

Manual



Service



VL3500™ Spot Luminaire

02.9678.0018

VARI*LITE®
Express yourself.

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VL1000[™], **VL2000**[™], **VL2201**[™], **VL2202**[™], **VL2400**[™] (and the individual product designations), **VL3000**[™], **VL3500**[™], **Series 1000**[™], **Series 2000**[™], **Series 3000**[™], **DICHTRO*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

A Genlyte Group Company

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Part number: **02.9678.0018 A**

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@genlyte.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 Series 3500 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.

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 60598-1:1997 Luminaire Safety Standard, General Requirements

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

EMC

EN 55022A:1994 Radiated and Conducted Emissions

EN 50082-1:1997 Generic Immunity Standard

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 Spot luminaires require an Osram HMI 1200 W/S metal halide lamp. 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 HMI 1200 W/S metal halide lamp), 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 Ultraviolettscirme 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 HMI 1200 W/S metal halide lamp) 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 lorsqu'il est en marche. Débrancher le courant et attendre que la lampe ait refroidi avant de la remplacer.
3. Les lampes à arc émettent des rayons ultraviolets pouvant causer de graves brûlures sur la peau et une inflammation des yeux. De plus, les lampes à arc fonctionnent sous haute tension à de très hautes températures. Si la lampe se casse, les particules de la lampe cassée peuvent causer blessures et/ou incendie en s'éparpillant.
4. Se protéger les yeux pour remplacer la lampe.
5. Utiliser des appareils de protection appropriés (gants, protection des yeux) pour manier des lampes endommagées.
6. Si la lampe a été touchée avec des mains nues, la nettoyer avec de l'alcool dénaturé et l'essuyer avec un chiffon non-pelucheux avant d'installer ou de brancher le luminaire.
7. Si la lampe a été endommagée ou a reçu une déformation thermique, elle doit être remplacée.

AVERTISSEMENT:

INTERFÉRENCE RF

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

CONSIDÉRATIONS DES CARACTÉRISTIQUES DE LAMPES À ARC

1. Après une interruption de courant ou une baisse importante de voltage, les lampes à arc mettent du temps avant de se rallumer. Dans certains cas, la lampe se rallumera automatiquement après s'être refroidie. Cela dépend de la manière dont le système est réglé pour le statut de mise en marche de la lampe.
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 HMI 1200 W/S metal halide lamp) 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.

安全性に関する注意事項

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

本マニュアルでは、以下の安全マークを使用しています。



注意：製品に損傷を与える危険性があります。



警告：人身事故につながる危険性があります。

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

警告：

火災の発生を防ぐためのヒント

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

警告：

感電を防ぐためのヒント

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

警告：

過度の UV 放射にさらされないためのヒント

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

警告：

人身事故を防ぐためのヒント

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

警告：

RF 干渉

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

アーク灯の特性

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

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Introduction

About This Manual

Note: The VL3500™ Spot 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™ Spot 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 Spot Luminaire	20.9678.0019	Arc
VL3500Q Spot Luminaire	20.9678.0020	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 Series Luminaire User's Manual. This manual is available in both printed and electronic (PDF) formats:

- VL3500 Series Luminaire User's Manual (02.9678.0019)
- For more information regarding DMX512 systems, refer to the DMX512/1990 & AMX 192 Standards publication available from United States Institute for Theatre Technology, Inc. (USITT).

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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 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)

email: customerservice@genlyte.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**
- **Principles of Operation**

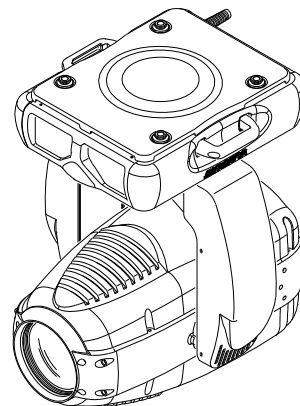


Features

Standard Features

All VL3500 series luminaire have the following standard features:

- CYM color mixing system.
- Variable CTO color correction.
- Six-position, fixed color wheel.
- Full field dimming system.
- Dual blade strobe system.
- Repositional pan/tilt system.
- Control by DMX512 protocol.
- Fan cooled.
- UV/IR glass.



Specific Features

VL3500 Spot Luminaire

- Four independent shutters
- 6:1 zoom optics system with 10° to 60° range.
- Variable beam focus to morph between gobo wheels.
- One, six-position gobo wheel with five rotatable, indexable gobo positions and one open position.
- One, seven-position fixed gobo wheel with six positions and one open position.

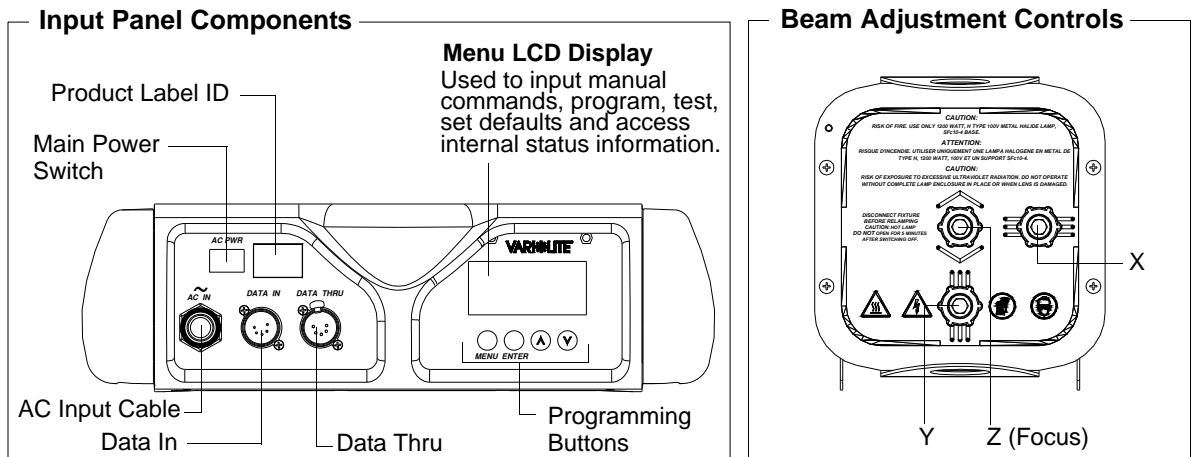
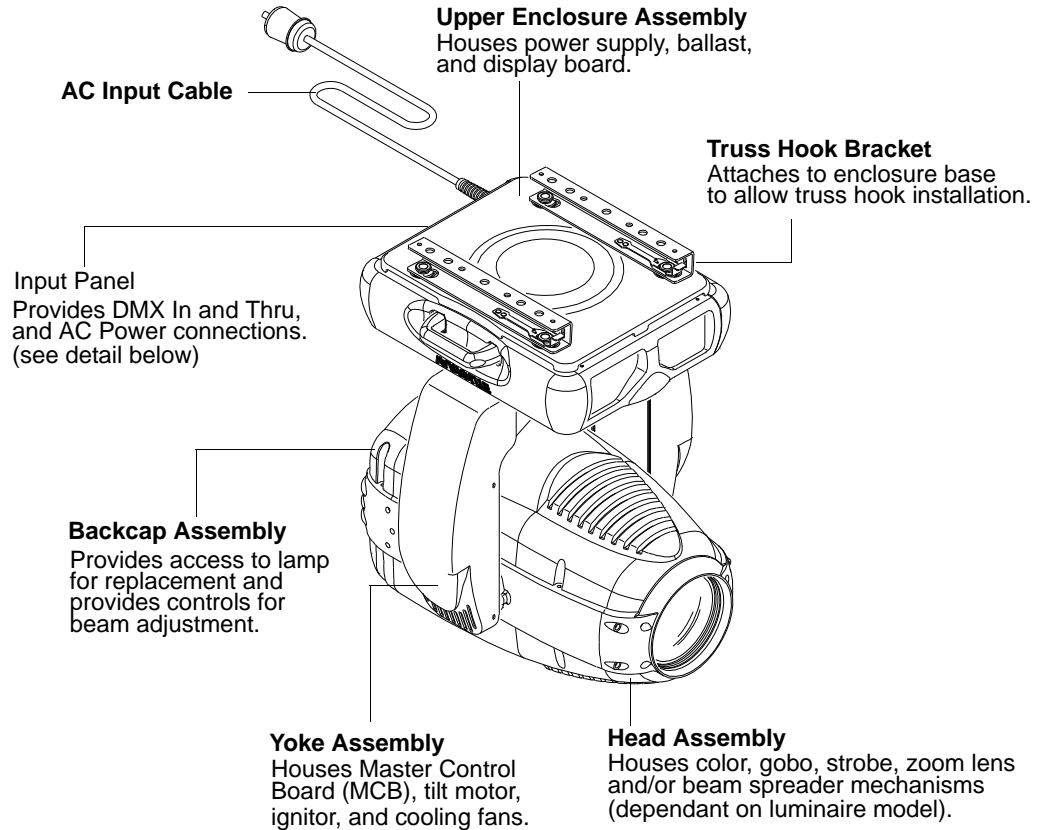
Technical Specifications

For technical specifications, refer to VL3500 Series Luminaire User's Manual (02.9678.0019).

Components

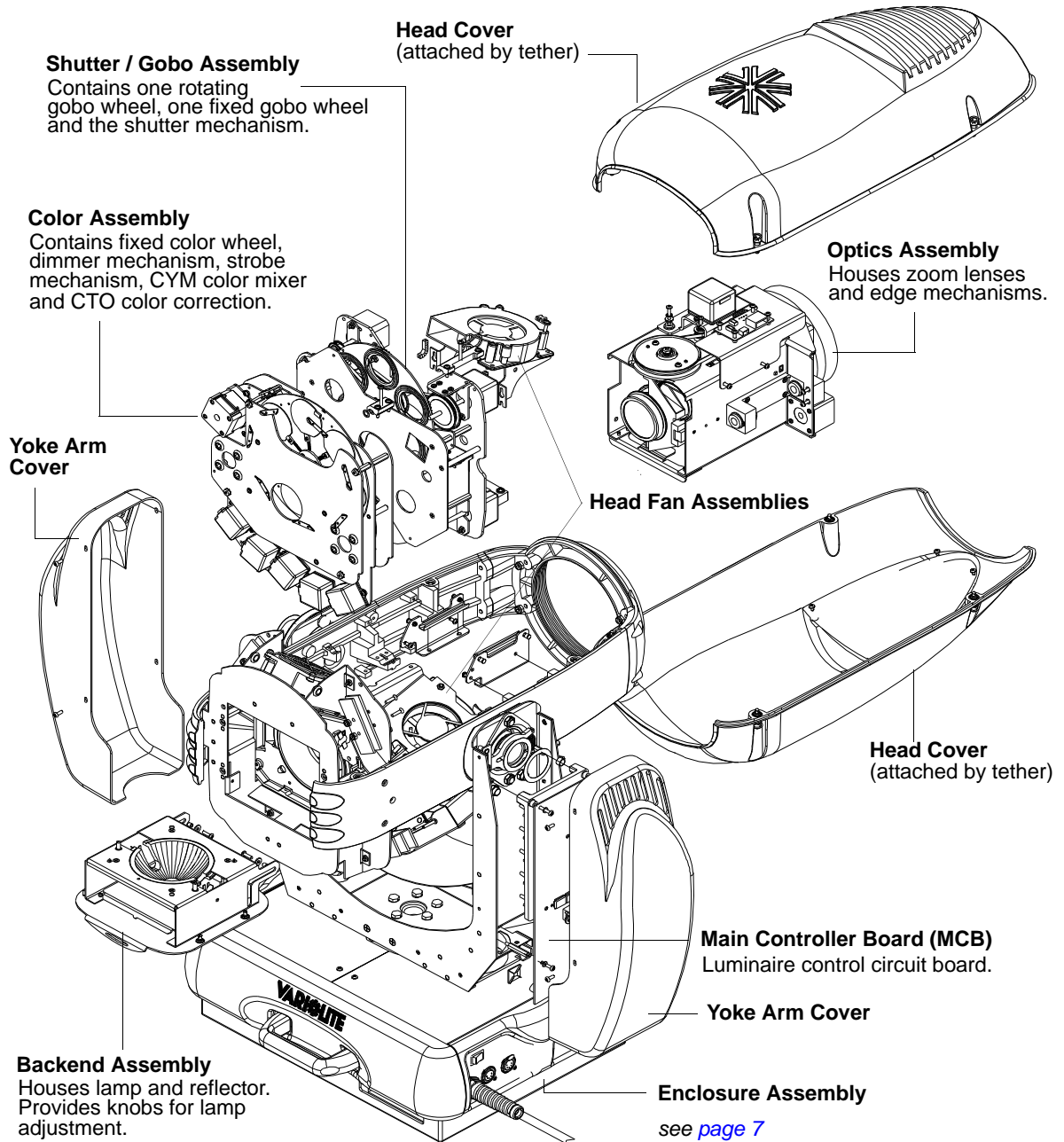
External Luminaire Components

The following illustration shows the external luminaire components and controls.



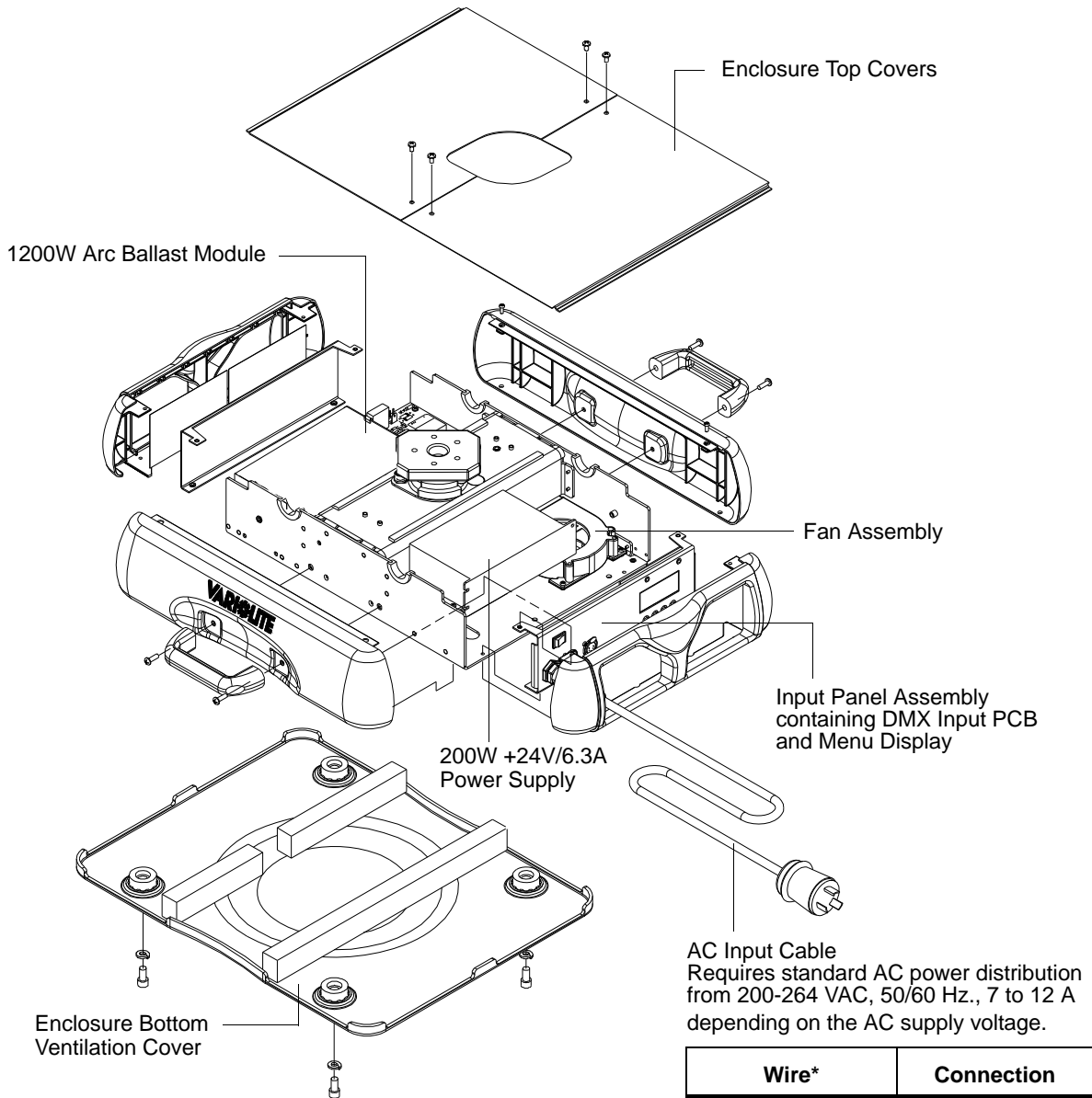
VL3500 Spot Luminaire Head and Yoke Components

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.)



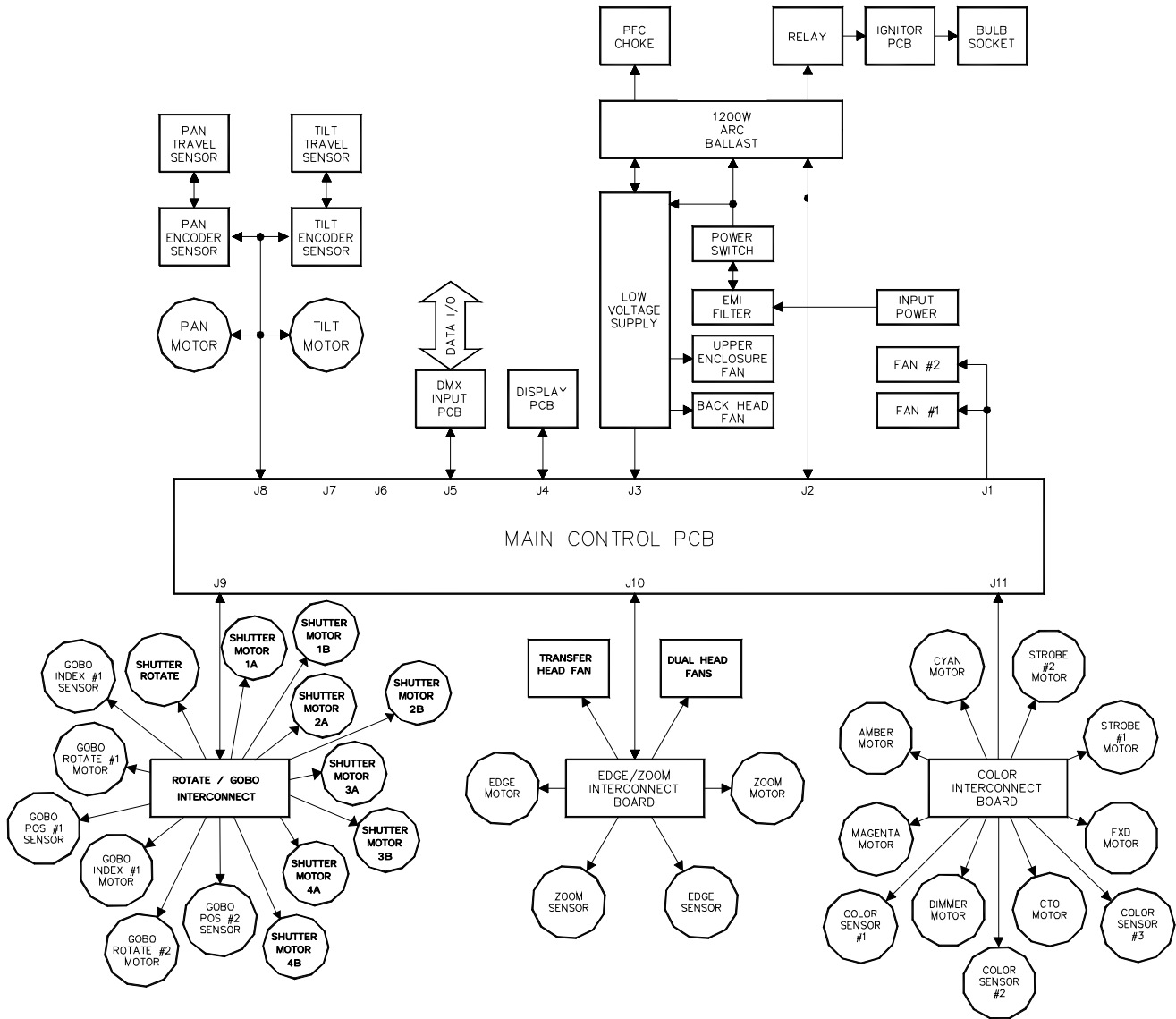
Wire*	Connection
Green/Yellow	AC Ground
Blue	AC Neutral
Brown	AC Line

* International (Harmonized) Standard

Principles of Operation

VL3500 Spot Luminaire

Functional Block Diagram



CHAPTER 2.

Maintenance

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

- **Testing**
- **Troubleshooting**
- **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.



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 Spot User's Manual (02.9678.0019).

Calibration Sequence

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

Phase 1

- Tilt
- Strobe
- Rotating Shutter Assembly
- Color Wheel

Phase 2

- Dimmer
- Shutter Frame 1A
- Shutter Frame 1B
- Shutter Frame 2A
- Shutter Frame 2B

Phase 3

- Shutter Frame 3A
- Shutter Frame 3B
- Shutter Frame 4A
- Shutter Frame 4B

Phase 4

- Edge
- CTO
- Yellow
- Magenta

Phase 5

- Pan
- Zoom
- Cyan

Phase 5

- Index 1
- Rotating Gobo
- Fixed Gobo

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 and edge. Pan and tilt are corrected continuously if required by encoders fitted to the motor shaft.



Note: Colors (CTO and CYM) will 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 recal color: Color wheel, CYM, CTO, Dimmer
- Hold DMX value 114 for 3 seconds then 0 recal gobos: Gobo wheels and Index
- Hold DMX value 128 for 3 seconds then 0 recal lenses: Edge, Zoom, and Shutter
- Hold DMX value 140 for 3 seconds then 0 recal Dimmer and Strobe

Sensor Testing

Most mechanisms within the VL3500 luminaire are equipped with either optical or magnetic sensors. The VL3500 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 four color mixers will read high when the tab is in the optical sensor.
- The fixed color wheel will read low when the magnet is at the sensor and high at other times.
- The zoom and edge will read high when the sensor is closed, or the tab is in the sensor.
- The gobo wheel reads low when the magnet is at the sensor.
- The gobo index/rotation reads low when the slot is in the 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 change 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.

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 14 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.
Index1/No Sens	Gobo 1 Index sensor not found.
Gobo1/No Sens	Rotating Gobo 1 sensor not found.
Fixed Gobo2/No Sens	Fixed Gobo sensor not found.
Dimmer/No Sens	Dimmer sensor not found.
Blue/No Sens	Blue sensor not found.
Amber/No Sens	Amber sensor not found.
Magenta/No Sens	Magenta sensor not found.
ColWheel/No Sens	Color wheel sensor not found.
CTO/No Sens	CTO sensor not found.
Zoom/No Sens	Zoom sensor not found.
Edge/No Sens	Edge sensor not found.



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

Troubleshooting Guide

If a problem is suspected, try recalibrating the luminaire to prompt an error message. Refer to “[Error Messages](#)” on page 13 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)
Lamp Power Douse	Lamp does not strike upon start-up	Lamp Off option is configured	Reconfigure lamp startup option in Lamp config menu
n/a	Luminaire behaves oddly	Profile Not Matched	Profile not set correctly... - check Setup menu for correct type (spot or wash). - 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, Col-Wheel, CTO, Gobo1, Index1, Gobo2, Zoom and Edge)	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... <ul style="list-style-type: none"> - 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... <ul style="list-style-type: none"> - properly install belt between pan motor and large pulley.
Tilt/ Encoder/ Fail	Luminaire will not tilt	Tilt Encoder Failure	MCB pan/tilt connector disconnected... <ul style="list-style-type: none"> - connect MCB pan/tilt connector (J8). Tilt motor disconnected <ul style="list-style-type: none"> - connect tilt motor power. Encoder faulty... <ul style="list-style-type: none"> - 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... <ul style="list-style-type: none"> - 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... <ul style="list-style-type: none"> - 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... <ul style="list-style-type: none"> - 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... <ul style="list-style-type: none"> - check MCB connector at J10. Check Interconnect board.
n/a	Gobo or iris mechanisms will not move	Gobos or Iris Failure	MCB connector disconnected... <ul style="list-style-type: none"> - 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... <ul style="list-style-type: none"> - disconnect DMX input cable.
n/a	Erratic control of luminaire	DMX Termination	No DMX termination or termination not correct... <ul style="list-style-type: none"> - 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

VL Part No: 71.2557.1200



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



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

To install lamp:

- Step 1. Ensure power is removed from luminaire.
- Step 2. At rear of luminaire head, loosen four 1/4-turn screws and slide lamp box back (it is hinged).
- Step 3. One side at a time, press lamp lock lever forward and remove each lamp connector to remove existing lamp.
- Step 4. Position new lamp with dimple side down. One side at a time, press lamp lock lever forward and insert lamp connector. Ensure lamp is seated fully 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 17](#).

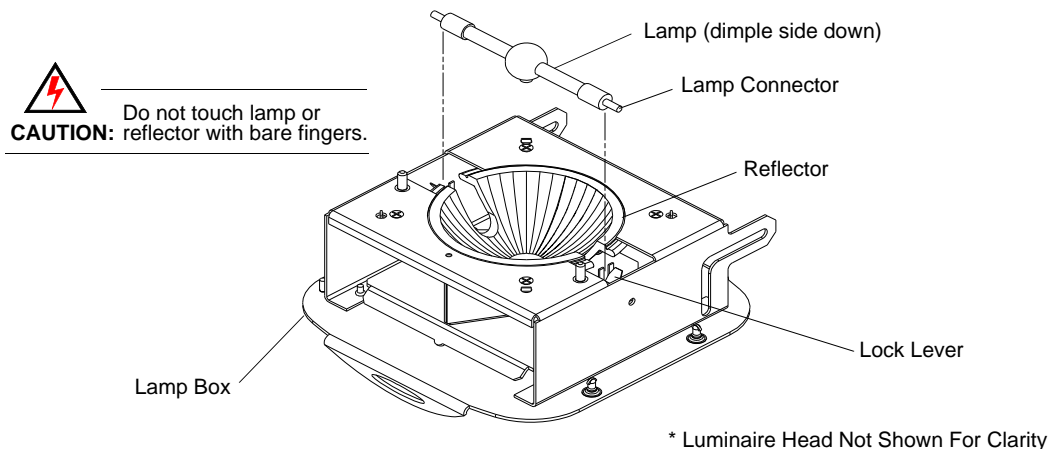


Figure 2-1: Lamp Replacement

Align Lamp

The design of the VL3500 luminaire optical system allows for a flat or peaked field. A flat field is one where there is no detectable hot spot and a peaked field is one where the intensity of the beam is greater at the center of the beam than at the perimeter.

After a new lamp is installed, it will be necessary to align the lamp to optimize the beam. Knobs located at the luminaire's backcap will allow adjustment.



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

To align lamp:

- Step 1. At Menu Display, select **Lamp** from **Config** menu. (If using console, set intensity to 100%, open beam size iris and focus for hard edge.)
- Step 2. Position beam on a white wall at a distance of 10 to 20 feet.
- Step 3. At backcap, using X, Y and Z adjustment screws, adjust beam as required.

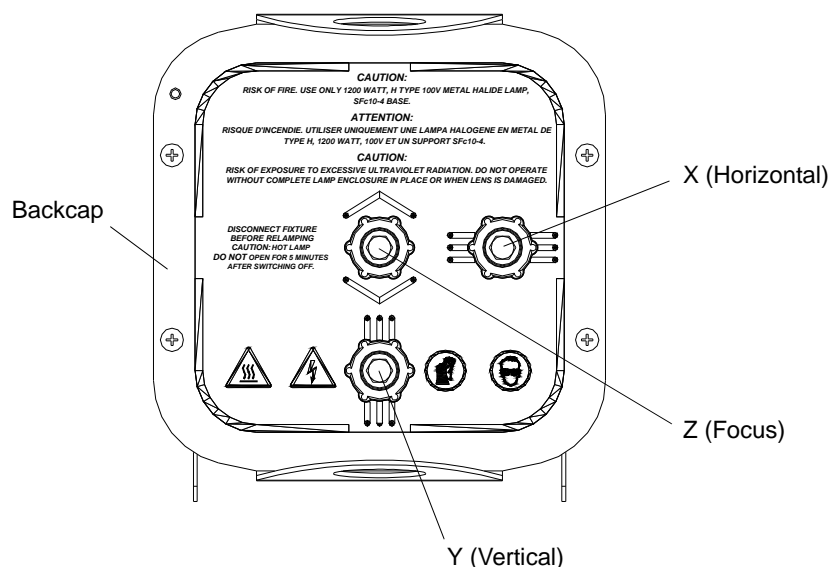


Figure 2-2: Lamp Alignment

Lamp Power Cut-Off Switch

It should be noted that the lower fan duct assembly is equipped with a lamp power cut-off switch. If the hinged duct is raised during operation, the relay will automatically disengage and the lamp will douse. Once the duct is closed, lamp power will be restored.

The fan duct assembly is located on the bottom half of the luminaire head as shown below.

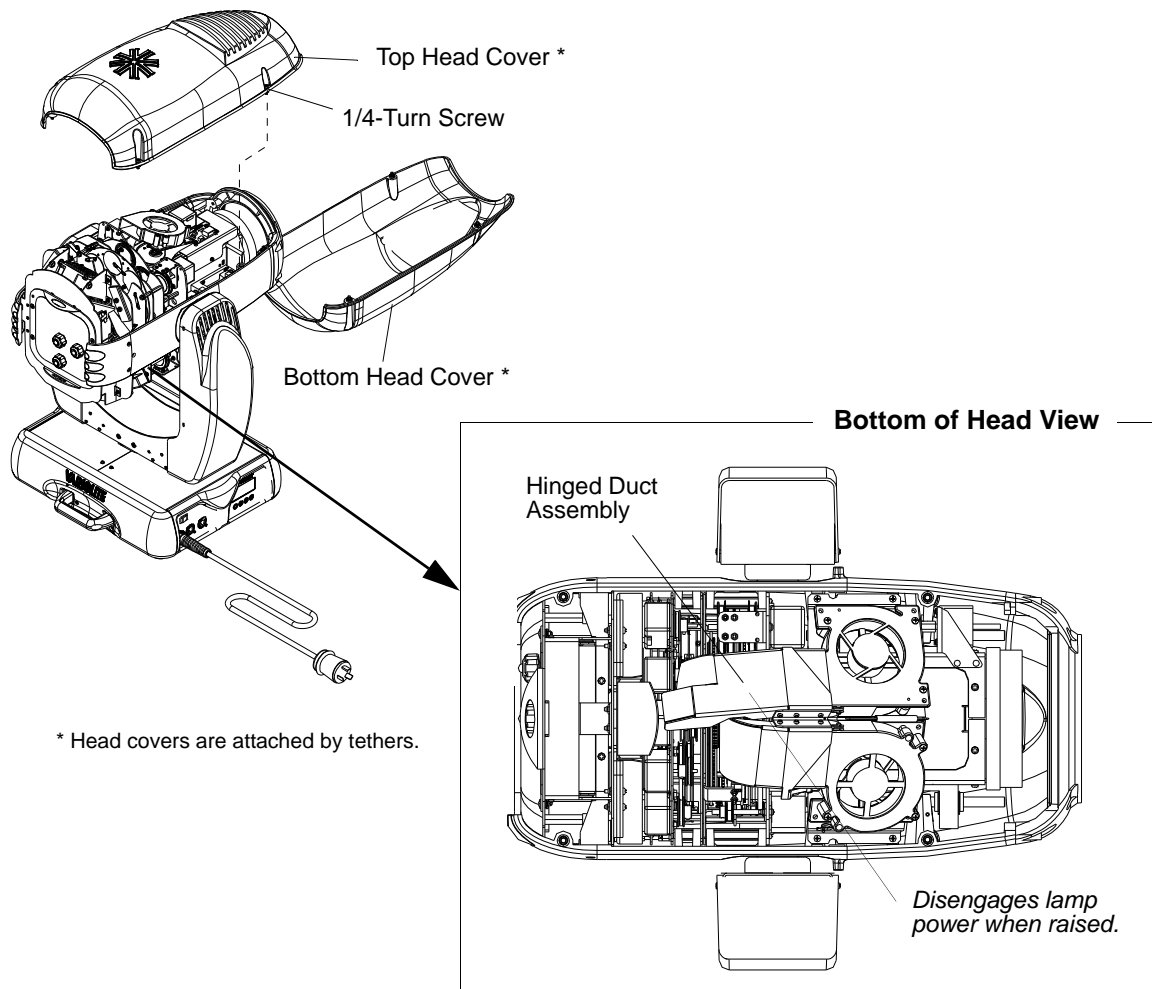


Figure 2-3: Fan Duct Assembly View

Gobo Replacement - Gobo Wheels 1 and 2



WARNING: Remove power from luminaire before performing maintenance. Gobos may be HOT after operation. Allow to cool before replacing.



WARNING: Users of VARI*LITE luminaires should not install or use metal gobos. The use of metal gobos in any VARI*LITE product may damage the luminaire and could void the luminaire's warranty.

To replace a gobo:

- Step 1. Remove power from luminaire.
- Step 2. Remove appropriate head cover by loosening four 1/4-turn screws:
 - a. To access Wheel 1, remove bottom cover as shown in [Figure 2-4](#).
 - b. To access Wheel 2, remove top cover as shown in [Figure 2-4](#).
- Step 3. If accessing Wheel 1, also raise hinged fan duct assembly. (Fan duct has a lamp cutoff switch which will disengage power to lamp.)
- Step 4. Rotate gobo wheel until required gobo position is accessible.



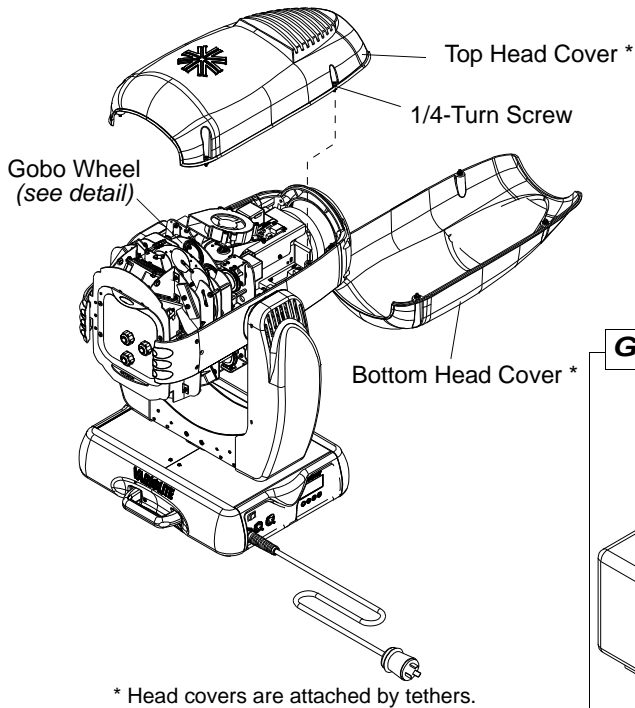
CAUTION: Do not push on gobo glass. Press on gobo carrier only.



CAUTION: Do not touch gobos with bare fingers. Wear cotton gloves or other covering while replacing. Clean with glass cleaner and soft cloth if required.

- Step 5. For Gobo Wheel 1:
 - a. Remove current gobo by carefully pressing on edges of gobo carrier with fingers, pressing gobo toward front end of luminaire (toward lens), and out of wheel.
 - b. Install new gobo as follows:
 - c. Align three tabs on gobo carrier with three notches in wheel (gobo can only be oriented in one direction).
 - d. Insert gobo carrier into wheel, ensuring that carrier snaps into place.
 - e. Close fan duct assembly and replace covers.
- Step 6. For Gobo Wheel 2:
 - a. Release (open) spring retaining clip as shown in [Figure 2-4](#).
 - b. Slide gobo out of gobo wheel.
 - c. Slide new gobo in wheel (be sure key on gobo carrier fits into slot).
 - d. Reinstall (close) gobo spring retaining clip. Ensure clips are positioned correctly and clear position sensor.

e. Replace covers.



CAUTION: Do not touch glass with bare fingers. Press on gobo carrier only.

* Head covers are attached by tethers.

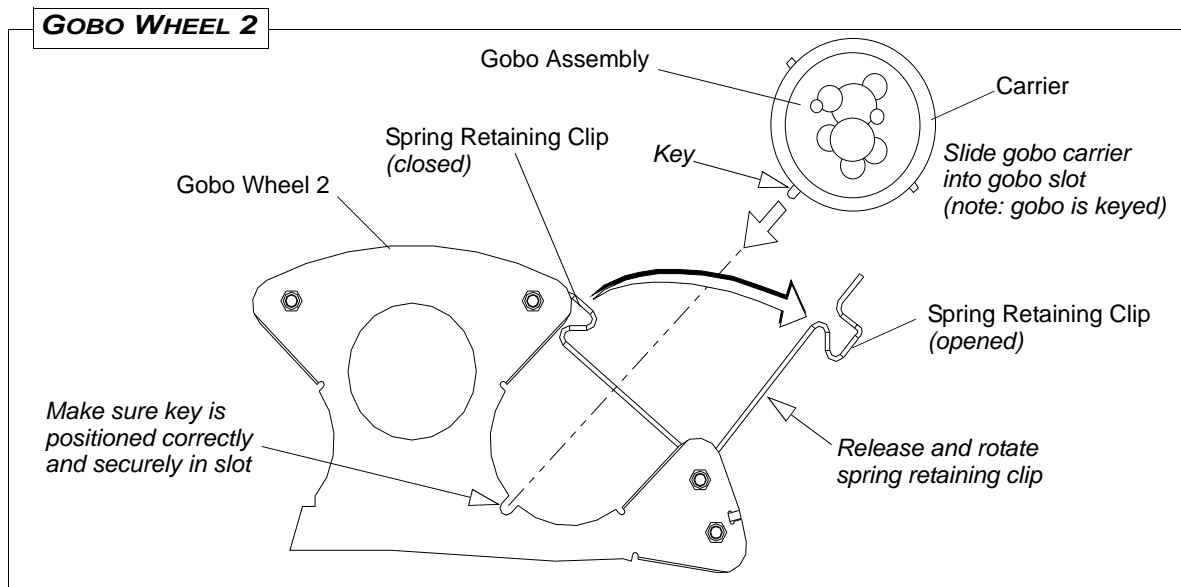
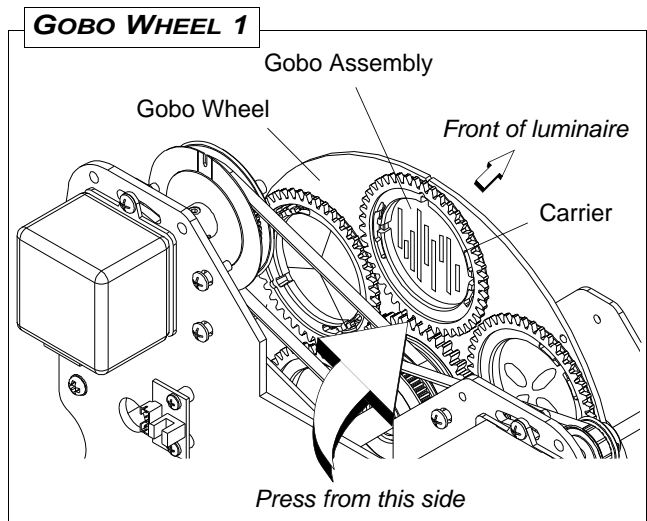


Figure 2-4: Replacing Gobos

Color Filter Replacement



WARNING: Remove power from luminaire before performing maintenance. Filters may be HOT after operation. Allow to cool before replacing.

To replace a color filter:

Step 1. Remove power from luminaire.

Step 2. Remove top head cover by loosening four 1/4-turn screws as shown in [Figure 2-5](#).



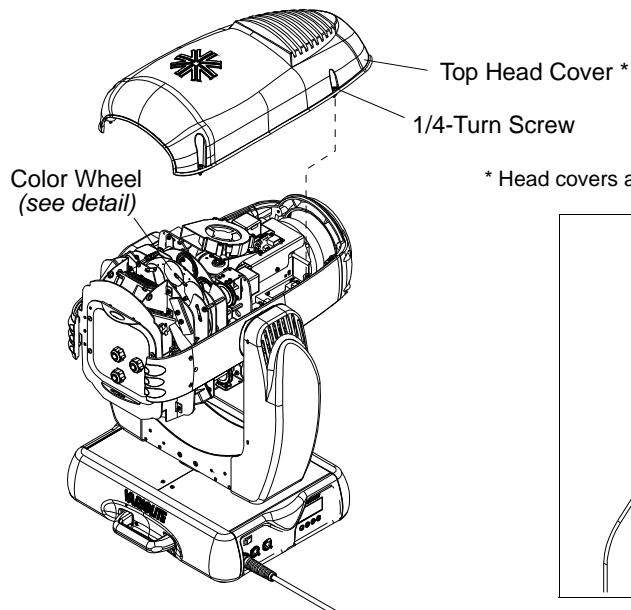
CAUTION: Do not touch filters with bare fingers. Wear cotton gloves or other covering while replacing. Clean with glass cleaner and soft cloth if required.

Step 3. Rotate color wheel until required filter position is accessible.

Step 4. Press spring lock back until color filter is free and remove filter.

Step 5. Install new filter (orientation does not matter) ensuring that it is securely in position.

Step 6. Replace head cover.



CAUTION: Do not touch filter with bare fingers. Wear cotton gloves.

* Head covers are attached by tethers.

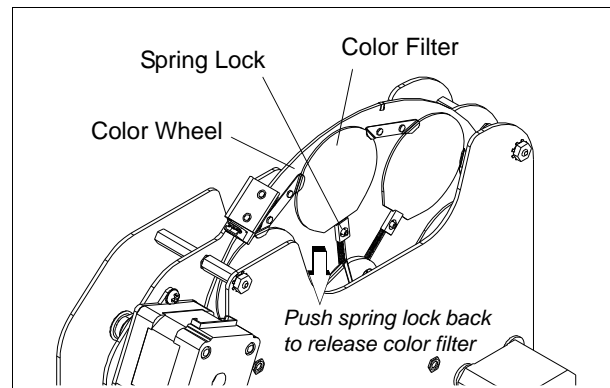


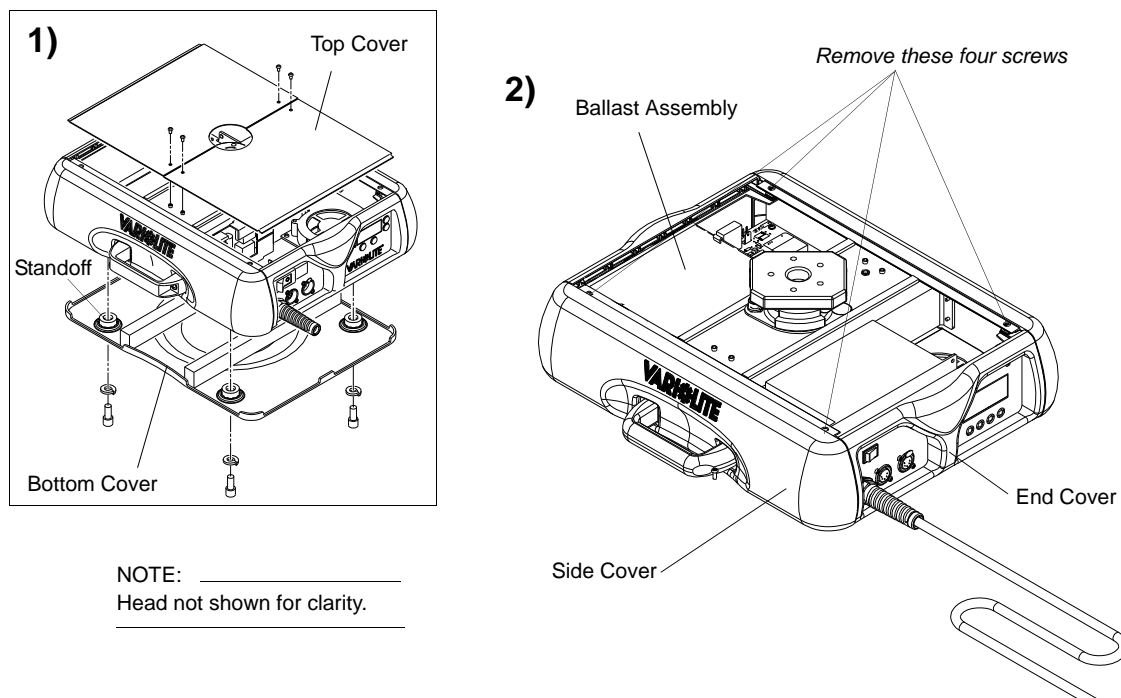
Figure 2-5: Color Filter Replacement

Ballast Assembly Replacement

VL Part No: 23.9678.1869

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. At enclosure, remove top covers.
- Step 3. Remove wiring to ballast noting placement for reconnection
- Step 4. Remove four (4) screws securing side covers to end-covers as indicated in [Figure 2-6](#).



NOTE: _____
Head not shown for clarity.

Figure 2-6: Ballast Assembly Replacement

- Step 5. Set luminaire on nose to access and remove bottom cover.
- Step 6. Remove bottom cover, handles, side covers, and end cover (nearest to ballast). Note the different size screws for the side and end covers, these must go back in the correct location.
- Step 7. Remove six (6) screws from bottom securing the ballast. Hold ballast assembly to prevent it from falling.
- Step 8. Remove ballast from enclosure.
- Step 9. Reinstall in reverse order. When reinstalling bottom cover, be sure standoffs are seated flush to chassis.

Color/Dimmer/Strobe Assembly Replacement

VL Part No: 22.9678.0402 (VL3500 Only)

VL Part No: 22.9678.0462 (VL3500Q Only)

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove top head cover.
- Step 3. Disconnect yoke cable at interconnect board.
- Step 4. Remove interconnect board at side rail by gently pushing inward at top and then lifting up.
- Step 5. Remove clamps.
- Step 6. Remove color/dimmer/strobe assembly by lifting the entire assembly straight up.
- Step 7. Replace color/dimmer/strobe assembly in reverse order.

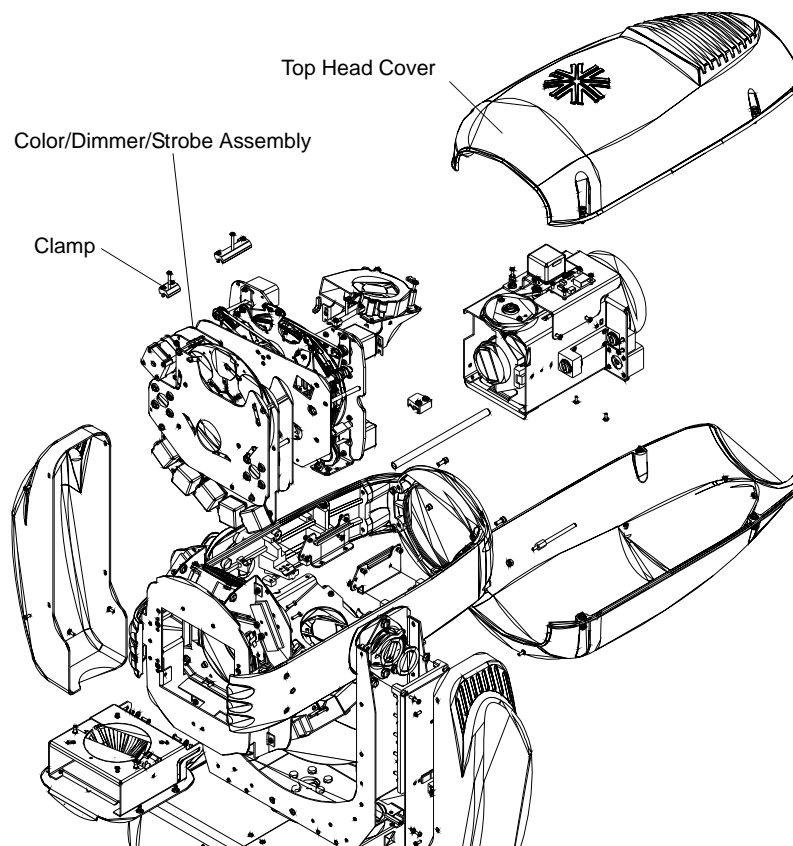


Figure 2-7: Color/Dimmer/Strobe Assembly Replacement

Main Control Board (MCB) Replacement

VL Part No: 24.9678.1730

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove board-side yoke leg cover.
- Step 3. At MCB, disconnect head wiring and remove screws to daughter board.
- Remove Standoffs and 2 screws securing MCB.
 - While holding MCB outward, disconnect wiring from upper enclosure and remove MCB.
- Step 4. Install in reverse order.

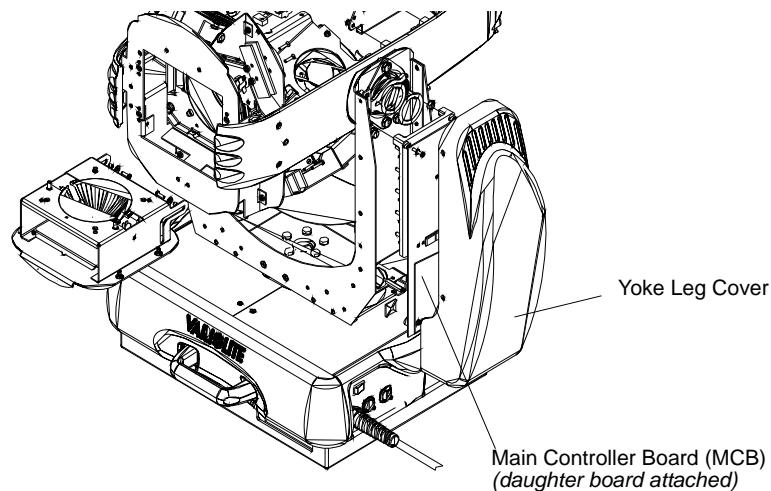


Figure 2-8: Main Controller Board (MCB) Replacement

Ignitor Board Replacement

VL Part No: 24.9661.3126

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove tilt-side yoke leg cover.
- Step 3. Disconnect four lamp wires and four screws securing the ignitor to the mounting plates as indicated in [Figure 2-9](#).
- Step 4. Remove and replace ignitor board.

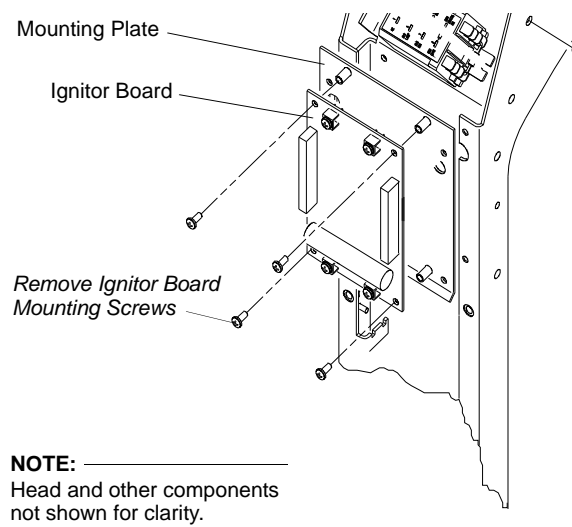


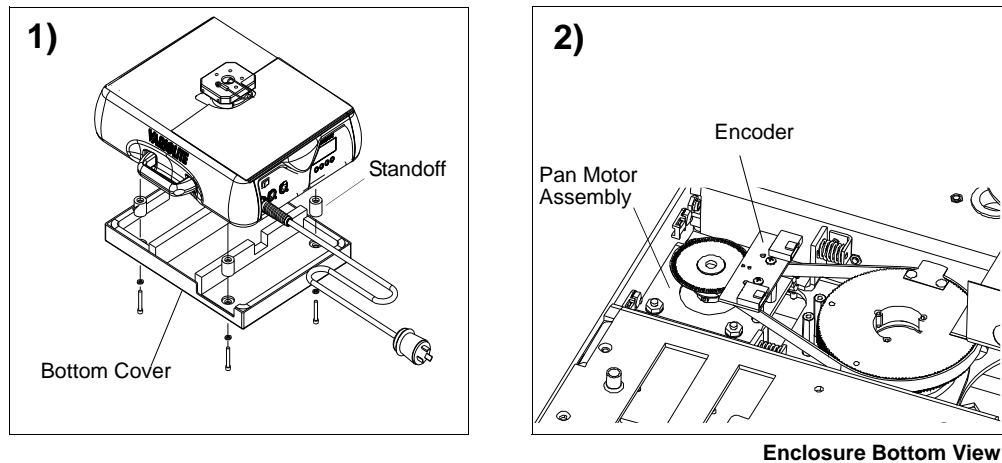
Figure 2-9: Ignitor Board Replacement

Pan Motor Assembly Replacement

VL Part No: 21.9678.0864

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Carefully lay luminaire on its side to have access to bottom of enclosure.
- Step 3. At enclosure assembly, remove bottom cover.
- Step 4. Remove two connectors to pan encoder board.
- Step 5. Remove four screws securing pan motor to chassis
- Step 6. Carefully lift motor upwards and remove tensioning springs.
- Step 7. Slide belt from around gears.
- Step 8. Unplug motor connector and remove motor.
- Step 9. Install in reverse order. Make sure bottom cover standoffs are seated fully against chassis.



NOTE: _____
Head not shown for clarity.

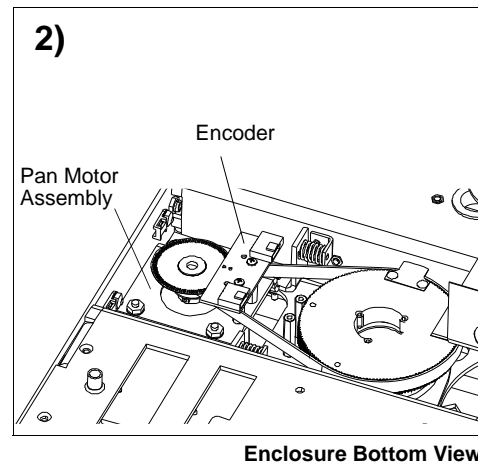
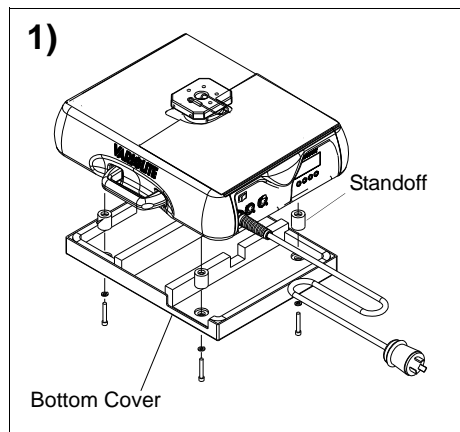
Figure 2-10: Pan Motor Assembly Replacement

Pan Encoder Replacement

VL Part No: 24.9678.9729

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Carefully lay luminaire on its side to have access to bottom of enclosure.
- Step 3. At enclosure assembly, remove bottom cover.
- Step 4. Remove pan encoder board.
- Step 5. Install in reverse order. Make sure bottom cover standoffs are seated fully against chassis.



NOTE: _____
Head not shown for clarity.

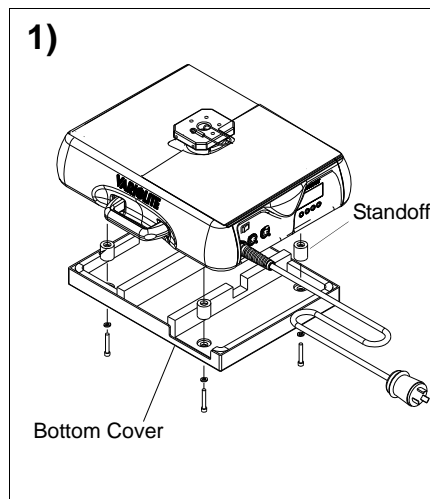
Figure 2-11: Pan Encoder Replacement

Pan EOT Sensor Replacement

VL Part No: 86.7002.0003

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Carefully lay luminaire on its side.
- Step 3. At enclosure assembly, remove bottom cover.
- Step 4. Remove pan sensor.
- Step 5. Install in reverse order. Make sure bottom cover standoffs are seated fully against chassis.



NOTE: _____
Head not shown for clarity.

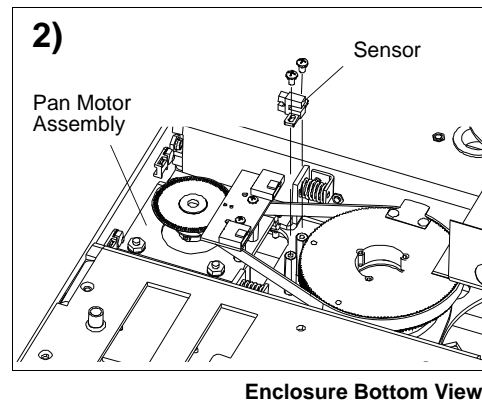


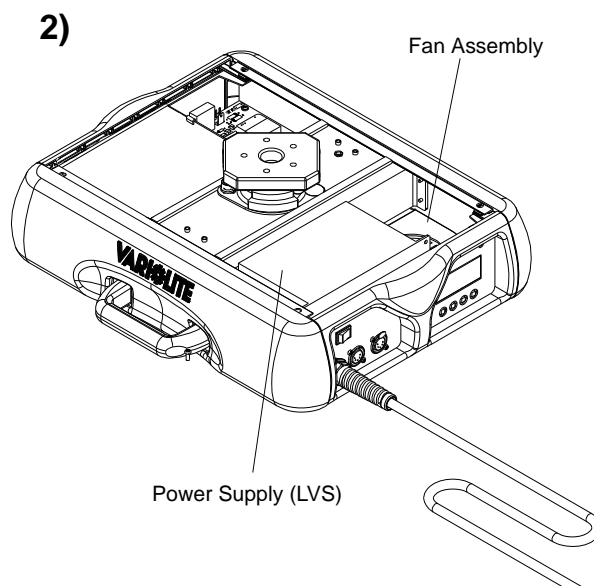
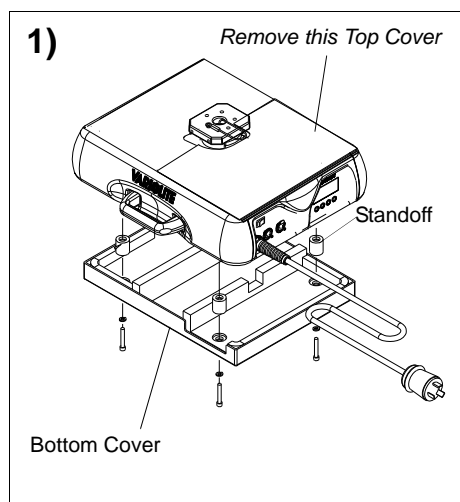
Figure 2-12: Pan EOT Sensor Replacement

Power Supply (LVS) Replacement

VL Part No: 69.3176.0201

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. At enclosure, remove top cover at power supply side.
- Step 3. At LVS, remove wiring.
- Step 4. Remove screw closest to pan tube. Loosen two screws at opposite end of wiring.
- Step 5. Remove LVS.
- Step 6. Install in reverse order. Make sure that no wires get pinched or caught in fan assembly.



NOTE: _____
 Head not shown for clarity.

Figure 2-13: Power Supply (LVS) Replacement

Gobo/Shutter Assembly Replacement

VL Part No: 21.9678.1200

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove top head cover.
- Step 3. Ensure that optic assembly is all the way forward. (Grip assembly by motor bracket and carefully pull forward along guide rods.)
- Step 4. Disconnect wiring for transfer fan assembly from optic assembly board.
- Step 5. Disconnect yoke cable from color assembly wiring interconnect.
- Step 6. Release color assembly yoke cable from two cable twist locks on transfer fan assembly.
- Step 7. Disconnect yoke wiring for gobo/shutter assembly.
- Step 8. Remove clamps holding gobo/shutter assembly.
- Step 9. Remove gobo/shutter assembly by pulling it upward.
- Step 10. Install in reverse order being careful not to snag yoke cables when inserting assembly.

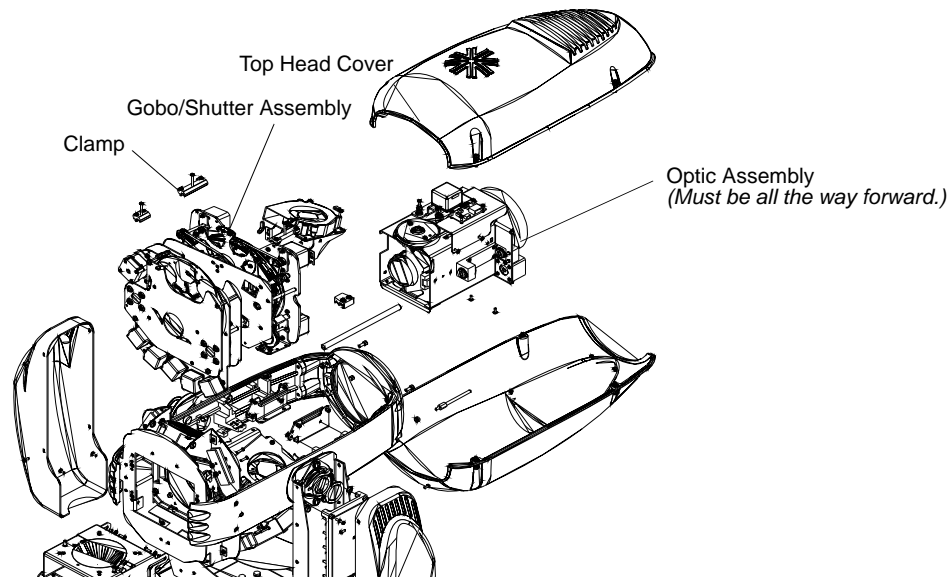


Figure 2-14: Gobo/Shutter Assembly Replacement

Spot Optic Assembly Replacement

VL Part No: 22.9678.0103

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove both head covers.
- Step 3. Disconnect all fan wires and yoke cable from optic assembly interconnect board.
- Step 4. Remove fan (or entire gobo assembly).
- Step 5. Remove lower head fan assembly for edge screw access.
- Step 6. At linear actuator edge screw, remove nut using 11/32" socket and 3/8" wrench.
- Step 7. Remove four clamps securing optic zoom box guide rods, being careful not to let optic box fall.
- Step 8. Remove spot optic assembly, being careful not to let the guide rails fall.
- Step 9. Remove guide rails
- Step 10. Install in reverse order, making sure guide rails ends are flush with back side of the rear clamps.



Note: To prevent binding, thread edge screw all the way into linear actuator motor before re-installing. Secure right-side (edge motor side) optic assembly clamps first when re-installing.

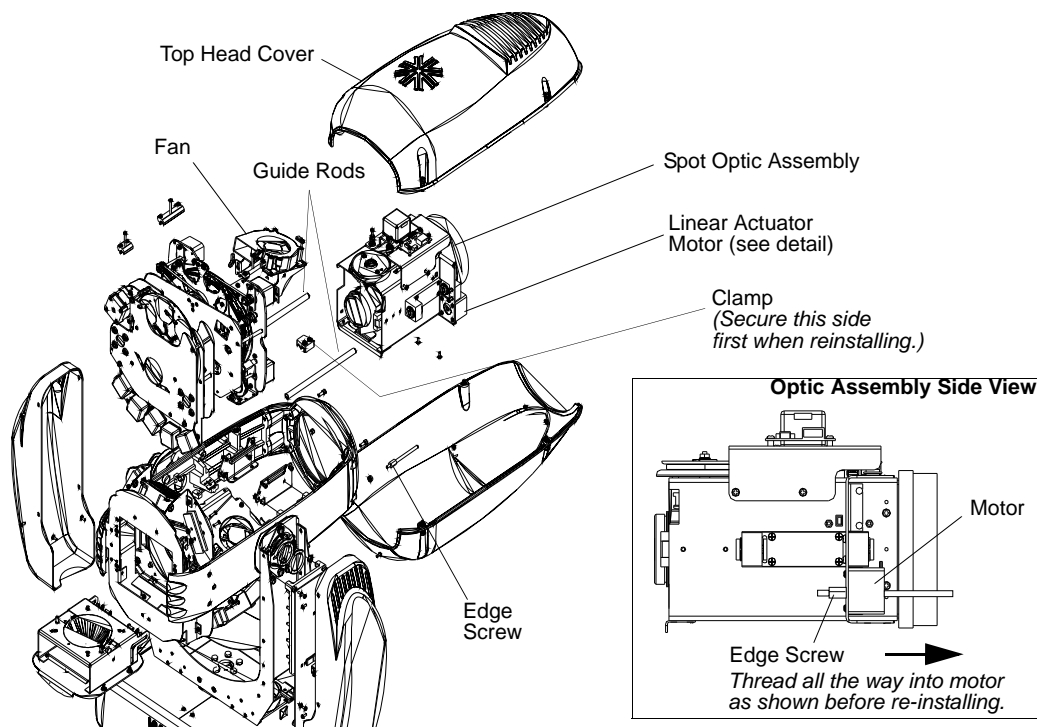


Figure 2-15: Spot Optic Assembly Replacement

Tilt Motor Assembly Replacement

VL Part No: 21.9678.6865

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove tilt-side yoke leg cover.
- Step 3. Remove motor connector.
- Step 4. Remove tilt motor assembly as indicated:
- Remove four screws securing tilt motor while holding motor to prevent it from falling.
 - Remove two tensioning springs.
 - Loosen tilt belt from around gears.
 - Disconnect two connectors from tilt sensor board.
 - Remove tilt motor assembly.
- Step 5. Install in reverse making sure not wires get pinched.

