

INSTRUCTIONS-PARTS LIST



307-111

This manual contains **IMPORTANT INSTRUCTIONS and WARNINGS.**
READ AND RETAIN FOR REFERENCE.

Rev AC
Supersedes AB
and PCN AC

ELECTRIC-HYDRAULIC AIRLESS PAINT SPRAYER

EH 433 GT HYDRA-SPRAY®

3000 psi (210 bar) MAXIMUM WORKING PRESSURE
Provides 1 gpm at 1000 psi (70 bar)

Model 231-004, Series A, 60 Hz, 120 VAC

Basic sprayer on upright cart without hose or gun

Model 226-433

Complete sprayer with hose, Silver Plus gun, RAC IV® DripLess™ Tip Guard and SwitchTip™

Model 226-432, Series L, 50 Hz, 220 VAC

Complete sprayer with hose, Flex Plus gun, RAC IV® DripLess™ Tip Guard and SwitchTip™

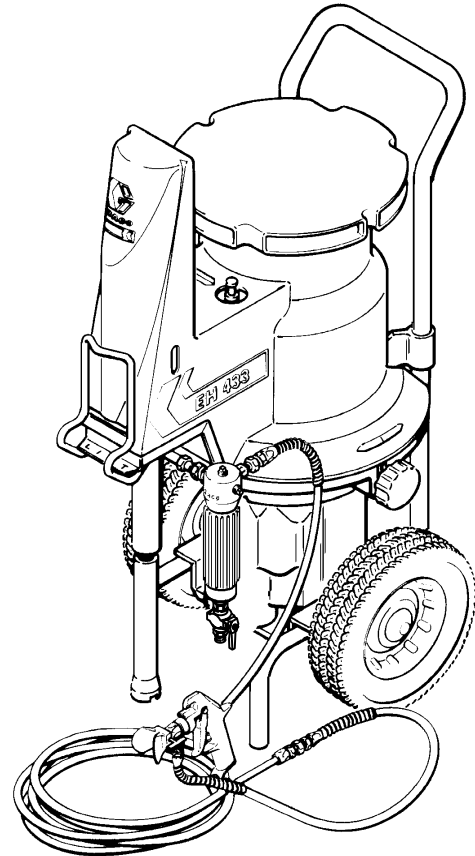


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NOTE: This is an example of the DANGER label on your sprayer.
This label is available in other languages, free of charge.
See page 25 to order.

! DANGER !			
	FIRE AND EXPLOSION HAZARD		SKIN INJECTION HAZARD
<p>Spray painting, flushing or cleaning equipment with flammable liquids in confined areas can result in fire or explosion.</p> <p>Use outdoors or in extremely well ventilated areas. Ground equipment, hoses, containers and objects being sprayed.</p> <p>Avoid all ignition sources such as static electricity from plastic drop cloths, open flames such as pilot lights, hot objects such as cigarettes, arcs from connecting or disconnecting power cords or turning light switches on and off.</p> <p>Failure to follow this warning can result in death or serious injury.</p>		<p>Liquids can be injected into the body by high pressure airless spray or leaks – especially hose leaks.</p> <p>Keep body clear of the nozzle. Never stop leaks with any part of the body. Drain all pressure before removing parts. Avoid accidental triggering of gun by always setting safety latch when not spraying.</p> <p>Never spray without a tip guard.</p> <p>In case of accidental skin injection, seek immediate “Surgical Treatment”.</p> <p>Failure to follow this warning can result in amputation or serious injury.</p>	
READ AND UNDERSTAND ALL LABELS AND INSTRUCTION MANUALS BEFORE USE			

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SAFETY WARNINGS

HIGH PRESSURE SPRAY CAN CAUSE SERIOUS INJURY.
FOR PROFESSIONAL USE ONLY. OBSERVE ALL WARNINGS

Read and understand all instruction manuals before operating equipment.

FLUID INJECTION HAZARD

General Safety

This equipment generates very high fluid pressure. Spray from the gun, leaks or ruptured components can inject fluid through your skin and into your body and cause extremely serious bodily injury, including the need for amputation. Also, fluid injected or splashed into the eyes or on the skin can cause serious damage.

NEVER point the spray gun at anyone or at any part of the body. NEVER put hand or fingers over the spray tip. NEVER try to “blow back” paint; this is NOT an air spray system.

ALWAYS have the tip guard in place on the spray gun when spraying.

ALWAYS follow the **Pressure Relief Procedure**, below, before cleaning or removing the spray tip or servicing any system equipment.

NEVER try to stop or deflect leaks with your hand or body.

Be sure equipment safety devices are operating properly before each use.

Medical Alert—Airless Spray Wounds

If any fluid appears to penetrate your skin, get **EMERGENCY MEDICAL CARE AT ONCE. DO NOT TREAT AS A SIMPLE CUT.** Tell the doctor exactly what fluid was injected.

***Note to Physician:** Injection in the skin is a traumatic injury. It is important to treat the injury surgically as soon as possible. Do not delay treatment to research toxicity. Toxicity is a concern with some exotic coatings injected directly into the blood stream. Consultation with a plastic surgeon or reconstructive hand surgeon may be advisable.*

Spray Gun Safety Devices

Be sure all gun safety devices are operating properly before each use. Do not remove or modify any part of the gun; this can cause a malfunction and result in serious bodily injury.

Safety Latch

Whenever you stop spraying, even for a moment, always set the gun safety latch in the closed or “safe” position, making the gun inoperative. Failure to set the safety latch can result in accidental triggering of the gun.

Diffuser

The gun diffuser breaks up spray and reduces the risk of fluid injection when the tip is not installed. Check diffuser operation regularly. Follow the **Pressure Relief Procedure**, below, then remove the spray tip. Aim the gun into a metal pail, holding the gun firmly to the pail. Using the lowest possible pressure, trigger the gun. If the fluid emitted is not diffused into an irregular stream, replace the diffuser immediately.

Tip Guard

ALWAYS have the tip guard in place on the spray gun while spraying. The tip guard alerts you to the fluid injection hazard and helps reduce, but does not prevent, the risk of accidentally placing your fingers or any part of your body close to the spray tip.

Trigger Guard

Always have the trigger guard in place on the gun when spraying to reduce the risk of accidentally triggering the gun if it is dropped or bumped.

Spray Tip Safety

Use extreme caution when cleaning or changing spray tips. If the spray tip clogs while spraying, engage the gun safety latch immediately. ALWAYS follow the **Pressure Relief Procedure** and then remove the spray tip to clean it.

NEVER wipe off build-up around the spray tip until pressure is fully relieved and the gun safety latch is engaged.

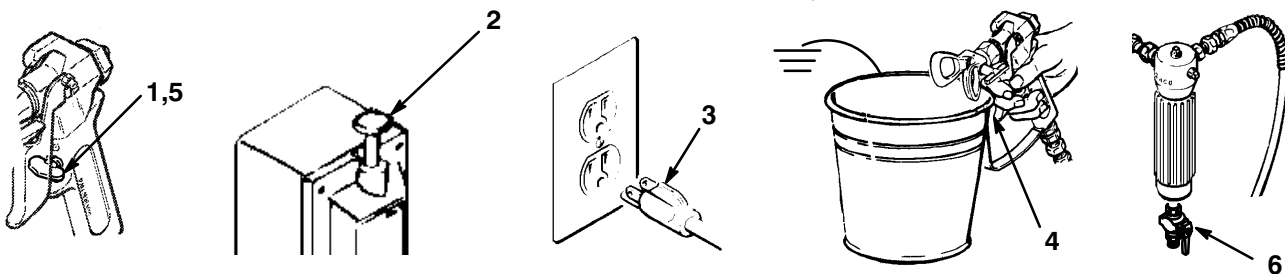
Pressure Relief Procedure

To reduce the risk of serious bodily injury, including fluid injection, splashing fluid or solvent in the eyes or on the skin, or injury from moving parts or electric shock, always follow this procedure whenever you shut off the sprayer, when checking or servicing any part of the spray system, when installing, cleaning or changing spray tips, and whenever you stop spraying.

1. Engage the gun safety latch.
2. Turn the ON/OFF switch to OFF.
3. Unplug the power supply cord.

4. Disengage the gun safety latch. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
5. Engage the gun safety latch.
6. Open the pressure drain valve, having a container ready to catch the drainage. Leave the valve open until you are ready to spray again.

If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, VERY SLOWLY loosen the the tip guard retaining nut or hose end coupling to relieve pressure gradually, then loosen completely. Now clear the tip or hose.



MOVING PARTS HAZARD

Moving parts can pinch or amputate your fingers or other body parts. KEEP CLEAR of moving parts when starting or operating the sprayer. Follow the **Pressure Relief Procedure** on page 2 before checking or servicing any part of the sprayer, to prevent it from starting accidentally.

EQUIPMENT MISUSE HAZARD

General Safety

Any misuse of the spray equipment or accessories, such as overpressurizing, modifying parts, using incompatible chemicals and fluids, or using worn or damaged parts, can cause them to rupture and result in fluid injection, splashing in the eyes or on the skin, or other serious bodily injury, or fire, explosion or property damage.

NEVER alter or modify any part of this equipment; doing so could cause it to malfunction.

CHECK all spray equipment regularly and repair or replace worn or damaged parts immediately.

Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.

System Pressure

This sprayer can develop **3000 psi (210 bar) MAXIMUM WORKING PRESSURE**. Be sure that all spray equipment and accessories used are rated to withstand this pressure. DO NOT exceed the maximum working pressure of any component or accessory used in the system.

Fluid and Solvent Compatibility

All chemicals used in the sprayer must be chemically compatible with the wetted parts shown in the **TECHNICAL DATA** on page 28. Consult your chemical supplier to ensure compatibility.

Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in this equipment, which contains aluminum and/or zinc parts. Such use could result in a serious chemical reaction, with the possibility of explosion, which could cause death, serious bodily injury and/or substantial property damage.

FIRE OR EXPLOSION HAZARD

Static electricity is created by the flow of fluid through the pump and hose. If every part of the spray equipment is not properly grounded, sparking may occur, and the system may become hazardous. Sparking may also occur when plugging in or unplugging a power supply cord. Sparks can ignite fumes from solvents and the fluid being sprayed, dust particles and other flammable substances, whether you are spraying indoors or outdoors, and can cause a fire or explosion and serious bodily injury and property damage.

If you experience any static sparking or even a slight shock while using this equipment, **STOP SPRAYING IMMEDIATELY**. Check the entire system for proper grounding. Do not use the system again until the problem has been identified and corrected.

Grounding

To reduce the risk of static sparking, ground the sprayer and all other spray equipment used or located in the spray area. CHECK your local electrical code for detailed grounding instructions for your area and type of equipment. BE SURE to ground all of this spray equipment:

1. *Sprayer*: plug into a properly grounded outlet. Do not remove the grounding prong of the plug, and do not use an adapter. Extension cords must have three wires.

HOSE SAFETY

High pressure fluid in the hoses can be very dangerous. If the hose develops a leak, split or rupture due to any kind of wear, damage or misuse, the high pressure spray emitted from it can cause a fluid injection injury or other serious bodily injury or property damage.

ALL FLUID HOSES MUST HAVE SPRING GUARDS ON BOTH ENDS! The spring guards help protect the hose from kinks or bends at or close to the coupling which can result in hose rupture.

TIGHTEN all fluid connections securely before each use. High pressure fluid can dislodge a loose coupling or allow high pressure spray to be emitted from the coupling.

NEVER use a damaged hose. Before each use, check the entire hose for cuts, leaks, abrasion, bulging cover, or damage or movement of the hose couplings. If any of these conditions exist, replace the hose immediately. DO NOT try to recouple high pressure hose or mend it with tape or any other device. A repaired hose cannot contain the high pressure fluid.

HANDLE AND ROUTE HOSES CAREFULLY. Do not pull on hoses to move equipment. Keep hoses clear of moving parts and hot surfaces of the pump. Do not use fluids or solvents which are not compatible with the inner tube and cover of the hose. DO NOT expose Graco hose to temperatures above 180° F (82° C) or below -40° F (-40° C).

Hose Grounding Continuity

Proper hose grounding continuity is essential to maintaining a grounded spray system. Check the electrical resistance of your fluid hoses at least once a week. If your hose does not have a tag on it which specifies the maximum electrical resistance, contact the hose supplier or manufacturer for the maximum resistance limits. Use a resistance meter in the appropriate range for your hose to check the resistance. If the resistance exceeds the recommended limits, replace it immediately. An ungrounded or poorly grounded hose can make your system hazardous. Also read **FIRE OR EXPLOSION HAZARD**.

2. *Fluid hoses*: use only grounded hoses with a maximum of 500 ft (150 m) combined hose length to ensure grounding continuity. See **Hose Grounding Continuity**.
3. *Spray gun*: obtain grounding through connection to a properly grounded fluid hose and sprayer.
4. *Object being sprayed*: according to local code.
5. *Fluid supply container*: according to local code.
6. *All solvent pails used when flushing*, according to local code. Use only metal pails, which are conductive. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.
7. *To maintain grounding continuity when flushing or relieving pressure*, always hold a metal part of the gun firmly to the side of a grounded metal pail, then trigger the gun.

Flushing Safety

Reduce the risk of fluid injection injury, static sparking, or splashing by following the flushing procedure given on page 9 of this manual. Follow the **Pressure Relief Procedure** on page 2, and remove the spray tip before flushing. Hold a metal part of the gun firmly to the side of a grounded metal pail and use the lowest possible fluid pressure during flushing.

IMPORTANT

United States Government safety standards have been adopted under the Occupational Safety and Health Act. These standards – particularly the General Standards, Part 1910, and the Construction Standards, Part 1926 – should be consulted.

AVERTISSEMENT

La pulvérisation à haute pression peut causer des blessures très graves.
Réservé exclusivement à l'usage professionnel. Observer toutes les consignes de sécurité.
Bien lire et bien comprendre tous les manuels d'instructions avant d'utiliser le matériel.

RISQUES D'INJECTION

Consignes générales de sécurité

Cet appareil produit un fluide à très haute pression. Le fluide pulvérisé par le pistolet ou le fluide sous pression provenant de fuites ou de ruptures peut pénétrer sous la peau ou à l'intérieur du corps et entraîner des blessures très graves, voir même une amputation. Même sans être sous pression, le fluide éclaboussant ou entrant dans les yeux peut aussi entraîner des blessures graves.

NE JAMAIS pointer le pistolet vers quelqu'un ou vers une partie quelconque du corps. NE JAMAIS mettre la main ou les doigts sur l'ajutage du pulvérisateur. NE JAMAIS essayer de "refouler" la peinture. Cet appareil N'est PAS un compresseur pneumatique.

TOUJOURS garder la protection de l'ajutage en place sur le pistolet pendant la pulvérisation.

TOUJOURS observer la **Marche à Suivre pour Détendre la Pression** donnée plus loin, avant de nettoyer ou d'enlever l'ajutage du pulvérisateur, ou d'effectuer un travail quelconque sur une partie de l'appareil.

NE JAMAIS essayer d'arrêter ou de dévier les fuites avec la main ou le corps.

Avant chaque utilisation, bien s'assurer que les dispositifs de sécurité fonctionnent correctement.

Soins médicaux

En cas de pénétration de fluide sous la peau: **DEMANDER IMMEDIATEMENT DES SOINS MEDICAUX D'URGENCE.** NE PAS SOIGNER CETTE BLESSURE COMME UNE SIMPLE COUPURE.

avis au medecin: La pénétration des fluides sous la peau est un traumatisme. **Il est important de traiter chirurgicalement cette blessure immédiatement.** Ne pas retarder le traitement pour effectuer des recherches sur la toxicité. Certains revêtements exotiques sont dangereusement toxiques quand ils sont injectés directement dans le sang. Il est souhaitable de consulter un chirurgien esthétique ou un chirurgien spécialisé dans la reconstruction des mains.

