



OPERATORS MANUAL / OPERATEURSHANDLEIDING

# F290 Falcon Flail Mower



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**INHOUD**

VOORWOORD
MAATSKAPPYPROFIEL
WAARBORG EN VRYWARING
PRODUKREEKS
INSTALLERING
WERKING
INSTANDHOUDING
PARTELYSTE

Authorised Dealer / Gemagtigde handelaar:

Date of Sale / Verkoopsdatum:

Implement:

Model No. / Model Nr.:

Serial No. / Reeks Nr.:

Part number	M8423	Onderdeelnummer
Version	1	Weergawe
Date of publication	2020/01/27	Datum van publisering

## FOREWORD



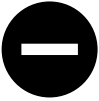
We at Falcon commend and congratulate you on the purchase of your Falcon implement, which we consider to be the best of its type available.

However, we would like to remind you that your success and satisfaction with the product will be greatly improved by you familiarising yourself with the contents of this manual. It contains important information relevant to the responsible operation, maintenance and most importantly, safe use of the product.

Note that failure to observe or comply with the provisions of this manual may result in unsafe operating conditions as well as damage to products and property which shall not be covered under warranty.

Should this manual become misplaced, damaged or destroyed, further copies are available from your Falcon dealer. Alternatively, this document is available for download from our website: [www.falconequipment.co.za](http://www.falconequipment.co.za)

### Symbols used in this document

	<b>Safety-critical notices</b>	Failure to comply with these notices may result in serious damage to equipment, personal injury or death.
	<b>Veiligheidskritieke kennisgewings</b>	Versuim om aan hierdie kennisgewings gehoor te gee kan ernstige skade aan toerusting, persoonlike beserings of dood tot gevolg hê.
	<b>Procedures and checks</b>	To be carried out by suitably competent persons in the course of installation, operation and maintenance of the equipment.
	<b>Prosedures en kontroles</b>	Moet deur toepaslik bekwame persone uitgevoer word by die installering, bedryf en instandhouding van die toerusting.
	<b>General information</b>	Information provided for references purposes, including any external references intended to be read in conjunction with this manual.
	<b>Algemene inligting</b>	Inligting vir verwysingsdoeleindes, insluitend enige eksterne verwysings wat bedoel is om saam met hierdie handleiding gelees te word.

## VOORWOORD

Ons by Falcon wens jou geluk met die aankoop van jou Falcon-implement, wat ons as die beste beskikbare werktuig in sy soort beskou.

Ons herinner u egter graag daaraan dat u sukses en tevredenheid met die produk grootliks verbeter sal word as u met die inhoud van hierdie handleiding vertrou raak. Dit bevat belangrike inligting met betrekking tot die verantwoordelike gebruik, instandhouding en, die heel belangrikste, veilige gebruik van die produk.

Let asseblief op dat versuim om die bepalings van hierdie handleiding na te kom tot onveilige bedryfstoelestate asook skade aan produkte en eiendom kan lei wat nie onder die waarborg gedek sal wees nie.

Indien hierdie handleiding dalk verloor, beskadig of vernietig sou word, is daar verdere kopieë by u Falcon-handelaar beskikbaar. Hierdie dokument kan ook van ons webwerf, [www.falconequipment.co.za](http://www.falconequipment.co.za), afgelaai word.

### Simbole wat in hierdie dokument gebruik word

## COMPANY PROFILE

Falcon Agricultural Equipment (Pty) Ltd is the largest manufacturer of rotary cutters in Africa. The company opened its doors in 1985 at its current premises in Howick, Kwazulu-Natal, South Africa. This is the ideal location as it is an agricultural area with a leading agricultural college nearby.

Our primary market is the agricultural sector, with niche efforts into the industrial and turf implement markets. We distribute our products through a network of over 350 authorised dealers with approximately 110 dedicated mechanisation dealers countrywide. We also distribute our products across our borders into other African countries such as Botswana, Kenya, Malawi, Mozambique, Namibia, Uganda, Swaziland, Tanzania, Zambia and Zimbabwe.

We manufacture the Falcon and Locust ranges of implements and our on-going programme of innovation and improvement ensures that we consistently launch implements to satisfy our customers' ever-changing needs.

The Falcon range includes slashers, Haymakers®, material handling implements, mulchers, mowers, spreaders, rotavators and flail cutters. Each is designed to be simple, safe and serviceable, while offering excellent value for money. They are built to last and are capable of coping with the tough South African conditions.

In many parts of South Africa "Falcon" is the generic term for grass-cutting implements, making us the undisputed leader in our field. Delivery on a marketing promise is the foundation of any successful marketing drive and farmers buying the Falcon brand buy more than just a product - they buy the heritage and expertise of a company that has been around for more than 35 years!

The Locust range of economy implements is particularly suited to smallholders, more price-sensitive buyers and emerging farmers. These implements, which include slashers and roller mowers, work well with older or lower-powered tractors.

We also import a range of implements that complement the locally manufactured ones. These include the Amazone spreaders, sprayers, mowers and soil tillage implements (from Germany) and Votex shredders (from the Netherlands).

Falcon Agricultural Equipment (Pty) Ltd is committed to supporting our local communities in many different ways. Our main focus is the well-being of children and we provide a safe and suitable school environment for them, as well as school-related necessities.

Our team prides itself on its professional approach to business. We have built long-standing relationships with our dealers and their customers based on honesty, trust, respect and integrity. Excellent customer service is an important part of the Falcon promise.

## MAATSKAPPYPROFIEL

Falcon Agricultural Equipment (Edms.) Bpk. is die grootste vervaardiger van wentelsnyers in Afrika. Die maatskappy het sy deure in 1985 by sy huidige perseel in Howick, KwaZulu-Natal, Suid-Afrika, geopen. Die ligging is ideaal: in 'n boerderygebied met 'n vooraanstaande landboukollege naby.

Ons hoofmark is die landbousektor, met nisverkope in die nywerheids- en turfimplement-markte. Ons versprei ons produkte deur 'n netwerk van meer as 350 gemagtigde handelaars met ongeveer 110 toegewyde meganisasie-handelaars landswyd. Ons versprei ook ons produkte oor ons grense na ander Afrikalande soos Botswana, Kenia, Malawi, Mosambiek, Namibië, Uganda, Swaziland, Tanzanië, Zambië en Zimbabwe.

Ons vervaardig die Falcon- en Locust-implementreekse, en ons voortgesette program van vernuwing en verbetering verseker dat ons konstant implemente bekendstel wat ons kliënte se immer veranderende behoeftes bevredig.

Die Falcon-reeks sluit wentelsnyers, Hooimakers®, materiaalhanteringsimplemente, mulchers, grassnyers, strooiers, kapploeë en vleëlsnyers in. Almal is ontwerp om eenvoudig, veilig en diensbaar te wees terwyl hulle uitstekende waarde vir geld bied. Hulle is gebou om te hou en ons strawwe Suid-Afrikaanse toestande die hoof te bied.

In baie dele van Suid-Afrika is "Falcon" die generiese term vir grassny-implemente, wat ons die onbetwiste leier op ons gebied maak. Die nakom van 'n bemarkingsbelofte is die grondslag van enige geslaagde bemarkingsveldtog, en boere wat die Falcon-handelsmerk koop, koop meer as net 'n produk – hulle koop die erfenis en deskundigheid van 'n maatskappy wat al meer as 35 jaar in die land is!

Die Locust-reeks ekonomiese implemente is veral geskik vir kleinboere, meer prysgevoelige kopers en ontluikende boere. Hierdie implemente, wat wentelsnyers en rollersnyers insluit, werk goed saam met ouer of minder kragtige trekkers.

Ons voer ook 'n reeks implemente in wat die plaaslik-vervaardigdes komplementeer. Dit sluit die Amazone-strooiers, -spuite, -grassnyers en –grondbewerkingsimplemente in (uit Duitsland), asook die Votex-stokkiekappers (uit Nederland).

Falcon Agricultural Equipment (Edms.) Bpk. is verbonde tot die ondersteuning van ons plaaslike gemeenskappe op baie verskillende maniere. Ons hooffokus is die welsyn van kinders, en ons verskaf vir hulle 'n veilige en geskikte skoolomgewing, sowel as skoolverwante benodigdhede.

Ons span is trots op sy professionele benadering tot besigheid. Ons het langdurige verhoudings met ons handelaars en hul klante opgebou wat op eerlikheid, vertroue, respek en integriteit gebaseer is. Voortreflike klantediens is 'n belangrike deel van die Falcon-belofte.

## WARRANTY AND DISCLAIMER

Falcon products are manufactured in accordance with established quality standards and are accompanied by a limited warranty against defective materials and workmanship. In terms of this warranty, Falcon or an authorised Dealer may conduct reasonable repairs or replacement of products or parts of products, as required.

### General conditions of limited warranty

Any claim with respect to warranty shall satisfy the following minimum conditions:

- The implement has not been subjected to misuse, abuse, damage or acts of negligence.
- The Owner is in possession of, and can demonstrate an understanding and application of the provisions of this manual.
- The implement has been used exclusively for its intended purpose and in a configuration in which it was designed to operate.
- Installation, setup, operation and maintenance of the implement have been carried out in accordance with this manual.
- Maintenance of the implement has been carried out as prescribed in this manual, using original and approved parts.
- The implement has not been subjected to structural, mechanical or any other unauthorised modification or repair.
- A warranty claim has been reported to an authorised Dealer within the prescribed warranty period for the product concerned.

### Exclusions

The following items are excluded from warranty cover, including any costs relating to these:

- Parts reckoned as consumable or wearing parts.
- Products or parts of products exhibiting acceptable wear and tear.
- Temporary replacement, loan or hire of substitute parts or equipment.
- Transport and handling of affected products.
- Consequential damage or loss on the part of any person, organization or otherwise affected party.

### Validity

This warranty supersedes all previous conditions of warranty, whether expressed or implied, including any previous obligation or liability on the part of Falcon in respect of non-conforming or defective product.

### Disclaimer

Falcon maintains a programme of continuous product improvement and consequently reserves the right to change designs, specifications, descriptions and materials

## WAARBORG EN VRYWARING

Falcon-produkte word vervaardig ooreenkomstig met gevestigde gehalte-standaarde en word deur 'n beperkte waarborg teen defektiewe materiale en vakmanskap gedek. Kragtens hierdie waarborg mag Falcon of 'n gemagtigde Handelaar redelike herstelwerk of vervanging van produkte of produkonderdele uitvoer, soos vereis.

### Algemene voorwaardes van beperkte waarborg

Enige eis ten opsigte van die waarborg moet aan die volgende minimumvoorwaardes voldoen:

- Die implement is nie aan verkeerde gebruik, misbruik, beskadiging of verwaarlosing onderwerp nie.
- Die Eienaar is in besit van hierdie handleiding en kan 'n begrip en toepassing van die bepalings daarvan demonstreer.
- Die implement is uitsluitlik vir die bedoelde doel gebruik en in 'n konfigurasie waarin dit ontwerp is om bedryf te word.
- Installering, opstelling, bedryf en instandhouding van die implement het in ooreenstemming met hierdie handleiding plaasgevind.
- Instandhouding van die implement is uitgevoer soos in hierdie handleiding voorgeskryf, met gebruik van oorspronklike en goedgekeurde onderdele.
- Die implement is nie aan enige strukturele, meganiese of enige ander ongemagtigde wysiging of herstelwerk onderwerp nie.
- Kennis van 'n waarborg-eis is binne die voorgeskrewe waarborgtydperk vir die betrokke produk aan 'n gemagtigde Handelaar gegee.

### Uitsluitings

Die volgende items word van waarborgdekking uitgesluit, insluitend enige onkoste daaraan verbode:

- Onderdele as verbruikbare of slytonderdele geag.
- Produkte of produkonderdele wat aanvaarbare slytasie vertoon.
- Tydelike vervanging, leen of huur van vervangingsonderdele of -toerusting.
- Vervoer en hantering van geaffekteerde produkte.
- Gevolglike skade of verlies aan of deur enige persoon, organisasie of andersins geaffekteerde party.

