WALTERSCHEID
POWERTRAIN GROUP

WALTERSCHEID

POWER DRIVE
PTO DRIVE SHAFT SERIES
P 300 – P 700

THE HIGH-POWER OPTION
FOR THE TOUGHEST DEMANDS

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POWER DRIVE

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Power Drive PTO drive shafts provide higher performance, greater safety and improved handling. Specifically designed for machines in continuous use, these shafts cater to the toughest demands, particularly to those of large-scale farmers and contractors.

For ease of handling

The guard cones of the Power Drive PTO drive shafts can be unlocked and pushed back with ease. This facilitates the coupling and uncoupling of the PTO drive shaft, plus joints and guard bearings can be maintained more easily. The integrated internal cone reinforcement permits the use of particularly flexible cones which provide an even higher degree of safety.

Profiled, thick-walled guard tubes prevent rotation of the two guard halves in relation to one another. It is thus no longer necessary to install a safety chain on the tractor side. In the full-guard version, the safety chain can be completely eliminated.

Maintenance

Power Drive PTO drive shafts (Version 2) are only maintained once per season (250 hours). This significantly extended maintenance interval is achieved through the following technical innovations:

› The guard bearing material only requires minimum lubrication.
› The joints are fitted with special universal joint seals (multi-lip system), whose shape and material prevent grease from escaping and dust from entering.
› The profile tubes are provided with a grease nipple. These tubes are made of a specially treated material which reduces the thrust force thus minimizing wear and tear of the profile tubes. Profile tube seals ward off dirt and prevent the loss of grease.

The ultimate advantage for the user: Power Drive PTO drive shafts (Version 2) only need to be maintained once per season (250 hours).

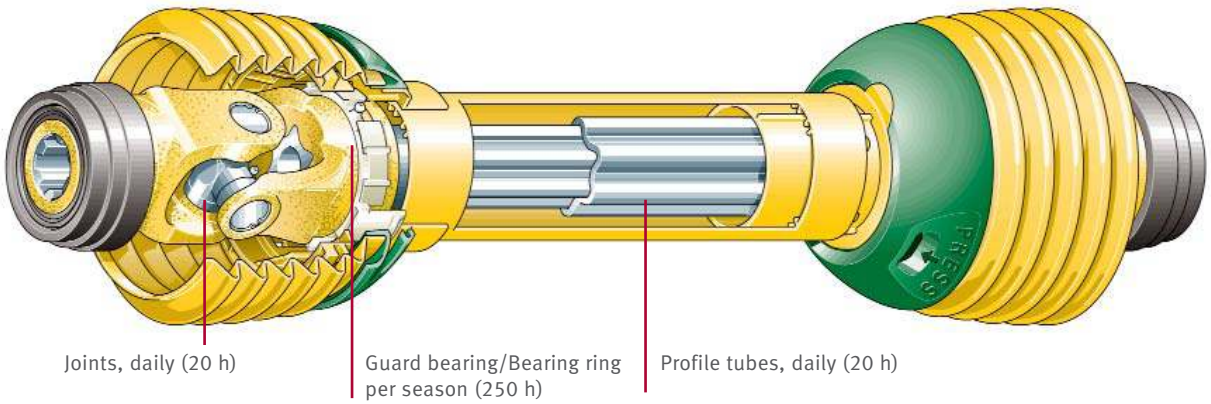
With the new generation of Power Drive PTO drive shafts Walterscheid meets the demands of the market: improved handling and minimum maintenance.

Walterscheid received the AE50 AWARD from the American Society of Agricultural Engineers for the new Power Drive PTO drive shaft, and an international design award for the PTO drive shaft guard.