Dispositifs de sécurité du pistolet

Avant chaque utilisation, bien s'assurer que tous les dispositifs de sécurité du pistolet fonctionnent correctement. Ne pas enlever ni modifier une partie quelconque du pistolet; ceci risquerait d'entraîner un mauvais fonctionnement et des blessures graves.

Verrou de sécurité

A chaque fois que l'on s'arrête de pulvériser, même s'il s'agit d'un court instant, toujours mettre le verrou de sécurité du pistolet sur la position "fermée" ou "sécurité" ("safe") pour empêcher le pistolet de fonctionner. Si le verrou de sécurité n'est pas mis, le pistolet peut se déclencher accidentellement. Voir la figure, ci-dessus.

Diffuser

Le diffuseur du pistolet sert à diviser le jet et à réduire les risques d'injection accidentelle quand l'ajutage n'est pas en place. Vérifier le fonctionnement du diffuseur régulièrement. Pour cette vérification, détendre la pression en observant la **Marche à Suivre pour Détendre la Pression** donnée plus loin puis enlever l'ajutage du pulvérisateur. Pointer le pistolet dans un seau en métal, en le maintenant fermement contre le seau. Puis, en utilisant la pression la plus faible possible, appuyer sur la gachette du pistolet. Si le fluide projette *n'est pas* diffusé sous forme de jet irrégulier, remplacer immédiatement le diffuseur.

Protection de l'ajutage

TOUJOURS maintenir la protection de l'ajutage en place sur le pistolet du pulvérisateur pendant la pulvérisation. La protection de l'ajutage attire l'attention sur les risques d'injection et contribue à réduire, mais n'évite pas le risque, que les doigts ou une partie quelconque du corps ne passent accidentellement à proximité immédiate de l'ajutage du pulvérisateur.

Consignes de sécurité concernant l'ajutage du pulvérisateur

Faire extrêmement attention à l'occasion du nettoyage ou du remplacement des ajutages du pulvérisateur. Si l'ajutage se bouche pendant la pulvérisation, mettre immédiatement le verrou de sécurité du pistolet. TOUJOURS bien observer la **Marche à Suivre pour Détendre la Pression** puis enlever l'ajutage du pulvérisateur pour le nettoyer.

NE JAMAIS essayer ce qui s'est accumulé autour de l'ajutage du pulvérisateur avant que la pression ne soit complètement tombée et que le verrou de sécurité du pistolet ne soit engagé.

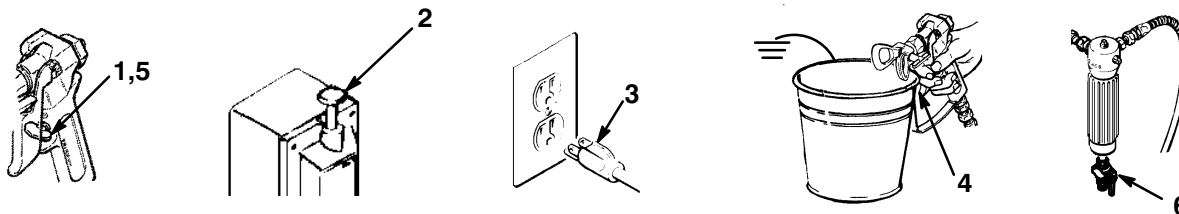
Marche à Suivre pour Détendre la Pression

Pour réduire les risques de blessures graves, y compris les blessures par injection de fluide ou celles causées par des éclaboussures dans les yeux ou sur la peau, des pièces en mouvement ou par électrocution, toujours bien observer cette marche à suivre à chaque fois que l'on arrête le pulvérisateur, à l'occasion de la vérification, du réglage ou du nettoyage du système ou lors du changement des ajutages.

1. Engager le verrou de sécurité du pistolet.
2. Basculer l'interrupteur de commande de pression sur ARRÊT (OFF).
3. Débrancher le cordon d'alimentation.

4. Désengager le verrou de sécurité du pistolet. Tout en maintenant une partie métallique du pistolet fermement appuyée contre le côté d'un seau en métal, actionner le pistolet pour libérer la pression.
5. Engager le verrou de sécurité du pistolet.
6. Ouvrir la soupape de sécurité et la laisser ouverte jusqu'à ce que l'on soit prêt à se servir de nouveau du pulvérisateur. Débrancher le fil de la bougie.

Si l'on soupçonne que le tuyau ou l'ajutage du est complètement bouché, ou que la pression n'a pas été complètement libérée après avoir procédé aux opérations ci-dessus, desserrer très LENTEMENT un raccord du bout du tuyau ou l'écrou de retenue de la protection de l'ajutage et libérer progressivement la pression.



RISQUES EN CAS DE MAUVAISE UTILISATION DU MATERIEL

Consignes générales de sécurité

Toute utilisation anormale de l'appareil de pulvérisation ou des accessoires comme, par exemple, la mise sous une pression excessive, les modifications de pièces, l'utilisation de produits chimiques et de matières incompatibles et l'utilisation de pièces usées ou abîmées peut causer des dégâts à l'appareil ou des ruptures de pièces et entraîner une injection de liquide ou d'autres blessures sérieuses, un incendie, une explosion ou d'autres dégâts.

NE JAMAIS alterer ou modifier une pièce de cet appareil; ceci risquerait d'entraîner son mauvais fonctionnement.

Vérifier régulièrement tout l'appareil de pulvérisation et ses équipements et réparer ou remplacer immédiatement les pièces usées ou abîmées.

MESURES DE SÉCURITÉ CONCERNANT LES TUYAUX FLEXIBLES

Le fluide à haute pression circulant dans les tuyaux peut être très dangereux. En cas de fuite sur le tuyau, de fissure, déchirure ou rupture à la suite de l'usure, de dégâts ou d'une mauvaise utilisation, les projections de fluide haute pression qui en proviennent peuvent entraîner des blessures graves par pénétration sous la peau ou par contact, ainsi que des dégâts matériels.

TOUS LES TUYAUX FLEXIBLES DOIVENT AVOIR DES RESORTS SPIRALE DE PROTECTION AUX BOUTS!

Les spirales de protection contribuent à éviter la formation de pliures, de boucles ou de nœuds sur les tuyaux qui pourraient entraîner la rupture du tuyau à l'endroit du raccord ou à son voisinage.

SERRER FERMEMENT tous les raccords avant chaque utilisation. Le fluide sous pression peut faire sauter un raccord desserré ou produire un jet à haute pression s'échappant par le raccord.

NE JAMAIS utiliser un tuyau endommagé. NE PAS essayer de refaire le raccord d'un tuyau haute pression ni de réparer le tuyau avec du ruban adhésif ou par tout autre moyen. Un tuyau réparé ne peut pas résister au fluide sous pression.

RISQUES D'INCENDIE OU D'EXPLOSION

De l'électricité statique est produite par le passage du fluide à grande vitesse dans la pompe et dans les tuyaux. Si toutes les pièces de l'appareil de pulvérisation ne sont pas convenablement reliées à la masse ou à la terre, des étincelles peuvent se produire et l'appareil risque d'être dangereux. Des étincelles peuvent également se produire à l'occasion du branchement ou du débranchement du cordon d'alimentation. Les étincelles sont suffisantes pour allumer les vapeurs de solvants et le fluide pulvérisé, les fines particules de poussière ainsi que d'autres substances inflammables, quand on pulvérise à l'intérieur ou à l'extérieur, et elles peuvent causer un incendie ou une explosion, ainsi que des blessures graves et des dégâts matériels.

Toujours brancher le pulvérisateur dans une prise se trouvant à au moins 6 m (20 pieds) de l'appareil et de l'endroit où se fait la pulvérisation. Ne pas brancher ou débrancher un cordon d'alimentation quel qu'il soit dans la zone où se fait la pulvérisation quand il y a le moindre risque que des vapeurs encore présentes dans l'air prennent feu.

S'il se produit des étincelles d'électricité statique, ou si vous ressentez la moindre décharge, ARRÊTEZ IMMÉDIATEMENT LA PULVÉRISATION. Vérifiez que le système entier est bien mis à la terre. Ne vous servez pas du système avant que le problème soit identifié et corrigé.

Mise à la terre ou à la masse

Pour réduire les risques de production d'étincelles d'électricité statique, le pulvérisateur et tous les équipements utilisés ou se trouvant dans la zone de pulvérisation doivent être reliés à la terre ou à la masse. Pour connaître le détail des instructions de mise à la terre dans la région et le type particulier d'équipement, CONSULTER le code ou les réglementations électriques locales. S'ASSURER que tous les équipements de pulvérisation suivants sont bien reliés à la terre:

1. *Pulvérisateur*: Brancher le cordon d'alimentation ou la rallonge qui doivent être équipés d'une prise à 3 fiches en bon état, dans une prise de courant convenablement mise à la terre. Ne pas utiliser d'adaptateur. Toutes les rallonges doivent avoir 3 fils.

Pression

Ce pulvérisateur peut produire une **PRESSION MAXIMUM DE TRAVAIL** 210 bar (3000 lb/po2). S'assurer que tous les éléments du pulvérisateur et ses accessoires sont conçus pour résister à la pression maximum de travail de ce pulvérisateur. NE PAS dépasser la pression maximum de travail d'aucun des éléments ou accessoires utilisés avec cet appareil.

Compatibilité chimique des corps

BIEN S'ASSURER que tous les corps des solvants utilisés sont chimiquement compatibles avec les parties mouillées indiquées dans les **Technical Data**, à page 28. Toujours lire soigneusement les documents et brochures du fabricant des fluides et solvants utilisés avant de s'en servir dans ce pulvérisateur.

MANIPULER LES TUYAUX AVEC PRECAUTION ET CHOISIR SOIGNEUSEMENT LEUR CHEMIN. Ne pas déplacer le fluide en tirant sur le tuyau. Ne pas utiliser de fluides ou de solvants qui ne sont pas compatibles avec l'enveloppe intérieure ou extérieure du tuyau. NE PAS exposer le tuyau à des températures supérieures à 82° C (180° F) ou inférieures à -40° C (-40° F).

Continuité de la mise à la terre des tuyaux

Une bonne continuité de la mise à la terre des tuyaux est essentielle pour maintenir la mise à la terre de l'ensemble de vaporisation. Vérifiez la résistance électrique de vos tuyaux à fluides et à air, au moins une fois par semaine. Si votre tuyau ne comporte pas d'étiquette qui précise la résistance électrique maximum, prenez contact avec le fournisseur de tuyaux ou la fabricant pour avoir les limites de résistance maximum. Utilisez un mètre de résistance de la gamme appropriée pour votre tuyau et vérifiez la résistance. Si celle-ci dépasse les limites recommandées, remplacez le tuyau immédiatement. Un tuyau sans mise à la terre ou avec une mise à la terre incorrecte peut entraîner des risques pour votre système. Lisez aussi **LES RISQUES D'INCENDIE OU D'EXPLOSION** ci-dessus.

2. *Tuyaux flexibles*: Afin d'assurer la continuité de la mise à la terre, n'utiliser que des tuyaux comportant une mise à la terre et ayant une longueur maximum combinée de 150 m (1500 pieds). Se reporter également au paragraphe **Continuité du circuit de mise à la terre des tuyaux**.
3. *Pistolet*: Réaliser la mise à la terre en le raccordant à un tuyau flexible et à un pulvérisateur déjà convenablement reliés à la terre.
4. *Récipient d'alimentation*: observer le code ou les réglementations locales.
5. *Objets, matériel ou surfaces recevant la pulvérisation*: observer le code ou les réglementations locales.
6. *Tous les seaux de solvants* utilisés pour le rinçage: observer le code ou les réglementations locales. N'utiliser que des seaux métalliques conducteurs de l'électricité. Ne pas mettre le seau sur une surface non conductrice comme sur du papier ou du carton car cela interromprait la continuité de la mise à la terre.
7. *Pour conserver la continuité de la mise à la terre quand on rince le matériel ou quand on libère la pression*, toujours maintenir une partie métallique du pistolet fermement appuyée contre le côté d'un seau en métal puis appuyer sur la détente du pistolet.

Mesures de sécurité concernant le Rinçage

Pour réduire les risques de blessures par pénétration de la peau et les risques dus aux étincelles d'électricité statique ou aux éclaboussures, observer la marche à suivre pour le rinçage donnée à la page 9 de ce manuel. Observer la "Marche à Suivre pour Détendre la Pression" donnée à la page 4 en *enlever l'ajutage du pulvérisateur avant le rinçage*. Maintenir une partie métallique du pistolet fermement appuyée contre le côté d'un seau en métal et utiliser la pression la plus faible possible pendant le rinçage.

ADVERTENCIA

EL ROCIADO a ALTA PRESIÓN PUEDE CAUSAR GRAVES LESIONES. SOLO PARA USO PROFESIONAL. RESPETE LOS AVISOS DE ADVERTENCIA.

Lea y entienda todo el manual de instrucciones antes de manejar el equipo.

PELIGRO DE INYECCIÓN DE FLUIDO

Seguridad general

Este equipo genera un fluido a una presión muy alta. El rociado de la pistola, los escapes de fluido o roturas de los componentes pueden inyectar fluido en la piel y el cuerpo y causar lesiones extremadamente graves, incluyendo a veces la necesidad de amputación. También, el fluido inyectado o salpicado en los ojos puede causar graves daños.

NUNCA apuntar la pistola hacia alguien o alguna parte del cuerpo. NUNCA colocar la mano o los dedos encima de la boquilla. NUNCA tratar de "hacer retornar la pintura"; este NO es un sistema de rociado de aire.

SIEMPRE tener colocado el protector de la boquilla en la pistola mientras se está pulverizando.

SIEMPRE seguir el procedimiento de descarga de presión, dado más abajo, antes de limpiar o sacar la boquilla o de dar servicio a cualquier equipo del sistema.

NUNCA tratar de parar o desviar los escapes con la mano o el cuerpo.

Asegurar que todos los aparatos de seguridad del equipo están funcionando bien antes de cada uso.

Tratamiento médico

Si pareciera que un poco de fluido penetró la piel, conseguir **TRATAMIENTO médico DE URGENCIA DE INMEDIATO. NO TRATAR LA HERIDA COMO UN SIMPLE CORTE.** Decir al médico exactamente cual fluido fue.

Aviso al médico: Si se llega a inyectar este fluido en la piel se causa una lesión traumática. **Es importante tratar quirúrgicamente la lesión a la brevedad posible.** No demorar el tratamiento para investigar la toxicidad. La toxicidad es algo de suma importancia en algunas pinturas exóticas cuando se inyectan directamente al torrente sanguíneo. Será conveniente consultar a un especialista en cirugía plástica o reconstructiva de las manos.

Aparatos de seguridad de la pistola pulverizadora

Asegurar que todos los aparatos protectores de la pistola están funcionando bien antes de cada uso. No sacar ni modificar ninguna pieza de la pistola pues podría causar el malfuncionamiento de la misma con las consiguientes lesiones personales.

Pestillo de seguridad

Cada vez que se deje de pulverizar, aunque sea por un breve momento, siempre colocar el pestillo de seguridad en la posición "cerrada" lo que deja la pistola inoperante. El no hacerlo puede llevar al disparo imprevisto de la pistola.

Difusor

El difusor de la pistola dispersa el chorro pulverizado y reduce el riesgo de inyección cuando no está instalada la boquilla.

