



TAX INVOICE

Linct Group



Invoice Date
1 May 2023

Invoice Number
INV-1162

Reference
LR445

ABN
71 627 726 238

Earthworks Diesel Repairs
Pty Ltd

ABN 71 627 726 238
4 Mulhalls Road
MACCLESFIELD VIC
3782

Mick@edrepairs.com.au
0407 147 882

Description	Quantity	Unit Price	GST	Amount AUD
29/03/2023. Cat 160M LR445 @5120hr, Labour to complete 5000hr service and mechanical inspection. Adjust valve clearances.	12.00	120.00	10%	1,440.00
Engine oil	30.00	5.00	10%	150.00
Engine oil filter	1.00	55.43	10%	55.43
Hydraulic filter	1.00	192.51	10%	192.51
Transmission filter	1.00	157.99	10%	157.99
All wheel drive filters	3.00	85.30	10%	255.90
Fuel filter	2.00	39.31	10%	78.62
Fuel water separator	1.00	79.14	10%	79.14
Primary air filter	1.00	158.29	10%	158.29
Secondary air filter	1.00	65.01	10%	65.01
Air con filter	1.00	59.88	10%	59.88
Cabin air filter	1.00	73.97	10%	73.97
Oil SOS's	7.00	37.40	10%	261.80
Coolant SOS	1.00	37.40	10%	37.40
TDTO 50	14.00	5.42	10%	75.88
85/140 gear oil	14.00	5.67	10%	79.38
ELC	6.00	9.27	10%	55.62
Grease	3.00	15.65	10%	46.95
Rocker cover gasket	1.00	290.23	10%	290.23

Description	Quantity	Unit Price	GST	Amount AUD
Environmental / Consumables	1.00	40.00	10%	40.00
24 volt H3 globes	2.00	10.00	10%	20.00
Labour to diagnose starting and DPF faults	4.00	120.00	10%	480.00
Carry out DPF burn and regen. Replace fuel rail pressor sensor	7.00	120.00	10%	840.00
DPF ecu reset	1.00	435.00	10%	435.00
Fuel rail pressor sensor	1.00	393.91	10%	393.91
Labour to replace blade circle drive gear and duo cone seal. Adjust circle and shim as required. Replace blade ram cap wear inserts and shim as required. Shim A frame. Replace blade slide bushes and adjust.	16.00	120.00	10%	1,920.00
Blade circle drive	1.00	1,625.76	10%	1,625.76
Circle drive duo cone seal	1.00	224.34	10%	224.34
Blade slide bushes/set	1.00	692.48	10%	692.48
Circle ram lift and side shift ram wear cup inserts	8.00	59.65	10%	477.20
Blade shims	16.00	12.76	10%	204.16
Cup shims	10.00	8.99	10%	89.90
Labour to repair wiring to blade position sensor	2.00	120.00	10%	240.00
Labour to replace rear guards. Replace RF steer hose support belt. Repair work lights x2	2.00	120.00	10%	240.00
Rear guards	2.00	1,166.65	10%	2,333.30
RF hose support belt	1.00	233.27	10%	233.27
Consumables	1.00	40.00	10%	40.00
			Subtotal	14,143.32
			TOTAL GST 10%	1,414.34
			TOTAL AUD	15,557.66

Due Date: 29 May 2023
 Earthworks Diesel Repairs Pty Ltd
 BSB: 013 312
 Acc No: 310793368

Thank You

Payment terms 14 days from invoice date



PAYMENT ADVICE

To: Earthworks Diesel Repairs Pty Ltd
ABN 71 627 726 238
4 Mulhalls Road
MACCLESFIELD VIC 3782
Mick@edrepairs.com.au
0407 147 882

Customer	Linct Group
Invoice Number	INV-1162
Amount Due	15,557.66
Due Date	29 May 2023
Amount Enclosed	

Enter the amount you are paying above



GRADER SERVICING SCHEDULE

Date:	<u>28.11.23</u>	Serial No:	<u>N9T00228</u>
Unit Number:	<u>LR445</u>	Mechanic:	<u>Ash Lockwood</u>
Rego Number:	<u>XV06YN</u>	Mechanic:	<u>Rob Arnaby</u>
Service Type:	<u>500hr</u>	Serviceman:	
Kilometres:		Operator:	
Hours:	<u>5,523</u>	Spotter:	

INSPECTION SCHEDULE

EVERY SERVICE

The following inspections require having the engine running or machine moving. Use of an operator and spotter may be required.

