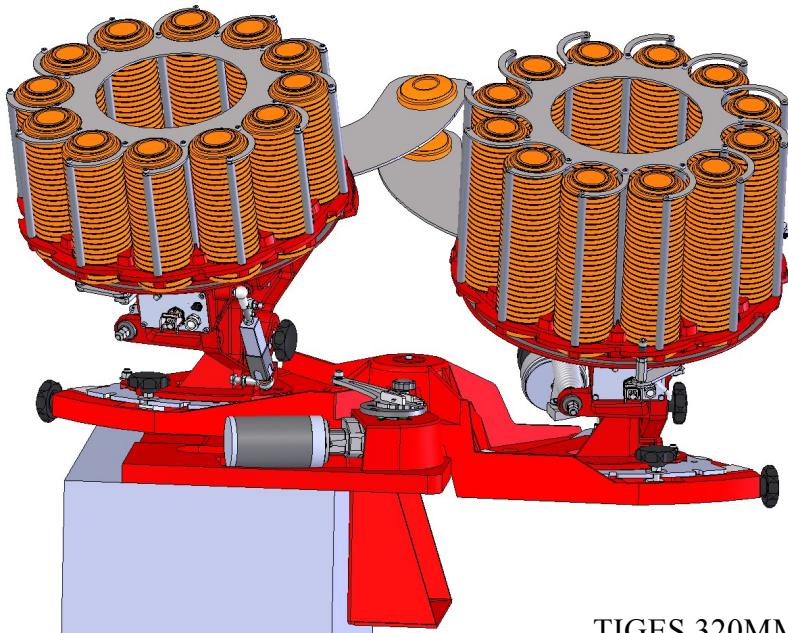




2020 12

185 TWINLAP 12C



TIGES 320MM ET 400 MM

OWNERS MANUAL Installation and operation

English

- Read the instructions carefully before attempting to install or operate the machine!
- This manual covers safety, installation and operating instructions and must be used in the maintenance, disassembly or trouble shooting of the machine.
- All reproduction, even partial, of this documentation is prohibited without the written authorisation of the Laporte company.

France

- Lire scrupuleusement les instructions avant l'installation et la mise en marche de la machine !
- Ce manuel technique vous donne toutes les instructions pour le montage, la sécurité et la mise en marche de votre Trap.
- La présente notice fait partie intégrante de l'appareil. Elle doit toujours se trouver à proximité immédiate de celui-ci.
- Toute reproduction, même partielle, de la documentation technique est interdite sans autorisation écrite de la société LAPORTE.

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2 GENERALITES TWINLAP

2 FEATURES AND DESCRIPTIONS

<p>La machine LAPORTE® modèle 185 2016 est entièrement automatique et destinée au Parcours de Chasse.</p> <p>Le modèle 2004, allie simplicité et fiabilité, robustesse et légèreté, et rapidité des réglages.</p>	<p>The LAPORTE® Trap model 185 2016 is a fully automatic trap and ideal for Sporting.</p> <p>The 2004 model combines simplicity and reliability, robustness and lightness and rapid adjustment.</p>
<p>UNE SOCIETE DE RENOMMEE INDENIABLE :</p> <ul style="list-style-type: none"> - 90 ans de conception de machines - Fournisseur des Jeux Olympiques - Homologuée par la N.S.C.A. (National Sporting Clay Association, USA), la N.S.S.A. (National Skeet Sporting Association, USA), fournisseur officiel de la Reine d'Angleterre, et reconnu par la FFT (Fédération Française de Tir), la FFBBT (Fédération Française de Ball-Trap) et par la F.I.T.A.S.C. (Fédération Internationale de Tir aux Armes Sportives). 	<p>COMPANY WITH PROVEN RECORD OF SUCCESS</p> <ul style="list-style-type: none"> -90 Years of Trap design - 8 Supplier to Olympic Games -The only traps on the market endorsed by NSSA (National Skeet Sporting Association, USA), NSCA (National Sporting Clay Association, USA), FITASC (International Federation for Shooting Sport), and by appointment to Her Majesty the Queen of U.K.
<p>CONCEPTION SIMPLE</p> <ul style="list-style-type: none"> - Une utilisation simple - Un minimum de pièces en mouvement - Facilité d'entretien et de remplacement de pièces 	<p>UNCOMPLICATED DESIGN</p> <ul style="list-style-type: none"> - Simple to use - Minimum moving parts - Easy maintenance and parts replacement
<p>BARILLET:</p> <ul style="list-style-type: none"> - 12 colonnes. - Capacité 400 cibles maxi. - Chargement par le haut. - Un couteau pour décollées les cibles. 	<p>MAGAZINE:</p> <ul style="list-style-type: none"> - 12 columns - 400 target capacity maxi. - Top loading
<p>CORPS ET SOCLE EN ALUMINIUM AU4G</p> <p>Avec une finition à la peinture époxy de haute qualité</p> <ul style="list-style-type: none"> - Léger et robuste, manipulation aisée. - Aucune oxydation possible (ne rouille pas). 	<p>ALUMINIUM CASTINGS AU4G</p> <ul style="list-style-type: none"> - High quality epoxy paint finish (does not rust) - Lightweight, easily moved
<p>ELECTRONIQUE SIMPLIFIE</p> <ul style="list-style-type: none"> - Facilité de remplacement des pièces électriques. - Fusible automobile. 	<p>PRE-WIRED ELECTRICAL CONTROL BOX.</p> <ul style="list-style-type: none"> -Easily maintained electrical parts
<p>SECURITE</p> <ul style="list-style-type: none"> - Arceau de protection total du bras de lancement <p>Note: Doit toujours être assemblé sur la machine</p> <ul style="list-style-type: none"> -Encercle toute la zone traversée par le bras de lancement 	<p>SAFETY</p> <ul style="list-style-type: none"> - Full safety guard for the throwing arm. <p>Note: Must always be assembled on Trap</p> <ul style="list-style-type: none"> -Encircles whole area traversed by throwing arm
<p>ANTI-RETOUR sur le bras de lancement</p> <ul style="list-style-type: none"> - Arrête le bras de lancement en position ¾ armée. - Réduit les vibrations. - Permet un armement plus rapide. 	<p>ONE WAY BEARING ON THROWING ARM</p> <ul style="list-style-type: none"> - Stops the throwing arm in 3/4 armed position - Reduces vibration - Enables faster 'arming'
<p>CHAP 2 PAGE 1</p>	

<p>TRAJECTOIRE:</p> <ul style="list-style-type: none"> - Parfaite du point de départ au point de chute <p>DISTANCE DE PROJECTION:</p> <ul style="list-style-type: none"> - De 40 à 110 m en fonction du ressort utilisé. - Noir, Vert, Gris ou Rouge. <p>RESSORT DE LANCEMENT</p> <ul style="list-style-type: none"> - Réglable par simple molette. <p>AJUSTEMENT DE LA TRAJECTOIRE:</p> <ul style="list-style-type: none"> - Les angles horizontaux et verticaux peuvent être modifiés rapidement et facilement. <p>DECLENCHEMENT :</p> <ul style="list-style-type: none"> - Par câble: Option : commande par radio et/ ou RAR (système de déclenchement par la voix) <p>TENSION: Disponible en 12V. Conso. Maximum 120 Ampères. Batterie recommandée 150 A (ref : 1150915) Chargeur 15A (ref : 1140134) Transformateur : 230V 1600 Va</p> <p>REARMEMENT: En 2 secondes. Le moteur est sollicité pendant un temps très court durant la phase d'armement et consomme donc peu d'énergie.</p> <p>POIDS: 220 Kg</p>	<p>TRAJECTORY:</p> <ul style="list-style-type: none"> - Perfect from start to finish <p>THROWING DISTANCE:</p> <ul style="list-style-type: none"> From 45 to 120 yards depending on spring - Black, Green, Grey or Red <p>THROWING SPRING:</p> <ul style="list-style-type: none"> -Simple knob adjustment. <p>TRAJECTORY MOVEMENTS: The horizontal and vertical angles can be easily and quickly modified</p> <p>TARGET RELEASE: By cable. Optional: radio remote control or voice release system upon request.</p> <p>VOLTAGE: Available in 12V. Conso. Maximum 120 Ampères. Battery recommandée 150 A (ref : 1150915) Chargeur 15A (ref : 1140134) Transformateur : 230V 1600 Va</p> <p>RE-ARMING: 2 seconds. The motor only operates for a short time during the re-cocking sequence and therefore, uses very little power.</p> <p>WEIGHT: 220 Kg</p>
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3 CONSEILS DE SECURITE

3 SAFETY ADVICE

<p>DANGER - CES MACHINES PEUVENT PROVOQUER DE SERIEUSES BLESSURES! LIRE SCRUPULEUSEMENT LES INSTRUCTIONS AVANT L' INSTALLATION ET LA MISE EN MARCHE DE LA MACHINE!</p> <p>☞ AVANT DE :</p> <ul style="list-style-type: none"><input type="checkbox"/> Installer la machine,<input type="checkbox"/> Brancher le courant,<input type="checkbox"/> Lubrifier,<input type="checkbox"/> Charger le barillet<input type="checkbox"/> Procéder aux réglages, <p>☞ VEILLER A ce que le bras de lancement soit en position désarmée ou que le ressort d'armement ne soit pas monté et que l'interrupteur "ON-OFF-UNCOCKED" du coffret électronique soit en position "OFF" et la machine DECONNECTEE de la source d'alimentation.</p> <p>NOTE: La position « désarmée » ("uncocked") mentionnée tout le long de ce manuel se réfère à la position du bras de lancement. Quand la machine est « désarmée », vu de derrière, le bras de lancement est visible à gauche de la machine. Quand on regarde la machine par le dessus depuis l'arrière, le bras « désarmé » sera visible en position 8h45. Quand la machine est livrée, le bras sera en position de « sécurité ».</p> <ol style="list-style-type: none">1. Toute personne habilitée à faire fonctionner la machine, ou à charger le barillet, doit lire ce manuel d'instruction et être formée par une personne connaissant le fonctionnement et les mesures de sécurité de ce matériel.2. Ne pas laisser la machine en position "armée" quand elle n'est pas utilisée. Cette pratique est non seulement dangereuse mais elle réduit la durée de vie du ressort d'armement.3. <u>Une seule personne à la fois doit faire fonctionner la machine.</u>4. Ne pas faire fonctionner la machine sans avoir installé l'arceau de sécurité. Cet arceau de sécurité définit la zone de danger autour du bras de lancement.5. Ne soulever, ni ne déplacer la machine par le bras de lancement ou l'arceau de sécurité. Ne vous appuyez pas sur l'arceau de sécurité et n'y poser aucun poids, telles que les boîtes de cibles.	<p>DANGER - THESE MACHINES CAN CAUSE SERIOUS INJURY! READ INSTRUCTIONS THOROUGHLY BEFORE ATTEMPTING TO INSTALL OR OPERATE!</p> <p>1. ☞BEFORE:</p> <ul style="list-style-type: none"><input type="checkbox"/> Installing the trap,<input type="checkbox"/> Connecting power,<input type="checkbox"/> Lubricating,<input type="checkbox"/> Loading the magazine or<input type="checkbox"/> Making any adjustments <p>☞ Be sure that the throwing arm is in the safe, unarmed position or that the mainspring is disconnected, the "ON-OFF-UNCOCK" toggle switch on the electrical control box is in the "OFF" position, and the machine is DISCONNECTED from the power source.</p> <p>NOTE: The "Decocked" position mentioned throughout this manual refers to the position of the throwing arm. When the machine is "unarmed", viewed from behind the machine, the throwing arm is to the left of the machine. When looking at the machine from on top behind, the "unarmed" throwing arm is visible in a 8h45 position. When the machine is delivered, the throwing arm is in the "safety" position.</p> <ol style="list-style-type: none">1. All personnel required to operate the trap, or load targets into the magazine, should read this instruction manual and be trained by someone knowledgeable as to the safe operation of the equipment.2. Do not leave the trap armed when not in use. Not only is this practice very hazardous, but, as the mainspring is stretched, its lifespan will be shortened.3. Only one person should operate the trap at any one time.4. Do not operate the trap without the safety guard installed on the trap as illustrated in this manual. This safety guard defines the danger zone of the throwing arm rotation.5. Do not lift or move the trap by the throwing arm or the safety guard. Do not lean on the safety guard or place any weight on it such as box of targets.
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<p>6. Des lunettes de protection doivent être portées par toutes personnes proches de la machine pour éviter les blessures aux yeux dues à des fragments de cibles.</p> <p>7. Eloigner toujours les enfants et les animaux de la machine.</p> <p>8. Avant de mettre la machine en marche, se mettre en position de sécurité à l'arrière gauche de la machine et s'assurer qu'il n'y a personne dans la zone de danger à l'avant de la machine. Des fragments de pigeons cassés peuvent voler rapidement en dehors de la zone de danger même en arrière. (Ils peuvent même rebondir sur les cabanes, etc...). Quand la machine est armée et prête à l'emploi, quitter toujours la zone de lancement en restant à l'arrière de la machine. ATTENTION !!!! certaines machines (Ex : PCT) peuvent pivoter sur 360° !!!</p> <p>9. Avant d'approcher la machine, pour la maintenance, les réglages ou le chargement des cibles, assurez-vous que l'interrupteur "ON-OFF-UNCOCK" du coffret électronique est en position "OFF" et que le bras de lancement est dans la position « Désarmée » ("Decocked") 8h45.</p> <p>NOTE: POUR DESARMER LE BRAS DE LANCEMENT ET PLACER LA MACHINE EN POSITION DE SECURITE, METTRE L'INTERRUPTEUR "ON-OFF-UNCOCK" DU COFFRET ELECTRONIQUE EN POSITION DESARMEE « UNCOCKED » PUIS EN POSITION « OFF ». LE BRAS DE LANCEMENT DOIT S'ARMER ET S'ARRETER DANS LA POSITION « DESARMEE » A L'AVANT DE LA MACHINE. PUIS, DEBRANCHER L'ALIMENTATION DU COFFRET ELECTRONIQUE. VOIR DESSIN CHAPITRE POSITION DE SECURITE.</p>	<p>6. Safety glasses must be worn by all personnel within close proximity to the trap to prevent eye injury from flying target fragments.</p> <p>7. Always keep children and animals away from the trap machine.</p> <p>8. Before turning on any switches, move to a safe position at the left rear of the trap and make sure that no one is within the danger zone in front of the trap. High-speed fragments from broken targets being thrown may fly outside the normal target danger zone, even backwards. (They may even rebound off traphouse sides etc.). When trap is armed and ready for use, always leave the area by keeping to the rear of the machine.</p> <p>9. Before approaching the trap, for any maintenance, adjustments, or for the loading of targets, be sure the trap is turned off with the "ON-OFF-UNCOCK" toggle switch on the electrical control box in the "OFF" position, and the throwing arm is in the "Decocked" 8:45 position.</p> <p>NOTE: TO UNARM THE THROWING ARM AND PLACE THE TRAP IN A SAFE CONDITION, MOVE THE "ON-OFF-UNCOCK" TOGGLE SWITCH, ON THE ELECTRICAL CONTROL BOX, TO THE "UNCOCK" POSITION, THEN TO THE "OFF" POSITION. THE THROWING ARM SHOULD 'FIRE' AND STOP IN THE "UNCOCKED" POSITION OUT IN FRONT OF THE TRAP. THEN DISCONNECT POWER FROM THE ELECTRICAL CONTROL BOX.</p>
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4 INSTRUCTIONS DE DEMARRAGE

4 START-UP INSTRUCTIONS

<p>Ces machines doivent être installées sur une plate-forme en bois ou en béton ou sur le socle multi positions LAPORTE. Fixer fermement la machine sur la base en utilisant la visserie appropriée au type de plate-forme utilisée.</p> <p>1. Installer l'arceau de sécurité (Voir plan)</p> <p>2. Installer le barillet (Voir plan)</p> <p>3. Raccordement électrique Pour les machines en 12 V, respecter les polarités « + rouge » et « - noir ou bleu » sur l'alimentation.</p> <p>4. Raccorder la commande par câble. Brancher la prise blanche 4 plots de la télécommande par câble sur le boîtier déporté à l'endroit "PULL CORD/REMOTE CONTROL", et verrouiller le branchement à l'aide du fermoir.</p> <p>5. Chargement du barillet: Charger d'abord les colonnes arrière du barillet Placer une pile de cibles dans la colonne du barillet en prêtant attention à ne pas les heurter, ni les faire tomber. Enlever les cibles cassées ou fendues et assurez-vous que les cibles ne soient pas collées ensemble. Vérifier que la cible du bas de la pile pose parfaitement sur la plaque support barillet. Continuer de placer des piles de cibles dans cette colonne jusqu'à ce qu'elle soit pleine.</p> <p>6. Comment armer et désarmer la machine</p> <p>1 Utilisation normale (en utilisant un déclenchement à câble)</p> <p>Positionnez l'interrupteur « ON-OFF-UNCOCK » de chaque coffret électrique de chaque machine sur « ON ». Puis, positionnez l'interrupteur « TEST-OFF-ON » du coffre électrique installé sur la Base sur « ON ». La machine s'arme seulement lorsque la personne a quitté la cabane ou se trouve la Twinlap et lorsque l'interrupteur « ON-OFF-UNCOCK » du coffret électrique de sécurité externe est positionné sur « ON ». Alors le voyant de signalisation s'allume et la machine peut être activé à partir de la télécommande Radio.</p>	<p>This trap may be installed on a LAPORTE trolley or a wooden or concrete platform Secure the trap to the base using suitable screws and bolts for the type of platform being used</p> <p>1. Install the safety guard (see notice).</p> <p>2. Install the magazine (see notice).</p> <p>3. Electrical connection (see notice): For the machines in 12V, control the polarities "+" and "-" on the power supply.</p> <p>4. Connect the "Pull Cord". Plug the white 4-pin plug of the cable release onto the control box "PULL CORD/REMOTE CONTROL" and close by the "clip".</p> <p>5. Loading the magazine Firstly load the rear columns of the magazine. Place a pile of clays into the magazine from the top being careful not to break them. Do not let them "fall" into the magazine. Making sure that there are no broken or cracked clays and that they are not stuck together. Check that the last clay in the pile lays perfectly flat on the magazine support base</p> <p>6. HOW TO COCK AND TO UNCOCK</p> <p>1 - Normal functioning (using a release cable)</p> <p>Position the "ON - OFF - UNCOCK" switch on each machine box to "ON". Then, position the "TEST - OFF - ON" switch on the base box to "ON". The machine will only be cocked once the person has left the trap house and when the "ON - OFF - UNCOCK" switch on the external safety control box is positioned to "ON". Then the signal light comes on and the machine can be activated by the remote control. The machine in uncocked by positioning the switch on the external safety control box to "UNCOCK"</p>
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Désarmez la machine en mettant l'interrupteur du coffret électrique de sécurité extérieur sur la position « UNCOCK ».

Fonctionnement dans le Mode « TEST » (après avoir désarmé la machine en mettant l'interrupteur du coffret électrique de sécurité extérieur sur la position « UNCOCK ».)

Laissez l'interrupteur « ON-OFF-UNCOCK » de chaque coffret électrique de chaque machine sur la position « ON ».

Positionnez l'interrupteur « TEST-OFF-ON » du coffret de commande installé sur la Base sur l'emplacement « TEST ». Le voyant lumineux installé sur ce même coffret s'illumine et la machine s'arme immédiatement.

Maintenant il est possible s'activer la machine en appuyant sur le bouton « PULL TEST » installé également sur ce même coffret.

Dans cette position le coffret extérieur de sécurité ainsi que le système Radio ne peuvent pas être utilisés.

La machine peut être désarmé en plaçant les interrupteurs de chaque machine sur la position « UNCOCK ».

MODE DE DECLENCHEMENT

La machine peut être déclenché de différent façons en fonction de la position de l'interrupteur du coffret de Base.

Vous pouvez placer l'interrupteurs sur les positions suivantes :

« DOUBLE-SINGLE RANDOM- SINGLE/ DOUBLE RANDOM »

Pour pouvez alors choisir entre les modes :

- Doublé systématique
- Simple (chaque machine lance à son tour de façon aléatoire)
- Doublé aléatoire (les machines lancent des fois en mode simple (66%) et des fois en doublé (34%)

Tandis que dans les positions « simple aléatoire » ou « simple/ doublé aléatoire », un microprocesseur assure un déclenchement d'un montant équitable entre la machine de gauche et la machine de droite afin de maintenir un poids stable des machines (en relation avec le nombre de cibles déclenchées).

Pour qu'une seule machine fonctionne dans le mode « simple », il faut placer l'interrupteur de la machine sur la position « ON » et sélectionner le mode « DOUBLE SYSTEMATIC ». Parallèlement maintenez l'interrupteur de l'autre machine sur le position « OFF ».

- Functioning in the test mode (after having uncocked the machine using the external safety control box) Leave the "ON - OFF - UNCOCK" switches on each machine control box in the "ON" position.

Position the "TEST- OFF - ON" switch of the base box to "TEST". The signal light on this box will come on and the machine will be cocked directly. It is then possible to start the machine by pushing the "PULL TEST" button on this box. In this position the external safety control box and the remote control cannot be used.

The machine can be uncocked by positioning the switches on each machine to "UNCOCK".

RELEASE MODE :

The machine can be released in different ways according to the position of the "DOUBLE - SINGLE RANDOM - SINGLE/DYNAMIC RANDOM" switch on the base box :

- either systematic double,
- or single (in turn, each machine releases randomly)
- or random double (the machines release sometimes in single (66 %) sometimes in double (34 %)).

Whilst in the "single random" or the "single/double random" position, a microprocessor ensures an equal amount of left machine and right machine releases in order to maintain a stable weight of the machines (according to the clay targets that are thrown).

For one machine only to function in single, position the switch on the machine to "ON" and select the functioning mode "systematic double" (leave the switch on the other machine in the "STOP" position).

Mouvement des BASES (Vertical et Horizontale)

L'Interrupteur « DIRECT-OFF-TIMER » indique les différentes façons dont la Base va tourner.

Dans la position « DIRECT », la base tournera uniquement lorsque la première commande du « PULL » a été effectuée, puis la base continuera d'osciller : la Base va s'arrêter au bout de 7 à 9 secondes si aucune autre commande est donnée.

Lorsque la machine a été mise sur la position « OFF », le mouvement de la Base reste possible.

Dans la position « TIMER », la Base commence à tourner lorsque la première commande du « PULL » a été donnée, puis la Base s'arrête au bout de 9 secondes si aucune autre commande est effectuée.

Si une autre commande est faite pendant les 9 secondes, alors la machine va s'arrêter 0.4 secondes après la commande. L'arrêt se fera d'une durée aléatoire allant de 0.5 à 2.5 secondes.

Puis elle reprend son mouvement pour un autre cycle de 7 à 9 secondes.

La procédure de test est maintenant terminée.

Déconnectez la machine de la source d'alimentation.

MOVING OF THE BASE

The "DIRECT - OFF - TIMER" switch directs the different ways the base moves.

In the "DIRECT" position, the base will only start moving once the first order to "PULL" is given and will keep on moving ; it will stop if no other order is given, after a random time of 7-9 seconds.

In the "OFF" position, no movement is possible.

In the "TIMER" position, the base starts moving once the first order to "PULL" is given and stops moving after 9 seconds if no other order is given in this lapse of time.

If another order is given within 9 seconds, the machine will stop moving 0.4 seconds after the order, for a random lapse of time (from 0.5 to 2.5 seconds), and will start again once this time is over for another cycle of 7-9 seconds.

The testing procedure is now complete.

Disconnect the machine from the power supply.

5 ANOMALIES DE FONCTIONNEMENT

5 TROUBLE SHOOTING

ATTENTION: AVANT DE PROCEDER A DES CHANGEMENTS OU DES REGLAGES, ASSUREZ-VOUS QUE LE BRAS DE LANCEMENT EST EN POSITION DESARMEE ET QUE LA MACHINE EST DECONNECTEE DE LA SOURCE D ALIMENTATION.

1. LE MOTEUR D'ARMEMENT NE FONCTIONNE PAS

La prise n'est pas branchée

Le disjoncteur est sur « OFF » ou le fusible a sauté. Positionner l'interrupteur "ON-OFF-UNCOCK" du coffret électronique sur la position "OFF". Soulever le couvercle du coffret et vérifier les fusibles. Si les fusibles continuent de griller, vérifier les câblages et l'alimentation pour localiser la cause avant de continuer.

La puissance électrique est insuffisante (vérifier avec un multimètre : 12 V, 110 V, ect....).

Les connections électriques sont sales ou desserrées.

Le moteur d'armement est grillé.

Le raccordement électrique est non conforme (voir instructions de démarrage).

Uniquement si la machine est désarmée :

La vis d'armement est en contact direct avec la vis d'armement. Le moteur n'aura pas suffisamment de puissance initiale pour amener le bras de lancement dans la position armée et le disjoncteur (ou fusible) va éventuellement sauter. Pour corriger cela, pousser le bras de lancement dans le sens contraire au aiguilles d'une montre d'environ 1.5 cm. Repasser à la position « ON » et réessayer.

La carte électronique est grillée.

2. LE MOTEUR TOURNE MAIS N'ARME PAS LE BRAS DE LANCEMENT

La puissance électrique n'est pas adéquate. (vérifier avec le multimètre : 12 V, 110V etc).

Le bras de lancement est bloqué. (**INTERVENIR AVEC EXTREME PRECAUTION !**)

La chaîne est cassée.

La vis d'armement du réducteur est cassée.

L'engrenage du réducteur est hors service (le moteur tourne mais le pignon d'armement ne tourne pas).

L'axe d'entraînement du tirant à œil de l'axe d'armement est cassé.

L'axe d'armement est cassé.

CAUTION: BEFORE MAKING ANY CHANGES OR ADJUSTMENTS MAKE SURE THE THROWING ARM IS IN THE SAFE UNCOCKED POSITION.

1. THE COCKING MOTOR WILL NOT START

Electricity is not connected.

The circuit breaker is off or the fuse has blown. Move the switch marked "ON-OFF-UNCOCK" on the electrical control box to the "OFF" position. Remove the cover of the control box and check the fuses. If the fuse continues to blow, check the wiring and the power supply to locate the cause before continuing.

The electricity supply is insufficient (check with a 12v multimeter)

Electrical connections are dirty or loose.

The cocking motor has burnt out.

The electrical connections do not comply (see Start-Up Instructions).

Only proceed if the machine is uncocked :

The arming screw is in direct contact with the arming spindle.

The motor does not have enough power to bring the throwing arm into the armed position and the short circuit (or fuse) will eventually blow. To correct this, push the throwing arm is an anti-clockwise direction by about 1.5cm. Re-start from the position "ON" and try again.

The electronic card has blown.

2. THE MOTOR TURNS BUT DOES NOT COCK THE THROWING ARM

The electricity supply is not sufficient (check with a 12v multimeter).

The throwing arm is blocked. (**INTERVENE WITH EXTREME CAUTION!**)

The chain is broken.

The gearbox toothed wheel mechanism does not work (the motor turns but the arming axe does not turn).

The axe between the main spindle and the threaded eye bolt is broken.

The main spindle is broken.

<p>3. LA MACHINE ARMEE NE DECLENCHE PAS</p>	<p>3. THE MACHINE IS COCKED BUT DOES NOT FIRE</p>
<p>Il n'y pas d'alimentation. Le ressort d'armement est cassé.</p>	<p>There is no electrical supply The main spring is broken.</p>
<p>Le bouton "Pull" ou l'appareil de déclenchement à distance ne fonctionne pas.</p>	<p>The "Pull" switch or remote release system is not working.</p>
<p>La batterie pour l'émetteur de la radio commande en option est déchargée et demande à être remplacée.</p>	<p>The battery in the Optional Radio Control transmitter is flat or exhausted, and needs replacing.</p>
<p>L'interrupteur "ON-OFF-UNCOCK" est en position "OFF".</p>	<p>The switch on the "ON-OFF-UNCOCK" is in the "OFF"position.</p>
<p>Le bras de lancement est bloqué par 2 cibles, ou par des pigeons cassés. ATTENTION : Le bras de lancement appuie trop FORTEMENT sur les cibles. Désarmer la machine en utilisant le "désarmement manuel", soyez très PRUDENT, car le bras de lancement va se relâcher TRES vite. La (es) cible(s) sur la plaque de lancement vont probablement voler en éclats dans TOUTES les directions.</p>	<p>The throwing arm is blocked by two clays or by fragmented clays. WARNING: The throwing arm will be pressing against the targets with TREMENDOUS PRESSURE. Uncocking the trap using "Manual Uncocking", be EXTREMELY CAUTIOUS, as the throwing arm will release VERY fast. The clay(s) on the throwing plate will most probably shatter throwing target fragments in all directions.</p>
<p>Le bras de lancement est tordu ou cassé et coincé contre une partie de la machine, c.à.d. une vis ou la base du barillet. CECI EST TRES DANGEREUX! Comme vous ne pouvez pas désarmer la machine, le bras doit être enlevé... Appeler LAPORTE.</p>	<p>The throwing arm is bent or broken and subsequently jammed against some part of the trap, e.g. the mobile throwing plate, the magazine base. THIS IS A VERY DANGEROUS CONDITION! As you cannot "re-arm" the machine. The arm will have to be removed.... Call LAPORTE for help.</p>
<p>AVEC ELECTRO- AIMANT (skeet, FO, ...):</p>	<p>WITH SOLENOID (Skeet, OT, ...):</p>
<p>La pression exercée sur la gâchette par le bras de Lancement est trop importante. Il est nécessaire de régler l'arrêt du bras. --12v, 220v, et 380v : agir sur le potentiomètre situé sur la carte électronique. --110v : agir sur le support micro- contact en le déplaçant vers la gauche lorsque la machine est vue de l'arrière.</p>	<p>There is too much pressure by the arm on the trigger. Adjust the stopping of the arm. - 12V, 220V and 380V: adjust the potentiometer on the electronic card. - 110V: adjust the micro-switch support by moving it to the left from a rear view of the machine.</p>
<p>ATTENTION : afin de désarmer manuellement une Machine équipée d'une gâchette, exercer une Pression sur le noyau de l'électro- aimant. Avant toute manipulation, positionner l'interrupteur sur « OFF » (faire attention aux éclats de pigeon eventuels).</p>	<p>WARNING: In order to manually disarm a machine with a solenoid, press on to solenoid core. Before any intervention, position the switch to "OFF" (be careful of eventual clay bits being thrown)</p>
<p>4. LE BRAS DE LANCEMENT NE S'ARRETE PAS ET LANCE DES CIBLES.</p>	<p>4. THE THROWING ARM DOES NOT STOP DECOCKING AND THROWING TARGETS.</p>
<p>Le micro-contact d'armement est cassé ou déréglé, et oblige le moteur d'armement à fonctionner en continu. Le relais est défectueux (il reste collé) DANGER LA MACHINE CONTINU A LANCER DES PLATEAUX MEME EN POSITION OFF .Il faut déconnectée la machine de la source d'alimentation.</p>	<p>The cocking micro-switch is broken or out of adjustment, and causes the cocking motor to run continually. The relay is defective and sticks. WARNING: THE MACHINE CONTINUES TO THROW CLAYS EVEN WHEN SWITCHED OFF. It is imperative to disconnect the power supply.</p>

<p>Le bouton "PULL" est bloqué ou le câble est abîmé. Le bouton de transmission de l'émetteur radio commande en position est continuellement enclenché (ex dans la boîte à outils, un tiroir de bureau, la poche, un étui à fusils, etc.). Vérifier en débranchant le récepteur de la télécommande depuis le coffret électronique.</p> <p>Un autre émetteur radio pourrait être réglé sur la même fréquence que le récepteur et déclencherait la machine. Vérifier en débranchant le récepteur de la radio-commande du coffret électronique.</p> <p>Le circuit électrique du boîtier de commande peut avoir "grillé".</p>	<p>The "PULL" button is stuck, or the cable is damaged. The button on the radio remote control is continually press (e.g. in a tool box, office drawer, pocket etc). Check by disconnecting the receiver of the radio remote from the electronic control box.</p> <p>Another radio transmitter could be adjusted to the same frequency as the receiver and operate the machine. Check by disconnecting the receiver of the radio remote from the electronic control box.</p> <p>The electronic circuit on the control box could have "blown".</p>
<p>AVEC ELECTRO- AIMANT (skeet, FO, ...):</p> <p>La gâchette reste en position ouverte : -le noyau de l'électro- aimant est coincé. -le ressort de rappel de la gâchette est défectueux ou n'est pas en place.</p> <p>La gâchette au repos n'est pas sur la trajectoire du bras : vérifier la vis de blocage du support gâchette (support électro-aimant)</p>	<p>WITH SOLENOID (Skeet, OT,....)</p> <p>The trigger stays in an open position : - the solenoid core is stuck. - the trigger spring is defective or is not in the correct position</p> <p>The fired trigger is no on the trajectory of the arm: check the blocking screw on the trigger support (solenoid support)</p>
<p>5. BRUITS ANORMAUX</p> <p>Vérifier le serrage des boulons.</p> <p>Le ressort d'armement est détendu et les spires se touchent entre elles : il est impératif lorsque le ressort est détendu à fond, que les spires ne se touchent pas. Dans le cas contraire, cela pourrait causer la rupture du corps principal !</p> <p>Le réducteur manque d'huile.</p> <p>Anti-retour détérioré ou cassé.</p> <p>Le bras de lancement est tordu et frotte sous la plaque SB (Support Barilet) ou sur la plaque de lancement.</p> <p>La plaque de lancement peut être desserrée.</p> <p>L'axe arrière du barilet manque de lubrification.</p>	<p>5. ABNORMAL NOISES</p> <p>Check all bolts for tightness.</p> <p>The mainspring does not have sufficient tension on it, and the coils are touching each other: it is imperative that when the spring is totally loose, the coils do not touch. If they do, this could break the main body.</p> <p>The one way bearing is worn out or damaged.</p> <p>The throwing arm is bent and scrapes on the underside of the magazine support base plate or on the throwing plate.</p> <p>The throwing plate could be loose.</p> <p>The magazine spindle needs greasing.</p>
<p>6. LES CIBLES CASSENT AU LANCEMENT</p> <p>Les cibles étaient cassées avant le chargement.</p> <p>Les cibles se sont cassées pendant le chargement.</p> <p>Cibles mélangées (différents diamètres c.à.d. 107-109-110 mm).</p> <p>La réglette est détériorée ou cassée.</p> <p>Le bras de lancement est tordu. Il peut être redressé sans le démonter en vérifiant que la réglette se trouve toujours à même distance de la plaque de lancement tout au long de sa rotation. Désarmer le bras de lancement et retirer le ressort d'armement avant toute vérification ou réglage.</p> <p>La plaque de lancement est endommagée. Vérifier si les bords de la plaque ont été déformés et poncer si nécessaire.</p> <p>La plaque de lancement est sale, ou il y a du brai résultant du mauvais positionnement de la cible à l'armement, la nettoyer avec du solvant ou la poncer.</p>	<p>6. THE TARGETS BREAK IMMEDIATELY WHEN FIRING</p> <p>The targets were damaged prior to loading.</p> <p>The targets were damaged during loading.</p> <p>Mixed targets (different diameters in it stack i.e. 107-109-110mm)</p> <p>The rubber is damaged or worn.</p> <p>The throwing arm is bent. It can be straightened without removing it. Check that the rubber is always at the same distance from the throwing plate. Uncock the throwing arm and take out the mainspring before this inspection and adjustment.</p> <p>The throwing plate is damaged. Check edges of plate for 'nicks' and file smooth if necessary.</p> <p>The throwing plate is dirty or has clay target pitch build up resulting in the target not being positioned correct at cocking time. Clean with solvent or sand it.</p>

<p>La plaque de lancement est desserrée. Vérifier qu'il n'y a pas d'obstruction à la trajectoire du plateau L'arceau de sécurité est tordu et interfère avec la trajectoire de la cible. Un éclat de cible est coincé sur la plaque de lancement ou toile amortisseur.</p>	<p>The throwing plate is loose. Check that there is nothing in the way of the target trajectory. The safety guard is bent and gets in the way of the clay flight path. A piece of broken clay is lodged on the throwing plate or shock absorbing plate.</p>
<p>Le bras n'est pas en contact avec la cible et quand la machine tire, le bras se rabat sur la cible et la détruit. Lors d'un armement correct, la réglette doit être impérativement en contact avec la cible avant le lancement. L'anti-retour est détérioré et provoque des vibrations dues à l'oscillation combinée du bras et du ressort. L'anti-retour, sur l'axe d'armement, a du jeu dans son logement. Le ressort d'armement n'est pas bien réglé, ou le silent bloc n'est pas installé correctement. Vérifier TOUTES les causes de la Section ci-dessous.</p>	<p>The arm is not in contact with the clay and when the machine fires, the arms hits against the clay and breaks it. The rubber should always be against the clay before the machine fires. The one-way bearing is damaged and causes vibrations. The bearing on the arming axe has play. The arming spring is not correctly fitted, or the silent bloc is not correctly installed. Check ALL the causes in section 8 below.</p>
<p>AVEC ELECTRO- AIMANT (skeet, FO, ...):</p> <p>L'électro-aimant est defectueux. Le fusible électro-aimant est hors service (sauf 12v). IMPORTANT : débrancher l'alimentation avant toutes opérations. ATTENTION : afin de désarmer manuellement une Machine équipée d'une gâchette, exercer une Pression sur le noyau de l'électro- aimant. Avant toute manipulation, positionner l'interrupteur sur « OFF » (faire attention aux éclats de pigeon eventuels).</p>	<p>The solenoid is defective. The solenoid fuse has “blown” (except 12v). IMPORTANT: Unplug the power supply before any adjustments WARNING: In order to manually disarm a machine with a solenoid, press on to solenoid core. Before any intervention, position the switch to “OFF” (be careful of eventual clay bits being thrown)</p>
<p>7. LES CIBLES TOMBENT CASSEES SUR LA PLAQUE</p> <p>BARILLET 6 COLONNES : Les cibles étaient cassées avant le chargement. Les cibles se sont cassées pendant le chargement. La plaque SB (Support Barillet) est sale, abîmée ou tordue. Vérifier que la tôle amortisseur soit libre et qu'elle puisse vibrer. Les ressorts lames inox 6c sont endommagés, ou mal ajustés (trop durs). Les couteaux de séparation pigeons sont mal réglés.</p>	<p>7. TWO CLAYS FALL AND BREAK ON THE PLATE</p> <p>6 COLUMN MAGAZINE The clays were broken before being loaded. The clays were broken while loading. The magazine support plate is dirty, damaged or bent. Check that the shock absorbing plate is free and can vibrate. The 6c target retainer leaf spring are damaged or incorrectly adjusted (too hard). The clay separator knives are incorrectly adjusted.</p>
<p>BARILLET 12 COLONNES : Les couteaux de séparation pigeons sont mal réglés.</p> <p>8. IL TOMBE 2 CIBLES DU BARILLET EN MEME TEMPS</p> <p>BARILLET 6 COLONNES : Cibles mélangées (différents diamètres c.à.d. 107-109-110mm) Les lames inox 6c sont abîmées ou desserrées ou la pression des lames est insuffisante.</p>	<p>12C MAGAZINE The clay separator knives are incorrectly adjusted.</p> <p>8. TWO CLAYS FALL FROM THE MAGAZINE AT THE SAME TIME</p> <p>6C MAGAZINE Mixed clays (different diameters in same stack i.e. 107-109-110mm)</p>

<p>La position de l'embase barijet est trop haute par rapport à la plaque sb (la surface de contact entre le caoutchouc des lames inox et le pigeon est insuffisante)</p> <p>BARILLET 12 COLONNES :</p> <p>Cibles mélangées (différents diamètres c.à.d. 107-109-110mm)</p> <p>Vérifier que les deux couteaux séparateur soit correctement serrer.</p> <p>9. LES CIBLES NE TOMBENT PAS DU BARILLET</p> <p>Les cibles restent collées entre elles, veiller à décoller les piles avant de les mettre dans le barijet.</p> <p>Cibles mélangées (différents diamètres c.à.d. 107-109-110mm)</p> <p>Les tiges du barijet sont abîmées ou tordues et réduisent le jeu latéral autour de la pile de cibles.</p> <p>les lames inox 6 col sont tordues ou vrillées et bloquent la première cible et empêche la colonne de cibles de descendre.</p> <p>La plaque SB est endommagée.</p> <p>Le barijet est vrillé.</p> <p>Le doigt de barijet n'entraîne pas le barijet ou son ressort est endommagé ou mal réglé.</p> <p>Vérifier la pression du doigt et sa lubrification.</p> <p>10. LE MOUVEMENT HORIZONTAL ET/OU VERTICAL NE FONCTIONNE PAS.</p> <p>Avant toutes manipulation, désarmé la machine puis débrancher l'alimentation électrique.</p> <p>Vérifié le ou les fusibles situés sur la carte partie basse.</p> <p>Vérifié qu'aucun obstacle n'interfère avec les différents mouvements.</p>	<p>The 6c target retainer leaf spring are damaged or loose or the pressure on the "springs" is insufficient.</p> <p>The position of the magazine base is too high with regards the magazine support base plate (the contact area between the target leaf rubber and the clay is insufficient).</p> <p>12 COLUMN MAGAZINE</p> <p>Mixed clays (different diameters in same stack i.e. 107-109-110mm)</p> <p>Check that the two knife separators are tightened correctly.</p> <p>9. THE TARGETS DO NOT COME OUT OF THE MAGAZINE</p> <p>The targets are stuck together. Separate them before putting them in the magazine.</p> <p>Mixed targets. (Different diameters in same stack i.e. 107-109-110mm)</p> <p>Magazine rods are damaged or bent and are restricting the vertical movement of the target stack.</p> <p>The 6c target retainer leaf springs are bent or twisted thus blocking the first clay and prevent the column of clays from falling down.</p> <p>The magazine support base is damaged.</p> <p>The magazine is twisted.</p> <p>The indexing finger does not move the magazine or its spring is damaged of incorrectly adjusted.</p> <p>Check the pressure of the indexing finger and its lubrication.</p> <p>10. THE HORIZONTAL AND/OR VERTICAL MOVEMENT DOES NOT FUNCTION.</p> <p>Before any adjustments, disarm the machine and switch off the power supply.</p> <p>Check the fuses on the lower card.</p> <p>Check that there is no obstacle interfering with the different movements.</p>
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SAFETY FIRST TWINLAP 285

SECURITE TWINLAP 285

DANGER - CES MACHINES PEUVENT CAUSER DE SERIEUSES BLESSURES !
LISEZ LES INSTRUCTIONS COMPLÈTEMENT AVANT D'ESSAYER D'INSTALLER OU D'UTILISER LA MACHINE!

NOTE : LA 285 COMPORTE DEUX MACHINES. EN TRAVAILLANT SUR LA 285, RAPPElez-VOUS QU'IL Y A DEUX BRAS DE LANCEMENT ET LES PRÉCAUTIONS DÉTAILLÉES DE CE MANUEL S'APPLIQUENT AUX **DEUX** MACHINES.
 LES INSTRUCTIONS CONCERNANT LA SÉCURITÉ S'APPLIQUENT AUX DEUX MACHINES.
VÉRIFIER TOUJOUR QUE LES DEUX BRAS SOIENT DESARMÉS UN-COCKED !!!

1 Avant d'installer la Twinlap, de brancher le courant, de charger les barillets, ou de procéder aux réglages, assurez vous que LES bras de lancement sont en position de sécurités (fig. 1), et que les prises sont déconnectées. Utilisez le bouton "UNCOCK" puis le placez dans la position OFF.