Revisar con regularidad el funcionamiento del difusor. Seguir el **procedimiento de descarga de presión**, dado más abajo, y después sacar la boquilla. Apuntar la pistola a un balde metálico, sosteniéndola bien firme contra el. Utilizando la presión más bajo posible, disparar la pistola. Si el fluido emitido no sale disperso en un chorro irregular, reemplazar de inmediato el difusor.

Protector de la boquilla

SIEMPRE tener el protector de la boquilla colocado en la pistola mientras se está pulverizando. Este protector llama la atención contra el peligro de inyección y ayuda a reducir, pero no evita, la colocación accidental de los dedos o cualquier otra parte del cuerpo cerca de la boquilla.

Seguridad de la boquilla pulverizadora

Tener mucho cuidado al limpiar o cambiar las boquillas. Si llega a obstruirse mientras está pulverizando, enganchar el pestillo de la pistola de inmediato. SIEMPRE seguir el **procedimiento de descarga de presión** y después sacar la boquilla para limpiarla.

NUNCA limpiar la acumulación de pintura alrededor de la boquilla antes de que se haya descargado por completo la presión y el pestillo este enganchado.

Procedimiento de descarga de presión

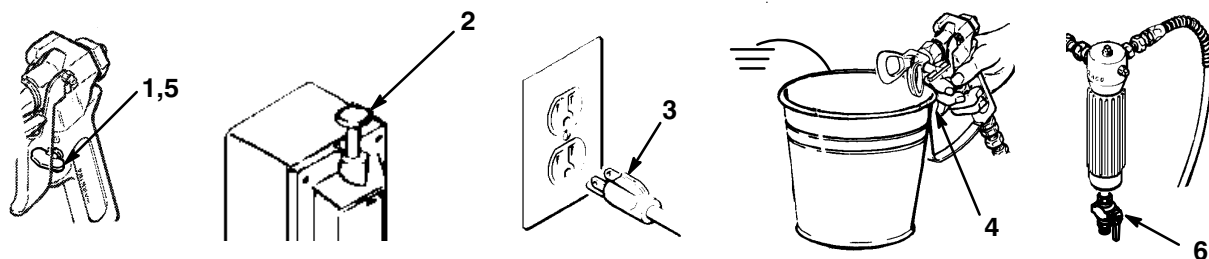
Para reducir el riesgo de sufrir graves lesiones corporales, incluyendo inyección o lesiones causadas por piezas en movimiento o choque eléctrico, siempre seguir este procedimiento al apagar la máquina pulverizadora, al revisar o dar servicio a cualquier parte del sistema de pulverización, al instalar, limpiar o cambiar las boquillas, y cada vez que se deja de pulverizar.

1. Enganchar el pestillo de la pistola.
2. Mover el interruptor eléctrico (ON/OFF) a la posición OFF (apagado).
3. Desenchufar el cordón eléctrico.
4. Desenganchar el pestillo de la pistola. Sujetar una parte metálica de la pistola bien firme contra un balde de metal, y disparar la pistola para descargar la presión.

5. Enganchar el pestillo de la pistola.

6. Abrir la válvula de presión y tener listo un recipiente para recibir la pintura. Dejar la válvula de alivio de presión abierta hasta que se este nuevamente listo para pulverizar.

Si se sospecha que la boquilla o la manguera está completamente obstruida, o que no se ha descargado por completo la presión después de haber seguido el procedimiento anterior, aflojar MUY LENTAMENTE la tuerca de retención del protector de la boquilla o acoplamiento de la punta de la manguera y descargar gradualmente la presión, después, aflojarlo por completo. Luego, despejar la boquilla o la manguera.



PELIGRO POR MAL USO DEL EQUIPO

Seguridad general

Cualquier mal uso del equipo pulverizador o los accesorios, tal como sobre presurización, modificación de piezas, uso de materiales y productos químicos incompatibles, o utilización de piezas dañadas o desgastadas, pueden hacer que se rompan y causen la inyección de fluido u otras lesiones corporales graves, incendio, explosión o daño a la propiedad.

NUNCA alterar o modificar ninguna pieza de este equipo; el hacerlo podría causar una avería.

REVISAR con regularidad el equipo pulverizador y reparar o reemplazar de inmediato las piezas dañadas o desgastadas.

SEGURIDAD EN EL USO DE LAS MANGUERAS

El fluido que escapa a alta presión por las mangueras puede ser muy peligroso. Si en la manguera se desarrolla un escape, una rotura o rajadura debido a cualquier tipo de desgaste, daño o maltrato, el chorro a alta presión emitido por allí puede causar una lesión por inyección u otras lesiones corporales graves o daños a la propiedad.

¡TODAS LAS MANGUERAS PARA FLUIDOS TIENEN QUE TENER GUARDAS DE RESORTE EN AMBOS EXTREMOS! Estas protegen las mangueras contra dobleces o retorceduras en los acoplamientos o cerca de ellos, los que podrían traducirse en roturas de la manguera.

Antes de usarlas, APRETAR bien firmes todas las conexiones. El fluido a alta presión puede desalojar un acoplamiento suelto o dejar que por el escape un chorro a alta presión.

NUNCA usar una manguera que está dañada. Siempre, revisarla en busca de cortaduras, escapes, abrasión, cubierta abultada, o acoplamientos sueltos o dañados. Si llegara a encontrarse cualquiera de estas condiciones, reemplazar de inmediato la manguera. NO intentar racoplar una manguera de alta presión o enmendarla con cinta adhesiva u otro material similar. Una manguera que ha sido remendada no aguante el fluido a alta presión.

PELIGRO DE INCENDIO O EXPLOSION

El flujo a alta velocidad del fluido al pasar por la bomba y manguera crea electricidad estática. Si todas las partes del equipo pulverizador no tienen buena tierra, pueden ocurrir chispas, convirtiendo al sistema en algo peligroso. También, pueden producirse chispas al enchufar o desenchufar el cordón eléctrico o al usar un motor de gasolina. Estas chispas pueden inflamar los vapores de los solventes y el chorro de fluido pulverizado, partículas de polvo y otras sustancias inflamables, sea al aire libre o bajo techo, lo que podría causar una explosión o incendio y graves lesiones corporales y daños a la propiedad. Enchufar siempre la pulverizadora a un tomacorriente que se encuentre a por lo menos 6 m (20 pies) de la máquina y del área que se va a rociar. No enchufar o desenchufar ningún cordón eléctrico en el lugar donde se está rociando cuando todavía exista la posibilidad de que queden vapores inflamables en el aire.

Si ocurre una chispa de electricidad estática o incluso un ligero choque eléctrico mientras se usa el equipo, DEJAR DE PULVERIZAR DE INMEDIATO. Revisar todo el sistema en busca de una tierra apropiada. No usar de nuevo el sistema hasta haber identificado y solucionado el problema.

Peusta a tierra

Para reducir el riesgo de chispas estáticas, conectar a tierra la pulverizadora y todo el otro equipo de pulverizar que se use o se encuentre en el lugar que se va a rociar. CONSULTAR el código eléctrico de la localidad para las instrucciones sobre las conexiones a tierra exigidas para la zona y tipo de equipo. ASEGURAR de conectar a tierra todo este equipo pulverizador:

1. *Pulverizadora:* enchufar el cordón eléctrico, o cable extensor, cada uno un enchuf de tres patas en buen estado, a un tomacorriente con puesta a tierra apropiada. No usar un adaptador. Todos los cables extensores tienen que tener tres hilos.

Presión del sistema

está pulverizadora puede desarrollar 210 barías (3000 psi) de presión DE TRABAJO MÁXIMA. Asegurar que todo el equipo pulverizador y sus accesorios tienen la capacidad para aguantar la presión máxima de trabajo de esta pulverizadora. NO exceder la presión máxima de trabajo de ningún componente o accesorio de este sistema.

Compatibilidad de fluido

Siempre leer las instrucciones del fabricante del fluido y solvente antes de usarlos en esta pulverizadora, dadas en la página 28.

Siempre usar gafas, guantes, vestimentas protectora y un respiradero, tal como recomiendan los fabricantes del fluido y del solvente.

MANEJAR Y PASAR CUIDADOSAMENTE LAS MANGUERAS. No tirar de las mangueras para mover el equipo. No usar fluidos o solventes que sean incompatibles con el tubo interno y la cubierta de la manguera. NO exponer las mangueras a temperaturas sobre 82 ° C (180 ° F) o bajo -40 ° C (-40 ° F).

Continuidad del circuito de puesta a tierra de la manguera

La continuidad del circuito de puesta a tierra apropiado es esencial para mantener conectado a tierra el sistema pulverizador. Es indispensable revisar la resistencia eléctrica máxima de las mangueras de aire y de fluido por lo menos una vez a la semana. Si la manguera no tiene una etiqueta en la cual se especifica la resistencia eléctrica, ponerse en contacto con el proveedor o fabricante de la manguera para la información sobre los límites de resistencia. Usar un metro de resistencia en la gama apropiada para comprobar la resistencia; si excede los límites recomendados, reemplazarla de inmediato. Es muy riesgoso tener una manguera sin puesta a tierra o con la puesta a tierra en malas condiciones. Leer también la información sobre **RIESGO DE INCENDIO O EXPLOSION**, más arriba.

2. *Mangueras para fluidos:* usar solamente mangueras con puesta a tierra de una longitud combinada de 150 m (500 pies), para asegurar buena continuidad a tierra. Referirse también al párrafo sobre **continuidad a tierra de la manguera**.
3. *Pistola:* hace la puesta a tierra conectándola a una manguera de fluido y pulverizadora bien conectadas a tierra.
4. *Suministrar un recipiente:* de acuerdo al código de la localidad.
5. *Objeto que se está rociando:* de conformidad con el código local.
6. *Todos los baldes de solvente* usados durante el lavado, de conformidad con el código local. Usar *solamente baldes de metal*, que sean conductivos. no colocar el balde en una superficie no conductiva, como papel o cartón, que interumpe la continuidad a tierra.
7. *Para mantener la continuidad a tierra durante el lavado o descarga de presión,* siempre apoyar una parte metálica de la pistola bien firme contra el costado del *balde de metal*, después apretar el gatillo.

Seguridad durante el lavado

Para reducir el riesgo de que se inyecte o salpique fluido en la piel, o que ocurra una descarga de electricidad estática, siempre seguir las INSTRUCCIONES PARA EL LAVADO, dadas en la página 9. Seguir el **procedimiento de descarga de presión** en la página 6, y quitar la *boquilla rociadora antes de lavar*. Apoyar una parte metálica de la pistola bien firme contra el costado de un *balde de metal* y usar la presión más baja posible de fluido durante el lavado.

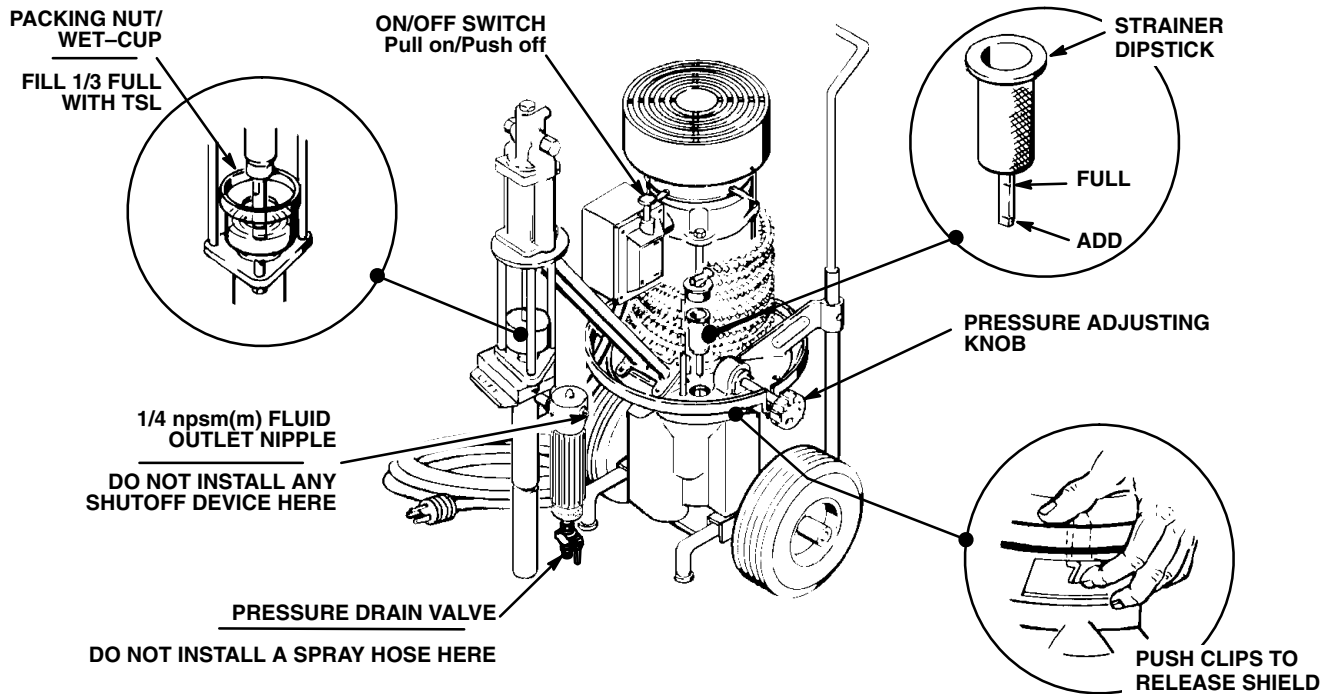


Fig 1

- 1 **Check the Hydraulic Fluid** (See Fig 1.) Push in on the two spring clips and lift the shield off the sprayer.

Remove the expander plug from the sump fill hole and lift the strainer/dipstick out of the hole. Using a clean, lint-free cloth, wipe the dipstick clean, replace it in the sump hole, and then remove it and check the fluid level. The fluid level should be between the ADD and FULL marks on the dipstick.

If the fluid level is at or below the ADD mark, replace the strainer/dipstick in the sump hole. Add approved hydraulic fluid (see ACCESSORIES) through the hole to bring the level to the FULL mark. One and three-fourths pints will raise the level from ADD to FULL.

WARNING

If you are supplying your own hoses and spray gun, be sure the hoses are electrically conductive, that the gun has a tip guard, and that each part is rated for at least *3000 psi (210 bar) Working Pressure*. This is to reduce the risk of serious bodily injury caused by static sparking, fluid injection or over-pressurization and rupture of the hose or gun.

- 2 **Connect the gun, 3 ft. hose and 50 ft. hose.** Don't use thread sealant, and don't install the spray tip yet.
- 3 **Fill the packing nut/wet-cup** 1/3 full with Graco Throat Seal Liquid (TSL), supplied. To access the cup, push in on the two spring clips and remove the sprayer shield. See Fig 1.

SETUP

WARNING

Proper electrical grounding is essential to reduce the risk of fire or explosion which can result in serious bodily injury and property damage. See the warning section **FIRE OR EXPLOSION HAZARD** on page 3 for more detailed grounding instructions.

- 4 **Check the electrical service** to be sure it is appropriate for your sprayer's wiring. See the next two paragraphs. Use a properly grounded outlet. Do not remove the grounding prong of the power supply cord. Do not use an adapter. Extension cords must have 3 wires of a minimum 12 gauge size. Long extension cords reduce sprayer performance; use a longer hose rather than a longer extension cord.