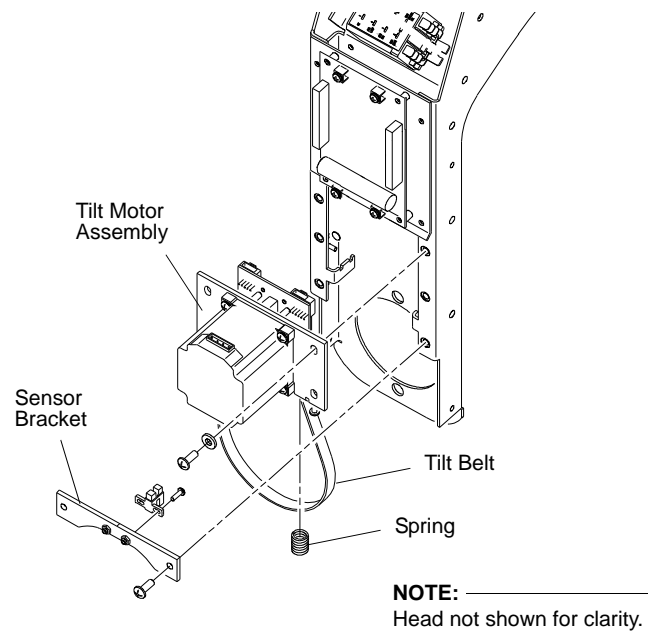


Figure 2-16: Tilt Motor Assembly Replacement

Tilt Encoder Replacement

VL Part No: 24.9678.9629 / 24.9678.8629

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove tilt-side yoke leg cover.
- Step 3. Remove tilt motor assembly from yoke leg as described on [page 32](#).
- Step 4. Remove and replace encoder.

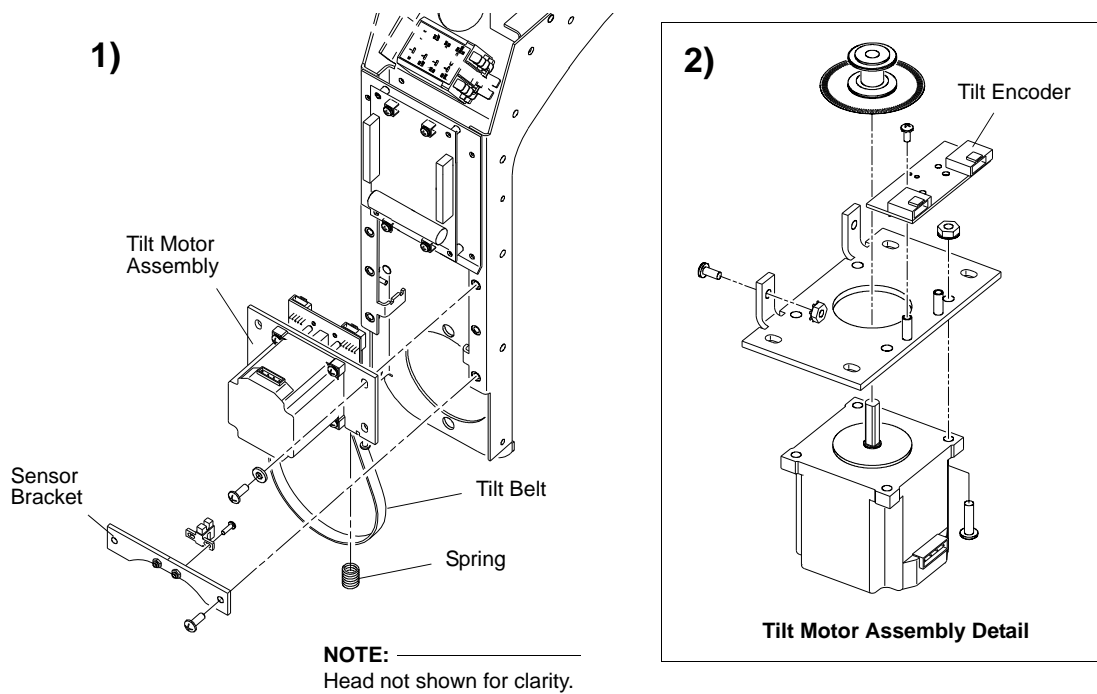


Figure 2-17: Tilt Encoder Replacement

Tilt EOT Sensor Replacement

VL Part No: 86.7002.0003

Repair Procedure

- Step 1. Disconnect luminaire AC input cable from power source.
- Step 2. Remove tilt-side yoke leg cover.
- Step 3. Remove sensor bracket.
- Step 4. Remove and replace tilt sensor.

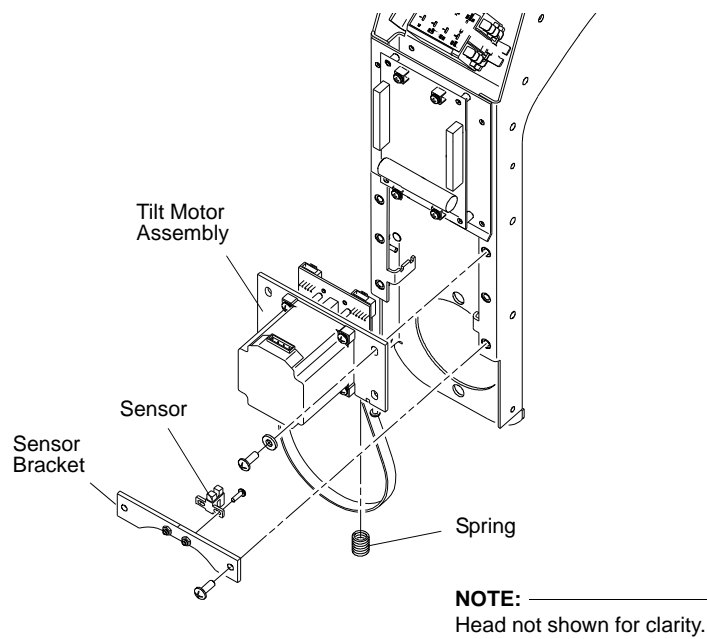


Figure 2-18: Tilt EOT Sensor Replacement

Gobo Timing Adjustments

The index timing belt must be aligned so that the mechanism "clocks" properly. This belt is installed around the index gear (top gear) of the gobo wheel. The wheel position belt is installed around the wheel position gear (bottom gear) of the gobo wheel, and does not require alignment. Each belt is also routed around one motor pulley.

For the following steps, refer to [Figure 2-19](#).

To time gobo wheels:

- Step 1. Align all holes in wheels as shown below.
- Step 2. Insert a 3" long #4 or M3 screw (or 0.125" diameter pin) completely through aligned holes in wheel and bulkhead plates as shown. This will lock the wheels in the "open" position.
- Step 3. To time Gobo Wheel 1, first align outside planet gear timing mark with notch in wheel. Loosen index belt just enough to slip teeth and rotate index pulley to center slot in optical sensor. Reset tension on belt and verify that pulley slot is still centered in sensor and sensor is centered between two guide marks on pulley flange.

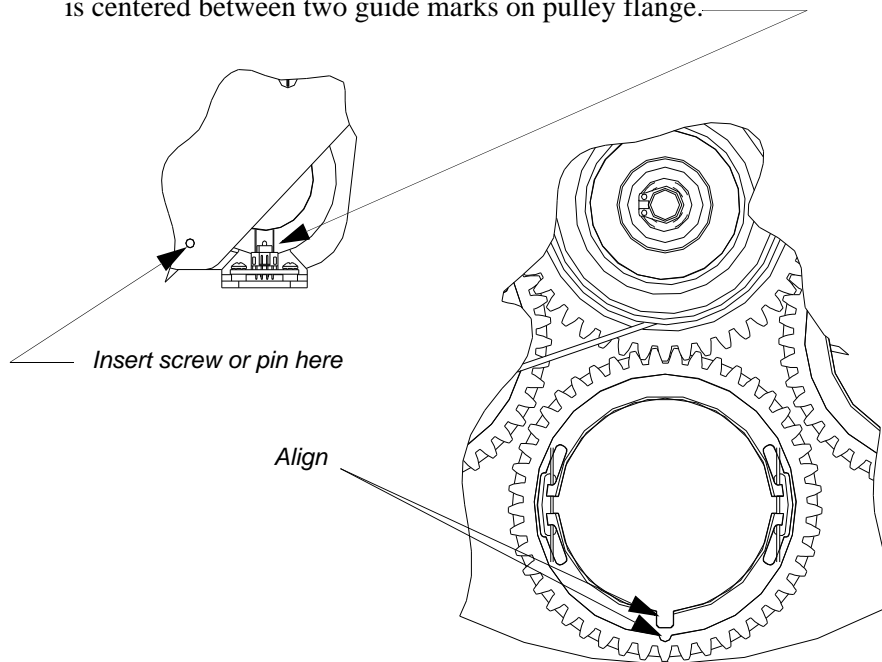


Figure 2-19: Gobo Wheel 1 Timing Adjustments

Gobo Gear Planet Alignment

Each gear of the gobo wheel assembly must be aligned so that the gobos will index correctly. Use the following procedure to re-align the gears in the event the gobo wheel is disassembled.

To re-align gobo gears:

- Step 1. Place center (sun) gear at starting point so that timing mark is directly facing Position 1 (open) as shown in [Figure 2-20](#).
- Step 2. Set Position 6 planet gear as follows:
- Step 3. Rotate center gear clockwise until timing mark is directly facing Position 6.
- Step 4. Lift edge of center gear slightly (so that it will not turn), while at same time rotating Position 6 gear until timing mark is directly across from center gear timing mark. Lower center gear into place and verify alignment.
- Step 5. Set remaining planet gears by following same procedure. When all gears are aligned, rotate center gear in full rotation to verify alignments and to verify that assembly spins freely. When rotating, marks should align perfectly at each gear as they pass. Adjust as necessary and recheck. There should be no drag in the movement.

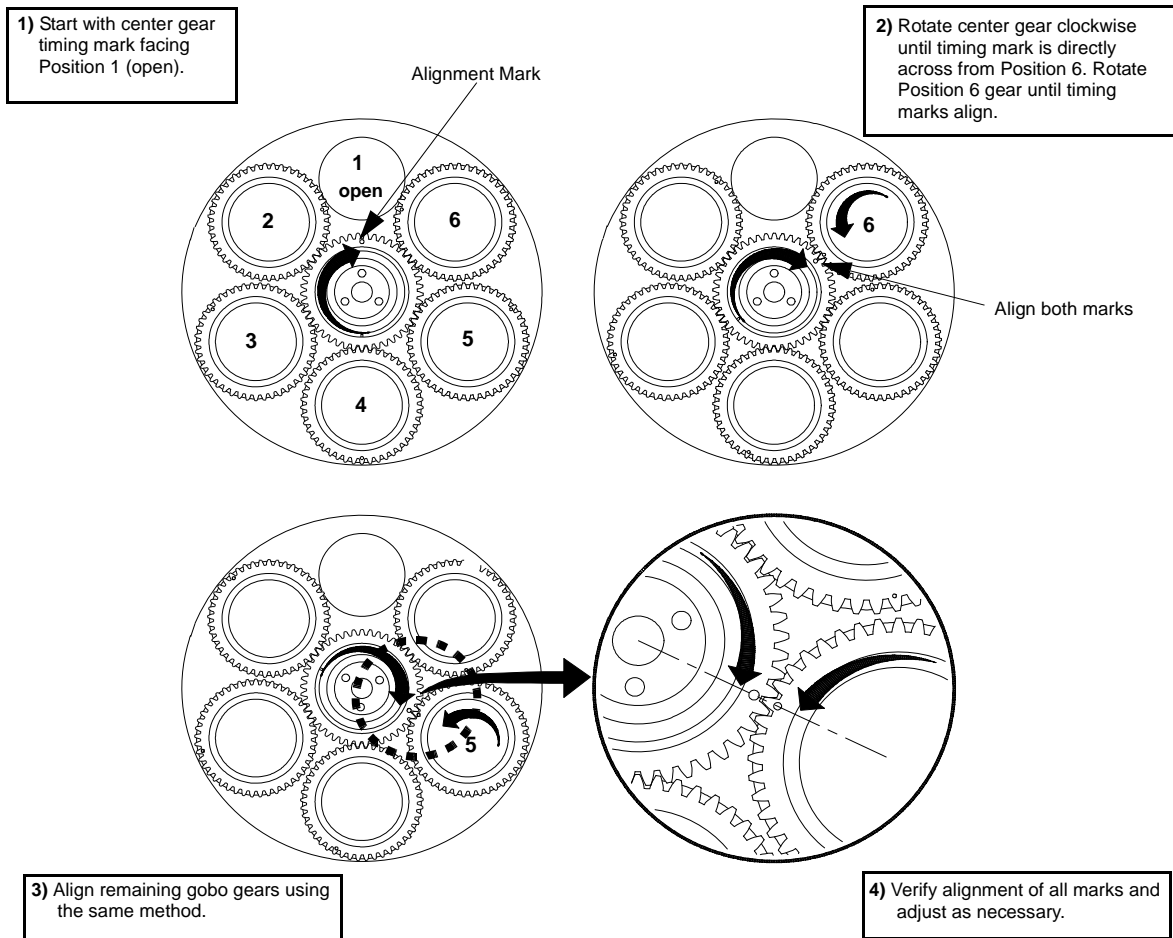


Figure 2-20: Aligning Gobo Planet Gears

CHAPTER 3.

Illustrated Parts Breakdown

This chapter contains illustrated parts breakdowns for all VL3500™ Spot Luminaire assemblies.

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

- **Drawing Trees**
- **Top Assembly**
- **Head Assembly**
- **Yoke Assembly**
- **Head/Yoke PCB Assemblies**
- **Enclosure Assembly**
- **Cable Assemblies**



SERVICE

Drawing Trees

VL3500 Spot Luminaire

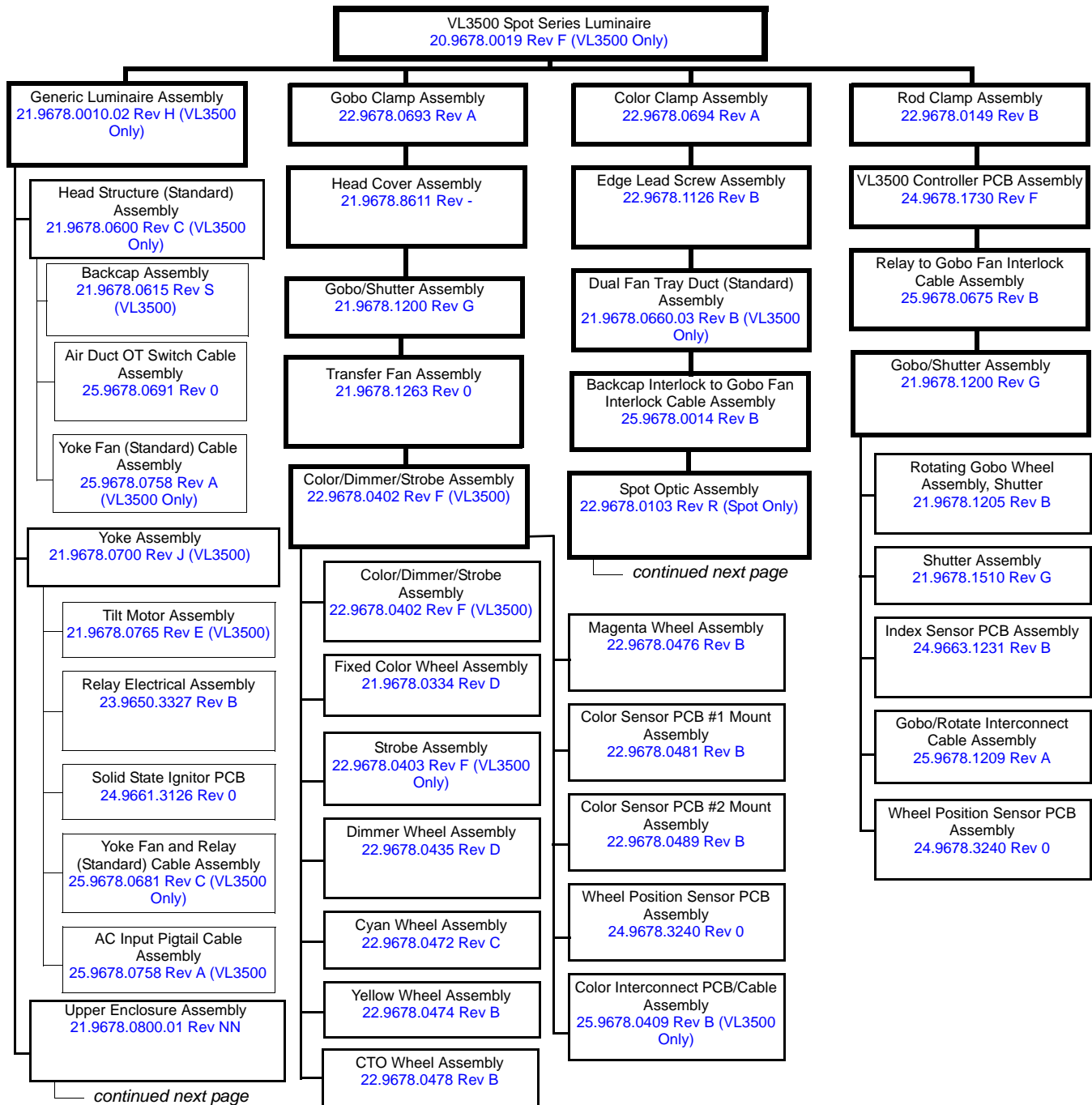


Figure 3-1: VL3500 Spot Luminaire Subassembly Drawing Tree Part 1

VL3500 Spot Luminaire (continued)

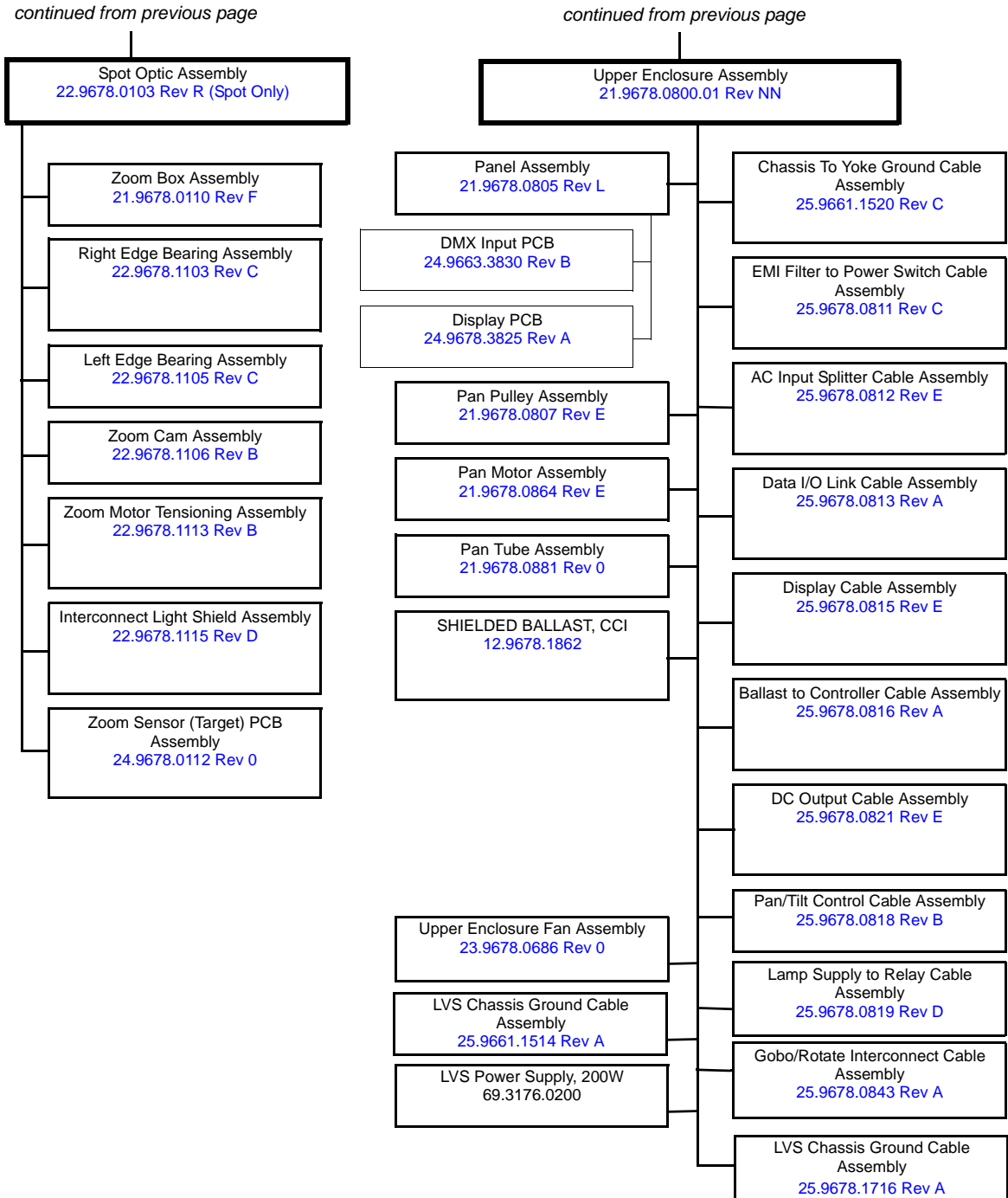


Figure 3-2: VL3500 Spot Luminaire Subassembly Drawing Tree Part 2

VL3500Q Spot Luminaire (continued)

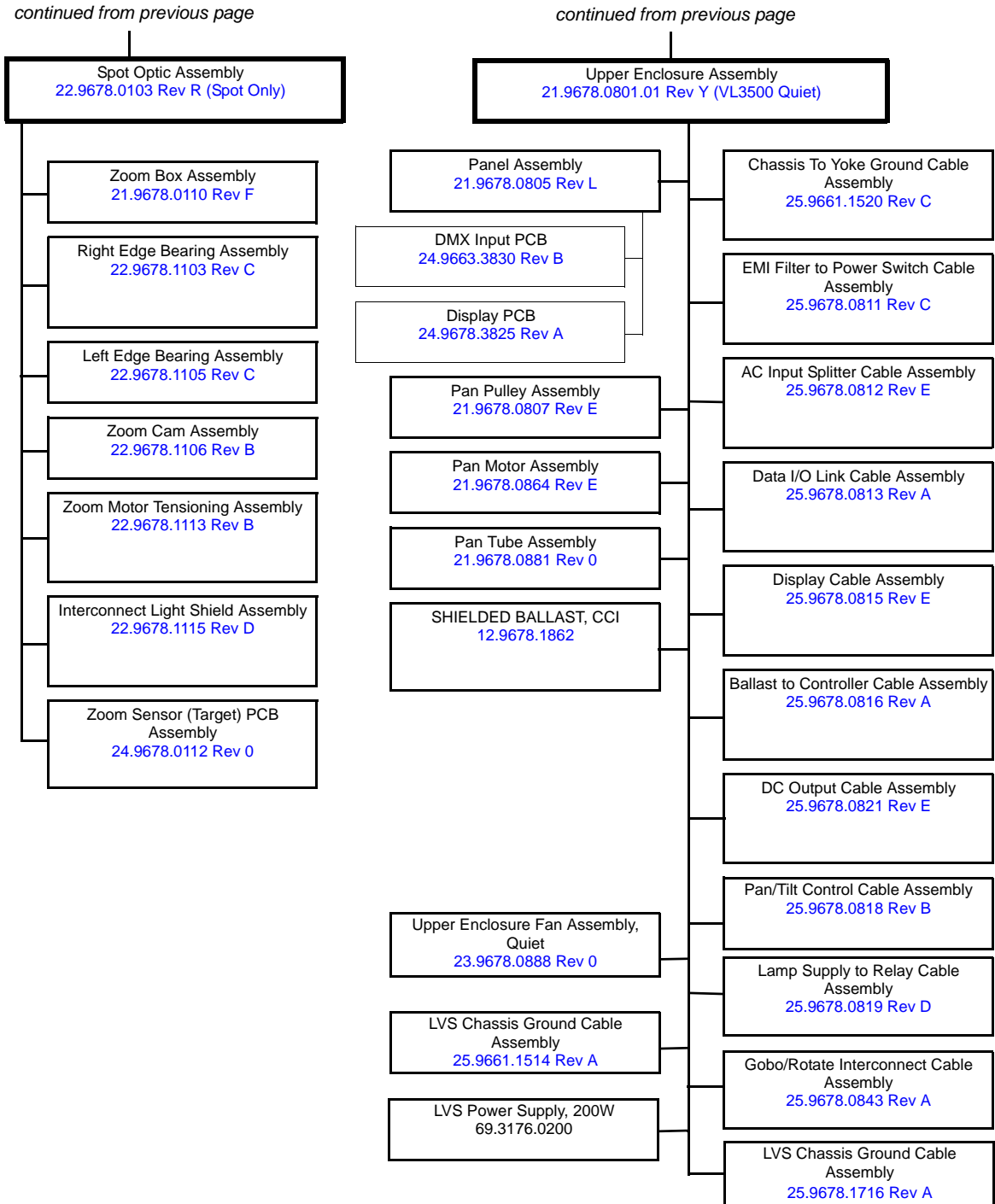


Figure 3-4: VL3500Q Spot Luminaire Subassembly Drawing Tree Part 2

Top Assembly

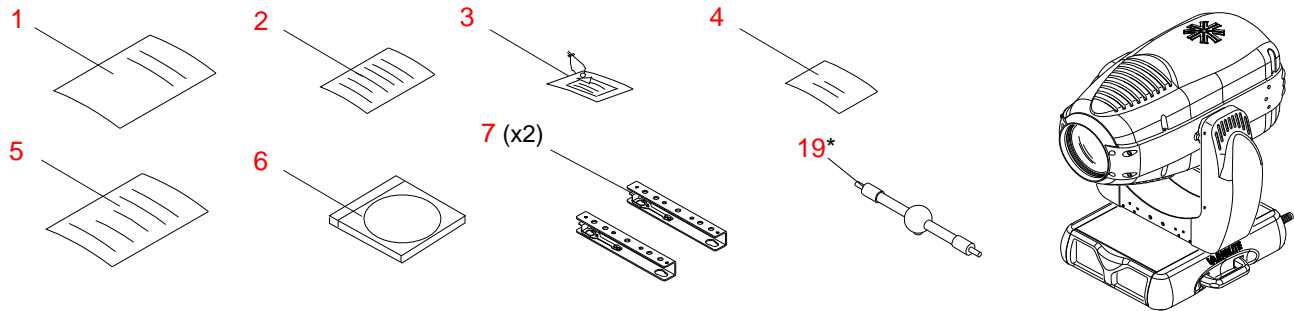
Included Items Kit, Spot

28.9678.0020 Rev E

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

No.	Item	Qty.	UM.	Description
1	02.8001.0001	1	EA	PRODUCT SUPPORT SHEET, VARI-LITE CUSTOMER SERVICE
2	02.8052.0001	1	EA	CARD, LIMITED WARRANTY
3	02.8406.0001	1	EA	TAG, LAMP NOTICE
4	02.8700.0001	1	EA	CARD, PRODUCT REGISTRATION
5	02.9678.0002	1	EA	UNPACK/QUICK START SHEET, VL3000
-	04.4037.0001	5	EA	LABEL, 2.5 X .5 BARCODE (not shown)
-	07.9678.0036	1	EA	CARDBOARD SHIPPING BOX, VL3000 (not shown)
6	08.3500.0001	1	EA	CD-ROM, VL3500 PRODUCT DOCUMENTATION, USER
7	22.9661.1636	2	EA	FAB ASSY, BRACKET TRUSS HOOK
8	41.6030.5011	1	EA	GOBO ASSY, NIGHT SKY (POS 1-3)
9	41.6030.5503	1	EA	GOBO ASSY, PALM LEAVES (POS 2-2)
10	41.6030.5523	1	EA	GOBO ASSY, TRIBAL BREAKUP (POS 1-4)
11	41.6030.6011	1	EA	GOBO ASSY, CIRCLE OF OVALS (POS 3-5)
12	41.6030.7002	1	EA	GOBO ASSY, PEBBLES (POS 2-27)
13	41.6030.7014	1	EA	GOBO ASSY, TRIANGLE BREAKUP (POS 2-4)
14	41.6030.7018	1	EA	GOBO ASSY, SHOCK BREAKUP (POS 2-3)
15	41.6030.7029	1	EA	GOBO ASSY, ALPHA RAYS (POS 1-2)
16	41.6030.8503	1	EA	GAG ASSY, GLACIER (POS 1-6)
17	41.6030.8509	1	EA	GAG ASSY, ICE BLOCKS (POS 2-5)
18	41.6030.8801	1	EA	GOBO ASSY, MULTI-COLOR CIRCLES (POS 1-5)
19	71.2557.1200	1	EA	LAMP, 1200 WATT SHORT ARC, DOUBLE-ENDED

Included Items Kit, Spot (continued)



<p>8</p> <p>Night Sky</p>	<p>9</p> <p>Palm Leaves</p>	<p>10</p> <p>Tribal Break-Up</p>	<p>11</p> <p>Circle of Ovals</p>	<p>12</p> <p>Pebbles</p>
<p>13</p> <p>Triangle Break-Up</p>	<p>14</p> <p>Shock Break-Up</p>	<p>15</p> <p>Alpha Rays</p>	<p>16</p> <p>Glacier Gag</p>	<p>17</p> <p>Ice Blocks Gag</p>
<p>18</p> <p>Multi-Colored Gobo</p>				

Figure 3-5: Included Items Kit, Spot

Note: * = Do not handle lamp with bare hands. When handling, it is best to wear clean cotton gloves in order to keep the lamp's glass as dirt and grease free as possible.

VL3500 Spot Series Luminaire

20.9678.0019 Rev F (VL3500 Only)

20.9678.0020 Rev G (VL3500Q Only)

Refer to [Figure 3-6](#)

No.	Item	Qty.	UM.	Description
-	02.8405.0001	1	EA	AC DANGER TAG, VL3000 (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)
-	04.9678.0063	1	EA	LABEL, AC INPUT RATING VL3500 (VL3500 ONLY - not shown)
-	04.9678.0064	1	EA	LABEL, AC INPUT RATING VL3500Q (VL3500Q ONLY - not shown)
-	10.9678.0609	1	EA	FRONT FILTER, FOAM, ZOOM (not shown)
1	10.9686.0617	1	EA	YOKE CROSSMEMBER, HEAT SHIELD
2	10.9678.0658	10	EA	PLATE, COUNTERWEIGHT
3	10.9678.0670	1	EA	INTERCONNECT PCB MOUNT, CYM
4	10.9686.0732	2	EA	COVER, YOKE THERMOFORM
5	21.9678.0010.02	1	EA	ASSY, GENERIC LUMINAIRE (VL3500 ONLY)
	21.9678.0011.02	1	EA	ASSY, GENERIC LUMINAIRE (VL3500Q ONLY)
6	21.9678.8611	2	EA	ASSY, HEAD COVER
7	21.9678.8640.01	1	EA	ASSY, HOT BOX, SPOT (VL3500 ONLY)
	21.9678.8698.01	1	EA	ASSY, HOT BOX, SPOT (VL3500Q ONLY)
8	21.9678.0660.03	1	EA	ASSY, DUAL FAN TRAY DUCT (VL3500 ONLY)
	21.9678.0659.03	1	EA	ASSY, DUAL FAN TRAY DUCT (VL3500Q ONLY)
9	21.9678.1200	1	EA	ASSY, GOBO/SHUTTER MODULE
10	21.9678.1246	1	EA	ASSY, CABLE INTERCONNECT, SHUTTER
11	21.9678.1263	1	EA	ASSY, TRANSFER FAN (VL3500 ONLY)
	21.9678.1263	1	EA	ASSY, TRANSFER FAN (VL3500Q ONLY)
12	22.9678.0103	1	EA	ASSY, SPOT OPTIC
13	22.9678.0149	4	EA	ASSY, ROD CLAMP
14	22.9678.0402	1	EA	ASSY, COLOR/DIMMER/STROBE (VL3500 ONLY)
	22.9678.0462	1	EA	ASSY, COLOR/DIMMER/STROBE (VL3500Q ONLY)
15	22.9678.0693	2	EA	ASSY, GOBO CLAMP
16	22.9678.0694	2	EA	ASSY, COLOR CLAMP
17	22.9678.1126	1	EA	ASSY, LEAD SCREW EDGE
18	24.9678.4730	1	EA	PCB ASSY, VL3500 CONTROLLER
-	25.9678.0675	1	EA	CABLE ASSY, RELAY TO GOBO FAN (not shown)

No.	Item	Qty.	UM.	Description
-	25.9678.0677	1	EA	CABLE ASSY, FRONT HEAD FANS (not shown)
-	25.9678.0689	1	EA	CABLE ASSY, YOKE TO HEAD GND (not shown)
-	25.9678.1715	1	EA	CABLE ASSY, HEAD CONTROL (not shown)
-	28.9678.0020	1	EA	INCLUDED ITEMS KIT, VL3500 SHUTTER (not shown)
19	53.2001.0003	4	EA	NUT, 10-32 NYLON INSERT
20	53.2002.0003	4	EA	NUT, 6-32 HEX ZINC NYLON IN
21	53.2202.0008	1	EA	NUT, 8-32 HEX SS, NYLON INSERT
22	53.6543.0001	8	EA	SCREW, 6-32 X 3/8" PPB
23	53.6558.0007	4	EA	SCREW, 6-32 X 1/4" LG PPZ SEMS EXT ZINC PLT
24	53.6558.0009	8	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS
25	53.6558.0016	2	EA	SCREW, 6-32 X 3/4" LG PPB ZINC SEMS EXT
26	53.6579.0001	4	EA	SCREW, 10-32 X 1/2" SCB
27	53.6613.0001	2	EA	SCREW, 6-32 X 1/2" PPZ
28	53.6614.0003	4	EA	SCREW, 6-32 X 5/8" PFZ
29	53.6616.0001	4	EA	SCREW, 6-32 X 3/4" PPZ
30	55.2141.0001	2	EA	STANDOFF, 5/16" HEX, 6-32 X 7/16" LG, MF
31	55.2150.0002	2	EA	STANDOFF, 1/4" HEX 6-32 1.188" LG MF STL
32	55.2284.0001	2	EA	CARD GUIDE, 3" LONG SNAP IN
33	55.6506.0024	2	EA	SPACER, 3/16" RND .1875" LG .141
34	55.6528.0001	2	EA	WASHER, #6 FLAT ZINC
35	55.6573.0001	2	EA	HARDENED SHAFT, 10 MM DIA X 200
36	55.6677.0033	4	EA	WASHER, .201" OD .125" ID .032" THK FLAT SS
	55.6699.0003	.830	FT	SLEEVING, 1/2" NOM.DIA. POLY (not shown)
-	55.6699.0004	1.16	FT	SLEEVING, 3/4" NOM.DIA. POLY (not shown)

VL3500 Spot Series Luminaire (continued)

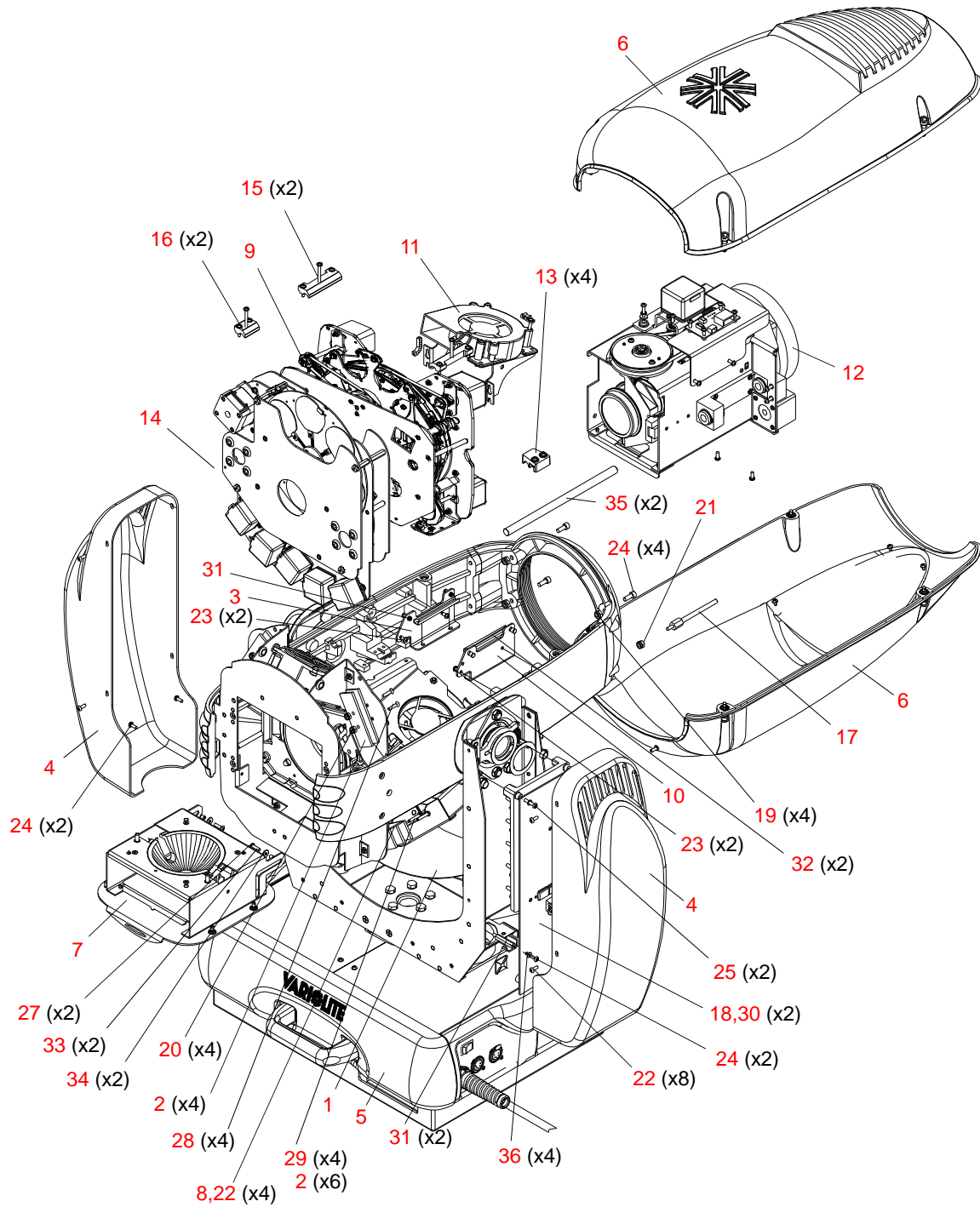


Figure 3-6: VL3500 Series Spot Luminaire

Generic Luminaire Assembly

21.9678.0010.02 Rev H (VL3500 Only)

Refer to [Figure 3-7](#)

No.	Item	Qty.	UM.	Description
1	21.9678.0600	1	EA	ASSY, HEAD STRUCTURE
2	21.9678.0700	1	EA	ASSY, YOKE
3	21.9678.0707	1	EA	ASSY, TILT PULLEY
3a	- 10.9678.0750	1	EA	TIMING PULLEY, 150 TOOTH
3b	- 10.9678.0754	1	EA	FLAG, CENTER OF TRAVEL, TILT
3c	- 53.6530.0006	3	EA	RIVET, 1/8"OD POP .188-.250GL
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	21.9678.0800.02	1	EA	ASSY, UPPER ENCLOSURE
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

Generic Luminaire Assembly (continued)

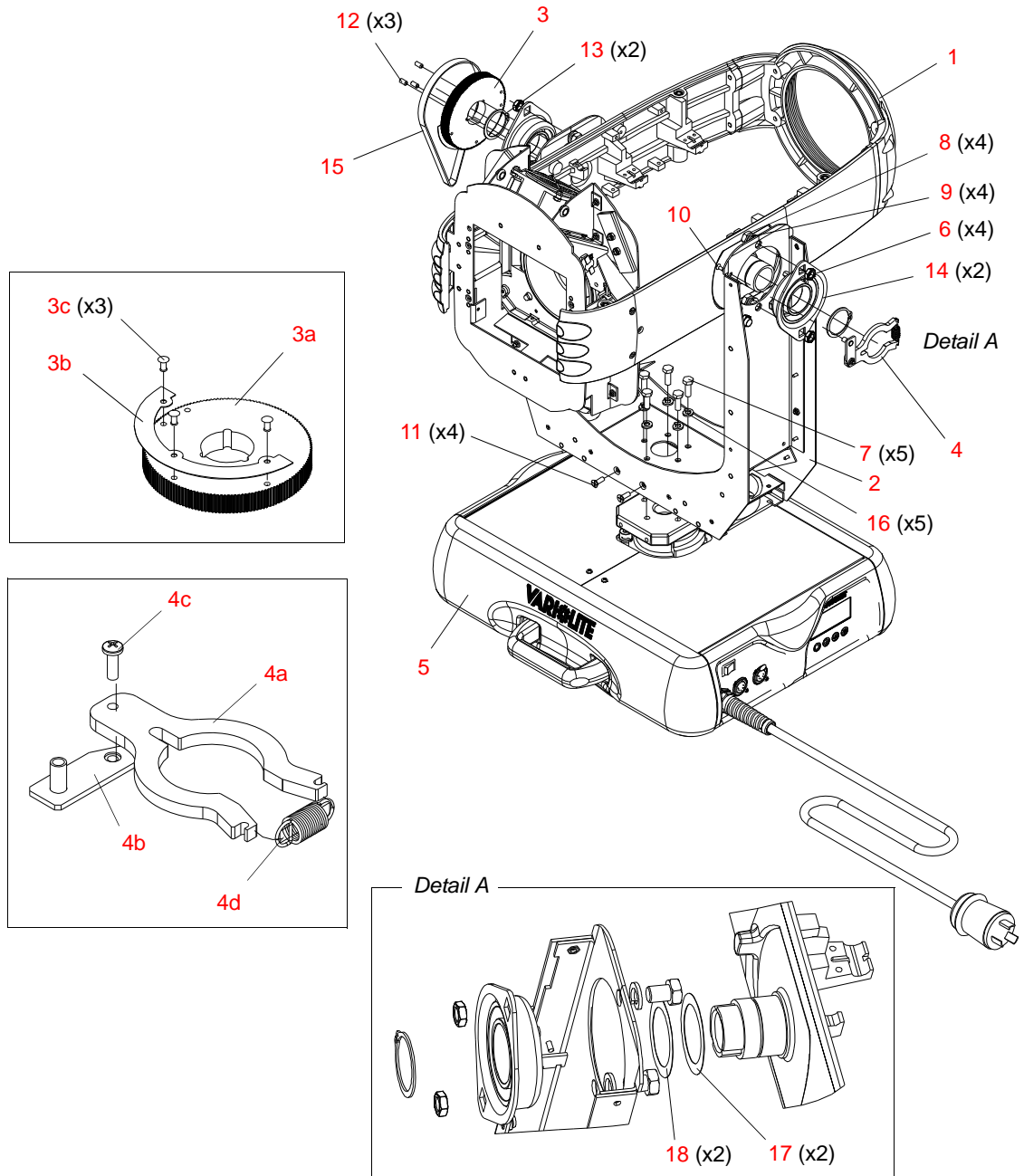


Figure 3-7: Generic Luminaire Assembly - VL3500 Only

Generic Luminaire (Quiet) Assembly

21.9678.0011.02 Rev C (VL3500Q Only)

Refer to [Figure 3-8](#)

No.	Item	Qty.	UM.	Description
1	21.9678.0601	1	EA	ASSEMBLY, HEAD STRUCTURE, QUIET
2	21.9678.0701	1	EA	ASSEMBLY, YOKE, QUIET
3	21.9678.0707	1	EA	ASSEMBLY, TILT PULLEY
3a	- 10.9678.0750	1	EA	TIMING PULLEY, 150 TOOTH
3b	- 10.9678.0754	1	EA	FLAG, CENTER OF TRAVEL, TILT
3c	- 53.6530.0006	3	EA	RIVET, 1/8"OD POP .188-.250GL
4	21.9678.0767	1	EA	ASSEMBLY, STABILIZER
4a	- 10.9678.0757	1	EA	STABILIZER, 1.377 DIA
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	21.9678.0801.02	1	EA	ASSEMBLY, UPPER ENCLOSURE, QUIET
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

Generic Luminaire (Quiet) Assembly (continued)

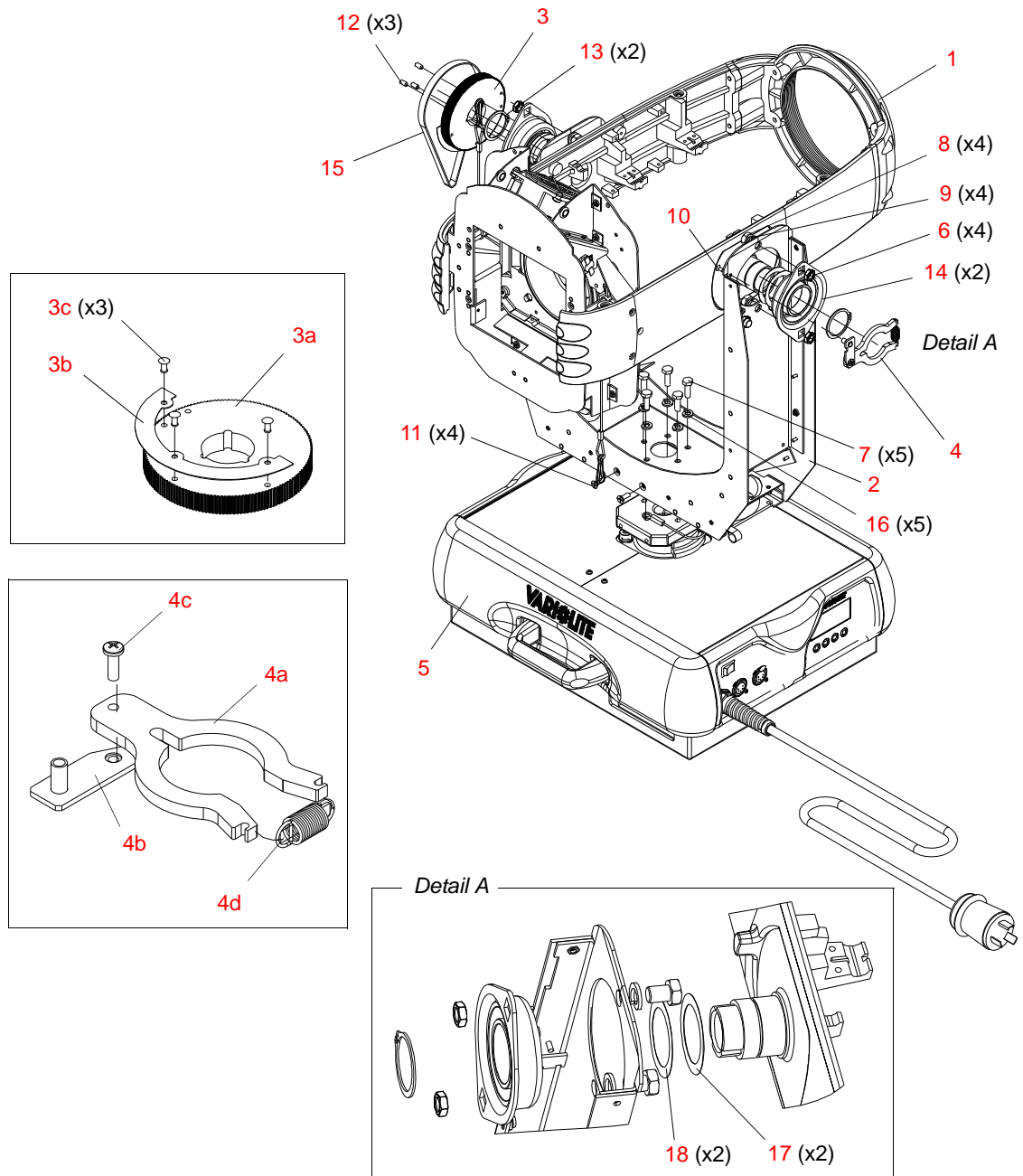


Figure 3-8: Generic Luminaire Assembly - VL3500Q Only

Head Assembly

Head Structure (Standard) Assembly

21.9678.0600 Rev C (VL3500 Only)

Refer to [Figure 3-1](#)

No.	Item	Qty.	UM.	Description
1	10.9678.8620	1	EA	FRONT CASTING
2	12.9678.8623	1	EA	RIGHT SIDE RAIL, MACHINED
3	12.9678.8625	1	EA	LEFT SIDE RAIL, MACHINED
4	21.9678.0615	1	EA	ASSY, BACKEND
5	53.6515.0001	6	EA	SCREW, 10-32 X 3/4" SCB CAP
6	53.6515.1000	1	EA	SCREW, 10-32 X 1" SOCKET CAP BLACK
7	53.6615.1125	3	EA	SCREW, 10-32 X 1.25" SOCKET CAP BLACK

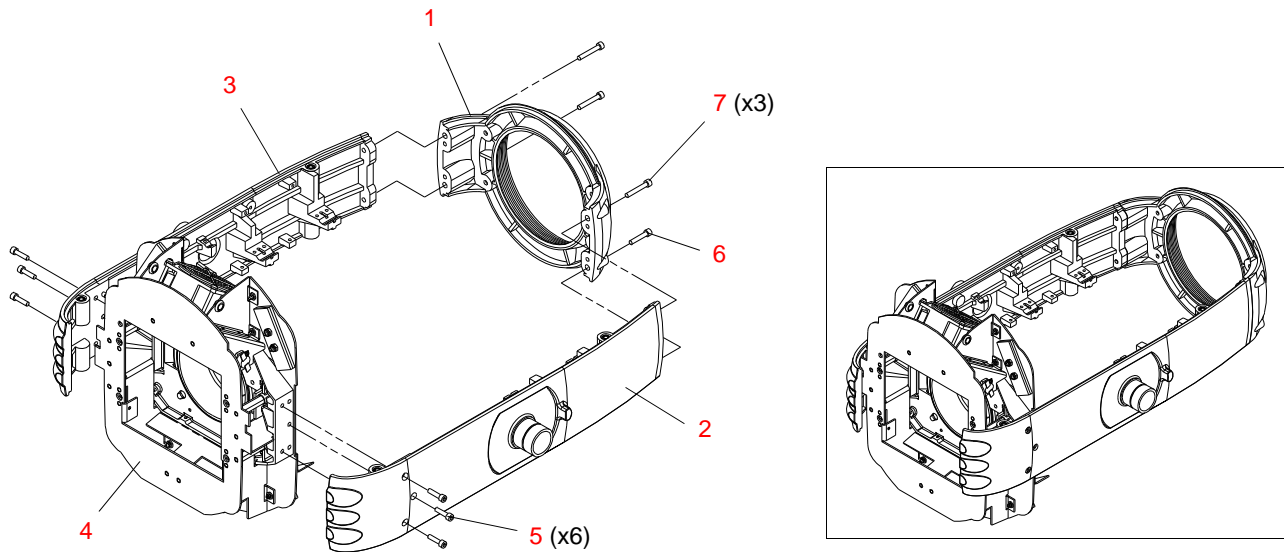


Figure 3-1: Head Structure Assembly - VL3500 Only

Head Structure (Quiet) Assembly

21.9678.0601 Rev 0 (VL3500Q Only)

Refer to [Figure 3-1](#)

No.	Item	Qty.	UM.	Description
1	10.9678.8620	1	EA	FRONT CASTING
2	12.9678.8623	1	EA	RIGHT SIDE RAIL, MACHINED
3	12.9678.8625	1	EA	LEFT SIDE RAIL, MACHINED
4	21.9678.0616	1	EA	ASSEMBLY, BACK CAP
5	53.6515.0001	6	EA	SCREW, 10-32 X 3/4" SCB CAP
6	53.6515.1000	1	EA	SCREW, 10-32 X 1" SOCKET CAP BLACK
7	53.6615.1125	3	EA	SCREW, 10-32 X 1.25" SOCKET CAP BLACK

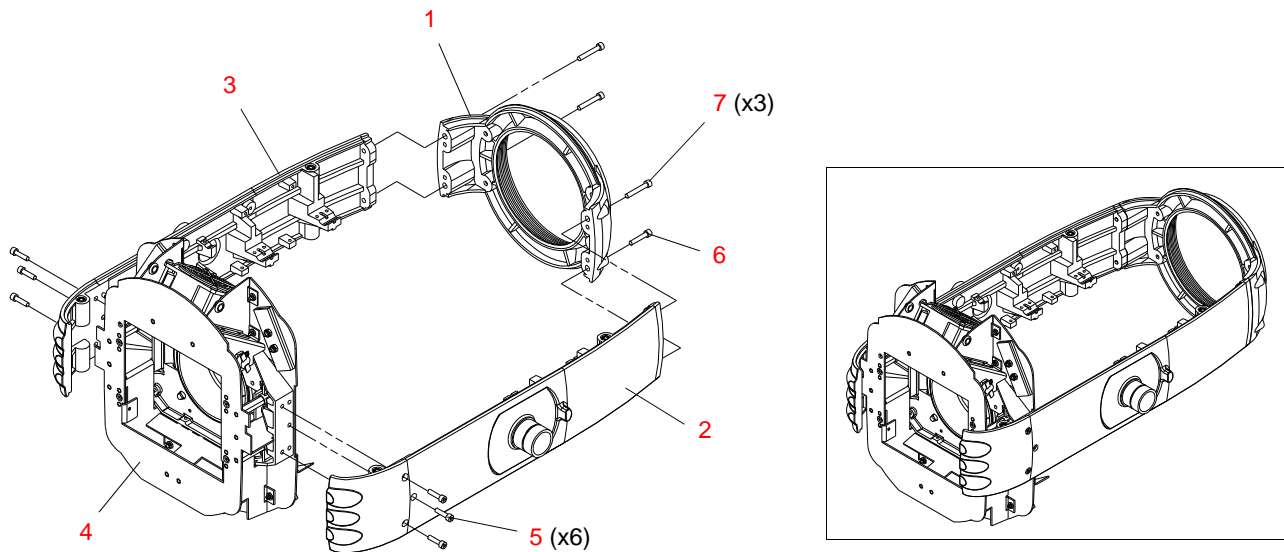


Figure 3-2: Head Structure Assembly - VL3500Q Only

Head Cover Assembly

21.9678.8611 Rev -

Refer to [Figure 3-3](#)

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	12.9678.8610	1	EA	HEAD COVER, PAINTED
6	53.6558.0003	1	EA	SCREW, 6-32 X 3/8"LG PPZ PLASTIC THD ROLL
7	53.5655.0250	4	EA	SCREW, 6-32 X 1/4"LG PPZ PLASTIC THD ROLL
8	55.2233.0003	4	EA	RETAINER, PUSH-ON TYPE
9	55.2233.0775	4	EA	STUD, 1/4 TURN OPR.775L STEEL
10	55.6528.0001	4	EA	WASHER, #6 FLAT ZINC

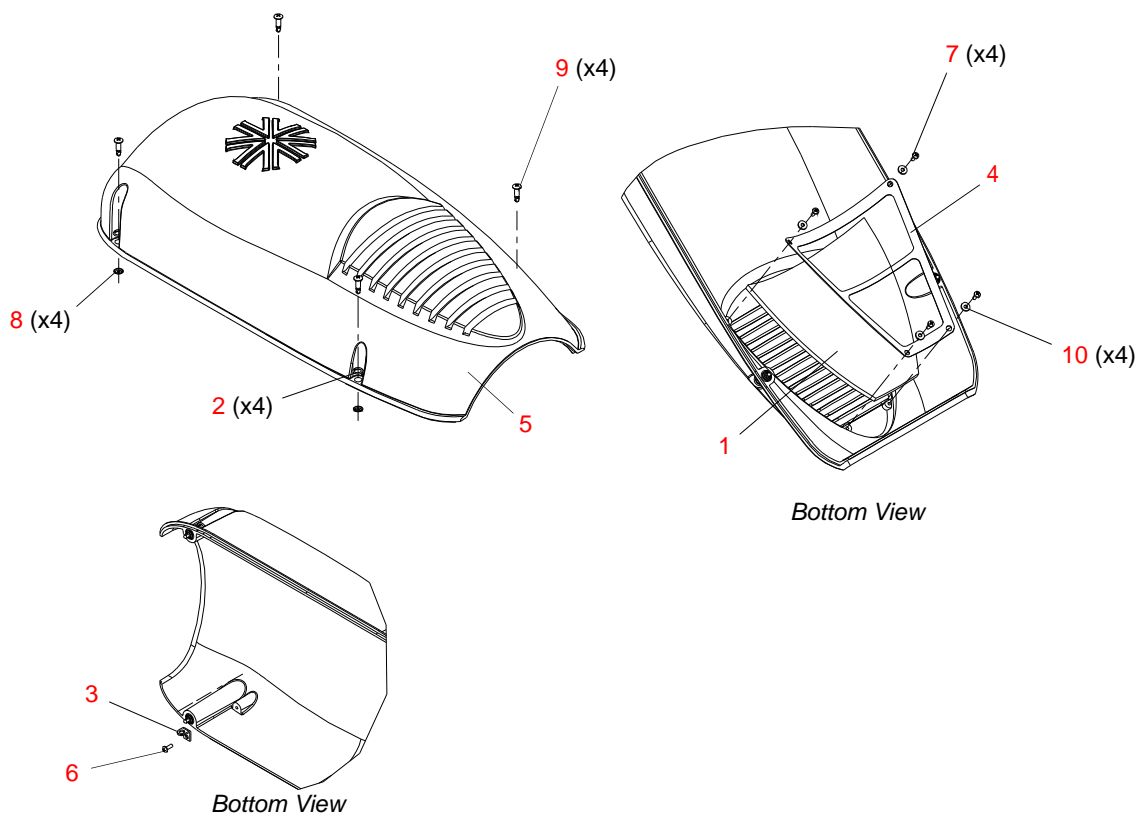


Figure 3-3: Head Cover Assembly

Backcap Assembly

21.9678.0615 Rev S (VL3500)

21.9678.0616 Rev G (VL3500 Q)

Refer to [Figure 3-4](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0631	1	EA	SEPARATION BULKHEAD
2	10.9678.8635	1	EA	EXHAUST BULKHEAD
3	10.9678.0637	2	EA	CLIP, RETRO-REFLECTOR
4	10.9678.0638	1	EA	AIR DIVERTER, STROBE MOTOR
5	10.9678.0653	1	EA	LIGHT BAFFLE, EXHAUST
6	12.9678.7152	1	EA	REFLECTOR, RETRO SPHERICAL COATED
7	12.9678.0627	1	EA	AFT BULKHEAD, MACHINED
8	21.9678.0619	1	EA	FAN ASSY, 80MM
9	21.9678.0673	2	EA	TETHER ASSY, COVER
10	22.9678.3655	1	EA	DUCT ASSY, 80MM FAN
11	22.9678.0639	1	EA	UV FILTER BULKHEAD ASSY
	22.9678.0631	1	EA	UV FILTER BULKHEAD ASSY (VL3500 QUIET)
-	25.9678.0012	1	EA	CABLE ASSY, AC FAN YOKE TO FAN (not shown)
-	25.9678.0014	1	EA	CABLE ASSY, BACKCAP INTERLOK TO GOBO INTERLOK (not shown)
-	25.9678.0691	1	EA	CABLE ASSY, OT SWITCH (not shown)
	25.9678.0690	1	EA	CABLE ASSY, OT SWITCH (VL3500 QUIET) (not shown)
12	53.2004.0002	6	EA	NUT, 8-32 KEPS ZINC PLATE
13	53.6519.0001	2	EA	SCREW, 4-40 X 5/8" PPZ
14	53.6545.0009	4	EA	SCREW, 8-32 X 1.375"LG PFZ
15	53.6523.0001	1	EA	SCREW, 6-32 X 3/8" SCB
16	53.6558.0007	6	EA	SCREW, 6-32 X 1/4" PPZ SEMS
17	53.6559.0001	4	EA	SCREW, 4-40 X 1/4" PFZ
18	53.6609.0001	6	EA	SCREW, 6-32 X 3/8" PFZ
-	55.6538.0001	2	EA	WASHER, #4 LOCK, INTERNAL TOOTH
19	53.6613.0001	1	EA	SCREW, 6-32 X 1/2" PPZ
20	53.6614.0003	2	EA	SCREW, 6-32 X 5/8" PFZ
21	53.6616.0001	2	EA	SCREW, 6-32 X 3/4" PPZ
22	53.6682.0002	2	EA	SCREW, 4-40 X 1/4"LG PPZ SEMS
23	55.2125.0003	4	EA	STANDOFF, 3/8"HEX 8-32 1.500"L
24	55.6538.0004	7	EA	WASHER, .750"OD .312"ID .125TH
25	55.6541.0008	1	EA	GROMMET, 1/2"ID 7/8"OD 3/4"GRV

No.	Item	Qty.	UM.	Description
26	55.6706.0001	4	EA	GROMMET, 9/32"ID 9/16"OD 1/4T
27	74.1099.0001	1	EA	SWITCH, MINIATURE 5AMP 150DEG
-	10.9678.0680	1	EA	INSULATOR, TEFLON TO-220 (not shown)
-	53.2200.0004	1	EA	NUT, 4-40 KEPS SS
28	53.6613.0004	3	EA	SCREW, 6-32 X 1/2" SCZ
29	10.9678.1645	1	EA	FAN SHIELD, LAMP COOLING

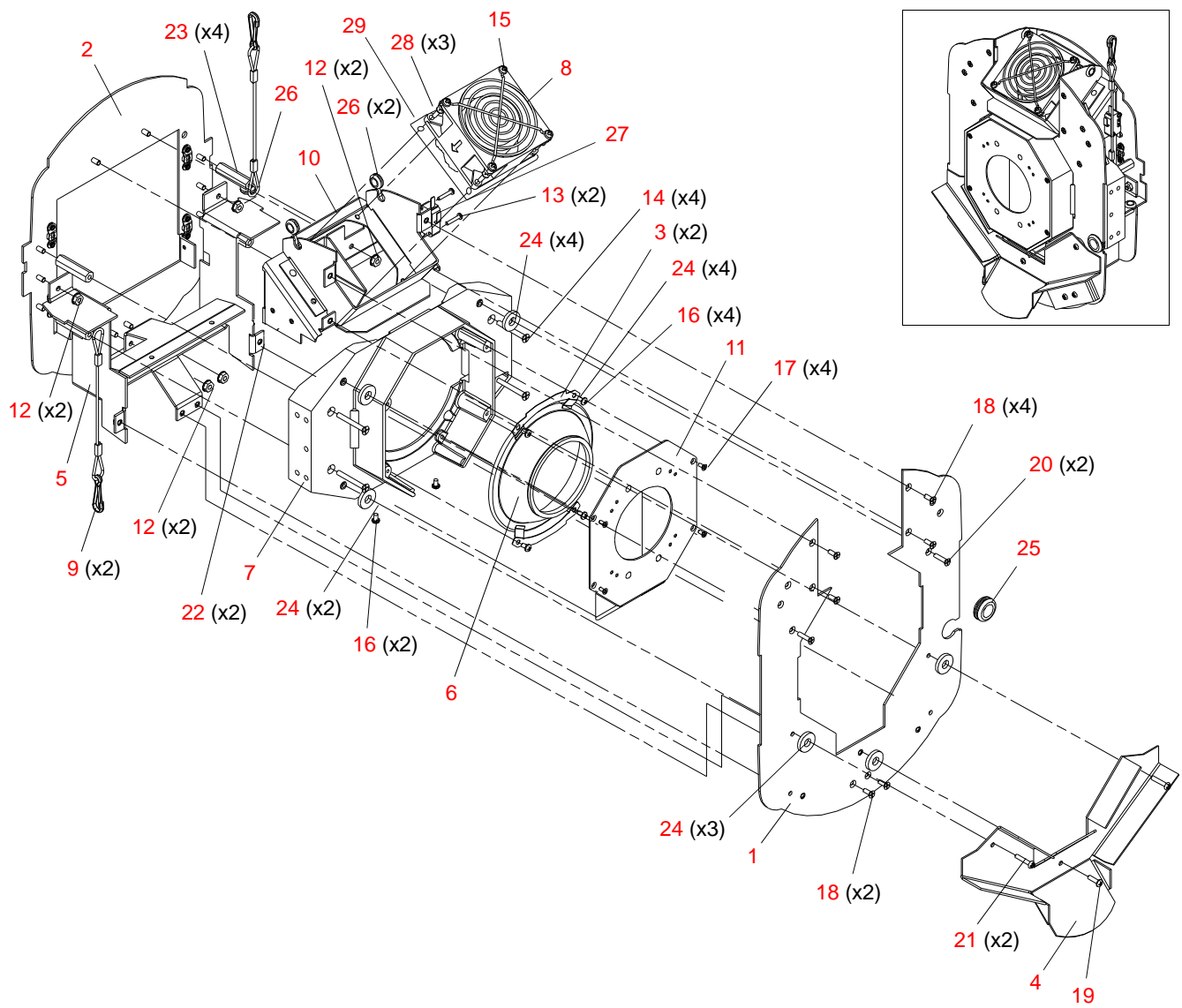


Figure 3-4: Backcap Assembly - VL3500 & VL3500 Q

80mm Fan Assembly

21.9678.0619 Rev B (VL3500 and VL3500 Quiet)

Refer to [Figure 3-5](#)

No.	Item	Qty.	UM.	Description
1	40.7145.0004	1	EA	FAN, TUBEAXIAL 80 X 80 X 38MM 230V 28 CFM
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

