver, gently run screwdriver tip over silicone pad, driving silicone pad into carrier and fully seating silicone pad.

Step 12. Reassemble luminaire.

Linear Actuator Motor Replacement (Magenta/Blue Bulkhead)

Parts:

44.9685.0230 2 EA MOTOR, LINEAR, 0.002"/STEP

Tools:

- #1 Phillips Screwdriver
- #2 Phillips Screwdriver
- #2 Slotted Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace linear actuator motor assembly:

- Step 1. Remove power from luminaire.
- Step 2. Set the luminaire head horizontally.
- Step 3. Engage tilt service lock to secure luminaire head in horizontal position to access heatsink latch.

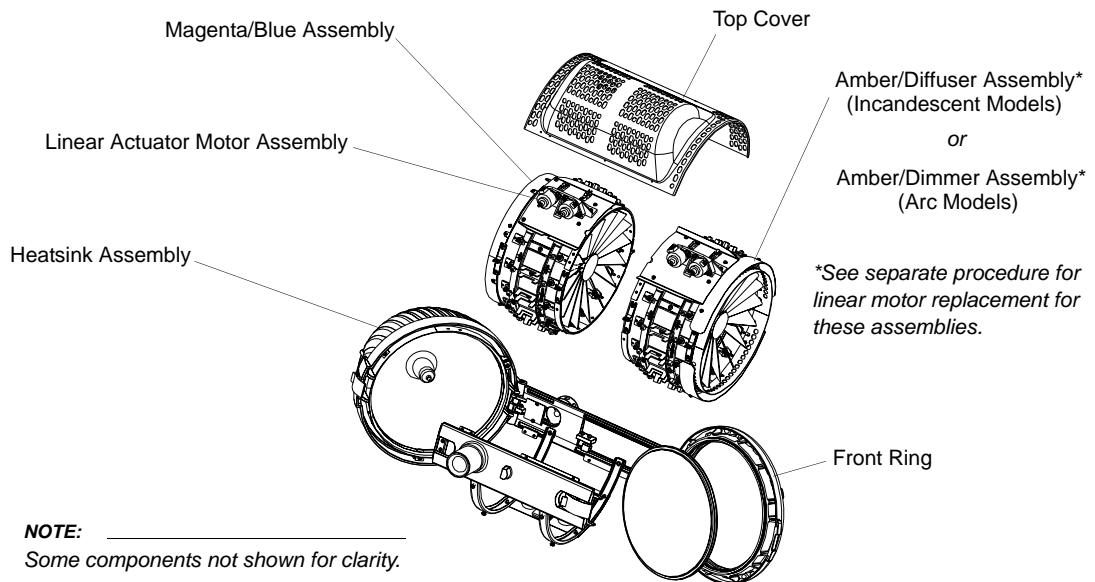


Figure 9: Magenta/Blue Color Bulkhead - Linear Actuator Motors

- Step 4. Remove top head cover.



Note: Linear actuator motors should be seen with cover removed. If not, flip head position.

- Step 5. At linear actuator motor to be replaced on Magenta/Blue assembly, disconnect wiring at both motors.
- Step 6. Remove linear actuator motor assembly as follows:
- At linear actuator motor assembly, using #1 Phillips screwdriver, remove three 4-40x1/4" PPZ screws and three #4 lock washers securing motor mount to luminaire head.
 - At linear actuator motor assemblies, using #2 slotted screwdriver, disconnect actuator/drive ring links from swivel links on drive rings.
- Step 7. At linear actuator motor, using #1 Phillips screwdriver, remove two 4-40x1/4" PPZ screws securing linear actuator motor to actuator mount, and remove motor. See **Figure 10**.

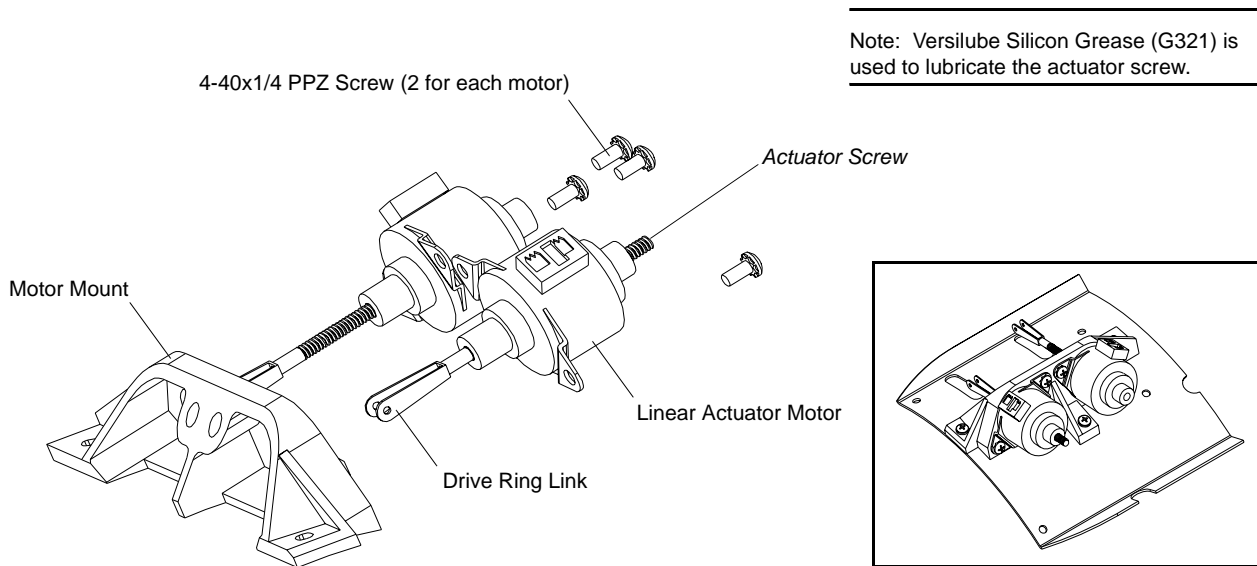


Figure 10: Magenta/Blue Linear Actuator Motor Replacement

- Step 8. Place linear actuator motor in place on actuator mount.
- Step 9. Re-install two 4-40x1/4" PPZ screws and two #4 lock washers and, using #1 Phillips screwdriver, tighten to secure linear actuator motor and heatsink to actuator mount.
- Step 10. Secure actuator/drive ring link to drive ring swivel link.
- Step 11. Attach wiring.
- Step 12. Re-install top head cover.
- Step 13. Release tilt service lock.



Note: If mechanism is too noisy, loosen the two 4-40 x 1/4" PPZ screws and align actuator motor to motor mount to lessen noise.

Linear Actuator Motor Replacement (Amber/Diffuser Bulkhead)

Parts:

44.9685.0230 2 EA MOTOR, LINEAR, 0.002"/STEP

Tools:

- #1 Phillips Screwdriver
- #2 Phillips Screwdriver
- #2 Slotted Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace linear actuator motor assembly:

- Step 1. Remove power from luminaire.
- Step 2. Set the luminaire head horizontally.
- Step 3. Engage tilt service lock to secure luminaire head in horizontal position to access heatsink latch.

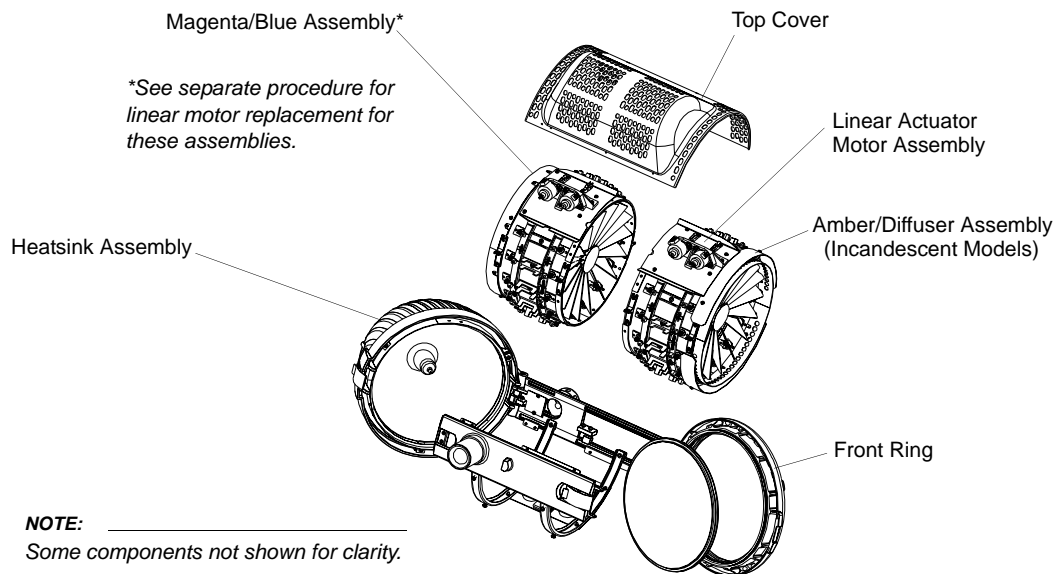


Figure 11: Amber/Diffuser Bulkhead - Linear Actuator Motors

- Step 4. Remove top head cover.



Note: Linear actuator motors should be seen with cover removed. If not, flip head over.

- Step 5. At linear actuator motor to be replaced on Amber/Diffuser assembly, disconnect wiring at both motors.
- Step 6. Remove linear actuator motor assembly as follows:
- At linear actuator motor assembly, using #1 Phillips screwdriver, remove three 4-40x1/4" PPZ screws and three #4 lock washers securing motor mount to luminaire head.
 - At linear actuator motor assemblies, using #2 slotted screwdriver, disconnect actuator/drive ring links from swivel links on drive rings.
- Step 7. At linear actuator motor, using #1 Phillips screwdriver, remove two 4-40x1/4" PPZ screws securing linear actuator motor to actuator mount, and remove motor. See **Figure 12**.

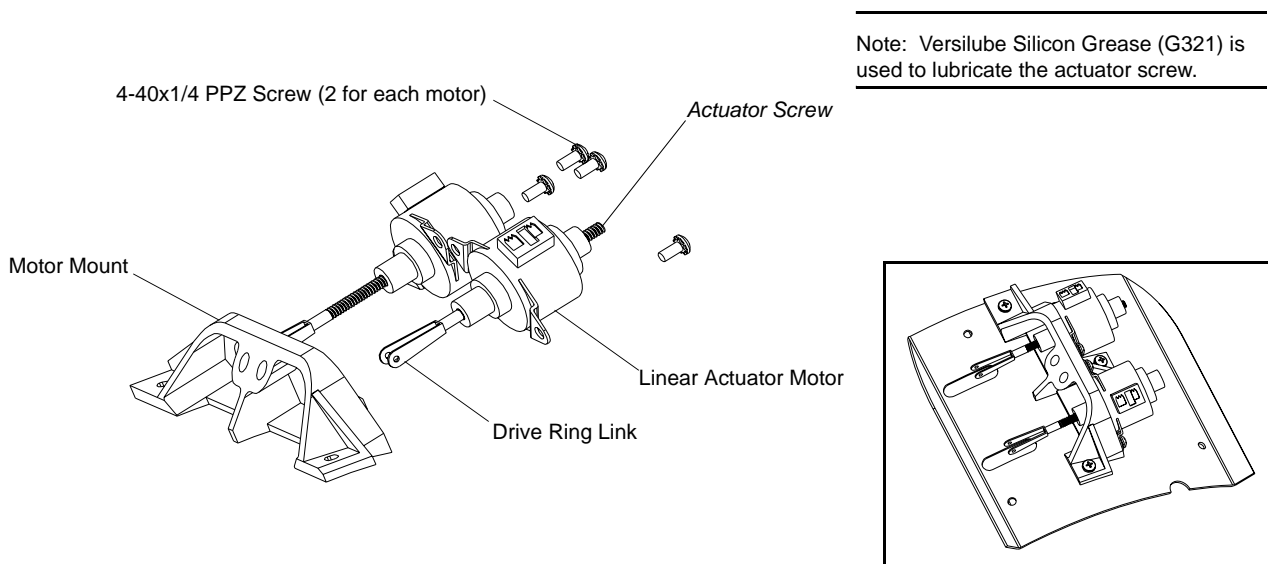


Figure 12: Amber/Diffuser Linear Actuator Motor Replacement

- Step 8. Place linear actuator motor in place on actuator mount.
- Step 9. Re-install two 4-40x1/4" PPZ screws and two #4 lock washers and, using #1 Phillips screwdriver, tighten to secure linear actuator motor and heatsink to actuator mount.
- Step 10. Secure actuator/drive ring link to drive ring swivel link.
- Step 11. Attach wiring.
- Step 12. Re-install top head cover.
- Step 13. Release tilt service lock.



Note: If mechanism is too noisy, loosen the two 4-40 x 1/4" PPZ screws and align actuator motor to motor mount to lessen noise.

Incandescent Lamp Socket Assembly Replacement

Parts:

23.9685.0780 1 EA ASSY, LAMP SOCKET

Tools:

- #2 Phillips Screwdriver
- 1/4" Hex Nutdriver

To remove and replace lamp socket assembly:

Step 1. **CLOSE ALL GLASS IN BULKHEADS** - Power up unit and allow all DICHRO*TUNE glass to calibrate. Once they close, power down unit.



WARNING: Remove power from luminaire before performing maintenance.

Step 2. Disconnect luminaire AC input cable from power source.

Step 3. Engage tilt lock so luminaire head is in horizontal position with top cover (one with bubble) facing up (as shown in [Figure 13](#)).

Step 4. Open heatsink by releasing latch.

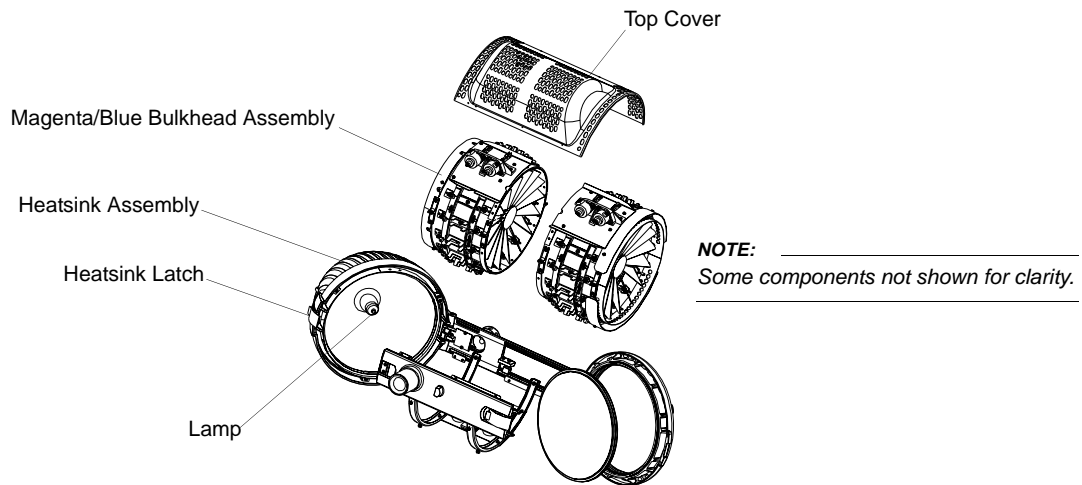


Figure 13: Accessing the Lamp Socket in VL550 and VL550D Fixtures

Step 5. At top cover, remove four 6-32x1/4" PPB SEMS screws.

Step 6. Remove top cover.

Step 7. Remove Magenta/Blue Bulkhead Assembly as described in "[Magenta/Blue DICHRO*TUNE Rear Bulkhead Replacement](#)" on page 24. Remove Magenta/Blue bulkhead.

Step 8. Using soft cloth to protect lamp, remove lamp from socket.

Step 9. As indicated in **Figure 14**, at light baffle, remove three 6-32x1/8" PPB screws.

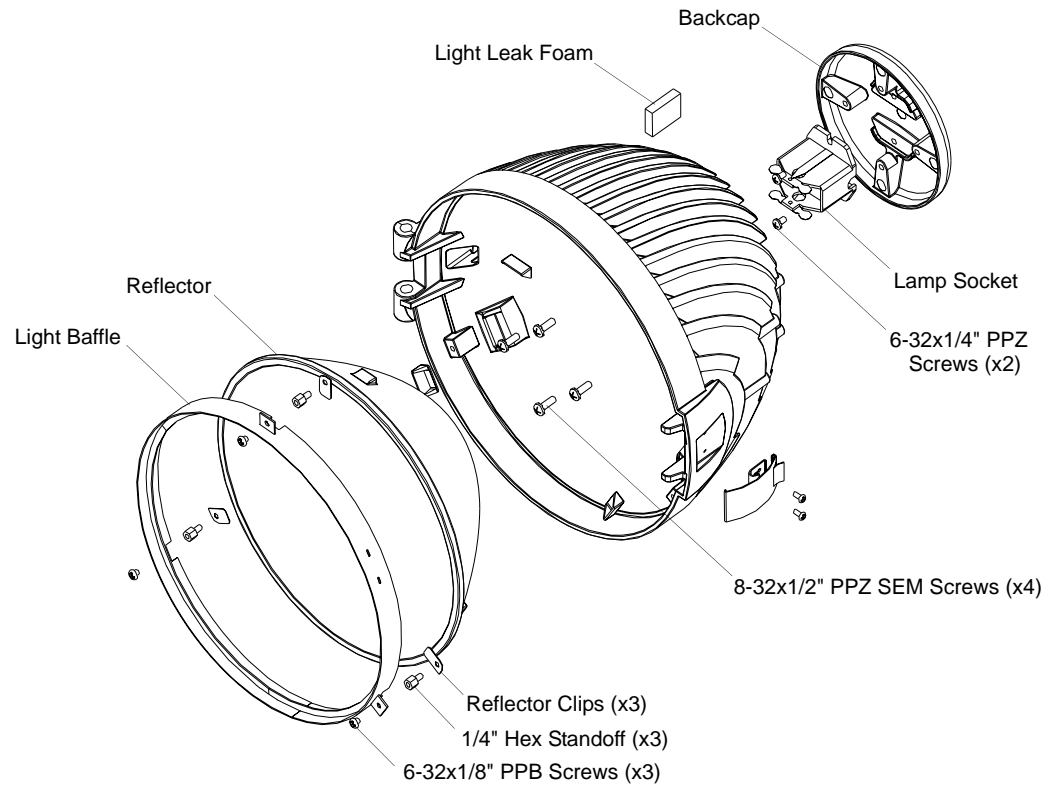


Figure 14: Heatsink Assembly - Lamp Socket Removal

- Step 10. Remove light baffle.
- Step 11. Loosen, but do not remove, three 1/4" hex standoffs and turn reflector clips out of way and remove reflector.
- Step 12. Remove yoke arm cover opposite display side by removing four 6-32x3/8" LG PTB screws.
- Step 13. If applicable, remove dimmer. See, "[IGBT Dimmer Replacement - VL550D Only](#)" on [page 45](#) for IGBT dimmer removal.
- Step 14. At inside of side rail, remove two 4-40x1/8" LG PPB screws and remove Lamp Wire Cover.
- Step 15. At support rib closest to tilt tube, remove one 6-32x1/4" LG PPG screw and remove ground strap.
- Step 16. Remove tilt tube plug and pass lamp wires through tilt tube.
- Step 17. Inside heatsink, remove four 8-32x1/2" LG PPZ SEM screws and remove back cap
- Step 18. Remove heatsink light leak foam and pass lamp wire through heatsink.
- Step 19. At socket, remove two 6-32x1/4" LG PPZ SEM screws and remove socket.
- Step 20. Replace by performing Steps 3 through 19 in reverse order.

Display PCB Replacement

Parts:

24.9685.0826 1 EA ASSY, VL500 DISPLAY PCB

Tools:

- 1/4" Hex Nutdriver
- #2 Phillips Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace display PCB assembly:

- Step 1. Remove power from luminaire.
- Step 2. Remove display-side yoke arm cover by removing four 6-32x3/8" PTB screws.
- Step 3. At display overlay, as indicated in **Figure 15**, remove four 6-32x1/4" PPB screws.

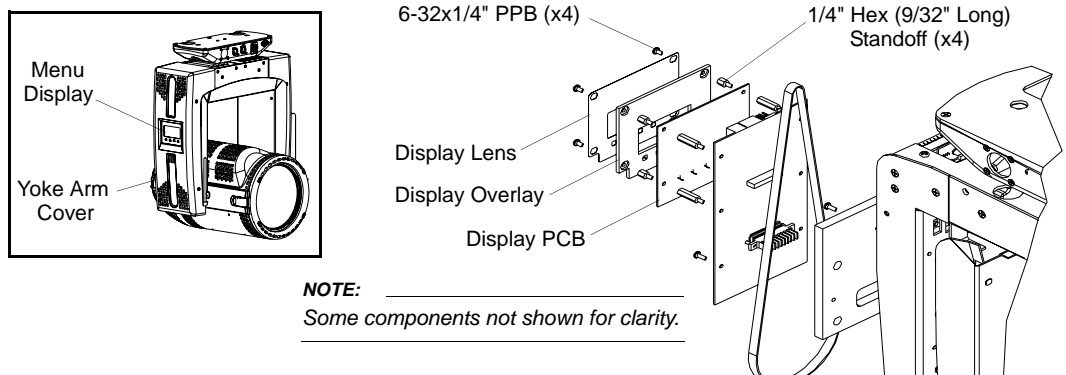


Figure 15: Display PCB Replacement

- Step 4. Remove display overlay.
- Step 5. As indicated in **Figure 15**, remove four 1/4" hex (9/32" long) standoffs.
- Step 6. At display PCB, disconnect the following wiring connections:
- a. 4-position MTA connector (24V DC)
 - b. 2-position connector (MCB Fan)
 - c. 4-position connector (LVS Fan/Temperature Switch)
 - d. 6-position connector (Display Communication)
- Step 7. Remove Display PCB.
- Step 8. Replace by performing Steps 2 through 7 in reverse order.



Note: Orientation of display overlay - the overlay should be black paper side out to allow proper and free button travel.

Main Control PCB/Fan Assembly Replacement

Parts:

21.9685.0731 1 EA ASSY, MAIN CONTROL PCB/FAN

Tools:

- 1/4" Hex Nutdriver
- #2 Phillips Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace main control PCB/fan assembly:

- Step 1. Remove power from luminaire.
- Step 2. Remove display-side yoke arm cover by removing four 6-32x3/8" PTB screws.
- Step 3. Remove Display PCB as described in, [“Display PCB Replacement” on page 36](#).
- Step 4. At Main Control PCB/Fan Assembly, disconnect the following wiring connections:
- a. Pan/Tilt wiring harness
 - b. Head motor wiring harness
 - c. 3-position connector (Dimmer communications - See note below)

Note: Dimmer communications is for VL550D models only (with on-board IGBT dimmers). On VL550 models (without on-board IGBT dimmer) this connector is present and wiring harness should be connected to MCB.

- d. 10-position AMP connector (Display Communications)
- e. 4-position connector (DMX communications)*



CAUTION: *This connector is similar to the connector for the LVS Fan/Temperature Switch connector used on the Display PCB. It is imperative that you do not confuse the two.

- f. 3-position connector (24V DC)
- Step 5. Remove two 6-32x3/8" PPZ screws (one has a ground wire terminal attached).
- Step 6. Remove four 1/4" hex (13/16" long) standoffs as indicated in [Figure 16](#).

Main Control PCB/Fan Assembly Replacement (continued)

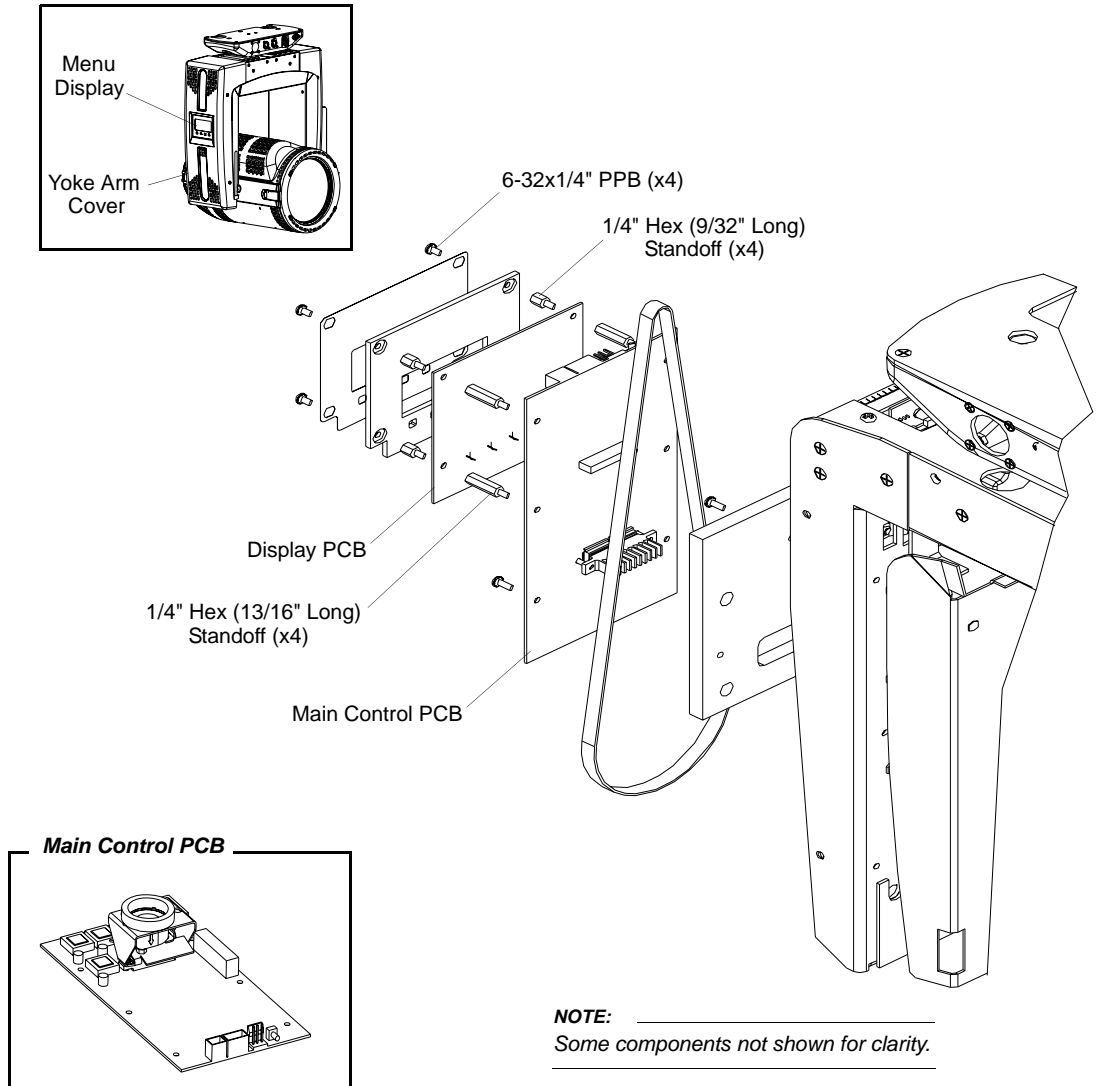


Figure 16: Main Control PCB/Fan Replacement

- Step 7. Remove Main Control PCB/Fan Assembly.
- Step 8. Replace Main Control PCB/Fan Assembly by following Steps 2 through 7 in reverse order.
- Step 9. Configure Main Control PCB using menus as needed.

Low Voltage Supply (LVS) Replacement

Parts:

69.3178.0121 1 EA POWER SUPPLY, 120W, 24VDC

Tools:

- #2 Phillips Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

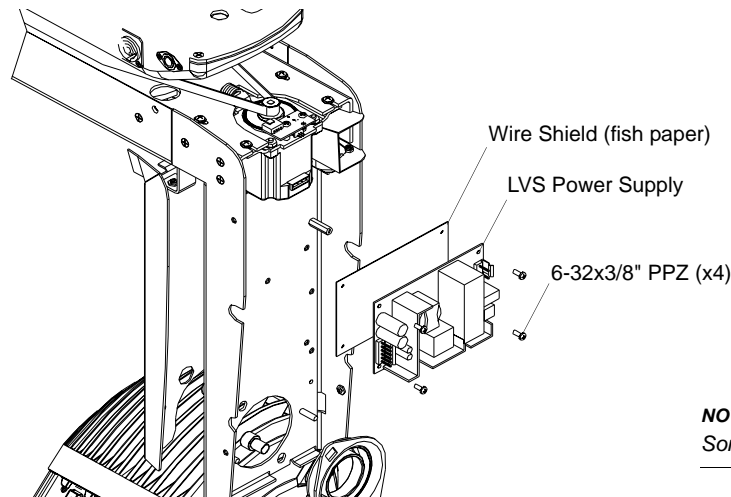


WARNING: With power applied, LIVE AC is present at heatsink. Do not touch when unit is powered.

To remove and replace LVS:

Step 1. Remove power from luminaire.

Step 2. Remove yoke arm cover opposite display side by removing four 6-32x3/8" PTB screws.



