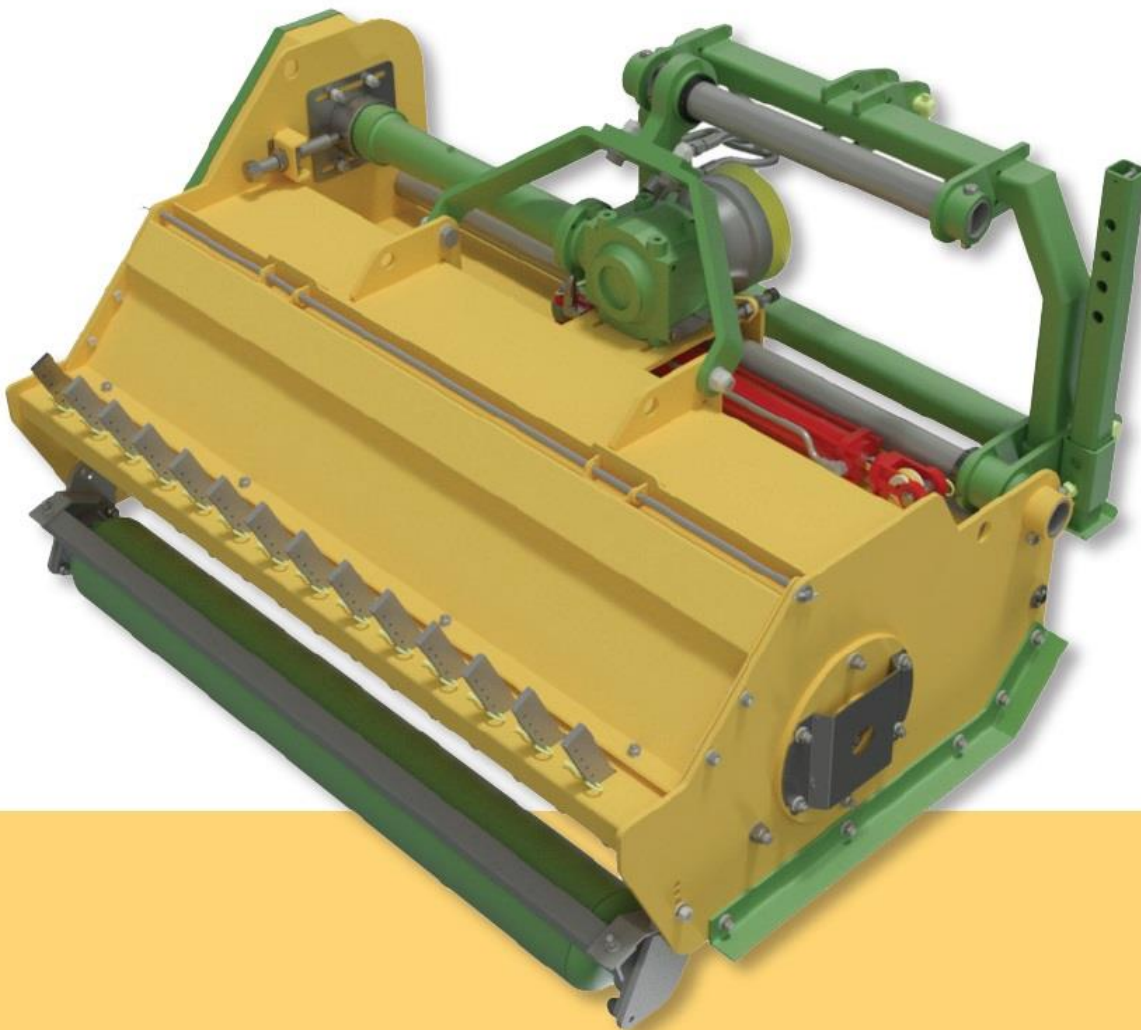




OPERATORS MANUAL / OPERATEURSHANDLEIDING

# Flail Cutters / Vleëlsnyers



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**INHOUD**

VOORWOORD
MAATSKAPPYPROFIEL
WAARBORG EN AFWYSING
PRODUKREEKS
INSTALLERING
WERKING
INSTANDHOUDING
FOUTOPSPORING
PARTELYSTE

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## FOREWORD



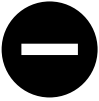
We at Falcon commend and congratulate you on the purchase of your Falcon implement, which we consider to be the best of its type available.

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 bedryfstoeestand 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

## MAATSKAPPYPROFIEL

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 250 authorised dealers and 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 range of implements, and our ongoing program 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 implements. 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 a long time!

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).

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.

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 grasbaanimplement-markte. Ons versprei ons produkte deur 'n netwerk van meer as 250 gemagtigde handelaars met ongeveer 110 toegewyde meganisasiehandelaars 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-implementreeks 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, kapploë en vleëlimplemente 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 lank in die land is!

Ons voer ook 'n reeks implemente in wat die plaaslik-vervaardigdes komplementeer. Dit sluit in die Amazone-strooiers, -spuite, -grassnyers en -grondbewerkings-implemente (uit Duitsland).

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 demonstree.
- 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 verbonde.

- 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	
				F80	3y	
			PTO shafts	Imported	All	1y
		OEM parts	Falcon	All	2y	
	Dual-spindle Slashers Dual-spindle Haymakers® Flexwing Grassmulchers™ Fieldmulchers™ SD Mulchers Rotagang®	Gearboxes	Imported	All	1y	
				Falcon	F50	2y
			F60		1y	
			F80		2y	
			PTO shafts	Imported	All	1y
			OEM parts	Falcon	All	1y
	Flail implements	Gearboxes	Imported	All	1y	
		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		
Bale Grab	OEM parts	Falcon	All	1y		
Amazone	Spreaders Sprayers Soil Tillage Turf equipment	All	Amazone	All	1y	

## PRODUCT RANGE

## PRODUKREEKS

Falcon Flail Cutters represent a range of universal implements intended for a wide range of cutting applications. This includes pasture maintenance, mulching of prunings in orchards, general bush clearing, shredding of maize stubble and maintenance of roadways and public amenities.

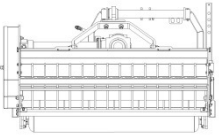
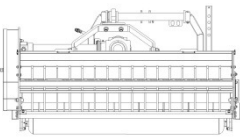
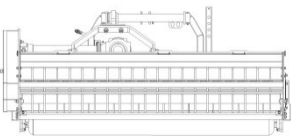
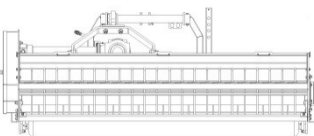
Due to their horizontal layout and enclosed cutting chamber, these implements provide predictable and consistent results with high levels of personal safety.

- Available in a range of sizes having working widths from 1.5 - 2.3 m, they are suitable for tractors between 35 - 60 kW.
- All 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 hydraulically-operated off-set hitch facility is provided on all models, allowing cutting up to boundaries and fence lines as well as providing access for the implement beneath low-hanging foliage.
- 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.

Falcon-vleëlsnyers verteenwoordig 'n reeks universele implemente wat vir 'n wye spektrum sny-aanwendings ontwerp is. Dit sluit in weidinginstandhouding, die mulch van snoeisels in boorde, algemene bosopruiming, opkap/mulch van mielie-/koringreste, en die instandhouding van paaie en openbare geriewe.

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

- Beskikbaar in 'n verskeidenheid groottes met werkswydtes van 1.5 tot 2.3 m, en daardeur geskik vir trekkers 35 - 60 kW.
- Alle modelle mag met hamers of lemme toegerus word afhangend van die beoogde gebruik.
- Die implement kan gestel word om ontlading van verwerkte materiaal maksimaal te versprei of maksimaal bymekaar te hou.
- 'n Hidrouliese kontrahaak word op alle modelle voorsien, wat dit moontlik maak om tot by grense en heinings te sny en ook toegang onder laaghangende plantegroei toe te laat.
- 'n V-band-aandryfstelsel verhoed meganiese ooreising, terwyl 'n ingeboude vryloopmeganisme spoedvermindering by afskakeling beheer.

Profile	Model / (Part No.)	Working width <sup>(1)</sup> (mm)	W x L x H (mm)			Off-set, Max. <sup>(2)</sup> (mm)	Blade / Hammer <sup>(3)</sup> (qty)	Mass (kg)	Power, Max. (kW)
	F150 (A0102)	1500	1710	1175	1020	710	42 14	615	35 - 50
	F170 (A0103)	1700	1910	1175	1020	910	48 16	651	35 - 50
	F210 (A0105)	2100	2310	1175	1020	1310	60 20	717	40 - 60
	F230 (A0106)	2300	2510	1175	1020	1510	66 22	751	40 - 60
Model	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> (hoev.)	Massa (kg)	Krag, Maks. (kW)

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

(2) From tractor PTO centreline to right-hand edge of cut / Vanaf middellyn van trekker se kragaftakker-as tot regterhandse snyrand.

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

## 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 standard 3-point agricultural hitch facility for attachment to the tractor.

- ✔ After attaching the implement to the tractor hitch, lower the implement such that the rear roller is in contact with the ground. Adjust the tractor 3-point hitch top link (Fig. 1-A) to level the implement in relation to ground level (Fig. 1-B).
- ✔ Lift the implement to an acceptable transport height and operate the hitch offset facility to the extremities of its travel, 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.

