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# MANUALE DI USO E MANUTENZIONE MANUEL D'UTILISATION ET D'ENTRETIEN USE AND MAINTENANCE MANUAL ANLEITUNG FÜR GEBRAUCH UND WARTUNG MANUAL DE USO Y MANTENIMIENTO INSTRUÇÕES DE UTILIZAÇÃO E DE MANUTENÇÃO ADVÍZEZN VOOR GEBRUIK EN ONDERHOUD BRUGERVEJLEDNING OG VEDLIGEHOLDELSESVEJLEDNING BRUHK-OG VEDLIKEHOLDSANVISNING BRUHSANVISNING OCH SHÖTSEL ΟΗΓΕΣ ΧΡΗΣΗΣ ΚΑΙ ΣΥΝΤΗΡΗΣΗΣ HÄYTTÖ-JA HUOLTO-OHJE

GX

## IT ISTRUZIONI ORIGINALI - PREMESSA (2.1)

Questo manuale contiene tutte le istruzioni d'uso della macchina e la conoscenza necessaria per un impiego corretto della stessa. Nel ringraziarla per l'acquisto del nostro carrello vorremmo porre alla sua attenzione alcuni aspetti di questo manuale: - il presente libretto fornisce utili indicazioni per il corretto funzionamento e la manutenzione del carrello a cui si riferisce; è quindi indispensabile prestare la massima attenzione a tutti i paragrafi che illustrano il modo più semplice e sicuro per operare con il carrello. - il presente libretto dovrà essere considerato parte integrante del carrello e dovrà esservi accusato all'atto di vendita. - questa pubblicazione né parte di essa, potrà essere riprodotta senza autorizzazione scritta da parte della casa costruttrice. - tutte le informazioni qui riportate sono basate sui dati disponibili al momento della stampa; la casa costruttrice si riserva il diritto di effettuare modifiche ai propri prodotti in qualsiasi momento, senza preavviso e senza incorrere in alcuna sanzione. Si consiglia pertanto di verificare sempre eventuali aggiornamenti.

## FR TRADUCTION DE LA NOTICE ORIGINALE - AVANT-PROPOS (2.1)

Ce manuel contient toutes les instructions d'utilisation de la machine et la connaissance nécessaire pour un emploi correct de celle-ci. En vous remerciant pour l'acquisition de notre chariot nous vous souhaitons de votre attention certains aspects de ce manuel: - ce livret fournit des indications utiles pour un fonctionnement correct et pour l'entretien du chariot élévateur auquel il se réfère; il est donc indispensable de porter une grande attention à tous les paragraphes qui illustrent la façon la plus simple et la plus sûre pour opérer avec le chariot. - ce livret doit être considéré partie intégrante du chariot et devra être inclus à l'acte de vente. - cette publication, ni aucune partie d'elle-même, ne pourra être reproduite sans autorisation écrite de la part de la maison de construction. - toutes les informations rapportées ici sont basées sur des données disponibles au moment de l'impression; la maison de construction se réserve le droit d'effectuer des modifications à ses propres produits à n'importe quel moment, sans préavis et sans encourrir aucune sanction. Il est donc conseillé de toujours vérifier d'éventuelles mises à jour.

## EN TRANSLATION OF THE ORIGINAL INSTRUCTIONS - INTRODUCTION (2.1)

This manual contains all the instruction for the use of the machine and the necessary knowledge for its correct use. While thanking you for buying our truck we would like to draw your attention to some important aspects of this manual: - this booklet gives useful indications for the correct functioning and maintenance of the fork lift truck to which it refers; it is, therefore, essential to pay great attention to all the paragraphs that illustrate the simplest and safest way of using the truck; - this booklet must be considered an integral part of the truck and should be included at the moment of sale; - no part of this publication may be reproduced without the written authorisation of the manufacturer; - all the information contained in this booklet is based on the data available at the time of printing; the manufacturer reserves the right to modify its products at any time, without notice and without liability. It is therefore advisable to regularly check for any changes.

## DE ÜBERSETZUNG DER ORIGINALBETRIEBSANLEITUNG - VORWORT (2.1)

Dieses anleitung enthält alle Gebrauchsweisungen für das Gerät und die Hinweise für seinen einwandfreien Betrieb. Wir danken Ihnen für den Erwerb eines unserer Hubwagen und möchten Sie auf einige Punkte dieses Handbuchs hinweisen: - das vorliegende Handbuch liefert nützliche Hinweise für den einwandfreien Betrieb und die Wartung des jeweiligen Hubwagens; es ist daher unerlässlich, allen den Paragraphen die größte Aufmerksamkeit zu schenken, die die einfachste und sicherste Art beschreiben, um mit dem Hubwagen zu arbeiten; - das vorliegende Handbuch muß als wesentlicher Bestandteil des Gerätes angesehen und daher dem Kaufvertrag beigefügt werden; - weder diese Veröffentlichung noch Teile von ihr dürfen ohne die schriftliche Genehmigung des Herstellers nachgedruckt werden; - alle hier wiedergegebenen Informationen beziehen sich auf die beim Druck verfügbaren Daten; der Hersteller behält sich das Recht vor, ohne Vorankündigung jederzeit Änderungen an seinen eigenen Produkten vorzunehmen, wobei er sich keinerlei Strafen zuzieht. Wir empfehlen daher immer, eventuelle Neuerungen zu beachten.

## ES TRADUCCIÓN DEL MANUAL ORIGINAL - PREMISA (2.1)

Este manual contiene todas las instrucciones para la utilización de la máquina, así como las condiciones necesarias para un empleo correcto de la misma. Al agradecerle la compra de nuestra carretilla, deseamos someter a su atención algunos aspectos de este manual: - el presente manual proporciona indicaciones útiles para el correcto funcionamiento y para la manutención de la carretilla; es indispensable prestar la máxima atención a todos los párrafos que ilustran la manera más sencilla y segura para trabajar con la carretilla. - el presente manual debe considerarse parte integrante de la carretilla y deberá estar incluido en el acto de venta. - ni ésta publicación ni parte de ella podrá ser reproducida sin autorización escrita por parte de la Casa Constructora. - todas las informaciones aquí contenidas, están basadas sobre los datos disponibles al momento de la impresión; la Casa Constructora se reserva el derecho de efectuar modificaciones a sus propios productos en cualquier momento, sin previo aviso y sin incurrir en ninguna sanción. Por lo tanto, les aconsejamos comprobar siempre eventuales actualizaciones.

## PT TRADUÇÃO DO MANUAL ORIGINAL - INTRODUÇÃO (2.1)

Este manual contém todas as informações para o uso do aparelho e o conhecimento necessário para um perfeito funcionamento. Agradecendo pela compra do nosso aparelho queremos esclarecer alguns aspectos deste manual. - Este manual contém indicações para o correcto funcionamento e manutenção da carretinha; é indispensável prestar muita atenção a todos os parágrafos que ilustram em modo simples e seguro a manipulação da carretinha. - No ato da venda observe-se o manual foi entregue junto com a carretinha, pois deve ser considerado como parte integral da mesma. - Esta publicação não pode ser reproduzida sem autorização escrita da casa de construção. - Todas as informações são baseadas nos dados disponíveis no momento da estampa; a casa de construção tem o direito de modificar os próprios produtos em qualquer momento, sem pré-aviso e sem nenhum tipo de multa. Aconselhamos comprovar eventuais atualizações.