NOTE: _____
Some components not shown for clarity.

Figure 17: LVS Replacement

Step 3. Disconnect the following wiring connections:

- 3-position connector (AC Input)
- 6-position MTA connector (DC Output)

Step 4. As shown in **Figure 17**, remove four 6-32x3/8" PPZ, SEMS screws.

Step 5. Remove LVS. Note fish paper (Wire Shield) behind LVS, save and reuse with replacement LVS.

Step 6. Replace by performing steps 2 through 5 in reverse order.

Low Voltage Supply (LVS) Temperature PCB Replacement

Parts:

24.9685.0740 1 EA TEMPERATURE BOARD, LVS

Tools:

- #2 Phillips Screwdriver



WARNING: Remove power from luminaire before performing maintenance.



WARNING: With power applied, LIVE AC is present at heatsink. Do not touch when unit is powered.

To remove and replace LVS temperature PCB:

- Step 1. Remove power from luminaire.
- Step 2. Remove LVS by following procedure, “[Low Voltage Supply \(LVS\) Replacement](#)” on page 39.

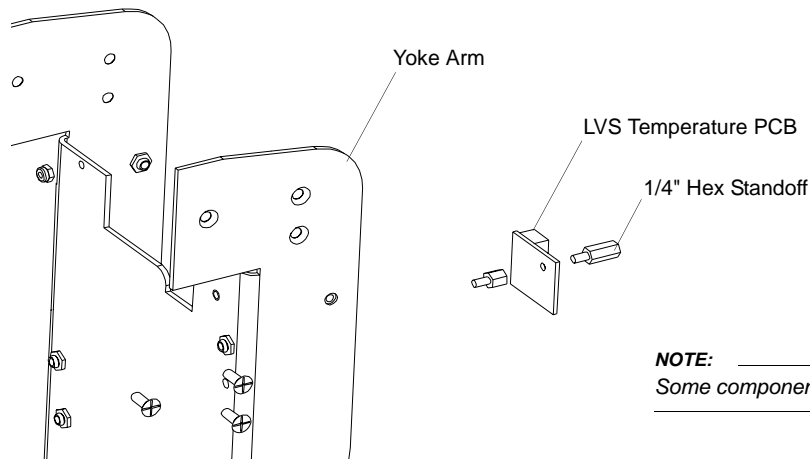


Figure 18: LVS Temperature PCB Replacement

- Step 3. Disconnect the following wiring connections on PCB:
- a. 2-position connector (LVS Fan)
 - b. 4-position connector (LVS Fan from MCB)
- Step 4. As shown in [Figure 18](#), remove one 1/4" hex standoff.
- Step 5. Remove LVS Temperature PCB.
- Step 6. Replace by performing steps 2 through 5 in reverse order.

Tilt Motor Assembly Replacement

Parts:

21.9685.0540 1 EA ASSY, PAN/TILT MOTOR

Tools:

- #2 Phillips Screwdriver
- Diagonal Cutters



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace tilt motor assembly:

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove display side yoke cover by removing four 6-32x3/8" LG PTB screws.
- Step 3. Remove Display PCB and Main Control PCB by following procedures "[Display PCB Replacement](#)" on page 36 and "[Main Control PCB/Fan Assembly Replacement](#)" on page 37.
- Step 4. Remove 4 x 6-32 x 3/8" PFB screws (two each side of yoke) that hold Top Cover Louver Plate and remove plate.
- Step 5. Disconnect wiring from motor and encoder PCB.
- Step 6. Cut wire tie connecting wiring to yoke arm.
- Step 7. Loosen (do NOT remove) four 8-32x7/16" PPZ screws that mount Pan/Tilt motor assembly to Tilt Motor Slide Plate.

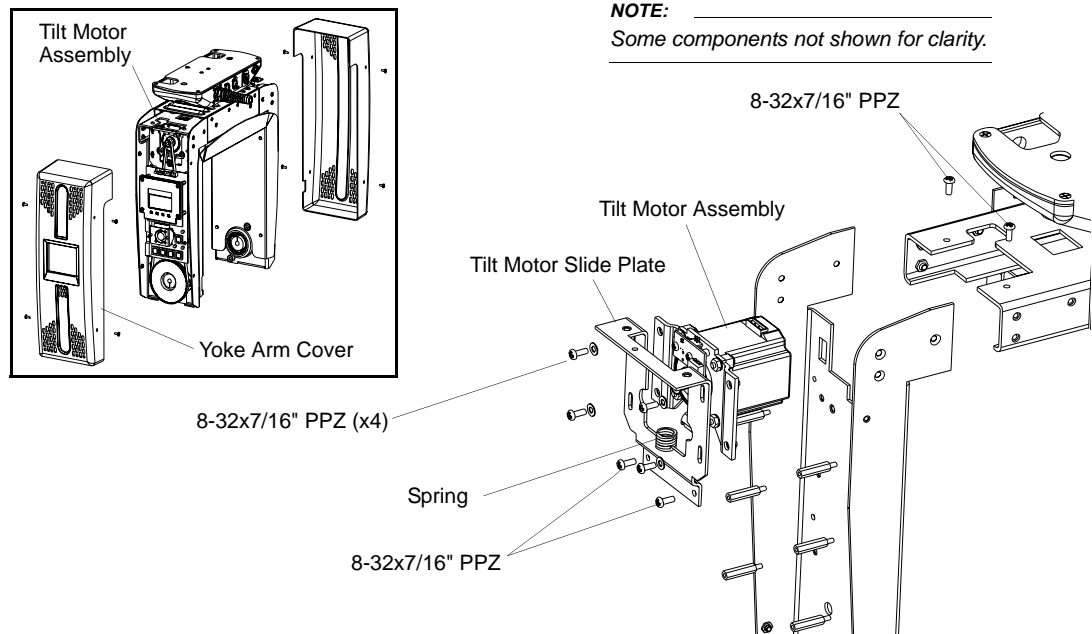


Figure 19: Tilt Motor Assembly Replacement

- Step 8. Press motor towards spring to loosen belt tension.
- Step 9. Remove belt from both drive pulley and driven pulley.
- Step 10. Remove four 8-32x7/16" PPZ screws that mount Tilt Motor Slide Plate to yoke and remove ENTIRE assembly.
- Step 11. Remove four 8-32x7/16" PPZ screws that mount Pan/Tilt Motor Assembly to Tilt Motor Slide Plate and remove Pan/Tilt Motor Assembly (be careful of spring).
- Step 12. Replace by performing Steps 2 through 10 in reverse order.



Note: When tightening four 8-32x7/16" PPZ screws that mount Pan/Tilt Motor Assembly to Tilt Motor Slide Plate, you must tighten in a **CLOCKWISE** pattern starting with screw in lower left-hand side from spring.

Pan Motor Assembly Replacement

Parts:

21.9685.0540 1 EA ASSY, PAN/TILT MOTOR

Tools:

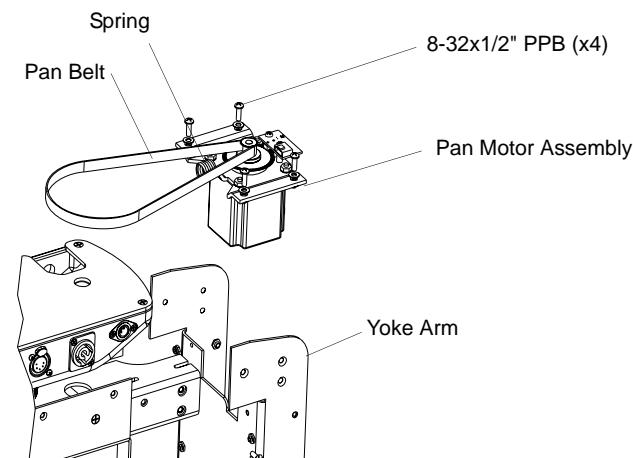
- #2 Phillips Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace pan motor assembly:

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove yoke cover opposite of display by removing four 6-32x3/8" LG PTB screws.
- Step 3. Remove 4 x 6-32 x 3/8" PFB screws (two each side of yoke) that hold Top Cover Louver Plate and remove plate.
- Step 4. Disconnect wiring from motor and encoder PCB.
- Step 5. As shown in **Figure 20**, loosen, but do not remove, four 8-32x1/2" PPB screws.
- Step 6. Press motor towards driven pulley and remove belt from drive pulley.
- Step 7. Remove four 8-32x1/2" PPB screws from Step 5.
- Step 8. Remove Pan/Tilt Motor Assembly.



NOTE: Some components not shown for clarity.

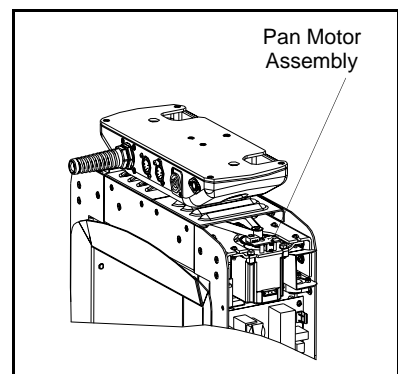


Figure 20: Pan Motor Assembly Replacement

- Step 9. Replace pan motor assembly by performing Steps 2 through 8 in reverse.



Note: When tightening four 8-32x1/2" PPB screws, you must tighten in a **CLOCKWISE** pattern starting with screw in lower left-hand side from spring.

Pan/Tilt Encoder PCB Replacement

Parts:

24.9685.7735 1 EA BOARD ASSY, PAN/TILT ENCODER

Tools:

- #2 Phillips Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace pan/tilt encoder PCB:

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. To access pan/tilt encoder PCB:
- For Tilt Motor Encoder PCB removal, remove display side yoke cover by removing four 6-32x3/8" LG PTB screws.
 - For Pan Motor Encoder PCB removal, access pan motor assembly see, "[Pan Motor Assembly Replacement](#)" on page 43.
- Step 3. At encoder PCB, disconnect wiring harness from assembly.
- Step 4. As shown in [Figure 21](#), remove two 6-32x3/8" PPZ screws and remove assembly.

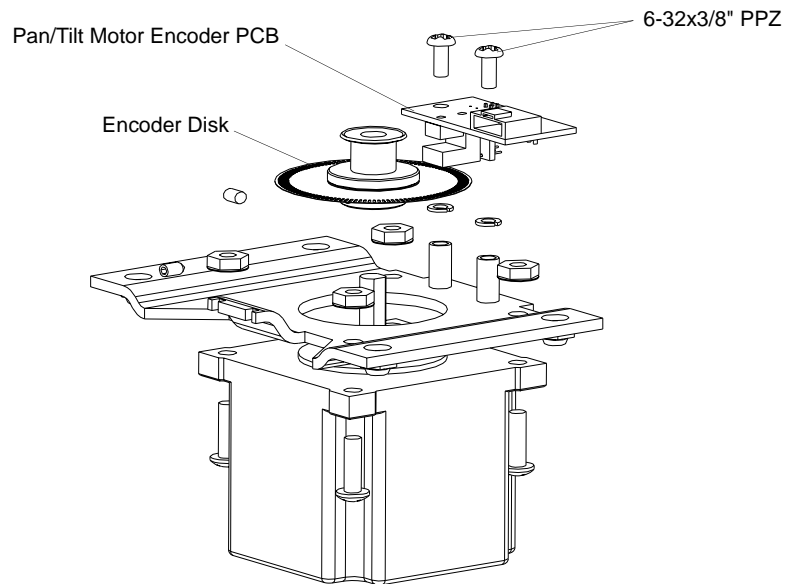


Figure 21: Pan/Tilt Motor Encoder PCB Replacement

- Step 5. Replace by performing Steps 2 through 4 in reverse order.



Note: Ensure that encoder disk passes freely through the optical sensor on PCB.

IGBT Dimmer Replacement - VL550D Only

Parts:

69.3173.0115	1 EA	DIMMER, IGBT, 1200W 120V REV PHASE CONT (VL550D 120V MODELS ONLY)
69.3173.0240	1 EA	DIMMER, IGBT, 1200W 230V REV PHASE CONT (VL550D 230V MODELS ONLY)

Tools:

- #2 Phillips Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace IGBT dimmer:

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove yoke cover on dimmer side by removing four 6-32x3/8" LG PTB screws.
- Step 3. As shown in **Figure 22**, at dimmer, loosen, but do not remove, four 6-32x3/8" PPZ screws.
- Step 4. Carefully remove IGBT dimmer. Note that there will be wires connected to dimmer on the back side.



CAUTION: All AC wiring is same color. It is a good idea to mark the connector attached to both the AC Line Input and Load (Output) terminals on the IGBT dimmer with a black marker before removing so the phasing can be maintained.

- Step 5. At dimmer, carefully note (and label before removing) and disconnect following wiring:
- 3-position (Dimmer Communication from MCB)
 - Four Faston (Quick Connects - AC Input / lamp Power Output)
- Step 6. Remove four 6-32x3/8" PPZ screws from Step 3. Install these screws in replacement IGBT dimmer.

IGBT Dimmer Replacement - VL550D Only (continued)

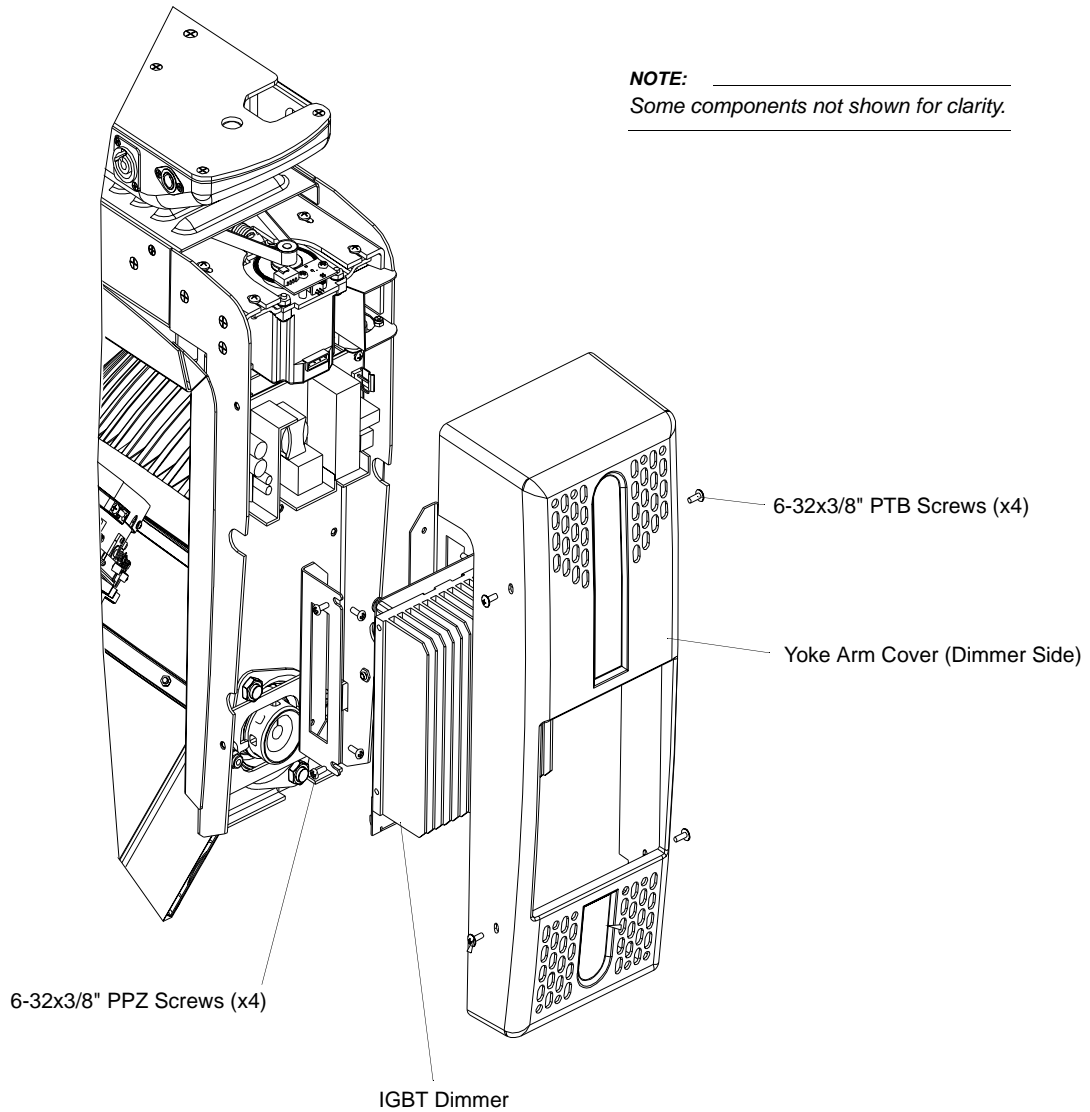


Figure 22: IGBT Dimmer Replacement (VL550D Only)

Step 7. Replace IGBT Dimmer by performing Steps 2 through 6 in reverse.

AC Input (PowerCon) Connector Replacement

Parts:

25.9685.0756 1 EA CONNECTOR, AC INPUT (POWERCON)

Tools:

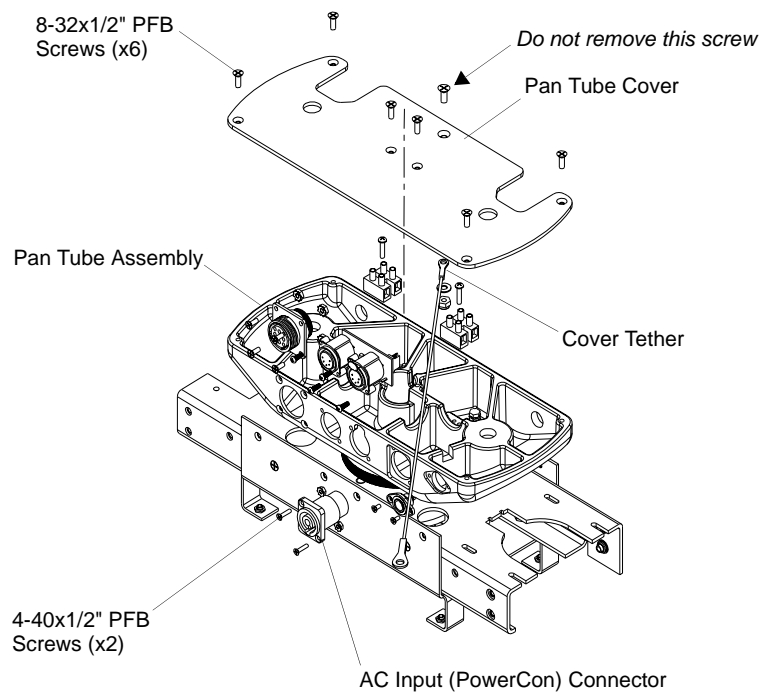
- #2 Phillips Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace AC input (PowerCon) connector:

- Step 1. Remove power from luminaire.
- Step 2. Position light to access top of pan tube assembly.
- Step 3. As shown in **Figure 23**, at pan tube cover, remove six 8-32x1/2" PFB screws.
- Step 4. Remove pan tube cover. (Note, tether will still hold cover).



NOTE: _____
Some components not shown for clarity. This procedure is applicable for all models.

Figure 23: AC Input (PowerCon) Connector Replacement

- Step 5. Remove two 4-40x1/2" PFB screws at front of PowerCon.
- Step 6. Disconnect wiring from PowerCon.
- Step 7. Replace PowerCon by performing Steps 3 through 6 in reverse.

DMX PCB Assembly Replacement

Parts:

24.9664.4895 1 EA ASSY, DMX INPUT PCB

Tools:

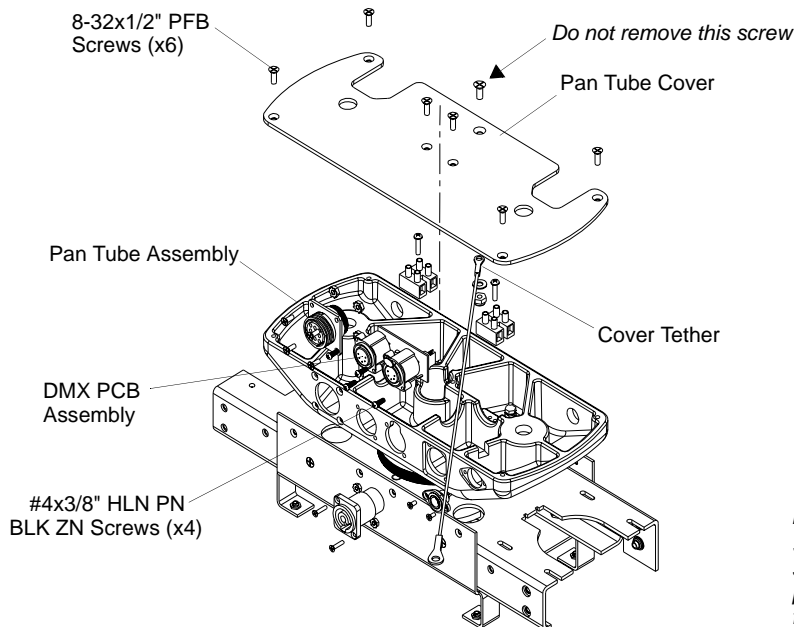
- #2 Phillips Screwdriver



WARNING: Remove power from luminaire before performing maintenance.

To remove and replace DMX PCB assembly:

- Step 1. Remove power from luminaire.
- Step 2. Position light to access top of pan tube assembly.
- Step 3. As shown in **Figure 24**, at pan tube cover, remove six 8-32x1/2" PFB screws.
- Step 4. Remove pan tube cover. (Note, tether will still hold cover).



NOTE:
Some components not shown for clarity. This procedure is applicable for all models.

Figure 24: DMX PCB Assembly Replacement

- Step 5. Disconnect wiring from DMX PCB Assembly.
- Step 6. Remove four #4 x 3/8" H/L PN BLK ZN screws at front of DMX PCB Assembly.
- Step 7. Replace DMX PCB Assembly by performing Steps 3 through 6 in reverse.

Cleaning Optical Lenses and Filters



WARNING: Remove power from luminaire before performing maintenance.



WARNING: Acetone is a harsh cleaning agent and solvent. Acetone is very flammable. Please handle acetone according to manufacturer's safety instructions and precautions.

The front lens, optics/color filters, and reflector may require cleaning after extended use.

- **FRONT LENS:** Use Isopropyl Alcohol along with a soft, lint-free cloth to clean the front lens.
- **OPTICS/COLOR FILTERS:** Use Acetone or Isopropyl Alcohol along with a soft, lint-free cloth to clean the optics/color filters.
- **REFLECTOR:** Use Acetone or Isopropyl Alcohol along with a soft, lint-free cloth to clean the reflector.



CAUTION: Do not continuously rub color filters or reflector - it may damage or remove the optical coating. Never use ammonia-based cleaners at anytime.

Notes

CHAPTER 3.

Illustrated Parts Breakdown

This chapter contains illustrated parts breakdowns for all VL550 wash luminaire assemblies.

- **Drawing Trees**
- **Top Assembly**
- **Head Assembly**
- **Yoke Assembly**
- **Cables**

Note: The following abbreviations are used to identify parts specific to certain models.

VL550 Wash Model Identifiers

ABBREVIATION	MODEL (INCLUDES STANDARD AND PASTEL COLOR SYSTEMS)
VL550	VL550 Incandescent Luminaire (120V or 230V)
VL550D	VL550D Incandescent Luminaire with IGBT On-Board Dimmer (120V or 230V)



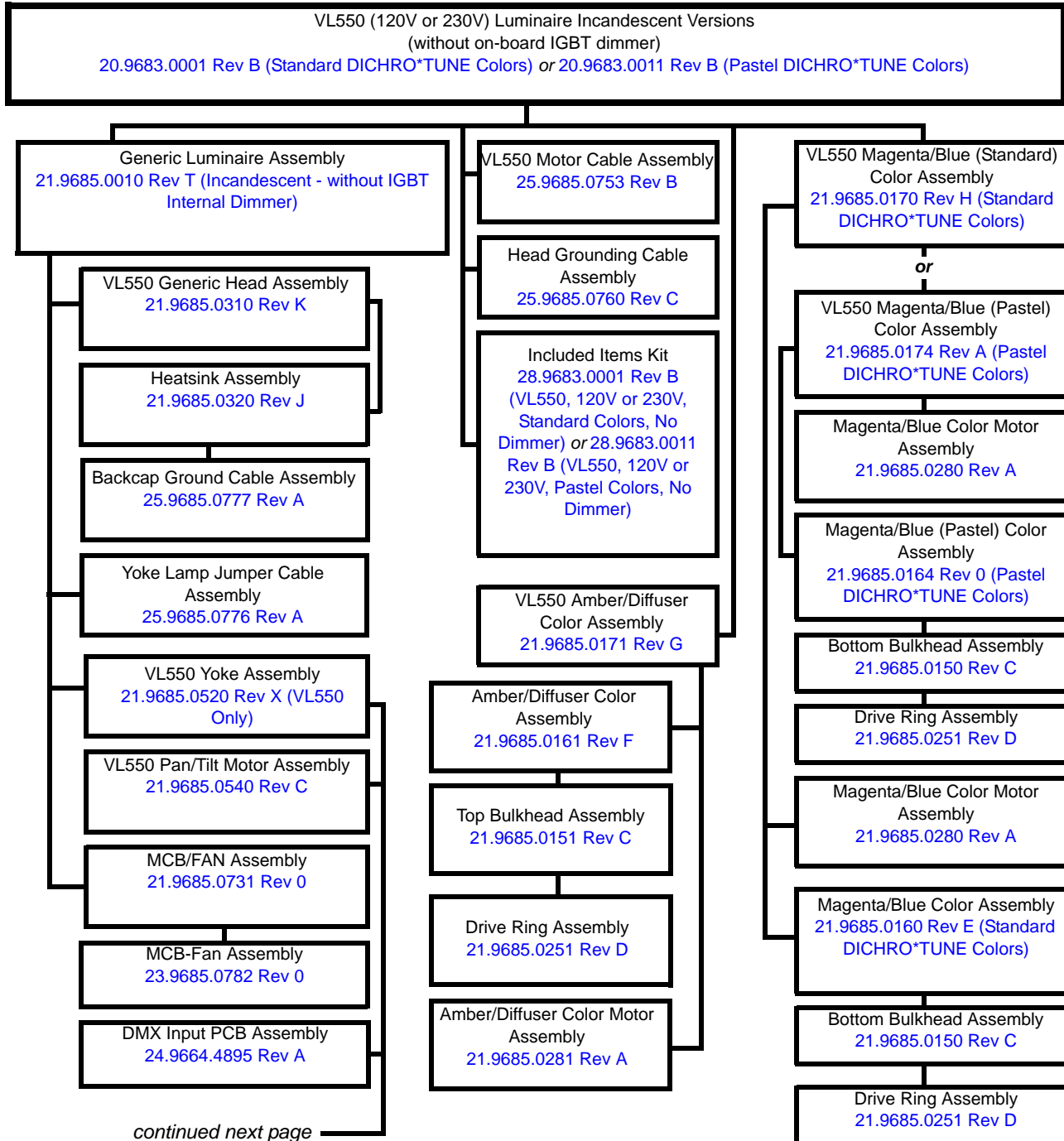
Note: VL550 wash luminaires share many components / parts of the VL500 wash luminaires. This manual (02.9683.0010 0) covers maintenance procedures, information, and drawings specific to VL550 wash luminaires only. Please refer to the current service manual (02.9685.0010) for maintenance procedures, information, and drawings for VL500 wash luminaires.