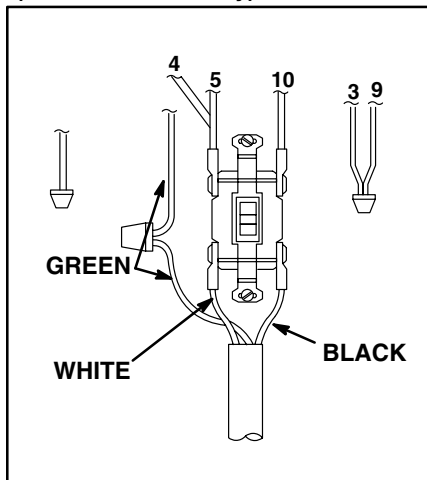
Models 226-433 and 231-004 require 115 Volt, 60 Hz AC, 20 Amp electric service, equipped with a NEMA NO. 5-20P plug. Since the unit draws 20 amps, use it only on a separate circuit with no other loads.

NOTE: A licensed electrician can rewire Models 226-433 and 231-004 for 230 volt service, if necessary. See the wiring diagram in Fig 2.

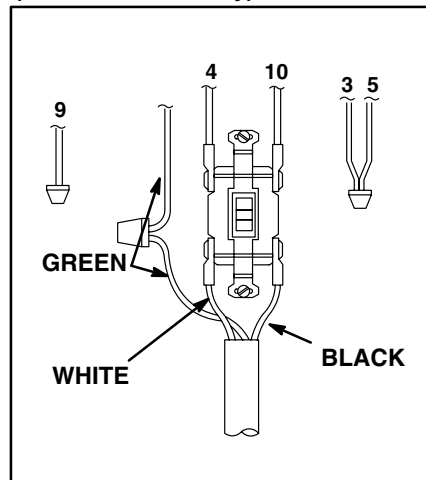
Model 226-432 requires 220 Volt, 50 Hz AC, 15 amp electric service. Have a licensed electrician install a plug conforming to local code.

- 5 **With the ON/OFF switch OFF, plug the cord into a grounded electrical outlet** located at least 20 ft. (6 m) away from the spray area.
- 6 **Flush the pump.** See page 10.
- 7 **Prepare the paint.** Follow the paint manufacturer's recommendations. Remove any paint skin. Stir to dissolve hard pigments. Strain the paint through a fine nylon mesh bag to remove particles that could clog the filter or spray tip. *This is probably the most important step toward trouble-free spray painting.*

**FOR 115V SERVICE
(Model 226-433 only)**



**FOR 230V SERVICE
(Model 226-433 only)**



**FOR 220V SERVICE
(Model 226-432 only)**

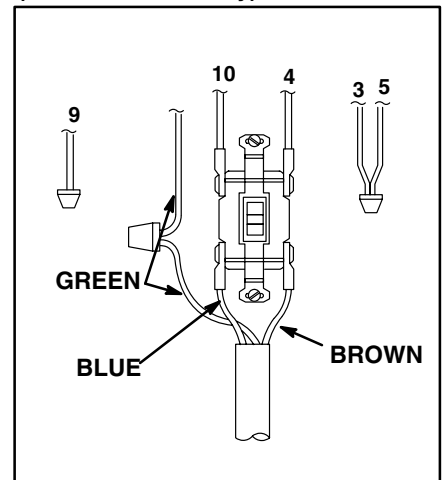


Fig 2

FLUSHING GUIDELINES – WHEN TO FLUSH

1. **New Sprayer.** The sprayer was factory tested in lightweight oil which was left in to protect pump parts.

Before using water-base paint, flush with mineral spirits, then warm, soapy water, and then clean water.

Before using oil-base paint, flush with mineral spirits.

2. **Changing Colors.** Flush with a compatible solvent.
3. **Changing from water-base to oil-base paint.** Flush with warm, soapy water, then mineral spirits.

4. **Changing from oil-base to water-base paint.** Flush with mineral spirits, then warm, soapy water, and then clean water.
5. **Storage.** Flush as indicated below, shut off the sprayer, open the pressure drain valve to relieve pressure and leave it open.

Water-base paint: flush with water, then mineral spirits. Leave the system filled with mineral spirits.

Oil-base paint: flush with mineral spirits.

6. **Startup after storage.** Before using water-base paint, flush out mineral spirits with soapy water and then clean water. When using oil-base paint, flush out the mineral spirits with the paint to be sprayed.

FLUSHING GUIDELINES – HOW TO FLUSH

1. Relieve pressure. See the **Pressure Relief Procedure Warning** on page 11.
2. Remove the filter bowl and screen; see manual 307–273. Clean the screen separately and install the bowl without the screen to flush it. See Fig 3.

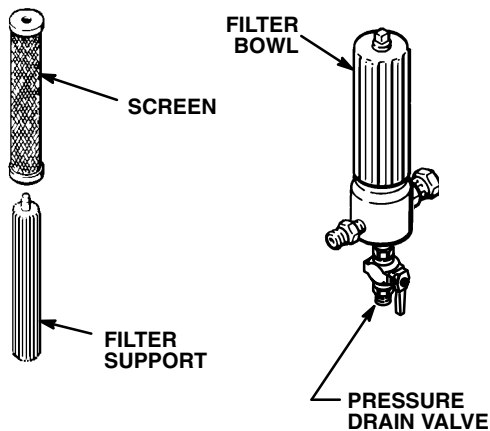


Fig 3

3. Close the pressure drain valve.
4. Pour one-half gallon of compatible solvent into a grounded metal pail. Put the suction tube in the pail.
5. Remove the spray tip from the gun, if it is installed.
6. Turn the pressure adjusting knob all the way counter-clockwise to lower the pressure setting.

WARNING

To reduce the risk of static sparking and splashing when flushing, always remove the spray tip from the gun, and hold a metal part of the gun firmly to the side of grounded metal pail.

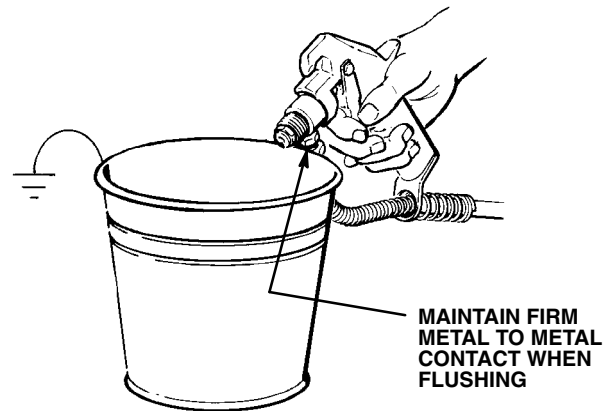


Fig 4

7. Hold a metal part of the gun firmly against a metal waste container. See Fig 4. Hold the trigger open, turn on the sprayer, and slowly increase the pressure just until the sprayer starts. Keep the gun triggered until all air is forced out of the system and the solvent flows freely from the gun. Release the trigger and engage the gun safety latch.

NOTE: If the pump is hard to prime, open the drain valve. When fluid comes from the valve, close it. Proceed as in Step 7.

8. Remove the suction tube from the pail. Disengage the gun safety latch and trigger the gun to force solvent from the hose. Do not run the pump dry for more than 30 seconds to avoid damaging the pump packings! Relieve pressure.
9. Remove the suction tube and strainer and clean them separately. Normal flushing does not adequately clean these parts.
10. Leave the pressure drain valve open until you are ready to use the sprayer again. If the screen was removed, unscrew the filter bowl and reinstall the clean screen. Reinstall the bowl, hand tight only.
11. If you flushed with mineral spirits and are going to use a water-base paint, flush with soapy water and then clean water. Relieve pressure.

WARNING

To reduce the risk of serious bodily injury, fluid injection, splashing in the eyes or on the skin, or injury from moving parts, always follow this procedure whenever you shut off the sprayer, when checking or servicing any part of the spray system, when installing, cleaning or changing spray tips, and whenever you stop spraying.

- 1 Engage the gun safety latch.
- 2 Turn the ON/OFF switch to OFF.
- 3 Unplug the power supply cord.
- 4 Disengage the gun safety latch. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
- 5 Engage the gun safety latch.
- 6 Open the pressure drain valve, having a container ready to catch the drainage. Leave the valve open until you are ready to spray again.

If you suspect that the spray tip or hose is completely clogged or that pressure has not been fully relieved after following the steps above, VERY SLOWLY loosen the tip guard retaining nut or hose end coupling and relieve pressure gradually, and then loosen the part completely. Clear the tip or hose obstruction.

Startup

Always use this procedure to help ensure the sprayer is ready to operate and that you start it safely.

- 1 **For a first time startup**, flush the sprayer. See page 10.
- 2 **Close the pressure drain valve.**
- 3 **Don't install the spray tip until the pump is primed!**
- 4 **Put the suction tube into the paint container.**
- 5 **Lower the pressure setting** by turning the pressure adjusting knob all the way counterclockwise.
- 6 **Disengage the gun safety latch.**

CAUTION

Do not run the sprayer dry for more than 30 seconds to avoid damaging the pump packings.

- 7 **To prime the pump**, hold a metal part of the gun firmly against a grounded metal waste container. See Fig 5. Squeeze the trigger and hold it open, turn the ON/OFF switch to ON, and slowly increase the pressure setting until the sprayer starts. Keep the gun triggered until all air is forced out of the system and the paint flows freely from the gun. Release the trigger and engage the gun safety latch.

NOTE: If the pump is hard to prime, place a container under the pressure drain valve and open it. When fluid comes from the valve, close it. Proceed as in Steps 6 and 7.

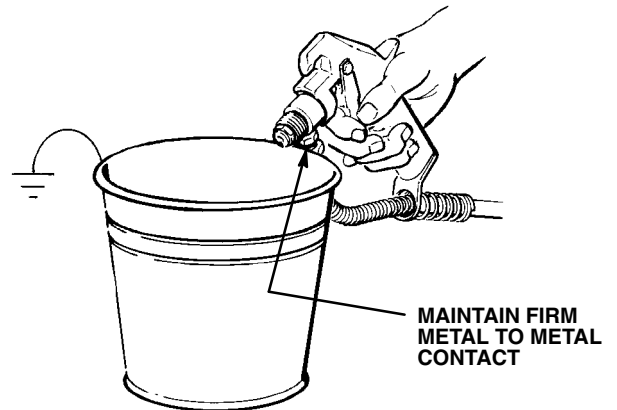


Fig 5

- 8 **Check all fluid connections for leaks.** If any leaks are found, relieve pressure before tightening the connections.
- 9 **Install the spray tip and tip guard.** Relieve pressure. Engage the gun safety latch. Install the spray tip. If you are using the RAC IV tip guard, refer to manual 307-848 for installation instructions.
- 10 **Adjust the pressure.**
 - a. Turn the pressure adjusting knob clockwise just until spray from the gun is completely atomized. To avoid excessive overspray and fogging, and to decrease tip wear and extend the life of the sprayer, always use the lowest possible pressure needed to get the desired results.
 - b. If more coverage is needed, use a larger tip rather than increasing the pressure.
 - c. Test the spray pattern. To adjust the direction of the spray pattern: engage the gun safety latch, loosen the retaining nut, position the tip guard horizontally for a horizontal pattern or vertically for a vertical pattern and tighten the retaining nut.

Cleaning a Clogged Tip

WARNING

To reduce the risk of serious bodily injury from from fluid injection:

DO NOT hold a hand, body , or rag in front of the spray tip when cleaning or checking it. Always point the gun toward the ground or into a waste container when checking to see if the tip is clear.

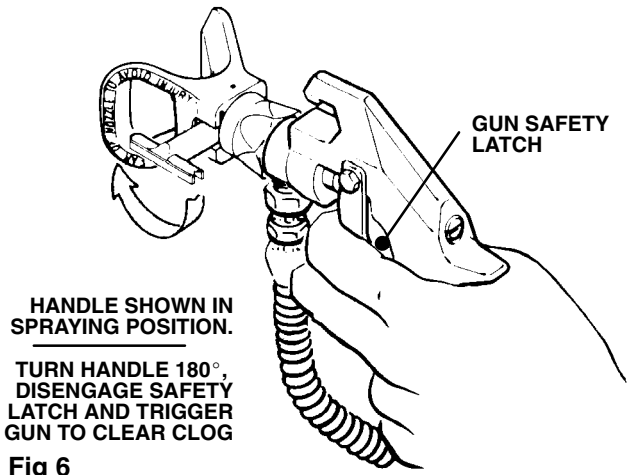
DO NOT try to “blow back” paint; this is NOT an air spray system.

If you are using a Reverse-A-Clean (RAC) spray tip:

- 1 If the spray tip does clog, release the gun trigger, engage the gun safety latch, and rotate the RAC IV handle 180°. See Fig 6.
- 2 Disengage the gun safety latch and trigger the gun into a pail. Engage the gun safety latch again.
- 3 Return the handle to the original position, disengage the gun safety latch, and resume spraying.
- 4 If the tip is still clogged, engage the gun safety latch, shut off and unplug the sprayer, and open the pressure drain valve to relieve pressure. Clean the spray tip as shown in manual 307–848, supplied with the RAC IV.

If you are not using a reversing spray tip:

- 1 VERY SLOWLY loosen the tip guard retaining nut or a hose end coupling and relieve pressure gradually, then loosen the part completely. Clear the tip or hose obstruction, and then reassembly.
- 2 If the tip is still clogged, engage the gun safety latch, shutoff and unplug the sprayer , and open the drain valve to relieve pressure. Remove the spray tip and clean it.



MAINTENANCE

- 1 **Check the packing nut/wet-cup daily.** Relieve the pressure. Keep the packing nut/wet-cup 1/3 full with TSL at all times to help prevent fluid buildup on the piston rod and premature wear of packings. Tighten the packing nut just enough to stop leakage. Overtightening may cause binding and excessive packing wear. Use a 1/4 inch diameter rod to adjust the nut.
- 2 **Clean the fluid filter often** and whenever the sprayer is stored. First relieve pressure. See manual 307-273 for the cleaning procedure.
- 3 **For very short shutoff periods,** leave the suction tube in the paint, relieve pressure, and clean the spray tip.
- 4 **At the end of each work day , flush the sprayer and relieve pressure.** Leave the pump and hoses filled with mineral spirits to help prevent pump corrosion and freezing. See **FLUSHING GUIDELINES**, page 10.
- 6 **Coil the hose and hang it on the hose rack** when storing it, even for overnight, to help protect the hose from kinking, abrasion, coupling damage, etc.
- 7 **Check the hydraulic fluid level** occasionally. Add fluid as necessary to keep the fluid level between the ADD and FULL marks on the dipstick. See page 9.
- 8 **Change the hydraulic fluid** every 2000 hours of operation or 12 months, whichever comes first. Also clean the hydraulic pump intake filter and replace the disposable filter in the return line. **First**, relieve pressure. then remove the sprayer shield. Refer to **Replacing the Electric Motor** on page 17 to get at the filters. Remove the old hydraulic fluid and clean the sump.
- 9 Periodically, or if the electric motor is overheating, unplug the sprayer , relieve pressure, remove the shield, and clean all paint and dirt from the shield, fan blades, motor and cooling fins.
- 10 To transport the sprayer , empty the wet-cup, or reduce the level of Throat Seal Liquid to 1/3 full or less and stuff a rag into the wet-cup. Load the sprayer as shown in Fig 8. To avoid leakage of hydraulic fluid, never lay the sprayer on its side.