IN CAB

No.	ACTION	CHECKS	S	US	N/A	Initial
1	Inspect	Door latches & seals, smoke bomb cab (if necessary)		X		RA
2	Inspect	Seat belt for damage, fraying & anchor bolt security	X			RA
3	Check	Seat for correct operation, excessive movement, cover & cushion condition	X			RA
4	Check	Windscreen & other glass in the cab for chips or cracks	X			RA
5	Check	Operation of window winders & door handles	X			RA
6	Check	Operation of air conditioner & heater	X			RA
7	Check	Pedal rubbers are on & in good condition	X			RA
8	Check	For breakdown triangles, condition & complete set	X			RA
9	Check	For a first aid kit, in date & complete	X			RA
10	Check	Operation of ignition & security of key, instrument cluster, warning alarms, warning indicator lights & horn	X			RA
11	Check	Steering column adjustment & security			X	RA
12	Check	Operation of steering wheel (lock to lock), security of the column adjustor	X			RA
13	Check	Secondary steering system for operation	X			RA
14	Check	Park lights, headlights, spot lights, indicators, brake lights, internal cab light, reverse alarm, reverse camera & rotating beacon	X			RA
15	Check	Operation of AM / FM radio & UHF radio	X			RA
16	Check	Operation of E-Stops engine shutdown switch	X			RA
17	Check	Wipers & Washers	X			RA
18	Check	Fire extinguisher for safety ties, gauge in green, rotate a couple of times & tap bottom to release sediment	X			RA

RUNNING CHECKS

No.	ACTION	CHECKS	S	US	N/A	Initial
19	Check	The general driving characteristics of the grader	X			RA
20	Check	For excessive exhaust smoke or abnormal noises / vibrations	X			RA
21	Test	Operation of automatic transmission kick down, lock-up & neutral inhibitor switch	X			RA
22	Inspect	Service brake operation / adjustment	X			RA

23	Check	Brake accumulator test (Apply & release service brake pedal and release the service brake pedal for a minimum of three applications, until alert indicator) if indicator doesn't illuminate refer to OEM Manual	X			RA
24	Check	Park brake operation (test on a 10° slope)	X			RA
25	Check	For brake drag	X			RA
26	Check	Blade float control	X			RA
27	Check	Steer king pins, steering / wheel lean, articulation, ripper cylinder pins & bushes for excessive movement (less than 2mm of movement)	X			AL
28	Check	Steering, wheel lean, blade lift, blade tilt, articulation, ripper cylinders for leaks, damage to the cylinder rod.	X			AL
29	Check	For wear in blade slide wear strips, lift cylinder socket cups, centre shift cylinder sockets, centre shift lock bar pin & bush		X		AL
30	Check GET	Blade cutting edges, moldboard end wear strips & damage to moldboard, check ripper tynes for security & ripper boots	X			AL
31	Check	Wear strips on top of circle & underneath circle, inspect circle drive teeth & for leaks from pinion on circle drive motor	X			AL
32	Check	Clearances of circle, for up & down movement in blade circle & oscillation movement in circle (check that it turns freely & centrally to circle)		X		AL
33	Check	A" Frame Ball clearance		X		AL
34	Check	Oscillating movement & excess movement in pivot shaft of both tandems	X			AL
35	Check	All wheel bearings for movement by lifting machine	X			AL
36	Check	Using scan tool check for fault codes	X			AL
37	Check	DPF / DET Status & conduct a manual burn if required	X			AL

FRAME & BODY

Park on level ground, Isolate generator, Fit body prop, Relieve all pressures, Start from front right hand side and work clockwise around generator checking each item below

No.	ACTION	CHECKS	S	US	N/A	Initial
38	Check	ROP's for security & integrity	X			AL
39	Check	Bonnet mounts, operation of bonnet tilt struts / locking mechanism	X			AL
40	Check	For external body damage / security of bonnet to main body, Check hinged doors / panels / sliding doors for correct operation & locking	X			AL
41	Check	Rear vision mirrors & brackets for condition & operation	X			AL
42	Inspect	Steering column mounting & universal joints for movement & grease penetration	X			AL
43	Check	Steps & handrails for security	X			AL
44	Check	Mudguards, mudflaps for condition & security		X		AL
45	Check	For metal fatigue in chassis, goose neck & tow hitch	X			AL
46	Inspect	All hydraulic hoses for signs of rubbing, leaks & deterioration	X			AL
47	Check / Clean	Battery box, mountings, signs of corrosion, terminal security & condition, cables & electrolyte levels	X			AL
48	Inspect	All air lines, valves / fittings for air leaks & chaffing	X			AL
49	Inspect	All grease lines & fittings for damage / security & grease penetration	X			AL
50	Inspect	Electrical harness / junction boxes for chaffing & dust sealing	X			AL
51	Inspect	Tow hitch / pin	X			AL
52	Check	Hazard warning / component location Decals	X			AL

