# Kelly\*\*

# Tillage System Model 3009N Assembly Manual Revision I - July 2022

3009

Serial Number:

Kelly Tillage PO Box 100 Booleroo Centre South Australia 5482 P +61 8 8667 2253 W kellytillage.com

## Thank you for choosing a Kelly Tillage product

We trust that you find the following manual clear and easy to follow. If you should require additional customer support or assistance, please do not hesitate to contact us.

Spare parts can be purchased, as required, through your local dealer or by contacting Kelly Tillage directly.

Kelly welcomes feedback. Should you have any difficulties that you wish to raise, suggestions for improvement or modifications that you feel would enhance our products we look forward to hearing from you.

#### **Contact Information**

#### Kelly Tillage

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This symbol indicates which way the machine is travelling

#### **Bolt Torque Settings**

Bolt Type	Wheel nut	U Bolt			Class 8.8 Bolt				Class 10.9 Bolt			
<b>Bolt Size</b>	M18	M12	M16	M20	M6	M8	M10	M12	M16	M20	M24	M20
Spanner	27	19	24	30	10	13	17	19	24	30	36	30
Nm (max)	270	50	75	260	9.9	18.1	28.8	41.9	78.8	127	183	181

[1] When fitting a wheel & tire to a hub, tighten the wheel nuts in a star pattern to the correct tension. To achieve this choose a wheel nut & tighten, then proceed to the opposite side of the hub to the next wheel nut & tighten & so on until all wheel nuts are tight. Then repeat the procedure to check that all nuts are tight. Do not use impact tools to tighten wheel nuts. For a guide to the correct tension of the wheel nuts please use the appropriate tension for your size wheel nuts from the Bolt Torque Settings table.

Torque values are for dry threads and surfaces however it is permissible to apply a small amount of anti corrosive oil to the threads.







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Item No.	Description	Qty	Number
1	Centre Frame	1	1532-01E



Item No.	Description	Qty	Number
1	M16 x 55 grade 8.8 zp Bolt	2	0211-1655
2	Nyloc Nut M16	2	0221-NYL16
3	Wing Folding Buffer	2	1201-12
4	Washer Flat M16	4	0231-F16





Item No.	Description	Qty	Number
1	Left Hand Inner Wing	1	1532-05-3E
2	PCH Wing Pivot Pin	2	0801-10-08-235
3	Cotter Pin M13 x 63	2	0261-PINC1363
4	Washer Flat M12	4	0231-F12
5	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280
6	Nyloc Nut M12	2	0221-NYL12
7	35 ID x 30mm DX Bush	4	0113-MB3530DX
8	Grease Nipple 1/8" BSP	2	0181-GN1-8



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Item No.	Description	Qty	Number	
1	Left Hand Outer Wing	1	1532-07-3	
2	PCH Wing Pivot Pin	2	0801-10-08-235	
3	35 ID x 30mm DX Bush	4	0113-MB3530DX	
4	Nyloc Nut M12	2	0221-NYL12	
5	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280	
6	Cotter Pin M13 x 63	2	0261-PINC1363	
7	Washer Flat M12	4	0231-F12	
8	Grease Nipple 1/8" BSP	2	0181-GN1-8	





Item No.	Description	Qty	Number
1	PCH Wing Pivot Pin	2	0801-10-08-235
2	Cotter Pin M13 x 63	2	0261-PINC1363
3	Nyloc Nut M12	2	0221-NYL12
4	35 ID x 30mm DX Bush	4	0113-MB3530DX
5	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280
6	Right Hand Inner Wing	1	1532-04-3
7	Washer Flat M12	4	0231-F12
8	Grease Nipple 1/8" BSP	2	0181-GN1-8





Item No.	Description	Qty	Number
1	Inner Wing Post	1	1532-04SPE
2	M16 x 50 Grade 8.8 ZP Bolt	4	0211-1650
3	Nyloc Nut M16	4	0221-NYL16
4	Washer Flat M16	8	0231-F16
5	Wing Buffer Pad	1	1501-27
6	Button Head Screw M6 x 25mm ZP	4	0211-0625BH
7	Washer Spring M6	4	0231-S6





Item No.	Description	Qty	Number
1	Right Hand Outer Wing	1	1532-06-3E
2	PCH Wing Pivot Pin	2	0801-10-08-235
3	35 ID x 30mm DX Bush	4	0113-MB3530DX
4	Nyloc Nut M12	2	0221-NYL12
5	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280
6	Cotter Pin M13 x 63	2	0261-PINC1363
7	Washer Flat M12	4	0231-F12
8	Grease Nipple 1/8" BSP	2	0181-GN1-8

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Item No.	Description	Qty	Number
1	Right Hand Outer Wing Post	1	1510-241E
2	Wing Buffer Pad	1	1501-27
3	U-Bolt M16 x 185 Deep x 104 Wide	2	0271-16185104
4	Nyloc Nut M16	4	0221-NYL16
5	Washer Flat M16	4	0231-F16
6	Button Head Screw M6 x 20mm ZP	4	0211-0620BH
7	Washer Spring M6	4	0231-S6





Item No.	Description	Qty	Number
1	Dual Circuit 3 Stage Sequence Manifold V12.5	1	0802-692196
2	M10 x 30 grade 8.8 ZP Bolt	6	0211-1030
3	Washer Spring M10	6	0231-S10
4	Washer Flat M10	6	0231-F10





Item No.	Description	Qty	Number
1	5" Bore 30" Stroke 3 1/8" S/Tube 2" Rod Hydraulic Cylinder	1	0311-530ST







Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212







Item No.	Description	Qty	Number
1	Double Clamp Bolt Group 2	1	0325-RCD-2BH
2	Clamp top plate group 2	1	0325-RCD-2PT
3	17mm Clamp Jaws (Pair)	2	0325-RCD-17J
4	Double Clamp Stacking Plate (Non Ryco)	1	0325-SI-2-5D-W3
5	Double Clamp Stacking Bolt Group 2	1	0325-RCD-2BS

Item No.	Description	Qty	Number
1	Left CE Port to LH Main Wing Cylinder Extend Port	1	H9-17
2	Left CR Port to LH Main Wing Cylinder Retract Port	1	H9-18



Item No.	Description	Qty	Number
1	5" Bore 30" Stroke 3 1/8" S/Tube 2" Rod Hydraulic Cylinder	1	0311-530ST







Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212





Item No.	Description	Qty	Number
1	Right CE Port to RH Main Wing Cylinder Extend Port	1	H9-21
2	Right CR Port to RH Main Wing Cylinder Retract Port	1	H9-22



Item No.	Description	Qty	Number
1	3.5" Bore 24" Stroke 1.75" Rod Hydraulic Cylinder	1	0311-3524SP







Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212





Item No.	Description	Qty	Number
1	LE Port to LH Outer Wing Cylinder Extend Port	1	H9-19
2	LR Port to LH Outer Wing Cylinder Retract Port	1	H9-20