## NL VERTALING VAN DE OORSPRONKELIJKE GEbruiksaanwijzing - VOORWOORD (2.1)

Dit boekje bevat alle gebruiksaanwijzingen van de machine en de nodige kennis voor een correct gebruik van de pallettruck. Wij bedanken u voor de aankoop van onze pallettruck en tevens vestigen wij graag uw aandacht op enige aspecten van deze handleiding: - dit boekje verschafft nuttige aanwijzingen voor een correct gebruik en onderhoud van de betreffende pallettruck; het is daarom noodzakelijk alle paragrafen die betrekking hebben op de meest eenvoudige en veilige manier van het omgaan met de pallettruck goed te lezen. - dit boekje dient beschouwd te worden als een wezenlijk onderdeel van de machine en moet op het moment van de verkoop bijgeleverd worden. - deze publicatie, noch gedetailleerde hiervan, mogen niet vermenigvuldigd worden zonder schriftelijke toestemming van het constructiebedrijf. - alle informatie in deze handleiding is gebaseerd op de beschikbare gegevens op het moment van het ter druk gaan; het constructiebedrijf houdt zich niet recht voor om, op elk moment, veranderingen aan de producten te brengen, zonder voorafgaand te berichten en zonder sancties op te lopen. Het is daarom aan te raden altijd de meest recente uitgave te raadplegen.

## DA OVERSÆTTELSE AF DEN ORIGINALE BRUGSANVISNING - INTRODUKTION (2.1)

Denne folder indeholder alle vejledningerne for brug af maskinen samt den nødvendige viden for korrekt brug. Med takk for købet af vores truck gør vi Dem opmærksom på nogle vigtige aspekter af denne folder. Denne folder giver nyttegørende vejledninger for korrekt brug og vedligeholdelse af gaffel-trucken den beskriver; det er derfor yderst vigtigt at læse alle seksionerne grundigt da disse forklarer den bedste og mest sikre brug af trucken. - denne folder må anses for en integreret del af trucken af skal inkluderes i salget af den. - ingen del af denne publikation må reproduceres uden skrevne autorisation fra den konstruerende virksomhed. - alle information i denne folder er baseret på data tilgjengelig ved skrivende stund - den konstruerende virksomhed reserverer rettigheden til at modifisere dets produkter til enhver tid uden varsel og uden sanktion. Det er derfor anbefalet at holde sig op til dato.

## NO OVERSETTELSE AV OPPRINNELIGE INSTRUKSJONENE - PREMISSER (2.1)

Denne manuken inneholder alle veiledningene for bruk av maskinen samt den nødvendige viden for korrekt bruk. Med takk for købet av våres maskin gjør vi Dem oppmertsom på noen viktige aspekter i denne manuken. Denne manuken gir nyttegørende veiledninger for korrekt bruk og vedligeholdelse av gaffel-trucken den beskriver; det er derfor veldig viktig å lese alle seksjonene grundigt siden disse forklarer den beste og mest sikre bruk av trucken. - denne manu skal anses for en integrert del av trucken og skal inkluderes i salget av den. - ingen del av denne publikasjon må reproduceres uten skrevne autorisasjon fra den konstruerende virksomhet. - alle informasjon i denne manuken er basert på data tilgjengelig ved skrivende stund - den konstruerende virksomhet reserverer rettigheten til å modifisere dets produkter til enhver tid uten varsel og uten sanksjon. Det er derfor anbefalet å holde seg opp til dato.

## SV ÖVERSÄTTNING AV BRUKSANVISNING I ORIGINAL - INTRODUKTION (2.1)

Denna häfte innehåller alla instruktioner för användning av maskinen samt den nödvändiga viden för korrekt hantering. Vi vill tacka Er för att ha valt vår truck och samtidigt göra Er uppmärksamma på några viktiga aspekter rörande detta manu. Detta häfte innehåller viktiga anvisningar om korrekt användning och underhåll av den truck som säljs här. Det är därför mycket viktigt att noggrant läppa igenom alla paragrafer i detta häfte för att handlära sig med trucken. - Detta häfte ska betraktas som en del av trucken och bär därför med sig, vid försäljning. - Ingen del av denna publikation får kopieras utan tillstånd från tillverkaren. - Alla information i detta häfte baseras på data tillgänglig vid tryckningsstiftelsen. Tillskrivande reserverar sig rättigheten att genomföra modifieringar på sina produkter på vilken tidpunkt som helst utan förvarning och utan skyldigheter. Det är därför rekommenderat att regelbundet kontrollera om eventuella förändringar genomförs.