SERVICE

Drawing Trees

VL550 Incandescent Luminaires



continued next page

Figure 3-1: VL550 Incandescent Luminaires Drawing Tree (Part 1)

VL550 Incandescent Luminaires (continued)

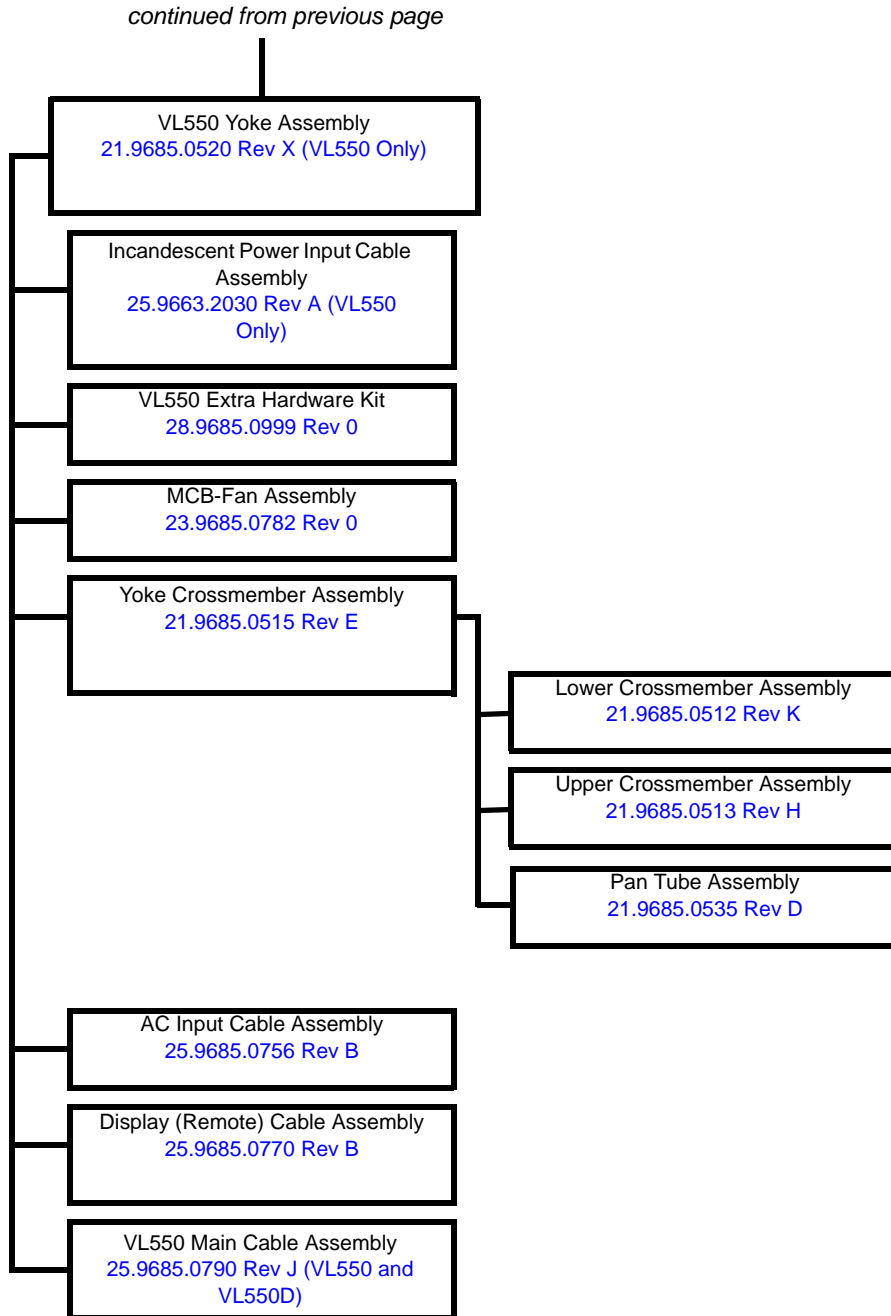


Figure 3-2: VL550 Incandescent Luminaires Drawing Tree (Part 2)

VL550D Incandescent (with Dimmer) Luminaires

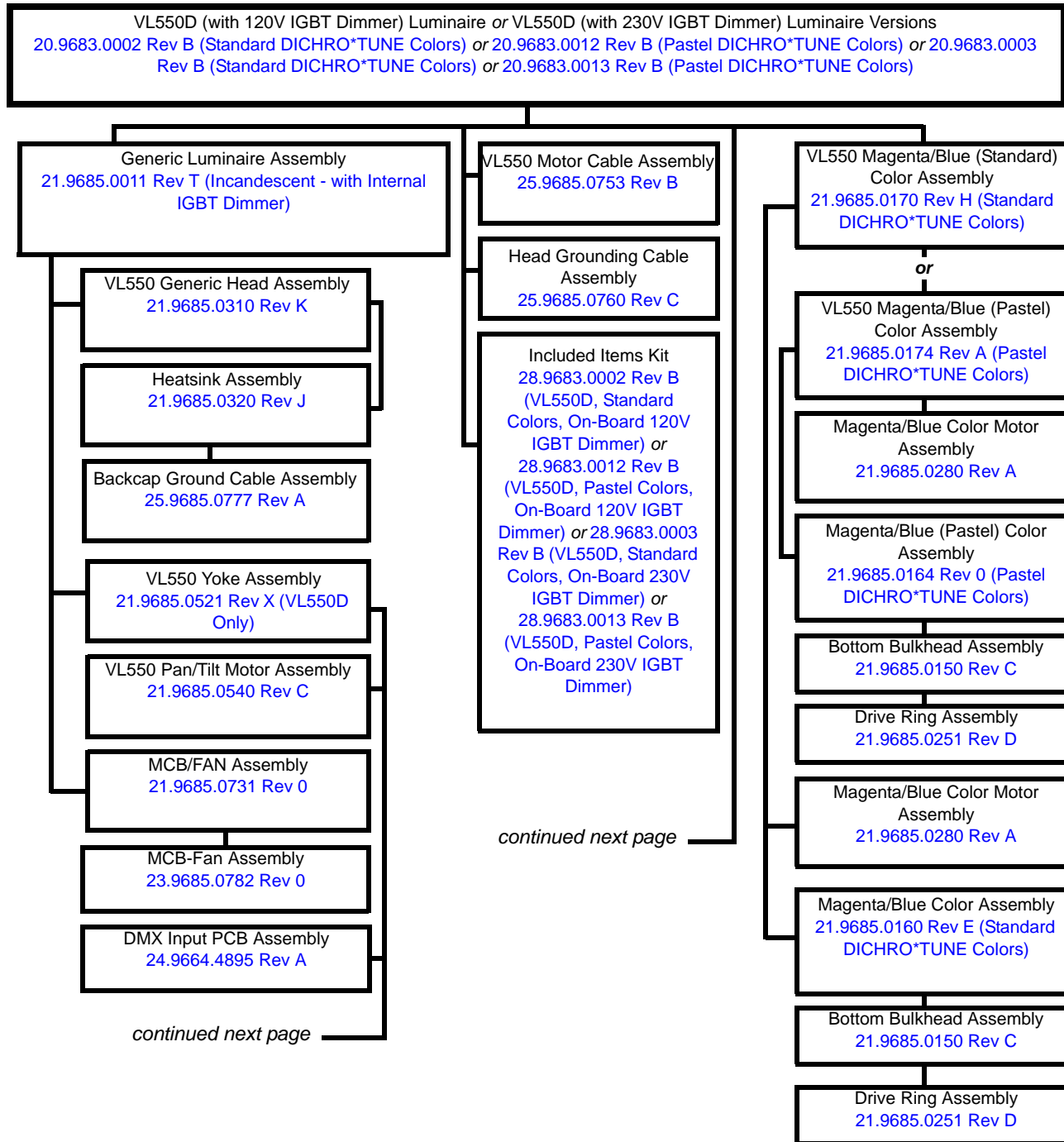


Figure 3-3: VL550D Incandescent Luminaires Drawing Tree (Part 1)

VL550D Incandescent (with Dimmer) Lumi-
naires (continued)

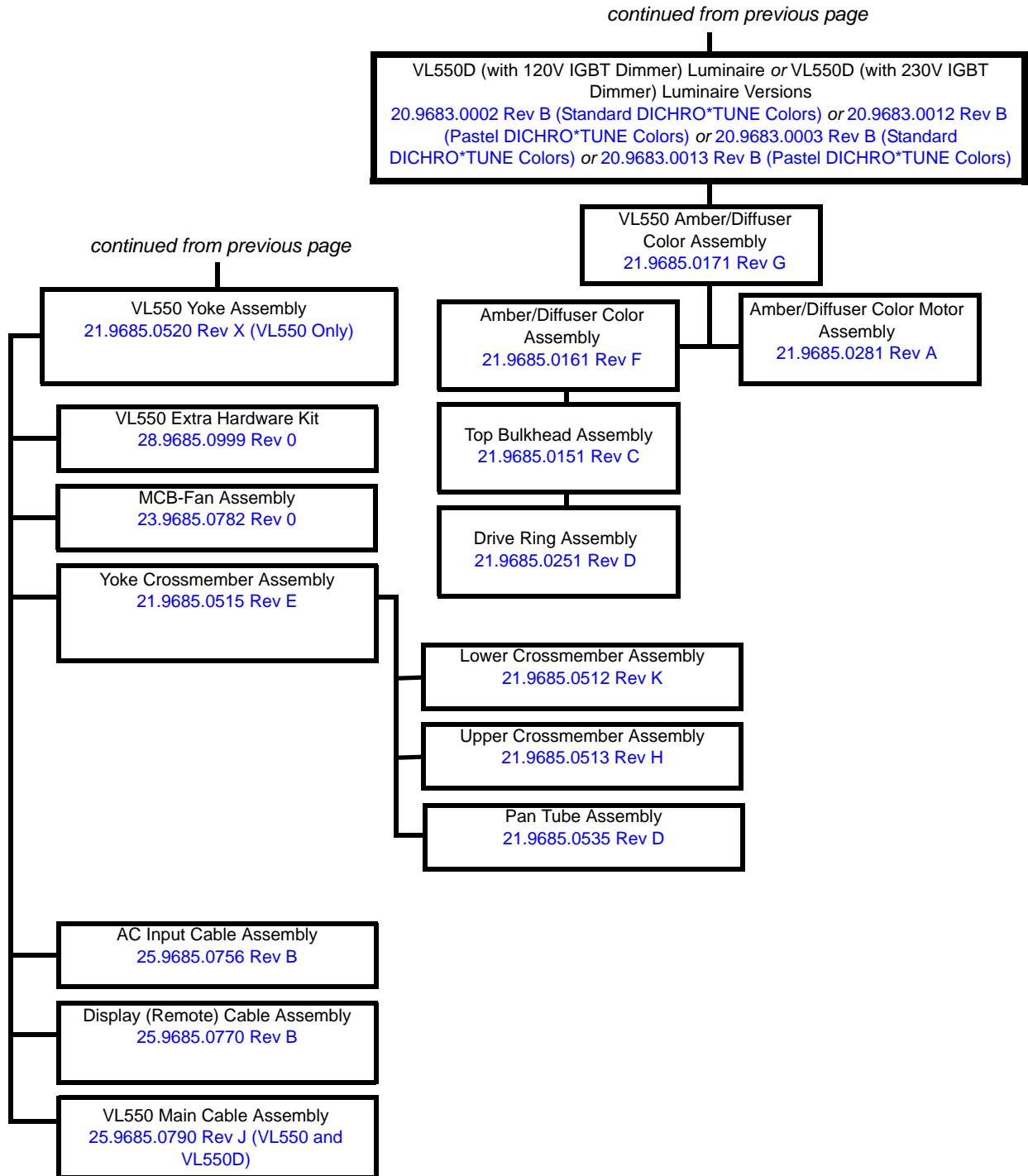


Figure 3-4: VL550D Incandescent Luminares Drawing Tree (Part 2)

Top Assembly

Included Items Kit

- 28.9683.0001 Rev B (VL550, 120V or 230V, Standard Colors, No Dimmer)
- 28.9683.0011 Rev B (VL550, 120V or 230V, Pastel Colors, No Dimmer)
- 28.9683.0002 Rev B (VL550D, Standard Colors, On-Board 120V IGBT Dimmer)
- 28.9683.0012 Rev B (VL550D, Pastel Colors, On-Board 120V IGBT Dimmer)
- 28.9683.0003 Rev B (VL550D, Standard Colors, On-Board 230V IGBT Dimmer)
- 28.9683.0013 Rev B (VL550D, Pastel Colors, On-Board 230V IGBT Dimmer)

Refer to [Figure 3-5](#).

No.	Item	Qty.	UM.	Description
1	02.8001.0001	1	EA	PRODUCT SUPPORT SHEET, VARI-LITE CUSTOMER SERVICE
2	02.8001.0002	1	EA	QA CERTIFICATE, VARI-LITE
3	02.8052.0001	1	EA	CARD, LIMITED WARRANTY
4	02.8700.0001	1	EA	CARD, PRODUCT REGISTRATION
5	02.9683.0002	1	EA	UNPACK/QUICK START SHEET, VL550
6	07.9685.1005	1	EA	SHIPPING BOX, CARDBOARD - VL500
7	08.9683.0001	1	EA	CD ROM, VL550 PRODUCT, DOCUMENTATION
8	52.6541.0001	1	EA	CONN, BLUE CABLE PWR INLET 3-POLE LOCKING - POWERCON
9	71.2526.0230	1	EA	230V/1000W TUNGSTEN HALOGEN LAMP, (VL550D, 230V ONLY)
	71.2529.0120	1	EA	120V/1200W TUNGSTEN HALOGEN LAMP, (VL550D, 120V ONLY)

Note: VL550 wash luminaires (without on-board dimmer), lamp type is specified by customer at time of ordering the fixture (either 120V or 230V lamp).

Included Items Kit (continued)

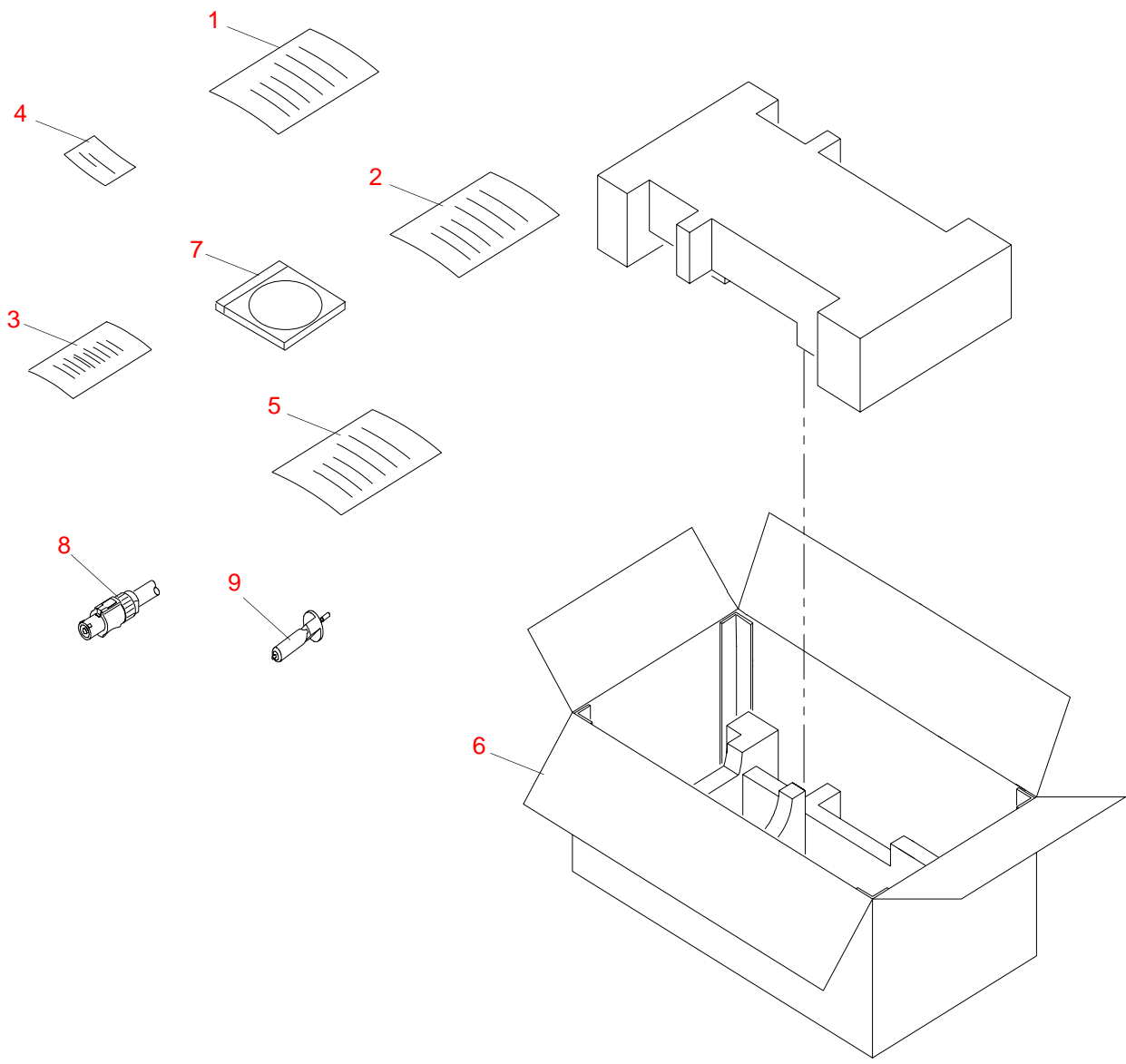


Figure 3-5: Included Items Kit

VL550 (120V or 230V) Luminaire

20.9683.0001 Rev B (Standard DICHRO*TUNE Colors)
 20.9683.0011 Rev B (Pastel DICHRO*TUNE Colors)

Refer to [Figure 3-6](#)

No.	Item	Qty.	UM.	Description
1	04.9683.0573	1	EA	LABEL, MCB YOKE COVER VL550
2	04.9685.0574	1	EA	LABEL, MCB YOKE COVER
3	04.9685.0588	1	EA	LABEL, YOKE COVER, PLAIN, VL500
4	10.9685.0525	2	EA	LOUVER PLATE, TOP COVER
5	10.9685.0580	1	EA	YOKE ARM COVER, DISPLAY SIDE
6	10.9685.0584	1	EA	YOKE ARM COVER, POWER SUPPLY SIDE
7	21.9685.0010	1	EA	ASSY, GENERIC VL500, INCANDESCENT
8	21.9685.0170	1	EA	ASSY, COLOR, MAGENTA / BLUE, STANDARD (20.9683.0001 ONLY)
	21.9685.0174	1	EA	ASSY, COLOR, MAGENTA / BLUE, PASTEL (20.9683.0011 ONLY)
9	21.9685.0171	1	EA	ASSY, COLOR, AMBER / DIFFUSION
10	22.9685.0086	1	EA	HEAD COVER, TOP
11	22.9685.0087	1	EA	HEAD COVER, BOTTOM
-	25.9685.0753	1	EA	CABLE ASSY, VL550 MOTOR (NOT SHOWN)
-	25.9685.0760	1	EA	CABLE ASSY, HEAD GROUNDING (NOT SHOWN)
-	28.9683.0001	1	EA	INCLUDED ITEMS KIT, VL550 INCANDESCENT - STANDARD ONLY (NOT SHOWN)
-	28.9683.0011	1	EA	INCLUDED ITEMS KIT, VL550 INCANDESCENT - PASTEL ONLY (NOT SHOWN)
12	42.9685.0207	1	EA	LENS, PAR 64 NSP (STIPPLE)
13	53.6523.0013	8	EA	SCREW, 6-32 X 3/8" LG PTB
14	53.6558.0009	8	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS
15	53.6558.0010	8	EA	SCREW, 6-32 X 1/4" PPB SEMS
16	53.6608.0001	8	EA	SCREW, 6-32 X 3/8" PFB

VL550 (120V or 230V) Luminaire (continued)

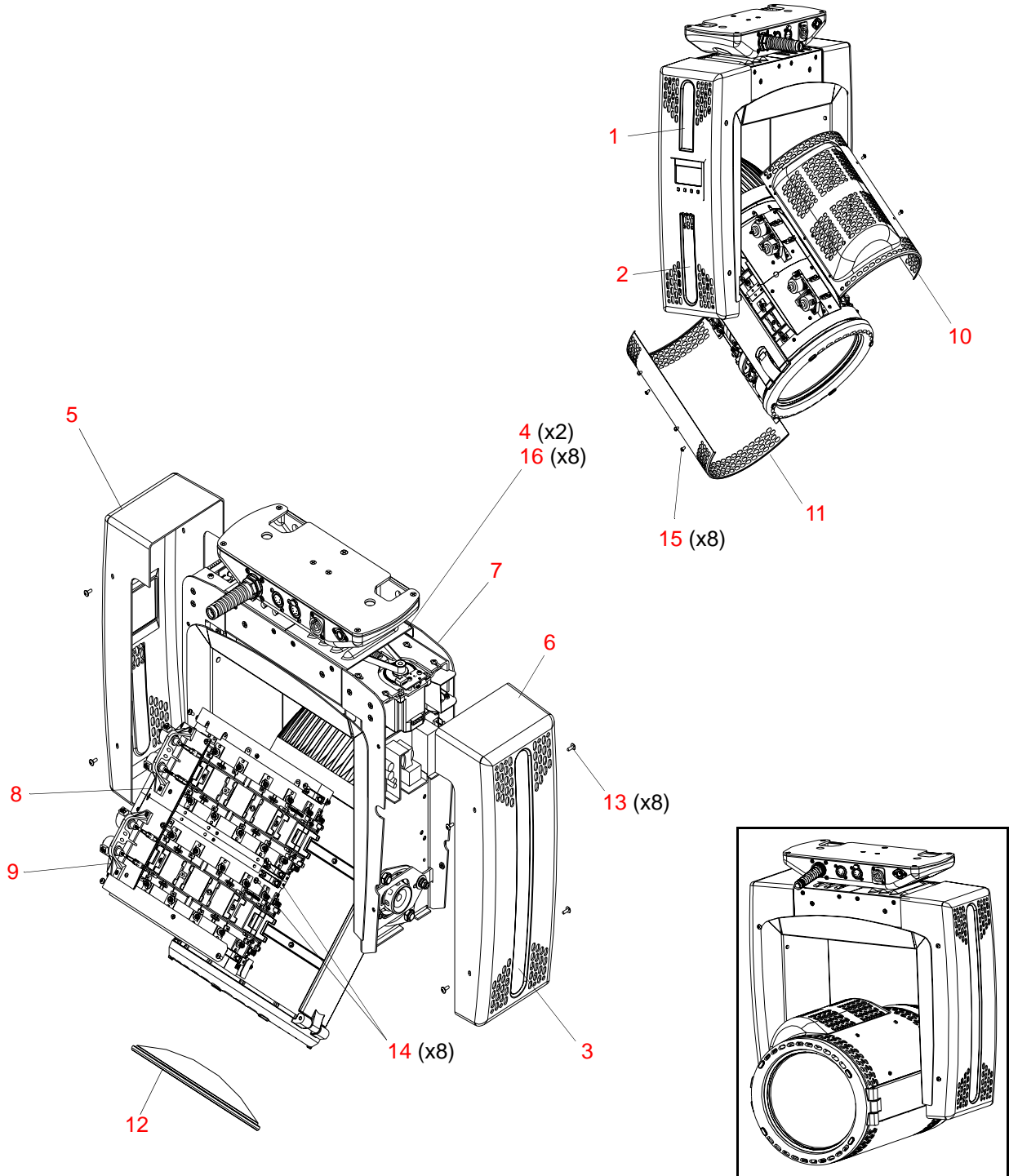


Figure 3-6: VL550 (120V or 230V) Luminaire

VL550D (with 120V IGBT Dimmer) Luminaire

20.9683.0002 Rev B (Standard DICHRO*TUNE Colors)
 20.9683.0012 Rev B (Pastel DICHRO*TUNE Colors)

Refer to [Figure 3-7](#)

No.	Item	Qty.	UM.	Description
1	04.9685.0573	1	EA	LABEL, MCB YOKE COVER
2	04.9685.0574	1	EA	LABEL, MCB YOKE COVER
3	04.9685.0576	1	EA	LABEL, YOKE COVER, DIMMER
4	04.9685.0577	1	EA	LABEL, YOKE COVER, DIMMER
5	10.9685.0525	2	EA	LOUVER PLATE, TOP COVER
6	10.9685.0565	2	EA	MOUNT, DIMMER
7	10.9685.0580	1	EA	YOKE ARM COVER, DISPLAY SIDE
8	10.9685.0582	1	EA	YOKE ARM COVER, DIMMER SIDE
9	21.9685.0011	1	EA	ASSY, GENERIC VL500, INCANDESCENT W/ DIMMER
10	21.9685.0170	1	EA	ASSY, COLOR, MAGENTA / BLUE, STANDARD (20.9683.0002 ONLY)
	21.9685.0174	1	EA	ASSY, COLOR, MAGENTA / BLUE, PASTEL (20.9683.0012 ONLY)
11	21.9685.0171	1	EA	ASSY, COLOR, AMBER / DIFFUSION
12	22.9685.0086	1	EA	HEAD COVER, TOP
13	22.9685.0087	1	EA	HEAD COVER, BOTTOM
-	25.9685.0753	1	EA	CABLE ASSY, VL550 MOTOR (NOT SHOWN)
-	25.9685.0760	1	EA	CABLE ASSY, HEAD GROUNDING (NOT SHOWN)
-	28.9683.0002	1	EA	INCLUDED ITEMS KIT, VL550 INCANDESCENT - VL550D 120V STANDARD ONLY (NOT SHOWN)
	28.9683.0012	1	EA	INCLUDED ITEMS KIT, VL550 INCANDESCENT - VL550D 120V PASTEL ONLY (NOT SHOWN)
14	42.9685.0207	1	EA	LENS, PAR 64 NSP (STIPPLE)
15	53.6523.0013	8	EA	SCREW, 6-32 X 3/8" LG PTB
16	53.6558.0001	8	EA	SCREW, 6-32 X 3/8" LG PPZ
17	53.6558.0009	8	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS
18	53.6558.0010	8	EA	SCREW, 6-32 X 1/4" PPB SEMS
19	53.6608.0001	8	EA	SCREW, 6-32 X 3/8" PFB
20	69.3173.0115	1	EA	DIMMER, 1200W 115V REV PHASE CONT

VL550D (with 120V IGBT Dimmer) Luminaire
(continued)

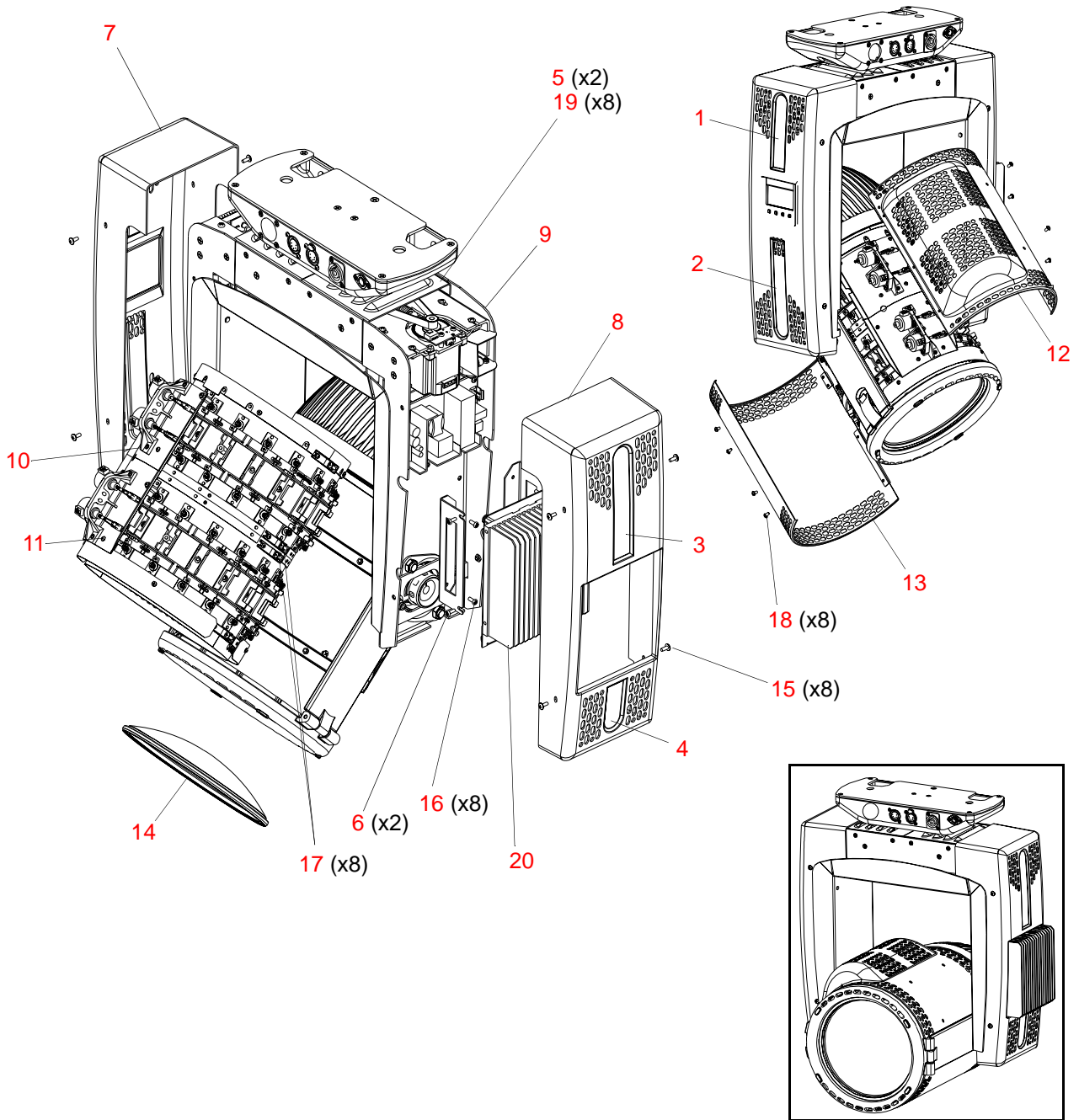


Figure 3-7: VL550D (with 120V IGBT Dimmer) Luminaire

VL550D (with 230V IGBT Dimmer) Luminaire

20.9683.0003 Rev B (Standard DICHRO*TUNE Colors)
 20.9683.0013 Rev B (Pastel DICHRO*TUNE Colors)

Refer to [Figure 3-8](#)