Item No.	Description	Qty	Number
1	3.5" Bore 24" Stroke 1.75" Rod Hydraulic Cylinder	1	0311-3524SP







tem No.	Description	Qty	Number	
	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-591-1212	
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Item No.	Description	Qty	Number
1	RE Port to RH Outer Wing Cylinder Extend Port	1	H9-23
2	RR Port to RH Outer Wing Cylinder Retract Port	1	H9-24





Item No.	Description	Qty	Number
1	Tractor to Sequence Valve EXT1 Port Fitted With Green EXT Decal	1	H9-01-GE-EXT1
2	Tractor to Sequence Valve RCT1 Port Fitted With Green RET Decal	1	H9-02-GR-RCT1









Cylinders cycled to exp Signed Unit Serial Numb	bel air from system




Item No.	Description	Qty	Number
1	9m Gen 2 Main Pull	1	1532-02E
2	M24 x 75 grade 8.8 zp Bolt	12	0211-2475
3	Nyloc Nut M24	12	0221-NYL24
4	Washer Flat M24	24	0231-F24





Item No.	Description	Qty	Number
1	Monroc 808X 80mm Square Stub Axle 315mm 8 on 275 PCD (Mounting Plate)	1	0733-808X-315
2	Nyloc Nut M20	4	0221-NYL20
3	M20 x 70 grade 8.8 ZP Bolt	4	0211-2070
4	Washer Flat M20	8	0231-F20





Item No.	Description	Qty	Number
1	Monroc 808X 80mm Square Stub Axle 315mm 8 on 275 PCD (Mounting Plate)	1	0733-808X-315
2	M20 x 70 grade 8.8 ZP Bolt	4	0211-2070
3	Nyloc Nut M20	4	0221-NYL20
4	Washer Flat M20	8	0231-F20





Item No.	Description	Qty	Number
1	80mm Beam Axle 8 on 275 2006mm track for 9m Gen 2	1	0733-808XF400X80C-V2006-MP
2	Nyloc Nut M20	8	0221-NYL20
3	M20 x 65 grade 8.8 ZP Bolt	8	0211-2065
4	Washer Flat M20	16	0231-F20





Item No.	Description	Qty	Number
1	400/55-22.5 Tyre on 8 on 275mm PCD Zero Offset Rim (Left Hand)	2	0751-400-55-22.5-8-275-0-L
2	400/55-22.5 Tyre on 8 on 275mm PCD Zero Offset Rim (Right Hand)	2	0751-400-55-22.5-8-275-0-R





All wheel nuts tightened to 305Nm	C

Signed\_\_\_\_\_ Date\_/\_/\_\_ Unit Serial Number\_\_\_\_\_

Item No.	Description	Qty	Number
1	Drawbar - 50mm Hitch Pin Europe	1	0810-65E
2	Drawbar Pivot Bush	4	0801-B423838
3	Nyloc Nut M12	2	0221-NYL12
4	Walking Axle Linkage Pivot Pin	2	1601-P38-220
5	Cotter Pin M13 x 63	2	0261-PINC1363
6	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280
7	Washer Flat M12	4	0231-F12





Item No.	Description	Qty	Number
1	Flange Mount Tow Hitch	1	1510-09-3
2	M12 x 100 grade 8.8 ZP Bolt	2	0211-12100
3	50mm Tow Hitch Pin	1	0801-008
4	50 ID x 50mm DX Bush	2	0113-MB5050DX
5	Nyloc Nut M12	2	0221-NYL12
6	Washer Flat M12	4	0231-F12
7	Grease Nipple M6	1	0181-GNM6





Item No.	Description	Qty	Number
1	Parallel Arm	1	0810-58E
2	Clevis Pin 25mm x 75mm	2	0801-KE0307-1
3	Washer Flat M24	2	0231-F24
4	Cotter Pin M6 x 50mm	2	0261-PINC650





Item No.	Description	Qty	Number
1	3" Bore x 12" Stroke 1.5" Rod Extended Hydraulic Cylinder	1	0311-312EXT





Item No.	Description	Qty	Number
1	Scharmueller CAT 4 51mm Flange Mount Tow Eye	1	0801-00.665.17.1-A02
2	M20 x 80 Class 10.9 ZP Bolt	12	0211-2080HT
3	Washer Spring M20	12	0231-520





0801-00.665.15.0-A02 Ball Joint Towing Eye, with flange CAT 2 Scharmüller	Flange Hole Pattern (mm): 160x160 Connection: Ball Joint Towing Eye Cat. 2 DØ33mm Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 250 Max. Permissible D-Value (kN): 120 Max. Permissible Vertical Load (kg): 3000	
0801-00.665.16.0-A02 Ball Joint Towing Eye, with flange CAT 3 Scharmüller	Flange Hole Pattern (mm): 160x160 Connection: Ball Joint Towing Eye Cat. 3 DØ42mm Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 250 Max. Permissible D-Value (kN): 120 Max. Permissible Vertical Load (kg): 3000	
0801-00.665.17.1-A02 Ball Joint Towing Eye, with flange CAT 4 Scharmüller	Flange Hole Pattern (mm): 160x160 Connection: Ball Joint Towing Eye Cat 4 DØ51mm Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 246 Max. Permissible D-Value (kN): 120,2 Max. Permissible Vertical Load (kg): 3000	
0801-00.665.901.0-A02 K80 Ball Coupling System, with flange Scharmüller	Flange Hole Pattern (mm): 160x160 Connection: K80® Towing Eye Ball Coupling System Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 250 Max. Permissible D-Value (kN): 120 Max. Permissible Vertical Load (kg): 4000	
1510-54A 2 Point Hitch CAT 3	Flange Hole Pattern (mm): 160x160 Connection: Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 285	
1510-55A 2 Point Hitch CAT 4	Flange Hole Pattern (mm): 160x160 Connection: Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 276	



All hitch options are fitted with the same process.

Item No.	Description	Qty	Number
1	Hose Post Spring	1	1601-CDB-00-0012
2	M16 x 35 grade 8.8 zp Bolt	1	0211-1635
3	Washer Spring M16	1	0231-S16
4	Washer Flat M16	1	0231-F16









em No.	Description	Qty	Number	//
	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-591-1212	5
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Item No.	Description	Qty	Number
1	Tractor to Front Lift Cylinder Extend Port Fitted With Blue EXT Grip	1	H9-05-BE-EXT
2	Tractor to Front Lift Cylinder Extend Port Fitted With Blue RTC Grip	1	H9-06-BR-RCT





Item No.	Description	Qty	Number
1	9m Gen 2 Rear A-Frame	1	1532-03E
2	PCH Wing Pivot Pin	2	0801-10-08-235
3	35 ID x 30mm DX Bush	4	0113-MB3530DX
4	Cotter Pin M13 x 63	2	0261-PINC1363
5	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280
6	Nyloc Nut M12	2	0221-NYL12
7	Washer Flat M12	4	0231-F12
8	Grease Nipple 1/8" BSP	2	0181-GN1-8