UNDER BONNET / ENGINE BAY

No.	ACTION	CHECKS	S	US	N/A	Initial
53	Inspect	Exhaust manifolds / covers, bolts, turbo, piping for any leaks & security	X			AL
54	Inspect / Tighten	Air induction boxes / hoses / piping / fittings for damage, clamps for tension & presence of dusting	X			AL
55	Inspect	Fuel pump / pipes / hoses / clamps, for leakage & movement	X			AL

56	Inspect	Engine for oil leaks & damaged hoses								X			AL
57	Check	Engine mounts for wear & security								X			AL
58	Check	Water pump "tell tail" for leakage or blockage & check bearing for movement								X			AL
59	Check	Alternator pulley, mountings, bearings & idler pulleys								X			AL
60	Inspect	Air Conditioner compressor pulley, mountings, hose connections for leakage & movement								X			AL
61	Inspect	Fan, alternator, air conditioner belts for cracking / unusual wear									X		AL
62	Inspect	Fan blades for cracks, wear, damage & security								X			AL
63	Check	Radiator mountings, coolant leakage & air flow through radiator (Clean when required)								X			AL
64	Inspect	Coolant, heater hoses, clamps for condition, leaks & tension								X			AL
65	Inspect	Electrical harnesses / connections for damage & security								X			AL
66	Inspect	Engine bay is free of combustible materials i.e. leaves, sticks & rags for prevention of fire hazards								X			AL
67	Clean	Vibration dampener, idler, A/C & alternator pulleys for dust build up								X			AL
POWER TRAIN & AXLES													
No.	ACTION	CHECKS								S	US	N/A	Initial
68	Inspect	Transmission & hydraulic pump pipes, hoses, clamps for tension & oil leaks								X			RA
69	Inspect	Transmission & hydraulic pump mountings & security								X			RA
70	Inspect	Drive universal joints for movement & grease penetration								X			RA
71	Inspect	Wheel rims for damage, cracks, missing or loose wheel nuts								X			RA
72	Check	For oil leaks on pivot shafts & wheel ends, damage & cracks, listen for excess chain slap on both tandems drives								X			RA
73	Inspect	Tyres for damage, tread depth & pressure											RA
74	Depth	P2:	28	mm	P4:	12	mm	P6:	25	mm	X		RA
		P1:	27	mm	P3:	27	mm	P5:	23	mm			
75	Damage	P2:	Nil		P4:	Replace		P6:	Nil		X		RA
		P1:	Nil		P3:	Nil		P5:	Nil				
76	Pressure	P2:	36	psi	P4:	38	psi	P6:	37	psi	X		RA
		P1:	37	psi	P3:	39	psi	P5:	38	psi			
2000 / 2500 HOUR SERVICE													
Check / Change & Adjust													
No.	ACTION	CHECKS								S	US	N/A	Initial
77		Cylinder 1	Cylinder 2	Cylinder 3	Cylinder 4	Cylinder 5	Cylinder 6						
	Intake												
	Exhaust												
78	Measure	Brake Material Thickness											
		P2:		P4:		P6:							
		P1:		P3:		P5:							
79	Check	Glow Plugs for power & conduct a continuity test on each plug											
80	Check	Using a Coolant Test Strip & compare to chart, change if necessary											
81	Check	Tandem Drive Chain Check, Refer to OEM Specifications											
EVERY 3 YEARS													
82	Check	Replacement date seat belt				Last Installed Date:							
LUBRICATION SCHEDULE													
EVERY SERVICE													

