Service Manual



VL3500™ Wash &
VL3500™ Wash FX Luminaires

02.9686.0010

PHILIPS

VARI*LITE

VARI✳LITE® is a trademark owned by Genlyte Thomas Group LLC and is registered in the United States and other countries.

VL1000™, **VL2000**™, **VL2201**™, **VL2202**™, **VL2400**™ (and the individual product designations), **VL3000**™, **VL3500**™, **Series 1000**™, **Series 2000**™, **Series 3000**™, **DICHRO✳TUNE**™, **VARI✳IMAGE**™, **VARI✳BRITE**™, and the Vari-Lite Asterisk are also trademarks owned by Genlyte Thomas Group LLC.

VARI✳LITE® products are protected by one or more of the following patents, and other pending patent applications worldwide:

U. S. Patents No. 6,809,869; 6,796,682; 6,769,792; 6,578,987; 6,550,939; 6,282,027; 6,123,436; 6,113,252; 6,046,861; 6,031,749; 6,011,640; 5,969,868; 5,959,768; 5,934,794; 5,882,107; 5,829,868; 5,825,548; 5,798,619; 5,774,273; 5,769,527; 5,758,956; 5,728,994; 5,640,061; 5,590,954; 5,454,477; 5,432,691; 5,367,444; 5,329,431; 5,307,295; 5,282,121; 5,278,742; 5,209,560; 5,186,536; 5,073,847; 5,010,459; 4,980,806; 4,972,306; 4,800,474; 4,779,176; 4,701,833; 4,602,321;

U. S. Design Patents No. 524,245; 457,678; 452,339; 451,890; 442,944; 439,356; 420,332; 417,300; 415,301; 414,888; 413,995; 377,338; 366,712; 359,574; 350,408; 347,113;

Australia Patents No. 693,691; 683,695; 667,109; 649,264; 646,588; 586,095; 576,400;

Australia Design Patents No. 128,796; 128,795;

Canada Patents No. 2,070,670; 2,050,375; 1,270,675; 1,259,058;

Canada Design Patents No. 81,234; 81,233; 76,046;

European (UK) Patents No. 0 652 400; 0 586 049; 0 565 218; 0 547 732; 0 534 710; 0 495 305; 0 474 202; 0 379 970; 0 253 082; 0 253 081; 0 248 974; 0 192 882;

Germany Patents No. 694 25 943.8; 693 14 122.0; 692 08 615.3; 692 07 692.1; 691 31 478.0; 691 21 029.2; 690 33 385.4; 37 89 166.9; 37 68 727.1; 37 51 804.6; 37 50 201.8; 35 87 270.5;

Germany Design Patents No. M 98 01 745.4; M 96 04 515.9; M 96 04 514.0; M 94 07 689.8; M 94 02 951.2; M 499 03 583.6; M 498 11 203.9; G 93 12 884.3;

Spain Patents No. 2 090 191; 2 084 289; 2 020 960; 0 548 328;

Spain Utility Model Patent No. 2.031.748;

Spain Design Patents No. 0.137.502; 0.137.501; 0.133.573;

Greece Patent No. 910.400.544;

Japan Patents No. 2,843,696; 2,059,669; 2,055,324; 2,002,168; 1,966,525; 1,889,481; 1,792,721; 1,770,241;

Japan Design Patents No. 985,985-1; 985,985; 947,552; 945,436-1; 945,436; 1,106,089; 1,077,598; 1,072,598; 1,060,414; 1,002,123;

Korea Patents No. 76,310; 42,639; 283,770; 181,180;

Korea Design Patents No. 209,896; 209,895;

Mexico Patent No. 180,148;

Taiwan Patents No. 78,726; 66,975; 65,380; 28,275;

United Kingdom Design Registrations No. 2082526; 2072562; 2056387; 2056386; 2042174; 2038212; 2033108; 2029499.

All other brand or product names which may be mentioned in this manual are trademarks or registered trademarks of their respective companies or organizations.

Vari-Lite

10911 Petal Street

Dallas, Texas 75238 USA

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How To Obtain Warranty Service

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

To obtain warranty service, please contact customer service at 1-877-VARI-LITE (1-877-827-4548), +1-214-647-7880, or customerservice@genlytecontrols.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
10911 Petal Street
Dallas, Texas 75238 USA
Attention: Warranty Service

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



Note: The VL3500™ Wash and VL3500™ Wash FX Luminaires share many common assemblies and parts of the Vari-Lite Series 3000 Luminaires.

Compliance Notice

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

CE

Declaration of Conformity

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

Safety

EN 60598-1:2000 Luminaire Safety Standard, General Requirements
EN 60598-2-17:1989 Specification for Luminaires for Stage and Studio Lighting

EMC

EN 61000-6-4:2001 Emission Standard for industrial environments
EN 61000-6-2:2001 Immunity 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 with specific lamp types. The VL3500™ Wash Luminaire requires the Osram SharXS® HTI® 1500 W/D7/60 . 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. Note distance requirement from combustible materials or illuminated objects for VARI✻LITE® luminaires.

WARNING:
INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST ELECTRICAL SHOCK

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

WARNING:
INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST EXCESSIVE EXPOSURE TO UV RADIATION

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

WARNING:
INSTRUCTIONS FOR PROTECTION AGAINST INJURY TO PERSONS

1. Exterior surfaces of the luminaire will be hot during operation. Use appropriate safety equipment (gloves, eye protection, etc.) when handling and adjusting hot equipment and components.
2. Luminaires will have a hot lamp when operating. Disconnect power and allow lamp to cool before replacing.
3. 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 denatured 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, the lamp will automatically relight after it has cooled depending on Lamp Power-Up State 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 Lampentyps. Achten Sie auf den Lampentyp (Osram SharXS® HTI® 1500 W/D7/60), 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. Beachten Sie die Einhaltung des erforderlichen Sicherheitsabstandes der VARI✻LITE®-Scheinwerfer von brennbarem Material oder beleuchteten Objekten.

WARNUNG:
HINWEISE ZUM SCHUTZ GEGEN ELEKTROSCHOCK

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

WARNUNG:
HINWEISE ZUM SCHUTZ GEGEN ÜBERHÖHTE UV-STRAHLUNG

1. Viele VARI*LITE®-Scheinwerfer verwenden die Lampentyp, der UV-Strahlen abgibt. SCHAUEN SIE NICHT direkt in die Lampe.
2. Es ist gefährlich, Leuchten ohne Linsen oder Blenden zu bedienen. Blenden, Linsen oder Ultraviolettschirme 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 denaturiertem 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.
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 type de lampes. Vérifier le type de lampe (Osram SharXS® HTI® 1500 W/D7/60) 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. Vérifier la distance à respecter entre les matériaux combustibles ou les objets illuminés et les luminaires VARI✻LITE®.

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE LES DÉCHARGES ÉLECTRIQUES

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

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE UNE EXPOSITION EXCESSIVE AUX RAYONS UV

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

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE LES ACCIDENTS POUVANT ENTRAÎNER DES BLESSURES

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

AVERTISSEMENT:
INTERFÉRENCE RF

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

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 automatiquemet après s'être refroidie. Cela dépend de la manière dont le système est réglé pour le statut de mise en marche de la lampe.
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 CONTRAGOLPES DE CORRIENTE ELÉCTRICA, INCENDIO, EXPOSICIÓN EXCESIVA A RADIACIÓN ULTRA VIOLETA Y LESIONES A LAS PERSONAS SE PUEDE ENCONTRAR SEGUIDAMENTE:

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA INCENDIO

1. Las luminarias VARI✻LITE® han sido diseñadas para ser usadas solamente con algunas lámparas. Tome nota del tipo de lámpara (Osram SharXS® HTI® 1500 W/D7/60) 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. Tome nota de los requerimientos de distancia de materiales combustibles u objetos iluminados para las luminarias VARI✻LITE®.

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA CHOQUE ELÉCTRICO

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

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

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

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTRA LESIONES DE PERSONAS

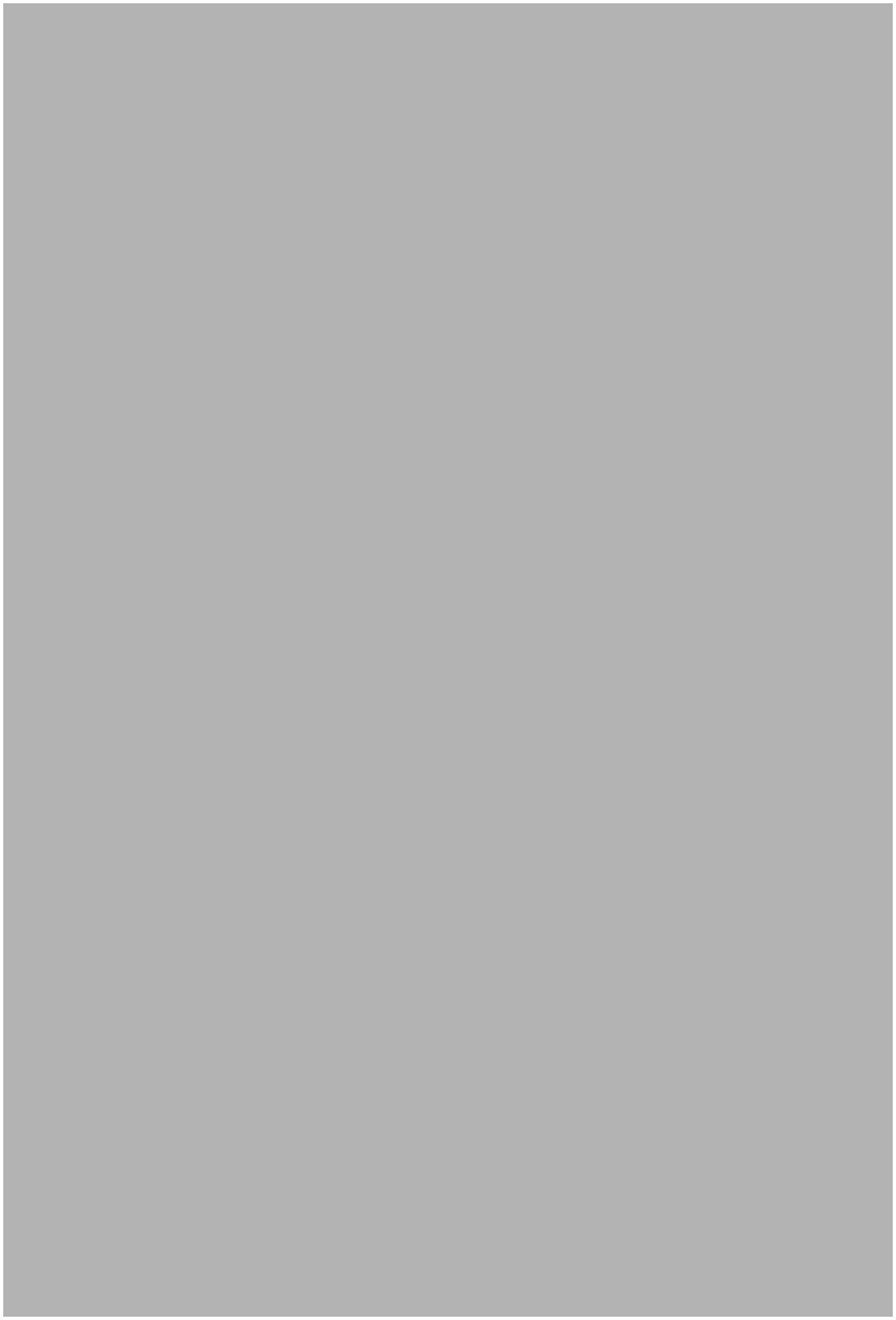
1. Las superficies exteriores de las luminarias están calientes durante su operación. Use un equipo de seguridad apropiado (guantes, protección para los ojos, etc.) cuando haga ajustes en el equipo y componentes que están calientes.
2. Cuando las luminarias están en operación la lámpara estará muy caliente. Desconecte la energía y deje que la lámpara se enfríe antes de reemplazarla.
3. 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 desnaturalizado 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.
2. La posición de encendido es universal.



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、高圧高温の状態で光を発します。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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Introduction

About This Manual

Note: The VL3500™ Wash and VL3500™ Wash FX Luminaires share many common assemblies and parts of the Vari-Lite Series 3000 Luminaires.

This manual provides descriptions, repair procedures, and illustrated parts breakdowns for all configurations of the VL3500™ Wash Luminaire. The manual is intended for use by Vari-Lite personnel and by Vari-Lite's customers/clients.

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

This manual covers the following models:

Model	Part Number	Source
VL3500™ Wash Luminaire	20.9686.0001	Arc
VL3500™ Wash FX Luminaire	20.9686.0011	Arc

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

Additional Documentation

For complete installation and operation instructions, refer to the VL3500™ Wash & VL3500™ Wash FX Luminaires User's Manual. This manual is available in both printed and electronic (PDF) formats:

- VL3500™ Wash & VL3500™ Wash FX Luminaires User's Manual (02.9686.0001)
- For more information regarding DMX512 systems, refer to the DMX512/1990 & AMX 192 Standards publication available from United States Institute for Theatre Technology, Inc. (USITT).

  USITT
  6443 Ridings Road
  Syracuse, NY 13206-1111 USA
  1-800-93USITT
  www.usitt.org

Customer Service

Our Goal

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

How to Obtain Support or Reach Us

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

or

Contact an Authorized Service Center.

or

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

Phone: 1-877-VARI-LITE (1-877-827-4548) or 1-214-647-7880

E-mail: customerservice@genlytecontrols.com

Additional Resources

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

Technical Bulletins and Notices

Technical bulletins concerning the latest changes to VARI*LITE® equipment are issued from the Dallas, Texas USA office. They are documentation supplements that contain procedures for equipment upgrades, retrofits, and repairs not found in the existing manuals. Operator technical bulletins are also issued to document changes in control software. Technical bulletins are integrated into the appropriate equipment manuals as those manuals are revised. Bulletins are categorized by assembly or subassembly, and identified by a number such as S3K-001 (VL3000 Series Luminaires Technical Bulletin number 1).

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

CHAPTER 1.

Description

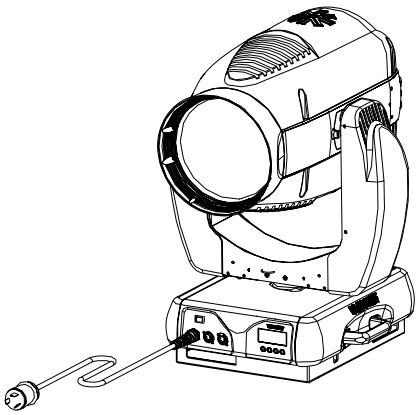
This chapter contains descriptions of luminaire features and components.

- **Features**
- **Components**



Features

VL3500 Wash & VL3500 Wash FX Standard Features



- Three-filter CYM color mixing system.
- Variable CTO color correction wheel.
- Full field dimming system.
- Dual blade strobe system.
- Fan cooled.
- UV/IR glass.
- Dual wattage, double-ended lamp capable of operation at 900W (Standby Mode), 1200W or 1500W – mode selectable from fixture or console.
- VARI✳BRITE™ mode - produces a tight, intense column of light.
- Zoomable beam optics mechanism for continuous beam size control with 10° to 50° range - dependent on the lens configuration.
- Dual, five-position (plus open) fixed color wheels.
- Five-position aperture wheel: 52, 40, 35, 30, and 25 mm (VL3500 Wash only).
- One rotating FX pattern wheel with four rotatable and indexable positions and one open position (VL3500 Wash FX only).
- Interchangeable front lenses: Fresnel and Plano Convex Stipple (standard on both models).
- Additional Plano Convex Clear front lens (VL3500 Wash only).
- Additional ULTRA Clear front lens (VL3500 Wash FX only).
- Repositional pan/tilt system.
- Control by DMX512 protocol.

WARNING: Some exceptional conditions apply to the safe operation of the VL3500™ Wash Luminaire. See "Warnings and Cautions" on page 15.

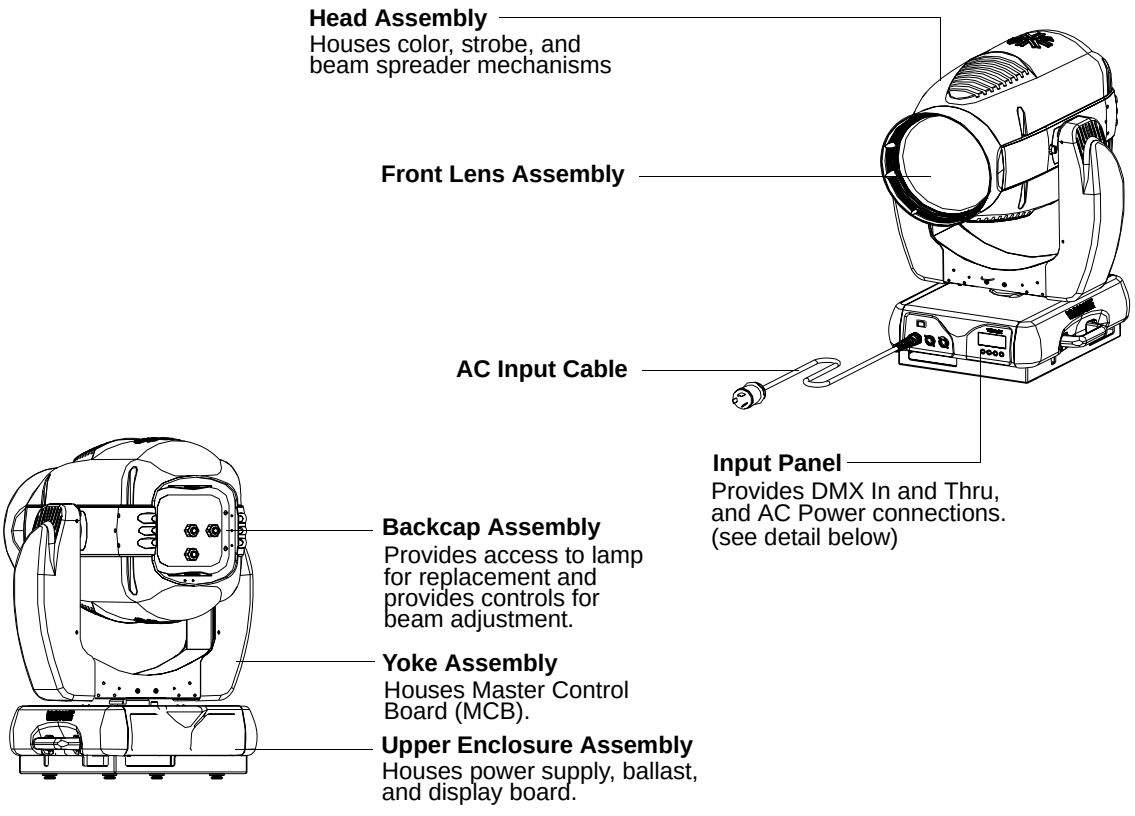
Technical Specifications

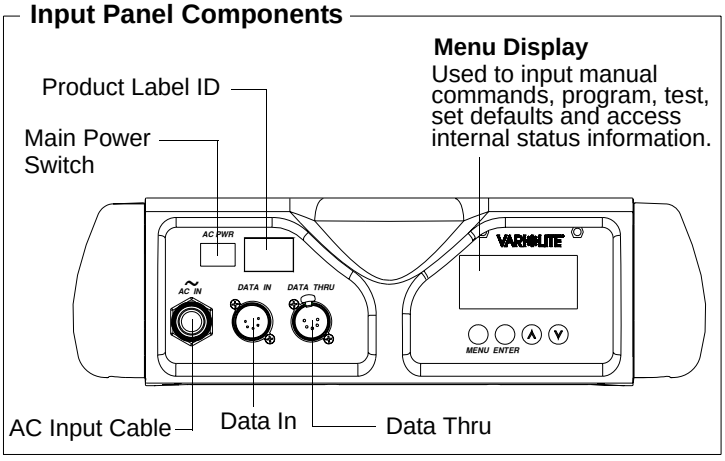
For technical specifications, refer to VL3500™ Wash and VL3500™ Wash FX Luminaires User's Manual (02.9686.0001).

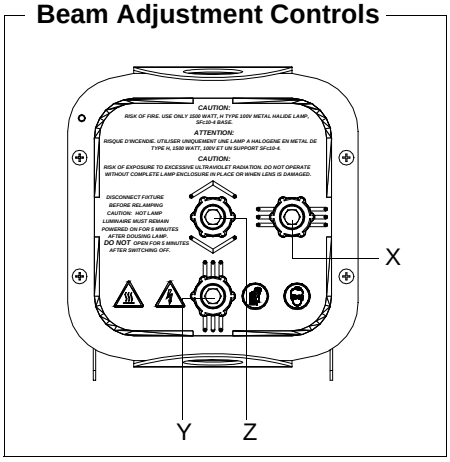
Components

External Luminaire Components

The following illustration shows the external luminaire components and controls.

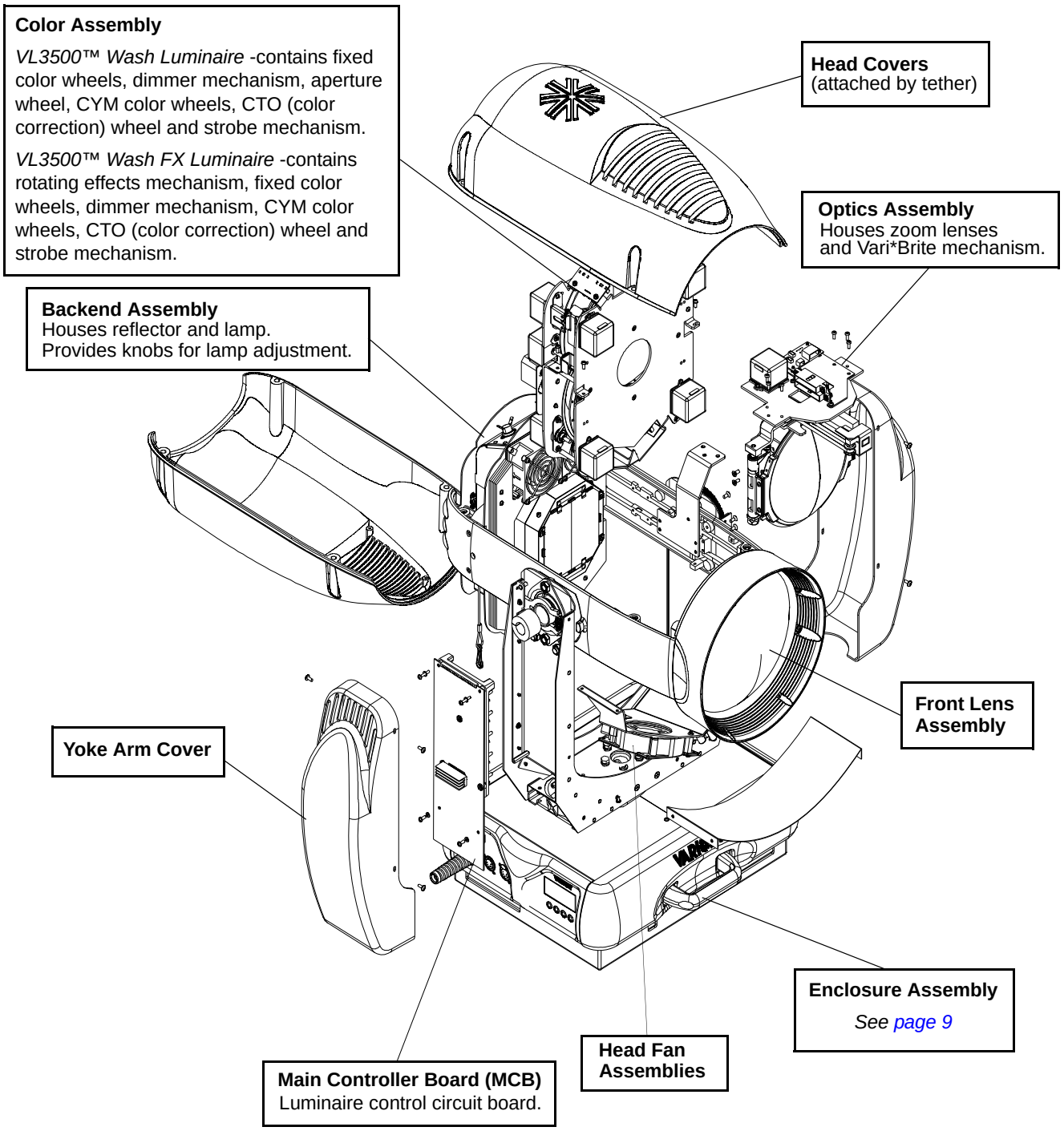






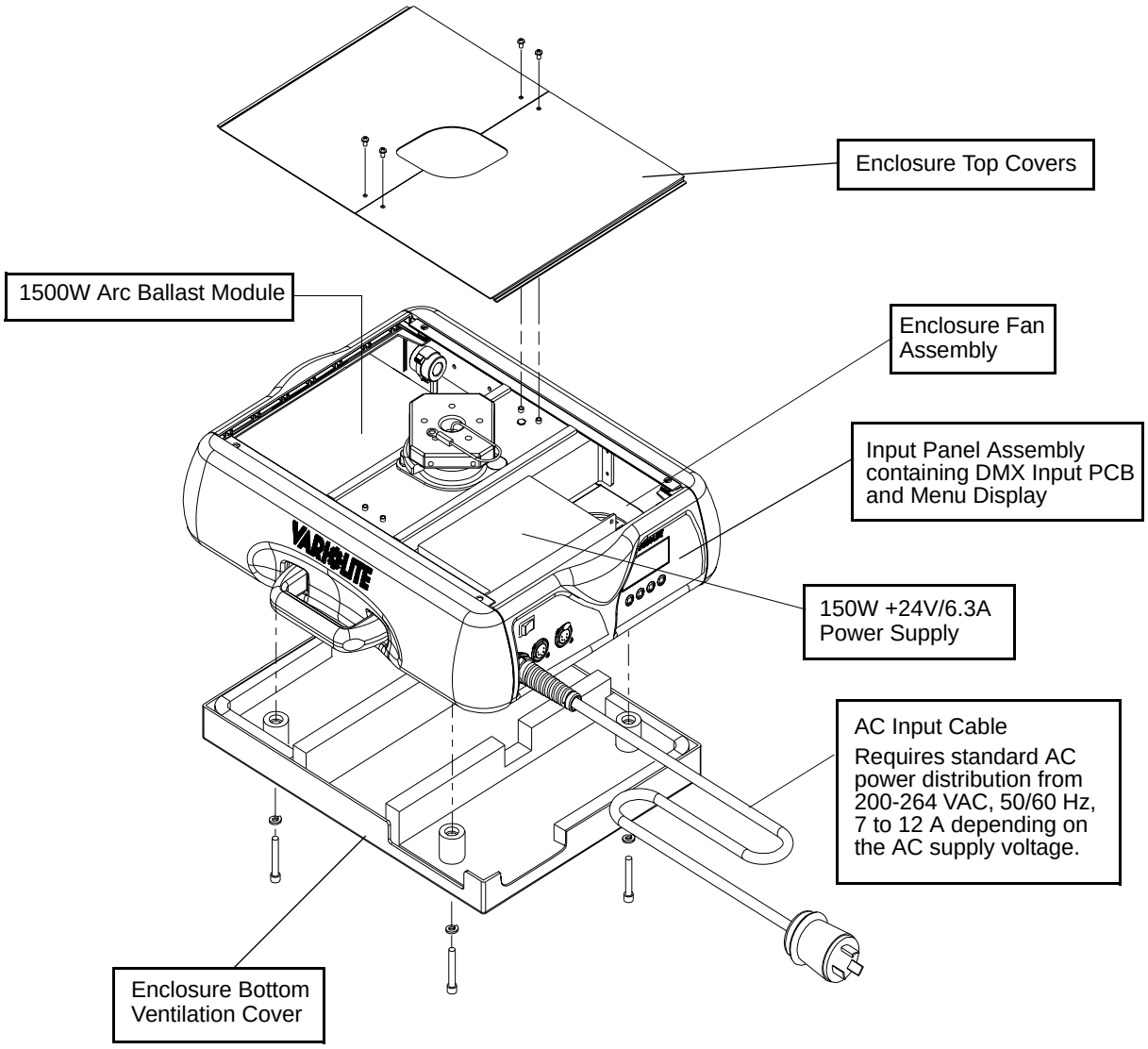
Luminaire Head and Yoke Components

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



Enclosure Components

The following illustration shows the major sub-assemblies, which are located in the luminaire enclosure assembly. (Yoke and head assemblies not shown for clarity.)



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

* International (Harmonized) Standard

Notes

CHAPTER 2.

Maintenance

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

- **Testing**
- **Warnings and Cautions**
- **Troubleshooting**
- **Maintenance Procedures**

SERVICE

WARNING: As with any repairs or maintenance to Vari-Lite luminaires, service should only be performed by a trained and qualified service technician or at an Authorized Vari-Lite Service facility.

Testing

Luminaire Self-Tests

The luminaire is capable of running self tests by using the **TEST** menu functions. For detailed instructions regarding the luminaire's self-test function, refer to the VL3500™ Wash Luminaire User's Manual (02.9686.0001).

Calibration Sequence

The following is an outline of the luminaire's standard calibration sequence:

VL3500 WASH

Phase 1

- Tilt
- Strobe
- Color Wheel 1
- Color Wheel 2

Phase 2

- Dimmer

Phase 3

- Aperture

Phase 4

- VARI✳BRITE
- CTO
- Amber
- Magenta

Phase 5

- Pan
- Zoom
- Cyan

VL3500 WASH FX

Phase 1

- Tilt
- Strobe
- Color Wheel 1
- Color Wheel 2

Phase 2

- Dimmer

Phase 3

- FX Wheel

Phase 4

- VARI✳BRITE
- CTO
- Amber
- Magenta

Phase 5

- Pan
- Zoom
- Cyan

Phase 6

- FX Index

Auto Recalibration

Most mechanisms with sensors will check their sensor when at a zero position, if the sensor is not detected within 3 seconds, the mechanism will recalibrate. This applies to all except pan and tilt, and zoom. Pan and tilt are corrected continuously if required by encoders fitted to the motor shaft.



Note: Colors (CTO and CYM) only auto recalibrate when the dimmer has been closed for 3 seconds.

Partial Recalibration

It is possible to recalibrate sections of the luminaire from a console. This allows greater flexibility and speed by only forcing a recalibration on specific mechanisms. Partial recalibration values (on the control channel) are as follows:

- Hold DMX value 102 for 3 seconds then 0 recals: Strobe, Color Wheel 1, Color Wheel 2, CYM, CTO, and Dimmer.
- Hold DMX value 128 for 3 seconds then 0 recals: Zoom, Dimmer, Aperture, and Internal Lenses.
- Hold DMX value 140 for 3 seconds then 0 recals Dimmer and Strobe.

Sensor Testing

Most mechanisms within the VL3500™ Wash Luminaire are equipped with either optical or magnetic sensors. The VL3500™ Wash master control board (MCB) has labeled test points for reading DC voltages at each sensor. Testing is best performed with a digital voltmeter for sensor readings or an Oscilloscope for pan/tilt encoder readings. The values can be used to determine whether a circuit is opening correctly or needs further troubleshooting.

Guidelines:

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

Notes regarding specific mechanisms:

- The two fixed color wheels and four color mixers read high when the tab is in the optical sensor.
- Pan and tilt sensors read high when the tab is in the sensor. The mechanism calibrates to the edge and its tab covers 50% of travel. Pan and tilt encoders are best read with a scope to read the encoder ticks.

Notes regarding lamp control:

- The douse command applies 5v to the out line. When the start command is given, this drops to 0v. This can be measured at the MCB at the ballast connection. The Out pin of the 5-pin connector should read 0v when the lamp is striking or On (Config>Lamp>Power>On). When the douse command is given (Config>Lamp>Power>Off), the reading should changed to 5v. Likewise, the standby circuit goes to standby when 5v is received on the standby line. Equally, if 5v is applied to the standby line, the lamp will go into standby mode, and if 5v is applied to the Out line, the lamp will douse.

Warnings and Cautions

Exceptional Safety Information for the VL3500 Luminaires

The light intensity and power density of the VL3500™ Wash and VL3500™ Wash FX Luminaires exceeds other fixtures typically used in this application. The warnings and cautions that follow are critically important to the safe operation of these luminaires. These products are for commercial use only. If you have any questions about the safe installation and operation of theVL3500™ Wash and VL3500™ Wash FX Luminaires, please contact VARI✻LITE customer service at 1-877-VARI-LITE (1-877-827-4548), +1-214-647-7880, or customerservice@genlytecontrols.com.

WARNING: Light Beam Projects Intense Heat
Do not illuminate objects within 3.5 m (11.5 feet) of the VL3500™ Wash orVL3500™ Wash FX Luminaire. Objects within this range can scorch, melt, or ignite from the heat projected by the light beam.

WARNING: High Intensity Light Output
Do not look directly into the light beam. Avoid looking at nearby surfaces illuminated by the beam. It is hazardous to operate luminaires without lens or shield. Shields, lenses, or ultraviolet screens must be changed if they have become visibly damaged to such an extent that their effectiveness is impaired. For example, by cracks, deep scratches, or coating breakdown.

WARNING: Hot Exterior Surfaces
The exterior surfaces of the luminaire can get very hot—up to 170ºC (338ºF). Do not touch any surface of the luminaire while it is operating. Keep all combustible materials a minimum of 200 mm (8 inches) away from the luminaire. To maintain cooling fan operation after the lamp is doused, keep the luminaire powered on for 5 minutes. Wait an additional 5 minutes before touching the luminaire.

CAUTION: Operating Environment
Do not operate the luminaire when the ambient temperature exceeds 40ºC (104ºF). Do not attempt to bypass thermostatic switches.

WARNING: Approved Lamp Type
Refer to the latest version of Vari-Lite Technical Notice TN-248 for approved lamp type(s). this technical notice is found on the vari-Lite web site at www.vari-lite.com in the Support section. The use of any lamp other than those specified or approved by Vari-Lite can result in premature wear or malfunction of the luminaire and may void the luminaire warranty.

Troubleshooting

Error Messages

If a problem occurs during luminaire calibration, at the end of the calibration sequence the Menu Display will cycle through any applicable error message(s), one at a time until the end of the list is reached. To review the error messages again, it will be necessary to access them using the Status function. (Refer to "Troubleshooting Guide" on page 17 for a list of possible causes and remedies associated with the error messages.)

To access error messages:

Step 1. Press [Menu].

Step 2. Press [Up] / [Down] arrows until **Fixture** appears. Press [Enter].

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

Table 2-1: Error Messages

Display	Message
OK	No Errors Found
Pan/No Sens	Pan sensor not found.
Pan/Encoder/Fail	Pan encoder failure.
Tilt/No Sens	Tilt sensor not found.
Tilt/Encoder/Fail	Tilt encoder failure.
Dimmer/No Sens	Dimmer sensor not found.
Cyan/No Sens	Cyan sensor not found.
Yellow/No Sens	Yellow sensor not found.
Magenta/No Sens	Magenta sensor not found.
ColWheel/No Sens	Color wheel sensor not found.
ColWheel2/No Sens	Color wheel sensor not found.
CTO/No Sens	CTO sensor not found.
Aperture/No Sens	Aperture sensor not found (VL3500 Wash Only).
FX Wheel/No Sens	FX wheel sensor not found (VL3500 Wash FX only).
FX Index/No Sens	FX index sensor not found (VL3500 Wash FX only)



WARNING: As with any repairs or maintenance to Vari-Lite luminaires, service should only be performed by a trained and qualified service technician or at an Authorized Vari-Lite Service facility.

Troubleshooting Guide

If a problem is suspected, try recalibrating the luminaire to prompt an error message. Refer to "Error Messages" on page 16 for more information. The chart below provides possible causes and remedies for each message.

Table 2-2: Troubleshooting Guide

Message	Symptom	Description	Possible Cause and Remedy
n/a	No response to DMX data	DMX Failure	MCB connector disconnected... - check MCB DATA IN connection.
n/a	Lamp douses frequently	Lamp Douse	Fan failure... - check fans for proper connection and operation.
n/a	Lamp will not strike	Lamp Strike Failure	Lamp cutout switch disengaged... - check lamp cutout switches at lamp box and fan ducts. Bad lamp... - replace lamp. Low input voltage... - check input power (must be 200 to 264 VAC)
n/a	Lamp does not strike upon start-up	Lamp Off option is config-ured	Reconfigure lamp startup option in Lamp config menu
n/a	Luminaire behaves oddly	Profile Not Matched	Profile not set correctly... - check start DMX address
No Sens	No control, continuous recalibration, and/or mechanism at wrong position	Mechanism failed to find sensor (reported for Blue, Amber, Magenta, ColWheel1, ColWheel2, CTO, or Aperture)	Motor power not connected... - connect motor power. Sensor not connected... - connect sensor. Interconnect board not connected securely... - check connection, inspect for bent pins. Movement restricted or impeded... - remove obstruction, check cable routing, and/or check voltage at MCB test point.
n/a	Luminaire does not power-up	No power	Switch not turned on... - verify switch is turned on. Not plugged in... - ensure A/C cable is connected to power source.
Pan/ Encoder/ Fail	Luminaire will not pan	Pan Encoder Failure	MCB pan/tilt connector disconnected... - connect MCB pan/tilt connector (J8). Pan motor disconnected - connect pan motor power. Encoder faulty... - replace pan end-of-travel/encoder sensor assembly.

Table 2-2: Troubleshooting Guide (Continued)

Message	Symptom	Description	Possible Cause and Remedy
Pan No Sens	Luminaire will not pan	Pan Sensor Not Found	EOT flag attached to large pulley is not engaging the EOT sensor... - ensure flag is attached to the large pulley. - ensure that flag passes through the sensor at a depth sufficient to engage the sensor beam. Pan belt disconnected, extremely loose or not installed properly... - properly install belt between pan motor and large pulley.
Tilt/ Encoder/ Fail	Luminaire will not tilt	Tilt Encoder Failure	MCB pan/tilt connector disconnected... - connect MCB pan/tilt connector (J8). Tilt motor disconnected - connect tilt motor power. Encoder faulty... - replace tilt end-of-travel/encoder sensor assembly.
Tilt No Sens	Luminaire will not tilt	Tilt Sensor Not Found	EOT flag attached to large pulley is not engaging the EOT sensor... - ensure flag is attached to the large pulley. - ensure that flag passes through the sensor at a depth sufficient to engage the sensor beam. Tilt belt disconnected, extremely loose or not installed properly... - properly install belt between tilt motor and large pulley.
n/a	Color, dimmer or strobe mechanisms will not move	Color, Dimmer, or Strobe Failure	MCB connector disconnected... - check MCB connector at J11. Check Interconnect board.
n/a	Zoom/Edge or beam spreader mechanisms will not move	Zoom/Edge or Beam Spreader Failure	MCB connector disconnected... - check MCB connector at J10. Check Interconnect board.
n/a	Aperture mechanism will not move	Aperture Failure	MCB connector disconnected... - check MCB connector at J9. Check Interconnect board.
n/a	Self tests will not run or software download does not work.	DMX Data Input	Detecting DMX data... - disconnect DMX input cable.
n/a	Erratic control of luminaire	DMX Termination	No DMX termination or termination not correct... - check DMX terminator.

Maintenance Procedures

WARNING: As with any repairs or maintenance to Vari-Lite luminaires, service should only be performed by a trained and qualified service technician or at an Authorized Vari-Lite Service facility.

Lamp Replacement

Parts:71.9686.1502

WARNING: Ensure that power is removed from luminaire when installing lamp. Always wear eye protection when opening lamp box and replacing lamps.

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

To install lamp:

Step 1. Remove power from luminaire.

Step 2. At rear of luminaire head, loosen four 1/4-turn screws and slide hinged lamp box back and out.

Step 3. Remove current lamp.

Step 4. Position new lamp with dimple side toward lamp socket. Insert lamp in connector. Ensure lamp is fully seated in place.

Step 5. Close lamp box and re-tighten 1/4-turn screws.

Step 6. Align lamp for flat field after power up, as detailed in "Align Lamp" on page 20.

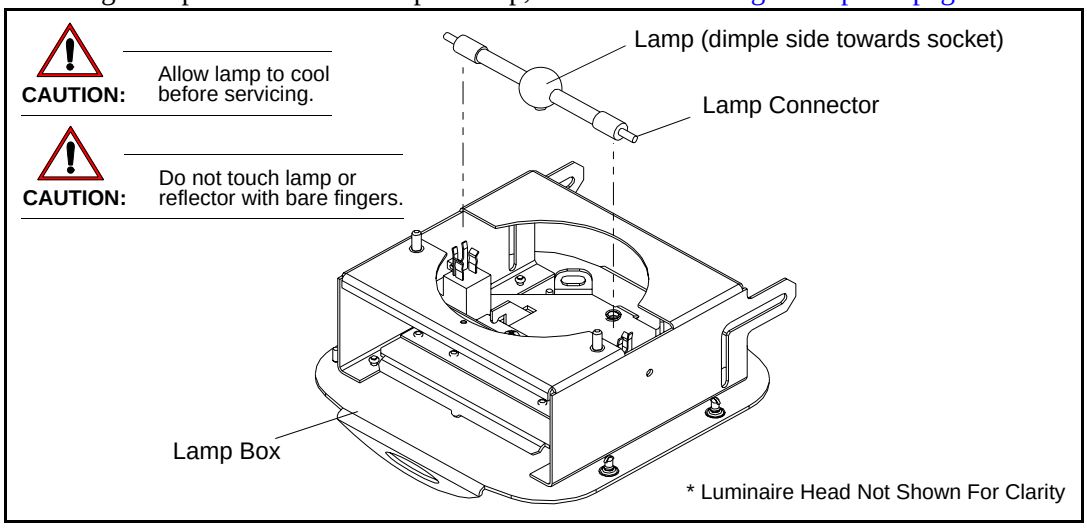


Figure 2-1: Lamp Replacement

Align Lamp

The design of the VL3500™ Wash luminaire optical system allows for a flat or peaked field. A flat field has no detectable hot spot. A peaked field has more intensity at the center of the beam than at the perimeter.

After you install a new lamp, align the lamp to optimize the beam. Use the knobs on the luminaire backcap to make the adjustments.

WARNING: Backcap and adjustment knobs are HOT during lamp operation. Wear gloves to prevent burns.

To align lamp:

Step 1. Strike lamp.

Step 2. At Menu Display, select **Test** and then select **Lamp**. This setting facilitates lamp alignment by disabling the pan and tilt motors, opening the dimmer, and opening the internal lenses.

Step 3. Position beam on a white wall at a distance of 12 to 20 feet.

Step 4. At backcap, using X, Y and Z adjustment screws, adjust beam as required.

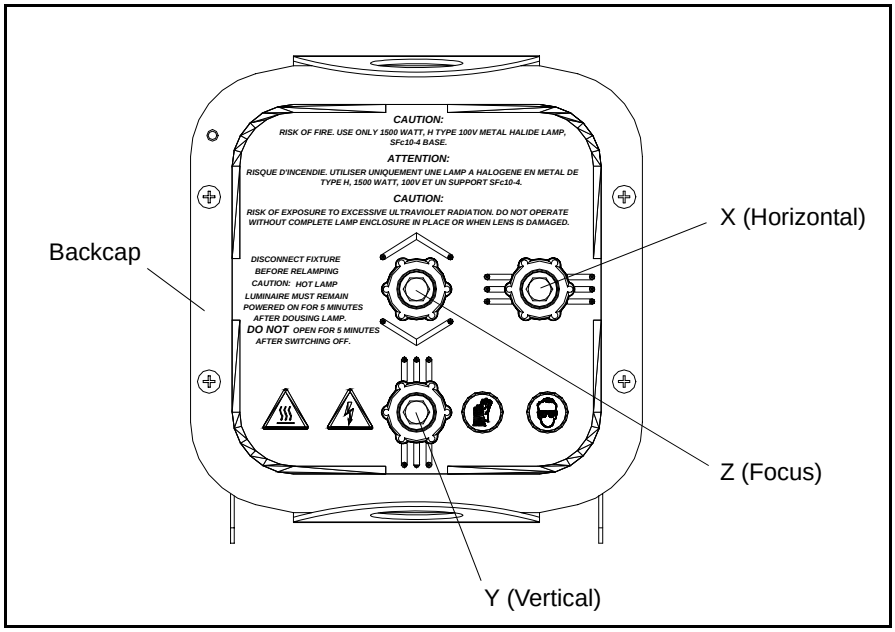


Figure 2-2: Lamp Alignment

Internal Lens Replacement

Tools:

- #2 Phillips screwdriver
- Lint-Free Cotton Gloves

To replace the internal lens assembly:

Step 1. Using a control console, close the internal lens assembly. Move internal lens assembly to front of head (close to the front lens)



WARNING: Remove power from luminaire before performing maintenance. Internal fixture components and assemblies can be HOT after operation. Allow to adequately cool before replacing.

Step 2. Remove power from luminaire.

Step 3. As shown in Figure 2-3, remove the bottom head cover by loosening four 1/4-turn screws.



CAUTION: Wear cotton gloves or other covering while replacing lenses. If required, clean any fingerprints or debris from the lenses with isopropyl alcohol and a soft cloth.

Step 4. At the internal lens assembly, remove the two retaining knobs and the cross strap securing the lens.

Step 5. Slide each section of lens assembly, straight up, and off the hinge rods.

Step 6. Slide the replacement lens assemblies onto the hinge rods.



CAUTION: As shown in ***Detail A*** in Figure 2-3, insure that each lens is aligned and inserted into the keyed carrier and ensure lens is in front (towards front lens) of bumper stops.

Step 7. Secure lens assembly by replacing the cross strap and retaining knobs. Hand tighten only.

Step 8. Replace head cover.

Step 9. Apply power the luminaire and test the function of the internal lens assembly.

Internal Lens Replacement (continued)

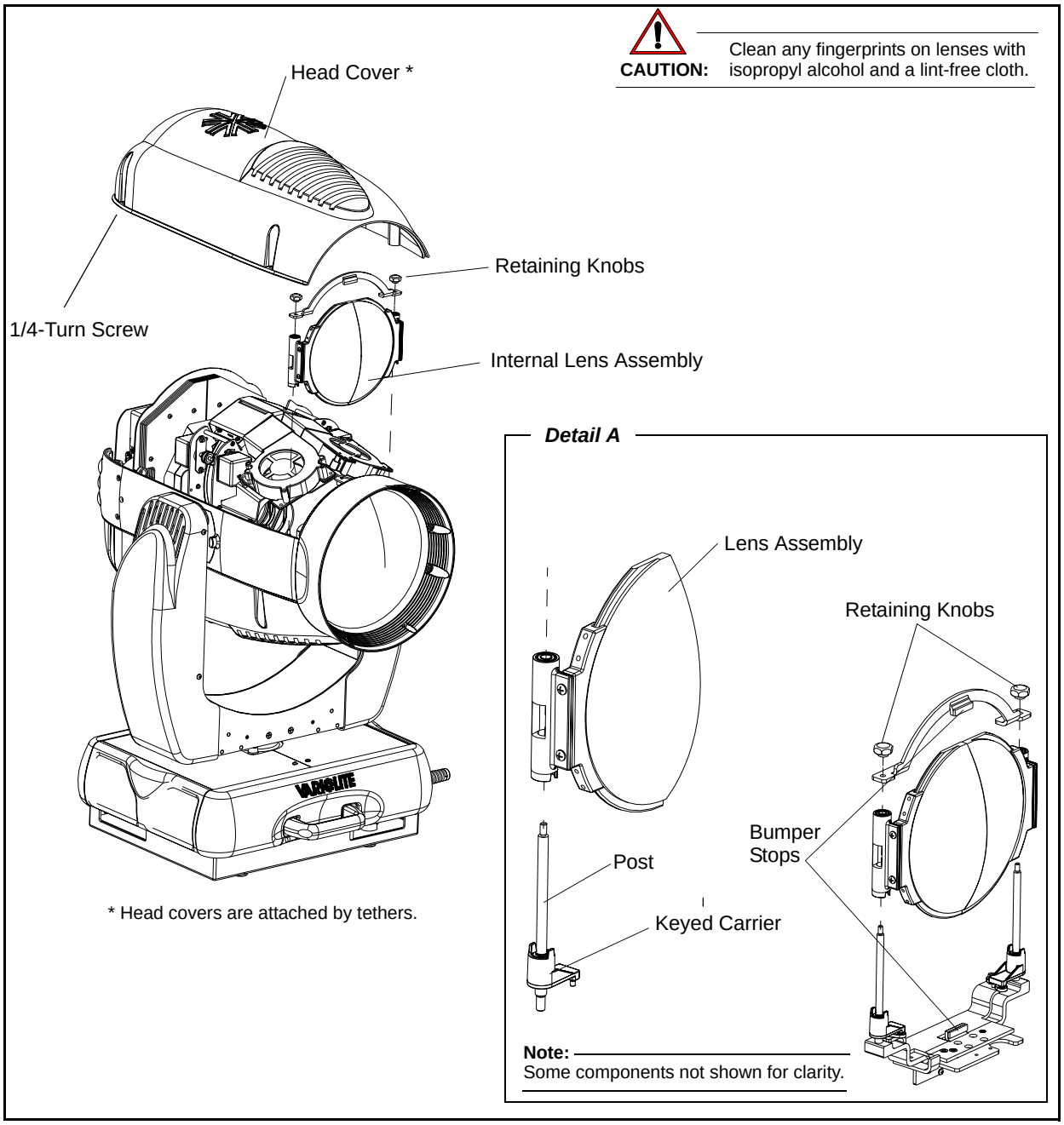


Figure 2-3: Internal Lens Replacement

Front Lens Assembly Removal

Tools:

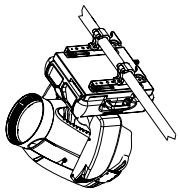
- 5/32" Allen wrench
- lint-free cotton gloves

To replace the front lens assembly:

WARNING: Remove power from luminaire before performing maintenance. Internal fixture components, assemblies, and the front lens can be HOT after operation. Allow components to adequately cool before replacing.

Step 1. Remove power from luminaire.

CAUTION: The luminaire head is a precisely balanced unit. The weight of the front lens assembly is counter-balanced inside the head. Removal of the front lens assembly can result in instantaneous uncontrolled head movement. To avoid uncontrolled movement when the luminaire is sitting on upper enclosure, point the head straight up. To avoid uncontrolled movement when the luminaire is hanging, point the head up at an angle until it rests against the tilt stops as shown here.



Step 2. As shown in Figure 2-4, remove front lens assembly by loosening the four captive 10-32 Allen head cap screws.

CAUTION: Wear cotton gloves or other covering while handling the front lens assembly. Clean any fingerprints or debris from lenses with isopropyl alcohol and soft cloth if required.

Step 3. Carefully position replacement front lens assembly so captive screws align with guide pins and mounting holes as illustrated in Figure 2-4.

Step 4. Tighten each captive screw to secure the front lens assembly to luminaire head.

Step 5. The luminaire is ready for operation.

Front Lens Assembly Removal (continued)

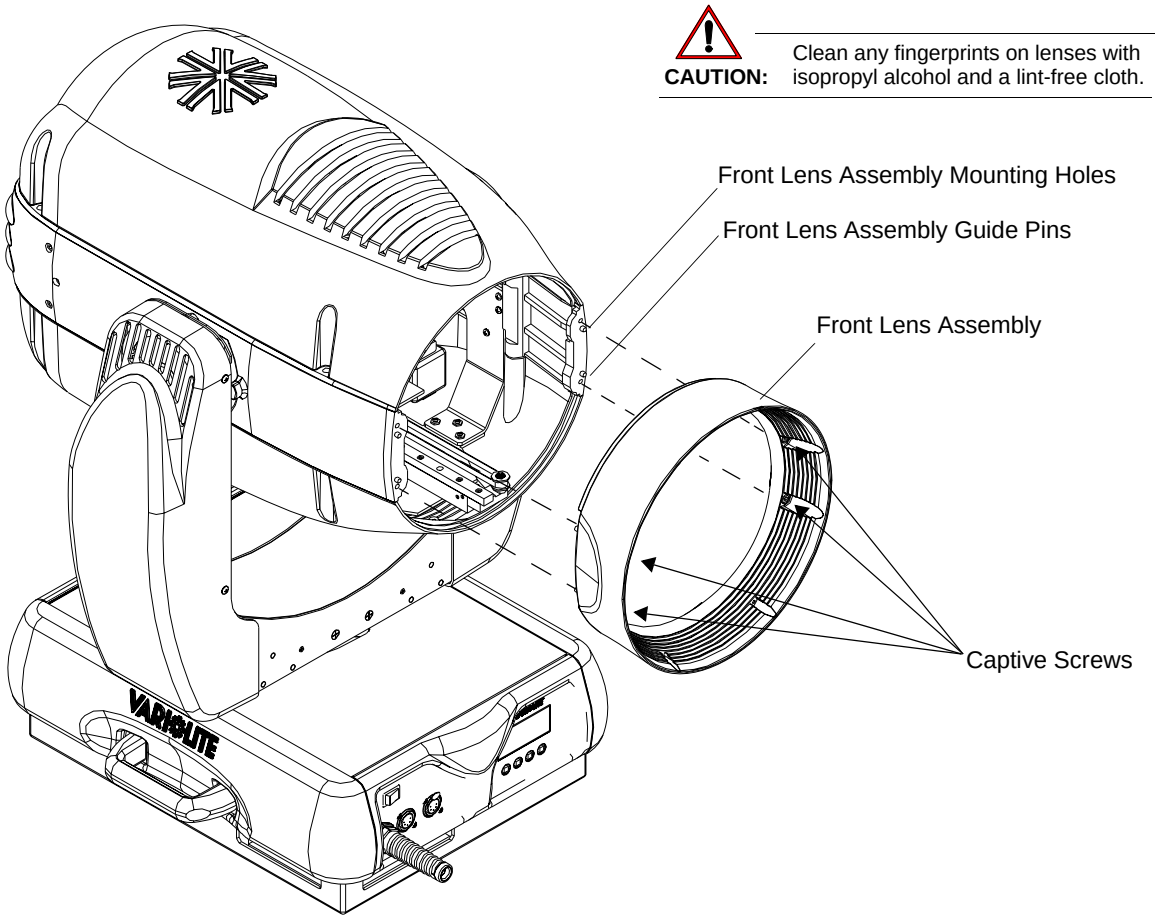


Figure 2-4: Front Lens Assembly Removal

Color Filter Replacement

Tools:

- #2 Philips screwdriver
- Lint-free cotton gloves

WARNING: Remove power from luminaire before performing maintenance. Filters can be HOT after operation. Allow the fixture to cool before removing filters.

To replace a color filter on Color Wheel 1:

Step 1. Remove power from luminaire.

Step 2. Remove bottom head cover by loosening the four 1/4-turn screws.

Step 3. As shown in Figure 2-5, open door on the cooling-air duct.

CAUTION: Do not touch filters with bare fingers. Wear cotton gloves or other covering while replacing filters. To clean filters, use isopropyl alcohol and soft cloth.

Step 4. Rotate Color Wheel 1 until the filter you are changing is accessible.

Step 5. To improve access to the filter, rotate the mixed color wheels to position the cut-outs next to the filter you are changing.

Step 6. Gently press the color filter toward the lamp until it is free of the lock pins. Remove the filter from the wheel.

Step 7. Slide the new filter (orient coating side towards lamp) under the spring clip until it is securely retained by the lock pins.

Step 8. Close the air-duct door. Replace the head cover.

To replace a color filter on Color Wheel 2:

Step 1. Remove power from luminaire.

Step 2. Remove top head cover by loosening the four 1/4-turn screws.

CAUTION: Do not touch filters with bare fingers. Wear cotton gloves or other covering while replacing filters. To clean filters, use isopropyl alcohol and soft cloth.

Step 3. Rotate Color Wheel 2 until the filter you are changing is accessible.

Step 4. To improve access to the filter, rotate the mixed color wheels to position the cut-outs next to the filter you are changing.

Step 5. As shown in Figure 2-5, gently press the color filter toward the lens until it is free of the lock pins. Remove the filter.

Step 6. Slide the new filter (orientation does not matter) under the spring clip until it is securely retained by the lock pins.

Step 7. Replace the head cover.

Color Filter Replacement (continued)

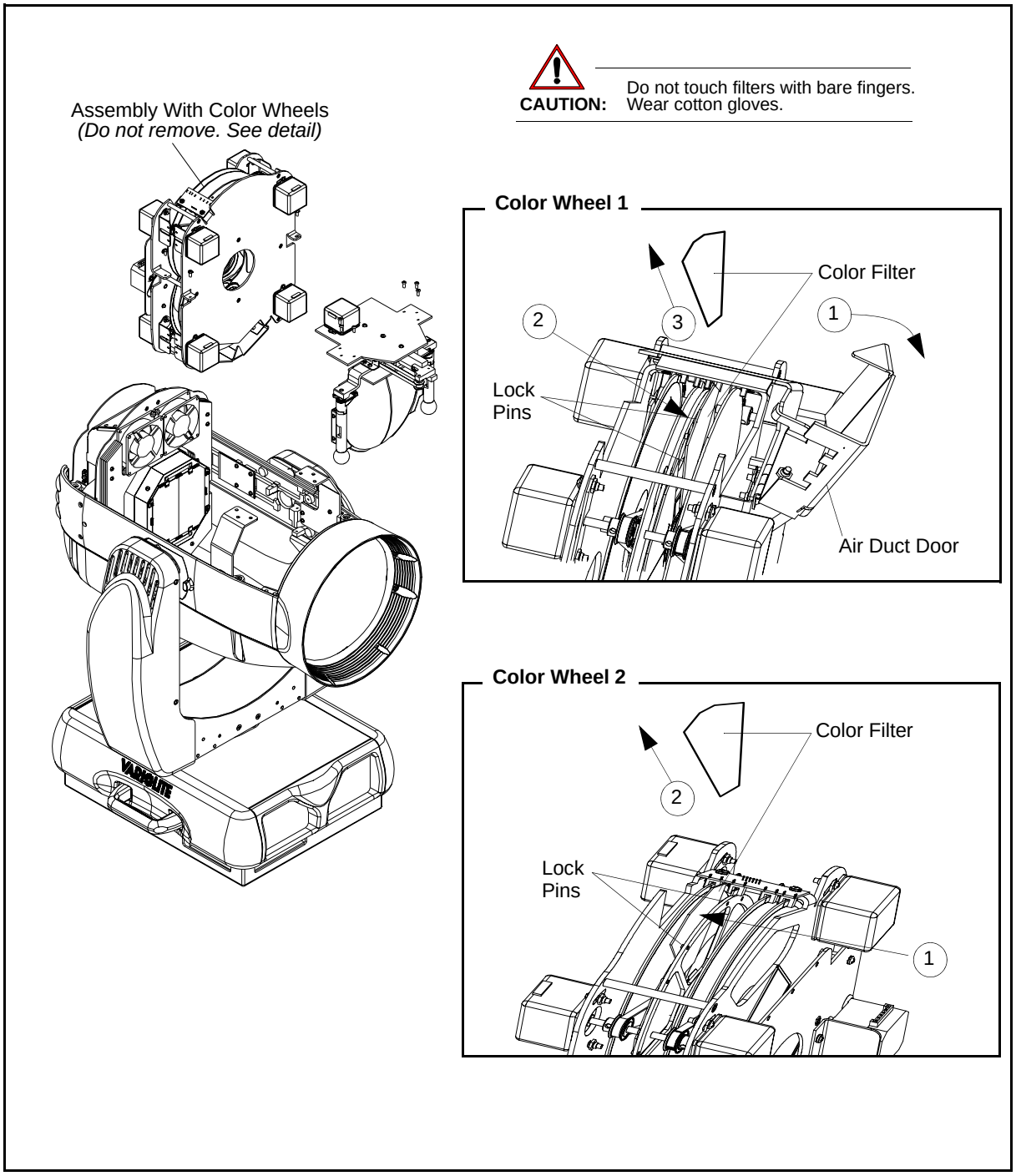


Figure 2-5: Replacing a Color Filter

Effects Pattern Replacement - VL3500 Wash FX Only

Tools:

- #2 Philips screwdriver
- Lint-free cotton gloves

WARNING: Remove power from luminaire before performing maintenance. Patterns can be HOT after operation. Allow the fixture to cool before removing patterns.

To replace an effects pattern on Rotating Effects Wheel:

Step 1. Remove power from luminaire.

Step 2. Remove bottom head cover by loosening the four 1/4-turn screws.

Step 3. As shown in Figure 2-6, open door on the cooling-air duct.

CAUTION: Do not touch patterns with bare fingers. Wear cotton gloves or other covering while replacing or cleaning patterns. To clean patterns, use isopropyl alcohol and soft cloth.

Step 4. Rotate Yellow Wheel until cut-out faces up.

Step 5. Rotate Effects Pattern Wheel to desired pattern.