Item No.	Description	Qty	Number
1	Jockey Wheel (Europe)	1	1610-12-70E
2	Plain Spherical Bearing 70mm	2	0113-GE70DO-2RS
3	Circlip Internal 105mm	2	0171-J105
4	Grease Nipple 1/4" UNF	2	0181-GN1-4
5	TC Seal 90mm x 125mm x 13mm	1	0121-TC12681
6	Circlip External 70mm	1	0172-D1400-0700APP
7	TC Seal 70mm x 110mm x 10mm	1	0121-TC12654



Circlip fitted to Jockey Wheel shaft

Signed\_\_\_\_\_ Date\_/\_/\_\_ Unit Serial Number\_\_\_\_

Item No.	Description	Qty	Number
1	Brake Disc	1	1600-405
2	M12 x 24 Wheel Bolt	3	0216-WB1224





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tem No.	Description	Qty	Number
	Brake Caliper Part 1	1	0810-12.1
1	Brake Caliper Part 2	1	0810-12.2
í	M16 x 160 Grade 8.8 ZP Bolt	1	0211-16160
L	M16 x 150 grade 8.8 zp Bolt	1	0211-16150
5	Washer Square M16 x 50 x 5	1	0231-SQ16505
5	Brake Compression Spring	1	0801-KE009
	Washer Flat M16	2	0231-F16
5	Nyloc Nut M16	1	0221-NYL16





Item No.	Description	Qty	Number
1	Monroc 606XR Stub Axle (VAR)	2	0733-606XRVAR
2	U-Bolt M20 x 105 Deep x 62 Wide	4	0271-2010562
3	Nyloc Nut M20	8	0221-NYL20
4	Washer Flat M20	8	0231-F20









Item No.	Description	Qty	Number
1	Module Lift Mount	1	0810-60E
2	U-Bolt M16 x 140 Deep x 154 Wide	2	0271-16140154
3	Nyloc Nut M16	4	0221-NYL16
4	Washer Flat M16	4	0231-F16





Item No.	Description	Qty	Number
1	9m Gen 2 Rear Tail	1	1532-10E
2	PCH Wing Pivot Pin	2	0801-10-08-235
3	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280
4	Cotter Pin M13 x 63	2	0261-PINC1363
5	35 ID x 30mm DX Bush	4	0113-MB3530DX
6	Nyloc Nut M12	2	0221-NYL12
7	Washer Flat M12	2	0231-F12
8	Grease Nipple 1/8" BSP	2	0181-GN1-8





1	4" Bore 16" Stroke 1 75" Bod Hydraulic Cylinder	1	0311-416SP	N
1	4 BOTE 10 STOKE 1.75 Kod Hydraulic Cylinder	1	0511-4105F	
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Item No.	Description	Qty	Number
1	TE1 Port to Tail Lift Cylinder Extend Port	1	H9-09
2	TR1 Port to Tail Lift Cylinder Retract Port	1	H9-10
3	3/4" JIC Male 3/4" JIC Female 3/4" JIC Male Tee	2	0324-S67-121212





Item No.	Description	Qty	Number
1	Tail Extension	1	1532-10SEE
2	M20 x 60 grade 8.8 ZP Bolt	8	0211-2060
3	Washer Flat M20	16	0231-F20
4	Nyloc Nut M20	8	0221-NYL20



Item No.	Description	Qty	Number
1	9m Gen 2 Front Module	1	1532-28-30E
2	U-Bolt M16 x 185 Deep x 104 Wide	8	0271-16185104
3	Nyloc Nut M16	16	0221-NYL16
4	Washer Flat M16	16	0231-F16







Item No.	Description		Number	
1	9m Rear Module	1	1532-29-30E	
2	U-Bolt M16 x 185 Deep x 104 Wide	8	0271-16185104	
3	Nyloc Nut M16	16	0221-NYL16	
4	Washer Flat M16	16	0231-F16	





Item No.	Description	Qty	Number	
1	Super Single LH Drop Leg No Clevis	1	0810-24SF	
2	Super Single RH Drop Leg No Clevis	1	0810-25SF	
3	Right Hand Chain Tension Lug	1	1510-69	
4	RH Chain Adjusting Lug	1	0810-27	
5	Forged Clevis 21mm Bolt Hole	2	0801-FC21	
6	Stainless Steel Wear Bush	2	1501-365033-SS	
7	M36 x 105 grade 8.8 zp Bolt	2	0211-36105	
8	Nyloc Nut M36	2	0221-NYL36	
9	M24 x 140 grade 8.8 zp Bolt	2	0211-24140	
10	Nyloc Nut M24	2	0221-NYL24	









Item No.	Description	Qty	Number
1	Chain Tension Adjustor	1	0802-PCHTA
2	Female Spring Locator	2	0801-KE0805-4
3	Tensioner Cup - Male	2	0801-KE0805-3
4	20mm Compression Spring	2	0801-XK9261S
5	Washer High Tensile 1 1/4"	2	0232-HT11-4
6	2.5" Bore x 6" Stroke x 1.5" Rod Side Port Wing Tensioner	1	0311-256SP-WT
7	ACME Threaded Rod	1	0810-06
8	Steel Spring Retaining Bush	1	0801-PCHTA-SB


Item No.	Description	Qty	Number
1	Super Single LH Drop Leg No Clevis	1	0810-24SF
2	Super Single RH Drop Leg No Clevis	1	0810-255F
3	Nyloc Nut M36	2	0221-NYL36
4	Stainless Steel Wear Bush	2	1501-365033-SS
5	M36 x 105 grade 8.8 ZP Bolt	2	0211-36105
6	M24 x 140 grade 8.8 zp Bolt	2	0211-24140
7	Nyloc Nut M24	2	0221-NYL24
8	LH Chain Adjusting Lug	1	0810-26
9	Left Hand Chain Tension Lug	1	1510-68
10	Forged Clevis 21mm Bolt Hole	2	0801-FC21

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Item No.	Description	Qty	Number
1	Cast 25mm Spacing	24	0801-CS25
2	M10 x 30 grade 8.8 ZP Bolt	24	0211-1030
3	Nyloc Nut M10	24	0221-NYL10





Item No.	Description	Qty	Number
1	Chain Tension Adjustor	2	0802-PCHTA
2	Washer High Tensile 1 1/4"	2	0232-HT11-4
3	20mm Compression Spring	2	0801-XK92615
4	Tensioner Cup - Male	2	0801-KE0805-3
5	Female Spring Locator	2	0801-KE0805-4
6	2.5" Bore x 6" Stroke x 1.5" Rod Side Port Wing Tensioner	1	0311-256SP-WT
7	ACME Threaded Rod	1	0810-06
8	Steel Spring Retaining Bush	2	0801-PCHTA-SB





Item No.	Description	Qty	Number
1	Dual Overcentre Valve, Line Mounted	1	0341-FPOE70D12LA20B
2	M8 x 50 grade 8.8 ZP Bolt	2	0211-850
3	Nyloc Nut M8	2	0221-NYL8
4	Washer Flat M8	4	0231-F8