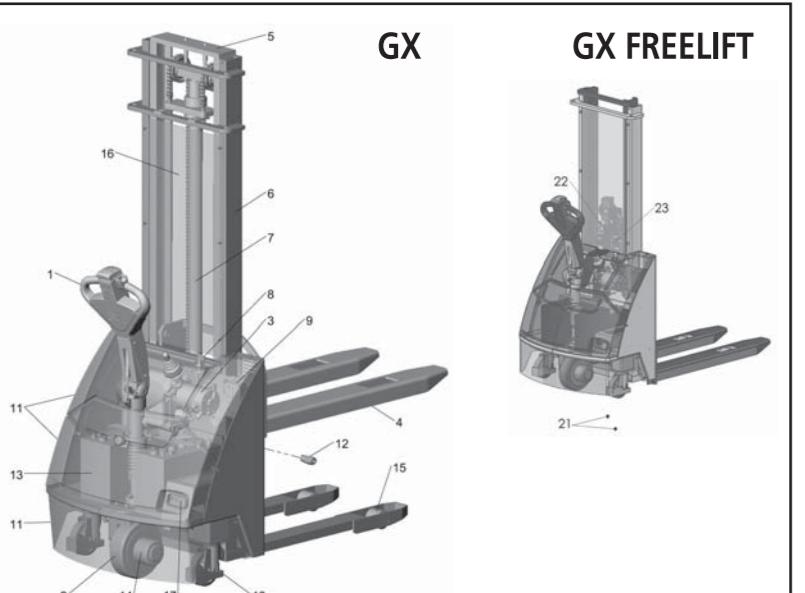
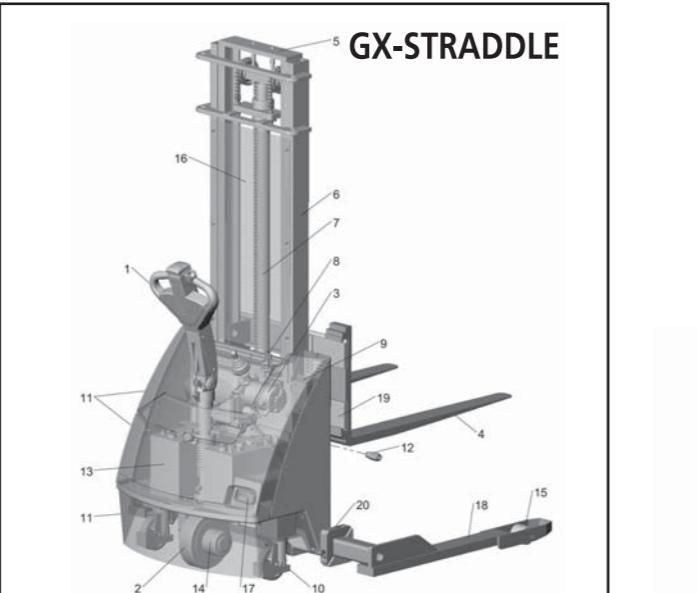
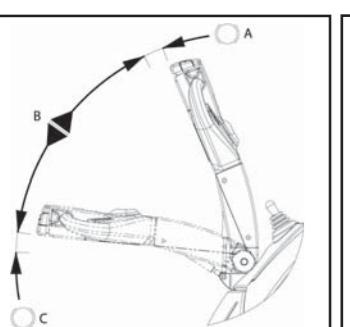
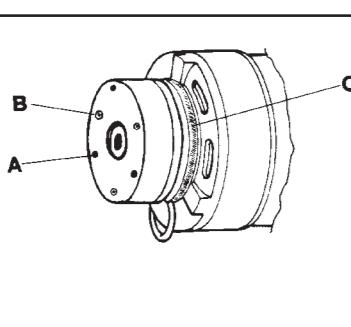
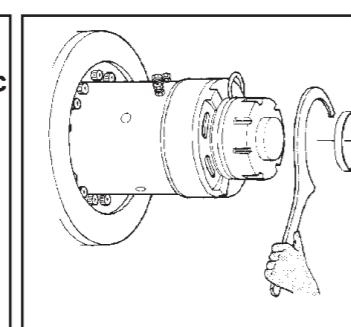
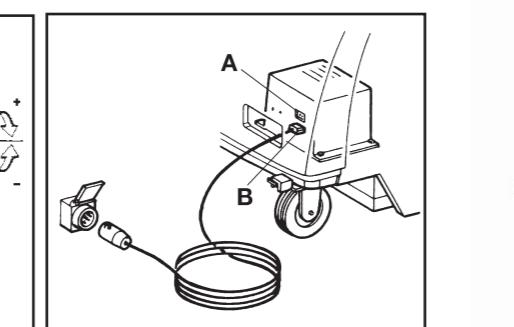
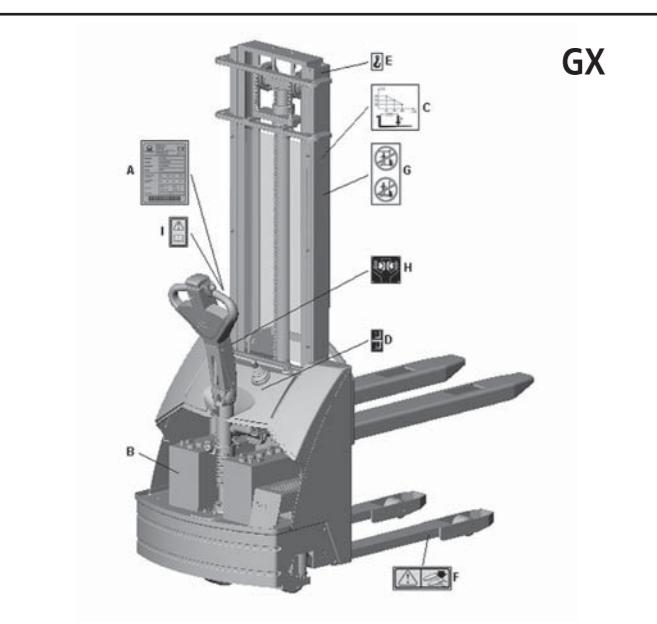
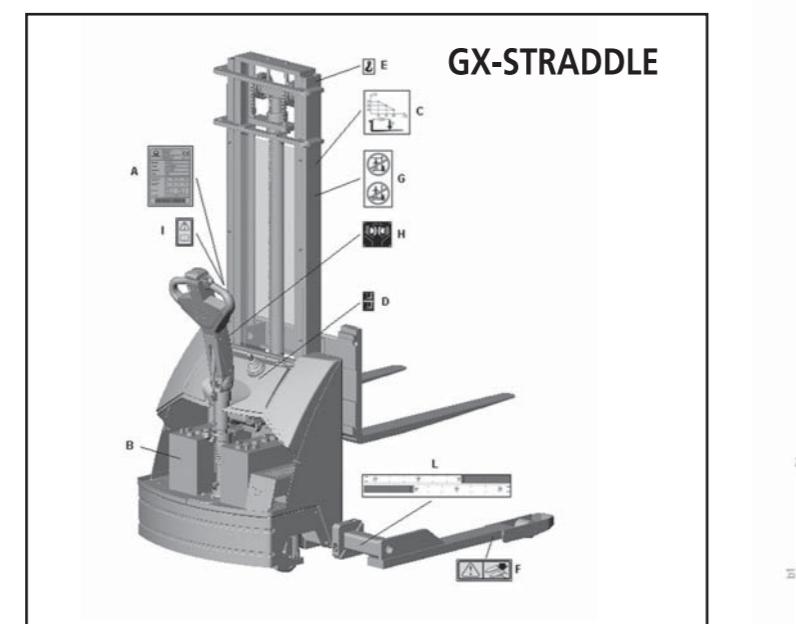
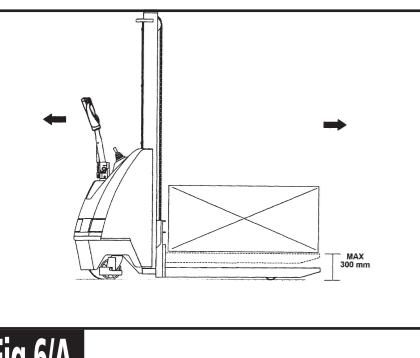
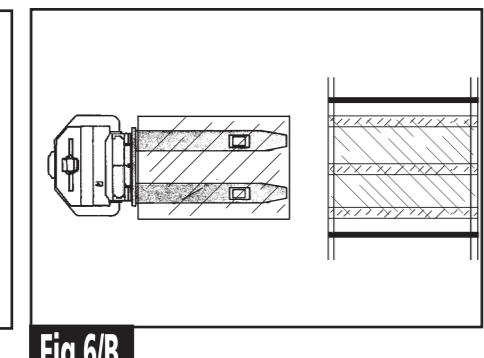
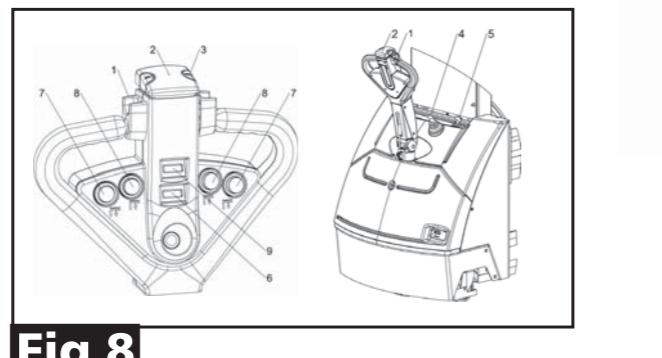
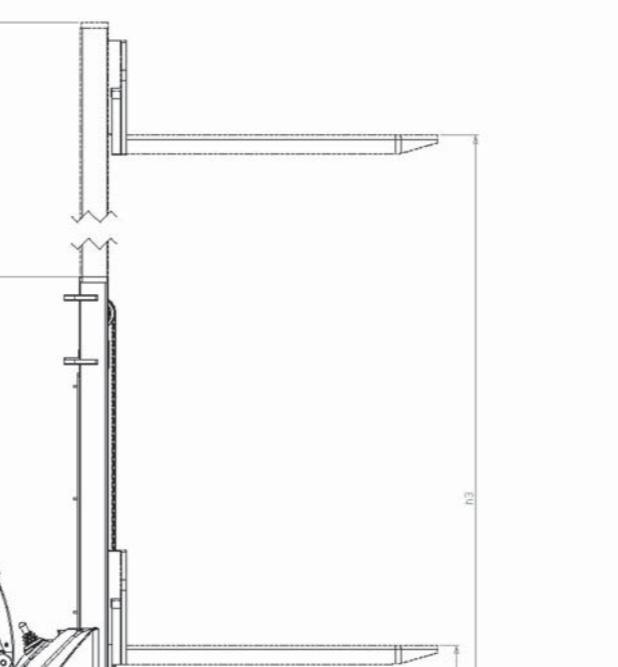
## EL Μετάφραση του πρωτότυπου των οδηγιών χρήσης - ΠΡΟΛΟΓΟΣ (2.1)