Vérifiez que les boîtes de contrôle électriques soient déconnectées de la source d'énergie électrique.

DANGER - THESE MACHINES CAN CAUSE SERIOUS INJURY !
READ INSTRUCTIONS THOROUGHLY BEFORE ATTEMPTING TO INSTALL OR OPERATE !

NOTE: THE 285PC COMPRISSES TWO MACHINES. WHEN WORKING ON THE 285PC, REMEMBER THERE ARE TWO THROWING ARMS AND THE CAUTIONS DETAILED THOUGHOUT THIS MANUAL APPLY TO BOTH MACHINES. WHEN CHECKING THE MACHINE IS SAFE TO WORK ON, THE INSTRUCTIONS REGARDING SAFETY APPLY TO BOTH MACHINES. WHEN TOLD TO CHECK THE ARM IS UN-COCKED, CHECK BOTH ARMS ARE UN-COCKED !!!

1 Before installing trap, connecting power, lubricating, loading or making any adjustments be sure that the throwing arms are in the safe, uncocked position (**Fig. 1**), or that the main springs are disconnected, the "ON-OFF-UNCOCK" toggle switches on the "Remote Safety Switch" and on each individual control box are in the "OFF" position, the switch marked "TEST-OFF-ON" on the Master Control box is in the "OFF" position, and the electrical control boxes are disconnected from the power source.

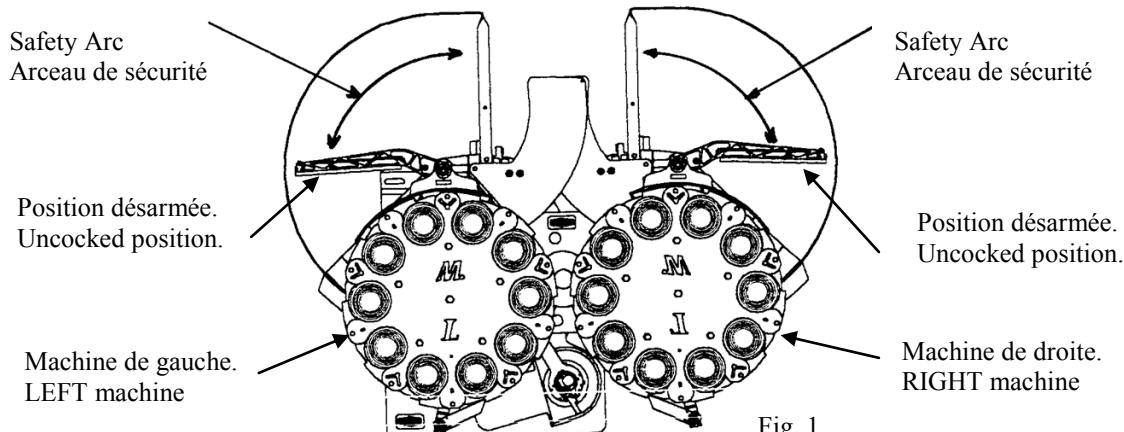


Fig. 1

DANGER : SI VOUS AVEZ REÇU La 285 AVEC LE BRAS DE LANCEMENT EN POSITION ARME.

DANGER !!! Référez vous au chapitre désarmement de ce manuel.

Le non respect des consignes peut avoir des graves conséquences corporelles.

DANGER: IF YOU HAVE RECEIVED THE TRAP WITH THE THROWING ARM COCKED -- STOP!! -- REFER TO THE "MANUAL UNCOCKING" SECTION OF THIS MANUAL BEFORE PROCEEDING. FAILURE TO DO SO MAY RESULT IN SERIOUS PERSONAL INJURY OR DAMAGE TO THE TRAP.

NOTE : En parlant des deux traps 285, les traps gauches et droites sont mentionnées vues de l'arrière de la machine. Se tenant derrière la machine, la trap GAUCHE est du côté gauche, la trap DROIT est du côté droit.

La position désarmée " Uncocked" mentionné dans ce manuel se rapporte à la position du bras de lancement.

Quand la machine de GAUCHE est désarmée " Uncocked", le bras de lancement est visible à gauche de la machine, (vu de derrière). Désarmé le bras sera visible en position de 8h45.

Quand la machine de DROITE est désarmée " Uncocked" le bras de lancement est visible à droite de la machine (vue de derrière). Le bras sera visible en position de 3h15.

Quand les machines sont livrées les bras seront le plus probablement dans la position " Sécurité ". Vu à partir du dessus, le bras sera à l'avant de la plaque de lancement. Sur la machine GAUCHE ce sera en position de 2h10 et sur la machine DROITE ce sera en position de 9h50.

EN RÈGLE GÉNÉRAL SI VOUS NE POUVEZ PAS CLAIREMENT VOIR LE BRAS DE LANCEMENT EN POSITION STATIONNAIRE DEVANT LA MACHINE, SUPPOSEZ QUE LA MACHINE EST " ARMEE " ET DANGEREUSE !!!

2. Tout le personnel requis pour l'utilisation de cette machine, ou pour charger les cibles, devrait lire ce manuel d'instruction et être formé par quelqu'un bien informé pour utiliser ces machines en toute sécurité.
3. Ne laissez pas la machine armée si elle n'est pas utilisé. Non seulement cette pratique est très dangereuse, mais cela aura pour effet de détendre le ressort d'armement.
4. **Seule une personne devrait actionner la 285 en même temps.**
5. N'actionnez pas la 285 sans arceau de sécurité installé sur la machine comme illustré dans ce manuel. Cet arceau de sécurité définit la zone dangereuse de la rotation du bras de lancement.
6. Ne soulevez pas la 285 par le bras de lancement ou l'arceau de sécurité. Ne vous penchez pas sur l'arceau de sécurité et ne posez pas de poids dessus. tel que la boîte de cibles.

NOTE: When talking about the two traps, the LEFT and RIGHT traps are referred to from the rear of the machine. If standing behind the machine, the LEFT trap is on the left, the RIGHT trap is on the right.

The "De-cocked" position mentioned throughout this manual refers to the position of the throwing arm. When the LEFT trap is "De-cocked", the throwing arm is visible out in front, to the left of the trap when viewed from behind. If looking down on the trap from the rear, the "De-cocked" arm will be visible in approximately the 8:45 position. When the RIGHT trap is "De-cocked", the throwing arm is visible out in front, to the RIGHT of the trap when viewed from behind. If looking down on the trap from the rear, the "De-cocked" arm will be visible in approximately the 3:15 position.

When the traps are delivered the arms will most probably be in the "Safe Delivery" position. Viewed from the top the arm will be laying across the throwing plate. On the LEFT machine this will be in the 2:10 position and on the RIGHT machine this will be in the 9:50 position.

A GENERAL GOOD RULE IS: IF YOU CANNOT CLEARLY SEE THE THROWING ARM IN A STATIONARY POSITION OUT IN FRONT OF THE TRAP, ASSUME THE TRAP IS "COCKED" AND DANGEROUS!!!.

2. All personnel required to operate the trap, or load targets into the magazine, should read this instruction manual and be trained by someone knowledgeable as to the safe operation of the equipment.
3. Do not leave trap cocked when not in use. Not only is this practice very hazardous, but, as the mainspring is stretched its useful life will be shortened.
4. **Only one person should operate the trap at any one time.**
5. Do not operate the trap without the safety guard ring installed on the trap as illustrated in this manual. This safety guard defines the danger zone of the throwing arm rotation.
6. Do not lift or move the trap by the throwing arm or the safety guard. Do not lean on the safety guard or place any weight on it such as box of targets.

7. Des verres de sûreté doivent être portés par tout le personnel qui ce trouve à proximité du lanceur, pour empêcher d'éventuels lésion oculaire due aux fragments de cible qui vol.

8. Gardez toujours les enfants et les animaux éloignés de la machine.

9. Avant de mettre en marche tous les interrupteurs, placez-vous dans une position sûre à l'arrière gauche du lanceur et assurez-vous que personne n'est dans la zone dangereuse devant le lanceur. Les fragments de cibles cassées étant propulsées à très grande vitesse, peuvent voler en dehors de la zone dangereuse normale des cibles, même vers l'arrière. (Ils peuvent même rebondir les côtés des cabanes etc.). Quand le lanceur est utilisé, laissez toujours de la place derrière la machine.

10. Avant d'approcher le lanceur, pour tous les entretien, ajustements, ou pour le chargement des cibles, vérifié que le lanceur soit arrêté avec le bouton " UNCOCK " et le placer dans la position " OFF ", le bras de lancement est dans la position " Désarmé ".

Également si la télécommande par radio facultatif est installé, assurez vous que:

Le contrôle par radio est en votre possession, c.-à-d. personne ne peut actionner le lanceur tandis que vous vous approchez.

Le code de fonctionnement doit être unique à ce lanceur c.-à-d. qu'aucun autre contrôle par radio n'a le même code à positions multiples.

NOTE : POUR DESARMER LE BRAS DE LANCEMENT ET PLACER LA MACHINE EN SECURITE, METTRE L'INTERRUPTEUR "ON-OFF-UNCOCK" DU COFFRET ELECTRONIQUE EN POSITION DESARMEE « UNCOCKED » PUIS EN POSITION « OFF ». LE BRAS DE LANCEMENT DOIT S'ARMER ET S'ARRETER DANS LA POSITION « DESARMEE » A L'AVANT DE LA MACHINE. PUIS, DEBRANCHER L'ALIMENTATION DU COFFRET ELECTRONIQUE.

VOIR DESSIN CHAPITRE POSITION DE SECURITE.

7. Safety glasses must be worn by all personnel within close proximity to the trap to prevent eye injury from flying target fragments.

8. Always keep children and animals away from the trap machine.

9. Before turning on any switches, move to a safe position at the left rear of the trap and make sure that no one is within the danger zone in front of the trap. High speed fragments from broken targets being thrown, may fly outside the normal target danger zone, even backwards. (They may even rebound off trap-house sides etc.). When trap is cocked and ready for use, always leave the area by keeping to the rear of machine.

10. Before approaching the trap, for any maintenance, adjustments, or for the loading of targets, be sure the trap is turned off with the "ON-OFF-UNCOCK" toggle switch on the "Remote Safety Switch" in the "OFF" position, and the throwing arm is in the "De-cocked" position.

Also if the optional radio remote control is installed, ensure:

Radio control is in your possession, i.e. no one can fire the trap while you are approaching.

The operating code is set unique to this trap i.e. no other radio control has the same DIP switch setting.

NOTE: TO DECOCK THE THROWING ARMS AND PLACE THE TRAPS IN A SAFE CONDITION, MOVE THE "ON-OFF-UNCOCK" TOGGLE SWITCH, ON THE "REMOTE SAFETY SWITCH", TO THE "UNCOCK" POSITION, THEN TO THE "OFF" POSITION. THE THROWING ARMS SHOULD 'FIRE' AND STOP IN THE "UNCOCKED" POSITION OUT IN FRONT OF THE TRAP. THEN DISCONNECT POWER FROM THE ELECTRICAL CONTROL BOX. IF THE THROWING ARMS DO NOT MOVE, THERE MAY BE A PROBLEM AND YOU SHOULD REFER TO THE FAULT-FINDING SECTION DESCRIBED LATER IN THIS MANUAL BEFORE PROCEEDING.

INSTALLATION INSTRUCTIONS

INSTRUCTIONS D'INSTALLATION

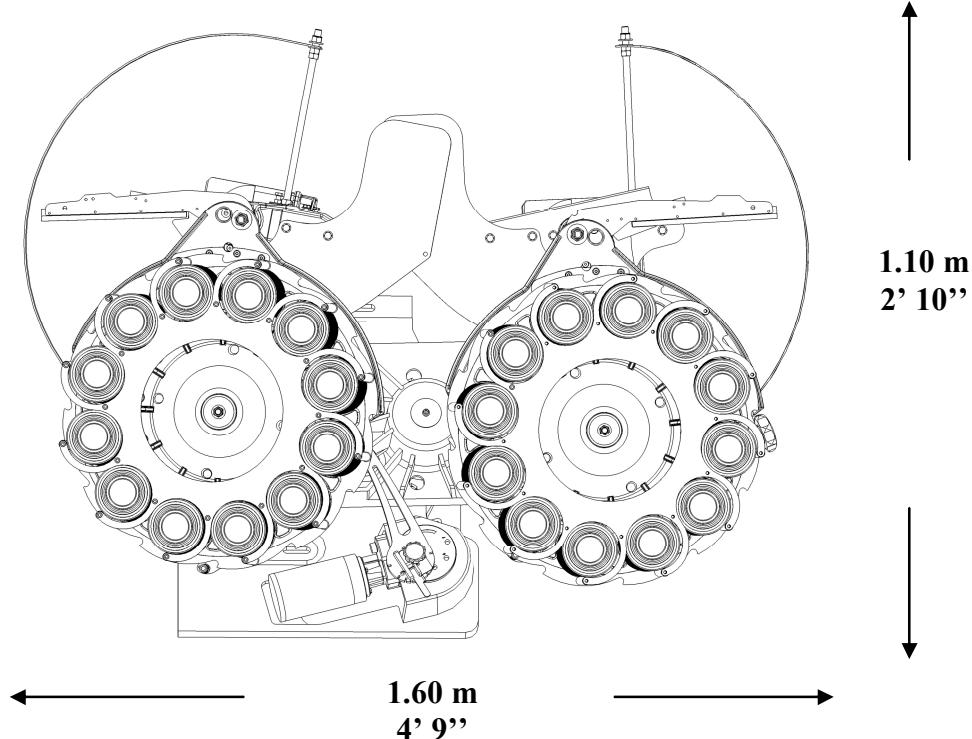
1. La Trap 285 peut être installé sur une plate-forme en bois ou en béton. (Voir la fig. 2) pour les dimensions hors-tout de la machine et de la position des vis de fixation.

2. Si vous utilisez une plate-forme déjà existante, enlevez tous les boulons de fixation de la machine précédente. NOTE : Si vous remplacez une machine d'une autre marque, la base du 285PC a été conçue de sorte que la base de la machine s'adapte exactement sur l'ancienne plate-forme, utilisant les boulons existants. MAIS, assurez que la base existante est en bon état, et que les boulons sont dans un bon état. Assurez-vous également que les vis existantes ne sont pas trop longues afin qu'il n'y ai pas d'interférence avec l'unité centrale tournante du 285PC.

1. The 285PC trap may be installed on a wooden or concrete platform. (**See Fig. 2**) for the overall dimensions of the trap and the mounting bolt hole position.

2. If you use an existing mounting platform, remove all mounting bolts or brackets from the previous machine. NOTE: If you are replacing an existing Western Trap machine, the base of the 285PC has been designed so that the trap base will fit exactly on the old Western mounting platform, using existing bolts. **BUT**, ensure the existing base is in good condition, and the bolts are in a good useable state with no damage to the threads. Also ensure the existing bolts are not too long causing a possible interference problem with the rotating base unit of the 285PC.

Fig. 2



3. Nettoyez le secteur et laissez un espace suffisant pour le déplacement de la machine 285.

4. Inspectez tous le réseau électrique existant que vous avez l'intention d'utiliser, assurez vous qu'il est en bon état, et qu'il corresponde au normes électriques local.

3. Clean the area and provide ample working room to install the new 285PC.

4. Inspect any existing electrical wiring you intend to use, to ensure it is in good condition, it is adequately sized and that it meets all current Federal, State and Local Electrical codes.

PRÉCAUTION : NE SOULEVEZ PAS OU NE DÉPLACEZ PAS LA MACHINE PAR LE BRAS DE LANCEMENT.

5. Soulevez délicatement la base pivotante et placez la base 285PC sur la plate-forme en béton.
6. Fixez la base 285PC utilisant les boulons de fixation appropriés et les d'écrou freins appropriés pour le type de plate-forme employée.
7. Montez La machine de DROITE sur la base 285PC. Serrez l'écrou à l'avant.
8. À l'arrière de l'embase de la machine il y a trois positions (0° - 11° - 22°). Placez La machine dans l'emplacement prévue.
Poussez la molette noire dans sa position voulue et vissez la molette fermement pour fixer la machine. (Voir la fig. & de 3a ; 3b)
9. Répétez les instructions ci-dessus (& 7 ; 8) pour la machine de GAUCHE.

Référez-vous aux instructions de démarrage pour lancer un plateau et vérifier la trajectoire.

CAUTION: DO NOT LIFT OR MOVE THE TRAP BY THE THROWING ARM, AS IT WILL BE DAMAGED AND HAVE TO BE REPLACED.

5. Carefully lift and set the 285PC base on the mounting platform.
6. Secure the 285PC base using suitable mounting bolts and appropriate lock-washers for the type of platform being used.
7. Mount the RIGHT trap onto the 285PC base. Tighten down the front lock-nut, then loosen one half turn to enable the rear of the trap to be moved from side to side.
8. At the rear of the trap base plate are three "cut-outs" (0 - 11 - 22). Move the trap so that the " 0 " cut-out is in line with the Black Turn-screw protruding from the 285PC base. Push the Black Turn-screw up into its locked position and screw it down thus holding the trap secure. (See Fig. 3a & 3b)
9. Repeat the above instructions (7 & 8) for the LEFT trap.

Refer to start-up instructions to complete the trap

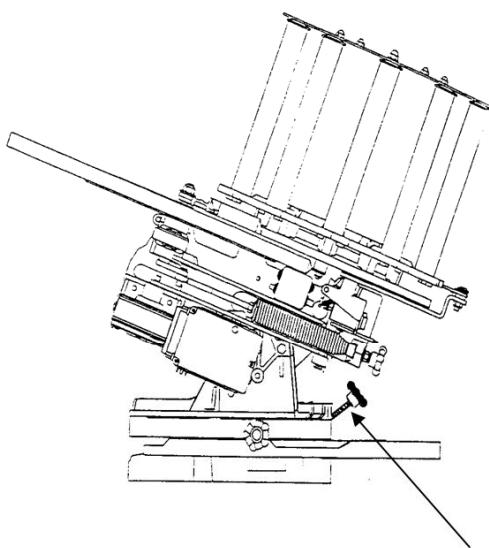


FIG: 3A

Vissez la molette
Turnscrew

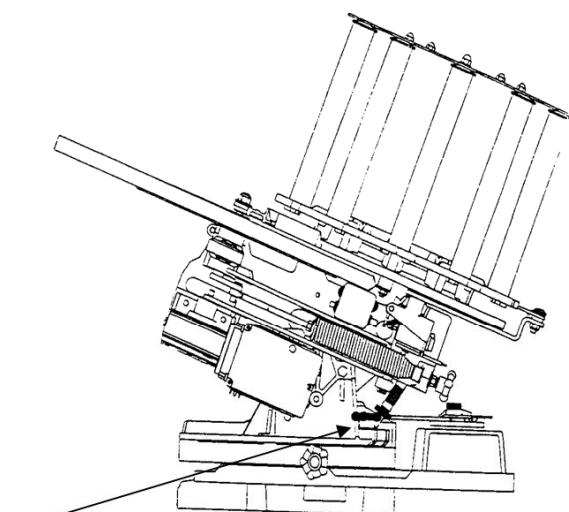


FIG: 3B

START-UP INSTRUCTIONS INSTRUCTIONS DEMARRAGE

1 Installez les arceaux de sécurité du bras de lancement:

Placez les deux sections des Arceaux de sécurité suivant les indications de (fig. 4) ci-dessous.
Serrez les deux boulons (A et B) située sur le corps du lanceur, et la tige filetée m12x 450 à l'avant sous la plaque de lancement.
Répétez l'opération pour le lanceur de DROITE.

PRÉCAUTION : ASSUREZ VOUS QUE L'ARCEAU DE SÉCURITÉ EST PLACÉE AU-DESSOUS DU NIVEAU DE LA PLAQUE DE LANCEMENT : ASSUREZ VOUS ÉGALEMENT QUE LES ARCEAUX DE SÉCURITÉ FORMENT UNE COURBE LISSE ET QU'ILS NE SONT PAS PLIÉS NI TORDUS.

SI LES TROUS DE MONTAGE DANS LA GARDE DE SÉCURITÉ N'ALIGNENT PAS AVEC LES BOULONS ILS SONT DE PLACER DESSUS, NE FORCENT PAS LA GARDE DE SÉCURITÉ À S'ADAPTER CAR LE SERVICE INFORMATIF QUE PEUT ÊTRE ENDOMMAGÉ ET PAS FONCTION UNE FOIS INSTALLÉ.

NE PAS INSTALLER CORRECTEMENT LES ARCEAUX DE SECURITE PEUT AVOIR COMME CONSÉQUENCE DES DOMMAGES AU LANCEUR OU DES DOMMAGES CORPOREL SÉRIEUX.

1 Install the throwing arm safety guards:

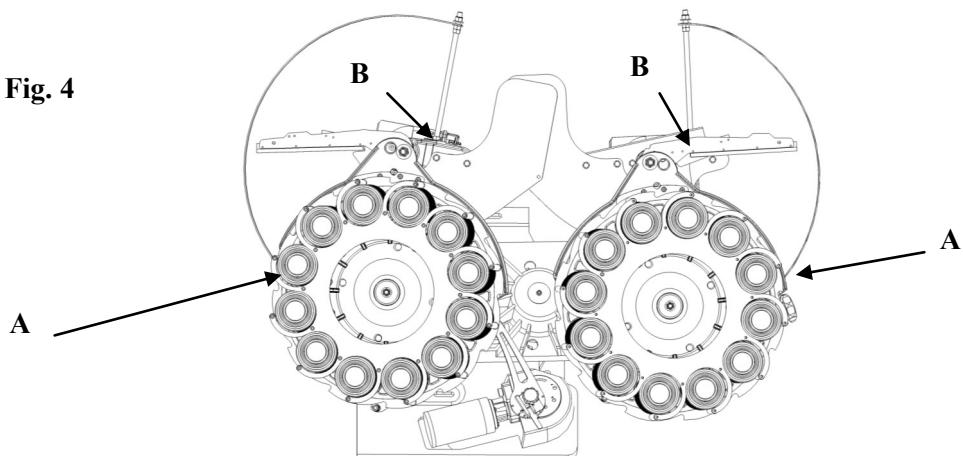
Unfold the two sections of the Safety Guard, and lay flat as shown in (**Fig. 4**) below.
Loosen the two bolts (**A & B Fig. 5**) located on the underside of the magazine base casting, and nut located on the underside of the aluminum casting beneath the throwing plate.
Repeat for the RIGHT trap.

CAUTION: ENSURE THE SAFETY GUARD IS POSITIONED BELOW THE LEVEL OF THE THROWING PLATE: ALSO ENSURE THE SAFETY GUARD RAILS FORM A SMOOTH CURVE AND ARE NOT BENT OR DISTORTED.

IF THE MOUNTING HOLES IN THE SAFETY GUARD DO NOT LINE UP WITH THE BOLTS THEY ARE TO LOCATE ON, DO NOT FORCE THE SAFETY GUARD TO FIT AS IT MAY BE DAMAGED AND NOT FUNCTION WHEN INSTALLED.

FAILURE TO INSTALL THIS GUARD PROPERLY MAY RESULT IN DAMAGE TO THE TRAP OR SERIOUS PERSONAL INJURY.

Fig. 4



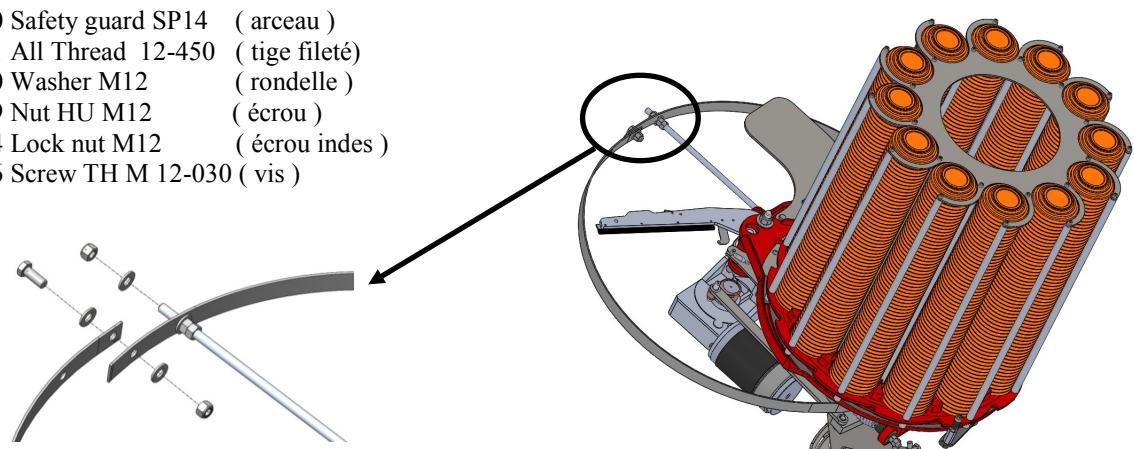
SAFETY GUARD 185 SP14

Arceau de sécurité 185 SP14

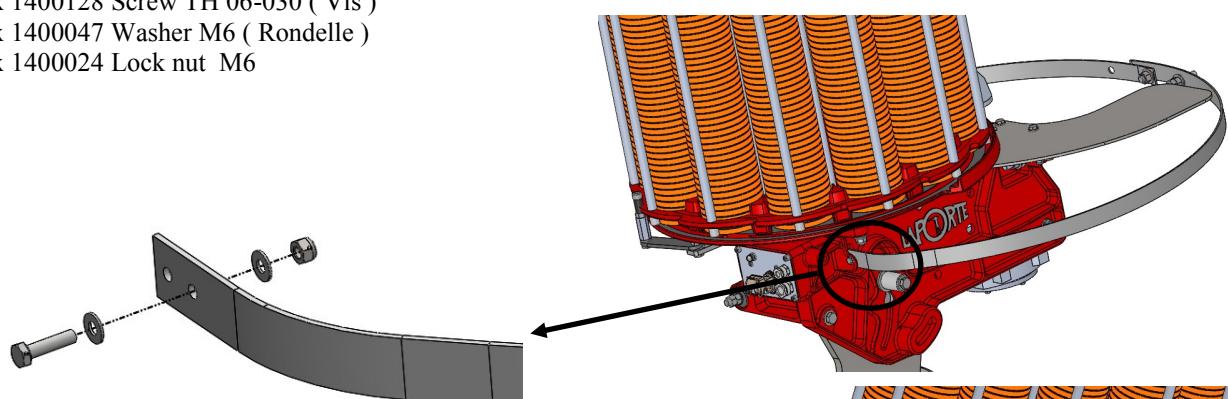
Warning !!! Before any adjustment make sure the Throwing arm is in the SAFE uncocked position and that the machine is unplugged from the power supply.

Attention !!! Avant de procéder à des manipulations, assurez-vous que le bras de lancement est en position désarmée et que la machine est déconnectée de la source d'alimentation.

2x 1309010 Safety guard SP14 (arceau)
 1x 1309011 All Thread 12-450 (tige fileté)
 6x 1400050 Washer M12 (rondelle)
 4x 1400009 Nut HU M12 (écrou)
 3x 1400024 Lock nut M12 (écrou indés)
 1x 1400156 Screw TH M 12-030 (vis)

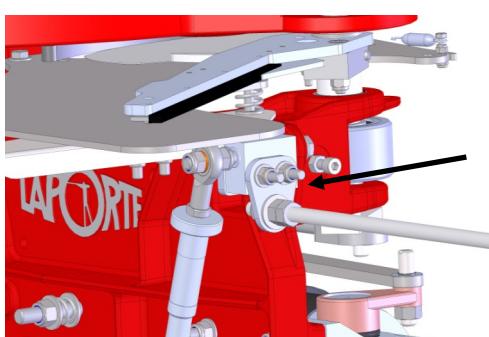
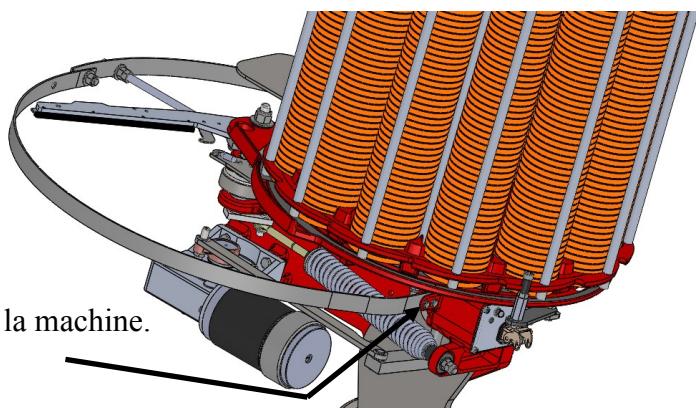


4 x 1400128 Screw TH 06-030 (Vis)
 8 x 1400047 Washer M6 (Rondelle)
 4 x 1400024 Lock nut M6



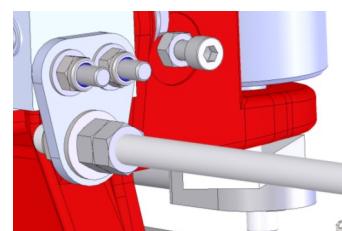
Fixing the safety guard to the rear of the machine.

Fixation de l'arceau de sécurité à l'arrière de la machine.



1309094 Adaptateur pour Trap TAHLB

4 Washer M8 /
 Rondelle M8
 2 Lock nut M8 /
 Ecrou indés M8



UNPACKING INSTRUCTION

INSTRUCTION DE DEBALLAGE

NOTE : DEUX machines compose la 285. Les instructions suivantes appliquent à chaque machine. Bien qu'il y ait une machine GAUCHE et une machine DROITE, les instructions sont fondamentalement identiques, toutes les différences seront mentionnées dans les endroits appropriés.

1. Examinez les cartons et le contenu, assurez vous qu'il n'y a eu aucun dommage en transit. Rapportez immédiatement tous dommages à l'expéditeur et/ou au transporteur.
2. Travaillez dans un espace suffisant pour déballer la machine et placez les éléments dans un endroit propres et secs.
3. Enlevez soigneusement les barillets, les arceaux de sécurité et les boîtes électriques du carton d'emballage.
4. Enlevez l'unité centrale de son carton d'emballage et l'assurez vous qu'il n'y a aucun dommage sur le bâti ou sur l'ensemble horizontal du moteur ou du bras.
5. Enlevez les boulons tenant les différentes bases de la machine sur la palette.
6. Soulevez les machines assez haut pour glisser la palette de dessous les lanceurs et pour placer soigneusement les machines au sol sur leurs bases sur une surface propre et de niveau. Au moins deux personnes devraient soulever chaque machine du carton d'emballage. Inspectez les lanceurs, barillets, moteurs, câblage et les boîtes électriques assurez vous qu'ils sont arrivés en bon état.

PRÉCAUTION : NE SOULEVEZ PAS OU NE DÉPLACEZ PAS LE LANCEUR PAR LE BRAS DE LANCEMENT, CAR VOUS RISQUEZ DE L'ENDOMMAGÉ ET IL DEVRA ÊTRE REMPLACÉ.

SI UNE SEULE PARTIE MENTIONNÉE AU POINT 6. CI-DESSUS SEMBLE ÊTRE "ENDOMMAGÉ ARRÊTEZ !" NE PROCÉDEZ PAS À L'INSTALLATION.

7. **ARRÊT :** N'essayez pas d'assembler le lanceur AVANT DE lire la section suivante !!

NOTE: There are TWO traps making up the 285PC. The following instructions apply to each machine. Although there is a LEFT and a RIGHT machine, the instructions are basically the same, any differences will be mentioned in the appropriate places.

1. Examine the cartons and the contents to be sure there has been no damage in transit. Immediately report any damage to the shipper and / or carrier.
2. Work in a clean, dry area with enough room to safely unpack and layout the parts.
3. Carefully remove the magazines, safety guards and electrical boxes from the shipping carton and set them aside.
4. Remove the base unit from its packing carton and ensure there is no damage to the casting or the horizontal motor or arm assembly.
5. Remove the bolts holding the individual trap bases to the pallet.
6. Lift the traps high enough to slide the pallet out from under the traps and carefully set the traps upright on their bases on a clean, level surface. At least two people should lift each trap from the packing carton. Inspect the traps, magazines, motors, wiring and electrical boxes to be sure they arrived in good condition..

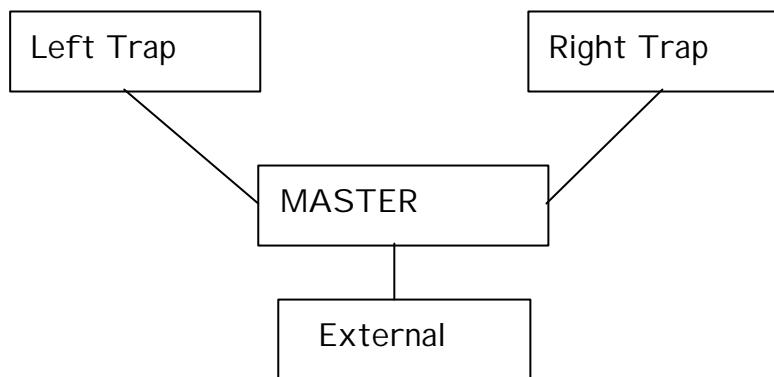
CAUTION: DO NOT LIFT OR MOVE THE TRAP BY THE THROWING ARM, AS IT WILL BE DAMAGED AND HAVE TO BE REPLACED.

IF ANY PART MENTIONED IN POINT 6. ABOVE APPEARS TO BE DAMAGED "STOP!" DO NOT PROCEED WITH INSTALLATION.

7. **STOP:** Do not attempt to assemble the trap BEFORE reading the following section!!

Interaction between the Control Boxes

Please examine the diagram below to understand the controls of the two traps. It is important to know how these control boxes interact with each other and how they control the operation of each trap. Without thoroughly understanding this relationship you are exposing yourself to a potential dangerous situation when using these controls to UNCOCK the two machines and making them safe to approach.



While examining each box, read the instructions below to familiarise yourself with the switch operation on each box.

Box 1 and Box 2 are the same, i.e. they control an individual trap (Box 1 is the Left trap control, Box 2 is the Right trap control). On each box is a three position toggle switch marked **ON-OFF-UNCOCK**.

On the Master Control Box, (Box 3), are three switches, but for now, we are only interested in the one marked **TEST-OFF-ON**.

On Box 4, the External Control Box, is a switch the same as on Box 1 & 2, i.e. **ON-OFF-UNCOCK -----**

All 4 boxes interact with each other.

- i) If the switch marked, "TEST-OFF-ON", on the Master Control Box (Box 3), is in the "OFF" position, all control switches on boxes 1, 2 and 4 are inoperative. i.e. the traps cannot be "COCKED" or "UNCOCKED" from boxes 1, 2 or 4. NOTE: Even if the arms are in the "COCKED" position, they cannot be "UNCOCKED" by using the "ON-OFF-UNCOCK" switch on any of the boxes.
- ii). If the switch marked, "TEST-OFF-ON" on the Master Control Box (Box 3), is in the "TEST" position, then the switch on the External Control Box (Box 4), is disabled and control is transferred to the two switches marked "ON-OFF-UNCOCK" on the Individual Trap Control Boxes (Boxes 1 and 2). The traps can be "Cocked" or "Uncocked" by moving these switches, marked "ON-OFF-UNCOCK",

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iii). If the switch marked, "TEST-OFF-ON", on the Master Control Box (Box 3), is in the "ON" position, then the switch marked "ON-OFF-UNCOCK", on the External Control Box (Box 4), is operative. The two traps can only be "COCKED" or "Uncocked" by switching the switch marked "ON-OFF-UNCOCK", on the External Control Box (Box 4), to the "ON" or "UNCOCK" position. The two switches marked "ON-OFF-UNCOCK" on the Individual Trap Control Boxes (Boxes 1 and 2), will not work, and the traps cannot be "Uncocked" by moving either of these switches to the "UNCOCK" position. NOTE:: If the switches marked "ON-OFF-UNCOCK" on the Individual Trap Control Boxes (Boxes 1 and 2), are in the "OFF" position, the switch marked "ON-OFF-UNCOCK" on the External Control Box (Box 4), will not operate.

NOTE: In these examples, the writer of this manual, assumes that before following the "Cocking" instructions, the traps are in an "UNCOCKED" condition. Likewise, when following the "Uncock" instructions, the writer assumes the traps were previously "COCKED".

Example: TO "COCK" both traps using the External Control Box (Box 4).

- a) Switch the switch marked "TEST-OFF-ON" on the Master Control Box (Box 3) to the "ON" position. i.e. transfer control to the External Control Box (Box 4)
- b) Switch the switch marked "ON-OFF-UNCOCK" on the External Control Box (Box 4), to the "OFF" position. i.e. turn "OFF" the "NEW" control box.
- c) Switch both switches marked "ON-OFF-UNCOCK" on the Individual Trap Control Boxes (Boxes 1 and 2), to the "ON" position. Nothing should happen. i.e. the traps will not "COCK".
- d) Switch the switch marked "ON-OFF-UNCOCK", on the External Control Box (Box 4), to the "UNCOCK" then the "ON" position. Both traps will "COCK" and be ready for using.

Example: TO "UNCOCK" both traps using the External Control Box (Box 4).

NOTE: Assuming both traps were "COCKED" from the External Control Box (Box 4), using the previous example.

- a) Switch the switch marked "ON-OFF-UNCOCK", on the External Control Box (Box 4), to the "UNCOCK" position, then back to the "OFF" position. Both traps should "UNCOCK" and be safe to approach. (Before approaching, check both arms are actually in the "UNCOCKED" position and visible out in front of each trap as described in the earlier section SAFETY FIRST)
- b) Switch the switches marked "ON-OFF-UNCOCK", on both the Individual Trap Control Boxes (Boxes 1 and 2), to the "OFF" position. (This is an added Safety precaution that prevents the traps being "RE-COCKED" by someone else turning on the switch marked "ON-OFF-UNCOCK" on the External Control Box (Box 4), to the "ON" position while you are still working on/reloading the traps.)

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Example: TO "COCK" either trap using the Individual Trap Control Box (Box 1 or 2).

- a) Switch the switch marked "TEST-OFF-ON", on the Master Control Box (Box 3), to the "TEST" position.
- b) Switch the switch marked "ON-OFF-UNCOCK", on the Individual Trap Control Box, (Box 1 or Box 2), to the "UNCOCK" then to the "ON" position. The trap will "COCK".

Example: TO "UNCOCK" either trap using the Individual Trap Control Box (Box 1 or 2).

- a) Switch the switch marked "ON-OFF-UNCOCK", on the Individual Trap Control Box , (Box 1 or Box 2), to the "UNCOCK" position, and then to the "OFF" position.

NOTE: Although the traps may have been "COCKED" using the External Control Box (Box 4), it is possible to "UNCOCK" them by using the Individual Trap Control Boxes. To do this simply move the switch marked "TEST-OFF-ON", on the Master Control Box (Box 3), from the "ON" position to the "TEST" position, then follow instruction (a) immediately above.

NOW YOU UNDERSTAND THE INTERACTION OF THE CONTROL BOXES, CONTINUE WITH THE "START-UP PROCEDURE".

10. Connect the black power cord from the Master Control Box to a power source. Likewise, connect the black power cords from the Individual Trap Control Boxes to a power source. i.e. 110VAC outlet. **Note:** This is a three prong grounded plug and it must be installed in a suitable outlet. A GFI (Ground Fault Interrupted) circuit is recommended for this installation.

11. Ensure the switch marked "ON-OFF-UNCOCK" on the External Control Box is in the "OFF" position.
12. Move the switch marked "TEST-OFF-ON", on the Master Control Box to the "TEST" position.

The following procedures (13 and 14), apply for each of the two traps (Left and Right).

13. Check that each machine "Cocks". Move the switch marked "ON-OFF-UNCOCK" on the Individual Trap Control Box, to the "UNCOCK" position then to the "ON" position. Check that the motor starts, the magazine indexing finger moves the magazine one position and the throwing arm "cocks"; (i.e. Left trap arm moves in a "Counter-Clockwise" direction, Right trap arm in a "Clockwise" direction, from the "out-front" position to the "6:30" position below the magazine.) The drive motor should shut off when the throwing arm is fully cocked. A solenoid mechanism, below the magazine, holds the throwing arm in this position. IF ANY OR ALL OF THESE DO NOT HAPPEN, **STOP!! MOVE THE SWITCH MARKED "ON-OFF-UNCOCK", ON THE INDIVIDUAL TRAP CONTROL BOX TO THE "OFF" POSITION, AND DISCONNECT THE POWER SOURCE (I.E. UNPLUG 110volt, OR UNCLIP CLAMPS FROM BATTERY IF 12volt.) GO DIRECTLY TO FAULT FINDING LATER IN THIS MANUAL.**

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Otherwise continue.....

14. Now test that each machine "Uncocks". Move the switch marked "**ON-OFF-UNCOCK**" on the Individual Trap Control Box, to the "**UNCOCK**" and then to the "**OFF**" position. The solenoid should "kick", releasing the firing arm. The arm should spin in a "**Counter-Clockwise**" direction on the Left trap or a "**Clockwise**" direction on the Right trap. The arm should come to rest in its "Uncocked" position, sticking out to the side of the trap. On the **Left trap** this should be approximately the 8:45 position, and on the **Right trap** this should be approximately the 3:15 position, when viewed from above and behind the traps. **IF THIS DOES NOT HAPPEN, STOP!! MOVE THE SWITCH MARKED "ON-OFF-UNCOCK", ON THE INDIVIDUAL TRAP CONTROL BOX TO THE "OFF" POSITION, AND DISCONNECT THE POWER SOURCE FROM EACH CONTROL BOX (I.E. UNPLUG 110volt, OR UNCLIP CLAMPS FROM BATTERY IF 12volt.) GO DIRECTLY TO FAULT FINDING LATER IN THIS MANUAL.**

Otherwise continue.....

REPEAT THE ABOVE INSTRUCTIONS (13 and 14) FOR THE OTHER TRAP.

15. "Cock" each machine again by repeating instruction 13 above. Ensure the switch marked "**SINGLE-DOUBLE-SINGLE/DOUBLE**" on the Master Control box is in the "**DOUBLE**" position. Press and release the "**PULL**" button located to the right of the "**TEST-OFF-ON**" button on the Master Control Box. Both traps should fire. i.e. the throwing arms should release and the trap machines should cycle as described earlier. **IF THIS DOES NOT HAPPEN, STOP!! MOVE THE SWITCH MARKED "TEST-OFF-ON", ON THE MASTER CONTROL BOX TO THE ""OFF" POSITION. AND DISCONNECT THE POWER SOURCE FROM EACH CONTROL BOX (I.E. UNPLUG 110volt, OR UNCLIP CLAMPS FROM BATTERY IF 12volt.) GO DIRECTLY TO FAULT FINDING LATER IN THIS MANUAL.**

Otherwise continue.....

16. The switch marked "**TEST-OFF-ON**" on the Master Control Box should be in the "**TEST**" position from the previous test (12). Move it to the "**ON**" position. Move the switch marked "**ON-OFF-UNCOCK**" on the External Control Box from the "**OFF**" position to the "**ON**" position.

17. Press the "**PULL**" button on the yellow box at the end of the Pull-Cord. Both traps should fire and cycle as in the previous test. **IF THIS DOES NOT HAPPEN, STOP!! MOVE THE SWITCH MARKED "ON-OFF-UNCOCK", LOCATED ON THE EXTERNAL CONTROL BOX TO THE "OFF" POSITION, MOVE THE SWITCH MARKED "TEST-OFF-ON" ON THE MASTER CONTROL BOX TO THE "TEST" POSITION, THEN UNCOCK EACH TRAP BY MOVING THE SWITCH MARKED "ON-OFF-UNCOCK" ON THE INDIVIDUAL TRAP CONTROL BOXES TO THE "UNCOCK" AND THEN THE "OFF" POSITION, AND DISCONNECT THE POWER SOURCE (I.E. UNPLUG 110volt, OR UNCLIP CLAMPS FROM BATTERY IF 12volt.) GO DIRECTLY TO FAULT FINDING LATER IN THIS MANUAL.**

Otherwise continue.....