1	Lubricate	All grease points:	AL		
250 HOUR SERVICE					
2	SOS	Engine Oil:	AL		
500 Hour Service					
3	SOS	Hydraulic Oil:	AL	Transmission / Diff Oil:	AL
		Front Wheel Bearing Oil:	AL	All Wheel Drive Oil:	AL
		LHS Tandem Oil:	AL	RHS Tandem Oil:	AL
4	Change	Engine Oil:	AL		
5	Change Filters	Engine Oil (Cut/Inspect):	AL	Outer Air Filter:	AL
		Fuel / Water Separator:	AL	Secondary Fuel:	AL
		Hydraulic Tank Return:	AL	Hydraulic Impl Control:	AL
6	Inspect / Change	Secondary Air Filters:	AL	Signs of Dusting Y / N:	N
7	Inspect / Clean	Air Cleaner Dust Bowl:	AL	Fuel Tank Cap & Strainer:	RA
8	Inspect / Clean / Change	Engine Breather:	RA	Tandem Breathers:	RA
9	Check / Top up	Engine Oil:	RA	Transmission / Diff Oil:	RA
		Hydraulic Oil:	RA	Both Tandems:	RA
		Front Wheel Bearing Oil:	RA	Circle Drive:	RA
		Coolant:	RA		
1000 HOUR SERVICE					
10	SOS	Coolant:		Hydraulic Oil:	
11	Change	Transmission / Diff Oil:			
12	Change Filters	Transmission / Diff:		All Wheel Drive Oil:	
13	Clean	Transmission / Diff screen:			
14	Inspect / Clean	Transmission / Diff screen:			
2000 Hour Service					
15	Change	Tandem Drive Oil:		Circle Drive Oil:	
		Front Wheel Bearing Oil:		Coolant (on SOS):	
		Gear Oil (All Wheel Drive):			
16	Change Filters	Inner Air:			
6000 Hour Service					
17	Change	Hydraulic Oil (on SOS):			
AFTER EVERY SERVICE					
18	Check	All fluid levels & Correct Running operation of Grader			
DEFECTS / COMENTS & PARTS TO BE ORDERED					
1	LHS door still needs bending and repair to seal the dust from the cab - waiting on parts				
29	Adjust all lift and side shift cylinder sockets				
32	Circle needs adjusting				
33	"A" fame ball needs adjusting				
44	LHS rear mud guard				
61	ALT belt needs replacing				



GRADER SERVICING SCHEDULE

Date:	<u>02.04.24</u>	Serial No:	<u>N9T00228</u>
Unit Number:	<u>LR445</u>	Mechanic:	<u>Harry Parker</u>
Rego Number:	<u>XV06YN</u>	Mechanic:	
Service Type:	<u>250HR</u>	Serviceman:	
Kilometres:		Operator:	
Hours:	<u>5,838</u>	Spotter:	

INSPECTION SCHEDULE

EVERY SERVICE

The following inspections require having the engine running or machine moving. Use of an operator and spotter may be required.

IN CAB

No.	ACTION	CHECKS	S	US	N/A	Initial
1	Inspect	Door latches & seals, smoke bomb cab (if necessary)	X			HP
2	Inspect	Seat belt for damage, fraying & anchor bolt security	X			HP
3	Check	Seat for correct operation, excessive movement, cover & cushion condition	X			HP
4	Check	Windscreen & other glass in the cab for chips or cracks	X			HP
5	Check	Operation of window winders & door handles	X			HP
6	Check	Operation of air conditioner & heater	X			HP
7	Check	Pedal rubbers are on & in good condition			X	HP
8	Check	For breakdown triangles, condition & complete set			X	HP
9	Check	For a first aid kit, in date & complete	X			HP
10	Check	Operation of ignition & security of key, instrument cluster, warning alarms, warning indicator lights & horn	X			HP
11	Check	Steering column adjustment & security			X	HP
12	Check	Operation of steering wheel (lock to lock), security of the column adjustor			X	HP
13	Check	Secondary steering system for operation	X			HP
14	Check	Park lights, headlights, spot lights, indicators, brake lights, internal cab light, reverse alarm, reverse camera & rotating beacon	X			HP
15	Check	Operation of AM / FM radio & UHF radio	X			HP
16	Check	Operation of E-Stops engine shutdown switch	X			HP
17	Check	Wipers & Washers	X			HP
18	Check	Fire extinguisher for safety ties, gauge in green, rotate a couple of times & tap bottom to release sediment	X			HP

RUNNING CHECKS

No.	ACTION	CHECKS	S	US	N/A	Initial
19	Check	The general driving characteristics of the grader	X			HP
20	Check	For excessive exhaust smoke or abnormal noises / vibrations	X			HP
21	Test	Operation of automatic transmission kick down, lock-up & neutral inhibitor switch	X			HP
22	Inspect	Service brake operation / adjustment	X			HP