To παρόν εγχειρίδιο περιέχει όλο τον οδηγό χρήσης του παλλετοφορού και τα απατούμενα γνωστά για τη χρήση του παλλετοφορού μαζί με θέλεις να επιτοποιήσει την πρωτότυπη σημείωση του εγχειρίδιου: -Το παρόν εγχειρίδιο περιέχει χρήσιμα πληροφορίες για τη σωστή λειτουργία και χρήση του παλλετοφορού στο οποίο αναφέρεται. Είναι λοιπόν, απαραίτητο να διαβάσετε με πρασινή ολόκληρη τη σειρά των παραγόντων κατά την παραγωγή της χρήσης του παλλετοφορού. -Το παρόν εγχειρίδιο δεν πρέπει να θεωρηθεί παραγόντων χρήσης του παλλετοφορού και θέλεις να θεωρηθεί παραγόντων χρήσης του παλλετοφορού. -Όλες οι πληροφορίες στο παρόντο διατίθενται σε δικλεπίδια μετατόπιση στη στρατηγική εγκατάσταση του κατετοπινού οικού. -Ο κατετοπινού οικού διατίθεται το δικλεπίδιο στη δικλεπίδια μετατόπιση στη στρατηγική εγκατάσταση του κατετοπινού οικού.

## FI ALKUPERÄISTEN OHJEIDEN KÄÄNNÖS - JOHDANTO (2.1)

Tämä käsikirja sisältää kaikki käyttöohjeet sekä tarpeellisen tiedon sen asianmukaiseen käytölle. Samalla kun kätimme teitä, saamme ostamisesta haluavilta kiinnittää huomionne tiettyihin tämän käsikirjan näkökohtiin: -Tämä käsikirja antaa tarpeelliset ohjeet truckin käytölle käytölleen ja huoltoon; tämä takia on olennaisista kiinnittävä huomiota kaikkiin kuviin, joista käy ilmi yksinkertaisin ja turvalisin tapa käyttää truckia. -Tämä käsikirja pitää olemassa osana truckia ja täten sisältää myös myyntipakkausseen. -Mitä n. osaa tästä tuloksista ei saa uudelleenkäytöltä ilman valmistajan kirjallista vahvistusta. -Kaikki tämän käsikirjan tiedot perustuvat painotetuille käsikirjoihin, joissa on osoitettu, että käsikirjat ovat oikeudessa tuotteltua milloin tahansa ilman ennakkolainoita ja ilman vastusta. Tämän takia on suositeltavaa siihen tarkistaa mahdolliset muutokset.



**Fig.1****Fig.1****Fig.2****Fig.3/A****Fig.3/B****Fig.5****Fig.4****Fig.4****Fig.6/A****Fig.6/B****Fig.8****GX****GX-STRADDLE**

## SUMMARY (1.1)

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## TECHNICAL DATA (3.10)