### Geldigheid

Hierdie waarborg vervang alle vorige waarborgvoorwaardes, hetsy eksplisiet of geïmpliseer, insluitend enige vorige verpligting of aanspreeklikheid van Falcon ten opsigte van nie-ooreenstemmende of defekte produkte.

### Vrywaring

Falcon handhaaf 'n program van voortdurende produkverbetering en gevolg behou ons die reg om ontwerpe, spesifikasies, beskrywings, materiale en enige ander

of construction and any other product attribute without prior notice. This includes no obligation to reflect such changes in documentation or literature or to provide any such changes to products previously sold or held in stock.

produkteienskap sonder voorafkennisgewing te wysig, insluitend geen verpligting om sulke veranderinge in dokumentasie of literatuur te weerspieël of aan te bring aan produkte wat voorheen verkoop of aangehou is nie.

#### Warranty Periods

Brands	Product groups	Components	Origin	Versions	Period
Falcon	Slashers Haymakers® Rollermowers Blowermowers™	Gearboxes	Imported	All	2y
			Falcon	F50	3y
				F60	2y
				F80	3y
		PTO shafts	Imported	All	2y
	OEM parts	Falcon	All	2y	
	Dual-spindle Slashers Flexwing Slasher Grassmulchers™ Fieldmulchers SD Mulchers Rotagang® TurfPro Finishing Mowers	Gearboxes	Imported	All	1y
			Falcon	F50	2y
				F60	1y
				F80	2y
		PTO shafts	Imported	All	1y
		OEM parts	Falcon	All	1y
		Flail cutters	Gearboxes	Imported	All
	PTO shafts		Imported	All	1y
	OEM parts		Falcon	All	1y
	Rotavators	Gearboxes	Falcon	All	1y
		OEM parts	Falcon	All	1y
	Rotorspreaders	OEM parts	Falcon	All	1y
		PTO shafts	Imported	All	1y
	Limespreaders	OEM parts	Falcon	All	1y
Bale forks + beams	OEM parts	Falcon	All	1y	
Unloaders®	OEM parts	Falcon	All	1y	
Locust	Slashers	Gearboxes	Generic	All	1y
	Rollermowers	OEM parts	Falcon	All	1y
Amazone	Spreaders Sprayers Disk/Combo harrows Power harrows Turf equipment	All	Amazone-DE	All	1y
Votex	Shredders	All	Votex-NL	All	1y

## PRODUCT RANGE

## PRODUKREEKS

The Falcon Flail Mower range currently consists of two models:

- Excluding wheels, i.e. travelling on side panels equipped with skids
- Including a set of articulated wheels for increased manoeuvrability and reduced scalping in rutted or cultivated lands.

Due to their horizontal layout and enclosed cutting chamber these implements provide predictable and consistent results with high levels of personal safety.

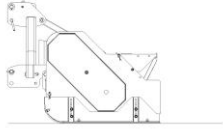
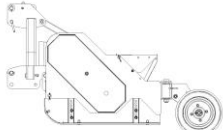
- With a working width of 2,9 m they are both suitable for tractors from 40 to 60 kW.
- Both models may be fitted with hammers or blades, depending on the intended application.
- Material discharge options are also possible by configuring the implement for maximum dispersion or maximum containment of processed materials.
- A V-belt drive system prevents mechanical overload, while a built-in over-run facility provides controlled deceleration of the drive system on shut-down.

Die Falcon Flail Mower-reeks bestaan tans uit twee modelle:

- Wiele uitgesluit, d.w.s. loop op sypanele wat met glystukke toegerus is.
- Met 'n stel geartikuleerde wiele ingesluit vir groter maneuvreerbaarheid en minder skraping in bewerkte landerye of landerye met groewe en slote.

Vanweë hulle horisontale uitleg en omhulde snykamer lewer hierdie implemente voorspelbare en konsekwente resultate met hoë vlakke van persoonlike veiligheid.

- Met 'n werkswydte van 2,9 m is albei geskik vir trekkers van 40 tot 60 kW.
- Aan albei modelle kan hamers of lemme aangebring word, na gelang van beoogde gebruik.
- Materiaalafvoeropties is ook moontlik deur die implement vir maksimum verspreiding of maksimum behoud inhou van verwerkte materiale te konfigureer.
- 'n V-band-dryfstelsel verhoed meganiese oorlading terwyl 'n ingeboude oorloopfasiliteit spoedvermindering van die dryfstelsel by afskakeling beheer.

Profile	Model (Part no.)	Working width <sup>(1)</sup> (mm)	W x L x H (mm)			Offset, max. <sup>(2)</sup> (mm)	Blade / Hammer <sup>(3)</sup> (qty)	Mass (kg)	Power, max. (kW)
	F290 Exc. wheels Wiele uitgesl. (A0119)	2 900	3 080	1 275	890	1 900	84 28	765	40-60
	F290 Inc. wheels Wiele ingesl. (A0120)	2 900	3 080	1 830	890	1 900	84 28	835	40-60
Profiel	Model (Onderdeelnr.)	Werks- wydte <sup>(1)</sup> (mm)	B x L x H (mm)			Afwyk, maks. <sup>(2)</sup> (mm)	Lem / Hamer <sup>(3)</sup> (aantal)	Massa (kg)	Krag, maks. (kW)

(1) Width of process area / Wydte van snygebied.

(2) From tractor PTO centre line to right-hand edge of cut / Vanaf trekker se kragaftakkeras-middellyn tot regterkantste snyrand.

(3) Fitted exclusively with either blades or hammers / Eksklusief met óf lemme óf hamers.

## INSTALLATION

## INSTALLERING

### Attaching the implement to the tractor

- ⚠ Do not enter the area between the tractor and the implement unless the tractor engine is shut off, handbrake applied and the key removed from the ignition.
- ⚠ Use only hitch pins and linchpins of the correct specification, such as those provided with the implement.

The implement is equipped with a 3-point agricultural hitch facility for attachment to the tractor. The tractor top link attachment configuration must be selected in accordance with the chosen implement support type, namely:

- the height-adjustable side panels and skids (Fig. 1) or
- the articulated, adjustable rear wheel sets (Fig. 2).

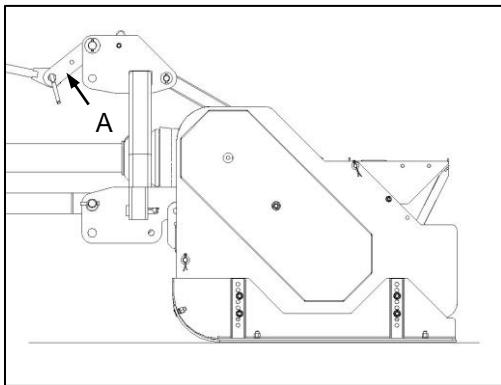


Fig. 1

### Koppel van die implement aan die trekker

- ⚠ Moenie tussen die trekker en die implement inbeweeg tensy die trekkerenjin afgeskakel, die handrem opgetrek en die sleutel uit die aansitter verwyder is nie.
- ⚠ Gebruik slegs haak- en lunspeene met die korrekte spesifikasies, soos dié wat saam met die implement verskaf word.

Die implement is toegerus met 'n 3-punt-haak om dit aan die trekker te koppel. Die trekker se boskachelhegstuk-konfigurasie moet ooreenkomstig die gekose implement-steuntipe geselekteer word, naamlik:

- die hoogteverstelbare sypanele en glystukke (Fig. 1) of
- die geartikuleerde, verstelbare agterwielstelle (Fig. 2).

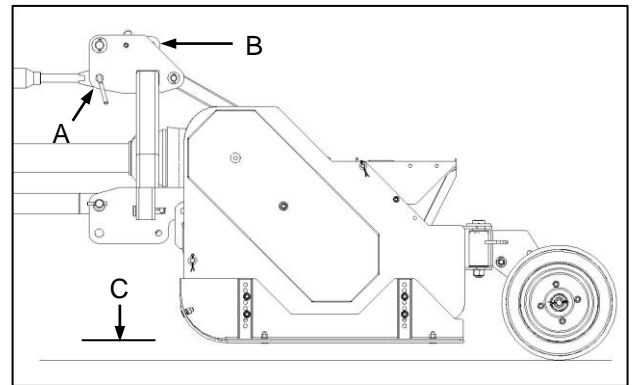


Fig. 2

- ⊖ Failure to operate the implement using the appropriate top link attachment configuration will result in unsatisfactory process results as well as structural and mechanical failure not covered under warranty.
- ⊖ Note that, regardless of the chosen attachment configuration (Fig. 1 / Fig. 2) above, this implement must NEVER be operated in reverse. This includes any attempt to reverse when the implement is in contact with the ground. Failure to observe this requirement will result in structural and mechanical failure not covered under warranty.

- ⊖ Versuim om die implement met die gepaste boskachelhegstukkonfigurasie te bedryf sal onbevredigende proses-resultate tot gevolg hê, asook strukturele en meganiese onklaarraking wat nie onder waarborg gedek word nie.
- ⊖ Let daarop dat ongeag die gekose hegstukkonfigurasie (Fig. 1 / Fig. 2 bo), hierdie implement NOOIT in trurat bedryf moet word nie. Dit sluit enige poging in om agteruit te stoot terwyl die implement in kontak met die grond is. Versuim om hierdie vereiste na te kom sal tot strukturele en meganiese onklaarraking lei wat nie onder waarborg gedek word nie.



Fig. 3



### Attachment using side panels with skids

Use of the adjustable side panels with skids requires the use of the break link (Fig. 1-A) provided on the implement hitch frame for attachment of the tractor top link.

- ✔ After attaching the implement to the tractor hitch, lower the implement until the skids are in full contact with the ground.
- ✔ Adjust the tractor 3-point hitch top link such that the break link assumes an angle of approximately 45 degrees.
- ✔ Lift the implement to an acceptable transport height, ensuring that there is no contact between the implement and any part of the tractor.
- ✔ Adjust the tractor 3-point hitch stabiliser arms to prevent excessive lateral movement of the implement during transportation.
- ✔ Set the tractor hitch lift arms to a floating position to enable independent movement of the arms while cutting.

### Attachment using articulated rear wheel sets

Use of the articulated rear wheel sets requires the tractor top link to be attached DIRECTLY to the implement hitch frame clevis (Fig. 2-A), while the break link may be stowed in the position shown (Fig. 2-B).

- ✔ After attaching the implement to the tractor hitch, lower the implement until the wheels are in contact with the ground and extended behind the implement, as in the normal forward travel position.
- ✔ Adjust the tractor 3-point hitch top link to level the implement in relation to ground level (Fig. 2-C).
- ✔ Lift the implement to an acceptable transport height, ensuring that there is no contact between the implement and any part of the tractor.
- ✔ Adjust the tractor 3-point hitch stabiliser arms to prevent excessive lateral movement of the implement during transportation and while cutting.
- ✔ Set the tractor hitch lift arms to a floating position to enable independent movement of the arms while cutting.

### Koppeling met gebruik van sypanele en glystukke

Gebruik van die verstelbare sypanele met glystukke vereis die gebruik van die knakskakel (Fig. 1-A) op die implementhaakraam vir die aanheg van die trekker-boskakel.

- ✔ Nadat die implement aan die trekker gehaak is, laat die implement sak totdat die glystukke in volle kontak met die grond is.
- ✔ Verstel die trekker se 3-punt-haak-boskakel só dat die breekskakel in ongeveer 'n 45 grade-posisie is.
- ✔ Lig die implement tot 'n aanvaarbare vervoerhoogte en verseker dat daar geen kontak tussen die implement en enige deel van die trekker is nie.
- ✔ Verstel die trekker se 3-punt-haak-stabiliseerderarms om oormatige laterale beweging van die implement tydens vervoer te voorkom.
- ✔ Stel die trekkerhaakhysarms in 'n swewende posisie om onafhanklike beweging van die arms tydens die snyproses moontlik te maak.

### Koppeling met gebruik van geartikuleerde agterwielstelle

Gebruik van die geartikuleerde agterwielstelle vereis dat die trekker-boskakel DIREK aan die implementhaakraamvurk (Fig. 2-A) gekoppel word, terwyl die breekskakel in die aangetoonde posisie (Fig. 2-B) gestoor kan word.