Step 6. At pattern's planet gear, gently rotate two planet gear latches that secure pattern planet gear.

Step 7. Remove planet gear containing the pattern from assembly.

Step 8. If replacing pattern, perform the following, if not proceed to Step 9.

a. At planet gear, rotate retaining spring from assembly.

b. Gently press pattern out from planet gear.

c. Install new pattern in same orientation (including black side up in the gear as shown in Figure 2-6 - reflective side must face lamp). This ensures all will calibrate in the same orientation.

Note: If installing same pattern in multiple fixtures, utilize same orientation (in relation to the planet gear) in all fixtures.

d. Use care in reinstalling retaining spring. Spring can scratch pattern.

Step 9. Rotate rotating effects wheel until you see the small indexing hole in the sun gear.

Step 10. When reinstalling planet gear assembly, you must align the index mark in the planet gear with the index mark (small indexing hole) in sun gear. Install pattern.

Step 11. Reengage two retaining latches. Ensure the latches are properly (and equally) positioned over neighboring planet gear assemblies.

Step 12. Close the air-duct door.

Step 13. Replace bottom head cover.

Effects Pattern Replacement - VL3500 Wash FX Only (continued)

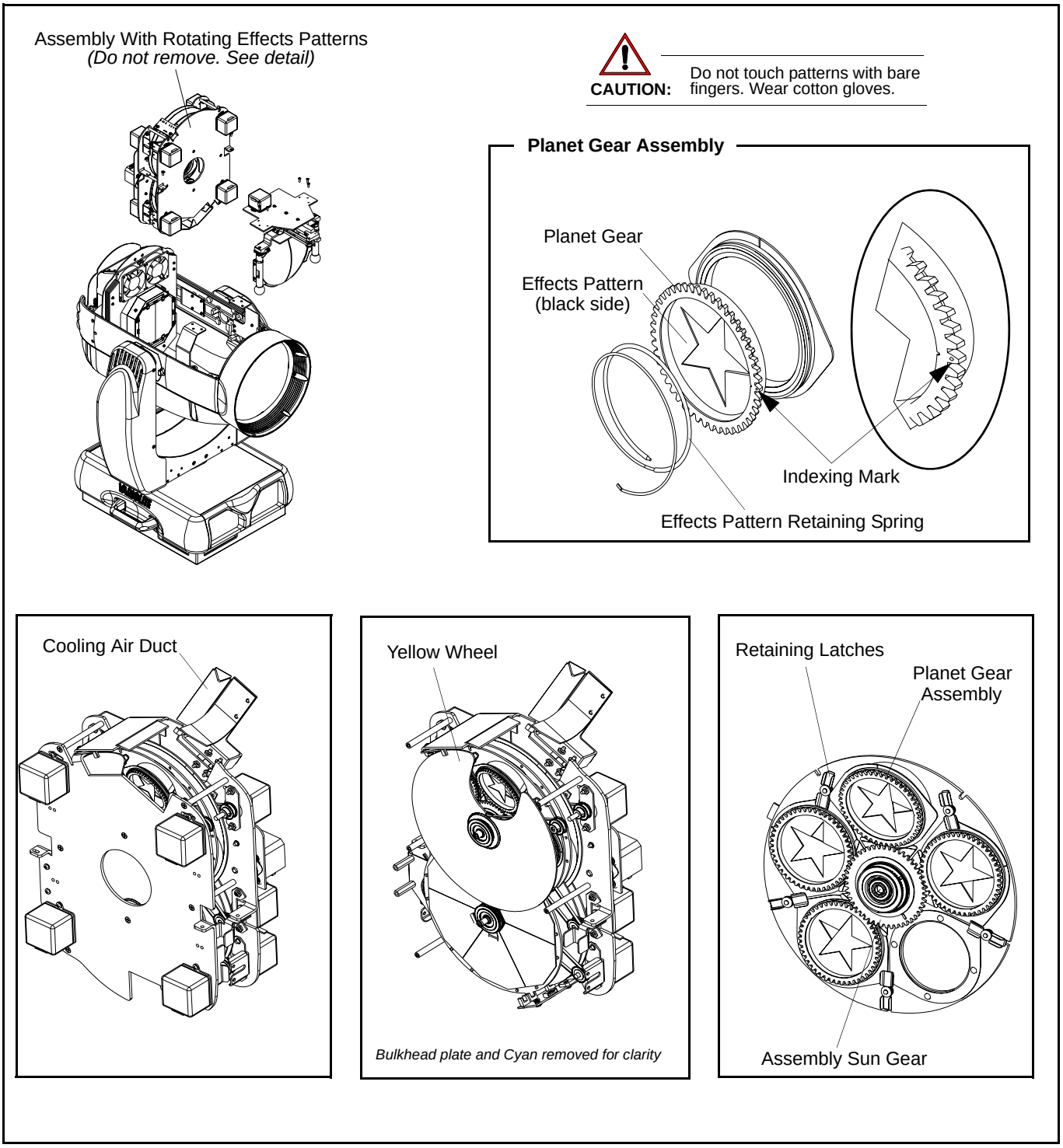


Figure 2-6: Effects Pattern Replacement - VL3500 Wash FX Only

Ballast Assembly Replacement

Parts:23.9686.1500

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source. Place the luminaire on the upper enclosure.

Step 2. As shown in Figure 2-7, at the upper enclosure, remove four 6-32 x 1/4" screws and remove both top covers.

Step 3. In each top corner, remove four 6-32 x 3/8" screws.



CAUTION: During the next step, do not allow the front lens to contact anything that could damage the lens coating.

Step 4. Set the luminaire on the front lens casting to access the ventilation cover.

Step 5. At bottom of the enclosure, remove four 1/4-20 x 1 5/8" socket screws and 1/4" split lock washers. Remove the ventilation cover.

Step 6. Remove both handles by removing two 10-32 x 5/8" screws for each handle.

Step 7. At bottom of the enclosure, remove four 6-32 x 1/4" screws and remove both side covers.

Step 8. Remove two 6-32 x 3/8" screws, the APS end bracket, and the end cover from ballast side.

Step 9. At bottom of the enclosure, disconnect the exhaust fan cable.

Step 10. At the exhaust fan, remove four 8/32 x 3/8" screws. Remove the exhaust fan.

Step 11. At the ballast, disconnect the following cable assemblies:

a. AC input at the wiring connector (attached ferrite remains with the ballast)

b. lamp wires

c. control wiring

Step 12. Hold the ballast assembly to prevent it from falling. At bottom of enclosure, remove three 8-32 x 3/8" flat-head screws and four 8/32 x 3/8" philister-head screws, which secure the ballast assembly to the enclosure.

Step 13. Carefully remove the ballast from the enclosure to avoid damage to cable assemblies.

Step 14. Follow Steps 2-13 in reverse order to install the replacement ballast. When reinstalling ventilation cover, be sure standoffs are seated flush to chassis.

Ballast Assembly Replacement (continued)

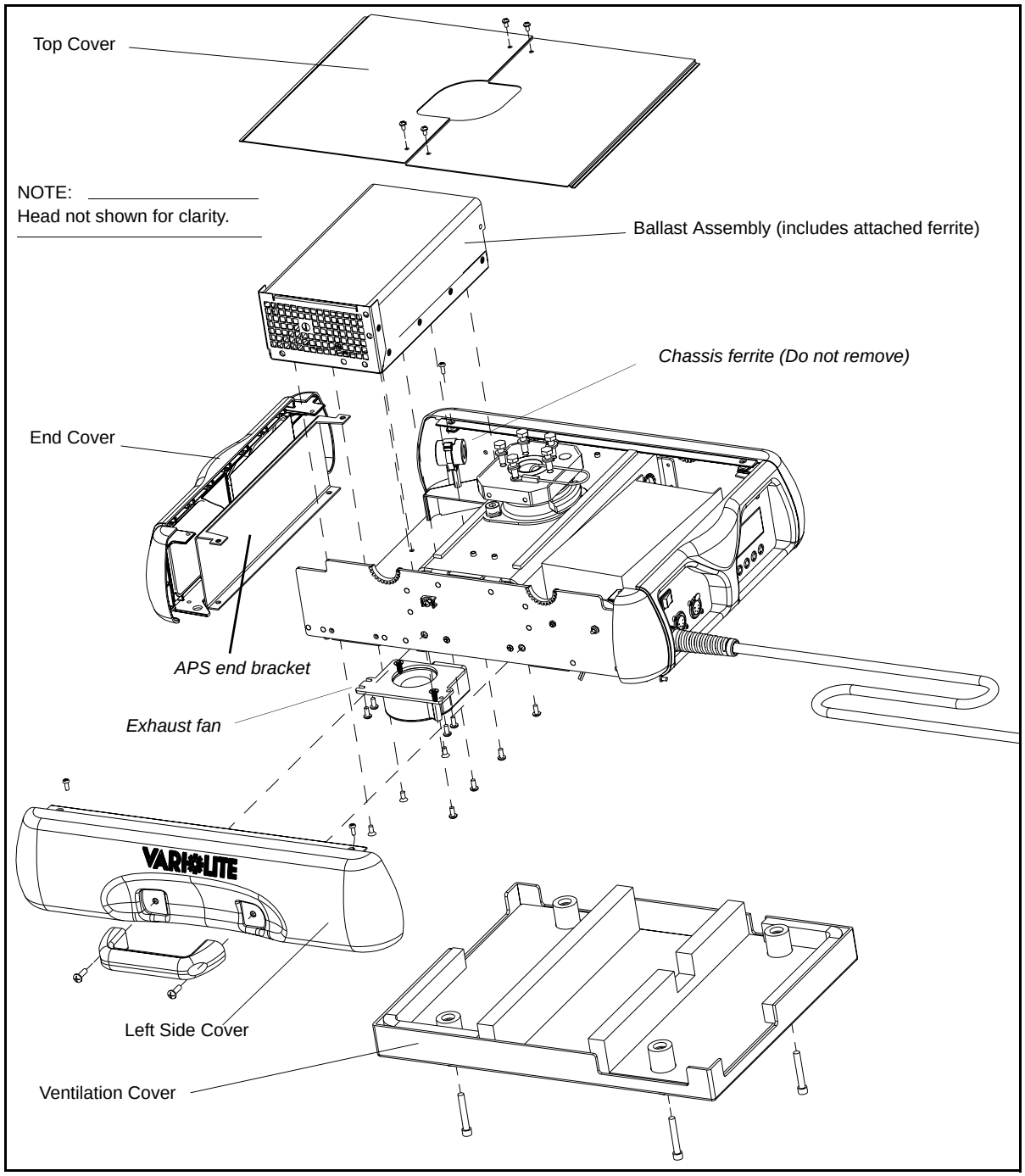


Figure 2-7: Ballast Assembly Replacement

Color/Dimmer/Strobe Assembly Replacement

Parts:21.9686.0400 (VL3500 Wash Only)

Parts:21.9686.1400 (VL3500 Wash FX Only)

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source. As shown in Figure 2-8, stand the luminaire on the upper enclosure. Use the orientation of the backcap label to determine the top and bottom of luminaire head.



WARNING: Before performing this modification, remove all power sources from the luminaire.

Step 2. Loosen the four quarter-turn fasteners and remove the top head cover. Likewise, remove the bottom head cover.

Step 3. Tilt the luminaire so the top of the backcap faces upward and front lens points downward. The Head-cable Interconnect must be facing up and the fans facing down.



CAUTION: Be careful not to damage wiring during the next step.

Step 4. Note the location of the wire ties on the head cable assembly. Carefully cut the two wire ties that hold head cable assembly together. Cut the two wire ties that attach the head cable assembly to the Color/Effect/Strobe module.

Step 5. At the Head Cable Interconnect, disconnect the head cables from both sides of the headers (4 cables).

Step 6. Disconnect zoom optics cable from interconnect.

Step 7. Disconnect the fan cable connector.

Step 8. As shown in Figure 2-8, remove the four 6-32 x 3/8" PPZ SEMS screws that hold the Color/Effect/Strobe module to the two attachment points on each side rail. Note position of wire harness guide which will be removed in this step.

Step 9. At the yoke on the MCB side, remove four 6-32 x 5/16" PTB screws and remove the yoke cover. Carefully pass the cable assemblies you disconnected in Step 5 back through the tilt tube.



CAUTION: Be careful not to damage the wires or the module during the next step.

Step 10. To clear the opening between the attachment points on the right side rail, lift the Color/Effect/Strobe module up and tilt it slightly toward the rear to enable the two motors on the bottom of the module to pass through the openings between the attachment points.

Step 11. Replace color/dimmer/strobe assembly in reverse order.

Color/Dimmer/Strobe Assembly Replacement (continued)

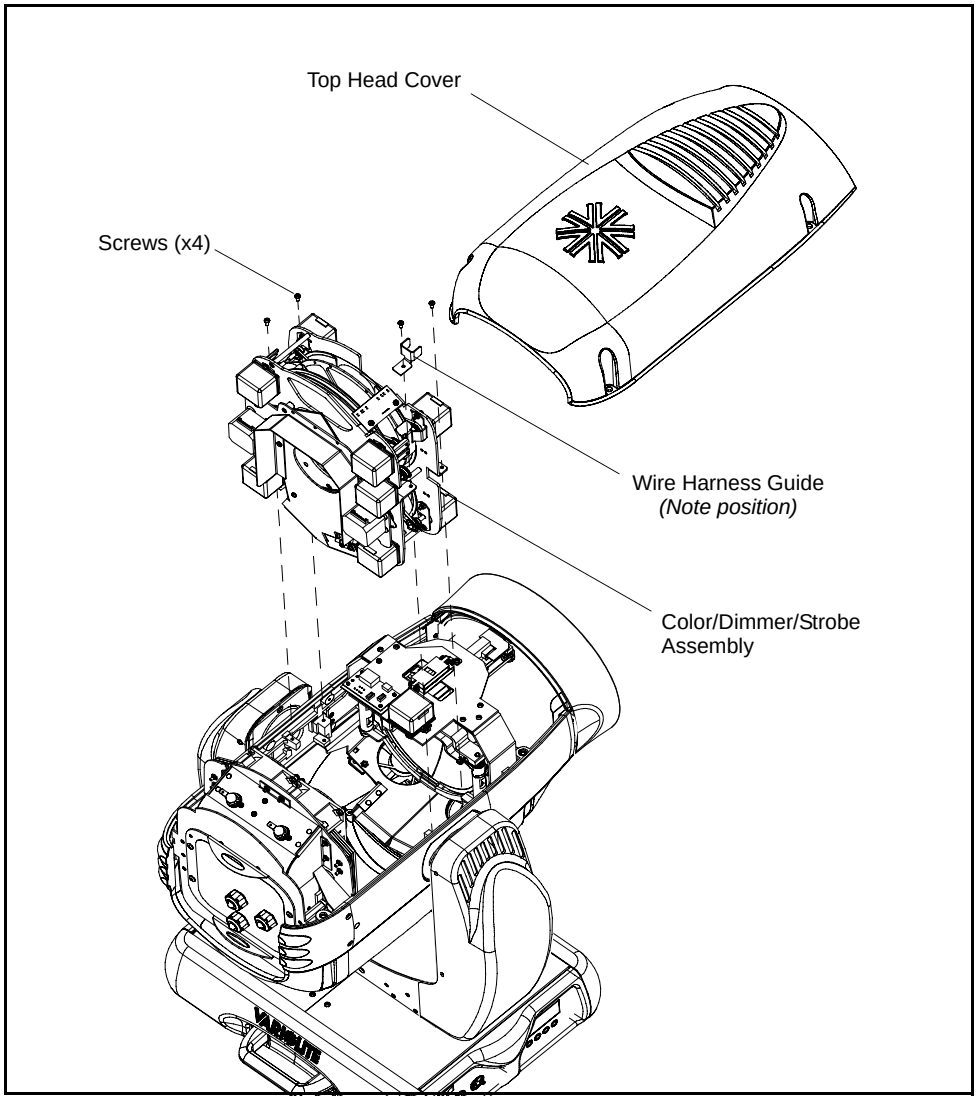


Figure 2-8: Color/Dimmer/Strobe Assembly Replacement

Internal Lens Assembly Replacement

Parts:21.9686.2150

Repair Procedure

Step 1. At the control console or the luminaire menu, close the split lens assembly.

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

Step 3. Remove the Color/Dimmer/Strobe Assembly. See “Color/Dimmer/Strobe Assembly Replacement” on page 31 for complete instructions.

Step 4. At the interconnect board, disconnect the zoom motor and split lens motor connectors.

Step 5. As shown in Figure 2-9, remove the two 6-32 x 3/8" PPZ SEMS screws and remove the interconnect board.

Step 6. Remove one 6-32 x 3/8" PPZ SEMS screw and remove the #8 cable saddle.

Step 7. Remove the three 6-32 x 3/8" PPB screws.

Step 8. Remove the split lens assembly.

Step 9. Replace the split lens assembly in reverse order.

Internal Lens Assembly Replacement (continued)

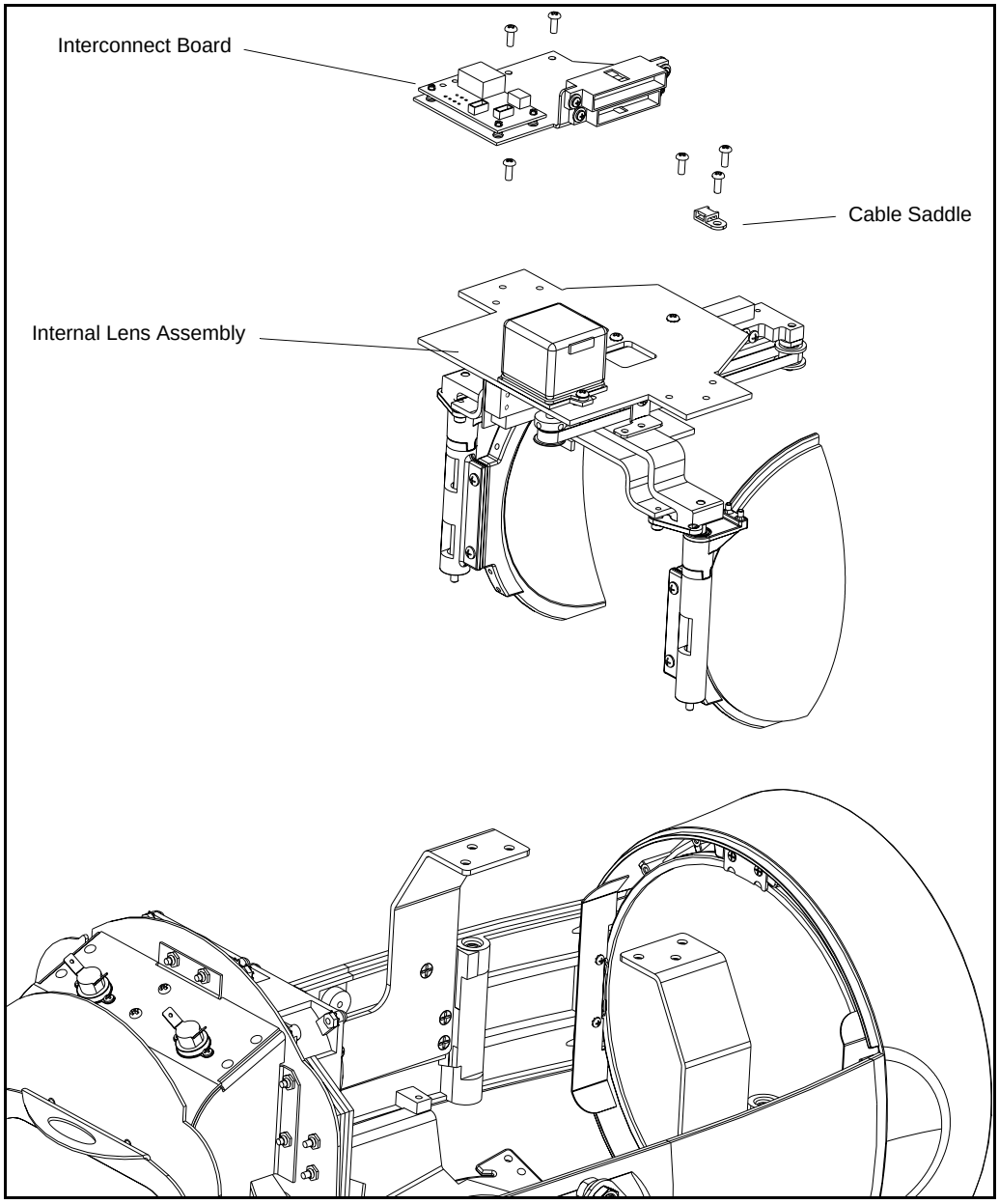


Figure 2-9: Internal Lens Assembly Replacement

Reflector Replacement

Parts:42.9686.0120

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. Remove the Color/Dimmer/Strobe Assembly. See “Color/Dimmer/Strobe Assembly Replacement” on page 31 for complete instructions.

Step 3. As shown in Figure 2-10, remove four 4-40 x 1 3/8" PPZ screws.

Step 4. Carefully remove the UV/Reflector assembly.

Step 5. Remove the springs from the reflector clamp and remove the reflector.

Step 6. Replace the reflector and UV/Reflector assembly in reverse order. Make sure the mark on the reflector lines up with the mark on the top-left reflector support; see the illustration in Figure 2-10.

Reflector Replacement (continued)

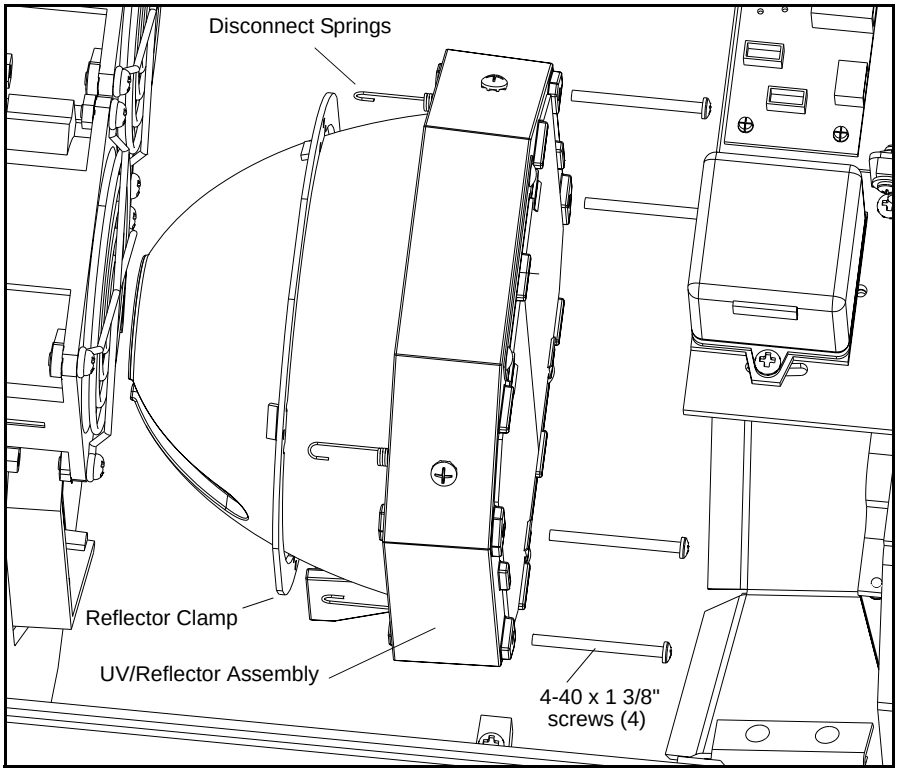


Figure 2-10: Reflector Replacement

Main Control Board (MCB) Replacement

Parts:24.9686.1429

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source.

Note: To determine which yoke leg is which without having to remove the covers, rotate yoke counterclockwise until it stops, then look at the luminaire while facing the input panel. The tilt-side leg is the leg to the left; the board-side leg is the leg to the right.

Step 2. At board-side leg, remove yoke leg cover by removing four 6-32 x 5/16" screws.

CAUTION: Always use anti-static precautions when working with PCBs.

Note: Please note placement of cable tie to saddle and cut tie.

Step 3. Disconnect wiring harness connectors J8, J9, J10 and J11.

Step 4. Remove four (4) 6-32 screws securing MCB PCB

Step 5. Disconnect upper enclosure connectors J1, J2, J3, J4 and J12 at back of MCB.

Step 6. Install replacement assembly by performing Steps 2-5 in reverse order.

Step 7. Configure using menu functions as necessary.

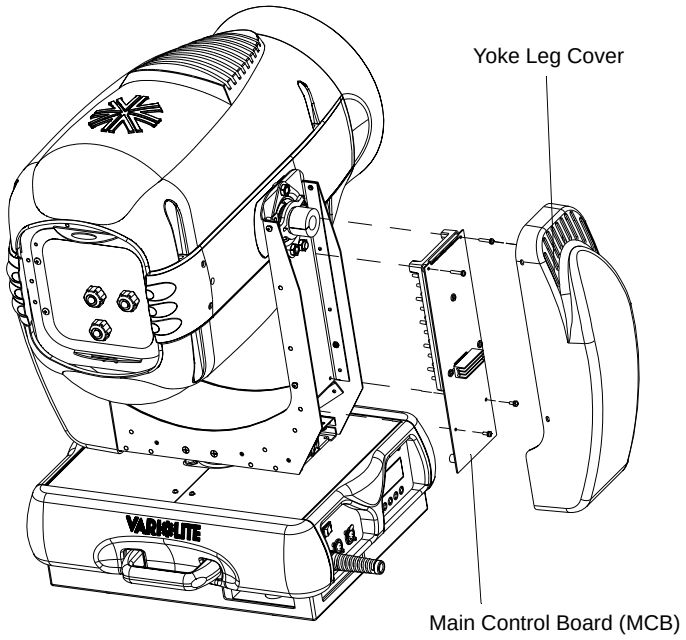


Figure 2-11: Main Controller Board (MCB) Replacement

Ignitor Board Replacement

Parts:24.9661.3126

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At tilt-side leg, remove yoke leg cover by removing four 6-32 x 5/16" screws.

CAUTION: Always use anti-static precautions when working with PCBs.

Step 3. Disconnect ignitor PCB wires by removing four screws that secure wire ring terminals to PCB and remove ignitor PCB.

Step 4. Remove four 6-32 x 3/8" screws.

Step 5. Replace by performing steps 2 through 4 in reverse.

Note: Make sure and orient ignitor properly (as shown in Figure 2-12).

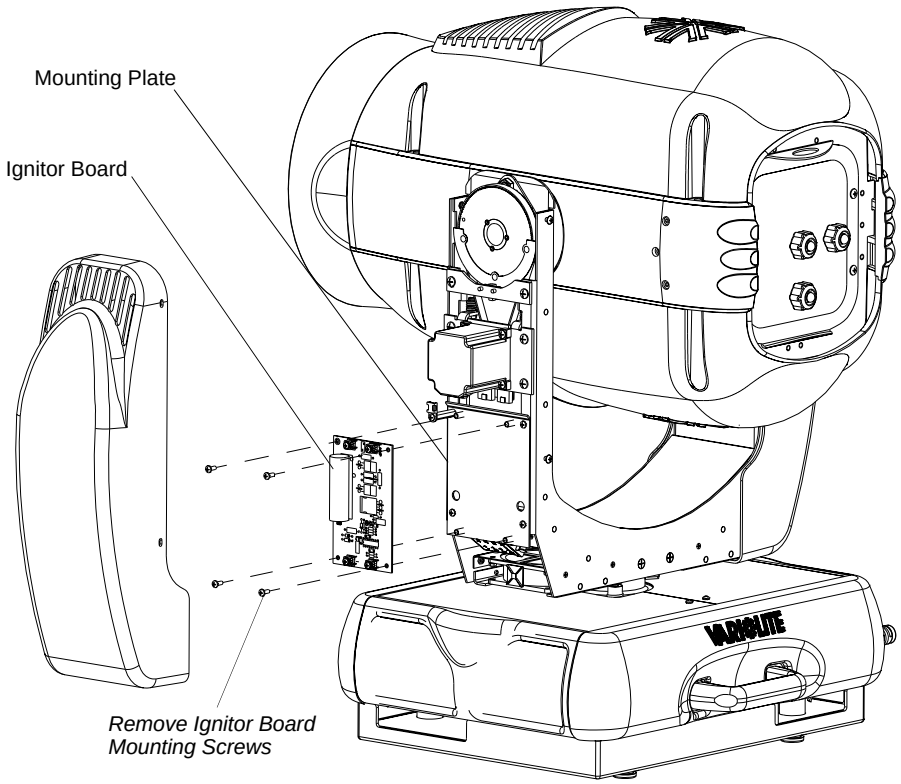


Figure 2-12: Ignitor Board Replacement

Pan Motor Assembly Replacement

Parts:21.9686.0864

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source. Place the luminaire on the upper enclosure.

Step 2. As shown in Figure 2-7, at the upper enclosure, remove four 6-32 x 1/4" screws and remove both top covers.

Step 3. In the corners on the pan-motor side, remove two 6-32 x 3/8" screws.

CAUTION: During the next step, do not allow the front lens to contact anything that could damage the lens coating.

Step 4. To provide access to the ventilation cover, set the luminaire on the front lens casting. Position the head so the pan-pulley sensor tab is inside the optical sensor.

Step 5. At bottom of the enclosure, remove four 1/4-20 x 1-5/8" socket screws and 1/4" split lock washers. Remove the ventilation cover.

Step 6. Remove the handle on the pan-motor side by removing two 10-32 x 5/8" PPB screws.

Step 7. At the enclosure bottom, remove two 6-32 x 1/4" PPB screws and the pan-motor side cover.

Step 8. At the side of the enclosure, remove two 6-32 x 3/8" PFZ screws and two 6-32 KEPS nuts that hold two cable saddles. Pull the cables out of way of the pan motor.

Step 9. Disconnect the wiring from the pan-encoder PCB.

Step 10. At the encoder PCB, remove two 4-40 x 1/4" screws and remove the PCB.

Step 11. As shown in Figure 2-13, loosen (but do not remove) four 10-32 x 3/4" SCB cap screws.

Step 12. Move pan motor assembly toward pan pulley and remove the belt from the pan pulley.

Step 13. Carefully remove the belt from around the code wheel and pass it through the tension rollers.

Step 14. Remove the four 10-32 x 3/4" SCB Cap screws loosened in Step 11.

Step 15. Pull motor assembly out of the enclosure. Remove the tension springs from the enclosure.

Step 16. Disconnect the motor wiring.

Step 17. Replace by performing steps 2 through 16 in reverse order.

Pan Motor Assembly Replacement (continued)

Note: Make sure wiring is not pinched during installation. When tightening four 10-32x3/4" SCB Cap screws that mount Pan Motor Assembly, you must tighten in a CLOCKWISE pattern starting with screw in lower left-hand side from spring.

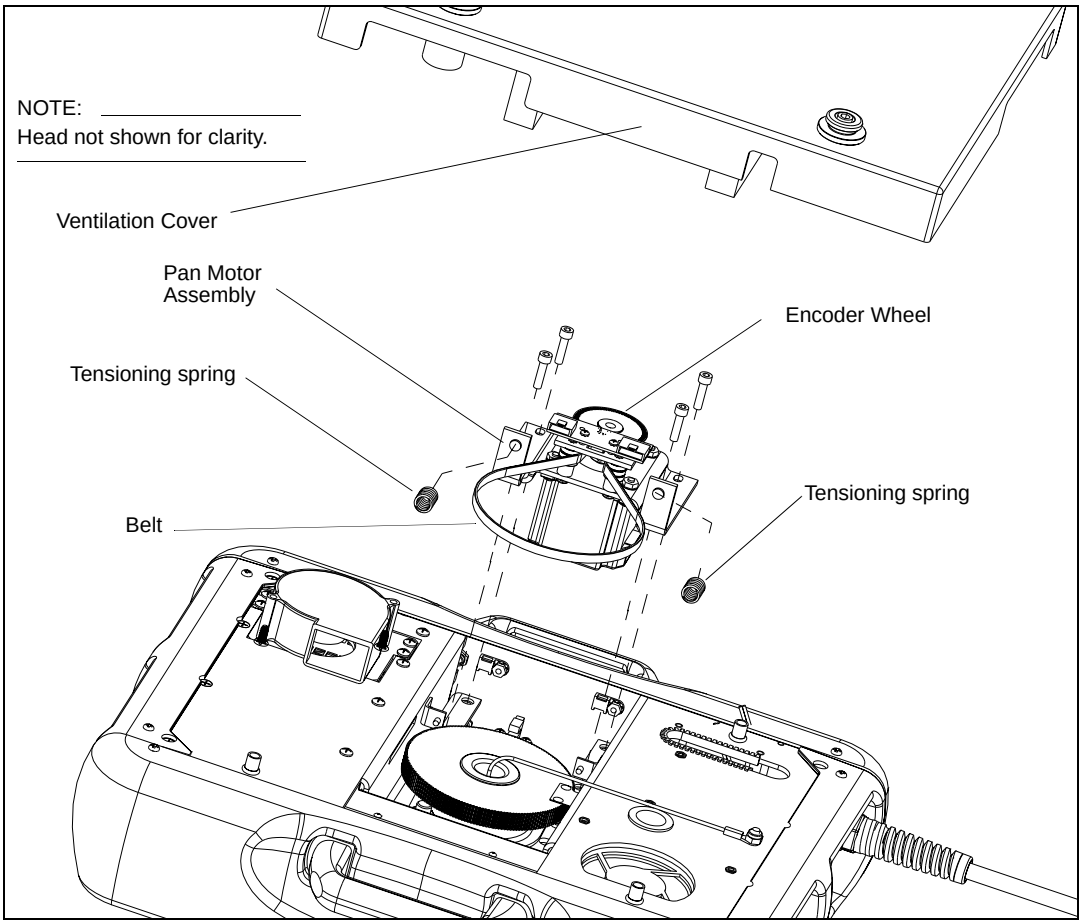


Figure 2-13: Pan Motor Assembly Replacement

Pan Encoder Replacement

Parts:24.9678.9729

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source. Place the luminaire on the upper enclosure.

CAUTION: During the next step, do allow the front lens to contact anything that could damage the lens coating.

Step 2. To provide access to the ventilation cover, set the luminaire on the front lens casting.

Step 3. At bottom of the enclosure, remove four 1/4-20 x 1-5/8" socket screws and 1/4" split lock washers. Remove the ventilation cover.

Step 4. As shown in Figure 2-14, at encoder board, remove two 4-40 x 1/4" PPZ screws.

Step 5. Disconnect wiring from encoder board.

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

Pan Encoder Replacement (continued)

Note: Make sure the encoder disk is centered in the optical sensor gap.

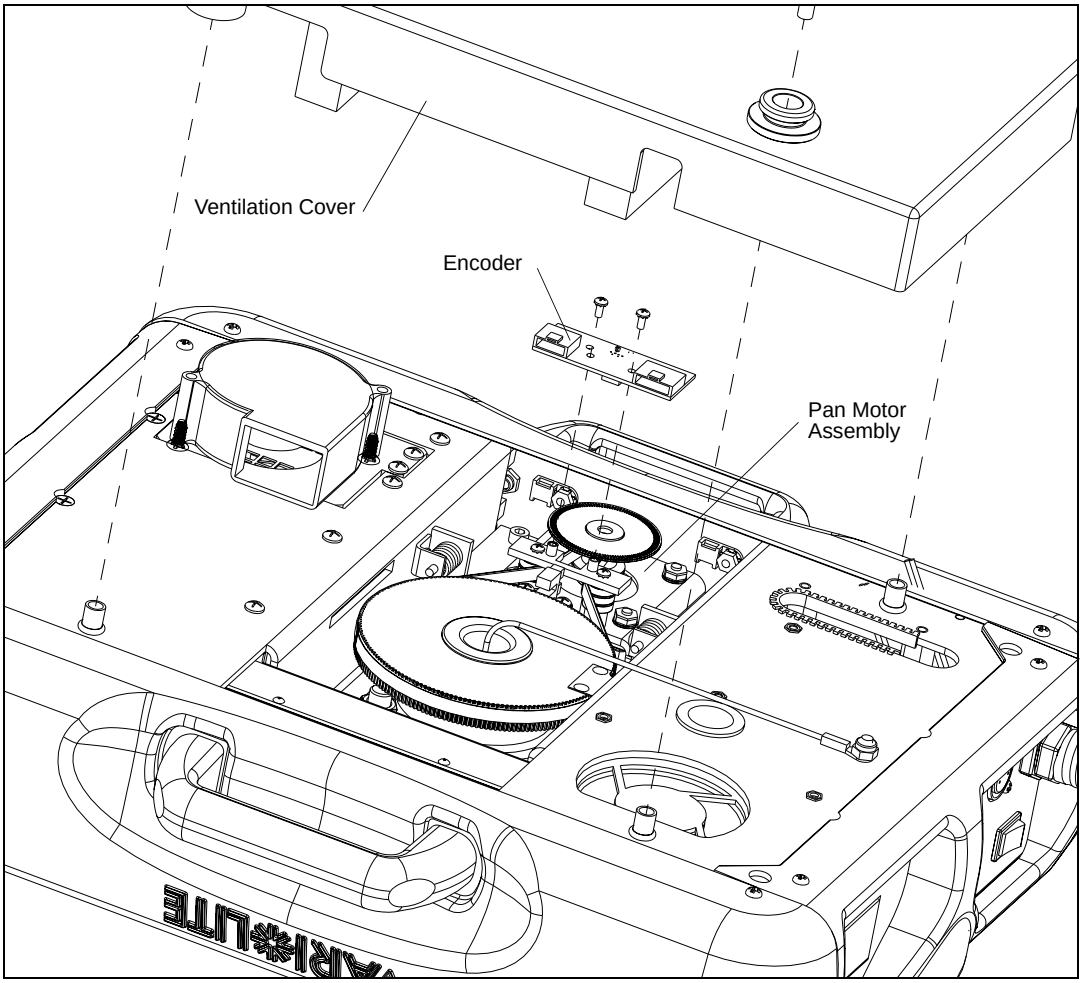


Figure 2-14: Pan Encoder Replacement

Pan EOT Sensor Replacement

Parts:23.9678.0687

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source. Place the luminaire on the upper enclosure.

CAUTION: During the next step, do allow the front lens to contact anything that could damage the lens coating.

Step 2. To provide access to the ventilation cover, set the luminaire on the front lens casting.

Step 3. At bottom of the enclosure, remove four 1/4-20 x 1-5/8" socket screws and 1/4" split lock washers. Remove the ventilation cover.

Step 4. As shown in Figure 2-15, at the pan sensor, remove two 6-32 x 3/8" PPZ screws.

Step 5. Disconnect wiring from the encoder PCB and remove the sensor.

Step 6. Replace sensor by performing steps 3 through 5 in reverse order.

Pan EOT Sensor Replacement (continued)

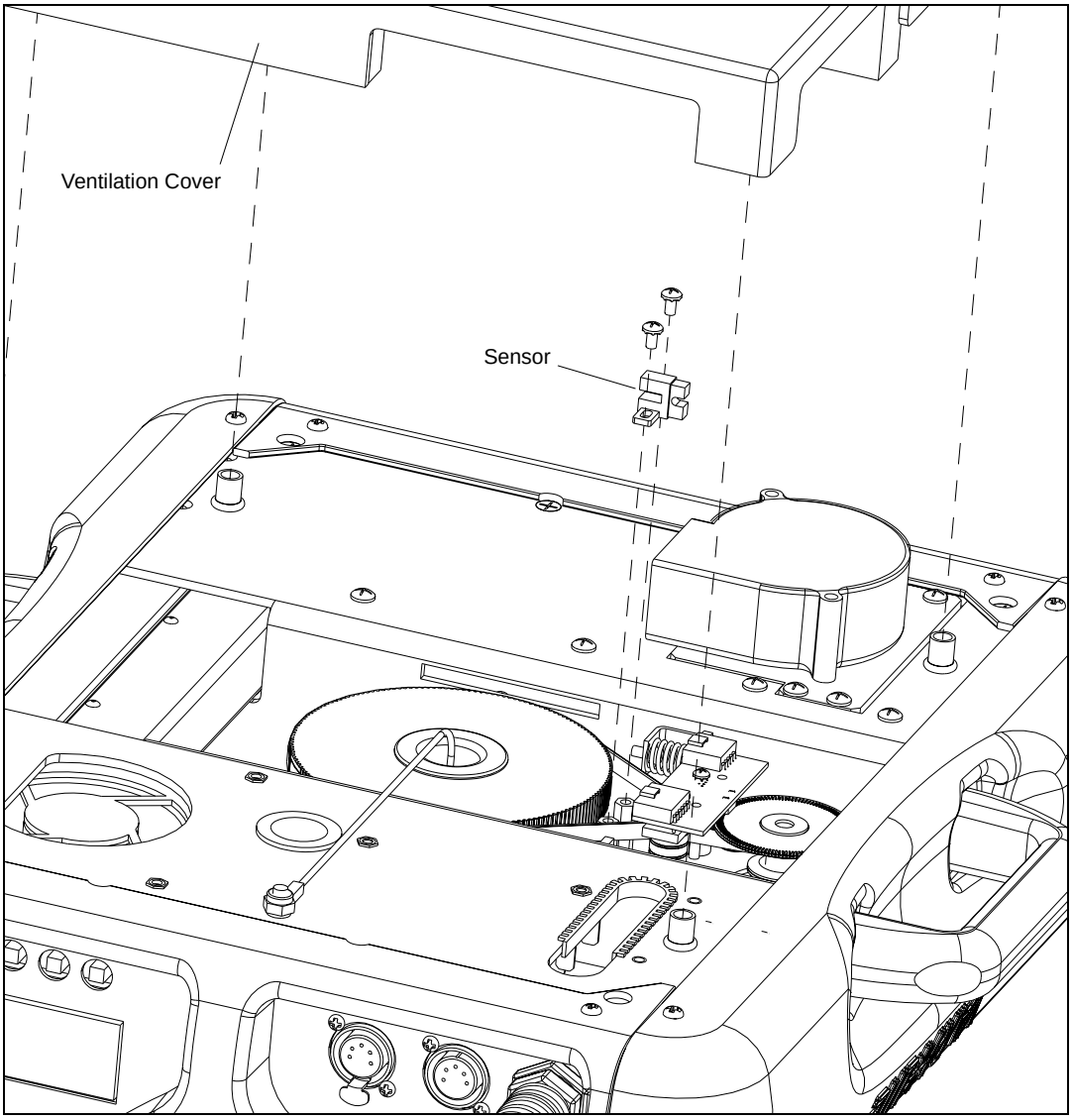


Figure 2-15: Pan EOT Sensor Replacement

Power Supply (LVS) Replacement

Parts:69.3177.0151

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. As shown in Figure 2-16, at the enclosure, remove two 6-32 x 1/4" LG PPZ screws from the display-side top cover and remove the cover.

Step 3. At power supply, disconnect wiring:

Location	Connector
N	White AC Wires
L	Black AC Wires
V +	Red DC Wires
V -	Black DC Wires

Step 4. Remove one 6-32 x 3/8" LG PPZ screw at the wiring end of the LVS.

Step 5. Loosen two 6-32 x 3/8" LG PPZ screws and slide the LVS towards upper enclosure fan to remove it.

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

Power Supply (LVS) Replacement (continued)

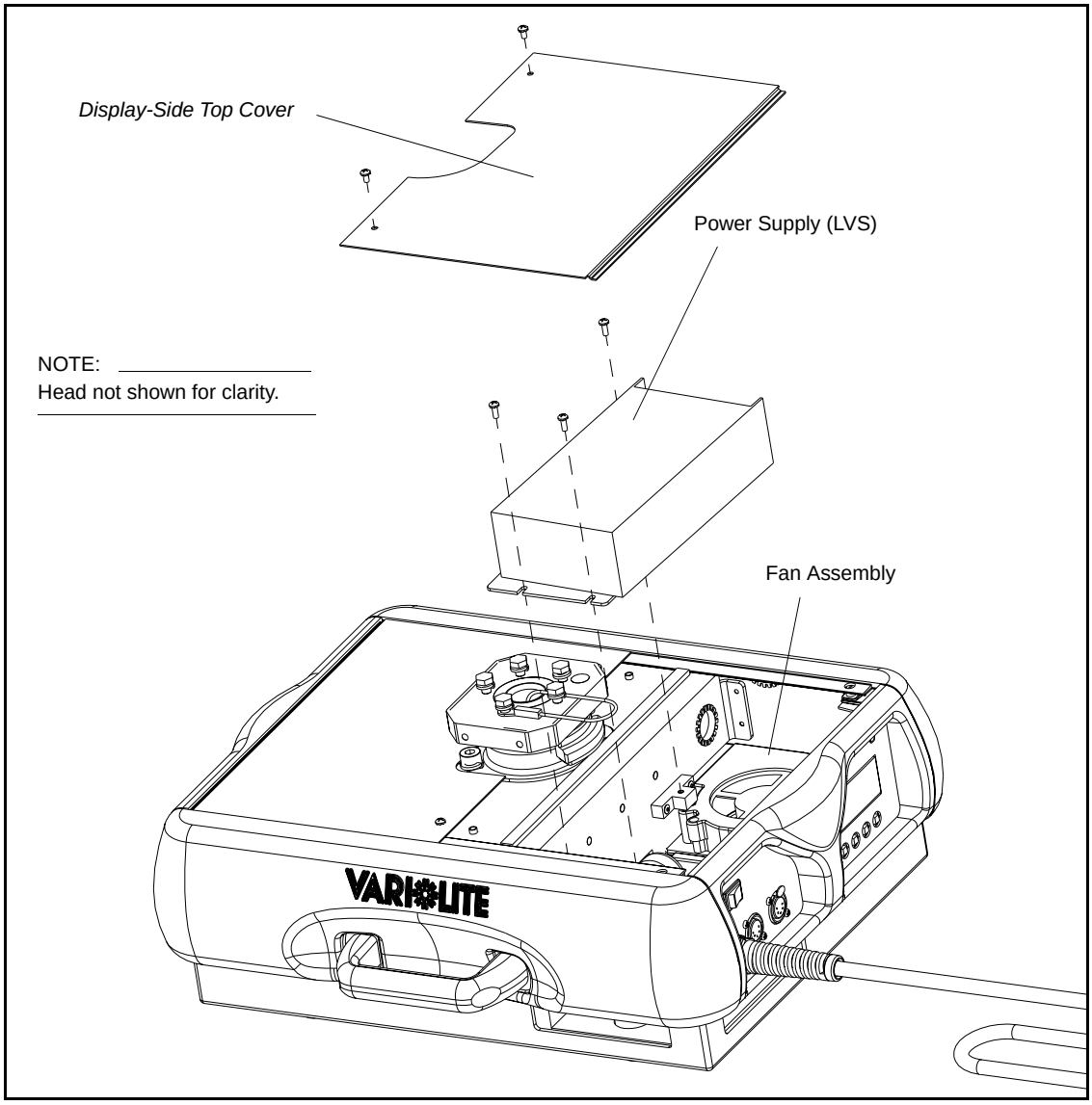


Figure 2-16: Power Supply (LVS) Replacement

Tilt Motor Assembly Replacement

Parts:21.9678.0765

Repair Procedure

To remove and replace the tilt motor assembly:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. As shown in Figure 2-17, at the tilt-side leg, remove yoke leg cover by removing four 6-32 x 5/16" PTB screws.

Step 3. At tilt motor assembly, loosen four 10-32 x 1/2" PPZ screws.

Step 4. Remove belt from tilt pulley.

Step 5. Remove four 10-32 x 1/2" PPZ screws. Remove tensioning springs.

Step 6. Disconnect wiring and remove the tilt motor assembly.

Step 7. Replace by performing steps 2 through 6 in reverse order.



Note: Make sure wiring is not pinched during installation. When tightening four 10-32 x 1/2" PPZ screws that fasten the tilt motor assembly, you must tighten then in a CLOCKWISE pattern starting with the screw in lower left-hand side.

To remove and replace the tilt motor belt:

Step 1 Disconnect luminaire AC input cable from power source.

Step 2. As shown in Figure 2-17, at the tilt-side leg, remove yoke leg cover by removing four 6-32 x 5/16" PTB screws.

Step 3. At tilt motor assembly, loosen four 10-32 x 1/2" PPZ screws.

Step 4. Remove belt from tilt pulley.

Step 5. Remove four 10-32 x 1/2" PPZ screws. Be mindful of tensioning springs.

Step 6. Disconnect the following wiring and remove tilt assembly:

a. Disconnect lamp wire from ignitor.

b. Remove ignitor assembly mounting bracket (leave ignitor attached to bracket) by removing three 6-32 x 3/8" PPZ screws and 1/4" standoff.

c. Disconnect ground wire from stud using 3/8" nut driver.

d. At interconnect, disconnect 80mm fan wiring.

Step 7. Remove belt.

Step 8. Replace by performing steps 2 through 7 in reverse order.

Tilt Motor Assembly Replacement (continued)

WARNING: Make sure wiring is not pinched during installation. When tightening four 10-32 x 1/2" PPZ screws that fasten the tilt motor assembly, you must tighten then in a CLOCKWISE pattern starting with the screw in lower left-hand side.

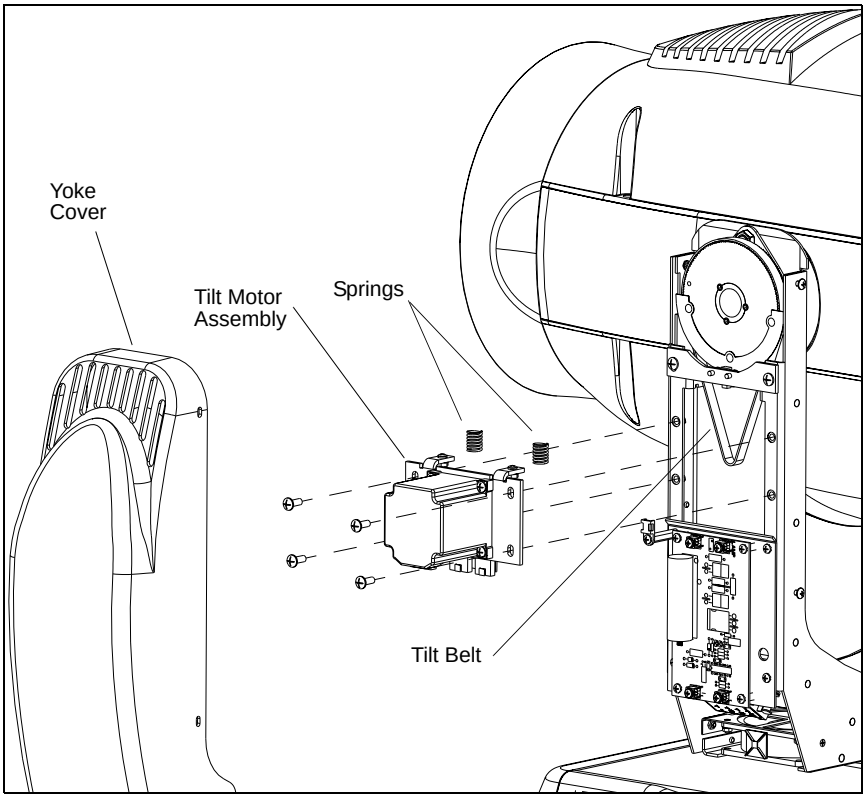


Figure 2-17: Tilt Motor Assembly Replacement

Tilt Encoder Replacement

Parts:24.9661.9629

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. As shown in Figure 2-17, at the tilt-side leg, remove yoke leg cover by removing four 6-32 x 5/16" PTB screws.

Step 3. At tilt motor assembly, loosen four 10-32 x 1/2" PPZ screws.

Step 4. Remove belt from tilt pulley.

Step 5. Remove four 10-32 x 1/2" PPZ screws. Remove tensioning springs.

Step 6. Disconnect wiring and remove the tilt motor assembly.

Step 7. As shown in Figure 2-18, at the tilt assembly, remove two 4-40 x 1/4" LG PPZ screws and remove encoder PCB.

Step 8. Replace by performing steps 2 through 7 in reverse order.

Note: Make sure encoder disk passes through sensor when installing encoder PCB. Do not pinch wiring during installation. When tightening four 10-32 x 1/2" PPZ screws that fasten the tilt motor assembly, you must tighten then in a CLOCKWISE pattern starting with the screw in lower left-hand side.

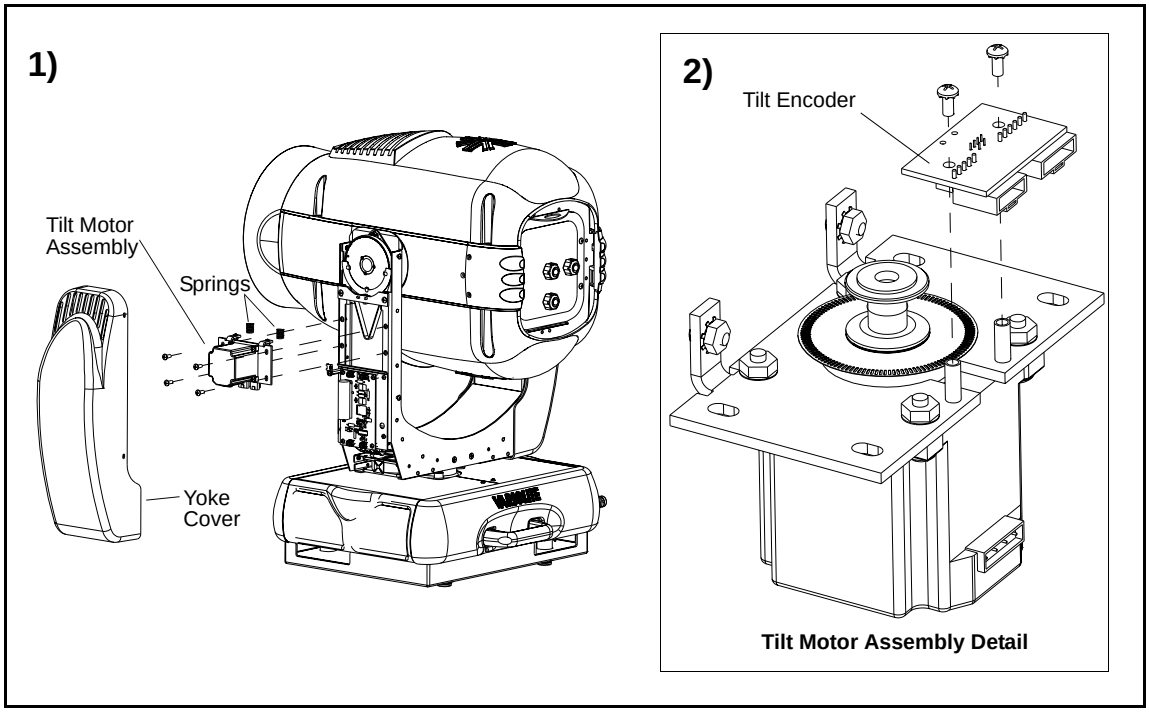


Figure 2-18: Tilt Encoder Replacement

Tilt EOT Sensor Replacement

Parts:23.9661.1253

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At tilt-side leg, remove yoke leg cover by removing four 6-32 x 5/16" PTB screws.

Step 3. As shown in Figure 2-19, at the sensor bracket, remove two 10-32 x 1/2" PPZ screws and remove bracket.

Step 4. Disconnect wiring from tilt encoder board.

Step 5. At sensor, remove two 6-32 x 3/8" PPZ screws and remove sensor from bracket.

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

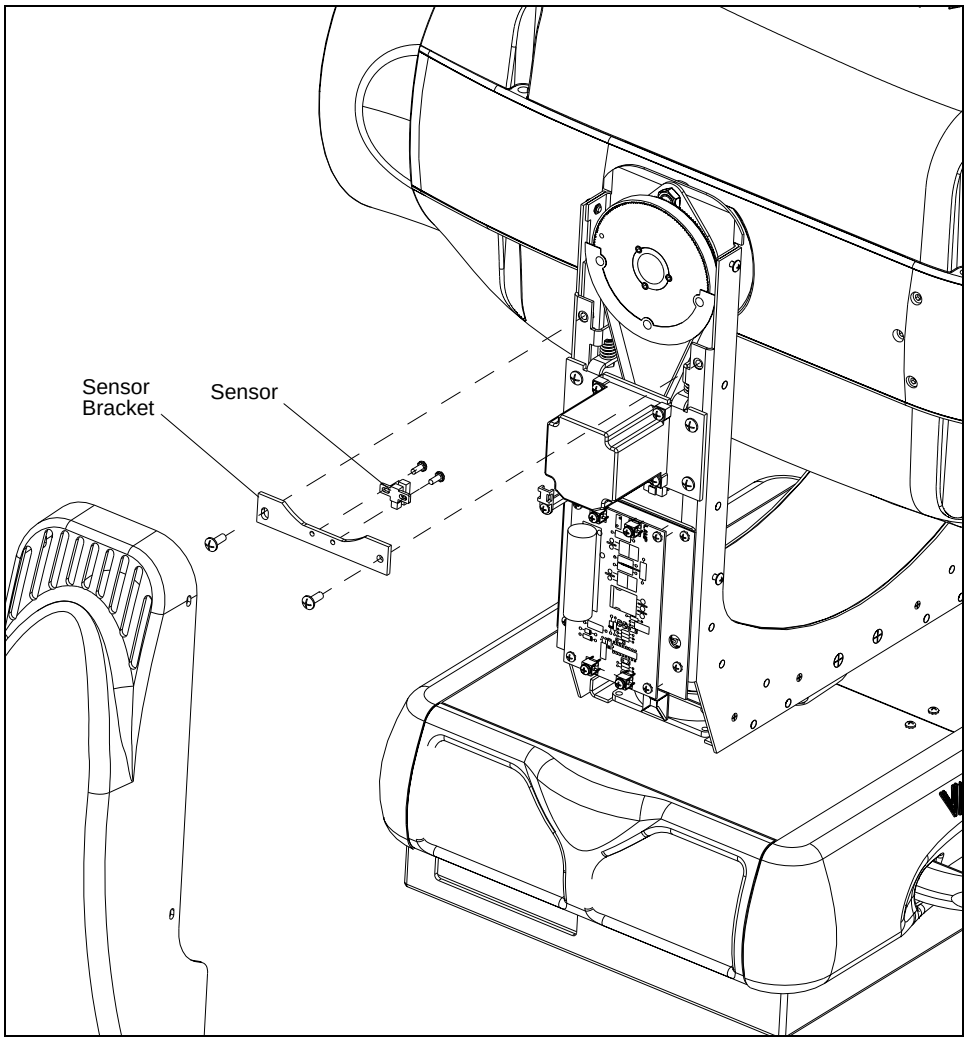


Figure 2-19: Tilt EOT Sensor Replacement

CHAPTER 3.

Illustrated Parts Breakdown

This chapter contains illustrated parts breakdowns for the VL3500™ Wash and VL3500™ Wash FX luminaire assemblies.

Note: The VL3500 Wash and VL3500 Wash FX Luminaires share many common assemblies and parts of the Vari-Lite Series 3000 Luminaires.