18. Move the switch marked "**ON-OFF-UNCOCK**" on the External Control Box from the "**ON**" position to the "**UNCOCK**" position, then to the "**OFF**" position. This should "Uncock" both traps. as described in (14) above. **IF THIS DOES NOT HAPPEN, STOP!! MOVE THE SWITCH MARKED "TEST-OFF-ON"**

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ON THE MASTER CONTROL BOX TO THE "TEST" POSITION, THEN UNCOCK EACH TRAP BY MOVING THE SWITCH MARKED "ON-OFF-UNCOCK" ON THE INDIVIDUAL TRAP CONTROL BOXES TO THE "UNCOCK" AND THEN THE "OFF" POSITION, AND DISCONNECT THE POWER SOURCE, THEN GO DIRECTLY TO FAULT FINDING LATER IN THIS MANUAL.

Otherwise continue.....

19. Load the magazine:

WARNING: DO NOT LOAD THE MAGAZINE WHEN THE TRAP IS "ON"

Ensure the switch marked "ON-OFF-UNCOCK" on the External Control Box is in the "OFF" position, the switch marked "TEST-OFF-ON" on the Master Control Box is in the "TEST" position, the switches marked "ON-OFF-UNCOCK" on the individual Trap Control Boxes are in the "OFF" position, and the throwing arms are at rest sticking out in front of the trap.

I.E. The traps are "Uncocked" and safe to approach.

The following procedure applies to each of the two traps, both left and right.

Look at the top of the magazine, there are 10 columns. Each alternative column has slots in the magazine top-plate, the others have a figure '8' cut-out as mentioned earlier in "Magazine Installation". (*see Fig. 6J*) The columns with the slots in the top, allow the outside, grey plastic tubes to be slid sideways, allowing targets to be loaded into the magazine from the side, as opposed to be loaded from the top. Load the five columns in the rear of the magazine first, by following these instructions: Push down the cylinder plunger on the top of one magazine cylinder and pull the top of the cylinder outward and to the side, following the guide slot in the magazine top-plate. (*see Fig. 6K*). Place a stack of targets in the magazine column, being careful not to bump or drop them. Remove any broken or cracked targets and make sure the targets are not stuck together. Check that the bottom target is resting squarely on the magazine base. Continue to place additional stacks of targets in this column until it is full (40 targets per column). Push the top of the magazine cylinder inward until it snaps back into position. To load the next column, repeat the previous instructions, but slide the grey cylinder in the other direction.

Repeat this process to load the other four columns in the rear half of the magazine

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NOTE::::: Throughout the following sections, reference is made to "Uncocking" the traps. The method used to "Uncock" the traps differs according to the operating mode the traps are in. i.e. The Master Control Box could be in "ON" mode or "TEST" mode. If in "ON" mode, the traps are "Uncocked" by use of the External Control Box. If in "TEST" mode the "Uncocking" is controlled on each Individual Trap Control Box. The writer of this manual assumes that the user is now fully aware of how to "Uncock" the trap machines, in either mode and make them safe to work on/reload..

IMPORTANT: BE SURE THE SWITCHES MARKED "ON-OFF-UNCOCK" ON THE "REMOTE SAFETY SWITCH" BOX AND THE INDIVIDUAL CONTROL BOXES ARE IN THE "OFF" POSITION, THE SWITCH MARKED "TEST-OFF-ON" ON THE MASTER CONTROL BOX IS IN THE "ON" POSITION AND THE THROWING ARMS ARE UNCOCKED WHEN THE TRAP MACHINES ARE NOT IN USE.

A GENERAL GOOD RULE IS: IF YOU CANNOT CLEARLY SEE THE THROWING ARM IN A STATIONARY POSITION OUT IN FRONT OF THE TRAP, ASSUME THE TRAP IS "COCKED" AND DANGEROUS!!!.

NOTE: YOU SHOULD NOW ADJUST THE TENSION OF THE MAIN SPRING. IF YOU ARE SATISFIED WITH THE TENSION YOU ALREADY SET DURING "INSTALLING THE MAIN SPRING", BE SURE TO READ THE FOLLOWING SECTION "SPRING TENSION ADJUSTMENT", MAKING SURE YOU CHECK THE SHOCK ABSORBER AND MICRO SWITCH ADJUSTMENT.

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Spring Tension Adjustment

CAUTION: MAKE SURE ALL PERSONNEL ARE CLEAR OF THE TRAP BEFORE PROCEEDING. WHEN WORKING ON EITHER TRAP ENSURE BOTH TRAPS ARE "DECOCKED", WITH THE THROWING ARMS IN THE SAFE "UNCOCKED" POSITION.

1. BEFORE PROCEEDING: If in the "ON" mode (i.e. the switch on the Master Control Box is in the "ON" position), move the switch marked "ON-OFF-UNCOCK" on the "Remote Safety Switch" to the "UNCOCK" position and then to the "OFF" position to leave the throwing arms in the safe, "Decocked" position. If in the "TEST" mode (i.e. the switch on the Master Control Box is in the "TEST" position), move the switch marked "ON-OFF-UNCOCK" on the Individual Control boxes to the "UNCOCK" position and then to the "OFF" position to leave the throwing arms in the safe, "Decocked" position. Then move the switch marked "TEST-OFF-ON" on the Master Control box to the "OFF" position.

ENSURE the switch marked "TEST-OFF-ON" on the Master Control box is in the "TEST" position thus taking control away from the "Remote Safety Switch" and avoiding anyone accidentally turning the traps on while you are working on them.

2. Loosen the locknut "A" on the threaded eye-bolt at the front of the mainspring (See Fig. 7).

3. Rotate the Black Turnwheel "C" at the rear of the mainspring. (See Fig. 7).

- Clockwise to increase the spring tension (targets will go faster/further)
- Counter-clockwise to decrease the spring tension (targets will go slower/shorter distance)

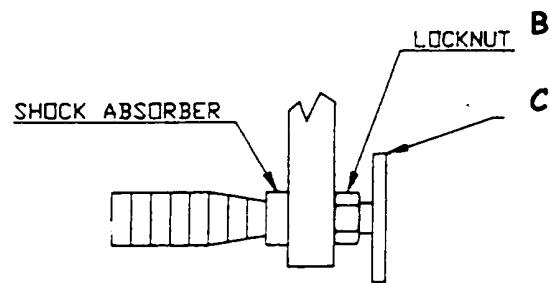
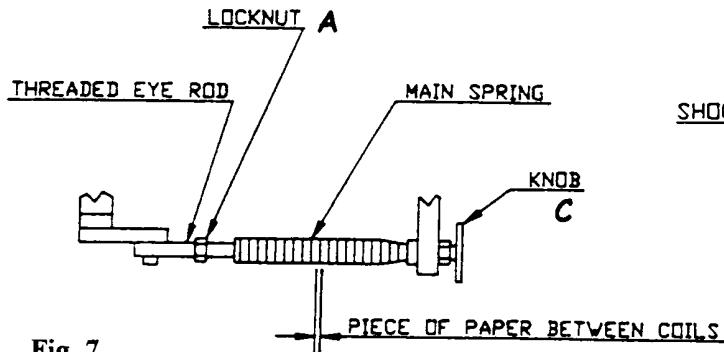


Fig. 8

IMPORTANT: NEVER REDUCE THE MAINSPRING TENSION TO THE POINT WHERE THE COILS OF THE SPRING ARE TOUCHING. A PIECE OF PAPER SHOULD SLIDE EASILY BETWEEN EACH COIL WHEN AT THE MINIMUM ALLOWED TENSION. NOTE : THIS CHECK SHOULD ONLY BE MADE WHEN THE THROWING ARM IS DIRECTLY OUT IN FRONT OF THE TRAP IN LINE WITH THE SPRING, (i.e. 12:00) NOT IN THE DECOCKED POSITION. IF NECESSARY REFER TO THE SECTION "MAIN SPRING REMOVAL" TO ENABLE THE ARM TO BE POSITIONED OUT FRONT (i.e. the 12:00 position when viewed from rear of trap)

4. After the adjustment is completed, retighten the locknut "A" on the threaded eye rod at the front of the mainspring. (See Fig. 7).

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5. The shock absorber at the rear of the Main Spring, between the coil section of the Main Spring and the red casting, should be factory set for the correct adjustment. If further adjustment in the field is necessary, tighten or loosen the rear Black Turnwheel "C" and the front Locknut "B", at the rear of the spring, to increase or decrease the shock absorber compression. (See Fig. 8). The Black Turnwheel and rear Locknut will have to be loosened before they will turn on the threaded bolt. Hold the front locknut with a wrench then unscrew the rear Black Turnwheel in a counter clockwise direction to free it. Tighten or loosen the front locknut to ensure the correct pressure is on the shock absorber. (See Fig. 9). (See "Author's Helpful Hint" below.) When you have set the correct pressure on the shock absorber, retighten the rear Black Turnwheel against the front Locknut by holding the front Locknut with a wrench and turning the rear Black Turnwheel clockwise, until it is tight against the front Locknut.

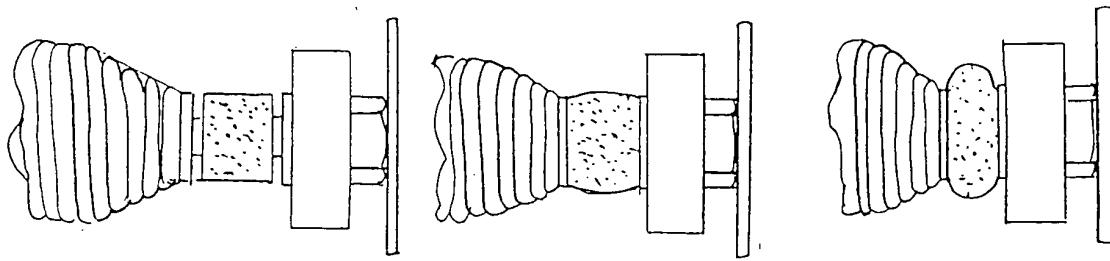


Fig. 9

TOO LOOSE

CORRECT

TOO TIGHT

6. Move the switch marked "ON-OFF-UNCOCK" on the remote safety switch from the "OFF" position to the "UNCOCK" position then to the "ON" position.

7. As tension has now been added to, or relieved from, the throwing arm, it is possible the throwing arm "Park" or "Cocked" position will have to be adjusted to compensate for this new tension. (See section "THROWING ARM PARKING ADJUSTMENT" detailed below).

AUTHOR'S HELPFULL HINT:

The front locknut on the bolt at the rear of the spring is a "Nylon Locknut", which as its name implies, means it is a locknut in its own right. i.e. it "locks" itself onto the thread of the bolt.

When you attempt to "Tighten" or "Loosen" this nut, it will turn the bolt round with it unless the bolt is held stationary. As this bolt is protruding from the enclosed spring, through the "shock absorber" and through the casting at the rear of the trap, it is impossible to get a grip on it.

Depending upon the pressure/tension of the Main Spring pulling on the bolt, (i.e. when the Main Spring is under tension it will exert pressure on the head of the bolt, inside the spring), the bolt may not turn when the "Nylon Locknut" is turned. If however, the tension is minimal (i.e. the spring is at a very low tension), there may not be sufficient friction on the bolt head to stop it turning when the "Nylon Locknut" is turned. If this is the case, more friction must be exerted on the head of the bolt. This can be achieved as follows.

The throwing arm at this time will be in the "Uncocked" position, which means there is "Half Tension" on the spring. (When the arm is in the "Cocked" position it has "Full Tension" on it). To apply more friction to the bolt head, (assuming you are now kneeling behind the trap), grab the throwing arm with your **left hand** if working on the **left trap** or your **right hand** if working on the **right trap** and pull it towards you, about halfway to the "Cocked" position. This will stretch the Mainspring, placing it under more tension, and hence apply more friction to the bolt head. You should now be able to loosen or tighten the "Nylon Locknut".

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Throwing Arm "Parking" Adjustment

CAUTION: MAKE SURE ALL PERSONNEL ARE CLEAR OF THE TRAP BEFORE PROCEEDING.

BEFORE PROCEEDING: If in the "ON" mode (i.e. the switch on the Master Control Box is in the "ON" position), move the switch marked "**ON-OFF-UNCOCK**" on the "Remote Safety Switch" to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position. If in the "TEST" mode (i.e. the switch on the Master Control Box is in the "TEST" position), move the switch marked "**ON-OFF-UNCOCK**" on the Individual Control boxes to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position.

ENSURE the switch marked "TEST-OFF-ON" on the Master Control box is in the "TEST" position thus taking control away from the "Remote Safety Switch" and avoiding anyone accidentally turning the traps on while you are working on them.

The throwing arm micro-switch, and "Thumbwheel" (inside the electrical control box), determine the position the throwing arm will come to rest in when the main "cocking" motor stops. Ideally, this will be with the throwing arm stops in the "6:30" position, just touching the brass throwing arm stop plate, at the rear of the trap.

WHEN MAKING ANY ADJUSTMENTS TO A TRAP, ENSURE YOU ARE IN "TEST" MODE, BY MAKING SURE THE SWITCH MARKED "TEST-OFF-ON" ON THE MASTER CONTROL BOX IS IN THE "TEST" POSITION. (This will prevent anyone from accidentally turning on the traps, by means of the "Remote Safety Switch" when you are working on them.)

Before continuing be sure you only work on one trap at a time. If you are going to work on the **LEFT** trap ensure the **RIGHT** trap is "**UNCOCKED**" and the switch marked "**ON-OFF-UNCOCK**" on the **RIGHT** trap Individual Control box is in the "**OFF**" position. Likewise, if you are going to work on the **RIGHT** trap ensure the **LEFT** trap is "**UNCOCKED**" and the switch marked "**ON-OFF-UNCOCK**" on the **LEFT** trap Individual Control box is in the "**OFF**" position.

For **LEFT Trap** continue, for **RIGHT Trap** go to "**RIGHT TRAP**".

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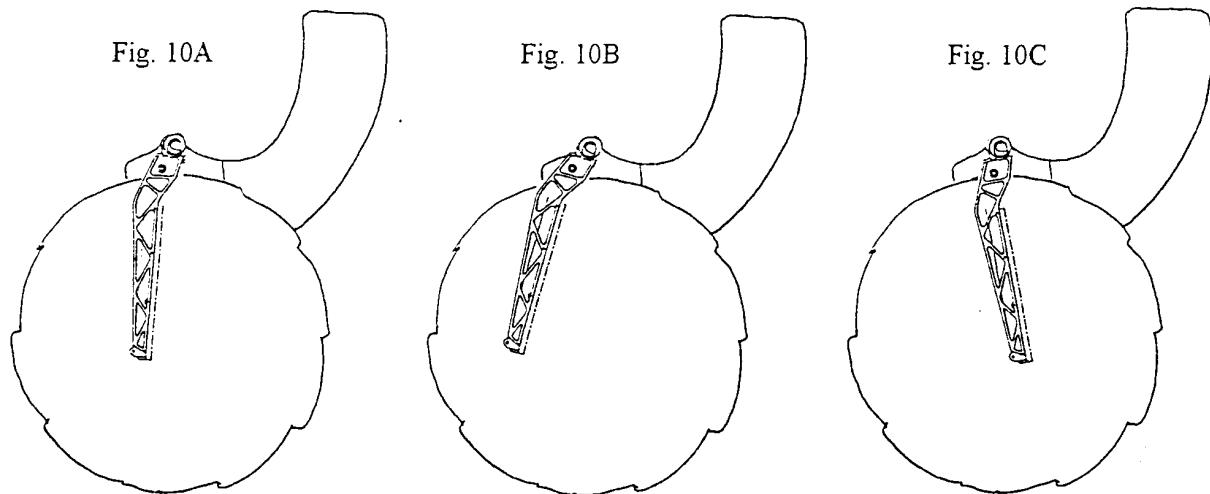
LEFT TRAP:

There are three conditions to look for:

1. As mentioned above, the throwing arm stops at "6:30" position
i.e. just touching the brass throwing arm stop plate. ---- IDEAL! (**Fig. 10A**)
2. The throwing arm does not travel far enough, say "7:35" position ---- WRONG! (**Fig. 10B**)
3. The throwing arm travels too far, and strikes the brass throwing arm stop plate too hard, or continually fires. ---- WRONG! (**Fig. 10C**)

In condition 1, no further action is required

In conditions 2 & 3, the throwing arm "Thumbwheel"/Micro-Switch needs to be adjusted.



CAUTION: The following adjustment may have to be made several times, (i.e. "Trial and Error"), to get the throwing arm to settle in the correct position (i.e. stopping in the "6:30" position just touching the brass throwing arm stop plate.) Ensure the trap is "Decocked" before each adjustment. (If the Master Control Box switch is in the "ON" position, move the switch marked "ON-OFF-UNCOCK" on the "Remote Safety Switch" from the "ON" position to the "UNCOCK" position and then to the "OFF" position. OR, if the Master Control Box switch is in the "TEST" position, move the Individual Control box switch marked "ON-OFF-UNCOCK" to the "UNCOCK" position, then to the "OFF" position. The throwing arm should now be positioned out in front of the trap at approximately the "8:45" position when viewed from the rear of the trap.

Move the switch marked "TEST-OFF-ON" on the Master Control box to the "TEST" position.

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Throwing Arm "Parking" adjustment by moving the "Thumbwheel".

As you will need to go "inside" the Individual Control box, ensure the power is disconnected before continuing. Remove the power lead from the 110volt supply.

The "Thumbwheel" is located in the Individual Control box.

Open the lid of the control box and fold it back. Inside the lid is a green circuit board. Look in the top right corner and locate the "Thumbwheel" (a small black plastic module 1/2" tall with a 1/2" diameter, white or red circular disc with notches cut in the circumference on its lower face.) (See Fig. 11). Turn it to the right to get the arm to stop later and park nearer the Brass Stop Plate, or turn it left to get the arm to stop sooner, and park further away from the Brass Stop Plate.

Note: Only turn it one "click" at a time.

Close the door of the control box.

Fig. 11

** Reconnect the power source, then move the switch marked "**ON-OFF-UNCOCK**" on the Individual Control box from the "**OFF**" position to the "**UNCOCK**" position, then to the "**ON**" position, "Cocking" the trap. Note the new position of the throwing arm.

Repeat the check from *"There are three conditions to look for."* at the start of this section.
REMEMBER: Only make a small movement of the "Thumbwheel" each time.

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RIGHT TRAP:

There are three conditions to look for:

1. As mentioned above, the throwing arm stops at "6:30" position
i.e. just touching the brass throwing arm stop plate. ---- IDEAL! (Fig. 12C)
2. The throwing arm does not travel far enough, say "5:25" position ---- WRONG! (Fig. 12B)
3. The throwing arm travels too far, and strikes the brass throwing arm stop plate too hard, or continually fires. ---- WRONG! (Fig. 12A)

In condition 1, no further action is required

In conditions 2 & 3, the throwing arm "Thumbwheel" needs to be adjusted.

FIG. 12A

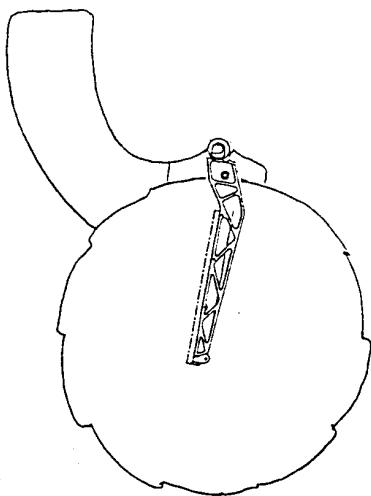


FIG. 12B

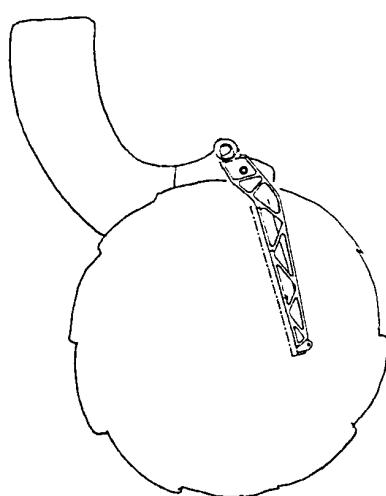
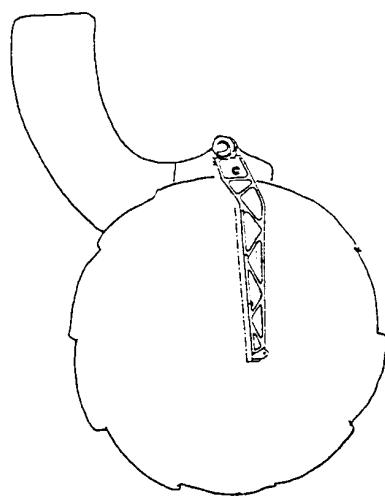


FIG. 12C



CAUTION: The following adjustment may have to be made several times, (i.e. "Trial and Error"), to get the throwing arm to settle in the correct position (i.e. stopping in the "6:30" position just touching the brass throwing arm stop plate.) Ensure the trap is "Decocked" before each adjustment. (If the Master Control Box switch is in the "ON" position, move the switch marked "ON-OFF-UNCOCK" on the "Remote Safety Switch" from the "ON" position to the "UNCOCK" position and then to the "OFF" position. OR, if the Master Control Box switch is in the "TEST" position, move the Individual Control ox switch marked "ON-OFF-UNCOCK" to the "UNCOCK" position, then to the "OFF" position. The throwing arm should now be positioned out in front of the trap at approximately the "8:45" position when viewed from the rear of the trap.

Move the switch marked "TEST-OFF-ON" on the Master Control box to the "TEST" position.

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Throwing Arm "Parking" adjustment by moving the "Thumbwheel".

As you will need to go "inside" the Individual Control box, ensure the power is disconnected before continuing. Remove the power lead from the 110volt supply.

The "Thumbwheel" located in the Individual Control box.

Open the lid of the control box and fold it back.. Inside the lid is a green circuit board. Look in the top right corner and locate the "Thumbwheel" (a small black plastic module 1/2" tall with a 1/2 " diameter, white or red circular disc, with notches cut in the circumference on its lower face.) (**See Fig. 11**). Turn it to the **left** to get the arm to stop later and park further to the **left**, or turn it **right** to get the arm to stop sooner, and park further to the **right**.

Note: Only turn it one "click" at a time.

Close the door of the control box.

** Reconnect the power source, then move the switch marked "**ON-OFF-UNCOCK**" on the trap control box from the "**OFF**" position to the "**UNCOCK**" position, then to the "**ON**" position, "Cocking" the trap. Note the new position of the throwing arm.

Repeat the check from *"There are three conditions to look for."* at the start of this section.

REMEMBER: Only make a small movement of the "Thumbwheel" each time.

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Spring Removal

CAUTION: MAKE SURE ALL PERSONNEL ARE CLEAR OF THE TRAP BEFORE PROCEEDING.

BEFORE PROCEEDING: If in the "ON" mode (i.e. the switch on the Master Control Box is in the "ON" position), move the switch marked "ON-OFF-UNCOCK" on the "Remote Safety Switch" to the "UNCOCK" position and then to the "OFF" position to leave the throwing arms in the safe, "Decocked" position. If in the "TEST" mode (i.e. the switch on the Master Control Box is in the "TEST" position), move the switch marked "ON-OFF-UNCOCK" on the Individual Control boxes to the "UNCOCK" position and then to the "OFF" position to leave the throwing arms in the safe, "Decocked" position

ENSURE the switch marked "TEST-OFF-ON" on the Master Control box is in the "TEST" position thus taking control away from the "Remote Safety Switch" and avoiding anyone accidentally turning the traps on while you are working on them.

Before continuing be sure you only work on one trap at a time. If you are going to work on the **LEFT** trap ensure the **RIGHT** trap is "UNCOCKED" and the switch marked "ON-OFF-UNCOCK" on the **RIGHT** trap Individual Control box is in the "OFF" position. Likewise, if you are going to work on the **RIGHT** trap ensure the **LEFT** trap is "UNCOCKED" and the switch marked "ON-OFF-UNCOCK" on the **LEFT** trap Individual Control box is in the "OFF" position.

CAUTION: Before continuing ensure the trap you are working on is in the "Uncocked" condition.

WARNING: Although the following operation is similar for both machines, it is important to follow the individual procedures for each machine as there are minor differences, which if not observed could result in serious injury!

NOTE: Pay special attention to the directions that ask you to rotate the cocking motor shaft and hence the gearbox cocking stud, and the direction the throwing arm moves in. There are differences between the **LEFT** and **RIGHT** machines.

The direction of travel in either:

CLOCKWISE or COUNTER-CLOCKWISE.

The directions in the text are highlighted. e.g.

"Rotate the shaft **clockwise** which will

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LEFT MACHINE:

1. Check the position of the throwing arm.

If it is straight out in front, as shown in (see **Fig. 13A**) go to step #6.

If it is still cocked as shown in (see **Fig. 13C**), reconnect the trap to its power source. Move the switch marked "**ON-OFF-DECOCK**" on the Individual Control box from the "**OFF**" position to the "**UNCOCK**" position , then back to the "**OFF**" position. The throwing arm should now be in the "Uncocked" position as shown in (see **Fig. 13B**) Go to step #2.

If it is past the straight out position and in the "Uncocked" 8:45 position as shown in (see **Fig. 13B**) go to step #2.

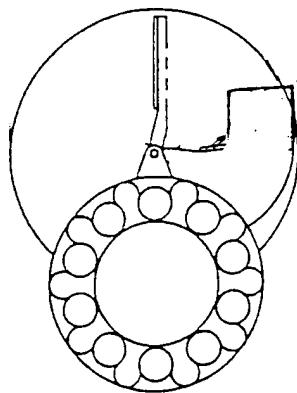


Fig. 13A

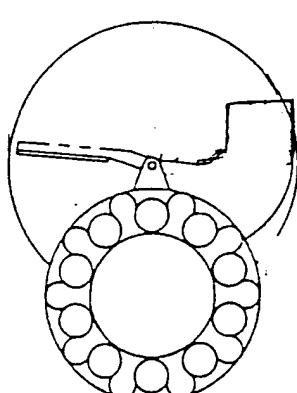


Fig. 13B

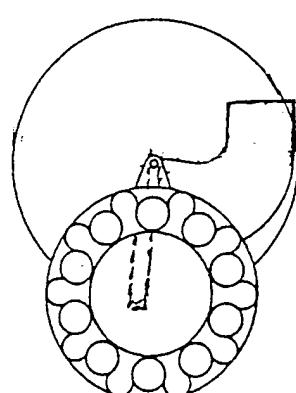
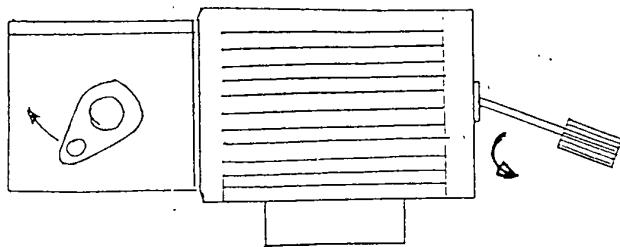


Fig. 13C

2. We now need to position the arm in the straight out 12:00 position, as in Fig. 13A. In order to do this we must first position the gearbox cocking stud in the 12:00 position to use it as a "break" to cushion the release of the throwing arm through its "Decocking" sequence. Follow the instructions below.

Using a small screwdriver inserted into the hole at the end of the cocking motor shaft, rotate the cocking motor **counter-clockwise**, so the gear box stud rotates in a **clockwise** direction. (See **Fig. 14**). Continue doing this until the stud has moved to the 12:00 position out front of the trap.

Fig:14



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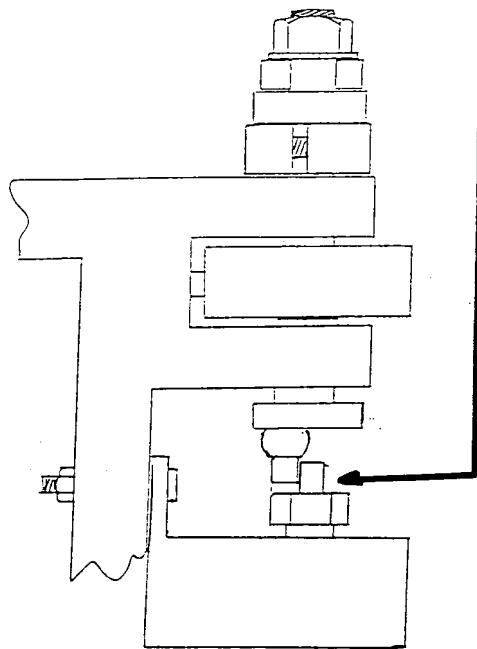
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3. You have now positioned the driving stud, on the gearbox, to a position in front of the driving stud on the throwing arm. You can now use the cocking motor, as a brake, to slowly release the spring tension on the throwing arm. **NOTE** : The throwing arm will only travel in a **counter-clockwise** direction due to the restriction of the one-way bearing on the throwing arm main-shaft. As the gearbox stud is now "in front", to the left of, the throwing arm stud, it will restrict the travel of the throwing arm.

4. Push the throwing arm **counter-clockwise**, towards the cocked position, **using the palm of the hand or your thumbs**, until it is in the 6:30 "Cocked Position" touching the brass throwing arm stop plate. **NOTE:** As mention before, the throwing arm will only travel **counter-clockwise**, it cannot be pulled back or reversed!. **SO.....** **WARNING:** *Do not wrap your fingers around the throwing arm, while pushing it, because if you push too fast or too hard, you may trap your fingers below the magazine base. REMEMBER THE ARM CANNOT BE PULLED BACK!!!*

The two studs, mentioned earlier, should now be touching. (see Fig. 16).

Fig. 16



If the throwing arm did not travel sufficient distance for it to be in the "6:30" "Cocked" Position, it means the stud on the gearbox is restricting it by being too far **clockwise**. (i.e. **1:05 position**). therefore follow the instructions below. If it is in the "COCKED" 6:30 position go to (5) below.

Use a small screw driver in the end of the cocking motor shaft to turn the motor **clockwise** a few turns. The stud on the gearbox will move **counter-clockwise**, thus parting from the throwing arm stud. ONLY ROTATE THE COCKING MOTOR A FEW TURNS SO THE TWO STUDS PART ABOUT 1/4". Push the throwing arm further towards the "Cocked" position. Repeat the above procedure until the throwing arm is in the "Cocked" 6:30 position, touching the brass throwing arm stop plate.

(Do not move studs more than 1/4 inch apart each time).

5. When the throwing arm is in the "6:30" "Cocked" position, it will be under maximum spring tension. We must now use the cocking motor as a brake to slowly release the throwing arm through its "**Uncock**" procedure. As we are releasing the throwing arm slowly, it will not go past the straight out, 12:00 position to the "Uncocked" 8:45 position where, after "normal release", it would be held by the action of the "One-way Bearing".

Follow the procedure below in order to release the throwing arm to the straight out 12:00 position.

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Use a small screwdriver in the end of the cocking motor shaft to turn the motor **clockwise** a few turns. The stud on the gearbox will move **counter-clockwise**, thus parting from the throwing arm stud. ONLY ROTATE THE COCKING MOTOR A FEW TURNS SO THE TWO STUDS PART ABOUT 1/4". Push in the throwing arm past the "6:30" "Cocked" position into the "Release" position. You will have to move the brass throwing arm stop plate aside to allow the arm to pass. If the throwing arm does not go into the "release" position, keep repeating the above 1/4" movement followed by pushing the throwing arm until the throwing arm releases and its stud comes to a "hard rest" against the gearbox stud. It is quite safe to do this, because when the throwing arm does eventually release it will only travel about an inch, being restricted by the stud on the gearbox which will only be 1/4" away from the throwing arm stud. It may appear to "jump" very fast, as if firing, but it will only travel about one inch. Now the throwing arm stud is "hard" against the gearbox stud.

Insert a small screwdriver in the hole in the end of the cocking motor shaft and rotate the motor shaft **clockwise**. This will cushion the travel of the throwing arm allowing it to "decock" slowly. Continue rotating the shaft until the throwing arm is in the straight out position in front of the trap i.e. "12:00" The main spring is now at its minimum tension.

6. Loosen the locknut "A" on the threaded eye rod at the front of the main spring. (see **Fig. 7**).
7. Rotate the Black Turnwheel "C" (see **Fig. 7**), at the rear of the Main Spring counter-clockwise until the threaded eye rod disengages from the Main Spring. NOTE: As the Main Spring is being unwound, it will be necessary to move the throwing arm in a **counter-clockwise** direction further, thus allowing the threaded eye bolt to disengage from the Main Spring. If at this time the gearbox stud is restricting the movement of the throwing arm stud to travel in the **counter-clockwise** direction, it will be necessary to move the gearbox stud further **counter-clockwise**, out of the way. This can be achieved by following the procedure detailed in (4) above when we used the cocking motor as a brake to allow the throwing arm to slowly rotate **counter-clockwise** through its "Uncocking" sequence. Simply move the gearbox stud further **counter-clockwise**. This will allow the throwing arm to move further **counter-clockwise**, thus disengaging the threaded eye-bolt from the Main Spring.
8. To disconnect the rear of the Main Spring, use a wrench to hold the front Locknut from turning, then loosen the Black Turnwheel by rotating it counter-clockwise to break the "Lock" between the it and the front Locknut. Remove the rear Black Turnwheel completely.
9. The front Locknut must now be removed, but as it is "Nylon Locking Nut" it will not be that easy. When you attempt to unscrew it from the thread of the Main Spring Bolt, it will turn the bolt with it. You can try to unscrew this forever, but it will continually turn the bolt with it.

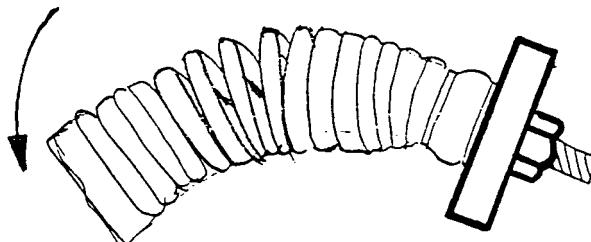
The trick to do this is as follows.....

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"AUTHOR'S HELPFULL HINT". With your left hand grasp the Main Spring and pull it sideways bending it to the left making it slightly banana shaped. (see Fig. 17). This will place sideways tension on the Main Spring Bolt, holding it still, and allow you to unwind the front "Nylon Locking Nut" using a wrench in your right hand. If the bolt continues to turn with the "Nylon Locking Nut", simply apply more "bend" on the Main Spring with your left hand.. When it is loose, remove the front "Nylon Locking Nut", two washers and the thrust bearing.

Fig. 17



10. Remove the Main Spring by pulling it towards the front of the trap and sliding the Main Spring Bolt from the rear hole.

TO INSTALL A NEW MAIN SPRING, reverse instructions 10, 9, & 8. i.e. installing the spring into the rear hole and locking the rear Black Turnwheel and front Locknut together.

Then proceed as follows;

The spring should now be hanging loose, connected to the main body of the trap.

Connecting the Main Spring:

. In order to connect the Main Spring to the throwing arm, it will be necessary to position the throwing arm out in front of the trap in the 1:05 position when viewed down on from the rear of the trap (i.e. slightly to the right and not quite straight out.). If the throwing arm is already in this position, say from removing an old Main Spring, then go to (B), otherwise continue. To achieve the 1:05 position, manually push the throwing arm in a **counter-clockwise** direction, passing out from beneath the magazine, over the throwing plate and towards the front of the trap. Continue to rotate the throwing arm **counter-clockwise** by hand until it is nearly straight out in front of the trap. (i.e. at the 1:05 position, when viewed from the rear of the trap.) It may be necessary to move the gearbox stud out of the way of the throwing arm stud thus allowing more free movement of the throwing arm. This is achieved by using the method used above in step (5).

(Refer to Fig. 17A). Guide the threaded eye rod on the bottom of the throwing arm main shaft "A" into the end of the aluminum block screwed into the front end of the Main Spring "B". Rotate the Black Turnwheel "C", at the rear of the Mainspring assembly, clockwise winding the threaded aluminum block onto the threaded eye rod. As you do this, it will be necessary to rotate the throwing arm **counter-clockwise** further to the straight out, 12 o'clock position, thus "feeding" the threaded eye rod into the Mainspring Assembly. Keep rotating the Black Turnwheel, until the Main Spring is wound approximately 2" onto the threaded eye rod,

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and the end of the threaded eye rod is visible, protruding about 1/4" through the rear of the aluminum block. Check this by looking through the "opening" coils of the Main Spring.

At this point check to ensure the Spring Coils have started to separate. Do this by sliding a piece of paper between the coils. (See Fig. 17B). When a piece of paper can just slide between the coils, this is the minimum setting for the tension. If you install the Mainspring at a tension less than this, i.e. the paper will not slide between the coils, then you run the risk of damaging the trap, because when the arm cycles the spring will be "rammed" into the rear casting and could possibly snap it off. The trap would then be completely inoperable and require a new base.

Check the targets are being thrown the correct distance. If not see "SPRING TENSION ADJUSTMENT" section earlier in this manual.

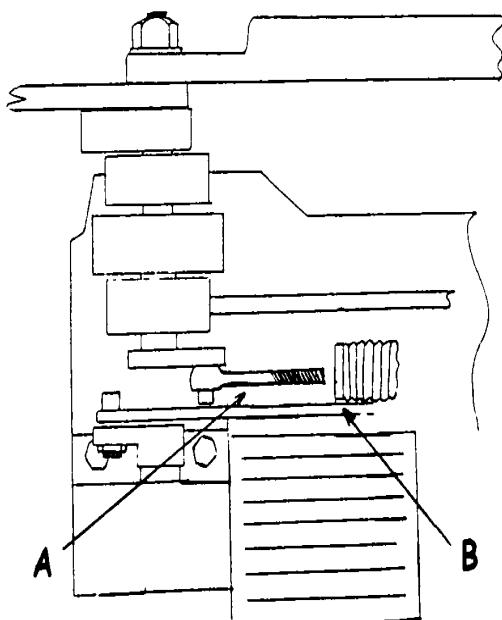


Fig. 17A

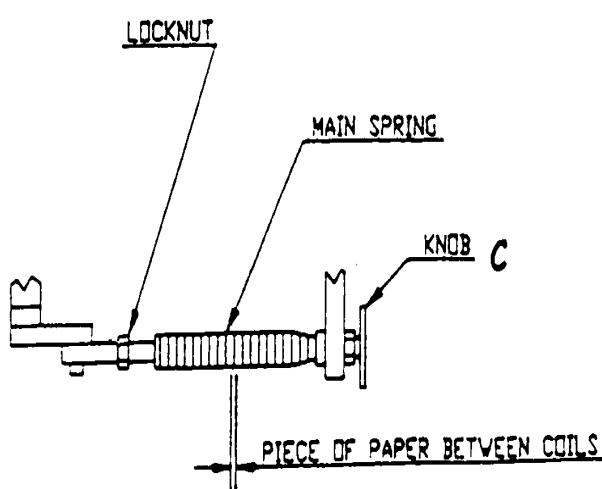


Fig. 17B

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RIGHT MACHINE:

1. Check the position of the throwing arm.

If it is straight out in front, as shown in (see Fig. 18C) go to step #6.

If it is still cocked as shown in (see Fig. 18A), reconnect the trap to its power source. Move the switch marked "ON-OFF-DECOCK" on the Individual Control box from the "OFF" position to the "UNCOCK" position , then back to the "OFF" position. The throwing arm should now be in the "Uncocked" position as shown in (see Fig. 18B) Go to step #2.

If it is past the straight out position and in the "Uncocked" 3:15 position as shown in (see Fig. 18B) go to step #2.

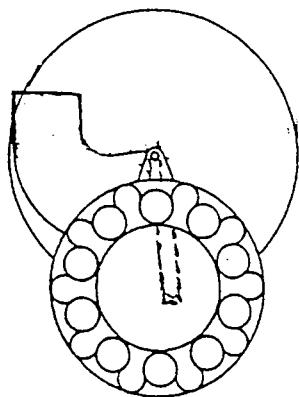


Fig. 18A

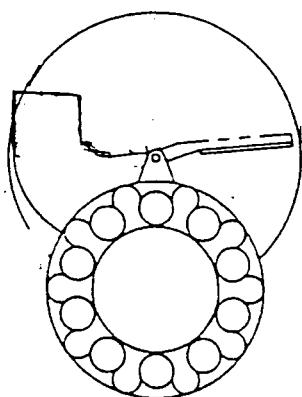


FIG. 18B

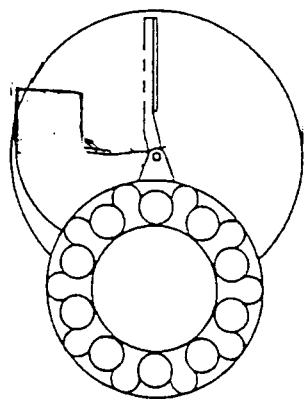


FIG. 18C

2. We now need to position the arm in the straight out 12:00 position. In order to do this we must first position the gearbox cocking stud in the 12:00 position to use it as a "break" to cushion the release of the throwing arm through its "Decocking" sequence. Follow the instructions below.

Using a small screwdriver inserted into the hole at the end of the cocking motor shaft, rotate the cocking motor **counter-clockwise**, so the gear box stud rotates in a **counter-clockwise** direction. (See Fig. 14). Continue doing this until the stud has moved to the 12:00 position out front of the trap.

3. You have now positioned the driving stud, on the gearbox, to a position in front of the driving stud on the throwing arm. You can now use the cocking motor, as a brake, to slowly release the spring tension on the throwing arm. **NOTE :** The throwing arm will only travel in a **clockwise** direction due to the restriction of the one-way bearing on the throwing arm main-shaft. As the gearbox stud is now "in front", to the right of, the throwing arm stud, it will restrict the travel of the throwing arm.

4. Push the throwing arm **clockwise**, towards the cocked position, **using the palm of the hand or your thumbs**, until it is in the 6:30 "Cocked Position" touching the brass throwing arm stop plate. **NOTE:** As mention before, *the throwing arm will only travel clockwise, it cannot be pulled back or reversed!*. **SO.....** **WARNING:** *Do not wrap your fingers around the throwing arm, while pushing it, because if you push too fast or to hard, you may trap your fingers below the magazine base.* **REMEMBER THE ARM CANNOT**

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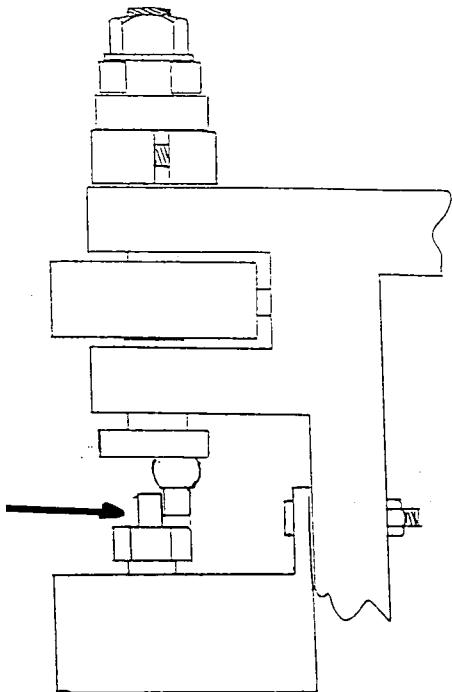


FIG. 19

Push the throwing arm further towards the "Cocked" position. Repeat the above procedure until the throwing arm is in the "Cocked" 6:30 position, touching the brass throwing arm stop plate. (**Do not move studs more than 1/4 inch apart each time**).