MAINTENANCE

1

Standard maintenance (daily)



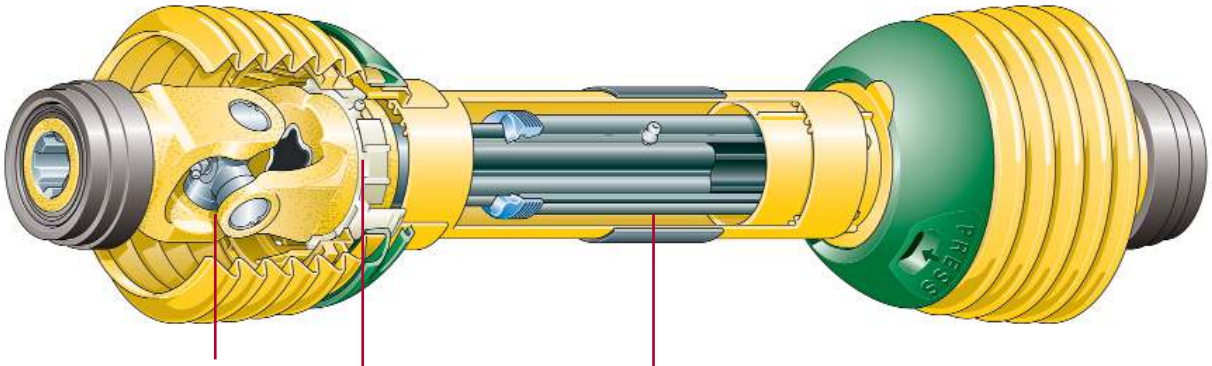
Joints, daily (20 h)

Guard bearing/Bearing ring per season (250 h)

Profile tubes, daily (20 h)

2

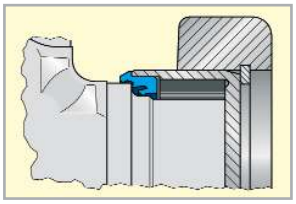
Seasonal maintenance

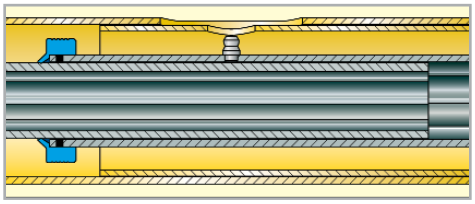


Joints with special universal joint seals, per season (250 h)

Guard bearing/Bearing ring per season (250 h)

Specially treated profil tubes with grease nipple and seals (250 h)





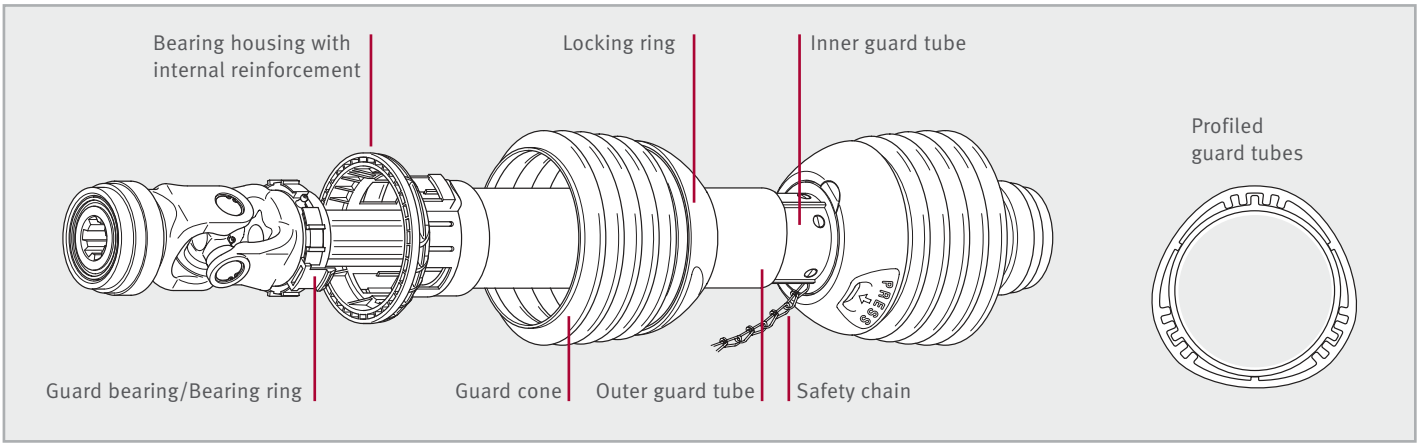
Maintenance intervals (h)		
Joints	**Guard bearing**	**Profile tubes**
daily (20)	per season (250)	daily (20)
per season (250)	per season (250)	per season (250)