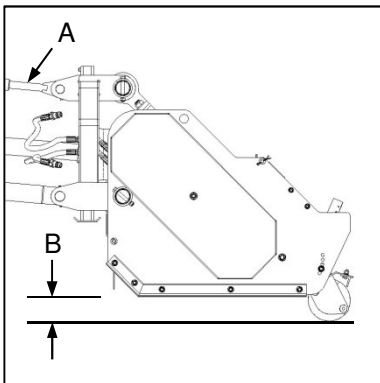


Fig. 1

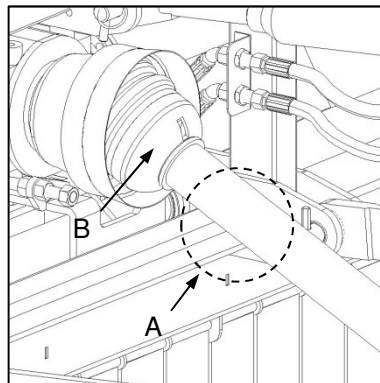


Fig. 2

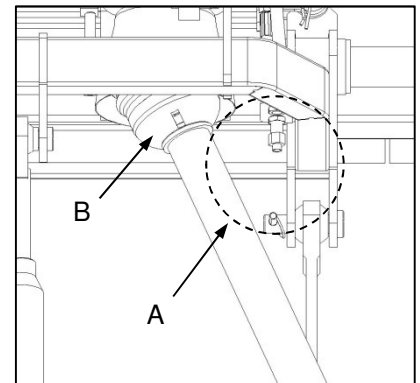


Fig. 3

### 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

### Koppel van die implement aan die trekker

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

Die implement is toegerus met 'n standaard 3-punt-haak om dit aan die trekker te koppel.

- ✔ Laat sak die implement nadat dit aan die trekker gehaak is totdat die agterste roller aan die grond raak. Verstel die 3-punt-haak se boonste koppelstuk (Fig. 1-A) om die implement gelyk met die grond te kry (Fig. 1-B).
- ✔ Lig die implement tot 'n aanvaarbare vervoerhoogte en beweeg die haak tot by die uiterste punte om seker te maak dat die implement aan geen deel van die trekker raak nie.
- ✔ Verstel die 3-punt-haak se stabiliseerderarms om enige oormatige laterale beweging van die implement tydens vervoer te voorkom.
- ✔ Stel die trekker se 3-punt-haak se hysarms om vry te kan beweeg sodat onafhanklike beweging van die arms tydens sny moontlik is.

### Installering van die kragtakkeras

- ⚠ Verseker behoorlike inskakeling tussen die kragtakkeras se koppelstukke en die inset- en leweringssasse aan die implement en die trekker.
- ⚠ Verseker voldoende oorvleueling van die kragtakkeras se buise in die werksposisie.
- ⚠ Moenie die gespesifiseerde kragtakkeras-spoed oorskry nie.
- ⚠ Moenie die implement bedryf sonder dat kragtakkeras-skerms in posisie en in 'n goeie toestand is nie. Antirotasie-kettings moet aangeheg wees.
- ⚠ Vervang beskadigde of vermiste kragtakkeras-skerm-onderdele slegs met oorspronklike onderdele.



loose fitting clothing to prevent entanglement.

Due to the many variations in tractor and implement hitch configurations, it is likely that the supplied PTO shaft 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 operate the hitch offset facility to both extremities of its travel. Ensure that there is no contact between the PTO shaft and any part of the implement (Fig. 2-A / 3-A).
- ✔ Ensure that universal joint operating angles (Fig. 2-B / 3-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 adjustment

- ⚠ 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.

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

- ✔ To set working height loosen the roller carrier pivot bolt (Fig. 4-A) while removing the height setting bolt (Fig. 4-B) completely.
- ✔ Using the tractor 3-point hitch, set the implement at the required working height and adjust the roller position by selecting an appropriate bolt hole. Be sure to select similar hole positions at both adjustment points.

When fitted, the position of the tines should be adjusted in relation to the selected operating height of the implement.

- ⚠ Moenie naby die draaiende kragaftakkeras kom nie en verhoed lospassende klere om verstrengeling te vermy.

Vanweë die talle variasies in trekkers en implemente se haakkonfigurasies, sal die kragaftakkeras wat verskaf is, waarskynlik verkort moet word om by die werksafstand tussen die trekker en die implement te pas.

- ✔ Verwys na die vervaardiger se instruksies wat saam met die kragaftakkeras voorsien is voordat die as tot die gepaste lengte gesny word.
- ✔ Na installering van die kragaftakkeras moet die implement tot 'n aanvaarbare vervoerhoogte gelig word en die haak na beide uiterste punte beweeg word. Verseker dat daar geen kontak tussen die kragaftakkeras en enige deel van die implement is nie (Fig. 2-A en 3-A).
- ✔ Verseker dat kruiskoppelingwerkshoeke (Fig. 2-B en 3-B) nie oorskry word nie en dat daar geen oorkompressie of oorverlenging van die kragaftakkeras plaasvind nie.
- ⊖ Alle kragaftakkeraste wat voorsien word saam met Falcon produkte word verskaf met 'n handleidingsboek (IM-03-2008) wat alle aspekte van installasie, operationele verbruik, onderhoud en veiligheidsmaatreëls i.v.m. die kragaftakkeras verduidelik. Die dokument vorm deel van die handleiding en sal aangeheg word aan elke kragaftakkeras wat op elke nuwe implement deur Falcon voorsien word.

### Instelling en verstelling

- ⚠ Moenie enige instandhouding- of ander werk aan die implement uitvoer 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 nog aan die trekker se 3-punthaak hang, en sonder addisionele steun vir die implement nie.

Die werkshoogte van die implement word gestel deur die posisie van die agterste roller in verhouding tot die implement self te verstel.

- ✔ Om die werkshoogte te stel, maak die rollerdraer se spilbout (Fig. 4-A) los en verwyder die hoogte-instellingsbout heeltemal (Fig. 4-B).
- ✔ Gebruik die trekker se 3-punt-haak om die implement op die vereiste hoogte te stel, en verstel die rollerposisie deur 'n gepaste boutgat te vind. Verseker dat dieselfde boutgatposisies aan beide verstelpunte gekies word.

Wanneer die tande aangebring is, moet die posisie daarvan in verhouding tot die gekose werkshoogte van die implement ingestel word.

- ✔ Remove the R-clip (Fig. 5-A), lift or lower the tine to its required position and re-insert the R-clip into an appropriate hole (Fig. 5-B). Ensure that all tines are adjusted equally.

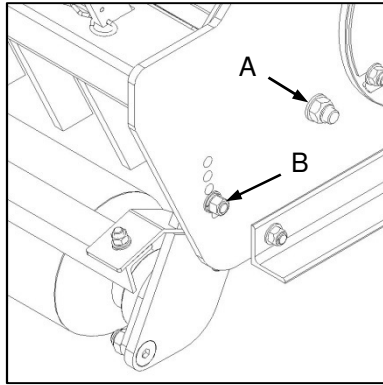


Fig. 4

- ✔ Verwyder die R-knip (Fig. 5-A), lig of laat sak die tande tot die vereiste posisie en plaas die R-knip in 'n geskikte gat terug (Fig. 5-B). Verseker dat al die tande dieselfde gestel is.

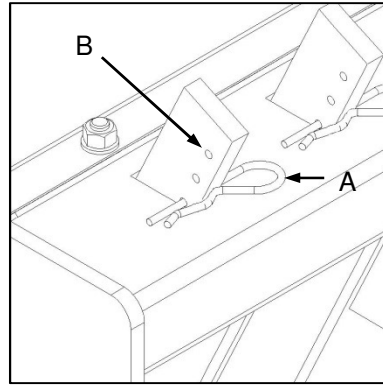


Fig. 5

- ⊖ Note that there are 5 available tine positions which correspond with the 5 available roller height settings.

- ⊖ Let op dat daar 5 beskikbare tandposisies is wat met die 5 beskikbare rollerhoogtestellings ooreenstem.

#### Lubrication and oil levels

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

- ✔ The gearbox (Fig. 6-A) and extension housing (Fig. 6-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.

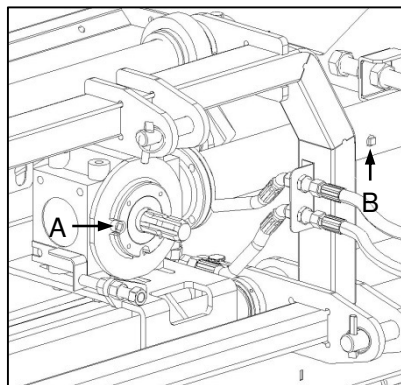


Fig. 6

#### Smering en olievlakke

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

- ✔ Die ratkas (Fig. 6-A) en verlengomhulsel (Fig. 6-B) beskik oor olieulpunte. Olievlakke moet by albei punte nagegaan word.
- ✔ Verwyder die vulprop en voeg olie by totdat dit die onderste rand van die gat bereik.