- When the throwing arm is in the "6:30" "Cocked" position, it will be under maximum spring tension. We must now use the cocking motor as a brake to slowly release the throwing arm through its "**Uncock**" procedure. As we are releasing the throwing arm slowly, it will not go past the straight out, 12:00 position to the "Uncocked" 3:15 position where, after "normal release", it would be held by the action of the "One-way Bearing".

Follow the procedure below in order to release the throwing arm to the straight out 12:00 position.

Use a small screwdriver in the end of the cocking motor shaft to turn the motor clockwise a few turns. The stud on the gearbox will move clockwise, thus parting from the throwing arm stud. ONLY ROTATE THE COCKING MOTOR A FEW TURNS SO THE TWO STUDS PART ABOUT 1/4". Push in the throwing arm past the "6:30" "Cocked" position into the "Release" position. You will have to move the brass throwing arm stop plate aside to allow the arm to pass. If the throwing arm does not go into the "release" position, keep repeating the above 1/4" movement followed by pushing the throwing arm until the throwing arm releases and its stud comes to a "hard rest" against the gearbox stud. It is quite safe to do this, because when the throwing arm does eventually release it will only travel about an inch, being restricted by the stud on the gearbox which will only be 1/4" away from the throwing arm stud. It may appear to "jump" very fast, as if firing, but it will only travel about one inch. Now the throwing arm stud is "hard" against the gearbox stud.

Insert a small screwdriver in the hole in the end of the cocking motor shaft and rotate the motor shaft clockwise. This will cushion the travel of the throwing arm allowing it to "decock" slowly. Continue rotating

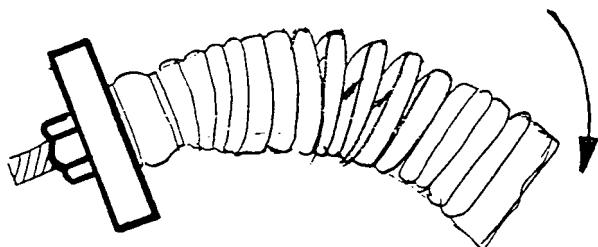
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the shaft until the throwing arm is in the straight out position in front of the trap i.e. "12:00". The main spring is now at its minimum tension.

6. Loosen the locknut "A" on the threaded eye rod at the front of the main spring. (see Fig. 7).
7. Rotate the Black Turnwheel "C" (see Fig. 7), at the rear of the Main Spring counter-clockwise until the threaded eye rod disengages from the Main Spring. NOTE: As the Main Spring is being unwound, it will be necessary to move the throwing arm in a **clockwise** direction further, thus allowing the threaded eye bolt to disengage from the Main Spring. If at this time the gearbox stud is restricting the movement of the throwing arm stud to travel in the **clockwise** direction, it will be necessary to move the gearbox stud further **clockwise**, out of the way. This can be achieved by following the procedure detailed in (4) above when we used the cocking motor as a brake to allow the throwing arm to slowly rotate **clockwise** through its "Uncocking" sequence. Simply move the gearbox stud further **clockwise**. This will allow the throwing arm to move further **clockwise**, thus disengaging the threaded eye-bolt from the Main Spring.
8. To disconnect the rear of the Main Spring, use a wrench to hold the front Locknut from turning, then loosen the Black Turnwheel by rotating it counter-clockwise to break the "Lock" between the it and the front Locknut. Remove the rear Black Turnwheel completely.
9. The front Locknut must now be removed, but as it is "Nylon Locking Nut" it will not be that easy. When you attempt to unscrew it from the thread of the Mainspring Bolt, it will turn the bolt with it. You can try to unscrew this forever, but it will continually turn the bolt with it. The trick to do this is as follows.....



"AUTHOR'S HELPFULL HINT". With your right hand grasp the Mainspring and pull it sideways bending it to the right making it slightly banana shaped. (see Fig. 20). This will place sideways tension on the Main Spring Bolt, holding it still, and allow you to unwind the front "Nylon Locking Nut" using a wrench in your left hand. If the bolt continues to turn with the "Nylon Locking Nut", simply apply more "bend" on the Main Spring with your right hand.. When it is loose, remove the front "Nylon Locking Nut", two washers and the thrust bearing.

Fig. 20

10. Remove the Mainspring by pulling it towards the front of the trap and sliding the Mainspring Bolt from the rear hole.

TO INSTALL A NEW MAINSPRING, reverse instructions 10, 9 & 8. i.e. installing the spring into the rear hole and locking the rear Black Turnwheel and front Locknut together.

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Then proceed as follows;

The spring should now be hanging loose, connected to the main body of the trap.

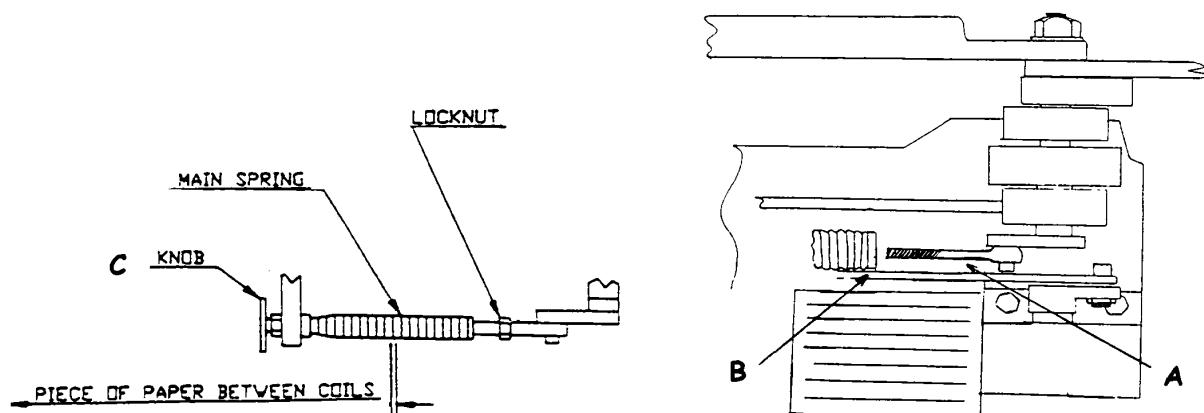
Connecting the Main Spring:

. In order to connect the Mainspring to the throwing arm, it will be necessary to position the throwing arm out in front of the trap in the 11:55 position when viewed down on from the rear of the trap (i.e. slightly to the left and not quite straight out.). If the throwing arm is already in this position, say from removing an old Main Spring, then go to (B), otherwise continue. To achieve the 11:55 position, manually push the throwing arm in a **clockwise** direction, passing out from beneath the magazine, over the throwing plate and towards the front of the trap. Continue to rotate the throwing arm **clockwise** by hand until it is nearly straight out in front of the trap. (i.e. at the 11:55 position, when viewed from the rear of the trap.) It may be necessary to move the gearbox stud out of the way of the throwing arm stud thus allowing more free movement of the throwing arm. This is achieved by using the method used above in step (5).

(Refer to Fig. 20A). Guide the threaded eye rod on the bottom of the throwing arm main shaft "A" into the end of the aluminum block screwed into the front end of the Main Spring "B". Rotate the Black Turnwheel "C", at the rear of the Mainspring assembly, clockwise winding the threaded aluminum block onto the threaded eye rod. As you do this, it will be necessary to rotate the throwing arm **clockwise** further to the straight out, 12 o'clock position, thus "feeding" the threaded eye rod into the Mainspring Assembly. Keep rotating the Black Turnwheel, until the Main Spring is wound approximately 2" onto the threaded eye rod, and the end of the threaded eye rod is visible, protruding about 1/4" through the rear of the aluminum block. Check this by looking through the "opening" coils of the Mainspring.

At this point check to ensure the Spring Coils have started to separate. Do this by sliding a piece of paper between the coils. (See Fig. 20B). When a piece of paper can just slide between the coils, this is the minimum setting for the tension. If you install the Mainspring at a tension less than this, i.e. the paper will not slide between the coils, then you run the risk of damaging the trap. When the arm cycles the spring will be "rammed" into the rear casting and could possibly snap this off. The trap would then be completely inoperable and require a new base.

Check the targets are being thrown the correct distance. If not see "SPRING TENSION ADJUSTMENT" section earlier in this manual.



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Alternative ARM BLOCKING Method.

THIS IS FOR THE LEFT TRAP!!!! REVERSE FOR THE RIGHT TRAP!!!!

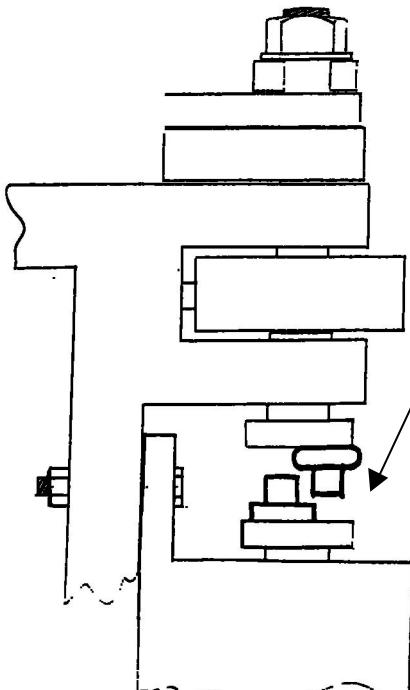
CAUTION: The method suggested below is detailed only for use on the “Latest” release traps, i.e. Traps with the Electronic Board Control. (It is possible to use this method on an earlier release trap but it depends upon where the gearbox stud positions itself after a “De-Cock” sequence. Read this section).

Caution: This method should only be attempted by following the instructions explicitly. If at any time you are not sure what is being explained or your trap appears not to operate in the same way as described DO NOT CONTINUE!

PLEASE read and digest the instructions from start to finish and only proceed if you feel confident you understand them and have no concerns about carrying them out.

I am assuming you are starting this procedure with the trap “DE-COCKED”.

- 1) Remove all targets from the trap.
- 2) “ARM / COCK” the trap. I.E. Connect power to the Electrical Control Box then move the switch marked “ON-OFF-UNCOCK” to the “UNCOCK” position then to the “ON” position. The Throwing arm should move from the “DE-COCKED” position to the “COCKED” position (i.e. 6:30 position if viewed from behind the trap).

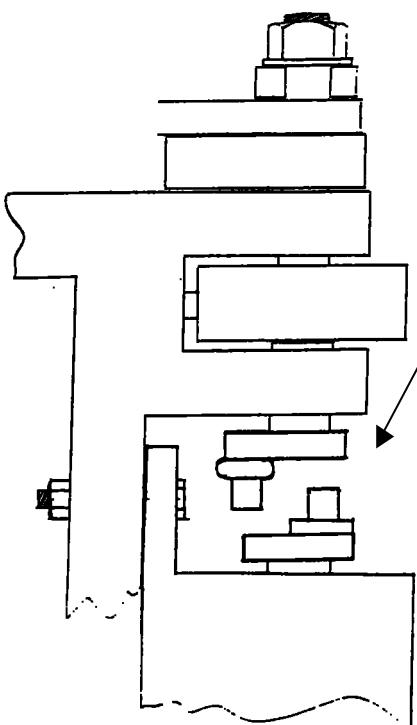


- 3) While staying outside the Throwing Arm Arc (outside the danger area as enclosed by the Safety Guard), move to the front of the trap and note the position of the Main Shaft Cocking Stud and the Gearbox Cocking Stud. They should be shown as in **diagram (i)** below. (The gearbox stud, the bottom one, should be to the **LEFT** of the axis stud, the upper one, and almost touching it when viewed from the front of the trap. The distance between them should be about a quarter to three eighths of an inch, in some cases they may even be touching).
- 4) Move to the rear of the trap and “DE-COCK” it. I.E. Move the switch marked “ON-OFF-UNCOCK” to the “UNCOCK” position then ‘quickly’ to the “OFF” position.
- 5) The throwing arm should now be in the “DE-COCKED” position to the left, front of the trap in approximately the 8:45 position if viewed from the rear of the trap.

DIAGRAM (i)

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- 6) Move to the front of the trap and note the new positions of the Main Shaft Cocking Stud and the Gearbox Cocking Stud. They should be shown as in **diagram (ii)** below. (The gearbox stud should be to the **RIGHT** of the axis stud when viewed from the front of the trap. The throwing arm stud having travelled in a **counter-clockwise** direction away from the gearbox stud and round behind it. It will be in approximately the 4:20 to 3:15 position if viewed from the rear of the trap.
- 7) Carefully examine where the gearbox stud is positioned. It should be in approximately the 11:55 to 11:58 position if viewed from behind the trap. I.E. It should have only moved about half an inch to one inch from its previously viewed position when you looked at it in instruction (3) above.

DIAGRAM (ii)

NOTE: These diagrams are for the **LEFT** trap only.
The pictures will be reversed for the **RIGHT** trap!

NOW WE MUST DECIDE WHETHER TO PROCEED OR NOT!!

- 8) IF the gearbox stud has travelled further than the distance mentioned above (7), and is now in the area say, 8:45 to 10:50 , when viewed from behind the trap, then this method **should not** be continued. (See EXPLANATION WARNING below).
- 9) The gearbox stud is now in a position, (11:55 to 11:58 if viewed from behind the trap) where we can continue this method in relative safety. I.E. The gearbox stud can be used as a brake to slowly release the throwing arm through its 'DE-COCK' cycle.
- 10) Standing to the **left** side of the trap you should see the throwing arm pointing towards you (8 :45 position). Using the palms of your hands or your thumbs push the throwing arm in a **counter-clockwise** direction towards its 'COCKED' position. This will appear a hard task to start with as you are pushing against the Mainspring tension exerted on the throwing arm, but as you approach the 'COCKED' position the tension will be eased and the throwing arm will move more freely.

CAUTION : ". **NOTE:** As observed, the throwing arm will only travel **counter-clockwise**, it cannot be pulled back or reversed!. **SO** **WARNING:** Do not wrap your fingers around the throwing arm, while pushing it, because if you push too fast or too hard, you may trap your fingers below the magazine base. **REMEMBER THE ARM CANNOT BE PULLED BACK!!!**

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- 11) **BE VERY CAREFULL** as you approach the ‘COCKED’ position. As you push the throwing arm into its ‘COCKED’ position just use the tips of your thumbs. Continue pushing the throwing arm until it passes its ‘COCKED’ position. You will know when this is, because you will have pushed the throwing arm past the ‘Point of no return’ and it will ‘jump’ away from your thumbs and start its ‘DE-COCK’ sequence. **HOWEVER**, it will only ‘jump’ an inch or two because the axis stud will now have come in contact with the gearbox stud and be restricted from travelling further in its **counter-clockwise** ‘DE-COCK’ path. **NOTE:** If your trap is fitted with a solenoid release system it will be necessary for you to move the brass release plate backwards out of the way to allow the throwing arm to pass.

- 12) The throwing arm will now be sitting in approximately the 4:20 to 5:25 position with the main axis stud to the left of, (when viewed from the front of the trap), and hard against the gearbox stud.

- 13) We can now use the Electrical Control Box to slowly release the throwing arm into the straight out, 12:00 position when viewed from the rear of the trap.

- 14) Using short, sharp ‘tweaks’, move the switch marked “**ON-OFF-UNCOCK**” to the “**UNCOCK**” position then ‘quickly’ to the “**OFF**” position. The throwing arm will move in a **counter-clockwise** direction in short movements of a few degrees each time.

- 15) When the throwing arm is in the straight out 12:00 position you can continue with the original task. I.E. Spring removal, Target Height Check etc.. Remember to remove the power from the Electrical Control Box before continuing any work on the trap.

NOTE: When the throwing arm is in the straight out position, the two studs will still be touching. By continual ‘tweaking’ of the switch marked “**ON-OFF-UNCOCK**” to the “**UNCOCK**” position then ‘quickly’ to the “**OFF**” position, you can move the gearbox stud further **counter-clockwise** out of the way of the throwing arm / main axis stud.

NOTE: This method can be adopted in other places throughout this manual **EXCEPT** for the section **Jammed Arm Removal**.

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EXPLANATION WARNING: or “Why not to proceed!”

When the throwing arm releases from the ‘COCKED’ position to the ‘UNCOCKED’ position it travels at a phenomenal rate. As much as 200 Miles per hour. Anything which is in its way will suffer a tremendous ‘hit’. Fingers can be broken, arms and legs can receive severe bruising and heads can receive fatal blows, concussion or ripped skin requiring numerous stitches. (The author can vouch for the last item having received 24 stitches in a head wound just above the eye).

When the throwing arm first starts to move into its ‘DECOCKING’ motion, although under tremendous tension, only moves slowly for the first few tenths of a second. During this time the stud on the main axis only travels about half an inch. If the gearbox stud is relatively near, the axis stud will jump into the gearbox stud “softly” and come to a halt. HOWEVER, after the first few tenths of a second, the throwing arm is travelling at maximum speed and if the gearbox stud is not near and is say two inches away, the axis stud will slam into the gearbox stud at maximum pressure and one of two situations will result;

- 1) There will be a tremendous ‘bang’ and the throwing arm will stop ‘dead’ half way through its ‘DECOCKING’ cycle. This will possibly result in either or both the axis stud and the arm stud being damaged and having a ‘flat’ spot beaten into them. This will shorten the life of one or other and make for uneven ‘COCKING’.

OR

- 2) There will be a tremendous “bang” as the throwing arm stud slams against the gearbox stud and one of them **SNAPS OFF**. This will result in the parted stud flying through the air until it hits something or someone, but worse, the throwing arm will complete its ‘DECOCK’ cycle and possibly hit the ‘human’ arm which has just pushed the throwing arm into its ‘DECOCK’ cycle. A cracked elbow would not be out of the question.

YOU CAN NOW SEE WHY IT IS VERY IMPORTANT TO ENSURE THAT THE GEARBOX STUD IS ONLY ONE HALF INCH TO AN INCH IN FRONT OF, TO THE RIGHT OF THE AXIS STUD, WHEN VIEWED FROM THE FRONT OF THE TRAP. SEE DIAGRAM (ii) ABOVE.

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Horizontal Adjustment

CAUTION: MAKE SURE ALL PERSONNEL ARE CLEAR OF THE TRAP BEFORE PROCEEDING.

BEFORE PROCEEDING: If in the "ON" mode (i.e. the switch on the Master Control Box is in the "ON" position), move the switch marked "**ON-OFF-UNCOCK**" on the "Remote Safety Switch" to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position. If in the "TEST" mode (i.e. the switch on the Master Control Box is in the "**TEST**" position), move the switch marked "**ON-OFF-UNCOCK**" on the Individual Control boxes to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position.

ENSURE the switch marked "TEST-OFF-ON" on the Master Control box is in the "TEST" position thus taking control away from the "Remote Safety Switch" and avoiding anyone accidentally turning the traps on while you are working on them.

Before continuing be sure you only work on one trap at a time. If you are going to work on the **LEFT** trap ensure the **RIGHT** trap is "**UNCOCKED**" and the switch marked "**ON-OFF-UNCOCK**" on the **RIGHT** trap Individual Control box is in the "**OFF**" position. Likewise, if you are going to work on the **RIGHT** trap ensure the **LEFT** trap is "**UNCOCKED**" and the switch marked "**ON-OFF-UNCOCK**" on the **LEFT** trap Individual Control box is in the "**OFF**" position.

There are several adjustments for the HORIZONTAL angles depending upon which mode you are operating in... DOUBLES or SINGLES.

DOUBLES:

There are two MAIN angle settings for DOUBLES. This is the angle between the two targets as they leave the trap house. These are **22.5** degrees or **45** degrees.

At the rear of each trap's base plate are three "Cut-Outs" marked **0 / 11 / 22**.

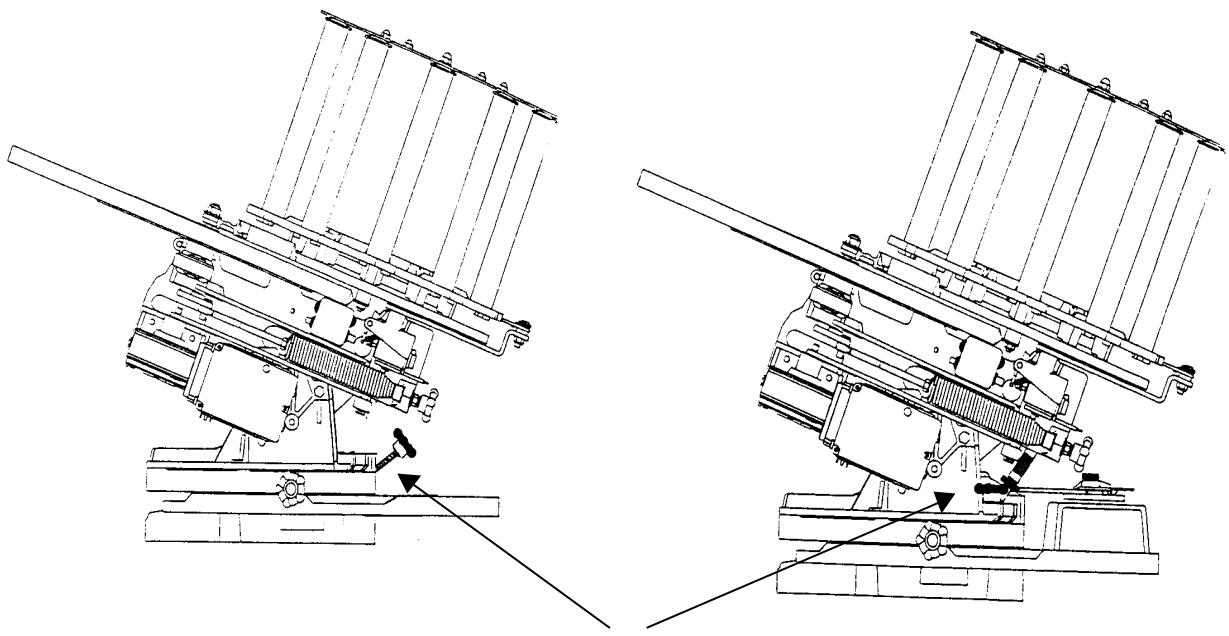
If the angle required is **22.5** degrees, then each trap must be set to **11** degrees.
If the angle required is **45** degrees, then each trap must be set to **22** degrees.

Loosen the Black Turn screw at the rear of the base plate and pull it backwards. (**See Fig. 21A**)

It will disengage from the base plate. Move the whole trap left or right to line up the required cut-out with the Black Turn screw. Push the Black Turn screw back into place (i.e. in the new cut-out), and tighten down. (**See Fig. 21B**). Repeat this with the other trap.

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Thumbscrew

FIG. 21A

FIG. 21B

Now ensure the Trap Mounting Base is in the DOUBLES position.

At the rear of the Trap Mounting Base is the horizontal motor, gearbox and oscillating arm. (See Fig. 22A) To set the Trap Mounting Base at the correct setting, remove the center screw from the oscillating arm and position the oscillating arm over the center hole in the gearbox circular flange. (See Fig. 22B). Retighten the center screw.

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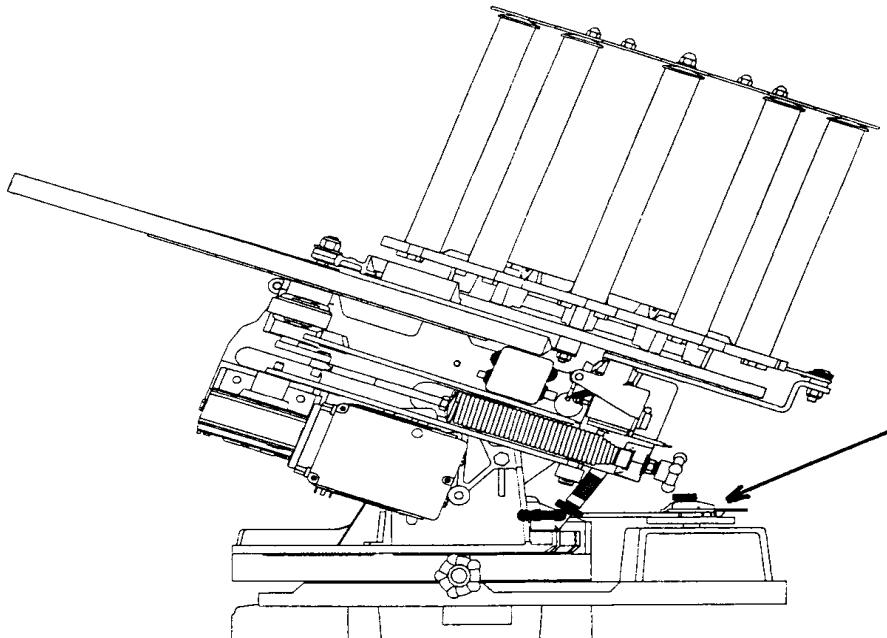


FIG. 22A

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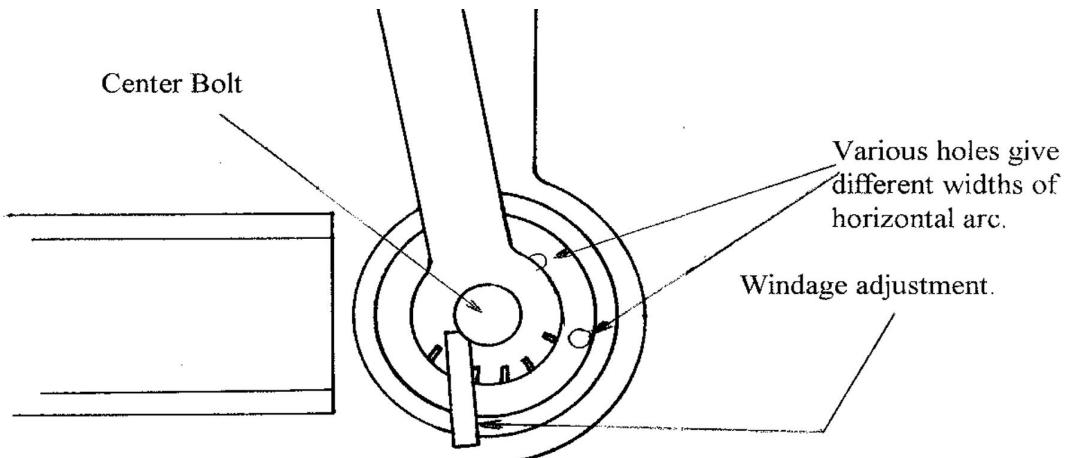


Fig. 22B

NOW TO TEST THE THROWING PATH AND ANGLE.

Move the switch marked "**TEST-OFF-ON**" on the Master Control box to the "**TEST**" position. Move the switches marked "**ON-OFF-UNCOCK**" on the Individual Control boxes to the "**UNCOCK**" position then to the "**ON**" position, thus "cocking" each trap.

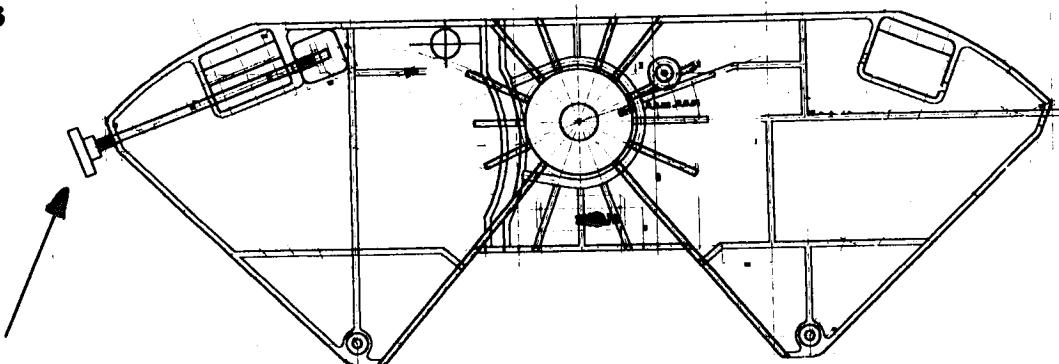
Ensure the switch marked "**SINGLE-DOUBLE-SINGLE/DOUBLE**" on the Master Control box is in the "**DOUBLE**" position.

Press the button marked "**PULL-TEST**" on the Master Control box and the two traps will fire the targets. Note their trajectory.

If correction to the angle is required, this can be achieved by turning the Horizontal Adjustment Knob at the base of each trap left or right. (**See Fig. 23**).

Before turning this knob, loosen the Black Turn screw securing the individual trap base to the Mounting Platform.

Fig. 23



Adjustment Knob

After setting the correct width of the target flight path, you should check the vertical height of each target. See the following section.

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SINGLES MODE.

With SINGLES mode, the two traps need to be facing the front. i.e. they have their "front-to-rear" axis parallel to each other.

At the rear of each trap's base plate are three "Cut-Outs" marked **0 / 11 / 22**.

Loosen the Black Turnscrew at the rear of the base plate and pull it backwards. (**See Fig. 21A**) It will disengage from the base plate. Move the whole trap left or right to line up the cut-out marked "**0**" with the Black Turnscrew. Push the Black Turnscrew back into place (i.e. in the new cut-out), and tighten down. (**See Fig. 21B**). Repeat this with the other trap.

Now ensure the Trap Mounting Base is in the SINGLES position.

At the rear of the Trap Mounting Base is the horizontal motor, gearbox and oscillating arm. (**See Fig. 24**) To set the Trap Mounting Base at the correct setting, remove the center bolt from the oscillating arm and position the oscillating arm over the center hole in the gearbox circular flange. Retighten the center bolt.

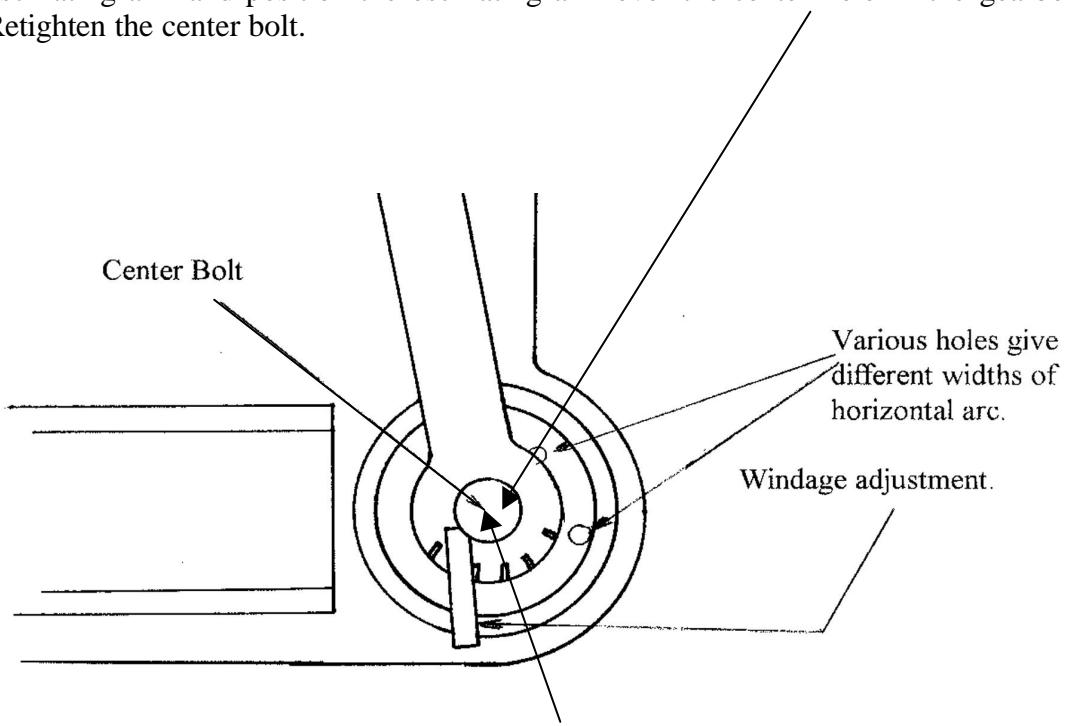


FIG. 24

Set center bolt into center hole.

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NOW TO TEST THE THROWING PATH AND ANGLE.

Move the switch marked "**TEST-OFF-ON**" on the Master Control box to the "**TEST**" position. Move the switches marked "**ON-OFF-UNCOCK**" on the Individual Control boxes to the "**UNCOCK**" position then to the "**ON**" position, thus "cocking" each trap.

Ensure the switch marked "**SINGLE-DOUBLE-SINGLE/DOUBLE**" on the Master Control box is in the "**SINGLE**" position.

Press the button marked "**PULL-TEST**" on the Master Control box and the two traps will fire the targets. Note their trajectory.

If correction to the angle is required, this can be achieved by turning the Horizontal Adjustment Knob at the base of each trap left or right. (**See Fig. 23**).

Before turning this knob, loosen the Black Turn screw securing the individual trap base to the Mounting Platform.

The two targets are now being thrown on the "same" flight path. We must now adjust the arc that they are thrown in!

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HORIZONTAL ARC ADJUSTMENT

WHEN MAKING ANY ADJUSTMENTS TO A TRAP, ENSURE YOU ARE IN "TEST" MODE, BY MAKING SURE THE SWITCH MARKED "TEST-OFF-ON" ON THE MASTER CONTROL BOX IS IN THE "TEST" POSITION. (This will prevent anyone from accidentally turning on the traps, by means of the "Remote Safety Switch" when you are working on them.)

I. HORIZONTAL ARC ADJUSTMENT

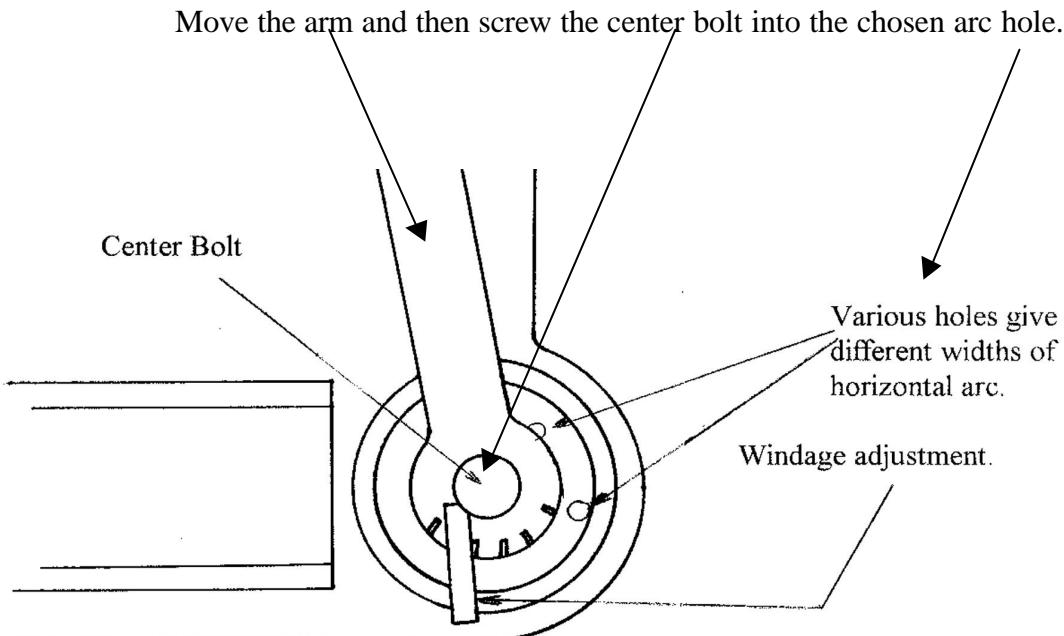
To adjust the width of the target throwing arc, loosen and remove the center bolt from the red circular plate on top of the horizontal motor gearbox flange at the rear of the trap. Note: There are several threaded holes in the gearbox flange, spiralling out from the center. (See Fig. 25).

Chose a new hole. If you chose a hole near the center, the arc will be small. If you chose a hole towards the outside of the flange, the arc will be greater.

Locate the red circular plate over the desired hole and replace the center bolt. Tighten down hand-tight. See "Windage Adjustment" section detailed later in this manual enabling the "target thrown arc" to be moved.

NOTE: TEST THE NEW SETTING AND MAKE ANY DESIRED CORRECTION.

Fig. 25



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Vertical Adjustment

CAUTION: MAKE SURE ALL PERSONNEL ARE CLEAR OF THE TRAP BEFORE CONTINUING.

IMPORTANT: BEFORE PROCEEDING WITH THE FOLLOWING ADJUSTMENTS MAKE SURE THE TWO TRAPS ARE SAFE TO WORK ON.

BEFORE PROCEEDING: If in the "ON" mode (i.e. the switch on the Master Control Box is in the "ON" position), move the switch marked "ON-OFF-UNCOCK" on the "Remote Safety Switch" to the "UNCOCK" position and then to the "OFF" position to leave the throwing arms in the safe, "**Decocked**" position. If in the "TEST" mode (i.e. the switch on the Master Control Box is in the "TEST" position), move the switch marked "ON-OFF-UNCOCK" on the Individual Control boxes to the "UNCOCK" position and then to the "OFF" position to leave the throwing arms in the safe, "**Decocked**" position. Then move the switch marked "TEST-OFF-ON" on the Master Control box to the "OFF" position.

ENSURE the switch marked "TEST-OFF-ON" on the Master Control box is in the "TEST" position thus taking control away from the "Remote Safety Switch" and avoiding anyone accidentally turning the traps on while you are working on them.

The adjustment described below is the same for each trap (left or right) and is very easy to understand. The drawings shown are for the **LEFT** trap and should be interpreted in reverse (i.e. mirrored) for the **RIGHT** trap.

I. VERTICAL ANGLE ADJUSTMENT (See Fig. 26)

Vertical adjustment is achieved by screwing the adjustment rod at the rear right of the trap in or out.

To increase the angle, turn the turnbuckle counter-clockwise.

To decrease the angle, turn the turnbuckle clockwise

FIG: 26

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Windage Adjustment

IMPORTANT: BEFORE PROCEEDING WITH THE FOLLOWING ADJUSTMENTS MAKE SURE THE TWO TRAPS ARE SAFE TO WORK ON.

BEFORE PROCEEDING: If in the "ON" mode (i.e. the switch on the Master Control Box is in the "ON" position), move the switch marked "**ON-OFF-UNCOCK**" on the "Remote Safety Switch" to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position. If in the "TEST" mode (i.e. the switch on the Master Control Box is in the "**TEST**" position), move the switch marked "**ON-OFF-UNCOCK**" on the Individual Control boxes to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position. Then move the switch marked "**TEST-OFF-ON**" on the Master Control box to the "**OFF**" position.

ENSURE the switch marked "TEST-OFF-ON" on the Master Control box is in the "TEST" position thus taking control away from the "Remote Safety Switch" and avoiding anyone accidentally turning the traps on while you are working on them.

The adjustment described below is the same for each trap (left or right). The drawings shown are for the **LEFT** trap and should be interpreted in reverse (i.e. mirrored) for the **RIGHT** trap.

NOTE: THERE ARE TWO "WINDAGE" ADJUSTMENTS

The first adjusts the "Falling Off" path of the target, i.e. "Does the target veers to one side or the other when 'settling'?". **Windage 1.**

The second allows for "quick" adjustment of the "Target Throwing Arc" should the wind increase or diminish, thus changing the position of the arc where the target should drop. **Windage 2.**

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WINDAGE 1. When the target is launched from the throwing plate, it should fly in a straight path and land in a spot directly in front of the trap. If the target veers off to one side or the other, at the end of its flight path, it is leaving the throwing plate at an incorrect angle.

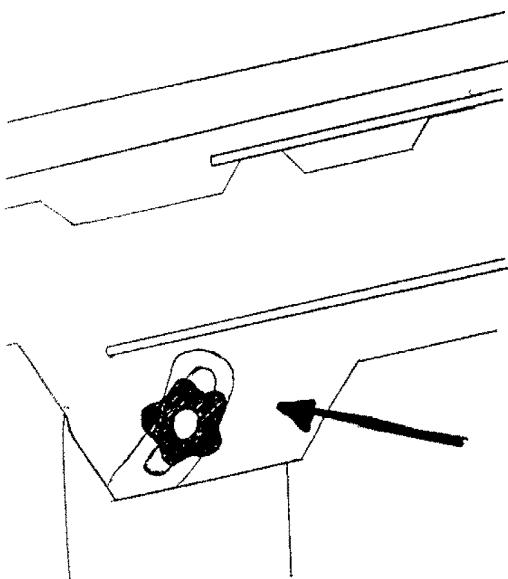
The flight path of the target can be altered by adjusting the 'windage' on the machine.

At the right side of the trap, is a black windage adjusting knob. (See Fig. 27A).

If the target flies to the 'left', adjust the 'windage' to the right. Turn the black knob counter-clockwise.

If the target flies to the 'right', adjust the 'windage' to the left. Turn the black knob clockwise.

Fig: 27A



Adjust Black Windage Know (Spring Loaded)

WINDAGE 2. The horizontal arc where the target should fall, can be adjusted by moving it to the right or to the left.. When the width of the horizontal arc is set (see section "Horizontal Adjustment"), the target will drop within defined set limits. (e.g. 45 degrees to the left of center to 45 degrees to the right of center). However, it is possible that once set the wind at the shooting range could increase or diminish and the arc change (i.e. 30 degrees to the left of center to 60 degrees to the right of center). Instead of resetting the Horizontal Arc, there is a feature on the trap allowing this "Arc" to be moved.

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When we set the Horizontal Arc we moved the red circular disc to a selected hole in the motor cam. This set the desired width of the Horizontal Throwing Arc. If you look at this red disc you will notice a small lever at the rear, which can be raised and moved clockwise or counter-clockwise.

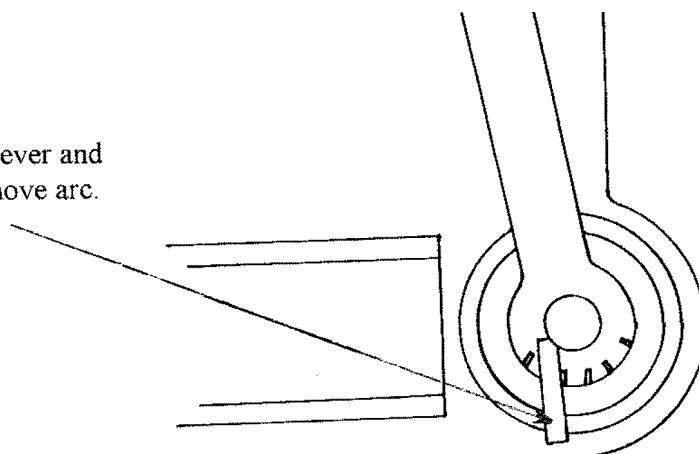
In order to adjust the position where targets thrown inside the Horizontal Throwing Arc will land on the shooting field, move this red lever to a new location slit in the red disc.

By moving the lever to the right (counter-clockwise), the Horizontal Throwing Arc will be moved to the right. By moving the red lever to the left (clockwise), the Horizontal Throwing Arc will be moved to the left. (**See Fig. 27B**).

Turn the trap back "ON" and test the new throwing position..

FIG. 27B

WINDAGE 2. Raise lever and move left or right to move arc.