- **Drawing Tree (VL3500 Wash)**
- **Drawing Tree (VL3500 Wash FX)**
- **Top Assembly**
- **Yoke Assembly**
- **Head/Yoke PCB Assemblies**
- **Enclosure Assembly**
- **Cable Assemblies**

SERVICE

Drawing Tree (VL3500 Wash)

VL3500™ Wash Luminaire

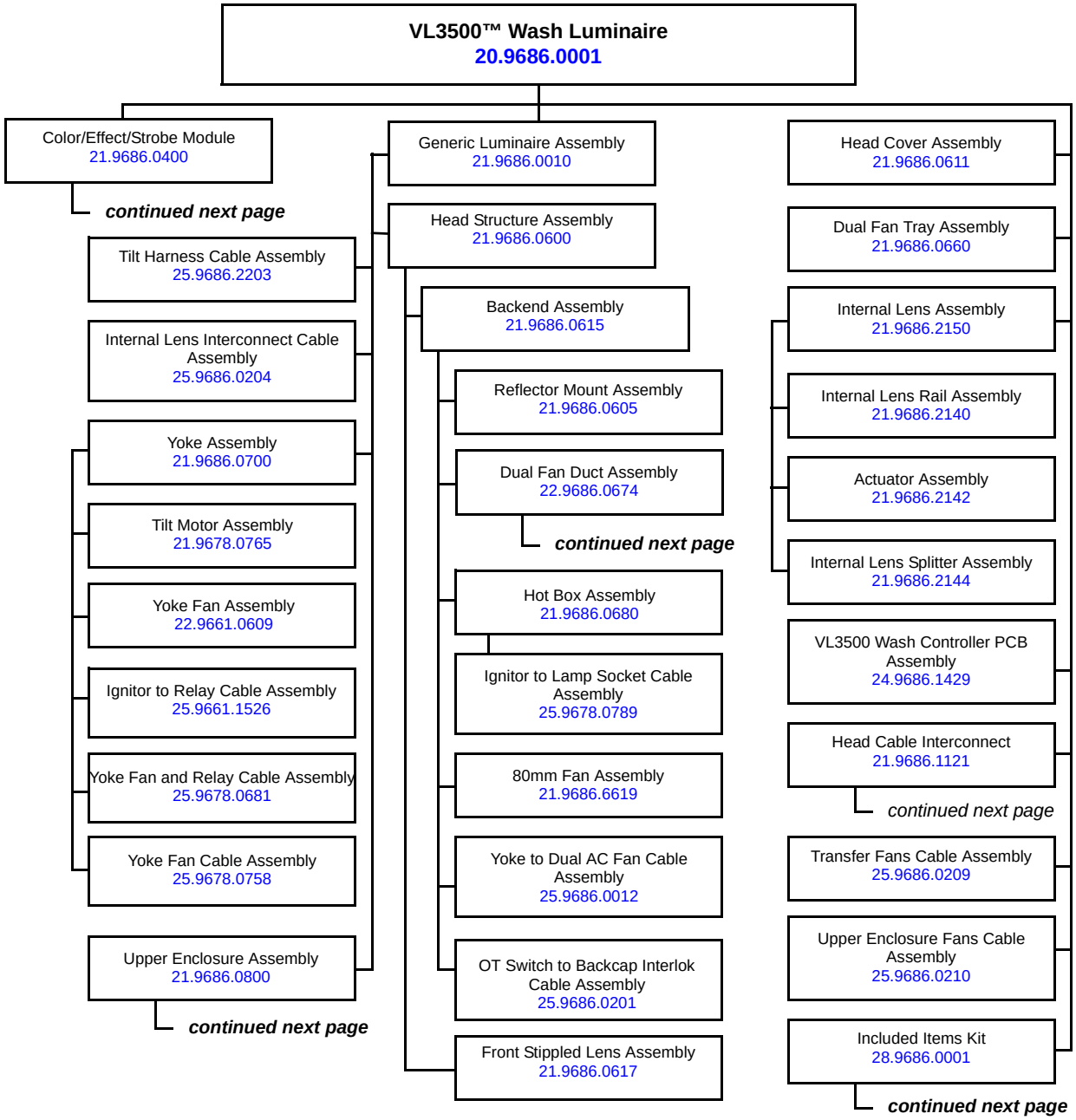


Figure 3-1: VL3500™ Wash Luminaire Subassembly Drawing Tree Part 1

VL3500™ Wash Luminaire (continued)

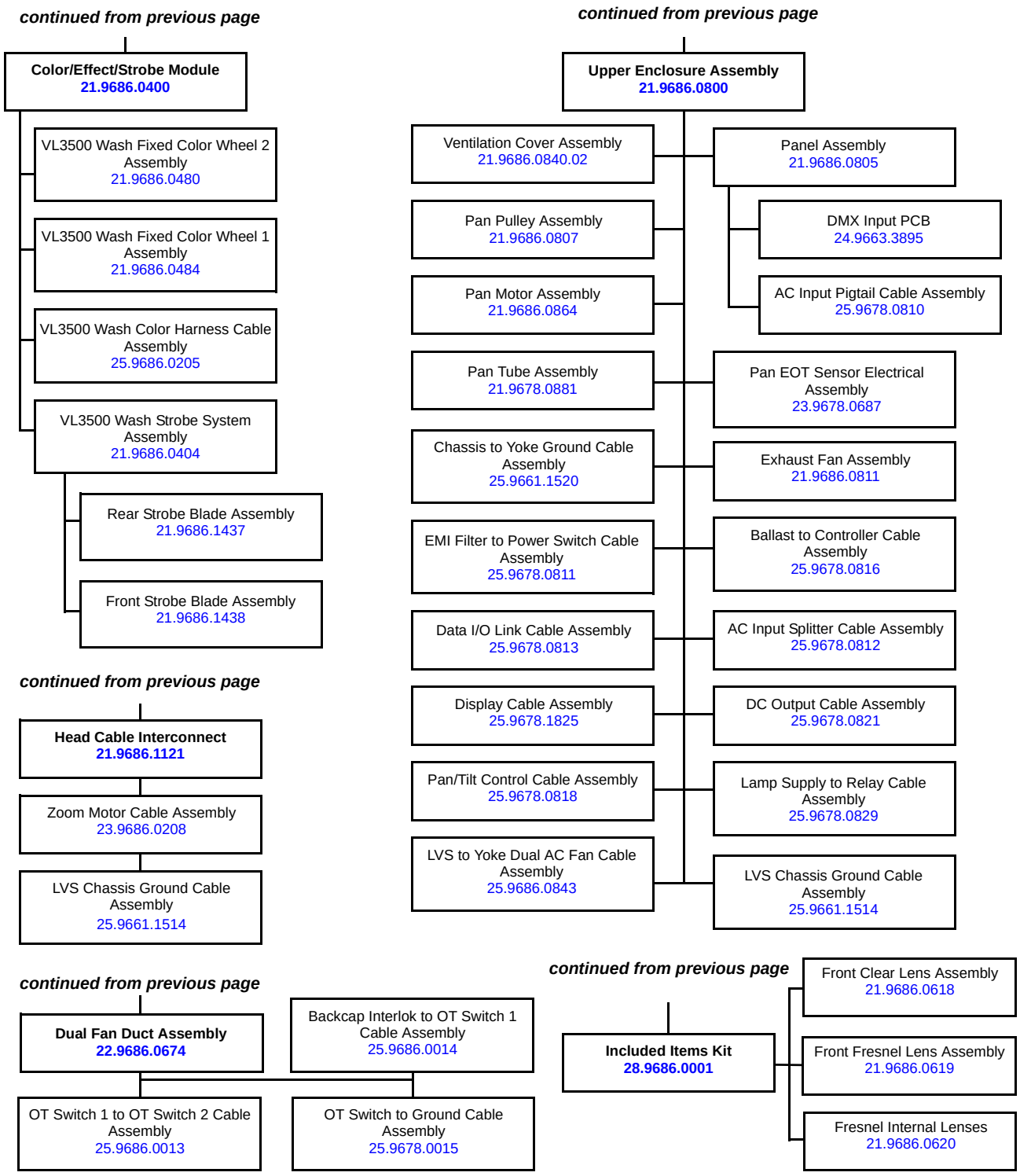


Figure 3-2: VL3500™ Wash Luminaire Subassembly Drawing Tree Part 2

Drawing Tree (VL3500 Wash FX)

VL3500™ Wash FX Luminaire

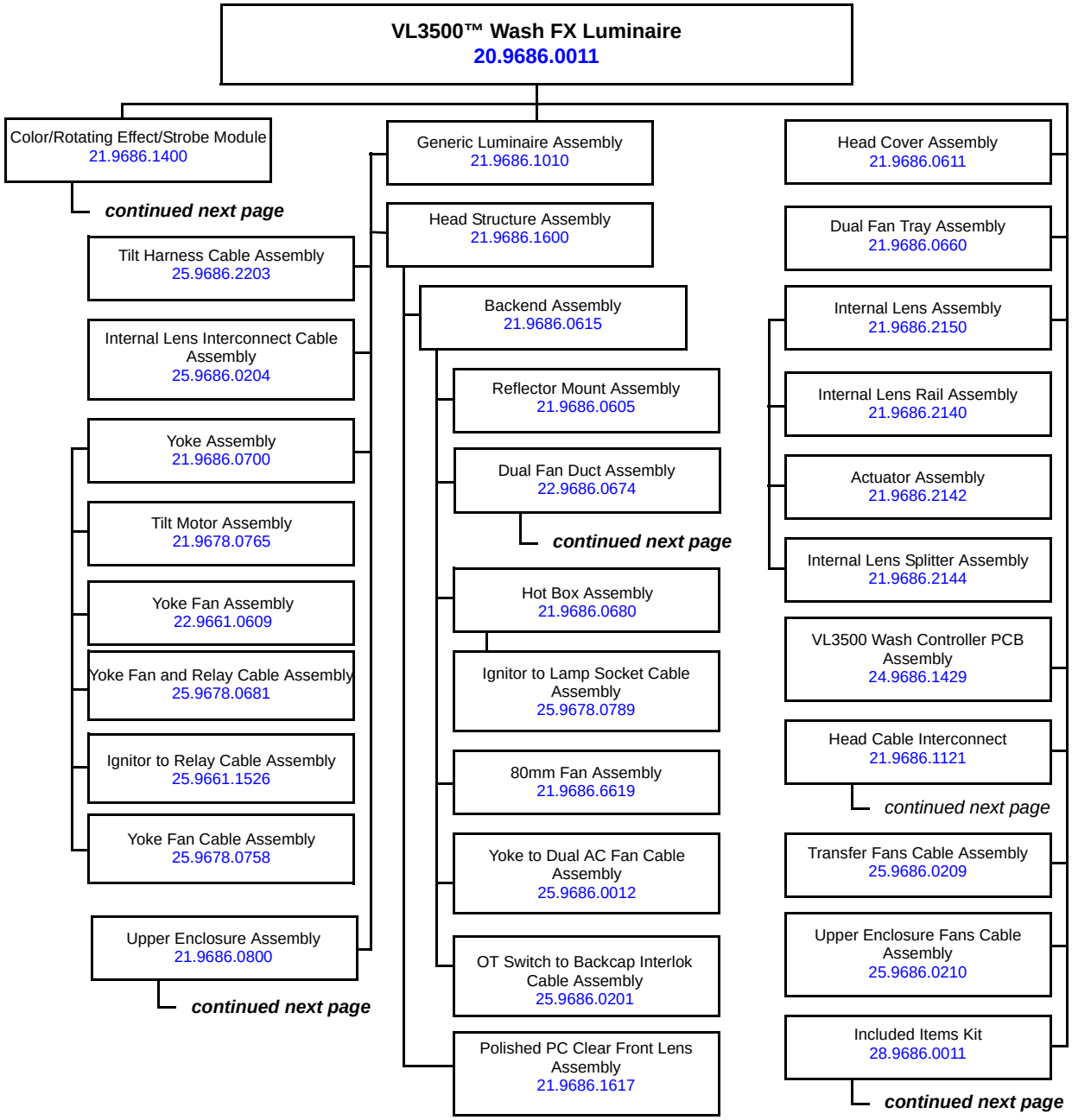


Figure 3-3: VL3500™ Wash FX Luminaire Subassembly Drawing Tree Part 1

VL3500™ Wash FX Luminaire (continued)

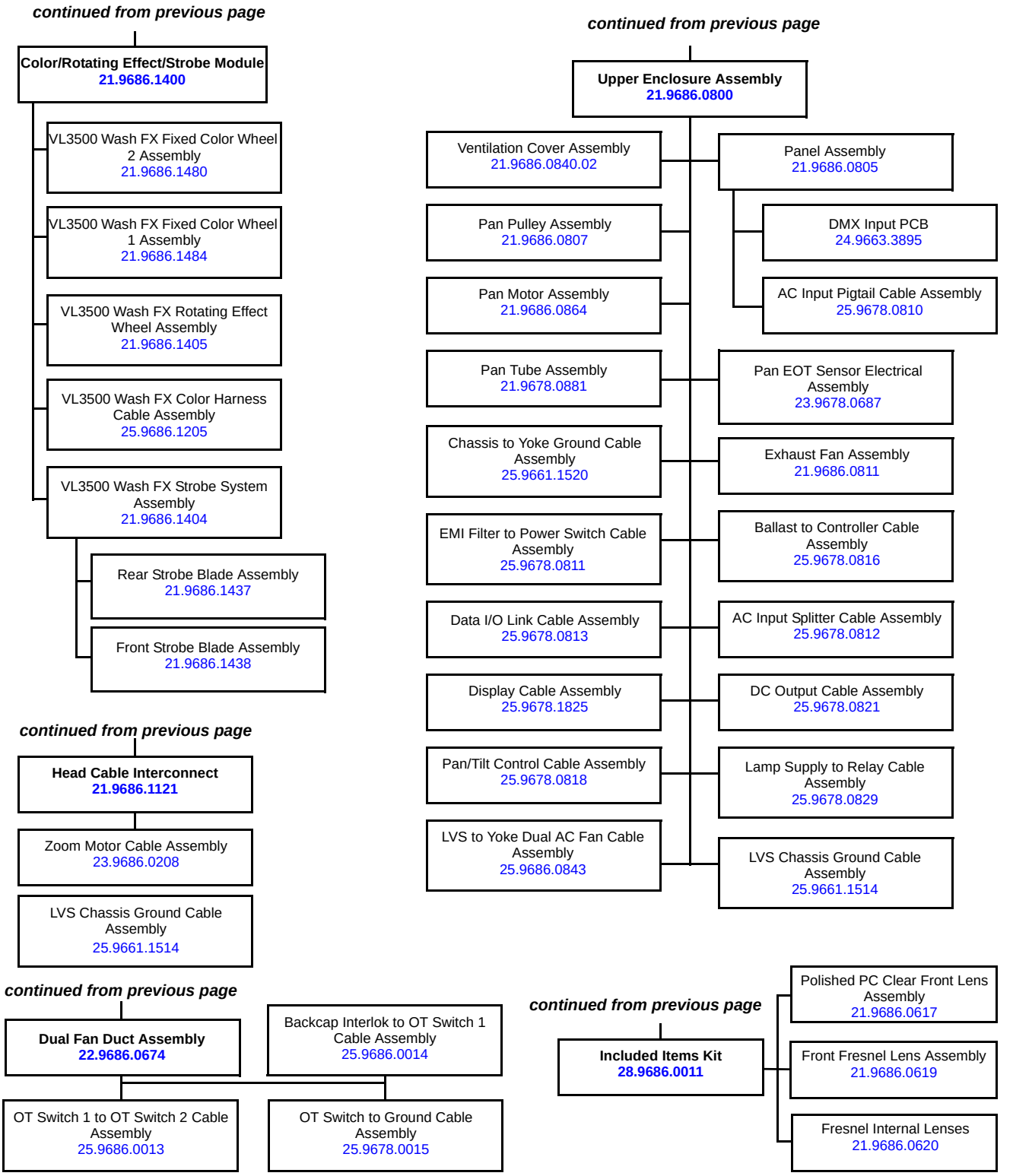


Figure 3-4: VL3500™ Wash FX Luminaire Subassembly Drawing Tree Part 2

Top Assembly

Included Items Kit

28.9686.0001 Rev A (VL3500 Wash)
28.9686.0011 Rev C (VL3500 Wash FX)

Refer to Figure 3-5.

No.	Item	Qty.	UM.	Description
1	02.8001.0001	1	EA	SHEET, VARI-LITE CUSTOMER SERVICE
2	02.8052.0001	1	EA	CARD, LIMITED WARRANTY (09-09-02)
3	02.8001.0002	1	EA	CERTIFICATE, VARI*LITE QA
4	02.8700.0001	1	EA	CARD, PRODUCT REGISTRATION
-	04.4037.0001	5	EA	LABEL, 2.5 X .5 BARCODE (**not shown**)
5	08.3500.0002	1	EA	CD-ROM, VL3500™ WASH PRODUCT DOCUMENTATION
6	02.9686.0002	1	EA	UNPACK/QUICK START SHEET, VL3500™ WASH
7	22.9661.1636	2	EA	FAB ASSY, BRACKET TRUSS HOOK
8	71.9686.1502	1	EA	LAMP, 1500 WATT SHORT ARC, DOUBLE-ENDED (**IN LUMINAIRE**)
9	21.9686.0620	1	EA	INTERNAL LENS, FRESNEL
10	21.9686.0619	1	EA	FRONT LENS ASSEMBLY, FRESNEL
11	21.9686.0618	1	EA	FRONT LENS ASSEMBLY, CLEAR PC (VL3500 WASH ONLY)
	21.9686.0617	1	EA	FRONT LENS ASSEMBLY, STIPPLE PC (VL3500 WASH FX ONLY)

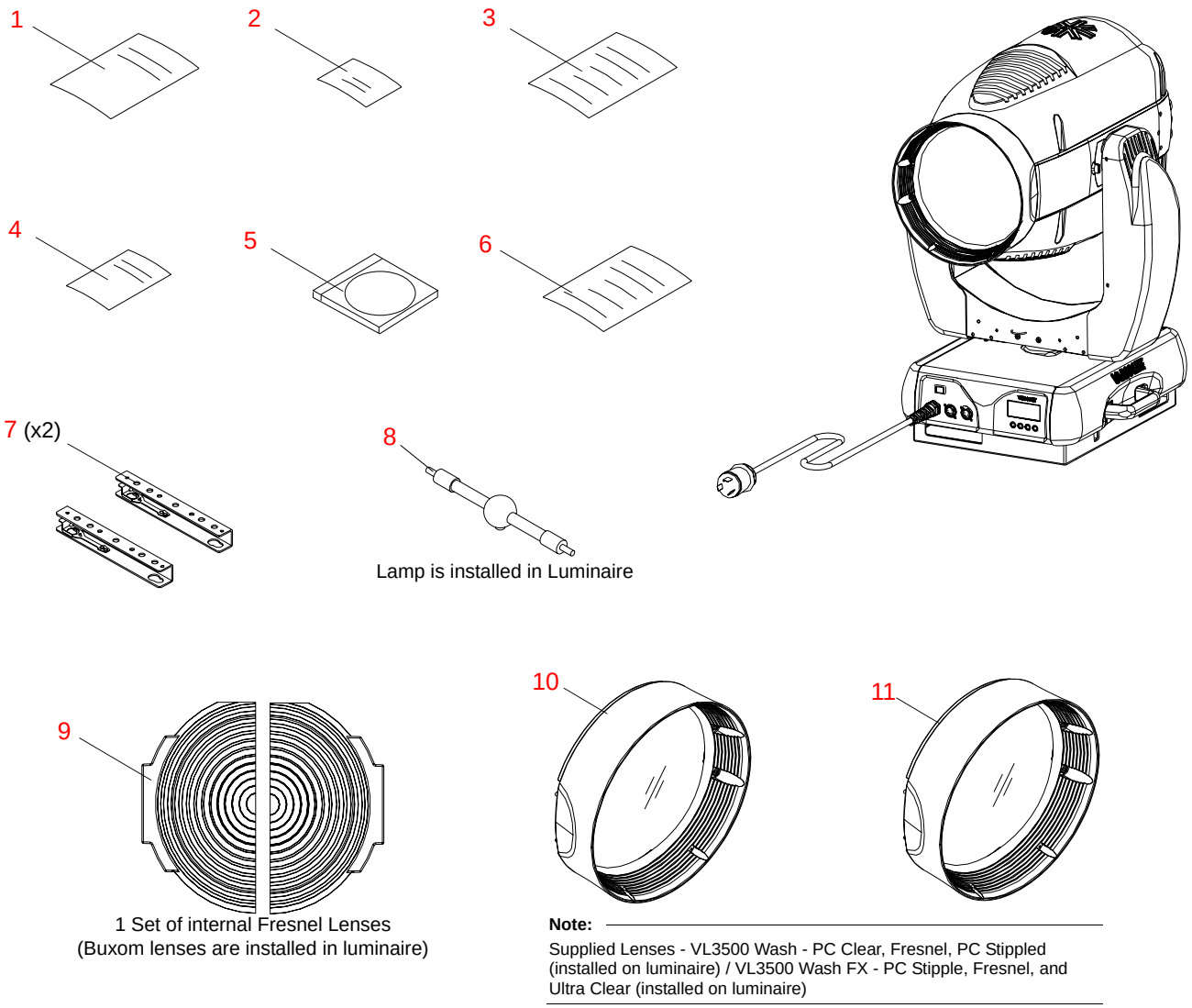


Figure 3-5: Included Items Kit

Note: * = Do not handle lamp with bare hands. To keep the lamp glass as free from dirt and grease as possible, wear clean cotton gloves.

VL3500™ Wash / VL3500™ Wash FX Luminaires

20.9686.0001 Rev H (VL3500 Wash)
20.9686.0011 Rev C (VL3500 Wash FX)

Refer to Figure 3-2

No.	Item	Qty.	UM.	Description
-	02.8405.0001	1	EA	AC DANGER TAG, VL3500 (**not shown**)
-	04.9661.0033.01	1	EA	LABEL, WARNING - 2000 SERIES (**not shown**)
-	04.9661.0039	1	EA	LABEL, LINE CORD WARNING (**not shown**)
-	04.9686.0061	1	EA	LABEL, AC INPUT RATING VL3500 WASH (VL3500 Wash Only - **not shown**)
-	04.9686.1061	1	EA	LABEL, AC INPUT RATING VL3500 WASH FX (VL3500 Wash FX Only - **not shown**)
1	10.9686.0617	1	EA	YOKE CROSSMEMBER, HEAT SHIELD
-	10.9686.0168	1	EA	ZOOM MOUNTING BRACKET, LEFT (**not shown**)
2	10.9686.0169	1	EA	ZOOM MOUNTING BRACKET, RIGHT
3	10.9686.0732	2	EA	COVER, YOKE THERMOFORM
4	10.9686.1482	1	EA	HARNESS GUIDE, ROTATING EFFECTS
5	21.9686.0010	1	EA	ASSY, GENERIC LUMINAIRE (VL3500 Wash Only)
	21.9686.1010	1	EA	ASSY, GENERIC LUMINAIRE (VL3500 Wash FX Only)
6	21.9686.0611	2	EA	ASSY, HEAD COVER
7	21.9686.0660	1	EA	ASSY, DUAL FAN TRAY DUCT
8	21.9686.2150	1	EA	ASSY, SPLIT LENS
9	21.9686.0400	1	EA	ASSY, COLOR/DIMMER/STROBE (VL3500 Wash Only)
	21.9686.1400	1	EA	ASSY, COLOR/ROTATING EFFECTS/STROBE (VL3500 Wash FX Only)
10	24.9686.1429	1	EA	PCB ASSY, VL3500 WASH CONTROLLER
-	21.9686.1121	1	EA	CABLE ASSY, HEAD CABLE INTERCONNECT (**not shown**)
-	25.9686.0209	1	EA	CABLE ASSY, TRANSFER FANS (**not shown**)
-	25.9686.0210	1	EA	CABLE ASSY, UPPER ENCLOSURE FANS (**not shown**)
-	28.9686.0001	1	EA	INCLUDED ITEMS KIT, VL3500 WASH (VL3500 Wash Only - **not shown**)
-	28.9686.0011	1	EA	INCLUDED ITEMS KIT, VL3500 WASH (VL3500 Wash FX Only - **not shown**)
11	53.6523.0013	8	EA	SCREW, 6-32 X 3/8" PTB
12	53.6543.0001	6	EA	SCREW, 6-32 X 3/8" PPB
13	53.6545.0007	10	EA	SCREW, 8-32 X 3/8" LG PFB
14	53.6558.0007	4	EA	SCREW, 6-32 X 1/4" LG PPZ SEMS EXT ZINC PLT
15	53.6558.0009	6	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS

No.	Item	Qty.	UM.	Description
16	53.6558.0016	2	EA	SCREW, 6-32 X 3/4" LG PPS SEMS
17	55.6677.0033	4	EA	WASHER, .201" OD .125" ID .032" THK FLAT SS
18	55.2150.0002	2	EA	STANDOFF, 1/4" HEX 6-32 X 1.188" LG MF STL

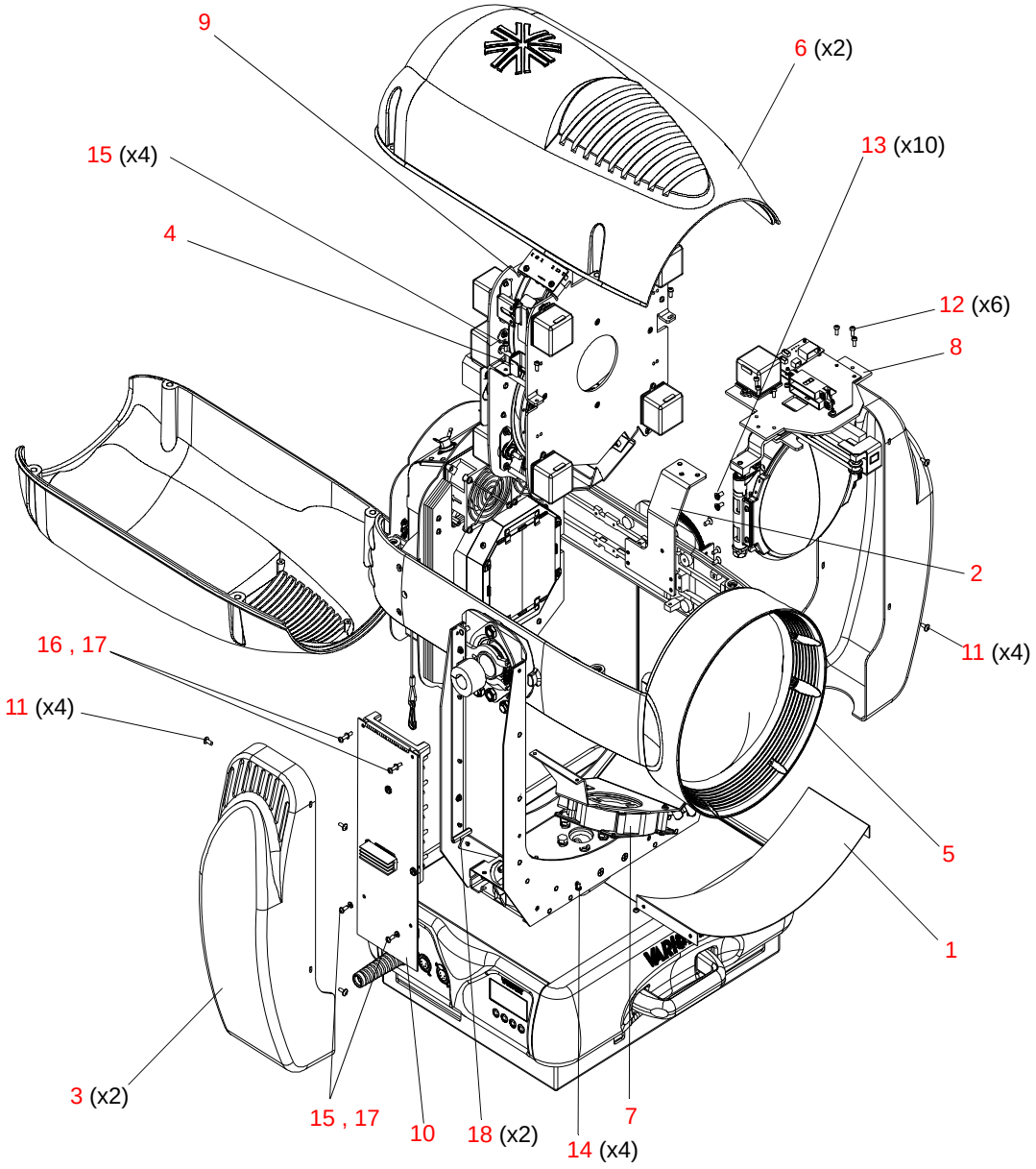


Figure 3-6: VL3500™ Wash / VL3500™ Wash FX Luminaires

Generic Luminaire Assembly

21.9686.0010 Rev E (VL3500 Wash)
21.9686.1010 Rev A (VL3500 Wash FX)

Refer to Figure 3-7

No.	Item	Qty.	UM.	Description
1	21.9686.0600	1	EA	ASSY, HEAD STRUCTURE, VL3500™ WASH (VL3500 Wash Only)
	21.9686.1600	1	EA	ASSY, HEAD STRUCTURE, VL3500™ WASH FX (VL3500 Wash FX Only)
2	21.9686.0700	1	EA	ASSY, YOKE
3	21.9678.0707	1	EA	ASSY, DRIVEN PULLEY
3a	- 10.9678.0750	1	EA	TIMING PULLEY, 150 TOOTH
3b	- 10.9678.0754	1	EA	FLAG, CENTER OF TRAVEL, TILT
3c	- 53.6530.0009	3	EA	RIVET, 1/8"OD POP .126-.187G
4	21.9678.0767	1	EA	ASSY, STABILIZER
4a	- 10.9678.0757	1	EA	STABILIZER, 1.377DIA
4b	- 10.9678.0762	1	EA	BRACKET, STABLIZER
4c	- 53.6610.0003	1	EA	SCREW, 6-32 X 7/16" PPZ
4d	- 55.6568.0075	1	EA	SPRING, EXTSN .375"OD 1.00"LG .041" WIRE DIA
5	21.9686.0800	1	EA	ASSY, UPPER ENCLOSURE, VL3500™ WASH
-	52-0259	1	EA	CABLE TIE, 5.5" INTERMEDIATE (**not shown**)
6	53.2019.0004	4	EA	NUT, 3/8-16 X 7/32"THK HEX JAM GRD5 ZINC PLT
7	53.6505.0020	5	EA	BOLT, 1/4-28X 3/4"HX HD GRD 8 ZINC PLT FULL THRD
8	53.6505.0026	4	EA	BOLT, 3/8-16 X .500"LG H X HD GRADE 5 BLK 9/16"HEX HEAD X .23 TALL
9	53.6539.0001	4	EA	WASHER, 3/8" SPLIT LOCK
10	53.5564.0250	1	EA	SCREW, 6-32 X 1/4" PFB UNDERCUT
11	53.6624.0001	4	EA	SCREW, 10-32 X 1/2"LG PFB
12	53.6513.0044	3	EA	SCREW, M5 X 10MM STL CUP PT
13	54.1206.0014	2	EA	RING, RETAINING 1.375"SHAFT 1.291"GRV DIA .056"GRVWD EXTERNAL
14	54.1255.0001	2	EA	BEARING ASSY, BLACK FLUSH MOUNT HOUSING
15	54.2055.0001	1	EA	BELT, TIMING S2M 210GROOVE 9MMWIDE URETHANE/KEVLAR
16	55.6549.0001	5	EA	WASHER, 1/4" SPLIT LOCK
17	55.6799.0001	2	EA	SHIM, 1-3/8"ID, 1-7/8"OD, .010" THK, SS
18	55.6799.0002	2	EA	SHIM, 1-3/8"ID, 1-7/8"OD, .005" THK, SS
19	10.9686.0629	1	EA	PLUG, TILT TUBE
-	25.9686.2203	1	EA	CABLE, TILT HARNESS (**not shown**)

No.	Item	Qty.	UM.	Description
-	25.9686.0204	1	EA	CABLE ASSY, VARI-BRITE INTERCONNECT (**not shown**)

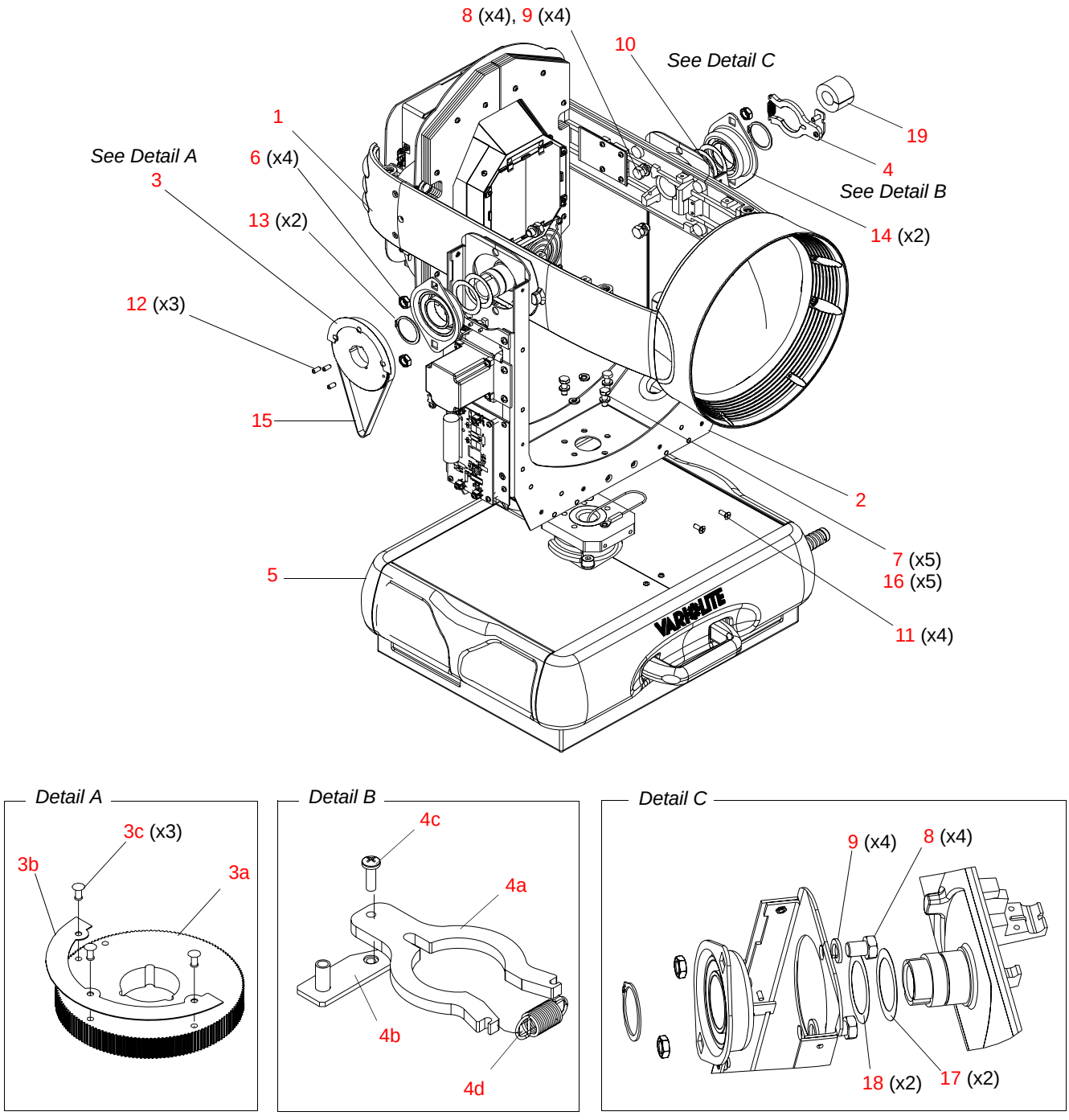


Figure 3-7: Generic Luminaire Assembly - VL3500™ Wash

Notes

Head Assembly

Head Structure Assembly

21.9686.0600 Rev E (VL3500 Wash)
21.9686.1600 Rev A (VL3500 Wash FX)

Refer to Figure 3-1

No.	Item	Qty.	UM.	Description
1	21.9686.0615	1	EA	ASSY, BACKEND
2	12.9686.0623	1	EA	RIGHT SIDE RAIL, MACHINED
3	12.9686.0625	1	EA	LEFT SIDE RAIL, MACHINED
4	21.9686.0617	1	EA	ASSEMBLY, FRONT CASTING/LENS (VL3500 Wash Only)
	21.9686.1617	1	EA	ASSEMBLY, FRONT LENS, CLEAR POLISHED (VL3500 Wash FX Only)
5	53.6515.0001	6	EA	SCREW, 10-32 X 3/4" SCB CAP
6	10.9686.0639	2	EA	LIGHT BAFFLE, FRONT
7	53.6682.0002	4	EA	SCREW, 4-40 X 1/4 PPZ SEMS

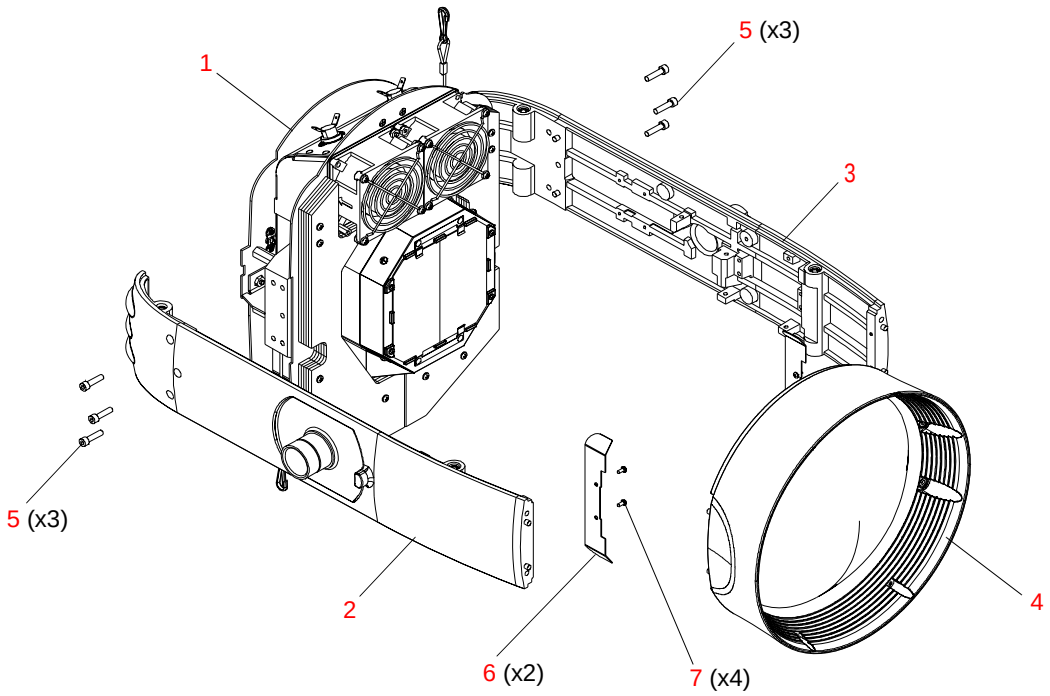


Figure 3-1: Head Structure Assembly

Front Stippled Lens Assembly

21.9686.0617 Rev A (VL3500 Wash Only)

Refer to Figure 3-2

No.	Item	Qty.	UM.	Description
1	10.9686.0641	4	EA	CLIP, FRONT LENS
2	12.9686.0627	1	EA	CASTING, CONVEX LENS
3	42.9686.0101	1	EA	LENS, ASPHERIC PLANO CONVEX STIPPLED
4	53.6598.0312	8	EA	SCREW, 4-40 X 5/16" PFB
5	53.6685.1125	4	EA	SCREW, CAPTIVE, SH CAP 10-32 1.125 LG BLK ZN

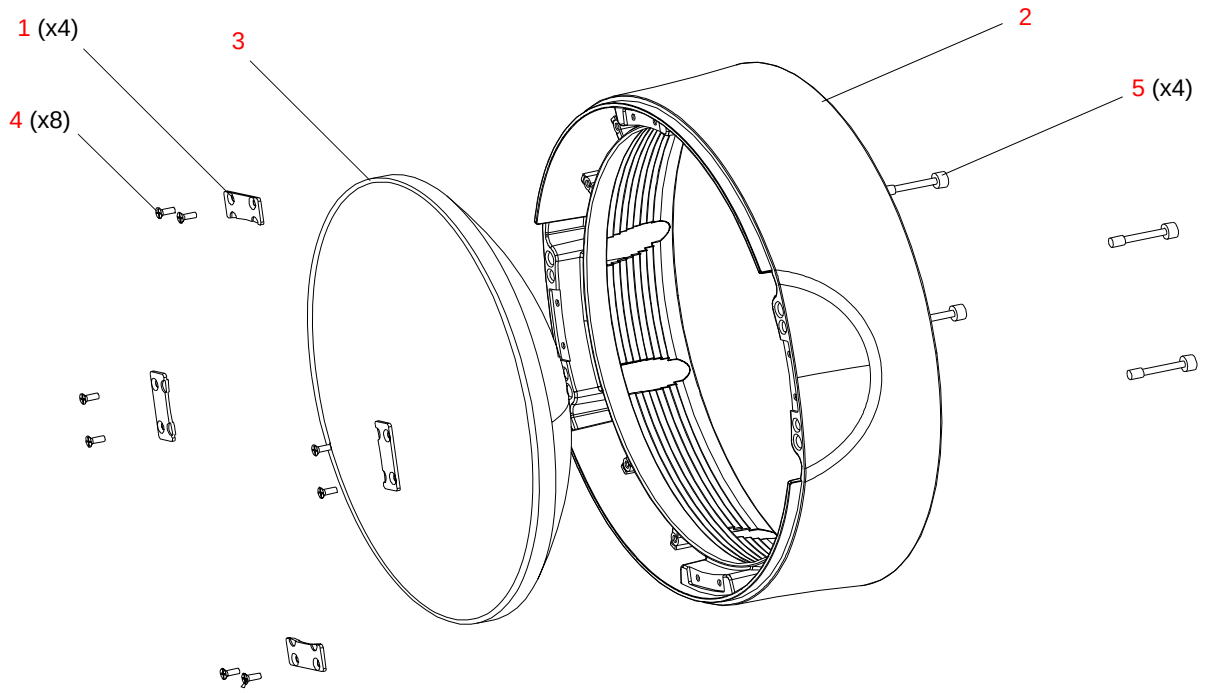


Figure 3-2: Front Stippled Lens Assembly

Polished PC Clear Front Lens Assembly

21.9686.1617 Rev D (VL3500 Wash FX Only)

Refer to Figure 3-3

No.	Item	Qty.	UM.	Description
1	10.9686.0641	4	EA	CLIP, FRONT LENS
2	10.9686.2190	4	EA	BUM PER, LENS STOP
3	12.9686.0627	1	EA	CASTING, CONVEX LENS
4	42.9686.0122	1	EA	LENS, ASPHERIC PC, CLEAR, POLISHED
5	53.6598.0312	8	EA	SCREW, 4-40 X 5/16" PFB
6	53.6685.2125	4	EA	SCREW, CAPTIVE, SH CAP 10-32 1.125 LG ZN

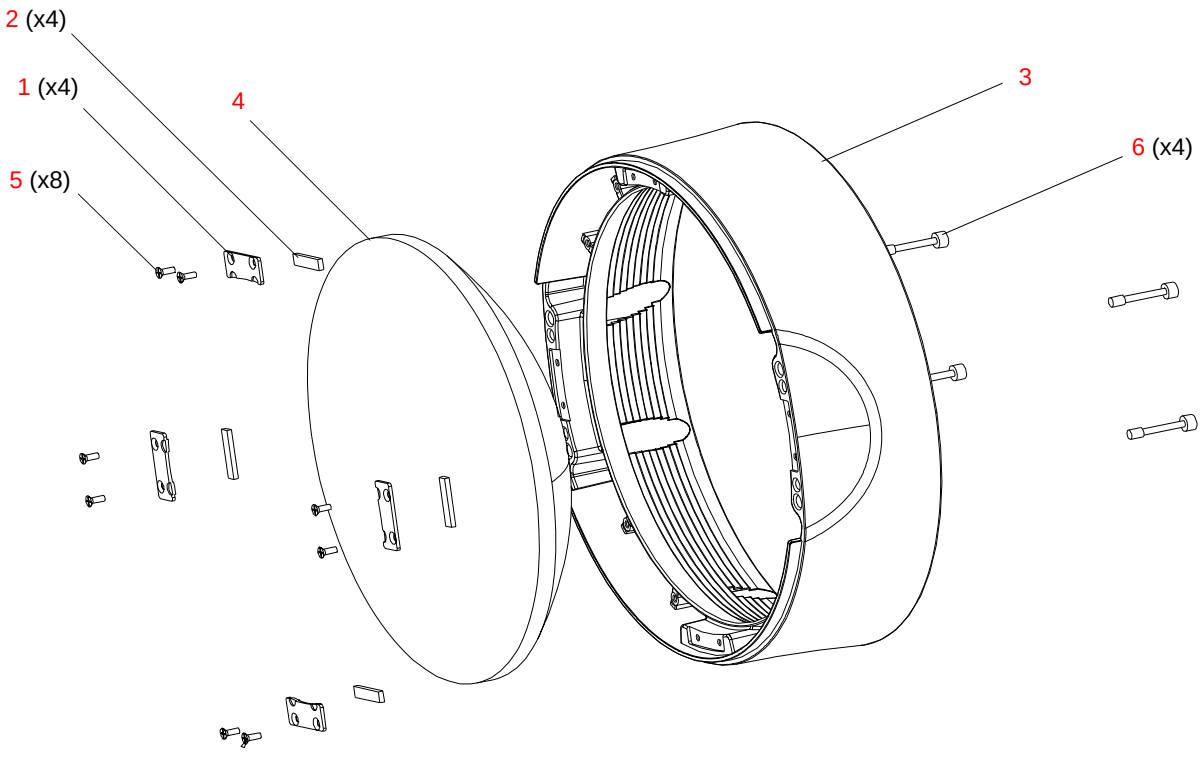


Figure 3-3: Polished PC Clear Front Lens Assembly

Front Clear Lens Assembly

21.9686.0618 Rev C (VL3500 Wash)

Refer to Figure 3-4

No.	Item	Qty.	UM.	Description
1	10.9686.0641	4	EA	CLIP, FRONT LENS
2	12.9686.0627	1	EA	CASTING, CONVEX LENS
3	42.9686.0121	1	EA	LENS, ASPHERIC PLANO CONVEX CLEAR
4	53.6598.0312	8	EA	SCREW, 4-40 X 5/16" PFB
5	53.6685.1125	4	EA	SCREW, CAPTIVE, SH CAP 10-32 1.125 LG BLK ZN

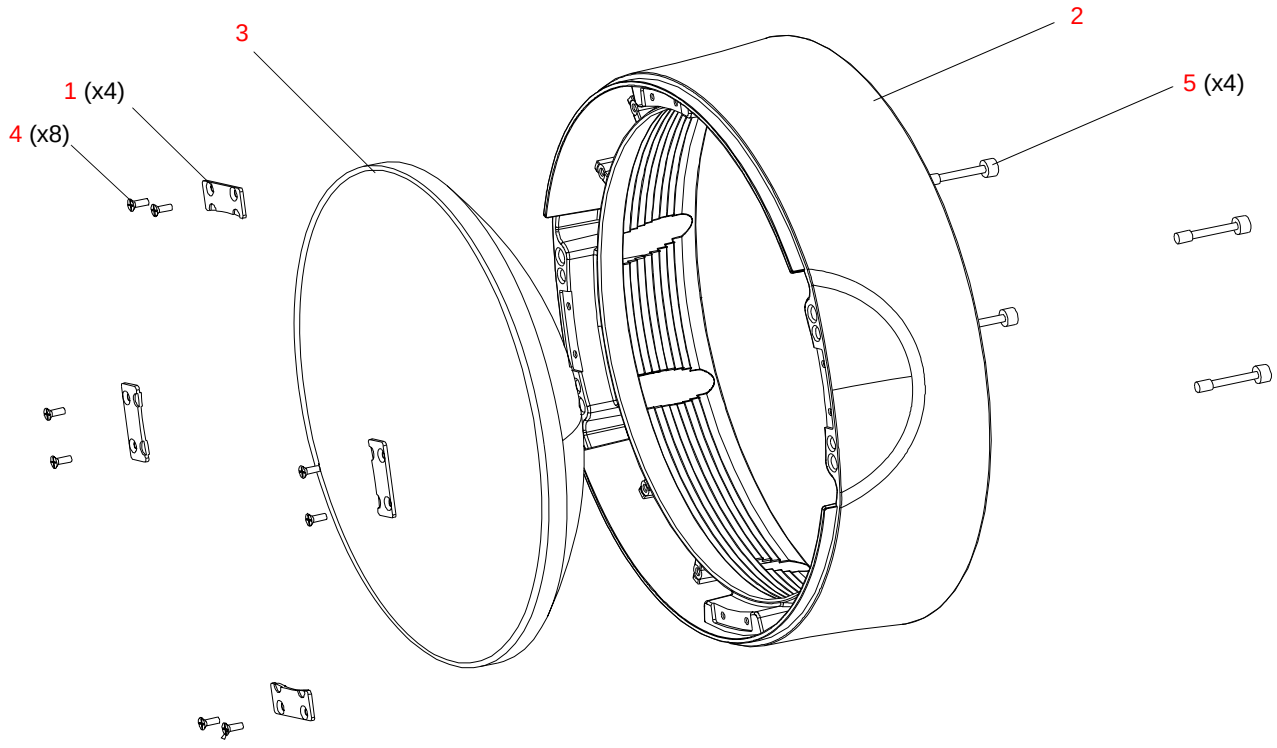


Figure 3-4: Front Clear Lens Assembly

Front Fresnel Lens Assembly

21.9686.0619 Rev D

Refer to Figure 3-5

No.	Item	Qty.	UM.	Description
1	10.9686.0641	4	EA	CLIP, FRONT LENS
2	10.9686.0682	4	EA	COUNTERWEIGHT, FRONT, SHORT, THIN
3	10.9686.0638	36	EA	COUNTERWEIGHT, FRONT, LONG
4	12.9686.0629	1	EA	CASTING, MACHINED, FRESNEL LENS
5	42.9686.0102	1	EA	LENS, FRESNEL 230 MM DIA
6	53.6598.0312	8	EA	SCREW, 4-40 X 5/16" PFB
7	53.6618.0001	8	EA	SCREW, 6-32 X 1.5 PPZ
8	53.6685.1500	4	EA	SCREW, CAPTIVE, SH CAP 10-32 1.5 LG BLK ZN

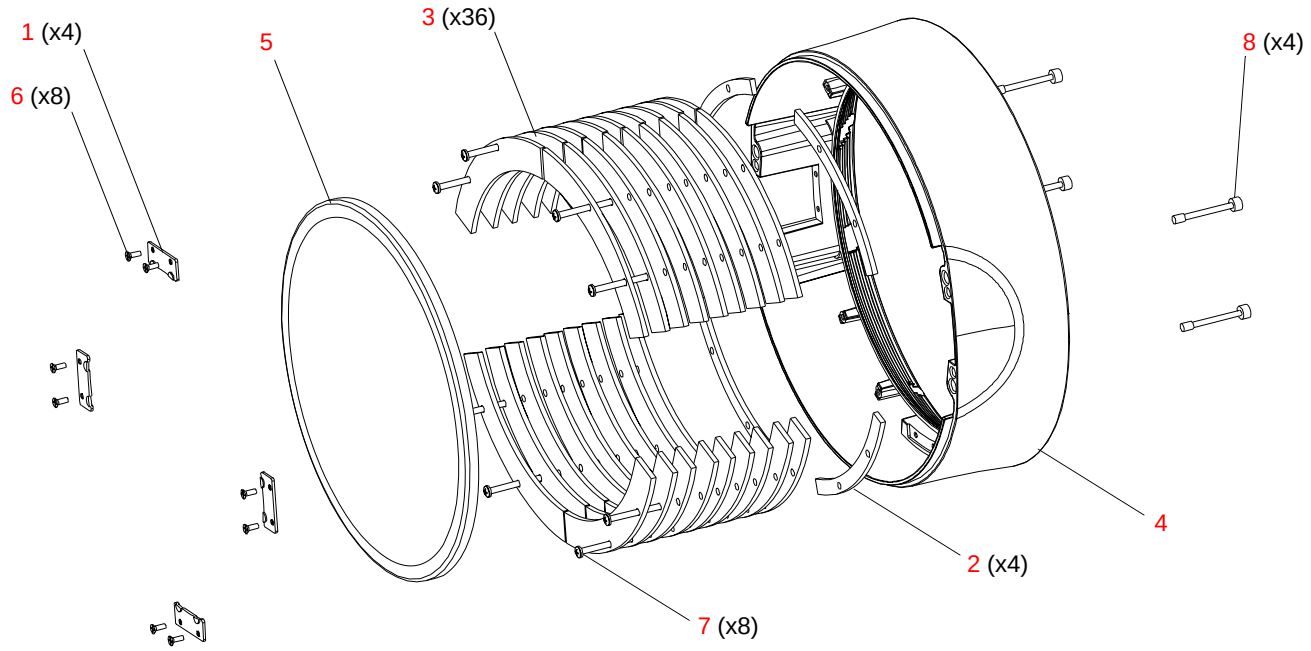


Figure 3-5: Front Fresnel Lens Assembly

Head Cover Assembly

21.9686.0611 Rev D

Refer to Figure 3-6

No.	Item	Qty.	UM.	Description
1	10.9678.0612	1	EA	HEAD COVER FOAM BAFFLE
2	10.9678.0649	4	EA	EJECTOR SPRING, BLACK OXIDE
3	10.9678.0674	1	EA	BRACKET, COVER TETHER
4	10.9678.0696	1	EA	FOAM FRAME, HEAD COVER
5	10.9686.0610	1	EA	HEAD COVER, VL3500™ WASH
6	53.5606.0375	1	EA	SCREW, 6-32 X 3/8, PPSS
7	53.6683.0015	4	EA	SCREW, #6 X 1/4" PPZ PLASTIC
8	55.2233.0016	4	EA	RETAINER, SPLIT RING
9	55.2233.0775	4	EA	STUD, 1/4 TURN .775L STEEL BLK ZINC
10	55.9676.0255	4	EA	BELLEVILLE SPRING WASHER

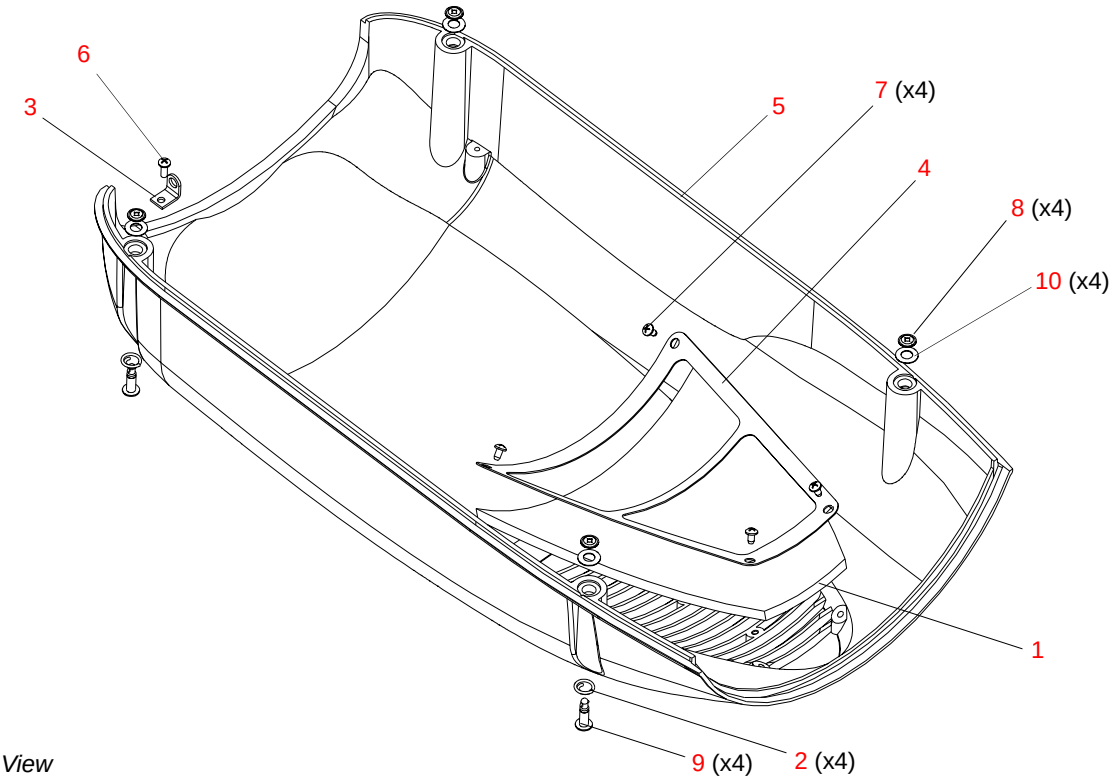


Figure 3-6: Head Cover Assembly

Backend Assembly

21.9686.0615 Rev M

Refer to Figure 3-7

No.	Item	Qty.	UM.	Description
1	10.9678.0653	1	EA	LIGHT BAFFLE, EXHAUST
2	10.9686.0635	1	EA	EXHAUST BULKHEAD
3	10.9686.0636	10	EA	COUNTERWEIGHT, REAR
4	10.9686.0671	1	EA	SEPARATION BULKHEAD
5	12.9678.0627	1	EA	REAR CROSS-CASTING, MACHINED
6	10.9686.0659	1	EA	INSULATOR, FAN, THIN
7	21.9678.0673	1	EA	TETHER ASSY, COVERED
8	21.9686.0673	1	EA	TETHER ASSY, BARE
9	21.9686.0605	1	EA	ASSEMBLY, REFLECTOR MOUNT
10	22.9686.0674	1	EA	ASSEMBLY, DUAL FAN DUCT
11	21.9686.0680	1	EA	ASSEMBLY, HOT BOX
12	21.9686.6619	2	EA	FAN ASSY, AC 80MM 36CFM
13	53.2002.0001	2	EA	NUT, 6-32 KEPS ZINC PLATED
14	53.2004.0002	4	EA	NUT, 8-32 KEPS ZINC PLATE
15	53.6545.0009	4	EA	SCREW, 8-32 X 1.375"LG PFZ
16	53.6519.0001	2	EA	SCREW, 4-40 X 5/8" PPZ
17	53.6558.0007	2	EA	SCREW, 6-32 X 1/4" PPZ SEMS
18	53.6581.0001	4	EA	SCREW, 4-40 X 1 3/8" PPZ
19	53.6609.0001	10	EA	SCREW, 6-32 X 3/8" PFZ
20	53.6614.0003	4	EA	SCREW, 6-32 X 5/8" PFZ
21	53.6617.0001	10	EA	SCREW, 6-32 X 1" PPB
22	55.2125.0003	4	EA	STANDOFF, 3/8"HEX 8-32 1.500"L
23	55.6706.0001	1	EA	GROMMET, 9/32"ID 9/16"OD 1/4T
24	74.1099.0001	1	EA	SWITCH, MINIATURE 5AMP 150DEG
25	55.6541.0008	1	EA	GROMMET, 1/2"ID 7/8"OD 3/4"GRV
26	55.6506.0024	2	EA	SPACER, 3/16 RND, .188 LG, .141 THRU
27	55.6528.0001	2	EA	WASHER, #6 FLAT, ZINC
28	55.6538.0004	4	EA	WASHER, .750" OD, .312" ID, .125 THK
29	53.6613.0001	2	EA	SCREW, 6-32 X 1/2" PPZ
30	55.6677.0042	2	EA	WASHER, .500" OD, .145" ID, .031" THICK
31	10.9678.1645	2	EA	FAN LIGHT SHIELD

No.	Item	Qty.	UM.	Description
32	55.6658.0500	2	EA	STANDOFF, 6-32 X 1/2" LG, 1/4" HEX, ZINC
-	25.9686.0012	1	EA	YOKE TO DUAL AC FAN CABLE ASSY (**not shown**)
-	25.9686.0201	1	EA	CABLE ASSY, OT SWITCH TO BACKCAP INTERLOCK (**not shown**)

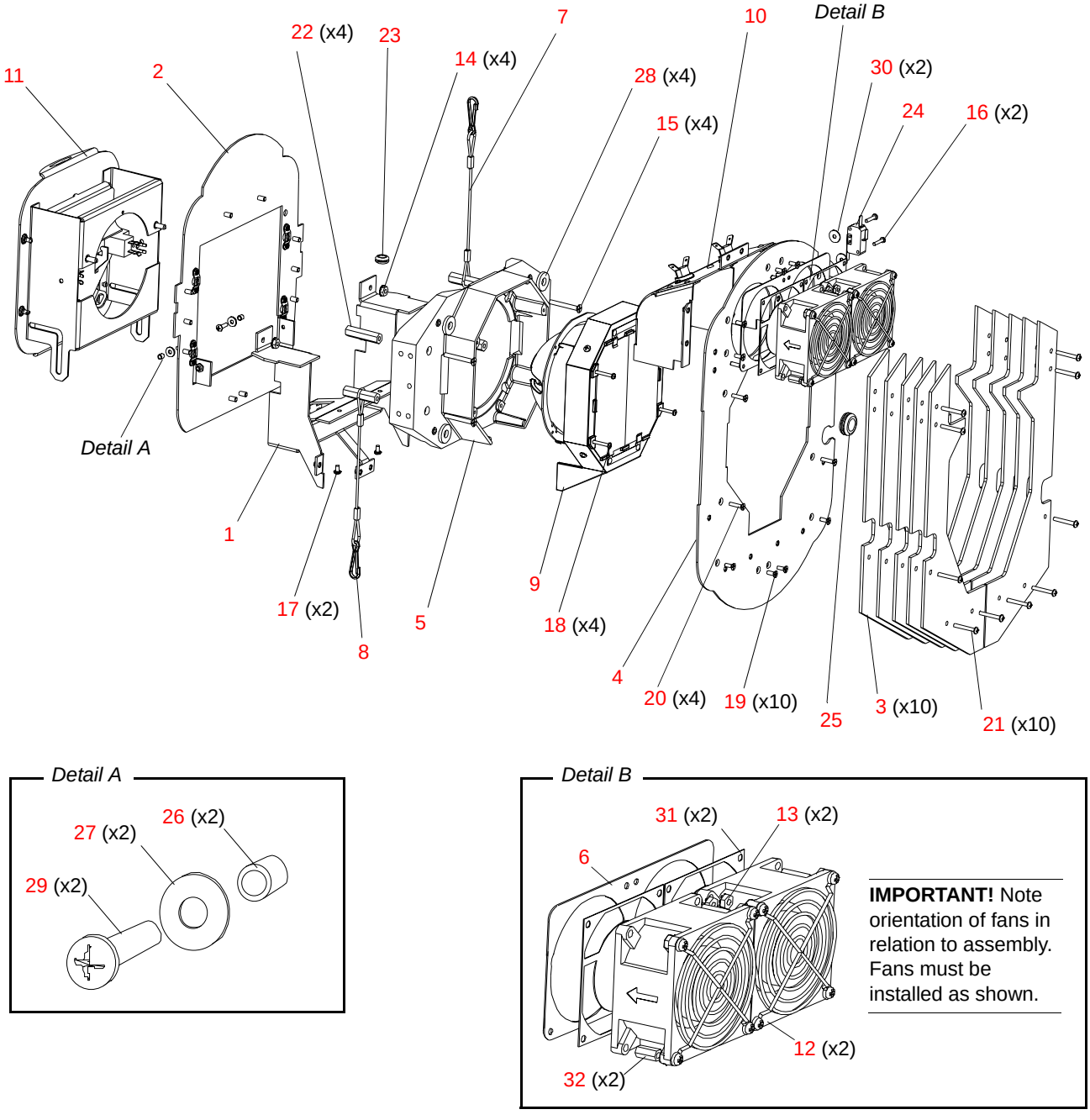


Figure 3-7: Backend Assembly

80mm Fan Assembly

21.9686.6619 Rev A

Refer to Figure 3-8

No.	Item	Qty.	UM.	Description
1	40.7144.0001	1	EA	FAN, TUBEAXIAL 80 X 80 X 38 MM, 230V, 36 CFM, BBEARING, 95°C
2	53.2200.0006	4	EA	NUT, 6-32 KEPS SS
3	53.6558.0001	4	EA	SCREW, 6-32 X 3/8" PPZ
4	55.7016.0001	1	EA	FAN GUARD, 80MM NICKEL PLATED STEEL WIRE