23	Check	Brake accumulator test (Apply & release service brake pedal and release the service brake pedal for a minimum of three applications, until alert indicator) if indicator doesn't illuminate refer to OEM Manual	X			HP
24	Check	Park brake operation (test on a 10° slope)	X			HP
25	Check	For brake drag	X			HP
26	Check	Blade float control	X			HP
27	Check	Steer king pins, steering / wheel lean, articulation, ripper cylinder pins & bushes for excessive movement (less than 2mm of movement)	X			HP
28	Check	Steering, wheel lean, blade lift, blade tilt, articulation, ripper cylinders for leaks, damage to the cylinder rod.	X			HP
29	Check	For wear in blade slide wear strips, lift cylinder socket cups, centre shift cylinder sockets, centre shift lock bar pin & bush	X			HP
30	Check GET	Blade cutting edges, moldboard end wear strips & damage to moldboard, check ripper tynes for security & ripper boots	X			HP
31	Check	Wear strips on top of circle & underneath circle, inspect circle drive teeth & for leaks from pinion on circle drive motor	X			HP
32	Check	Clearances of circle, for up & down movement in blade circle & oscillation movement in circle (check that it turns freely & centrally to circle)	X			HP
33	Check	A" Frame Ball clearance	X			HP
34	Check	Oscillating movement & excess movement in pivot shaft of both tandems	X			HP
35	Check	All wheel bearings for movement by lifting machine	X			HP
36	Check	Using scan tool check for fault codes	X			HP
37	Check	DPF / DET Status & conduct a manual burn if required	X			HP

FRAME & BODY

Park on level ground, Isolate generator, Fit body prop, Relieve all pressures, Start from front right hand side and work clockwise around generator checking each item below

No.	ACTION	CHECKS	S	US	N/A	Initial
38	Check	ROP's for security & integrity	X			HP
39	Check	Bonnet mounts, operation of bonnet tilt struts / locking mechanism	X			HP
40	Check	For external body damage / security of bonnet to main body, Check hinged doors / panels / sliding doors for correct operation & locking	X			HP
41	Check	Rear vision mirrors & brackets for condition & operation	X			HP
42	Inspect	Steering column mounting & universal joints for movement & grease penetration	X			HP
43	Check	Steps & handrails for security	X			HP
44	Check	Mudguards, mudflaps for condition & security		X		HP
45	Check	For metal fatigue in chassis, goose neck & tow hitch	X			HP
46	Inspect	All hydraulic hoses for signs of rubbing, leaks & deterioration	X			HP
47	Check / Clean	Battery box, mountings, signs of corrosion, terminal security & condition, cables & electrolyte levels	X			HP
48	Inspect	All air lines, valves / fittings for air leaks & chaffing	X			HP
49	Inspect	All grease lines & fittings for damage / security & grease penetration	X			HP
50	Inspect	Electrical harness / junction boxes for chaffing & dust sealing	X			HP
51	Inspect	Tow hitch / pin	X			HP
52	Check	Hazard warning / component location Decals	X			HP

UNDER BONNET / ENGINE BAY

No.	ACTION	CHECKS	S	US	N/A	Initial
53	Inspect	Exhaust manifolds / covers, bolts, turbo, piping for any leaks & security	X			HP
54	Inspect / Tighten	Air induction boxes / hoses / piping / fittings for damage, clamps for tension & presence of dusting	X			HP
55	Inspect	Fuel pump / pipes / hoses / clamps, for leakage & movement	X			HP

56	Inspect	Engine for oil leaks & damaged hoses	X			HP
57	Check	Engine mounts for wear & security	X			HP
58	Check	Water pump "tell tail" for leakage or blockage & check bearing for movement	X			HP
59	Check	Alternator pulley, mountings, bearings & idler pulleys	X			HP
60	Inspect	Air Conditioner compressor pulley, mountings, hose connections for leakage & movement	X			HP
61	Inspect	Fan, alternator, air conditioner belts for cracking / unusual wear	X			HP
62	Inspect	Fan blades for cracks, wear, damage & security	X			HP
63	Check	Radiator mountings, coolant leakage & air flow through radiator (Clean when required)	X			HP
64	Inspect	Coolant, heater hoses, clamps for condition, leaks & tension	X			HP
65	Inspect	Electrical harnesses / connections for damage & security	X			HP
66	Inspect	Engine bay is free of combustible materials i.e. leaves, sticks & rags for prevention of fire hazards	X			HP
67	Clean	Vibration dampener, idler, A/C & alternator pulleys for dust build up	X			HP