- ✔ Nadat die implement aan die trekker gehaak is, laat die implement sak totdat die wiele in kontak met die grond en agter die implement uitgestrek is, soos in die normale vorentoerposisie.
- ✔ Verstel die trekker se 3-punt-haak-boskakel só dat die implement parallel met die grond is (Fig. 2-C).
- ✔ Lig die implement tot 'n aanvaarbare vervoerhoogte en verseker dat daar geen kontak tussen die implement en enige deel van die trekker is nie.
- ✔ Verstel die trekker se 3-punt-haak-stabiliseerderarms om oormatige laterale beweging van die implement tydens vervoer te voorkom.
- ✔ Stel die trekkerhaakhysarms in 'n swewende posisie om onafhanklike beweging van die arms tydens die snyproses moontlik te maak.

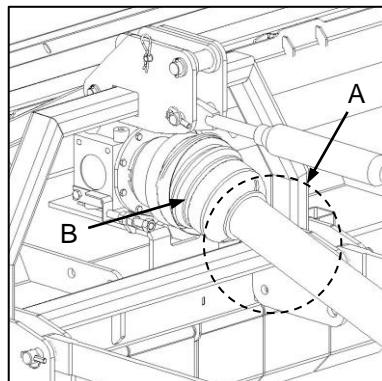


Fig. 4

## Installing the PTO shaft

- ⚠ Ensure proper engagement between the PTO shaft couplings and the input and output shafts on the implement and tractor.
- ⚠ Ensure sufficient overlap of PTO shaft tubes at the working position.
- ⚠ Do not exceed the specified PTO input speed.
- ⚠ Do not operate the implement without PTO shaft guards in place and in good condition. Anti-rotation chains must be attached.
- ⚠ Replace damaged or missing PTO guard parts only with original spare parts.
- ⚠ Do not approach the rotating PTO shaft, and avoid loose-fitting clothing to prevent entanglement.

Due to the many variations in tractor and implement hitch configurations it is likely that the supplied PTO driveshaft will have to be cut to suit the operating distance between the tractor and the implement.

- ✔ Before cutting the PTO shaft to the appropriate operating length, refer to the PTO manufacturer's instructions supplied with the PTO shaft.
- ✔ Following installation of the PTO shaft, lift the implement to an acceptable transport height and ensure that there is no contact between the PTO shaft and any part of the implement (Fig. 4-A).
- ✔ Ensure that universal joint operating angles (Fig. 4-B) are not exceeded and that over-compression or over-extension of the PTO shaft is avoided.
- ⊖ All PTO drive shafts supplied on Falcon implements are accompanied by a product handbook (IM-03-2008) describing all aspects of installation, operation, maintenance and safety with respect to the PTO drive shaft. The document constitutes part of this manual and will be found attached to the PTO drive shaft supplied with each new Falcon implement.

## Settings and adjustments

- ⚠ Do not perform maintenance or any other work on the implement unless the tractor engine is shut off, handbrake applied and the key is removed from the ignition.
- ⚠ Do not perform maintenance or any other work on the implement while it is suspended only on the tractor 3-point hitch and without suitable additional support for the implement.

## Height setting using side panels with skids

The working height of the implement is set by adjusting the position of the side panels and skids in relation to the implement body.

## Installering van die kragaftakkeras

- ⚠ Verseker behoorlike inskakeling tussen die kragaftakkeras se koppelstukke en die inset- en leweringsasse aan die implement en trekker.
- ⚠ Verseker voldoende oorvleueling van die kragaftakkerasbuise in die werkposisie.
- ⚠ Hou by die gespesifiseerde kragaftakkeras-insetspoed.
- ⚠ Moenie die implement bedryf sonder die kragaftakkeras-skerms in posisie en in goeie toestand nie. Teendraaikettings moet aangeheg wees.
- ⚠ Vervang beskadigde of ontbrekende kragaftakkeras-skerm-onderdele slegs met oorspronklike onderdele.
- ⚠ Moenie die draaiende kragaftakkeras nader nie, en vermy lospassende klere om verstrengeling te verhoed.

Vanweë die talle variasies in trekker-en-implementhaakkonfigurasies sal die kragaftakkeras wat verskaf is, waarskynlik verkort moet word om die bedryfsafstand tussen die trekker en die implement te pas.

- ✔ Voordat die as tot die gepaste bedryfslengte gesny word, verwys eers na die vervaardiger se instruksies wat saam met die kragaftakkeras voorsien is.
- ✔ Na installering van die kragaftakkeras moet die implement tot 'n aanvaarbare vervoerhoogte gelig word en verseker word dat daar geen kontak tussen die kragaftakkeras en enige deel van die implement is nie (Fig. 4-A).
- ✔ Verseker dat kruiskoppelingwerkshoeke (Fig. 4-B) nie oorskry word nie en dat oorkompressie of oorverlenging van die kragaftakkeras vermy word.
- ⊖ Alle kragaftakkerasse wat saam met Falcon-produkte voorsien word, word vergesel van 'n produkhandleiding (IM-03-2008) wat alle aspekte van installering, bedryf, instandhouding en veiligheid m.b.t.. die kragaftakkeras beskryf. Die dokument vorm deel van hierdie handleiding en is aangeheg aan die kragaftakkeras wat met elke nuwe Falcon-implement verskaf word.

## Instellings en verstellings

- ⚠ Moenie enige instandhouding- of ander werk aan die implement doen tensy die trekkerenjin afgeskakel, die handrem opgetrek en die sleutel uit die aansitter verwyder is nie.
- ⚠ Moenie enige instandhouding- of ander werk aan die implement uitvoer terwyl dit slegs aan die trekker se 3-punt-haak hang sonder bykomende steun vir die implement nie.

## Hoogtestelling met gebruik van sypanele met glystukke

Die werkshoogte van die implement word gestel deur die posisie van die sypanele en glystukke in verhouding tot die implementromp te verstel.

- ✔ To set the working height of the implement, remove the side panel retaining bolts (Fig. 5-A) and adjust the position of the side panels as required. Ensure that the implement is level by selecting corresponding hole positions at all adjustment points.

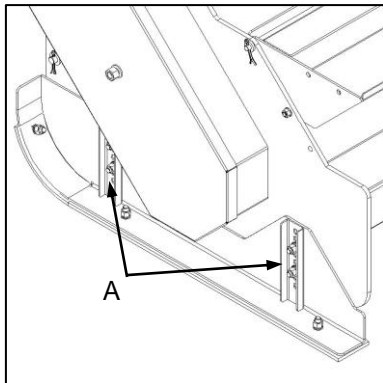


Fig. 5

- ✔ Om die werkhoopte van die implement te stel, verwyder die sypaneelklemoute (Fig. 5-A) en verstel die posisie van die sypaneel soos nodig. Verseker dat die implement waterpas is deur ooreenstemmende gatposisies by alle verstellingspunte te selekteer.

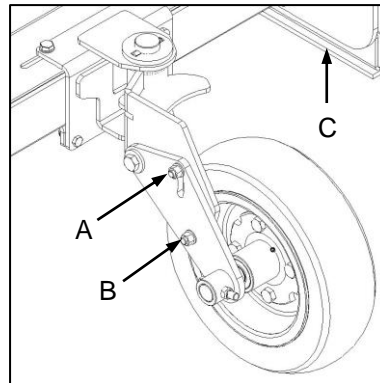


Fig. 6

### Height setting using articulated rear wheels

The working height of the implement is set by adjusting the vertical position of the rear roller in relation to the implement body.

- ✔ To set working height, loosen the pivot bolt (Fig. 6-A) while removing the height setting bolt (Fig. 6-B) completely.
- ✔ With the assistance of the tractor 3-point hitch, set the implement to the required working height and adjust the roller position by selecting an appropriate bolt hole. To ensure that the implement is level, be sure to select corresponding hole positions at the two wheels.

- ⊖ Note that the articulated rear wheels may be used with the side panels and skids still in place. However, these must be suitably adjusted to prevent any ground contact during operation (Fig. 6-C). Failure to observe this requirement will result in structural and mechanical failure not covered under warranty.

### Lubrication and oil levels

Confirm that transmission oil levels are correct before use of the implement.

- ✔ The gearbox (Fig. 7-A) and extension housing (Fig. 7-B) are equipped with filling ports. Check oil levels in both locations.
- ✔ Remove the filler plug and add oil through the filling port so that the oil level coincides with the bottom edge of the hole.

### Hoogtestelling met gebruik van geartikuleerde agterwiele

Die werkhoopte van die implement word gestel deur die vertikale posisie van die agterste roller in verhouding tot die implementromp te verstel.

- ✔ Om die werkhoopte te stel, draai die spilbout los (Fig. 6-A) los en verwyder die hoogteverstellingsbout heeltemal (Fig. 6-B).
- ✔ Stel die implement met behulp van die trekker se 3-punt-haak op die vereiste werkhoopte en verstel die rollerposisie deur seleksie van 'n gepaste boutgat. Om te verseker dat die implement waterpas is, kies ooreenstemmende gatposisies by die twee wiele.

- ⊖ Let daarop dat die geartikuleerde agterwiele gebruik kan word met die sypaneel en glystukke steeds in posisie. Dié moet egter so verstel word dat daar geen grondkontak tydens bedryf is nie (Fig 6-C). Versuim om hierdie vereiste na te kom sal tot strukturele en meganiese onklaarraking lei wat nie onder waarborg gedek word nie.

### Smearing en olievlakke

Verseker dat die ratkasolievlakke korrek is voordat die implement gebruik word.

- ✔ Die ratkas (Fig. 7-A) en verlengomhulsel (Fig. 7-B) beskik oor olievulpunte. Olievlakke moet by albei punte nagegaan word.
- ✔ Verwyder die vulprop en voeg olie by totdat dit die onderste rand van die gat bereik.

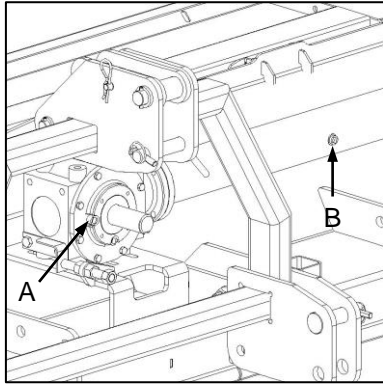


Fig. 7

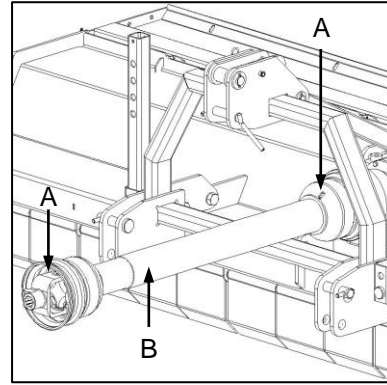


Fig. 8

Ensure that the PTO shaft is properly lubricated before use of the implement.

✔ Apply grease to the universal joints (Fig. 8-A) and telescopic tubes (Fig. 8-B) of the PTO shaft.

⊖ For additional information, refer to the PTO manufacturer's handbook supplied with the implement.

Verseker dat die kragtakkeras behoorlik gegries is voor gebruik van die implement.

✔ Ghries die kruiskoppelings (Fig. 8-A) en teleskopiese buise (Fig. 8-B) van die kragtakkeras.

⊖ Verwys vir verdere inligting na die kragtakkeras se vervaardigershandboek wat saam met die implement voorsien is.

## OPERATION

### General

It is the responsibility of the owner to ensure that the operation of an agricultural tractor and any attached equipment is carried out in accordance with all applicable laws, regulations and practices relating to safe and responsible operation.

- ➔ Applicable regulations should include, but not be limited to, the South African Occupational Health and Safety Act No. 83 of 1993 and the South African National Road Traffic Act No. 93 of 1996.
- ➔ Refer also to operational information relevant to the tractor concerned, including handbooks, operator manuals, safety and warning notices and decals.

### Preparation for use

⚠ Only suitably trained persons should operate the implement and no person should operate the implement without first studying and establishing a complete understanding of the content of this manual.

The implement must be thoroughly inspected and prepared before each use and with reference to procedures described elsewhere in this manual.

1. Attaching the implement to the tractor.
2. Installing the PTO driveshaft.
3. Settings and adjustments.
4. Lubrication and oil levels.
5. Routine maintenance (before and after each use).