1

2

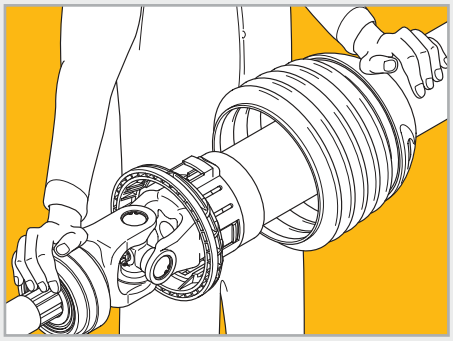
POWER DRIVE PTO DRIVE SHAFT SERIES – STANDARD VERSION

PTO drive shaft guard



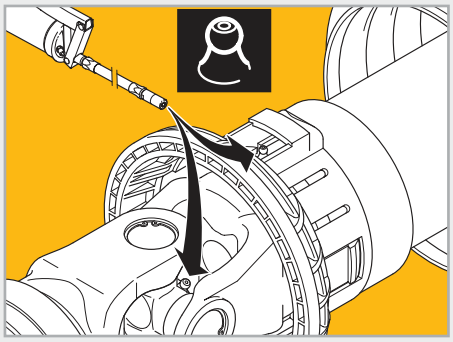
ADVANTAGES

Handling



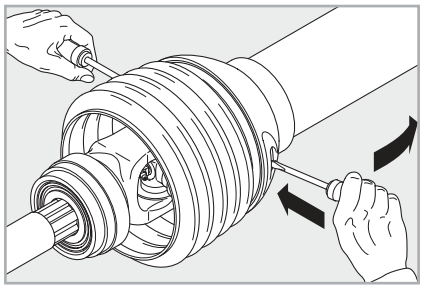
Ample space for all PTO drive shaft quick-disconnect locks when coupling and uncoupling.

Maintenance

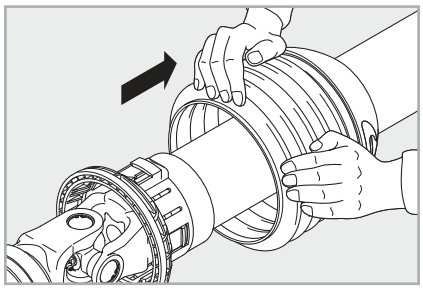


Ample space and easily accessible lubricating points during maintenance.

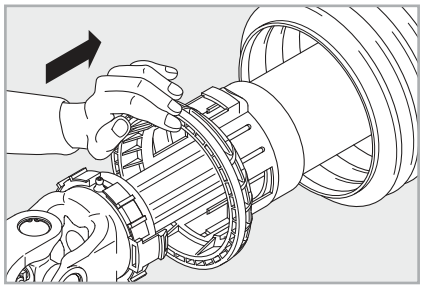
Dismantling



Undo both lock wilh tool.

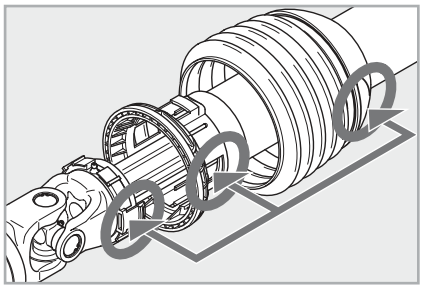


Push back guard cone.

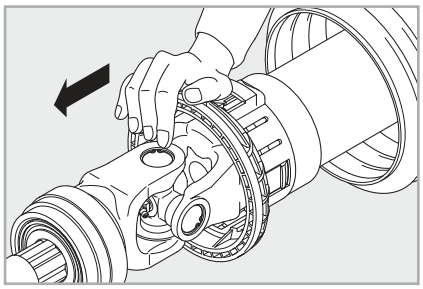


Release and remove guard tube with bearing housing with a gentle knock, using a hammer if necessary.