Item No.	Description	Qty	Number
1	1/2" BSPP Encapt Male 3/4" JIC Male Adaptor	4	0323-574-0812
2	3/4" JIC Male 3/4" JIC Female 3/4" JIC Male Tee	2	0324-567-121212





Item No.	Description	Qty	Number
1	TE1 Bridge to V1 Chain Tension Retract	1	H9-25
2	TR1 Bridge To V2 Chain Tension Extend	1	H9-26





Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212





Item No.	Description	Qty	Number
1	C1 To Left Hand Wing Tension Retract	1	H9-29
2	C2 Tee To Left Hand Wing Tension Extend	1	H9-30





Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-591-1212









Item No.	Description	Qty	Number
1	Standard Chain Mount Plate	1	0810-20E
2	Height Adjusting Chain Assembly 13 Link	1	0801-20MCA
3	Chain Mount Pivot Pin	1	0801-10-51
4	Forged Clevis 21mm Bolt Hole	1	0801-FC21
5	Height Adjustor Retaining Clip	1	0801-KE014
6	Stainless Steel Wear Bush	1	1501-365033-SS
7	M12 x 80 grade 8.8 ZP Bolt	1	0211-1280
8	M36 x 105 grade 8.8 zp Bolt	1	0211-36105
9	Nyloc Nut M36	1	0221-NYL36
10	Washer High Tensile 1 3/8"	1	0232-HT13-8
11	Nyloc Nut M12	1	0221-NYL12
12	Washer Flat M12	2	0231-F12
13	Buffer Mount	1	0810-43E
14	Wing Folding Buffer	1	1201-12
15	M16 x 55 Grade 8.8 ZP Bolt	3	0211-1655
16	Washer Flat M16	6	0231-F16
17	Nyloc Nut M16	3	0221-NYL16





Item No.	Description	Qty	Number
1	Extended Chain Mount Plate	1	0810-69
2	Height Adjusting Chain Assembly 13 Link	1	0801-20MCA
3	Chain Mount Pivot Pin	1	0801-10-51
4	Forged Clevis 21mm Bolt Hole	1	0801-FC21
5	Height Adjustor Retaining Clip	1	0801-KE014
6	Stainless Steel Wear Bush	1	1501-365033-SS
7	Nyloc Nut M36	1	0221-NYL36
8	M36 x 105 grade 8.8 zp Bolt	1	0211-36105
9	M12 x 80 grade 8.8 ZP Bolt	1	0211-1280
10	Nyloc Nut M12	1	0221-NYL12
11	Washer High Tensile 1 3/8"	1	0232-HT13-8
12	Washer Flat M12	2	0231-F12









Item No.	Description	Qty	Number
1	Standard Chain Mount Plate	1	0810-20
2	Height Adjusting Chain Assembly 13 Link	1	0801-20MCA
3	Chain Mount Pivot Pin	1	0801-10-51
4	Forged Clevis 21mm Bolt Hole	1	0801-FC21
5	Height Adjustor Retaining Clip	1	0801-KE014
6	Stainless Steel Wear Bush	1	1501-365033-SS
7	M36 x 105 grade 8.8 zp Bolt	1	0211-36105
8	M12 x 80 grade 8.8 ZP Bolt	1	0211-1280
9	Nyloc Nut M12	1	0221-NYL12
10	Nyloc Nut M36	1	0221-NYL36
11	Washer High Tensile 1 3/8"	1	0232-HT13-8
12	Washer Flat M12	2	0231-F12

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Item No.	Description	Qty	Number
1	Tension Box	1	0810-57E
2	Module Tension Rod Assembly	1	0810-105A
3	20mm Compression Spring	1	0801-XK9261S
4	Rigid Spring Locator	1	0801-10-52L
5	Washer High Tensile 1 1/4"	1	0232-HT11-4





Item No.	Description	Qty	Number
1	Module Tension Arm No Clevis	1	0810-104F
2	Forged Clevis 21mm Bolt Hole	1	0801-FC21
3	Wear Bush	1	1501-365033-SS
4	Module Pivot Arm Bush	1	0801-10-110
5	35 ID x 50mm DU Bush	2	0113-MB3550DU
6	M36 x 105 Class 8.8 ZP Bolt	1	0211-36105
7	M20 x 160 Grade 8.8 ZP Bolt	1	0211-20160
8	Washer Flat M20	2	0231-F20
9	Nyloc Nut M36	1	0221-NYL36
10	Nyloc Nut M20	1	0221-NYL20
11	Washer Flat M24	1	0231-F24



Item No.	Description	Qty	Number
1	Chain Mount Pivot Pin	1	0801-10-51
2	Washer High Tensile 1 3/8"	1	0232-HT13-8
3	M12 x 80 Class 8.8 ZP Bolt	1	0211-1280
4	Height Adjusting Chain Assembly 13 Link	1	0801-20MCA
5	Washer Flat M12	2	0231-F12
6	Nyloc Nut M12	1	0221-NYL12







Item No.	Description	Qty	Number
1	Compact Module Lift Arm	1	0810-51E
2	Clevis Pin 25mm x 75mm	1	0801-KE0307-1
3	Cotter Pin M5 x 50	1	0261-PINC550
4	Height Adjustor Retaining Clip	1	0801-KE014
5	Washer Flat M24	1	0231-F24





Item No.	Description	Qty	Number
1	2.5" Bore x 6" Stroke 1.5" Rod Side Port Cylinder	1	0311-256SP





Item No.	Description	Qty	Number	1
1	3/4" JIC Male 3/4" UN O Ring Male 45° Elbow	2	0323-588-1212	
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Item No.	Description	Qty	Number
1	Compact Module Lift Arm	1	0810-51E
2	Clevis Pin 25mm x 75mm	1	0801-KE0307-1
3	Cotter Pin M6 x 50mm	1	0261-PINC650
4	Height Adjustor Retaining Clip	1	0801-KE014
5	Washer Flat M24	1	0231-F24





Item No.	Description	Qty	Number
1	2.5" Bore x 6" Stroke 1.5" Rod Side Port Cylinder	1	0311-256SP





Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212





Item No.	Description	Qty	Number
1	Compact Module Lift Arm	1	0810-51E
2	Clevis Pin 25mm x 75mm	1	0801-KE0307-1
3	Cotter Pin M6 x 50mm	1	0261-PINC650
4	Height Adjustor Retaining Clip	1	0801-KE014
5	Washer Flat M24	1	0231-F24





Item No.	Description	Qty	Number
1	2.5" Bore x 6" Stroke 1.5" Rod Side Port Cylinder	1	0311-256SP





Item No.	Description	Qty	Number
1	ME2 Port to Rear Module Extend Tee	1	H9-11
2	MR2 Port to Rear Module Retact Tee	1	H9-12
3	3/4" JIC Male Tee	2	0324-S19-121212







Item No.	Description	Qty	Number
1	Rear Module Extend Tee to LH Rear Module Cyl Extend Port	1	H9-15
2	Rear Module Retract Tee to LH Rear Module Cyl Retract Port	1	H9-16