### Inspect the work area

- ✔ Remove any movable obstructions from the work area, especially any object which may become a projectile.
- ✔ Note the presence of ditches, holes, stumps, stones, rocks, or any other obstruction that might destabilise the tractor or cause damage to the implement. Remove these obstacles where possible, otherwise note and avoid these areas during cutting.

This implement is intended for general maintenance where material consistency may vary considerably, sometimes including fallen branches and fruit and other solid materials. Proper preparation of the work area will result in more consistent results and extend the service life of the implement.

- ✔ Identify and discard any potentially damaging material which should be processed by other, more appropriate means.
- ✔ Where possible, fallen branches, twigs and other heavy materials should be as short as possible to prevent snagging and blockages.

## BEDRYF

### Algemeen

Dit is die verantwoordelikheid van die eienaar om te verseker dat die bedryf van 'n landboutrekker en enige gekoppelde toerusting uitgevoer word in ooreenstemming met alle toepaslike wette, regulasies en praktyke wat met veilige en verantwoordelike bedryf te doen het.

- ➔ Toepaslike regulasies sluit in, maar is nie beperk nie tot, die Suid-Afrikaanse Wet op Beroepsgesondheid en Veiligheid nr. 85 van 1993 en die Suid-Afrikaanse Wet op Nasionale Padverkeer nr. 93 van 1996.
- ➔ Verwys ook na tersaaklike bedryfsinligting oor die betrokke trekker, insluitend handboeke, operateurhandleidings, en veiligheid- en waarskuwingskennisgewings en -plakkers.

### Vorbereiding vir gebruik

⚠ Slegs toepaslik opgeleide persone moet die implement bedryf, en geen persoon moet dit bedryf sonder om eers die inhoud van hierdie handleiding te bestudeer en 'n volledige begrip daarvan te verkry nie.

Die implement moet telkens eers deeglik geïnspekteer en voorberei word voor dit gebruik word, en met verwysing na prosedures wat elders in hierdie handleiding beskryf word.

1. Koppeling van die implement aan die trekker.
2. Installering van die kragaftakkeras.
3. Instellings en verstellings.
4. Smering en olievlakke.
5. Roetine-instandhouding (voor en na elke gebruik).

### Inspekteer die werksgebied

- ✔ Verwyder enige los obstrukties van die werksgebied, veral enige voorwerp wat dalk 'n projektiel mag word.
- ✔ Let op enige dongas, gate, stompe, klippe, rotse of enige ander obstruksie wat die trekker mag destabiliseer of die implement kan beskadig. Verwyder hierdie hindernisse waar moontlik, of anders moet hierdie gebiede aangemerk en gedurende sny vermy word.

Hierdie implement is ontwerp vir algemene instandhouding waar 'n groot verskeidenheid materiale mag voorkom, insluitend afgevalde takke en takkies, vrugte en ander soliede materiaal. Behoorlike voorbereiding van die werksgebied sal meer konsekwente resultate oplewer en die dienslewe van die implement verleng

- ✔ Identifiseer en verwyder enige potensieel skadelike materiaal wat deur ander, meer gepaste metodes verwerk behoort te word.
- ✔ Waar moontlik moet gevalde takke so kort as moontlik en ander swaar materiale so klein as moontlik wees om vashaak en blokkasies te voorkom.

- ⊖ As a guide, any solid materials likely to be encountered during cutting should be of a maximum diameter of 25 mm.

### Operating the implement

- ⚠ Never approach, or allow any other person to approach, the implement unless the implement has been lowered to the ground, the tractor engine is shut off, the handbrake applied and the implement cutting gear has come to a complete stop.
  - ⚠ Actively discourage spectators and cease operation of the implement if any person approaches or enters the work area.
  - ⚠ Be sure to operate the implement only at the specified PTO input speed.
  - ⚠ Do not approach the rotating PTO shaft, and avoid loose-fitting clothing to prevent entanglement.
- ⊖ Failure to operate the implement at the specified PTO shaft speed can result in unsafe operating conditions as well as structural and mechanical failure not covered under warranty.

The implement is intended to be operated in two basic configurations, dependent on the consistency and volume of material to be processed and the desired consistency and dispersion of material after processing.

- ⊖ Due to the large variation in material properties and operating conditions, the actual capability of the implement should be established by test, and in consultation with an authorised Falcon Dealer.
- ⊖ The processing of heavier and harder materials will, in general, have the effect of reducing cutting gear and blade life as well as the overall lifespan of the implement.
- ⊖ All recommended material sizes are intended as a guide only.

#### ➤ Discharge mode (Fig. 1)

Appropriate for general grass-cutting and mowing where the occurrence of solid materials is low.

- ✔ Discharge chute in the open position (Fig. 1), allowing material to be discharged to the rear immediately after having been cut.
- ⊖ When using the implement in this mode, the discharge chute support bracket (Fig. 1-A) MUST be in place. Failure to observe this requirement will result in structural and mechanical failure not covered under warranty.

- ⊖ As riglyn moet enige soliede materiale wat in die sny-operasie teëgekom mag word, hoogstens 25 mm in deursnee wees.

### Bedryf van die implement

- ⚠ Moet nooit na die implement beweeg, of toelaat dat enigiemand anders dit doen, tensy die implement op die grond laat sak is, die trekkerenjin afgeskakel is, die handrem opgetrek is en die implement se snymeganisme heeltemal tot stilstand gekom het nie.
  - ⚠ Toeskouers moet aktief ontmoedig word en bedryf van die implement moet onmiddellik gestaak word as enige persoon die werksgebied benader of dit betree.
  - ⚠ Verseker dat die implement slegs teen die gespesifiseerde kragaftakkerasinsetspoed bedryf word.
  - ⚠ Moenie na die draaiende kragaftakkeras beweeg nie, en verhoed verstrengeling deur lospassende klere te vermy.
- ⊖ Versuim om die implement teen die voorgeskrewe krag-aftakkerasspoed te bedryf kan tot onveilige bedryfs-toestande lei, asook strukturele en meganiese onklaar-raking wat nie onder waarborg gedek word nie.

Die implement is ontwerp om in twee basiese konfigurasies te werk, afhangend van die digtheid en volume van materiaal wat verwerk moet word en die verlangde digtheid en verspreiding van materiaal na verwerking.

- ⊖ Weens die groot wisseling in materiaaleienskappe en bedryfstoeestand moet die eintlike vermoë van die implement deur toetsing bepaal word, en in oorleg met 'n gemagtigde Falcon-handelaar.
- ⊖ Die verwerking van swaarder en harder materiale sal oor die algemeen snymeganisme- en lemlewe verkort, asook die algehele lewensduur van die implement.
- ⊖ Alle aanbevole materiaalgroottes word bloot as 'n riglyn bedoel.

#### ➤ Ontladingmodus (Fig. 1)

Gepas vir algemene snywerk waar so min soliede materiale as moontlik voorkom.

- ✔ Afvoergeut in die oop posisie (Fig. 1), sodat gesnyde materiaal onmiddellik na agter ontlaai kan word.
- ⊖ Wanneer die implement in hierdie modus gebruik word, MOET die afvoergeutsteunstuk (Fig. 1-A) in posisie wees. Versuim om aan hierdie vereiste te voldoen sal tot strukturele en meganiese onklaarraking lei wat nie onder waarborg gedek word nie.

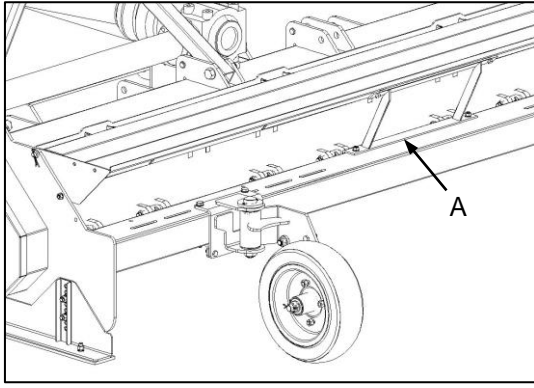


Fig. 1

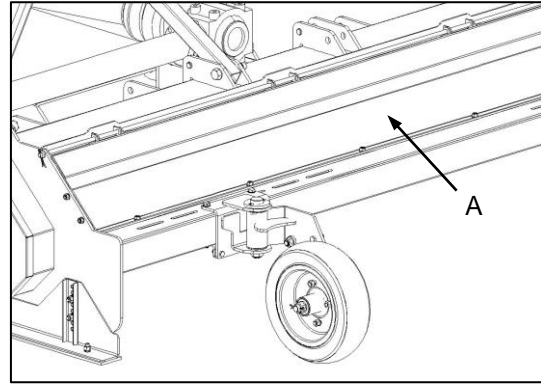


Fig. 2

➤ **Containment mode (Fig. 2)**

Appropriate for cutting and shredding in areas where solid materials may be encountered, as well as areas where containment of cut material is required for safety reasons.

- ✔ Discharge chute in the closed position (Fig. 2-A), allowing solid materials to be repeatedly processed.
- ⊖ In both of the configurations it is recommended that the implement be used to process material up to a maximum diameter of 25 mm.

The discharge chute position should be set in accordance with the chosen operating configuration.

- ✔ Remove all bolts retaining the discharge chute (Fig. 3-A / B).
- ✔ Lift the discharge chute and secure it in position by using the alternative hole available at each end (Fig. 4-A).
- ✔ Install the central chute support bracket (Fig. 1-A).

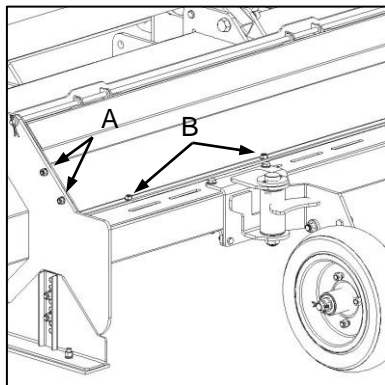


Fig. 3

The implement is provided with manual, 2-position offset capability. This allows positioning of the implement an additional 500 mm to the right of the centre line of the tractor, which can assist in cutting outside of the extremities of the tractor, against fence lines or under low-hanging obstructions.

- ✔ Remove all front and rear hitch frame mounting bolts (Fig. 5-A).

➤ **Behoudmodus (Fig. 2)**

Gepas vir sny en versnippering in gebiede waar soliede materiale mag voorkom, asook gebiede waar opvang van gesnyde materiaal om veiligheidsredes nodig is.

- ✔ Afvoergeut in die toe posisie (Fig. 2-A), sodat gesnyde materiaal herhaaldelik gesny kan word.
- ⊖ By albei konfigurasies word aanbeveel dat die implement gebruik word om materiaal tot 'n maksimumdeursnee van 25 mm te verwerk.

Die afvoergeutposisie moet in ooreenstemming met die gekose bedryfskonfigurasie gestel word.

- ✔ Verwyder alle boute wat die afvoergeut in posisie hou (Fig. 3-A / B).
- ✔ Lig die afvoergeut op en bout dit vas deur van die alternatiewe gat aan elke ent gebruik te maak (Fig. 4-A)
- ✔ Installeer die middelste geutsteunstuk (Fig. 1-A).

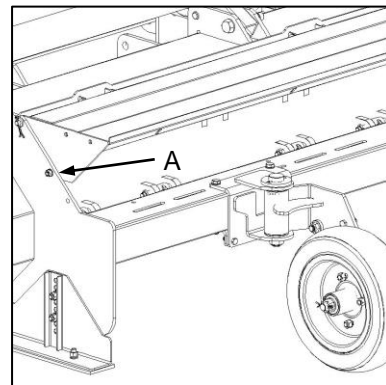


Fig. 4

Die implement beskik oor twee kontra-aanhaak-posisies wat dit moontlik maak om die implement 'n ekstra 500 mm na regs van die trekker se middellyn te posisioneer, wat kan help om buite die uiterstes van die trekker te sny, teenaan heinings of onder laaghangende obstruksies.

- ✔ Verwyder alle voorste en agterste haakraammonteerboute (Fig. 5-A).