POWER TRAIN & AXLES

No.	ACTION	CHECKS										S	US	N/A	Initial
68	Inspect	Transmission & hydraulic pump pipes, hoses, clamps for tension & oil leaks										X			HP
69	Inspect	Transmission & hydraulic pump mountings & security										X			HP
70	Inspect	Drive universal joints for movement & grease penetration										X			HP
71	Inspect	Wheel rims for damage, cracks, missing or loose wheel nuts										X			HP
72	Check	For oil leaks on pivot shafts & wheel ends, damage & cracks, listen for excess chain slap on both tandems drives										X			HP
73	Inspect	Tyres for damage, tread depth & pressure										X			HP
74	Depth	P2:		mm	P4:		mm	P6:		mm		X			HP
		P1:		mm	P3:		mm	P5:		mm					HP
75	Damage	P2:			P4:			P6:				X			HP
		P1:			P3:			P5:							HP
76	Pressure	P2:		psi	P4:		psi	P6:		psi		X			HP
		P1:		psi	P3:		psi	P5:		psi					HP

2000 / 2500 HOUR SERVICE

Check / Change & Adjust

No.	ACTION	CHECKS										S	US	N/A	Initial
77		Cylinder 1	Cylinder 2	Cylinder 3	Cylinder 4	Cylinder 5	Cylinder 6								
	Intake														
	Exhaust														
78	Measure	Brake Material Thickness													
		P2:		P4:		P6:									
		P1:		P3:		P5:									
79	Check	Glow Plugs for power & conduct a continuity test on each plug													
80	Check	Using a Coolant Test Strip & compare to chart, change if necessary													
81	Check	Tandem Drive Chain Check, Refer to OEM Specifications													

EVERY 3 YEARS

82	Check	Replacement date seat belt	Last Installed Date:	Apr-17		X		HP
----	-------	----------------------------	----------------------	--------	--	---	--	----

LUBRICATION SCHEDULE

EVERY SERVICE

[illegible]



GRADER SERVICING SCHEDULE

Date:	<i>11.08.24</i>	Serial No:	N9T00228
Unit Number:	<i>LR445</i>	Mechanic:	<i>Robert Arnsby</i>
Rego Number:	<i>XV27TB</i>	Mechanic:	
Service Type:	<i>2000 hr</i>	Serviceman:	
Kilometres:		Operator:	
Hours:	<i>6,160</i>	Spotter:	

INSPECTION SCHEDULE

EVERY SERVICE

The following inspections require having the engine running or machine moving. Use of an operator and spotter may be required.

IN CAB

No.	ACTION	CHECKS	S	US	N/A	Initial
1	Inspect	Door latches & seals, smoke bomb cab (if necessary)		<i>X</i>		<i>RA</i>
2	Inspect	Seat belt for damage, fraying & anchor bolt security	<i>X</i>			<i>RA</i>
3	Check	Seat for correct operation, excessive movement, cover & cushion condition	<i>X</i>			<i>RA</i>
4	Check	Windscreen & other glass in the cab for chips or cracks		<i>X</i>		<i>RA</i>
5	Check	Operation of window winders & door handles	<i>X</i>			<i>RA</i>
6	Check	Operation of air conditioner & heater		<i>X</i>		<i>RA</i>
7	Check	Pedal rubbers are on & in good condition	<i>X</i>			<i>RA</i>
8	Check	For breakdown triangles, condition & complete set			<i>X</i>	<i>RA</i>
9	Check	For a first aid kit, in date & complete				
10	Check	Operation of ignition & security of key, instrument cluster, warning alarms, warning indicator lights & horn	<i>X</i>			<i>RA</i>
11	Check	Steering column adjustment & security			<i>X</i>	<i>RA</i>
12	Check	Operation of steering wheel (lock to lock), security of the column adjustor	<i>X</i>			<i>RA</i>
13	Check	Secondary steering system for operation	<i>X</i>			<i>RA</i>
14	Check	Park lights, headlights, spot lights, indicators, brake lights, internal cab light, reverse alarm, reverse camera & rotating beacon		<i>X</i>		<i>RA</i>
15	Check	Operation of AM / FM radio & UHF radio	<i>X</i>			<i>RA</i>
16	Check	Operation of E-Stops engine shutdown switch	<i>X</i>			<i>RA</i>
17	Check	Wipers & Washers	<i>X</i>			<i>RA</i>
18	Check	Fire extinguisher for safety ties, gauge in green, rotate a couple of times & tap bottom to release sediment	<i>X</i>			<i>RA</i>

RUNNING CHECKS

No.	ACTION	CHECKS	S	US	N/A	Initial
19	Check	The general driving characteristics of the grader	<i>X</i>			<i>RA</i>
20	Check	For excessive exhaust smoke or abnormal noises / vibrations	<i>X</i>			<i>RA</i>
21	Test	Operation of automatic transmission kick down, lock-up & neutral inhibitor switch	<i>X</i>			<i>RA</i>
22	Inspect	Service brake operation / adjustment	<i>X</i>			<i>RA</i>