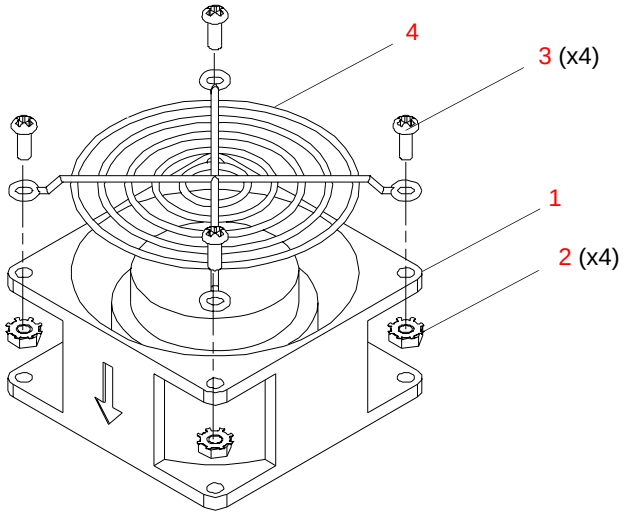


Figure 3-8: 80mm Fan Assembly

Dual Fan Duct Assembly

22.9686.0674 Rev B

Refer to Figure 3-9

No.	Item	Qty.	UM.	Description
1	10.9686.1672	1	EA	DUAL FAN DUCT
2	10.9686.0673	1	EA	TURNING VANE, FAN DUCT
3	25.9678.0015	1	EA	CABLE ASSY, OT SWITCH 2 TO GND (**not shown**)
4	25.9686.0013	1	EA	CABLE ASSY, OT SWITCH 1 TO OT SWITCH 2 (**not shown**)
5	25.9686.0014	1	EA	CABLE ASSY, BACKCAP INTRLK TO OT SWITCH 1 (**not shown**)
6	53.6558.0001	2	EA	SCREW, 6-32 X 3/8" PPZ
7	53.6604.0002	4	EA	SCREW, 4-40 X 1/4 THREAD FORMING
8	74.1090.0001	2	EA	OT1 THERMAL SWITCH, LIMIT, 199°C

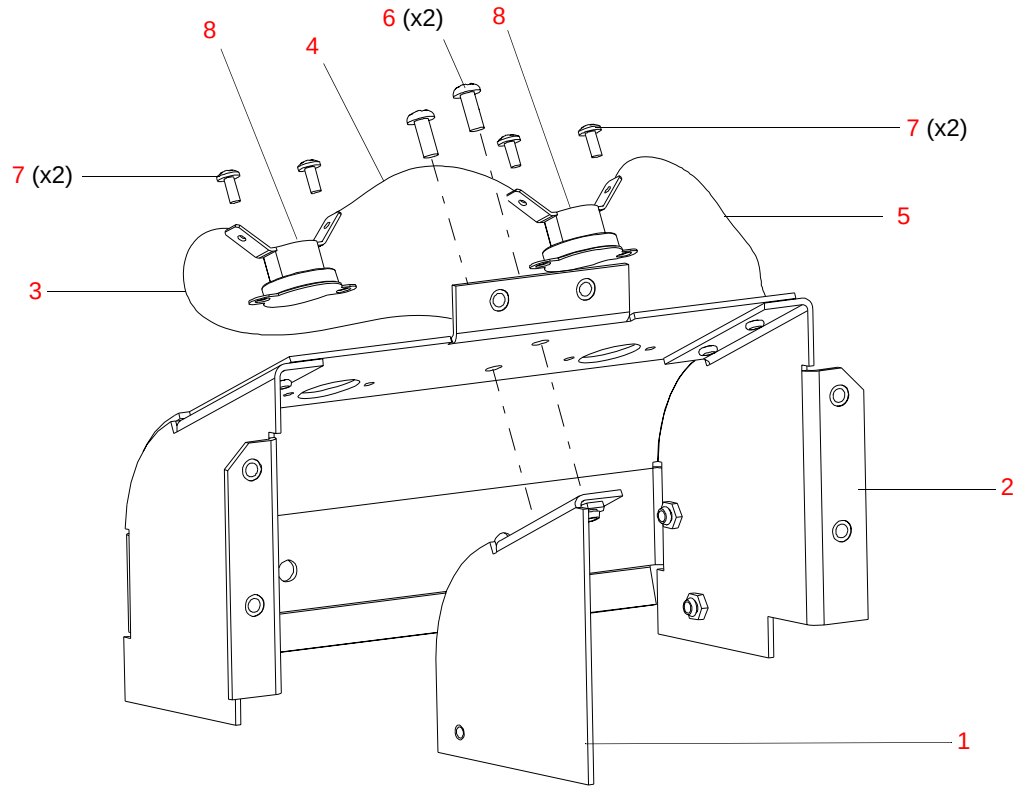


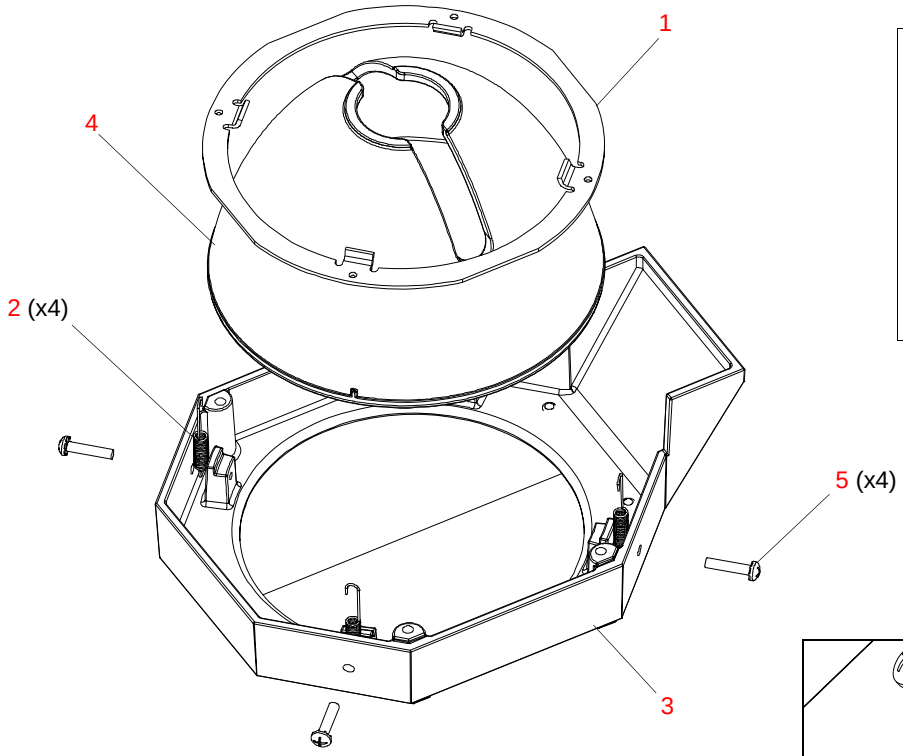
Figure 3-9: Dual Fan Duct Assembly

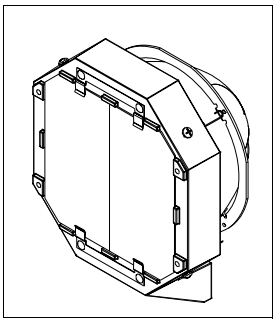
Reflector Mount Assembly

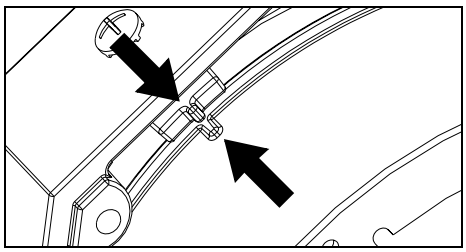
21.9686.0605 Rev D

Refer to Figure 3-10

No.	Item	Qty.	UM.	Description
1	10.9686.0632	1	EA	REFLECTOR CLAMP
2	10.9686.0644	4	EA	SPRING, REFLECTOR MOUNT
3	21.9686.0606	1	EA	ASSEMBLY, UV GLASS
4	42.9686.0120	1	EA	REFLECTOR, ELIPTICAL
5	53.6683.0015	4	EA	SCREW, 6-32 X 5/8, PPB, SEMS







Align tabs on reflector and top-left support

Note: Install filter with marks indicating IR coating side of the glass facing up and located outside of circular cutout in reflector mount.

Figure 3-10: Reflector Mount Assembly

Notes

Hot Box Assembly

21.9686.0680 Rev E

Refer to Figure 3-11

No.	Item	Qty.	UM.	Description
1	10.9678.0043.04	1	EA	LABEL PLATE, VL3500 WASH BACKCAP, BLACK
2	10.9686.0642	1	EA	BACKCAP PLATE
3	10.9678.0643	1	EA	LAMP ADJUST STOP
4	10.9678.0645	3	EA	KNOB, LAMP ADJ MOLDED
5	10.9686.0681	1	EA	HOT BOX
6	22.9686.0649	1	EA	ASSEMBLY, TILT PLATE, LONG VANE
-	25.9661.1522	1	EA	CABLE ASSY, HEAD TO BACKCAP GND (**not shown**)
-	25.9678.0789	1	EA	CABLE ASSY, IGNITOR TO LAMP SOCKET (**not shown**)
7	53.2030.0001	3	EA	NUT, ACORN 10-32THD 3/8 WIDE
8	53.5508.0375	2	EA	SCREW, 8-32 X 3/8" PPSS
9	53.6530.0013	8	EA	RIVET, 1/8"OD .063" - .125"GL CSK HD ALUM
10	55.2233.0003	4	EA	RETAINER, PUSH-ON TYPE
11	55.2233.0006	4	EA	STUD, 1/4 TURN OPR .455L STEEL
12	55.6546.0004	3	EA	WASHER, TEFLON, .201ID X .438OD X .04 THK
13	55.6568.0035	3	EA	SPRING, CPRSN .300"OD .875"LG .035"WIRE DIA SS
14	71.2561.0002	1	EA	LAMPHOLDER, SFC10-4 WITH PREFOCUS SHARX

Hot Box Assembly (continued)

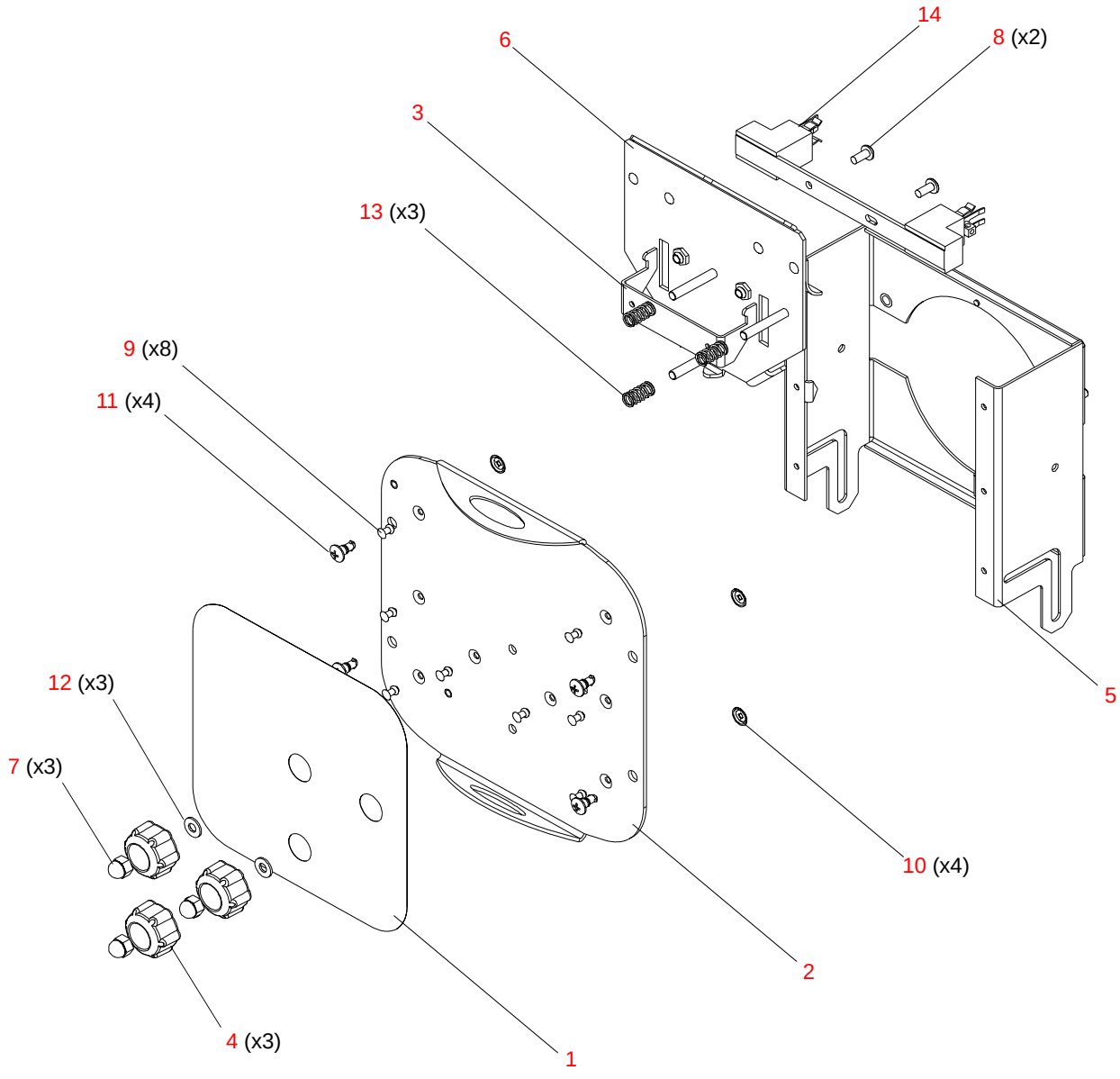


Figure 3-11: Hot Box Assembly

Dual Fan Tray Assembly

21.9686.0660 Rev B

Refer to Figure 3-12

No.	Item	Qty.	UM.	Description
1	22.9686.0661	1	EA	ASSY, FAN TRAY
2	23.9686.0684	2	EA	FAN ASSY, HEAD FRONT
3	53.5506.1375	4	EA	SCREW, 6-32 X 1 3/8"LG PPB
4	55.6818.0002	1	EA	STANDOFF, 45 DEG NYLON 6/6 KUR

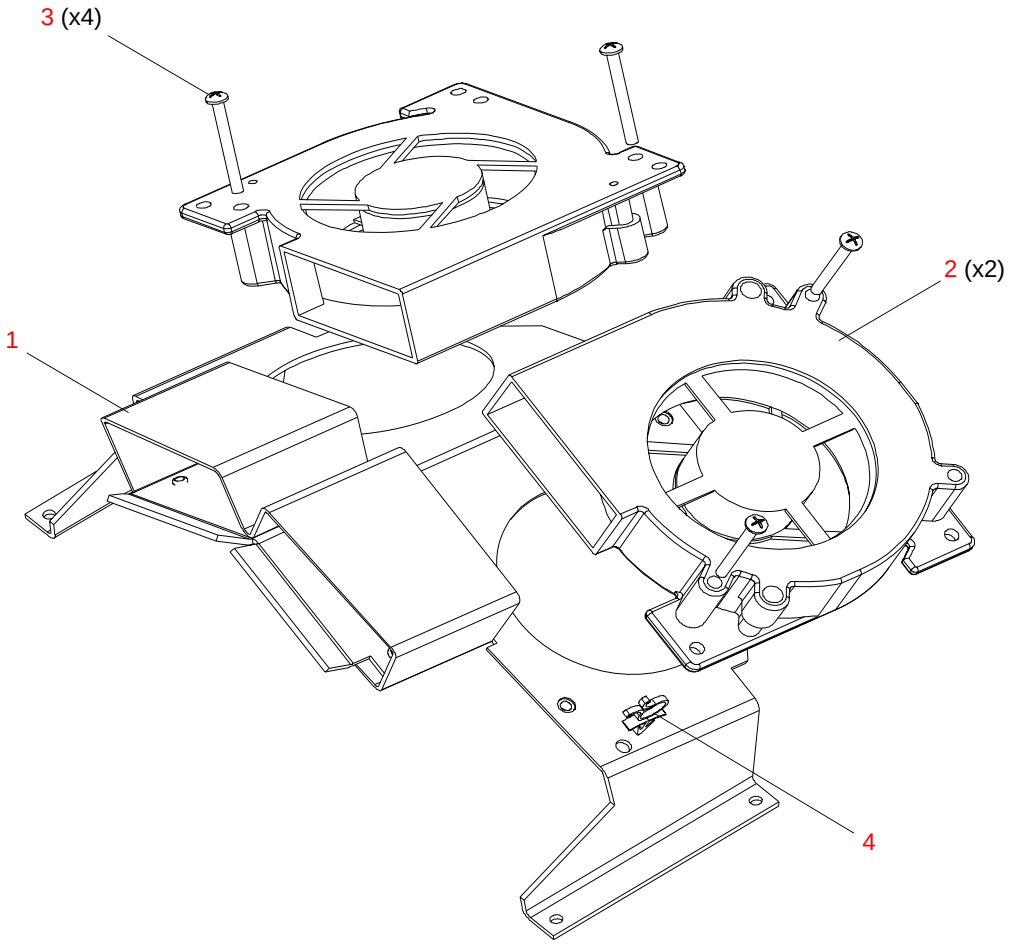


Figure 3-12: Dual Fan Tray Assembly

Head Front Fan Assembly

23.9686.0684 Rev 0

Refer to Figure 3-13

No.	Item	Qty.	UM.	Description
1	12.9686.0664	1	EA	FAN, COOLING, 24V MODIFIED
2	52.6523.0002	1	EA	CONN, HOUSING 2POS PLUG SHROUDED WIRE TO WIRE
3	52.8347.0001	2	EA	CONTACT, 24-30AWG MALE CRIMP

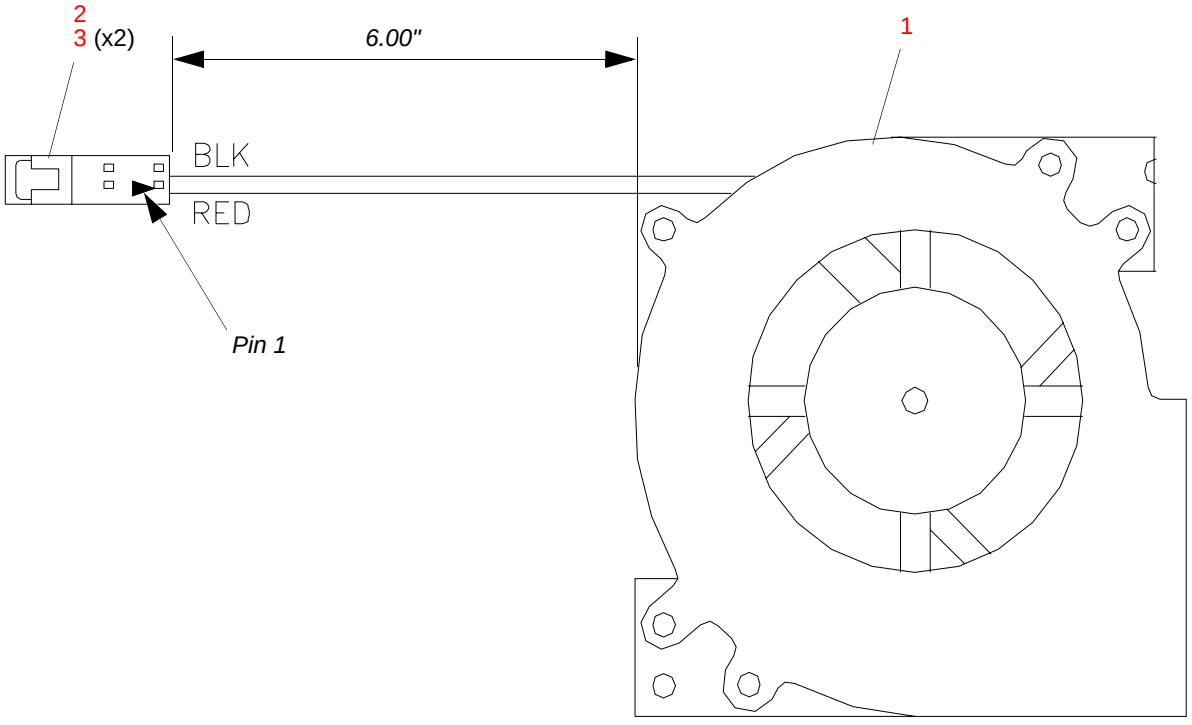


Figure 3-13: Head Front Fan Assembly

Internal Lens Assembly

21.9686.2150 Rev H

Refer to Figure 3-14

No.	Item	Qty.	UM.	Description
1	10.9686.1155	1	EA	CLAMP, BELT, FRONT
2	10.9686.2180	1	EA	CROSS STRAP, BEAM SPLITTER
3	10.9686.2190	1	EA	BUMPER, LENS
4	10.9686.7135	2	EA	KNOB, HEX, ALUMINUM
5	21.9686.2140	1	EA	ASSEMBLY, RAIL, SPLIT LENS
6	21.9686.2142	1	EA	ACTUATOR ASSEMBLY
7	21.9686.2144	1	EA	ASSEMBLY, INTERNAL LENS SPLITTER
8	21.9686.2164	1	EA	ASSEMBLY, SPLIT ZOOM BUXOM, RIGHT
9	21.9686.2165	1	EA	ASSEMBLY, SPLIT ZOOM BUXOM, LEFT
10	53.6513.0032	4	EA	SCREW, M3 X 5 X 10MM LG, PPZ, METRIC
11	53.6513.0046	4	EA	SCREW, M3 X 6 LG SOC CAP, LOW PROFILE, BLK
12	53.6607.0001	1	EA	SCREW, 6-32 X 1/4 PPB

Internal Lens Assembly (Continued)

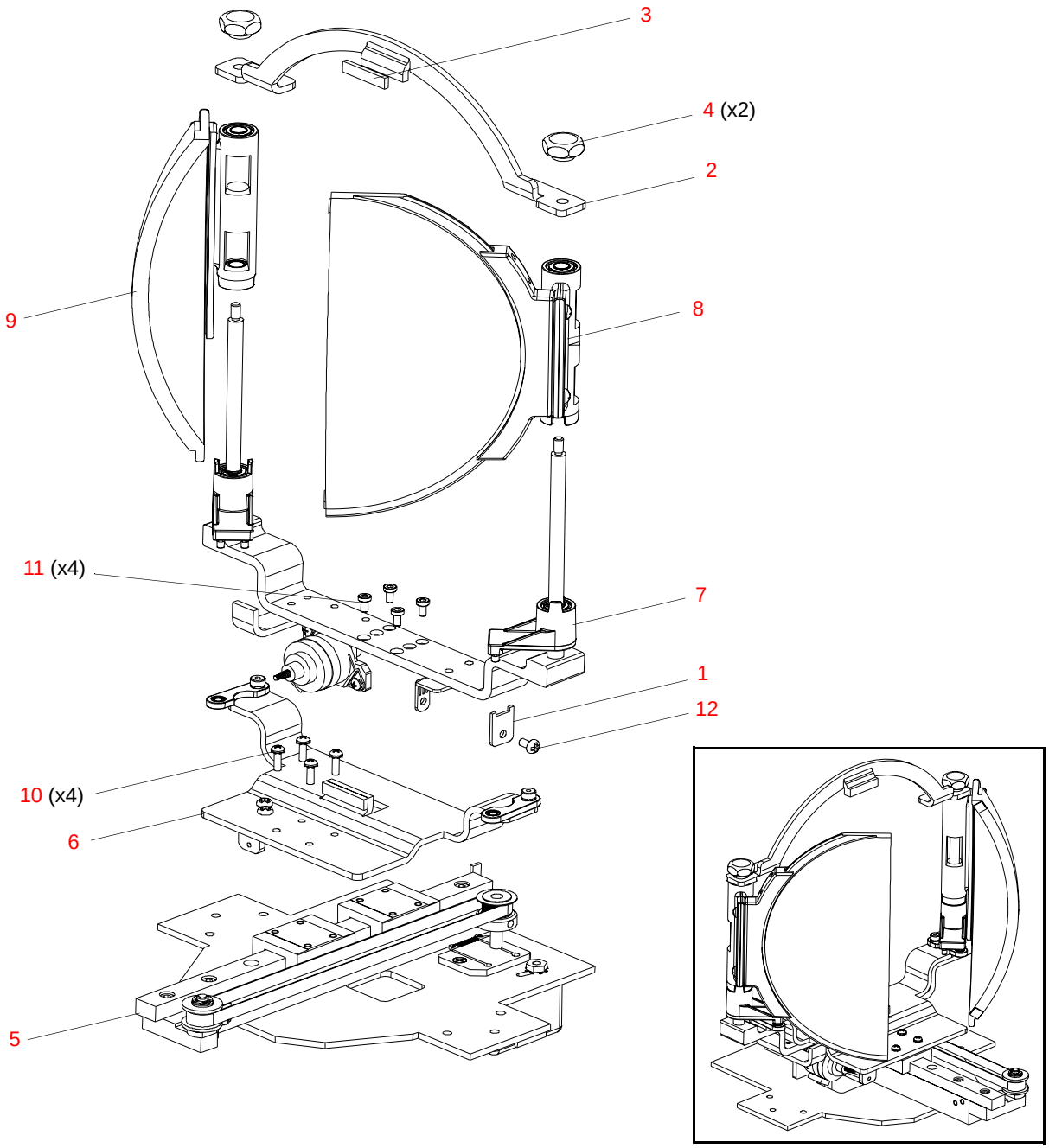


Figure 3-14: Internal Lens Assembly

Internal Lens Rail Assembly

21.9686.2140 Rev K

Refer to Figure 3-15

No.	Item	Qty.	UM.	Description
1	10.9621.0097	1	EA	STABILIZER, STEPPER, GOBO WHEEL
2	10.9678.0128	1	EA	PULLEY, ZOOM MOTOR
3	10.9678.1131	1	EA	FORWARD PULLEY SHAFT, BEARING
4	10.9686.1170	1	EA	MOUNT, RAIL
5	10.9686.1173	1	EA	PAD, ISOLATION, ZOOM MOTOR
6	10.9686.1182	1	EA	BLOCK, MOUNTING, IDLER PULLEY
7	10.9686.2130	1	EA	END OF TRAVEL STOP
8	10.9686.3171	1	EA	MOUNTING PLATE, SPLIT LENS ZOOM ASSY
9	21.9686.1132	1	EA	EOT STOP, FRONT, SPLIT LENS ASSEMBLY
10	22.9686.1154	1	EA	LINEAR RAIL, 12MM, 2 LONG CARRIAGE
11	44.9663.1766	1	EA	MOTOR, 17 1.24" SHAFT 11.8MH 5.5 OHM
12	53.2200.0006	1	EA	NUT, 6-32 KEPS SS
13	53.6523.0001	5	EA	SCREW, 6-32 X 3/8" SCB ALLEN
14	53.6543.0001	5	EA	SCREW, 6-32 X 3/8" PPB
15	53.6598.0312	1	EA	SCREW, 4-40 X 5/16 PFB
16	53.6613.0008	2	EA	SCREW, 6-32 X 1/2" LG PPZ SEMS
17	53.6614.0001	2	EA	SCREW, 6-32 X 5/8" PPB
18	54.1262.0001	2	EA	BEARING, FLANGED.1875 BORE
19	54.2064.0192	1	EA	BELT, TIMING, MXL (.080), 192 GRV, 1/4" WIDE
20	54.2053.0001	1	EA	MXT T BELT PULLEY, 20 GRV.25WD
21	55.2234.0001	1	EA	E-RING,.188 SHAFT DIA.
22	55.6568.0016	1	EA	SPRING, EXTSN 0.125" OD, 0.500" LG

Internal Lens Rail Assembly

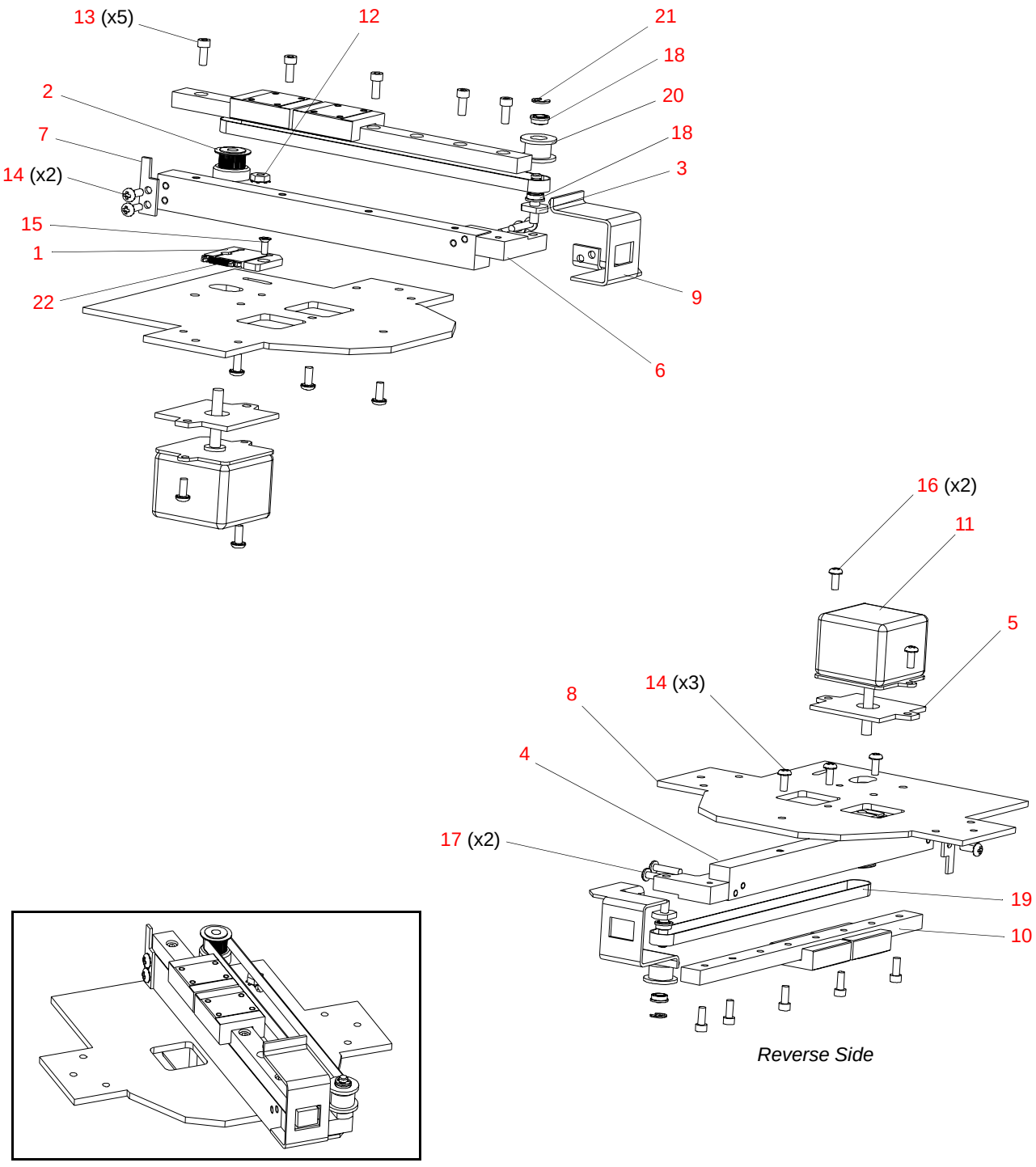


Figure 3-15: Internal Lens Rail Assembly

Internal Lens Splitter Assembly

21.9686.2144 Rev E

Refer to Figure 3-16

No.	Item	Qty.	UM.	Description
1	10.9686.1156	1	EA	BELT CLAMP, BACK
2	10.9686.1159	2	EA	SPACER, PIVOT
3	10.9686.1176	1	EA	MOTOR MOUNT 1, SPLIT LENS MOTOR
4	10.9686.1179	2	EA	HINGE ROD
5	10.9686.2175	1	EA	MOUNT, ZOOM LENS
6	10.9686.2189	1	EA	EOT STOP, VARI-BRITE
7	21.9686.2160	2	EA	PIVOT ASSY, INTERNAL LENS
8	44.9686.0164	1	EA	MOTOR, SPLIT LENS
9	53.6524.0002	4	EA	SCREW, 6-32 X 5/16" PPB
10	53.6592.0250	2	EA	SCREW, 4-40 X 1/4" LG PPB SEMS
11	53.6607.0001	2	EA	SCREW, 6-32 X 1/4" PPB
12	54.2007.0001	2	EA	RING, RETAINING EXTERNAL 1/4"

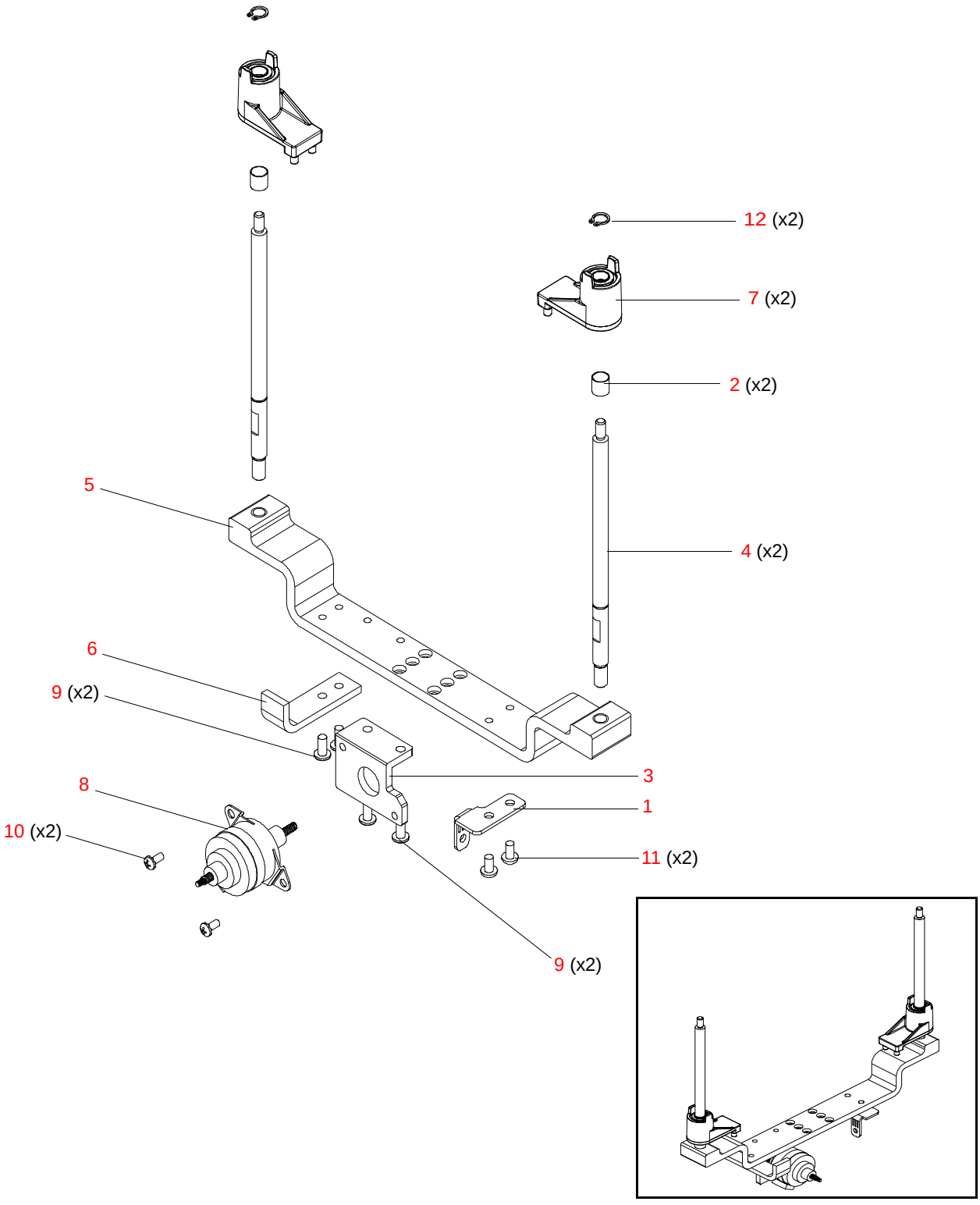


Figure 3-16: Internal Lens Splitter Assembly

Actuator Assembly

21.9686.2142 Rev F

Refer to Figure 3-17

No.	Item	Qty.	UM.	Description
1	10.9686.1158	4	EA	SPACER, PIVOT LINK
2	10.9686.2190	1	EA	BUMPER, LENS
3	10.9686.4188	1	EA	PLATE, LINKAGE ACTUATOR
4	10.9686.4189	1	EA	MOUNT, LEAD SCREW
5	21.9686.2130	2	EA	ASSEMBLY, PIVOT LINK
6	53.6607.0001	2	EA	SCREW, 6-32 X 1/4" PPB
7	53.6678.0013	2	EA	SCREW, SHLDR 4-40TH.125DIA.188 SHLDR

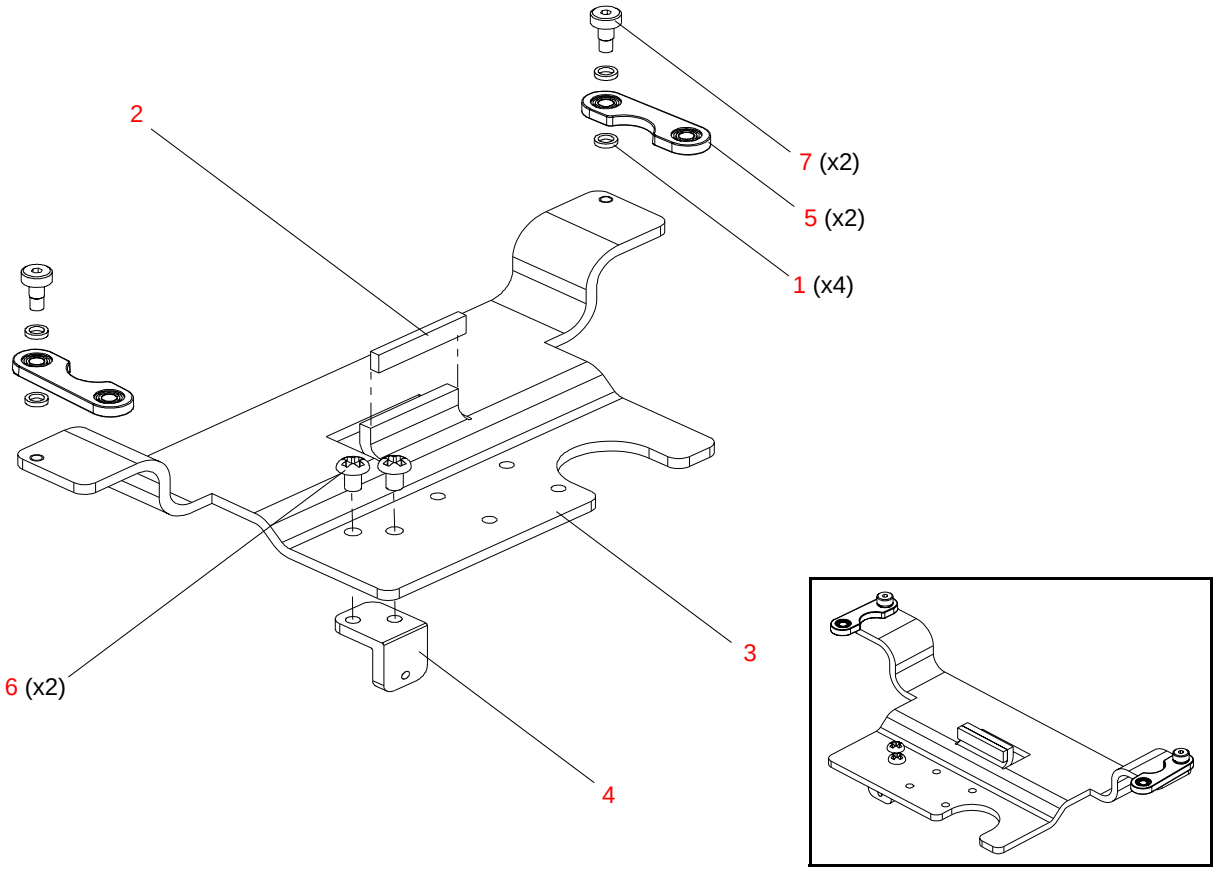


Figure 3-17: Actuator Assembly

Fresnel Internal Lenses

21.9686.0620 Rev C

Refer to Figure 3-18

No.	Item	Qty.	UM.	Description
1	10.9686.1141	2	EA	ADAPTOR, SPLIT LENS PIVOT
2	10.9686.1143	2	EA	LENS MOUNT, FRESNEL, SPLIT LENS
3	10.9686.2181	6	EA	SPACER, LENS MOUNTING
4	10.9686.2182	2	EA	BUMPER PAD, SPLIT LENSES
5	42.9686.0111	1	EA	LENS, ZOOM FRESNEL, RIGHT
6	42.9686.0112	1	EA	LENS, ZOOM FRESNEL, LEFT
7	53.6543.0001	4	EA	SCREW, 6-32 X 3/8" PPB
8	54.1259.0006	2	EA	BEARING, FLANGED, EXT IN. RACE, 0.25" ID
9	54.1259.0007	2	EA	BEARING, FLANGED, 0.25" ID

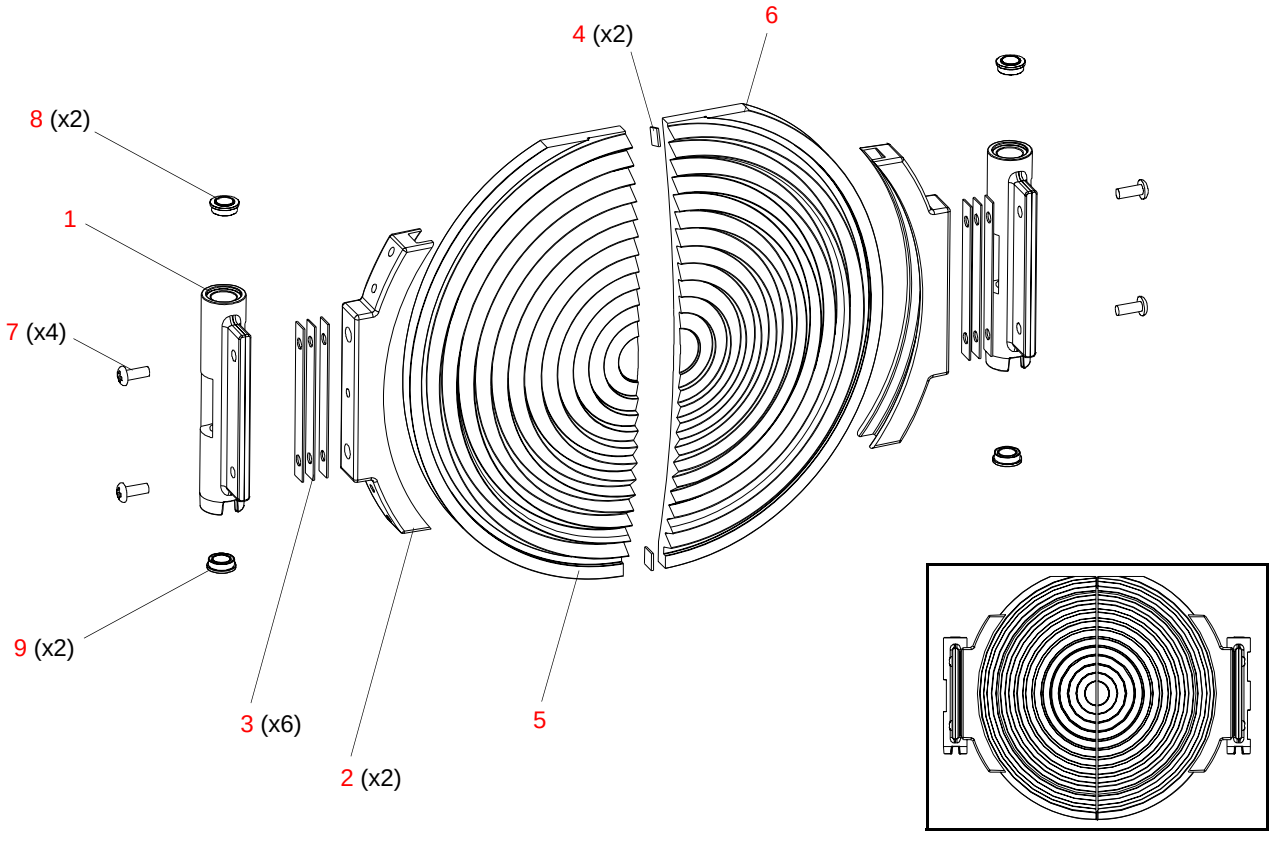


Figure 3-18: Fresnel Internal Lenses

Color/Effect/Strobe Module

21.9686.0400 Rev K (VL3500 Wash)

Refer to Figure 3-19

No.	Item	Qty.	UM.	Description
1	10.9676.0230.02	3	EA	SPACER, COLOR WHEEL.043" LG
2	10.9678.0246	5	EA	ADJUST PLATE, MOTOR
3	10.9686.0420	1	EA	BULKHEAD, COLOR MODULE, FRONT
4	10.9686.0421	1	EA	BULKHEAD, COLOR MODULE, REAR
5	10.9686.0422	2	EA	SHAFT, COLOR WHEEL, FRONT
6	10.9686.0432	2	EA	SHAFT, COLOR WHEEL, REAR
7	10.9686.0433	5	EA	SPACER, COLOR SYSTEM HALVES
8	10.9686.0442	1	EA	BLOCKING PLATE, AIR, DIMMER
9	10.9686.0443	1	EA	AIR DIVERTER, DIMMER
10	10.9686.0444	1	EA	AIR DIVERTER, DIMMER, BELT SIDE
11	10.9686.0446	2	EA	MOTOR ADJUST PLATE
12	10.9686.0447	1	EA	MOTOR ADJUST PLATE, CABLE GUIDE
13	10.9686.0457.01	2	EA	SPACER, COLOR WHEEL.322" LG
14	10.9686.0457.02	2	EA	SPACER, COLOR WHEEL.125 LG
15	10.9686.0457.03	1	EA	SPACER, COLOR WHEEL,.490" LG
16	10.9686.0457.04	1	EA	SPACER, COLOR WHEEL,.090" LG
17	10.9686.0457.05	1	EA	SPACER, COLOR WHEEL,.271" LG
18	10.9686.0468	6	EA	PULLEY, COLOR WHEEL DRIVE MOTOR, WITH FLANGES
19	10.9686.2468	2	EA	PULLEY, MOTOR, NO FLANGES, FOR CTO AND DIMMER WHEELS
20	21.9686.0404	1	EA	ASSEMBLY, STROBE SYSTEM
21	21.9686.0480	1	EA	ASSY, FIXED COLOR WHEEL #2
22	21.9686.0484	1	EA	ASSY, FIXED COLOR WHEEL #1
23	22.9686.0410	1	EA	ASSY, COLOR WHEEL, CYAN
24	22.9686.0411	1	EA	ASSY, COLOR WHEEL, YELLOW
25	22.9686.0412	1	EA	ASSY, COLOR WHEEL, MAGENTA
26	22.9686.0413	1	EA	ASSY, COLOR WHEEL, CTO
27	22.9686.0414	1	EA	ASSY, DIMMER WHEEL
28	22.9686.0490	1	EA	ASSY, APERTURE WHEEL
29	24.9686.0427	1	EA	BOARD. ASMB COLOR WHEEL SENSOR, TRIPLE
30	24.9686.0428	1	EA	BOARD. ASMB COLOR WHEEL SENSOR, QUAD
-	25.9686.0205	1	EA	CABLE ASSY, COLOR HARNESS (**not shown**)

No.	Item	Qty.	UM.	Description
31	44.9663.1766	8	EA	MOTOR, ZOOM/DIMMER
32	53.6525.0188	4	EA	SCREW, 6-32 X 3/16" PPZ SEMS
33	53.6530.0006	6	EA	RIVET, 1/8" OD POP,.188 -.250 LG
34	53.6558.0009	10	EA	SCREW, 6-32 X 3/8"LG PPZ SEM
35	53.6609.0001	14	EA	SCREW, 6-32 X 3/8" PFZ
36	53.6613.0001	12	EA	SCREW, 6-32 X 1/2" PPZ
37	54.2057.0001	8	EA	BELT, TIMING MXL.188W 144 GRV URETH/KEVLAR
38	55.6669.0014	6	EA	STANDOFF, 1/4 " HEX 6-32 5/8" (0.625") LG MF

Color/Effect/Strobe Module (continued)

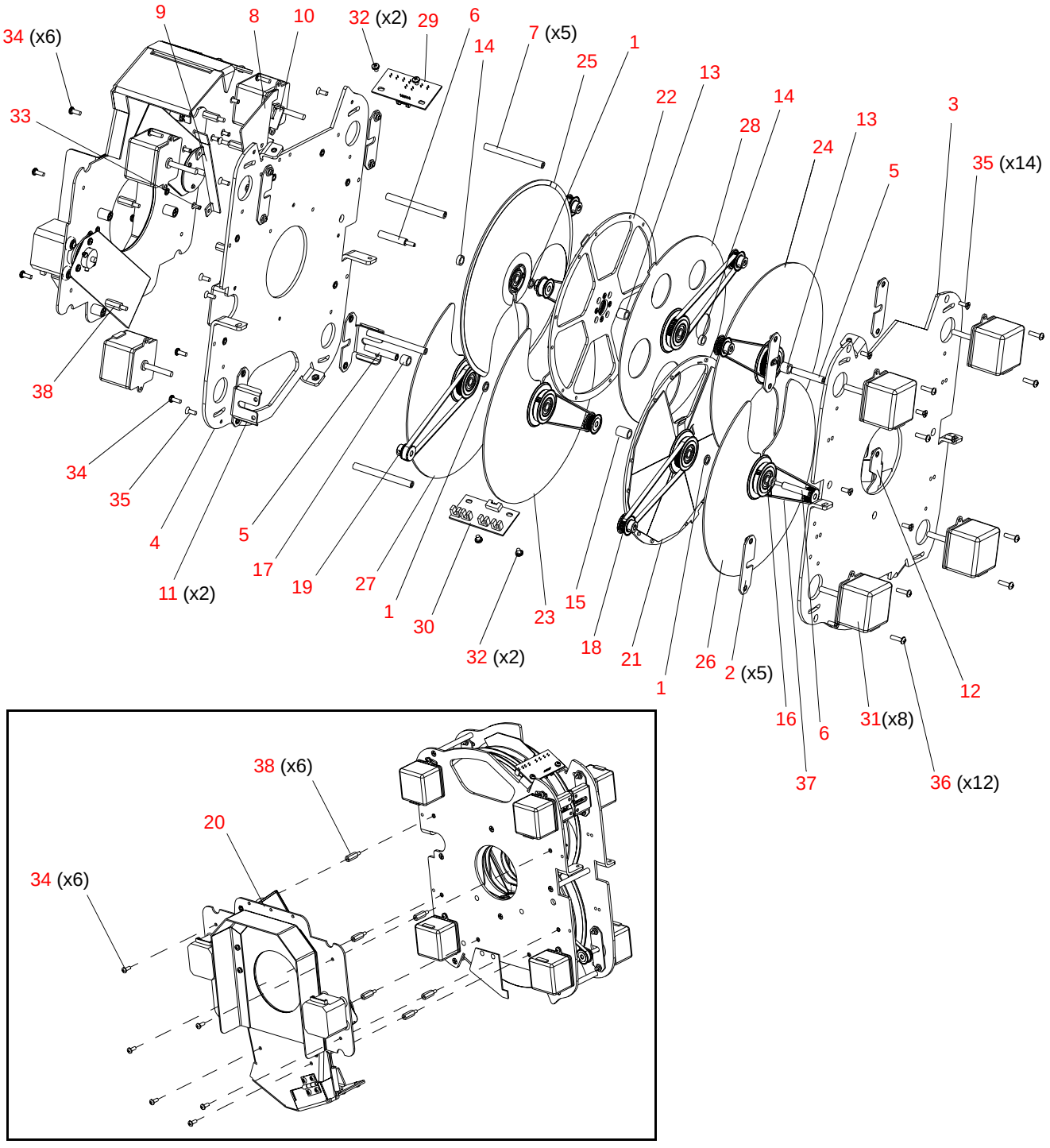


Figure 3-19: Color/Effect/Strobe Module

Color/Rotating Effect/Strobe Module

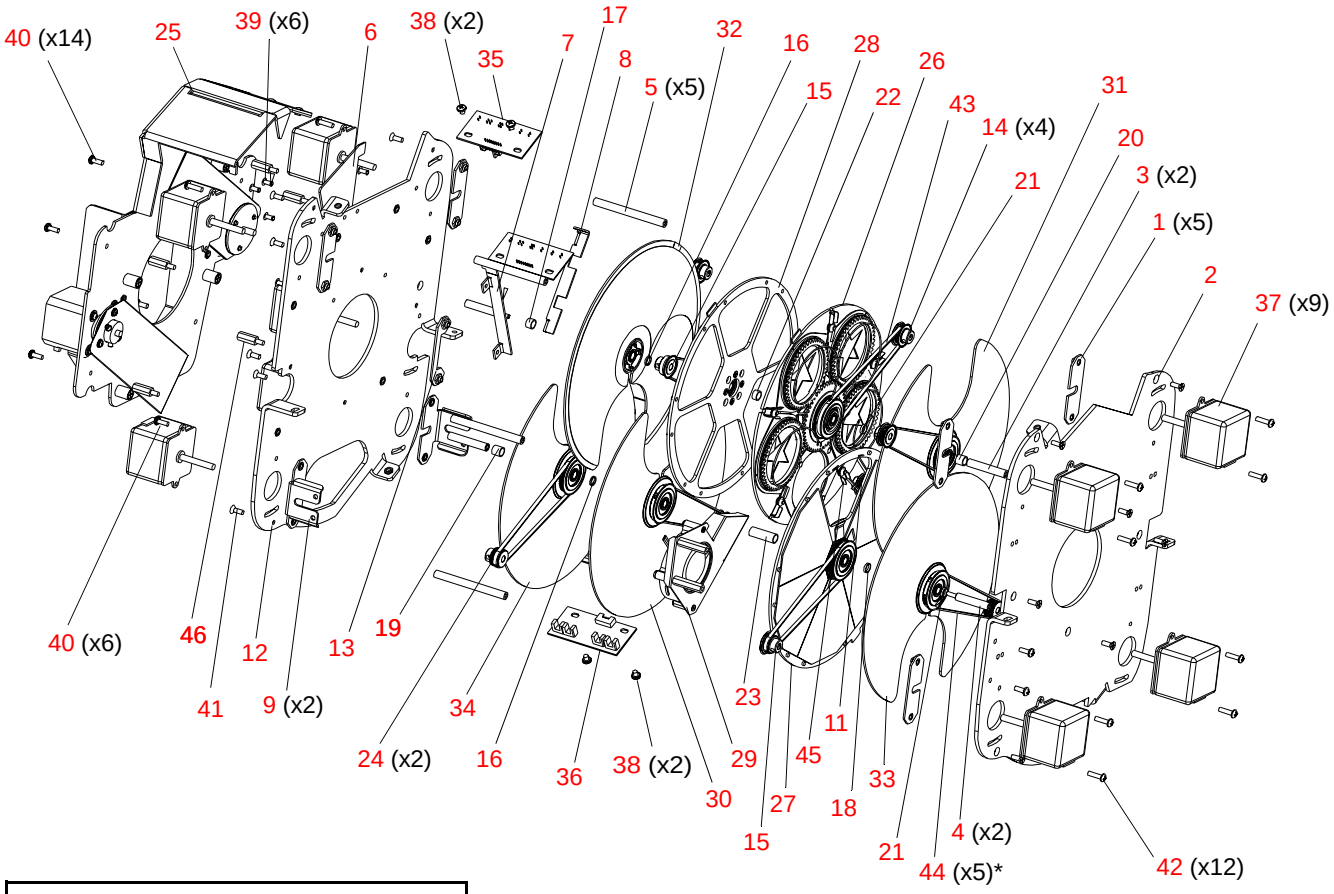
21.9686.1400 Rev K (VL3500 Wash FX)

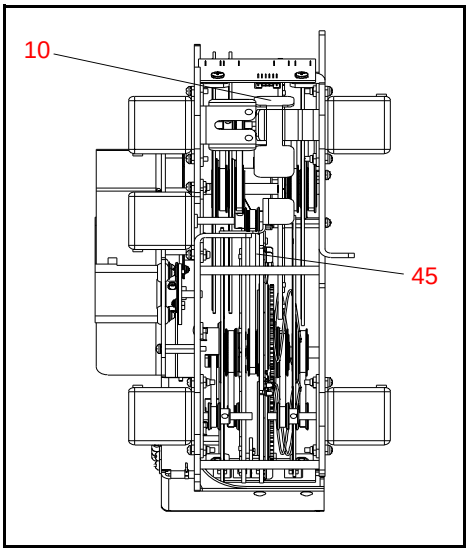
Refer to Figure 3-19

No.	Item	Qty.	UM.	Description
1	10.9678.0246	5	EA	MOTOR ADJUST PLATE
2	10.9686.0420	1	EA	BULKHEAD, COLOR MODULE, FRONT
3	10.9686.0422	2	EA	SHAFT, COLOR WHEEL, FRONT
4	10.9686.0432	2	EA	SHAFT, COLOR WHEEL, REAR
5	10.9686.0433	5	EA	SPACER, COLOR SYSTEM HALVES
6	10.9686.0442	1	EA	BLOCKING PLATE, AIR, DIMMER
7	10.9686.0443	1	EA	AIR DIVERTER, DIMMER
8	10.9686.0444	1	EA	AIR DIVERTER, DIMMER, BELT SIDE
9	10.9686.0446	2	EA	ADJUST PLATE, MOTOR
10	10.9686.0447	1	EA	MOTOR ADJUST PLATE, CABLE GUIDE
11	10.9686.0468	1	EA	MOTOR PULLEY W/ FLANGES, 3/16 BELT
12	10.9686.1421	1	EA	BULKHEAD, COLOR MODULE, REAR, ROTATING EFFECTS
13	10.9686.1446	1	EA	MOTOR ADJUST PLATE, NOTCHED
14	10.9686.1468	4	EA	MOTOR PULLEY W/ FLANGES, 1/8 BELT
15	10.9686.1469	2	EA	MOTOR PULLEY SINGLE FLANGE, 1/8 BELT
16	10.9686.2457.01	2	EA	SPACER, COLOR WHEEL
17	10.9686.2457.02	1	EA	SPACER, COLOR WHEEL
18	10.9686.2457.03	1	EA	SPACER, COLOR WHEEL
19	10.9686.2457.05	1	EA	SPACER, COLOR WHEEL
20	10.9686.2457.06	1	EA	SPACER, COLOR WHEEL
21	10.9686.2457.07	2	EA	SPACER, COLOR WHEEL
22	10.9686.2457.08	1	EA	SPACER, COLOR WHEEL
23	10.9686.2457.09	1	EA	SPACER, COLOR WHEEL
24	10.9686.2468	2	EA	PULLEY, COLOR MOTOR, WHL DRV, NO FLANGES
25	21.9686.1404	1	EA	ASSEMBLY, STROBE SYSTEM
26	21.9686.1405	1	EA	ASSEMBLY, ROTATING EFFECTS WHEEL, LATCH
27	21.9686.1480	1	EA	ASSEMBLY, FIXED COLOR WHEEL 2, ROT EFF
28	21.9686.1484	1	EA	ASSEMBLY, FIXED COLOR WHEEL 1, ROT EFF
29	21.9686.1448	1	EA	BLOWER ASSEMBLY, ROTATING EFFECTS
30	22.9686.1410	1	EA	ASSEMBLY, COLOR WHEEL, CYAN
31	22.9686.1411	1	EA	ASSEMBLY, COLOR WHEEL, YELLOW