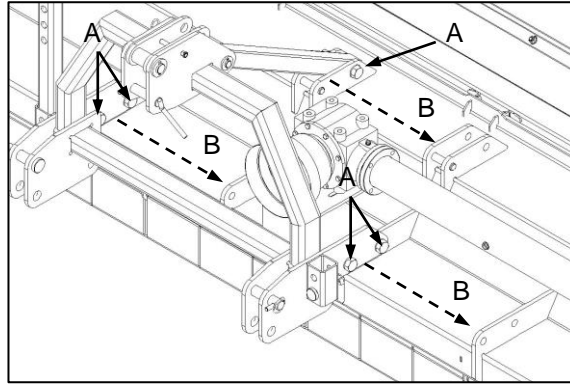


Fig. 5

- ✔ Manually relocate the hitch frame to the alternative mounting locations situated to the left of the implement centre line (Fig. 5-B).
- ✔ Standard offset position (Fig. 6)  $S1 = \text{Working width (W)} - 500 \text{ mm}$ .
- ✔ Maximum offset position (Fig. 7)  $S2 = \text{Working width (W)} - 1000 \text{ mm}$ .
- ✔ Verskuif die haakraam met die hand na die alternatiewe monterposisies links van die implement se middellyn (Fig. 5-B).
- ✔ Standaardkontraposisie (Fig. 6)  $S1 = \text{Werkswydte (W)} - 500 \text{ mm}$ .
- ✔ Maksimumkontraposisie (Fig. 7)  $S2 = \text{Werkswydte (W)} - 1000 \text{ mm}$ .

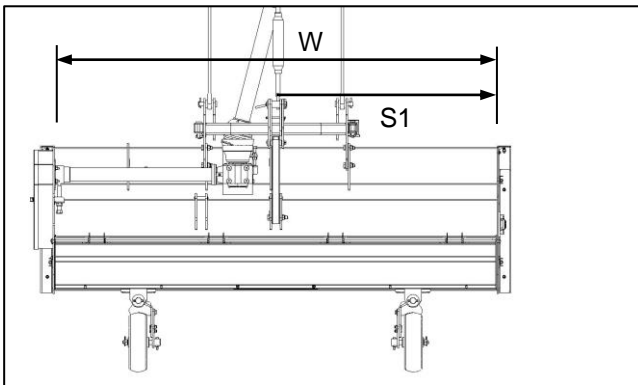


Fig. 6

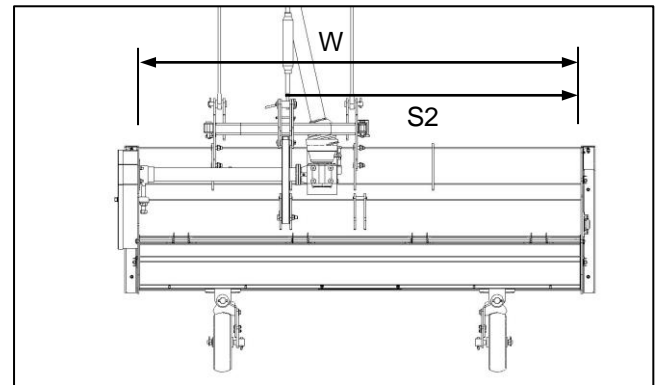


Fig. 7

- ⊖ It is recommended that when travelling with the implement in an offset position, usual travel speeds should be reduced to prevent damages due to unbalanced loading of the tractor 3-point hitch, as well as other breakages not covered under warranty.
- ⊖ Daar word aanbeveel dat wanneer die implement in 'n kontraposisie aangehaak is, daar stadiger as normaal gery word om skade vanweë ongebalanseerde las op die trekker se 3-punt-haak te voorkom, asook ander brekasies wat nie onder waarborg gedek word nie.

### The cutting process

The following procedure is recommended for starting the cutting process and, in general, should be followed on each occasion that PTO input is engaged.

- ✔ Start the tractor with the implement suspended on the 3-point hitch and select the required hitch offset position.
- ✔ Lower the implement so that it is just clear of the ground and engage the PTO at idling speed.
- ✔ Set the throttle to provide the specified PTO input speed and lower the implement to the working position.
- ✔ Select low gear on the tractor and begin cutting.

- ⊖ Unless otherwise indicated, the specified implement PTO input speed should be 540 r/min.

### Die snyproses

Die volgende prosedure word aanbeveel om die snyproses te begin en moet in die algemeen gevolg word elke keer wanneer die kragaftakker in werking gestel word.

- ✔ Skakel die trekkerenjinn aan met die implement wat aan die 3-punt-haak hang en kies die vereiste kontra-aanhaakposisie.
- ✔ Laat die implement sak sodat dit net bo die grond is en kry die kragaftakker op luierspoed.
- ✔ Stel die versneller vir die gespesifiseerde kragaftakkerinsetspoed en laat sak die implement na die werksposisie.
- ✔ Sit die trekker in 'n lae rat en begin sny.

- ⊖ Tensy anders aangedui, moet die gespesifiseerde kragaftakkerinsetspoed van die implement 540 r/min wees.



- ⊖ On tractors with an “economy” PTO drive option (indicated as 540E on the tractor’s tachometer), refer to the tractor’s operator manual in selecting the relevant PTO gearbox ratio on the tractor to maintain the specified implement PTO input speed.

#### Controlling the cutting process

- ✔ Tractor forward speed should be controlled by gear selection and NOT engine speed.
  - ✔ Tractor engine speed must be pre-set to continuously provide the specified PTO input speed, while forward speed should be controlled by an appropriate gear selection.
  - ✔ In general, the optimal gear selection can be identified by selecting the highest forward speed which does not result in stalling or blade recoil\* (see below).
- ⊖ Flail-type implements rely on the momentum of the flail hammers or blades for efficient cutting and minimising the load on the cutting gear, belt drive system and transmission.
  - ⊖ \* Blade recoil occurs when blade momentum is lost and blades are forced backwards against the rotor shaft. It is evident from loud metallic knocking sounds from the cutting chamber. This condition will result in elevated torque levels and possible transmission and cutting gear damage not covered under warranty.
  - ⊖ Forward speed, material volumes and material size should be collectively considered so as to prevent any unnecessary reduction of the equipment lifespan, as well as other damage and failures not covered under warranty.

#### Transportation and storage

The implement is intended to be transported on a standard 3-point agricultural tractor hitch.

- ✔ Ensure that the implement is lifted to a suitable height to clear any obstacles during transportation.
- ✔ Adjust stabilisers on the tractor hitch to prevent excessive lateral sway and possible contact with the tractor tyres.
- ✔ Maintain a speed low enough to prevent excessive bouncing and resultant damage to mounting points and other load-bearing components.

The implement is equipped with a parking stand to allow easier hitching to and unhitching from the tractor.

- ⊖ By trekkers met ’n “ekonomie”-kragaftakkerdryfopsie (aangedui as 540E op die trekker se toereteller), verwys na die trekkerbestuurdershandleiding vir die kies van die tersaaklike kragaftakkeratkasverhouding om die gespesifiseerde implementkragaftakkerinsetspoed te handhaaf.

#### Beheer van die snyproses

- ✔ Die trekker se vorentoe spoed moet deur ratseleksie en NIE enjinspoed nie.
  - ✔ Trekkerenjinspoed moet vooraf gestel word om die vereiste kragaftakkerasinsetspoed konstant te hou, terwyl vorentoe spoed deur gepaste ratseleksie beheer moet word.
  - ✔ Oor die algemeen kan die optimale rat geïdentifiseer word deur die hoogste vorentoe spoed te selekteer wat nie die enjin laat vrek of lemterugslag\* veroorsaak nie (kyk hier onder).
- ⊖ Vleël-tipe implemente maak staat op die momentum van die vleël-hamers of -lemme vir doeltreffende sny en minimalisering van die lading op die snymeganisme, bandaandryfstelsel en ratkas.
  - ⊖ \* Lemterugslag vind plaas wanneer lemmomentum verloor word en lemme teen die rotor-as teruggedwing word. Harde metaalslaggeluide word dan vanuit die snykamer gehoor. Hierdie toestand sal tot hoër wringkragvlakke lei, asook moontlike ratkas- en snymeganismeskade wat nie onder waarborg gedek word nie.
  - ⊖ Materiaalvolumes, materiaalgroottes en vorentoespoed moet saam in ag geneem word om onnodige verkorting van die toerusting se lewensduur, asook ander skade en onklaarraking wat nie onder waarborg gedek word nie, te verhoed.

#### Vervoer en berging

Die implement is ontwerp om aan ’n standaard 3-punt-landboutrekkerhaak vervoer te word.

- ✔ Verseker dat die implement hoog genoeg gelig is om tydens vervoer bo-oor enige hindernisse te kan beweeg.
- ✔ Verstel stabiliseerders aan die trekkerhaak om oormatige laterale beweging en moontlike kontak met die trekker se bande te verhoed.
- ✔ Handhaaf ’n spoed wat laag genoeg is om oormatige borsing en gevolglike skade aan monteerpunte en ander lasdraende komponente te verhoed.

Die implement is toegerus met ’n parkeerstaander vir makliker aan- en afhaak.

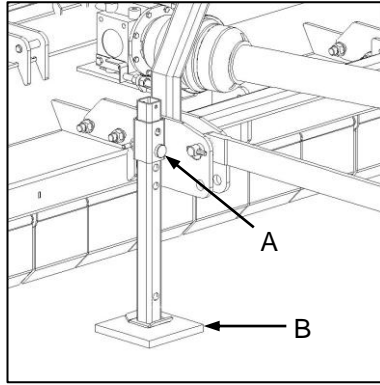


Fig. 8

- ✔ Extend the parking jack and select an appropriate pin hole (Fig. 8-A) to allow the implement to assume a level position.
- ✔ In soft ground conditions, it is recommended to use a wooden base block (Fig. 8-B) for added stability.
- ✔ Verleng die parkeerdomkrag en kies 'n gepaste pengaatjie (Fig. 8-A) om die implement gelyk te laat staan.
- ✔ Dit word aanbeveel dat 'n houtblok (Fig. 8-B) vir ekstra stabiliteit gebruik word waar die grond sag is.

**Routine maintenance**

- ⚠ Do not perform maintenance or any other work on the implement unless the tractor engine has been shut off, the handbrake applied and the key removed from the ignition.
- ⚠ Do not perform maintenance or any other work on the implement while it is suspended only on the tractor 3-point hitch, or without suitable additional support for the implement.
- ⚠ Use only original and approved Falcon replacement parts and lubricants. Refer to the parts information provided in this manual.

Maintenance should be carried out before and after each use and in accordance with the schedules provided in this chapter.

- ⊖ Bolted connections should be checked for tightness with reference to Bolt Torque Specifications (Table 1).

➤ **BEFORE each use**

To be carried out at least daily in periods of continuous use. Otherwise before each occasion that the implement is put to use.

- ✔ Check transmission oil levels and replenish as necessary.
- ✔ Lubricate PTO shaft UV joints and telescopic tubes.
- ✔ Lubricate rotating and sliding components. This includes rotor bearings (Fig. 1-A / Fig. 2-A) and wheel bearings (Fig. 3-A).
- ✔ Check the drive belt tension as described elsewhere in this chapter.

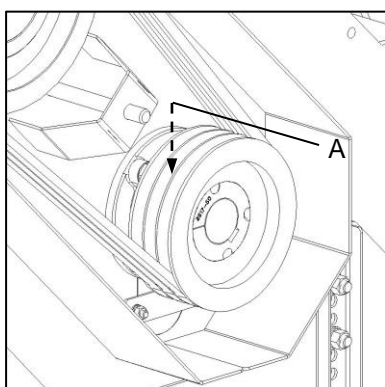


Fig. 1

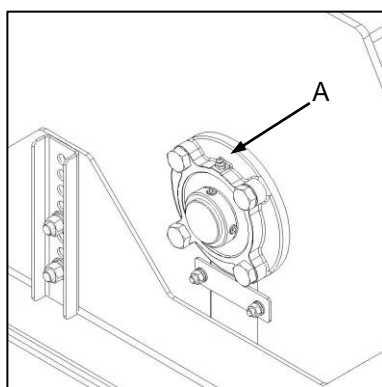


Fig. 2

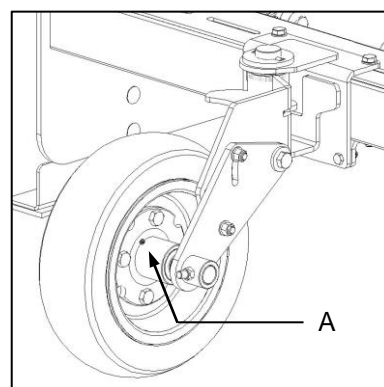


Fig. 3

- ✔ Check all fasteners for tightness. Pay special attention to safety-critical fasteners such as blade bolts and nuts (Fig. 4-A), hitch frame mounting bolts (Fig. 5-A / B), rotor mounting bolts (Fig. 6-A) and wheel mounting bolts (Fig. 6-B).
- ✔ Inspect blades for indications of wear and sharpen or replace as necessary. When manual sharpening is carried out, ensure that sharpened blades retain similar shapes and masses to prevent rotary imbalance.