Item No.	Description	Qty	Number	
1	Chain Carrier Beam	1	0810-61E	
2	U-Bolt M16 x 160 Deep x 127 Wide	4	0271-16160127	
3	400mm Pedestal	2	0810-59	
4	U-Bolt M16 x 95 Deep x 102 Wide	4	0271-1695102	
5	Nyloc Nut M16	16	0221-NYL16	
6	Washer Flat M16	16	0231-F16	





Item No.	Description	Qty	Number
1	Nyloc Nut M12	8	0221-NYL12
2	M12 x 40 Coach Head Bolt	8	0215-CH1240
3	Extended Chain Carrier Bolt on End	2	0810-17LEE
4	Washer Flat M12	8	0231-F12





Item No.	Description	Qty	Number
1	Chain Carrier Bolt on End	2	0810-17L
2	M12 x 40 Coach Head Bolt	8	0215-CH1240
3	Nyloc Nut M12	16	0221-NYL12
4	Washer Flat M12	24	0231-F12
5	Chain Retainer Plate	2	0800-360
6	M12 x 30 Class 8.8 ZP Bolt	8	0211-1230


Item No.	Description	Qty	Number
1	Chain Carrier Beam	1	0810-61E
2	400mm Pedestal	2	0810-59E
3	U-Bolt M16 x 160 Deep x 127 Wide	4	0271-16160127
4	U-Bolt M16 x 185 Deep x 104 Wide	4	0271-16185104
5	Washer Flat M16	16	0231-F16
6	Nyloc Nut M16	16	0221-NYL16





Item No.	Description	Qty	Number
1	Extended Chain Carrier Bolt on End	2	0810-17LEE
2	M12 x 40 Coach Head Bolt	8	0215-CH1240
3	Nyloc Nut M12	8	0221-NYL12
4	Washer Flat M12	8	0231-F12





Item No.	Description	Qty	Number
1	Straight Chain Carrier M	1	0810-19
2	Round Tube Insert 60.3 x 3.2-5mm	2	0264-RTRi-5584
3	U-Bolt M12 x 185 Deep x 104 Wide	2	0271-12185104
4	Washer Flat M12	4	0231-F12
5	Nyloc Nut M12	4	0221-NYL12







Item No.	Description	Qty	Number
1	Catch Plate	2	0800-687
2	M12 x 35 Grade 8.8 ZP Bolt	6	0211-1235
3	Washer Flat M12	12	0231-F12
4	Nyloc Nut M12	6	0221-NYL12







Item No.	Description	Qty	Number
1	Outrigger	2	0810-42E
2	U-Bolt M16 x 140 Deep x 154 Wide	6	0271-16140154
3	Nyloc Nut M16	12	0221-NYL
4	Washer Flat M16	12	0231-F16



Item No.	Description	Qty	Number
1	9m Gen 2 - Front Oversize Sign	1	1532-02OS
2	European Oversize Sign 3	2	1501-EUOS3
3	U-Bolt M12 x 85 Deep x 102 Wide	4	0271-1285102
4	Washer Flat M12	8	0231-F12
5	Nyloc Nut M12	8	0221-NYL12
6	Button Head Screw M6 x 20mm	8	0211-0620_BH
7	Washer Flat M6	16	0231-F6
8	Nyloc Nut M6	8	0221-NYL6





Item No.	Description	Qty	Number
1	30 Degree OS Sign Mounting Bracket	2	1510-45
2	9m Gen 2 Rear Oversize Sign	2	1510-51
3	European Oversize Sign 2	2	1501-EUOS2
4	M8 x 25 Coach Head Bolt	8	0215-CH0825
5	Washer Flat M8	8	0231-F8
6	M12 x 65 Coach Head Bolt	4	0215-CH1265
7	Nyloc Nut M8	8	0221-NYL8
8	Nyloc Nut M12	4	0221-NYL12
9	Washer Flat M12	4	0231-F12
10	Button Head Screw M6 x 50mm	8	0211-0650_BH
11	Washer Flat M6	16	0231-F6
12	Nyloc Nut M6	8	0221-NYL6





Item No.	Description	Qty	Number
1	Module Cylinder Guard	1	0800-167.3
2	M12 x 45 grade 8.8 ZP Bolt	2	0211-1245
3	Nyloc Nut M12	2	0221-NYL12
4	Washer Flat M12	4	0231-F12



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Item No.	Description	Qty	Number			
1	Tail Guard Short	1	1510-242			
2	Outrigger	1	0810-41E		5	
3	U-Bolt M12 x 185 Deep x 104 Wide	2	0271-12185104		12	
4	Nyloc Nut M12	4	0221-NYL12		N	
5	M16 x 45 Class 8.8 ZP Bolt	2	0211-1645		11	
6	Washer Flat M16	4	0231-F16			7
7	Washer Flat M12	4	0231-F12			
8	Nyloc Nut M15	2	0221-NVL16			
0	NYIOC NUC INILO	4	0221-101110			

Item No.	Description	Qty	Number
1	20mm Bolt Swivel Unit	1	0802-PCHB55
2	M20 x 110 grade 10.9 ZP Short Thread Bolt	1	0211-20110 ST
3	Nyloc Nut M20	1	0221-NYL20





Item No.	Description	Qty	Number
1	Operator Manual Cannister	1	0801-OMC-1
2	Cylinder Safety Stop	1	0800-688
3	Square Loop Pin 5/16" x 3 1/4"	1	0511-PINLOOPSQ516x314
4	Ratcheting Gear Wrench 1 3/4"	1	0802-GW1 3-4
5	M6 x 25 Class 8.8 ZP Bolt	3	0211-625
6	Washer Flat M6	6	0231-F6
7	Nyloc Nut M6	3	0221-NYL6







Item No.	Description	Qty	Number	
1	9m Air Valve Bracket	1	1500-401	
2	M10 x 20 grade 8.8 ZP Bolt	2	0211-1020	
3	Washer Spring M10	2	0231-S10	



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Item No.	Description	Qty	Number
1	Air Reservoir 20L	1	0761-9504200030
2	20L Air Reservoir Bracket	2	0761-9504053512
3	Nyloc Nut M10	4	0221-NYL10
4	M10 x 25 grade 8.8 ZP Bolt	4	0211-1025
5	Washer Flat M10	8	0231-F10

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	Item No.	Description Relay Emergency Valve M10 x 35 grade 8.8 ZP Bolt	<b>Qty</b> 1 2	Number 0761-9710026200 0211-1035			
	3	Nyloc Nut M10	2	0221-NYL10		2)	

Item No.	Description	Qty	Number
1	Relay Emergency Valve	1	0761-9710026200
2	M10 x 35 grade 8.8 ZP Bolt	2	0211-1035
3	Nyloc Nut M10	2	0221-NYL10
4	Washer Flat M10	2	0231-F10