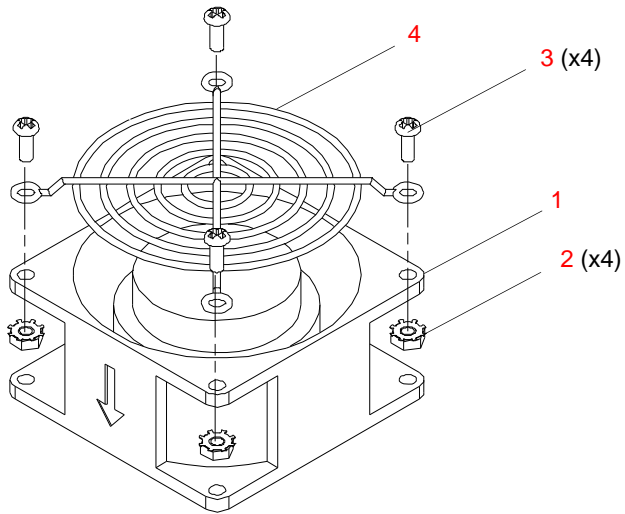


Figure 3-5: 80mm Fan Assembly - VL3500 and VL3500 Quiet

UV Filter Bulkhead Assembly

22.9678.0617 Rev A (VL3500 Quiet)

22.9678.0639 Rev C (VL3500 Only)

Refer to [Figure 3-6](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0634	1	EA	UV FILTER BULKHEAD
2	10.9678.0648	2	EA	CLIP, UV GLASS
3	41.9678.1160	1	EA	UV/IR FILTER, 3.00" X 3.00" (VL3500 QUIET)
	41.9678.0608	1	EA	UV/IR FILTER, 3.00" X 3.00"
4	53.6530.0002	4	EA	RIVET, 1/8 OD POP, .063-.125 GRIP, ALUM

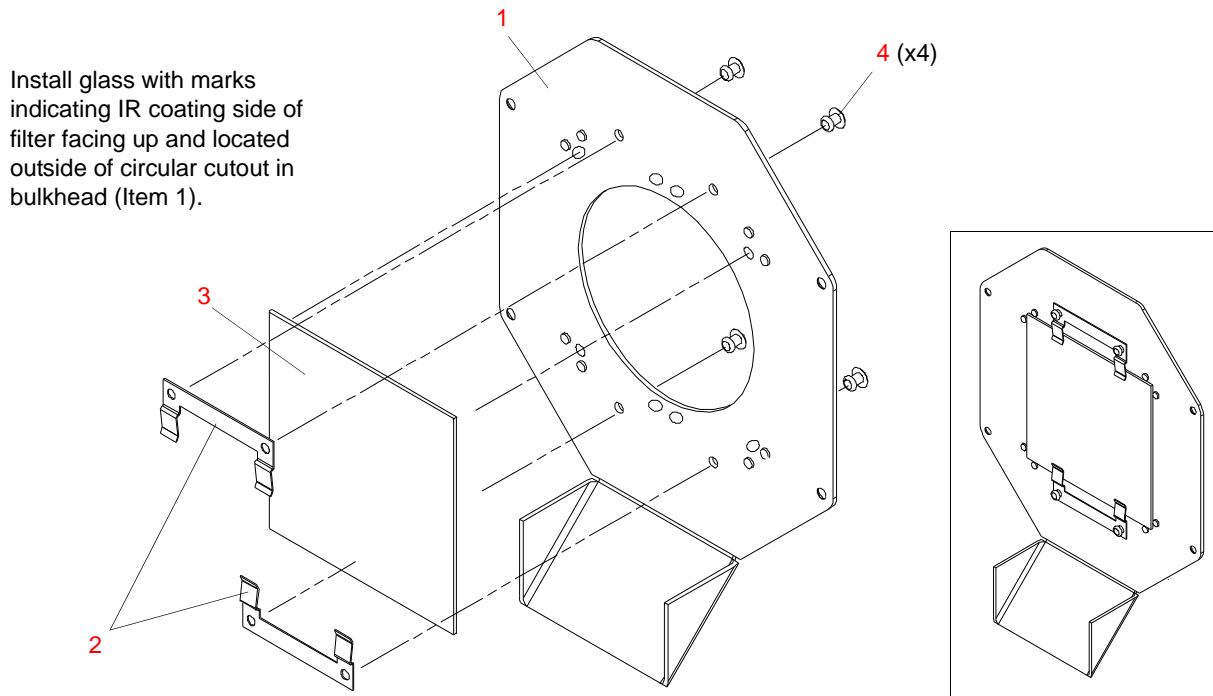


Figure 3-6: UV Filter Bulkhead Assembly - VL3500 and VL3500 Q

Notes

Gobo/Shutter Assembly

21.9678.1200 Rev G

Refer to [Figure 3-7](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0338	1	EA	PULLEY, ZOOM MOTOR
2	10.9678.0225	6	EA	SHAFT, GOBO WHEEL
3	10.9678.0231	2	EA	PULLEY, MOTOR GOBO WHEEL DRIVE
4	10.9678.0232	1	EA	PULLEY, INSEX DRIVE 64 GROOVE
5	10.9678.0246	3	EA	ADJUST PLATE, MOTOR
6	10.9678.1215	1	EA	BULKHEAD, SHUTTER MODULE FRONT
7	10.9678.1244	1	EA	MOUNT, INDEX SENSOR LONG
8	10.9678.1558	1	EA	SPRING, TENSION, SHUTTER ROTATE
9	21.9678.0243	2	EA	ASSY, MOTOR LONG SHAFT
10	21.9678.1205	1	EA	ASSY, ROTATING GOBO WHEEL, SHUTTER
11	21.9678.1510	1	EA	ASSY, SHUTTER
12	21.9678.1555	2	EA	ASSY, ROLLER PIVOT, ROTATE
13	22.9678.1550	2	EA	ASSY, SHUTTER ROTATE ROLLER
14	24.9663.1231	2	EA	PCB ASSY, INDEX SENSOR
-	25.9678.1209	1	EA	CABLE ASSY, GOBO/ROTATE INTERCONNECT (Not Shown)
15	44.9663.1202	1	EA	MOTOR, 17 2.42" SHAFT 11.8MH
16	44.9663.1766	1	EA	MOTOR, 17 1.24" SHAFT 11.8MH 5
17	53.5558.0125	8	EA	SCREW, 8-32 X .125" SET SS
18	53.5638.0252	6	EA	SCREW, 6-32 X 3/8" PFZ UNDERCUT HD
19	53.6520.0375	2	EA	SCREW, 4-40 X 3/8" PPZ SEMS
20	53.6558.0001	4	EA	SCREW, 6-32 X 3/8" PPZ
21	53.6558.0009	4	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS
22	53.6609.0001	4	EA	SCREW, 6-32 X 3/8" PFZ
23	53.6613.0001	8	EA	SCREW, 6-32 X 1/2" PPZ
24	53.6682.0002	2	EA	SCREW, 4-40 X 1/4" PPZ SEMS
25	54.1259.0004	2	EA	BEARING, FLANGED .25" ID .625" OD .0005 RP
26	54.2062.0001	1	EA	BELT, TIMING MXL .080" PITCH 160 GRV 1/8" W POL/KVLR
27	55.2178.0001	4	EA	CABLE ANCHOR MOUNT, #8 SCREW
28	55.6506.0001	1	EA	SPACER, 3/8" RND .297" LG .257" ID
29	55.6506.0030	1	EA	SPACER, 3/8" RND 3/8" LG .257" ID THRU ALUM
30	55.6506.0032	1	EA	SPACER, 3/8" RND 1-1/4" LG .257" ID THRU AL

No.	Item	Qty.	UM.	Description
31	55.6506.0033	4	EA	SPACER, 3/8" RND 1-1/8" LG .257"ID THRU AL
32	55.6520.0001	4	EA	WASHER WAVE SPRING .265" ID .367" OD .006" THK

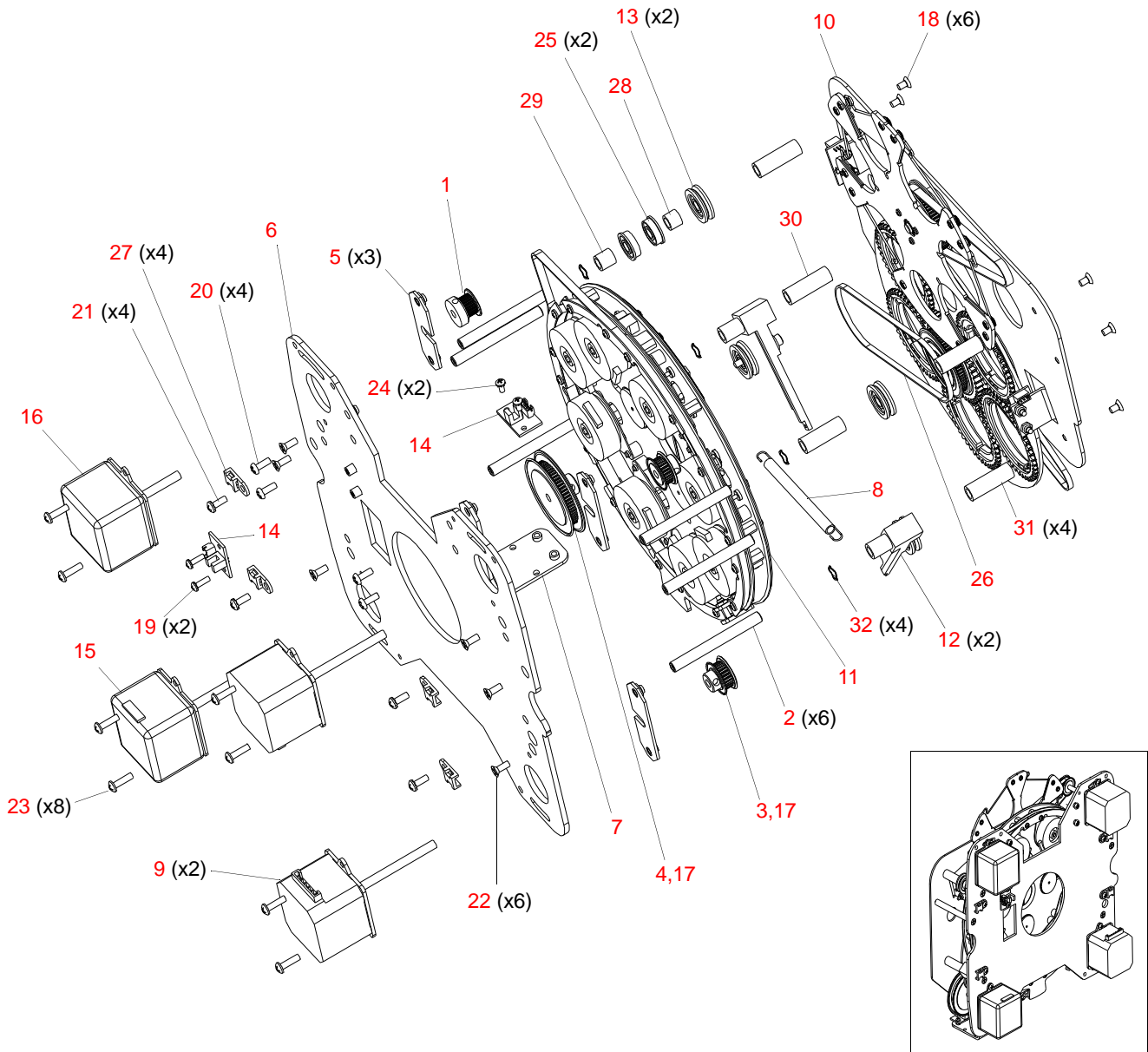


Figure 3-7: Gobo/Shutter Assembly

Rotating Gobo Wheel Assembly, Shutter

21.9678.1205 Rev B

Refer to [Figure 3-8](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1216	1	EA	BULKHEAD, SHUTTER MODULE, REAR
2	10.9678.1225	2	EA	SHAFT, GOBO WHEEL, CANTILEVER
3	21.9678.1210	1	EA	ASSY, ROTATING GOBO WHEEL
4	21.9678.1410	1	EA	ASSY, FIXED GOBO WHEEL
5	24.9678.1240	2	EA	ASSY, PCB, WHEEL POSITION SENSOR
6	53.6520.0001	4	EA	SCREW, 4-40 X 3/8" PPZ
7	53.6601.0001	6	EA	SCREW, 4-40 X 3/16" PFZ
8	54.2007.0001	2	EA	RING, RETAINING, EXTERNAL, 1/4" SHAFT DIA
9	54.2057.0001	1	EA	TIMING BELT, MXL, 144 GRV, .188" WD, KEVLAR
10	54.2061.0001	1	EA	TIMING BELT, MXL, 144 GRV, .125" WD, KEVLAR
11	55.2110.0002	2	EA	WASHER, .400" OD, .260" ID, .010" THK FLAT SS
12	55.6506.0034	1	EA	SPACER, .375" OD, .257" ID, .063" LG, AL
13	55.6520.0001	2	EA	WASHER, WAVE SPRING, .265" ID, .367" OD, .006" THK

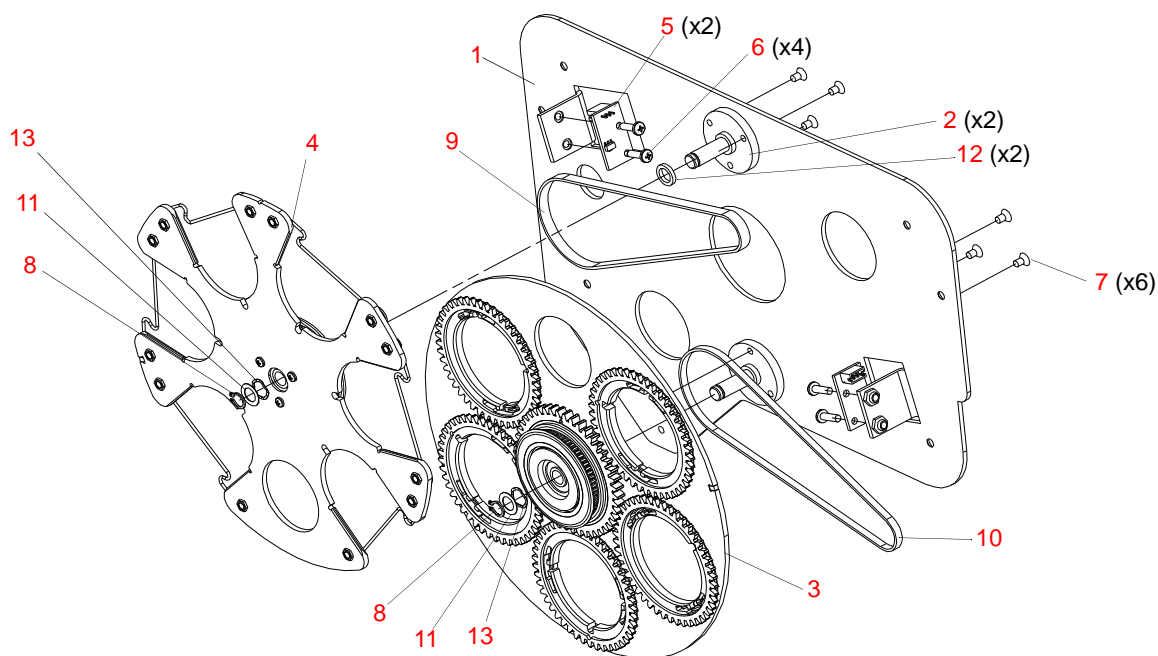


Figure 3-8: Rotating Gobo Wheel Assembly

Fixed Gobo Wheel Assembly

21.9678.1410 Rev B

Refer to [Figure 3-9](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0250	1	EA	MAGNET TAPE .375"W x .625" L x .0035" THICK
2	10.9678.1412	1	EA	PLATE, ROTATING GOBO WHEEL
3	10.9678.1425	6	EA	FIXED GOBO RETAINING WIRE
4	22.9678.1415	1	EA	ASSY, PULLEY, FIXED WHEEL HUB
5	53.6601.0002	12	EA	SCREW, 4-40 X 3/16" PTHZ
6	53.6650.0001	3	EA	SCREW, 2-56 X 5/16" PPZ
7	55.2256.0001	1	EA	MAGNET, 2:17 SMCO 2MM X 2MM X 3MM
8	55.3301.0008	6	EA	WASHER, #8 FLAT SS
9	55.6568.0078	6	EA	SPRING, CURVED DISK .322" OD, .174" ID .005 T

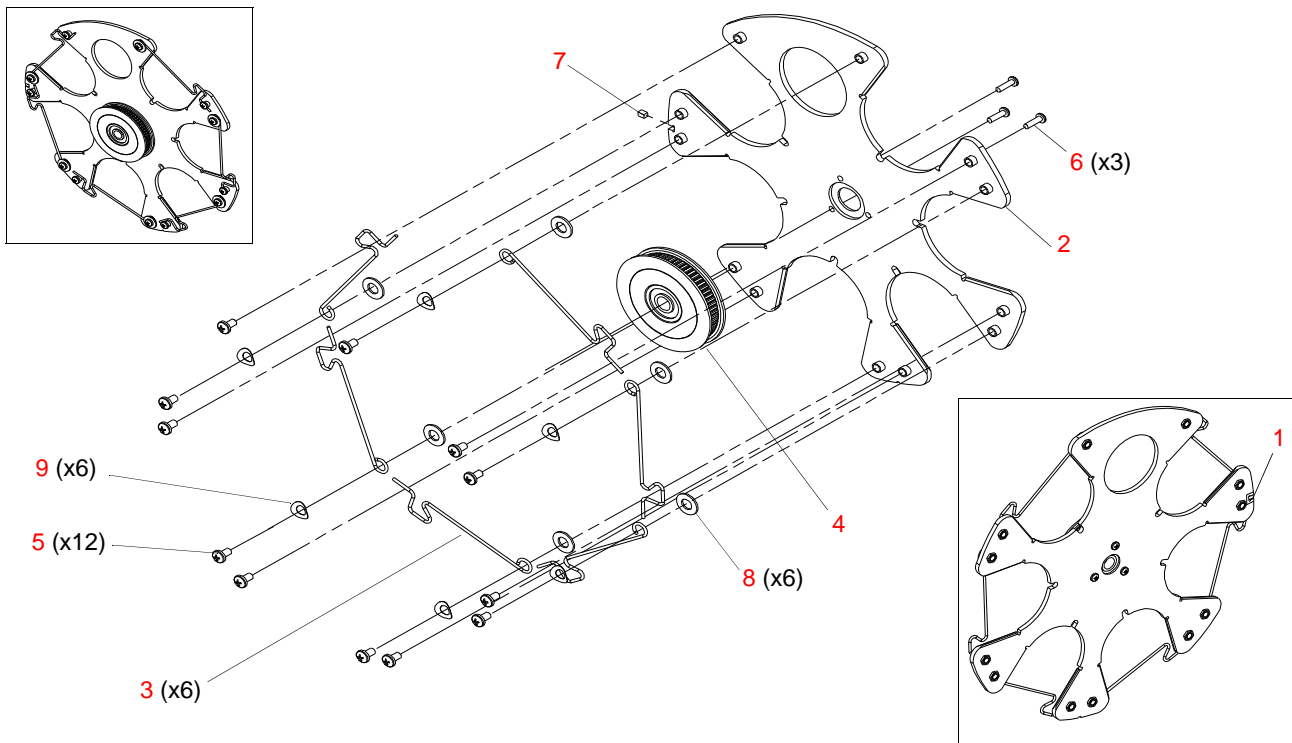


Figure 3-9: Fixed Gobo Wheel Assembly

Rotating Gobo Wheel Assembly

21.9678.1210 Rev 0

Refer to [Figure 3-10](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0250	1	EA	MAGNET TAPE .375"W x .625" L x .0035" THICK
2	10.9663.1211	10	EA	SPACER, TEFLON GOBO GEAR
3	10.9663.1240	5	EA	BEARING, GOBO WHEEL BORE
4	10.9678.0220	1	EA	PLATE, ROTATING GOBO WHEEL
5	10.9678.0224	5	EA	RETAINING RING, PLANET
6	12.9678.1223	1	EA	SUN GEAR, MOLDED, WITH FLANGE, MODIFIED
7	22.9678.0230	5	EA	ASSY, PLANET GEAR
8	22.9678.1234	1	EA	ASSY, PULLEY GOBO WHEEL HUB
9	22.9678.1235	1	EA	ASSY, GOBO WHEEL HUB, INDEX
10	53.6659.0009	3	EA	SCREW, 2-56 X 7/16" PPZ
11	55.2256.0001	1	EA	MAGNET, 2:17 SMCO 2MM X 2MM X 3MM

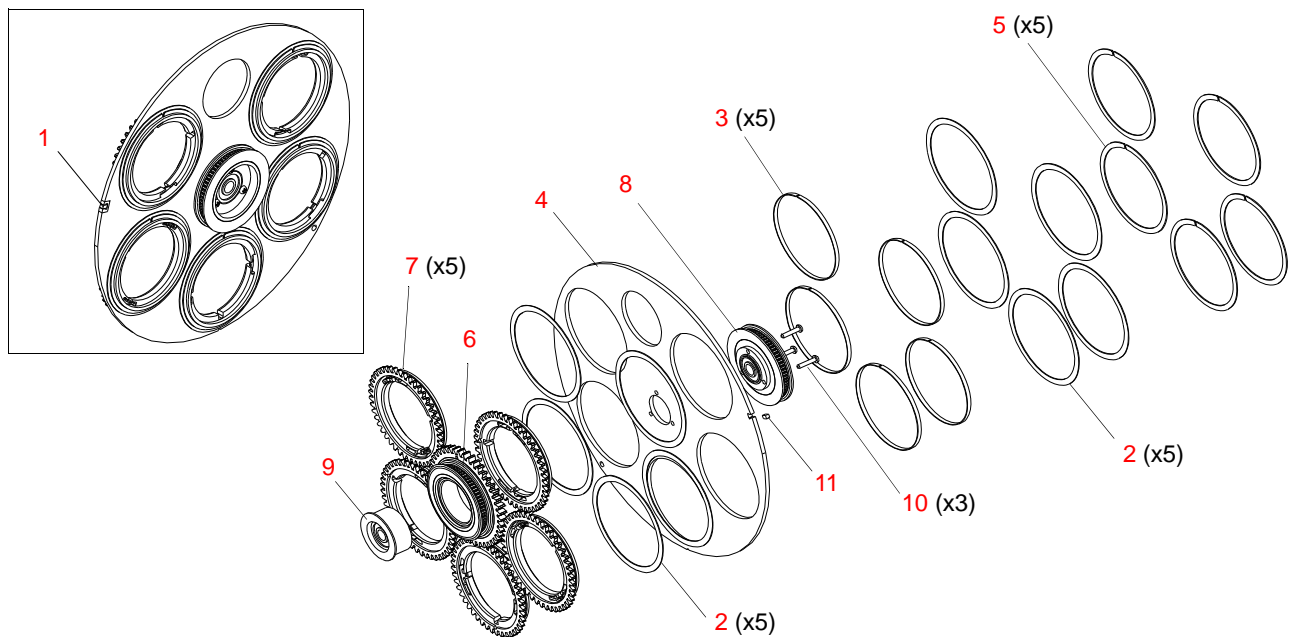


Figure 3-10: Rotating Gobo Wheel Assembly

Roller Pivot Rotate Assembly

21.9678.1555 Rev 0

Refer to [Figure 3-11](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1551	1	EA	ROLLER PIVOT, SHUTTER ROTATE
2	22.9678.1550	1	EA	ASSY, SHUTTER ROTATE, ROLLER
3	53.6609.0001	1	EA	SCREW, 6-32 X 3/8" PFZ

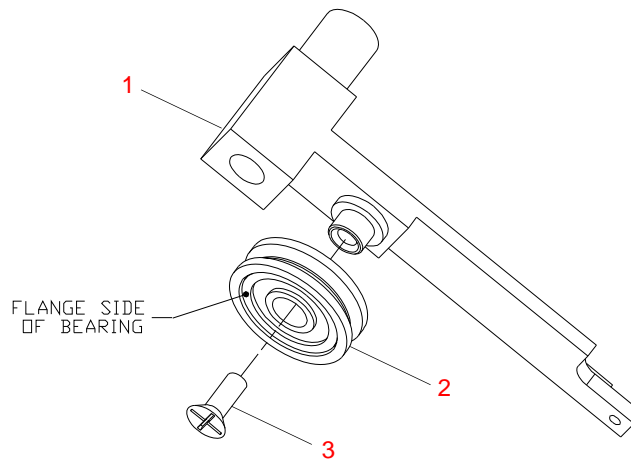


Figure 3-11: Roller Pivot Rotate Assembly

Shutter Rotate Roller Assembly

22.9678.1550 Rev B

Refer to [Figure 3-12](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1552	1	EA	ROLLER SHUTTER ROTATE
2	54.1259.0005	1	EA	BEARING, FLANGED, .25" ID, .625" OD, .0001

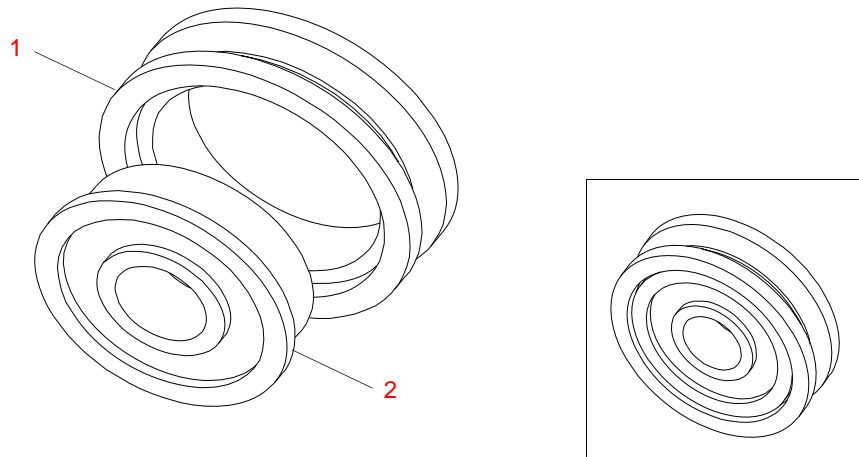


Figure 3-12: Shutter Rotate Roller Assembly

Long Shaft Motor Assembly

21.9678.0243 Rev 0

Refer to [Figure 3-13](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0330	1	EA	PLATE, MOTOR ADAPTER
2	44.9678.0249	1	EA	MOTOR, STEPPER 42MM X 34MM 60MM SHAFT
3	53.6513.0002	4	EA	SCREW, 3MM X 5MM LG PFZ METRIC

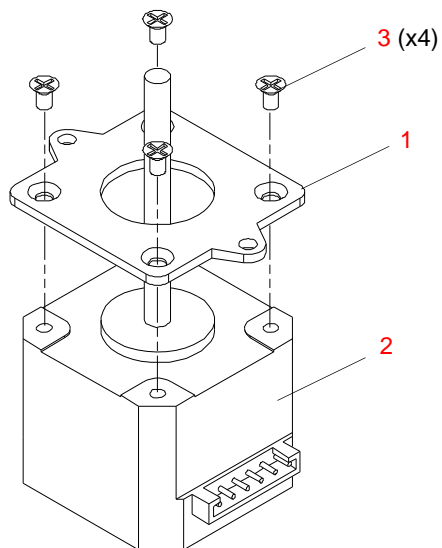


Figure 3-13: Long Shaft Motor Assembly

Shutter Assembly

21.9678.1510 Rev G

Refer to [Figure 3-14](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1526	2	EA	PIVOT, SHUTTER BLADE, SHORT
2	10.9678.1527	2	EA	PIVOT, SHUTTER BLADE, LONG
3	10.9678.1528	16	EA	CAM STOP
4	10.9678.1529	1	EA	CABLE CLAMP, SHUTTER
5	10.9678.1532	4	EA	GLIDE, BLADE PIVOT
6	10.9678.1534	8	EA	ACTUATOR ARM, BEARING, SHUTTER
7	10.9678.1535	1	EA	GLIDE SHEET, SHUTTER, BOTTOM
8	10.9678.1536	1	EA	GLIDE SHEET, SHUTTER, MIDDLE
9	10.9678.1537	4	EA	SPACER, SHUTTER BLADE
10	10.9678.1540	4	EA	BELT RING SECTOR
11	10.9678.1541	7	EA	BELT RING FLANGE SECTOR
12	10.9678.1542	1	EA	BELT RING FLANGE STOP
13	10.9678.1543	1	EA	BELT CLAMP, BOTTOM
14	10.9678.1544	1	EA	BELT CLAMP, TOP
15	12.9678.1562	2	EA	BLADE, SHUTTER, BOTTOM, COATED
16	12.9678.1565	2	EA	BLADE, SHUTTER, TOP, COATED, PAINTED
17	21.9678.1515	1	EA	ASSY, SHUTTER MOTOR PLATE
18	53.2202.0004	6	EA	NUT, 4-40 HEX SS NYLON INSERT
19	53.6536.0625	2	EA	SCREW, 4-40 X 5/8" PFZ
20	53.6567.0001	16	EA	SCREW, 4-40 X 1/2" PPZ
21	53.6659.0005	4	EA	SCREW, 2-56 X 1/4" PFZ
22	53.6659.0014	16	EA	SCREW, 2-56 X 3/8" PFZ
23	53.6596.0001	8	EA	SCREW, 4-40 X 5/16" PPZ
24	53.6664.0001	8	EA	STANDOFF, 1/4" HEX 4-40 3/8" LG FF
25	53.6667.0004	16	EA	SCREW, 6-32 X 1/8" LG, SET, BLACK
26	54.1209.0003	8	EA	BEARING, .093" ID, 3/16" OD, FLANGED
27	54.2064.0001	1	EA	TIMING BELT, MXL 330 GRV, .188" WD, KEVLAR
28	55.2186.0001	2	EA	CABLE TIE, .10" X 4", SMALL (not shown)

Shutter Assembly (continued)

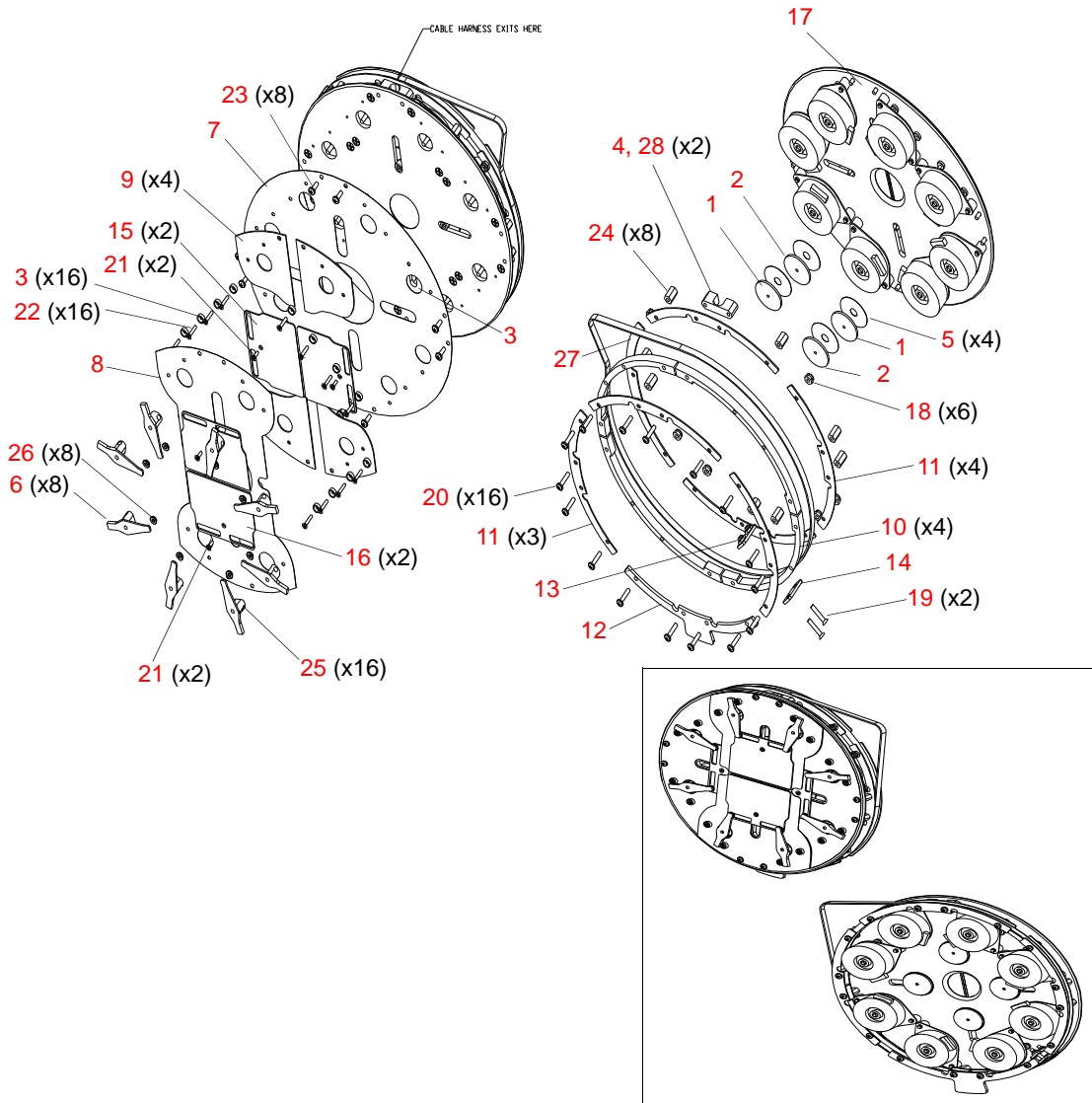


Figure 3-14: Shutter Assembly

Shutter Motor Disk Assembly

21.9678.1515 Rev E

Refer to [Figure 3-15](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1560	1	EA	BASE PLATE, SHUTTER
2	44.9678.1517	8	EA	MOTOR, PANCAKE, SIZE 16, .47" SHAFT
3	53.2202.0030	4	EA	NUT, M3 X .5 HEX NYLOC ZINC
4	53.6513.0029	8	EA	SCREW, M3 X 12 PFZ
5	53.6513.0045	8	EA	SCREW, M3 X 16 PFZ
6	55.2178.0001	4	EA	CABLE ANCHOR, #8 SCREW MOUNT
7	55.2186.0001	10	EA	CABLE TIE, .10" X 4" SMALL
8	10.9678.1566	8	EA	SPACER, MOTOR MOUNT
9	25.9678.1717	1	EA	CABLE ASSEMBLY, SHUTTER DISK

Shutter Motor Disk Assembly (continued)

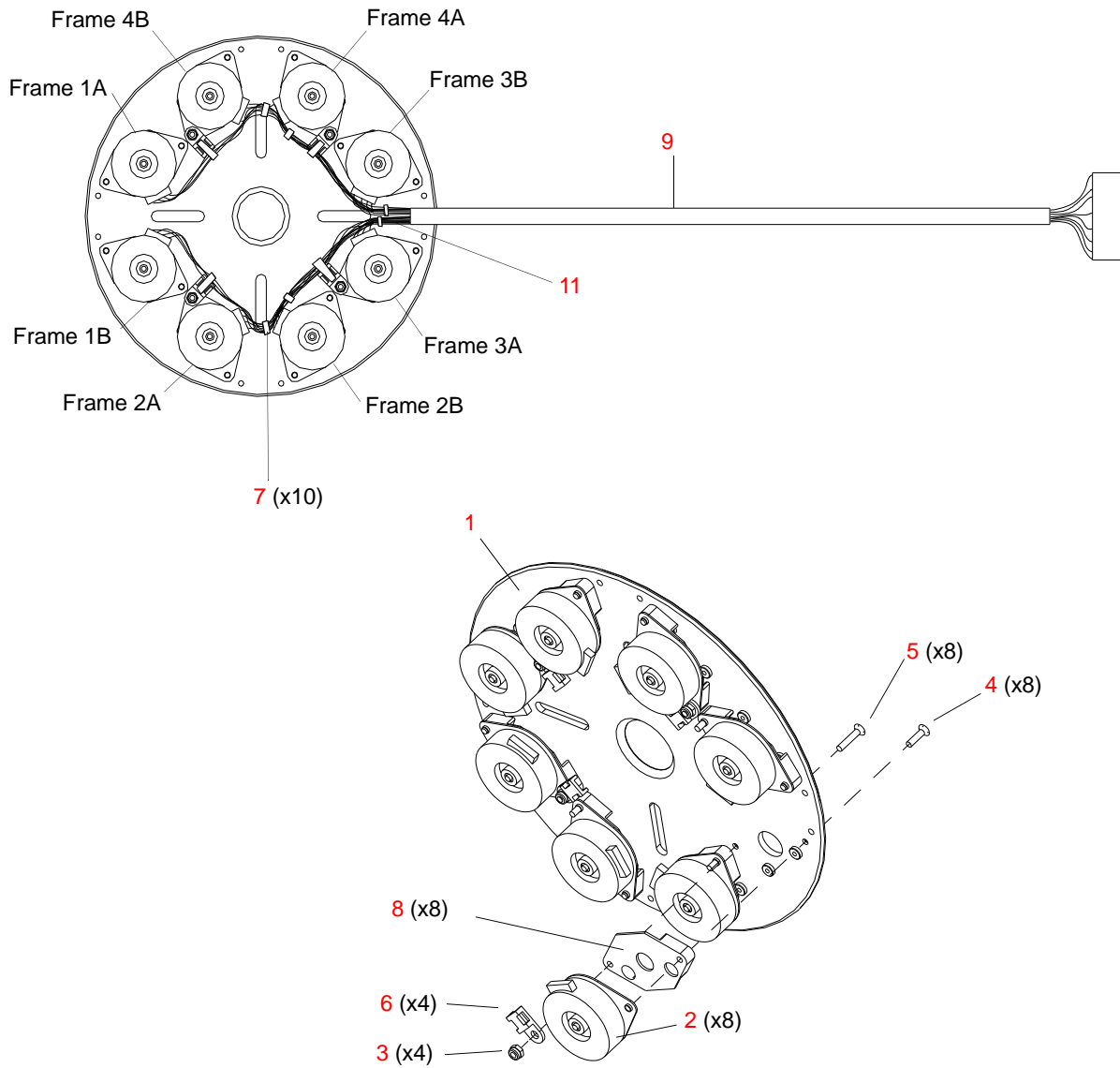


Figure 3-15: Shutter Motor Disk Assembly

Hot Box Assembly

21.9678.8640.01 Rev E (Spot)

21.9678.8698.01 Rev C (Quiet Spot)

Refer to [Figure 3-16](#)

No.	Item	Qty.	UM.	Description
1	04.9678.0042	1	EA	LABEL, VL3000 BACKCAP
	10.9678.0043	1	EA	LABEL, BACKCAP, VL3000 QUIET
2	10.9678.0641	1	EA	HOT BOX
3	10.9678.0642	1	EA	BACKCAP PLATE
4	10.9678.0643	1	EA	LAMP ADJUST STOP
5	10.9678.0645	3	EA	KNOB, LAMP ADJ MOLDED
6	10.9678.0646	1	EA	TILT PLATE, XYZ ADJUSTMENT
7	10.9678.1648	4	EA	GASKET, PRIMARY REFLECTOR
8	10.9678.2647	4	EA	CLAMP, PRIMARY REFLECTOR
9	55.6759.0003	4	EA	STANDOFF, PEM 6-32 X .562 LG, SST
10	55.6568.0077	4	EA	SPRING, COMPRESSION, 0.035 " WIRE, 0.300 DIA X .625" LG
11	12.9678.7151	1	EA	REFLECTOR, PRI 40 LUNE DUAL CURVATURE
-	25.9661.1522	1	EA	CABLE ASSY, HEAD TO BACKCAP GROUND (Not Shown)
-	25.9678.0789	1	EA	CABLE ASSY, IGNITOR TO LAMP SOCKET (Not Shown)
12	53.6582.0001	4	EA	SCREW, 6-32 X 3/4" PFZ
13	53.2030.0001	3	EA	NUT, ACORN 10-32THD 3/8 WIDE, 3/16 THD DP BLK ZINC
14	53.5508.0375	2	EA	SCREW, 8-32 X 3/8" PPSS
15	53.6530.0013	8	EA	RIVET, 1/8"OD .063" - .125"GL CSK HD ALUM
16	55.2233.0003	4	EA	RETAINER, PUSH-ON TYPE
17	55.2233.0006	4	EA	STUD, 1/4 TURN OPR .455L STEEL
18	55.6546.0004	3	EA	WASHER, TEFLON, .201ID X .438O
19	55.6568.0077	3	EA	SPRING, CPRSN .300"OD .625"LG .035"WIRE DIA SS
20	71.2561.0002	1	EA	LAMPHOLDER, SFC10-4 WITH PREFOCUS, SHARX
	71.2571.0001	1	EA	LAMPHOLDER, SFC10-4 WITH GOLD CONTACTS, SHARX (VL3500 Q)

Hot Box Assembly (continued)

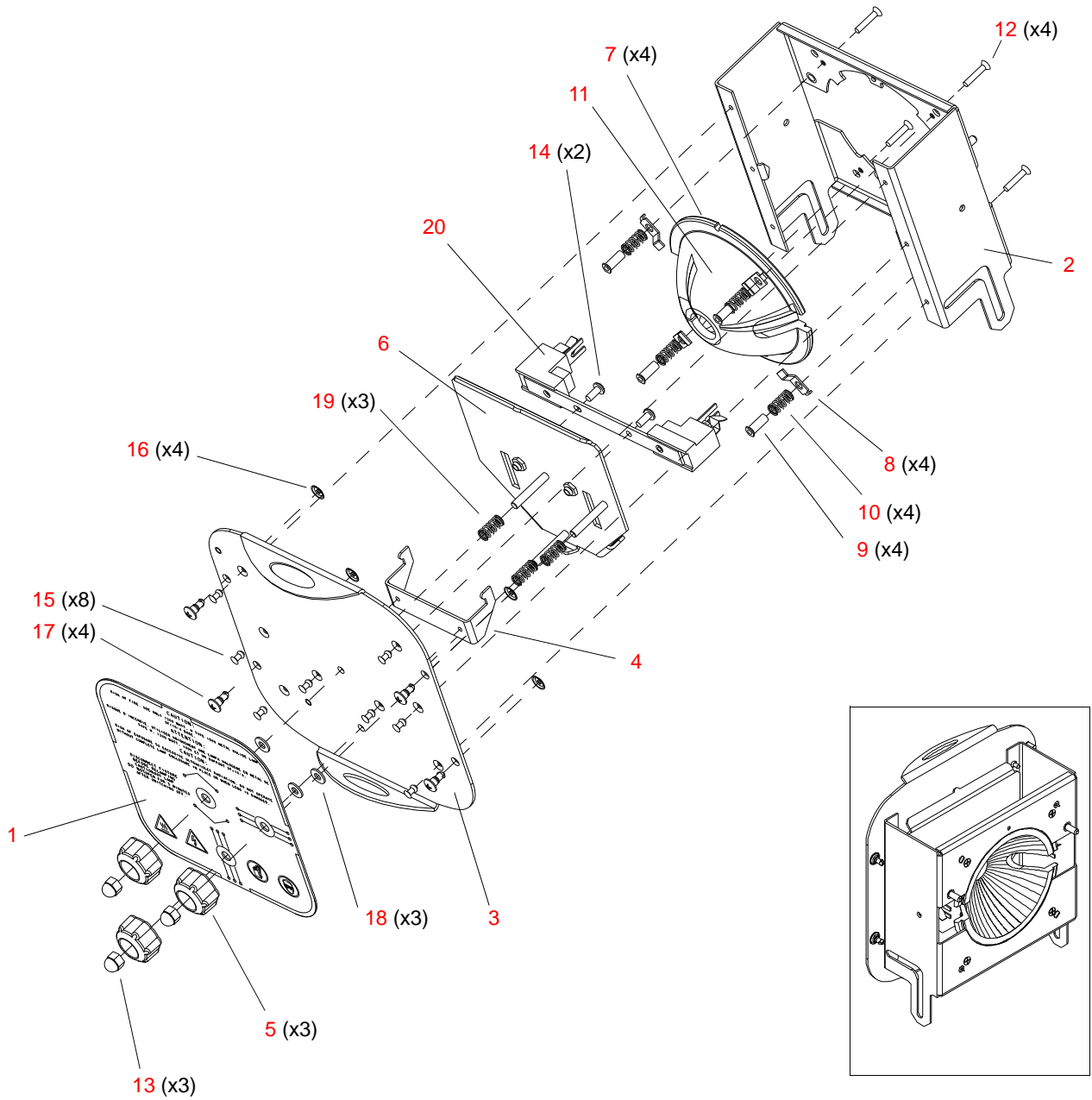


Figure 3-16: Hot Box Assembly

Dual Fan Tray Duct (Standard) Assembly

21.9678.0660.03 Rev B (VL3500 Only)

Refer to [Figure 3-17](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0665	1	EA	SPRING, EXTENSION ELONGATED HOOKS
2	22.9678.0661	1	EA	ASSY, FAN TRAY
3	22.9678.1265	1	EA	DUCT ASSY, SHUTTER/GOBO
4	23.9678.0684	2	EA	FAN ASSY, HEAD FRONT
5	53.5506.1375	6	EA	SCREW, 6-32 X 1 3/8"LG PPB
6	53.6519.0001	2	EA	SCREW, 4-40 X 5/8" PPZ
7	53.6530.0006	2	EA	RIVET, 1/8"OD POP .188-.250GL
8	55.6538.0002	2	EA	WASHER, #6 NYLON NATURAL
9	55.6818.0002	1	EA	STANDOFF, 45 DEG NYLON 6/6 KUR
10	74.1099.0001	1	EA	SWITCH, MINIATURE 5AMP 150DEG

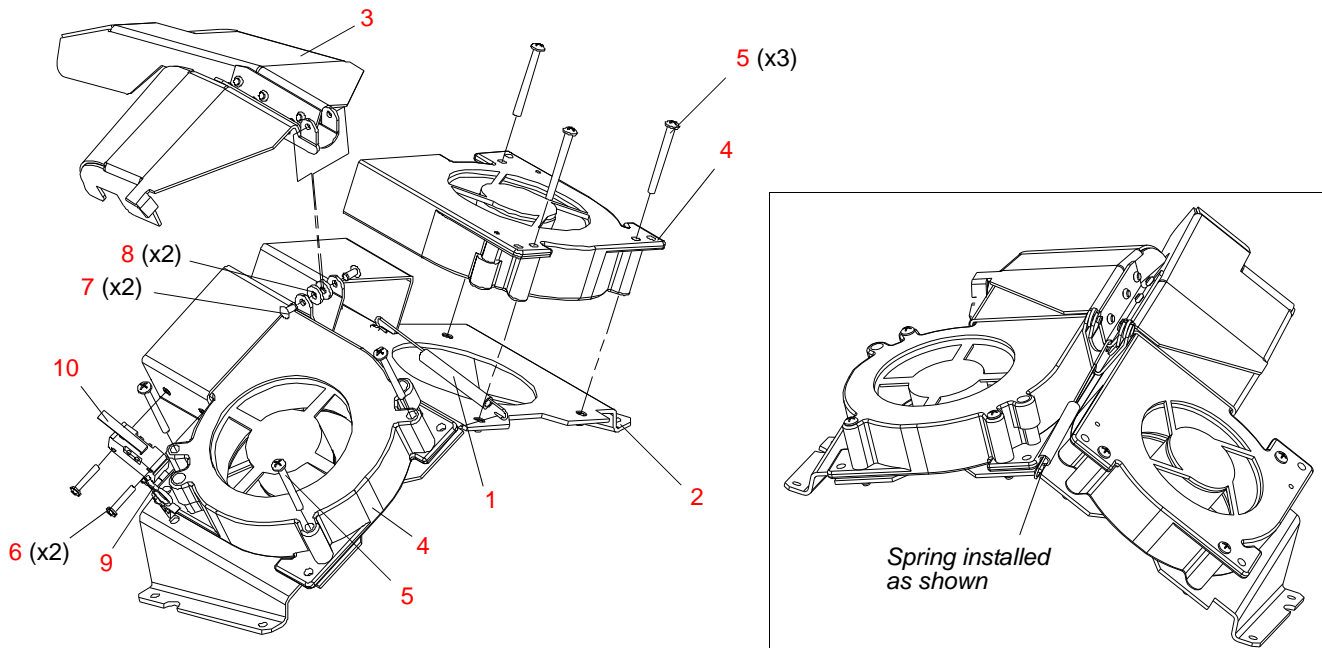


Figure 3-17: Dual Fan Tray Duct (Standard) Assembly - VL3500 Only

Dual Fan Tray Duct (Quiet) Assembly

21.9678.0659.03 Rev D (VL3500Q Only)

Refer to [Figure 3-18](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0665	1	EA	SPRING, EXTENSION ELONGATED HO
2	22.9678.0661	1	EA	ASSY, FAN TRAY
3	22.9678.1265	1	EA	DUCT ASSY, SHUTTER/GOBO
4	23.9678.0699	2	EA	FAN ASSY, HEAD FRONT
5	53.5506.1375	6	EA	SCREW, 6-32 X 1 3/8" LG PPB
6	53.6519.0001	2	EA	SCREW, 4-40 X 5/8" PPZ
7	53.6530.0006	2	EA	RIVET, 1/8" OD POP .188-.250GL
8	55.2179.0003	2	EA	SADDLE, CABLE, .75" X .75", 4-WAY ADH BACK WHITE
9	55.2186.0001	2	EA	CABLE TIE, .10" WD, 4.00" LG SMALL (not shown)
10	55.6538.0002	2	EA	WASHER, #6 NYLON NATURAL
11	55.6818.0002	1	EA	STANDOFF, 45 DEG NYLON 6/6 KUR
12	74.1099.0001	1	EA	SWITCH, MINIATURE 5AMP 150DEG

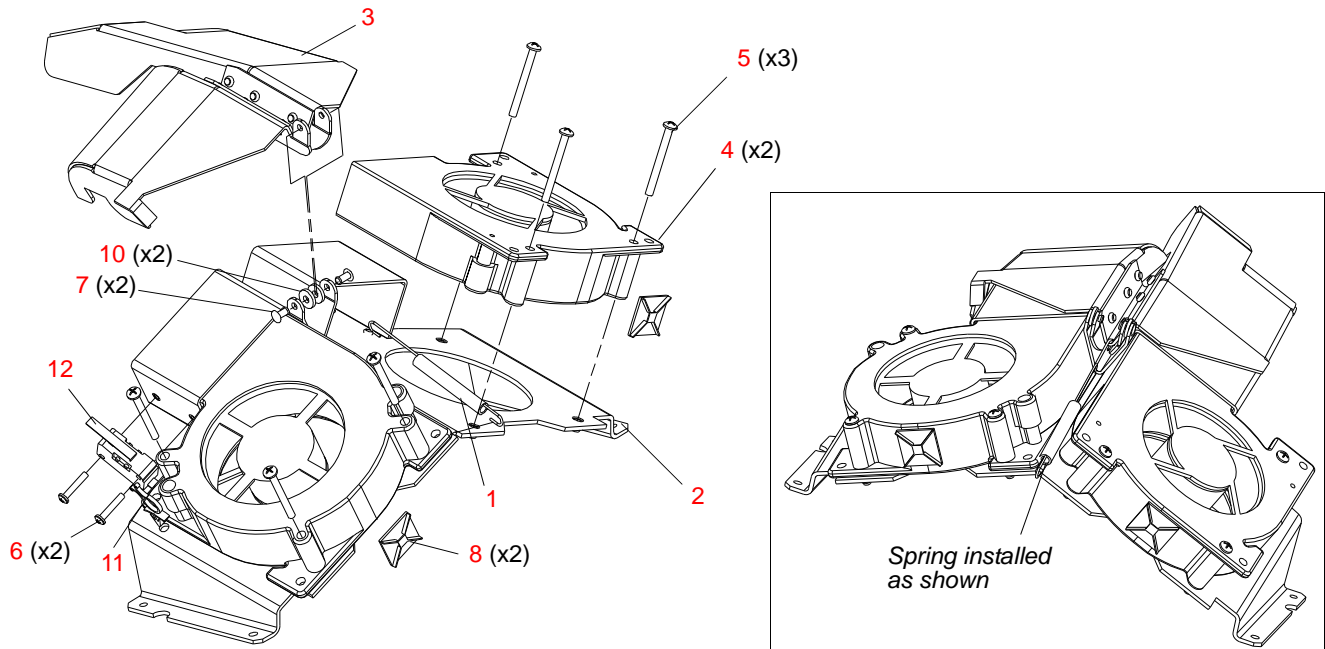


Figure 3-18: Dual Fan Tray Duct (Quiet) Assembly - VL3500Q Only

Head Front Fan (Standard) Assembly

23.9678.0684 Rev 0 (VL3500 Only)

Refer to [Figure 3-19](#)

No.	Item	Qty.	UM.	Description
1	40.7125.0001	1	EA	FAN, 24V FAL6F24LH
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

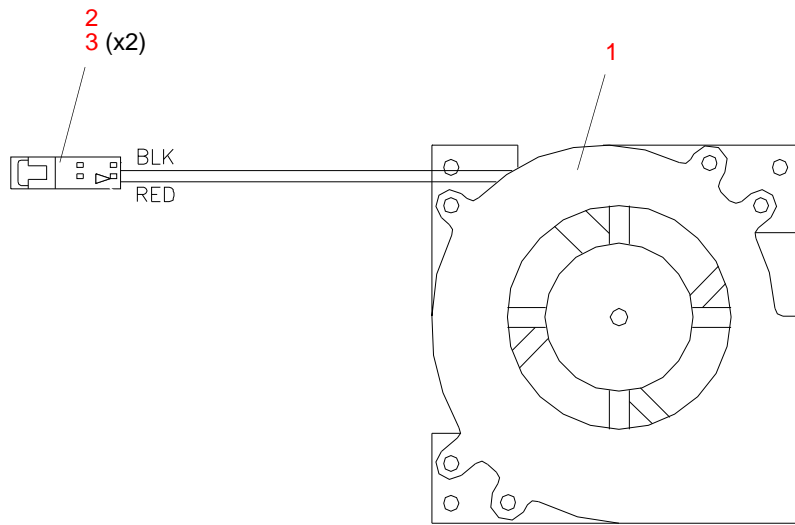


Figure 3-19: Head Front Fan Assembly - VL3500 Only

Head Front Fan (Quiet) Assembly

23.9678.0699 Rev A (VL3500Q Only)

Refer to [Figure 3-20](#)

No.	Item	Qty.	UM.	Description
1	40.7125.0001	1	EA	FAN, 24V FAL6F24LH
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
4	55.2186.0001	1	EA	CABLE TIE, .10 X 4" SMALL
5	55.2268.0125	1	EA	HEATSHRINK, 1/8" CLEAR KYNAR UL 600V 150 DEG C
6	60.8440.6801	1	EA	RESISTOR, 10W, 5%, 68 OHM WIREWOUND

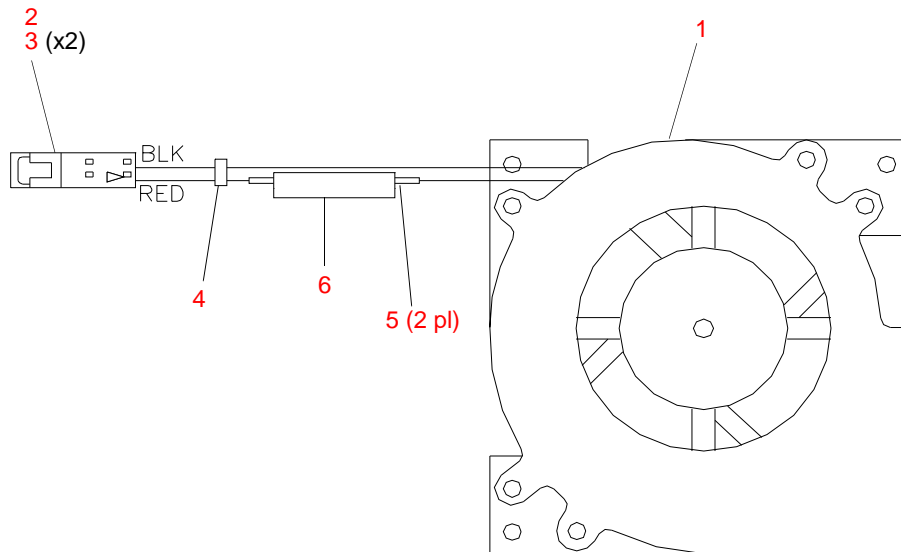


Figure 3-20: Head Front Fan Assembly - VL3500Q Only

Transfer Fan Assembly

21.9678.1263 Rev 0

Refer to [Figure 3-21](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0679	1	EA	TRANSFER FAN TRAY
2	22.9678.1280	1	EA	SHIELD ASSY, SHUTTER ROTATE HARNESS
3	23.9678.0695	1	EA	ASSY, TRANSFER FAN
4	53.6558.0001	1	EA	SCREW, 6-32 X .375" LG PPZ
5	53.6571.0003	3	EA	SCREW, 6-32 X 1.500" LG PPB
6	55.2179.0001	1	EA	CABLE ANCHOR, #6 SCREW MOUNT
-	55.2186.0001	2	EA	CABLE TIE, .10" WD, 4" LG, SMALL (not shown)
7	55.6543.0001	2.12	IN	GROMMET STRIP, SERRATED POLYETHYLENE
8	55.6769.0004	2	EA	TWIST-LOK 0.55" ID NOM WHT 85 C MAX FLAME RET

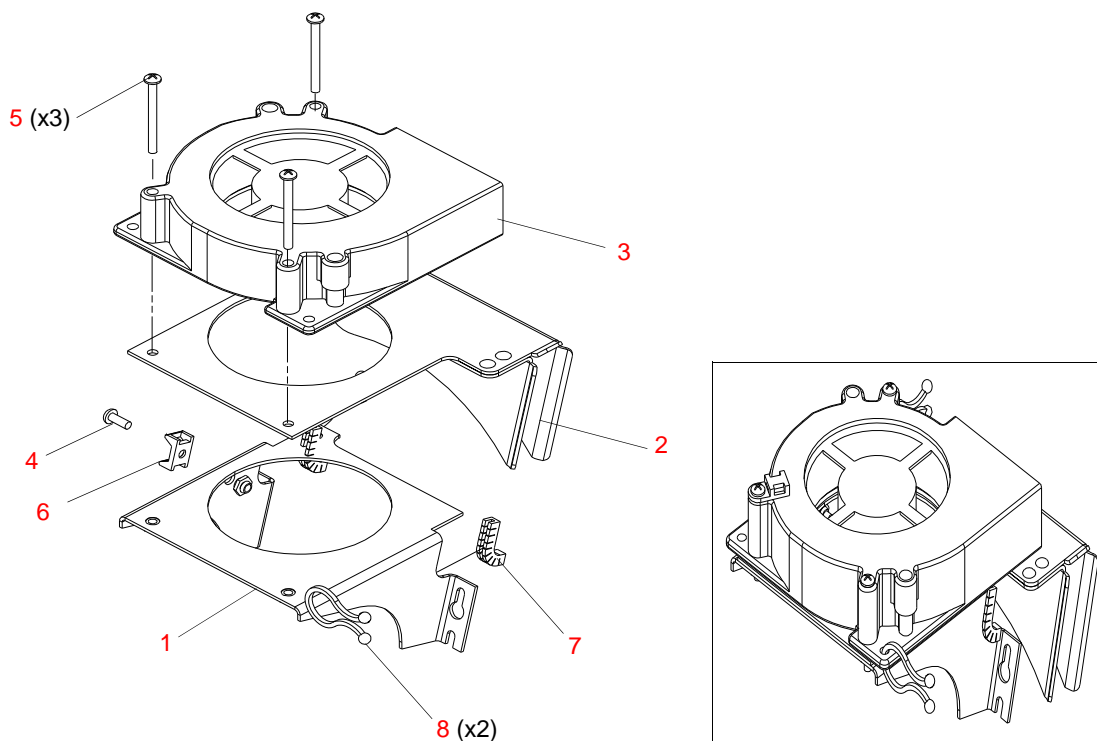


Figure 3-21: Transfer Fan Assembly

NOTES

Spot Optic Assembly

22.9678.0103 Rev R (Spot Only)

Refer to [Figure 3-22](#) and [Figure 3-23](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1131	1	EA	FORWARD PULLEY SHAFT (changed 12-15-04)
2	10.9678.0127	1	EA	PULLEY, IDLER
3	10.9678.0129	2	EA	SPACER, ROLLER CAM
4	10.9678.0153	1	EA	CABLE CLAMP, CAST
5	10.9678.0156	2	EA	BARREL STRAP, G1 & G2
6	10.9678.0157	1	EA	BARREL STRAP, G3
7	10.9678.0171	1	EA	SHAFT, CAM PULLEY
8	10.9678.1185	1	EA	LIGHT BAFFLE #2 (NOT SHOWN)
9	10.9678.1186	1	EA	LIGHT BAFFLE #3
10	10.9678.1191	1	EA	LIGHT BAFFLE, G3
11	12.9678.0174	1	EA	LENS MOUNT, MACHINE G3
12	12.9678.1179.01	1	EA	LENS MOUNT, MACHINE G1
13	12.9678.1179.02	1	EA	LENS MOUNT, MACHINE G2
14	21.9678.0110	1	EA	ASSY, ZOOM BOX
15	21.9678.0113	1	EA	ASSY, RAIL & CARRIAGE
16	22.9678.1181	1	EA	LENS ASSY, GROUP 1
17	22.9678.0182	1	EA	LENS ASSY, GROUP 2
18	22.9678.0183	1	EA	LENS ASSY, GROUP 3
19	22.9678.0199	1	EA	ASSY, LENS MOUNT G4
20	22.9678.1103	1	EA	ASSY, EDGE BEARING RIGHT
21	22.9678.1105	1	EA	ASSY, EDGE BEARING LEFT
22	22.9678.1106	1	EA	ZOOM CAM ASSY
23	22.9678.1113	1	EA	ASSY, ZOOM MOTOR TENSIONING
24	22.9678.1115	1	EA	INTERCONNECT, LIGHT SHIELD
25	22.9678.1190	1	EA	LID ASSY, ZOOM BOX (changed 11-05-03)
	- 12.9678.1189	1	EA	LID, ZOOM BOX
	- 53.2008.0006	1	EA	NUT, PUSH #6
	- 53.6522.0001	1	EA	SCREW, 6-32 X 1/4" PPZ
	- 55.3303.0006	1	EA	WASHER, #6 LOCK INT. TOOTH SS

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No.	Item	Qty.	UM.	Description
26	23.9678.1120	1	EA	LINEAR ACTUATOR ASSEMBLY
	- 44.9678.0119	1	EA	LINEAR ACTUATOR EDGE DRIVE
	- 52.6467.0004	1	EA	4 POS 30-24 AWG CRIMP PHR
	- 52.6467.0024	4	EA	CONTACT, SOCKET 30-24AWG CRIMP (REEL) PH (JST)
27	24.9678.3112	1	EA	PCB ASSY, VL3000 ZOOM SENSOR
28	53.2004.0002	1	EA	NUT, 8-32 KEPS ZINC PLATE
29	53.2213.0001	7	EA	NUT, #6 KEPS (changed 03-24-04)
30	53.5564.0250	2	EA	SCREW, 6-32 X 1/4" PFB UNDERCUT (added 04-07-06)
31	53.5604.0375	5	EA	SCREW, 4-40 X 3/8" PPB (changed 03-24-04)
32	53.6513.0023	6	EA	SCREW, M3 X 8MM LG PFZ METR
33	53.6558.0009	17	EA	SCREW, 6-32 X 3/8" SEMS (changed 03-24-04)
34	53.6558.0016	1	EA	SCREW, 6-32 X 3/4" LG PPS SEMS (changed 3-03-04)
35	53.6596.0002	4	EA	SCREW, 4-40 X 5/16" LG PPZ SEMS (changed 3-03-04)
36	53.6609.0001	6	EA	SCREW, 6-32 X 3/8" PFZ
37	53.6613.0008	4	EA	SCREW, 6-32 X 1/2" LG PPZ SEMS (added 3-03-04)
38	53.6614.0003	2	EA	SCREW, 6-32 X 5/8" PFZ (NOT SHOWN)
39	53.6617.0003	1	EA	SCREW, 6-32 X 1" PPB SEMS (changed 3-03-04)
40	53.6682.0025	2	EA	SCREW, 8-32 X 5/8" LNG PPZ SEMS (changed 11-19-03)
41	54.1261.0001	6	EA	BUSHING, LOW DAMP THERMOPLASTIC .189" ID .5" OD
42	55.2234.0001	1	EA	RING, RETAINING E-STYLE GRV.188 DIA (changed 02-06-05)
43	54.2053.0001	1	EA	MXT T BELT PULLEY, 20GRV .25WD
44	54.2054.0001	1	EA	BELT, TIMING MXL .080 PITCH 235 G, 3/16" WIDE, POLYU/KEVLAR
45	54.1262.0001	2	EA	BEARING, FLANGED EXTENDED .1875 BORE (changed 12-15-04)
46	55.2283.0001	4	EA	SHIM, SPACER .253" IDX, .010" THK
47	55.6503.0004	3	EA	WASHER, #8 FLAT ZINC (changed 03-24-04)
48	55.6528.0001	5	EA	WASHER, #6 FLAT ZINC
49	55.6578.0073	1	EA	SPRING, EXTSN .375"OD
50	55.6846.0001	2	EA	CAM FOLLOWER, 3MM DIA STUD
51	10.9678.1140	1	EA	SHOCK PAD, G1 (added 12-15-04)
52	10.9678.1141	1	EA	BACKING PLATE, SHOCK PAD, G1 (added 12-15-04)

Spot Optic Assembly (continued)