No.	Item	Qty.	UM.	Description
32	22.9686.1412	1	EA	ASSEMBLY, COLOR WHEEL, MAGENTA
33	22.9686.1413	1	EA	ASSEMBLY, COLOR WHEEL, CTO
34	22.9686.1414	1	EA	ASSEMBLY, DIMMER WHEEL
35	24.9686.3427	1	EA	PCB, COLOR WHEEL SENSOR, QUAD WITH HALL
36	24.9686.3428	1	EA	PCB, COLOR WHEEL SENSOR, QUAD
-	25.9686.1205	1	EA	CABLE ASSEMBLY, COLOR/EFFECTS HARNESS (**not shown**)
37	44.9663.1766	9	EA	MOTOR, ZOOM/DIMMER
38	53.6525.0188	4	EA	SCREW, 6-32 X 3/16" LG PPZ SEMS
39	53.6530.0006	6	EA	RIVET, 1/8" OD POP,.188 -.250 LG
40	53.6558.0009	12	EA	SCREW, 6-32 X 3/8" LG PPZ SEM
41	53.6609.0001	14	EA	SCREW, 6-32 X 3/8" LG PFZ
42	53.6613.0001	12	EA	SCREW, 6-32 X 1/2" LG PPZ
43	54.2057.0002	3	EA	BELT, TIMING, MXL 144 GRV, 0.125 WD UR/KEV
44	54.2057.0003	5	EA	BELT, TIMING, MXL 144 GRV, 0.125 WD SIL/KEV
45	54.2068.0003	1	EA	BELT, TIMING, MXL 175 GRV, 0.125 WD SIL/KEV
46	55.6669.0014	6	EA	STANDOFF, 1/4 " HEX 6-32 5/8" (0.625") LG MF

Color/Rotating Effect/Strobe Module (continued)





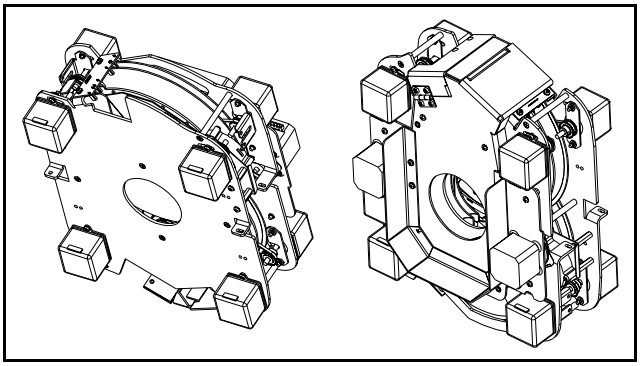


Figure 3-20: Color/Rotating Effect/Strobe Module

VL3500 Wash Fixed Color Wheel 1 Assembly

21.9686.0484 Rev H (VL3500 Wash)

Refer to Figure 3-21

No.	Item	Qty.	UM.	Description
1	10.9686.0487	1	EA	WHEEL, FIXED COLOR 1 (WHEEL #1)
2	10.9686.0482	1	EA	SPACER PLATE, FIXED COLOR
3	10.9686.0483	1	EA	SPRING PLATE, FIXED COLOR
4	21.9686.0419	1	EA	TIMING PULLEY WITH BEARINGS
5	41.9686.0490	1	EA	COLOR FILTER, RED (WHEEL #1)
6	41.9686.0491	1	EA	COLOR FILTER, YELLOW (WHEEL #1)
7	41.9686.0492	1	EA	COLOR FILTER, MAGENTA (WHEEL #1)
8	41.9686.0493	1	EA	COLOR FILTER, KELLY GREEN (WHEEL #1)
9	41.9686.0494	1	EA	COLOR FILTER, CONGO BLUE (WHEEL #1)
10	53.6598.0312	4	EA	SCREW, 4-40 X 5/16 " PFB

VL3500 Wash Fixed Color Wheel 1 Assembly (continued)

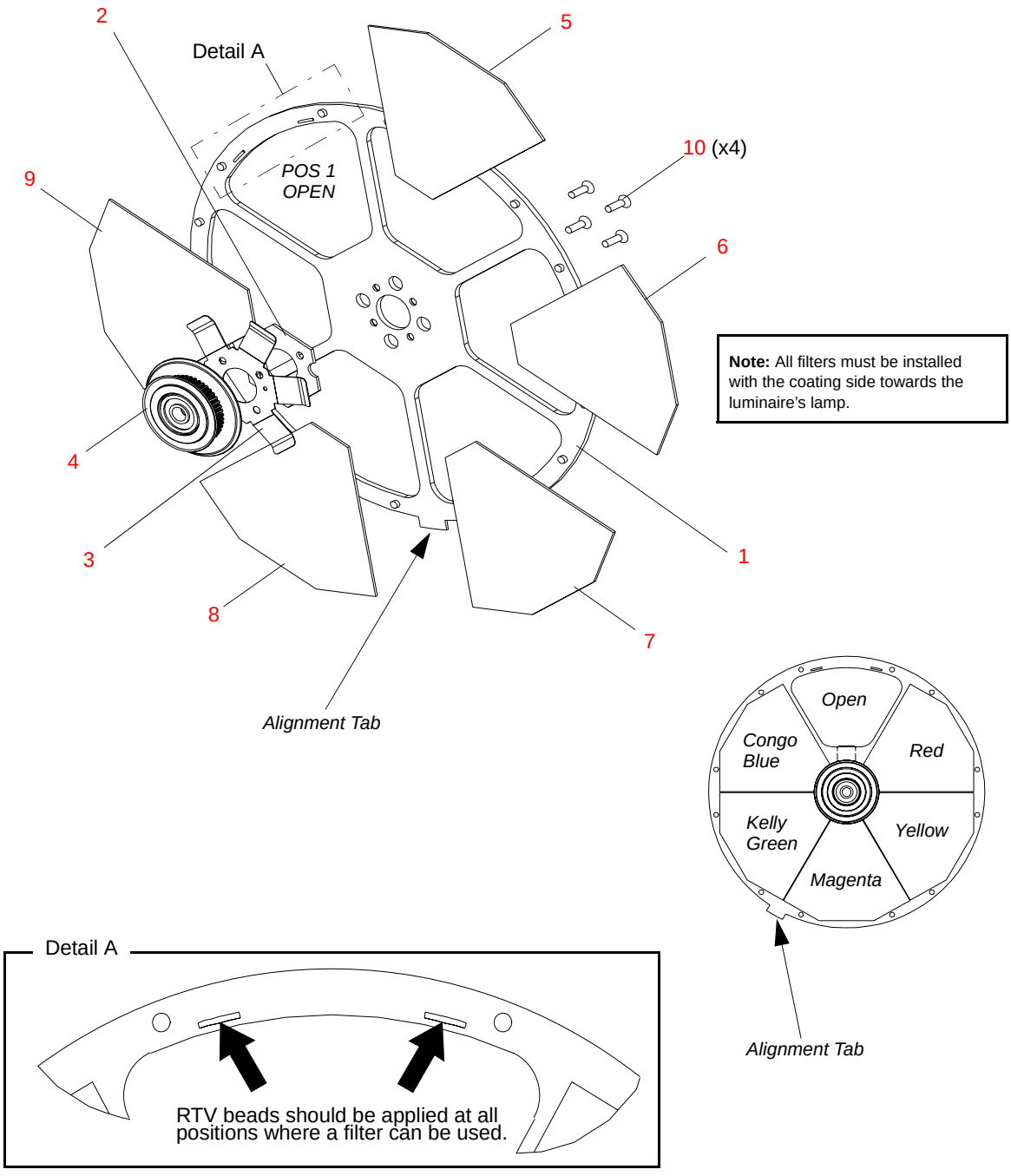


Figure 3-21: VL3500 Wash Fixed Color Wheel 1 Assembly

VL3500 Wash Fixed Color Wheel 2 Assembly

21.9686.0480 Rev H (VL3500 Wash)

Refer to Figure 3-22

No.	Item	Qty.	UM.	Description
1	10.9686.0481	1	EA	WHEEL, FIXED COLOR 2 (WHEEL #2)
2	10.9686.0482	1	EA	SPACER PLATE, FIXED COLOR
3	10.9686.0483	1	EA	SPRING PLATE, FIXED COLOR
4	21.9686.0419	1	EA	TIMING PULLEY WITH BEARINGS
5	41.9686.0495	1	EA	COLOR FILTER, BLUE (WHEEL #2)
6	41.9686.0496	1	EA	COLOR FILTER, AMBER (WHEEL#2)
7	41.9686.0497	1	EA	COLOR FILTER, DARK FUCHSIA (WHEEL #2)
8	41.9686.0498	1	EA	COLOR FILTER, ORANGE (WHEEL #2)
9	41.9686.0499	1	EA	COLOR FILTER, GREEN (WHEEL #2)
10	53.6598.0312	4	EA	SCREW, 4-40 X 5/16 " PFB

VL3500 Wash Fixed Color Wheel 2 Assembly (continued)

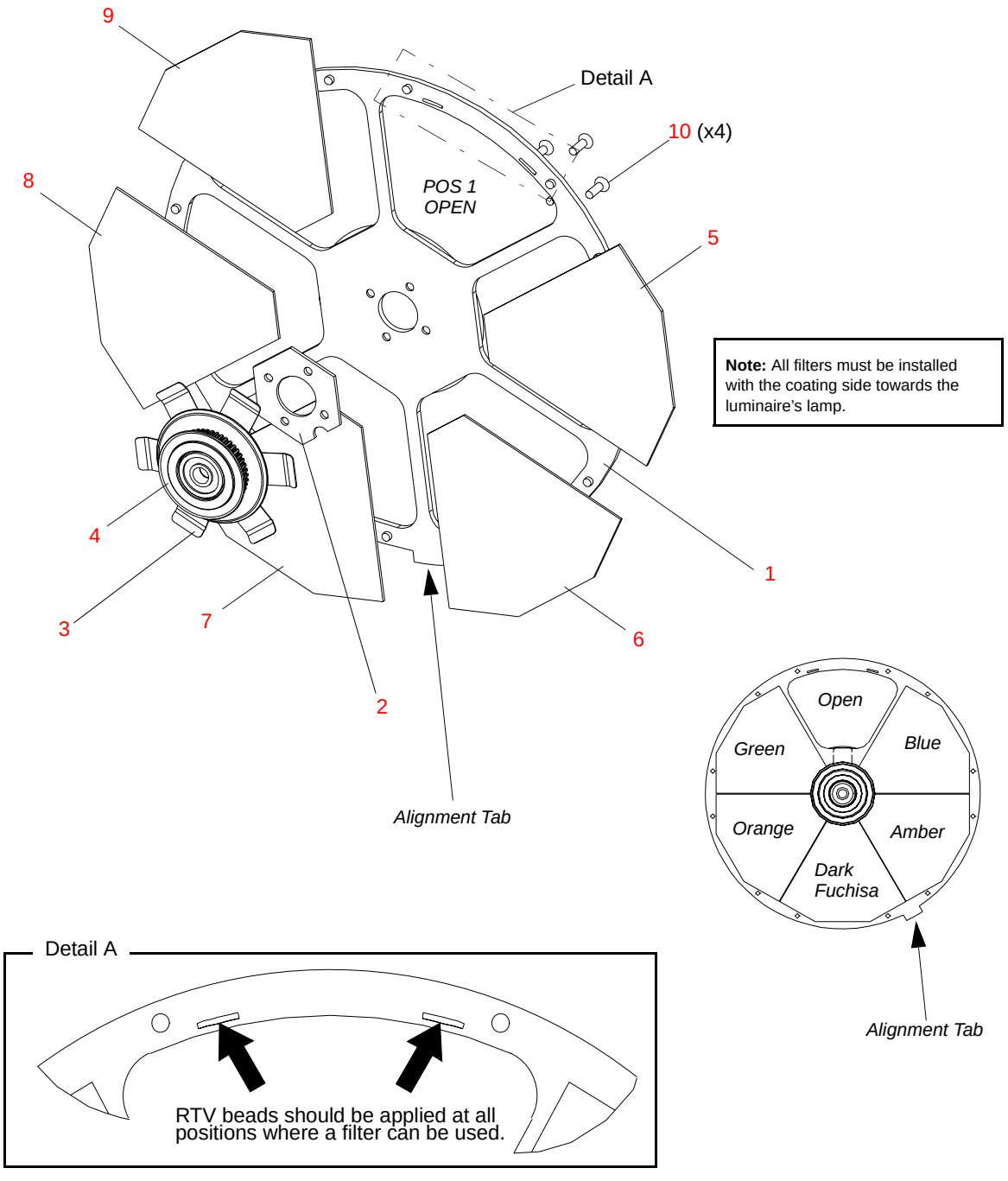


Figure 3-22: VL3500 Wash Fixed Color Wheel 2 Assembly

VL3500 Wash FX Fixed Color Wheel 1 Assembly

21.9686.1484 Rev A (VL3500 Wash FX)

Refer to Figure 3-23

No.	Item	Qty.	UM.	Description
1	10.9686.0487	1	EA	WHEEL, FIXED COLOR 1 (WHEEL #1)
2	10.9686.0482	1	EA	SPACER PLATE, FIXED COLOR
3	10.9686.0483	1	EA	SPRING PLATE, FIXED COLOR
4	22.9686.1416	1	EA	FIXED COLOR WHEEL HUB WITH BEARINGS
5	41.9686.0490	1	EA	COLOR FILTER, RED (WHEEL #1)
6	41.9686.0491	1	EA	COLOR FILTER, YELLOW (WHEEL #1)
7	41.9686.0492	1	EA	COLOR FILTER, MAGENTA (WHEEL #1)
8	41.9686.0493	1	EA	COLOR FILTER, KELLY GREEN (WHEEL #1)
9	41.9686.0494	1	EA	COLOR FILTER, CONGO BLUE (WHEEL #1)
10	53.6598.0312	4	EA	SCREW, 4-40 X 5/16 " PFB

VL3500 Wash FX Fixed Color Wheel 1 Assembly (continued)

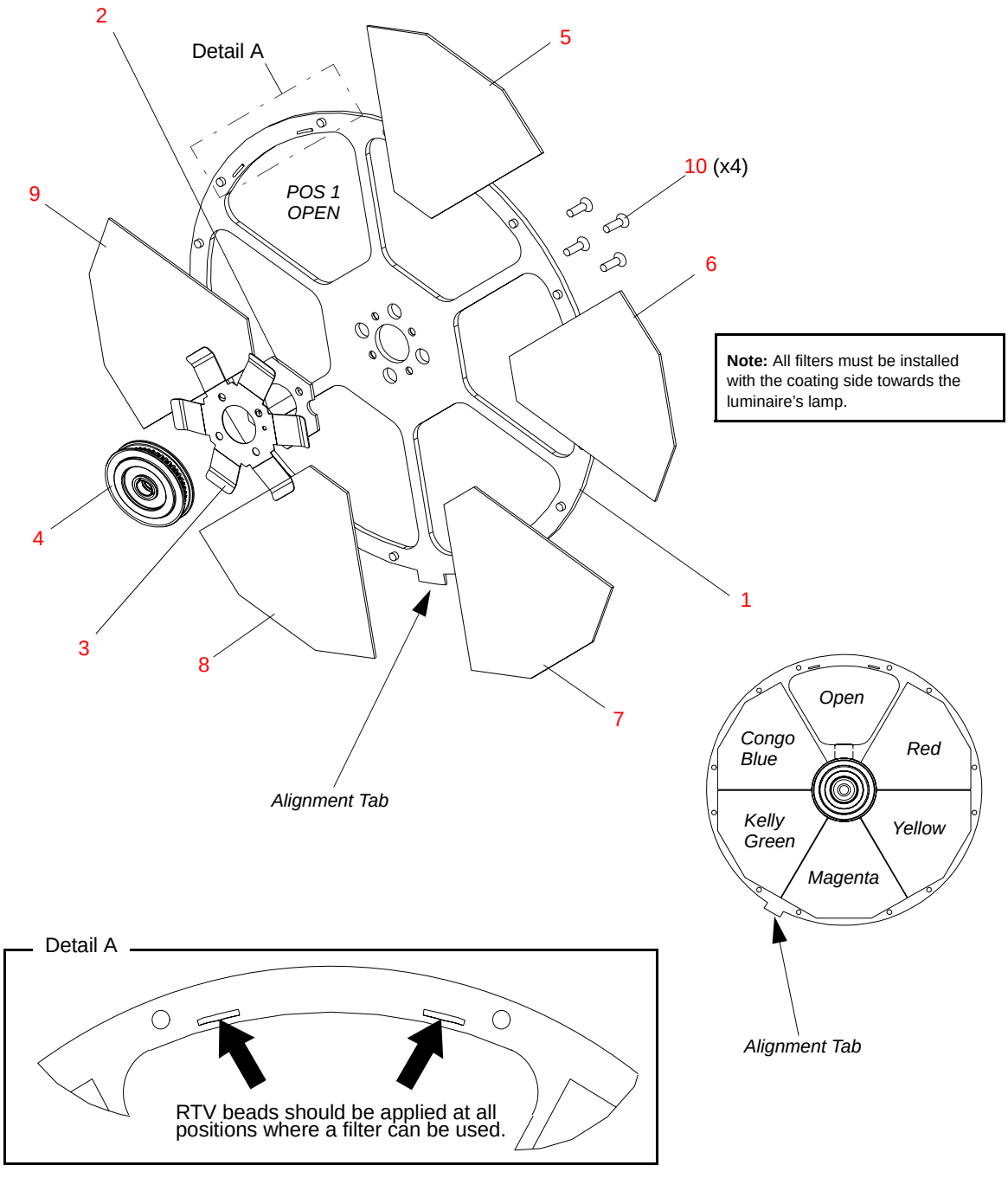


Figure 3-23: VL3500 Wash FX Fixed Color Wheel 1 Assembly

VL3500 Wash FX Fixed Color Wheel 2 Assembly

21.9686.1480 Rev A (VL3500 Wash FX)

Refer to Figure 3-24

No.	Item	Qty.	UM.	Description
1	10.9686.0481	1	EA	WHEEL, FIXED COLOR 2 (WHEEL #2)
2	10.9686.0482	1	EA	SPACER PLATE, FIXED COLOR
3	10.9686.0483	1	EA	SPRING PLATE, FIXED COLOR
4	22.9686.1416	1	EA	FIXED COLOR WHEEL HUB WITH BEARINGS
5	41.9686.0495	1	EA	COLOR FILTER, BLUE (WHEEL #2)
6	41.9686.0496	1	EA	COLOR FILTER, AMBER (WHEEL#2)
7	41.9686.0497	1	EA	COLOR FILTER, DARK FUCHSIA (WHEEL #2)
8	41.9686.0498	1	EA	COLOR FILTER, ORANGE (WHEEL #2)
9	41.9686.0499	1	EA	COLOR FILTER, GREEN (WHEEL #2)
10	53.6598.0312	4	EA	SCREW, 4-40 X 5/16 " PFB

VL3500 Wash FX Fixed Color Wheel 2 Assembly (continued)

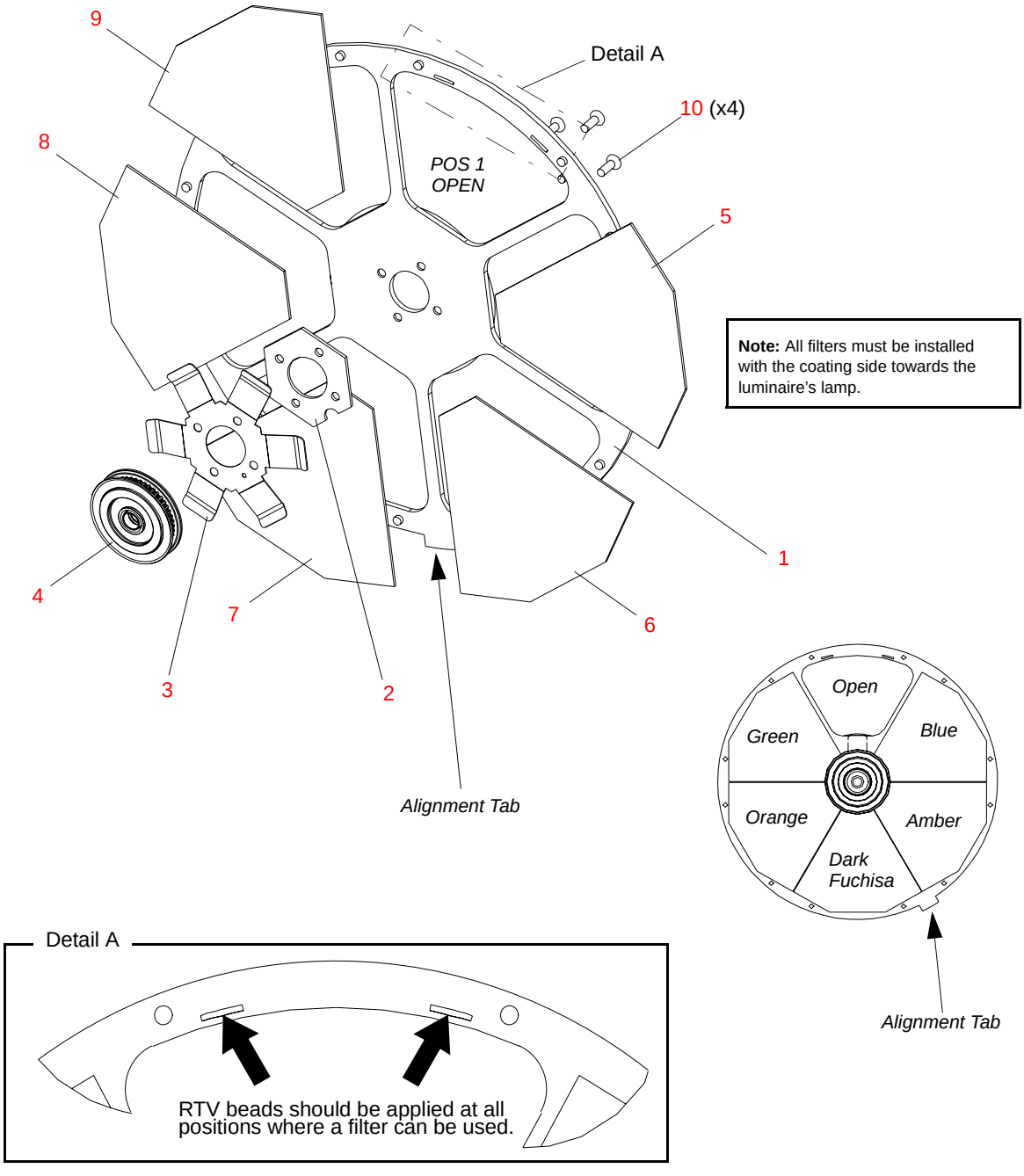


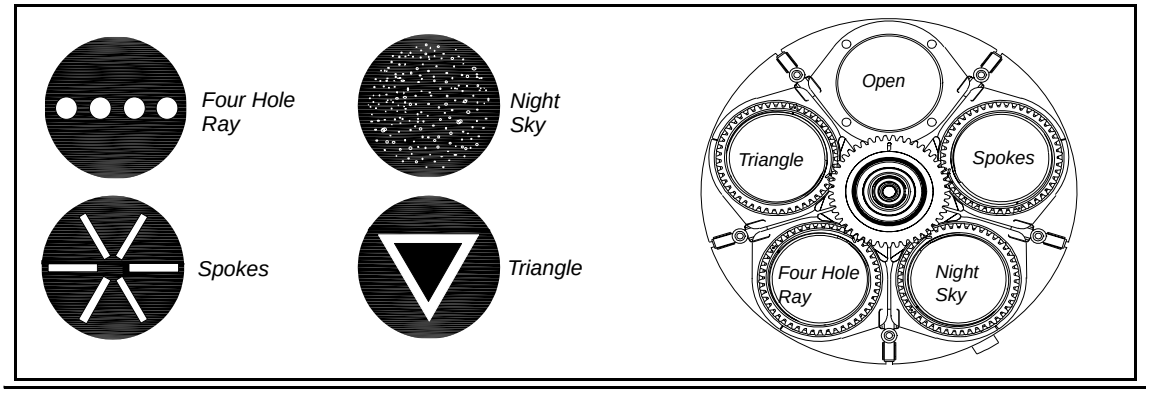
Figure 3-24: VL3500 Wash FX Fixed Color Wheel 2 Assembly

VL3500 Wash FX Rotating Effect Wheel Assembly

21.9686.1405 Rev 0 (VL3500 Wash FX)

Refer to Figure 3-25 and Figure 3-26

No.	Item	Qty.	UM.	Description
1	10.9686.1493	5	EA	LATCH, ROTATING EFFECTS PLANET
2	21.9686.1470	1	EA	ASSEMBLY, SUN GEAR
3	22.9686.1455	1	EA	ROTATING EFFECTS WHEEL HUB WITH BEARINGS
4	22.9686.1475	4	EA	PLANET GEAR ASSEMBLY
5	22.9686.1490	1	EA	ASSEMBLY, PLATE, ROTATING EFFECTS WHEEL, LATCH
6	41.6040.4002	1	EA	PATTERN, VL3500 WASH FX, FOUR HOLE RAY
7	41.6040.4009	1	EA	PATTERN, VL3500 WASH FX, MEDIUM TRIANGLE
8	41.6040.4326	1	EA	PATTERN, VL3500 WASH FX, SPOKES
9	41.6040.5011	1	EA	PATTERN, VL3500 WASH FX, NIGHT SKY
10	53.6530.0013	5	EA	RIVET, 1/8" OD POP 0.328" AL CS
11	53.6659.0008	3	EA	SCREW, 2-56 X 3/16" PFZ
12	54.1206.0020	1	EA	RETAINING RING, 0.625" SHAFT, 0.018" THK
13	55.6677.0050	10	EA	WASHER, FLAT, 0.129" ID, 0.270" OD, 0.031" TEFLON
14	55.6677.0051	5	EA	WASHER, FLAT, 0.135" ID, 0.312" OD, 0.030" SST
15	55.6799.0004	5	EA	SHIM, 0.627" ID, 0.875" OD, 0.020 THK SST



Note: This graphic is for illustrative purposes only. Refer to Figure 3-26 for component breakdown.

Figure 3-25: VL3500 Wash Gobo Patterns and Positions

VL3500 Wash FX Rotating Effect Wheel Assembly (continued)

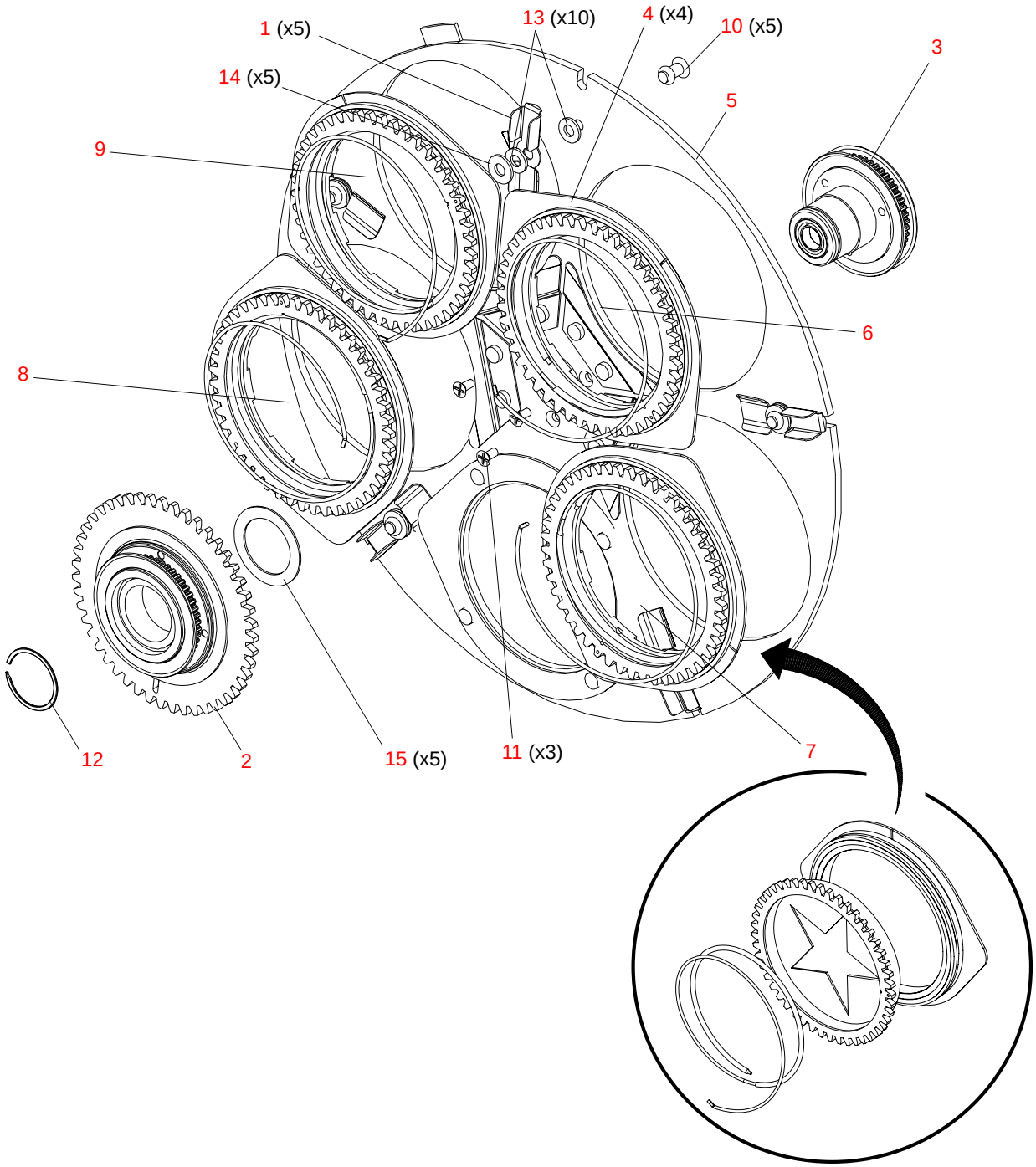


Figure 3-26: VL3500 Wash FX Rotating Effect Wheel Assembly

VL3500 Wash Strobe System Assembly

21.9686.0404 Rev H (VL3500 Wash)

Refer to Figure 3-27

No.	Item	Qty.	UM.	Description
1	10.9678.0491	4	EA	BUMPER STOP, STROBE
2	10.9686.0435	1	EA	STROBE BULKHEAD, COLOR ACCESS
3	10.9686.0438	1	EA	SPRING, COLOR ACCESS
4	10.9686.0440	1	EA	SHIELD, STROBE MOTOR/HARNESS
5	10.9686.1450	1	EA	REFLECTOR, STROBE BULKHEAD
6	21.9686.1445	1	EA	ASSY, AIR DUCT
7	21.9686.1437	1	EA	REAR STROBE BLADE ASSEMBLY
8	21.9686.1438	1	EA	FRONT STROBE BLADE ASSEMBLY
9	44.5029.0001	2	EA	MOTOR, STEPPER 42MM X 34MM - AR6
10	53.6513.0026	8	EA	SCREW, M3 X.5 X 12MM LG PP
11	53.6558.0001	4	EA	SCREW, 6-32 X 3/8" PPZ
12	53.6558.0007	4	EA	SCREW, 6-32 X 1/4" PPZ SEMS
13	53.6609.0001	4	EA	SCREW, 6-32 X 3/8" LG PFZ
14	55.2023.0002	1	EA	HINGE, 1.00" LG X 1.00" WD, ZINC STEEL
15	55.3303.0004	8	EA	WASHER, #4 LOCK INT. TOOTH SS
16	55.3306.0006	8	EA	WASHER,.375 OD.149 ID.025 THK
17	55.6659.0001	8	EA	SPACER, 1/4" RND 4 THRU 3/16"
18	55.6706.0001	8	EA	GROMMET, 9/32"ID 9/16"OD 1/4T

VL3500 Wash Strobe System Assembly (continued)

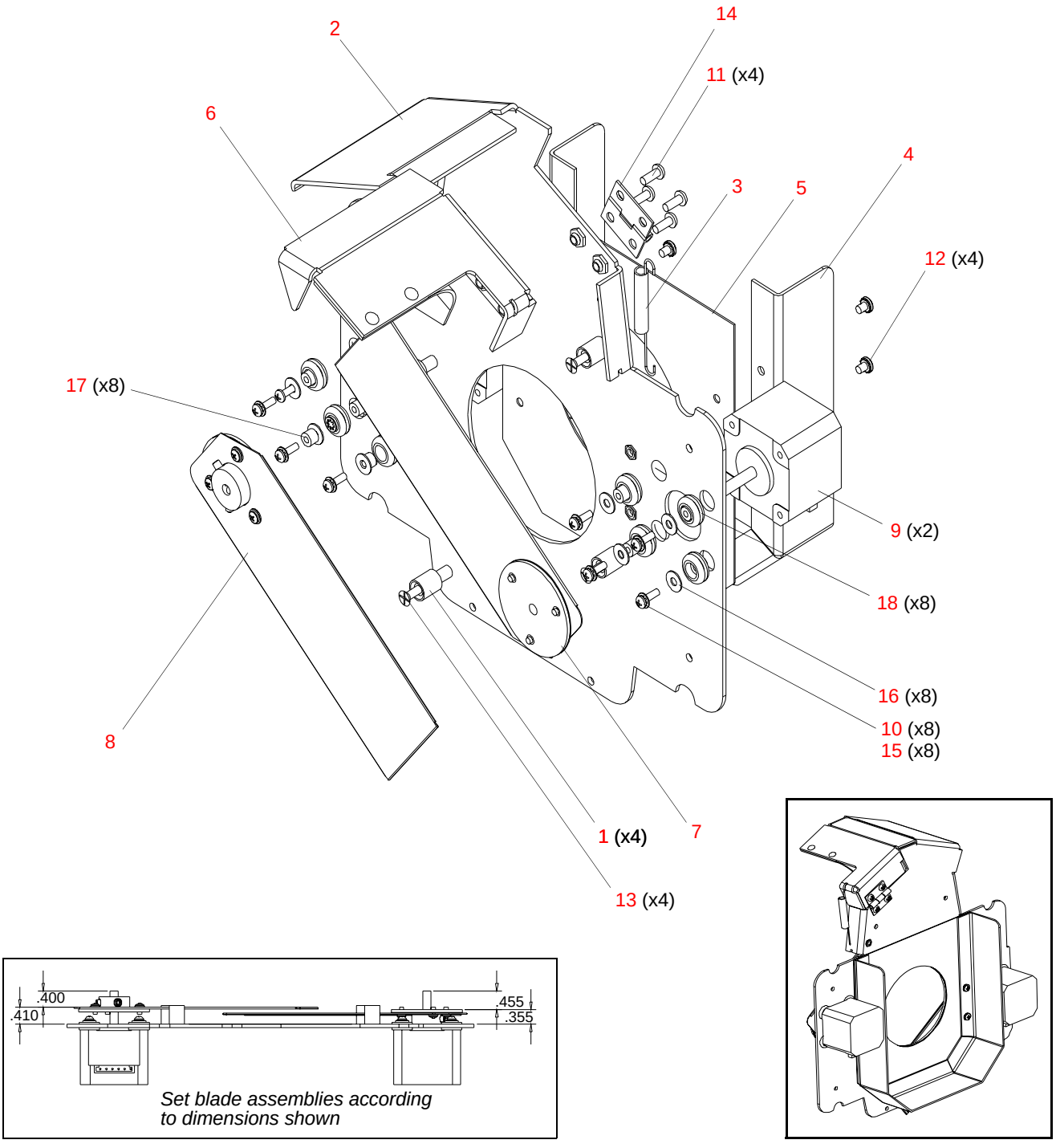


Figure 3-27: VL3500 Wash Strobe System Assembly

VL3500 Wash FX Strobe System Assembly

21.9686.1404 Rev 0 (VL3500 Wash FX)

Refer to Figure 3-28

No.	Item	Qty.	UM.	Description
1	10.9678.0491	4	EA	BUMPER STOP, STROBE
2	10.9686.0438	1	EA	SPRING, COLOR ACCESS
3	10.9686.0440	1	EA	SHIELD, STROBE MOTOR/HARNESS
4	10.9686.1435	1	EA	STROBE BULKHEAD, COLOR ACCESS
5	21.9686.1445	1	EA	ASSY, AIR DUCT
6	21.9686.1437	1	EA	REAR STROBE BLADE ASSEMBLY
7	21.9686.1438	1	EA	FRONT STROBE BLADE ASSEMBLY
8	44.5029.0001	2	EA	MOTOR, STEPPER 42MM X 34MM - AR6
9	53.6513.0026	8	EA	SCREW, M3 X.5 X 12MM LG PP
10	53.6525.0188	4	EA	SCREW, 6-32 X 3/16" PPZ SEMS
11	53.6558.0001	4	EA	SCREW, 6-32 X 3/8" PPZ
12	53.6609.0001	4	EA	SCREW, 6-32 X 3/8" LG PFZ
13	55.2023.0002	1	EA	HINGE, 1.00" LG X 1.00" WD, ZINC STEEL
14	55.3303.0004	8	EA	WASHER, #4 LOCK INT. TOOTH SS
15	55.3306.0006	8	EA	WASHER,.375 OD.149 ID.025 THK
16	55.6659.0001	8	EA	SPACER, 1/4" RND 4 THRU 3/16"
17	55.6706.0001	8	EA	GROMMET, 9/32"ID 9/16"OD 1/4T

VL3500 Wash FX Strobe System Assembly (continued)

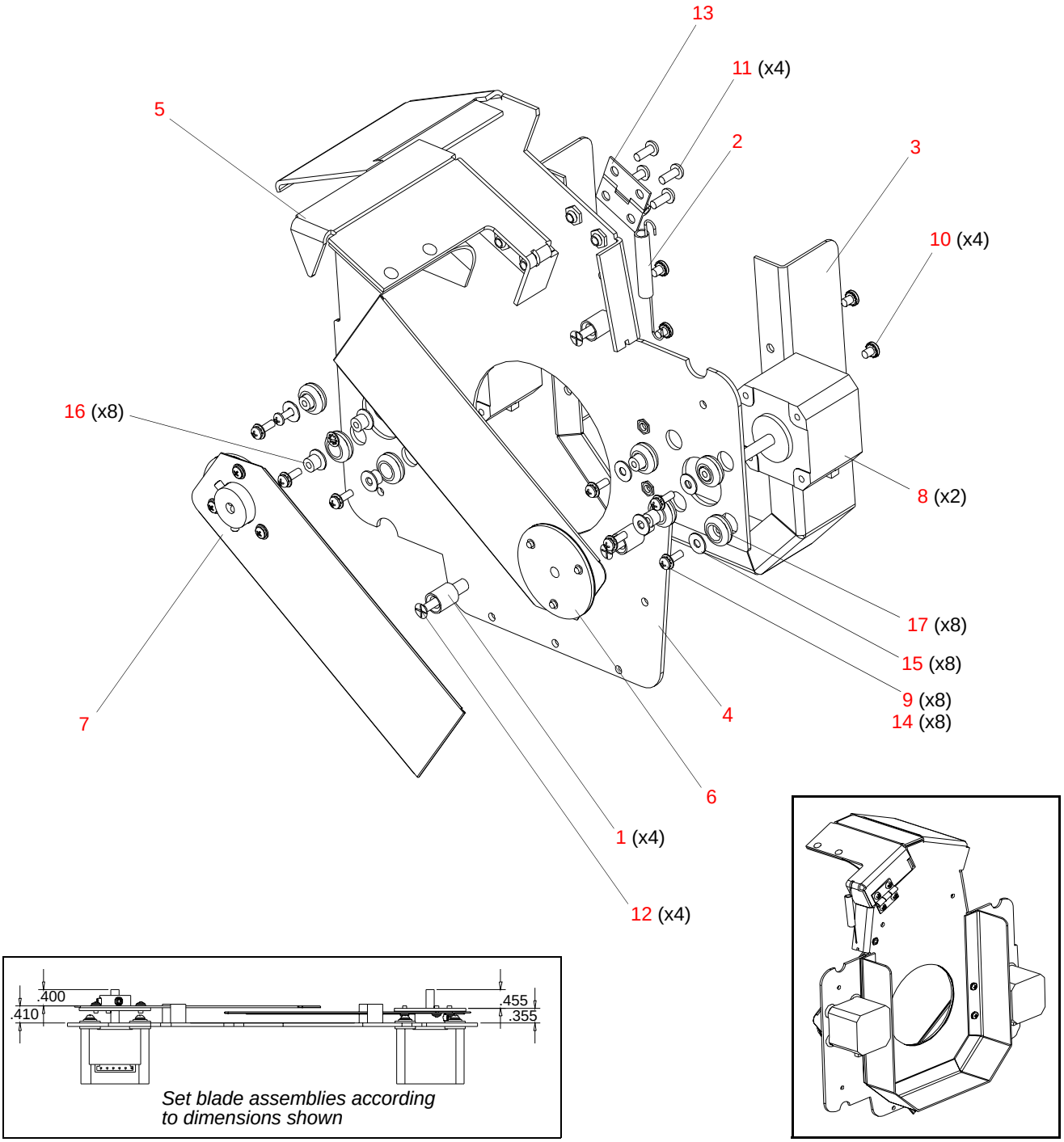


Figure 3-28: VL3500 Wash FX Strobe System Assembly

Rear Strobe Blade Assembly

21.9686.1437 Rev 0

Refer to Figure 3-29

No.	Item	Qty.	UM.	Description
1	10.9678.0432	1	EA	HUB, STROBE BLADE
2	10.9678.0466	1	EA	STROBE BLADE, DAMPER
3	10.9686.1431	1	EA	STROBE BLADE, NOTCHED
4	53.5558.0188	2	EA	SCREW, 8-32 X .188 LG SET SS BRASS TIP UNC-2A
5	53.6597.0001	3	EA	SCREW, 4-40 X 3/16" PPZ
6	55.3303.0004	3	EA	WASHER, #4 LOCK INT. TOOTH SS

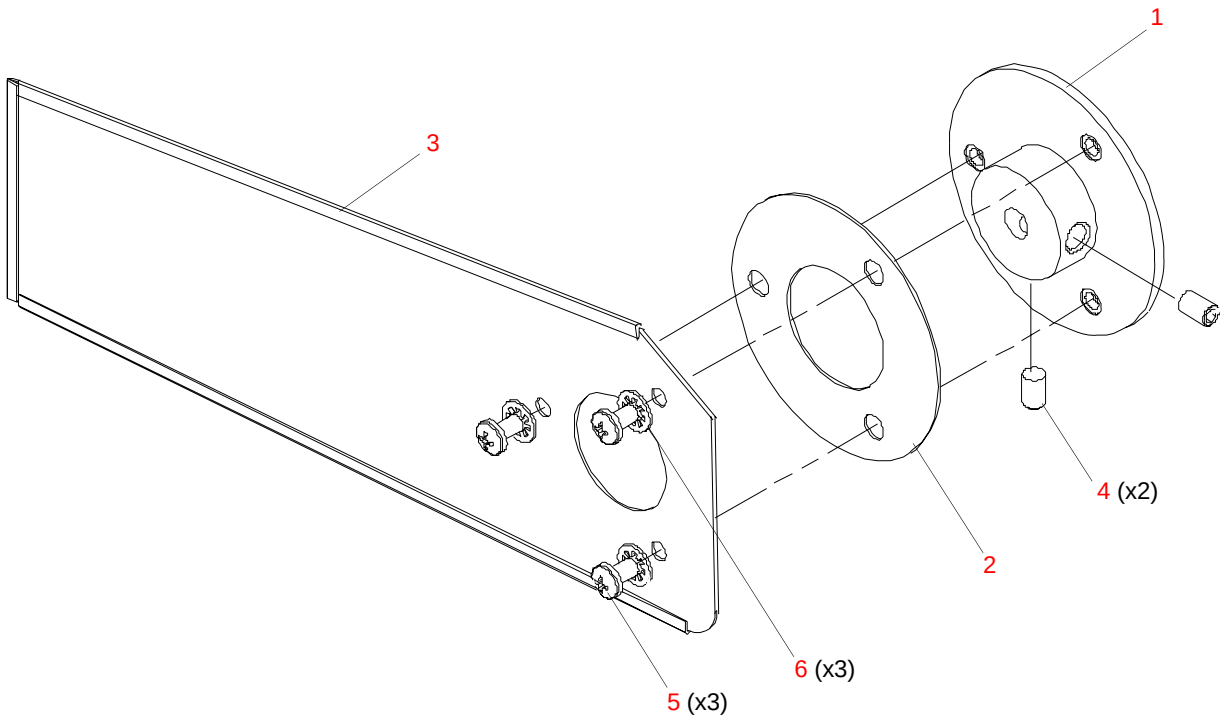


Figure 3-29: Rear Strobe Blade Assembly

Front Strobe Blade Assembly

21.9686.1438 Rev 0

Refer to Figure 3-30

No.	Item	Qty.	UM.	Description
1	10.9678.0432	1	EA	HUB, STROBE BLADE
2	10.9678.0466	1	EA	STROBE BLADE DAMPER
3	10.9686.1431	1	EA	STROBE BLADE, NOTCHED
4	53.5558.0188	2	EA	SCREW, 8-32 X .188 LG SET SS BRASS TIP UNC-2A
5	53.6597.0001	3	EA	SCREW, 4-40 X 3/16" PPZ
6	55.3303.0004	3	EA	WASHER, #4 LOCK INT. TOOTH SS

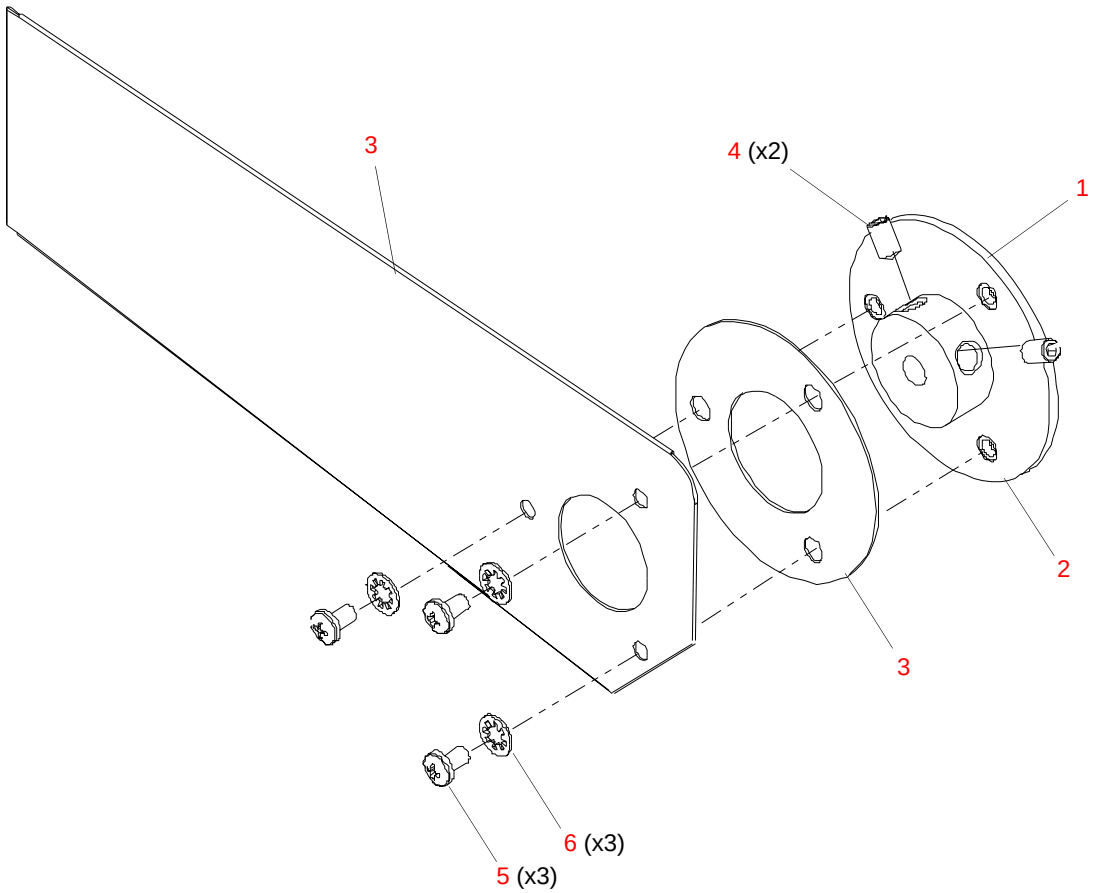


Figure 3-30: Front Strobe Blade Assembly

Yoke Assembly

Yoke Assembly

21.9686.0700 Rev A

Refer to Figure 3-31

No.	Item	Qty.	UM.	Description
1	10.9678.0764	1	EA	PLATE, TILT ENCODER MOUNT
2	10.9678.0756	1	EA	IGNITOR SHIELD
3	21.9678.0765	1	EA	ASSY, TILT MOTOR
4	22.9661.0609	2	EA	ASSY, YOKE FAN
5	22.9686.0705	1	EA	ASSY, YOKE STRUCTURE
6	23.9650.3327	1	EA	ELEC ASSY, RELAY
7	23.9661.1253	1	EA	ELEC ASSY, PAN EOT SENSOR
8	24.9661.3126	1	EA	PCB ASSY, SOLID STATE IGNITOR
-	25.9661.1526	2	EA	CABLE ASSY, IGNITOR TO RELAY (**not shown**)
-	25.9678.0681	1	EA	CABLE ASSY, YOKE FAN AND RELAY (**not shown**)
-	25.9678.0758	1	EA	CABLE ASSY, YOKE FAN (**not shown**)
9	53.2019.0004	2	EA	NUT, 3/8-16 X 7/32" THK HEX
10	53.2200.0006	1	EA	NUT, 6-32 KEPS SS
11	53.5634.0250	8	EA	SCREW, 4-40 X 1/4" PFSS BL
12	53.6539.0001	2	EA	WASHER, 3/8" SPLIT LOCK
13	53.6558.0009	12	EA	SCREW, 6-32 X 3/8"LG PPZ SEM
14	53.6626.0001	6	EA	SCREW, 10-32 X 1/2" PPZ
15	53.6634.0003	2	EA	SCREW, 3/8-16 X 1/2"LG SOC
16	55.2150.0002	1	EA	STANDOFF, 1/4" HEX 6-32 1.187"L
17	55.2178.0001	1	EA	CABLE ANCHOR MOUNT, #8 SCREW MOUNT
18	55.6528.0001	2	EA	WASHER, #6 FLAT ZINC
19	55.6541.0002	2	EA	GROMMET, 1 "ID 1 3/4"OD 1 3/
20	55.6568.0074	2	EA	SPRING, CPRSN .420"OD .750"LG
21	55.6658.0004	2	EA	STANDOFF, 1/4" HEX 6-32 .750"LG, F-F, AL

Yoke Assembly (continued)

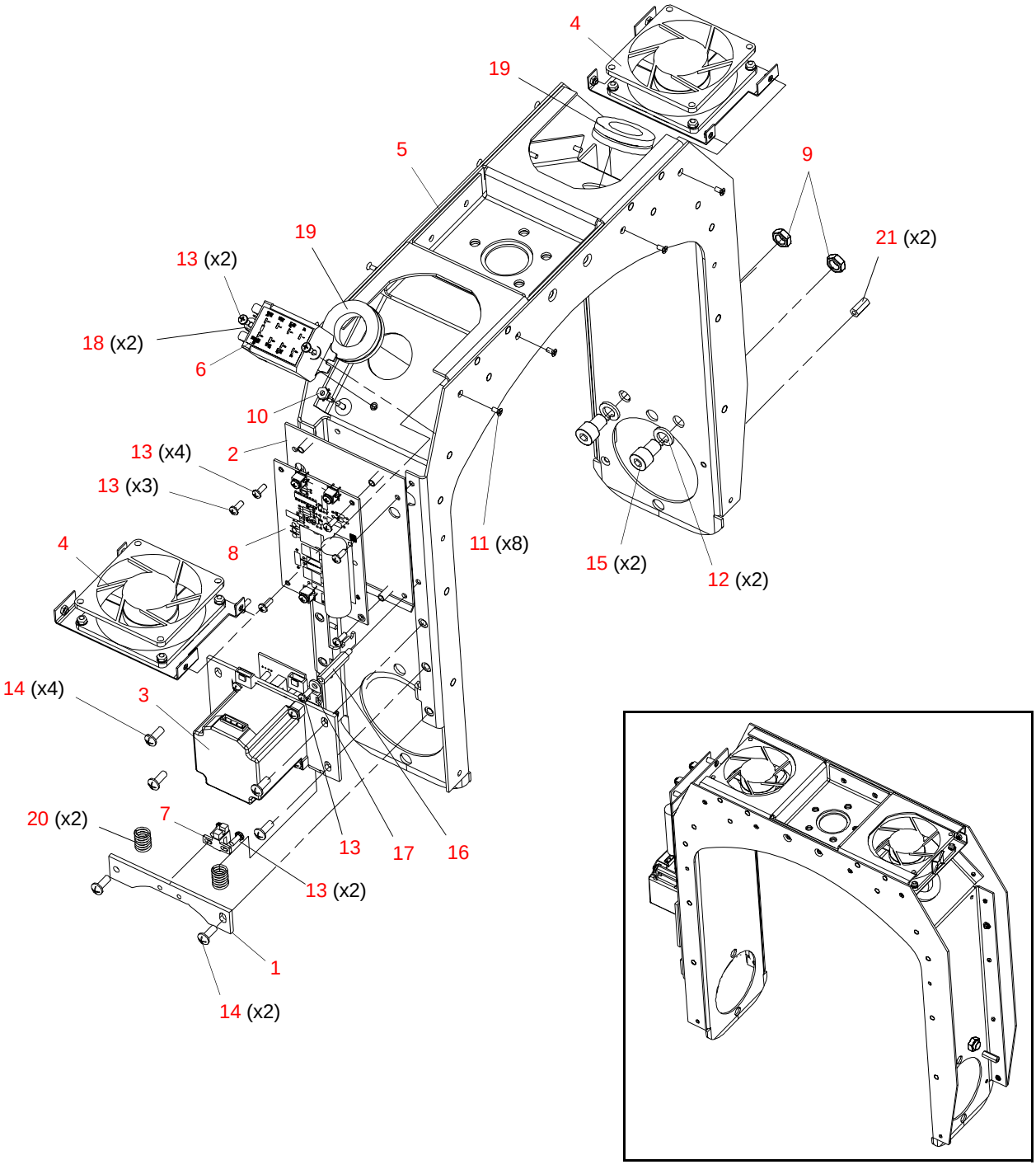


Figure 3-31: Yoke Assembly

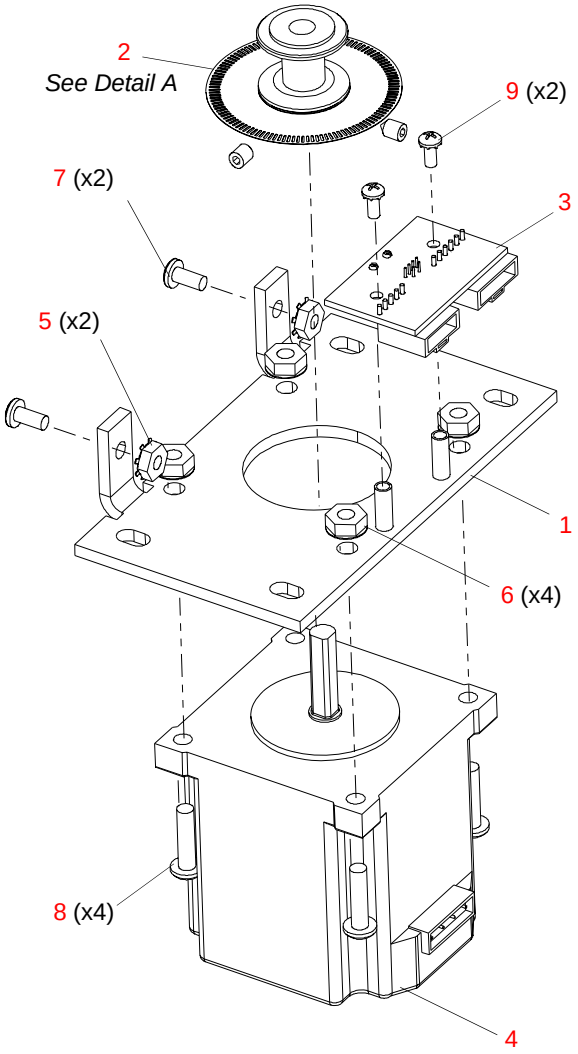
Tilt Motor Assembly

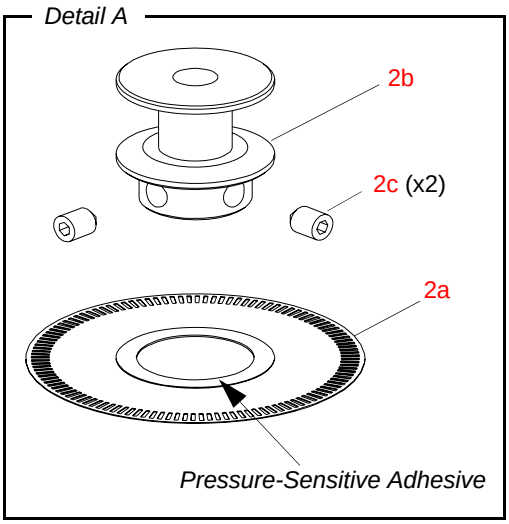
21.9678.0765 Rev E

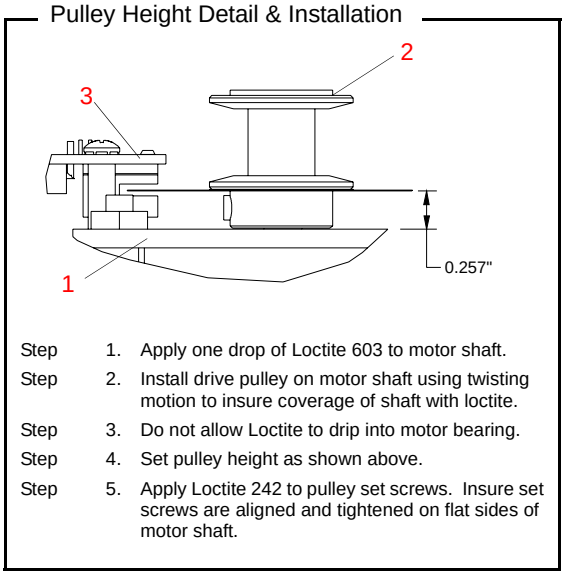
Refer to Figure 3-32

No.	Item	Qty.	UM.	Description
1	10.9678.0763	1	EA	PLATE, TILT MOTOR MOUNT
2	21.9678.0708	1	EA	ASSY, DRIVE PULLEY
2a	10.9678.0720	1	EA	CODEWHEEL, 120 COUNT, LARGE ID
2b	10.9678.1749	1	EA	TIMING PULLEY, 17 TOOTH, SHORTENED
2c	53.5560.0250	2	EA	SCREW, 8-32 X 1/4" SET CONE POINT
3	24.9661.9629	1	EA	PCB ASSY, PAN/TILT ENCODER
4	44.9678.0680	1	EA	MOTOR, 3 PHASE SIZE 23 HIGH TORQUE
5	53.2200.0006	2	EA	NUT, 6-32 KEPS SS
6	53.2200.0008	4	EA	NUT, 8-32 KEPS SS
7	53.6525.0001	2	EA	SCREW, 6-32 X 5/16" PPZ
8	53.6546.0001	4	EA	SCREW, 8-32 X 5/8" PPB
9	53.6682.0002	2	EA	SCREW, 4-40 X 1/4"LG PPZ SEMS-EXT