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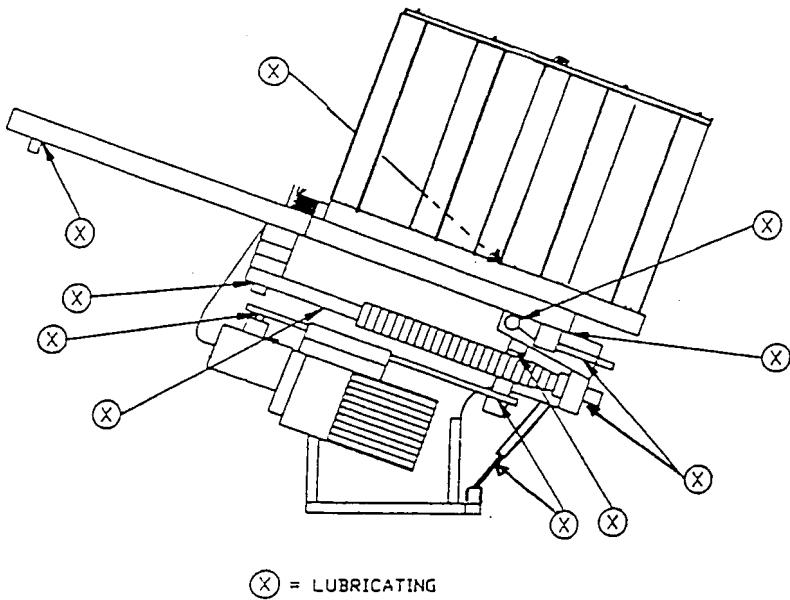
Maintenance and Storage

BEFORE PROCEEDING: If in the "ON" mode (i.e. the switch on the Master Control Box is in the "ON" position), move the switch marked "**ON-OFF-UNCOCK**" on the "Remote Safety Switch" to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position. If in the "TEST" mode (i.e. the switch on the Master Control Box is in the "**TEST**" position), move the switch marked "**ON-OFF-UNCOCK**" on the Individual Control boxes to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position. Then move the switch marked "**TEST-OFF-ON**" on the Master Control box to the "**OFF**" position.

ENSURE the switch marked "TEST-OFF-ON" on the Master Control box is in the "TEST" position thus taking control away from the "Remote Safety Switch" and avoiding anyone accidentally turning the traps on while you are working on them.

1. Clean the machine by removing dust and target fragments. A small air-compressor is ideal.
2. Lubricate all moving linkages and parts of the trap using MOBILTAC 375 or equivalent grease as shown below. (**See Fig. 28**).

FIG: 28



3. Check the condition of the throwing arm rubber and replace if there are any cuts, nicks or tears.
4. Check the condition of the target throwing plate, and remove any build-up of target pitch using a suitable solvent (carburettor cleaner works quite well BUT, do not squirt it in quantity as it dissolves the pitch then runs down the trap. If not cleaned immediately the black solution will solidify and make a sticky mess to be chipped away at a later date.). Alternatively, fine emery-cloth or sandpaper may be used. Try to keep the throwing plate in a 'polished' condition.
5. After using the emery-cloth try using "Silver Polish" with wire-wool. It will produce a very smooth surface. This will help the targets to be launched in a better condition and travel on a more accurate flight path. NOTE: Apart from the "visible" part of the throwing plate, also clean and polish the part under the carousel and also the "Flipper Plate".
6. To prolong the life of the trap, protect it against weather elements.

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Trouble Shooting

Remember: There are two Traps and the problems and solutions apply to either.

Obviously there will be common faults but there may be unique problems that are in the base control or master controller.

CAUTION: BEFORE MAKING ANY CHANGES OR ADJUSTMENTS MAKE SURE THE THROWING ARMS ARE IN THE SAFE, UNCOCKED POSITION.

I. THE COCKING MOTOR WILL NOT START

Electricity is not connected.

The circuit breaker is off or the fuse is blown. Move the switch marked "**ON-OFF-DECOCK**" on the "Remote Safety Switch" to the "**OFF**" position. Remove the cover of the control box and see if the BLACK button on the circuit breaker has "Popped". If it has, press it in.. Check the fuses. If the circuit breaker continues to "kick out", or if fuses continue to blow, check all wiring and electrical supply to locate the cause before continuing.

The electric power supply is inadequate. (Check with meter : 100 volt - 130 volt).

Check to electrical connections between the LEFT and RIGHT Control Boxes and the MASTER Control Box, and the Remote Safety Switch. Check all three Control Boxes are "plugged-in" i.e. connected to a power source. (See diagram and explanation on Page 15).

Electrical connections are dirty or loose.

The cocking motor is burnt out.

The cocking motor micro-switch is faulty.

The cocking stud on the gear box is in direct contact with the cocking stud on the throwing arm. The motor will not have sufficient initial power to push the throwing arm into the 'cocked' position, and the circuit breaker will eventually trip. To correct this, turn the "**ON-OFF-UNCOCK**" switch on the "remote safety switch" to the "**OFF**" position, then using a small screw driver in the hole at the end of the cocking motor shaft, rotate the cocking motor **counter-clockwise**, so the gear box stud backs in a **clockwise** (LEFT Trap), **counter-clockwise** (RIGHT Trap) direction and separates from the cocking arm stud. (1/2" is sufficient). **ALTERNATIVELY:** This can be achieved by pushing the throwing arm in a **counter-clockwise (left trap), clockwise (right trap), direction about 1/2"** with the palm of the hand or thumbs Turn power back "**ON**" and re-try.

The circuit board is "burnt-out". Place your nose near it and see if you can smell the distinctive "Burnt Plastic" or Ozone smell.

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II. THE MOTOR STARTS, BUT DOES NOT COCK THE THROWING ARM

The main spring is broken.

The electric power supply is inadequate. (Check with meter : 100 volt - 130 volt)

The throwing arm is blocked./jammed. (**CLEAR WITH EXTREME CAUTION!!**)

The throwing arm axis needs lubricating.

The magazine axis needs lubricating.

The gearbox stud is broken.

The gearbox has "stripped" gears. (Does motor turn, but gearbox stud does not rotate?)

The stud on the throwing arm main shaft is broken.

The throwing arm main shaft is broken.

III. THE MOTOR STARTS, AND COCKS THE THROWING ARM, BUT THE MAGAZINE DOES NOT ROTATE

The magazine indexing finger spring is missing, loose, out of place or broken, and the magazine indexing finger is not engaging with the magazine.

The connecting rod, (gearbox to magazine feeder shaft), is broken.

The clamp at the rear of the connecting rod has come loose and does not rotate the magazine indexing feeder shaft. Check also, that the 'key' has not fallen out.

IV. THE MACHINE IS COCKED BUT DOES NOT FIRE

There is no electrical supply. Refer to "Manually Uncocking" section before proceeding.

The "Pull Button" or remote release system is not working.

The battery in the Optional Radio Control transmitter is flat or exhausted, and needs replacing.

The "**ON-OFF-UNCOCK**" switch is in the "**OFF**" position.

The solenoid is burnt out.

The solenoid fuse is blown. (MOST probable cause.) Check on Green Circuit Board inside Control Box.

The relay, in the electrical control box, for firing the solenoid, is faulty and will not operate. Replace Circuit Board.

The throwing arm Thumbwheel is out of adjustment, and the throwing arm is jammed tight against the brass throwing arm stop. There is too much pressure against this stop, and the

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solenoid cannot release it. Continued efforts to fire the trap, using the Pull-Cord, will cause the cocking motor to build pressure of the throwing arm against the brass throwing arm stop. As the solenoid cannot function, the solenoid fuse will eventually blow, followed, possibly by the main circuit-breaker as the cocking motor strains and heats up. CAUTION: At this time the throwing arm will be pressing against the brass throwing arm stop with TREMENDOUS PRESSURE. When uncocking the trap using the method described in the "Manually Uncocking" section, be EXTREMELY CAUTIOUS, as the throwing arm will release VERY fast. If there is a target on the throwing plate it will most probably shatter, throwing target fragments in ALL directions. Refer to the section, "Throwing Arm Removal", detailed at the end of this manual. (**Also "Jammed Arm"**).

The throwing arm is blocked by two targets, or by target fragments. CAUTION: At this time the throwing arm will be pressing against the targets with TREMENDOUS PRESSURE. When uncocking the trap using the method described in the "Manually Uncocking" section, be EXTREMELY CAUTIOUS, as the throwing arm will release VERY fast. The target(s) on the throwing plate will most probably shatter, throwing target fragments in ALL directions.

The throwing arm is bent or broken and subsequently jammed against some part of the trap, e.g. the throwing plate, the magazine base, the target feeder plate. THIS IS A VERY DANGEROUS CONDITION!! as you cannot "Decock" the machine. The arm will have to be removed. Follow the procedure detailed at the end of this section "Throwing Arm Removal".

Check to electrical connections between the LEFT and RIGHT Control Boxes and the MASTER Control Box, and the Remote Safety Switch. Check all three Control Boxes are "plugged-in" i.e. connected to a power source. (See diagram and explanation on Page 15).

V. **THROWING ARM DOES NOT STOP DECOCKING AND THROWING TARGETS.**

The throwing arm micro-switch is broken, and continually causes the cocking motor to run.

The solenoid does not work.

The solenoid trigger spring is disconnected, broken or stretched and does not have sufficient tension to pull the brass throwing arm stop plate back against the solenoid plunger.

The solenoid plunger is damaged and does not slide back into the solenoid housing.

The solenoid plunger is rusty or corroded and stuck in the fire position. NOTE: Never oil or grease the solenoid plunger. Just keep it clean with alcohol or contact cleaner.

The "PULL" button is stuck, or the cable is damaged.

The throwing arm Thumbwheel is out of adjustment, resulting in the throwing arm SLAMMING against the brass throwing arm stop and pushing it out of the way. This results in the throwing arm not being held and allowed to continually cycle. See section "Throwing Arm Thumbwheel Adjustment" detailed earlier in this manual.

The latching stud on the underside of the far end of the throwing arm is missing.

The end of the throwing arm is bent up and the latching stud on the underside of the far end of the throwing arm, is by-passing the brass throwing arm stop.

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The brass throwing arm stop plate on the solenoid is stuck in the 'fired' position and not returning to rest against the solenoid plunger. It could be damaged, or the rod it pivots on could be bent, or it could simply need cleaning and lubricating.

The top catch on the brass throwing arm stop plate (the part that the latching stud, on the underneath of the far end of the throwing arm, rests against), could be worn, and allows the latching stud, (on the throwing arm), to slide off and past. Replace or "square-up" with a file.

The relay for 'firing' the solenoid, in the electrical control box, is burnt or faulty and is stuck in the closed position. This results in the solenoid plunger being continually held out not allowing the brass throwing arm stop plate to return to its 'home' position. Replace the circuit board.

The solenoid assembly is loose resulting in misalignment of the brass throwing arm stop with the latching stud on the underneath of the far end of the throwing arm. Check the bolts holding this assembly to the underneath of the magazine base.

The Optional Radio Control transmitter is placed somewhere with pressure on the transmit button. (e.g. in a tool-box, desk draw, pocket, gun-case etc.) Check by unplugging the Radio Control Receiver from the remote safety switch.

The Optional Radio Control may have its 'code' (dip-switches), set to the same as that being used on another trap. Check by unplugging the Radio Control Receiver from the "remote safety switch".

The Circuit Board in the control box may be "Burnt-Out"

VI. ABNORMAL NOISES

Check all bolts for tightness.

The throwing arm axis (main shaft) needs lubricating.

The mainspring does not have sufficient tension on it, and the coils are touching each other. See section "SPRING TENSION ADJUSTMENT" earlier in this manual.

The gear box is low on oil.

The one way bearing is worn out or damaged.

The one way bearing securing bolt is loose - tighten.

The magazine indexing finger arm is bent or the shaft is tight in its bearing.

The throwing arm is bent and rubbing on the bottom of the magazine assembly or the throwing plate.

The throwing plate is bent causing the throwing arm to rub against it. Use the procedure "ARM HEIGHT CHECK AND ADJUSTMENT", detailed later in this manual, to check the clearance of the throwing arm with the throwing plate.

The throwing plate may be loose.

The target feeder plate may need lubricating, or be out of adjustment.

The target feeder plate pivot axis, below the feeder plate, may need lubricating.

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Lack of lubrication on magazine main shaft.

VII. THE TARGETS BREAK IMMEDIATELY WHEN FIRING

The targets were damaged prior to loading.

The targets were damaged during loading.

Mixed targets. (different sizes in same stack i.e. 107-109-110mm)

The throwing arm rubber is damaged or worn.

The throwing arm is bent. It can be straightened without removing it. Check that the rubber is always at the same distance from the throwing plate. Uncock the throwing arm and disconnect the mainspring before this inspection and adjustment. See section - "ARM HEIGHT CHECK AND ADJUSTMENT" at the end of this chapter ..

The throwing plate is damaged. Check edges of plate for 'nicks' and file smooth if necessary.

The throwing plate is dirty or has clay target pitch build up resulting in the target not being positioned correct at cocking time. Clean with solvent or fine emery cloth.

The throwing plate is loose.

The target positioning finger spring is missing, loose or broken.

The target positioning finger does not move freely. It may need lubricating or the holding bolt could be too tight.

The target positioning finger is bent and rubs on the throwing plate.

The curved target guide at the rear of the throwing plate is out of adjustment or loose, and the target is not being guided off the throwing plate correctly. Loosen the 10mm bolt holding the guide to the throwing plate and push the guide, at the bolt end, forward as far as possible, then re-tighten the bolt.

The machine is leaning too far to one side, or not mounted securely.

The circular safety guard is bent up into target flight path.

Piece of broken target trapped in positioning finger spring.

Feeder plate is badly adjusted and not laying flat when in cocked position.

Feeder plate is badly adjusted and protrudes too high into magazine base when feeding a target.

Safety guard bolts are loose and protrude through magazine base into the target path.

The throwing arm Thumbwheel is out of adjustment and the throwing arm is stopping short of the "Cocked" position. The arm is not touching the target, and when the trap is "fired" the arm slams into the target and shatters it.

The throwing arm Thumbwheel is out of adjustment and the throwing arm is hitting the brass throwing arm stop plate too hard. When the trap is "fired", the initial pressure the arm is releasing onto the target is too great and it shatters the target.

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The one-way bearing, on the throwing arm main shaft, is internally damaged or shattered, and not allowing the throwing arm to release in a smooth movement

The one-way bearing, on the throwing arm main-shaft is loose - tighten its bolt and locknut.

The main spring is not adjusted correctly, or the shock absorber is not set correct.

Check ALL reasons in Section VIII below.

VIII. THE TARGETS ARE ALREADY BROKEN WHEN FALLING ON TO THE THROWING PLATE

The targets were damaged prior loading.

The targets were damaged during loading.

The magazine support base is dirty, damaged or bent.

The target pressure roller system is damaged, or badly adjusted (too tight or to loose).

The target pressure rollers do not rotate freely (lubricate if necessary, WD40).

Safety guard bolts are loose and protrude through magazine base plate into target path.

Large rubber rollers on underneath of magazine are damaged.

IX. TWO TARGETS FALL FROM THE MAGAZINE

Mixed targets.

The target pressure roller system is damaged, or badly adjusted.

X. THE TARGETS DO NOT COME OUT OF THE MAGAZINE

The targets are stuck together. Separate them before putting them in the magazine.

Mixed targets.

A magazine cylinder is damaged or bent.

The magazine cylinders are set for the wrong target size and are restricting the vertical movement of the target stack.

The target roller system is damaged and blocks the last target or prevents the column of targets from moving down.

The magazine base plate is damaged.

The magazine is twisted.

The magazine indexing finger is not engaged with the magazine or its spring is damaged or out of adjustment. Check the bolt holding the finger and spring is not loose or too tight.

The magazine indexing finger needs lubricating and does not easily engage with the magazine. Test by pulling back the arm against the spring pressure then let go. See if it hits the magazine,

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if it sticks, clean and lubricate.

XI. THE HORIZONTAL OSCILATION DOES NOT WORK.

The Control switches are in the "OFF" position.

The "ON-OFF-UNCOCK" switch on the "Remote Safety Switch" is in the "OFF" position.

There is no power to the trap or the electrical control box.

The fuse has "blown" in the electrical control box. Replace.

The circuit board in the electrical control box is burnt. Check the trap still "Cocks" and "Fires". If it doesn't the board may need replacing.

The grey cable from the electrical control box to the trap may be damaged, or the screw plug (12 volt only) may be loose, or the pins damaged.

The movement motor may be burnt out.

CHECK... Move switch(s) to "DIRECT" mode. See if oscillation works. If it does, but it doesn't in "TIMER" mode. Check to see if the "PULL" still works the trap i.e. does the "PULL" fire the trap. If it does the circuit board will need replacing as the "Timer" circuit is faulty and the oscillation only functions in "DIRECT" mode.

If the drive motor appears to be working, (you can hear it), the gearbox may have "stripped" gears and need replacing. Alternatively the gearbox discs may have come loose on the gearbox shaft or the "key" may have fallen out.

When the adjustment to the HORIZONTAL was made, the center bolt which must be located into one of the "spiral" holes around the disc, may have been screwed into the center hole. The disc rotates but no movement is transferred to the arm.

The MASTER CONTROL Box has the switch marked "**"SINGLE-DOUBLE-SINGLE/DOUBLE"**" on the Master Control box in the "**DOUBLE**" position.

XII. TARGETS ARE NOT RELEASED AT THE SAME TIME (DOUBLES MODE).

One of the Traps is turned off.

Uneven Mainspring tension on the Throwing Arm. Check the distance each target is thrown individually. Uneven tension can produce extra pressure on the Brass release Plate, and/or can cause a faster release.

Both throwing arms are not touching the Brass Release Plate when in the "Cocked" Position. Adjust the micro-switch or Thumbwheel settings. i.e. one could be stopping "short".

One of the throwing arms may be hitting the Brass Release Plate too hard and binding upon release. Check that both Throwing Arms "gently" come into park, just touching the Brass Release Plates. Each arm should "click" into position, just coming under mainspring tension, resting against the Brass Release Plate, or compressing the spring only about $\frac{1}{4}$ to $\frac{1}{2}$ inch. Adjust the micro-switch or the Thumbwheel.

If you have any questions, please call :

LAPORTE BALL-TRAP ® 33 (0)4 92 94 77 77 Fax : 33 (0)4 92 94 77 78
e-mail export@laporte-shooting.com www.laporte-shooting.com

22/09/00

Throwing Arm Height - Check & Adjustment

IMPORTANT: BEFORE PROCEEDING WITH THE FOLLOWING ADJUSTMENTS MAKE SURE THE TWO TRAPS ARE SAFE TO WORK ON.

BEFORE PROCEEDING: If in the "ON" mode (i.e. the switch on the Master Control Box is in the "ON" position), move the switch marked "**ON-OFF-UNCOCK**" on the "Remote Safety Switch" to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position.

If in the "TEST" mode (i.e. the switch on the Master Control Box is in the "**TEST**" position), move the switch marked "**ON-OFF-UNCOCK**" on the Individual Control boxes to the "**UNCOCK**" position and then to the "**OFF**" position to leave the throwing arms in the safe, "**Decocked**" position. Then move the switch marked "**TEST-OFF-ON**" on the Master Control box to the "**OFF**" position.

ENSURE the switch marked "TEST-OFF-ON" on the Master Control box is in the "TEST" position thus taking control away from the "Remote Safety Switch" and avoiding anyone accidentally turning the traps on while you are working on them.

The adjustments described below are basically the same for each trap, BUT there are differences in the way the throwing arm is positioned and made secure; I will therefore describe each as an independent trap.

Pay attention to the "direction" of the motor, gearbox and arm. In the following sections you are asked to rotate shafts, move arms etc, in a **CLOCKWISE** or **COUNTER-CLOCKWISE** direction. Make sure you follow the guidelines. Any direction will be highlighted to remind you!

e.g. "Turn the motor shaft in a **CLOCKWISE** direction..."

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22/09/00

LEFT TRAP

1. In order to check to correct height of the throwing arm we need to position the throwing arm across the launching plate at approximately the 2:10 position when viewed from the rear of the machine. To do this we must adopt the same procedures as used for SPRING REMOVAL, by using the gearbox stud to restrict the movement of the throwing arm as it passes through its "Release Position".

In order to do this we must first position the gearbox cocking stud in the 12:00 position to use it as a "break" to cushion the release of the throwing arm through its "Decocking" sequence. Follow the instructions below.

I am assuming you have obeyed the above warning and both traps are "DE-COCKED"!!!!

Using a small screwdriver inserted into the hole at the end of the cocking motor shaft, rotate the cocking motor **counter-clockwise**, so the gear box stud rotates in a **clockwise direction**. Continue doing this until the stud has moved to the 12:00 position out front of the trap.

2. You have now positioned the driving stud, on the gearbox, to a position in front of the driving stud on the throwing arm. You can now use the cocking motor, as a brake, to slowly release the spring tension on the throwing arm. **NOTE** : The throwing arm will only travel in a **counter-clockwise** direction due to the restriction of the one-way bearing on the throwing arm main-shaft. As the gearbox stud is now "in front", to the left of, the throwing arm stud, it will restrict the travel of the throwing arm.

3. Push the throwing arm **counter-clockwise** towards the cocked position, **using the palm of the hand or you thumbs**, until it is in the 6:30 "Cocked Position". **NOTE:** *As mention before, the throwing arm will only travel counter-clockwise, it cannot be pulled back or reversed!* **SO..... WARNING:** *Do not wrap your fingers around the throwing arm, while pushing it, because if you push too fast or too hard, you may trap your fingers below the magazine base. REMEMBER THE ARM CANNOT BE PULLED BACK!!!*

The two studs, mentioned earlier, should now be touching. If the throwing arm did not travel sufficient distance for it to be in the "6:30" "Cocked" Position, it means the stud on the gearbox is restricting it by being too far **clockwise**.

Use a small screwdriver in the end of the cocking motor shaft to turn the motor **clockwise** a few turns. The stud on the gearbox will move **counter-clockwise**, thus parting from the throwing arm stud. ONLY ROTATE THE COCKING MOTOR A FEW TURNS SO THE TWO STUDS PART ABOUT 1/4". Push the throwing arm further towards the "Cocked" position. Repeat the above procedure until the throwing arm is in the "Cocked" 6:30 position. (**Do not move studs more than 1/4 inch apart each time**).

4. When the throwing arm is in the "6:30" "Cocked" position, it will be under maximum spring tension. We must now use the cocking motor as a brake to slowly release the throwing arm through its "**Uncock**" procedure. As we are releasing the throwing arm slowly, it will not go past the straight out, 12:00 position to the "Uncocked" 8:45 position where, after "normal release", it would be held by the action of the "One-way Bearing".

Use a small screwdriver in the end of the cocking motor shaft to turn the motor **clockwise** a few turns. The

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e-mail export@laporte-shooting.com www.laporte-shooting.com

22/09/00

stud on the gearbox will move **counter-clockwise**, thus parting from the throwing arm stud. ONLY ROTATE THE COCKING MOTOR A FEW TURNS SO THE TWO STUDS PART ABOUT 1/4". Push in the throwing arm past the "6:30" "Cocked" position into the "Release" position. You will have to pull the brass throwing arm stop plate back out of the path of the arm to allow the arm to pass by. If the throwing arm does not go into the "release" position, keep repeating the above 1/4" movement followed by pushing the throwing arm until the throwing arm releases and its stud comes to a "hard rest" against the gearbox stud. It is quite safe to do this, as when the throwing arm does eventually release it will only travel about an inch, being restricted by the stud on the gearbox which should only be 1/4" away from the throwing arm stud. It may appear to "jump" very fast, as if firing, but it will only travel about one inch..

Insert a small screw driver in the hole in the end of the cocking motor shaft and rotate the motor shaft **clockwise**. This will cushion the travel of the throwing arm allowing it to "decock" slowly. Continue rotating the shaft until the throwing arm is in the 2:10 position laying across the launch plate.

5. Now, check the arm is parallel to the throwing plate:

Take a clay target and lay it on the throwing plate in front of the throwing arm.

Insure the first step of the target fits below the throwing arm rubber. It should not be trapped, neither should the gap be too large. (See Fig. 29).

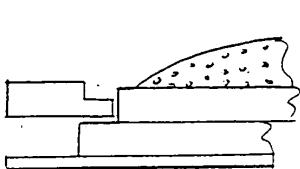
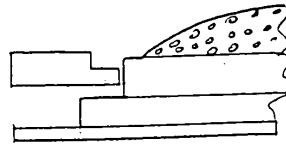
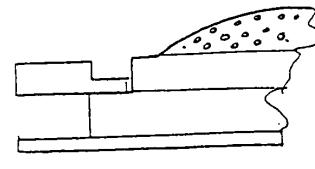


FIG. 29 Correct



Too Loose



Too Tight

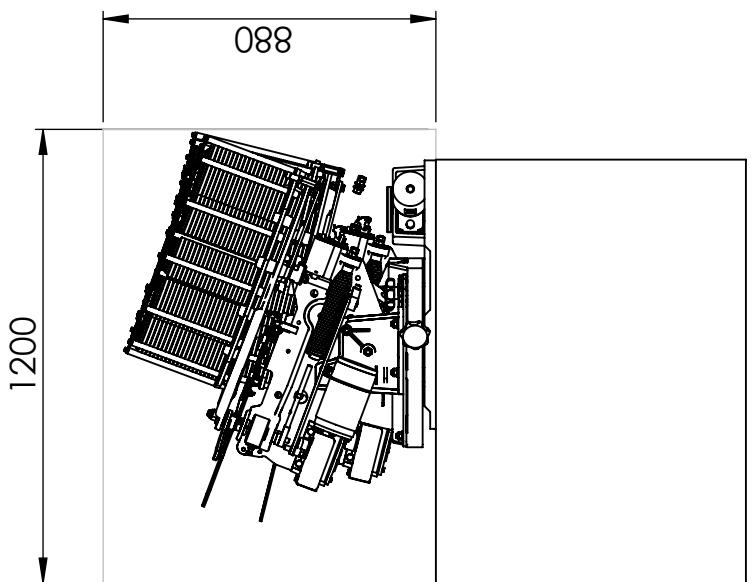
Slide the target along the length of the throwing arm checking the clearance below the arm rubber. If the target appears to be trapped or too loose, the problem could be with the throwing arm or with the throwing plate.

If the problem is with the throwing arm, it is possible to bend it slightly up or down to correct any variances. If a large distortion of the arm is required it could imply that the arm is damaged and needs replacing. NOTE: The arm is cast magnesium and will not bend far in either direction without snapping.

If the problem appears to be with the throwing plate, it is possible to raise or lower the throwing plate by varying the number of spacer washers between the throwing plate and the cast

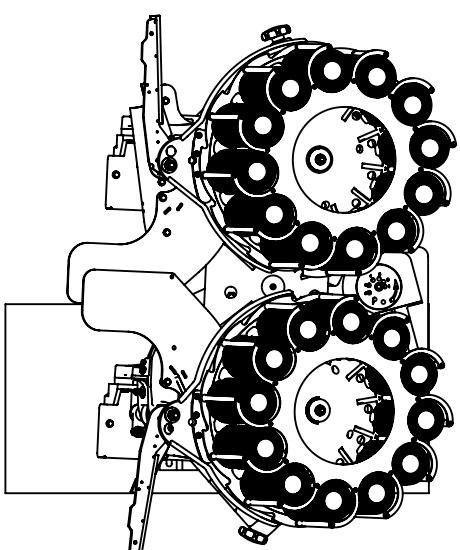
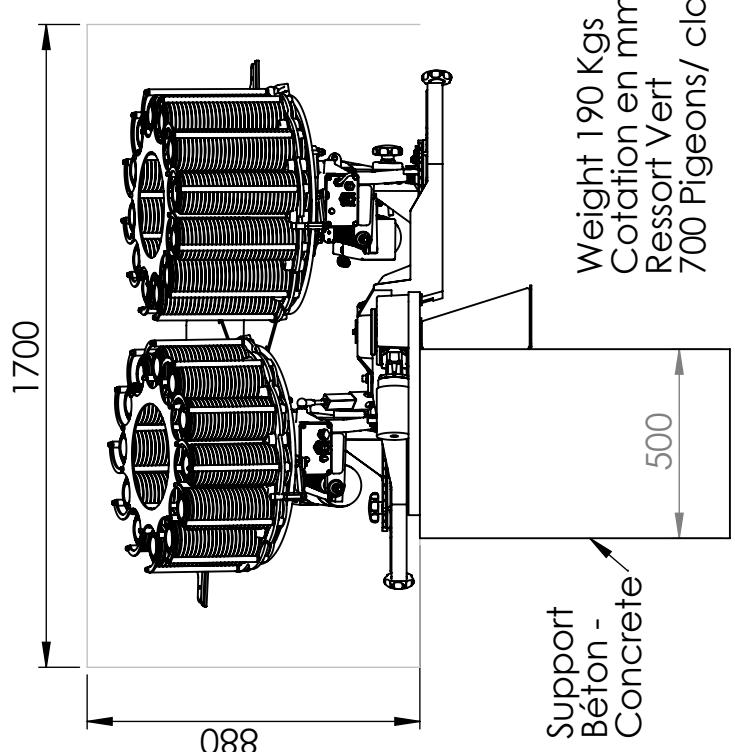
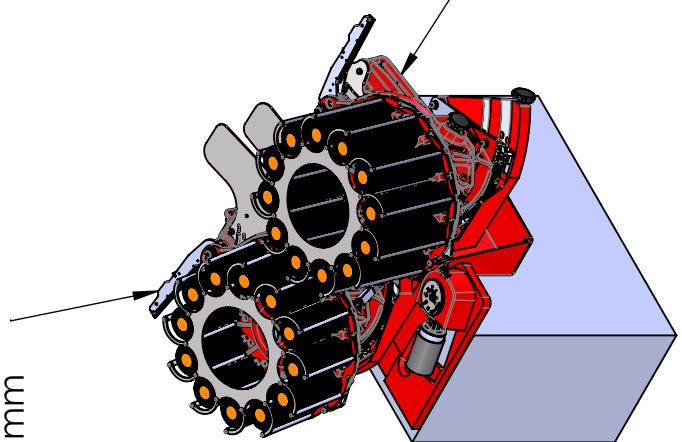
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22/09/00



COTATION EN MM

Trap 581e Left
Barillet 400 pigeons
Tiges - Rods 1309349
320 mm



LAPORTE

INDICE	Date	Désignation	Rugosité générale	Indice	Echelle
		TRAP 285 TWINLAP 2019 04 TWIN LAP 12C 12V	--	--	A4

Description: TRAP 285 TWINLAP 2019 04

371 Chemin Des Prés
06 410 BIOT FRANCE
Tel: +33 (0)4 93 65 77 90 Fax: +33 (0)4 93 65 77 98
achat@laporte-shooting.com

Destiné par Aubry Sébastien Date 19 02 2010
J.M.F. Date

Vérifié par C:\sebastien\T BALL TRAP\1990 TRAP 185E 10 COLONNES\TRAP 581 pi fix\TRAP 285 TWINLAP 2019 04 -- Fichier Dessin 2D: C:\sebastien\T BALL TRAP\1990 TRAP 185E 10 COLONNES\TRAP 581 pi fix\TRAP 285 TWINLAP 2019 04 sidwpn

WAPORITE

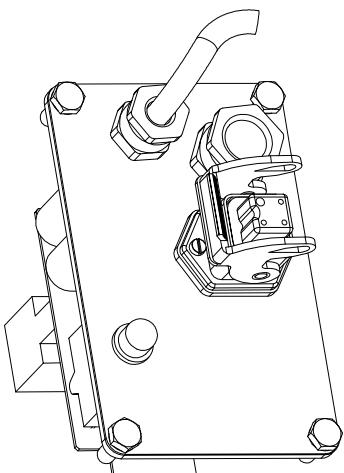


PLATE CARD FOR 185 PC

REFERENCE 1130681

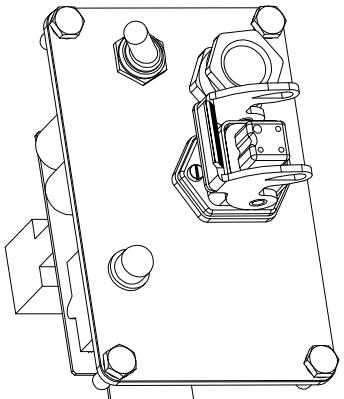
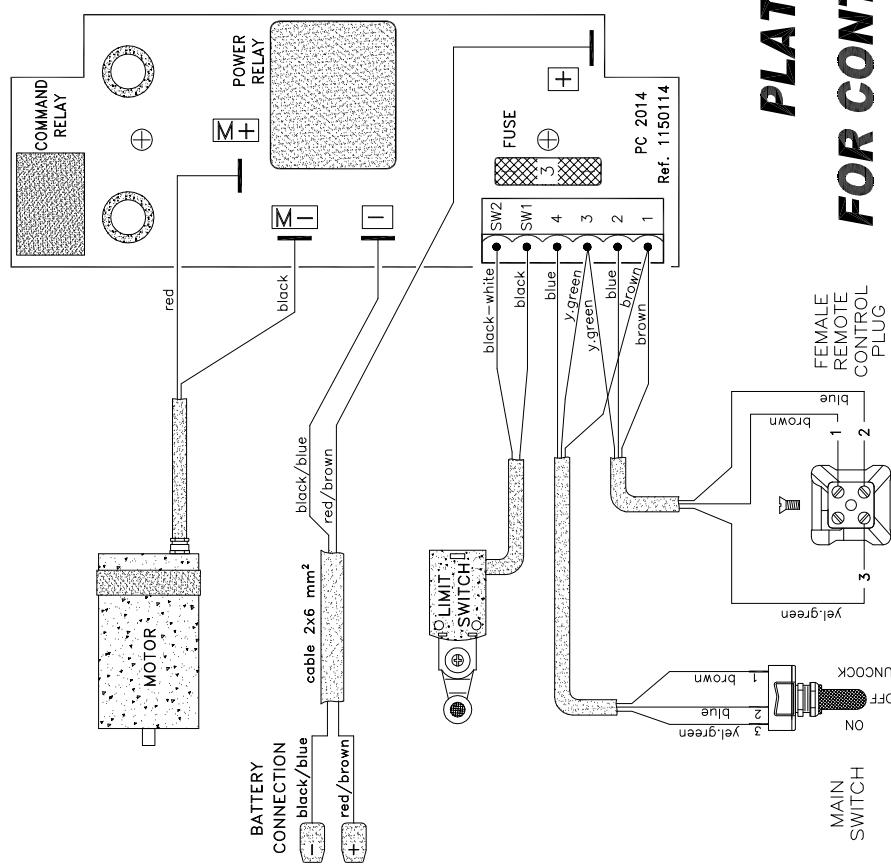
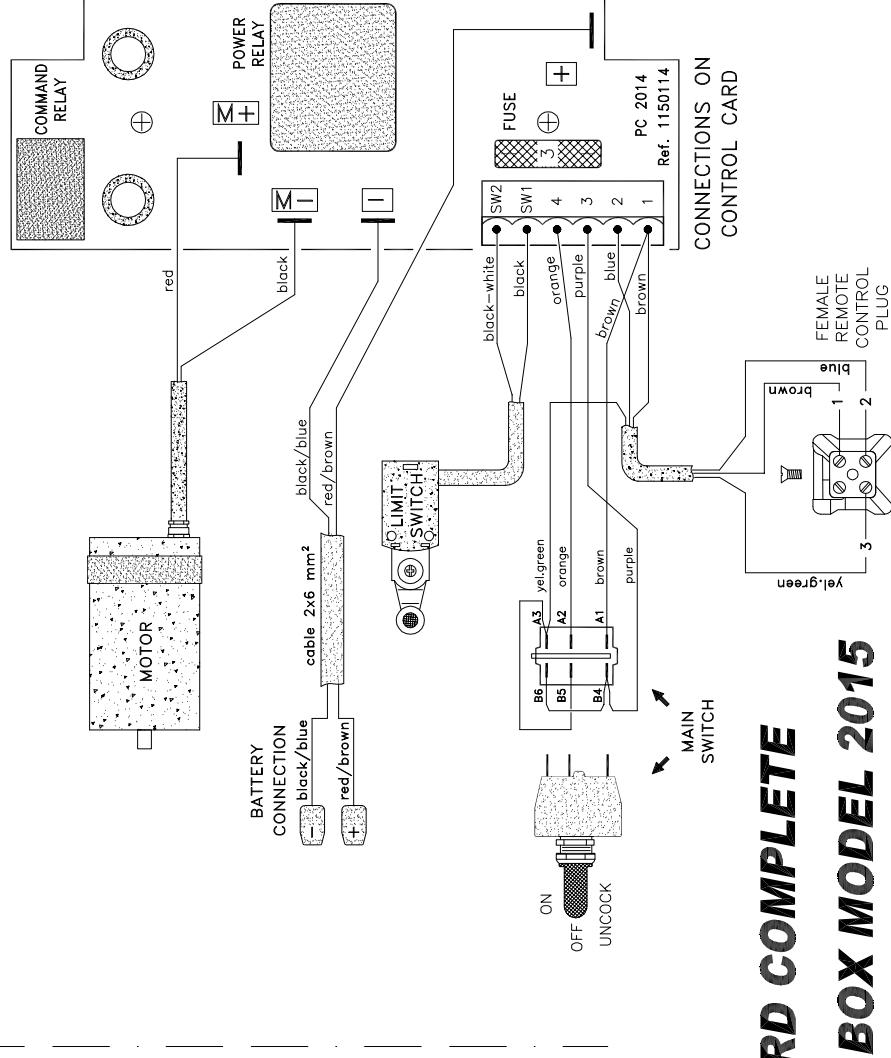


PLATE CARD FOR 185 FO

REFERENCE 1130682



**PLATE CARD COMPLETE
FOR CONTROL BOX MODEL 2015**

MAIN SWITCH
OFF: yel.green
1: brown
2: blue
3: yel.green

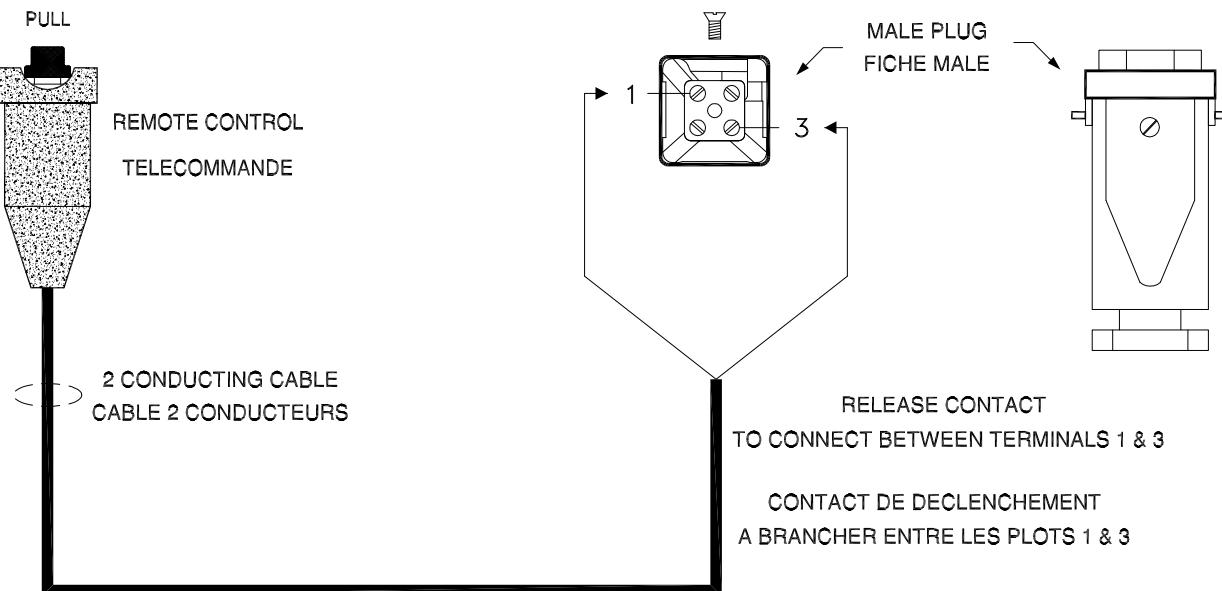
FEMALE REMOTE CONTROL PLUG
1: blue
2: brown
3: yel.green

REMOTE CONTROL PLUG

FICHE DE TELECOMMANDE

CABLE REMOTE PLUGGING

BRANCHEMENT D'UNE TELECOMMANDE PAR CABLE



RADIO RECEIVER OR SONO-PULL PLUGGING

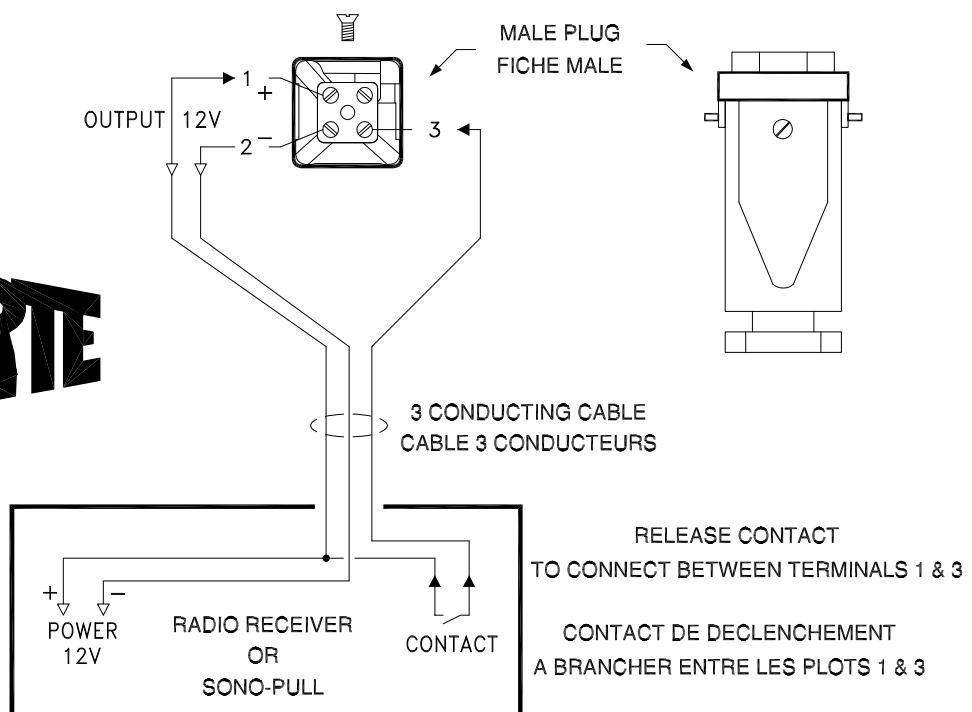
BRANCHEMENT D'UN RECEPTEUR RADIO OU D'UN SONO-PULL