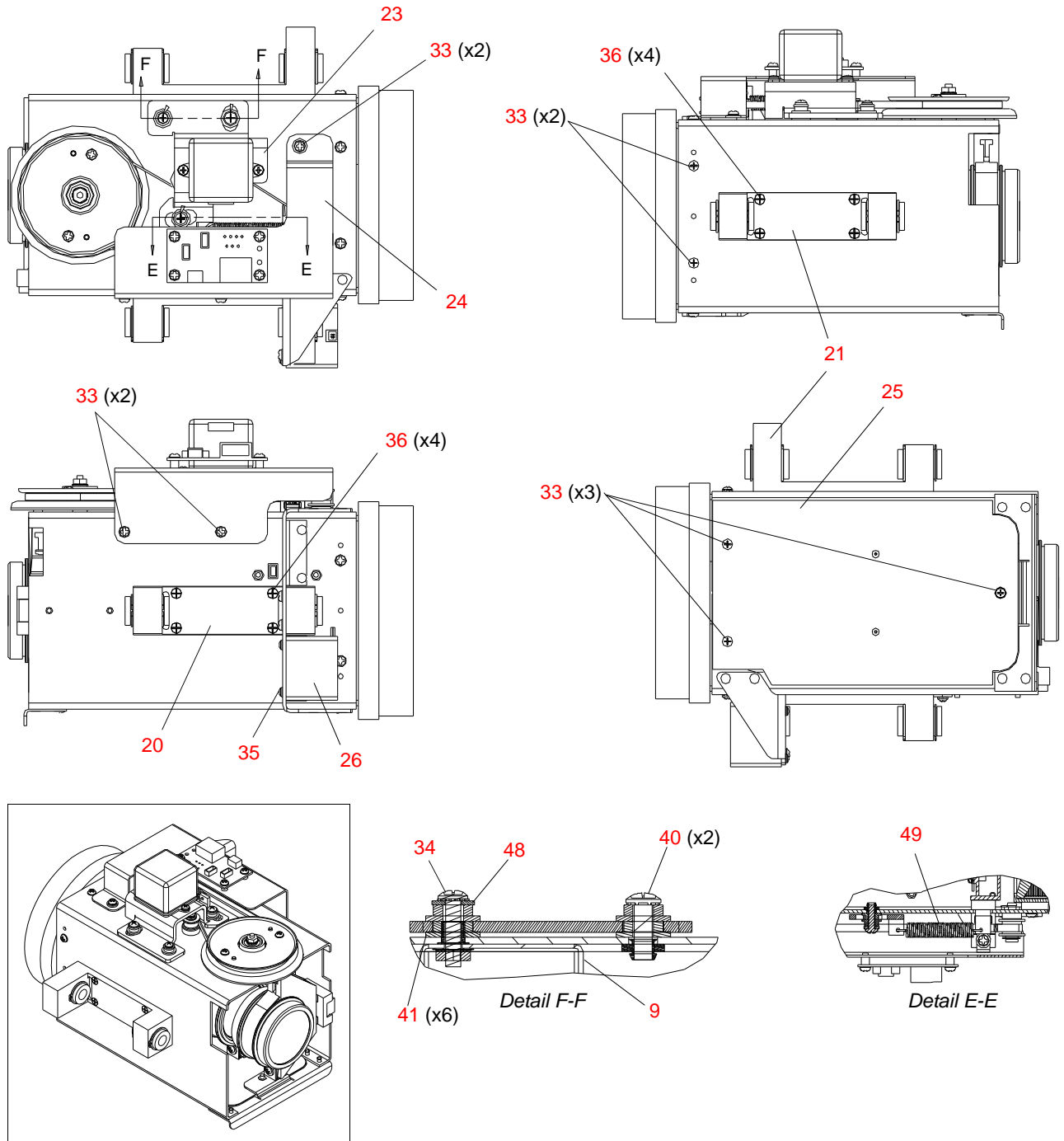


Figure 3-22: Spot Optic Assembly View 1

Spot Optic Assembly (continued)

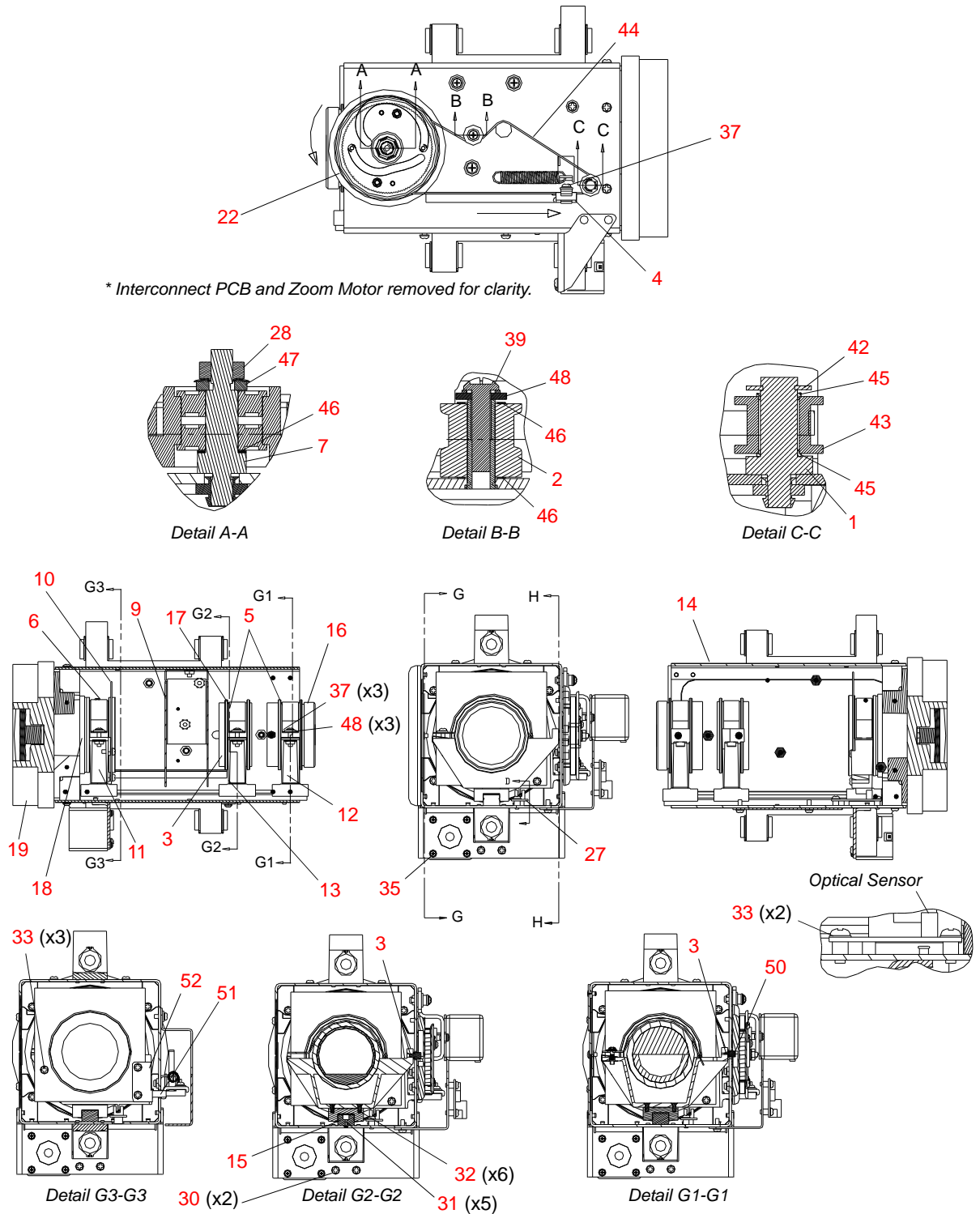


Figure 3-23: Spot Optic Assembly View 2

Zoom Box Assembly

21.9678.0110 Rev F

Refer to [Figure 3-24](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0124	1	EA	ZOOM BOX
2	10.9678.0125	1	EA	BRACE, FOCUS
3	10.9678.0126	1	EA	BRACE, REAR
4	53.6530.0006	12	EA	RIVET, 1/8"OD POP .188-.250GL

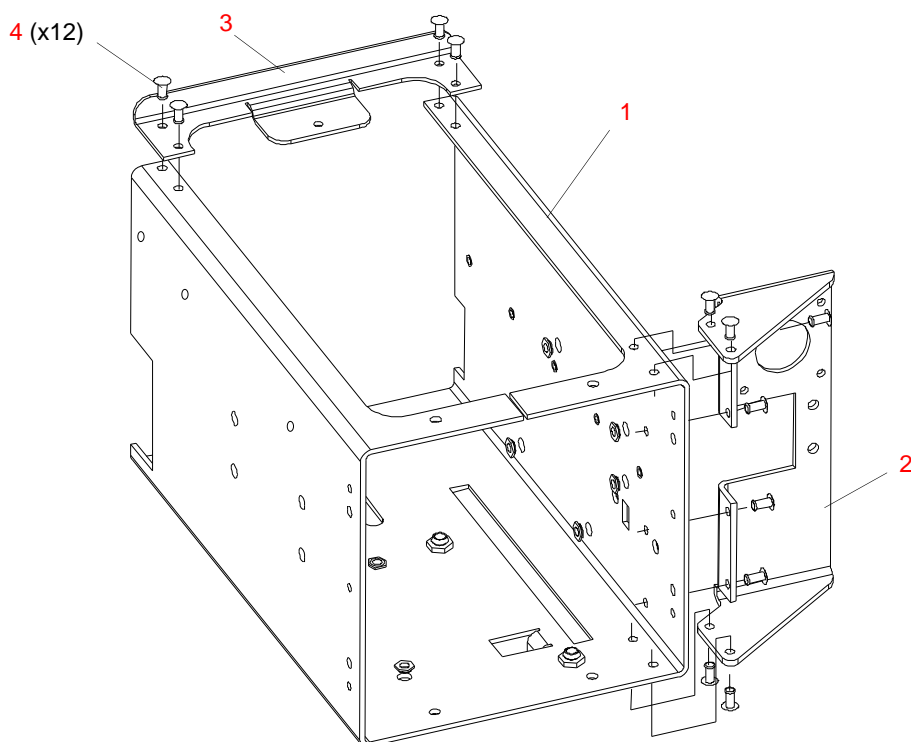


Figure 3-24: Zoom Box Assembly

Group 4 Lens Assembly

22.9678.0199 Rev 0

Refer to [Figure 3-25](#)

No.	Item	Qty.	UM.	Description
1	12.9678.0198	2	EA	RING BLOCK, MACHINED G4
2	22.9678.0174	1	EA	LENS ASSY, GROUP 4
3	53.6558.0001	4	EA	SCREW, 6-32 X 3/8" PPZ
4	55.3303.0006	4	EA	WASHER, #6 LOCK INT.Tooth SS
5	55.6763.0500	4	EA	PIN, DOWEL .5"LG .125"DIA 303SS

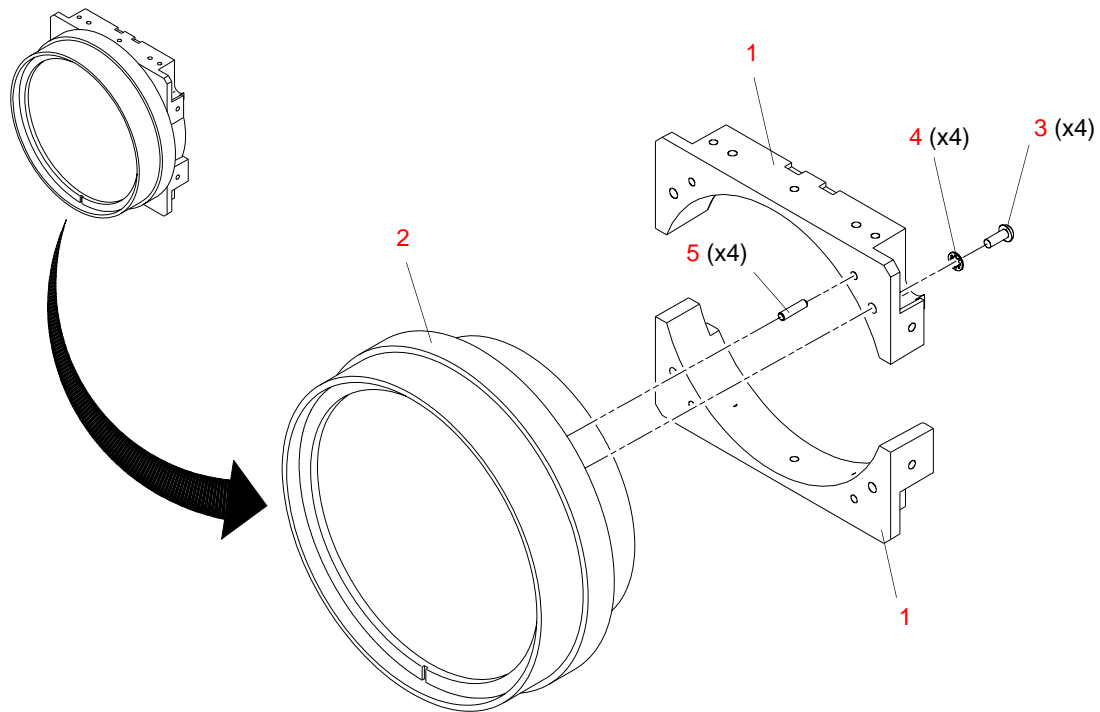


Figure 3-25: G4 Lens Mount Assembly

Right Edge Bearing Assembly

22.9678.1103 Rev C

Refer to [Figure 3-26](#)

No.	Item	Qty.	UM.	Description
1	12.9678.1102	1	EA	EDGE BEARING, MACHINED RIGHT
2	54.2056.0001	4	EA	RING, RETAINING EXTERNAL 19MM
3	55.6776.0010	2	EA	LINEAR BUSHING, 10MM STEEL W/PHENOLIC CAGE

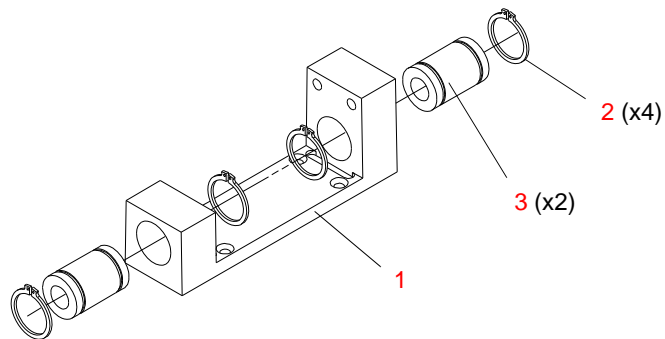


Figure 3-26: Right Edge Bearing Assembly

Left Edge Bearing Assembly

22.9678.1105 Rev C

Refer to [Figure 3-27](#)

No.	Item	Qty.	UM.	Description
1	12.9678.1104	1	EA	EDGE BEARING, MACHINE LEFT
2	54.2056.0001	4	EA	RING, RETAINING EXTERNAL 19MM
3	55.6776.0010	2	EA	LINEAR BUSHING, 10MM STEEL W/PHENOLIC CAGE

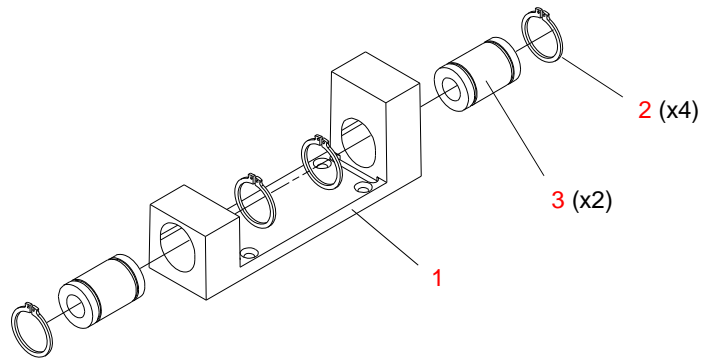


Figure 3-27: Left Edge Bearing Assembly

Zoom Cam Assembly

22.9678.1106 Rev B

Refer to [Figure 3-28](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1107	1	EA	ZOOM TIMING CAM
2	10.9678.1108	1	EA	PULLEY FLANGE
3	10.9678.1118	1	EA	TIMING PULLEY, ZOOM
4	53.6613.0008	2	EA	SCREW, 6-32 X 1/2" PPZ (changed 11-08-04)
5	54.1259.0004	2	EA	BEARING, RADIAL FLANGED .25"ID .625"OD (changed 06-25-03)
6	55.6763.0500	2	EA	PIN, DOWEL .5"LG .125"DIA 303SS

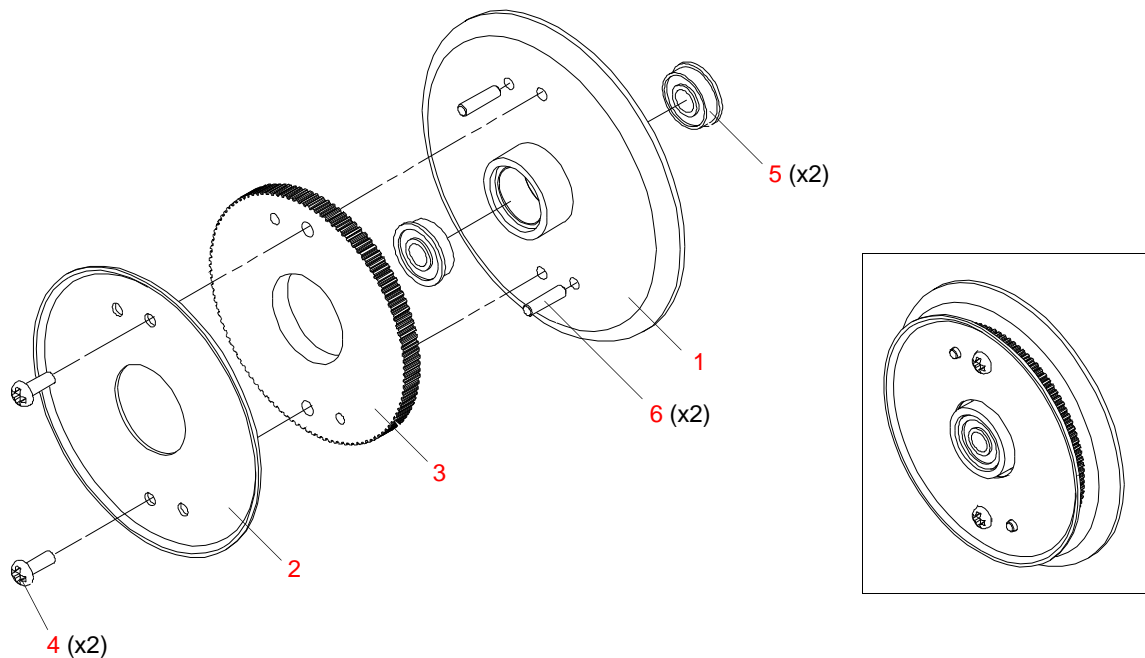


Figure 3-28: Zoom Cam Assembly

Zoom Motor Tensioning Assembly

22.9678.1113 Rev B

Refer to [Figure 3-29](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0338	1	EA	PULLEY, ZOOM MOTOR
2	10.9678.1111	1	EA	BRACKET, ZOOM TENSION SHEETMETAL
3	44.9663.1326	1	EA	MOTOR, 17 .53" SHAFT 11.8MH 5.5 OHM
4	53.5559.0250	2	EA	SCREW, 6-32 X 1/4" SET CONE POINT
5	53.6522.0001	2	EA	SCREW, 6-32 X 1/4" PPZ
6	55.3303.0006	2	EA	WASHER, #6 LOCK INT.TOOTH SS

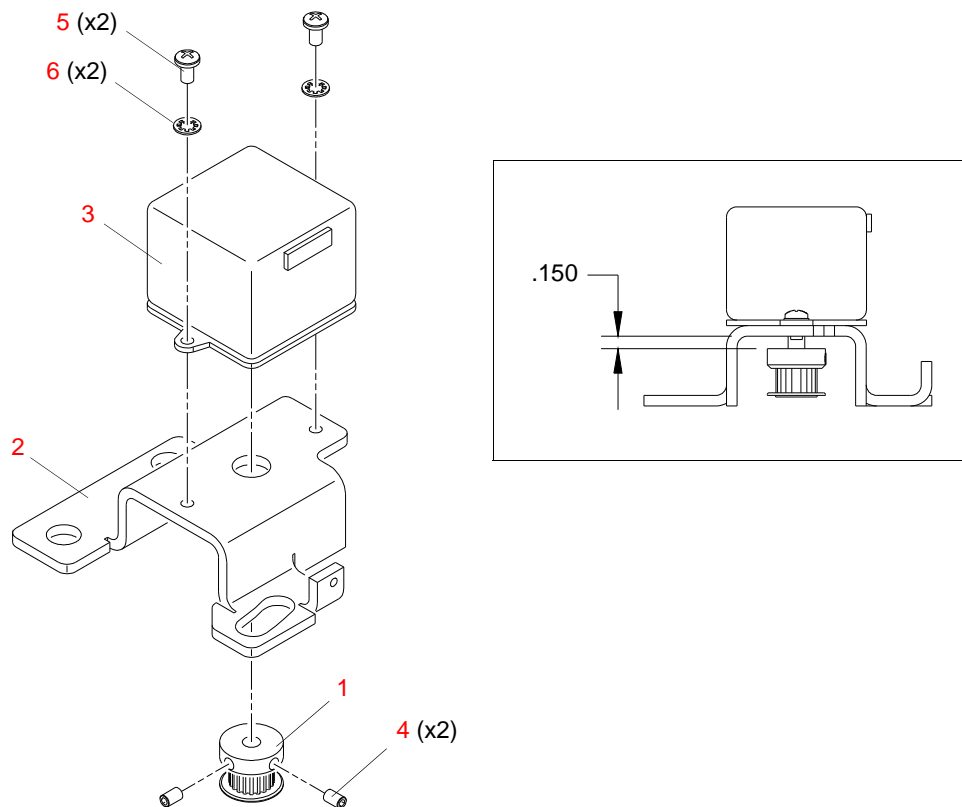


Figure 3-29: Zoom Motor Tensioning Assembly

Interconnect Light Shield Assembly

22.9678.1115 Rev D

Refer to [Figure 3-30](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1114	1	EA	SHIELD, INTERCONNECT MOUNT/LIGHT
2	24.9678.3116	1	EA	PCB ASSY, ZOOM INTERCONNECT (changed 03-07-06)
3	53.6558.0009	4	EA	SCREW, 6-32 X 3/8" PPZ SEMS

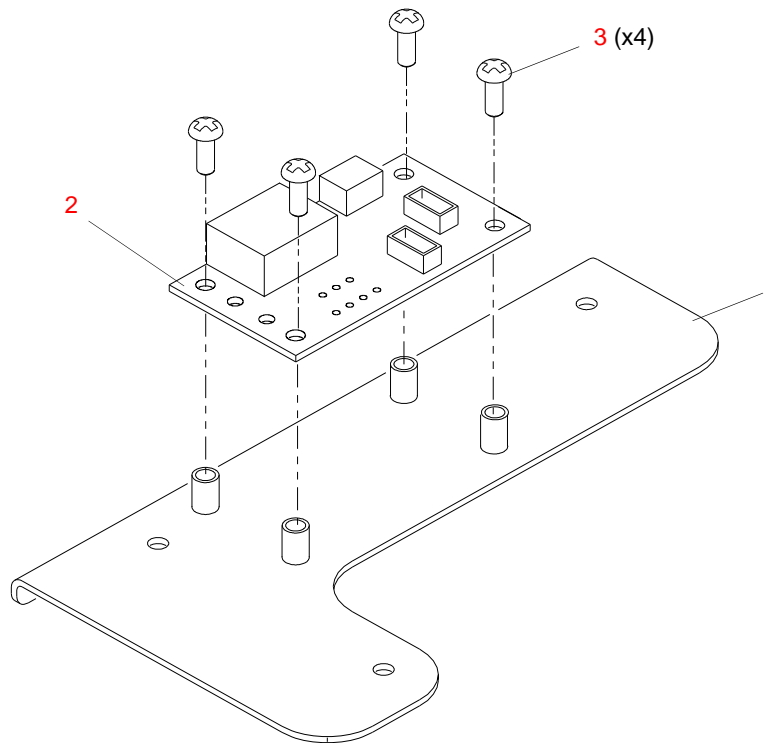


Figure 3-30: Interconnect Light Shield Assembly

Rod Clamp Assembly

22.9678.0149 Rev B

Refer to [Figure 3-31](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0151	1	EA	CLAMP, OPTIC ROD CAST
2	53.6616.0001	2	EA	SCREW, 6-32 X 3/4" PPZ
3	55.6528.0001	2	EA	WASHER, #6 FLAT ZINC
4	55.6538.0001	2	EA	WASHER, #6 LOCK INTERNAL TOOTH
5	53.2008.0006	2	EA	SPRING CLIP, 6-32

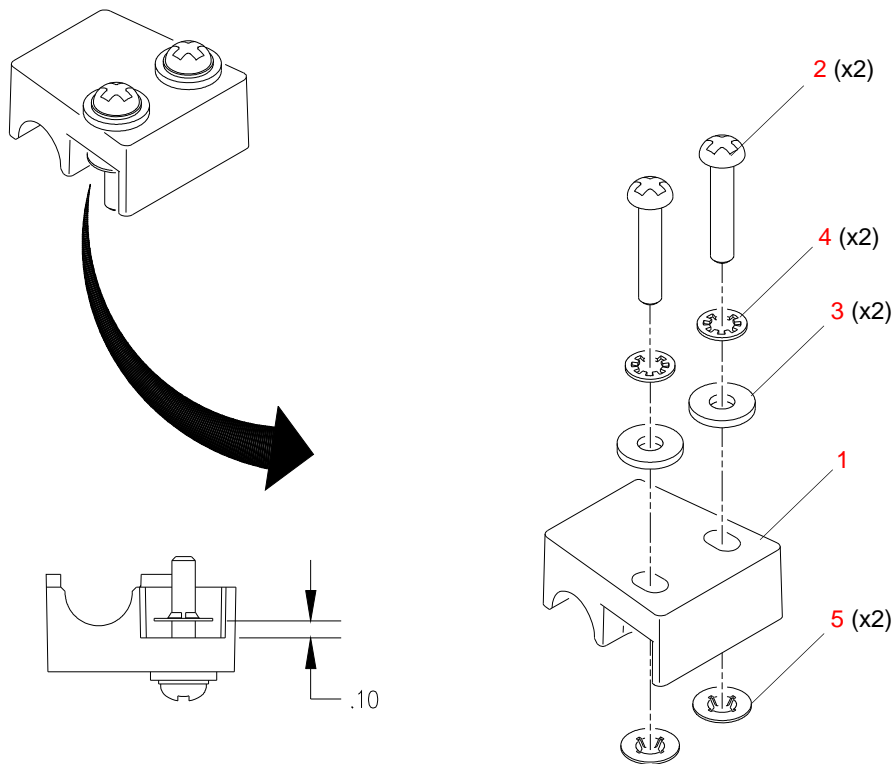


Figure 3-31: Rod Clamp Assembly

Color/Dimmer/Strobe Assembly

22.9678.0402 Rev F (VL3500)

22.9678.0462 Rev 0 (VL3500Q)

No.	Item	Qty.	UM.	Description
1	10.9678.0324	1	EA	PULLEY, FIXED COLOR WHEEL
2	10.9678.0337	1	EA	DRIVE PULLEY, FIXED COLOR WHEEL (changed 03-09-06)
3	10.9678.0456	4	EA	SHAFT, COLOR WHEEL
4	10.9678.0457.07	1	EA	SPACER, COLOR WHEEL L.357 (changed 07-22-04)
5	10.9678.0457.02	2	EA	SPACER, COLOR WHEEL L.190
6	10.9678.0457.03	3	EA	SPACER, COLOR WHEEL L.123
7	10.9678.0457.04	3	EA	SPACER, COLOR WHEEL L.031
8	10.9678.0469	1	EA	REAR COLOR BULKHEAD
9	10.9678.0485	5	EA	PULLEY, COLOR MOTOR
10	21.9678.0331	1	EA	ASSY MOTOR/PLATE
11	21.9678.0334	1	EA	ASSY, FIXED COLOR WHEEL
12	22.9678.0335	1	EA	ASSY, BEARING BLOCK, FIXED WHEEL
	- 10.9678.0323	1	EA	WHEEL MOUNT
	- 54.1259.0004	2	EA	BEARING, RADIAL FLANGED 0.25"ID 0.625"OD (changed 6-25-03)
13	22.9678.0403	1	EA	ASSY, STROBE
	22.9678.0463	1	EA	ASSY, STROBE (VL3000 QUIET)
14	22.9678.0435	1	EA	ASSY, DIMMER WHEEL
15	22.9678.0472	1	EA	ASSY, CYAN WHEEL
16	22.9678.0474	1	EA	ASSY, YELLOW WHEEL
17	22.9678.0476	1	EA	ASSY, MAGENTA WHEEL
18	22.9678.0478	1	EA	ASSY, CTO WHEEL
19	22.9678.0481	1	EA	MOUNT ASSY, COLOR SENSE PCB #1
20	10.9678.0486	1	EA	FRONT COLOR BULKHEAD
21	22.9678.0489	1	EA	ASSY, COLOR SENSE PCB #2 MOUNT
22	24.9678.3240	1	EA	PCB ASSY, WHEEL POSITION SENSOR (changed 02-14-05)
-	25.9678.1409	1	EA	PCB/CABLE ASSY, COLOR INTERCNT (not shown) (changed 06-28-06)
-	25.9678.1419	1	EA	PCB/CABLE ASSY, COLOR INTERCNT (not shown) (VL3500 QUIET)
23	44.9678.0455	5	EA	COLOR MOTOR
24	53.2202.0008	1	EA	NUT, 8-32 HEX SS, NYLON INSERT
25	53.2200.0006	12	EA	NUT, 6-32 KEPS SS
26	53.5559.0250	12	EA	SCREW, 6-32 X 1/4" SET CONE PO

VARI**LITE*® - VL3500™ SPOT LUMINAIRE SERVICE MANUAL

No.	Item	Qty.	UM.	Description
27	53.5638.0252	12	EA	SCREW, 6-32 X 1/4"LG PFS UNDERCUT HEAD
28	53.6558.0001	7	EA	SCREW, 6-32 X 3/8" PPZ
29	53.6597.0001	2	EA	SCREW, 4-40 X 3/16" PPZ
30	53.6608.0003	5	EA	SCREW, 6-32 X 3/16"LG PPZ
31	54.2036.0017	1	EA	BELT, TIMING N=150 W=.125 URETHANE/KEVLAR
32	54.2059.0001	4	EA	TIMING BELT, MXL PITCH 150 TOOTH SI/KEVLAR
33	54.2060.0001	1	EA	BELT, TIMING MXL PITCH 165 TOOTH SI/KEVLAR
34	55.2132.0011	4	EA	STANDOFF, 1/4"HEX 6-32 X 1.093"L SS
35	55.2132.0012	4	EA	STANDOFF, 1/4"HEX 6-32 X 0.75"LG SS
36	55.3303.0004	2	EA	WASHER, #4 LOCK INT.TOOTH SS
37	55.3303.0006	6	EA	WASHER, #6 LOCK INT.TOOTH SS
38	55.6503.0004	1	EA	WASHER, #8 FLAT ZINC
39	55.6528.0001	2	EA	WASHER, #6 FLAT ZINC
40	55.2110.0002	2	EA	SPACER, 0.010 LG
-	55.2186.0002	5	EA	CABLE TIE, 0.09WD, 0.375 LG, TEFZEL (not shown)
41	10.9678.0457.06	1	EA	SPACER, COLOR WHEEL, 0.015 L
42	55.6520.0001	2	EA	WASHER, WAVE SPRING, 1/4" DIA (added 05-17-04) (VL3500 only)

Color/Dimmer/Strobe Assembly (continued)

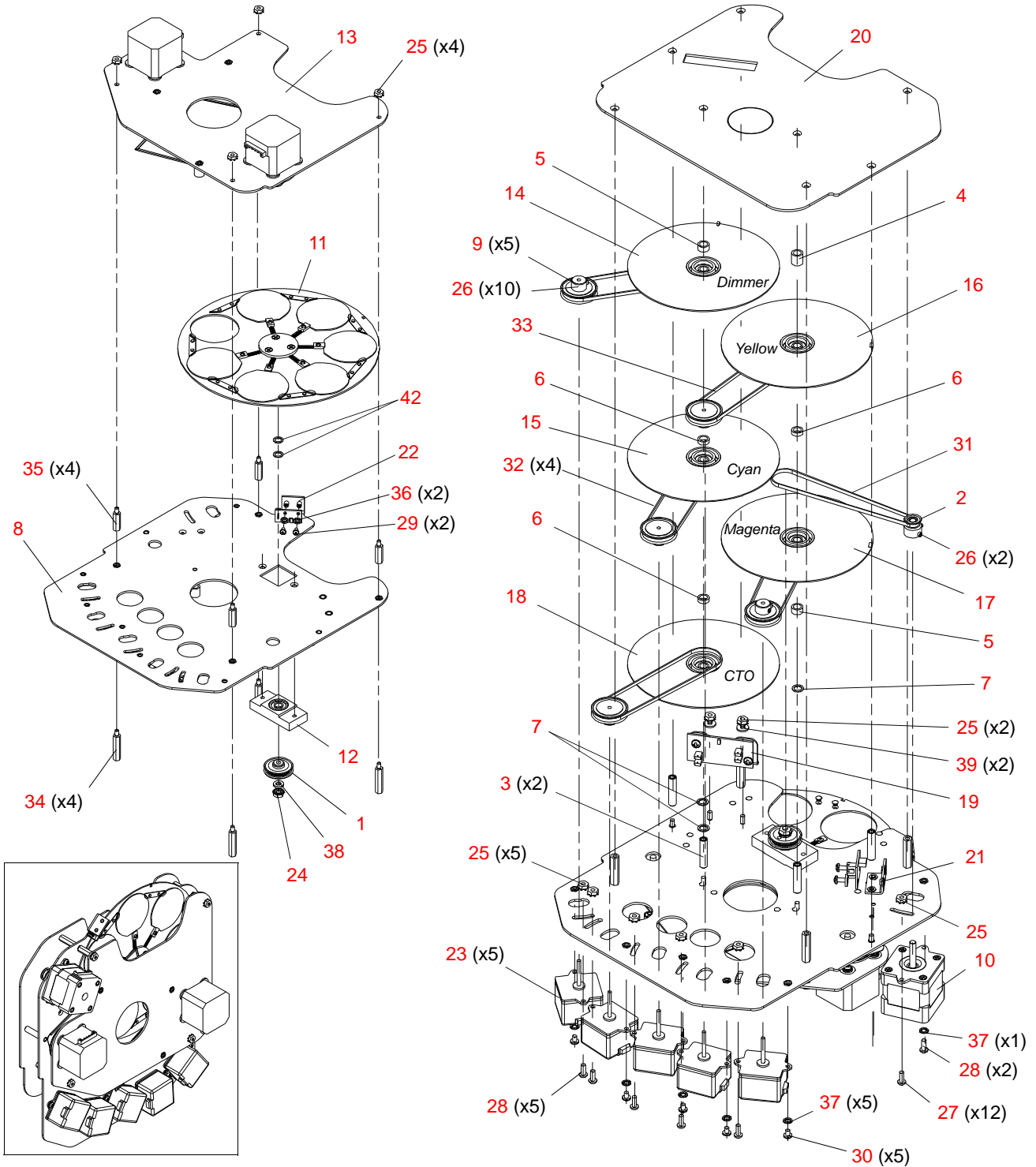


Figure 3-32: Color/Dimmer/Strobe Assembly

Motor/Adapter Plate Assembly

21.9678.0331 Rev 0

Refer to [Figure 3-33](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0330	1	EA	PLATE, MOTOR ADAPTER
2	44.5031.0001	1	EA	MOTOR, STEPPER 42MM X 40MM,10
3	53.6513.0002	4	EA	SCREW, 3MM X 5MM LG PFZ METR

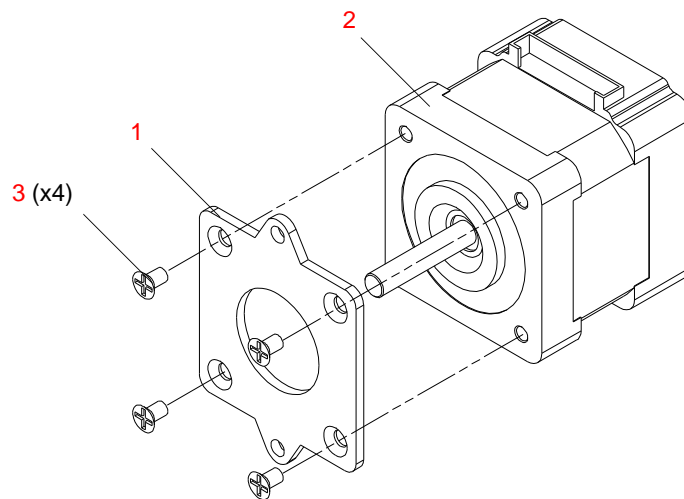


Figure 3-33: Motor/Adapter Plate Assembly

Fixed Color Wheel Assembly

21.9678.0334 Rev D

Refer to [Figure 3-34](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0322	1	EA	SPIN SHAFT, COLOR WHEEL
2	10.9678.0332	6	EA	SLIDING RETAINER
3	10.9678.0333	6	EA	RETAINER CLIP
4	22.9678.1336	1	EA	FAB ASSY, FIXED WHEEL/CLIP
5	41.9678.0305.01	1	EA	COLOR FILTER, DEEP RED VL3000
6	41.9678.0305.02	1	EA	COLOR FILTER, KELLY GREEN VL3000
7	41.9678.0305.03	1	EA	COLOR FILTER, CONGO BLUE VL3000
8	41.9678.0305.04	1	EA	COLOR FILTER, MAGENTA VL3000
9	41.9678.0305.05	1	EA	COLOR FILTER, ORANGE VL3000
10	41.9678.0305.06	1	EA	COLOR FILTER, DARK FUSHIA VL3000
11	53.6534.0001	6	EA	RIVET, 3/32"OD POP 3/32GRIP R
12	53.6608.1857	3	EA	SCREW, 6-32 X 3/16"LG PFSS
13	55.2256.0001	1	EA	MAGNET, 2:17 SMCO 2MM X 2MM
14	55.6568.0076	6	EA	SPRING, CPRSN .120"OD.750"LG
15	10.9678.0250	1	EA	MAGNET TAPE

Fixed Color Wheel Assembly (continued)

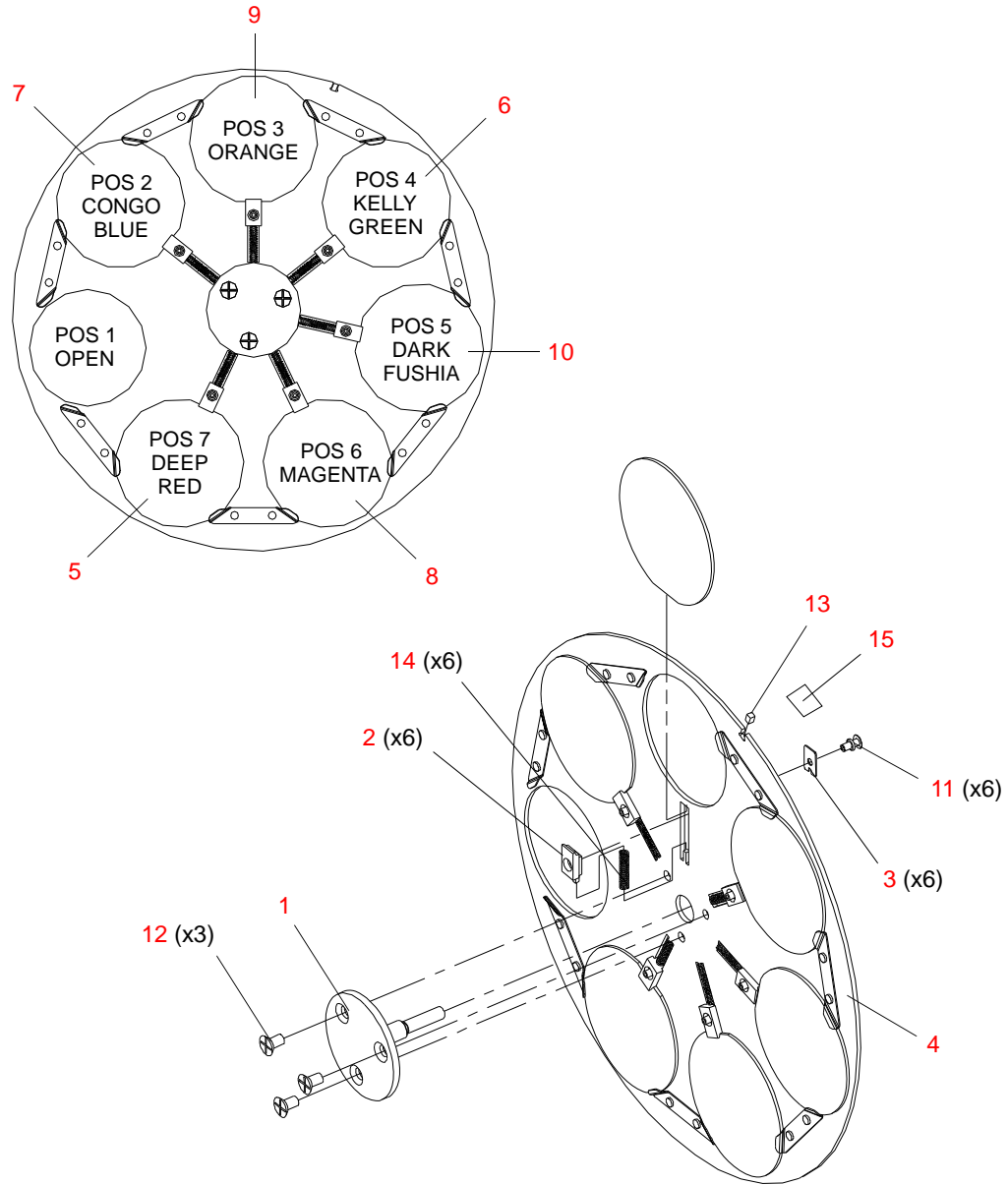


Figure 3-34: Fixed Color Wheel Assembly

Strobe Assembly

22.9678.0403 Rev F (VL3500 Only)

Refer to [Figure 3-35](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0491	4	EA	BUMPER STOP, STROBE
2	10.9678.0465	1	EA	STROBE BULKHEAD
3	22.9678.0467	1	EA	ASSY, RIGHT STROBE BLADE
4	22.9678.0468	1	EA	ASSY, LEFT STROBE BLADE
5	44.5029.0001	2	EA	MOTOR, STEPPER 42MM X 34MM - AR
6	53.6513.0032	8	EA	SCREW, M3X10MM SEMS PPZ EXT TO
7	53.6609.0500	4	EA	SCREW, 6-32 X 1/2" LG PFZ
8	55.6659.0001	8	EA	SPACER, 1/4" OD X 3/16" L X #4 HOLE
9	55.3306.0006	8	EA	WASHER, .375 OD .149 ID .025 THK SS
10	55.6706.0001	8	EA	GROMMET, 9/16" OD, 9/32" ID 1/4 T SILICONE RED

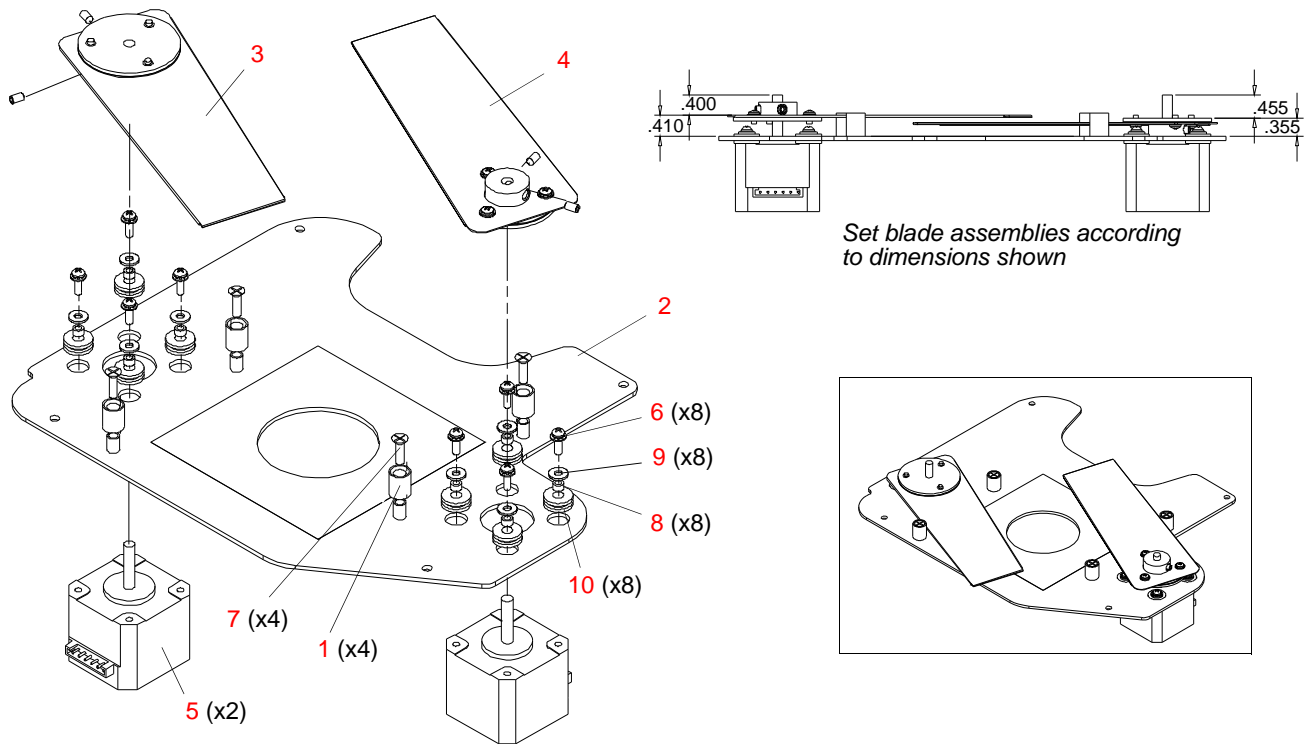


Figure 3-35: Strobe Assembly - VL3500 Only

Strobe (Quiet) Assembly

22.9678.0463 Rev B (VL3500Q Only)

Refer to [Figure 3-36](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0491	4	EA	BUMPER STOP, STROBE
2	10.9678.0465	1	EA	STROBE BULKHEAD
3	22.9678.0467	1	EA	ASSEMBLY, RIGHT STROBE BLADE
4	22.9678.0468	1	EA	ASSEMBLY, LEFT STROBE BLADE
5	23.9678.0499	2	EA	ASSEMBLY, STROBE MOTOR, VL3000Q
6	53.6520.0001	8	EA	SCREW, #4-40 X 3/8 PPZ
7	53.6609.0500	4	EA	SCREW, 6-32 X 1/2" LG PFZ
8	55.3306.0006	8	EA	WASHER, .375 OD .149 ID .025 THK SS
9	55.6537.0001	8	EA	WASHER, #4 INTERNAL LOCK TOOTH
10	55.6659.0001	8	EA	SPACER, 1/4" RND 4 THRU 3/16" AL
11	55.6706.0001	8	EA	GROMMET, 9/32" ID, 9/16" OD, 1/4TH SILICONE

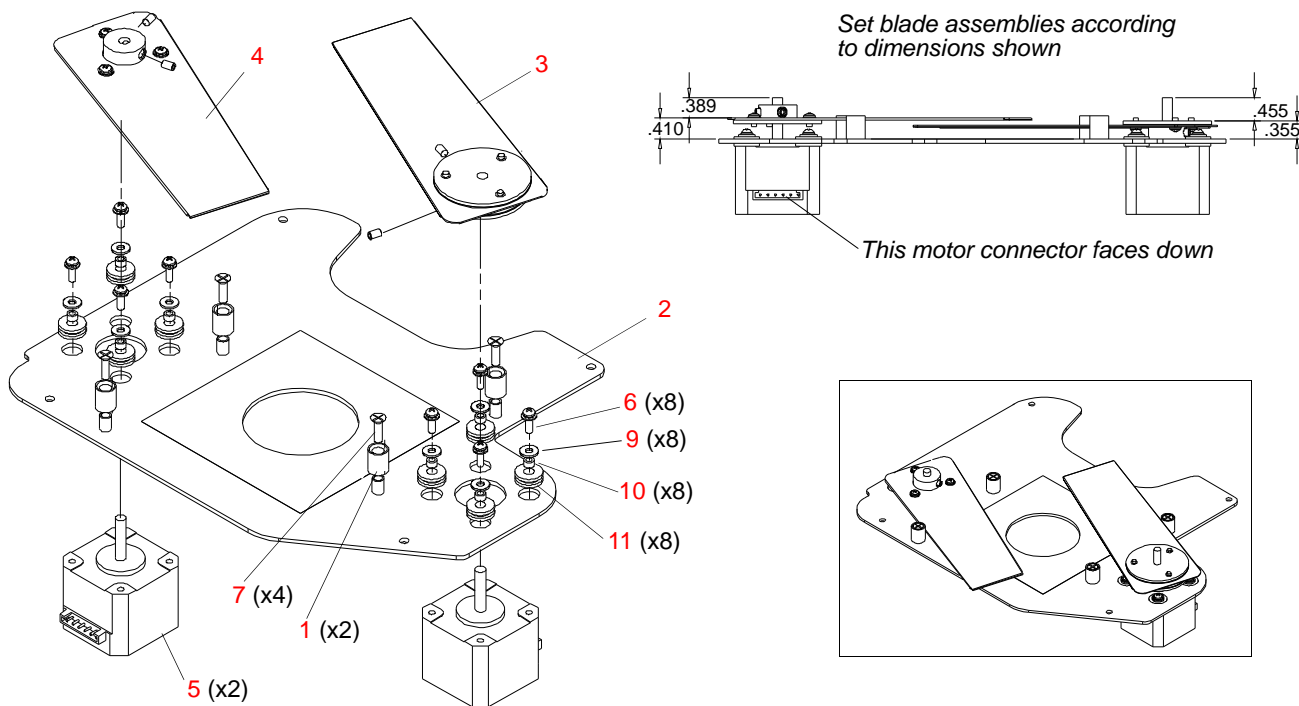


Figure 3-36: Strobe (Quiet) Assembly - VL3500Q Only

Right Strobe Blade Assembly

22.9678.0467 Rev C

Refer to [Figure 3-37](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0464	1	EA	STROBE BLADE
2	10.9678.0432	1	EA	HUB, STROBE BLADE
3	10.9678.0466	1	EA	STROBE BLADE, DAMPER
4	53.5559.0250	2	EA	SCREW, 6-32 X 1/4" SET CONE POINT
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

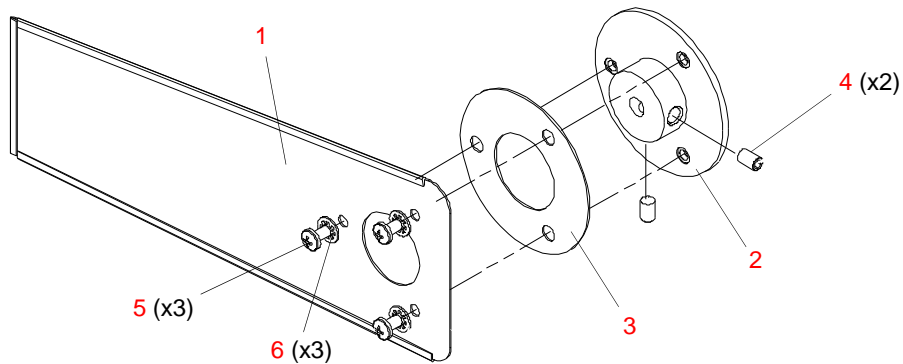


Figure 3-37: Right Strobe Blade Assembly

Left Strobe Blade Assembly

22.9678.0468 Rev C

Refer to [Figure 3-38](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0464	1	EA	STROBE BLADE
2	10.9678.0432	1	EA	HUB, STROBE BLADE
3	10.9678.0466	1	EA	STROBE BLADE, DAMPER
4	53.5559.0250	2	EA	SCREW, 6-32 X 1/4" SET CONE POINT
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

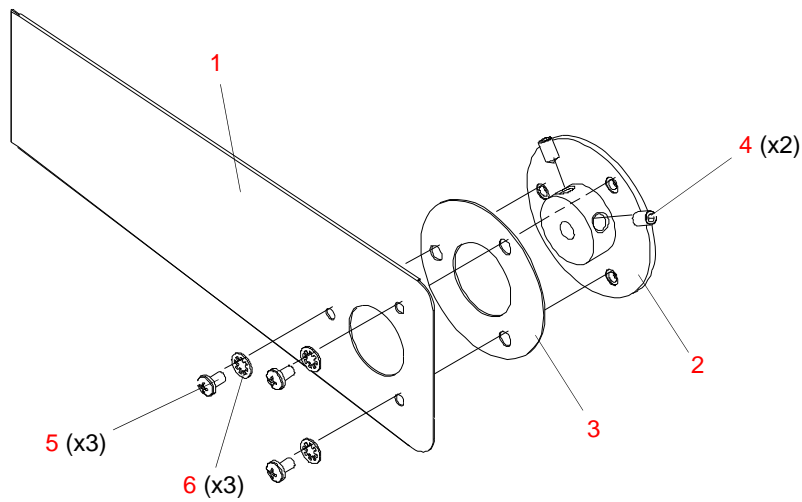


Figure 3-38: Left Strobe Blade Assembly

Strobe Motor (Quiet) Assembly

23.9678.0499 Rev A (VL3500Q Only)

Refer to [Figure 3-39](#)

No.	Item	Qty.	UM.	Description
1	44.5035.0001	1	EA	STEPPER MOTOR, 2 PHASE, PK
2	52.6524.0004	1	EA	CONNECTOR, HOUSING, 4 POS RECEPT
3	55.8346.0001	4	EA	CONTACT, 24-30 AWG FEMALE CRIMP
4	55.2200.0003	0.25	FT	HEATSHRINK, 3/16" VITON

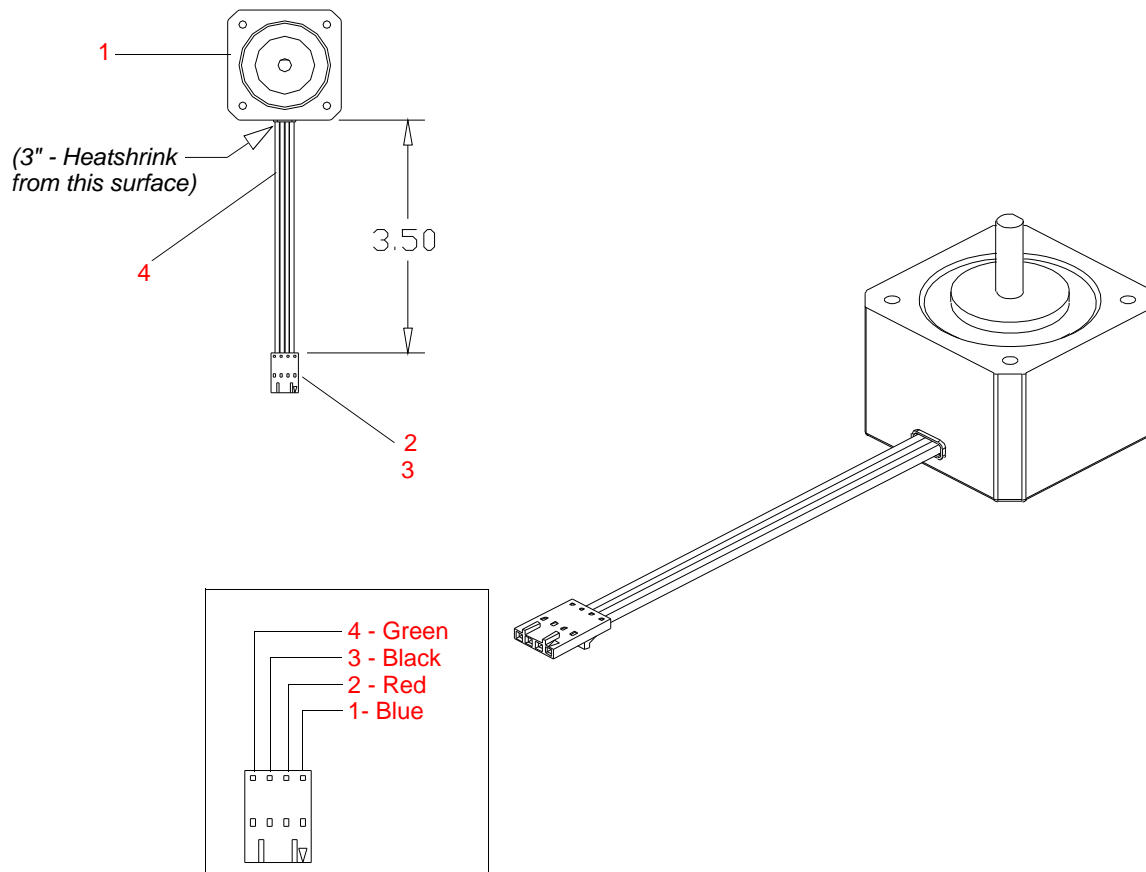


Figure 3-39: Strobe Motor (Quiet) Assembly - VL3500Q Only

Dimmer Wheel Assembly

22.9678.0435 Rev D

Refer to [Figure 3-40](#)

No.	Item	Qty.	UM.	Description
1	22.9678.0420	1	EA	PULLEY ASSY, WITH BEARING
2	41.9678.0494	1	EA	GLASS, COATED DIMMER WHEEL (changed on 01-23-04)
3	55.2256.0001	1	EA	MAGNET, 2:17 SMCO 2MM X 2MM

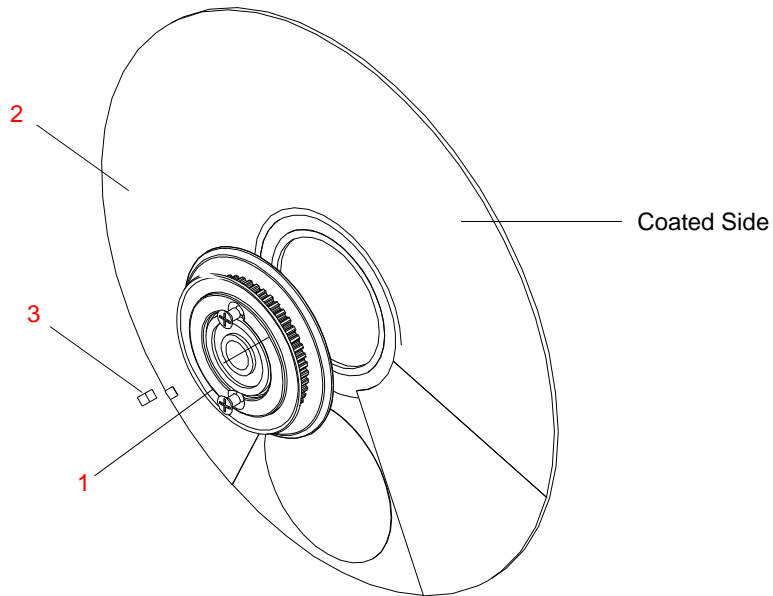


Figure 3-40: Dimmer Wheel Assembly

Cyan Wheel Assembly

22.9678.0472 Rev C

Refer to [Figure 3-41](#)

No.	Item	Qty.	UM.	Description
1	22.9678.0420	1	EA	PULLEY ASSY, WITH BEARING
2	41.9678.0471	1	EA	GLASS, CYAN COLOR WHEEL

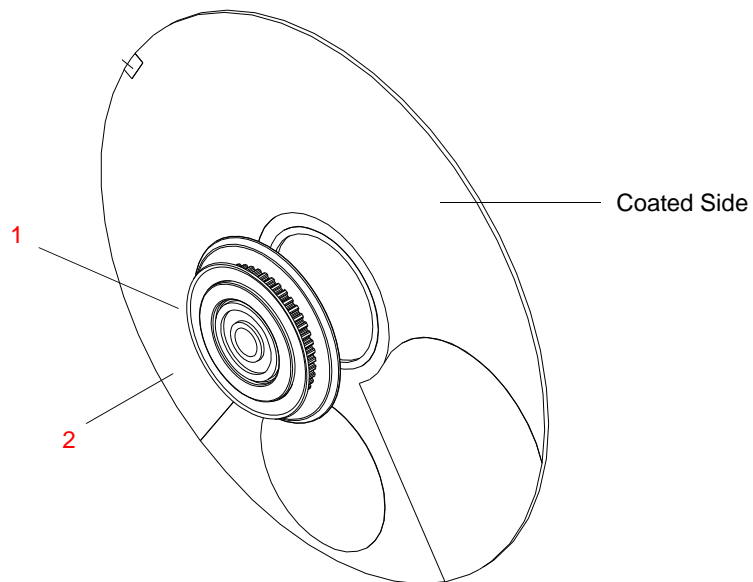


Figure 3-41: Cyan Wheel Assembly

Yellow Wheel Assembly

22.9678.0474 Rev B

Refer to [Figure 3-42](#)

No.	Item	Qty.	UM.	Description
1	22.9678.0420	1	EA	PULLEY ASSY, WITH BEARING
2	41.9678.0473	1	EA	GLASS, YELLOW COLOR WHEEL

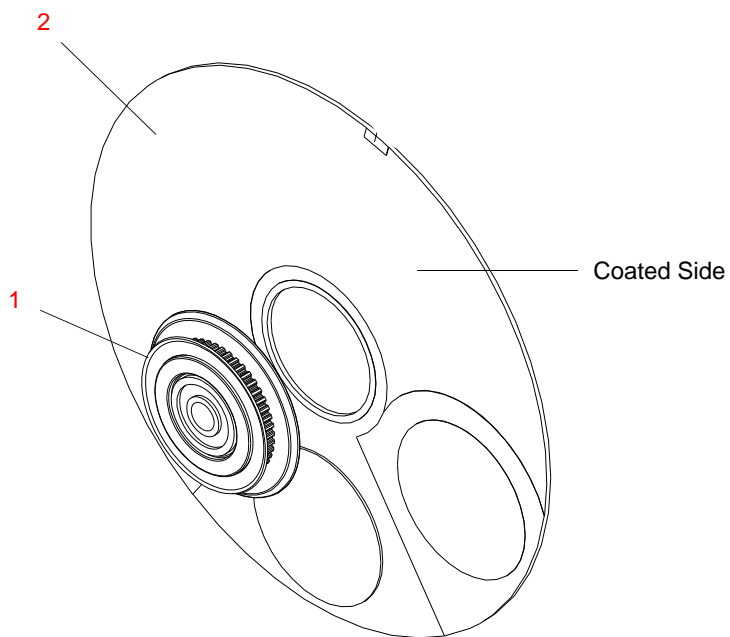


Figure 3-42: Yellow Wheel Assembly

Magenta Wheel Assembly

22.9678.0476 Rev B

Refer to [Figure 3-43](#)

No.	Item	Qty.	UM.	Description
1	22.9678.0420	1	EA	PULLEY ASSY, WITH BEARING
2	41.9678.0475	1	EA	GLASS, MAGENTA COLOR WHEEL

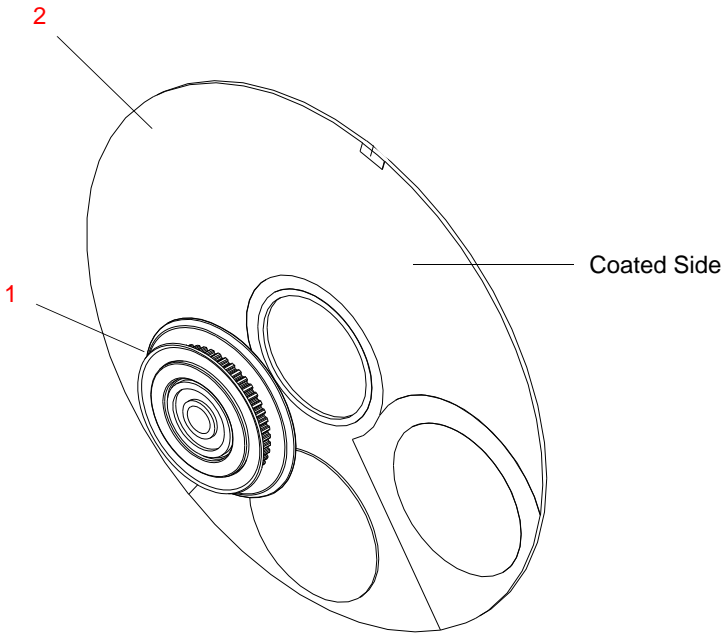


Figure 3-43: Magenta Wheel Assembly

CTO Wheel Assembly

22.9678.0478 Rev B

Refer to [Figure 3-44](#)

No.	Item	Qty.	UM.	Description
1	22.9678.0420	1	EA	PULLEY ASSY, WITH BEARING
2	41.9678.0477	1	EA	GLASS, COATED CTO

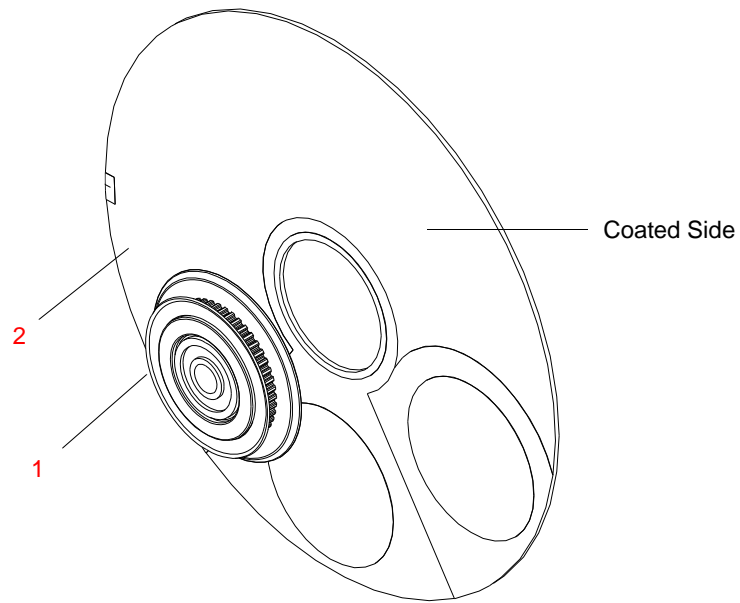


Figure 3-44: CTO Wheel Assembly

Gobo Clamp Assembly

22.9678.0693 Rev A

Refer to [Figure 3-45](#)

No.	Item	Qty.	UM.	Description
1	12.9678.0691	1	EA	GOBO CLAMP
2	53.6685.0625	2	EA	SCREW, CAPTIVE PANEL, 6-32 X .625"LG PPS ZINC PLATED
3	55.6538.0001	3	EA	WASHER, #6 LOCK INTERNAL TOOTH
4	53.6613.1126	1	EA	SCREW, 6-32 X 1.125 LG PPZ

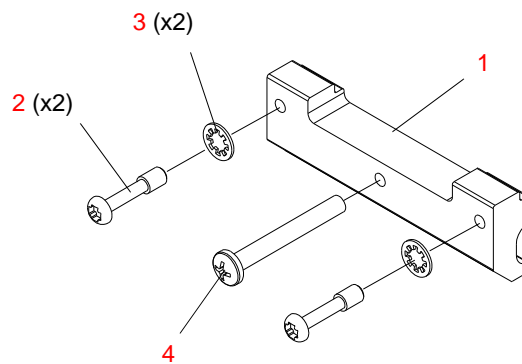


Figure 3-45: Gobo Clamp Assembly

Color Clamp Assembly

22.9678.0694 Rev A

Refer to [Figure 3-46](#)

No.	Item	Qty.	UM.	Description
1	12.9678.0692	1	EA	COLOR CLAMP
2	53.6685.0625	2	EA	SCREW, CAPTIVE PANEL, 6-32 X .625" LG PPS ZINC PLATED
3	55.6538.0001	2	EA	WASHER, #6 LOCK INTERNAL TOOTH
4	53.6613.1126	1	EA	SCREW, 6-32 X 1.125 LG PPZ

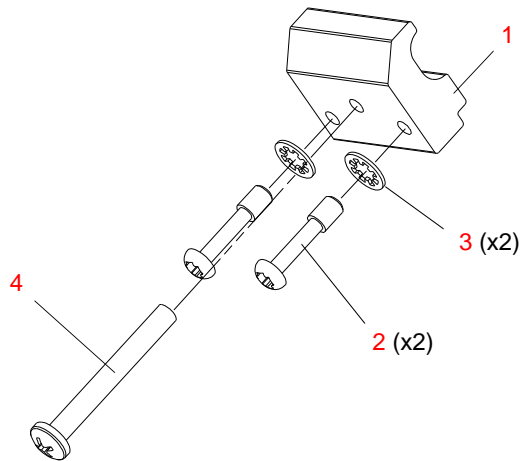


Figure 3-46: Color Clamp Assembly

Edge Lead Screw Assembly

22.9678.1126 Rev B

Refer to [Figure 3-47](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1119	1	EA	LEAD SCREW, EDGE
2	55..6616.0007	1	EA	STANDOFF, 3/8" HEX THRD .562" LG

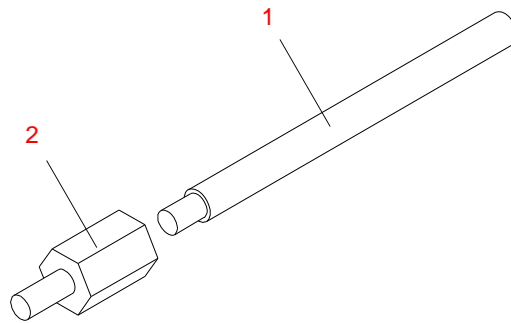


Figure 3-47: Edge Lead Screw Assembly

Notes

Yoke Assembly

Yoke Assembly

21.9678.0700 Rev J (VL3500)

21.9678.0701 Rev B (VL3500Q)

Refer to [Figure 3-48](#)

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
	21.9678.8765	1	EA	ASSY, TILT MOTOR
4	22.9661.0609	2	EA	ASSY, YOKE FAN
	22.9678.0609	2	EA	ASSY, YOKE FAN, VL3500 QUIET
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, TILT 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)
-	25.9678.0781	1	EA	CABLE ASSY, YOKE FAN AND RELAY, VL3500 QUIET (NOT SHOWN)
-	25.9678.0758	1	EA	CABLE ASSY, YOKE FAN (NOT SHOWN)
-	25.9678.0759	1	EA	CABLE ASSY, YOKE FAN, VL3500 QUIET (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 3/8 GROOVE DIA
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 (changed 05-27-03)

Yoke Assembly (cont.)