Item No.	Description	Qty	Number
1	9m Parking Brake Mechanism	1	0761-9MPB
2	M10 x 20 grade 8.8 ZP Bolt	2	0211-1020
3	Washer Spring M10	2	0231-510





Item No.	Description	Qty	Number
1	9m Air Coupling Storage Bracket	1	1500-402
2	M8 x 20 Class 8.8 ZP Bolt	2	0211-820
3	Washer Spring M8	2	0231-S8





Item No.	Description	Qty	Number
1	M22/16 Straight Connector	2	0761-8931003404
2	Air Line Filter	2	0761-4325000200
3	Bulkhead Fitting	2	0761-8931042922
4	M22 Bulkhead Nut	2	0761-8915004544
5	M16 x 12mm Air Hose Connector	2	0761-8938000022







Item No.	Description	Qty	Number
1	Elbow M16 x 1.5	1	0761-8934010152
2	M16 x 12mm Air Hose Connector	1	0761-8938000022
3	M22 Connector	1	0761-893129132
4	M22 x 12mm Air Hose Connector	1	0761-8938000082









Item No.	Description	Qty	Number
1	Elbow M16 x 1.5	1	0761-8934010152
2	M16 Connector	1	0761-8931291922
3	M16 x 12mm Air Hose Connector	1	0761-8938000022



Item No.	Description	Qty	Number
1	Polyamide Air Brake Line 12mm	1	0761-TR12



Item No.	Description	Qty	Number
1	Polyamide Air Brake Line 12mm	1	0761-TR12







Item No.	Description	Qty	Number
1	Polyamide Air Brake Line 12mm	1	0761-TR12



Item No.	Description	Qty	Number
1	Red Flexi Air Hose	1	0761-4527110580
2	Yellow Flexi Air Hose	1	0761-4527110590
3	M22/16 Straight Connector	2	0761-8931003404
4	Red Air Hose Coupling	1	0761-9528970070
5	Yellow Air Hose Coupling	1	0761-9528970060



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Item No.	Description	Qty	Number
1	EU Rear Light Bracket	2	1510-238
2	M10 x 30 Class 8.8 ZP Bolt	4	0211-1030
3	Washer Flat M10	8	0231-F10
4	Nyloc Nut M10	4	0221-NYL10





Item No.	Description	Qty	Number
1	LED Combination Tail Light Left	1	0412-EU200L
2	LED Combination Tail Light Right	1	0412-EU200R
3	EU38 Series Amber Position Marker Light	2	0412-LEDEU38AMB
4	Nyloc Nut M5	4	0221-NYL5
5	Washer Flat M5	4	0231-F5





Item No.	Description	Qty	Number
1	Rear Light Bracket Guard	2	1510-239
2	M6 Class 8.8 ZP Bolt	8	0211-615
3	Washer Spring M6	8	0231-S6
4	Washer Flat M6	8	0231-F6





Item No.	Description	Qty	Number
1	EU38 Series Amber Position Marker Light	2	0412-LEDEU38AMB





Item No.	Description	Qty	Number
1	EU38 Series Amber Position Marker Light	4	0412-LEDEU38AMB
2	EU38 Series White Position Marker Light	2	0412-LEDEU38WMB












Item No.	Description	Qty	Number
1	20mm Bolt Swivel Unit	1	0802-PCHB55
2	M20 x 110 Class 10.9 ZP Short Thread Bolt	1	0211-20110ST
3	Nyloc Nut M20	1	0221-NYL20







All bearings correctly orientated with s	beal facing rear of the Date / /	machine
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Item No.	Description	Qty	Number
1	Tapered Chain End Hub	1	0810-45-4
2	TCE First Blade	1	0800-696
3	TCE Second Blade	1	0800-697
4	Disc Chain Spacer	1	0801-253755
5	M20 x 110 Class 10.9 ZP Short Thread Bolt	2	0211-20110ST
6	Nyloc Nut M20	2	0221-NYL20
7	M12 x 30 Coach Head Bolt	8	0215-CH1230
8	Nyloc Nut M12	8	0221-NYL12







All coach head bolts installed with the heads towards the front of the machine	(

Signed\_\_\_\_\_ Date\_/\_/\_\_ Unit Serial Number\_\_\_\_\_



Item No.	Description	Qty	Number
1	Disc Chain Tie Plate Link 20mm	1	0802-DCTP-20
2	Disc Chain Spacer	1	0801-253755
3	Nyloc Nut M20	2	0221-NYL20
4	M20 x 110 Class 10.9 ZP Short Thread Bolt	2	0211-20110ST







# Section 2 Decal Application



Item No.	Description	Qty	Number
1	3009NT Data Plate	1	1501-009
2	Power Line Hazard Decal	1	1501-58
3	Hydraulic Pressure Hazard Decal	1	1501-59
4	KTS Decal	1	1501-S14
5	NOTICE' Hydra Grip Sequence Decal 200x360mm	1	0801-S20
6	Hydraulic Flow Decal	1	0801-S21
7	Mud Folding Warning Decal	1	0801-522
8	Euro Pinch Point Decal	1	1501-S1





Item No.	Description	Qty	Number
1	EU Hydraulic Pressure Hazard Decal	1	1501-59
2	EU KTS Decal	1	1501-S14
3	EU Read Manual Decal	1	1501-S3
4	Euro Pinch Point Decal	1	1501-S1





Item No.	Description	Qty	Number
1	Euro Park Brake Decal	1	1501-S2
2	Air Line Welding Hazard Decal	1	1501-S4





Item No.	Description	Qty	Number
1	EU Overhead Objects Decal	1	1501-S7
2	EU Power Line Hazard Decal	1	1501-58
3	Yellow Reflective Decal	1	0801-SYRF
4	Grease Point Indicator	4	1501-S12







Item No.	Description	Qty	Number
1	Chain Tension 330mm Decal	1	0801-S15
2	Grease Point Indicator	1	1501-S12
3	Yellow Reflective Decal	1	0801-SYRF





Item No.	Description	Qty	Number
1	Chain Tension 330mm Decal	1	0801-S15
2	Red Reflective Decal	1	0801-SRRF
3	Yellow Reflective Decal	1	0801-SYRF











Item No.	Description	Qty	Number
1	Brake Caliper Decal	1	0801-S11
2	Grease Point Indicator	4	1501-S12
3	25km/h Speed Limit Decal	1	1501-S13









Item No.	Description	Qty	Number
1	EU Hydraulic Pressure Hazard Decal	1	1501-S9
2	Euro Pinch Point Decal	1	1501-S1
3	Grease Point Indicator	2	1501-S12
4	Red Reflective Decal	1	0801-SRRF



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Item No.	Description	Qty	Number
1	Chain Tension 330mm Decal	1	0801-S15
2	Grease Point Indicator	2	1501-S12
3	Red Reflective Decal	1	0801-SRRF
4	Yellow Reflective Decal	1	0801-SYRF





Item No.	Description	Qty	Number
1	Chain Tension 330mm Decal	1	0801-S15
2	Grease Point Indicator	1	1501-S12
3	Yellow Reflective Decal	1	0801-SYRF