LAPORTE

Fiche de commande
CB

12V OUTPUT
BETWEEN TERMINALS 1 (+) & 2 (-)
MAX 1,5 Amps

SORTIE 12V
ENTRE LES PLOTS 1 (+) & 2 (-)
MAX 1,5 Amps



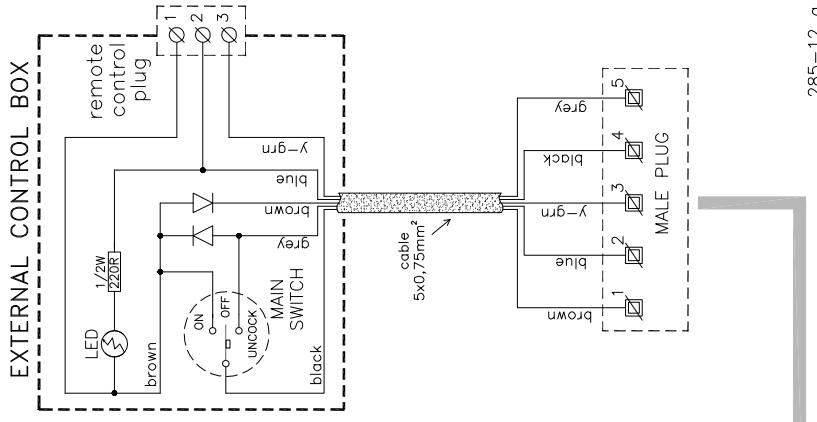
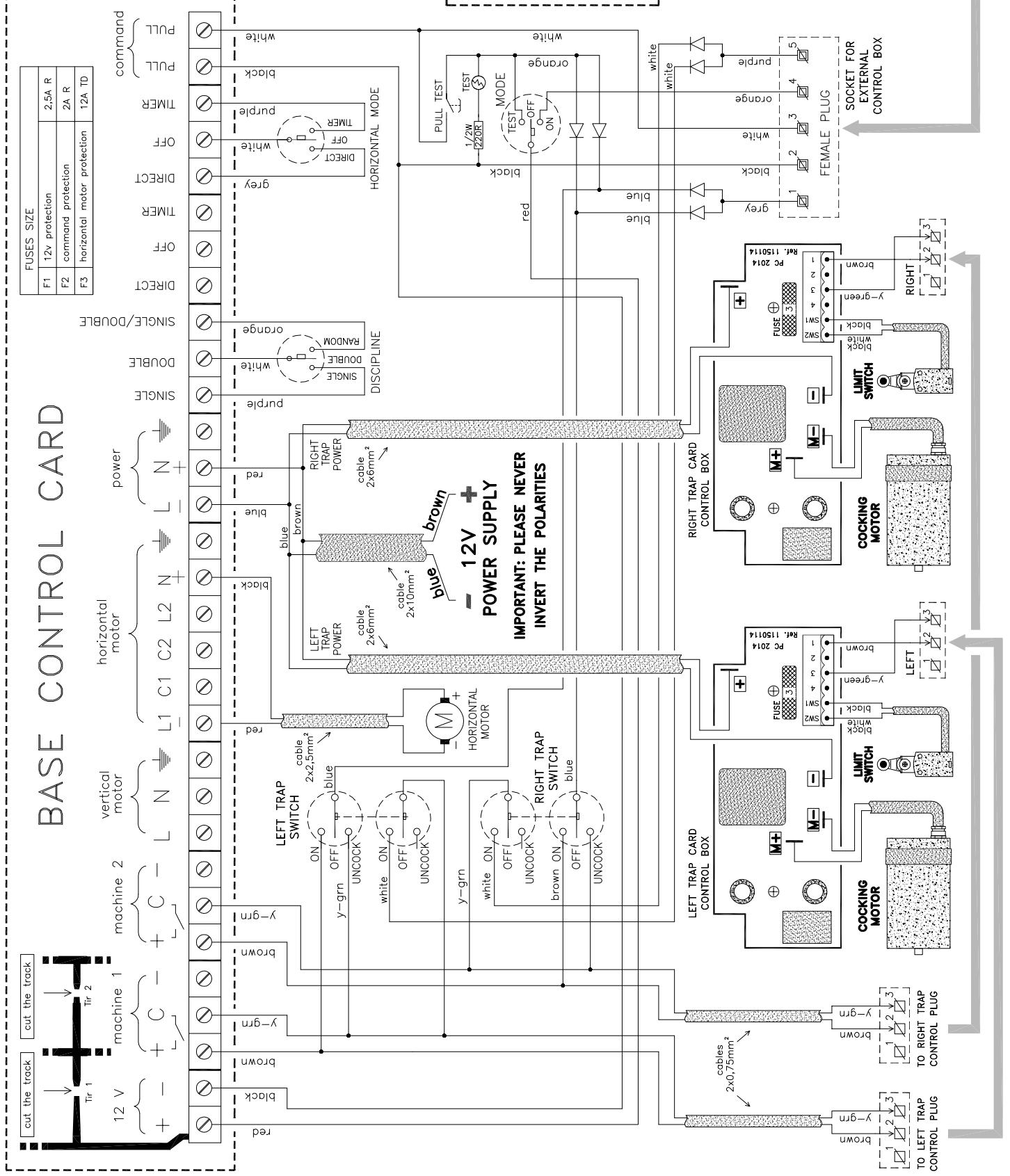
**TWINLAP
285**

VOLTAGE 12V

ELECTRICAL SCHEMATIC

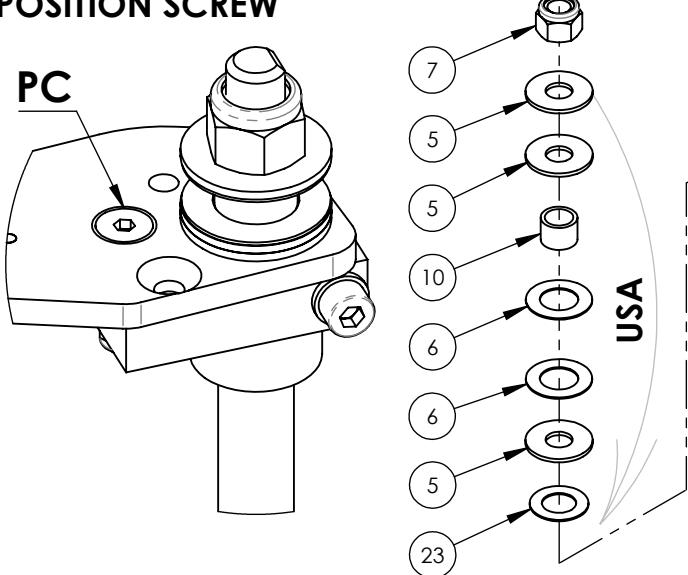


BASE CONTROL CARD



285-12 a
09/10/15 CB

POSITION SCREW



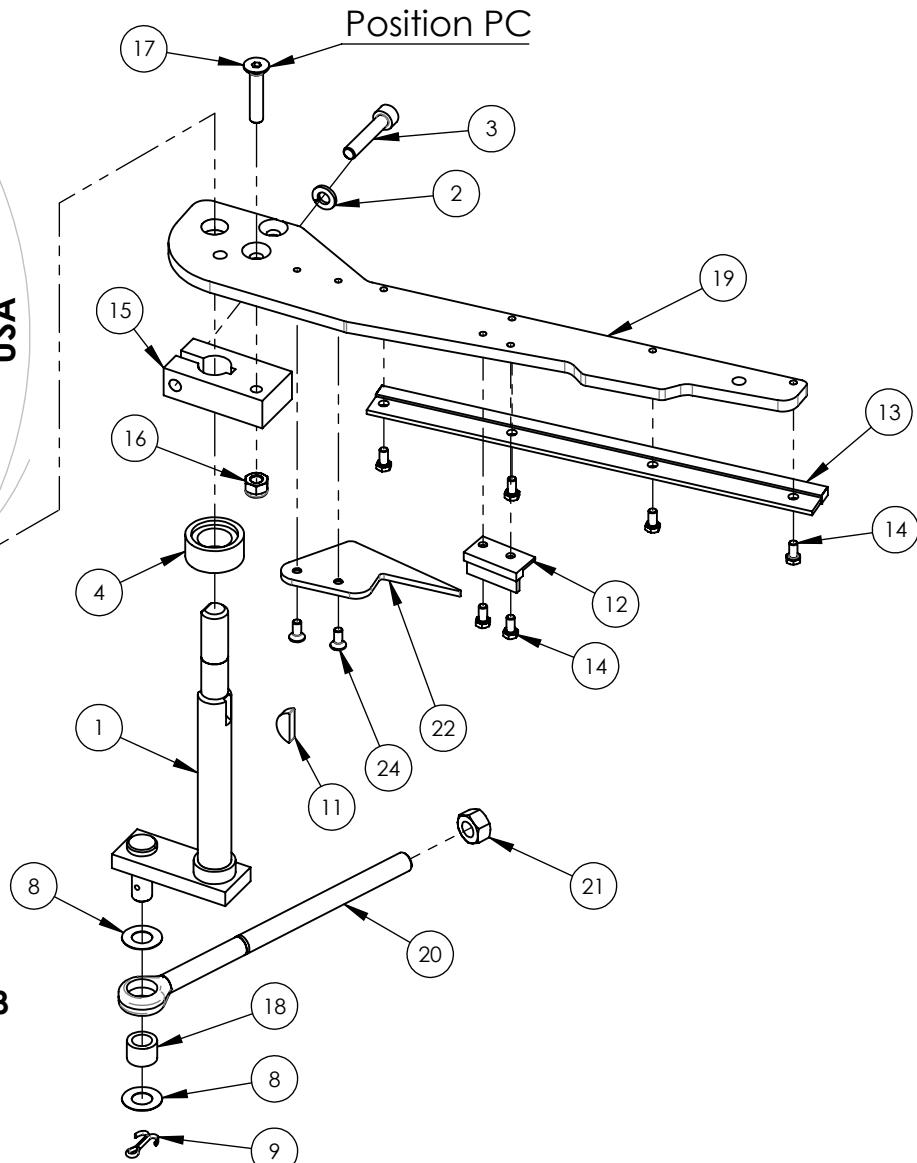
Version US placez une rondelle large de 16 en plus sur le bras afin de relever la plaque SB.



TRAP 185E 2014 PC 12C SP14 SCH04 AXE ARMEMENT SP14 PC 2014 08

Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.

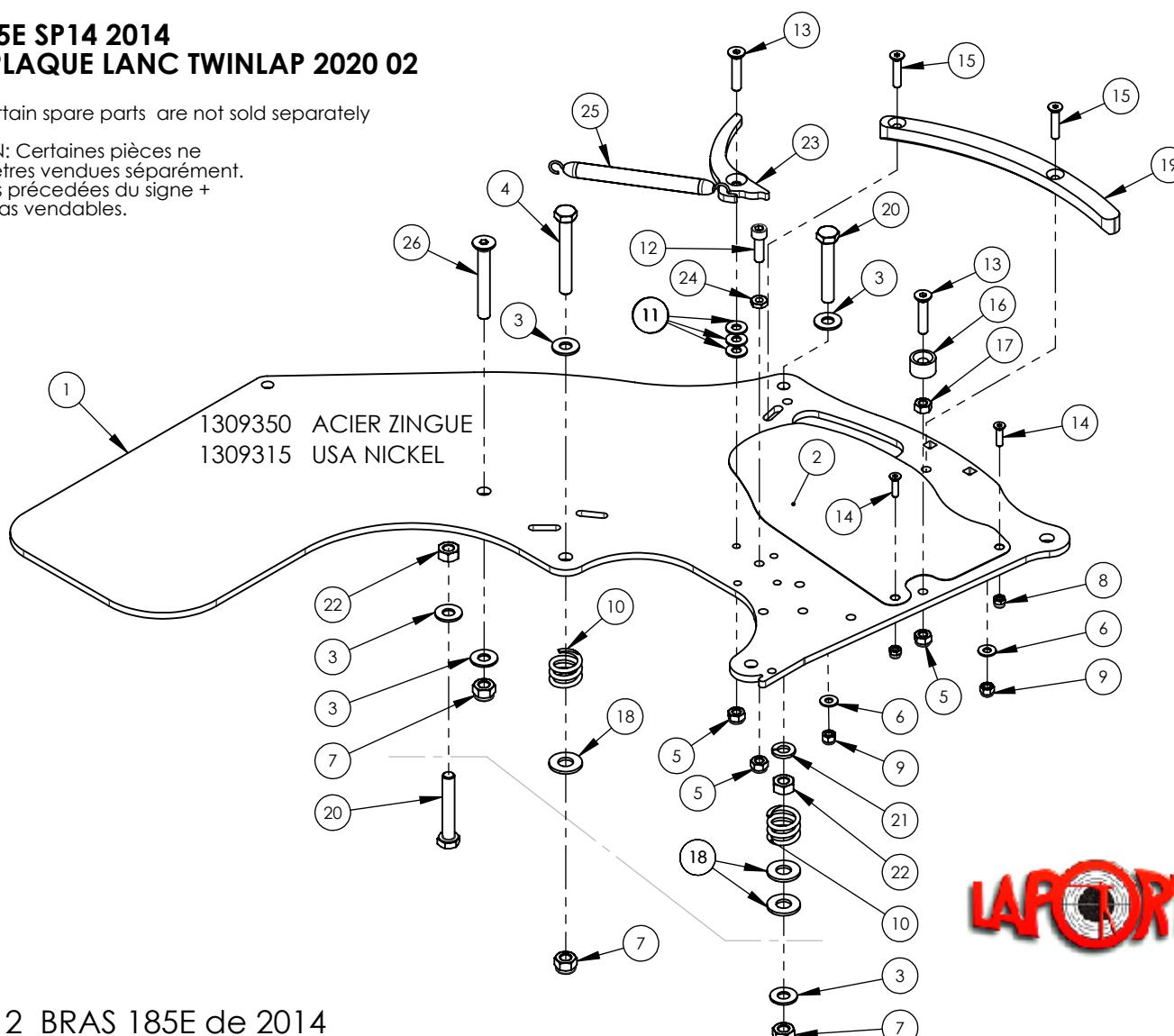


No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1309057 AXE ARM SOUDE BLANC 2009 320L	MAIN SPINDLE WHITE 2009
2	1	1400068 RD GROWER AZ 08-000	GROWER WASHER AZ 08-000
3	1	1400187 VIS TCHC 8Z 08-040	SCREW TCHC 8Z 08-040
4	1	1309311 ENTRETOISE SUPPORT BRAS L2 SP14	SPACER SUPPORT THROWING ARM SP14
5	3	1400038 RONDELLE LARGE 16-040	LARGE WASHER AZ 16-040
6	2	1400394 RONDELLE EMB LAITON 23x40x1	BRASS WASHER 23-40-1
7	1	1400028 ECROU INDES AZ 16-000	LOCK NUT 16
8	2	1400080 RONDELLE EMBASE 12-24-005	WASHER EMB 12-24-005
9	1	1400244 GOUPILLE FENDUE 3.2-025 P	PIN SPLIT 3.2-025 P
10	1	1309309 ENTRETOISE 17-22-16 PL SB 12C SP14 A	WASHER MAG SUP BASE 12C SP14
11	1	1400361 CLAVETTE DISQUE 6-9	WOODRUFF KEY 6x9
12	1	1307727 BALAIS BRAS LANC D	BRUSH ARM
13	1	1302070 REGLETTE 185-2001 C	ARM RUBBER 185-2001
14	6	1400139 VIS TH6.8 05-010	SCREW TH6.8 05-010
15	1	1309330 L2 SUPPORT BRAS SP14	THROW ARM CON BLOCK L2 SP14
16	1	1400025 ECROU INDES AZ 08-000	LOCK NUT 08
17	1	1400211 VIS TFHC 1Z 08-040	SCREW TFHC 1Z 08-040
18	1	1306096 PALIER IGLI MFM 12x18x12.9	BUSHING IGLIDURE
19	1	1309312 BRAS 12C L2AVANT SP14 D	THROWING ARM SP14
20	1	1302653 TIRANT A OEIL 12-130 +	THREADED EYE ROD +
21	1	1400009 ECROU HU AZ 12-000	NUT HU AZ 12-000
22	1	1309015 DOIGT POSITION BRAS SL06 C	CLAY POSITIONING FINGER SP14
23	1	1302260 RONDELLE BUTEE AS 2035	WASHER (MAIN SPIN) AS 2035 185 6C
24	2	1400343 VIS TFHC 1Z 05-012	SCREW TFHC 1Z 05-012

**TRAP 185E SP14 2014
SCH08 PLAQUE LANC TWINLAP 2020 02**

Note: Certain spare parts are not sold separately

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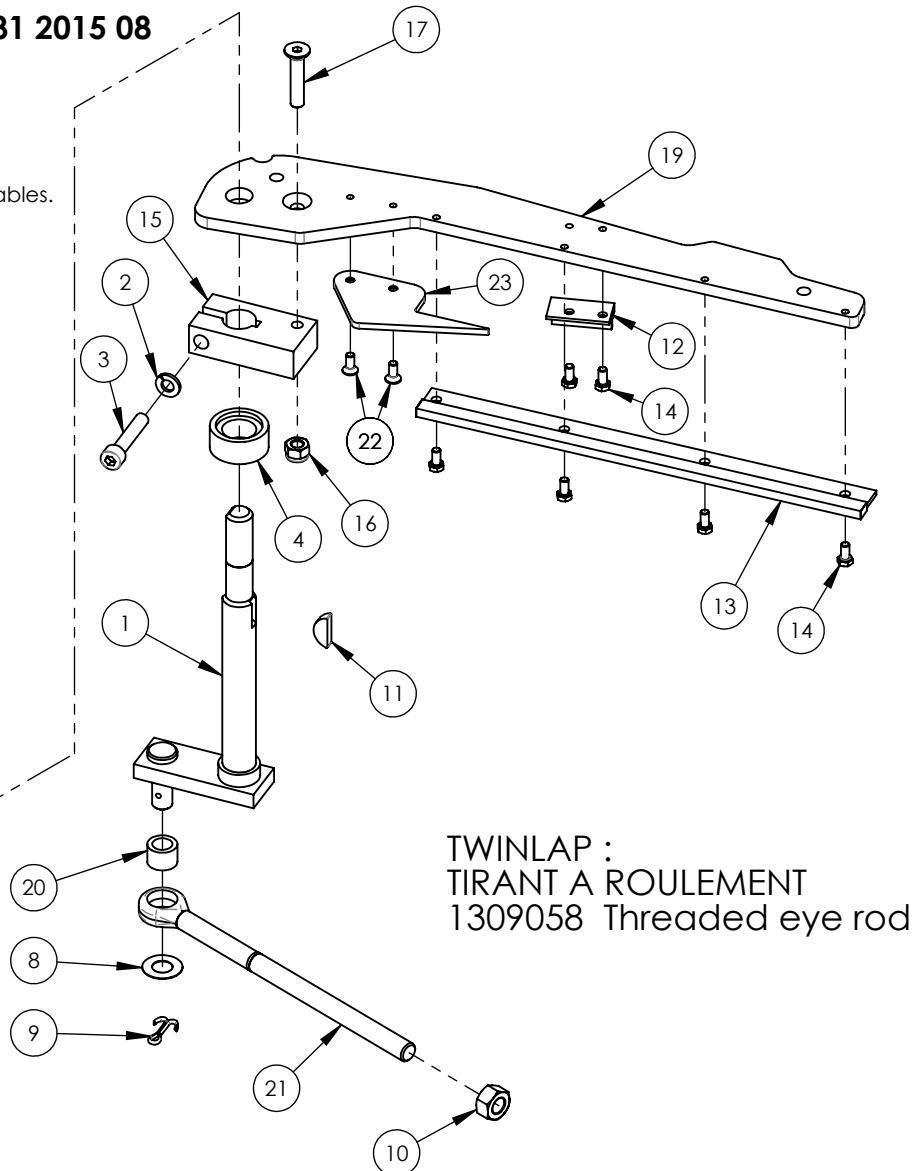
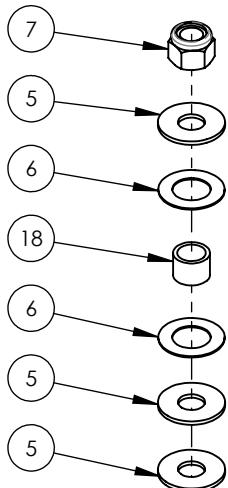
Pour
1309312 BRAS 185E de 2014

No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1309350 PLAQUE LANCEMENT AZ RIO M	THROWING PLATE SP14
2	1	1309005 TOLE AMORTISSEUR 8C PRO M	SHOCK ABSORBER THROWING PLATE
3	5	1400048 RONDELLE MOYENNE 08	FLAT WASHER MED AZ 08-018-1.5
4	1	1400136 VIS TH 08-060 CL8.8	SCREW TH8.8 08-060
5	3	1400024 ECROU INDES AZ 06-000	LOCK NUT 06
6	2	1400046 RONDELLE MOYENNE 05	FLAT WASHER MED AZ 05-000
7	3	1400025 ECROU INDES AZ 08-000	LOCK NUT 08
8	2	1400022 ECROU INDES AZ 04-000	LOCK NUT 04
9	2	1400023 ECROU INDES AZ 05-000	LOCK NUT 05
10	2	1305120 RESSORT SOCLE COURT 185E	BASE SPRING SHORT 185E
11	3	1400047 RONDELLE MOYENNE 06	FLAT WASHER MED AZ 06-014-1.2
12	1	1400176 VIS TCHC 8Z 06-020	SCREW TCHC 8Z 06-20
13	2	1400336 VIS TFHC 8Z 06-030	SCREW TFHC 8Z 06-030
14	2	1400464 VIS TFHC 1Z 04-016	SCREW TFHC 1Z 04-016
15	2	1400371 VIS TFHC 1Z 05-025	SCREW TFHC 1Z 05-025
16	1	1309316 BUTEE CAOUTCHOUC PL LANC A	RUBBER ROLLER THROWING PLATE
17	1	1400002 ECROU STANDARD 06	NUT HU CL8 06-000
18	3	1400049 RONDELLE MOYENNE 10	FLAT WASHER MED AZ 10-022-02
19	1	1309006 VIRGULE PEHD 8C PRO D	THROWING PLATE ADJUST RAIL SL06
20	2	1400317 VIS TH 08-050 CL8.8	SCREW TH8.8 08-050
21	1	1400068 RD GROWER AZ 08-000	GROWER WASHER AZ 08-000
22	2	1400003 ECROU STANDARD 08	NUT HU CL8 08-000
23	1	1309793 DOIGT POSITION PIGEON SK19 B	CLAY POSITION FINGER SK19
24	1	1400012 ECROU BAS 06-000 AZ	LOW NUT AZ 06-000
25	1	1302185 RESSORT 404 LRS 185	SPRING 404 LRS 185E
26	1	1400000 VIS TFHC 1Z 08-060	SCREW TFHC 1Z 08-060

**TRAP 581E 2014 PC 12C SP14
SCH04 AXE ARMEMENT PC SP14 581 2015 08**

Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.



TWINLAP :
TIRANT A ROULEMENT
1309058 Threaded eye rod

LAPORTE

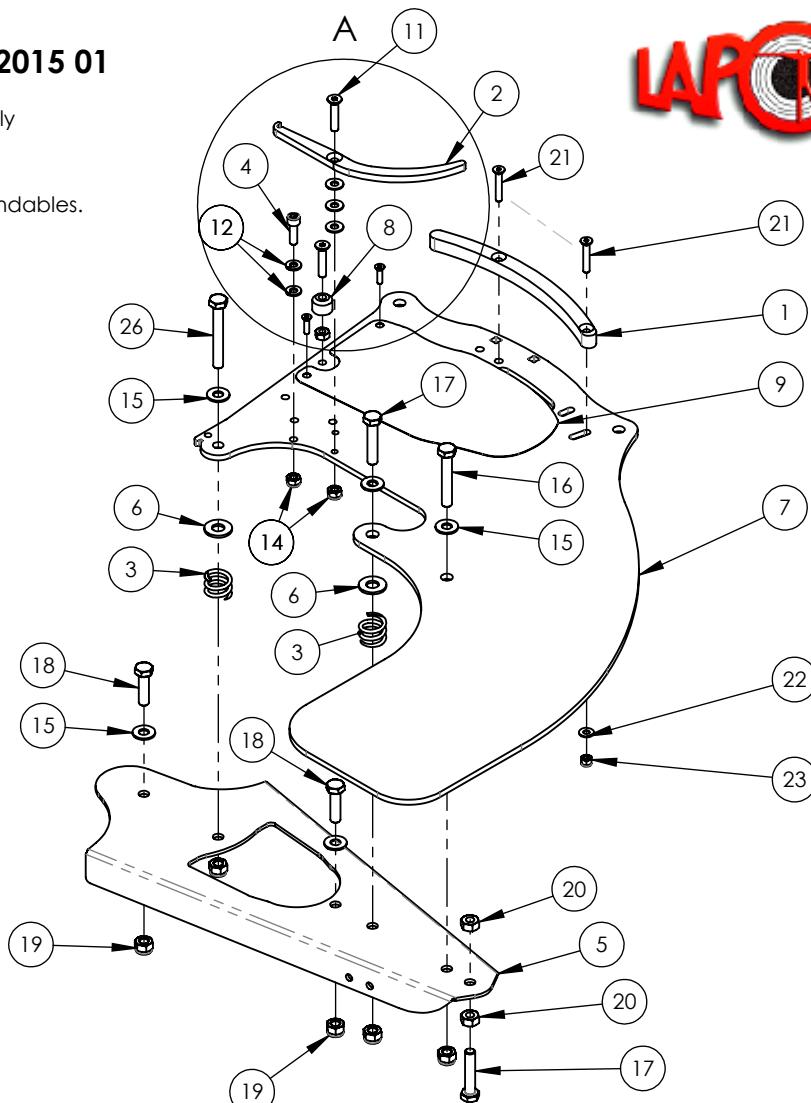
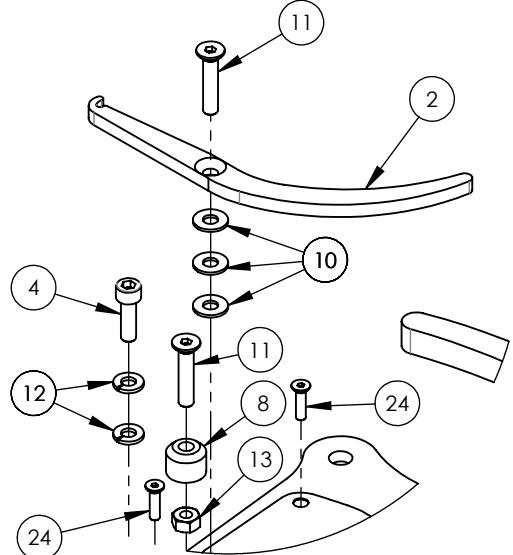
No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1309057 AXE ARM SOUDE BLANC 2009 320L	MAIN SPINDLE WHITE 2009
2	1	1400068 RD GROWER AZ 08-000	GROWER WASHER AZ 08-000
3	1	1400187 VIS TCHC 8Z 08-040	SCREW TCHC 8Z 08-040
4	1	1309311 ENTRETOISE SUPPORT BRAS L2 SP14	SPACER SUPPORT THROWING ARM SP14
5	3	1400038 RONDELLE LARGE 16-040	LARGE WASHER AZ 16-040
6	2	1400394 RONDELLE EMB LAITON 23x40x1	BRASS WASHER 23-40-1
7	1	1400028 ECROU INDES AZ 16-000	LOCK NUT 16
8	1	1400080 RONDELLE EMBASE 12-24-005	WASHER EMB 12-24-005
9	1	1400245 GOUPILLE FENDUE 3.2-032 P	PIN SPLIT 3.2-032 P
10	1	1400009 ECROU HU AZ 12-000	NUT HU AZ 12-000
11	1	1400361 CLAVETTE DISQUE 6-9	WOODRUFF KEY 6x9
12	1	1307727 BALAIS BRAS LANC D	BRUSH ARM
13	1	1302070 REGLETTE 185-2001 C	ARM RUBBER 185-2001
14	6	1400139 VIS TH6.8 05-010	SCREW TH6.8 05-010
15	1	1309330 L2 SUPPORT BRAS SP14	THROW ARM CON BLOCK L2 SP14
16	1	1400025 ECROU INDES AZ 08-000	LOCK NUT 08
17	1	1400211 VIS TFHC 1Z 08-040	SCREW TFHC 1Z 08-040
18	1	1309309 ENTRETOISE 17-22-16 PL SB 12C SP14 A	WASHER MAG SUP BASE 12C SP14
19	1	1309345 BRAS LANCEMENT SP14 581 E	THROWING ARM SP14
20	1	1306096 PALIER IGLI MFM 12x18x12.9	BUSHING IGLIDURE
21	1	1302653 TIRANT A OEIL 12-130 +	THREADED EYE ROD +
22	2	1400343 VIS TFHC 1Z 05-012	SCREW TFHC 1Z 05-012
23	1	1309381 DOIGT POSITION BRAS 581 SP14 A	CLAY POSITIONING FINGER (ARM) SP14

**TRAP 581 12C RIO 2014
SCH08.2 PLAQUE LANCEMENT 581 2015 01**

LAPORTE

Note: Certain spare parts are not sold separately

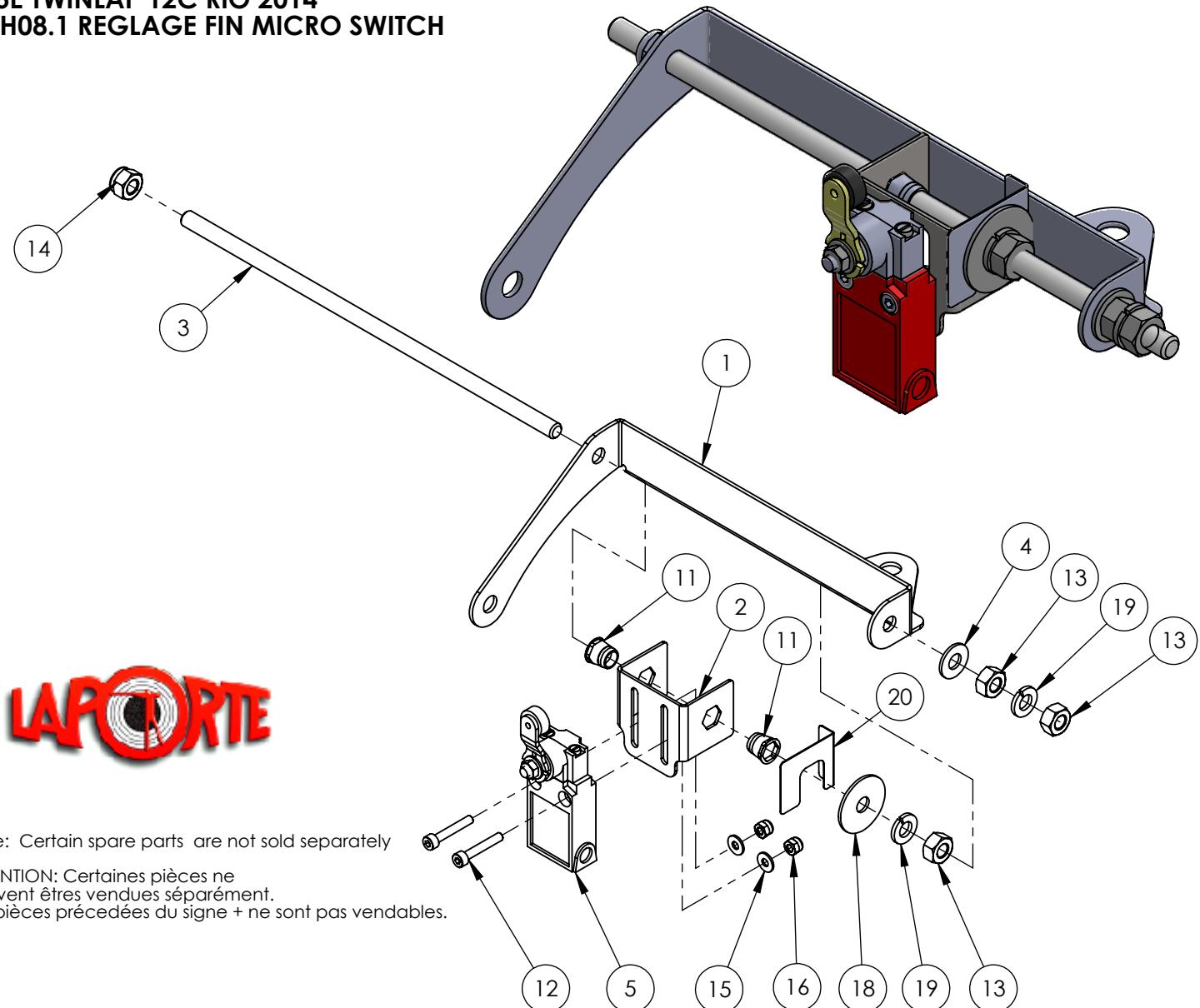
ATTENTION: Certaines pièces ne peuvent être vendues séparément.
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DÉTAIL A
ECHELLE 1 : 3

No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1309071 VIRGULE 581 PEHD 8C PRO	THROWING PLATE ADJUST RAIL SL06
2	1	1309070 DOIGT POSITION 581 8C PRO	CLAY POSITION FINGER PRO
3	2	1305120 RESSORT SOCLE COURT 185E	BASE SPRING SHORT 185E
4	1	1400176 VIS TCHC 8Z 06-020	SCREW TCHC 8Z 06-20
5	1	1309342 EQUERRE PL LANC AV SP14 581 A	FRONT CORNER ANGLE 581 THROW PLATE
6	2	1400049 RONDELLE MOYENNE 10-022-2	FLAT WASHER MED AZ 10-000
7	1	1309315 PLAQUE LANCEMENT SP14 F	THROWING PLATE SP14
8	1	1309316 BUTEE CAOUTCHOUC PL LANC	RUBBER ROLLER THROWING PLATE
9	1	1309005 TOLE AMORTISSEUR 8CPRO K	SHOCK ABSORBER THROW. PLATE
10	3	1400047 RONDELLE MOYENNE 06-014-1.2	FLAT WASHER MED AZ 06-014-1.2
11	2	1400336 VIS TFHC 8Z 06-030	SCREW TFHC 8Z 06-030
12	2	1400067 RD GROWER AZ 06-000	GROWER WASHER AZ 06-000
13	1	1400002 ECROU HU CL8 06-000	NUT HU CL8 06-000
14	3	1400024 ECROU INDES AZ 06-000	LOCK NUT 06
15	5	1400048 RONDELLE MOYENNE 08-018-1.5	FLAT WASHER MED AZ 08-000
16	1	1400317 VIS TH8.8 08-050	SCREW TH8.8 08-050
17	2	1400135 VIS TH8.8 08-040	SCREW TH8.8 08-040
18	2	1400133 VIS TH8.8 08-030	SCREW TH8.8 08-030
19	5	1400025 ECROU INDES AZ 08-000	LOCK NUT 08
20	2	1400003 ECROU HU CL8 08-000	NUT HU CL8 08-000
21	2	1400327 VIS TFHC 1Z 05-030	SCREW TFHC 1Z 05-030
22	2	1400046 RONDELLE MOYENNE 05-000	FLAT WASHER MED AZ 05-000
23	2	1400023 ECROU INDES AZ 05-000	LOCK NUT 05
24	2	1400464 VIS TFHC 1Z 04-016	SCREW TFHC 1Z 04-016
25	2	1400022 ECROU INDES AZ 04-000	LOCK NUT 04
26	1	1400136 VIS TH8.8 08-060	SCREW TH8.8 08-060

**285E TWINLAP 12C RIO 2014
SCH08.1 REGLAGE FIN MICRO SWITCH**



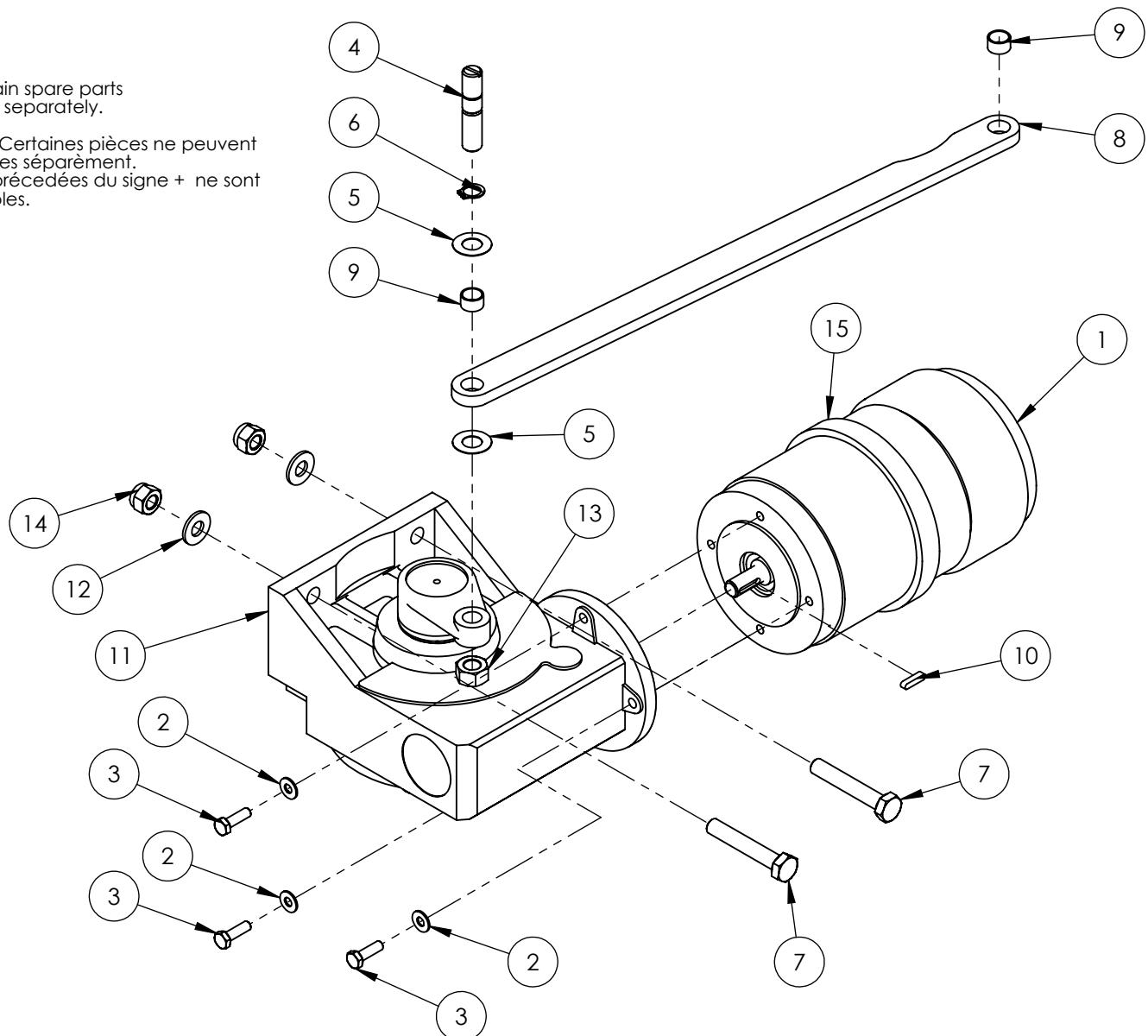
No.	Qu	No.PIÈCE	DESCRIPTION
1	1	1308150 TOLE SUP REGLAGE FIN MC A	SHEET SUPPORT ADJUSTMENT
2	1	1308151 REGLAGE FIN MICRO CONTACT A	MICRO SWITCH SUPPORT
3	1	1300000 TIGE FILETEE 08-250	ROD 08-130
4	1	1400048 RONDELLE MOYENNE 08-018-1.5	FLAT WASHER MED AZ 08-000
5	1	1112360 MICRO-CONTACT ARM	MICRO SWITCH LOADING MOTOR
8	1	1400046 RONDELLE MOYENNE 05-000	FLAT WASHER MED AZ 05-000
9	1	1400007 ECROU HU AZ 05-000	NUT HU AZ 05-000
10	2	1400419 VIS METAUX AZ TC 03-016	SCREW TC 03-016
11	2	8400008 ECROU HEXA SERTIR AZ M8-11 T PLATE	HEX NUT CRIMP Z M8-11
12	2	1400409 VIS TCHC 8Z 04-025	SCREW TCHC 8Z 04-025
13	3	1400003 ECROU HU CL8 08-000	NUT HU CL8 08-000
14	1	1400025 ECROU INDES AZ 08-000	LOCK NUT 08
15	2	1400045 RONDELLE MOYENNE 04-000	FLAT WASHER MED AZ 04-000
16	2	1400022 ECROU INDES AZ 04-000	LOCK NUT 04
18	1	1400054 RONDELLE LARGE 08-030-1.5	LARGE WASHER AZ 08-030-1.5
19	2	1400068 RD GROWER AZ 08-000	GROWER WASHER AZ 08-000
20	1	1308154 CALE SUPPRESSION JEU MC FIN	SHEET 1MM FIXING MICRO SWITCH

TRAP 185 PC PRO 12C SP14

SCH03 MOTO REDUCTEUR 12V SP14 2015 10

Note: Certain spare parts
are not sold separately.

ATTENTION: Certaines pièces ne peuvent
être vendues séparément.
Les pièces précédées du signe + ne sont
pas vendables.