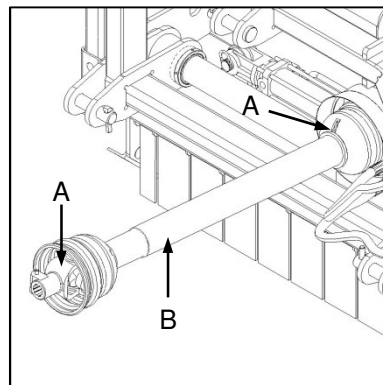


Fig. 7

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

- ✔ Apply grease to the universal joints (Fig. 7-A) and telescopic tubes (Fig. 7-B) of the PTO shaft.
- ⊖ For additional information, refer to the PTO manufacturer's handbook supplied with the implement.

Verseker dat die kragaftakkeras behoorlik gesmeer is voordat die implement gebruik word.

- ✔ Ghries die kruiskoppelings (Fig. 7-A) en teleskopiese buise (Fig. 7-B) van die kragaftakkeras.
- ⊖ Verwys vir verdere inligting na die kragaftakkeras 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.

- ➊ 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.
- ➋ Refer also to operational information relevant to the tractor concerned, including handbooks, operators 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 should 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 shaft.
3. Settings and adjustment.
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, 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.

Specifically in mulching and shredding applications (typically involving prunings and other solid materials), proper preparation of the material to be processed will result in more consistent results and extend the service life of the implement.

- ✔ Identify and discard any material of a diameter in excess of the recommended maximum.
- ✔ Where possible, prunings, branches and other solid materials should be cut as short as practically possible to prevent snagging and blockages.
- ✔ Avoid bifurcated (forked) off-cuts as these are also

## WERKING

### 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 bediening te doen het.

- ➊ Toepaslike regulasies sluit in, maar is nie beperk 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 nie.
- ➋ Verwys ook na tersaaklike bedryfsinligting oor die betrokke trekker, insluitend handboeke, operateurshandleidings, veiligheid en waarskuwingskennisgewings en -plakkers.

### Vorbereiding vir gebruik

⚠ Slegs toepaslik opgeleide persone moet die implement bedryf, en geen persoon moet die implement bedryf sonder om eers die inhoud van hierdie handleiding te bestudeer en volledig onder die knie te kry nie.

Die implement moet telkens eers deeglik geïnspekteer en voorberei word voor dit gebruik word en met verwysing na prosedures wat in ander dele van 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, of enige ander obstruksie wat die trekker mag destabiliseer of die implement kan beskadig. Verwyder hierdie hindernisse waar moontlik, of anders moet hierdie gebiede gedurende sny vermy word.

Veral by mulch- en kerfaanwendings (waarby tipies snoeisels en ander soliede materiale betrokke is), sal behoorlike voorbereiding van die materiaal wat verwerk gaan word, meer konsekwente resultate lewer en die dienslewe van die implement verleng.

- ✔ Identifiseer en verwyder enige materiaal met 'n groter deursnee as die aanbevole maksimum.
- ✔ Waar moontlik moet snoeisels, takke en ander soliede materiale so kort as prakties moontlik gesny word om vashaak en blokkasies te verhoed.
- ✔ Vermoed gevurkte afvalstukke – hulle sal meer waarskynlik

more likely to snag on the equipment and cause blockages.

- ✔ Where possible, arrange material in an ordered fashion, parallel to the direction of travel of the implement and within the working width of the implement.
- ⊖ As a guide, prepared material lengths should be approximately equal to the effective rotating diameter of the cutting gear (in the case of this implement, ±465 mm).
- ⊖ Use the same approximation for determining the maximum stacked height of prepared material to be encountered by the implement.

### Operating the implement

- ⚠ Never approach or allow any person to approach the implement unless the implement has been lowered to the ground, the tractor engine is shut off, 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 input 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, dependant 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, bush clearing and mowing.

- ✔ Discharge chute in the open position (Fig. 1-A), allowing cut material to be discharged over the rear

aan die toerusting vashaak en blokkasies veroorsaak.

- ✔ Rangskik materiaal waar moontlik op 'n geordende wyse, parallel met die rigting waarin die implement beweeg en binne die werkswydte van die implement.
- ⊖ As 'n riglyn moet voorbereide materiaallengtes ongeveer dieselfde wees as die effektiewe draaieursnee van die snymeganisme (in die geval van hierdie implement, ± 465 mm).
- ⊖ Gebruik dieselfde benaderde berekening om die maksimum stapelhoogte van voorbereide materiaal wat die implement moet hanteer, te bepaal.

### Bedryf van die implement

- ⚠ Moet nooit die implement benader, of toelaat dat enigiemand anders dit doen, tensy die implement op die grond laat sak is, die trekkerenjin afgeskakel is, die handrem vas is en die implement se snymeganisme heeltemal tot stilstand gekom het nie.
- ⚠ Toeskouers moet aktief ontmoedig word. Snywerk moet onmiddellik gestaak word as enige persoon die werksgebied benader of dit betree.
- ⚠ Verseker dat die implement slegs teen die gespesifiseerde kragaftakkeras-spoed bedryf word.
- ⚠ Moenie die draaiende kragaftakkeras nader nie en verhoed verstrengeling deur loospasende klere te vermy.
- ⊖ Versuim om die implement teen die gespesifiseerde kragaftakkeras-spoed te bedryf kan onveilige bedryfstoestande skep, en ook strukturele en meganiese onklaarraking veroorsaak wat nie deur die waarborg gedek word nie.

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

- ⊖ Weens die groot wisseling in materiaaleienskappe en bedryfstoestande 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 lemluwe verkort, asook die algehele lewensduur van die implement.
- ⊖ Alle aanbevole materiaalgroottes word bloot as 'n riglyn bedoel.

#### ➤ Ontladingmodus (Fig. 1)

Gepas vir algemene sny van gras en bosopruiming.

- ✔ Afvoergeut in die oop posisie (Fig. 1-A), wat gesnyde materiaal toelaat om onmiddellik nadat dit gesny is, bo-oor

roller immediately after being cut.

- ✔ Tines are generally not required in this configuration and should be removed to prevent obstruction of the discharge area (Fig. 1-B).
- ⊖ In this configuration, it is recommended that the implement be used to process material up to a maximum diameter of 25 mm.

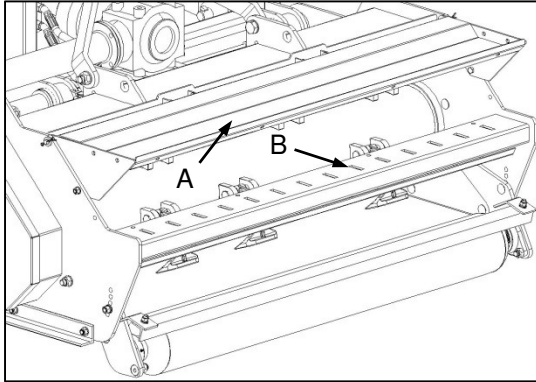


Fig. 1

die agterste roller ontlaai te word.

- ✔ Tande word oor die algemeen nie in hierdie konfigurasie vereis nie, en moet verwyder word om obstruksie van die ontlaaigebied te verhoed (Fig. 1-B).
- ⊖ In hierdie konfigurasie word dit aanbeveel dat die implement gebruik word om materiaal tot 'n maksimumdeursnee van 25 mm te verwerk.

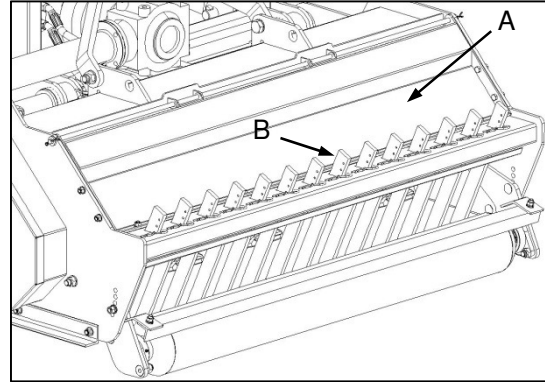


Fig. 2

### ➤ Containment mode (Fig. 2)

Appropriate to mulching and shredding of cuttings and prunings, as well as applications where containment of cut material is required for safety reasons.

- ✔ Discharge chute in the closed position (Fig. 2-A), allowing heavy materials to be repeatedly processed.
- ✔ Tines should remain in position in this configuration to provide added containment of materials until sufficiently processed to pass between the tines (Fig. 2-B).

- ⊖ In this configuration, it is recommended that the implement be used to process material up to a maximum diameter of 50 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 alternate hole available at each end (Fig. 4-A).

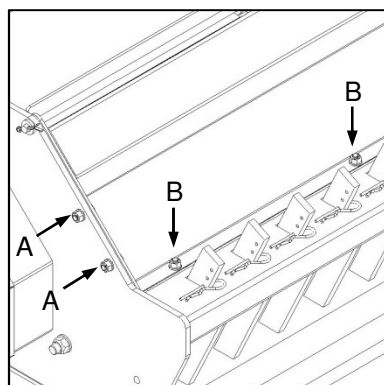


Fig. 3

### ➤ Behoudmodus (Fig. 2)

Gepas vir die mulch en opkerf van snysels en snoeisels, asook toepassings waar behoud van gesnyde materiaal om veiligheidsredes nodig is.