Tilt Motor Assembly (continued)







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 3-32: Tilt Motor Assembly

Yoke Fan Assembly

22.9661.0609 Rev C

Refer to Figure 3-33

No.	Item	Qty.	UM.	Description
1	10.9661.0646	1	EA	FAN TRAY
2	40.7113.0001	1	EA	FAN, +24V 80MM X 80MM X 25MM, 32 CFM
3	53.2200.0006	4	EA	NUT, 6-32 KEPS SS

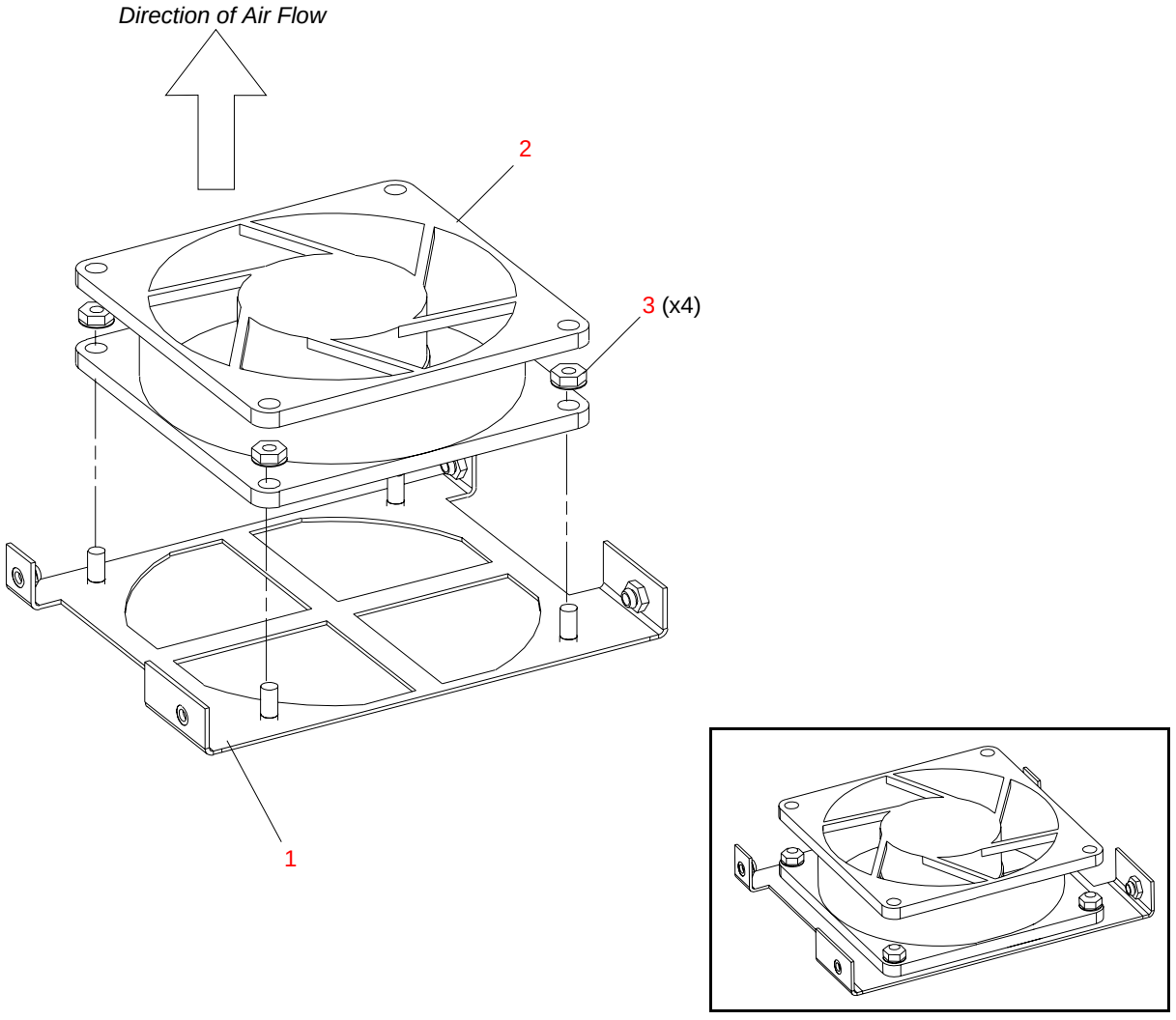


Figure 3-33: Yoke Fan Assembly

Notes

Head/Yoke PCB Assemblies

Head Cable Interconnect

21.9686.1121 Rev A

Refer to Figure 3-34

No.	Item	Qty.	UM.	Description
1	10.9686.1120	1	EA	BRACKET, HEAD CABLE INTERCONNECT
2	23.9686.0208	1	EA	CABLE ASSY, ZOOM MOTOR (**cable portion not shown**)
-	25.9686.0206	1	EA	CABLE ASSY, VARI-BRITE MOTOR (**not shown** - *part of 23.9686.0208*)
3	53.6520.0002	4	EA	SCREW, 4-40 X 7/16 PPZ
4	55.6621.0001	4	EA	WASHER, #4 FLAT ZINC
5	52.6670.0040	1	EA	HEADER ASSY, MOD 11 40 POS MTG
6	52.6670.0034	1	EA	HEADER ASSY, MOD 11 34 POS MTG

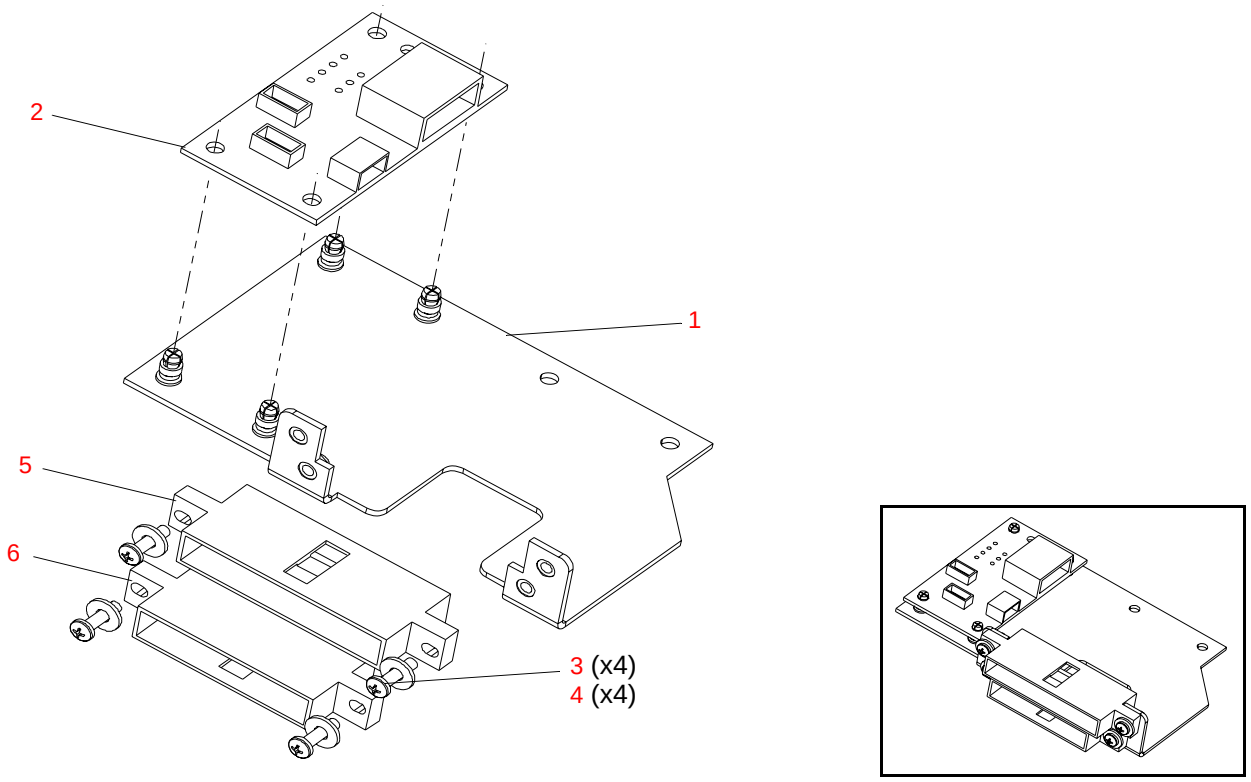


Figure 3-34: Head Cable Interconnect

VL3500 Wash Controller PCB Assembly

24.9686.1429 Rev B

Refer to Figure 3-36

No.	Item	Qty.	UM.	Description
1	10.9661.1275	1	EA	HEATSINK, MAIN CONTROLLER
2	10.9678.0731	1	EA	HEATSINK, CONTROLLER
3	10.9678.0746	1	EA	GROMMET, PCB EDGE
4	10.9678.0885	1	EA	KIT, THERMAL TRANSFER, MCB
5	53.2200.0006	3	EA	NUT, 6-32 KEPS SS
6	53.6404.0003	2	EA	SCREW, 4-40 X 1" PPZ
7	53.6616.0001	2	EA	SCREW, 6-32 X 3/4" PPZ
8	55.2179.0001	1	EA	CABLE ANCHOR MOUNT, #6 SCREW MOUNT
9	55.3303.0004	2	EA	WASHER, #4 LOCK INT TOOTH SS
10	55.6538.0002	2	EA	WASHER, #6 NYLON, NATURAL

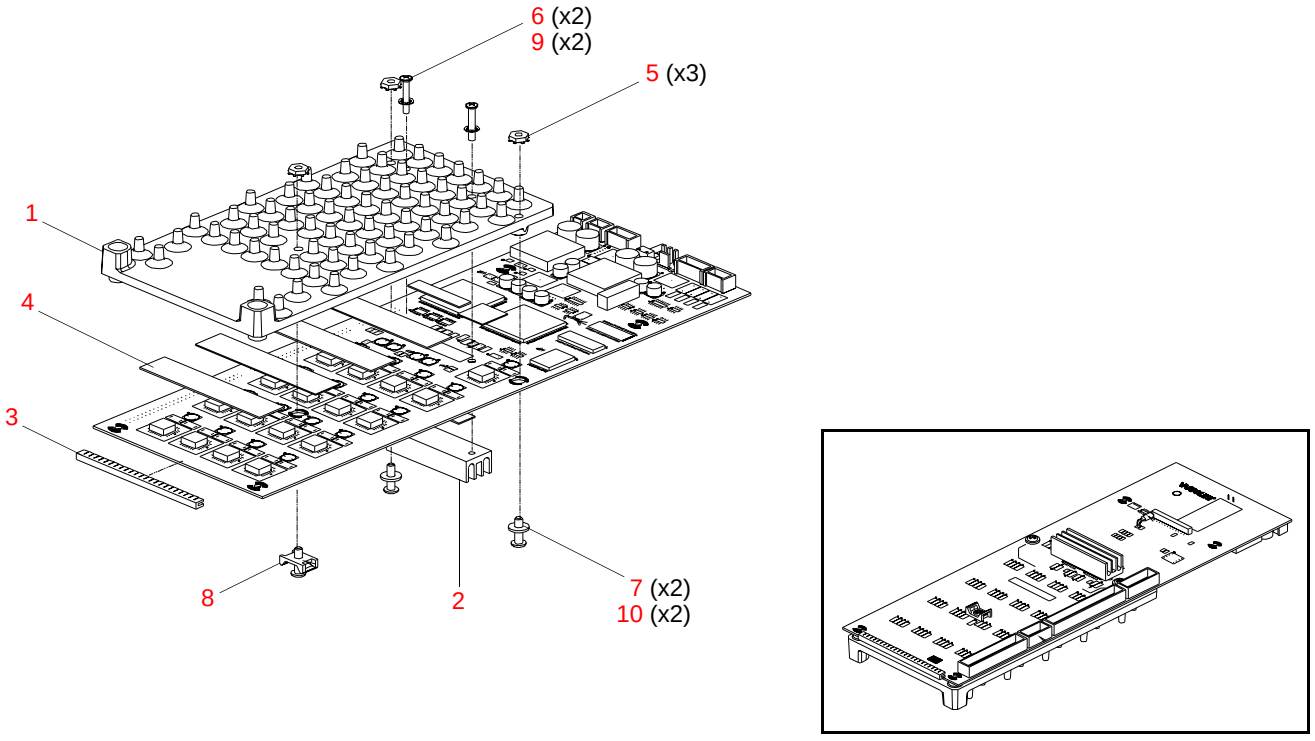
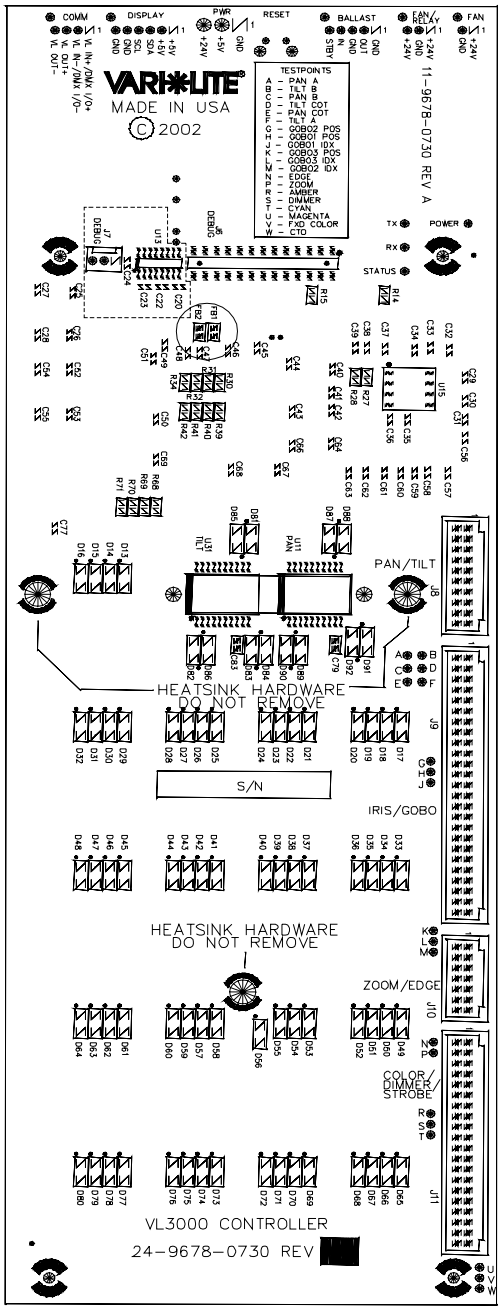
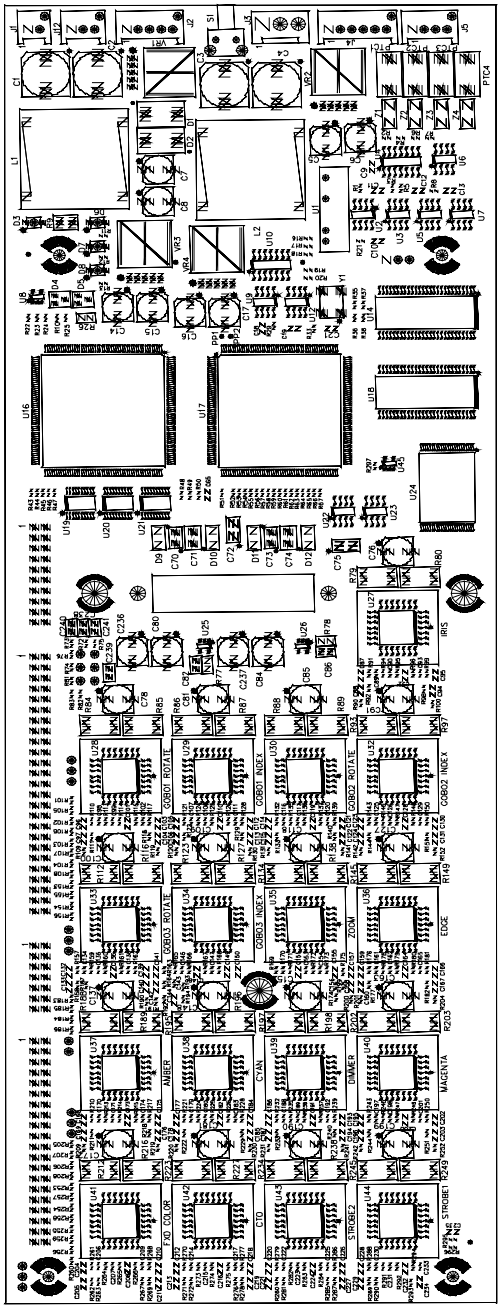


Figure 3-35: VL3500 Wash Controller PCB Assembly

VL3500 Controller PCB Assembly (continued)



Solder Side



Component Side

Figure 3-36: VL3500 Wash Controller PCB Assembly

Notes

Enclosure Assembly

Upper Enclosure Assembly

21.9686.0800 Rev I

Refer to Figure 3-37 and Figure 3-38

No.	Item	Qty.	UM.	Description
1	04.9640.0374	1	EA	LABEL, P.E. GROUND
2	04.9661.1218.01	1	EA	LABEL, PATENT, VL2201 & VL2400 SERIES LUM.
3	04.9686.0040	1	EA	LABEL, VL3500 WASH SERIES COMPLIANCE
4	06.6032.0009	1	EA	CABLE MARKER TIE
5	10.9661.1258	1	EA	BRACKET, APS SIDE
6	10.9678.1876	1	EA	AIR DISTRIBUTION PLENUM
7	10.9678.0820	1	EA	LANYARD, PAN TUBE
8	10.9686.0839	2	EA	COVER, TOP
9	10.9686.0846	2	EA	HANDLE, CAST ENCLOSURE
10	10.9678.0869	1	EA	BRACKET, LVS
11	10.9678.0892	1	EA	BUSHING, WIRE PROTECTION PAN
12	10.9678.0886	1	EA	SPACER, PAN BEARING, .235" THK
13	12.9686.1236	2	EA	MACHINED, COVER FRONT
14	12.9686.1238	2	EA	MACHINED, COVER SIDE
15	12.9678.0842	1	EA	AIR DUCT, UPPER ENCLOSURE MOD
16	21.9686.0840.02	1	EA	ASSY, COVER - VENTILATION
17	21.9678.0767	1	EA	ASSY, STABILIZER
17a	- 10.9678.0757	1	EA	STABILIZER, 1.377DIA
17b	- 10.9678.0762	1	EA	BRACKET, STABLIZER
17c	- 53.6610.0003	1	EA	SCREW, 6-32 X 7/16" PPZ
17d	- 55.6568.0075	1	EA	SPRING, EXTSN .375"OD 1.00"LG .041" WIRE DIA
18	21.9686.0805	1	EA	ASSY, PANEL
19	21.9686.0807	1	EA	ASSY, PAN PULLEY
20	21.9686.0864	1	EA	ASSY, PAN MOTOR
21	21.9678.0881	1	EA	ASSY, PAN TUBE
22	22.9686.0851	1	EA	ASSY, UPPER ENCLOSURE
23	23.9686.1500	1	EA	ASSY, BALLAST MODULE, 1500W ARC (INCLUDES ATTACHED FERRITE)
24	23.9686.0824	1	EA	FAN ASSY, UPPER ENCLOSURE

No.	Item	Qty.	UM.	Description
25	21.9686.0811	1	EA	FAN ASSY, EXHAUST
26	23.9678.0687	1	EA	ELEC ASSY, PAN EOT SENSOR
-	25.9661.1514	1	EA	CABLE ASSY, LVS CHASSIS GROUND (**not shown**)
-	25.9661.1520	1	EA	CABLE ASSY, CHASSIS TO YOKE GROUND (**not shown**)
-	25.9678.0811	1	EA	CABLE ASSY, EMI FILTER TO POWER (**not shown**)
-	25.9678.0812	1	EA	CABLE ASSY, AC INPUT SPLITTER (**not shown**)
-	25.9678.0813	1	EA	CABLE ASSY, DATA I/O LINK (**not shown**)
-	25.9678.1825	1	EA	CABLE ASSY, DISPLAY (**not shown**)
-	25.9678.0816	1	EA	CABLE ASSY, BALLAST TO CONTROL (**not shown**)
-	25.9678.0821	1	EA	CABLE ASSY, DC OUTPUT (**not shown**)
-	25.9678.0818	1	EA	CABLE ASSY, PAN/TILT CONTROL (**not shown**)
-	25.9678.0829	1	EA	CABLE ASSY, LAMP SUPPLY TO RELAY (**not shown**)
-	25.9686.0843	1	EA	CABLE ASSY, DUAL AC FAN LVS TO YOKE (**not shown**)
27	53.2001.0003	1	EA	NUT, 10-32 NYLON INSERT
28	53.2019.0004	4	EA	NUT, 3/8-16 X 7/32" THK HEX
29	53.2200.0006	4	EA	NUT, 6-32 KEPS SS
30	53.6505.0022	3	EA	BOLT, 3/8-16 X 3/4"LG CARR
31	53.6515.0001	4	EA	SCREW, 10-32 X 3/4" SCB CAP
32	53.6522.0001	1	EA	SCREW, 6-32 X 1/4" PFZ
33	53.6522.0004	2	EA	SCREW, 6-32 X 1/4" SOC HD
34	53.6525.0188	2	EA	SCREW, 6-32 X 3/16" PPZ SEMS
35	53.6530.0023	2	EA	RIVET, 1/8"OD POP .376-.500GRP
36	53.6539.0001	4	EA	WASHER, 3/8" SPLIT LOCK
37	53.6545.0003	4	EA	SCREW, 8-32 X 3/8" PFZ
38	53.6545.0004	4	EA	SCREW, 8-32 X 3/8" LG PPZ
39	53.6556.0002	1	EA	SCREW, 4-40 X 3/4"LG PPB
40	53.6558.0009	13	EA	SCREW, 6-32 X 3/8"LG PPZ SEMS
41	53.6558.0010	11	EA	SCREW, 6-32 X 1/4"LG PPZ BLACK
42	53.6558.0015	4	EA	SCREW, 6-32 X 3/8" PPB SEMS EXT
43	53.6571.0003	1	EA	SCREW, 6-32 X 1-1/2"LG PPB
44	53.6591.0001	2	EA	SCREW, 6-32 X 1/4" PFZ
45	53.6609.0001	4	EA	SCREW, 6-32 X 3/8" PFZ
46	53.6626.0001	1	EA	SCREW, 10-32 X 1/2" PPZ
47	55.6575.0001	4	EA	SCREW, 10-32 X 3/4" PPB
48	53.6634.1000	1	EA	SCREW, 3/8-16 X 1.00" LG SOC
49	53.6513.0044	3	EA	SCREW, M5 X 10MM STL CUP PT
50	54.1206.0014	2	EA	RING, RETAINING
51	54.1255.0001	1	EA	BEARING ASSY, BLACK FLUSH MOU

No.	Item	Qty.	UM.	Description
52	54.2067.0001	1	EA	BELT, TIMING S2M, 448 MM, 244 TEETH
53	55.2150.0003	2	EA	STANDOFF, 1/4"HEX 6-32 1.125"L
54	55.2178.0001	3	EA	CABLE ANCHOR MOUNT, #8 SCREW
55	55.2179.0001	3	EA	CABLE ANCHOR MOUNT, #6 SCREW
56	55.2261.0001	1	EA	SLEEVE, NYLON THIN WALL #6 SCR
57	55.2267.0001	2	FT	RUBBER STRIP, SPONGE CLSD CELL
58	55.6677.0039	4	EA	WASHER, 0.438" OD X 0.219" ID X 0.040" THK
59	55.6532.0004	2	EA	BRACKET, 6-32 THREADED HOLES
60	55.6543.0001	3.75	IN	GROMMET STRIP, SERRATED 0.062"
61	55.6543.0002	1.54	FT	GROMMET STRIP, SERRATED 0.125"
62	55.6658.0009	1	EA	STANDOFF, 1/4" HEX 6-32 X 3/4"
63	55.6568.0074	2	EA	SPRING, CPRSN 0.420"OD, 0.750"LG
64	55.6577.0005	2	EA	STANDOFF, 1/2" HEX 6-32 1.625"L
65	55.6677.0044	1	EA	WASHER, 0.877"OD, 0.170"ID, 0.093"THK
-	55.6699.0010	0.5	FT	SLEEVING, 5/16" NON DIA WOVEN POLY ROUNDIT (**not shown**)
66	55.6775.0009	1	EA	BUSHING, SNAP .750"ID 1"MT H
67	67.4018.0001	1	EA	FERRITE, 26X28.5 X 13MM CYL
68	67.9686.1500	1	EA	FILTER, EMI 1500W BALLAST
-	68.4541.0004	1	EA	FERRITE, CLAMP ON, AXIAL (**not shown**)
69	68.9678.0827	1	EA	CHOKE, COMMON MODE
70	69.3177.0151	1	EA	LVS POWER SUPPLY, 150W +24V/6.3A
71	10.9661.1358	1	EA	AIR SEAL, DUCT
72	52.8295.0002	1	EA	THERMAL STRIP, 300V 12AWG 20A
73	55.6799.0001	AR	EA	SHIM, 1.375" ID, 1.875" OD, 0.010" THK
74	55.6799.0002	AR	EA	SHIM, 1.375" ID, 1.875" OD, 0.005" THK

AR = As Required

Upper Enclosure Assembly (continued)

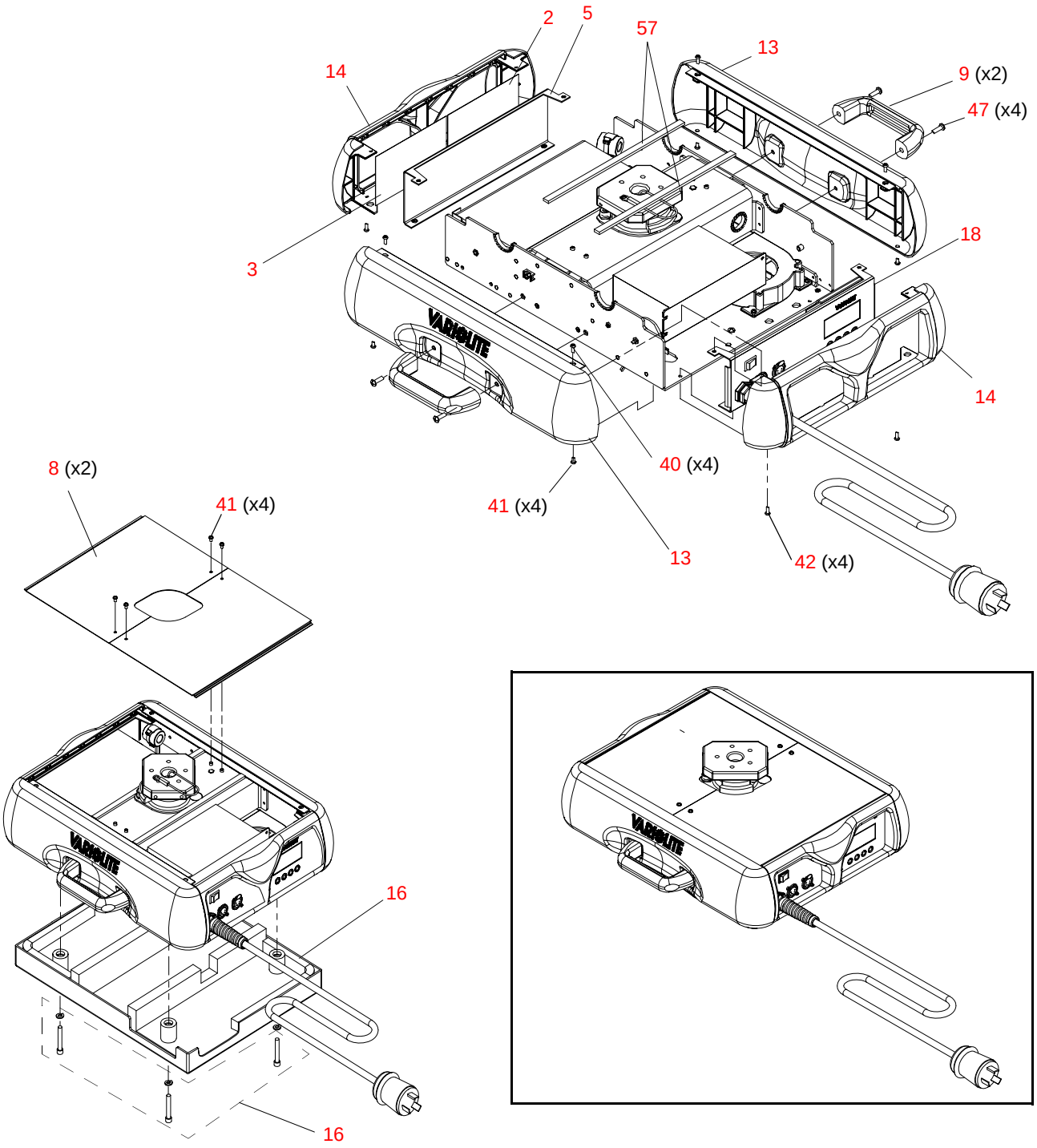
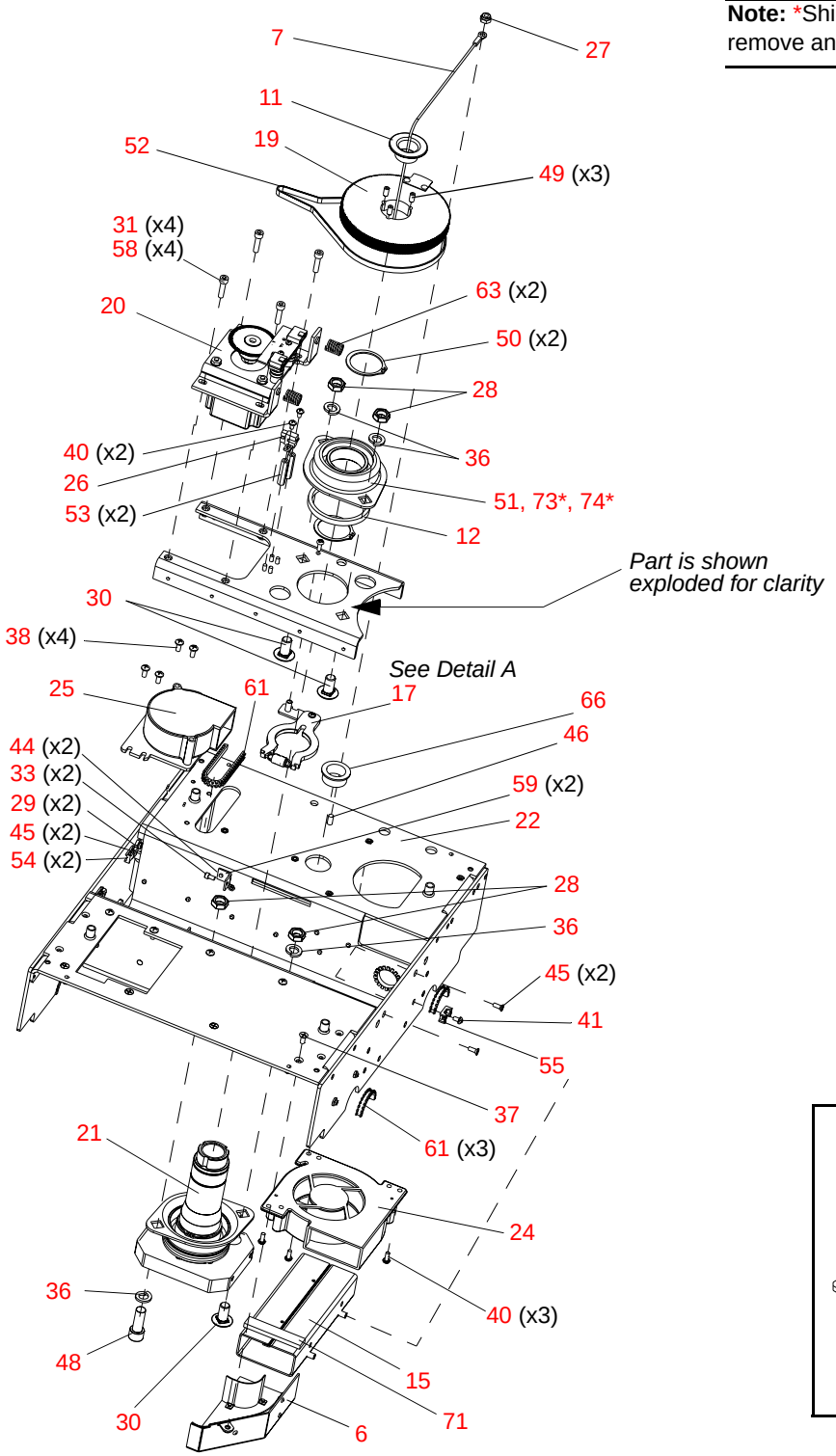


Figure 3-37: Upper Enclosure Assembly

Upper Enclosure Assembly (continued)

Note: *Shims used as required to remove any slack in pan tube assembly.



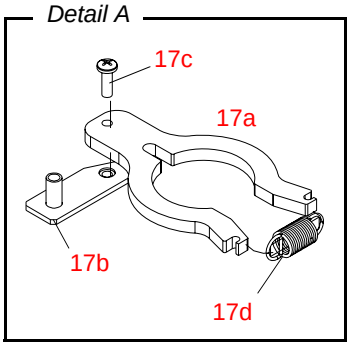


Figure 3-38: Upper Enclosure Mechanical Components

Upper Enclosure Assembly (continued)

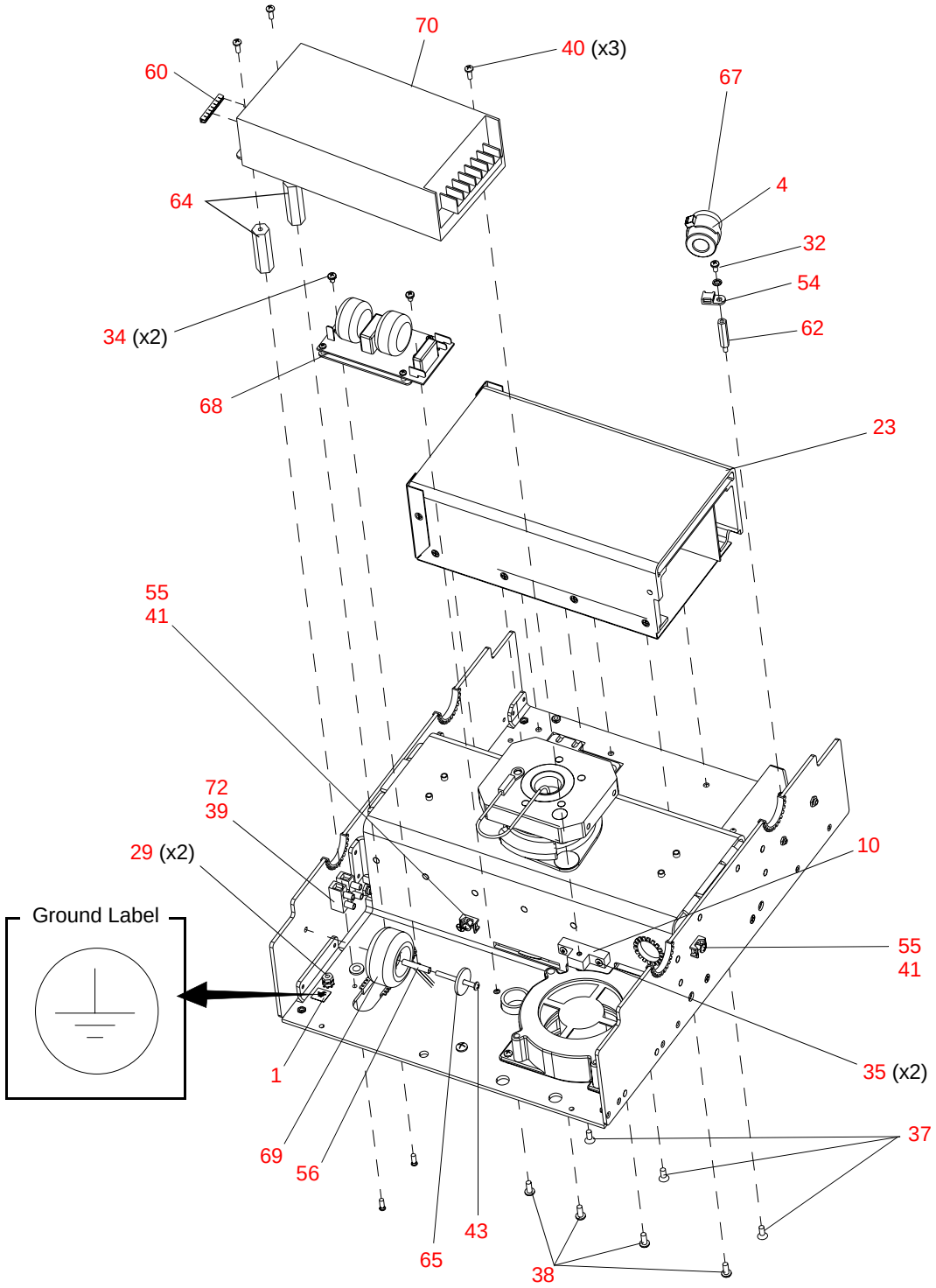


Figure 3-39: Upper Enclosure Electrical Components

Ventilation Cover Assembly

21.9686.0840.02 Rev B

Refer to Figure 3-40

No.	Item	Qty.	UM.	Description
1	10.9686.1249	4	EA	POST, TRUSS HOOK
2	10.9686.0883	1	EA	COVER, VENTILATION
3	10.9678.0837	1	EA	AIR SEAL, FAN SIDE
4	10.9678.0838	1	EA	AIR SEAL, APS SIDE
5	10.9678.0835	1	EA	AIR SEAL, SHORT STRIP
6	10.9678.0836	1	EA	AIR SEAL, LONG STRIP
7	10.9678.0887	2	EA	RAIN COVER SOUND INSULATION, ALUMINUM COVER
8	53.6653.0027	4	EA	SCREW, 1/4-20 X 1 5/8 SOC HEAD
9	54.1206.0015	4	EA	RING, RETAINING, PRESS-ON, 1" SH
10	55.6549.0001	4	EA	WASHER, 1/4" SPLIT LOCK

Ventilation Cover Assembly (continued)

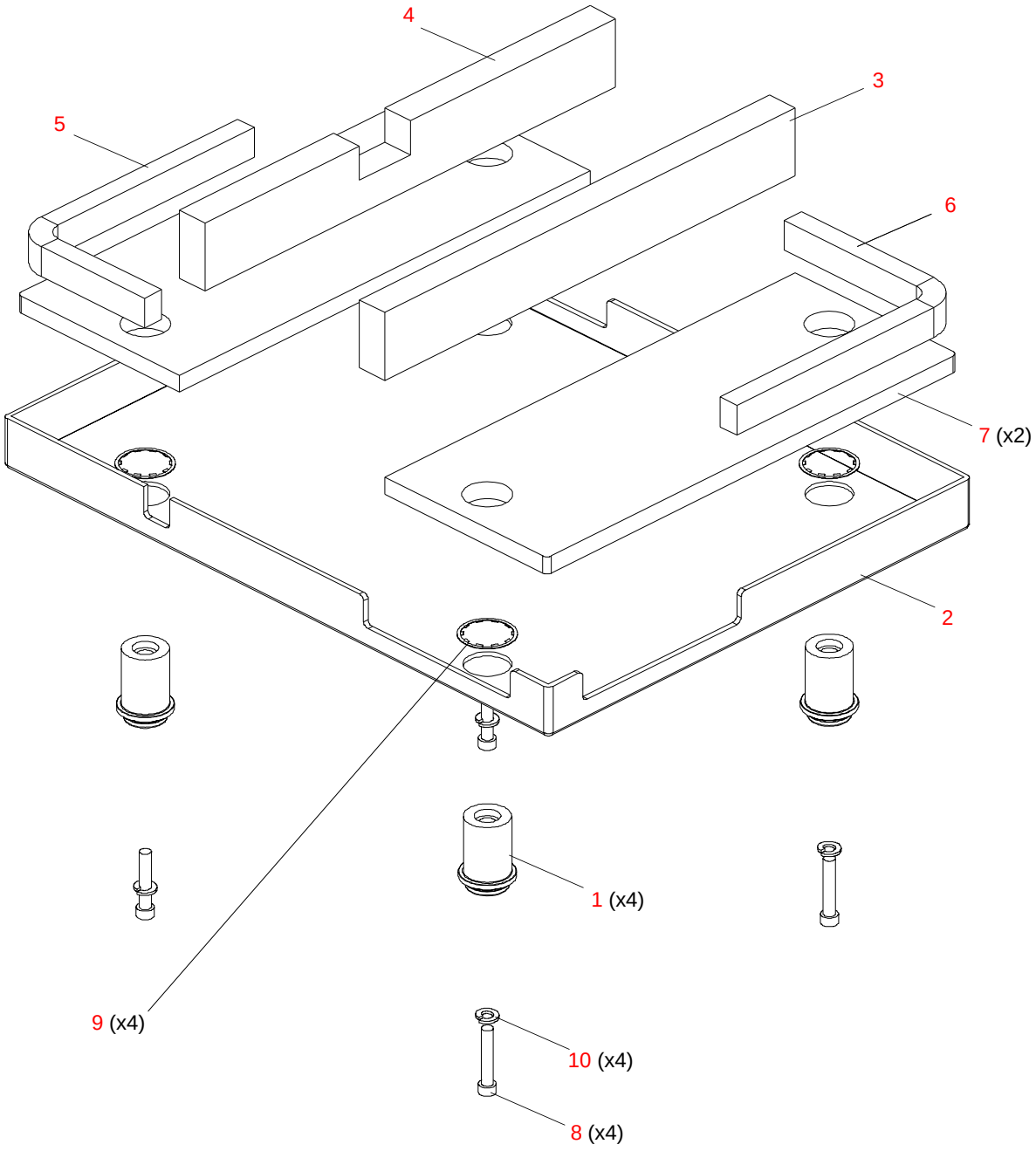


Figure 3-40: Ventilation Cover Assembly

Exhaust Fan Assembly

21.9686.0811 Rev C

Refer to Figure 3-41

No.	Item	Qty.	UM.	Description
1	10.9686.0810	1	EA	MOUNTING PLATE, EXHAUST FAN
2	40.7140.0001	1	EA	BLOWER, CENTRIFUGAL, 24VDC 9CFM 3" X 3"
3	52.6523.0002	1	EA	CONN, HOUSING, 2 POS PLUG SHROUDED
4	52.8347.0001	2	EA	CONTACT, 24-30 AWG MALE CRIMP
5	55.6576.0001	2	EA	SCREW, #10-16 X 3/8 TYPE B PFZ

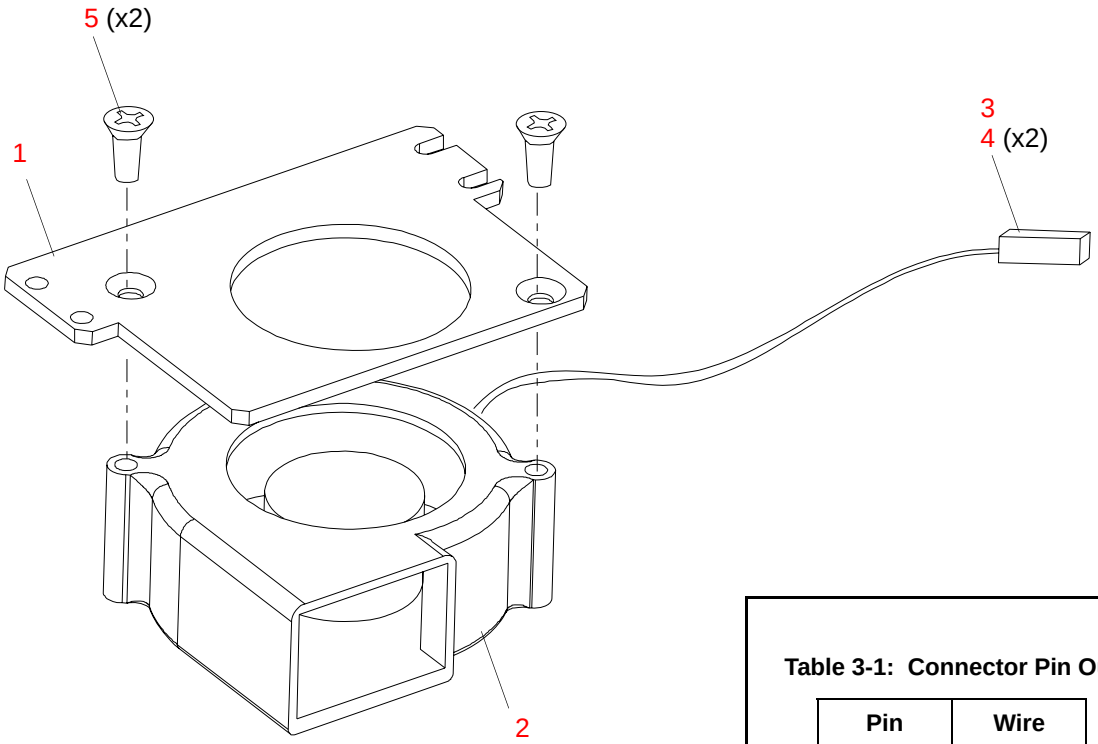


Table 3-1: Connector Pin Out

Pin	Wire
1	Black
2	Red

Figure 3-41: Exhaust Fan Assembly

Panel Assembly

21.9686.0805 Rev B

Refer to Figure 3-42

No.	Item	Qty.	UM.	Description
1	10.9678.0852.01	1	EA	LAYOUT, ENCLOSURE OVERLAY
2	10.9678.0859	1	EA	BRACKET, INPUT
3	10.9678.0872	1	EA	STIFFENER, DISPLAY BOARD
4	10.9686.0820	1	EA	FILLER PANEL, DMX CONNECTOR
5	24.9663.3895	1	EA	PCB ASSY, DMX INPUT
6	25.9678.0810	1	EA	CABLE ASSY, AC INPUT PIGTAIL
7	24.9678.3825	1	EA	PCB ASSY, VL3000 DISPLAY
8	51-0541	4	EA	SCREW, 4- X 3/8" H/L BLK ZINC PLT
9	53.6558.0009	2	EA	SCREW, 6-32 X 3/8"LG PPZ SEMS EXT ZINC PLT
10	55.2284.0001	1	EA	CARD GUIDE, SNAP-IN 3" LONG, NYLON NATURAL
11	74.2000.0002	1	EA	SWITCH, ROCKER, 2 POLE, HIGH CURRENT, BLACK

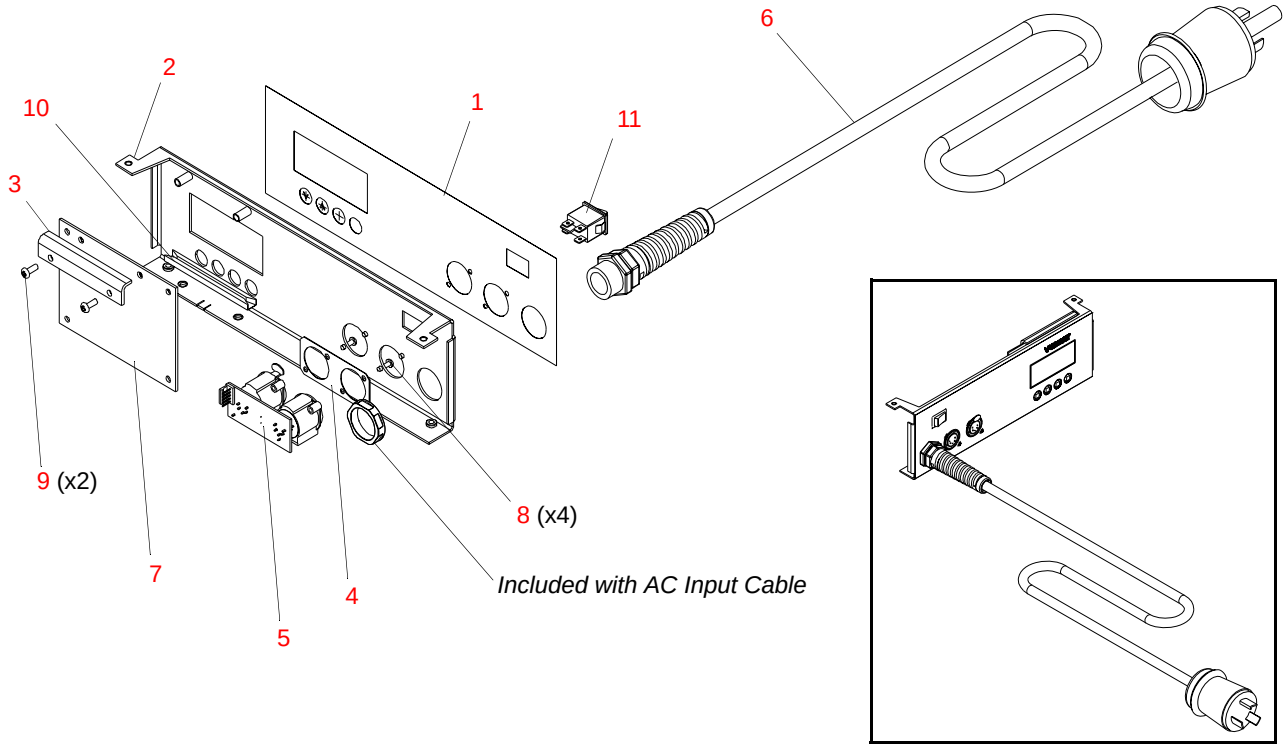


Figure 3-42: Panel Assembly

DMX Input PCB

24.9663.3895 Rev 0

Refer to Figure 3-43

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

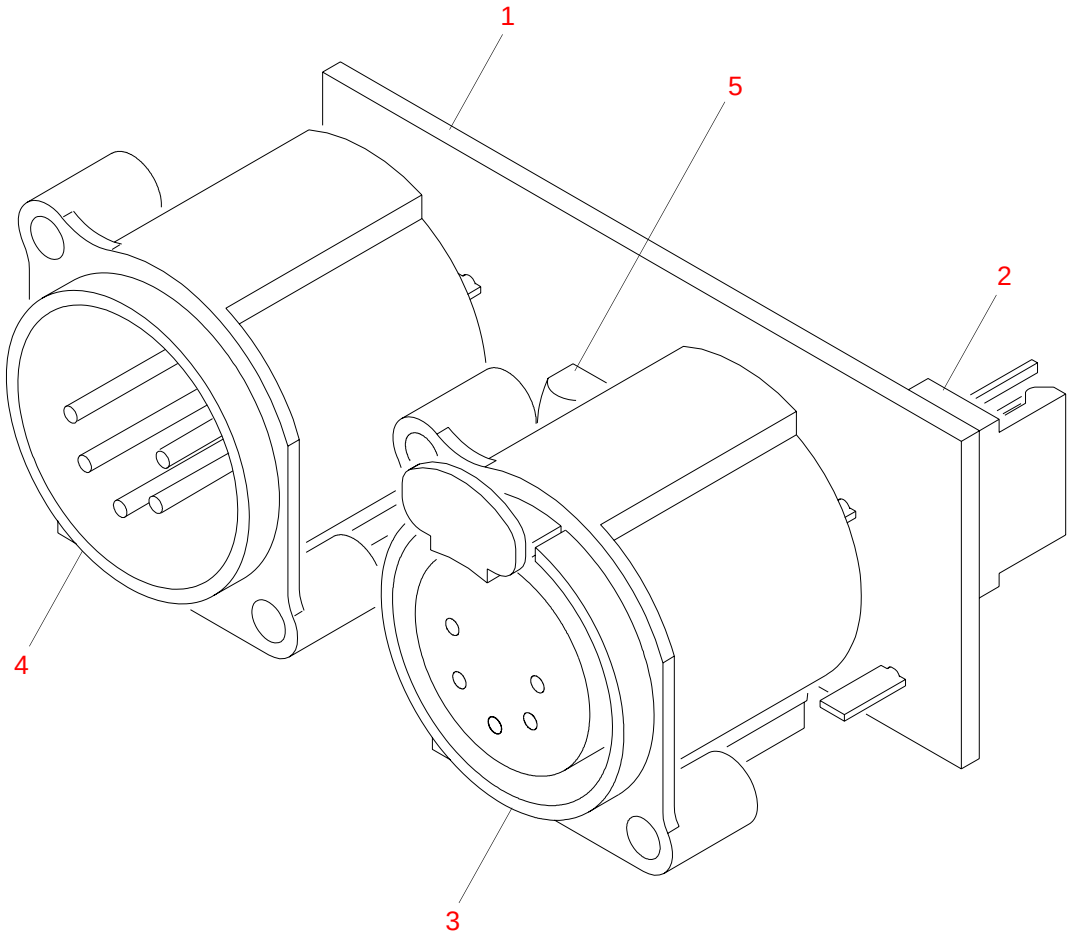


Figure 3-43: DMX Input PCB

Pan Pulley Assembly

21.9686.0807 Rev B

Refer to Figure 3-44

No.	Item	Qty.	UM.	Description
1	10.9686.0750	1	EA	TIMING PULLEY, 170 TOOTH
2	10.9678.0855	1	EA	PAN FLAG
3	53.6530.0009	2	EA	RIVET, 1/8"OD POP .126-.187 GL

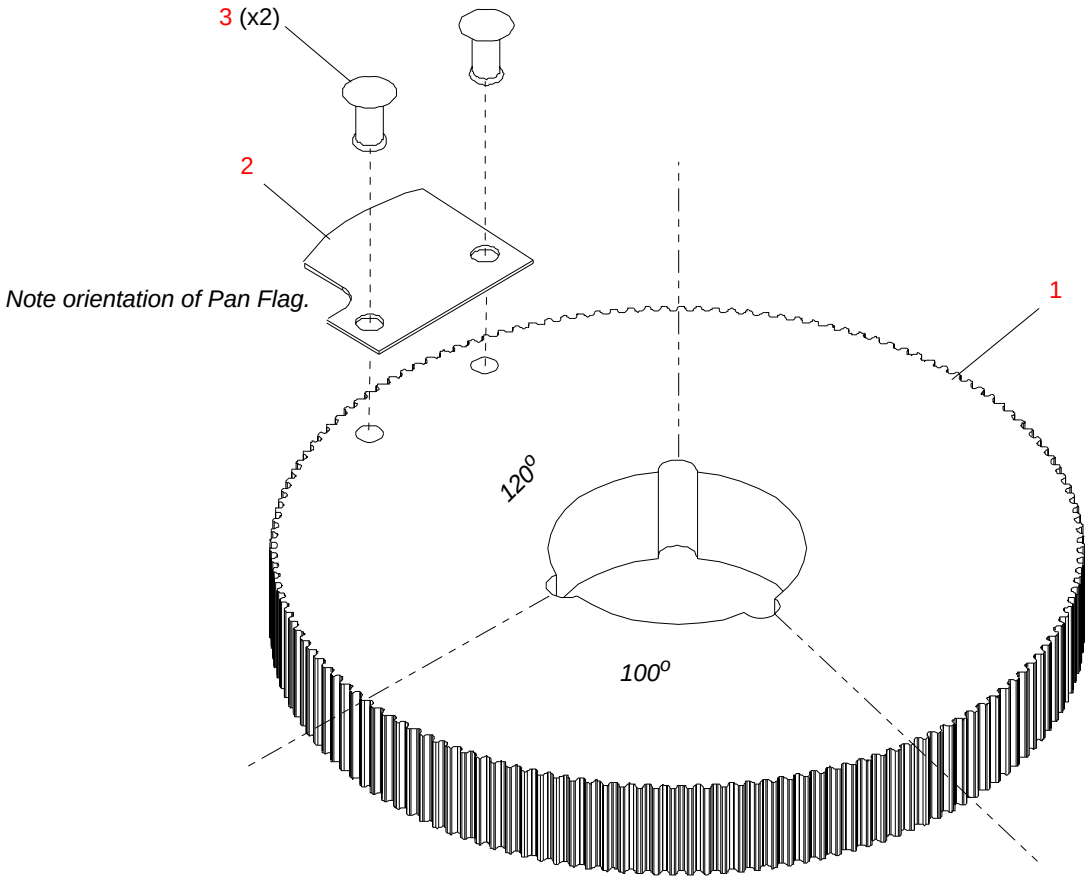


Figure 3-44: Pan Pulley Assembly

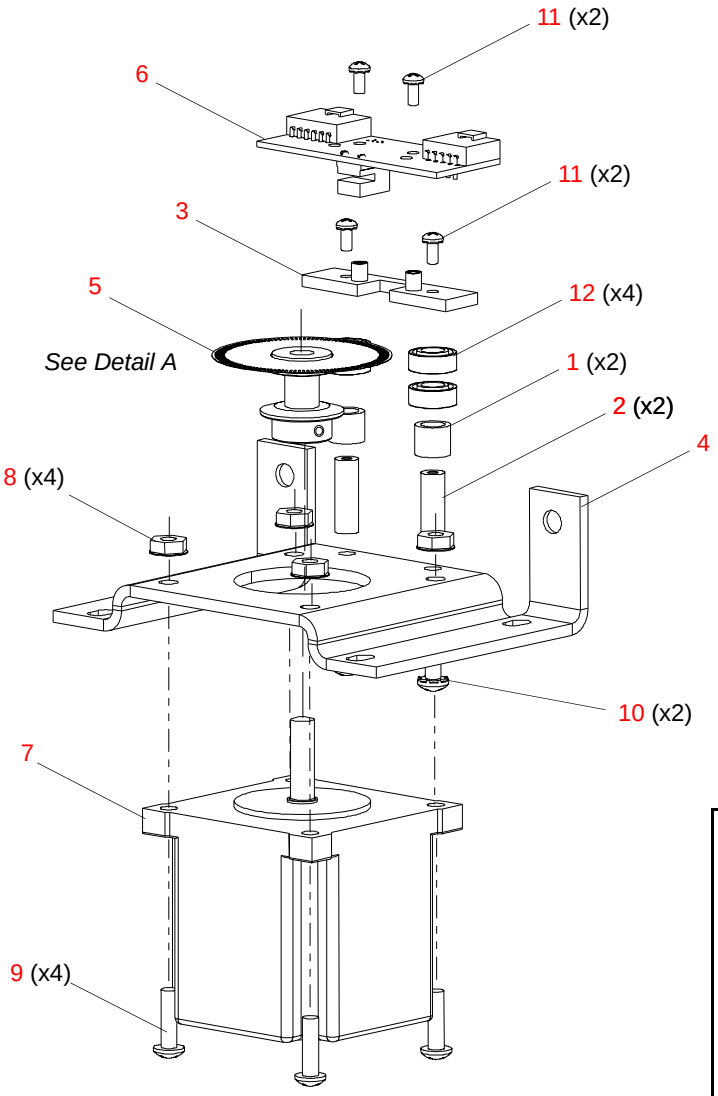
Pan Motor Assembly

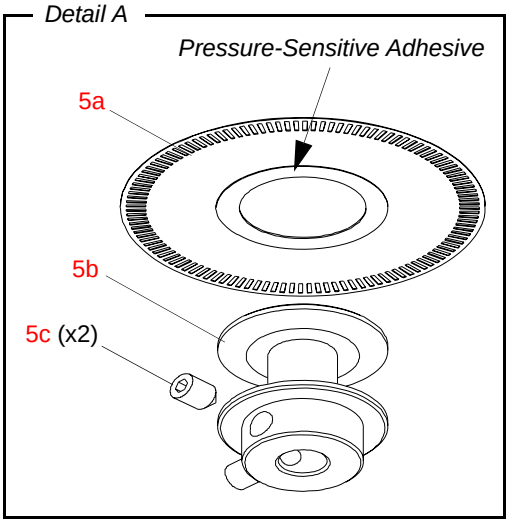
21.9686.0864 Rev D

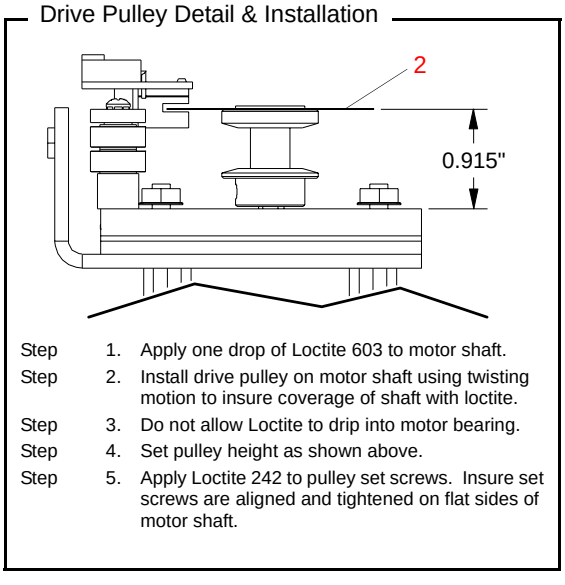
Refer to Figure 3-45

No.	Item	Qty.	UM.	Description
1	10.9686.0457.01	2	EA	SPACER, COLOR, .322 LG
2	10.9686.0840	2	EA	STANDOFF, 1/4", F-F 4-40/8-32, 0.791" LG AL
3	10.9686.0841	1	EA	ADAPTOR PLATE, PAN SENSOR PCB
4	10.9686.0865	1	EA	PLATE, PAN MOTOR MOUNT
5	21.9686.0828	1	EA	ASSY, DRIVE PULLEY, PAN
5a	10.9678.8720	1	EA	CODEWHEEL, 120 COUNT
5b	10.9686.0749	1	EA	TIMING PUILLEY
5c	53.5560.0250	2	EA	SCREW, 8-32 X 1/4" SET CONE POINT
6	24.9678.9729	1	EA	PCB ASSY, VL2203 PAN/TILT ENCODER
7	44.9678.0680	1	EA	MOTOR, 3 PHASE SIZE 23 HIGH TORQUE
8	53.2200.0008	4	EA	NUT, 8-32 KEPS SS
9	53.6546.0001	4	EA	SCREW, 8-32 X 5/8" PPB
10	53.6575.0009	2	EA	SCREW, 8-32 X 3/8" LG PPZ SEMS
11	53.6682.0002	4	EA	SCREW, 4-40 X 1/4"LG PPZ SEMS-EXT
12	54.1259.0009	4	EA	BEARING, 1/4" ID, 1/2" OD EXT. INNER RACE

Pan Motor Assembly (continued)







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 3-45: Pan Motor Assembly

Pan Tube Assembly

21.9678.0881 Rev 0

Refer to Figure 3-46

No.	Item	Qty.	UM.	Description
1	10.9678.0809	1	EA	PAN TOGGLE STOP
2	10.9678.0847	1	EA	SILICONE FOAM WASHER
3	10.9678.0848	2	EA	WASHER, PAN TEFLON
4	12.9678.0877	1	EA	PAN TUBE, MACHINED
5	54.1206.0021	1	EA	RING, RETAINING 1.562"SHAFT 1.468"GRV DIA .068"GRVWD EXTERNAL
6	54.1255.0002	1	EA	BEARING ASSY, FLUSH MOUNT HOUSING LARGE

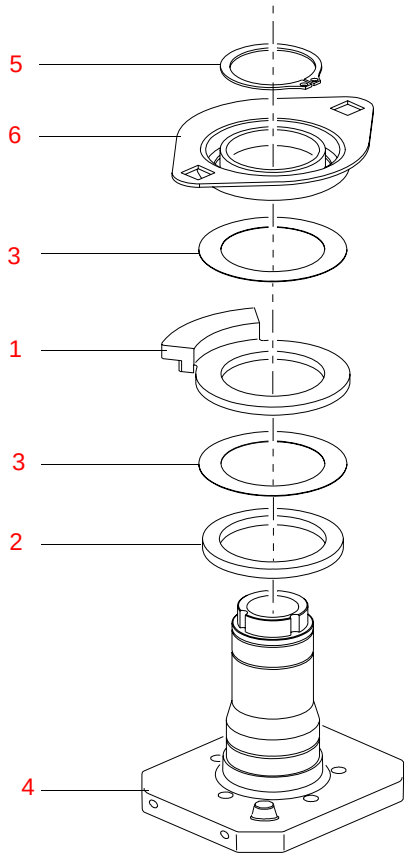


Figure 3-46: Pan Tube Assembly

Notes

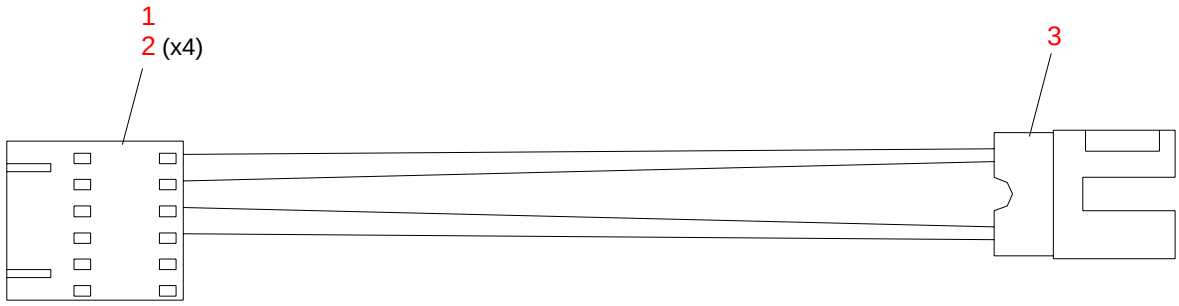
Cable Assemblies

Pan EOT Sensor Electrical Assembly

23.9678.0687 Rev A

Refer to Figure 3-47

No.	Item	Qty.	UM.	Description
1	52.6524.0006	1	EA	CONN, HOUSING 6 POS RECEPTACLE
2	52.8346.0001	4	EA	CONTACT, 24-30AWG FEMALE CRIMP
3	86.7002.0003	1	EA	SWITCH, SLOTTED OPTICAL



WIRE CHART		
CONNECTOR	SENSOR	DESCRIPTION
PIN 1	N.C.	NO CONNECTION
PIN 2	N.C.	NO CONNECTION
PIN 3	BLACK	IRED CATHODE
PIN 4	RED	IRED ANODE
PIN 5	GREEN	DETECTOR EMITTER
PIN 6	WHITE	DETECTOR COLLECTOR

Figure 3-47: Pan EOT Sensor Electrical Assembly

LVS Chassis Ground Cable Assembly

25.9661.1514 Rev A

Refer to Figure 3-48

No.	Item	Qty.	UM.	Description
1	52.8231.0005	1	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
2	52.8271.0001	1	EA	FASTON RECEPT, 16-14 AWG (REEL)
3	73.3516.0504	3.5	IN	WIRE, 16 AWG 300V 105C PVC GRN/YEL UL1569

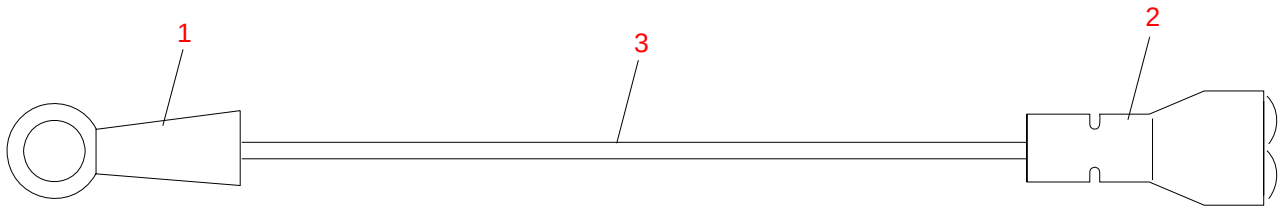


Figure 3-48: LVS Chassis Ground Cable Assembly

Ignitor to Relay Cable Assembly

25.9661.1526 Rev C

Refer to Figure 3-49.