**Roetine-instandhouding**

- ⚠ Moenie instandhouding- of enige ander werk aan die implement doen tensy die trekkerenjin afgeskakel, die handrem opgetrek en die sleutel uit die aansitter verwyder is nie.
- ⚠ Moenie instandhouding- of enige ander werk aan die implement doen terwyl dit net aan die trekker se 3-punt-haak hang, of sonder geskikte ekstra stutte vir die implement nie.
- ⚠ Gebruik slegs oorspronklike en goedgekeurde Falcon-ervangingsonderdele en smeermiddels. Verwys na die onderdele-inligting in hierdie handleiding.

Instandhouding moet telkens voor en na gebruik gedoen word, en in ooreenstemming met die skedules wat in hierdie hoofstuk vervat is.

- ⊖ Verseker dat koppelboute in ooreenstemming met die boutwringkragspesifikasiekaart vas is (Tabel 1).

➤ **VOOR elke gebruik**

Moet ten minste daagliks in tye van deurlopende gebruik uitgevoer word. Andersins voor elke keer wanneer die implement gebruik gaan word.

- ✔ Gaan transmissieolievlakke na en vul aan indien nodig.
- ✔ Ghries kragaftakkeras-kruiskoppelings en teleskopiese buise.
- ✔ Ghries draaiende en skuivende komponente. Dit sluit rotorkoeëllaers (Fig. 1-A / Fig. 2-A) en wielkoeëllaers in (Fig. 3-A).
- ✔ Gaan die dryfbandspanning na soos elders in hierdie hoofstuk beskryf.

- ✔ Verseker dat alle hegstukke vas is. Gee spesiale aandag aan veiligheidskritieke hegstukke soos lemboute en lemmoere (Fig. 4-A), haakraammonteerboute (Fig. 5-A / B), rotormonteerboute (Fig. 6-A) en wielmonteerboute (Fig. 6-B).
- ✔ Inspekteer lemme vir tekens van slytasie, en slyp of vervang indien nodig. Indien met die hand geslyp word, verseker dat lemme soortgelyke vorme en massas behou om ongebalanseerde rotasie te voorkom.

- ✔ Ensure that all guards, shields and other safety devices are in place, properly secured and in good condition.

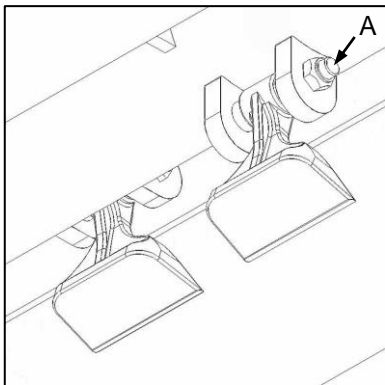


Fig. 4

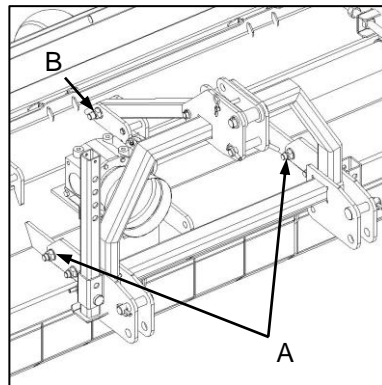


Fig. 5

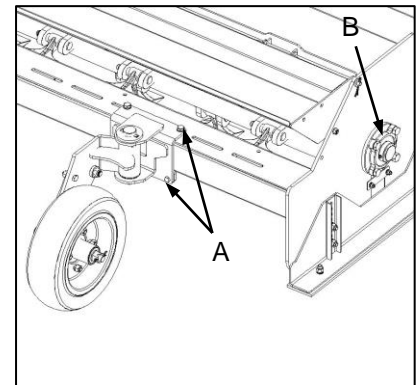


Fig. 6

- ✔ Verseker dat alle skutplate, skermes en ander veiligheids-toestelle in posisie is, behoorlik vas is, en in 'n goeie toestand is.

- ✔ Inspect all mounting pins for signs of wear. Check that all lynch pins, split-pins and clips are in place and in good condition.
- ✔ Run the implement up to operating speed and conduct visual and audible checks for excessive vibration and noise.

- ✔ Inspekteer alle monterpenne vir tekens van slytasie. Verseker dat alle lunspenne, splitpenne en knippe in posisie en in 'n goeie toestand is.
- ✔ Versnel die implement tot werkspoed en voer visuele en gehoorinspeksies uit vir oormatige vibrasie en geraas.

- ⊖ The rotor shaft installed on this implement is a precision-balanced component. Unauthorised modification or repair of this item may lead to imbalance and consequential structural or mechanical failure not covered under warranty.

- ⊖ Die rotor-as aan hierdie implement is 'n presisie-gebalanseerde komponent. Ongemagtigde wysiging of herstelwerk aan hierdie item kan tot wanbalans en gevolglike strukturele of meganiese onklaarraking lei wat nie onder waarborg gedek word nie.

#### ➤ AFTER each use

To be carried out at least every 40 hours in periods of continuous use. Otherwise after each occasion that the implement is used, or before long-term storage (longer than 1 month).

#### ➤ NA elke gebruik

Word ten minste elke 40 uur in tye van deurlopende gebruik uitgevoer. Andersins na elke gebruik van die implement, of voor langtermynberging (langer as 1 maand).

- ✔ Clean all debris from the implement, particularly the underside of the deck. Where pressurised cleaning is undertaken, care must be taken in areas around seals, breathers, lubrication points and PTO shaft components.
- ✔ Thoroughly inspect the implement for any signs of damage incurred during use. Note these for attention and repair before using it again.
- ✔ Check V-belt drive system for signs of slippage and wear. Usually indicated by black rubber residue within the drive belt chamber, possibly accompanied by burning odours.
- ✔ Ensure that all safety and warning decals are in place and in a legible condition.
- ✔ Before long-term storage (longer than 1 month), check oil levels and thoroughly lubricate all specified lubrication points.
- ✔ Store the implement in a clean, dry, weather-protected area.

- ✔ Verwyder alle vuiligheid van die implement, veral onder die dek. Drukspuitskoonmaak moet versigtig gedoen word, veral rondom seëls, luggate, ghriespunte en kragaftakkeras-komponente.
- ✔ Inspekteer die implement deeglik vir enige tekens van beskadiging tydens gebruik. Merk dit aan vir aandag en herstel voor dit weer gebruik word.
- ✔ Gaan die V-band-dryfstelsel na vir tekens van gly en slytasie – gewoonlik swart rubberreste in die dryfbandomhulsel, moontlik vergesel van brandreuke.
- ✔ Verseker dat alle veiligheids- en waarskuwingsplakkers in posisie, sigbaar en leesbaar is.
- ✔ Voor langtermynberging (langer as 1 maand) moet olievakke nagegaan en alle gespesifiseerde ghriespunte deeglik gesmeer word.
- ✔ Stoor die implement in 'n droë, skoon, weerbestande plek.

## Blade replacement

- ⚠ The cutting gear installed on these implements rotates at extremely high speed. Improper maintenance or repairs can result in failures which might cause serious damage, injury or death.
- ⚠ Use only original Falcon parts of the correct specification and grade for installation of the implement cutting gear. High-speed failure of rotating parts can result in serious damage, injury or death.

Blades (or hammers) should be replaced if they become damaged, bent or broken, or have been reduced in mass by more than 20% as a result of wear.

- ✔ Replace all associated mounting hardware when fitting new hammers or blades. This should include blade bolts, bushes and nuts (Fig. 8-A / Fig. 9-A).
- ✔ Check blade mounting lugs (Fig. 7-A) for signs of wear, distortion, elongation or fractures. Severe wear or damage to the blade mountings may necessitate replacement of the complete rotor (Fig. 7-B).
- ✔ Following the installation of new cutting gear, run the implement up to operating speed and conduct a visual check for excessive vibration.

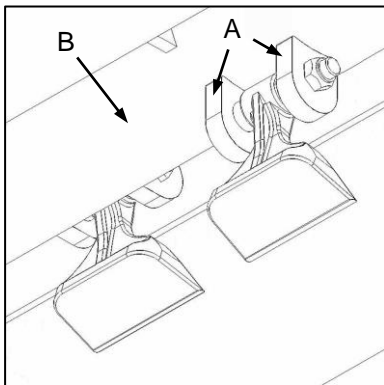


Fig. 7

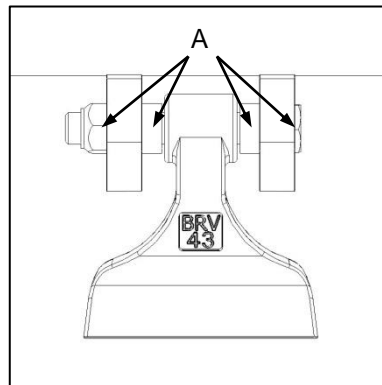


Fig. 8

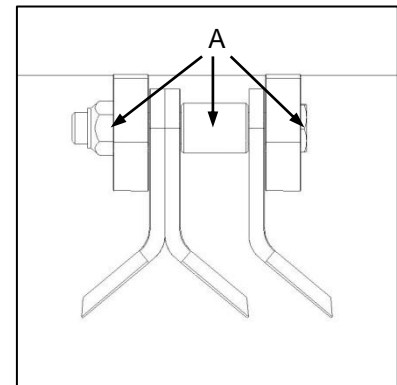


Fig. 9

- ⊖ Causes of excessive vibration must be identified and eliminated immediately to prevent consequential structural or mechanical failure not covered under warranty.

## Drive belt adjustment

- ⊖ Drive belt tension should be checked at the mid-point between pulley centres (Fig. 10-A). A deflection of  $\pm 20$  mm should be evident when single-finger pressure is applied to a single belt.

Adjusting drive belt tension.

- ✔ Remove the belt drive cover.
- ✔ Loosen 4x locking nuts on the drive tensioner base plate (Fig. 11-A) and 4x gearbox mounting bolts located below the gearbox base plate (Fig. 12-C).
- ✔ Loosen the tensioner lead-screw locknut (Fig. 11-C) and adjust the lead-screw (Fig. 11-B) to achieve the required belt tension.

## Lemvervanging

- ⚠ Die snymeganisme aan hierdie implemente draai teen 'n uiters hoë spoed. Onbehoorlike instandhouding of herstelwerk kan tot onklaarraking lei wat ernstige skade, beserings en selfs dood kan veroorsaak.
- ⚠ Gebruik slegs oorspronklike Falcon-onderdele met die korrekte spesifikasie en graad vir die installering van die snymeganisme. Hoëspoed-onklaarraking van draaiende onderdele kan tot ernstige skade, beserings of dood lei.

Lemme (of hamers) moet vervang word as hulle beskadig word, of buig of breek, of as hulle weens slytasie meer as 20% ligter geword het.

- ✔ Vervang al die betrokke monteringsonderdele wanneer nuwe hamers of lemme aangebring word. Dit moet lemboute, -busse en -moere insluit (Fig. 8-A / Fig. 9-A).
- ✔ Gaan lemmonteringskloue (Fig. 7-A) na vir tekens van slytasie, verwringing, rekking of krake. Ernstige slytasie of beskadiging van die lemmonteringstukke mag vervanging van die hele rotor noodsaak (Fig. 7-B).
- ✔ Na installering van nuwe snymeganisme-onderdele, kry die implement op werkspoed en voer 'n visuele inspeksie vir oormatige vibrasie uit.