- ✔ Afvoergeut in die geslote posisie (Fig. 2-A), wat toelaat dat swaar materiale herhaaldelik verwerk word.
- ✔ Tande moet in hierdie konfigurasie in posisie bly om ekstra behoud van materiale te verskaf totdat dit genoegsaam verwerk is om tussen die tande deur te kan beweeg (Fig. 2-B).

- ⊖ In hierdie konfigurasie word dit aanbeveel dat die implement gebruik word om materiaal tot 'n maksimumdeursnee van 50 mm te verwerk.

Die afvoergeutposisie moet ooreenkomstig met die gekose bedryfskonfigurasie gestel word.

- ✔ Verwyder alle boute wat die afvoergeut aanheg (Fig. 3-A en B).
- ✔ Lig die afvoergeut op en hou dit in posisie deur die alternatiewe boutgat aan elke punt te gebruik (Fig. 4-A).

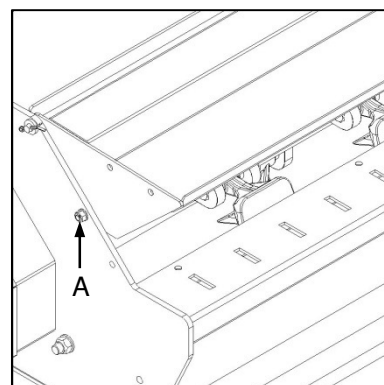


Fig. 4

The implement is provided with a remotely-operated hydraulic off-set facility which allows adjustable positioning in to the right of the centreline of the tractor. This can assist in cutting outside of the extremities of the tractor, against fence lines or under low-hanging obstructions.

- ✔ Connect the hydraulic hoses to the tractor auxiliary hydraulic power outlets.
- ✔ Lift the implement clear of the ground and set the desired offset position (Fig. 6 / Fig. 7).
- ✔ Standard position (Fig. 6)  $S1 = \text{Working width } (W) - 500 \text{ mm}$ .
- ✔ Maximum offset position (Fig. 7)  $S2 = \text{Working width } (W) - 1000 \text{ mm}$ .

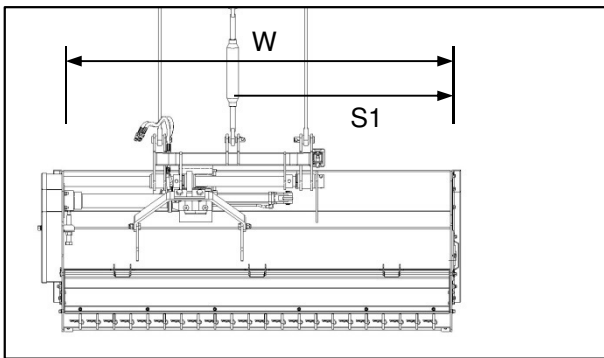


Fig. 6

- ⊖ It is recommended that the implement not be transported in an offset position as this may result in excessive unbalanced loading of the tractor 3-point hitch, as well as damage and breakages not covered under warranty.

### 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 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 idle speed.
- ✔ Set the throttle to provide the specified PTO input speed and lower the implement to the working position.
- ✔ Place the tractor in a low gear and begin cutting.
- ⊖ Unless otherwise indicated, the specified implement PTO input speed shall be 540 r/min.
- ⊖ On tractors with an "economy" PTO drive option (indicated as 540E on the tractor tachometer) refer to the tractor operators manual in selecting the relevant PTO gearbox ratio on the tractor to maintain the specified implement PTO input speed.

Die implement is toegerus met 'n afstandbeheerde hidrouliese kontrahaak wat verstelbare posisionering inwaarts na regs van die middellyn van die trekker toelaat. Dit kan help om buite die uiterstes van die trekker te sny, teen heinings of onder laaghangende obstrukties.

- ✔ Koppel die hidrouliese pype aan die trekker se hulp hidrouliese kragpunte.
- ✔ Lig die implement van die grond af en stel die kontrahaak in die verlangde posisie (Fig. 6 en Fig. 7).
- ✔ Standaardposisie (Fig. 6)  $S1 = \text{Werkswydte } (W) - 500 \text{ mm}$ .
- ✔ Maksimum-kontrahaakposisie (Fig. 7)  $S2 = \text{Werkswydte } (W) - 1000 \text{ mm}$ .

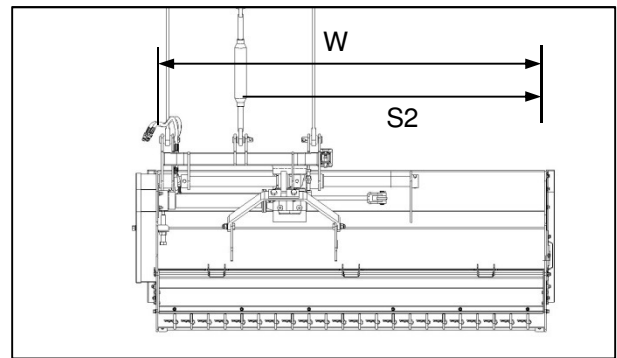


Fig. 7

- ⊖ Dit word aanbeveel dat die implement nie in 'n kontraposisie vervoer word nie, aangesien dit oormatige ongebalanseerde lading op die trekker se 3-punt-haak kan veroorsaak, asook skade en brekasies wat nie onder die waarborg gedek word nie.

### Die snyproses

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

- ✔ Skakel die trekkerenjin aan met die implement wat aan die 3-punt-haak hang en kies die vereiste haakposisie.
- ✔ Laat die implement sak sodat dit net bo die grond is en kry die kragaftakker op luierspoed.
- ✔ Stel die versneller om teen die gespesifiseerde kragaftakkerspoed te loop en laat sak die implement na die werksposisie.
- ✔ Sit die trekker in 'n lae rat en begin sny.
- ⊖ Behalwe as anders aangedui, is die gespesifiseerde implement se kragaftakkerinsetspoed 540 r/min.
- ⊖ By trekkers met 'n "ekonomie"-kragaftakker-dryfopsie (aangedui as 540E op die trekker se toereter) verwys na die trekkerbestuurder se handleiding vir die kies van die tersaaklike kragaftakkerratkas-verhouding om die gespesifiseerde implement se kragaftakkerinsetspoed te handhaaf.

### 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 cutters 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 as 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 selected 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 the hydraulic offset facility such that the implement is positioned as near as possible to the centreline of the tractor.
- ✔ 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.

### Beheer van die snyproses.

- ✔ Die trekker se vorentoe spoed moet deur ratseleksie en NIE enjin spoed beheer word nie.
- ✔ Trekkerenjinspoed moet vooraf gestel word om die vereiste kragaftakkeras-spoed 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).
- ✘ Vleëlsnyers maak staat op die momentum van die vleëlsnyers of -lemme vir doeltreffende sny en minimalisering van die lading op die sny meganisme, 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 wringkragsvlakke lei, asook moontlike ratkas- en sny meganisme-skade wat nie deur die waarborg gedek word nie.
- ✘ Vorentoe spoed, materiaalvolumes en materiaal grootte moet aangepas word om onnodige verkorting van die toerusting se lewensduur, asook ander skade en brekies wat nie onder die waarborg gedek word nie, te verhoed.

### Vervoer en berging

Die implement is ontwerp om aan 'n standaard 3-punt landbou trekkerhaak vervoer te word.

- ✔ Verseker dat die implement hoog genoeg gelig is om tydens vervoer bo-oor enige hindernisse te kan beweeg.
- ✔ Verstel die hidrouliese kontrahaak só dat die implement so na as moontlik aan die middellyn van die trekker geposisioneer is.
- ✔ 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 bonsing en gevolglike skade aan monterpunte en ander ladingdraende komponente te verhoed.

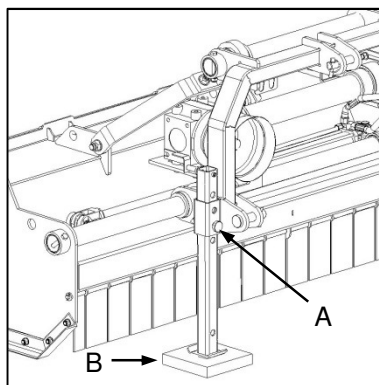


Fig. 5

The implement is equipped with a parking stand to facilitate easier hitching and un-hitching to/from the tractor.

- ✔ Before lowering the implement to the ground, adjust the hydraulic off-set facility such that the parking stand is nearest to the centre of the implement.
- ✔ Extend the parking jack and select an appropriate pin hole (Fig. 5-A) to allow the implement to assume a level position.
- ✔ In soft ground conditions, it is recommended to use a wooden block (Fig. 5-B) for added stability.

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

- ✔ Voordat die implement op die grond laat sak word, verstel die hidrouliese kontrahaak só dat die parkeerstaander die naaste aan die middel van die implement is.
- ✔ Verleng die parkeerdromkrag en kies 'n gepaste pengaatjie (Fig. 5-A) om die implement gelyk te laat staan.
- ✔ Dit word aanbeveel dat 'n houtblok (Fig. 5-B) vir ekstra stabiliteit gebruik word waar die grond sag is.



## MAINTENANCE

### Routine maintenance

- ⚠ 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, 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 Chart (Tab. 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), rear roller bearings (Fig. 3-A), hitch frame bushes and rails (Fig. 5-A / Fig. 6-A).
- ✔ Check the drive belt tension as described in this chapter.