No.	Item	Qty.	UM.	Description
1	04.9683.0573	1	EA	LABEL, MCB YOKE COVER
2	04.9685.0574	1	EA	LABEL, MCB YOKE COVER
3	04.9685.0576	1	EA	LABEL, YOKE COVER, DIMMER
4	04.9685.0577	1	EA	LABEL, YOKE COVER, DIMMER
5	10.9685.0525	2	EA	LOUVER PLATE, TOP COVER
6	10.9685.0565	2	EA	MOUNT, DIMMER
7	10.9685.0580	1	EA	YOKE ARM COVER, DISPLAY SIDE
8	10.9685.0582	1	EA	YOKE ARM COVER, DIMMER SIDE
9	21.9685.0011	1	EA	ASSY, GENERIC VL500, INCANDESCENT W/ DIMMER
10	21.9685.0170	1	EA	ASSY, COLOR, MAGENTA / BLUE, STANDARD (20.9685.0003 ONLY)
	21.9685.0174	1	EA	ASSY, COLOR, MAGENTA / BLUE, PASTEL (20.9685.0013 ONLY)
11	21.9685.0171	1	EA	ASSY, COLOR, AMBER / DIFFUSION
12	22.9685.0086	1	EA	HEAD COVER, TOP
13	22.9685.0087	1	EA	HEAD COVER, BOTTOM
-	25.9685.0753	1	EA	CABLE ASSY, VL550 MOTOR (NOT SHOWN)
-	25.9685.0760	1	EA	CABLE ASSY, HEAD GROUNDING (NOT SHOWN)
-	28.9683.0003	1	EA	INCLUDED ITEMS KIT, VL550 INCANDESCENT - VL550D 230V STANDARD ONLY (NOT SHOWN)
-	28.9683.0013	1	EA	INCLUDED ITEMS KIT, VL550 INCANDESCENT - VL550D 230V PASTEL ONLY (NOT SHOWN)
14	42.9685.0207	1	EA	LENS, PAR 64 NSP (STIPPLE)
15	53.6523.0013	8	EA	SCREW, 6-32 X 3/8" LG PTB
16	53.6558.0001	8	EA	SCREW, 6-32 X 3/8" LG PPZ
17	53.6558.0009	8	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS
18	53.6558.0010	4	EA	SCREW, 6-32 X 1/4" PPB SEMS
19	53.6608.0001	8	EA	SCREW, 6-32 X 3/8" PFB
20	69.3173.0240	1	EA	DIMMER, 1200W 230V REV PHASE CONT

VL550D (with 230V IGBT Dimmer) Luminaire
(continued)

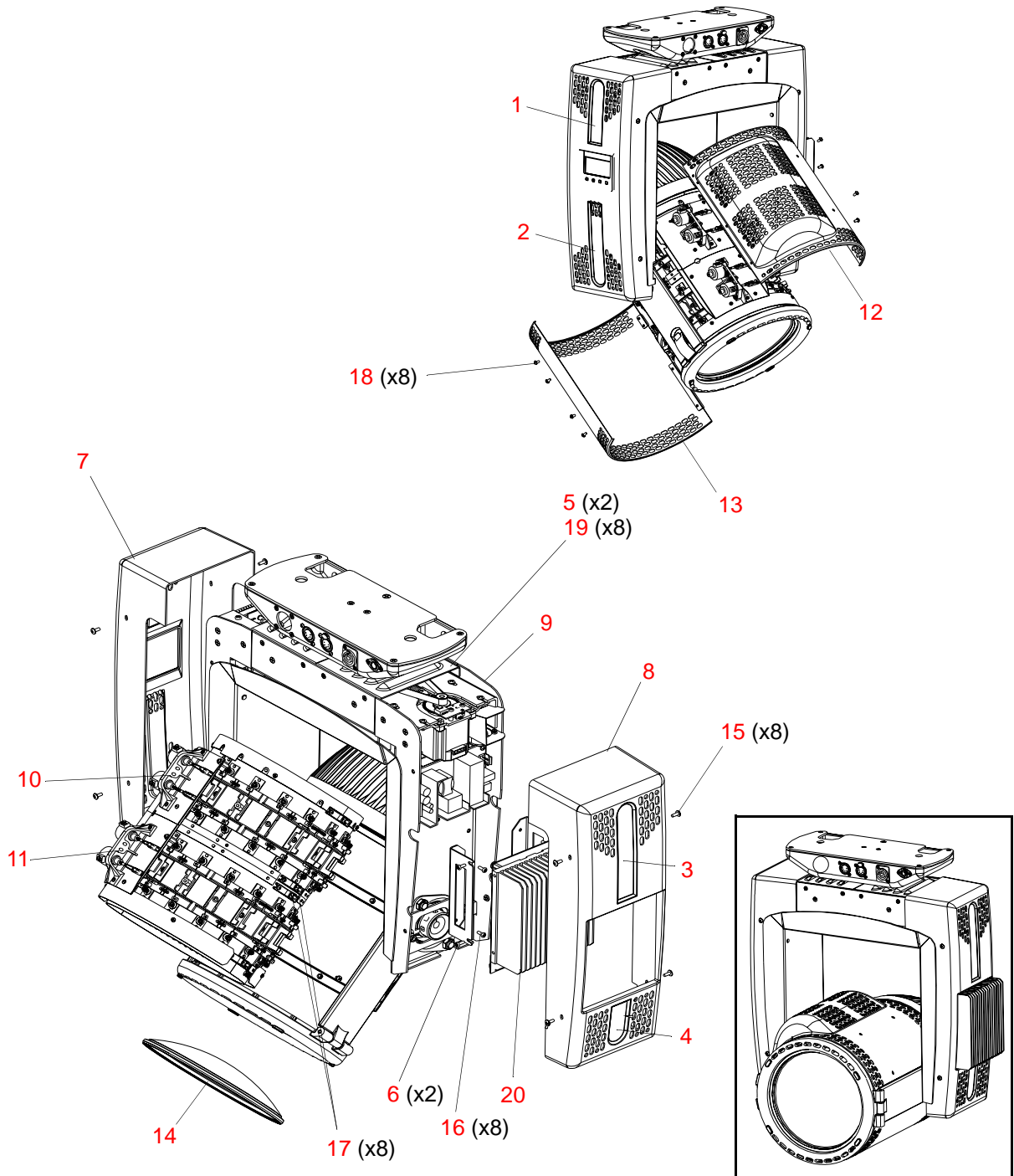


Figure 3-8: VL550D (with 230V IGBT Dimmer) Luminaire

Generic Luminaire Assembly

21.9685.0010 Rev T (Incandescent - without IGBT Internal Dimmer)
 21.9685.0011 Rev T (Incandescent - with Internal IGBT Dimmer)

Refer to [Figure 3-9](#)

No.	Item	Qty.	UM.	Description
1	10.9685.0521	1	EA	PULLEY, DRIVEN, PAN/TILT
2	10.9685.0542	1	EA	SHIELD, WIRE, LVS
3	10.9685.0555	1	EA	LENS, DISPLAY, VL500
4	10.9685.0556	1	EA	OVERLAY, DISPLAY, VL500
5	10.9685.0564	1	EA	PANEL, TILT, CLOSEOUT
6	10.9685.0566	1	EA	PLATE, TILT LOCK
7	10.9685.0567	1	EA	HEAT SHIELD, TILT SIDE
8	10.9685.0568	1	EA	HEAT SHIELD, DIMMER/POWER SUPPLY SIDE
9	10.9685.1569	1	EA	HEAT SHIELD, CROSSMEMBER
10	10.9685.0570	1	EA	SPACER, TILT TUBE
11	10.9685.0571	2	EA	PLUG, TILT TUBE
12	10.9685.0575	1	EA	COUNTERWEIGHT, VL500 (VL550D ONLY)
13	21.9685.0310	1	EA	ASSY, GENERIC VL500, INCANDESCENT
14	21.9685.0520	1	EA	ASSY, YOKE, BASE, INCANDESCENT (VL550 ONLY)
	21.9685.0521	1	EA	ASSY, YOKE, BASE, INTERNAL IGBT DIMMER (VL550D ONLY)
15	21.9685.0731	1	EA	ASSY, MCB / FAN
16	24.9685.4826	1	EA	ASSY, VL500 DISPLAY BOARD
-	25.9685.0776	2	EA	YOKE LAMP JUMPER WIRES (VL550 ONLY) (NOT SHOWN)
17	53.2001.0003	8	EA	NUT, 10-32 HEX NYLON INSERT
18	53.2019.0004	8	EA	NUT, 3/8-16X7/32" THK HEX JAM G
19	53.6539.0001	2	EA	WASHER, 3/8" SPLIT LOCK
20	53.6558.0009	11	EA	SCREW, 6-32 X 3/8", PPZ, SEMS (VL550 ONLY)
	53.6558.0009	10	EA	SCREW, 6-32 X 3/8", PPZ, SEMS (VL550D ONLY)
21	53.6558.0010	4	EA	SCREW, 6-32 X 1/4", PPB, SEMS
22	53.6608.0001	4	EA	SCREW, 6-32 X 3/8", PFB
23	53.6634.0003	4	EA	SCREW, 3/8-16 X 1/2" SOC HD CAP
24	53.6634.1000	2	EA	SCREW, 3/8-16 X 1.00" SOC HD CAP
25	54.1206.0021	1	EA	RING, RETAINING, 1.562" SHAFT
26	54.1255.0002	2	EA	ASSY, BEARING/HOUSING
27	54.1261.0001	2	EA	BUSHING, LOW DAMP THRMOPLS.189

No.	Item	Qty.	UM.	Description
28	54.2066.0001	1	EA	BELT, TIMING, S2M, 396 GRV, 9MM WIDE
-	55.2178.0001	1	EA	CABLE SADDLE, #6 MOUNTING HOLE (VL550 ONLY - NOT SHOWN)
29	55.2287.0001	4	EA	STANDOFF, MF 6-32 X 9/32" LG, 1/4" HEX
30	55.2288.0001	4	EA	STANDOFF, MF 6-32 X 13/16" LG, 1/4" HEX
31	55.3301.0010	2	EA	WASHER, #10 FLAT
32	55.6677.0041	2	EA	WASHER, 0.750" OD, 0.203" ID, 0.04" THK
33	69.3178.0121	1	EA	POWER SUPPLY, 120W +24V 3X5

Generic Luminaire Assembly (continued)

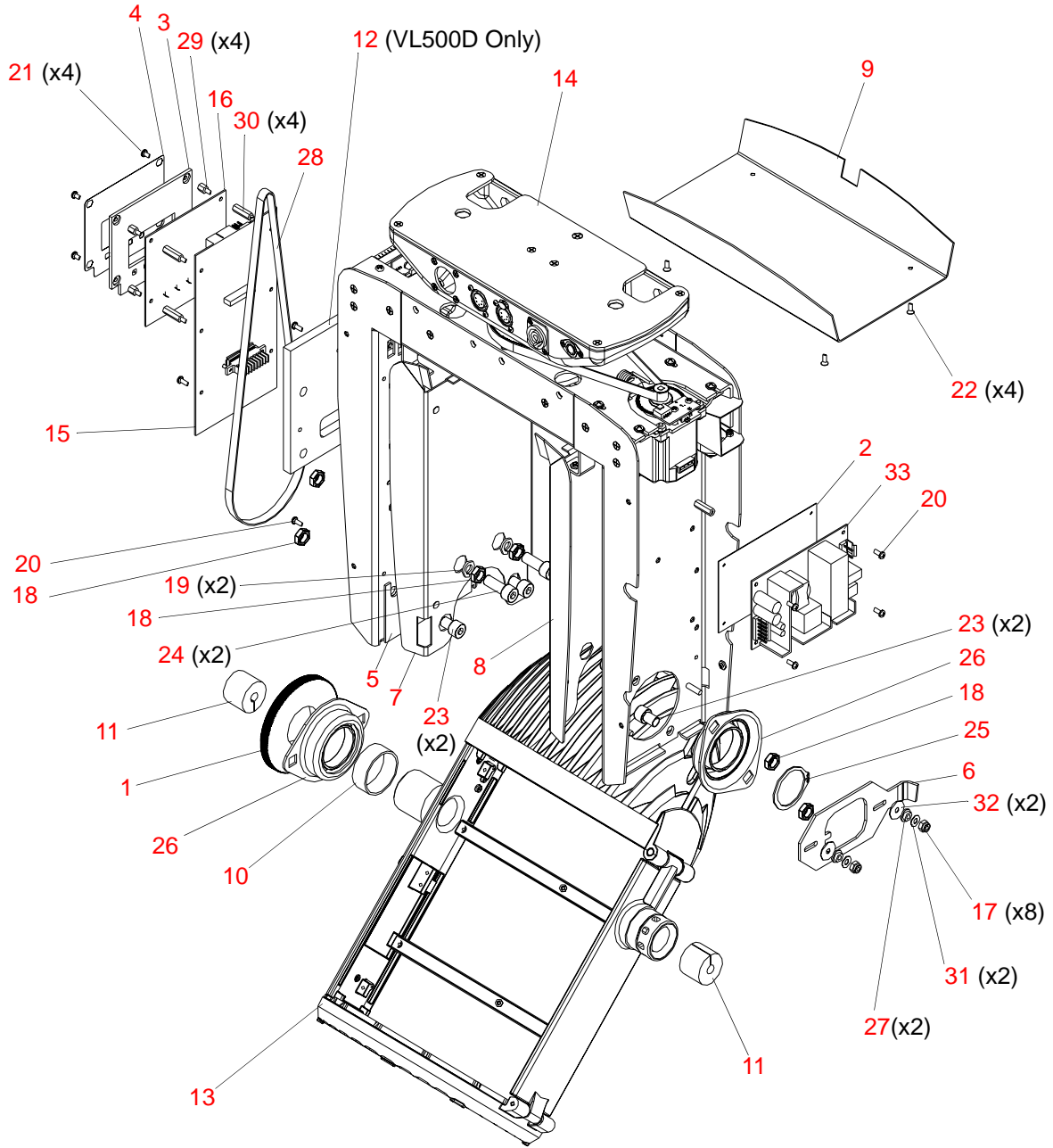


Figure 3-9: Generic Luminaire Assembly

Head Assembly

VL550 Generic Head Assembly

21.9685.0310 Rev K

Refer to [Figure 3-10](#).

No.	Item	Qty.	UM.	Description
1	10.9634.0162	1	EA	GASKET, LENS, FRONT CASTING
2	10.9685.0340	2	EA	SUPPORT, RIB
3	10.9685.0344	1	EA	COVER, LAMP WIRE
4	12.9685.1331	1	EA	SIDE RAIL, HINGE, MACHINED CASTING
5	12.9685.0333	1	EA	SIDE RAIL, LATCH, MACHINED CASTING
6	12.9685.0388	1	EA	FRONT RING, VL500
7	21.9685.0315	1	EA	ASSY, COUNTERWEIGHT SUPPORT
8	21.9685.0320	1	EA	ASSY, HEATSINK, INCANDESCENT
9	53.6556.0004	6	EA	SCREW, 4-40 X 1/8" LG PPB
10	53.6598.0187	4	EA	SCREW, 4-40 X 0.187" LG PFB UNDERCUT HD
11	53.6607.0001	4	EA	SCREW, 6-32 X 1/4" LG PPB
12	54.1226.0001	1	EA	LATCH ASSEMBLY
13	54.1226.0002	1	EA	STRIKE, LATCH
14	55.3500.0002	1	EA	WASHER, #10 FIBRE FLAT 0.196" ID
15	55.3500.0003	1	EA	WASHER, 3/8" FIBRE FLAT 0.385" ID
16	55.6612.0005	1	EA	PIN, FRONT CASTING PIVOT
17	55.6612.0009	1	EA	PIN, REAR CASTING PIVOT

VL550 Generic Head Assembly (continued)

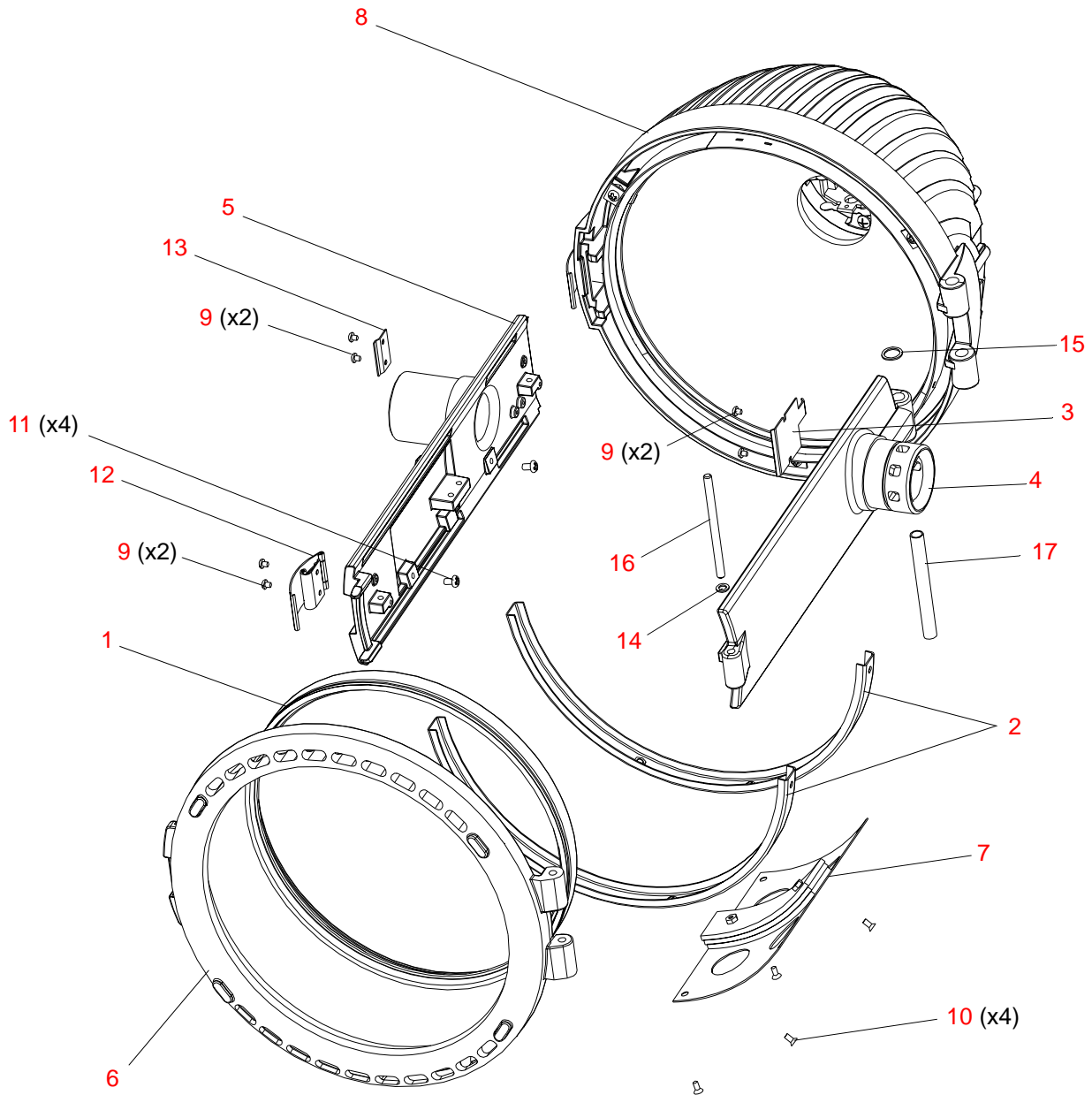


Figure 3-10: VL550 Generic Head Assembly

Heatsink Assembly

21.9685.0320 Rev J

Refer to [Figure 3-11](#).

No.	Item	Qty.	UM.	Description
1	10.9634.0103	3	EA	PAD, REFLECTOR MOUNT
2	10.9685.0343	3	EA	CLIP, REFLECTOR
3	10.9685.0360	1	EA	FOAM, HEATSINK LIGHT LEAK
4	12.9685.0335	1	EA	HEATSINK, MACHINED CASTING
5	12.9685.0337	1	EA	BACKCAP, INCANDESCENT, MACHINED CASTING
6	22.9685.0215	1	EA	LIGHT BAFFLE, REFLECTOR
7	23.9685.0780	1	EA	ASSY, VL500 LAMP SOCKET, HIGH TEMP
-	25.9685.0777	1	EA	CABLE ASSY, BACKCAP GROUND (NOT SHOWN)
8	42.9685.7190	1	EA	REFLECTOR, PARABOLIC, VL500, PARABOLIC, SMOOTH
9	53.6543.0002	3	EA	SCREW, 6-32 X 1/8" LG PPB
10	53.6558.0007	2	EA	SCREW, 6-32 X 1/4" LG PPZ SEM
11	53.6575.0010	4	EA	SCREW, 8-32 X 1/2" LG PPZ SEM
12	54.1226.0001	1	EA	ASSY, LATCH
13	55.2203.0002	2	EA	SCREW, 4-40 X 1/4" LG PPB
14	55.2132.0013	3	EA	STANDOFF, 1/4 HEX X 0.218" LG 6-32 MF

VL550 Heatsink Assembly (continued)

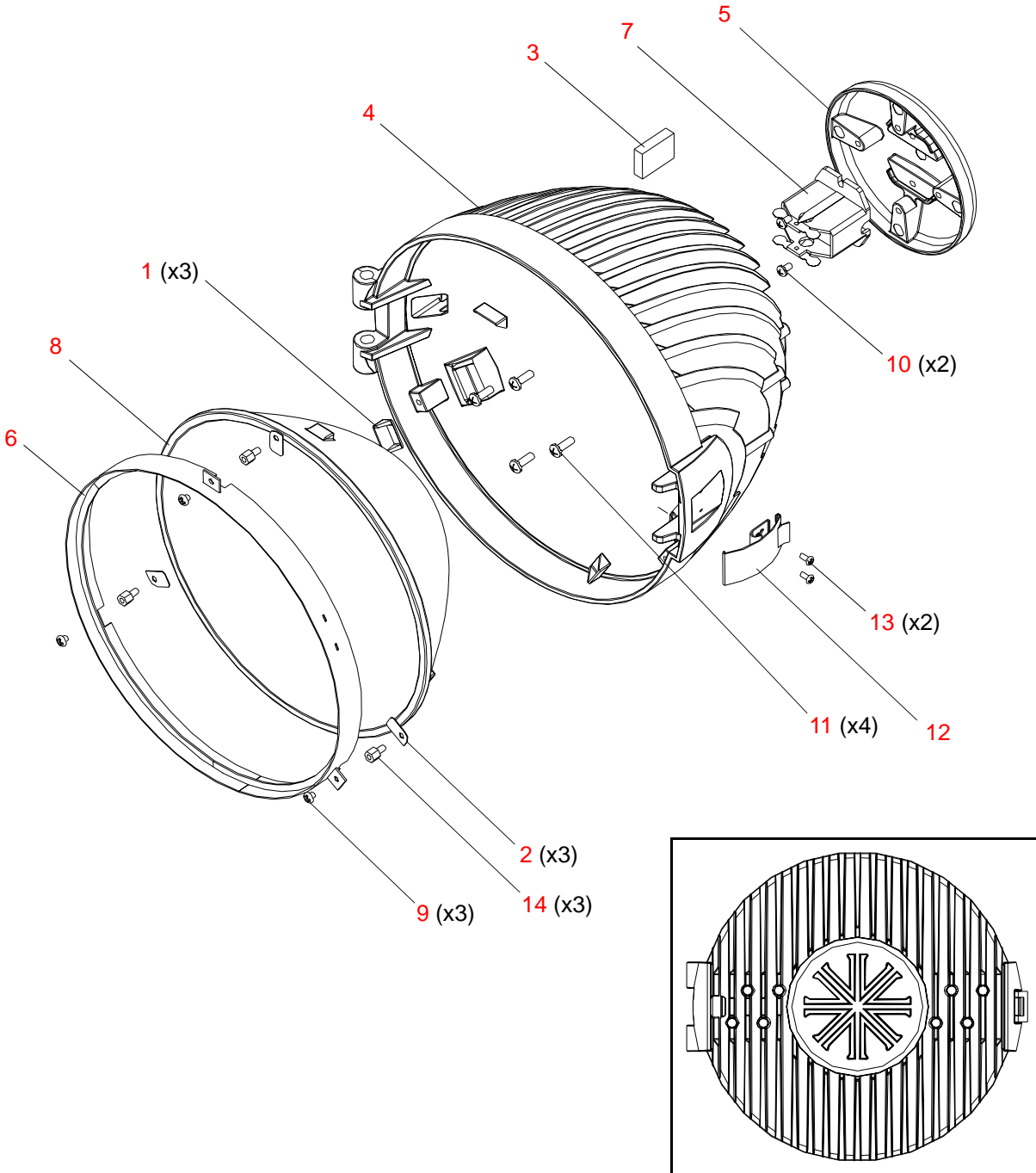


Figure 3-11: VL550 Heatsink Assembly

VL550 Magenta/Blue (Standard) Color Assembly

21.9685.0170 Rev H (Standard DICHRO*TUNE Colors)

Refer to [Figure 3-12](#).

No.	Item	Qty.	UM.	Description
1	10.9685.0257	2	EA	LIGHT BAFFLE, REAR BULKHEAD
2	21.9685.0160	1	EA	ASSY, MAGENTA/BLUE, STANDARD, DICHRO*TUNE
3	21.9685.0280	1	EA	MOTOR ASSY, MAG/BLUE
4	53.6592.0250	8	EA	SCREW, 4-40 X 1/4" PPB SEMS
5	55.6704.0015	1	EA	STANDOFF, 5/16" HEX, 6-32 X 0.593" LG

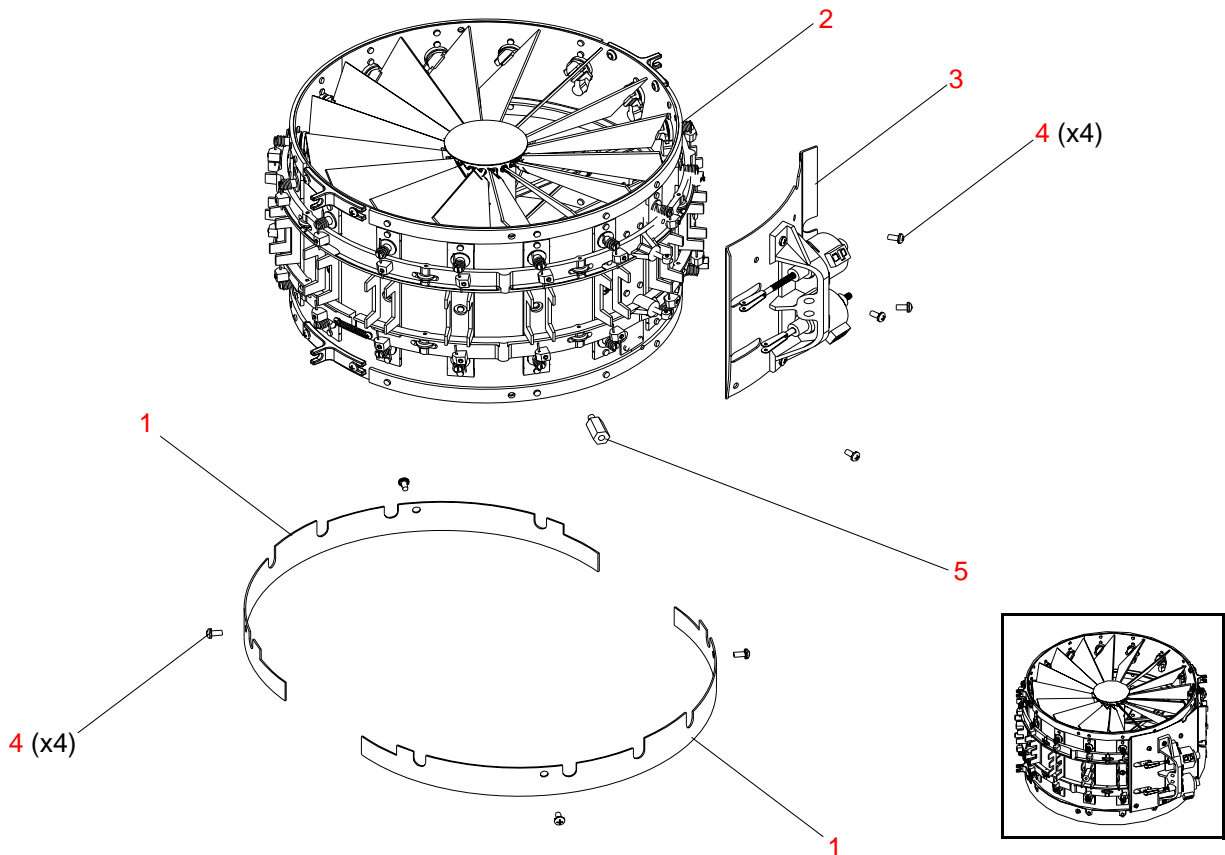


Figure 3-12: VL550 Magenta/Blue (Standard) Color Assembly

VL550 Magenta/Blue (Pastel) Color Assembly

21.9685.0174 Rev A (Pastel DICHRO*TUNE Colors)

Refer to [Figure 3-13](#).