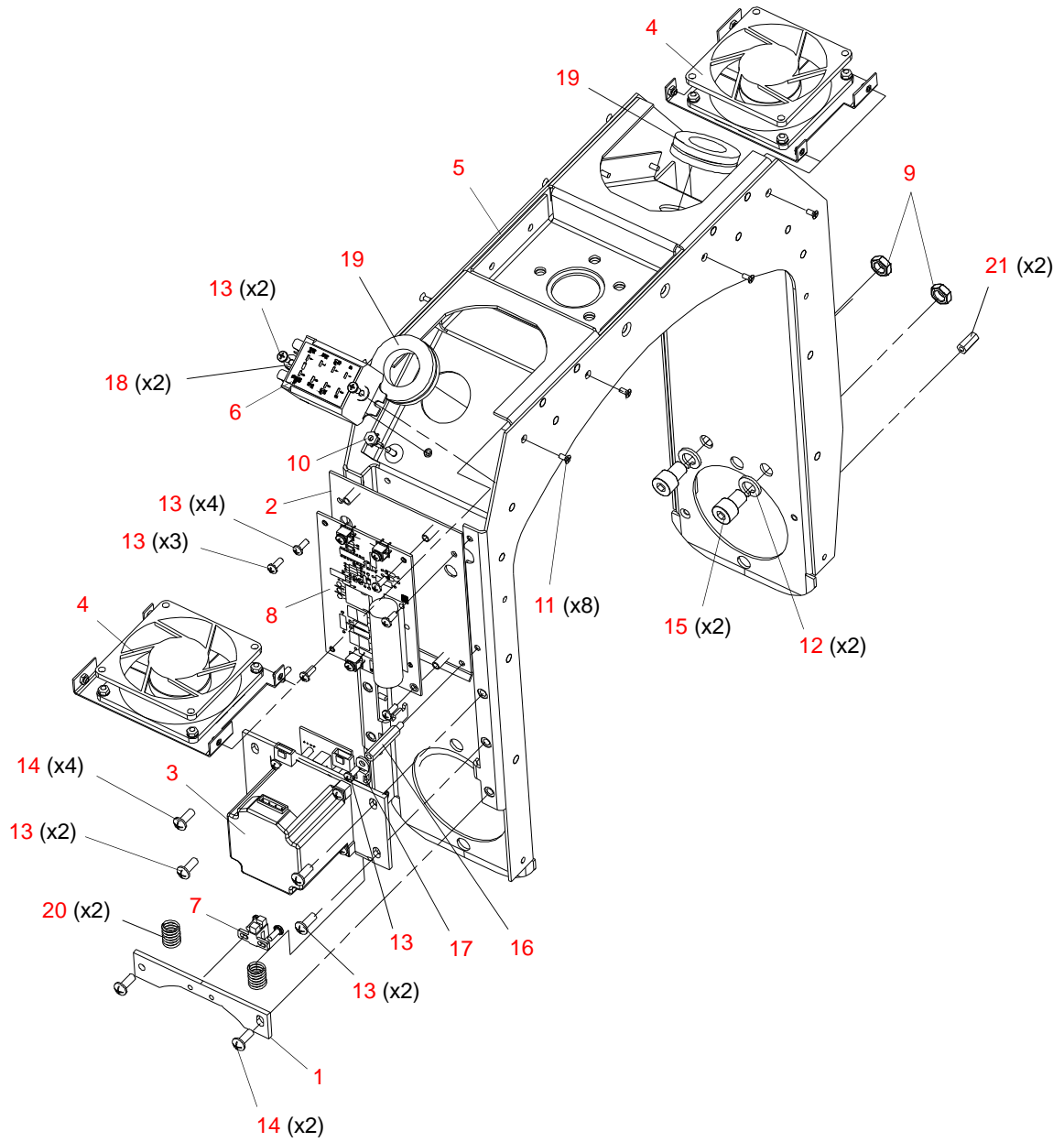


Figure 3-48: Yoke Assembly

Tilt Motor Assembly

21.9678.0765 Rev E (VL3500)

21.9678.6865 Rev 0 (VL3500 Quiet)

Refer to [Figure 3-49](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0763	1	EA	PLATE, TILT MOTOR MOUNT
	10.9678.8763	1	EA	PLATE, TILT MOTOR MOUNT (VL3500 QUIET)
2	21.9678.0708	1	EA	ASSY, DRIVE PULLEY
	- 10.9678.8720	1	EA	CODEWHEEL, 120 COUNT LARGE ID (changed 10-05-06)
	- 10.9678.0749	1	EA	TIMING PULLEY, 2MM GT 17 TOOTH
	- 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 (changed 02-22-06)
	24.9661.8629	1	EA	PCB ASSY, PAN/TILT ENCODER (changed 02-22-06) (VL3500 QUIET)
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

Note: Vari-Lite recommends that this motor 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.

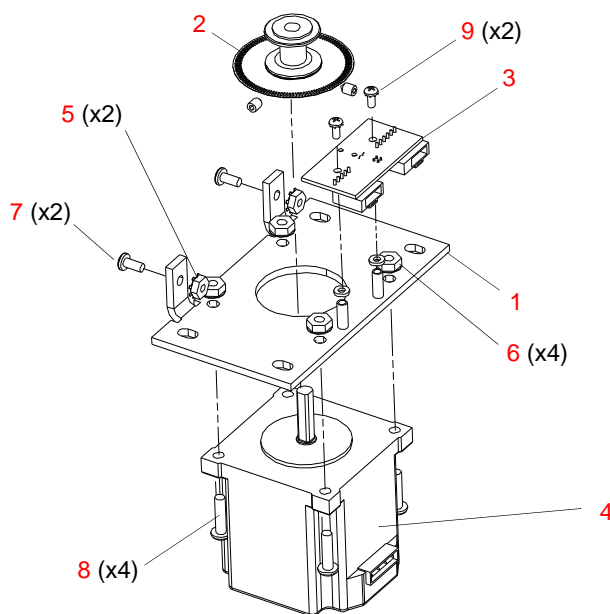


Figure 3-49: Tilt Motor Assembly

Relay Electrical Assembly

23.9650.3327 Rev B

Refer to [Figure 3-50](#)

No.	Item	Qty.	UM.	Description
1	04.9650.0044	1	EA	LABEL, RELAY WIRING -VL7
2	52.8271.0005	2	EA	RECEPT, FASTON 1/4" 16-14 AWG INSULATED
3	66.4510.0002	1	EA	RELAY, 20A 250VAC DPDT UL/CSA
4	82.4307.4002	1	EA	DIODE, 1N4002 RECTIFIER 100V 1A

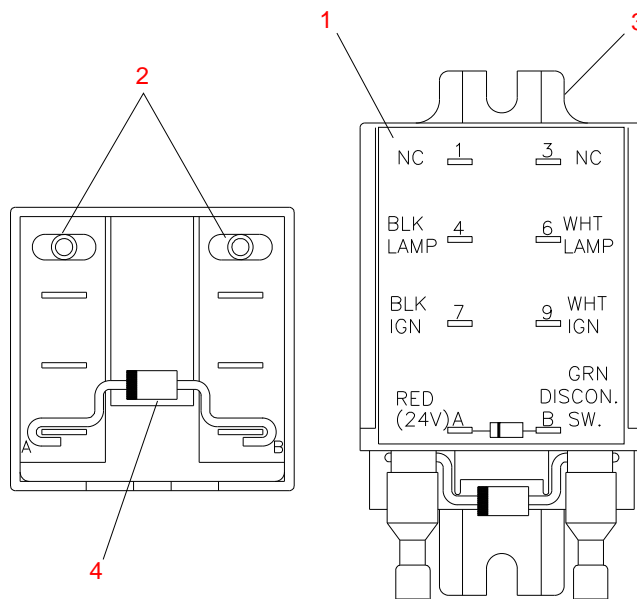


Figure 3-50: Relay Electrical Assembly

Yoke Fan Assembly

22.9661.0609 Rev C (VL3500)

22.9678.0609 Rev A (VL3500Q)

Refer to [Figure 3-51](#)

No.	Item	Qty.	UM.	Description
1	10.9661.0646	1	EA	FAN TRAY
2	40.7113.0001	1	EA	FAN, +24V 80 X 80 X 25MM, 32CFM
3	53.2200.0006	1	EA	NUT, 6-32 KEPS SS
4	55.2179.0003	1	EA	CABLE SADDLE, .75 X .75 4WAY, VL3500 QUIET (NOT SHOWN)
5	55.2186.0001	1	EA	CABLE TIE, .10 WD X 4" LG, VL3500 QUIET (NOT SHOWN)

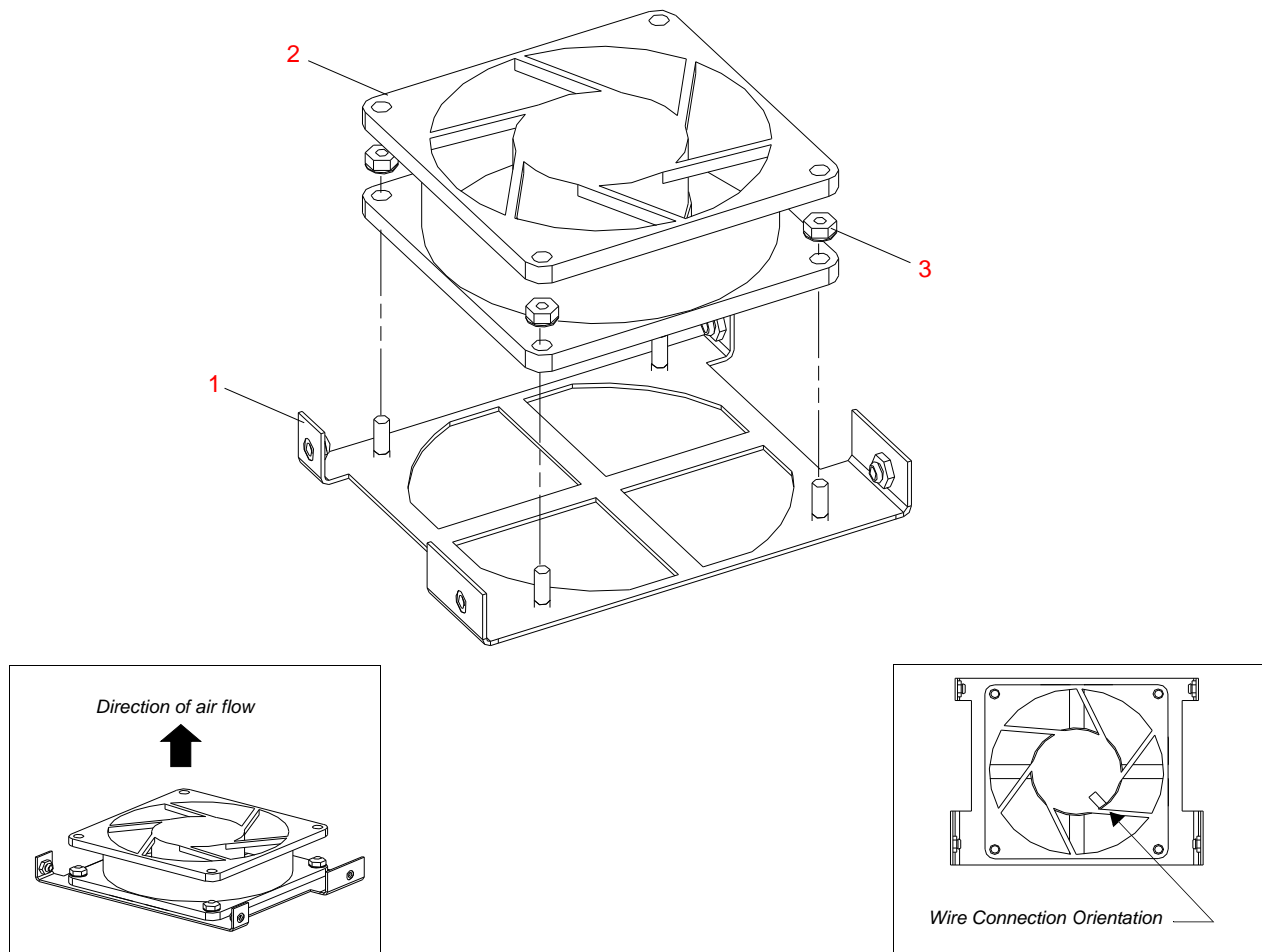


Figure 3-51: Yoke Fan Assembly

Notes

Head/Yoke PCB Assemblies

Shutter Cable Interconnect Assembly

21.9678.1246 Rev A

Refer to [Figure 3-52](#)

No.	Item	Qty.	UM.	Description
1	10.9678.1245	1	EA	MOUNT, CABLE INTERCONNECT, SHUTTER
2	52.6670.0034	1	EA	HEADER, MOD II, 34 PIN, DUAL SIDED
3	52.6670.0040	1	EA	HEADER, MOD II, 40 PIN, DUAL SIDED
4	53.6520.0002	4	EA	SCREW, 4-40 X 7/16" PPZ
5	55.6621.0001	4	EA	WASHER, #4 FLAT ZINC

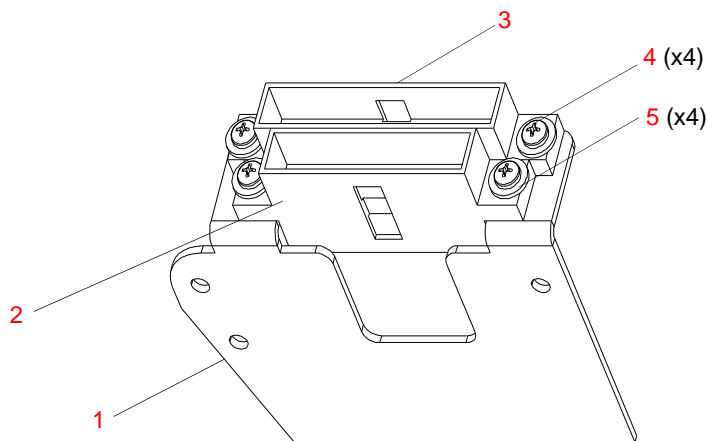


Figure 3-52: Shutter Cable Interconnect Assembly

Color Sensor PCB #1 Mount Assembly

22.9678.0481 Rev B

Refer to [Figure 3-53](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0482	1	EA	PCB MOUNT, COLOR SENSOR #1
2	24.9678.3480	1	EA	PCB ASSY, COLOR SENSOR #1
3	53.6558.0001	2	EA	SCREW, 6-32 X 3/8" PPZ
4	55.3303.0006	2	EA	WASHER, #6 LOCK INT.Tooth SS

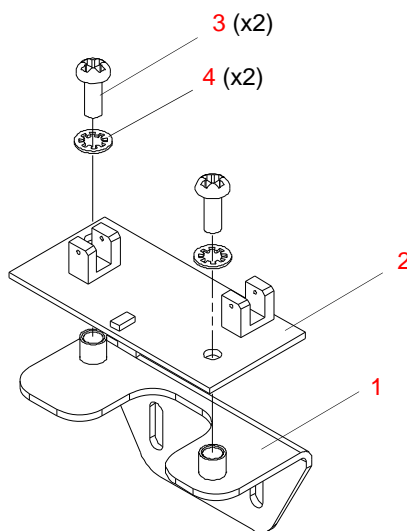


Figure 3-53: Color Sensor #1 PCB Mount Assembly

Color Sensor PCB #2 Mount Assembly

22.9678.0489 Rev B

Refer to [Figure 3-54](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0452	1	EA	PCB MOUNT, COLOR SENSOR #2
2	24.9678.0454	1	EA	PCB ASSY, COLOR SENSOR #2
3	53.6558.0007	2	EA	SCREW, 6-32 X 1/4" SEMS

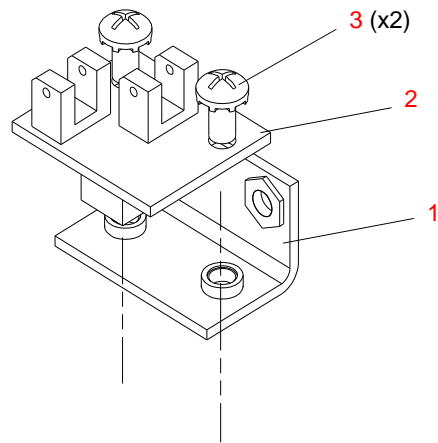


Figure 3-54: Color Sense PCB #2 Mount Assembly

Solid State Ignitor PCB

24.9661.3126 Rev 0

Refer to [Figure 3-55](#)

Only available as an assembly.

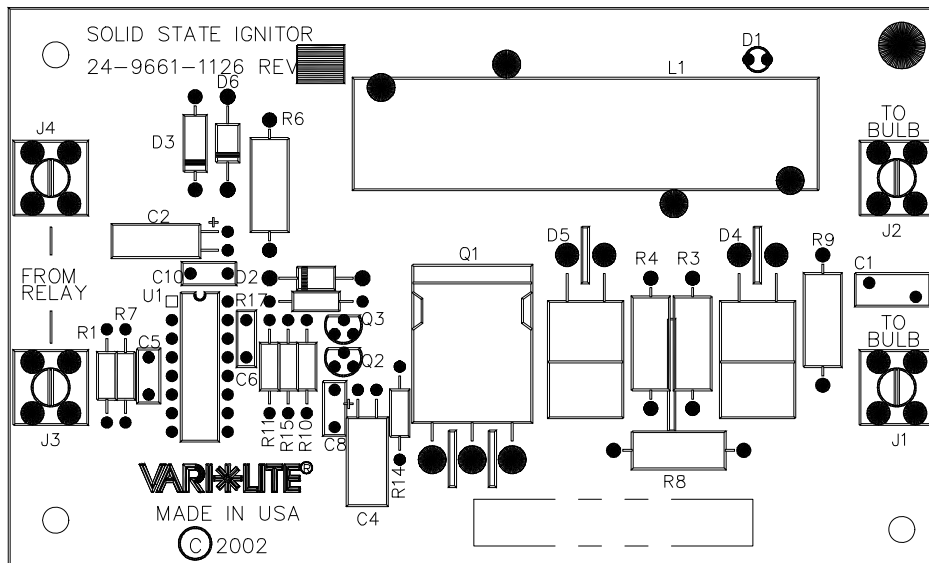


Figure 3-55: Solid State Ignitor PCB

Wheel Position Sensor PCB Assembly

24.9678.3240 Rev 0

Refer to [Figure 3-56](#)

No.	Item	Qty.	UM.	Description
1	17.9678.3240	1	EA	PCB, WHEEL POSITION SENSOR
2	52.6447.0008	1	EA	HEADER, SHROUDED 3 POSITION

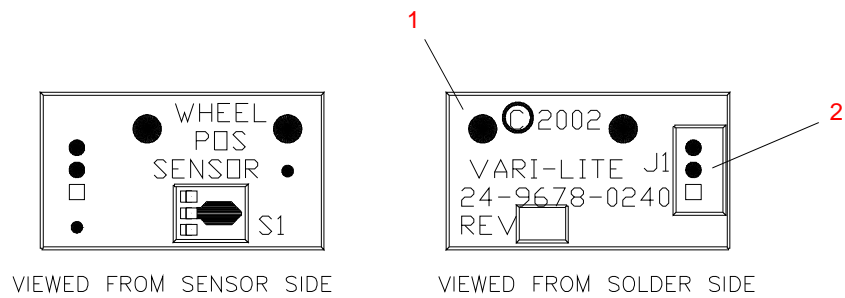


Figure 3-56: Wheel Position Sensor PCB Assembly

Color Interconnect PCB/Cable Assembly

25.9678.0409 Rev B (VL3500 Only)

Refer to [Figure 3-57](#) and [Figure 3-58](#)

No.	Item	Qty.	UM.	Description
1	24.9678.3409	1	EA	PCB ASSY, COLOR INTERCONNECT
2	28.9678.0409	1	EA	WIRE KIT, COLOR INTERCONNECT
-	- 04.9678.0409.00	1	EA	LABEL SET, COLOR HARNESS
-	- 11.9678.0409	1	EA	PCB, COLOR INTERCONNECT
-	- 52.6467.0003	1	EA	CONN, FEM PLUG 3POS 30-24 AWG
-	- 52.6467.0005	1	EA	CONN, FEM PLUG 5POS 30-24AWG
-	- 52.6467.0007	1	EA	CONN, FEM PLUG 7POS 30-24AWG
-	- 52.6467.0024	1	EA	CONTACT, SOCKET 30-24AWG CRIMP
-	- 52.6661.0006	1	EA	CONN, RECEIPT 6CIR WIRE TO
-	- 52.6467.0011	5	EA	CONN, FEM PLUG 11 POS 30-24AWG
-	- 52.8387.0001	3	EA	CONTACT, 26-28AWG FEMALE CRIM
-	- 55.2186.0002	20	EA	CABLE TIE, .09"WD 3.750"LG TEF
-	- 73.2326.0123	17.34	FT	WIRE, 26AWG 4COND 300V200C TEF
-	- 73.2326.7001	2.01	FT	WIRE, 26AWG 7COND 300V 200C TE
-	- 73.2326.5001	1.3	FT	WIRE, 26AWG 5COND 300V 200C TE
-	- 73.2326.3003	1.04	FT	WIRE, 26AWG 3COND 300V 200C TEF

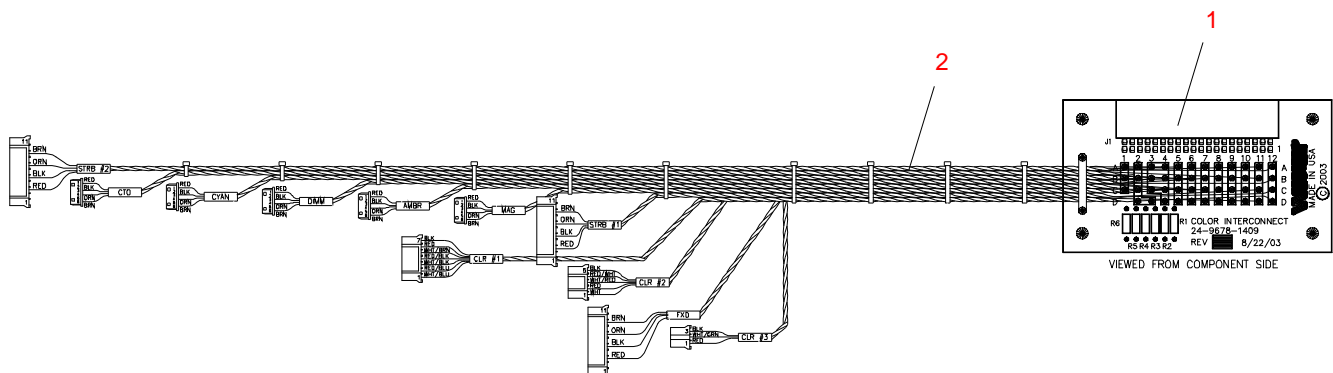
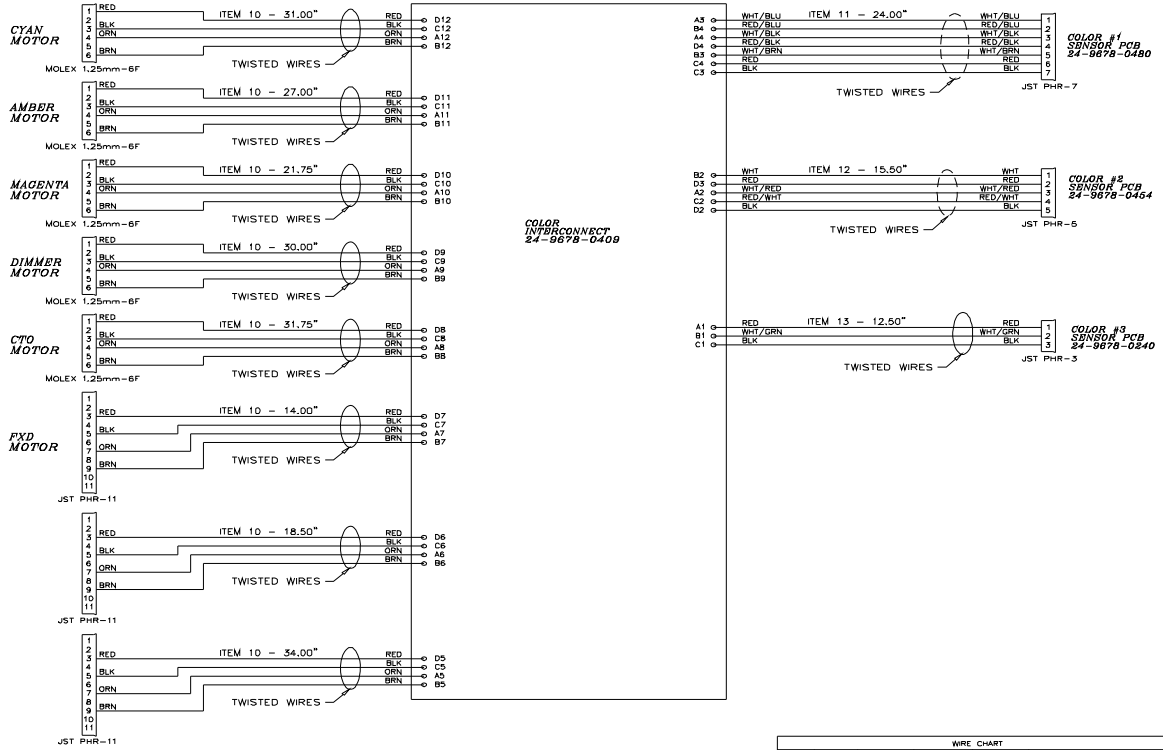


Figure 3-57: Color Interconnect PCB/Cable Assembly - VL3500 Only

Color Interconnect PCB/Cable Assembly (continued)



WIRE CHART					
FROM	TO	CONN. ITEM NO.	WIRE COLOR	WIRE ITEM NO.	FUNCTION
A12	PIN 4	6	ORN	10	CYAN MOTOR - 2A
B12	PIN 6	6	BRN	10	CYAN MOTOR - 2B
C12	PIN 5	6	BLK	10	CYAN MOTOR - 1B
D12	PIN 1	6	RED	10	CYAN MOTOR - 1A
A11	PIN 4	6	ORN	10	AMBER MOTOR - 2A
B11	PIN 6	6	BRN	10	AMBER MOTOR - 2B
C11	PIN 5	6	BLK	10	AMBER MOTOR - 1B
D11	PIN 1	6	RED	10	AMBER MOTOR - 1A
A10	PIN 4	6	ORN	10	MAGENTA MOTOR - 2A
B10	PIN 6	6	BRN	10	MAGENTA MOTOR - 2B
C10	PIN 5	6	BLK	10	MAGENTA MOTOR - 1B
D10	PIN 1	6	RED	10	MAGENTA MOTOR - 1A
A9	PIN 4	6	ORN	10	DIMMER MOTOR - 2A
B9	PIN 6	6	BRN	10	DIMMER MOTOR - 2B
C9	PIN 5	6	BLK	10	DIMMER MOTOR - 1B
D9	PIN 1	6	RED	10	DIMMER MOTOR - 1A
A8	PIN 4	6	ORN	10	CTO MOTOR - 2A
B8	PIN 6	6	BRN	10	CTO MOTOR - 2B
C8	PIN 5	6	BLK	10	CTO MOTOR - 1B
D8	PIN 1	6	RED	10	CTO MOTOR - 1A
A7	PIN 7	7	ORN	10	FXD MOTOR - 2A
B7	PIN 9	7	BRN	10	FXD MOTOR - 2B
C7	PIN 5	7	BLK	10	FXD MOTOR - 1B
D7	PIN 3	7	RED	10	FXD MOTOR - 1A
A6	PIN 7	7	ORN	10	STROBE #1 MOTOR - 2A
B6	PIN 9	7	BRN	10	STROBE #1 MOTOR - 2B
C6	PIN 5	7	BLK	10	STROBE #1 MOTOR - 1B
D6	PIN 3	7	RED	10	STROBE #1 MOTOR - 1A
A5	PIN 7	7	ORN	10	STROBE #2 MOTOR - 2A
B5	PIN 9	7	BRN	10	STROBE #2 MOTOR - 2B
C5	PIN 5	7	BLK	10	STROBE #2 MOTOR - 1B
D5	PIN 3	7	RED	10	STROBE #2 MOTOR - 1A
A3	PIN 1	4	WHT/BLU	11	SENSE - CYAN
A4	PIN 3	4	WHT/BLK	11	SENSE - DIMMER
B3	PIN 5	4	WHT/BRN	11	SENSE - CTO
B4	PIN 2	4	RED/BLU	11	VCC_R - CYAN
C3	PIN 7	4	BLK	11	GND - COLOR #1
C4	PIN 6	4	RED	11	VCC_R - CTO
D4	PIN 4	4	RED/BLK	11	VCC_R - DIMMER
A2	PIN 3	3	WHT/RED	12	SENSE - MAGENTA
B2	PIN 1	3	WHT	12	SENSE - AMBER
C2	PIN 4	3	RED/WHT	12	VCC_R - MAGENTA
D2	PIN 5	3	BLK	12	GND - COLOR #2
D3	PIN 2	3	RED	12	VCC_R - AMBER
A1	PIN 1	2	RED	13	VCC_R - FXD
B1	PIN 2	2	WHT/GRN	13	SENSE - FXD
C1	PIN 3	2	BLK	13	GND - COLOR #3

Figure 3-58: Color Interconnect PCB Assembly Wire Chart - VL3500 Only

Color Interconnect (Quiet) PCB/Cable Assembly

25.9678.0419 Rev A (VL3500Q Only)

Refer to [Figure 3-59](#) and [Figure 3-60](#)

No.	Item	Qty.	UM.	Description
1	24.9678.0409	1	EA	PCB ASSY, COLOR INTERCONNECT
2	28.9678.0419	1	EA	WIRE KIT, COLOR INTERCONNECT
-	- 04.9678.0409.00	1	EA	LABEL SET, COLOR HARNESS
-	- 11.9678.0409	1	EA	PCB, COLOR INTERCONNECT
-	- 52.6467.0003	1	EA	CONN, FEM PLUG 3POS 30-24 AWG
-	- 52.6467.0005	1	EA	CONN, FEM PLUG 5POS 30-24AWG
-	- 52.6467.0007	1	EA	CONN, FEM PLUG 7POS 30-24AWG
-	- 52.6467.0024	19	EA	CONTACT, SOCKET 30-24AWG CRIMP
-	- 52.6661.0006	5	EA	CONN, RECEPT 6CIR WIRE TO
-	- 52.6467.0011	1	EA	CONN, FEM PLUG 11 POS 30-24AWG
-	- 52.6523.0004	2	EA	CONN., HOUSING 4 POS PLUG
-	- 52.8347.0001	8	EA	CONTACT, 24-30AWG MALE CRIMP
-	- 52.8387.0001	20	EA	CONTACT, 26-28AWG FEMALE CRIM
-	- 55.2186.0002	11	EA	CABLE TIE, .09"WD 3.750"LG TEF
-	- 73.2326.0123	17.34	FT	WIRE, 26AWG 4COND 300V200C TEF
-	- 73.2326.7001	2.01	FT	WIRE, 26AWG 7COND 300V 200C TE
-	- 73.2326.5001	1.30	FT	WIRE, 26AWG 5COND 300V 200C TE
-	- 73.2326.3003	1.04	FT	WIRE, 26AWG 3COND 300V 200C TEF

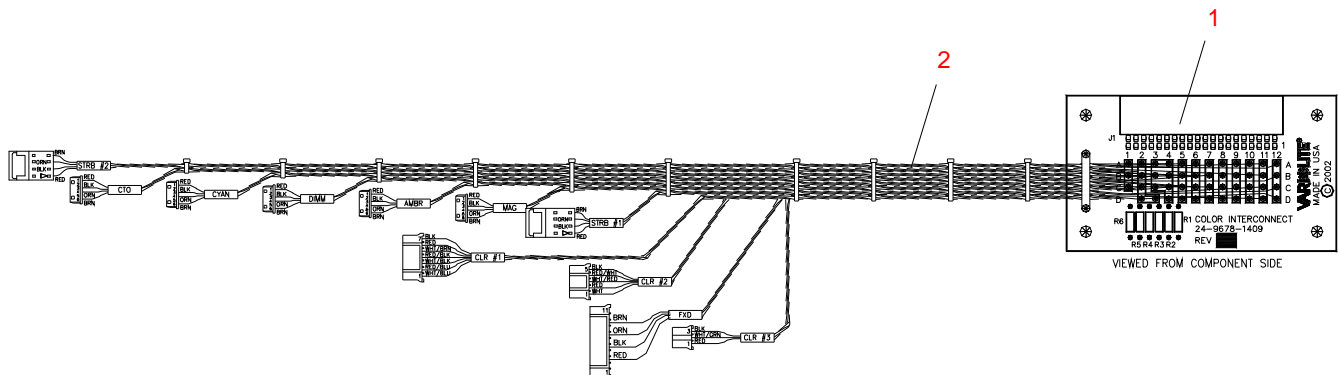
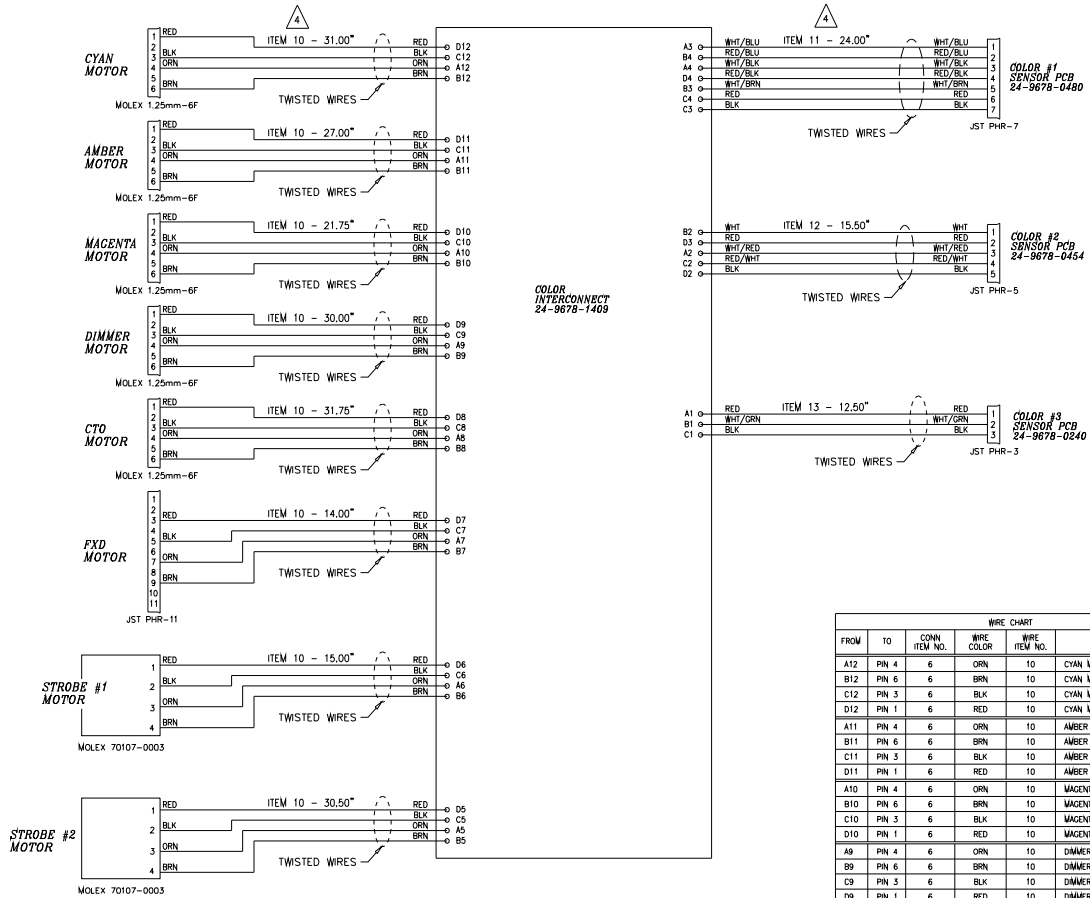


Figure 3-59: Color Interconnect PCB/Cable Assembly - VL3500Q Only

Color Interconnect PCB/Cable Assembly (continued)



WIRE CHART						
FROM	TO	CONN ITEM NO.	WIRE COLOR	WIRE ITEM NO.	FUNCTION	
A12	PN 4	6	ORN	10	CYAN MOTOR - 2A	
B12	PN 6	6	BRN	10	CYAN MOTOR - 2B	
C12	PN 3	6	BLK	10	CYAN MOTOR - 1B	
D12	PN 1	6	RED	10	CYAN MOTOR - 1A	
A11	PN 4	6	ORN	10	AMBER MOTOR - 2A	
B11	PN 6	6	BRN	10	AMBER MOTOR - 2B	
C11	PN 3	6	BLK	10	AMBER MOTOR - 1B	
D11	PN 1	6	RED	10	AMBER MOTOR - 1A	
A10	PN 4	6	ORN	10	MAGENTA MOTOR - 2A	
B10	PN 6	6	BRN	10	MAGENTA MOTOR - 2B	
C10	PN 3	6	BLK	10	MAGENTA MOTOR - 1B	
D10	PN 1	6	RED	10	MAGENTA MOTOR - 1A	
A9	PN 4	6	ORN	10	DIMMER MOTOR - 2A	
B9	PN 6	6	BRN	10	DIMMER MOTOR - 2B	
C9	PN 3	6	BLK	10	DIMMER MOTOR - 1B	
D9	PN 1	6	RED	10	DIMMER MOTOR - 1A	
A8	PN 4	6	ORN	10	CTO MOTOR - 2A	
B8	PN 6	6	BRN	10	CTO MOTOR - 2B	
C8	PN 3	6	BLK	10	CTO MOTOR - 1B	
D8	PN 1	6	RED	10	CTO MOTOR - 1A	
A7	PN 7	7	ORN	10	FXD MOTOR - 2A	
B7	PN 9	7	BRN	10	FXD MOTOR - 2B	
C7	PN 5	7	BLK	10	FXD MOTOR - 1B	
D7	PN 3	7	RED	10	FXD MOTOR - 1A	
A6	PN 7	7	ORN	10	STROBE #1 MOTOR - 2A	
B6	PN 9	7	BRN	10	STROBE #1 MOTOR - 2B	
C6	PN 5	7	BLK	10	STROBE #1 MOTOR - 1B	
D6	PN 3	7	RED	10	STROBE #1 MOTOR - 1A	
A5	PN 7	7	ORN	10	STROBE #2 MOTOR - 2A	
B5	PN 9	7	BRN	10	STROBE #2 MOTOR - 2B	
C5	PN 5	7	BLK	10	STROBE #2 MOTOR - 1B	
D5	PN 3	7	RED	10	STROBE #2 MOTOR - 1A	
A3	PN 1	4	WHI/BLU	11	SENSE - CYAN	
A4	PN 3	4	WHI/BLK	11	SENSE - DIMMER	
B3	PN 5	4	WHI/BRN	11	SENSE - CTO	
B4	PN 2	4	RED/BLU	11	VCC_R - CYAN	
C3	PN 7	4	BLK	11	GND - COLOR #1	
D4	PN 4	4	RED/BLK	11	VCC_R - DIMMER	
A2	PN 3	3	WHI/RED	12	SENSE - MAGENTA	
B2	PN 1	3	WHI	12	SENSE - AMBER	
C2	PN 4	3	RED/WHI	12	VCC_R - MAGENTA	
D2	PN 5	3	BLK	12	GND - COLOR #2	
D3	PN 2	3	RED	12	VCC_R - AMBER	
A1	PN 1	2	RED	13	VCC_R - FXD	
B1	PN 2	2	WHI/GRN	13	SENSE - FXD	
C1	PN 3	2	BLK	13	GND - COLOR #3	

Figure 3-60: Color Interconnect PCB Assembly Wire Chart - VL3500Q Only

Pan/Tilt Encoder PCB

24.9661.9629 Rev B (VL3500)

24.9661.8629 Rev 0 (VL3500 Quiet)

Refer to [Figure 3-61](#)

Available only as an assembly.

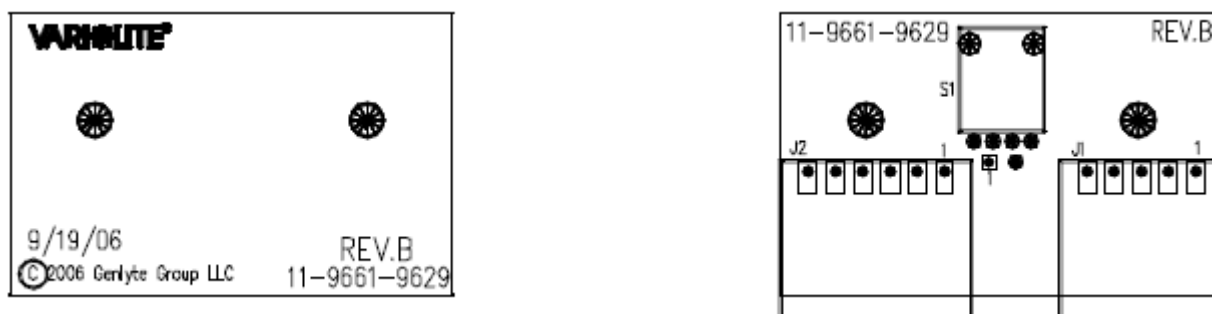


Figure 3-61: Pan/Tilt Encoder PCB

VL3500 Controller PCB Assembly

24.9678.1730 Rev F

Refer to [Figure 3-62](#) Available only as an assembly.

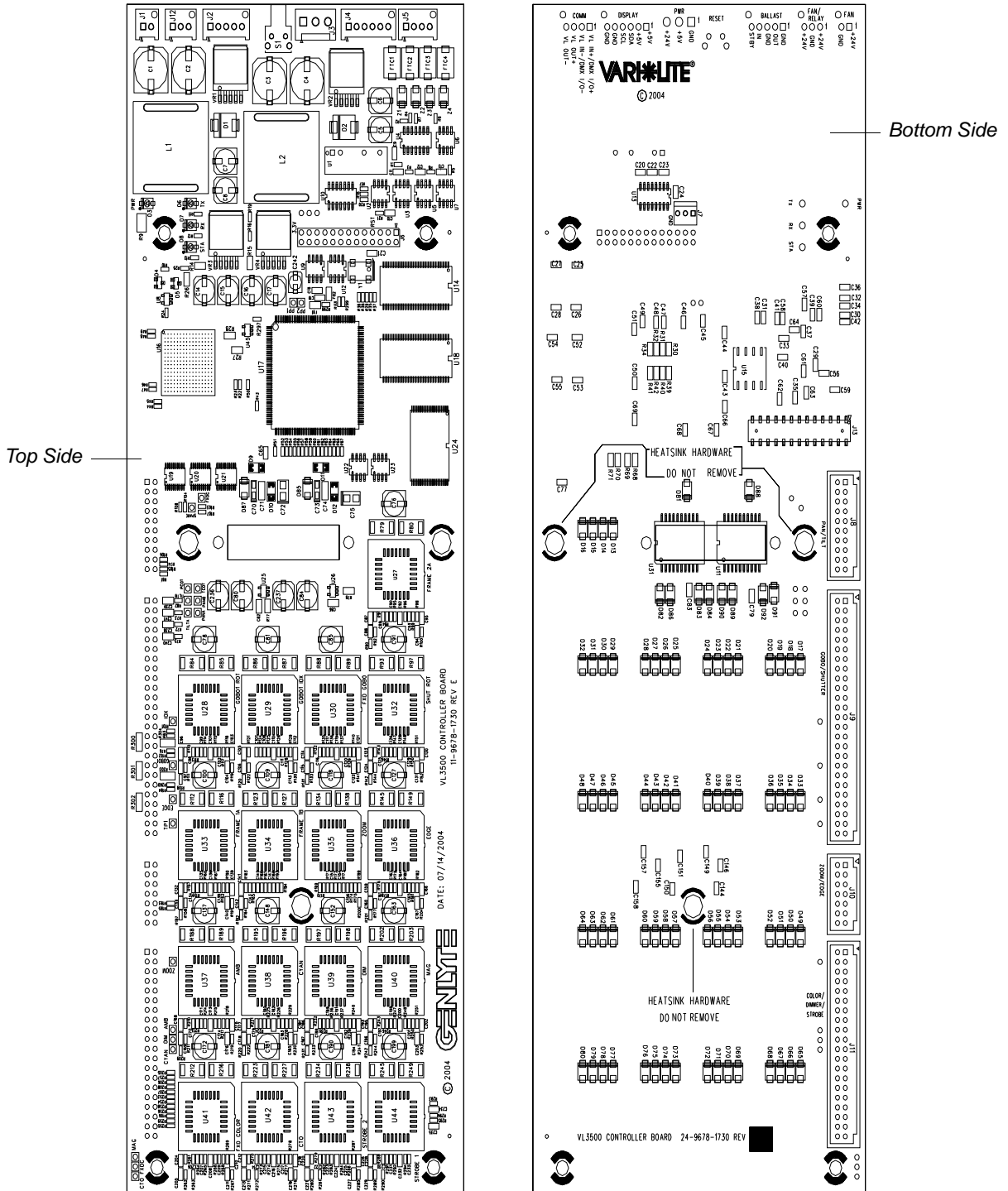


Figure 3-62: VL3500 Controller PCB

Motor Driver (Piggy Back) PCB

24.9678.1732 Rev C

Refer to [Figure 3-63](#)

Ref.	Item	Qty.	UM.	Description
	11.9678.1732	1	EA	PCB, MOTOR DRIVER PGY BK VL3500
U6	36-0090	1	EA	IC, 74HC14 SCH TRIG SOIC-14
J2	52.6599.0048	1	EA	CONN, HDR 24POS SHRD .1LS VERT
J1	52.8412.0026	1	EA	CONN, 26 PIN .025" SQ PIN SOCKET
R7, R8, R13, R14, R18, R29, R40, R41, R46, R47	60.1161.2673	10	EA	RES, 1/16W 1% 2.67K OHM CHIP THK
R3-R6, R9- R12, R16, R17, R27, R28, R36- R39, R42- R45	60.1161.7503	20	EA	RES, 1/16W 1% 7.50K OHM CHIP THK
R19-R22, R30, R31, R48-R51	60.1165.1004	10	EA	RES, 1/16W 5% 10K OHM CHIP THK
R1, R2, R15, R34, R35	60.1165.2404	5	EA	RES, 1/16W 5% 24.0K OHM CHIP THK
R23-R26, R32, R33, R52-R55	60.3242.1000	10	EA	RES, 1W 1% 1.0 OHM WW SU
C1, C2, C9, C28, C29	62.4228.0106	5	EA	CAP, 10UF, 50V 20% ALUM EL
C5-C11, C13, C17, C23, C32, C34, C36	62.4240.0103	10	EA	CAP, .01UF 25V 10% CER CHIP SU
C3, C10, C30, C31	62.4240.0104	5	EA	CAP, .1UF 25V 10% CER CHIP SU
C6, C8, C12, C18, C24, C33, C35, C37, C39	62.4240.0223	10	EA	CAP, .022UF 25V 10% CER CHIP SU

Ref.	Item	Qty.	UM.	Description
C15, C16, C25, C40, C41	62.4245.0272	5	EA	CAP, 2700PF 25V 10% CER CHIP SU
C19-C22, C26, C27, C42-C45	62.4245.0471	10	EA	CAP, 470PF 25V 10% CER CHIP SU
D1-D20	82.5362.0001	20	EA	DIODE, SCHOTTKY BARRIER RECTIFIER
U1-U5	85.3773.0001	5	IC., STEP MOTOR DRIVER	

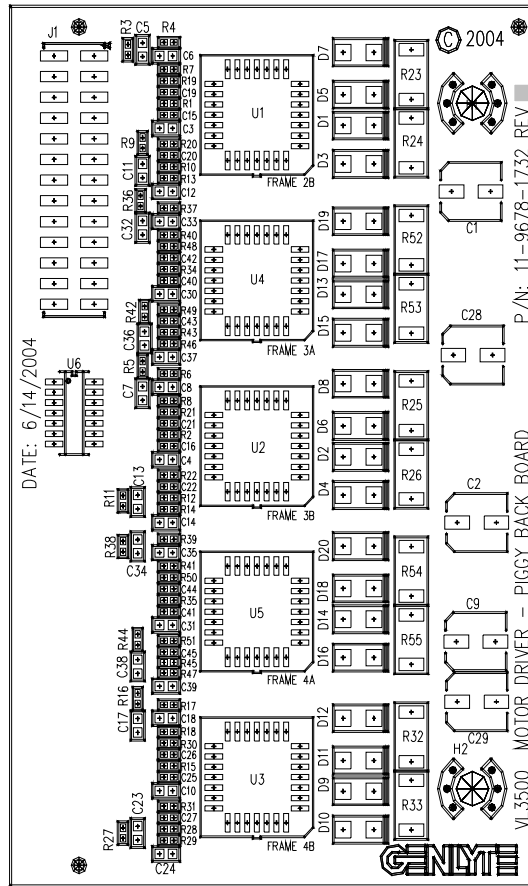


Figure 3-63: Motor Driver (Piggy Back) PCB

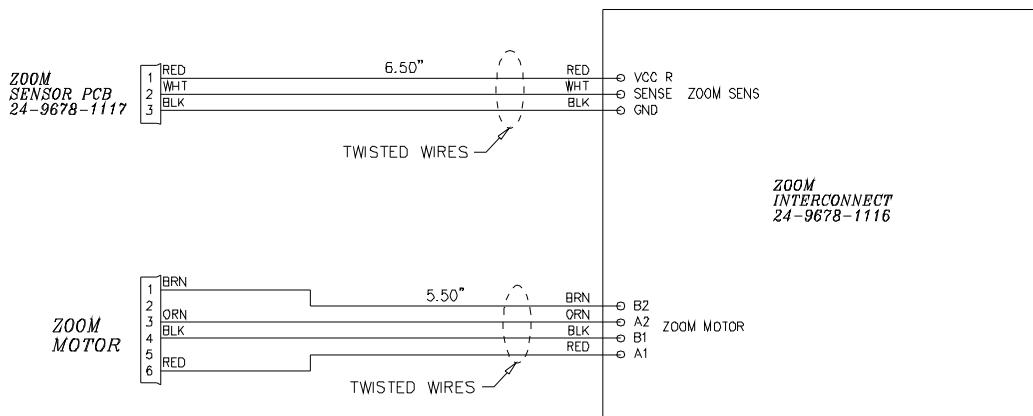
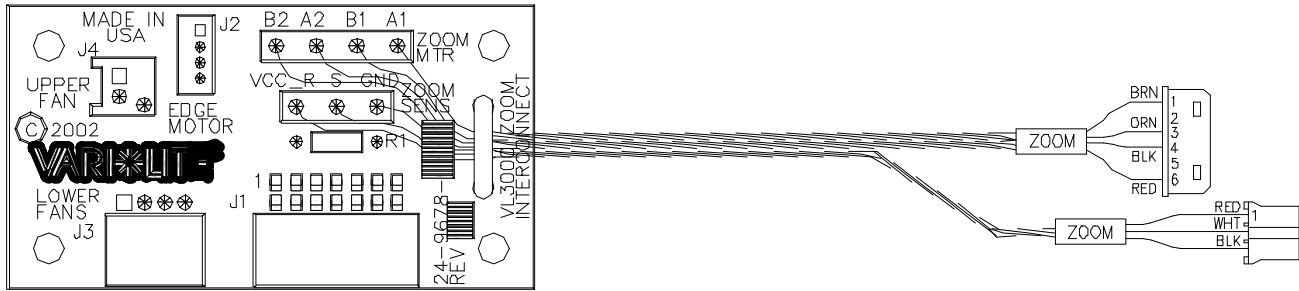
Arc Zoom Interconnect PCB Assembly

24.9678.1116 Rev 0

Refer to [Figure 3-64](#)

Ref.	Item	Qty.	UM.	Description
-	04.9678.1116.00	1	EA	LABEL SET ZOOM HARNESS (Not Shown)
-	11.9678.1116	1	EA	PCB ZOOM INTERCONNECT
J3	52.6259.0004	1	EA	HDR 4POS NT\MTA100 SD RT ANG
J4	52.6260.0003	1	EA	HEADER, 2POS MTA-100 SHROUDED
J2	52.6447.0004	1	EA	HEADER, SHROUDED 4 POSITION
	52.6467.0003	1	EA	CONN, FEM PLUG 3POS 30-24AWG
	52.6467.0024	3	EA	CONTACT, SOCKET 30-24AWG CRIMP
J1	52.6598.0028	1	EA	HDR 14P 2ROW AMP MODU R/A
	52.6662.0006	1	EA	HOUSING, 6POS 125V/2A 2.00
	52.8388.0001	4	EA	CONTACT, 24-30AWG FEMALE CRI
	55.2186.0001	1	EA	CABLE TIE, .10"WD 4.00"LG SMALL
R1	60.1425.2703	1	EA	RES, 1/4W 5% 270.0 OHM CF
	73.2324.0029	.54	FT	WIRE, 24AWG 3CD TW 300V 200C
	73.2324.0123	.46	FT	WIRE, 24AWG 4CD TW 300V 200C

Zoom Interconnect PCB Assembly (continued)



WIRE CHART					
FROM	TO	CONN ITEM NO.	WIRE COLOR	WIRE ITEM NO.	FUNCTION
A1 - ZOOM MTR	PIN 6	10	RED	14	ZOOM MOTOR - 1A
B1 - ZOOM MTR	PIN 4	10	BLK	14	ZOOM MOTOR - 1B
A2 - ZOOM MTR	PIN 3	10	ORN	14	ZOOM MOTOR - 2A
B2 - ZOOM MTR	PIN 1	10	BRN	14	ZOOM MOTOR - 2B
VCC_R - ZOOM SENS	PIN 1	6	RED	16	VCC_R - ZOOM SENSOR
S - ZOOM SENS	PIN 2	6	WHT	16	SENSE - ZOOM SENSOR
GND - ZOOM SENS	PIN 3	6	BLK	16	GND - ZOOM SENSOR

Figure 3-64: Arc Zoom Interconnect PCB Assembly

Zoom Sensor (Target) PCB Assembly

24.9678.0112 Rev 0

Refer to [Figure 3-65](#)

Ref.	Item	Qty.	UM.	Description
-	11.9678.1117	1	EA	PCB, VL3000 ZOOM SENSOR
J1	52.6447.0003	1	EA	HEADER, SHROUDED 3 POSITION
S1	86.7002.0004	1	EA	SWITCH, SLOTTED OPTICAL OPB610

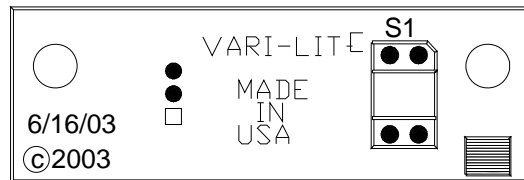


Figure 3-65: Zoom Sensor PCB Assembly

Index Sensor PCB Assembly

24.9663.1231 Rev B

Refer to [Figure 3-66](#)

Ref.	Item	Qty.	UM.	Description
-	11.9663.1231	1	EA	PCB, INDEX SENSOR
J1	52.6447.0004	1	EA	HEADER, SHROUDED 4 POSITION
S1	86.7002.0004	1	EA	SWITCH, SLOTTED OPTICAL OPB610

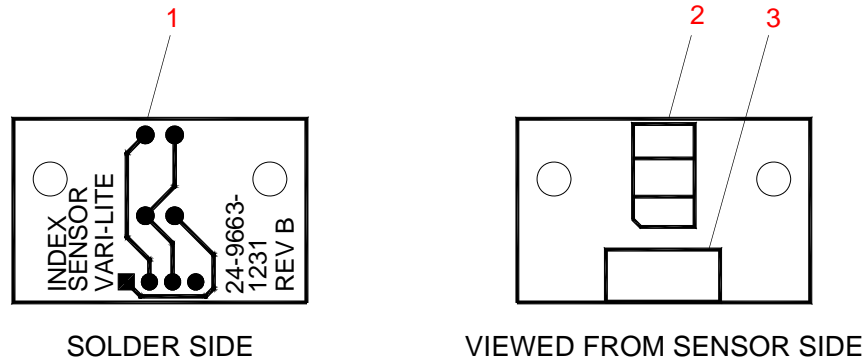


Figure 3-66: Index Sensor PCB Assembly

Notes

Enclosure Assembly

Upper Enclosure Assembly

21.9678.0800.01 Rev NN

21.9678.0801.01 Rev Y (VL3500 Quiet)

Refer to [Figure 3-67](#) and [Figure 3-68](#)

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	04.9678.0040.01	1	EA	LABEL, VL3000 COMPLIANCE
	04.9678.0045	1	EA	LABEL, VL3000 COMPLIANCE, VL3500 QUIET
4	06.6032.0009	1	EA	CABLE MARKER TIE, WHITE 19 X 7
5	10.9661.1258	1	EA	BRACKET, APS SIDE
6	10.9661.1358	1	EA	AIR SEAL, DUCT
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	10.9678.0886	1	EA	SPACER, PAN BEARING 0.235" THK
12	10.9678.0892	1	EA	BUSHING, WIRE PROTECTION PAN
13	10.9678.1876	1	EA	AIR DIST PLENUM, 1200W S W BALLAST P/S
14	12.9686.1236	2	EA	MACHINED, COVER FRONT
15	12.9686.1238	2	EA	MACHINED, COVER SIDE
16	12.9678.0842	1	EA	AIR DUCT, UPPER ENCLOSURE MOD
17	12.9678.1862	1	EA	SHIELDED BALLAST, CCI
18	21.9678.1254	1	EA	ASSY, COVER - VENTILATION
	21.9686.0840.02	1	EA	ASSY, COVER - VENT, VL3500 QUIET, ALUMINUM (not shown)
19	21.9678.0767	1	EA	ASSY, STABILIZER
19a	- 10.9678.0757	1	EA	STABILIZER, 1.377DIA
19b	- 10.9678.0762	1	EA	BRACKET, STABLIZER
19c	- 53.6610.0003	1	EA	SCREW, 6-32 X 7/16" PPZ
19d	- 55.6568.0075	1	EA	SPRING, EXTSN 0.375" OD 1.00" LG 0.041" WIRE DIA
20	21.9678.0805	1	EA	ASSY, PANEL
21	21.9678.0807	1	EA	ASSY, PAN PULLEY

No.	Item	Qty.	UM.	Description
22	21.9678.0864	1	EA	ASSY, PAN MOTOR
23	21.9678.0881	1	EA	ASSY, PAN TUBE
24	22.9678.0851	1	EA	ASSY, UPPER ENCLOSURE
25	23.9678.0686	1	EA	FAN ASSY, UPPER ENCLOSURE
	23.9678.0888	1	EA	FAN ASSY, UPPER ENCLOSURE, SLOW, VL3500 QUIET
26	23.9678.0687	1	EA	ELEC ASSY, PAN EOT SENSOR
-	25.9661.1514	1	EA	CABLE ASSY, LVS CHASSIS GND (not shown)
-	25.9661.1520	1	EA	CABLE ASSY, CHASSIS TO YOKE GND (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)
-	25.9678.0816	1	EA	CABLE ASSY, BALLAST TO CONTROL (not shown)
-	25.9678.0818	1	EA	CABLE ASSY, PAN/TILT CONTROL (not shown)
-	25.9678.0821	1	EA	CABLE ASSY, DC OUTPUT (not shown)
-	25.9678.1825	1	EA	CABLE ASSY, DISPLAY (not shown)
-	25.9678.0829	1	EA	CABLE ASSY, LAMP SUPPLY TO RELAY (not shown)
-	25.9678.0843	1	EA	CABLE ASSY, AC FAN LVS TO YOKE (not shown)
27	52.8295.0002	1	EA	TERMINAL STRIP, 300V 12AWG 20A
28	53.2001.0003	1	EA	NUT, 10-32 NYLON INSERT
29	53.2019.0004	4	EA	NUT, 3/8-16 X 7/32" THK HEX
30	53.2200.0006	4	EA	NUT, 6-32 KEPS SS
31	53.6505.0022	3	EA	BOLT, 3/8-16 X 3/4" LG CARR
32	53.6513.0044	3	EA	SCREW, M5 X 10MM STL CUP PT
33	53.6515.0001	4	EA	SCREW, 10-32 X 3/4" SCB CAP
34	53.6522.0001	1	EA	SCREW, 6-32 X 1/4" PPZ
35	53.6522.0004	2	EA	SCREW, 6-32 X 1/4" SOC HD
36	53.6525.0188	2	EA	SCREW, 6-32 X 3/16" PPZ SEMS
37	53.6530.0023	2	EA	RIVET, 1/8" OD POP .376-.500 GRP
38	53.6539.0001	4	EA	WASHER, 3/8" SPLIT LOCK
39	53.6545.0003	4	EA	SCREW, 8-32 X 3/8" PFZ
40	53.6545.0004	4	EA	SCREW, 8-32 X 3/8" PPZ
41	53.6556.0002	1	EA	SCREW, 4-40 X 3/4" LG
42	53.6558.0009	13	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS
43	53.6558.0010	11	EA	SCREW, 6-32 X 1/4" LG PPZ BLACK
44	53.6558.0015	4	EA	SCREW, 6-32 X 3/8" PPB SEMS EXT
45	53.6571.0003	1	EA	SCREW, 6-32 X 1-1/2" LG PPB
46	53.6591.0001	2	EA	SCREW, 6-32 X 1/4" PFZ
47	53.6609.0001	4	EA	SCREW, 6-32 X 3/8" PFZ