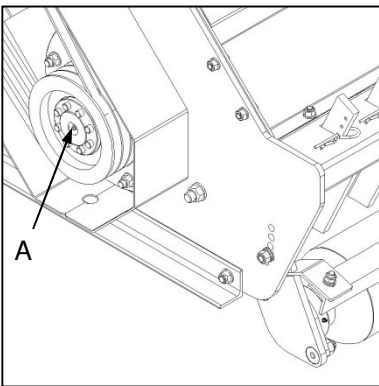


Fig. 1

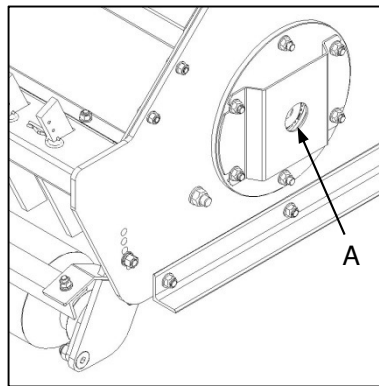


Fig. 2

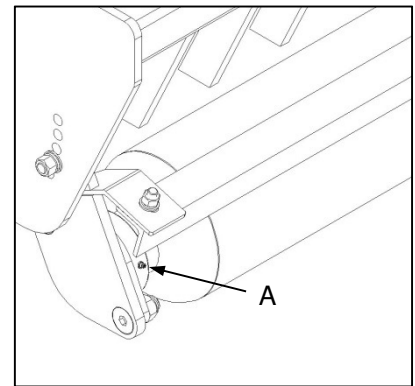


Fig. 3

- ✔ Check all fasteners for tightness. Pay special attention to safety-critical fasteners such as blade bolts and nuts (Fig. 4-A), hitch frame rail bolts (Fig. 5-B / 6-B) and hitch frame stay bolts (Fig. 6-C).

## INSTANDHOUDING

### Roetine-instandhouding

- ⚠ Moenie instandhouding of enige ander werk aan die implement doen tensy die trekkerenjin afgeskakel, die handrem opgetrek en die sleutel uit die aansitterpunt verwyder is nie.
- ⚠ Moenie instandhouding- of enige ander werk aan die implement doen terwyl dit 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 onderdeel-inligting in hierdie handleiding.

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

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

#### > Voor elke gebruik

Word ten minste daagliks in tye van deurlopende gebruik uitgevoer. Anders voor elke geleentheid waar die implement gebruik word.

- ✔ Gaan transmissie-olievlakke na en vul aan indien dit nodig.
- ✔ Ghries die kragaftakkeras-kruiskoppelings en teleskopiese buise.
- ✔ Ghries draaiende en skuivende komponente. Dit sluit rotorkoeëllaars (Fig. 1-A en Fig. 2-A), agterste rollerkoeëllaars (Fig. 3A), haakraambusse en stawe in (Fig. 5-A en Fig. 6-A).
- ✔ Kontroleer die dryfbandspanning soos in hierdie hoofstuk beskryf word.

- ✔ Verseker dat alle hegstukke vas is. Gee spesiale aandag aan veiligheidskritieke hegstukke soos lemboute en -moere (Fig. 4-A), haakraamstaafboute (Fig. 5-B en Fig. 6-B) en haakraamankerboute (Fig. 6-C).

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

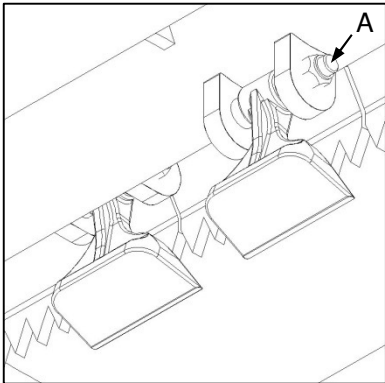


Fig. 4

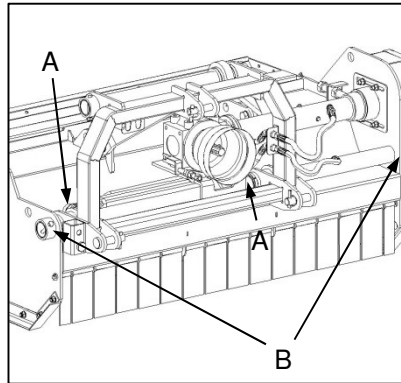


Fig. 5

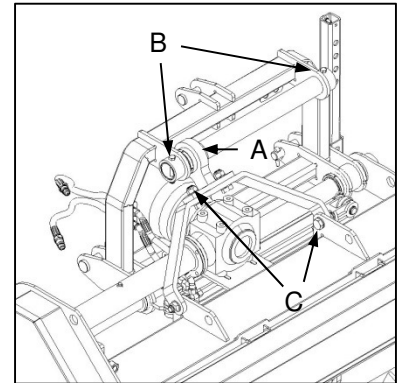


Fig. 6

- ✔ Inspekteer lemme vir tekens van slytasie en slyp of vervang indien nodig. Wanneer met die hand geslyp word, verseker dat die skerp gemaakte lemme eenders lyk en dieselfde weeg om ongebalanseerde rotasie te voorkom.
- ✔ Verseker dat alle skutplate en ander veiligheidstoestelle in posisie is, behoorlik vas en in 'n goeie toestand.

- ✔ Inspect all mounting pins for signs of wear. Check all linchpins, 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.

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

#### ➤ 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 put to use, or before long-term storage (longer than 1 month).

- ✔ 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 damages incurred during use. Note these for attention and carry out rectification prior to next use.
- ✔ 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 state.
- ✔ Prior to long-term storage check oil levels and thoroughly lubricate all recognised lubrication points.
- ✔ Store the implement in a clean, dry, weather-protected area.

- ✔ Inspekteer alle monteringspenne 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.

⊖ Die rotor-as aan hierdie implement is 'n presisiegebalanseerde onderdeel. Ongemagtigde wysiging van of herstelwerk aan hierdie item kan tot ongebalanseerdheid en gevolglike strukturele of meganiese onklaarraking lei wat nie deur die waarborg gedek word nie.

#### ➤ Na elke gebruik

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

- ✔ Verwyder alle vuiligheid van die implement, veral onder die dek. Drukspuitskoonmaak moet versigtig gedoen word, veral naby seëls, luggate, ghriespunte en kragaftakkeras-komponente.
- ✔ Inspekteer die implement deeglik vir enige beskadiging tydens gebruik. Merk dit aan vir aandag en herstel voor dit weer gebruik word.
- ✔ Kontroleer die V-band-aandryfstelsel vir tekens van gly en slytasie - gewoonlik swart rubberreste in die dryfbandomhulsel, en moontlik selfs 'n brandreuk.
- ✔ Verseker dat alle veiligheids- en waarskuwingsplakkers in posisie, sigbaar en leesbaar is.
- ✔ Voor langtermynberging moet olievlakke in die implement nagegaan en alle 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, 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 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.

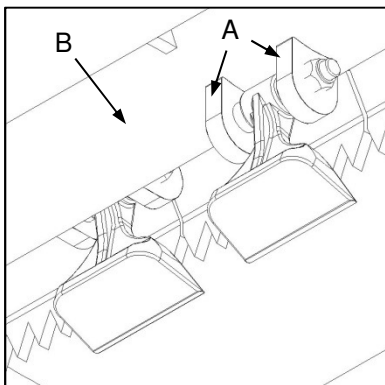


Fig. 7

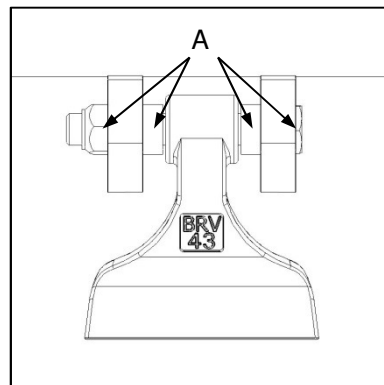


Fig. 8

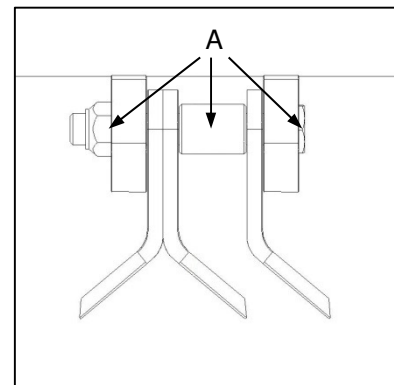


Fig. 9

- ⊖ 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 baseplate (Fig. 11-A) and 4x gearbox mounting bolts located

## Lemvervanging

- ⚠ Die snymeganisme aan hierdie implemente draai teen 'n uiters hoë spoed. Gebrekkige instandhouding of herstelwerk kan tot brekasies 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. Hoëspoedbrekasie van draaiende onderdele kan ernstige skade, beserings of dood veroorsaak.

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 en Fig. 9-A).
- ✔ Gaan lemmonteringskloue (Fig. 7-A) na vir tekens van slytasie, verwringing, rekking of krake. Ernstige slytasie of beskadiging aan die lemmonteerstukke mag vervanging van die hele rotor noodsaak (Fig. 7-B).
- ✔ Na installering van nuwe snymeganisme-onderdele, kry die implement op werkspoed vir 'n visuele inspeksie vir oormatige vibrasie.