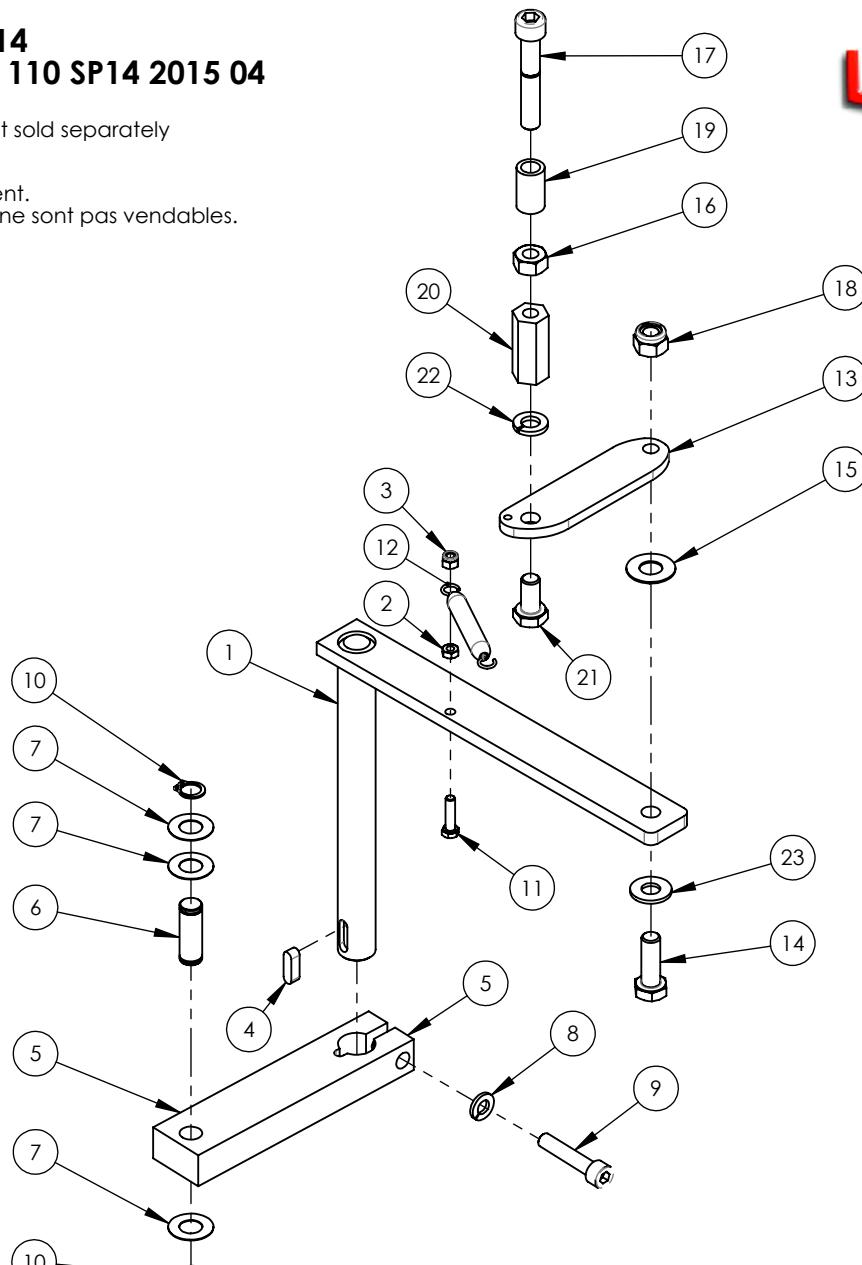
No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1500005 MOTEUR ARM 12V LAPORTE A	COCKING MOTOR 12V
2	3	1400047 RONDELLE MOYENNE 06-014-1.2	FLAT WASHER MED AZ 06-014-1.2
3	3	1400126 VIS TH8.8 06-020	SCREW TH8.8 06-020
4	1	1302916 VIS ARMEMENT PC SP14 A	COCKING SCREW M12 185
5	2	1400080 RONDELLE EMBASE 12-24-005	WASHER EMB 12-24-005
6	1	1400251 CIRCLIPS ARBRE 12	CIRCLIP OUTSIDE 12
7	2	1400152 VIS TH8.8 10-060	SCREW TH8.8 10-060
8	1	1300421 BARRE TRANSMISSION 185E A	MAG INDEX TRANS BAR 185
9	2	1306524 PALIER IGLI 12x14x08	BUSHING IGLIDUR GSM 12 14 8
10	1	1400222 CLAVETTE 4-4-18 2BR	KEY 4-4-18 2BR
11	1	1500020 REDUCTEUR ARME VRA 1-60 2013 10	GEARBOX RVR 60HO AL 185-2001
12	2	1400049 RONDELLE MOYENNE 10-022-2	FLAT WASHER MED AZ 10-022-02
13	1	1400009 ECROU HU AZ 12-000	NUT HU AZ 12-000
14	2	1400026 ECROU INDES AZ 10-000	LOCK NUT 10
15	1	1111025 COLLIER NOIR 540-7-8	NECKLACE BLACK
16	2	1118478 COSSE CEMBRE ISOLEE GF-F608P	SPADE CONNECTOR
17	2	1111032 COLLIER CABLE 200-4.8 BLC	NECKLACE RISLAN WHITE

**TRAP 185E 12C SP14 2014
SCH06 AXE ARRIERE 12C 110 SP14 2015 04**

LAPORTE

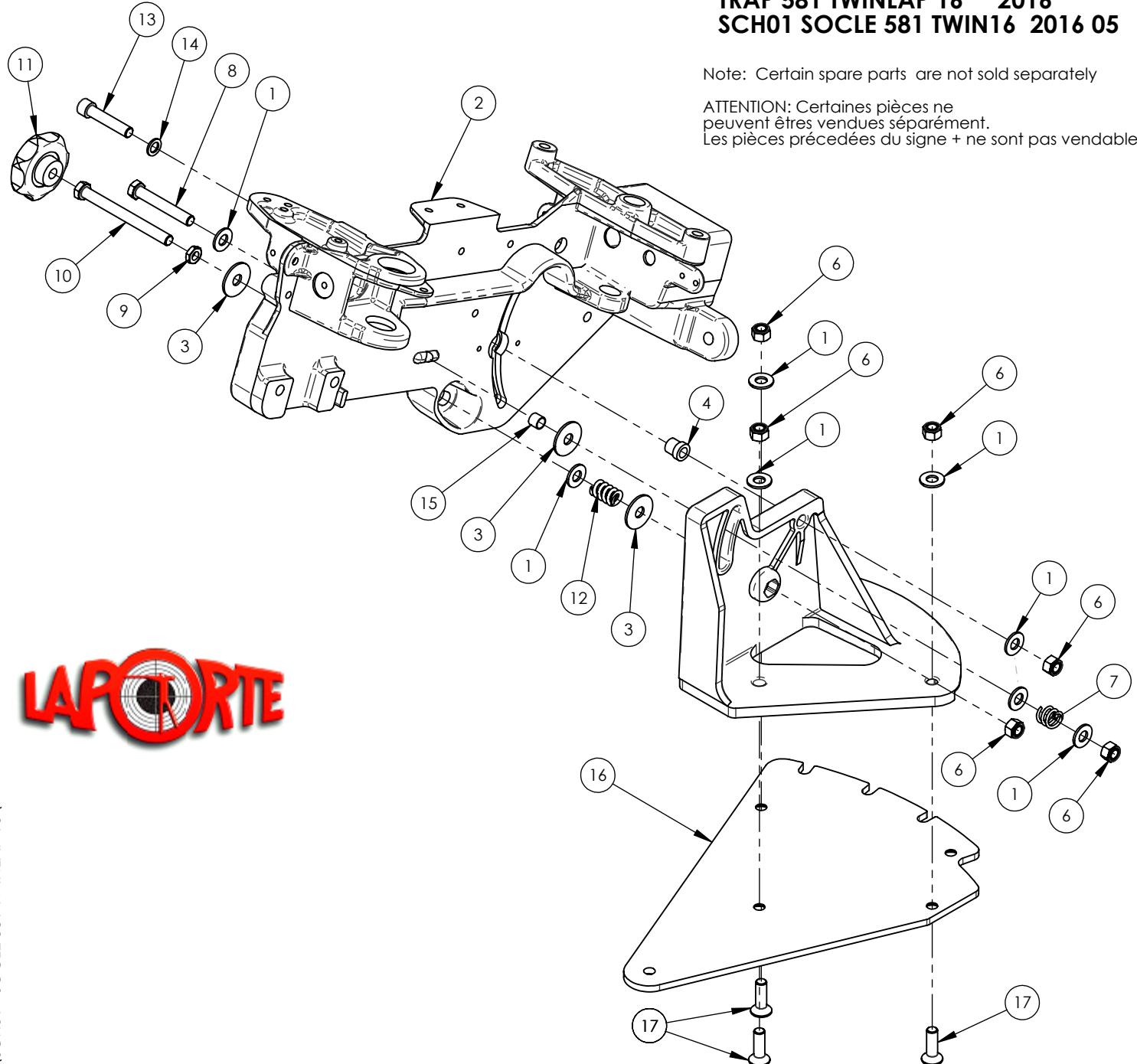
Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.



No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1309314 AXE ARRIERE 12C RIO C	MAGAZINE SPINDLE 12C RIO
2	1	1400007 ECROU HU AZ 05-000	NUT HU AZ 05-000
3	1	1400023 ECROU INDES AZ 05-000	LOCK NUT 05
4	1	1400228 CLAVETTE 6-6-20 2BR	KEY 6-6-20 2BR
5	1	1303125 CARRE AXE ARRIERE 10C 12C G	MAGA DRIVING SQUARE 185 10C
6	1	1300260 AXE DIA 12 AB36	SPINDLE DIA 12 AB 185
7	3	1400080 RONDELLE EMBASE 12-24-005	WASHER EMB 12-24-005
8	1	1400068 RD GROWER AZ 08-000	GROWER WASHER AZ 08-000
9	1	1400187 VIS TCHC 8Z 08-040	SCREW TCHC 8Z 08-040
10	2	1400251 CIRCLIPS ARBRE 12	CIRCLIP OUTSIDE 12
11	1	1400141 VIS TH6.8 05-020	SCREW TH6.8 05-020
12	1	1302185 RESSORT 404 LRS 185	trigger SPRING 404 185
13	1	1308019 DOIGT AXE AR 12C 110 E	REAR AXIS FINGER 12C
14	1	1400148 VIS TH8.8 10-030	SCREW TH8.8 10-030
15	1	1302255 RONDELLE BUTEE AS 1226	WASHER BUTEE AS 1226
16	1	1400008 ECROU HU AZ 10-000	NUT HU AZ 10-000
17	1	1400318 VIS TCHC 8Z 10-060	SCREW TCHC 8Z 10-060
18	1	1400026 ECROU INDES AZ 10-000	LOCK NUT 10
19	1	1309055 GALET DOIGT AXE AR 320L	RUBBER FINGER REAR AXIS 12C
20	1	1309313 ENTRETOISE HEXAG 17 M10-040	HEXA SPACER M10-040 12C SP14
21	1	1400146 VIS TH8.8 10-020	SCREW TH8.8 10-020
22	1	1400043 RD GROWER AZ 10-000	GROWER WASHER AZ 10-000
23	1	1400049 RONDELLE MOYENNE 10-022-2	FLAT WASHER MED AZ 10-000

**TRAP 581 TWINLAP 16 2016
SCH01 SOCLE 581 TWIN16 2016 05**

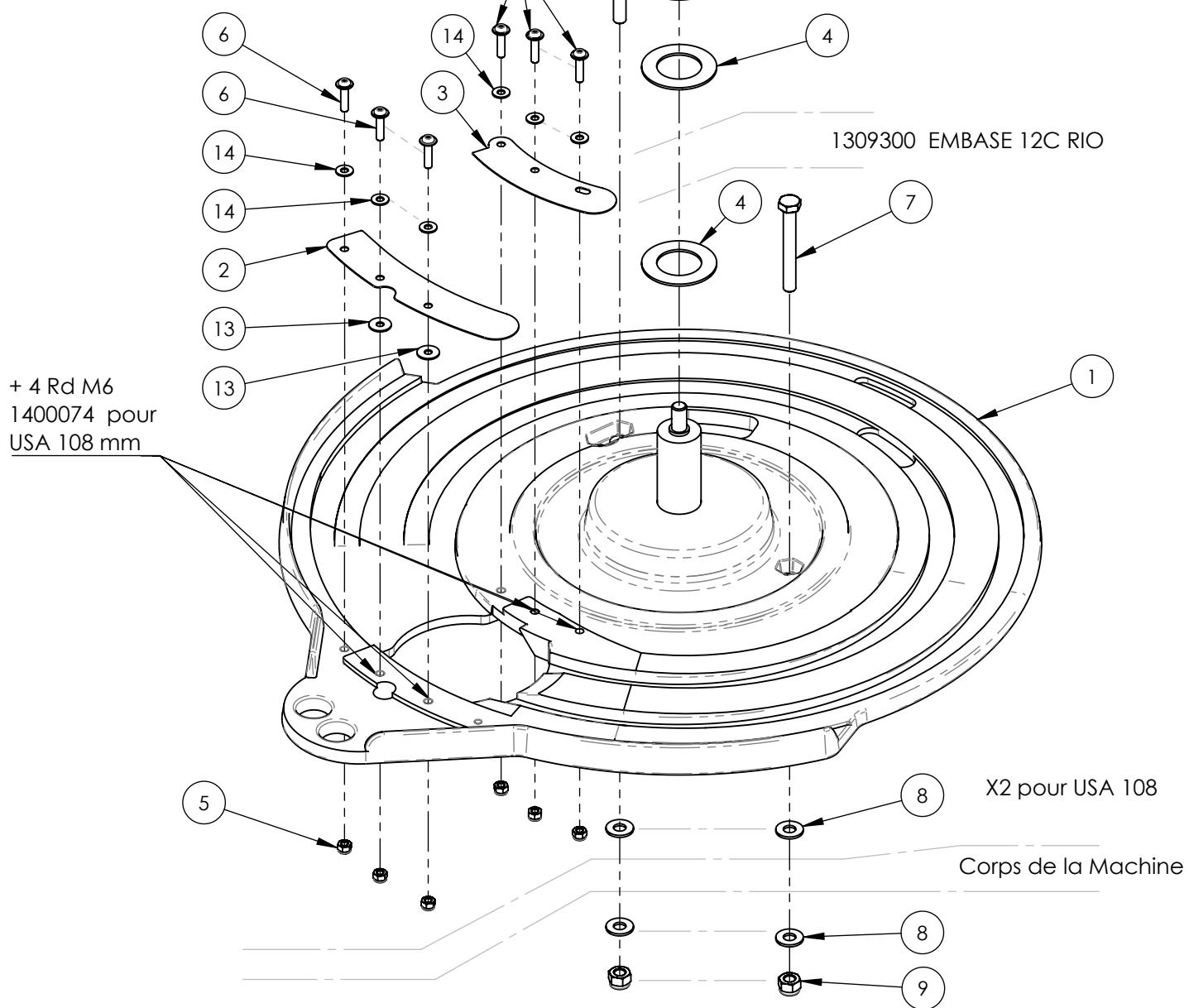


**TRAP 185E 12C RIO 2014
SCH09 PLAQUE SB 12C SP14 2016 10**

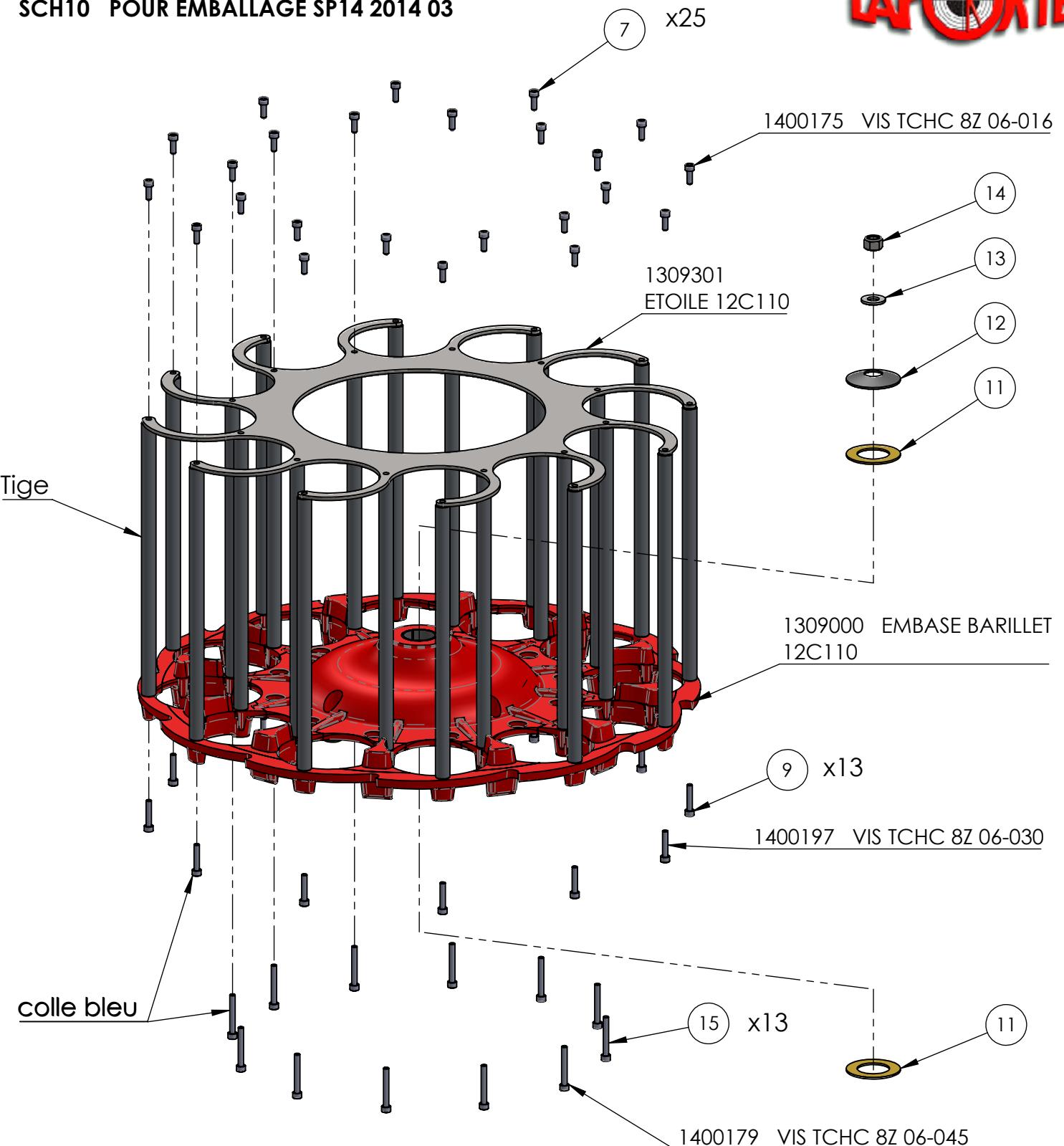
Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.

LAPORTE



No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1309303 PLAQUE SB 12C 110 SP14 N	ALUMINIUM SB BASE 12C
2	1	1309304 COUTEAU SEPARATEUR EXT 12C 110 SP14 B	KNIFE SEPARATOR EXT 12C 110 SP14
3	1	1309305 COUTEAU SEPARATEUR INT 12C 110 SP14 C	KNIFE SEPARATOR INT 12C 110 SP14
4	2	1400315 RONDELLE LAITON 36x60x2	BRASS WASHER 36-60-2
5	6	1400024 ECROU INDES AZ 06-000	LOCK NUT 06
6	6	1400487 VIS TCBHC 8Z 06-025	SCREW TCHC 8Z 06-025
7	2	1400167 VIS TH8.8 10-080	SCREW TH8.8 10-080
8	4	1400049 RONDELLE MOYENNE 10	FLAT WASHER MED AZ 10-022-02
9	2	1400026 ECROU INDES AZ 10-000	LOCK NUT 10
10	1	1400086 RONDELLE BELLEVILLE 20	BELLEVILLE WASHER DIA 20
11	1	1400050 RONDELLE MOYENNE 12	FLAT WASHER MED AZ 12-000
12	1	1400027 ECROU INDES AZ 12-000	LOCK NUT 12-000
13	2	1400074 RONDELLE L AZ 06-018-1.2	FLAT WASHER L AZ 06-018-1.2
14	6	1400047 RONDELLE MOYENNE 06	FLAT WASHER MED AZ 06-014-1.2



No.	Qu.	No.PIÈCE
20	1	1309300 EMBASE BARILLET 12C110 SP14 L
21	24	1309349 TIGE BARILLET D16-L320 M6 A
15	13	1400179 VIS TCHC 8Z 06-045
7	25	1400175 VIS TCHC 8Z 06-016
9	13	1400197 VIS TCHC 8Z 06-030
11	2	1400315 RONDELLE LAITON 36x60x2
12	1	1400086 RONDELLE BELLEVILLE 20
13	1	1400050 RONDELLE MOYENNE 12-000
14	1	1400027 ECROU INDES AZ 12-000

24X

1309366 Tige Barillet 230 plateaux (215 mm) Battue

1309368 Tige Barillet 270 plateaux (250 mm)

1309349 Tige Barillet 350 plateaux (320mm) FO/TA

1309063 Tige Barillet 400 plateaux (360mm)

1309339 Tige Barillet 450 plateaux (400mm) PC 400

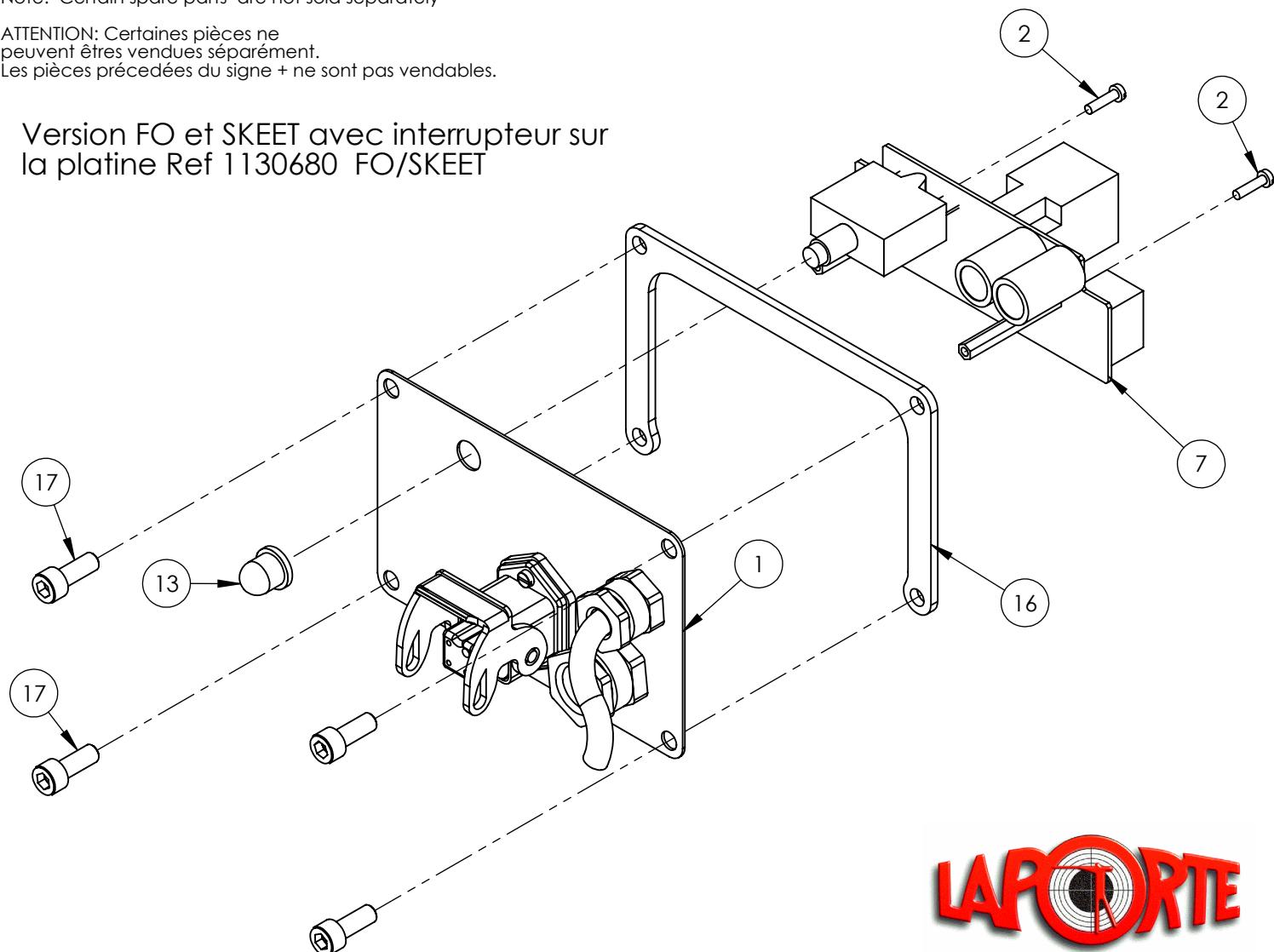
1309042 Tige Barillet 650 plateaux (590mm) PC 700/SK

TRAP 185E 12V SP14 PC ET FO
1130681 PLATINE CDE 12V PC RIO 2014 03

Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.

Version FO et SKEET avec interrupteur sur la platine Ref 1130680 FO/SKEET



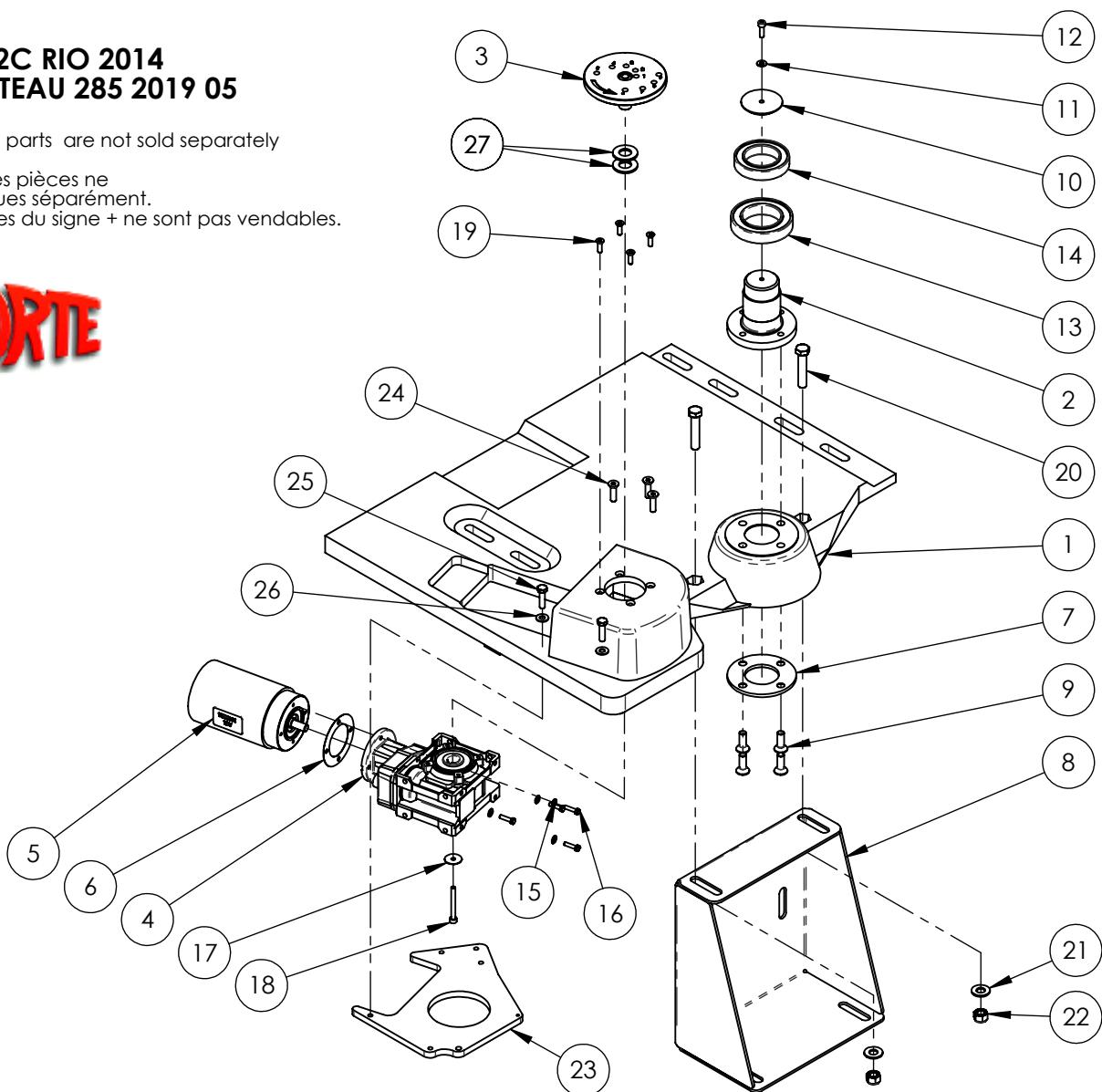
ATTENTION !!! Ne pas inverser le sens de rotation du Moteur.

No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1309353 PLATINE COMMANDE FO RIO	ELECTRICITY COVER 12V DC
2	4	1400095 VIS METAUX AZ TC 03-012	SCREW METAL AZ TC 03-012
3	1	1115510 EMBASE DROITE ILME CK 03I	STRAIGHT FITTED BASE CK03I
4	1	1115540 PRISE FEMELLE ILME CKF 03	FEMALE PLUG ILME CKF 03
5	2	1400058 RD EVENTAIL AZ 03-000	GROWER WASHER AZ 03-000
6	2	1400005 ECROU HU AZ 03-000	NUT HU AZ 03-000
7	1	1150114 CARTE DE CDE 12V PC 2014 A	CONTROL CARD PC 2004
8	1	1111730 CONTRE ECROU PLASTIQUE N° 9	PLASTIC LOCKINGNUT N°9
10	1	1111720 PRESSE-ETOUPE PLASTIQUE N° 9	PLASTIC STUFFING GLAND N°9
13	1	1117875 CAPOT DE DISJONCTEUR	CAP TRANSPARENT E-T-A
16	1	1309340 JOINT PLATINE SP14 B	SEAL PLATE SP14
17	4	1400175 VIS TCHC 8Z 06-016	SCREW TCHC 8Z 06-016

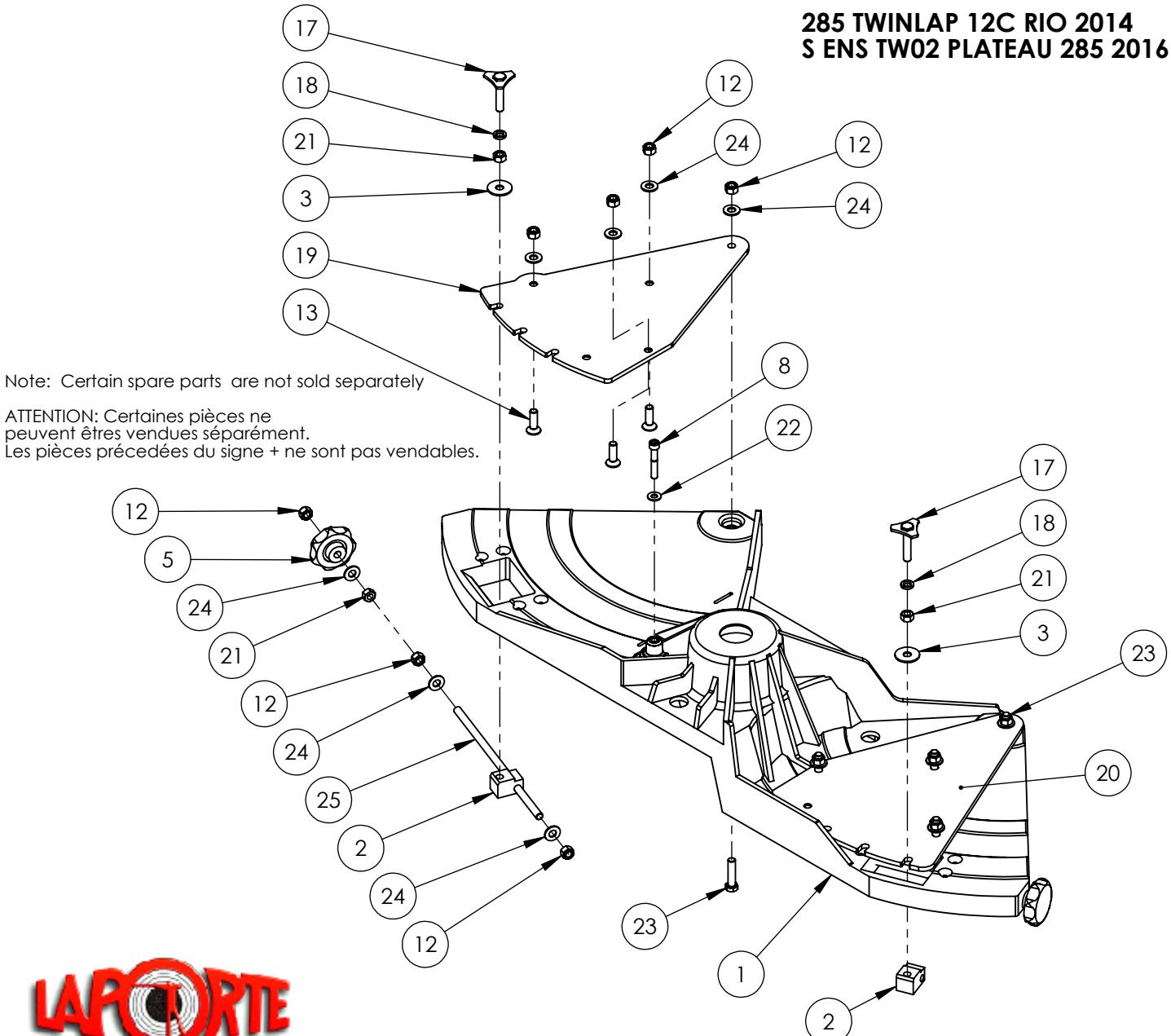
285 TWINLAP 12C RIO 2014 S ENS TW01 PLATEAU 285 2019 05

Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.



No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1305390 SOCLE EMBASE D	BASE SOCLE 285 TWINLAP
2	1	1304740 AXE SOCLE LOW BASE A	AXIS LOW BASE
3	1	1308304 EXCENTRIQUE MVT HORIZ D18 C	OFF CENTER HOR MVT D18 185LB
4	1	1500889 REDUCTEUR MVT HF40 1-260	GEARBOX 1/260 DTL LB
5	1	1500891 MOTEUR TOURELLE 12V GS	VERTICAL MOTOR 12V
6	1	1308305 RONDELLE B56 RED TRAMEC A	WASHER RED TRAM B56
7	1	1304745 CONTRE PLAQUE BASE TAHLB	AXIS PLATE LOW BASE 185
8	1	1305555 EQUERRE FIX BASE 285 A	BASE SUPPORT 285
9	4	1400354 VIS TFHC 8.8 M10-030	SCREW TFHC 10-030
10	1	1304825 BOUCHON PROTECTION AXE 185LB A	WASHER PIVOTING PLATE
11	1	1400047 RONDELLE MOYENNE 06	FLAT WASHER MED AZ 06-014-1.2
12	1	1400176 VIS TCHC 8Z 06-020	SCREW TCHC 8Z 06-20
13	1	1304780 ROULEMENT 6011 EE 55x90x18	BEARING 6011 2RS 185LB
14	1	1302305 ROULEMENT 6010 EE 50x80x16	ROLLER BEARING 6010 2RS
15	4	1400046 RONDELLE MOYENNE 05	FLAT WASHER MED AZ 05-000
16	4	1400123 VIS TH8.8 05-020	SCREW TH8.8 05-020
17	1	1400314 RONDELLE LARGE 06-025-1	LARGE WASHER AZ 06-025-1
18	1	1400181 VIS TCHC 8Z 06-055	SCREW TCHC AZ 06-055
19	4	1400207 VIS TFHC 8Z 06-020	SCREW TFHC 1Z 06-020
20	2	1400160 VIS TH8.8 12-060	SCREW TH8.8 12-060
21	2	1400050 RONDELLE MOYENNE 12	FLAT WASHER MED AZ 12-000
22	2	1400027 ECROU INDES AZ 12-000	LOCK NUT 12-000
23	1	1305392 TOLE RENF INF EMBASE TWINLAP B	BASE REINFORCEMENT SHEET
24	3	1400340 VIS TFHC 1Z 08-030	SCREW TFHC 1Z 08-030
25	2	1400133 VIS TH 08-030 CL8.8	SCREW TH8.8 08-030
26	2	1400048 RONDELLE MOYENNE 08	FLAT WASHER MED AZ 08-018-1.5
27	2	1400493 RONDELLE MOYENNE 18-36-03	FLAT WASHER MED AZ 18



LAPORTE

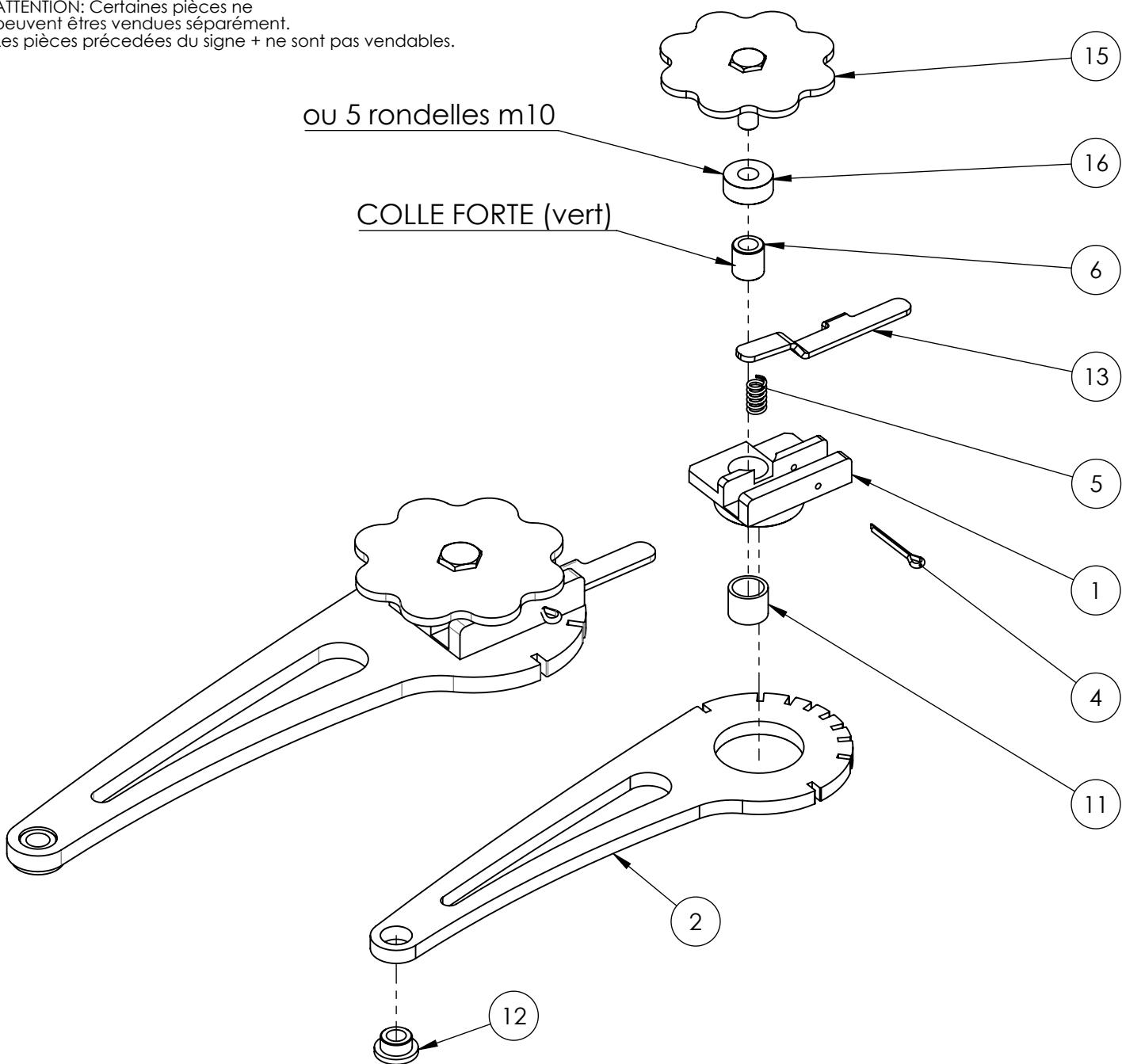
No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1305405 PLATEAU PIVOTANT A	PIVOTING PLATE 285
2	2	1305560 CARRE DE REGLAGE B	REGLAGE SQUARE 285
3	2	1400056 RONDELLE LARGE 12-040-2.5	LARGE WASHER AZ 12-040
5	2	1306055 MOLETTE M12 MOD 98	KNOB M12 MODEL 1998
8	1	1400318 VIS TCHC 8Z 10-060	SCREW TCHC 8Z 10-060
12	14	1400027 ECROU INDES AZ 12-000	LOCK NUT 12-000
13	6	1400507 VIS TFHC 8.8 AZ 12-040	SCREW TFHC M12-040
15	2	1305065 SOCLE PCT	BASE 185
17	2	1306151 MOLETTE HEXAG 19 TWIN16 C	LOW BASE 285 KNOB 2016
18	2	1400365 RD GROWER AZ 12-000	GROWER WASHER AZ 12-000
19	1	1308152 TOLE SOCLE STD 285 2015 B	SHEET FIXING BASE STD 285
20	1	1309424 TOLE SOCLE 581 TWIN 16 A	SHEET FIXING BASE 581
21	4	1400009 ECROU STANDARD 12	NUT HU AZ 12-000
22	1	1400049 RONDELLE MOYENNE 10	FLAT WASHER MED AZ 10-022-02
23	2	1400159 VIS TH8.8 12-050 FILETAGE TOTAL	SCREW TH8.8 12-050
24	14	1400050 RONDELLE MOYENNE 12	FLAT WASHER MED AZ 12-000
25	2	1307729 TIGE FILETEE 12-330 AZ	ROD 12-330

**TRAP 185E 12C RIO 2014
S ENS BIELLE CRANTEE TAHLB 2018 09**

LAPORTE

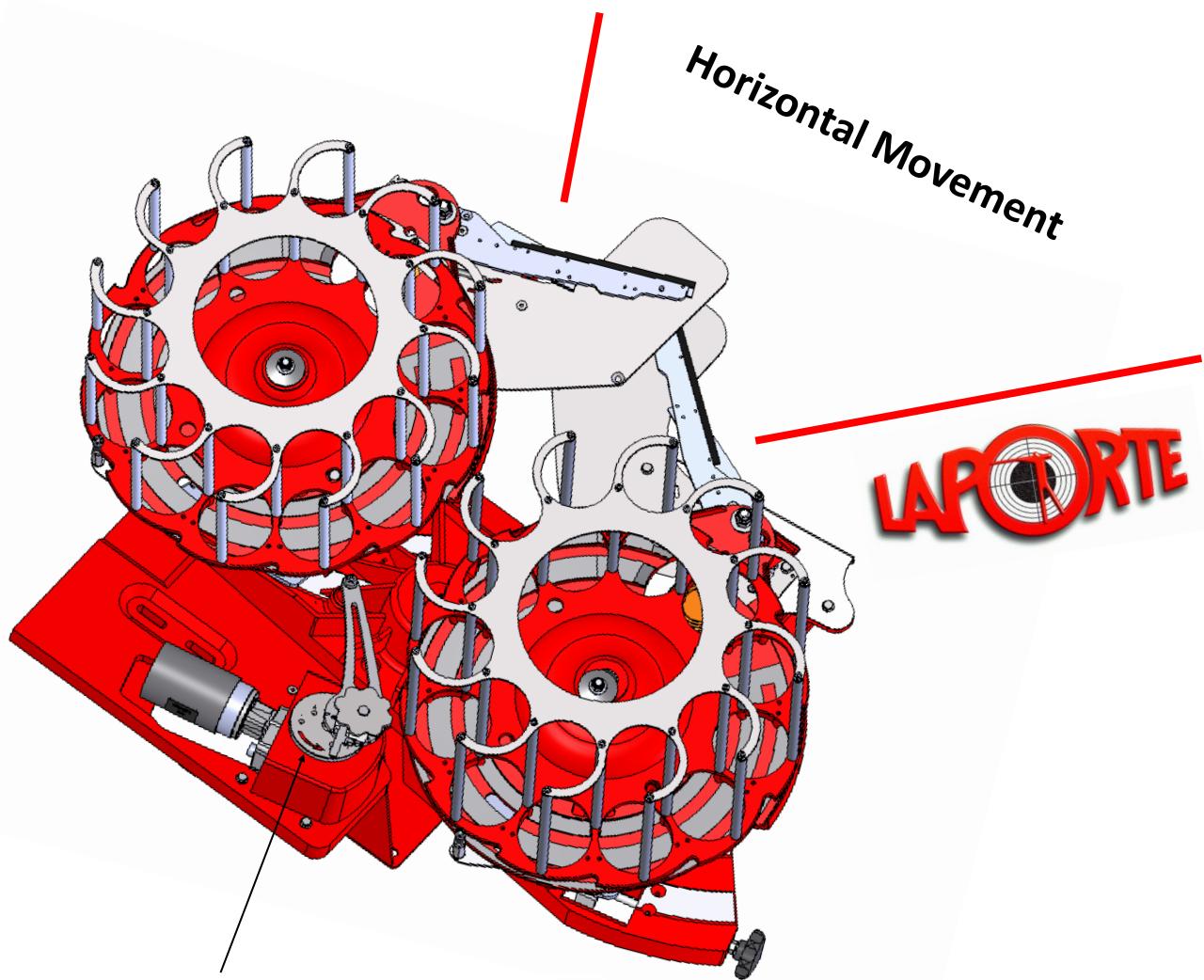
Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.