No.	Item	Qty.	UM.	Description
1	10.9685.0257	2	EA	LIGHT BAFFLE, REAR BULKHEAD
2	21.9685.0164	1	EA	ASSY, MAGENTA/BLUE, PASTEL, DICHRO*TUNE
3	21.9685.0280	1	EA	MOTOR ASSY, MAG/BLUE
4	53.6592.0250	8	EA	SCREW, 4-40 X 1/4" PPB SEMS
5	55.6704.0015	1	EA	STANDOFF, 5/16" HEX, 6-32 X 0.593" LG

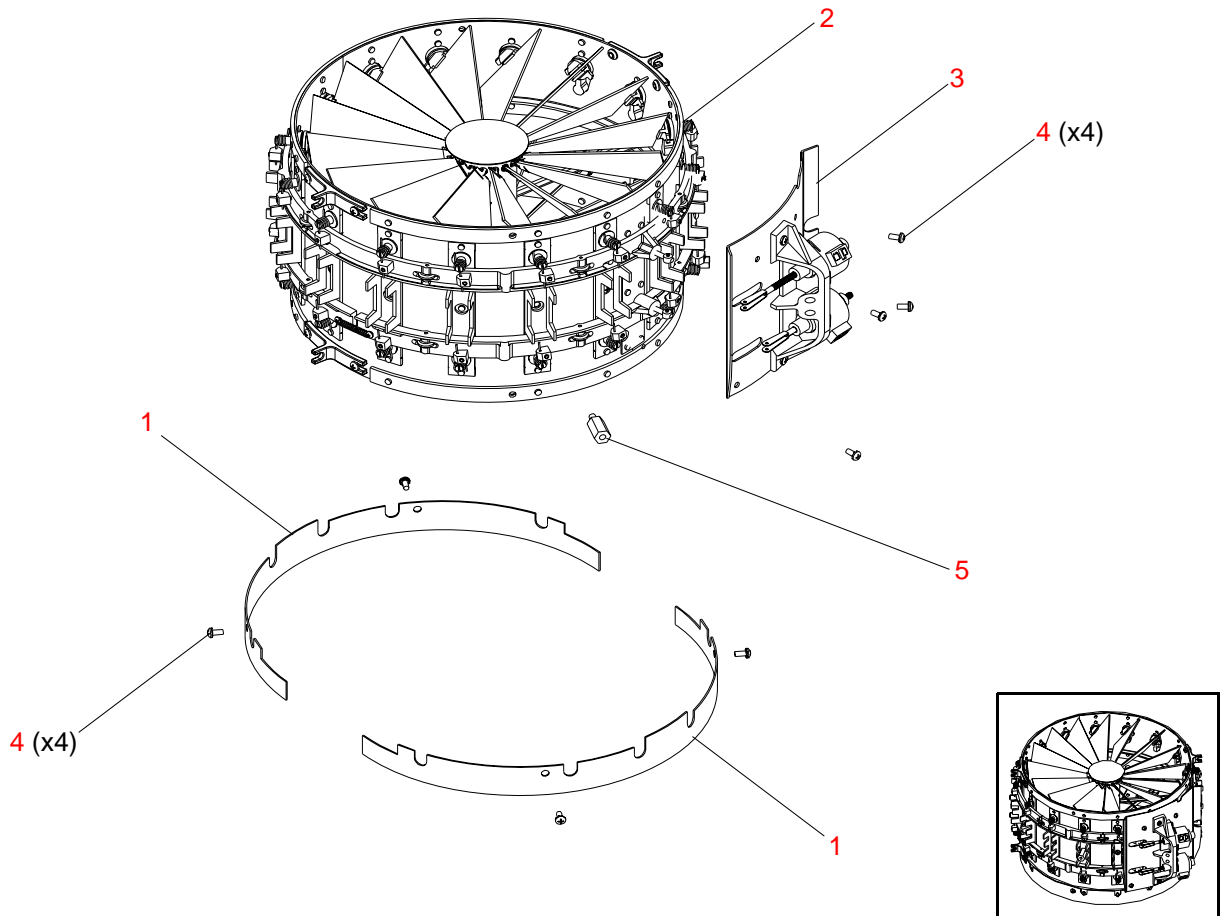


Figure 3-13: VL550 Magenta/Blue (Pastel) Color Assembly

VL550 Amber/Diffuser Color Assembly

21.9685.0171 Rev G

Refer to [Figure 3-14](#).

No.	Item	Qty.	UM.	Description
1	10.9685.0245	2	EA	LIGHT BAFFLE, TOP
2	21.9685.0161	1	EA	ASSY, AMBER/DIFFUSER, DICHRO*TUNE
3	21.9685.0281	1	EA	MOTOR ASSY, AMBER/DIFFUSER
4	53.6592.0250	8	EA	SCREW, 4-40 X 1/4" PPB SEMS
5	55.6704.0015	1	EA	STANDOFF, 5/16" HEX, 6-32 X 0.593" LG

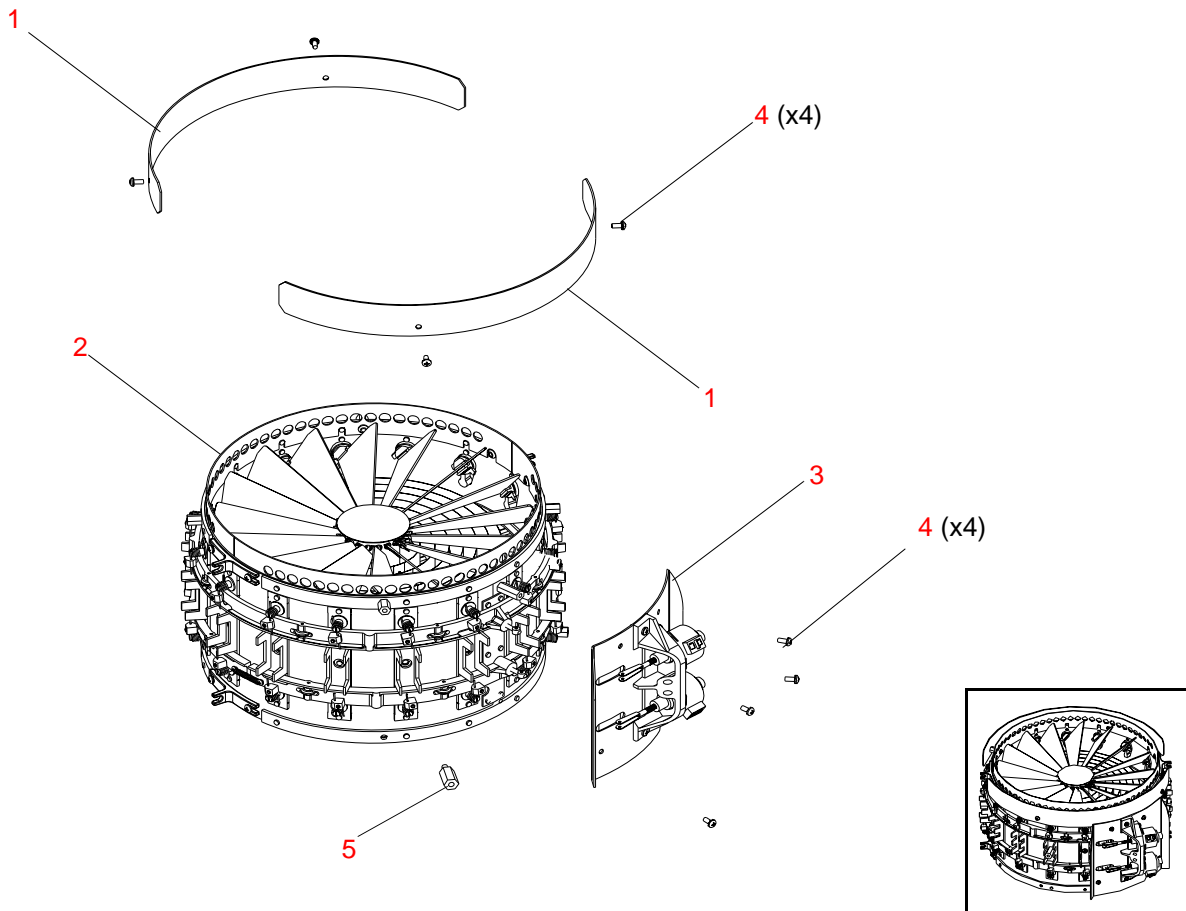


Figure 3-14: VL550 Amber/Diffuser Color Assembly

Magenta/Blue Color Assembly

21.9685.0160 Rev E (Standard DICHRO*TUNE Colors)

Refer to [Figure 3-15](#).

No.	Item	Qty.	UM.	Description
1	10.9634.0034	32	EA	SPRING, DRIVE ARM, FILTER
2	10.9634.0035	32	EA	LINK, DRIVE ARM
3	10.9634.0166	32	EA	CARRIER, FILTER, METAL INJ MOLD
4	21.9685.0150	1	EA	ASSY, BOTTOM BULKHEAD
5	22.9685.0122	16	EA	ASSY, FILTER, MAGENTA, DICHRO*TUNE
6	22.9685.0123	16	EA	ASSY, FILTER, BLUE, DICHRO*TUNE

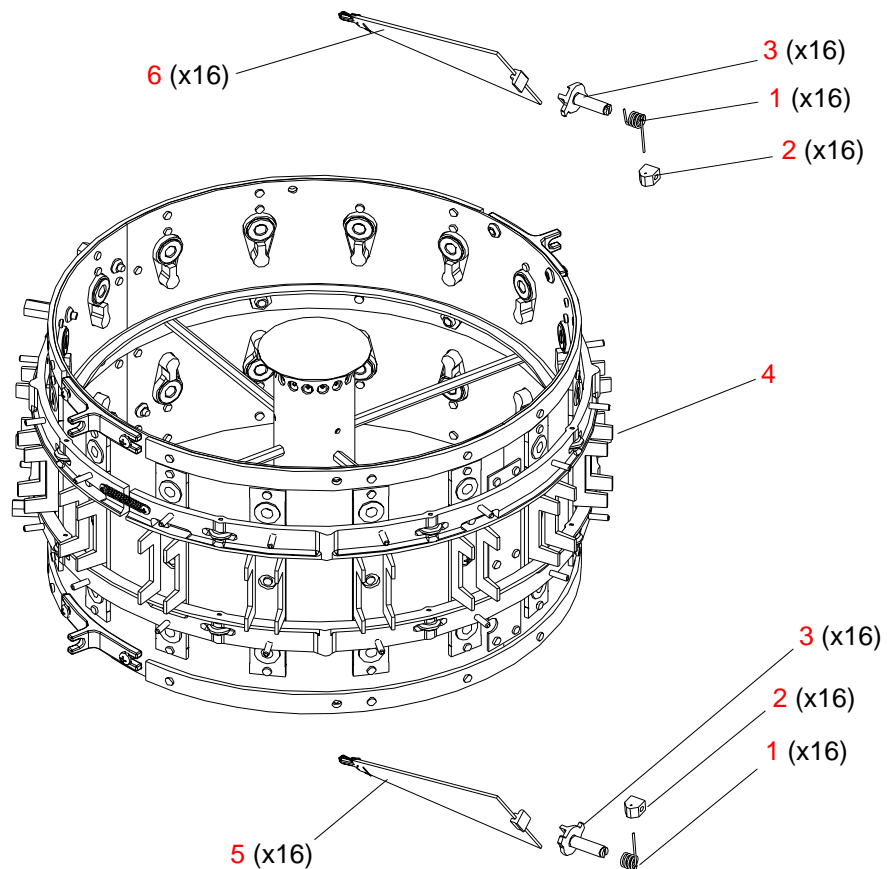


Figure 3-15: Magenta/Blue Color Assembly

Magenta/Blue (Pastel) Color Assembly

21.9685.0164 Rev 0 (Pastel DICHR0*TUNE Colors)

Refer to [Figure 3-16](#).

No.	Item	Qty.	UM.	Description
1	10.9634.0034	32	EA	SPRING, DRIVE ARM, FILTER
2	10.9634.0035	32	EA	LINK, DRIVE ARM
3	10.9634.0166	32	EA	CARRIER, FILTER, METAL INJ MOLD
4	21.9685.0150	1	EA	ASSY, BOTTOM BULKHEAD
5	22.9685.0120	16	EA	ASSY, FILTER, MAGENTA, PASTEL, DICHR0*TUNE
6	22.9685.0121	16	EA	ASSY, FILTER, BLUE, PASTEL, DICHR0*TUNE

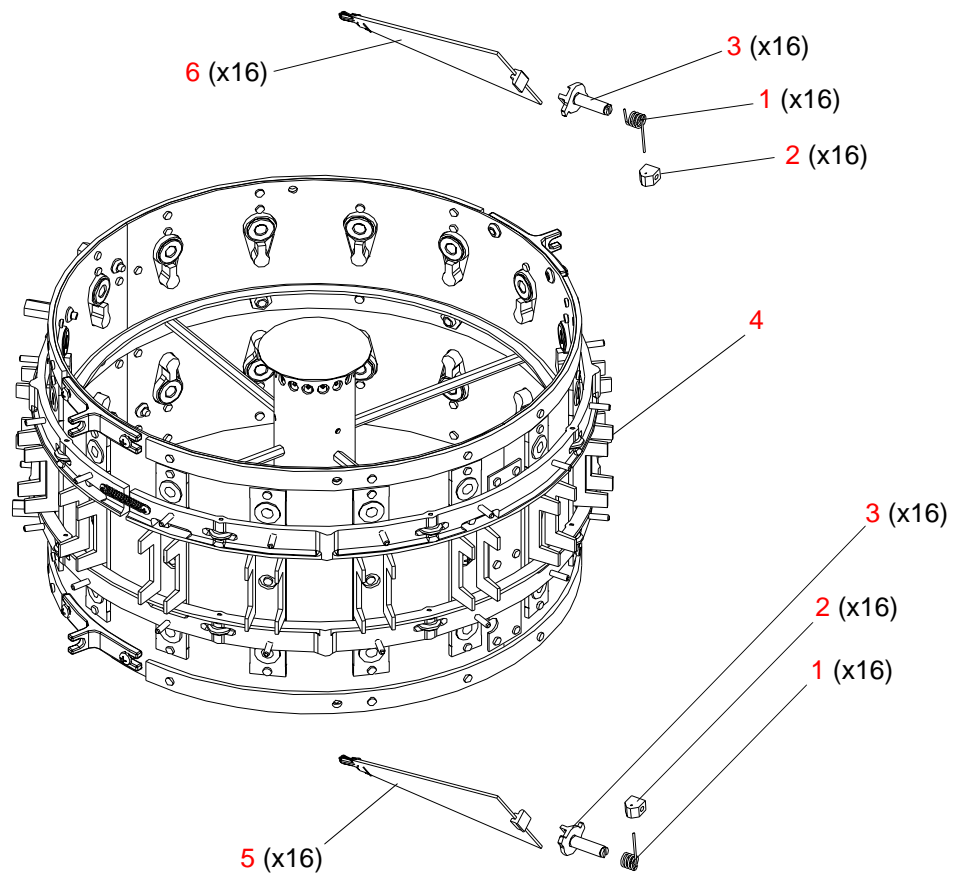


Figure 3-16: Magenta/Blue (Pastel) Color Assembly

Amber/Diffuser Color Assembly

21.9685.0161 Rev F

Refer to [Figure 3-17](#).

No.	Item	Qty.	UM.	Description
1	10.9634.0034	32	EA	SPRING, DRIVE ARM, FILTER
2	10.9634.0035	32	EA	LINK, DRIVE ARM
3	10.9634.0166	32	EA	CARRIER, FILTER, METAL INJ MOLD
4	21.9685.0151	1	EA	ASSY, BULKHEAD, TOP
5	22.9685.0124	16	EA	ASSY, FILTER, AMBER, DICHRO*TUNE
6	22.9685.0126	16	EA	ASSY, DIFFUSER PANEL

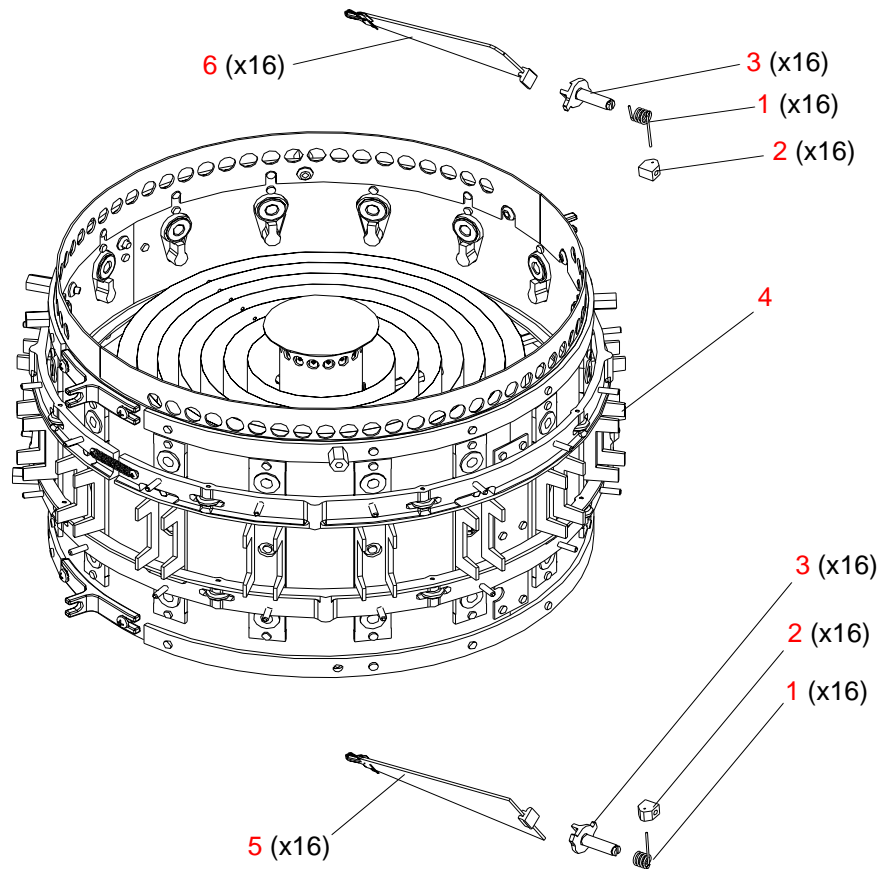


Figure 3-17: Amber/Diffuser Color Assembly

Bottom Bulkhead Assembly

21.9685.0150 Rev C

Refer to [Figure 3-18](#).

No.	Item	Qty.	UM.	Description
1	10.9661.0315	4	EA	SUPPORT, BULKHEAD
2	21.9685.0251	2	EA	ASSY, DRIVE RING
3	22.9634.0119	1	EA	ASSY, CENTER HUB
4	22.9685.0201	1	EA	ASSY, GENERIC BULKHEAD
5	53.6682.0002	12	EA	SCREW, 4-40 X 1/4" PPZ SEMS
6	55.6612.0008	10	EA	PIN, 1/8" OD X 3/8" LG AL DRIV-LOX
7	55.6669.0009	4	EA	STANDOFF, 1/4" HEX, #4-40 X 0.625" MF

Bottom Bulkhead Assembly (continued)

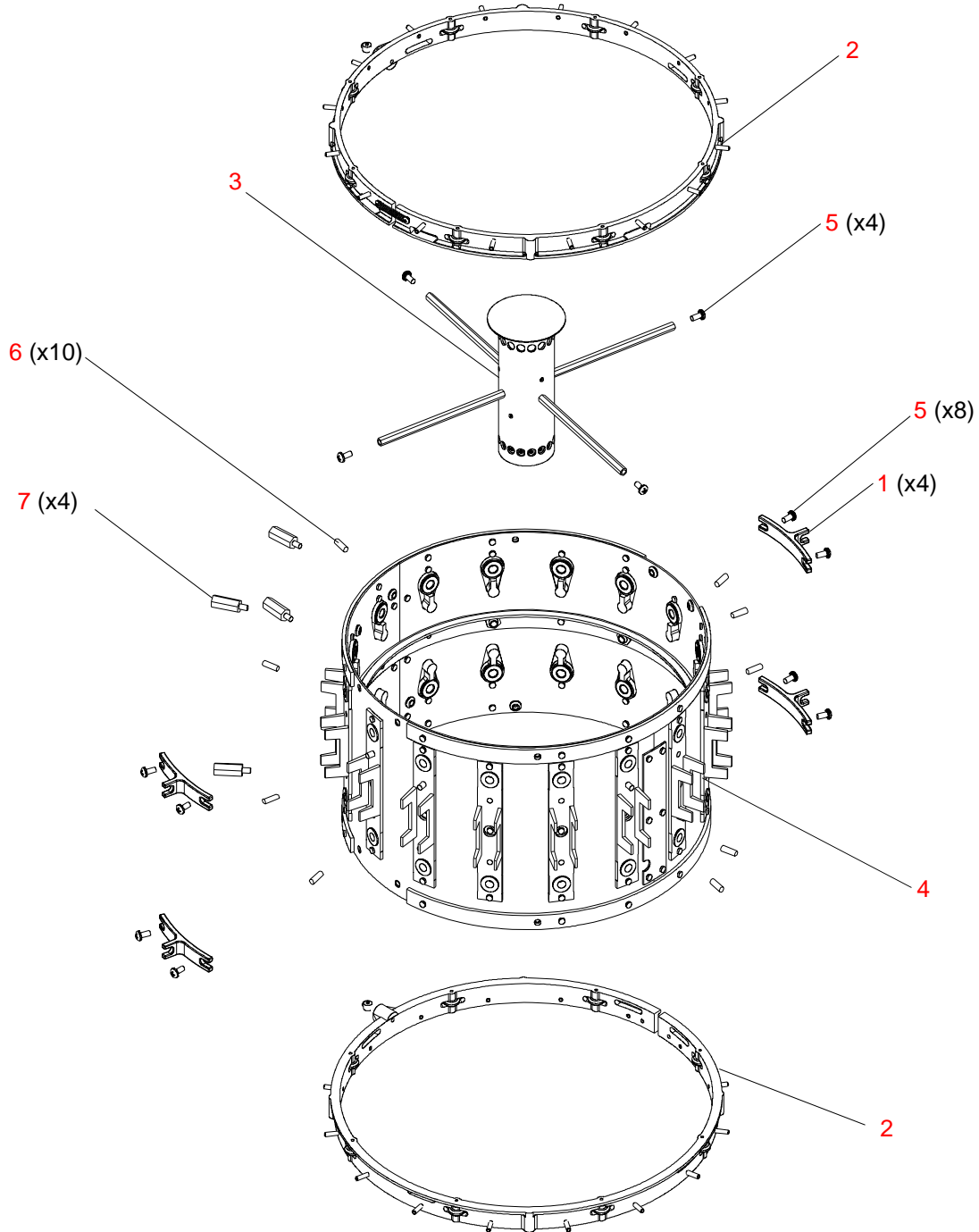


Figure 3-18: Bottom Bulkhead Assembly

Top Bulkhead Assembly

21.9685.0151 Rev C

Refer to [Figure 3-19](#).

No.	Item	Qty.	UM.	Description
1	10.9661.0315	4	EA	SUPPORT, BULKHEAD
2	10.9685.0219	2	EA	AUX RING, COLOR BULKHEAD
3	21.9685.0251	2	EA	ASSY, DRIVE RING
4	22.9634.0120	1	EA	ASSY, LIGHT BAFFLE
5	22.9685.0201	1	EA	ASSY, GENERIC BULKHEAD
6	53.6682.0002	12	EA	SCREW, 4-40 X 1/4" PPZ SEMS
7	55.6612.0008	10	EA	PIN, 1/8" OD X 3/8" LG AL DRIV-LOX
8	55.6669.0009	4	EA	STANDOFF, 1/4" HEX, #4-40 X 0.625" MF
9	55.6858.0002	4	EA	STANDOFF, 1/4" HEX, #4-40 X 0.343" MF

Top Bulkhead Assembly (continued)

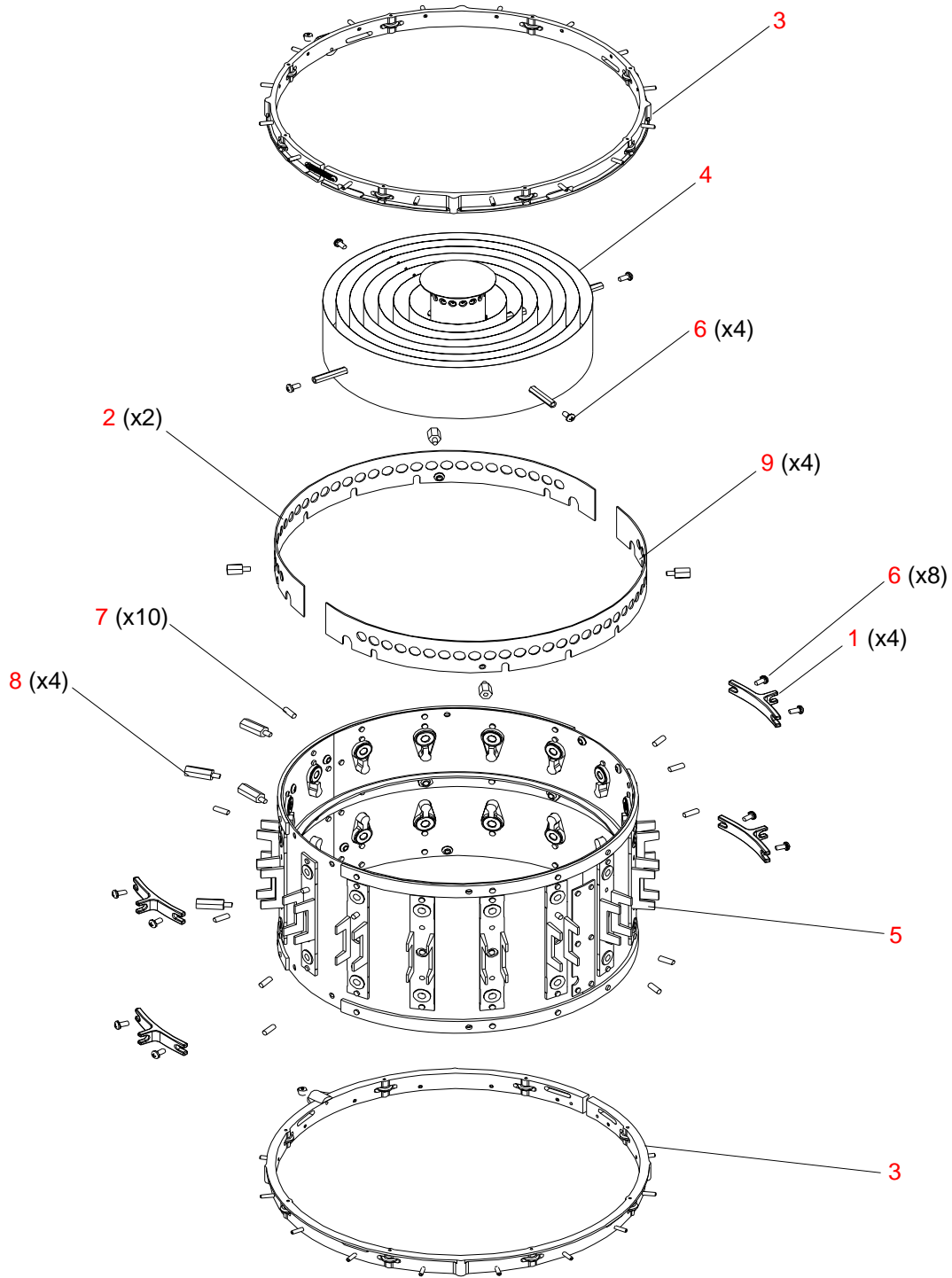


Figure 3-19: Top Bulkhead Assembly

Drive Ring Assembly

21.9685.0251 Rev D

Refer to [Figure 3-21](#).