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

## Verstelling van dryfband

- ⊖ Dryfbandspanning moet halfpad tussen die katrolasentrums gekontroleer word (Fig. 10-A). Speling van  $\pm 20$  mm behoort met eenvinger-druk 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

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

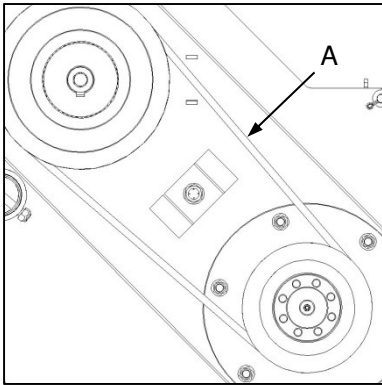


Fig. 10

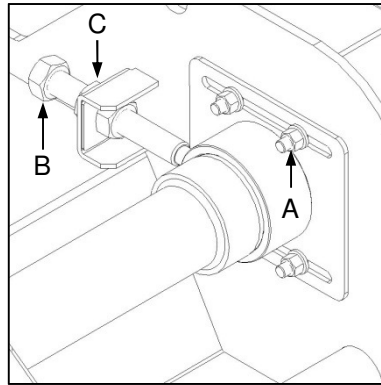


Fig. 11

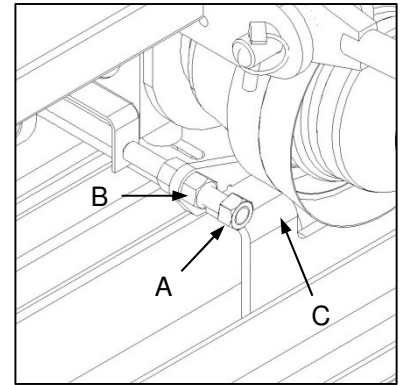


Fig. 12

ratkasmonteerbout onder die ratkassteunplaat (Fig. 12-C).

- ✔ Laat skiet die spannerleiskroef-sluitmoer (Fig. 11-C) en verstel die leiskroef (Fig. 11-B) om die vereiste bandspanning te verkry.
- ✔ Die belyning van die ratkas moet gedurende die bandspanningsproses gehandhaaf word. Gebruik die ratkasposisionering-leiskroef en sluitmoer (Fig. 12-A en B) vir hierdie doel.

- ✔ Be sure to re-tighten all locknuts and mounting bolts on completion of belt tension adjustment.
- ⊖ Drive belts displaying excessive wear, fraying or cracking should be replaced immediately.

- ✔ Verseker dat alle sluitmoere en monteerbout na verstelling van die dryfbandspanning weer styf vasgedraai word.
- ⊖ Dryfbande wat tekens van oormatige slytasie, rafeling of barste toon, moet onmiddellik vervang word.

Tab. 1

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

Class / Klas	4.6		8.8		10.8		12.9	
	Wet / Nat	Dry / Droog	Wet / Nat	Dry / Droog	Wet / Nat	Dry / Droog	Wet / Nat	Dry / Droog
M6	4.8	6.0	9.0	11.0	13.0	17.0	15.0	19.0
M8	12.0	15.0	22.0	28.0	32.0	40.0	37.0	47.0
M10	23.0	29.0	43.0	55.0	63.0	80.0	75.0	95.0
M12	40.0	50.0	75.0	95.0	110.0	140.0	130.0	165.0
M14	63.0	80.0	120.0	150.0	175.0	225.0	205.0	260.0
M16	100.0	125.0	190.0	240.0	275.0	350.0	320.0	400.0
M18	135.0	175.0	260.0	330.0	375.0	475.0	440.0	560.0
M20	190.0	240.0	375.0	475.0	530.0	675.0	625.0	800.0
M22	260.0	330.0	510.0	650.0	725.0	925.0	850.0	1075.0
M24	330.0	425.0	650.0	825.0	925.0	1150.0	1075.0	1350.0
M27	490.0	625.0	950.0	1200.0	1350.0	1700.0	1600.0	2000.0
M30	675.0	850.0	1300.0	1650.0	1850.0	2300.0	2150.0	2700.0
M33	800.0	1150.0	1750.0	2200.0	2500.0	3150.0	2900.0	3700.0
M36	1150.0	1450.0	2250.0	2850.0	3200.0	4050.0	3750.0	4750.0

## TROUBLESHOOTING

## FOUTOPSPORING

### General troubleshooting

The table below (Troubleshooting Guide - ENG) offers guidance in remedying commonly encountered problems. If a remedy is not possible, further assistance should be sought from an authorised Falcon dealer.

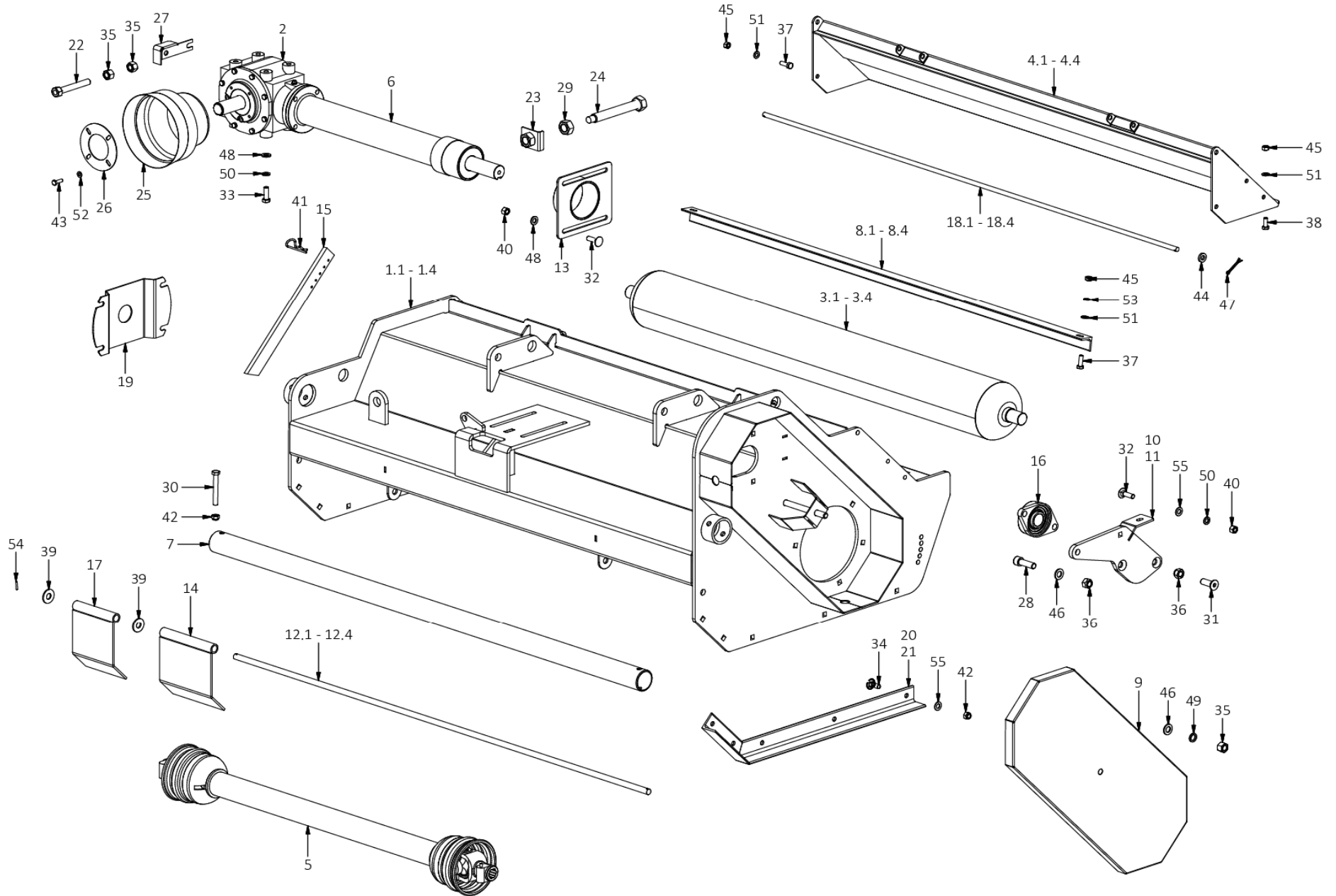
### Algemene foutopsporing

Die tafel onder (Foutopsporingsgids - AFR) bied riglyne vir die oplos van probleme wat algemeen voorkom. As 'n fout nie reggestel kan word nie, moet verdere hulp van 'n gemagtigde Falcon-handelaar bekom word.