23	Check	Brake accumulator test (Apply & release service brake pedal and release the service brake pedal for a minimum of three applications, until alert indicator) if indicator doesn't illuminate refer to OEM Manual	X			RA
24	Check	Park brake operation (test on a 10° slope)	X			RA
25	Check	For brake drag	X			RA
26	Check	Blade float control	X			RA
27	Check	Steer king pins, steering / wheel lean, articulation, ripper cylinder pins & bushes for excessive movement (less than 2mm of movement)		X		RA
28	Check	Steering, wheel lean, blade lift, blade tilt, articulation, ripper cylinders for leaks, damage to the cylinder rod.	X			RA
29	Check	For wear in blade slide wear strips, lift cylinder socket cups, centre shift cylinder sockets, centre shift lock bar pin & bush		X		RA
30	Check GET	Blade cutting edges, moldboard end wear strips & damage to moldboard, check ripper tynes for security & ripper boots		X		RA
31	Check	Wear strips on top of circle & underneath circle, inspect circle drive teeth & for leaks from pinion on circle drive motor		X		RA
32	Check	Clearances of circle, for up & down movement in blade circle & oscillation movement in circle (check that it turns freely & centrally to circle)		X		RA
33	Check	A" Frame Ball clearance		X		RA
34	Check	Oscillating movement & excess movement in pivot shaft of both tandems		X		RA
35	Check	All wheel bearings for movement by lifting machine		X		RA
36	Check	Using scan tool check for fault codes				
37	Check	DPF / DET Status & conduct a manual burn if required				

FRAME & BODY

Park on level ground, Isolate generator, Fit body prop, Relieve all pressures, Start from front right hand side and work clockwise around generator checking each item below

No.	ACTION	CHECKS	S	US	N/A	Initial
38	Check	ROP's for security & integrity	X			RA
39	Check	Bonnet mounts, operation of bonnet tilt struts / locking mechanism	X			RA
40	Check	For external body damage / security of bonnet to main body, Check hinged doors / panels / sliding doors for correct operation & locking	X			RA
41	Check	Rear vision mirrors & brackets for condition & operation	X			RA
42	Inspect	Steering column mounting & universal joints for movement & grease penetration			X	RA
43	Check	Steps & handrails for security	X			RA
44	Check	Mudguards, mudflaps for condition & security	X			RA
45	Check	For metal fatigue in chassis, goose neck & tow hitch				
46	Inspect	All hydraulic hoses for signs of rubbing, leaks & deterioration				
47	Check / Clean	Battery box, mountings, signs of corrosion, terminal security & condition, cables & electrolyte levels	X			RA
48	Inspect	All air lines, valves / fittings for air leaks & chaffing			X	RA
49	Inspect	All grease lines & fittings for damage / security & grease penetration	X			RA
50	Inspect	Electrical harness / junction boxes for chaffing & dust sealing	X			RA
51	Inspect	Tow hitch / pin	X			RA
52	Check	Hazard warning / component location Decals	X			RA

UNDER BONNET / ENGINE BAY

No.	ACTION	CHECKS	S	US	N/A	Initial
53	Inspect	Exhaust manifolds / covers, bolts, turbo, piping for any leaks & security	X			RA
54	Inspect / Tighten	Air induction boxes / hoses / piping / fittings for damage, clamps for tension & presence of dusting	X			RA
55	Inspect	Fuel pump / pipes / hoses / clamps, for leakage & movement	X			RA

56	Inspect	Engine for oil leaks & damaged hoses	X			RA
57	Check	Engine mounts for wear & security	X			RA
58	Check	Water pump "tell tail" for leakage or blockage & check bearing for movement	X			RA
59	Check	Alternator pulley, mountings, bearings & idler pulleys	X			RA
60	Inspect	Air Conditioner compressor pulley, mountings, hose connections for leakage & movement	X			RA
61	Inspect	Fan, alternator, air conditioner belts for cracking / unusual wear	X			RA
62	Inspect	Fan blades for cracks, wear, damage & security	X			RA
63	Check	Radiator mountings, coolant leakage & air flow through radiator (Clean when required)	X			RA
64	Inspect	Coolant, heater hoses, clamps for condition, leaks & tension	X			RR
65	Inspect	Electrical harnesses / connections for damage & security	X			RA
66	Inspect	Engine bay is free of combustible materials i.e. leaves, sticks & rags for prevention of fire hazards	X			RA
67	Clean	Vibration dampener, idler, A/C & alternator pulleys for dust build up	X			RA