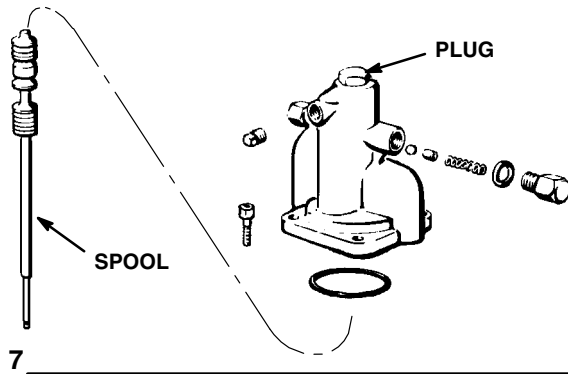


Fig 7

- 5 **If the pump stalls at the top of its stroke,** relieve fluid pressure, remove the plug from the top of the hydraulic motor, and push the spool all the way down. See Fig 7. Replace the plug and restart the sprayer.

NOTE: Relieving pressure whenever you are not using the sprayer helps prevent the pump stalling at the top of its stroke.

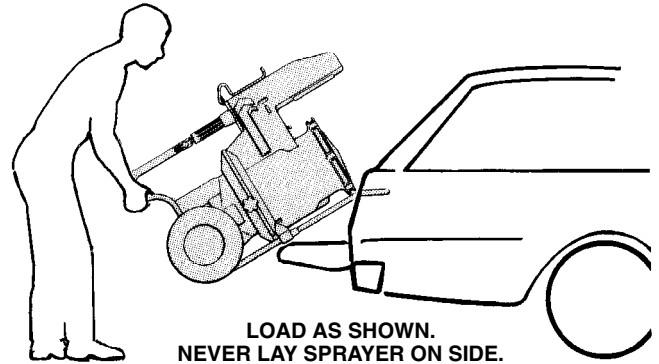


Fig 8

TROUBLESHOOTING GUIDE

WARNING

To reduce the risk of serious bodily injury, including fluid injection, injury from splashing fluid or solvent in the eyes or on the skin, moving parts or electric shock, always follow the **Pressure Relief Procedure** on page 11 whenever you shut off the sprayer, when checking or servicing any part of the spray system, when installing, cleaning or changing spray tips, and whenever you stop spraying.

Check everything in the guide before disassembling the sprayer.

PROBLEM	CAUSE	SOLUTION
Building circuit breaker opens	Check all electrical wiring for damaged insulation.	Replace any damaged wiring.
	Check for other electrical appliances on circuit.	Shutdown other electrical appliances on circuit.

TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Electric motor won't run or stops while spraying	Sprayer unplugged or fuse blown	Check fuse, replace.
	Defective switch or electric motor	Replace switch or motor.
	Overheating switch has opened	Unplug sprayer ¹ .
Electric motor runs but pump won't work	Hydraulic motor stalled	See Step 5 in MAINTENANCE , page 13.
	Pressure setting too low	Increase pressure setting.
	Outlet filter is dirty or plugged	Clean filter. See manual 307–273.
	Tip is plugged	Use Reverse-A-Clean feature to clear clog, or relieve pressure and remove to clean.
	Hydraulic fluid level is low	Check hydraulic fluid level, and add fluid ² .
	Hydraulic pump is worn or damaged	Check pump, replace if needed.
	Hydraulic motor is worn or damaged	Check motor – see manual 306–980; replace if needed.
	Displacement rod is stuck due to dried fluid	Repair pump. See page 16.
Pump runs but output is low	Piston ball not seating	Service. See page 16.
	Piston packings worn or damaged	Replace. See page 16.
	Intake valve ball not seating	Service. See page 16.
Excessive leaking around hydraulic motor piston rod wiper	Worn or damaged piston rod or seal	Replace. See manual 306–980.
Fluid leaks into wet-cup	Throat packings worn or damaged	Replace. See page 16.
Excessive surge at spray gun	Outlet filter is dirty or plugged	Clean. See manual 307–273.
	Tip is plugged	Use Reverse-A-Clean feature to clear, or relieve pressure and remove tip to clean.
	Spray tip is too big or worn	Change tip.
Insufficient fluid atomization	Pressure setting is too low	Increase.
	Outlet filter is dirty or plugged	Clean. See manual 307–273.
	Hydraulic fluid level is low	Check, add fluid ² .
	Hydraulic pump is worn or damaged	Check, replace. See page 19.
	Hydraulic motor is worn or damaged	Check motor – see manual 306–980; replace if needed.
Fluid coating is too thick	Spray tip is too big or it is worn	Change tip.
Tails or fingers in spray pattern	Pressure drop in hose	Use larger hose.
	Fluid supply is low or exhausted	Check, refill.
Spitting from spray gun	Fluid supply is low or exhausted	Check, refill.
Static sparking from spray gun	Sprayer or work piece is not grounded	Stop spraying immediately. Check for proper grounding as described on page 3.
Gun will not spray	Drain valve is open	Close.
	Hose or tip is clogged	Relieve pressure, then clear the clog.

¹ The electric motor has an overheating protection switch which will automatically reset upon cooling. If it opens, unplug the sprayer and let it cool for up to 20 minutes. Try to correct the cause of overheating.

² When adding hydraulic fluid to the sump, use only Graco approved fluid. See **ACCESSORIES** on page 25.

HYDRAULIC MOTOR REMOVAL

WARNING

To reduce the risk of serious bodily injury, including fluid injection, splashing of fluid in the eyes or on the skin, injury from moving parts or electric shock, always follow the **Pressure Relief Procedure Warning** on page 11 before repairing the sprayer.

NOTE: Refer to Fig 9 for this procedure.

1. Remove the shield (119) and hydraulic motor (104).
2. Unscrew the three tie rod nuts (13) and pull the displacement pump (84) down off the rods. This will also pull the hydraulic motor piston down.
3. Remove the cotter pin (15) from the hydraulic motor piston rod. See Fig 9.
4. Rotate the displacement pump to unscrew the displacement rod (103) from the motor piston. Use a wrench on the flats of the displacement rod only.
5. Unscrew the three tie rods (68) and remove the hydraulic motor.
6. See manual 306–980, supplied, for hydraulic motor parts and repair information. When reassembling, be sure the motor and its support are absolutely clean.

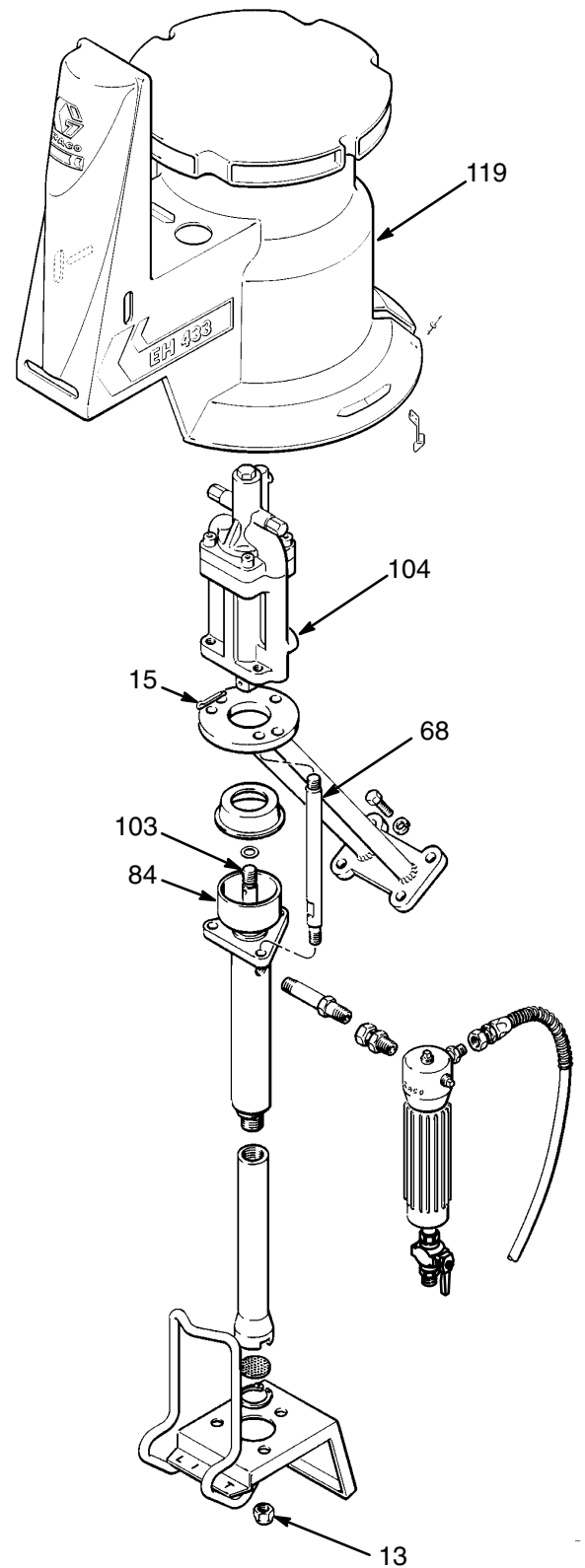


Fig 9

DISPLACEMENT PUMP REPAIR

Disassembly

NOTE: For this procedure, see Fig 10 for Model 208-916 and Fig 11 for Model 221-072

1. Screw the extension tube (80) or suction tube union off the intake valve housing (99). Remove the retaining ring (78) and strainer (79) from the extension tube and put them in a pail of clean solvent. See page 20.
2. Unscrew the intake valve housing (99) and remove all parts. Clean the parts with solvent. Inspect the carbide seat; replace the housing if the seat is worn or damaged. If no further service is needed, reassemble the intake valve.
3. Disconnect the displacement rod (103). See **HYDRAULIC MOTOR REMOVAL**, page 14.
4. Remove the cover (59). Loosen the packing nut (102). Push the displacement rod (103) down and pull it and the piston out the bottom of the housing (101).

NOTE: If the rod (103) is stuck due to dried fluid, remove the packing nut (102). Fill the packing cavity with solvent and let it soak to free the rod.

5. Unscrew the piston stud (100) and remove the packings, glands, etc.
6. Screw the packing nut (102) out of the pump housing (101). Remove the packings, glands, etc.
7. Clean all parts with solvent and inspect them. Replace worn or damaged parts, paying particular attention to the carbide seat on the piston stud.
8. Inspect the outer surface of the displacement rod (103) and the inner surface of the sleeve (90) for scratches or scoring which could damage the packings and cause the pump to leak. To replace a sleeve (90), contact your Graco representative. The new sleeve must be installed with the tapered end down.

Reassembly Notes

1. Repair kits are available for the pumps. Use all the parts in the kit for the best results.

Pump Model 208-916: use kit 208-919. Parts included in this kit are marked with an asterisk, i.e. 85* in the text and drawings. See Fig 10.

Pump Model 221-072: use kit 223-664. Parts included in this kit are marked with a dagger, i.e. 85†, in the text and drawings. See Fig 11.

2. Lubricate all packings before installing them. Make sure the lips of the v-packings are facing against the fluid pressure.

Model 208-916

See Model 221-072 on page 17

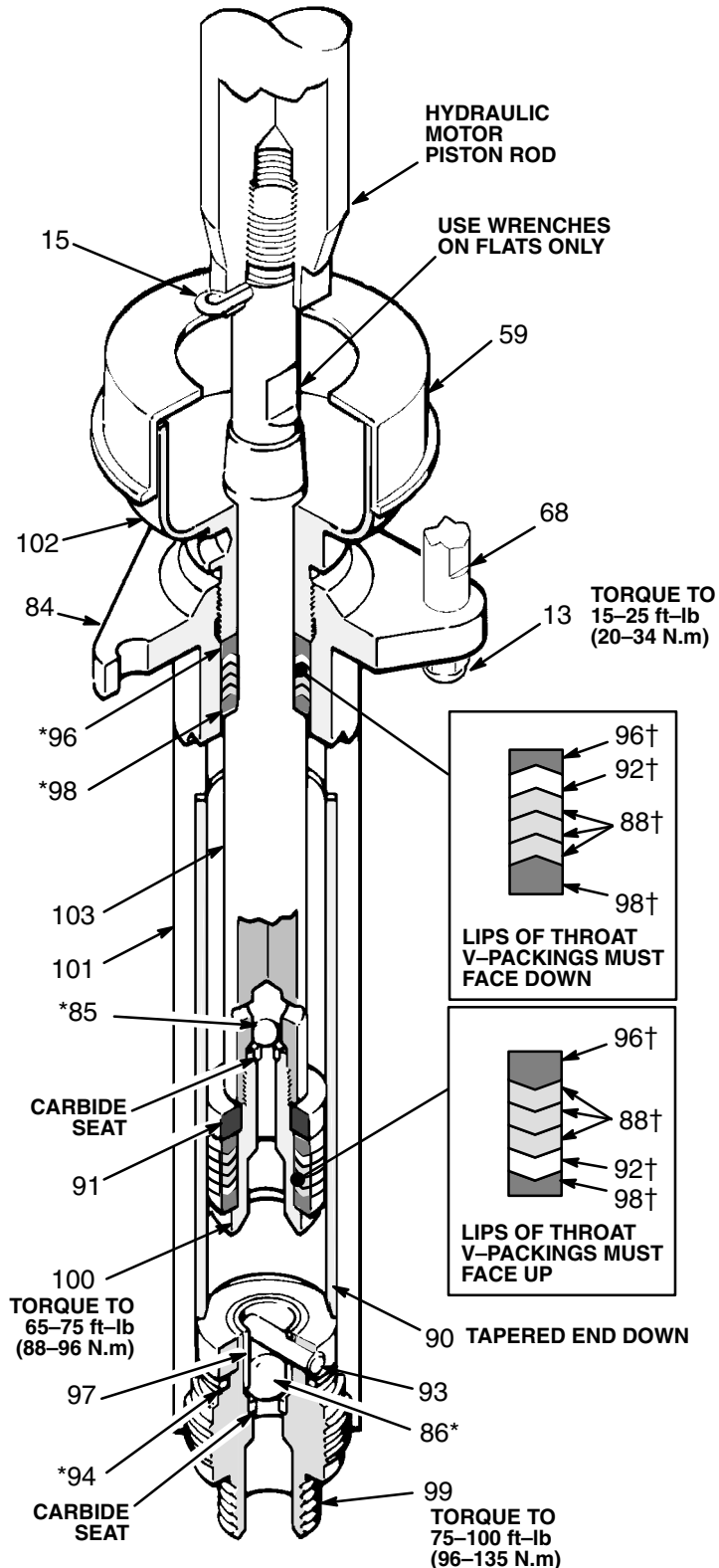


Fig 10

DISPLACEMENT PUMP REPAIR

Reassembly

NOTE: For this procedure, see Fig 10 for Model 208–916 and Fig 11 for Model 221–072

1. **For Pump 208–916**, with the lips of v-packings facing DOWN, install these parts in the pump housing (101): male gland (98*), three leather packings (88*), PTFE packing (92*), female gland (96*).

For Pump 221–072, with the lips of v-packings facing DOWN, install these parts in the pump housing (101): poly packing (92†), two leather packings (88†), poly packing (92†), female gland (96†).

2. Loosely screw the packing nut into the housing.
3. **For Pump 208–916**, with the lips of v-packings facing UP, install these parts on the piston stud (100): female gland (96*), PTFE® packing (92*), three leather packings (88*), male gland (98*), packing retainer (91), and ball (85*).

For Pump 221–072, with the lips of v-packings facing UP, install these parts on the piston stud (100): poly packing (92 †), two leather packings (88 †), poly packing (92 †), male gland (98 †), packing retainer (91), and ball (85†).