No.	Item	Qty.	UM.	Description
1	10.9634.0105	1	EA	LINK, SWIVEL
2	10.9685.7240	8	EA	ROLLER, DRIVE RING
3	22.9685.0238	1	EA	RING, DRIVE, WITH PINS
4	53.5554.0875	1	EA	SCREW, 4-40 X 7/8" SET SS FLAT POINT
5	53.6659.0013	2	EA	SCREW, 2-56 X 1/8" PPB
6	55.6603.0001	1	EA	SPRING, SS 4.6#/IN EXTENSION
7	55.6612.0004	8	EA	PIN, 1/16" OD X 1/2" LG TYPE C 303 S/S

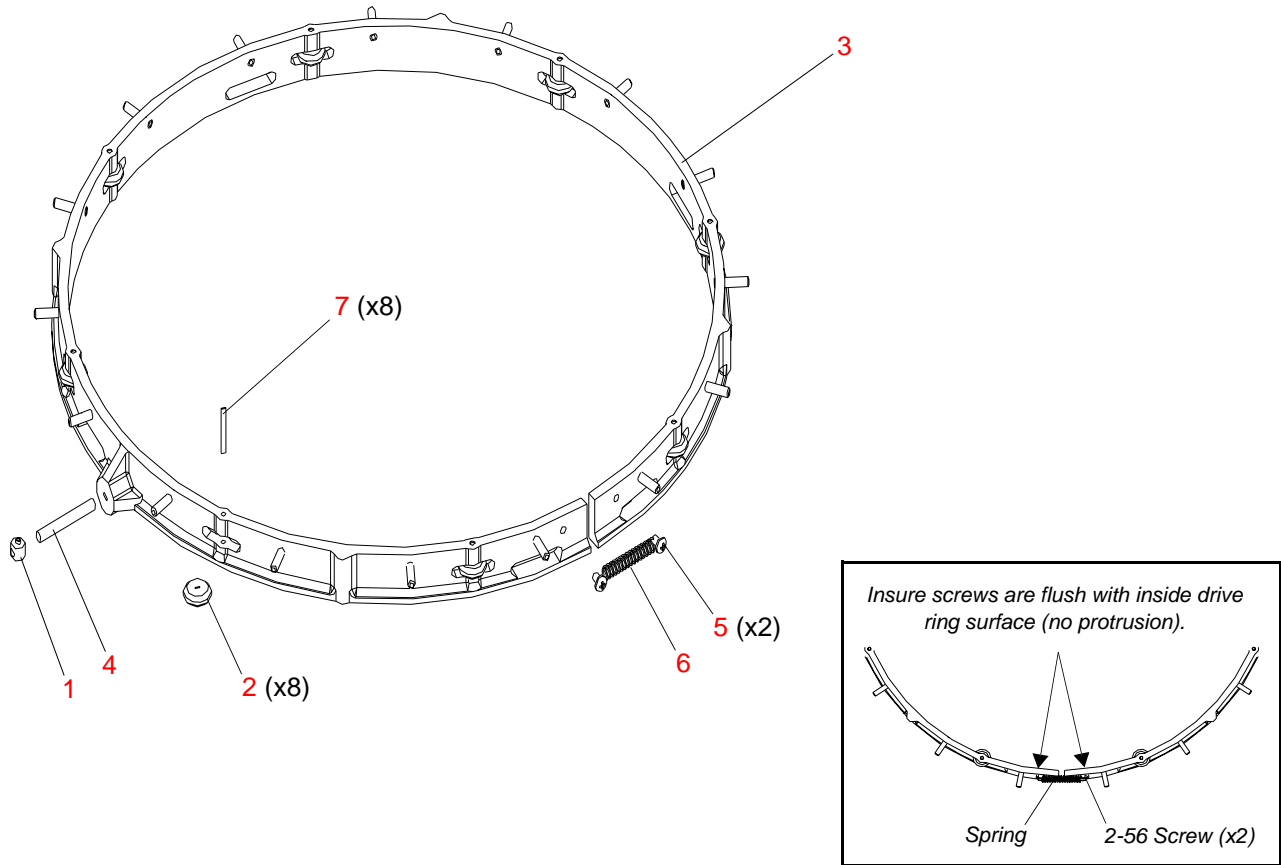


Figure 3-20: Drive Ring Assembly

Magenta/Blue Color Motor Assembly

21.9685.0280 Rev A

Refer to [Figure 3-21](#).

No.	Item	Qty.	UM.	Description
1	10.9634.0061	1	EA	ACTUATOR MOUNT, VL500
2	10.9634.0075	1	EA	HEAT SHIELD, MAGENTA/BLUE
3	44.9685.0230	2	EA	MOTOR, LINEAR, 0.002"/STEP
4	53.6520.0001	3	EA	SCREW, 4-40 X 3/8" PPZ
5	53.6682.0002	4	EA	SCREW, 4-40 X 1/4" PPZ SEMS
6	54.1217.0004	2	EA	LINK, VL500 ACTUATOR-DRIVE RING

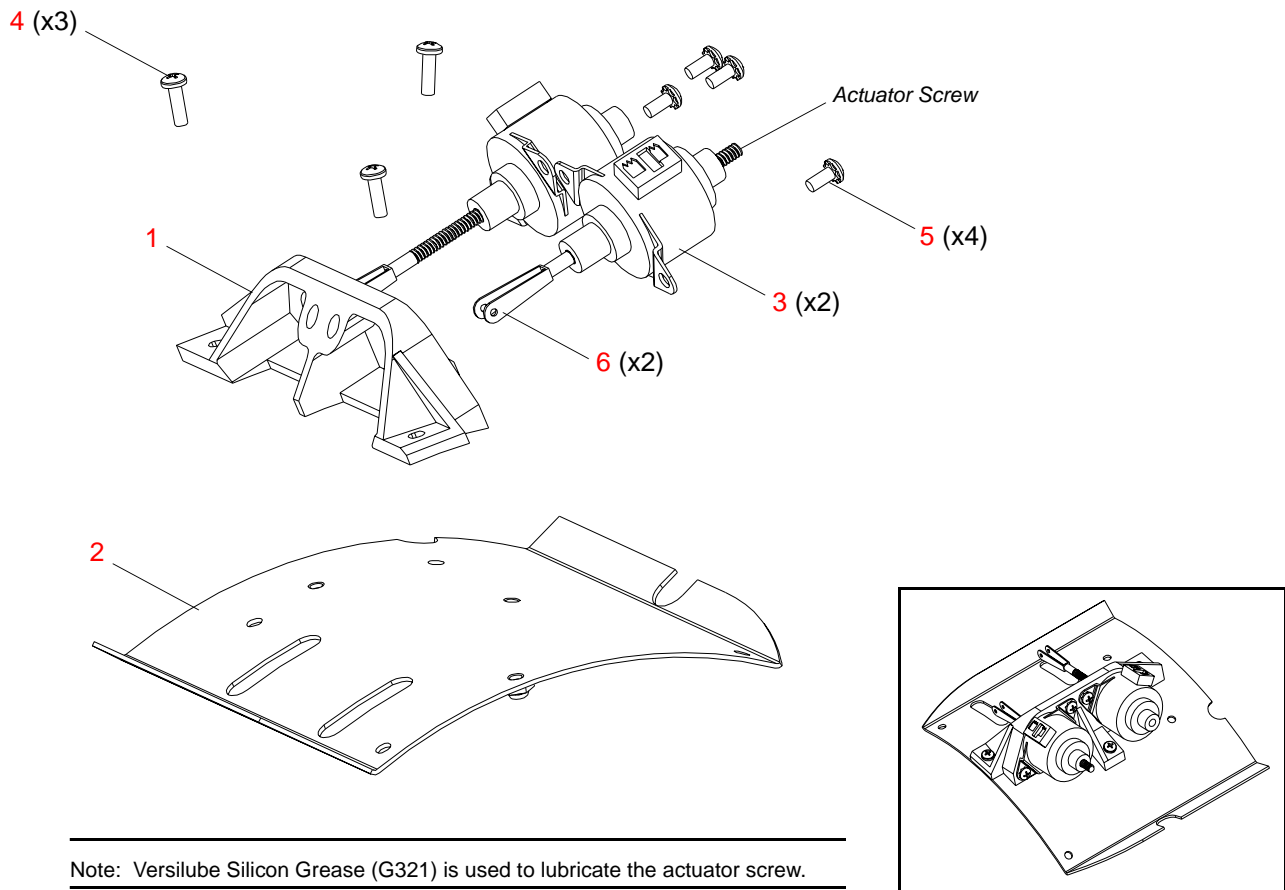


Figure 3-21: Magenta/Blue Color Motor Assembly

Amber/Diffuser Color Motor Assembly

21.9685.0281 Rev A

Refer to [Figure 3-21](#).

No.	Item	Qty.	UM.	Description
1	10.9634.0061	1	EA	ACTUATOR MOUNT, VL500
2	10.9634.0074	1	EA	HEAT SHIELD, AMBER/DIFFUSER
3	44.9685.0230	2	EA	MOTOR, LINEAR, 0.002"/STEP
4	53.6520.0001	3	EA	SCREW, 4-40 X 3/8" PPZ
5	53.6682.0002	4	EA	SCREW, 4-40 X 1/4" PPZ SEMS
6	54.1217.0004	2	EA	LINK, VL500 ACTUATOR-DRIVE RING

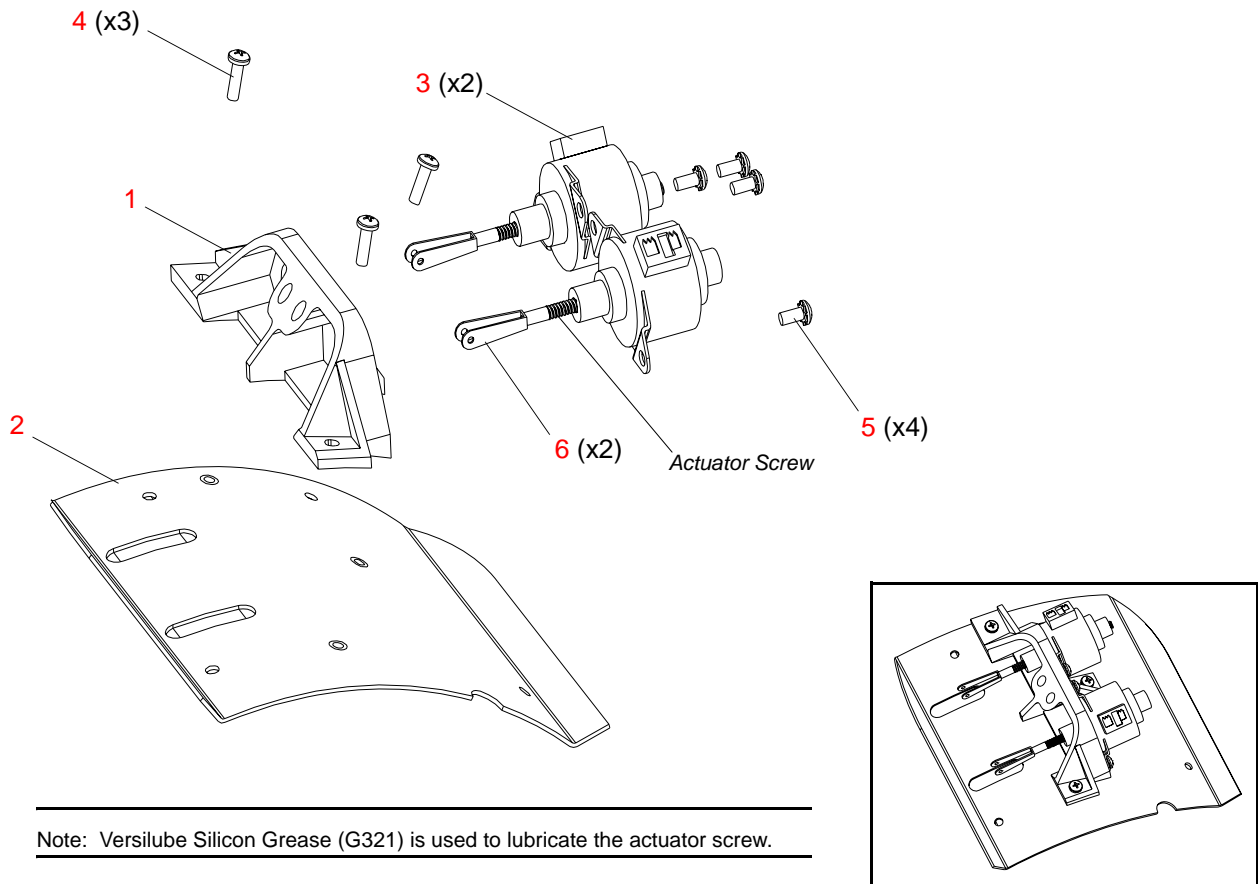


Figure 3-22: Amber/Diffuser Color Motor Assembly

Notes

Yoke Assembly

VL550 Yoke Assembly

21.9685.0520 Rev X (VL550 Only)

21.9685.0521 Rev X (VL550D Only)

Refer to [Figure 3-23](#) and [Figure 3-24](#).

No.	Item	Qty.	UM.	Description
1	10.9685.0534	1	EA	COVER, PAN TUBE
2	10.9685.0537	1	EA	PLATE, MOUNTING, LAMP POWER PIGTAIL (VL550 ONLY)
3	10.9685.0538	1	EA	BEZEL, LAMP POWER PIGTAIL (VL550 ONLY)
4	10.9685.1560	1	EA	YOKE LEG, TILT SIDE
5	10.9685.1561	1	EA	YOKE LEG, DIMMER SIDE
6	10.9685.0562	1	EA	PLATE, TILT MOTOR, SLIDE
7	10.9685.0596	1	EA	MOUNT, FAN, LVS
8	21.9685.0515	1	EA	ASSY, YOKE CROSSMEMBER
9	21.9685.0540	2	EA	ASSY, PAN/TILT MOTOR
10	23.9685.0782	1	EA	ASSY, FAN MCB
11	24.9664.4895	1	EA	PCB ASSY, DMX INPUT
12	24.9685.3740	1	EA	TEMPERATURE BOARD, LVS
13	25.9663.2030	1	EA	CABLE ASSY, INCANDESCENT POWER (VL550 ONLY)
14	25.9685.0756	1	EA	CABLE ASSY, AC INPUT
15	25.9685.0770	1	EA	DISPLAY CABLE RECEPTACLE, BLACK
-	25.9685.0790	1	EA	CABLE ASSY, MAIN HARNESS, INCANDESCENT (NOT SHOWN)
-	28.9685.0999	1	EA	KIT, EXTRA US HARDWARE (NOT SHOWN)
16	51-0541	4	EA	SCREW, #4X3/8" H/L PN BLK ZN
17	52.8295.0002	2	EA	TERMINAL BLOCK, 300V 12 AWG 20A 2-POS
18	53.2001.0003	1	EA	NUT, 10-32 NYLOCK
19	53.2200.0004	2	EA	NUT, 4-40 KEPS SS
20	53.2200.0006	4	EA	NUT, 6-32 KEPS SS (VL550D)
21	53.2202.0004	4	EA	NUT, 4-40 HEX SS NYLON INSERT
22	53.6519.0001	3	EA	SCREW, 4-40X5/8" PPZ
23	53.6521.0001	4	EA	SCREW, 8-32X1/2" PPB
24	53.6526.0002	2	EA	SCREW, 6-32X5/8" PPZ TYPE F

VARI*LITE - VL550 WASH LUMINAIRES SERVICE MANUAL

No.	Item	Qty.	UM.	Description
25	53.6546.0003	8	EA	SCREW, 8-32X7/16" PPZ
26	53.6552.0002	18	EA	SCREW, 8-32X1/2" PFB
27	53.6559.0002	2	EA	SCREW, 4-40X1/4" PFB
28	53.6606.0001	2	EA	SCREW, 4-40X1/2" PFB
29	53.6608.0750	4	EA	SCREW, 6-32X3/8" PFB
30	53.6624.0001	1	EA	SCREW, 10-32X1/2" PFB
31	53.6596.0001	1	EA	SCREW, 4-40X5/16" PPZ
32	54.2065.0001	1	EA	BELT, TIMING, S2M 252 GROOVE
33	55.2166.0250	1	EA	STANDOFF, 1/4" HEX 6-32, 0.250" LG MF SS
34	55.2288.0001	3	EA	STANDOFF, 1/4" HEX 6-32 X 13/16" LG
35	55.3301.0008	8	EA	WASHER, #8 FLAT SS
36	55.3301.0010	1	EA	WASHER, #10 FLAT
37	55.6543.0001	2.4	IN	GROMMET STRIP, SERRATED, 0.062
38	55.6568.0056	2	EA	SPRING, CPRSN, 0.600 OD, 0.080 WIR
39	55.6662.0010	1	EA	HOLE PLUG, 1.093" DIA, BLK NYLON (VL550D ONLY)
40	55.6669.0005	6	EA	STANDOFF, 6-32 X 0.500" LG 1/4" HEX
41	55.6669.0012	1	EA	STANDOFF, 6-32 X 1.00" LG 1/4" HEX MF CSTL ZINC

VL550 Yoke Assembly (continued)

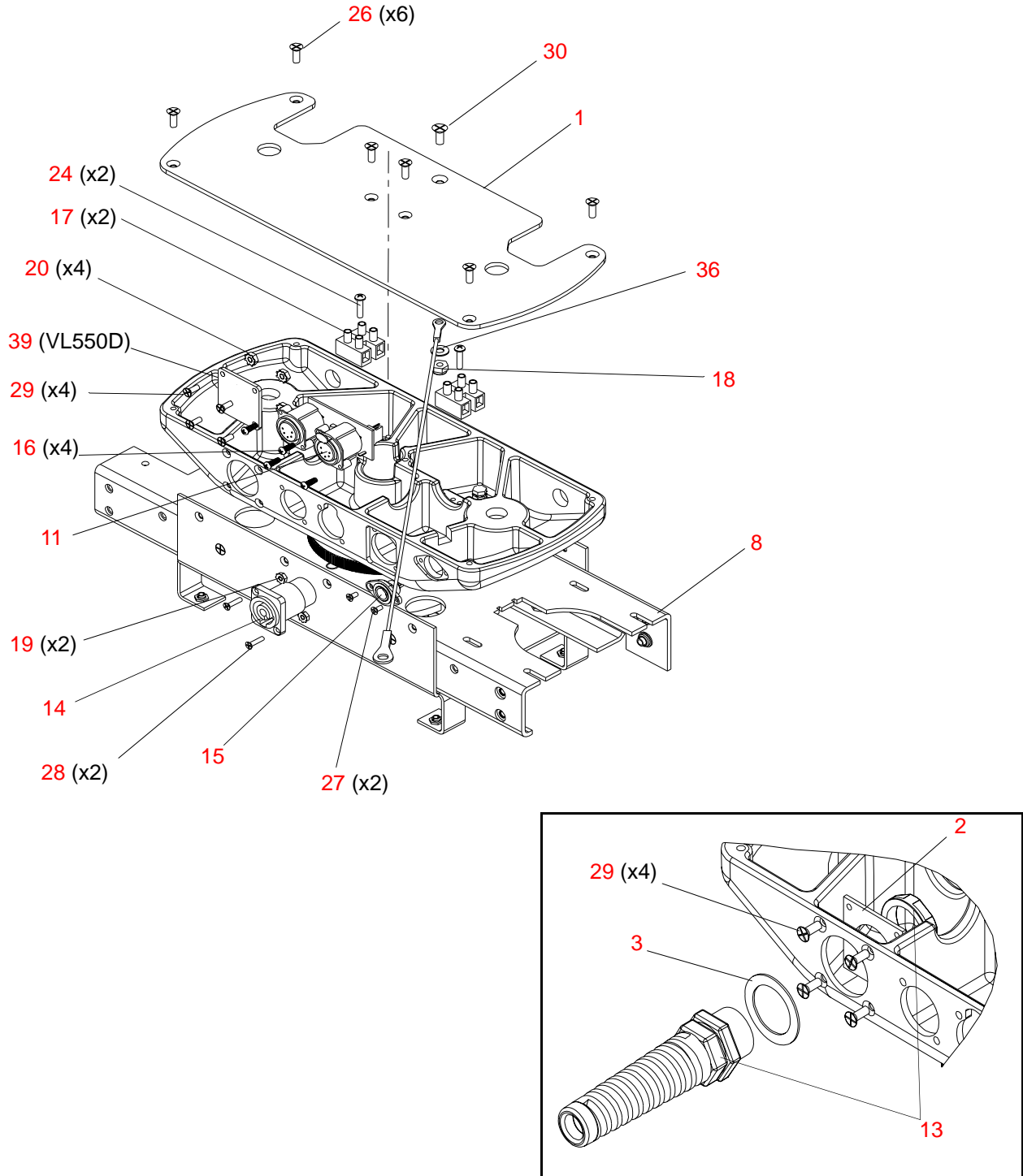


Figure 3-23: VL550 Yoke Assembly

VL550 Yoke Assembly (continued)

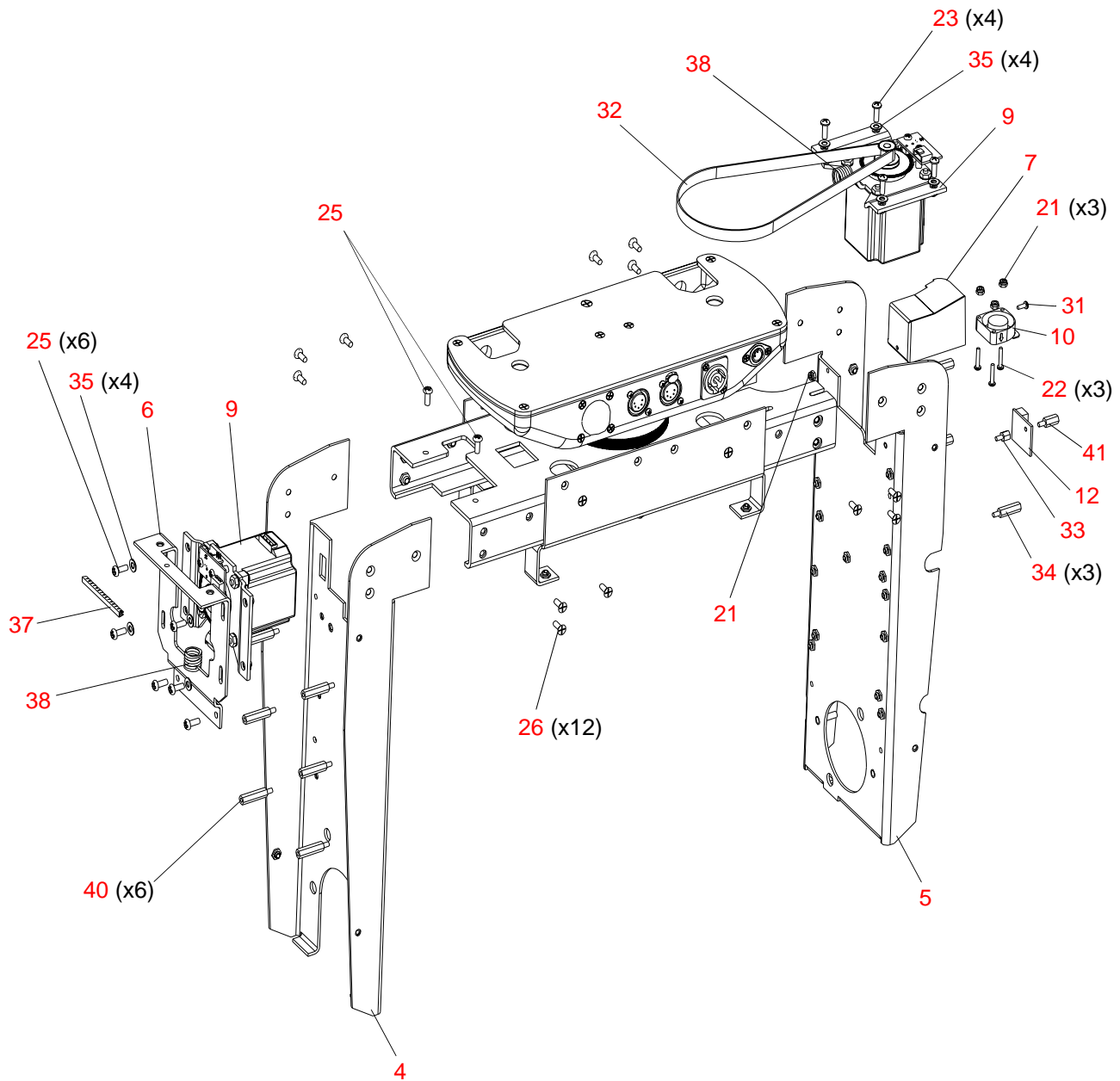


Figure 3-24: VL550 Yoke Assembly

VL550 Extra Hardware Kit

28.9685.0999 Rev 0

Note: This kit contains additional US-standard hardware (that may be difficult to find outside North America). It is packaged into the foot of the fixture (underneath the pan tube cover).

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

No.	Item	Qty.	UM.	Description
1	07.5044.0002	1	EA	BAG, 4-MIL X 2" X 3", ZIP PRESS POLYETHYLENE
2	53.6608.0001	4	EA	SCREW, 6-32 X 3/8" PFB
3	53.6523.0013	4	EA	SCREW, 6-32 X 3/8" PTB
4	53.6558.0001	4	EA	SCREW, 6-32 X 3/8" PPZ
5	53.6558.0009	4	EA	SCREW, 6-32 X 3/8" PPZ SEMS
6	53.6558.0010	4	EA	SCREW, 6-32 X 1/4" PPZ SEMS

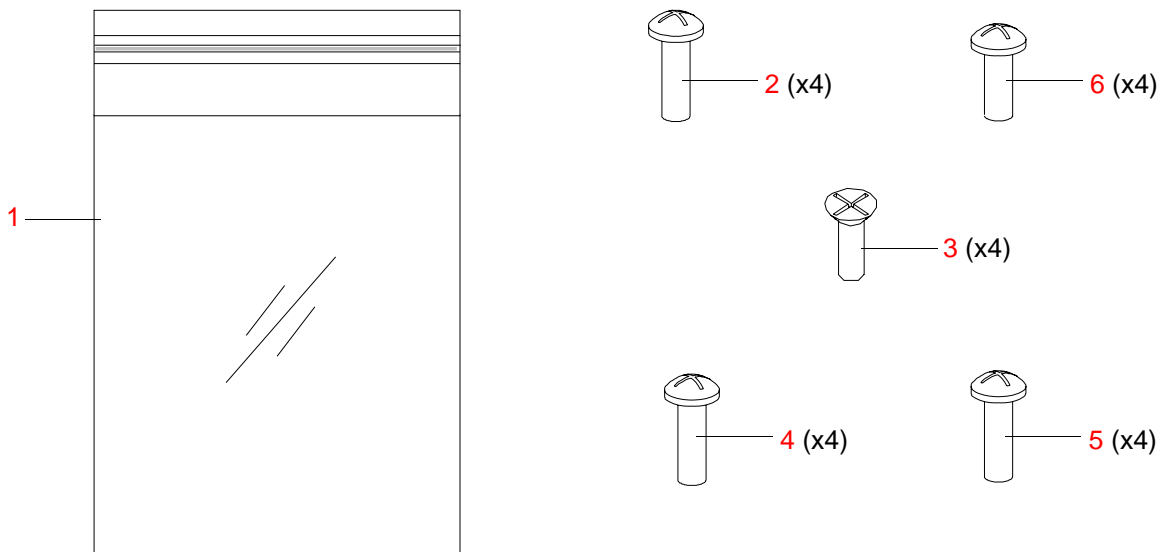


Figure 3-25: VL550 US Extra Hardware Kit

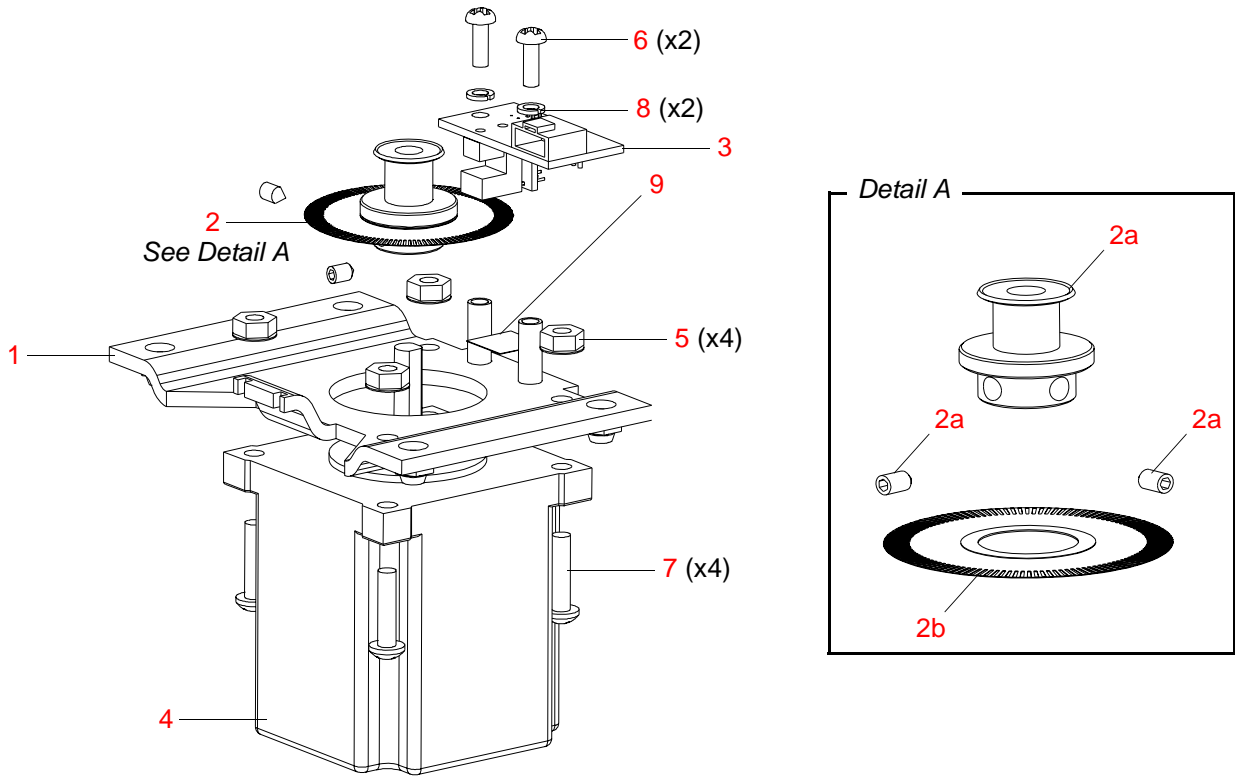
VL550 Pan/Tilt Motor Assembly

21.9685.0540 Rev C

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

No.	Item	Qty.	UM.	Description
1	10.9685.0541	1	EA	PLATE, TENSION ADJUSTMENT, PAN/TILT
2	21.9685.0545	1	EA	ASSY, DRIVE PULLEY
- 2a	10.9685.0524	1	EA	PULLEY, DRIVE - PAN/TILT, 2MM GT 18 TOOTH
- 2b	10.9678.8720	1	EA	CODEWHEEL, 120 COUNT
3	24.9685.7735	1	EA	BOARD ASSY, PAN/TILT ENCODER, VL500
4	44.9678.0680	1	EA	MOTOR, 3-PHASE SZ 23 HIGH TORQUE
5	53.2200.0008	4	EA	NUT, 8-32 KEPS SS
6	53.6558.0001	2	EA	SCREW, 6-32X3/8" PPZ
7	53.6575.0004	4	EA	SCREW, 8-32X5/8" PPZ
8	55.6627.0001	2	EA	WASHER, #6 SPLIT LOCK
9	84-0100	0.5	IN	TAPE, KAPTON, 0.035" WIDE P221

VL550 Pan/Tilt Motor Assembly (continued)



Drive Pulley Detail & Installation

0.090" from Pulley to Motor

Tape goes under this board between standoffs.