No.	Item	Qty.	UM.	Description
1	52.8231.0005	1	EA	TERM, RING #6 BLUE 16-14 AWG (LOOSE) PIDG
2	52.8312.0001	1	EA	RECP, FASTON 1/4" 18-14 AWG INSULATED VO
3	73.7101.0009	0.42	FT	WIRE, 14AWG 15KV 150C SILICONE 41/30 STRANDING

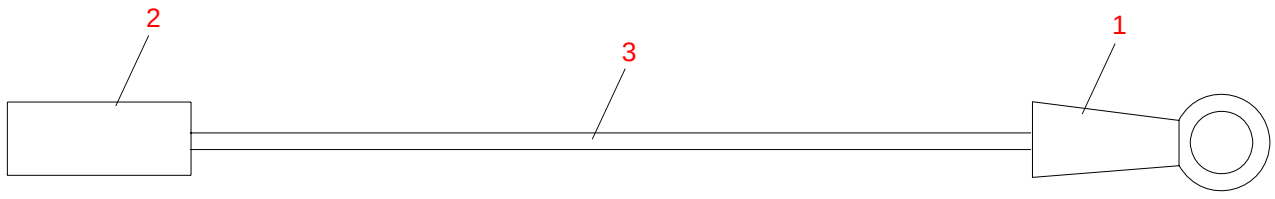


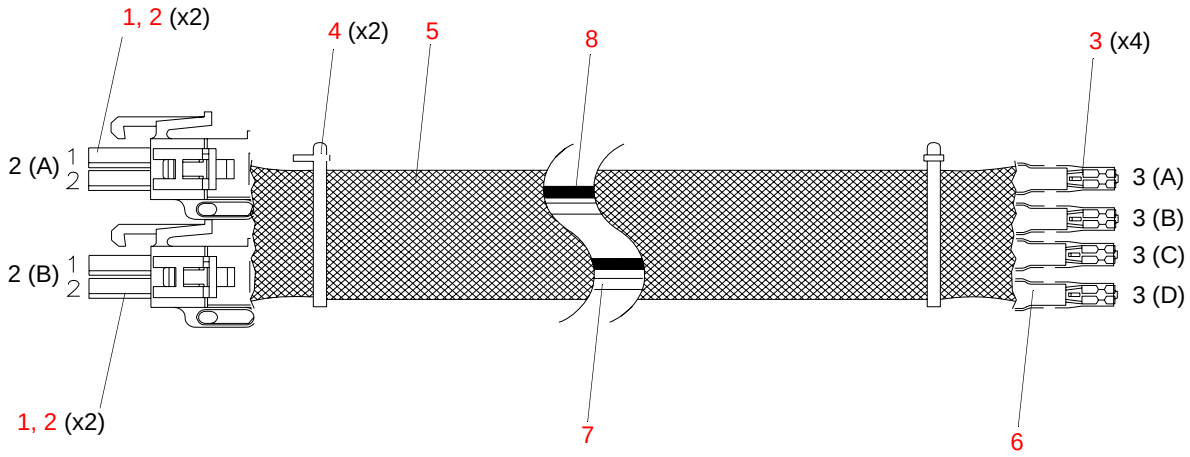
Figure 3-49: Ignitor to Relay Cable Assembly

Yoke to Dual AC Fan Cable Assembly

25.9686.0012 Rev A

Refer to Figure 3-50

No.	Item	Qty.	UM.	Description
1	52.6665.0001	4	EA	CONTACT, 22-26AWG MALE MATE-N-LOK 2
2	52.6665.0002	2	EA	CONN, HOUSING 2 POS PLUG MATE-N-LOC 2
3	52.8413.0001	4	EA	RECEPT, FASTON .110 SERIES 22-18AWG INSULATED
4	55.2186.0002	2	EA	CABLE TIE, .09"WD 3.750"LG TEFZEL
5	55.2260.0208	2.75	FT	SLEEVING, FIBERGLASS 0.208 ID
6	55.2200.0003	0.50	FT	HEATSHRINK, TEFLON NATURAL COLOR
7	73.6222.0009	6.33	FT	WIRE, 22AWG 600V 200C TFE WHT UL1199 19STRAND
8	73.6222.0010	6.33	FT	WIRE, 22AWG 600V 200C TFE BLK UL1199



WIRE CHART				
FROM	CONN ITEM NO.	TO	CONN ITEM NO.	WIRE COLOR
PIN 1	2(A)	SPADE	3(A)	BLK
PIN 2	2(A)	SPADE	3(B)	WHT
PIN 1	2(B)	SPADE	3(C)	BLK
PIN 2	2(B)	SPADE	3(D)	WHT

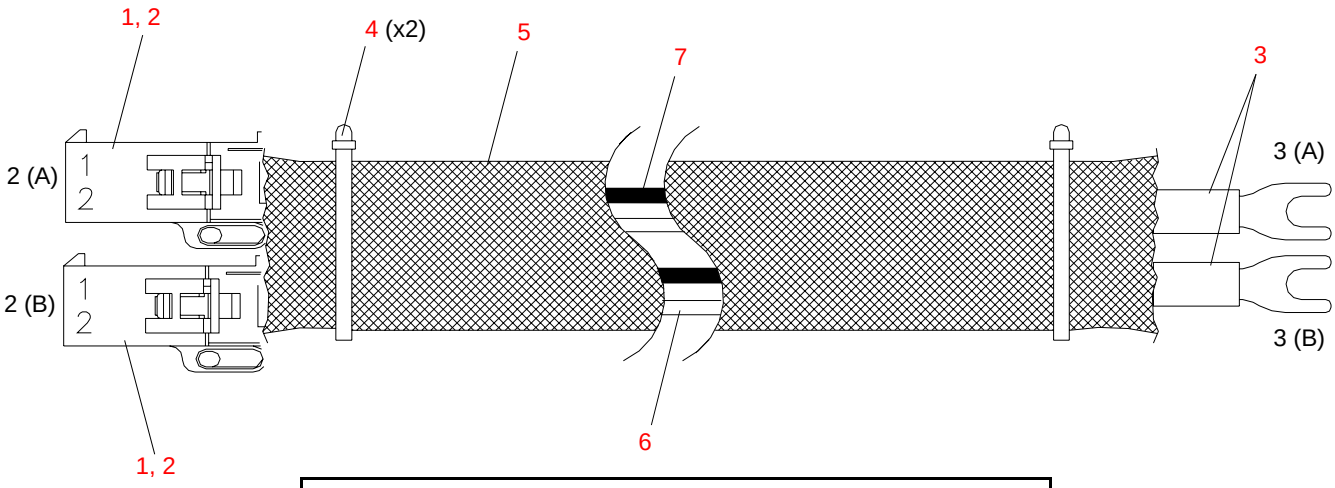
Figure 3-50: Yoke to Dual AC Fan Cable Assembly

LVS to Yoke Dual AC Fan Cable Assembly

25.9686.0843 Rev A

Refer to Figure 3-51

No.	Item	Qty.	UM.	Description
1	52.6664.0001	4	EA	CONTACT, 22-26AWG FEMALE MATE-N-LOK 2
2	52.6664.0002	2	EA	CONN, HOUSING 2 POS CAP MATE-N-LOK 2
3	52.8231.0008	2	EA	TERM, SPADE #6 RED 22-16AWG INSERT
4	55.2186.0001	2	EA	CABLE TIE, .10" WD 4.00"LG SMALL
5	55.6699.0002	2.08	FT	SLEEVING, 1/4" NOM.DIA. POLY EXP BRAIDED
6	73.6222.0009	4.34	FT	WIRE, 22AWG 600V 200C TFE WHT UL1199
7	73.6222.0010	4.34	FT	WIRE, 22AWG 600V 200C TFE BLK UL1199



WIRE CHART				
FROM	CONN ITEM NO.	TO	CONN ITEM NO.	WIRE COLOR
PIN 1	2(A)	SPADE	3(A)	BLK
PIN 2	2(A)	SPADE	3(B)	WHT
PIN 1	2(B)	SPADE	3(A)	BLK
PIN 2	2(B)	SPADE	3(B)	WHT

Figure 3-51: Yoke to Dual AC Fan Cable Assembly

OT Switch 1 to OT Switch 2 Cable Assembly

25.9686.0013 Rev A

Refer to Figure 3-53

No.	Item	Qty.	UM.	Description
1	52.8371.0001	2	EA	RECEPT, FASTON, 24-20 AWG UNINSUL TIN
2	73.7089.0000	0.42	FT	WIRE. 22AWG 300V 200C TEF BLK UL1180

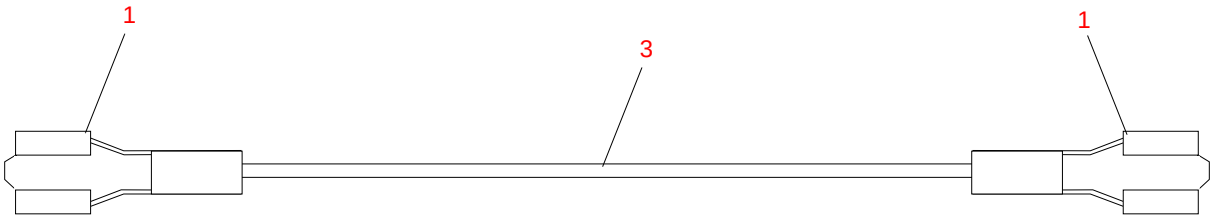


Figure 3-52: OT Switch 1 to OT Switch 2 Cable Assembly

Backcap Interlok to OT Switch 1 Cable Assembly

25.9686.0014 Rev A

Refer to Figure 3-53

No.	Item	Qty.	UM.	Description
1	52.8414.0001	1	EA	RECEPT, FASTON, .187 SERIES 24-20 AWG UNINSUL
2	52.8371.0001	1	EA	RECEPT, FASTON, 24-20 AWG UNINSUL
3	73.7089.0000	0.33	FT	WIRE. 22AWG 300V 200C TEF BLK UL1180

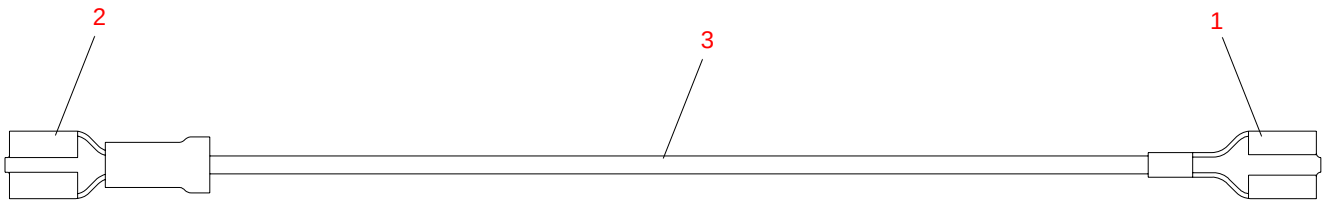


Figure 3-53: Backcap Interlok to OT Switch 1 Cable Assembly

OT Switch to Ground Cable Assembly

25.9678.0015 Rev A

Refer to Figure 3-54

No.	Item	Qty.	UM.	Description
1	52.8237.0002	1	EA	TERM, RING #4 24-20AWG
2	52.8371.0001	1	EA	RECEPT, FASTON 24-20AWG UNISUL TIN PLT BRS .250 X .032 TAB
3	73.7089.0000	0.25	FT	WIRE, 22AWG BLK 300V 200C TEFLON STRANDED

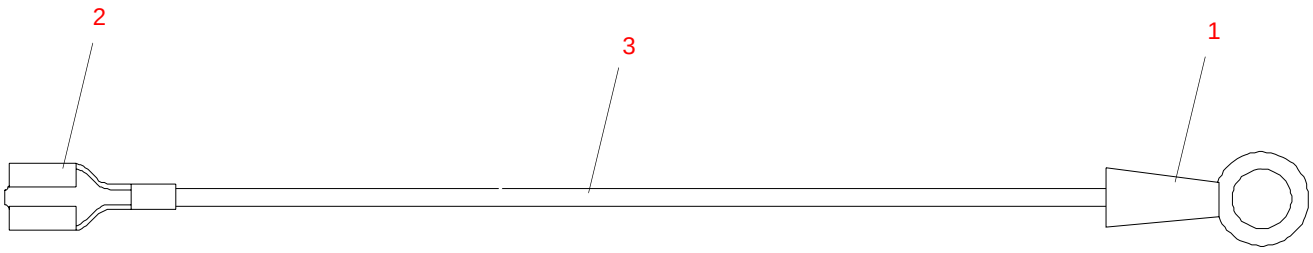


Figure 3-54: OT Switch to Ground Cable Assembly

Tilt Harness Cable Assembly

25.9686.2203 Rev A

Refer to Figure 3-55 and Figure 3-56

No.	Item	Qty.	UM.	Description
1	52.6610.0040	2	EA	CONNECTOR, HOUSING 40 POS, 26-22 AWG DBL ROW UNLOADED
2	52.6224.1040	2	EA	COVER, FRONT 40 POS MT LATCHING
3	52.6224.2040	2	EA	COVER, BACK 40 POS MT
4	52.6610.0034	1	EA	CONNECTOR, HOUSING 34 POS, 26-22 AWG DBL ROW UNLOADED
5	52.6224.1034	1	EA	COVER, FRONT 34 POS MT LATCHING
6	52.6224.2034	1	EA	COVER, BACK 34 POS MT
7	52.6610.0017	1	EA	CONNECTOR, HOUSING 50 POS, 26-22 AWG DBL ROW UNLOADED
8	52.6224.1050	1	EA	COVER, FRONT 50 POS MT LATCHING
9	52.6224.2050	1	EA	COVER, BACK 50 POS MT
10	52.8351.0004	118	EA	CONTACT, 26-22 AWG RECP MTE
11	52.6524.0004	2	EA	CONNECTOR, HOUSING 4 POS RECEPTACLE 30-24 AWG
12	52.8346.0001	6	EA	CONTACT, 24-30 AWG FEMALE CRIMP
13	73.5116.0123	29.6	FT	WIRE, 24 AWG, 4 COND TW, 300V 80C (BLK-BRN-RED-ORN)
14	73.5126.0002	1.9	FT	WIRE, 26 AWG, 2 COND TW, 300V 80C (BLK-RED)
15	55.2186.0001	2	EA	CABLE TIE, .10 X 4" SMALL
16	55.6699.0011	1.13	FT	SLEEVING, 3/4" NOM. DIA WOVEN POLY, ROUNDIT 200D

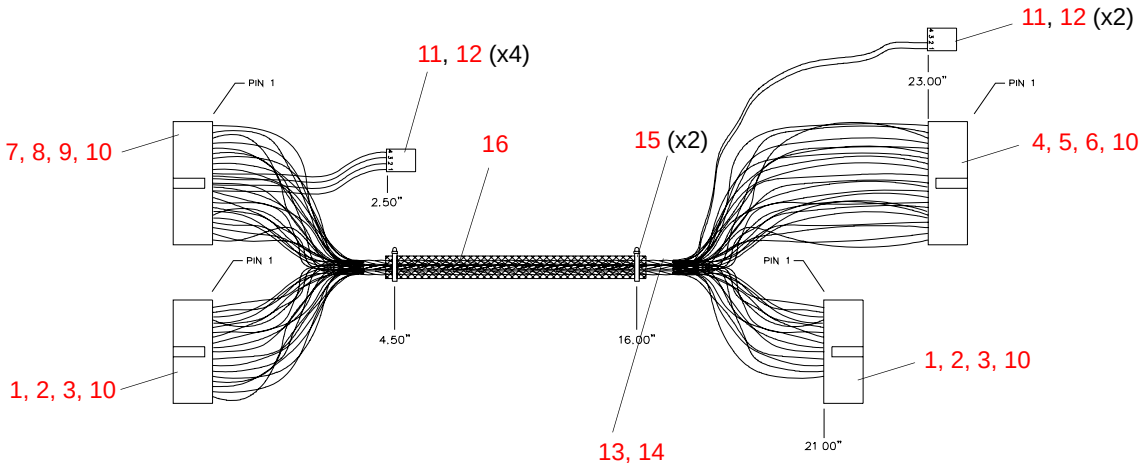


Figure 3-55: Tilt Harness Cable Assembly

Tilt Harness Cable Assembly (continued)

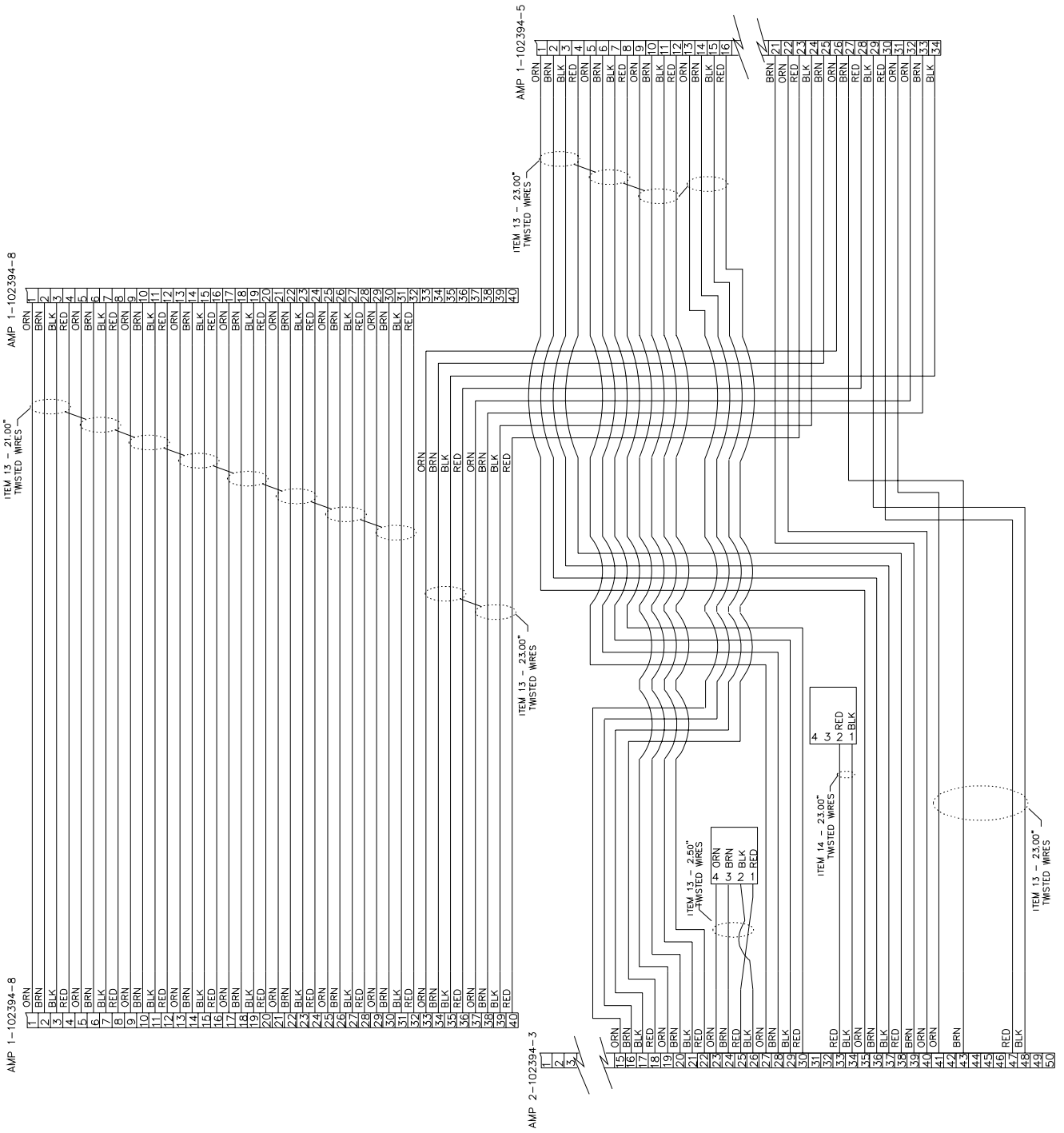


Figure 3-56: Tilt Harness Cable Assembly Wiring / Pin Out

Internal Lens Interconnect Cable Assembly

25.9686.0204 Rev 0

Refer to Figure 3-57

No.	Item	Qty.	UM.	Description
1	52.6610.0014	2	EA	CONNECTOR, HOUSING 14 POS, 26-22 AWG
2	52.6224.1014	2	EA	COVER, FRONT 14 POS MT LATCHING
3	52.6224.2014	2	EA	COVER, BACK 14 POS MT
4	55.2186.0001	4	EA	CABLE TIE, .10 X 4" SMALL
5	55.6699.0004	0.6	FT	SLEEVING, 3/4" NOM. DIA POLY EXP BRAID
6	73.5116.0123	4.0	FT	WIRE, 24 AWG, 4 COND TW, 300V 80C (BLK-BRN-RED-ORN)
7	73.5126.0002	2.0	FT	WIRE, 26 AWG, 2 COND TW, 300V 80C (BLK-RED)
8	73.5126.0007	2.0	FT	WIRE, 26 AWG, 2 COND TW, 300V 80C (BLK-ORN)
9	73.3026.0009	2.0	FT	WIRE, 26 AWG 300V 80C WHT
10	52.8351.0004	26	EA	CONTACT, 26-22 AWG RECP MTE

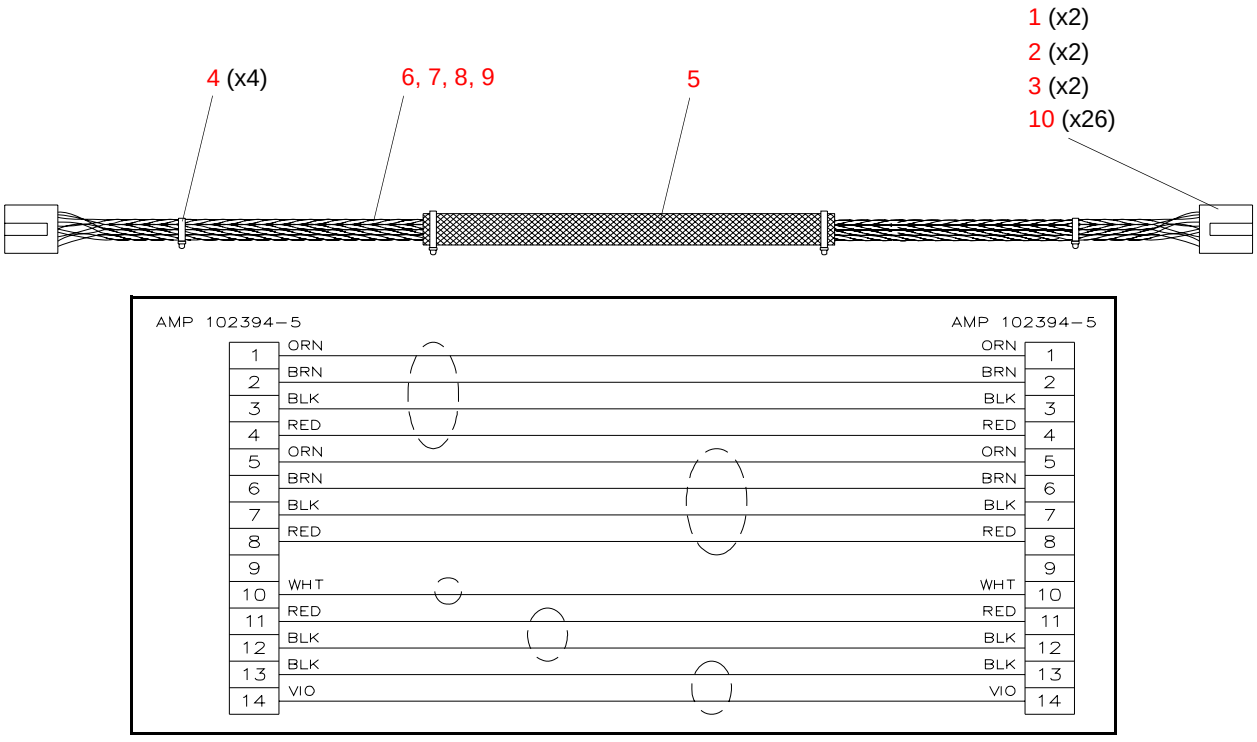


Figure 3-57: Internal Lens Interconnect Cable Assembly

VL3500 Wash Color Harness Cable Assembly

25.9686.0205 Rev E (VL3500 Wash)

Refer to Figure 3-58 and Figure 3-59

No.	Item	Qty.	UM.	Description
1	52.6610.0040	1	EA	CONNECTOR, HOUSING 40 POS, 26-22 AWG DBL ROW UNLOADED
2	52.6224.1040	1	EA	COVER, FRONT 40 POS MT LATCHING
3	52.6224.2040	1	EA	COVER, BACK 40 POS MT
4	52.6610.0034	1	EA	CONNECTOR, HOUSING 34 POS, 26-22 AWG DBL ROW UNLOADED
5	52.6224.1034	1	EA	COVER, FRONT 34 POS MT LATCHING
6	52.6224.2034	1	EA	COVER, BACK 34 POS MT
7	52.8351.0004	52	EA	CONTACT, 26-22 AWG RECP MTE
8	52.6467.0011	2	EA	CONNECTOR, FEMALE PLUG 11 POS, 30-24 AWG
9	52.6467.0024	20	EA	CONTACT, SOCKET 30-24 AWG CRIMP
10	52.6662.0006	8	EA	HOUSING, 6 POS 125/2A 2.0 MM PITCH
11	52.8388.0001	32	EA	CONTACT, 24-30 AWG FEMALE CRIMP 2.0 MM PITCH
12	55.2186.0001	8	EA	CABLE TIE, .10 X 4" SMALL
13	73.2324.0123	13.33	FT	WIRE, 24 AWG, 4 COND TW, 300V 200C TEF (BLK-BRN-RED-ORN)
14	73.2328.5000	3.29	FT	WIRE, 26 AWG, 6 COND TW, 300V 200C TEF UL1180
15	52.6467.0001	2	EA	CONN, FEMALE PLUG, 6 POS 24-30 AWG

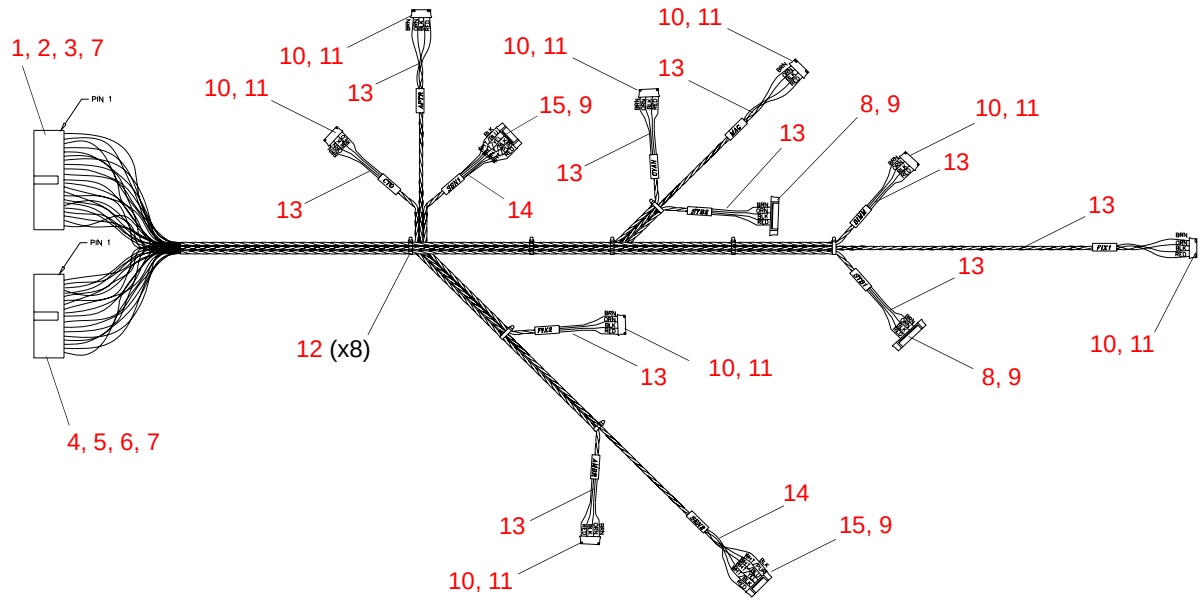


Figure 3-58: VL3500 Wash Color Harness Cable Assembly

VL3500 Wash Color Harness Cable Assembly (continued)

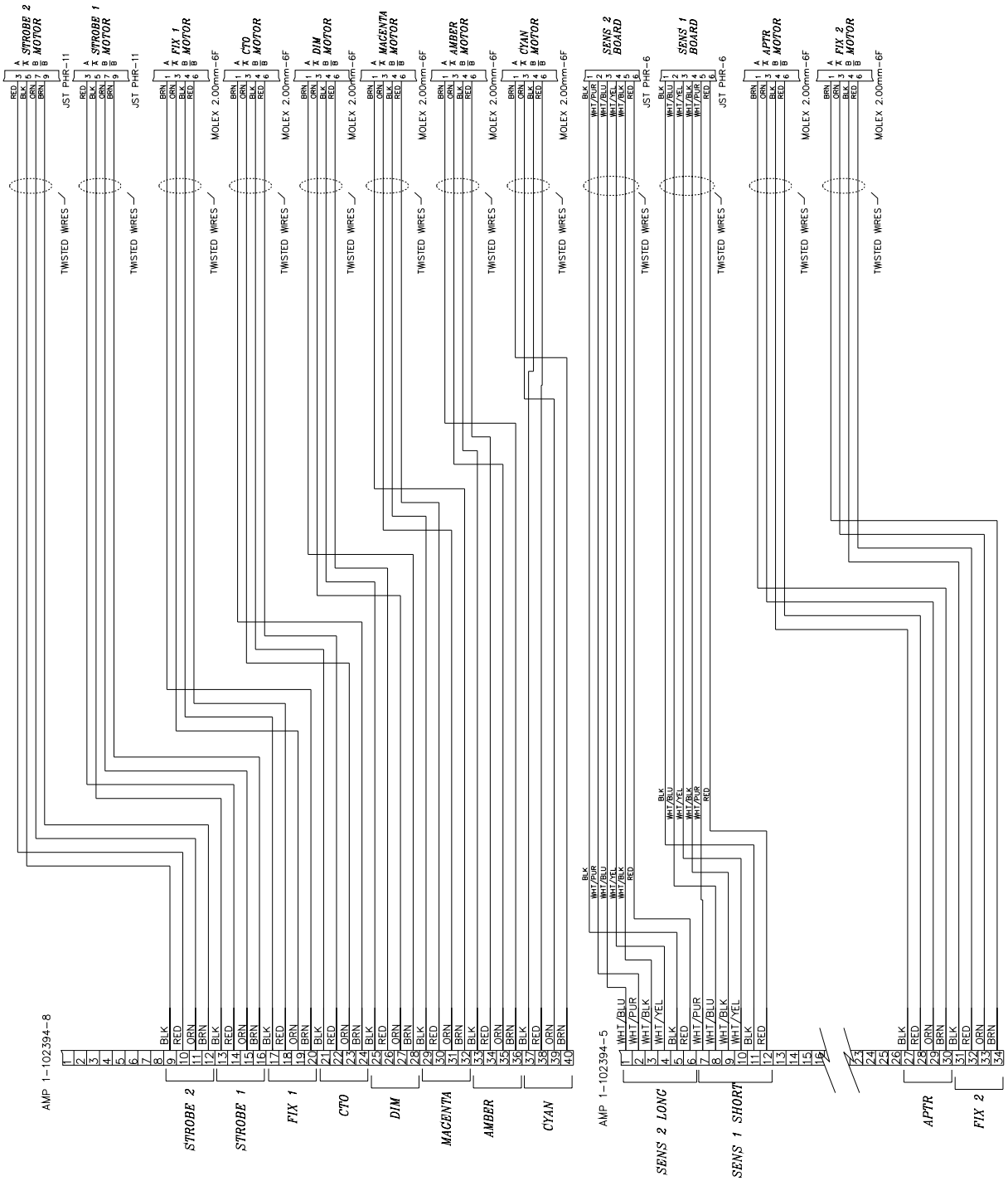


Figure 3-59: VL3500 Wash Color Harness Cable Assembly Wiring / Pin Out

VL3500 Wash FX Color Harness Cable Assembly

25.9686.1205 Rev B (VL3500 FX Wash)

Refer to Figure 3-60 and Figure 3-61

No.	Item	Qty.	UM.	Description
1	52.6610.0040	1	EA	CONNECTOR, HOUSING 40 POS, 26-22 AWG DBL ROW UNLOADED
2	52.6224.1040	1	EA	COVER, FRONT 40 POS MT LATCHING
3	52.6224.2040	1	EA	COVER, BACK 40 POS MT
4	52.6610.0034	1	EA	CONNECTOR, HOUSING 34 POS, 26-22 AWG DBL ROW UNLOADED
5	52.6224.1034	1	EA	COVER, FRONT 34 POS MT LATCHING
6	52.6224.2034	1	EA	COVER, BACK 34 POS MT
7	52.8351.0004	60	EA	CONTACT, 26-22 AWG RECP MTE
8	52.6467.0011	2	EA	CONNECTOR, FEMALE PLUG 11 POS, 30-24 AWG
9	52.6467.0024	22	EA	CONTACT, SOCKET 30-24 AWG CRIMP
10	52.6662.0006	9	EA	HOUSING, 6 POS 125/2A 2.0 MM PITCH
11	52.8388.0001	36	EA	CONTACT, 24-30 AWG FEMALE CRIMP 2.0 MM PITCH
12	55.2186.0001	8	EA	CABLE TIE, .10 X 4" SMALL
13	73.2324.0123	14.66	FT	WIRE, 24 AWG, 4 COND TW, 300V 200C TEF (BLK-BRN-RED-ORG)
14	73.2328.6000	0.875	FT	WIRE, 26 AWG, 6 COND, 300V 200C TEF (BLK-WHT/BLU-WHT/YEL-WHT/ BLK-WHT/PUR-RED) UL1180
15		2.42	FT	WIRE, 26 AWG, 8 COND, 300V 200C TEF (BLK-WHT/BLU-WHT/YEL-WHT/ BLK-WHT/PUR-RED/ORG/YEL) UL1180
16	52.6467.0006	1	EA	CONN, FEMALE PLUG, 6 POS 24-30 AWG JST PHR6
17	52.6467.0008	1	EA	CONN, FEMALE PLUG, 8 POS 24-30 AWG JST PHR8
18	52.6524.0002	1	EA	CONN, HOUSING, 2 POS RECEPT MOLEX 50-57-9402
19	52.8346.0001	2	EA	24-30AWG FEMALE CRIMP MOLEX 16-02-0097
20		0.75	FT	WIRE, 26 AWG, 2 COND, 300V 200C TEF (BLK/RED) UL1180

VL3500 Wash FX Color Harness Cable Assembly (continued)

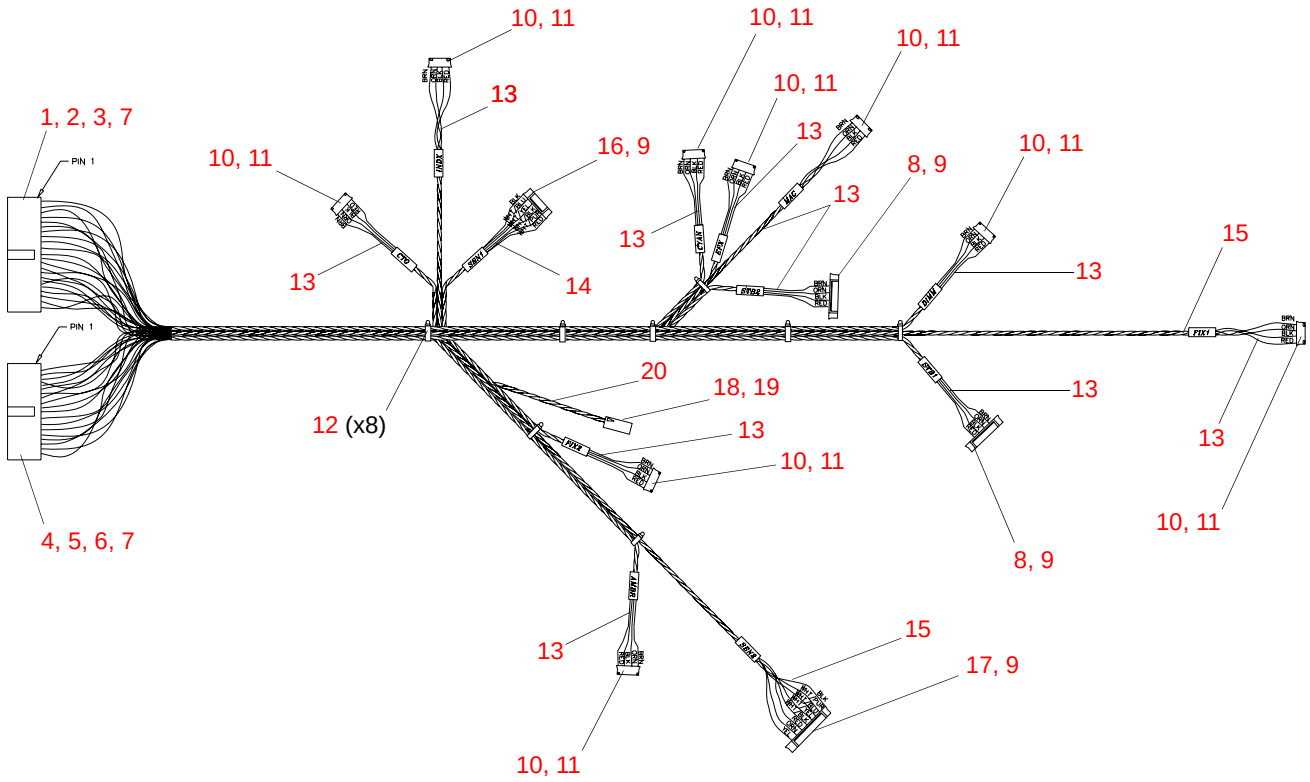


Figure 3-60: VL3500 Wash FX Color Harness Cable Assembly

VL3500 Wash FX Color Harness Cable Assembly (continued)

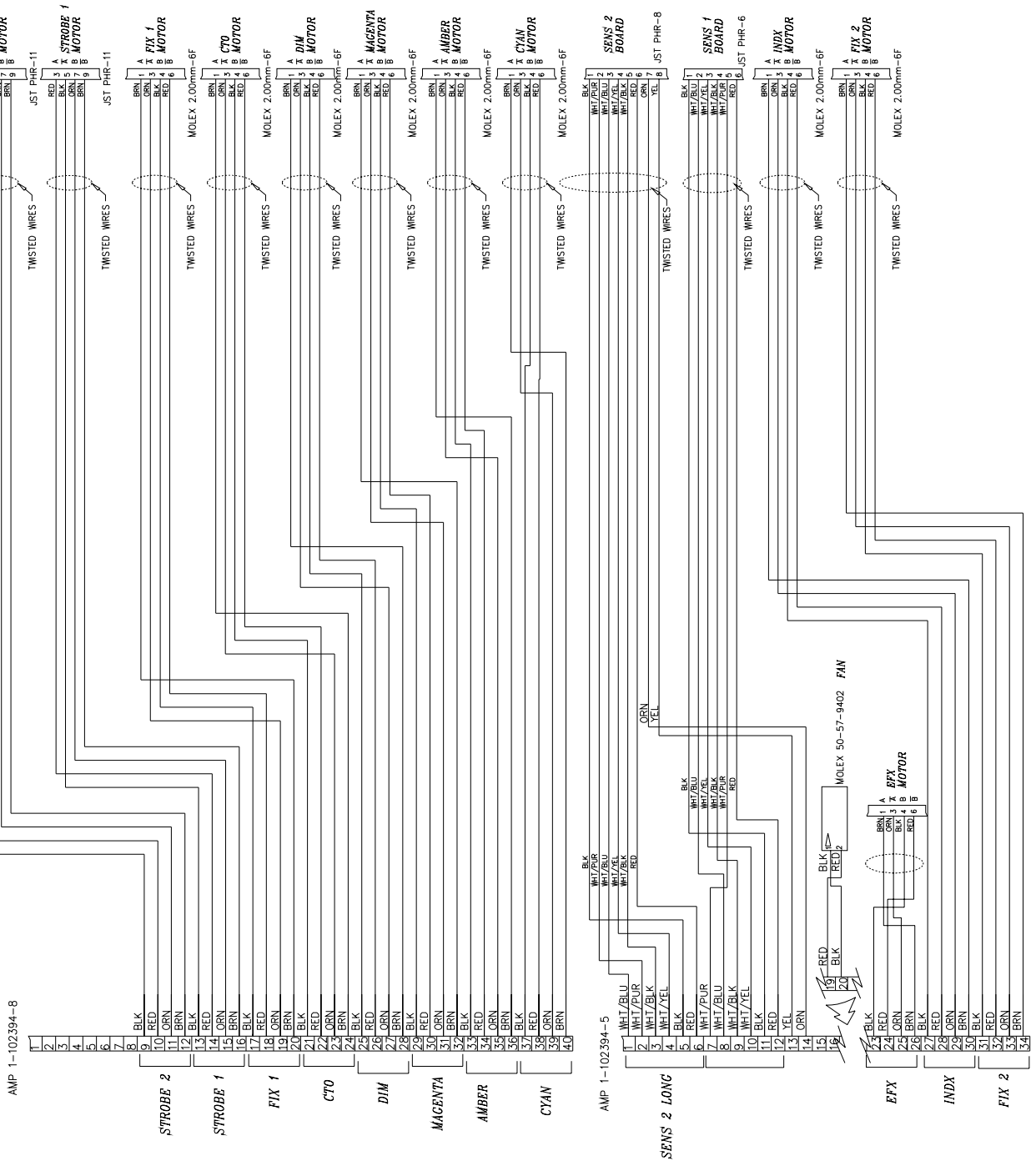


Figure 3-61: VL3500 Wash FX Color Harness Cable Assembly Wiring / Pin Out

Internal-Lens Split Motor Cable Assembly

25.9686.0206 Rev 0

Refer to Figure 3-62

No.	Item	Qty.	UM.	Description
1	52.6467.0004	1	EA	CONNECTOR, FEM PLUG 4 POS, 30-24 AWG
2	52.6467.0024	4	EA	CONTACT, 24-30 AWG FEMALE CRIMP 2.00 MM PITCH
3	52.6696.0001	1	EA	RECEPT, WIRE TO WIRE 4 POS, 2 MM PITCH 28-24 AWG
4	52.6694.0001	4	EA	CRIMP, TERMINAL WIRE-TO-WIRE FEMALE 2 MM PITCH 28-24 AWG
5	73.2326.0123	0.7	FT	WIRE, 26 AWG, 4 COND, 300V 200C TEF UL1180 (BLK-BRN-RED-ORN)

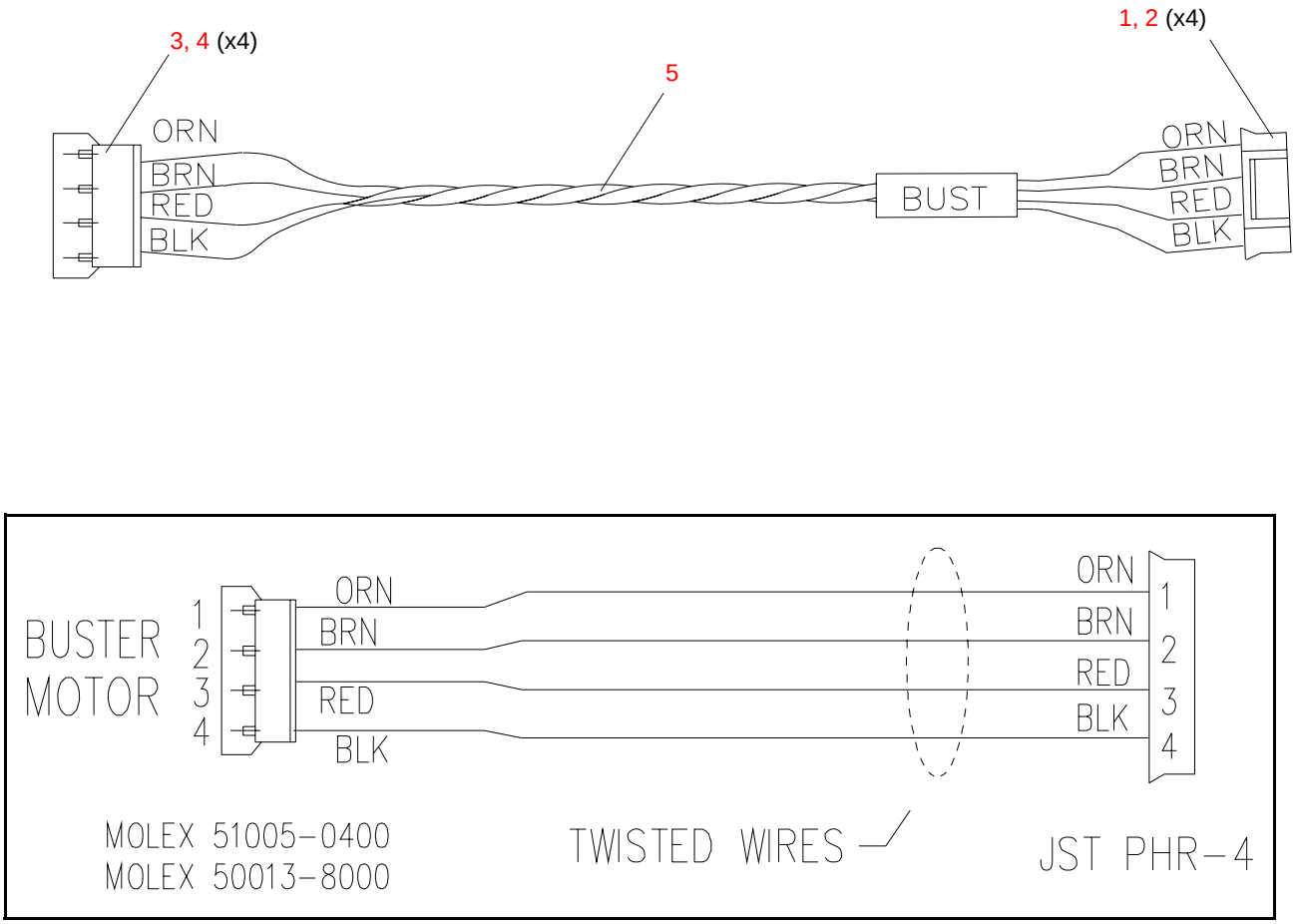


Figure 3-62: Internal-Lens Split Motor Cable Assembly

Transfer Fans Cable Assembly

25.9686.0209 Rev B

Refer to Figure 3-63

No.	Item	Qty.	UM.	Description
1	52.6523.0004	1	EA	CONN, HOUSING 4POS RECEPTACLE
2	52.6524.0002	2	EA	CONN, HOUSING 2POS RECEPTACLE
3	52.8347.0001	4	EA	CONTACT, 24-30AWG MALE CRIMP
4	52.8346.0001	4	EA	CONTACT, 24-30AWG FEMALE CRIMP
5	73.2324.0200	2.21	FT	WIRE, 26AWG 2COND 300V 200C <BLK-RED> UL1213
6	52.8274.0001	2	EA	CONNECTOR, BUTT SPLICE, 22-18 AWG INSULATED

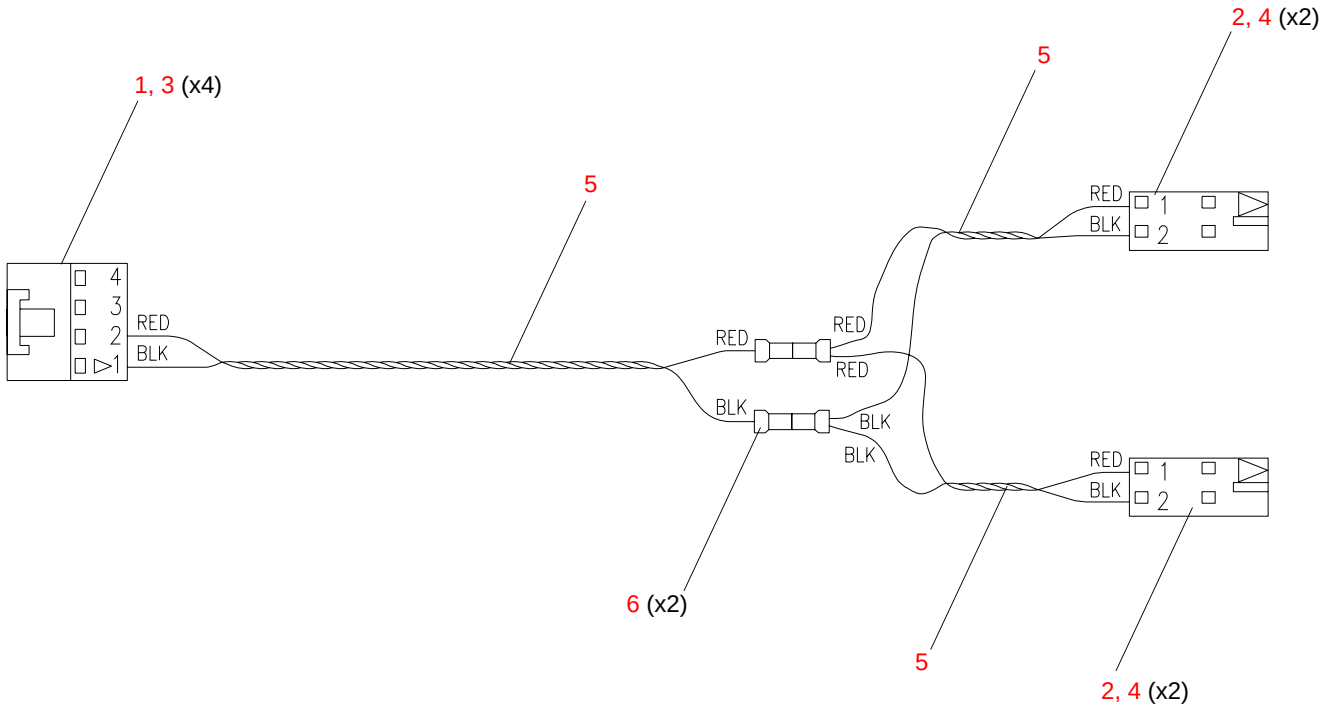


Figure 3-63: Transfer Fans Cable Assembly

Upper Enclosure Fans Cable Assembly

25.9686.0210 Rev 0

Refer to Figure 3-64

No.	Item	Qty.	UM.	Description
1	52.6523.0004	1	EA	CONN, HOUSING 4POS RECEPTACLE
2	52.6524.0002	2	EA	CONN, HOUSING 2POS RECEPTACLE
3	52.8347.0001	4	EA	CONTACT, 24-30AWG MALE CRIMP
4	52.8346.0001	4	EA	CONTACT, 24-30AWG FEMALE CRIMP
5	73.5126.0002	6.41	FT	WIRE, 26AWG 2COND 300V 80C <BLK-RED>

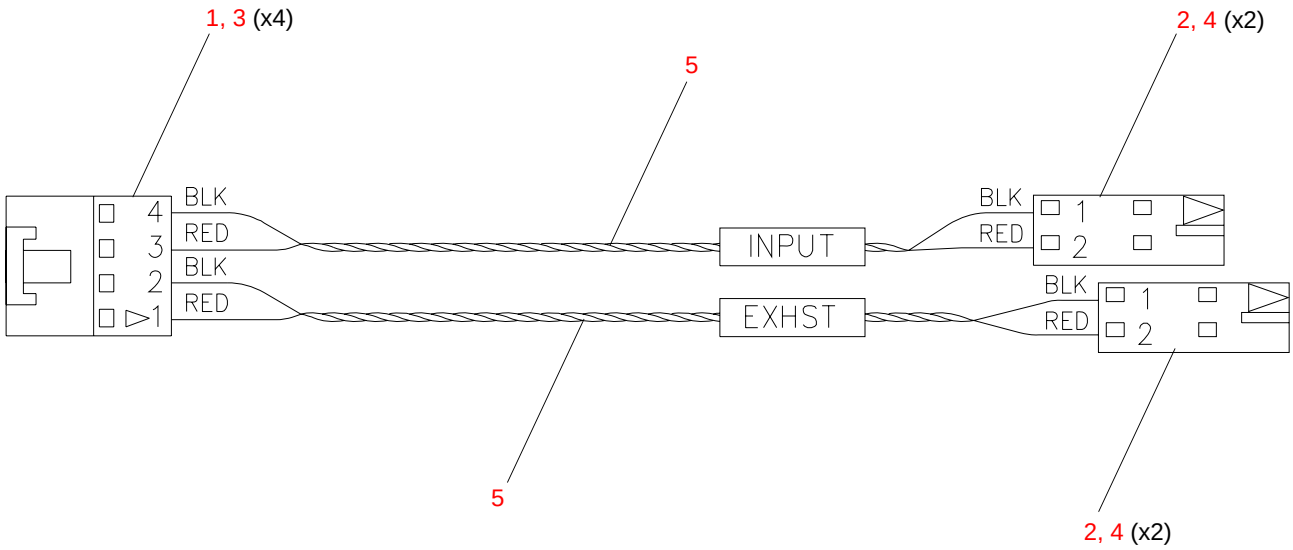


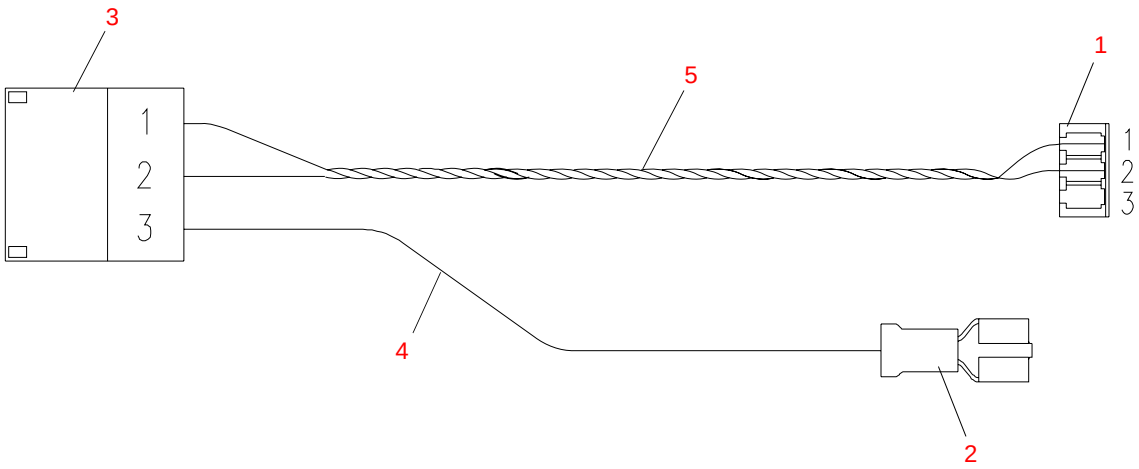
Figure 3-64: Upper Enclosure Fans Cable Assembly

Yoke Fan and Relay Cable Assembly

25.9678.0681 Rev C

Refer to Figure 3-65

No.	Item	Qty.	UM.	Description
1	52.6423.0003	1	EA	HOUSING, 3 POS MT RECEPT, 2MM
2	52.8230.0003	1	EA	RECEPT, 1/4" FASTON 22-18AWG
3	52.6396.3103	1	EA	RECEPT, 3 POS MTA100 W/ POL TAB BLU CLSD END
4	73.3526.0002	1.25	FT	WIRE, 26AWG 300V 105C PVC RED
5	73.5126.0002	1.50	FT	WIRE, 26AWG 2 COND 300V 80C <RED-BLK>



WIRE CHART				
FROM	CONN ITEM NO.	TO	CONN ITEM NO.	WIRE COLOR
PIN 1	3	PIN 1	1	RED
PIN 2	3	PIN 2	1	BLK
PIN 3	3	FASTON	2	RED

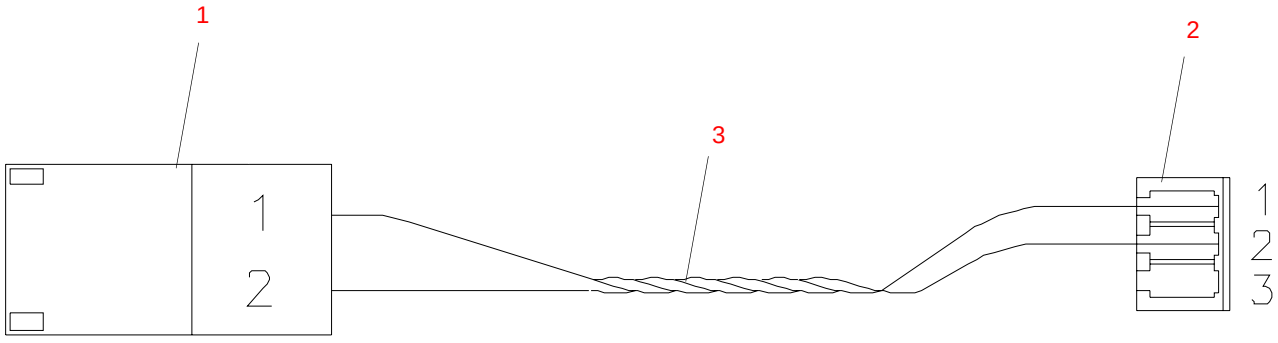
Figure 3-65: Yoke Fan and Relay Cable Assembly

Yoke Fan Cable Assembly

25.9678.0758 Rev A

Refer to Figure 3-66

No.	Item	Qty.	UM.	Description
1	52.6396.3102	1	EA	RECEPT, 2POS MTA100 W/POL TAB BLUE CLSD END
2	52.6423.0003	1	EA	HOUSING, 3POS MT RECEPT, 2MM CT 28-26 AWG
3	73.5126.0002	0.5	FT	WIRE, 26AWG 2COND 300V 80C <BLK-RED> UL1061, 19STRND



WIRE CHART				
FROM	CONN ITEM NO.	TO	CONN ITEM NO.	WIRE COLOR
PIN 1	2	PIN 1	1	RED
PIN 2	2	PIN 2	1	BLK

Figure 3-66: Yoke Fan Cable Assembly

OT Switch to Backcap Interlok Cable Assembly

25.9686.0201 Rev A

Refer to Figure 3-67

No.	Item	Qty.	UM.	Description
1	52.8230.0003	1	EA	RECEPT, FASTON 22-18AWG 1/4"
2	52.8414.0001	1	EA	RECEPT, FASTON, .187 SERIES 24-20 AWG UNISUL
3	73.7089.0000	3.00	FT	WIRE. 22AWG 300V 200C TEF BLK UL1180

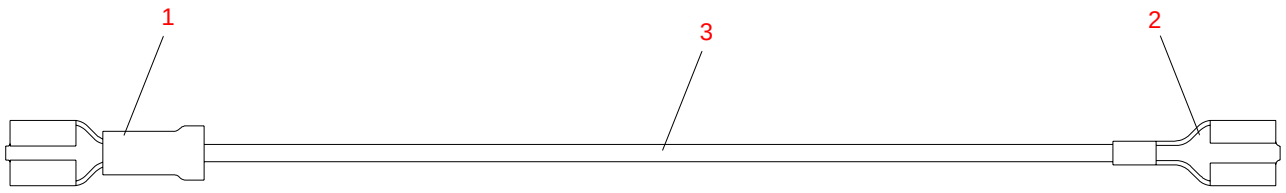


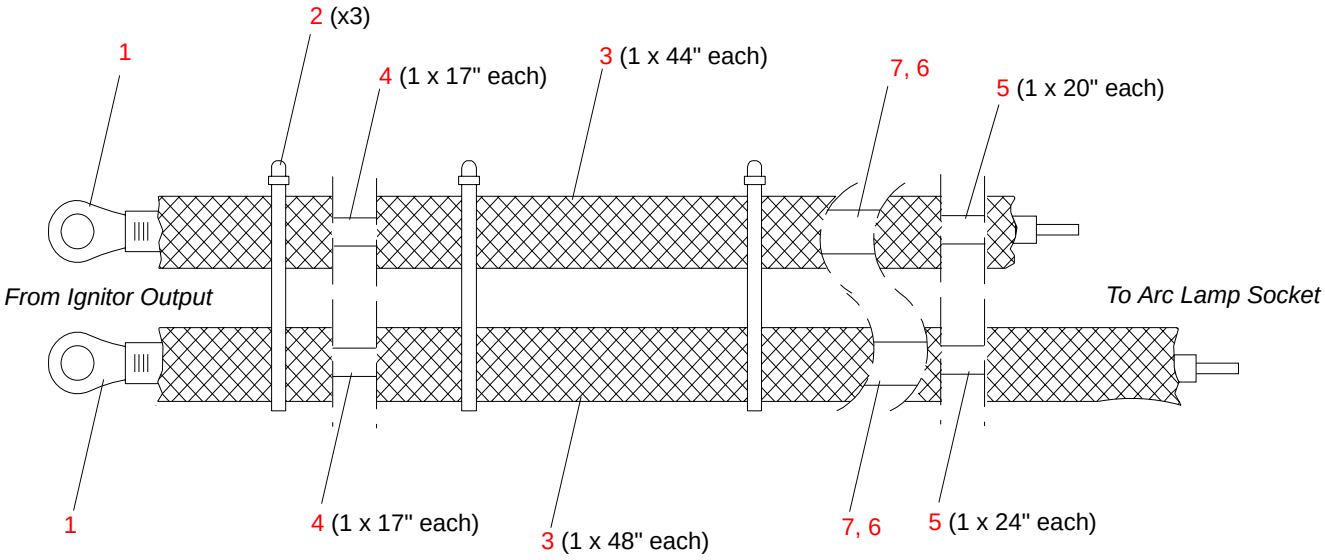
Figure 3-67: OT Switch to Backcap Interlok Cable Assembly

Ignitor to Lamp Socket Cable Assembly

25.9678.0789 Rev B

Refer to Figure 3-68.