Troubleshooting Guide - ENG		
Observation	Probable cause	Available remedy
Uneven cut	Implement not level Worn, damaged or bent blades	Adjust operating height Sharpen / replace blades
Poor material distribution	Material build-up under deck Implement not level Worn blades Wet / damp material	Clean Adjust operating height Sharpen / replace blades Await suitable conditions
Mechanical noise	Loose components Low gearbox oil level Drive belt slippage Blade / hammer recoil	Check all fasteners for tightness Check and adjust oil levels Check and adjust drive belt tension Reduce forward speed Check material weights / consistencies
Rapid blade wear	Blade contact with ground Incorrect PTO shaft speed Incorrect forward speed	Adjust operating height Maintain specified PTO speed Adjust forward speed
Poor cut quality	Excessive forward speed Drive belt slippage Worn blades	Adjust forward speed Check and adjust drive belt tension Sharpen / replace blades
Excessive vibration	Damaged / worn cutting gear Damaged PTO shaft	Replace damaged / worn parts Replace damaged parts

Foutopsporingsgids - AFR		
Waarneming	Waarskynlike oorsaak	Beskikbare regstelling
Oneweredige snit	Implement nie gelyk nie Geslyte, beskadigde of gebuigde lemme	Verstel snyhoogte Slyp/vervang lemme
Swak materiaalverspreiding	Materiaal-opbou onder dek Implement nie gelyk nie Geslyte lemme Nat/klam materiaal	Maak skoon Verstel snyhoogte Slyp/vervang lemme Wag vir geskikte toestande
Meganiese geraas	Los komponente Ratkasolievlak laag Dryfband gly Lem-/hamer-terugslag	Maak seker alle boute ens. is vas Maak seker olievlakke is reg Maak seker dryfbandspanning is reg Verminder vorentoe-spoed Maak seker materiaalgewig en -digtheid is reg
Vinnige lemslytasie	Lemkontak met grond Verkeerde kragaftakkeras-spoed Verkeerde vorentoe-spoed	Verstel snyhoogte Handhaaf gespesifiseerde kragaftakkeras-spoed Verstel vorentoe-spoed
Swak snitgehalte	Te hoë vorentoe-spoed Dryfband gly Geslyte lemme	Verstel vorentoe-spoed Maak seker dat dryfbandspanning reg is Slyp/vervang lemme
Uitermatige vibrasie	Beskadigde/geslyte snymeganisme Beskadigde kragaftakkeras	Vervang beskadigde/geslyte onderdele Vervang beskadigde onderdele

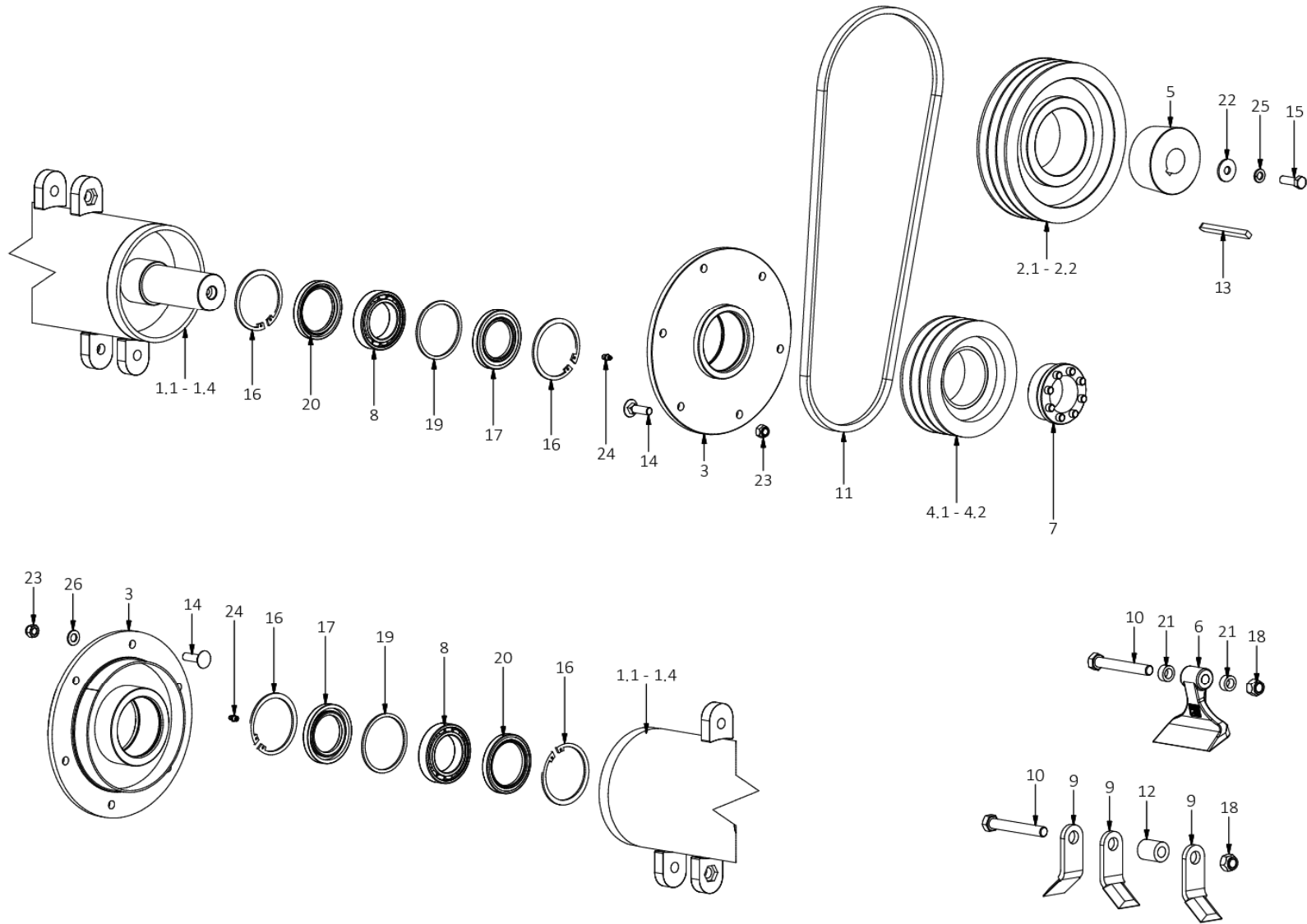
**Flail Cutter: Main Body**  
**1 = F150 (A0102) 2 = F170 (A0103) 3 = F210 (A0105) 4 = F230 (A0106)**



**Flail Cutter: Main Body**  
**1 = F150 (A0102) 2 = F170 (A0103) 3 = F210 (A0105) 4 = F230 (A0106)**

Item	Part No.	Description	1	2	3	4	Item	Part No.	Description	1	2	3	4
1.1	H5602	Deck 1500	1				23	H5661	Nut Captured	1	1	1	1
1.2	H5603	Deck 1700		1			24	H5662	Leadscrew M24x190	1	1	1	1
1.3	H5605	Deck 2100			1		25	M1141	PTO Counter-cone Rnd	1	1	1	1
1.4	H5606	Deck 2300				1	26	M5579	Plate 4-M8@PCD105 2.0 MS PLB0	1	1	1	1
2	M5650	Gearbox T311J Comer	1	1	1	1	27	H5665	Bracket Adjust	1	1	1	1
3.1	H5622	Roller 1500 D165.0	1				28	M51650	Hexagon Socket Head Cap Screw	2	2	2	2
3.2	H5623	Roller 1700 D165.0		1			29	M32418	Nut M24	1	1	1	1
3.3	H5625	Roller 2100 D165.0			1		30	M41290	Bolt M12x90HT	4	4	4	4
3.4	H5626	Roller 2300 D165.0				1	31	M51645	Cap screw M16 x 45 CSK	4	4	4	4
4.1	H5632	Cover Discharge 1500	1				32	M712040	Carriage bolt M12x40	6	6	6	6
4.2	H5633	Cover Discharge 1700		1			33	M41235	Bolt M12x35HT	5	5	5	5
4.3	H5635	Cover Discharge 2100			1		34	M712030	Carriage bolt M12x30	10	10	10	10
4.4	H5636	Cover Discharge 2300				1	35	M11640	Bolt + Nut M16x40HT	3	3	3	3
5	T601010CE112112	PTO shaft B6 1.2m + Clutch FF2	1	1	1	1	36	M61616	Nut Nyloc M16	6	6	6	6
6	M5651	Extension 780mm Comer	1	1	1	1	37	M41030	Bolt M10x30HT	6	6	6	6
7	H5620	Rail Sliding Lower	1	1	1	1	38	M41025	Bolt M10x25HT	4	4	4	4
8.1	H5692	Scraper 1500	1				39	M81603	Washer M16x40x3	9	10	12	13
8.2	H5693	Scraper 1700		1			40	M31209	Nut M12	6	6	6	6
8.3	H5695	Scraper 2100			1		41	M5235	R-clip 4mm	14	16	20	22
8.4	H5696	Scraper 2300				1	42	M61209	Nut Nyloc M12	12	12	12	12
9	H5649	Cover Belt drive	1	1	1	1	43	M40825	Bolt M8x25HT	4	4	4	4
10	H5656	Bearing carrier L Adjust	1	1	1	1	44	M5723	Washer 13x25x5 5.0	2	2	2	2
11	H5657	Bearing carrier R Adjust	1	1	1	1	45	M31007	Nut M10	10	10	10	10
12.1	H5684	Pin 1500 D16.0	1				46	M81602	Washer Flat M16x40x2	3	3	3	3
12.2	H5685	Pin 1700 D16.0		1			47	M1399	Split pin B4x60	2	2	2	2
12.3	H5687	Pin 2100 D16.0			1		48	M8577	Washer profiled 12.5x30x4.5	8	8	8	8
12.4	H5688	Pin 2300 D16.0				1	49	M91604	Washer Spring M16	1	1	1	1
13	H5658	Baseplate Tensioner Ext shaft	1	1	1	1	50	M91213	Washer Spring M12	6	6	6	6
14	H5653	Flap Safety Main	6	7	9	10	51	M81002	Washer Flat M10	10	10	10	10
15	H5655	Rake Adjust 40x12x400	14	16	20	22	52	M80803	Washer Flat M8	4	4	4	4
16	M0461	Bearing UCFL207	2	2	2	2	53	M91002	Washer Spring M10	2	2	2	2
17	H5654	Flap Safety End	2	2	2	2	54	M5243	Roll pin 4x25	2	2	2	2
18.1	H5642	Pin 1500 D12.0	1				55	M81202	Washer Flat M12	20	20	20	20
18.2	H5643	Pin 1700 D12.0		1									
18.3	H5645	Pin 2100 D12.0			1								
18.4	H5646	Pin 2300 D12.0				1							
19	M5799	Guard	1	1	1	1							
20	H5647	Skid runner L	1	1	1	1							
21	H5648	Skid runner R	1	1	1	1							
22	H5666	Leadscrew M16x110	1	1	1	1							