Note location of code wheel with respect to sensor

Pan & Tilt Motor Cross Section

Drive Pulley 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.

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.

Figure 3-26: VL550 Pan/Tilt Motor Assembly

MCB/FAN Assembly

21.9685.0731 Rev 0

Refer to [Figure 3-27](#).

No.	Item	Qty.	UM.	Description
1	10.9676.0735	2	EA	HEATSINK, PAN/TILT DRIVERS
2	10.9676.0885	2	EA	PAD, THERMAL TRANSFER, PAN/TILT
3	10.9685.0594	1	EA	BRACKET, FAN, MCB
4	10.9685.0595	1	EA	SEAL, AIR
5	23.9685.0782	1	EA	ASSY, FAN, MCB
6	24.9685.0730	1	EA	MCB, VL500
7	53.2200.0004	5	EA	NUT, 4-40 KEPS SS
8	53.6556.0001	2	EA	SCREW, 4-40 X 3/4" PPZ
9	53.6592.0001	3	EA	SCREW, 4-40 X 1/2" PPB
10	55.6537.0001	2	EA	WASHER, #4 LOCK INTERNAL TOOTH

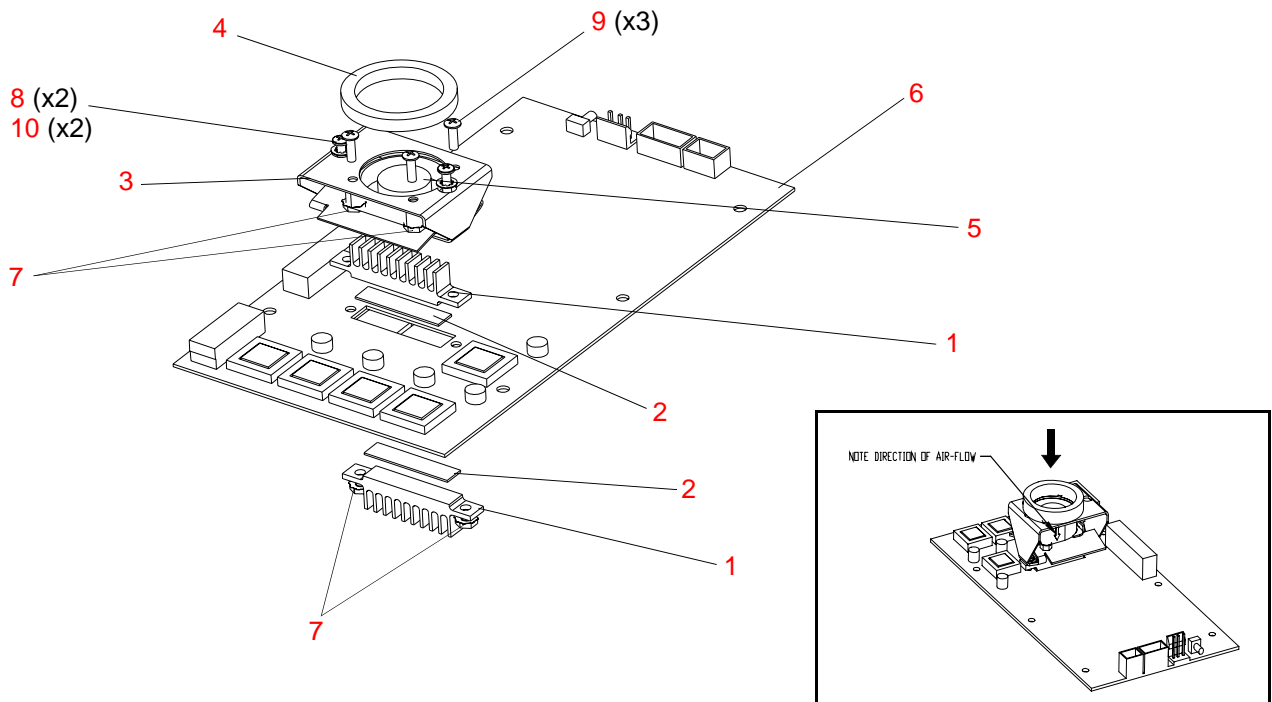


Figure 3-27: VL550 MCB/Fan Assembly (VL550 and VL550D Only)

MCB-Fan Assembly

23.9685.0782 Rev 0

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

No.	Item	Qty.	UM.	Description
1	40.7113.0007	1	EA	FAN, 12VDC, 30X10 MM, 3.3CFM
2	52.6450.0002	1	EA	CONNECTOR, MTA 100 IDC 2-POS, 28 AWG

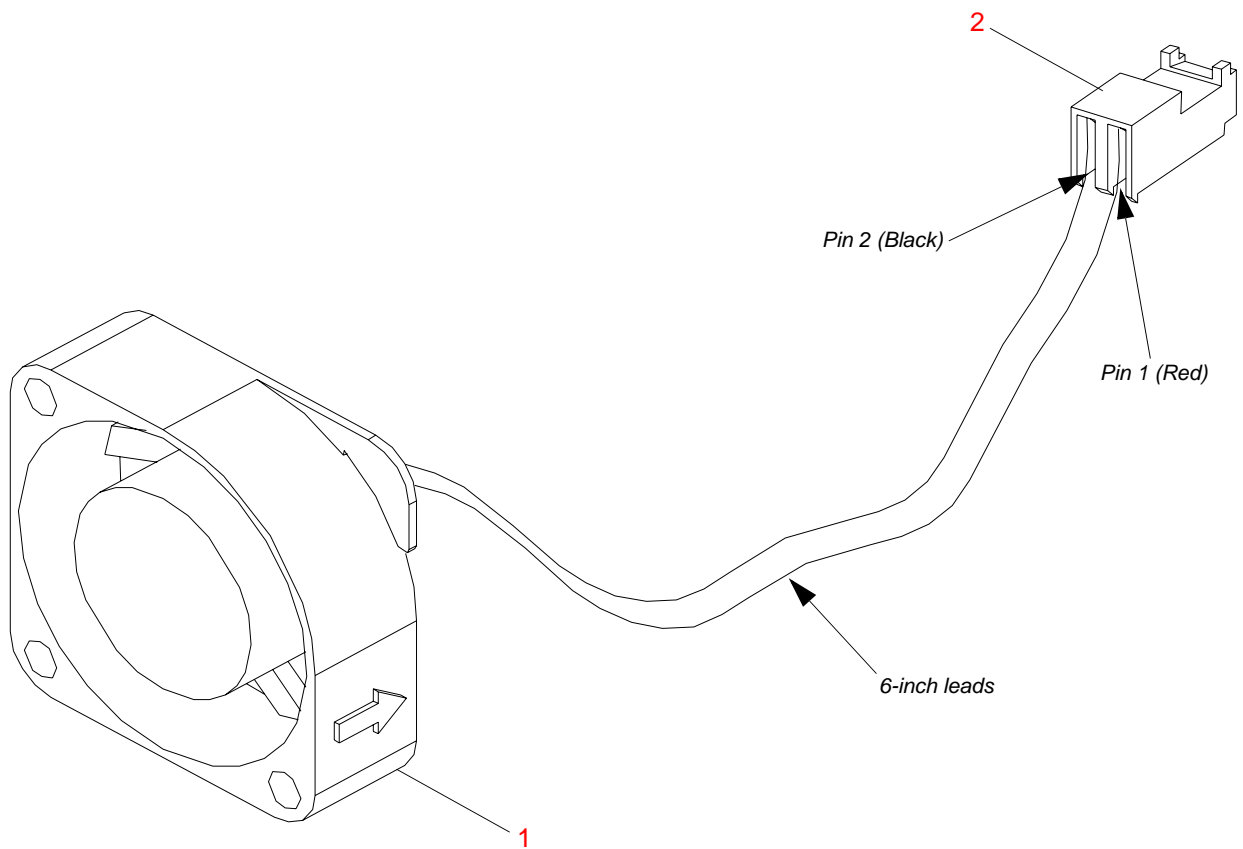


Figure 3-28: MCB-Fan Assembly

Yoke Crossmember Assembly

21.9685.0515 Rev E

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

No.	Item	Qty.	UM.	Description
1	10.9685.0547	1	EA	BUSHING, WIRE PROTECTION, 0.95" OD
2	10.9685.7590	1	EA	TOGGLE STOP, PAN
3	10.9685.7591	1	EA	TOGGLE, PAN
4	21.9685.0512	1	EA	ASSY, LOWER CROSSMEMBER
5	21.9685.0513	1	EA	ASSY, UPPER CROSSMEMBER
6	21.9685.0535	1	EA	ASSY, PAN TUBE
7	53.6552.0002	8	EA	SCREW, 8-32 X 1/2" PFB
8	53.6667.0005	2	EA	SCREW, 10-32 X 3/8" SET CUP POINT
9	54.1206.0014	3	EA	RING, RETAINING 1.375" SHAFT

Yoke Crossmember Assembly (continued)

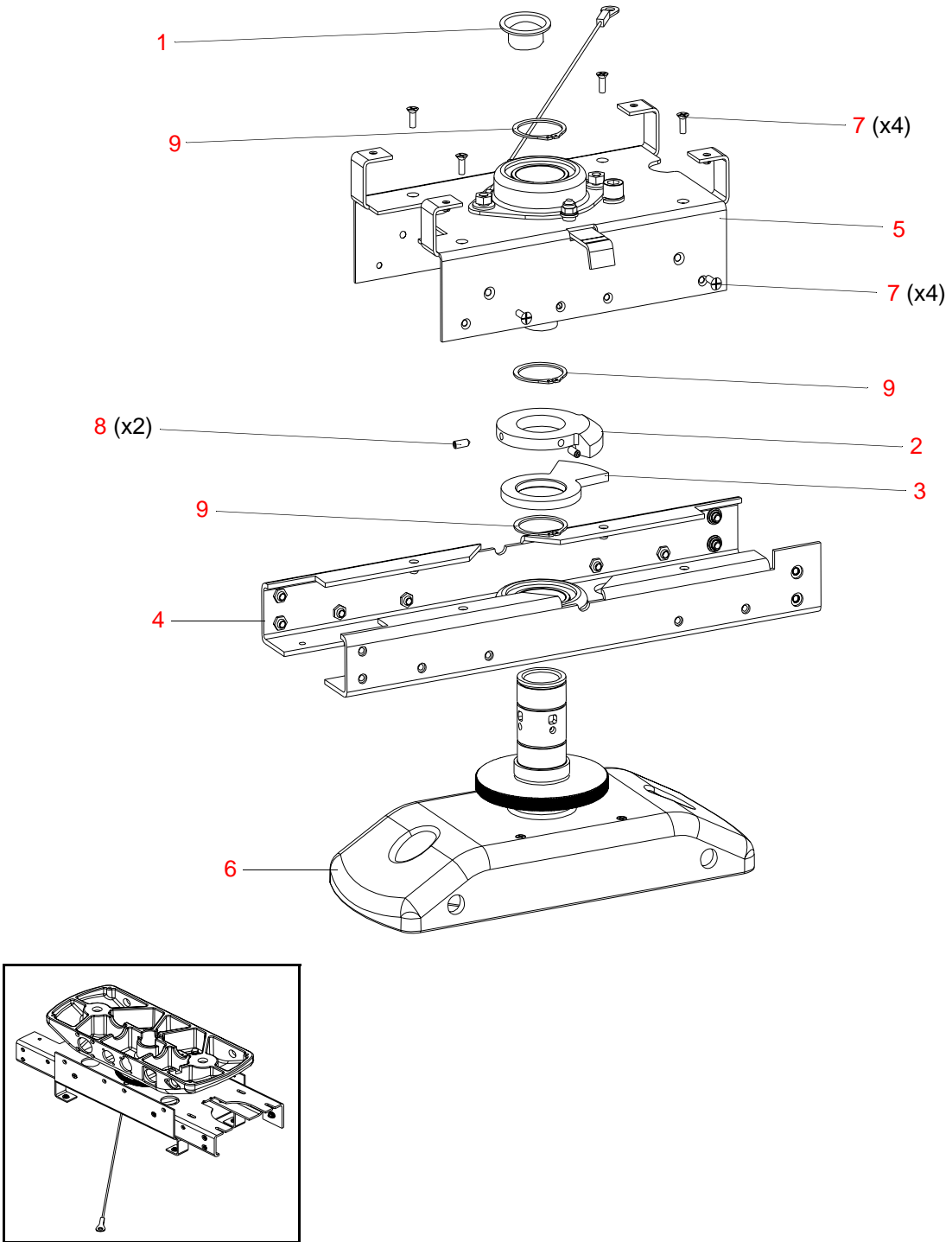


Figure 3-29: Yoke Crossmember Assembly

Lower Crossmember Assembly

21.9685.0512 Rev K

Refer to [Figure 3-30](#).

No.	Item	Qty.	UM.	Description
1	10.9685.1509	1	EA	LOWER CROSSMEMBER
2	10.9685.0522	1	EA	PLATE, PAN LOCK
3	10.9685.0527	2	EA	WASHER, CENTERING, STEP
4	10.9685.0533	1	EA	LANYARD, SAFETY
5	53.2001.0003	2	EA	NUT, 10-32 NYLON INSERT
6	53.2019.0004	1	EA	NUT, 3/8-16 HEX
7	53.2020.0001	2	EA	NUT, 1/4X20 HEX STL ZINC PLTD
8	53.6539.0001	1	EA	WASHER, 3/8" SPLIT LOCK
9	53.6634.0875	1	EA	SCREW, 3/8-16 X 7/8" SCSS
10	53.6648.0001	2	EA	SCREW, 10-32 X 3/4" PPZ
11	54.1255.0001	1	EA	ASSY, BEARING/HOUSING
12	54.1261.0001	2	EA	BUSHING, LOW DAMP THRMOPLS.189
13	55.3301.0010	2	EA	WASHER, #10 FLAT
14	55.6549.0001	1	EA	WASHER, 1/4" SPLIT LOCK
15	55.6677.0035	2	EA	WASHER, 0.750" OD, 0.187" ID

Lower Crossmember Assembly (continued)

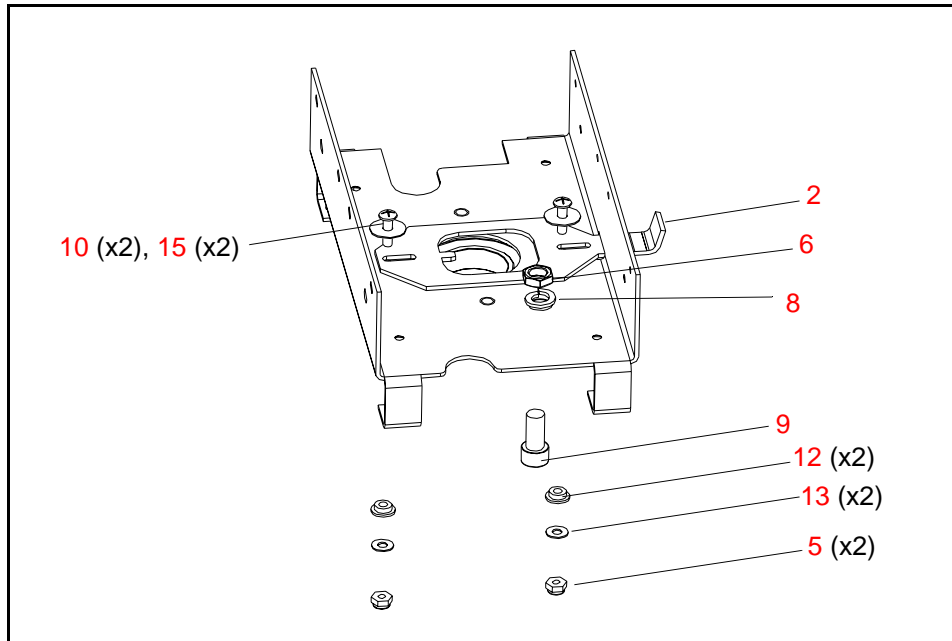
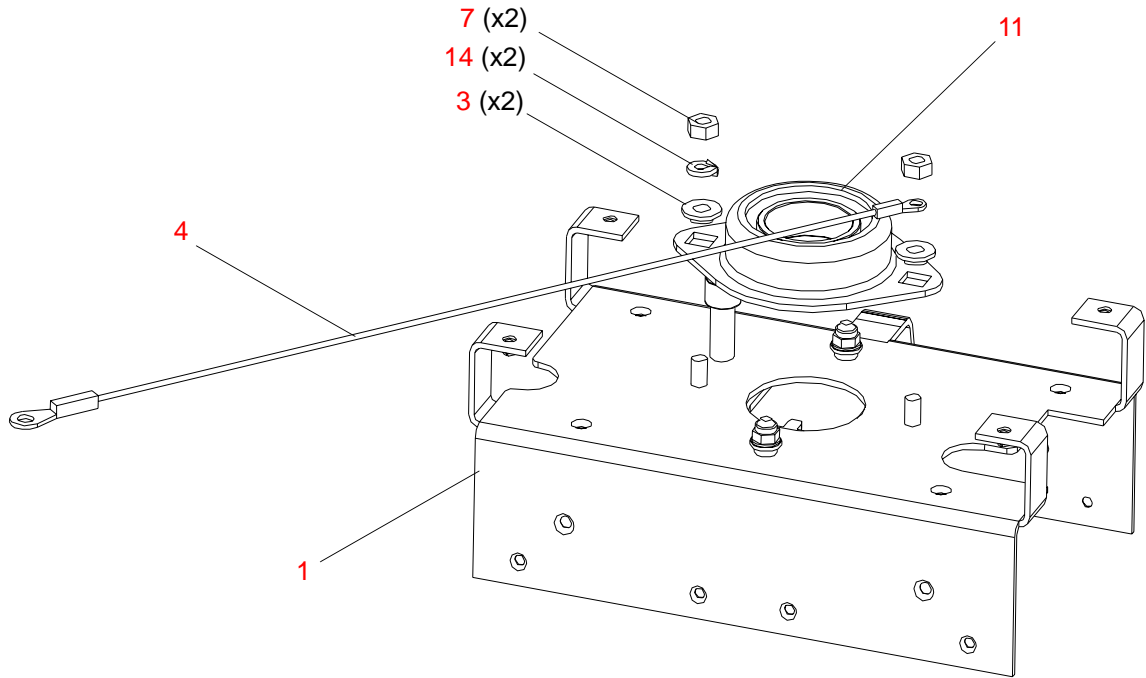


Figure 3-30: Lower Crossmember Assembly

Upper Crossmember Assembly

21.9685.0513 Rev H

Refer to [Figure 3-30](#).

No.	Item	Qty.	UM.	Description
1	10.9685.1510	1	EA	UPPER CROSSMEMBER
2	10.9685.0527	2	EA	WASHER, CENTERING, STEP
3	53.2020.0001	2	EA	NUT, 1/4-20 HEX STL ZINC PLTD
4	54.1255.0001	1	EA	ASSY, BEARING/HOUSING
5	55.6549.0001	2	EA	WASHER, 1/4" SPLIT LOCK

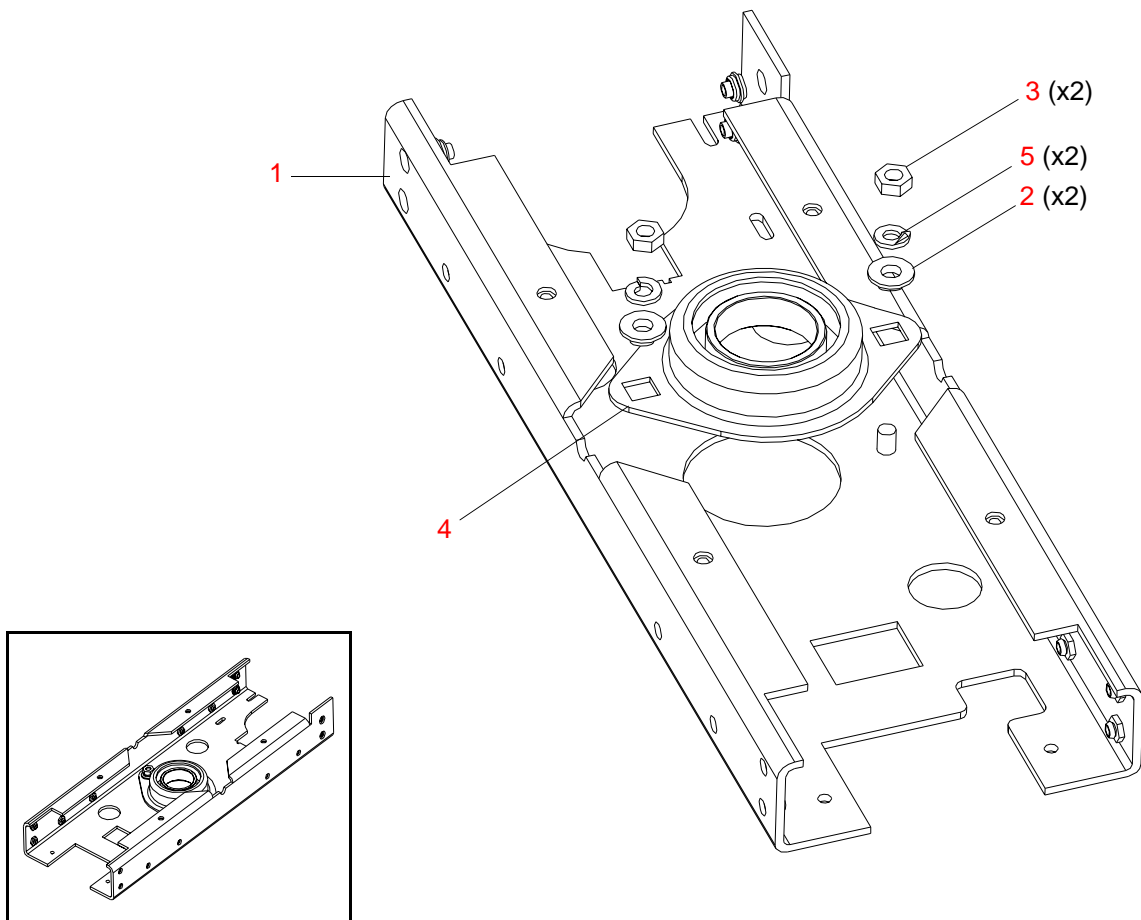


Figure 3-31: Upper Crossmember Assembly

Pan Tube Assembly

21.9685.0535 Rev D

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

No.	Item	Qty.	UM.	Description
1	10.9685.0521	1	EA	PULLEY, DRIVEN, PAN/TILT
2	10.9685.0531	1	EA	PAN TUBE
3	10.9685.0532	1	EA	PAN PULLEY SPACER
4	53.2200.0006	4	EA	NUT, 6-32 KEPS SS
5	53.6608.0750	2	EA	SCREW, 6-32 X 3/4" PFB

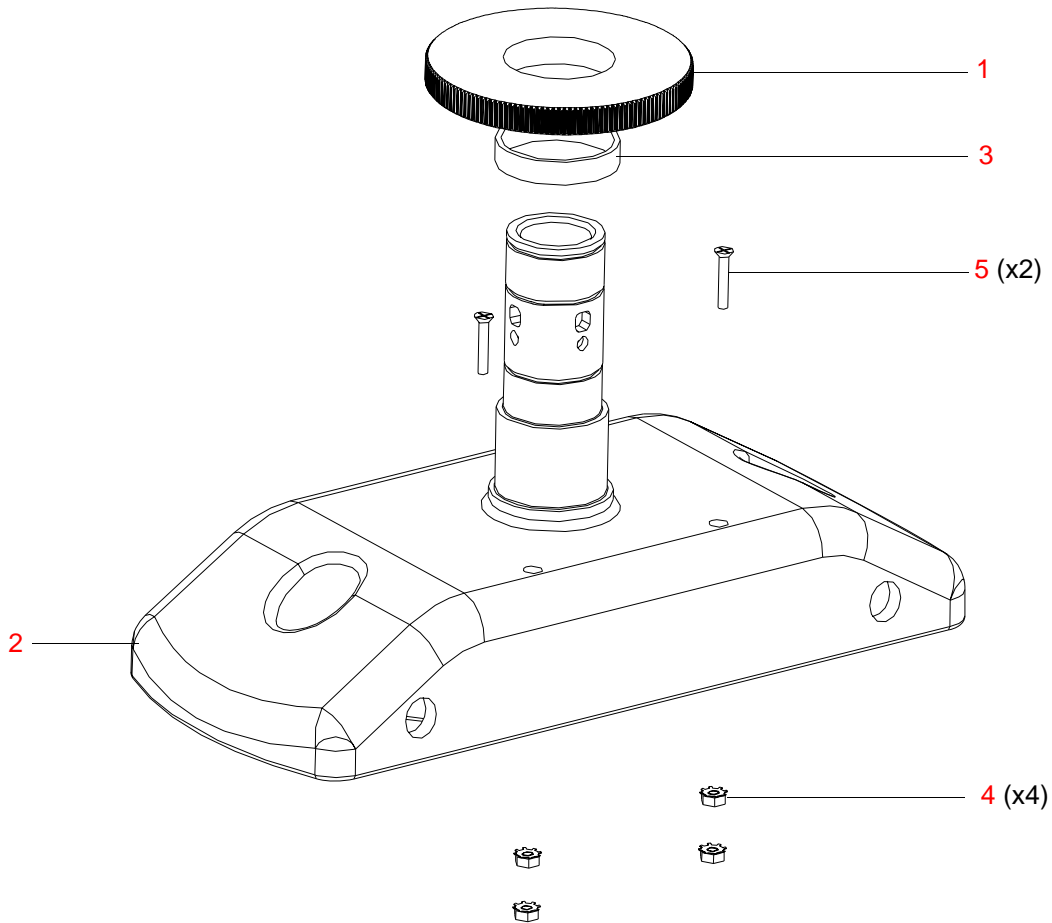


Figure 3-32: Pan Tube Assembly

Input Panel Assembly

21.9665.1550 Rev D

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

No.	Item	Qty.	UM.	Description
1	10.9665.1512	1	EA	PANEL, INPUT
-	25.9684.2020	1	EA	CABLE ASSY, AC INPUT (NOT SHOWN)
2	52.6541.0003	1	EA	CONN, CHASSIS PWR 3 POLE, LOCKING
3	53.2200.0004	2	EA	NUT, 4-40 KEPS SS
4	53.6606.0001	2	EA	SCREW, 4-40 X 1/2" PFB