No.	Item	Qty.	UM.	Description
1	52.8231.0005	2	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
2	55.2186.0001	3	EA	CABLE TIE, .10"WD 4.00"LG SMALL
3	55.2260.0133	6.83	FT	SLEEVING, FIBERGLASS .133" ID
4	73.7100.0001	2.84	FT	WIRE, 16AWG 20KVDC 41/32 STRD 200C SILICONE 2 X 17"
5	73.7190.0001	3.66	FT	WIRE, 250 DEG C
6	55.2200.0003	.33	FT	HEAT SHRINK TUBING 2 X 2"
7	52.8274.1614	2	EA	CONN, BUTT SPLICE, 16-14 PIDG



Note: Some material removed to show wire detail.

Figure 3-68: Ignitor to Lamp Socket Cable Assembly

Chassis to Yoke Ground Cable Assembly

25.9661.1520 Rev C

Refer to Figure 3-69

No.	Item	Qty.	UM.	Description
1	52.8250.0006	2	EA	TERM, RING #8, 10AWG
2	73.7089.0504	15.17	FT	WIRE, 22AWG 300V 200C TEF GRN/YEL UL1180

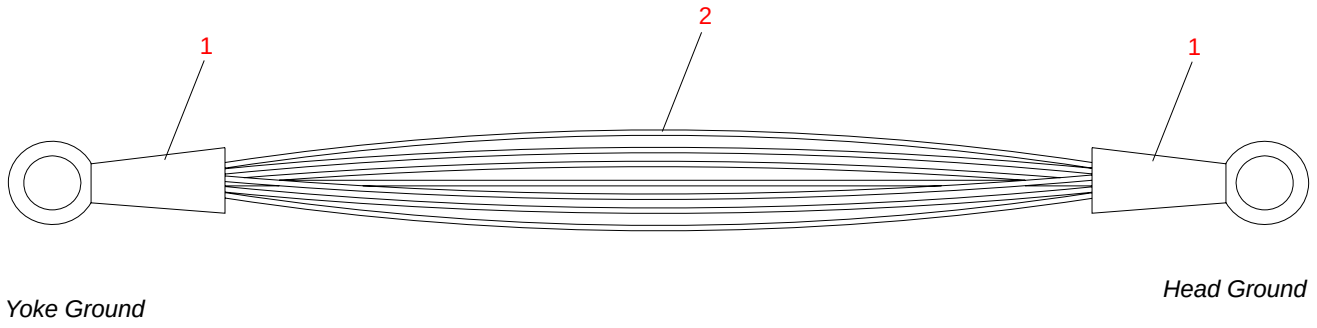


Figure 3-69: Chassis to Yoke Ground Cable Assembly

Zoom Motor Cable Assembly

23.9686.0208 Rev 0

Refer to Figure 3-70

No.	Item	Qty.	UM.	Description
1	25.9686.0206	1	EA	CABLE ASSY, ZOOM MOTOR
2	24.9678.5916	1	EA	PCB ASSY, ZOOM INTERCONNECT

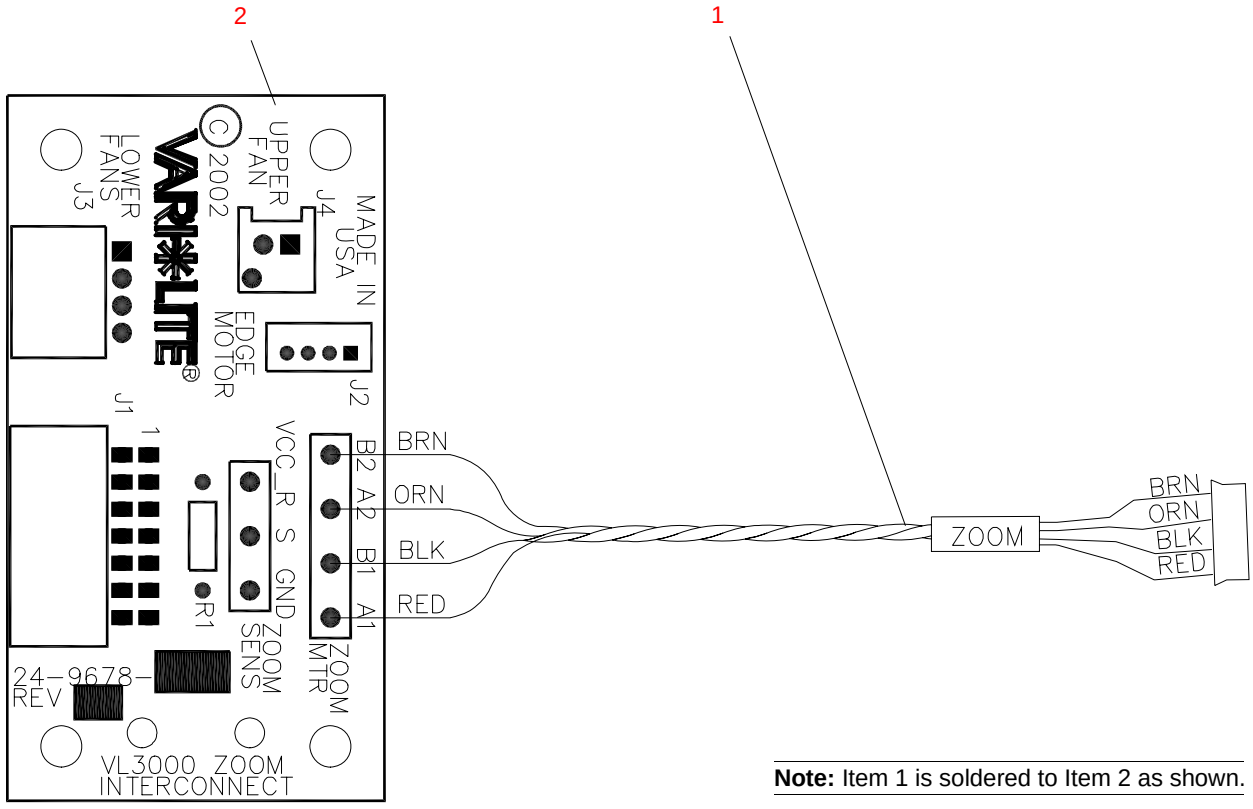


Figure 3-70: Zoom Motor Cable Assembly

Zoom Motor Cable

25.9686.0206 Rev 0

Refer to Figure 3-71

No.	Item	Qty.	UM.	Description
1	52.6662.0006	1	EA	HOUSING, 6 POS, 125/2A 2.00 MM PITCH
2	52.6467.0024	4	EA	CONTACT, 24-30 AWG FEMALE CRIMP 2.00 MM PITCH
3	73.2326.0123	0.75	FT	WIRE, 26 AWG, 4 COND, 300V 200C TEF UL1180 (BLK-BRN-RED-ORN)

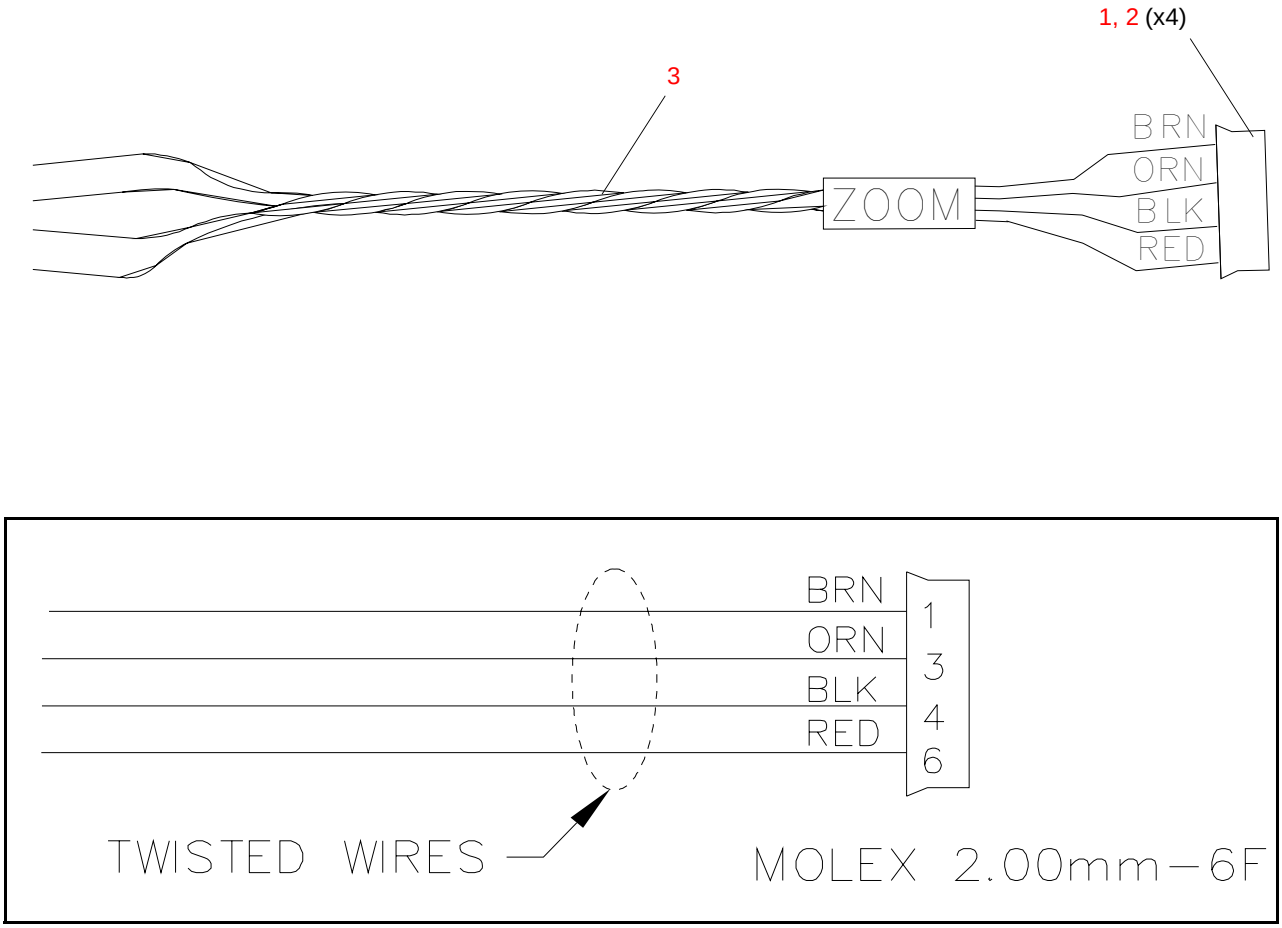


Figure 3-71: Transfer Fans Cable Assembly

AC Input Pigtail Cable Assembly

25.9678.0810 Rev B

Refer to Figure 3-72

No.	Item	Qty.	UM.	Description
1	52.6274.2313	1	EA	STRAIN RELIEF, SKINTOP FLEX TYPE PG13 BLK
2	52.6401.2321	1	EA	CONN, PLUG "CE MARKED" 20A 250V TWIST-LOCK MALE LINE, 3-WIRE
3	52.8231.0005	1	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
4	52.8298.1160	2	EA	FERRULE, WIRE 1X16 AWG L2=8MM BLACK
5	55.2268.0187	0.92	FT	HEATSHRINK, 3/16" CLEAR KYNAR VDE UL 600V 150DEG C
6	55.2268.0500	0.13	FT	HEATSHRINK, 1/2" CLEAR KYNAR VDE UL 600V 150DEG C
7	73.9636.0153	4.00	FT	CORDAGE, 1.5/3 750V 60C EURO BLK HD-22 11MMOD

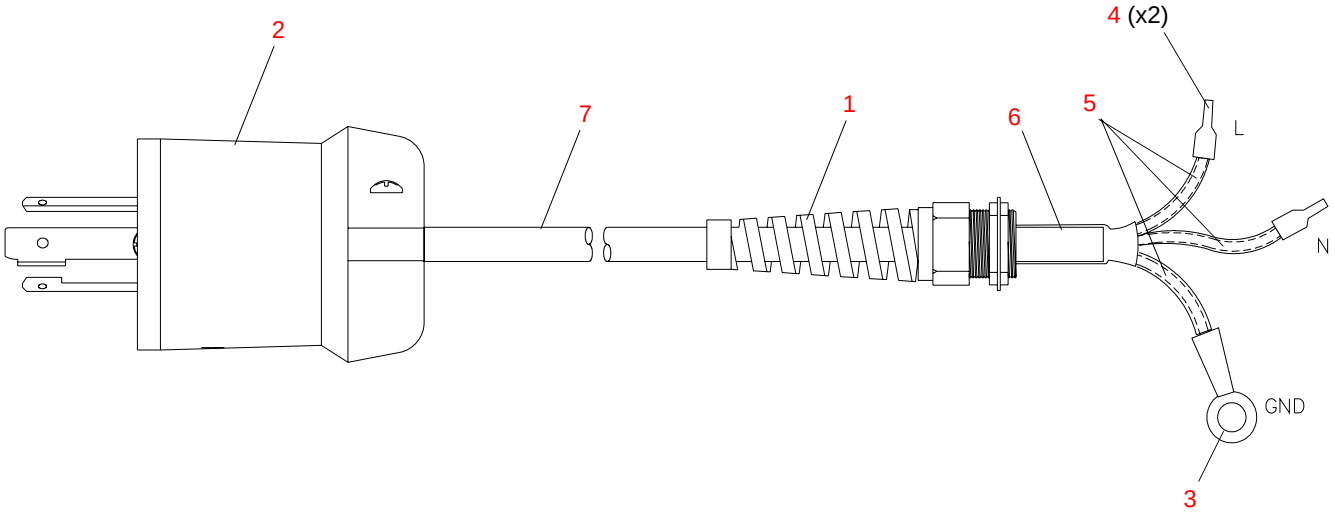


Figure 3-72: AC Input Pigtail Cable Assembly

EMI Filter to Power Switch Cable Assembly

25.9678.0811 Rev C

Refer to Figure 3-73

No.	Item	Qty.	UM.	Description
1	52.8313.0001	2	EA	RCPT, FASTON 1/4" 18-14 AWG FLAG DBL CRP (REEL)
2	52.8392.0001	2	EA	RECP, FASTON .187"X0.32" 16-14 AWG FLAG DBL CRP
3	55.2186.0001	1	EA	CABLE TIE, 0.10" WD 4.00" LG SMALL
4	73.6016.0009	0.83	FT	WIRE, 16AWG 600V 105C PVC WHT UL1015
5	73.6016.0010	0.83	FT	WIRE, 16AWG 600V 105C PVC BLK UL1015

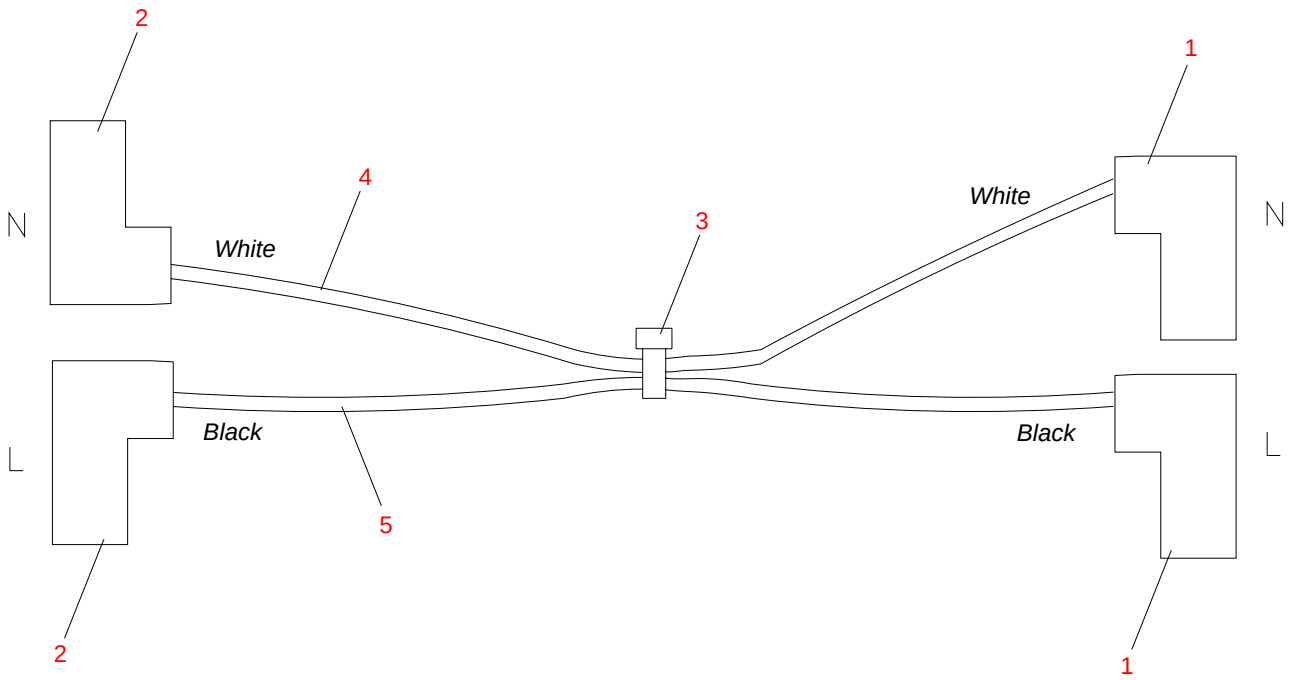


Figure 3-73: EMI Filter to Power Switch Cable Assembly

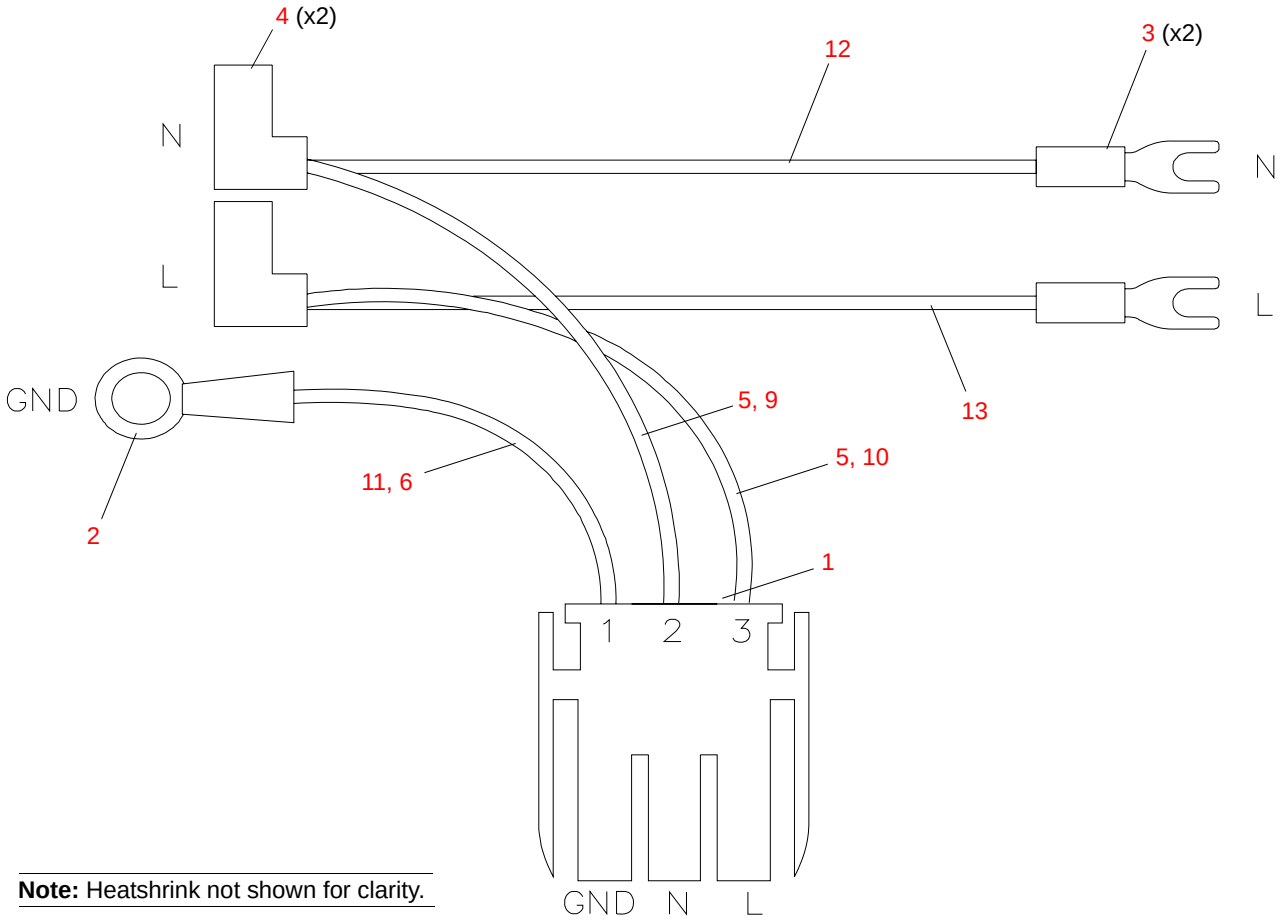
AC Input Splitter Cable Assembly

25.9678.0812 Rev E

Refer to Figure 3-74

No.	Item	Qty.	UM.	Description
1	52.6231.0001	1	EA	PLUG HOUSING, MNLOK PLUG 3 POS
2	52.8231.0005	1	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
3	52.8231.0008	2	EA	TERM, SPADE #6 RED 22-16 AWG INSERT
4	52.8392.0001	2	EA	RECP, FASTON .187" X 0.32" 16-14 AWG FLAG DBL CRP
5	52.8270.0001	2	EA	CONTACT PIN, 20-14 AWG MNLOK (REEL)
6	52.8314.0001	1	EA	PIN, GND 20-14 AWG MNLOK .060"- .130"INS DIA
7	55.2186.0001	3	EA	CABLE TIE, .10" WD, 4.00" LG, SMALL
8	55.6699.0003	1.50	FT	SLEEVING, 1/2" NOM. DIA. POLY EXP BRAIDED
9	73.6016.0009	1.83	FT	WIRE, 16 AWG 600V 105C PVC WHT UL1015
10	73.6016.0010	1.83	FT	WIRE, 16 AWG 600V 105C PVC BLK UL1015
11	73.6016.0504	2.08	FT	WIRE, 16 AWG 600V 105C PVC GRN/YEL UL1015
12	73.6018.0009	1.00	FT	WIRE, 18 AWG 600V 105C PVC WHT UL1015
13	73.6018.0010	1.00	FT	WIRE, 18 AWG 600V 105C PVC BLK UL1015

AC Input Splitter Cable Assembly (continued)



Note: Heatshrink not shown for clarity.

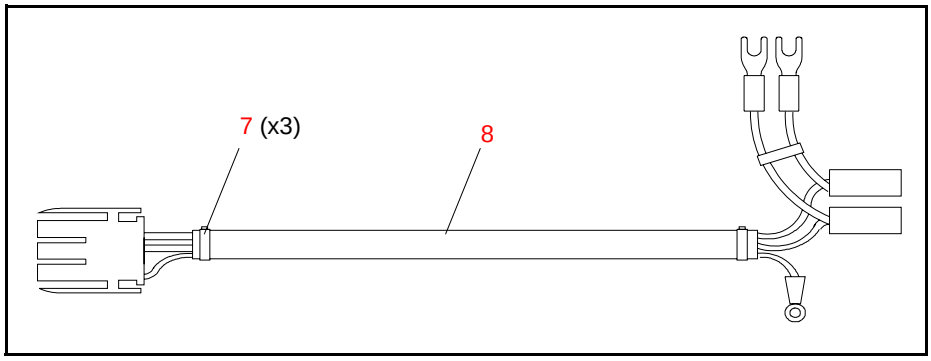


Figure 3-74: AC Input Splitter Cable Assembly

Data I/O Link Cable Assembly

25.9678.0813 Rev A

Refer to Figure 3-75

No.	Item	Qty.	UM.	Description
1	52.6396.2904	1	EA	RECEPT, 4 POS MTA100 W/POL TAB RED CLSD END
2	52.6396.2905	1	EA	RECEPT, 5 POS MTA100 W/POL TAB RED CLSD END
3	73.5122.0259	2.17	FT	CBL, 22AWG STRND 4COND PVC INSUL

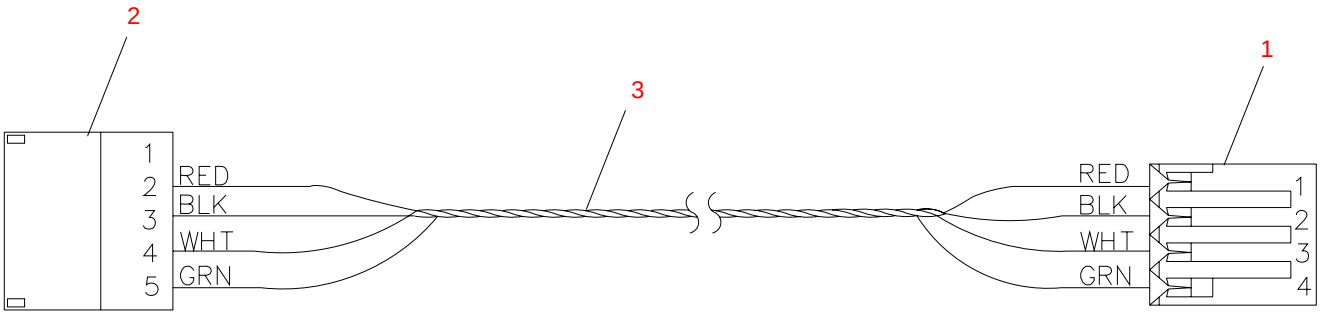


Figure 3-75: Data I/O Link Cable Assembly

Display Cable Assembly

25.9678.1825 Rev C

Refer to Figure 3-76

No.	Item	Qty.	UM.	Description
1	52.6396.2406	2	EA	RECEPT, 6 POS MTA100 W/POL TAB WHT CLSD END
2	73.5116.0123	1.02	FT	WIRE, 24AWG 4COND TW <BLK-BRN-RED-ORN>
3	55.2186.0001	4	EA	CABLE TIE, .10" WD 4" LG SMALL
4	73.7130.0004	0.958	FT	WIRE, TUBULAR BRAID, 1/8" X 23" LG
5	73.6224.0005	0.208	FT	WIRE, 24AWG 600V 200C TFE GRN 2.5" LG
6	55.6699.0009	2.08	FT	SLEEVING, 3/8" NOM DIA POLY EXP
7	55.6621.0001	1	EA	SLEEVE, NYLON THIN WALL #6 SCR 1.0" LG

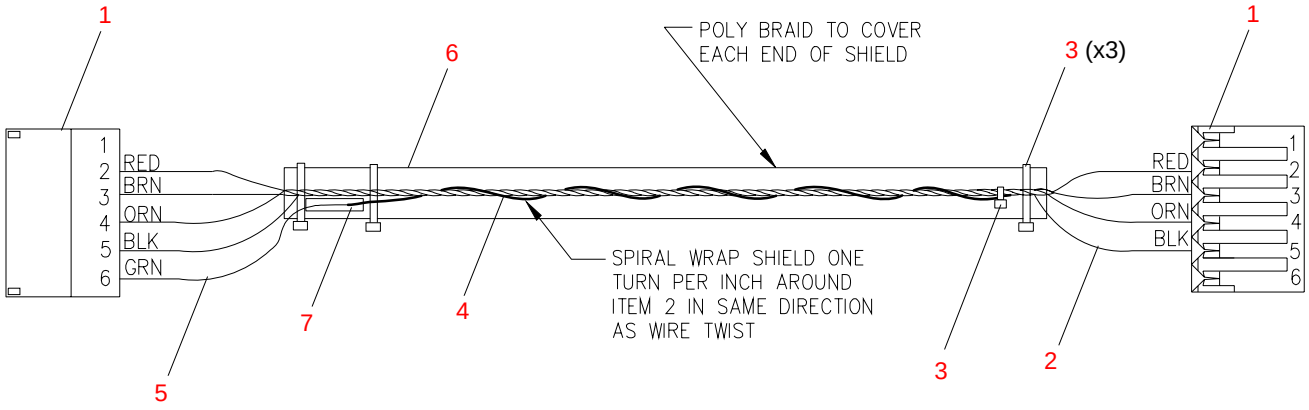


Figure 3-76: Display Cable Assembly

Ballast to Controller Cable Assembly

25.9678.0816 Rev A

Refer to Figure 3-77

No.	Item	Qty.	UM.	Description
1	52.6396.3002	1	EA	RECEPT, 2 POS MTA100 W/POL TAB WHT CLSD END
2	52.6396.3005	1	EA	RECEPT, 5 POS MTA100 W/POL TAB WHT CLSD END
3	52.6396.3008	1	EA	RECEPT, 8 POS MTA100 W/POL TAB WHT CLSD END
4	73.5124.1289	3.67	FT	WIRE, 24AWG 5COND <BLK-BRN-RED-GRN-WHT>

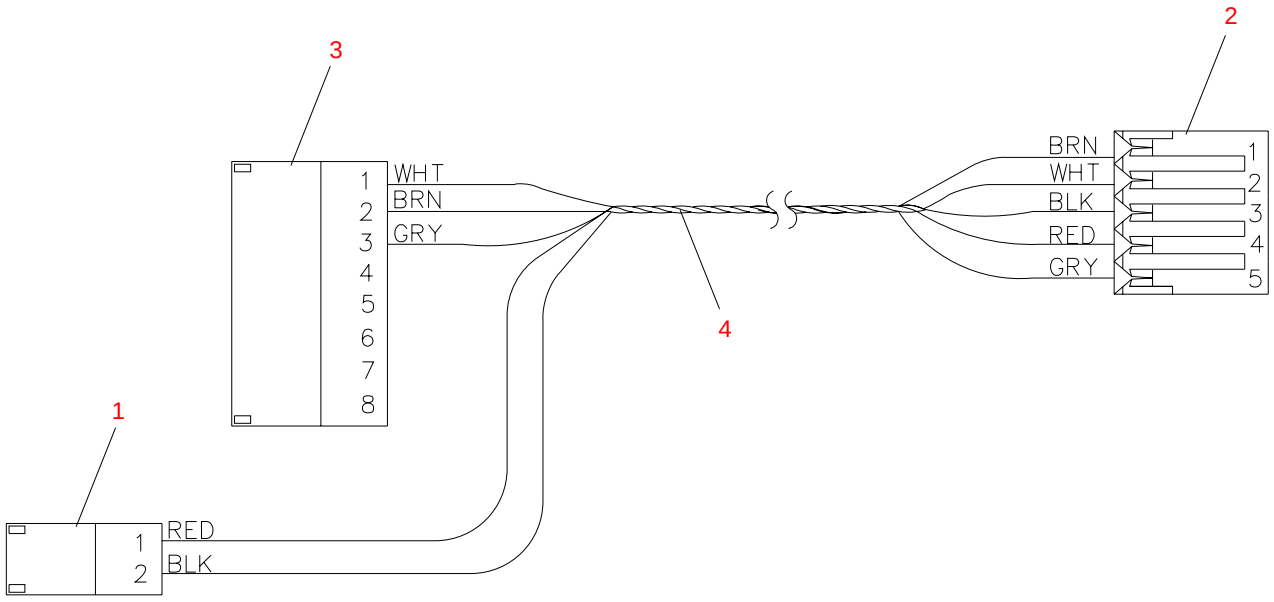


Figure 3-77: Ballast to Controller Cable Assembly

DC Output Cable Assembly

25.9678.0821 Rev E

Refer to Figure 3-78

No.	Item	Qty.	UM.	Description
1	52.6464.0002	1	EA	CONN, HOUSING, SL-156 2 POS
2	52.6464.0003	1	EA	CONN, HOUSING, SL-156 3 POS
3	52.8231.0004	2	EA	TERM, RING #6 BLUE 12-10 AWG INSRT
4	52.8323.0002	4	EA	CONTACT, CRIMP, 18-22 AWG SL-156 (**not shown**)
5	52.8274.1614	2	EA	CONN BUTT SPLICE 16-14 BLUE .150" OD MAX
6	55.2186.0001	4	EA	CABLE TIE, .01" x 4.00" SMALL
7	55.6699.0003	2.08	FT	SLEEVING, 1/2" NOM DIA POLY EXP BRAID
8	73.3518.0002	1.58	FT	WIRE, 18 AWG 300V 105C PVC RED
9	73.3518.0010	1.58	FT	WIRE, 18 AWG 300V 105C PVC BLK
10	73.7060.0001	2.08	FT	WIRE, 18 AWG HI VOLT RED YOKE LMP
11	73.7060.0002	2.08	FT	WIRE, 18 AWG HI VOLT BLK YOKE LMP

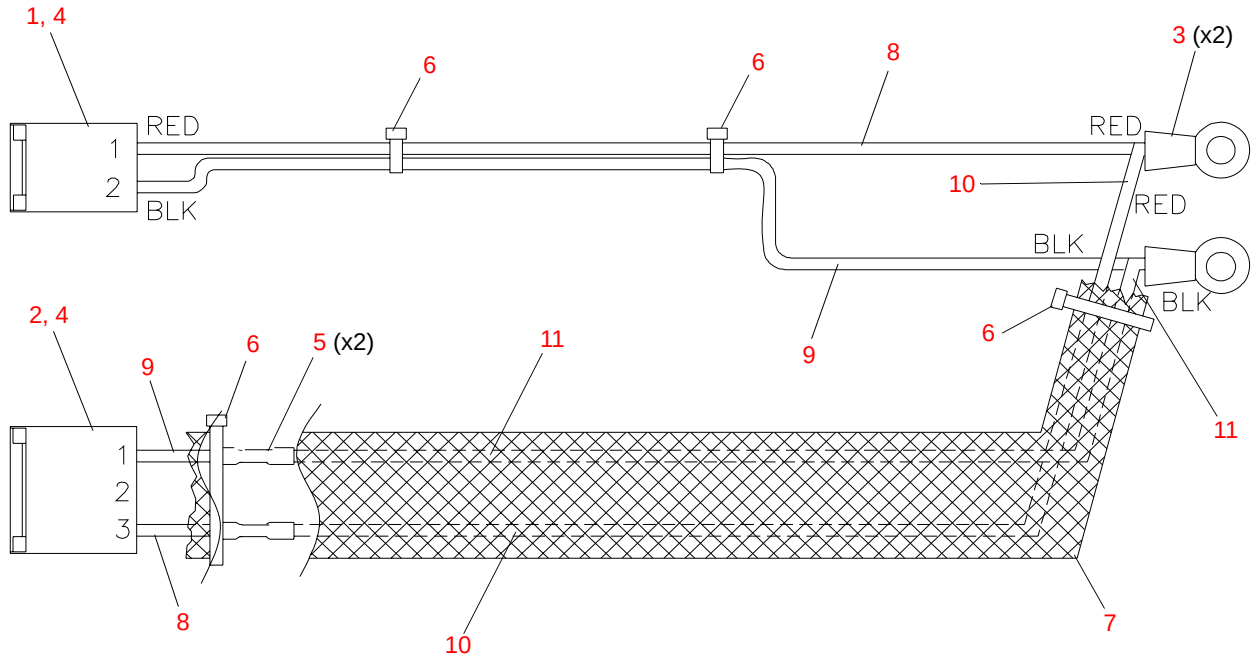


Figure 3-78: DC Output Cable Assembly

Pan/Tilt Control Cable Assembly

25.9678.0818 Rev B

Refer to Figure 3-79 and Figure 3-80

No.	Item	Qty.	UM.	Description
1	52.6610.0008	1	EA	HOUSING, 20POS UNLOADED DBL ROW
2	52.6224.1020	1	EA	COVER, FRONT 20POS MT LATCHING
3	52.6224.2020	1	EA	COVER, BACK 20POS MT
4	52.6524.0005	2	EA	CONN, HOUSING 5POS RECEPTACLE
5	52.6588.0007	2	EA	HOUSING, 7POS XH 250V/3A 2.5MMPITCH
6	52.7007.0001	6	EA	CONTACT, 28-22AWG PHOSPHOR BRONZE TIN-PLT
7	52.8346.0001	10	EA	CONTACT, 24-30AWG FEMALE CRIMP
8	55.2186.0001	6	EA	CABLE TIE, .10"WD 4.00"LG SMALL
9	73.5119.0246	6.08	FT	WIRE, 24AWG 3COND TW 600V 200C <RED-YEL-BLU>
10	73.5124.1289	6.17	FT	WIRE, 24AWG 5COND 300V 80C (BLK-BRN-RED-GRY-WHT)
11	52.8351.0004	16	EA	CONTACT, 26-22 AWG RECP MTE (REEL) (NOT SHOWN)

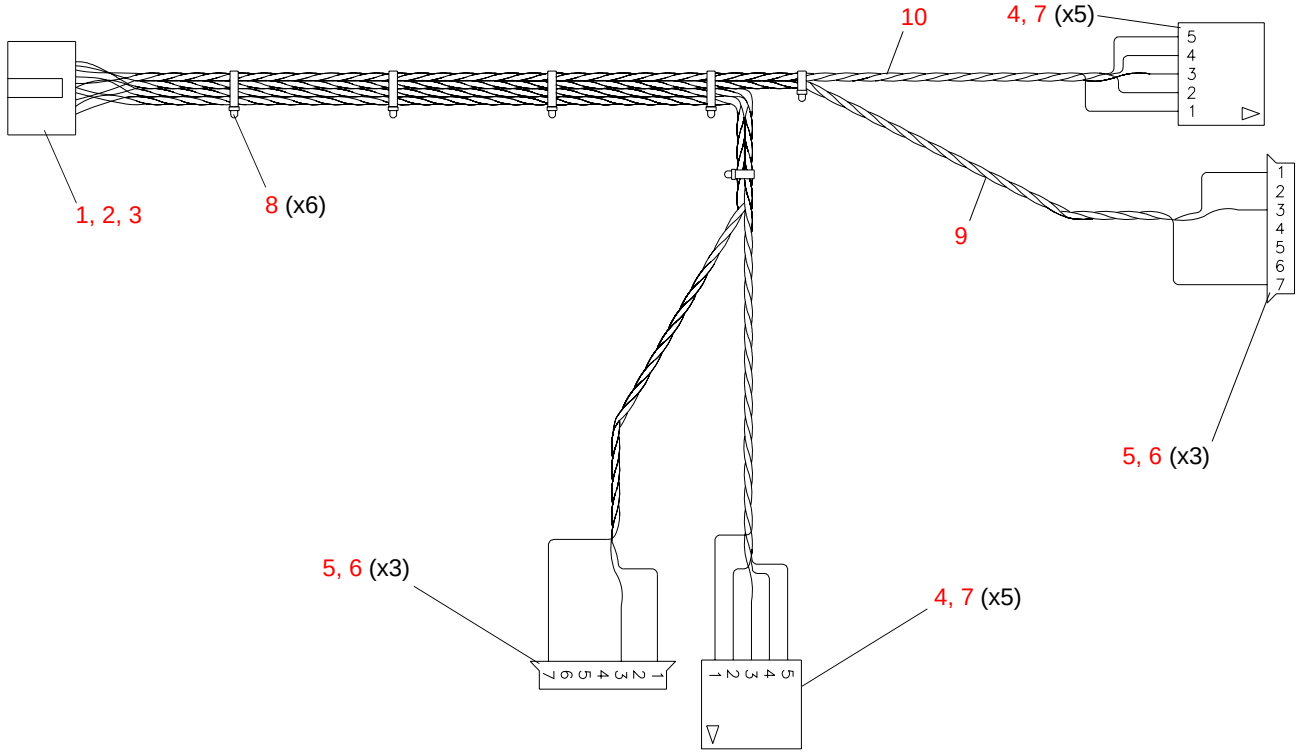


Figure 3-79: Pan/Tilt Control Cable Assembly

Pan/Tilt Control Cable Assembly (continued)

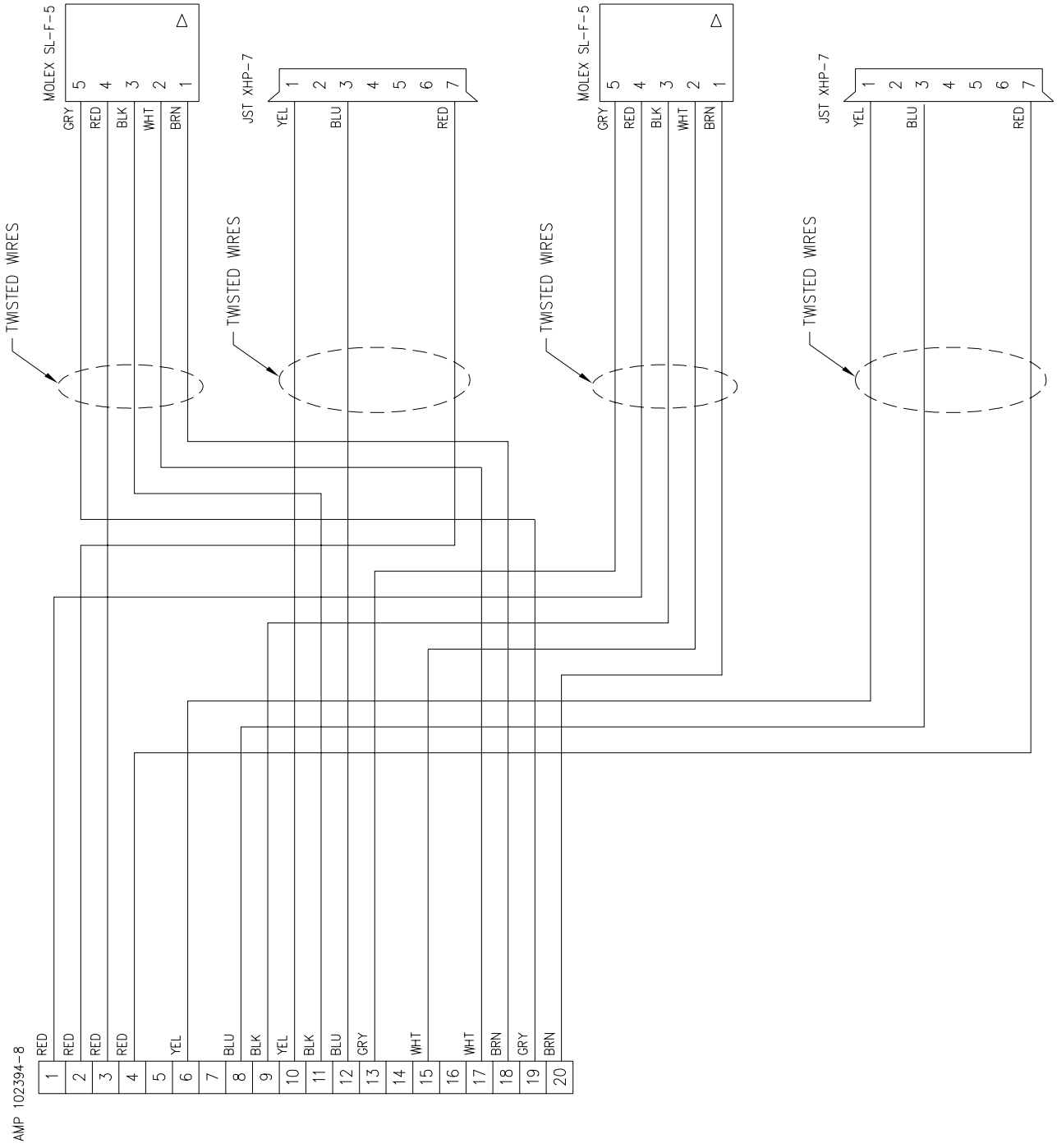


Figure 3-80: Pan/Tilt Control Cable Assembly Wiring / Pin Out

Lamp Supply to Relay Cable Assembly

25.9678.0829 Rev A

Refer to Figure 3-81

No.	Item	Qty.	UM.	Description
1	52.8312.0001	4	EA	RECP, FASTON 1/4" 18-14 AWG INSULATED VO
2	55.2186.0001	3	EA	CABLE TIE, .10"WD 4.00"LG SMALL
3	55.6699.0003	3.19	FT	SLEEVING, 1/2" NOM. DIA POLY EXP BRAIDED
4	73.7089.0000	34.41	FT	WIRE, 22AWG BLK 300V TEFLON STRANDED
5	73.7089.0009	34.41	FT	WIRE, 22AWG WHT 300V TEFLON STRANDED
6	73.3516.0504	.58	FT	WIRE, 16 AWG 300V 105C PVC GRN/YEL UL1569
7	52.8245.0001	1	EA	TERM, RING, #10 16-14 AWG REEL PIDG
8	73.7130.0005	2.08	FT	WIRE, TUBULAR BRAID, 7/16" (NOT SHOWN)
9	55.2183.0001	.33	FT	HEATSHRINK 1/2" BLACK (NOT SHOWN)

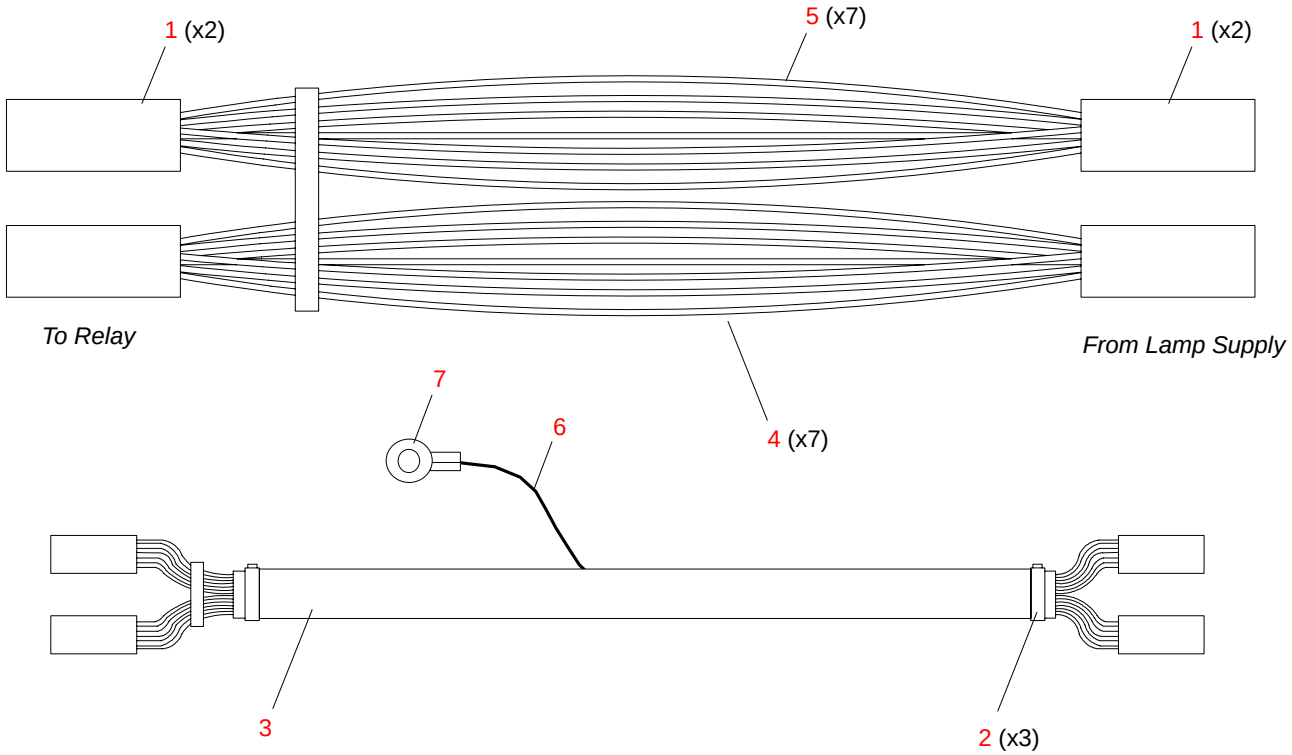


Figure 3-81: Lamp Supply to Relay Cable Assembly

Notes

APPENDIX A.

Technical Bulletins and Notices

Product Technical Bulletins and Notices

The following table identifies the current technical bulletins and notices associated with the VL3500™ Wash and VL3500™ Wash FX Luminaires. These improvements have been incorporated into this manual (where applicable) and are available on the Vari-Lite web site at http://www.vari-lite.com.

Table A-1: Vari-Lite VL3500™ Wash / VL3500™ Wash FX Technical Notices

Technical Notice	Description	Model(s)
TN-248	Specified and Approved Lamps for use in VARI✻LITE Luminaires	All
TN-264	Split Lens Rail Change	VL3500 Wash
TN-274	Pack-up Cues for Shipping	VL3500 Wash
TN-275	Lamp Part Number Change	VL3500 Wash
TN-278	Cyan and Yellow Color Wheels - Ordering Information	VL3500 Wash

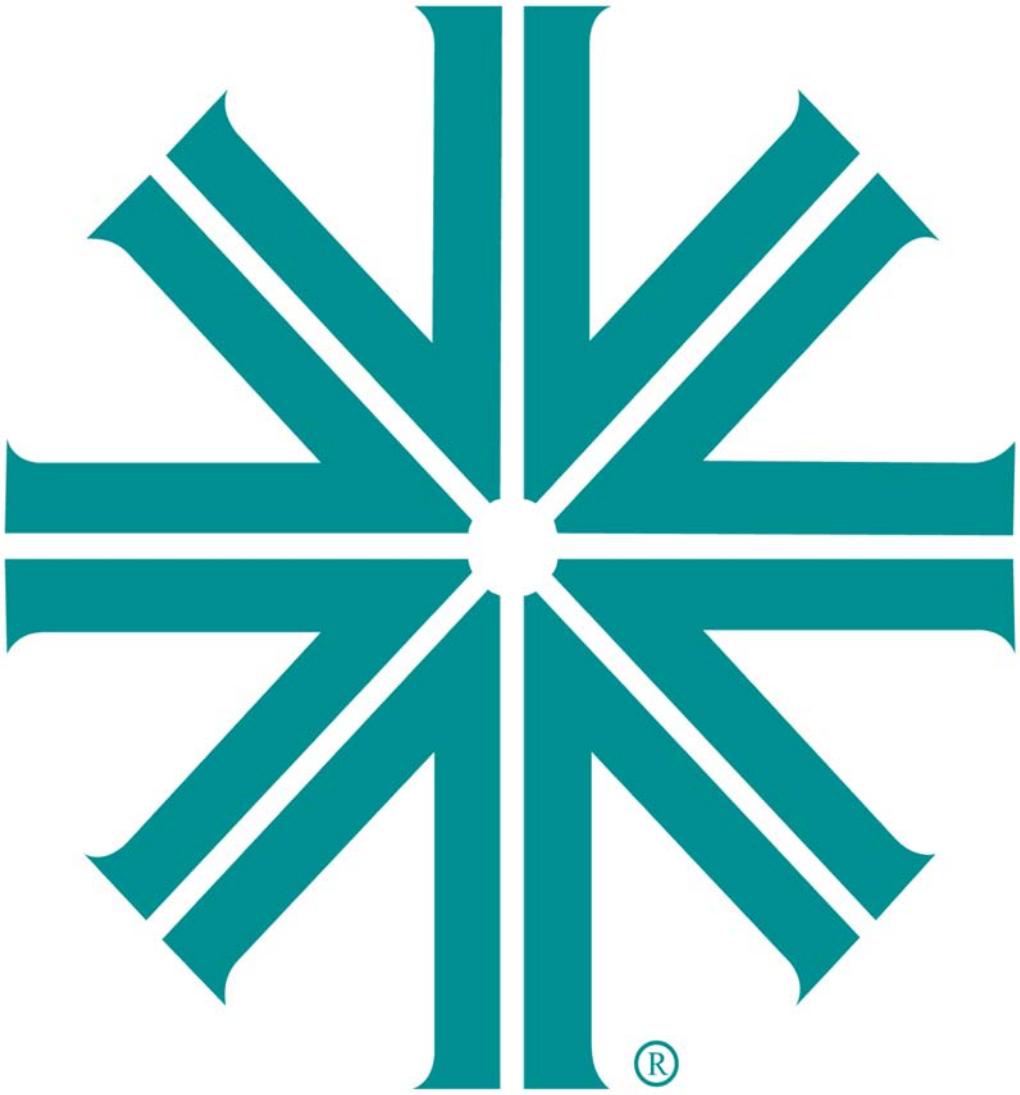
Table A-2: Vari-Lite VL3500™ Wash / VL3500™ Wash FX Technical Bulletins

Technical Bulletin	Description	Model(s)
S3K-015	Cooling System Modification Kit	VL3500 Wash
S3K-016	Internal Lens Travel Stop Installation	VL3500 Wash
S3K-017	VL3500 Wash to VL3500 Wash FX Conversion Procedures	VL3500 Wash

Technical Bulletins, Software Updates, support, and other information is available online at http://www.vari-lite.com (under the Support Tab).

Note: To request access to the password-protected support areas, please contact Vari-Lite Customer Service at 1-877-827-4548 or customerservice@genlytecontrols.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: **19-May-2009 /** Manual Part Number: **02.9686.0010 A**

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