4. Screw the piston stud (100) into the displacement rod (103) and torque to 65–75 ft–lb (88–100 N.m).
5. Lubricate the outside of the displacement rod (103) and the inside of the sleeve (90). Slide the displacement rod into the pump housing (101) from the bottom until it protrudes through the packing nut (102). Tighten the packing nut just enough to prevent leaking.
6. Screw the displacement rod (103) into the hydraulic motor piston. Install the cotter pin (15).
7. Screw the three tie rod nuts (13) onto the tie rods to attach the displacement pump to the hydraulic motor. Torque the nuts to 15–25 ft–lb (20–34 N.m).
8. Install the ball (86* †), guide (97), o-ring (94*†), and retainer (95) in the intake valve housing. Line up the holes and insert the pin (93). Screw the intake valve into the pump housing (101) and torque to 75–100 ft–lb (100–135 N.m).
9. Install the strainer (79) and retaining ring (78) in the extension tube (80), if used. Apply sealant to the threads of the intake valve and install the tube.

Model 221–072

See Model 208–916 on page 16

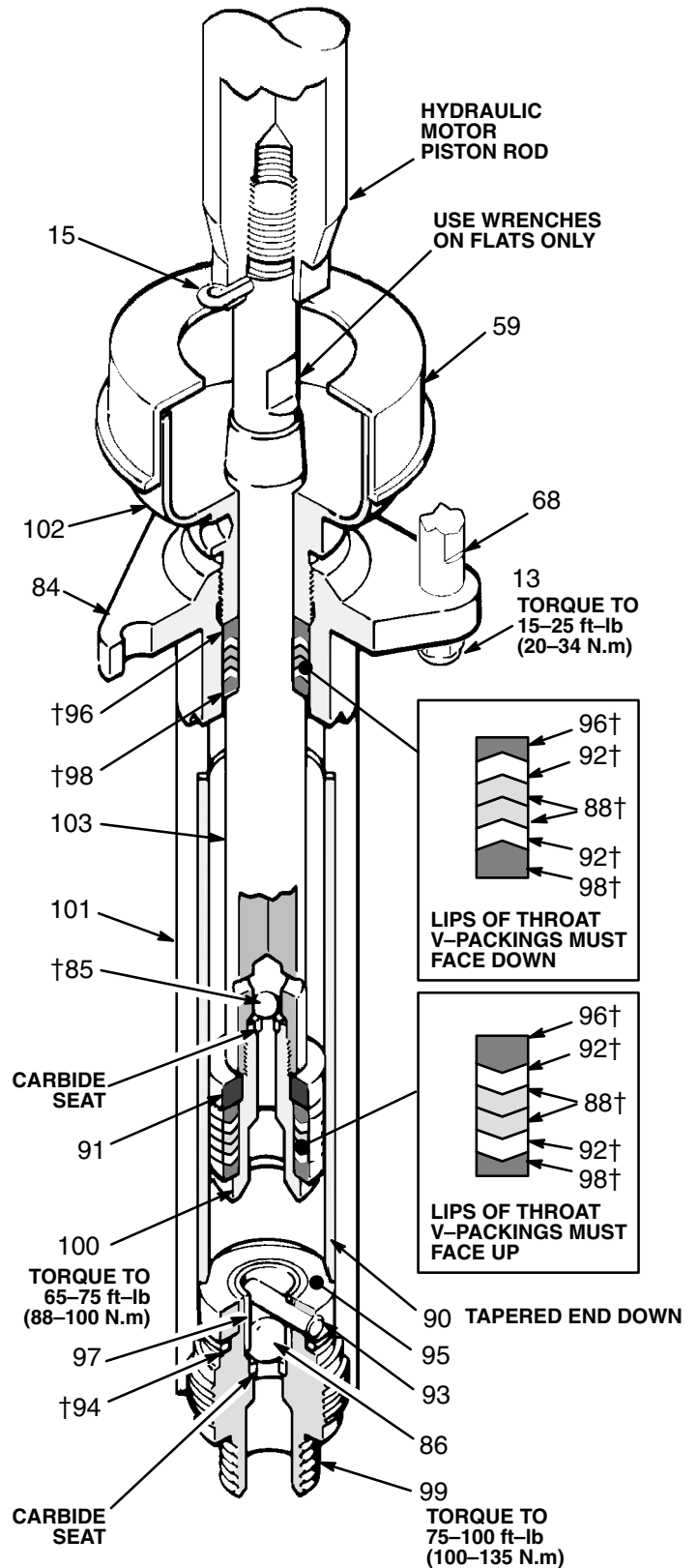


Fig 11

ELECTRIC MOTOR REPLACEMENT

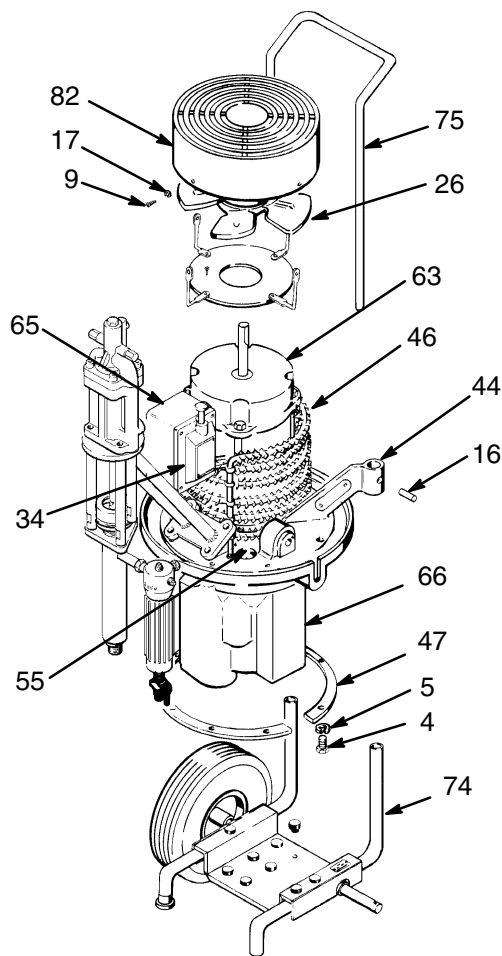


Fig 12

NOTE: Refer to Fig 12 for this procedure.

If the electric motor (63) won't run and the circuit, on/off switch and fuse are good, relieve pressure, unplug the sprayer and proceed as follows.

1. Remove the shield (19), the four screws (9) and washers (17) and the upper fan guard (82). Loosen the fan blade setscrew and remove the fan (26).
2. Remove the switch box cover (34) and disconnect the power cord wires. Do not scratch the smooth mating surfaces of the switch box (65) and cover (34).

3. Drive out the two spring pins (16) and then pull out the handle (75). Hook the switch box conduit with a hoist and lift the unit about 6 in. (150 mm) off the floor. Pull the cart frame (74) down out of the support mounting (44) and move it out of the way.
4. Remove the eight screws (4) and washers (5) holding the reservoir mounting (44). Raise the unit high enough for the reservoir (66) to clear. Pull the reservoir down off the unit and pour out the hydraulic fluid.
5. Carefully lower the unit and tilt it back until the arms of the support mounting (44) are resting on the floor.
6. Put the cart handle (75) through the arms. Hold the hook on the switch box (65) as you lower the unit to make sure it doesn't slip off.
7. Remove the four electric motor mounting screws (7 – see page 20), hold the motor (63) by the shaft and switch box (65), and then rock it from side to side to free it from the support mounting. Carefully pull it out of the cooling coils (46).
8. Screw the switch box (65) and nipple (11 – see page 20) out of the motor. Take the coupling off the motor shaft and install it on the new motor. When installing the nipple and switch box, engage the threads at least five full turns.
9. Carefully slide the new motor through the cooling coils (46), forcing it into the support mounting, and tightly install the mounting screws.
10. Set the gap between the two coupling halves at 0.31 in. (0.8 mm), and then tighten the coupling setscrew securely. See Fig 13, page 19.
11. Clean the reservoir (66) of sediment and reassemble the unit using a new gasket (47). Fill the hydraulic fluid reservoir through the fill hole filter (55).

HYDRAULIC PUMP REPAIR

Electric motor wiring diagram See Fig 13.

Model 226-433 and 231-004 are wired for 115 volt service. It can be rewired for 230 volt service. Model 226-432 is wired for 220 volt service. Check your local code before rewiring it for 110 volt service, which draws 22 amps.

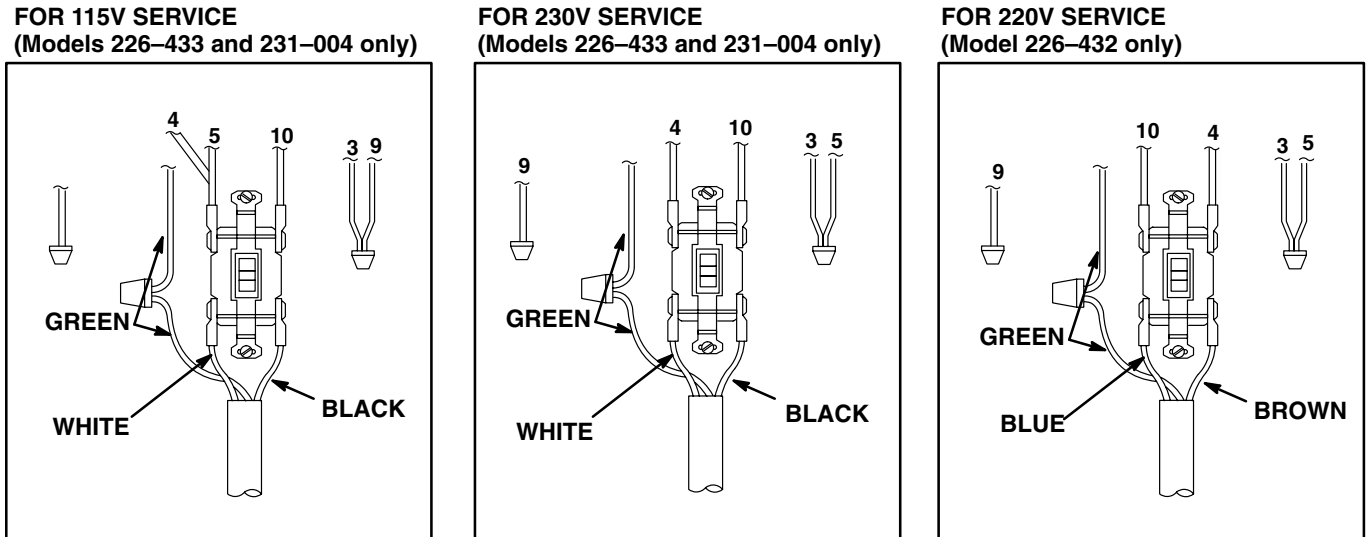


Fig 13

Replacing the hydraulic pump

1. Unplug the sprayer. Relieve pressure. Remove the shield (119). Disassemble the sprayer as in **ELECTRIC MOTOR REPLACEMENT**, page 18.
2. Loosen the setscrew in the coupling half (19). Push the coupling against the hydraulic pump (64). See Fig 12. Remove the four screws (1), the washers (5) (see page 20) and the hydraulic pump. Discard the o-ring seals. See Fig 14, 15 and page 20.
3. Remove the adjusting sprocket retaining nut (29) and pull the sprocket off the adjusting nut. See Fig 14.
4. Apply light grease to the o-rings. Place the o-rings on the pump mounting. Put the coupling half on the shaft of the new pump and leave it loose. See Fig 14.
5. Carefully put the pump in place on the mounting so you don't disturb the o-ring seals. Install the mounting screws tightly. Push the coupling half into the other coupling half until there is a 0.31 in. (0.8 mm) clearance between them, and then tighten the coupling setscrew firmly. See Fig 14.
6. Put the adjusting chain onto the sprocket, then onto the adjusting nut, and then screw the retaining nut (29) onto the stud and tighten until snug. Finally, back off the nut 1/12 to 1/8 turn. See Fig 14.
7. Clean the reservoir of sediment. Reassemble the sprayer. Pour hydraulic fluid into the reservoir. Check the fluid level and add fluid as necessary.