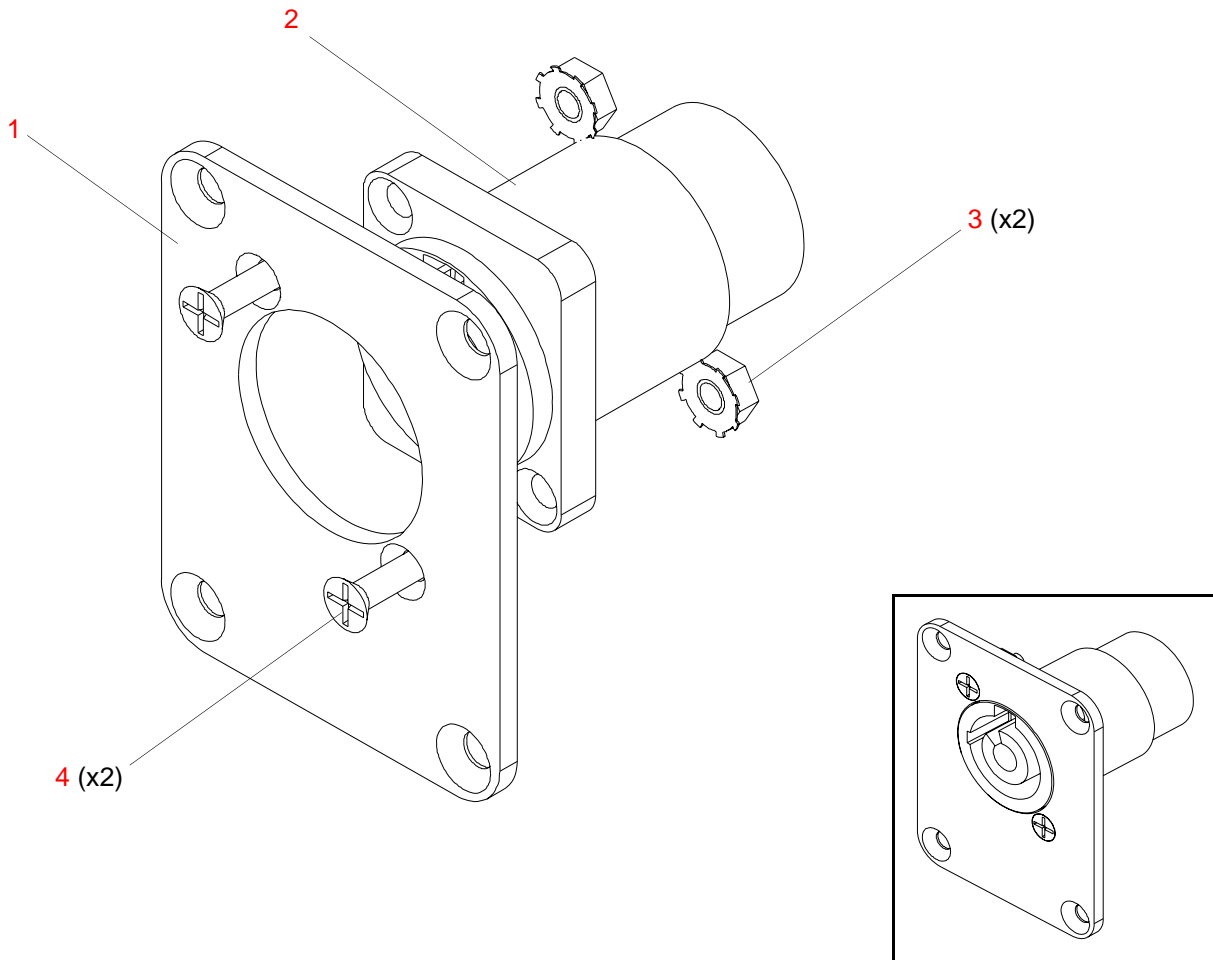


Figure 3-33: Input Panel Assembly

DMX Input PCB Assembly

24.9664.4895 Rev A

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

No.	Item	Qty.	UM.	Description	Ref
1	17.9663.3895	1	EA	PCB, DMX INPUT	-
2	52.6259.0006	1	EA	HEADER, 5POS MTA FRCT LOK STRT	J3
3	52.6625.0006	1	EA	CONN, RECEPT XLR 5PIN FEMALE	J1
4	52.6626.0006	1	EA	CONN, RECEPT XLR 5PIN MALE	J2
5	62.3039.0102	1	EA	CAP, 1000PF 250V RAD CER DISC 20% X-Y	C1

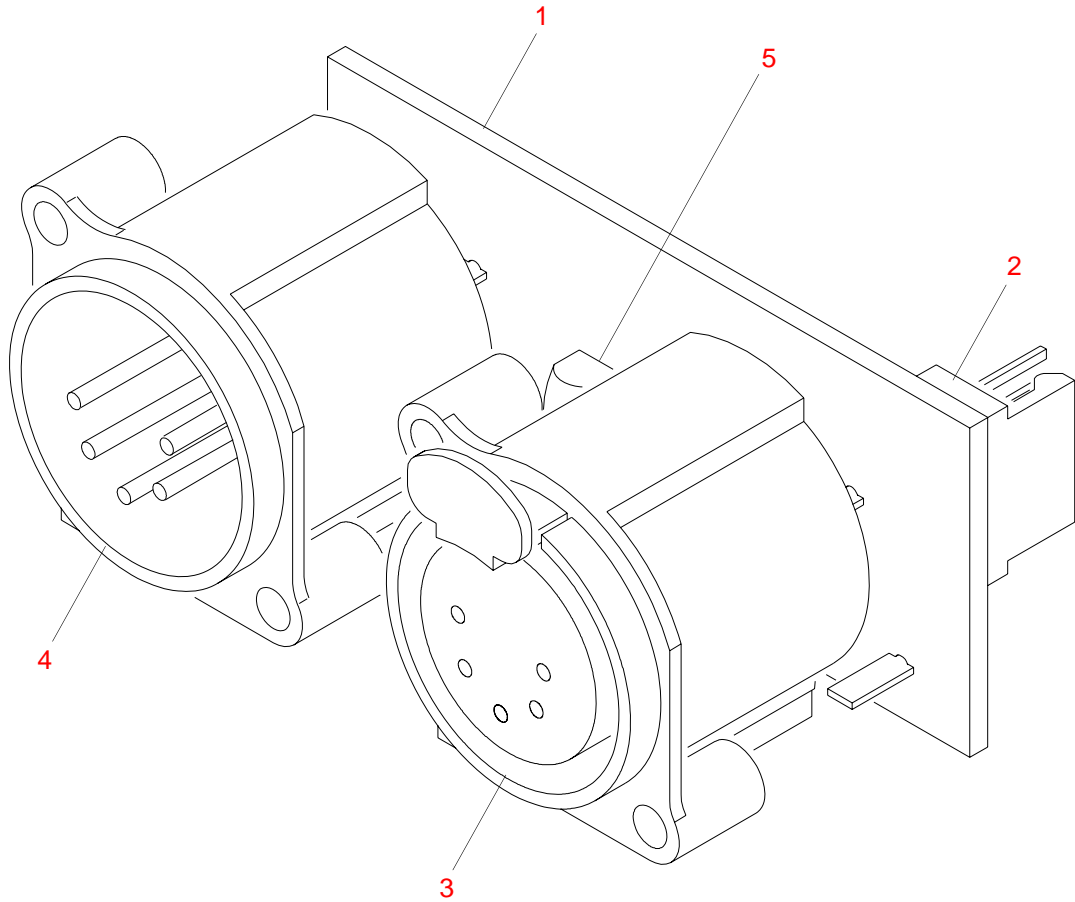


Figure 3-34: DMX Input PCB Assembly

Notes

Cables

Incandescent Power Input Cable Assembly

25.9663.2030 Rev A (VL550 Only)

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

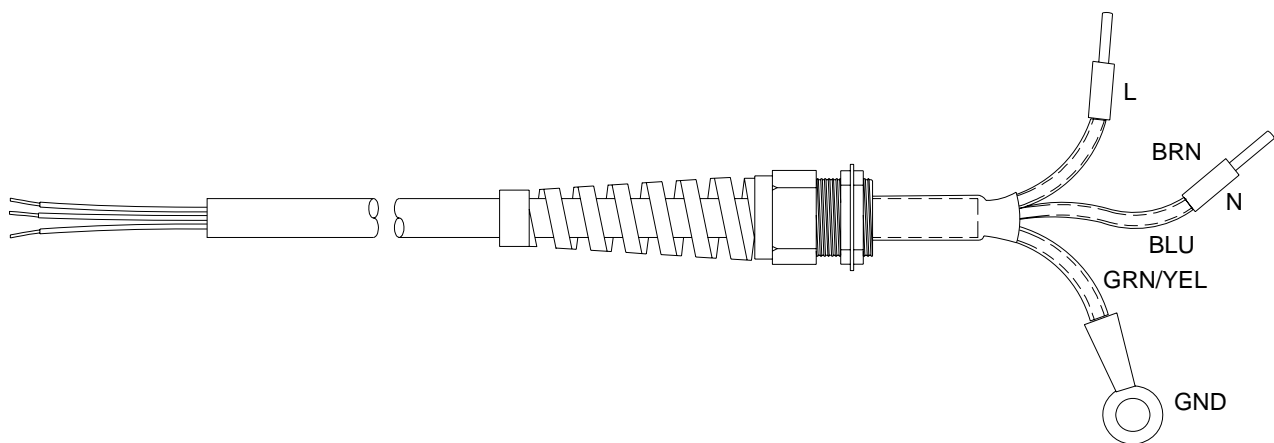


Figure 3-35: Incandescent Power Input Cable Assembly (VL550 Only)

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

VL550 Motor Cable Assembly

25.9685.0753 Rev B

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

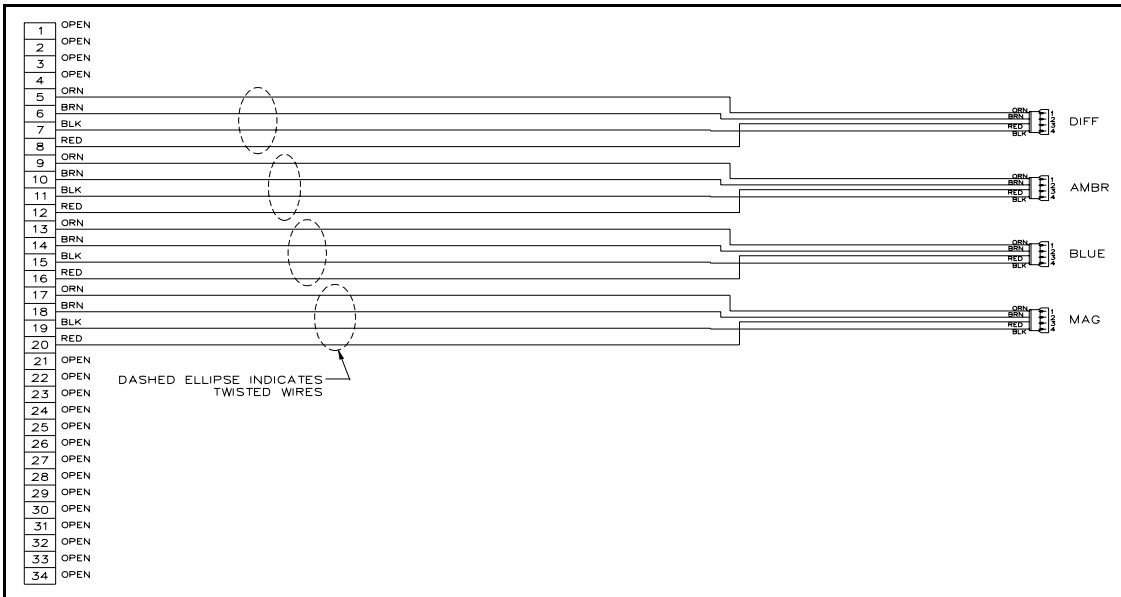
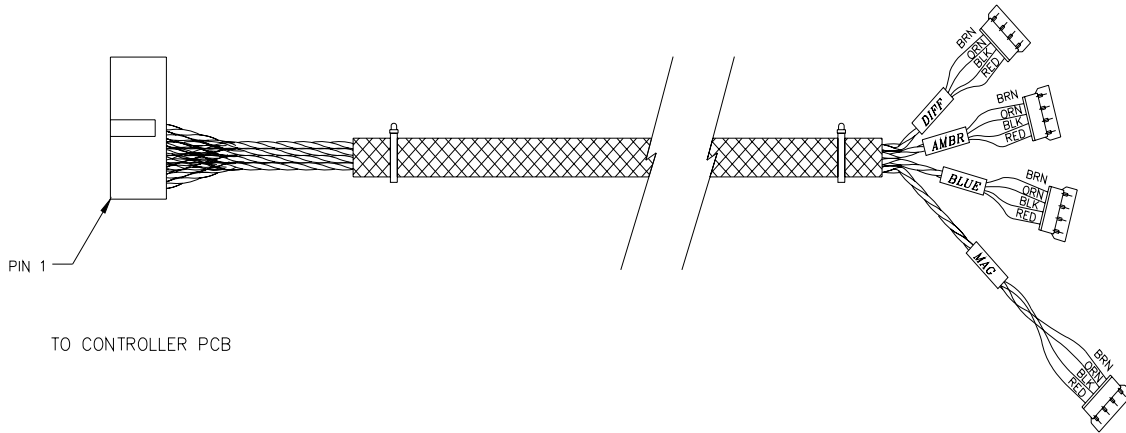


Figure 3-36: VL550CD Motor Cable Assembly

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

AC Input Cable Assembly

25.9685.0756 Rev B

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

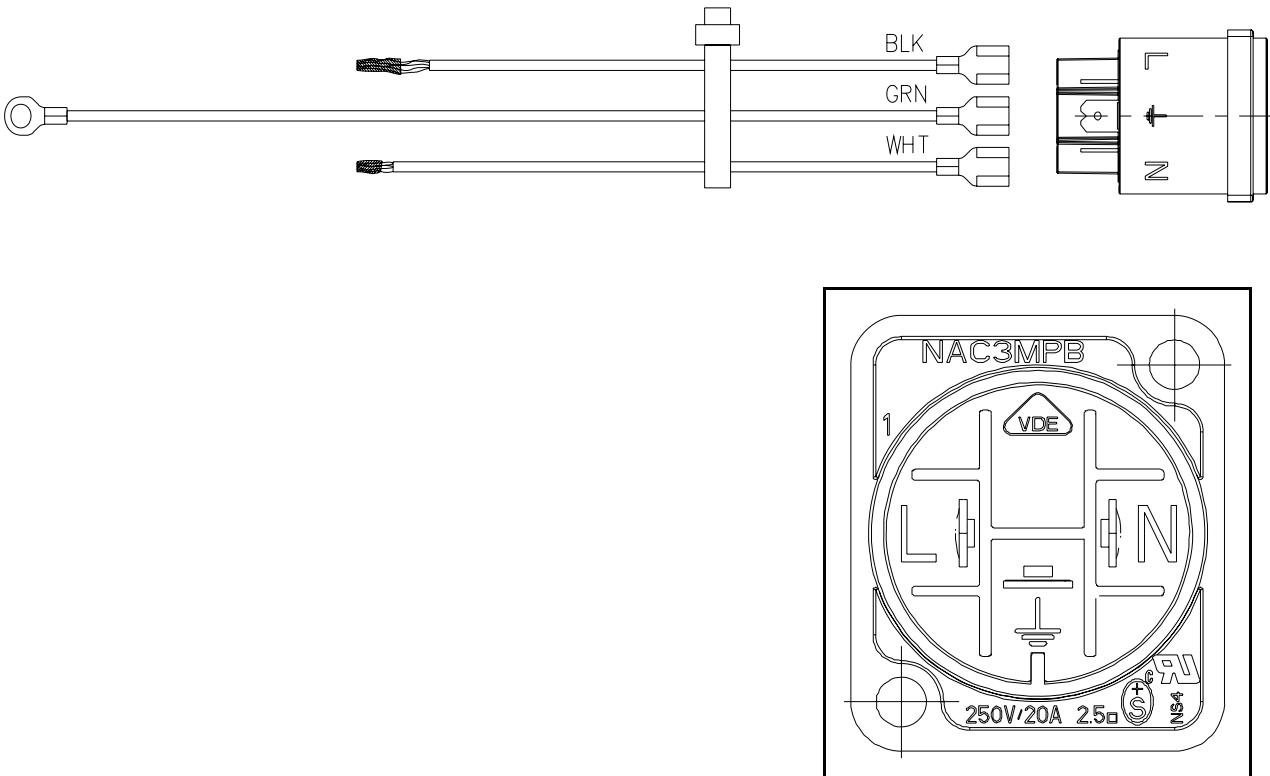


Figure 3-37: AC Input Cable Assembly

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

Head Grounding Cable Assembly

25.9685.0760 Rev C

Refer to [Figure 3-38](#).

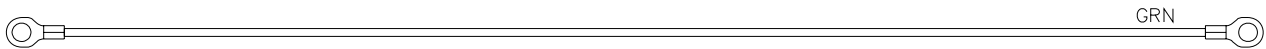


Figure 3-38: Head Earthing Cable Assembly

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

Display (Remote) Cable Assembly

25.9685.0770 Rev B

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

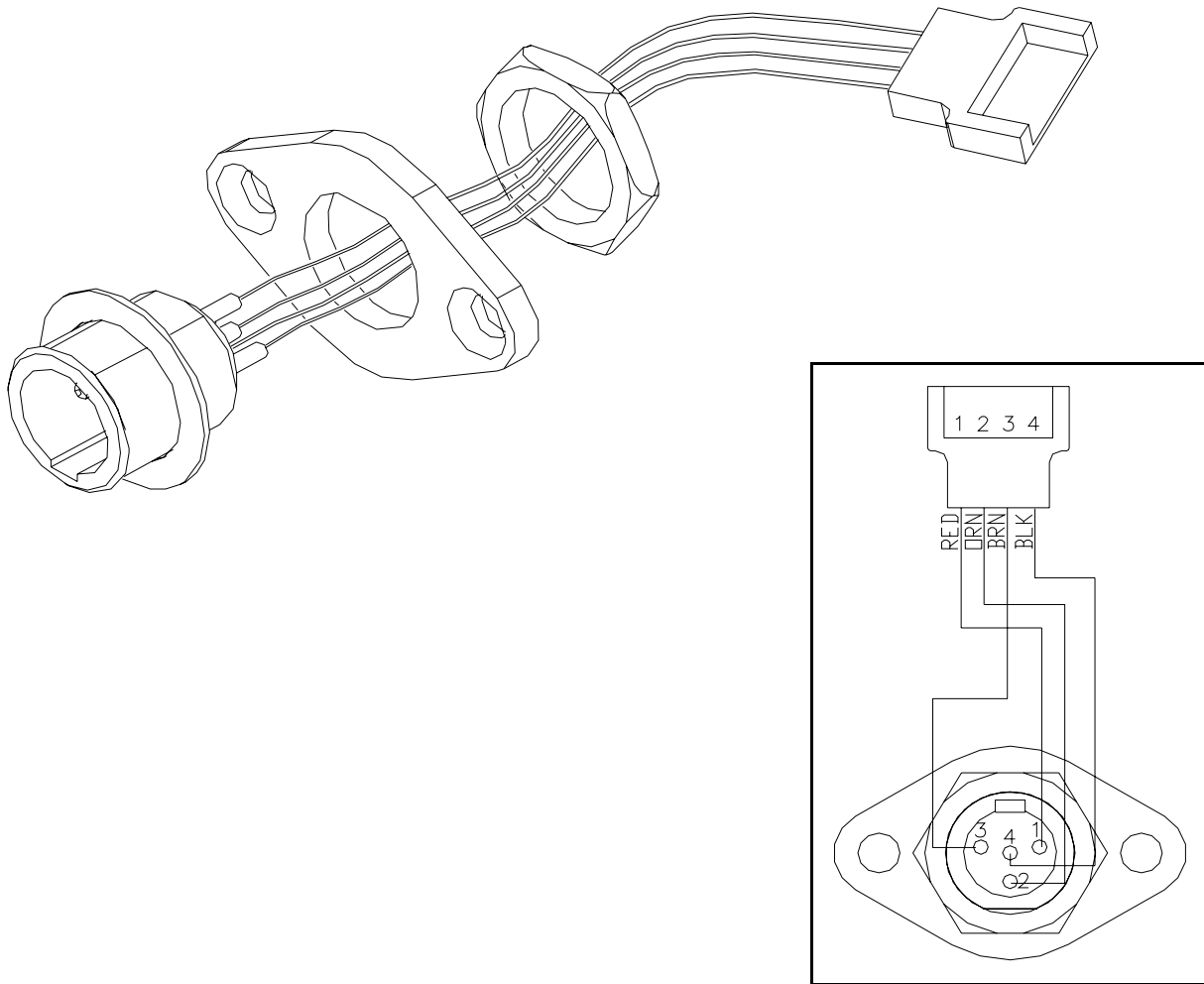


Figure 3-39: Display (Remote) Cable Assembly

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

Yoke Lamp Jumper Cable Assembly

25.9685.0776 Rev A

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

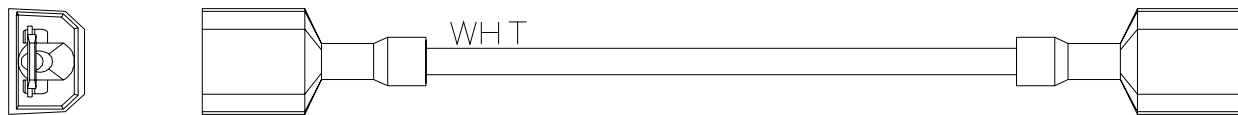


Figure 3-40: Yoke Lamp Jumper Cable Assembly

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

Backcap Ground Cable Assembly

25.9685.0777 Rev A

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



Figure 3-41: VL500 Backcap Ground Cable Assembly

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

VL550 Main Cable Assembly

25.9685.0790 Rev J (VL550 and VL550D)

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

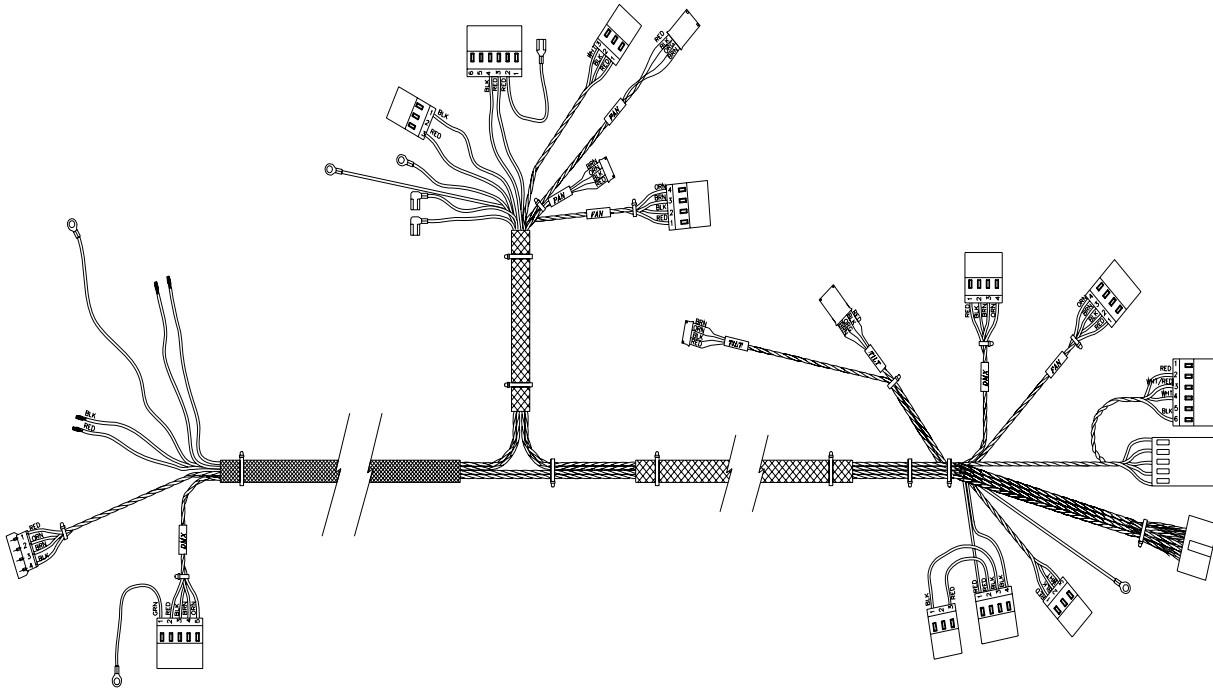


Figure 3-42: VL550 Main Cable Assembly (VL550 and VL550D)

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

APPENDIX A.

Technical Bulletins and Notices

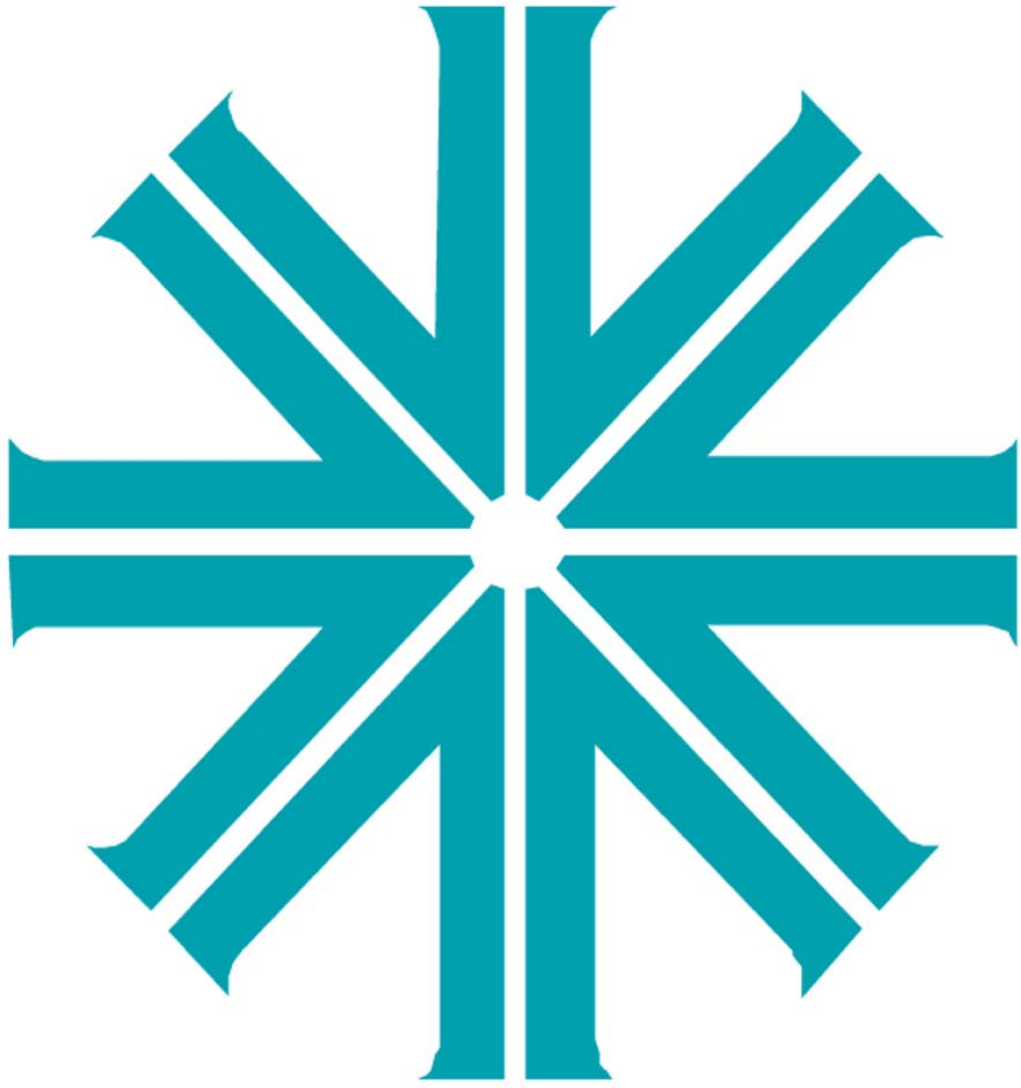
VL550 Wash Luminaire Technical Bulletins and Notices

The following table identifies the current technical bulletins and notices associated with the VL550 wash luminaire. If applicable, these improvements have been incorporated into this manual.

Technical Bulletin or Notice	Description
LSW-054	Software Release 10.14.10 (VL500/550/550CD)
TN-309	64-Bit Driver for Microsoft Windows Vista / Windows 7 Operating Systems
TN-248	Specified and Approved Lamps for use in VARI*LITE Luminaires (refer to current version of this notice)
TN-235	Transportation and Shipping Case Requirements for VARI*LITE Luminaires (refer to current version of this notice)
TN-231	Recommended Spare Parts Kits for VARI*LITE Luminaires
TN-229	Powering VARI*LITE Luminaires From Dimmer Circuits - NOT RECOMMENDED (<i>Note: VL550 tungsten luminaires [without on-board IGBT dimmers] LAMP power can be connected to an external dimmer. Powering the luminaire's motors, electronics, or electrical systems - other than the lamp - is not recommended.</i>)

Technical Bulletins, Technical Notices, Software Updates, and support, and other information is available online at <http://www.vari-lite.com> and click on the Support tab. To request access to the password-protected support areas, please contact Vari-Lite Customer Service at 1.214.647.7880 or 1.877.827.4548 or entertainment.service@philips.com.

Notes



VARI*LITE[®]

Express yourself.

Vari-Lite

10911 Petal Street

Dallas, Texas 75238 USA

1.877.VARI-LITE * Fax 1.214.647.8038

www.vari-lite.com

Date: **25 March 2011**

Manual Part Number: **02.9683.0010 0**