No.	Item	Qty.	UM.	Description
48	53.6626.0001	1	EA	SCREW, 10-32 X 1/2" PPZ
49	53.6634.1000	1	EA	SCREW, 3/8-16 X 1.00" LG SOC
50	53.6653.0502	4	EA	SCREW, 1/4-20 X 1/2" LG SOC
51	54.1206.0014	2	EA	RING, RETAINING
52	54.1255.0001	1	EA	BEARING ASSY, BLACK FLUSH MOU
53	54.2055.0001	1	EA	BELT, TIMING S2M 210GROOVE 9MM
54	55.2150.0003	2	EA	STANDOFF, 1/4"HEX 6-32 1.125"L
55	55.2178.0001	2	EA	CABLE ANCHOR MOUNT, #8 SCREW
56	55.2179.0001	3	EA	CABLE ANCHOR MOUNT, #6 SCREW
57	55.2186.0001	5	EA	CABLE TIE, .10"WD 4.00"LG SMALL
58	55.2261.0001	1	EA	SLEEVE, NYLON THIN WALL #6 SCR
59	55.2267.0001	2	FT	RUBBER STRIP, SPONGE CLSD CELL
60	55.6677.0039	4	EA	WASHER, 0.438" OD X 0.219" ID X 0.040" THK
61	55.6532.0004	2	EA	BRACKET, 6-32 THREADED HOLES
62	55.6543.0001	0.312	FT	GROMMET STRIP, SERRATED .062"
63	55.6543.0002	1.54	FT	GROMMET STRIP, SERRATED .125"
64	55.6549.0001	4	EA	WASHER, 1/4" SPLIT LOCK
65	55.6568.0074	2	EA	SPRING, CPRSN .420"OD .750"LG 0.055" DIA WIRE
66	55.6575.0001	4	EA	SCREW, 10-32 X 3/4" PPB
67	55.6577.0005	2	EA	STANDOFF, 1/2" HEX 6-32 X 1.625" L
68	55.6580.0002	2	EA	CABLE TIE, 0.18" WD 8.0" LG
69	55.2132.0012	1	EA	STANDOFF, 1/4" HEX 6-32 X 3/4" LG
70	55.6677.0044	1	EA	WASHER, .877"OD.170"ID.093"THK
71	55.6699.0010	0.50	FT	SLEEVING, 5/16" NOM DIA WOVEN POLY ROUNDIT
72	55.6775.0009	1	EA	BUSHING, SNAP .750"ID 1"MT H
73	67.4018.0001	1	EA	FERRITE, 26 X 28.5 X 13MM CYL
74	67.4021.0002	1	EA	FILTER, EMI, CCI
75	68.9678.0827	1	EA	CHOKER, COMMON MODE
76	69.3176.0201	1	EA	POWER SUPPLY, 200W +24V/8.5A WMTH PLT (LAMBDA)
77	55.6799.0001	A/R	EA	PAN TUBE BEARING SHIM, 1.375" ID 1.875" OD, 0.005" THK (not shown)
78	55.6799.0002	A/R	EA	PAN TUBE BEARING SHIM, 1.375" ID 1.875" OD, 0.010" THK (not shown)

Upper Enclosure Assembly (continued)

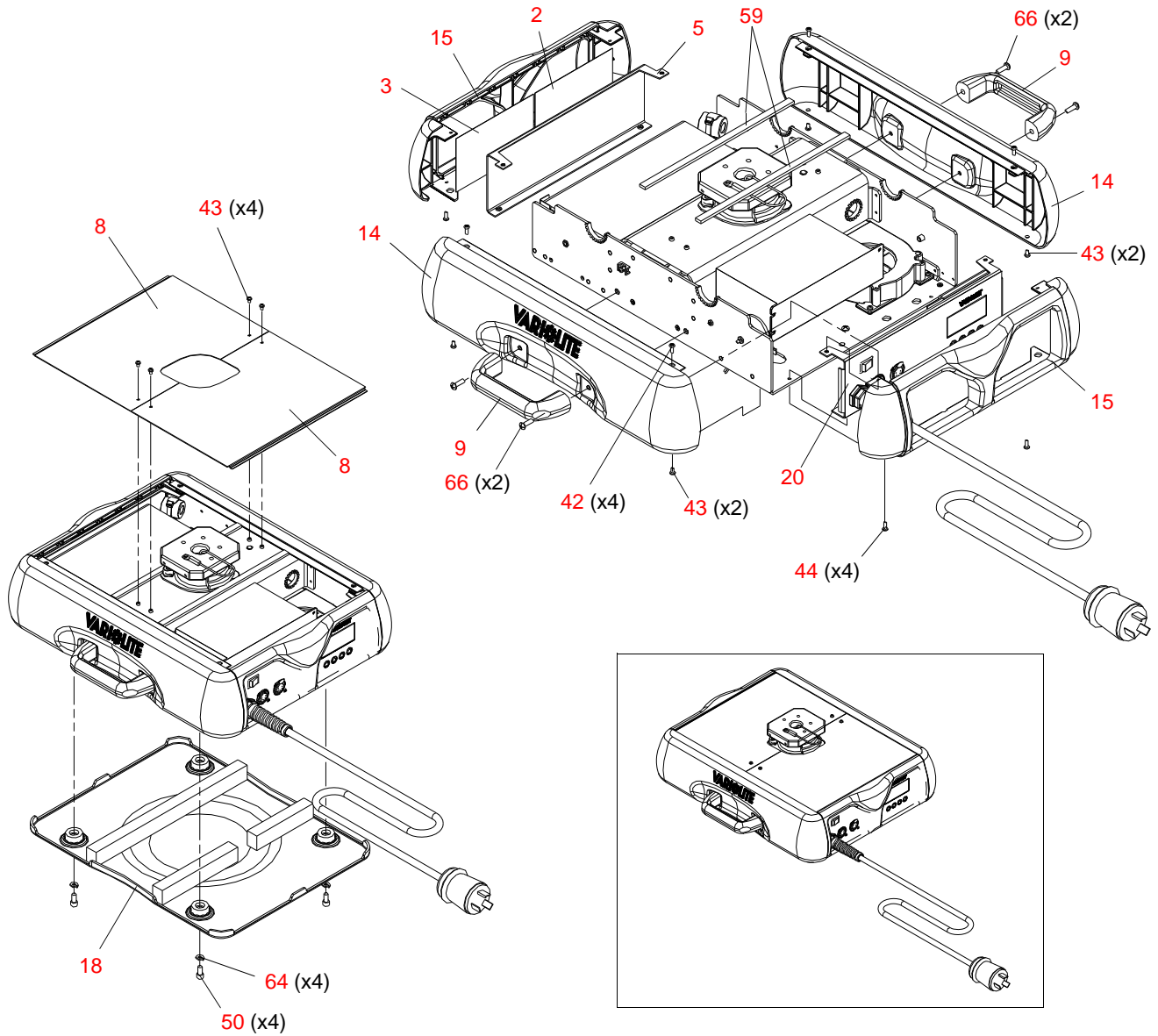


Figure 3-67: Upper Enclosure Assembly Part 1

Upper Enclosure Assembly (continued)

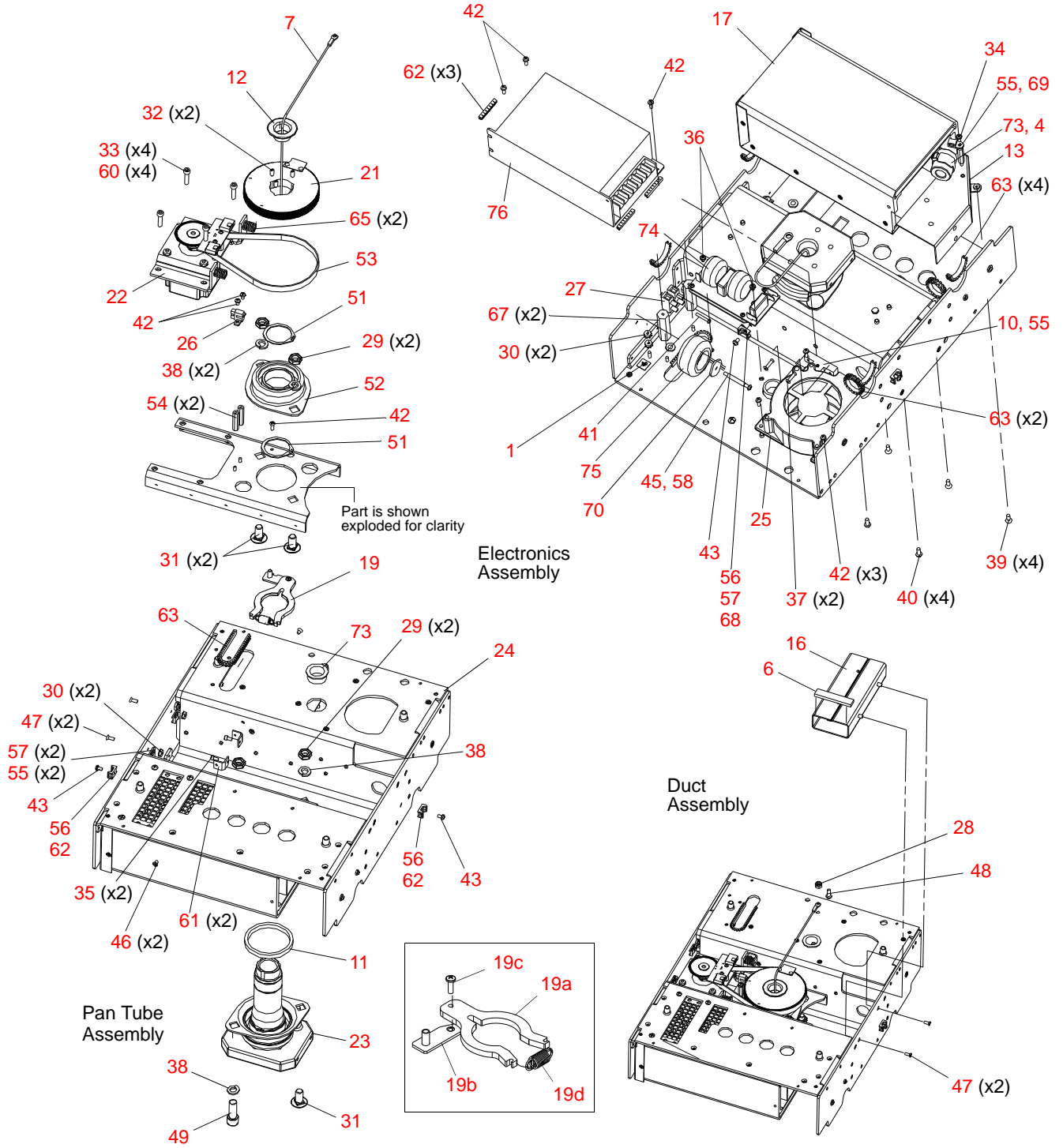


Figure 3-68: Upper Enclosure Assembly Part 2

Ventilation Cover Assembly - Standard

21.9661.1254 Rev C

Refer to [Figure 3-69](#)

No.	Item	Qty.	UM.	Description
1	10.9661.1249	4	EA	POST, TRUSS HOOK
2	10.9661.1350	1	EA	COVER, VENTILATION
3	10.9678.0893	1	EA	12" AIR SEAL, UPPER ENCLOSURE (changed 05-11-05)
4	10.9678.0894	1	EA	6" AIR SEAL, UPPER ENCLOSURE (changed 05-11-05)
5	10.9678.0896	1	EA	4.5" AIR SEAL, UPPER ENCLOSURE (changed 05-11-05)
6	54.1206.0015	4	EA	RING, RETAINING, PRESS-ON, 1" SH

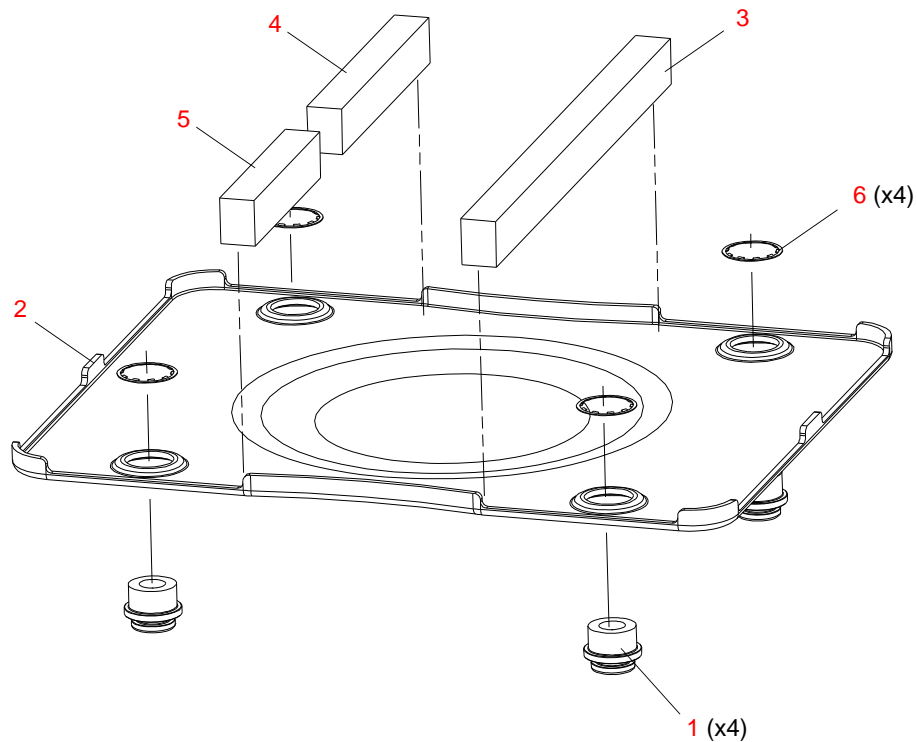


Figure 3-69: Ventilation Cover Assembly

Ventilation Cover Assembly - VL3500 Quiet

21.9686.0840.02 Rev B

Refer to [Figure 3-69](#)

No.	Item	Qty.	UM.	Description
1	10.9686.1249	4	EA	POST, TRUSS HOOK
1a	10.9678.0850	4	EA	POST, TRUSS HOOK, SHORT, EARLY PRODUCTION
1b	10.9678.0833	4	EA	SPACER, 1.25 "
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 - VL3500 Quiet (continued)

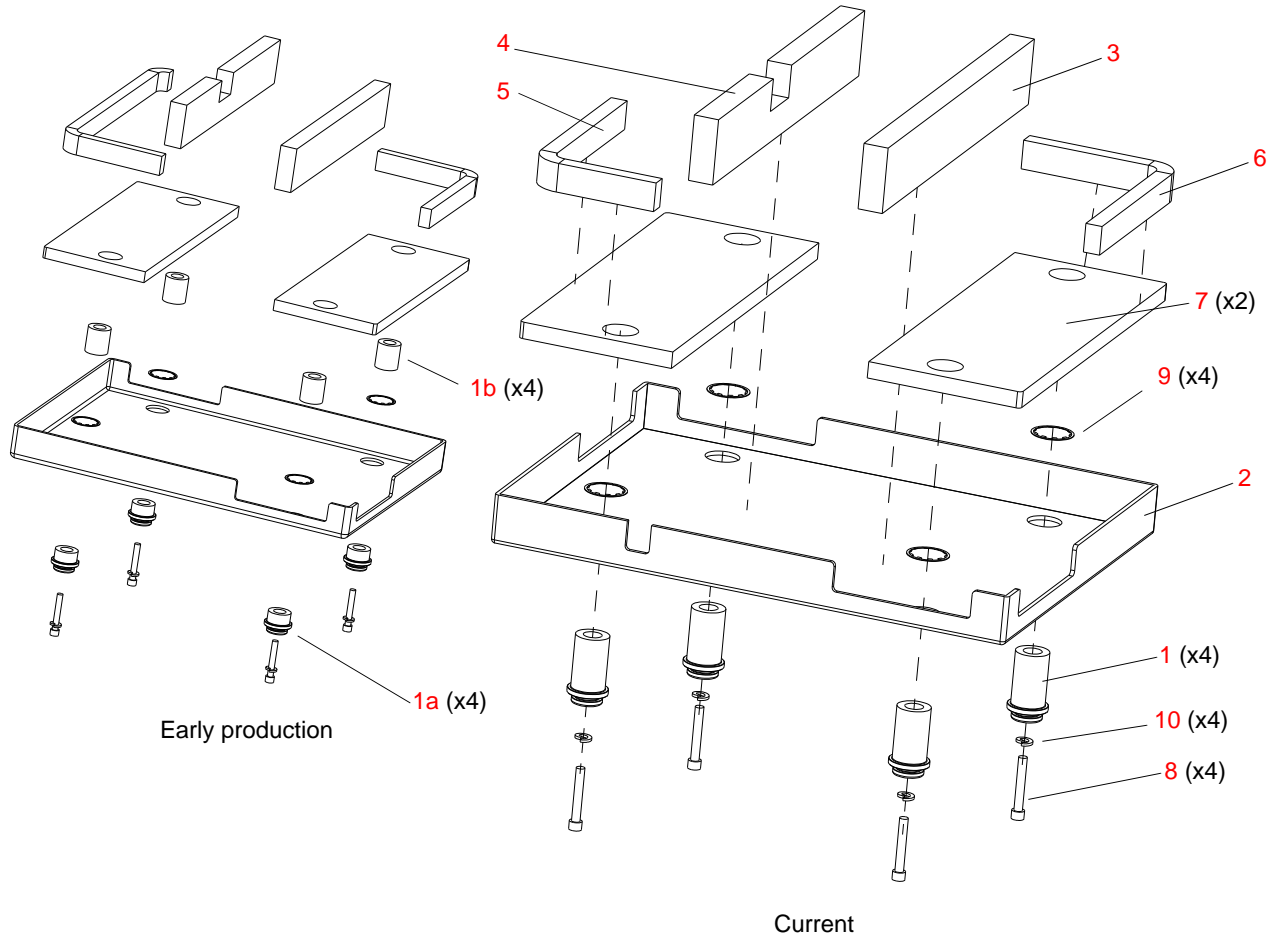


Figure 3-70: Ventilation Cover Assembly

Panel Assembly

21.9678.0805 Rev L

Refer to [Figure 3-71](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0852.01	1	EA	LAYOUT, ENCLOSURE OVERLAY (changed 01-06-04)
2	10.9678.0859	1	EA	BRACKET, INPUT
3	10.9678.0872	1	EA	STIFFENER, DISPLAY BOARD (added 05-26-05)
4	24.9663.3830	1	EA	PCB ASSY, DMX INPUT (changed 07-01-06)
5	24.9678.3825	1	EA	PCB ASSY, DISPLAY (changed 07-01-06)
6	25.9678.0810	1	EA	CABLE ASSY, AC INPUT PIGTAIL (changed 04-28-05)
7	51-0541	4	EA	SCREW, 4-40 X 3/8" HI-LO® BLK ZINC PLT (changed 05-30-06)
8	53.6558.0009	2	EA	SCREW, 6-32 X 3/8" LG PPZ SEMS EXT ZINC PLT
9	55.2284.0001	1	EA	CARD GUIDE, SNAP-IN 3" LONG
10	74.2000.0001	1	EA	SWITCH, ROCKER 10A 250VAC HORIZ NON-ILLUM

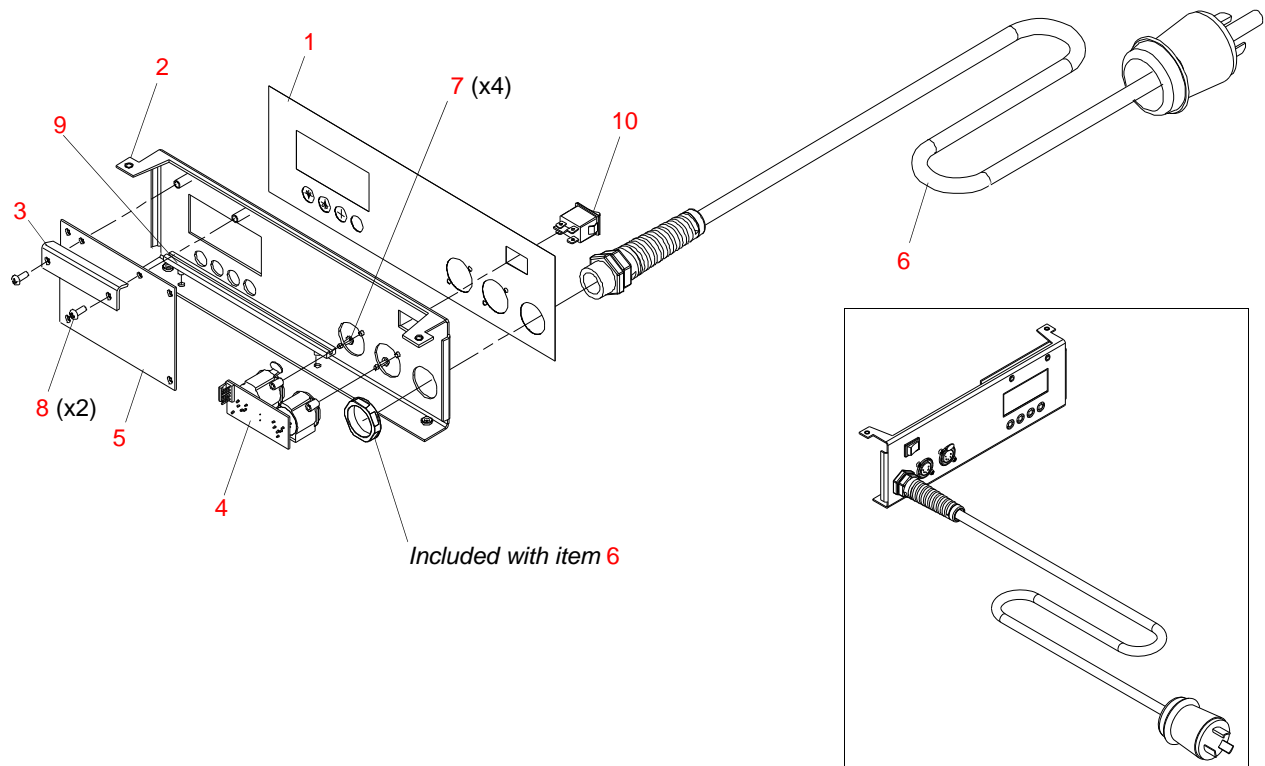


Figure 3-71: Panel Assembly

DMX Input PCB

24.9663.3830 Rev B

Refer to [Figure 3-72](#)

No.	Item	Qty.	UM.	Description	Ref.
1	11.9663.1830	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, RECPT XLR 5P FEM PC MT VERT	J1
4	52.6626.0006	1	EA	CONN, RECPT XLR 5P MALE PC MT VERT	J2
5	62.3017.0102	1	EA	CAP, 1000PF 250V RAD CER DISC 20% Y-TYPE	C1

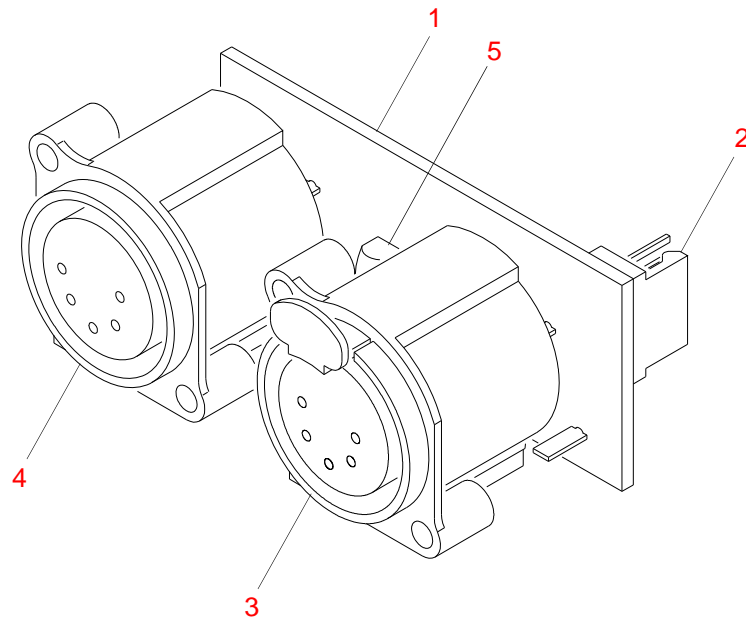


Figure 3-72: DMX Input PCB

Display PCB

24.9678.3825 Rev A

Refer to [Figure 3-73](#)

Ref.	Item	Qty.	UM.	Description
-	11.9678.2825	1	EA	PCB BOARD, VL3000 DISPLAY
-	40-0968	1	EA	HEADER, 20 POS SAMTEC MTLW .1 LS
J1	52.6365.0012	1	EA	HEADER, 6POS MTA100 SHROUDED R/A
-	53.6659.0003	4	EA	SCREW, 2-56 X 3/8" PPZ
-	55.3500.0001	4	EA	WASHER, #2 FLAT 0.312"OD FIBER
-	55.6821.0002	4	EA	STANDOFF, 5/32"RND 2-56 .125"LG BRASS SWAGE TYPE, .105" SHANK
R7, R14, R15	60.9461.1003	3	EA	RES, 0.1W 5% 1.0 K 100V CHIP THICK FILM SMT0805
R2, R3, R5, R9-R13	60.9461.1004	8	EA	RES, 0.1W 5% 10.0 K 100V CHIP THICK FILM
R1	60.9461.2704	1	EA	RES, 0.1W 5% 27K OHM 100V CHIP THICK FILM SMT0805
R8	60.9461.3604	1	EA	RES, 0.1W 5% 36.0 K 100V CHIP THK FLM SMT0805
R6	60.9461.7502	1	EA	RES, 0.1W 5% 750.0 OHM CHIP THK FILM SUR MT
C1	62.3038.0101	1	EA	CAP, 100PF 50V 10% MONO CER CHIP SUR MT
C6, C13	62.3038.0103	2	EA	CAP, 0.01UF 50V 10% MONO CER CHIP SUR MT
C3, C4, C7, C9, C12	62.3042.0102	5	EA	CAP, 0.1UF 50V 20% CER CHIP SUR MT Z5U EIA0805
C5	62.3049.0107	1	EA	CAP, 100UF 10V 20% ALUM ELECTRO SUR MT
C8, C10, C11	62.3053.0106	3	EA	CAP, 10UF 35V 20% ALUM ELECTRO SUR MT
C2	62.3053.0226	1	EA	CAP, 22UF 35V 20% ALUM ELECTRO SUR MT
S5	71-0670	1	EA	WIRE, JUMPER 22 AWG BARE, 0.1" LG
U3	72.2130.0002	1	EA	DISPLAY, LCD GRAPHIC MODULE 122 X 22
XS1, XS1, XS3, XS4	74.1085.0013	4	EA	CAP, SWITCH, 5MM SQ BLACK TL1105
S1, S2, S3, S4	74.1098.0003	4	EA	SWITCH, TACT, SPST
D1	82.5350.0002	1	EA	DIODE, BAT54SLT1 DUAL SCHOTTKY CATHODE TO ANODE CONNECTED 30V 200MA
VR1	83.3205.0001	1	EA	IC, LP3964EMP-ADT LINEAR REGULATOR 800MA ADJUSTABLE SMT
U5	83.3207.0002	1	EA	IC, TIMER, ICM7555ISA SOIC-8-N
U1, U2, U4	83.3208.0002	3	EA	IC, PCA9554PW TSSOP-6

Display PCB (continued)

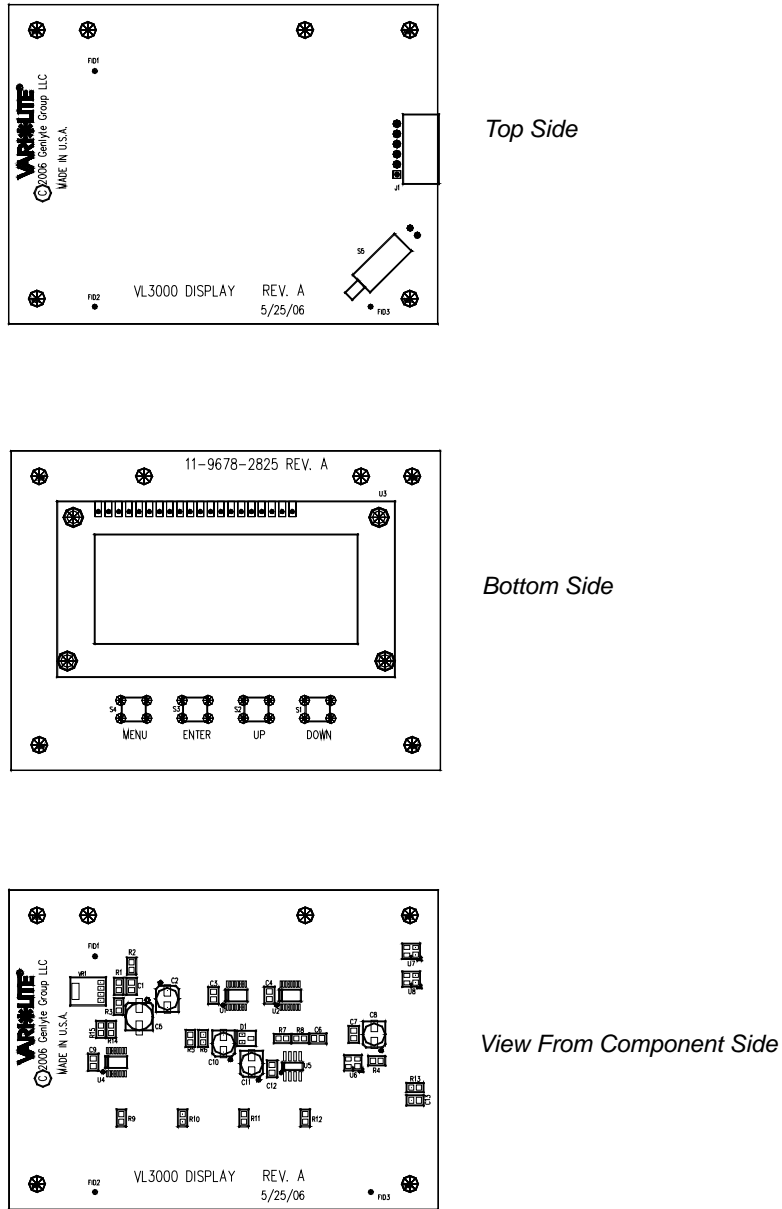


Figure 3-73: Display PCB

Pan Pulley Assembly

21.9678.0807 Rev E

Refer to [Figure 3-74](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0750	1	EA	TIMING PULLEY, 2MM GT 150 TOOTH
2	10.9678.0855	1	EA	PAN FLAG
3	53.6530.0009	2	EA	RIVET, 1/8"OD POP 0.126-0.187GL (changed 10-05-06)

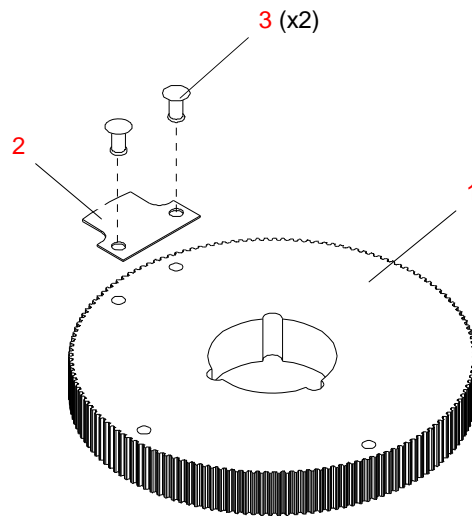


Figure 3-74: Pan Pulley Assembly

Pan Motor Assembly

21.9678.0864 Rev E

Refer to [Figure 3-75](#)

No.	Item	Qty.	UM.	Description
1	10.9678.0865	1	EA	PLATE, PAN MOTOR MOUNT
2	21.9678.0828	1	EA	ASSY, DRIVE PULLEY, PAN
	- 10.9678.0720	1	EA	CODEWHEEL, 120 COUNT LARGE ID
	- 10.9678.0749	1	EA	TIMING PULLEY, 2MM GT 17 TOOTH
	- 53.5562.0250	1	EA	SCREW, 8-32 X 1/4" SET FLAT POINT
3	24.9678.9729	1	EA	PCB ASSY, VL3000 PAN ENCODER (changed 06-27-07)
4	44.9678.0680	1	EA	MOTOR, 3 PHASE SIZE 23 HIGH TORQUE
5	53.2200.0008	4	EA	NUT, 8-32 KEPS SS
6	53.6546.0001	4	EA	SCREW, 8-32 X 5/8" PPB
7	53.6682.0002	2	EA	SCREW, 4-40 X 1/4" LG PPZ SEMS-EXT
8	55.2132.0014	2	EA	STANDOFF, 1/4"HEX 4-40 1.062" LG CS (changed 05-18-06)

Note: Vari-Lite recommends that this motor 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.

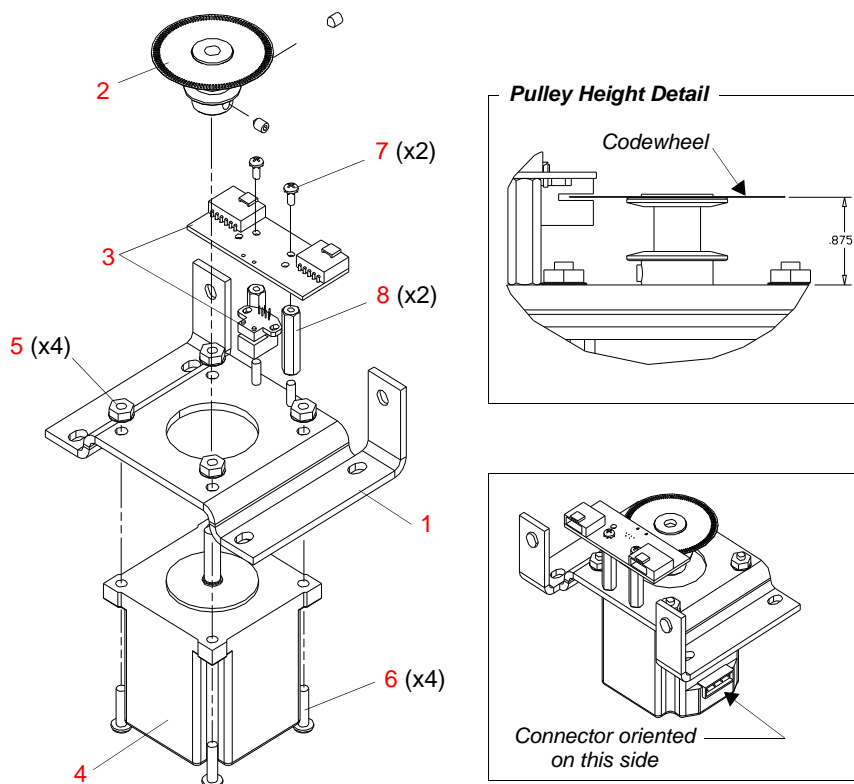


Figure 3-75: Pan Motor Assembly

Pan Tube Assembly

21.9678.0881 Rev 0

Refer to [Figure 3-76](#)

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

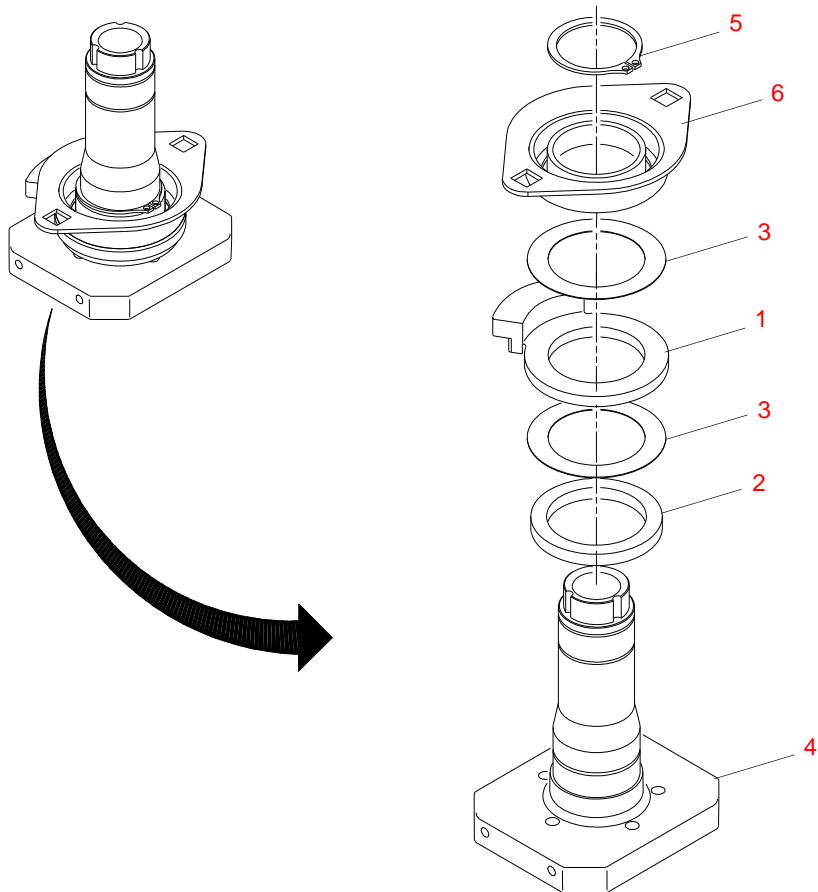


Figure 3-76: Pan Tube Assembly

Notes

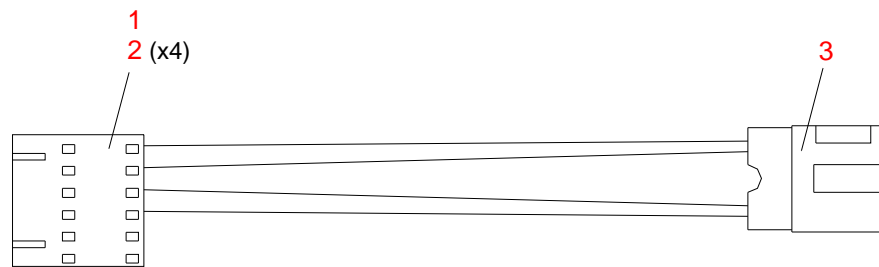
Cable Assemblies

Pan EOT Sensor Electrical Assembly

23.9678.0687 Rev A

Refer to [Figure 3-77](#)

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 3-77: Pan EOT Sensor Electrical Assembly

LVS Chassis Ground Cable Assembly

25.9661.1514 Rev A

Refer to [Figure 3-78](#)

No.	Item	Qty.	UM.	Description
1	52.8231.0001	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

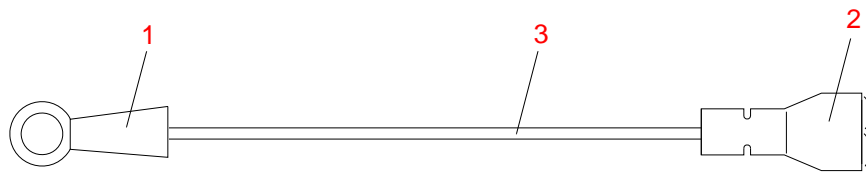


Figure 3-78: LVS Chassis Ground Cable Assembly

Chassis To Yoke Ground Cable Assembly

25.9661.1520 Rev C

Refer to [Figure 3-79](#)

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



Figure 3-79: Chassis To Yoke Ground Cable Assembly

Head to Back Cap Ground Cable Assembly

25.9661.1522 Rev B

Refer to [Figure 3-80](#).

No.	Item	Qty.	UM.	Description
1	52.8311.0003	2	EA	TERM, RING #6 14-16AWG NON-INS. TAPE
2	73.7130.0001	1.33	FT	WIRE, 7/64" TUBULAR BRAID TINNED COPPER

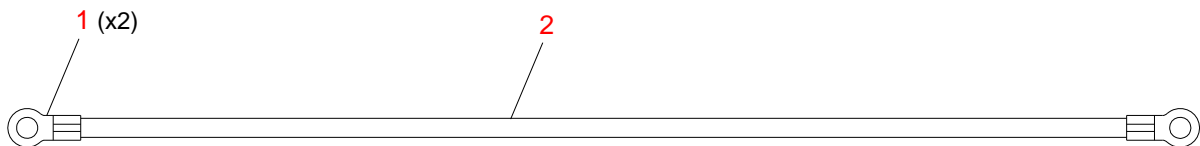


Figure 3-80: Head to Back Cap Ground Cable Assembly

Ignitor to Relay Cable Assembly

25.9661.1526 Rev C

Refer to [Figure 3-81](#).

No.	Item	Qty.	UM.	Description
1	52.8231.0005	1	EA	TERM, RING #6 BLUE 16-14 AWG (REEL) 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



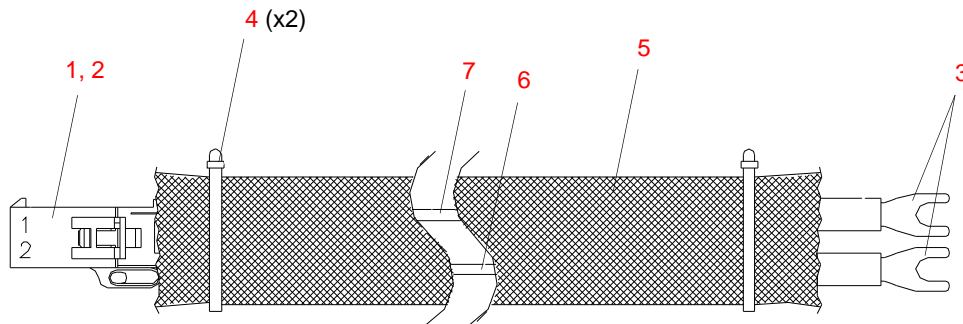
Figure 3-81: Ignitor to Relay Cable Assembly

LVS to Yoke AC Fan Cable Assembly

25.9678.0843 Rev A

Refer to [Figure 3-82](#)

No.	Item	Qty.	UM.	Description
1	52.6664.0001	2	EA	CONTACT, 22-26AWG FEMALE MATE-N-LOK 2
2	52.6664.0002	1	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	2.17	FT	WIRE, 22AWG 600V 200C TFE WHT UL1199
7	73.6222.0010	2.17	FT	WIRE, 22AWG 600V 200C TFE BLK UL1199



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

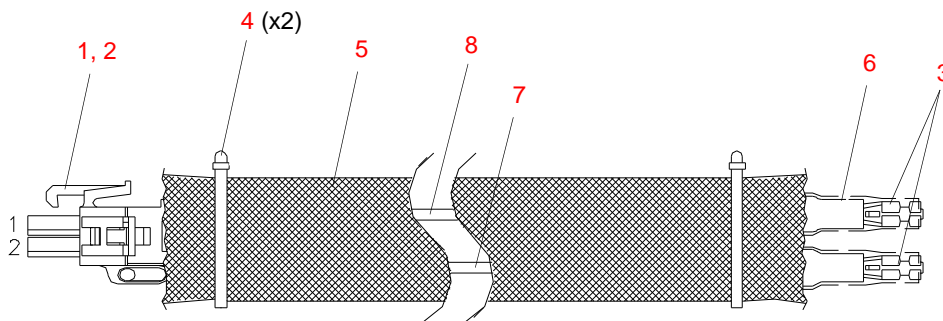
Figure 3-82: LVS to Yoke AC Fan Cable Assembly

Yoke to AC Fan Cable Assembly

25.9678.0012 Rev A

Refer to [Figure 3-83](#)

No.	Item	Qty.	UM.	Description
1	52.6665.0001	2	EA	CONTACT, 22-26AWG MALE MATE-N-LOK 2
2	52.6665.0002	1	EA	CONN, HOUSING 2 POS PLUG MATE-N-LOC 2
3	52.8413.0001	2	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	2.58	FT	SLEEVING, FIBERGLASS 0.208 ID
6	55.2200.0003	0.25	FT	HEATSHRINK, 3/16" VITON
7	73.6222.0009	3	FT	WIRE, 22AWG 600V 200C TFE WHT UL1199
8	73.6222.0010	3	FT	WIRE, 22AWG 600V 200C TFE BLK UL1199



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

Figure 3-83: Yoke To Fan AC Fan Cable Assembly

Backcap Interlock to Gobo Fan Interlock Cable Assembly

25.9678.0014 Rev B

Refer to [Figure 3-84](#)

No.	Item	Qty.	UM.	Description
1	52.8414.0001	2	EA	RECEPT, FASTON .187 SERIES 24-20 AWG UNINSUL
2	73.7089.0000	2.00	FT	WIRE, 22AWG 300V 200C TEF BLK UL1180

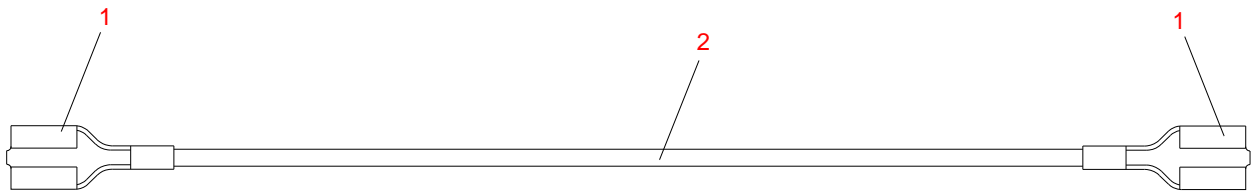


Figure 3-84: Backcap Interlock to Gobo Fan Interlock Cable Assembly

Relay to Gobo Fan Interlock Cable Assembly

25.9678.0675 Rev B

Refer to [Figure 3-85](#).

No.	Item	Qty.	UM.	Description
1	52.8230.0003	1	EA	RECEPT, 1/4" FASTON 22-18AWG (TAPE MOUNT)
2	52.8414.0001	1	EA	RECEPT, FASTON .J187 SERIES 24-20 AWG UNINSUL
3	73.7089.0000	2.00	FT	WIRE, 22AWG 300V 200C TEF BLK UL1180

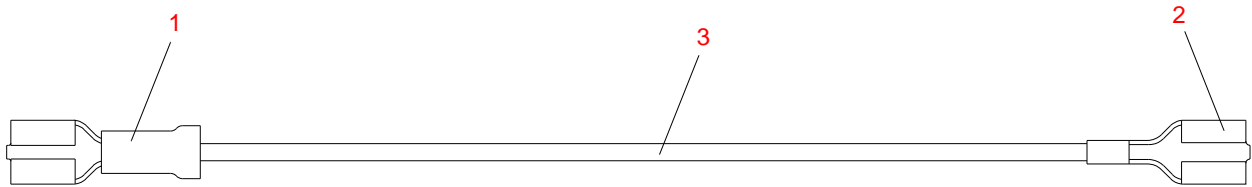


Figure 3-85: Relay to Gobo Fan Interlock Cable Assembly

Front Head Fans Cable Assembly

25.9678.0677 Rev B

Refer to [Figure 3-86](#)

No.	Item	Qty.	UM.	Description
1	52.6396.3104	1	EA	RECEPT, 4POS MTA100 W/POL TAB BLU CLSD END
2	52.6524.0002	2	EA	CONN, HOUSING 2POS RECEPTACLE
3	52.8346.0001	4	EA	CONTACT, 24-30AWG FEMALE CRIMP
4	73.5126.0002	2.67	FT	WIRE, 26AWG 2COND 300V 80C <BLK-RED>

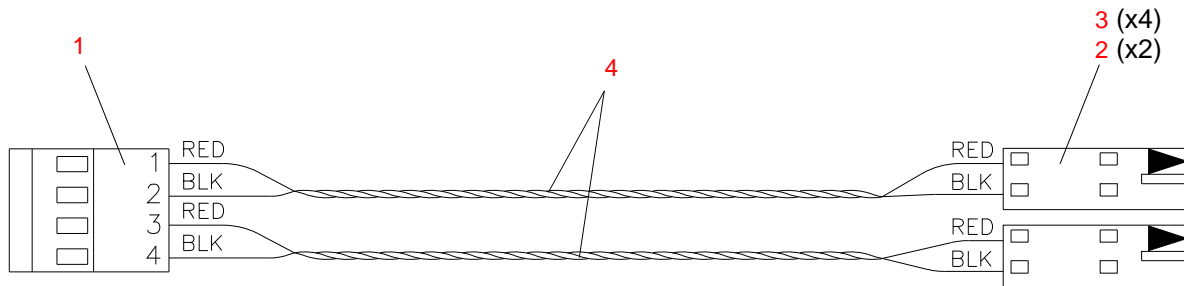


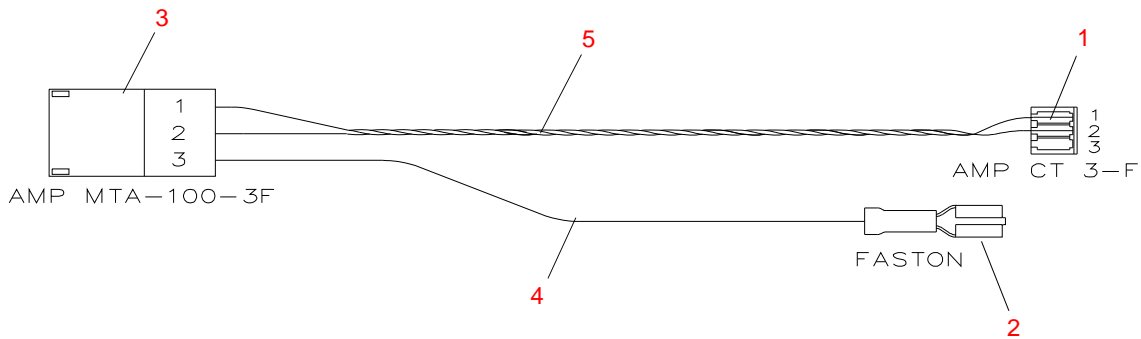
Figure 3-86: Front Head Fans Cable Assembly

Yoke Fan and Relay (Standard) Cable Assembly

25.9678.0681 Rev C (VL3500 Only)

Refer to [Figure 3-87](#)

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 3-87: Yoke Fan and Relay (Standard) Cable Assembly - VL3500 Only

Air Duct OT Switch Cable Assembly

25.9678.0690 Rev 0 (VL3500Q)

25.9678.0691 Rev 0

Refer to [Figure 3-88](#)

No.	Item	Qty.	UM.	Description
1	52.8414.0001	1	EA	RECEPT, FASTON .187 SERIES, 24-20AWG UNISUL
2	52.8237.0002	1	EA	TERM, RING #4 24-20AWG
3	73.7089.0000	1.48	FT	WIRE, 22AWG BLK 300V 200C TEFLON STRANDED
4	55.2260.0133	.375	FT	SLEEVING, FIBERGLASS, .133" ID
5	55.2198.0002	.083	FT	HEATSHRINK, 1/8" BLACK
6	63.2047.5130	1	EA	THERMOSTAT, 130° TO-220 OPEN ON RISE
	63.2047.5120	1	EA	THERMOSTAT, 120° TO-220 OPEN ON RISE, VL3000 QUIET

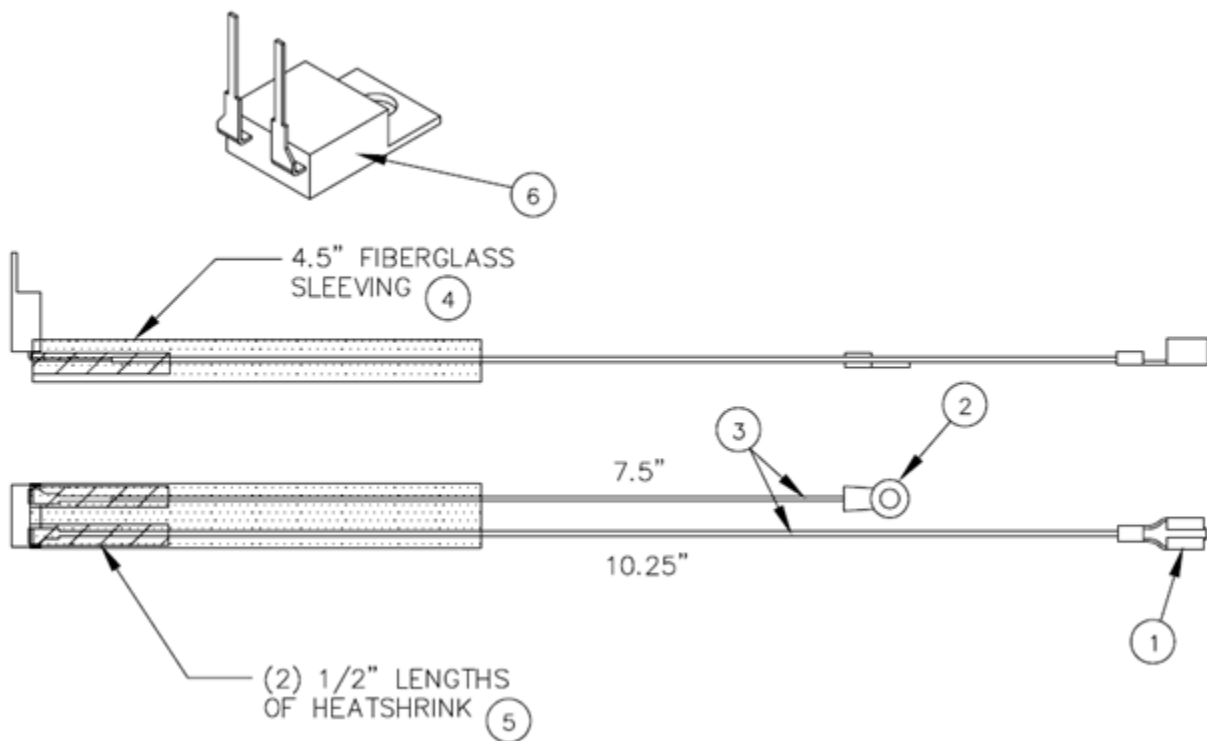


Figure 3-88: Air Duct OT Switch Cable Assembly

Yoke Fan and Relay (Quiet) Cable Assembly

25.9678.0781 Rev A (VL3500Q Only)

Refer to [Figure 3-89](#)

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	55.2186.0001	1	EA	CABLE TIE, .10 X 4" SMALL
5	55.2268.0125	1	IN	HEATSHRINK, 1/8" CLEAR KYNAR UL 600V 150° C
6	60.7440.2002	1	EA	RESISITOR, 5W, 5% 200 OHM WIREWOUND
7	73.3526.0002	1.25	FT	WIRE, 26AWG 300V 105C PVC RED
8	73.5126.0002	1.50	FT	WIRE, 26AWG 2 COND 300V 80C <RED-BLK>

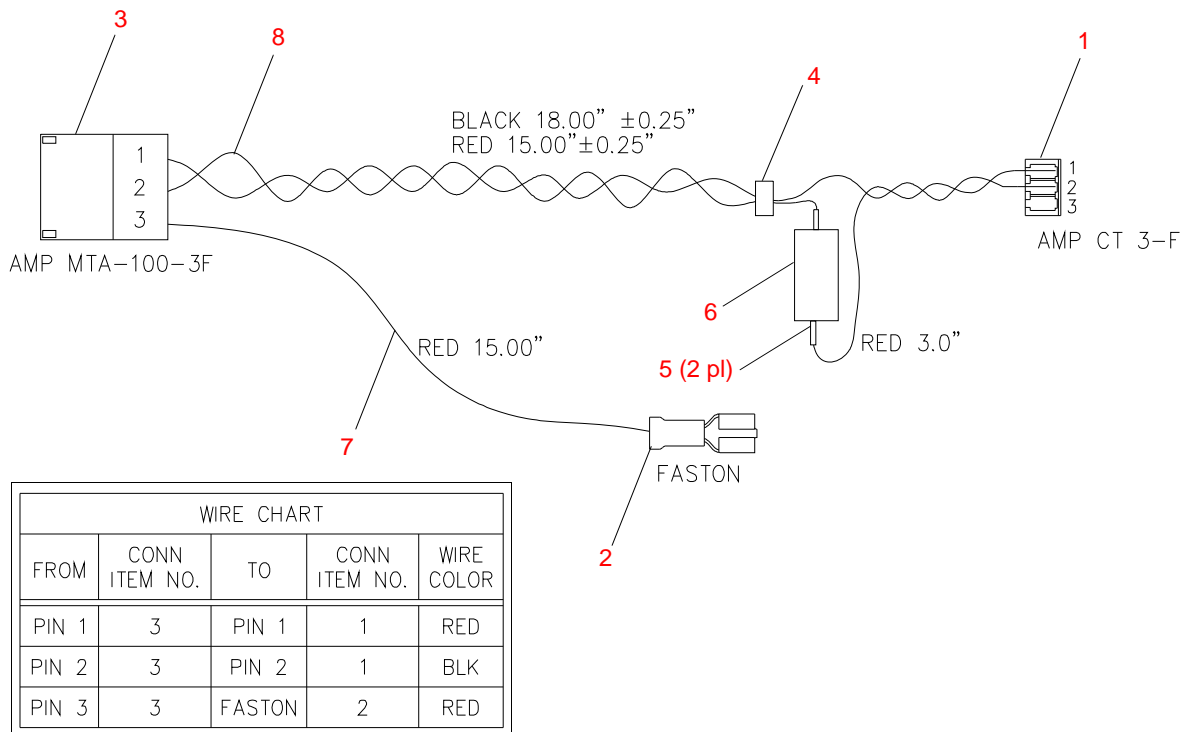


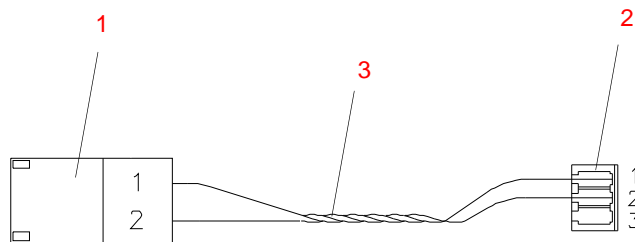
Figure 3-89: Yoke Fan and Relay (Quiet) Cable Assembly - VL3500Q Only

Yoke Fan (Standard) Cable Assembly

25.9678.0758 Rev A (VL3500 Only)

Refer to [Figure 3-90](#)

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	.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 3-90: Yoke Fan (Standard) Cable Assembly - VL3500 Only

Yoke Fan (Quiet) Cable Assembly

25.9678.0759 Rev A (VL3500Q Only)

Refer to [Figure 3-90](#)

No.	Item	Qty.	UM.	Description
1	52.6396.3102	1	EA	RECEPT, 2 POS MTA100 W/POL TAB BLUE CLSD END
2	52.6423.0003	1	EA	HOUSING, 3 POS MT RECEPT, 2MM CT 28-26 AWG
3	55.2186.0001	1	EA	CABLE TIE, .10 X 4" SMALL
4	55.2268.0125	1	EA	HEASTRINK, 1/8" CLEAR KYNAR UL 600V 150° C
5	60.7440.2002	1	EA	RESISTOR, 5W, 5% 200 OHM WIREWOUND
6	73.5126.0002	.5	FT	WIRE, 26AWG 2COND 300V 80C <BLK-RED> UL1061, 19STRND

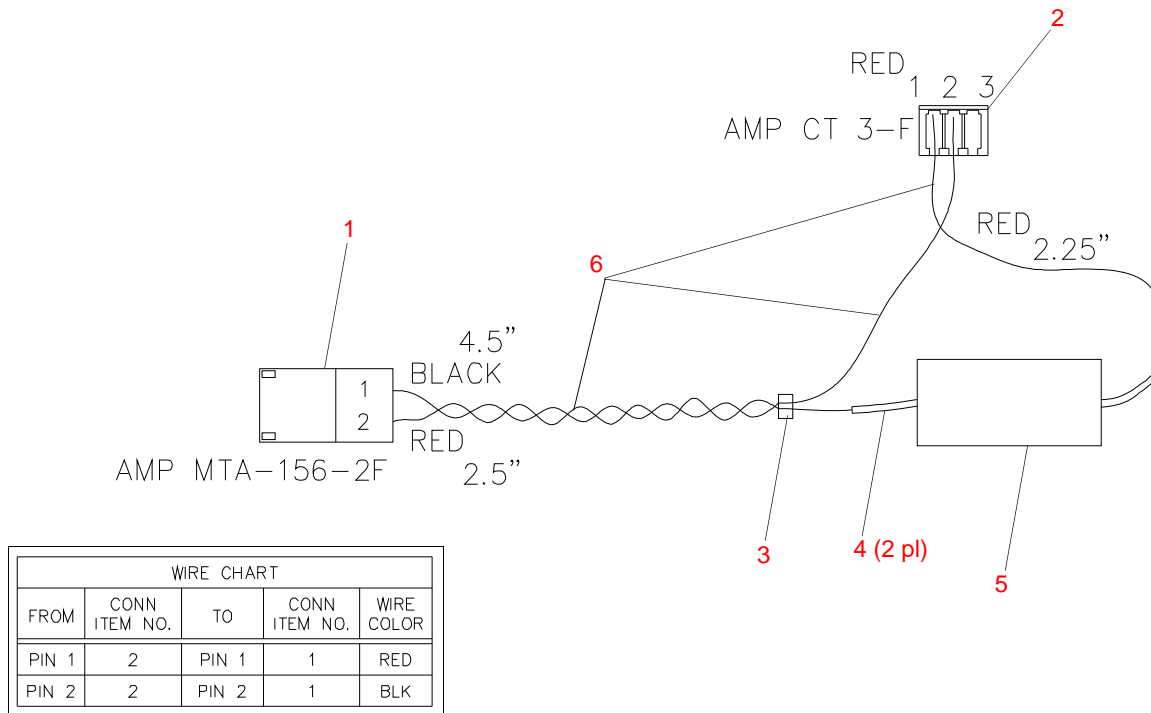


Figure 3-91: Yoke Fan (Quiet) Cable Assembly - VL3500Q Only

Ignitor to Lamp Socket Cable Assembly

25.9678.0789 Rev B

Refer to [Figure 3-92](#).