- ⊖ Oorsake van oormatige vibrasie moet vasgestel en onmiddellik uitgeskakel word om gevolglike strukturele of meganiese onklaarraking te verhoed wat nie onder waarborg gedek word nie.

## Verstelling van dryfband

- ⊖ Dryfbandspanning moet halfpad tussen die katrolsentrus gekontroleer word (Fig. 10-A). Speling van  $\pm 20$  mm behoort met eenvingerdruk op 'n enkele band sigbaar te wees.

Verstelling van dryfbandspanning.

- ✔ Verwyder die dryfbandskerm.
- ✔ Laat skiet die 4x sluitmoere aan die dryfbandspannersteunplaat (Fig. 11-A) en die 4x ratkas-monteerboute onder die ratkassteunplaat (Fig. 12-C).
- ✔ Laat skiet die spannerleiskroefsluitmoer (Fig. 11-C) en verstel die leiskroef (Fig. 11-B) om die vereiste bandspanning te verkry.

- ✔ During the belt tensioning process, alignment of the gearbox should be maintained. Use the gearbox positioning lead-screw and locknut (Fig. 12-A and 12-B) for this purpose.

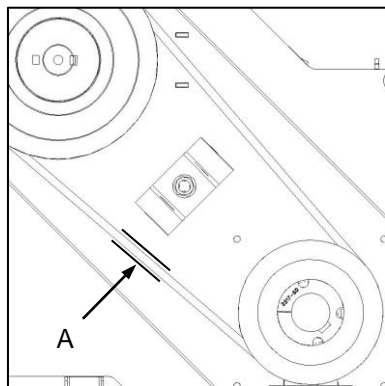


Fig. 10

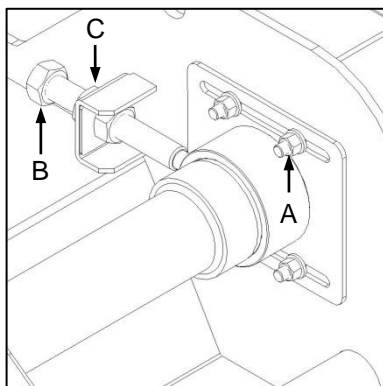


Fig. 11

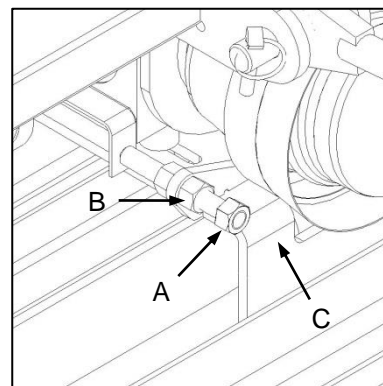


Fig. 12

- ✔ Die belyning van die ratkas moet tydens die bandspanningsproses gehandhaaf word. Gebruik die ratkasposisioneringsleiskroef en sluitmoer (Fig. 12-A en 12-B) vir hierdie doel.

- ✔ Be sure to retighten all locknuts and mounting bolts on completion of belt tension adjustment.

- ✔ Draai alle sluitmoere en monteerboute na verstelling van die dryfbandspanning weer behoorlik vas.

- ✘ Drive belts displaying excessive wear, fraying or cracking should be replaced immediately.

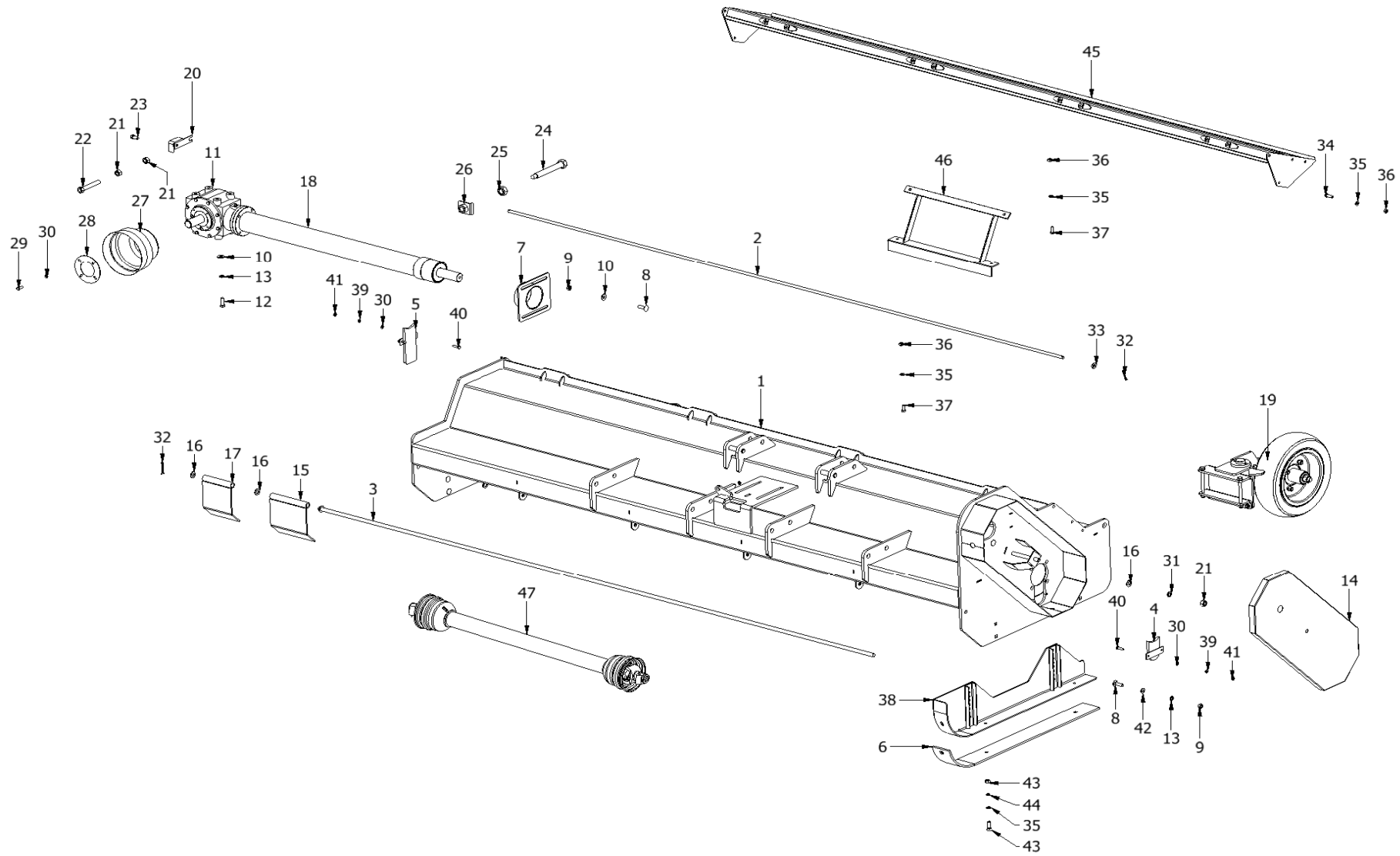
- ✘ Dryfbande wat tekens van oormatige slytasie, rafeling of kraakvorming toon, moet onmiddellik vervang word.

Table/Tabel 1

Bolt Torque Specifications (N.m) / Boutwringkragspesifikasies (N.m)

Class/Klas Lubrication/ Smering	4.6		8.8		10.9		12.9	
	Wet/Nat	Dry/Droog	Wet/Nat	Dry/Droog	Wet/Nat	Dry/Droog	Wet/Nat	Dry/Droog
M6	4,8	6	9	11	13	17	15	19
M8	12	15	22	28	32	40	37	47
M10	23	29	43	55	63	80	75	95
M12	40	50	75	95	110	140	130	165
M14	63	80	120	150	175	225	205	260
M16	100	125	190	240	275	350	320	400
M18	135	175	260	330	375	475	440	560
M20	190	240	375	475	530	675	625	800
M22	260	330	510	650	725	925	850	1 075
M24	330	425	650	825	925	1 150	1 075	1 350
M27	490	625	950	1 200	1 350	1 700	1 600	2 000
M30	675	850	1 300	1 650	1 850	2 300	2 150	2 700
M33	800	1 150	1 750	2 200	2 500	3 150	2 900	3 700
M36	1 150	1 450	2 250	2 850	3 200	4 050	3 750	4 750

Flail Mower: Main  
 F290 (A0119) / F290 inc. Wheels (A0120)