DESCRIPTION	1.1 MANUFACTURER		PR INDUSTRIAL	PR INDUSTRIAL
	1.2 MODEL		PMC-S-FF-137	PMC-S-AA-150
	1.3 DRIVE		ELECTRIC	ELECTRIC
	1.4 OPERATOR TYPE	lbs	PEDESTRIAN	PEDESTRIAN
	1.5 LOAD CAPACITY	Q	2, 500	2,500
	1.6 LOAD CENTRE DISTANCE	c inch	23 <sup>5/8</sup>	23 <sup>5/8</sup>
	1.8 LOAD DISTANCE, CENTRE OF DRIVE AXLE TO FORK	x inch	31 <sup>1/4</sup>	29 <sup>1/8</sup>
	1.9 WHEEL BASE	y inch	46 <sup>7/8</sup>	46 <sup>7/8</sup>
	2.1 SERVICE WEIGHT	kg	1,172	1,466
	2.2 AXLE LOAD LADED, FRONT/REAR	kg	1,290/2,526	1,446/2,666
WEIGHTS	2.3 AXLE LOAD UNLADEN, FRONT/REAR	kg	878/293	1,023/443
	3.1 TYRES		G+P/P	G+P/P
	3.2 TYRE SIZE, FRONT ( $\varnothing \times$ width)		9 <sup>7/8</sup> x 2,99	9 <sup>7/8</sup> x 2,99
	3.3 TYRE SIZE, REAR ( $\varnothing \times$ width)		3 <sup>1/4</sup> x 2 <sup>3/4</sup>	3 <sup>1/4</sup> x 2 <sup>3/4</sup>
	3.4 SIDE WHEELS ( $\varnothing \times$ width)		5,9 x 1 <sup>9/16</sup>	5,9 x 1 <sup>9/16</sup>
	3.5 WHEELS, NUMBER (x=DRIVEN) FRONT/REAR			
	3.6 TREAD, FRONT	b <sub>10</sub> mm	28	28
	3.7 TREAD, REAR (MIN/MAX**)	b <sub>11</sub> mm	16 <sup>1/8</sup>	42 <sup>5/8</sup> /54 <sup>9/16</sup>
	4.2 HEIGHT, MAST LOWERED	h <sub>1</sub> mm	88 <sup>9/16</sup>	95 <sup>1/2</sup>
	4.3 FREE LIFT	h <sub>2</sub> mm	3 <sup>1/8</sup>	3 <sup>1/8</sup>
DIMENSIONS	4.4 LIFT	h <sub>3</sub> mm	134 <sup>1/2</sup>	146
	4.5 HEIGHT, MAST EXTENDED	h <sub>4</sub> mm	154 <sup>1/8</sup>	168
	4.6 INITIAL LIFT	h <sub>5</sub> mm	-	-
	4.9 HEIGHT OF TILLER IN DRIVE POSITION MIN/MAX	h <sub>14</sub> mm	39/54 <sup>3/4</sup>	39/54 <sup>3/4</sup>
	4.15 HEIGHT, LOWERED	h <sub>13</sub> mm	3 <sup>1/2</sup>	1 <sup>3/8</sup>
	4.19 OVERALL LENGTH	l <sub>1</sub> mm	71 <sup>1/8</sup>	67 <sup>1/2</sup>
	4.20 LENGTH TO FACE OF FORKS	l <sub>2</sub> mm	26 <sup>9/16</sup>	28 <sup>1/8</sup>
	4.21 OVERALL WIDTH (FRONT/REAR MIN/MAX**)	b <sub>1</sub> mm	33 <sup>1/2</sup>	33 <sup>1/2</sup> /47 <sup>1/4</sup> -59 <sup>1/4</sup>
	4.22 FORK DIMENSIONS	s/e/l mm	2 <sup>1/2</sup> /5,9/45 <sup>1/2</sup>	1 <sup>3/8</sup> /3,93/39 <sup>7/8</sup>
	4.24 FORK-CARRIAGE WIDTH	b <sub>3</sub> mm	25 <sup>9/16</sup>	32 <sup>1/2</sup>
PERFORMANCE DATA	4.25 DISTANCE BETWEEN FORK ARMS (MIN/MAX**)	b <sub>5</sub> mm	22	9/31 <sup>1/8</sup>
	4.26 DISTANCE BETWEEN LEGS (MIN/MAX**)	b <sub>4</sub> mm	-	38/50
	4.32 GROUND CLEARANCE, CENTRE OF WHEEL BASE	m <sub>2</sub> mm	7/8	1 <sup>9/16</sup>
	4.34 AISLE WIDTH FOR PALLETS 800x1200 LENGTHWISE	A <sub>st</sub> mm	88	89 <sup>3/8</sup>
	4.35 TURNING RADIUS	W <sub>a</sub> mm	57 <sup>1/2</sup>	57 <sup>1/2</sup>
	5.1 TRAVEL SPEED, LADEN/UNLADEN	km/h	2,4/3,1	2,4/3,1
	5.2 LIFT SPEED, LADEN/UNLADEN	m/s	3,51/4,72	3,51/4,72
	5.3 LOWERING SPEED, LADEN/UNLADEN	m/s	15,75/3,93	15,75/3,93
	5.8 MAX GRADEABILITY, LADEN/UNLADEN	%	5/10	5/10
	5.10 SERVICE BRAKE		ELECTRIC	ELECTRIC
ELECTRIC MOTORS	6.1 DRIVE MOTOR POWER	kW	0,7	0,7
	6.2 LIFT MOTOR POWER	kW	2,2	2,2
	6.4 BATTERY VOLTAGE, NOMINAL CAPACITY C5	V/Ah	24/88 (C20) - (24/105 <sup>*</sup> - 24/118 <sup>**</sup> )	24/88 (C20) - (24/105 <sup>*</sup> - 24/118 <sup>**</sup> )
	6.5 BATTERY WEIGHT	kg	89	89
	6.6 ENERGY CONSUMPTION ACC. TO VDI CYCLE	kWh/h	-	-
	8.4 SOUND LEVEL AT DRIVER'S EAR	dB(A)	67	67

\* VERSION GEL \*\* VERSION PLUS \*\*\* ONLY VERSION STRADDLE

1.2 MODEL			
2.1 SERVICE WEIGHT	kg	1,171	1,466
2.2 AXLE LOAD LADED, FRONT/REAR	kg	1,290/2,526	1,446/2,666
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4.4 LIFT	h <sub>3</sub> mm	135	146
4.5 HEIGHT, MAST EXTENDED	h <sub>4</sub> mm	154	168

## DECLARATION OF VIBRATION EMISSION (33.2)

Declared vibration emission values in compliance with EN 12096

Description	Value	European Norm (EN)	Test surface
Measured vibration emission value, a (m/s <sup>2</sup> )	<b>0.71</b>	EN ISO 20643 (Hand-Arm)	Industrial smooth concrete floor
Uncertainty, K (m/s <sup>2</sup> )	<b>0.68</b>		
Measured vibration emission value, a (m/s <sup>2</sup> )	<b>2.3</b>	EN ISO 20643 (Hand-Arm)	On test track according to EN 13059
Uncertainty, K (m/s <sup>2</sup> )	<b>0.6</b>		
Measured vibration emission value, a (m/s <sup>2</sup> )	<b>0.77</b>	EN 13059 (Whole body)	Industrial smooth concrete floor
Uncertainty, K (m/s <sup>2</sup> )	<b>0.39</b>		
Measured vibration emission value, a (m/s <sup>2</sup> )	<b>1.02</b>	EN 13059 (Whole body)	On test track according to EN 13059
Uncertainty, K (m/s <sup>2</sup> )	<b>0.08</b>		

Values determined in compliance with EN ISO 20643 and EN 13059.

## USE OF THE MACHINE (4.1)

This machine has been designed to lift and transport loads on perfectly even floors. An identification plate can be found on the chassis (6 fig.1) indicating the lifting capacity that must never be exceeded both for the safety of the personnel and not to damage the vehicle.  
Please observe the safety, use and maintenance regulations to the letter. Any mounting of extra equipment on the machine must be authorised by the manufacturers.