Item No.	Description	Qty	Number
1	EU Overhead Objects Decal	1	1501-S7
2	EU Power Line Hazard Decal	1	1501-58
3	Grease Point Indicator	2	1501-S12
4	Yellow Reflective Decal	1	0801-SYRF











### Section 3 Chain Assembly



Item No.	Description	Number
1	Nyloc Nut M20	0221-NYL20
2	M20 x 110 Class 10.9 ZP Short Thread Bolt	0211-20110ST
3	20mm Bolt Swivel Unit	0802-PCHB55
4	Tie Plate Disc 20mm	0802-DCTP-20
5	Disc Chain Spacer	0801-253755
6	Roll Pin Zinc Plated 3/8" x 2"	0262-3-8X2
7	CL1-B Chain Disc Link	0803-CL1





Item No.	Description	Number
1	Nyloc Nut M20	0221-NYL20
2	M20 x 110 Class 10.9 ZP Short Thread Bolt	0211-20110ST
3	20mm Bolt Swivel Unit	0802-PCHB55
4	Tie Plate Disc 20mm	0802-DCTP-20
5	Disc Chain Spacer	0801-253755
6	K4 Disc Assembly	0803-K4
7	M12 x 55 Class 8.8 ZP Bolt	0211-1255
8	Nyloc Nut M12	0221-NYL12








Item No.	Description	Number
1	Nyloc Nut M20	0221-NYL20
2	M20 x 110 Class 10.9 ZP Short Thread Bolt	0211-20110ST
3	20mm Bolt Swivel Unit	0802-PCHB55
4	Tie Plate Disc 20mm	0802-DCTP-20
5	Disc Chain Spacer	0801-253755
6	CL2-Link Assembly	0803-CL2
7	Roll Pin Zinc Plated 3/8" x 2"	0262-3-8X2
8	CL1 Disc Chain Link	0803-CL1







Front Left 24 2   Front Right 24 2   Front Right 23 11   Rear Right 23 11   Rear Right 23 11   Rear Set 50 15   Total 105 21	Front Left 24 2   Front Right 24 2   Front Modules 7 3   Front Set 55 7   Rear Right 23 11   Rear Left 21 2   Rear Set 50 15   Total 105 21	Front Right 24 2   Front Right 24 2   Front Right 24 2   Front Right 23 11   Rear Left 21 2   Rear Set 50 15   Total 105 21		Set	CL2	CL1
Front Right 24 2   Front Modules 7 3   Front Set 55 7   Rear Right 23 11   Rear Left 21 2   Rear Set 50 15   Total 105 21	Front Right 24 2   Front Modules 7 3   Front Modules 7 3   Front Set 55 7   Rear Right 23 11   Rear Left 21 2   Rear Set 50 15   Total 105 21	Front Right 24 2   Front Right 24 2   Front See 55 7   Rear Right 23 11   Rear Left 21 2   Rear Set 50 15   Total 105 21		Front Left	24	2
Front Modules 7 3   Front Modules 7 3   Front Set 55 7   Rear Right 23 11   Rear Right 23 11   Rear Modules 6 2   Rear Set 50 15   Total 105 21	Front Modules 7 3   Front Set 35 7   Ber Right 23 11   Rear Light 21 2   Rear Set 50 15   Total 105 21   ODDOO Oddes 6 15   Total 105 21 105	Front Modules 7 3   Front Set 55 7   Rear Right 23 11   Rear Right 21 2   Rear Night 50 15   Total 105 21   Optimized 6 2   Rear Set 50 15   Total 105 21		Front Right	24	2
Front Set 55 7   Rear Right 23 11   Rear Right 23 11   Rear Modules 6 2   Rear Set 50 15   Total 105 21	Front Set 55 7   Rear Right 23 11   Rear Right 23 11   Rear Right 23 11   Rear Left 21 2   Rear Set 50 15   Total 105 21   Opponentiation Opponentiation Opponentiation	Front Set 55 7   Rear Right 23 11   Rear Right 21 2   Rear Right 105 21	The second second	Front Modules	7	3
Rear Right 23 11   Rear Left 21 2   Rear Set 50 15   Total 105 21	Rest Right 23 11   Rest Left 21 2   Rest Set 50 15   Total 105 21	Description Rear Right 23 11   Rear Left 21 2   Rear Set 50 15   Total 105 21		Front Set	55	7
Rear Left 21 2   Rear Modules 6 2   Rear Set 50 15   Total 105 21	Rear Left 21 2   Rear Modules 6 2   Rear Set 50 15   Total 105 21	Rear Left 21 2   Rear Modules 6 2   Rear Set 50 15   Total 105 21		Rear Right	23	11
Rear Modules 6 2 Rear Set 50 15 Total 105 21	Rear Modules 8 2   Rear Set 50 15   Total 105 21	Rear Set 50 15   Total 105 21	Rat	Rear Left	21	2
Rear Set 50 15 Total 105 21	Rear Set 50 15 Total 105 21	Rear Set 50 15 Total 105 21	m	Rear Modules	6	2
Total 105 21	Total 105 21	Total 105 21		Rear Set	50	15
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Item No.	Description	Number
1	Nyloc Nut M20	0221-NYL20
2	M20 x 110 Class 10.9 ZP Short Thread Bolt	0211-20110ST
3	20mm Bolt Swivel Unit	0802-PCHB55
4	Tie Plate Disc 20mm	0802-DCTP-20
5	Disc Chain Spacer	0801-253755
6	R300 Chain Link	0803-R300





Item No.	Description	Number
1	Nyloc Nut M20	0221-NYL20
2	M20 x 110 Class 10.9 ZP Short Thread Bolt	0211-20110ST
3	20mm Bolt Swivel Unit	0802-PCHB55
4	Tie Plate Disc 20mm	0802-DCTP-20
5	Disc Chain Spacer	0801-253755
6	W36/25 Chain Link	0803-W36





Item No.	Description	Number
1	Nyloc Nut M20	0221-NYL20
2	M20 x 110 Class 10.9 ZP Short Thread Bolt	0211-20110ST
3	20mm Bolt Swivel Unit	0802-PCHB55
4	Tie Plate For 20mm Bolt	0800-83.2
5	Disc Chain Spacer	0801-253755
6	10 Spike Disc Chain 49/27/5	0803-SD49





Item No.	Description	Number
1	Nyloc Nut M20	0221-NYL20
2	M20 x 110 Class 10.9 ZP Short Thread Bolt	0211-20110ST
3	20mm Bolt Swivel Unit	0802-PCHB55
4	0800-83.2	0800-83.2
5	Prickle Chain	0803-PCH





## **Section 4** Diagrams & Charts

### **Operating speeds**

Operating speeds for normal conditions	
Chain type	Speed
Prickle Chain	10-16 kph
Disc Chain	10-12 kph
Transport / towing on roads	25 kph