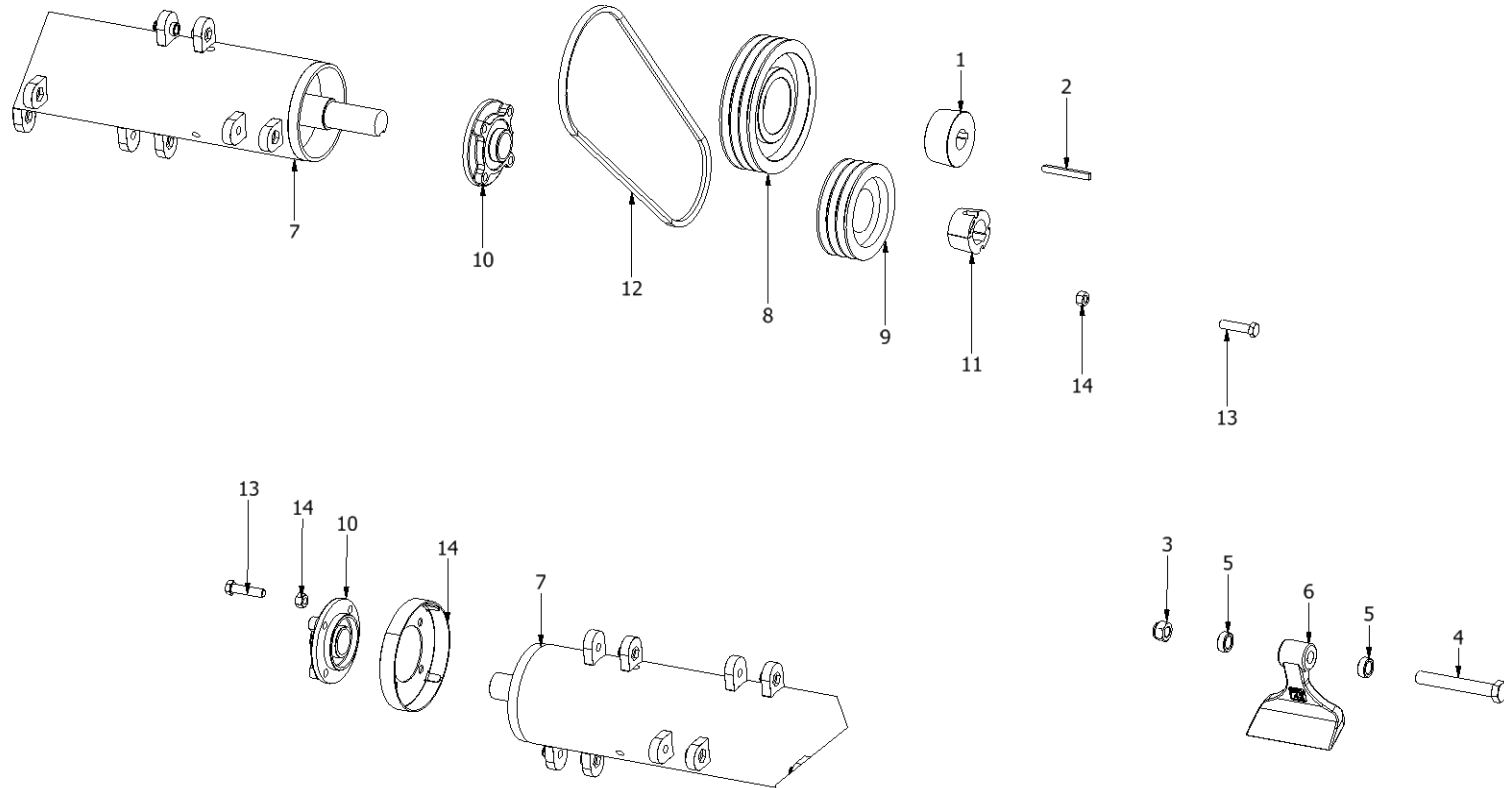


**Flail Mower: Main  
F290 (A0119) / F290 inc. Wheels (A0120)**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	H8700	Deck 2900 A0119	1	40	M40830	Bolt M8x30 HT	4
2	H8719	Round bar 12mm	1	41	M31008	Nut M8 Galv	4
3	H8718	Round bar 16mm	1	42	M81202	Washer Flat M12 Galv	8
4	H8706	Cover Rotor access Right	1	43	M21240	Plough bolt M12x40 CSK Galv	12
5	H8705	Cover Rotor access Left	1	44	M91002	Washer Spring M10 Galv	6
6	H8720	Skid Runner	2	45	H8702	Cover Discharge 2900	1
7	H5658	Baseplate Tensioner Ext shaft Galv	1	46	H8715	Support bracket Door	1
8	M712040	Carriage bolt M12x40 Galv	12	47	T601010CE112112	PTO shaft B6 1.2m + Clutch FF2	1
9	M31209	Nut M12 Galv	12				
10	M8577	Washer profiled 12.5x30x4.5 Galv	8				
11	M5650	Gearbox T311J Comer 9.311.875.10	1				
12	M41235	Bolt M12x35 HT Galv	4				
13	M91213	Washer Spring M12 Galv	12				
14	H5649	Cover Belt drive	1				
15	H5653	Flap Safety Main Galv	13				
16	M81602	Washer Flat M16x40x2	23				
17	H5654	Flap Safety End Galv	2				
18	H8730	Extension 1200	1				
19L	H8721	Wheel assy L 15" Swivel	1				
19R	H8722	Wheel assy R 15" Swivel	1				
20	H5665	Bracket Adjust Galv	1				
21	M11640	Bolt + Nut M16x40 HT Galv	3				
22	H5666	Leadscrew M16x110 Galv	1				
23	M41225	Bolt M12x25 HT Galv	2				
24	H5662	Leadscrew M24 Galv	1				
25	M32418	Nut M24 Galv	1				
26	H5661	Nut Leadscrew Captured M24 Galv	1				
27	M1141	PTO counter cone Comer	1				
28	M5579	Plate 4-M8@PCD105 2.0 MS PLB0 Galv	1				
29	M40825	Bolt M8x25HT Galv	4				
30	M80803	Washer Flat M8 Galv	9				
31	M91604	Washer Spring M16 Galv	1				
32	M1399	Split pin B4x60	4				
33	M5723	Washer 13x25x5 5.0 MS PLB0 Galv	2				
34	M41030	Bolt M10x30HT Galv	2				
35	M81002	Washer Flat M10 Galv	12				
36	M31007	Nut M10 Galv	6				
37	M41025	Bolt M10x25HT Galv	4				
38	H8703	Side panel Right	1				
39	M90813	Washer Spring M8 Galv	4				



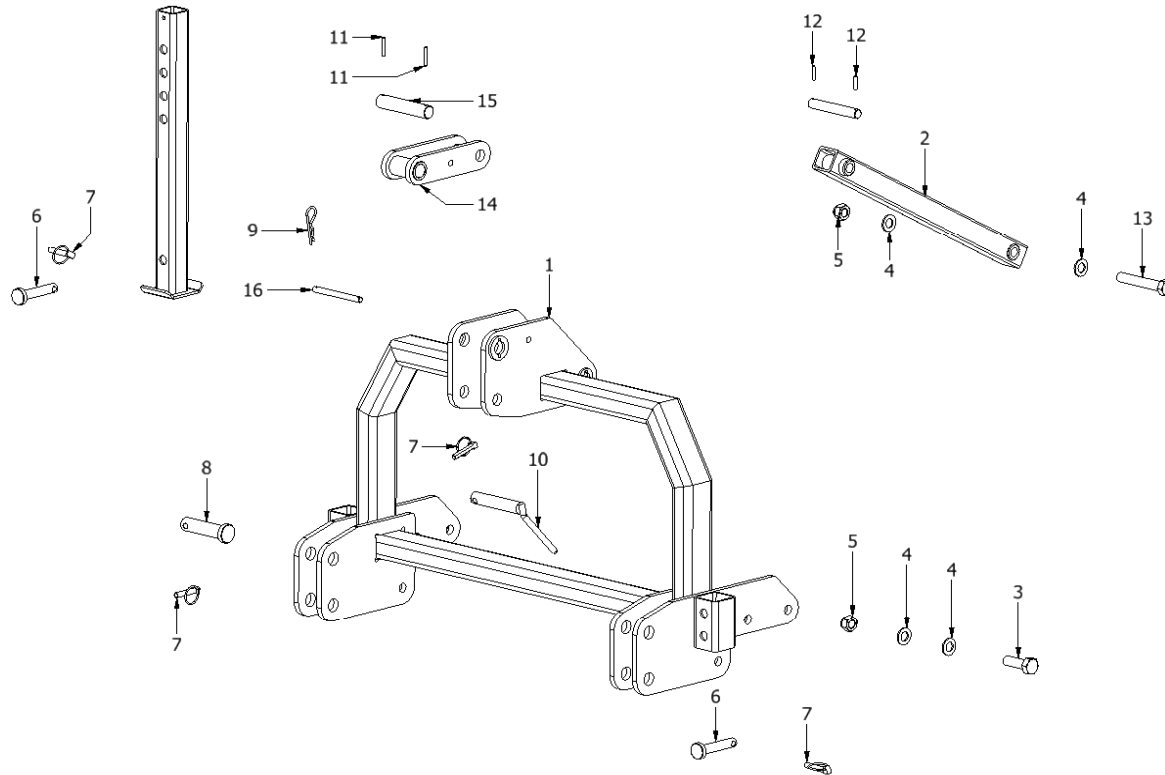
Flail Mower: Cutting Gear Assembly  
F290 (A0119) / F290 inc. Wheels (A0120)



**Flail Mower: Cutting Gear Assembly  
F290 (A0119) / F290 inc. Wheels (A0120)**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	M5702	Taper-lock bush 3020-40	1				
2	H5704	Key 12x8x100	1				
3	M61616	Nut Nyloc M16 Galv	30				
4	M616110	Bolt M16x110-10.9	28				
5	H71610	Bush Hard 16x25x10	56				
6	M5735	Hammer Flail MANOB01NOBC 120x110x16	28				
7	H8716	Rotor 2900x28 mount	1				
8	M5718	Pulley SPB 250-3V TL3020-40	1				
9	M5714	Pulley SPB 180-3V FLK133-60x90	1				
10	M8740	Bearing UCFC210	2				
11	M5712	Taper-lock bush 2517-50	1				
12	M5715	Belt SPB-1600	3				
13	M41665	Bolt M16x65 HT Galv	8				
14	H8717	Guard Rotor	2				

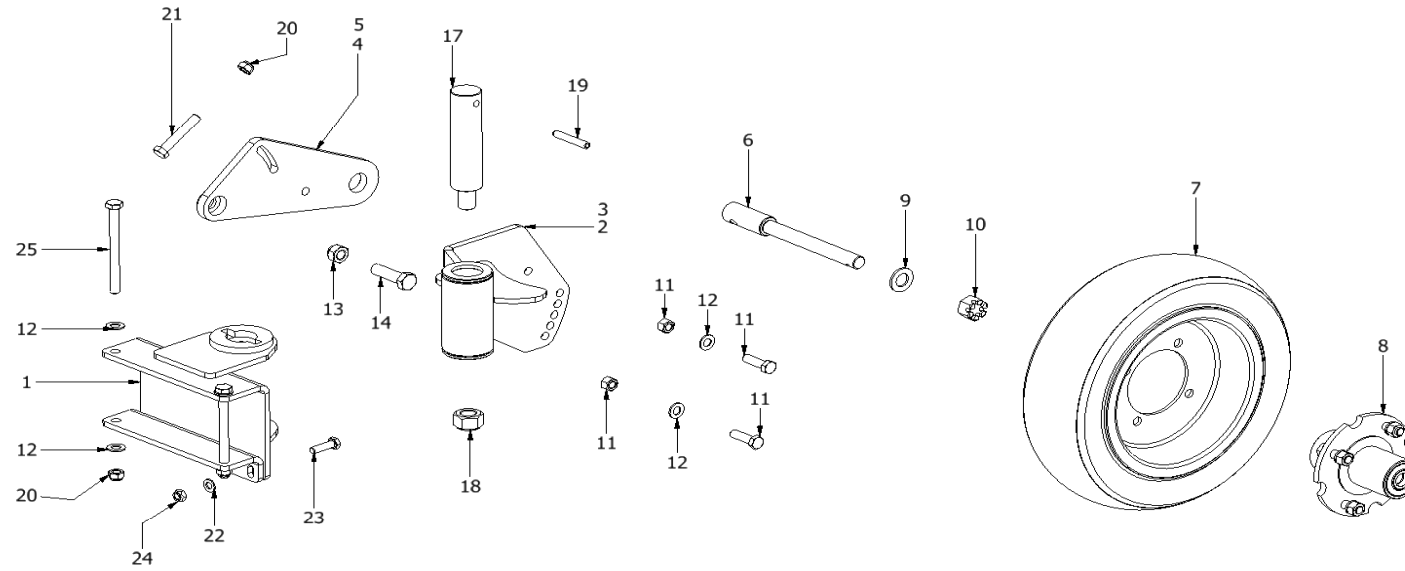
Flail Mower: Hitch Frame  
F290 (A0119) / F290 inc. Wheels (A0120)



**Flail Mower: - Hitch Frame  
F290 (A0119) / F290 inc. Wheels (A0120)**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	H8701	Hitch frame Cat2	1				
2	H8711	Stay Hitch frame	1				
3	M42060	Bolt M20x60 HT Galv	4				
4	M82001	Washer Flat M20	10				
5	M20200201	Nut Nyloc M20	5				
6	H0631	Pin Top link Cat1	2				
7	FLP11	Lynchpin 11mm	5				
8	H0643	Pin Bottom link Cat2	2				
9	M5235	R-clip 4mm	1				
10	H0634	Pin Top link Cat 2-125mm	1				
11	M5593	Roll pin M6x40	2				
12	M5592	Roll pin M6x30	2				
13	M1120120	Bolt M20 x 200	1				
14	H8712	Break link	1				
15	H8725	Pin D28x134.0-116	1				
16	H8713	Pin Break link Lock	1				
18	H8726	Pin D20x129-115	1				

Wheel assembly LH/RH - H8721/H8722  
F290 inc. Wheels (A0120)



**Wheel assembly LH/RH - H8721/H8722  
F290 inc. Wheels (A0120)**

Item	Part No.	Description	Qty	Item	Part No.	Description	Qty
1	H8723	Wheels bracket	1				
2	H5825	Hinge bracket Right	1				
3	H5823	Hinge bracket Left	1				
4	H5826	Swingarm Right	1				
5	H5824	Swingarm Left	1				
6	H5818	Axle 30.0 EN8_M20	1				
7	M3767	Wheel	1				
8	H3880	Wheel Hub	1				
9	M82001	Washer Flat M20	1				
10	N20200201	Nut Nyloc M20 Galv	1				
11	M11240	Bolt M12x40 + Nut Galv	4				
12	M81202	Washer Flat M12 Galv	6				
13	M61616	Nut Nyloc M16 Galv	1				
14	M41655	Bolt M16x55 HT Galv	1				
15	H5323	Washer 40.5 x 65x10.0	2				
16	H5291	Bush 40.3x50x50	2				
17	M5837	Pin 40x193-M22	1				
18	M62222	Nut Nyloc M22 Galv	1				
19	M5248	Roll pin 10x65	1				
20	M61209	Nut Nyloc M12 Galv	3				
21	M41270	Bolt M12x70HT Galv	1				
22	M81002	Washer Flat M10 Galv	2				
23	M41035	Bolt M10x35HT Galv	2				
24	M61007	Nut Nyloc M10 Galv	2				
25	M412140	Bolt M12 x 140	2				