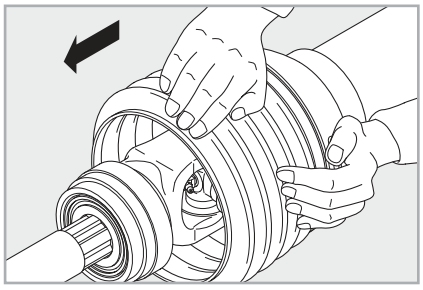
Assembly



Important! Turn bearing ring, bearing housing and locking ring into the correct position for assembly.



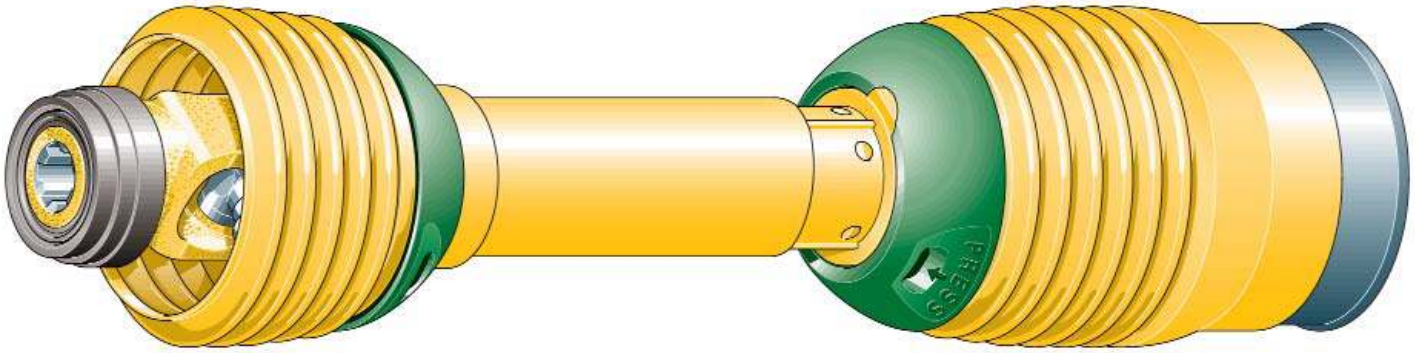
Slide on guard tube with guard bearing and lock in place on bearing ring with a gentle knock applied to the internal reinforcement.

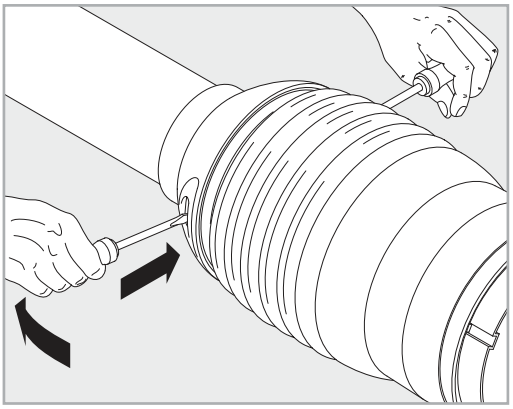


Slide on guard cone until it engages automatically.

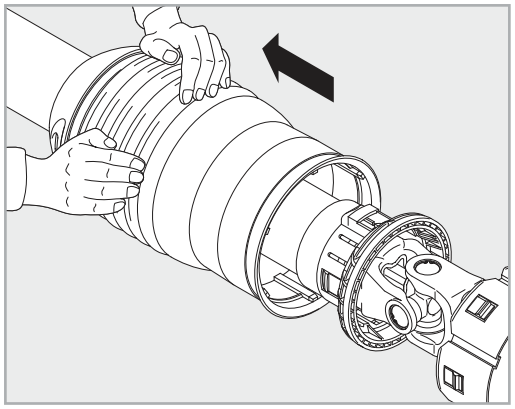
POWER DRIVE PTO DRIVE SHAFT SERIES WITH FULL GUARD AND WITHOUT SAFETY CHAIN

In addition to eliminating the safety chain, the new full-guard Version (implement side) also makes it possible to completely cover the PTO drive shaft in many applications, without restricting the handling advantages with additional mounting elements, such as retainer straps, screws, pins, etc. This affords improved guarding of the rotating parts of the PTO drive shafts and thus higher safety for the user.