## DESCRIPTION OF THE TRUCK (5.6) - (see fig. 1)

This truck is an electric, pedestrian controlled fork lift-truck, ideally suited for storage and handling of load units on level and even surfaces. The control components are well in sight and easily operated. The lift-truck is conformant to all current EC comfort and safety regulations. The drawing illustrates the main characteristics:

- 1) CONTROL TILLER
- 2) WHEEL-DRIVE
- 3) HYDRAULIC CONTROL UNIT
- 4) LIFT FORK
- 5) SECOND STAGE
- 6) CHASSIS
- 7) LIFT CYLINDER
- 8) MAIN SWITCH
- 9) ELECTRONIC CARD
- 10) STABILISER WHEEL
- 11) PROTECTION GUARD
- 12) FLOW CONTROL VALVE (except Free Lift model)
- 13) BATTERY
- 14) ELECTRIC BRAKE
- 15) LOAD ROLLERS
- 16) HAND GUARDS
- 17) RECTIFIER
- 18) ADJUSTABLE LEG (GX STRADDLE)
- 19) FORK CONNECTION (GX STRADDLE)
- 20) FASTENING CLAMP (GX STRADDLE)
- 21) HOSE BURST VALVE (only Free Lift model)
- 22) FORK RAISING CYLINDER (only Free Lift model)
- 23) SECOND STAGE RAISING CYLINDER (only Free Lift model)

## SAFETY DEVICES (6.5) - (see fig. 1)

- 1) MAIN SWITCH (REF.8); 2) ELECTRIC BRAKE (RIF.14); 3) FLOW CONTROL VALVE (REF.12) (except Free Lift model); 4) RELIEF VALVE; 5) BUMPER GUARD: to protect the driving wheel (ref.2), the lateral stabiliser wheels (ref.10) and the load rollers (ref.15) against collisions; therefore, in case of accidents feet and the load are protected;
- 6) "DEAD-MAN CONTROL" FEELER DEVICE (REF.2/FIG.8): this is a safety switch located on the control tiller that protects the operator against collisions during reverse movement;
- 7) HAND GUARDS (REF.16); 8) HOSE BURST VALVE (only Free Lift model).

## Structure (7.2)

The lifting mast, the legs and the hood form a very rigid welded structure (ref. 6). The forks are precision guided by 4 rollers that run up the whole mast. Two pivoted wheels and two rollers give the truck great stability on 4 points of support.

The covers (REF. 11) can be easily opened to allow access to all the units for maintenance.

## Drive (8.1)

The electromagnetic brake (REF. 14), the driving motor, the gears and the leading wheel form a compact unit. A system of springs fixes the driving wheel constantly to the ground.

## Steering bar (9.4) (rif.1/fig.1)

The truck can be driven by a person either from the ground or standing on the platform, if installed.

The steering angle is 180°.

The steering bar operates directly on the driving wheel, therefore, to change direction turn it in the required direction.

To move the truck (see fig.2) keep the steering bar in its central position (Pos.B), while to stop it move it to its upper position (Pos.A) or in its lower position (Pos.C). When released the steering bar returns automatically to its upper position (pos.A) and acts as a parking brake.

## Brakes (10.6)

The electromagnetic brake acts directly on the driving motor, either by means of the DEAD MAN'S HANDLE (REF.2/FIG.7), or by moving the steering bar to its upper position (pos.A) or lower position (Pos.C) See FIG..2. If the electrical circuit is disconnected, the brake acts as a parking brake.

GX 10: Braking force can be adjusted by regulating the "A" screws (Fig. 3/A). The "B" screws regulate the obligatory distance between plate "A" and the brake lining (0.4 mm). GX 12: Braking force can be adjusted by turning the brake ring as shown in fig.3/B. Turning clockwise the braking force increases.

## Hydraulic circuit (11.1)

To raise and lower the forks, move the motor pump (REF. 3/FIG. 1) control lever that pumps the hydraulic oil from the tank to the lifting cylinder. If the truck has a double lifting control, lifting/lowering of the forks can also be activated by means of the buttons on the steering (ref. 7-8/fig. 8). The energy necessary for effective work is supplied by the battery (ref.13/fig.1). Two safety valves are installed in the hydraulic circuit:

- a) Flow limiting valve (rif.12/fig.1) stops the load from falling suddenly in case the hydraulic system fails (this is located at the bottom of the cylinder)
- b) Maximum pressure valve, contained in the motor pump, protects the mechanical and hydraulic system from overloading.

## Electrical circuit (12.6)

Constructed according to current regulations and comprising a programmable electronic variator (ref. 9/fig.1) (supplied with all safety and adjustment devices) and controls that can be operated from the steering bar handle.

The connections are guaranteed against accidental loosening. The copper conductors are very flexible and have a diameter sufficient for operating conditions and any external events that could occur.

All the electrical components are mounted so as to guarantee operation and facilitate maintenance.

## PLATES (13.5) - (see fig.4)

The following plates are visible on the machine:

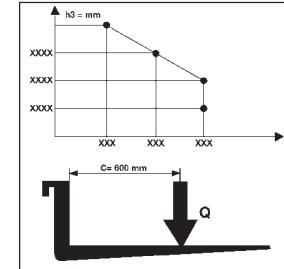
- A) Plate that identifies the kind of vehicle
- B) Battery plate
- C) Plate showing the loading diagram according to the lifting height and the position of the centre of gravity of the load on the forks
- D) Plates indicating the functions of the controls
- E) Plates indicating the harness points
- F) Plates indicating that feet may be squashed
- G) Plate forbidding use
- H) Plate indicating the direction of movement
- I) Plate: read the instructions
- L) Leg removal plate (GX STRADDLE)

In no case may the plates be removed or made illegible.

**IMPORTANT: IT IS FORBIDDEN TO EXCEED THE LOAD SHOWN ON THE C TYPE PLATE FIXED TO THE MACHINE AT THE MOMENT OF SALE AND SHOWN HEREUNDER:**

This diagram illustrates the relationship between the maximum load that can be lifted and the relative maximum heights from the ground during loading and unloading operations of a pallet from a shelf.

The fork diagram shown to the side indicates the centre of gravity of the load that, however, must be distributed as uniformly as possible along the whole length of the fork!!



## TRANSPORT AND SET UP

### Transport (14.1)

To transport the truck two harness points are supplied, indicated by the "E" type plates (fig.4), while the weight of the truck is indicated on the "A" type identification plate (fig.4). While driving, make sure the truck is firmly fixed, so as to avoid its tilting. Make sure that no acid nor vapour is leaking from the battery (if any).

### Set up (15.1)

Before starting the machine check that all the parts are in perfect condition, check the performance of all the units and the safety devices.  
Move the truck with battery current and never with rectified alternating current so as not to damage the electrical components.

## BATTERY (16.5)

### Instructions, safety measures and maintenance

Inspection, charging and substitution of the battery must be carried out by authorised personnel following the manufacturer's instructions.

It is forbidden to smoke or keep inflammable or spark-producing material near the truck or the battery recharger. The area must be kept well aired.

The caps of the elements must be kept dry and clean. Remove any acid that has leaked out and spread a little Vaseline on the terminals and then tighten them (the gel batteries are maintenance-free type, since they are supplied with a gel electrolyte). The weight and size of the batteries can effect the stability of the truck, therefore, if a non-standard battery is mounted it is advisable to contact the manufacturers for the relative authorisation.

### Charging the battery

Before charging check the performance of the conductors. Connect the battery charger socket (A) to the plug (B) (see fig.5). After charging the battery charger stops the current supply. The stop light turns on. When the battery has been charged the battery charger interrupts the supply of current and lights up the STOP led. Remove the socket (A) from the plug (B). Normal recharging lasts from 8 to 10 hours (from 14 to 18 hours for gel batteries). It is advisable to recharge the battery after each days work. The battery charger has been designed to maintain charging for a certain period of time after completing charging. There is no risk of overloading and therefore it is unnecessary to remove the battery charger after completing recharging.