### Tyre pressure

Tyre size	Ply	KPA	PSI
400/55-22.5	18	350	50
10.0/75-15.3	14	300	44

### **Chain Harrow specifications**

Model	3009NT
Working width	8.76m
<b>Transport width</b>	2.40m
Transport height	3.35m
Transport length	11.61m

Model		Length	CL2	CL1	K4	W36	R300	SD49	Prickle chain
			CL2 disc chain also requires CL1 disc chain						
3009NT	Front right	5.33m	CL2 - 23 CL1 - 2	33	34	31	42	42	59
	Front left	5.33m	CL2 - 23 CL1 - 2	33	34	31	42	42	59
	Rear right	6.49m	CL2 - 22 CL1 - 11	41	42	38	52	52	72
	Rear left	4.88m	CL2 - 21 CL1 - 2	30	31	29	39	39	54
	Front module	1.97m	CL2 - 7 CL1 - 3	12	12	11	16	16	22
	Rear module	1.61m	CL2 - 6 CL1 - 2	10	10	9	13	13	18

For correct chain tension, chain links may need to be removed from the end of the chain as follows:

CL2 Disc Chain - unhook disc chain link/s from end of the disc chain CL1 Disc Chain - unhook disc chain link/s from end of the disc chain K4 Disc Chain - unhook disc chain link/s from end of the disc chain Spiked Disc Chain - cut a disc chain link from the end of the disc chain R300 Disc Chain - cut a disc chain link from the end of the disc chain W36 Disc Chain - cut a disc chain link from the end of the disc chain Prickle Chain - cut a prickle chain link from the end of the prickle chain



# Section 5 Operation

### **Basic Operation**

#### Unfolding:

- 1. Remove transport safety stop.
- 2. Walk around and inspect the machine.
  - a. Check that chains are not hooked on framework
  - b. Check swivel bolts at end of each chain are in place and not broken
  - c. Check that height adjusting chains have not fallen out of their slotted plates during transport.
  - d. Ensure front lift cylinder depth stops are fully engaged on cylinder shaft.
- 3. Lower front drawbar to working height.

4. Unfold wings, holding the hydraulic lever until the main center cylinder pins have centered in their slots.

5. Lower rear tail by holding hydraulic lever until tail and modules are completely lowered to working position and the wing de-tensioning cylinders are fully retracted, tensioning the chain.

6. Walk around and check that all chain links are straight and that working height of all swivels are correct for field conditions. Adjust if neccessary.

7. Move off with all chains in working position. If neccessary it is acceptabe to raise frame to transport height. This will lift the front chains off the ground and reduce the load on the tractor. Lower the frame once operating speed is reached.

#### Folding:

- 1. Lower the front drawbar to working height. (This is important to ensure that all chains locate correctly in their transport rests).
- 2. Raise the rear tail and modules by holding the hydraulic lever until they come to a complete stop.
- 3. Fold the wings. They should move as follows; main center cylinders will retract, one or both, until the wings stand vertically. The left outer wing then the right outer wing will fold down.
- 4. Raise front drawbar to transport height.
- 5. Walk around and check that chains have located correctly in transport rests.
- 6. Install transport safety stop.

### Setting for correct chain tension

#### Wings

- Use the spanner supplied. Loosen the lock nut adjacent to the tensioner assembly body.
- Turn the tension bolt clockwise to compress the coil spring to 330mm. Correct tension is acheived when spring retains its set length when operator rolls the chain fore and aft on the ground. Retighten the lock nut.
- When less than 25mm of thread remains visible on the adjustor bolt then a link must be removed from the chain.

#### **Modules**

- Loosen the lock nut on the draw bolt.
- Tighten the adjusting nut clockwise until the outer face of the spring retaining washer is flushed with the body of the module tensioning unit.
- Retighten the lock nut.
- After setting the tension assemblies to have the recommended thread showing (less than 200mm), move out to the wings of the machine and use the provided spanner to tension the chain.

### **Modules & Chain Tension**



#### Importance of chain tension

#### Operational

It is imperative that the correct adjustment be maintained. Only through correct adjustment can a smooth and level finish be achieved in field working.

Loose chains lead to :

- Uneven performance across the width of the machine
- Uneven weed control
- Unsatisfactory incorporation
- Ineffective levelling
- Accelerated or premature chain wear
- Chains failing to engage with transport locators when folded
- Machine damage when folding or unfolding
- Uneven field surface with ridges and furrows being created. The leading 1/3rd of a loose chain is much more aggressive than the trailing 1/3rd and the center. This will mean that middle of the machine's front pair of chains will aggressively move soil outwards. The machine's rear pair of chains, if loose, have their aggressive 1/3rd near the wing extremity. It follows then that as the front discs push soil outwards, the least aggressive portion of the rear chain follows them and does not balance the soil movement. This is exacerbated at the wings, effectively creating a broad ridge about halfway out each wing. It won't be evident in one pass, but is possible if care is not taken over time.

#### A correctly adjusted machine will not have this problem.

### Correct chain height adjustment

To adjust the swivel height at the wings, relocate one of the spacers either above or below the fixed mounting tube. Each Dropleg has four pairs of 25mm cast spacers. The most common set up is to have two pairs of cast spacers on the bottom and two pairs of cast spacers on the top. Below is the process to adjust the Dropleg height.

- 1. Loosen chain tension completely
- 2. Undo 2 x M10 bolts from corresponding spacer set and take the two halfs off of the drop leg tube
- 3. Replace it in the selected position after raising or lowering the drop leg
- 4. Reinstall the M10 bolts and re-tension the chain

It is possible to install all spacers either above or below the mounting tube giving a maximum of 125mm of adjustment.



## Section 6 Pre-Delivery Checklist

### **Dealer Pre-Delivery Checklist**

To be completed by the dealer on sale of the machine

Check Item:	Checked by Initial
Tow hitch is fitted correctly with bolts tightened to correct torque and marked	
Air brake hoses are correctly routed through holders and fitted with no leaks	
Air brake relay valve is correctly set for the load	
Hydraulic hoses are routed through holders and fitted to cylinders with no leaks	
Hydraulic Accumulator is charged correctly (2006 only)	
All bolts and nuts are tightened to the correct torque and marked	
All split pins are inserted and split	
All safety signs and decals are in the correct locations as per the Assembly/Operators Manual	
All safety lights are in the correct locations and working	
All tyres are fitted correctly and inflated to the correct pressure	
All wheel nuts are tightened to the correct torque and marked	
Swivel units are correctly orientated	
Drop legs are correctly orientated	
Grease all marked locations	
Disc roll pins/locking bolts are installed in the discs (CL1, CL2 and K4 only)	
Check the chain tension as per Operators Manual	
Machine folds/unfolds in the correct sequence	
Chains are resting correctly on their transport supports (chain carriers)	
Machine is registered for Warranty	
Customer has been shown the website and how to access parts information	

Operators manual has	been provided	with the	machine
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Completed Pre-Delivery Checklist to be returned to <u>warranty@kellytillage.com</u> within 7 days of delivery to the customer.

Name:	
Signature:	
Date:	



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