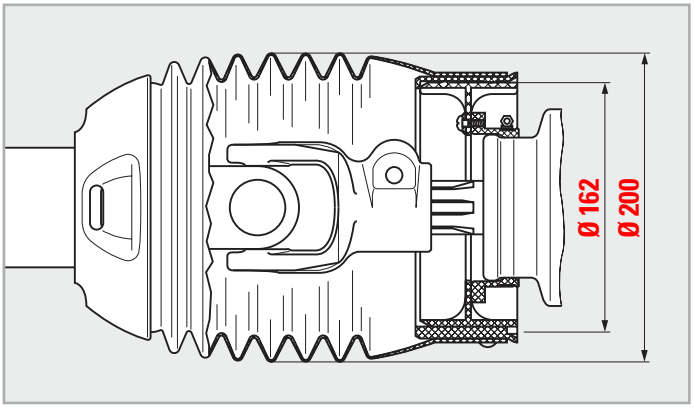


Undo both locks with tool.

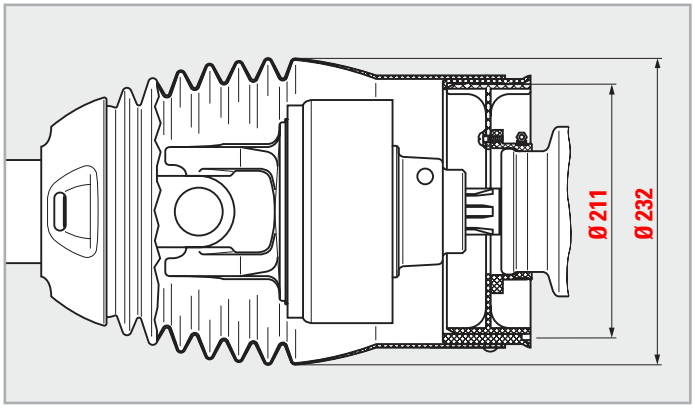


Push back the full-guard cone.

Implement-side full guard versions

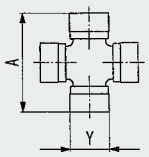


Standard PTO drive shaft

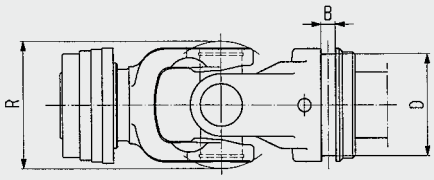


PTO drive shaft with overload clutch

TABLE OF DIMENSIONS – PTO DRIVE SHAFT SIZES



Cross and bearing kit



Standard Joint

Size	A (mm)	Y (mm)	B (mm)	Ø D (mm)	Swing dia. Ø R (mm)
PJ 300	75	27	11	76,5	92
PJ 400	76	32	11	76,5	95
PJ 500	89	36	11	76,5	108
PJ 600	104	42	16	93,5	125
PJ 700	118	50	16	93,5	145

TABLE OF POWER RATINGS – PTO DRIVE SHAFT SIZES

Basis of calculation:

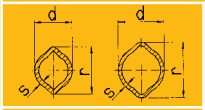
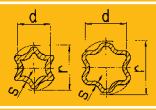
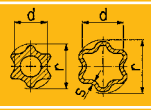
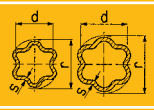
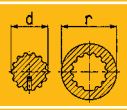
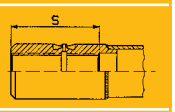
1. Standard joint — Joint angle 5° – Life 1000 h
2. Standard joint — Joint angle 10° – Life 100 h