**Flail Cutter: Cutting Gear Assembly**  
**1 = F150 (A0102) 2 = F170 (A0103) 3 = F210 (A0105) 4 = F230 (A0106)**

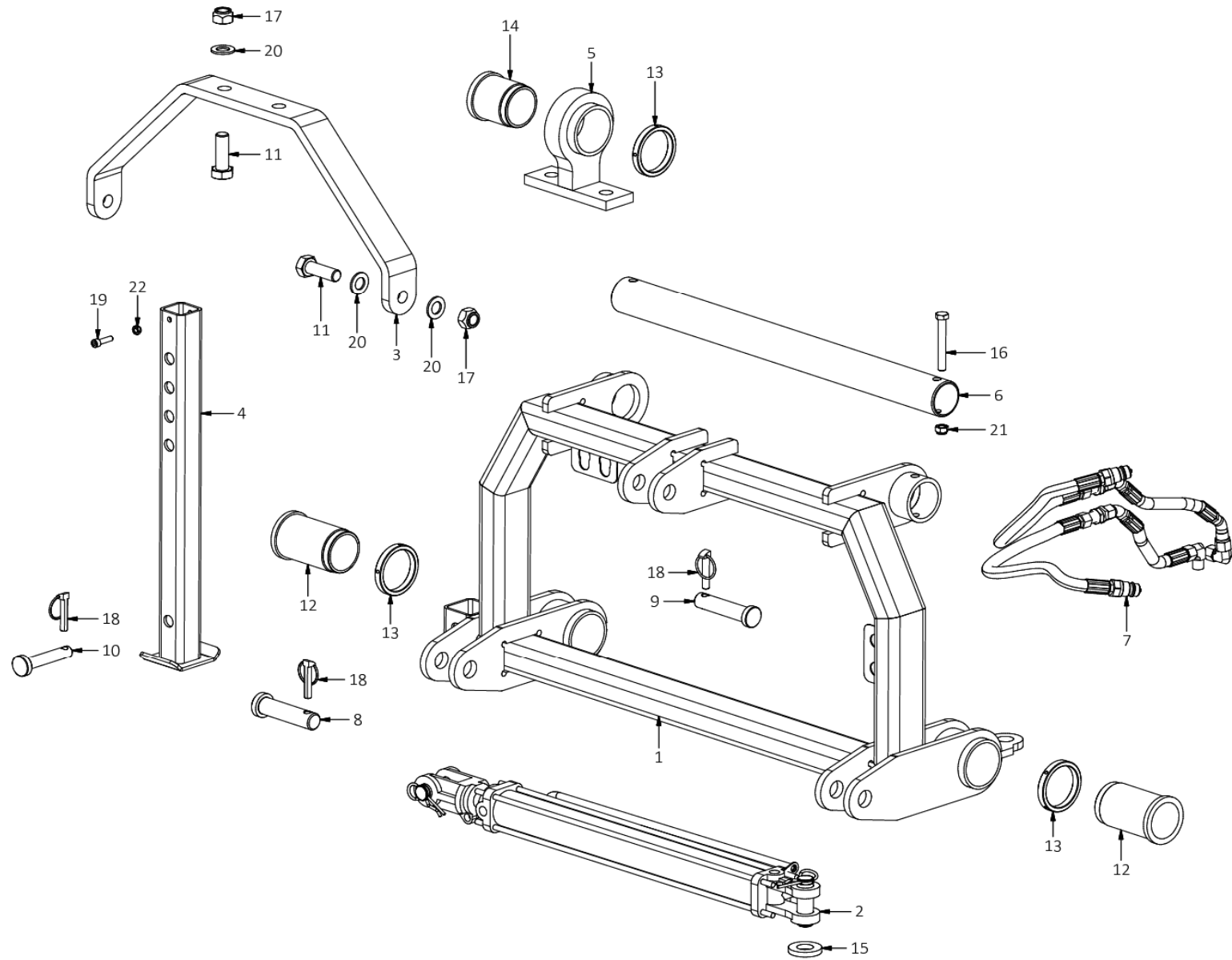




**Flail Cutter: Cutting Gear Assembly**  
**1 = F150 (A0102) 2 = F170 (A0103) 3 = F210 (A0105) 4 = F230 (A0106)**

Item	Part No.	Description	1	2	3	4	Item	Part No.	Description	1	2	3	4
1.1	H5612	Rotor 1500 x14 mount	1										
1.2	H5613	Rotor 1700 x16 mount		1									
1.3	H5615	Rotor 2100 x20 mount			1								
1.4	H5616	Rotor 2300 x22 mount				1							
2.1	M5718	Pulley SPB 250-3V TL3020-40	1	1									
2.2	M5719	Pulley SPB 250-4V TL3020-40			1	1							
3	H5668	Bearing carrier D95-PCD258	2	2	2	2							
4.1	M5716	Pulley SPB 180-3V FLK133-60x90	1	1									
4.2	M5717	Pulley SPB 180-4V FLK133-60x90			1	1							
5	M5702	Taper-lock bush 3020-40	1	1	1	1							
6	M5735	Hammer Flail MANOB01N0BC 120x110x16	14	16	20	22							
7	M5703	Locking element FLK133-60x90	1	1	1	1							
8	M5705	Bearing 6012	2	2	2	2							
9	M5730	Blade Flail TNOB01N0BC 8x40	42	48	60	66							
10	M616110	Bolt M16x110-10.9	14	16	20	22							
11	M5715	Belt SPB-1600	3	3	4	4							
12	H5675	Bush 17x32x36	14	16	20	22							
13	M5704	Key 12x8x100	1	1	1	1							
14	M712040	Carriage bolt M12x40	12	12	12	12							
15	M41235	Bolt M12x35HT	1	1	1	1							
16	M5708	Circlip Int INT0950	4	4	4	4							
17	M5707	Seal Radial lip 60x95x10	2	2	2	2							
18	M61616	Nut Nyloc M16	14	16	20	22							
19	H5671	Spacer 85x95x3	2	2	2	2							
20	M5706	Seal Radial lip 70x95x10	2	2	2	2							
21	H5674	Bush 17x32x10	28	32	40	44							
22	M8537	Washer 12.5x36x3	1	1	1	1							
23	M61209	Nut Nyloc M12	12	12	12	12							
24	M10039	Grease nipple 1/8"	2	2	2	2							
25	M91213	Washer Spring M12	1	1	1	1							
26	M81202	Washer Flat M12	4	4	4	4							

**Flail Cutter: Hitch Frame Assembly**  
**1 = F150 (A0102) 2 = F170 (A0103) 3 = F210 (A0105) 4 = F230 (A0106)**



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Item	Part No.	Description	1	2	3	4	Item	Part No.	Description	1	2	3	4
1	H5610	Hitch frame Cat2 Inc offset	1	1	1	1							
2	M5659	Cylinder Hyd DB20020-106	1	1	1	1							
3	H5618	Hitch stay	1	1	1	1							
4	H5680	Parking stand Adjustable	1	1	1	1							
5	H5619	Bush carrier Sliding	1	1	1	1							
6	H5630	Rail Sliding Upper	1	1	1	1							
7	M5681	Kit Hydraulic Fixed	1	1	1	1							
8	H0643	Pin Bottom link Cat2	2	2	2	2							
9	H0632	Pin Top link Cat2	1	1	1	1							
10	H0631	Pin Top link Cat1	1	1	1	1							
11	M42060	Bolt M20x60HT	4	4	4	4							
12	H5664	Bush 60x73x125-M70 Supamide	2	2	2	2							
13	M5701	Locknut M70x2.0 KM-14	3	3	3	3							
14	H5663	Bush 60x73x80-M70 Supamide	1	1	1	1							
15	M5479	Washer 26x52x8 8.0	4	4	4	4							
16	M41290	Bolt M12x90HT	2	2	2	2							
17	M20200201	Nut Nyloc M20	4	4	4	4							
18	FLP11	Lynchpin 11mm	4	4	4	4							
19	M8992	Cap screw M8x35	1	1	1	1							
20	M82001	Washer Flat M20	8	8	8	8							
21	M61209	Nut Nyloc M12	2	2	2	2							
22	M60809	Nut Nyloc M8	1	1	1	1							