**Never completely uncharge the battery and avoid partial charging; Allow the battery charger to signal completion of charging.**

**IMPORTANT: Exclusively use the specific charger to recharge the gel batteries.**

**WARNING: If the batteries are allowed to run down too much their life will be shortened.**

### Substituting the battery (17.3)

- a) Remove the battery from its retainers
- b) Remove the cables from the battery terminals
- c) Slide out the battery
- d) Mount the battery following the

above instructions in reverse order, fixing it in place and connecting it correctly,  
(The battery must always be of the same type that it replaces)

**IMPORTANT: USE THE SULPHURIC ACID WITH CARE, IT IS TOXIC AND CORROSIVE (THE GEL BATTERY ELECTROLYTE IS CORROSIVE TOO; THEREFORE IT IS STRICTLY FORBIDDEN TO OPEN THE BATTERIES); IF SKIN OR CLOTHES COME INTO CONTACT WITH THIS ACID WASH WITH ABUNDANT SOAP AND WATER. IN CASE OF ACCIDENTS CONSULT A DOCTOR!!!**

After replacing the battery, consign the used one to the nearest petrol station (since also the gel batteries are leaded, they must be recycled while replacing).

#### Battery check

Carefully read the battery manufacturer's use and maintenance instructions. Check that there is no corrosion, that Vaseline is present on the poles (gel batteries do not need any further check) and that the acid is 15 mm above the plates. If the elements are not covered, top up with distilled water. Measure electrolyte density with a densimeter to check the charging level.

#### USE (18.2+X9)

The driver must carry out the following instructions of use in the driving position in way to remain reasonably distant from the dangerous zones (such as masts, forks, chains, pulleys, driving and stabilizing wheels and any other movable part), that can cause the crushing of hands and/or feet.

#### Safety Regulations

The truck must be used according to the following regulations:

- a) The driver of the machine must be aware of the instructions for use of the vehicle and wear appropriate clothing and a helmet.
  - b) If the fork lift truck is supplied with a platform, only professionally trained persons over 18 years old may drive.
  - c) The driver responsible for the fork lift truck must not allow unauthorised personnel to drive the truck or to step onto the forks or the platform.
- While the truck is in movement the operator must reduce speed in curves, in narrow corridors, through doors or on irregular surfaces. He must keep unauthorised personnel away from the area where the truck is working and immediately warn people if they are in danger; if, in spite of this warning there is still someone in the work area the driver must immediately stop the truck.
- d) It is forbidden to stop in areas where there are moving parts and step on the fixed parts of the truck.
  - e) The driver must avoid sudden stops and fast inversions of movement.
  - f) In case of slopes with maximum permitted inclination, the driver must keep the load above the truck and reduce speed.
  - g) When driving the driver must make sure that visibility is good and that there are no obstructions when reversing.
  - h) If the truck is transported in lifts he must enter them with the loading forks in front (first make sure the lift has a sufficient load)
  - i) It is absolutely forbidden to disconnect or dismount the safety devices. If the truck is used in areas with a high risk of fire or explosion, it must be approved for this kind of use.
  - j) The loading capacity of the truck must in no case be exceeded.
- The driver must ensure that the load is well placed on the forks and in perfect order; the load must not jut out more than 50mm from the end of the forks.
- m) It is forbidden to move the truck with the forks in their upper position. This is allowed only when manoeuvring to put down and pick up loads
  - n) Before beginning work the driver of the truck must check:
    - the performance of the service and parking brake
    - that the loading forks are in perfect order
    - that the wheels and the rollers are not damaged
    - that the battery is charged, well fixed and the elements perfectly dry and clean
    - that all the safety devices are in working order
  - o) Once the battery (ref. 6/fig. 8) signals that it only has 20% charge left, the trolley/truck must stop being used and, therefore, recharged.
  - p) The truck must always be used or parked sheltered from rain and snow and in no case must it be used in very damp areas.
  - q) Temperature of use 0°C / +40°C.
  - r) It is forbidden to transport foodstuffs in direct contact with the truck.
  - s) The machine does not need to be in a specially lighted area. However provide adequate lighting to comply with applicable working norms.
  - t) The driver must remove the mobile legs by paying attention not to overstep the end limit marked on the leg itself (GX STRADDLE).
  - u) The driver must pay attention to place both mobile legs and forks conveniently equidistant from the truck centre; if not, stability may be compromised (GX STRADDLE).
- The manufacturers shall not be held liable in case of faults or accidents due to negligence, incapacity, installation by unqualified technicians and improper use of the truck.**

#### Movement

Before moving the truck check that the horn and the brake work and that the battery is completely charged. Turn the key to the 1 position and move the steering bar to its movement position. Turn the governor slowly and move towards the relative work area. To brake or stop turn the governor in the opposite direction. Always steer the truck slowly as sudden movements can provoke dangerous situations (particularly when the truck moves at high speeds). Always drive with the load in a low position, reduce speed in narrow corridors and on curves.

#### Stacking

- 1) Approach the shelving carefully with the load low (the platform, if present, must be high and the truck driven by a driver on the ground)
- 2) Make sure that the legs of the truck are free to move under the pallet or in the shelving. The best way to do this is to put the side of the pallet to be lifted in a perfect line with the top pallet in the shelving using it as reference. In this way loading and unloading will be easier.
- 3) Lift the load until it rises above the level of the shelf.
- 4) Move slowly forwards and stop when the load is above the shelf; at this point lower the forks so as to free them from the pallet and not exert force on the underlying shelf. Make sure that the load is safely positioned.
- 5) Move slowly backwards making sure the pallet remains firmly positioned.
- 6) Lower the forks to their position of movement (FIG. 6/A - 6/B)

#### Unloading

- 1) With the forks lowered and perpendicular approach the shelving and enter under the bottom pallet
- 2) Return with the forks out of the pallet
- 3) Raise the forks to the required height and slowly move towards the pallet to be unloaded. At the same time make sure that the forks enter under the pallet easily and that the load is safely positioned on the forks.
- 4) Raise the forks until the pallet is lifted from the level of the shelf
- 5) Move slowly backwards in the corridor
- 6) Lower the load slowly at the same time making sure that the forks do not touch obstacles while lowering

**WARNING: Always check the weight of the load with the lifting capacity relative to the height indicated on the appropriate plate.**

**WARNING: When the load is lifted steering and braking manoeuvres must be carried out slowly and very carefully.**

#### Lift locking device (28.1)

The lift truck is provided with an automatic device which stops the lifting if the batteries reach a discharge rate over 80%. The intervention of this device is indicated by the signal lamp No. 1, which turns on when the device is active. If this device intervenes, it is necessary to drive the truck to a battery charger and act as described in the section "battery charging".