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

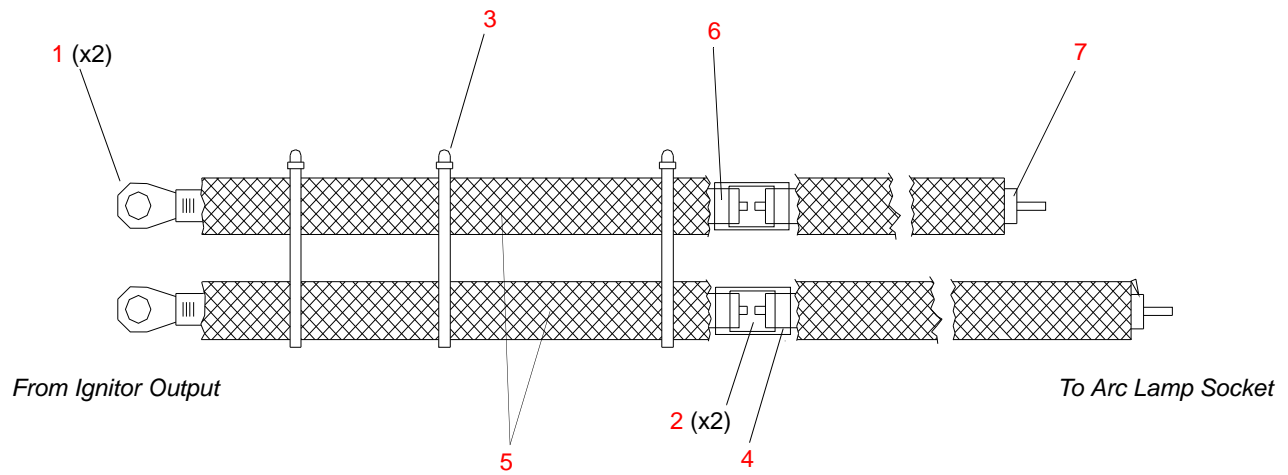


Figure 3-92: Ignitor to Lamp Socket Cable Assembly

Yoke to Head Ground Cable Assembly

25.9678.0689 Rev 0

Refer to [Figure 3-93](#)

No.	Item	Qty.	UM.	Description
1	52.8250.0011	2	EA	TERM, RING #10, 122-10AWG (REEL)
2	73.7089.0504	15.17	FT	WIRE, 22AWG 300V 200C TEF GRN/YEL UL1180

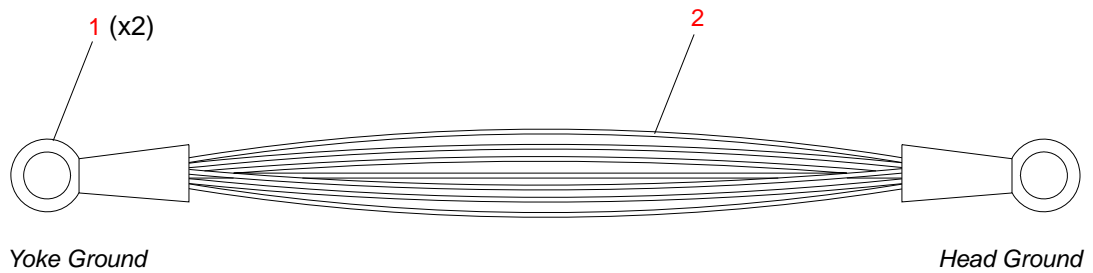


Figure 3-93: Yoke to Head Ground Cable Assembly

Head Controller Cable Assembly

25.9678.1715 Rev A

Refer to [Figure 3-94](#)

No.	Item	Qty.	UM.	Description
1	55.6610.0014	1	EA	CONN HOUSING, 14 POS DBL ROW UNLOADED
2	55.6610.0024	1	EA	CONN HOUSING, 24 POS DBL ROW UNLOADED
3	55.6610.0034	1	EA	CONN HOUSING, 34 POS DBL ROW UNLOADED
4	55.6610.0040	3	EA	CONN HOUSING, 40 POS DBL ROW UNLOADED
5	55.6610.0017	1	EA	CONN HOUSING, 50 POS DBL ROW UNLOADED
6	52.6224.1014	2	EA	COVER, FRONT 14 POS MT LATCHING
7	52.6224.1024	1	EA	COVER, FRONT 24 POS MT LATCHING
8	52.6224.1034	1	EA	COVER, FRONT 34 POS MT LATCHING
9	52.6224.1040	3	EA	COVER, FRONT 40 POS MT LATCHING
10	52.6224.1050	1	EA	COVER, FRONT 50 POS MT LATCHING
11	52.6224.2014	2	EA	COVER, BACK 14 POS MT
12	52.6224.2024	1	EA	COVER, BACK 24 POS MT
13	52.6224.2034	1	EA	COVER, BACK 34 POS MT
14	52.6224.2040	3	EA	COVER, BACK 40 POS MT
15	52.6224.2050	1	EA	COVER, BACK 50 POS MT
16	55.2186.0001	11	EA	CABLE TIE, .10"WD 4.00"LG SMALL
17	55.6699.0004	1.92	FT	SLEEVING, 3/4" NOM. DIA. POLY EXP BRAIDED
18	73.3026.0009	1.83	FT	WIRE, 26 AWG 300V 80 DEG C PVC WHITE
19	73.3026.0329	1.83	FT	WIRE, 26 AWG 3 COND TW 300V PVC <RED-WHT/VIO-BLK>
20	73.5116.0123	41.42	FT	WIRE, 24 AWG 4 COND TW 300V 80C <BLK-BRN-RED-ORG> UL1061
21	73.5126.0002	3.75	FT	WIRE, 26 AWG 2 COND TWISTED <RED-BLK>
22	73.5126.0007	1.83	FT	WIRE, 26 AWG 2 COND 300V 80C UL1061 19STRND <BLK-V10>
23	73.5126.0029	1.83	FT	WIRE, 24 AWG 3 COND TW 300V PVC <RED-WHT-BLK>
24	73.5126.0129	1.83	FT	WIRE, 26 AWG 3 COND TW 300V PVC <RED-WHT/RED-BLK>
25	73.5126.0229	1.83	FT	WIRE, 26 AWG 3 COND TW 300V PVC <RED-WHT/BLK-BLK>
26	73.5126.6009	1.92	FT	WIRE, 26 AWG 6 COND TWISTED <WHT-WHT/BLU-WHT/BLK-WHT/ BRN-WHT/GRN-WHT/RED>
27	55.8351.0004	226	EA	CONTACT, 26-22AWG RECP MTE REEL (NOT SHOWN)

Head Controller Cable Assembly (continued)

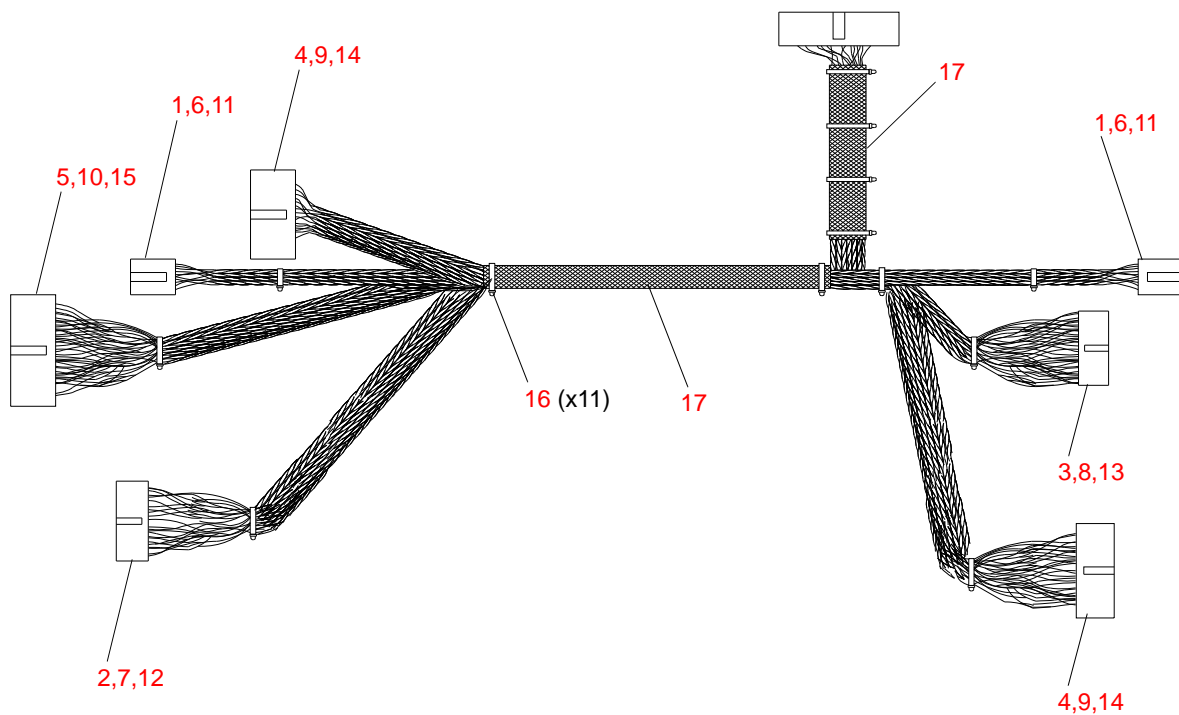


Figure 3-94: Head Controller Cable Assembly

AC Input Pigtail Cable Assembly

25.9678.0810 Rev B

Refer to [Figure 3-95](#)

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

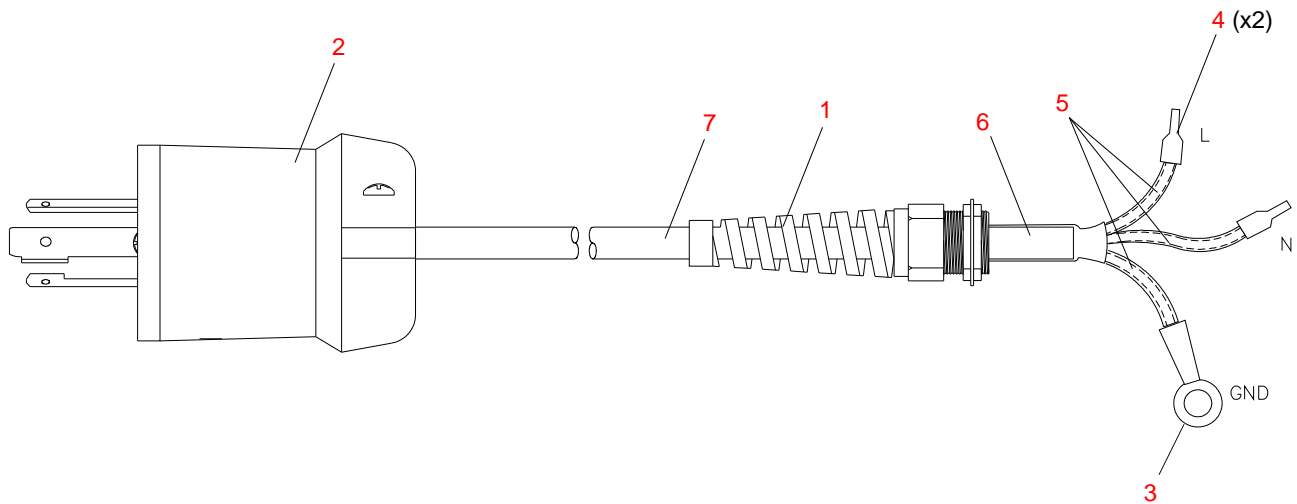


Figure 3-95: AC Input Pigtail Cable Assembly

EMI Filter to Power Switch Cable Assembly

25.9678.0811 Rev C

Refer to [Figure 3-96](#)

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 INS, R/A
3	55.2186.0001	1	EA	CABLE TIE, .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

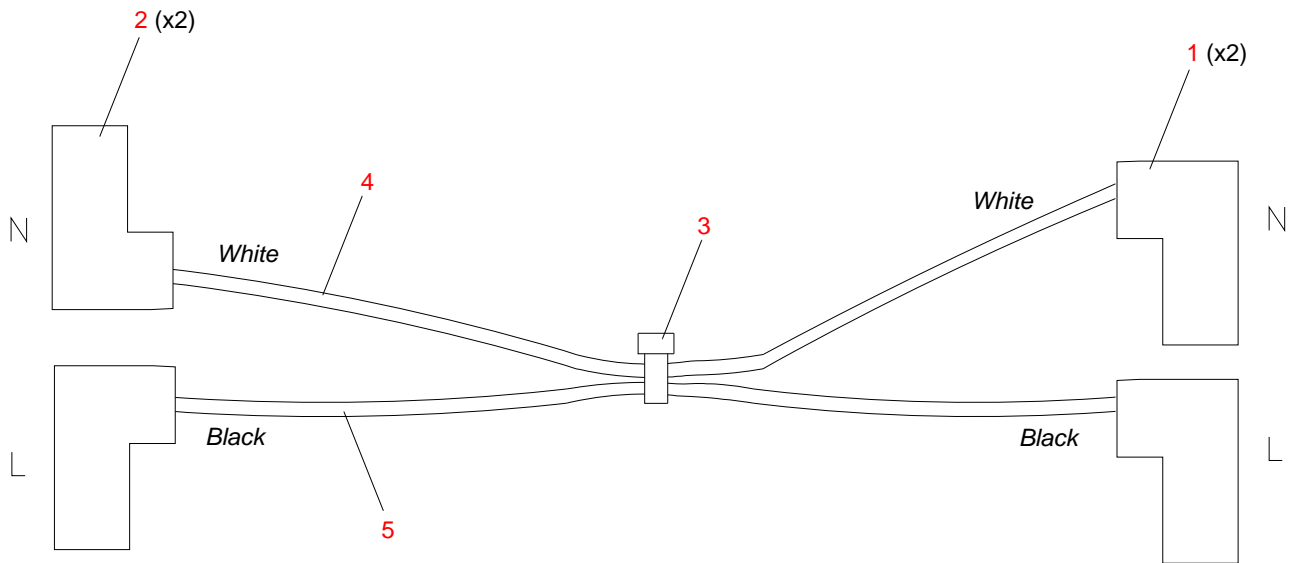


Figure 3-96: EMI Filter to Power Switch Cable Assembly

AC Input Splitter Cable Assembly

25.9678.0812 Rev E

Refer to [Figure 3-97](#)

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)

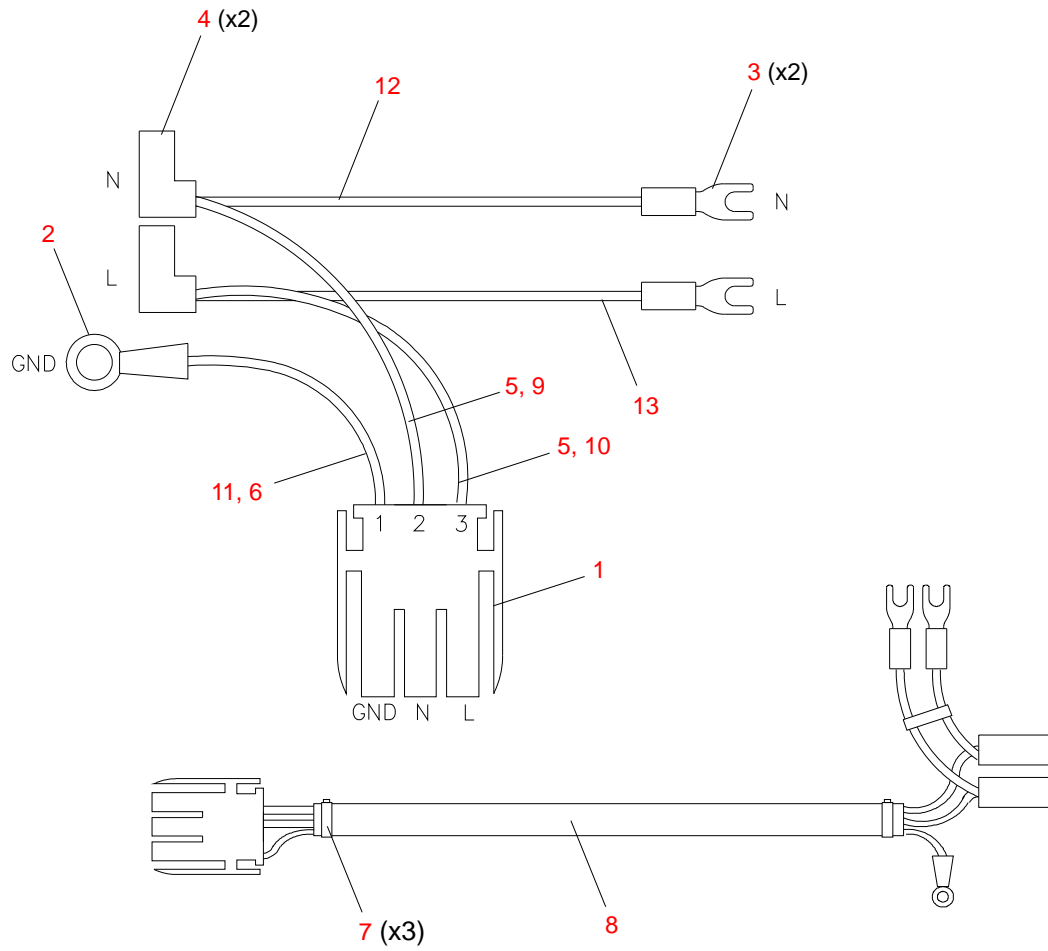


Figure 3-97: AC Input Splitter Cable Assembly

Data I/O Link Cable Assembly

25.9678.0813 Rev A

Refer to [Figure 3-98](#)

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

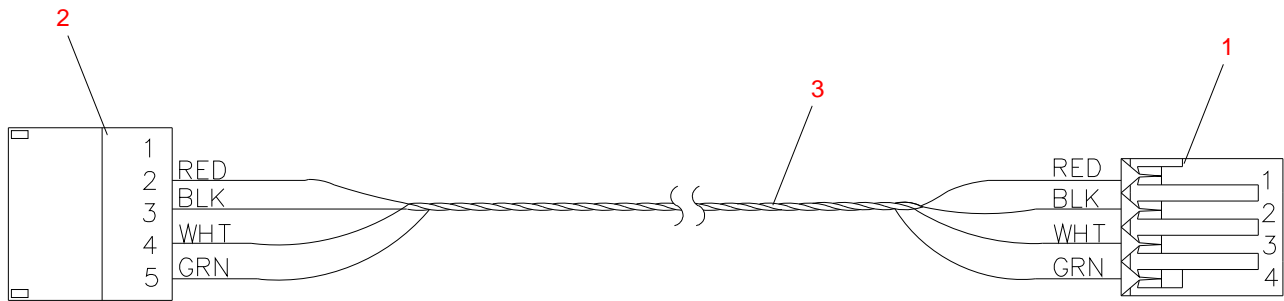


Figure 3-98: Data I/O Link Cable Assembly

Display Cable Assembly

25.9678.0815 Rev E

Refer to [Figure 3-99](#)

No.	Item	Qty.	UM.	Description
1	52.6396.3006	2	EA	RECEPT, 6 POS MTA100 W/POL TAB WHT CLSD END
2	73.5116.0123	2.0	FT	WIRE, 24AWG 4COND TW <BLK-BRN-RED-ORN>

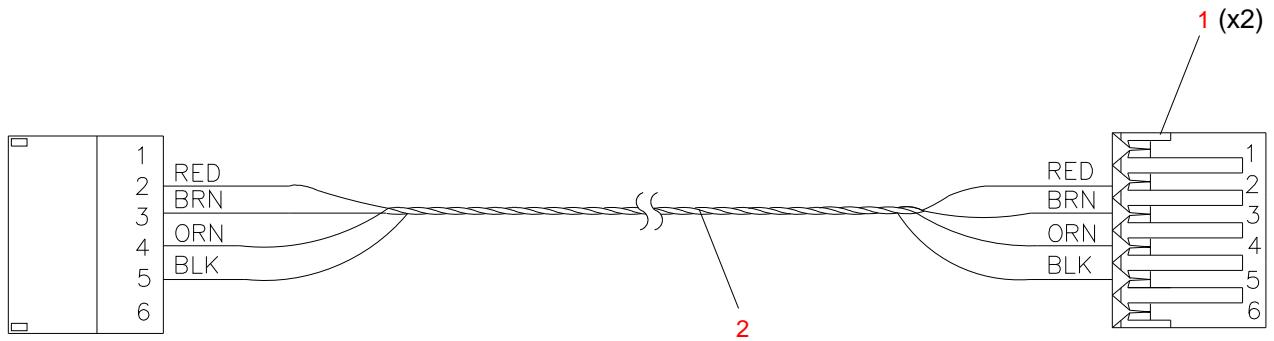


Figure 3-99: Display Cable Assembly

Ballast to Controller Cable Assembly

25.9678.0816 Rev A

Refer to [Figure 3-100](#)

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>

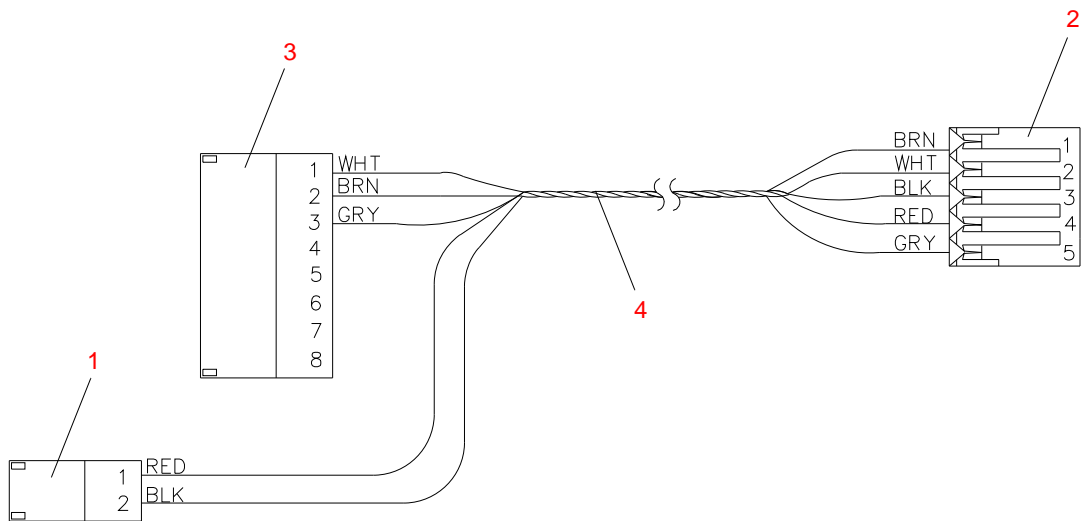


Figure 3-100: Ballast to Controller Cable Assembly

DC Output Cable Assembly

25.9678.0821 Rev E

Refer to [Figure 3-101](#)

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	5	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

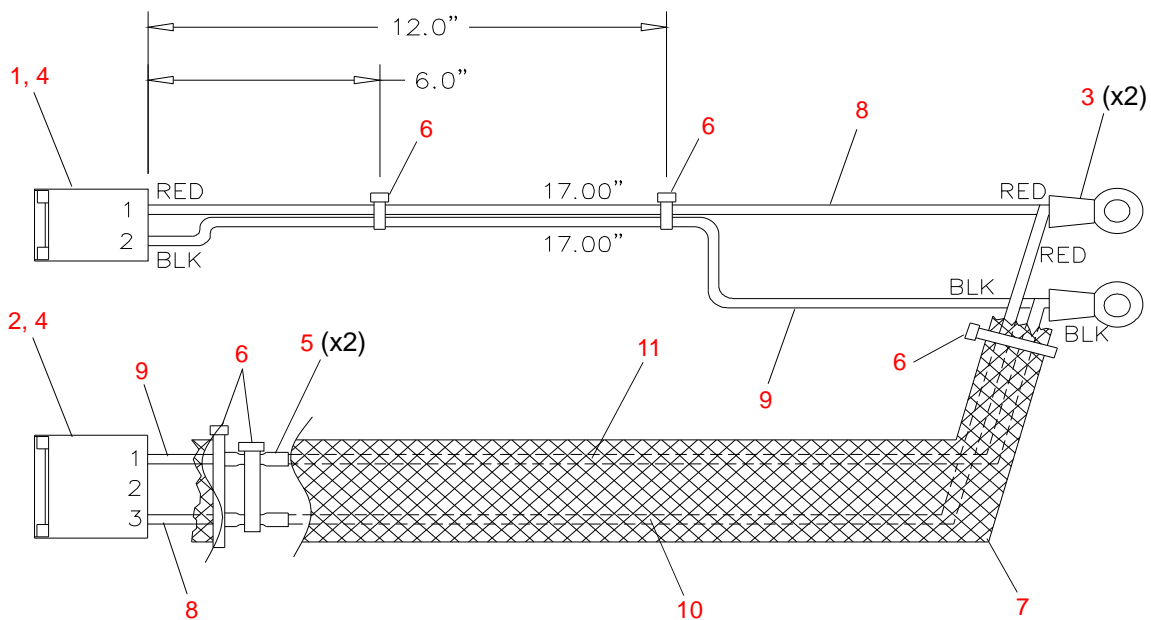


Figure 3-101: DC Output Cable Assembly

Pan/Tilt Control Cable Assembly

25.9678.0818 Rev B

Refer to [Figure 3-102](#)

No.	Item	Qty.	UM.	Description
1	52.6610.0008	1	EA	CONN HOUSING, 20POS DBL ROW UNLOADED
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 -USE SXH CONTACTS
6	52.7007.0001	6	EA	CONTACT, 28-22AWG PHOSPHOR BRONZE TIN-PLT SXH
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>UL1213
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)

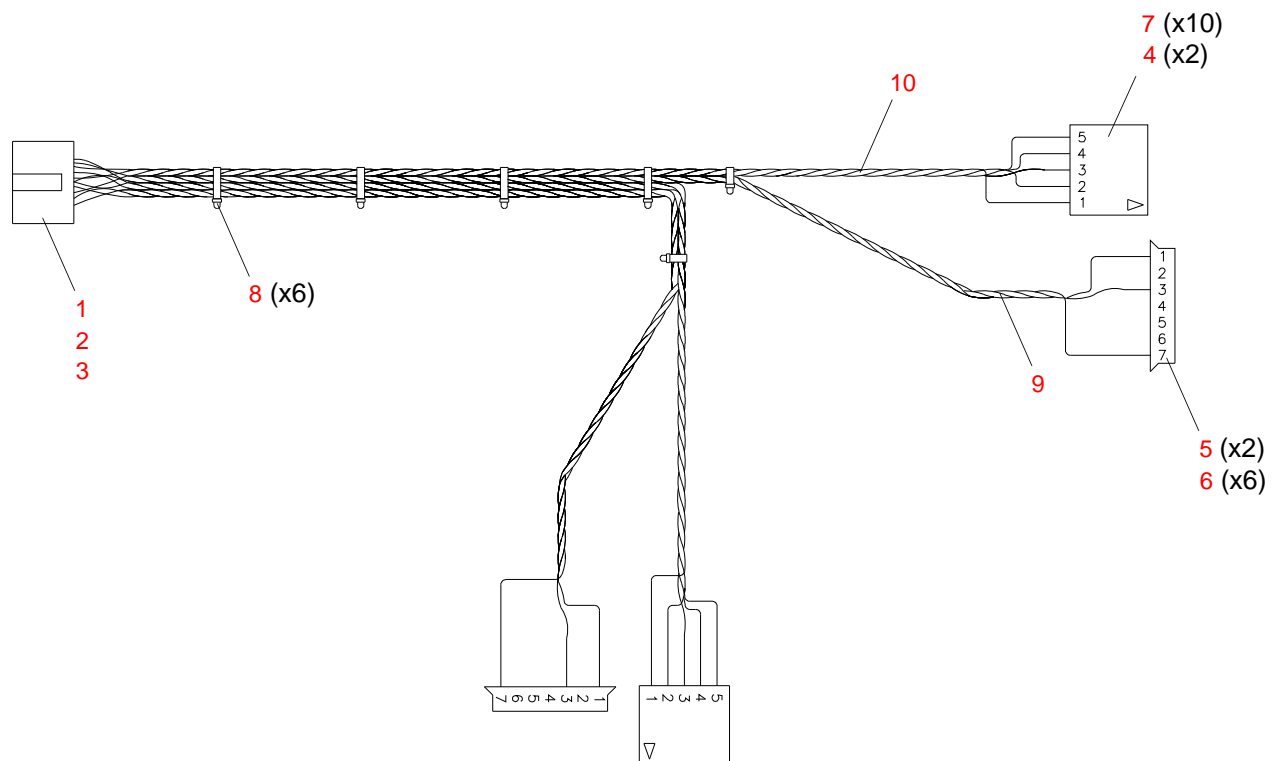


Figure 3-102: Pan/Tilt Control Cable Assembly

Lamp Supply to Relay Cable Assembly

25.9678.0819 Rev D

Refer to [Figure 3-103](#)

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	3.75	FT	SLEEVING, 1/2" NOM. DIA POLY EXP BRAIDED
4	73.7089.0000	33.25	FT	WIRE, 22AWG BLK 300V TEFLON STRANDED
5	73.7089.0009	33.25	FT	WIRE, 22AWG WHT 300V TEFLON STRANDED

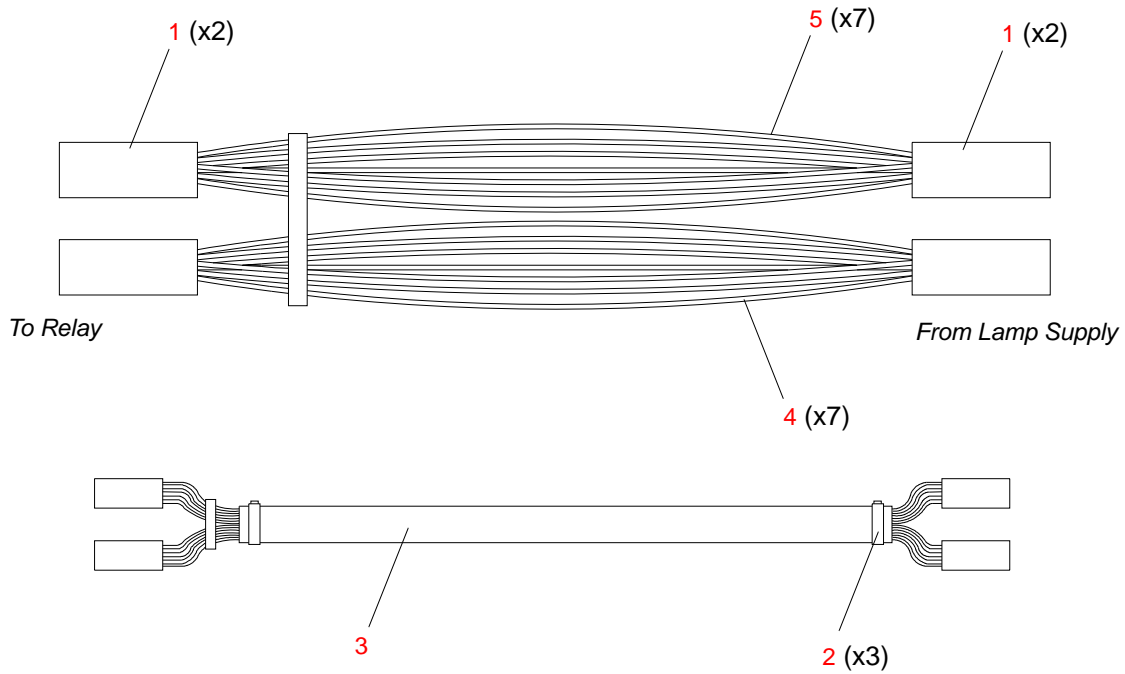


Figure 3-103: Lamp Supply to Relay Cable Assembly

Gobo/Rotate Interconnect Cable Assembly

25.9678.1209 Rev A

Refer to [Figure 3-104](#) and [Figure 3-105](#)

No.	Item	Qty.	UM.	Description
1	25.9678.1209	1	EA	CABLE ASSY, GOBO/ROTATE INTERCONNECT

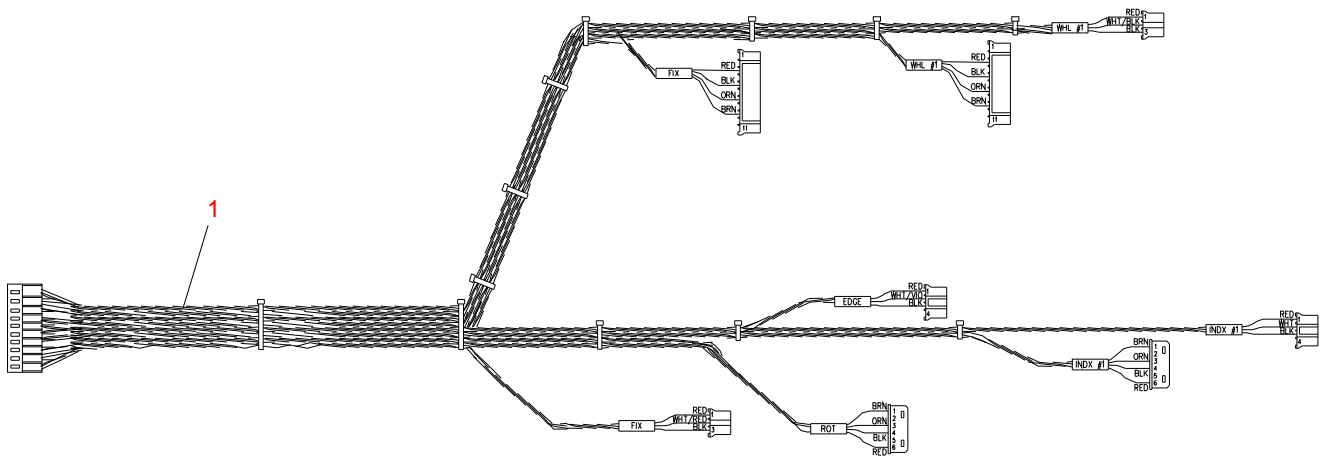
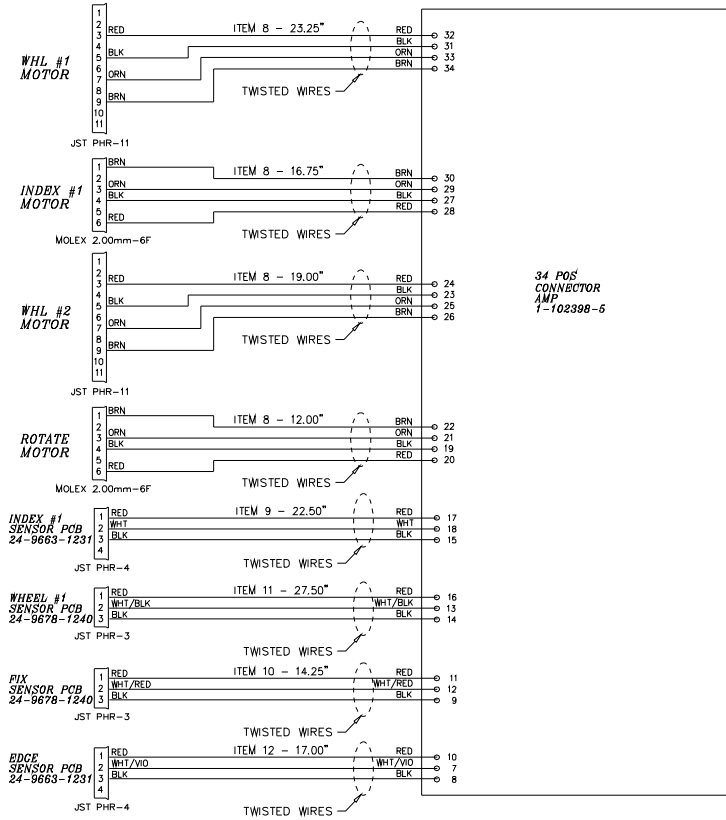


Figure 3-104: Gobo/Rotate Interconnect Cable Assembly

Gobo/Rotate Interconnect Cable Assembly (continued)



34 POS
CONNECTOR
AMP
1-102388-5

WIRE CHART					
FROM PIN	TO	CONN ITEM NO.	WIRE COLOR	WIRE ITEM NO.	FUNCTION
33	PIN 7	13	ORN	8	WHEEL #1 MOTOR - 2A
34	PIN 9	13	BRN	8	WHEEL #1 MOTOR - 2B
31	PIN 5	13	BLK	8	WHEEL #1 MOTOR - 1B
32	PIN 3	13	RED	8	WHEEL #1 MOTOR - 1A
29	PIN 3	5	ORN	8	INDEX #1 MOTOR - 2A
30	PIN 1	5	BRN	8	INDEX #1 MOTOR - 2B
27	PIN 4	5	BLK	8	INDEX #1 MOTOR - 1B
28	PIN 6	5	RED	8	INDEX #1 MOTOR - 1A
25	PIN 7	13	ORN	8	FIX MOTOR - 2A
26	PIN 9	13	BRN	8	FIX MOTOR - 2B
23	PIN 5	13	BLK	8	FIX MOTOR - 1B
24	PIN 3	13	RED	8	FIX MOTOR - 1A
21	PIN 3	5	ORN	8	ROTATE MOTOR - 2A
22	PIN 1	5	BRN	8	ROTATE MOTOR - 2B
19	PIN 4	5	BLK	8	ROTATE MOTOR - 1B
20	PIN 6	5	RED	8	ROTATE MOTOR - 1A
17	PIN 1	3	RED	9	VCC_R - INDEX #1 SENSOR
18	PIN 2	3	WHT	9	SENSE - INDEX #1 SENSOR
15	PIN 3	3	BLK	9	GND - INDEX #1 SENSOR
16	PIN 1	2	RED	11	VCC_R - WHEEL #1 SENSOR
13	PIN 2	2	WHT/BLK	11	SENSE - WHEEL #1 SENSOR
14	PIN 3	2	BLK	11	GND - WHEEL #1 SENSOR
11	PIN 1	2	RED	10	VCC_R - FIX SENSOR
12	PIN 2	2	WHT/RED	10	SENSE - FIX SENSOR
9	PIN 3	2	BLK	10	GND - FIX SENSOR
10	PIN 1	3	RED	12	VCC_R - EDGE SENSOR
7	PIN 2	3	WHT/WO	12	SENSE - EDGE SENSOR
8	PIN 3	3	BLK	12	GND - EDGE SENSOR
5	-	-	-	-	NOT USED
6	-	-	-	-	NOT USED
3	-	-	-	-	NOT USED
4	-	-	-	-	NOT USED
1	-	-	-	-	NOT USED
2	-	-	-	-	NOT USED

Figure 3-105: Gobo/Rotate Interconnect Cable Assembly Wire Chart

LVS Chassis Ground Cable Assembly

25.9678.1716 Rev A

Refer to [Figure 3-106](#)

No.	Item	Qty.	UM.	Description
1	52.8231.0005	1	EA	TERMINAL, RING, #6 BLUE, 16-14 AWG REEL PIDG
1	52.8231.0008	1	EA	TERMINAL, SPADE, #6 RED, 22-16 AWG INSERT
2	73.3516.0504	1.08	FT	WIRE, 16 AWG 300V 105 DEG C PVC <GRN-YEL> UL1569

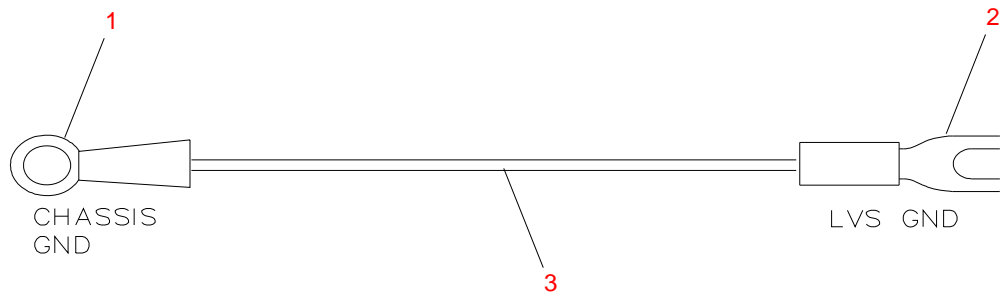
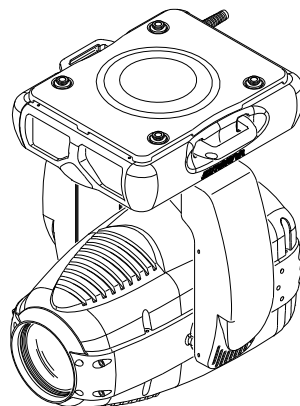


Figure 3-106: LVS Chassis Ground Cable Assembly

APPENDIX A.**Technical Bulletins****VL3500 Technical Bulletins**

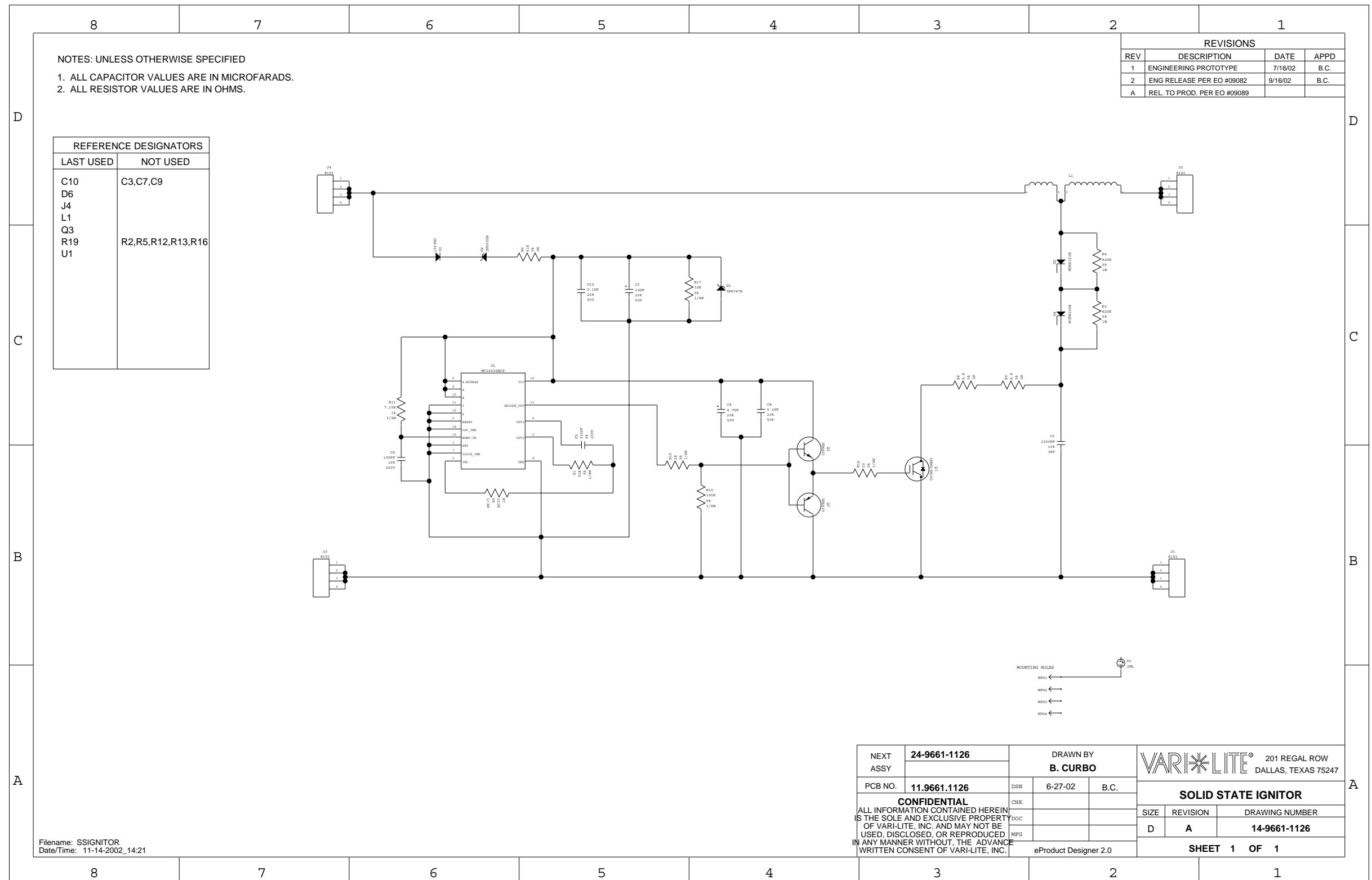
The following table identifies the current technical bulletins associated with the VL3000 series luminaires. These improvements have been incorporated into this manual (where applicable) and are available on the Vari-Lite web site at www.vari-lite.com.

Technical Bulletin	Description	Model(s)
S3K-001	Tilt Sensor Wire Routing	Spot and Wash
S3K-002	Improving Lamp and Reflector Cooling	Spot and Wash
S3K-003	Cancelled	Not Applicable
S3K-004	Light Baffle Retrofit	Spot
S3K-005	Front End Filter Installation	Spot
S3K-006	Lanyard (Safety) Cable Retrofit	Spot and Wash
S3K-007	LVS DC Output Cable Replacement	Spot and Wash
S3K-008	Zoom Box Assembly Lens Group Cleaning	Spot
S3K-009	Choke Paper Inspection / Alignment	Spot and Wash
S3K-010	Pan Tube Bushing Installation	Spot and Wash
S3K-011	MCB PCB Wire Protection Strip	Spot and Wash
S3K-012	80MM Fan Shield Installation	Spot and Wash
S3K-013	VL3000Q/VL3500Q Vent Cover/Fan Assy Change	Q Models Only
S3K-014	New-Style Ballast Conversion Procedure	All Models

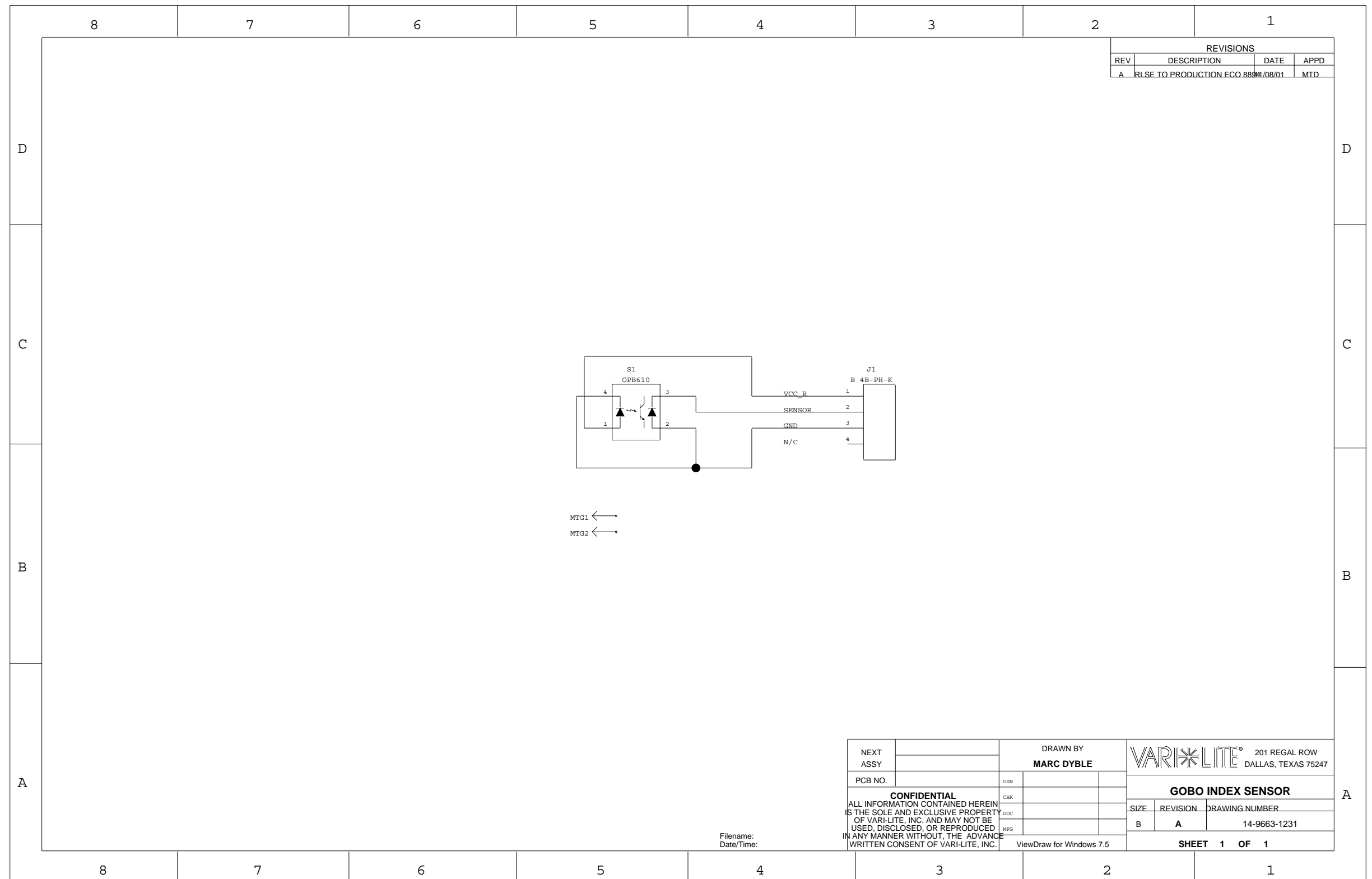


Notes

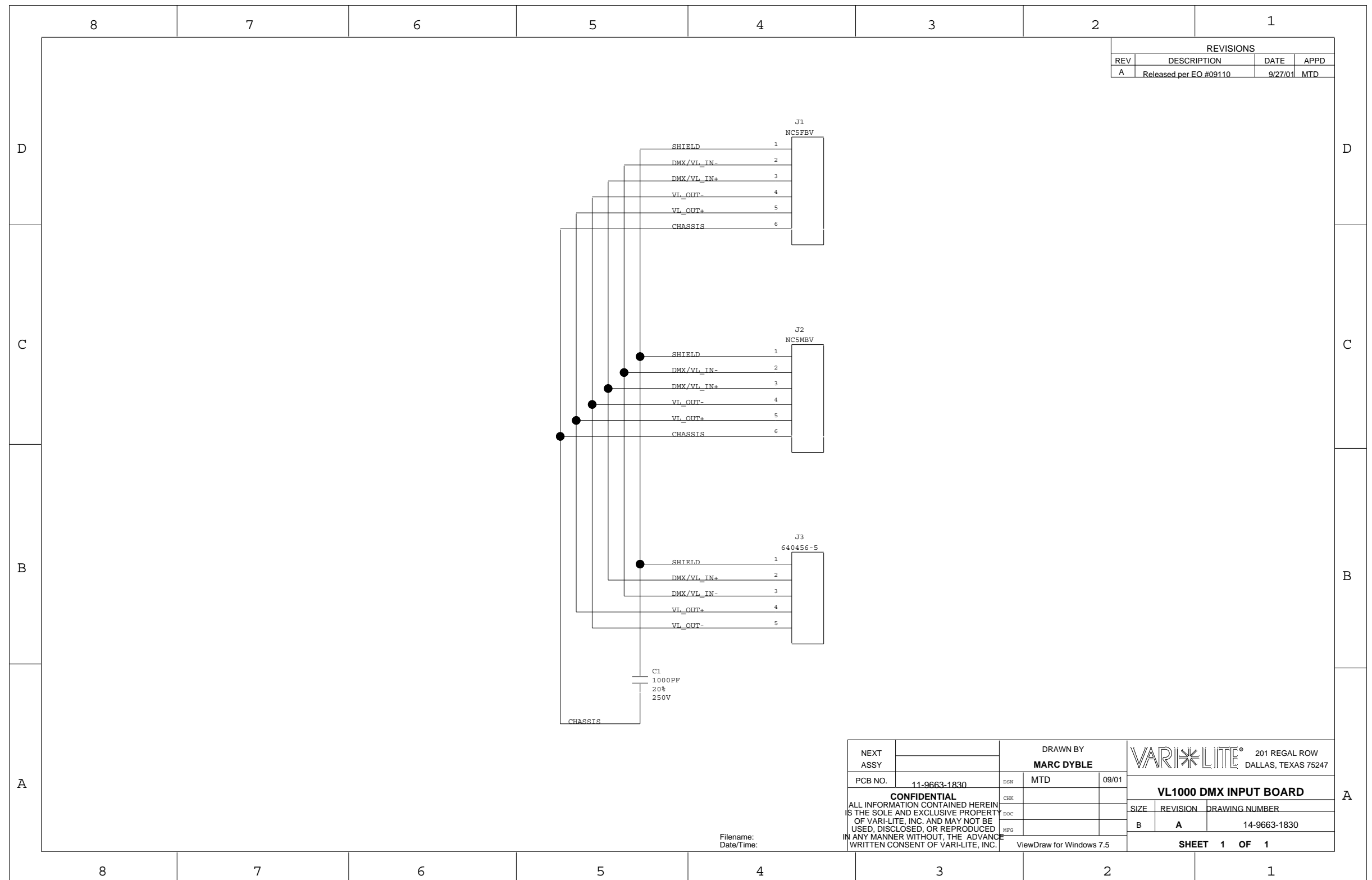
Solid State Ignitor PCB (Sheet 1 of 1)



Gobo Index Sensor PCB (Sheet 1 of 1)



DMX Input PCB (Sheet 1 of 1)

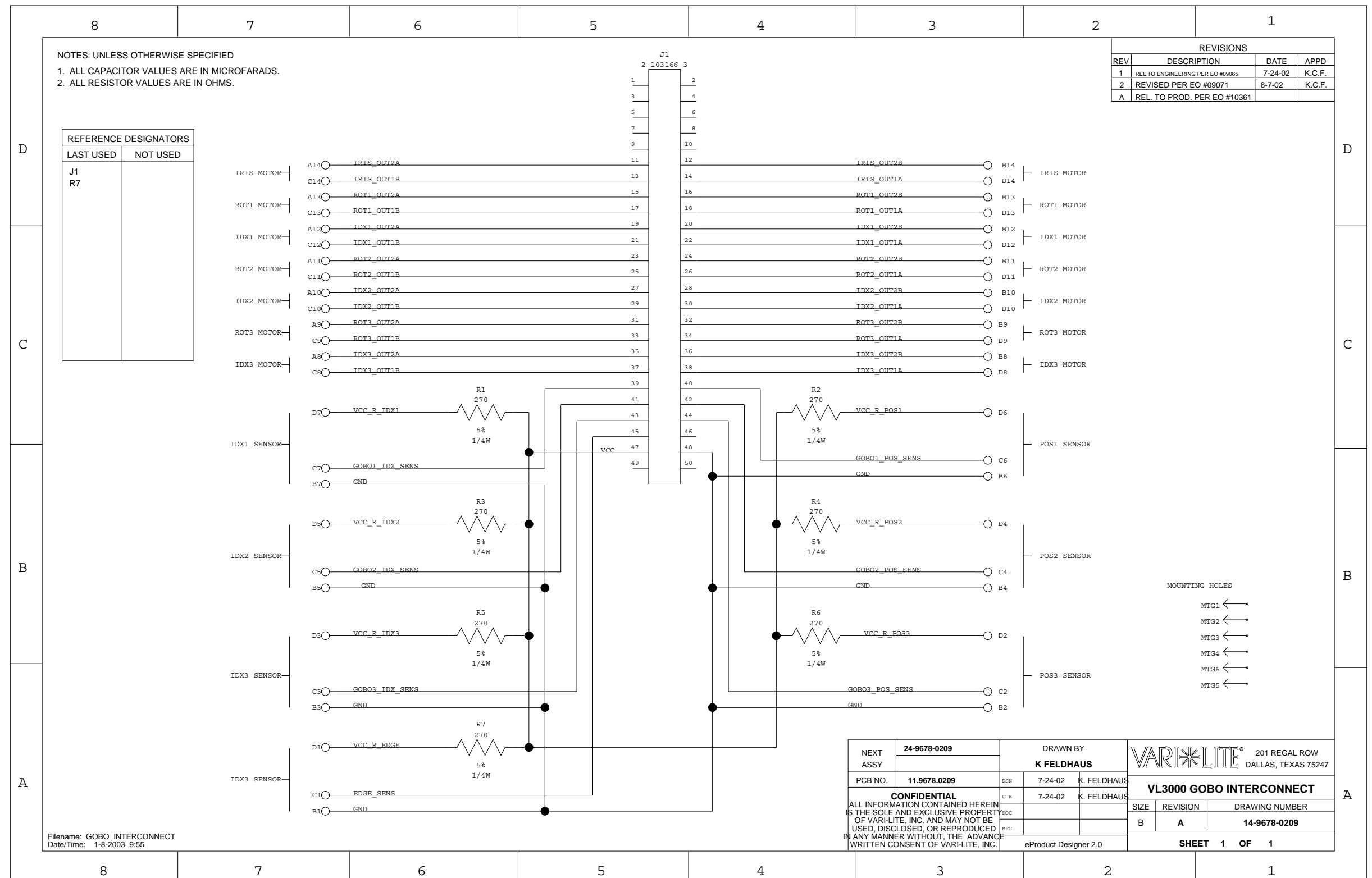


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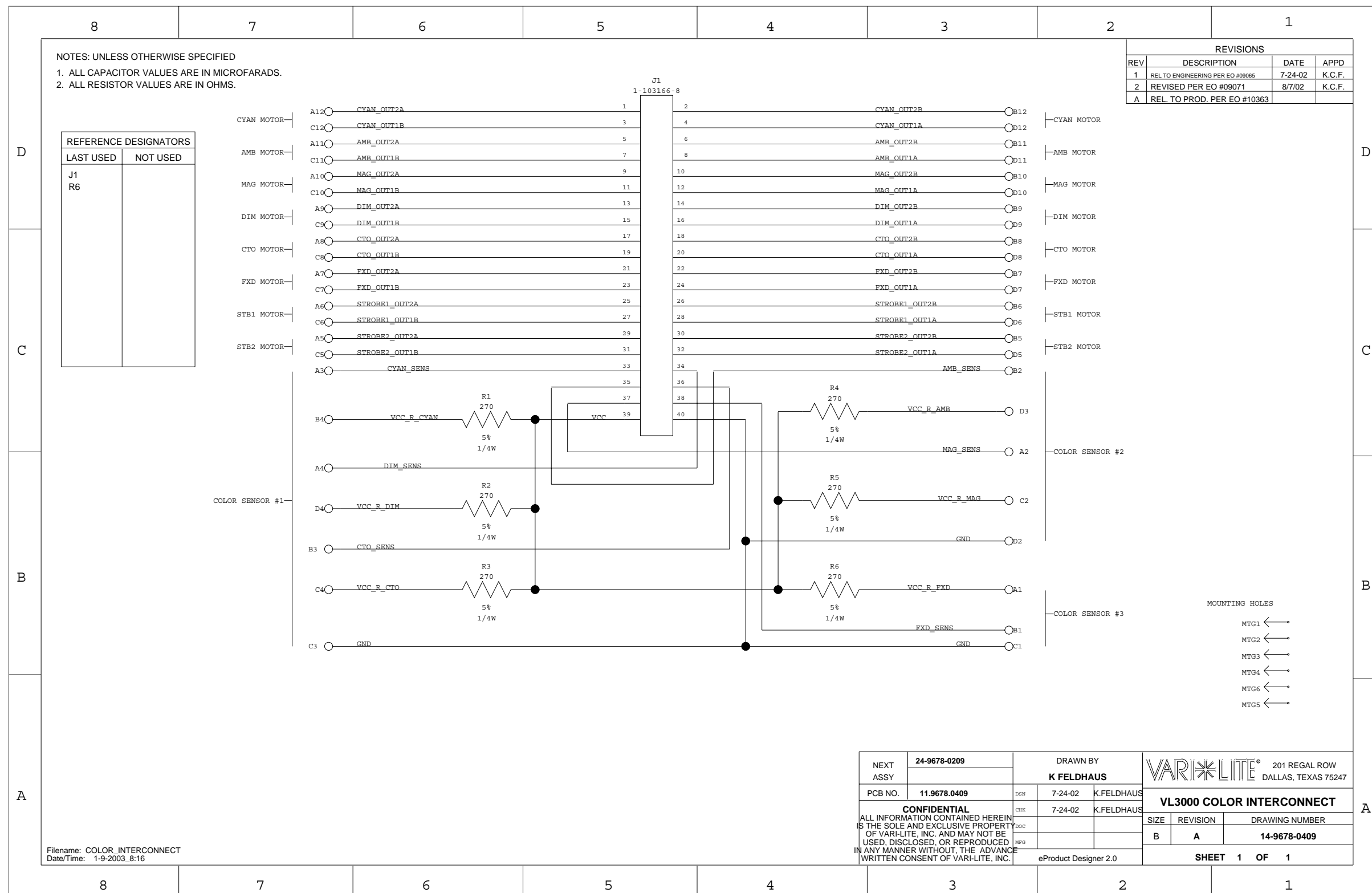
NEXT ASSY		DRAWN BY MARC DYBLE		VARI*LITE® 201 REGAL ROW DALLAS, TEXAS 75247	
PCB NO.	11-9663-1830	DSN	MTD	09/01	
VL1000 DMX INPUT BOARD					
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		DOC		B	A
		MFG		DRAWING NUMBER 14-9663-1830	
		ViewDraw for Windows 7.5			
		SHEET 1 OF 1			

Filename:
Date/Time:

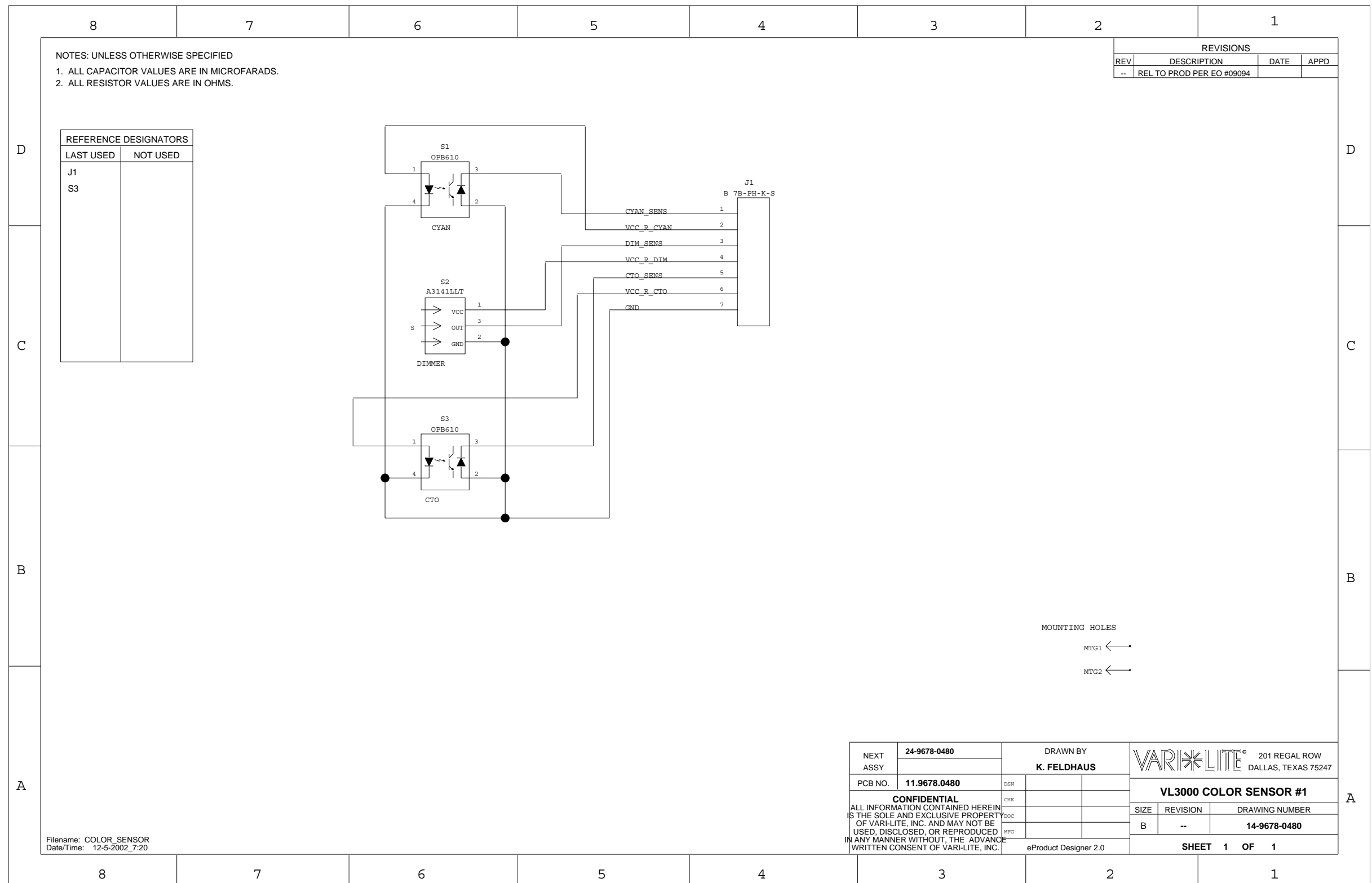
Gobo Interconnect PCB (Sheet 1 of 1)



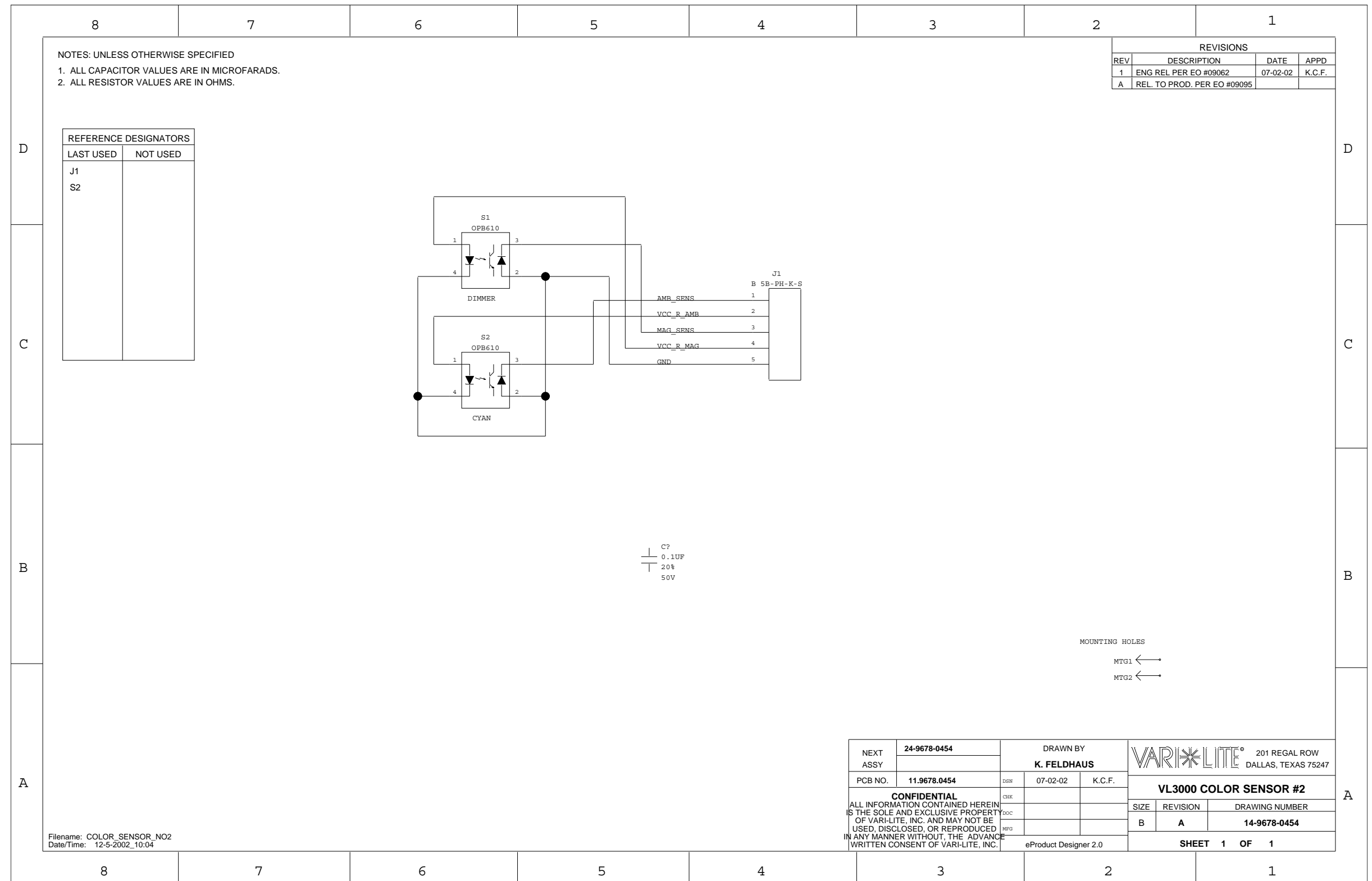
Color Interconnect PCB (Sheet 1 of 1)



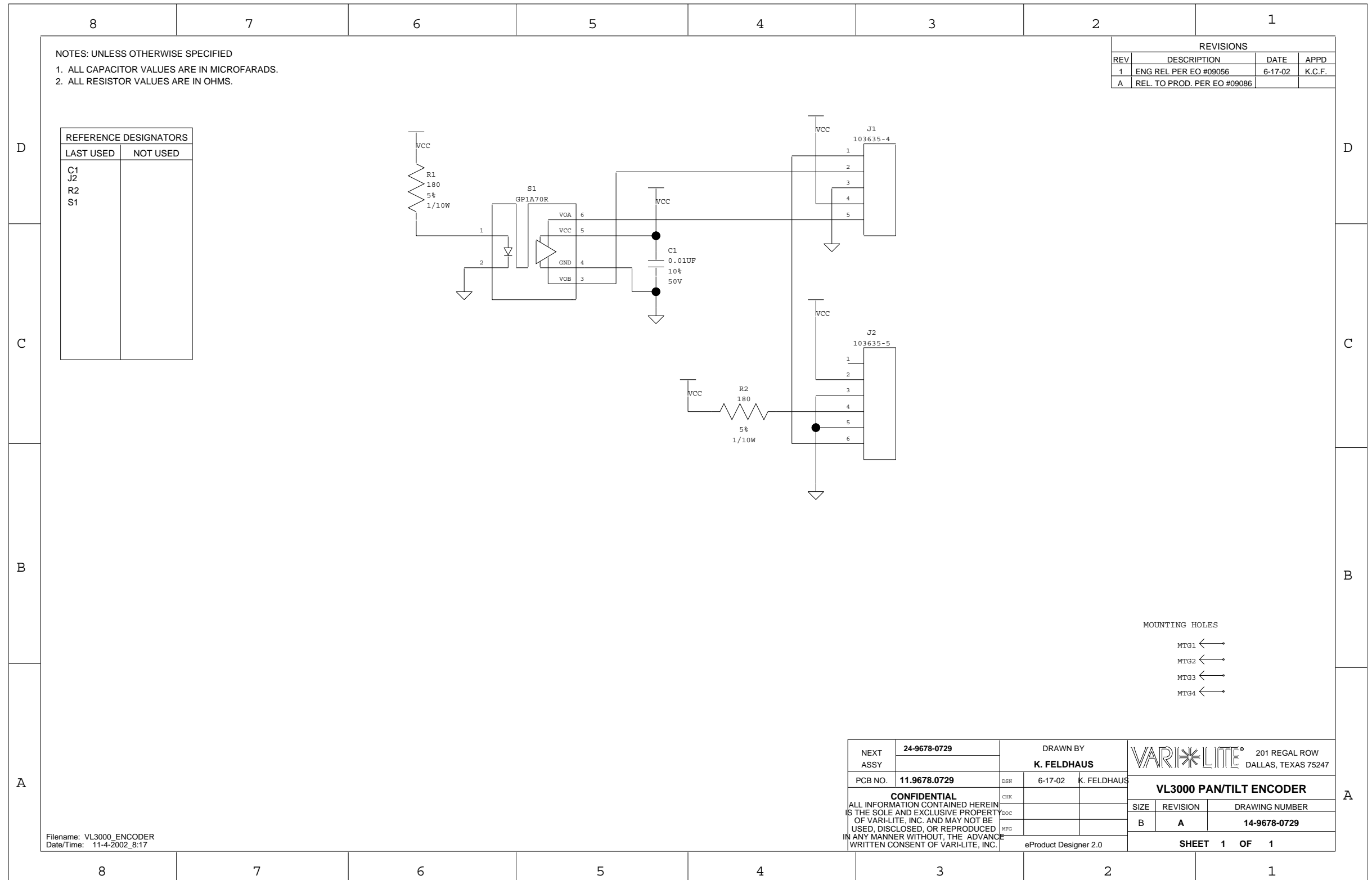
Color Sensor #1 PCB (Sheet 1 of 1)



Color Sensor #2 PCB (Sheet 1 of 1)



Pan/Tilt Encoder PCB (Sheet 1 of 1)



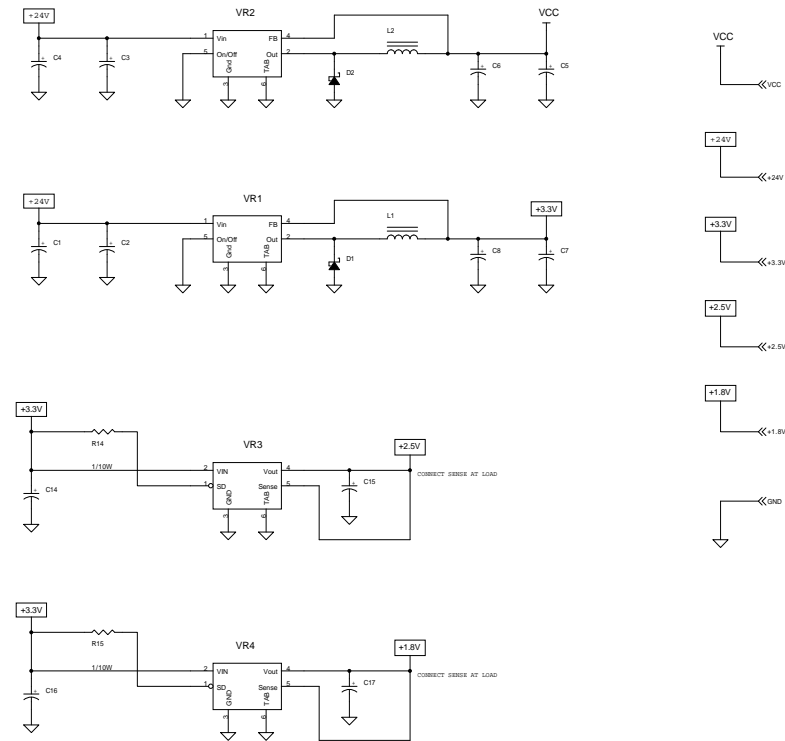
VL3500 Controller PCB (Sheet 1 of 10)

NOTES: UNLESS OTHERWISE SPECIFIED
 1.) ALL CAPACITOR VALUES ARE IN MICROFARADS.
 2.) ALL RESISTOR VALUES ARE IN OHMS.