No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1304810 EXCENT BIELLE CRANTEE F	WINDAGE ADJUSTING HUB
2	1	1304805 BIELLE CRANTEE TAHLB H	TURRET INDEXED CON ROD 158LB
4	1	1400245 GOUPILLE FENDUE 3.2-032	PIN SPLIT 3.2-032
5	1	1304720 RESSORT PLAQUE SB	BEARING SUPP SPRING MOB
6	1	1306200 ENTRE EXCENTRIQUE LB A	SPACER FOR EXCENTRIC LB
11	1	1301650 PALIER AL 16x20x16	SELF LUBR BEARING 185V
12	1	1307505 PALIER IGLI MFM 10x16x10	BUSHING IGLIDURE C 10-16-10
13	1	1304795 LEVIER EXCENT HORIZ A	EXCENTRIC LEVER 185 LB
15	1	1309420 LEVIER MOLETTE HEXAG 17 LB16 C	LOW BASE 285 KNOB 2016
16	1	1400--- ENTRETOISE 10.5-25-10	SPACER CYL. 10.5-25-020

AMPLITUDE TWINLAP 285 2022 10



1308304 EXCENTRIQUE MVT

HORIZONTAL D18

N°1 ==> 13°

N°2 ==> 17.5 °

N°3 ==> 22°

N°4 ==> 26°

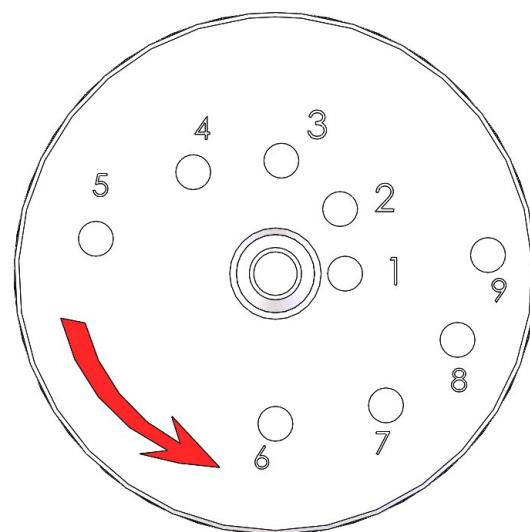
N°5 ==> 37°

N°6 ==> 30°

N°7 ==> 35°

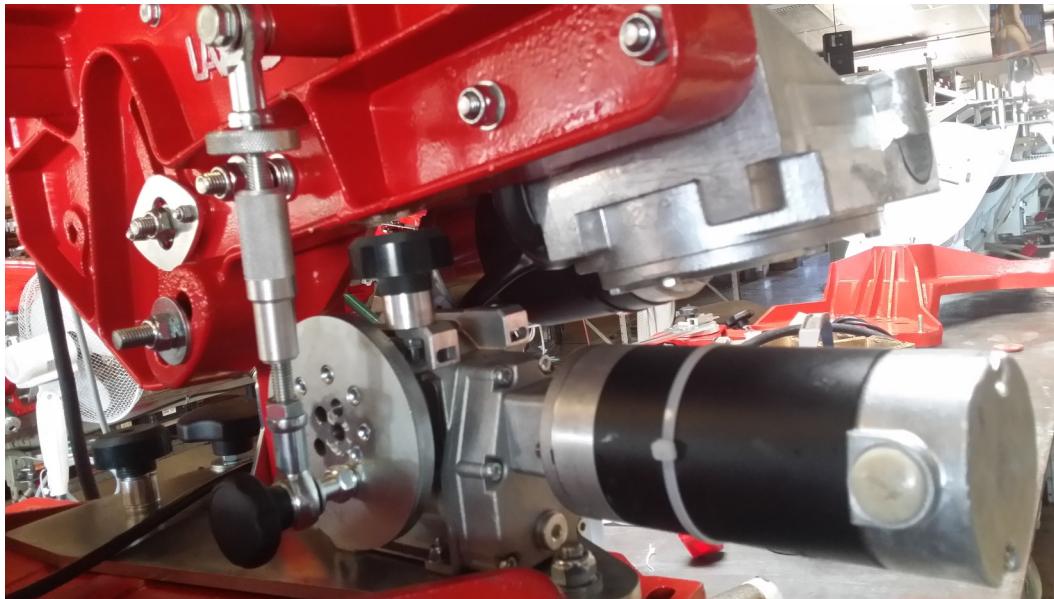
N°8 ==> 40°

N°9 ==> 45°

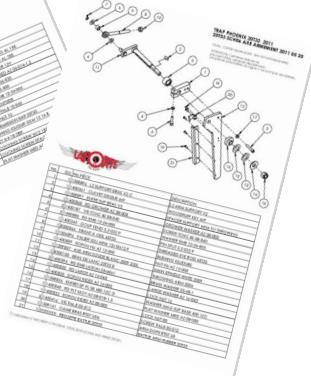
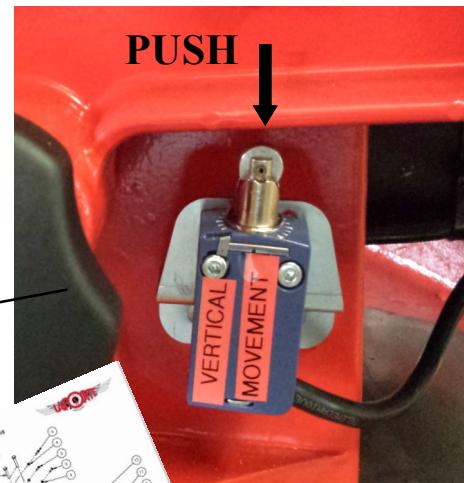
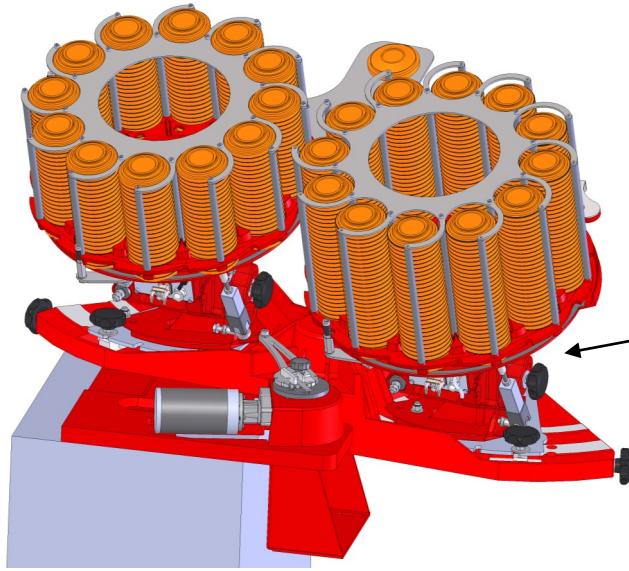


ECLATEES TWINVERT 16

2016 05 05



TIGES BARILLET 320 MM M6
TIGES BARILLET 400 MM M6



CONFIDENTIEL

Ce plan est la propriété de la Sté LAPORTE,
371 Chemin des Prés 06 410 BIOT
FRANCE

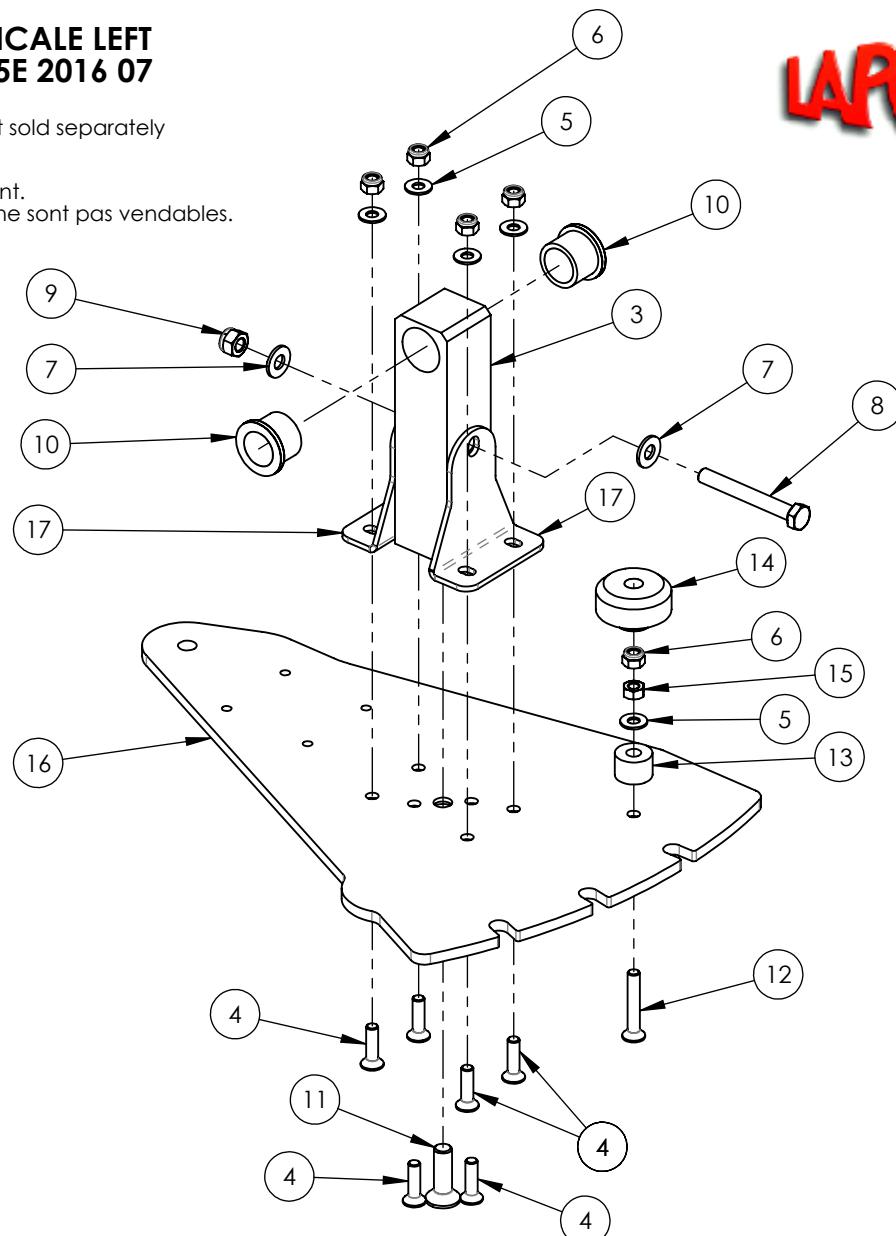
Tel: +33 (0)4 93 65 77 77 Fax:+33 (0)4 93 65 77 78
achat@laporte-shooting.com saubry@laporte.biz
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TRAP 185E TWINLAP VERTICALE LEFT SCH01 TWIN VERT 16 185E 2016 07

LAPORTE

Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.



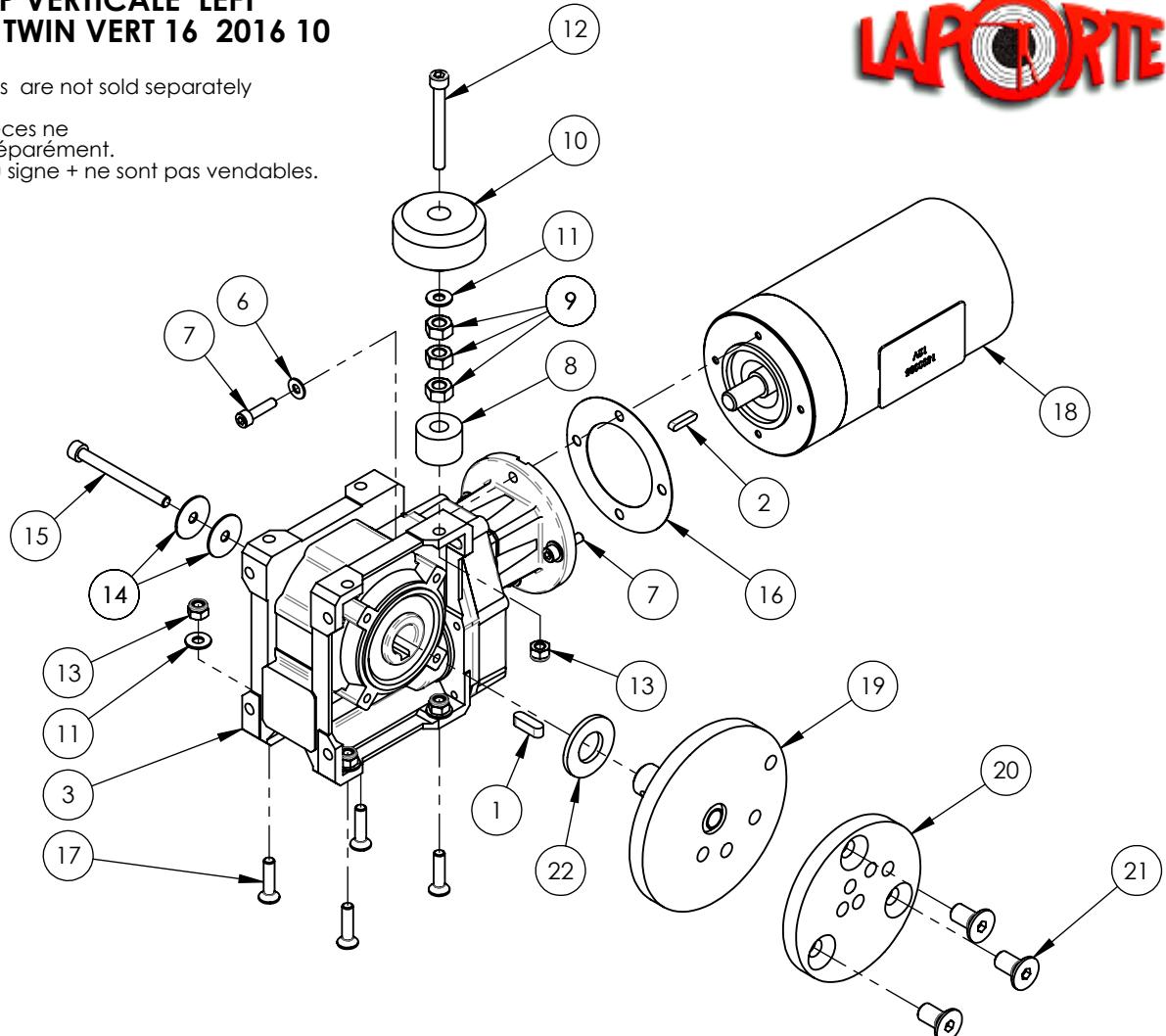
No.	Qu.	No.PIÈCE	DESCRIPTION
3	1	1300806 CARRE SUPP MACHINE PCTAHV A	SQUARE SUPP MACH 185 PCT
4	6	1400340 VIS TFHC 1Z 08-030	SCREW TFHC 1Z 08-030
5	5	1400048 RONDELLE MOYENNE 08-018-1.5	FLAT WASHER MED AZ 08-000
6	5	1400025 ECROU INDES AZ 08-000	LOCK NUT 08
7	2	1400049 RONDELLE MOYENNE 10-022-2	FLAT WASHER MED AZ 10-022-02
8	1	1400167 VIS TH8.8 10-080	SCREW TH8.8 10-080
9	1	1400026 ECROU INDES AZ 10-000	LOCK NUT 10
10	2	1301680 PALIER ALC 25x32x25 FP15	SELF LUBRIC BUSHING 25x32x25 185
11	1	1400507 VIS TFHC 8.8 AZ 12-040	SCREW TFHC M12-040
12	1	1400316 VIS TFHC 1Z 08-050	SCREW TFHC 1Z 08-050
13	1	1308229 ENTRE EQU PLSB 10-25-17	SPACER THROWING PLATE
14	1	1307214 BUTEE POLYURETHANE RES ARM A	POLYURETHANE STOP ARMING SPRING
15	1	1400003 ECROU HU CL8 08-000	NUT HU CL8 08-000
16	1	1309425 TOLE SOCLE TWIN VERT LEFT 16 B	SHEET FIXING VERT TWIN 185
17	2	1309426 EQUERRE RENF CARRE TWIN VERT 16	SET SQUARE REINFORC TWIN VERT 16

**TRAP 185E TWINLAP VERTICALE LEFT
SCH02 MOTORED TWIN VERT 16 2016 10**

LAPORTE

Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.

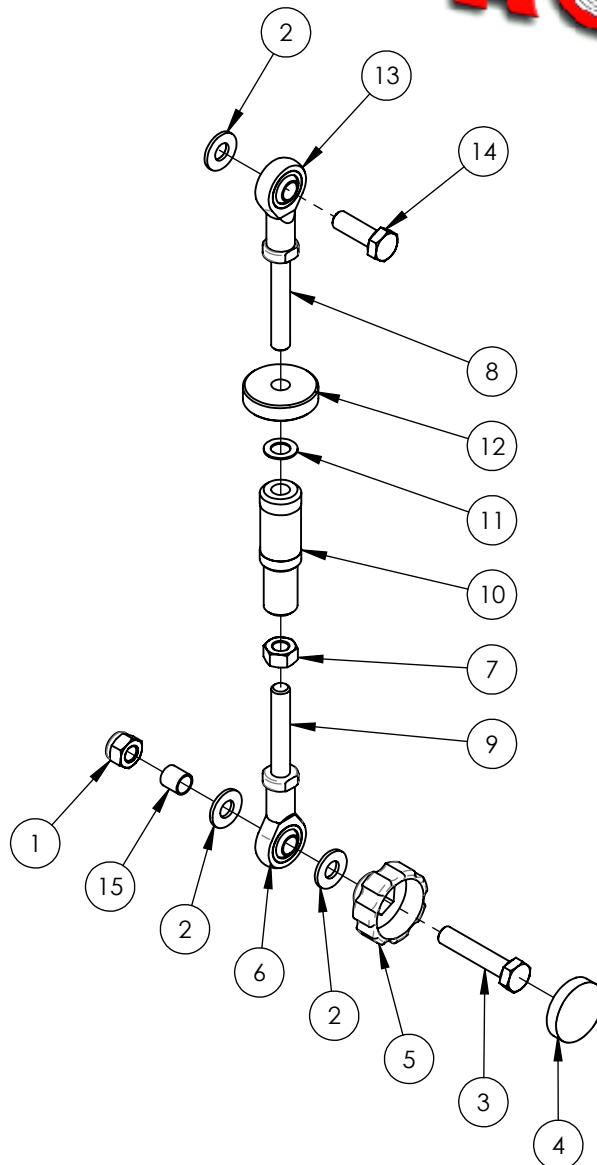
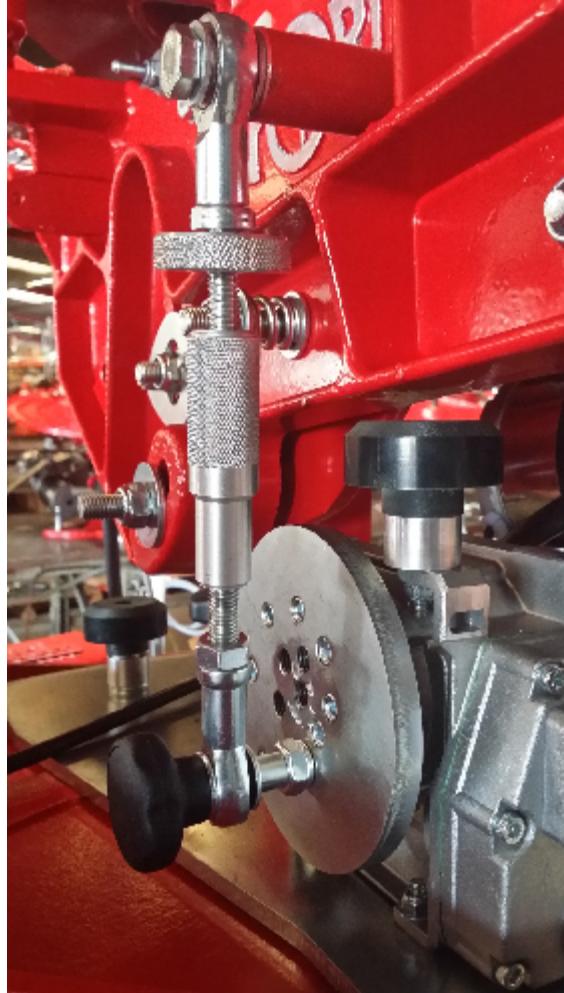


No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1400228 CLAVETTE 6-6-20 2BR	KEY 6-6-20 2BR
2	1	1400222 CLAVETTE 4-4-18 2BR	KEY 4-4-18 2BR
3	1	1500889 RED DOUBLE Hori HF40 260 56 B14	GEARBOX 1/260 DTL LB
6	4	1400046 RONDELLE MOYENNE 05-000	FLAT WASHER MED AZ 05-000
7	4	1400171 VIS TCHC 8Z 05-020	SCREW TCHC 8Z 05-020
8	1	1308229 ENTRE EQU PLSB 10-25-17	SPACER THROWING PLATE
9	3	1400003 ECROU HU CL8 08-000	NUT HU CL8 08-000
10	1	1307214 BUTEE POLYURETHANE RES ARM A	POLYURETHANE STOP ARMING SPRING
11	5	1400047 RONDELLE MOYENNE 06-014-1.2	FLAT WASHER MED AZ 06-014-1.2
12	1	1400181 VIS TCHC 8Z 06-055	SCREW TCHC AZ 06-055
13	5	1400024 ECROU INDES AZ 06-000	LOCK NUT 06
14	2	1400314 RONDELLE LARGE 06-025-1	LARGE WASHER AZ 06-025-1
15	1	1400182 VIS TCHC 8Z 06-065	SCREW TCHC AZ 06-065
16	1	1308305 RONDELLE B56 RED TRAMEC A	WASHER RED TRAM B56
17	4	1400208 VIS TFHC 8Z 06-025	SCREW TFHC 8Z 06-025
18	1	1500085 MOTEUR TOURELLE 12V 185 RAB LS	VERTICAL MOTOR 12V
19	1	1308306 EXCENTRIQUE VERTICAL D18 LB13	OFF CENTER VERT WITH AXIS 18MM TRAMEC
20	1	PROTO0223 RD EXCENT VERT D18 TWIN16	OFF CENTER VERTICAL MVT TWIN16
21	3	1400214 VIS TFHC 8.8 M10-020	SCREW TFHC M10-020
22	1	1400493 RONDELLE MOYENNE 18-36-03	FLAT WASHER MED AZ 18

**TRAP 185E TWINLAP VERTICALE LEFT
SCH03 AXE REGLABLE AV TWIN VERT 16 2016 03**

Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.



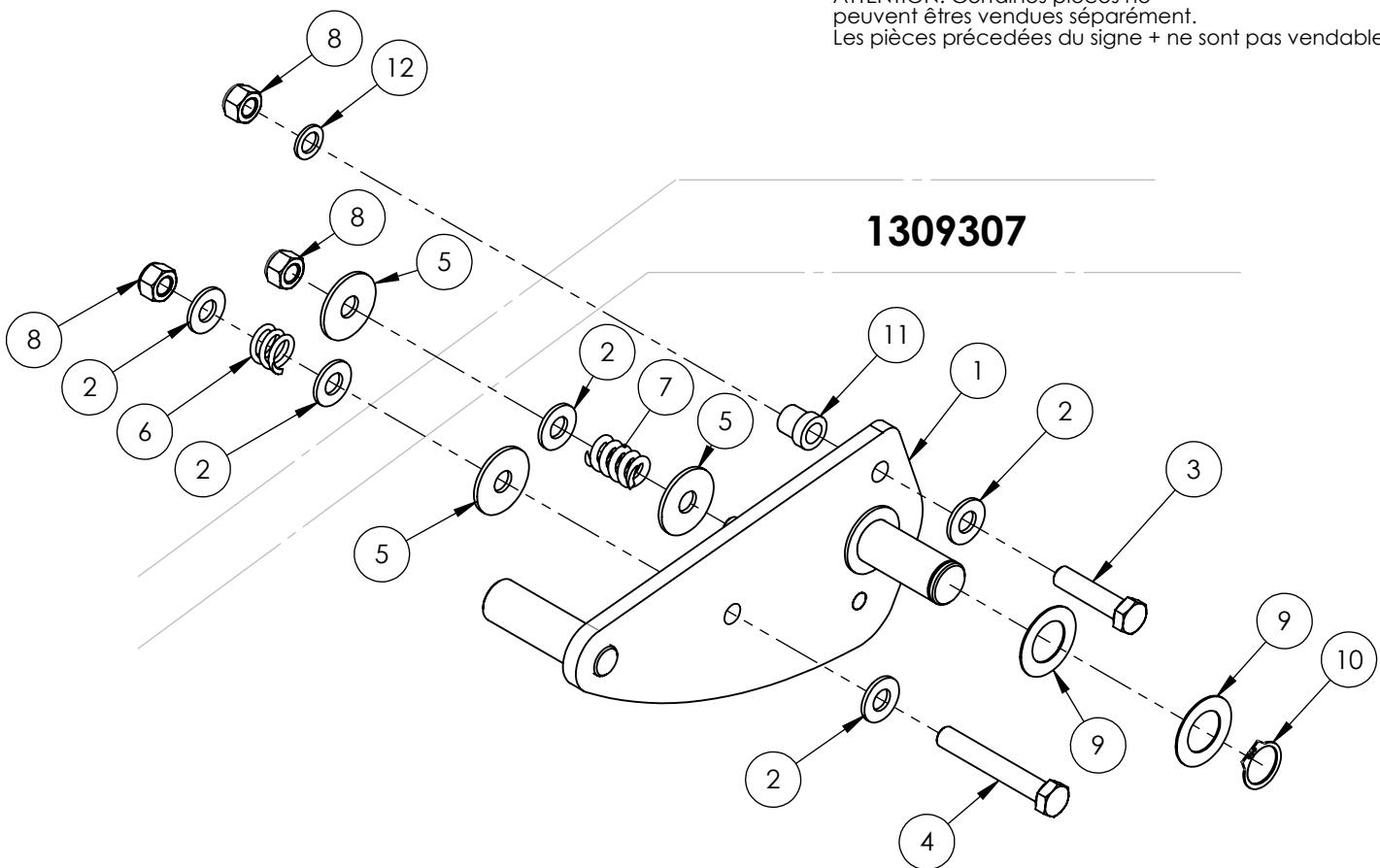
No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1400026 ECROU INDES AZ 10-000	LOCK NUT 10
2	3	1400049 RONDELLE MOYENNE 10-022-2	FLAT WASHER MED AZ 10-022-02
3	1	1400150 VIS TH8.8 10-050	SCREW TH6.8 10-050
4	1	1306150 MOLETTE LOW BASE CAPOT	LOW BASE 285 KNOB
5	1	1306150 MOLETTE LOW BASE	LOW BASE 285 KNOB
6	1	1305160 ROTULE TESC CF10 M10	EYE ROD SI10E 185E THREAD
7	1	1400008 ECROU HU AZ 10-000	NUT HU AZ 10-000
8	1	1305355 TIGE FILETEE LEFT 10-080 GAUCHE	LEFT THREADED ROD 10-090
9	1	1305350 TIGE FILETEE 10-080	THREADED ROD 10-075
10	1	1309428 AXE REGLABLE MVT VERT TWIN 16	ADJUSTING AXIS 185E
11	1	1400042 RONDELLE EVENTAIL 10	WASHER BATWING AZ 04-000
12	1	1305155 ECROU BLOCAGE VERIN LEFT	JACK LOCK NUT 185E
13	1	1304775 ROTULE TESC LEFT CF10 M10	EYE ROD SIL 10E LEFT 185LB
14	1	1400148 VIS TH8.8 10-030	SCREW TH8.8 10-030
15	1	1306080 ENTR AXE REGL 10 12 12 A	SPACER FOR ADJUSTING AXIS MOD 98

**TRAP 185E TWINLAP VERTICALE LEFT
SCH04 PLAQUE FIX MACH TWIN VERT 16**



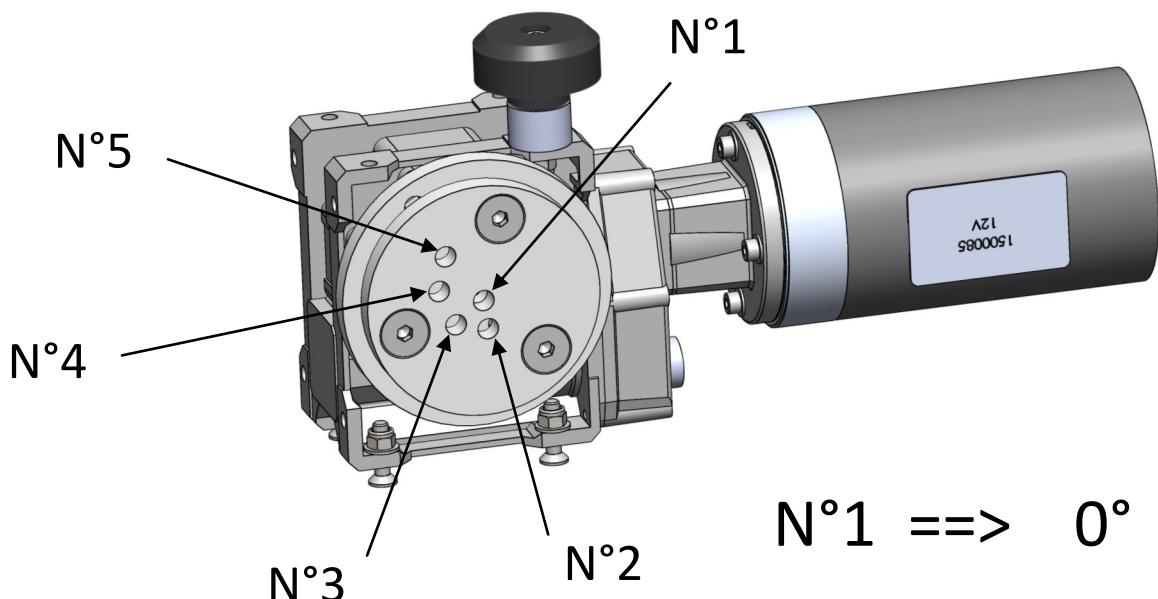
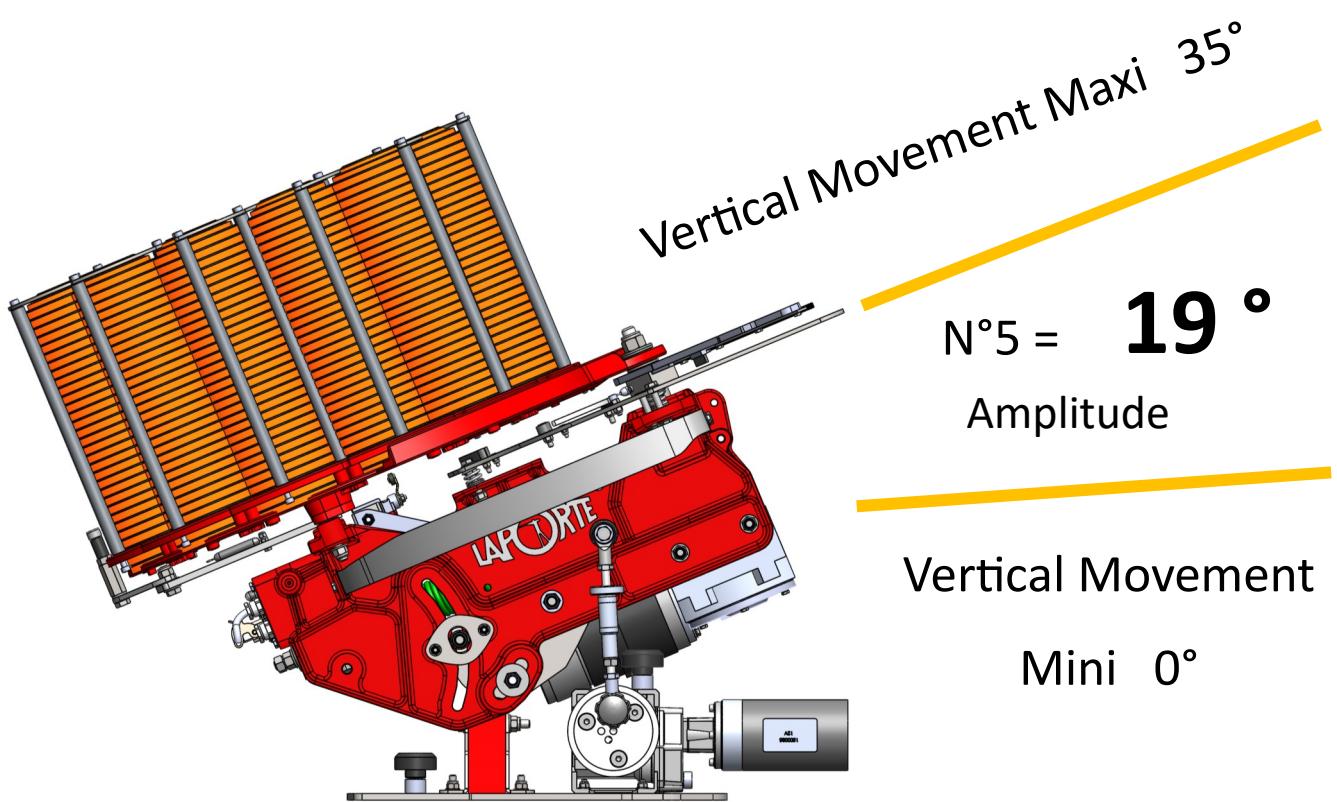
Note: Certain spare parts are not sold separately

ATTENTION: Certaines pièces ne peuvent être vendues séparément.
Les pièces précédées du signe + ne sont pas vendables.



No.	Qu.	No.PIÈCE	DESCRIPTION
1	1	1309429 PLAQUE FIXATION TWINVERT16	TRAP FIXING PLATE TWINVERT16 185
2	5	1400050 RONDELLE MOYENNE 12-000	FLAT WASHER MED AZ 12-000
3	1	1400159 VIS TH8.8 12-050	SCREW TH8.8 12-050
4	1	1400320 VIS TH8.8 12-080	SCREW TH8.8 12-080
5	3	1400056 RONDELLE LARGE 12-040-2.5	LARGE WASHER AZ 12-040
6	1	1309415 RESSORT SOCLE COURT RENF	BASE SPRING SHORT 185 E
7	1	1309137 RESSORT SOCLE LONG A	BASE SPRING LONG 185E
8	3	1400027 ECROU INDES AZ 12-000	LOCK NUT 12-000
9	2	1302265 RONDELLE BUTEE AS 25-42-1	THRUST WASHER AS 25-42-1
10	1	1400249 CIRCLIPS ARBRE 25	CIRCLIPS OUTSIDE DIA25
11	1	1305125 ENTRE ROTULE CORPS SOCLE A	EYE ROD SPACER BODY BASE
12	1	1400364 RONDELLE ETROITE 12-018-02	WASHER AZ 12-018-02

AMPLITUDE TWINLAP VERTICAL LEFT 2020 10



LAPORTE
Since 1927

N°1	=>	0°
N°2	=>	9°
N°3	=>	11°
N°4	=>	14°
N°5	=>	19°

TWINLAP VERTICAL FACADE CDE 2016 10

Interrupteur permettant de n'autoriser le déclenchement que par le bouton "Pull Test" et d'inhiber le déclenchement par la télécommande

On/off switch authorizing the release by the "Pull Test" button exclusively and forbidding the release by the radio remote control.

Led de signalisation du mode "Test"

Signal Led of the "Test" mode

Bouton "Pull Test"

"Pull Test" button

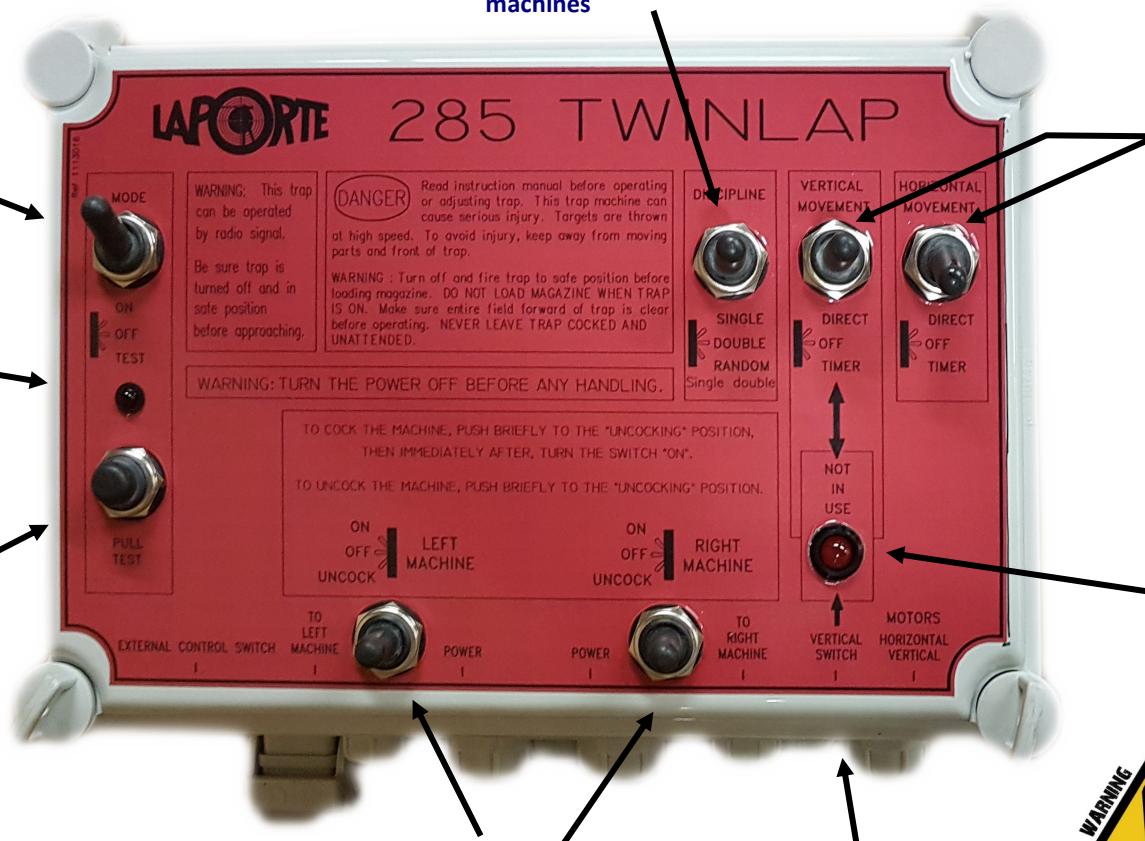
Interrupteur de sélection du mode de déclenchement des deux machines

On/off switch to select the release mode of the 2 machines

Interrupteurs de sélection du mode de fonctionnement des mouvements horizontal et vertical

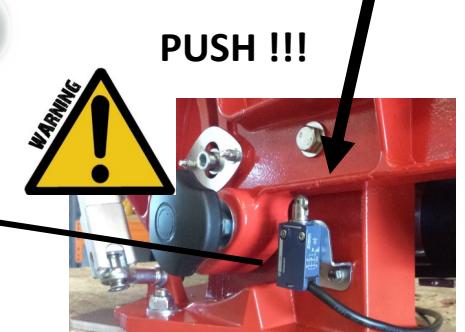
On/off switch to select the release mode of the horizontal & vertical movement

Voyant de signalisation de l'inhibition du mouvement vertical
Led for signaling inhibition of vertical movement



Interrupteur de mise en service ou hors service des 2 machines

Start-up and shut down of the 2 machines
(On-Off-Uncock)



Machine de droite — Right machine

TWINLAP

285

WITH VERTICAL

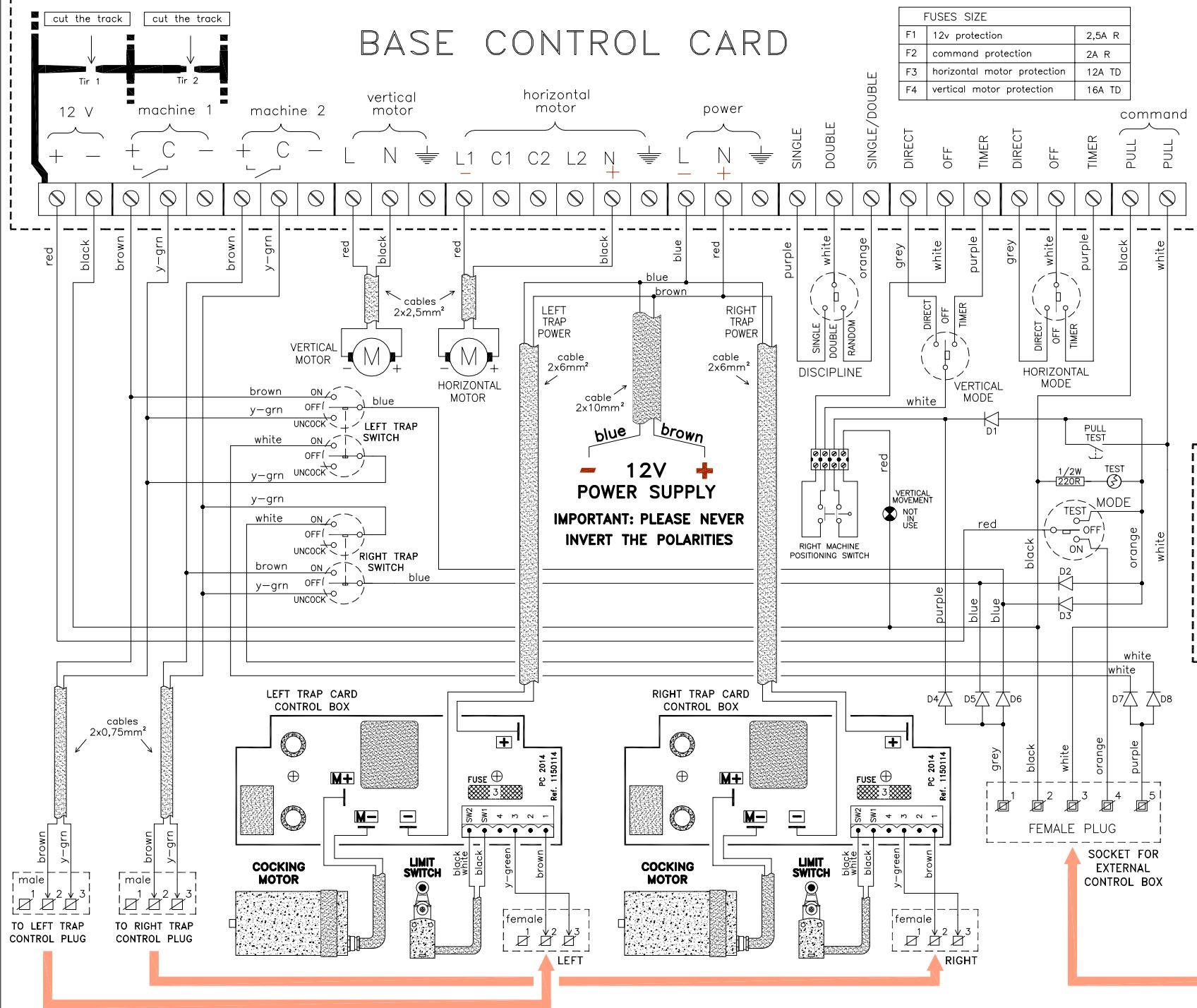
VOLTAGE 12V

ELECTRICAL

SCHEMATIC



EXTERNAL CONTROL BOX



285-12a vertical
12/07/16 CB