#### Controls (19.6+X42) - (fig.8)

- 1) Accelerator
- 2) Dead man's handle
- 3) Horn
- 4) Raising and lowering lever
- 5) Master switch
- 6) Battery warning light
- 7) Raising button (if equipped with double lifting control)
- 8) Lowering button (if equipped with double lifting control)
- 9) Meter (GX PLUS e GX GEL)

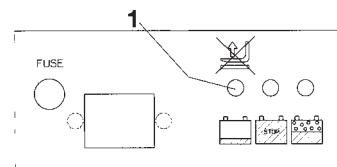


fig.7

#### MAINTENANCE (20.6+X39)

Maintenance must be carried out by specialised personnel.

The truck must undergo a general check up at least once a year.

After every maintenance operation the performance of the truck and its safety devices must be checked.

Inspect the truck periodically so as not to risk the machine stopping or danger for personnel! (see maintenance table)

**Note. Disconnect the master switch before carrying out any maintenance operation.**

Maintenance table

ELEMENT	CHECKS	EVERY		
		3 Months	6 Months	12 Months
STRUCTURE AND FORKS	Check load bearing elements Check nuts and bolts are tightened Check for backstops and play	● ● ●		
BRAKES	Check performance Check lining for wear Check braking power Check play (about 0,4 mm)	● ● ●	●	
WHEELS	Check wear Check bearing play Check anchorage	● ●	●	
STEERING BAR	Check play Check sideways movement Check return to vertical position	● ● ●	●	
ELECTRICAL SYSTEM	Check wear of remote control switch Check connections, cable trouble Check master switch Check horn Check dead man's button Check fuse values	● ● ● ●		●
HYDRAULIC SYSTEM	Check performance Check oil level Check for leaks and wear of connections Change oil/filter Check performance of pressure limiting valve Check flow limiting valve	● ● ● ● ● ●	● ● ● ●	

ELEMENT	CHECKS	EVERY		
		3 Months	6 Months	12 Months
CYLINDER	Check performance leaks and wear of gaskets Check pulleys		● ●	
ELECTRIC MOTORS	Check wear of brushes Check starting motor relay		● ●	●
BATTERY	Check electrolyte density and level (not necessary for gel batteries) Check voltage of elements Check anchorage and hold of terminals Check cables		● ● ●	●
INSPECTIONS	Grease terminals with Vaseline Check connection to electrical circuit earth Check ascent and descent speed of lifting forks Check safety devices Test raising and lowering with nominal load		● ● ●	●

**CLEANING THE TRUCK:** Clean the parts of the truck, except electrical and electronic elements, with a damp cloth. Do not use direct jets of water, steam or inflammable liquids. Clean electrical and electronic components with dehumidified compressed air at low pressure (max. 5 bar) or with a non metallic brush.

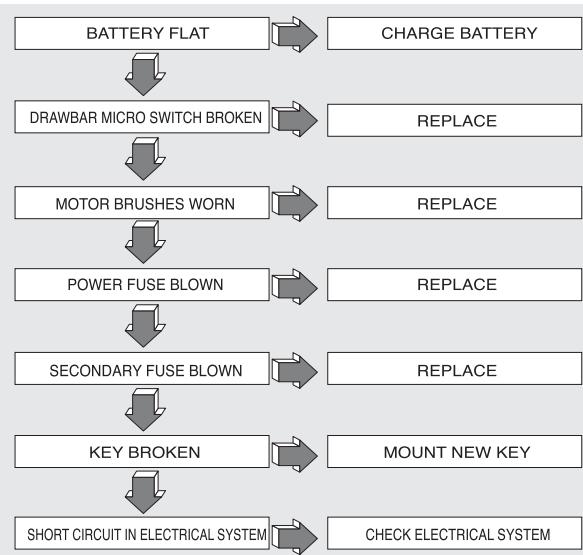
Lubrication table

LUBRICATION POINTS	KIND OF LUBRICATOR	EVERY		
		3 Months	6 Months	12 Months
WHEELS AND ROLLERS	Lithium grease NLGI-2	●		
LIFTING CHAIR	Lithium grease NLGI-2	●		
MAST GUIDES	Lithium grease NLGI-2		●	
HYDRAULIC UNIT	Oil viscosity 40°C cSt32		●	

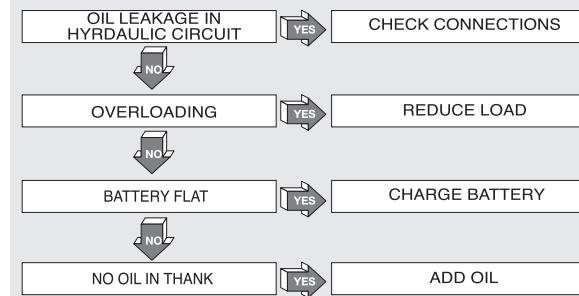
Use hydraulic oil apart from motor and brake oil. Note: When eliminating used oil please respect the environment. The oil should be stored in a drum that should be later consigned to the nearest petrol station. Do not dump the oil in the ground or in unsuitable places.

## TROUBLE SHOOTING

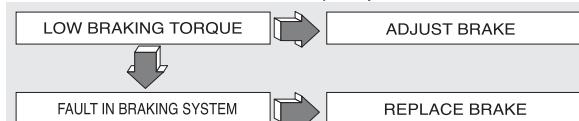
### THE MACHINE DOESN'T START (21.2):



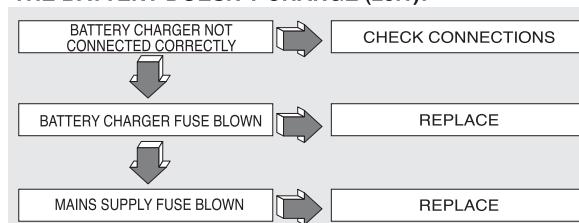
### THE GASKETS DON'T RISE (22.1):



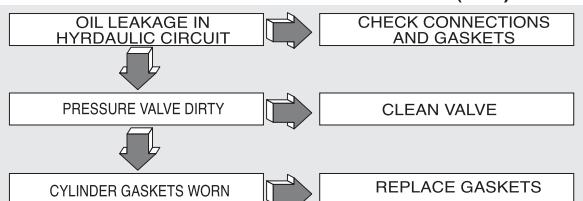
### THE TRUCK DOESN'T BRAKE (23.1):



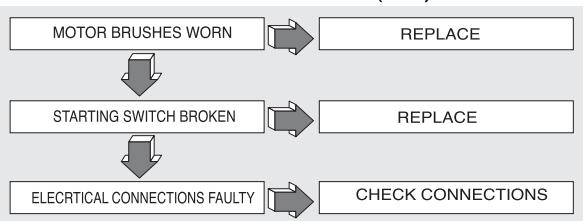
### THE BATTERY DOESN'T CHARGE (25.1):



### THE FORKS GASKETS DON'T STAY RAISED (26.1):



### THE MOTOR PUMP DOESN'T START (24.1):



**ATTENTION !!! (27.1)**  
IF NONE OF THE SOLUTIONS  
SUGGESTED SOLVES  
THE PROBLEM, TAKE THE  
ELEVATOR TO THE  
NEAREST SERVICE CENTER.