REV. NO	ECO #	DESCRIPTION	DATE	APPROVED
A0	NONE	PROTO VERSION	12/12/03	
B0	NONE	MODIFIED NET NAMES AND U16	1/9/04	
C0	NONE	CHANGED CATHODES TO PIN 1 CHANGED SHEET 2, 3 AND 4	3/16/04	
C1	NONE	CHANGED VALUE ON VR1 AND VR4	4/27/04	
C2	NONE	CHANGED COMP VALUES & U20 GND	5/11/04	
C3	NONE	CHANGED MORE COMP VALUES U21-9 TO N/C & RENAMED TP#	5/25/04	
D0	NONE	ADDED TP - FXDG RENAMED SHEET TO FRAME	6/14/04	
E0	S04-	RENAMED NETS TO: FXDG & FXDC U6-5 ISO_GND/ U6-8 ISO_VCC		

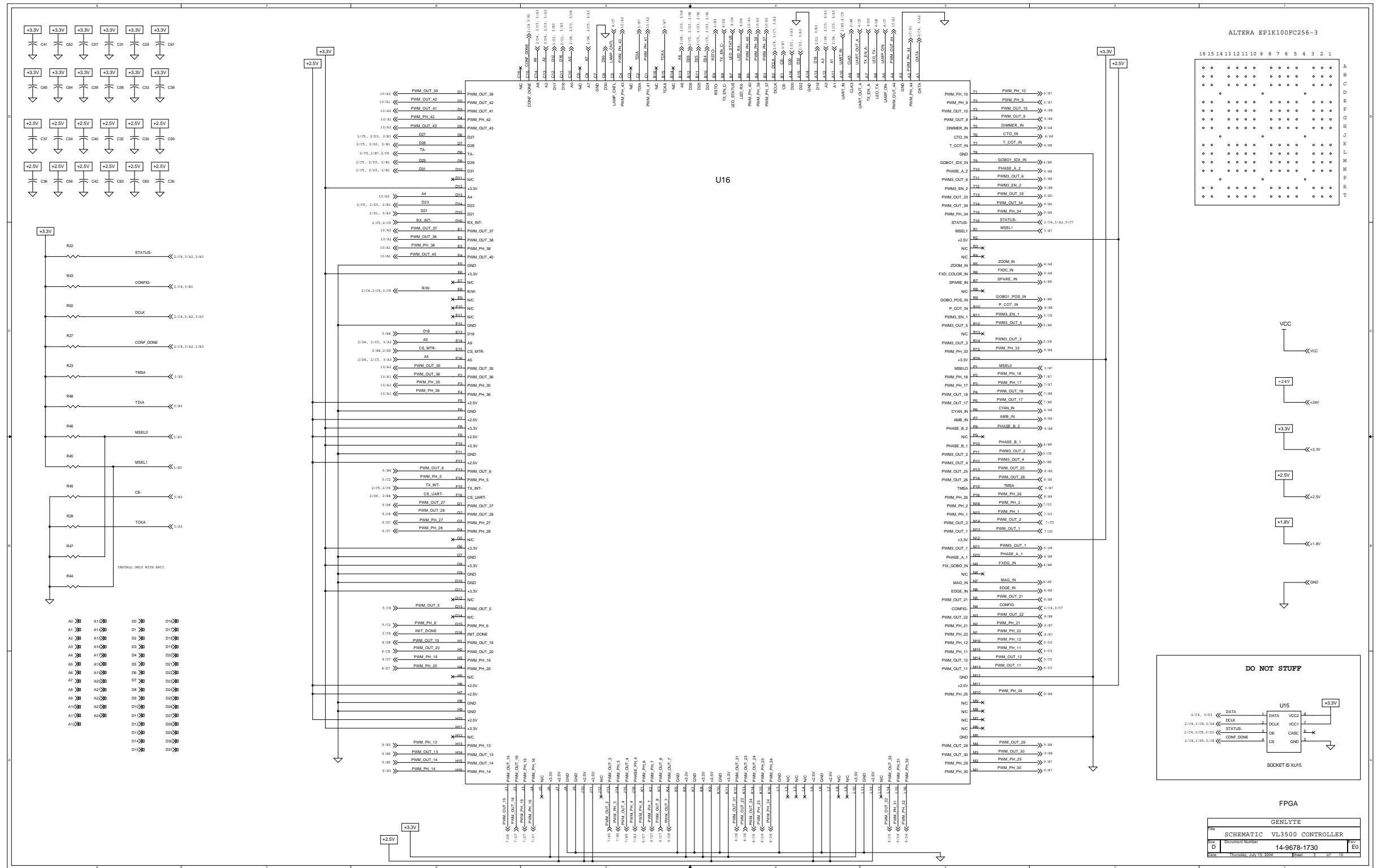
REFERENCE DESIGNATORS

LAST USED	NOT USED
C242	
D92	
FB1	
J13	
L2	
PTC4	
R304	
S1	
U45	
VR4	
Y1	
Z4	
PP2	
TP1	

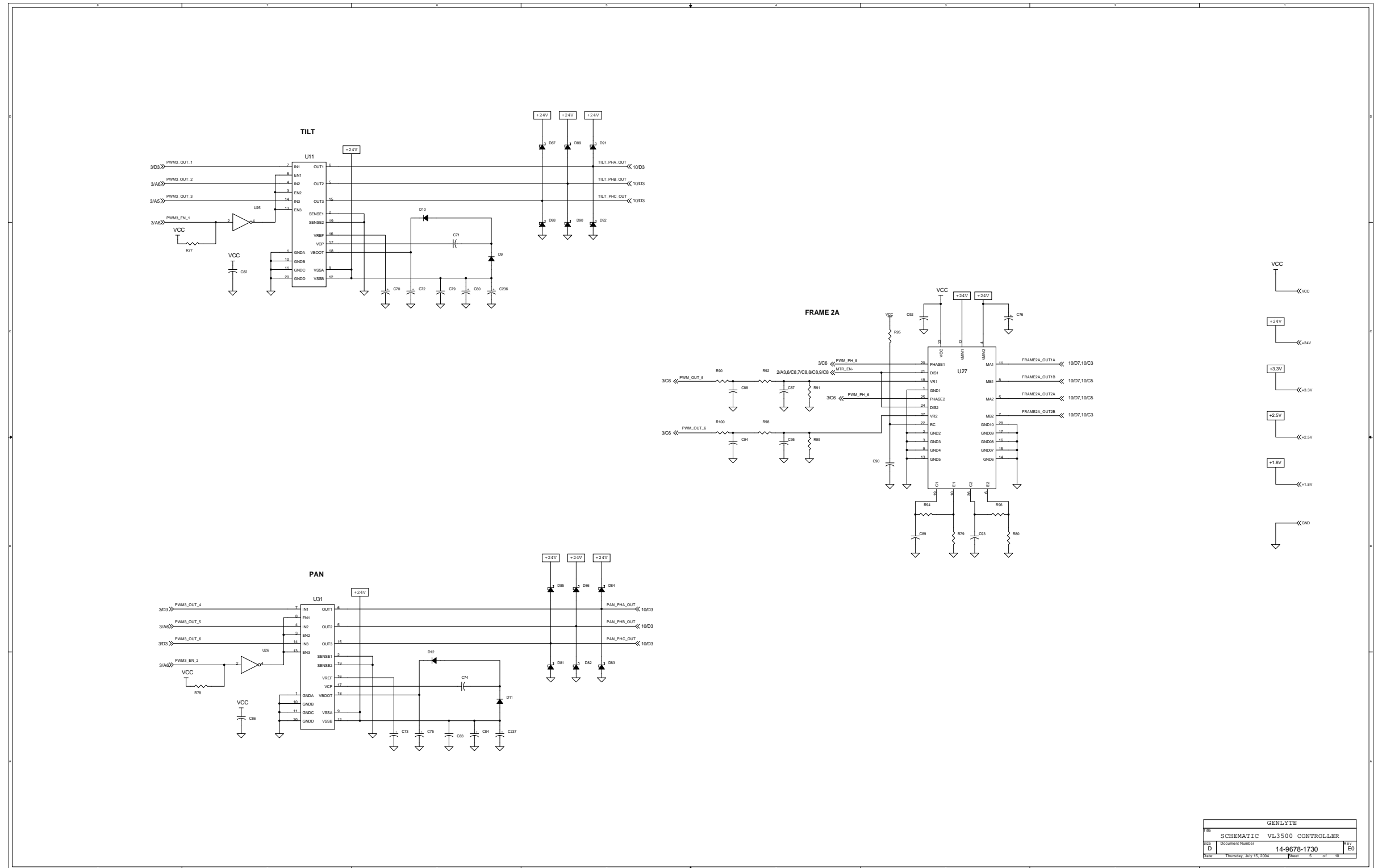


GENLYTE	
14	SCHMATIC VL3500 CONTROLLER
0	14-9678-1730
14-11862-000 14 2004	Rev: 1 07 10

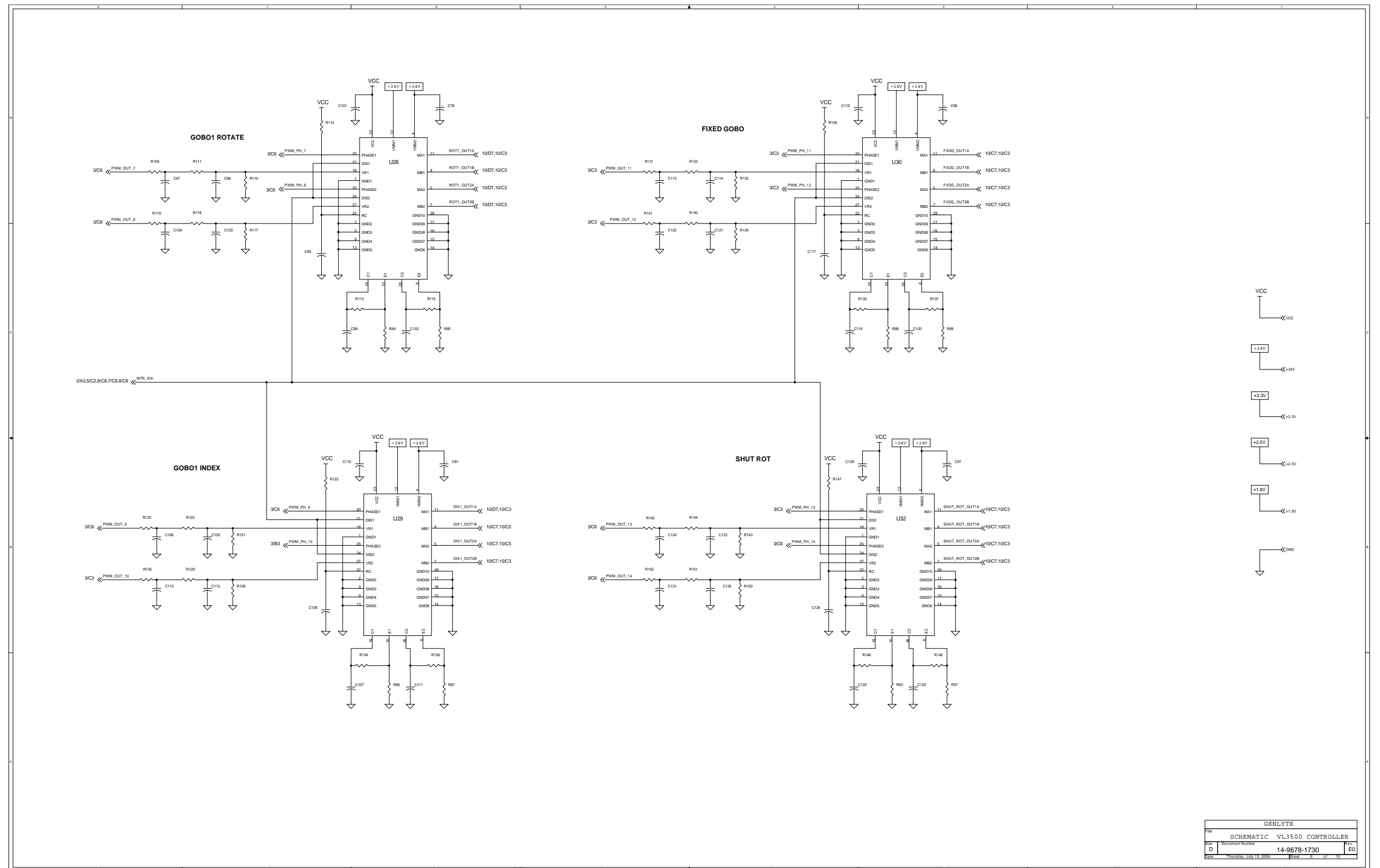
VL3500 Controller PCB (Sheet 3 of 10)



VL3500 Controller PCB (Sheet 5 of 10)

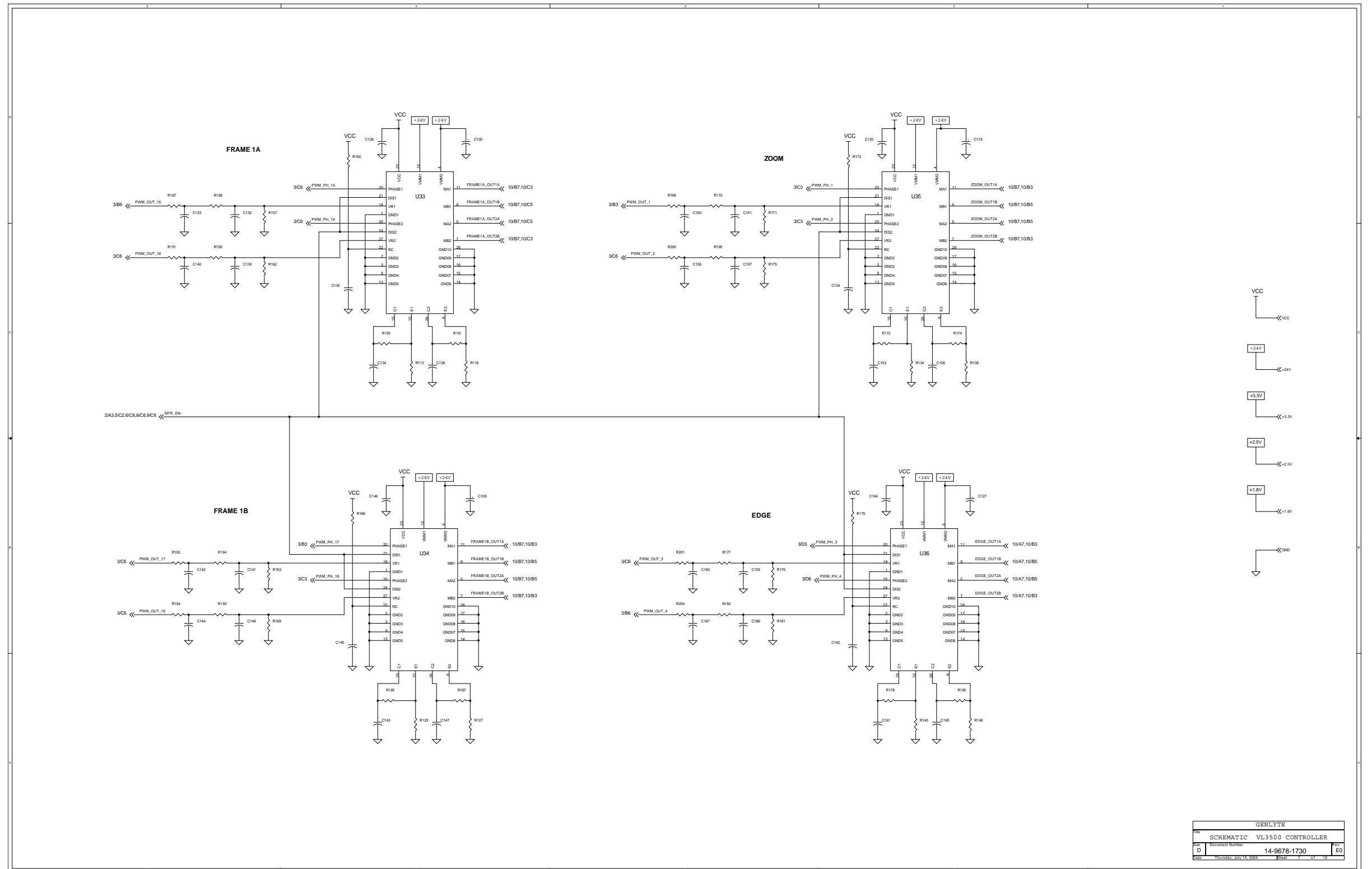


VL3500 Controller PCB (Sheet 6 of 10)



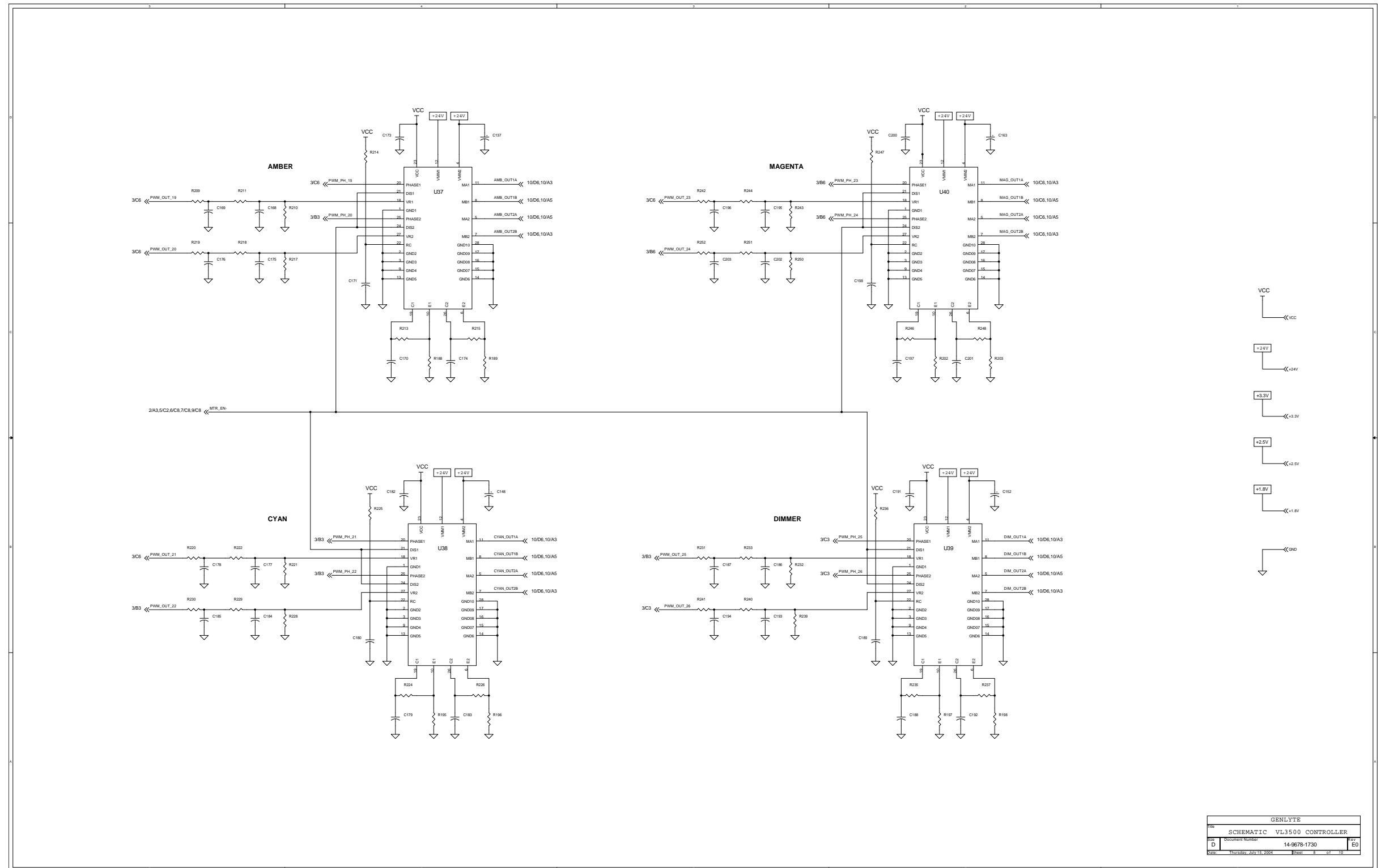
GENLYTE			
REV	SCHEMATIC VL3500 CONTROLLER		REV
D	Document Number	14-9678-1730	E0
DATE	Thursday, July 14, 2005	REV	E 01 0

VL3500 Controller PCB (Sheet 7 of 10)



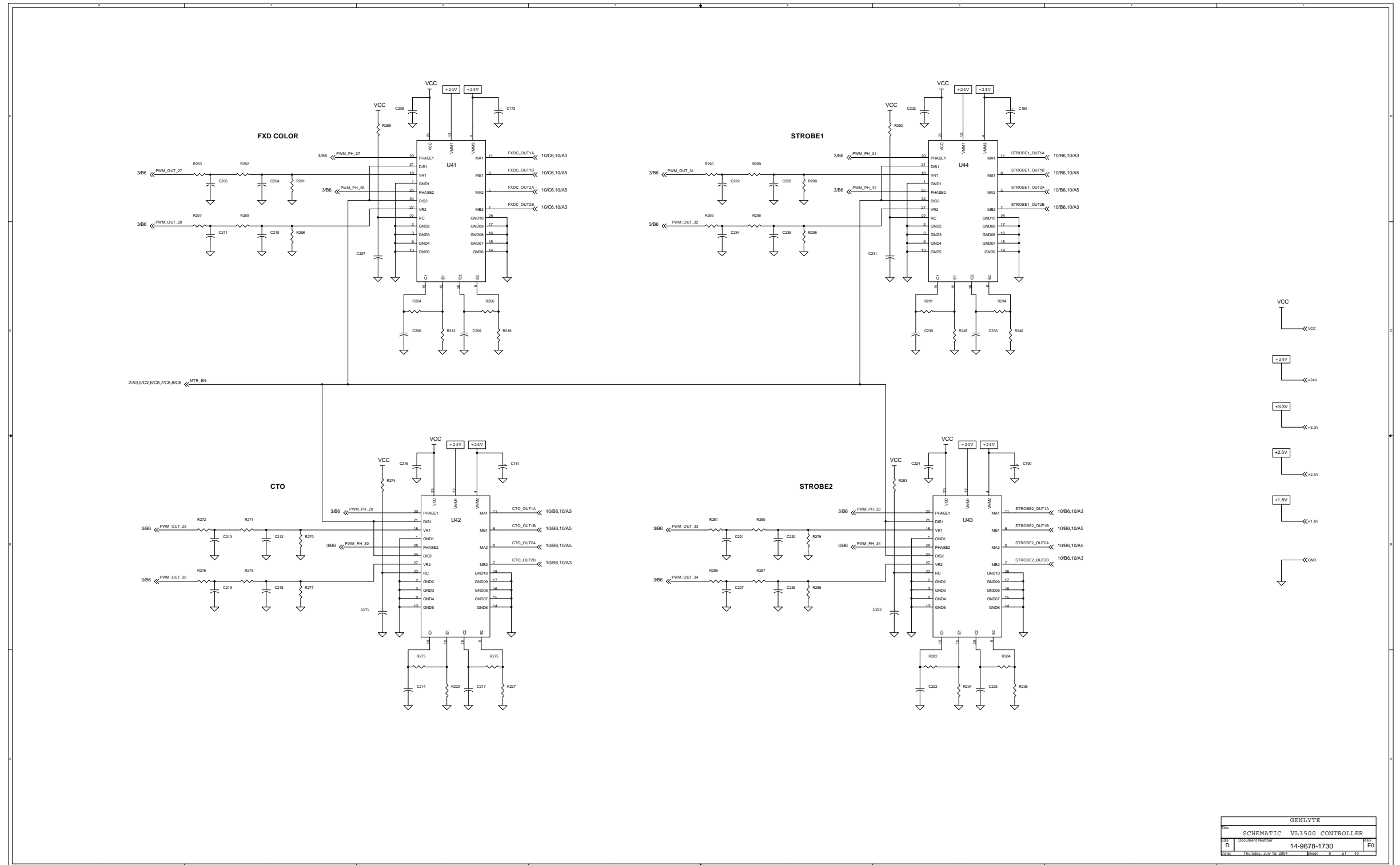
GENLYTE			
SCHEMATIC VL3500 CONTROLLER			
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D		14-9678-1730	ED
DATE	THURSDAY, JULY 15, 2004	PROJECT	7 OF 10

VL3500 Controller PCB (Sheet 8 of 10)

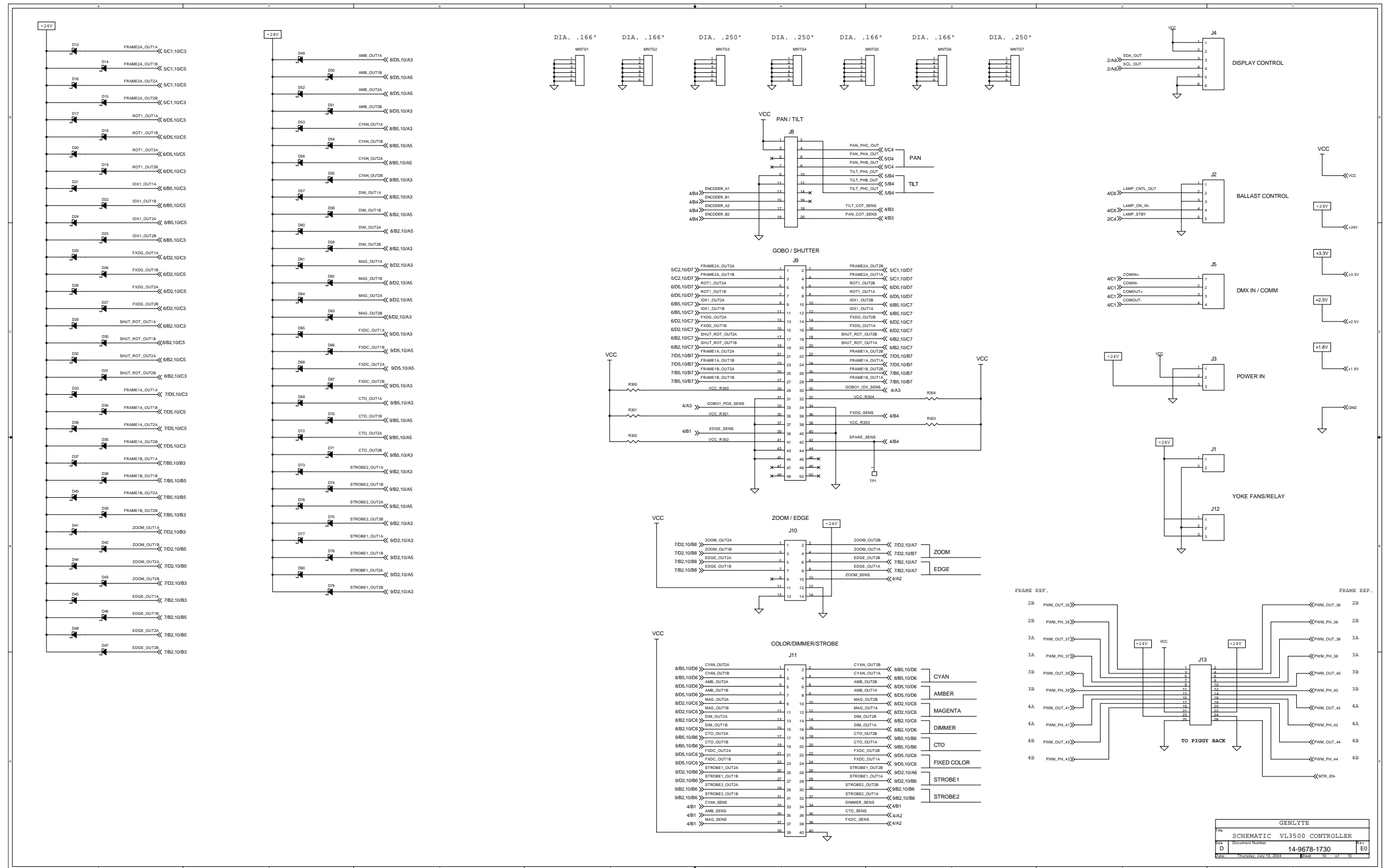


GENLYTE			
SCHEMATIC VL3500 CONTROLLER			
D	Document Number	14-0678-1730	EO
REV	Thursday, July 15, 2004	Page	8 of 10

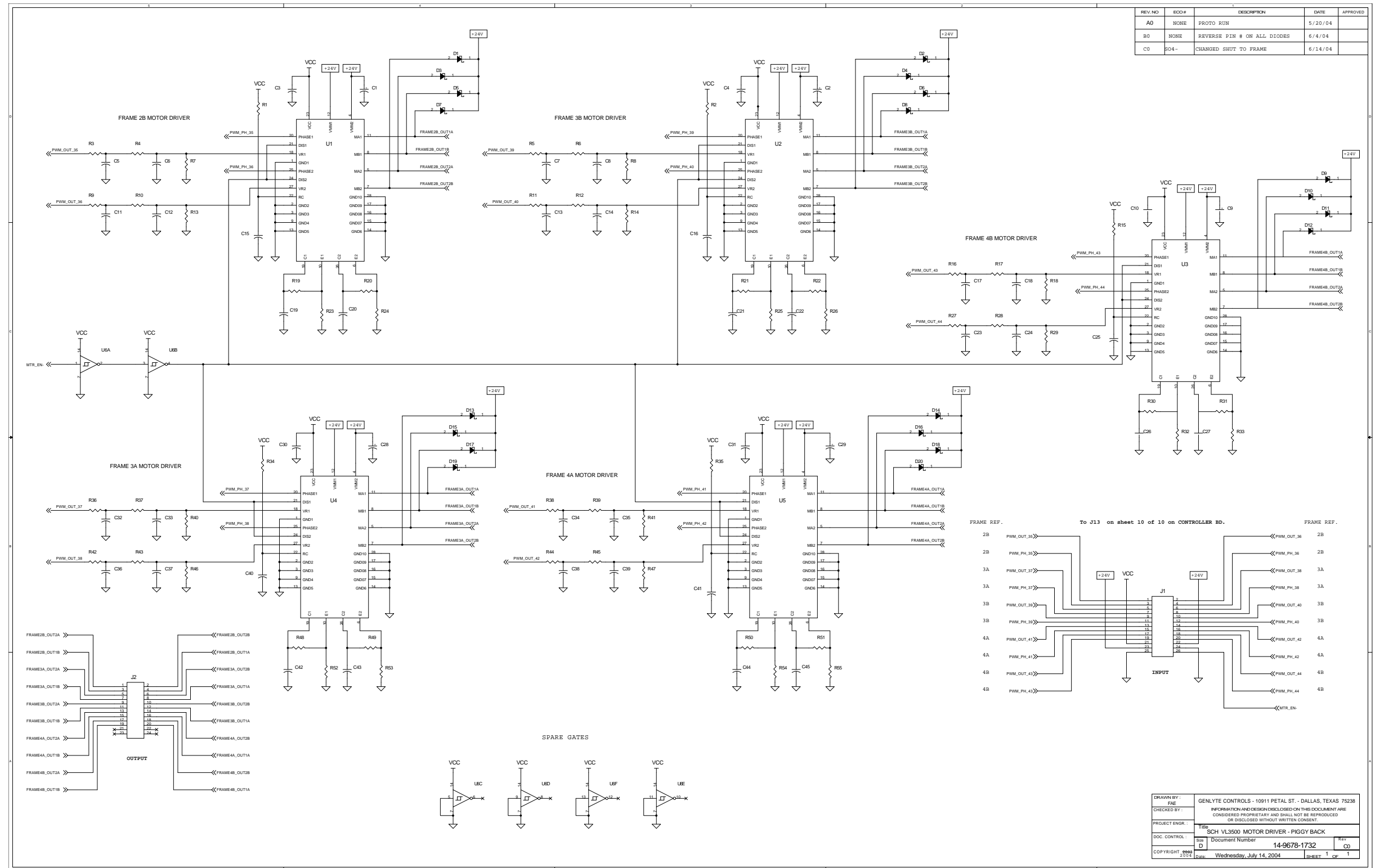
VL3500 Controller PCB (Sheet 9 of 10)



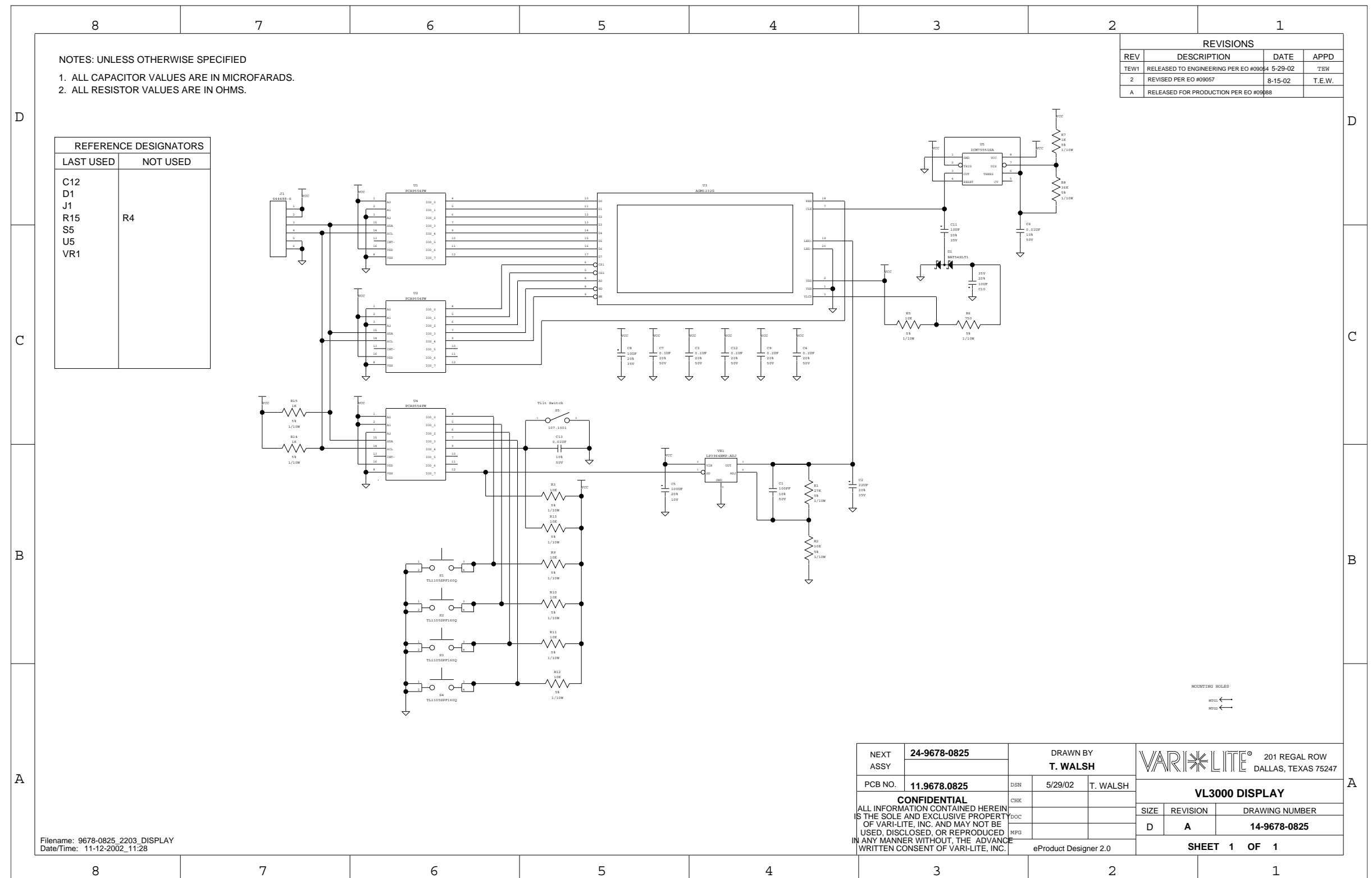
VL3500 Controller PCB (Sheet 10 of 10)



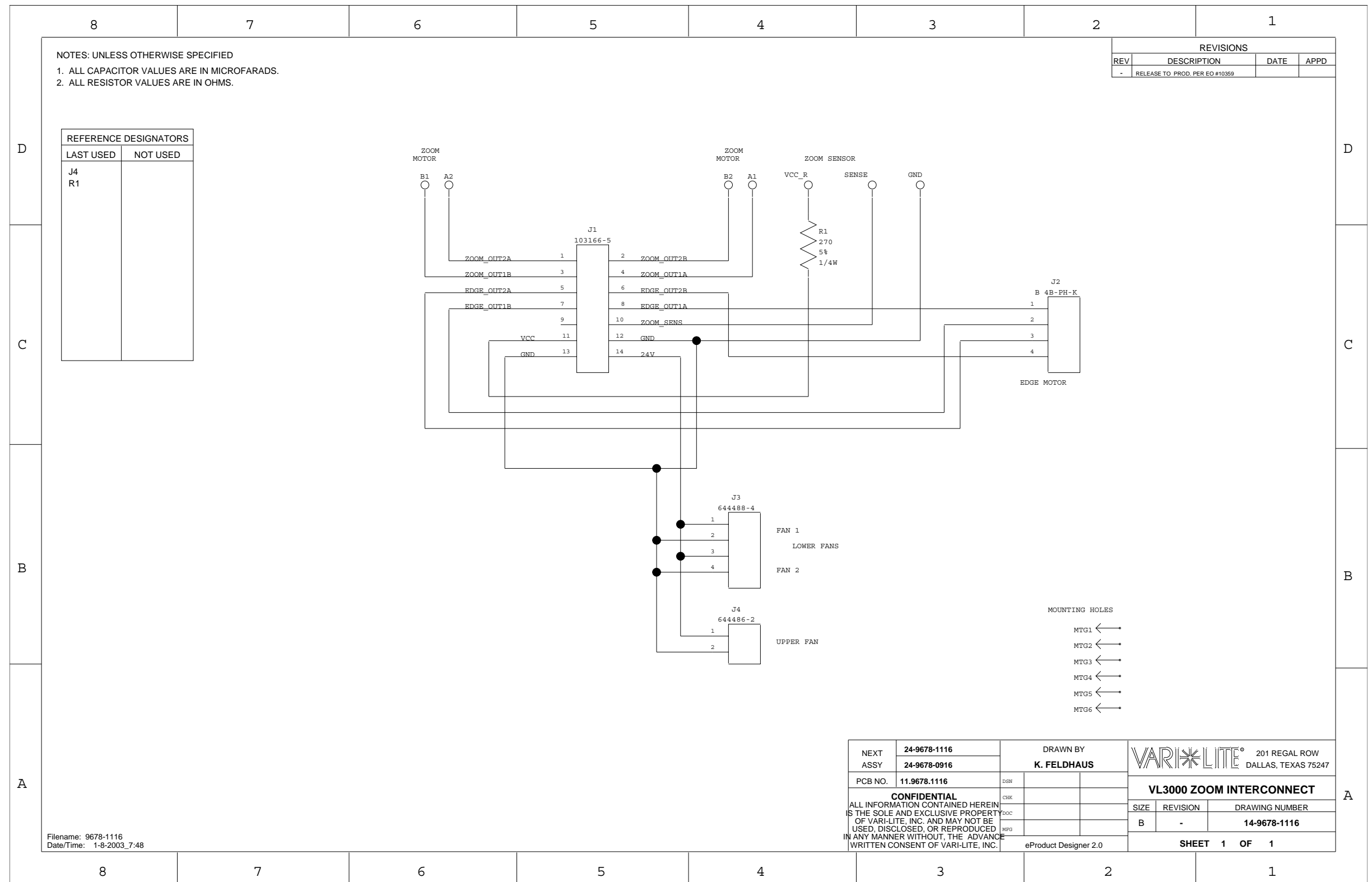
VL3500 Motor Driver (Piggy Back) PCB (Sheet 1 of 1)



Display PCB (Sheet 1 of 1)



Zoom Interconnect PCB (Sheet 1 of 1)

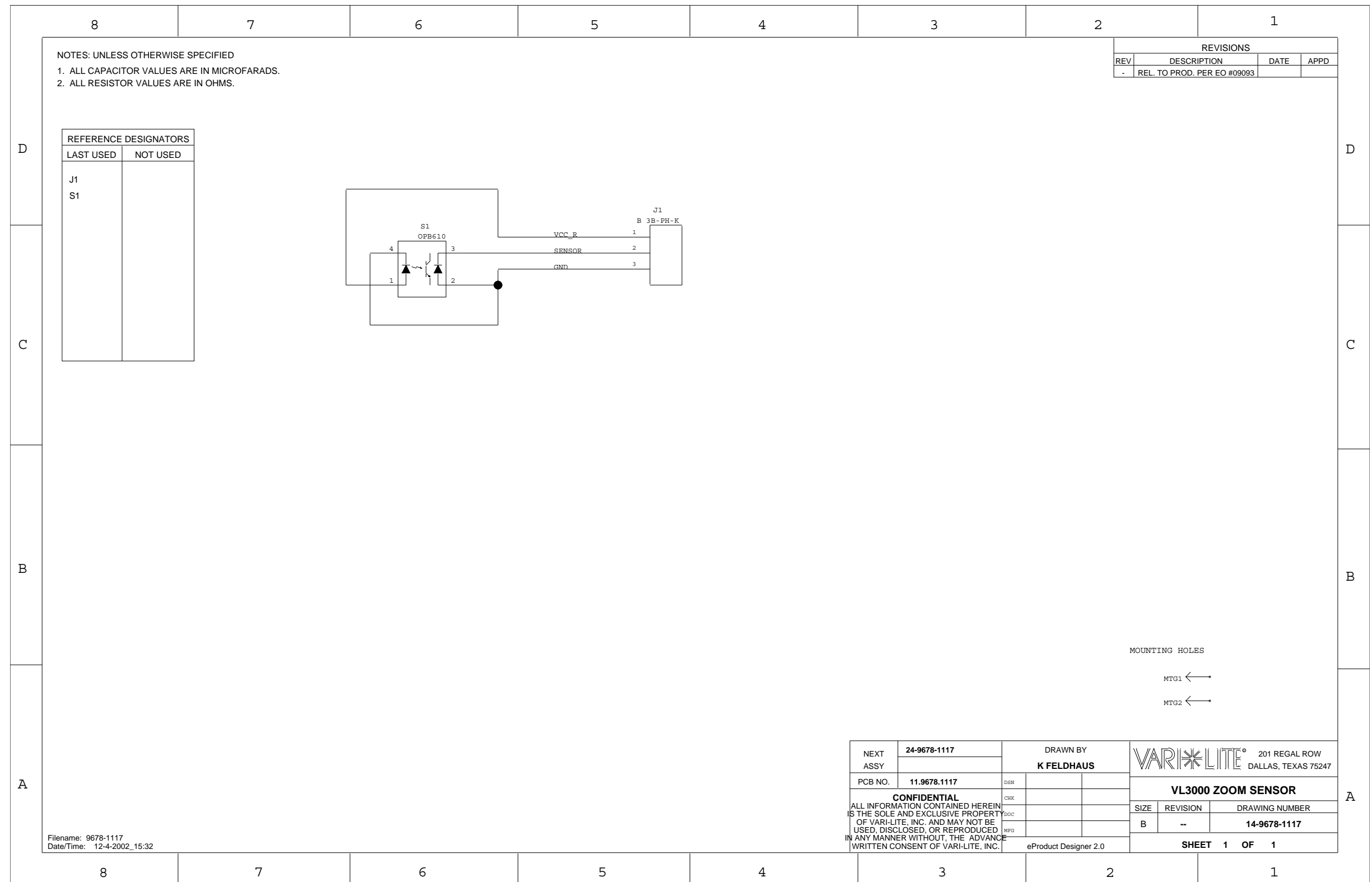


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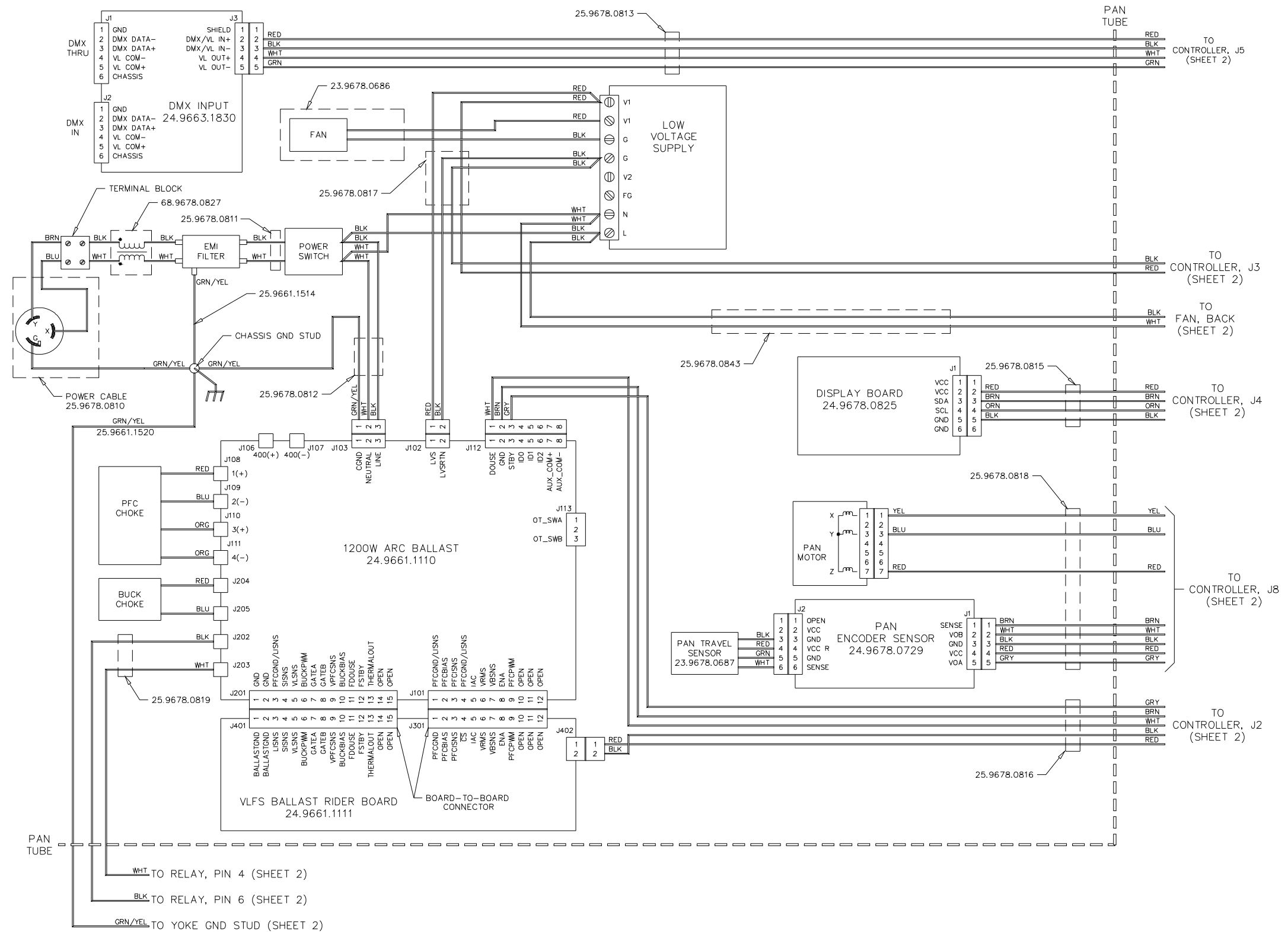
NEXT ASSY	24-9678-1116	24-9678-0916	DRAWN BY	K. FELDKHAUS		VARI*LITE® 201 REGAL ROW DALLAS, TEXAS 75247		
PCB NO.	11.9678.1116		DEN			VL3000 ZOOM INTERCONNECT		
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						SHEET 1 OF 1		

Filename: 9678-1116
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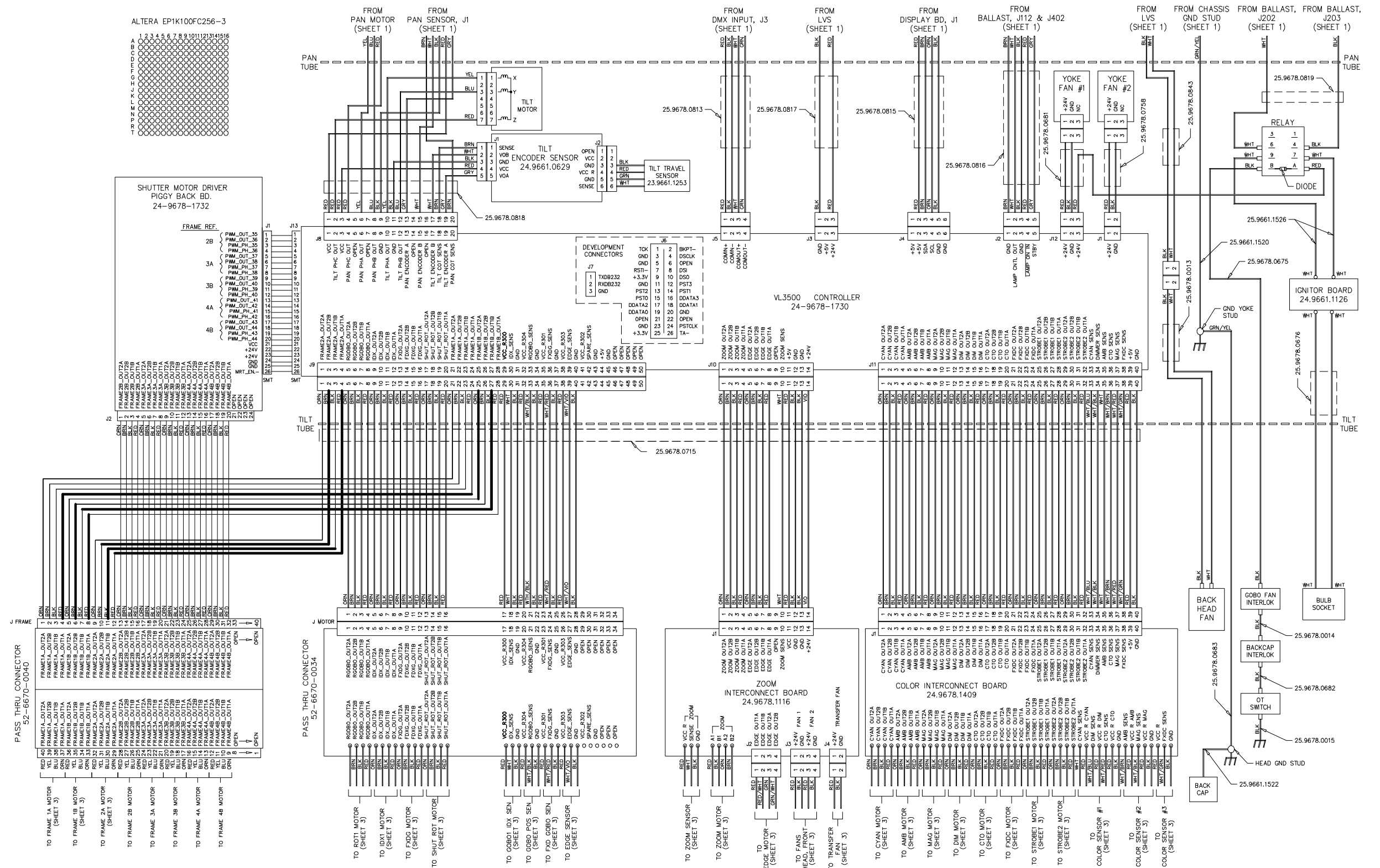
Zoom Sensor PCB (Sheet 1 of 1)



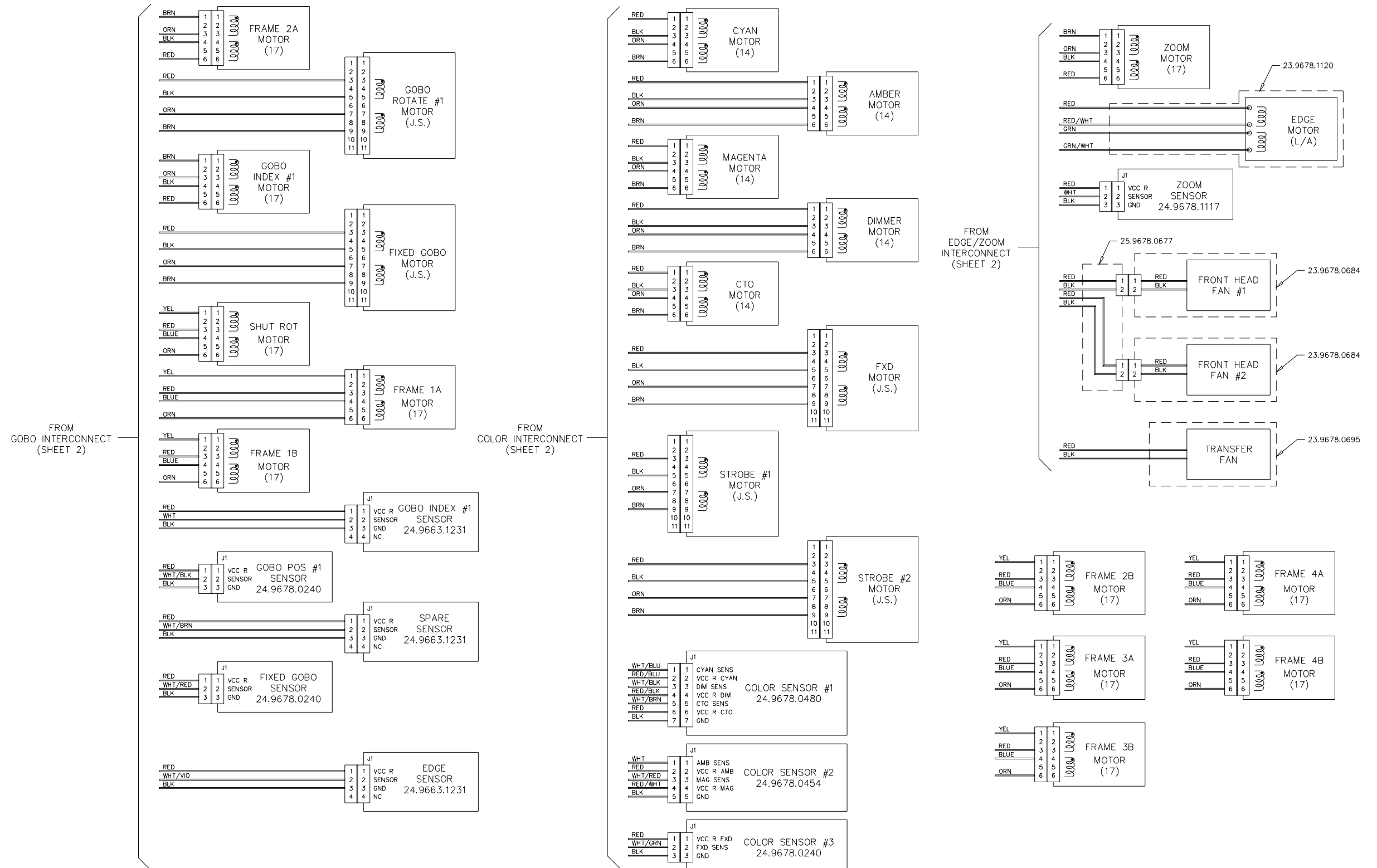
VL3500 Spot Luminaire Wiring Diagram (Sheet 1 of 3)

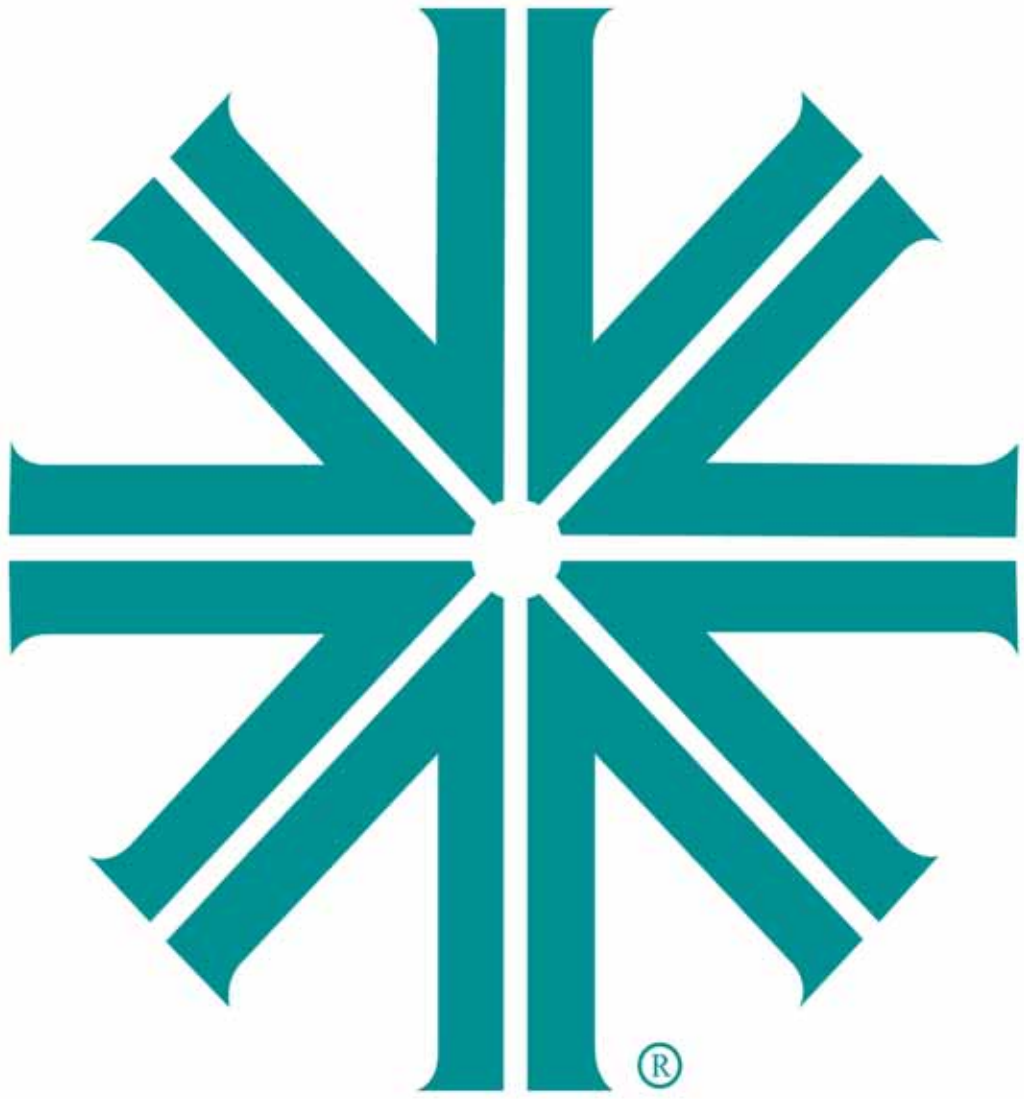


VL3500 Spot Luminaire Wiring Diagram (Sheet 2 of 3)



VL3500 Spot Luminaire Wiring Diagram (Sheet 3 of 3)







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