POWER TRAIN & AXLES

No.	ACTION	CHECKS										S	US	N/A	Initial
68	Inspect	Transmission & hydraulic pump pipes, hoses, clamps for tension & oil leaks											X		RA
69	Inspect	Transmission & hydraulic pump mountings & security										X			RA
70	Inspect	Drive universal joints for movement & grease penetration													
71	Inspect	Wheel rims for damage, cracks, missing or loose wheel nuts										X			RA
72	Check	For oil leaks on pivot shafts & wheel ends, damage & cracks, listen for excess chain slap on both tandems drives										X			RA
73	Inspect	Tyres for damage, tread depth & pressure													
74	Depth	P2:	27	mm	P4:	13	mm	P6:	18	mm		X		RA	
		P1:	27	mm	P3:	6	mm	P5:	19	mm					
75	Damage	P2:	Nil		P4:	Nil		P6:	Minor			X		RA	
		P1:	Nil		P3:	Nil		P5:	Nil						
76	Pressure	P2:		psi	P4:		psi	P6:		psi					
		P1:		psi	P3:		psi	P5:		psi					

2000 / 2500 HOUR SERVICE

Check / Change & Adjust

No.	ACTION	CHECKS										S	US	N/A	Initial
77		Cylinder 1		Cylinder 2		Cylinder 3		Cylinder 4		Cylinder 5		Cylinder 6			
	Intake														
	Exhaust														
78	Measure	Brake Material Thickness													
		P2:			P4:			P6:							
		P1:			P3:			P5:							
79	Check	Glow Plugs for power & conduct a continuity test on each plug													
80	Check	Using a Coolant Test Strip & compare to chart, change if necessary													
81	Check	Tandem Drive Chain Check, Refer to OEM Specifications													

EVERY 3 YEARS

82	Check	Replacement date seat belt	Last Installed Date:				
----	-------	----------------------------	----------------------	--	--	--	--

LUBRICATION SCHEDULE

EVERY SERVICE

1	Lubricate	All grease points:	RA		
250 HOUR SERVICE					
2	SOS	Engine Oil:	RA		
500 Hour Service					
3	SOS	Hydraulic Oil:	RA	Transmission / Diff Oil:	RA
		Front Wheel Bearing Oil:	RA	All Wheel Drive Oil:	RA
		LHS Tandem Oil:	RA	RHS Tandem Oil:	RA
4	Change	Engine Oil:	RA		
5	Change Filters	Engine Oil (Cut/Inspect):	RA	Outer Air Filter:	RA
		Fuel / Water Separator:	RA	Secondary Fuel:	RA
		Hydraulic Tank Return:	RA	Hydraulic Impl Control:	RA
6	Inspect / Change	Secondary Air Filters:	RA	Signs of Dusting Y / N:	N
7	Inspect / Clean	Air Cleaner Dust Bowl:	RA	Fuel Tank Cap & Strainer:	RA
8	Inspect / Clean / Change	Engine Breather:		Tandem Breathers:	
9	Check / Top up	Engine Oil:	RA	Transmission / Diff Oil:	RA
		Hydraulic Oil:	RA	Both Tandems:	
		Front Wheel Bearing Oil:	RA	Circle Drive:	
		Coolant:			
1000 HOUR SERVICE					
10	SOS	Coolant:	RA	Hydraulic Oil:	RA
11	Change	Transmission / Diff Oil:			
12	Change Filters	Transmission / Diff:		All Wheel Drive Oil:	RA
13	Clean	Transmission / Diff screen:			
14	Inspect / Clean	Transmission / Diff screen:			
2000 Hour Service					
15	Change	Tandem Drive Oil:		Circle Drive Oil:	
		Front Wheel Bearing Oil:	RA	Coolant (on SOS):	
		Gear Oil (All Wheel Drive):	RA		
16	Change Filters	Inner Air:	RA		
6000 Hour Service					
17	Change	Hydraulic Oil (on SOS):			
AFTER EVERY SERVICE					
18	Check	All fluid levels & Correct Running operation of Grader			
DEFECTS / COMENTS & PARTS TO BE ORDERED					
1	RHS inner door latch broken				
4	Front windscreen needs replacing				
6	A/C Intermitantly working				
14	RHS outer roof cab light out				
27	RHS Steering cylinder ball socket +1mm of movement in it, articulation pins and bushes need replacing, +1mm movement in main ripper cylinder mounting pins has movement in it				
31	Wear strips at the front of the circle are badly worn and need replacing, the drive gear is starting to show signs of excessive wear and should be rplaced soon				

[illegible]