PJ Standard joint

Size	Limit values		Dynamic capacity 1 (540 min⁻¹ / 1000 min⁻¹)		Dynamic capacity 2 (540 min⁻¹ / 1000 min⁻¹)	
	Ms [Nm] (inlb)	Mp [Nm] (inlb)	P [kw] (HP)	Mn [Nm] (inlb)	P [kw] (HP)	Mn [Nm] (inlb)
PJ 300	840 (7435)	2350 (20800)	28 (38)	500 (4420)	45 (61)	790 (6995)
			44 (60)	415 (3675)	69 (94)	660 (5840)
PJ 400	1240 (10975)	3800 (33630)	39 (53)	695 (6150)	62 (85)	1100 (9740)
			61 (83)	580 (5130)	96 (131)	915 (8100)
PJ 500	2150 (19030)	6000 (53100)	66 (90)	1175 (10400)	105 (143)	1860 (16460)
			102 (139)	975 (8630)	162 (220)	1545 (13670)
PJ 600	2895 (25620)	7800 (69030)	79 (107)	1400 (12390)	125 (170)	2215 (19605)
			122 (166)	1165 (103 10)	193 (263)	1840 (16285)
PJ 700	4530 (40090)	10600 (93810)	119 (162)	2095 (18540)	188 (256)	3320 (29380)
			182 (248)	1740 (15400)	289 (393)	2760 (24420)

Ms = Pulsating torque Mp = Specifies the static load limit Mn = Nominal torque

TABLE OF DIMENSIONS – TELESCOPIC SECTIONS
ALLOCATION – TELESCOPIC SECTIONS/PTO DRIVE SHAFT GUARD

	Profile tubes								Profile sleeves	
										
Profiles	1b/2a		S4LH/S5		S4/S5		S5H/S6		40 x 36 (20) H	52 x 47 (25) H
r [mm]	49	57,5	51	61	51	61	61	71,5	62	75
d [mm]	39,5	48	37	47	37	47	47	57,5	40	52
s [mm]	4,5	4,0	6,0	4,5		4,5	4,5	5,0	100	120
Guard	PG20		PG20		PG20		PG30		PG20	PG30

ALLOCATION – PTO DRIVE SHAFT SIZE/ TELESCOPIC SECTIONS/PTO DRIVE SHAFT GUARD

		Profile tubes				Profile sleeves	
		1b/2a	S4LH/S5	S4/S5	S5H/S6	40 x 36 (20) H	52 x 47 (25) H
Guard		PG20	PG20	PG20	PG30	PG20	PG30
Size	P 300	•					
	P 400	•	•			•	
	P 500		•	•		•	
	P 600				•		•
	P 700						•

TABLE OF POWER RATINGS – TELESCOPIC SECTIONS

Profile tubes	**Mp [Nm]**	**(inlb)**	**Thrust force/Torque N/Nm Lubricated shaft sections**
1b/2a	2300	(20355)	9
S4LH/S5	3000	(26550)	8
S4/S5	3000	(26550)	6,5
S5H/S6	6000	(53100)	7,5
Profile sleeves			
40 x 36 (20) H*	3400	(30090)	7
52 x 47 (25) H*	6000	(53100)	7

* H = hardened profile Mp = Specifies the static load limit

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Walterscheid
– the original

ALLOCATION OF CLUTCHES AND SIZES

Type	Size	P 300	P 400	P 500	P 600	P 700
Radial Pin clutches						
	K32B	•				
	K33B	•	•			
	K34B	•	•	•		
Cut-out clutches						
	KB61/20	•	•	•		
	KB61/30				•	
	K64/12-14	•	•			
	K64/22-24	•	•	•	•	
Friction clutches						
	K92	•	•			
	K92/4	•	•	•		
	K96	•	•			
	K96/4	•	•	•	•	
	K97/4				•	•
Elastic clutches						
	K65/2	•	•			
Overrunning clutches						
	F5/1	•	•	•		
	F5/2			•	•	•
Combined clutches						
	FK96	•	•			
	FK96/4	•	•	•	•	
	FK97/4				•	•

Data see Technical Manual 410