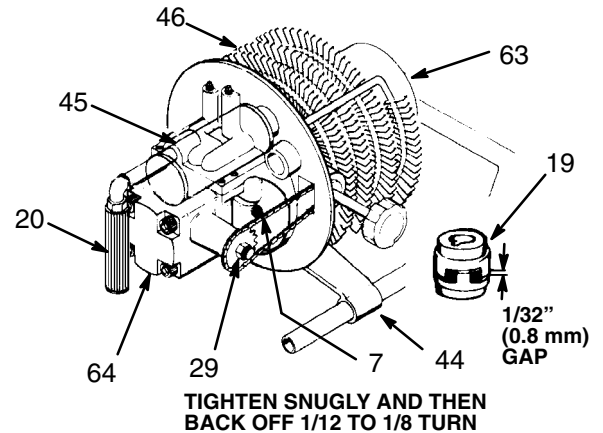


Fig 14

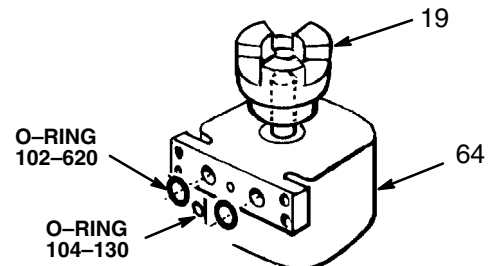
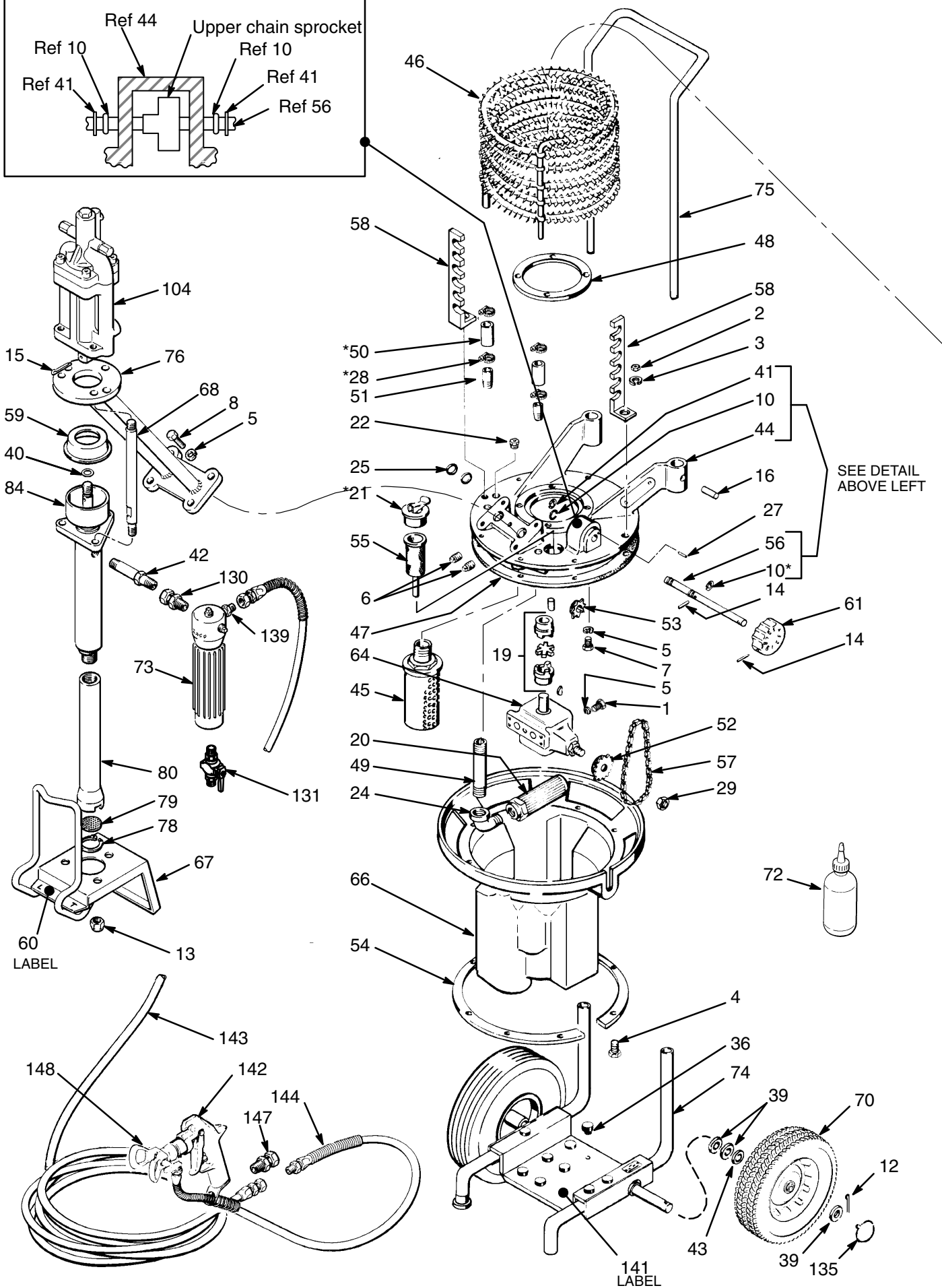
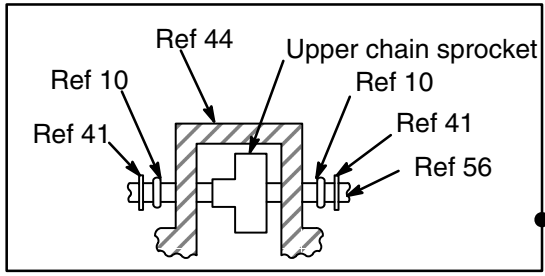
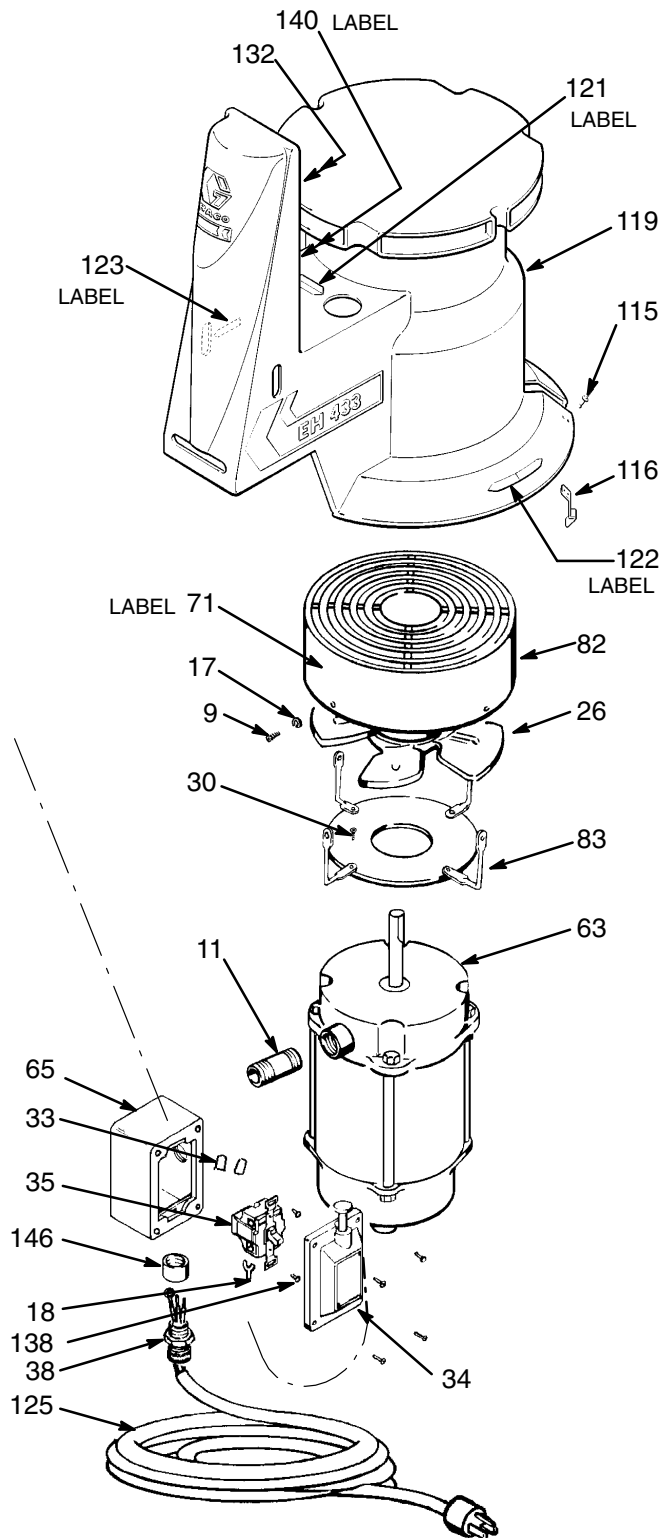


Fig 15

PARTS DRAWING



PARTS LIST



Model 231-004

EH 433 Airless Paint Sprayer, 60 Hz, 120 V AC

Includes items 1 – 141

Model 226-433, Series A

EH 433 Airless Paint Sprayer with hose and gun

Includes items 1 – 144

Model 226-432, Series K

EH 433 Airless Paint Sprayer, 50 Hz, 230 V AC with hose and gun

Includes items 1 – 147

REF NO.	PART NO.	DESCRIPTION	QTY
1	100-004	CAPSCREW, hex hd, 3/8-16 x 1-1/4"	4
2	100-015	NUT, hex, 1/4-20	8
3	100-016	LOCKWASHER, spring, 1/4"	8
4	100-021	CAPSCREW, hex hd, 1/4-20 x 1"	8
5	100-133	LOCKWASHER, spring, 3/8"	13
6	100-509	PLUG, pipe, 1/4 npt	2
7	100-659	CAPSCREW, soc head, 3/8-16 x 1"	4
8	100-680	CAPSCREW, hex head, 3/8-16 x 7/8"	5
9	100-933	SCREW, type F self tap, 8-32 x 3/8"	4
10	101-166**	RING, retaining	2
11	101-407	NIPPLE, pipe, 3/4 npt x 3"	1
12	101-545**	PIN, cotter	2
13	101-566	LOCKNUT, hex, nylon insert, 3/8-16	3
14	101-831	PIN, spring	2
15	101-946	PIN, cotter	1
16	102-039**	PIN, spring	2
17	102-063	LOCKWASHER, ext tooth, no. 8	4
18	102-276	TERMINAL, forked	4
19	106-129	COUPLING, flexible	1
20	102-405*	STRAINER, wire cloth	1
21	102-505*	PLUG, expander, 1-7/8" dia. hole size	1
22	104-157	VALVE, vent, hydraulic reservoir	1
24	100-549	ELBOW, 90°, street	1
26	102-654	FAN	1
27	101-154	PIN	1
28	103-126	CLAMP, hose	4
29	103-179	LOCKNUT, 5/8-11	1
30	105-967	SCREW, type AB self tap, 10-16 x 1/2"	4
33	103-760	CONNECTOR, wire	
		<i>Model 231-004, 226-433</i>	2
		<i>Model 226-432</i>	3
34	108-591	COVER, switch box (mounting screws included)	1
35	103-850	SWITCH (mounting screws included)	1
36	103-867	BUMPER, rubber	9
38	102-467	CONNECTOR, cable (Models 231-004 and 226-433 only)	1
	108-295	BUSHING, strain relief (Model 226-432 only)	1
39	154-636	WASHER, flat, 5/8"	6
40	154-771	PACKING, o-ring, nitrile rubber	1
41	155-685	PACKING, o-ring, nitrile rubber	2
42	160-790	NIPPLE, adapter, 3/8 npt x 3-5/8"	1
43	176-364	SPACER	2

Continued on page 22

PARTS LIST

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
44	167-725	MOUNTING, support	1	114	214-682	SHIELD KIT	
45	167-748**	FILTER, hydraulic	1			Includes items 115-123, 132	1
46	167-777	COIL, cooling	1	115	102-472	. RIVET, blind	4
47	167-778	GASKET, mounting to sump	1	116	167-786	. CLIP, spring tension	2
48	176-132	GASKET, motor to mounting	1	119	176-115**	. SHIELD	1
49	167-780	NIPPLE, pipe, 3/4 npt x 4"	1	121	170-965	. LABEL, instruction	1
50	167-781**	HOSE, rubber, 3/8" ID, 2-1/4" long	2	122	170-967	. LABEL, instruction	1
51	167-782	ADAPTER, straight	2	123	170-968	LABEL, instruction	1
52	167-784	SPROCKET, chain, hydraulic pump	1	125		CORD SET	
53	167-785	SPROCKET, chain, adj. shaft	1		170-973	<i>For Models 231-004 & 226-433 only</i>	1
54	167-789	SUPPORT, sump	2		181-944	<i>For Model 226-432 only</i>	1
55	167-799	LEVEL INDICATOR w/fill filter	1	130	155-665	UNION, straight adapter, 3/8 npt(m)	
56	167-803	SHAFT, shouldered, valve adj.	1			x 3/8 npsm(f) swivel	1
57	167-814	CHAIN, roller	1	131	210-659	DRAIN VALVE	1
58	167-816	SUPPORT, cooling coil	2	132	185-953†	LABEL, DANGER, English	1
59	167-817	COVER, plastic snap-on	1	135	104-811	HUBCAP	2
60	167-820	DECAL, "Lift"	1	138	100-032	SCREW, pan hd, 6-32 x 1/4"	2
61	167-907	KNOB, valve, adjustment	1	139	162-453	NIPPLE, 1/4 npsm	1
63		MOTOR, electric, 1.5 HP, UL listed, includes 3/16" sq x 1/2" parallel key		140	185-956†	LABEL, DANGER, French	
	170-792	<i>For Model 226-432 only</i>				<i>Models 231-004, 226-433 only</i>	1
		220 V, 50 Hz AC	1	141	186-126†	LABEL, WARNING	
	170-793	<i>For Models 231-004 & 226-433 only</i>		142		<i>Models 231-004, 226-433 only</i>	1
		115 V, 60 Hz AC	1			SPRAY GUN, RAC IV TIP GUARD AND 513 TIP	
64		PUMP, hydraulic, 900 psi (63 bar) maximum pressure, 4 GPM max. 1800 rpm			235-463	<i>For Model 226-432 only</i>	
		Includes items 64a - 64c				Silver Plus Gun", See 308-236 for parts	1
	170-794	<i>For Model 226-432 only</i> 1500 rpm	1		235-459*	<i>For Model 226-433 only</i>	
	170-795	<i>For Models 231-004 & 226-433 only</i>	1	143		"Flex Gun", See 307-633 for parts	1
64a	102-639	. KEY, woodruff	1		223-540	HOSE, static free nylon, 1/4" ID, cpld 1/4 npsm(f) swivel	
64b	102-620	. O-RING	2			<i>For Model 226-432 only</i>	
64c	104-130	. O-RING	1		223-541	<i>For Model 226-433 only</i>	
65	181-945	BOX, switch	1			25 ft (7.6 m) long	1
66	170-951	RESERVOIR, hydraulic fluid	1			<i>For Model 226-433 only</i>	
67	214-907	SUPPORT, pump	1	144	214-701	50 ft (15 m) long	1
68	170-958	ROD, tie	3			HOSE, whip end, static free nylon, 3/16" ID, cpld 1/4 npt(m) x 1/4 npsm(f) swivel, 36" (914 mm) long	
70	179-811	WHEEL, semi-pneumatic	2			<i>For Models 226-432 & 226-433 only</i>	1
71	171-001†	LABEL, Warning	1	146	107-219	BUSHING <i>Model 226-432 only</i>	1
72	206-994	THROAT SEAL LIQUID (TSL), 8 oz.	1	147	204-940	SWIVEL <i>Model 226-432 only</i>	
73	214-570	FLUID FILTER				See 306-861 for parts	1
		<i>Includes two of Ref No. 6</i>					
		See 307-273 for parts	1				
74	214-908	FRAME, cart	1				
75	167-801	HANDLE, cart	1				
76	207-797	SUPPORT, motor	1				
77	214-904	SUCTION KIT					
		Includes items 78-80	1				
78	102-616	. RING, retaining	1				
79	167-759	. STRAINER	1				
80	176-365	. TUBE, suction	1				
82	208-914	GUARD, fan, top	1				
83	208-915	GUARD, fan, bottom	1				
84		DISPLACEMENT PUMP					
		See parts on page 21	1				
	208-916	<i>For Models 231-004 & 226-433 only</i>	1				
	221-072	<i>For Model 226-432 only</i>	1				
104	208-918	HYDRAULIC MOTOR					
		See 306-980 for parts	1				

**Recommended spare parts to keep on hand.

† Extra Danger and Warning labels available free.

306 & 307 numbers in descriptions refer to separate instruction manual.

SERVICE INFORMATION

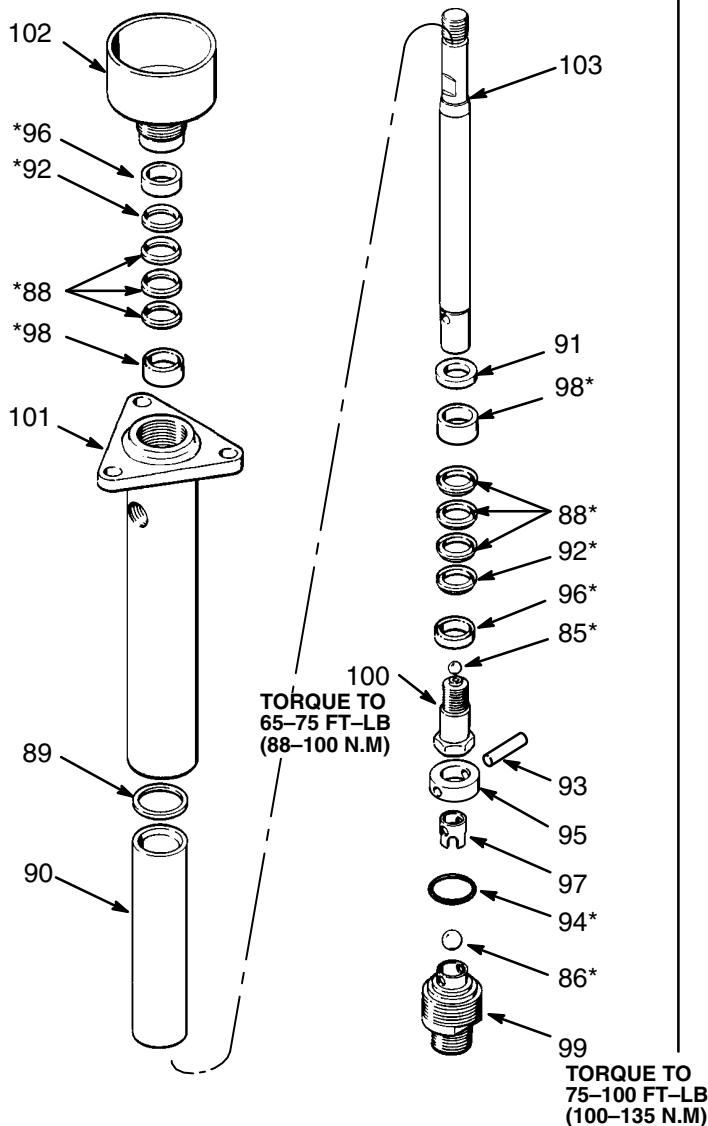
Assembly Changed	Status	Ref No.	Part No.	Name
226-433	Old	142	220-956	Gun
	New	142	235-459	Gun
226-432	Old	142	220-954	Gun
	New	142	235-463	Gun

PARTS LIST

Ref No. 84
208-916 Displacement Pump
 Used in Sprayers 231-004 and 226-433

REF NO.	PART NO.	DESCRIPTION	QTY
85	100-065*	. BALL, chrome alloy, 5/16" dia	1
86	100-084*	. BALL, chrome alloy, 1/2" dia.	1
88	164-477*	. V-PACKING, leather	6
89	164-480	. GASKET, PTFE®	1
90	164-481	. SLEEVE, housing	1
91	164-484	. RETAINER, piston packing	1
92	164-862*	. V-PACKING, PTFE®	2
93	165-049	. PIN, ball stop	1
94	165-052*	. PACKING, o-ring, PTFE®	1
95	165-279	. RETAINER, o-ring	1
96	165-895*	. GLAND, packing, female	2
97	170-257	. GUIDE, ball	1
98	171-146*	. GLAND, packing, male	2
99	205-981	. HOUSING, intake valve	1
100	206-345	. PISTON VALVE	1
101	207-420	. HOUSING, displacement pump	1
102	207-731	. PACKING NUT w/wet cup	1
103	223-589	. DISPLACEMENT ROD	1

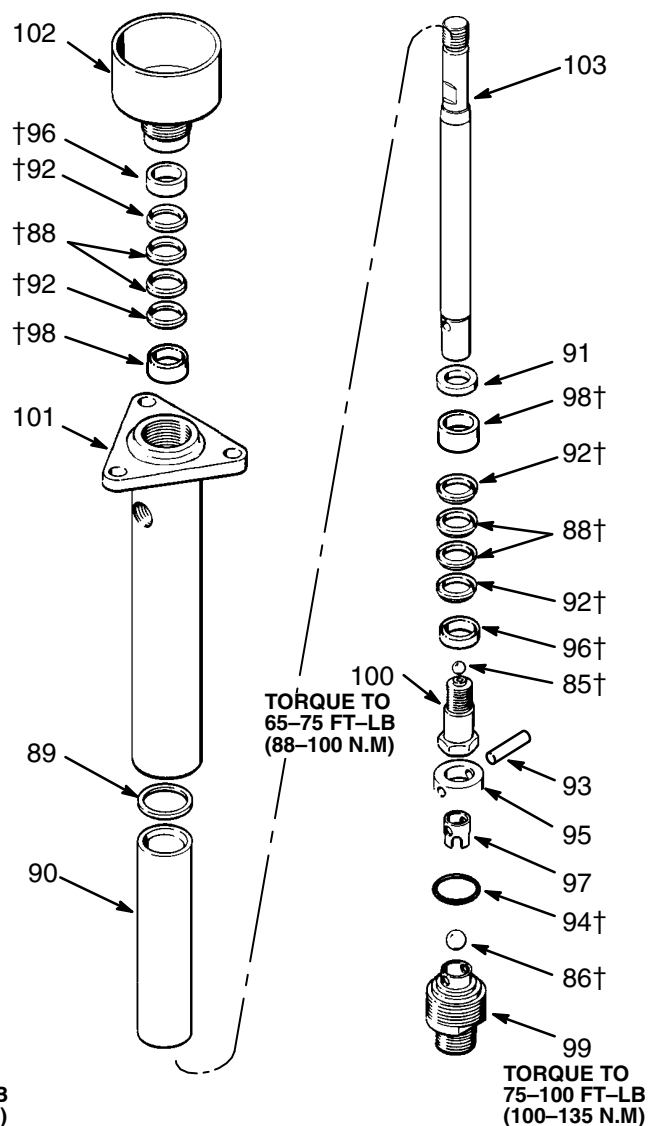
*Included in Repair Kit 208-919



Ref No. 84
221-072 Displacement Pump
 Used in Sprayer 226-432

REF NO.	PART NO.	DESCRIPTION	QTY
85	100-065†	. BALL, chrome alloy, 5/16" dia	1
86	100-084†	. BALL, chrome alloy, 1/2" dia.	1
88	164-477†	. V-PACKING, leather	4
89	164-480	. GASKET, PTFE®	1
90	178-902	. SLEEVE, housing	1
91	164-484	. RETAINER, piston packing	1
92	108-453†	. V-PACKING, UHMWPE	4
93	165-049	. PIN, ball stop	1
94	165-052†	. PACKING, o-ring, PTFE®	1
95	165-279	. RETAINER, o-ring	1
96	186-181†	. GLAND, packing, female	2
97	170-257	. GUIDE, ball	1
98	171-146†	. GLAND, packing, male	2
99	205-981	. HOUSING, intake valve	1
100	206-345	. PISTON VALVE	1
101	207-420	. HOUSING, displacement pump	1
102	207-731	. PACKING NUT w/wet cup	1
103	223-589	. DISPLACEMENT ROD	1

†Included in Repair Kit 223-664



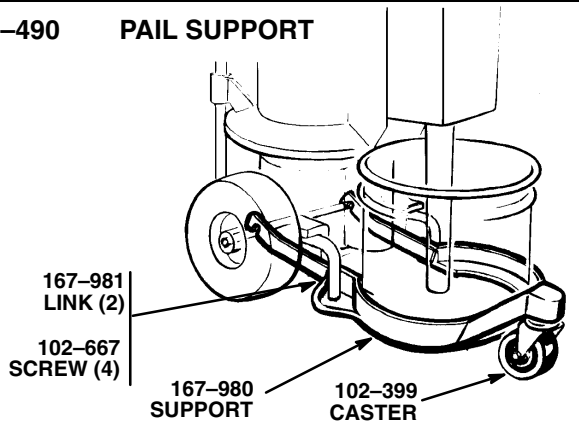
ACCESSORIES

Must be purchased separately.

STATIC FREE NYLON HOSE 3000 psi (210 bar) MAXIMUM WORKING PRESSURE

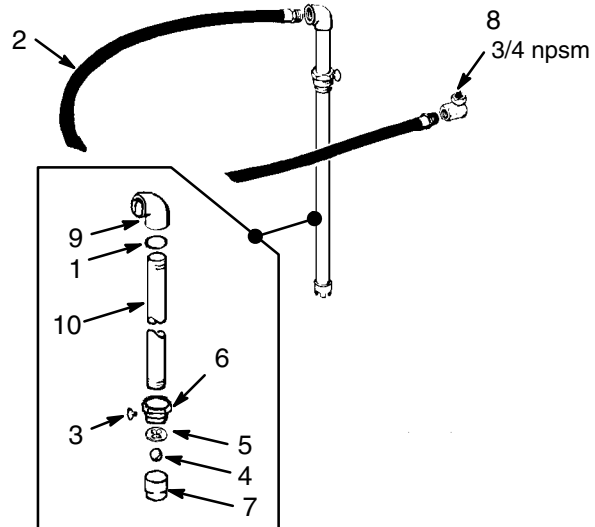
Part No.	ID	Length	Thd. Size
223-540	1/4" (6.4 mm)	25 ft (7.6 m)	1/4 npsm(f)
223-541	1/4" (6.4 mm)	50 ft (15.2 m)	1/4 npsm(f)
214-703	3/8" (9.5 mm)	25 ft (9.5 m)	3/8 npt(m)
214-705	3/8" (9.5 mm)	50 ft (15.2 m)	3/8 npt(m)

207-490 PAIL SUPPORT



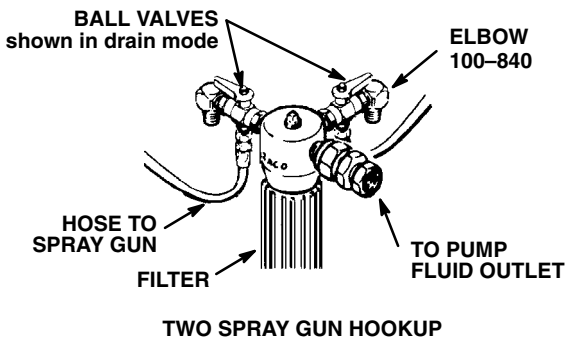
207-485 SUCTION TUBE 55 gallon (200 liter)

Ref No.	Part No.	Description	Qty
1	156-593	PACKING, o-ring	1
2	214-961	HOSE, coupled	1
3	100-220	SCREW, thumb	1
4	100-279	BALL	1
5	159-100	BALL RETAINER	1
6	176-684	ADAPTER, bung	1
7	159-101	HOUSING, intake valve	1
8	156-589	UNION, swivel	1
9	156-591	ELBOW, adapter	1
10	156-592	TUBE, riser	1



214-711 BALL VALVE 5000 psi (350 bar) MAXIMUM WORKING PRESSURE

100-840 ELBOW, 1/4 npt(f) x 1/4" npt(m)

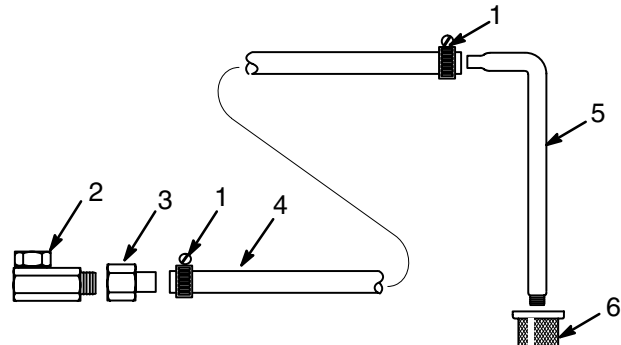


Each line in a two gun system must have (1) a shutoff valve so one gun can be isolated for servicing while the other is in operation; and (2) a drain valve to relieve line pressure if the gun tip becomes clogged. Ball valve no. 214-711 is recommended for both purposes. We also recommend using elbow no. 100-840 to direct the outlet flow from the drain valve in a safe direction to a pail.

In the drain mode, the ball valve handle is turned away from the elbow (marked DRAIN on housing). In the operating mode, the handle is turned toward the elbow (marked CIRC on the housing).

208-920 SUCTION TUBE KIT 5 gallon (19 liter)

Ref No.	Part No.	Description	Qty
1	101-818	HOSE CLAMP	2
2	160-327	UNION, 90° swivel, 3/4 npt(m x f)	1
3	170-705	ADAPTER, intake	1
4	170-706	HOSE, 1" ID x 48", nylon tube	1
5	170-957	TUBE, suction	1
6	181-072	STRAINER	1



ACCESSORIES

Must be purchased separately.

DANGER LABELS

The English language DANGER label shown on page 1 is also on your sprayer. If you have painters who do not read English, order one of the following labels to apply to your sprayer. The drawing below shows the best placement of these labels for good visibility.

Order the labels directly from Graco, free of charge.

Toll Free: 1-800-328-0211

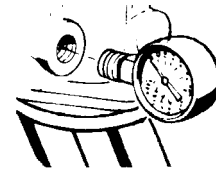
French	185-957
Spanish	185-959
German	186-039
Greek	186-043
Korean	186-047
English	185-951

207-428 HYDRAULIC FLUID, Graco-approved
1 gallon (3/8 liter)

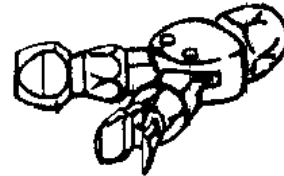
GRACO THROAT SEAL LIQUID (TSL)
Non evaporating fluid for the wet-cup

206-995 1 quart (0.95 liter)
206-996 1 gallon (3.8 liter)

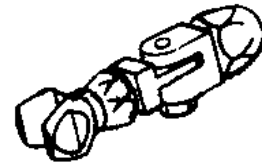
102-814 FLUID GAUGE, 5000 pound
Install to read pressure in hydraulic fluid system
KEEP DIRT OUT OF SYSTEM!



206-236 DUAL ADAPTER less tips
Two spray tips controlled by one spray gun – used where one tip does not provide a sufficiently wide spray pattern or the work piece demands two spray patterns angled in two directions.



206-235 DIRECTIONAL ADAPTER less tips
Adjustable 180° swiveling nozzle permits changing the spray pattern direction to satisfy work piece demands.



TECHNICAL DATA

Electric motor	1.5 HP, 1725 rpm, single phase with automatic reset thermal overload. UL listed <i>Model 231-004 & 226-433: 115 V, 60 HzAC</i> <i>Model 226-432: 220 V, 50 HzAC</i>
Electric cord	No. 12 ga., 3 wire, 10 ft (3 m) long (Use 12 ga minimum, 3 wire extension cord)
Hydraulic pump	4 gpm (15 liter/min) maximum volume, 600-900 psi (41-62 bar) pressure range
Hydraulic fluid sump	1 gallon (3.8 liter) operating level with fill strainer dipstick
Hydraulic pump suction filter	100 mesh monel wire cloth with 16 mesh monel wire cloth backup, reusable type
Hydraulic oil return filter	400 sq. in. (2580 cm ²) surface area; 25 micron filtration, disposable type
Paint filter	60 mesh, 18 sq. in. (116 cm ²) stainless steel screen with 3/8 npt(f) inlet and 1/4 npt(f) outlets, reusable type
Wetted parts	Nitralloy, Rubber impregnated leather, PTFE [®] , Chrome or Zinc plated steel, Stainless steel, Chrome alloy steel, Tungsten carbide, Bronze, Aluminum, Viton [®] , UHMW polyethylene
Overall dimensions	Height: 40" (1010 mm) Width: 21" (530 mm) Depth: 27.5" (690 mm) Weight: 145 lb (66 kg)
Noise level	Does not exceed 85 dBAs (3 ft from machine)
Electrical requirements	115 Volt - 20 amp circuit; 220 volt - 15 amp circuit

THE GRACO WARRANTY AND DISCLAIMERS

WARRANTY

Graco warrants all equipment manufactured by it and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. As purchaser's sole remedy for breach of this warranty, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment proven defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for, any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility with Graco equipment of structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claim. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor and transportation.

DISCLAIMERS AND LIMITATIONS

THE TERMS OF THIS WARRANTY CONSTITUTE PURCHASER'S SOLE AND EXCLUSIVE REMEDY AND ARE IN LIEU OF ANY OTHER WARRANTIES (EXPRESS OR IMPLIED), INCLUDING WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY NON-CONTRACTUAL LIABILITIES, INCLUDING PRODUCT LIABILITIES, BASED ON NEGLIGENCE OR STRICT LIABILITY. EVERY FORM OF LIABILITY FOR DIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS IS EXPRESSLY EXCLUDED AND DENIED. IN NO CASE SHALL GRACO'S LIABILITY EXCEED THE AMOUNT OF THE PURCHASE PRICE. ANY ACTION FOR BREACH OF WARRANTY MUST BE BROUGHT WITHIN TWO (2) YEARS OF THE DATE OF SALE.

EQUIPMENT NOT COVERED BY GRACO WARRANTY

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO ACCESSORIES, EQUIPMENT, MATERIALS, OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motor, switches, hose, etc.) are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

Factory Branches: Atlanta, Chicago, Dallas, Detroit, Los Angeles, West Caldwell (N.J.)

Subsidiary and Affiliate Companies: Canada; England; Korea; Switzerland; France; Germany; Hong Kong; Japan

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